LEVERAGING GENE/SUBNETWORK META-ANALYSIS TO RECOVER SIGNAL AND DECONVOLUTE THE INTERACTIONS BETWEEN GENES IN THE RISK OF GENETIC DISORDERS

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A thesis presented for the degree of
Doctor of Philosophy in Human Genetics, Department of Pathology,
Faculty of Health Sciences, University of Cape Town,
March 2025

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ABSTRACT

Genome-wide association studies (GWAS) have identified numerous loci associated with diverse human traits. While these discoveries offer valuable insights into disease biology and inform patient care, key challenges remain. These include the disconnect between identified variants and biological mechanisms, the difficulty in detecting low-frequency or moderate-effect variants, and the inherent complexity of most human phenotypes.

To address these limitations and enhance discovery power, large sample sizes are increasingly employed through individual study expansion or meta-analysis. However, the classical single-variant approach, analyzing individual genes or variants in isolation, may not fully capture the intricate genetic architecture of complex diseases. This can be due to genetic heterogeneity or limitations associated with gene-based analysis, where power is lost due to non-effect variants within a gene or low-frequency causal variants. Consequently, traditional GWAS often lack robust mechanistic insights into the functional underpinnings of complex traits.
This thesis proposes a novel framework that integrates GWAS signals across multiple studies, leveraging summary statistics to improve association mapping and detect weak signals missed in single GWAS. The method aggregates SNP-level signals to the gene level and incorporates protein-protein interaction (PPI) networks for association mapping at gene and pathway/subnetwork levels.
We applied this framework to GWAS summary statistics from seven European bipolar disorder cohorts. The analysis identified seven genes, including a highly significant effect at the gene level for *AGT*. Additionally, a significant subnetwork was identified with Estrogen Receptor 1 (*ESR1*) as the central hub. Furthermore, the method was employed to explore the genetic overlap between suicide and psychiatric disorders in the FinnGen database. This analysis revealed disease-specific traits sharing common risk factors with suicide. Notably, several genes with small effects were identified at both the gene and subnetwork levels, highlighting the involvement of overlapping genes, pathways, and subnetworks in the underlying molecular mechanisms. Functional enrichment analysis of hub genes based on annotations from Reactome and KEGG databases revealed significant pathways, with top significant involved in signaling, nervous system development, and the immune system.
Finally, the framework was applied to investigate the genetic overlap between suicidality and subcortical brain volume. This analysis identified potentially significant genes, hub genes with small effects, along with a network of interacting genes. Enrichment analysis of the network genes revealed pathways with top significance associated with signaling, immune function, and nervous system development.

In conclusion, the method presented in this thesis provides new insights into functional and molecular mechanisms issued from a gene/subnetwork-centric approach and exhibits candidate genes for drug targets and drug re-purposing. Altogether, these findings point to important pathways and possible regulatory mechanisms that may be involved in the emergence of disorders, as well as the multi- and co-morbidities associated with them. Clinical research and an integrated strategy of additional modalities will advance individualized mechanistic understandings of these complex illnesses.

DEDICATION

This thesis is dedicated to my Lord Jesus Christ whom I trust. The one who carried me throughout this PhD journey.
To God be all the Glory!!!

Whoever is without love does not know God, for God is love
1 John 4:8

ACKNOWLEDGMENTS

One-third to half of PhD students are at risk of developing a mental disease and experiencing psychological discomfort according to some reports. Without a question, obtaining a PhD is a very challenging process, but in a welcoming and encouraging atmosphere, it can also be one of the most fulfilling and significant experiences. Being able to fully engage with a question, investigate the current quo, challenge it, formulate a plan, look for solutions, and push forward in wisdom and understanding is a fantastic grace and empowerment for both personal and professional development.

First and foremost, I am very grateful to the Lord GOD. Without Him, I wouldn't be able to embark on this PhD journey and finish well.

I am thankful to Prof Raj Ramesar for his supervision, mentorship, invaluable support, guidance, and insight that I have received throughout this PhD program. I have the privilege of receiving a lot of insightful advice from you to see beyond my comfort zone and be able to carry this project along. I have learned the concept of leadership under your mentorship, and it has expanded my vision in the field of genetics and bioinformatics in general.

I am thankful to Dr Denis Awany for his invaluable help and support. You have played a mighty role in my travail, always there to make sure about the relevance of any statistical and analytical process.

I am thankful to Prof Emile Chimusa for the privilege of introducing me to this project and laying a foundation for my bioinformatics skills.

Special thanks to my dearest wife Sandrine, for your unconditional love, support, and encouragement, always supportive and for giving me valuable advice when I was going through the darkest moment and sleepiest night for the perspective of achieving the goal. Thank you for helping me to become a better person. May God bless you abundantly.

Big thanks to Dr Faghri and Akshay, for your assistance, encouragements, support, and advice in all things concerning the lab and beyond. You have done a lot concerning the pathway for my professional career and I am so grateful to be a good listener to the multitude of your council.

I am thankful to my parents, Mr David and Mrs Jacqueline Simo; to my sisters, Aline, and Edith Laure Simo; You are all dear to my heart. Thanks to all my friends, to my brothers and sisters in the Lord Jesus Christ all around the world for your support, prayers, and encouragement. I cannot take them for granted. May God almighty bless you.

I am thankful to all my in-laws for all the support, encouragements, advices, and prayers made to GOD for me to deliver the product that we see today. May God almighty bless you.

A big thanks to all my colleagues, and staff in the Division of Human Genetics at the University of Cape Town. I genuinely appreciate the multitude of your contributions and support in various forms.

To all of you, Thank you!

But it is from Him that you are in Christ Jesus, who became to us wisdom from God[revealing his plan of salvation], and righteousness[making us acceptable to God], and sanctification[making us holy ans setting us apart for God], and redemption[providing our ransom for the penalty for sin], so then, as it is written [in scripture], "HE WHO BOASTS and GLORIES, LET HIM BOAST and GLORY IN THE LORD"

1 Corinthians 1:30-31*(Amplified version)*

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DECLARATION OF THE THESIS WORK

I, **Joel Defo**, hereby declare that the work of this thesis/dissertation has been submitted in fulfilment of the requirements for the PhD degree at the University of Cape Town. This thesis is my original work (except where acknowledgements indicate otherwise). Neither the whole work nor any part of it has been, is being, or is to be submitted to this or any other university. This thesis/dissertation has been submitted to the Turnitin module (or equivalent similarity and originality checking software) and I confirm that my supervisor has seen my report and any concerns revealed by such have been resolved with my supervisor.

Signature:



Date: 08th July 2024

OUTPUTS RELATED TO THIS THESIS

Publications

1. **Defo, J.**, Awany, D., & Ramesar, R. (2023). From SNP to pathway-based GWAS meta-analysis: do current meta-analysis approaches resolve power and replication in genetic association studies? *Briefings in bioinformatics*, *24*(1), bbac600. https://doi.org/10.1093/bib/bbac600

2. Chimusa, E. R., & **Defo, J.** (2022). Dissecting Meta-Analysis in GWAS Era: Bayesian Framework for Gene/Subnetwork-Specific Meta-Analysis. *Frontiers in genetics*, *13*, 838518. https://doi.org/10.3389/fgene.2022.838518

3. **Defo, J.**, & Ramesar, R. (2025). Unravelling the Shared Genetic Architecture between Suicidality and Subcortical Brain Volume: A Genome-wide Association Study (paper accepted in Acta Neuropsychiatrica).

Publication from collaborative efforts during PhD project

5. Kootbodien, T., London, L., Martin, L. J., **Defo, J.**, & Ramesar, R. (2023). The shared genetic architecture of suicidal behaviour and psychiatric disorders: A genomic structural equation modelling study. *Frontiers in genetics*, *14*, 1083969. https://doi.org/10.3389/fgene.2023.1083969

6. Alosaimi, S., van Biljon, N., Awany, D., Thami, P. K., **Defo, J.**, Mugo, J. W., Bope, C. D., Mazandu, G. K., Mulder, N. J., & Chimusa, E. R. (2021). Simulation of African and non-African low and high coverage whole genome sequence data to assess variant calling approaches. *Briefings in bioinformatics*, *22*(4), bbaa366. https://doi.org/10.1093/bib/bbaa366

Chapter ONE: GENERAL INTRODUCTION

1. INTRODUCTION AND BACKGROUND

For more than a decade, Genome-wide Association Studies (GWAS) have successfully uncovered thousands of genetic variants in human populations susceptible to complex traits or diseases which include cancer, hypertension, schizophrenia, high blood pressure, and T2 Diabetes, amongst others. GWAS has become a powerful tool for establishing risk associations between variants and phenotypes. One of the goals of association studies is to comprehend disease aetiology and to develop viable strategies to prevent and treat diseases. As a result, many disease susceptibility loci and in some cases, unexpected disease mechanisms, have been unveiled, leading to insights into disease aetiology. GWAS signals can now be estimated, using statistical methods, both at the SNP and gene level based on the input signals and the biological features so that such loci or genes (associated with disease) may be prioritized. Until recently, GWAS studies have faced several limitations, including the inability to detect causal disease-associated markers with low or moderate risk due to limited statistical power [1,2] and the heritability of the SNPs. Additionally, there has been a lack of clear understanding regarding the interactions between genes that confer disease predisposition [2,3,4]. To overcome these shortcomings, researchers have engaged in developing statistical and computational approaches making use of various processes to improve the detection of variants associated with disease/phenotype. These included GWAS meta-analysis methods either at the SNP or gene level to increase the power of association, thereby replicating previous findings and identifying new loci [5, 6]. Others have incorporated functional information, such as protein-protein interactions (PPI) or gene expression networks, to incorporate association signals beyond a single SNP-based GWAS association [7, 8]. Generally, all of these studies focused on one phenotype at a time.

With the increasing evidence of the genetic overlap in susceptibility across different diseases and related phenotypes [9, 10, 11], unveiling the aetiological commonalities between them could reveal and contribute to a better understanding of the pathogenesis of these diseases, with potential clinical implications for disease diagnosis and management. Therefore, developing an approach that incorporates meta-analysis for the GWAS pathway will be invaluable in determining cross-phenotype associations.

1.1 EXPLORING THE GENETICS OF HUMAN DISEASES

Modern medical population genetics aims to improve the understanding of genetic mutations and potential genetic risk factors causing or contributing to human diseases. During the past century, progress toward the understanding of certain genetic diseases in individuals and families has resulted in the discovery of the Mendel law of inheritance and genetic linkage, the medical basis of disease-trait inheritance as well as the discovery of the structure and function of DNA. This has paved the way to better understand the molecular basis of many human diseases that result either from single-gene defects or of disorders due to polygenic defects. For

instance, Loddo & Romano (2015) commented that the pathogenesis of Inflammatory Bowel Disease may be triggered by genetic susceptibility, environment, intestinal microbiota, and immune system, with potential interactions as shown in **Figure 1.1**.

In this context, the international HapMap project has developed an initiative to map SNPs along the length of each human chromosome and developed a haplotype map of the human genome, describing the pattern of common human sequence variation. This initiative, discovering and mapping of millions of SNPs, has become a reference for Genome-Wide Association Studies (GWAS), is being used extensively for disease association [12]. In addition, the 1000 Genomes consortium reconstructed the genome of 2,504 individuals from 26 populations using next-generation sequencing technologies. Today, more than 85 million SNPs have been characterized as relevant for research on common diseases [13]. Several projects including the Human Genome Project [14], UK Biobank (www.ukbiobank.ac.uk), HapMap [15], H3Africa (http://www.h3africa.org/), the 1000 Genomes project [13] have become valuable database catalogues for human genetic research to map disease susceptibility and drug response. It has been estimated that the human genome contains 20,000 to 25,000 genes [16, 17]. The development of new technologies, the knowledge of the human genome sequence and the generation of markers of genetic variation have allowed investigators to associate diseases with chromosomal loci [17].

Mutations of the human DNA sequence are what cause genetic variation, and also phenotypes, including human diseases. The nature of the disease depends on the functions performed by the mutated gene [16]. In general, human genetic diseases are of two types: monogenic and polygenic. Single gene, (also called monogenic) diseases, are diseases that have a Mendelian pattern of inheritance (The Mendelian laws of inheritance, when applied to variants, stipulate that an individual carries two copies [alleles] of a given nucleotide and passes one of them at random to each of their offspring). The disease may be the result of either a single copy of the mutated allele (dominant inheritance) or both mutated copies (recessive inheritance) in an individual. Based on the pattern of inheritance, we can predict whether the mutated gene is dominant (the disorder is caused by a single copy of a mutated gene) or recessive (where both copies are mutated), autosomal (located on the autosomes [i.e. chromosomes 1 to 22] or sex-linked (on the X or Y chromosomes) [18, 16]. Inheritance and patterns of single-gene disorders which are identified via pedigree analysis of large families, with multiple affected members, have provided invaluable opportunities to understand the molecular mechanism of all hereditary diseases.

Research has shown that a large number of common diseases display a complex inheritance pattern that does not obey Mendelian inheritance patterns characteristic of single-gene disorders. These disorders are generally associated with the additive effects of multiple effects of mutations in multiple genes. With time, studies have gradually moved from monogenic diseases to polygenic diseases, which include interactions between genes, and between genes and the environment [18, 19]. An example of this complex mechanism is illustrated in **Figure 1.1.**

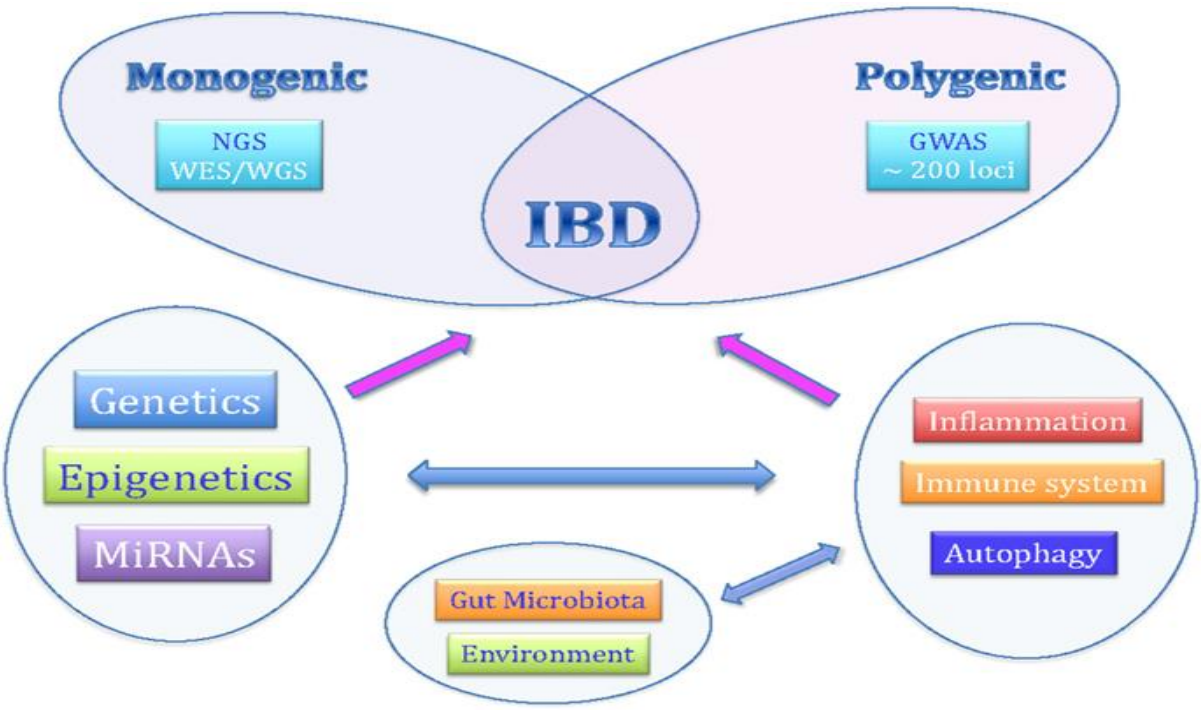


Figure 1.1 Development of IBD in most patients revealing its potential pathogenicity. Gut microbiome and environmental factors are part of the acting determinant that predispose the disease in the host. The combined effect of multiple genes added to ecological factors are elements that increase the risk of disease in most cases; this elucidates the interplay between genes and environment (blue two-sided arrows) as important elements in disease aetiology (Picture taken from Loddo & Romano (2015)).

Factors involving genetic and environmental interactions have contributed to a meaningful understanding of disease risks in general, and complex disease risk in particular. Such diseases include various Alzheimer's disease, asthma, bipolar disorder, cancers, cardiovascular diseases, coronary heart disease, diabetes, Inflammatory bowel disease, Parkinson's disease, and schizophrenia. In all such diseases, only a small fraction (between 1 to 7%) of heritability is explained by any single variant transmitted by Mendelian inheritance [19, 20]. Its manifestation depends in some part on a person's environment and lifestyle. Although genes cannot be changed, the adjustment of lifestyle and environment can prevent or delay the onset of such disorders [20, 21].

1.2 OVERVIEW OF METHODS UNDERLYING DISEASE RISK

1.2.1 LINKAGE ANALYSIS

Linkage analysis is a genetic technique used to identify the locations of genes that co-segregate with the risk of disease [22,23,24]. If a disease or trait has a genetic basis, this technique involves pinpointing the loci associated with the disease in some family members or through assessing the genetic variants each family member carries at a specific locus [23, 24]. The data for linkage analysis typically include observations of families with individuals exhibiting a

heritable disease and genotyped family members. These families can consist of parent-offspring trios, extended pedigrees, and affected sibling pairs. Evidence of linkage is established by statistically demonstrating that the disease phenotype co-segregates with a particular genetic marker within each family structure (affected and non-affected members) [23, 24]

Linkage studies have been valuable tools for detecting chromosomal locations of disease genes and identifying several genes underlying monogenic Mendelian diseases such as cystic fibrosis and Huntington disease [25, 26]. They have also been useful in detecting variants underlying familial forms of multifactorial diseases (e.g., Parkinson and Alzheimer diseases) and other hereditary syndromes like neurofibromatosis types 1 and 2 [27]. However, linkage studies are generally less effective for identifying genes associated with multifactorial diseases as a whole. One major challenge is the limited power of linkage studies in late-onset diseases with high mortality rates. Finding families with more than one affected generation can be difficult in such cases. Additionally, linkage studies are less helpful in explaining the genetic mechanisms (such as gene-gene and gene-environment interactions) underlying complex diseases [23, 28].

For Mendelian diseases, crossover events can narrow down the region of interest within the genome sufficiently to identify small intervals. However, for complex diseases, linkage analysis often identifies only large regions, typically spanning about ten centimorgans (cM). While candidate genes may exist within these linkage regions, such regions can contain dozens of genes with potential relevance to the disease. Furthermore, the prevalence of multifactorial diseases suggests that the alleles contributing to these diseases are common at both the family and population levels. To address these limitations, studies have shifted from family data to case-control data, comparing allele frequencies between affected and unaffected individuals. This approach focuses on much smaller genomic distances and pertains to disease association at both the family and population levels.

1.2.2 GENOME-WIDE ASSOCIATION STUDIES

Since its inception in the early 2000s, GWAS have become a pivotal tool for analyzing common and complex traits [1, 29, 30, 31, 32]. This approach has revolutionized human genetics, spreading globally as a method for identifying variants associated with common and complex diseases. The GWAS era emerged with the advancement of high-throughput genotyping, allowing the investigation of millions of genotypes in case-control studies. Fuelled by the common disease-common variant hypothesis, early GWAS efforts aimed to identify common variants with minor allele frequencies (MAF) above 1% (SNPs) in the general population. Despite this focus, it soon became evident that only a fraction of the heritability of most traits and diseases was explained in many studies [33, 34].

Whole-genome (WGS) and whole-exome sequencing (WES) have been considered but found to be prohibitively expensive for providing a complete picture of an individual's allelic landscape across large sample sizes. Despite decreasing sequencing costs, large-scale sequencing projects remain costly and are not typically conducted for the thousands of samples usually involved in GWAS. This led to the development and implementation of genotype imputation algorithms, which predict genotypes based on a reference panel of sequenced samples.

Within a decade, GWAS successfully identified variants contributing to various diseases and traits, including psychiatric and metabolic disorders, blood metabolite levels, and anthropometric measurements. Advances in next-generation sequencing technologies have also

highlighted the contributions of rare variants to common and complex traits. However, GWAS often suffers from inconsistent replication of variant findings [35]. Many GWAS have small or moderate sample sizes, compromising the significance of the association signals [5, 36]. For example, genetic variants underlying complex diseases like coronary artery disease and obesity typically confer small-to-moderate effects (per-allele disease odds ratios ≤ 1.2 or trait variance ≤ 0.2%) [37, 38]. These findings necessitate large sample sizes (on the order of thousands) for reliable detection of variants via GWAS.

Additionally, disease-associated SNPs often fail to explain the phenotypic variation due to the "missing heritability" problem. This issue may stem from the simultaneous testing of multiple SNPs, resulting in only a few significant SNPs while true markers remain undetected [2, 3]. The association between a single variant and a phenotype also reduces statistical power, as evidence shows multiple genetic variants across many genes are associated with phenotype-involved pathways [7, 39, 40, 41]. Moreover, pleiotropy, where one variant affects multiple phenotypes, is increasingly recognized in complex diseases. Therefore, focusing on a single phenotype may miss genetic variants associated with multiple phenotypes, hindering the understanding of genetic mechanisms influencing complex diseases [42, 43].

These challenges have led researchers to develop post-GWAS techniques to enhance GWAS findings and uncover the genetic mechanisms of various diseases and traits. One such technique is meta-analysis, a statistical method that combines datasets and aggregates estimates from independent studies to increase power and detect associations that single GWAS approaches might miss [5, 6]. Another technique is pathway analysis, which complements GWAS by tagging gene sets within the same pathway for phenotype studies [36, 44, 45].

1.2.3 POST-GWAS ERA

Scientists have successfully identified tens of thousands to millions of variants (typically SNPs) associated with the risk for complex diseases and traits through the GWAS approach [46]. However, several challenges remain in bridging the gap between understanding the biological mechanisms behind disease risk and the statistical relationships between loci and phenotypes.

The first challenge is the insufficient statistical power to detect all loci linked with the disease or trait. Most of the identified loci only account for a small portion of the total heritability, leaving the bulk of heritability still unexplained [2]. This low statistical power could be due to the presence of multiple genetic variants across many genes involved in phenotype-related pathways [7, 39, 40, 41]. The lack of coverage of genetic variants on genotyping platforms, such as rare or even private mutations, might also contribute to the missing heritability. Additionally, despite involving thousands of participants, many disease-associated variants have little to no statistical power, making them unlikely to be identified [2, 31].

Secondly, GWAS does not specify which gene or genes are affected by the causal variant (sometimes called the "target gene") nor the variant or variants at the locus causing the association (the "causal variant"). This issue arises because numerous co-inherited variants in strong linkage disequilibrium (LD) often constitute a haplotype, making it difficult to distinguish the most important disease-associated variant [47].

Thirdly, understanding the biological significance of susceptible loci and connecting them to disease causation remains challenging. Many disease-related variants are found in non-coding regions of the genome, with the majority of linked SNPs in the GWAS catalogue being in non-coding intergenic and intronic regulatory regions [48, 49]. To fully understand disease aetiology and develop effective prevention and treatment strategies, it would be ideal for GWAS results to implicate functional variants and disease pathways that can be experimentally

studied in follow-up functional studies [2, 48]. Numerous articles have highlighted additional challenges with GWAS [36, 41, 50, 51].

Given these limitations, several post-GWAS techniques have been proposed. The primary purpose of post-GWAS analysis is to use the results of genotype-phenotype associations (summary statistics) to achieve the following goals: (1) Increase the power of association to detect new functional loci that could not be detected with simple GWAS; (2) Detect novel disease susceptibility genes, gene-phenotype relationships, and biological pathway networks; (3) Use summary statistics to establish a polygenic risk score.

In the next sections, common post-GWAS approaches will be emphasised , including GWAS meta-analysis using GWAS summary statistics, pathway analysis using GWAS datasets, and network epistasis.

1.2.3.1 OVERVIEW METHODS OF GWAS META-ANALYSIS

To perform a GWAS meta-analysis, each study provides summary statistics for SNPs, which vary based on the study's purpose and the variables of interest. This information includes the genomic region of the SNP in a given human genome build, its alleles, and sometimes the frequencies of the minor alleles. Information about the SNP's association typically includes the effect size estimate, its standard error or a 95% confidence interval, and the P-value of the association between the variant and the phenotype. These statistical records are compiled into files that are smaller than the original genotype data, reducing the risk of exposing individual participant data [6, 52]. Most available information comes in the form of summary statistics. Although these statistics differ from study to study, they generally include data about the SNP and its estimated effect on the phenotype under study [5].

These summary statistics are crucial for the computational process used to generate new statistics, helping to determine whether new variants have been detected or loci have been replicated. This process involves aggregating information, estimating heterogeneity, and calculating summary effects [5, 52]. The summary effect typically includes the SNP's label being meta-analyzed, along with statistical indicators such as the overall effect size, standard error, P-values, and a 95% confidence interval.

Several GWAS meta-analysis methods have been developed, which can be grouped into three main classes: SNP-based approaches, gene-based approaches, and pathway-based approaches. These methods rely on different statistical models, such as combining P-values to produce a chi-square for association, fixed-effect (FE) models that assume genetic effects are homogeneous across studies, random-effect (RE) models that consider genetic effects to be heterogeneous, or Bayesian partition models that account for allelic heterogeneity between ethnic population groups [42, 53].

SNP-based Meta-analysis Approaches:

- These approaches analyze one genetic variant at a time using different effect models for common variants. They help address inconsistent results of a single SNP's association with a disease or trait in a given population by maximizing the power for replication.

Gene-based Meta-analysis Approaches:

- Motivated by the understanding that the genetic variability of complex traits results from the combined influence of many genetic variants within a gene,

where each variant has a small effect on the disease or trait [54]. Evidence suggests that multiple SNPs within a gene can contribute to disease risk. This approach aggregates summary information from independent causal variants within a gene or genes to enhance association signals and reduce the penalty of multiple testing [55, 56].

Pathway-based Meta-analysis Approaches:

- This novel technique integrates meta-analysis at the gene level into pathway enrichment. Pathway analysis has become a powerful tool to complement GWAS by tagging gene sets within the same pathway for studying a phenotype [36, 57]. Different genes involved in the same pathway may help identify associations that single SNPs might miss [41]. Thus, pathway-based meta-analysis is becoming a key method for evaluating the interaction effects of candidate genes within biological pathways in complex traits [58].

1.2.3.2 OVERVIEW OF GENE SET/PATHWAY ANALYSIS FROM GWAS DATASETS

Many variants underlying complex diseases only account for a portion of the causal genetic basis, with signals from causal genetic variants often hidden in the statistical noise of GWAS. While GWAS meta-analysis has retrieved signals undetected by simpler GWAS approaches, it focuses on loci associations without revealing the complete landscape of the mechanisms behind disorders. A systems approach, including pathway analysis and network modelling, can partially overcome these limitations. Network modelling helps increase statistical power to identify susceptible loci with subtle effects by using significantly associated loci derived from GWAS.

Ongoing studies have successfully uncovered the genetic architecture of various diseases and phenotypes through large-scale GWAS analysis. Evidence shows that many disorders are polygenic, involving disruptions in proteins that interact in complex ways between genes [59, 60]. Interactions between genes in a particular pathway (or gene set) can prioritize genes involved in the pathogenesis of complex diseases [36]. With the availability of biological annotations of known genes, post-GWAS methods, including meta-analysis, have shifted from single genes to gene set associations. This shift helps ascertain the interaction of predefined lists of genes involved in disease pathways and elucidates the genetic mechanisms of disorders based on existing biological and functional features [61, 56, 39].

Pathway analysis can be performed using GWAS summary statistics and can extend to rare variants, other "-omics" data, and interaction data [62]. The goal of pathway analysis is to provide insights into the biological processes by aggregating the association signals observed for a collection of SNPs into a pathway-level signal. Pathway (gene set) methods began with gene expression profiling [63] and have evolved to integrate SNP genotype data [45], sometimes combining both [64, 65, 66]. Pathway analysis is now an efficient approach to detect subtle SNP effects within the same gene set through statistical analysis of defined lists of genes with similar biological functions [64, 66]. These defined gene lists can aid in interpreting results and increase the power to detect genetic associations with the phenotype compared to individual SNPs [66, 67].

Pathway analysis involves three main steps:

1. Mapping individual SNPs to genes by genomic position and aggregating their significance to compute each gene's association with the phenotype.
2. Mapping genes into a predefined pathway database and quantifying the enrichment score of a gene set, summarizing the association scores of genes in the pathway.
3. Determining the pathway's significance based on an appropriate statistical method [56, 68].

The mapping of SNPs to genes is followed by two testing approaches:

- **Competitive approach:** Tests for over-representation of statistically significant signals of association among genes within a known biological pathway compared to genes outside the pathway, identifying enriched gene sets with a significantly higher percentage of differentially expressed (DE) genes than expected by chance [69].
- **Self-contained approach:** Performs a joint test of all gene-associated signals within the pathway to detect associations with the disease [39, 65].

Several tools have been developed for pathway analysis using GWAS, and reviews of these tools are available in peer-reviewed journals [67, 70, 62, 45, 71]. Gene set enrichment can be assessed using online pathway databases such as KEGG, Reactome, GO, WikiPathways, BioCarta, BioCyc, or NCI-NATURE [67]. The biological causes of disorders can be explored by examining changes in gene expression or mutations within a pathway.

Existing tools vary in their methods for each step and the strategies employed. Choosing the appropriate tool involves considering factors such as the null hypothesis, gene size, linkage disequilibrium between genes, and pathway size [62, 70]. Despite the usefulness of pathway analysis in describing disease mechanisms, it faces several challenges. These include poor reproducibility due to a lack of proper simulation frameworks, changes in study cohorts, different GWAS platforms, lack of imputation procedures before independent analysis, and no consensus on SNP-to-gene mapping procedures [70, 44].

Typically, hundreds of genes are involved in a pathway, and incomplete database annotations can make it difficult to reveal additional driver genes, undermining confidence in validating pathway or gene set findings in disease mechanisms. The diversity of methodologies and candidate genes used in analyses, along with the lack of standard protocols, makes replicating results challenging. There are no established guidelines for efficiently comparing pathway methodologies and tools, especially regarding the use of simulated data versus standard biological systems. Simulated datasets do not always reflect real organism events, highlighting the complexity of substantiating pathway analysis results [70].

Providing enough information for each study could help understand its strengths and weaknesses, aiding in choosing appropriate tools for pathway analysis using GWAS. Another challenge is that gene set annotation is still incomplete, causing non-annotated genes to be filtered out during analysis. To improve this process, researchers have introduced protein-protein interaction data for dense-module searching (DMS) of enriched association signals from one or multiple GWAS datasets. However, most studies using pathway analysis rely on data from a single source and a limited sample size related to one phenotype, often failing to identify new findings beyond what has already been discovered. Continuous development of pathway databases may improve the identification of candidate genes and gene sets as part of the genetic factors in disease risk.

1.2.3.3 NETWORK EPISTASIS

Increasing evidence shows that functionally related genes associated with phenotypes or traits are more likely to form networks of interacting proteins [7, 8]; such a phenomenon is called epistasis. This finding, verified for many diseases, supports the hypothesis of interaction modules, meaning protein-protein or disease-disease interactions. This interactome-based approach helps us better understand human diseases and phenotypes [72, 73]. The approach involves configuring sub-networks within the interactome, which may contain all the molecular determinants of a particular phenotype [74, 8, 75]. Combining biomedical data with networks helps evaluate disease etiologies and identify treatment markers. The most used types of interaction networks include gene regulatory networks (GRNs), metabolic networks, and protein-protein interactions (PPIs). In this thesis, the focus is mainly on PPIs.

PPI networks offer a better understanding of cellular interconnections in disease progression and could lead to identifying disease genes and pathways. This understanding could result in better drug development targets and reshape clinical practice, from identifying more precise biomarkers to disease classification, relevant to personalized medicine [7, 73]. It's important to differentiate between "pathway" and "network." Pathway analysis does not necessarily generate a network of genes but refers to a group of genes related to certain features. Conversely, a network combines all potential relationships among genes discovered for pattern prediction and disease risk [70].

The hypothesis behind the network approach is that variants not identified using single GWAS can be detected through the combined effect of multiple variants in interacting groups of genes with shared functions. This network approach is a post-GWAS procedure that assesses either interaction modules from interactive PPI networks or biological pathways using statistical information on each gene [67]. Centrality measures identify well-connected hubs (highly connected nodes) crucial for detecting subnetworks and maintaining the global network structure. These hubs reveal disease-associated genes (or driver genes) involved in complex disease mechanisms and help formulate new hypotheses about biological functions at the molecular and cellular levels.

The pattern of interconnections between nodes and edges based on important metrics has led to the introduction of scale-free networks (node degree connectivity distribution follows a power law) and small-world networks (distance between nodes grows proportionally to the logarithm of the network size) [7]. Various network-based methodologies have been applied to identify disease modules containing most disease-associated genes [76, 67]. In the recent decade, the network-based approach has shown promising progress in disease classification, disease gene prediction, and drug repurposing, especially for COVID-19. Active PPI databases are publicly accessible via web interfaces, as listed in [67]. Disease mechanisms can also be predicted using a scoring approach and genome-wide PPI network analysis.

However, network analysis should be approached with caution. Many network genes are largely incomplete, with missing nodes due to incomplete biological annotation. Identifying statistically significant subnetworks using a test statistic for each may pose problems due to the large number of subnetworks to be tested and evaluated. A large number of tests may generate many false positives or fail to identify any significant subnetworks after multiple testing corrections. Additionally, network structures may change significantly during biological or disease progression, and no example has been provided to dynamically ascertain PPIs. Despite these challenges, networks with subnetwork detection have proven valuable in addressing the

mechanisms underlying pathology and disease susceptibility. For instance, studies of network dynamics can shed light on disease-related network states [77]. Therefore, subnetworks can be considered putative driver pathways and may help unveil the functional landscape of disease mechanisms, with resulting genes acting as driver genes.

1.3 CROSS-PHENOTYPE ASSOCIATION

The recent expansion of GWAS datasets, coupled with detailed phenotypic data and epidemiological studies, has unveiled a growing number of population-based cross-phenotype associations. These associations can arise from various factors, with pleiotropy being a prominent contributor [78]. Cross-phenotype analysis offers the advantage of detecting variants with subtle effects across multiple traits or diseases. Significant GWAS findings can reveal hidden connections between seemingly unrelated conditions, prompting further investigation into shared pathways underlying these disorders. A straightforward approach to exploring cross-phenotype effects involves setting a significance threshold such that variants falling below this threshold across a set of traits are identified as cross-phenotype associations [78]. However, this method may miss truly associated variants when sample sizes are small, resulting in reduced statistical power. Consequently, several methods have been developed to combine summary information across multiple traits through meta-analysis.

Cotsapas and colleagues introduced a method called cross-phenotype meta-analysis (CPMA), which uses p-values as input and compares their distribution across all traits for a given variant to test the null hypothesis of uniform association [79]. This method is applicable to a broad range of phenotypes but is not tailored for pairwise comparisons between phenotypes. Another approach, ASSET, utilizes effect estimates of variants to identify disease subtypes within case-control data and all possible subsets of traits based on the maximum absolute Z-statistic for that variant [80]. ASSET can account for effect heterogeneity and sample overlap between traits and has successfully detected associations across different cancer risks and autoimmune disorders [81].

Zhu and colleagues developed CPASSOC, which employs two meta-analysis tests to detect cross-phenotype associations assuming homogeneous and heterogeneous effects across studies [82]. CPASSOC requires SNP information and an inter-cohort correlation matrix derived from summary statistics. This method has been applied to anthropometric traits within the GIANT consortium, revealing associations within the TOX gene that were not identified in single GWAS approaches [83]. Additional methods address trait correlations using bivariate linkage disequilibrium (LD) score regression [84, 88] or incorporate multiple testing adjustments [85]. Recently, Cichonska and colleagues proposed a metaCCA framework based on canonical correlation analysis for multivariate GWAS meta-analysis [86]. MetaCCA evaluates associations between all SNPs within the same gene and multiple phenotypes, leveraging cross-covariance matrices between genotypic SNPs and correlation structures between traits from GWAS summary statistics. However, this method assumes uniform sample sizes across traits, which may not hold in practice and can lead to underestimation of relationships for larger studies [86, 87].

While cross-phenotype meta-analysis enhances the power to detect genetic effects across multiple traits, several challenges persist. Many methods focus on SNP detection, potentially missing variants that affect only a subset of traits rather than all under study. Moreover, most meta-analysis approaches provide overall statistical evidence without identifying specific traits driving pleiotropic signals. Causal variants may exhibit varying biological impacts across different traits, complicating efforts to pinpoint pathways that best characterize pleiotropic

effects and broaden our understanding of the genetic mechanisms underlying cross-phenotype associations.

1.4 OUTLINE OF THE THESIS

This study introduces a framework for aggregating GWAS signals from individual genetic variants to gene levels, and subsequently to network and pathway levels. We applied this framework through analyses at both GWAS and meta-analysis levels using simulated and empirical datasets. Our findings underscore the potential of meta-analysis, particularly at the gene level, to reveal additional genetic associations, enhance the biological annotation of known genes, and potentially redefine disease classifications. This area of research is particularly crucial given the frequent discovery of cross-phenotype associations in GWAS studies, where the underlying aetiopathology remains unclear. Current diagnostic tools may be insufficient, and many treatment options may result in unintended side effects.

Recent studies, especially in psychiatric disorders and cancer, highlight significant comorbidity and genetic overlap. Comparative analyses across different types of cancers or psychiatric disorders reveal extensive genetic similarities, suggesting shared biological mechanisms across multiple phenotypes. This shared genetic architecture at the gene and pathway/network levels could provide valuable insights into disease classification. To address these complexities, designing gene-based and sub-network/pathway-based meta-analyses that integrate summary-level data across multiple phenotypes can capture aggregate-level pleiotropic associations. This approach leverages information from diverse population GWAS datasets and multiple variants within genes or gene sets. A deeper understanding of pleiotropy promises to offer new perspectives on disease classification, personalized medicine efforts such as drug repurposing, and the prevalence of non-responsive patient populations.

Thesis Outline

1. **Chapter 2**: Reviews existing meta-analysis methods at the variant, gene, and pathway levels, providing a mathematical description of each approach.
2. **Chapter 3**: Introduces ancMETA, a tool for performing GWAS meta-analysis at the gene and subnetwork levels using variant GWAS summary statistics and protein-protein interaction (PPI) data. This chapter demonstrates the tool's application with simulated data and real data on bipolar disorder.
3. **Chapter 4**: Investigates the genetic overlap between suicide and psychiatric phenotypes using ancMETA, analyzing summary GWAS studies from the FinnGen cohort to elucidate shared genetic contributions and molecular mechanisms underlying these disorders.
4. **Chapter 5**: Explores the genetic overlap between suicidality and subcortical brain structures using ancMETA, further probing shared genetic mechanisms.
5. **Chapter 6**: Summarizes findings from the preceding chapters and discusses future directions for GWAS meta-analysis, emphasizing insights into both single phenotype and cross-phenotype signals, with a focus on shared molecular mechanisms underlying correlated disorders.

This structured approach aims to advance our understanding of complex genetic relationships and their implications for disease management and therapeutic strategies.

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Chapter TWO: FROM SNP TO PATHWAY-BASED GWAS META-ANALYSIS: DO CURRENT META-ANALYSIS APPROACHES RESOLVE POWER AND REPLICATION IN GENETIC ASSOCIATION STUDIES?

This chapter is published in Briefings in Bioinformatics

Defo, J., Awany, D., & Ramesar, R. (2023). From SNP to pathway-based GWAS meta-analysis: do current meta-analysis approaches resolve power and replication in genetic association studies? *Briefings in bioinformatics*, *24*(1), bbac600. https://doi.org/10.1093/bib/bbac600

OXFORD

Briefings in Bioinformatics, 2023, **24(1)**, 1–14
https://doi.org/10.1093/bib/bbac600
Review

From SNP to pathway-based GWAS meta-analysis: do current meta-analysis approaches resolve power and replication in genetic association studies?

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Abstract

Genome-wide association studies (GWAS) have benefited greatly from enhanced high-throughput technology in recent decades. GWAS meta-analysis has become increasingly popular to highlight the genetic architecture of complex traits, informing about the replicability and variability of effect estimations across human ancestries. A wealth of GWAS meta-analysis methodologies have been developed depending on the input data and the outcome information of interest. We present a survey of current approaches from SNP to pathway-based meta-analysis by acknowledging the range of resources and methodologies in the field, and we provide a comprehensive review of different categories of Genome-Wide Meta-analysis methods employed. These methods highlight different levels at which GWAS meta-analysis may be done, including Single Nucleotide Polymorphisms, Genes and Pathways, for which we describe their framework outline. We also discuss the strengths and pitfalls of each approach and make suggestions regarding each of them.

Keywords: meta-analysis, genome-wide association studies, pathway, genes

Introduction

Genome-wide Association Studies (GWAS), which have successfully uncovered thousands of genetic variants and new genetic loci in human populations susceptible to complex traits or diseases, have begun to progressively move patients' treatment/-management to personalized medicine [1, 2]. Despite its relevant successes in the field of human-health genomics, GWAS recorded several challenges and limitations. As illustrations of these barriers, many single GWAS represents work on small or moderate sample sizes which compromise statistical power to discover a true association signal, thereby jeopardizing the relevance of a potential candidate signal [3, 4]. Moreover, it is well known that several detected disease-causing single nucleotide polymorphisms (SNPs) have small to moderate effects and their joint action cannot explain all the phenotypic variation; a phenomenon referred to as 'missing heritability' problem [5–7]. Other possible causes for the missing of true phenotype-associated markers in GWAS are thought to be due to the insufficiency of genomic coverage by markers on genotyping arrays, and the multiple testing burden from the simultaneous association testing of several SNPs [8]. The applied multiple testing correction allows a small number of SNPs to be significant, while truly associated markers not attaining significance threshold go undetected. The classical single variant approach to ascertain the association between a variant and a phenotype is limited and lowers statistical detection power given the evidence that most phenotypes result from the influence of many genetic variants in many genes and pathways [9–11]. The effect of one variant on multiple phenotypes (pleiotropy) has become an increasing phenomenon in complex diseases. Thus, the association with one single phenotype may lose the power to uncover genetic variants associated with multiple phenotypes to better understand genetic mechanisms influencing complex diseases/traits [12,13].

To overcome these shortcomings, scholars have embarked on a large-scale meta-analysis of GWAS, a statistical technique to boost statistical power to detect true associations by synthesizing and aggregating datasets and statistical estimates from two or more independent studies [3,14]. A particularly appealing merit of the method is its use of summary statistics, rather than raw genotype data. Because of this, the method has become increasingly popular in genomic analysis for complex traits, with the benefit of minimizing workload when handling genotype data from GWAS analysis while focusing on the use of published summary statistics. In addition, GWAS meta-analyses offer the potential to recover signals that a single (perhaps underpowered) study might miss [15], while at the same time addressing both 'between-study' and 'between-population' heterogeneity, thus helping uncover association signals in the presence of background heterogeneity and confounding in populations of interest [14–16]. With the advent of multiple consortia that facilitate the sharing of data between several studies, it is now feasible to perform Genome-Wide Association Meta-Analysis (GWMA).

The GWMA literature enables us to identify three categories based on the method employed, namely: (i) the SNP-based approach, (ii) the gene-based approach and (iii) the pathway-based approach. The SNP-based GWMA approach utilizes one genetic variant at a time, usually assuming fixed-effect for quantitative traits, and is mostly applied to the analysis of

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Received: September 8, 2022. **Revised:** November 30, 2022. **Accepted:** December 6, 2022
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common variants. Such approaches help solve inconsistent results of a single SNP association to a disease/trait in a given population, ensuring the replication of that SNP by maximizing its power. The gene-based GWMA approach is motivated by the fact that genetic variability of complex traits is the result of the influence of many genetic variants within a gene; each variant, having a small effect on the disease/trait [14]. This approach aggregates the summary information of independent causal variants within a candidate gene or genes to enrich association signals and reduces the penalty of multiple testing [17,18]. Frameworks within this category of methods include fixed as well as random effects models to ascertain associations. The fixed-effect models assume homogeneity of genetic effects in all studies, whereas random effect models treat genetic effects as heterogeneous in all studies [13,16].

The pathway-based GWMA approach is novel, in that it integrates meta-analysis at gene level into pathway enrichment. Pathway analysis has become a powerful tool to complement GWAS and enable the tagging of gene sets included in the same pathway for the study of a phenotype [4,19]. Different genes may be involved in the same pathway and may collectively contribute to identifying associations that single SNPs might have missed [11]. Owing to this, pathway-based GWMA is increasingly becoming the method of choice to evaluate the interactive effects of candidate genes comprising biological pathways in complex traits [20]. While many reviews have already described and/or rated different meta-analysis methods and software packages [3,14,21], little effort has been made to classify the different existing methods with a focus on the GWAS summary level unit information, and the statistical models employed.

We aim to describe and summarize different GWMA methodologies for SNP, gene and pathway-level meta-analyses and to assess some of the commonly used statistical tools. In doing so, we hope, to some extent, to update the review on different GWMA methods with the methodological developments in the field. We also hope to discuss the strengths and pitfalls of the various methods.

Brief historical note on GWAS meta-analysis

Meta-analysis refers to the use of statistical methods to combine and compare evidence from different independent studies. Statistical approaches to combine evidence can be dated back to the 17th century with the works developed by Blaise Pascal and Pierre di Fermat on probability theory and gambling [22]. Only recently was the term 'meta-analysis' first formulated by American statistician, Gene Glass who defined it as the analysis of analyses, and illustrated this concept in different analyses related to educational research [23]. The first application of meta-analysis was attributed to Pearson in 1904 who appraised the performance of an enteric fever vaccine across multiple clinical studies [24]. Pearson identified that the correlation between vaccination for enteritis fever and its mortality is subject to 'remarkable variations' and that the effect of enteric inoculation is largely influenced by the difference in the environment or of the treatment. He consequently recommended additional investigation using volunteers where every second participant would receive the inoculation [24]. With the availability of cheaper genotyping methods, the completion of the human genome project in 2003, and the success of the International HapMap Project, the study of genetic polymorphisms has grown rapidly to increasingly become a primary tool to locate susceptibility variants for common and complex diseases. As a result of inconsistent replications of several variants [25], researchers turned to meta-analysis to summarize results across multiple GWAS [26,27]. Since then, this technique has become a valuable approach being regularly used to discover genetic signals underlying complex traits and to replicate previously identified variants.

Popular approaches for SNP-based GWMA

In order to perform GWMA, one usually accesses a study containing SNP summary statistics, and information on the purpose of the study and the variables of interest. The summary statistics may contain labels about SNPs, odds ratios, *P*-value, effect sizes or other metrics along with their uncertainty (variance, standard error, 95% confidence interval) [15]. Most of the accessible information is in the structure of the summary statistics. Although summary statistics vary from study to study, they typically incorporate data about the SNP with its estimated effect on the phenotype under study [3]. The SNP-related information consists of the genomic region (in each build of the human genome), along with its alleles and (sometimes) the minor allele frequencies (MAFs). Information about the SNP's association frequently encompasses the effect size estimate, its standard error, or a 95% confidence interval and the *P*-value of the association between the variant and the phenotype. All these statistical records are in smaller files compared with the original genotype data which lessens the risk of uncovering individual data about study participants [14,28]. All the above-mentioned indicators are important as part of the computational process to generate new statistics using an appropriate mathematical approach that will help achieve the purpose of whether new variants along with their effect size have been detected, or loci have been replicated (confer some of these approaches in Supplementary File Section 1, available online at http://bib.oxfordjournals.org/). This process includes issues such as information aggregation, estimation of heterogeneity and summary effects [3,28]. The summary effect usually encompasses the output SNP label being meta-analysed, followed by its statistical indicators which include overall effect size, standard error, *P*-values and 95% confidence interval.

Pitfalls of SNP-specific GWMA

Despite the ongoing success of unveiling new SNPs and replicating previous SNPs in association with the disease/phenotype, the SNP-based meta-analysis approach only uses one genetic variant at a time and is mainly applied to analyse common variants. This approach does not account for the combination of genetic variants involved in the risk of the disease/phenotype as many phenotypes are polygenic. Therefore, performing an SNP-based meta-analysis may not improve the power of association when it comes to measuring the pooled effect of variants within the same biological unit (gene) involved in the biological pathway of the disease. Moreover, existing methods focused on measuring the combined effect of a SNP in the same phenotype, assuming that independence across studies tend to forget that data on several traits can be collected from the same cohort of individuals, which could result in the fact that studies may share individuals across traits. As a result, the assumption of independence across studies may not hold with the presence of overlapping individuals across studies [29,30]. In addition, the labelling and codification of SNPs may vary from data set to data set because of the so-called 'strand' issue [21,31]. Sometimes, using a small subset of SNPs, the coding of the SNPs in different studies may often cause similar effects that, in reality, look opposite, and where the diverse

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features of GWMA software packages do not always produce the expectation caused by the SNP-specific effect [21]. Moreover, Begum and co-workers mentioned the choice of the genetic model used in GWAS to be included in GWMA, which constitutes a relevant challenge [21]. The GWAS summary statistics result from a particular approach, as there are different GWAS approaches for SNP phenotype disease/association. Although it is not compulsory to employ the same model in each study, the downside of this is that synthesis of all these studies might not always be possible. To our knowledge, there has not been a study of the impact of different GWAS studies on meta-analysis. The combination may cause some level of heterogeneity effects which could fail to comply with the Fixed Effect Meta-analysis (FEM) assumptions on a particular study or disease of interest [21].

Databases and software packages

Early studies on GWMA were based on multiple SNP-based GWAS summary statistics. To increase power, and ensure the replication of findings, researchers have embarked on extensive data collection. As a result, large international consortia and various databases have been formed (see Table 1) with the purpose of combining their data into meta-analyses, generally with tens of thousands of samples, and to validate the significant sets of variants found using the usual GWAS approaches. Various packages have been introduced under prior assumptions to perform GWAS SNP-specific meta-analysis (Table 2). For instance, Willer and colleagues [32] developed METAL, a two-stage meta-analysis which consists of (i) computing a weighted Z-score based on the sample size, effect size and *P*-value observed in each study, indicating how an allele is associated with lower or higher disease risk/quantitative trait levels, and (ii) generating a weighted effect size estimate based on their study-specific standard error [32]. Another useful package is MetABEL, a component of GenABEL, which applies a fixed effects model like METAL, and visualizes the results. PLINK also, an open-source package, can perform either fixed or random effect meta-analysis. GWAMA is another package which performs meta-analysis correcting for population structure within each study and potential variants between studies. GWAMA applies two measures of heterogeneity of allelic effects between studies and presents the option to perform random-effects meta-analysis in the presence of heterogeneity [33]. METASOFT has been proposed by Han and Eskin for the binary effect assumption and proposed optimal tests to detect whether some studies have an effect or not and to identify the association in the presence of heterogeneity [34]. As mentioned in the previous section, MANTRA and TransMeta have been introduced for the meta-analysis of results from multi-ethnic studies, modelling the genetic effect heterogeneity across diverse populations [16,35]. This model assumes genetic distance to be the correlation structure across ancestry groups with genetic effects taken as random variables. TransMeta achieves robust power using adaptive variance components regardless of the degree of genetic effect heterogeneity [35]. Recently, Turley and colleagues developed a tool called MAMA [36] which perform GWAS meta-analysis from distinct ancestry cohorts and produce summary statistics for each population. This tool has the advantage to account for either one or multiple phenotype.

With the increasing sample sizes and availability of variant summary statistics, GWMA has been proposed as a way forward to palliate the lack of replication of causal variants observed in GWAS, and also as a means to discover new loci that could not be identified using simple GWAS approach. Existing meta-analysis packages have emerged to increase the power of association and to detect new loci that single marker GWAS could not have detected.

Popular approaches for Gene-Specific GWMA

Over the past decades, advanced high-throughput technologies have continuously contributed to expanding GWAS. However, detecting genetic variants that have low disease risk still poses a challenge. Because single SNPs, alone, might not be responsible for a complex trait/phenotype, designing a meta-analysis approach that combines the effect of various SNPs within genes, or genes within pathways, from multiple independent population GWAS may help identify associations with small effect sizes and increase the association power.

Most of the statistical methods used in meta-analysis for GWAS focused on single genetic variant approaches by using one genetic variant at a time. These approaches do not fully account for the role of differential gene expression patterns across different tissues [44]. Small sample sizes lower the power of detection of signals of single markers due to differing patterns of linkage disequilibrium [45]. Moreover, current approaches have a lower power to detect true signals from variants with weak effects. There is evidence that multiple variants with low effect sizes, or rare variants within a region, can influence one or several traits at a time. Classical low-frequency, single-variant-based association tests, with modest effects, or rare variants, are underpowered even with the presence of large sample sizes [14,45]. Furthermore, due to poor statistical power, SNP-based analyses often ignore uncommon variations, whereas gene-based analysis may combine data from both common and rare variants and hence capture more genomic diversity than SNP-based analyses. In an attempt to strengthen and replicate signals accounting for weak effects at a time, gene-based or region-based approaches that handle multiple variants are more impactful [46]. In this regard, aggregation techniques of rare variants or low-effect variants within genes to generate score-type statistics are more valuable and efficient, particularly for binary traits [45].

Aggregation tests to detect signals of association

Gene-level association testing with rare or low-effect variants within genes has recently become a means of ascertaining gene associations with phenotypes of interest. The customary approach consists of combining information from several variants within a gene to improve association signals and to reduce the penalty of multiple testing in a linear regression framework. The most straightforward and common methodology is the burden test (or collapsing test) which computes the burden score for each set of variants in a gene for each study sample, using either a cohort allelic sums test (CAST), with binary value [47], or a weighted sum of allele counts in the region, with weight dependent on MAFs [48]. Another form of burden test is the Combined Multivariate and Collapsing test, wherein CAST is performed after having divided SNPs into subgroups according to their MAFs [49].

An alternative set of methods of aggregation is the variant threshold (VT) method which aggregates the variants within a gene in which the MAFs are under a certain threshold and minimizes the *P*-value over the observed MAF thresholds [50,51]. Other methods include the variance-component tests, to detect association of SNPs within a gene with opposite effects such as the C-alpha test [52] and the Sequence Kernel Association (SKAT) test [53]. A related test named the optimal unified SKAT-O test

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Table 1. List of available summary statistics level GWAS results database

Consortium	Disease targeted	Specific features	Online download link
UK BioBank (UKBB)	Arthritis, cancer, depression, diabetes, and forms of dementia, eye disorders, Heart disease, osteoporosis, stroke,,,,	Consist of at least 500 000 participants, aged 40–69 years, from the UK general population. Sample size and statistical power are considered based on two angles: the exploration of the power profile of nested case–control studies and the likelihood number of cases that UKBB is projected to create for a range of important complex diseases	https://sites.google.com/broadinstitute.org/ukbbgwasresults/home?authuser=0 or http://geneatlas.roslin.ed.ac.uk/
Psychiatric Genomic Consortium (PGC)	Encompasses information of 11 diseases including Alzheimer's disease, attention deficit hyperactivity disorder, autism, bipolar disorder, major depressive disorder, obsessive–compulsive disorder, post-traumatic stress disorder, schizophrenia, Tourette syndrome, eating disorders, substance use disorders and all other anxiety disorders	Aim to elucidate the genetic basis of psychiatric disorders with more than 400 000 subjects with the goal to obtain GWAS data on 100 000 cases for each disorder	https://www.med.unc.edu/pgc/results-and-downloads
Enhancing Neuro Imaging Genetics Through Meta Analysis (ENIGMA)	contain group of diseases including psychiatric disorders, Infectious diseases/cancer and neurological disorders and brain volume	Contains more than 50 000 subjects and affords increased power to detect subtle effects	http://enigma.ini.usc.edu/research/download-enigma-gwas-results/
Genetic Investigation of Anthropometric Traits (GIANT)	Encompasses anthropometric traits including body mass index (BMI), height and traits related to waist circumference (such as waist-hip ratio adjusted for BMI, or WHRadjBMI)	Contains summary statistics (effect size, direction and *P*-value) of more than 2 million genotyped and imputed SNPs and high degree of ethnic differences, incorporate results of more than 100 000 individuals	http://portals.broadinstitute.org/collaboration/giant/index.php/GIANT_consortium_data_files
Cohorts for Heart and Ageing Research in Genetic Epidemiology (CHARGE)	Provides data of 14 phenotypes collected from five different cohorts (the Age, Gene/Environment Susceptibility-Reykjavik Study, the Atherosclerosis Risk in Communities Study, the Cardiovascular Health Study, the Framingham Heart Study and the Rotterdam Study). These phenotypes encompass atrial fibrillation, blood pressure, body mass index, bone mineral density, C-reactive protein, carotid intima-media thickness, echocardiography, electrocardiographic PR and QRS interval, fasting insulin, haematocrit, pulmonary function, retinal venule diameter and stroke	Genome-wide data collected from more than 38 000 individuals and provide power calculation for continuous and binary phenotype	http://www.chargeconsortium.com/main/results
Diabetes Genetics Replication and Meta-analysis (Diagram)	Only focusses on Type 2 Diabetes (T2D) with sample from individuals of European, East Asian and South Asian descent	The database contains GWAS summary statistics and metabochip data issued from various set of studies	http://diagram-consortium.org/downloads.html
Coronary ARtery DIsease Genome wide Replication plus the Coronary Artery Disease (CARDIoGRAMplusC4D)	Targets the identification of risk loci for coronary artery disease and myocardial infarction	The data contains 60 801 cases and 123 504 controls of mixed ancestry across 48 studies (77% European; 13% South Asian; 6% East Asian) with 220 SNPs. The dataset has ample power to detect variation at odd ratio and allele frequencies level	http://www.cardiogramplusc4d.org/data-downloads/
Wellcome Trust Case Control Consortium (WTCC)	Tuberculosis, Malaria, Autoimmune thyroid disease, Type 1 and 2 diabetes, Breast cancer, Crohn's disease, Coronary heart disease, Rheumatoid arthritis, Ankylosing spondylitis, Multiple sclerosis, bipolar disorder and Hypertension, Anorexia Nervosa, HIV-1, Renal Transplant Dysfunction, Pre-Eclampsia and Primary Biliary Cirrhosis	WTCC contain samples from individuals of African descent in a study of host resistance to infectious diseases (2000 cases of tuberculosis and 2000 cases of malaria, as well as 2000 shared controls). In addition, 6 diseases including coronary artery disease, Crohn's disease, hypertension, rheumatoid arthritis, type 1 diabetes and type 2 diabetes, each with 2000 cases and shared 3000 controls. Estimation of statistical power depend on the number of studies used and the statistical method	https://www.wtccc.org.uk/ccc1/summary_stats.html

(Continued)

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Table 1. Continued

Consortium	Disease targeted	Specific features	Online download link
Genome-Wide Repository of Associations (GRASPv2.0)	GRASP contains diverse and numerous traits/phenotypes encompassing 177 categories: quantitative traits, neurological-related phenotypes, blood-related phenotypes, cardiovascular disease and cardiovascular risk factors, cancer, inflammation, behavior-related phenotypes and more	The database contains 8.87 million SNP associations reported in 2082 studies and has a web interface for direct query	https://grasp.nhlbi.nih.gov/FullResults.aspx
LD Hub (collaborative consortium developed by institutions and consortia)	Grouped GWAS summary statistics of 173 diseases/traits from publicly available resources from individuals of European and non-European descent	the database encompasses more than 965 GWAS summary-level datasets, with a web-interface where LD score and genetic correlation can be estimated; however, no statistical power is provided	http://ldsc.broadinstitute.org/
Human Heredity and Health in Africa(H3Africa)	Focus on two set of studies: one set studied the interactions between disease-causing microbes and human hosts; another set investigated non-communicable diseases such as hypertension, stroke, heart disease, diabetes or cancer, which are all becoming more common among African populations. GWAS includes 1000 cases and 1000 controls. But some other studies may involve more than 10 000 individuals all of them from African populations	Encompasses African data from the 1000 Genomes Project and the African Genome Variation Project with slightly 2.4 million SNPs information derived from H3Africa Projects	https://h3africa.org/

[54] has been introduced to make the most significant weighted linear sum of the burden and SKAT tests. The above-mentioned tests can be extended to meta-analysis using an aggregation approach and have become the basis for the construction of several bioinformatics packages to meet the demand for gene-level associations. Some of these tests will be described in the following section.

These techniques using aggregation of rare variants within a gene or region of interest are powerful to detect association of a 'causal' gene, but with limited power [46]. Thus, appropriate methods for the meta-analysis at gene level have been introduced in order to increase the power to detect associations. In this regard, summary statistics of detected genetic variants, in a particular gene, is utilized to build a score variable that incorporates association of these variants within a gene or genes for a particular disease. Such information has the relevant implication of identifying and locating genes involved in biological pathways underlying a phenotype of interest.

Software packages

Distinctive computer programs have been fashioned for the meta-analysis of gene or regional variants via a score-statistic-based meta-analysis framework (Table 3). Such packages include MASS [18], RAREMETAL [55,56], MetaSKAT [57] and seqMeta [58]. Each package computed summary statistics (score statistics and information matrices) for each study and synthesized them to perform gene-level association tests. The pipelines for each above-mentioned packages are shown in the study carried out by Tang and co-workers [59]. Tang and Lin [59] proposed a package called PreMeta which incorporates the four meta-analysis packages and allows the consortium to synthesize incompatible file formats and non-equivalent summary statistics outputs from these packages. PreMeta proposes different transformation techniques aimed at achieving normality and reduction of type I errors [59,60]. This facilitates the incorporation of summary statistics across different studies disregarding the need to perform the analysis using each software independently. Several limitations were identified in the MetaSKAT package among other uncontrolled type I error rates in the simulation results. Also, MetaSKAT does not report which cohort is highly associated with a phenotype while detecting a specific gene cohort [61]. In an attempt to solve the limitations of MetaSKAT, Ka and colleagues proposed a Meta Quadratic Test (Meta-Qtest) [61], a meta-analysis method based on the extension of the Quadratic tests [44]. This method accounts for the relationship of multiple variants in the gene/region, keeping the original statistical model structure of the QTest, and the process of deriving the statistics. Such an approach constitutes a great advantage to maximize the test statistics [61]. Besides the above popular packages, Fan and colleagues [30] developed an approach making use of Generalized Functional Linear Models (GFLMs). GFLMs are fixed models in which association between a complex dichotomous trait and multiple genetic variants is tested using chi-squared-distributed Rao's efficient score test and likelihood-ratio test (LRT) statistics [30]. Fan and colleagues showed that Rao's score test statistics have similar or slightly lower power than MetaSKAT. In addition, the LRT statistics perform accurate type I error rates for FEM, may inflate type I error rates for REM owing to a large number of degrees of freedom and have similar or slightly higher power than Rao's efficient score test statistics [30]. Another tool called MAGA was proposed to perform gene-level meta-analysis using single variant summary statistics and correlation matrix from the available reference panel [62]. MAGA can be used as an alternative in the case when score statistics and information matrices cannot be obtained. Nevertheless, the method is limited to single ancestral populations and does not perform well in the presence of a few studies coming from different ancestral populations with few reference panels [62].

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Table 2. List of SNP-based GWAS meta-analysis

SNP-based meta-analysis				
Meta-analysis tool	**Statistical method**	**Reference**	**Comment**	**Online download link**
Fixed and random effect models				
METAL	meta-analysis based on fixed effects	[32]	use method based on P-values when fixed effects are not available	http://csg.sph.umich.edu/abecasis/metal/download/
GWAMA	Fixed effects, Random effects models	[33]	Correct for potential population structure by accounting for genomic inflation from each study, and use method based on P-values when effects sizes are not available	https://www.geenivaramu.ee/en/tools/gwama-download
PLINK	Fixed effects and random effects models	[37]	Pooling the data from various cohort for joint analysis is close to impossible because of privacy restrictions and data protection concerns	https://www.cog-genomics.org/plink/1.9/
MetABEL	Fixed effects model	[38]	perform forest plot and takes input data frame issued from the tool GENABEL	https://cran.r-project.org/package=MetABEL
METASOFT	Fixed effects, Random effects, Han and Eskin model (RE-HE) and Binary effects model	[34,39]	Detect higher power to detect heterogeneous effects over the traditional random effect	http://genetics.cs.ucla.edu/meta/
Trans-ethnic meta-analysis framework				
MANTRA	Trans-ethnic meta-analysis method using Bayesian Partition Model	[16]	MANTRA categorizes studies into ethnic clusters to account for their relatedness. Studies belonging to the same ethnic clusters have the same genetic effect. The same applies to studies belonging to separate ethnic clusters. The method contrary to another methods outcome the Bayes factor	Available under request
MR-MEGA	Trans-ethnic meta-regression method using multi-dimensional scaling to derive axes of genetic variation	[40]	The approach performs a linear regression taking the axes of genetic variation as covariates to model the allelic effect of variant across GWAS	https://genomics.ut.ee/en/tools/mr-mega
TransMeta	Trans-ethnic meta-analysis method based on Kernel Regression framework	[35]	The method builds a genetic similarity kernel using only the genotype data and fixes it prior to carrying out the data analysis	https://sites.google.com/a/umich.edu/leeshawn/software
MAMA	Trans-ethnic meta-analysis accounting for differences between populations in conditional effects, allele frequencies and LD.	[36]	Require substantial amount of reference sample to perform genetic corelation between them	https://github.com/JonJala/mama.
Multiple trait Meta-analysis Framework				
CONFIT	Meta-analysis on multiple traits with no prior assumption of relation between the traits with likelihood ratio averaged over many model	[29]	The method estimates the degree of shared effect between traits from the data. Because of the exponential growth of the runtime, it is recommended to run CONFIT with less than 10 traits	https://github.com/lgai/CONFIT.
MTAG	Fixed and random effect accounting for correlated effects across trait	[41]	For each variant, MTAG induce trait-specific effect estimate and employs bivariate linkage disequilibrium (LD) score regression to adjust for potentially unknown sample overlap between GWAS summary statistics for distinct traits	https://github.com/omeed-maghzian/mtag.git
RE2C	Use the Lin and Sullivan approach to perform random effect model accounting for correlation statistics	[42]	RE2C employs an optimization technique based on spectral decomposition and uses P-value approximation procedure using analytical decomposition of the statistics	http://software.buhmhan.com/RE2C
GPA (Genetic analysis incorporating Pleiotropy and Annotation)	Based on pleiotropy and annotation information, the tool prioritizes GWAS findings.	[43]	Assume independence between SNPs and independence between annotation datasets, the model makes use of the likelihood ratio test to assess the statistical significance of the variant.	http://dongjunchung.github.io/GPA/

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Table 3. List of available gene-level meta-analysis tool

Gene-level meta-analysis			
Meta-analysis tool	**Statistical method**	**Reference**	**Download link**
MASS	Use score statistics and covariance matrices for each study and afterwards perform meta-analysis with burden, SKAT and VT technique	[18]	http://dlin.web.unc.edu/software/mass
RAREMETAL	Use score statistics and covariance matrices for each study and afterwards perform meta-analysis with burden, SKAT and VT technique	[55,56]	http://genome.sph.umich.edu/wiki/RAREMETAL
MetaSKAT and MetaSKAT-O	Use score statistics and covariance matrices for each study and afterwards perform meta-analysis with burden, SKAT and SKAT-O	[57]	http://cran.r-project.org/web/packages/MetaSKAT
seqMeta	Use score statistics and covariance matrices for each study and afterwards perform meta-analysis with burden, SKAT and SKAT-O	[58]	http://cran.r-project.org/web/packages/seqMeta/
PreMeta	Correct summary statistics and output files format issued from the 4-above mentioned packages and include inverse normal transformation and rescaled inverse normal transformation at the meta-analysis stage	[59]	http://dlin.web.unc.edu/software/premeta
MAGA	Perform gene-level meta-analysis using single variant summary statistics and correlation matrix from the single variant tests statistics	[62]	http://userwww.service.emory.edu/%7Eyhu30/software.html
rqt	Compute score of whole gene using weighted sum of corresponding effect sizes from fitting a multivariate regression	[19]	https://github.com/izhbannikov/rqt
GFLM approach	Generalized Functional Linear Models using chi-squared-distributed Rao's efficient score test statistics and LRT statistics to test for an association	[30]	http://www.nichd.nih.gov/about/org/diphr/bbb/software/fan/Pages/default.aspx
MetaQ-test	Fixed and Random effect Models	[61]	available under request

Pathway-level meta-analysis

Ongoing studies successfully uncover the genetic architecture of several diseases/phenotypes via the analysis of large GWAS. Evidence shows that many disorders are 'polygenic' (many genetic loci contribute to risk), as reflected by disruptions in proteins that participate and involve complex interactions between genes [63,64]. Interaction between genes involved in a particular pathway (or gene set) may prioritize genes underlying the pathogenesis of complex disease risk [4]. With the availability of biological annotation of known genes, post-GWAS methods, which include meta-analysis, has shifted from single genes to gene set associations in order to ascertain the interaction of predefined lists of genes that can be involved in a pathway of disease risk and to elucidate the genetic mechanisms of the disorders, according to existing biological and functional features [65–67]. Pathway (gene set) methods, which were first initiated using gene expression profiles [67], have gradually evolved by integrating SNP genotypes [68] and, sometimes, a combination of the two [69–71]. Pathway analysis has become an efficient approach which offers the potential to detect subtle SNP effects of the same gene set, via statistical analysis of a defined list of genes having similar or related to a similar biological function [70,71]. The evidence of these defined lists of genes having similar biological and functional features may aid investigators in the interpretation of results. In addition, pathway analysis offers the potential to increase the power to detect genetic associations of the phenotype with the gene set, as compared with the power to detect association with an individual SNP [71,72]. Pathway analysis encompasses three main steps: (i) individual SNPs are mapped to genes (by genomic position) and their significance is aggregated to compute the association of each gene with the phenotype; (ii) map the gene into a predefined pathway database and quantify the enrichment score of a gene set, which summarizes association scores of genes in the pathway and (iii) elucidate the significance of the pathway based on appropriate statistical methods [65,73]. The mapping of SNPs to genes is followed by the choice of two testing approaches: (i) either for over-representation of statistically significant signals of association among genes (also called gene set enrichment) within a known biological pathway compared with the number of such signals among genes outside the pathway. This technique is labelled the 'competitive' approach. An enriched gene set is defined as a set that has a significantly higher percentage of differentially expressed genes than would be expected by chance [74]; (ii) alternatively perform a joint test of all gene-associated signals within the pathway for detecting association with the disease. Such a technique is labelled the 'self-contained' technique [69,75]. A variety of pathway databases as well as pathway analysis methods from a collection of GWAS summary statistics to detect the significance of a biological pathway have been proposed and reviewed [72,76]. These methods have shown some level of success by improving the power in pinpointing gene set activities, which uncover the genetic mechanism of certain phenotypes. However, albeit this level of success, various pathway analysis techniques often fail to provide new findings beyond what has already been uncovered due to the limited sample sizes of many current studies. As a result, combining multiple studies by integrating either the same type of SNP summary data or gene expression profiles across participating studies offers the possibility to increase power and reproducibility and could provide opportunities for detecting novel pathway associations [73].

Meta-analysis for pathway enrichment

The first approach highlighted in meta-analysis at the pathway level has been introduced by Shen and Tseng [65], motivated by the observation that the identified DE genes from microarray studies do not directly connect to the phenotype of interest, added to the need to improve the gene set enrichment analysis (GSEA) proposed by Subramanian *et al.* [69]. With the advantage of pathway analysis, they developed a tool which combines the statistical significance across studies at gene level before moving to pathway analysis or at the pathway level after pathway analysis. The method includes three method frameworks denoted: (i)

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MAPE at gene level ($MAPE_G$), (ii) MAPE at pathway level ($MAPE_P$) and (iii) MAPE integrated ($MAPE_I$).

Shen and Tseng [65] made an important foundational effort in developing MAPE. This model holds promise in exploring power increase in pathway association; however, MAPE methods may be subject to power loss, as they do not account for different set sizes in their permutation-based procedures, and fall short of clearly managing between-study heterogeneity. All these limitations affect the performance of MAPE methods and have led several scholars to develop alternative tools to overcome these shortcomings [77].

Integrated Bayesian model for meta-analysis of gene set enrichment

Chen and colleagues [74] proposed an integrated Bayesian framework, which models gene expression data from multiple studies and gene set information, and perform differential expression analysis, together with gene set enrichment analysis and meta-analysis. Unlike MAPE, which makes use of a sequential approach, Chen and co-workers proposed a Bayesian inference model, which jointly models gene set information and expression data from multiple studies and exhibits between-study heterogeneities for gene expression data by including non-overlapping genes [74].

One of the advantages of this approach is the integration of all the parameters in the model to perform pathway/gene set meta-analysis in parallel rather than in a sequential manner. Despite great human efforts to locate the convergence of Markov Chain Monte Carlo in the model, the use of the classification strategy makes the results relatively easy to interpret [74]. However, the model is limited to binary phenotypes making it difficult to perform gene set enrichment for complex traits.

Integrative gene set enrichment analysis

In the perspective of improving the gene set meta-analysis using gene expression statistics, Lu and colleagues proposed a method which integrates multiple independent gene-set enrichment studies sharing a common phenotype. This method allows the possibility to choose either a Fixed Effect, Random Effect meta-analysis approach or Adaptive testing approach for achieving robustness against model misspecification. This model applies to both discrete and continuous phenotypes [77]. The algorithm process includes the computation of the gene level statistics for each study taking information from the gene expression level data, followed by the overall computation of the gene level meta-analysis based on score statistic [18,60] to address between-study heterogeneity, and finally, using an appropriate database of gene sets, ascertain enrichment of the identified gene sets [77].

The model recommends the use of Adaptive testing in combining GSEA studies because of its performance in fitting multiple gene set sizes. However, the permutation procedure is much slower when the number of genes is larger [77]. The model is found to outperform the MAPE method [65] in terms of power and is able to adapt for covariates in the computational process. The method can extend its application to microarray analysis and NGS experiments in addition to other omics such as epigenomic studies in large consortia [77].

Meta-analysis with quantitative set analysis for gene expression

One of the methods introduced in gene set analysis was the quantification of gene set differential expression activities via a probability density function (PDF) rather than a *P*-value as widely used [78]. This approach labelled QuSAGE, accounts for gene–gene correlation and uses a modified PDF to generate a variance inflation factor (VIF) from the data without assuming equal variances for all the genes in each gene set [78]. Meng and colleagues [79] extended the QuSAGE approach to meta-analysis which can be summarized in three steps: (i) gene sets analysis for each study is carried out through QuSAGE whereby, through PDF, the activity of each gene is quantified. After that, all PDFs for each gene belonging to a particular gene set are synthesized using numerical convolution in a single activity. The VIF is generated accounting for gene–gene correlations assuming no equal variance for all the genes in each gene set; (ii) the model performs meta-analysis in which the PDFs of all individual studies are combined using a weighted numeric convolution algorithm in a function called 'combinePDFs' [79]. This process is preceded by a sampling of a finite number of points proportional to its weight from each continuous PDF within an interval that encompasses their ranges. The weighting factor from the combination denotes the sample size for each study; (iii) the significance of the combination is extracted from the combined PDFs and the figure of the outcome is visualized in a function called 'plotCombinedPDF' [79]. By modelling the intra- and inter-study variance this way, the method increases the power of analysis by detecting biologically appropriate gene sets that could not be identified via single studies while at the same time adjusting for variance inflation allowing it to also account for gene–gene correlations. In addition, the statistic used to describe gene set activity (PDFs) is based on the numeric convolution algorithm which fully accounts for the differences and the direction of the gene set activities. This measure provides a better accuracy estimation compared with the *P*-values or single statistics, which does not fully uncover the gene set activity [79]. However, the method ignores the heterogeneity of variance in high-throughput data and disregards the nature of gene set overlap in different gene sizes. These aspects affect gene set activities in the sense that, in the gene annotation database, several genes sets overlap as a result of genes involved in different pathways and processes [80]. This area could be an avenue for future investigations.

Meta-analysis-based summary adaptive rank truncated product

In the preceding sections, we describe methods which perform pathway-based meta-analysis using gene expression data added to their advantages and limitations. GWAS-based pathway analysis is a powerful tool to complement GWASes to detect significant gene sets that may explain the studied trait/phenotype. More recently, many GWAS-based pathway analysis has been successfully used to investigate associated pathways and to uncover the genetic mechanism of complex human traits/phenotypes [68,72,75]. Since standard marker approaches may miss genes involved in the same pathway, combining the same type of GWAS summary data across multiple contributing studies offers the possibility of bringing about novel pathway associations that might not have been discovered using a single study approach. Moreover, pathway-based meta-analysis provides the option of evaluating biological consistency across GWAS results and reduces the multiple comparison burden besetting the identification of novel loci involved in new pathways for the outcome of interest [81]. Summary adaptive rank truncated product (sARTP) is a method which takes as input GWAS SNP association results from multiple studies, added to their correlations estimated from a sample of reference panels with individual-level genotype data [81] (confer method description in Supplementary File Section 3.4, available online at http://bib.oxfordjournals.org/). Though the

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model provides possibilities to identify novel pathway signals that were undetectable due to the limitation of sample size, Zhang and colleagues mentioned the importance of SNP coverage information to accurately compute a variance–covariance matrix as most of the consortia do not provide this element. Zhang demonstrated that a lack of SNP coverage information may lead to an inflated false positive rate [81]. This method provides an avenue to extend the model accounting for LD structure in different ethnic populations [81].

Meta-analysis of gene set analysis (META-GSA)

Investigating the genetic basis of complex diseases and identifying their molecular mechanism using GWAS results has become a research target for personalized medicine. As a result, gene set analysis procedures were suggested as complementary approaches to ascertain the genetic basis of a disease, by searching for sets of genes sufficiently enriched with significance for an association with phenotype [68,71,82,83]. Most gene set analysis approaches generate no effect estimates, rather *P*-values obtained from one-sided statistical tests. Those *P*-values are computed based on SNPs GWAS summary information belonging to specific genes involved in a pathway using a gene-pathway annotation database [83]. However, minor alleles from these markers can be observed simultaneously as risk factors in one study and as protective factors in another. Thus, the significance of a gene set may occur simultaneously with a lack of concordance patterns observed among SNPs associated with phenotype [84]. It is motivated by this observation that Rosenberg and colleagues [84] developed an approach (META-GSA) which aimed at aggregating *P*-values of gene set analyses accounting for the concordance of the signs of single-marker-association point estimates and related *P*-values of all SNPs assigned to genes contained in the gene set. The hub aspect of this approach is the introduction of directed *P*-value and the pooling of gene set *P*-values. The performance of META-GSA follows four necessary steps which use marker-specific information and study-specific weight to ascertain the null distribution of the test statistics as well as its overall significance.

META-GSA has been found to be applicable to any gene set analysis method, with the possibility of adding individual participants' genotype data, which seems more powerful than methods based on GWAS summary statistics. However, the model is limited by its reliance on SNP, gene and pathway annotations in databases, which are currently incomplete. Furthermore, the model generates *P*-values and does not provide effect estimation, hence reflecting incomplete activity information at the pathway/gene set level.

Other methods

Besides the method described in our previous sections, additional methods have been proposed to conduct MAPE. For instance, Kaever and colleagues [85] introduced a framework which performs meta-analysis of *P*-values secured from pathway enrichment analysis of multiple dependent or independent data sets from different omics platforms. For independent *P*-values, the framework either makes use of Fisher's [86] to combine *P*-values into a chi-square distribution, or Stouffer's [87] method to combine *P*-values into a normally distributed random variable. For dependent *P*-values, the model applies Brown's method [88] from a scaled chi-squared distribution, and a covariance matrix between data sets estimated from the standard normal deviates of the pathway-specific *P*-values, which were obtained for each single data set in Pathway Enrichment Analysis [89]. The tool has the advantage to ascertain the correlation between different data sets and condense the outcomes of multiple analyses but also distinguishing experiment-specific key pathways [85]. Furthermore, Nguyen *et al.* [90] developed a bi-level meta-analysis framework in the context of pathway analysis. This method split each data set into small dataset in which pathway analysis is being performed, then combine each data sets for each pathway using either an additive method or central limit theorem to ensure the accuracy of the outcome indicators [90]. The output sorts a list of pathways ranked according to the combined *P*-values adjusted for multiple comparisons using False Discovery Rate.

Challenges in pathway-based meta-analysis

Pathway-based meta-analysis methods have paved the way to detect novel pathways/gene sets significantly enriched in a phenotype of interest. However, one of the challenges facing this approach is the availability of gold-standard datasets. Though many consortia are being set up to build a standardized database, many remain to be done in terms of harmonization, and this could facilitate the development of a better statistical approach and help evaluate the current methods. In addition, with the availability of the aforementioned methods, there has been no concrete evaluation between them to ascertain the sensitivity and specificity of their measures either at the meta-analysis stage or at the pathway stage. It is also noteworthy to mention that genes often have multiple functions and the presence of an associated gene in a pathway does not necessarily establish a pathway-level association despite the model being used [83]. Importantly, due to the presence of multifunctional genes (genes involved in several biological functions or molecular processes), gene set overlap may occur, and these aforementioned methods ignore this overlap which is an integral part of gene set databases. Gene set overlap is an important challenge that needs to be investigated to address the pleiotropic effect of gene sets [91]. Quantitative approaches for pathway-based meta-analysis make use of well-known gene set databases as input in the pathway analysis step. Hence, the choice of the gene-set database has a significant effect in the analysis workflow [68]. Moreover, genes associated with phenotypes are not well represented. Then, an evaluation of the appropriate gene-set database is needed to better conduct pathway-based analysis and meta-analysis [68,91].

In general, GWAS meta-analysis whether at SNPs, gene or pathway level carries some limitations that require an undertaking to help improve the accuracy of statistical outcomes and make relevant implications. The hypothesis that different datasets are sampled independently is an important assumption in GWAS meta-analysis. Individuals overlap across datasets may result in a similar association signal in each dataset, artificially confirming this signal and leading to a spurious association reported by the meta-analysis. Because individuals in a given dataset are exposed to a particular environmental influence that causes a gene–environment interaction, an association signal may be present in one dataset but not in another. Individuals in both datasets may be genetically vulnerable to this impact, but it will not be noticed in one dataset due to the absence of the environmental effect. This might result in erroneous negative findings in comparison analyses once more. A similar scenario can occur when a gene–gene interaction influences phenotype and the relevant interacting genotype is present in one dataset but not the other. The same gene may then be related to only one of the two datasets. Moreover, population structure can lead to the discovery of specific loci associated with phenotypes that are simply tied to geography and local environmental realities that affect the

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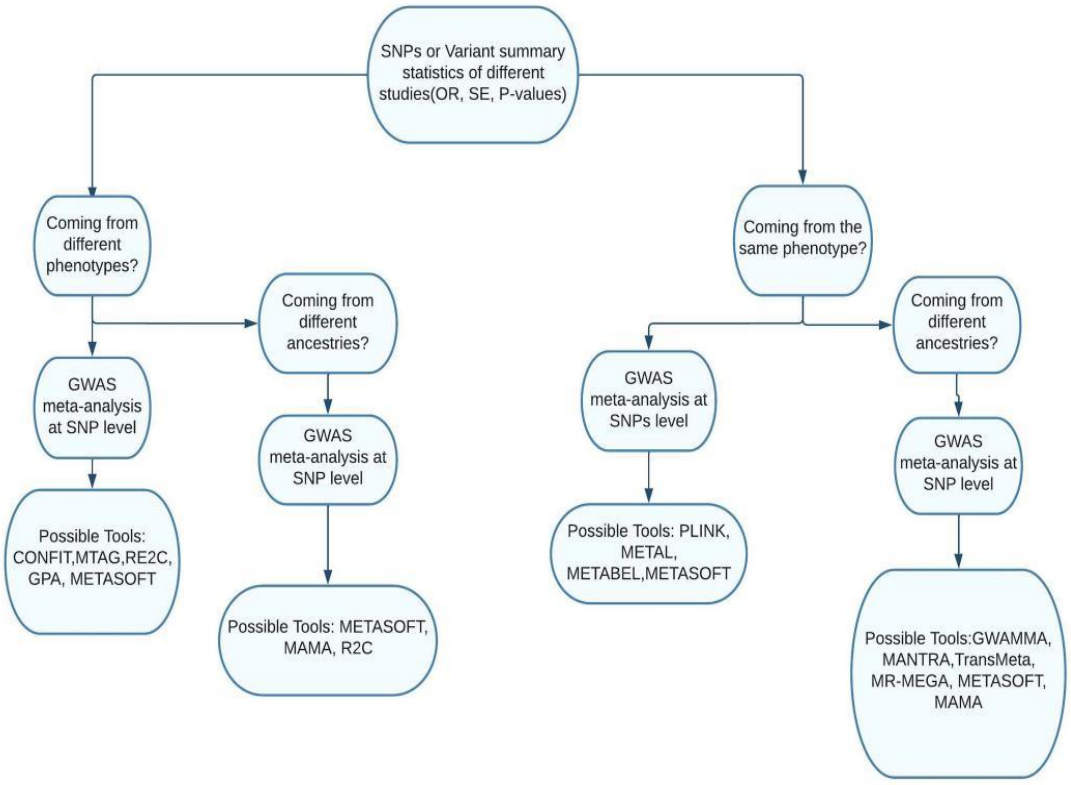


Figure 1. Similarities and differences with possible tools at SNP-level meta-analysis.

phenotype. Furthermore, as in genome-wide association research on a single dataset, these systematic ancestral discrepancies between distinct phenotypic classes can contribute to misleading relationships. Because of this possible confounder, if two or more traits are highly correlated with kinship, they may display shared genetic-association signals. When meta-analysing, FEM is usually carried out, in which the effect of a genetic variant is considered to be the same across all datasets. Although the FEM is the most popular approach to meta-analysis, if the datasets reveal significant genetic heterogeneity, the abovementioned assumption will be violated. As a result of the latter, it will yield inflated *P*-values, false-negative and false-positive findings. Because multiple genotyping technologies are used, distinct sets of genetic markers are frequently included in different datasets. As a result, the SNP having the strongest association in one dataset may be absent from another. This necessitates either: (i) limiting the analysis to SNPs present in all datasets issued from the same genotypic platform, (ii) assessing the score at the gene level rather than the SNP level or (iii) imputing missing SNPs in each dataset [92]. If the studies to be included in a comparative analysis or meta-analysis were imputed using different techniques and/or different haplotype panels obtained from a different ethnic population than the intended one, the data will be more heterogeneous.

To sum up, GWAS meta-analysis has become a valuable technique to increase the power of association of functional units whether variant, gene or set of genes involved in the same pathway. Though this technique mostly makes use of SNPs information, but its application can also be extended at structural variation summary information. Such an approach has helped validate numerous replicable genes increasing the risk of various

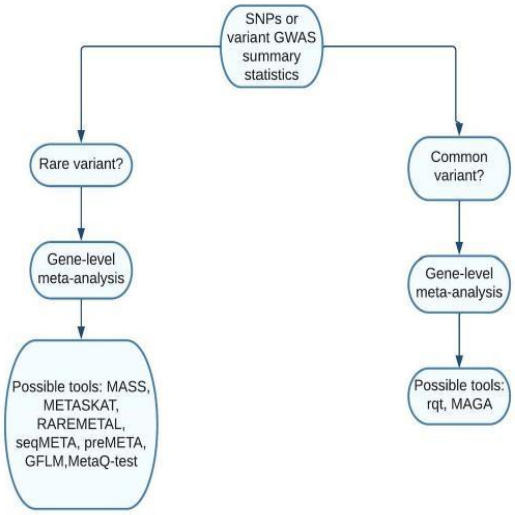


Figure 2. Similarities and differences with possible available tools at gene-level meta-analysis.

complex phenotypes or diseases and has suggested targets for biological follow-up and drug development. However, false-positive discoveries (type I or type II errors) can result from a variety of factors, including ascertainment bias, phenotyping or genotyping error, population structure or cryptic relatedness.

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Table 4. List of available pathway-based meta-analysis tool

Tool	Analysis framework and method	Input	Output	Reference
MAPE	meta-analysis of gene expression + pathway analysis	Gene expression profiles data	pathway enrichment score *P*-value and *Q*-value	http://www.biostat.pitt.edu/bioinfo/
Bayesian	Bayesian Inference of gene sets	Gene expression profiles data	False discovery rate	http://qbrc.swmed.edu/software/
iGSEA	meta-analysis based on FE and RE models with KS for enrichment score	Gene expression profile data	KS statistic, *P*-value, *Q*-value	https://CRAN.R-project.org/package=iGSEA
META-GSA	aggregate *P*-values from gene set analysis accounting for the concordance of the signs of single marker-association point estimates and related *P*-values of all SNPs assigned to genes contained in the gene set	SNP summary statistics	*P*-value of the combined gene sets	https://journals.plos.org/plosone/article?id=10.1371/&&&&journal.pone.0140179#pone.0140179.s013
sARTP	meta-analysis with FE models with pathway analysis	SNP summary statistics + reference panel	pathway *P*-values	https://github.com/zhangh12/ARTP2
QuSAGE	meta-analysis of gene sets accounting for gene–gene correlation using PDFs from multiple studies	gene expression profile data	*P*-value and plot of the combined gene set activity	https://bitbucket.org/kleinstein/qusage
ancMETA	Bayesian graph-based framework to perform gene and sub-network/pathway specific meta-analysis accounting for the variation of effect sizes across multiple independent GWAS studies	SNP summary statistics + SNP-gene information + gene-gene information + gene-pathway information	sub-networks and enrichment of top significant central subnetwork	https://github.com/echimusa/ancMETA

These factors can also misdirect expensive downstream functional research. Hence, addressing these shortcomings may bring confidence in the design, replication and discoveries of new association signals. Finding a suitably powered reliable dataset becomes more difficult as GWAS discovery sample sizes increase since newly found loci tend to have smaller effect sizes or come from variations with uncommon MAF [93]. The replicability issue is not expressly addressed by most of the meta-analysis methods. When some of the contributing studies have spurious positive signals, these methodologies may result in biased meta-analysis conclusions. In actuality, some worthwhile procedures may be used to assess the validity of the findings in the case where the association signal is supported by a certain number of participating studies or if the genetic effect's heterogeneity between genetically similar populations is low, which can make the findings difficult to replicate and generalize. The significance of association after combining each cohort cannot always be considered a reliable indicator for replicability because large datasets give more significant *P*-values in comparison to smaller studies when the estimated association effect size (either real or spurious) is the same.

Besides, GWAS meta-analysis, there is a need to develop in-principle methods for assessing the replicability of findings. One can attempt to compare meta-analysis outcomes with and without removing low-frequency variants from imputation-based GWAS. The other option is to develop an appropriate indicator to measure the strength and the consistency of the signals between biological replicates accounting for the difference in sample sizes between cohorts.

In addition, not all methods can be utilized for GWAS meta-analysis studies, depending on the data on hand and the expected outcome. For instance, if GWAS studies come from the same phenotype, METAL or METASOFT can be employed; however, if the GWAS studies come from different phenotypes with statistical information on overlapping SNPs, then METAL of METASOFT might not be appropriate. Similar thing applies in the case where the GWAS studies originated from different ancestries with the same phenotype of different phenotype. In the same way, what may be working for common variant might not be working for rare variant. The difference and relatedness of each method and the possible tool which can be applied based on the data on hand are suggested in Figures 1 and 2. The user needs to appropriately choose the tool which perform GWAS meta-analysis whether at SNP, gene or pathway level depending on the available information on hand. The avenue is then opened to develop methods which account for all these varieties whether at SNPs, gene or pathway level to retrieve important information with relevant implications.

Conclusion

In this paper, we reviewed a set of popular methods for meta-analysis at SNP, gene and pathway levels. We highlighted the statistical models underlying the frameworks and discussed some of their strengths and shortcomings. We also pointed out some avenues of investigation, especially at the pathway level. Though association signal is driven by the association of variant (or set of variants), the prediction of these variants to the underlying phenotype has grown to become a relevant avenue to understand their roles on traits across population. This approach utilizes polygenic risk score to ascertain the prediction of a variant to the phenotype. Even though it is not the focus of our review, one avenue would be to survey different methods of polygenic risk score at different level highlighting their similarities and differences. Currently, pathway-based meta-analysis plays an important role and represents the best way to unveil sets of genes involved in disease aetiology and disease mechanisms. The workflow of this approach varies from situation to situation and method to method depending on the input data, the statistics used to assay the meta-analysis at gene level, the pathway database used to annotate the gene sets and the measures for association at the pathway level (Table 4). Each of these methods has its potential and limitations. Leveraging the potential of these methods offers an opportunity for novel discoveries, whereas existing limitations

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mean much research work remains to provide robust frameworks for association tests. As GWAS continue to grow in sample size, developing pathway-based meta-analysis approaches using GWAS summary statistics provides a greater opportunity to identify novel pathway association. However, sARTP, ancMETA and META-GSA approaches are presently the sole methods which integrate summary statistics-level input data in the analysis process. The door is wide open to developing new methodologies including statistical approaches with appropriate datasets to improve and ascertain our findings and address new research questions that could arise.

Key Points

- Introduction of the three categories of Genome-Wide Association Studies meta-analysis found amidst in the literature which includes the SNP-based, gene-based and pathway-based GWAS meta-analysis and the method being employed.
- Summary description and outline framework of these methodologies at each level.
- Discussion of the strengths and pitfalls of GWAS meta-analysis approaches within various categories.

Supplementary Data

Supplementary data are available online at https://academic.oup.com/bib.

Data availability

No datasets were generated or analyzed during the current study.

Acknowledgements

We would like to thank Dr Armin Deffur for helpful discussions, support and guidance in the preparation of the manuscript.

Funding

This work was supported by the South African Medical Research Council.

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Chapter THREE: ancMETA: A BAYESIAN FRAMEWORK FOR GENE/SUB-NETWORK-SPECIFIC META-ANALYSIS

This chapter is published in *Frontiers in Genetics*

Chimusa, E. R., & Defo, J. (2022). Dissecting Meta-Analysis in GWAS Era: Bayesian Framework for Gene/Subnetwork-Specific Meta-Analysis. *Frontiers in genetics*, *13*, 838518. https://doi.org/10.3389/fgene.2022.838518

frontiers | Frontiers in Genetics

METHODS
published: 18 May 2022
doi: 10.3389/fgene.2022.838518

Dissecting Meta-Analysis in GWAS Era: Bayesian Framework for Gene/Subnetwork-Specific Meta-Analysis

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Over the past decades, advanced high-throughput technologies have continuously contributed to genome-wide association studies (GWASs). GWAS meta-analysis has been increasingly adopted, has cross-ancestry replicability, and has power to illuminate the genetic architecture of complex traits, informing about the reliability of estimation effects and their variability across human ancestries. However, detecting genetic variants that have low disease risk still poses a challenge. Designing a meta-analysis approach that combines the effect of various SNPs within genes or genes within pathways from multiple independent population GWASs may be helpful in identifying associations with small effect sizes and increasing the association power. Here, we proposed ancMETA, a Bayesian graph-based framework, to perform the gene/pathway-specific meta-analysis by combining the effect size of multiple SNPs within genes, and genes within subnetwork/pathways across multiple independent population GWASs to deconvolute the interactions between genes underlying the pathogenesis of complex diseases across human populations. We assessed the proposed framework on simulated datasets, and the results show that the proposed model holds promise for increasing statistical power for meta-analysis of genetic variants underlying the pathogenesis of complex diseases. To illustrate the proposed meta-analysis framework, we leverage seven different European bipolar disorder (BD) cohorts, and we identify variants in the angiotensinogen (*AGT*) gene to be significantly associated with BD across all 7 studies. We detect a commonly significant BD-specific subnetwork with the *ESR1* gene as the main hub of a subnetwork, associated with neurotrophin signaling ($p = 4e^{-14}$) and myometrial relaxation and contraction ($p = 3e^{-08}$) pathways. ancMETA provides a new contribution to post-GWAS methodologies and holds promise for comprehensively examining interactions between genes underlying the pathogenesis of genetic diseases and also underlying ethnic differences.

Keywords: gene, meta-analysis, Bayesian, subnetwork, GWAS

OPEN ACCESS

Edited by:
Maria I. Klapa, Foundation for Research and Technology, Hellas, Greece

Reviewed by:
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Specialty section:
This article was submitted to Human and Medical Genomics, a section of the journal Frontiers in Genetics

Received: *17 December 2021*
Accepted: *07 April 2022*
Published: *18 May 2022*

Citation:
Chimusa ER and Defo J (2022) Dissecting Meta-Analysis in GWAS Era: Bayesian Framework for Gene/Subnetwork-Specific Meta-Analysis. Front. Genet. 13:838518. doi: 10.3389/fgene.2022.838518

1 INTRODUCTION

The main goals of trait mapping studies, including genome-wide association studies (GWASs), are to understand the genetic architecture of diseases, pinpoint the number of loci associated with a particular trait, and approximate the underlying heritability rate (Hirschhorn and Daly, 2003; Cantor et al., 2010; Wray et al., 2010; Garfield, 2020). Once the disease-causing variants and genes are

identified, this information will help researchers who are working in clinical, medical, or public health fields to establish prevention strategies, predict risks, and adapt therapeutic measurements Hirschhorn and Daly (2003); Cantor et al. (2010); Tam et al. (2019); Nguyen and Eisman (2020); Legge et al. (2021). Regardless of the successes, GWASs are still confronting many challenges and limitations Hao et al., 2019); Zhu et al. (2017) and have received considerable criticism (Zuka et al., 2012; Cantor et al., 2010). The challenges faced by GWASs include 1) the translation of the associated loci into suitable biological hypotheses (Zuka et al., 2012); 2) the issue of missing or hidden heritability (Kang et al., 2010; Hirschhorn and Daly 2003), which has now been partially tackled; 3) the understanding of how multiple modestly associated variants within genes interact to influence a phenotype (Wang et al., 2007; Hao et al., 2019; Tam et al., 2019); 4) the imperfection of asymptotic distribution of the current mixed model association or logistic regression in the specific case of low-frequency variants (Chimusa et al., 2012; Hao et al., 2019); and 5) the inefficiency in distinguishing between inflation from bias (from cryptic relatedness and population stratification) to the true signal from polygenicity (Chimusa et al., 2012; Hao et al., 2019; Tam et al., 2019).

These limitations reflect a gap in our understanding of the mechanisms underlying the pathogenesis of complex traits and diseases. The major source of these shortcomings is the method of GWAS itself as restricted to a single-marker-based testing approach (Wang et al., 2007; Hao et al., 2019; Tam et al., 2019). Various post-GWAS approaches have been proposed to address the single-SNP-based GWAS limitation (Jia et al., 2011; Wu et al., 2009; Wang et al., 2010; Peng et al., 2008), which are different in many aspects, but all are driven by the need to extract useful information from the GWAS summary statistics. The GWAS meta-analysis has become an increasingly adopted method that leverages association summary statistics to fostering a culture of compulsory *in silico* replication to maintain reliability in genetics association findings Ilya et al. (2017); Duarte et al. (2019); Shen and Tseng (2010); Lu et al. (2018). A meta-analysis framework combines results from different GWAS cohorts and puts them in one analysis framework to recover signals that one single GWAS cohort study mighty be missed and address the between-study and between-population heterogeneity Kavvoura and Ioannidis (2008); Thompson et al. (2011). In the last decade, the use of meta-analysis method has increased due to different interests from both the medical researchers and statisticians Shi and Lee (2016); Fan et al. (2016); Turley et al. (2018). Recently, meta-analysis has shown remarkable discovery results and helped to more understand and validate association results from different studies. The meta-analysis is considered as post-genome-wide association study method Chimusa et al. (2012); Han and Eskin (2011); Lu et al. (2018); Shi and Lee (2016). Despite the instrumental findings from single-SNP-based meta-analysis, there remains a need for a single comprehensive analysis that can both aggregate from the diverse population GWAS and incorporate the effect of multiple markers and other potential factors at a gene or pathway level. Heterogeneity among the GWAS meta-analyses remains an issue, particularly when the number of studies increases Han and Eskin (2011); Kavvoura and Ioannidis (2008); Thompson et al. (2011). This raised challenge on the power of GWAS meta-analysis across diverse population cohorts of differing genetics ancestry. Moreover, critical caution is required since incomplete replication can also be informative as several studies reported lack of interpopulation replicability, indicating that some risk variants are population-specific Hirschhorn and Daly (2005); McCarthy et al. (2008); Newton-Cheh and Hirschhorn (2005). For example, comparing the Asian and European associations with major depression, the failure of replication is largely due to the difference in the partner of linkage disequilibrium (LD), which reduces power in one population since the proportion of attributable risk declines with a population-specific minor allele frequency Newton-Cheh and Hirschhorn (2005). A caveat, however, is that fewer GWASs conducted in the non-European ancestry usually constitute of fewer samples Newton-Cheh and Hirschhorn (2005), raising the question as to how the clinical utility of GWASs can be made equitable across multi-ethnic populations Martin et al. (2021); Torkamani et al. (2018) and, specifically, how to accurately predict health and disease risks in the African populations. Furthermore, variation of the cohort size across independent studies is challenging, especially when these studies have been conducted from distinct populations of different ancestries and patterns of LD Chimusa et al. (2012); Han and Eskin (2011); Kavvoura and Ioannidis (2008); Thompson et al. (2011).

While the factors may raise heterogeneity Chimusa et al. (2012); Han and Eskin (2011); Kavvoura and Ioannidis (2008); Thompson et al. (2011), designing a gene-based and subnetwork/pathway-based meta-analysis may be helpful in pooling information from multiple population GWASs and multiple variants within a gene or genes within pathways or subnetworks Shi and Lee (2016); Fan et al. (2016); Turley et al. (2018); Ilya et al. (2017); Duarte et al. (2019); Shen and Tseng (2010); Lu et al. (2018). This may reveal larger effects and provide valuable information to prioritize the most important results across human populations. We refer to this approach as gene- or subnetwork/pathway-specific meta-analysis. Similarly, the list of new post-GWAS tools, such as multi-marker analyses, which go beyond single SNP tests, or the inclusion of functional evidence to reweight GWAS results, is growing by the day Newton-Cheh and Hirschhorn (2005); Chimusa et al. (2012); Shi and Lee (2016); Fan et al. (2016); Turley et al. (2018); Ilya et al. (2017); Duarte et al. (2019); Shen and Tseng (2010); Lu et al. (2018). Although many methods for meta-analysis have been developed over the past decades, the methodology still faces significant limitations. In particular, the challenge of low statistical power is still unresolved, as demonstrated by the fact that meta-analyses have not necessarily resulted in an increased statistical power Li et al. (2012). This is, in part, due to the analysis methods failing to optimally account for the high degree of between-study

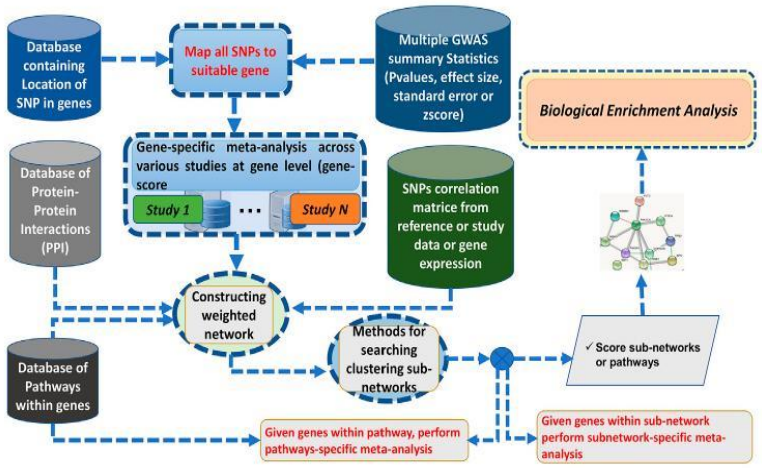


FIGURE 1 | Flowchart of ancMETA.

heterogeneity that characterizes most meta-analyses of the datasets Shi and Lee (2016); Fan et al. (2016); Turley et al. (2018); Duarte et al. (2019); Lu et al. (2018). Apart from power considerations, another important challenge is the translation of statistical association in meta-analyses into biologically meaningful insights.

Here, we addressed some GWAS meta-analysis limitations by proposing a Bayesian graph-based framework to perform the gene/pathway-specific meta-analysis by combining the effect size of multiple SNPs within genes, and genes within subnetwork/pathways across multiple independent population GWAS to deconvolute the interactions between genes underlying the pathogenesis of complex diseases across diverse populations (**Figure 1**).

We assessed the proposed framework on simulated datasets, and the results show that the proposed model holds promise for increasing statistical power for meta-analysis of genetic variants underlying the pathogenesis of complex diseases. We illustrated it in 7 different European bipolar disorder (BD) cohorts, and we finally outlined the implications, challenges, and opportunities that cross-ancestry meta-analyses present in the GWAS era. The proposed method has been implemented in the ancMETA tool https://github.com/echimusa/ancMETA, providing a new contribution to post-GWAS methodologies, and holds promise for deconvoluting interactions between genes underlying the pathogenesis of genetic diseases and underlying ethnic differences.

2 MATERIALS AND METHODS

2.1 Details of Gene/Subnetwork-Specific Meta-Analysis

Here, we discuss the proposed meta-analysis framework, ancMETA. It performs meta-analysis at two different levels by aggregating multiple independent population GWAS summary statistics datasets. It uses an integrative analysis through Bayesian posterior probability and combines the results into known biological protein–protein network datasets. Lastly, ancMETA performs the meta-analysis at the subnetwork level and identifies the most significant subnetworks to understand the biological pathways (**Figure 1**).

We describe six different steps of the proposed meta-analysis framework as follows:

Step 1: Collection of N-independent studies.

This step requires $N \geq 2$ independent GWAS summary statistics datasets, from the same phenotype or trait. GWAS summary statistics are defined here as per-genetic locus effect sizes (log odds ratios) together with their standard errors, p-values, or z-scores for the affected–unaffected traits de Leeuw et al. (2015); Il-Youp and Wei (2015); Huang et al., 2016); Wang et al. (2017).

Step 2: Mapping SNPs to the associated genes.

This is an intermediate step, and it is similar to our previous approach Chimusa et al. (2015), where all the SNPs are mapped to their related genes. It is common practice to assign SNPs to the genes based on a distance cutoff, and the previous studies use a variety of cutoffs, such as distance from 2 to 500 Kbps Conti et al. (2009); Brodie et al. (2016); Chimusa et al. (2015); Wang et al. (2010, 2007). ancMETA allows users to specify the distance cutoffs of assigning SNPs down-/upstream to a specific gene (see the **Supplementary Material**). At this step, the combined statistical outcomes (i.e., the effect size and the standard error) are computed, as illustrated in **Figure 1**.

We assume that the *ith* study (i = 1, 2,. . ., N) has J_i genes G_j^i ($j = 1, 2, \ldots, J_i$), each having a set of specific SNPs, where N is the total number of studies. Let $S = \cup_{i,j} S_j^i$ denote the set of all SNPs, where S_j^i is the set of SNPs at the *jth* gene of the study i. For an SNP $s \in S_j^i$, let $\beta_j^i(s)$, $\zeta_j^i(s)$, and $p_j^i(s)$ represent the effect size,

the standard error, and the p-value, respectively. The proposed meta-analysis framework assumes that the SNPs related to one gene are correlated. This assumption is due to the fact that each gene contains a large number of SNPs mostly under LD; therefore, the magnitude of the statistical outcomes for each SNP within a gene from each study is considered to be approximately the same. Thus, the effect size and the p-value will follow a normal distribution. Let μ_j^i be the unknown true effect size at the jth gene G_j^i of study i ($i = 1, 2,\ldots, N$; $j = 1, 2,\ldots, J_i$). Thus, a fixed-effects model can be applied to estimate the combined effect size at the gene level from each study $i = 1, 2, \ldots N$. We construct a linear function of parameters μ_j^i as follows:

$$x = y(\beta, \mu) = \sum_{s \in S_j^i} \beta_j^i(s)\mu_j^i.$$

Let $V_j^i(s)$ be the variance. Then, the estimation of the combined effect size is given as follows:

$$\begin{aligned} p\left(x|B_j^i, \mu_j^i, V_j^i\right) &= \mathcal{N}\left(x|B_j^i\mu_j^{iT}, V_j^i\right) \\ &\sim \prod_{s \in S_j^i} \frac{1}{\sqrt{2V_j^i(s)\pi}} \exp\left[-\frac{\left(\beta_j^i(s) - \mu_j^i\right)^2}{2V_j^i(s)}\right]. \end{aligned} \quad (1)$$

Note **Eq. 1** is the likelihood when $\mu \neq 0$. Although the solution, which corresponds to the maximum true effect size μ_j^i at gene G_j^i, can be approximated from sampling approaches, **Eq. 1** can be solved analytically by differentiating the log likelihood and setting it to 0, that is,

$$\frac{\partial \log\left(p\left(x|B_j^i, \mu_j^i, V_j^i\right)\right)}{\partial \mu_j^i} = 0$$

or

$$\sum_{s \in S_j^i} \left[\frac{\beta_j^i(s) - \mu_j^i}{V_j^i(s)}\right] = 0. \quad (2)$$

Eq. 2 can be written as

$$\sum_{s \in S_j^i} \left(V_j^i(s)\right)^{-1} \beta_j^i(s) - \sum_{s \in S_j^i} \left(V_j^i(s)\right)^{-1} \mu_j^i = 0.$$

Hence, the estimated effect size of gene G_j^i is given as

$$\hat{\mu}_j^i = \frac{\sum_{s \in S_j^i} \left(V_j^i(s)\right)^{-1} \beta_j^i(s)}{\sum_{s \in S_j^i} \left(V_j^i(s)\right)^{-1}}.$$

Therefore, its standard error is derived as

$$sd\left(\hat{\mu}_j^i\right) = \left(\sqrt{\sum_{s \in S_j^i} V_j^i(s)}\right)^{-1}.$$

Step 3: Meta-analysis at the gene level.

Let β_j^i and ζ_j^i be the combined statistical outcomes (i.e., effect size and standard error, respectively). Since the effect size may be different across the studies, the heterogeneity between the studies may be high. A parameter σ_j^2, which accounts for between-study variability, is introduced. Because the maximum-likelihood method underestimates the variance when the number of studies is small DerSimonian and Laird (1986), we use the unbiased method of moments Borenstein et al. (2010) to compute the variance components as follows:

$$\sigma_j^2 = \frac{1}{N}\sum_{i=1}^{N}\left[\beta_j^i - H_j\right]^2,$$

where $H_j = \frac{1}{N}\sum_{i=1}^{N}\beta_j^i$. It is assumed that the true effect size of the gene G_j is $\mu_j + \sigma_j^2$, where μ_j is an unknown parameter. The same calculations as in step 2 are applied to estimate the effect size of the gene G_j across the studies, which is calculated as follows:

$$\hat{\mu}_j = \frac{\sum_{i=1}^{N}\left(\sigma_j^2 + V_j^i\right)^{-1}\beta_j^i}{\sum_{i=1}^{N}\left(\sigma_j^2 + V_j^i\right)^{-1}},$$

and its standard error is given as follows:

$$sd\left(\hat{\mu}_j\right) = \left(\sqrt{\sum_{i=1}^{N}\left[\sigma_j^2 + V_j^i\right]}\right)^{-1}.$$

If the precision ρ^i of the study ith for $i = 1, 2,\ldots, N$ is equal to $\frac{1}{(\mu^i)^2}$, then the heterogeneity statistic, using Cochrane's test (Q) is given as follows:

$$Q = 100 \times \sum_{i}^{N} \rho^i\left(\hat{\mu}_j - \theta\right)^2, \quad (3)$$

where $\theta = \frac{\Sigma_i^N \rho^i \hat{\mu}_i}{\Sigma_i^N \rho^i}$ is a weighted estimator, and $Q \sim \chi_{N-1}^2$ under the null hypothesis that the between-study variance $\tau^2 = 0$. If we consider the expectation of **Eq. 3**, the between-study variance is given as

$$\tau^2 = \frac{Q - (N-1)}{\Sigma_i^N \rho_i - \left(\frac{\Sigma_i^N \rho_i^2}{\Sigma_i^N \rho_i}\right)}.$$

Since the test statistics in **Eq. 3** has N − 1 degree of freedom (df), then for $Q < df$ (which means $\tau^2 < 0$), the maximum between 0 and τ^2 is considered, so that τ^2 is non-negative. Recalling that in

Algorithm 1 : The procedure to generate a sub-network is similar to our recent method.

(1) **Input**: A mapped network G, which contains the genes that are weighted by effect sizes, standard error and LD.
(2) From the network G, find structural hubs and connected components.
(3) For each gene, compute the betweenness, the closeness and the eigenvector scores.
(4) For each centrality score, compute the cut-off for central genes of sub-graphs.
(5) Consider a gene as a hub if its score is greater than or equal to the corresponding cut-off.
(6) Consider a gene as a central gene if it is hub for all the four scoring measures in step (3).
(7) For each central gene, search its neighbours for n iteration, or the mean shortest path. The central gene and its neighbours constitute a sub-network of the network G.
(8) **Output**: sub-networks and enrichment of top significant central sub-network.

step 2, we pointed out that SNPs within one gene are correlated. Therefore, to perform meta-analysis, a fixed-effects model is used Borenstein et al. (2010).

Step 4: Mapping genes to biological networks.

For this step, all the genes and their related statistical outcomes and gene–gene combined LD are mapped into a PPI network database (**Supplementary Material**), which contains information on interactions among the genes. Therefore, the genes are considered as weighted nodes with their related statistical outcomes (i.e., effect size and standard error), and the edges represent the interactions between the genes (nodes), which are weighted with the combined LD, for each pair-wise genes (nodes) that have a link. More details can be found in **Supplementary Materials**. The details of the combined LD can be found in **Supplementary Text S1**.

Step 5: Meta-analysis at the subnetwork level. This step estimates the effect size and standard error of each subnetwork from . **Supplementary Text S1** provides more details of different concepts used in . The procedure is the same as that of step 3, where it is assumed that there is a heterogeneity between the genes in each subnetwork. Let ρ_j^2 be the between-gene heterogeneity, β_j^i be the observed effect size, and ζ_j^i be its standard error. If μ is the unknown true effect size at the subnetwork level with K genes, the estimated effect size is given by $p(x|\beta_j^i, \mu_j^i, V_j^i + \rho_j^2) \sim$

$$\prod_{G_j^i \in K} \frac{1}{\sqrt{2\left(V_j^i + \rho_j^2\right)\pi}} e^{\left[-\frac{\left(\beta_j^i - \mu_j^i\right)^2}{2\left(V_j^i + \rho_j^2\right)}\right]}. \tag{4}$$

Since **Eq. 4** is considered to be the likelihood when $\mu \neq 0$, maximizing the log likelihood by solving

$$\frac{\partial \log\left(p\left(t|\beta_j^i, \mu, V_j^i + \rho_j^2\right)\right)}{\partial \mu_j^i} = 0$$

yields

$$\hat{\mu}_j^i = \frac{\sum_{G_j^i \in K}\left(\rho_j^2 + V_j^i\right)^{-1}\beta_j}{\sum_{G_j^i \in K}\left(\rho_j^2 + V_j^i\right)^{-1}}, \tag{5}$$

Algorithm 2 : The specification of proposed meta-analysis Framework.

(1) GWAS summary statistics (Effect sizes, the standard errors, p-value and LD), for each study i = 1,…, N

(2) For each study i = 1, …, N map SNP in GWAS summary statistics to gene if the SNP is located within that gene's primary transcript or 40 kilobases (kb) downstream or upstream.

(3) Assuming SNPs within a gene are dependent (or correlated), from study i ($i = 1, \ldots, N$) compute the overall p-value, the effect size and its standard error for gene G_j^i ($j = 1, \ldots, M$) following a fixed model.

(4) Given the estimated effect size and its standard error (at gene level) in the study i ($i = 1, \ldots, N$), compute the posterior probability e^i that the effect exists, the between-study variance and the heterogeneity at gene G_j^i. Construct the weighted sum of the $z - score$ from the Binary effect (or random effect) model and estimate the p-value from $z - score$ value.

(5) Map the set G = $\{G_1, \ldots, G_M\}$ of genes to PPI network and weight each edge by computing the LD between genes using the genotype data of the population under study.

(6) Map the set G = $\{G_1, \ldots, G_M\}$ of genes to the weighted Gene Ontology (GO) network.

(7) Transform network in steps (5) and (6) to an integrated weighted network whose nodes are weighted by p-values, the effect sizes and their standard errors from studies ($i = 1, \ldots, N$). The new edges are weighted by a transformed weight from both networks in steps (5) and (6).

(8) Break down the resulting network in (7) into sub-networks using the algorithm 1.

(9) Assuming, that genes within a given sub-network are independent, for each study i ($i = 1, \ldots, N$), compute the overall p-value, effect size and its standard error for each sub-network following a standard random model.

(10) Repeat step 4 for sub-networks level.

(11) Output file contains cross populations meta-analysis summary signals each sub-network, biological pathway enrichment of the top significant sub-network and its meta-analysis forest plot.

and its standard error estimated effect size is given as

$$sd\left(\hat{\mu}_j^i\right) = \left(\sqrt{\sum_{G_j^i \in K}\left[\rho_j^2 + V_j^i\right]}\right)^{-1}.$$

Step 6: Computing the overall statistical significance.

From step 5, we know that β_j^i and ζ_j^i represent the observed effect size and the standard error, respectively, where $\hat{\mu}_j^i$ as the unknown effect was estimated using **Equation 5**. For this step, let us consider the Bayes' theorem, which includes all the possible effect outcomes for N studies, and let us apply the symmetrical property of the Gaussian distribution. Therefore, the posterior probability is approximately given as

$$\begin{aligned} \hat{e}_j^i &= \frac{\pi \int_{\mathbb{R}} \mathcal{N}\left(\beta_j^i|\hat{\mu}_j^i, \zeta_j^i\right) p\left(\hat{\mu}_j^i\right) d\hat{\mu}_j^i}{(1-\pi)\mathcal{N}\left(\beta_j^i|0, \zeta_j^i\right) + \pi \int_{\mathbb{R}} \mathcal{N}\left(\beta_j^i|\hat{\mu}_j^i, \zeta_j^i\right) p\left(\hat{\mu}_j^i\right) d\hat{\mu}_j^i} \\ &= \frac{\pi \mathcal{N}\left(\beta_j^i|\hat{X}_j^i, \zeta_j^i + \hat{V}_j^i\right)}{(1-\pi)\mathcal{N}\left(\mu_j^i|0, \zeta_j^i\right) + \pi \mathcal{N}\left(\mu_j^i|\hat{X}_j^i, \zeta_j^i + \hat{V}_j^i\right)}. \end{aligned} \tag{6}$$

However, a test statistic based on the weighted sum of chi-square can be used, under the null hypothesis that there is no association. Thus, from the fact that e_j^i contains the information from all studies, it can be used as a prior weight in the weighted sum of the chi-square statistics as follows:

$$\hat{\chi}_j = \frac{\sum_{i=1}^N \hat{e}_j^i}{\sqrt{\hat{e}_j^i}} \frac{\left(\hat{\mu}_j\right)^2}{\left(\sum_{i=1}^N \zeta_j^i + \tau^2\right)}, \quad \tau^2 \geq 0,$$

where τ^2 is the between-study variance. Recalling that **Equation 6** is not normally distributed, the p-values can be evaluated through a sampling method developed by Han and Eskin (2011). puts together all the steps of the proposed framework.

2.2 Evaluation of ancMETA From Simulation GWAS Data

The U.S. residents of northern and western European ancestry (CEU), Yoruba (YRI), and Mexican (MEX) populations from the HapMap3 Project were used to generate independent case–control studies. Details of these populations can be found in **Supplementary Table S1**. We independently performed a population growth model on each dataset mentioned previously (**Supplementary Text S2**). From the resulting expanded datasets, we generated three independent case–control datasets based on chromosomes 1 and 22 using HapGen2 Su et al. (2011). Here, we randomly selected 3 SNPs on chromosome 1 and 3 other SNPs on chromosome 22 to be simulated as causal disease SNPs with differing effect sizes under HapGen2 Su et al. (2011). The simulated disease effect size parameters of those SNPs are summarized in **Supplementary Table S2**. These parameters are chosen to fit small effect size in some studies and strong in others. We simulated 1,000, 3,000, and 950 cases and 1,000, 3,000, and 1,000 controls from the haplotype

(combination of multiple SNPs) data of CEU, YRI, and MEX, respectively. We considered the simulated MEX GWAS dataset as our primary study. The simulation details can be found in **Supplementary Text S2**.

We conducted a GWAS on each dataset using EMMAX Kang et al. (2010). As expected and according to our simulation parameters (**Supplementary Table S2**), the GWAS results indicate significant, moderate, and weak signals of association in CEU, YRI, and MEX, respectively, as per simulation (**Supplementary Table S3** and **Supplementary Figure S1**). We used the resulting GWAS summary statistics as input in our proposed model, implemented in "ancMETA," to perform the gene- and subnetwork-specific meta-analysis (**Supplementary Text S3**).

At the gene level, the results in **Table 1** and **Supplementary Figure S2** show significant genes, including *CBX7*, *LD0C1L*, and *ASTN1* associated with our simulated causal SNPs (**Supplementary Table S2**). This result indicates further increase in the effect size across these 3 simulated case–control studies, compared to single-SNP tests in GWAS based on EMMAX (**Supplementary Table S3**). Interestingly, at a subnetwork level, we observed a significant convergence of effect sizes of the simulated disease variants across all the studies (**Figures 2A,B**), particularly to *CBX7* (**Table 1**). This supports the fact that the true effect risk-associated variants may differ across populations at the polymorphism level, but the effect may tend to convert at a similar magnitude at gene and pathway levels or overlap in the same biological subnetworks/pathways when aggregating several small polymorphism effects.

2.3 Application to Seven European With Bipolar Disorder Cohorts

Here, we used seven European bipolar disorder (BD) GWAS summary statistics obtained from the NIMH data repository (**Supplementary Table S1**). These datasets include Irish (IRI), Scottish (SCT), 3 European American (EUA), Norwegian (NOR), and British (BRB) individuals. **Supplementary Table S4** provides GWAS summary results of each of these studies. Leveraging the European reference panel from 1000 Genomes Project data, we first conducted the imputation LD fine-mapping from the obtained GWAS summary statistics using ImpG-Summary Pasaniuc et al. (1977) to possibly unravel more LD-SNP association (**Supplementary Figure S3**). The resulting imputation GWAS LD fine-mapping summary statistics were used as input for ancMETA. We performed the meta-analysis at a gene level across these 7 studies, and seven genes were identified (*AGT CACNA1C*, *ESR1*, *NCAN*, *BDNF*, *BCR*, and *GSK3B*), of which *AGT* has a strong effect across the European populations including Irish, Scottish, Norwegian, and British in contrast to the European American (**Supplementary Figures S4,5** and **Supplementary Table S5**).

Leveraging the recent version of the human PPI network (IntAct release 239) from the IntAct database Kerrien et al. (2012); Orchard et al. (2014), we observed a significant connected subnetwork where the estrogen receptor 1 (*ESR*1) gene is the main hub. *ESR1* interacts with *AGT* and is connected with the other gene hubs with known BD-associated genes such as *CACNA1C*, *PLCG2*, *NCAN*, *BCR*, and *BDNF*. **Supplementary Table S5** summarizes the association of the top subnetwork across these 7 studies. The identified subnetwork (**Figures 3A,B**) is significantly associated with the neurotrophin signaling ($p = 4e^{-14}$) and other interesting biological pathways such as myometrial relaxation and contraction ($p = 3e^{-08}$), morphine addiction ($p = 9.2e^{-08}$), DNA damage response ($p = 3e^{-05}$), and alcoholism ($p = 2e^{-05}$). In addition, the subnetwork (**Figure 3C**) is implicated in a positive regulation of transcription from RNA polymerase II promoter involved in neuronal differentiation ($p = 7.7e^{-21}$) and is also associated with autosomal dominant ($p = 2.8e^{-07}$) inheritance types of diseases (**Figure 3C**).

To evaluate the determined interconnectivity among *AGT*, *CACNA1C*, *ESR1*, *NCAN*, *BDNF*, *BCR*, and *GSK3B* as well as with the other protein-coding genes in **Figure 3**, and their association with BD, we leverage GeneMania Franz et al. (2018) to reconstruct the network shown in **Figure 3** based on physical and co-expressed interactions. The result from the reconstructed co-expression and physical interaction network of genes in **Figure 3A** confirms that the above 7 genes detected by ancMETA (**Figure 3A**) are physically and co-expressly interconnected **Figure 4** and as well as with other protein-coding genes in **Figure 3A**. From the enrichment analysis based on Enrichr Kuleshov et al. (2016), the network in **Figure 4** is significantly associated with neurotrophin signaling and other interesting biological pathways such as ErbB signaling pathways (**Figure 4**). Interestingly, recent studies have revealed that complex ErbB signaling networks regulate the assembly of neural circuitry, myelination, neurotransmission, and synaptic plasticity Mei and Nave (2014). Evidence indicates that there is an optimal level of ErbB signaling in the brain, and a deviation from it impairs brain functions. The ErbB signaling pathway may provide therapeutic targets for specific neuropsychiatric symptoms, and dysregulation in the ErbB signaling pathway may explain abnormalities of neural precursor migration in BD Mei and Nave (2014).

3 DISCUSSION AND CONCLUSION

Designing a post-GWAS meta-analysis that leverages the combined effect of multiple SNPs within a gene or genes within subnetworks/pathways across multiple GWAS datasets may reveal consensus association signals and identify large effect sizes. This may further provide valuable information in prioritizing the most important results across different populations. Here, we proposed a Bayesian graph-based gene- and pathway-specific meta-analysis approach. We implemented the proposed model in ancMETA (**Figure 1**), which addresses the variation in effect size across

TABLE 1 | Meta-analysis at gene and subnetwork levels from the simulated GWAS summary statistics across 3 studies: results show convergence of effects across studies to the simulated causal variants.

Gene	#Study	P	Q	Tau square	Study p-values			Study M-values		
					MEX	YRI	CEU	MEX	YRI	CEU
LDOC1L	3	1.33e-10	2.055	0.0007	0.012	0.00019	0.0003	0.98	0.91	0.81
PRKCZ	3	1.77e-11	2.193	0.001	0.001	0.047	0.001	0.40	0.41	0.41
CBX7	3	0.00000001	1.825	0	0.0001	0.001	0.0001	0.90	0.91	0.90
ASTN1	3	2.006e-8	2.261	0.001	0.0012	0.001	0.0006	0.81	0.91	0.91
Hub	**#Study**	**P**	**Q**	**Tau Square**	**MEX**	**YRI**	**CEU**	**MEX**	**YRI**	**CEU**
CBX7	3	4.25e-7	2.1	0.0002	0.0003	0.0004	0.0001	0.98	0.96	1.0
PRKCZ	3	1.93e-7	2.2	0.0002	0.019	0.04	0.021	0.59371	0.59	0.59
HNRNPA1	3	3e-08	2.09	0.00008	0.09	0.048	0.03	0.59	0.59	0.59
KRT18	3	4e-07	1.90	0	0.049	0.09	0.005	0.59	0.59	0.59

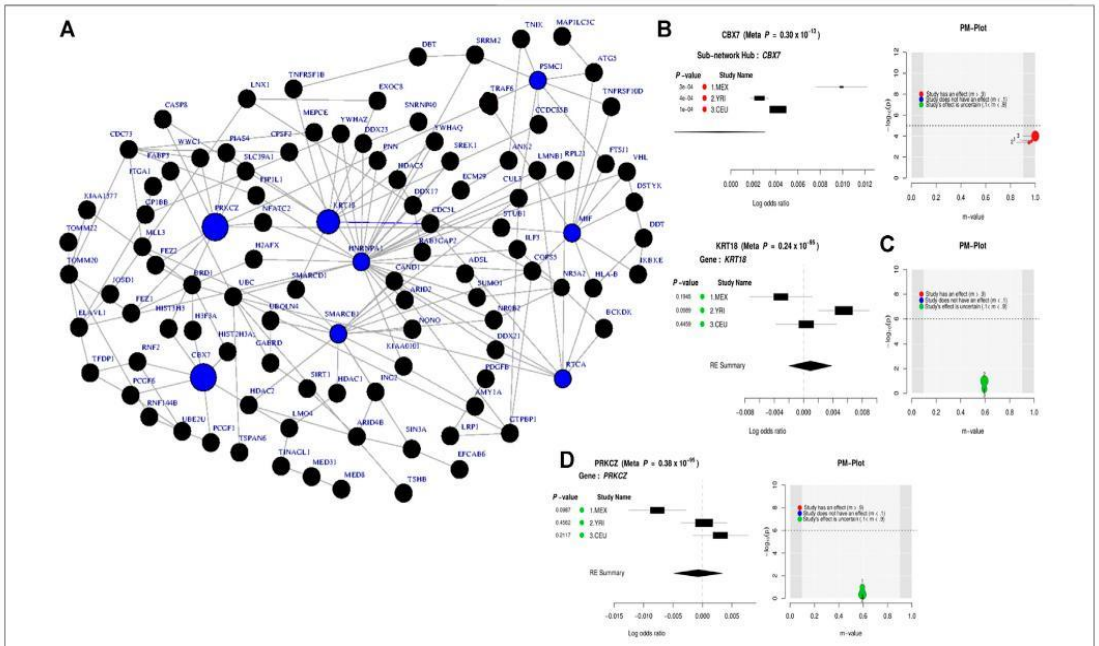
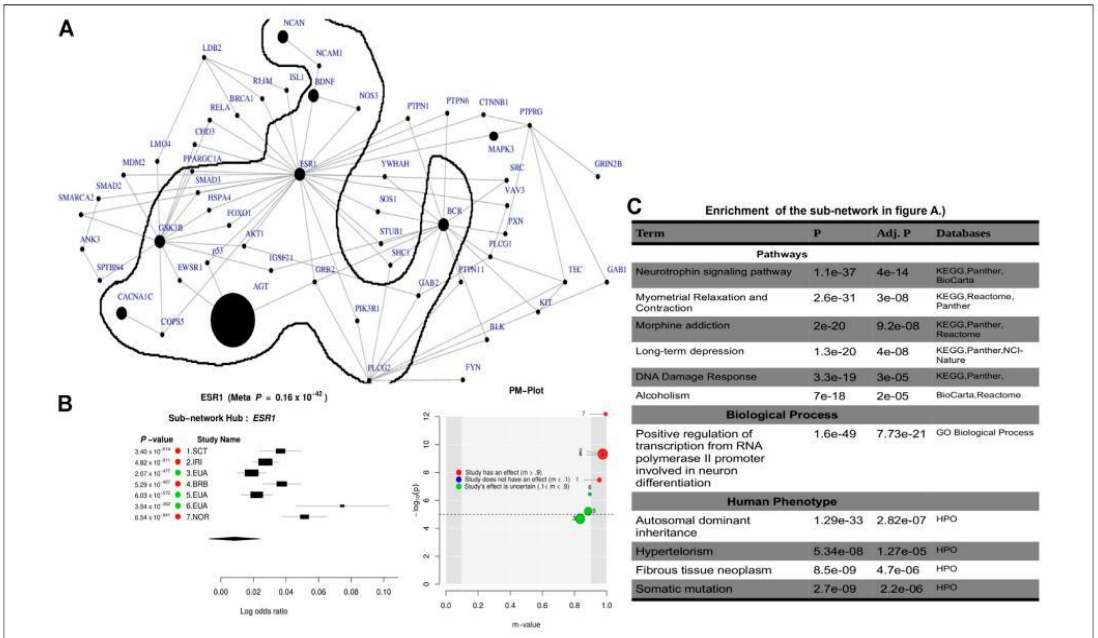


FIGURE 2 | Combined statistical outcomes at the subnetwork level, explaining causality relationship between the simulated phenotype and population variation population based on 3 independent simulated GWAS datasets from CEU, YRI, and MEX, respectively. **(A)** Top significant meta-analysis-based sub-network from ancMETA where nodes in blue colour denote critical hub and genes associated to the simulated causal SNPs. The size of a node denotes its statistical significance from small to large. **(B-D)** Forest plot of three gene-hub from the top 3 meta-analysis sub-networks produced from ancMETA.

several independent GWAS summary statistics from distinct populations of different ancestry background. We assessed ancMETA through the simulation of different ancestries in three different GWAS studies.

A well-reconstructed human protein–protein interaction network is a powerful tool in network biology and medicine research, which forms the basis for multi-omics and dynamic analyses Mortezaei and Tavallaei (2020). However, the topology of the network and their connectivity may be very sensible from various pathway analysis methods Mazandu and Mulder (2011) in reflecting the relationship between certain biological processes or densely connected multi-protein complexes of biological relevance Franz et al. (2018); Kuleshov et al. (2016). This makes it challenging to compare the different post-GWAS pathway-based or network-based methods Jia et al. (2011); Chimusa et al. (2015); Wang et al. (2015); Mishra and Macgregor (2015); Huang et al., 2016; Wang et al. (2017); de Leeuw et al. (2015).



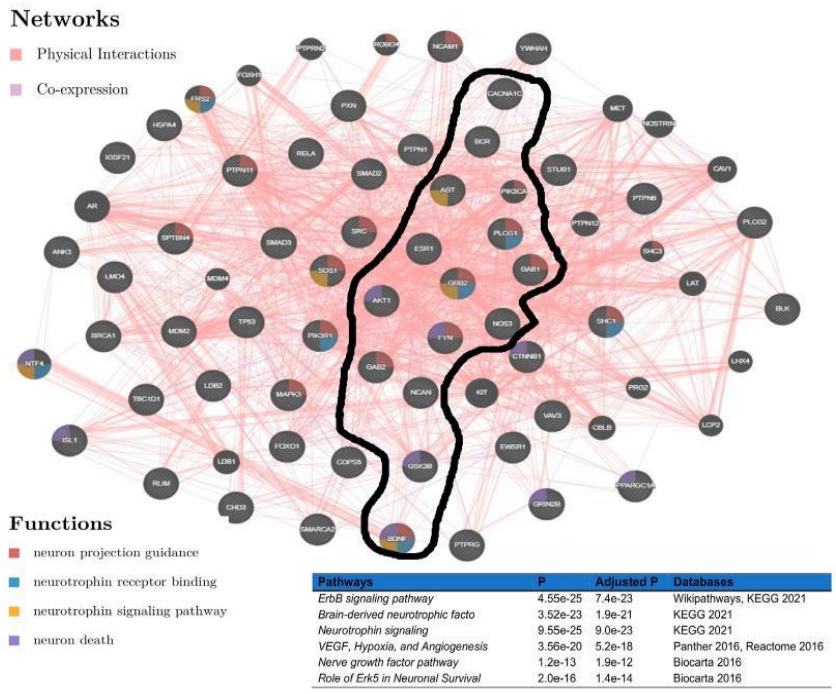
Term	P	Adj. P	Databases
Pathways			
Neurotrophin signaling pathway	1.1e-37	4e-14	KEGG,Panther, BioCarta
Myometrial Relaxation and Contraction	2.6e-31	3e-08	KEGG,Reactome, Panther
Morphine addiction	2e-20	9.2e-08	KEGG,Panther, Reactome
Long-term depression	1.3e-20	4e-08	KEGG,Panther,NCI-Nature
DNA Damage Response	3.3e-19	3e-05	KEGG,Panther,
Alcoholism	7e-18	2e-05	BioCarta,Reactome
Biological Process			
Positive regulation of transcription from RNA polymerase II promoter involved in neuron differentiation	1.6e-49	7.73e-21	GO Biological Process
Human Phenotype			
Autosomal dominant inheritance	1.29e-33	2.82e-07	HPO
Hypertelorism	5.34e-08	1.27e-05	HPO
Fibrous tissue neoplasm	8.5e-09	4.7e-06	HPO
Somatic mutation	2.7e-09	2.2e-06	HPO

FIGURE 3 | Combined statistical outcomes at the subnetwork level, explaining causality relationship between the simulated phenotype and population variation based on 7 independent GWAS datasets from European bipolar cohorts. **(A)** The top significant meta-analysis-based sub-network where the size of a node denotes its statistical significance from small to large and large sized node are associated genes or genes interacting with known Bipolar genes. **(B)** Forest plot of the gene-hub from the top meta-analysis sub-networks in **(A, C)** Enrichment analysi based on pathways, biological process and human phenotype associated to the top significant meta-analysis-based sub-network in **(A)**.

In addition to the GWAS summary statistics, ancMETA allows users to use any weighted biological network and accepts a user-defined network. In case if users provide an unweighted biological network, ancMETA leverages case–control genotype datasets to construct the weights of the network (**Supplementary Text S1**), in which the current post-GWAS approaches Fan et al. (2016); Turley et al. (2018); Ilya et al. (2017); Duarte et al. (2019); Shen and Tseng (2010); Lu et al. (2018); Mishra and Macgregor (2015); Huang et al., 2016; Wang et al. (2017); de Leeuw et al. (2015); Jia et al. (2011); Wang et al. (2015) do not account for. Evidence shows that many disorders are "polygenic" (many genetic loci contribute to risk) and reflect disruptions in proteins that participate and involve complex interactions between genes Dudbridge (2016); Khera et al. (2018). In contrast to other tools Shi and Lee (2016); Fan et al. (2016); Turley et al. (2018); Ilya et al. (2017); Duarte et al. (2019); Shen and Tseng (2010); Lu et al. (2018), ancMETA leverages the advantage of topological properties of biological networks to ascertain the interaction of proteins/genes that can be involved in a pathway. Our method accounts for the correlation that exists between the SNPs within a gene or genes within pathways and introduces flexibility in estimating the gene-specific and subnetwork-specific effect size, which, to our knowledge, is a new contribution to post-GWAS methodologies. The proposed framework holds promise for comprehensively examining the interactions between genes underlying the pathogenesis of genetic diseases.

Some improvements need to be considered in future work, such as accurately modeling the convergence of the SNP signal to the related subnetworks and leveraging the weakly/moderately associated signals from different GWAS studies. It is worth mentioning that we have applied ancMETA on old BD GWAS with a limited sample size (see **Supplementary Table S5**). However, regardless of the trait or phenotype used by the user in using ancMETA, the validity of the outcome will benefit and be improved by employing the powered GWAS summary statistics from GWAS datasets associated with larger numbers of samples (cases/controls).

There is also a need to integrate summary-level data across multiple phenotypes to simultaneously capture the evidence of the aggregate-level pleiotropic association. The lack of accurate knowledge of complex traits and the sensitivity of human protein interaction network makes it challenging to directly compare the results from the different pathway analysis methods. Overall, the method implemented in the proposed framework highlights the value of identifying the effect size of pathways associated with a disease, which may be useful in understanding the pathogenesis, disease risk prediction, and susceptibility to genetic diseases.



Pathways	P	Adjusted P	Databases
ErbB signaling pathway	4.55e-25	7.4e-23	Wikipathways, KEGG 2021
Brain-derived neurotrophic facto	3.52e-23	1.9e-21	KEGG 2021
Neurotrophin signaling	9.55e-25	9.0e-23	KEGG 2021
VEGF, Hypoxia, and Angiogenesis	3.56e-20	5.2e-18	Panther 2016, Reactome 2016
Nerve growth factor pathway	1.2e-13	1.9e-12	Biocarta 2016
Role of Erk5 in Neuronal Survival	2.0e-16	1.4e-14	Biocarta 2016

FIGURE 4 | Network reconstructed from genes in **Figure 3**, based on physical and co-expressed interactions obtained GeneMania Franz et al. (2018) and the top pathways of the reconstructed network from **Figure 3** obtained from various pathways databases in Enrichr Kuleshov et al. (2016).

The results obtained from the GWAS summary statistics on the European BD cohorts found association with seven genes, of which *CACNA1C* and *NCAN* have previously been implicated in BD through GWAS Bellantuono et al. (2007); Ferreira et al. (2008); Gordovez and McMahon (2020); O'Connell and Coombes (2021). This meta-analysis therefore strengthens these initial results and demonstrates that ancMETA can successfully validate GWAS findings. Interestingly, *AGT* has not reached GWAS significance in the previous studies despite being considered as a candidate in BD due to its role in the renin–angiotensin system Ferreira et al. (2008); Gordovez and McMahon (2020); O'Connell and Coombes (2021). The high significance for *AGT* from this analysis ($p = 3.2e^{-19}$) therefore strengthens its association with BD and further highlights the potential impact of ancMETA as a useful tool in discovering additional small effect variants that may be missed in the single GWAS. Importantly, the very interesting *AGT* finding is due to the innovations made in addressing population variation and to the inclusion of a PPI framework. The results from the subnetwork analysis revealed a strong interaction of the hub gene *ESR1* with *AGT*, as well as *CACNA1C*, *NCAN*, *BCR*, *GSK3B*, and *BDNF*, suggesting the fact that the *AGT* finding here is not merely indicative of a false positive, but rather that is valid. In addition to a moderate link to BD, *ESR1* has been related to migraine onset, alcohol dependence, obsessive compulsive disorder, and postpartum depression Alonso et al. (2011). The pleiotropy and genetic overlap between BD and these and other psychiatric phenotypes is a considerable complex Carmiol et al. (2014), suggesting that this analysis may have identified a key hub network and genetic underpinnings in not only BD etiology but also across several psychiatric phenotypes.

DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article/**Supplementary Material**, Further inquiries can be directed to the corresponding author.

ETHICS STATEMENT

Ethical review and approval was not required for the study on human participants in accordance with the local legislation

and institutional requirements. Written informed consent for participation was not required for this study in accordance with the national legislation and the institutional requirements.

AUTHOR CONTRIBUTIONS

EC and JD contribute in editing and writing the manuscript. EC designed, implemented and wrote the script of the methods and the python code of ancMETA.

FUNDING

The authors are supported in part by National Institutes of Health Common Fund under grant number 1U2RTW012131-01 (COBIP), and National Research Foundation of South Africa for funding (NRF) [Grant RA171111285157/119056]. Responsibility for the information and views expressed in the article lies entirely with the authors.

ACKNOWLEDGMENTS

We thank all study participants for the dataset used from NIMH data repository https://data-archive.nimh.nih.gov. Computations were performed using facilities provided by the University of Cape Town's and Cape Town Centre for High Performance Computing team (https://www.chpc.ac.za/) and technical supports from Omics Data Solutions (https://www.omicsdatasolutions.com). Some of the authors are funded in part by the National Institutes of Health Common Fund under grant number U24HG006941. The content of this publication is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fgene.2022.838518/full#supplementary-material

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Supplementary Materials

1 SUPPLEMENTARY DATA

To evaluate our developed tool, we extracted three populations from HapMap 3 data sets http://www.sanger.ac.uk/resources/downloads/human/hapmap3.html. In each of the simulation we used whole-genome data of $1,604,948$ overlap SNPs, from the HapMap3 of 165 northern and western Europe (CEU), 203 Yoruba in Ibadan, Nigeria (YRI) and 86 Mexican ancestry in Los Angeles, California samples (see Table S1). To apply our developed tool, we used European population with Bipolar disorder (BD) GWAS datasets, with which we have been granted access, which are stored at the NIMH data repository. BD datasets comprised of seven different studies, with $3,793$ cases and $3,440$ controls in total (see Table S1).

2 SUPPLEMENTARY METHODS

We implemented the proposed model, called ancMETA using python programming language and made it available for public via this link (https://github.com/echimusa/ancMETA). Implemented module related functionalities to map the associated signal into protein-protein network and visualize the results of network statistics, are updated from our previous model Chimusa et al. (2015). The protein-protein interaction (PPI) dataset was manually updated from our previous method Chimusa et al. (2015), initially based on KEGG, BioCarta and Ambion GeneAssist Pathway Atlas pathway databases and from the recent version of the human protein-protein interaction (PPI) network (IntAct release 239) from IntAct database (Kerrien et al., 2012; Orchard et al., 2014). A topological test was performed on the constructed LD-weighted network of 21,429 pair-wise PPI network. The annotated human pathways was obtained from Zhang et al. (2012) and collected more from annotated pathways include the KEGG, BioCarta and Ambion GeneAssist Pathway Atlas pathway databases. We downloaded genomic coordinates for all genes from the NCBI ftp-server ftp://ftp.ncbi.nih.gov. All these data sets come along with ancMETA

2.1 Text S1:Leveraging the topological properties of network in searching clustered sub-networks

2.1.1 Searching for Sub-networks using Centrality Measures

Given two different sets of SNPs $S^a = \{s_i\}_{i=1,2,\ldots,m}$ and $S^b = \{s_j\}_{i=1,2,\ldots,n}$, $(s_i \neq s_j, i = 1, 2, \ldots, m$ and $j = 1, 2, \ldots, n)$ associated with genes G_a and G_b, the pair-wise LD between SNPs in S^a and S^b are computed using the r^2 measure Kristin et al. (2002) to get a combined LD. We provide two approaches for weighting (estimating the combined LD at the gene level) the interaction between genes in the Protein-Protein interaction network.

Case 1: Assuming sets of SNPs $S^a = \{s_i\}_{i=1,2,\ldots,m}$ and $S^b = \{s_j\}_{j=1,2,\ldots,n}$, $s_i \neq s_j$, for $i = 1, 2, \ldots, m$, and for $j = 1, 2, \ldots, n$ are assigned to genes G_a and G_b; and the pairwise LD of SNPs between G_a and G_b are independent. Because the distribution of the LD is not normal, thus from $(s_i \neq s_j)$ we compute the average z-transforms of LD from all possible combination of pairs of SNPs between genes G_a and G_b. The z-transforms of LD are normally distributed with mean 0 and variance 1 Choi (1977). We compute the combined LD between two genes G_a and G_b as follows,

$$r_{G_aG_b} = tanh\left(\frac{\sum_{i\neq j}^{N} tanh^{-1}\left(LD_{s_is_j}\right)}{N}\right). \tag{S1}$$

Case 2: Alternatively, if SNPs between a given pair of genes are dependent or correlated, we consider the maximum $r_{G_aG_b} = tanh(\max_{i \neq j}(tanh^{-1}\left(LD_{s_is_j}\right)))$ among all possible N pairs of SNPs between the given pair of genes.

The combined LD is used as the weight of the edge between G_a and G_b genes in the PPI network.

2.1.2 Searching for Sub-networks using Centrality Measures

Considering a weighted Protein-Protein interaction (PPI) network as an undirected network, $G = (V, E)$, where V is the set of n genes as nodes and E is the set of edges as interactions found between genes weighted using gene-correlation. To cluster G into sub-networks, we analyse the general properties of G and quantify the usefulness of each gene in G using their centrality scores; closeness, betweenness, degree or eigenvector. Let us first define the following centrality measures,

(1) **Degree Centrality:**
The degree centrality C_d of a gene in an undirected graph G is the number of genes in the network interacting with it.

(2) **Closeness Centrality Measure:**
The closeness centrality $C_{c(u)}$ of a node u in a network is the inverse of the average distance to all other nodes connected to it Mazandu and Mulder (2011), i.e., $C_{c(u)} = \frac{1}{\frac{1}{m}\sum_{v \in V_u} dist(u,v)}$, where V_u is the set of nodes connected to u, $m = |V_u|$ the number of nodes in V_u and $dist(u, v)$ is the shortest communication path between u and v in the network.

(3) **Communication Betweenness Centrality Measure:**
Let γ_{uv} be the number of communications between genes u and v, and $\gamma_{uv}(t)$ the number of shortest communications between u and v in the network G using t as an interior node, for $t, u, v \in V(G)$. The rate of communication between u and v, Δ_{uv} that can be controlled by an interior gene t, is given by

$$\Delta_{uv}(t) = \frac{\gamma_{uv}(t)}{\gamma_{uv}},$$

if $\gamma_{uv} = 0$, then we set $\Delta_{uv} = 0$. The shortest communication betweenness centrality $C_{spb}(t)$ is given by

$$C_{spb} = \sum_{u \in V \wedge u \neq t} \sum_{v \in V \wedge v \neq t} \Delta_{uv}(t).$$

(4) **Eigenvector Centrality Measure:**
The eigenvector centrality measure assigns relative weights to all genes in the network based on the fact that connections to high-weighted genes contribute more to the weight of the gene target. This means the weight or the contribution x_u of the gene u to the functioning of the system is proportional to the sum of the scores of all genes v connected to u, i.e.,

$$\sum_{(u,v) \in E} x_v = \lambda x_u$$

where λ is a constant of proportionality and x_z denotes the contribution of gene z.
In terms of the adjacency matrix $\mathcal{A} = (a_{uv})_{1 \leq u,v \leq n}$, we have

$$\sum_{v=1}^{n} a_{uv} x_v = \lambda x_u$$

with n the number of genes in the network. It turns out that λ is simply an eigenvalue of the adjacency matrix and the vector of contributions of genes is the eigenvector associated with λ.

Let $o\,(G)$ be the order, $s\,(G)$ the size of G and SP_{mean}, the mean shortest-communication from every node or gene to every destination within the network G.

Note that the cut-off of different network centrality measures are estimated using general topological properties of the network Mazandu and Mulder (2011). For the betweenness measure, the cut-off is the total number of shortest paths expected in the network, which is approximately $o(G) * SP_{mean}$. For the closeness metric, as defined above, the cut-off is $1/SP_{mean}$ and that of the degree centrality measure is the number of expected interacting genes of a gene in the network, which is $s(G)/o(G)$. In the case of the eigenvector measure, the cut-off is the mean value of the weight or contribution vector of all genes in the network.

(1) Given network G, find structural hubs and connected components;

(2) For each gene, compute the betweenness, the closeness and the eigenvector scores;

(3) For each centrality score, compute the cut-off for central genes of sub-graphs BetOf, ClosOf, DegOf and EigOf;

(4) Consider a gene as a hub if its score is greater than or equal to the corresponding cut-off;

(5) Consider a gene as a central gene if it is hub for all the four scoring measures in step (3);

(6) For each central gene, search its neighbours given a step n or the mean shortest path. The central gene and its neighbours constitute a sub-network of G.

We perform the steps above to identify sub-networks using centrality scores of each gene.

2.1.3 Multiple Correction Procedure

To account for the influence of possible type I error and account for gene/sub-network difference on the number of associated SNPs within and between studies statistics of significance, we apply a similar algorithm to the Benjamini-Hochberg Benjamini and Hochberg (1995) false-discovery correction method on their summary statistics.

(1) Rank the p-value of each gene/sub-network in order from the smallest to the largest.

(2) Multiply the largest p-value by the number of genes/sub-networks in test.

(3) Take the second largest p-value and multiply it by the total number of genes/sub-networks in gene/sub-network list divided by its rank. If less than 0.05, it is significant. Corrected p-value = p-value$*\left(\frac{n}{n-1}\right) < 0.05$, if so, gene is significant.

(4) Take the third p-value and proceed as in step 3: Corrected p-value = p-value$*\left(\frac{n}{n-2}\right) < 0.05$, if so, gene/sub-network is significant.

(5) Repeat step (1) to (4).

Below, we will discuss on how to characterize enriched sub-network given the trait ender study.

2.1.4 Characterization of enriched sub-networks

Here we aim to identify the association between sub-network (obtained from our network-based clustering approach). Let S_i, $(i = 1, \ldots, T)$ within $n_1, \ldots, n_T$ genes and human pathway $P_j \in \mathcal{P}$ be the set of human pathways. We obtained annotated pathways from Zhang et al. (2012) and collected more from annotated pathways include the KEGG, BioCarta and Ambion GeneAssist Pathway Atlas pathway databases. We downloaded genomic coordinates for all genes from the NCBI ftp-server `ftp://ftp.ncbi.nih.gov`

and retained only entries for the human reference sequence. We assign the SNPs located within a gene or less than $40kb$ distance up/downstream of the gene. Let α be the intersection between genes within S_i and genes within pathway P_j. Let β be the intersection between genes within S_i and the total genes in $P_{j,(j=1,\ldots,J)}$. Let N^* be the intersection between genes in the P_j pathway and the total genes in $P_{j,(j=1,\ldots,J)}$, and M^* be the total genes in $P_{j,(j=1,\ldots,J)}$. We compute the statistic of significance of overlap between sub-network S_i of n_t genes and a given pathway P_j using the z-score (A_S), which employs the binomial proportions test Berger et al. (2007),

$$A_S = \left(\frac{\alpha}{N^*} - \frac{\beta}{M^*}\right) \Big/ \sqrt{\frac{\frac{\beta}{M^*}\cdot\left(1-\frac{\beta}{M^*}\right)}{M^*}} \tag{S2}$$

2.2 Text S2: Evaluation of the designed method though simulation

The simulation data was generated using a simulation algorithm in HapGen2 Su et al. (2011). We simulated three independent case-control studies using CEU, YRI and MEX (see Table 1) by extraction data of chromosome 1 and 22 from HapMap3 Project Frazer and et al (2007); McVean et al. (2012).

For each datasets, we further conducted quality control to remove all structured, indel, multi-allelic variants and those with low minor allele frequency (MAF < 0.05) prior rephasing. We first phased and inferred the haplotypes using Eagle Loh et al. (2016) from the resulting curated data in Table 1. We performed a post-phasing quality control. We checked the switch-error between haplotypes panel and curated 1000 Genomes haplotypes McVean et al. (2012), 99.7%, 98.05%, 97.05% of sites were with no phase switch-error in these 3 panels (CEU, YRI an MEX), respectively. We further compared sites discordance between these haplotypes panels and independently with their original VCF file prior phasing. Only sites with phase switch error showed discrepancies in MAF, therefore were removed.

Prior to simulation, we independently expanded each haplotype panel following Rogers and Harpendings (1992) model of exponential population growth Williams (1997); Li and Stephens (2003). We implemented this model using three parameters $a_0 = 2P_0\mu$, $a_1 = 2P_1\mu$ and $\lambda = 2\mu$t where P_0 which is the population size of an initial population assuming to grow exponentially to a new population size P_1 at a time t generation back from present. The mutation rate μ, is the per-generation probability that a mutation strikes a random nucleotide along the genome. Each panel was expanded to $2,000$ haplotypes.

To simulated case-control data set from each haplotype panel, we used Hapgen2 Su et al. (2011). Hapgen2 simulator applies alternative resampling approach to simulate case/control samples. It also has the ability to simulate data for many populations. In addition, it allows the user to specify risk allele, heterozygote and homozygote relative risks. Hapgen2 simulator uses Li and Stephens (LS) model of LD Li and Stephens (2003), by considering reference panel of haplotypes say $T^P = T_1, T_2, \ldots T_P$ as input, where each haplotypes is located at B biallelic sites. The LS model takes each new haplotypes as a deficient mosiac of the haplotypes T^P. Controls are simulated by adding haplotypes under LD model and by using copy states, which are developed through Markov ways. The haplotypes are simulated into three stages. Firstly, the cross-over events (by using transition probability) mimic the effect of recombination and separate them into independent segments. Secondly, the copying state is uniformly sampled, and lastly, the allele at each SNP is conditionally simulated on the copying state and a mutation parameter. Cases are simulated in the same way, but in pairs, hence the simulation of each haplotype pair arise from four steps.

Here, we simulated $1,000$, $3,000$, 950 cases and $1,000$, $3,000$, $1,000$ controls from the haplotype (combination of multiple SNPs) data of CEU, YRI and MEX respectively. We randomly selected 3 SNPs on chromosome 1 and 3 other SNPs on chromosome region 22 to be simulated as causal disease genetic variants. The simulated disease effect size parameter of those SNPs are summarized in the Table 2 below, and are chosen to fit small effect size in some studies and strong in other versus-versa.

MEX GWAS is considered to be our main study, and YRI and CEU GWAS are studies that we would like to pool information from in order to reveal larger effects in MEX GWAS and to provide valuable information that will be useful to prioritize the most important results.

3 SUPPLEMENTARY RESULTS

3.1 Text S3: Simulation and Evaluation results

3.1.1 Single-based GWAS results

To check the association signal from our simulated data sets, we conducted Genome-Wide Association Studies (GWAS) in each case-control dataset. To this end we used EMMAX Zhou and Stephens (2012). Table 3 displays the GWAS summary statistics of our simulated diseases SNPs. As expected, we obtain very weak signal of association from SNPs simulated with small effects, particularly form MEX and YRI. We obtained significant SNPs, particularly on chromosome 22 in CEU. Using a custom script in python, we plotted the Manhattan plots to represent the p-values of both chromosome 1 and 22 of GWAS on a genomic scale (Figure 1), for each simulated case-control data set.

3.1.2 Meta-analysis based on ancMETA at gene and sub-network levels

Here we used the GWAS summary statistics, consisting of study effect sizes, its standard errors and the associated p-values from the 3 simulated case-control data sets, to perform meta-analysis at gene and sub-network level using ancMETA. Further inputs required by ancMETA include (1) pairwise weighted Protein-Protein network. If Protein-Protein network is not weighted, ancMETA may use the genotype data of the study or a reference genotype data from the population close to those under study. This will allow ancMETA to compute the pair-wise SNP-LD and use it as described in the method to derive pairwise genes correlation coefficients. These pairwise gene correlation coefficients are used as the weight of the network. (2) Pathways dataset, that provides a list of pathways and associated genes.

Given these inputs, we conducted gene- and sub-network-specific meta-analysis under ancMETA. Table 4 displays top 4 genes with overall studies p-values $\leq 1.5e-08$ and the top 4 sub-networks represented by gene hubs.

The forest plot in Figure 2 indicates convergence of effect across studies, particularly simulated causal gene *CBX7*.

Importantly, the result in Table 4 indicates a convergence of the association signal in detecting true causal variants by leveraging not only multiple small effects at gene (or sub-network) level within a study, but also effects from cross studies. By leveraging the topological properties of network in significantly breaking into clustered sub-network, ancMETA identifies causal gene *CBX7* as central hub gene of one of the top significant sub-networks across these 3 studies.

3.2 Text S4: Application to Bipolar

3.2.1 Imputation fine-mapping on 7 European Bipolar Disorder GWAS data sets

As mentioned earlier, we obtained access to 7 European Bipolar Disorder GWAS cohorts (see Table 1).

Different GWAS on BD (Table 5) have been published in the last ten years, and have revealed interesting loci for understanding better the aetiology of this disorder. The general purpose of repeated GWAS was to discover genetic markers that are robustly associated with BD, to better characterize this complex disorder.

From each GWAS data set, we conducted LD-fine mapping base on the imputation of their GWAS summary statistics using the software ImpG-Summary (`http://bogdan.bioinformatics.ucla.edu/software/impg/`). ImpG-Summary implements a GWAS Gaussian imputation of summary statistics framework that leverage the haplotype and LD from close related reference haplotypes such as the $1,000$ Genomes. It is assumed that the summary statistics consist of Z-scores (note that they are distributed with mean 0 and the variance 1, under the null model of no association. The linkage disequilibrium between the marker i and j lead to a covariance among their observed Z-scores, due to the correlation r_{ij} between the two markers. In this way, under null data, the vector V of all Z-scores at all markers, is approximately distributed ($\sim \mathcal{N}(0, \Sigma)$) as the Gaussian distribution. We independently ran ImpG-Summary to each GWAS, resulting in millions of imputed z-scores of SNPs under LD with the original SNPs in the GWAS data sets.

For each population, Manhattan plots were created using a python script. Statistical strength of association (this means -log_{10} p-value) is plotted against genomic position with 22 chromosomes in different colors. The grey horizontal line indicates the genome-wide significance threshold of p-value = 5×10^{-08}. The vertical red-dotted points describe the highly significant SNPs associated with Bipolar disorder on a specific chromosome.

For Bipolar disorder GWAS on every population considered in this analysis framework except one population, we observed that the highly significant SNPs associated with Bipolar disorder are on chromosome 3. For the Scottish, British, Norwegian and European-American populations, the below Manhattan plots (see Figure S3) highlighted almost the same significant markers that are associated with Bipolar disorder, while we observed a different pattern of the distribution of significant SNPs associated with Bipolar disorder in the Irish population.

3.2.2 Gene- and sub-network-specific meta-analysis of 7 European GWAS summary statistics

Given the typed and the fine mapped GWAS summary statistics of these 7 European populations with Bipolar disorder, we conducted gene- and sub-network meta-analysis with relevant inputs required by ancMETA. At a gene level, 7 interesting genes were significant across these 7 studies (Table 7). Among these significant genes, *AGT* is strongly significant. These genes, are known to be associated with Bipolar disorder and other psychiatric disorders.

At sub-network level, we obtained 1 single significant sub-network of witch the gene *ESR1* is the central hub. This sub-network is well connected and includes several Bipolar disorder known associated genes and the most significant finding *AGT*

To further show the cross studies pattern of effect size and level of significance, We plotted the forest plots of these 7 genes (Figures 5-6).

4 SUPPLEMENTARY TABLES AND FIGURES

Tables captions

[0] BD-GWAS on European-American population* was done by Pritzker Neuropsychiatric Disorders Research Consortium, whereas BD-GWASs on European-American population** and European-American population*** were done by Systematic Treatment Enhancement Program for Bipolar Disorder into two steps.

Table S1. Study data description: For simulation based on 3 HapMap 3 populations and application of the tool based on 7 European Cohorts with Bipolar Disorder.

Population	Label	Cases	Controls	$Total sample$	# SNPs
Western Europe	CEU	0	165	165	1604948
Mexican ancestry	MEX	0	86	86	1604948
Yoruba	YRI	0	203	203	1604948
Irish population	IRI	150	797	947	617, 245
Scottish population	SCT	282	275	557	332, 354
European-American population*	EUA	1130	718	1848	317, 213
European-American population**	EUA	922	645	1567	300, 388
European-American population***	EUA	659	192	851	621, 069
Norwegian population	NOR	203	349	552	504, 025
British population	BRB	457	495	952	329, 624

Table S2. The simulated disease effect size of simulated six SNPs. Het. risk (Heterozygosity risk) and Homo. risk (Homozygosity risk)

CHR	SNPs	Gene	CEU			YRI			MEX		
			Het risks	Homo. risk	risk allele	Het. risks	Homo risk	Risk allele	Het risk	Homo risk	Risk allele
1	*rs1204389*	*LOC105373298*	3.5	2.25	1	3.5	2.25	0	1.1	0.98	1
1	*rs3128291*	*PRKCZ*	4.5	3.2	0	2.5	2.25	1	1.0	1.6	1
1	*rs11590989*	*ASTN1*	5.5	5.2	1	1.0	1.25	0	1.2	1.8	0
22	*rs131154*	*RTL6*	2.95	6.1	0	4.2	3.25	0	2.2	1.8	0
22	*rs17002000*	*MKL1*	2.95	6.1	2.0	4.2	1.25	2.1	1.6	1.8	1.0
22	*rs139418*	*CBX7*	2.95	7.1	2.1	2.2	1.2	2.1	1.7	1.88	1.2

Table S3. Single-SNP GWAS results from case-control simulated datasets: Displaying the signal of simulated variants.

			CEU		YRI		MEX	
SNP	CHR	Closest Gene	P	$Beta \pm SD$	P	$Beta \pm SD$	P	$Beta \pm SD$
rs3128291	1	*PRKCZ*	0.034	0.022 ± 0.0105	0.263	-0.024 ± 0.021	0.1814	0.057 ± 0.043
rs131154	22	*RTL6*	0.0001	0.0408 ± 0.0107	0.09	-0.0031 ± 0.018	0.061	-0.059 ± 0.031
rs139418	22	*CBX7*	$4.33e-14$	-0.0105 ± 0.0013	$4.18e-07$	0.055 ± 0.010	0.016	-0.028 ± 0.012
rs1204389	1	*LOC105373298*	0.86	-0.026 ± 0.15	0.30	0.025 ± 0.025	0.59	0.028 ± 0.053
rs17002000	22	*MKL1*	$1.37e-10$	-0.0105 ± 0.0016	$9.25e-05$	0.055 ± 0.014	0.018	-0.028 ± 0.012

Table S4. Meta-Analysis at gene and sub-network level:

					Study P-values			Study M-values		
Genes	**#Study**	**P**	**Q**	**Tau Square**	**MEX**	**YRI**	**CEU**	**MEX**	**YRI**	**CEU**
LDOC1L	3	1.33e-10	2.055	0.0007	0.012	0.00019	0.0003	0.98	0.91	0.81
PRKCZ	3	1.77e-11	2.193	0.001	0.001	0.047	0.001	0.40	0.41	0.41
CBX7	3	0.00000001	1.825	0	0.0001	0.001	0.0001	0.90	0.91	0.90
ASTN1	3	2.006e-8	2.261	0.001	0.0012	0.001	0.0006	0.81	0.91	0.91
Hub Sub-network	**#Study**	**P**	**Q**	**Tau Square**	**MEX**	**YRI**	**CEU**	**MEX**	**YRI**	**CEU**
HNRNPA1	3	0.00000003	2.09	0.00008	0.09	0.048	0.03	0.59	0.59	0.59
PRKCZ	3	1.93e-7	2.2	0.0002	0.019	0.04	0.021	0.59371	0.59	0.59
CBX7	3	4.25e-7	2.1	0.0002	0.010	0.021	0.044	0.60	0.59	0.59
KRT18	3	0.0000004	1.90	0	0.049	0.09	0.005	0.59	0.59	0.59

Authors	Year	Discovery population	Validation population	Cases (male; Female)	Control (male; female)	SNP	Genes of interest	Chromosome /Locus	p value
WTCCC	2007	UK	-	1868	2938	rs420259	PALP2/NDUFAB1/DCTN5	16*p*12	6.3×10^{-8}
Sklar et al.	2008	US/Uk	Caucasian/US	1461	2008	rs4939921	MYO5B	18q21	1.66×10^{-7}
						rs1705236	TSPAN8	12q14.1-q21.1	6.11×10^{-7}
Ferreira et al.	2008	European/US	European/US	4387	6209	rs10994336	ANK3	10q21	9.1×10^{-9}
						rs1006737	CACNA 1C	12p13.3	7.0×10^{-8}
Baum et al.	2008 *a*	European	German/US	1233	1439	rs1012053	DGKH	13q14.11	1.5×10^{-8}
Baum et al.	2008 *b*	European	UK/German/US	3101	4377	rs4806874	SLC39A3/JAM3	19p13.3/11q25	$9 \times 10^{-6}/5 \times 10^{-6}$
						rs10791345			
ISC	2009	European	European European-American African-American	3322(2176*M*; 1146*F*)	3587 (1642*M*; 1945*F*)	rs5761163	*MYO18B*	22*p*11.2	3.4×10^{-7}
Hattori et al.	2009	Japanese	Japanese	107 (35*M*; 54*F*)	107 (35*M*; 54*F*)	rs6540451	PLXNA2	1q32.2	7.5×10^{-8}
Scott et al.	2009	European	European ancestry	2076	1676	rs1042779	*mH1*	3	1.8×10^{-7}
Smith et al.	2009	US/Uk	European/African	1001(*E*)/345(*A*)	1033(*E*)/670(*A*)	rs5907577	Intergenic/NAP5	*X*q27.1/2q21.2	$1.6 \times 10^{-6}/9.8 \times 10^{-6}$
						rs10193871 (E)/rs2111504; rs2769605; (*A*)	(E)/DPY19L3/NTRK2(A)	(*E*)/19p13.11/9q21.33 (A)	(*E*)/$1.5 \times 10^{-6}/4.5 \times 10^{-5}$ (A)
McMahon et al.	2010	US/UK/European	European	6683	9068	*rs*2251219	Polybromo-1(PBRM1)	3p21	1.7×10^{-9}
Djurovic	2010	Norwegian	Icelander	194	336	rs1750565, rs1798968 rs1750567, rs11617400	DLEU2/GUCY1B2	13q14.2 – 14.3	$2.4 \times 10^{-5}/3.7 \times 10^{-5}$
Lee et al.	2010	Han Chinese	Han Chinese	1000	1000	rs2709736	SP8/ST8SIA2/KCTD 12/	7p21/15q26/13q22.3/	$4.9 \times 10^{-7}/6.1 \times 10^{-6}$/
						rs8040009	CACNB2	10p12	$9.7 \times 10^{-6}/5.2 \times 10^{-5}$
						*rs*2073831			
						*rs*11013860			
Belmonte Mahon et al.	2011	US/European	US/European	2836	2744	*rs*16883399, rs455219, rs10267593, rs2623968, rs17054536	MBOAT1/FAT1/MAD 1L1/ SYNE1/ECHDC1	chromosome 6/4/7/6/6	$6.8 \times 10^{-5}/1.5 \times 10^{-4}$ $2.3 \times 10^{-4}/9.7 \times 10^{-4}$/ 1.9×10^{-4}
Cichon et al.	2011	European	European	2411	3613	rs1064395	NCAN	19p13.11	3.0×10^{-8}

Table S5. Different published GWAS on Bipolar Disorder. WTCCC stands for to The Wellcome Trust Case Control Consortium.

Table S6. Gene and sub-network-specific meta-analysis on 7 European populations with Bipolar disorder from GWAS summary statistics.

				Study Pvalues							M-values						
Gene	**#Study**	**Overal P**	**Tau Square**	**IRI**	**NOR**	**EUA**	**EUA**	**BRB**	**EUA**	**SCT**	**IRI**	**NOR**	**EUA**	**EUA**	**BRB**	**EUA**	**SCT**
AGT	7	3.20e-19	0	3.21e-7	4.82e-8	2.072e-5	5.29e-9	6.03e-6	3.54e-6	6.54e-9	0.9345	0.95	0.81	0.95	0.89	0.89	0.99
CACNA1C	7	1.10e-5	0	0.017	0.008	0.002	0.003	0.015	0.001	0.037	0.39	0.39	0.37	0.35	0.36	0.39	0.43
NCAN	7	9.00e-3	0	0.003	0.003	0.015	0.012	0.015	0.003	0.002	0.63	0.53	0.43	0.47	0.39	0.4	0.53
ESR1	7	3.38e-4	0	0.009	0.001	0.001	0.006	0.002	0.002	0.006	0.38	0.43	0.38	0.53	0.48	0.41	0.63
BDNF	7	5.00e-3	0.0025	0.015	0.002	0.006	0.001	0.006	0.002	0.002	0.39	0.39	0.38	0.43	0.43	0.73	0.43
BCR	7	2.40e-3	0	0.002	0.002	0.006	0.001	0.001	0.004	0.009	0.38	0.36	0.43	0.33	0.63	0.53	0.4
GSK3B	7	2.70e-3	0.055	0.005	0.004	0.018	0.001	0.024	0.0009	0.002	0.33	0.33	0.341	0.33	0.34	0.33	0.33
Hub sub-network	**#Study**	**Overal P**	**Tau Square**	**IRI**	**NOR**	**EUA**	**EUA**	**BRB**	**EUA**	**SCT**	**IRI**	**NOR**	**EUA**	**EUA**	**BRB**	**EUA**	**SCT**
ESR1	7	1.032e-12	0	3.20e-7	4.82e-8	2.072e-5	5.29e-9	6.039e-6	3.5e-6	6.54e-9	0.93	0.95	0.81	0.95	0.89	0.89	0.99

Figures captions

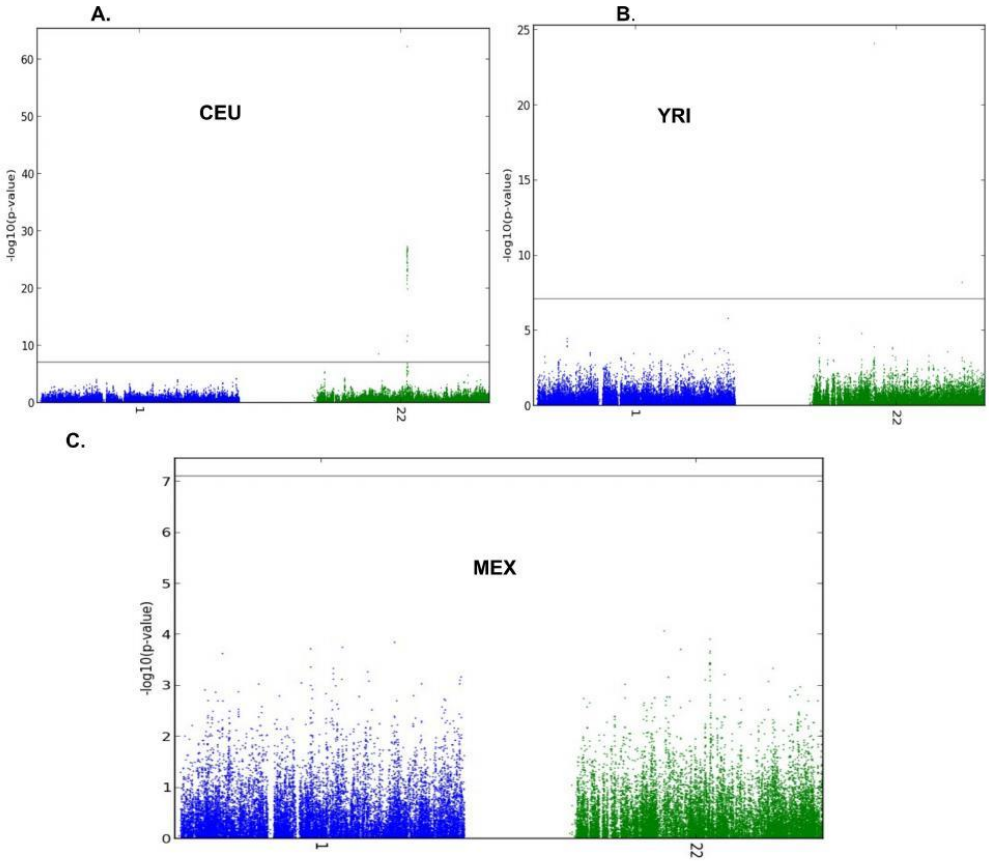


Figure S1. Manhattan plots represent the p-values of GWAS on a genomic scale based chromosome 1 and 22 for the simulated case-control CEU, YRI and MEX.

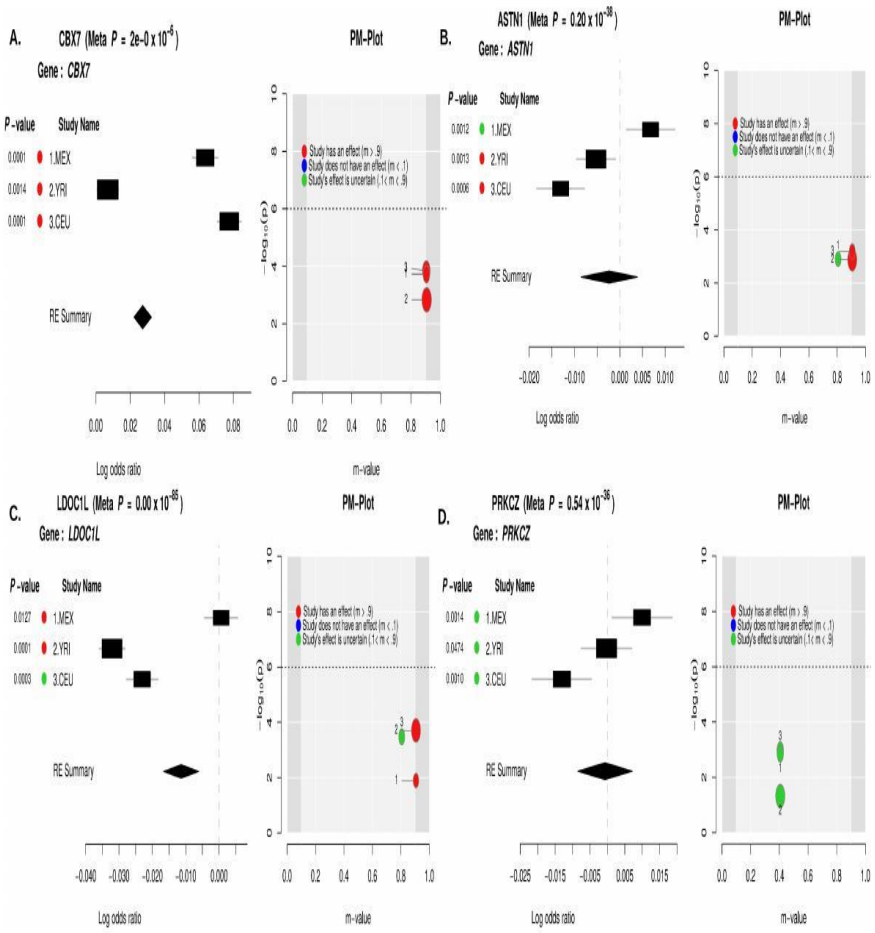


Figure S2. Forest plot of the top 4 significant genes from ancMETA, meta-analysis at a gene level across three simulated case-control data sets, CEU, YRI and MEX.

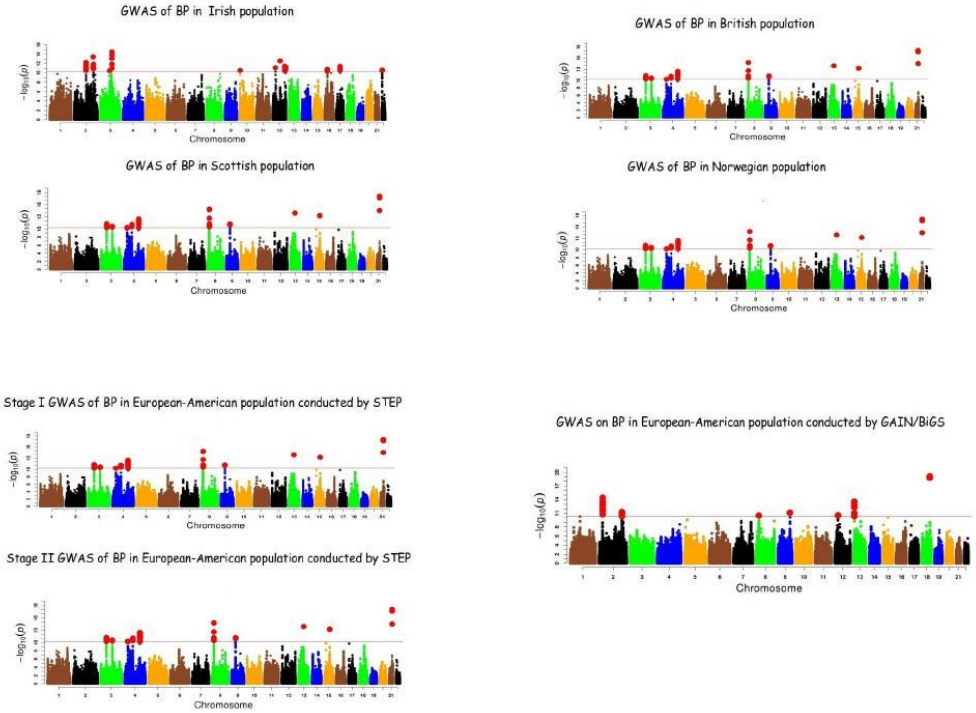


Figure S3. Manhattan plots for GWAS-replicate on Bipolar (BP) in different European populations.

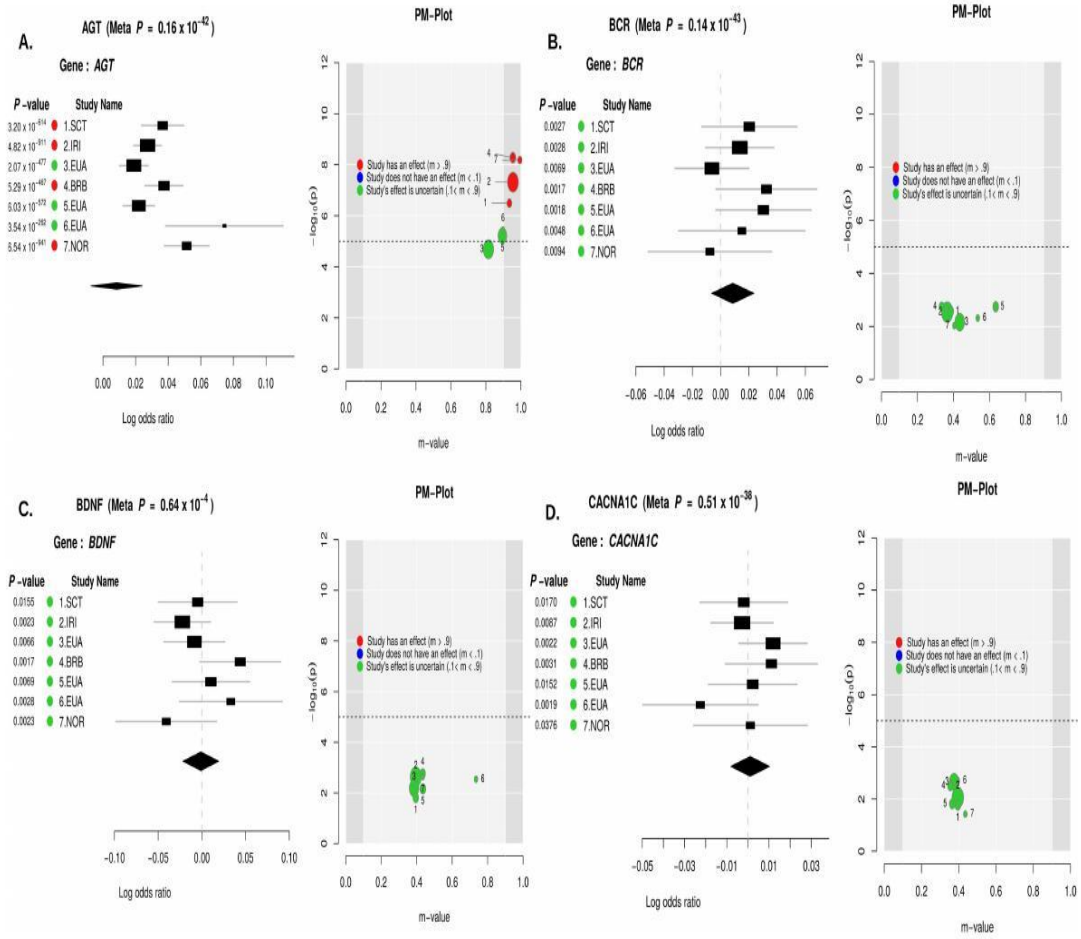


Figure S4. Forest plot of top 7 significant genes from ancMETA, meta-analysis at gene level across 7 European populations with Bipolar disorder from GWAS data sets.

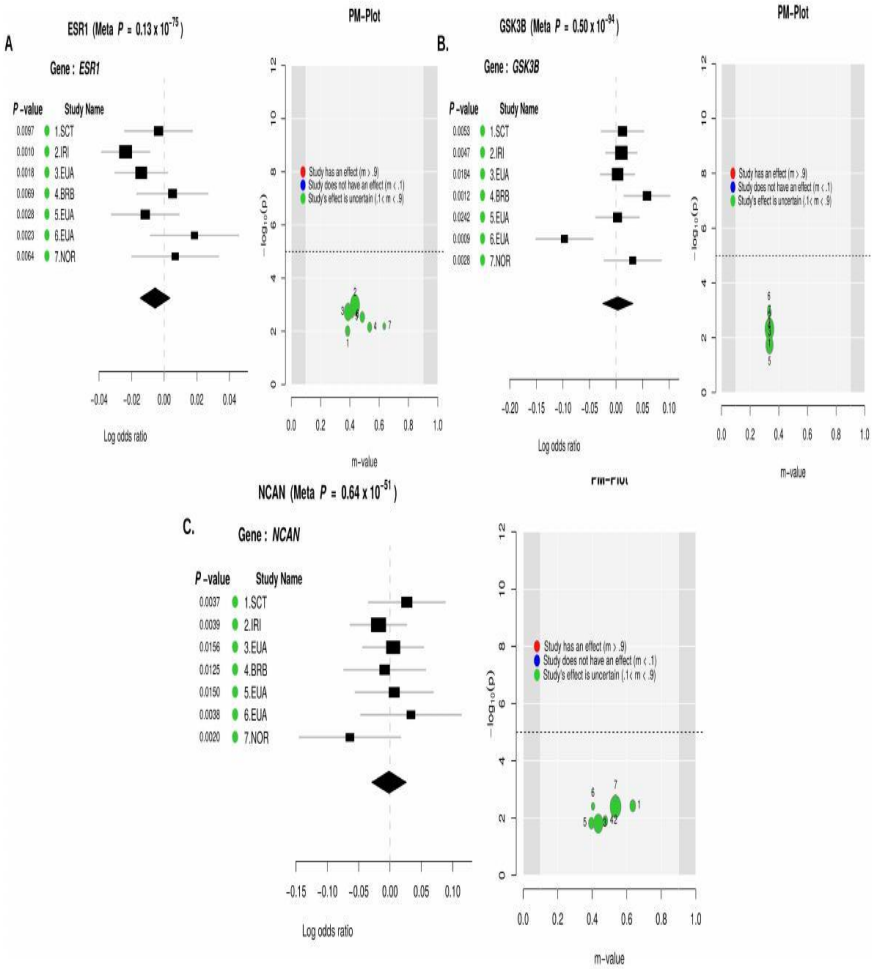


Figure S5. (continue))Forest plot of top 7 significant genes from ancMETA, meta-analysis at a gene level across 7 European populations with Bipolar disorder from GWAS data sets.

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Chapter FOUR: DECODING THE SHARED GENETIC LANDSCAPE: UNRAVELING THE INTERSECTION OF SUICIDAL BEHAVIOR AND PSYCHIATRIC PHENOTYPES FROM THE FINNGEN BIOBANK

Summary

Suicidal behaviors, with their intricate cross-diagnostic nature, represent a formidable challenge in psychiatric research. These behaviors often intertwine with various psychiatric disorders, necessitating a deeper understanding of their shared genetic underpinnings. Our study delves into the genomic overlap between suicide and a spectrum of psychiatric phenotypes, aiming to illuminate novel avenues for treatment and prevention. We leveraged genome-wide association study (GWAS) summary statistics from the FinnGen Biobank, a rich repository of genetic data. By meticulously analyzing this extensive dataset, we identified specific psychiatric conditions that share a common genetic factor with suicide. Our findings transcend traditional diagnostic boundaries, revealing a complex interplay between suicidal behavior and the following disorders: Disturbance of Activity and Attention, Anxiety Disorders, Generalized Anxiety Disorder, Alcohol Use Disorder, Bipolar Disorder, and Depression, Post-Traumatic Stress Disorder. Cross-phenotype GWAS meta-analysis encompassing these disorders with suicide revealed at variant level 12,729 significant variants ($P < 5 \times 10^{-8}$), with 521 showing potential pleiotropy. Furthermore, our gene/subnetwork-centric meta-analysis using ancMETA unearthed 1,201 significant genes (Overall $P < 0.05$), with 53 acting as hubs within subnetworks. These hub genes were implicated in significant pathways, including Signaling by Receptor Tyrosine Kinases, Signal Transduction, Axon Guidance, Nervous System Development, and Immune System function acting as top significant. These hubs represent critical nodes in the shared biological pathways, with a potential for therapeutic targeting. Our study underscores the urgent need for integrated strategies that address suicidal behavior within the broader context of psychiatric disorders. We can forge novel therapeutic interventions and preventive measures by focusing on these shared pathways. As we decode the genetic symphony, we move closer to a future where lives are saved through precision medicine tailored to intersecting vulnerabilities.

4.1. Introduction

Suicidal behavior (SB) represents a critical public health crisis, claiming an estimated 700,000 lives annually worldwide—a mortality rate of 9.0 per 100,000 individuals [1]. This phenomenon predominantly affects the young, with the majority of suicides occurring among those aged 10–49 years [2,3]. SB's significance extends beyond its mortality statistics; it is a complex psychiatric challenge due to its diagnostic ubiquity and frequent co-occurrence with a myriad of psychiatric conditions. In the European Union, psychiatric disorders impact 38.2% of the population each year, exhibiting minimal variance across member states [4]. In Finland, mental illnesses are the leading cause of early disability retirement, with approximately 101,000 individuals granted disability pensions for psychiatric conditions in 2021 [5,6]. Globally, suicide ranks as the fourth leading cause of death among individuals aged 15 to 29 years [1]. SB's spectrum includes various behaviors, with non-suicidal self-injury (NSSI)—the intentional harm to one's body without suicidal intent—emerging as a distinct category [7]. Suicide attempts (SA), defined as nonfatal self-harm with an intent to die, are estimated to occur over 20 times more frequently than death by suicide (SD). SA, as a facet of SB, contributes significantly to disability, diminished quality of life, and economic and societal strain.

Genetic factors account for a substantial portion of SB's etiology [9], with heritability estimates ranging from 30 to 55% for suicidal ideation and 17-45% for attempts, even after adjusting for comorbid psychiatric disorders [10,11]. The genetic nexus between trauma exposure, NSSI, suicidal ideation, SA, and SD presents a complex web of interactions (Richmond et al., 2019). Genetic correlations and polygenic risk scores (PRS) have established shared heritability between SB and psychiatric disorders, with the UK Biobank (UKB) data indicating a strong genetic link with depression (rg = 0.81, [12,13]; rg = 0.86, [14]) Moreover, the concept of a "p factor" has been proposed to encapsulate a common set of genetic factors underlying the comorbidity of various psychiatric disorders, suggesting a shared genetic pathway [15,18,19].

Contemporary genomic research dissects the shared genetic risk across diseases by pinpointing variants associated with multiple disorders. This endeavor employs GWAS data alongside innovative statistical methodologies [16]. A seminal study by Lee et al. (2019) identified three core dimensions of genetic risk sharing—Neurodevelopmental, Compulsive, and Psychotic—across eight psychiatric conditions, hinting at fundamental mechanisms underlying individual disorder susceptibility [17]. Furthermore, Grotzinger et al. (2022) applied structural equation modeling via GenomicSEM to GWAS datasets, revealing four principal factors indicative of genetic vulnerability that span disease clusters [19]. This analytical approach provides invaluable insights into the genetic commonalities and specificities among psychiatric disorders within a given cohort. Despite its burgeoning application, the integration of this methodology into the study of SB remains limited.

Recent investigations by Kootbodien and colleagues (2023) have delved into the shared genetic architecture of SB and specific psychiatric disorders, including major depression, alcohol use disorder, and ADHD, within subjects from the UK Biobank [14]. These studies underscore the critical role of genomic, exomic, and gene-gene interaction analyses in timely diagnosis, management, and prognosis for patients affected by suicide, particularly those exhibiting symptoms that intersect with various psychiatric conditions. However, there remains a need to replicate and extend these findings across diverse cohorts with sufficient sample sizes.

Furthermore, investigations involving multiple phenotypes often suffer from heterogeneity due to varying ascertainment protocols, sample collection methods, measurements, genotyping platforms, and GWAS tools. This lack of harmonization results in uncoordinated GWAS summary data, potentially introducing selection biases [21]. Building upon this foundation, our study focuses on unravelling the shared genetic landscape between suicide and a broader

spectrum of psychiatric disorders. We leverage a homogeneous Finnish cohort of North European ancestry, with GWAS summary statistics sourced from FinnGen [22]. FinnGen offers the advantage of population-wide homogeneity, as biological material originates from the same population, and the summary statistics adhere to a consistent protocol. Our GWAS analysis within the FinnGen cohort employs the conventional FinnGen pipeline, which effectively addresses sample relatedness and case-control imbalance using the Linear Mixed Model algorithm implemented in SAIGE [20].
Our primary objective is to identify disorder-specific components that share a common genetic factor with suicide. To achieve this, we employ the Genomic Structural Equation Modeling (GenomicSEM) technique. Subsequently, we delve into potential loci and functional enrichment associated with the gene set derived from this common factor.

The psychiatric disorders investigated in our study, listed alphabetically, include:
Disturbance of Activity and Attention (ADHD); Anxiety Disorders (ANX); Alcohol Use Disorder-ICD-based (AUD); Autism (AUT); Bipolar Disorder (BIP); Depression (DEP); General Anxiety Disorder (GAD); Neurotic, Stress-related, and Somatoform Disorders (NEU); Obsessive-Compulsive Disorder (OCD); Post-Traumatic Stress Disorder (PTSD); Suicide or other Intentional Self-harm (SUIC); Schizoaffective Disorder (SCZAF); Schizophrenia (SCZ). By dissecting the genetic architecture underlying these conditions, we aim to shed light on shared biological pathways and potential therapeutic targets.

4.2 MATERIALS AND METHODS

4.2.1 GWAS Summary Datasets

We obtained GWAS summary statistics pertaining to Disturbance of Activity and Attention (ADHD), Anxiety Disorders (ANX), Alcohol Use Disorder-ICD-based (AUD), Autism (AUT), Bipolar Disorder (BIP), Depression (DEP), General Anxiety Disorder (GAD), Neurotic, Stress-related and Somatoform Disorders (NEU), Obsessive-Compulsive disorder (OCD), Post-Traumatic Stress Disorder (PTSD), Suicide or other Intentional self-harm (SUIC), Schizoaffective Disorder (SCZAF), and Schizophrenia (SCZ) from the FinnGen database. **Table 4.1** presents a summary of the data used in this study; for further information about data collection methods and techniques, please refer to the original publication [22].

Table 4.1 Summary information of the phenotypes of our study from the FinnGen Biobank

Phenotype	**#Case**	**#Controls**	**Sample size**	**Number of SNPs**
SCZAF	2,518	297,496	300,014	16,383,306
SCZ	6,050	297,496	303,546	16,383,311
BIP	5,763	271,380	277,143	16,383,274
DEP	33,812	271,380	305,192	16,383,312
NEU	30,336	278,818	309,154	16,383,316
ANX	30,731	278,423	309,154	16,383,316

AUT	418	306,261	306,679	16,383,316
AUD	14,307	328,192	342,499	20,169,557
ADHD	1,357	304,758	306,115	16,383,302
GAD	3.228	278,818	282,046	16,383,246
OCD	1,466	278,818	280,284	16,383,236
PTSD	1,639	278,818	280,457	16,383,235
SUIC	1361	341,138	342,499	20,169,557

After the data was retrieved from the FinnGen database, we initiated a thorough process of data refinement. First, duplicate SNPs were eliminated, and we extracted SNPs that had a Minor Allele Frequency (MAF) greater than 0.01. We also eliminated SNPs that had conflicting alleles and those that had missing information from the Genome-Wide Association Study (GWAS) summary statistics for each disorder.

4.2.2. SNP-Based Heritability and Genome-Wide Genetic Correlation

Our study used univariate LD-score regression (LDSC) [23] to measure the portion of phenotypic variance due to common genetic variants, known as SNP-based heritability (h^2 SNP) in the observed scale. The method was implemented using the GenomicSEM R package [18] and adhered to default settings for quality control processes. The Major Histocompatibility Complex region, characterized by a complex gene network, often contains SNPs with large effect sizes, requiring exclusion to prevent skewing results. LD scores were derived from the 1000 Genomes European sample, limited to HapMap3 SNPs for reliable heritability and genetic correlation estimates. The default settings were followed in the quality control processes for genetic covariance and sampling covariance matrices.

4.2.3. Genomic Structural Equation Modelling Analysis

Genomic factor analysis was performed using the R package, GenomicSEM. We assume that the underlying latent structure of genetic variance between traits was unknown. Initially, we performed a genomic exploratory factor analysis (EFA) to determine the number of factors that best describe the shared genetic variation; next, we applied this to inform the subsequent genomic confirmatory factor analysis (CFA) to estimate the parameter for model fitting. EFA allowed us to detect different number of factors to identify which model performed best using predefined criteria. Since diagonally weighted least squares estimation takes into account variations in GWAS sample size and is more accurate when modelling trait characteristics (Grotzinger et al., 2019), we implemented it to run all the models. We compared the outcomes of the fitting models test following previously suggested cut-off values for genomicSEM in order to evaluate the fit of the various models from CFA. We used the following as measures for absolute fit: AIC (Akaike Information Criterion), a measure used to compare the quality of statistical models, with lower values indicating a better fit. The standardized root mean square residual (SRMR) with values ≤ 0.10 indicating moderate fit, and SRMR ≤ 0.05 indicating good fit; the comparative fit index (CFI) test with values ≥ 0.90 (indicating moderate fit) and CFI $\geq$ 0.95 (indicating good fit). Additionally, we examined the chi-square statistics, which indicate a precise match, and where lower chi-square values correspond with greater fit [18].

4.2.4. Variant-based GWAS Meta-analysis on the Revised Common Factor

We performed a variant-based GWAS cross-trait meta-analysis on the revised common factor to pinpoint potential pleiotropic variants/SNPs cross-associated with the disorders of the revised common factor. Characterizing the functional genomics of cross-phenotype genetic effects may also assist in finding targets for diagnostics and treatments by illuminating the basic characteristics of pleiotropic loci that set them apart from loci unique to a particular disorder. We deployed RE2C (v1.06) [24], which accounts for sample overlap among GWAS summary data (http://software.buhmhan.com/RE2C) to perform the analysis. RE2C* *P*-value, which is conditioned for the overlapping samples was used as the significance level for each variant. SNPs and loci that were significant (RE2C*$P < 5 \times 10^{-8}$) after meta-analysis but were not genome-wide significant in either of the individual trait GWAS datasets were regarded as novel [25]. In addition to the fixed effect (FE) and the modified random effects (RE2) models [26], we conducted cross-trait GWAS meta-analyses which were integrated into the METASOFT software (http://genetics.cs.ucla.edu/meta/). To estimate the SNP meta-analysis statistics (effect size and p-value), the FE model, supposing that the GWAS traits examined the same (fixed) effect, employed the inverse variance weighted technique. In the presence of heterogeneity based on the I^2 statistics METASOFT makes use of the random effects (RE2) model to estimate the SNP meta-analysis statistics, using the METASOFT m-value technique [27]. The m-value is the cross-trait meta-posterior analysis probability that the effect occurs in each trait [27]. METASOFT was also utilized to identify potential pleiotropic loci based on the m-value. M-values larger than 0.9 denote the presence of the effect or rather the contribution of the joint effect of a SNP from all participating studies implicating evidence of pleiotropy across the disorders. M-values less than 0.1 denote the absence of the effect, and m-values between 0.1 and 0.9 suggest ambiguity regarding the presence of the effect.

4.2.5. Gene and Subnetwork-Specific Meta-Analysis of the Revised Common Factor

Gene and subnetwork-specific meta-analysis was performed using ancMETA [28] to estimate the aggregated genetic effects of variants nearby genes and the level of significance of the revised common factor (refer to **Figure 4.4**). Common SNPs were extracted from all studies and mapped to genes located within or less than 20 kb distance up/downstream of the protein-coding gene using FUMA SNP2GENE option [29]. ancMETA, based on common SNPs mapped to genes, deploys a Bayesian posterior probability approach, merges the data into datasets of known biological protein-protein networks, conducts meta-analysis at the gene and sub-network levels, and finds the most significant sub-network hubs to map the biological pathways. The expression level and tissue enrichment of the identified hub genes were investigated using FUMA from the GENE2FUNC option [29]. The most recent version of the human protein-protein interactions (PPI) network from the STRINGv11 database [30] was used to generate the network encompassing all the significant hub genes. The list of significant hub genes within the network was plugged into Enrichr (https://maayanlab.cloud/Enrichr/) to identify the underlying pathways and biological processes contributing to the common factor. Additionally, The Drug-Gene Interaction Database v4.0 (DGIdb 4.0), an open-access database and web interface, was used to identify drug-gene interactions (https://beta.dgidb.org/). DGIdb gathers drug-gene interaction and druggable gene data from 30 different sources and 22 databases [31].

4.3. Results

4.3.1 SNP-Based Heritability and Genome-Wide Genetic Correlation

The FinnGen cohort demonstrated overall low estimates of SNP-based heritability for the thirteen disorders on the observed scale with the lowest being AUT (h_2 = 0.0071, SE = 0.0125) and the highest being GAD (h_2 = 0.0786, SE = 0.0173) (**see Table S1A-B**). Given this evidence of SNP-based heritability across all of these traits, we employed bivariate LDSC to investigate genetic correlations between them. After correction for multiple testing (p = 0.05/13 = 0.0038), strong significant genetic correlations were observed between ANX and DEP (rg = 0.9278; p-value = 1.03×10^{-45}), followed by DEP and NEU (rg = 0.9266; p-value = 1.97×10^{-44}) and between ANX and NEU (rg = 1.0004; p-value = 3.85×10^{-38}). There was evidence of significant genetic correlation between ANX and AUD (rg = 0.67; p-value = 3.83×10^{-33}), NEU and AUD (rg = 0.67; p-value = 1.4×10^{-32}), DEP and AUD (rg = 0.6686; p-value = 2.15×10^{-32}). Significant positive genetic correlation was detected between DEP and SUIC (rg = 0.94; p-value = 5.5×10^{-12}), AUD and SUIC (rg = 0.73; p-value = 8.39×10^{-08}), NEU and SUIC (rg = 0.71; p-value = 3.09×10^{-07}), ANX and SUIC (rg = 0.72; p-value = 3.24×10^{-07}), PTSD and SUIC (rg = 1.24; p-value = 0.0007), BIP and SUIC (rg = 0.59; p-value = 0.0017)(**Figure 4.1**). This figure **(Figure 4.1**) illustrates that, at least within the FinnGen cohort, genetic components associated with one disorder strongly increase the risk of symptoms of the other. This is particularly likely for SUIC which exhibits a high and significant positive correlation with PTSD and DEP.

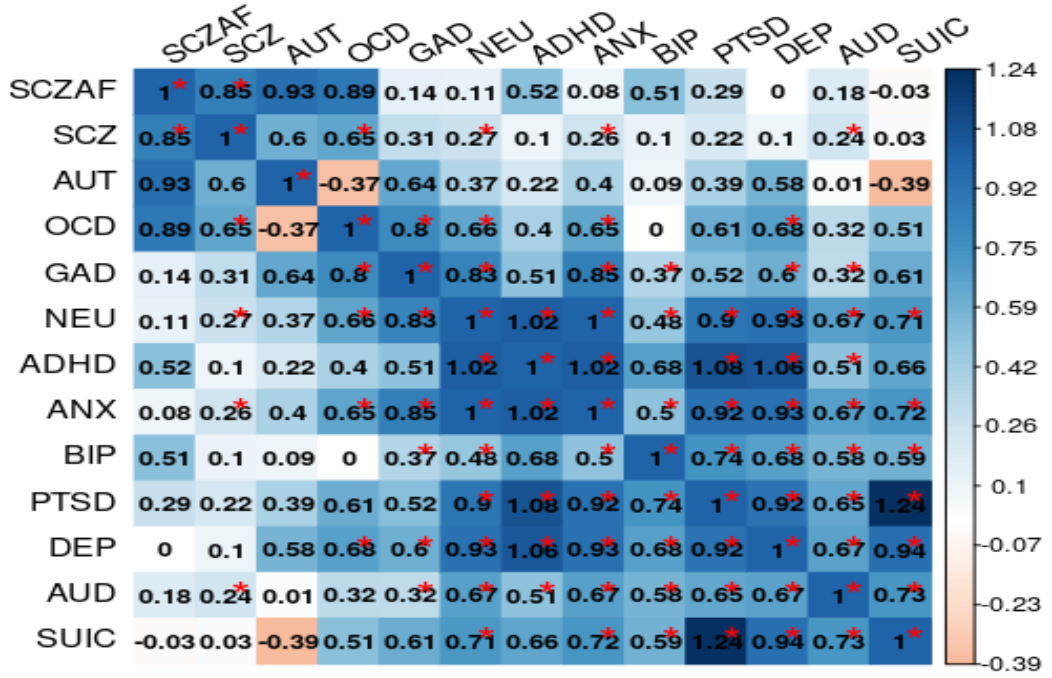


Figure 4.1. Pairwise genetic correlation heatmap between the thirteen disorders within the FinnGen Biobank. The red star (*) highlights the significant correlation, after Bonferroni correction.

4.3.2 Genomic Structural Equation Modelling Analysis

First, we ascertained the level of common genetic variance between all of the included traits by testing the performance level of a common genetic factor. The common factor model, with freely determined loadings, had a fair fit (chi-square, $X^2(65) = 95330.87$, AIC = 95382.87, CFI = 0.993, SRMR = 0.147) (**Figure 4.2A**). Next, our GenomicSEM analyses identified an acceptable fit of a strongly correlated two-factor model, which was able to fit the data best (chi-square, $X^2(26) = 13167.04$, AIC = 13205.04, CFI = 0.9986, SRMR = 0.0585) suggesting that the shared molecular mechanism increasing the risk of the comorbidity factor F_2 correlates with the one included in F_3 (**Figure 4.2B**).

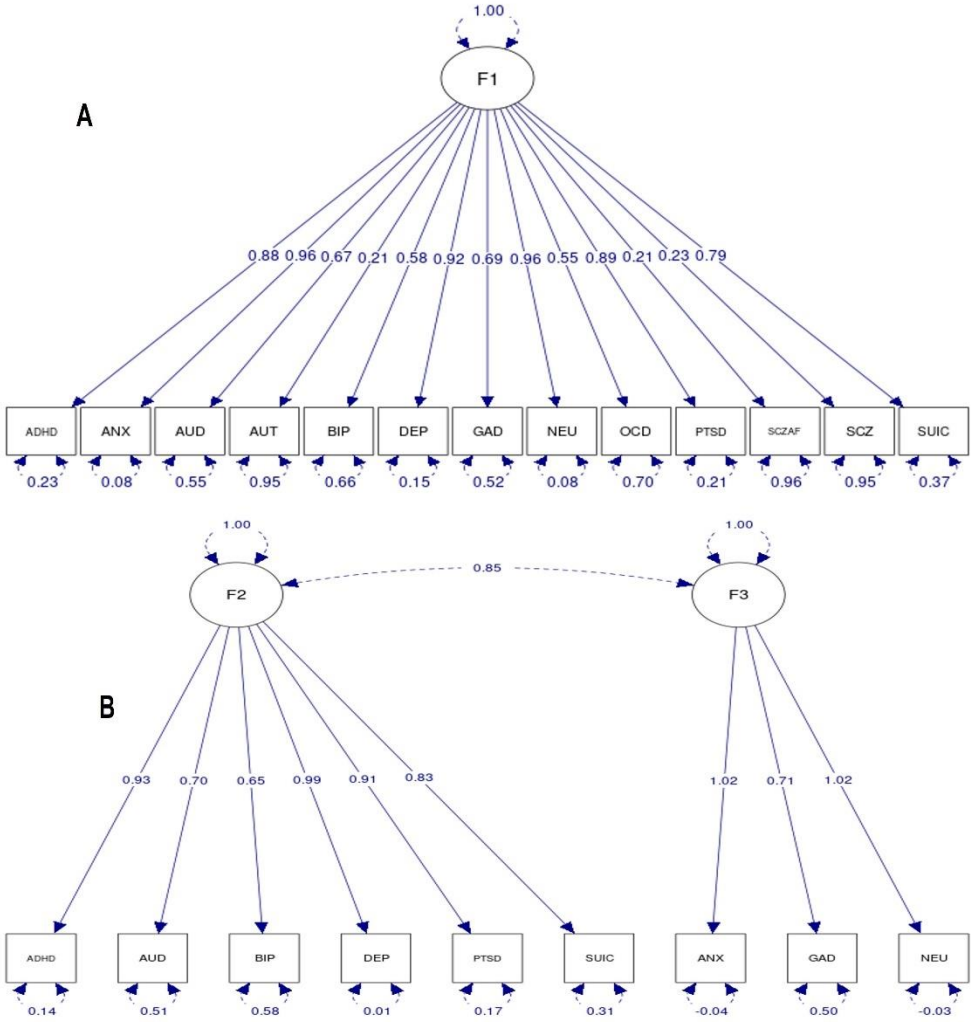


Figure 4.2. **A**- Path diagram for the single common factor model, which shows the overall common variance among all included traits. Path diagrams in GenomicSEM use squares to represent seen variables and circles to represent unobserved, or latent, variables. One-headed arrows going from the independent variable to the dependent variable are used to illustrate regression connections between variables. A two-headed arrow connecting a variable to itself is used to symbolize the variance of a variable or the covariance between a variable and itself; **B**- Path diagram for the two common factor model. Two-headed arrows connecting two variables indicate covariance connections between them. The figure shows the strong correlation between the factors; with SUIC sharing the same factor with ADHD, AUD, BIP,

DEP, and PTSD. This factor is strongly correlated with the factor encompassing ANX, GAD and NEU.

In addition to the above, we identified two different correlated factor scenarios encompassing most of the observed disorders. The first scenario highlights two positive correlated factors similar to that in **Figure 4.2B**, however with SCZAF, SCZ and OCD sharing each of these factors (see **Figure 4.3A**). This model fits the data best with good estimates (chi-square, X2(47) = 8602.041, AIC = 8664.041 CFI = 0.99925, SRMR = 0.077). The second scenario similar to **Figure 4.3A**, is shown with the addition of AUT as the common factor of all the observed traits. The model generated best fit estimates (chi-square, X2(47) = 10562.07, AIC = 10650.07 CFI = 0.999, SRMR = 0.071) (**Figure 4.3B**). This was followed by an investigation of a three-factor model fit with a factor loading score > 0.3. The model accounts for 80% cumulative variances. The model fits best (chi-square, X2(47) = 20150.97, AIC = 20238.97 CFI = 0.99855, **SRMR = 0.0708**), assuming a correlation between the factors, and with AUT inter-correlated between the factors (**Figure 4.3C**). The first factor includes ANX, GAD, NEU, ADHD, AUD, DEP and OCD; the second factor includes ADHD, AUD, DEP, BIP, PTSD and SUIC, and the third includes OCD, SCZAF and SCZ.

It is worth mentioning that, through the process of building the model, a constant common factor with constant fit estimates was identified (based on the assumption of a common 'revised factor' underlying or underpinning the three-factor model) which included ADHD, ANX, AUD, DEP, BIP, GAD, PTSD and SUIC. Interestingly, this set of phenotypes shows a constant common factor model with good estimates regardless of the model being fitted (chi-square, X2(20) = 38.7, P_{chisq} = 0.007, AIC = 70.7, CFI = 0.99, SRMR = **0.071**) suggesting that these eight disorders establish a firm constant common factor in the FinnGen cohort (**Figure 4.4**).

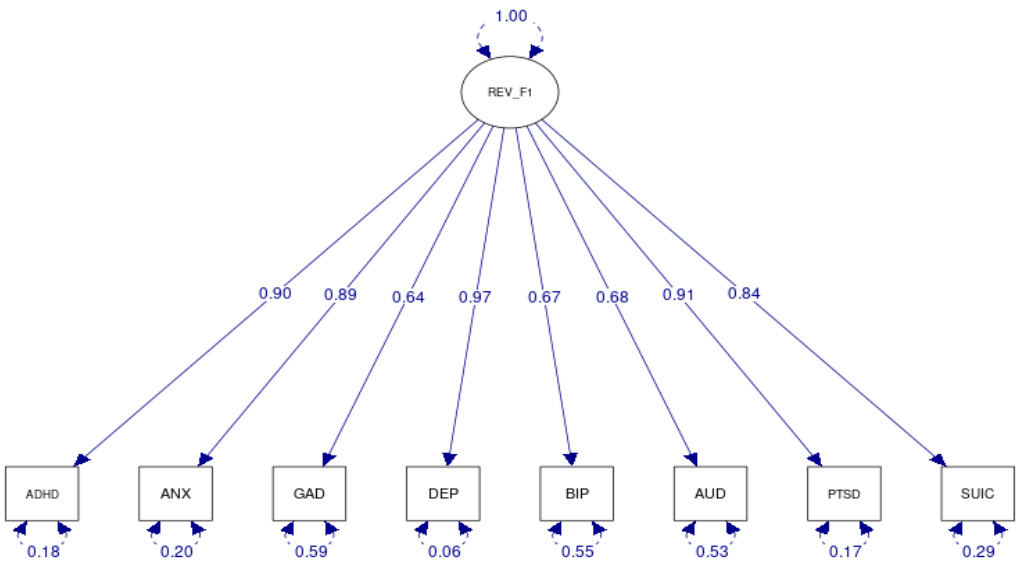


Figure 4.4. Path Diagram of the Revised constant common factor encompassing ADHD, ANX, DEP, BIP, AUD, GAD, PTSD and SUIC.

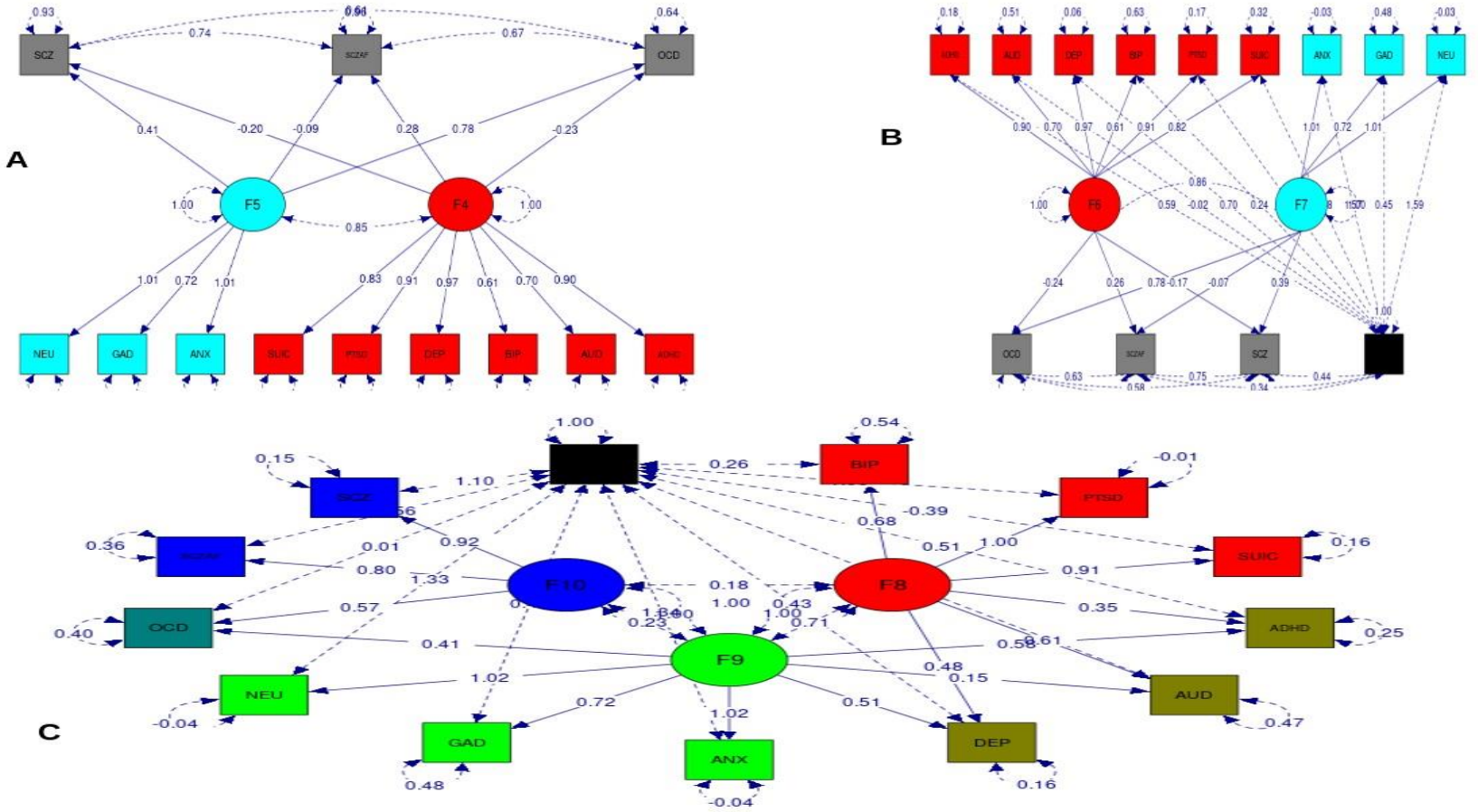


Figure 4.3. **A**- Path diagram for the revised correlated two-factor model without AUT; **B**- Path diagram for the revised correlated two-factor model including AUT (in black). The figure exhibits how AUT could be considered the common factor of the rest of the observed traits; **C**- Path diagram for the three-factor model. The figure shows a positive correlation between factors and AUT (in black) as the common factor of each of the observed traits/phenotypes.

Figure 4.3. **A**- Path diagram for the revised correlated two-factor model without AUT; **B**- Path diagram for the revised correlated two-factor model including AUT (in black). The figure exhibits how AUT could be considered as the common factor of the rest of the observed traits; **C**- Path diagram for the three-factor model. The figure shows a positive correlation between factors and AUT (in black) as the common factor of each of the observed traits/phenotypes.

4.3.3. GWAS Meta-analysis on the disorders encompassing the Revised Common Factor

Because SUIC seems to originate from the same common factor as ADHD, ANX, AUD, BIP, DEP, GAD, and PTSD, we sought to ascertain the shared loci or molecular mechanism underlying the revised common factor encompassing these disorders. To identify shared genetic components on the revised common factor, we first performed cross-disorder GWAS meta-analysis at variant level to discover the association of putative SNPs, and thereafter, accounting for the aggregation of variants within proximal genes from each GWAS summary, performed gene and sub-network meta-analyses to identify potential genes, pathways and networks of genes underlying the shared mechanism between traits included in the revised common factor. We then interrogated the biological significance of the identified associations by performing a functional enrichment analysis of the hub genes. The result of the analyses lends insight into genetic relationships and the shared mechanism between these traits.

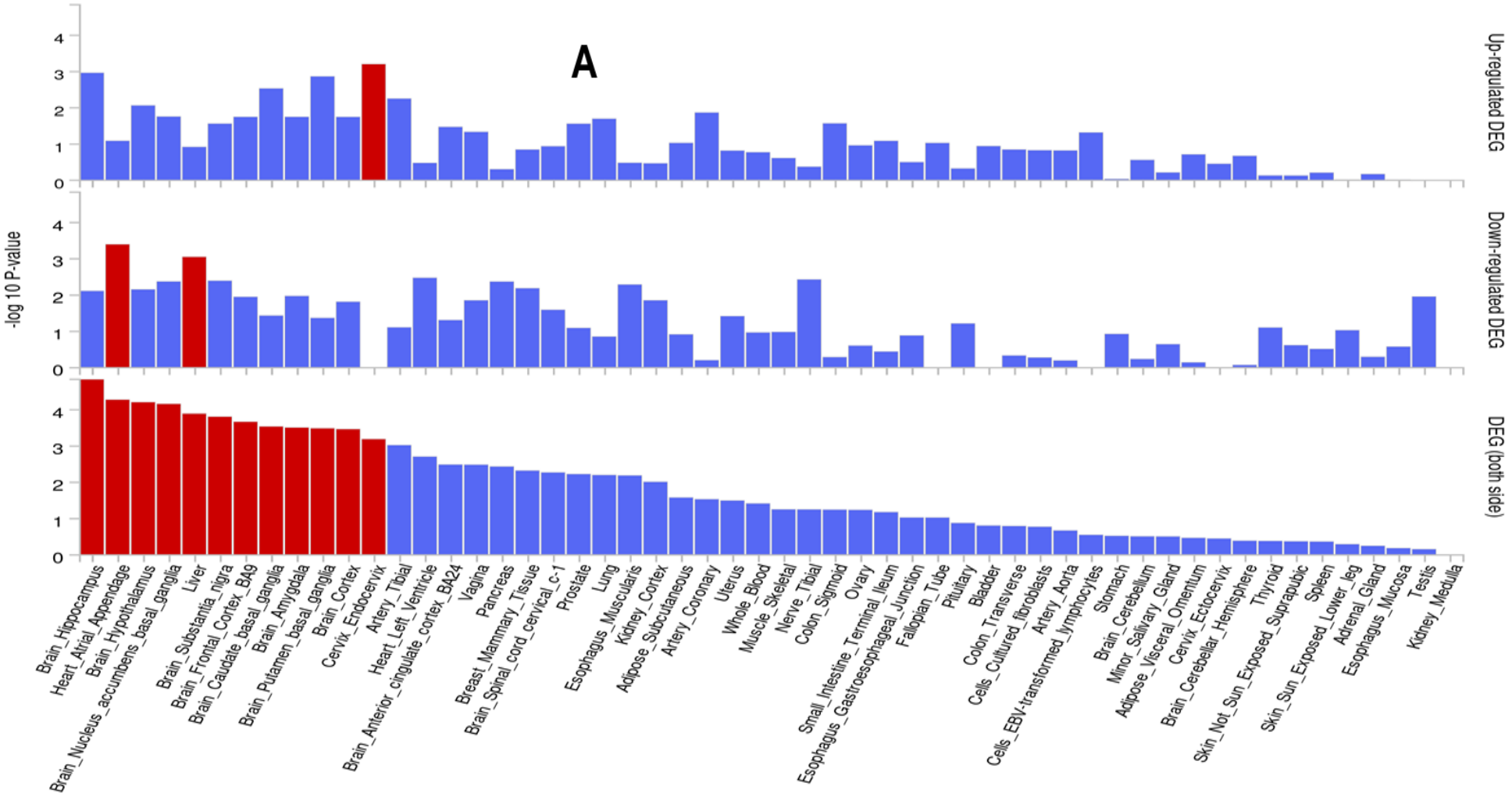
4.3.3.1. Variant-based GWAS Meta-analysis on the Revised Common Factor

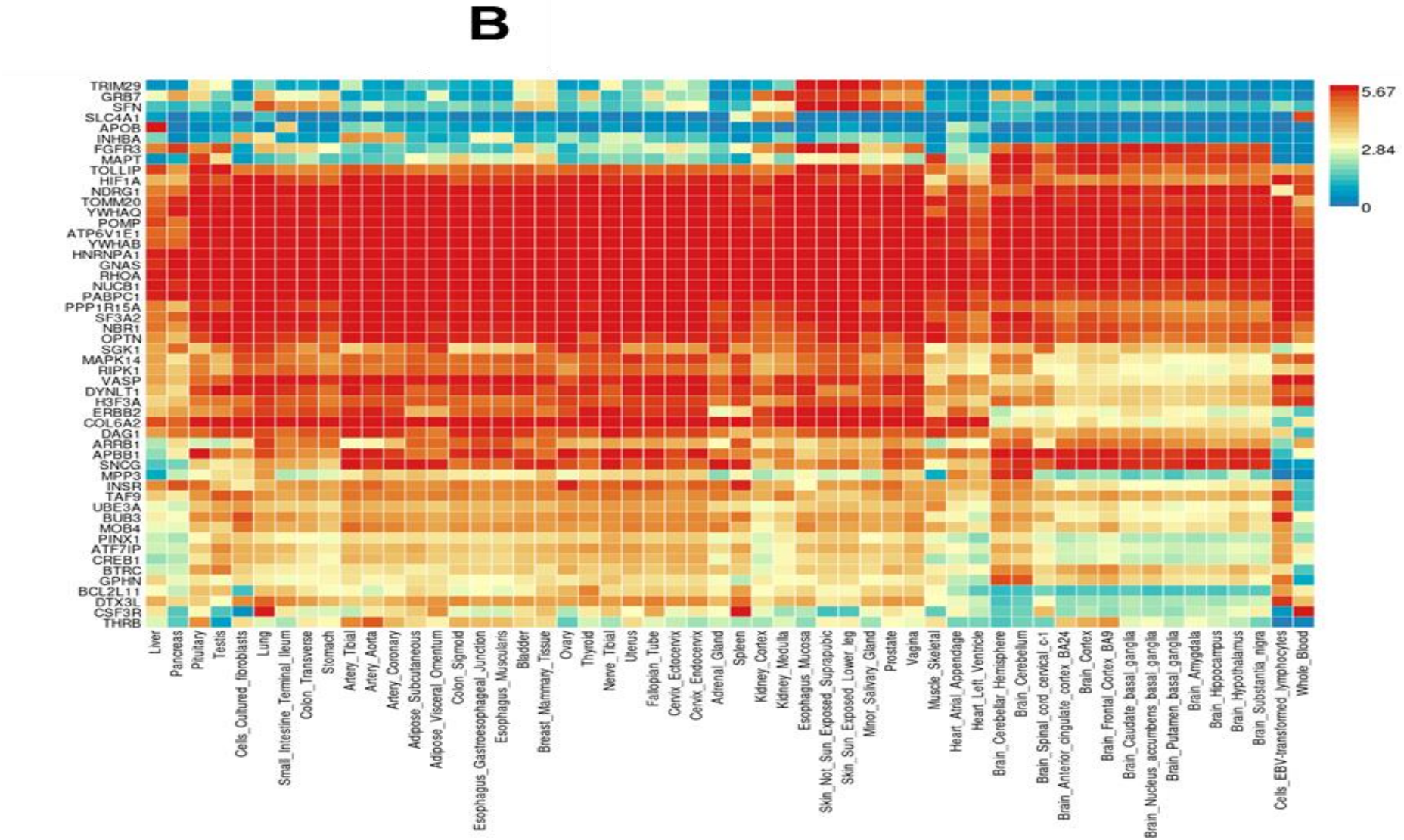
Our cross-trait meta-analysis using RE2C identified 12,729 significant variants (RE2C*$P < 5\times10^{-8}$) (**Table S2**) with overall small to moderate effects. Among these significant SNPs, 521 potential pleiotropic variants were identified (m-value > 0.9 for all disorders) indicating the probability of each SNP affecting all of the disorders (**Tables S3 and S4**). The top five significant pleiotropic variants were located near genes *PRR16, BTN3A2, POM121L2, ZNF322,* and *ZNF184* (**Table 4.2, Tables S2-S4**). Among the list of our potential pleiotropic variants, *PRR20A, SMYD3, PCDH10, MON1B, SLC17A2, MRPL33, PTPRD, BTN3A1, ZNF184, HIST1H2BJ, PITRM1, and ANKRD1* are the top nearby genes containing a significant number (more than 10) of potential pleiotropic variants.

Table 4.2. Top five significant potential pleiotropic loci (m-value > 0.9) from the cross-phenotype GWAS meta-analysis encompassing disorders part of the revised common factor.

Rsids	chr	pos	ref	alt	gene	RE2Cp	P_SUIC	P_ADHD	P_ANX	P_AUD	P_BIP	P_DEP	P_GAD	P_PTSD
rs12517895	5	120759853	C	G	*PRR16*	1.71×10^{-19}	0.13	0.37	5.18×10^{-06}	7×10^{-05}	1.4×10^{-02}	6.9×10^{-09}	0.15	0.26
rs9467714	6	26340557	G	A	*BTN3A2*	7.02×10^{-16}	0.4	0.2	3.24×10^{-05}	4.9×10^{-04}	0.025	8.7×10^{-06}	0.069	9.7×10^{-04}
rs12174489	6	27320021	C	T	*POM121L2*	4.45×10^{-14}	0.375	0.041	6.04×10^{-06}	0.061	7.1×10^{-03}	4.2×10^{-05}	3.2×10^{-03}	0.35
rs71557344	6	26637496	T	C	*ZNF322*	7.76×10^{-14}	0.329	0.314	1.54×10^{-04}	1.8×10^{-04}	0.16	6.6×10^{-05}	0.048	1.9×10^{-03}
rs34573979	6	27512747	C	T	*ZNF184*	1.28×10^{-13}	0.116	0.422	3.1×10^{-04}	3.9×10^{-04}	0.076	7.1×10^{-05}	0.062	1.4×10^{-03}

Ref: reference allele; alt: alternative allele; chr: chromosome; $RE2C_P$: P-value generated by RE2C


A
-log 10 P-value
Up-regulated DEG
Down-regulated DEG
DEG (both side)
Brain_Hippocampus
Heart_Atrial_Appendage
Brain_Hypothalamus
Brain_Nucleus_accumbens_basal_ganglia
Liver
Brain_Substantia_nigra
Brain_Frontal_Cortex_BA9
Brain_Caudate_basal_ganglia
Brain_Amygdala
Brain_Putamen_basal_ganglia
Brain_Cortex
Cervix_Endocervix
Artery_Tibial
Heart_Left_Ventricle
Brain_Anterior_cingulate_cortex_BA24
Vagina
Pancreas
Breast_Mammary_Tissue
Brain_Spinal_cord_cervical_c-1
Prostate
Lung
Esophagus_Muscularis
Kidney_Cortex
Adipose_Subcutaneous
Artery_Coronary
Uterus
Whole_Blood
Muscle_Skeletal
Nerve_Tibial
Colon_Sigmoid
Ovary
Small_Intestine_Terminal_Ileum
Esophagus_Gastroesophageal_Junction
Fallopian_Tube
Pituitary
Bladder
Colon_Transverse
Cells_Cultured_fibroblasts
Cells_EBV-transformed_lymphocytes
Artery_Aorta
Stomach
Brain_Cerebellum
Minor_Salivary_Gland
Adipose_Visceral_Omentum
Cervix_Ectocervix
Brain_Cerebellar_Hemisphere
Thyroid
Skin_Not_Sun_Exposed_Suprapubic
Skin_Sun_Exposed_Lower_leg
Spleen
Adrenal_Gland
Esophagus_Mucosa
Testis
Kidney_Medulla


B
TRIM29
GRB7
SFN
SLC4A1
APOB
INHBA
FGFR3
MAPT
TOLLIP
HIF1A
NDRG1
TOMM20
YWHAQ
POMP
ATP6V1E1
YWHAB
HNRNPA1
GNAS
RHOA
NUCB1
PABPC1
PPP1R15A
SF3A2
NBR1
OPTN
SGK1
MAPK14
RIPK1
VASP
DYNLT1
H3F3A
ERBB2
COL6A2
DAG1
ARRB1
APBB1
SNCG
MPP3
INSR
TAF9
UBE3A
BUB3
MOB4
PINX1
ATF7IP
CREB1
BTRC
GPHN
BCL2L11
DTX3L
CSF3R
THRB
5.67
2.84
0
Liver
Pancreas
Pituitary
Testis
Cells_Cultured_fibroblasts
Lung
Small_Intestine_Terminal_Ileum
Colon_Transverse
Stomach
Artery_Tibial
Artery_Aorta
Artery_Coronary
Adipose_Subcutaneous
Adipose_Visceral_Omentum
Colon_Sigmoid
Esophagus_Gastroesophageal_Junction
Esophagus_Muscularis
Bladder
Breast_Mammary_Tissue
Ovary
Thyroid
Nerve_Tibial
Uterus
Fallopian_Tube
Cervix_Ectocervix
Cervix_Endocervix
Adrenal_Gland
Spleen
Kidney_Cortex
Kidney_Medulla
Esophagus_Mucosa
Skin_Not_Sun_Exposed_Suprapubic
Skin_Sun_Exposed_Lower_leg
Minor_Salivary_Gland
Prostate
Vagina
Muscle_Skeletal
Heart_Atrial_Appendage
Heart_Left_Ventricle
Brain_Cerebellar_Hemisphere
Brain_Cerebellum
Brain_Spinal_cord_cervical_c-1
Brain_Anterior_cingulate_cortex_BA24
Brain_Cortex
Brain_Frontal_Cortex_BA9
Brain_Caudate_basal_ganglia
Brain_Nucleus_accumbens_basal_ganglia
Brain_Putamen_basal_ganglia
Brain_Amygdala
Brain_Hippocampus
Brain_Hypothalamus
Brain_Substantia_nigra
Cells_EBV-transformed_lymphocytes
Whole_Blood

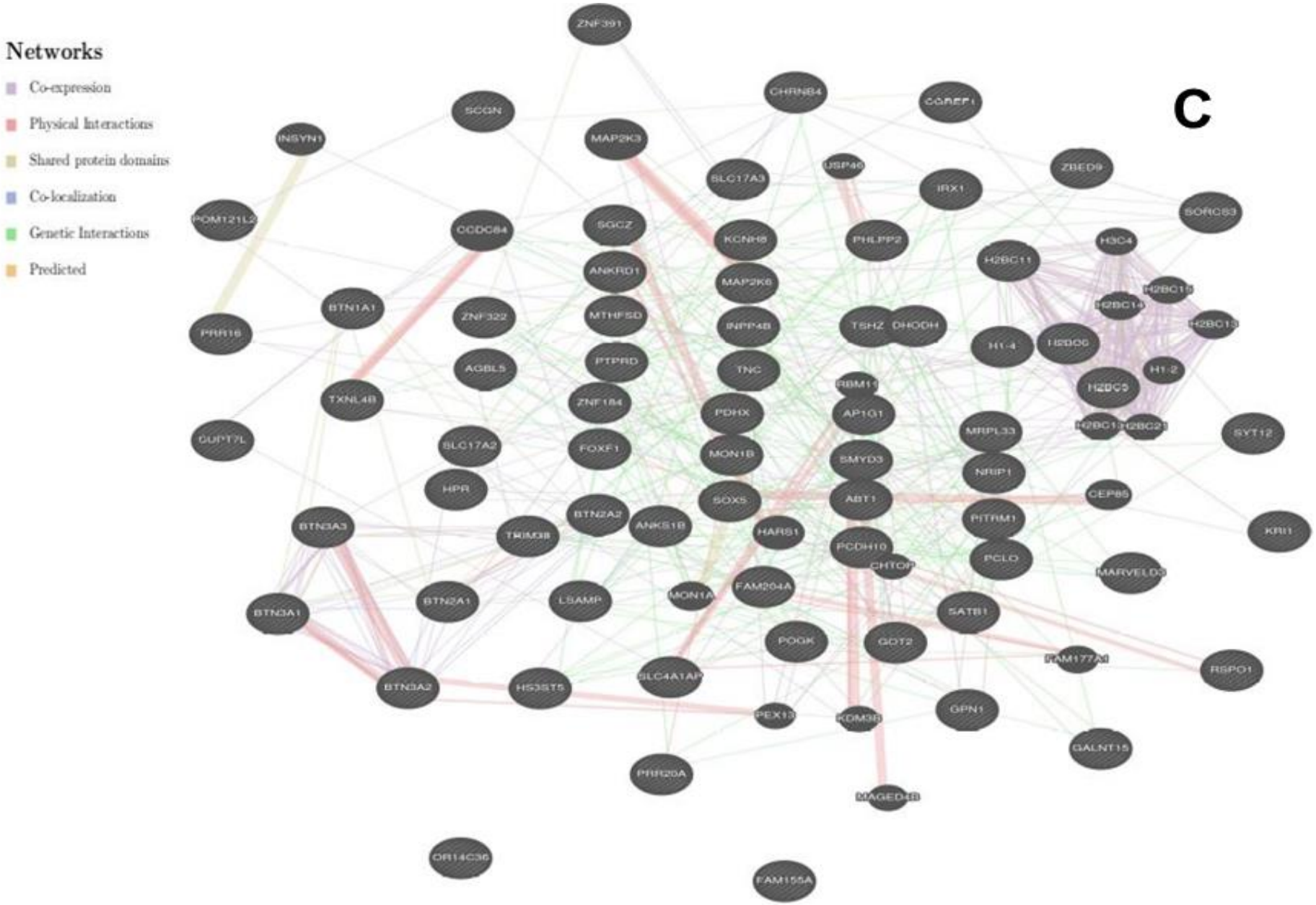

Networks
Co-expression
Physical Interactions
Shared protein domains
Co-localization
Genetic Interactions
Predicted
C
ZNF391
CHRNB4
SCGN
INSYN1
MAP2K3
SLC17A3
USP46
IRX1
ZBED9
SORCS3
POM121L2
CCDC64
SGCZ
KCNH8
PHLPP2
H3C4
H2BC11
ANKRD1
MAP2K6
H2BC15
H2BC14
BTN1A1
ZNF322
MTHFSD
INPP4B
TSHZ
DHODH
H2BC13
PRR16
PTPRD
TNC
H1-4
H2BC6
AGBL5
H1-2
RBM11
H2BC9
TXNL4B
ZNF184
PDHX
AP1G1
H2BC12
H2BC21
SYT12
GUPT2L
SLC17A2
FOXF1
MON1B
MRPL33
SMYD3
NRIP1
HPR
SOX5
ABT1
CEP85
BTN3A3
BTN2A2
ANKS1B
HARS1
PITRM1
KRI1
TRIM38
PCDH10
PCLO
CHTOP
MARVELD3
BTN2A1
LSAMP
MON1A
FAM204A
BTN3A1
SATB1
PDGK
GOT2
FAM177A1
RSPO1
BTN3A2
HS3ST5
SLC4A1AP
PEX13
KDM3B
GPN1
GALNT15
PRR20A
MAGED4B
OR14C36
FAM155A

Figure 4.5. (**A**)- Baplot of tissue-expression enrichment of genes from significant pleiotropic SNPs. The colour Red suggests the enrichment/significance of the tissue while blue suggests the non-enrichment/significance of the tissue; (**B**)- Heatmap of the gene expression from the pleiotropic SNPs; (**C**)- Genemania network interface showcasing the variety of interactions between the genes proximal to the associated pleiotropic SNPs.

Using the GENE2FUNC option in FUMA [29], we investigated the expression level and tissue enrichment of the genes proximal to the identified pleiotropic loci. The results suggest that genes emerging from the significant pleiotropic loci were differentially expressed in several central nervous system tissues. Notably, the strongest enrichment was observed for genes expressed in the hippocampus, hypothalamus, nucleus accumbens, substantia nigra, frontal cortex, caudate, amygdala, putamen and the cortex (**Figures 4.5A and 4.5B**) indicating that this enrichment was exclusive to subcortical and limbic structures. Particularly, down-regulated genes were evident in non-brain tissues which include the heart and liver which have been suggested to be tissues with somatic and endocrine functions.

4.3.3.2. Gene and Subnetwork-Specific Meta-Analysis of the Revised Common Factor

ancMETA identified 1,201 significant genes (overall P < 0.05) (**Table S5**) with *PPM1G* (p-value = 2.17×10^{-05}), *LRBA* (p-value = 2.299×10^{-05}), and *BSN* (p-value = 4.78×10^{-05}), being the top three (**Table 4.3**). The data indicates that the combined impact of these genetic variations within specific genes significantly aligns at the gene level, contributing to the association across multiple phenotypes with disorders linked by a common factor. *PPM1G* is associated with impulsivity and behavioural disinhibition, which are features of several mental health disorders, including AUD and suicidal ideation [32]. This gene was associated with SB when carrying loss-of-function mutations [33]. In a previous study, *LRBA* was identified as an autism-related candidate gene [34]; while *BSN* has previously been linked to SCZ [35], and SCZAF via GABA signalling [36].

Table 4.3. Top 3 significant genes and subnetwork hub genes from the cross-trait meta-analysis of disorders included in the revised common factor.

Gene	#Study	Overall P	Q	Tau^2	P_SUIC	P_BIPO	P_ADHD	P_DEP	P_ANX	P_PTSD	P_GAD	P_AUD
PPM1G	8	2.17E-05	6.94	0	0.0021	0.000409	0.002056	0.00091	0.000322	0.00184	0.000811	0.000173
LRBA	8	2.30E-05	5.95	0	0.00320	0.01004	0.00128	0.000344	0.000412	0.001840	0.00098	0.000196
BSN	8	4.797E-05	7.497	0.0003867	0.001193	0.0003289	0.000903	0.000174	0.000311	0.00152	0.001512	0.000268
Sub-network Hub	**#Study**	**Overall P**	**Q**	**Tau^2**	**P_SUIC**	**P_BIPO**	**P_ADHD**	**P_DEP**	**P_ANX**	**P_PTSD**	**P_GAD**	**P_AUD**
GPHN	8	6.719E-05	6.1425	0	0.08128	0.2659	0.0856	0.0596	0.01955	0.29485	0.06097	0.11153
MAPT	8	0.0004323	5.7418	0	0.266598	0.056869	0.399803	0.239616	0.043896	0.0931540	0.172529	0.018635
RHOA	8	0.0005063	7.3650	0.0006051	0.385435	0.0531520	0.0731967	0.024807	0.067098	0.2785003	0.12244	0.026418

Q: level of heterogeneity in the meta-analysis testing whether studies shared the common effect size; tau^2: variance of the effect size of each gene across the studies.

At subnetwork level, ancMETA identified 721 hub genes amongst which 53 were significant (overall P < 0.05) (**Table S6**). Among the latter hub genes, *GPHN* (p-value = 6.719×10^{-05}), *MAPT* (p-value = 4.3×10^{-04}), and *RHOA* (p-value = 5.06×10^{-04}) were the most significant

(**Table 4.3**). This observation indicates that the accumulation and impact of genetic variants within these hub genes significantly converge at the pathway or gene set level, contributing to the cross-phenotype association with disorders implicated in the common factor.

Results suggest that the set of hub genes was differentially expressed in the pancreas, and brain tissue (**Figure 4.6C**). The most significant enrichment in the brain was observed for hub genes in the brain cortex, the nucleus accumbens, the anterior cingulate cortex, and the putamen basal ganglia. The cerebellar hemisphere showed significance exclusively for down-regulated differentially expressed genes.
The interactions between the hub genes from ancMETA were visually depicted in **Figures 4.6A** and **4.6B** using significant hub genes. The network from Genemania [66] exhibits the lines connecting the circles suggesting a mix of genetic interactions, co-expression, and co-localization. It suggests that these genes may be cooperating and interacting with each other. Potentially strong interactions between hub genes were depicted in the Genemania graphic, both directly and indirectly through other genes.

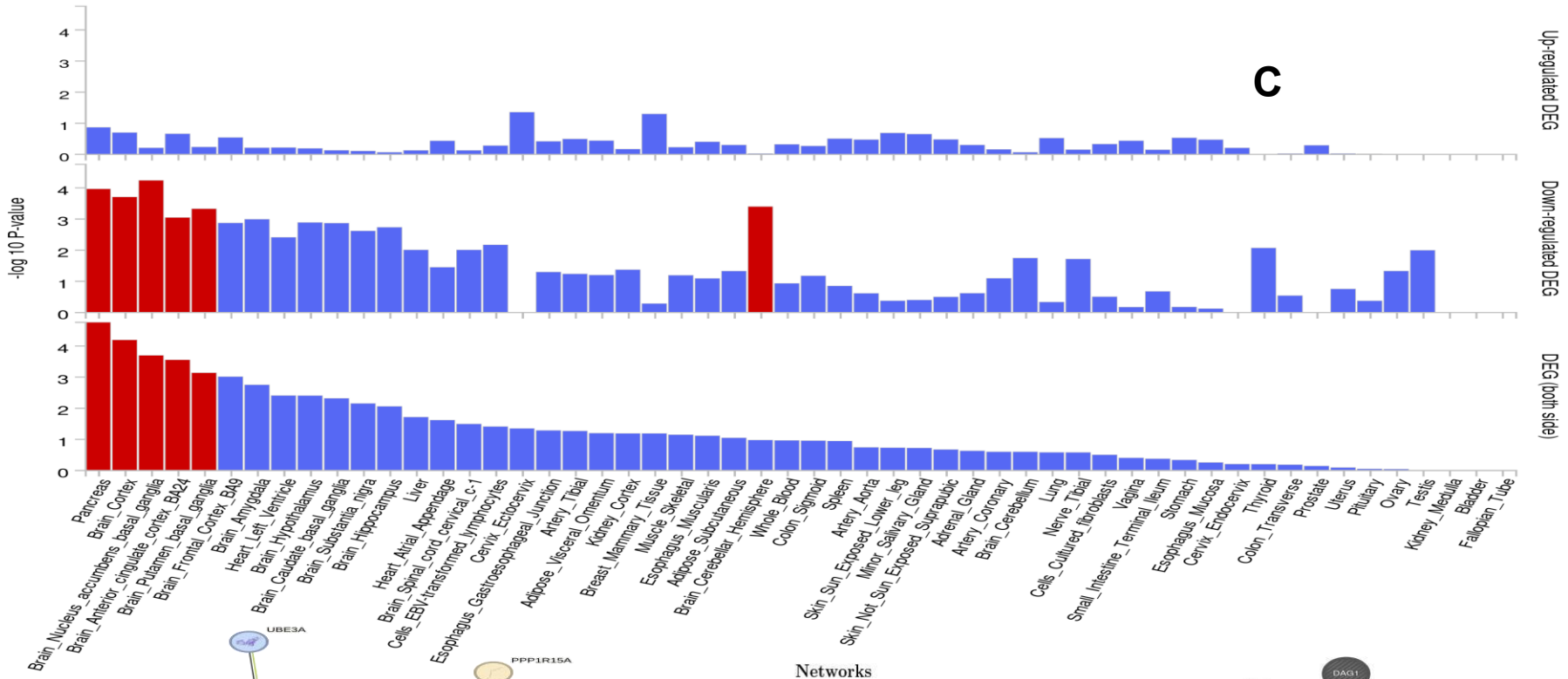

C
Up-regulated DEG
Down-regulated DEG
DEG (both side)
-log 10 P-value
Pancreas
Brain_Cortex
Brain_Nucleus_accumbens_basal_ganglia
Brain_Anterior_cingulate_cortex_BA24
Brain_Putamen_basal_ganglia
Brain_Frontal_Cortex_BA9
Brain_Amygdala
Heart_Left_Ventricle
Brain_Hypothalamus
Brain_Caudate_basal_ganglia
Brain_Substantia_nigra
Brain_Hippocampus
Liver
Heart_Atrial_Appendage
Brain_Spinal_cord_cervical_c-1
Cells_EBV-transformed_lymphocytes
Cervix_Ectocervix
Esophagus_Gastroesophageal_Junction
Artery_Tibial
Adipose_Visceral_Omentum
Kidney_Cortex
Breast_Mammary_Tissue
Muscle_Skeletal
Esophagus_Muscularis
Adipose_Subcutaneous
Brain_Cerebellar_Hemisphere
Whole_Blood
Colon_Sigmoid
Spleen
Artery_Aorta
Skin_Sun_Exposed_Lower_leg
Minor_Salivary_Gland
Skin_Not_Sun_Exposed_Suprapubic
Adrenal_Gland
Artery_Coronary
Brain_Cerebellum
Lung
Nerve_Tibial
Cells_Cultured_fibroblasts
Vagina
Small_Intestine_Terminal_Ileum
Stomach
Esophagus_Mucosa
Cervix_Endocervix
Thyroid
Colon_Transverse
Prostate
Uterus
Pituitary
Ovary
Testis
Kidney_Medulla
Bladder
Fallopian_Tube
A
B
Networks
Physical Interactions
Predicted
Co-expression
Genetic Interactions
Co-localization
Shared protein domains
Pathway

Figure 4.6. **(A)-** Protein-Protein Interaction Network from STRING encompassing all the identified significant hub genes generated by ancMETA; **(B)-** Outcome from GeneMANIA based on significant hub genes. The genes from the top hit GWAS are shown as larger circles, while genes from the GeneMANIA extension are smaller; **(C)-** Baplot of tissue-expression enrichment of significant hub genes. The colour Red suggests the enrichment/significance of the tissue while blue suggests the non-enrichment/significance of the tissue**.**

With the set of significant hub genes, 93 significant Reactome pathways, 56 significant KEGG pathways and 101 significant WikiPathways underlying the shared risk of the disorders implicated in the common factor were identified (adjusted p-value < 0.05) (**Tables S7-S9**). PI3K-Akt-signaling pathway (adjusted p-value = 4.8×10^{-06}), Rap1-signaling pathway (Adjusted p-value = 0.0017), MAPK-signaling pathway (adjusted p-value = 0.0058), and Aldosterone-regulated sodium reabsorption (adjusted p-value = 0.0058) were most significant according to KEGG. Signaling by Receptor Tyrosine Kinases (adjusted p-value = 1.97×10^{-07}), Signal Transduction (Adjusted p-value = 4.23×10^{-06}), Axon Guidance (adjusted p-value = 1.5×10^{-04}), Nervous System Development (adjusted p-value = 1.78×10^{-04}), and Immune System (adjusted p-value = 6.1×10^{-04}) were the most significant pathways/biological processes, according to Reactome. The Orexin Receptor Pathway (adjusted p-value = 9.66×10^{-07}), Leukocyte Intrinsic Hippo Pathway Functions (adjusted p-value = 2.83×10^{-04}), and Myometrial Relaxation and Contraction Pathways (adjusted p-value = 3.46×10^{-04}) were the most significant according to WikiPathways.
Our analysis reports that the top significantly enriched biological processes from our list of significant hub genes include Negative Regulation of Transferase Activity (adjusted p-value = 0.0026), DNA Damage Response (adjusted p-value = 0.0034), and Negative Regulation Of Protein Ubiquitination (adjusted p-value = 0.004) (**Table S10**). Furthermore, the top enriched molecular functions encompassing the hub genes in the network include Transmembrane Receptor Protein Tyrosine Kinase Activity, Insulin-Like Growth Factor Receptor Binding, and Ubiquitin-Like Protein Ligase Binding (**Table S11**). Likewise, Focal Adhesion, Cell-Substrate Junction, and Cytoplasmic Vesicle Membrane were the top enriched cellular components from the significant subnetwork hub genes (**Table S12**). All these molecular and cellular mechanisms confer stress-induced social behaviour and interaction changes which, if not controlled, may promote neuronal cell death or apoptosis.

4.3.4. Drug-gene interactions

Using the DGIdb database to investigate drug-gene interaction of the 53 significant hub genes suggested by ancMETA led to the identification of 1129 potential drugs, including 326 already approved with known interaction types. The information about the source and interaction type of target drugs is provided in the **Table S13**. Among the hub genes listed, 20 were druggable, and 16 were clinically actionable (**Table S14**). The final list only included drugs approved by the USA Food and Drug Administration, with several drugs already tested in clinical trials. Some of these identified drugs include Quercetin, Daunorubicin, Doxorubicin Hydrochloride, Tretinoin, and Cytarabine, amongst many others (**Table S13**). These drugs have been studied in clinical trials, including their efficacy relating to phenotypic traits.

4.4. DISCUSSION

In this study, we examined the common genetic architecture between psychiatric disorders and SB using large-scale GWAS summary-level data from the FinnGen Biobank. We found significant positive genetic correlations between SUIC and several psychiatric disorders, including depression (DEP), alcohol use disorder (AUD), neuroticism (NEU), anxiety (ANX), post-traumatic stress disorder (PTSD), and bipolar disorder (BIP). Our GenomicSEM analysis identified disorder-specific components that share a common factor with SUIC, including ADHD, ANX, AUD, BIP, DEP, GAD, and PTSD, suggesting the existence of shared genetic variation at the variant, gene, and/or molecular mechanism level.

These findings suggest a disorder-specific network having a common factor encompassing SUIC with a set of psychiatric disorders including ADHD, ANX, AUD, DEP, BIP, GAD, and PTSD confirming previous work, including epidemiological [37,38,39] and/or genomic findings [40,41,14]. Particularly, this finding expands the one conducted by Kootbodien and colleagues (2023) adding PTSD, ANX, GAD and BIP to the list of disorders sharing a common factor with SUIC. Furthermore, this finding has potential implications in the comorbidity of diagnoses, knowing that most individuals with SUIC have a or several psychiatric diagnoses. The list of disorder-specific components sharing the same common factor may suggest a comorbid manifestation in terms of psychiatric-related phenotype manifestation.

Our cross-phenotype GWAS meta-analysis singled out 521 pleiotropic variants with signals proximal to *PRR16, BTN3A2, POM121L2, ZNF322,* and *ZNF184* being the strongest. *PRR16* was identified in a previous GWAS meta-analysis of DEP [42]. The potential pleiotropic genes are widely expressed in different brain tissues; some at relatively high levels, which suggest that these genes could be considered as candidates for drug targets. *BTN3A2*, with other Butyrophilin family interactions (*BTN3A1, BTN3A3, BTN2A2, BTN2A1, BTN1A1*) include significant pleiotropic variants. This family of genes, based on a co-expression network approach, are associated with DEP [43]. Lin et al (2021) also reported an association between several genes of this family, and both DEP and insomnia [44]. *POM121L2* has been previously associated with SB in a European-ancestry-specific GWAS meta-analysis [45]. Little is known about the function of *POM121L2*; however, one study has detected variants in this gene/locus linked to suicidal ideation, conditioned on comorbid conditions including Insomnia, PTSD, SCZ, BIP and DEP [46]. Furthermore, the differential expression of *ZNF184* was strongest in subcortical regions in males and females with DEP [47, 48]. *ZNF184* was also associated with BIP [49, 50].

Our gene- and sub-network-specific meta-analysis encompassing the trait included in the revised common factor revealed 1,201 significant genes with *PPM1G, LRBA*, and *BSN* as the top significant. The same analysis unearthed 53 significant sub-network hub genes with *GPHN, MAPT,* and *RHOA* as top significant. A previous study identified variants within *GPHN* (the gene encoding the inhibitory synaptic scaffolding molecule, gephyrin) associated with suicide attempts in individuals with DEP [51]. Moreover, uncommon copy number variants within *GPHN* have been found in several individuals with other neurodevelopmental disorders, such as AUT-spectrum disorder, SCZ, and seizures [52, 53]. *MAPT* has been linked as a shared risk gene between frontotemporal dementia and SCZ using cis-expression quantitative trait loci analysis [54]. *RHOA* is a member of the RAS homolog (Rho) family and, through Rho-kinase, is involved in the development, survival, and plasticity of the central nervous system [55]. Previous studies have shown that mRNA expression levels of *RHOA* are altered in SCZ [56]. Moreover, Lin et al. (2021) reported *RHOA* associated with DEP and insomnia [57]. According to Reactome these three hub genes, amongst others, showed significant enrichment in the functioning of the immune system, development of the nervous system, signaling by Receptor

Tyrosine Kinases and signal transduction processes. These pathways were confirmed by previous studies [41, 14].
Our study reveals that the potential pleiotropic loci are significantly expressed in the brain, particularly in the hippocampus, hypothalamus, nucleus accumbens, basal ganglia, substantia nigra, frontal cortex, caudate, amygdala, and cortex. Meanwhile, by aggregating variants within genes accounting for protein-protein interactions, the significant hub genes that we detected were enriched for expression in the brain cortex, nucleus accumbens, basal ganglia, the anterior cingulate cortex, and putamen_basal ganglia (from the results generated by FUMA). This finding corroborates prior functional neuroimaging investigations, indicating that individuals with a shared history of suicide and psychiatric disorders associated with the revised common factor may exhibit anomalies in multiple brain regions responsible for regulating emotions, making decisions, and controlling impulses. This is characterized by a diminished ability to regulate motivational responses to significant negative stimuli. [58, 59, 60, 61, 62, 63].
Our study contributes to elucidating this shared architecture within the FinnGen Biobank. Genetic variants with high pleiotropy are typically associated with genes expressed across various tissues, suggesting that pleiotropy may arise from the co-expression and co-regulation of proximal genes, potentially affecting diverse physiological processes [64]. This hypothesis was supported in our study, where we identified 521 potential pleiotropic variants showing a high level of co-expression among nearby genes. These genes were notably expressed in brain regions including the cortex, nucleus accumbens, anterior cingulate cortex, and putamen basal ganglia.

Given that most disease phenotypes result from complex interactions among multiple genes, we employed a network-guided strategy. Genetic variants influence gene products whose activity and expression are regulated within intricate molecular networks in cells, potentially propagating their effects through various regulatory pathways [65]. Using this approach, we conducted gene- and sub-network-specific genome-wide association meta-analyses, which helped identify potential gene-enriched pathways and shared Gene Ontology terms between SUIC and psychiatric disorders within the FinnGen cohort.

However, our study has several limitations. It focused on individuals of European ancestry, thus limiting generalizability to non-European populations. Additionally, SB in our cohort was classified based on self-reported items or cases identified through hospital inpatient and death registry ICD-10 coding, potentially leading to underreporting and misclassification bias. Furthermore, despite including various genetic risk factors, the GWAS approach has inherent limitations, including the need for larger sample sizes to ensure reproducibility. Additionally, due to the lack of sex-specific GWAS summary datasets for all traits, we were unable to explore sex-specific effects, despite known sex differences in the heritability of psychiatric disorders [69] and suicidal individuals [67, 68].

It is important to note that our study design does not include environmental factors. This is one caveat identified in our analysis as a possibility that unmeasured/unaccounted-for environmental factors, including things like infection with viral diseases, could have acted to increase the expression of the inflammatory-related gene signatures. However, the chapter we are dealing with here is limited to the shared genetic aspect and not the full spectrum which may include environmental causes of the up-regulation of inflammatory signatures in those with suicide.

In conclusion, we depicted a shared genetic architecture contributing to the development of SB and a cluster of psychiatric illnesses, sharing a common neurodevelopmental origin. Our study

contributes to elucidating this shared architecture within the FinnGen Biobank. Moreover, this study may facilitate the identification of relevant biomarkers and, in conjunction with therapeutic and environmental factors, improve diagnosis, treatment, and prevention of suicide with psychiatric symptoms.

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Chapter FIVE: UNRAVELLING THE SHARED GENETIC ARCHITECTURE BETWEEN SUICIDALITY AND SUBCORTICAL BRAIN VOLUME: A GENOME-WIDE ASSOCIATION STUDY

This chapter has been accepted in *Acta Neuropsychiatrica.*
Defo, J., & Ramesar, R. (2024). Unravelling The Shared Genetic Architecture Between Suicidality and Subcortical Brain Volume: A Genome-Wide Association Study. (Accepted in *Acta Neuropsychiatrica*).

Summary

Suicidality represents a critical public health challenge with complex neurobiological underpinnings. Recent neuroimaging and genetic studies indicate pathological brain volumetric abnormalities in individuals exhibiting suicidal behaviours and in post-mortem brain samples from suicide victims. Despite advances in understanding the genetics of suicidality, the shared genetic architecture between suicidality and subcortical brain volumes remains obscure.
Our study leverages Genome-Wide Association Studies (GWAS) to investigate the genetic overlap between suicidality and subcortical brain volumes. We obtained summary statistics from suicidal behaviour measures—including Suicide Attempts (n = 50,264), Ever-Self Harmed (n = 117,733), and Thoughts of Life Not Worth Living (n = 117,291)—from the UK Biobank, alongside data on Suicide and intentional self-harm (n = 342,499) from the FinnGen Biobank. Additionally, we utilized genome-wide association summary statistics data on seven subcortical brain volume and Intracranial Volume from the ENIGMA2 study.
Linkage Disequilibrium score regression was deployed to ascertain the genetic relationship between suicidality and subcortical brain volume, while Genomic Structural Equation Modelling (GenomicSEM) analyses were deployed to identify common genetic factor patterns. Our results revealed a nominal genetic correlation between Suicide from FinnGen and Intracranial Volume Furthermore, a common genetic factor was identified, comprising two categories: one including Suicide Attempt, Ever Self-Harmed, and Thoughts of Life Not Worth Living from the UK Biobank; and the other encompassing Suicide from FinnGen, Intracranial Volume, and subcortical brain volumes. This pattern led to a variant-based GWAS meta-analysis (RE2C and METASOFT) as well as gene/subnetwork meta-analysis (ancMETA) to uncover potential significant variants and genes per group of traits. In the first category, our variant-based GWAS meta-analysis uncovers 37 significant variants with the top three significant located within the *DCC* gene (rs17408393, rs62099230, rs17487277). The gene/subnetwork GWAS meta-analysis reveals 893 significant genes whereby 50 were detected as hub genes. The top significant hub genes include the top significant genes were *GPHN* (p-value = 0.00022), *RGS2* (p-value = 0.004), and *ATP1A1* (p-value = 0.0045).
In the second category, the variant-level GWAS meta-analysis identified 484 significant variants with rs6567261 (5.68×10^{-30}), rs11754988 (5.17×10^{-27}), and rs56161836 (6.69×10^{-27}) identified as top significant. The gene/subnetwork GWAS meta-analysis reveals 402 significant

genes with 22 significant hub genes. The most significant hub genes included *NEB* (p-value = 0.012), *EEF1D* (p-value = 0.013), and *B2M* (p-value = 0.019).
Network, pathway, and Gene Ontology analyses of these joint datasets uncovered enriched pathways and biological processes linked to blood-brain barrier permeability and inflammation. Our findings suggest a biological continuity in suicidality, marked by an inflammatory signature present in both blood and brain tissues, implying a common heritability. These insights underscore the role of brain and peripheral blood inflammation in suicide risk, offering promising avenues for targeted interventions and personalized treatments to reduce suicidality in vulnerable populations.

5.1. Introduction

Suicidality has become an increasingly critical issue within public health, claiming approximately 700,000 lives globally each year and maintaining a suicide rate of 9.0 per 100,000 individuals worldwide [1]. In the United States, it was the 12th leading cause of death from 2010 to 2018 [2]. The economic impact of suicidal behaviour is profound, with an estimated cost of $70 billion annually in the U.S. alone (CDC, 2020). Research has highlighted the genetic basis of suicidality, complementing the roles of environmental and individual factors [3,4]. For instance, monozygotic twins demonstrate a significantly higher likelihood of suicide attempts and completions compared to dizygotic twins [4]. Genome-wide association Studies (GWAS) have identified a Single Nucleotide Polymorphism (SNP) heritability of 3.5% in the UK Biobank and 6.8% in the International Suicide Genetics Consortium meta-analysis [5,6].
Neuroimaging studies have indicated associations between changes in subcortical structures and suicidality risk [7,8,9]. These findings align with the brain-centric diathesis-stress model of suicidal behavior [10], suggesting brain changes contribute to suicide risk. However, conflicting reports exist, with some studies finding no significant association between suicidality and subcortical brain volume [11]. For instance, the ENIGMA-MDD consortium found no significant differences in subcortical regions among individuals with or without suicidal ideation or behaviour. Another study involving adolescents with major depressive disorder did not find a link between suicide attempts and subcortical alterations [12]. Such discrepancies may stem from sample heterogeneity and the acute nature of suicidal behaviour. Similarly, brain volume has been shown to possess a heritable component [13]. Twin studies have revealed genetic influences on both overall brain and subcortical volumes [14,15]. Notably, GWAS have identified five genetic variants associated with the sizes of the putamen and caudate nucleus among seven subcortical brain regions [16]. More recent GWAS have discovered numerous genetic variants linked to brain morphometry [17]. Despite these insights, the extent of shared genetic loci between suicidality and subcortical brain volume remains underexplored, and the common underlying features are not fully understood. Moreover, the genetic overlaps at the polygenic level are still inadequately comprehended. Genetic investigations may provide a clearer understanding of the overlapping psychopathology between suicidality and brain volume than imaging studies alone.
Recent research has proposed the existence of a genetic 'p factor', indicating shared genetic variance across various disorders, particularly psychiatric symptoms [18,19]. This conceptualization suggests shared components in the underlying pathophysiology of mental disorders, potentially explaining their comorbidity. Utilizing large-scale GWAS datasets on suicidality and subcortical brain volume, this study aims to elucidate the shared genetic architecture between these phenotypes. We introduce a common factor model extending the

genomic 'p factor' to include suicidality and subcortical brain volume through Genomic Structural Equation Modelling (Genomic SEM). We conducted variant-based and gene/pathway-specific GWAS meta-analyses to identify loci significantly associated with this common factor. Furthermore, we sought to uncover cross-disorder risk loci between subcortical brain volume and suicidality using our common factor-informed approach, aiming to elucidate shared molecular mechanisms.

5.2. MATERIALS AND METHODS

We acquired Genome-Wide Association Study (GWAS) summary statistics pertaining to Suicide or other intentional self-harm (SUIC) from the FinnGen Biobank (https://www.finngen.fi/en/access_results), as well as data on Thought Life Not Worth Living (TLNWL) and Ever Self-Harmed (ESH) from the United Kingdom Biobank/Neale lab, Attempted suicide (SA) from the study led by Erlangsen et al. (2020) which can be retrieved within the iPSYCH Biobank [20]. Additionally, summary-level data on seven subcortical brain volumes including Amygdala (AMY), Accumbens (ACC), Caudate (CAU), Hippocampus (HIP), Pallidum (PAL), Putamen (PUT), and Thalamus (THA) with the Intracranial Volume (ICV) were sourced from the ENIGMA2 study, accessible via the public database (http://enigma.ini.usc.edu/research/download-enigma-gwas-results/). All samples were of European ancestry, and comprehensive details regarding sample collection, genotyping, processing, quality control, and imputation procedures for each GWAS have been previously documented and briefly outlined [16,21]. Details regarding the number of samples are outlined in **Table 5.1**.

Table 5.1. Summary information of the phenotypes of our study

Phenotype	**#Case**	**#Controls**	**Sample size**	**Source**
SUIC	1,361	341,138	342,499	FinnGen
TLNWL	NA	NA	117,291	United Kingdom Biobank/Neale lab
ESH	5,099	112,634	117,733	United Kingdom Biobank/Neale lab
SA	6,024	44,240	50,264	iPSYCH
Accumbens	NA	NA	13,112	ENIGMA2
Amygdala	NA	NA	13,160	ENIGMA2
Caudate	NA	NA	13,171	ENIGMA2
Hippocampus	NA	NA	13,163	ENIGMA2
Pallidum	NA	NA	13,142	ENIGMA2
Putamen	NA	NA	13,145	ENIGMA2
Thalamus	NA	NA	13,193	ENIGMA2
ICV	NA	NA	11,373	ENIGMA2

Upon retrieving data from the FinnGen database, UK Biobank and ENIGMA, we initiated a meticulous process of data refinement. Initially, we conducted data cleaning to ensure its quality and reliability. Duplicate Single Nucleotide Polymorphisms (SNPs) were removed, and we extracted SNPs with a Minor Allele Frequency (MAF) exceeding 0.01. Additionally, SNPs with conflicting alleles and those with missing information within the Genome-Wide Association Study (GWAS) summary statistics for each disorder were excluded from further analysis.

5.2.1 SNP-Based Heritability and Genome-wide Genetic Correlation

To gauge the portion of phenotypic variance attributable to common genetic variants, known as SNP-based heritability (h^2 SNP), we employed univariate LD-score regression (LDSC) [22]. This method was implemented using the Genomic SEM R package [23]. We adhered to default LDSC settings for quality control processes, which involved filtering SNPs to HapMap3, excluding SNPs within the Major Histocompatibility Complex (MHC) region, and removing SNPs with a MAF less than 1%. The defaults in LDSC were followed in the quality control (QC) processes for creating the genetic covariance (S) and sampling covariance (V) matrices. The MHC region, characterized by a complex gene network, often contains SNPs with disproportionately large effect sizes, thus necessitating its exclusion to prevent skewing results from heritability and genetic correlation studies, as well as in the genomic SEM analyses [23]. LD scores used in the analysis were derived from the 1000 Genomes European sample, limited to HapMap3 SNPs for reliable heritability estimates.

5.2.2 Genomic Structural Equation Modelling Analysis

Genomic factor analysis was conducted using the Genomic SEM R package. Initially, a genomic exploratory factor analysis (EFA) was performed to determine the optimal number of factors describing shared genetic variation. This informed subsequent genomic confirmatory factor analysis (CFA) to estimate model parameters for fitting. We employed diagonally weighted least squares estimation due to its robustness when modelling traits with varying characteristics. Model fit was evaluated using established criteria for absolute fit, including the AIC (Akaike Information Criterion), a measure used to compare the quality of statistical models, with lower values indicating a better fit, the standardized root mean square residual (SRMR) with values ≤ 0.10 indicating moderate fit and SRMR ≤ 0.05 indicating good fit; comparative fit index (CFI) with values ≥ 0.90 indicating moderate fit and CFI ≥ 0.95 indicating good fit; and lower chi-square statistic with p-value less than 0.05 suggesting a precise match and greater fit [23]. We use this approach to derive a potential common factor model and thereafter perform GWAS meta-analyses at SNP, gene and sub-network levels encompassing the phenotypes detected within the potential common factor.

5.3. RESULTS

5.3.1 SNP-Based Heritability and Genome-Wide Genetic Correlations

The heritability estimates (see **Table 5.2**), expressed on the observed scale, were derived from our analysis. For traits exhibiting lower-than-usual heritability estimates with greater standard errors compared to other studies, the corresponding SNP-based heritability couldn't be identified due to insufficient statistical power. Utilizing bivariate LDSC (Bulik-Sullivan et al., 2015) implemented into the R package GenomicSEM [22] between the twelve disorders, we

estimated genetic correlations (rg). However, it's important to note that the unbiased estimates provided by LDSC may exceed the range (-1 to +1) under certain conditions, such as large standard errors or highly significant genetic correlations between studies. Our analysis could not generate the genetic correlation estimate between the Amygdala and the rest of the phenotype due to its negative heritability estimate.

Table 5.2. Heritability estimates from our Analysis

Trait	h2	h2(SE)	Z-score	Lambda GC	Mean Chi^2	h2_inter	h2_inter_se	#SNPs for heritability analysis
SUIC	0.0025	0.0013	2.02	1.0292	1.0232	1.0065	0.07	1150849
TLNWL	0.0735	0.0054	13.7	1.1577	1.1788	1.0086	0.0072	1078769
ESH	0.0217	0.0044	4.96	1.0535	1.0613	1.0107	0.0066	1078769
SA	0.08	0.0122	6.6	1.0987	1.1107	1.0221	0.0091	922234
Accumbens	0.0905	0.0379	2.39	0.9967	1.0027	0.9796	0.0062	1171081
Amygdala	-0.0197	0.0322	-0.613	0.9944	0.9964	1.0014	0.0059	1171167
Caudate	0.2495	0.00397	6.28	1.0273	1.0326	0.9691	0.0062	1171185
Hippocampus	0.1542	0.0386	4	1.0103	1.0244	0.9844	0.0067	1171208
Pallidum	0.1551	0.0415	3.74	1.0065	1.0199	0.9799	0.0068	1171081
Putamen	0.2972	0.0481	6.17	1.0141	1.0268	0.951	0.0075	1171189
Thalamus	0.1314	0.0379	3.46	1.0065	1.0151	0.9816	0.0065	1171264
ICV	0.1845	0.00436	4.24	1.0383	1.0417	1.0008	0.0066	1171991

Our study identified a marginal positive genetic correlation between SUIC and intracranial volume (ICV) (rg = 0.47; p-value = 0.024) and a negative genetic correlation (however not significant) between SUIC and accumbens (rg = -0.52; p-value = 0.93). (see **Figure 5.1**). There are notable positive genetic correlations between several subcortical brain volumes (e.g., accumbens, putamen, caudate, pallidum, thalamus). We found significant genetic correlations between the putamen (PUT) and accumbens (ACC) (rg = 0.51; p-value = 0.043), caudate (CAU) and accumbens (ACC) (rg = 0.56; p-value = 0.0168), thalamus (THA) and accumbens (ACC) (rg = 0.52; p-value = 0.022), and a strong positive genetic correlation between the pallidum (PAL) and thalamus (THA) (rg = 0.6; p-value = 0.02). Other Suicidality-Related Traits (ESH, SA, TLNWL) exhibit various correlations with each other and non-significant correlations with brain structures, with ESH and SA showing high significant correlations with each other (rg = 1.02; p-value = 2.45×10^{-14}). The pattern of correlations highlights potential shared genetic underpinnings between certain brain volumes and suicidality, warranting further investigation into the underlying mechanisms. This analysis provides insight into the genetic architecture connecting brain structures and suicidality-related traits, suggesting both shared and unique genetic factors across these phenotypes.

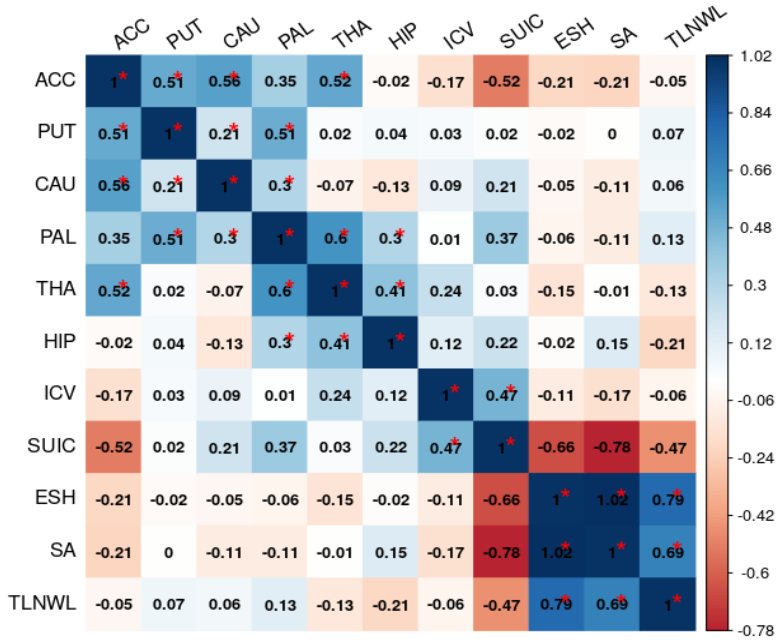


Figure 5.1. The heatmap shows the genetic correlations (rg) between various brain structures and suicidality-related traits. The values represent the strength and direction of the genetic correlations, with significant (P-values less than 0.05) correlations indicated by asterisks (*). The colour scale ranges from blue (positive correlations) to red (negative correlations), with darker shades representing stronger correlations.

5.3.2 Genomic Structural Equation Modelling Analysis

First, we ascertained the level of common genetic variance between all our included traits by testing the performance level of a common genetic factor. The common factor model converged with freely determined loadings, however, the fit was not fair enough(chisq(44) = 215.0768, $P_{chisq} = 2.21\times10^{-24}$, AIC = 259.0768, CFI = 0.696, SRMR = 0.194)(**Figure 5.2**).

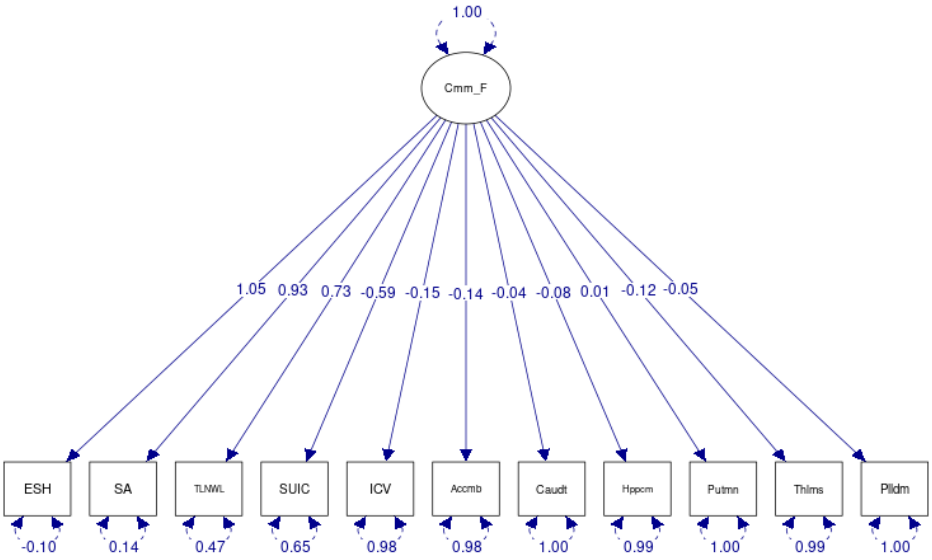


Figure 5.2. Path diagram for the single factor common factor model, which shows the overall common variance among all included traits. Ellipse indicate latent variables; rectangles indicate observed variables/traits. Numbers on arrows are standardized factor loadings and numbers at the end of arrows are residual variances.

Our genomic SEM analysis reveals an intriguing revised common factor model that fits the data well, with the best-fit statistics (chisq(15) = 25.69, P_{chisq} = 0.04, AIC = 127.69, CFI = 0.981, SRMR = 0.047) (Figure 3). This model identifies a common latent factor divided into two distinct groups of phenotypes. The first group includes the suicidal traits from the UK Biobank (ESH, SA, and TLNWL) highlighted in red, while the second group includes SUIC, ICV, Accumbens, Caudate, Hippocampus, Pallidum, Thalamus, and Putamen highlighted in green. This suggests that SUIC has a closer genomic link with subcortical brain volume and ICV compared to the suicidal traits ESH, SA, and TLNWL. However, both groups of traits exhibit the same genomic common factor, indicating the presence of a shared molecular mechanism.

5.3.3 GWAS Meta-Analysis at Variant and Gene Level

We conducted a variant-based GWAS meta-analysis using RE2C (v1.06) [24] to account for sample overlap among GWAS summary data. Significant variants were identified based on the RE2C P-value statistic (RE2C*P $< 5 \times 10^{-8}$). Variants that became significant after meta-analysis but did not reach genome-wide significance in individual trait GWAS datasets were considered novel [25]. In addition to the RE2C model, we performed cross-trait GWAS meta-analyses using both fixed effect (FE) and modified random effects (RE2) models [26], integrated into the METASOFT software (http://genetics.cs.ucla.edu/meta/). The FE model, which assumes the GWAS traits examined the same (fixed) effect, used the inverse variance weighted technique to estimate SNP meta-analysis statistics (effect size and p-value). In cases of heterogeneity, indicated by I^2 statistics, METASOFT employed the RE2 model to estimate SNP meta-analysis statistics. Gene and subnetwork-specific meta-analyses were conducted using ancMETA [27], which incorporates summary GWAS information and aggregates SNPs within nearby genes. ancMETA provides information on significant genes and hub genes based

on known biological protein-protein networks, shedding light on potential biological pathways shared across disorders. The meta-analysis GWAS focused on two sets of phenotypes:

Group 1: ESH, SA, and TLNWL.
Group 2: SUIC, ICV, Accumbens, Thalamus, Putamen, Caudate, Pallidum, and Hippocampus.

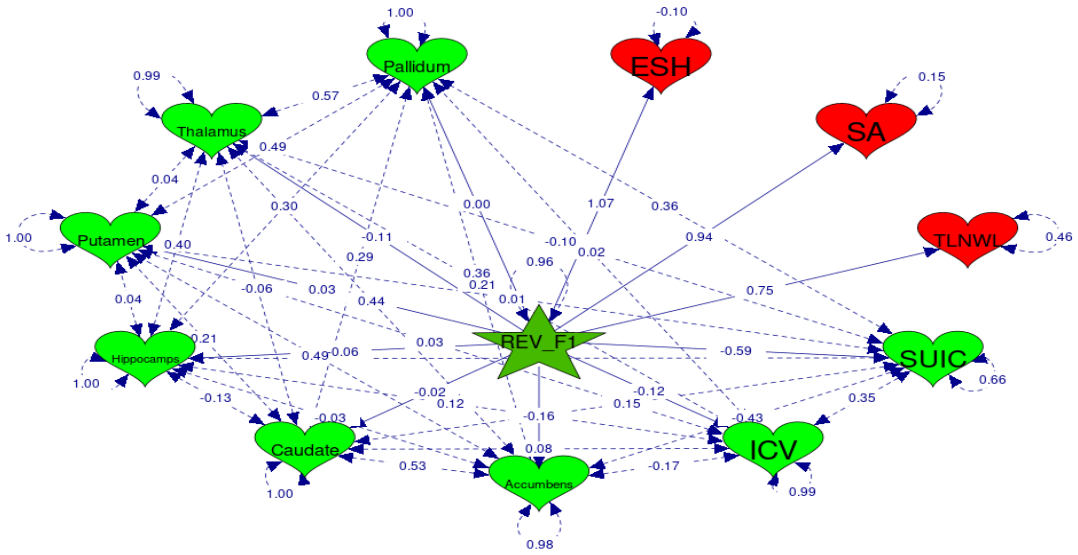


Figure 5.3. Path Diagram of the Revised Common Factor (Labelled "REV_F1"). This diagram illustrates the overall common variance among all included traits, representing observed variables with "heart" shapes and the unobserved (latent) variable with a "star" shape. It suggests two groups of disorders sharing the same common factor: the first group in red and the second group in green. One-headed arrows represent regression connections between variables, while two-headed arrows indicate the variance of a variable or the covariance between a variable and itself. This analysis aimed to identify overlapping genetic factors and elucidate potential shared molecular mechanisms across the included traits.

5.3.3.1 GWAS Meta-analysis at SNP level between ESH, SA and TLNWL

Our cross-trait meta-analysis using RE2C identified 37 significant variants (RE2C*$P < 5\times10^{-8}$) (**Table S15**) with overall small effects, in which 31 were found novel meaning not associated with any of the disorders ($P_{each_studies} > 5 \times 10^{-8}$).

Table 5.3 Top 5 Significant Loci from Cross-Trait Meta-Analysis of ESH, SA, and TLNWL (RE2C*P $< 5 \times 10^{-8}$)

variant	chr	bp	ref	alt	Nearest gene	P-ESH	P-SA	P-TLNWL	RE2C*P	Beta	SE	I^2
rs17408393	18	53,183,611	A	G	*DCC*	2.85×10^{-05}	0.49	9.41×10^{-08}	1.53×10^{-09}	0.0045	0.0008	88
rs62099230	18	53,195,342	G	A	*DCC*	3.49×10^{-05}	0.49	1.09×10^{-07}	2.14×10^{-09}	0.0044	0.0008	88
rs17487277	18	53,192,574	C	G	*DCC*	3.7×10^{-05}	0.49	1.1×10^{-07}	2.25×10^{-09}	0.0044	0.0008	88
rs62100771	18	53,214,760	A	G	*DCC*	7.99×10^{-05}	0.48	5.89×10^{-08}	$2.79\times10^{--09}$	0.0043	0.0008	88

rs150002680	15	83,579,597	A	G	*SH3GL3*	7.9×10^{-09}	0.77	0.166	2.86×10^{-09}	0.024	0.004	0

Chr chromosome; bp base-pair position; ref reference allele; alt alternate allele; Beta effect size of the SNP; SE Standard error of the effect size; I^2 heterogeneity statistic quantifying the degree of heterogeneity.

Our results at SNP level exhibit that the top significant loci are located within the *DCC* gene and other loci were found in the *SH3GL3, STIM2, MEAF6* and *RSPO1* genes (**Table 5.3; Table S15**). The top four significant loci were found novel all located within the *DCC* gene; other new loci were found within *STIM2, MEAF6* and *RSPO1* genes (**Table S15**) adding value to the new genes found in previous literature [3].

5.3.3.2 GWAS Meta-analysis at SNP level between SUIC, ICV, Accumbens, Caudate, Hippocampus, Pallidum, Thalamus, and Putamen.

Our GWAS meta-analysis using the RE2C model identified 484 significant variants, all exhibiting low effect sizes (**Table 5.5**, **Table S16**). Among these, 64 SNPs showed potential pleiotropic effects, influencing multiple subcortical brain structures simultaneously, including the accumbens, caudate, hippocampus, pallidum, thalamus, and putamen. According to the SNP2GENE option from the FUMA analysis, the genes located near these significant loci exhibit enrichment across various brain regions. The highest levels of enrichment were found in the hypothalamus, brain cortex, and frontal cortex (**Figure 5.4A**). However, the genes near the pleiotropic loci showed enrichment in nearly all parts of the brain, except the putamen basal ganglia and the spinal cord (**Figure 5.4B**).

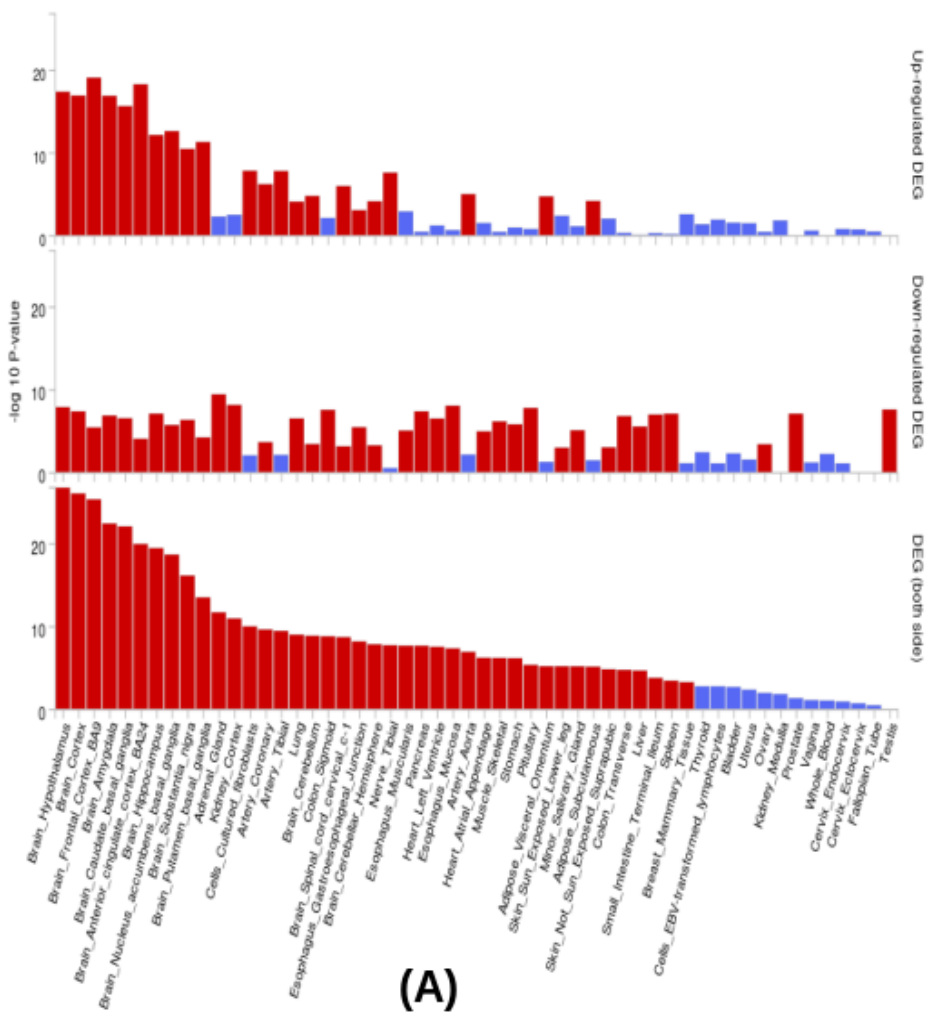

-log 10 P-value
Up-regulated DEG
Down-regulated DEG
DEG (both side)
(A)
(B)

Figure 5.4. **A**- Bar plot showing enrichment tissues of all the nearby genes issues from significant cross-associated SNPs; **B**- Bar plot showing enrichment tissues of nearby genes from the significant potential pleiotropic (Accumbens, Caudate, Hippocampus, Pallidum, Thalamus, and Putamen combined) SNPs. The red colour speaks for significance and the blue one speaks for non-significance.

These findings suggest widespread genetic influences across various brain regions, emphasizing the importance of considering multiple brain structures when studying genetic associations with suicidality and subcortical brain volumes.

Table 5.4. Top 5 significant loci from cross-trait GWAS meta-analysis including SUIC, ICV, Accumben, Caudate, Hippocampus, Pallidum, Thalamus, and Putamen (RE2C*P < 5×10^{-8}).

rsids	chromosome	pos	ref	alt	gene	RE2C*p	Beta	SE	I^2
rs6567261	18	62184009	T	C	*PIGN*	5.68×10^{-30}	-0.0012	0.0004	92.77
rs11754988	6	74253222	C	T	*CD109*	5.17×10^{-27}	-0.001	0.000385	92.3
rs56161836	1	245197588	G	A	*KIF26B*	6.69×10^{-27}	-0.001	0.000378	92.31
rs13022308	2	166492125	G	A	*SCN7A*	7.94×10^{-27}	-0.001	0.000376	92.2
rs2302862	3	10216809	T	C	*IRAK2*	8.9×10^{-27}	-0.001	0.000379	92.2

ref reference allele; alt alternate allele; Beta effect size of the SNP; SE Standard error of the effect size; I^2 heterogeneity statistic quantifying the degree of heterogeneity.

5.3.3.3 GWAS Meta-analysis at gene and sub-network level between ESH, SA and TLNWL

Gene-Level Analysis. At the gene level, ancMETA identified 893 significant genes (**Table 5.5; Table S17**) associated with ESH, SA, and TLNWL (overall P < 0.05). The top significant genes include *RANBP17* (p-value = 3.25×10^{-05}), *C6orf89* (p-value = 1.8×10^{-04}), and *GPHN* (p-value = 2.1×10^{-04}). *RANBP17* is Located on chromosome 5q35.1 and encodes RAN-binding protein 17, a nuclear transport receptor. It has been associated with the severity of suicide attempts in mood disorders at the polymorphism level [28]. *C6orf89* which encodes the bombesin receptor-activated protein (BRAP), is associated with allergic rhinitis and asthma and is potentially implicated in the stress response of lung epithelia [31,32]. Studies in mice suggest that BRAP regulates dendritic spine development and synaptic plasticity in the hippocampus, providing a protective behavioral response to stress [29]. Regarding *Gephyrin* (*GPHN),* previous studies have linked exonic microdeletions in this gene to neurodevelopmental issues such as idiopathic generalized epilepsy [30], schizophrenia, autism spectrum disorder, and epileptic seizures. These findings suggest that while the effects of variants within these genes differ between studies, the aggregation of variant effects within these genes significantly contributes to the cross-phenotype association of ESH, SA, and TLNWL.

Sub-Network Level Analysis. At the sub-network level, ancMETA identified 50 significant hub genes (**Table S18**). Among these, the top significant genes were *GPHN* (p-value = 0.00022), *RGS2* (p-value = 0.004), and *ATP1A1* (p-value = 0.0045). These hub genes indicate that the aggregation's effect of variants within these genes significantly contributes to the cross-phenotype association at the pathway/gene set level, encompassing the phenotypes of ESH, SA, and TLNWL. Our FUMA analysis revealed that the significant genes and hub genes identified in our ancMETA results showed significant expression enrichment across all brain

regions. The top enriched tissues include the brain anterior cingulate cortex, cultured fibroblast cells, brain hippocampus, brain putamen basal ganglia, and brain substantia nigra (**Figure 5.5B).**

Previous studies highlighted the association between numerous variants within the *RGS2* gene and a higher risk of committing suicide [33, 34]. *ATP1A1* is among the members of the sodium/potassium pump (Na+/K+-ATPase) family that is expressed in the brain and is responsible for regulating the amounts of potassium and sodium across cellular membranes [35]. Previous research has verified the involvement of brain Na+/K+-ATPase α subunit isoforms in several behavioral features, particularly the α2 and α3 subunits that have been linked to mental and behavioral disorders in humans [36, 37]. Another study has shown the connection between ATP1A1 expression levels and clinical anxiety scores in major depressive disorder patients [38].

Table 5.5. Top 3 significant genes and subnetwork hub genes from cross-trait meta-analysis between ESH, SA and TLNWL.

Gene	**#Study**	**Overall P**	**Q**	**P_Q**	**I^2**	**P_ESH**	**P_SA**	**P_TLNWL**
RANBP17	3	3.25E-05	1.55	0.46	0	0.0021	0.225	0.000236
C6orf89	3	1.84E-04	1.55	0.46	0	0.00029	0.031	0.000229
GPHN	3	2.1E-04	1.08	0.58	0	0.00022	0.0094	0.00262
Sub-network Hub	**#Study**	**Overall P**	**Q**	**P_Q**	**I^2**	**P_ESH**	**P_SA**	**P_TLNWL**
GPHN	3	2.1E-04	1.08	0.58	0	0.022	0.396	0.22
RGS2	3	0.00395	1.55	0.46	0	0.037	0.391	0.378
ATP1A1	3	0.00452	1.557	0.459	0	0.0488	0.203	0.04573

Q heterogeneity statistic indicating the presence or absence of heterogeneity; P_Q P-value of the Q estimate; I^2 Heterogeneity statistic quantifying the degree of heterogeneity.

5.3.3.3.4 GWAS Meta-analysis at gene and sub-network level between SUIC, ICV, accumbens, caudate, hippocampus, pallidum, thalamus, and putamen.

Gene-Level Analysis. In a comprehensive GWAS meta-analysis, ancMETA identified 402 significant genes cross-associated with SUIC, ICV, and various subcortical brain regions, including the accumbens, caudate, hippocampus, pallidum, thalamus, and putamen (overall P < 0.05; **Table 5.6, Table S19**). The top significant genes were *RPL11* (p-value = 1.8×10^{-4}), *DDX4* (p-value = 4.03×10^{-4}), and *WDR55* (p-value = 1.06×10^{-3}). *RPL11* has been previously implicated in the ribosomal pathway, playing a role in the pathogenesis of mild cognitive impairment and Alzheimer disease [39]. It is also associated with brain arteriovenous malformations [40] and has been proposed as a biomarker for major depressive disorder [41] and low risk neuroblastoma [42]. *WDR55* encodes WD repeat-containing protein 55, which modulates ribosomal RNA biogenesis, cell cycle progression, and organ development. It has been identified as a significant CpG site and methylated region associated with depression risk in Chinese monozygotic twins [43].

Table 5.6. Top 3 significant genes and subnetwork hub genes from cross-trait meta-analysis between SUIC, ICV, accumbens, caudate, hippocampus, pallidum, thalamus, and putamen.

Gene	#Study	Overall P	Q	P_Q	P_SUIC	P_Cau	P_ICV	P_Acc	P_Tha	P_Pal	P_Put	P_Hip
RPL11	8	1.8E-04	6.68	0.46	0.012	0.001	0.002	0.00046	0.0006	0.00028	0.001	0.00041
DDX4	8	4.0E-04	5.34	0.62	0.01	0.00032	0.014	0.00087	0.00064	0.00033	0.000386	0.00052
WDR55	8	1.06E-03	6.61	0.47	0.0036	0.00046	0.012	0.00062	0.0093	0.00035	0.0012	0.001
Sub-network Hub	**#Study**	**Overall P**	**Q**	**P_Q**	**P_SUIC**	**P_Cau**	**P_ICV**	**P_Acc**	**P_Tha**	**P_Pal**	**P_Put**	**P_Hip**
NEB	8	0.012	7.28	0.4	0.44	0.08	0.164	0.198	0.06	0.052	0.0086	0.056
EEF1D	8	0.0138	6.125	0.52	0.24	0.066	0.433	0.033	0.139	0.0372	0.42	0.115
B2M	8	0.019	6.53	0.4791	0.35	0.0869	0.236	0.415	0.081	0.062	0.0769	0.0394

Q heterogeneity statistic indicating the presence or absence of heterogeneity; P_Q P-value of the Q estimate.

Sub-Network Level Analysis. At the sub-network level, ancMETA identified 22 significant hub genes (**Table S20**). Among the significant hub genes, *NEB* (p-value = 0.012), *EEF1D* (p-value = 0.013), and *B2M* (p-value = 0.019) were the most significant. Those significant hub genes suggest that although the variant effect within these genes varies, the aggregation/contribution of the effect of these variants within these hub genes converge significantly to the cross-phenotype association risk at pathway/gene set level encompassing the disorders SUIC, and brain structures: ICV, accumbens, caudate, hippocampus, pallidum, thalamus, and putamen. From our FUMA analysis, the significant gene and hub genes list from our ancMETA results showed significant enrichment of expression in all brain regions, except for the cerebellum and the cerebellar hemisphere which were specific for down-regulated expressed genes. The top enriched tissue includes the heart and left ventricle, the pancreas, the putamen,_basal ganglia, the substantia nigra, and the hippocampus(**Figure 5A**).

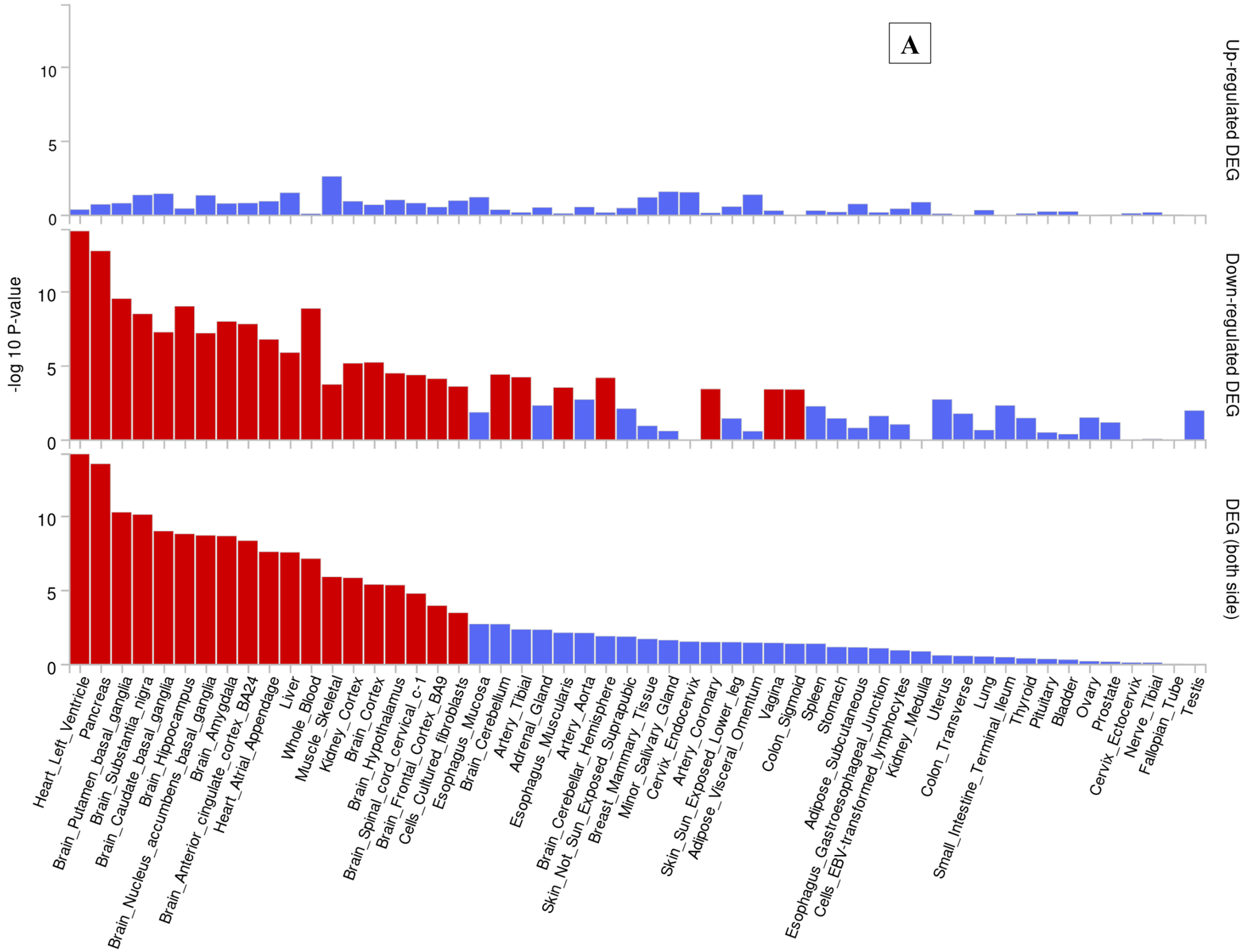
NEB (on chromosome 2q23.3) encodes nebulin, a protein extensively expressed in skeletal muscle, known for regulating muscle contraction and stabilizing thin filaments [44]. Immunohistochemistry has shown nebulin expression predominantly in the cytoplasm of pyramidal neurons and subcortical endothelial cells in the adult brain [45]. Whole exome sequencing identified two likely pathogenic *NEB* variants in a patient with cognitive impairment and dysmorphic features [46], suggesting a potential role for nebulin in the central nervous system and suicidality risk.

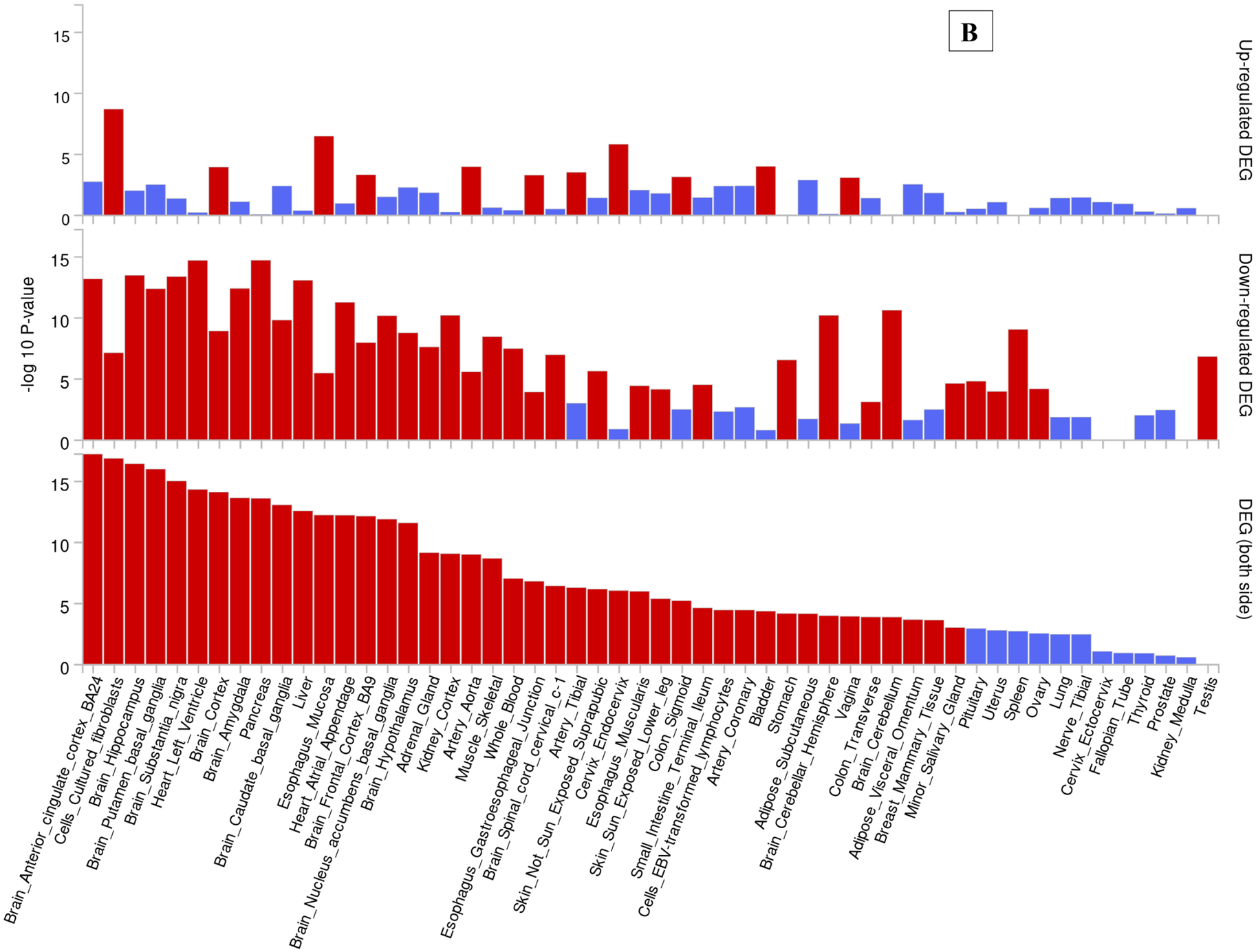
EEF1D (located on chromosome 8q24.3) undergoes alternative splicing in the brain and testis, affecting its expression. Mutations in EEF1D have been linked to neurodevelopmental disorders, microcephaly, and severe intellectual disability [47,48]. *B2M* (Beta-2-Microglobulin) has been identified as a biomarker for stress-related disorders, including suicide [49]. Additionally, *B2M* is associated with various neuropsychiatric phenotypes, such as alcoholism, autism, depression, eating disorders, pain, and aging, potentially mediating the effects of stress in these conditions [49].

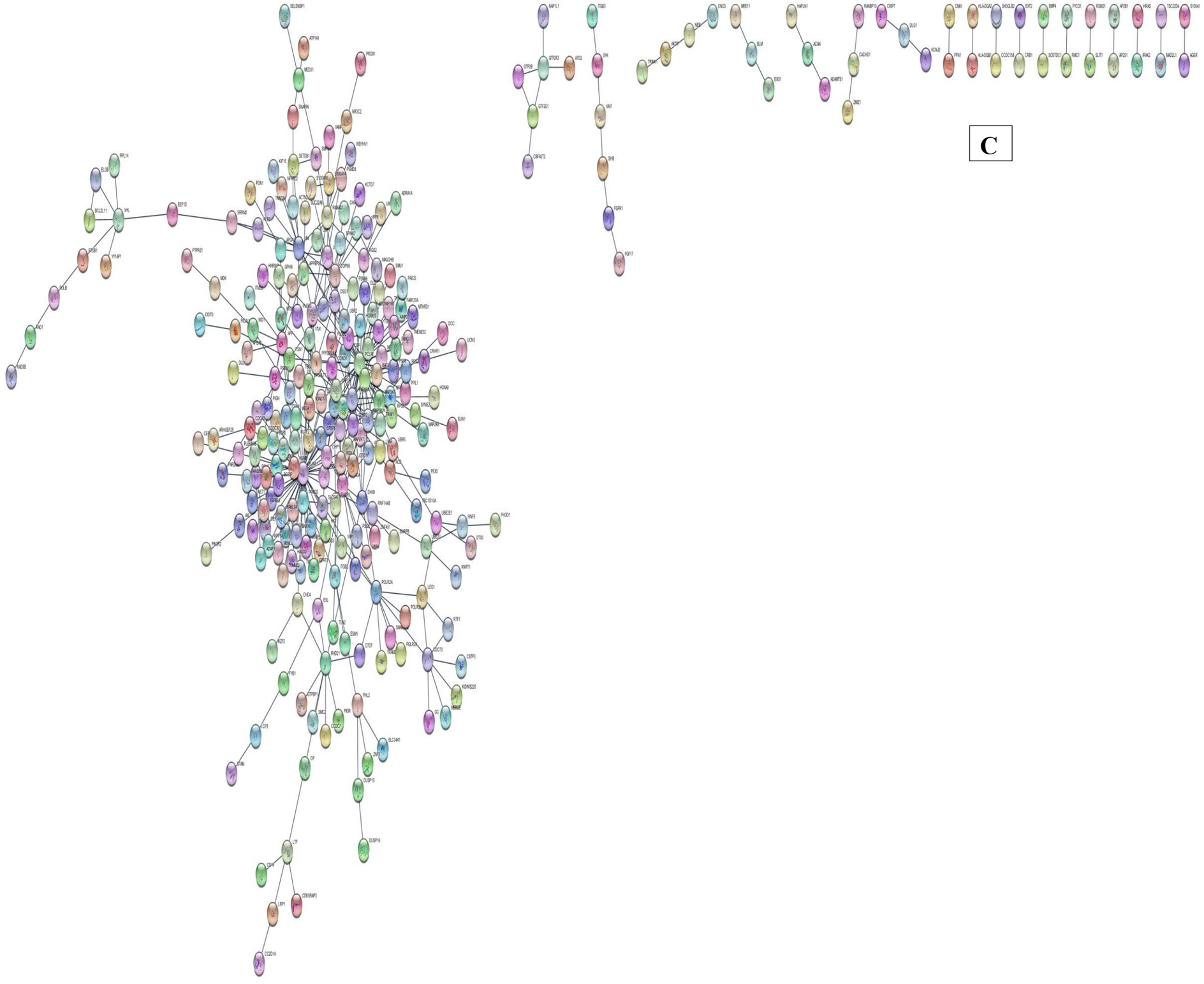
5.3.4 Utilizing Network and Pathway Analysis Across Two Sets of Traits

In this study, we performed a network and pathway analysis involving two distinct sets of disorders. Initially, we used ancMETA to generate subnetworks containing significant genes and hub genes for each set of disorders. These subnetworks were then merged using Cytoscape version 3.7.2 (see **Figure 5C**). We conducted pathway enrichment analysis based on Gene Ontology (GO), Reactome pathways, and the Protein-Protein Interaction (PPI) network and

visualized the results with the StringApp plugin in Cytoscape version 3.7.2 [50;51]. The merged subnetwork of genes was assessed for enrichment in pathways and gene ontology using the Cytoscape plugin StringApp.


A
Up-regulated DEG
Down-regulated DEG
-log 10 P-value
DEG (both side)
10
5
0
Heart_Left_Ventricle
Pancreas
Brain_Putamen_basal_ganglia
Brain_Substantia_nigra
Brain_Caudate_basal_ganglia
Brain_Hippocampus
Brain_Nucleus_accumbens_basal_ganglia
Brain_Amygdala
Brain_Anterior_cingulate_cortex_BA24
Heart_Atrial_Appendage
Liver
Whole_Blood
Muscle_Skeletal
Kidney_Cortex
Brain_Cortex
Brain_Hypothalamus
Brain_Spinal_cord_cervical_c-1
Brain_Frontal_Cortex_BA9
Cells_Cultured_fibroblasts
Esophagus_Mucosa
Brain_Cerebellum
Artery_Tibial
Adrenal_Gland
Esophagus_Muscularis
Artery_Aorta
Brain_Cerebellar_Hemisphere
Skin_Not_Sun_Exposed_Suprapubic
Breast_Mammary_Tissue
Minor_Salivary_Gland
Cervix_Endocervix
Artery_Coronary
Skin_Sun_Exposed_Lower_leg
Adipose_Visceral_Omentum
Vagina
Colon_Sigmoid
Spleen
Stomach
Adipose_Subcutaneous
Esophagus_Gastroesophageal_Junction
Cells_EBV-transformed_lymphocytes
Kidney_Medulla
Uterus
Colon_Transverse
Lung
Small_Intestine_Terminal_Ileum
Thyroid
Pituitary
Bladder
Ovary
Prostate
Cervix_Ectocervix
Nerve_Tibial
Fallopian_Tube
Testis


B
Up-regulated DEG
Down-regulated DEG
DEG (both side)
-log 10 P-value
15
10
5
0
Brain_Anterior_cingulate_cortex_BA24
Cells_Cultured_fibroblasts
Brain_Hippocampus
Brain_Putamen_basal_ganglia
Brain_Substantia_nigra
Heart_Left_Ventricle
Brain_Cortex
Brain_Amygdala
Pancreas
Brain_Caudate_basal_ganglia
Liver
Esophagus_Mucosa
Heart_Atrial_Appendage
Brain_Frontal_Cortex_BA9
Brain_Nucleus_accumbens_basal_ganglia
Brain_Hypothalamus
Adrenal_Gland
Kidney_Cortex
Artery_Aorta
Muscle_Skeletal
Whole_Blood
Esophagus_Gastroesophageal_Junction
Brain_Spinal_cord_cervical_c-1
Artery_Tibial
Skin_Not_Sun_Exposed_Suprapubic
Cervix_Endocervix
Esophagus_Muscularis
Skin_Sun_Exposed_Lower_leg
Colon_Sigmoid
Small_Intestine_Terminal_Ileum
Cells_EBV-transformed_lymphocytes
Artery_Coronary
Bladder
Stomach
Adipose_Subcutaneous
Brain_Cerebellar_Hemisphere
Vagina
Colon_Transverse
Brain_Cerebellum
Adipose_Visceral_Omentum
Breast_Mammary_Tissue
Minor_Salivary_Gland
Pituitary
Uterus
Spleen
Ovary
Lung
Nerve_Tibial
Cervix_Ectocervix
Fallopian_Tube
Thyroid
Prostate
Kidney_Medulla
Testis



C

Figure 5.5 A: The bar plot shows tissue enrichment for all significant genes and hub genes identified through ancMETA analysis at the gene and subnetwork levels, using suicidality data from FinnGen and subcortical brain volume data from ENIGMA.
B: The bar plot displays tissue enrichment for significant genes and hub genes identified through ancMETA analysis at the gene and subnetwork levels, using emotional stability (ESH), social anxiety (SA), and tolerance to noise and workload (TLNWL) data from the UK Biobank. Red indicates significance, while blue indicates non-significance.
C: This potential subnetwork includes all significant genes and hub genes combined, generated by ancMETA from the two sets of phenotypes.

We identified significant (FDR < 0.05) 132 Reactome pathways, 50 KEGG pathways, and 51 WikiPathways in the resulting network. Notably, Rap1 signaling pathway (FDR value = 1.3×10^{-04}), Osteoclast differentiation (FDR value = 1.3×10^{-04}), T cell receptor signaling pathway (FDR value = 1.3×10^{-04}), and Viral carcinogenesis (FDR value = 3.9×10^{-04}) emerged as top significant pathways according to KEGG. Similarly, Disease (FDR value = 1.12×10^{-10}), Signaling By Receptor Tyrosine Kinases (FDR value = 3.9×10^{-09}), Signal Transduction (FDR value = 2.95×10^{-07}), Adaptive Immune System (FDR value = 1.5×10^{-06}), Infectious disease (FDR value = 4.01×10^{-06}), and Immune System (FDR value = 1.1×10^{-05}) pathways were identified as highly significant according to Reactome. Additionally, VEGFA-VEGFR2 signaling (FDR value = 6.4×10^{-08}), RANKL/RANK signaling pathway (FDR value = 7.97×10^{-07}), and T-cell receptor signaling pathway (FDR value = 5.07×10^{-05}) were prominent pathways according to WikiPathways. A comprehensive table listing each significant pathway per database and all significant GO biological processes, components, and functions can be found in **Tables S21-S27**. Furthermore, we compiled a list of pathogenic loci derived from our gene/sub-network GWAS meta-analysis using ancMETA on the two sets of disorders. The pathogenic criteria were based on the probability of being loss-of-function Intolerant > 0.9 [52].

Table 5.7. List of Pathogenic loci derived from our gene/sub-network GWAS meta-analysis using ancMETA on the two sets of disorders. The pathogenic criteria were based on the probability of being loss-of-function Intolerant > 0.9 [52].

Set of Disorders	**Gene list identified as Pathogenic [52]**
ESH, SA, and TLNWL	*MTOR;UBR4;THRAP3;RPS8;USP1;SLC6A17;ATP1A1;SETDB1;CHTOP;ASTN1;DHX9;NMNAT2;CDC73;SYT14;PROX1;LBR;ACTN2;KIF26B;PRKCE;PSME4;MDH1;AFTPH;ZC3H6;RABL2A;PAX8;PRPF40A;KCNH7;IKZF2;SLC6A1;STT3B;PTPLB;PDCD10;SEC62;CLOCK;PPAT;TMEM165;G3BP2;GRID2;FAT4;DCLK2;NR3C2;FNIP1;VDAC1;DPYSL3;FBXO38;CYFIP2;LCP2;GNB2L1;UBR2;TFAP2B;TRAM2;MAP3K7;PTPRK;L3MBTL3;PDE7B;TAB2;DLL1;GET4;USP42;GLI3;HGF;CACNA2D1;DOCK4;PTPRZ1;ZNF398;PPP2R2A;HOOK3;GDF6;PABPC1;UBR5;RAD21;ARC;SMARCA2;SMU1*

	;ZCCHC6;PHF2;FAM120A;GABBR2;SMC2;DENND1A;SCAI;PPP6C;NUP188;VIM;STAM;ARID5B;ZMIZ1;SLC35G1;LCOR;TDRD1;DENND5A;QSER1;CSTF3;CHRM4;AMBRA1;PICALM;FAT3;YAP1;RDX;PAFAH1B2;SIK3;CHD4;PLEKHA5;HNRNPA1;DTX3;CPSF6;NAV3;CDK17;BTBD11;FRY;DCLK1;PCDH9;MBNL2;TPP2;PSMA6;NFKBIA;BMP4;DDHD1;RTN1;GPHN;PSEN1;MAP3K9;EVL;GABRA5;RYR3;RTF1;LEO1;TLN2;TLE3;ACAN;ALDH1A3;KIAA0430;ATP6V0D1;CTCF;RANBP10;CMIP;IRF8;POLR2A;ZBTB4;SREBF1;SPAG9;APPBP2;DHX40;MAP2K6;EIF4A3;GNAL;C18orf8;DSG1;DCC;KIAA1468;ELAVL1;MAP2K7;PIK3R2;MAST3;ATP1A3;AP2S1;SLC24A3;ARFGEF2;ITSN1;TBC1D10A;SF3A1;GTPBP1
SUIC, ICV, Accumbens, Caudate, Hippocampus, Pallidum, Thalamus, and Putamen	*RNF220;DMBX1;SARS;LMX1A;POU2F1;CDC73;BCL2L11;KCNH7;AGFG1;RPL14;WDR82;ATG3;GTF2E1;DLG1;SEC24B;BRIX1;DDX4;ZMAT2;NSD1;TRIM41;HIVEP1;DAAM2;KCNQ5;AUTS2;MEPCE;NYAP1;ACTR3B;FGFR1;VDAC3;ST18;PABPC1;ARC;UBE2R2;SYK;PAPPA;ENG;NUP188;VIM;SLIT1;TMEM9B;EHF;VPS26B;DNAJC14;NAB2;LRP1;NAP1L1;VPS29;FBXO21;SPPL3;FNDC3A;ARGLU1;RNF31;HECTD1;PSMC6;SIPA1L1;NAA60;ADCY9;ATAD5;AP2B1;NFE2L1;TANC2;VAV1;HNRNPL;EXOC3L2;AP2S1;E2F1;CBFA2T2;NFATC2*

5.4. DISCUSSION

The findings of this study offer crucial insights into the intricate genetic relationship between suicidality and alterations in brain structure, particularly in subcortical brain regions. This highlights possible shared molecular mechanisms and genetic underpinnings. The discovery of a common genetic factor between suicidality and subcortical brain regions underscores the existence of shared pathways and biological processes. Although we identified a nominal positive genetic correlation between SUIC and ICV, this emphasizes the complexity of the relationship and the need for further exploration using diverse methodologies and larger sample sizes [53,54]. Furthermore, our study demonstrated a common factor emerging from two cohorts: the suicide cohort from the UK Biobank (emotional stability, social anxiety, and tolerance to noise and workload) and the phenotypes, including SUIC from FinnGen and subcortical brain volume data. This suggests a direct overlap between SUIC and subcortical brain regions in the FinnGen cohort, compared to the UK Biobank cohort.

At the SNP level, our comprehensive analysis revealed significant variants within key genes, including *DCC*, *SH3GL3* (rs150002680), *STIM2* (rs28592695), *MEAF6* (rs6682470), and *RSPO1* (rs115632986) from the UK Biobank. This adds to the loci previously reported by Strawbridge and colleagues (2019). The SNP-based GWAS meta-analysis between SUIC and subcortical brain volume identified 484 significant variants with low effects, with 64 SNPs

showing potential pleiotropic effects on the accumbens, caudate nucleus, hippocampus, pallidum, thalamus, and putamen. These findings highlight the interconnectedness of genetic factors and support previous research linking suicidality to frontal-subcortical circuits [55,56]. Beyond individual variants, our gene and subnetwork GWAS meta-analysis unveiled numerous significant genes and hub genes implicated in both SUIC and altered brain volume. Particularly noteworthy are the loss-of-function-related genes, which indicate a pathogenic potential and heightened risk for suicidality (refer to **Table 5.6**).

The integration of these genetic findings into a comprehensive network analysis revealed enriched functionalities across various biological processes and pathways. Notably, genes related to neuroinflammation were significantly enriched, with pathways involving immune signalling, apoptosis, nervous system, neurodevelopmental disorders (such as Alzheimer and Huntington Disease), infectious diseases, and neurotrophic factors. These findings suggest potential targets for therapeutic intervention. Several pathways and GO enrichment strategies identified in our study align with previous findings that link the blood-brain barrier and suicidal risk [10,57,58,59].

Our findings indicate that the presence and severity of SUIC are associated with an inflammatory signature detectable in both blood and brain tissues. This suggests a biological continuity underlying SUIC, potentially indicating a common heritability. These results support the role of brain and peripheral blood inflammation in suicide risk, holding promise for targeted interventions and personalized treatment strategies to mitigate suicidality in vulnerable individuals.

The identification of genes involved in the dysregulation of the blood-brain barrier and immune function underscores the bidirectional communication between the brain and peripheral immune system in the context of suicidal risk. These results are corroborated by previous studies, further strengthening the validity of our findings and highlighting potential translational implications [60]. Our findings expand on previous research that identified genes substantially expressed in brain tissue and enriched in pathways related to immunologic markers, cellular stress response, gene regulation, and DNA repair [61,62,63].

The involvement of glial cells and microglia in inflammatory responses within the central nervous system [64] provides mechanistic insights into the pathophysiology of suicidality and altered brain volume. Glial cells, the most prevalent cells in the central nervous system, interact with immune system cells, neurons, and brain microvascular endothelial cells. Microglia, in particular, are resident innate immune cells. Studies have shown higher densities of activated microglia [65] in the white matter of suicide postmortem cases, as well as higher microglial priming and macrophage recruitment [66]. The transmission of inflammatory signals from the periphery to the brain via humoral transmigration or sensory afferent projections through the blood-brain barrier can stimulate microglial activation [67,68], and suicidality has been linked to anomalies in endothelial cells and the blood-brain barrier [69,70].

Despite these significant findings, several limitations warrant consideration. Generalizing our findings to other populations and ethnicities requires replication in diverse cohorts. Additionally, the reliance on GWAS summary statistics and the inherent statistical power of the original studies necessitates cautious interpretation of null results. Therefore, null conclusions in our research do not always imply a lack of association. The negative heritability of the amygdala did not provide a clear picture of genetic correlation and was not included in our SNPs, gene, and subnetwork GWAS meta-analysis. A well-powered GWAS of altered brain volume and suicidality could improve the detection of significant variants, genes, and pathways shared between these traits. Most of our suicide phenotypes have very low heritability, confirmed by the low effect sizes of relevant loci. Hence, the identified loci, networks, and functional pathways need validation in future studies with additional experiments, either *in* vivo or *in vitro*. Our findings are limited to autosomal chromosomal common variants; copy

number variants and other rare variants independently demonstrate strong penetrance for suicidal risk [71]. Known sex-specific effects in individuals with suicidal behavior [72,73] and brain development [74] further necessitate future studies on rare variants and sex-specific shared mechanisms.

In conclusion, this study represents a pioneering effort in elucidating the shared genetic architecture of suicidality and subcortical brain volumes. By uncovering overlapping genetic factors and biological pathways, we provide novel insights into the complex interplay between brain structure and suicidal behaviour. These findings hold promise for developing targeted interventions and personalized treatment strategies aimed at mitigating suicidality in vulnerable individuals. Further research exploring rare variants, sex-specific effects, and functional validations will be crucial for advancing our understanding of these complex phenomena and informing clinical practice.

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Chapter SIX: CONCLUSION AND OUTLOOK

Meta-analysis has proven to be a powerful tool for integrating samples and results from different genome-wide association studies (GWASs). Significant discoveries have emerged over the past two decades; however, heterogeneity within and across populations has reduced the power of detecting true signals and hindered the replication of findings. Although incorporating multiple non-homogeneous populations in discoveries is promising, significant methodological challenges arise as the field moves towards merging studies from various disorders, populations, and study designs. Standard meta-analysis approaches are effective when combining GWASs to determine the average effect of a locus on a single trait. However, these methods are not ideal for analyzing multiple traits where the effect of individual susceptibility loci may manifest only in a subset of traits or in different directions for different traits. Additionally, understanding how multiple modestly associated variants within genes interact to influence a phenotype or multiple traits remains a challenge in uncovering the molecular mechanisms of disorders.

Cross-disorder and pleiotropy GWAS associations are increasingly recognized as significant in the genetic architecture of complex diseases. Approximately 17% of the genes in the NHGRI Catalogue of published GWAS have pleiotropic effects. However, current investigations into the pleiotropic mechanisms of complex disorders often rely on single pleiotropic genes, which can be functionally independent and sometimes provide insufficient information. Some pleiotropic genes are involved in various cellular activities, and the biological roles of many genes remain unknown. Consequently, identifying individual pleiotropic genes often yields limited insights into the genetic underpinnings of complex disorders.

In this dissertation, we reviewed current approaches for variant, gene, and pathway-based meta-analysis, discussing the benefits and pitfalls of each method. We proposed a Bayesian graph-based framework called "ancMETA," which performs gene- and sub-network/pathway-specific meta-analysis, accounting for variations in effect sizes across multiple independent GWAS studies. This technique accommodates the heterogeneity in effect sizes across various GWAS summary statistics from different cohorts. Through simulations and application to European Bipolar Disorder cohorts, our method identified effect sizes of genes and hub genes within subnetworks, aiding in understanding pathogenesis, disease risk prediction, and susceptibility to genetic diseases.

Beyond bipolar disorder, ancMETA was applied to identify significant genes and hub genes involved in shared mechanisms between suicide and various psychiatric phenotypes using GWAS summary statistics from the FinnGen database. GenomicSEM analyses revealed that several psychiatric disorders, including bipolar disorder, depression, disturbance of activity and attention, anxiety disorder, general anxiety disorder, alcohol use disorder, and post-traumatic stress disorder, share a genetic common factor with suicide, confirming comorbidity across psychiatric disorders. The significant hub genes and their associated subnetworks cross-associated with these phenotypes, helping to identify potential common molecular mechanisms contributing to the overlapping pathophysiology of these disorders. This analysis highlighted genetic loci that could be candidate drug targets and identified drugs that may be repurposed.

Furthermore, ancMETA was used to detect genes overlapping between suicidality and subcortical brain structures. The identified network of genes and pathway/enrichment findings suggest that the presence and severity of suicidality are associated with an inflammatory signature detectable in blood and brain, highlighting the role of brain and peripheral blood inflammation in suicide risk. The identification of genes involved in the dysregulation of the blood-brain barrier and immune function underscores the bidirectional communication between the brain and peripheral immune system in the context of suicidal risk.

Despite the promising results, this study has several limitations. The ancMETA analysis relies on GWAS summary statistics and protein-protein interaction (PPI) information from various databases, which may influence outcomes as PPI databases are updated. Additionally, studies with larger sample sizes from each GWAS would enable better investigation of epistatic interactions and provide greater resolution to current findings. Our ancMETA analysis and generated network of genes are based on candidate genes that may be updated over time and vary by population of interest. The findings of shared pathways are based on the identification of hub genes that may interact with other candidate genes. Furthermore, this framework does not account for sample overlap and phenotype correlation, which could be addressed in future research to capture candidate loci involved in disorder pathogenesis accurately. The method could be improved by assigning Bayesian priors that incorporate knowledge about the overlap (e.g. using genomic relationship matrix) by analytically computing the correlation between studies. Such statistics can be included in the pipeline of ancMETA at gene level and adjusting the effect size estimates accordingly. There is also a need to integrate summary-level data across multiple correlated phenotypes to uncover aggregate-level shared pleiotropic mechanisms. The lack of comprehensive knowledge of complex traits and the incomplete human protein interaction network poses challenges in directly comparing results from different pathway analysis methods. Furthermore, the application of ancMETA was done across studies with the same ancestry. There is a need to implement ancMETA in a cross-ancestry setting and assess its performance by comparing ancMETA with other tools with a similar methodology. Our findings reveal that the genes and pathways found via ancMETA corroborate with previous studies with no evidence of false positives. This suggests that ancMETA, in its current form can be applied in the context of sample overlap. However, though several adjustments need to be made to improve the efficacy of the tool, it will be necessary to assess the performance of ancMETA depending on the extent of sample overlap between studies.

The advent of advanced high-throughput technology has generated vast amounts of biological data. However, progress in understanding disease phenomena lags significantly behind data collection and integration. Many existing methods do not fully integrate information gathered on samples to improve estimate accuracy and unravel the underlying mechanisms of complex diseases. Traditional meta-analysis, which incorporates significance levels or effect sizes from similar datasets, has proven valuable in detecting significant biomarkers and replicating findings within single studies. This multi-study data integration, known as "horizontal genomic meta-analysis," has been widely applied in genomics [1,2,3] and transcriptomics [4,5]. Conversely, when different omics datasets from the same cohort of samples are joined, the datasets are vertically aligned, with samples matched on the columns. This approach, called "vertical genomic meta-analysis," [6, 7] is popular in systems biology and involves merging data from multiple levels of the 'omics-cascade,' such as transcriptional and metabolic data from the same patient cohorts [6].

As multi-level omics datasets, including SNPs, gene, protein, and metabolite expression data, are increasingly collected from large clinical cohort studies, the vertical integration of omics

data has become a prominent focus in bioinformatics. Integrating multi-omic data, including transcriptomics, genomics, proteomics, microRNA, and phenomics, is progressively revealing additional insights into disease pathogenesis. We propose extending the ancMETA tool to combine multi-omics data from different experiments on the same samples (vertical integration) and across studies on the same phenotype (horizontal integration). This will enhance understanding and accuracy of the genetic mechanisms underlying complex diseases. With the eased limits on data integration, this framework is expected to be widely applicable as large databases of varied data types become available. Further studies with larger sample sizes and multi-omics data integration can elucidate polygenic effects in complex traits, extending analysis to genome partitioning, risk prediction, and genetic correlations.

Concluding Summary

In conclusion, this dissertation underscores the efficacy and potential of meta-analysis in synthesizing data from diverse GWASs to uncover the genetic underpinnings of complex disorders. Despite the challenges posed by heterogeneity across populations and traits, our proposed ancMETA framework demonstrates significant advancements in addressing these issues by incorporating gene- and sub-network/pathway-specific analyses. The application of ancMETA to bipolar disorder and its shared mechanisms with other psychiatric disorders, as well as its extension to suicidality and subcortical brain structures, highlights its versatility and robustness in identifying significant genes and hub genes. These findings not only enhance our understanding of the genetic architecture of these complex traits but also pave the way for identifying potential drug targets and repurposing existing medications.

The limitations of this study, including the reliance on current PPI databases and the need for larger sample sizes, point to directions for future research. Integrating multi-omics data through both horizontal and vertical genomic meta-analysis presents a promising avenue for further elucidating the polygenic effects in complex traits. By extending ancMETA to incorporate a broader spectrum of omics data, we anticipate more precise and comprehensive insights into the genetic mechanisms underlying complex diseases.

Overall, this work contributes to the field of bioinformatics by offering a novel and robust framework for meta-analysis, addressing existing methodological hurdles, and providing a foundation for future research that integrates diverse and comprehensive datasets. Continued advancements in this area hold the promise of significantly improving our understanding of disease pathogenesis, risk prediction, and the development of targeted therapeutic interventions.

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APPENDIX 1 (CHAPTER TWO)

1. Some Aggregation Techniques for SNP-based GWMA

1.1 P-value and Z-score Meta-analysis

P-value and Z-score of individual studies in a meta-analysis are simplistic and follow the usual statistical definition. Here is the p-value test statistic method introduced by Fisher [1], defined by

$$X_{2s}^2 = -2\sum_{i=1}^{s}\log(p_i) \sim \chi_{2s}^2 \quad (1)$$

where s is the number of studies and p_i is the individual p-value. The combined meta-analysis Z value can be computed with pi computed from two or more separate and independent studies, each with a corresponding Z-score Zi. This method is based on the average of the Z_i from each study and is derived using the sample size information, the p-values and direction of the effect, as mentioned below

$$Z = \frac{\sum_{i=1}^{s}\omega_i Z_i}{\sqrt{\sum_{i=1}^{s}\omega_i^2}} \sim N(0,1) \quad (2)$$

where $Z_i = \Phi^{-1}(1-\frac{p_i}{2})$ is the direction of effect; with ω_i the square root of the sample size and Φ, the standard normal cumulative distribution function. Although these methods are relatively straightforward to perform, the major limitation of this P-value meta-analysis is that there is no information regarding the effects of each study. Hence the overall estimate of the effect size cannot be determined, which results in a consistent loss of power and makes it difficult to quantitatively assess the magnitude of gene and SNP effects. Nonetheless, P-value and Z-score meta-analyses might be attractive approaches especially to conduct GWMA with low-frequency variants or rare variants wherein p-values or Z-test statistics are given with summary information rather than the effect size estimates [2].

1.2 Fixed Effect model (FEM)

Under the fixed-effect model (FEM), a summary effect across the component studies of a meta-analysis is estimated, which constitutes the main aim of the model. To compute the summary effect estimate, the model assumes that all studies in the meta-analysis have the same common effect and that the source of variability is only due to sampling noise. Each true-effect size from each study is assigned a weight which corresponds to the inverse of their observed variance; this implies that under this model, studies with larger sample sizes are assigned larger weights. More formally, for s studies in the meta-analysis, each having an estimated effect size y_i and standard error SE_i (for $i \in 1,...s$); assuming that $y_1 = y_2 = y_3 = ... = y_s$, the estimated overall effect size, β_{fix}, of a SNP is estimated using the inverse-variance weighted average method, as denoted by

$$\beta_{fix} = \frac{\sum_{i=1}^{s} \omega_i y_i}{\sum_{i=1}^{s} \omega_i} \quad (3)$$

with associated weights ω_i defined by

$$\omega_i = \frac{1}{SE_i^2} \quad (4)$$

and the estimated standard error labelled SE_{fix} of the overall effect, given by

$$SE_{fix} = \sqrt{\frac{1}{\sum_{i=1}^{s} \omega_i}} \quad (5)$$

The Z test statistic is defined by

$$Z_{fix} = \frac{\beta_{fix}}{SE_{fix}} = \frac{\sum_{i=1}^{s} \omega_i y_i}{\sqrt{\sum_{i=1}^{s} \omega_i}} \quad (6)$$

The test statistic follows a standard normal distribution under the null hypothesis of no association. The p-value of the association, assuming a two-sided test is given by $p_{fix} = 2\Phi(-|Z_{fix}|)$ where Φ is the cumulative density function of the standard normal distribution.

Fixed effect meta-analyses are easy to compute, and the results are relatively easy to interpret. This model is often used to combine evidence between discovery and replication cohorts in a GWAS to determine the "true" effect size of the marker on the phenotype. With the assumption that there is a single common effect underlying every study in the meta-analysis, the result of every study would be identical because there will be no between-study heterogeneity. This is useful if we aim to optimize power for detecting association. However, in the presence of heterogeneity, this association may not be possible to extend equally well to diverse admixed populations and the model underestimates the standard error of the combined effect estimates. Heterogeneity is an important aspect of meta-analysis studies since it elucidates the magnitude of the genetic effect across different populations and different biological settings and reveals the mechanism through which the variant acts on disease risk [3, 4]. GWMA could induce genetic heterogeneity of effect sizes which could be partly explained by the incorrect definition of the phenotype, concomitant phenotype, diverse study designs, studies carried out on diverse ancestral groups in different geographic areas, population stratification, the pattern of linkage disequilibrium, sex differences and gene-gene interactions and gene-environment interactions with differential non-genetic environmental exposures across different populations [2]. The FEM is the most popular approach in the synthesis of GWAS data but has limited power in the presence of genetic heterogeneity [2]. This limitation led to the development of the random-effect model, which attempts to account for and to model between-study heterogeneity in order to achieve higher power.

1.3 Random Effect model (REM)

The REM assumes that for $i \in 1,...s$, the true effect size for each study, $y_i \sim N(y, SE_i^2 + \tau^2)$, such that y denotes the average underlying summary effect and τ the heterogeneity (or between-study) variance. It is worth mentioning that estimates for the average random effect and extent of heterogeneity will expectedly be imprecise when meta-analyses comprise a few studies (i.e. ≤ 5 studies) [5]. Consequently, the new expression of the weight will be given by

$$\omega_i{}^* = \frac{1}{SE_i^2 + \tau^2} \tag{7}$$

The pooled effect estimator β_{ran} is similar to the fixed effect model in equation 3 except that the precision includes the between-study variance

$$\beta_{ran} = \frac{\sum_{i=1}^{s} \omega_i{}^* y_i}{\sum_{i=1}^{s} \omega_i{}^*} \tag{8}$$

and its estimated standard error labelled SE_{ran} is given by

$$SE_{ran} = \sqrt{\frac{1}{\sum_{i=1}^{s} \omega_i{}^*}} \tag{9}$$

and the test statistic is expressed as follows

$$Z_{ran} = \frac{\beta_{ran}}{SE_{ran}} = \frac{\sum_{i=1}^{s} \omega_i{}^* y_i}{\sqrt{\sum_{i=1}^{s} \omega_i{}^*}} \tag{10}$$

and its associated p-value is $p_{ran} = 2\Phi(1 - |Z_{ran}|)$ where Φ is the cumulative density function of the standard normal distribution. Once we estimate the random effect means and variance, we need to ascertain the homogeneity of the effect sizes, i.e., whether they are probably deriving from a single distribution of effect sizes. For this purpose, the homogeneity statistic Q, named Cochran's test statistic, is denoted by

$$Q = \sum_{i=1}^{s} \omega_i \left(y_i - \beta_{fix}\right)^2 = \sum_{i=1}^{s} \omega_i {y_i}^2 - \frac{\sum_{i=1}^{s} (\omega_i y_i)^2}{\sum_{i=1}^{s} \omega_i} \tag{11}$$

If the effect sizes are homogeneous, Q is distributed as a chi-square distribution with s-1 degrees of freedom [6, 7]. This statistic is widely used to assess heterogeneity; however, it becomes underpowered when the number of studies is small [7]. With the assumption of heterogeneity of the effect size for each SNP, the between-study variance of heterogeneity is expressed by

$$\tau^2 = \begin{cases} \dfrac{Q - s - 1}{\sum_{i=1}^{s} \omega_i - \dfrac{\sum_{i=1}^{s} \omega_i{}^2}{\sum_{i=1}^{s} \omega_i}} & if\ Q \geq s - 1 \\ 0 & if\ Q < s - 1 \end{cases} \tag{12}$$

Whereby Q is the Cochran test statistic as expressed in equation 11 and s is the number of studies. The value of τ^2 equal to zero indicates no variation between studies. Various other statistics have been proposed to overcome the underpower of Q. For instance, the I^2 index, given by $100 \times \frac{Q-(s-1)}{Q}$, measures the degree of true heterogeneity in a meta-analysis. This statistic does not depend on the number of studies and is interpreted as the percentage of total variation in study estimates that is due to heterogeneity, meaning between-studies variability [8, 6]. Higgins and colleagues consider values of I^2 less than 25% indicative of homogeneity, while values of I^2 between 25% and 50%, 50% and 75%, 75% and 100% show respectively small, moderate, and large degrees of heterogeneity [9].

Although REM and FEM have specific hypotheses, REM, under the null hypothesis of no association, relies on the assumption of between-study heterogeneity of the effect size, which do not unravel the occurrence of statistical heterogeneity as studies are combined in the same analysis structure. An alternative REM (representing a combination of both, hence REM-FEM) was proposed by Han and Eskin to address the issue of heterogeneous effect sizes and to achieve higher power compared to REM [10]. This model operates under the null hypothesis of common true effect size between studies, and variation of effect sizes across studies under alternative hypotheses. The details of the method are formalized below: The REM-FEM uses a likelihood ratio that takes each statistic as a single observation. Because there is no heterogeneity, the values of the true mean and the true variance are assumed to be nought under null hypothesis (true mean effect $\mu = 0$ and the heterogeneity variance $\tau^2 = 0$). The likelihood ratios L_0 and L_1, respectively, under the null and alternative hypotheses are given by

$$L_0 = \prod_i \frac{1}{\sqrt{2V_i}} \exp\left(-\frac{y_i^2}{2V_i}\right) \tag{13}$$

$$L_1 = \prod_i \frac{1}{\sqrt{2\pi(V_i + \tau^2)}} \exp\left(-\frac{(y_i^2 - \mu)^2}{2(V_i + \tau^2)}\right) \tag{14}$$

Where y_i and V_i represent respectively the effect size and the variance of the associated effect for study i. By testing whether $\mu \neq 0$ and $\tau \neq 0$, the maximum likelihood estimates of $\hat{\mu}$ and $\hat{\tau}$ are given using the approach of Hardy and Thompson [11]. Following these estimates, the likelihood ratio test statistic for this model is as follows

$$S_{RE-FE} = -2\log\left(\frac{SupL_0}{SupL_1}\right) = \sum_i \log\left(\frac{V_i}{V_i + \hat{\tau}^2}\right) + \sum_i \frac{y_i^2}{2V_i} - \sum_i \frac{(y_i - \hat{\mu})^2}{V_i + \hat{\tau}^2} \tag{15}$$

Under the assumption of equal sample size, the significance of the model is provided in a tabulated way with studies varying between 2 and 50. The model generates 10^{10} null statistics to construct the p-value table with a precision of up to 10^{-8}. For several sufficiently large studies, the statistic S_{RE-FE} follows, asymptotically, a mixture of chi-square distribution with 1 and 2 degrees of freedom [10].

Although the method can be extended to multiple diseases with similar etiology, one major challenge resides in the interpretation of the results. To address this issue, Han and Eskin introduced the Binary Effects Model [12], to be discussed in the next section.

1.4 Binary Effects Model (BEM)

In the classical random effect model, Han and Eskin (2012) discovered that the absence of the effect of a SNP is not evidenced by its non-significant p-value. In addition, they realized how complicated it is to plot the observed effect sizes and their confidence interval [12]. In light of these limitations, Han and Eskin proposed a new method for random effects meta-analysis for GWAS. This method, BEM, assumes two hypotheses. First, it accounts for the presence or the absence of an effect in a study, and second, in the presence of an effect, this effect is expected to be similar between the studies [13, 12]. The BEM uses a statistic called the m-value, which is the posterior probability that the effect exists in each study and proposes a weighted sum of Z-scores statistic which incorporates the m-values computed from the data as prior weights from each of the component studies [12]. More formally, let s be the number of studies and α_i be the observed effect size of study i (i = 1,...,s) with σ_i the associated variance.

Assuming no effect in study i, $P(\alpha_i|\text{no effect}) = f(\alpha_i,0,\sigma_i)$ whereby f is the probability density function of the normal distribution. In the case of effect in study i, $P(\alpha_i|\text{effect}) = f(\alpha_i,\mu,\sigma_i)$ whereby μ is the unknown effect size.

Here, they defined the z-score for each study i (Z_i) as the ratio between the observed effect size, α_i and its standard error, SE_i. The test statistic Z_{BE} is defined as follows

$$Z_{BE} = \frac{\sum_i m_i \sqrt{t_i}\, Z_i}{\sqrt{m_i^2 t_i}} \tag{16}$$

Where the m-values are computed by $m_i = P(T_i|\alpha_i) = \frac{P(\alpha_i|T_i = 1)\times P(T_i=1)}{P(\alpha_i|T_i = 0)\times P(T_i=0)+P(\alpha_i|T_i = 1)\times P(T_i=1)}$.

T_i is a random variable that has a value of 1 if study i has an effect, and 0, otherwise ($T_i = 0$), the prior probability of each study having an effect, is assumed to have a beta prior. The Markov Chain Monte Carlo (MCMC) was proposed to estimate the m-values [12]. The weight is approximated by $\sqrt{t_i} \cong \sqrt{n_i p_i (1-p_i)}$ where n_i is the sample size and p_i is the minor allele frequency (MAF) for the i^{th} study. Although this method has been found useful to detect associations showing heterogeneity, and to predict whether studies have an effect or not, this method does not differentiate the true heterogeneity and the statistical heterogeneity [12].

1.5 Meta-Regression

Meta-regression is an approach which ascertains the relationship of multiple predictors on effect magnitude [14]. Once possible confounders among covariates have been explored in the literature, meta-regression can be used to relate effect size with the other set of variables in the effect size model. Meta-regression can be carried out both under FEM and REM. Supposing that the underlying effect in the fixed or random-effects meta-regression are normally distributed in a linear predictor, meaning $\theta_1,\theta_2,\theta_3,\ldots,\theta_i \sim N(x_i\beta,\tau^2)$ the underlying effect of i^{th} study in a meta-regression, with s studies in denoted by

$$y_i \sim N\left(x_i\beta, \tau^2 + \sigma_i^2\right) \tag{17}$$

Equivalent to

$$y_i = x_i\beta + \varepsilon_i + \gamma_i \tag{18}$$

Where $\varepsilon_i \sim N\left(0, \sigma_i^2\right)$ and $\gamma_i \sim N(0, \tau^2)$ wherein y_i is the underlying effect for the i^{th} study (i = 1,...,s), β is a l x 1 vector matrix of coefficient which may cover a constant if well fitted, x_i is a 1 x l vector matrix of coefficient of covariates values in the i^{th} study with component values fixed between either 0 or 1, τ^2 the amount of heterogeneity, σ_i^2 the sampling variance for the i^{th} study, $_i$ the error of the sampling variance to the underlying effect in the i^{th} study and γ_i the error of the between-study variance to the underlying effect in the i^{th} study. Fixed effects or random effects meta-regression are considered as the extension of fixed effect or random effects meta-analysis and therefore are subjected to the assumptions of FEM and REM, described in the previous section. Meta-regression, when conducted under the REM explores the contribution of known covariates to heterogeneity while accounting for the residual variability that could not be explained by covariates incorporated in the meta-regression model [14]. In principle, study indicators in the meta-regression should be investigated following the outcome of the study design features and biological factors likely to bring about variability of observed study effects,

this lessens the burden of multiple testing and the potential for false positives arising from data cleaning. The power of the significant relationship between outcome variables and the multiple explanatory variables depends on the number of studies included in the meta-regression [15]. The coefficients in the meta-regression represent the change in the outcome variable per unit of increase in the predictor variables. The amount of heterogeneity in a meta-regression explained by the study indicators of interest with no covariates are compared with those in the models with covariates. The proportion of heterogeneity because of the predictor variables, denoted R_{adj}^2, is given by

$$R_{adj}^2 = \frac{\tau^2 - \tau_0^2}{\tau_0^2} \tag{19}$$

Where τ^2 and τ_0^2 are, respectively, the estimate of the amount of heterogeneity with covariate and without covariates. This indicator is often positive, except in the context of few studies and when the predictors in the meta-regression model explain less heterogeneity than would be expected by chance [15].

1.6 Genetic Effect with Trans-ethnic Meta-analysis Framework

The problem of trans-ethnic GWMA came about from the motivation that most of the SNP-specific GWMA was primarily carried out using GWAS summary statistics from studies of populations of European descent [16]. With GWAS data being increasingly accessible from diverse populations, transethnic meta-analysis is becoming an efficient approach to increase power to locate additional novel loci with associated effects. The trans-ethnic meta-analysis methodology includes more diverse populations and provides considerable performance improvements to detect associations and identify causal variants compared to fixed-effects meta-analysis. Additionally, this approach has increased power compared to random-effect meta-analysis with a well-captured similarity of allelic effects between populations [2, 16]. Morris (2011) proposed a Bayesian framework under the label "MANTRA" (Meta-Analysis of Trans-ethnic Association studies), which accounts for the relatedness by grouping studies (or ethnic groups) with the same underlying genetic effect into the same cluster and those with markedly different genetic backgrounds into different clusters [16]. Morris introduced the Bayesian partition model assuming that similar studies are more likely to have similar effect sizes, while dissimilar studies may have more variable effect estimates [16]. If we consider the different sets of clusters as one, all the separate individual studies can be aggregated into one with unvaried genetic effect sizes. In this instance, MANTRA becomes a Bayesian application of the fixed-effects technique. In case the number of clusters is equivalent to the number of studies, we correspond each study to its very own cluster, and MANTRA becomes the application of the Bayesian random-effects technique. Let b and s be, respectively, the observed allelic effect and the standard error under the null hypothesis, H_0 (no association of a variant with a trait in any population, $\beta = 0$), and the alternative hypothesis, H_1($\beta \neq 0$). The evidence of statistical association is assayed by the Bayes's Factor (BF) as follows

$$\Delta = \frac{f(b, s|H_1)}{f(b, s|H_0)} \tag{20}$$

The marginal likelihood of the observed allelic effect under model M is given by an integration over an unknown parameter x which includes the population specific allelic effects, β, and additional parameters related to their prior distribution (**Equation 21**). The model, M, varies according to the pattern of the population-specific allelic effects with different clusters.

$$f(b, s|M) \propto \int f(b, s|x) f(x|M) dx \tag{21}$$

The integration in **Equation 21** includes study-specific true allelic effect β_k and additional parameters relating to the prior distribution with likelihood $f(b,s|x) = f(b,s|\beta) = \prod_{k=1}^{N} f(b_k, s_k|\beta_k)$ and $f(b_k, s_k|\beta_k) \propto \frac{1}{s_k} \exp\left(\frac{(b_k-\beta_k)^2}{2s_k^2}\right)$. The likelihood function $f(b,s|M)$ is often computationally approximated using the Metropolis-Hastings MCMC algorithm as it cannot be directly evaluated analytically. MANTRA has proven to perform well in terms of increasing power to detect association compared to traditional fixed-effect and random-effect meta-analysis, shedding light on the heterogeneity of allelic effect between populations at particular loci, and enabling the detection of novel loci associated with complex traits in trans-ethnic GWAS [16]. Additionally, Shi and Lee proposed a novel REM for trans-ethnic meta-analysis, modelling the genetic effect heterogeneity across diverse populations [17]. This model, based on a kernel machine framework, assumes genetic distance to be the correlation structure across ancestral groups, with genetic effects taken as random variables. In addition, TransMeta achieves robust power using an adaptive variance component, regardless of the degree of genetic effect heterogeneity [17].

2. Some Aggregation Techniques for Gene-Specific GWMA

2.1 Gene-based Scoring using P-values.

The strategy applied using this approach consists of obtaining a regional or gene-based p-value from each study and then meta-analysing them. Different methods are being used to synthesize the association of SNPs within genes to address the association of the gene with the phenotype. Consider a set of m SNPs(m = 1,...,M) and their associated p-values p_m. Below we describe different methods enabling the combination of different p-values to generate a single statistic for the gene. The simplest proposed strategy is the Sidak's combination test, denoted by

$$P_{sidak} = 1 - (1 - err)^k \tag{22}$$

where err is the type I error rate and k is the number of independent SNPs [18]. We also denote the Fisher's combination test to combine k independent SNPs P-values are given by

$$P_{Fisher} = -2 \sum_{m=1}^{M} log(p_m) \tag{23}$$

where P_{Fisher} follows a chi-square distribution χ^2_{2m} with 2m degree of freedom. Alternatively, Stouffer's method makes use of the inverse normal distribution as below

$$P_{Stouffer} = \frac{1}{\sqrt{M}} \sum_{m=1}^{M} \Theta^{-1}(1 - p_m) \tag{24}$$

$P_{Stouffer}$ follows a normal distribution with mean 0 and variance $\sqrt{M}$ and Θ^{-1} is the inverse cumulative distribution function of the standard normal distribution [19]. In addition, the Simes combination test highlights how ranked p-values are combined using the statistic denoted by

$$P_{Simes} = min\left(\frac{mp_{(i)}}{i}\right) \tag{25}$$

where $p_{(i)}$ are the ordered p-values from the m SNPs p-values and P_{Simes} follow a uniform (0,1) distribution under the null hypothesis [20]. Such methods look agreeable in the absence of effect size estimates but are not widely implemented, since they have revealed a substantial loss of information, as it does not account for sample size and direction of effects[12]. Moreover, they model SNP effects as independent, which, as we now know, is inappropriate.

2.2 Gene-level meta-analysis based on score statistics.

The meta-analysis framework being used in this section can be decomposed on either a fixed-effect or random-effect approach. The overall approaches are either based on individual score test summary statistics issued from individual variant score tests, accompanied by an average variance-covariance matrix for the gene/region [27, 21, 22, 23, 24]. Others apply an aggregation test technique which encompasses effect and standard errors from the regression analyses followed by a correlation matrix of the individual variant [25]. Suppose that we have L independent studies. For k = 1,...,L, assuming that we have J variants in a gene or region of interest, let $S_{k,j}$ denote the score statistic for testing the null hypothesis of no association for variant j and $V_{k,j}$ its variance/covariance for the study k. The two major approaches for meta-analyses are the fixed effects and the random effects models.

FIXED EFFECT MODELS

Under the fixed effect models, the common effects of the j variants (j from 1 to J) across the k studies are assumed to be the same. We take the overall score statistic and the overall variance for each variant across the L studies denoted by [21, 27]

$$S_j = \sum_{k=1}^{L} S_{k,j} \quad and \quad V_j = \sum_{k=1}^{L} V_{k,j} \tag{26}$$

Under the null hypothesis, S(k) asymptotically follows a multivariate normal distribution with means 0 and variance V_j. In the case where the variant is not found in a specific study, the score and the variance are, respectively, equal to 0. Let's define $S = (S_1, S_2, \ldots, S_J)^T$ the gene score having the score for all the variants as components; and its variance $V = cov(S)$.

Under the additive mode of inheritance of continuous or binary traits, Tang and colleagues (2015) proposed the meta-analysis for the burden test statistics under the null hypothesis with no association formalized by:

$$T_{FE-Burden} = \frac{(\gamma^T S)^2}{\gamma^T V \gamma} \sim \chi_1^2 \tag{27}$$

Similarly, Liu [21] proposed another form of burden test:

$$T_{FE-Burden} = \frac{\gamma^T S}{\sqrt{\gamma^T S \gamma}} \sim N(0,1) \tag{28}$$

$\gamma = (\gamma_1, \gamma_2, \ldots, \gamma_J)^T$ is the vector weights mainly based on MAFs proposed by Madsen and Browning [26] $\gamma_j = \frac{1}{\sqrt{MAF_j(1-MAF_j)}}$. This weight has the advantage of being numerically stable and permits a normal approximation of the score statistic.

The Variant threshold (VT) test is obtained by computing the burden test statistics at each MAF below a certain threshold and minimizes the P-value over the observed MAF thresholds. Let τ the total number of MAFs threshold, and $T_{FE-Burden_l}$ the fixed effect burden test at the l^{th} threshold (l = 1...τ). The burden score at that threshold is given by $S_l = \gamma_l^T S$. Here γ_l is the vector of indicators where the a^{th} element equals 1 if the combined MAF at the variant site a is less than l and zero, otherwise. We can denote, by convenience, a matrix of indicators of the MAF threshold $\eta = (\gamma_{l_1}, \gamma_{l_2}, \ldots, \gamma_{l_n})$. Henceforth, the Variant threshold test statistic is indicated by

$$T_{FE-VT} = \max_{l=1\ldots\tau} T_{FE-Burden_l}, \qquad where \;\; T_{FE-Burden_l} = \frac{S_l}{\sqrt{\gamma_l^T S \gamma_l}} \tag{29}$$

The significance of the statistic is determined analytically using the cumulative distribution of the multivariate normal distribution S [21, 27]. More formally, given the covariance between test statistics computed from the alleles frequency thresholds, $(T_{FE-Burden_{l_1}}, T_{FE-Burden_{l_2}}, \ldots, T_{FE-Burden_{l_n}}) \sim MVN(0, \eta V \eta^T)$. Hence, the p-value of the Variant Threshold statistic is denoted by:

$$\begin{aligned} p-value &= 1 - \Pr(T_{FE-VT} \le t) \\ &= 1 - \Pr\left(T_{FE-Burden_{l_i}} \le t\right), i = 1, \ldots, n, \\ &= 1 - D_{MVN}(t, t, \ldots, t) \end{aligned} \tag{30}$$

where D_{MVN} is the multivariate normal distribution function with means 0 and variance $\eta V \eta^T$ [21, 27].

The meta-analysis framework for the Variant Component tests assumes that the mean effect of the variants in the gene/region is the same for each study. Assuming that the mean effect of the variants follows a multivariate normal distribution of m dimensional mean vector 0 and covariance matrix $\sigma_s W$, where σ_s refers to the variance component designating the variant effects within-study variation and $W = diag s_1^2, s_2^2, \ldots, s_J^2$ is a diagonal matrix in which s_j^2 denotes the within-study specified weight for the j^{th} variant (usually a function of the MAF). The meta-analysis score statistic for testing the null hypothesis that $\sigma_s = 0$ is given by[27, 28]:

$$T_{FE-SKAT} = S^T W S \tag{31}$$

For instance, if W is a diagonal $beta(MAF, v_1, v_2)$, the meta-analysis score statistic is equivalent to the SKAT statistic [68]. In the case when W is equal to the identity matrix, it generates the meta-analysis

for the C-alpha test [67]. The p-value of the test statistic from **equation 31** is determined by the mixture of the χ_1^2 $\sum_{j=1}^{J}$ $\alpha_j \chi_{1,j}^2$, where α_j is the j^{th} eigenvalue of $V^{\frac{1}{2}} W V^{\frac{1}{2}}$ and $\chi_{1,1}^2, \chi_{1,2}^2, \ldots, \chi_{1,J}^2$ are independent χ_1^2 random variables[27, 28]. SKAT-O[69], an extension of SKAT proposed an optimal test which consists of a linear combination of the SKAT and burden test under the form of a weighted sum of the squared score statistic [12, 28]. The meta-analysis formula is denoted by:

$$T_{FE-SKAT-O} = \rho T_{FE-burden} + (1-\rho) T_{FE-SKAT} \tag{32}$$

In practice, when ρ takes the value 1 (respectively 0), the test statistics correspond to the meta-analysis of the burden test (respectively of the SKAT statistic). The p-value is computed using a one-dimensional numerical integration and the value of ρ is chosen to minimize the p-value [28].

RANDOM EFFECT MODELS (REM)

Under REM, we assume the genetic effects of the different studies to be derived from the same distribution but are not the same. The biggest challenge is to quantify heterogeneity between and across studies, especially in the case of rare variants as they are population-specific [12]. The assumption behind the REM is expressed as [74]

$$\beta_k = \mu_* + \phi_k, k = 1, \ldots, K \tag{33}$$

where $\beta_k = (\beta_{k1}, \beta_{k2}, \ldots, \beta_{km})^T$ stands for the effects of the burden score on the k^{th} study, $\mu_* = (\mu_{1*}, \mu_{2*}, \ldots, \mu_{m*})^T$ represents the mean effect of the burden score across studies and $\phi_k = (\phi_{k1}, \phi_{k2}, \ldots, \phi_{km})^T$ the deviation of the effect of the k^{th} study from the mean μ_* assuming a multivariate normal distribution with mean 0 and covariance matrix σ(σ quantifies the between-study heterogeneity of the effects of the burden score). The meta-analysis burden test statistic assuming no effect($\mu_* = 0$) and no heterogeneity($\sigma = 0$)[28, 29] is given by:

$$T_{RE-Burden} = T_{FE-Burden} + \frac{(\sum_{k=1}^{K} S_k^2 - \sum_{k=1}^{K} V_k)^2}{2 \sum_{k=1}^{K} V_k^2} \tag{34}$$

The second term speaks of the score statistic for testing $\sigma = 0$ given $\mu_* = 0$. This statistic (**Equation 34**) measures the joint test of the mean and heterogeneity of the effects and attains high power under the condition of large mean effect size and/or robust between-study heterogeneity [28]. The Variant Threshold test under the REM is similar to the one from the FEM as denoted below:

$$T_{RE-VT} = \max_{l=1\ldots\tau} T_{RE-Burden_l} \tag{35}$$

where $T_{RE-Burden_l}$ is the meta-analysis random effect burden test statistic at the MAF threshold l and τ the number of thresholds)[28, 29]. Another proposed technique under the REM includes the Variant Component approach which incorporates the SKAT and SKAT-O tests. with individual genotypes of d-variants, we assume the following:

$$\beta_k^* = \mu + \phi_k^*, k = 1, \dots, K \tag{36}$$

where β_k^* denotes the value of the effect for the k^{th} study, μ refers to the average effects of all variants across the studies and ϕ_k^* the deviations of the effects from the k^{th} study from the average effect. Like in the FEM, we assumed that μ follow a J-variate normal distribution with mean vector 0 and covariance matrix $\sigma_s W$. In addition, ϕ_k^* follows a multivariate normal distribution with means vector 0 and covariance matrix $v_\delta \Delta$ where v_δ is a scalar which denotes the between-study variation of the effects and $\Delta = diag(\Delta_1^2, \Delta_2^2, \dots, \Delta_J^2)$ a diagonal matrix in which the Δ_i is regarded as the between-study weight of the j^{th} variant ($j = 1, \dots, J$) for the burden score effects. Lee and colleagues [22] proposed two test statistics accounting for heterogeneity. Het-SKAT tests the null hypothesis that $\sigma_s = 0$ and $v_\delta = 0$. Of the following, the RE models of SKAT test the joint null hypothesis that $v_\delta = 0$ and $\sigma_s = 0$, and its test statistic can be written as:

$$T_{RE-SKAT} = \begin{bmatrix} S_{\sigma_s} & S_{v_\delta} \end{bmatrix} V_\sigma^{-1} \begin{bmatrix} S_{\sigma_s} \\ S_{v_\delta} \end{bmatrix} \tag{37}$$

in which $S_{\sigma_s} = \frac{1}{2} T_{FE-SKAT} - \frac{1}{2} trace(VW)$, and $S_{v_\delta} = \frac{1}{2} T_{Het-SKAT} - \frac{1}{2} trace(VB)$ given the expression of Het-SKAT:

$$Het - SKAT = \sum_{k=1}^{L} S_{k,j}^T \Delta S_{k,j} \tag{38}$$

V_σ speaks of the covariance matrix of $(S_{\sigma_s}, S_{v_\delta})$ and is denoted by:

$$V_\sigma = \frac{1}{2} \begin{bmatrix} trace(VWVW) & trace\left(\sum_{k=1}^{L} V_{k,j} W V_{k,j} \Delta\right) \\ trace\left(\sum_{k=1}^{L} V_{k,j} \Delta V_{k,j} W\right) & trace\left(\sum_{k=1}^{L} V_{k,j} \Delta V_{k,j} \Delta\right) \end{bmatrix} \tag{39}$$

While Het-SKAT tests the heterogeneity at the variant level, $T_{RE-SKAT}$ tests both the heterogeneity and the means effect. As a result, Het-SKAT tends to be more powerful than $T_{RE-SKAT}$ in the presence of no effect, but the opposite happens in the presence of an effect [28, 22].

Another version of SKAT to test for heterogeneity effects called Het-SKAT-O was suggested as written below:

$$Het - SKAT - O = \rho\left(\sum_{j=1}^{J}\sum_{k=1}^{L}\Delta_j S_{k,j}\right)^2 + (1-\rho)Het - SKAT \tag{40}$$

ρ is adequately chosen between 0 and 1 to cause the most significant result. The level of significance of Het-SKAT and Het-SKAT-O can be estimated using modified moment-matching approximation and numerical integration [22]. For more accuracy, the Monte Carlo simulation is the best technique to quantify the p-values of the above tests. Lee and co-workers suggested simulating the sum of the score across all studies, applying the multivariate normal distribution and recomputing the test statistic. The p-value is defined as the proportion of the simulated test statistics that are more significant than the observed test statistics [22].

3 Some Aggregation Techniques for Pathway-based GWMA

3.1 Meta-analysis for Pathway Enrichment (MAPE)

The outline framework for MAPE is described below:

a. MAPE$_G$ Framework

MAPE$_G$ runs meta-analysis by synthesizing gene result statistics across studies and conducts pathway enrichment analysis just once using the combined gene results statistics [30, 31]. It generates the p-value statistic for each differential expression gene. Let t_{gk} ($1 \le g \le G$, $1 \le k \le K$) be the association score with the phenotype (supposed to be binary) for each gene g in study k obtained either by t-statistic or through a correlation measure, and I the indicator function. After permuting group labels B times, the permuted t-statistic t_{gk}^b($1 \le b \le B$) is used to estimate the p-value of the score p(t_{gk}) and the p-value of the permuted score p(t_{gk}^b) as defined below:

$$\begin{aligned} p(t_{gk}) &= \frac{\sum_{b=1}^{B}\sum_{g'=1}^{G} I\left(\left|t_{g'k}^b\right| \ge |t_{gk}|\right)}{B.G} \\ p(t_{gk}^b) &= \frac{\sum_{b'=1}^{B}\sum_{g'=1}^{G} I\left(\left|t_{g'k}^{b'}\right| \ge |t_{gk}^b|\right)}{B.G} \end{aligned} \tag{41}$$

Meta-analysis of all genes across all datasets is applied using the maximum p-value (maxP) statistic for the association score $u_g = \max_{1\le k\le K} p(t_{gk})$ and the permuted ones $u_g^b = \max_{1\le k\le K} p(t_{gk}^b)$. The p-value of the statistic maxP is estimated by $p(u_g) = \frac{\sum_{b=1}^{B}\sum_{g'=1}^{G} I(u_{g'}^b \le u_g)}{B.G}$. Given a pathway P, enrichment analysis is performed using the Kolmogorov-Smirnov (KS) statistic for gene set enrichment on $p(u_g)$ and $p(u_g^b)$ labelled, respectively, v_p and v_p^b. P-values and pathway p-values adjusted for false discovery rate(Q-value) are estimated for each pathway via permutation test as indicated below:

$$p(\nu_p) = \frac{\sum_{b=1}^{B} \sum_{p'=1}^{P} I\left(\nu_{p'}^{b} \geq \nu_p\right)}{B.P}$$
$$p(\nu_p^b) = \frac{\sum_{b'=1}^{B} \sum_{p'=1}^{P} I\left(\nu_{p'}^{b'} \geq \nu_p^b\right)}{B.P} \quad (42)$$
$$q(\nu_p) = \widehat{\theta_0} \frac{\sum_{b=1}^{B} \sum_{p'=1}^{P} I\left(\nu_{p'}^{b} \leq \nu_p\right)}{B.\sum_{p'=1}^{P} I(\nu_{p'} \leq \nu_p)}$$

where θ_0 is an estimate of the proportion of non-enriched pathways. The significance of the enriched pathway generated by $MAPE_G$ is given by

$$P_{MAPE_G} = \{p: q(\nu_p) \leq 0.05\} \quad (43)$$

Storey (2002) proposed an estimate of that proportion by $\theta_0 = \frac{\sum_{p=1}^{P} I(p(\nu_p) \in A)}{P.l(A)}$ where A is the closed interval $A = [0.5,1]$ and l(A) = 0.5[33]. The value θ_0 set to 1 have been recommended as numerous reports have mentioned challenges in estimating θ_0 for the reason that a poor estimate of θ_0 may deteriorate the FDR computation [30].

b. MAPEP Framework

In this framework, pathway enrichment analysis is conducted for each study, then combined using a maximum p-value approach to obtain the gross gene-set statistics. For each study k, we compute the p-value $p(t_{gk})$ for the gene g ($1 \leq g \leq G$)using Student-test; the KS approach is performed in any given pathway, P, for enrichment analysis to generate its score, ν_{pk}, and its significance, $p(\nu_{pk})$, as well as the ones after permutation B times ν_{pk}^b $p(\nu_{pk}^b)$ (**Equation 44**).

$$p(\nu_{pk}) = \frac{\sum_{b=1}^{B} \sum_{p'=1}^{P} I\left(\nu_{p'k}^{b} \geq \nu_{pk}\right)}{B.P}$$
$$p(\nu_{pk}^b) = \frac{\sum_{b'=1}^{B} \sum_{p'=1}^{P} I\left(\nu_{p'k}^{b'} \geq \nu_{pk}^b\right)}{B.P} \quad (44)$$

Meta-analysis is performed using maxP for all pathways across all data sets. The estimate of the p-values is given by:

$$p(w_p) = \frac{\sum_{b=1}^{B} \sum_{p'=1}^{P} I\left(w_{p'}^{b} \leq w_p\right)}{B.P}$$
$$p(w_p^b) = \frac{\sum_{b'=1}^{B} \sum_{p'=1}^{P} I\left(w_{p'}^{b'} \leq w_p^b\right)}{B.P} \quad (45)$$

where $p(w_p) = \max_{1\le k\le K} p(v_{pk})$ and $p(w_p^b) = \max_{1\le k\le K} p(v_{pk}^b)$. Q-value estimates via permutation tests, as well as the enriched pathways generated by $MAPE_P$ are computed as indicated below:

$$\begin{aligned} q(w_p) &= \frac{\sum_{b=1}^{B}\sum_{p'=1}^{P} I\left\{w_{p'}^b \le w_p\right\}}{B\sum_{p'=1}^{P} I\{w_{p'} \le w_p\}} \\ P_{MAPE_P} &= \{p: q(w_p) \le 0.05\} \end{aligned} \tag{46}$$

c. MAPE$_I$ Framework

$MAPE_I$ combines the results of $MAPE_G$ and $MAPE_P$ and computes p-value and FDR through permutation tests. More formally, let $s_p = min\{p(v_p), p(w_p)\}$ and $s_p^b = \min\{p(v_p^b), p(w_p^b)\}$ obtained from the $MAPE_G$ and $MAPE_P$ frameworks, the estimate of the p-value $p(s_p)$ is given by

$$p(s_p) = \frac{\sum_{b=1}^{B}\sum_{p'=1}^{P} I\left\{s_{p'}^b \le s_p\right\}}{B.P} \tag{47}$$

The Q-value of the integrated pathway as well as its significance are given below:

$$\begin{aligned} q(s_p) &= d\frac{\sum_{b=1}^{B}\sum_{p'=1}^{P} I\left\{s_{p'}^b \le s_p\right\}}{B\sum_{p'=1}^{P} I\{s_{p'} \le s_p\}} \\ P_{MAPE_I} &= \{p: q(s_p) \le 0.05\} \end{aligned} \tag{48}$$

Shen and Tseng (2010) made an important foundational effort in developing meta-analysis for pathway enrichment. This model holds promise in exploring power increase in pathway association; however, MAPE methods may be subject to power loss, as they do not account for different set sizes in their permutation-based procedures, and fall short of clearly managing between-study heterogeneity. All these limitations affect the performance of MAPE methods and has led several scholars to develop alternative tools to overcome these shortcomings [32].

3.2 Integrated Bayesian model for meta-analysis of gene set enrichment

Chen and colleagues (2013), proposed an integrated Bayesian framework which models gene expression data from multiple studies and gene set information, and performs differential expression analysis, together with gene set enrichment analysis and meta-analysis [31]. Unlike MAPE, which make use of a sequential approach, Chen and co-workers proposed a Bayesian inference model which jointly models gene set information and expression data from multiple studies and exhibits between-study heterogeneities for gene expression data by including non-overlapping genes [31].

Suppose we have J total number of distinct genes appearing in at least one of the K independent studies considered for meta-analysis so that for each study k($1 \le k \le K$), we have I_k samples. Let V_{jk} be the indicator variable for gene j($1 \le j \le J$) being included in study k. Granted V_{jk} = 1, let Y_{ijk} the expression intensity for gene j in sample i included in study k with i ∈ 1....I_k. For the purpose of

including different potential studies in meta-analysis, the model acknowledges different genes from the same genome to be found in different studies and subsequently assumes that a gene will always be differentially (equally) expressed with its expression differing across studies [31]. The mean expression intensity for a gene can be different in different studies, but here, we assume common mean intensity and common variance measurement errors among all samples of each phenotype in a study, *k*. Additionally, we define an indicator variable of a binary phenotype for study k given to sample i as:

$$X_{ik} = \begin{cases} 1\ if\ a\ case\ sample\ is\ in\ study\ k \\ 0\ if\ a\ control\ sample\ is\ in\ study\ k \end{cases} \tag{49}$$

The model mentioned that the expression intensity Y_{ijk} follows a normal distribution as denoted by $Y_{ijk}|V_{jk} = 1, \alpha_{jk}, \beta_{jk}, X_{ik}, \sigma_k^2 \sim N(\alpha_{jk} + \beta_{jk}X_{ik}, \sigma_k)$ where α_{jk} is the mean expression intensity for the control sample of gene j in study k; β_{jk} is the the change in expression intensity between the different phenotypes; and σ_k^2 the common variance measurement error assumed for all genes in study *k*. The model considers the expression of a gene, j, to be either equally expressed (EE), up-regulated (UR),or down-regulated (DR). Due to a change in expression intensity between different phenotypes, let's define the status of a gene, j, by a 3 dimension indicator vectors $n_j = (n_{jd})_{d\in 0,+,-} = (n_{j0}, n_{j+}, n_{j-})$ whereby n_{jd} = 1 represents a gene, j, is either EE(d = 0), UR(d = +) or DR(d = -) and 0, otherwise. This gives, by expansion

$$n_j = \begin{cases} (0,0,1)\ if\ gene\ j\ is\ DR \\ (0,1,0) if\ gene\ j\ is\ UR \\ (1,0,0)\ if\ gene\ j\ is\ EE \end{cases} \tag{50}$$

Due to the influence of the gene status in the expression change β_{jk}, we assume that β_{jk} follows a three modes mixture normal distribution with mean b_{kd} and variance τ_{kd}^2 as given by,

$$\beta_{jk}|n_{jd} = 1 \sim N(b_{kd}, \tau_{kd}^2) \tag{51}$$

where $d \in \{0, +, -\}$ represents the gene j's status with $b_{k0} \equiv 0$ and $b_{k-} < 0 < b_{k+}$. The model also assumes that $\alpha_{jk} \sim N(a_k, \tau_k^2)$. The indicator vector $(n_{jd})_{d\in\{0,+,-\}}$ is assumed to follow a multinomial distribution with the parameter vector defined by

$$(n_{jd})_{d\in\{0,+,-\}} \sim Mutinom\left(1, \left(\sigma_{d_{d\in\{0,+,-\}}}\right)\right) \tag{52}$$

where $\left(\sigma_{d_{d\in\{0,+,-\}}}\right) = (\sigma_0, \sigma_+, \sigma_-)$ denote the probability of EE, UR and DR genes, respectively, in the overall gene list.

Concerning the prior, the model emphasizes distributions on $\sigma \sim Dirichlet(1,1,1)$, $b_{k+} \sim Unif(0, D)$, $b_{k-} \sim Unif(-D, 0)$, and $a_k \sim Unif(-L, L)$ in which D represents the maximum absolute value of changes in gene expression in all K studies between different phenotypes, and L denotes the maximum absolute value of gene expression with phenotype, 0, in all *K* studies. The variance is assumed to follow an Inverse-Gamma distribution prior with shape, w, and scale, *v*. The values of *w* and *v* are taken at a small scale to allow density to reflect prior knowledge in variance parameters.

The gene set information is modelled as follows: let G be the total number of gene sets in which Z denotes the list of all the predefined gene sets examined in the meta-analysis. The elements of the matrix $Z * J$ being binary, set $Z_{gj} = 1$ if gene j is in set g and $Z_{gj} = 0$, otherwise. We denote the conditional probability that a gene is in set g given that the gene status is d ($d \in \{0, +, -\}$) by $\theta_{jd} = Pr(Z_{jd} = 1 | n_{jd} = 1)$. If for a particular gene set g, $\theta_{j0} = \theta_{j+} = \theta_{j-}$, then Z_{gj} is independent of n_j regardless the gene's status. However, that condition may not hold for all the G gene sets as some gene sets are likely to be co-expressed leading to positive correlation in their expression levels and also, the gene expression and the list of all gene sets depends on the gene status. Thereafter, the model assigns a beta prior to θ_{jd} for all $d \in \{0, +, -\}$ and $g \in \{1, \dots, G\}$ whereby $\theta_{jd} \overset{iid}{\sim} Beta\left(\sigma_d^* n_g, \sigma_d^*(J - n_g)\right)$. n_g is the number of genes in the gene set g and σ_d^* is the true proportion of genes with status d in the overall gene list. σ_d^* can be estimated from the gene expression data using existing methods, or be set to (1/3, 1/3, 1/3) to reflect prior belief, or defined via existing biological knowledge. According to the distribution of θ_{jd}, the mean is set to $\frac{n_g}{J}$ which shows that the mean probability for a gene belonging to set g is proportional to the size of the gene set, n_g , and does not depend on the gene status. The prior variance of θ_{jd} is given by $Var(\theta_{jd}) = \frac{\frac{n_g}{J}\left(1 - \frac{n_g}{J}\right)}{\sigma_d^* J}$. In practice, most genes are EE, this leads the model to employ few genes to allow a more concentrated set of EE genes around the prior mean, n_g/J , for set g. Meanwhile, θ_{g+} and θ_{g-} for DE genes have a large prior variability around the mean [31].

With regard to the posterior computation, the aim is to identify gene set enrichment. All the parameters involved have known distributions. The enrichment scores for the enriched gene sets can then be determined by evaluating the resulting joint model using a MCMC approach, selecting random samples from the joint distribution. Let ψ_{gd} be the conditional probability that a gene in a set g has status, d. According to [31], the enrichment of a gene in a set, g, is attained if $\psi_{g+} + \psi_{g-} > \sigma_+ + \sigma_-$. Denote $\phi_g \equiv Pr(\psi_{g+} + \psi_{g-} > \sigma_+ + \sigma_- | D)$ the posterior probability that set g is enriched given the observed data, D. By iterating over gene set g, let $\sigma_d^{(t)}$ and $\theta_{gd}^{(t)}$ the posterior draw from the parameters σ_d and θ_{gd} in the t^{th} iteration. The estimate $\widehat{\phi_g}$ of ϕ_g is given by

$$\widehat{\phi_g} = \frac{\sum_{t=1}^{T} I\left\{\psi_{g+}^{(t)} + \psi_{g-}^{(t)} > \sigma_+^{(t)} + \sigma_-^{(t)}\right\}}{T} \tag{53}$$

where T denotes the total number of iterations after the burn-in period and I the indicator function[31]. $\psi_{g+}^{(t)}$ and $\psi_{g-}^{(t)}$ are computed based on the Bayes rule:

$$\psi_{gd}^{(t)} = \frac{\theta_{gd}^{(t)} \sigma_d^{(t)}}{\sum_{d \in \{0,+,-\}} \theta_{gd}^{(t)} \sigma_d^{(t)}} \tag{54}$$

Enriched gene sets are identified by classifying all the gene sets based on $\widehat{\phi_g}$ and selecting the sets across the ranking list [31]. The model makes use of the Bayesian False Discovery rate (FDR) to choose the significance cut-off c for the enriched gene sets:

$$\widehat{FDR}(c) = \frac{\sum_{g=1}^{G}\left(1-\widehat{\phi_g}\right)I\{\widehat{\phi_g} \geq c\}}{\sum_{g=1}^{G} I\{\widehat{\phi_g} \geq c\}} \tag{55}$$

The choice of c is so that $\widehat{FDR}_{+}(c) \leq \nu$ where ν can take values 1, 5, or 10%.

One of the advantages of this approach is the integration of all the parameters in the model to perform pathway/gene set meta-analysis in parallel rather than in a sequential manner. Despite great human efforts to locate the convergence of MCMC in the model, the use of the classification strategy makes the results relatively easy to interpret [31]. However, the model is limited to binary phenotypes making it difficult to perform gene set enrichment for complex traits.

3.3 Integrative Gene Set Enrichment Analysis (iGSEA)

In the perspective of improving the gene set meta-analysis using gene expression statistics, Lu and colleagues proposed a method which integrates multiple independent gene-set enrichment studies sharing a common phenotype. This method allows the possibility to choose either a Fixed Effect or Random Effect meta-analysis approach, and applies to both discrete and continuous phenotypes [32]. The algorithm process includes the computation of the gene level statistics for each study taking information from the gene expression level data, followed by the overall computation of the gene level meta-analysis based on score statistic [27, 29] to address between-study heterogeneity, and finally, using an appropriate database of gene sets, ascertain enrichment of the identified gene sets [32]. To materialize these steps, let's define K-independent gene sets enrichment analysis sharing the same phenotype, giving rise to G genes within the genome in at least one of the K studies. The relationship between the expression level of gene g($1 \leq k \leq K$) in sample, j ($1 \leq j \leq J_k$) to the phenotype in study k with sample size J_k is modelled using the General Linear Model (GLM) to generate information which includes the effect of the gene, g's, and expression on the phenotype in the study, k. Let's denote the score statistic, U_{gk} , and its corresponding variance V_{gk} , obtained after testing the hypothesis for association with effect, β_{gk}, of gene, g, based on the distribution of the phenotype in the study, k. To aggregate gene expression data from multiple GSEA studies and test the overall association between the gene *g's* expression and the phenotype, the model considers three testing approaches:

a. Fixed Effect

This approach assumes homogeneity of gene expression effect between GSEA studies as clarified by:

$$\beta_{gk} \equiv \mu_g \quad for \quad k = 1, \vdots \ldots, K, \tag{56}$$

where μ_g denote the common effect of gene expression g among the studies. To test the hypothesis of no association of the common effect, the model makes use of the following overall statistic,

$$C_g^{FE} = \frac{\left(\sum_{k=1}^{K} T_{gk}U_{gk}\right)^2}{\sum_{k=1}^{K} T_{gk}V_{gk}} \tag{57}$$

where T_{gk} denotes the indicator function, equal to 1, in case gene, g, belonging to study, k, and 0, otherwise. Under the null hypothesis, $C_g^{FE} \sim \chi_1^2$. This statistic will be used at the latter stage when the gene set will be tested by ordering the C_g^{FE} values to indicate evidence of gene set association [31].

b. Random Effect and Between-Study Heterogeneity

To account for between-study heterogeneity, the REM is used to synthesize results for different studies as denoted below,

$$\beta_{gk} = \mu_g + \epsilon_{gk}, k = 1, \vdots \ldots, K, \tag{58}$$

where μ_g is the average genetic effect among studies and, ϵ_{gk} , the study-specific deviation of the effect from the mean effect, μ_g , assuming, the normal distribution, with mean 0 and variance, τ_g. In the presence of heterogeneity, the REM reach higher power compared to the FEM [12]. In this case, we test the null hypothesis H_0: $\mu_g = 0$ and $\tau_g = 0$, the overall test statistic is defined by

$$C_g^{RE} = \frac{(\sum_{k=1}^{K} T_{gk}U_{gk})^2}{\sum_{k=1}^{K} T_{gk}V_{gk}} + \frac{(\sum_{k=1}^{K} (T_{gk}U_{gk})^2 - \sum_{k=1}^{K} T_{gk}V_{gk})^2}{2\sum_{k=1}^{K} (T_{gk}V_{gk})^2} \tag{59}$$

The statistic C_g^{FE} is the first term of the above expression to test the null hypothesis with no effect under the FE model ($\tau_g = 0$). As for the FE models C_g^{RE} will be used at the latter stage when the gene set will be tested by ordering the C_g^{RE} values. Under the REM, Lu and colleagues proposed the use of the Q statistic to test the heterogeneity of gene, g, as denoted below,

$$Q_g = \sum_{k=1}^{K} T_{gk} w_{gk} (\hat{\beta}_{gk} - \hat{\beta}_g)^2 \tag{60}$$

wherein $\hat{\beta}_{gk}$ is the estimator of the effect β_{gk} and $w_{gk} \equiv \frac{1}{\sigma_{gk}^2}$ represents the gene's weight effect contribution in study k with σ_{gk}^2 the variance of the effect β_{gk}[32]. $\hat{\beta}_g$ denote the overall estimate of the weighted average effect of gene g across all studies defined by,

$$\hat{\beta}_g = \frac{\sum_{k=1}^{K} T_{gk} w_{gk} \hat{\beta}_{gk}}{\sum_{k=1}^{K} T_{gk} w_{gk}} \tag{61}$$

As we test the null hypothesis of no between-study heterogeneity, the Q_g statistic asymptotically follows a $\chi^2_{(\sum_{k=1}^{K} T_{gk} - 1)}$ distribution where the P-value can be derived. Alternatively, Lu and colleagues proposed the computation of the P-value based on permutation approaches using a list of methods which include the variance component type estimator (VC), the method of moments estimator (MM), the maximum

likelihood estimator (ML), the restricted maximum likelihood estimator (REML), the empirical Bayes estimator (EB), the model error variance type estimator (MV), a variation of the MV estimator (MVvc). Among these above-mentioned methods, MVvc and EB are found to be more performing in the case of large or moderate variance [32].

c. Adaptive testing

Besides the FE and RE testing, the model makes use of the adaptive approach for achieving robustness against model misspecification. The model tests the between-study heterogeneity under the RE model, $H_0^{(1)}: \tau_g = 0$. If $H_0^{(1)}$ is rejected, then the null hypothesis under RE model H_0 is also rejected confirming there exists at least one study whereby gene, g, is associated with the phenotype. On the other hand, $H_0^{(1)}$ not rejected, shift the test to the FE model with C_g^{FE} wherein $H_0^{(2)}: \mu_g = 0$. In addition, if $\sum_{k=1}^{K} T_{gk} = 1$; we shift the hypothesis testing to $H_0^{(2)}$. The overall P-value, denoted p_g^{AT} for each gene is obtained by combining the p-values of the two stages issued from the hypothesis $H_0^{(1)}$ and $H_0^{(2)}$. Let p_{1_g} and p_{2_g} the P-values of gene g in the respective stages 1 and 2 from the adaptive testing. As p_{2_g} is based on the FEM, the statistic C_g^{FE} follows asymptotically a χ_1^2 distribution. Then p_{2_g} can be determined either based on this distribution or via a standard permutation procedure. p_{1_g}, when testing $H_0^{(1)}$ correspond to the P-value while testing the null hypothesis of no variance. To determine the overall P-value of the adaptive test, denote α the overall significance level of the two-stage tests, and α_i the significance level for stage i(i=1, 2) such that $0 < \alpha_i < \alpha$. Let α_0 be the upper limit of α meaning $0 < \alpha < \alpha_0 \leq 1$. The following decision rule is applied to the model: (a) If $p_{1_g} \leq \alpha_1$, reject $H_0^{(1)}$; if $p_{1_g} > \alpha_0$, fail to reject $H_0^{(1)}$ and stop the test. (b) If $\alpha_1 < p_{1_g} \leq \alpha_0$, then proceed to the second stage. Assuming a predetermined function F(x,y), $H_0^{(2)}$ is rejected if and only if F(x,y) is less or equal to a function f determined by the condition

$$\alpha_1 + \int_{\alpha_1}^{\alpha_0} \int_0^1 IF(x,y) \leq f dy dx = \alpha \tag{62}$$

Wherein I is the indicator function. The model set $\alpha_0 = 1$ and the function $F(x,y) = p_{2_g}$. Then, the significance of our test is given by

$$p_g^{AT} = \begin{cases} p_{1_g} & if \quad p_{1_g} \leq \alpha_1 \\ \alpha_1 + p_{2_g}(1-\alpha_1) & otherwise \end{cases} \tag{63}$$

In the case of independence of the two stages, we have the equation $\alpha_1 + \alpha_2(1-\alpha_1) = \alpha$. The value of α_1 is set based on prior information about between-study heterogeneity or the common effect size [32]. In case, that information is not available, the model: either set $\alpha_1 = \alpha_2$ which entails $\alpha_1 = 1 - \sqrt{1-\alpha}$ or choose α_1 build on the exploration of data for assessing the heterogeneity [86]. To perform gene set enrichment analysis, let S be the number of gene sets to be tested and G_s the total number of

genes in a set s ($1 \leq s \leq S$). Let u_g the overall gene-level statistics obtained from either FE($u_g = C_g^{FE}$), RE($u_g = C_g^{RE}$) or AT($u_g = -p_g^{AT}$). The total number of genes, G, is ordered according to one of the three overall gene-level statistics as follows: For instance, if A and B indicate the statistic C_g^{RE} for genes in and out of gene s respectively, the order statistics are $A_{(1)}, A_{(2)}, \ldots, A_{(G_s)}$ and $B_{(1)}, B_{(2)}, \ldots, B_{(G_{-s})}$ wherein $G_{-s} \equiv G - G_s$. Let F_A and F_B respectively be the cumulative distribution function(CDF) for A and B. The hypothesis testing is formalized as follows

$$\begin{cases} H_0: F_A = F_B \quad for\ all\ x, \\ H_a: F_A \leq F_B \quad for\ all\ x\ and\ \ F_A < F_B \quad for\ some\ x \end{cases} \tag{64}$$

From the CDF F_A and F_B, we denote the respective empirical CDF $\hat{F}_A$ and $\hat{F}_B$ by,

$$\hat{F}_A(x) = \begin{cases} 0 & if\ \ x < A_{(1)} \\ \dfrac{m}{G_s} & if\ \ A_{(m)} \leq x < A_{(m+1)}\ \ for\ \ m = 1,2,\ldots,G_s - 1 \\ 1 & if\ \ x \geq A_{(G_s)} \end{cases} \tag{65}$$

$\hat{F}_B$ is defined similarly as $\hat{F}_A$.

Lu and colleagues consider a one-sided Kolmogorov-Smirnov(KS) test to ascertain whether the distribution of the overall gene-level statistic for genes in the set, s, is stochastically larger/smaller than the distribution of the same statistic for genes out of the set [32]. The enrichment score for a gene set, s, is given by,

$$v_s = \frac{h_s}{\sqrt{\dfrac{1}{G_s} + \dfrac{1}{G_{-s}}}} \tag{66}$$

where $h_s = \max_x\{\hat{F}_B(x) - \hat{F}_A(x)\}$ is the one-sided two-sample KS test statistic. v_s has an asymptotic distribution wherein the CDF is given by

$$F(y) = 1 - \exp(-2y^2), y > 0 \tag{67}$$

which does not depend on the size of the gene set [86]. After computing the enrichment score, the model randomly mixes up genes B times and assigns genes to the gene set to compute the permuted enrichment score, v_s^b , for all permutations, b($1 \leq b \leq B$). The model approximates the P-value of the observed score v_s as below,

$$p(v_s) = \frac{\sum_b^B I\left(v_s^b \geq v_s\right)}{B} \tag{68}$$

It is important to note that if one gene set is tested, the approach used for enrichment is to adopt an acceptable set-level statistic and compute its P-value through a permutation procedure. On the other hand, if more than one gene set is being tested, the model computes the Q-value as the minimum false discovery rate (FDR) to determine whether a set is truly statistically significant [32]. The Q-value of the observed v_s is given by,

$$q(v_s) = \frac{\hat{\pi}_0 \sum_{s'=1}^{S} \sum_{b=1}^{B} I\left(v_{s'}^b \geq v_s\right)}{B \sum_{s'=1}^{S} I(v_{s'} \geq v_s)} \tag{69}$$

Wherein $\hat{\pi}_0$ indicates the estimate of the proportion of non-enriched sets, and S is the number of gene sets being tested/determined using the method developed by Storey [32, 33], and implemented in the R package "qvalue". Gene sets with Q-value $q(v_s) < \sigma$ (σ = 0.05 by default in the model) is claimed to be enriched [32]. The model recommends the use of Adaptive testing in combining GSEA studies because of its performance in fitting multiple gene set sizes. However, the permutation procedure is much slower when the number of genes is larger [32]. The model is found to outperform the MAPE method [30] in terms of power and is able to adapt for covariates in the computational process. The method can extend its application to microarray analysis and NGS experiments in addition to other omics such as epigenomic studies in large consortia [32].

3.4 Meta-analysis-based Summary Adaptive Rank Truncated Product (SARTP)

The pathway-based meta-analysis methodology is summarized as follows: Assuming the availability of summary statistics including estimated effect size $\hat{\beta}_t^k$ and standard error τ_t^k for study $k(1 \leq k \leq N)$ at a particular SNP *t*, for each of the *k* participating studies, the fixed effects inverse-variance weighting method is being used to generate the combined effect size at each SNP *t*, as follows:

$$\hat{\beta}_t = \frac{\sum_{k=1}^{N} \frac{\hat{\beta}_t^k}{(\tau_t^k)^2}}{\sum_{k=1}^{N} \frac{1}{(\tau_t^k)^2}} \tag{70}$$

with its standard error denoted by

$$\tau_t = \frac{1}{\sqrt{\sum_{k=1}^{N} \frac{1}{(\tau_t^k)^2}}} \tag{71}$$

When only effect size and SNP p-values are at hand, the standard error can be computed as $\tau_t^k = |\hat{\beta}_t^k|/\sqrt{\chi^2_{1,p}}$, where χ^2_{1,p_t^k} denotes the quantile satisfy $P\left(\chi_1^2 \geq \chi^2_{1,p_t^k}\right) = p_t^k$ with χ_1^2 is the 1-df chi-square random variable [97]. Holding the condition that covariates and genotypes are uncorrelated or weakly correlated, added to large sample sizes, the model derives the approximated score statistic for each SNP, $S_t \approx \tau_t^{-2}\hat{\beta}_t$ and its variance-covariance matrix between two SNPs, *t* and *s*, denoted by

$$V_{ts} \approx \frac{n_{ts}}{\sqrt{n_t n_s}}\frac{\rho_{ts}}{\tau_t \tau_s} \tag{72}$$

whereby $n_t = \sum_{k=1}^{N} n_t^k$ and $n_{ts} = \sum_{k=1}^{N} n_{ts}^k$ n_t^k and n_{ts}^k denote, respectively, the number of samples that have their genotype available at SNP, t, and at both SNPs, *t* and *s*, for study, *k*. ρ_{ts} is the Pearson correlation coefficient between two SNPs, *t* and *s*, assuming being the same across all studies. The assumption regarding common correlation across studies holds if and only if either the sample source population is relatively homogeneous, or the subjects of the studies belong to the same ancestral population[35]. The correlation coefficient can be either estimated from one of the contributing studies or from publicly available databases, such as 1000 Genomes, HapMap, or NHLBI Exome Sequencing Project (ESP) [36, 37, 38]. To apply this approach, the model requires the SNP coverage information in each study as most often, sets of SNPs generated from GWAS can differ from one study to another [35]. In cases when the same set of SNPs are being used by all studies, then the variance-covariance matrix can be estimated without SNP coverage information. The next step is to aggregate the score statistics for pathway analysis. With the computed score matrix, $S = (S_t)_{q*1}$, and the variance-covariance matrix $V = (V_{ts})_{q*q}$, the model performs a pathway association test which is conducted using the framework of the Adaptive Rank Truncated Product (ARTP) [34, 35]. The framework includes the aggregation of P-values of SNPs to generate gene-based association statistics with associated significance levels, then combines the gene-level P-values into testing statistics for the pathway association. Formally, for each gene j with q_j distinct SNPs, we obtain their P-values as $p_{t_k} = P\left(\chi_1^2 \geq \frac{S_t^2}{V_{tt}}\right)$, for all k ∈ 1,...,$q_j$. We set the ordered statistic of those P-values by $p_{j_1} \leq p_{j_2} \leq \ldots \leq p_{j_{q_j}}$ For any predefined truncated integer point *K* and SNP-level cut points $c_1 < c_2 < \ldots < c_K$ such that the $p_{j_{c_k}}$s are part of the ordered statistics p-values. The negative log product statistics for that gene j at cut point c_K is given by

$$w_{jk} = -\sum_{t=1}^{\min(q_j, c_K)} \log\left(p_{j_t}\right), k = 1, \ldots, K \tag{73}$$

M copies of vectors of the score statistic S are sampled from the null distribution N(0,V) to be converted into a tail probability of χ_1^2 as $p_{t_1}^m, p_{t_2}^m, \ldots, p_{t_{q_j}}^m$, for $m \in 1, \ldots M$. These $p_{t_k}^m$ are used in the same manner to compute the negative log product w_{jk}^m for each copy m. The significance of w_{jk} is given by

$$\epsilon_{jk} = \frac{\#\{w_{jk}^m \geq w_{jk}; m = 1, \ldots, M\}}{M + 1} \tag{74}$$

To test the association between a gene j and the outcome, we set the ARTP statistic [34, 35] by $T_j = \min_{k=1,\ldots,K} \epsilon_{jk}$. Evaluating the significance can be computationally cumbersome. To avoid challenging resampling procedures, the significance of w_{jk} can be estimated by

$$\epsilon_{jk}^{m} = \frac{\#\left\{w_{jk}^{m'} \geq w_{jk}^{m}; m' \neq m, m = 1, \ldots, M\right\}}{M+1}, m = 1, \ldots, M \tag{75}$$

The estimated gene-level P-value of association between gene j and the outcome denoted T_j is calibrated by

$$P_{T_j} = \frac{\#\left\{T_j^{m} \leq T_j; m = 1, \ldots, M\right\}}{M+1}, j = 1, \ldots, J \tag{76}$$

where $T_j^{m} = \min_{k=1,\ldots,K} \epsilon_{jk}^{m}$. To compute the pathway-P-value, the method applies the same framework as above by combining gene-level P-values P_{T_j}[35]. For any predefined integer K' and gene-level cut points $d_1 < d_2 < \ldots < d_{K'}$, the ARTP statistic for pathway association is denoted by

$$T = \min_{k=1,\ldots,K'} \omega_k \tag{77}$$

where ω_k is the p-value of negative log product statistics defined on T_j, j = 1,...,J at a specific cut point d_k, k = 1,...,K'. The candidate genes involved in the secure pathway association signal are located at the top d_{k*} genes such that $\omega_{k*} = \min_{k=1,\ldots,K'} \omega_k$[34, 35]. Though the model provides possibilities to identify novel pathway signals that were undetectable due to the limitation of sample size, Zhang and colleagues mentioned the importance of SNP coverage information to accurately compute a variance-covariance matrix as most of the consortia do not provide this element. Zhang demonstrated that a lack of SNP coverage information may lead to an inflated false positive rate [35]. This method provides an avenue to extend the model accounting for LD structure in different ethnic populations[35].

3.5 Meta-analysis of Gene Set Analysis (META-GSA)

We describe below the summary workflow of META-GSA: Assume that we have S independent studies with SNPs GWAS summary information in which gene set analysis has been performed. For each SNP $m = 1, \ldots, M$ and for each study $s = 1, \ldots, S$ SNPs GWAS information includes: association measures(e.g. odd ratio) $\theta_{m,s}$,its corresponding P-value $p_{m,s}$ with test statistic $T_{m,s}$ from two-sided test hypothesis of no association $H_0: \theta_{m,s} = 1$ and alternative $H_A: \theta_{m,s} \neq 1$. The model assumes that gene set analysis based on the outcome of GWASs for each independent study s has already been carried out. The direction $d_{m,s}$ of the estimate $\theta_{m,s}$ is introduced by

$$d_{m,s} = \begin{cases} -1 \ \ if \ \theta_{m,s} < 1 \\ 1 \ \ if \ \theta_{m,s} \geq 1 \end{cases} \tag{78}$$

The above equation assumes that all representative markers are the same across the studies. If all significant markers assigned to gene, g, have the same direction, then $d_{g,s}$ which is the direction of gene, g, in the study, s, is the common direction of all significant markers assigned to that gene. Otherwise, the model accounts for the LD between significant markers from two different studies assigned to that gene by computing the mean correlation coefficient between the alleles of two significant markers within that gene. In such a case, the correlation between the alleles of two markers m_s and $m'_{s'}$ is being used to generate the gene-level direction by:

$$d_{g,s} = sign(\theta_{m,s}) r_{m_s, m'_{s'}} \tag{79}$$

From these above-mentioned estimates, markers are allocated to a gene, and the most significant marker in that gene is used to obtain the p-values of that gene within each study;

$$p_{g,s} = \min(p_{m|g,s}) \tag{80}$$

The direction of the gene depends on whether the direction of the markers assigned to that gene is the same or not. From there, we define the directed reversed p-value as

$$p'_{g,s} = d_{g,s}(1 - p_{g,s}) \tag{81}$$

The model also suggests the use of the weighted Fisher inverse χ^2-method for single marker p-values as a possibility to generate the gene-level statistic (**Equation 82**) and henceforth the p-value $p_{g,s}$ derived from the χ^2 distribution. The v_i are chosen as the inverse of the sum of the sum of r^2 across any pair of markers within the same LD block $\left(v_{m|g} = \frac{1}{\sum_{m'} r^2_{m'|g,m|g}}\right)$.

$$C_{g,s} = -2 \sum_{i=1}^{n_{m|g,s}} v_i \ln(p_{i,s}) \tag{82}$$

The degree of freedom of the χ^2 distribution is the sum of the marker weights $\sum_{g,s} v_{m|g,s}$ which is also equivalent to the number of independent markers. Provided with this information, the gene-level direction is given by the weighted mean of marker-specific direction using the same marker weight $v_{m|g,s}$:

$$d_{g,s} = \sum_{i=1}^{n_{m|g,s}} v_i sign(\theta_{i,s}) \tag{83}$$

and the p-value of the gene within each study is a function of all markers within the gene $p_{g,s} = f_{m|g}p_{m|g,s}$. The second step consists of computing the study weights from rank correlations of PDRs. To that end, the model uses the Kendall rank correlation coefficient as the pairwise correlation of observed PPDR profiles between studies to generate the correlation matrix [38]. Next, the model implements the principal component analysis (PCA) to generate the contribution of each study *s*, on the common PPDR profile of the gene set (though unknown) assuming that each contribution is represented by the first principal component ($PC1_s$). the generated eigenvalue, EV1, is S-times the fraction of the variance accounted for by $PC1_s$ through which we defined the "effective number of studies" by $\frac{EV1}{S}$. Hence, the study weight w_s is computed as the product between the number of the normalized contribution to the "effective number of studies" by:

$$w_s = \frac{PC1_s}{\sum_{j=1}^{S} PC1_j} . \frac{EV1}{S} \tag{84}$$

This indicator satisfies the sum of weights equal to the “effective number of studies” and not to 1 for the perspective to apply significance testing. The model proposes a permutation procedure; herein genes are allocated to gene sets to determine the weights which satisfy the conditions: $1 \geq w_s \geq 0$ for all s and $\sum_{s=1}^{S} w_s = 1$. Using these weights, we produce random p-values of gene sets from a uniform distribution [38]. The statistical significance by permutation denoted $p_{permuted,GS}$ is obtained by the fraction of permutations achieving a test statistic $M_j = -2\sum_{s=1}^{j} w_s \ln(p_{GS,s})$($j$ from 1 to x) [39, 38]. With $p_{GS,s}$ denoting the gene set significance for study s. $p_{permuted,GS}$-values might not be all independent due to the presence of a single gene in several gene sets or genes in LD between each other. Then, the model applies correction for multiple testing using the bootstrap approach developed by Storey and Tibshirani [40, 38] whereby the $p_{permuted,GS}$-values are being used to compute the tuning parameter, λ , and then generates the proportion of true null hypotheses π_0 by:

$$\pi_0(\lambda) = \frac{n_{GS} - n*_{GS}(\lambda) + z}{(1-\lambda)n_{GS}}, \qquad for\ \lambda \in K = \left\{0, \frac{1}{n_{GS}}, \dots, \frac{n_{GS}-1}{n_{GS}}\right\} \tag{85}$$

Where $n*_{GS}$ is the number of $p_{permuted,GS}$-values less or equal to λ, and z = 1 for the finite-sample case or takes the value, 0, otherwise. For each value of λ, the model bootstraps on the p-values to sort B bootstrap classes $\pi_0^b(\lambda)$ for $b = 1, \dots, B$ and choose the optimal value of λ that sort the minimum $\widehat{MSE}(\lambda) = \frac{1}{B}\sum_{b=1}^{B} (\pi_0^b(\lambda) - \min_{\lambda \in K}\pi_0(\lambda))^2$. As a result, the corrected p-value is determined by:

$$p_{META-GSA,GS} = \min\left(1, p_{permuted,GS}.n_{GS}.\pi_0(\lambda)\right) \tag{86}$$

META-GSA applies to any gene set analysis method, with the possibility of adding individual participants' genotype data, which seems more powerful than methods based on GWAS summary statistics. However, the model is limited by its reliance on SNP, gene and pathway annotations in databases, which are currently incomplete. Furthermore, the model generates p-values and does not provide effect estimation, hence reflecting incomplete activity information at the pathway/gene set level.

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APPENDIX 2

Table S1 A- heritability estimates from our FinnGen cohort

Trait	h2_liab	h2_liab_se	Z-score	Lambda GC	Mean Chi^2	h2_inter	h2_inter_se	#SNPs for heritability analysis
ADHD	0.0664	0.0447	1.48545861	1.0471	1.0466	1.0301	0.0079	1132813
ANX	0.0401	0.0031	12.9354839	1.22	1.248	1.0695	0.0094	1132815
AUD	0.0783	0.006	13.05	1.2418	1.2712	1.073	0.0099	1150849
AUT	0.0071	0.0125	0.568	1.0217	1.0111	1.0057	0.0067	1132806
BIP	0.0747	0.0112	6.66964286	1.0877	1.0935	1.0203	0.0078	1132860
DEP	0.0349	0.0029	12.0344828	1.2702	1.2985	1.0819	0.0095	1132825
GAD	0.0786	0.0173	4.5433526	1.0554	1.0569	1.0131	0.0077	1132832
NEU	0.0396	0.0031	12.7741935	1.217	1.243	1.0684	0.0093	1132815
OCD	0.0579	0.0392	1.47704082	1.0401	1.0414	1.0266	0.0078	1132823
PTSD	0.0618	0.0327	1.88990826	1.0383	1.0325	1.0157	0.0073	1132816
SCZAF	0.0397	0.0238	1.66806723	1.0362	1.0452	1.0259	0.0079	1132831
SCZ	0.0551	0.0087	6.33333333	1.0918	1.0867	1.0276	0.0074	1132825
SUIC	0.0641	0.0318	2.01572327	1.0292	1.0232	1.0065	0.007	1150849

Table S1 B- Genetic Correlation estimates from our FinnGen cohort

P1	P2	rg	SE	Z-score	P-value
ADHD	ANX	1.0225	0.1667	6.13377325	4.29E-10
ADHD	AUD	0.5082	0.1509	3.36779324	3.79E-04
ADHD	AUT	0.2219	0.7998	0.27744436	0.3907195
ADHD	BIP	0.6759	0.2542	2.65892998	0.00391946
ADHD	DEP	1.0553	0.1713	6.16053707	3.62E-10
ADHD	GAD	0.5073	0.2959	1.71443055	0.04322484
ADHD	NEU	1.0196	0.1664	6.12740385	4.47E-10
ADHD	OCD	0.4008	0.4067	0.98549299	0.162191
ADHD	PTSD	1.0765	0.4037	2.6665841	0.00383132
ADHD	SCZAF	0.5176	0.4159	1.24452994	0.1066523
ADHD	SCZ	0.0981	0.2437	0.40254411	0.3436418
ADHD	SUIC	0.6569	0.4164	1.57756964	0.05733226
ANX	AUD	0.6732	0.0564	11.9361702	3.83E-33
ANX	AUT	0.3964	0.2601	1.52402922	0.06375071
ANX	BIP	0.502	0.0797	6.29861982	1.50E-10
ANX	DEP	0.9278	0.0656	14.1432927	1.03E-45
ANX	GAD	0.8519	0.1019	8.36015702	3.13E-17
ANX	NEU	1.0004	0.0778	12.8586118	3.85E-38
ANX	OCD	0.6507	0.1647	3.95081967	3.89E-05

ANX	PTSD	0.9223	0.1623	5.68268638	6.63E-09
ANX	SCZAF	0.076	0.1433	0.5303559	0.2979326
ANX	SCZ	0.2557	0.0817	3.12974296	0.0008748
ANX	SUIC	0.7211	0.1449	4.97653554	3.24E-07
AUD	AUT	0.0126	0.2455	0.05132383	0.4795337
AUD	BIP	0.5793	0.0693	8.35930736	3.15E-17
AUD	DEP	0.6686	0.0567	11.7918871	2.15E-32
AUD	GAD	0.315	0.0879	3.58361775	0.00016943
AUD	NEU	0.673	0.0569	11.827768	1.40E-32
AUD	OCD	0.3246	0.1555	2.08745981	0.0184233
AUD	PTSD	0.6454	0.1444	4.46952909	3.92E-06
AUD	SCZAF	0.1766	0.1259	1.40270056	0.08035308
AUD	SCZ	0.2417	0.0823	2.93681652	0.001658
AUD	SUIC	0.7288	0.1393	5.23187365	8.39E-08
AUT	BIP	0.0882	0.3776	0.23358051	0.4076553
AUT	DEP	0.5804	0.2338	2.48246364	0.00652387
AUT	GAD	0.6398	0.4937	1.2959287	0.09750002
AUT	NEU	0.3652	0.2561	1.42600547	0.07693338
AUT	OCD	-0.3723	0.7843	-0.4746908	0.6824963
AUT	PTSD	0.3907	0.6967	0.56078657	0.2874715
AUT	SCZAF	0.9332	0.7769	1.20118419	0.1148399
AUT	SCZ	0.5994	0.439	1.36537585	0.08606747
AUT	SUIC	-0.3927	0.6978	-0.5627687	0.7132038
BIP	DEP	0.6753	0.0898	7.52004454	2.74E-14
BIP	GAD	0.3651	0.1316	2.77431611	0.0027659
BIP	NEU	0.4807	0.0802	5.99376559	1.03E-09
BIP	OCD	-0.0037	0.1834	-0.0201745	0.5080479
BIP	PTSD	0.7443	0.1803	4.1281198	1.83E-05
BIP	SCZAF	0.5111	0.2332	2.19168096	0.01420128
BIP	SCZ	0.1023	0.1156	0.8849481	0.1880923
BIP	SUIC	0.5948	0.2035	2.92285012	0.00173422
DEP	GAD	0.6018	0.0951	6.32807571	1.24E-10
DEP	NEU	0.9266	0.0665	13.9338346	1.97E-44
DEP	OCD	0.675	0.1505	4.48504983	3.64E-06
DEP	PTSD	0.9177	0.1393	6.5879397	2.23E-11
DEP	SCZAF	0.0024	0.1475	0.01627119	0.493509
DEP	SCZ	0.0952	0.0812	1.17241379	0.1205155
DEP	SUIC	0.9408	0.1385	6.79277978	5.50E-12
GAD	NEU	0.8285	0.1021	8.11459354	2.44E-16
GAD	OCD	0.7951	0.2752	2.88917151	0.00193129
GAD	PTSD	0.5241	0.2527	2.07400079	0.01903962
GAD	SCZAF	0.1366	0.2557	0.53421979	0.2965947
GAD	SCZ	0.3056	0.1498	2.0400534	0.0206725
GAD	SUIC	0.6127	0.2446	2.50490597	0.0061242
NEU	OCD	0.6563	0.166	3.95361446	3.85E-05
NEU	PTSD	0.9044	0.1639	5.51799878	1.71E-08
NEU	SCZAF	0.1129	0.1438	0.78511822	0.2161921
NEU	SCZ	0.2681	0.0824	3.25364078	0.00056968

NEU	SUIC	0.7149	0.1434	4.98535565	3.09E-07
OCD	PTSD	0.6132	0.4408	1.39110708	0.08209648
OCD	SCZAF	0.8927	0.4321	2.06595695	0.01941627
OCD	SCZ	0.6479	0.2259	2.86808322	0.00206483
OCD	SUIC	0.5101	0.4176	1.22150383	0.1109477
PTSD	SCZAF	0.2854	0.4041	0.70626083	0.240013
PTSD	SCZ	0.2162	0.2203	0.98138901	0.1632005
PTSD	SUIC	1.2426	0.3892	3.19270298	0.00070474
SCZAF	SCZ	0.8465	0.2343	3.61288946	0.0001514
SCZAF	SUIC	-0.034	0.3618	-0.0939746	0.5374353
SCZ	SUIC	0.0323	0.2252	0.14342806	0.4429761

Table S2

Significant SNPS from our GWAS meta-analysis Results using RE2C

rsids	#chrom	pos	ref	alt	nearest_genes	LSs	LSse	LSp	I2	Q	Qp	RE2Cp*	RE2Cp
rs12517895	5	120759853	C	G	PRR16	-0.05	0	1.7061E-19	0	1.03	0.9942635	7.638E-19	1
rs6865302	5	120736858	G	C	PRR16	-0.05	0	1.7258E-19	0	1.32	0.987891	7.725E-19	1
rs1449164	5	120757927	A	G	PRR16	-0.05	0	3.4532E-19	0	1.77	0.971311	1.535E-18	1
rs1449163	5	120757618	T	G	PRR16	-0.05	0	3.5656E-19	0	1.79	0.9707609	1.584E-18	1
rs281264	15	47383372	G	A	SEMA6D	-0.05	0	3.6426E-19	0	6.47	0.4860126	1.618E-18	1
rs281265	15	47383405	C	A	SEMA6D	-0.05	0	3.6456E-19	0	6.47	0.4860579	1.62E-18	1
rs10041474	5	120734270	A	C	PRR16	-0.05	0	4.4374E-19	0	2.86	0.8977722	1.967E-18	1
rs10068422	5	120786999	C	A	PRR16	0.04	0	5.6516E-19	0	1.06	0.993808	2.499E-18	1
rs13168806	5	120735909	A	C	PRR16	-0.05	0	5.7497E-19	0	2.94	0.8905996	2.542E-18	1
rs7708998	5	120777328	C	T	PRR16	0.04	0	7.8272E-19	0	1.05	0.9939034	3.45E-18	1
rs4605820	5	120778570	A	G	PRR16	0.04	0	8.8184E-19	0	1.13	0.9925025	3.882E-18	1
rs60385369	5	120782004	T	TG	PRR16	0.04	0	8.9009E-19	0	1.15	0.9921357	3.918E-18	1
rs1125578	5	120742729	A	C	PRR16	-0.04	0	9.2681E-19	0	1.84	0.9682813	4.078E-18	1
rs2034414	5	120740577	C	A	PRR16	-0.04	0	1.2899E-18	0	1.83	0.9688149	5.656E-18	1
rs419055	15	47384322	A	T	SEMA6D	0.05	0	1.6257E-18	0	5.19	0.6367992	7.111E-18	1
rs2433018	15	47385399	A	G	SEMA6D	0.05	0	1.6374E-18	0	5.21	0.6344351	7.162E-18	1
rs6869423	5	120800860	C	T	PRR16	0.04	0	1.6476E-18	0	0.6	0.9989794	7.206E-18	1
rs6874581	5	120801513	C	G	PRR16	0.04	0	1.796E-18	0	0.55	0.9992289	7.847E-18	1
rs10055500	5	120780965	C	G	PRR16	0.04	0	1.8269E-18	0	0.88	0.9965806	7.981E-18	1
rs1026124	5	120733761	T	C	PRR16	0.05	0	2.1702E-18	0	3.36	0.8493396	9.463E-18	1
rs10053752	5	120750210	G	C	PRR16	-0.04	0	2.2368E-18	0	1.96	0.962002	9.751E-18	1
rs5870922	5	120774071	T	TGATA	PRR16	0.04	0	2.2841E-18	0	1.32	0.9878399	9.954E-18	1
rs10039454	5	120775228	T	G	PRR16	0.04	0	2.5845E-18	0	1.26	0.9894852	1.125E-17	1
rs58499616	5	120790397	T	G	PRR16	0.04	0	3.1699E-18	0	0.53	0.999339	1.377E-17	1
rs13153752	5	120761212	A	G	PRR16	-0.04	0	4.1789E-18	0	1.32	0.9877865	1.809E-17	1
rs1449171	5	120769876	C	G	PRR16	-0.04	0	4.2339E-18	0	1.31	0.9880865	1.833E-17	1
rs9791112	5	120765189	C	G	PRR16	-0.04	0	4.2477E-18	0	1.31	0.9880517	1.839E-17	1

rs4273626	5	120762545	G	T	PRR16	-0.04	0	4.3206E-18	0	1.29	0.9886304	1.87E-17	1
rs1816980	5	120759719	C	A	PRR16	-0.04	0	4.4616E-18	0	1.52	0.9817671	1.93E-17	1
rs12653270	5	120751195	G	A	PRR16	-0.04	0	5.1546E-18	0	1.84	0.9683031	2.227E-17	1
rs34626100	5	120762754	CT	C	PRR16	-0.04	0	6.8483E-18	0	1.56	0.9799863	2.949E-17	1
rs13358641	5	120773548	A	C	PRR16	0.04	0	9.6692E-18	0	1.54	0.9808992	4.148E-17	1
rs6877942	5	120784369	A	G	PRR16	0.04	0	1.0137E-17	0	1.52	0.9817124	4.347E-17	1
rs6861861	5	120772766	T	C	PRR16	0.04	0	1.0357E-17	0	1.54	0.9810383	4.44E-17	1
rs11241565	5	120767478	A	C	PRR16	-0.04	0	1.111E-17	0	1.62	0.9776812	4.759E-17	1
rs12522314	5	120787246	T	C	PRR16	0.04	0	1.1603E-17	0	1.46	0.9838227	4.968E-17	1
rs6878072	5	120784392	A	G	PRR16	0.04	0	1.2117E-17	0	1.56	0.9802859	5.186E-17	1
rs10040060	5	120775558	T	C	PRR16	0.04	0	1.3369E-17	0	1.51	0.9819897	5.715E-17	1
rs7728674	5	120762024	G	C	PRR16	0.04	0	1.7227E-17	0	1.68	0.9754676	7.344E-17	1
rs7728749	5	120762234	C	T	PRR16	0.04	0	1.8951E-17	0	1.7	0.9747057	8.07E-17	1
rs10059100	5	120765089	A	G	PRR16	0.04	0	2.0033E-17	0	1.69	0.974864	8.526E-17	1
rs9790948	5	120765305	A	G	PRR16	-0.04	0	2.2356E-17	0	1.67	0.9756828	9.502E-17	1
rs6863440	5	120748926	G	C	PRR16	0.04	0	3.5841E-17	0	4.33	0.7405692	1.515E-16	1
rs5870920	5	120751750	A	AT	PRR16	0.04	0	3.8484E-17	0	4.3	0.7446925	1.626E-16	1
rs2406162	5	120735153	C	G	PRR16	0.04	0	3.9864E-17	0	4.63	0.7052826	1.683E-16	1
rs56162185	18	54816176	C	T	RAB27B	0.04	0	4.0698E-17	0	2.35	0.9378838	1.718E-16	1
rs62379821	5	120755395	T	A	PRR16	0.04	0	4.081E-17	0	4.56	0.7129375	1.723E-16	1
rs6508210	18	53220821	A	C	DCC	0.04	0	4.2108E-17	0	6.29	0.5068504	1.75E-16	1
rs62099231	18	53198529	G	A	DCC	0.04	0	4.7558E-17	0	5.42	0.6093205	1.988E-16	1
rs6879947	5	120755182	G	A	PRR16	-0.04	0	4.7819E-17	0	4.49	0.72178	2.015E-16	1
rs2069191	18	53197090	T	C	DCC	0.04	0	5.1739E-17	0	5.48	0.6020497	2.157E-16	1
rs7237747	18	54808877	C	G	RAB27B	0.04	0	5.2761E-17	0	2.89	0.8953392	2.221E-16	1
rs59180978	5	120788154	T	G	PRR16	0.04	0	5.5803E-17	0	1.72	0.973745	2.347E-16	1
rs6876567	5	120759427	A	G	PRR16	0.04	0	6.2767E-17	0	2.5	0.9269992	2.637E-16	1
rs62094571	18	54807094	T	A	RAB27B	0.04	0	6.3228E-17	0	2.52	0.9254423	2.656E-16	1
rs11447428	5	120789907	A	AC	PRR16	0.04	0	6.3889E-17	0	1.21	0.990706	2.683E-16	1
rs7734839	5	120743772	T	C	PRR16	0.04	0	6.6765E-17	0	4.58	0.7105135	2.803E-16	1

Table S2

rs6869780	5	120801057	C	T	PRR16	0.04	0	7.2099E-17	0	1.21	0.9907136	3.024E-16	1
rs10041968	5	120883645	T	C	PRR16	0.04	0	7.8754E-17	0	1.55	0.9803614	3.3E-16	1
rs1449172	5	120752392	G	T	PRR16	-0.04	0	8.1485E-17	0	4.06	0.7733026	3.413E-16	1
rs56412481	5	120779702	C	T	PRR16	0.04	0	8.6475E-17	0	2.51	0.9262619	3.619E-16	1
rs56366998	5	120779631	C	G	PRR16	0.04	0	8.7965E-17	0	2.5	0.9268265	3.681E-16	1
rs55833879	5	120779584	A	G	PRR16	0.04	0	9.1225E-17	0	2.51	0.9264173	3.816E-16	1
rs72783657	5	120779381	A	G	PRR16	0.04	0	9.2641E-17	0	2.5	0.9272602	3.874E-16	1
rs62379855	5	120784994	T	G	PRR16	0.04	0	1.0901E-16	0	1.25	0.9897788	4.55E-16	1
rs4412134	5	120775003	T	C	PRR16	0.04	0	1.0992E-16	0	2.46	0.9300973	4.587E-16	1
rs72781627	5	120758534	A	G	PRR16	0.04	0	1.1016E-16	0	2.63	0.917158	4.598E-16	1
rs58897895	5	120759332	C	A	PRR16	0.04	0	1.1285E-16	0	2.48	0.9288169	4.708E-16	1
rs6869346	5	120777957	C	T	PRR16	0.04	0	1.1686E-16	0	2.47	0.9292539	4.874E-16	1
rs7735871	5	120772032	T	G	PRR16	0.04	0	1.1905E-16	0	2.56	0.9225569	4.964E-16	1
rs4317354	5	120777116	G	A	PRR16	0.04	0	1.1961E-16	0	2.54	0.9237514	4.987E-16	1
rs6891234	5	120780162	C	A	PRR16	0.04	0	1.2051E-16	0	2.07	0.955609	5.024E-16	1
rs10633591	5	120772585	T	TTC	PRR16	0.04	0	1.2145E-16	0	2.51	0.9265735	5.063E-16	1
rs4576171	5	120773747	A	G	PRR16	0.04	0	1.2184E-16	0	2.48	0.9284927	5.079E-16	1
rs4624817	5	120778317	A	G	PRR16	0.04	0	1.2224E-16	0	2.48	0.9287024	5.095E-16	1
rs2406164	5	120763483	G	C	PRR16	0.04	0	1.2336E-16	0	2.49	0.9280509	5.141E-16	1
rs6595262	5	120772324	C	T	PRR16	0.04	0	1.2353E-16	0	2.52	0.9255189	5.148E-16	1
rs72783652	5	120774420	G	A	PRR16	0.04	0	1.2511E-16	0	2.54	0.9239983	5.213E-16	1
rs72783651	5	120774419	T	A	PRR16	0.04	0	1.2511E-16	0	2.54	0.923998	5.213E-16	1
rs61358955	5	120758163	A	T	PRR16	0.04	0	1.2809E-16	0	2.61	0.918429	5.336E-16	1
rs62379846	5	120771785	T	G	PRR16	0.04	0	1.3788E-16	0	2.52	0.9254495	5.739E-16	1
rs11966360	6	26316754	A	G	HIST1H4H	-0.09	0	1.4271E-16	4	7.36	0.3927918	6.865E-16	1
rs17487484	18	53196913	T	G	DCC	0.04	0	1.4803E-16	0	5.62	0.5847491	6.155E-16	1
rs7230446	18	53196809	G	A	DCC	0.04	0	1.4803E-16	0	5.62	0.5847491	6.155E-16	1
rs62379848	5	120776528	C	T	PRR16	0.04	0	1.4922E-16	0	2.51	0.9260998	6.205E-16	1
rs7230285	18	53196710	G	A	DCC	0.04	0	1.4996E-16	0	5.6	0.5871362	6.234E-16	1
rs8084239	18	53199573	T	C	DCC	0.04	0	1.5634E-16	0	5.48	0.6014688	6.436E-16	1

Table S2

rs5870924	5	120776826	T	TA	PRR16	0.04	0	1.6199E-16	0	2.53	0.9248599	6.73E-16	1
rs7726836	5	120730224	T	A	PRR16	-0.04	0	1.6707E-16	0	2.4	0.9347477	6.939E-16	1
rs4529227	5	120776807	T	A	PRR16	0.04	0	1.6714E-16	0	2.55	0.9235103	6.941E-16	1
rs4594884	5	120776809	C	A	PRR16	0.04	0	1.6714E-16	0	2.55	0.9235103	6.941E-16	1
rs7710640	5	120730291	A	G	PRR16	-0.04	0	1.673E-16	0	2.39	0.9348702	6.948E-16	1
rs4632195	18	53220378	C	T	DCC	0.04	0	1.8376E-16	0	6.3	0.5049108	7.586E-16	1
rs2084516	5	120770420	A	G	PRR16	0.04	0	1.8862E-16	0	3.09	0.8762941	7.822E-16	1
rs76653090	5	120760636	TAATA	T	PRR16	0.04	0	1.9679E-16	0	3.07	0.8780468	8.157E-16	1
rs7730641	5	120771144	T	G	PRR16	0.04	0	1.9943E-16	0	3.09	0.8769326	8.265E-16	1
rs10900741	5	120770372	A	G	PRR16	-0.04	0	2.037E-16	0	3.09	0.8764588	8.44E-16	1
rs146903465	5	120770245	AAC	A	PRR16	0.04	0	2.0418E-16	0	3.23	0.862814	8.459E-16	1
rs11241566	5	120769161	G	A	PRR16	0.04	0	2.0651E-16	0	3.13	0.8728429	8.555E-16	1
rs34488670	15	47392739	T	C	SEMA6D	0.05	0	2.1443E-16	13	8.09	0.324528	1.246E-15	1
rs281296	15	47392813	G	A	SEMA6D	0.04	0	2.1849E-16	11	7.93	0.3384761	1.329E-15	1
rs1025143	15	47392862	T	C	SEMA6D	0.04	0	2.1898E-16	11	7.94	0.3383188	1.333E-15	1
rs12907546	15	47392083	G	A	SEMA6D	0.05	0	2.1914E-16	13	8.08	0.3256745	1.269E-15	1
rs796584893	15	47383638	TCATAAGG	T	SEMA6D	0.05	0	2.261E-16	12	8	0.3326225	1.281E-15	1
rs35534970	15	47383388	G	A	SEMA6D	0.05	0	2.2628E-16	12	8	0.3328662	1.281E-15	1
rs6873366	5	120783951	C	T	PRR16	0.04	0	2.2821E-16	0	2.41	0.9334993	9.442E-16	1
rs142735750	5	120769939	CT	C	PRR16	0.04	0	2.284E-16	0	3.12	0.8738559	9.45E-16	1
rs7231178	18	53227371	G	A	DCC	0.04	0	2.2962E-16	0	6.75	0.4554696	8.824E-16	1
rs7174964	15	47384031	A	C	SEMA6D	0.05	0	2.3609E-16	12	8.01	0.3318462	1.34E-15	1
rs4895286	5	120842680	G	A	PRR16	0.04	0	2.4576E-16	0	1.65	0.9766583	1.016E-15	1
rs11749221	5	120766012	G	A	PRR16	0.04	0	2.5361E-16	0	3.07	0.878513	1.048E-15	1
rs12901436	15	47390898	C	G	SEMA6D	0.05	0	2.5674E-16	12	8.02	0.3309228	1.461E-15	1
rs8033799	15	47389187	A	C	SEMA6D	0.05	0	2.5768E-16	12	8.02	0.3304823	1.468E-15	1
rs12910487	15	47389193	C	T	SEMA6D	0.05	0	2.5771E-16	12	8.02	0.3304812	1.468E-15	1
rs8034190	15	47389170	G	A	SEMA6D	0.05	0	2.5821E-16	12	8.02	0.3304509	1.471E-15	1
rs35175834	15	47388618	G	A	SEMA6D	0.05	0	2.6083E-16	12	8.02	0.3310262	1.484E-15	1
rs34794623	15	47388604	C	A	SEMA6D	0.05	0	2.6084E-16	12	8.02	0.3310312	1.484E-15	1

Table S2

rs6493274	15	47384292	A	C	SEMA6D	0.05	0	2.616E-16	12	7.96	0.3361176	1.466E-15	1
rs7174904	15	47383913	C	T	SEMA6D	0.05	0	2.6169E-16	11	7.94	0.3381651	1.456E-15	1
rs7175414	15	47384003	G	A	SEMA6D	0.05	0	2.6181E-16	11	7.94	0.3380087	1.458E-15	1
rs35473814	15	47388465	G	A	SEMA6D	0.05	0	2.6301E-16	12	8.01	0.3318907	1.493E-15	1
rs8032333	15	47388370	A	G	SEMA6D	0.05	0	2.6574E-16	12	8	0.3322835	1.506E-15	1
rs12904595	15	47387327	T	C	SEMA6D	0.05	0	2.6612E-16	12	8.03	0.3296677	1.52E-15	1
rs2132661	15	47387529	A	G	SEMA6D	0.05	0	2.6645E-16	12	8	0.3329087	1.508E-15	1
rs2132660	15	47387610	A	G	SEMA6D	0.05	0	2.6646E-16	12	8	0.3329092	1.508E-15	1
rs7166534	15	47385935	T	C	SEMA6D	0.05	0	2.6646E-16	12	8	0.3329113	1.508E-15	1
rs8040226	15	47384633	A	G	SEMA6D	0.05	0	2.6653E-16	12	8.01	0.3318738	1.513E-15	1
rs8041603	15	47384658	T	C	SEMA6D	0.05	0	2.6676E-16	12	8	0.3329518	1.509E-15	1
rs34418589	15	47385678	AT	A	SEMA6D	0.05	0	2.6676E-16	12	7.99	0.3331024	1.509E-15	1
rs4485292	15	47386701	G	A	SEMA6D	0.05	0	2.6939E-16	12	7.97	0.3350527	1.515E-15	1
rs17503453	5	120766491	A	G	PRR16	0.04	0	2.7523E-16	0	3.25	0.8613984	1.136E-15	1
rs281287	15	47389355	A	G	SEMA6D	0.04	0	2.7541E-16	11	7.9	0.3411008	1.655E-15	1
rs5812385	15	47387035	C	CGT	SEMA6D	0.04	0	2.8528E-16	11	7.89	0.3420002	1.708E-15	1
rs62379838	5	120766333	T	C	PRR16	0.04	0	2.9209E-16	0	3.2	0.8659174	1.205E-15	1
rs62379840	5	120766408	C	T	PRR16	0.04	0	2.9468E-16	0	3.19	0.8665835	1.216E-15	1
rs62379842	5	120766742	C	T	PRR16	0.04	0	2.9656E-16	0	3.17	0.8687434	1.223E-15	1
rs62379841	5	120766482	T	A	PRR16	0.04	0	2.9767E-16	0	3.19	0.8667377	1.228E-15	1
rs17503473	5	120766858	T	C	PRR16	0.04	0	2.997E-16	0	3.14	0.8718785	1.236E-15	1
rs17444067	5	120768871	A	T	PRR16	0.04	0	3.1161E-16	0	3.15	0.8704364	1.285E-15	1
rs8040191	15	47384519	C	T	SEMA6D	0.05	0	3.1207E-16	12	7.98	0.3347318	1.753E-15	1
rs12523559	5	120788299	T	C	PRR16	0.04	0	3.5469E-16	0	2.32	0.9400227	1.46E-15	1
rs12910916	15	47383458	C	T	SEMA6D	0.05	0	3.6218E-16	15	8.28	0.3084614	2.169E-15	1
rs6595264	5	120818686	G	A	PRR16	0.04	0	3.8257E-16	0	0.77	0.997702	1.573E-15	1
rs6862391	5	120869877	G	A	PRR16	0.04	0	3.9575E-16	0	1.41	0.9851929	1.627E-15	1
rs8084351	18	53200189	G	A	DCC	0.04	0	4.0737E-16	0	5.67	0.5790166	1.672E-15	1
rs10039677	5	120826433	A	G	PRR16	0.04	0	4.435E-16	0	0.97	0.9953052	1.82E-15	1
rs62379857	5	120787464	G	A	PRR16	0.04	0	4.4731E-16	0	2.39	0.9351994	1.836E-15	1

Table S2

rs4128735	5	120827354	T	C	PRR16	0.04	0	4.6191E-16	0	1.03	0.9943189	1.895E-15	1
rs8084280	18	53200379	A	T	DCC	0.04	0	4.8874E-16	0	5.64	0.5823835	2.003E-15	1
rs62379837	5	120764275	T	C	PRR16	0.04	0	4.9707E-16	0	3.07	0.8782107	2.037E-15	1
rs141675706	5	120781718	TAC	T	PRR16	0.04	0	5.0016E-16	0	3.09	0.8763868	2.05E-15	1
rs62379847	5	120773424	A	C	PRR16	0.04	0	5.2869E-16	0	1.99	0.9605963	2.165E-15	1
rs4895166	5	120817924	C	T	PRR16	0.04	0	5.3173E-16	0	0.83	0.997097	2.178E-15	1
rs10075828	5	120846664	T	G	PRR16	0.04	0	5.501E-16	0	2.26	0.9437913	2.252E-15	1
rs6595266	5	120818822	G	C	PRR16	0.04	0	5.7311E-16	0	0.79	0.9975394	2.345E-15	1
rs4895284	5	120820044	T	C	PRR16	0.04	0	5.7783E-16	0	0.84	0.9970053	2.364E-15	1
rs6595267	5	120818839	A	C	PRR16	0.04	0	5.8646E-16	0	0.85	0.9969188	2.399E-15	1
rs66694560	5	120790812	G	A	PRR16	0.04	0	6.2739E-16	0	1.85	0.9675772	2.564E-15	1
rs6595265	5	120818789	T	C	PRR16	0.04	0	6.3958E-16	0	0.84	0.9969848	2.614E-15	1
rs62379853	5	120781640	A	C	PRR16	0.04	0	7.0238E-16	0	3.15	0.8710402	2.867E-15	1
rs9467714	6	26340557	G	A	BTN3A2	-0.09	0	7.0259E-16	0	5.56	0.5914415	2.868E-15	1
rs62381087	5	120798262	A	T	PRR16	0.04	0	7.0397E-16	0	1.61	0.9780609	2.873E-15	1
rs114444359	3	43769352	C	T	ABHD5	0.1	0	7.217E-16	0	6.1	0.5282797	2.945E-15	1
rs62379825	5	120757345	C	A	PRR16	0.04	0	7.495E-16	0	3.3	0.8562425	3.057E-15	1
rs62381083	5	120794269	T	C	PRR16	0.04	0	7.9837E-16	0	1.79	0.9703567	3.254E-15	1
rs11291040	5	120820631	CA	C	PRR16	0.04	0	8.0172E-16	0	0.84	0.9970674	3.267E-15	1
rs5787553	10	104842738	C	CT	SORCS3	-0.05	0	8.059E-16	25	9.4	0.2253988	3.284E-15	1
rs7729364	5	120756666	C	A	PRR16	0.04	0	8.0707E-16	0	3.39	0.846339	3.289E-15	1
rs7725293	5	120756240	G	A	PRR16	0.04	0	8.0945E-16	0	3.39	0.8467651	3.298E-15	1
rs10680011	5	120820495	C	CTTCATT	PRR16	0.04	0	8.2207E-16	0	0.83	0.9971716	3.349E-15	1
rs9327168	5	120805657	G	A	PRR16	0.04	0	8.4426E-16	0	0.71	0.9982423	3.438E-15	1
rs146030245	16	21583805	GGCAAGAC	G	METTL9	0.04	0	8.684E-16	0	5.87	0.554948	3.535E-15	1
rs62379822	5	120755534	T	C	PRR16	0.04	0	8.7151E-16	0	3.59	0.8253132	3.548E-15	1
rs6882937	5	120820927	C	T	PRR16	0.04	0	9.0366E-16	0	0.8	0.997451	3.677E-15	1
rs62379824	5	120757144	T	C	PRR16	0.04	0	9.1417E-16	0	3.31	0.8545965	3.719E-15	1
rs72865044	3	43533359	C	T	ANO10	0.07	0	9.4293E-16	12	8.02	0.330772	3.438E-15	1
rs1449149	5	120730879	C	T	PRR16	0.04	0	9.4297E-16	0	3.16	0.8694227	3.835E-15	1

Table S2

rs4801097	18	54822129	C	G	RAB27B	0.04	0	9.9264E-16	0	2.54	0.9239898	4.034E-15	1
rs1027190	10	104843328	T	G	SORCS3	-0.05	0	1.0161E-15	27	9.66	0.208594	4.052E-15	1
rs7900775	10	104840585	T	C	SORCS3	-0.05	0	1.0173E-15	25	9.4	0.2249507	4.108E-15	1
rs79494381	5	120808685	T	TCTC	PRR16	0.04	0	1.0183E-15	0	0.72	0.9981365	4.137E-15	1
rs9962851	18	54825437	G	C	RAB27B	-0.04	0	1.0712E-15	0	2.72	0.9094218	4.35E-15	1
rs17503168	5	120727512	C	A	PRR16	0.04	0	1.0794E-15	0	3.27	0.8586844	4.382E-15	1
rs281260	15	47381731	C	T	SEMA6D	-0.04	0	1.0942E-15	0	5.15	0.6420337	4.442E-15	1
rs1839245	5	120730938	A	G	PRR16	0.04	0	1.1331E-15	0	3.19	0.8669731	4.598E-15	1
rs6803386	3	43535522	C	T	ANO10	0.07	0	1.15E-15	11	7.94	0.3380163	4.214E-15	1
rs281274	15	47367248	C	T	SEMA6D	-0.04	0	1.191E-15	0	4.99	0.6616399	4.83E-15	1
rs5870927	5	120844870	A	ATATC	PRR16	0.04	0	1.1918E-15	0	1.92	0.9641337	4.833E-15	1
rs281258	15	47380004	C	T	SEMA6D	-0.04	0	1.2027E-15	0	5.07	0.651356	4.876E-15	1
rs62379823	5	120755771	T	C	PRR16	0.04	0	1.2114E-15	0	3.25	0.8609636	4.911E-15	1
rs2496014	10	104839251	T	C	SORCS3	-0.04	0	1.213E-15	28	9.72	0.2047583	4.807E-15	1
rs281259	15	47380115	C	T	SEMA6D	-0.04	0	1.2255E-15	0	5.07	0.6518268	4.968E-15	1
rs281280	15	47369172	G	A	SEMA6D	-0.04	0	1.227E-15	0	4.99	0.6607204	4.974E-15	1
rs62379836	5	120761494	T	G	PRR16	0.04	0	1.2475E-15	0	3.85	0.797268	5.056E-15	1
rs530758485	3	43656252	G	A	ANO10	0.06	0	1.2847E-15	28	9.74	0.2036424	3.094E-15	1
rs7715474	5	120809073	G	T	PRR16	0.04	0	1.3726E-15	0	0.69	0.998408	5.556E-15	1
rs7245332	18	54816755	T	C	RAB27B	-0.04	0	1.4076E-15	0	2.84	0.8997005	5.696E-15	1
rs10884051	10	104827625	A	G	SORCS3	-0.04	0	1.4489E-15	18	8.59	0.2832639	5.861E-15	1
rs10553094	18	54837021	CCTA	C	RAB27B	0.04	0	1.4575E-15	0	2.42	0.9330497	5.895E-15	1
rs1375460	5	120730051	A	G	PRR16	0.04	0	1.4842E-15	0	3.4	0.845901	6.002E-15	1
rs1584469	5	120765999	C	T	PRR16	0.04	0	1.535E-15	0	3.84	0.7982809	6.205E-15	1
rs62379839	5	120766400	A	G	PRR16	0.04	0	1.711E-15	0	3.99	0.7805258	6.907E-15	1
rs7628239	3	43594321	C	T	ANO10	0.07	0	1.7572E-15	9	7.7	0.3595639	6.454E-15	1
rs57790719	3	43602579	G	A	ANO10	0.07	0	1.7722E-15	9	7.71	0.358878	6.505E-15	1
rs3773087	3	29567549	T	C	RBMS3,RP11	-0.06	0	1.7779E-15	55	15.67	0.0282632	1.704E-15	2.83455E-16
rs72865095	3	43581110	G	A	ANO10	0.07	0	1.8376E-15	9	7.7	0.3600509	6.717E-15	1
rs962950	15	47393219	A	T	SEMA6D	0.04	0	1.939E-15	22	9.01	0.2519856	1.372E-14	1

Table S2

rs2008551	18	54816355	T	C	RAB27B	-0.04	0	1.9831E-15	0	2.79	0.9037386	7.99E-15	1
rs175979	15	47382615	A	G	SEMA6D	-0.04	0	1.9928E-15	0	5.36	0.6155986	8.029E-15	1
rs962949	15	47393181	A	G	SEMA6D	0.04	0	2.0186E-15	22	9	0.2526801	1.425E-14	1
rs1025142	15	47392735	A	C	SEMA6D	0.04	0	2.1801E-15	6	7.47	0.3816437	1.06E-14	1
rs1025144	15	47392883	A	G	SEMA6D	0.04	0	2.1838E-15	6	7.46	0.3825096	1.059E-14	1
rs17503224	5	120728540	T	A	PRR16	0.04	0	2.2073E-15	0	3.27	0.8591397	8.882E-15	1
rs59321834	15	47392528	G	A	SEMA6D	0.04	0	2.234E-15	6	7.48	0.3804264	1.091E-14	1
rs4338738	15	47392333	G	A	SEMA6D	0.04	0	2.241E-15	6	7.47	0.3813794	1.09E-14	1
rs4356418	15	47392435	C	G	SEMA6D	0.04	0	2.2542E-15	6	7.47	0.3813974	1.097E-14	1
rs140382589	15	47392514	GAAGGTGA	G	SEMA6D	0.04	0	2.2562E-15	6	7.48	0.3807708	1.1E-14	1
rs4404005	15	47391999	C	T	SEMA6D	0.04	0	2.2602E-15	6	7.47	0.3820257	1.097E-14	1
rs4511474	15	47392483	G	A	SEMA6D	0.04	0	2.2612E-15	6	7.48	0.3811366	1.101E-14	1
rs4497626	15	47392311	A	G	SEMA6D	0.04	0	2.2779E-15	6	7.47	0.3812297	1.109E-14	1
rs5812388	15	47391399	G	GC	SEMA6D	0.04	0	2.3205E-15	6	7.45	0.3835919	1.12E-14	1
rs12515135	5	120788082	A	G	PRR16	0.04	0	2.3638E-15	0	3.04	0.8808673	9.503E-15	1
rs1025145	15	47393109	A	G	SEMA6D	0.04	0	2.3843E-15	22	9.05	0.2492312	1.692E-14	1
rs12523006	5	120848271	T	A	PRR16	0.04	0	2.3852E-15	0	1.49	0.9826709	9.588E-15	1
rs74350316	3	43440898	A	G	ANO10	0.07	0	2.4082E-15	1	7.09	0.4195273	9.124E-15	1
rs4800967	18	54808410	A	G	RAB27B	0.04	0	2.4817E-15	0	1.78	0.971132	9.971E-15	1
rs74505206	3	43437511	A	C	ANO10	0.07	0	2.4826E-15	1	7.1	0.4180679	9.395E-15	1
rs62094572	18	54814498	C	T	RAB27B	0.04	0	2.5322E-15	0	1.73	0.97348	1.017E-14	1
rs281293	15	47391136	G	A	SEMA6D	0.04	0	2.5427E-15	5	7.44	0.3841609	1.223E-14	1
rs111948361	15	47390572	T	TTTTG	SEMA6D	0.04	0	2.5936E-15	5	7.42	0.3860757	1.238E-14	1
rs281291	15	47390231	A	G	SEMA6D	0.04	0	2.5969E-15	5	7.42	0.386111	1.24E-14	1
rs281289	15	47389882	A	G	SEMA6D	0.04	0	2.5992E-15	5	7.43	0.3859107	1.242E-14	1
rs281286	15	47389053	T	C	SEMA6D	0.04	0	2.6064E-15	5	7.43	0.3855971	1.246E-14	1
rs281285	15	47388774	G	C	SEMA6D	0.04	0	2.62E-15	5	7.41	0.38703	1.246E-14	1
rs5812386	15	47388807	G	GA	SEMA6D	0.04	0	2.6304E-15	5	7.44	0.3843567	1.264E-14	1
rs591143	15	47355558	C	T	SEMA6D	-0.04	0	2.6809E-15	0	4.25	0.7502377	1.076E-14	1
rs11664943	18	54810551	T	C	RAB27B	-0.04	0	2.7111E-15	0	1.35	0.9871216	1.088E-14	1

Table S2

rs4393653	18	54810960	T	C	RAB27B	-0.04	0	2.8049E-15	0	1.32	0.987808	1.125E-14	1
rs10041997	5	120862616	G	A	PRR16	0.04	0	2.9047E-15	0	1.49	0.9826463	1.165E-14	1
rs78230729	5	120790500	GCA	G	PRR16	0.04	0	3.0336E-15	0	2.68	0.9129136	1.216E-14	1
rs10478485	5	120827939	C	T	PRR16	0.04	0	3.0945E-15	0	1.32	0.9879422	1.24E-14	1
rs6887646	5	120821410	C	A	PRR16	0.04	0	3.2438E-15	0	1.12	0.9926896	1.299E-14	1
rs75962789	3	43476027	G	A	ANO10	0.07	0	3.7176E-15	7	7.6	0.3694703	1.331E-14	1
rs60329676	3	43492168	T	C	ANO10	0.07	0	3.7183E-15	7	7.6	0.369449	1.331E-14	1
rs4512150	5	120798662	A	G	PRR16	0.04	0	3.8362E-15	0	1.85	0.9678628	1.533E-14	1
rs12967395	18	53512337	T	C	DCC	0.04	0	3.8596E-15	41	12.06	0.0986333	1.183E-14	1
rs34330545	15	47321535	GTCA	G	SEMA6D	-0.04	0	3.927E-15	0	4.58	0.7113197	1.568E-14	1
rs7713588	5	120814058	A	T	PRR16	0.04	0	4.0311E-15	0	0.56	0.9992175	1.61E-14	1
rs12956208	18	54805936	G	A	RAB27B	-0.04	0	4.0341E-15	0	7.02	0.4268898	1.572E-14	1
rs6493275	15	47384382	A	T	SEMA6D	0.05	0	4.2863E-15	0	6.81	0.4485556	1.71E-14	1
rs62381082	5	120794166	A	C	PRR16	0.04	0	4.3124E-15	0	2.75	0.9068895	1.72E-14	1
rs11739528	5	120795757	T	C	PRR16	0.04	0	4.4468E-15	0	2.83	0.900658	1.773E-14	1
rs7245004	18	53190575	C	A	DCC	0.04	0	4.4808E-15	0	5.32	0.6204708	1.787E-14	1
rs72865099	3	43583801	T	C	ANO10	0.07	0	4.6725E-15	6	7.47	0.3818995	1.678E-14	1
rs78788842	3	43507192	T	C	ANO10	0.07	0	4.8246E-15	1	7.14	0.4142609	1.858E-14	1
rs653298	15	47352212	T	G	SEMA6D	-0.04	0	4.8601E-15	0	4.47	0.724647	1.936E-14	1
rs7716620	5	120826662	G	T	PRR16	0.04	0	4.9238E-15	0	1.35	0.9870615	1.961E-14	1
rs10072469	5	120811804	A	C	PRR16	0.04	0	4.9627E-15	0	0.59	0.999021	1.976E-14	1
rs35509548	18	54805177	A	G	RAB27B	-0.04	0	5.0429E-15	0	6.25	0.5112897	2.008E-14	1
rs12970424	18	54805751	G	A	RAB27B	-0.04	0	5.107E-15	0	6.45	0.4880163	2.029E-14	1
rs11241570	5	120810761	A	C	PRR16	0.04	0	5.3819E-15	0	0.65	0.9986991	2.141E-14	1
rs7642287	3	43594674	T	C	ANO10	0.07	0	5.3836E-15	5	7.39	0.3891536	1.941E-14	1
rs148738106	3	43595223	A	C	ANO10	0.07	0	5.4286E-15	5	7.4	0.388456	1.956E-14	1
rs1905181	3	43573820	T	C	ANO10	0.07	0	5.4286E-15	5	7.4	0.388456	1.956E-14	1
rs57838122	3	43602537	T	C	ANO10	0.07	0	5.4286E-15	5	7.4	0.388456	1.956E-14	1
rs72865102	3	43585649	T	C	ANO10	0.07	0	5.4286E-15	5	7.4	0.388456	1.956E-14	1
rs10065049	5	120851983	T	C	PRR16	0.04	0	5.5176E-15	0	1.76	0.9717394	2.194E-14	1

Table S2

rs17075829	3	43565371	A	C	ANO10	0.07	0	5.5506E-15	4	7.37	0.3917863	2.019E-14	1
rs590869	15	47345756	A	G	SEMA6D	0.04	0	5.564E-15	0	4.53	0.7175038	2.212E-14	1
rs56405820	5	120795518	G	A	PRR16	0.04	0	5.5727E-15	0	1.36	0.9867398	2.216E-14	1
rs590898	15	47345774	A	G	SEMA6D	-0.04	0	5.7006E-15	0	4.53	0.7174886	2.266E-14	1
rs11152003	18	54809238	A	G	RAB27B	-0.04	0	5.726E-15	0	6.81	0.4486524	2.241E-14	1
rs494065	15	47339678	A	G	SEMA6D	0.04	0	5.8924E-15	0	4.48	0.723444	2.341E-14	1
rs12520572	5	120806097	A	C	PRR16	0.04	0	5.9534E-15	0	0.99	0.9950525	2.365E-14	1
rs2879567	18	53494990	A	C	DCC	0.04	0	5.9727E-15	41	12	0.1006793	1.847E-14	1
rs12457761	18	54809639	T	A	RAB27B	-0.04	0	5.9795E-15	0	6.84	0.4458583	2.335E-14	1
rs12965081	18	54811808	G	A	RAB27B	-0.04	0	6.1523E-15	0	6.86	0.4439968	2.401E-14	1
rs10708455	18	54812282	CT	C	RAB27B	-0.04	0	6.1537E-15	0	6.86	0.4439954	2.401E-14	1
rs12457101	18	54809566	A	G	RAB27B	-0.04	0	6.1666E-15	0	6.86	0.4438593	2.406E-14	1
rs531595	15	47351056	A	G	SEMA6D	-0.04	0	6.2878E-15	0	4.45	0.7263743	2.496E-14	1
rs955686	15	47353759	T	C	SEMA6D	-0.04	0	6.3063E-15	0	4.52	0.717845	2.503E-14	1
rs7236335	18	54807842	G	A	RAB27B	-0.04	0	6.3217E-15	0	6.88	0.4416131	2.462E-14	1
rs7236320	18	54807820	G	A	RAB27B	-0.04	0	6.3271E-15	0	6.88	0.4415934	2.464E-14	1
rs516191	15	47347755	A	T	SEMA6D	0.04	0	6.3287E-15	0	4.44	0.7282697	2.512E-14	1
rs6566871	18	54808673	T	C	RAB27B	0.04	0	6.3405E-15	0	6.87	0.4420455	2.469E-14	1
rs590777	15	47345691	A	G	SEMA6D	0.04	0	6.3519E-15	0	4.42	0.7307796	2.521E-14	1
rs578458	15	47348590	T	C	SEMA6D	-0.04	0	6.3609E-15	0	4.38	0.7355196	2.525E-14	1
rs593094	15	47346241	G	T	SEMA6D	-0.04	0	6.3616E-15	0	4.5	0.7204559	2.525E-14	1
rs569935	15	47346209	A	T	SEMA6D	0.04	0	6.3741E-15	0	4.5	0.7203935	2.53E-14	1
rs1486899	15	47350566	A	G	SEMA6D	-0.04	0	6.3885E-15	0	4.45	0.7273077	2.536E-14	1
rs621423	15	47347918	A	G	SEMA6D	-0.04	0	6.3941E-15	0	4.42	0.7301911	2.538E-14	1
rs6493273	15	47346354	T	C	SEMA6D	0.04	0	6.3948E-15	0	4.45	0.7264867	2.538E-14	1
rs8085272	18	54814352	A	G	RAB27B	0.04	0	6.3954E-15	0	6.82	0.4480657	2.5E-14	1
rs12966541	18	54814171	C	G	RAB27B	-0.04	0	6.4085E-15	0	6.82	0.4479904	2.505E-14	1
rs2009198	18	54813564	A	G	RAB27B	-0.04	0	6.4133E-15	0	6.82	0.4478193	2.507E-14	1
rs11152005	18	54813347	G	A	RAB27B	-0.04	0	6.4172E-15	0	6.82	0.4477746	2.509E-14	1
rs12960257	18	54814207	T	G	RAB27B	-0.04	0	6.4175E-15	0	6.82	0.4478323	2.509E-14	1

Table S2

rs6763411	3	43542885	C	T	ANO10	0.07	0	6.4224E-15	3	7.27	0.4008786	2.342E-14	1
rs653749	15	47352331	G	A	SEMA6D	-0.04	0	6.4282E-15	0	4.47	0.7239386	2.551E-14	1
rs12968302	18	54811739	A	G	RAB27B	-0.04	0	6.4295E-15	0	6.82	0.4477627	2.513E-14	1
rs563298	15	47345438	A	T	SEMA6D	-0.04	0	6.447E-15	0	4.42	0.73072	2.559E-14	1
rs623549	15	47341803	T	C	SEMA6D	0.04	0	6.4472E-15	0	4.45	0.7266093	2.559E-14	1
rs488732	15	47347043	C	T	SEMA6D	0.04	0	6.45E-15	0	4.45	0.7265729	2.56E-14	1
rs606997	15	47347018	T	C	SEMA6D	0.04	0	6.45E-15	0	4.45	0.7265723	2.56E-14	1
rs518222	15	47348027	T	C	SEMA6D	-0.04	0	6.4519E-15	0	4.43	0.7295011	2.56E-14	1
rs4611398	15	47350283	T	C	SEMA6D	-0.04	0	6.4538E-15	0	4.44	0.7274825	2.561E-14	1
rs499491	15	47349837	A	G	SEMA6D	-0.04	0	6.4542E-15	0	4.44	0.727481	2.561E-14	1
rs648585	15	47349491	T	G	SEMA6D	-0.04	0	6.4582E-15	0	4.44	0.7274756	2.563E-14	1
rs651999	15	47351960	G	C	SEMA6D	0.04	0	6.4668E-15	0	4.44	0.7273815	2.566E-14	1
rs4270118	15	47350384	C	T	SEMA6D	0.04	0	6.4674E-15	0	4.44	0.7273895	2.567E-14	1
rs57500723	15	47351655	G	C	SEMA6D	0.04	0	6.4687E-15	0	4.42	0.7308688	2.567E-14	1
rs12908163	15	47349325	C	T	SEMA6D	0.04	0	6.4707E-15	0	4.44	0.7273679	2.568E-14	1
rs474356	15	47349405	C	G	SEMA6D	-0.04	0	6.4885E-15	0	4.45	0.7272948	2.575E-14	1
rs8092503	18	54812256	A	G	RAB27B	-0.04	0	6.5088E-15	0	6.83	0.4467668	2.542E-14	1
rs489692	15	47347157	C	T	SEMA6D	-0.04	0	6.5186E-15	0	4.44	0.7285231	2.587E-14	1
rs684920	15	47344961	A	C	SEMA6D	-0.04	0	6.5373E-15	0	4.43	0.7293056	2.594E-14	1
rs607473	15	47347136	G	A	SEMA6D	-0.04	0	6.573E-15	0	4.43	0.72917	2.608E-14	1
rs955685	15	47353835	G	A	SEMA6D	-0.04	0	6.5822E-15	0	4.39	0.7334283	2.611E-14	1
rs7497188	15	47327725	A	T	SEMA6D	-0.04	0	6.6055E-15	0	4.4	0.7327981	2.621E-14	1
rs11632739	15	47329055	C	A	SEMA6D	-0.04	0	6.621E-15	0	4.38	0.7355863	2.627E-14	1
rs499580	15	47340258	G	A	SEMA6D	0.04	0	6.6343E-15	0	4.42	0.7302961	2.632E-14	1
rs7243785	18	54807931	A	G	RAB27B	-0.04	0	6.6376E-15	0	6.85	0.4446571	2.589E-14	1
rs12956220	18	54814519	A	T	RAB27B	-0.04	0	6.6542E-15	0	6.81	0.4490168	2.601E-14	1
rs623254	15	47348371	G	C	SEMA6D	0.04	0	6.6737E-15	0	4.46	0.7250578	2.647E-14	1
rs685291	15	47345024	A	G	SEMA6D	-0.04	0	6.6805E-15	0	4.46	0.7254113	2.65E-14	1
rs36000843	15	47349736	AT	A	SEMA6D	-0.04	0	6.6866E-15	0	4.4	0.7324218	2.652E-14	1
rs649483	15	47349702	A	G	SEMA6D	-0.04	0	6.6866E-15	0	4.4	0.7324218	2.652E-14	1

Table S2

rs10851452	15	47326743	T	C	SEMA6D	-0.04	0	6.6881E-15	0	4.4	0.7329397	2.653E-14	1
rs1027460	15	47330640	A	C	SEMA6D	-0.04	0	6.7156E-15	0	4.42	0.730543	2.664E-14	1
rs1496905	15	47323023	T	A	SEMA6D	-0.04	0	6.7449E-15	0	4.42	0.7306796	2.675E-14	1
rs1390876	15	47353592	A	G	SEMA6D	-0.04	0	6.7587E-15	0	4.39	0.7337453	2.681E-14	1
rs7719307	5	120815275	C	T	PRR16	0.04	0	6.7667E-15	0	0.62	0.9988682	2.684E-14	1
rs56043914	5	120795392	C	G	PRR16	0.04	0	6.7818E-15	0	1.34	0.987349	2.69E-14	1
rs6566870	18	54808629	C	G	RAB27B	0.04	0	6.8338E-15	0	6.92	0.4371772	2.653E-14	1
rs4611399	15	47350538	T	C	SEMA6D	-0.04	0	6.8748E-15	0	4.41	0.7310308	2.726E-14	1
rs62381090	5	120815761	A	G	PRR16	0.04	0	6.9995E-15	0	2.42	0.9333155	2.775E-14	1
rs66653209	5	120794942	T	C	PRR16	0.04	0	7.1015E-15	0	1.42	0.984832	2.815E-14	1
rs4895285	5	120839764	A	G	PRR16	0.04	0	7.1347E-15	0	1.47	0.983218	2.828E-14	1
rs589497	15	47345427	C	T	SEMA6D	-0.04	0	7.1373E-15	0	4.25	0.7507571	2.829E-14	1
rs665751	15	47352766	T	C	SEMA6D	-0.04	0	7.1855E-15	0	4.41	0.7310755	2.848E-14	1
rs535072	15	47344715	C	T	SEMA6D	-0.04	0	7.2817E-15	0	4.41	0.7320314	2.885E-14	1
rs281297	15	47393307	T	C	SEMA6D	0.04	0	7.3005E-15	0	4.17	0.7596985	2.893E-14	1
rs75854701	3	43577384	C	T	ANO10	0.07	0	7.4438E-15	0	6.93	0.4362094	2.874E-14	1
rs684499	15	47344884	G	A	SEMA6D	-0.04	0	7.4793E-15	0	4.39	0.7340601	2.962E-14	1
rs1496919	15	47353294	A	G	SEMA6D	0.04	0	7.6118E-15	0	4.42	0.7298747	3.014E-14	1
rs606602	15	47346935	G	A	SEMA6D	-0.04	0	7.8819E-15	0	4.44	0.7284364	3.12E-14	1
rs4476748	5	120798862	A	G	PRR16	0.04	0	8.0987E-15	0	1.34	0.9873877	3.204E-14	1
rs7167304	15	47326117	T	C	SEMA6D	0.04	0	8.11E-15	0	4.42	0.7305474	3.209E-14	1
rs116759971	3	43765743	C	T	ABHD5	0.09	0	8.309E-15	31	10.16	0.1794706	4.79E-14	1
rs7505145	18	53185406	A	C	DCC	0.04	0	8.4214E-15	0	5.05	0.6538831	3.33E-14	1
rs8093506	18	54806939	A	G	RAB27B	-0.04	0	9.2936E-15	0	6.19	0.517852	3.671E-14	1
rs10221412	18	53198102	T	C	DCC	0.04	0	9.4694E-15	0	5.39	0.6119815	3.739E-14	1
rs12522060	5	120830994	G	A	PRR16	0.04	0	9.4943E-15	0	1.33	0.9876695	3.749E-14	1
rs10070730	5	120835408	A	G	PRR16	0.04	0	1.0167E-14	0	1.4	0.9854246	4.011E-14	1
rs9304439	18	53191406	G	A	DCC	0.04	0	1.0241E-14	0	5.33	0.6197726	4.04E-14	1
rs6878559	5	120872497	A	G	PRR16	0.04	0	1.0622E-14	0	1.78	0.971219	4.188E-14	1
rs10051563	5	120833545	C	T	PRR16	0.04	0	1.2133E-14	0	1.37	0.9863681	4.775E-14	1

Table S2

rs140743137	5	120836499	AT	A	PRR16	0.04	0	1.2133E-14	0	1.35	0.9870268	4.775E-14	1
rs9586	3	49176204	C	T	KLHDC8B	-0.05	0	1.2146E-14	0	6.57	0.4750128	4.78E-14	1
rs10063944	5	120835854	T	C	PRR16	0.04	0	1.2242E-14	0	1.32	0.9878562	4.817E-14	1
rs12970682	18	54814404	G	A	RAB27B	-0.04	0	1.2462E-14	4	7.34	0.3946397	4.742E-14	1
rs17502651	5	120715360	G	T	PRR16	0.04	0	1.2566E-14	0	3.5	0.8352415	4.943E-14	1
rs6508209	18	53217163	G	A	DCC	0.04	0	1.315E-14	0	5.41	0.6098259	5.17E-14	1
rs13066405	3	29575577	T	C	RBMS3,RP11	-0.06	0	1.3166E-14	46	13.07	0.070416	3.119E-14	1
rs6508208	18	53211692	G	C	DCC	0.04	0	1.3853E-14	0	5.39	0.6128324	5.442E-14	1
rs13084037	3	49176633	G	A	KLHDC8B	-0.05	0	1.39E-14	0	6.68	0.4632349	5.461E-14	1
rs9831648	3	49176870	G	T	KLHDC8B	-0.05	0	1.4166E-14	0	6.67	0.4645516	5.564E-14	1
rs7243019	18	53186873	C	T	DCC	0.04	0	1.4849E-14	0	5.35	0.6171667	5.828E-14	1
rs1021362	10	104851510	G	A	SORCS3	-0.04	0	1.5113E-14	22	9.02	0.250921	5.926E-14	1
rs1021363	10	104851081	A	G	SORCS3	-0.04	0	1.5124E-14	22	9.01	0.2519781	5.935E-14	1
rs12969597	18	53255667	G	A	DCC	0.04	0	1.5557E-14	0	6.19	0.5178403	6.102E-14	1
rs7617480	3	49173299	A	C	KLHDC8B	-0.05	0	1.6031E-14	0	6.58	0.4734516	6.286E-14	1
rs1824223	3	29571488	A	G	RBMS3,RP11	-0.06	0	1.6416E-14	46	13.03	0.0712978	3.88E-14	1
rs10447270	5	120712213	G	A	PRR16	-0.04	0	1.6997E-14	0	3.55	0.8303593	6.659E-14	1
rs62000222	15	47323648	T	C	SEMA6D	-0.04	0	1.704E-14	0	4.74	0.6914389	6.676E-14	1
rs62381120	5	120840635	T	C	PRR16	0.04	0	1.7771E-14	0	3.02	0.8830695	6.958E-14	1
rs114255265	3	43821893	G	A	ABHD5	0.08	0	1.8294E-14	29	9.9	0.194582	1.058E-13	1
rs76138603	3	43834724	C	T	ABHD5	0.08	0	1.8445E-14	29	9.87	0.196043	1.069E-13	1
rs11877032	18	53407887	A	T	DCC	0.04	0	1.8704E-14	35	10.87	0.1442411	7.319E-14	1
rs10502979	18	53521236	C	G	DCC	0.04	0	1.9531E-14	41	12.03	0.0995632	5.595E-14	1
rs6446285	3	49588873	G	A	BSN	-0.06	0	1.9818E-14	0	3.72	0.8110934	7.749E-14	1
rs141165523	3	49590722	CATA	C	BSN	0.06	0	1.9822E-14	0	3.72	0.8110881	7.75E-14	1
rs7658785	4	14955708	G	C	CPEB2	-0.04	0	2.022E-14	0	6.34	0.5010089	7.904E-14	1
rs10038014	5	120806923	G	C	PRR16	0.04	0	2.0293E-14	0	0.96	0.9954009	7.932E-14	1
rs12327102	18	53261469	G	C	DCC	0.04	0	2.0371E-14	0	6.15	0.5223531	7.962E-14	1
rs9869120	3	49586632	T	C	BSN	-0.06	0	2.1055E-14	0	3.72	0.8117402	8.225E-14	1
rs9869256	3	49586662	T	G	BSN	-0.06	0	2.1058E-14	0	3.72	0.8117385	8.226E-14	1

Table S2

rs17443405	5	120717333	T	C	PRR16	0.04	0	2.2182E-14	0	3.61	0.8233914	8.66E-14	1
rs6446284	3	49579564	A	G	BSN	-0.06	0	2.2263E-14	0	3.7	0.8140539	8.691E-14	1
rs145321320	3	49579796	ATTGGAAA	A	BSN	-0.06	0	2.36E-14	0	3.7	0.8137225	9.205E-14	1
rs71080535	3	49578620	G	GA	BSN	-0.06	0	2.3712E-14	0	3.7	0.8136086	9.248E-14	1
rs11130208	3	49578191	G	T	BSN	-0.06	0	2.3719E-14	0	3.7	0.8136516	9.251E-14	1
rs6797299	3	49572361	G	T	BSN	-0.06	0	2.3784E-14	0	3.7	0.813258	9.276E-14	1
rs1532204	3	49572044	C	G	BSN	-0.06	0	2.3828E-14	0	3.7	0.8131387	9.293E-14	1
rs9327165	5	120804462	T	C	PRR16	0.04	0	2.3832E-14	0	1.8	0.9700485	9.295E-14	1
rs3773093	3	29579951	G	A	RBMS3,RP11	-0.06	0	2.4757E-14	46	13.11	0.0694659	5.825E-14	1
rs34890793	3	49582060	C	T	BSN	-0.06	0	2.5079E-14	0	3.69	0.8146437	9.774E-14	1
rs11130207	3	49574233	T	G	BSN	-0.06	0	2.5206E-14	0	3.71	0.8128847	9.823E-14	1
rs2298606	18	53205453	T	C	DCC	0.04	0	2.5879E-14	0	5.37	0.6148005	1.008E-13	1
rs7629322	3	49584561	C	T	BSN	-0.06	0	2.6259E-14	0	3.72	0.8110786	1.023E-13	1
rs10078559	5	121169928	T	G	PRR16	0.12	0	2.6391E-14	40	11.79	0.1077393	3.128E-13	1
rs55638820	18	53213897	A	AAAAT	DCC	0.04	0	2.6506E-14	0	5.21	0.6338249	1.032E-13	1
rs6508207	18	53211580	T	C	DCC	0.04	0	2.7392E-14	0	5.44	0.6063462	1.066E-13	1
rs1972044	18	53404710	G	A	DCC	0.04	0	2.8072E-14	36	11.03	0.1373814	1.364E-13	1
rs1491983	3	49602370	G	T	BSN	-0.06	0	2.8764E-14	0	3.81	0.801022	1.119E-13	1
rs4241405	3	49604594	C	T	BSN	-0.06	0	2.8778E-14	0	3.81	0.8011008	1.119E-13	1
rs10164055	18	53393230	T	C	DCC	0.04	0	2.9029E-14	36	11.01	0.1380424	1.121E-13	1
rs11130211	3	49607776	C	T	BSN	-0.06	0	2.9103E-14	0	3.81	0.801343	1.132E-13	1
rs12637313	3	49608025	A	G	BSN	-0.06	0	2.9114E-14	0	3.81	0.8013485	1.132E-13	1
rs2029591	3	49609548	T	C	BSN	-0.06	0	2.9117E-14	0	3.81	0.8013078	1.133E-13	1
rs11721148	3	49609236	G	A	BSN	-0.06	0	2.9127E-14	0	3.81	0.801136	1.133E-13	1
rs1463728	3	49609971	T	A	BSN	-0.06	0	2.994E-14	0	3.79	0.8036568	1.164E-13	1
rs4435893	5	120819582	T	C	PRR16	0.04	0	3.1423E-14	0	1.33	0.9877089	1.221E-13	1
rs3132390	6	28865011	A	G	TRIM27	-0.09	0	3.2228E-14	5	7.42	0.386914	1.466E-13	1
rs11749110	5	120795812	C	T	PRR16	0.04	0	3.2634E-14	0	2.25	0.9450063	1.267E-13	1
rs150583	16	21701422	G	A	OTOA	0.04	0	3.3097E-14	0	5.74	0.57063	1.285E-13	1
rs3949215	6	25777269	A	T	SLC17A4	0.09	0	3.4137E-14	7	7.6	0.3693701	1.575E-13	1

Table S2

rs1954598	6	25775832	T	C	SLC17A4	0.09	0	3.4515E-14	7	7.6	0.3688171	1.595E-13	1
rs6456701	6	25773902	C	T	SLC17A4	0.09	0	3.455E-14	7	7.61	0.3686843	1.597E-13	1
rs9467626	6	25873518	C	A	SLC17A3	-0.09	0	3.4917E-14	5	7.37	0.3911052	1.49E-13	1
rs114227873	3	43420951	G	A	ANO10,SNRI	0.09	0	3.737E-14	0	6.83	0.446877	1.449E-13	1
rs13381096	18	53423032	C	A	DCC	0.04	0	3.7432E-14	34	10.73	0.1507935	1.451E-13	1
rs12250380	10	104828192	A	G	SORCS3	-0.04	0	3.7613E-14	2	7.22	0.4066947	1.514E-13	1
rs4236040	6	25760981	T	C	SLC17A4	0.09	0	3.879E-14	9	7.74	0.3562888	1.848E-13	1
rs4712969	6	25763964	A	G	SLC17A4	0.09	0	3.8868E-14	9	7.72	0.3583059	1.844E-13	1
rs5019113	5	120822193	A	G	PRR16	0.04	0	3.8874E-14	0	1.55	0.980704	1.506E-13	1
rs6902211	6	25767209	G	A	SLC17A4	0.09	0	3.8958E-14	9	7.72	0.3583003	1.848E-13	1
rs76048911	3	43279585	A	G	SNRK	0.09	0	3.9483E-14	0	5.69	0.576255	1.529E-13	1
rs12523352	5	120823407	T	G	PRR16	0.04	0	3.9945E-14	0	1.6	0.9785042	1.547E-13	1
rs215904	16	21716808	G	T	OTOA	0.04	0	4.0024E-14	0	5.72	0.5732404	1.55E-13	1
rs138792987	6	28865366	GATTT	G	TRIM27	-0.09	0	4.0384E-14	2	7.21	0.4069945	1.712E-13	1
rs3131341	6	28810946	C	T	TRIM27	-0.09	0	4.0939E-14	1	7.11	0.4177	1.654E-13	1
rs1892250	6	25768796	T	C	SLC17A4	0.09	0	4.1997E-14	8	7.62	0.3670679	1.947E-13	1
rs114990157	3	43227053	G	A	SNRK	0.13	0	4.2696E-14	43	12.3	0.0910071	1.652E-13	1
rs11082972	18	53206780	C	T	DCC	0.04	0	4.2868E-14	0	5.28	0.6258586	1.659E-13	1
rs17598658	6	26175638	A	C	HIST1H2BE	-0.09	0	4.3035E-14	20	8.82	0.2657729	2.837E-13	1
rs3132389	6	28863244	T	G	TRIM27	-0.09	0	4.3323E-14	1	7.1	0.4182262	1.746E-13	1
rs3135299	6	28841273	G	C	TRIM27	-0.09	0	4.3324E-14	1	7.1	0.41822	1.747E-13	1
rs3131336	6	28863834	C	T	TRIM27	-0.09	0	4.3328E-14	1	7.1	0.4182231	1.747E-13	1
rs3132385	6	28857197	C	T	TRIM27	-0.09	0	4.3328E-14	1	7.1	0.4182231	1.747E-13	1
rs3118359	6	28826127	G	T	TRIM27	-0.09	0	4.4243E-14	1	7.1	0.4183035	1.782E-13	1
rs12174489	6	27320021	C	T	POM121L2	0.04	0	4.4545E-14	0	5.52	0.5961731	1.722E-13	1
rs2372546	3	43732934	G	T	ABHD5	-0.06	0	4.5156E-14	0	5.96	0.5446624	1.746E-13	1
rs7716347	5	120796579	C	T	PRR16	0.04	0	4.5478E-14	0	2.18	0.9492811	1.758E-13	1
rs9467621	6	25851110	G	A	SLC17A3	-0.09	0	4.6765E-14	4	7.31	0.3970225	1.966E-13	1
rs6913795	6	25847797	T	C	SLC17A3	-0.09	0	4.6817E-14	4	7.31	0.3969653	1.968E-13	1
rs3132392	6	28870852	T	C	TRIM27	-0.09	0	4.715E-14	0	7.02	0.4268949	1.836E-13	1

Table S2

rs9257192	6	28797569	G	C	TRIM27	-0.09	0	4.917E-14	0	7	0.4290728	1.899E-13	1
rs12520103	5	120850864	A	G	PRR16	0.04	0	4.986E-14	0	2.2	0.9477904	1.925E-13	1
rs9467609	6	25809523	A	G	SLC17A1	-0.09	0	5.0433E-14	4	7.35	0.393593	2.128E-13	1
rs9467607	6	25809249	G	A	SLC17A1	-0.09	0	5.0476E-14	4	7.35	0.393614	2.129E-13	1
rs9467606	6	25808990	A	G	SLC17A1	-0.09	0	5.049E-14	4	7.35	0.3936281	2.13E-13	1
rs9461216	6	25808515	A	T	SLC17A1	-0.09	0	5.0545E-14	4	7.35	0.3932975	2.134E-13	1
rs9467603	6	25803484	A	G	SLC17A1	-0.09	0	5.068E-14	4	7.36	0.3923115	2.145E-13	1
rs9257191	6	28797321	C	G	TRIM27	-0.09	0	5.0904E-14	0	6.98	0.4309897	1.965E-13	1
rs7766699	6	28800490	G	A	TRIM27	-0.09	0	5.0945E-14	0	6.98	0.4309443	1.966E-13	1
rs9257217	6	28801155	C	T	TRIM27	-0.09	0	5.0945E-14	0	6.98	0.4309443	1.966E-13	1
rs7761321	6	28799705	C	A	TRIM27	-0.09	0	5.0971E-14	0	6.98	0.430927	1.967E-13	1
rs13200921	6	25790150	T	C	SLC17A1	-0.09	0	5.0979E-14	5	7.38	0.3903112	2.167E-13	1
rs3132373	6	28805578	G	T	TRIM27	-0.09	0	5.1104E-14	0	6.98	0.4307766	1.972E-13	1
rs9257223	6	28808540	T	C	TRIM27	-0.09	0	5.1125E-14	0	6.98	0.430685	1.973E-13	1
rs9467600	6	25792540	C	T	SLC17A1	-0.09	0	5.1133E-14	5	7.38	0.3904137	2.173E-13	1
rs9257227	6	28819607	T	C	TRIM27	-0.09	0	5.1366E-14	0	7	0.4292768	1.982E-13	1
rs71548384	6	28809793	T	TC	TRIM27	-0.09	0	5.1797E-14	10	7.83	0.3475738	2.638E-13	1
rs35195355	18	53474575	C	A	DCC	0.04	0	5.2202E-14	48	13.47	0.0613916	1.185E-13	1
rs3135296	6	28828079	A	T	TRIM27	-0.09	0	5.2939E-14	0	6.98	0.4312955	2.042E-13	1
rs3131340	6	28812101	T	G	TRIM27	-0.09	0	5.3032E-14	0	6.97	0.4324771	2.046E-13	1
rs3132397	6	28814383	G	A	TRIM27	-0.09	0	5.304E-14	0	6.97	0.4324543	2.046E-13	1
rs3135307	6	28879607	C	T	TRIM27	-0.09	0	5.3207E-14	0	6.97	0.4315973	2.052E-13	1
rs3132396	6	28814533	T	C	TRIM27	-0.09	0	5.3278E-14	0	6.97	0.4322706	2.055E-13	1
rs71674967	6	25875339	CTGTAT	C	SLC17A3	-0.09	0	5.3515E-14	3	7.26	0.4022176	2.213E-13	1
rs4947247	6	28831248	C	T	TRIM27	-0.09	0	5.3582E-14	0	6.98	0.4312134	2.067E-13	1
rs35608874	6	28879147	CT	C	TRIM27	-0.09	0	5.3588E-14	0	6.98	0.4314088	2.067E-13	1
rs3118358	6	28831611	T	G	TRIM27	-0.09	0	5.3607E-14	0	6.98	0.4312342	2.068E-13	1
rs4947303	6	28831378	A	T	TRIM27	-0.09	0	5.3623E-14	0	6.98	0.4312109	2.068E-13	1
rs9257249	6	28835727	T	C	TRIM27	-0.09	0	5.3921E-14	0	6.98	0.4311904	2.08E-13	1
rs9257250	6	28835856	A	T	TRIM27	-0.09	0	5.3921E-14	0	6.98	0.4311904	2.08E-13	1

rs3132376	6	28833391	G	A	TRIM27	-0.09	0	5.3969E-14	0	6.98	0.4312261	2.081E-13	1
rs3135294	6	28820992	G	A	TRIM27	-0.09	0	5.4095E-14	0	6.97	0.4315201	2.086E-13	1
rs3135297	6	28836911	G	A	TRIM27	-0.09	0	5.41E-14	0	6.98	0.4311046	2.086E-13	1
rs3135298	6	28838526	G	C	TRIM27	-0.09	0	5.4158E-14	0	6.98	0.4310211	2.089E-13	1
rs3118366	6	28872122	T	C	TRIM27	-0.09	0	5.4222E-14	0	6.98	0.4309731	2.091E-13	1
rs3135305	6	28871932	A	G	TRIM27	-0.09	0	5.4222E-14	0	6.98	0.4309731	2.091E-13	1
rs3135306	6	28872021	G	A	TRIM27	-0.09	0	5.4222E-14	0	6.98	0.4309731	2.091E-13	1
rs3132393	6	28841821	T	C	TRIM27	-0.09	0	5.4241E-14	0	6.98	0.4309935	2.092E-13	1
rs3132394	6	28841261	T	G	TRIM27	-0.09	0	5.4241E-14	0	6.98	0.4309935	2.092E-13	1
rs3132395	6	28841215	A	G	TRIM27	-0.09	0	5.4241E-14	0	6.98	0.4309935	2.092E-13	1
rs3131335	6	28846669	T	C	TRIM27	-0.09	0	5.4244E-14	0	6.98	0.4309949	2.092E-13	1
rs7760313	6	28850120	T	C	TRIM27	-0.09	0	5.4244E-14	0	6.98	0.4309949	2.092E-13	1
rs9257262	6	28849813	C	T	TRIM27	-0.09	0	5.4244E-14	0	6.98	0.4309949	2.092E-13	1
rs9257267	6	28852103	A	G	TRIM27	-0.09	0	5.4245E-14	0	6.98	0.4309949	2.092E-13	1
rs9257271	6	28853899	G	A	TRIM27	-0.09	0	5.4245E-14	0	6.98	0.4309958	2.092E-13	1
rs9257272	6	28853958	T	C	TRIM27	-0.09	0	5.4245E-14	0	6.98	0.4309958	2.092E-13	1
rs3135300	6	28856620	T	A	TRIM27	-0.09	0	5.4245E-14	0	6.98	0.4309959	2.092E-13	1
rs3118367	6	28871752	T	C	TRIM27	-0.09	0	5.4246E-14	0	6.98	0.4309967	2.092E-13	1
rs3132388	6	28860102	C	T	TRIM27	-0.09	0	5.4246E-14	0	6.98	0.4309967	2.092E-13	1
rs3132391	6	28870028	G	A	TRIM27	-0.09	0	5.4246E-14	0	6.98	0.4309967	2.092E-13	1
rs3135302	6	28861860	G	C	TRIM27	-0.09	0	5.4246E-14	0	6.98	0.4309967	2.092E-13	1
rs34592554	6	28869566	AC	A	TRIM27	-0.09	0	5.4246E-14	0	6.98	0.4309967	2.092E-13	1
rs66845243	6	28860616	TCTAAC	T	TRIM27	-0.09	0	5.4246E-14	0	6.98	0.4309967	2.092E-13	1
rs7764642	6	28796326	T	A	TRIM27	-0.09	0	5.4642E-14	0	6.94	0.4350487	2.107E-13	1
rs3135304	6	28871626	G	A	TRIM27	-0.09	0	5.4701E-14	0	7.06	0.4228014	2.16E-13	1
rs3131093	6	28869660	C	T	TRIM27	-0.09	0	5.4862E-14	0	6.97	0.431553	2.115E-13	1
rs3135295	6	28826138	T	C	TRIM27	-0.09	0	5.5383E-14	0	6.98	0.4310607	2.135E-13	1
rs3132384	6	28856222	C	A	TRIM27	-0.09	0	5.6049E-14	0	6.98	0.4313054	2.16E-13	1
rs138026462	3	43554391	C	T	ANO10	0.09	0	5.6261E-14	0	6.76	0.4545051	2.168E-13	1
rs9467623	6	25860352	G	A	SLC17A3	-0.09	0	5.7026E-14	3	7.28	0.3998785	2.369E-13	1

rs3118357	6	28834372	G	A	TRIM27	-0.09	0	5.7394E-14	0	7.03	0.4259114	2.238E-13	1
rs3118370	6	28865324	T	G	TRIM27	-0.09	0	5.7835E-14	0	6.99	0.4297667	2.228E-13	1
rs72324954	6	25862790	TGAAAA	T	SLC17A3	-0.09	0	5.8016E-14	3	7.28	0.4002133	2.408E-13	1
rs9257188	6	28789712	T	C	TRIM27	-0.09	0	5.8958E-14	0	6.95	0.4335933	2.271E-13	1
rs3131094	6	28871576	C	A	TRIM27	-0.09	0	5.9588E-14	0	7.06	0.4229511	2.349E-13	1
rs57713596	6	27036319	C	T	HIST1H2BJ	-0.07	0	6.0043E-14	0	4.78	0.6862847	2.312E-13	1
rs71537559	6	27342000	G	C	POM121L2	-0.09	0	6.142E-14	0	6.2	0.5164133	2.364E-13	1
rs6939997	6	25820996	C	T	SLC17A1	-0.09	0	6.2203E-14	2	7.16	0.4125156	2.504E-13	1
rs34351439	6	25832782	T	C	SLC17A3	-0.09	0	6.2385E-14	2	7.15	0.4137272	2.504E-13	1
rs13199775	6	25828554	A	T	SLC17A1	-0.09	0	6.32E-14	2	7.15	0.4136992	2.536E-13	1
rs9257187	6	28789125	C	T	TRIM27	-0.09	0	6.3271E-14	0	6.95	0.4345664	2.435E-13	1
rs34770320	6	25821906	GA	G	SLC17A1	-0.09	0	6.3344E-14	2	7.15	0.4136449	2.542E-13	1
rs66983783	6	25821764	TATACA	T	SLC17A1	-0.09	0	6.3344E-14	2	7.15	0.4136449	2.542E-13	1
rs36013569	6	25817568	AT	A	SLC17A1	-0.09	0	6.3687E-14	2	7.15	0.413462	2.557E-13	1
rs9461219	6	25836699	C	G	SLC17A3	-0.09	0	6.5469E-14	3	7.29	0.3992195	2.726E-13	1
rs9467613	6	25812413	T	C	SLC17A1	-0.09	0	6.5619E-14	1	7.14	0.4147444	2.625E-13	1
rs13191296	6	25684378	C	T	SCGN	-0.09	0	6.579E-14	7	7.53	0.3760893	2.986E-13	1
rs3131343	6	28807787	G	A	TRIM27	-0.09	0	6.6093E-14	0	7.04	0.4245222	2.586E-13	1
rs41269265	6	27457570	T	C	ZNF184	-0.09	0	6.6188E-14	0	6.38	0.4957739	2.545E-13	1
rs11923546	3	43837861	T	G	ABHD5	0.08	0	6.6396E-14	36	11.02	0.137906	3.94E-13	1
rs34953377	6	27413881	T	C	ZNF391	-0.09	0	6.7609E-14	0	6.38	0.4965495	2.599E-13	1
rs66841633	6	27414607	G	T	ZNF391	-0.09	0	6.7609E-14	0	6.38	0.4965495	2.599E-13	1
rs35212793	6	27030914	T	C	HIST1H2BJ	-0.07	0	6.7892E-14	0	4.73	0.6924093	2.61E-13	1
rs62091462	18	54821467	T	C	RAB27B	-0.04	0	6.8902E-14	3	7.29	0.3995234	2.525E-13	1
rs28412066	6	25775342	T	A	SLC17A4	0.09	0	6.9283E-14	6	7.52	0.3766854	3.091E-13	1
rs35769282	6	27032129	G	C	HIST1H2BJ	-0.07	0	6.9509E-14	0	4.72	0.6942767	2.671E-13	1
rs9257184	6	28788311	C	T	TRIM27	-0.09	0	6.9512E-14	0	6.93	0.43613	2.671E-13	1
rs34864993	6	27003116	C	A	HIST1H2BJ	-0.07	0	6.9517E-14	0	4.72	0.6940403	2.671E-13	1
rs36022097	6	27027389	G	A	HIST1H2BJ	-0.07	0	6.9525E-14	0	4.72	0.6942488	2.672E-13	1
rs56874662	6	27017828	C	A	HIST1H2BJ	-0.07	0	6.9561E-14	0	4.72	0.69425	2.673E-13	1

Table S2

rs9717913	6	27010173	G	T	HIST1H2BJ	-0.07	0	6.9561E-14	0	4.72	0.69425	2.673E-13	1
rs13196692	6	27411340	C	T	ZNF391	-0.09	0	6.9973E-14	0	6.39	0.4946021	2.689E-13	1
rs62091461	18	54821441	C	T	RAB27B	-0.04	0	7.0083E-14	3	7.27	0.4015559	2.572E-13	1
rs9257183	6	28788231	A	T	TRIM27	-0.09	0	7.1518E-14	0	6.92	0.437243	2.747E-13	1
rs9517301	13	98442834	T	C	FARP1	0.04	0	7.1955E-14	0	5.86	0.5560124	2.764E-13	1
rs34452876	6	27408383	TGAA	T	ZNF391	-0.09	0	7.2023E-14	0	6.34	0.5002436	2.766E-13	1
rs4324798	6	28808340	G	A	TRIM27	-0.09	0	7.4274E-14	1	7.1	0.4185031	2.971E-13	1
rs12969167	18	54821987	A	G	RAB27B	-0.04	0	7.5113E-14	2	7.2	0.4085401	2.765E-13	1
rs17443350	5	120717185	T	G	PRR16	0.04	0	7.5119E-14	0	3.44	0.8412167	2.884E-13	1
rs9278100	6	28866089	CAG	C	TRIM27	-0.09	0	7.5172E-14	7	7.6	0.3692798	3.62E-13	1
rs11241568	5	120804861	T	C	PRR16	0.04	0	7.5506E-14	0	2.22	0.9469016	2.898E-13	1
rs1965662	18	54818849	C	T	RAB27B	-0.04	0	7.5607E-14	2	7.2	0.4078827	2.784E-13	1
rs9257189	6	28789778	C	G	TRIM27	-0.09	0	7.5788E-14	0	6.8	0.4496821	2.909E-13	1
rs3135309	6	28888028	A	C	TRIM27	-0.09	0	7.5803E-14	0	6.43	0.4900227	2.91E-13	1
rs6800306	3	43617353	G	A	ANO10	0.07	0	7.6709E-14	11	7.9	0.3410673	2.794E-13	1
rs2015502	18	54822751	A	G	RAB27B	0.04	0	7.6793E-14	2	7.21	0.407209	2.827E-13	1
rs9686731	5	120807801	C	T	PRR16	0.04	0	7.7032E-14	0	2.24	0.9456419	2.956E-13	1
rs71557344	6	26637496	T	C	ZNF322	-0.09	0	7.7612E-14	0	5.88	0.5542817	2.978E-13	1
rs2052326	18	54822213	G	C	RAB27B	0.04	0	7.7863E-14	3	7.22	0.4059443	2.862E-13	1
rs7228688	18	54821239	A	G	RAB27B	0.04	0	7.7863E-14	3	7.22	0.4059443	2.862E-13	1
rs2871673	18	54824196	T	G	RAB27B	-0.04	0	7.8533E-14	2	7.19	0.4091725	2.897E-13	1
rs1311912	6	28749077	A	T	ZBED9	-0.09	0	7.8988E-14	0	7.01	0.4283581	3.037E-13	1
rs34332556	6	27389635	C	G	ZNF391	-0.09	0	7.9175E-14	0	6.36	0.4985081	3.037E-13	1
rs4340941	5	120805108	G	T	PRR16	0.04	0	7.9651E-14	0	2.3	0.941544	3.055E-13	1
rs9687387	5	120807768	T	A	PRR16	0.04	0	8.0438E-14	0	2.22	0.9464138	3.085E-13	1
rs13207689	6	27401925	C	G	ZNF391	-0.09	0	8.0457E-14	0	6.33	0.5013038	3.086E-13	1
rs71952517	18	54823419	GGTCAA	G	RAB27B	-0.04	0	8.0953E-14	3	7.22	0.406449	2.975E-13	1
rs12960467	18	54825720	C	G	RAB27B	-0.04	0	8.1567E-14	3	7.22	0.4066169	3E-13	1
rs3764516	18	54827143	A	C	RAB27B	0.04	0	8.3233E-14	3	7.23	0.4052858	3.057E-13	1
rs7231263	18	54825936	T	A	RAB27B	0.04	0	8.3266E-14	3	7.23	0.4052894	3.058E-13	1

Table S2

rs12606265	18	54825239	T	C	RAB27B	-0.04	0	8.342E-14	3	7.23	0.4051203	3.063E-13	1
rs35413162	18	54831059	C	G	RAB27B	-0.04	0	8.342E-14	3	7.23	0.4051203	3.063E-13	1
rs1819886	18	54826391	A	G	RAB27B	-0.04	0	8.3454E-14	3	7.23	0.4051254	3.065E-13	1
rs12606230	18	54825021	T	C	RAB27B	-0.04	0	8.363E-14	3	7.23	0.4049764	3.071E-13	1
rs12454204	18	54832780	G	T	RAB27B	-0.04	0	8.4521E-14	2	7.18	0.4105981	3.119E-13	1
rs12959833	18	54825348	C	T	RAB27B	-0.04	0	8.4835E-14	2	7.21	0.4071406	3.119E-13	1
rs7767099	6	28800921	C	T	TRIM27	-0.09	0	8.5081E-14	1	7.08	0.4204074	3.368E-13	1
rs2014237	18	54827352	T	C	RAB27B	0.04	0	8.5177E-14	3	7.22	0.4065009	3.131E-13	1
rs35006536	18	54825469	G	GTC	RAB27B	-0.04	0	8.5642E-14	3	7.25	0.4037162	3.141E-13	1
rs1833282	18	54833781	A	G	RAB27B	-0.04	0	8.6755E-14	3	7.25	0.40332	3.182E-13	1
rs12456731	18	54833061	C	T	RAB27B	-0.04	0	8.6805E-14	3	7.23	0.4056505	3.187E-13	1
rs12456002	18	54831929	C	T	RAB27B	-0.04	0	8.7042E-14	2	7.2	0.4086582	3.207E-13	1
rs12456067	18	54832217	C	T	RAB27B	-0.04	0	8.7042E-14	2	7.2	0.4086582	3.207E-13	1
rs12457769	18	54832570	T	G	RAB27B	-0.04	0	8.7042E-14	2	7.2	0.4086582	3.207E-13	1
rs3764515	18	54827166	G	T	RAB27B	-0.04	0	8.7042E-14	2	7.2	0.4086582	3.207E-13	1
rs12454336	18	54829973	A	G	RAB27B	-0.04	0	8.7078E-14	2	7.2	0.4086606	3.208E-13	1
rs9278145	6	29051468	GT	G	OR2W1	-0.09	0	8.7563E-14	0	6.09	0.5293136	3.354E-13	1
rs3130777	6	29131019	C	G	OR2J3	-0.09	0	8.7753E-14	0	4.65	0.7031924	3.361E-13	1
rs3764513	18	54827858	A	G	RAB27B	-0.04	0	8.7776E-14	2	7.17	0.4110872	3.238E-13	1
rs3764512	18	54828093	G	T	RAB27B	-0.04	0	8.8557E-14	2	7.15	0.4136085	3.277E-13	1
rs9257248	6	28835514	C	T	TRIM27	-0.09	0	8.8642E-14	0	6.74	0.4569229	3.395E-13	1
rs12964118	18	54828275	A	G	RAB27B	-0.04	0	8.9427E-14	2	7.19	0.4088857	3.295E-13	1
rs76070504	6	25846153	A	T	SLC17A3	-0.09	0	8.9508E-14	15	8.24	0.3117617	4.455E-13	1
rs62098330	18	53528699	T	C	DCC	0.04	0	9.0184E-14	44	12.6	0.0825877	2.192E-13	1
rs1833281	18	54831570	G	C	RAB27B	-0.04	0	9.0571E-14	2	7.19	0.4091897	3.336E-13	1
rs11954162	5	120803077	A	C	PRR16	0.04	0	9.1109E-14	0	2.1	0.9543342	3.488E-13	1
rs13195040	6	27446145	A	G	ZNF184	-0.09	0	9.1384E-14	0	6.28	0.5073757	3.498E-13	1
rs4682900	3	43676038	C	T	ANO10	-0.05	0	9.2677E-14	18	8.59	0.2830855	2.885E-13	1
rs6940698	6	25821352	C	T	SLC17A1	-0.09	0	9.3438E-14	6	7.46	0.3830117	4.013E-13	1
rs12457718	18	54832395	T	C	RAB27B	-0.04	0	9.3975E-14	2	7.2	0.4079095	3.456E-13	1

Table S2

rs9278063	6	28767210	CAA	C	TRIM27	-0.09	0	9.5223E-14	0	6.9	0.4395938	3.643E-13	1
rs9257167	6	28773957	C	A	TRIM27	-0.09	0	9.5401E-14	0	6.9	0.4397032	3.65E-13	1
rs35433668	18	54820901	AG	A	RAB27B	-0.04	0	9.5727E-14	4	7.36	0.3922151	3.47E-13	1
rs9257140	6	28759344	G	A	ZBED9	-0.09	0	9.6173E-14	0	6.9	0.4394243	3.679E-13	1
rs11241567	5	120804426	T	C	PRR16	0.04	0	9.792E-14	0	2.35	0.9378131	3.745E-13	1
rs71394030	2	124251292	A	AC	CNTNAP5	-0.04	0	9.9711E-14	48	13.58	0.0591486	3.812E-13	1
rs3135293	6	28909470	T	C	TRIM27	-0.09	0	1.0037E-13	0	4.91	0.6709121	3.837E-13	1
rs144161348	13	98444364	T	TG	FARP1	0.04	0	1.0098E-13	37	11.19	0.1303645	4.973E-13	1
rs28360634	6	27365112	T	C	ZNF391	-0.09	0	1.0192E-13	0	6.29	0.5066736	3.896E-13	1
rs9257137	6	28756172	T	C	ZBED9	-0.09	0	1.0458E-13	0	6.84	0.4452583	3.996E-13	1
rs11130008	3	43662120	G	A	ANO10	-0.05	0	1.0515E-13	17	8.51	0.2898258	3.279E-13	1
rs114224165	3	43512779	G	A	ANO10	0.08	0	1.0534E-13	34	10.67	0.1536925	4.933E-13	1
rs3118365	6	28872131	G	A	TRIM27	-0.09	0	1.0544E-13	0	6.72	0.4588304	4.028E-13	1
rs2315520	4	14961915	A	T	CPEB2	-0.04	0	1.073E-13	0	6.24	0.5121358	4.098E-13	1
rs13127099	4	14963133	C	T	CPEB2	-0.04	0	1.0785E-13	0	6.3	0.5050308	4.119E-13	1
rs36014129	6	25884291	G	A	SLC17A3	-0.09	0	1.08E-13	17	8.46	0.2941531	5.405E-13	1
rs55912630	6	25866707	T	C	SLC17A3	-0.09	0	1.0846E-13	15	8.29	0.307344	5.358E-13	1
rs3774792	3	43705860	C	T	ABHD5	-0.05	0	1.0888E-13	19	8.68	0.27667	3.33E-13	1
rs9257133	6	28755644	C	T	ZBED9	-0.09	0	1.089E-13	0	6.82	0.447814	4.159E-13	1
rs139871222	6	28786654	AT	A	TRIM27	-0.09	0	1.0947E-13	0	6.78	0.4525413	4.18E-13	1
rs9257136	6	28756064	A	C	ZBED9	-0.09	0	1.1235E-13	0	6.81	0.4492359	4.289E-13	1
rs1238262	6	28756183	C	T	ZBED9	-0.09	0	1.133E-13	0	6.8	0.4497806	4.324E-13	1
rs1311917	6	28783264	G	T	TRIM27	-0.09	0	1.1356E-13	0	6.78	0.4523292	4.334E-13	1
rs1742743	6	28756305	A	T	ZBED9	-0.09	0	1.1439E-13	0	6.8	0.4501085	4.365E-13	1
rs13191227	6	27422336	G	C	ZNF391	-0.09	0	1.1505E-13	0	6.26	0.5095594	4.39E-13	1
rs34150729	6	27420975	T	C	ZNF391	-0.09	0	1.1505E-13	0	6.26	0.5095594	4.39E-13	1
rs71559024	6	27384971	G	A	ZNF391	-0.09	0	1.1589E-13	0	6.41	0.4924997	4.422E-13	1
rs35716472	6	27438828	C	G	ZNF184	-0.09	0	1.1708E-13	0	6.26	0.5099663	4.466E-13	1
rs1233623	6	28780504	C	T	TRIM27	-0.09	0	1.1744E-13	0	6.78	0.4521972	4.48E-13	1
rs3774790	3	43708616	G	A	ABHD5	-0.05	0	1.1752E-13	18	8.58	0.2843002	3.542E-13	1

Table S2

rs1233599	6	28763411	T	G	TRIM27	-0.09	0	1.1797E-13	0	6.78	0.4519625	4.5E-13	1
rs13198474	6	25874195	G	A	SLC17A3	-0.09	0	1.186E-13	15	8.29	0.3080363	5.832E-13	1
rs139624725	6	27349237	AC	A	ZNF391	-0.09	0	1.1882E-13	0	6.15	0.5219483	4.532E-13	1
rs1233609	6	28768424	G	A	TRIM27	-0.09	0	1.1887E-13	0	6.78	0.4520133	4.534E-13	1
rs1233611	6	28769277	A	G	TRIM27	-0.09	0	1.1893E-13	0	6.78	0.4520224	4.536E-13	1
rs1233610	6	28769211	A	G	TRIM27	-0.09	0	1.1893E-13	0	6.78	0.4520224	4.536E-13	1
rs1233612	6	28770652	G	T	TRIM27	-0.09	0	1.1893E-13	0	6.78	0.4520577	4.536E-13	1
rs1233600	6	28764737	A	G	TRIM27	-0.09	0	1.1894E-13	0	6.78	0.4519331	4.536E-13	1
rs13191474	6	27445566	C	T	ZNF184	-0.09	0	1.1906E-13	0	6.25	0.5105788	4.541E-13	1
rs1311914	6	28774309	G	C	TRIM27	-0.09	0	1.1912E-13	0	6.78	0.4520901	4.543E-13	1
rs1233594	6	28759566	A	G	ZBED9	-0.09	0	1.2005E-13	0	6.78	0.4518239	4.578E-13	1
rs1233593	6	28759038	C	T	ZBED9	-0.09	0	1.2022E-13	0	6.78	0.4518065	4.584E-13	1
rs145557701	6	25846144	TG	T	SLC17A3	-0.09	0	1.2131E-13	15	8.25	0.3114552	6.052E-13	1
rs35120058	6	27390387	A	G	ZNF391	-0.09	0	1.2525E-13	0	6.55	0.4776803	4.774E-13	1
rs2132083	4	14958905	T	C	CPEB2	-0.04	0	1.2611E-13	0	6.46	0.4873797	4.806E-13	1
rs34196306	6	27457865	G	C	ZNF184	-0.09	0	1.2645E-13	0	6.22	0.5147542	4.818E-13	1
rs56136723	3	43738774	A	G	ABHD5	0.05	0	1.2654E-13	18	8.6	0.2823665	4.052E-13	1
rs35950880	17	68100388	G	T	KPNA2	-0.04	0	1.2794E-13	38	11.33	0.1248241	1.524E-12	1
rs34573979	6	27512747	C	T	ZNF184	-0.09	0	1.2821E-13	0	6.48	0.4847748	4.885E-13	1
rs72839477	6	27359221	C	T	ZNF391	-0.09	0	1.2887E-13	0	6.17	0.5197662	4.909E-13	1
rs58616630	6	27506936	A	G	ZNF184	-0.09	0	1.2888E-13	0	6.48	0.4848848	4.91E-13	1
rs13211947	6	25864590	C	T	SLC17A3	-0.09	0	1.3373E-13	19	8.73	0.2725894	7.073E-13	1
rs35537952	17	68100310	ACACT	A	KPNA2	-0.04	0	1.3714E-13	38	11.34	0.1246071	1.625E-12	1
rs116086673	3	43645211	C	T	ANO10	0.08	0	1.3754E-13	30	10.02	0.1875969	5.235E-13	1
rs13201341	6	25822433	C	T	SLC17A1	-0.09	0	1.4054E-13	14	8.16	0.3188432	6.821E-13	1
rs13212921	6	27237643	C	T	PRSS16	-0.07	0	1.4628E-13	0	6.06	0.5332405	5.562E-13	1
rs71557378	6	26935806	T	G	HIST1H2BJ	-0.09	0	1.4943E-13	0	6.51	0.4818594	5.68E-13	1
rs17526722	6	25918627	G	A	SLC17A2	-0.09	0	1.4966E-13	16	8.38	0.3006361	7.679E-13	1
rs3884025	6	25929860	G	A	SLC17A2	-0.09	0	1.5495E-13	16	8.42	0.2970567	7.98E-13	1
rs12940060	17	68089562	G	C	KPNA2	0.04	0	1.5879E-13	37	11.23	0.1289435	1.859E-12	1

Table S2

rs4772079	13	98438583	G	C	FARP1	0.04	0	1.6008E-13	4	7.36	0.3921129	6.982E-13	1
rs7435318	4	15003031	G	A	CPEB2	-0.04	0	1.6324E-13	0	4.45	0.7261521	6.198E-13	1
rs35044849	6	28699892	A	G	ZBED9	-0.09	0	1.6514E-13	0	6.21	0.5151857	6.269E-13	1
rs56327309	18	53104421	C	G	DCC	0.04	0	1.6631E-13	0	6.86	0.4430991	6.313E-13	1
rs56027651	18	53280720	T	A	DCC	0.04	0	1.6837E-13	0	6.55	0.4770903	6.39E-13	1
rs62084748	17	68084098	T	C	KPNA2	0.04	0	1.7366E-13	37	11.15	0.1320822	1.997E-12	1
rs77431211	3	43385797	T	C	ANO10,SNRI	0.05	0	1.7429E-13	0	6.4	0.4943929	5.743E-13	1
rs13213957	6	25785998	T	C	SLC17A1	-0.09	0	1.761E-13	18	8.6	0.2829843	9.094E-13	1
rs72866845	3	43635250	T	C	ANO10	0.06	0	1.7693E-13	8	7.67	0.3629353	6.319E-13	1
rs67554133	6	25866004	T	A	SLC17A3	-0.09	0	1.7776E-13	7	7.54	0.3745394	7.609E-13	1
rs12943289	17	68089425	G	A	KPNA2	0.04	0	1.7808E-13	37	11.23	0.1287389	2.066E-12	1
rs9517298	13	98442749	C	T	FARP1	0.04	0	1.7901E-13	0	6.17	0.5201244	6.787E-13	1
rs13202592	6	25935363	C	T	SLC17A2	-0.09	0	1.8026E-13	17	8.52	0.2893082	9.356E-13	1
rs528702995	3	43589232	C	CAGATGTC	ANO10	0.07	0	1.8328E-13	0	5.77	0.5673529	6.947E-13	1
rs68194335	6	25866015	A	T	SLC17A3	-0.09	0	1.8433E-13	21	8.88	0.2613005	6.986E-13	1
rs6872181	5	120725512	C	G	PRR16	0.04	0	1.8755E-13	0	3.19	0.8671788	7.106E-13	1
rs34071253	6	27424023	C	T	ZNF391	-0.09	0	1.8795E-13	0	6.11	0.5271867	7.121E-13	1
rs62084750	17	68089067	T	C	KPNA2	0.04	0	1.8855E-13	38	11.31	0.1254725	2.233E-12	1
rs182153917	3	43565823	G	A	ANO10	0.08	0	1.9673E-13	29	9.99	0.1889386	9.128E-13	1
rs35869525	6	26978908	C	T	HIST1H2BJ	-0.09	0	1.9708E-13	0	6.39	0.4952466	7.462E-13	1
rs34816374	6	26981893	A	G	HIST1H2BJ	-0.09	0	1.9745E-13	0	6.39	0.4955375	7.476E-13	1
rs66488313	6	26631340	G	T	ZNF322	-0.09	0	1.9758E-13	0	6.29	0.5063135	7.481E-13	1
rs35173303	6	26967600	C	T	HIST1H2BJ	-0.09	0	1.9793E-13	0	6.38	0.4958239	7.494E-13	1
rs80264589	6	26959823	G	A	HIST1H2BJ	-0.09	0	1.9853E-13	0	6.38	0.4955854	7.516E-13	1
rs71557395	6	26956578	C	G	HIST1H2BJ	-0.09	0	1.9854E-13	0	6.38	0.4956404	7.517E-13	1
rs7200447	16	71824359	G	C	AP1G1	0.04	0	2.0196E-13	23	9.16	0.2411891	1.159E-12	1
rs34969311	6	26610485	CTG	C	ABT1	-0.09	0	2.0452E-13	0	6.26	0.5100801	7.74E-13	1
rs144767380	6	27037306	ATTGT	A	HIST1H2BJ	-0.07	0	2.0606E-13	0	5.17	0.6386582	7.797E-13	1
rs1449153	5	120718350	C	G	PRR16	0.04	0	2.0692E-13	0	3.08	0.8772075	7.829E-13	1
rs67777156	6	26633483	T	A	ZNF322	-0.09	0	2.0813E-13	0	6.26	0.5100225	7.874E-13	1

rs34105070	6	27593026	C	T	ZNF184	-0.09	0	2.0887E-13	0	5.73	0.5718193	7.902E-13	1
rs57440165	6	26875738	A	C	ZNF322	-0.09	0	2.1031E-13	0	6	0.5402528	7.956E-13	1
rs13217285	6	27032066	C	T	HIST1H2BJ	-0.07	0	2.104E-13	0	5.12	0.6455462	7.959E-13	1
rs13215879	6	27010921	T	C	HIST1H2BJ	-0.07	0	2.1057E-13	0	5.12	0.6454832	7.965E-13	1
rs2292042	18	53505562	C	T	DCC	0.04	0	2.1416E-13	57	16.65	0.0197736	4.416E-13	1
rs13202775	6	27597100	T	C	ZNF184	-0.09	0	2.1508E-13	0	5.73	0.5718427	8.133E-13	1
rs67859638	6	27390199	A	G	ZNF391	-0.09	0	2.1842E-13	0	6.2	0.5160287	8.258E-13	1
rs34724414	6	28651576	A	G	ZBED9	-0.09	0	2.2223E-13	0	5.96	0.5439746	8.4E-13	1
rs2451499	10	104872897	T	C	SORCS3	-0.04	0	2.2301E-13	20	8.77	0.2698165	8.22E-13	1
rs6908726	6	28703566	G	C	ZBED9	0.09	0	2.2379E-13	0	5.96	0.5445252	8.458E-13	1
rs590247	15	47355363	C	T	SEMA6D	-0.04	0	2.2489E-13	0	6.27	0.5088172	8.499E-13	1
rs1311918	6	28785869	C	T	TRIM27	-0.09	0	2.2593E-13	0	6.83	0.4462849	8.538E-13	1
rs35400317	6	26593047	C	T	ABT1	-0.09	0	2.2783E-13	0	6.32	0.5029933	8.608E-13	1
rs13201782	6	26650825	T	A	ZNF322	-0.09	0	2.3031E-13	0	6.21	0.5156788	8.701E-13	1
rs113735801	3	43619091	A	G	ANO10	0.06	0	2.3128E-13	7	7.6	0.3695766	8.253E-13	1
rs9393926	6	28714948	G	A	ZBED9	0.09	0	2.3221E-13	0	6.69	0.4614641	8.771E-13	1
rs62381088	5	120805628	G	A	PRR16	0.04	0	2.3351E-13	0	1.86	0.9673572	8.82E-13	1
rs6769241	3	43606081	A	G	ANO10	0.06	0	2.3526E-13	7	7.59	0.3699124	8.386E-13	1
rs72866837	3	43623967	C	T	ANO10	0.06	0	2.3702E-13	8	7.62	0.367624	8.439E-13	1
rs9393929	6	28728286	A	C	ZBED9	0.09	0	2.3855E-13	0	6.82	0.4476995	9.007E-13	1
rs1233620	6	28778394	G	A	TRIM27	-0.09	0	2.3866E-13	0	6.94	0.435212	9.012E-13	1
rs13191326	6	27063250	A	G	HIST1H2BJ	-0.07	0	2.4104E-13	0	5.76	0.5684079	9.1E-13	1
rs2451500	10	104873119	C	T	SORCS3	-0.04	0	2.4132E-13	20	8.77	0.2693557	8.868E-13	1
rs72845046	6	27607489	T	A	ZNF184	-0.09	0	2.4309E-13	0	5.73	0.5714109	9.176E-13	1
rs2451497	10	104872279	T	C	SORCS3	-0.04	0	2.4328E-13	20	8.78	0.2685948	8.932E-13	1
rs2491376	10	104871572	G	T	SORCS3	-0.04	0	2.4333E-13	20	8.78	0.2685706	8.934E-13	1
rs11920552	3	44039548	A	G	TOPAZ1	0.08	0	2.4405E-13	27	9.59	0.2127563	1.341E-12	1
rs3131079	6	28990622	T	G	ZNF311	-0.09	0	2.4651E-13	0	5.92	0.5490194	9.303E-13	1
rs13198716	6	26581807	C	T	ABT1	-0.09	0	2.4907E-13	0	5.54	0.5943508	9.399E-13	1
rs74551139	3	43266800	A	C	SNRK	0.08	0	2.5038E-13	25	9.35	0.228268	1.174E-12	1

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rs35741362	6	27039908	T	C	HIST1H2BJ	-0.07	0	2.506E-13	0	4.99	0.6608948	9.456E-13	1
rs7711647	5	120816792	T	C	PRR16	0.04	0	2.5377E-13	0	2.53	0.924565	9.573E-13	1
rs2496022	10	104872720	T	C	SORCS3	-0.04	0	2.5543E-13	21	8.86	0.2625821	9.318E-13	1
rs1026888	3	43459907	G	C	ANO10	0.05	0	2.5624E-13	18	8.54	0.2876072	5.179E-13	1
rs147853699	2	196130306	T	C	STK17B	0.09	0	2.5888E-13	0	4.52	0.7180857	9.763E-13	1
rs2372435	3	43464471	G	A	ANO10	0.05	0	2.594E-13	18	8.55	0.2863648	5.226E-13	1
rs77463213	3	43390532	C	T	ANO10,SNRI	0.05	0	2.6159E-13	10	7.8	0.3502006	7.497E-13	1
rs11459547	5	120819159	G	GA	PRR16	0.04	0	2.6161E-13	0	2.53	0.9250101	9.865E-13	1
rs13217472	6	28713638	G	A	ZBED9	-0.09	0	2.618E-13	0	6.57	0.4751146	9.872E-13	1
rs6806759	3	43662432	T	C	ANO10	-0.05	0	2.6288E-13	28	9.72	0.2047432	7.166E-13	1
rs72865025	3	43496801	C	T	ANO10	0.05	0	2.6487E-13	18	8.58	0.284288	5.303E-13	1
rs3130834	6	29280372	T	C	OR14J1	-0.09	0	2.6768E-13	0	5.43	0.607463	1.009E-12	1
rs35608615	6	27072623	G	C	HIST1H2BJ	-0.07	0	2.6842E-13	0	5.75	0.5695062	1.012E-12	1
rs3129120	6	29143998	T	C	OR2J2	-0.09	0	2.6894E-13	0	5.75	0.569122	1.014E-12	1
rs35526527	6	27074508	C	A	HIST1H2BJ	-0.07	0	2.6923E-13	0	5.75	0.5695171	1.015E-12	1
rs141342723	6	27654305	T	C	HIST1H2BL	-0.09	0	2.7196E-13	0	5.74	0.5704703	1.025E-12	1
rs34543938	6	27656861	A	G	HIST1H2BL	-0.09	0	2.7256E-13	0	5.74	0.570379	1.027E-12	1
rs3051208	6	28741374	GGTT	G	ZBED9	-0.09	0	2.7283E-13	0	6.57	0.4748805	1.028E-12	1
rs13194504	6	28662914	G	A	ZBED9	-0.09	0	2.7313E-13	0	5.94	0.5470986	1.029E-12	1
rs6441778	3	43490426	A	T	ANO10	0.05	0	2.7376E-13	18	8.62	0.2807323	5.429E-13	1
rs191169844	2	196154791	C	A	STK17B	0.09	0	2.7454E-13	0	3.93	0.78791	1.035E-12	1
rs34038546	6	27639881	C	A	ZNF184	-0.09	0	2.7746E-13	0	5.74	0.5702197	1.045E-12	1
rs13212093	6	27638937	C	T	ZNF184	-0.09	0	2.7761E-13	0	5.74	0.5702091	1.046E-12	1
rs34043431	6	25874856	T	C	SLC17A3	-0.09	0	2.7868E-13	17	8.48	0.2918777	1.381E-12	1
rs7716293	5	120819473	A	G	PRR16	0.04	0	2.8168E-13	0	2.49	0.9280534	1.061E-12	1
rs1233579	6	28744886	A	G	ZBED9	-0.09	0	2.8416E-13	8	7.68	0.3614163	1.386E-12	1
rs2230683	6	28923399	T	C	TRIM27	-0.09	0	2.8472E-13	0	5.88	0.5541427	1.072E-12	1
rs2363585	12	60397384	T	A	SLC16A7	-0.04	0	2.8567E-13	58	16.79	0.0187686	1.559E-12	1
rs3130725	6	29150970	T	G	OR2J2	-0.09	0	2.8575E-13	0	5.83	0.559583	1.076E-12	1
rs1995514	12	60395828	G	A	SLC16A7	-0.04	0	2.8618E-13	58	16.79	0.0187855	1.562E-12	1

rs10484399	6	27566749	A	G	ZNF184	-0.09	0	2.8619E-13	0	5.74	0.5698674	1.078E-12	1
rs67884160	12	60400508	G	A	SLC16A7	-0.04	0	2.8692E-13	60	17.58	0.0140139	1.08E-12	1
rs35243068	6	28705657	G	A	ZBED9	-0.09	0	2.878E-13	0	6.5	0.4830466	1.084E-12	1
rs4947263	6	29165865	C	T	OR2J2	-0.09	0	2.8795E-13	0	5.83	0.5598407	1.084E-12	1
rs78113114	3	43868520	C	T	ABHD5	0.08	0	2.8811E-13	26	9.53	0.2165174	1.658E-12	1
rs3117342	6	29238474	T	C	OR2J2	-0.09	0	2.8884E-13	0	5.81	0.5620889	1.088E-12	1
rs3131101	6	28918086	A	G	TRIM27	-0.09	0	2.8908E-13	0	5.88	0.554002	1.088E-12	1
rs3132378	6	28918088	A	G	TRIM27	-0.09	0	2.8908E-13	0	5.88	0.554002	1.088E-12	1
rs3132382	6	28915519	G	A	TRIM27	-0.09	0	2.8908E-13	0	5.88	0.554002	1.088E-12	1
rs3132374	6	28900717	C	G	TRIM27	-0.09	0	2.891E-13	0	5.88	0.5539806	1.089E-12	1
rs3118363	6	28907724	T	C	TRIM27	-0.09	0	2.8912E-13	0	5.88	0.5539918	1.089E-12	1
rs13206458	6	28925796	T	C	TRIM27	-0.09	0	2.8921E-13	0	5.88	0.5539915	1.089E-12	1
rs3130892	6	28937746	G	A	TRIM27	-0.09	0	2.9081E-13	0	5.88	0.5537762	1.095E-12	1
rs3131069	6	28938508	C	G	TRIM27	-0.09	0	2.9121E-13	0	5.88	0.5537206	1.096E-12	1
rs3131068	6	28938155	C	A	TRIM27	-0.09	0	2.9137E-13	0	5.88	0.5537688	1.097E-12	1
rs3131071	6	28939145	C	G	TRIM27	-0.09	0	2.9179E-13	0	5.88	0.5538121	1.099E-12	1
rs7711644	5	120816787	T	C	PRR16	0.04	0	2.9242E-13	0	2.53	0.9251216	1.101E-12	1
rs3130895	6	28938014	G	A	TRIM27	-0.09	0	2.9249E-13	0	5.88	0.5538365	1.101E-12	1
rs149404333	6	29178926	A	C	OR2J2	-0.09	0	2.9326E-13	0	5.83	0.5596124	1.104E-12	1
rs13195636	6	27541714	A	C	ZNF184	-0.09	0	2.938E-13	0	5.81	0.5618191	1.106E-12	1
rs4713177	6	28706221	A	G	ZBED9	0.09	0	2.9533E-13	0	5.99	0.5410879	1.112E-12	1
rs6761983	3	43731108	G	A	ABHD5	-0.04	0	2.9573E-13	0	3.81	0.8016432	1.113E-12	1
rs140046499	18	53256066	T	C	DCC	0.04	0	2.9603E-13	7	7.58	0.370805	1.114E-12	1
rs146280065	6	28897432	T	TA	TRIM27	-0.09	0	2.9652E-13	0	5.86	0.5558895	1.116E-12	1
rs3116829	6	29195923	C	A	OR2J2	-0.09	0	2.9806E-13	0	5.82	0.5609338	1.122E-12	1
rs3129794	6	29006488	G	T	ZNF311	-0.09	0	2.9889E-13	0	5.71	0.5734351	1.125E-12	1
rs3130894	6	29013742	G	C	ZNF311	-0.09	0	2.9889E-13	0	5.71	0.5734351	1.125E-12	1
rs3131081	6	29014495	C	T	ZNF311	-0.09	0	2.9889E-13	0	5.71	0.5734351	1.125E-12	1
rs9257611	6	29207721	G	A	OR2J2	-0.09	0	2.9918E-13	0	5.82	0.5614709	1.126E-12	1
rs3130808	6	29222195	G	A	OR2J2	-0.09	0	2.9954E-13	0	5.81	0.5616105	1.127E-12	1

rs3130828	6	29214120	C	A	OR2J2	-0.09	0	2.9954E-13	0	5.81	0.5616105	1.127E-12	1
rs56405707	6	27672467	G	A	HIST1H2BL	-0.09	0	2.9971E-13	0	5.72	0.5728154	1.128E-12	1
rs3130891	6	29009440	G	C	ZNF311	-0.09	0	2.9974E-13	0	5.72	0.5733585	1.128E-12	1
rs140729339	6	29037901	TTAA	T	OR2W1	-0.09	0	3.0141E-13	0	5.72	0.5730044	1.134E-12	1
rs3117146	6	29039442	C	A	OR2W1	-0.09	0	3.0141E-13	0	5.72	0.5730044	1.134E-12	1
rs3129797	6	29024382	C	G	ZNF311	-0.09	0	3.0141E-13	0	5.72	0.5730044	1.134E-12	1
rs3129798	6	29030672	G	T	OR2W1	-0.09	0	3.0141E-13	0	5.72	0.5730044	1.134E-12	1
rs3129799	6	29033738	G	C	OR2W1	-0.09	0	3.0141E-13	0	5.72	0.5730044	1.134E-12	1
rs68006638	6	25710343	G	A	SCGN	-0.09	0	3.0163E-13	26	9.5	0.2186597	1.743E-12	1
rs3135317	6	29021520	A	G	ZNF311	-0.09	0	3.0166E-13	0	5.72	0.5729941	1.135E-12	1
rs3130896	6	29016110	A	G	ZNF311	-0.09	0	3.0213E-13	0	5.72	0.5729521	1.137E-12	1
rs3131082	6	29015497	G	C	ZNF311	-0.09	0	3.0213E-13	0	5.72	0.5729521	1.137E-12	1
rs35353359	6	28356601	C	T	ZKSCAN3	-0.09	0	3.024E-13	0	5.95	0.5451037	1.138E-12	1
rs3130890	6	28989362	C	T	ZNF311	-0.09	0	3.0663E-13	0	5.7	0.5754228	1.154E-12	1
rs3130887	6	28976309	G	T	ZNF311	-0.09	0	3.084E-13	0	5.79	0.5642773	1.16E-12	1
rs3130888	6	28982183	T	C	ZNF311	-0.09	0	3.0888E-13	0	5.69	0.5759657	1.162E-12	1
rs35715914	6	27624224	C	T	ZNF184	-0.09	0	3.0956E-13	0	5.53	0.5951533	1.164E-12	1
rs7775835	6	28710580	T	C	ZBED9	0.08	0	3.1213E-13	0	6.02	0.5376607	1.174E-12	1
rs3130838	6	28898751	T	C	TRIM27	-0.09	0	3.1224E-13	0	6.02	0.5369289	1.174E-12	1
rs62097975	18	53256530	G	C	DCC	0.04	0	3.1445E-13	8	7.63	0.3663993	1.183E-12	1
rs3129112	6	29122234	G	A	OR2J3	-0.09	0	3.1715E-13	0	5.63	0.5839726	1.193E-12	1
rs3130773	6	29128131	G	A	OR2J3	-0.09	0	3.1715E-13	0	5.63	0.5839726	1.193E-12	1
rs3130715	6	29141420	G	A	OR2J3	-0.09	0	3.175E-13	0	5.63	0.583882	1.194E-12	1
rs71550120	6	29140996	TA	T	OR2J3	-0.09	0	3.1774E-13	0	5.63	0.583869	1.195E-12	1
rs3129791	6	28986516	G	A	ZNF311	-0.09	0	3.1852E-13	0	5.62	0.5842471	1.198E-12	1
rs35848276	6	27553317	C	T	ZNF184	-0.09	0	3.2207E-13	0	5.52	0.5965638	1.211E-12	1
rs144022448	6	27488273	CAG	C	ZNF184	-0.09	0	3.2444E-13	0	6.44	0.4894193	1.22E-12	1
rs34864796	6	27492144	G	A	ZNF184	-0.09	0	3.2444E-13	0	6.44	0.4894193	1.22E-12	1
rs67240003	6	27475423	G	T	ZNF184	-0.09	0	3.2444E-13	0	6.44	0.4894193	1.22E-12	1
rs4452638	6	27261486	G	A	PRSS16	-0.07	0	3.2519E-13	0	5.44	0.606208	1.222E-12	1

Table S2

rs1961639	10	104876239	G	A	SORCS3	-0.04	0	3.2538E-13	19	8.74	0.2717363	1.191E-12	1
rs67652222	6	27618441	C	T	ZNF184	-0.09	0	3.2783E-13	0	5.76	0.568218	1.232E-12	1
rs13209332	6	27552973	T	A	ZNF184	-0.09	0	3.3001E-13	0	5.73	0.5714504	1.24E-12	1
rs34965299	6	27554077	A	G	ZNF184	-0.09	0	3.3555E-13	0	5.74	0.5704614	1.261E-12	1
rs34493019	6	25714731	A	G	HIST1H2AA	-0.09	0	3.3625E-13	12	7.96	0.335892	1.6E-12	1
rs66785117	6	27555519	T	G	ZNF184	-0.09	0	3.3703E-13	0	5.74	0.5705014	1.266E-12	1
rs17410557	18	53250021	T	C	DCC	0.04	0	3.3825E-13	0	6.9	0.4389197	1.271E-12	1
rs3130885	6	28971506	T	C	ZNF311	-0.09	0	3.3832E-13	0	5.8	0.5633493	1.271E-12	1
rs35491132	6	27559448	GT	G	ZNF184	-0.09	0	3.412E-13	0	5.74	0.5705782	1.282E-12	1
rs72409223	6	29100913	ATTCT	A	OR2J3	-0.09	0	3.4156E-13	0	5.66	0.5794741	1.283E-12	1
rs9278146	6	29052944	TAA	T	OR2W1	-0.09	0	3.4252E-13	0	5.66	0.5794739	1.286E-12	1
rs3131085	6	29076924	G	A	OR2B3	-0.09	0	3.4344E-13	0	5.67	0.5793261	1.29E-12	1
rs3129800	6	29045793	C	T	OR2W1	-0.09	0	3.4388E-13	0	5.67	0.5793378	1.292E-12	1
rs3130747	6	29047449	A	G	OR2W1	-0.09	0	3.4388E-13	0	5.67	0.5793378	1.292E-12	1
rs3130844	6	28948817	G	A	TRIM27	-0.09	0	3.4471E-13	0	5.8	0.563201	1.295E-12	1
rs114825981	3	43626723	G	A	ANO10	0.07	0	3.4475E-13	1	7.13	0.4149905	1.289E-12	1
rs148696809	6	28966575	T	C	ZNF311	-0.09	0	3.4485E-13	0	5.8	0.5631865	1.295E-12	1
rs3131076	6	28962480	G	A	ZNF311	-0.09	0	3.4488E-13	0	5.8	0.5631938	1.295E-12	1
rs3130846	6	28958460	C	T	TRIM27	-0.09	0	3.4496E-13	0	5.8	0.5631867	1.296E-12	1
rs3130847	6	28959765	A	G	ZNF311	-0.09	0	3.4496E-13	0	5.8	0.5631867	1.296E-12	1
rs3131072	6	28952119	G	A	TRIM27	-0.09	0	3.4496E-13	0	5.8	0.5631867	1.296E-12	1
rs3116815	6	29180617	A	G	OR2J2	-0.09	0	3.454E-13	0	5.73	0.5721135	1.297E-12	1
rs3117141	6	29054722	A	T	OR2W1	-0.09	0	3.4582E-13	0	5.73	0.5719476	1.299E-12	1
rs35337219	6	27574503	CT	C	ZNF184	-0.09	0	3.484E-13	0	5.75	0.5692735	1.308E-12	1
rs3130746	6	29185378	A	G	OR2J2	-0.09	0	3.4872E-13	0	5.72	0.5729653	1.309E-12	1
rs3734537	6	26422399	C	A	BTN3A1	-0.07	0	3.5018E-13	6	7.46	0.3830226	1.61E-12	1
rs3130831	6	29215110	T	A	OR2J2	-0.09	0	3.5146E-13	0	5.71	0.574061	1.32E-12	1
rs1311911	6	28737297	G	T	ZBED9	-0.09	0	3.5188E-13	0	6.43	0.4902201	1.321E-12	1
rs3130837	6	28980315	G	T	ZNF311	-0.09	0	3.5199E-13	0	5.89	0.5528906	1.322E-12	1
rs13198809	6	28355925	G	A	ZKSCAN3,ZS	-0.09	0	3.5227E-13	0	6.27	0.5091118	1.323E-12	1

rs35744819	6	28350554	G	T	ZKSCAN3,ZS	-0.09	0	3.5227E-13	0	6.25	0.5103687	1.323E-12	1
rs6456835	6	28733715	G	C	ZBED9	0.09	0	3.5271E-13	0	6.43	0.4902034	1.324E-12	1
rs2362250	1	246115211	T	C	SMYD3	-0.06	0	3.5568E-13	0	6.09	0.528736	1.267E-12	1
rs7749305	6	27478787	T	C	ZNF184	-0.09	0	3.718E-13	0	6.41	0.4928962	1.395E-12	1
rs3116830	6	29199798	G	A	OR2J2	-0.08	0	3.722E-13	0	5.69	0.576892	1.396E-12	1
rs62100780	18	53256479	T	C	DCC	0.04	0	3.7278E-13	11	7.87	0.3441479	1.398E-12	1
rs62100781	18	53256480	G	C	DCC	0.04	0	3.7278E-13	11	7.87	0.3441479	1.398E-12	1
rs72152395	6	28989703	GCCTTA	G	ZNF311	-0.08	0	3.7498E-13	0	5.57	0.5909971	1.407E-12	1
rs966311	4	14965642	A	G	CPEB2	-0.04	0	3.7539E-13	0	5.42	0.6084598	1.408E-12	1
rs62097974	18	53256484	T	G	DCC	0.04	0	3.7552E-13	11	7.88	0.3436898	1.409E-12	1
rs142808087	6	28358517	GCAGAACC	G	ZKSCAN3	-0.09	0	3.7802E-13	0	6	0.539371	1.418E-12	1
rs1233581	6	28746070	C	T	ZBED9	-0.09	0	3.8067E-13	0	6.39	0.494608	1.428E-12	1
rs3131073	6	28953195	G	A	TRIM27	-0.08	0	3.8243E-13	0	5.58	0.5901421	1.434E-12	1
rs2315507	4	14972568	G	A	CPEB2	-0.04	0	3.8697E-13	0	5.31	0.6219491	1.451E-12	1
rs56114371	6	27307055	C	T	POM121L2	-0.09	0	3.9075E-13	0	5.67	0.578462	1.465E-12	1
rs3733155	3	43728831	C	T	ABHD5	-0.05	0	3.9178E-13	0	6.99	0.4295694	1.462E-12	1
rs62409270	4	15026419	G	C	CPEB2	0.04	0	3.974E-13	0	4.82	0.6820159	1.489E-12	1
rs3117333	6	29251712	G	A	OR14J1	-0.08	0	3.9847E-13	0	5.71	0.5740262	1.493E-12	1
rs3131095	6	28883795	T	C	TRIM27	-0.08	0	3.9927E-13	0	5.97	0.543637	1.496E-12	1
rs35909544	6	27195677	G	A	HIST1H2AH	-0.07	0	3.9942E-13	0	5.04	0.6550593	1.497E-12	1
rs3135312	6	28889112	T	A	TRIM27	-0.08	0	4.046E-13	0	5.78	0.5654094	1.516E-12	1
rs3135313	6	28889853	G	C	TRIM27	-0.08	0	4.046E-13	0	5.78	0.5654094	1.516E-12	1
rs3135310	6	28888912	A	G	TRIM27	-0.08	0	4.0481E-13	0	5.78	0.5653892	1.517E-12	1
rs3135311	6	28888963	A	C	TRIM27	-0.08	0	4.0481E-13	0	5.78	0.5653892	1.517E-12	1
rs17749927	6	27702197	A	G	HIST1H2BL	-0.09	0	4.1065E-13	0	5.83	0.5602058	1.538E-12	1
rs35016036	6	28347103	C	T	ZSCAN31	-0.09	0	4.1218E-13	0	6.24	0.5124237	1.544E-12	1
rs3129104	6	29243661	A	T	OR14J1	-0.08	0	4.124E-13	0	5.62	0.58512	1.545E-12	1
rs3117339	6	29243665	C	T	OR14J1	-0.08	0	4.1307E-13	0	5.62	0.5852354	1.547E-12	1
rs3117337	6	29243779	T	A	OR14J1	-0.08	0	4.17E-13	0	5.61	0.5855924	1.562E-12	1
rs13219354	6	27217885	T	C	PRSS16	-0.07	0	4.2031E-13	0	4.89	0.6731606	1.574E-12	1

Table S2

rs923546	10	104878982	C	T	SORCS3	-0.04	0	4.2119E-13	21	8.93	0.2574278	1.504E-12	1
rs12065115	1	246133388	A	T	SMYD3	-0.04	0	4.2803E-13	0	5.11	0.6463326	1.601E-12	1
rs13217619	6	28338894	T	C	ZSCAN31	-0.09	0	4.2886E-13	0	5.91	0.5505909	1.605E-12	1
rs35030260	6	28337731	G	A	ZSCAN31	-0.09	0	4.2886E-13	0	5.91	0.5505909	1.605E-12	1
rs67457459	6	27230564	T	G	PRSS16	-0.07	0	4.2949E-13	0	4.93	0.6681668	1.608E-12	1
rs12060229	1	246133364	T	A	SMYD3	-0.04	0	4.2999E-13	0	5.11	0.6461681	1.608E-12	1
rs71206067	6	26935600	C	T	HIST1H2BJ	-0.09	0	4.3077E-13	0	5.92	0.548935	1.612E-12	1
rs67340775	6	28336607	A	C	ZSCAN31	-0.09	0	4.3126E-13	0	5.91	0.5505223	1.614E-12	1
rs3129788	6	29089862	G	A	OR2B3	-0.08	0	4.3465E-13	0	5.72	0.5725395	1.627E-12	1
rs3033761	4	15011969	T	TAGTC	CPEB2	-0.04	0	4.3647E-13	0	4.6	0.7091739	1.634E-12	1
rs67123130	6	29270702	AC	A	OR14J1	-0.08	0	4.3923E-13	0	5.62	0.5847943	1.644E-12	1
rs3131096	6	28884674	T	C	TRIM27	-0.08	0	4.3989E-13	0	5.95	0.5457109	1.646E-12	1
rs3131097	6	28885420	A	G	TRIM27	-0.08	0	4.399E-13	0	5.94	0.546575	1.646E-12	1
rs78131568	3	43413692	T	C	ANO10,SNRI	0.05	0	4.4037E-13	5	7.43	0.38561	1.332E-12	1
rs3135308	6	28884379	C	T	TRIM27	-0.08	0	4.406E-13	0	5.95	0.5456687	1.649E-12	1
rs3118364	6	28885101	G	A	TRIM27	-0.08	0	4.4345E-13	0	5.95	0.5455184	1.659E-12	1
rs56862318	6	27217575	G	A	PRSS16	-0.07	0	4.4417E-13	0	4.91	0.6703897	1.662E-12	1
rs1858513	6	19228707	C	T	ID4	0.05	0	4.4622E-13	68	21.98	0.002564	1.949E-13	3.53241E-14
rs4947336	6	28608366	T	A	ZBED9	-0.09	0	4.481E-13	0	6.05	0.5340438	1.676E-12	1
rs370057132	3	49849425	ACCATCCT(	A	TRAIP	0.06	0	4.4845E-13	0	3.5	0.8356	1.678E-12	1
rs2932559	10	104880365	G	A	SORCS3	-0.04	0	4.4935E-13	20	8.8	0.2672451	1.611E-12	1
rs143520892	3	43292072	C	G	SNRK	0.06	0	4.5266E-13	0	5.93	0.5474652	1.693E-12	1
rs3117326	6	29272601	C	T	OR14J1	-0.08	0	4.5552E-13	0	5.62	0.5842612	1.704E-12	1
rs12663351	6	51699393	G	A	PKHD1	-0.06	0	4.5659E-13	16	8.37	0.3014436	1.828E-12	1
rs35017208	6	28377505	C	T	ZSCAN12	-0.09	0	4.6141E-13	0	6.11	0.5264697	1.725E-12	1
rs13213152	6	28381921	A	G	ZSCAN12	-0.09	0	4.618E-13	0	6.11	0.5264317	1.727E-12	1
rs11192193	10	104809495	A	G	SORCS3	-0.04	0	4.6434E-13	0	4.86	0.6774968	1.736E-12	1
rs72843784	6	26498530	G	T	BTN1A1	-0.09	0	4.6472E-13	0	5.65	0.5815914	1.738E-12	1
rs967808	4	15017831	G	A	CPEB2	-0.04	0	4.6602E-13	0	4.8	0.6846213	1.742E-12	1
rs1390877	15	47353695	T	C	SEMA6D	-0.04	0	4.7291E-13	0	6.47	0.4862317	1.768E-12	1

Table S2

rs67981811	6	28387058	C	G	ZSCAN12	-0.09	0	4.7609E-13	0	6.13	0.5250966	1.779E-12	1
rs13213986	6	28390232	T	A	ZSCAN12	-0.09	0	4.7643E-13	0	6.13	0.5250585	1.781E-12	1
rs36092177	6	28390030	C	T	ZSCAN12	-0.09	0	4.7643E-13	0	6.13	0.5250585	1.781E-12	1
rs1948505	4	15018602	A	G	CPEB2	-0.04	0	4.7897E-13	0	4.67	0.6998969	1.79E-12	1
rs1486901	15	47350796	G	A	SEMA6D	0.04	0	4.8928E-13	0	6.41	0.4926397	1.828E-12	1
rs3130893	6	29012930	A	G	ZNF311	-0.08	0	4.9344E-13	0	5.8	0.5637075	1.843E-12	1
rs9257681	6	29287205	C	G	OR14J1	-0.08	0	4.9424E-13	0	5.77	0.5672468	1.846E-12	1
rs587939	15	47354801	C	G	SEMA6D	0.04	0	4.9517E-13	0	6.42	0.4915341	1.85E-12	1
rs17411339	18	53280989	A	G	DCC	0.04	0	4.9523E-13	0	7.06	0.4225815	1.85E-12	1
rs62097976	18	53258462	G	T	DCC	0.04	0	4.9739E-13	10	7.83	0.348068	1.858E-12	1
rs9570465	13	61110486	T	G	PCDH20	-0.09	0	5.0376E-13	34	10.74	0.1502048	3.151E-12	1
rs4600907	4	14971578	T	C	CPEB2	-0.04	0	5.0459E-13	0	5.52	0.5961802	1.884E-12	1
rs9849038	3	49734557	A	G	IP6K1	-0.06	0	5.0498E-13	0	3.59	0.8251864	1.886E-12	1
rs34119086	6	28594470	TG	T	ZBED9	-0.09	0	5.0806E-13	0	6.18	0.5188528	1.897E-12	1
rs569842	15	47346185	A	G	SEMA6D	-0.04	0	5.1291E-13	0	6.4	0.4944323	1.915E-12	1
rs143888777	6	19227868	T	TAC	ID4	0.05	0	5.1777E-13	68	22.16	0.0023794	2.172E-13	3.94508E-14
rs34197618	6	26083291	T	C	HFE	-0.09	0	5.1778E-13	19	8.73	0.2724894	2.865E-12	1
rs11130217	3	49699890	A	G	RNF123	-0.06	0	5.1854E-13	0	3.72	0.8117633	1.936E-12	1
rs35506517	6	26044636	T	C	HIST1H3C	-0.09	0	5.1882E-13	19	8.72	0.2732755	2.87E-12	1
rs34961555	6	26199675	C	T	HIST1H2BF	-0.09	0	5.1911E-13	22	9.01	0.2516898	3.31E-12	1
rs557899	15	47351598	A	C	SEMA6D	-0.04	0	5.1931E-13	0	6.41	0.4930744	1.939E-12	1
rs565085	15	47345645	A	G	SEMA6D	-0.04	0	5.2011E-13	0	6.35	0.4993224	1.941E-12	1
rs201202687	3	49776502	GC	G	IP6K1	0.06	0	5.2055E-13	0	3.39	0.8469875	1.943E-12	1
rs59684465	3	49836813	C	T	TRAIP	0.06	0	5.215E-13	0	3.39	0.8462614	1.947E-12	1
rs9460314	6	19227914	T	C	ID4	0.05	0	5.2159E-13	68	22.16	0.0023824	2.19E-13	3.9779E-14
rs5848662	3	43392166	T	TA	ANO10,SNRI	0.05	0	5.2265E-13	7	7.58	0.3712883	1.536E-12	1
rs61557789	3	49833768	C	T	TRAIP	0.06	0	5.2398E-13	0	3.39	0.8462925	1.956E-12	1
rs4712371	6	19227436	G	A	ID4	0.05	0	5.2449E-13	68	22.16	0.0023799	2.202E-13	4.00039E-14
rs13210041	6	26037373	G	A	HIST1H2AB	-0.09	0	5.2836E-13	19	8.72	0.2735521	2.918E-12	1
rs34888489	6	26073147	C	A	HFE	-0.09	0	5.3128E-13	19	8.72	0.2731536	2.939E-12	1

rs638818	15	47351282	A	T	SEMA6D	-0.04	0	5.3301E-13	0	6.31	0.5037473	1.989E-12	1
rs36109883	6	26132842	G	A	HIST1H2AC	-0.09	0	5.381E-13	23	9.15	0.2421064	3.127E-12	1
rs17487256	18	53191944	C	T	DCC	0.04	0	5.4798E-13	0	6.68	0.4634747	2.044E-12	1
rs56029819	3	43436803	T	C	ANO10	0.05	0	5.4849E-13	11	7.87	0.3445561	1.564E-12	1
rs7650267	3	43426403	T	C	ANO10	0.05	0	5.4983E-13	11	7.88	0.3436053	1.564E-12	1
rs13217620	6	27685341	C	T	HIST1H2BL	-0.09	0	5.5106E-13	0	5.53	0.5953281	2.055E-12	1
rs78879443	3	43521842	T	C	ANO10	0.05	0	5.5491E-13	18	8.55	0.286681	1.085E-12	1
rs72865013	3	43485322	C	T	ANO10	0.05	0	5.597E-13	17	8.47	0.2929924	1.108E-12	1
rs58339610	3	49807573	T	A	UBA7	0.06	0	5.6125E-13	0	3.37	0.8486085	2.093E-12	1
rs144447022	6	29276442	G	T	OR14J1	-0.08	0	5.6153E-13	0	5.28	0.6256904	2.094E-12	1
rs1799844	3	49810209	G	A	UBA7	0.06	0	5.6239E-13	0	3.37	0.8486192	2.097E-12	1
rs28535523	3	49810981	C	T	UBA7	0.06	0	5.6239E-13	0	3.37	0.8486192	2.097E-12	1
rs6802567	3	43495593	T	C	ANO10	0.05	0	5.6356E-13	17	8.49	0.2913273	1.104E-12	1
rs7649428	3	49831443	A	T	TRAIP	0.06	0	5.6602E-13	0	3.64	0.8202483	2.11E-12	1
rs11659803	18	53108749	G	A	DCC	0.04	0	5.6788E-13	0	6.35	0.4993226	2.117E-12	1
rs35872411	10	3260893	AG	A	PITRM1	0.04	0	5.6935E-13	41	11.91	0.1037168	3.713E-12	1
rs13192965	6	27704046	G	A	HIST1H2BL	-0.09	0	5.697E-13	0	5.75	0.5697426	2.124E-12	1
rs13210634	6	27678713	A	G	HIST1H2BL	-0.09	0	5.7258E-13	0	5.74	0.5702442	2.134E-12	1
rs41266779	6	26021644	C	T	HIST1H4A	-0.09	0	5.734E-13	19	8.73	0.2726248	3.158E-12	1
rs13215275	6	27679730	G	T	HIST1H2BL	-0.09	0	5.7366E-13	0	5.74	0.5701947	2.138E-12	1
rs1271015799	3	43488754	T	C	ANO10	0.08	0	5.7378E-13	33	10.59	0.1576276	2.69E-12	1
rs6772068	3	43511236	T	C	ANO10	0.05	0	5.763E-13	16	8.43	0.2964953	1.148E-12	1
rs72865005	3	43460496	T	C	ANO10	0.05	0	5.7656E-13	17	8.44	0.295304	1.147E-12	1
rs13191038	6	28515140	T	C	GPX6	-0.09	0	5.7668E-13	0	6.17	0.5196591	2.149E-12	1
rs34676049	6	28485841	T	G	GPX6	-0.09	0	5.7702E-13	0	6.17	0.5196507	2.151E-12	1
rs10510737	3	43507167	A	G	ANO10	0.05	0	5.798E-13	17	8.44	0.2957645	1.156E-12	1
rs71550133	6	29283553	GA	G	OR14J1	-0.08	0	5.8127E-13	0	5.66	0.5802661	2.166E-12	1
rs66975207	6	26974367	A	C	HIST1H2BJ	-0.09	0	5.8754E-13	0	5.81	0.5621792	2.189E-12	1
rs2702519	4	15037227	C	G	CPEB2	-0.04	0	5.8903E-13	0	4.59	0.7095714	2.195E-12	1
rs75919775	3	43418831	T	C	ANO10,SNRI	0.05	0	5.8929E-13	11	7.95	0.3370554	1.651E-12	1

Table S2

rs753966714	3	49776506	G	GA	IP6K1	0.06	0	5.9072E-13	0	3.34	0.8514422	2.201E-12	1
rs3761010	19	849935	A	C	ELANE	-0.04	0	5.9186E-13	0	5.18	0.6374062	2.205E-12	1
rs1233618	6	28775073	G	A	TRIM27	-0.08	0	5.9233E-13	9	7.7	0.360137	2.826E-12	1
rs7636753	3	43468346	A	T	ANO10	0.05	0	5.9374E-13	17	8.48	0.2922191	1.172E-12	1
rs62260723	3	49834691	T	C	TRAIP	0.06	0	5.9383E-13	0	3.64	0.8205294	2.212E-12	1
rs17075754	3	43523242	T	C	ANO10	0.05	0	5.9445E-13	17	8.47	0.293123	1.176E-12	1
rs35129566	3	49829151	T	G	TRAIP	0.06	0	5.9455E-13	0	3.64	0.8205427	2.215E-12	1
rs113758058	3	43493790	C	T	ANO10	0.05	0	5.9501E-13	17	8.48	0.2919401	1.173E-12	1
rs1996664	3	49840962	A	G	TRAIP	0.06	0	5.9507E-13	0	3.68	0.8152713	2.217E-12	1
rs113875112	3	43482271	T	C	ANO10	0.05	0	5.9523E-13	17	8.48	0.2919565	1.174E-12	1
rs6904596	6	27523520	G	A	ZNF184	-0.08	0	5.9546E-13	0	5.66	0.5795045	2.218E-12	1
rs61282240	6	51717523	T	C	PKHD1	-0.06	0	5.9585E-13	14	8.22	0.3138875	2.22E-12	1
rs34546498	6	26993501	C	T	HIST1H2BJ	-0.09	0	5.9749E-13	0	5.8	0.5629657	2.226E-12	1
rs3117439	6	29298706	G	A	OR14J1	-0.08	0	5.9897E-13	0	6.09	0.5297277	2.231E-12	1
rs72865027	3	43499703	T	C	ANO10	0.05	0	5.9979E-13	17	8.49	0.291265	1.181E-12	1
rs72865029	3	43502655	T	G	ANO10	0.05	0	5.9986E-13	17	8.49	0.2912661	1.181E-12	1
rs13191445	6	26015261	G	A	HIST1H1A	-0.09	0	6.0565E-13	19	8.68	0.276684	3.323E-12	1
rs62098329	18	53524544	C	A	DCC	0.04	0	6.07E-13	57	16.54	0.0206214	1.122E-12	1
rs785324	15	47343481	C	T	SEMA6D	0.04	0	6.0719E-13	0	6.52	0.4809384	2.261E-12	1
rs6493272	15	47324183	T	C	SEMA6D	0.04	0	6.0729E-13	0	6.28	0.5070582	2.262E-12	1
rs35345226	6	28123802	A	G	ZSCAN16	-0.09	0	6.0984E-13	0	4.66	0.7014575	2.271E-12	1
rs62262730	3	49770841	T	G	IP6K1	0.06	0	6.1086E-13	0	3.36	0.8494474	2.275E-12	1
rs7613603	3	49775433	C	T	IP6K1	0.06	0	6.1086E-13	0	3.36	0.8494474	2.275E-12	1
rs148383796	3	49773614	G	A	IP6K1	0.06	0	6.1232E-13	0	3.36	0.8494573	2.28E-12	1
rs4516168	15	47350421	G	A	SEMA6D	0.04	0	6.1351E-13	0	6.13	0.5250555	2.284E-12	1
rs1659711	2	27143540	C	A	PRR30	0.04	0	6.1516E-13	0	5.57	0.5911294	2.29E-12	1
rs11953061	5	120808330	C	T	PRR16	0.04	0	6.1676E-13	0	1.63	0.9774927	2.296E-12	1
rs73442823	6	51710696	T	C	PKHD1	-0.06	0	6.1885E-13	13	8.13	0.3210539	2.304E-12	1
rs3020779	3	49687375	T	C	MST1	-0.06	0	6.2162E-13	0	3.59	0.8260173	2.314E-12	1
rs1431197	18	53265590	G	A	DCC	0.04	0	6.2195E-13	2	7.18	0.4103404	2.013E-12	1

Table S2

rs7574004	2	27140243	C	T	PRR30	0.04	0	6.2398E-13	0	5.65	0.581706	2.323E-12	1
rs922642	3	43516864	A	T	ANO10	0.05	0	6.2439E-13	17	8.53	0.2880777	1.216E-12	1
rs1484778917	6	29300241	G	C	OR14J1	-0.08	0	6.2477E-13	0	5.67	0.5787425	2.326E-12	1
rs1233583	6	28747789	G	A	ZBED9	-0.08	0	6.2772E-13	0	5.95	0.5453219	2.337E-12	1
rs2702515	4	15045267	T	C	CPEB2	-0.04	0	6.3095E-13	0	4.66	0.7011413	2.348E-12	1
rs11728134	4	15023994	C	G	CPEB2	0.04	0	6.3134E-13	0	4.6	0.7085242	2.35E-12	1
rs62099230	18	53195342	G	A	DCC	0.04	0	6.3205E-13	0	6.42	0.4912041	2.352E-12	1
rs34817112	6	27208849	G	A	PRSS16	-0.07	0	6.353E-13	0	4.97	0.6631902	2.364E-12	1
rs13204572	6	26189128	G	C	HIST1H4D	-0.09	0	6.3534E-13	21	8.92	0.2581791	4.041E-12	1
rs374577630	6	26947660	T	G	HIST1H2BJ	-0.09	0	6.3557E-13	0	5.73	0.5717037	2.365E-12	1
rs62260720	3	49816363	T	A	UBA7	0.06	0	6.3676E-13	0	3.62	0.8227407	2.37E-12	1
rs2232429	6	28391855	T	G	ZSCAN12	-0.09	0	6.3875E-13	0	6.16	0.5210256	2.377E-12	1
rs62100766	18	53210988	G	T	DCC	0.04	0	6.4004E-13	0	6.79	0.4508797	2.382E-12	1
rs62100778	18	53231670	A	G	DCC	0.04	0	6.4061E-13	5	7.42	0.3867858	2.384E-12	1
rs2232426	6	28392882	G	C	ZSCAN12	-0.09	0	6.4123E-13	0	6.25	0.5113198	2.386E-12	1
rs7583384	2	124263464	C	T	CNTNAP5	-0.04	0	6.4429E-13	46	13.12	0.069189	1.8E-12	1
rs12715437	3	49714423	T	C	RNF123	-0.06	0	6.4482E-13	0	3.6	0.8246387	2.399E-12	1
rs1275513	2	27148102	T	C	TCF23	0.04	0	6.4616E-13	0	5.71	0.5741278	2.404E-12	1
rs11720705	3	49716355	A	G	RNF123	-0.06	0	6.4699E-13	0	3.59	0.8253739	2.407E-12	1
rs1233604	6	28766899	G	A	TRIM27	-0.08	0	6.4853E-13	0	6.55	0.4773832	2.413E-12	1
rs9870858	3	49731638	C	T	IP6K1	-0.06	0	6.4879E-13	0	3.6	0.824561	2.414E-12	1
rs7628207	3	49717537	T	C	AMIGO3,GM	-0.06	0	6.5267E-13	0	3.6	0.8246755	2.428E-12	1
rs9291634	4	15019561	T	C	CPEB2	0.04	0	6.577E-13	0	4.6	0.7087918	2.446E-12	1
rs9295778	6	28716406	T	G	ZBED9	0.08	0	6.6148E-13	0	2.87	0.8964493	2.46E-12	1
rs13093525	3	49673011	C	G	APEH	-0.06	0	6.6257E-13	0	3.61	0.8237499	2.464E-12	1
rs13212534	6	25982782	G	A	TRIM38	-0.09	0	6.6702E-13	20	8.76	0.2705918	3.676E-12	1
rs7621797	3	49761431	G	A	IP6K1	0.06	0	6.7134E-13	0	3.6	0.8249488	2.496E-12	1
rs9835157	3	49760336	G	A	IP6K1	0.06	0	6.7134E-13	0	3.6	0.8249488	2.496E-12	1
rs1659677	2	27142747	A	G	PRR30	0.04	0	6.7576E-13	0	5.62	0.5844562	2.513E-12	1
rs67381177	6	28444164	G	C	ZSCAN23	-0.09	0	6.7603E-13	0	6.27	0.5083825	2.514E-12	1

Table S2

rs2439076	2	27142694	T	C	PRR30	0.04	0	6.7777E-13	0	5.57	0.5902216	2.52E-12	1
rs62100767	18	53211669	A	G	DCC	0.04	0	6.7788E-13	0	6.77	0.4532982	2.52E-12	1
rs2232423	6	28398374	A	G	ZSCAN12	-0.09	0	6.8062E-13	0	6.16	0.5212956	2.53E-12	1
rs6426278	1	246120861	C	T	SMYD3	-0.04	0	6.8089E-13	0	4.69	0.6974644	2.531E-12	1
rs13007929	2	124259172	A	G	CNTNAP5	-0.04	0	6.8282E-13	46	13.2	0.0674215	1.851E-12	1
rs17408393	18	53183611	A	G	DCC	0.04	0	6.8914E-13	0	6.48	0.4848662	2.562E-12	1
rs9829155	3	49780017	T	C	IP6K1	0.06	0	6.9073E-13	0	3.61	0.8237281	2.567E-12	1
rs71548333	6	28429899	AAC	A	ZSCAN23	-0.09	0	6.9091E-13	0	6.17	0.5194895	2.568E-12	1
rs13201681	6	28426903	C	T	ZSCAN23	-0.09	0	6.9091E-13	0	6.17	0.5194904	2.568E-12	1
rs62260663	3	49777516	T	C	IP6K1	0.06	0	6.9116E-13	0	3.6	0.8240318	2.569E-12	1
rs35883476	6	28400731	G	C	ZSCAN12	-0.09	0	6.915E-13	0	6.17	0.5195491	2.57E-12	1
rs34546986	6	28394532	G	A	ZSCAN12	-0.09	0	6.9272E-13	0	6.17	0.5196351	2.575E-12	1
rs34871267	6	28396455	G	A	ZSCAN12	-0.09	0	6.9272E-13	0	6.17	0.5196351	2.575E-12	1
rs9836756	3	49785476	G	A	IP6K1	0.06	0	6.9532E-13	0	3.6	0.8240919	2.584E-12	1
rs9851651	3	49787893	C	A	IP6K1	0.06	0	6.9532E-13	0	3.6	0.8240919	2.584E-12	1
rs9851930	3	49787936	G	A	IP6K1	0.06	0	6.9532E-13	0	3.6	0.8240919	2.584E-12	1
rs7637711	3	49792220	A	G	CDHR4	0.06	0	6.954E-13	0	3.6	0.824092	2.584E-12	1
rs9257800	6	29372966	C	T	OR5V1	-0.08	0	7.0096E-13	0	5.13	0.6436893	2.605E-12	1
rs77578399	6	51840614	T	C	PKHD1	-0.07	0	7.0107E-13	43	12.47	0.0861492	1.543E-12	1
rs7651078	3	43457526	A	G	ANO10	0.05	0	7.0211E-13	18	8.57	0.2846909	1.351E-12	1
rs34160346	18	53457069	C	G	DCC	0.04	0	7.1017E-13	45	12.84	0.0760498	1.437E-12	1
rs17487277	18	53192574	C	G	DCC	0.04	0	7.1023E-13	0	6.43	0.4906054	2.639E-12	1
rs13197574	6	28092461	T	C	ZNF165	-0.09	0	7.1028E-13	0	4.57	0.7117287	2.639E-12	1
rs17417046	18	53458627	C	T	DCC	0.04	0	7.1376E-13	45	12.85	0.0758341	1.44E-12	1
rs62097992	18	53309493	T	C	DCC	0.04	0	7.1489E-13	0	6.92	0.4375751	2.656E-12	1
rs62100771	18	53214760	A	G	DCC	0.04	0	7.1634E-13	0	6.74	0.4569115	2.661E-12	1
rs146798531	3	43448336	TC	T	ANO10	0.05	0	7.1659E-13	18	8.6	0.2826522	1.371E-12	1
rs200287431	3	49724134	T	TGGCGGAT	IP6K1	0.06	0	7.3893E-13	0	3.57	0.8282935	2.744E-12	1
rs17488727	18	53234563	A	C	DCC	0.04	0	7.4112E-13	12	7.99	0.3334206	2.752E-12	1
rs57450848	6	51715850	T	C	PKHD1	-0.06	0	7.4118E-13	13	8.07	0.326632	2.752E-12	1

rs10502966	18	53222129	A	G	DCC	0.04	0	7.4216E-13	11	7.9	0.341848	2.756E-12	1
rs138583020	18	53208505	GA	G	DCC	0.04	0	7.4422E-13	0	6.73	0.4579055	2.763E-12	1
rs6885643	5	120824324	T	C	PRR16	0.04	0	7.4865E-13	0	2.44	0.9314431	2.779E-12	1
rs62099232	18	53201321	C	T	DCC	0.04	0	7.4882E-13	0	6.72	0.4585909	2.78E-12	1
rs13202688	6	25993241	A	G	TRIM38	-0.09	0	7.5017E-13	19	8.72	0.2731768	4.09E-12	1
rs62262722	3	49731986	G	C	IP6K1	0.06	0	7.5509E-13	0	3.56	0.8284856	2.803E-12	1
rs35781323	6	28177054	T	C	ZKSCAN8	-0.09	0	7.5525E-13	0	4.57	0.7120393	2.803E-12	1
rs6809879	3	49797138	A	G	CDHR4	0.06	0	7.5946E-13	0	3.47	0.8379124	2.819E-12	1
rs4855882	3	49677921	G	T	APEH	-0.06	0	7.6155E-13	0	3.64	0.8202099	2.826E-12	1
rs66886492	6	28121953	C	T	ZSCAN16	-0.09	0	7.6182E-13	0	4.6	0.7092171	2.827E-12	1
rs72229355	6	25986798	ACCC	A	TRIM38	-0.09	0	7.6253E-13	20	8.79	0.2677209	4.186E-12	1
rs71559072	6	28121703	C	T	ZSCAN16	-0.09	0	7.6343E-13	0	4.59	0.7099044	2.833E-12	1
rs35749575	6	28147040	G	T	ZKSCAN8	-0.09	0	7.6379E-13	0	4.59	0.7095918	2.835E-12	1
rs6456834	6	28732575	T	G	ZBED9	0.08	0	7.6391E-13	0	2.94	0.8904458	2.835E-12	1
rs72846780	6	28151277	T	C	ZKSCAN8	-0.09	0	7.641E-13	0	4.59	0.7097235	2.836E-12	1
rs35098436	6	28166443	T	C	ZKSCAN8	-0.09	0	7.6419E-13	0	4.59	0.7098081	2.836E-12	1
rs34505829	6	28165461	A	T	ZKSCAN8	-0.09	0	7.6438E-13	0	4.59	0.7098017	2.837E-12	1
rs34765154	6	28162672	G	A	ZKSCAN8	-0.09	0	7.6438E-13	0	4.59	0.7098017	2.837E-12	1
rs6795944	3	43538751	C	T	ANO10	0.05	0	7.6685E-13	16	8.36	0.301765	1.549E-12	1
rs34832585	6	28183100	C	T	ZKSCAN8	-0.09	0	7.6736E-13	0	4.59	0.7098745	2.848E-12	1
rs13217984	6	28171932	A	T	ZKSCAN8	-0.09	0	7.6777E-13	0	4.59	0.7102525	2.849E-12	1
rs75782365	6	26408323	T	G	BTN3A1	-0.09	0	7.6827E-13	0	6.71	0.460061	2.851E-12	1
rs34349668	6	28469986	AGAG	A	ZSCAN23	-0.09	0	7.7039E-13	0	6.39	0.4949236	2.859E-12	1
rs2702536	4	14997698	A	G	CPEB2	-0.04	0	7.7198E-13	0	4.6	0.7080828	2.865E-12	1
rs4456576	18	53236485	C	G	DCC	0.04	0	7.7222E-13	12	8.03	0.3303405	2.865E-12	1
rs62084747	17	68083493	T	C	KPNA2	0.04	0	7.7391E-13	36	11.09	0.1347337	8.848E-12	1
rs55690788	6	28468368	T	C	ZSCAN23	-0.09	0	7.7506E-13	0	6.39	0.4951169	2.876E-12	1
rs138024639	6	28468237	TAAACATA	T	ZSCAN23	-0.09	0	7.7687E-13	0	6.39	0.4951858	2.882E-12	1
rs976950	4	14974201	C	A	CPEB2	-0.04	0	7.7775E-13	0	5.4	0.6114198	2.886E-12	1
rs3794923	18	53201148	C	T	DCC	0.04	0	7.7945E-13	0	6.76	0.4543748	2.892E-12	1

Table S2

rs13207082	6	27283600	A	G	POM121L2	-0.09	0	7.827E-13	0	5	0.6605059	2.904E-12	1
rs71909458	6	25986809	ACC	A	TRIM38	-0.09	0	7.8375E-13	19	8.73	0.2727923	4.285E-12	1
rs72231003	6	25986803	TCAA	T	TRIM38	-0.09	0	7.8375E-13	19	8.73	0.2727923	4.285E-12	1
rs34371502	6	28113980	T	C	ZSCAN16	-0.09	0	7.8496E-13	0	4.55	0.7141497	2.912E-12	1
rs1494949	4	14990530	C	T	CPEB2	-0.04	0	7.8633E-13	0	4.65	0.7029093	2.917E-12	1
rs11709734	3	49707802	G	A	RNF123	-0.06	0	7.8645E-13	0	3.65	0.8188443	2.917E-12	1
rs1491985	3	49702074	G	C	RNF123	-0.06	0	7.8645E-13	0	3.65	0.8188443	2.917E-12	1
rs17486305	18	53170750	C	T	DCC	0.04	0	7.87E-13	0	6.62	0.4691074	2.919E-12	1
rs67092078	6	27086993	G	A	HIST1H2BJ	-0.09	0	7.876E-13	0	5.42	0.6090578	2.922E-12	1
rs13203816	6	28111820	T	C	ZSCAN16	-0.09	0	7.9196E-13	0	4.55	0.7151411	2.938E-12	1
rs34166054	6	28098023	T	C	ZNF165	-0.09	0	7.9196E-13	0	4.55	0.7151411	2.938E-12	1
rs34588114	6	28112850	C	A	ZSCAN16	-0.09	0	7.9196E-13	0	4.55	0.7151411	2.938E-12	1
rs34662244	6	28106103	G	A	ZNF165	-0.09	0	7.9196E-13	0	4.55	0.7151411	2.938E-12	1
rs35902873	6	28091171	G	C	ZNF165	-0.09	0	7.9196E-13	0	4.55	0.7151411	2.938E-12	1
rs35952432	6	28107123	C	T	ZSCAN16	-0.09	0	7.9196E-13	0	4.55	0.7151411	2.938E-12	1
rs71559070	6	28071151	G	A	ZNF165	-0.09	0	7.9196E-13	0	4.55	0.7151411	2.938E-12	1
rs72029806	6	28105099	CCGACCTG	C	ZNF165	-0.09	0	7.9196E-13	0	4.55	0.7151411	2.938E-12	1
rs7729632	5	120809845	A	G	PRR16	0.04	0	7.9202E-13	0	1.55	0.9803922	2.938E-12	1
rs6790568	3	49798017	C	T	CDHR4	0.06	0	7.9462E-13	0	3.57	0.8281953	2.947E-12	1
rs13201308	6	28162311	C	T	ZKSCAN8	-0.09	0	7.9522E-13	0	4.62	0.705632	2.95E-12	1
rs1842805	3	43549913	T	C	ANO10	0.05	0	7.9551E-13	16	8.41	0.2978228	1.593E-12	1
rs34661691	6	26173250	T	G	HIST1H2BE	-0.08	0	7.9576E-13	16	8.34	0.3039758	4.609E-12	1
rs41266839	6	26409662	G	C	BTN3A1	-0.09	0	7.9639E-13	0	6.71	0.4598224	2.954E-12	1
rs2072803	6	26392287	G	C	BTN2A2	-0.06	0	7.9759E-13	0	4.74	0.6911337	2.958E-12	1
rs3129682	6	29315895	C	T	OR14J1	-0.08	0	7.9843E-13	0	5.76	0.5679308	2.961E-12	1
rs3130845	6	28955590	A	G	TRIM27	-0.08	0	7.9896E-13	0	6.11	0.5269623	2.963E-12	1
rs55834529	6	27104763	A	G	HIST1H2BJ	-0.09	0	8.0545E-13	0	5.42	0.6089133	2.987E-12	1
rs9468413	6	28721895	C	A	ZBED9	0.08	0	8.055E-13	0	2.99	0.8861204	2.987E-12	1
rs62084693	17	68039994	C	T	KPNA2	-0.04	0	8.057E-13	38	11.39	0.122304	8.662E-12	1
rs7405743	17	68047422	C	T	KPNA2	-0.04	0	8.1003E-13	37	11.17	0.1314145	8.878E-12	1

Table S2

rs1431196	18	53305732	A	G	DCC	0.04	0	8.1017E-13	1	7.07	0.4212522	3.004E-12	1
rs66462181	6	27123882	T	C	HIST1H2BJ	-0.09	0	8.1107E-13	0	5.42	0.6087332	3.007E-12	1
rs9257793	6	29367377	T	C	OR5V1	-0.08	0	8.1301E-13	0	5.12	0.6447947	3.014E-12	1
rs13195291	6	28201463	G	A	ZSCAN9	-0.09	0	8.1621E-13	0	4.58	0.7106306	3.026E-12	1
rs2072806	6	26384865	C	G	BTN2A2	-0.06	0	8.1733E-13	0	4.19	0.7577886	3.03E-12	1
rs10786831	10	104854813	A	G	SORCS3	-0.04	0	8.1888E-13	0	6.41	0.4922893	3.036E-12	1
rs72839445	6	27281907	G	A	POM121L2	-0.09	0	8.2295E-13	0	5.28	0.6254255	3.051E-12	1
rs11663596	18	52980636	T	C	DCC	0.04	0	8.2309E-13	0	0.98	0.9951238	3.051E-12	1
rs199771699	16	71731534	C	CT	AP1G1	0.05	0	8.2643E-13	0	5.38	0.6132556	3.063E-12	1
rs13200214	6	28049472	C	T	ZNF165	-0.09	0	8.2765E-13	0	4.54	0.7154185	3.068E-12	1
rs7503834	17	68037868	G	A	KPNA2	-0.04	0	8.2786E-13	38	11.46	0.1196921	9.341E-12	1
rs71557312	6	26002842	C	G	TRIM38	-0.09	0	8.2839E-13	20	8.76	0.2700701	4.523E-12	1
rs9379875	6	26444504	C	T	BTN3A3	-0.06	0	8.3359E-13	0	4.8	0.6838438	3.09E-12	1
rs35942482	6	26444710	T	A	BTN3A3	-0.06	0	8.3361E-13	0	4.8	0.6838433	3.09E-12	1
rs35706035	16	71724911	G	C	PHLPP2	0.05	0	8.3579E-13	0	5.39	0.6124424	3.098E-12	1
rs3118361	6	28930510	C	T	TRIM27	-0.08	0	8.438E-13	0	6.42	0.4921177	3.127E-12	1
rs13214169	6	25890428	A	G	SLC17A3	-0.08	0	8.4675E-13	25	9.39	0.2257195	3.054E-12	1
rs13197176	6	28161454	C	T	ZKSCAN8	-0.09	0	8.4978E-13	0	4.48	0.7235104	3.149E-12	1
rs3117425	6	29292654	C	T	OR14J1	-0.08	0	8.5385E-13	0	5.47	0.6034072	3.164E-12	1
rs114701812	3	43250817	C	T	SNRK	0.08	0	8.5401E-13	25	9.34	0.22924	3.927E-12	1
rs7717562	5	120820245	A	T	PRR16	0.04	0	8.609E-13	0	2.4	0.9346662	3.189E-12	1
rs9379873	6	26402489	T	C	BTN3A1	-0.06	0	8.6437E-13	0	4.16	0.7612892	3.202E-12	1
rs17528178	6	25983549	C	T	TRIM38	-0.09	0	8.655E-13	20	8.77	0.2694756	4.734E-12	1
rs113722340	5	120884556	GTCAA	G	PRR16	0.04	0	8.656E-13	0	2.84	0.8992978	3.206E-12	1
rs3117427	6	29306359	T	C	OR14J1	-0.08	0	8.6953E-13	0	5.75	0.5694571	3.221E-12	1
rs7714971	5	120713643	G	A	PRR16	0.04	0	8.8191E-13	0	2.79	0.9039689	3.266E-12	1
rs9393718	6	26407254	G	A	BTN3A1	-0.06	0	8.8252E-13	0	4.84	0.6795021	3.268E-12	1
rs13197175	6	28161453	C	T	ZKSCAN8	-0.09	0	8.8334E-13	0	4.63	0.7052134	3.271E-12	1
rs17473118	3	43402042	G	A	ANO10,SNRI	0.05	0	8.8436E-13	1	7.09	0.4193987	2.758E-12	1
rs9358939	6	26416559	C	G	BTN3A1	-0.06	0	8.8659E-13	0	4.84	0.6794209	3.283E-12	1

Table S2

rs74652506	3	43402386	C	T	ANO10,SNRI	0.05	0	8.8991E-13	1	7.1	0.4188228	2.773E-12	1
rs9830730	3	49638442	G	C	BSN	-0.06	0	8.983E-13	0	3.43	0.8428485	3.326E-12	1
rs9824435	3	49636910	C	T	BSN	-0.06	0	8.9842E-13	0	3.43	0.8428485	3.326E-12	1
rs1586827	3	49633791	T	C	BSN	-0.06	0	8.9885E-13	0	3.43	0.8428598	3.328E-12	1
rs2329021	3	49641639	G	A	BSN	-0.06	0	9.0021E-13	0	3.41	0.8442626	3.333E-12	1
rs1994942	4	14980913	G	A	CPEB2	-0.04	0	9.0064E-13	0	6.11	0.527001	3.334E-12	1
rs147932924	3	43401407	C	CG	ANO10,SNRI	0.05	0	9.0498E-13	1	7.11	0.4170714	2.817E-12	1
rs7730659	5	120810188	G	A	PRR16	0.04	0	9.0631E-13	0	1.43	0.9846215	3.355E-12	1
rs34788973	6	27911422	C	A	OR2B2	-0.09	0	9.1202E-13	0	4.47	0.7247652	3.376E-12	1
rs75507005	3	43390937	T	C	ANO10,SNRI	0.05	0	9.1318E-13	1	7.11	0.4179876	2.842E-12	1
rs7437974	4	15005183	C	G	CPEB2	-0.04	0	9.1544E-13	0	4.68	0.6993016	3.388E-12	1
rs78301985	3	43387097	G	C	ANO10,SNRI	0.05	0	9.1582E-13	1	7.08	0.4203436	2.867E-12	1
rs1994943	4	14984384	A	C	CPEB2	-0.04	0	9.1995E-13	0	6.02	0.5378074	3.405E-12	1
rs1352889	3	49614715	T	C	BSN	-0.06	0	9.2313E-13	0	3.42	0.8433577	3.416E-12	1
rs3749971	6	29374998	G	A	OR12D3,OR5	-0.08	0	9.2386E-13	0	7.03	0.4254407	3.455E-12	1
rs7676255	4	14984033	A	C	CPEB2	-0.04	0	9.2433E-13	0	6.02	0.5379484	3.421E-12	1
rs1796520	6	26410572	C	T	BTN3A1	-0.04	0	9.2489E-13	0	2.05	0.9567502	3.423E-12	1
rs62262672	3	49618494	T	A	BSN	0.06	0	9.2967E-13	0	3.42	0.8435296	3.44E-12	1
rs4855848	3	49616024	C	T	BSN	-0.06	0	9.2986E-13	0	3.42	0.8435689	3.441E-12	1
rs4855849	3	49615945	A	G	BSN	-0.06	0	9.2986E-13	0	3.42	0.8435689	3.441E-12	1
rs67035515	3	49619097	CTGAA	C	BSN	-0.06	0	9.309E-13	0	3.42	0.8435608	3.444E-12	1
rs35155148	3	49619983	CT	C	BSN	-0.06	0	9.3094E-13	0	3.42	0.8435609	3.445E-12	1
rs4855833	3	49620008	A	G	BSN	-0.06	0	9.3094E-13	0	3.42	0.8435609	3.445E-12	1
rs13096480	3	49620651	A	G	BSN	-0.06	0	9.3114E-13	0	3.42	0.84356	3.445E-12	1
rs9883000	3	49630258	T	C	BSN	-0.06	0	9.3346E-13	0	3.42	0.8435528	3.454E-12	1
rs115638313	3	43435324	C	A	ANO10	0.05	0	9.3435E-13	0	7.02	0.4263988	2.952E-12	1
rs7633180	3	18657320	C	A	SATB1	0.04	0	9.4023E-13	0	4.55	0.7151784	3.478E-12	1
rs2131108	3	49627957	G	A	BSN	-0.06	0	9.4362E-13	0	3.42	0.8435201	3.491E-12	1
rs4855846	3	49646093	G	A	BSN	-0.06	0	9.4732E-13	0	3.41	0.8451446	3.504E-12	1
rs6446286	3	49644271	A	G	BSN	-0.06	0	9.474E-13	0	3.41	0.8451465	3.505E-12	1

rs4855845	3	49649610	T	C	BSN	-0.06	0	9.4967E-13	0	3.41	0.8450616	3.513E-12	1
rs6774202	3	49650346	T	G	BSN	-0.06	0	9.517E-13	0	3.41	0.8450726	3.52E-12	1
rs67040724	6	27937731	T	C	OR2B6	-0.09	0	9.523E-13	0	4.58	0.7115269	3.522E-12	1
rs2186800	11	113372138	G	A	TTC12	-0.04	0	9.5316E-13	14	8.2	0.315277	4.919E-12	1
rs742090	6	26415409	A	C	BTN3A1	-0.04	0	9.5382E-13	0	2.07	0.9557101	3.528E-12	1
rs10452032	3	49643540	G	A	BSN	-0.06	0	9.5746E-13	0	3.41	0.8451259	3.541E-12	1
rs9358938	6	26387318	C	T	BTN2A2	-0.06	0	9.5815E-13	0	4.02	0.7771631	3.544E-12	1
rs4855885	3	49652766	G	A	BSN	-0.06	0	9.6037E-13	0	3.41	0.8450316	3.552E-12	1
rs1078341	3	49648159	A	G	BSN	-0.06	0	9.6174E-13	0	3.41	0.845051	3.557E-12	1
rs13197633	6	28206979	G	A	ZSCAN9	-0.09	0	9.6719E-13	0	4.62	0.706357	3.577E-12	1
rs35594666	17	68043502	G	A	KPNA2	-0.04	0	9.7121E-13	35	10.87	0.144379	1.023E-11	1
rs8078543	17	68041135	G	T	KPNA2	-0.04	0	9.7365E-13	39	11.52	0.1175361	1.1E-11	1
rs6796823	3	43739421	C	T	ABHD5	-0.04	0	9.7608E-13	0	4.78	0.687176	3.609E-12	1
rs35072899	6	28313764	C	T	ZSCAN31	-0.08	0	9.7847E-13	0	5.72	0.5728939	3.618E-12	1
rs13214023	6	28364364	G	A	ZKSCAN3	-0.08	0	9.7954E-13	0	5.43	0.6080881	3.622E-12	1
rs5812377	15	47344189	AT	A	SEMA6D	0.04	0	9.8825E-13	0	6.47	0.4860803	3.653E-12	1
rs11663824	18	53218866	C	A	DCC	0.04	0	9.8828E-13	0	6.71	0.4601968	3.653E-12	1
rs2315506	4	14985925	T	C	CPEB2	-0.04	0	1.0006E-12	0	5.97	0.5433532	3.698E-12	1
rs13202295	6	27731058	C	T	HIST1H2BL	-0.09	0	1.0007E-12	0	4.96	0.6642733	3.699E-12	1
rs7842714	8	64798447	T	A	CYP7B1	0.04	0	1.0037E-12	5	7.42	0.3869369	3.652E-12	1
rs11642529	16	71765856	G	C	AP1G1	0.05	0	1.0143E-12	0	4.66	0.7014165	3.748E-12	1
rs9860285	3	49317941	G	T	USP4	-0.05	0	1.0226E-12	0	5.2	0.6358987	3.685E-12	1
rs9366656	6	26434402	T	C	BTN3A3	-0.06	0	1.0241E-12	0	4.87	0.6755959	3.784E-12	1
rs62262675	3	49636229	A	G	BSN	0.06	0	1.0246E-12	0	3.39	0.8466486	3.786E-12	1
rs11720542	3	49319994	A	G	USP4	-0.05	0	1.0254E-12	0	5.2	0.6353166	3.695E-12	1
rs6504576	17	68038360	T	C	KPNA2	0.04	0	1.0381E-12	39	11.53	0.1170123	1.167E-11	1
rs62084696	17	68042065	C	G	KPNA2	-0.04	0	1.0389E-12	39	11.53	0.1169812	1.168E-11	1
rs11642526	16	71738424	A	T	AP1G1	0.05	0	1.04E-12	0	4.78	0.6871811	3.842E-12	1
rs11305764	10	3247877	GA	G	PITRM1	0.04	0	1.0414E-12	0	5.89	0.5524703	3.847E-12	1
rs111481406	16	71755707	A	G	AP1G1	0.05	0	1.0432E-12	0	4.69	0.6972003	3.853E-12	1

rs78363264	3	43381120	A	T	ANO10,SNRI	0.05	0	1.0448E-12	1	7.13	0.4150291	3.252E-12	1
rs75236169	17	68035083	T	C	KPNA2	0.04	0	1.045E-12	39	11.48	0.1190478	1.18E-11	1
rs143618681	6	28325631	G	GC	ZSCAN31	-0.08	0	1.0529E-12	0	5.7	0.5749302	3.888E-12	1
rs17488580	18	53230891	G	T	DCC	0.04	0	1.0533E-12	14	8.2	0.3152645	3.89E-12	1
rs56075693	6	28322551	T	G	ZSCAN31	-0.08	0	1.0575E-12	0	5.7	0.5748158	3.905E-12	1
rs62084691	17	68039402	C	T	KPNA2	0.04	0	1.0609E-12	38	11.44	0.1205023	1.19E-11	1
rs1233580	6	28745948	G	C	ZBED9	-0.08	0	1.0617E-12	0	6.17	0.5204932	3.921E-12	1
rs62262673	3	49624201	C	T	BSN	0.06	0	1.0624E-12	0	3.38	0.8472594	3.923E-12	1
rs11710434	3	49308697	T	C	USP4	-0.05	0	1.0647E-12	0	5.18	0.6377224	3.838E-12	1
rs9881860	3	49315089	A	T	USP4	-0.05	0	1.0684E-12	0	5.18	0.6380409	3.852E-12	1
rs138278759	6	28087814	A	AAG	ZNF165	-0.08	0	1.0695E-12	0	4.4	0.7324796	3.949E-12	1
rs13218875	6	27916234	C	T	OR2B2	-0.08	0	1.0716E-12	0	4.72	0.6944804	3.957E-12	1
rs4880603	10	3263952	G	T	PITRM1	0.04	0	1.0729E-12	42	12.13	0.0964608	6.793E-12	1
rs13190888	6	28318208	G	A	ZSCAN31	-0.08	0	1.074E-12	0	5.7	0.574757	3.965E-12	1
rs34661125	6	28314117	G	A	ZSCAN31	-0.08	0	1.0791E-12	0	5.71	0.5745412	3.984E-12	1
rs13199649	6	27901014	C	T	HIST1H2BO	-0.09	0	1.0793E-12	0	4.53	0.716649	3.985E-12	1
rs13193295	6	28035450	C	G	ZNF165	-0.08	0	1.0844E-12	0	4.52	0.7179186	4.003E-12	1
rs138234416	6	28025120	G	A	ZNF165	-0.08	0	1.0847E-12	0	4.52	0.7179268	4.004E-12	1
rs71546588	6	28003671	GC	G	OR2B6	-0.08	0	1.0847E-12	0	4.52	0.7179268	4.004E-12	1
rs71559067	6	28026638	A	T	ZNF165	-0.08	0	1.0847E-12	0	4.52	0.7179268	4.004E-12	1
rs2393667	6	26421117	T	C	BTN3A1	-0.06	0	1.085E-12	0	4.91	0.6710404	4.005E-12	1
rs4638	17	68043234	A	G	KPNA2	-0.04	0	1.0853E-12	36	10.99	0.138894	1.151E-11	1
rs62084702	17	68047041	C	T	KPNA2	-0.04	0	1.0853E-12	36	10.99	0.138894	1.151E-11	1
rs11185541	3	196459456	T	C	RNF168	0.04	0	1.0856E-12	0	3.3	0.8562387	4.008E-12	1
rs34273322	6	26415181	T	A	BTN3A1	-0.06	0	1.0857E-12	0	4.91	0.6710177	4.008E-12	1
rs35453056	17	68043552	A	G	KPNA2	-0.04	0	1.0877E-12	36	11	0.1388202	1.154E-11	1
rs71537572	6	28002937	T	C	OR2B6	-0.08	0	1.0896E-12	0	4.52	0.7182821	4.022E-12	1
rs34950484	6	28310911	G	A	PGBD1	-0.08	0	1.0905E-12	0	5.72	0.5728167	4.025E-12	1
rs13191786	6	28309894	T	G	PGBD1	-0.08	0	1.091E-12	0	5.72	0.5728482	4.027E-12	1
rs36005309	6	28309569	AT	A	PGBD1	-0.08	0	1.0919E-12	0	5.72	0.5728956	4.03E-12	1

Table S2

rs3117143	6	29063365	C	A	OR2W1	-0.08	0	1.0939E-12	0	5.6	0.5873249	4.038E-12	1
rs62084679	17	68033977	G	A	KPNA2	-0.04	0	1.0943E-12	39	11.48	0.1190313	1.235E-11	1
rs56189111	6	28304196	C	A	PGBD1	-0.08	0	1.0954E-12	0	5.72	0.5730971	4.043E-12	1
rs35436081	6	25700114	G	A	SCGN	-0.08	0	1.0956E-12	15	8.33	0.3043894	4.044E-12	1
rs72854513	6	28298177	A	T	PGBD1	-0.08	0	1.0959E-12	0	5.72	0.5731284	4.045E-12	1
rs16891725	6	26478922	C	T	BTN2A1	-0.06	0	1.0982E-12	0	4.91	0.671547	4.053E-12	1
rs148418547	6	27946581	AAATGAAC	A	OR2B6	-0.08	0	1.1095E-12	0	4.45	0.7269497	4.094E-12	1
rs149583087	6	27944659	G	A	OR2B6	-0.08	0	1.1095E-12	0	4.45	0.7269497	4.094E-12	1
rs71559054	6	27929021	A	C	OR2B2	-0.08	0	1.1095E-12	0	4.45	0.7269497	4.094E-12	1
rs67662114	6	27964523	G	A	OR2B6	-0.08	0	1.1187E-12	0	4.5	0.7201845	4.128E-12	1
rs13216117	6	27970706	A	G	OR2B6	-0.08	0	1.1205E-12	0	4.5	0.7202469	4.134E-12	1
rs28360499	6	27977618	G	A	OR2B6	-0.08	0	1.1205E-12	0	4.5	0.7202469	4.134E-12	1
rs36101351	6	27975591	C	T	OR2B6	-0.08	0	1.1205E-12	0	4.5	0.7202469	4.134E-12	1
rs17750747	6	27762555	T	C	HIST1H2BL	-0.08	0	1.1218E-12	0	5.18	0.6378166	4.139E-12	1
rs35501037	6	27771787	T	A	HIST1H2BL	-0.08	0	1.1218E-12	0	5.18	0.6378166	4.139E-12	1
rs72847313	6	27762303	C	T	HIST1H2BL	-0.08	0	1.1218E-12	0	5.18	0.6378166	4.139E-12	1
rs11877496	18	53302532	C	T	DCC	0.04	0	1.1267E-12	0	6.88	0.4416901	3.666E-12	1
rs35565446	6	27177562	C	T	HIST1H2AH	-0.09	0	1.1278E-12	0	5.27	0.6267241	4.161E-12	1
rs4619804	3	18633152	A	C	SATB1	0.04	0	1.1304E-12	0	2.78	0.9046233	4.17E-12	1
rs56305452	17	67994384	C	A	C17orf58	-0.04	0	1.1323E-12	48	13.51	0.060664	1.099E-11	1
rs62084701	17	68046122	C	T	KPNA2	-0.04	0	1.1353E-12	36	11	0.1388116	1.204E-11	1
rs62084704	17	68048913	G	A	KPNA2	-0.04	0	1.1364E-12	36	10.98	0.1395725	1.202E-11	1
rs12752	17	68035784	T	C	KPNA2	0.04	0	1.1435E-12	39	11.48	0.1189824	1.29E-11	1
rs7214869	17	68036141	T	C	KPNA2	0.04	0	1.1442E-12	39	11.48	0.1189752	1.291E-11	1
rs17411548	18	53296573	G	T	DCC	0.04	0	1.1488E-12	0	6.88	0.4418845	4.237E-12	1
rs75756883	17	68040827	T	TG	KPNA2	-0.04	0	1.153E-12	33	10.45	0.164453	1.156E-11	1
rs35343279	1	246131914	T	TA	SMYD3	-0.04	0	1.1555E-12	0	5.39	0.6122874	4.256E-12	1
rs1353307	4	14981669	G	A	CPEB2	-0.04	0	1.1789E-12	0	6.05	0.5341461	4.347E-12	1
rs4334749	4	14983136	C	T	CPEB2	-0.04	0	1.1812E-12	0	6.05	0.5340753	4.355E-12	1
rs5821444	17	67991393	TTAA	T	C17orf58	-0.04	0	1.1815E-12	48	13.48	0.0612789	1.242E-11	1

rs58473556	4	14983554	G	A	CPEB2	-0.04	0	1.1941E-12	0	6.05	0.534499	4.402E-12	1
rs9467632	6	25889478	A	G	SLC17A3	-0.08	0	1.1957E-12	27	9.68	0.2074773	3.891E-12	1
rs11646401	16	21598657	C	G	METTL9	0.04	0	1.2091E-12	7	7.58	0.3712678	5.271E-12	1
rs78549997	3	43255955	G	C	SNRK	0.06	0	1.2458E-12	0	5.91	0.5499924	4.589E-12	1
rs7701853	5	120818638	A	G	PRR16	0.04	0	1.2506E-12	0	1.88	0.9659308	4.607E-12	1
rs10209020	2	27758077	C	T	MRPL33	0.04	0	1.2732E-12	0	4.47	0.7243981	4.689E-12	1
rs75429814	2	27738747	T	C	MRPL33	-0.04	0	1.2741E-12	0	5.27	0.6270524	4.692E-12	1
rs7749823	6	26157851	A	C	HIST1H2BD	-0.08	0	1.284E-12	12	7.99	0.3331441	6.745E-12	1
rs7718040	5	120814567	A	C	PRR16	0.04	0	1.2846E-12	0	1.4	0.9856462	4.73E-12	1
rs77154381	2	27759252	A	G	MRPL33	-0.04	0	1.286E-12	0	4.48	0.7225781	4.735E-12	1
rs2274051	13	98439380	C	T	FARP1	0.04	0	1.2912E-12	0	6.28	0.5071893	4.754E-12	1
rs62381109	5	120822252	G	C	PRR16	0.04	0	1.2959E-12	0	2.05	0.9571506	4.771E-12	1
rs33932084	6	28301047	A	G	PGBD1	-0.08	0	1.2979E-12	0	5.52	0.5965074	4.778E-12	1
rs4955424	3	49345645	A	G	USP4	-0.05	0	1.3037E-12	0	5.32	0.6209961	4.663E-12	1
rs2235251	6	26431754	C	T	BTN3A3	-0.06	0	1.3122E-12	0	4.75	0.6900059	4.83E-12	1
rs138693036	3	43215513	TTGGAGGC	T	SNRK	0.06	0	1.3126E-12	0	5.61	0.5857558	4.831E-12	1
rs968365	4	15042115	G	A	CPEB2	-0.04	0	1.3217E-12	0	4.34	0.7398937	4.864E-12	1
rs546445407	17	46011401	A	C	MAPT	-0.13	0	1.3246E-12	0	5.91	0.5499455	4.875E-12	1
rs56146709	1	246096286	G	A	SMYD3	-0.06	0	1.3279E-12	3	7.26	0.4023952	4.052E-12	1
rs3129173	6	29191852	A	C	OR2J2	-0.08	0	1.3398E-12	0	6.61	0.4703188	4.93E-12	1
rs7766531	6	25886349	T	C	SLC17A3	-0.08	0	1.3533E-12	25	9.45	0.2218758	4.825E-12	1
rs118061440	12	24491578	G	A	BCAT1	-0.1	0	1.3629E-12	0	2.19	0.9483777	5.014E-12	1
rs182656281	17	46013099	C	T	MAPT	-0.13	0	1.3633E-12	0	5.91	0.5507245	5.015E-12	1
rs73074316	3	48364733	A	G	FBXW12	-0.05	0	1.3684E-12	0	3.37	0.8490426	5.034E-12	1
rs35037868	6	27791336	G	C	HIST1H2BL	-0.08	0	1.4071E-12	0	5.04	0.6547148	5.174E-12	1
rs7750960	6	25886989	A	C	SLC17A3	-0.08	0	1.4237E-12	26	9.48	0.2201975	5.05E-12	1
rs2369818	16	21602688	C	T	METTL9	0.04	0	1.4452E-12	10	7.81	0.3495306	6.629E-12	1
rs1624440	6	26433101	G	A	BTN3A3	-0.04	0	1.4544E-12	0	2.24	0.9454679	5.345E-12	1
rs7233123	18	53192510	G	A	DCC	0.04	0	1.4549E-12	0	6.28	0.5080173	5.347E-12	1
rs76887862	3	43279922	G	T	SNRK	0.05	0	1.4709E-12	0	6.6	0.4712586	4.803E-12	1

rs13202291	6	27731078	A	G	HIST1H2BL	-0.08	0	1.4815E-12	0	5.18	0.6379537	5.443E-12	1
rs13193480	6	27734782	A	G	HIST1H2BL	-0.08	0	1.4816E-12	0	5.18	0.6379528	5.443E-12	1
rs13193542	6	27734646	G	T	HIST1H2BL	-0.08	0	1.4816E-12	0	5.18	0.6379528	5.443E-12	1
rs55836177	3	43283602	A	G	SNRK	0.05	0	1.4859E-12	0	6.61	0.4711165	4.869E-12	1
rs1233619	6	28777675	G	A	TRIM27	-0.08	0	1.4915E-12	2	7.15	0.413154	5.809E-12	1
rs13212318	6	27721062	A	C	HIST1H2BL	-0.08	0	1.5008E-12	0	5.18	0.637542	5.513E-12	1
rs34064842	6	27720846	G	T	HIST1H2BL	-0.08	0	1.5031E-12	0	5.18	0.6375555	5.521E-12	1
rs2702557	4	15085841	T	C	CPEB2	-0.04	0	1.5141E-12	0	4.46	0.7253592	5.561E-12	1
rs1416087	1	246074112	A	C	SMYD3	-0.04	0	1.5163E-12	22	9.06	0.2485695	5.569E-12	1
rs4144192	2	124251346	T	C	CNTNAP5	-0.04	0	1.5169E-12	47	13.43	0.0622772	3.847E-12	1
rs2604543	4	15083505	C	T	CPEB2	-0.04	0	1.521E-12	0	4.46	0.725625	5.586E-12	1
rs1416086	1	246074258	T	C	SMYD3	-0.04	0	1.5352E-12	22	9.07	0.2475263	5.634E-12	1
rs61742093	6	27912204	A	G	OR2B2	-0.08	0	1.5528E-12	0	4.44	0.7281211	5.701E-12	1
rs4643406	18	53292521	C	T	DCC	0.04	0	1.5533E-12	0	6.69	0.4620647	5.107E-12	1
rs11873021	18	53310044	A	G	DCC	0.04	0	1.5581E-12	0	7.02	0.4264093	5.72E-12	1
rs1919840	2	124252281	A	G	CNTNAP5	-0.04	0	1.5598E-12	47	13.41	0.0628332	4.457E-12	1
rs34448212	4	15073779	C	CAACT	CPEB2	-0.04	0	1.5622E-12	0	4.76	0.689773	5.735E-12	1
rs2788006	1	246073492	A	G	SMYD3	-0.04	0	1.5647E-12	23	9.19	0.2390793	6.317E-12	1
rs6795061	3	18632221	T	C	SATB1	0.04	0	1.5896E-12	0	2.88	0.8962403	5.834E-12	1
rs34691223	6	28290431	C	A	PGBD1	-0.08	0	1.5902E-12	0	5.24	0.6308006	5.836E-12	1
rs17405916	3	43268092	C	G	SNRK	0.05	0	1.5957E-12	0	6.64	0.4674793	5.212E-12	1
rs3135316	6	28897072	A	G	TRIM27	-0.08	0	1.6013E-12	0	6.67	0.4640945	5.876E-12	1
rs112539101	14	105775228	G	A	IGHG3	0.11	0	1.6257E-12	0	4.52	0.7178926	5.964E-12	1
rs10496632	2	124256744	G	C	CNTNAP5	-0.04	0	1.6263E-12	48	13.49	0.0609306	3.949E-12	1
rs56201719	2	124254481	G	C	CNTNAP5	-0.04	0	1.6317E-12	48	13.5	0.0607914	3.957E-12	1
rs13195402	6	26463347	G	T	BTN2A1	-0.08	0	1.6344E-12	0	6.51	0.4819292	5.995E-12	1
rs6729514	2	124253157	T	A	CNTNAP5	-0.04	0	1.6347E-12	48	13.48	0.0611808	3.977E-12	1
rs389419	6	29553668	C	T	UBD	-0.08	0	1.6368E-12	0	5.13	0.6434974	6.004E-12	1
rs2787969	1	246070477	T	C	SMYD3	-0.04	0	1.6371E-12	24	9.23	0.2362942	6.6E-12	1
rs7721615	5	120820425	A	G	PRR16	0.04	0	1.6379E-12	0	1.87	0.9668816	6.008E-12	1

rs62170849	2	124255349	T	C	CNTNAP5	-0.04	0	1.643E-12	47	13.26	0.0659282	4.043E-12	1
rs34218844	6	28322870	T	C	ZSCAN31	-0.08	0	1.6443E-12	0	5.45	0.6050862	6.031E-12	1
rs1796521	6	26421164	T	C	BTN3A1	-0.04	0	1.6521E-12	0	1.98	0.9608376	6.059E-12	1
rs56023784	3	43397931	T	C	ANO10,SNRI	0.05	0	1.6586E-12	3	7.29	0.3991738	5.024E-12	1
rs10623191	3	49640044	C	CAT	BSN	-0.06	0	1.6668E-12	0	3.06	0.8790826	6.113E-12	1
rs76520479	16	71691610	T	G	PHLPP2	0.05	0	1.6876E-12	0	4.73	0.6922819	6.188E-12	1
rs12923444	16	21628389	A	C	METTL9	0.04	0	1.6917E-12	12	8.02	0.3305251	8.068E-12	1
rs35806784	1	246072806	CTT	C	SMYD3	-0.04	0	1.6937E-12	24	9.23	0.2368244	6.21E-12	1
rs2788009	1	246075296	A	G	SMYD3	-0.04	0	1.6996E-12	23	9.09	0.2459136	6.894E-12	1
rs10900742	5	120825347	G	A	PRR16	0.04	0	1.7068E-12	0	2.45	0.9307776	6.257E-12	1
rs2788008	1	246073545	G	T	SMYD3	-0.04	0	1.7095E-12	24	9.22	0.2369988	6.267E-12	1
rs7624323	3	18657090	G	A	SATB1	0.04	0	1.7177E-12	0	4.73	0.6923168	6.296E-12	1
rs5846999	3	18629431	T	TA	SATB1	0.04	0	1.7202E-12	0	2.89	0.8949602	6.305E-12	1
rs6833049	4	14975786	C	T	CPEB2	-0.04	0	1.7254E-12	0	6.25	0.5107362	6.324E-12	1
rs1796522	6	26422032	G	A	BTN3A1	-0.04	0	1.7347E-12	0	2.14	0.9518201	6.358E-12	1
rs150657497	5	120820992	C	CTTAT	PRR16	0.04	0	1.7401E-12	0	1.87	0.9666416	6.377E-12	1
rs4588383	3	18628465	A	C	SATB1	0.04	0	1.7469E-12	0	2.89	0.8953357	6.402E-12	1
rs112439757	16	72134438	C	T	PMFBP1	0.04	0	1.7615E-12	0	2.84	0.8994893	6.454E-12	1
rs10154992	3	49238644	C	T	CCDC36	-0.04	0	1.795E-12	25	9.4	0.2251332	4.596E-12	1
rs1233578	6	28744470	A	G	ZBED9	-0.08	0	1.8261E-12	0	2.77	0.9054451	6.687E-12	1
rs1417998	6	26161791	T	A	HIST1H2BD	-0.08	0	1.8291E-12	16	8.43	0.2963567	1.083E-11	1
rs1529290	2	124246945	T	C	CNTNAP5	-0.04	0	1.8503E-12	48	13.54	0.0599269	4.431E-12	1
rs34937122	17	68079772	A	G	KPNA2	0.04	0	1.8738E-12	37	11.28	0.1268716	2.113E-11	1
rs34432857	6	27718046	G	A	HIST1H2BL	-0.08	0	1.886E-12	0	5.16	0.6400435	6.903E-12	1
rs6923139	6	26313120	C	T	HIST1H4H	-0.08	0	1.8861E-12	0	5.4	0.6118232	6.903E-12	1
rs34409918	6	27717569	A	G	HIST1H2BL	-0.08	0	1.8877E-12	0	5.16	0.6400861	6.909E-12	1
rs28483507	9	137388054	T	C	EXD3	0.04	0	1.8961E-12	31	10.17	0.1792143	1.035E-11	1
rs12493769	3	43418132	A	G	ANO10,SNRI	0.05	0	1.8963E-12	4	7.31	0.3971627	5.721E-12	1
rs62084742	17	68079426	A	G	KPNA2	0.04	0	1.9032E-12	38	11.38	0.1227497	2.155E-11	1
rs66868086	6	27898124	A	T	HIST1H2BO	-0.08	0	1.9219E-12	0	4.8	0.6845186	7.032E-12	1

rs2076030	6	26426628	G	A	BTN3A1	-0.06	0	1.9246E-12	0	4.8	0.6837468	7.042E-12	1
rs2491373	10	104877990	T	C	SORCS3	-0.04	0	1.9485E-12	15	8.28	0.3087632	7.101E-12	1
rs12953529	18	53442603	A	G	DCC	0.04	0	1.9761E-12	45	12.95	0.0733097	4.567E-12	1
rs13004388	2	124246528	C	T	CNTNAP5	-0.04	0	1.9889E-12	47	13.31	0.0648566	4.973E-12	1
rs4296324	18	53108726	C	G	DCC	0.04	0	2.0375E-12	0	3.07	0.8780209	7.449E-12	1
rs59956089	17	67964738	T	C	BPTF	0.04	0	2.0517E-12	32	10.37	0.168454	1.969E-11	1
rs34107459	6	26328125	T	C	BTN3A2	-0.08	0	2.0553E-12	2	7.17	0.411466	7.948E-12	1
rs55706012	6	26266083	A	C	HIST1H3G	-0.08	0	2.0725E-12	1	7.1	0.4189897	7.828E-12	1
rs190517593	17	46107606	A	T	KANSL1	-0.13	0	2.0761E-12	0	6	0.5400353	7.588E-12	1
rs17751184	6	27807250	C	T	HIST1H2BL	-0.08	0	2.0769E-12	0	5.14	0.6428127	7.591E-12	1
rs34718920	6	27816163	C	T	HIST1H2BM	-0.08	0	2.0769E-12	0	5.14	0.6428127	7.591E-12	1
rs35706352	6	27826214	G	A	HIST1H4J	-0.08	0	2.0769E-12	0	5.14	0.6428127	7.591E-12	1
rs67101035	6	27831109	C	G	HIST1H4K	-0.08	0	2.0769E-12	0	5.14	0.6428127	7.591E-12	1
rs71546575	6	27837243	GTA	G	HIST1H2BN	-0.08	0	2.0769E-12	0	5.14	0.6428127	7.591E-12	1
rs71559050	6	27829638	C	A	HIST1H4K	-0.08	0	2.0769E-12	0	5.14	0.6428127	7.591E-12	1
rs13212651	6	27839207	A	G	HIST1H2BN	-0.08	0	2.0783E-12	0	5.14	0.6428077	7.595E-12	1
rs35819751	6	27842791	A	G	HIST1H2BN	-0.08	0	2.0839E-12	0	5.14	0.6429044	7.616E-12	1
rs13220522	6	26316067	G	A	HIST1H4H	-0.08	0	2.0864E-12	1	7.09	0.4194733	7.868E-12	1
rs34706883	6	27837477	A	C	HIST1H2BN	-0.08	0	2.0975E-12	0	5.13	0.644043	7.665E-12	1
rs4321259	18	53097270	G	A	DCC	0.04	0	2.1015E-12	0	3.06	0.8794868	7.679E-12	1
rs13195401	6	26463346	G	T	BTN2A1	-0.08	0	2.1105E-12	0	6.46	0.4870745	7.711E-12	1
rs62100765	18	53209048	C	T	DCC	0.04	0	2.1171E-12	0	6.71	0.4593607	7.735E-12	1
rs1183979592	6	27827806	G	C	HIST1H4J	-0.08	0	2.1199E-12	0	5.18	0.6375691	7.745E-12	1
rs9467704	6	26319258	C	T	HIST1H4H	-0.08	0	2.1302E-12	0	4.89	0.6736523	7.782E-12	1
rs408623	6	29551777	G	T	UBD	-0.08	0	2.1526E-12	0	5.16	0.6401408	7.863E-12	1
rs4305732	6	151919313	A	G	ESR1	-0.04	0	2.1584E-12	46	13.15	0.0685581	7.883E-12	1
rs67998226	6	28270281	T	C	RP5-874C20.8	-0.08	0	2.179E-12	0	5.4	0.6110709	7.958E-12	1
rs76473767	16	71610103	T	G	MARVELD3	0.05	0	2.1826E-12	0	5.33	0.6200337	7.97E-12	1
rs413670	6	29558785	G	A	GABBR1,UB	-0.08	0	2.1848E-12	0	5.16	0.6409444	7.978E-12	1
rs2082923	3	49217739	T	C	CCDC36	-0.04	0	2.1994E-12	24	9.32	0.2305508	5.731E-12	1

Table S2

rs11121	2	27137019	C	T	PRR30	0.04	0	2.2111E-12	12	7.96	0.3362845	9.621E-12	1
rs7526153	1	246133421	C	T	SMYD3	-0.04	0	2.219E-12	0	5.17	0.6395892	8.041E-12	1
rs34878803	6	28282402	T	C	PGBD1	-0.08	0	2.2206E-12	0	5.3	0.6232592	8.107E-12	1
rs6446257	3	49216059	C	T	CCDC36	-0.04	0	2.2585E-12	24	9.32	0.2302836	5.886E-12	1
rs13194781	6	27847861	A	G	HIST1H2BN	-0.08	0	2.2623E-12	0	5.14	0.6430949	8.257E-12	1
rs1245129	11	113148737	T	C	NCAM1	0.04	0	2.2963E-12	21	8.87	0.2618825	1.059E-11	1
rs2604548	4	15088829	C	T	CPEB2	-0.04	0	2.3108E-12	0	3.79	0.8033242	8.431E-12	1
rs34396849	6	28283178	A	C	PGBD1	-0.08	0	2.3163E-12	0	5.22	0.6325418	8.451E-12	1
rs61733127	16	71649815	A	G	PHLPP2	0.05	0	2.3248E-12	0	5.31	0.6221414	8.482E-12	1
rs17695758	6	27869405	T	C	HIST1H1B	-0.08	0	2.3249E-12	0	5.13	0.6435679	8.482E-12	1
rs17763089	6	27867440	G	A	HIST1H1B	-0.08	0	2.3263E-12	0	5.13	0.6435539	8.487E-12	1
rs13199906	6	27866361	C	G	HIST1H1B	-0.08	0	2.3274E-12	0	5.13	0.6435566	8.491E-12	1
rs9330556	17	68073785	T	G	KPNA2	0.04	0	2.3294E-12	33	10.6	0.1569339	2.381E-11	1
rs35202262	6	27831736	C	T	HIST1H4K	-0.08	0	2.331E-12	0	4.82	0.6821015	8.504E-12	1
rs35339855	6	27831742	T	A	HIST1H4K	-0.08	0	2.331E-12	0	4.82	0.6821015	8.504E-12	1
rs425335	6	27831749	T	C	HIST1H4K	-0.08	0	2.331E-12	0	4.82	0.6821015	8.504E-12	1
rs34194357	6	27850757	A	G	HIST1H2BN	-0.08	0	2.3336E-12	0	5.13	0.6435277	8.513E-12	1
rs36116761	6	27850704	C	G	HIST1H2BN	-0.08	0	2.3336E-12	0	5.13	0.6435277	8.513E-12	1
rs6940007	6	25931729	A	C	SLC17A2	-0.08	0	2.3494E-12	25	9.4	0.2251993	8.57E-12	1
rs12957162	18	54817068	T	A	RAB27B	-0.04	0	2.3529E-12	0	6.95	0.4340262	8.195E-12	1
rs13096411	3	29526168	T	G	RBMS3,RP11	-0.05	0	2.3777E-12	56	16.04	0.0247792	3.481E-12	6.71882E-13
rs2731465	12	60396817	C	T	SLC16A7	-0.04	0	2.3834E-12	61	18	0.0119703	1.34E-11	1
rs6769821	3	49207224	G	A	CCDC36	-0.04	0	2.389E-12	24	9.31	0.2312	6.228E-12	1
rs4955427	3	49223213	T	C	CCDC36	-0.04	0	2.4032E-12	25	9.45	0.2221191	6.233E-12	1
rs9517313	13	98453638	G	C	FARP1,STK2	0.04	0	2.4191E-12	4	7.34	0.3945577	8.82E-12	1
rs9867285	3	49211948	A	G	CCDC36	-0.04	0	2.4219E-12	25	9.35	0.2283154	6.312E-12	1
rs2655871	12	60394611	A	G	SLC16A7	-0.04	0	2.4238E-12	61	17.99	0.0120015	1.365E-11	1
rs1119988	12	60393384	T	C	SLC16A7	-0.04	0	2.4295E-12	61	17.99	0.0120063	1.368E-11	1
rs4955439	3	49208212	T	G	CCDC36	-0.04	0	2.4318E-12	25	9.34	0.2288507	6.336E-12	1
rs13205911	6	28156336	C	T	ZKSCAN8	-0.08	0	2.4372E-12	0	4.78	0.687259	8.885E-12	1

Table S2

rs215890	16	21694516	T	A	OTOA	0.04	0	2.4436E-12	5	7.39	0.3890804	9.822E-12	1
rs7626076	3	49260706	G	A	CCDC36	-0.04	0	2.4626E-12	24	9.31	0.2310101	6.393E-12	1
rs12204714	6	151914204	C	T	ESR1	-0.04	0	2.4702E-12	47	13.27	0.0657328	9.003E-12	1
rs2655879	12	60401210	C	T	SLC16A7	-0.04	0	2.4931E-12	60	17.82	0.0128137	1.421E-11	1
rs147681743	3	49213147	G	GAC	CCDC36	-0.04	0	2.4962E-12	25	9.39	0.2255659	6.498E-12	1
rs1910677	12	60401161	G	A	SLC16A7	-0.04	0	2.5023E-12	60	17.84	0.0127159	1.423E-11	1
rs6903228	6	25902819	A	G	SLC17A2	-0.08	0	2.508E-12	25	9.39	0.2258341	9.139E-12	1
rs7619016	3	49235156	C	T	CCDC36	-0.04	0	2.52E-12	25	9.34	0.2290503	6.514E-12	1
rs62085660	17	68101598	C	G	KPNA2	-0.04	0	2.5231E-12	22	8.99	0.2533623	1.888E-11	1
rs1352653	10	104876605	G	A	SORCS3	-0.04	0	2.536E-12	15	8.24	0.3116162	9.209E-12	1
rs77145152	3	43307420	C	T	SNRK	0.05	0	2.5546E-12	0	6.43	0.4905426	8.479E-12	1
rs78741618	11	113045348	ACTT	A	NCAM1	0.04	0	2.558E-12	0	5.22	0.633147	9.318E-12	1
rs111815923	1	246088554	G	C	SMYD3	-0.06	0	2.56E-12	0	6.96	0.4329624	8.359E-12	1
rs62404522	6	19306883	T	C	ID4	0.05	0	2.5612E-12	70	24.11	0.0010876	5.416E-13	1.00255E-13
rs8086812	18	53212974	C	G	DCC	0.04	0	2.5652E-12	0	6.94	0.4348196	9.344E-12	1
rs2099526	3	49232325	G	T	CCDC36	-0.04	0	2.5746E-12	24	9.32	0.2305708	6.685E-12	1
rs9467701	6	26311942	G	C	HIST1H4H	-0.08	0	2.5771E-12	0	5.09	0.6494554	9.387E-12	1
rs6902389	6	26321925	A	G	HIST1H4H	-0.08	0	2.5825E-12	0	5.08	0.6496353	9.406E-12	1
rs6902392	6	26321887	C	T	HIST1H4H	-0.08	0	2.5838E-12	0	5.08	0.6496259	9.411E-12	1
rs4955414	3	49280294	C	G	USP4	-0.04	0	2.5857E-12	25	9.34	0.2291539	6.687E-12	1
rs6908156	6	26322633	C	T	HIST1H4H	-0.08	0	2.586E-12	0	5.08	0.6496834	9.418E-12	1
rs2496023	10	104876923	G	A	SORCS3	-0.04	0	2.5998E-12	15	8.26	0.3098615	9.432E-12	1
rs4955417	3	49260772	T	C	CCDC36	-0.04	0	2.6082E-12	24	9.28	0.2329079	6.833E-12	1
rs6778080	3	49279905	T	C	USP4	-0.04	0	2.6154E-12	25	9.35	0.2285896	6.758E-12	1
rs9467635	6	25908938	A	C	SLC17A2	-0.08	0	2.6421E-12	25	9.36	0.2277747	1.106E-11	1
rs11130187	3	49270439	T	C	C3orf62	-0.04	0	2.6478E-12	25	9.34	0.2294331	6.849E-12	1
rs138334840	3	43323768	TACA	T	SNRK	0.05	0	2.6542E-12	0	6.45	0.4879674	8.801E-12	1
rs13199772	6	27866307	A	G	HIST1H2BN	-0.08	0	2.668E-12	0	5.14	0.642436	9.712E-12	1
rs13195728	6	27803328	T	C	HIST1H2BL	-0.08	0	2.6727E-12	0	4.94	0.667156	9.729E-12	1
rs74463492	3	43344690	A	G	SNRK	0.05	0	2.6802E-12	0	6.53	0.479752	8.855E-12	1

Table S2

rs79877168	3	43325905	T	G	SNRK	0.05	0	2.6905E-12	0	6.46	0.487451	8.918E-12	1
rs35710087	3	43302871	A	AT	SNRK	0.05	0	2.7028E-12	0	6.42	0.4921512	8.962E-12	1
rs4955443	3	49249185	T	G	CCDC36	-0.04	0	2.7123E-12	24	9.31	0.2314715	7.057E-12	1
rs6903015	6	26322298	A	G	HIST1H4H	-0.08	0	2.7227E-12	0	5.09	0.6484593	9.908E-12	1
rs11130186	3	49238395	A	G	CCDC36	-0.04	0	2.7629E-12	24	9.29	0.2323243	7.132E-12	1
rs10865752	3	18642718	T	C	SATB1	0.04	0	2.7683E-12	0	2.86	0.8975907	1.007E-11	1
rs7638475	3	18642375	G	A	SATB1	0.04	0	2.777E-12	0	2.9	0.8945093	1.01E-11	1
rs6808036	3	49199006	T	G	CCDC36	-0.04	0	2.7796E-12	25	9.37	0.2270049	7.242E-12	1
rs13207673	6	25900905	C	T	SLC17A2	-0.08	0	2.7898E-12	25	9.44	0.2225219	9.55E-12	1
rs79621756	3	43355731	A	G	ANO10,SNRI	0.05	0	2.7962E-12	0	6.47	0.4855875	9.248E-12	1
rs2491381	10	104861000	A	C	SORCS3	-0.04	0	2.7967E-12	16	8.37	0.3010958	1.016E-11	1
rs35942569	6	26338903	A	G	BTN3A2	-0.08	0	2.7968E-12	0	5.99	0.5410656	1.017E-11	1
rs728423	10	104875920	T	C	SORCS3	-0.04	0	2.7987E-12	16	8.41	0.2978762	1.011E-11	1
rs34525648	6	25914625	G	A	SLC17A2	-0.08	0	2.8001E-12	25	9.39	0.2261208	1.019E-11	1
rs77245213	3	43359263	T	C	ANO10,SNRI	0.05	0	2.8095E-12	0	6.49	0.4833438	9.27E-12	1
rs62381112	5	120833988	G	C	PRR16	0.04	0	2.8259E-12	0	2.74	0.9083418	1.028E-11	1
rs56403804	3	43326529	G	A	SNRK	0.05	0	2.8312E-12	0	6.51	0.4819258	9.33E-12	1
rs4835267	4	145903626	C	T	ZNF827	0.04	0	2.834E-12	45	12.93	0.0738962	2.299E-11	1
rs13208096	6	28257533	C	G	NKAPL	-0.08	0	2.841E-12	0	5.33	0.6192266	1.033E-11	1
rs12544798	8	10172089	C	G	MSRA	0.04	0	2.8601E-12	0	1.63	0.9774267	1.04E-11	1
rs138887541	6	28248649	A	AGAAACCT	ZKSCAN4	-0.08	0	2.8753E-12	0	5.34	0.6191439	1.045E-11	1
rs3734523	6	25925759	G	A	SLC17A2	-0.08	0	2.8863E-12	23	9.19	0.2393666	1.044E-11	1
rs35469757	3	18622235	C	CT	SATB1	0.04	0	2.8877E-12	0	2.96	0.8886495	1.05E-11	1
rs9848614	3	18653998	T	G	SATB1	0.04	0	2.9069E-12	0	2.96	0.8883304	1.057E-11	1
rs74885759	18	53191761	GTT	G	DCC	0.04	0	2.935E-12	0	6.88	0.4419056	1.067E-11	1
rs34569761	6	26334078	A	G	BTN3A2	-0.08	0	2.9513E-12	0	5.13	0.6445162	1.073E-11	1
rs62084759	17	68101151	A	G	KPNA2	-0.04	0	2.954E-12	18	8.54	0.2872403	1.937E-11	1
rs149177087	18	53060184	CTGT	C	DCC	0.04	0	2.9595E-12	0	2.89	0.89488	1.076E-11	1
rs9310571	3	18654576	A	G	SATB1	0.04	0	2.9631E-12	0	2.96	0.8886923	1.077E-11	1
rs12576197	11	113050349	C	T	NCAM1	0.04	0	2.9921E-12	0	5.2	0.6356692	1.087E-11	1

rs11128895	3	18655424	C	T	SATB1	0.04	0	3.0005E-12	0	2.94	0.8903238	1.09E-11	1
rs9379882	6	26510848	C	T	BTN1A1	-0.06	0	3.0048E-12	0	6.8	0.4503619	1.092E-11	1
rs215894	16	21678470	T	A	OTOA	0.04	0	3.0134E-12	23	9.13	0.2433409	1.759E-11	1
rs17587226	6	25962076	C	T	TRIM38	-0.08	0	3.0487E-12	30	10.09	0.1833013	1.001E-11	1
rs75687318	1	246134063	C	A	SMYD3	-0.06	0	3.0824E-12	0	6.83	0.4468747	9.731E-12	1
rs9461223	6	25918107	T	C	SLC17A2	-0.08	0	3.1268E-12	24	9.22	0.2374901	1.135E-11	1
rs9855153	3	18651731	A	G	SATB1	0.04	0	3.1379E-12	0	2.98	0.8865862	1.139E-11	1
rs3091404	16	21646945	C	T	IGSF6,METT	0.04	0	3.1582E-12	9	7.75	0.3555467	1.386E-11	1
rs67491322	6	25961124	C	T	TRIM38	-0.08	0	3.1604E-12	30	10.09	0.1834989	1.036E-11	1
rs7406141	17	68025870	T	C	KPNA2	-0.04	0	3.1694E-12	44	12.7	0.0796859	3.672E-11	1
rs11128896	3	18655438	T	A	SATB1	0.04	0	3.1781E-12	0	2.99	0.8862449	1.154E-11	1
rs10502971	18	53361591	G	A	DCC	0.04	0	3.1794E-12	5	7.43	0.3859156	1.154E-11	1
rs116652041	3	43358217	C	A	ANO10,SNRI	0.05	0	3.2086E-12	0	6.43	0.4903579	1.063E-11	1
rs6931120	6	25925406	G	A	SLC17A2	-0.08	0	3.2229E-12	24	9.23	0.2366021	1.167E-11	1
rs62405343	6	19219384	C	T	ID4	0.05	0	3.2422E-12	67	21.25	0.0034217	1.521E-12	2.8802E-13
rs1892253	6	25782086	T	G	SLC17A1	0.08	0	3.2489E-12	21	8.96	0.2552279	1.179E-11	1
rs3799383	6	26510520	C	T	BTN1A1	-0.06	0	3.254E-12	0	6.69	0.4613979	1.181E-11	1
rs13205211	6	28235278	T	G	ZSCAN9	-0.08	0	3.2559E-12	0	5.31	0.6222299	1.182E-11	1
rs6939978	6	26328234	G	C	BTN3A2	-0.08	0	3.2675E-12	0	5.07	0.6518668	1.186E-11	1
rs6939799	6	26328138	G	A	BTN3A2	-0.08	0	3.2704E-12	0	5.07	0.6518594	1.187E-11	1
rs6910549	6	25780583	A	G	SLC17A4	0.08	0	3.2753E-12	21	8.97	0.2548939	1.436E-11	1
rs9467708	6	26327728	T	C	BTN3A2	-0.08	0	3.2808E-12	0	5.07	0.6515862	1.19E-11	1
rs34354280	1	246105859	A	G	SMYD3	-0.06	0	3.2895E-12	0	6.83	0.4466684	1.026E-11	1
rs7232543	18	53192387	A	G	DCC	0.04	0	3.2997E-12	0	6.67	0.4637934	1.197E-11	1
rs6550575	3	18689867	C	G	SATB1	0.04	0	3.3068E-12	0	4.05	0.7741613	1.2E-11	1
rs78756554	3	43369882	C	T	ANO10,SNRI	0.05	0	3.3069E-12	0	6.41	0.4926129	1.1E-11	1
rs113201630	18	53191449	TC	T	DCC	0.04	0	3.3281E-12	0	6.95	0.4339214	1.207E-11	1
rs6504574	17	68026895	G	A	KPNA2	-0.04	0	3.3332E-12	44	12.71	0.0795673	3.846E-11	1
rs7406031	17	68025637	C	T	KPNA2	-0.04	0	3.3332E-12	44	12.71	0.0795673	3.846E-11	1
rs6864919	5	120824452	G	A	PRR16	0.04	0	3.3337E-12	0	1.72	0.9738551	1.209E-11	1

Table S2

rs1937126	6	25769380	G	C	SLC17A4	0.08	0	3.347E-12	22	9.02	0.2513249	1.471E-11	1
rs141331058	17	67840458	CTTG	C	BPTF	0.04	0	3.3553E-12	44	12.71	0.0795237	3.598E-11	1
rs1323611140	6	26740598	AAC	A	ZNF322	-0.08	0	3.3671E-12	0	6.25	0.510671	1.221E-11	1
rs3857546	6	26157534	C	T	HIST1H1E	-0.08	0	3.3691E-12	8	7.66	0.363672	1.583E-11	1
rs3131337	6	28828294	G	C	TRIM27	-0.08	0	3.3828E-12	3	7.25	0.4036586	1.338E-11	1
rs4327409	3	18656668	G	A	SATB1	0.04	0	3.3833E-12	0	2.99	0.8858107	1.227E-11	1
rs7503096	17	68052679	C	T	KPNA2	0.04	0	3.3837E-12	35	10.79	0.1481895	3.371E-11	1
rs61472021	6	26089797	T	C	HFE	-0.08	0	3.4124E-12	4	7.3	0.3987152	1.237E-11	1
rs45509595	6	27873148	T	C	HIST1H4L	-0.08	0	3.4234E-12	0	5.2	0.6354518	1.241E-11	1
rs529266437	3	44673430	G	A	ZNF35	0.08	0	3.4349E-12	0	5.01	0.6582173	1.245E-11	1
rs1168855534	3	43283899	TCACACAC	T	SNRK	0.05	0	3.4514E-12	0	4.22	0.754016	1.251E-11	1
rs9467707	6	26327677	G	C	BTN3A2	-0.08	0	3.4807E-12	0	5.08	0.6504915	1.262E-11	1
rs10900744	5	120854664	C	T	PRR16	0.04	0	3.4842E-12	0	3.25	0.8614254	1.263E-11	1
rs185158567	17	45963361	A	G	MAPT	-0.12	0	3.5298E-12	0	5.63	0.5835837	1.279E-11	1
rs7429661	3	49191367	G	A	C3orf84	-0.04	0	3.5334E-12	25	9.42	0.2235801	9.199E-12	1
rs1245131	11	113144264	G	A	NCAM1	0.04	0	3.5458E-12	23	9.18	0.2402204	1.636E-11	1
rs1892251	6	25769121	T	C	SLC17A4	0.08	0	3.5488E-12	22	9.07	0.2477679	1.286E-11	1
rs13195279	6	25919203	T	A	SLC17A2	-0.08	0	3.5517E-12	26	9.56	0.2151224	1.2E-11	1
rs35169013	6	25917799	A	C	SLC17A2	-0.08	0	3.5517E-12	26	9.56	0.2151224	1.2E-11	1
rs1367633	18	53221586	G	A	DCC	0.04	0	3.5629E-12	13	8.07	0.3265912	1.291E-11	1
rs55906054	18	53213793	A	G	DCC	0.04	0	3.6034E-12	0	6.85	0.4443624	1.306E-11	1
rs142708876	10	104880626	A	ACTT	SORCS3	-0.04	0	3.6176E-12	16	8.37	0.3011859	1.291E-11	1
rs17586784	6	25934999	C	A	SLC17A2	-0.08	0	3.6346E-12	26	9.57	0.2140931	1.219E-11	1
rs34116162	6	25937424	G	A	SLC17A2	-0.08	0	3.6433E-12	26	9.56	0.2149221	1.223E-11	1
rs34233736	6	25933871	A	T	SLC17A2	-0.08	0	3.6449E-12	26	9.57	0.214183	1.223E-11	1
rs4373086	3	18649345	G	A	SATB1	0.04	0	3.6566E-12	0	3.12	0.8741591	1.324E-11	1
rs34804024	6	25925268	C	T	SLC17A2	-0.08	0	3.6614E-12	26	9.57	0.214552	1.232E-11	1
rs17586553	6	25928547	G	A	SLC17A2	-0.08	0	3.6622E-12	26	9.57	0.2145651	1.232E-11	1
rs948178	11	113324873	A	G	TTC12	-0.04	0	3.6636E-12	0	3.59	0.825136	1.327E-11	1
rs67844427	6	25930792	G	A	SLC17A2	-0.08	0	3.6637E-12	26	9.57	0.2145635	1.233E-11	1

rs62097947	18	53029561	A	T	DCC	0.04	0	3.6829E-12	0	2.83	0.90033	1.334E-11	1
rs4129439	18	53062713	T	C	DCC	0.04	0	3.6926E-12	0	2.94	0.8908696	1.337E-11	1
rs1245133	11	113140999	A	G	NCAM1	0.04	0	3.6946E-12	23	9.17	0.2409065	1.694E-11	1
rs9852522	3	18638989	G	A	SATB1	0.04	0	3.7013E-12	0	2.8	0.9029501	1.34E-11	1
rs142831935	3	44685044	C	T	ZNF35	0.08	0	3.7151E-12	0	5.03	0.6566711	1.345E-11	1
rs9819708	3	18646981	G	T	SATB1	0.04	0	3.7258E-12	0	3.11	0.8742751	1.349E-11	1
rs11130183	3	49191513	A	G	C3orf84	-0.04	0	3.7278E-12	25	9.38	0.2263681	9.767E-12	1
rs2295593	6	26501540	C	T	BTN1A1	-0.06	0	3.7454E-12	0	6.65	0.4667214	1.356E-11	1
rs201241244	5	120837302	T	C	PRR16	0.04	0	3.7508E-12	0	2.82	0.9010433	1.358E-11	1
rs6550553	3	18639814	G	A	SATB1	0.04	0	3.7518E-12	0	2.8	0.9025893	1.358E-11	1
rs62100772	18	53214927	G	A	DCC	0.04	0	3.8173E-12	0	6.95	0.4345235	1.382E-11	1
rs4267657	3	18636756	G	C	SATB1	0.04	0	3.8358E-12	0	2.75	0.9068385	1.388E-11	1
rs111911908	5	153022494	C	T	GRIA1	0.09	0	3.8469E-12	0	2.63	0.9168216	1.392E-11	1
rs112669240	5	153027190	T	C	GRIA1	0.09	0	3.8469E-12	0	2.63	0.9168216	1.392E-11	1
rs11959709	5	120831744	C	A	PRR16	0.04	0	3.8508E-12	0	2.66	0.9146958	1.394E-11	1
rs13191776	6	25955513	C	T	TRIM38	-0.08	0	3.8514E-12	26	9.54	0.216439	1.297E-11	1
rs11959710	5	120831776	C	T	PRR16	0.04	0	3.8686E-12	0	2.66	0.914727	1.4E-11	1
rs4870063	6	151923512	C	A	ESR1	-0.04	0	3.9052E-12	35	10.87	0.1444847	8.276E-12	1
rs34191997	1	246107065	T	C	SMYD3	-0.06	0	3.918E-12	0	6.65	0.4667081	1.259E-11	1
rs13204012	6	28233753	G	A	ZSCAN9	-0.08	0	3.9203E-12	0	5.28	0.6263745	1.418E-11	1
rs404240	6	29556180	A	G	GABBR1,UB	-0.08	0	3.9401E-12	0	5.27	0.6266268	1.425E-11	1
rs17515923	18	53526806	T	G	DCC	0.04	0	3.9474E-12	58	16.99	0.0174661	4.579E-12	8.89783E-13
rs9393727	6	26499783	C	G	BTN1A1	-0.06	0	3.9749E-12	0	6.69	0.4617119	1.438E-11	1
rs11128900	3	18663227	G	T	SATB1	0.04	0	3.9758E-12	0	5.15	0.6411368	1.438E-11	1
rs6809851	3	49272354	C	A	C3orf62	-0.04	0	3.9786E-12	18	8.57	0.2846986	1.154E-11	1
rs2235233	6	27312073	T	C	POM121L2	0.04	0	3.9898E-12	0	4.81	0.6828348	1.443E-11	1
rs10050852	5	120873321	C	T	PRR16	0.04	0	3.9909E-12	0	3.29	0.8567187	1.444E-11	1
rs11128901	3	18664845	G	C	SATB1	0.04	0	4.007E-12	0	5.17	0.6392193	1.449E-11	1
rs12575544	11	113048263	G	A	NCAM1	0.04	0	4.0073E-12	0	5.23	0.6317339	1.449E-11	1
rs4631209	5	120832006	G	C	PRR16	0.04	0	4.0454E-12	0	2.64	0.9159145	1.463E-11	1

Table S2

rs28461583	1	246105292	C	T	SMYD3	-0.06	0	4.0499E-12	0	6.79	0.4509921	1.274E-11	1
rs10221371	18	53199924	C	A	DCC	0.04	0	4.0514E-12	0	6.92	0.4375569	1.465E-11	1
rs34417254	17	68101288	T	C	KPNA2	-0.04	0	4.0851E-12	20	8.79	0.2681465	2.882E-11	1
rs7506245	18	53044033	A	G	DCC	0.04	0	4.0853E-12	0	2.85	0.8988848	1.477E-11	1
rs7506451	18	53044061	T	A	DCC	0.04	0	4.1114E-12	0	2.85	0.8988909	1.486E-11	1
rs7763910	6	26472427	A	G	BTN2A1	0.04	0	4.1124E-12	0	2.02	0.9585083	1.487E-11	1
rs7506328	18	53044357	A	T	DCC	0.04	0	4.1162E-12	0	2.85	0.8989467	1.488E-11	1
rs34243448	6	28225324	C	A	ZSCAN9	-0.08	0	4.1336E-12	0	5.27	0.6275295	1.494E-11	1
rs35656932	6	28223510	G	T	ZSCAN9	-0.08	0	4.1336E-12	0	5.27	0.6275295	1.494E-11	1
rs62100775	18	53227723	A	G	DCC	0.04	0	4.135E-12	12	8.04	0.3289547	1.486E-11	1
rs4273390	3	18648046	A	G	SATB1	0.04	0	4.1446E-12	0	3.23	0.8634051	1.498E-11	1
rs62099173	18	53069566	T	G	DCC	0.04	0	4.148E-12	0	3.08	0.877314	1.499E-11	1
rs9257803	6	29376618	C	T	OR5V1	-0.08	0	4.1501E-12	0	6.56	0.4761934	1.5E-11	1
rs13211507	6	28289600	T	C	PGBD1	-0.08	0	4.1609E-12	0	5.08	0.6500195	1.504E-11	1
rs62381111	5	120826021	A	G	PRR16	0.04	0	4.162E-12	0	1.73	0.9733479	1.504E-11	1
rs147726906	3	44401162	G	A	TCAIM	0.08	0	4.1921E-12	0	5.43	0.6078955	1.515E-11	1
rs6446256	3	49186777	A	G	C3orf84	-0.04	0	4.2035E-12	26	9.47	0.2207525	1.093E-11	1
rs71386942	16	71958918	C	A	PKD1L3	0.04	0	4.2125E-12	15	8.25	0.3107755	1.522E-11	1
rs4870060	6	151910269	G	A	ESR1	-0.04	0	4.2191E-12	47	13.34	0.0643301	1.167E-11	1
rs74381227	1	246117045	G	C	SMYD3	-0.06	0	4.2195E-12	0	6.81	0.4487246	1.323E-11	1
rs11661483	18	53045584	A	G	DCC	0.04	0	4.2221E-12	0	2.84	0.8991907	1.526E-11	1
rs12176129	6	26514712	C	T	BTN1A1	-0.06	0	4.2432E-12	0	6.51	0.4814751	1.533E-11	1
rs13088994	3	18663711	T	G	SATB1	0.04	0	4.2545E-12	0	5.14	0.6422791	1.537E-11	1
rs67048424	3	18664479	A	AT	SATB1	0.04	0	4.2552E-12	0	5.14	0.6422863	1.538E-11	1
rs11714200	3	18657819	G	A	SATB1	0.04	0	4.2621E-12	0	5.27	0.6274518	1.54E-11	1
rs62084675	17	68030909	A	G	KPNA2	-0.04	0	4.2667E-12	43	12.41	0.0878019	4.897E-11	1
rs12714223	2	27740463	G	A	MRPL33	0.04	0	4.2702E-12	0	3.74	0.8095505	1.543E-11	1
rs10500526	16	65745918	T	A	CDH11	0.04	0	4.2867E-12	0	4.18	0.7591879	1.549E-11	1
rs58427198	5	153027685	T	C	GRIA1	0.09	0	4.2902E-12	0	2.64	0.915974	1.55E-11	1
rs9678824	2	27741461	G	C	MRPL33	-0.04	0	4.3281E-12	0	3.74	0.8092772	1.563E-11	1

rs72540422	2	27740807	A	ATG	MRPL33	-0.04	0	4.3552E-12	0	3.78	0.8044308	1.573E-11	1
rs62100777	18	53229387	G	A	DCC	0.04	0	4.3789E-12	7	7.6	0.3696178	1.544E-11	1
rs10900743	5	120839117	G	T	PRR16	0.04	0	4.383E-12	0	2.72	0.9095003	1.583E-11	1
rs13202371	6	25935261	A	G	SLC17A2	-0.08	0	4.409E-12	25	9.36	0.2275681	1.513E-11	1
rs16901784	6	26555205	C	A	HMGN4	-0.06	0	4.4277E-12	0	6.62	0.4695131	1.599E-11	1
rs9826966	3	18696304	A	G	SATB1	0.04	0	4.4412E-12	0	4.03	0.7766621	1.604E-11	1
rs146307530	5	153045553	AAC	A	GRIA1	0.09	0	4.4482E-12	0	2.62	0.9178912	1.606E-11	1
rs2012801	11	113125732	A	G	NCAM1	-0.04	0	4.4604E-12	23	9.13	0.2432912	1.611E-11	1
rs57627853	5	153057131	A	G	GRIA1	0.09	0	4.4898E-12	0	2.62	0.91814	1.621E-11	1
rs7432077	3	49185471	T	C	C3orf84	-0.04	0	4.5173E-12	25	9.46	0.2213524	1.178E-11	1
rs12522598	5	120838771	A	G	PRR16	0.04	0	4.5223E-12	0	2.71	0.9101659	1.633E-11	1
rs13192713	6	25943006	C	A	SLC17A2	-0.08	0	4.5499E-12	24	9.33	0.2297385	1.567E-11	1
rs13208859	6	25894381	G	A	SLC17A3	-0.08	0	4.5502E-12	31	10.15	0.180144	1.394E-11	1
rs13193424	6	25943418	G	C	SLC17A2	-0.08	0	4.5618E-12	24	9.33	0.2297304	1.571E-11	1
rs2051539	6	25947031	G	C	TRIM38	-0.08	0	4.5721E-12	24	9.33	0.229735	1.574E-11	1
rs34796805	6	25946405	AC	A	SLC17A2	-0.08	0	4.5721E-12	24	9.33	0.229735	1.574E-11	1
rs35778245	6	25944575	G	A	SLC17A2	-0.08	0	4.5721E-12	24	9.33	0.229735	1.574E-11	1
rs6547796	2	27752527	T	C	MRPL33	0.04	0	4.5893E-12	0	3.75	0.8079734	1.656E-11	1
rs9677663	2	27749578	G	A	MRPL33	0.04	0	4.5945E-12	0	3.74	0.8086966	1.658E-11	1
rs12063895	1	246110090	C	T	SMYD3	-0.06	0	4.6035E-12	0	6.9	0.4397722	1.428E-11	1
rs10201247	2	27752104	A	G	MRPL33	0.04	0	4.6074E-12	0	3.75	0.8081558	1.663E-11	1
rs11645898	16	72195633	T	C	PMFBP1	0.04	0	4.6292E-12	0	3.93	0.7875983	1.67E-11	1
rs9915591	17	67829974	C	G	BPTF	0.04	0	4.6541E-12	45	12.89	0.0749299	5.145E-11	1
rs34718543	1	246060783	A	G	SMYD3	-0.04	0	4.6696E-12	0	4.77	0.6878436	1.685E-11	1
rs57238885	2	27751393	C	G	MRPL33	-0.04	0	4.6995E-12	0	3.75	0.8084717	1.695E-11	1
rs35069699	6	25957054	C	T	TRIM38	-0.08	0	4.7299E-12	25	9.38	0.2262222	1.575E-11	1
rs7615602	3	18676563	C	G	SATB1	0.04	0	4.736E-12	0	3.97	0.783572	1.708E-11	1
rs11756123	6	151896944	A	T	ESR1	-0.04	0	4.7512E-12	48	13.69	0.0569001	1.714E-11	1
rs137872780	3	18662635	C	CTGT	SATB1	0.04	0	4.7741E-12	0	5.22	0.6332827	1.722E-11	1
rs62098013	18	53337491	G	A	DCC	0.04	0	4.7768E-12	0	4.79	0.6852095	1.723E-11	1

Table S2

rs34294155	1	246114193	G	A	SMYD3	-0.06	0	4.7779E-12	0	6.9	0.4397245	1.482E-11	1
rs35631096	1	246114132	CAG	C	SMYD3	-0.06	0	4.7795E-12	0	6.9	0.4397838	1.483E-11	1
rs71954424	8	10047301	TCAAA	T	MSRA	-0.04	0	4.7822E-12	0	3.95	0.7855551	1.725E-11	1
rs72447896	1	246107507	CTCCCCAC	C	SMYD3	-0.06	0	4.7836E-12	0	6.71	0.4599155	1.521E-11	1
rs7636195	3	18661117	T	C	SATB1	0.04	0	4.7839E-12	0	5.22	0.6332943	1.725E-11	1
rs35847416	1	246114348	T	C	SMYD3	-0.06	0	4.7914E-12	0	6.89	0.4401727	1.487E-11	1
rs11128898	3	18662347	G	T	SATB1	0.04	0	4.7919E-12	0	5.21	0.6338027	1.728E-11	1
rs4458386	3	18661518	T	C	SATB1	0.04	0	4.7922E-12	0	5.22	0.6333012	1.728E-11	1
rs6794840	3	18662144	T	C	SATB1	0.04	0	4.7956E-12	0	5.22	0.6332745	1.73E-11	1
rs11128897	3	18662285	C	T	SATB1	0.04	0	4.7965E-12	0	5.22	0.6332764	1.73E-11	1
rs11128899	3	18662605	T	A	SATB1	0.04	0	4.7973E-12	0	5.22	0.6332718	1.73E-11	1
rs9340850	6	151881486	GT	G	ESR1	-0.04	0	4.8028E-12	49	13.91	0.0528547	1.732E-11	1
rs3052860	1	246115155	CAGA	C	SMYD3	-0.06	0	4.8089E-12	0	6.89	0.4402704	1.493E-11	1
rs57960429	3	18692204	A	G	SATB1	0.04	0	4.8146E-12	0	3.84	0.7975031	1.736E-11	1
rs13084910	3	18659832	A	G	SATB1	0.04	0	4.8272E-12	0	5.21	0.6346082	1.741E-11	1
rs6791643	3	18661876	A	G	SATB1	0.04	0	4.8343E-12	0	5.2	0.6354128	1.743E-11	1
rs6699465	1	246115415	A	G	SMYD3	-0.06	0	4.8344E-12	0	6.89	0.4402901	1.501E-11	1
rs67234939	6	26530191	A	G	HMGN4	-0.06	0	4.8393E-12	0	6.63	0.4689372	1.745E-11	1
rs4955423	3	49183015	G	A	C3orf84	-0.04	0	4.8522E-12	26	9.49	0.2190465	1.263E-11	1
rs7618456	3	18677317	C	G	SATB1	0.04	0	4.8559E-12	0	4.03	0.7766496	1.751E-11	1
rs12635326	3	18663734	G	C	SATB1	0.04	0	4.8691E-12	0	5.22	0.6333494	1.756E-11	1
rs10924473	1	246059021	T	C	SMYD3	-0.04	0	4.8694E-12	0	4.78	0.6869707	1.756E-11	1
rs7622818	3	18677356	A	C	SATB1	0.04	0	4.9185E-12	0	4.01	0.7784666	1.773E-11	1
rs13220488	6	25896679	A	G	SLC17A3	-0.08	0	4.9284E-12	31	10.16	0.1797398	1.503E-11	1
rs12521338	5	120830215	C	T	PRR16	0.04	0	4.9375E-12	0	2.61	0.9182761	1.78E-11	1
rs6504568	17	68003532	C	T	C17orf58	-0.04	0	4.956E-12	46	13.01	0.0717884	5.648E-11	1
rs62097994	18	53314592	T	A	DCC	0.04	0	4.9573E-12	9	7.73	0.3570402	1.787E-11	1
rs6794713	3	18661987	T	C	SATB1	0.04	0	4.9833E-12	0	5.19	0.6365391	1.796E-11	1
rs62100769	18	53213490	G	A	DCC	0.04	0	4.9955E-12	0	6.92	0.4373883	1.8E-11	1
rs192619538	2	196380347	C	G	HECW2	0.08	0	5.0013E-12	0	5.39	0.6124803	1.802E-11	1

Table S2

rs34539883	1	246117474	C	G	SMYD3	-0.06	0	5.0406E-12	0	6.89	0.4403659	1.565E-11	1
rs9838564	3	18678552	A	C	SATB1	0.04	0	5.0514E-12	0	4.06	0.7731809	1.82E-11	1
rs35001169	6	28219854	T	G	ZSCAN9	-0.08	0	5.0567E-12	0	6.23	0.5133564	1.822E-11	1
rs62086889	17	68004487	C	T	C17orf58	0.04	0	5.0817E-12	45	12.78	0.0775609	5.844E-11	1
rs75756093	17	68004462	TAGTC	T	C17orf58	0.04	0	5.0817E-12	45	12.78	0.0775609	5.844E-11	1
rs62097995	18	53316863	T	A	DCC	0.04	0	5.0858E-12	9	7.74	0.3556745	1.832E-11	1
rs1079021	11	113121647	G	A	NCAM1	-0.04	0	5.0973E-12	21	8.97	0.2549142	1.837E-11	1
rs8081714	17	68005014	A	G	C17orf58	-0.04	0	5.1228E-12	45	12.78	0.0777136	5.884E-11	1
rs4955421	3	49181455	G	A	C3orf84	-0.04	0	5.1296E-12	26	9.52	0.2176198	1.334E-11	1
rs5021426	3	18658992	C	T	SATB1	0.04	0	5.1524E-12	0	4.09	0.7692912	1.856E-11	1
rs62097996	18	53316899	C	A	DCC	0.04	0	5.1618E-12	9	7.76	0.3544778	1.859E-11	1
rs12451721	17	67942959	G	A	BPTF	0.04	0	5.2386E-12	46	13.11	0.0694097	5.58E-11	1
rs12059622	1	246101396	C	T	SMYD3	-0.06	0	5.2422E-12	0	6.06	0.5332091	1.784E-11	1
rs9461222	6	25904883	G	A	SLC17A2	-0.08	0	5.2467E-12	23	9.11	0.2445368	1.889E-11	1
rs74743707	3	43208465	T	A	SNRK	0.05	0	5.2603E-12	0	6.56	0.4757003	1.866E-11	1
rs6920256	6	26537573	G	A	HMGN4	-0.06	0	5.2888E-12	0	6.64	0.467569	1.904E-11	1
rs4368222	18	53084842	G	C	DCC	0.03	0	5.321E-12	0	2.86	0.8978019	1.916E-11	1
rs4468701	18	53084910	T	C	DCC	0.03	0	5.3213E-12	0	2.86	0.8977826	1.916E-11	1
rs7631586	3	49182704	A	G	C3orf84	-0.04	0	5.3228E-12	26	9.54	0.2164224	1.387E-11	1
rs12637346	3	49247080	A	G	CCDC36	-0.04	0	5.3462E-12	24	9.21	0.2376301	1.387E-11	1
rs9467711	6	26332377	A	C	BTN3A2	-0.08	0	5.385E-12	0	4.72	0.6936011	1.938E-11	1
rs11663694	18	53033616	T	C	DCC	0.04	0	5.3884E-12	0	2.87	0.89693	1.94E-11	1
rs8065296	17	68022446	T	A	KPNA2	-0.04	0	5.3989E-12	44	12.6	0.0824321	6.201E-11	1
rs8182243	17	68022389	T	C	KPNA2	-0.04	0	5.3989E-12	44	12.6	0.0824321	6.201E-11	1
rs62097900	18	53000438	C	T	DCC	0.04	0	5.4083E-12	0	1	0.9947647	1.947E-11	1
rs9834003	3	49179039	T	C	C3orf84	-0.04	0	5.5012E-12	26	9.53	0.2168003	1.43E-11	1
rs1833935	16	65743582	G	C	CDH11	0.03	0	5.5077E-12	0	4.2	0.7559703	1.982E-11	1
rs12444759	16	65744159	A	G	CDH11	0.03	0	5.5378E-12	0	4.2	0.7568918	1.993E-11	1
rs7622320	3	18676816	A	C	SATB1	0.04	0	5.5829E-12	0	4.06	0.7728235	2.009E-11	1
rs8098405	18	53226003	A	G	DCC	0.03	0	5.6255E-12	10	7.78	0.3521374	1.973E-11	1

Table S2

rs62084711	17	68054795	C	T	KPNA2	-0.04	0	5.6476E-12	34	10.65	0.1546476	5.488E-11	1
rs796392045	18	53375248	G	GA	DCC	0.04	0	5.6531E-12	13	8.13	0.3211925	2.033E-11	1
rs34503060	17	68052563	A	G	KPNA2	-0.04	0	5.6545E-12	34	10.65	0.1545435	5.496E-11	1
rs7503056	17	68052533	C	G	KPNA2	0.04	0	5.6549E-12	34	10.65	0.1546277	5.495E-11	1
rs7503206	17	68053058	G	A	KPNA2	0.04	0	5.6549E-12	34	10.65	0.1546277	5.495E-11	1
rs34702735	1	246099372	G	A	SMYD3	-0.06	0	5.6649E-12	8	7.65	0.3640652	1.58E-11	1
rs28407265	5	120878095	T	C	PRR16	0.04	0	5.7059E-12	0	3.23	0.8633711	2.052E-11	1
rs62381113	5	120834390	C	A	PRR16	0.04	0	5.7248E-12	0	2.69	0.9119916	2.059E-11	1
rs111550232	1	246114699	C	T	SMYD3	-0.06	0	5.7253E-12	1	7.11	0.4179859	1.726E-11	1
rs7755997	6	26482820	G	A	BTN2A1	0.04	0	5.7756E-12	0	2.07	0.9560815	2.077E-11	1
rs75885145	17	68050690	G	C	KPNA2	0.04	0	5.8012E-12	34	10.71	0.1518877	5.648E-11	1
rs150826473	3	44227978	G	C	TOPAZ1	0.08	0	5.8052E-12	0	5.38	0.6132573	2.087E-11	1
rs200945156	5	120834492	ATCAC	A	PRR16	0.04	0	5.8065E-12	0	2.67	0.9138124	2.088E-11	1
rs148188065	17	46149218	G	A	KANSL1	-0.12	0	5.8528E-12	0	5.53	0.5953513	2.104E-11	1
rs28873404	18	53513068	C	T	DCC	0.04	0	5.971E-12	59	17.24	0.0159217	8.384E-12	1.60707E-12
rs11109659	12	98900777	A	C	ANKS1B	0.06	0	5.9736E-12	0	0.97	0.995272	2.147E-11	1
rs11663217	18	53000163	A	G	DCC	0.04	0	5.9852E-12	0	0.99	0.9950376	2.151E-11	1
rs1105643	18	53500718	G	A	DCC	0.04	0	5.9871E-12	59	17.48	0.0145637	8.404E-12	1.60707E-12
rs9973932	2	207385798	T	G	CREB1	0.04	0	6.0204E-12	0	6.14	0.5237791	2.163E-11	1
rs35580353	18	53219997	TG	T	DCC	0.04	0	6.0323E-12	6	7.5	0.3787984	2.167E-11	1
rs4702	15	90883330	G	A	FURIN	-0.03	0	6.0647E-12	0	2.48	0.9283902	2.179E-11	1
rs7214557	17	68051614	T	C	KPNA2	0.04	0	6.0737E-12	34	10.68	0.1532002	5.917E-11	1
rs72832596	6	25962723	C	A	TRIM38	-0.08	0	6.1122E-12	24	9.33	0.2301456	2.108E-11	1
rs11109660	12	98901930	C	G	ANKS1B	0.06	0	6.1127E-12	0	0.97	0.9953086	2.196E-11	1
rs145024643	17	68052216	GC	G	KPNA2	-0.04	0	6.1254E-12	34	10.66	0.1540702	5.944E-11	1
rs11664320	18	53346253	T	C	DCC	0.04	0	6.1424E-12	14	8.23	0.3123469	2.206E-11	1
rs11109648	12	98884244	T	A	ANKS1B	0.06	0	6.1475E-12	0	0.98	0.9952126	2.208E-11	1
rs6693295	1	246059818	C	T	SMYD3	-0.04	0	6.1491E-12	0	4.78	0.686507	2.209E-11	1
rs13206443	6	26119017	C	T	HIST1H2BC	-0.08	0	6.1602E-12	29	9.93	0.1927289	2.087E-11	1
rs4791295	17	68001201	G	A	C17orf58	0.04	0	6.1839E-12	46	13.14	0.0686981	6.965E-11	1

Table S2

rs62085991	17	67924392	G	A	BPTF	0.04	0	6.2598E-12	46	13.09	0.0699471	6.69E-11	1
rs11109647	12	98883889	T	G	ANKS1B	0.06	0	6.2702E-12	0	0.98	0.9952083	2.252E-11	1
rs56393562	17	67937802	C	T	BPTF	0.04	0	6.2778E-12	46	13.09	0.0699069	6.709E-11	1
rs61676547	17	67896391	G	C	BPTF	0.04	0	6.3148E-12	43	12.33	0.0901206	6.412E-11	1
rs73338706	17	67930488	T	C	BPTF	0.04	0	6.3227E-12	46	13.1	0.06962	6.776E-11	1
rs112021469	2	207379271	T	C	CREB1	0.05	0	6.3498E-12	0	6.38	0.4966654	2.28E-11	1
rs5821447	17	67940063	TATTAA	T	BPTF	0.04	0	6.3677E-12	46	13.1	0.069596	6.802E-11	1
rs10924474	1	246059031	T	C	SMYD3	-0.04	0	6.39E-12	0	4.77	0.6881446	2.294E-11	1
rs12132524	1	246061136	C	T	SMYD3	-0.04	0	6.4007E-12	0	4.77	0.6881619	2.298E-11	1
rs34784543	1	246060853	TA	T	SMYD3	-0.04	0	6.4007E-12	0	4.77	0.6881619	2.298E-11	1
rs6693092	1	246059641	C	T	SMYD3	-0.04	0	6.4009E-12	0	4.77	0.6881624	2.298E-11	1
rs10924478	1	246059270	T	G	SMYD3	-0.04	0	6.4014E-12	0	4.77	0.6881605	2.298E-11	1
rs10924472	1	246058858	A	C	SMYD3	-0.04	0	6.4022E-12	0	4.77	0.6881562	2.298E-11	1
rs35757106	1	246056171	C	T	SMYD3	-0.04	0	6.4045E-12	0	4.77	0.688144	2.299E-11	1
rs72917329	18	53080872	G	A	DCC	0.04	0	6.415E-12	0	2.02	0.9588675	2.303E-11	1
rs13214027	6	26573403	C	G	ABT1	-0.06	0	6.4263E-12	5	7.4	0.3882886	2.776E-11	1
rs1431188	18	53270447	A	G	DCC	0.04	0	6.4759E-12	19	8.7	0.274838	1.838E-11	1
rs190517796	5	153953804	C	T	FAM114A2	0.09	0	6.4843E-12	0	5.67	0.5789753	2.327E-11	1
rs9967838	2	27745587	A	C	MRPL33	0.04	0	6.4865E-12	0	4	0.7802493	2.328E-11	1
rs11677973	2	207364373	T	G	CREB1	0.05	0	6.4913E-12	0	6.28	0.5074994	2.33E-11	1
rs11662416	18	53321414	T	G	DCC	0.04	0	6.5112E-12	11	7.94	0.3379763	2.673E-11	1
rs13418151	2	124200711	G	A	CNTNAP5	-0.04	0	6.5255E-12	50	14.05	0.050212	9.151E-12	1.73649E-12
rs10924477	1	246059232	G	A	SMYD3	-0.04	0	6.5448E-12	0	4.77	0.6878968	2.349E-11	1
rs35825164	6	26117176	T	C	HIST1H2BC	-0.08	0	6.5745E-12	28	9.84	0.1979158	2.248E-11	1
rs35484309	6	26105141	C	T	HIST1H4C	-0.08	0	6.5755E-12	28	9.84	0.1979176	2.249E-11	1
rs6799759	3	18658579	T	C	SATB1	0.04	0	6.5867E-12	0	5.25	0.6300777	2.363E-11	1
rs56084230	2	207367261	C	A	CREB1	0.05	0	6.5943E-12	0	6.16	0.5212748	2.366E-11	1
rs9379891	6	26579332	C	T	ABT1	-0.06	0	6.5965E-12	4	7.34	0.3946859	2.772E-11	1
rs148810956	6	26107361	GAT	G	HIST1H1T	-0.08	0	6.6081E-12	28	9.83	0.1982059	2.261E-11	1
rs11689266	2	207366533	G	A	CREB1	0.05	0	6.6188E-12	0	6.15	0.5223177	2.375E-11	1

rs7590074	2	207379531	T	C	CREB1	0.05	0	6.626E-12	0	6.34	0.5005336	2.377E-11	1
rs12602556	17	67830745	A	G	BPTF	0.04	0	6.6293E-12	45	12.94	0.0735725	7.204E-11	1
rs5020052	18	53115326	T	G	DCC	0.03	0	6.6387E-12	0	3.79	0.8039891	2.382E-11	1
rs56106733	2	207367335	A	G	CREB1	0.05	0	6.6683E-12	0	6.15	0.5225216	2.392E-11	1
rs11685591	2	207370957	A	G	CREB1	0.05	0	6.6892E-12	0	6.23	0.513014	2.399E-11	1
rs7748167	6	25904424	A	C	SLC17A2	-0.08	0	6.6937E-12	16	8.37	0.3011433	2.401E-11	1
rs11689163	2	207366276	G	A	CREB1	0.05	0	6.6973E-12	0	6.15	0.5222247	2.402E-11	1
rs9845140	3	18687386	C	A	SATB1	0.04	0	6.7027E-12	0	3.93	0.787487	2.404E-11	1
rs11676081	2	207377759	G	A	CREB1	0.05	0	6.7031E-12	0	6.3	0.5052013	2.404E-11	1
rs72953771	2	207369005	C	G	CREB1	0.05	0	6.7056E-12	0	6.17	0.520599	2.405E-11	1
rs11677847	2	207366131	A	G	CREB1	0.05	0	6.708E-12	0	6.15	0.522135	2.406E-11	1
rs72951700	2	207365758	C	T	CREB1	0.05	0	6.7206E-12	0	6.15	0.5221236	2.411E-11	1
rs16839694	2	207368447	T	C	CREB1	0.05	0	6.7328E-12	0	6.15	0.5224255	2.415E-11	1
rs111967199	2	207379659	T	A	CREB1	0.05	0	6.7361E-12	0	6.27	0.5081336	2.416E-11	1
rs72953773	2	207369110	C	T	CREB1	0.05	0	6.7452E-12	0	6.15	0.5219452	2.419E-11	1
rs72955720	2	207384089	G	A	CREB1	0.05	0	6.7486E-12	0	6.36	0.4980142	2.42E-11	1
rs9393735	6	26582099	A	G	ABT1	-0.06	0	6.7562E-12	4	7.34	0.394691	2.837E-11	1
rs62084208	17	67831327	C	T	BPTF	0.04	0	6.7678E-12	45	12.93	0.0737518	7.349E-11	1
rs11688473	2	207378283	A	G	CREB1	0.05	0	6.7757E-12	0	6.29	0.5063901	2.43E-11	1
rs72955719	2	207384077	C	T	CREB1	0.05	0	6.7771E-12	0	6.36	0.4986877	2.43E-11	1
rs141801930	2	207378896	G	GT	CREB1	0.05	0	6.7973E-12	0	6.29	0.5058085	2.438E-11	1
rs113683378	2	207379446	G	A	CREB1	0.05	0	6.8115E-12	0	6.3	0.5051538	2.443E-11	1
rs3785083	16	21649189	C	T	IGSF6,METT	0.04	0	6.8221E-12	23	9.14	0.2428912	3.429E-11	1
rs11688902	2	207373219	A	G	CREB1	0.05	0	6.8266E-12	0	6.18	0.5193934	2.448E-11	1
rs113309880	2	207376536	G	A	CREB1	0.05	0	6.8307E-12	0	6.26	0.5093159	2.449E-11	1
rs11679776	2	207374857	G	A	CREB1	0.05	0	6.8311E-12	0	6.25	0.5109919	2.45E-11	1
rs56149684	2	207376872	C	T	CREB1	0.05	0	6.8345E-12	0	6.27	0.5083627	2.451E-11	1
rs35163685	2	207382456	G	C	CREB1	0.05	0	6.8361E-12	0	6.34	0.5010042	2.451E-11	1
rs11680443	2	207370907	T	C	CREB1	0.05	0	6.8389E-12	0	6.16	0.5214754	2.452E-11	1
rs13200888	6	26099970	G	A	HFE	-0.08	0	6.8531E-12	28	9.85	0.1972688	2.339E-11	1

Table S2

rs10932190	2	207371434	T	G	CREB1	0.05	0	6.857E-12	0	6.16	0.5212623	2.459E-11	1
rs10932191	2	207371526	C	T	CREB1	0.05	0	6.8589E-12	0	6.16	0.5212395	2.459E-11	1
rs11677814	2	207373236	C	T	CREB1	0.05	0	6.8668E-12	0	6.17	0.5200738	2.462E-11	1
rs35347400	2	207365222	T	TA	CREB1	0.05	0	6.8678E-12	0	6.16	0.5214298	2.463E-11	1
rs11695858	2	207364975	C	T	CREB1	0.05	0	6.8696E-12	0	6.17	0.5205253	2.463E-11	1
rs141212431	2	207373720	CAAAT	C	CREB1	0.05	0	6.8801E-12	0	6.19	0.5178808	2.467E-11	1
rs34569535	18	53026595	A	C	DCC	0.04	0	6.8923E-12	0	4.44	0.7277599	2.471E-11	1
rs60939828	18	53202897	T	C	DCC	0.04	0	6.8934E-12	0	6.92	0.4376945	2.472E-11	1
rs1883215	6	26314005	G	C	HIST1H4H	-0.08	0	6.913E-12	0	4.34	0.7398484	2.478E-11	1
rs79731121	6	101428948	T	A	GRIK2	0.07	0	6.9216E-12	0	4.43	0.7289933	2.481E-11	1
rs10924475	1	246059083	A	G	SMYD3	-0.04	0	6.9561E-12	0	4.77	0.6876491	2.494E-11	1
rs62097981	18	53279245	G	C	DCC	0.04	0	6.9854E-12	15	8.28	0.3081981	2.172E-11	1
rs72953784	2	207372822	A	G	CREB1	0.05	0	7.0449E-12	0	6.16	0.5214466	2.525E-11	1
rs7613681	3	50401362	T	C	CACNA2D2	0.04	0	7.0519E-12	52	14.77	0.0390348	4.455E-11	1
rs62098017	18	53348855	A	C	DCC	0.04	0	7.0684E-12	12	8.03	0.330386	2.533E-11	1
rs68149500	6	26111043	C	T	HIST1H1T	-0.08	0	7.0718E-12	28	9.75	0.2034225	2.439E-11	1
rs11685176	2	207374117	T	C	CREB1	0.05	0	7.1145E-12	0	6.23	0.5128539	2.55E-11	1
rs11663393	18	53088362	G	A	DCC	0.03	0	7.1341E-12	0	3.79	0.8033388	2.556E-11	1
rs62085661	17	68101661	C	G	KPNA2	-0.04	0	7.147E-12	22	9.04	0.250126	4.439E-11	1
rs11690588	2	207374435	A	C	CREB1	0.05	0	7.1528E-12	0	6.25	0.510937	2.563E-11	1
rs336610	3	18608523	G	T	SATB1	0.04	0	7.1733E-12	0	3.81	0.8016967	2.57E-11	1
rs201027130	17	43821785	C	CA	MPP3	0.08	0	7.1797E-12	54	15.48	0.0303398	2.572E-11	1
rs11683849	2	207382604	G	A	CREB1	0.05	0	7.1845E-12	0	6.23	0.5126641	2.574E-11	1
rs6697845	1	246059632	A	G	SMYD3	-0.04	0	7.1965E-12	0	4.76	0.6888276	2.578E-11	1
rs72955717	2	207383680	C	G	CREB1	0.05	0	7.2245E-12	0	6.34	0.5002184	2.588E-11	1
rs72953779	2	207372608	A	C	CREB1	0.05	0	7.2469E-12	0	6.18	0.5185028	2.596E-11	1
rs62099235	18	53204233	G	A	DCC	0.04	0	7.2751E-12	0	6.95	0.4337403	2.606E-11	1
rs2604551	4	15089577	T	G	CPEB2	-0.04	0	7.286E-12	0	3.99	0.7813303	2.61E-11	1
rs58764043	8	10148373	C	T	MSRA	0.04	0	7.3059E-12	0	3.99	0.7812596	2.617E-11	1
rs4790973	17	67955017	C	T	BPTF	0.04	0	7.3079E-12	46	13.14	0.0686974	7.794E-11	1

Table S2

rs11684690	2	207365367	A	C	CREB1	0.05	0	7.3126E-12	0	6.03	0.5363316	2.619E-11	1
rs74541577	17	67857535	C	T	BPTF	0.04	0	7.3279E-12	46	12.98	0.0724815	7.724E-11	1
rs7227069	18	53205432	G	A	DCC	0.04	0	7.3383E-12	0	6.92	0.4367737	2.628E-11	1
rs7227402	18	53369396	G	T	DCC	0.04	0	7.389E-12	9	7.77	0.3535041	2.646E-11	1
rs62099234	18	53204154	C	T	DCC	0.04	0	7.4177E-12	0	6.91	0.438175	2.656E-11	1
rs62099236	18	53204685	G	T	DCC	0.04	0	7.4177E-12	0	6.91	0.438175	2.656E-11	1
rs12277922	11	113046656	C	T	NCAM1	0.04	0	7.4324E-12	0	5.24	0.6312114	2.662E-11	1
rs28628885	18	53227356	A	G	DCC	0.03	0	7.5037E-12	11	7.87	0.3445813	2.586E-11	1
rs2347867	6	151908715	G	A	ESR1	-0.04	0	7.5535E-12	47	13.3	0.0650771	1.602E-11	1
rs2237228	6	26104402	C	T	HIST1H4C	-0.08	0	7.5582E-12	28	9.75	0.2032837	2.61E-11	1
rs12601759	17	67959168	A	G	BPTF	0.04	0	7.5702E-12	47	13.38	0.0633588	8.32E-11	1
rs12925372	16	65746638	T	C	CDH5	0.03	0	7.5975E-12	0	4.1	0.7683246	2.72E-11	1
rs11128904	3	18700778	G	C	SATB1	0.04	0	7.6148E-12	0	3.88	0.7931826	2.726E-11	1
rs71743943	17	68102250	GACGCTGC	G	KPNA2	-0.04	0	7.684E-12	25	9.4	0.2248887	6.11E-11	1
rs34158769	6	26336344	G	A	BTN3A2	-0.08	0	7.6991E-12	0	6.29	0.5063047	2.755E-11	1
rs4869748	6	151904248	T	G	ESR1	-0.04	0	7.7052E-12	48	13.48	0.0611843	2.758E-11	1
rs62084210	17	67832594	A	G	BPTF	0.04	0	7.7079E-12	45	12.95	0.0733444	8.341E-11	1
rs143861937	3	48409898	A	G	PLXNB1	-0.05	0	7.7144E-12	0	4.35	0.7388132	2.761E-11	1
rs6550597	3	18697448	G	A	SATB1	0.04	0	7.741E-12	0	3.91	0.7896922	2.77E-11	1
rs117021806	17	46130821	C	T	KANSL1	-0.13	0	7.7616E-12	0	5.34	0.6182264	2.777E-11	1
rs4635727	3	18663543	G	A	SATB1	0.04	0	7.7662E-12	0	3.84	0.7982791	2.779E-11	1
rs142281315	18	53348996	TC	T	DCC	0.04	0	7.812E-12	11	7.94	0.3379187	2.795E-11	1
rs62097985	18	53284305	C	T	DCC	0.04	0	7.8415E-12	12	7.99	0.333512	2.425E-11	1
rs62098020	18	53356411	C	T	DCC	0.04	0	7.865E-12	9	7.74	0.3563079	2.814E-11	1
rs4975311	4	142579070	A	G	INPP4B	0.04	0	7.8757E-12	29	9.98	0.1896572	4.369E-11	1
rs17412636	18	53359772	A	C	DCC	0.03	0	7.9279E-12	9	7.74	0.3561059	2.836E-11	1
rs17412782	18	53361981	T	C	DCC	0.03	0	7.9279E-12	9	7.74	0.3561059	2.836E-11	1
rs56030110	18	53360220	A	T	DCC	0.03	0	7.9279E-12	9	7.74	0.3561059	2.836E-11	1
rs62098022	18	53362521	T	C	DCC	0.03	0	7.9279E-12	9	7.74	0.3561059	2.836E-11	1
rs4517559	11	113309480	C	T	TTC12	-0.03	0	7.9749E-12	0	4.46	0.725435	2.84E-11	1

rs5468	16	72054432	T	G	TXNL4B	0.05	0	7.9775E-12	0	4.86	0.677612	2.853E-11	1
rs11664259	18	52935590	C	T	DCC	0.04	0	8.0438E-12	0	0.87	0.9966791	2.877E-11	1
rs1504746	18	53331649	T	C	DCC	0.03	0	8.0534E-12	12	8.01	0.3321468	2.88E-11	1
rs13220395	6	26055140	G	A	HIST1H1C	-0.08	0	8.0817E-12	24	9.31	0.2308311	2.838E-11	1
rs1823949	4	15097524	T	C	CPEB2	-0.04	0	8.0848E-12	0	3.29	0.8573937	2.891E-11	1
rs17503448	18	53331293	T	C	DCC	0.03	0	8.0861E-12	12	8	0.3322206	2.892E-11	1
rs1346914	18	53319460	G	T	DCC	0.04	0	8.0901E-12	8	7.64	0.3654723	2.893E-11	1
rs13200797	6	26122729	G	A	HIST1H2BC	-0.08	0	8.0932E-12	28	9.8	0.200414	2.75E-11	1
rs13073498	3	18665411	A	T	SATB1	0.03	0	8.1514E-12	0	5.25	0.6290858	2.915E-11	1
rs4665386	2	27712485	C	A	SLC4A1AP	-0.04	0	8.1585E-12	0	4.07	0.7714998	2.917E-11	1
rs3852788	16	72191887	C	T	PMFBP1	0.03	0	8.1724E-12	0	6.06	0.5332121	2.922E-11	1
rs13096484	3	18665477	T	C	SATB1	0.03	0	8.1796E-12	0	5.24	0.631249	2.924E-11	1
rs4405620	18	53358159	C	A	DCC	0.03	0	8.2223E-12	8	7.65	0.3640658	2.94E-11	1
rs61447311	3	18665298	G	GT	SATB1	0.03	0	8.2238E-12	0	5.23	0.63166	2.94E-11	1
rs7216064	17	67902693	G	A	BPTF	0.04	0	8.233E-12	46	12.98	0.0726366	8.665E-11	1
rs6550560	3	18666788	C	G	SATB1	0.04	0	8.2556E-12	0	3.93	0.7880726	2.951E-11	1
rs7209959	17	68054289	C	T	KPNA2	-0.04	0	8.277E-12	37	11.12	0.1336544	8.83E-11	1
rs3783007	13	98457562	T	G	STK24	0.03	0	8.3024E-12	1	7.14	0.4146925	2.968E-11	1
rs34457121	3	18666012	T	C	SATB1	0.03	0	8.3518E-12	0	5.26	0.628032	2.985E-11	1
rs80034976	18	53367277	AAT	A	DCC	0.03	0	8.3676E-12	9	7.74	0.3561986	2.991E-11	1
rs13084638	3	18666849	C	G	SATB1	0.03	0	8.4038E-12	0	5.26	0.6277644	3.003E-11	1
rs142667158	18	53038667	CTAAG	C	DCC	0.04	0	8.4263E-12	0	2.91	0.8928628	3.011E-11	1
rs62098048	18	53378192	C	G	DCC	0.03	0	8.4691E-12	10	7.78	0.3521602	3.026E-11	1
rs8099160	18	53226240	G	A	DCC	0.03	0	8.488E-12	10	7.83	0.3477763	2.928E-11	1
rs35162296	6	26318034	C	T	HIST1H4H	-0.08	0	8.5252E-12	0	6.08	0.5306901	3.046E-11	1
rs9257805	6	29378552	A	G	OR5V1	-0.08	0	8.5291E-12	2	7.18	0.4105386	3.263E-11	1
rs61820769	1	213886627	C	T	PROX1	-0.09	0	8.531E-12	20	8.77	0.2696926	2.146E-11	1
rs62098023	18	53367632	A	C	DCC	0.03	0	8.6105E-12	10	7.81	0.34984	3.076E-11	1
rs9479138	6	151894064	T	G	ESR1	-0.04	0	8.6749E-12	47	13.46	0.0617408	3.099E-11	1
rs17504372	18	53376680	C	T	DCC	0.03	0	8.7597E-12	8	7.68	0.3614702	3.128E-11	1

Table S2

rs60724671	12	98888258	T	C	ANKS1B	0.06	0	8.8703E-12	0	1	0.994867	3.167E-11	1
rs2365764	17	67861598	G	A	BPTF	0.04	0	8.8935E-12	46	13.07	0.0704568	9.598E-11	1
rs7210027	17	67980937	C	T	BPTF	-0.04	0	8.9102E-12	40	11.73	0.10971	9.095E-11	1
rs11334985	6	26399509	AT	A	BTN3A1	-0.03	0	8.9238E-12	0	2.18	0.948994	3.186E-11	1
rs62098042	18	53376190	G	A	DCC	0.03	0	8.9527E-12	9	7.71	0.358568	3.196E-11	1
rs1504744	18	53363188	G	A	DCC	0.03	0	8.9752E-12	9	7.7	0.360088	3.204E-11	1
rs4510098	18	53071367	G	T	DCC	0.04	0	8.9759E-12	0	3.17	0.8690255	3.204E-11	1
rs62098043	18	53376208	A	G	DCC	0.03	0	8.9761E-12	9	7.71	0.3586167	3.204E-11	1
rs62098046	18	53376403	T	C	DCC	0.03	0	9.0125E-12	9	7.71	0.3588427	3.217E-11	1
rs62098044	18	53376377	G	C	DCC	0.03	0	9.0132E-12	9	7.71	0.3589174	3.217E-11	1
rs2655878	12	60401081	A	T	SLC16A7	-0.03	0	9.019E-12	60	17.57	0.0140729	3.219E-11	1
rs771639121	18	53375240	TCTTTATA	T	DCC	0.03	0	9.0271E-12	9	7.73	0.3572408	3.222E-11	1
rs11155821	6	151894587	T	C	ESR1	-0.04	0	9.0444E-12	48	13.48	0.0612055	3.228E-11	1
rs62086046	17	67986827	C	T	BPTF	0.04	0	9.0538E-12	40	11.74	0.1094999	9.244E-11	1
rs10804162	2	207373622	G	T	CREB1	0.04	0	9.1653E-12	0	5.93	0.5481642	3.271E-11	1
rs11643192	16	72180377	C	A	PMFBP1	0.03	0	9.1658E-12	0	5.75	0.5689865	3.271E-11	1
rs2788021	1	246085402	A	G	SMYD3	-0.04	0	9.1966E-12	20	8.83	0.2648235	3.276E-11	1
rs62098047	18	53377991	G	A	DCC	0.03	0	9.2194E-12	9	7.71	0.3586818	3.29E-11	1
rs11998591	8	10145244	C	A	MSRA	0.04	0	9.2459E-12	0	3.73	0.810828	3.299E-11	1
rs11109650	12	98885153	T	C	ANKS1B	0.06	0	9.2977E-12	0	1	0.9947878	3.317E-11	1
rs11728466	4	16815657	T	A	LDB2	-0.19	0	9.3129E-12	0	2.5	0.9269697	3.323E-11	1
rs7830315	8	64695804	T	C	CYP7B1	0.04	0	9.3312E-12	0	4.14	0.7638271	3.329E-11	1
rs62098012	18	53335941	C	T	DCC	0.03	0	9.3812E-12	12	7.97	0.3356694	3.863E-11	1
rs4506980	18	53071284	G	A	DCC	0.04	0	9.3856E-12	0	3.17	0.8683955	3.348E-11	1
rs2787953	1	246085357	T	A	SMYD3	-0.04	0	9.432E-12	20	8.86	0.2628768	3.364E-11	1
rs4790941	17	67981016	G	A	BPTF	0.04	0	9.4406E-12	40	11.75	0.1091565	9.589E-11	1
rs4791212	17	67979269	C	T	BPTF	0.04	0	9.4409E-12	40	11.7	0.1108236	9.591E-11	1
rs7927508	11	113317475	G	A	TTC12	-0.03	0	9.4504E-12	0	4.39	0.733592	3.367E-11	1
rs1893699	11	113321802	G	T	TTC12	-0.03	0	9.4584E-12	0	4.39	0.7340562	3.369E-11	1
rs11079709	17	67857247	C	T	BPTF	0.04	0	9.5221E-12	45	12.85	0.075961	1.007E-10	1

Table S2

rs1273044	11	113123126	T	C	NCAM1	-0.03	0	9.5485E-12	22	9.07	0.2479732	3.405E-11	1
rs62098049	18	53378296	G	A	DCC	0.03	0	9.5512E-12	9	7.71	0.3590225	3.406E-11	1
rs16891264	6	26072217	T	C	HFE	-0.08	0	9.5973E-12	21	8.9	0.2600834	3.422E-11	1
rs150282240	3	43182512	G	C	POMGNT2	0.08	0	9.6002E-12	0	6.49	0.4837088	3.423E-11	1
rs7213292	17	67884327	A	G	BPTF	0.04	0	9.6072E-12	46	13.06	0.0705484	1.024E-10	1
rs2523431	6	29516438	G	T	MAS1L	-0.08	0	9.6247E-12	0	5.28	0.6258725	3.432E-11	1
rs4382947	12	60081276	G	A	SLC16A7	-0.03	0	9.6302E-12	67	21.66	0.0029086	2.404E-11	1
rs12661921	6	51785962	G	A	PKHD1	-0.06	0	9.657E-12	17	8.49	0.291656	4.027E-11	1
rs62086045	17	67977615	G	A	BPTF	0.04	0	9.7053E-12	40	11.75	0.1091739	9.862E-11	1
rs62086044	17	67974721	G	T	BPTF	0.04	0	9.7098E-12	40	11.75	0.1090201	9.897E-11	1
rs12929749	16	72134342	T	G	PMFBP1	0.03	0	9.8191E-12	0	6.1	0.5284235	3.438E-11	1
rs8071463	17	67942539	G	A	BPTF	-0.04	0	9.8653E-12	46	13.09	0.069863	1.045E-10	1
rs17411025	18	53266106	C	G	DCC	0.04	0	9.8859E-12	18	8.63	0.2803916	2.921E-11	1
rs1416089	1	246076168	T	C	SMYD3	-0.04	0	9.923E-12	20	8.79	0.2681637	3.537E-11	1
rs62084240	17	67863117	C	A	BPTF	0.04	0	9.9301E-12	45	12.95	0.0733308	1.054E-10	1
rs2043145	18	53324737	A	G	DCC	0.03	0	9.9391E-12	10	7.79	0.3514735	3.542E-11	1
rs72791121	16	72191395	C	T	PMFBP1	0.04	0	9.9559E-12	0	3.66	0.8175678	3.548E-11	1
rs9849654	3	117912352	G	C	LSAMP	-0.04	0	1.0022E-11	0	1.45	0.9838466	3.571E-11	1
rs7950569	11	113322879	C	T	TTC12	-0.03	0	1.0051E-11	0	4.43	0.7285693	3.574E-11	1
rs2787962	1	246076965	A	G	SMYD3	-0.04	0	1.0223E-11	20	8.78	0.2688593	3.642E-11	1
rs2788010	1	246077021	A	G	SMYD3	-0.04	0	1.0249E-11	20	8.78	0.2689135	3.651E-11	1
rs2788011	1	246077037	G	T	SMYD3	-0.04	0	1.025E-11	20	8.78	0.2689129	3.651E-11	1
rs2788012	1	246078187	G	A	SMYD3	-0.04	0	1.0273E-11	20	8.78	0.2689536	3.659E-11	1
rs2787960	1	246078938	A	G	SMYD3	-0.04	0	1.0299E-11	20	8.78	0.2690503	3.665E-11	1
rs7827287	8	64693162	G	T	CYP7B1	0.04	0	1.0332E-11	0	4.15	0.7618355	3.68E-11	1
rs17501820	18	53252367	C	T	DCC	0.04	0	1.0333E-11	18	8.62	0.281006	3.054E-11	1
rs2788016	1	246081320	T	A	SMYD3	-0.04	0	1.0341E-11	20	8.79	0.2680738	3.683E-11	1
rs11660187	18	53275276	C	A	DCC	0.04	0	1.0364E-11	18	8.57	0.2853408	3.06E-11	1
rs62097980	18	53269632	G	A	DCC	0.04	0	1.0367E-11	19	8.66	0.2780125	3.027E-11	1
rs2788014	1	246079553	G	A	SMYD3	-0.04	0	1.0396E-11	20	8.78	0.2690356	3.699E-11	1

Table S2

rs10445361	17	67966122	T	G	BPTF	0.04	0	1.0444E-11	40	11.75	0.109114	1.06E-10	1
rs35069141	16	71963601	G	A	PKD1L3	0.05	0	1.0459E-11	30	10	0.1883844	3.724E-11	1
rs7209675	17	67835142	A	T	BPTF	0.04	0	1.0483E-11	46	13.01	0.0717974	1.12E-10	1
rs2885262	1	246083593	A	G	SMYD3	-0.04	0	1.0504E-11	20	8.86	0.2628722	3.74E-11	1
rs10414837	19	849618	C	T	ELANE	-0.04	0	1.0527E-11	0	4.66	0.7018833	3.748E-11	1
rs35601686	16	71953145	CAA	C	PKD1L3	0.04	0	1.0546E-11	19	8.68	0.2762938	4.53E-11	1
rs1124435	16	65729479	A	G	CDH11	0.03	0	1.0562E-11	0	4.21	0.7547552	3.76E-11	1
rs10802329	1	246077453	A	G	SMYD3	-0.04	0	1.0568E-11	20	8.76	0.2701598	3.762E-11	1
rs2788017	1	246081461	T	C	SMYD3	-0.04	0	1.0586E-11	20	8.78	0.2691478	3.766E-11	1
rs2787961	1	246078742	A	G	SMYD3	-0.04	0	1.06E-11	20	8.8	0.2672709	3.774E-11	1
rs7211282	17	68028479	G	A	KPNA2	-0.04	0	1.0623E-11	45	12.89	0.0748147	1.213E-10	1
rs34027471	6	26073183	T	G	HFE	-0.08	0	1.063E-11	24	9.3	0.2320824	3.689E-11	1
rs2787959	1	246081423	C	T	SMYD3	-0.04	0	1.0633E-11	20	8.77	0.269302	3.782E-11	1
rs10484435	6	26031583	T	G	HIST1H3B	-0.08	0	1.0643E-11	26	9.51	0.217934	3.652E-11	1
rs28360595	6	26029816	A	G	HIST1H3B	-0.08	0	1.0659E-11	25	9.46	0.2213327	3.667E-11	1
rs2061786	16	65733313	A	G	CDH11	0.03	0	1.0751E-11	0	4.16	0.761628	3.827E-11	1
rs10492269	12	98890087	T	C	ANKS1B	0.06	0	1.0759E-11	0	0.99	0.9950052	3.829E-11	1
rs16891235	6	26017314	T	C	HIST1H1A	-0.08	0	1.0778E-11	31	10.16	0.1798774	3.614E-11	1
rs336614	3	18590414	T	C	SATB1	0.03	0	1.0818E-11	0	4.96	0.664847	3.85E-11	1
rs1431181	18	53253042	G	A	DCC	0.04	0	1.0824E-11	19	8.68	0.2761837	3.17E-11	1
rs453585	3	18593380	G	A	SATB1	0.03	0	1.0865E-11	0	3.7	0.8132957	3.867E-11	1
rs62099183	18	53096622	T	C	DCC	0.03	0	1.0894E-11	0	3.44	0.8414957	3.877E-11	1
rs7681288	4	15094899	G	A	CPEB2	-0.04	0	1.0917E-11	0	3.46	0.8396418	3.885E-11	1
rs13195692	6	26044145	C	T	HIST1H2BB	-0.08	0	1.0927E-11	30	10.08	0.1841138	3.716E-11	1
rs12452511	17	67836460	A	G	BPTF	0.04	0	1.0955E-11	44	12.72	0.079212	1.167E-10	1
rs400750	3	18593470	T	G	SATB1	0.03	0	1.0962E-11	0	3.69	0.8141708	3.901E-11	1
rs149604876	18	53207030	TTC	T	DCC	0.03	0	1.0983E-11	0	6.92	0.4374463	3.908E-11	1
rs12449073	16	72137105	A	T	PMFBP1	0.03	0	1.1005E-11	0	6.06	0.5328765	3.838E-11	1
rs35367169	6	26040367	G	A	HIST1H2BB	-0.08	0	1.1076E-11	30	10.08	0.1840836	3.765E-11	1
rs2061787	16	65733378	T	A	CDH11	0.03	0	1.1077E-11	0	4.2	0.7569978	3.941E-11	1

Table S2

rs11639843	16	71954484	G	A	PKD1L3	0.04	0	1.1098E-11	23	9.12	0.2438289	4.963E-11	1
rs62084246	17	67871795	G	C	BPTF	0.04	0	1.1117E-11	46	13.03	0.0714908	1.184E-10	1
rs35335639	6	26038453	C	G	HIST1H2BB	-0.08	0	1.1147E-11	30	10.08	0.1840882	3.788E-11	1
rs17411061	18	53268743	C	T	DCC	0.04	0	1.1171E-11	19	8.74	0.2715455	3.32E-11	1
rs4459619	18	53094338	T	C	DCC	0.03	0	1.1175E-11	0	3.44	0.8414267	3.975E-11	1
rs1881394	2	27726185	G	A	SLC4A1AP	-0.04	0	1.1175E-11	0	4.08	0.7709744	3.975E-11	1
rs1535039	6	29443655	T	C	OR11A1	-0.08	0	1.1206E-11	0	4.99	0.6610621	3.986E-11	1
rs745631	11	113075170	A	G	NCAM1	0.03	0	1.1231E-11	0	6.72	0.4581179	3.995E-11	1
rs34791189	6	26035578	G	A	HIST1H2AB	-0.08	0	1.1274E-11	30	10.08	0.1841096	3.83E-11	1
rs4527503	4	34464396	C	G	ARAP2	0.04	0	1.1301E-11	32	10.32	0.1713783	6.227E-11	1
rs12450907	17	67874528	T	G	BPTF	0.04	0	1.1348E-11	46	13.07	0.0703917	1.222E-10	1
rs17768587	16	77048273	G	A	MON1B	-0.05	0	1.1398E-11	0	3.35	0.8506348	4.053E-11	1
rs4791046	17	67855857	G	A	BPTF	0.04	0	1.1405E-11	46	13.03	0.0713084	1.213E-10	1
rs188721049	3	43169356	A	G	POMGNT2	0.08	0	1.1437E-11	0	6.51	0.4811489	4.067E-11	1
rs59950564	17	67864743	A	G	BPTF	0.04	0	1.1467E-11	46	13.04	0.0712596	1.219E-10	1
rs58141639	17	67868786	C	T	BPTF	0.04	0	1.1504E-11	46	13.04	0.0711145	1.223E-10	1
rs62084235	17	67857321	C	T	BPTF	0.04	0	1.1505E-11	46	13.04	0.0712158	1.223E-10	1
rs12450072	17	67857401	C	G	BPTF	0.04	0	1.1506E-11	46	13.04	0.0712153	1.223E-10	1
rs34872586	17	67867350	T	C	BPTF	0.04	0	1.1509E-11	46	13.04	0.0711116	1.223E-10	1
rs4790905	17	67867234	C	A	BPTF	0.04	0	1.1509E-11	46	13.04	0.0711116	1.223E-10	1
rs3935969	17	67885843	A	G	BPTF	0.04	0	1.1511E-11	46	13.04	0.0711178	1.224E-10	1
rs6504545	17	67884251	A	G	BPTF	0.04	0	1.1515E-11	46	13.17	0.0681844	1.234E-10	1
rs4318247	17	67886056	A	G	BPTF	0.04	0	1.1533E-11	46	13.04	0.0710904	1.226E-10	1
rs7208663	17	67889055	T	C	BPTF	0.04	0	1.1533E-11	46	13.04	0.0710904	1.226E-10	1
rs75231441	17	67889369	A	G	BPTF	0.04	0	1.1533E-11	46	13.04	0.0710904	1.226E-10	1
rs8079291	17	67891506	A	G	BPTF	0.04	0	1.1533E-11	46	13.04	0.0710904	1.226E-10	1
rs6531314	4	34463898	C	T	ARAP2	0.04	0	1.1533E-11	32	10.31	0.1714865	6.36E-11	1
rs56321819	4	34467063	A	G	ARAP2	0.04	0	1.1538E-11	32	10.31	0.1717871	6.36E-11	1
rs6739686	2	124245462	G	T	CNTNAP5	-0.04	0	1.154E-11	49	13.79	0.0550172	1.637E-11	3.14387E-12
rs6531313	4	34463790	A	T	ARAP2	0.04	0	1.1562E-11	32	10.32	0.1713595	6.374E-11	1

rs1364061	16	65735268	T	C	CDH11	0.03	0	1.157E-11	0	4.2	0.7566878	4.113E-11	1
rs385816	6	29512447	G	A	MAS1L	-0.08	0	1.1609E-11	0	4.82	0.6813777	4.127E-11	1
rs8079754	17	67891780	A	G	BPTF	0.04	0	1.1613E-11	46	13.05	0.0708514	1.232E-10	1
rs2128792	17	67861061	C	T	BPTF	0.04	0	1.1614E-11	46	13.03	0.0713337	1.232E-10	1
rs3094569	6	29515843	A	T	MAS1L	-0.08	0	1.1617E-11	0	4.82	0.6814421	4.13E-11	1
rs75352663	17	67863943	AT	A	BPTF	0.04	0	1.1644E-11	46	13.03	0.0712957	1.236E-10	1
rs62084238	17	67860457	T	A	BPTF	0.04	0	1.1686E-11	46	13.05	0.0708581	1.241E-10	1
rs12500604	4	14959779	T	C	CPEB2	-0.03	0	1.1693E-11	0	5.73	0.5712136	4.156E-11	1
rs4762524	12	98903228	C	A	ANKS1B	0.06	0	1.1701E-11	0	1.06	0.9938695	4.159E-11	1
rs2086744	17	67853159	C	G	BPTF	0.04	0	1.1739E-11	46	13.04	0.0711346	1.246E-10	1
rs74561219	17	67857643	T	A	BPTF	0.04	0	1.1827E-11	45	12.95	0.0732602	1.249E-10	1
rs11869819	17	67872553	A	C	BPTF	0.04	0	1.183E-11	46	13.03	0.0714535	1.254E-10	1
rs12450363	17	67843992	T	C	BPTF	0.04	0	1.1839E-11	43	12.36	0.0894085	1.217E-10	1
rs17700957	16	77047312	A	G	MON1B	-0.05	0	1.1892E-11	0	3.34	0.852128	4.226E-11	1
rs10484433	6	26030264	C	A	HIST1H3B	-0.08	0	1.1909E-11	31	10.21	0.1771729	4.232E-11	1
rs2052187	17	67838621	T	C	BPTF	0.04	0	1.1911E-11	45	12.73	0.0789549	1.247E-10	1
rs2124219	4	15093687	A	G	CPEB2	-0.04	0	1.1918E-11	0	3.47	0.8386341	4.235E-11	1
rs13387659	2	124245447	A	G	CNTNAP5	-0.04	0	1.1947E-11	48	13.67	0.0572831	1.742E-11	3.39693E-12
rs8074078	17	67842627	T	G	BPTF	0.04	0	1.1962E-11	44	12.72	0.0791017	1.253E-10	1
rs11647889	16	72018135	C	G	DHODH	0.05	0	1.2021E-11	0	3.22	0.864069	4.271E-11	1
rs146079696	3	44595487	C	T	ZNF197,ZNF	0.08	0	1.2034E-11	0	5.68	0.5769924	4.275E-11	1
rs3206817	17	67896718	A	G	BPTF	0.04	0	1.2053E-11	46	13.1	0.0697101	1.273E-10	1
rs4271626	17	67934017	G	A	BPTF	0.04	0	1.2061E-11	46	13.12	0.069148	1.274E-10	1
rs5817543	16	65740834	G	GA	CDH11	0.03	0	1.2062E-11	0	4.19	0.7570968	4.285E-11	1
rs35249036	6	26025935	C	G	HIST1H4B	-0.08	0	1.2075E-11	30	10.11	0.1824793	4.29E-11	1
rs7107356	11	47654618	A	G	AGBL2	0.03	0	1.2103E-11	0	6.88	0.4414936	4.299E-11	1
rs62085992	17	67926967	T	A	BPTF	0.04	0	1.2152E-11	46	13.09	0.0698661	1.28E-10	1
rs62085993	17	67927036	T	C	BPTF	0.04	0	1.2152E-11	46	13.09	0.0698661	1.28E-10	1
rs2523432	6	29516333	G	A	MAS1L	-0.08	0	1.2156E-11	0	5.37	0.6148099	4.318E-11	1
rs12452823	17	67889667	G	A	BPTF	0.04	0	1.2179E-11	46	13.04	0.071028	1.289E-10	1

rs336613	3	18590533	G	A	SATB1	0.03	0	1.2184E-11	0	4.93	0.6687152	4.328E-11	1
rs34733047	17	67852002	T	TA	BPTF	0.04	0	1.2229E-11	46	13.03	0.0712666	1.299E-10	1
rs13203673	6	25978894	T	C	TRIM38	-0.08	0	1.2231E-11	26	9.49	0.2195223	4.182E-11	1
rs56355004	1	231033999	T	C	FAM89A	-0.05	0	1.2252E-11	0	4.82	0.6823228	4.351E-11	1
rs35451370	13	28753074	G	T	SLC46A3	-0.04	0	1.2255E-11	0	6.22	0.5143666	4.352E-11	1
rs56360439	11	113044643	T	C	NCAM1	0.03	0	1.2268E-11	0	5.38	0.6140387	4.357E-11	1
rs11656743	17	67984173	G	A	BPTF	-0.04	0	1.2269E-11	33	10.5	0.1618233	1.132E-10	1
rs7224923	17	67846149	T	G	BPTF	0.04	0	1.2271E-11	47	13.31	0.0649019	1.303E-10	1
rs10029034	4	15095056	C	T	CPEB2	-0.04	0	1.2283E-11	0	3.46	0.8393526	4.362E-11	1
rs8081856	17	67849802	A	G	BPTF	0.04	0	1.2286E-11	46	13.03	0.0714204	1.302E-10	1
rs8081517	17	67849581	A	T	BPTF	0.04	0	1.229E-11	46	13.03	0.0714193	1.303E-10	1
rs17587597	6	25986223	G	A	TRIM38	-0.08	0	1.2352E-11	26	9.48	0.2199661	4.226E-11	1
rs2046323	17	67853811	T	G	BPTF	0.04	0	1.2377E-11	46	13.03	0.0713381	1.312E-10	1
rs62084234	17	67850944	A	G	BPTF	0.04	0	1.2381E-11	46	13.02	0.0716986	1.311E-10	1
rs11867517	17	67879210	C	T	BPTF	0.04	0	1.2441E-11	47	13.22	0.0669176	1.316E-10	1
rs2702554	4	15092207	C	T	CPEB2	-0.04	0	1.246E-11	0	3.47	0.8379647	4.424E-11	1
rs55745018	4	14963405	G	C	CPEB2	-0.03	0	1.2493E-11	0	5.62	0.5841722	4.436E-11	1
rs1979914	18	53328041	G	A	DCC	0.03	0	1.2512E-11	11	7.9	0.3417449	4.442E-11	1
rs215897	16	21666748	C	T	METTL9	0.04	0	1.2541E-11	0	6.21	0.5150473	4.452E-11	1
rs7549378	1	246090890	C	T	SMYD3	-0.05	0	1.2559E-11	0	6.94	0.4346294	3.86E-11	1
rs1836799	11	113060902	C	T	NCAM1	0.03	0	1.2564E-11	0	5.63	0.5840667	4.46E-11	1
rs1836798	11	113060903	A	G	NCAM1	0.03	0	1.2578E-11	0	5.63	0.5840282	4.465E-11	1
rs1585084	3	117897197	C	T	LSAMP	-0.04	0	1.2585E-11	0	1.44	0.9843995	4.468E-11	1
rs1585083	3	117897206	A	G	LSAMP	-0.04	0	1.2585E-11	0	1.44	0.9844001	4.468E-11	1
rs35156113	18	53328497	TAAG	T	DCC	0.03	0	1.2673E-11	11	7.9	0.3416291	4.498E-11	1
rs72834623	6	26014624	G	A	HIST1H1A	-0.08	0	1.2682E-11	30	10.04	0.1860499	4.313E-11	1
rs658689	11	99654395	G	A	CNTN5	-0.04	0	1.281E-11	0	3.27	0.8588463	4.546E-11	1
rs2956517	12	60401805	G	A	SLC16A7	-0.03	0	1.2814E-11	57	16.5	0.0208867	8.792E-11	1
rs34821024	16	77043285	AG	A	MON1B	-0.05	0	1.285E-11	0	3.37	0.8493032	4.56E-11	1
rs62411781	4	14963575	A	G	CPEB2	-0.03	0	1.2869E-11	0	5.59	0.5881113	4.567E-11	1

rs5821446	17	67966422	A	AT	BPTF	-0.04	0	1.2943E-11	32	10.4	0.1670777	1.158E-10	1
rs10058763	5	121427185	C	G	FTMT	0.11	0	1.2979E-11	0	5.57	0.5901651	4.605E-11	1
rs1186396	2	124257382	G	A	CNTNAP5	0.03	0	1.2985E-11	57	16.44	0.021363	1.432E-11	2.76331E-12
rs8065906	17	67906529	G	A	BPTF	0.04	0	1.2995E-11	46	13.13	0.0689201	1.373E-10	1
rs3857142	4	15104412	C	T	CPEB2	-0.04	0	1.2997E-11	0	3.49	0.8366041	4.612E-11	1
rs1115529	16	65735892	T	C	CDH11	0.03	0	1.303E-11	0	4.2	0.7569325	4.623E-11	1
rs12600941	17	67922691	A	G	BPTF	0.04	0	1.3102E-11	46	13.13	0.0690485	1.38E-10	1
rs1170578	2	124257525	C	T	CNTNAP5	0.03	0	1.3125E-11	56	16.1	0.0242606	1.493E-11	2.90967E-12
rs17488531	18	53228626	G	A	DCC	0.03	0	1.3187E-11	12	8.04	0.3292774	4.644E-11	1
rs7223813	17	67949724	A	G	BPTF	0.04	0	1.3233E-11	46	13.14	0.0688484	1.394E-10	1
rs13213200	6	26745970	G	A	ZNF322	-0.07	0	1.3292E-11	0	6.22	0.5140954	4.714E-11	1
rs56195001	6	25975937	C	T	TRIM38	-0.08	0	1.3311E-11	30	10.1	0.1827401	4.482E-11	1
rs13125551	4	14963208	G	C	CPEB2	-0.03	0	1.3386E-11	0	5.59	0.5883301	4.747E-11	1
rs35116528	6	25975441	A	G	TRIM38	-0.08	0	1.3405E-11	30	10.11	0.1823976	4.754E-11	1
rs7223357	17	67949420	C	G	BPTF	0.04	0	1.3431E-11	46	13.14	0.0686643	1.414E-10	1
rs56294283	6	25975871	A	G	TRIM38	-0.08	0	1.3465E-11	30	10.11	0.1825136	4.775E-11	1
rs66790453	6	26106860	C	T	HIST1H1T	-0.08	0	1.3469E-11	24	9.28	0.2329844	5.476E-11	1
rs1170599	2	124261384	G	A	CNTNAP5	0.03	0	1.3487E-11	58	16.68	0.0195614	1.365E-11	2.62431E-12
rs2702552	4	15099386	A	G	CPEB2	-0.04	0	1.3499E-11	0	3.45	0.8409973	4.786E-11	1
rs3964019	16	65721291	A	C	CDH11	0.03	0	1.3504E-11	0	4.29	0.7458183	4.788E-11	1
rs7752448	6	28333322	A	G	ZSCAN31	-0.08	0	1.3514E-11	0	2.87	0.8963879	4.792E-11	1
rs779976	2	124262450	A	T	CNTNAP5	0.03	0	1.3514E-11	58	16.68	0.0195616	1.359E-11	2.62431E-12
rs6449094	4	14962029	A	T	CPEB2	-0.03	0	1.3526E-11	0	5.59	0.5883729	4.796E-11	1
rs1170598	2	124261247	A	G	CNTNAP5	0.03	0	1.3565E-11	58	16.68	0.0195693	1.373E-11	2.62431E-12
rs62084245	17	67871013	C	T	BPTF	0.04	0	1.3572E-11	46	13.03	0.0714087	1.434E-10	1
rs16891334	6	26124075	T	C	HIST1H2AC	-0.08	0	1.3617E-11	24	9.26	0.2347742	4.828E-11	1
rs780042	2	124250259	T	G	CNTNAP5	0.03	0	1.3621E-11	56	16.23	0.023108	1.472E-11	2.83555E-12
rs780044	2	124249570	G	A	CNTNAP5	0.03	0	1.3642E-11	56	16.22	0.0231762	1.476E-11	2.83555E-12
rs4790908	17	67856791	T	G	BPTF	0.04	0	1.3647E-11	47	13.27	0.0657829	1.434E-10	1
rs779985	2	124247112	T	C	CNTNAP5	0.03	0	1.3656E-11	56	16.21	0.0232284	1.47E-11	2.83555E-12

Table S2

rs1170575	2	124259965	C	T	CNTNAP5	0.03	0	1.3662E-11	57	16.32	0.0223177	1.416E-11	2.76331E-12
rs1455208	4	15101263	A	G	CPEB2	-0.04	0	1.3664E-11	0	3.45	0.8400644	4.844E-11	1
rs17151193	8	10142799	G	A	MSRA	0.04	0	1.3719E-11	0	4.14	0.7635719	4.863E-11	1
rs35299677	6	151947868	GT	G	ESR1	-0.04	0	1.3725E-11	0	5.4	0.6109978	4.865E-11	1
rs36012762	6	25980295	A	C	TRIM38	-0.08	0	1.3726E-11	30	10.1	0.1832381	4.866E-11	1
rs745936705	17	67879040	AGG	A	BPTF	0.04	0	1.3728E-11	46	13.2	0.0674188	1.459E-10	1
rs775942045	17	67879043	AATATTTT(	A	BPTF	0.04	0	1.3728E-11	46	13.2	0.0674188	1.459E-10	1
rs2702551	4	15100005	G	C	CPEB2	-0.04	0	1.3785E-11	0	3.45	0.8407597	4.886E-11	1
rs8179607	2	124235016	G	A	CNTNAP5	-0.04	0	1.3792E-11	50	14.11	0.0492034	1.884E-11	3.67036E-12
rs13192365	6	25993740	T	C	TRIM38	-0.08	0	1.3807E-11	30	10.09	0.1834663	4.894E-11	1
rs2604568	4	15100894	T	A	CPEB2	-0.04	0	1.3833E-11	0	3.45	0.840818	4.903E-11	1
rs35528636	6	25995473	A	C	TRIM38	-0.08	0	1.3835E-11	30	10.09	0.1834534	4.661E-11	1
rs13206501	6	26109920	T	C	HIST1H1T	-0.08	0	1.3854E-11	24	9.25	0.2352784	4.91E-11	1
rs62262671	3	49612440	A	G	BSN	0.06	0	1.3864E-11	0	2.11	0.9534708	4.914E-11	1
rs6844060	4	34463068	A	G	ARAP2	0.04	0	1.3891E-11	32	10.42	0.1659037	7.638E-11	1
rs116201501	6	25998921	C	T	TRIM38	-0.08	0	1.3901E-11	30	10.1	0.183178	4.927E-11	1
rs72834617	6	25998947	G	A	TRIM38	-0.08	0	1.3901E-11	30	10.1	0.183178	4.927E-11	1
rs11665242	18	53380757	A	G	DCC	0.03	0	1.3922E-11	8	7.65	0.3642607	4.934E-11	1
rs13197334	6	26122420	G	C	HIST1H2BC	-0.08	0	1.3939E-11	24	9.26	0.2345286	4.94E-11	1
rs13415020	2	124200373	C	G	CNTNAP5	-0.04	0	1.3972E-11	50	14.08	0.0497632	1.876E-11	3.67036E-12
rs17488316	18	53223565	A	T	DCC	0.03	0	1.3989E-11	13	8.07	0.3261607	4.92E-11	1
rs3020377	6	151951263	G	A	ESR1	-0.04	0	1.3995E-11	0	5.41	0.6100268	4.959E-11	1
rs6819236	4	15098848	C	A	CPEB2	-0.04	0	1.3995E-11	0	3.46	0.8395629	4.959E-11	1
rs13214280	6	26008392	C	T	HIST1H1A	-0.08	0	1.4024E-11	30	10.11	0.1821709	4.969E-11	1
rs779995	2	124254744	T	C	CNTNAP5	0.03	0	1.4027E-11	58	16.67	0.0196526	1.429E-11	2.76331E-12
rs7243008	18	53224314	A	T	DCC	0.03	0	1.4044E-11	13	8.08	0.325569	4.939E-11	1
rs12602912	17	67873957	C	T	BPTF	0.04	0	1.4062E-11	46	13.17	0.0679787	1.522E-10	1
rs3020314	6	151949537	C	T	ESR1	-0.04	0	1.4067E-11	0	5.36	0.6158563	4.985E-11	1
rs6819476	4	15098975	C	A	CPEB2	-0.04	0	1.4075E-11	0	3.46	0.8395154	4.987E-11	1
rs1913475	6	151924621	T	C	ESR1	-0.04	0	1.4116E-11	31	10.24	0.1755583	3.214E-11	1

Table S2

rs6504546	17	67884269	A	C	BPTF	0.04	0	1.4142E-11	47	13.27	0.065864	1.52E-10	1
rs437638	16	72061553	C	T	TXNL4B	0.05	0	1.4157E-11	0	3.8	0.8029807	5.016E-11	1
rs34522419	1	246032012	A	C	SMYD3	-0.04	0	1.416E-11	0	4.05	0.7738938	5.017E-11	1
rs61857747	10	90937897	G	A	ANKRD1	-0.05	0	1.4164E-11	21	8.93	0.2576168	6.861E-11	1
rs1807922	2	124205522	G	A	CNTNAP5	-0.04	0	1.4201E-11	50	14.25	0.0468769	1.857E-11	3.57685E-12
rs11709892	3	43280529	T	C	SNRK	-0.04	0	1.4202E-11	38	11.35	0.1242368	1.415E-11	2.76331E-12
rs9296321	6	40150613	C	T	MOCS1	0.03	0	1.4227E-11	28	9.83	0.1986748	4.041E-11	1
rs2702550	4	15107021	A	G	CPEB2	-0.04	0	1.4256E-11	0	3.44	0.8410952	5.05E-11	1
rs13395031	2	124213967	C	T	CNTNAP5	-0.04	0	1.4284E-11	50	14.28	0.0464113	1.847E-11	3.57685E-12
rs11867537	17	67879376	A	G	BPTF	0.04	0	1.4321E-11	47	13.24	0.0665754	1.52E-10	1
rs12451511	17	67878745	T	G	BPTF	0.04	0	1.4321E-11	47	13.24	0.0665754	1.52E-10	1
rs62084248	17	67878425	C	T	BPTF	0.04	0	1.4321E-11	47	13.24	0.0665754	1.52E-10	1
rs62084249	17	67878882	A	G	BPTF	0.04	0	1.4321E-11	47	13.24	0.0665754	1.52E-10	1
rs9913471	17	67878379	C	T	BPTF	0.04	0	1.4321E-11	47	13.24	0.0665754	1.52E-10	1
rs9915108	17	67878347	T	C	BPTF	0.04	0	1.4321E-11	47	13.24	0.0665754	1.52E-10	1
rs779977	2	124261717	C	A	CNTNAP5	0.03	0	1.4328E-11	57	16.31	0.022466	1.516E-11	2.90967E-12
rs55939964	17	67873181	G	A	BPTF	0.04	0	1.4362E-11	47	13.24	0.0665222	1.524E-10	1
rs9912084	17	67871919	A	C	BPTF	0.04	0	1.4363E-11	47	13.24	0.0665222	1.524E-10	1
rs9912770	17	67872117	C	T	BPTF	0.04	0	1.4363E-11	47	13.24	0.0665222	1.524E-10	1
rs62084251	17	67882620	G	A	BPTF	0.04	0	1.4366E-11	47	13.24	0.0665356	1.525E-10	1
rs9892803	17	67883127	T	G	BPTF	0.04	0	1.4366E-11	47	13.24	0.0665356	1.525E-10	1
rs4569324	17	67876634	C	T	BPTF	0.04	0	1.4367E-11	47	13.24	0.0665356	1.525E-10	1
rs62084247	17	67876787	C	T	BPTF	0.04	0	1.4367E-11	47	13.24	0.0665356	1.525E-10	1
rs4848924	2	124234310	A	C	CNTNAP5	-0.04	0	1.4384E-11	50	14.22	0.0474085	1.828E-11	3.57685E-12
rs4494619	18	53107079	T	G	DCC	0.03	0	1.4396E-11	0	3.55	0.8297421	5.099E-11	1
rs11877505	18	53302653	A	G	DCC	0.03	0	1.4456E-11	13	8.12	0.3217772	4.405E-11	1
rs11870068	17	67948399	A	C	BPTF	0.04	0	1.4474E-11	46	13.15	0.0684581	1.521E-10	1
rs13212652	6	26099051	T	G	HFE	-0.08	0	1.4496E-11	24	9.26	0.2348305	5.134E-11	1
rs3734528	6	26022016	A	G	HIST1H4A	-0.08	0	1.4499E-11	27	9.68	0.2072427	4.945E-11	1
rs35402046	6	26099244	G	A	HFE	-0.08	0	1.4518E-11	24	9.27	0.2338406	5.141E-11	1

Table S2

rs10957321	8	64693321	G	A	CYP7B1	0.04	0	1.4526E-11	0	4.25	0.7500452	5.144E-11	1
rs4788616	16	72178085	T	G	PMFBP1	0.03	0	1.4569E-11	0	5.21	0.6343174	5.159E-11	1
rs12447803	16	65743990	T	C	CDH11	0.03	0	1.4625E-11	0	4.26	0.7495274	5.179E-11	1
rs189331782	3	44182677	A	G	TOPAZ1	0.08	0	1.4632E-11	0	5.79	0.5639398	5.181E-11	1
rs811901	2	124255330	C	A	CNTNAP5	0.03	0	1.4647E-11	57	16.29	0.0225857	1.561E-11	3.06378E-12
rs779996	2	124255283	G	A	CNTNAP5	0.03	0	1.4651E-11	57	16.29	0.0225902	1.562E-11	3.06378E-12
rs13414601	2	124199978	C	G	CNTNAP5	-0.04	0	1.4679E-11	50	14.22	0.0474727	1.935E-11	3.76631E-12
rs13389404	2	124200202	A	G	CNTNAP5	-0.04	0	1.4682E-11	50	14.22	0.0474764	1.935E-11	3.76631E-12
rs12451707	17	67875482	G	A	BPTF	0.04	0	1.4685E-11	47	13.23	0.0666258	1.556E-10	1
rs7558767	2	124201914	T	C	CNTNAP5	-0.04	0	1.4688E-11	50	14.23	0.0472522	1.932E-11	3.76631E-12
rs140912776	17	67883456	TA	T	BPTF	0.04	0	1.4697E-11	47	13.23	0.0666907	1.557E-10	1
rs2420571	2	124204129	G	C	CNTNAP5	-0.04	0	1.4734E-11	50	14.23	0.0472251	1.937E-11	3.76631E-12
rs1919841	2	124204043	C	T	CNTNAP5	-0.04	0	1.4734E-11	50	14.23	0.0472251	1.937E-11	3.76631E-12
rs2178357	2	124203979	T	A	CNTNAP5	-0.04	0	1.4735E-11	50	14.23	0.0472254	1.937E-11	3.76631E-12
rs6707012	2	124210963	G	A	CNTNAP5	-0.04	0	1.4764E-11	50	14.23	0.0471796	1.936E-11	3.76631E-12
rs6719774	2	124214369	C	T	CNTNAP5	-0.04	0	1.479E-11	50	14.23	0.0471974	1.943E-11	3.76631E-12
rs1919842	2	124205133	A	T	CNTNAP5	-0.04	0	1.479E-11	50	14.23	0.0472436	1.945E-11	3.76631E-12
rs8074644	17	67882101	G	C	BPTF	0.04	0	1.4798E-11	47	13.24	0.0665057	1.567E-10	1
rs79695845	10	90938392	T	C	ANKRD1	-0.05	0	1.4807E-11	21	8.93	0.2579673	7.159E-11	1
rs34213745	2	124196688	C	G	CNTNAP5	-0.04	0	1.4831E-11	50	14.19	0.0478681	1.964E-11	3.86477E-12
rs62084252	17	67883462	G	C	BPTF	0.04	0	1.4846E-11	47	13.24	0.0664653	1.572E-10	1
rs11647125	16	72209378	T	C	PMFBP1	0.04	0	1.4876E-11	0	3.55	0.8295717	5.266E-11	1
rs35515443	2	124226108	T	C	CNTNAP5	-0.04	0	1.4878E-11	51	14.35	0.0452207	1.817E-11	3.57685E-12
rs35902160	6	26128310	C	G	HIST1H2AC	-0.08	0	1.495E-11	24	9.24	0.2357282	5.292E-11	1
rs55971695	10	90938512	T	C	ANKRD1	-0.05	0	1.4952E-11	21	8.92	0.2586306	7.227E-11	1
rs3752417	6	26045677	G	C	HIST1H3C	-0.08	0	1.4969E-11	20	8.86	0.2628117	5.299E-11	1
rs35789010	6	25513951	G	A	LRRC16A	-0.09	0	1.5038E-11	12	8	0.3328042	5.323E-11	1
rs6753736	2	27735988	C	G	MRPL33	0.04	0	1.5096E-11	0	3.23	0.8629932	5.343E-11	1
rs1425018091	6	26732200	C	G	ZNF322	-0.07	0	1.5196E-11	0	6.03	0.5365752	5.378E-11	1
rs4324325	2	124206042	C	A	CNTNAP5	-0.04	0	1.5212E-11	49	13.99	0.0513926	2.072E-11	4.06948E-12

Table S2

rs142979871	16	72156481	G	A	PMFBP1	0.04	0	1.5224E-11	0	2.6	0.9197144	5.387E-11	1
rs978164	6	164751626	G	A	C6orf118	-0.03	0	1.5254E-11	0	3.35	0.8508217	5.398E-11	1
rs6504555	17	67944611	A	G	BPTF	-0.04	0	1.5273E-11	43	12.35	0.089687	1.611E-10	1
rs1367638	18	53225055	G	C	DCC	0.03	0	1.5275E-11	15	8.27	0.3096458	5.35E-11	1
rs4086434	4	15102852	T	C	CPEB2	-0.04	0	1.5345E-11	0	3.43	0.8430605	5.43E-11	1
rs1491184659	6	26131564	CAA	C	HIST1H2AC	-0.08	0	1.537E-11	26	9.55	0.215347	5.28E-11	1
rs801923	2	124256296	G	A	CNTNAP5	0.03	0	1.5472E-11	57	16.3	0.0225367	1.664E-11	3.22606E-12
rs2702549	4	15107986	A	G	CPEB2	-0.04	0	1.5515E-11	0	3.44	0.8414879	5.489E-11	1
rs7223930	17	67846070	G	A	BPTF	0.04	0	1.5628E-11	47	13.44	0.0621586	1.65E-10	1
rs12711676	2	124213446	A	C	CNTNAP5	-0.04	0	1.5695E-11	51	14.37	0.0450447	1.906E-11	3.67036E-12
rs13399760	2	124202844	A	G	CNTNAP5	-0.04	0	1.5707E-11	51	14.37	0.044988	1.902E-11	3.67036E-12
rs4917465	10	106212962	G	A	SORCS1	-0.04	0	1.5751E-11	0	7.03	0.4255152	5.646E-11	1
rs13403332	2	124203812	A	G	CNTNAP5	-0.04	0	1.5858E-11	51	14.36	0.0451001	1.926E-11	3.76631E-12
rs7575558	2	124203454	A	C	CNTNAP5	-0.04	0	1.5877E-11	51	14.36	0.0451625	1.931E-11	3.76631E-12
rs4788614	16	72154929	T	C	PMFBP1	0.04	0	1.5903E-11	0	2.58	0.920708	5.624E-11	1
rs13391053	2	124209428	T	A	CNTNAP5	-0.04	0	1.5929E-11	51	14.36	0.0450623	1.933E-11	3.76631E-12
rs7558880	2	124202043	T	G	CNTNAP5	-0.04	0	1.5932E-11	51	14.37	0.0449706	1.929E-11	3.76631E-12
rs9899520	17	67961452	A	G	BPTF	-0.04	0	1.5944E-11	40	11.76	0.1088439	1.637E-10	1
rs10188021	2	124197790	G	A	CNTNAP5	-0.04	0	1.5948E-11	51	14.34	0.0455063	1.948E-11	3.76631E-12
rs10197517	2	124197281	T	C	CNTNAP5	-0.04	0	1.5961E-11	51	14.34	0.0455093	1.95E-11	3.76631E-12
rs10208745	2	124197657	A	G	CNTNAP5	-0.04	0	1.5962E-11	51	14.34	0.0455005	1.95E-11	3.76631E-12
rs9824903	3	117902690	C	T	LSAMP	-0.04	0	1.5974E-11	0	2.38	0.9361292	5.648E-11	1
rs1968831	16	65727983	A	T	CDH11	0.03	0	1.5981E-11	0	4.32	0.7424015	5.651E-11	1
rs13216484	6	26739799	G	A	ZNF322	-0.07	0	1.5992E-11	0	6.02	0.5374322	5.654E-11	1
rs12711674	2	124196186	A	C	CNTNAP5	-0.04	0	1.6002E-11	51	14.33	0.0456026	1.958E-11	3.86477E-12
rs6783146	3	117909681	G	T	LSAMP	-0.04	0	1.6028E-11	0	2.37	0.9362904	5.667E-11	1
rs34244947	6	26740141	A	G	ZNF322	-0.07	0	1.6035E-11	0	6.02	0.5369267	5.669E-11	1
rs28645478	3	117908099	C	T	LSAMP	-0.04	0	1.6042E-11	0	2.37	0.9362252	5.672E-11	1
rs9845443	3	18657436	C	T	SATB1	0.04	0	1.6043E-11	0	2.57	0.9219205	5.672E-11	1
rs7578495	2	124203714	A	C	CNTNAP5	-0.04	0	1.6075E-11	51	14.37	0.044938	1.955E-11	3.86477E-12

Table S2

rs1045537	6	26096520	G	C	HFE	-0.08	0	1.6076E-11	24	9.24	0.235928	5.684E-11	1
rs2604558	4	15106053	A	G	CPEB2	-0.04	0	1.6079E-11	0	3.46	0.8395708	5.685E-11	1
rs9828034	3	117908388	C	A	LSAMP	-0.04	0	1.6122E-11	0	2.37	0.9362593	5.7E-11	1
rs2237235	6	26391167	A	G	BTN2A2	-0.04	0	1.6174E-11	0	4.01	0.7782127	5.718E-11	1
rs6541944	2	124212132	T	C	CNTNAP5	-0.04	0	1.6187E-11	51	14.32	0.0458257	1.987E-11	3.86477E-12
rs4791300	17	67934656	A	G	BPTF	0.04	0	1.6269E-11	41	11.88	0.1044614	1.657E-10	1
rs62097986	18	53292457	C	A	DCC	0.03	0	1.6273E-11	8	7.65	0.364646	5.13E-11	1
rs12994085	2	27729539	C	T	SLC4A1AP	0.04	0	1.6389E-11	0	3.38	0.8475207	5.792E-11	1
rs13252547	8	64779146	C	A	CYP7B1	0.04	0	1.6425E-11	0	4.63	0.7044587	5.805E-11	1
rs6698425	1	246060181	A	G	SMYD3	-0.04	0	1.6478E-11	18	8.59	0.2831859	5.823E-11	1
rs7416945	1	246062555	G	A	SMYD3	-0.04	0	1.6512E-11	18	8.6	0.2829336	5.835E-11	1
rs28419077	16	72162877	A	G	PMFBP1	0.04	0	1.6548E-11	0	2.56	0.9223239	5.848E-11	1
rs72787094	16	72158714	C	A	PMFBP1	0.04	0	1.6567E-11	0	2.63	0.9167377	5.854E-11	1
rs12993377	2	27729900	G	C	SLC4A1AP	0.04	0	1.6569E-11	0	3.38	0.8472597	5.855E-11	1
rs56653693	4	46795566	T	C	COX7B2	0.04	0	1.6615E-11	27	9.6	0.2126684	7.218E-11	1
rs2296461	10	3265033	A	G	PITRM1	-0.04	0	1.6636E-11	30	10.14	0.1807877	1.122E-10	1
rs192012479	14	105562515	G	A	IGHA2	0.11	0	1.6659E-11	22	9	0.2523529	4.075E-11	1
rs12630897	3	43659438	G	A	ANO10	-0.04	0	1.6685E-11	0	3.81	0.8016677	5.895E-11	1
rs12548518	8	64761482	A	G	CYP7B1	0.04	0	1.6719E-11	0	4.64	0.7032143	5.907E-11	1
rs665539	11	99697656	C	T	CNTN5	-0.03	0	1.6793E-11	42	12.17	0.0950299	3.006E-11	5.99363E-12
rs4790981	17	67925718	A	G	BPTF	0.04	0	1.6815E-11	41	11.9	0.1039505	1.714E-10	1
rs17604349	16	72176966	G	A	PMFBP1	0.04	0	1.6859E-11	0	4.29	0.7461422	5.956E-11	1
rs13210399	6	26095415	G	A	HFE	-0.08	0	1.6905E-11	23	9.19	0.2391803	6.954E-11	1
rs11648479	16	72158890	G	A	PMFBP1	0.04	0	1.6905E-11	0	2.64	0.9158808	5.972E-11	1
rs34759227	16	65735012	TG	T	CDH11	0.03	0	1.6938E-11	0	4.29	0.7462978	5.983E-11	1
rs4698315	4	15103688	G	C	CPEB2	-0.04	0	1.6954E-11	0	3.42	0.8433107	5.989E-11	1
rs113365769	16	72024768	G	A	DHODH	0.05	0	1.7019E-11	0	3.29	0.8571955	6.011E-11	1
rs4671358	2	59937499	T	A	BCL11A	0.04	0	1.7032E-11	43	12.34	0.0898725	9.819E-11	1
rs4788615	16	72158473	G	A	PMFBP1	0.04	0	1.7038E-11	0	2.64	0.9162664	6.018E-11	1
rs71638315	1	246092894	C	T	SMYD3	-0.05	0	1.7109E-11	10	7.84	0.3464981	4.621E-11	1

rs60244972	11	113009653	C	G	NCAM1	0.04	0	1.7166E-11	0	3.23	0.8634096	6.062E-11	1
rs1233488	6	29499942	G	A	MAS1L	-0.08	0	1.7206E-11	0	5.22	0.6327648	6.076E-11	1
rs2155293	11	113030372	T	A	NCAM1	0.04	0	1.727E-11	0	3.22	0.8642916	6.098E-11	1
rs35076545	6	26603696	C	A	ABT1	-0.07	0	1.7278E-11	0	6.21	0.5159964	6.101E-11	1
rs12288908	11	113028273	C	T	NCAM1	0.04	0	1.7286E-11	0	3.22	0.8642438	6.104E-11	1
rs4312109	12	98884903	C	G	ANKS1B	0.06	0	1.7346E-11	0	1.17	0.9915131	6.125E-11	1
rs4545595	11	113309118	G	T	TTC12	-0.03	0	1.7375E-11	0	4.33	0.7405172	6.117E-11	1
rs215896	16	21667465	T	C	METTL9	0.04	0	1.7396E-11	1	7.14	0.4143997	6.142E-11	1
rs71557316	6	26072753	G	A	HFE	-0.08	0	1.7466E-11	19	8.74	0.271557	6.166E-11	1
rs13212985	6	26609761	G	C	ABT1	-0.07	0	1.7473E-11	0	6.2	0.5160565	6.169E-11	1
rs72694238	9	11111529	T	G	PTPRD	-0.05	0	1.7495E-11	0	6.85	0.4451667	6.177E-11	1
rs11641424	16	72032980	C	T	DHODH	0.05	0	1.7499E-11	0	3.3	0.8556386	6.178E-11	1
rs77596502	17	67968054	TAGG	T	BPTF	0.04	0	1.7524E-11	40	11.77	0.1085285	1.776E-10	1
rs34781270	6	26592809	A	G	ABT1	-0.07	0	1.7574E-11	0	6.18	0.5186949	6.204E-11	1
rs17114702	11	113029013	C	T	NCAM1	0.04	0	1.7585E-11	0	3.21	0.8648553	6.208E-11	1
rs12287147	11	113027488	C	A	NCAM1	0.04	0	1.7586E-11	0	3.21	0.8648584	6.208E-11	1
rs11867401	17	67951854	G	A	BPTF	-0.04	0	1.7601E-11	40	11.86	0.1053037	1.773E-10	1
rs8057899	16	65737037	T	C	CDH11	0.03	0	1.7612E-11	0	4.34	0.7397509	6.217E-11	1
rs12401773	1	210653496	T	C	HHAT	0.03	0	1.7656E-11	0	6.86	0.4431399	6.232E-11	1
rs16891261	6	26062403	A	G	HIST1H1C	-0.08	0	1.7673E-11	19	8.74	0.2714917	6.238E-11	1
rs13196552	6	25973976	A	G	TRIM38	-0.08	0	1.7673E-11	28	9.86	0.196934	6.238E-11	1
rs17114705	11	113029110	G	A	NCAM1	0.04	0	1.7749E-11	0	3.21	0.8645204	6.265E-11	1
rs9891146	17	67991933	T	C	C17orf58	-0.04	0	1.7766E-11	34	10.67	0.1537317	1.478E-10	1
rs12285372	11	112996460	C	T	NCAM1	0.04	0	1.7818E-11	0	3.21	0.8646528	6.288E-11	1
rs1338032419	6	26742729	CAAATAAA	C	ZNF322	-0.07	0	1.7821E-11	0	5.46	0.6037472	6.29E-11	1
rs72787042	16	72033623	A	G	DHODH	0.05	0	1.7858E-11	0	3.31	0.8545421	6.302E-11	1
rs8050058	16	71947471	T	G	PKD1L3	0.04	0	1.7973E-11	22	9.03	0.2507271	6.342E-11	1
rs12471347	2	27758788	G	C	MRPL33	-0.04	0	1.799E-11	0	5	0.6605467	6.348E-11	1
rs13190739	6	26587145	G	T	ABT1	-0.07	0	1.799E-11	0	6.18	0.5188621	6.348E-11	1
rs4666011	2	27758045	G	C	MRPL33	-0.04	0	1.8032E-11	0	4.99	0.6607419	6.363E-11	1

rs13203358	6	26590350	A	T	ABT1	-0.06	0	1.8079E-11	12	8.05	0.3285623	9.566E-11	1
rs4595579	11	113008273	C	T	NCAM1	0.04	0	1.8086E-11	0	3.21	0.8650884	6.381E-11	1
rs12273652	11	113003813	G	A	NCAM1	0.04	0	1.8088E-11	0	3.21	0.8651003	6.382E-11	1
rs4322430	11	113009984	A	G	NCAM1	0.04	0	1.8104E-11	0	3.2	0.866022	6.388E-11	1
rs35243555	17	67880361	G	C	BPTF	0.04	0	1.8161E-11	47	13.31	0.0648794	1.906E-10	1
rs3733156	3	43719949	A	G	ABHD5	-0.04	0	1.8262E-11	0	4.35	0.7389391	6.443E-11	1
rs11683456	2	207357647	G	A	CREB1	0.04	0	1.8275E-11	0	6.52	0.4809516	6.447E-11	1
rs61820796	1	213960293	T	C	PROX1	-0.09	0	1.8295E-11	10	7.83	0.3481429	5.246E-11	1
rs36061290	10	104700419	GT	G	SORCS3	0.04	0	1.8297E-11	0	3.34	0.8519649	6.455E-11	1
rs2155289	11	113014359	A	G	NCAM1	0.04	0	1.8374E-11	0	3.22	0.8642007	6.481E-11	1
rs13216785	6	26078957	C	T	HFE	-0.07	0	1.8477E-11	22	8.99	0.2533649	6.494E-11	1
rs501084	6	33602597	C	T	ITPR3	0.04	0	1.8488E-11	0	6.24	0.5121601	6.521E-11	1
rs2384655	2	27729368	A	T	SLC4A1AP	0.04	0	1.8608E-11	0	3.26	0.8596341	6.563E-11	1
rs12731586	1	246131650	A	C	SMYD3	-0.05	0	1.869E-11	11	7.91	0.3408772	5.051E-11	1
rs9257809	6	29388554	A	G	OR5V1	-0.08	0	1.8701E-11	0	4.93	0.6684452	6.595E-11	1
rs70981105	6	26668604	TG	T	ZNF322	-0.07	0	1.8725E-11	0	6.12	0.5254657	6.603E-11	1
rs11640722	16	72138401	C	T	PMFBP1	0.04	0	1.8744E-11	0	2.44	0.9317283	6.61E-11	1
rs1559625	2	59946731	A	G	BCL11A	0.04	0	1.8858E-11	38	11.3	0.1261143	1.171E-10	1
rs6672297	1	246131213	T	G	SMYD3	-0.05	0	1.8987E-11	11	7.92	0.3397613	5.12E-11	1
rs12965339	18	52885080	C	A	DCC	0.04	0	1.8999E-11	0	0.85	0.9969482	6.698E-11	1
rs6911230	6	151942225	A	G	ESR1	-0.04	0	1.9063E-11	30	10.1	0.1832215	4.351E-11	1
rs594759	11	99700932	A	G	CNTN5	-0.03	0	1.9077E-11	40	11.79	0.1075212	3.403E-11	6.82081E-12
rs17075971	3	43742925	G	A	ABHD5	0.04	0	1.9134E-11	34	10.68	0.1531564	4.531E-11	1
rs7895858	10	90930809	G	C	ANKRD1	-0.05	0	1.9158E-11	20	8.75	0.270888	9.023E-11	1
rs57841322	18	53227239	T	C	DCC	0.03	0	1.9276E-11	15	8.28	0.3088768	6.683E-11	1
rs12080174	1	246107173	G	T	SMYD3	-0.05	0	1.9276E-11	6	7.5	0.3788559	5.44E-11	1
rs4791299	17	67934821	A	G	BPTF	0.04	0	1.9294E-11	40	11.82	0.1066605	1.952E-10	1
rs7896058	10	90931185	C	G	ANKRD1	-0.04	0	1.9295E-11	53	14.95	0.0366097	1.311E-10	1
rs78873302	16	48752414	C	T	N4BP1	0.08	0	1.9296E-11	0	2.63	0.9171624	6.801E-11	1
rs7540406	1	246090763	G	A	SMYD3	-0.05	0	1.9298E-11	11	7.88	0.3434215	5.187E-11	1

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rs67296946	6	26048331	T	G	HIST1H3C	-0.08	0	1.9364E-11	26	9.48	0.2201504	6.802E-11	1
rs60856912	17	67896227	G	T	BPTF	0.04	0	1.9409E-11	56	16.24	0.0229979	1.29E-10	1
rs6927072	6	151936552	T	G	ESR1	-0.04	0	1.9437E-11	31	10.16	0.1798889	4.414E-11	1
rs72694237	9	11111031	A	G	PTPRD	-0.05	0	1.9462E-11	0	6.85	0.4450526	6.859E-11	1
rs3909543	16	72149644	G	A	PMFBP1	0.03	0	1.9492E-11	0	6.12	0.5257996	6.801E-11	1
rs9890629	17	67875443	G	A	BPTF	0.04	0	1.9511E-11	47	13.32	0.0646486	2.053E-10	1
rs62097987	18	53292866	T	G	DCC	0.03	0	1.9519E-11	11	7.94	0.337555	5.971E-11	1
rs72787093	16	72156867	C	T	PMFBP1	0.04	0	1.9609E-11	0	2.7	0.9109827	6.909E-11	1
rs3852785	16	72164743	G	A	PMFBP1	0.04	0	1.978E-11	0	2.82	0.9010017	6.969E-11	1
rs1170597	2	124260664	C	T	CNTNAP5	0.03	0	1.9813E-11	56	16.23	0.0231007	2.161E-11	4.28505E-12
rs62097989	18	53300108	A	G	DCC	0.03	0	1.9883E-11	11	7.94	0.3383141	6.068E-11	1
rs145913703	18	53295551	TGTAA	T	DCC	0.03	0	1.9883E-11	11	7.94	0.3376805	6.074E-11	1
rs72787091	16	72156285	C	T	PMFBP1	0.04	0	2.0023E-11	0	2.68	0.9126821	7.053E-11	1
rs113191211	16	72027142	G	A	DHODH	0.05	0	2.0105E-11	0	3.39	0.8464022	7.081E-11	1
rs8049508	16	71944410	C	T	PKD1L3	0.04	0	2.0186E-11	24	9.32	0.2308056	7.109E-11	1
rs62086043	17	67971887	A	G	BPTF	0.04	0	2.0446E-11	40	11.79	0.1075317	2.052E-10	1
rs149123117	6	26670390	A	G	ZNF322	-0.07	0	2.0493E-11	0	6.01	0.538128	7.216E-11	1
rs11665486	18	52874076	C	T	DCC	0.04	0	2.056E-11	0	0.91	0.9961036	7.239E-11	1
rs4648325	11	113307191	C	T	TTC12	-0.03	0	2.0563E-11	0	4.35	0.7382268	7.219E-11	1
rs76586169	2	27674968	G	A	SLC4A1AP	-0.04	0	2.0621E-11	0	4.66	0.7018719	7.26E-11	1
rs8047881	16	72160007	A	G	PMFBP1	0.04	0	2.07E-11	0	2.65	0.9153868	7.287E-11	1
rs13208916	6	26601712	G	A	ABT1	-0.06	0	2.0881E-11	12	7.99	0.3330398	1.087E-10	1
rs28360517	6	26602225	A	G	ABT1	-0.06	0	2.0881E-11	12	7.99	0.3330398	1.087E-10	1
rs9348726	6	26604978	G	A	ABT1	-0.06	0	2.0881E-11	12	7.99	0.3330398	1.087E-10	1
rs9379899	6	26602787	T	A	ABT1	-0.06	0	2.0881E-11	12	7.99	0.3330398	1.087E-10	1
rs9379901	6	26603638	T	C	ABT1	-0.06	0	2.0881E-11	12	7.99	0.3330398	1.087E-10	1
rs72694236	9	11110402	A	G	PTPRD	-0.05	0	2.0928E-11	0	6.86	0.4435423	7.366E-11	1
rs72613829	2	27680120	C	T	SLC4A1AP	-0.04	0	2.0933E-11	0	4.66	0.700791	7.368E-11	1
rs398580	16	72061554	A	G	TXNL4B	0.05	0	2.0982E-11	0	3.82	0.8003008	7.385E-11	1
rs4665385	2	27707970	C	T	SLC4A1AP	-0.04	0	2.1026E-11	0	4.69	0.6977476	7.4E-11	1

rs7865295	9	11110004	C	T	PTPRD	-0.05	0	2.1164E-11	0	6.86	0.4439142	7.448E-11	1
rs2161768	2	207362448	A	G	CREB1	0.04	0	2.1269E-11	0	6.44	0.4891926	7.484E-11	1
rs12197646	6	166246476	A	G	PRR18	0.05	0	2.1274E-11	20	8.84	0.2645364	1.34E-10	1
rs7875617	9	11109859	G	A	PTPRD	-0.05	0	2.1427E-11	0	6.87	0.4424136	7.539E-11	1
rs6589368	11	113298196	C	T	TTC12	-0.03	0	2.1448E-11	0	4.36	0.7380129	7.524E-11	1
rs8067892	17	67841867	A	G	BPTF	0.04	0	2.1593E-11	42	12.26	0.0921827	2.219E-10	1
rs34229567	6	26588293	C	T	ABT1	-0.06	0	2.1756E-11	12	7.96	0.3359528	1.121E-10	1
rs7875257	9	11109844	A	G	PTPRD	-0.05	0	2.1766E-11	0	6.87	0.4421122	7.656E-11	1
rs13201821	6	26057553	A	C	HIST1H1C	-0.07	0	2.1815E-11	25	9.42	0.2239991	7.673E-11	1
rs35378061	6	26058929	C	A	HIST1H1C	-0.08	0	2.2067E-11	20	8.84	0.2641277	7.752E-11	1
rs2702575	4	15057481	T	C	CPEB2	-0.04	0	2.2091E-11	0	4.78	0.6870908	7.768E-11	1
rs6472147	8	64700140	A	T	CYP7B1	0.04	0	2.214E-11	0	4.53	0.7166659	7.785E-11	1
rs1121463	9	11108520	C	G	PTPRD	-0.05	0	2.2188E-11	0	6.86	0.4437221	7.802E-11	1
rs1234844	6	29484359	T	G	MAS1L	-0.08	0	2.2357E-11	0	4.91	0.6710341	7.86E-11	1
rs72694225	9	11106656	C	T	PTPRD	-0.05	0	2.2499E-11	0	6.85	0.4448247	7.909E-11	1
rs4881131	10	3253481	G	A	PITRM1	0.04	0	2.255E-11	0	6.58	0.4736669	7.927E-11	1
rs11109651	12	98887573	T	C	ANKS1B	0.06	0	2.2604E-11	0	1.16	0.9917885	7.946E-11	1
rs2143668	6	29464396	A	T	OR2H1	-0.08	0	2.2673E-11	0	4.93	0.6689353	7.97E-11	1
rs11593966	10	3255090	A	G	PITRM1	0.04	0	2.2724E-11	0	6.61	0.4707938	7.987E-11	1
rs11079707	17	67839501	G	A	BPTF	0.04	0	2.2791E-11	42	12.22	0.0935102	2.326E-10	1
rs2901199	2	124229272	T	C	CNTNAP5	-0.04	0	2.2861E-11	49	13.8	0.054811	3.282E-11	6.47633E-12
rs532928	8	10039834	T	C	MSRA	-0.04	0	2.3058E-11	0	4.99	0.66079	8.102E-11	1
rs55754265	3	49650053	C	T	BSN	0.06	0	2.3099E-11	0	2.28	0.9427759	8.117E-11	1
rs10164593	2	161125461	C	T	TANK	-0.05	0	2.3189E-11	0	2.14	0.9515989	8.148E-11	1
rs11694393	2	207355116	T	C	CREB1	0.04	0	2.3252E-11	0	6.39	0.4950638	8.17E-11	1
rs3759213	12	98879812	T	A	ANKS1B	0.06	0	2.3265E-11	0	0.9	0.9962307	8.174E-11	1
rs12742623	1	246068504	G	A	SMYD3	-0.05	0	2.3307E-11	10	7.85	0.3457796	6.345E-11	1
rs12075850	1	246070822	A	C	SMYD3	-0.05	0	2.3335E-11	11	7.89	0.3427129	6.261E-11	1
rs80135947	17	67839885	A	C	BPTF	0.04	0	2.3336E-11	42	12.22	0.0936322	2.381E-10	1
rs8082512	17	67840943	T	C	BPTF	0.04	0	2.3357E-11	42	12.22	0.0936508	2.383E-10	1

rs75873575	17	67835625	GT	G	BPTF	0.04	0	2.3363E-11	44	12.51	0.0850891	2.423E-10	1
rs10112206	8	64699204	A	C	CYP7B1	0.04	0	2.3373E-11	0	4.52	0.7188606	8.211E-11	1
rs12197511	6	166246307	A	T	PRR18	0.05	0	2.3413E-11	25	9.35	0.2283402	1.602E-10	1
rs62084214	17	67847209	C	G	BPTF	0.04	0	2.3446E-11	44	12.52	0.0846132	2.428E-10	1
rs7623007	3	43689274	A	C	ANO10	-0.04	0	2.3479E-11	0	4.27	0.7484196	8.248E-11	1
rs3768003	1	59870296	G	A	HOOK1	0.06	0	2.3497E-11	38	11.37	0.1234089	8.254E-11	1
rs11665461	18	52874040	A	T	DCC	0.04	0	2.3497E-11	0	0.93	0.9959421	8.254E-11	1
rs4127469	11	113302060	A	G	TTC12	-0.03	0	2.3517E-11	0	4.27	0.7481632	8.247E-11	1
rs1599859	17	67841077	C	G	BPTF	0.04	0	2.3527E-11	42	12.22	0.0935445	2.4E-10	1
rs1966410	17	67841099	T	C	BPTF	0.04	0	2.3527E-11	42	12.22	0.0935445	2.4E-10	1
rs2523443	6	29447687	C	A	OR11A1	-0.08	0	2.3576E-11	0	4.96	0.6650127	8.281E-11	1
rs12935106	16	71791948	G	C	AP1G1	0.04	0	2.3597E-11	24	9.28	0.232838	7.073E-11	1
rs7208909	17	67837430	T	C	BPTF	0.04	0	2.3634E-11	44	12.52	0.0847922	2.444E-10	1
rs1976054	17	67837108	T	G	BPTF	0.04	0	2.3644E-11	42	12.21	0.0938034	2.407E-10	1
rs4682901	3	43681269	G	A	ANO10	-0.04	0	2.3646E-11	0	4.27	0.747918	8.306E-11	1
rs11718672	3	43684903	G	A	ANO10	-0.04	0	2.3736E-11	0	4.28	0.7475655	8.337E-11	1
rs11570051	11	47349891	G	A	MYBPC3	-0.07	0	2.3844E-11	0	4.95	0.6664809	8.111E-11	1
rs186232984	3	44814821	T	C	KIF15	0.08	0	2.3879E-11	0	4.86	0.6770885	8.386E-11	1
rs140005264	19	49457409	G	T	ALDH16A1	0.07	0	2.3919E-11	10	7.78	0.3523632	6.652E-11	1
rs4532631	8	64671099	T	C	CYP7B1	0.04	0	2.3986E-11	0	6.07	0.5321121	7.555E-11	1
rs7197104	16	71760158	C	T	AP1G1	0.04	0	2.3991E-11	23	9.17	0.2408827	7.211E-11	1
rs35521801	3	43694838	G	A	ABHD5	-0.04	0	2.4006E-11	0	4.28	0.7471145	8.43E-11	1
rs10924485	1	246071397	T	C	SMYD3	-0.05	0	2.4094E-11	11	7.89	0.3427575	6.491E-11	1
rs17603936	16	72135103	C	A	PMFBP1	0.04	0	2.4165E-11	0	2.42	0.9331168	8.485E-11	1
rs2039069	6	25424099	G	A	LRRC16A	0.09	0	2.4307E-11	23	9.13	0.2431709	8.328E-11	1
rs11868959	17	67844694	T	C	BPTF	0.04	0	2.4368E-11	44	12.52	0.0846434	2.528E-10	1
rs11871285	17	67844693	G	T	BPTF	0.04	0	2.4375E-11	44	12.52	0.084647	2.529E-10	1
rs2365466	17	67845013	G	A	BPTF	0.04	0	2.4405E-11	44	12.52	0.0846009	2.532E-10	1
rs4461935	8	64787510	C	G	CYP7B1	0.04	0	2.4416E-11	0	4.64	0.7041778	8.571E-11	1
rs4632883	6	25423963	A	G	LRRC16A	0.09	0	2.4427E-11	23	9.13	0.2432706	8.367E-11	1

Table S2

rs35370634	16	72150667	C	T	PMFBP1	0.04	0	2.4589E-11	0	2.4	0.9344215	8.631E-11	1
rs10484439	6	26309680	G	A	HIST1H4H	-0.08	0	2.4621E-11	0	6	0.5401021	8.642E-11	1
rs62303495	4	46700326	C	T	COX7B2	0.04	0	2.4824E-11	0	5.94	0.5472876	8.712E-11	1
rs58551145	17	67841119	A	G	BPTF	0.04	0	2.4914E-11	42	12.23	0.0933923	2.531E-10	1
rs12601921	17	67829238	C	T	BPTF	0.04	0	2.4946E-11	45	12.83	0.076481	2.485E-10	1
rs667315	11	99692177	T	G	CNTN5	-0.03	0	2.5149E-11	28	9.86	0.1967741	6.446E-11	1
rs112222385	17	67844408	T	C	BPTF	0.04	0	2.5198E-11	43	12.44	0.0868673	2.617E-10	1
rs7774567	6	25425298	A	G	LRRC16A	0.09	0	2.5297E-11	21	8.89	0.2606717	8.797E-11	1
rs78452260	17	67852406	G	T	BPTF	0.04	0	2.5322E-11	44	12.55	0.0839028	2.651E-10	1
rs2066026	1	246083658	G	A	SMYD3	-0.05	0	2.5411E-11	12	7.96	0.336214	6.754E-11	1
rs7218014	17	67835900	T	C	BPTF	0.04	0	2.5424E-11	41	12.05	0.0989759	2.523E-10	1
rs7499467	16	72037602	C	T	TXNL4B	0.05	0	2.5456E-11	0	3.26	0.8604467	8.93E-11	1
rs10924489	1	246075023	T	C	SMYD3	-0.05	0	2.5505E-11	11	7.92	0.3398881	6.845E-11	1
rs10865954	3	49174556	T	C	KLHDC8B	-0.04	0	2.5529E-11	0	4.88	0.6744223	8.955E-11	1
rs11130010	3	43694217	C	T	ABHD5	-0.04	0	2.561E-11	0	4.24	0.7522715	8.983E-11	1
rs4955420	3	49171432	T	C	KLHDC8B	-0.04	0	2.5704E-11	0	4.9	0.6723734	9.016E-11	1
rs55824906	16	72031006	A	G	DHODH	0.05	0	2.5766E-11	0	3.26	0.8598307	9.037E-11	1
rs12078766	1	246076271	C	A	SMYD3	-0.05	0	2.5898E-11	11	7.93	0.3386723	6.932E-11	1
rs12078763	1	246076252	C	G	SMYD3	-0.05	0	2.5924E-11	11	7.93	0.3388827	6.942E-11	1
rs9379897	6	26601298	T	C	ABT1	-0.06	0	2.5974E-11	14	8.17	0.3176494	1.424E-10	1
rs7634751	3	51812717	G	C	IQCF3	-0.03	0	2.6271E-11	43	12.31	0.0909501	5.166E-11	1
rs4788459	16	72119226	C	G	PMFBP1	0.04	0	2.6445E-11	0	2.44	0.9316411	9.271E-11	1
rs7221651	17	67836274	G	A	BPTF	0.04	0	2.6649E-11	43	12.44	0.0870789	2.734E-10	1
rs12060886	1	246077717	G	A	SMYD3	-0.05	0	2.6848E-11	12	7.97	0.3353841	7.132E-11	1
rs57383363	10	90933846	T	C	ANKRD1	-0.04	0	2.6871E-11	54	15.35	0.0317633	1.776E-10	1
rs34832584	16	72129067	G	T	PMFBP1	0.04	0	2.6905E-11	0	2.73	0.9085656	9.43E-11	1
rs75565404	1	246078341	C	G	SMYD3	-0.05	0	2.6978E-11	12	7.97	0.3348107	7.158E-11	1
rs1233491	6	29493953	G	C	MAS1L	-0.08	0	2.701E-11	0	4.81	0.6835543	9.466E-11	1
rs6441861	3	44610795	A	G	ZNF197	-0.03	0	2.7179E-11	9	7.73	0.357418	9.524E-11	1
rs34467796	1	246081190	T	G	SMYD3	-0.05	0	2.7284E-11	12	7.98	0.3341061	7.228E-11	1

rs13319803	3	44593969	G	A	ZKSCAN7,ZI	-0.03	0	2.7306E-11	9	7.73	0.3570337	9.568E-11	1
rs10924498	1	246080539	A	G	SMYD3	-0.05	0	2.7445E-11	12	7.98	0.3339946	7.269E-11	1
rs78602238	16	77046092	A	G	MON1B	-0.05	0	2.7626E-11	0	2.55	0.9229558	9.678E-11	1
rs9638618	7	71304706	G	A	WBSCR17	0.04	0	2.7692E-11	0	5.34	0.6188574	9.667E-11	1
rs4634439	6	26597776	A	G	ABT1	-0.06	0	2.778E-11	11	7.94	0.338148	1.416E-10	1
rs58461030	4	46640266	C	T	COX7B2	0.04	0	2.7935E-11	0	5.33	0.6198689	9.784E-11	1
rs11641721	16	72121342	G	A	PMFBP1	0.04	0	2.7966E-11	0	2.72	0.9096255	9.795E-11	1
rs72785856	5	120838134	A	T	PRR16	0.04	0	2.8048E-11	0	2.98	0.8864184	9.823E-11	1
rs72787046	16	72045443	A	G	TXNL4B	0.04	0	2.8076E-11	0	3.52	0.8328785	9.833E-11	1
rs3812985	16	72154058	A	T	PMFBP1	0.04	0	2.8079E-11	0	2.33	0.9390247	9.834E-11	1
rs7129926	11	112992179	G	T	NCAM1	0.04	0	2.8123E-11	0	3.3	0.8560699	9.849E-11	1
rs1320163	3	43261804	A	G	SNRK	-0.04	0	2.8188E-11	0	6.09	0.5289414	9.466E-11	1
rs11079706	17	67839354	G	T	BPTF	0.04	0	2.8237E-11	43	12.33	0.0902061	2.885E-10	1
rs2372351	3	43237392	C	A	SNRK	0.04	0	2.8251E-11	0	5.95	0.5460809	9.5E-11	1
rs12919271	16	71758793	C	A	AP1G1	0.04	0	2.8344E-11	22	9.04	0.2499082	8.565E-11	1
rs16891315	6	26111528	T	C	HIST1H2BC	-0.07	0	2.8364E-11	26	9.58	0.2134366	9.932E-11	1
rs72787078	16	72124594	C	T	PMFBP1	0.04	0	2.8469E-11	0	2.44	0.9313473	9.968E-11	1
rs17075415	3	43261679	C	T	SNRK	0.04	0	2.8533E-11	0	6.08	0.5300395	9.587E-11	1
rs1320161	3	43261635	G	A	SNRK	-0.04	0	2.8543E-11	0	6.09	0.529473	9.586E-11	1
rs1320162	3	43261705	C	T	SNRK	-0.04	0	2.8622E-11	0	6.09	0.5290255	9.61E-11	1
rs1320160	3	43261593	G	A	SNRK	-0.04	0	2.8624E-11	0	6.09	0.5296231	9.613E-11	1
rs2372361	3	43261908	A	G	SNRK	-0.04	0	2.8659E-11	0	6.09	0.5292643	9.624E-11	1
rs7433886	3	117897290	C	T	LSAMP	-0.03	0	2.8683E-11	0	1.5	0.9821931	1.004E-10	1
rs4788611	16	72141357	A	G	PMFBP1	0.04	0	2.8759E-11	0	2.43	0.9320334	1.007E-10	1
rs6964131	7	71304276	T	C	WBSCR17	0.04	0	2.8863E-11	0	5.31	0.6223337	1.006E-10	1
rs6977328	7	71304259	G	A	WBSCR17	0.04	0	2.8882E-11	0	5.31	0.6226963	1.007E-10	1
rs9257566	6	29176755	C	T	OR2J2	-0.07	0	2.9051E-11	0	2.22	0.9469514	1.017E-10	1
rs1317402	3	43260885	G	A	SNRK	0.04	0	2.9204E-11	0	6.09	0.529711	9.8E-11	1
rs3923569	7	71303731	T	A	WBSCR17	0.04	0	2.923E-11	0	5.31	0.6226453	1.019E-10	1
rs654782	11	99698127	T	C	CNTN5	-0.03	0	2.9263E-11	41	11.87	0.1050601	5.208E-11	1.06077E-11

Table S2

rs35377660	16	71950030	A	T	PKD1L3	0.04	0	2.9287E-11	19	8.67	0.2775795	1.025E-10	1
rs1996497	3	43260667	A	G	SNRK	0.04	0	2.9355E-11	0	6.09	0.5290934	9.844E-11	1
rs2746150	6	29474924	C	T	OR2H1	-0.08	0	2.9377E-11	0	5.06	0.6528612	1.028E-10	1
rs2372360	3	43259962	C	T	SNRK	-0.04	0	2.9534E-11	0	6.09	0.5293401	9.904E-11	1
rs72787070	16	72117202	T	C	PMFBP1	0.04	0	2.9568E-11	0	2.83	0.9001022	1.035E-10	1
rs9295675	6	25918245	C	T	SLC17A2	-0.07	0	2.9573E-11	22	9.07	0.2477615	9.969E-11	1
rs442694	6	29388910	G	T	OR5V1	-0.08	0	2.9643E-11	0	5.25	0.629558	1.037E-10	1
rs1467085	6	164753774	G	A	C6orf118	-0.03	0	2.9679E-11	0	2.83	0.9003606	1.038E-10	1
rs56412846	3	43257867	G	A	SNRK	0.04	0	2.9817E-11	0	6.08	0.5309501	1E-10	1
rs55990908	3	43257630	A	G	SNRK	0.04	0	2.9872E-11	0	6.08	0.5308763	1.002E-10	1
rs146892484	2	27629283	C	CG	GPN1	-0.04	0	2.9883E-11	0	4.76	0.6890711	1.045E-10	1
rs7646966	3	43259379	C	A	SNRK	-0.04	0	2.9985E-11	0	6.09	0.5293735	1.006E-10	1
rs72787077	16	72122775	C	T	PMFBP1	0.04	0	3E-11	0	2.75	0.9075226	1.049E-10	1
rs62084213	17	67845900	A	G	BPTF	0.04	0	3.0039E-11	44	12.71	0.0796093	3.114E-10	1
rs5848654	3	43253752	G	GC	SNRK	0.04	0	3.0248E-11	0	6.02	0.5375514	1.018E-10	1
rs6808396	3	43253479	T	C	SNRK	0.04	0	3.0274E-11	0	6.01	0.5383066	1.02E-10	1
rs6801151	3	43256095	G	A	SNRK	0.04	0	3.0333E-11	0	6.06	0.5323415	1.018E-10	1
rs60898966	7	71306285	AT	A	WBSCR17	0.04	0	3.0353E-11	0	5.33	0.6199626	1.057E-10	1
rs6791341	3	43253386	G	A	SNRK	0.04	0	3.0403E-11	0	6.02	0.5373946	1.023E-10	1
rs6805108	3	43253167	A	G	SNRK	0.04	0	3.0403E-11	0	6.02	0.5369796	1.023E-10	1
rs4719109	7	71306148	C	T	WBSCR17	0.04	0	3.0516E-11	0	5.32	0.6204862	1.063E-10	1
rs73072912	3	43252212	T	C	SNRK	0.04	0	3.0528E-11	0	6.02	0.5370818	1.027E-10	1
rs62084744	17	68082412	T	C	KPNA2	0.04	0	3.0687E-11	34	10.62	0.1558424	2.673E-10	1
rs55919553	3	43255040	C	T	SNRK	0.04	0	3.0724E-11	0	6.06	0.5330989	1.031E-10	1
rs6767019	3	43256197	A	C	SNRK	0.04	0	3.0754E-11	0	6.09	0.5294837	1.03E-10	1
rs60971695	3	43255245	C	T	SNRK	0.04	0	3.0785E-11	0	6.07	0.5319246	1.033E-10	1
rs11641113	16	71772162	G	T	AP1G1	0.04	0	3.0826E-11	27	9.59	0.2127689	8.967E-11	1
rs1077190	15	78779042	T	G	ADAMTS7	-0.04	0	3.0891E-11	0	4.96	0.6644403	1.08E-10	1
rs9296320	6	40150559	C	G	MOCS1	0.03	0	3.0952E-11	26	9.58	0.2135455	8.691E-11	1
rs141303426	3	43251653	T	TA	SNRK	0.04	0	3.1204E-11	0	6.04	0.5352781	1.048E-10	1

rs10238960	7	71308285	C	T	WBSCR17	0.04	0	3.1218E-11	0	5.39	0.6128264	1.086E-10	1
rs1029956	7	153837080	A	G	DPP6	0.04	0	3.1375E-11	0	5.77	0.5670106	1.097E-10	1
rs55988644	3	43251743	G	A	SNRK	0.04	0	3.1388E-11	0	6.05	0.5343643	1.054E-10	1
rs73829200	3	43246894	G	A	SNRK	0.04	0	3.143E-11	0	6.03	0.5363776	1.055E-10	1
rs1233494	6	29485442	T	C	MAS1L	-0.08	0	3.1485E-11	0	4.92	0.6703072	1.1E-10	1
rs4788605	16	72120783	G	T	PMFBP1	0.04	0	3.1689E-11	0	2.52	0.9258349	1.108E-10	1
rs56291522	3	43249607	A	T	SNRK	0.04	0	3.1774E-11	0	6.04	0.5348005	1.066E-10	1
rs17254786	3	43247135	C	A	SNRK	0.04	0	3.1849E-11	0	6.04	0.5356015	1.069E-10	1
rs56796226	18	53016932	A	G	DCC	0.03	0	3.1943E-11	0	3.55	0.8303067	1.116E-10	1
rs7633546	3	43248533	A	G	SNRK	0.04	0	3.1972E-11	0	6.04	0.5354599	1.073E-10	1
rs72787085	16	72148665	C	T	PMFBP1	0.04	0	3.2011E-11	0	2.46	0.9299365	1.119E-10	1
rs73072908	3	43246164	G	A	SNRK	0.04	0	3.2027E-11	0	6.03	0.5368257	1.075E-10	1
rs75169602	3	43246285	G	A	SNRK	0.04	0	3.2059E-11	0	6.03	0.5365561	1.075E-10	1
rs1402751	3	44552538	C	A	ZKSCAN7	-0.03	0	3.2227E-11	6	7.45	0.3831558	1.103E-10	1
rs2878494	16	71830205	T	C	ATXN1L	0.04	0	3.2534E-11	25	9.39	0.2258981	1.137E-10	1
rs13212562	6	27332531	A	G	POM121L2	-0.07	0	3.2544E-11	9	7.72	0.3580221	1.354E-10	1
rs73072920	3	43255312	G	A	SNRK	0.04	0	3.2707E-11	0	6.01	0.5383009	1.1E-10	1
rs56053383	3	43230220	A	C	SNRK	0.04	0	3.2731E-11	0	5.96	0.5441714	1.099E-10	1
rs73088732	3	43233913	G	A	SNRK	0.04	0	3.2731E-11	0	5.96	0.5441714	1.099E-10	1
rs11130182	3	49169334	C	T	KLHDC8B	-0.04	0	3.2771E-11	0	4.89	0.6734994	1.145E-10	1
rs17320570	3	43245090	C	A	SNRK	0.04	0	3.2777E-11	0	6.01	0.5387539	1.099E-10	1
rs502235	6	33602776	A	G	ITPR3	0.04	0	3.322E-11	0	6.02	0.5368547	1.16E-10	1
rs7641590	3	43222416	C	A	SNRK	0.04	0	3.3282E-11	0	5.94	0.5472592	1.118E-10	1
rs73088757	3	43242905	G	A	SNRK	0.04	0	3.3297E-11	0	5.98	0.5418733	1.117E-10	1
rs10871329	16	77033390	G	A	MON1B	-0.05	0	3.347E-11	0	3.5	0.8355027	1.169E-10	1
rs8053906	16	71832557	G	A	ATXN1L	0.04	0	3.3518E-11	24	9.32	0.2303206	1.468E-10	1
rs4504148	3	43236921	T	C	SNRK	0.04	0	3.3708E-11	0	5.96	0.5440994	1.131E-10	1
rs55650554	3	43236911	C	T	SNRK	0.04	0	3.3708E-11	0	5.96	0.5440994	1.131E-10	1
rs6766079	3	43235852	G	C	SNRK	0.04	0	3.3708E-11	0	5.96	0.5440994	1.131E-10	1
rs73088738	3	43236560	C	A	SNRK	0.04	0	3.3708E-11	0	5.96	0.5440994	1.131E-10	1

rs17254504	3	43240106	G	A	SNRK	0.04	0	3.3712E-11	0	5.96	0.5438917	1.131E-10	1
rs56745072	3	43237669	C	T	SNRK	0.04	0	3.3732E-11	0	5.96	0.5440918	1.132E-10	1
rs73088748	3	43238829	C	T	SNRK	0.04	0	3.3754E-11	0	5.96	0.5440893	1.133E-10	1
rs57757985	3	43238925	G	A	SNRK	0.04	0	3.3801E-11	0	5.97	0.5435714	1.134E-10	1
rs4713637	6	33602120	G	C	ITPR3	0.04	0	3.3913E-11	0	5.23	0.6318352	1.184E-10	1
rs2372350	3	43237161	C	T	SNRK	0.04	0	3.4044E-11	0	5.97	0.5427854	1.141E-10	1
rs10852507	16	71937997	G	A	PKD1L3	0.04	0	3.4423E-11	26	9.56	0.2149299	1.201E-10	1
rs34486623	18	52838138	C	T	DCC	0.03	0	3.466E-11	0	0.82	0.9972629	1.209E-10	1
rs185802481	17	44019392	C	A	TMEM101	0.08	0	3.5156E-11	57	16.62	0.0200061	1.226E-10	1
rs7185027	16	71827240	A	T	AP1G1	0.04	0	3.5207E-11	25	9.43	0.2235284	1.528E-10	1
rs1923466	6	39998207	A	C	MOCS1	-0.03	0	3.5294E-11	23	9.11	0.2451518	7.751E-11	1
rs11665656	18	52867283	G	A	DCC	0.03	0	3.5703E-11	0	0.71	0.9982664	1.245E-10	1
rs1976052	17	67834462	C	T	BPTF	0.04	0	3.583E-11	47	13.24	0.0665029	3.573E-10	1
rs495659	6	33602051	A	G	ITPR3	0.04	0	3.583E-11	0	6.13	0.5243909	1.25E-10	1
rs72844462	6	26563636	A	C	HMGN4	-0.07	0	3.5893E-11	0	5.5	0.5993258	1.252E-10	1
rs114178241	5	120690713	G	A	PRR16	0.11	0	3.5894E-11	0	3.76	0.8065505	1.252E-10	1
rs12449442	17	67951524	G	A	BPTF	0.04	0	3.5913E-11	47	13.33	0.0644244	3.664E-10	1
rs508298	6	33602106	G	T	ITPR3	0.04	0	3.5956E-11	0	6.14	0.5236121	1.254E-10	1
rs17075328	3	43214629	T	A	SNRK	0.04	0	3.6193E-11	0	5.93	0.5482825	1.216E-10	1
rs7223643	17	67834166	A	G	BPTF	0.04	0	3.6201E-11	47	13.24	0.0665838	3.615E-10	1
rs35277236	6	26562041	G	T	HMGN4	-0.07	0	3.622E-11	0	5.5	0.5988378	1.263E-10	1
rs371152854	6	26831005	G	A	ZNF322	-0.07	0	3.6237E-11	0	5.86	0.555692	1.264E-10	1
rs374593247	6	26831017	G	T	ZNF322	-0.07	0	3.6259E-11	0	5.86	0.5556805	1.264E-10	1
rs7634209	3	43213141	A	G	SNRK	0.04	0	3.6281E-11	0	5.93	0.5485071	1.219E-10	1
rs56032317	3	43215921	C	T	SNRK	0.04	0	3.6286E-11	0	5.92	0.5492172	1.22E-10	1
rs73088703	3	43213467	G	C	SNRK	0.04	0	3.6313E-11	0	5.93	0.5483481	1.22E-10	1
rs6791526	3	43215252	C	T	SNRK	0.04	0	3.6318E-11	0	5.93	0.5484727	1.221E-10	1
rs6796424	3	43215300	A	G	SNRK	0.04	0	3.6331E-11	0	5.93	0.5485117	1.221E-10	1
rs146617821	5	121480532	T	C	FTMT	0.11	0	3.6332E-11	0	3.74	0.8091251	1.267E-10	1
rs73086702	3	43213435	C	G	SNRK	0.04	0	3.6336E-11	0	5.93	0.5484292	1.221E-10	1

Table S2

rs10891538	11	113353295	C	T	TTC12	-0.03	0	3.6379E-11	13	8.12	0.3217341	1.808E-10	1
rs58504881	3	43216683	C	G	SNRK	0.04	0	3.6519E-11	0	5.92	0.5494181	1.228E-10	1
rs11109655	12	98892839	T	C	ANKS1B	0.06	0	3.6567E-11	0	1	0.9948627	1.275E-10	1
rs11493880	11	113354422	C	T	TTC12	-0.03	0	3.6622E-11	13	8.12	0.3222937	1.818E-10	1
rs6790914	3	49168885	G	C	CCDC71	-0.04	0	3.6768E-11	0	4.88	0.6751379	1.282E-10	1
rs2023463	6	29445226	C	T	OR11A1	-0.08	0	3.6832E-11	0	4.95	0.6661761	1.284E-10	1
rs35555795	6	26509154	C	T	BTN1A1	-0.07	0	3.6834E-11	0	5.45	0.6046863	1.284E-10	1
rs13220261	6	26498957	C	T	BTN1A1	-0.07	0	3.6929E-11	0	5.46	0.6039037	1.287E-10	1
rs8046044	16	71836305	G	C	ATXN1L	0.04	0	3.705E-11	25	9.38	0.2267413	1.291E-10	1
rs73088726	3	43223755	A	C	SNRK	0.04	0	3.7239E-11	0	5.89	0.5520998	1.249E-10	1
rs11214585	11	113357001	G	C	TTC12	-0.03	0	3.7327E-11	13	8.12	0.3217512	1.854E-10	1
rs7939992	11	113358943	T	C	TTC12	-0.03	0	3.771E-11	13	8.12	0.3221004	1.87E-10	1
rs145548091	6	33598510	TTTTA	T	BAK1	0.04	0	3.7723E-11	0	6.14	0.5238587	1.314E-10	1
rs35023999	11	113395689	A	C	ANKK1	-0.03	0	3.7794E-11	0	6.13	0.5248368	1.317E-10	1
rs3088285	16	71856647	G	A	ATXN1L,IST	0.04	0	3.7856E-11	26	9.53	0.2170055	1.319E-10	1
rs113573560	14	105560512	C	T	IGHA2	0.11	0	3.7905E-11	22	8.99	0.2532933	9.025E-11	1
rs138310177	2	5891407	T	A	SOX11	0.05	0	3.8208E-11	63	19.31	0.0072679	4.363E-11	8.61809E-12
rs13330178	16	71846683	C	G	ATXN1L,IST	0.04	0	3.8325E-11	25	9.44	0.2226765	1.335E-10	1
rs35028754	16	71845769	G	A	ATXN1L	0.04	0	3.8325E-11	25	9.44	0.2226765	1.335E-10	1
rs34982111	6	33602314	TTAA	T	ITPR3	0.04	0	3.8454E-11	0	5.97	0.5429475	1.339E-10	1
rs35209006	16	71845259	C	T	ATXN1L	0.04	0	3.849E-11	25	9.44	0.2226176	1.341E-10	1
rs2746149	6	29467578	T	C	OR2H1	-0.08	0	3.8542E-11	0	4.84	0.6788911	1.342E-10	1
rs561642562	2	196027456	TATA	T	DNAH7	0.08	0	3.8578E-11	0	5.69	0.5764364	1.344E-10	1
rs2294950	1	59848824	T	G	HOOK1	0.06	0	3.9335E-11	39	11.56	0.1159568	1.287E-10	1
rs144502861	8	131346423	T	C	ADCY8	-0.12	0	3.9337E-11	14	8.18	0.3171327	1.37E-10	1
rs11125820	2	59933956	C	T	BCL11A	0.04	0	3.942E-11	22	9.03	0.2504361	2.043E-10	1
rs141305769	16	72020167	T	G	DHODH	0.04	0	3.9438E-11	0	3.56	0.8291059	1.373E-10	1
rs112128680	16	72020153	G	A	DHODH	0.04	0	3.9744E-11	0	3.57	0.8281167	1.384E-10	1
rs138757175	6	26854230	TC	T	ZNF322	-0.07	0	3.9875E-11	0	5.81	0.5620177	1.388E-10	1
rs200487745	6	26875868	G	GTAAA	ZNF322	-0.07	0	3.993E-11	0	5.8	0.5629299	1.39E-10	1

rs77666565	6	26883636	G	A	ZNF322	-0.07	0	3.9932E-11	0	5.8	0.5636351	1.39E-10	1
rs2059367	7	135363281	G	C	CNOT4	0.04	0	3.998E-11	66	20.79	0.0040947	4.78E-12	9.29824E-13
rs190945449	6	26860580	C	T	ZNF322	-0.07	0	4.0109E-11	0	5.81	0.5625775	1.396E-10	1
rs55664827	6	26857141	T	C	ZNF322	-0.07	0	4.0171E-11	0	5.81	0.5624479	1.398E-10	1
rs74689501	6	26920042	G	A	HIST1H2BJ	-0.07	0	4.027E-11	0	5.78	0.5655935	1.402E-10	1
rs191631470	2	195994321	C	T	DNAH7	0.08	0	4.0298E-11	0	5.63	0.5831728	1.403E-10	1
rs34063917	2	59924716	GA	G	BCL11A	0.04	0	4.0322E-11	42	12.14	0.0961335	2.373E-10	1
rs34148261	6	26511516	G	C	BTN1A1	-0.07	0	4.0434E-11	0	5.5	0.5985811	1.407E-10	1
rs28507440	4	46713482	C	T	COX7B2	0.04	0	4.0436E-11	0	6.64	0.4671026	1.407E-10	1
rs6798590	3	44515369	T	A	ZNF852	-0.03	0	4.1054E-11	0	5.69	0.5766291	1.412E-10	1
rs11214582	11	113347328	C	T	TTC12	-0.03	0	4.1069E-11	14	8.17	0.3177487	2.056E-10	1
rs10924495	1	246079390	A	G	SMYD3	-0.05	0	4.1107E-11	14	8.2	0.3151347	1.043E-10	1
rs1898910	5	125220154	C	A	ZNF608	0.04	0	4.1123E-11	0	5.08	0.650424	1.431E-10	1
rs11572285	1	59907049	A	G	CYP2J2	0.06	0	4.1133E-11	40	11.67	0.1119299	1.338E-10	1
rs7747058	6	164756280	A	G	C6orf118	-0.03	0	4.158E-11	0	3.03	0.8824056	1.446E-10	1
rs35595148	16	71842161	G	C	ATXN1L	0.04	0	4.1614E-11	26	9.51	0.2181938	1.82E-10	1
rs2293600	3	44557611	T	G	ZKSCAN7	-0.03	0	4.174E-11	5	7.41	0.3873457	1.419E-10	1
rs10203072	2	59944518	T	C	BCL11A	0.04	0	4.194E-11	38	11.32	0.1252142	2.464E-10	1
rs16943	3	51840663	C	T	IQCF3	0.03	0	4.1941E-11	20	8.84	0.263992	1.353E-10	1
rs2311059	3	51850056	G	A	IQCF2	0.03	0	4.1963E-11	19	8.74	0.272091	1.37E-10	1
rs562027	6	33601587	C	T	ITPR3	0.04	0	4.2403E-11	0	6.14	0.5233497	1.474E-10	1
rs12202102	6	33601564	C	T	ITPR3	0.04	0	4.2411E-11	0	6.14	0.5235415	1.475E-10	1
rs72845428	6	26549916	C	T	HMGN4	-0.07	0	4.2456E-11	0	5.54	0.5941557	1.476E-10	1
rs76150334	15	61817508	G	A	VPS13C	-0.09	0	4.2661E-11	0	6.54	0.4786197	1.483E-10	1
rs628310	11	99633016	A	C	CNTN5	-0.03	0	4.2674E-11	0	3.03	0.8824395	1.484E-10	1
rs11737443	4	46710017	T	C	COX7B2	0.04	0	4.2748E-11	0	6.61	0.4706304	1.486E-10	1
rs562899	6	33601657	T	C	ITPR3	0.04	0	4.2781E-11	0	6.15	0.5228378	1.487E-10	1
rs4355585	6	164755052	G	C	C6orf118	-0.03	0	4.2803E-11	0	3.06	0.8797535	1.488E-10	1
rs471461	6	33601689	C	G	ITPR3	0.04	0	4.2994E-11	0	6.15	0.5228339	1.495E-10	1
rs34246779	6	26548984	G	A	HMGN4	-0.07	0	4.3029E-11	0	5.55	0.5934019	1.496E-10	1

Table S2

rs79415988	17	68070853	C	T	KPNA2	0.04	0	4.3048E-11	0	6.8	0.450444	1.497E-10	1
rs4712936	6	25417195	G	T	LRRC16A	0.09	0	4.317E-11	25	9.34	0.2288443	1.456E-10	1
rs7191848	16	71937188	T	C	PKD1L3	0.04	0	4.3247E-11	26	9.52	0.2171493	1.891E-10	1
rs12967277	18	52845456	C	G	DCC	0.03	0	4.3403E-11	0	0.55	0.9992633	1.509E-10	1
rs525819	6	33603035	C	G	ITPR3	0.04	0	4.3408E-11	0	6.2	0.5169978	1.509E-10	1
rs1560520	18	52859144	T	A	DCC	0.03	0	4.3437E-11	0	0.76	0.9978624	1.51E-10	1
rs12966968	18	52845354	A	G	DCC	0.03	0	4.359E-11	0	0.54	0.9992645	1.515E-10	1
rs4100041	18	53256222	A	G	DCC	0.03	0	4.3689E-11	0	5.45	0.605131	1.518E-10	1
rs11735302	4	46708583	T	C	COX7B2	0.04	0	4.3756E-11	0	6.6	0.4714039	1.521E-10	1
rs511007	6	33602399	G	A	ITPR3	0.04	0	4.3829E-11	0	6.16	0.5208491	1.523E-10	1
rs1334028	9	11086960	A	G	PTPRD	-0.04	0	4.3892E-11	13	8.05	0.3278427	2E-10	1
rs4282138	4	46708800	A	G	COX7B2	0.04	0	4.3899E-11	0	6.6	0.4711969	1.526E-10	1
rs510153	6	33602298	G	A	ITPR3	0.04	0	4.3906E-11	0	6.17	0.5206084	1.526E-10	1
rs112676175	4	46709810	G	GATTTT	COX7B2	0.04	0	4.3987E-11	0	6.61	0.4703702	1.529E-10	1
rs523892	6	33602816	A	G	ITPR3	0.04	0	4.3997E-11	0	6.18	0.5184204	1.529E-10	1
rs56819084	4	46713233	A	G	COX7B2	0.04	0	4.4018E-11	0	6.65	0.4661721	1.53E-10	1
rs523852	6	33602800	A	G	ITPR3	0.04	0	4.412E-11	0	6.18	0.5188686	1.533E-10	1
rs5858037	4	46706163	C	CAG	COX7B2	0.04	0	4.4173E-11	0	6.46	0.4867573	1.535E-10	1
rs62303504	4	46712849	A	G	COX7B2	0.04	0	4.4282E-11	0	6.64	0.4669484	1.539E-10	1
rs62530676	9	11087183	T	C	PTPRD	-0.04	0	4.4424E-11	14	8.2	0.3151367	2.096E-10	1
rs4694830	4	46713103	A	C	COX7B2	0.04	0	4.4468E-11	0	6.64	0.4667834	1.545E-10	1
rs12958755	18	53281712	T	A	DCC	0.03	0	4.4522E-11	0	5.06	0.6528854	1.547E-10	1
rs9940234	16	71930902	C	T	IST1,PKD1L3	0.04	0	4.4604E-11	25	9.46	0.2215299	1.956E-10	1
rs12957519	18	53281713	A	T	DCC	0.03	0	4.4614E-11	0	5.06	0.6529813	1.55E-10	1
rs12934512	16	71931327	C	G	PKD1L3	0.04	0	4.4624E-11	25	9.46	0.2214281	1.55E-10	1
rs72841536	6	26378060	T	A	BTN3A2	-0.06	0	4.4864E-11	0	1.61	0.9783501	1.559E-10	1
rs35433030	6	26529662	G	A	HMGN4	-0.07	0	4.487E-11	0	5.56	0.5918604	1.559E-10	1
rs66941101	6	26530148	C	T	HMGN4	-0.07	0	4.4872E-11	0	5.56	0.5918622	1.559E-10	1
rs11214583	11	113353682	A	G	TTC12	-0.03	0	4.4909E-11	15	8.28	0.3086339	2.301E-10	1
rs12149307	16	71934188	A	C	PKD1L3	0.04	0	4.5426E-11	25	9.37	0.2269504	1.998E-10	1

Table S2

rs34739687	17	67865998	TA	T	BPTF	0.04	0	4.5612E-11	41	11.89	0.1041192	4.506E-10	1
rs8077872	17	67864943	G	T	BPTF	0.04	0	4.5628E-11	41	11.89	0.1041172	4.507E-10	1
rs12445641	16	71933880	C	T	PKD1L3	0.04	0	4.5827E-11	25	9.39	0.225966	1.591E-10	1
rs12149325	16	71934244	G	C	PKD1L3	0.04	0	4.5828E-11	25	9.39	0.2259663	2.015E-10	1
rs6504549	17	67892668	A	G	BPTF	0.04	0	4.5875E-11	41	11.9	0.1040295	4.531E-10	1
rs6504548	17	67889932	T	C	BPTF	0.04	0	4.6021E-11	41	11.9	0.1039788	4.545E-10	1
rs62303490	4	46689853	G	A	COX7B2	0.04	0	4.6086E-11	0	6.94	0.4352469	1.6E-10	1
rs11708420	3	58613962	A	G	FAM107A	0.03	0	4.623E-11	16	8.37	0.300787	1.594E-10	1
rs78115154	5	153519541	T	C	GRIA1	0.07	0	4.6328E-11	28	9.85	0.1970632	2.413E-10	1
rs11861296	16	71816729	T	C	AP1G1	0.04	0	4.6504E-11	29	9.87	0.1958025	1.614E-10	1
rs9356253	6	164705584	G	A	C6orf118	0.05	0	4.6796E-11	0	4.42	0.7299549	1.624E-10	1
rs62303499	4	46702837	A	G	COX7B2	0.04	0	4.6872E-11	0	6.53	0.4790478	1.627E-10	1
rs17358402	16	71934024	C	T	PKD1L3	0.04	0	4.7086E-11	25	9.4	0.2251698	2.069E-10	1
rs79993364	17	67852461	C	CCT	BPTF	0.04	0	4.7104E-11	41	11.91	0.1035741	4.707E-10	1
rs4713636	6	33600244	G	A	BAK1	0.04	0	4.7208E-11	0	6.25	0.5106088	1.638E-10	1
rs9457017	6	164897626	T	C	C6orf118	0.03	0	4.7503E-11	19	8.67	0.2768635	1.645E-10	1
rs76343838	2	195705792	A	T	SLC39A10	0.07	0	4.7677E-11	0	6.09	0.5290165	1.654E-10	1
rs1484638	8	10110758	G	A	MSRA	0.04	0	4.7809E-11	0	3	0.8845441	1.659E-10	1
rs140141706	2	195775281	A	C	DNAH7	0.07	0	4.7831E-11	0	6.04	0.5354983	1.66E-10	1
rs2194701	2	59910058	C	T	BCL11A	0.04	0	4.7946E-11	16	8.38	0.3006774	2.166E-10	1
rs1614887	6	26392793	G	A	BTN2A2	-0.03	0	4.8073E-11	0	3.87	0.7949287	1.668E-10	1
rs7749414	6	26074656	G	T	HFE	-0.07	0	4.8183E-11	23	9.19	0.2391609	1.653E-10	1
rs9295661	6	25449798	C	A	LRRC16A	0.09	0	4.8335E-11	21	8.87	0.2619596	1.665E-10	1
rs12149460	16	71815564	C	T	AP1G1	0.04	0	4.8543E-11	29	9.94	0.1921118	1.684E-10	1
rs4791048	17	67852878	G	A	BPTF	0.04	0	4.8582E-11	41	11.89	0.1041431	4.795E-10	1
rs34053338	16	71816071	C	T	AP1G1	0.04	0	4.862E-11	29	9.93	0.1923188	1.687E-10	1
rs369418517	12	24524340	CATCTATCT	C	BCAT1	-0.08	0	4.8687E-11	0	2.3	0.9411282	1.689E-10	1
rs900236716	17	44524473	C	T	GPATCH8	0.08	0	4.8716E-11	50	14	0.0511069	1.44E-10	1
rs7212293	17	67851209	A	G	BPTF	0.04	0	4.8816E-11	41	11.92	0.1033748	4.824E-10	1
rs7227448	18	54801171	C	A	RAB27B	0.03	0	4.8874E-11	0	6.12	0.5258061	1.695E-10	1

rs913455	6	25420116	C	G	LRRC16A	0.09	0	4.9031E-11	23	9.13	0.2432824	1.675E-10	1
rs7752195	6	25418866	T	C	LRRC16A	0.09	0	4.9094E-11	23	9.13	0.2433321	1.678E-10	1
rs17203016	2	207390794	A	G	CREB1	0.04	0	4.9139E-11	0	5.48	0.6018678	1.704E-10	1
rs140088666	12	24025222	A	G	SOX5	-0.09	0	4.9201E-11	3	7.25	0.403565	1.706E-10	1
rs28840107	4	46662835	A	G	COX7B2	0.04	0	4.9382E-11	0	6.22	0.51391	1.713E-10	1
rs493063	6	33604208	G	A	ITPR3	0.03	0	4.9452E-11	0	5.97	0.5438125	1.715E-10	1
rs11075906	16	71884772	T	C	ATXN1L,IST	0.04	0	4.9467E-11	32	10.34	0.1701002	2.166E-10	1
rs6541947	2	124239633	G	A	CNTNAP5	-0.04	0	4.9774E-11	52	14.68	0.0403041	6.717E-11	1.37506E-11
rs548147	6	33600355	T	C	ITPR3	0.03	0	4.978E-11	0	6.18	0.5190796	1.726E-10	1
rs550127	6	33600588	T	C	ITPR3	0.03	0	4.992E-11	0	6.19	0.5174981	1.731E-10	1
rs11645704	16	71792708	G	T	AP1G1	0.04	0	4.9939E-11	24	9.3	0.2320052	1.512E-10	1
rs574186	6	33603320	C	T	ITPR3	0.04	0	5.0094E-11	0	6.25	0.510438	1.737E-10	1
rs11572325	1	59896030	A	T	CYP2J2	0.06	0	5.0256E-11	38	11.42	0.1214166	1.742E-10	1
rs1980772	6	33600982	A	G	ITPR3	0.03	0	5.0293E-11	0	6.21	0.515323	1.744E-10	1
rs13431415	2	195155093	T	C	SLC39A10	0.05	0	5.0411E-11	0	5.33	0.6200603	1.748E-10	1
rs66540516	2	195151857	G	A	SLC39A10	0.05	0	5.0488E-11	0	5.33	0.6198245	1.75E-10	1
rs74182380	2	205949469	G	A	INO80D	-0.06	0	5.0667E-11	0	3.59	0.8259221	1.756E-10	1
rs141783988	2	195782072	A	G	DNAH7	0.07	0	5.0984E-11	0	6.09	0.5298532	1.767E-10	1
rs12213869	6	33600910	A	G	ITPR3	0.03	0	5.1029E-11	0	6.22	0.514053	1.769E-10	1
rs111938697	2	27740266	C	T	MRPL33	-0.04	0	5.1037E-11	0	4.67	0.7006189	1.769E-10	1
rs71386939	16	71894790	C	T	IST1,ZNF821	0.04	0	5.1287E-11	31	10.19	0.1780197	2.234E-10	1
rs4538458	4	46688352	A	G	COX7B2	0.04	0	5.1393E-11	0	6.78	0.4524474	1.781E-10	1
rs68072215	6	26377699	T	C	BTN3A2	-0.06	0	5.1835E-11	0	1.86	0.9671524	1.796E-10	1
rs55896768	17	67917242	T	C	BPTF	0.04	0	5.1915E-11	41	12.06	0.098629	5.135E-10	1
rs34991172	6	25480100	T	G	LRRC16A	-0.09	0	5.2056E-11	13	8.08	0.3254597	1.803E-10	1
rs12646450	4	14943190	G	C	CPEB2	-0.03	0	5.2257E-11	0	5.79	0.5647834	1.81E-10	1
rs34664834	16	71888066	G	A	IST1,ZNF821	0.04	0	5.2271E-11	31	10.22	0.1763632	2.274E-10	1
rs4790974	17	67954991	A	T	BPTF	-0.04	0	5.2336E-11	41	11.99	0.100861	5.166E-10	1
rs336606	3	18615248	T	C	SATB1	0.04	0	5.2365E-11	0	1.76	0.9718861	1.814E-10	1
rs12149917	16	71870974	G	A	ATXN1L,IST	0.04	0	5.2613E-11	31	10.16	0.179482	1.823E-10	1

rs67603684	2	195142252	C	G	SLC39A10	0.05	0	5.2663E-11	0	5.33	0.6195256	1.824E-10	1
rs9907491	17	67953877	G	A	BPTF	-0.04	0	5.267E-11	42	12.19	0.0945235	5.245E-10	1
rs1233493	6	29490464	A	G	MAS1L	-0.08	0	5.2683E-11	0	4.92	0.6694708	1.825E-10	1
rs1233480	6	29509637	C	T	MAS1L	-0.08	0	5.2936E-11	0	4.96	0.6649572	1.834E-10	1
rs9807185	18	53021129	G	T	DCC	0.03	0	5.3215E-11	0	3.89	0.7924106	1.843E-10	1
rs71142114	17	67954174	GT	G	BPTF	-0.04	0	5.326E-11	41	11.98	0.1012083	5.239E-10	1
rs76892966	3	44561276	AG	A	ZKSCAN7	-0.03	0	5.343E-11	6	7.47	0.3818684	1.813E-10	1
rs12921459	16	71871989	G	A	ATXN1L,IST	0.04	0	5.3493E-11	31	10.22	0.1766236	1.853E-10	1
rs7198834	16	71864576	C	T	ATXN1L,IST	0.04	0	5.3493E-11	31	10.22	0.1766236	1.853E-10	1
rs336605	3	18614858	G	T	SATB1	0.04	0	5.3568E-11	0	1.79	0.9705663	1.855E-10	1
rs75888697	16	71951323	A	C	PKD1L3	0.04	0	5.3682E-11	0	4.27	0.7487142	1.859E-10	1
rs4665394	2	27836155	T	C	MRPL33,RBI	-0.04	0	5.3815E-11	0	5.83	0.5602677	1.864E-10	1
rs28631322	4	46704957	C	T	COX7B2	0.04	0	5.4029E-11	0	6.51	0.4821334	1.871E-10	1
rs59058422	4	46706772	G	GTA	COX7B2	0.04	0	5.4146E-11	0	6.51	0.4816658	1.875E-10	1
rs11660938	18	53286366	G	T	DCC	0.03	0	5.4161E-11	3	7.22	0.406645	1.721E-10	1
rs4266263	4	46706358	A	T	COX7B2	0.04	0	5.4413E-11	0	6.51	0.4815915	1.884E-10	1
rs62097903	18	53004862	A	G	DCC	0.03	0	5.4588E-11	0	3.87	0.7943413	1.89E-10	1
rs2206853	6	29469256	C	T	OR2H1	-0.08	0	5.462E-11	0	5.36	0.6166791	1.891E-10	1
rs62303501	4	46703412	T	C	COX7B2	0.04	0	5.4629E-11	0	6.51	0.482007	1.891E-10	1
rs4666022	2	27834956	T	C	MRPL33,RBI	-0.04	0	5.4664E-11	0	5.84	0.5590731	1.892E-10	1
rs35938312	18	52846451	G	A	DCC	0.03	0	5.5072E-11	0	0.51	0.9994057	1.906E-10	1
rs10456045	6	26404730	G	A	BTN3A1	-0.04	0	5.5569E-11	0	2.42	0.9332661	1.923E-10	1
rs56183156	18	53012077	C	G	DCC	0.03	0	5.5699E-11	0	3.89	0.7923936	1.928E-10	1
rs140854233	18	53002648	ATATT	A	DCC	0.03	0	5.584E-11	0	3.84	0.797728	1.932E-10	1
rs4395923	8	64656830	G	A	CYP7B1	0.04	0	5.5857E-11	0	5.92	0.5487297	1.767E-10	1
rs11640135	16	71847127	A	G	ATXN1L,IST	0.04	0	5.588E-11	23	9.12	0.2441776	2.402E-10	1
rs12124268	1	246135712	A	T	SMYD3	-0.04	0	5.5915E-11	0	4.74	0.6922572	1.935E-10	1
rs12923326	16	77024760	A	T	MON1B	-0.03	0	5.603E-11	0	7.06	0.4226123	1.993E-10	1
rs117605916	19	49462431	G	A	ALDH16A1	0.07	0	5.6096E-11	3	7.28	0.4006039	1.662E-10	1
rs56404791	17	67896903	T	G	BPTF	0.04	0	5.6189E-11	42	12.15	0.095771	5.563E-10	1

rs66823108	6	26377711	G	A	BTN3A2	-0.06	0	5.6201E-11	0	1.74	0.9728273	1.945E-10	1
rs56148300	17	67896636	T	C	BPTF	0.04	0	5.6227E-11	42	12.16	0.0954363	5.58E-10	1
rs12209172	6	33601429	T	C	ITPR3	0.03	0	5.6403E-11	0	6.19	0.5173576	1.952E-10	1
rs76872858	12	66338732	T	C	HELB	0.07	0	5.6422E-11	28	9.75	0.2032466	3.116E-10	1
rs12624161	2	59943838	A	G	BCL11A	0.04	0	5.6425E-11	45	12.82	0.0764913	3.181E-10	1
rs11885959	2	27836033	C	G	MRPL33,RBI	-0.04	0	5.6439E-11	0	5.83	0.5595003	1.953E-10	1
rs12617110	2	27837044	A	G	MRPL33,RBI	-0.04	0	5.6484E-11	0	5.83	0.5595227	1.954E-10	1
rs12617113	2	27837070	A	G	MRPL33,RBI	-0.04	0	5.6484E-11	0	5.83	0.5595227	1.954E-10	1
rs34096628	2	27838123	A	C	MRPL33,RBI	-0.04	0	5.6485E-11	0	5.83	0.5595337	1.954E-10	1
rs9897982	17	67883476	G	T	BPTF	0.04	0	5.6522E-11	42	12.08	0.0978761	5.614E-10	1
rs4462754	2	27841127	C	T	MRPL33,RBI	-0.04	0	5.6538E-11	0	5.83	0.5594143	1.956E-10	1
rs9678336	2	27842537	A	G	MRPL33,RBI	-0.04	0	5.655E-11	0	5.83	0.559423	1.957E-10	1
rs62305180	4	46802413	T	C	COX7B2	0.04	0	5.6606E-11	22	9.03	0.2507806	2.458E-10	1
rs4840461	8	10047278	C	T	MSRA	-0.04	0	5.6648E-11	0	3.65	0.8187659	1.96E-10	1
rs7535626	1	246109865	A	C	SMYD3	-0.05	0	5.697E-11	11	7.88	0.3430791	1.502E-10	1
rs11075903	16	71776860	A	G	AP1G1	0.04	0	5.723E-11	24	9.27	0.2339557	1.719E-10	1
rs7672199	4	46698320	C	G	COX7B2	0.04	0	5.7267E-11	0	6.55	0.4775774	1.981E-10	1
rs79489472	16	71836456	C	T	ATXN1L	0.04	0	5.7358E-11	0	5.12	0.6453602	1.984E-10	1
rs28415895	4	46677800	T	C	COX7B2	0.04	0	5.774E-11	0	6.54	0.477843	1.997E-10	1
rs62097940	18	53009818	C	G	DCC	0.03	0	5.7754E-11	0	3.88	0.7934136	1.997E-10	1
rs9356454	6	166247452	C	G	PRR18	0.05	0	5.7776E-11	26	9.53	0.2170153	4.008E-10	1
rs12992890	2	27837964	T	C	MRPL33,RBI	-0.04	0	5.7873E-11	0	5.86	0.5564811	2.001E-10	1
rs35149938	2	59939243	G	A	BCL11A	0.04	0	5.7885E-11	38	11.39	0.1224736	3.254E-10	1
rs72242462	6	166247386	CTTATTTT	C	PRR18	0.05	0	5.7917E-11	26	9.53	0.2169367	4.018E-10	1
rs629444	6	25885586	C	T	SLC17A3	-0.06	0	5.7966E-11	52	14.88	0.0376108	8.495E-11	1.73667E-11
rs9678430	2	27834262	G	C	MRPL33,RBI	-0.04	0	5.7974E-11	0	5.86	0.5565514	2.005E-10	1
rs2702576	4	15056621	A	G	CPEB2	-0.03	0	5.801E-11	0	4.88	0.6746333	2.006E-10	1
rs2156286	18	52859844	A	G	DCC	0.03	0	5.806E-11	0	0.61	0.9989542	2.008E-10	1
rs11729099	4	46652214	T	C	COX7B2	0.04	0	5.827E-11	0	6.06	0.5322527	2.015E-10	1
rs9365976	6	166247482	G	T	PRR18	0.05	0	5.8278E-11	26	9.52	0.2174124	4.039E-10	1

Table S2

rs9365977	6	166247489	T	C	PRR18	0.05	0	5.8333E-11	26	9.52	0.2174383	4.042E-10	1
rs56225534	6	166247494	T	C	PRR18	0.05	0	5.8418E-11	26	9.52	0.2175412	4.048E-10	1
rs1494957	4	14947207	C	T	CPEB2	-0.03	0	5.8558E-11	0	5.15	0.6422375	2.025E-10	1
rs1610313	6	166248466	C	T	PRR18	0.05	0	5.8575E-11	25	9.45	0.2218829	4.028E-10	1
rs1610312	6	166248445	T	C	PRR18	0.05	0	5.8601E-11	25	9.45	0.2218623	4.03E-10	1
rs9356453	6	166247245	A	C	PRR18	0.05	0	5.8649E-11	26	9.55	0.2156017	4.08E-10	1
rs1610314	6	166248516	A	G	PRR18	0.05	0	5.8774E-11	25	9.43	0.2235305	4.024E-10	1
rs1979	6	26377363	G	T	BTN3A2	-0.06	0	5.8916E-11	0	1.89	0.9658991	2.037E-10	1
rs9365979	6	166247612	A	G	PRR18	0.05	0	5.9287E-11	26	9.51	0.2178132	4.104E-10	1
rs10008839	4	14943861	T	C	CPEB2	-0.03	0	5.9491E-11	0	5.14	0.6427678	2.056E-10	1
rs12464988	2	27835359	C	T	MRPL33,RBI	-0.04	0	5.9562E-11	0	5.99	0.5414775	2.059E-10	1
rs11865456	16	71935594	C	T	PKD1L3	0.04	0	5.9573E-11	28	9.78	0.2015827	2.059E-10	1
rs55827098	18	52871880	G	T	DCC	0.03	0	5.96E-11	0	0.73	0.9980903	2.06E-10	1
rs782048344	17	68082741	T	TTA	KPNA2	0.04	0	5.9614E-11	33	10.49	0.1622271	5.048E-10	1
rs112852979	4	46646147	ACAT	A	COX7B2	0.04	0	5.9759E-11	0	5.99	0.541217	2.066E-10	1
rs17387036	18	52849712	C	T	DCC	0.03	0	5.9956E-11	0	0.73	0.9980872	2.072E-10	1
rs11645725	16	71792980	C	T	AP1G1	0.04	0	6.0455E-11	26	9.52	0.2171744	1.796E-10	1
rs140647325	6	33603281	AAAGTCCC	A	ITPR3	0.03	0	6.05E-11	0	6.27	0.5089514	2.091E-10	1
rs13401341	2	195138239	A	T	SLC39A10	0.05	0	6.083E-11	0	5.34	0.618248	2.102E-10	1
rs9379856	6	26366608	A	C	BTN3A2	-0.06	0	6.1345E-11	0	2.21	0.9474009	2.119E-10	1
rs1355433	2	195135734	G	A	SLC39A10	0.05	0	6.1598E-11	0	5.33	0.6200274	2.128E-10	1
rs113078366	4	46643196	A	C	COX7B2	0.04	0	6.185E-11	0	6.04	0.53457	2.137E-10	1
rs7652150	3	18696541	T	C	SATB1	0.03	0	6.1875E-11	0	3.66	0.8179144	2.137E-10	1
rs10808738	8	64631568	G	A	CYP7B1	0.04	0	6.1891E-11	0	5.94	0.5464518	1.952E-10	1
rs76877263	17	68092945	C	G	KPNA2	-0.04	0	6.2004E-11	33	10.56	0.1589437	5.277E-10	1
rs35060233	6	166248205	ATAGT	A	PRR18	0.05	0	6.2966E-11	26	9.47	0.2204253	4.333E-10	1
rs28512206	17	68093732	T	A	KPNA2	-0.04	0	6.3396E-11	33	10.59	0.157619	5.399E-10	1
rs62084752	17	68093252	C	G	KPNA2	-0.04	0	6.3396E-11	33	10.59	0.157619	5.399E-10	1
rs6999999	8	64672852	T	C	CYP7B1	0.04	0	6.3409E-11	0	5.97	0.5434604	1.98E-10	1
rs4452822	8	64625546	G	A	CYP7B1	0.04	0	6.3518E-11	0	5.97	0.5437155	1.996E-10	1

Table S2

rs4527450	4	46638956	G	T	COX7B2	0.04	0	6.361E-11	0	6.03	0.5361683	2.196E-10	1
rs10896145	11	66989909	G	A	C11orf86	-0.03	0	6.3872E-11	19	8.71	0.2744886	3.04E-10	1
rs78352159	17	68082103	C	G	KPNA2	0.04	0	6.3988E-11	33	10.45	0.1643201	5.405E-10	1
rs8072225	17	67916844	A	G	BPTF	0.04	0	6.4326E-11	41	11.92	0.1031801	6.275E-10	1
rs10105184	8	64634103	A	G	CYP7B1	0.04	0	6.4375E-11	0	5.96	0.5442433	2.023E-10	1
rs4581093	8	64635939	T	G	CYP7B1	0.04	0	6.4399E-11	0	5.96	0.544227	2.024E-10	1
rs2113798	2	59920032	C	T	BCL11A	0.04	0	6.4406E-11	33	10.57	0.1583861	3.618E-10	1
rs57852066	16	72995680	G	A	ZFHX3	0.07	0	6.4524E-11	45	12.73	0.0790318	8.387E-11	1.73667E-11
rs6674153	1	246111805	G	C	SMYD3	-0.05	0	6.4656E-11	9	7.78	0.3526112	1.707E-10	1
rs62097899	18	52991139	C	T	DCC	0.03	0	6.4987E-11	0	3.88	0.7936794	2.243E-10	1
rs17123748	12	60394013	C	G	SLC16A7	-0.04	0	6.5164E-11	56	16.19	0.0234533	2.332E-10	1
rs9298088	8	64668433	C	T	CYP7B1	0.04	0	6.5234E-11	0	5.96	0.5438589	2.038E-10	1
rs6681900	1	246106266	C	T	SMYD3	-0.05	0	6.5264E-11	9	7.76	0.3542122	1.731E-10	1
rs2419407	2	59943740	C	T	BCL11A	0.04	0	6.5329E-11	45	12.81	0.0768692	3.693E-10	1
rs147179190	8	64645792	A	G	CYP7B1	0.04	0	6.5573E-11	0	5.97	0.5432446	2.059E-10	1
rs11214594	11	113388610	G	A	ANKK1	-0.03	0	6.5598E-11	0	5.97	0.5438246	2.264E-10	1
rs55652326	15	47339775	T	G	SEMA6D	0.06	0	6.6091E-11	28	9.77	0.2021742	3.38E-10	1
rs149661230	20	53005569	G	A	TSHZ2	-0.1	0	6.6183E-11	31	10.19	0.178219	1.904E-10	1
rs8057568	16	71778092	G	A	AP1G1	0.04	0	6.6287E-11	26	9.55	0.2155532	1.969E-10	1
rs16926933	9	11087828	C	G	PTPRD	-0.04	0	6.6325E-11	17	8.47	0.2933618	3.139E-10	1
rs4382514	8	64657400	T	C	CYP7B1	0.04	0	6.6349E-11	0	5.98	0.5422216	2.079E-10	1
rs4507804	8	64649068	A	G	CYP7B1	0.04	0	6.637E-11	0	5.98	0.5422418	2.08E-10	1
rs11996031	8	64649382	C	T	CYP7B1	0.04	0	6.64E-11	0	5.98	0.5423113	2.081E-10	1
rs188173485	16	73023457	A	G	ZFHX3	0.07	0	6.6417E-11	44	12.63	0.0817604	9.36E-11	1.92655E-11
rs34652711	8	64666549	TC	T	CYP7B1	0.04	0	6.6421E-11	0	5.98	0.5420024	2.075E-10	1
rs11985376	8	64657942	G	A	CYP7B1	0.04	0	6.6455E-11	0	5.98	0.5422606	2.083E-10	1
rs6817225	4	14941018	A	C	CPEB2	-0.03	0	6.6565E-11	0	5.12	0.6452799	2.296E-10	1
rs4549814	8	64667314	G	T	CYP7B1	0.04	0	6.6566E-11	0	5.98	0.5419533	2.078E-10	1
rs12681856	8	64668025	A	G	CYP7B1	0.04	0	6.6596E-11	0	5.98	0.5421007	2.079E-10	1
rs59030950	2	22555712	T	A	KLHL29	0.03	0	6.698E-11	2	7.21	0.406908	2.57E-10	1

rs11659401	18	52854983	G	C	DCC	0.03	0	6.7105E-11	0	0.59	0.9990669	2.315E-10	1
rs113909596	14	105563287	G	A	IGHA2	0.1	0	6.7192E-11	0	4.08	0.7708255	2.318E-10	1
rs2513657	11	66992774	A	C	SYT12	-0.03	0	6.7389E-11	20	8.86	0.262896	3.238E-10	1
rs7197486	16	71924149	A	G	IST1	0.04	0	6.7526E-11	24	9.28	0.2333202	3.03E-10	1
rs12550244	8	10102446	G	A	MSRA	0.04	0	6.7811E-11	1	7.1	0.4183633	2.442E-10	1
rs58060922	6	26927469	C	A	HIST1H2BJ	-0.07	0	6.7979E-11	0	5.61	0.5858141	2.344E-10	1
rs12521161	5	125213209	A	C	ZNF608	0.04	0	6.816E-11	0	4.75	0.6899566	2.35E-10	1
rs71557332	6	26356625	C	T	BTN3A2	-0.06	0	6.8176E-11	0	1.87	0.9666564	2.351E-10	1
rs215903	16	21717747	T	C	OTOA	0.04	0	6.8344E-11	0	1.89	0.9654565	2.357E-10	1
rs4146949	2	195169417	G	A	SLC39A10	0.05	0	6.8442E-11	0	5.74	0.5705304	2.36E-10	1
rs10171674	2	195171875	C	T	SLC39A10	0.05	0	6.8469E-11	0	5.74	0.5701339	2.361E-10	1
rs2200865	2	195173297	T	C	SLC39A10	0.05	0	6.8509E-11	0	5.74	0.5701865	2.362E-10	1
rs2702560	4	15081256	T	C	CPEB2	-0.03	0	6.873E-11	0	4.78	0.6871384	2.37E-10	1
rs10200499	2	195161626	C	T	SLC39A10	0.05	0	6.884E-11	0	5.74	0.5701835	2.373E-10	1
rs10187223	2	195157563	C	T	SLC39A10	0.05	0	6.8843E-11	0	5.74	0.570186	2.374E-10	1
rs10210267	2	195157252	A	G	SLC39A10	0.05	0	6.8843E-11	0	5.74	0.570186	2.374E-10	1
rs16837228	2	195153498	A	G	SLC39A10	0.05	0	6.8854E-11	0	5.74	0.5701718	2.374E-10	1
rs1473222	4	142566942	G	A	INPP4B	0.04	0	6.8893E-11	36	11	0.1387646	3.539E-10	1
rs1104893	1	226410951	A	G	PARP1	0.03	0	6.8996E-11	19	8.65	0.2787416	3.393E-10	1
rs11986615	8	64659667	C	T	CYP7B1	0.04	0	6.9234E-11	0	5.98	0.5425725	2.169E-10	1
rs2130343	2	195147359	C	T	SLC39A10	0.05	0	6.9506E-11	0	5.74	0.5700546	2.396E-10	1
rs2372362	3	43182612	A	G	POMGNT2	-0.04	0	6.9545E-11	26	9.55	0.2153708	3.435E-10	1
rs34494800	2	195167735	C	T	SLC39A10	0.05	0	6.9924E-11	0	5.73	0.5713713	2.41E-10	1
rs16837888	2	195179300	G	A	SLC39A10	0.05	0	7.0162E-11	0	5.72	0.5724791	2.418E-10	1
rs56262979	9	11116684	C	G	PTPRD	-0.05	0	7.022E-11	0	6.6	0.4715989	2.42E-10	1
rs28631938	2	195160273	G	T	SLC39A10	0.05	0	7.0239E-11	0	5.72	0.5726174	2.421E-10	1
rs56167101	9	11116697	C	T	PTPRD	-0.05	0	7.0253E-11	0	6.6	0.471598	2.421E-10	1
rs6686676	1	246106184	A	C	SMYD3	-0.05	0	7.0488E-11	10	7.82	0.3491506	1.849E-10	1
rs6681796	1	246106150	C	A	SMYD3	-0.05	0	7.0525E-11	10	7.82	0.3490533	1.85E-10	1
rs6681797	1	246106151	C	A	SMYD3	-0.05	0	7.0525E-11	10	7.82	0.3490533	1.85E-10	1

rs7683782	4	14934206	C	G	CPEB2	-0.05	0	7.0577E-11	0	5.41	0.6102292	2.432E-10	1
rs814421	8	10082971	G	T	MSRA	0.04	0	7.0749E-11	0	3.79	0.8036834	2.438E-10	1
rs148582489	16	71553978	G	A	ZNF19	0.04	0	7.0828E-11	0	5.32	0.6213006	2.441E-10	1
rs35060524	8	64658175	G	A	CYP7B1	0.04	0	7.0941E-11	0	5.99	0.5412385	2.215E-10	1
rs2702561	4	15080067	A	G	CPEB2	-0.03	0	7.0966E-11	0	4.77	0.6874441	2.445E-10	1
rs71386932	16	71782288	G	A	AP1G1	0.04	0	7.1081E-11	26	9.55	0.2154563	2.13E-10	1
rs6681902	1	246106269	C	T	SMYD3	-0.05	0	7.1135E-11	10	7.81	0.34927	1.866E-10	1
rs72694244	9	11115945	A	G	PTPRD	-0.05	0	7.1247E-11	0	6.59	0.472882	2.455E-10	1
rs34489362	1	246108555	T	C	SMYD3	-0.05	0	7.1589E-11	12	7.96	0.3363732	1.836E-10	1
rs6689428	1	246106644	A	G	SMYD3	-0.05	0	7.1701E-11	10	7.82	0.3486956	1.879E-10	1
rs7202840	16	71790811	C	T	AP1G1	0.04	0	7.1744E-11	26	9.53	0.2168035	2.155E-10	1
rs2200866	2	195144664	G	A	SLC39A10	0.05	0	7.1856E-11	0	5.75	0.5694577	2.476E-10	1
rs16837885	2	195179004	G	A	SLC39A10	0.05	0	7.2399E-11	0	5.73	0.5720888	2.494E-10	1
rs72915846	2	195179059	A	G	SLC39A10	0.05	0	7.2514E-11	0	5.72	0.5722189	2.498E-10	1
rs149735550	18	52866733	G	T	DCC	0.03	0	7.2579E-11	0	0.76	0.997806	2.5E-10	1
rs7661334	4	14943793	G	A	CPEB2	-0.05	0	7.285E-11	0	5.59	0.58821	2.509E-10	1
rs814427	8	10089813	G	C	MSRA	-0.04	0	7.2938E-11	0	3.17	0.8683925	2.512E-10	1
rs1933638	6	19315250	T	A	ID4	0.06	0	7.3128E-11	68	22.24	0.0023108	2.011E-11	3.96581E-12
rs12090318	1	246107321	A	T	SMYD3	-0.05	0	7.3315E-11	10	7.83	0.3480162	1.919E-10	1
rs34897669	6	166247876	C	CA	PRR18	0.05	0	7.3438E-11	26	9.56	0.2147866	5.109E-10	1
rs149019403	2	124263234	A	G	CNTNAP5	0.04	0	7.3756E-11	0	5.96	0.5449047	2.54E-10	1
rs7685796	4	14943274	A	G	CPEB2	-0.05	0	7.3799E-11	0	5.56	0.5920617	2.541E-10	1
rs9295286	6	164753809	C	G	C6orf118	-0.03	0	7.406E-11	0	2.93	0.8916924	2.55E-10	1
rs4307728	11	67000247	T	A	SYT12	-0.03	0	7.4134E-11	17	8.52	0.288943	3.448E-10	1
rs149882971	14	28839450	AT	A	FOXG1	-0.06	0	7.4201E-11	0	3.89	0.7920745	2.555E-10	1
rs918876	7	135471381	C	A	CNOT4	-0.04	0	7.4291E-11	66	20.78	0.0041132	9.004E-12	1.73649E-12
rs2048426	1	226406600	C	T	PARP1	0.03	0	7.4466E-11	22	9	0.2526001	3.848E-10	1
rs35170928	1	226412959	A	ACT	PARP1	0.03	0	7.4581E-11	18	8.64	0.2795171	3.665E-10	1
rs12921279	16	71916390	G	A	IST1	0.04	0	7.4599E-11	24	9.27	0.234154	3.31E-10	1
rs2377013	1	226412964	C	A	PARP1	0.03	0	7.4635E-11	18	8.64	0.279496	3.668E-10	1

rs72800614	16	86543957	G	A	MTHFSD	-0.08	0	7.4641E-11	0	2.69	0.9122659	2.57E-10	1
rs2793377	1	226412938	T	C	PARP1	0.03	0	7.4842E-11	19	8.65	0.278892	3.683E-10	1
rs6673742	1	246109085	C	T	SMYD3	-0.05	0	7.5452E-11	11	7.91	0.3403447	1.948E-10	1
rs66511457	1	246109185	TA	T	SMYD3	-0.05	0	7.5609E-11	11	7.91	0.3402369	1.951E-10	1
rs78351802	2	124259208	T	C	CNTNAP5	0.04	0	7.5624E-11	0	6.01	0.5380734	2.603E-10	1
rs35535529	16	71907356	C	T	IST1	0.04	0	7.5709E-11	27	9.63	0.2107307	3.395E-10	1
rs12447094	16	71785678	G	A	AP1G1	0.04	0	7.5754E-11	26	9.57	0.2145902	2.263E-10	1
rs11047571	12	24681285	G	A	BCAT1	-0.08	0	7.5866E-11	0	3.61	0.8230363	2.611E-10	1
rs2249844	1	226413434	T	C	PARP1	0.03	0	7.5929E-11	19	8.67	0.2769688	3.747E-10	1
rs11679836	2	124256292	T	C	CNTNAP5	0.04	0	7.5979E-11	0	6.02	0.5377664	2.615E-10	1
rs7535917	1	246109527	T	A	SMYD3	-0.05	0	7.6062E-11	11	7.92	0.3401228	1.962E-10	1
rs7528464	1	246109385	C	T	SMYD3	-0.05	0	7.6178E-11	11	7.91	0.340372	1.96E-10	1
rs7538217	1	246109650	T	C	SMYD3	-0.05	0	7.6218E-11	11	7.92	0.3401029	1.966E-10	1
rs1872324	2	22554622	G	A	KLHL29	0.03	0	7.6405E-11	2	7.21	0.4076316	2.914E-10	1
rs1334035	9	11105574	G	C	PTPRD	-0.05	0	7.6595E-11	0	5.64	0.5817923	2.636E-10	1
rs12094685	1	246110241	A	T	SMYD3	-0.05	0	7.6685E-11	11	7.91	0.3402487	1.979E-10	1
rs2702565	4	15076860	C	T	CPEB2	-0.03	0	7.6685E-11	0	4.82	0.682081	2.639E-10	1
rs62305178	4	46798467	A	G	COX7B2	0.04	0	7.6818E-11	23	9.18	0.2401251	3.225E-10	1
rs5023021	9	11104151	T	C	PTPRD	-0.05	0	7.6841E-11	0	5.18	0.6374619	2.644E-10	1
rs12091007	1	246110618	T	C	SMYD3	-0.05	0	7.6917E-11	11	7.91	0.3403361	1.985E-10	1
rs12927458	16	65751219	A	G	CDH5	0.03	0	7.6923E-11	0	5.07	0.6516218	2.647E-10	1
rs11421226	6	25413175	G	GT	LRRC16A	-0.09	0	7.6924E-11	0	6.9	0.4398053	2.647E-10	1
rs7541394	1	246110660	T	G	SMYD3	-0.05	0	7.6925E-11	11	7.91	0.3403402	1.985E-10	1
rs7541479	1	246110746	T	C	SMYD3	-0.05	0	7.6952E-11	11	7.91	0.3403352	1.986E-10	1
rs7541560	1	246110807	T	G	SMYD3	-0.05	0	7.6973E-11	11	7.91	0.3403765	1.987E-10	1
rs2408311	5	125218551	A	G	ZNF608	0.04	0	7.6989E-11	0	4.85	0.677676	2.649E-10	1
rs9817547	3	18711922	C	A	SATB1	0.03	0	7.7197E-11	0	3.48	0.8369933	2.656E-10	1
rs2666427	1	226414173	G	A	PARP1	0.03	0	7.7289E-11	19	8.68	0.2761182	3.828E-10	1
rs113954731	15	47343526	G	A	SEMA6D	0.06	0	7.7348E-11	28	9.83	0.1986828	4.016E-10	1
rs13387779	2	161082846	T	C	TANK	-0.05	0	7.7423E-11	0	2.57	0.9218627	2.664E-10	1

rs146762167	20	56106027	C	A	CBLN4	-0.12	0	7.7433E-11	39	11.58	0.1153905	4.988E-10	1
rs2513659	11	67000288	A	G	SYT12	-0.03	0	7.7466E-11	17	8.5	0.2908265	3.586E-10	1
rs4437694	8	64667251	G	A	CYP7B1	0.04	0	7.7519E-11	0	5.97	0.5433508	2.419E-10	1
rs1828445	1	226413700	A	G	PARP1	0.03	0	7.7602E-11	19	8.69	0.2755877	3.848E-10	1
rs1865222	1	226414183	A	C	PARP1	0.03	0	7.7624E-11	19	8.69	0.2755559	3.849E-10	1
rs1865221	1	226414273	G	T	PARP1	0.03	0	7.7625E-11	19	8.69	0.2755558	3.849E-10	1
rs2793654	1	226414005	T	A	PARP1	0.03	0	7.7627E-11	19	8.69	0.2755594	3.849E-10	1
rs1828446	1	226413619	G	A	PARP1	0.03	0	7.7751E-11	19	8.69	0.2756017	3.855E-10	1
rs2695235	1	226414855	A	G	PARP1	0.03	0	7.7804E-11	19	8.69	0.2755399	3.857E-10	1
rs1931399	9	11085520	A	G	PTPRD	-0.04	0	7.7836E-11	0	6.96	0.4330785	2.678E-10	1
rs1397550	1	226413541	T	C	PARP1	0.03	0	7.7932E-11	19	8.69	0.2756876	3.863E-10	1
rs946150	1	246112196	A	T	SMYD3	-0.05	0	7.8018E-11	11	7.91	0.3404783	2.014E-10	1
rs7545261	1	246112400	T	G	SMYD3	-0.05	0	7.8097E-11	11	7.91	0.3405472	2.017E-10	1
rs946149	1	246112382	G	A	SMYD3	-0.05	0	7.8145E-11	11	7.91	0.3405295	2.018E-10	1
rs1890333	1	246112436	T	G	SMYD3	-0.05	0	7.8173E-11	11	7.91	0.340521	2.018E-10	1
rs6426273	1	246112598	C	T	SMYD3	-0.05	0	7.8227E-11	11	7.91	0.3406223	2.02E-10	1
rs6426274	1	246112614	C	T	SMYD3	-0.05	0	7.8243E-11	11	7.91	0.3406529	2.021E-10	1
rs61824823	1	230463605	C	T	PGBD5	0.03	0	7.8335E-11	0	6.56	0.476009	2.695E-10	1
rs11726563	4	46821617	A	C	COX7B2	0.04	0	7.8376E-11	17	8.51	0.2896556	3.365E-10	1
rs9938500	16	65747791	T	C	CDH5	0.03	0	7.8429E-11	0	5.22	0.6333547	2.698E-10	1
rs12448086	16	71875327	G	A	ATXN1L,IST	0.04	0	7.8458E-11	27	9.68	0.2071613	3.549E-10	1
rs1865220	1	226414585	T	C	PARP1	0.03	0	7.8689E-11	19	8.69	0.2755496	3.9E-10	1
rs6862425	5	125212948	A	G	ZNF608	0.04	0	7.8748E-11	0	4.71	0.6952607	2.709E-10	1
rs1418131	1	230468381	C	T	PGBD5	0.03	0	7.8844E-11	0	6.87	0.4423618	2.712E-10	1
rs3924835	3	82278835	G	T	GBE1	0.04	0	7.9096E-11	29	9.92	0.1932597	2.68E-10	1
rs12092502	1	246113594	A	G	SMYD3	-0.05	0	7.9122E-11	11	7.91	0.3406933	2.043E-10	1
rs2888389	3	44517664	G	A	ZNF852	-0.03	0	7.9153E-11	0	5.76	0.5680307	2.649E-10	1
rs12082560	1	246113837	G	A	SMYD3	-0.05	0	7.9158E-11	11	7.91	0.3406886	2.044E-10	1
rs12087830	1	246113635	T	C	SMYD3	-0.05	0	7.9158E-11	11	7.91	0.3406886	2.044E-10	1
rs12092637	1	246113849	A	G	SMYD3	-0.05	0	7.9158E-11	11	7.91	0.3406886	2.044E-10	1

rs35617001	1	246113973	T	G	SMYD3	-0.05	0	7.9158E-11	11	7.91	0.3406886	2.044E-10	1
rs7868483	9	11114392	T	C	PTPRD	-0.05	0	7.973E-11	0	6.49	0.4837611	2.742E-10	1
rs8056939	16	71602022	G	A	MARVELD3	0.04	0	8.0024E-11	0	5.87	0.5555015	2.752E-10	1
rs6751255	2	59926186	C	G	BCL11A	0.04	0	8.0709E-11	36	11.01	0.1381796	4.369E-10	1
rs17357420	16	71867745	T	C	ATXN1L,IST	0.04	0	8.077E-11	27	9.66	0.2085284	3.651E-10	1
rs10500567	16	71870275	A	G	ATXN1L,IST	0.04	0	8.0825E-11	27	9.66	0.2086113	3.654E-10	1
rs71391418	16	71869557	CTA	C	ATXN1L,IST	0.04	0	8.0825E-11	27	9.66	0.2086113	3.654E-10	1
rs2793378	1	226409640	A	G	PARP1	0.03	0	8.0843E-11	18	8.56	0.2857756	3.884E-10	1
rs12092007	1	246116457	T	C	SMYD3	-0.05	0	8.094E-11	11	7.91	0.3409441	2.092E-10	1
rs78158665	1	246045532	G	C	SMYD3	-0.06	0	8.1139E-11	0	4.52	0.7178734	2.789E-10	1
rs5023023	9	11104055	C	T	PTPRD	-0.05	0	8.1202E-11	0	5.11	0.6466884	2.791E-10	1
rs2793655	1	226415113	T	A	PARP1	0.03	0	8.1808E-11	19	8.67	0.2771025	4.032E-10	1
rs9379871	6	26375626	C	G	BTN3A2	-0.06	0	8.19E-11	0	1.93	0.9633529	2.815E-10	1
rs73245866	4	46812640	G	C	COX7B2	0.04	0	8.2174E-11	17	8.51	0.2894777	3.527E-10	1
rs11645783	16	71601071	T	A	TAT	0.04	0	8.2192E-11	0	5.87	0.5545546	2.825E-10	1
rs7513243	1	246117312	A	G	SMYD3	-0.05	0	8.2417E-11	11	7.9	0.3410826	2.13E-10	1
rs10908310	1	36635097	C	T	CSF3R	0.03	0	8.2507E-11	56	16.17	0.023566	1.286E-10	2.69923E-11
rs6655957	1	36636941	G	A	CSF3R	0.03	0	8.2507E-11	56	16.17	0.023566	1.286E-10	2.69923E-11
rs12933007	16	71773907	C	T	AP1G1	0.04	0	8.2602E-11	29	9.99	0.188915	2.327E-10	1
rs9646824	2	195137507	A	C	SLC39A10	0.05	0	8.3005E-11	0	5.76	0.5679656	2.852E-10	1
rs9366654	6	26376800	G	A	BTN3A2	-0.06	0	8.3013E-11	0	1.93	0.9635233	2.853E-10	1
rs6775484	3	196467613	C	A	RNF168	0.03	0	8.3134E-11	6	7.5	0.3783069	2.857E-10	1
rs12092055	1	246116573	T	C	SMYD3	-0.05	0	8.3275E-11	11	7.87	0.3439955	2.164E-10	1
rs12096848	1	246116576	A	T	SMYD3	-0.05	0	8.3275E-11	11	7.87	0.3439955	2.164E-10	1
rs139537655	6	25788971	A	ATAGG	SLC17A1	-0.05	0	8.3575E-11	11	7.94	0.3383487	3.203E-10	1
rs72694240	9	11113891	A	G	PTPRD	-0.05	0	8.3621E-11	0	6.51	0.4815271	2.873E-10	1
rs2073529	6	26374931	A	G	BTN3A2	-0.06	0	8.3702E-11	0	1.94	0.9632664	2.876E-10	1
rs2073530	6	26375015	T	C	BTN3A2	-0.06	0	8.3702E-11	0	1.94	0.9632664	2.876E-10	1
rs2073531	6	26375028	A	G	BTN3A2	-0.06	0	8.3702E-11	0	1.94	0.9632664	2.876E-10	1
rs9298087	8	64637800	C	T	CYP7B1	0.04	0	8.376E-11	0	6.09	0.5295137	2.59E-10	1

rs9393715	6	26375417	G	A	BTN3A2	-0.06	0	8.3832E-11	0	1.94	0.9633117	2.88E-10	1
rs9348716	6	26375430	G	A	BTN3A2	-0.06	0	8.3833E-11	0	1.94	0.9633124	2.88E-10	1
rs17150950	8	10023499	T	C	MSRA	0.04	0	8.4058E-11	0	4.35	0.7386647	2.888E-10	1
rs16837931	2	195181280	A	G	SLC39A10	0.05	0	8.4124E-11	0	5.7	0.575115	2.89E-10	1
rs3757138	6	26375875	A	G	BTN3A2	-0.06	0	8.4167E-11	0	1.93	0.9635247	2.892E-10	1
rs2793376	1	226415220	A	G	PARP1	0.03	0	8.4202E-11	19	8.69	0.2756879	4.178E-10	1
rs12174602	6	26372599	C	T	BTN3A2	-0.06	0	8.4382E-11	0	1.94	0.9630276	2.899E-10	1
rs35815698	6	26372232	C	CT	BTN3A2	-0.06	0	8.4382E-11	0	1.94	0.9630276	2.899E-10	1
rs9379864	6	26372356	G	A	BTN3A2	-0.06	0	8.4382E-11	0	1.94	0.9630276	2.899E-10	1
rs12174631	6	26372922	C	T	BTN3A2	-0.06	0	8.4383E-11	0	1.94	0.9630275	2.899E-10	1
rs9379863	6	26372199	A	G	BTN3A2	-0.06	0	8.4423E-11	0	1.94	0.9630173	2.9E-10	1
rs9358937	6	26374046	C	G	BTN3A2	-0.06	0	8.4434E-11	0	1.94	0.9630639	2.901E-10	1
rs2375240	2	195181186	T	C	SLC39A10	0.05	0	8.4528E-11	0	5.7	0.5752515	2.904E-10	1
rs4269101	3	18722051	T	G	SATB1	0.03	0	8.4616E-11	0	4.03	0.7761567	2.907E-10	1
rs9366655	6	26377157	C	G	BTN3A2	-0.06	0	8.4638E-11	0	1.93	0.9636389	2.907E-10	1
rs1978	6	26377345	T	A	BTN3A2	-0.06	0	8.4794E-11	0	1.93	0.9636889	2.913E-10	1
rs2073527	6	26374750	T	C	BTN3A2	-0.06	0	8.4902E-11	0	1.94	0.9632692	2.916E-10	1
rs8053677	16	71597711	G	T	TAT	0.04	0	8.4929E-11	0	5.89	0.5531959	2.917E-10	1
rs71557315	6	26041642	G	T	HIST1H2BB	-0.07	0	8.5125E-11	32	10.37	0.1683367	2.6E-10	1
rs34338862	1	246110179	G	T	SMYD3	-0.05	0	8.5125E-11	11	7.87	0.3438864	2.222E-10	1
rs1121465	9	11112537	T	C	PTPRD	-0.05	0	8.5465E-11	0	5.67	0.578503	2.935E-10	1
rs4390955	3	18713205	C	A	SATB1	0.03	0	8.5523E-11	0	3.53	0.8316704	2.937E-10	1
rs7000542	8	10023625	T	C	MSRA	0.04	0	8.5706E-11	0	4.82	0.6814805	2.943E-10	1
rs3047288	6	26376086	A	G	BTN3A2	-0.06	0	8.5883E-11	0	1.93	0.9634855	2.949E-10	1
rs17151188	8	10138343	C	T	MSRA	0.04	0	8.5901E-11	0	4.15	0.7623435	2.95E-10	1
rs5023022	9	11104105	T	C	PTPRD	-0.05	0	8.6157E-11	0	5.19	0.6369797	2.959E-10	1
rs7553693	1	246117206	C	T	SMYD3	-0.05	0	8.6216E-11	11	7.88	0.3432228	2.224E-10	1
rs1858301	2	195185424	C	G	SLC39A10	0.05	0	8.6234E-11	0	5.7	0.5751867	2.961E-10	1
rs9930311	16	65748575	A	G	CDH5	0.03	0	8.6267E-11	0	5.11	0.6466604	2.962E-10	1
rs35196924	1	246038510	A	C	SMYD3	-0.06	0	8.6413E-11	0	4.49	0.7221951	2.967E-10	1

rs9348721	6	26485345	A	G	BTN2A1	-0.06	0	8.6706E-11	0	3.57	0.828275	2.977E-10	1
rs77823468	16	71794713	C	T	AP1G1	0.04	0	8.6767E-11	31	10.19	0.1782641	2.385E-10	1
rs7568498	2	161172602	T	G	TANK	-0.05	0	8.6816E-11	0	2.75	0.9073334	2.981E-10	1
rs150071566	16	71919334	GTTTTC	G	IST1	0.04	0	8.688E-11	27	9.65	0.2092976	3.928E-10	1
rs7188591	16	71919119	G	A	IST1	0.04	0	8.688E-11	27	9.65	0.2092976	3.928E-10	1
rs4528577	16	71913831	G	A	IST1	0.04	0	8.6892E-11	27	9.65	0.2092176	3.929E-10	1
rs35404791	16	71911944	G	C	IST1	0.04	0	8.6963E-11	27	9.7	0.2062094	3.982E-10	1
rs8088141	18	54797157	A	T	RAB27B	0.03	0	8.726E-11	0	6.17	0.5202665	2.996E-10	1
rs12445564	16	71909406	C	T	IST1	0.04	0	8.7335E-11	27	9.65	0.2092266	3.948E-10	1
rs12713413	2	59933655	T	C	BCL11A	0.04	0	8.7373E-11	19	8.68	0.2760794	4.341E-10	1
rs1995942	6	164757079	C	A	C6orf118	-0.03	0	8.7383E-11	0	2.84	0.8993626	3E-10	1
rs75637410	14	28852220	G	A	FOXG1	-0.06	0	8.7504E-11	0	4.48	0.7232699	3.004E-10	1
rs35035147	1	246040686	T	C	SMYD3	-0.06	0	8.7621E-11	0	4.46	0.7256827	3.008E-10	1
rs8051878	16	71784528	C	G	AP1G1	0.04	0	8.8442E-11	31	10.2	0.1774294	2.437E-10	1
rs2744301	6	25322915	G	T	LRRC16A	-0.1	0	8.8484E-11	1	7.13	0.4158801	3.103E-10	1
rs11130185	3	49212438	C	T	CCDC36	-0.03	0	8.8585E-11	0	6.3	0.5052542	3.041E-10	1
rs4279123	3	18723055	C	G	SATB1	0.03	0	8.8869E-11	0	4.11	0.7670657	3.05E-10	1
rs6900665	6	26486941	C	T	BTN2A1	-0.06	0	8.8933E-11	0	3.56	0.8289816	3.052E-10	1
rs12174623	6	26372858	C	T	BTN3A2	-0.06	0	8.9129E-11	0	1.93	0.9635612	3.059E-10	1
rs117234222	12	66386351	C	T	GRIP1	0.07	0	8.9261E-11	32	10.41	0.1666134	5.192E-10	1
rs71386940	16	71911375	A	G	IST1	0.04	0	8.9602E-11	27	9.6	0.2124474	4.026E-10	1
rs12174639	6	26372893	G	A	BTN3A2	-0.06	0	8.9606E-11	0	1.94	0.9628692	3.075E-10	1
rs12750611	1	246048841	T	C	SMYD3	-0.06	0	8.9698E-11	0	4.54	0.7158467	3.078E-10	1
rs16891727	6	26488632	C	A	BTN2A1	-0.06	0	8.9725E-11	0	3.56	0.8291523	3.079E-10	1
rs6504543	17	67841543	T	C	BPTF	0.04	0	9.0278E-11	37	11.13	0.1328468	8.335E-10	1
rs4417032	1	246063126	G	A	SMYD3	-0.04	0	9.0517E-11	11	7.89	0.3421638	3.106E-10	1
rs66739676	1	246063932	G	A	SMYD3	-0.06	0	9.0659E-11	0	4.55	0.7146473	3.11E-10	1
rs10433657	3	196532534	A	G	SMCO1	-0.03	0	9.0774E-11	48	13.72	0.0563851	5.72E-10	1
rs12751188	1	246049220	T	C	SMYD3	-0.06	0	9.0827E-11	0	4.54	0.7153254	3.116E-10	1
rs34475394	1	246050766	G	A	SMYD3	-0.06	0	9.0984E-11	0	4.54	0.7153791	3.121E-10	1

Table S2

rs34587828	1	246050977	G	A	SMYD3	-0.06	0	9.0984E-11	0	4.54	0.7153791	3.121E-10	1
rs12748550	1	246053598	T	G	SMYD3	-0.06	0	9.101E-11	0	4.54	0.7153938	3.122E-10	1
rs34225987	1	246055385	A	C	SMYD3	-0.06	0	9.102E-11	0	4.54	0.7153915	3.123E-10	1
rs35700971	1	246056370	T	C	SMYD3	-0.06	0	9.1045E-11	0	4.54	0.7153919	3.123E-10	1
rs35792493	1	246056741	C	T	SMYD3	-0.06	0	9.1045E-11	0	4.54	0.7153919	3.123E-10	1
rs35468688	1	246057561	C	T	SMYD3	-0.06	0	9.1064E-11	0	4.54	0.7153837	3.124E-10	1
rs34230056	1	246057845	A	T	SMYD3	-0.06	0	9.1066E-11	0	4.54	0.7153871	3.124E-10	1
rs35148287	1	246058765	T	C	SMYD3	-0.06	0	9.1085E-11	0	4.54	0.7153863	3.125E-10	1
rs10852505	16	71847434	A	T	ATXN1L,IST	0.04	0	9.1224E-11	16	8.34	0.3036291	3.12E-10	1
rs9379851	6	26354552	A	C	BTN3A2	-0.06	0	9.1444E-11	0	1.95	0.962534	3.137E-10	1
rs1995943	6	164756991	C	G	C6orf118	-0.03	0	9.2138E-11	0	2.93	0.8916463	3.16E-10	1
rs6773385	3	18723425	C	T	SATB1	0.03	0	9.2505E-11	0	4.17	0.759799	3.173E-10	1
rs6691368	1	36633383	G	A	CSF3R	0.03	0	9.2648E-11	56	16.18	0.0235499	1.41E-10	2.91773E-11
rs7195988	16	71929283	C	T	IST1	0.04	0	9.271E-11	26	9.52	0.2177292	4.168E-10	1
rs9366653	6	26354019	G	A	BTN3A2	-0.06	0	9.2889E-11	0	1.89	0.9655692	3.186E-10	1
rs2017146	4	142617026	C	A	INPP4B	0.04	0	9.3093E-11	31	10.28	0.1733935	5.451E-10	1
rs2056923	6	27722160	T	C	HIST1H2BL	-0.05	0	9.3366E-11	0	3.14	0.8719723	3.202E-10	1
rs10865314	2	59895175	C	T	BCL11A	0.04	0	9.3822E-11	34	10.69	0.1527594	5.129E-10	1
rs11719470	3	51864975	G	T	IQCF2	0.03	0	9.4323E-11	48	13.67	0.0574391	1.174E-10	2.43316E-11
rs12928939	16	71766142	G	A	AP1G1	0.04	0	9.4372E-11	24	9.28	0.2332195	2.654E-10	1
rs2365468	17	67845202	C	T	BPTF	0.04	0	9.4434E-11	38	11.4	0.1222525	8.909E-10	1
rs6438417	3	117828868	G	T	LSAMP	-0.03	0	9.4721E-11	0	2.64	0.9161545	3.247E-10	1
rs3029927	17	67845167	A	AAGT	BPTF	0.04	0	9.4773E-11	38	11.4	0.1221708	8.953E-10	1
rs2365467	17	67845169	A	T	BPTF	0.04	0	9.4811E-11	38	11.4	0.1222322	8.956E-10	1
rs7192848	16	72173056	A	G	PMFBP1	0.03	0	9.5053E-11	6	7.52	0.3766648	2.882E-10	1
rs71638311	1	246066635	C	T	SMYD3	-0.06	0	9.5166E-11	0	4.57	0.7128029	3.262E-10	1
rs140286069	5	120739962	C	T	PRR16	0.11	0	9.5229E-11	0	3.9	0.7908346	3.264E-10	1
rs67685647	1	246066577	C	T	SMYD3	-0.06	0	9.5254E-11	0	4.56	0.7128818	3.265E-10	1
rs62084755	17	68099765	A	G	KPNA2	-0.04	0	9.5413E-11	32	10.34	0.170272	7.901E-10	1
rs7624552	3	61123689	G	C	FHIT	-0.04	0	9.5622E-11	53	14.98	0.0362953	3.278E-10	1

rs73782432	5	125212022	C	T	ZNF608	0.04	0	9.58E-11	0	4.64	0.7035954	3.284E-10	1
rs71557335	6	26368051	G	A	BTN3A2	-0.06	0	9.6667E-11	0	1.89	0.965504	3.313E-10	1
rs145281382	17	44967554	C	T	C1QL1	0.07	0	9.6688E-11	18	8.62	0.2812589	3.266E-10	1
rs73139826	1	246088347	C	A	SMYD3	-0.05	0	9.67E-11	15	8.31	0.3064285	2.539E-10	1
rs1994223	8	10105980	T	C	MSRA	0.04	0	9.6787E-11	0	2.83	0.9006589	3.317E-10	1
rs2695236	1	226415302	T	C	PARP1	0.03	0	9.7045E-11	15	8.32	0.3048937	4.44E-10	1
rs60331817	4	46823178	G	A	COX7B2	0.04	0	9.7146E-11	38	11.4	0.1220113	3.329E-10	1
rs4414519	16	72970136	C	G	ZFHX3	-0.03	0	9.746E-11	31	10.22	0.1765142	2.879E-10	1
rs12176317	6	26372558	A	G	BTN3A2	-0.06	0	9.7998E-11	0	2.02	0.9587966	3.358E-10	1
rs68112369	6	26365531	T	C	BTN3A2	-0.06	0	9.8018E-11	0	1.89	0.965555	3.358E-10	1
rs36004866	1	246108422	C	T	SMYD3	-0.05	0	9.8244E-11	12	7.99	0.3335093	2.503E-10	1
rs73004016	11	113574005	T	C	DRD2	-0.05	0	9.8483E-11	21	8.88	0.2611373	4.909E-10	1
rs1976053	17	67836886	C	G	BPTF	0.04	0	9.8621E-11	38	11.32	0.1253541	9.215E-10	1
rs34998650	16	71795426	T	C	AP1G1	0.04	0	9.9305E-11	30	10.08	0.1839745	2.751E-10	1
rs9835270	3	44512230	G	A	ZNF852	-0.03	0	9.9461E-11	0	6.73	0.4574817	3.247E-10	1
rs62083314	18	52831739	C	T	DCC	0.03	0	9.9501E-11	0	0.71	0.9982941	3.408E-10	1
rs147864582	2	161180153	CTT	C	TANK	-0.05	0	9.9735E-11	0	2.73	0.9092131	3.416E-10	1
rs9393713	6	26373450	G	A	BTN3A2	-0.06	0	9.9753E-11	0	1.8	0.9701728	3.417E-10	1
rs9393706	6	26361272	G	A	BTN3A2	-0.06	0	9.9929E-11	0	1.9	0.9653908	3.422E-10	1
rs62305172	4	46769029	A	G	COX7B2	0.04	0	1.0036E-10	18	8.6	0.2824358	4.541E-10	1
rs9379855	6	26364702	T	C	BTN3A2	-0.06	0	1.0042E-10	0	1.93	0.9636595	3.439E-10	1
rs60807346	4	46770314	A	G	COX7B2	0.04	0	1.0044E-10	18	8.6	0.2824268	4.545E-10	1
rs28592929	17	68056618	C	T	KPNA2	0.04	0	1.0049E-10	0	6.53	0.478851	3.441E-10	1
rs78429175	17	68058655	G	A	KPNA2	0.04	0	1.0049E-10	0	6.53	0.478851	3.441E-10	1
rs12631989	3	49236563	C	T	CCDC36	-0.03	0	1.0058E-10	0	6.26	0.5099156	3.444E-10	1
rs13064780	3	49237393	T	G	CCDC36	-0.03	0	1.0072E-10	0	6.35	0.4995149	3.449E-10	1
rs139345647	17	68057409	C	CA	KPNA2	-0.04	0	1.008E-10	0	6.5	0.483105	3.452E-10	1
rs77194282	17	68065510	C	T	KPNA2	0.04	0	1.0081E-10	0	6.54	0.4785935	3.452E-10	1
rs67509210	6	26353872	G	T	BTN3A2	-0.06	0	1.0116E-10	0	1.89	0.9656761	3.464E-10	1
rs62084734	17	68060081	C	T	KPNA2	0.04	0	1.0132E-10	0	6.52	0.4809844	3.469E-10	1

Table S2

rs437955	6	29408025	T	C	OR5V1	-0.07	0	1.0199E-10	0	5.09	0.6486942	3.492E-10	1
rs34550936	6	26361757	A	G	BTN3A2	-0.06	0	1.0202E-10	0	1.89	0.9656554	3.493E-10	1
rs34622023	6	26361891	A	T	BTN3A2	-0.06	0	1.0202E-10	0	1.89	0.9656554	3.493E-10	1
rs9358932	6	26362477	C	T	BTN3A2	-0.06	0	1.0202E-10	0	1.89	0.9656554	3.493E-10	1
rs9358934	6	26363527	G	C	BTN3A2	-0.06	0	1.0202E-10	0	1.89	0.9656554	3.493E-10	1
rs9393707	6	26362258	T	C	BTN3A2	-0.06	0	1.0202E-10	0	1.89	0.9656554	3.493E-10	1
rs72836482	6	26359013	A	T	BTN3A2	-0.06	0	1.021E-10	0	1.89	0.9656506	3.495E-10	1
rs9348709	6	26360083	G	A	BTN3A2	-0.06	0	1.021E-10	0	1.89	0.9656506	3.495E-10	1
rs9379852	6	26357050	A	G	BTN3A2	-0.06	0	1.021E-10	0	1.89	0.9656506	3.495E-10	1
rs9357006	6	26364400	A	C	BTN3A2	-0.06	0	1.0215E-10	0	1.89	0.9656592	3.497E-10	1
rs28362606	6	26365358	T	C	BTN3A2	-0.06	0	1.0215E-10	0	1.89	0.965659	3.497E-10	1
rs71557334	6	26365685	G	T	BTN3A2	-0.06	0	1.0215E-10	0	1.89	0.965659	3.497E-10	1
rs9348712	6	26366283	T	A	BTN3A2	-0.06	0	1.0215E-10	0	1.89	0.965659	3.497E-10	1
rs35934643	6	26354866	G	A	BTN3A2	-0.06	0	1.0216E-10	0	1.89	0.9656342	3.497E-10	1
rs34029919	16	71930021	C	T	IST1,PKD1L3	0.04	0	1.0226E-10	27	9.6	0.2121512	4.603E-10	1
rs7652746	3	49224874	A	G	CCDC36	-0.03	0	1.0261E-10	0	6.28	0.5069785	3.513E-10	1
rs1977	6	26377318	A	G	BTN3A2	-0.06	0	1.0263E-10	0	1.87	0.9664787	3.513E-10	1
rs2117938	3	49226417	G	A	CCDC36	-0.03	0	1.0264E-10	0	6.28	0.507075	3.514E-10	1
rs1866560	2	27105685	T	G	CGREF1	0.03	0	1.0273E-10	8	7.62	0.3670871	4.388E-10	1
rs72925321	18	53280832	G	A	DCC	-0.06	0	1.0278E-10	0	5.19	0.6363693	3.518E-10	1
rs9379854	6	26362626	T	C	BTN3A2	-0.06	0	1.0287E-10	0	1.89	0.9656843	3.521E-10	1
rs4772087	13	98462787	C	T	STK24	0.03	0	1.0293E-10	13	8.09	0.3247496	3.523E-10	1
rs2334958	3	49214931	C	T	CCDC36	-0.03	0	1.0307E-10	0	6.42	0.4918726	3.528E-10	1
rs1872510	16	77025465	C	A	MON1B	-0.03	0	1.0359E-10	0	6.92	0.4370616	3.546E-10	1
rs4917466	10	106213019	A	G	SORCS1	-0.03	0	1.0367E-10	8	7.62	0.3675068	4.424E-10	1
rs11717524	3	49224161	C	T	CCDC36	-0.03	0	1.0373E-10	0	6.39	0.4954033	3.55E-10	1
rs3856519	2	59940362	T	C	BCL11A	0.04	0	1.0392E-10	38	11.36	0.1237262	6.335E-10	1
rs17693963	6	27742386	A	C	HIST1H2BL	-0.07	0	1.0433E-10	0	6.43	0.4909974	3.57E-10	1
rs145398340	12	24204714	T	C	SOX5	-0.09	0	1.0439E-10	0	1.32	0.9880297	3.572E-10	1
rs149039865	12	24204723	G	C	SOX5	-0.09	0	1.044E-10	0	1.32	0.9880284	3.573E-10	1

rs66827971	6	26365538	T	C	BTN3A2	-0.06	0	1.0442E-10	0	1.89	0.9657123	3.574E-10	1
rs4940252	18	53306713	A	G	DCC	0.03	0	1.0485E-10	0	5.05	0.6542671	3.588E-10	1
rs11172247	12	57552727	G	C	KIF5A	0.03	0	1.0528E-10	0	2.98	0.8866188	3.602E-10	1
rs6987670	8	10025667	C	T	MSRA	0.04	0	1.0538E-10	0	4.25	0.7506191	3.606E-10	1
rs67748032	4	46764156	A	G	COX7B2	0.04	0	1.0545E-10	18	8.63	0.2801806	4.795E-10	1
rs4955432	3	49229339	C	T	CCDC36	-0.03	0	1.0583E-10	0	6.27	0.5088827	3.621E-10	1
rs17600713	11	113389225	G	A	ANKK1	-0.03	0	1.062E-10	0	6.24	0.5124545	3.633E-10	1
rs9379859	6	26369321	C	T	BTN3A2	-0.06	0	1.0633E-10	0	1.89	0.9657045	3.638E-10	1
rs9379857	6	26367426	G	C	BTN3A2	-0.06	0	1.068E-10	0	1.89	0.9654946	3.653E-10	1
rs35304979	6	26356119	C	A	BTN3A2	-0.06	0	1.0688E-10	0	1.89	0.9654896	3.656E-10	1
rs6775319	3	18717009	A	T	SATB1	0.03	0	1.0737E-10	0	3.81	0.8014702	3.673E-10	1
rs61859608	10	90987211	C	T	ANKRD1	-0.05	0	1.0746E-10	21	8.93	0.2576065	5.427E-10	1
rs140653283	14	28859589	AT	A	FOXG1	-0.06	0	1.0778E-10	0	4.4	0.7322401	3.686E-10	1
rs13088309	3	49330884	A	G	USP4	-0.04	0	1.0782E-10	9	7.76	0.3545579	2.994E-10	1
rs17075283	3	43184728	A	G	POMGNT2	0.04	0	1.0793E-10	22	9.03	0.2504914	5.088E-10	1
rs13027427	2	27798176	G	T	MRPL33,RBI	-0.04	0	1.0842E-10	0	5.71	0.5736349	3.708E-10	1
rs1307771	14	29028515	G	T	FOXG1	-0.06	0	1.0843E-10	0	3.6	0.8247991	3.708E-10	1
rs11127125	2	27800253	T	C	MRPL33,RBI	-0.04	0	1.0853E-10	0	5.7	0.5757598	3.712E-10	1
rs76254124	16	77034146	A	G	MON1B	-0.05	0	1.0887E-10	0	3.36	0.8500242	3.723E-10	1
rs71384781	16	71925175	G	C	IST1	0.04	0	1.0897E-10	28	9.72	0.2047979	4.987E-10	1
rs12621229	2	59940392	A	C	BCL11A	0.04	0	1.0957E-10	38	11.31	0.125781	6.665E-10	1
rs10891539	11	113365770	G	C	TTC12	-0.03	0	1.0968E-10	17	8.51	0.2898227	6.033E-10	1
rs215902	16	21717893	C	T	OTOA	0.04	0	1.0987E-10	0	1.8	0.9698908	3.757E-10	1
rs7570730	2	27799808	G	A	MRPL33,RBI	-0.04	0	1.1006E-10	0	5.7	0.5749748	3.763E-10	1
rs11920267	3	49238531	G	A	CCDC36	-0.03	0	1.1034E-10	0	6.25	0.511068	3.772E-10	1
rs12629637	3	49249364	G	A	CCDC36	-0.03	0	1.1034E-10	0	6.25	0.511068	3.772E-10	1
rs7638154	3	49261942	C	A	CCDC36	-0.03	0	1.1035E-10	0	6.25	0.5107964	3.773E-10	1
rs10891547	11	113396496	C	A	ANKK1	-0.03	0	1.1049E-10	0	6.21	0.5159448	3.777E-10	1
rs35307327	6	26370246	C	T	BTN3A2	-0.06	0	1.1053E-10	0	1.88	0.9662286	3.779E-10	1
rs34436535	6	26370137	G	C	BTN3A2	-0.06	0	1.1055E-10	0	1.88	0.9662285	3.779E-10	1

rs34878490	6	26370344	C	T	BTN3A2	-0.06	0	1.1055E-10	0	1.88	0.9662285	3.779E-10	1
rs9358935	6	26369359	A	G	BTN3A2	-0.06	0	1.1055E-10	0	1.88	0.9662285	3.779E-10	1
rs8052358	16	71865286	G	A	ATXN1L,IST	0.04	0	1.1055E-10	21	8.93	0.2574958	3.779E-10	1
rs9358936	6	26370429	A	G	BTN3A2	-0.06	0	1.1055E-10	0	1.88	0.9662286	3.779E-10	1
rs9393711	6	26370431	C	T	BTN3A2	-0.06	0	1.1055E-10	0	1.88	0.9662286	3.779E-10	1
rs860068	8	10085484	G	A	MSRA	0.04	0	1.1056E-10	0	3.53	0.8321102	3.78E-10	1
rs12173854	6	26371451	A	G	BTN3A2	-0.06	0	1.106E-10	0	1.88	0.9662269	3.781E-10	1
rs9393712	6	26370772	G	C	BTN3A2	-0.06	0	1.106E-10	0	1.88	0.9662269	3.781E-10	1
rs11127126	2	27800417	C	T	MRPL33,RBI	-0.04	0	1.1075E-10	0	5.71	0.5745451	3.786E-10	1
rs139388510	7	24670608	T	C	MPP6	-0.09	0	1.1078E-10	34	10.74	0.150522	5.236E-10	1
rs12919399	16	65733950	A	G	CDH11	0.03	0	1.1092E-10	0	4.69	0.6977734	3.792E-10	1
rs16945226	16	77091981	A	G	MON1B	-0.05	0	1.1094E-10	0	5.59	0.5883885	3.793E-10	1
rs1078	11	113371155	C	T	TTC12	-0.03	0	1.11E-10	17	8.51	0.2896938	6.103E-10	1
rs35218722	3	49238372	A	G	CCDC36	-0.03	0	1.1125E-10	0	6.23	0.5127245	3.803E-10	1
rs11214595	11	113388936	G	T	ANKK1	-0.03	0	1.1157E-10	0	6.21	0.5151573	3.813E-10	1
rs12804573	11	113371004	G	A	TTC12	-0.03	0	1.119E-10	17	8.51	0.2897493	6.151E-10	1
rs12473400	2	27801157	G	T	MRPL33,RBI	-0.04	0	1.1219E-10	0	5.71	0.5738149	3.834E-10	1
rs9379858	6	26367461	T	C	BTN3A2	-0.06	0	1.1219E-10	0	1.94	0.9628472	3.834E-10	1
rs35174559	3	49250326	T	C	CCDC36	-0.03	0	1.1233E-10	0	6.35	0.4993875	3.839E-10	1
rs12805699	11	113371088	T	A	TTC12	-0.03	0	1.1244E-10	17	8.51	0.2898747	6.178E-10	1
rs10891548	11	113396537	G	A	ANKK1	-0.03	0	1.1252E-10	0	6.21	0.5158209	3.845E-10	1
rs34601878	11	113390176	G	A	ANKK1	-0.03	0	1.1317E-10	0	6.22	0.5144459	3.867E-10	1
rs2734849	11	113399438	A	G	ANKK1	-0.03	0	1.1326E-10	0	6.33	0.5020019	3.87E-10	1
rs406511	6	29408608	C	G	OR5V1	-0.07	0	1.1415E-10	0	5.13	0.6445745	3.9E-10	1
rs2551762	7	135478179	C	T	CNOT4	-0.04	0	1.1455E-10	66	20.94	0.0038614	1.284E-11	2.4923E-12
rs761719	1	36627425	C	T	CSF3R	0.03	0	1.1467E-10	54	15.24	0.0329911	1.751E-10	3.68537E-11
rs10174929	2	59904398	C	G	BCL11A	0.04	0	1.1532E-10	32	10.35	0.1693483	6.535E-10	1
rs2359199	1	36628300	G	T	CSF3R	0.03	0	1.1548E-10	53	15.2	0.033489	1.767E-10	3.68537E-11
rs5773535	1	36627815	TG	T	CSF3R	0.03	0	1.1574E-10	53	15.2	0.0335726	1.772E-10	3.68537E-11
rs3751820	16	71928003	A	G	IST1	0.04	0	1.1584E-10	25	9.35	0.2284638	5.247E-10	1

Table S2

rs12995865	2	27802199	A	C	MRPL33,RBI	-0.04	0	1.1602E-10	0	5.72	0.5727565	3.963E-10	1
rs60020658	10	91029521	G	A	ANKRD1	-0.04	0	1.1615E-10	33	10.52	0.1607643	8.092E-10	1
rs13001060	2	27802194	T	C	MRPL33,RBI	-0.04	0	1.1638E-10	0	5.72	0.5730681	3.975E-10	1
rs1233489	6	29495266	T	A	MAS1L	-0.07	0	1.1657E-10	0	5.45	0.6056991	3.981E-10	1
rs79249301	6	25260690	T	C	LRRC16A	-0.1	0	1.1673E-10	0	6.1	0.5280686	3.987E-10	1
rs79926713	6	33427745	G	T	SYNGAP1	0.04	0	1.1676E-10	35	10.84	0.1458637	4.976E-10	1
rs28498823	11	47893389	C	G	NUP160	-0.03	0	1.1709E-10	0	6.71	0.459938	3.999E-10	1
rs10891540	11	113368360	G	A	TTC12	-0.03	0	1.1743E-10	17	8.52	0.2891875	6.461E-10	1
rs2186799	11	113371811	G	T	TTC12	-0.03	0	1.1816E-10	17	8.5	0.2902475	6.479E-10	1
rs6940230	6	25246892	G	T	LRRC16A	-0.1	0	1.1823E-10	0	5.9	0.5519032	4.037E-10	1
rs11604671	11	113397337	G	A	ANKK1	-0.03	0	1.1828E-10	0	6.29	0.5058441	4.039E-10	1
rs10876988	12	57485309	G	A	ARHGAP9,M	0.03	0	1.1858E-10	0	2.21	0.9475063	4.049E-10	1
rs974495	3	49363049	T	C	RHOA	-0.04	0	1.2018E-10	14	8.14	0.320184	3.158E-10	1
rs9393708	6	26362415	T	C	BTN3A2	-0.06	0	1.2093E-10	0	1.88	0.9662356	4.128E-10	1
rs6438418	3	117829141	C	T	LSAMP	-0.03	0	1.2137E-10	0	2.69	0.9119766	4.142E-10	1
rs11678980	2	161244750	G	A	TANK	0.03	0	1.2218E-10	0	4.77	0.688141	4.169E-10	1
rs74548903	6	25245670	C	T	LRRC16A	-0.1	0	1.2226E-10	0	5.87	0.5547238	4.172E-10	1
rs186361256	2	195760056	C	T	DNAH7	0.08	0	1.2229E-10	0	5.43	0.6079023	4.173E-10	1
rs145802336	14	105525337	G	A	TMEM121	0.09	0	1.2255E-10	0	4.27	0.7476141	4.182E-10	1
rs11639885	16	77085646	G	A	MON1B	-0.05	0	1.2298E-10	0	4.66	0.7018976	4.196E-10	1
rs17720293	6	28246920	C	T	ZKSCAN4	-0.06	0	1.2345E-10	0	6.96	0.4328055	4.212E-10	1
rs74979580	6	25247452	C	T	LRRC16A	-0.1	0	1.2349E-10	0	5.88	0.5538934	4.213E-10	1
rs138739848	6	25250264	C	T	LRRC16A	-0.1	0	1.2366E-10	0	5.92	0.549481	4.219E-10	1
rs12629759	3	49199961	T	C	CCDC36	-0.03	0	1.2379E-10	0	6.33	0.5021975	4.223E-10	1
rs74983924	6	25247778	T	C	LRRC16A	-0.1	0	1.2384E-10	0	5.88	0.553737	4.225E-10	1
rs11891769	2	27802713	G	C	MRPL33,RBI	-0.04	0	1.2387E-10	0	5.77	0.5665246	4.226E-10	1
rs10104911	8	10109664	A	C	MSRA	0.04	0	1.2438E-10	0	3.21	0.8652229	4.243E-10	1
rs4425103	2	22598794	A	C	KLHL29	0.03	0	1.2456E-10	0	6.3	0.5050386	4.249E-10	1
rs12092543	1	246113654	A	C	SMYD3	-0.05	0	1.2493E-10	12	8.02	0.3306261	3.083E-10	1
rs10500560	16	71647250	G	A	PHLPP2	0.04	0	1.2504E-10	26	9.51	0.2180074	3.843E-10	1

rs77951490	6	25236417	G	A	LRRC16A	-0.1	0	1.2507E-10	0	5.95	0.5459139	4.266E-10	1
rs62251383	3	44510929	A	G	ZNF852	-0.03	0	1.2512E-10	0	6.93	0.4357482	4.032E-10	1
rs112273702	10	92783886	T	A	EXOC6	-0.05	0	1.2515E-10	0	3.01	0.8845125	4.269E-10	1
rs56393513	10	91027356	A	G	ANKRD1	-0.04	0	1.2539E-10	36	11.03	0.1372967	8.805E-10	1
rs10098474	8	10054107	C	T	MSRA	-0.04	0	1.2541E-10	0	3.03	0.8819854	4.277E-10	1
rs138267301	6	25241045	A	T	LRRC16A	-0.1	0	1.2555E-10	0	5.9	0.5512012	4.282E-10	1
rs12360992	11	113392178	A	C	ANKK1	-0.03	0	1.2584E-10	0	6.21	0.5150924	4.292E-10	1
rs7824803	8	10027363	C	G	MSRA	0.03	0	1.2591E-10	0	4.15	0.7620639	4.294E-10	1
rs75672316	6	25249822	A	G	LRRC16A	-0.1	0	1.2601E-10	0	5.89	0.5525963	4.298E-10	1
rs12637576	3	49199901	C	T	CCDC36	-0.03	0	1.2623E-10	0	6.33	0.5013598	4.305E-10	1
rs117447488	16	48718161	C	T	N4BP1	0.08	0	1.2654E-10	0	3.35	0.8508671	4.315E-10	1
rs34104395	6	26478024	C	T	BTN2A1	-0.07	0	1.2668E-10	0	5.61	0.5859476	4.32E-10	1
rs543361280	5	120799907	TAA	T	PRR16	0.11	0	1.2695E-10	0	4.2	0.756385	4.329E-10	1
rs115949281	6	25239986	G	A	LRRC16A	-0.1	0	1.2752E-10	0	5.91	0.5508753	4.348E-10	1
rs76266945	6	25240282	G	A	LRRC16A	-0.1	0	1.2769E-10	0	5.9	0.5511275	4.354E-10	1
rs148380803	16	48732155	G	A	N4BP1	0.08	0	1.2841E-10	0	2.95	0.8893602	4.378E-10	1
rs4423852	4	46823722	C	T	COX7B2	0.04	0	1.287E-10	29	9.86	0.1964364	5.897E-10	1
rs77006546	6	25219354	T	C	LRRC16A	-0.1	0	1.2892E-10	0	5.59	0.5881104	4.395E-10	1
rs76798435	6	25231267	A	C	LRRC16A	-0.1	0	1.29E-10	0	5.89	0.5522964	4.398E-10	1
rs4353824	3	18747436	A	G	SATB1	0.03	0	1.2905E-10	0	4.47	0.7247731	4.399E-10	1
rs7190257	16	71612622	T	G	MARVELD3	0.04	0	1.2958E-10	0	3.06	0.8796362	4.417E-10	1
rs1341336	1	226408688	A	G	PARP1	0.03	0	1.2975E-10	20	8.79	0.2678082	6.433E-10	1
rs6784203	3	49344245	C	T	USP4	-0.04	0	1.3052E-10	10	7.81	0.3496001	3.576E-10	1
rs62303544	4	46754086	G	C	COX7B2	0.04	0	1.3054E-10	9	7.74	0.3561832	5.452E-10	1
rs3448	3	49359318	T	C	RHOA	-0.04	0	1.31E-10	10	7.84	0.3469388	3.573E-10	1
rs77914161	6	25233257	T	C	LRRC16A	-0.1	0	1.3104E-10	0	5.89	0.5532389	4.466E-10	1
rs111656223	10	92794879	C	T	EXOC6	-0.05	0	1.3132E-10	0	2.99	0.8854855	4.475E-10	1
rs201320279	3	43208079	TA	T	SNRK	0.04	0	1.314E-10	0	5.84	0.5580555	4.478E-10	1
rs200381132	3	43208076	TAA	T	SNRK	0.04	0	1.3196E-10	0	5.84	0.5583788	4.497E-10	1
rs13195509	6	26463432	G	A	BTN2A1	-0.07	0	1.3231E-10	0	5.54	0.5947317	4.509E-10	1

Table S2

rs4665392	2	27806782	A	G	MRPL33,RBI	-0.04	0	1.3251E-10	0	5.72	0.5731416	4.515E-10	1
rs62305173	4	46769230	A	G	COX7B2	0.04	0	1.3274E-10	9	7.74	0.3565239	5.538E-10	1
rs4955425	3	49345745	A	G	USP4	-0.04	0	1.3322E-10	10	7.82	0.3490804	3.673E-10	1
rs61240383	16	77080792	A	G	MON1B	-0.05	0	1.3356E-10	0	3.52	0.8327532	4.55E-10	1
rs4955430	3	49340655	G	A	USP4	-0.04	0	1.3395E-10	10	7.84	0.3471999	3.66E-10	1
rs7593136	2	27794925	A	G	MRPL33,RBI	-0.04	0	1.3403E-10	0	5.8	0.5628273	4.565E-10	1
rs116090114	6	25257557	C	T	LRRC16A	-0.1	0	1.3404E-10	0	5.93	0.5475799	4.566E-10	1
rs6744348	2	27795158	A	C	MRPL33,RBI	-0.04	0	1.3432E-10	0	5.81	0.5626472	4.575E-10	1
rs3734543	6	26468317	G	C	BTN2A1	-0.07	0	1.3482E-10	0	5.61	0.5859621	4.592E-10	1
rs114032189	5	120795820	G	C	PRR16	0.11	0	1.3542E-10	0	4.1	0.7680195	4.613E-10	1
rs34039719	3	196536345	C	CT	WDR53	-0.03	0	1.3584E-10	47	13.39	0.0631002	9.036E-10	1
rs7871350	9	11078734	G	T	PTPRD	-0.04	0	1.3614E-10	0	6.8	0.450428	4.636E-10	1
rs12801450	11	113292545	C	A	NCAM1	-0.03	0	1.3645E-10	0	3.85	0.7964461	4.647E-10	1
rs10891549	11	113407725	T	C	DRD2	-0.03	0	1.3663E-10	0	6.29	0.5065748	4.653E-10	1
rs3734542	6	26468098	G	A	BTN2A1	-0.07	0	1.367E-10	0	5.62	0.5849673	4.655E-10	1
rs11923032	3	49447559	T	C	NICN1	-0.04	0	1.3683E-10	14	8.16	0.31834	3.555E-10	1
rs9393703	6	26356723	T	C	BTN3A2	-0.06	0	1.3744E-10	0	1.87	0.9666054	4.68E-10	1
rs17701060	16	77060616	A	T	MON1B	-0.05	0	1.3754E-10	0	4.12	0.7661423	4.683E-10	1
rs7555230	1	36638918	T	C	CSF3R	0.03	0	1.3758E-10	55	15.9	0.0260769	2.18E-10	4.65545E-11
rs55708748	11	113367851	T	TGTAGAGA	TTC12	-0.03	0	1.3766E-10	19	8.71	0.2739247	7.836E-10	1
rs6795756	3	49195295	G	A	CCDC36	-0.03	0	1.3767E-10	0	6.37	0.4973544	4.688E-10	1
rs12465012	2	27805324	C	T	MRPL33,RBI	-0.04	0	1.3796E-10	0	5.84	0.5580914	4.697E-10	1
rs10789942	11	113365477	A	G	TTC12	-0.03	0	1.3799E-10	19	8.7	0.2752445	7.831E-10	1
rs12623170	2	27797290	C	T	MRPL33,RBI	-0.04	0	1.381E-10	0	5.83	0.5592639	4.7E-10	1
rs1503579	12	60591845	A	G	SLC16A7	-0.04	0	1.3819E-10	56	16.15	0.0237486	6.282E-10	1
rs4666013	2	27796239	C	T	MRPL33,RBI	-0.04	0	1.3834E-10	0	5.82	0.5604318	4.709E-10	1
rs62302748	4	46639547	C	A	COX7B2	0.04	0	1.3857E-10	0	5.74	0.5706789	4.718E-10	1
rs183712207	2	195746558	G	A	DNAH7	0.07	0	1.3906E-10	0	5.63	0.5832474	4.734E-10	1
rs10490064	2	59935992	A	G	BCL11A	0.04	0	1.3908E-10	23	9.1	0.2458897	6.913E-10	1
rs11214603	11	113409200	G	A	DRD2	-0.03	0	1.3908E-10	0	6.35	0.4991824	4.735E-10	1

rs10809326	9	11075596	C	T	PTPRD	-0.04	0	1.3912E-10	0	6.85	0.4444871	4.736E-10	1
rs62259944	3	49393450	G	A	RHOA	0.04	0	1.3914E-10	9	7.74	0.3562632	3.859E-10	1
rs10796888	1	36640272	T	C	GRIK3	0.03	0	1.3921E-10	56	15.93	0.0257953	2.188E-10	4.65545E-11
rs4666014	2	27796308	G	A	MRPL33,RBI	-0.04	0	1.3942E-10	0	5.77	0.5667387	4.746E-10	1
rs10809329	9	11079779	A	G	PTPRD	-0.04	0	1.4013E-10	0	6.81	0.4492084	4.77E-10	1
rs10155014	3	49394888	C	T	RHOA	-0.04	0	1.4018E-10	9	7.73	0.3571353	3.892E-10	1
rs11214596	11	113393789	C	G	ANKK1	-0.03	0	1.4048E-10	0	6.22	0.514706	4.782E-10	1
rs11039216	11	47385041	C	T	SPI1	0.03	0	1.405E-10	0	7.01	0.427694	4.793E-10	1
rs2046398	8	10110311	T	A	MSRA	0.04	0	1.4066E-10	0	2.65	0.9150534	4.788E-10	1
rs6550617	3	18736344	A	G	SATB1	0.03	0	1.4072E-10	0	4.41	0.7315588	4.79E-10	1
rs7028951	9	11087132	G	A	PTPRD	-0.04	0	1.4083E-10	0	6.59	0.4725134	4.793E-10	1
rs7237127	18	53353330	T	A	DCC	0.03	0	1.4146E-10	0	4.9	0.6725775	4.815E-10	1
rs7538860	1	36638709	C	A	CSF3R	0.03	0	1.4152E-10	55	15.9	0.0260833	2.235E-10	4.77794E-11
rs78771277	5	153576638	G	T	GRIA1	0.08	0	1.4236E-10	0	7.05	0.4234061	4.844E-10	1
rs4850595	2	195199675	C	T	SLC39A10	-0.04	0	1.431E-10	0	5.61	0.5864558	4.869E-10	1
rs13096474	3	49405648	T	C	RHOA	-0.04	0	1.4311E-10	15	8.26	0.3105436	3.685E-10	1
rs7024802	9	11086378	G	A	PTPRD	-0.04	0	1.4311E-10	0	6.6	0.4712955	4.87E-10	1
rs12001095	9	11086183	A	G	PTPRD	-0.04	0	1.4353E-10	0	6.61	0.4708461	4.884E-10	1
rs5896433	9	11086565	CT	C	PTPRD	-0.04	0	1.4361E-10	0	6.61	0.4708331	4.886E-10	1
rs2341396	3	196541565	C	G	WDR53	-0.03	0	1.4426E-10	51	14.46	0.0435583	8.063E-10	1
rs6434757	2	195197135	A	G	SLC39A10	-0.04	0	1.4508E-10	0	5.6	0.5874396	4.935E-10	1
rs1554929	11	113408042	C	T	DRD2	-0.03	0	1.4521E-10	0	6.36	0.4979434	4.94E-10	1
rs6434755	2	195196344	T	A	SLC39A10	-0.04	0	1.4538E-10	0	5.6	0.5874583	4.945E-10	1
rs4850596	2	195199744	T	A	SLC39A10	-0.04	0	1.4592E-10	0	5.59	0.5879135	4.963E-10	1
rs4646620	15	57966043	G	A	ALDH1A2	0.03	0	1.4622E-10	50	14.09	0.0495281	4.974E-10	1
rs11720657	3	49355187	A	G	GPX1	-0.04	0	1.4635E-10	12	7.98	0.3343272	3.917E-10	1
rs966971	2	59911127	C	T	BCL11A	0.04	0	1.4637E-10	11	7.95	0.3370207	6.023E-10	1
rs2155463	11	113371579	T	C	TTC12	-0.03	0	1.4643E-10	19	8.7	0.275157	8.296E-10	1
rs4666015	2	27796500	G	A	MRPL33,RBI	-0.04	0	1.4661E-10	0	5.73	0.571106	4.986E-10	1
rs6790105	3	49355976	C	T	GPX1	-0.04	0	1.4719E-10	12	7.99	0.3332905	3.939E-10	1

Table S2

rs549163626	2	161012617	CA	C	TANK	-0.08	0	1.4751E-10	22	8.98	0.2540704	7.522E-10	1
rs528053698	2	161012624	A	T	TANK	-0.08	0	1.4753E-10	22	8.98	0.254064	7.523E-10	1
rs79215447	5	153528635	T	C	GRIA1	0.08	0	1.4809E-10	0	6.98	0.4312012	5.036E-10	1
rs11130184	3	49192497	C	T	C3orf84	-0.03	0	1.4847E-10	0	6.39	0.494774	5.048E-10	1
rs11716334	3	49192663	G	A	C3orf84	-0.03	0	1.4987E-10	0	6.37	0.4969612	5.095E-10	1
rs10809328	9	11077993	C	T	PTPRD	-0.04	0	1.5016E-10	0	6.71	0.4600228	5.105E-10	1
rs34358623	16	71692233	C	T	PHLPP2	0.04	0	1.5054E-10	26	9.58	0.2134522	4.65E-10	1
rs137917260	13	98481751	CA	C	STK24	0.03	0	1.5061E-10	15	8.33	0.3047295	4.659E-10	1
rs7575465	2	27068793	G	A	AGBL5	0.03	0	1.5084E-10	7	7.57	0.3716924	6.267E-10	1
rs4850597	2	195214806	T	C	SLC39A10	-0.04	0	1.5126E-10	0	5.64	0.5818487	5.142E-10	1
rs4315696	3	18744558	A	T	SATB1	0.03	0	1.5128E-10	0	4.44	0.7280589	5.142E-10	1
rs6945641	7	135493279	T	C	CNOT4	0.04	0	1.5153E-10	65	20.35	0.0048704	2.187E-11	4.28505E-12
rs1559536	7	135487468	A	G	CNOT4	-0.04	0	1.5155E-10	65	20.35	0.0048683	2.186E-11	4.28505E-12
rs34731378	16	71711845	C	T	PHLPP2	0.04	0	1.5218E-10	25	9.35	0.2288203	4.73E-10	1
rs2983140	6	40049485	A	G	MOCS1	0.03	0	1.5237E-10	13	8.06	0.3277364	4.581E-10	1
rs78756484	6	51487902	T	C	PKHD1	-0.07	0	1.5242E-10	33	10.52	0.1610434	4.778E-10	1
rs11732825	4	15113037	T	G	CPEB2	-0.04	0	1.5244E-10	0	3.96	0.7841169	5.181E-10	1
rs9570498	13	61194179	C	A	PCDH20	-0.07	0	1.5279E-10	33	10.6	0.1569314	1.1E-09	1
rs34884299	10	104695762	G	C	SORCS3	0.04	0	1.5286E-10	0	3.08	0.8774778	5.195E-10	1
rs11725004	4	46676239	G	A	COX7B2	0.04	0	1.5358E-10	0	6.29	0.5067987	5.219E-10	1
rs61859618	10	90997666	A	G	ANKRD1	-0.05	0	1.5375E-10	19	8.73	0.2729787	7.12E-10	1
rs1474850	1	36630583	C	A	CSF3R	0.03	0	1.54E-10	54	15.27	0.0327364	2.726E-10	1
rs9832550	3	18746038	T	G	SATB1	0.03	0	1.5431E-10	0	4.48	0.7236894	5.243E-10	1
rs41281664	13	102744278	C	T	CCDC168	0.09	0	1.5434E-10	0	1.18	0.991294	5.245E-10	1
rs72791117	16	72183486	T	C	PMFBP1	0.04	0	1.544E-10	0	3.21	0.8644518	5.246E-10	1
rs754672	11	113378414	C	T	TTC12	-0.03	0	1.5498E-10	23	9.18	0.2396667	9.789E-10	1
rs1582634	7	135481773	C	T	CNOT4	-0.04	0	1.5535E-10	65	20.33	0.0049017	2.266E-11	4.39708E-12
rs7615925	3	18745582	A	C	SATB1	0.03	0	1.5579E-10	0	4.45	0.7271359	5.293E-10	1
rs2551760	7	135484666	C	T	CNOT4	-0.04	0	1.5588E-10	65	20.31	0.0049464	2.291E-11	4.51205E-12
rs7576017	2	59932397	A	G	BCL11A	0.04	0	1.562E-10	31	10.28	0.173012	9.282E-10	1

Table S2

rs35627490	6	26461876	C	T	BTN2A1	-0.07	0	1.564E-10	0	5.36	0.6165679	5.313E-10	1
rs9869437	3	196501489	C	A	RNF168	-0.03	0	1.565E-10	8	7.68	0.3616032	6.515E-10	1
rs7909129	10	104697818	A	G	SORCS3	0.04	0	1.5653E-10	0	3.05	0.8806161	5.317E-10	1
rs112292441	12	60594243	GT	G	SLC16A7	-0.04	0	1.568E-10	56	16.05	0.0246264	7.077E-10	1
rs17117590	14	72561337	A	G	RGS6	0.09	0	1.5681E-10	0	5.38	0.6136759	5.327E-10	1
rs111642431	12	60595805	AT	A	SLC16A7	-0.04	0	1.5681E-10	56	16.05	0.0246201	7.075E-10	1
rs61925034	12	60595808	T	G	SLC16A7	-0.04	0	1.5681E-10	56	16.05	0.0246201	7.075E-10	1
rs61925033	12	60594394	G	A	SLC16A7	-0.04	0	1.5684E-10	56	16.05	0.0246275	7.078E-10	1
rs12580804	12	60595707	C	G	SLC16A7	-0.04	0	1.5686E-10	56	16.05	0.024621	7.077E-10	1
rs1994224	8	10109076	A	G	MSRA	0.04	0	1.5758E-10	0	2.94	0.890734	5.353E-10	1
rs17672559	12	60592955	G	T	SLC16A7	-0.04	0	1.5778E-10	56	16.09	0.0242961	7.064E-10	1
rs12416372	10	104698869	G	C	SORCS3	0.04	0	1.5814E-10	0	3.12	0.873655	5.371E-10	1
rs17114365	14	28914716	A	G	FOXG1	-0.06	0	1.5897E-10	0	3.69	0.8148596	5.399E-10	1
rs1170630	2	124208905	A	G	CNTNAP5	-0.04	0	1.5906E-10	10	7.84	0.3464928	6.202E-10	1
rs1170634	2	124209729	T	C	CNTNAP5	-0.04	0	1.5906E-10	10	7.84	0.3464928	6.202E-10	1
rs1464569	3	49422917	A	G	RP11-949J7.8	-0.04	0	1.5909E-10	13	8.13	0.321416	4.131E-10	1
rs73371347	12	60603225	A	G	SLC16A7	-0.04	0	1.591E-10	56	16.16	0.0236665	6.944E-10	1
rs35680819	6	26455586	T	C	BTN3A3	-0.07	0	1.5938E-10	0	5.35	0.6177679	5.412E-10	1
rs1170602	2	124216232	A	G	CNTNAP5	-0.04	0	1.5951E-10	10	7.85	0.3463188	6.22E-10	1
rs1170608	2	124218115	T	C	CNTNAP5	-0.04	0	1.5972E-10	10	7.85	0.3464167	6.227E-10	1
rs3823158	6	26463043	T	A	BTN2A1	-0.07	0	1.5978E-10	0	5.35	0.6176906	5.426E-10	1
rs36033628	6	26455846	T	G	BTN2A1	-0.07	0	1.5978E-10	0	5.35	0.6176921	5.426E-10	1
rs1345868	16	71635721	C	A	MARVELD3	0.04	0	1.5986E-10	25	9.42	0.2237939	4.967E-10	1
rs12733808	1	246031634	G	A	SMYD3	-0.06	0	1.599E-10	0	4.59	0.7096608	5.43E-10	1
rs2699359	2	124223097	A	G	CNTNAP5	-0.04	0	1.5992E-10	11	7.9	0.3416684	6.242E-10	1
rs1170611	2	124224900	G	T	CNTNAP5	-0.04	0	1.6009E-10	10	7.86	0.3450476	6.218E-10	1
rs34605993	6	26454135	C	T	BTN3A3	-0.07	0	1.6119E-10	0	5.32	0.6208795	5.473E-10	1
rs2699360	2	124223095	A	G	CNTNAP5	-0.04	0	1.618E-10	11	7.9	0.3411812	6.322E-10	1
rs686147	6	153207873	A	C	RGS17	0.03	0	1.6191E-10	0	2.42	0.9331966	5.497E-10	1
rs72794561	16	77059358	A	G	MON1B	-0.05	0	1.6199E-10	0	4.02	0.7775966	5.499E-10	1

Table S2

rs112535944	9	137383754	C	A	EXD3	0.04	0	1.6265E-10	12	8.01	0.3315784	7.038E-10	1
rs6856297	4	34494277	T	C	ARAP2	0.04	0	1.6274E-10	9	7.75	0.3550628	6.357E-10	1
rs73244152	4	46587695	A	T	GABRA2	0.04	0	1.633E-10	0	6.26	0.5094759	5.543E-10	1
rs138759369	12	60602988	TAAAG	T	SLC16A7	-0.04	0	1.6351E-10	56	16.06	0.0246059	7.366E-10	1
rs10459865	16	77083529	T	C	MON1B	-0.05	0	1.6379E-10	0	3.5	0.83567	5.559E-10	1
rs429479	6	29404546	A	G	OR5V1	-0.07	0	1.6389E-10	0	5.26	0.6283267	5.563E-10	1
rs6446262	3	49363720	T	C	RHOA	-0.04	0	1.6403E-10	13	8.07	0.3268914	4.324E-10	1
rs11708541	3	82277796	T	G	GBE1	0.04	0	1.6447E-10	31	10.16	0.1798208	5.371E-10	1
rs11720102	3	82277806	G	T	GBE1	0.04	0	1.6447E-10	31	10.16	0.1798208	5.371E-10	1
rs7803353	7	135503333	T	C	CNOT4	0.04	0	1.646E-10	65	20.29	0.0049685	2.461E-11	4.8753E-12
rs1477503	2	59919780	C	T	BCL11A	0.03	0	1.6504E-10	22	8.98	0.2543882	8.015E-10	1
rs6415715	9	11101803	G	A	PTPRD	0.04	0	1.6507E-10	0	4.25	0.751024	5.602E-10	1
rs11953183	5	120831745	A	G	PRR16	0.03	0	1.6537E-10	0	2.39	0.935472	5.612E-10	1
rs71638309	1	246035639	C	G	SMYD3	-0.06	0	1.6545E-10	0	4.54	0.7154261	5.615E-10	1
rs1056303	16	71636163	C	T	MARVELD3	0.04	0	1.6574E-10	25	9.42	0.2238095	5.146E-10	1
rs1170607	2	124217925	G	T	CNTNAP5	-0.04	0	1.658E-10	10	7.84	0.3473178	6.463E-10	1
rs35670428	1	246033551	C	T	SMYD3	-0.06	0	1.6641E-10	0	4.62	0.706003	5.647E-10	1
rs117462985	15	46704200	C	A	AC066615.1	0.06	0	1.6653E-10	0	6.07	0.5317649	5.651E-10	1
rs11075922	16	72123819	C	T	PMFBP1	0.03	0	1.6662E-10	0	5.13	0.6435915	5.627E-10	1
rs6824402	4	34494222	G	C	ARAP2	0.04	0	1.6666E-10	9	7.75	0.3550631	6.507E-10	1
rs12578303	12	60602447	C	T	SLC16A7	-0.04	0	1.6693E-10	56	16.05	0.0246613	7.575E-10	1
rs2363475	12	60598790	G	C	SLC16A7	-0.04	0	1.6697E-10	56	16.15	0.0237733	7.36E-10	1
rs74838273	14	28955530	G	A	FOXG1	-0.06	0	1.67E-10	0	3.57	0.8282091	5.667E-10	1
rs10021178	4	34493351	T	G	ARAP2	0.04	0	1.6742E-10	9	7.75	0.355193	6.534E-10	1
rs11907168	20	55753188	G	A	CBLN4	-0.05	0	1.6771E-10	0	5.26	0.6277728	5.69E-10	1
rs2127856	4	34493300	G	T	ARAP2	0.04	0	1.6785E-10	9	7.75	0.3550457	6.553E-10	1
rs34181670	2	27796989	T	C	MRPL33,RBI	-0.04	0	1.6794E-10	0	5.92	0.548715	5.672E-10	1
rs9884438	4	34493055	C	G	ARAP2	0.04	0	1.6804E-10	9	7.75	0.3549446	6.561E-10	1
rs814424	8	10085414	A	G	MSRA	0.04	0	1.6815E-10	0	3.29	0.8567055	5.705E-10	1
rs4835866	5	125211547	A	G	ZNF608	0.04	0	1.6815E-10	0	4.53	0.7175973	5.705E-10	1

rs10019000	4	34487368	T	C	ARAP2	0.04	0	1.683E-10	9	7.75	0.3553861	6.568E-10	1
rs62302741	4	46597148	A	G	GABRA2	0.04	0	1.6866E-10	0	6.45	0.4880387	5.722E-10	1
rs11130190	3	49364704	T	C	RHOA	-0.04	0	1.6867E-10	13	8.08	0.3252472	4.429E-10	1
rs34556721	1	246037237	C	A	SMYD3	-0.06	0	1.6874E-10	0	4.52	0.7178672	5.724E-10	1
rs6845705	4	34487966	A	G	ARAP2	0.04	0	1.6891E-10	9	7.75	0.3552635	6.594E-10	1
rs1021851	12	60582151	C	A	SLC16A7	-0.04	0	1.6896E-10	56	16.23	0.0231376	7.569E-10	1
rs12644434	4	34488544	C	T	ARAP2	0.04	0	1.6934E-10	9	7.75	0.3548415	6.615E-10	1
rs111981346	12	60585983	C	T	SLC16A7	-0.04	0	1.6954E-10	56	16.07	0.0245153	7.674E-10	1
rs2202276	12	60586114	G	A	SLC16A7	-0.04	0	1.6965E-10	56	16.07	0.0245106	7.678E-10	1
rs28713219	4	34490532	A	G	ARAP2	0.04	0	1.6976E-10	9	7.75	0.3550569	6.63E-10	1
rs13147249	4	34489139	G	C	ARAP2	0.04	0	1.6998E-10	9	7.75	0.3549393	6.639E-10	1
rs7678053	4	34491166	T	C	ARAP2	0.04	0	1.7013E-10	9	7.75	0.3551544	6.641E-10	1
rs4481216	4	46692147	T	G	COX7B2	0.04	0	1.7028E-10	0	6.15	0.5222854	5.776E-10	1
rs12733342	1	246031551	C	T	SMYD3	-0.06	0	1.7075E-10	0	4.54	0.7157688	5.791E-10	1
rs9812360	3	49364918	T	C	RHOA	-0.04	0	1.708E-10	13	8.09	0.3245358	4.483E-10	1
rs4646616	15	57969151	G	A	ALDH1A2	0.03	0	1.7117E-10	48	13.65	0.0577315	3.699E-10	1
rs1307770	14	28989465	T	A	FOXG1	0.06	0	1.7197E-10	0	3.56	0.8293109	5.832E-10	1
rs62303507	4	46715101	T	C	COX7B2	0.04	0	1.7215E-10	0	6.57	0.4749928	5.838E-10	1
rs6545768	2	59918741	G	T	BCL11A	0.04	0	1.7244E-10	29	9.9	0.1943763	8.728E-10	1
rs189712206	2	196010458	C	T	DNAH7	0.08	0	1.7318E-10	0	5.38	0.6142931	5.872E-10	1
rs7298983	12	60585069	G	A	SLC16A7	-0.04	0	1.7479E-10	56	16.11	0.0241458	7.823E-10	1
rs2891550	2	27111756	C	T	CGREF1	0.03	0	1.7484E-10	11	7.92	0.3401281	8.144E-10	1
rs4370966	11	113360969	G	A	TTC12	-0.03	0	1.7501E-10	0	6.99	0.4295765	5.933E-10	1
rs11214587	11	113361700	T	G	TTC12	-0.03	0	1.758E-10	0	6.96	0.4332929	5.959E-10	1
rs4260511	4	46708955	C	T	COX7B2	0.04	0	1.7637E-10	0	6.47	0.4855933	5.978E-10	1
rs1170612	2	124225479	T	C	CNTNAP5	-0.04	0	1.7677E-10	11	7.88	0.3433152	6.851E-10	1
rs7307420	12	60587049	A	T	SLC16A7	-0.04	0	1.77E-10	56	16.1	0.0242169	7.928E-10	1
rs61925030	12	60587510	A	G	SLC16A7	-0.04	0	1.773E-10	56	16.1	0.0242238	7.94E-10	1
rs151241745	14	28865946	T	C	FOXG1	-0.06	0	1.7734E-10	0	3.21	0.8649652	6.01E-10	1
rs17328524	2	59934022	C	T	BCL11A	0.03	0	1.775E-10	28	9.75	0.2031219	9.352E-10	1

rs113079128	15	46706889	T	A	AC066615.1	0.06	0	1.779E-10	0	6.1	0.5278585	6.029E-10	1
rs4881129	10	3251527	A	G	PITRM1	0.04	0	1.7806E-10	0	5.91	0.5500297	6.035E-10	1
rs2363477	12	60588054	G	C	SLC16A7	-0.04	0	1.7847E-10	56	16.1	0.0242344	7.995E-10	1
rs2885790	12	60588115	A	G	SLC16A7	-0.04	0	1.785E-10	56	16.1	0.0242324	7.995E-10	1
rs6446275	3	49429438	A	G	NICN1	0.04	0	1.7879E-10	14	8.18	0.317085	4.613E-10	1
rs1170621	2	124231786	C	T	CNTNAP5	-0.04	0	1.7893E-10	11	7.89	0.3424976	6.937E-10	1
rs12959099	18	53185140	A	G	DCC	0.03	0	1.7912E-10	8	7.66	0.363641	6.07E-10	1
rs60389053	12	60588342	C	T	SLC16A7	-0.04	0	1.7925E-10	56	16.1	0.0242307	8.023E-10	1
rs11737113	4	46707910	G	A	COX7B2	0.04	0	1.799E-10	0	6.45	0.4887681	6.096E-10	1
rs749196	2	124231455	T	C	CNTNAP5	-0.04	0	1.8048E-10	11	7.89	0.3423926	6.998E-10	1
rs62259933	3	49432270	G	A	NICN1	0.04	0	1.8112E-10	14	8.15	0.319943	4.687E-10	1
rs10191489	2	121236245	C	T	TFCP2L1	-0.06	0	1.8134E-10	0	1.58	0.9794065	6.144E-10	1
rs12466227	2	59921805	A	G	BCL11A	0.03	0	1.8135E-10	32	10.41	0.1662786	9.716E-10	1
rs1170619	2	124231171	G	T	CNTNAP5	-0.04	0	1.8146E-10	11	7.89	0.3422818	7.035E-10	1
rs814422	8	10083511	C	T	MSRA	0.04	0	1.8149E-10	0	3.49	0.836086	6.148E-10	1
rs61925027	12	60578401	G	A	SLC16A7	-0.04	0	1.817E-10	56	16.22	0.0232137	8.184E-10	1
rs34527699	1	246025949	T	G	SMYD3	-0.06	0	1.8176E-10	0	4.51	0.7191544	6.158E-10	1
rs73088137	3	49410990	G	A	RHOA	0.04	0	1.8177E-10	14	8.15	0.3195328	4.704E-10	1
rs8897	3	49422974	C	T	NICN1,RP11-	0.04	0	1.8177E-10	14	8.15	0.3195328	4.704E-10	1
rs940045	3	49412205	G	A	RHOA	-0.04	0	1.8179E-10	14	8.15	0.3195318	4.704E-10	1
rs12578905	12	60579641	C	T	SLC16A7	-0.04	0	1.8193E-10	56	16.22	0.0232131	8.197E-10	1
rs7620024	3	49414258	G	A	TCTA	0.04	0	1.8208E-10	14	8.15	0.3197076	4.713E-10	1
rs17615742	12	60579908	C	A	SLC16A7	-0.04	0	1.8212E-10	56	16.22	0.0232094	8.204E-10	1
rs35547829	1	246026144	C	T	SMYD3	-0.06	0	1.8224E-10	0	4.51	0.7191732	6.174E-10	1
rs13061396	3	49407471	T	C	RHOA	-0.04	0	1.8228E-10	14	8.15	0.3196902	4.719E-10	1
rs78252389	6	25257302	C	T	LRRC16A	-0.1	0	1.823E-10	0	6.12	0.5260129	6.176E-10	1
rs4438071	11	113360892	C	T	TTC12	-0.03	0	1.8317E-10	0	6.94	0.4349648	6.204E-10	1
rs66757203	6	26454728	C	T	BTN3A3	-0.07	0	1.8338E-10	0	5.42	0.6090468	6.211E-10	1
rs4955413	3	49372633	A	C	RHOA	-0.04	0	1.8381E-10	14	8.15	0.3198962	4.757E-10	1
rs3795855	2	121219139	T	C	TFCP2L1	0.06	0	1.8431E-10	0	1.47	0.9831941	6.242E-10	1

rs867282	2	27728791	T	C	SLC4A1AP	0.04	0	1.8433E-10	0	4	0.7795221	6.243E-10	1
rs11639600	16	77088652	A	G	MON1B	-0.05	0	1.8446E-10	0	5.47	0.6032689	6.247E-10	1
rs11719762	3	49371569	G	C	RHOA	-0.04	0	1.845E-10	14	8.14	0.3203453	4.779E-10	1
rs6775069	3	49375063	A	G	RHOA	-0.04	0	1.845E-10	14	8.14	0.3203453	4.779E-10	1
rs6796147	3	49371383	G	C	RHOA	-0.04	0	1.845E-10	14	8.14	0.3203453	4.779E-10	1
rs2140270	3	49402007	A	G	RHOA	0.04	0	1.8467E-10	14	8.15	0.3197895	4.78E-10	1
rs2177268	3	49402292	A	T	RHOA	0.04	0	1.8467E-10	14	8.15	0.3197895	4.78E-10	1
rs56127630	3	49400603	C	G	RHOA	0.04	0	1.8467E-10	14	8.15	0.3197895	4.78E-10	1
rs7648995	3	49401370	C	T	RHOA	0.04	0	1.8467E-10	14	8.15	0.3197895	4.78E-10	1
rs7602545	2	59932253	G	C	BCL11A	0.04	0	1.8488E-10	32	10.35	0.1696656	1.05E-09	1
rs6769744	3	49374582	C	T	RHOA	-0.04	0	1.85E-10	13	8.14	0.3205016	4.793E-10	1
rs12957545	18	53375248	G	A	DCC	-0.04	0	1.8559E-10	39	11.66	0.1123157	8.361E-10	1
rs1367635	18	53335039	T	C	DCC	0.03	0	1.8651E-10	0	5.42	0.6090057	6.315E-10	1
rs1170626	2	124233963	C	T	CNTNAP5	-0.04	0	1.8683E-10	10	7.83	0.3473893	7.195E-10	1
rs6785045	3	49397810	G	C	RHOA	0.04	0	1.8687E-10	14	8.15	0.3192767	4.838E-10	1
rs4844662	1	208243413	C	G	PLXNA2	-0.03	0	1.8704E-10	0	4.62	0.706509	6.333E-10	1
rs11736668	4	46710403	A	G	COX7B2	0.04	0	1.8725E-10	0	6.48	0.4846346	6.34E-10	1
rs6809204	3	49331950	C	T	USP4	-0.04	0	1.8768E-10	16	8.41	0.2976542	4.954E-10	1
rs62259947	3	49402491	T	C	RHOA	0.04	0	1.878E-10	14	8.14	0.320097	4.868E-10	1
rs1484685	2	22620180	C	T	KLHL29	-0.03	0	1.879E-10	0	6.12	0.5256661	6.362E-10	1
rs10756179	9	11081093	G	A	PTPRD	-0.04	0	1.8806E-10	0	6.68	0.4628309	6.367E-10	1
rs61404973	12	60583565	A	G	SLC16A7	-0.04	0	1.8808E-10	56	16.25	0.0229554	8.404E-10	1
rs6766334	3	44525573	T	C	ZNF852	-0.03	0	1.8811E-10	1	7.08	0.4209434	5.83E-10	1
rs36025948	9	11081012	A	C	PTPRD	-0.04	0	1.8835E-10	0	6.68	0.4628552	6.377E-10	1
rs10167951	2	121232844	C	T	TFCP2L1	-0.06	0	1.8869E-10	0	1.62	0.9777584	6.388E-10	1
rs7617003	3	18749856	T	C	SATB1	0.03	0	1.8922E-10	0	4.61	0.707309	6.405E-10	1
rs77852537	14	28876978	C	T	FOXG1	-0.06	0	1.8968E-10	0	3.21	0.8645336	6.421E-10	1
rs112026127	6	164649819	A	G	C6orf118	0.05	0	1.8972E-10	0	5.14	0.6431144	6.422E-10	1
rs4646617	15	57969001	ACAC	A	ALDH1A2	0.03	0	1.8974E-10	49	13.91	0.0528862	3.397E-10	1
rs62303505	4	46713091	A	G	COX7B2	0.04	0	1.8987E-10	0	6.47	0.4864467	6.427E-10	1

rs12935232	16	72186085	T	C	PMFBP1	0.03	0	1.9009E-10	0	5.17	0.6392941	6.434E-10	1
rs4930401	11	66968660	T	C	C11orf86	-0.03	0	1.9042E-10	39	11.66	0.1123195	6.445E-10	1
rs73078367	3	48670914	C	T	NCKIPSD	-0.04	0	1.9064E-10	0	4.03	0.7765346	6.453E-10	1
rs2220152	2	22611193	T	C	KLHL29	-0.03	0	1.9089E-10	0	6.07	0.5314112	6.461E-10	1
rs61859604	10	90973172	G	C	ANKRD1	-0.05	0	1.9093E-10	21	8.96	0.2555856	9.399E-10	1
rs12903792	15	57969082	C	T	ALDH1A2	0.03	0	1.9172E-10	49	13.92	0.0526282	3.92E-10	1
rs61859606	10	90980933	C	T	ANKRD1	-0.05	0	1.9183E-10	21	8.97	0.2547753	9.37E-10	1
rs10255837	7	135370989	C	T	CNOT4	0.04	0	1.9215E-10	65	20.45	0.0046783	2.634E-11	5.1336E-12
rs74177455	20	52639314	G	GTGTTACAT	TSHZ2	-0.04	0	1.9241E-10	16	8.39	0.2991023	9.156E-10	1
rs6765486	3	18774634	A	G	SATB1	0.03	0	1.9296E-10	0	4.33	0.7411634	6.53E-10	1
rs76110027	14	28830970	T	C	FOXG1	-0.06	0	1.9299E-10	0	3.52	0.8331178	6.531E-10	1
rs6723552	2	22618054	A	G	KLHL29	-0.03	0	1.9302E-10	0	6.1	0.5279452	6.532E-10	1
rs61925002	12	60574477	G	A	SLC16A7	-0.04	0	1.9315E-10	56	16.18	0.0234849	8.755E-10	1
rs9358199	6	19226297	A	G	ID4	0.04	0	1.9361E-10	67	21.27	0.0033955	8.661E-11	1.78231E-11
rs11119561	1	210653034	A	G	HHAT	0.03	0	1.9389E-10	0	7.04	0.4251867	6.561E-10	1
rs12924631	16	71671871	G	A	PHLPP2	0.04	0	1.9413E-10	26	9.5	0.2189174	5.875E-10	1
rs17114364	14	28913964	G	A	FOXG1	-0.06	0	1.9452E-10	0	3.55	0.8303249	6.582E-10	1
rs61925026	12	60577447	G	T	SLC16A7	-0.04	0	1.9464E-10	56	16.18	0.0235225	8.82E-10	1
rs61925037	12	60603850	C	T	SLC16A7	-0.04	0	1.9485E-10	56	15.91	0.0259248	8.773E-10	1
rs3952715	11	115116515	A	G	CADM1	0.04	0	1.9531E-10	43	12.46	0.0865024	4.099E-10	1
rs2019950	2	22610527	G	C	KLHL29	-0.03	0	1.9538E-10	0	6.11	0.526975	6.61E-10	1
rs4855869	3	49451551	T	C	DAG1	-0.04	0	1.9633E-10	15	8.28	0.3084157	4.965E-10	1
rs62302758	4	46678854	A	T	COX7B2	0.04	0	1.9655E-10	0	6.44	0.4889651	6.649E-10	1
rs6734579	2	59927672	C	A	BCL11A	0.03	0	1.9685E-10	26	9.58	0.2135812	1.025E-09	1
rs10506412	12	60574955	T	C	SLC16A7	-0.04	0	1.9689E-10	56	16.12	0.0240614	8.988E-10	1
rs1881557	2	22616798	A	G	KLHL29	-0.03	0	1.969E-10	0	6.1	0.5284072	6.661E-10	1
rs11642616	16	77060866	A	T	MON1B	-0.05	0	1.9744E-10	0	4.02	0.7779951	6.679E-10	1
rs9878064	3	18774426	G	A	SATB1	0.03	0	1.9768E-10	0	4.35	0.7383911	6.687E-10	1
rs12468914	2	59932621	T	C	BCL11A	0.04	0	1.9796E-10	32	10.38	0.1680386	1.12E-09	1
rs1813627	2	22613823	C	T	KLHL29	-0.03	0	1.9819E-10	0	6.11	0.5274582	6.703E-10	1

rs72652256	13	98453135	A	C	FARP1,STK2	0.08	0	1.9844E-10	10	7.83	0.3477163	5.27E-10	1
rs12579281	12	60580872	G	C	SLC16A7	-0.04	0	1.9865E-10	57	16.29	0.0226297	8.738E-10	1
rs6805609	3	49434089	G	C	NICN1	0.04	0	1.991E-10	13	8.12	0.3221558	5.16E-10	1
rs9654010	3	49443475	T	C	NICN1	0.04	0	1.9924E-10	15	8.26	0.3103167	5.055E-10	1
rs138084484	3	49445760	C	T	NICN1	0.04	0	1.9945E-10	15	8.26	0.310369	5.06E-10	1
rs142665618	3	49444005	AGGACT	A	NICN1	-0.04	0	1.9963E-10	15	8.26	0.3103209	5.064E-10	1
rs57273516	3	49445641	A	G	NICN1	-0.04	0	1.9963E-10	15	8.26	0.3103209	5.064E-10	1
rs7710483	5	125222610	T	G	ZNF608	0.04	0	1.9966E-10	0	5.74	0.5700512	6.752E-10	1
rs2042559	2	59895816	C	T	BCL11A	0.04	0	1.9992E-10	33	10.57	0.1582901	1.092E-09	1
rs34264700	1	246093620	G	A	SMYD3	-0.05	0	2.0036E-10	20	8.82	0.2659476	4.482E-10	1
rs4524148	2	22612036	C	T	KLHL29	-0.03	0	2.0064E-10	0	6.09	0.5292929	6.785E-10	1
rs12624148	2	27733614	C	T	MRPL33	-0.04	0	2.0067E-10	0	3.98	0.7824137	6.786E-10	1
rs62084746	17	68083430	T	C	KPNA2	0.04	0	2.0069E-10	45	12.93	0.073861	1.707E-09	1
rs72694248	9	11120126	T	G	PTPRD	-0.05	0	2.0084E-10	0	5.72	0.5728516	6.791E-10	1
rs80146508	14	28832050	C	T	FOXG1	-0.06	0	2.0084E-10	0	3.53	0.8325302	6.792E-10	1
rs4665510	2	22615238	C	T	KLHL29	-0.03	0	2.009E-10	0	6.09	0.5287509	6.793E-10	1
rs4665511	2	22615267	A	G	KLHL29	-0.03	0	2.0095E-10	0	6.09	0.5287424	6.795E-10	1
rs11685129	2	22615838	T	C	KLHL29	-0.03	0	2.0101E-10	0	6.09	0.5288236	6.797E-10	1
rs1881558	2	22612200	T	C	KLHL29	-0.03	0	2.0106E-10	0	6.09	0.5291453	6.799E-10	1
rs9393705	6	26360783	G	A	BTN3A2	-0.06	0	2.0117E-10	0	2.02	0.9588653	6.802E-10	1
rs4367098	3	49182236	C	T	C3orf84	-0.03	0	2.0158E-10	0	6.48	0.484662	6.816E-10	1
rs174541	11	61798436	T	C	FADS2	0.03	0	2.0164E-10	50	14.27	0.0465683	5.537E-10	1
rs990069	2	22613906	T	C	KLHL29	-0.03	0	2.0184E-10	0	6.1	0.5277837	6.825E-10	1
rs7563504	2	59932282	T	C	BCL11A	0.04	0	2.0258E-10	32	10.37	0.1688047	1.146E-09	1
rs11075924	16	72180714	C	A	PMFBP1	0.03	0	2.0259E-10	0	4.67	0.699891	6.85E-10	1
rs17114362	14	28912214	A	C	FOXG1	-0.06	0	2.0295E-10	0	3.54	0.8314958	6.861E-10	1
rs4936278	11	113576938	G	C	DRD2	-0.04	0	2.0319E-10	0	5.34	0.6180322	6.717E-10	1
rs138388436	10	90974460	GA	G	ANKRD1	-0.05	0	2.0322E-10	21	8.92	0.2588155	9.945E-10	1
rs11715581	3	49156898	C	T	CCDC71	-0.03	0	2.0332E-10	0	6.58	0.4739111	6.874E-10	1
rs6277	11	113412737	G	A	DRD2	-0.03	0	2.0437E-10	0	6.27	0.5089882	6.909E-10	1

rs56021312	9	11123022	T	G	PTPRD	-0.05	0	2.0533E-10	0	5.89	0.5524032	6.94E-10	1
rs1916647	20	52641517	C	T	TSHZ2	-0.04	0	2.057E-10	16	8.38	0.3001982	9.76E-10	1
rs72791112	16	72170170	T	A	PMFBP1	0.04	0	2.0599E-10	0	3.65	0.8188866	6.962E-10	1
rs59606976	12	60588472	C	T	SLC16A7	-0.04	0	2.0611E-10	56	16.1	0.024252	9.346E-10	1
rs61753635	16	71626501	G	A	MARVELD3	0.04	0	2.0626E-10	24	9.25	0.23501	6.445E-10	1
rs10470769	4	46681044	T	C	COX7B2	0.04	0	2.0645E-10	0	6.4	0.4938072	6.977E-10	1
rs1916648	20	52641479	A	G	TSHZ2	-0.04	0	2.0699E-10	16	8.38	0.2999495	9.825E-10	1
rs6467589	7	135373802	G	A	CNOT4	0.04	0	2.0727E-10	65	20.3	0.0049645	3.055E-11	5.99363E-12
rs61924999	12	60570731	C	A	SLC16A7	-0.04	0	2.0729E-10	56	16.21	0.0232418	9.47E-10	1
rs6844927	4	46608070	T	A	COX7B2	0.04	0	2.0736E-10	0	6.26	0.5097391	7.008E-10	1
rs12956821	18	53365793	T	G	DCC	-0.03	0	2.0776E-10	9	7.76	0.3545971	9.153E-10	1
rs6126631	20	52638671	A	C	TSHZ2	-0.04	0	2.0783E-10	16	8.38	0.300293	9.856E-10	1
rs8052408	16	72124178	C	T	PMFBP1	0.03	0	2.0791E-10	0	5.22	0.6331747	6.977E-10	1
rs59387603	12	60568889	C	A	SLC16A7	-0.04	0	2.0808E-10	56	16.21	0.0232441	9.506E-10	1
rs59357257	12	60568212	C	T	SLC16A7	-0.04	0	2.0827E-10	56	16.21	0.0232487	9.517E-10	1
rs12579240	12	60573537	A	T	SLC16A7	-0.04	0	2.0905E-10	56	16.24	0.023038	9.428E-10	1
rs13094224	3	35743089	A	G	ARPP21	0.04	0	2.1043E-10	39	11.49	0.1187386	1.399E-09	1
rs200394766	2	195182335	AG	A	SLC39A10	0.05	0	2.1065E-10	0	5.24	0.6301721	7.117E-10	1
rs12108134	3	44501538	C	T	ZNF852	-0.03	0	2.1076E-10	0	5.79	0.5643844	6.861E-10	1
rs75979098	14	28873562	A	G	FOXG1	-0.06	0	2.1143E-10	0	3.53	0.8315859	7.143E-10	1
rs61925000	12	60571597	A	G	SLC16A7	-0.04	0	2.1146E-10	56	16.24	0.0230073	9.588E-10	1
rs553672759	5	120667067	C	T	PRR16	0.1	0	2.1147E-10	0	4.66	0.7016092	7.144E-10	1
rs7428918	3	18782806	A	G	SATB1	0.03	0	2.1149E-10	0	4.21	0.7547249	7.145E-10	1
rs113741748	3	49453347	G	A	DAG1	0.04	0	2.1166E-10	16	8.36	0.3021318	5.202E-10	1
rs2329025	3	49458830	G	A	DAG1	-0.04	0	2.1171E-10	16	8.36	0.3020369	5.202E-10	1
rs9368050	6	19226344	C	T	ID4	0.04	0	2.1179E-10	66	21.08	0.0036509	9.993E-11	2.08245E-11
rs1264194	3	48587833	T	C	COL7A1	-0.04	0	2.12E-10	0	4	0.7793148	7.162E-10	1
rs4844661	1	208243376	A	G	PLXNA2	-0.03	0	2.1272E-10	0	4.7	0.6965472	7.185E-10	1
rs61925001	12	60572008	A	G	SLC16A7	-0.04	0	2.1276E-10	56	16.24	0.0229935	9.635E-10	1
rs61859605	10	90977962	C	T	ANKRD1	-0.05	0	2.128E-10	21	8.92	0.2587952	1.038E-09	1

rs62303497	4	46701586	G	C	COX7B2	0.04	0	2.1287E-10	0	6.35	0.4992695	7.19E-10	1
rs1484663	2	22579303	C	T	KLHL29	0.03	0	2.1293E-10	9	7.77	0.3531633	1.005E-09	1
rs62303498	4	46702116	C	G	COX7B2	0.04	0	2.1294E-10	0	6.37	0.4969024	7.193E-10	1
rs1484664	2	22579147	G	T	KLHL29	0.03	0	2.1313E-10	9	7.77	0.3531052	1.006E-09	1
rs2888390	3	44469913	G	A	ZNF445	-0.03	0	2.1366E-10	0	5.79	0.5638905	6.952E-10	1
rs4431151	3	44469414	G	C	ZNF445	-0.03	0	2.1386E-10	0	5.8	0.5638312	6.958E-10	1
rs9819766	3	44479488	G	C	ZNF445	-0.03	0	2.1389E-10	0	5.78	0.5652085	6.967E-10	1
rs61924994	12	60561755	A	G	SLC16A7	-0.04	0	2.1502E-10	56	16.25	0.0229234	9.722E-10	1
rs200497	6	27824862	C	T	HIST1H4J	-0.07	0	2.1505E-10	20	8.81	0.2667336	1.352E-09	1
rs57608022	12	60563587	T	C	SLC16A7	-0.04	0	2.156E-10	56	16.25	0.0229333	9.749E-10	1
rs75067080	6	51507924	A	G	PKHD1	-0.07	0	2.1578E-10	26	9.47	0.2207455	7.287E-10	1
rs61859607	10	90985961	A	T	ANKRD1	-0.05	0	2.1608E-10	21	8.94	0.2569127	1.052E-09	1
rs55863711	10	90985646	T	G	ANKRD1	-0.05	0	2.1618E-10	21	8.94	0.2568716	1.052E-09	1
rs4580630	4	46664544	G	T	COX7B2	0.04	0	2.1666E-10	0	6.02	0.5376701	7.316E-10	1
rs62303502	4	46703542	C	T	COX7B2	0.04	0	2.1681E-10	0	6.36	0.498087	7.321E-10	1
rs1364925	4	142595221	G	C	INPP4B	0.04	0	2.1699E-10	26	9.53	0.2169499	1.217E-09	1
rs6769609	3	44481312	C	T	ZNF445	-0.03	0	2.1712E-10	0	5.79	0.564774	7.067E-10	1
rs144063354	4	46664020	G	A	COX7B2	0.04	0	2.1728E-10	0	6.02	0.5379346	7.337E-10	1
rs200491	6	27827839	G	A	HIST1H4J	-0.07	0	2.1805E-10	20	8.83	0.2648866	1.383E-09	1
rs12445161	16	71708025	C	T	PHLPP2	0.04	0	2.1863E-10	32	10.42	0.1661924	6.355E-10	1
rs11727011	4	46680894	T	C	COX7B2	0.04	0	2.1901E-10	0	6.42	0.4914299	7.394E-10	1
rs2507898	11	115118275	G	A	CADM1	-0.04	0	2.1929E-10	44	12.68	0.0804035	4.404E-10	1
rs1393430	16	77088898	G	A	MON1B	-0.05	0	2.1929E-10	0	5.16	0.6399965	7.403E-10	1
rs4280707	4	46683172	C	T	COX7B2	0.04	0	2.1941E-10	0	6.42	0.4914777	7.407E-10	1
rs7113566	11	99729332	T	C	CNTN5	0.03	0	2.195E-10	14	8.23	0.3125469	6.373E-10	1
rs4264808	4	46706103	A	T	COX7B2	0.04	0	2.1966E-10	0	6.37	0.4975538	7.415E-10	1
rs4414926	4	46706532	C	A	COX7B2	0.04	0	2.2045E-10	0	6.37	0.4968269	7.442E-10	1
rs56091266	4	46671633	A	G	COX7B2	0.04	0	2.2049E-10	0	6.01	0.5385901	7.443E-10	1
rs62303494	4	46698688	C	T	COX7B2	0.04	0	2.206E-10	0	6.43	0.4903157	7.447E-10	1
rs10011680	4	34477145	G	T	ARAP2	0.04	0	2.2092E-10	10	7.8	0.3502233	8.642E-10	1

rs10024620	4	46689103	G	A	COX7B2	0.04	0	2.2101E-10	0	6.41	0.4925562	7.46E-10	1
rs62302759	4	46682079	A	T	COX7B2	0.04	0	2.2107E-10	0	6.41	0.4924532	7.462E-10	1
rs1385265	2	22577819	G	T	KLHL29	0.03	0	2.2108E-10	9	7.76	0.3542676	1.039E-09	1
rs28437075	4	46687316	T	C	COX7B2	0.04	0	2.2109E-10	0	6.41	0.4927763	7.463E-10	1
rs7201225	16	72176151	C	T	PMFBP1	0.03	0	2.211E-10	10	7.79	0.3513726	6.658E-10	1
rs62303486	4	46683827	A	G	COX7B2	0.04	0	2.2112E-10	0	6.41	0.4929236	7.464E-10	1
rs62303489	4	46689139	G	A	COX7B2	0.04	0	2.2119E-10	0	6.41	0.4925336	7.466E-10	1
rs62303493	4	46695780	C	T	COX7B2	0.04	0	2.2121E-10	0	6.42	0.4921855	7.467E-10	1
rs7655134	4	46695135	T	A	COX7B2	0.04	0	2.2128E-10	0	6.41	0.4922841	7.469E-10	1
rs10028240	4	46690609	G	A	COX7B2	0.04	0	2.213E-10	0	6.41	0.4923702	7.47E-10	1
rs62303488	4	46686884	A	G	COX7B2	0.04	0	2.2141E-10	0	6.41	0.4927857	7.473E-10	1
rs73244170	4	46691751	C	A	COX7B2	0.04	0	2.215E-10	0	6.41	0.4923542	7.476E-10	1
rs28564331	4	46691101	G	A	COX7B2	0.04	0	2.2151E-10	0	6.41	0.4923399	7.477E-10	1
rs62303492	4	46691010	A	G	COX7B2	0.04	0	2.2151E-10	0	6.41	0.4923347	7.477E-10	1
rs62303491	4	46690983	C	T	COX7B2	0.04	0	2.2151E-10	0	6.41	0.4923357	7.477E-10	1
rs4246215	11	61796827	G	T	FADS2,FEN1	0.03	0	2.2159E-10	49	13.88	0.053294	6.126E-10	1
rs62303485	4	46682984	T	C	COX7B2	0.04	0	2.2176E-10	0	6.41	0.492827	7.485E-10	1
rs11409407	3	49395768	G	GT	RHOA	0.04	0	2.2182E-10	13	8.13	0.3208599	5.759E-10	1
rs9291288	4	46683182	G	T	COX7B2	0.04	0	2.2201E-10	0	6.41	0.4927218	7.493E-10	1
rs6441844	3	44462087	C	T	ZNF445	-0.03	0	2.2203E-10	0	5.84	0.5584348	7.184E-10	1
rs111620454	4	46682711	T	C	COX7B2	0.04	0	2.2203E-10	0	6.41	0.4927731	7.494E-10	1
rs28591655	4	46681938	T	C	COX7B2	0.04	0	2.2249E-10	0	6.41	0.4924781	7.509E-10	1
rs7661781	4	46681729	G	T	COX7B2	0.04	0	2.2251E-10	0	6.41	0.4924695	7.51E-10	1
rs200996	6	27844050	G	A	HIST1H2BN	-0.07	0	2.2267E-10	20	8.82	0.2656209	1.411E-09	1
rs11729863	4	46680885	G	A	COX7B2	0.04	0	2.2292E-10	0	6.41	0.4923846	7.523E-10	1
rs62303460	4	46682261	G	T	COX7B2	0.04	0	2.2301E-10	0	6.41	0.4924543	7.526E-10	1
rs141013358	11	46077141	A	C	PHF21A	-0.09	0	2.2313E-10	10	7.8	0.3508821	7.53E-10	1
rs4546219	4	46700154	G	A	COX7B2	0.04	0	2.2314E-10	0	6.43	0.4906824	7.531E-10	1
rs9291287	4	46681211	G	C	COX7B2	0.04	0	2.2321E-10	0	6.41	0.4929078	7.533E-10	1
rs4694827	4	46679674	A	G	COX7B2	0.04	0	2.233E-10	0	6.41	0.4923567	7.536E-10	1

Table S2

rs3922601	4	46680255	T	C	COX7B2	0.04	0	2.2332E-10	0	6.41	0.4922395	7.537E-10	1
rs55783045	3	44462059	GGTTT	G	ZNF445	-0.03	0	2.2373E-10	0	5.84	0.558287	7.237E-10	1
rs12325266	16	72180959	C	T	PMFBP1	0.03	0	2.239E-10	0	4.5	0.720211	7.556E-10	1
rs11888341	2	59904618	C	T	BCL11A	0.04	0	2.2391E-10	28	9.82	0.1993009	1.156E-09	1
rs140327315	5	120721685	A	T	PRR16	0.11	0	2.2473E-10	0	2.33	0.9395423	7.584E-10	1
rs58545098	3	49385708	GT	G	RHOA	0.04	0	2.248E-10	13	8.13	0.3216518	5.846E-10	1
rs9842132	3	49390500	G	A	RHOA	0.04	0	2.248E-10	13	8.13	0.3216518	5.846E-10	1
rs3049053	3	49386242	ATT	A	RHOA	-0.04	0	2.2486E-10	13	8.13	0.3216511	5.847E-10	1
rs11644671	16	77083734	G	A	MON1B	-0.05	0	2.2497E-10	0	3.52	0.8327678	7.591E-10	1
rs55955726	16	72179792	G	C	PMFBP1	0.04	0	2.2497E-10	0	3.64	0.8203258	7.591E-10	1
rs200489	6	27830479	T	C	HIST1H4K	-0.07	0	2.2502E-10	20	8.82	0.2659344	1.425E-09	1
rs200493	6	27827640	G	A	HIST1H4J	-0.07	0	2.2502E-10	20	8.82	0.2659344	1.425E-09	1
rs11670	16	71645124	G	T	PHLPP2	0.04	0	2.2534E-10	27	9.62	0.2113652	6.746E-10	1
rs1433721	6	40387055	C	G	LRFN2	0.03	0	2.2607E-10	0	1.65	0.9765323	7.628E-10	1
rs349691	5	144465691	T	C	KCTD16	0.03	0	2.2619E-10	3	7.25	0.4032301	6.002E-10	1
rs10959500	9	11072408	G	C	PTPRD	-0.04	0	2.2638E-10	0	6.68	0.4628542	7.638E-10	1
rs113068148	4	46677921	G	A	COX7B2	0.04	0	2.2707E-10	0	6.41	0.4927811	7.661E-10	1
rs2604572	4	15120205	C	T	CPEB2	-0.04	0	2.272E-10	0	4.31	0.7432689	7.665E-10	1
rs4453910	4	46709136	C	G	COX7B2	0.04	0	2.2772E-10	0	6.39	0.494569	7.682E-10	1
rs56972052	4	46677361	CT	C	COX7B2	0.04	0	2.2772E-10	0	6.41	0.4928374	7.682E-10	1
rs146838239	6	51734786	T	C	PKHD1	-0.07	0	2.278E-10	22	8.98	0.2538067	7.685E-10	1
rs72792509	2	22625484	C	T	KLHL29	0.03	0	2.2798E-10	18	8.64	0.2796571	1.474E-09	1
rs2250092	2	121235345	T	C	TFCP2L1	-0.06	0	2.2883E-10	0	1.59	0.9788721	7.719E-10	1
rs61925050	12	60617267	C	G	SLC16A7	-0.04	0	2.2895E-10	56	15.93	0.0257679	1.022E-09	1
rs9936642	16	72175620	C	T	PMFBP1	0.03	0	2.2898E-10	10	7.83	0.3474811	6.896E-10	1
rs71403864	16	71661127	C	T	PHLPP2	0.04	0	2.2949E-10	29	9.9	0.1941065	6.77E-10	1
rs149192104	4	46690203	CCCCG	C	COX7B2	0.04	0	2.305E-10	0	6.42	0.4921094	7.774E-10	1
rs2874871	4	142602069	A	T	INPP4B	0.04	0	2.3113E-10	26	9.56	0.2151898	1.302E-09	1
rs201949202	1	246083515	G	GGGTCCTC	SMYD3	-0.05	0	2.3142E-10	11	7.88	0.3437131	6.743E-10	1
rs78143474	11	113555512	C	G	DRD2	-0.06	0	2.3177E-10	0	3.76	0.8069562	7.816E-10	1

rs6499562	16	72128956	G	A	PMFBP1	0.03	0	2.3219E-10	0	5.17	0.638988	7.807E-10	1
rs184189607	6	51734131	C	G	PKHD1	-0.07	0	2.3365E-10	22	9	0.2527066	7.879E-10	1
rs200252406	3	192198405	AT	A	FGF12	0.07	0	2.3587E-10	0	4.57	0.712728	7.952E-10	1
rs527295088	3	192198407	A	C	FGF12	0.07	0	2.3591E-10	0	4.57	0.7127283	7.953E-10	1
rs7836997	8	90192004	A	C	CALB1	0.03	0	2.3647E-10	0	3.87	0.7944205	7.972E-10	1
rs7116782	11	113380216	A	G	TTC12	-0.03	0	2.3651E-10	15	8.3	0.3068503	1.247E-09	1
rs2507900	11	115120270	G	A	CADM1	-0.04	0	2.3664E-10	45	12.9	0.0745676	4.61E-10	1
rs1341333	1	226416937	A	G	PARP1	0.03	0	2.3674E-10	29	9.96	0.1909943	1.323E-09	1
rs150252649	4	46705231	TAGA	T	COX7B2	0.04	0	2.37E-10	0	6.33	0.5012877	7.99E-10	1
rs138554681	16	72903630	G	A	ZFHX3	0.07	0	2.3748E-10	21	8.94	0.2570809	6.441E-10	1
rs2513691	11	115120472	G	A	CADM1	-0.04	0	2.3872E-10	45	12.9	0.0747025	4.66E-10	1
rs200990	6	27848045	T	G	HIST1H2BN	-0.07	0	2.3882E-10	20	8.81	0.2665417	1.509E-09	1
rs349690	5	144465322	T	G	KCTD16	0.03	0	2.3884E-10	3	7.25	0.4032358	6.362E-10	1
rs60017783	12	60606945	G	A	SLC16A7	-0.04	0	2.3922E-10	56	16.1	0.0241816	1.023E-09	1
rs200977	6	27886523	T	C	HIST1H3J	-0.07	0	2.3932E-10	18	8.57	0.2850484	1.42E-09	1
rs11640830	16	71659533	G	T	PHLPP2	0.04	0	2.4001E-10	29	9.87	0.1962546	7.093E-10	1
rs34680964	16	71624691	G	A	MARVELD3	0.04	0	2.4008E-10	23	9.18	0.2399683	7.473E-10	1
rs540376246	20	55753453	CTATTA	C	CBLN4	-0.05	0	2.4009E-10	0	5.44	0.6068549	8.092E-10	1
rs12579759	12	60617033	G	A	SLC16A7	-0.04	0	2.4017E-10	56	15.96	0.0254896	1.059E-09	1
rs12448022	16	71690466	T	C	PHLPP2	0.04	0	2.4036E-10	32	10.4	0.1672352	6.899E-10	1
rs197261	2	161048312	A	G	TANK	-0.04	0	2.406E-10	0	1.67	0.9759664	8.109E-10	1
rs2089058	12	60607253	C	A	SLC16A7	-0.04	0	2.4095E-10	56	16.13	0.023988	1.025E-09	1
rs493161	6	27882936	A	T	HIST1H3J	-0.07	0	2.41E-10	18	8.57	0.2848565	1.43E-09	1
rs35366602	6	27870740	C	CT	HIST1H3I	-0.07	0	2.4177E-10	20	8.81	0.266602	1.528E-09	1
rs200950	6	27867994	A	G	HIST1H1B	-0.07	0	2.419E-10	20	8.81	0.266596	1.528E-09	1
rs200952	6	27869198	C	T	HIST1H1B	-0.07	0	2.4196E-10	20	8.81	0.2665957	1.529E-09	1
rs200989	6	27848664	A	G	HIST1H2BN	-0.07	0	2.4201E-10	20	8.81	0.2664856	1.529E-09	1
rs200948	6	27867494	T	C	HIST1H1B	-0.07	0	2.4214E-10	20	8.81	0.2665893	1.53E-09	1
rs200981	6	27865396	A	G	HIST1H2AL,	-0.07	0	2.4218E-10	20	8.81	0.266582	1.53E-09	1
rs200983	6	27862548	C	T	HIST1H2BN	-0.07	0	2.4241E-10	20	8.81	0.2665723	1.532E-09	1

Table S2

rs34295134	6	27860373	T	A	HIST1H2BN	-0.07	0	2.4249E-10	20	8.81	0.2665694	1.532E-09	1
rs145810861	2	22593756	CACAA	C	KLHL29	0.03	0	2.4279E-10	9	7.74	0.3564509	1.129E-09	1
rs3036133	2	161237184	CTT	C	TANK	-0.04	0	2.4374E-10	0	2.53	0.9249704	8.212E-10	1
rs12489887	3	44505632	A	T	ZNF852	-0.03	0	2.4409E-10	0	6.75	0.4557344	7.689E-10	1
rs200985	6	27856998	T	C	HIST1H2BN	-0.07	0	2.445E-10	23	9.13	0.2434323	1.69E-09	1
rs483143	6	27878966	G	C	HIST1H4L	-0.07	0	2.4464E-10	18	8.58	0.2844683	1.452E-09	1
rs114541334	5	120937968	T	C	PRR16	0.11	0	2.4464E-10	0	2.07	0.956017	8.242E-10	1
rs62302755	4	46657458	G	A	COX7B2	0.04	0	2.4486E-10	0	5.84	0.5583215	8.249E-10	1
rs7981741	13	98594489	T	A	STK24	0.03	0	2.4582E-10	14	8.2	0.3151668	6.828E-10	1
rs62302756	4	46659309	G	T	COX7B2	0.04	0	2.4592E-10	0	5.92	0.549323	8.285E-10	1
rs10891544	11	113385430	C	A	TTC12	-0.03	0	2.4626E-10	16	8.33	0.3040661	1.308E-09	1
rs17535998	10	90993964	A	G	ANKRD1	-0.05	0	2.4711E-10	21	8.97	0.2550894	1.184E-09	1
rs6097050	20	52620353	C	T	TSHZ2	-0.03	0	2.4726E-10	0	7.01	0.4283248	8.351E-10	1
rs3870339	3	49499430	T	A	DAG1	-0.04	0	2.4735E-10	18	8.57	0.2847191	5.96E-10	1
rs62302751	4	46641181	G	T	COX7B2	0.04	0	2.4851E-10	0	5.84	0.5582536	8.37E-10	1
rs631131	18	79789530	C	G	CTDP1	-0.08	0	2.4923E-10	37	11.28	0.1270015	1.134E-09	1
rs9809237	3	49478917	G	A	DAG1	-0.04	0	2.4958E-10	18	8.57	0.2849195	5.924E-10	1
rs63450962	6	27824826	TTGTC	T	HIST1H4J	-0.07	0	2.4961E-10	20	8.78	0.2685731	1.576E-09	1
rs12617557	2	22595137	C	T	KLHL29	0.03	0	2.4981E-10	9	7.75	0.3553799	1.166E-09	1
rs4532156	3	18741984	T	C	SATB1	0.03	0	2.4997E-10	0	4.65	0.7027401	8.418E-10	1
rs62302754	4	46656217	G	A	COX7B2	0.04	0	2.5098E-10	0	5.83	0.5599324	8.452E-10	1
rs61859609	10	90989747	T	G	ANKRD1	-0.05	0	2.5101E-10	22	8.99	0.2534021	1.207E-09	1
rs11283658	11	113382968	A	AGATCCCT	TTC12	-0.03	0	2.5113E-10	16	8.34	0.3032642	1.336E-09	1
rs10000763	4	34476277	T	C	ARAP2	0.04	0	2.5123E-10	9	7.77	0.3534358	9.74E-10	1
rs13125809	4	34476779	A	C	ARAP2	0.04	0	2.5123E-10	9	7.77	0.3534358	9.74E-10	1
rs57339789	4	34475753	C	G	ARAP2	0.04	0	2.5123E-10	9	7.77	0.3534358	9.74E-10	1
rs58220776	4	34475663	T	C	ARAP2	0.04	0	2.5123E-10	9	7.77	0.3534358	9.74E-10	1
rs71655221	4	34473607	T	TCTTA	ARAP2	0.04	0	2.5123E-10	9	7.77	0.3534358	9.74E-10	1
rs75809309	4	34475211	A	G	ARAP2	0.04	0	2.5123E-10	9	7.77	0.3534358	9.74E-10	1
rs7696728	4	34469816	A	G	ARAP2	0.04	0	2.5135E-10	9	7.77	0.3533059	9.746E-10	1

rs7656385	4	34469663	C	T	ARAP2	0.04	0	2.5136E-10	9	7.77	0.3533046	9.746E-10	1
rs12446005	16	71621132	G	A	MARVELD3	0.04	0	2.5142E-10	24	9.25	0.2354253	7.778E-10	1
rs7485265	12	60608868	A	G	SLC16A7	-0.04	0	2.5237E-10	56	16.15	0.0238024	1.067E-09	1
rs12579742	12	60617060	C	A	SLC16A7	-0.04	0	2.5259E-10	56	15.96	0.0254625	1.112E-09	1
rs9835977	3	18751848	T	C	SATB1	0.03	0	2.5288E-10	0	4.57	0.7123792	8.515E-10	1
rs28443175	4	34478402	T	C	ARAP2	0.04	0	2.5313E-10	9	7.76	0.3538205	9.807E-10	1
rs10003696	4	34477047	T	C	ARAP2	0.04	0	2.5369E-10	9	7.77	0.3537119	9.83E-10	1
rs7083785	10	90990150	T	G	ANKRD1	-0.05	0	2.537E-10	22	8.99	0.2532972	1.219E-09	1
rs1154992	4	15118725	G	T	CPEB2	-0.04	0	2.5377E-10	0	3.98	0.7821128	8.544E-10	1
rs75070471	16	72904905	C	T	ZFHX3	0.07	0	2.5451E-10	21	8.93	0.2578646	6.904E-10	1
rs12193097	6	151932929	C	T	ESR1	-0.03	0	2.5497E-10	0	3.33	0.8528925	8.583E-10	1
rs12577640	11	115112717	G	T	CADM1	0.03	0	2.5536E-10	44	12.54	0.0840937	6.426E-10	1
rs1892252	6	25772411	G	C	SLC17A4	0.06	0	2.5559E-10	31	10.19	0.1779742	4.831E-10	1
rs2702544	4	15118963	A	G	CPEB2	-0.04	0	2.5578E-10	0	3.98	0.782375	8.61E-10	1
rs146724653	19	1444206	G	A	APC2	0.11	0	2.5614E-10	0	1.81	0.9694002	8.622E-10	1
rs9873072	3	44475004	G	A	ZNF445	-0.03	0	2.5648E-10	0	6.75	0.455152	8.071E-10	1
rs56234157	3	44474729	G	A	ZNF445	-0.03	0	2.5653E-10	0	6.75	0.4550585	8.072E-10	1
rs12186073	3	44474321	C	T	ZNF445	-0.03	0	2.5668E-10	0	6.75	0.4550295	8.076E-10	1
rs13313937	3	44468486	T	C	ZNF445	-0.03	0	2.5678E-10	0	6.76	0.4542089	8.072E-10	1
rs10004008	4	34477385	T	C	ARAP2	0.04	0	2.5703E-10	9	7.75	0.3547528	9.94E-10	1
rs4888582	16	76964722	A	C	RP11-58C22.	0.04	0	2.5762E-10	0	6.16	0.5207685	8.671E-10	1
rs6836122	4	34453498	C	T	ARAP2	0.04	0	2.5763E-10	13	8.07	0.326871	1.088E-09	1
rs4855858	3	49492168	G	T	DAG1	-0.04	0	2.5826E-10	18	8.55	0.2869326	6.093E-10	1
rs6783003	3	49487345	G	C	DAG1	0.04	0	2.5843E-10	18	8.55	0.2867892	6.094E-10	1
rs28666383	4	34450890	A	G	ARAP2	0.04	0	2.5859E-10	13	8.07	0.3267518	1.092E-09	1
rs56231820	3	44488837	C	T	ZNF852	-0.03	0	2.5866E-10	0	6.75	0.4553829	8.138E-10	1
rs9855433	3	44426573	C	A	LINC00694	-0.03	0	2.587E-10	0	6.89	0.4404611	8.049E-10	1
rs7651372	3	49496498	C	T	DAG1	0.04	0	2.5927E-10	18	8.54	0.2872052	6.121E-10	1
rs7374731	3	49495661	C	G	DAG1	-0.04	0	2.5931E-10	18	8.54	0.2872026	6.122E-10	1
rs75206158	3	18762853	T	TCAC	SATB1	0.03	0	2.5938E-10	0	4.57	0.7121209	8.729E-10	1

rs10642047	3	18752821	A	ATTTC	SATB1	0.03	0	2.5954E-10	0	4.6	0.7090437	8.734E-10	1
rs8044868	16	72128203	C	T	PMFBP1	0.03	0	2.5954E-10	0	5.21	0.6340705	8.696E-10	1
rs147710324	13	61087465	G	A	PCDH20	-0.09	0	2.5959E-10	8	7.66	0.3638914	1.187E-09	1
rs148930185	16	72180636	A	AT	PMFBP1	0.04	0	2.5984E-10	0	3.38	0.8475926	8.745E-10	1
rs61859611	10	90990877	T	C	ANKRD1	-0.05	0	2.5996E-10	22	9	0.2529787	1.25E-09	1
rs7912022	10	90990867	T	C	ANKRD1	-0.05	0	2.6048E-10	22	8.99	0.2530172	1.253E-09	1
rs1009051	3	49484116	G	A	DAG1	-0.04	0	2.6101E-10	17	8.54	0.2877206	6.167E-10	1
rs67243795	4	34445869	T	A	ARAP2	0.04	0	2.6122E-10	13	8.07	0.3260344	1.105E-09	1
rs7107223	11	113384852	A	T	TTC12	-0.03	0	2.6203E-10	15	8.33	0.3047662	1.387E-09	1
rs62302752	4	46645150	T	G	COX7B2	0.04	0	2.6238E-10	0	5.81	0.5616002	8.828E-10	1
rs59523644	12	60568096	G	T	SLC16A7	-0.04	0	2.635E-10	56	15.94	0.0256774	1.288E-09	1
rs62302749	4	46639597	T	G	COX7B2	0.04	0	2.6362E-10	0	5.91	0.5498332	8.869E-10	1
rs11936559	4	34450738	G	A	ARAP2	0.04	0	2.6414E-10	13	8.08	0.3259845	1.119E-09	1
rs62302747	4	46638455	G	C	COX7B2	0.04	0	2.6429E-10	0	5.91	0.5502217	8.891E-10	1
rs3844425	16	72160426	T	C	PMFBP1	0.03	0	2.6455E-10	0	5.95	0.5452898	8.9E-10	1
rs11214589	11	113374326	G	A	TTC12	-0.03	0	2.6493E-10	20	8.82	0.2656191	1.527E-09	1
rs4681698	3	58644332	C	T	FAM3D	0.03	0	2.6575E-10	0	2	0.9601129	8.94E-10	1
rs7083909	10	90990281	T	G	ANKRD1	-0.05	0	2.6654E-10	22	9	0.2524122	1.278E-09	1
rs751442676	4	34473076	A	ATTTG	ARAP2	0.04	0	2.6655E-10	10	7.85	0.3461567	1.049E-09	1
rs4682745	3	44467475	T	C	ZNF445	-0.03	0	2.6667E-10	0	6.8	0.4501957	8.332E-10	1
rs7914213	10	90988269	G	C	ANKRD1	-0.05	0	2.6706E-10	20	8.77	0.2693587	1.251E-09	1
rs1806579	3	44467789	T	C	ZNF445	-0.03	0	2.6712E-10	0	6.8	0.4501783	8.345E-10	1
rs9812663	3	44460616	A	G	ZNF445	-0.03	0	2.6787E-10	0	6.8	0.4495031	8.36E-10	1
rs62261183	3	49485025	C	T	DAG1	0.04	0	2.6825E-10	18	8.58	0.284451	6.301E-10	1
rs146038204	6	51471837	T	C	PKHD1	-0.07	0	2.6869E-10	34	10.62	0.1560795	8.13E-10	1
rs9827285	3	18754026	G	A	SATB1	0.03	0	2.6886E-10	0	4.57	0.712528	9.042E-10	1
rs62302753	4	46653614	C	T	COX7B2	0.04	0	2.6998E-10	0	5.9	0.551677	9.079E-10	1
rs1009543	10	3277282	A	G	PITRM1	0.03	0	2.7043E-10	43	12.5	0.0853484	9.094E-10	1
rs8061728	16	73647330	C	T	ZFHX3	-0.04	0	2.7045E-10	18	8.62	0.2810862	8.645E-10	1
rs9847248	3	18763163	G	A	SATB1	0.03	0	2.7052E-10	0	4.53	0.7166012	9.097E-10	1

rs877137	11	113385608	C	T	TTC12	-0.03	0	2.7149E-10	15	8.32	0.3049411	1.435E-09	1
rs1514339	6	162795734	G	A	PACRG	-0.03	0	2.719E-10	0	1.31	0.9881351	9.143E-10	1
rs201841492	4	34473077	C	CTGTAATCA	ARAP2	0.04	0	2.7212E-10	10	7.86	0.3455367	1.071E-09	1
rs1819881	18	54804342	C	G	RAB27B	0.04	0	2.7223E-10	0	4.77	0.6883427	9.153E-10	1
rs7622860	3	18754273	C	A	SATB1	0.03	0	2.7229E-10	0	4.57	0.712787	9.155E-10	1
rs9998170	4	34441233	A	G	ARAP2	0.04	0	2.7262E-10	13	8.06	0.327564	1.149E-09	1
rs7107215	11	99945185	C	A	CNTN5	-0.04	0	2.7307E-10	0	6.36	0.4982452	9.181E-10	1
rs4432663	3	18757540	A	G	SATB1	0.03	0	2.7311E-10	0	4.54	0.716055	9.183E-10	1
rs9867083	3	18763242	T	C	SATB1	0.03	0	2.7418E-10	0	4.54	0.7163874	9.218E-10	1
rs4672332	2	59946405	C	T	BCL11A	0.03	0	2.7455E-10	40	11.8	0.1074229	8.871E-10	1
rs2042560	2	59895439	T	A	BCL11A	0.03	0	2.7544E-10	22	9.03	0.2506717	1.313E-09	1
rs7139717	13	98594599	C	T	STK24	-0.03	0	2.7588E-10	14	8.21	0.314226	7.582E-10	1
rs12331102	4	34438905	C	T	ARAP2	0.04	0	2.7681E-10	12	8.04	0.3294165	1.162E-09	1
rs113698514	4	34440124	AT	A	ARAP2	0.04	0	2.7713E-10	12	8.03	0.3296325	1.163E-09	1
rs79848337	16	72930286	G	A	ZFHX3	0.07	0	2.7738E-10	24	9.26	0.2345617	7.226E-10	1
rs4859282	4	34436140	T	C	ARAP2	0.04	0	2.779E-10	12	8.04	0.3291776	1.167E-09	1
rs11648483	16	71673495	T	C	PHLPP2	0.04	0	2.7912E-10	32	10.32	0.1709315	7.901E-10	1
rs34905263	1	246035351	G	A	SMYD3	-0.05	0	2.7923E-10	0	4.45	0.7268034	9.384E-10	1
rs115630006	5	120710350	T	A	PRR16	0.1	0	2.7961E-10	0	5.02	0.6578978	9.397E-10	1
rs34590006	6	25758742	CT	C	SLC17A4	0.06	0	2.8017E-10	37	11.17	0.1315276	5.182E-10	1
rs369697606	16	71671912	T	TCAAA	PHLPP2	0.04	0	2.8074E-10	32	10.3	0.1722455	7.967E-10	1
rs12968035	18	54804306	A	G	RAB27B	-0.04	0	2.809E-10	0	5.26	0.6285992	9.439E-10	1
rs72711012	9	11067453	A	G	PTPRD	-0.04	0	2.82E-10	0	6.77	0.452784	9.476E-10	1
rs6848780	4	34420120	C	G	ARAP2	0.04	0	2.8241E-10	12	8.02	0.3305348	1.196E-09	1
rs1610315	6	166248640	C	A	PRR18	0.04	0	2.8247E-10	0	6.78	0.4525066	9.491E-10	1
rs7185575	16	71638666	A	G	MARVELD3	0.04	0	2.8279E-10	26	9.57	0.2145473	8.487E-10	1
rs6835532	4	34483334	C	T	ARAP2	0.04	0	2.8303E-10	7	7.53	0.3758762	9.51E-10	1
rs2695238	1	226416818	G	C	PARP1	0.03	0	2.8448E-10	29	9.86	0.1964029	1.56E-09	1
rs11933862	4	34482148	A	G	ARAP2	0.04	0	2.8555E-10	8	7.69	0.360598	9.593E-10	1
rs6834819	4	34483644	G	A	ARAP2	0.04	0	2.8569E-10	8	7.68	0.3611975	9.597E-10	1

rs4364183	3	18768044	G	A	SATB1	0.03	0	2.8572E-10	0	4.41	0.7318403	9.598E-10	1
rs12635457	3	196477108	G	A	RNF168	0.03	0	2.866E-10	2	7.18	0.4105048	9.627E-10	1
rs1341335	1	226417380	C	T	PARP1	0.03	0	2.8667E-10	28	9.85	0.1974893	1.568E-09	1
rs6817229	4	34483257	T	G	ARAP2	0.04	0	2.867E-10	8	7.69	0.3610796	9.631E-10	1
rs2136875	1	226418835	G	A	PARP1	0.03	0	2.8675E-10	29	9.88	0.1957163	1.587E-09	1
rs2895226	5	144460418	T	C	KCTD16	0.03	0	2.8697E-10	5	7.39	0.3898439	7.408E-10	1
rs13408168	2	207388699	G	T	CREB1	0.04	0	2.8705E-10	0	6.24	0.5117805	9.642E-10	1
rs74011406	15	47338837	G	A	SEMA6D	0.06	0	2.8705E-10	29	9.93	0.1927292	1.507E-09	1
rs2570368	1	226417672	T	C	PARP1	0.03	0	2.8766E-10	29	9.87	0.1961258	1.577E-09	1
rs4955419	3	49163259	T	A	CCDC71	-0.03	0	2.877E-10	0	6.53	0.4797	9.664E-10	1
rs9997913	4	34434787	T	C	ARAP2	0.04	0	2.8816E-10	12	8.04	0.3287621	1.22E-09	1
rs34028112	16	71642285	T	C	PHLPP2	0.04	0	2.8843E-10	30	10.12	0.1818294	8.463E-10	1
rs1341334	1	226417323	A	G	PARP1	0.03	0	2.8902E-10	29	9.86	0.196644	1.582E-09	1
rs9860055	3	49469467	C	T	DAG1	0.04	0	2.8924E-10	15	8.26	0.3103135	7.06E-10	1
rs7613491	3	49471543	T	C	DAG1	0.04	0	2.9003E-10	15	8.27	0.3096493	7.079E-10	1
rs35242305	1	226416535	CT	C	PARP1	0.03	0	2.9101E-10	29	9.86	0.1966882	1.596E-09	1
rs2695239	1	226417526	T	C	PARP1	0.03	0	2.9139E-10	29	9.86	0.1966775	1.595E-09	1
rs61925040	12	60613595	A	G	SLC16A7	-0.04	0	2.9169E-10	56	15.99	0.0252316	9.795E-10	1
rs6499564	16	72155756	G	A	PMFBP1	0.03	0	2.9229E-10	0	5.94	0.547077	9.815E-10	1
rs4912974	5	144461152	C	G	KCTD16	0.03	0	2.9369E-10	5	7.42	0.3862342	7.534E-10	1
rs10078316	5	144461657	T	C	KCTD16	0.03	0	2.9375E-10	5	7.42	0.3864121	7.537E-10	1
rs9840153	3	82306008	T	C	GBE1	-0.04	0	2.9451E-10	27	9.7	0.2059592	9.804E-10	1
rs12808482	11	113424276	T	A	DRD2	-0.03	0	2.9457E-10	0	5.67	0.5790035	9.89E-10	1
rs7649834	3	44462240	C	T	ZNF445	-0.03	0	2.952E-10	0	6.77	0.4527843	9.236E-10	1
rs4712972	6	25771819	A	G	SLC17A4	0.06	0	2.9525E-10	37	11.13	0.1329698	5.412E-10	1
rs7647973	3	49473498	G	A	DAG1	0.04	0	2.9614E-10	15	8.26	0.3103416	7.233E-10	1
rs63071961	3	82296103	CACATACA	C	GBE1	-0.04	0	2.9622E-10	27	9.69	0.2069908	9.867E-10	1
rs142095221	3	49500053	TAGCCTCC	T	DAG1	-0.04	0	2.9667E-10	22	9.06	0.2484602	6.546E-10	1
rs10193842	2	22645064	G	T	KLHL29	0.03	0	2.9669E-10	0	7.05	0.4233378	1.026E-09	1
rs188015	6	27909668	T	A	OR2B2	-0.07	0	2.9679E-10	21	8.86	0.2625314	1.64E-09	1

rs9842965	3	82320483	C	T	GBE1	-0.04	0	2.9716E-10	29	9.91	0.1940104	9.796E-10	1
rs12986980	2	27807570	A	G	MRPL33,RBF	-0.04	0	2.9794E-10	0	5.79	0.5645605	9.966E-10	1
rs58684404	4	34427861	A	G	ARAP2	0.04	0	2.9797E-10	11	7.94	0.3378735	1.241E-09	1
rs4856383	3	82303092	A	C	GBE1	-0.04	0	2.98E-10	27	9.71	0.2054941	9.914E-10	1
rs62143649	2	59904418	A	G	BCL11A	0.03	0	2.983E-10	22	9.07	0.2475857	9.985E-10	1
rs401763	6	27814750	T	C	HIST1H2AJ	-0.07	0	2.9836E-10	22	9.03	0.2504411	1.922E-09	1
rs558717779	20	55753460	CCTCTTTTC	C	CBLN4	-0.05	0	2.9898E-10	0	5.39	0.6124787	1.004E-09	1
rs6830620	4	34420160	T	C	ARAP2	0.04	0	2.9921E-10	11	7.95	0.3369492	1.25E-09	1
rs4472158	4	34430179	C	T	ARAP2	0.04	0	3.0017E-10	11	7.93	0.3388359	1.25E-09	1
rs6858128	4	34424189	T	C	ARAP2	0.04	0	3.0077E-10	11	7.95	0.3373223	1.255E-09	1
rs718746	4	34421628	G	A	ARAP2	0.04	0	3.0168E-10	11	7.95	0.3373192	1.259E-09	1
rs2078224	1	210662078	A	C	HHAT	0.03	0	3.0183E-10	6	7.5	0.3789206	1.013E-09	1
rs4955418	3	49163194	A	G	CCDC71	-0.03	0	3.0212E-10	0	6.46	0.4871536	1.014E-09	1
rs1559623	2	59898825	G	C	BCL11A	0.04	0	3.0232E-10	27	9.63	0.2104227	1.681E-09	1
rs6778876	3	82292562	A	C	GBE1	-0.04	0	3.0257E-10	28	9.77	0.2018161	1.004E-09	1
rs3008833	6	40018564	G	A	MOCS1	0.03	0	3.0281E-10	20	8.81	0.2663275	7.901E-10	1
rs11127767	3	82282174	G	A	GBE1	0.04	0	3.0286E-10	27	9.72	0.205075	1.007E-09	1
rs4487260	3	82299941	G	C	GBE1	-0.04	0	3.0289E-10	28	9.75	0.2031416	1.005E-09	1
rs71367541	18	79789150	A	C	CTDP1	-0.08	0	3.0296E-10	38	11.33	0.1247934	1.391E-09	1
rs73331922	14	42911635	A	G	LRFN5	0.05	0	3.0399E-10	54	15.23	0.033204	4.693E-10	1.01797E-10
rs184624619	6	51374937	T	C	PKHD1	-0.07	0	3.0458E-10	34	10.72	0.1510881	8.997E-10	1
rs11600349	11	115115341	G	A	CADM1	0.04	0	3.0471E-10	43	12.42	0.0874604	6.674E-10	1
rs4515071	3	82289131	C	T	GBE1	-0.04	0	3.0476E-10	28	9.73	0.2043006	1.012E-09	1
rs11916178	3	82301388	T	C	GBE1	-0.04	0	3.0493E-10	28	9.74	0.2040731	1.013E-09	1
rs6800774	3	82307348	T	A	GBE1	-0.04	0	3.0493E-10	28	9.74	0.2040731	1.013E-09	1
rs9846605	3	82303637	A	T	GBE1	-0.04	0	3.0493E-10	28	9.74	0.2040731	1.013E-09	1
rs9846891	3	82303786	A	T	GBE1	-0.04	0	3.0493E-10	28	9.74	0.2040731	1.013E-09	1
rs1559624	2	59898733	T	C	BCL11A	0.04	0	3.0684E-10	26	9.49	0.2191752	1.677E-09	1
rs945358	13	82372267	C	G	SLITRK1	0.03	0	3.0688E-10	0	5.39	0.6123422	1.03E-09	1
rs13069992	3	82281082	A	G	GBE1	0.04	0	3.069E-10	28	9.74	0.2036212	1.019E-09	1

Table S2

rs1562731	3	82283765	C	A	GBE1	0.04	0	3.069E-10	28	9.74	0.2036212	1.019E-09	1
rs4398455	3	82279613	A	G	GBE1	0.04	0	3.069E-10	28	9.74	0.2036212	1.019E-09	1
rs4611844	3	82279578	T	C	GBE1	0.04	0	3.069E-10	28	9.74	0.2036212	1.019E-09	1
rs5850560	3	82280352	GA	G	GBE1	0.04	0	3.069E-10	28	9.74	0.2036212	1.019E-09	1
rs5850562	3	82284753	AT	A	GBE1	0.04	0	3.069E-10	28	9.74	0.2036212	1.019E-09	1
rs7637723	3	82280446	T	G	GBE1	0.04	0	3.069E-10	28	9.74	0.2036212	1.019E-09	1
rs13095307	3	82293360	T	C	GBE1	-0.04	0	3.0694E-10	28	9.74	0.2035931	1.019E-09	1
rs4283592	3	82289509	C	A	GBE1	-0.04	0	3.0694E-10	28	9.74	0.2035931	1.019E-09	1
rs4339123	3	82293821	T	G	GBE1	-0.04	0	3.0694E-10	28	9.74	0.2035931	1.019E-09	1
rs4343647	3	82288970	G	C	GBE1	-0.04	0	3.0694E-10	28	9.74	0.2035931	1.019E-09	1
rs4370049	3	82285016	G	C	GBE1	-0.04	0	3.0694E-10	28	9.74	0.2035931	1.019E-09	1
rs4518153	3	82292881	A	G	GBE1	-0.04	0	3.0694E-10	28	9.74	0.2035931	1.019E-09	1
rs4603977	3	82289778	G	A	GBE1	-0.04	0	3.0694E-10	28	9.74	0.2035931	1.019E-09	1
rs4856213	3	82290639	A	G	GBE1	-0.04	0	3.0694E-10	28	9.74	0.2035931	1.019E-09	1
rs6779320	3	82292988	A	G	GBE1	-0.04	0	3.0694E-10	28	9.74	0.2035931	1.019E-09	1
rs7619609	3	82299253	T	G	GBE1	-0.04	0	3.0694E-10	28	9.74	0.2035931	1.019E-09	1
rs9811672	3	82292067	A	G	GBE1	-0.04	0	3.0694E-10	28	9.74	0.2035931	1.019E-09	1
rs9847402	3	82296854	C	T	GBE1	-0.04	0	3.0694E-10	28	9.74	0.2035931	1.019E-09	1
rs554005300	16	29937027	T	A	TMEM219	0.11	0	3.0708E-10	12	8.03	0.3296324	9.825E-10	1
rs3924834	3	82278904	A	G	GBE1	0.04	0	3.0766E-10	28	9.75	0.2034658	1.021E-09	1
rs1449863	3	82304637	C	G	GBE1	-0.04	0	3.0767E-10	28	9.75	0.203453	1.021E-09	1
rs9878507	3	82302354	C	T	GBE1	-0.04	0	3.094E-10	26	9.56	0.2148066	1.032E-09	1
rs9850129	3	44490555	C	T	ZNF852	-0.03	0	3.0977E-10	0	6.82	0.4478454	9.688E-10	1
rs2570369	1	226418064	T	C	PARP1	0.03	0	3.1097E-10	29	9.93	0.1926976	1.723E-09	1
rs1514338	6	162811300	T	C	PACRG	-0.03	0	3.1112E-10	0	1.38	0.986144	1.043E-09	1
rs4515072	3	82269882	C	T	GBE1	0.04	0	3.1151E-10	27	9.64	0.2099376	1.038E-09	1
rs4381966	3	82283020	C	T	GBE1	0.04	0	3.116E-10	26	9.55	0.215386	1.045E-09	1
rs9309889	3	82287943	G	A	GBE1	-0.04	0	3.1198E-10	28	9.76	0.2025015	1.034E-09	1
rs6504550	17	67898426	A	G	BPTF	0.04	0	3.1207E-10	12	7.97	0.3354493	1.492E-09	1
rs4536858	3	49155648	A	G	CCDC71	-0.03	0	3.1237E-10	0	6.54	0.4780093	1.048E-09	1

rs79425166	16	72933717	T	C	ZFHX3	0.07	0	3.1362E-10	32	10.35	0.1697423	6.872E-10	1
rs35829247	3	82246877	TA	T	GBE1	0.04	0	3.1377E-10	28	9.77	0.2017238	1.039E-09	1
rs4261899	3	82247035	G	T	GBE1	0.04	0	3.1377E-10	28	9.77	0.2017238	1.039E-09	1
rs4306886	3	82243555	A	T	GBE1	0.04	0	3.1377E-10	28	9.77	0.2017238	1.039E-09	1
rs4314191	3	82240069	A	G	GBE1	0.04	0	3.1377E-10	28	9.77	0.2017238	1.039E-09	1
rs4315700	3	82247327	T	C	GBE1	0.04	0	3.1377E-10	28	9.77	0.2017238	1.039E-09	1
rs4346572	3	82247407	T	C	GBE1	0.04	0	3.1377E-10	28	9.77	0.2017238	1.039E-09	1
rs4524299	3	82270699	A	T	GBE1	0.04	0	3.1377E-10	28	9.77	0.2017238	1.039E-09	1
rs4525893	3	82269828	A	G	GBE1	0.04	0	3.1377E-10	28	9.77	0.2017238	1.039E-09	1
rs4528973	3	82269308	A	T	GBE1	0.04	0	3.1377E-10	28	9.77	0.2017238	1.039E-09	1
rs6783944	3	82244199	T	C	GBE1	0.04	0	3.1377E-10	28	9.77	0.2017238	1.039E-09	1
rs7615603	3	82268159	G	C	GBE1	0.04	0	3.1377E-10	28	9.77	0.2017238	1.039E-09	1
rs7617188	3	82272089	C	T	GBE1	0.04	0	3.1377E-10	28	9.77	0.2017238	1.039E-09	1
rs7636973	3	82271926	A	G	GBE1	0.04	0	3.1377E-10	28	9.77	0.2017238	1.039E-09	1
rs13059618	3	82273725	G	T	GBE1	0.04	0	3.1378E-10	28	9.77	0.2017341	1.039E-09	1
rs13097001	3	82273089	G	C	GBE1	0.04	0	3.1378E-10	28	9.77	0.2017341	1.039E-09	1
rs35025076	3	82272730	A	C	GBE1	0.04	0	3.1378E-10	28	9.77	0.2017341	1.039E-09	1
rs36003809	3	82272917	G	A	GBE1	0.04	0	3.1378E-10	28	9.77	0.2017341	1.039E-09	1
rs4610246	3	82275231	T	G	GBE1	0.04	0	3.1378E-10	28	9.77	0.2017341	1.039E-09	1
rs5850558	3	82275457	CAT	C	GBE1	0.04	0	3.1378E-10	28	9.77	0.2017341	1.039E-09	1
rs4499638	3	49165349	C	G	CCDC71	-0.03	0	3.1389E-10	0	6.54	0.4780935	1.053E-09	1
rs5848864	3	49158420	T	TAGG	CCDC71	-0.03	0	3.142E-10	0	6.54	0.4780619	1.054E-09	1
rs4308307	3	49155783	C	T	CCDC71	-0.03	0	3.1486E-10	0	6.53	0.4788861	1.056E-09	1
rs12490393	3	49158699	C	T	CCDC71	-0.03	0	3.15E-10	0	6.54	0.4780269	1.056E-09	1
rs5850561	3	82282934	CT	C	GBE1	0.04	0	3.1536E-10	28	9.77	0.2022029	1.045E-09	1
rs9873661	3	82301633	C	T	GBE1	-0.04	0	3.1577E-10	28	9.78	0.2011526	1.045E-09	1
rs12050859	15	47353964	T	C	SEMA6D	0.06	0	3.1586E-10	28	9.85	0.1970959	1.659E-09	1
rs2695240	1	226419635	T	C	PARP1	0.03	0	3.1639E-10	29	9.92	0.1932127	1.734E-09	1
rs76415716	2	178921328	C	T	CCDC141	0.06	0	3.1703E-10	32	10.4	0.1669425	2.297E-09	1
rs1923465	6	40003637	A	T	MOCS1	0.03	0	3.198E-10	20	8.81	0.2662986	8.294E-10	1

Table S2

rs2570370	1	226419684	T	C	PARP1	0.03	0	3.1984E-10	29	9.92	0.1933105	1.751E-09	1
rs28889955	3	82301087	T	C	GBE1	-0.04	0	3.2002E-10	28	9.86	0.1967588	1.054E-09	1
rs911818	6	40021077	C	A	MOCS1	0.03	0	3.2064E-10	20	8.81	0.2662362	8.355E-10	1
rs1165163	6	25863259	G	C	SLC17A3	-0.06	0	3.2086E-10	46	13.17	0.0681041	4.559E-10	9.91688E-11
rs9295689	6	26455583	T	C	BTN3A3	0.03	0	3.2132E-10	0	1.91	0.9648607	1.077E-09	1
rs2984430	6	40016002	A	G	MOCS1	0.03	0	3.2189E-10	20	8.82	0.2657873	8.377E-10	1
rs7633157	3	117810419	A	G	LSAMP	-0.03	0	3.221E-10	0	3.17	0.8690094	1.08E-09	1
rs1480992	4	34482529	A	T	ARAP2	0.04	0	3.2221E-10	8	7.66	0.3638741	1.08E-09	1
rs4672331	2	59945487	A	G	BCL11A	0.03	0	3.2238E-10	40	11.79	0.1075379	1.9E-09	1
rs71633696	3	82243906	C	CTGTT	GBE1	0.04	0	3.2267E-10	28	9.79	0.2009182	1.067E-09	1
rs3734557	6	40392726	A	G	LRFN2	0.03	0	3.227E-10	0	1.32	0.9877982	1.082E-09	1
rs7192860	16	71609719	G	A	MARVELD3	0.04	0	3.2328E-10	23	9.17	0.2407686	9.849E-10	1
rs2984433	6	40005706	T	G	MOCS1	0.03	0	3.2359E-10	20	8.82	0.2657445	8.419E-10	1
rs10052462	5	10051811	G	T	FAM173B	0.14	0	3.2457E-10	0	7.06	0.4229197	1.113E-09	1
rs1923462	6	40008361	T	C	MOCS1	0.03	0	3.2588E-10	20	8.83	0.2652288	8.471E-10	1
rs56807129	6	162812618	CA	C	PACRG	-0.03	0	3.2679E-10	0	1.39	0.9858427	1.095E-09	1
rs143546002	11	66978525	T	TG	C11orf86	-0.03	0	3.2753E-10	20	8.79	0.2678055	1.501E-09	1
rs6554567	5	10058863	G	A	FAM173B	0.14	0	3.2773E-10	0	6.92	0.436931	1.098E-09	1
rs1858550	1	226420403	C	A	PARP1	0.03	0	3.282E-10	29	9.9	0.1942661	1.775E-09	1
rs140180248	12	121736681	C	T	TMEM120B	0.07	0	3.286E-10	0	5.25	0.6290381	1.101E-09	1
rs35126602	11	113334456	ACT	A	TTC12	-0.03	0	3.2887E-10	22	9.01	0.2522726	1.886E-09	1
rs11125819	2	59930986	C	G	BCL11A	0.03	0	3.2938E-10	21	8.92	0.2583199	1.563E-09	1
rs188338811	6	51702491	G	A	PKHD1	-0.07	0	3.2962E-10	20	8.78	0.2687678	1.214E-09	1
rs72791115	16	72173416	T	C	PMFBP1	0.04	0	3.2977E-10	0	3.44	0.8411261	1.105E-09	1
rs646420	11	99626372	A	G	CNTN5	-0.03	0	3.299E-10	0	2.66	0.914249	1.105E-09	1
rs4464229	2	27815213	C	T	MRPL33,RBI	-0.04	0	3.3045E-10	0	5.11	0.646817	1.107E-09	1
rs13199893	6	162813987	T	C	PACRG	-0.03	0	3.3085E-10	0	1.39	0.9857376	1.108E-09	1
rs1796237	7	157701587	T	C	PTPRN2	0.05	0	3.3098E-10	0	4.74	0.691456	1.109E-09	1
rs11214609	11	113445380	G	C	DRD2	-0.03	0	3.3128E-10	16	8.4	0.2984741	1.669E-09	1
rs8049163	16	71685450	C	T	PHLPP2	0.04	0	3.3203E-10	35	10.88	0.1440543	1.112E-09	1

Table S2

rs1858548	1	226420073	A	G	PARP1	0.03	0	3.3209E-10	29	9.92	0.1932622	1.808E-09	1
rs35380305	1	226420095	GC	G	PARP1	0.03	0	3.3231E-10	29	9.91	0.1936871	1.806E-09	1
rs12364051	11	113434592	A	G	DRD2	-0.03	0	3.3446E-10	0	5.69	0.5769407	1.12E-09	1
rs189055804	11	46471447	G	A	AMBRA1	-0.08	0	3.3493E-10	0	6.45	0.4886348	1.079E-09	1
rs73331935	14	42916110	C	T	LRFN5	0.05	0	3.3518E-10	53	15.08	0.0349829	5.387E-10	1.19091E-10
rs77814874	11	46455038	C	T	AMBRA1	-0.08	0	3.3545E-10	0	6.45	0.4887349	1.08E-09	1
rs6919088	6	162807382	C	G	PACRG	-0.03	0	3.3592E-10	0	1.39	0.9857896	1.125E-09	1
rs13185476	5	155666997	A	G	SGCD	0.04	0	3.3675E-10	0	5.85	0.5570872	1.128E-09	1
rs7122246	11	113433735	G	A	DRD2	-0.03	0	3.3681E-10	0	5.7	0.5753148	1.128E-09	1
rs11716603	3	82281815	A	G	GBE1	0.04	0	3.3707E-10	28	9.73	0.204417	1.118E-09	1
rs1333960	6	162811951	C	G	PACRG	-0.03	0	3.3718E-10	0	1.39	0.9858188	1.129E-09	1
rs1406290055	17	68079174	CTGTTTGTT	C	KPNA2	0.04	0	3.3897E-10	33	10.56	0.1590793	2.77E-09	1
rs11608185	11	113424254	T	C	DRD2	-0.03	0	3.3928E-10	0	5.76	0.5680937	1.136E-09	1
rs13407664	2	207388452	C	A	CREB1	0.04	0	3.4085E-10	0	6.19	0.5180476	1.141E-09	1
rs11214577	11	113333544	C	T	TTC12	-0.03	0	3.4165E-10	24	9.29	0.2328181	2.012E-09	1
rs11695841	2	207387868	A	G	CREB1	0.04	0	3.4213E-10	0	6.18	0.5188828	1.145E-09	1
rs73078357	3	48658401	T	C	CELSR3	-0.04	0	3.4227E-10	0	3.98	0.7815618	1.146E-09	1
rs1425522	4	142572060	A	G	INPP4B	0.05	0	3.4274E-10	0	6.01	0.5390199	1.147E-09	1
rs11608109	11	113432726	G	C	DRD2	-0.03	0	3.4306E-10	0	5.68	0.5771566	1.148E-09	1
rs146650656	17	43962483	C	T	PYY	0.07	0	3.4405E-10	53	15.19	0.0336657	1.521E-09	1
rs1019643	4	142581918	A	G	INPP4B	0.05	0	3.4475E-10	0	6.03	0.5362943	1.154E-09	1
rs56217133	9	11101682	G	A	PTPRD	-0.04	0	3.4539E-10	0	5.09	0.6487806	1.156E-09	1
rs10786826	10	104849185	T	C	SORCS3	-0.03	0	3.4621E-10	28	9.73	0.2045213	1.144E-09	1
rs74737973	16	72908359	G	A	ZFHX3	0.07	0	3.4678E-10	27	9.69	0.2069065	8.386E-10	1
rs75272187	16	72908589	C	T	ZFHX3	0.07	0	3.468E-10	27	9.69	0.20692	8.385E-10	1
rs77518531	16	72908178	A	C	ZFHX3	0.07	0	3.4702E-10	27	9.69	0.2068362	8.39E-10	1
rs62302740	4	46596633	T	C	GABRA2	0.04	0	3.4727E-10	0	5.59	0.5881697	1.162E-09	1
rs10786823	10	104838161	C	G	SORCS3	-0.03	0	3.4803E-10	24	9.26	0.2346042	1.453E-09	1
rs13392707	2	207391167	A	G	CREB1	0.04	0	3.483E-10	0	6.21	0.5154197	1.166E-09	1
rs6855641	4	46628071	A	G	COX7B2	0.04	0	3.4896E-10	0	6.46	0.4875801	1.168E-09	1

rs72791120	16	72190684	G	T	PMFBP1	0.04	0	3.5032E-10	0	3.67	0.8171626	1.172E-09	1
rs11680147	2	207392745	A	G	CREB1	0.04	0	3.5048E-10	0	6.21	0.5159496	1.173E-09	1
rs9973923	2	207387126	A	G	CREB1	0.04	0	3.5143E-10	0	6.16	0.5217097	1.176E-09	1
rs13041661	20	52647165	C	G	TSHZ2	-0.04	0	3.5148E-10	23	9.12	0.2439926	1.873E-09	1
rs6126635	20	52646811	G	C	TSHZ2	-0.04	0	3.5148E-10	23	9.12	0.2439926	1.873E-09	1
rs8126232	20	52645637	G	C	TSHZ2	-0.04	0	3.5148E-10	23	9.12	0.2439926	1.873E-09	1
rs34788820	20	52647294	T	C	TSHZ2	-0.04	0	3.5151E-10	23	9.12	0.2439868	1.873E-09	1
rs11692198	2	207389110	T	C	CREB1	0.04	0	3.5198E-10	0	6.19	0.5174768	1.178E-09	1
rs2296465	10	3267455	A	G	PITRM1	0.03	0	3.5236E-10	16	8.43	0.2965806	1.699E-09	1
rs62084738	17	68063664	T	C	KPNA2	0.04	0	3.5241E-10	0	5.63	0.584101	1.179E-09	1
rs1531921	2	22636539	C	G	KLHL29	0.03	0	3.5274E-10	3	7.23	0.4056061	1.334E-09	1
rs4938017	11	113433207	C	T	DRD2	0.03	0	3.5315E-10	0	5.66	0.5793788	1.182E-09	1
rs3852787	16	72191834	A	G	PMFBP1	0.03	0	3.5395E-10	0	5.53	0.5955015	1.184E-09	1
rs1800498	11	113420866	G	A	DRD2	-0.03	0	3.5421E-10	0	5.66	0.5799707	1.185E-09	1
rs3734540	6	26463093	A	C	BTN2A1	0.03	0	3.5463E-10	0	1.85	0.967601	1.186E-09	1
rs35319755	5	120866652	C	T	PRR16	0.03	0	3.553E-10	0	5.14	0.6430442	1.189E-09	1
rs144446730	2	207389132	G	GA	CREB1	0.04	0	3.555E-10	0	6.19	0.5174476	1.189E-09	1
rs9973582	2	207386927	G	T	CREB1	0.04	0	3.5555E-10	0	6.14	0.523068	1.189E-09	1
rs17202925	2	207389137	C	T	CREB1	0.04	0	3.5568E-10	0	6.19	0.5181778	1.19E-09	1
rs2734831	11	113422874	T	G	DRD2	-0.03	0	3.5611E-10	0	5.68	0.5780879	1.191E-09	1
rs2734832	11	113422779	A	G	DRD2	-0.03	0	3.5612E-10	0	5.68	0.5780891	1.191E-09	1
rs750859	2	207389262	T	C	CREB1	0.04	0	3.5625E-10	0	6.19	0.5181748	1.192E-09	1
rs34554234	11	113421604	GC	G	DRD2	-0.03	0	3.5793E-10	0	5.68	0.5780315	1.197E-09	1
rs79791535	2	207394017	T	C	CREB1	0.04	0	3.5823E-10	0	6.19	0.5180245	1.198E-09	1
rs5838070	2	207390178	G	GC	CREB1	0.04	0	3.588E-10	0	6.19	0.5180468	1.2E-09	1
rs1077639	2	207390184	G	A	CREB1	0.04	0	3.5882E-10	0	6.19	0.5180437	1.2E-09	1
rs10221687	2	207393299	A	G	CREB1	0.04	0	3.6044E-10	0	6.19	0.517828	1.206E-09	1
rs11691382	2	207392666	G	A	CREB1	0.04	0	3.6044E-10	0	6.19	0.517828	1.206E-09	1
rs11694427	2	207394446	C	G	CREB1	0.04	0	3.6044E-10	0	6.19	0.517828	1.206E-09	1
rs11694560	2	207394662	C	A	CREB1	0.04	0	3.6044E-10	0	6.19	0.517828	1.206E-09	1

Table S2

rs13391493	2	207394068	T	C	CREB1	0.04	0	3.6044E-10	0	6.19	0.517828	1.206E-09	1
rs67213986	2	207393310	GT	G	CREB1	0.04	0	3.6044E-10	0	6.19	0.517828	1.206E-09	1
rs751810272	2	207393972	C	CTT	CREB1	0.04	0	3.6044E-10	0	6.19	0.517828	1.206E-09	1
rs764502110	2	207393967	TTGA	T	CREB1	0.04	0	3.6044E-10	0	6.19	0.517828	1.206E-09	1
rs76980718	2	207394014	T	C	CREB1	0.04	0	3.6044E-10	0	6.19	0.517828	1.206E-09	1
rs13392734	2	207391251	A	C	CREB1	0.04	0	3.6054E-10	0	6.19	0.517803	1.206E-09	1
rs13415468	2	207390857	G	T	CREB1	0.04	0	3.606E-10	0	6.19	0.5177985	1.206E-09	1
rs62404527	6	19311464	T	C	ID4	0.05	0	3.618E-10	76	30.02	9.401E-05	5.981E-12	1.11938E-12
rs78711661	16	72911676	A	C	ZFHX3	0.07	0	3.6182E-10	28	9.73	0.2043221	8.688E-10	1
rs10502172	11	113328424	C	T	TTC12	-0.03	0	3.6185E-10	23	9.14	0.2427054	2.107E-09	1
rs113643332	4	46676704	AT	A	COX7B2	0.04	0	3.6243E-10	0	5.94	0.5468773	1.212E-09	1
rs12478766	2	27818333	T	C	MRPL33,RBI	-0.04	0	3.6294E-10	0	4.99	0.6609313	1.214E-09	1
rs10221909	2	207393280	C	T	CREB1	0.04	0	3.6332E-10	0	6.19	0.5180291	1.215E-09	1
rs10221910	2	207393285	C	T	CREB1	0.04	0	3.6332E-10	0	6.19	0.5180291	1.215E-09	1
rs4740475	9	11091639	G	A	PTPRD	-0.04	0	3.6339E-10	10	7.78	0.3524876	1.215E-09	1
rs11039448	11	47896864	G	T	NUP160	-0.03	0	3.6343E-10	0	6.19	0.5174226	1.215E-09	1
rs71648193	4	15070220	TAGAG	T	CPEB2	-0.03	0	3.646E-10	0	4.08	0.7707035	1.219E-09	1
rs4788463	16	72189817	G	T	PMFBP1	0.04	0	3.6469E-10	0	3.74	0.8092159	1.219E-09	1
rs35195170	3	61126915	T	C	FHIT	-0.03	0	3.647E-10	0	6.78	0.4518089	1.22E-09	1
rs4741102	9	11091737	A	G	PTPRD	-0.04	0	3.6488E-10	10	7.84	0.3467906	1.22E-09	1
rs9858020	3	196492923	A	G	RNF168	-0.03	0	3.6531E-10	4	7.36	0.3926706	1.222E-09	1
rs2187987	11	115115580	G	T	CADM1	0.03	0	3.6624E-10	37	11.18	0.1310298	8.794E-10	1
rs4666016	2	27814273	T	A	MRPL33,RBI	-0.04	0	3.6746E-10	0	5.06	0.6525306	1.229E-09	1
rs4233716	2	27811517	C	T	MRPL33,RBI	-0.04	0	3.6776E-10	0	5.05	0.6533736	1.23E-09	1
rs4420671	2	27816433	G	C	MRPL33,RBI	-0.04	0	3.6829E-10	0	5.06	0.6527523	1.231E-09	1
rs4233717	2	27811813	A	T	MRPL33,RBI	-0.04	0	3.6841E-10	0	5.06	0.6529544	1.232E-09	1
rs7754113	6	19324675	T	C	ID4	0.05	0	3.6861E-10	76	29.69	0.0001081	6.872E-12	1.3071E-12
rs113846786	17	81468820	CA	C	BAHCC1	-0.04	0	3.6961E-10	9	7.71	0.3585503	1.454E-09	1
rs34626667	1	246079898	T	G	SMYD3	-0.05	0	3.7035E-10	21	8.96	0.255302	8.086E-10	1
rs10924494	1	246079253	G	A	SMYD3	-0.05	0	3.7061E-10	21	8.94	0.2568271	8.132E-10	1

Table S2

rs12069507	1	246080017	T	C	SMYD3	-0.05	0	3.7078E-10	21	8.96	0.255376	8.113E-10	1
rs74449057	2	207394005	A	G	CREB1	0.04	0	3.7088E-10	0	6.18	0.5189401	1.24E-09	1
rs117218721	13	102938389	G	A	ERCC5	0.08	0	3.7099E-10	0	4.7	0.6970497	1.24E-09	1
rs146995172	2	207391085	G	GA	CREB1	0.04	0	3.7198E-10	0	6.18	0.5194161	1.243E-09	1
rs10924496	1	246079482	C	G	SMYD3	-0.05	0	3.7205E-10	21	8.94	0.2568514	8.164E-10	1
rs13426173	2	207386719	A	T	CREB1	0.04	0	3.7286E-10	0	6.12	0.5260121	1.246E-09	1
rs34793141	1	246079884	T	G	SMYD3	-0.05	0	3.7329E-10	21	8.94	0.2567145	8.188E-10	1
rs12069587	1	246080149	T	C	SMYD3	-0.05	0	3.7374E-10	21	8.95	0.2565574	8.195E-10	1
rs4607842	1	246150421	A	G	SMYD3	-0.04	0	3.7375E-10	0	5.07	0.6509302	1.249E-09	1
rs12069551	1	246080083	T	C	SMYD3	-0.05	0	3.7386E-10	21	8.95	0.2566009	8.199E-10	1
rs3008870	1	66952344	C	T	MIER1	0.03	0	3.7425E-10	0	4.24	0.7519274	1.251E-09	1
rs1163401449	17	68079918	T	TGAATCCT	KPNA2	0.04	0	3.743E-10	35	10.77	0.1487679	3.158E-09	1
rs1184930	2	124230445	T	C	CNTNAP5	-0.04	0	3.7778E-10	8	7.69	0.3611706	1.409E-09	1
rs9995220	4	46734464	G	A	COX7B2	0.04	0	3.7782E-10	12	7.99	0.3333767	1.567E-09	1
rs76312308	5	125200832	A	G	ZNF608	0.04	0	3.7807E-10	0	5.73	0.571886	1.263E-09	1
rs75805805	16	72925608	G	A	ZFHX3	0.07	0	3.7816E-10	22	9.07	0.2478676	1.077E-09	1
rs4714292	6	40035940	T	G	MOCS1	-0.03	0	3.7831E-10	26	9.56	0.2146742	8.271E-10	1
rs1177441	6	25859185	A	G	SLC17A3	-0.06	0	3.786E-10	46	13.12	0.0691373	5.36E-10	1.16017E-10
rs139945272	15	47328422	A	G	SEMA6D	0.06	0	3.7865E-10	13	8.11	0.3231281	1.451E-09	1
rs4395475	4	46740632	T	C	COX7B2	0.04	0	3.8023E-10	12	7.99	0.3332959	1.572E-09	1
rs11736008	4	46734836	A	T	COX7B2	0.04	0	3.8031E-10	12	7.98	0.3341668	1.574E-09	1
rs1116313	11	113425385	A	G	DRD2	-0.03	0	3.8091E-10	0	5.64	0.5823702	1.273E-09	1
rs62303536	4	46736090	C	A	COX7B2	0.04	0	3.818E-10	12	8	0.3329128	1.584E-09	1
rs614514	11	99706358	T	C	CNTN5	-0.03	0	3.8222E-10	45	12.77	0.0779524	6.354E-10	1.39323E-10
rs12662236	6	19323626	G	A	ID4	0.05	0	3.8534E-10	76	29.65	0.0001103	7.506E-12	1.41241E-12
rs1931400	9	11091101	A	G	PTPRD	-0.04	0	3.8561E-10	17	8.52	0.2892765	1.832E-09	1
rs75847797	16	72913384	G	A	ZFHX3	0.07	0	3.8572E-10	28	9.77	0.2020895	9.199E-10	1
rs9807529	18	53418531	A	G	DCC	0.03	0	3.8605E-10	38	11.35	0.1242218	1.784E-09	1
rs12524891	6	19315778	C	G	ID4	0.05	0	3.861E-10	76	29.86	0.0001005	6.977E-12	1.3071E-12
rs4666017	2	27817658	C	A	MRPL33,RBI	-0.04	0	3.8694E-10	0	5.08	0.6506918	1.292E-09	1

Table S2

rs3852786	16	72187558	C	T	PMFBP1	0.03	0	3.8856E-10	0	5.52	0.5965468	1.298E-09	1
rs77043447	16	72914064	C	T	ZFHX3	0.07	0	3.8975E-10	28	9.78	0.2014344	9.281E-10	1
rs2234690	11	113421026	T	A	DRD2	-0.03	0	3.9015E-10	0	5.59	0.5882827	1.303E-09	1
rs72830557	6	19321897	G	A	ID4	0.05	0	3.903E-10	76	29.66	0.0001096	7.565E-12	1.44936E-12
rs186390916	16	72921846	C	T	ZFHX3	0.07	0	3.9048E-10	28	9.83	0.1983483	9.215E-10	1
rs4665393	2	27817409	G	A	MRPL33,RBF	-0.04	0	3.9177E-10	0	5.04	0.6548323	1.308E-09	1
rs9465337	6	19330173	C	G	ID4	0.05	0	3.9195E-10	76	29.66	0.0001097	7.562E-12	1.44936E-12
rs13125362	4	142592881	G	A	INPP4B	0.04	0	3.922E-10	25	9.35	0.2283993	2.171E-09	1
rs13026758	2	27818406	A	G	MRPL33,RBF	-0.04	0	3.934E-10	0	5.13	0.6444486	1.314E-09	1
rs11127764	3	82259549	T	A	GBE1	0.04	0	3.9353E-10	29	9.87	0.1961578	1.29E-09	1
rs10791066	11	99955440	C	G	CNTN5	-0.04	0	3.9358E-10	0	6.79	0.4510317	1.314E-09	1
rs12529149	6	19321070	T	C	ID4	0.05	0	3.9404E-10	76	29.67	0.0001091	7.6E-12	1.44936E-12
rs118034653	16	71889041	T	C	IST1,ZNF821	0.04	0	3.9523E-10	0	5.9	0.5515206	1.32E-09	1
rs6445195	3	61127416	G	A	FHIT	-0.04	0	3.9626E-10	46	13.16	0.0682328	1.323E-09	1
rs11039447	11	47896079	G	A	NUP160	-0.03	0	3.9627E-10	0	6.23	0.5127349	1.323E-09	1
rs62405608	6	19332071	C	T	ID4	0.05	0	3.963E-10	76	29.66	0.0001095	7.682E-12	1.44936E-12
rs76517802	6	51530044	G	T	PKHD1	-0.07	0	3.9631E-10	30	10.09	0.1837743	1.273E-09	1
rs1019614	2	59904022	A	G	BCL11A	0.04	0	3.9641E-10	26	9.54	0.2163587	2.055E-09	1
rs72116399	1	166563710	CTT	C	POGK	0.05	0	3.9691E-10	0	5.71	0.5741026	1.325E-09	1
rs1425523	4	142572406	G	A	INPP4B	0.05	0	3.9699E-10	0	6.09	0.5296019	1.325E-09	1
rs1076563	11	113425187	A	C	DRD2	-0.03	0	3.97E-10	0	5.61	0.5854626	1.325E-09	1
rs73913948	20	55755804	G	A	CBLN4	-0.05	0	3.9723E-10	0	5.51	0.5983871	1.326E-09	1
rs4666018	2	27819192	C	T	MRPL33,RBF	-0.04	0	3.9863E-10	0	5.05	0.654255	1.331E-09	1
rs36162392	6	26568907	T	C	HMGN4	-0.07	0	3.9901E-10	0	6.11	0.5272594	1.332E-09	1
rs1931402	9	11091355	G	A	PTPRD	-0.04	0	3.9918E-10	10	7.82	0.3488823	1.333E-09	1
rs41398044	6	19329783	C	T	ID4	0.05	0	3.9936E-10	76	29.62	0.0001117	7.821E-12	1.48728E-12
rs1933637	6	19315173	C	T	ID4	0.05	0	4.0125E-10	76	29.68	0.0001085	7.518E-12	1.41241E-12
rs896436	11	67013792	A	G	SYT12	-0.03	0	4.015E-10	13	8.05	0.3278779	1.666E-09	1
rs9460336	6	19330897	C	T	ID4	0.05	0	4.0156E-10	76	29.61	0.000112	7.914E-12	1.48728E-12
rs143328184	16	72914743	G	C	ZFHX3	0.07	0	4.0169E-10	28	9.8	0.200235	9.524E-10	1

Table S2

rs62405600	6	19329553	G	A	ID4	0.05	0	4.0277E-10	76	29.84	0.0001016	7.557E-12	1.44936E-12
rs16882031	6	19323114	C	T	ID4	0.05	0	4.033E-10	76	29.44	0.0001203	8.281E-12	1.56611E-12
rs13425956	2	207386535	A	C	CREB1	0.04	0	4.0532E-10	0	6.44	0.4895507	1.353E-09	1
rs1559622	2	59903513	C	T	BCL11A	0.04	0	4.0692E-10	21	8.92	0.2587142	1.992E-09	1
rs75257146	3	44180327	C	T	TOPAZ1	0.05	0	4.0698E-10	43	12.34	0.0899876	3.608E-09	1
rs4740474	9	11091611	C	T	PTPRD	-0.04	0	4.0727E-10	10	7.81	0.3493255	1.359E-09	1
rs143424112	2	207390345	C	CA	CREB1	0.04	0	4.0747E-10	0	6.09	0.5295868	1.36E-09	1
rs62086042	17	67971327	C	T	BPTF	-0.03	0	4.0769E-10	10	7.84	0.346801	1.842E-09	1
rs9426568	1	226416196	T	G	PARP1	-0.03	0	4.0772E-10	27	9.69	0.2071175	2.249E-09	1
rs1982861	3	49540232	A	G	DAG1	-0.04	0	4.0805E-10	21	8.89	0.2609766	8.907E-10	1
rs1931403	9	11091390	T	A	PTPRD	-0.04	0	4.0838E-10	10	7.81	0.3496308	1.363E-09	1
rs34096377	6	19320959	CG	C	ID4	0.05	0	4.0872E-10	76	29.45	0.0001196	8.345E-12	1.60707E-12
rs7770791	6	19327937	T	C	ID4	0.05	0	4.0931E-10	76	29.8	0.0001034	7.649E-12	1.44936E-12
rs80060958	16	72916566	G	A	ZFHX3	0.07	0	4.1032E-10	28	9.8	0.1999134	9.719E-10	1
rs17149332	8	10106723	C	G	MSRA	0.04	0	4.1045E-10	0	2.51	0.9260497	1.369E-09	1
rs9324959	5	144457762	G	A	KCTD16	0.03	0	4.1052E-10	17	8.48	0.2923493	9.578E-10	1
rs11227627	11	66917872	G	C	PC	-0.03	0	4.1123E-10	41	11.97	0.1016481	1.405E-09	1
rs11662175	18	53202617	T	C	DCC	0.03	0	4.1135E-10	0	6.99	0.4302162	1.372E-09	1
rs78576265	16	72918889	G	T	ZFHX3	0.07	0	4.1209E-10	28	9.82	0.1988364	9.708E-10	1
rs62404534	6	19326933	A	G	ID4	0.05	0	4.1234E-10	76	29.72	0.0001067	7.856E-12	1.48728E-12
rs41470445	6	19327103	A	G	ID4	0.05	0	4.129E-10	76	29.74	0.0001061	7.829E-12	1.48728E-12
rs62404532	6	19326761	G	A	ID4	0.05	0	4.1298E-10	76	29.72	0.000107	7.88E-12	1.48728E-12
rs1889305	9	11088433	A	G	PTPRD	-0.04	0	4.1356E-10	9	7.7	0.359832	1.38E-09	1
rs1334029	9	11090375	G	A	PTPRD	-0.04	0	4.1357E-10	10	7.78	0.3522448	1.38E-09	1
rs188087993	15	47324426	A	C	SEMA6D	0.06	0	4.1471E-10	14	8.23	0.3130232	1.383E-09	1
rs60933862	3	49408664	G	GTATA	RHOA	-0.03	0	4.1519E-10	19	8.7	0.2752949	1.854E-09	1
rs143384544	9	11081660	CAGTAAAT	C	PTPRD	-0.04	0	4.1622E-10	0	6.29	0.5068173	1.388E-09	1
rs75101764	16	72924899	C	T	ZFHX3	0.07	0	4.1639E-10	29	9.97	0.1903113	9.544E-10	1
rs10924530	1	246174417	G	A	SMYD3	-0.04	0	4.1662E-10	0	4.7	0.6970568	1.39E-09	1
rs180763627	7	24572459	A	G	MPP6	-0.08	0	4.1729E-10	35	10.78	0.1484634	1.821E-09	1

rs2551769	7	135453583	G	A	CNOT4	-0.04	0	4.179E-10	66	20.88	0.0039442	4.884E-11	9.81295E-12
rs1858549	1	226420191	G	A	PARP1	0.03	0	4.1878E-10	31	10.19	0.1781847	2.295E-09	1
rs10791895	11	66920629	G	A	PC	-0.03	0	4.1931E-10	41	11.96	0.1018647	1.433E-09	1
rs59028806	12	60598060	C	A	SLC16A7	-0.04	0	4.1934E-10	56	16.09	0.024299	1.918E-09	1
rs7355800	3	49479086	C	T	DAG1	0.04	0	4.1952E-10	17	8.48	0.2923179	9.931E-10	1
rs1019615	2	59903915	A	G	BCL11A	0.04	0	4.1985E-10	21	8.9	0.2597402	2.055E-09	1
rs7750346	6	19327707	G	T	ID4	0.05	0	4.2033E-10	76	29.78	0.0001043	7.887E-12	1.48728E-12
rs1931401	9	11091254	C	T	PTPRD	-0.04	0	4.2036E-10	9	7.72	0.3575362	1.402E-09	1
rs12583	3	49534029	G	T	DAG1	0.04	0	4.2126E-10	20	8.75	0.2707852	9.369E-10	1
rs75914203	19	1429347	G	C	DAZAP1	0.11	0	4.2212E-10	0	2.33	0.9395487	1.408E-09	1
rs13400096	2	207385888	G	A	CREB1	0.04	0	4.224E-10	0	6.01	0.5386949	1.409E-09	1
rs78747715	16	72923814	C	T	ZFHX3	0.07	0	4.229E-10	28	9.84	0.1978812	9.941E-10	1
rs184775744	2	197188608	G	A	AC013264.1,A	0.08	0	4.2298E-10	0	5.53	0.5955731	1.41E-09	1
rs77250485	16	72918845	G	A	ZFHX3	0.07	0	4.2356E-10	28	9.84	0.1979606	9.935E-10	1
rs1889304	9	11088360	C	G	PTPRD	-0.04	0	4.2406E-10	8	7.69	0.3609487	1.414E-09	1
rs1242786	7	157703091	A	G	PTPRN2	0.05	0	4.2435E-10	0	4.87	0.6758843	1.415E-09	1
rs10791065	11	99955346	T	C	CNTN5	-0.04	0	4.2539E-10	0	6.82	0.4482281	1.418E-09	1
rs7168241	15	101359514	G	T	PCSK6	0.12	0	4.2545E-10	58	16.84	0.0184673	4.776E-09	1
rs36122414	11	67022722	T	TA	SYT12	-0.03	0	4.2623E-10	0	6.15	0.5229124	1.421E-09	1
rs11679664	2	207397676	A	G	CREB1	0.04	0	4.2701E-10	0	6.16	0.5211675	1.424E-09	1
rs11682446	2	207398975	A	C	CREB1	0.04	0	4.2701E-10	0	6.16	0.5211675	1.424E-09	1
rs11692026	2	207397862	C	T	CREB1	0.04	0	4.2701E-10	0	6.16	0.5211675	1.424E-09	1
rs3906401	5	62184948	A	G	KIF2A	0.03	0	4.2708E-10	0	3.77	0.8061913	1.424E-09	1
rs11692326	2	207398555	C	T	CREB1	0.04	0	4.2748E-10	0	6.16	0.5214583	1.425E-09	1
rs4347474	12	23962593	A	C	SOX5	-0.08	0	4.2793E-10	0	5.15	0.6415462	1.427E-09	1
rs2073526	6	26374430	G	A	BTN3A2	-0.03	0	4.2933E-10	0	2.77	0.9055618	1.431E-09	1
rs7121038	11	47891545	C	T	NUP160	-0.03	0	4.3036E-10	0	6.22	0.5143628	1.435E-09	1
rs2081474	4	142568413	T	C	INPP4B	0.05	0	4.3057E-10	0	6.03	0.5364525	1.435E-09	1
rs10756183	9	11096920	A	G	PTPRD	0.04	0	4.3073E-10	0	6.9	0.4391082	1.436E-09	1
rs2695237	1	226415934	T	C	PARP1	0.03	0	4.3081E-10	27	9.7	0.2064269	2.368E-09	1

Table S2

rs1334033	9	11092505	A	T	PTPRD	-0.04	0	4.3104E-10	8	7.65	0.3641327	1.437E-09	1
rs76385734	2	207417741	T	C	CREB1	0.04	0	4.3188E-10	0	6.21	0.5149801	1.44E-09	1
rs10490563	2	161057657	G	A	TANK	-0.04	0	4.3266E-10	0	1.31	0.9881141	1.442E-09	1
rs117186866	16	72924771	G	T	ZFHX3	0.07	0	4.3331E-10	29	9.86	0.1966199	1.013E-09	1
rs4646619	15	57966144	A	G	ALDH1A2	0.03	0	4.3346E-10	54	15.33	0.0319556	1.445E-09	1
rs10756184	9	11096934	A	G	PTPRD	0.04	0	4.3397E-10	0	6.98	0.4309379	1.446E-09	1
rs4741104	9	11092160	T	G	PTPRD	-0.04	0	4.3433E-10	8	7.63	0.3665152	1.597E-09	1
rs7027297	9	11092167	A	G	PTPRD	0.04	0	4.3471E-10	8	7.63	0.3662948	1.599E-09	1
rs10680443	11	66918307	G	GGA	PC	-0.03	0	4.3569E-10	41	12	0.1006036	1.482E-09	1
rs11130204	3	49546810	A	G	BSN	-0.04	0	4.3785E-10	20	8.77	0.2697784	9.687E-10	1
rs6940116	6	27740953	A	G	HIST1H2BL	-0.05	0	4.3866E-10	0	3.1	0.8757185	1.462E-09	1
rs2155462	11	113336077	A	C	TTC12	-0.03	0	4.3878E-10	24	9.29	0.2326829	2.606E-09	1
rs4855837	3	49545244	T	C	BSN	-0.04	0	4.3908E-10	20	8.77	0.2696382	9.714E-10	1
rs4855838	3	49542443	A	G	DAG1	-0.04	0	4.3908E-10	20	8.77	0.2696381	9.714E-10	1
rs4855853	3	49541898	T	G	DAG1	-0.04	0	4.3908E-10	20	8.77	0.2696381	9.714E-10	1
rs3870341	3	49547312	A	G	BSN	-0.04	0	4.3914E-10	20	8.77	0.2698546	9.718E-10	1
rs1334031	9	11092409	G	A	PTPRD	-0.04	0	4.3961E-10	8	7.65	0.3645854	1.465E-09	1
rs1407045	6	26475927	A	G	BTN2A1	0.03	0	4.4022E-10	0	1.2	0.9909193	1.467E-09	1
rs10865956	3	49544126	C	A	DAG1	-0.04	0	4.406E-10	20	8.8	0.2676737	9.861E-10	1
rs66518420	3	49526883	ATAT	A	DAG1	0.04	0	4.4067E-10	20	8.77	0.2699379	9.756E-10	1
rs11150581	16	30019378	T	C	DOC2A	-0.03	0	4.4091E-10	28	9.78	0.2014955	2.387E-09	1
rs17605038	17	47224732	G	A	MYL4	0.05	0	4.4166E-10	0	5.17	0.6395573	1.471E-09	1
rs4930395	11	66924837	C	T	PC	-0.03	0	4.4183E-10	41	11.93	0.1029901	1.515E-09	1
rs2161990	2	59903085	T	C	BCL11A	0.04	0	4.4232E-10	19	8.74	0.2716688	2.123E-09	1
rs62261249	3	49556627	T	C	BSN	0.04	0	4.4282E-10	20	8.75	0.2708774	9.819E-10	1
rs3905330	3	49513341	A	G	DAG1	-0.04	0	4.4288E-10	19	8.75	0.2713522	9.846E-10	1
rs77716838	5	153535752	C	T	GRIA1	0.08	0	4.4313E-10	0	6.22	0.5141123	1.476E-09	1
rs41272623	3	158821707	A	G	MFSD1	-0.04	0	4.432E-10	0	5.94	0.5463726	1.477E-09	1
rs12422241	12	23964990	C	T	SOX5	0.08	0	4.4387E-10	0	5.14	0.6426849	1.479E-09	1
rs61258990	6	19278113	CT	C	ID4	0.05	0	4.4392E-10	75	28.25	0.0001979	1.616E-11	3.14387E-12

Table S2

rs77621608	16	72930867	T	C	ZFHX3	0.07	0	4.4442E-10	30	10.05	0.1859362	9.968E-10	1
rs1242788	7	157702543	T	C	PTPRN2	0.05	0	4.4539E-10	0	4.91	0.670839	1.484E-09	1
rs9871024	3	49516808	T	C	DAG1	0.04	0	4.4635E-10	19	8.73	0.2724839	9.948E-10	1
rs13322887	3	49518150	G	A	DAG1	0.04	0	4.4647E-10	19	8.73	0.2725215	9.951E-10	1
rs7756048	6	19329102	A	G	ID4	0.05	0	4.4732E-10	76	29.6	0.0001122	9.04E-12	1.73649E-12
rs10511562	9	11089021	T	C	PTPRD	-0.04	0	4.484E-10	6	7.52	0.3766729	1.622E-09	1
rs1253434	11	67004578	T	C	SYT12	-0.03	0	4.4881E-10	12	7.96	0.3364103	1.837E-09	1
rs16882045	6	19323851	C	T	ID4	0.05	0	4.4881E-10	76	29.49	0.000118	9.351E-12	1.7819E-12
rs10511561	9	11088819	T	C	PTPRD	-0.04	0	4.4936E-10	6	7.52	0.3771979	1.497E-09	1
rs7625857	3	49559029	C	T	BSN	-0.04	0	4.4945E-10	19	8.74	0.2715659	9.973E-10	1
rs1253435	11	67005606	C	T	SYT12	-0.03	0	4.4974E-10	13	8.05	0.327856	1.88E-09	1
rs200362632	16	71762840	CCTGA	C	AP1G1	0.05	0	4.4996E-10	0	6.27	0.5090625	1.499E-09	1
rs1263540	7	157687562	C	G	PTPRN2	0.05	0	4.5045E-10	0	4.84	0.6796487	1.5E-09	1
rs73158379	3	158822577	G	A	MFSD1	-0.04	0	4.5057E-10	0	5.94	0.5470819	1.501E-09	1
rs139254555	2	205084394	G	C	PARD3B	0.08	0	4.5139E-10	35	10.9	0.1429747	2.833E-09	1
rs4888596	16	77089136	C	T	MON1B	-0.05	0	4.5152E-10	0	5.16	0.6409238	1.504E-09	1
rs538457339	5	144463461	C	CTG	KCTD16	0.03	0	4.5272E-10	6	7.5	0.3785757	1.16E-09	1
rs3866330	3	49545561	T	C	BSN	-0.04	0	4.5334E-10	20	8.77	0.2694363	1.002E-09	1
rs9862534	3	49560631	T	C	BSN	-0.04	0	4.5353E-10	19	8.74	0.2719606	1.007E-09	1
rs6742571	2	27719021	A	G	SLC4A1AP	0.04	0	4.5474E-10	0	3.32	0.8537209	1.514E-09	1
rs4740473	9	11090005	C	T	PTPRD	-0.04	0	4.5482E-10	7	7.57	0.372304	1.514E-09	1
rs12617351	2	22624587	C	G	KLHL29	0.03	0	4.5482E-10	1	7.1	0.4187143	1.599E-09	1
rs2217017	4	142584440	C	T	INPP4B	0.04	0	4.5516E-10	26	9.5	0.2186369	2.537E-09	1
rs4918130	10	104833187	C	T	SORCS3	-0.03	0	4.5522E-10	23	9.13	0.2433913	1.885E-09	1
rs1334030	9	11090421	C	T	PTPRD	-0.04	0	4.5547E-10	7	7.59	0.3703458	1.517E-09	1
rs4582035	3	16103802	T	C	GALNT15	-0.04	0	4.5574E-10	0	4.13	0.7651517	1.517E-09	1
rs6831966	4	142583025	C	T	INPP4B	0.04	0	4.5616E-10	24	9.32	0.2304823	2.505E-09	1
rs13429850	2	207385837	T	C	CREB1	0.04	0	4.5622E-10	0	6	0.5403003	1.519E-09	1
rs76206989	16	72942689	G	A	ZFHX3	0.07	0	4.5656E-10	29	9.94	0.1918433	1.038E-09	1
rs6719345	2	59888287	C	T	BCL11A	0.03	0	4.578E-10	14	8.19	0.3161614	2.123E-09	1

rs71332797	9	11089852	CA	C	PTPRD	0.04	0	4.5829E-10	7	7.56	0.3726594	1.526E-09	1
rs62527007	9	11087732	G	A	PTPRD	-0.04	0	4.5881E-10	4	7.3	0.3980929	1.528E-09	1
rs62410578	3	196529746	G	T	SMCO1	-0.03	0	4.5989E-10	45	12.74	0.0786777	2.999E-09	1
rs62410579	3	196529747	A	T	SMCO1	-0.03	0	4.5999E-10	45	12.74	0.0786752	3E-09	1
rs7644148	3	49507808	G	A	DAG1	0.04	0	4.6084E-10	20	8.84	0.2645574	1.007E-09	1
rs74471041	3	49505110	T	G	DAG1	0.04	0	4.6171E-10	20	8.84	0.2642511	1.008E-09	1
rs190212723	13	60710001	T	C	TDRD3	-0.11	0	4.6268E-10	0	5.62	0.5843815	1.54E-09	1
rs4961178	8	90197557	C	T	CALB1	0.03	0	4.6359E-10	0	5.79	0.5649752	1.543E-09	1
rs74866429	16	72927532	C	T	ZFHX3	0.07	0	4.644E-10	29	9.87	0.1961425	1.076E-09	1
rs9287807	2	161058850	T	C	TANK	-0.04	0	4.6442E-10	0	1.28	0.9888419	1.546E-09	1
rs4241407	3	49562886	G	A	BSN	-0.04	0	4.6564E-10	19	8.74	0.2717011	1.033E-09	1
rs77623358	16	72927308	C	T	ZFHX3	0.07	0	4.667E-10	29	9.92	0.1929484	1.073E-09	1
rs16926935	9	11087885	A	G	PTPRD	-0.04	0	4.6729E-10	3	7.23	0.4055563	1.555E-09	1
rs2530400	7	157693335	T	C	PTPRN2	0.05	0	4.6834E-10	0	4.81	0.6826182	1.559E-09	1
rs192095319	16	72927991	G	A	ZFHX3	0.07	0	4.6979E-10	30	10.08	0.1839531	1.045E-09	1
rs6937110	6	162801391	A	G	PACRG	-0.03	0	4.7043E-10	0	1.57	0.9798656	1.565E-09	1
rs6937111	6	162801392	A	G	PACRG	-0.03	0	4.7043E-10	0	1.57	0.9798656	1.565E-09	1
rs149273410	3	49506082	C	T	DAG1	0.04	0	4.7268E-10	20	8.82	0.2659662	1.036E-09	1
rs13013777	2	161074601	A	G	TANK	-0.04	0	4.7274E-10	0	2.51	0.9261581	1.573E-09	1
rs144500327	12	24404889	G	A	BCAT1	-0.09	0	4.7327E-10	0	3.28	0.8580247	1.575E-09	1
rs401754	6	27814760	T	A	HIST1H2AJ	-0.07	0	4.7355E-10	22	9.02	0.2515348	2.97E-09	1
rs1471712	11	47890598	G	A	NUP160	-0.03	0	4.7476E-10	0	6.15	0.522708	1.58E-09	1
rs56016006	11	66977815	G	A	C11orf86	-0.03	0	4.75E-10	19	8.74	0.2719949	2.155E-09	1
rs13073551	3	196530032	C	T	SMCO1	-0.03	0	4.7521E-10	45	12.76	0.0780731	3.088E-09	1
rs10775503	18	53000131	C	T	DCC	0.03	0	4.7566E-10	0	2.63	0.9173921	1.583E-09	1
rs4741101	9	11089957	C	T	PTPRD	-0.04	0	4.7714E-10	8	7.68	0.3612576	1.587E-09	1
rs10471540	5	62203371	G	A	KIF2A	0.03	0	4.7743E-10	0	3.89	0.7922241	1.588E-09	1
rs12523566	5	125204026	C	T	ZNF608	0.03	0	4.7823E-10	0	5.77	0.5666038	1.591E-09	1
rs10676551	4	142794957	C	CAT	INPP4B	-0.03	0	4.783E-10	39	11.63	0.1132968	3.218E-09	1
rs34676253	8	90194210	T	A	CALB1	0.03	0	4.7833E-10	0	5.68	0.5778242	1.591E-09	1

rs148440960	2	195191224	T	C	SLC39A10	-0.04	0	4.7863E-10	0	5.41	0.6100636	1.592E-09	1
rs9873741	3	158832751	A	G	MFSD1	-0.04	0	4.7883E-10	0	5.91	0.550012	1.593E-09	1
rs17203403	2	207399266	A	G	CREB1	0.04	0	4.7966E-10	0	6.03	0.5360093	1.596E-09	1
rs72966484	2	207409161	A	G	CREB1	0.04	0	4.8092E-10	0	6.18	0.5188284	1.6E-09	1
rs62530677	9	11087715	G	A	PTPRD	-0.04	0	4.8099E-10	5	7.41	0.3873372	1.6E-09	1
rs6831927	4	142796011	C	T	INPP4B	-0.03	0	4.8111E-10	40	11.69	0.1113588	3.231E-09	1
rs200484	6	27807896	A	G	HIST1H2BL	-0.07	0	4.8147E-10	21	8.89	0.2607754	3.012E-09	1
rs7894737	10	104853572	C	A	SORCS3	-0.03	0	4.8175E-10	28	9.73	0.2046976	1.577E-09	1
rs13435565	4	142801798	T	C	INPP4B	-0.03	0	4.8197E-10	40	11.71	0.1104436	3.224E-09	1
rs79388664	16	72928780	G	A	ZFHX3	0.07	0	4.826E-10	29	9.95	0.1912052	1.1E-09	1
rs74958639	16	72928975	T	A	ZFHX3	0.07	0	4.843E-10	29	9.96	0.1910344	1.103E-09	1
rs13395671	2	139881263	T	G	LRP1B	0.07	0	4.8437E-10	0	2.6	0.9192362	1.611E-09	1
rs9990398	3	158833376	A	G	MFSD1	-0.04	0	4.8514E-10	0	5.87	0.5552016	1.613E-09	1
rs62410577	3	196529727	T	A	SMCO1	-0.03	0	4.8541E-10	43	12.33	0.0903345	2.953E-09	1
rs75757159	16	72901842	A	G	ZFHX3	0.07	0	4.8682E-10	30	10.1	0.1831069	1.097E-09	1
rs7010298	8	90196579	C	T	CALB1	0.03	0	4.8724E-10	0	5.81	0.5615877	1.62E-09	1
rs186599242	16	72953753	A	G	ZFHX3	0.07	0	4.8796E-10	31	10.21	0.1767421	1.005E-09	1
rs6845583	4	142797929	C	T	INPP4B	-0.03	0	4.8804E-10	40	11.68	0.1114957	3.271E-09	1
rs28420913	4	142801358	G	A	INPP4B	-0.03	0	4.8824E-10	40	11.71	0.1105015	3.266E-09	1
rs67260454	3	49523110	TC	T	DAG1	0.04	0	4.9161E-10	16	8.35	0.3024708	1.134E-09	1
rs2312462	3	49563822	T	C	BSN	-0.04	0	4.9173E-10	20	8.79	0.2684344	1.088E-09	1
rs143273550	13	98561552	A	ATGTT	STK24	0.03	0	4.9234E-10	22	9.01	0.2521621	1.265E-09	1
rs1491332234	13	98561550	CCA	C	STK24	0.03	0	4.9234E-10	22	9.01	0.2521621	1.265E-09	1
rs1030318	2	59893687	A	T	BCL11A	0.04	0	4.925E-10	25	9.43	0.223034	2.503E-09	1
rs200885114	5	153239603	T	TA	GRIA1	0.08	0	4.9265E-10	0	3.65	0.8189769	1.638E-09	1
rs34814102	13	55838795	CA	C	PRR20A	0.05	0	4.9301E-10	0	6.47	0.4864419	1.639E-09	1
rs76898249	16	72929694	A	T	ZFHX3	0.07	0	4.9329E-10	29	9.97	0.1902165	1.12E-09	1
rs74866145	16	72930900	G	A	ZFHX3	0.07	0	4.9334E-10	29	9.98	0.1896437	1.119E-09	1
rs144948701	16	72932941	A	ATTAAG	ZFHX3	0.07	0	4.9352E-10	29	9.97	0.1903312	1.121E-09	1
rs2427657	11	115116533	G	A	CADM1	-0.03	0	4.9394E-10	42	12.1	0.0972683	1.028E-09	1

Table S2

rs62410576	3	196529723	T	A	SMCO1	-0.03	0	4.9426E-10	45	12.74	0.078709	3.218E-09	1
rs1165184	6	25836029	C	G	SLC17A3	-0.06	0	4.9588E-10	40	11.81	0.1070554	9.345E-10	1
rs4267532	2	104248335	A	G	POU3F3	-0.09	0	4.9684E-10	0	5.05	0.6536337	1.652E-09	1
rs147251271	16	72929983	C	T	ZFHX3	0.07	0	4.9688E-10	29	9.98	0.1898453	1.126E-09	1
rs147251621	16	86529453	G	A	MTHFSD	-0.08	0	4.971E-10	0	2.39	0.9349068	1.652E-09	1
rs6844306	4	142798042	G	C	INPP4B	-0.03	0	4.9721E-10	40	11.67	0.1119373	3.334E-09	1
rs11864960	16	72932535	A	T	ZFHX3	0.07	0	4.9732E-10	29	9.98	0.189682	1.126E-09	1
rs11864131	16	72932394	A	G	ZFHX3	0.07	0	4.9733E-10	29	9.98	0.1896817	1.126E-09	1
rs11864089	16	72932299	A	G	ZFHX3	0.07	0	4.9733E-10	29	9.98	0.1896809	1.126E-09	1
rs74594395	16	72932333	T	C	ZFHX3	0.07	0	4.9733E-10	29	9.98	0.1896809	1.126E-09	1
rs147965099	16	72933305	CATT	C	ZFHX3	0.07	0	4.9764E-10	29	9.98	0.1897003	1.127E-09	1
rs74662138	16	72933240	T	C	ZFHX3	0.07	0	4.9764E-10	29	9.98	0.1897003	1.127E-09	1
rs78570035	16	72933231	T	C	ZFHX3	0.07	0	4.9764E-10	29	9.98	0.1897003	1.127E-09	1
rs78937262	16	72933560	T	A	ZFHX3	0.07	0	4.9785E-10	29	9.98	0.1897137	1.127E-09	1
rs77658025	16	72934008	T	C	ZFHX3	0.07	0	4.9799E-10	29	9.97	0.1900191	1.129E-09	1
rs1137656	1	66985919	A	C	MIER1	-0.03	0	4.9825E-10	0	4.35	0.7387526	1.656E-09	1
rs11693885	2	59894911	G	A	BCL11A	0.03	0	4.9845E-10	35	10.92	0.1422067	1.426E-09	1
rs10055205	5	62189528	C	T	KIF2A	0.03	0	4.9847E-10	0	3.93	0.7875577	1.657E-09	1
rs149209160	16	72930233	TA	T	ZFHX3	0.07	0	4.9883E-10	29	9.98	0.1896451	1.129E-09	1
rs1072195	5	62189992	C	T	KIF2A	0.03	0	4.9938E-10	0	3.93	0.7874473	1.66E-09	1
rs8066358	17	81467478	G	A	BAHCC1	-0.04	0	4.9954E-10	13	8.12	0.3223215	2.004E-09	1
rs11862948	16	72931295	C	T	ZFHX3	0.07	0	4.9973E-10	29	9.98	0.1895556	1.131E-09	1
rs75811565	16	72930809	G	A	ZFHX3	0.07	0	4.9986E-10	29	9.98	0.1895542	1.131E-09	1
rs80034230	16	72930666	A	G	ZFHX3	0.07	0	4.9986E-10	29	9.98	0.1895542	1.131E-09	1
rs78025462	16	72935201	G	T	ZFHX3	0.07	0	5.0191E-10	29	9.97	0.1901018	1.138E-09	1
rs113870227	16	21712148	G	A	OTOA	-0.05	0	5.0192E-10	0	5.45	0.6050496	1.668E-09	1
rs8066164	17	81467315	G	A	BAHCC1	-0.04	0	5.0453E-10	13	8.06	0.3275998	2.012E-09	1
rs10057876	5	62191256	C	T	KIF2A	0.03	0	5.0491E-10	0	3.93	0.7881799	1.678E-09	1
rs11928090	3	49567471	G	A	BSN	-0.04	0	5.0492E-10	19	8.66	0.2779473	1.135E-09	1
rs7895087	10	104853659	G	T	SORCS3	-0.03	0	5.0542E-10	27	9.66	0.2088937	1.65E-09	1

rs184972073	2	197204073	G	A	AC013264.1,A	0.08	0	5.065E-10	0	5.48	0.6016257	1.683E-09	1
rs9311358	3	44497256	C	G	ZNF852	-0.03	0	5.0661E-10	0	5.67	0.5790247	1.656E-09	1
rs16901847	6	28408074	G	A	ZSCAN12	-0.05	0	5.067E-10	3	7.23	0.4054429	1.867E-09	1
rs13359224	5	62187266	T	A	KIF2A	0.03	0	5.0717E-10	0	3.94	0.7868353	1.685E-09	1
rs2003622	16	21709216	T	G	OTOA	-0.05	0	5.0778E-10	0	5.48	0.6011735	1.687E-09	1
rs10050495	5	62197944	T	C	KIF2A	0.03	0	5.0864E-10	0	3.93	0.7875398	1.69E-09	1
rs75909464	16	72940011	C	T	ZFHX3	0.07	0	5.0884E-10	29	9.95	0.1913412	1.158E-09	1
rs7646174	3	196483937	T	C	RNF168	0.03	0	5.0897E-10	0	6.92	0.4370085	1.691E-09	1
rs4783340	16	21708579	G	A	OTOA	-0.05	0	5.0907E-10	0	5.46	0.6040896	1.691E-09	1
rs17805961	20	52616873	C	T	TSHZ2	-0.03	0	5.0924E-10	9	7.7	0.3594187	2.277E-09	1
rs741718	16	21709693	A	G	OTOA	-0.05	0	5.0975E-10	0	5.45	0.605469	1.694E-09	1
rs75182609	16	71930399	C	T	IST1,PKD1L3	0.04	0	5.0995E-10	0	5.21	0.6341564	1.694E-09	1
rs75832282	16	72940573	G	C	ZFHX3	0.07	0	5.1043E-10	29	9.95	0.1911683	1.162E-09	1
rs79169855	16	71916298	A	G	IST1	0.04	0	5.1054E-10	0	5.25	0.6298711	1.696E-09	1
rs10939933	5	62205733	G	C	KIF2A	0.03	0	5.1119E-10	0	3.91	0.7902552	1.698E-09	1
rs16839729	2	207406485	G	A	CREB1	0.04	0	5.1412E-10	0	6.18	0.519002	1.708E-09	1
rs9807752	18	52995066	A	T	DCC	0.03	0	5.1447E-10	0	2.64	0.916527	1.709E-09	1
rs72966483	2	207408768	G	A	CREB1	0.04	0	5.1463E-10	0	6.23	0.5133084	1.71E-09	1
rs11185543	3	196488789	G	A	RNF168	0.03	0	5.1491E-10	1	7.09	0.4194083	1.71E-09	1
rs7724362	5	157377733	G	T	CYFIP2	-0.05	0	5.162E-10	0	6.04	0.5347952	1.715E-09	1
rs74980679	16	71745407	G	T	AP1G1	0.05	0	5.1716E-10	0	6.16	0.521553	1.718E-09	1
rs77832972	16	71753091	G	A	AP1G1	0.05	0	5.1719E-10	0	6.15	0.5227575	1.718E-09	1
rs6752125	2	59896800	C	G	BCL11A	0.04	0	5.178E-10	27	9.59	0.2128622	2.516E-09	1
rs74885315	6	164691116	C	T	C6orf118	0.03	0	5.1796E-10	0	1.95	0.9625636	1.72E-09	1
rs149816958	19	1429175	C	T	DAZAP1	0.11	0	5.1902E-10	0	2.34	0.9387745	1.724E-09	1
rs10511560	9	11087447	A	T	PTPRD	-0.04	0	5.1978E-10	1	7.07	0.4214457	1.726E-09	1
rs200481	6	27806054	T	A	HIST1H2BL	-0.07	0	5.2118E-10	22	9	0.2530006	3.334E-09	1
rs13073564	3	196530048	C	T	SMCO1	-0.03	0	5.2147E-10	45	12.76	0.0780708	3.417E-09	1
rs7858827	9	11096775	T	G	PTPRD	0.04	0	5.2195E-10	0	6.99	0.4299773	1.733E-09	1
rs349687	5	144467568	C	T	KCTD16	0.03	0	5.2199E-10	0	7.07	0.4221369	1.416E-09	1

Table S2

rs17604518	7	70779318	G	A	AUTS2	-0.05	0	5.2297E-10	13	8.1	0.3236045	1.731E-09	1
rs35350832	4	59239010	CAT	C	ADGRL3	-0.04	0	5.2366E-10	0	6.65	0.4659317	1.739E-09	1
rs150292648	16	71918606	C	T	IST1	0.04	0	5.245E-10	0	5.27	0.6270652	1.742E-09	1
rs17518473	5	125200086	A	C	ZNF608	0.03	0	5.2452E-10	0	5.99	0.5404403	1.742E-09	1
rs117278919	10	92843223	C	T	EXOC6	-0.07	0	5.2476E-10	0	2.88	0.8957803	1.743E-09	1
rs7646273	3	196484023	T	C	RNF168	0.03	0	5.2507E-10	2	7.16	0.4128945	1.744E-09	1
rs62084749	17	68087677	T	C	KPNA2	0.03	0	5.2696E-10	31	10.17	0.1790622	3.673E-09	1
rs4895287	5	120908800	T	C	PRR16	-0.03	0	5.2768E-10	0	3.78	0.8045849	1.752E-09	1
rs34196595	3	196476797	G	A	RNF168	0.03	0	5.2851E-10	3	7.27	0.4014671	1.829E-09	1
rs10891535	11	113330558	C	G	TTC12	-0.03	0	5.2937E-10	25	9.44	0.2223312	3.181E-09	1
rs9554480	13	98568884	T	A	STK24	0.03	0	5.2944E-10	24	9.26	0.2345345	1.327E-09	1
rs9598227	13	61021488	A	G	PCDH20	-0.03	0	5.31E-10	31	10.27	0.1739429	4.687E-09	1
rs7420620	2	195213505	A	G	SLC39A10	-0.04	0	5.3107E-10	0	6.24	0.512055	1.761E-09	1
rs4052546	3	49538116	G	C	DAG1	-0.04	0	5.3117E-10	18	8.6	0.2830463	1.275E-09	1
rs7647487	3	196479304	T	C	RNF168	0.03	0	5.3274E-10	4	7.33	0.3949157	1.769E-09	1
rs1253439	11	67017244	G	A	SYT12	-0.03	0	5.3339E-10	9	7.72	0.3581234	2.09E-09	1
rs10214468	6	25789162	T	A	SLC17A1	-0.06	0	5.34E-10	46	13.19	0.0675359	9.871E-10	1
rs62667860	3	196485784	A	AT	RNF168	0.03	0	5.3458E-10	2	7.16	0.4126565	1.824E-09	1
rs13084212	3	196485340	G	T	RNF168	0.03	0	5.3473E-10	2	7.16	0.4126755	1.825E-09	1
rs13098146	3	196475043	G	A	RNF168	0.03	0	5.3488E-10	4	7.34	0.3947183	1.776E-09	1
rs28360585	6	25790128	A	T	SLC17A1	-0.06	0	5.3504E-10	46	13.19	0.0675329	9.888E-10	1
rs7612450	3	196482659	A	G	RNF168	0.03	0	5.3563E-10	2	7.16	0.4125957	1.778E-09	1
rs12206050	6	33596519	A	T	BAK1	0.03	0	5.3634E-10	0	6.84	0.4462125	1.78E-09	1
rs7423607	2	195217582	C	T	SLC39A10	-0.04	0	5.3711E-10	0	6.29	0.5060418	1.78E-09	1
rs1858512	6	19229719	C	T	ID4	0.05	0	5.3778E-10	75	28.82	0.0001559	1.625E-11	3.14387E-12
rs7643192	3	196483719	A	G	RNF168	0.03	0	5.4015E-10	2	7.15	0.4138511	1.793E-09	1
rs56375082	12	59917881	T	C	SLC16A7	-0.04	0	5.4018E-10	23	9.13	0.2437289	2.493E-09	1
rs7611980	3	196488189	A	G	RNF168	0.03	0	5.4086E-10	5	7.37	0.3913948	1.897E-09	1
rs8052338	16	72151775	C	T	PMFBP1	0.03	0	5.4122E-10	0	5.61	0.5864288	1.783E-09	1
rs1893695	11	113335363	A	C	TTC12	-0.03	0	5.4148E-10	26	9.47	0.2209494	3.257E-09	1

rs12662740	6	19286420	T	G	ID4	0.05	0	5.4177E-10	75	28.43	0.0001834	1.893E-11	3.67036E-12
rs349686	5	144467880	T	G	KCTD16	0.03	0	5.426E-10	1	7.11	0.4171903	1.462E-09	1
rs145716	5	144467655	T	C	KCTD16	0.03	0	5.4358E-10	1	7.1	0.4186667	1.468E-09	1
rs4916499	3	196481293	G	A	RNF168	0.03	0	5.4415E-10	2	7.17	0.4116347	1.806E-09	1
rs927456	11	29748870	T	C	KCNA4	0.03	0	5.4426E-10	12	7.96	0.3361731	2.262E-09	1
rs4393941	3	196479872	A	G	RNF168	0.03	0	5.452E-10	2	7.15	0.4130329	1.809E-09	1
rs7831194	8	90197475	T	A	CALB1	0.03	0	5.453E-10	0	5.81	0.561897	1.809E-09	1
rs239471	5	144468207	T	C	KCTD16	0.03	0	5.4533E-10	1	7.12	0.4164711	1.468E-09	1
rs3020400	6	151961411	G	A	ESR1	-0.03	0	5.4666E-10	0	4.32	0.742397	1.814E-09	1
rs67637684	6	123895905	AG	A	NKAIN2	0.03	0	5.4677E-10	0	3.44	0.8413587	1.814E-09	1
rs12525684	6	26483682	A	C	BTN2A1	0.03	0	5.4963E-10	0	1.14	0.992166	1.824E-09	1
rs34722299	3	196485328	T	C	RNF168	0.03	0	5.5029E-10	2	7.19	0.4088996	1.826E-09	1
rs58080123	6	19230359	A	T	ID4	0.05	0	5.5081E-10	75	28.81	0.0001567	1.67E-11	3.22606E-12
rs10891536	11	113338706	C	G	TTC12	-0.03	0	5.5118E-10	26	9.48	0.2198981	3.323E-09	1
rs11719920	3	196470933	T	G	RNF168	0.03	0	5.5182E-10	4	7.34	0.3940599	1.831E-09	1
rs4587762	11	113436171	G	A	DRD2	-0.03	0	5.5188E-10	0	6.11	0.5274988	1.831E-09	1
rs1267074	2	161195062	T	A	TANK	-0.03	0	5.5471E-10	0	2.59	0.9198578	1.84E-09	1
rs1863161	2	59912389	G	A	BCL11A	0.03	0	5.5514E-10	21	8.96	0.2554879	2.677E-09	1
rs149369040	16	71711159	G	A	PHLPP2	0.04	0	5.554E-10	0	6.76	0.4540846	1.842E-09	1
rs62405601	6	19329580	T	G	ID4	0.05	0	5.5599E-10	76	29.73	0.0001064	1.044E-11	1.97572E-12
rs1863158	2	59896052	C	T	BCL11A	0.03	0	5.5651E-10	22	9.02	0.2512874	2.599E-09	1
rs6474630	9	11095503	T	C	PTPRD	0.04	0	5.5761E-10	0	6.98	0.4306589	1.849E-09	1
rs3020396	6	151958743	G	A	ESR1	-0.03	0	5.5828E-10	0	4.5	0.7207438	1.852E-09	1
rs10924523	1	246156598	G	T	SMYD3	-0.04	0	5.5839E-10	0	4.73	0.6932144	1.852E-09	1
rs10733223	9	11095952	A	G	PTPRD	0.04	0	5.5935E-10	1	7.1	0.4185927	1.855E-09	1
rs7643983	3	61123439	A	T	FHIT	-0.03	0	5.6067E-10	0	6.75	0.4553702	1.859E-09	1
rs1165168	6	25859280	A	C	SLC17A3	-0.06	0	5.6181E-10	46	13.15	0.0684523	7.623E-10	1.67315E-10
rs6876062	5	120890062	G	A	PRR16	0.03	0	5.6213E-10	0	3.44	0.8413433	1.864E-09	1
rs10891537	11	113340648	T	G	TTC12	-0.03	0	5.6227E-10	26	9.48	0.2198195	3.387E-09	1
rs6474633	9	11095826	A	G	PTPRD	0.04	0	5.6477E-10	1	7.1	0.4189904	1.873E-09	1

rs77219797	6	19228368	CTA	C	ID4	0.05	0	5.6529E-10	75	28.59	0.0001716	1.856E-11	3.57685E-12
rs10400963	16	72151084	A	C	PMFBP1	0.03	0	5.6645E-10	0	5.51	0.5977444	1.865E-09	1
rs116935504	11	43978144	G	A	C11orf96	0.1	0	5.6754E-10	0	2.06	0.9565405	1.882E-09	1
rs56113204	6	19231843	A	C	ID4	0.05	0	5.6819E-10	75	28.8	0.0001575	1.726E-11	3.39693E-12
rs1267073	2	161193488	G	A	TANK	-0.03	0	5.6843E-10	0	2.59	0.9202992	1.885E-09	1
rs4741106	9	11094508	G	A	PTPRD	0.04	0	5.6993E-10	1	7.1	0.4189981	1.89E-09	1
rs6474632	9	11095649	T	C	PTPRD	0.04	0	5.7005E-10	1	7.1	0.4189212	1.89E-09	1
rs1253440	11	67015123	G	T	SYT12	-0.03	0	5.7094E-10	0	6.64	0.4672365	1.893E-09	1
rs56106726	9	11122695	C	A	PTPRD	-0.05	0	5.7103E-10	0	6.37	0.497234	1.893E-09	1
rs6434763	2	195221753	A	G	SLC39A10	-0.04	0	5.7213E-10	0	6.35	0.4992335	1.893E-09	1
rs4421134	5	120908007	A	G	PRR16	-0.03	0	5.7258E-10	0	3.99	0.7807673	1.898E-09	1
rs35875412	6	28364041	C	T	ZKSCAN3	-0.05	0	5.727E-10	0	7.05	0.4233984	1.947E-09	1
rs12724208	1	246068363	T	C	SMYD3	-0.04	0	5.743E-10	17	8.52	0.2891238	1.904E-09	1
rs1413379	9	11092824	A	T	PTPRD	0.04	0	5.7767E-10	0	7.01	0.4283494	1.915E-09	1
rs523383	6	25869620	A	G	SLC17A3	-0.06	0	5.7838E-10	41	11.95	0.1022337	1.048E-09	1
rs11585740	1	230458440	C	G	PGBD5	0.03	0	5.7872E-10	3	7.27	0.4014223	2.217E-09	1
rs555460	6	25870427	C	T	SLC17A3	-0.06	0	5.7929E-10	41	11.95	0.1022203	1.05E-09	1
rs2888410	3	44613984	A	C	ZNF197	-0.03	0	5.8063E-10	3	7.24	0.4048019	1.924E-09	1
rs11275533	3	35743564	TCTTCTTTA	T	ARPP21	0.04	0	5.814E-10	29	9.91	0.193971	3.362E-09	1
rs11729045	4	111251830	C	A	PITX2	-0.06	0	5.8181E-10	0	4.01	0.7781443	1.928E-09	1
rs73004672	11	113040254	A	G	NCAM1	0.03	0	5.8198E-10	0	3.96	0.784346	1.926E-09	1
rs10891493	11	113039149	G	A	NCAM1	0.03	0	5.8217E-10	0	3.96	0.7844067	1.927E-09	1
rs7108388	11	66932151	G	C	PC	-0.03	0	5.8365E-10	40	11.86	0.1053562	1.934E-09	1
rs6752231	2	59896868	C	T	BCL11A	0.03	0	5.8424E-10	26	9.5	0.2185424	2.84E-09	1
rs1376769	8	64550321	G	A	BHLHE22	-0.04	0	5.8455E-10	0	2.89	0.8950533	1.937E-09	1
rs1376770	8	64550316	C	T	BHLHE22	-0.04	0	5.854E-10	0	2.89	0.8950316	1.94E-09	1
rs73004014	11	113573726	C	A	DRD2	-0.06	0	5.8596E-10	0	3.54	0.8307492	1.942E-09	1
rs35420934	14	42983690	G	A	LRFN5	0.05	0	5.8609E-10	19	8.67	0.2769628	1.884E-09	1
rs9556972	13	98557561	C	T	STK24	0.03	0	5.8624E-10	23	9.12	0.2438694	1.478E-09	1
rs11222087	11	99967779	C	T	CNTN5	0.04	0	5.8701E-10	0	6.81	0.4487081	1.945E-09	1

rs13188689	5	30880070	G	T	CDH6	0.03	0	5.8752E-10	21	8.9	0.2596145	2.916E-09	1
rs4771307	13	98569625	A	G	STK24	0.03	0	5.8813E-10	23	9.14	0.2428392	1.456E-09	1
rs74441113	10	90969348	A	G	ANKRD1	-0.05	0	5.8862E-10	18	8.54	0.2870942	2.666E-09	1
rs62403365	6	19230662	T	A	ID4	0.05	0	5.8983E-10	75	28.73	0.000162	1.876E-11	3.67036E-12
rs11214491	11	113108316	T	C	NCAM1	0.03	0	5.9073E-10	0	5.41	0.6094985	1.957E-09	1
rs3020398	6	151960480	G	A	ESR1	-0.03	0	5.9135E-10	0	4.31	0.7440297	1.959E-09	1
rs10959491	9	11062746	C	T	PTPRD	-0.04	0	5.9201E-10	0	6.86	0.4439329	1.961E-09	1
rs145565981	13	98567336	GACC	G	STK24	0.03	0	5.9338E-10	25	9.37	0.2269961	1.468E-09	1
rs73244155	4	46598370	G	A	GABRA2	0.04	0	5.9348E-10	0	6.27	0.5090737	1.966E-09	1
rs62412101	4	41008912	T	C	APBB2	-0.05	0	5.9449E-10	19	8.69	0.2755271	3.183E-09	1
rs9556975	13	98568188	G	A	STK24	0.03	0	5.9589E-10	25	9.37	0.2269865	1.475E-09	1
rs4637426	4	34458724	A	G	ARAP2	0.04	0	5.9666E-10	10	7.83	0.3479666	2.362E-09	1
rs10956510	8	90200334	G	T	CALB1	0.03	0	5.9679E-10	0	5.81	0.5622945	1.977E-09	1
rs370155	6	27814253	T	G	HIST1H2AJ	-0.07	0	5.99E-10	21	8.93	0.257556	3.757E-09	1
rs72694247	9	11119853	G	A	PTPRD	-0.05	0	5.9921E-10	0	6.28	0.5071372	1.985E-09	1
rs11227632	11	66931740	G	A	PC	-0.03	0	5.9993E-10	47	13.27	0.0659069	1.672E-09	1
rs10511565	9	11092206	G	A	PTPRD	-0.04	0	6.0029E-10	0	6.94	0.4354566	1.988E-09	1
rs28513069	4	34457064	T	C	ARAP2	0.04	0	6.0073E-10	10	7.83	0.3475873	2.382E-09	1
rs59539521	4	34456232	T	G	ARAP2	0.04	0	6.0103E-10	10	7.84	0.346728	2.388E-09	1
rs76340457	16	72956369	G	A	ZFHX3	0.07	0	6.0275E-10	32	10.39	0.1677705	1.218E-09	1
rs1334026	9	11093769	T	C	PTPRD	0.04	0	6.0309E-10	2	7.17	0.4115228	1.997E-09	1
rs4682987	3	44633504	C	T	ZNF197	-0.03	0	6.0671E-10	4	7.32	0.3958609	2.009E-09	1
rs72711010	9	11065175	C	T	PTPRD	-0.04	0	6.072E-10	0	6.74	0.4564668	2.011E-09	1
rs62527037	9	11093271	T	A	PTPRD	-0.04	0	6.084E-10	2	7.16	0.4119332	2.015E-09	1
rs77333198	10	91014071	G	A	ANKRD1	-0.05	0	6.0875E-10	0	4.14	0.7634817	2.016E-09	1
rs148768231	3	44533027	G	A	ZKSCAN7	0.06	0	6.0893E-10	29	9.88	0.1953274	2.142E-09	1
rs12216900	9	11064079	A	G	PTPRD	-0.04	0	6.093E-10	0	6.65	0.4659761	2.017E-09	1
rs2984431	6	40013161	T	A	MOCS1	0.03	0	6.1035E-10	21	8.9	0.260117	1.533E-09	1
rs2162103	4	34454146	C	G	ARAP2	0.04	0	6.1151E-10	10	7.81	0.3493847	2.416E-09	1
rs79367933	10	90958217	A	T	ANKRD1	-0.05	0	6.1205E-10	17	8.51	0.2896437	2.733E-09	1

rs56226914	10	90959394	T	A	ANKRD1	-0.05	0	6.1341E-10	17	8.52	0.2892847	2.74E-09	1
rs9556978	13	98582394	G	A	STK24	0.03	0	6.1347E-10	39	11.52	0.1175313	1.188E-09	1
rs12635624	3	44637006	G	A	ZNF197	-0.03	0	6.1359E-10	4	7.35	0.3929256	2.031E-09	1
rs4421446	9	11093422	A	G	PTPRD	0.04	0	6.1425E-10	2	7.16	0.4124755	2.034E-09	1
rs61859575	10	90952471	G	T	ANKRD1	-0.05	0	6.1514E-10	17	8.52	0.2892408	2.748E-09	1
rs61859576	10	90952713	A	G	ANKRD1	-0.05	0	6.1514E-10	17	8.52	0.2892408	2.748E-09	1
rs61859580	10	90954848	T	C	ANKRD1	-0.05	0	6.1514E-10	17	8.52	0.2892408	2.748E-09	1
rs56075405	10	90955002	G	A	ANKRD1	-0.05	0	6.1529E-10	17	8.52	0.2892253	2.748E-09	1
rs1267063	2	161145756	T	A	TANK	-0.04	0	6.1547E-10	0	2.68	0.9128139	2.037E-09	1
rs137958504	10	90951110	C	CTGTT	ANKRD1	-0.05	0	6.1558E-10	17	8.52	0.2892327	2.75E-09	1
rs61859573	10	90951107	T	A	ANKRD1	-0.05	0	6.1558E-10	17	8.52	0.2892327	2.75E-09	1
rs139526565	10	90952199	T	A	ANKRD1	-0.05	0	6.1566E-10	17	8.52	0.2892327	2.75E-09	1
rs61859574	10	90951266	T	G	ANKRD1	-0.05	0	6.1566E-10	17	8.52	0.2892327	2.75E-09	1
rs4741107	9	11094560	T	C	PTPRD	0.04	0	6.1589E-10	1	7.13	0.4152972	2.039E-09	1
rs1334024	9	11093714	T	C	PTPRD	0.04	0	6.1626E-10	2	7.16	0.4123977	2.04E-09	1
rs1981912	2	59902295	C	T	BCL11A	0.03	0	6.1791E-10	27	9.7	0.2059386	3.06E-09	1
rs62527036	9	11092983	C	A	PTPRD	-0.04	0	6.1799E-10	2	7.16	0.4120776	2.046E-09	1
rs3020394	6	151958078	G	A	ESR1	-0.03	0	6.1799E-10	0	4.81	0.6828278	2.046E-09	1
rs12468757	2	207486377	C	A	CREB1	0.04	0	6.1838E-10	27	9.69	0.2069544	2.011E-09	1
rs12713412	2	59897401	A	G	BCL11A	0.03	0	6.1894E-10	25	9.36	0.2277015	2.967E-09	1
rs7648154	3	43258386	A	G	SNRK	-0.04	0	6.1943E-10	32	10.36	0.1692722	8.341E-10	1.85773E-10
rs6783201	3	16109881	A	G	GALNT15	0.03	0	6.2181E-10	0	4.71	0.6952685	2.058E-09	1
rs6531309	4	34454616	C	A	ARAP2	0.04	0	6.2226E-10	10	7.79	0.3510763	2.455E-09	1
rs17490390	5	152983146	G	A	GRIA1	0.05	0	6.2264E-10	0	4.85	0.6779907	2.061E-09	1
rs7761976	6	19235342	A	G	ID4	0.05	0	6.2334E-10	75	28.7	0.0001638	1.995E-11	3.86477E-12
rs11222057	11	99961092	C	T	CNTN5	0.04	0	6.2337E-10	0	6.76	0.4543343	2.063E-09	1
rs72711050	9	11092795	A	G	PTPRD	-0.04	0	6.2367E-10	0	7.03	0.4252496	2.064E-09	1
rs28561074	6	123926691	G	A	NKAIN2	0.03	0	6.264E-10	0	2.63	0.9170278	2.073E-09	1
rs200953	6	27869489	T	C	HIST1H1B	-0.07	0	6.2689E-10	21	8.93	0.257587	3.894E-09	1
rs7317938	13	98582107	C	T	STK24	0.03	0	6.2768E-10	14	8.21	0.3143491	1.613E-09	1

Table S2

rs7710965	5	62208719	G	A	KIF2A	0.03	0	6.2799E-10	0	4.03	0.776258	2.078E-09	1
rs4741108	9	11094840	T	C	PTPRD	0.04	0	6.2833E-10	1	7.12	0.4165792	2.079E-09	1
rs6912296	6	19273282	C	G	ID4	0.05	0	6.2839E-10	75	28.09	0.0002118	2.458E-11	4.8753E-12
rs993409	15	87477481	C	A	NTRK3	0.08	0	6.287E-10	22	9.06	0.2481746	2.08E-09	1
rs10514933	5	62213484	T	C	KIF2A	0.03	0	6.2924E-10	0	3.01	0.8842131	2.082E-09	1
rs16926968	9	11093119	G	A	PTPRD	-0.04	0	6.2963E-10	2	7.16	0.4128284	2.083E-09	1
rs4712378	6	19273940	C	A	ID4	0.05	0	6.3018E-10	75	28.29	0.0001949	2.254E-11	4.39708E-12
rs28704798	4	34372552	A	G	ARAP2	0.04	0	6.3072E-10	17	8.49	0.2917318	2.983E-09	1
rs1812006	6	32810879	A	G	HLA-DOB	0.06	0	6.3518E-10	0	5.41	0.6096075	2.101E-09	1
rs62302744	4	46605226	A	G	COX7B2	0.04	0	6.3624E-10	0	6.27	0.5084167	2.105E-09	1
rs72711049	9	11092761	C	T	PTPRD	-0.04	0	6.3627E-10	2	7.15	0.4133495	2.105E-09	1
rs151071492	16	72183151	A	G	PMFBP1	0.07	0	6.3683E-10	27	9.64	0.2096442	1.745E-09	1
rs890068	2	59941374	A	T	BCL11A	0.04	0	6.3692E-10	32	10.3	0.1722631	4.01E-09	1
rs1334023	9	11093591	C	G	PTPRD	0.04	0	6.3729E-10	0	6.97	0.4321938	2.108E-09	1
rs6720574	2	22621357	T	C	KLHL29	-0.03	0	6.3891E-10	0	6.5	0.4823344	2.114E-09	1
rs142029494	11	113350189	T	C	TTC12	-0.06	0	6.3902E-10	0	4.33	0.7409025	2.114E-09	1
rs748211	2	59941375	T	C	BCL11A	0.04	0	6.3967E-10	32	10.3	0.1722497	4.027E-09	1
rs72694252	9	11126335	C	G	PTPRD	-0.05	0	6.3988E-10	0	6.41	0.4927252	2.117E-09	1
rs10756182	9	11094362	A	G	PTPRD	0.04	0	6.4069E-10	1	7.11	0.4175034	2.119E-09	1
rs61041167	4	46588204	T	C	GABRA2	0.04	0	6.4194E-10	0	6.26	0.5101626	2.123E-09	1
rs9845345	3	196530323	G	T	SMCO1	-0.03	0	6.4516E-10	46	13.14	0.0687049	4.429E-09	1
rs143870588	19	1457003	G	C	APC2	0.11	0	6.4656E-10	0	2.32	0.9398106	2.138E-09	1
rs62527008	9	11091458	T	A	PTPRD	-0.04	0	6.4696E-10	1	7.14	0.4145375	2.14E-09	1
rs9366657	6	26434686	C	G	BTN3A3	-0.03	0	6.4818E-10	0	4.58	0.7111037	2.144E-09	1
rs7329463	13	56275524	A	T	PRR20A	-0.06	0	6.4857E-10	0	6.78	0.452272	2.145E-09	1
rs6449590	5	62224838	G	T	KIF2A	0.03	0	6.4894E-10	0	3.99	0.7803626	2.146E-09	1
rs61859572	10	90945281	T	G	ANKRD1	-0.05	0	6.5053E-10	17	8.52	0.2886613	2.904E-09	1
rs3809366	13	98578012	C	T	STK24	0.03	0	6.5278E-10	38	11.46	0.1196659	1.261E-09	1
rs3020401	6	151961909	G	A	ESR1	-0.03	0	6.5396E-10	0	4.29	0.7463181	2.162E-09	1
rs17808090	9	11072447	C	A	PTPRD	-0.04	0	6.5572E-10	0	5.87	0.5549766	2.168E-09	1

Table S2

rs56104176	6	19239456	G	A	ID4	0.05	0	6.5707E-10	75	28.51	0.000178	2.201E-11	4.28505E-12
rs62302737	4	46581582	C	T	GABRA2	0.04	0	6.5711E-10	0	6.06	0.5323428	2.173E-09	1
rs10065228	5	62229519	C	T	KIF2A	0.03	0	6.5725E-10	0	3.99	0.7813954	2.173E-09	1
rs7762189	6	19235219	G	A	ID4	0.05	0	6.5762E-10	75	28.83	0.0001556	2.013E-11	3.96581E-12
rs10809319	9	11064428	C	T	PTPRD	-0.03	0	6.5844E-10	0	6.74	0.4567688	2.177E-09	1
rs9556973	13	98562808	C	A	STK24	0.03	0	6.5855E-10	23	9.12	0.2441439	1.652E-09	1
rs17598137	3	49853929	C	A	TRAIP	0.06	0	6.5956E-10	0	1.62	0.9778898	2.181E-09	1
rs4103176	5	62230632	A	G	KIF2A	0.03	0	6.6015E-10	0	3.99	0.781493	2.182E-09	1
rs7648243	3	196525136	G	A	SMCO1	-0.03	0	6.6023E-10	45	12.86	0.0756126	3.851E-09	1
rs349685	5	144468329	C	T	KCTD16	0.03	0	6.6226E-10	0	7.01	0.4281893	1.792E-09	1
rs140374970	4	46677407	TAAAAGAA	T	COX7B2	0.04	0	6.6253E-10	0	5.68	0.5778911	2.19E-09	1
rs55756745	6	19237570	G	A	ID4	0.05	0	6.6497E-10	75	28.52	0.0001771	2.215E-11	4.28505E-12
rs61294200	3	196480067	C	CCT	RNF168	0.03	0	6.665E-10	4	7.32	0.3962725	2.34E-09	1
rs200482	6	27806126	G	A	HIST1H2BL	-0.07	0	6.6723E-10	19	8.7	0.275101	3.843E-09	1
rs17732348	4	142769957	C	T	INPP4B	-0.07	0	6.6726E-10	7	7.53	0.3755979	2.777E-09	1
rs2734833	11	113422198	G	A	DRD2	-0.03	0	6.6814E-10	0	5.54	0.5944273	2.208E-09	1
rs12520974	5	62218784	T	C	KIF2A	0.03	0	6.6909E-10	0	4.03	0.7768006	2.211E-09	1
rs62404485	6	19270342	C	T	ID4	0.05	0	6.6962E-10	75	28.19	0.0002028	2.531E-11	5.00278E-12
rs138297474	20	64026366	C	CGTGGT	PRPF6	0.04	0	6.7151E-10	0	4.15	0.7621054	2.219E-09	1
rs2371220	5	62220798	G	A	KIF2A	0.03	0	6.7181E-10	0	4.03	0.7767438	2.22E-09	1
rs60157091	5	62213828	C	T	KIF2A	0.03	0	6.7255E-10	0	4.02	0.7774746	2.223E-09	1
rs1324088	6	25840894	G	A	SLC17A3	-0.06	0	6.7269E-10	46	13.13	0.0690711	9.158E-10	2.06273E-10
rs56103269	5	62217478	G	A	KIF2A	0.03	0	6.7291E-10	0	4.01	0.7784378	2.224E-09	1
rs1413378	9	11092632	C	A	PTPRD	0.04	0	6.7346E-10	1	7.1	0.4186078	2.226E-09	1
rs2146079	9	111644369	A	G	DNAJC25,DN	0.03	0	6.7351E-10	0	3.65	0.8189044	2.226E-09	1
rs2747054	6	27815581	A	G	HIST1H2BM	-0.07	0	6.758E-10	21	8.91	0.2594892	4.205E-09	1
rs12373763	2	59891003	G	A	BCL11A	0.04	0	6.7727E-10	23	9.13	0.2436366	3.33E-09	1
rs6868941	5	125208462	A	T	ZNF608	0.03	0	6.7759E-10	0	5.54	0.5941556	2.239E-09	1
rs62410580	3	196530000	G	C	SMCO1	-0.03	0	6.7834E-10	47	13.33	0.0645211	4.635E-09	1
rs12470692	2	59887934	C	G	BCL11A	0.03	0	6.7861E-10	0	6.24	0.5124989	2.242E-09	1

rs10809359	9	11145717	T	C	PTPRD	-0.04	0	6.8042E-10	11	7.95	0.3369322	2.915E-09	1
rs11309093	8	90202786	TA	T	CALB1	0.03	0	6.8107E-10	0	5.79	0.5648374	2.25E-09	1
rs12521971	5	62209661	C	A	KIF2A	0.03	0	6.8236E-10	0	4.01	0.7791271	2.254E-09	1
rs3935212	3	44419462	G	A	LINC00694	-0.03	0	6.8263E-10	0	6.71	0.4598094	2.143E-09	1
rs9865162	3	44644595	C	T	ZNF197	-0.03	0	6.8369E-10	5	7.44	0.3848616	2.259E-09	1
rs8091083	18	53344021	T	A	DCC	0.03	0	6.8454E-10	0	5	0.660109	2.261E-09	1
rs2801617	13	55896707	T	C	PRR20A	0.06	0	6.8494E-10	0	6.83	0.4464919	2.263E-09	1
rs4714293	6	40041827	T	C	MOCS1	-0.03	0	6.863E-10	24	9.29	0.2323787	1.576E-09	1
rs61910571	11	99969331	A	G	CNTN5	0.04	0	6.8784E-10	0	6.89	0.4407485	2.272E-09	1
rs12404559	1	246150019	G	A	SMYD3	-0.04	0	6.8854E-10	0	4.39	0.7343779	2.274E-09	1
rs8124744	20	52645356	A	G	TSHZ2	-0.04	0	6.9018E-10	32	10.35	0.1693768	3.579E-09	1
rs58830312	5	62213859	C	T	KIF2A	0.03	0	6.9094E-10	0	4	0.7797006	2.282E-09	1
rs34915829	6	27729225	C	CT	HIST1H2BL	-0.04	0	6.9129E-10	0	6.15	0.5227921	2.283E-09	1
rs4680469	3	158820267	T	C	MFSD1	-0.04	0	6.9176E-10	0	5.95	0.5457332	2.285E-09	1
rs7709712	5	144493273	T	C	KCTD16	0.03	0	6.9219E-10	0	7.02	0.4264636	1.764E-09	1
rs12714923	3	16104736	A	C	GALNT15	-0.04	0	6.9253E-10	0	4.5	0.7209626	2.287E-09	1
rs761801	6	40029437	G	A	MOCS1	-0.03	0	6.9331E-10	26	9.49	0.2192792	1.504E-09	1
rs58148619	11	99972979	CAT	C	CNTN5	0.04	0	6.9335E-10	0	6.86	0.4436517	2.29E-09	1
rs3845513	1	246150706	C	T	SMYD3	-0.05	0	6.9449E-10	0	6.3	0.5049445	2.294E-09	1
rs117047829	6	164736271	C	T	C6orf118	0.03	0	6.9477E-10	0	1.39	0.9859668	2.295E-09	1
rs72830533	6	19235600	C	A	ID4	0.05	0	6.9542E-10	75	28.45	0.0001822	2.428E-11	4.75108E-12
rs975451	1	67014377	T	C	SLC35D1	0.03	0	6.967E-10	0	4.15	0.7621695	2.301E-09	1
rs9369159	6	40031114	T	C	MOCS1	-0.03	0	6.9671E-10	25	9.45	0.222112	1.523E-09	1
rs9556971	13	98554810	T	C	STK24	0.03	0	6.9696E-10	23	9.12	0.2439902	1.753E-09	1
rs3020316	6	151957037	C	T	ESR1	-0.03	0	6.9715E-10	0	4.85	0.6782016	2.302E-09	1
rs10033503	4	34372047	T	C	ARAP2	0.04	0	6.9724E-10	17	8.47	0.2932486	3.263E-09	1
rs12798681	11	115096498	G	A	CADM1	0.03	0	6.9728E-10	48	13.49	0.0609884	1.569E-09	1
rs73073007	3	49458626	G	A	DAG1	-0.04	0	6.9816E-10	0	4.51	0.7199901	2.306E-09	1
rs12663823	6	19243151	C	T	ID4	0.05	0	7.0041E-10	75	28.43	0.0001836	2.458E-11	4.8753E-12
rs146058500	6	19244646	CTT	C	ID4	0.05	0	7.008E-10	75	28.43	0.0001835	2.459E-11	4.8753E-12

rs56402806	6	19237341	G	A	ID4	0.05	0	7.0159E-10	75	28.45	0.0001823	2.45E-11	4.75108E-12
rs62488697	8	10105184	C	G	MSRA	0.04	0	7.0245E-10	0	5.88	0.5536271	2.319E-09	1
rs200485	6	27807919	G	C	HIST1H2BL	-0.07	0	7.0255E-10	21	8.91	0.2592678	4.37E-09	1
rs553467330	6	40032142	T	TC	MOCS1	-0.03	0	7.0538E-10	25	9.44	0.2226662	1.545E-09	1
rs116870615	11	47158226	G	C	C11orf49	-0.08	0	7.0625E-10	0	5.44	0.6060112	2.299E-09	1
rs56346470	16	77096698	C	A	MON1B	-0.05	0	7.0655E-10	0	5.34	0.618375	2.333E-09	1
rs28588623	3	158835850	A	G	MFSD1	-0.04	0	7.0845E-10	0	6.48	0.4847713	2.339E-09	1
rs1484687	2	22609630	A	G	KLHL29	-0.03	0	7.0863E-10	9	7.75	0.3550017	3.252E-09	1
rs1304602	6	40045732	T	G	MOCS1	-0.03	0	7.1116E-10	26	9.46	0.2212557	1.569E-09	1
rs12521969	5	62217019	A	C	KIF2A	0.03	0	7.1177E-10	0	3.97	0.7836032	2.35E-09	1
rs4968896	17	68146575	T	G	KPNA2	0.03	0	7.1188E-10	0	6.42	0.4916356	2.35E-09	1
rs117121702	10	92883091	C	T	EXOC6	-0.07	0	7.1268E-10	0	3.16	0.8695226	2.353E-09	1
rs2396	1	230465151	C	T	PGBD5	0.03	0	7.1685E-10	7	7.61	0.368607	2.945E-09	1
rs11738586	5	157380771	C	G	CYFIP2	-0.05	0	7.1708E-10	0	5.9	0.5514251	2.367E-09	1
rs2027619	11	115094014	T	C	CADM1	0.03	0	7.1807E-10	48	13.56	0.0596274	1.597E-09	1
rs138786615	6	164740228	ATTGT	A	C6orf118	0.03	0	7.1899E-10	0	1.79	0.9705472	2.373E-09	1
rs3048471	1	67009698	T	TCGG	SLC35D1	0.03	0	7.2104E-10	0	4.09	0.7692451	2.38E-09	1
rs4741105	9	11094489	C	A	PTPRD	0.04	0	7.2198E-10	1	7.12	0.4169095	2.383E-09	1
rs60829979	3	61118408	T	TGTAA	FHIT	-0.04	0	7.2263E-10	58	16.85	0.018405	2.385E-09	1
rs62488714	8	10140470	A	T	MSRA	0.04	0	7.2331E-10	0	3.7	0.8138473	2.387E-09	1
rs200490	6	27829157	G	T	HIST1H4K	-0.07	0	7.2498E-10	21	8.93	0.2575523	4.558E-09	1
rs9556555	13	96309228	A	G	HS6ST3	0.03	0	7.2592E-10	0	3.91	0.7905659	2.395E-09	1
rs73158380	3	158823113	A	G	MFSD1	-0.04	0	7.2603E-10	0	5.94	0.547003	2.396E-09	1
rs34049315	6	40045201	T	TTGTG	MOCS1	-0.03	0	7.2678E-10	25	9.42	0.2237738	1.603E-09	1
rs61969458	13	98525379	A	G	STK24	0.03	0	7.2743E-10	23	9.16	0.2414735	1.841E-09	1
rs112206316	11	48210750	T	A	OR4B1	-0.07	0	7.2899E-10	13	8.07	0.326555	2.099E-09	1
rs200483	6	27807046	G	A	HIST1H2BL	-0.07	0	7.3084E-10	21	8.89	0.2606222	4.552E-09	1
rs9736596	11	99964369	A	G	CNTN5	-0.04	0	7.3133E-10	0	6.89	0.4400006	2.413E-09	1
rs12044278	1	66995294	T	C	SLC35D1	-0.03	0	7.322E-10	0	4.2	0.7563795	2.416E-09	1
rs4353243	11	99963874	A	G	CNTN5	-0.04	0	7.3241E-10	0	6.89	0.4405524	2.416E-09	1

Table S2

rs2815350	1	67011632	G	A	SLC35D1	0.03	0	7.3288E-10	0	4.13	0.7644521	2.418E-09	1
rs10959560	9	11139180	A	T	PTPRD	-0.04	0	7.3486E-10	13	8.1	0.3235992	3.25E-09	1
rs3846846	6	26444811	A	G	BTN3A3	-0.03	0	7.3615E-10	0	4.67	0.7007502	2.429E-09	1
rs62410572	3	196525552	C	A	SMCO1	-0.03	0	7.364E-10	46	13.13	0.0691192	4.418E-09	1
rs3846845	6	26444687	G	A	BTN3A3	-0.03	0	7.3642E-10	0	4.66	0.7007931	2.429E-09	1
rs7320054	13	96324138	A	G	HS6ST3	0.03	0	7.365E-10	0	4.35	0.7392892	2.43E-09	1
rs9517304	13	98444368	A	G	FARP1	-0.03	0	7.3754E-10	60	17.62	0.0138063	1.713E-09	1
rs67019224	1	66972050	GATA	G	MIER1	-0.03	0	7.405E-10	0	4.11	0.7667293	2.443E-09	1
rs3020390	6	151955323	A	G	ESR1	-0.03	0	7.4061E-10	0	4.94	0.6674523	2.443E-09	1
rs7320735	13	96324253	G	C	HS6ST3	0.03	0	7.4102E-10	0	4.35	0.7392898	2.444E-09	1
rs3792253	2	27779135	T	C	MRPL33	-0.03	0	7.4177E-10	0	5.78	0.5657286	2.447E-09	1
rs4772101	13	98555300	G	A	STK24	0.03	0	7.4297E-10	24	9.21	0.2378381	1.86E-09	1
rs11398094	6	151957043	A	AT	ESR1	-0.03	0	7.4348E-10	0	5.07	0.6517858	2.452E-09	1
rs143562407	3	44488263	C	T	ZNF445	0.06	0	7.4463E-10	27	9.59	0.213055	2.733E-09	1
rs180792990	2	197196731	A	G	AC013264.1,A	0.07	0	7.4465E-10	0	4.87	0.6756208	2.456E-09	1
rs2551445	18	55976199	C	T	TCF4	0.05	0	7.4626E-10	0	1.42	0.9848955	2.461E-09	1
rs175597	6	27842848	T	C	HIST1H2BN	-0.07	0	7.4828E-10	18	8.54	0.2874401	4.203E-09	1
rs1439004	3	61118224	A	G	FHIT	-0.04	0	7.4899E-10	58	16.87	0.0182308	1.137E-09	2.54332E-10
rs12125969	1	246177865	C	T	SMYD3	-0.04	0	7.5122E-10	0	4.67	0.6998094	2.477E-09	1
rs113090214	1	66978286	ATAGG	A	MIER1	-0.03	0	7.5136E-10	0	4.13	0.7651226	2.478E-09	1
rs34818702	13	96325258	A	G	HS6ST3	0.03	0	7.519E-10	0	4.35	0.7386477	2.479E-09	1
rs11208979	1	66976592	C	T	MIER1	-0.03	0	7.522E-10	0	4.17	0.7600514	2.48E-09	1
rs9556554	13	96307892	C	T	HS6ST3	0.03	0	7.5231E-10	0	3.98	0.7825959	2.481E-09	1
rs9356262	6	164732418	T	C	C6orf118	0.03	0	7.5287E-10	0	1.27	0.9892479	2.483E-09	1
rs11647352	16	77061147	G	A	MON1B	-0.05	0	7.5326E-10	0	4.15	0.7627041	2.484E-09	1
rs12615147	2	59928529	A	C	BCL11A	0.03	0	7.5337E-10	21	8.91	0.2591638	3.512E-09	1
rs145191754	14	42973559	AAATT	A	LRFN5	0.05	0	7.544E-10	15	8.26	0.3104342	2.45E-09	1
rs1870830	3	158823808	T	C	MFSD1	-0.04	0	7.5534E-10	0	5.94	0.5467572	2.491E-09	1
rs35092596	13	96325138	T	G	HS6ST3	0.03	0	7.5677E-10	0	4.34	0.7401363	2.495E-09	1
rs111981302	14	42973360	T	G	LRFN5	0.05	0	7.5749E-10	15	8.25	0.3107119	2.46E-09	1

Table S2

rs2815361	1	67028908	G	T	SLC35D1	0.03	0	7.5859E-10	0	4.16	0.7608074	2.501E-09	1
rs13100782	3	196526174	A	G	SMCO1	-0.03	0	7.6247E-10	46	13.17	0.0680965	4.565E-09	1
rs4916518	3	196526392	T	G	SMCO1	-0.03	0	7.6307E-10	46	13.16	0.0682778	4.57E-09	1
rs9937546	16	72969820	T	C	ZFHX3	-0.03	0	7.6333E-10	20	8.85	0.2635364	2.516E-09	1
rs1972855	3	61117049	A	G	FHIT	-0.04	0	7.6335E-10	58	16.86	0.0183062	1.162E-09	2.61081E-10
rs2365059	3	61116619	T	C	FHIT	-0.04	0	7.6336E-10	58	16.86	0.0183061	1.162E-09	2.61081E-10
rs7942348	11	66947888	G	A	PC	-0.03	0	7.6381E-10	40	11.85	0.1055473	2.686E-09	1
rs7107922	11	47647737	C	A	MTCH2	0.03	0	7.6408E-10	4	7.34	0.3939916	2.519E-09	1
rs79459927	11	99975293	G	A	CNTN5	0.04	0	7.6461E-10	0	6.93	0.4360409	2.521E-09	1
rs6445193	3	61121394	T	C	FHIT	-0.04	0	7.6567E-10	58	16.78	0.0188498	2.524E-09	1
rs146392518	1	66958314	T	TTTCTC	MIER1	0.03	0	7.6606E-10	0	4.18	0.7583153	2.525E-09	1
rs11313486	1	67006689	TG	T	SLC35D1	0.03	0	7.6664E-10	0	4.17	0.7600533	2.527E-09	1
rs7129797	11	47645615	G	C	MTCH2	0.03	0	7.6718E-10	5	7.38	0.3908874	2.529E-09	1
rs7627230	3	61121214	T	C	FHIT	-0.04	0	7.6724E-10	58	16.78	0.0188405	1.339E-09	3.05526E-10
rs147195452	15	46222239	A	G	SQRDL	0.05	0	7.6738E-10	47	13.35	0.0640134	3.05E-09	1
rs7615464	3	196525654	C	T	SMCO1	-0.03	0	7.676E-10	46	13.16	0.0682041	4.596E-09	1
rs2009311	1	67015554	C	T	SLC35D1	0.03	0	7.6835E-10	0	4.17	0.7595052	2.533E-09	1
rs975452	1	67014507	A	T	SLC35D1	0.03	0	7.6846E-10	0	4.17	0.7594891	2.533E-09	1
rs1479551	3	2522511	A	G	CNTN4	-0.03	0	7.6862E-10	13	8.14	0.3206953	2.157E-09	1
rs2985822	1	66939227	T	G	MIER1	0.03	0	7.6921E-10	0	4.17	0.7602872	2.535E-09	1
rs6772452	3	49003029	A	G	P4HTM	-0.04	0	7.6935E-10	32	10.29	0.1724733	3.759E-09	1
rs1324087	6	25841180	G	A	SLC17A3	-0.06	0	7.6954E-10	46	13.13	0.0690328	1.049E-09	2.35117E-10
rs10198465	2	194224602	G	A	SLC39A10	-0.06	0	7.697E-10	34	10.71	0.1520132	3.451E-09	1
rs4841280	8	10099042	G	A	MSRA	-0.04	0	7.6989E-10	0	3.19	0.8665264	2.538E-09	1
rs2065001	1	67020826	C	G	SLC35D1	0.03	0	7.6995E-10	0	4.18	0.7592641	2.538E-09	1
rs2815348	1	67006482	G	C	SLC35D1	0.03	0	7.7076E-10	0	4.18	0.7592105	2.54E-09	1
rs34882801	1	67007482	A	AG	SLC35D1	0.03	0	7.7076E-10	0	4.18	0.7592105	2.54E-09	1
rs345904	2	8550795	A	G	ID2	0.03	0	7.7076E-10	0	4.8	0.6838026	2.54E-09	1
rs12044492	1	66995984	T	C	SLC35D1	-0.03	0	7.7077E-10	0	4.18	0.7592822	2.54E-09	1
rs12143044	1	66994371	A	T	SLC35D1	-0.03	0	7.7077E-10	0	4.18	0.7592822	2.54E-09	1

Table S2

rs2065000	1	67002441	G	C	SLC35D1	-0.03	0	7.7077E-10	0	4.18	0.7592822	2.54E-09	1
rs6673462	1	66996174	A	C	SLC35D1	-0.03	0	7.7077E-10	0	4.18	0.7592822	2.54E-09	1
rs12132532	1	66991332	G	T	MIER1	-0.03	0	7.7105E-10	0	4.18	0.7592926	2.541E-09	1
rs12377572	9	11145582	C	T	PTPRD	-0.04	0	7.7128E-10	12	8	0.332251	3.331E-09	1
rs67651198	3	49003302	CTGTGGCT	C	P4HTM	-0.04	0	7.7201E-10	32	10.45	0.1645997	3.838E-09	1
rs35463245	2	27777857	C	G	MRPL33	-0.03	0	7.7209E-10	0	5.84	0.5590708	2.545E-09	1
rs9556550	13	96294780	A	C	HS6ST3	0.03	0	7.7286E-10	0	3.93	0.7876591	2.547E-09	1
rs9365754	6	164695168	A	C	C6orf118	0.03	0	7.736E-10	0	1.31	0.9882969	2.55E-09	1
rs2985824	1	66944488	A	G	MIER1	0.03	0	7.738E-10	0	4.15	0.7624402	2.55E-09	1
rs7613052	3	158835092	T	G	MFSD1	-0.04	0	7.7425E-10	0	6.17	0.5202441	2.552E-09	1
rs10934270	3	114384900	C	T	ZBTB20	-0.03	0	7.7711E-10	0	6.39	0.495181	2.561E-09	1
rs3008873	1	66960087	G	A	MIER1	0.03	0	7.7789E-10	0	4.1	0.7683856	2.563E-09	1
rs7117396	11	115106897	A	G	CADM1	-0.04	0	7.7804E-10	19	8.73	0.2728675	4.264E-09	1
rs2985818	1	66933233	G	A	MIER1	0.03	0	7.788E-10	0	4.15	0.7625032	2.566E-09	1
rs2365058	3	61116613	T	G	FHIT	-0.04	0	7.8121E-10	58	16.8	0.0187514	1.205E-09	2.75124E-10
rs17006242	2	27778184	C	A	MRPL33	-0.03	0	7.8175E-10	0	5.85	0.5567986	2.576E-09	1
rs34042835	3	44665085	AATT	A	ZNF35	-0.03	0	7.8182E-10	5	7.44	0.3847756	2.576E-09	1
rs2278764	8	491776	C	T	TDRP	0.05	0	7.8281E-10	0	5.06	0.6530609	2.579E-09	1
rs144234480	15	46164970	T	C	SQRDL	0.05	0	7.8307E-10	46	13.16	0.0683609	3.29E-09	1
rs10946310	6	19278954	T	G	ID4	0.03	0	7.8346E-10	35	10.81	0.1471048	1.738E-09	1
rs9364756	6	164697191	T	A	C6orf118	0.03	0	7.8355E-10	0	1.31	0.9880505	2.582E-09	1
rs9554340	13	96321858	T	C	HS6ST3	0.03	0	7.8473E-10	0	3.93	0.7881754	2.586E-09	1
rs76686883	1	66949936	AC	A	MIER1	0.03	0	7.8483E-10	0	4.16	0.7609371	2.586E-09	1
rs6719762	2	59939697	T	C	BCL11A	0.03	0	7.86E-10	42	12.16	0.0954816	2.996E-09	1
rs10517307	4	34380605	G	T	ARAP2	0.04	0	7.8659E-10	17	8.46	0.2935614	3.689E-09	1
rs144715921	2	195432662	A	G	SLC39A10	0.07	0	7.8757E-10	0	3.11	0.8741963	2.595E-09	1
rs6456802	6	27730576	A	G	HIST1H2BL	-0.04	0	7.8981E-10	0	6.07	0.5318458	2.602E-09	1
rs761799	6	40022311	T	A	MOCS1	-0.03	0	7.9008E-10	26	9.55	0.2153074	1.7E-09	1
rs2395543	6	39997281	A	G	MOCS1	-0.03	0	7.9171E-10	25	9.37	0.2269242	1.765E-09	1
rs182197453	11	48410982	A	G	OR4C5	-0.07	0	7.9195E-10	11	7.89	0.3419742	2.313E-09	1

Table S2

rs36128756	11	48410977	A	G	OR4C5	-0.07	0	7.9195E-10	11	7.89	0.3419742	2.313E-09	1
rs554331752	11	48410981	C	G	OR4C5	-0.07	0	7.9195E-10	11	7.89	0.3419742	2.313E-09	1
rs12376448	9	11142732	C	A	PTPRD	-0.04	0	7.9361E-10	12	7.97	0.3356091	3.401E-09	1
rs12039172	1	66981767	A	G	MIER1	-0.03	0	7.9385E-10	0	4.18	0.7592267	2.615E-09	1
rs12117131	1	66986239	C	T	MIER1	-0.03	0	7.9385E-10	0	4.18	0.7592267	2.615E-09	1
rs142144569	1	66988113	T	TGTGTGCT(	MIER1	-0.03	0	7.9385E-10	0	4.18	0.7592267	2.615E-09	1
rs4620509	1	66984258	A	G	MIER1	-0.03	0	7.9385E-10	0	4.18	0.7592267	2.615E-09	1
rs58680688	1	66978068	C	G	MIER1	-0.03	0	7.9385E-10	0	4.18	0.7592267	2.615E-09	1
rs12132068	1	66986241	G	T	MIER1	-0.03	0	7.941E-10	0	4.18	0.7592385	2.616E-09	1
rs4655659	1	66936913	T	C	MIER1	0.03	0	7.9681E-10	0	4.17	0.7602896	2.625E-09	1
rs13316352	3	158824788	G	C	MFSD1	-0.04	0	7.9717E-10	0	6.02	0.5372326	2.626E-09	1
rs9556559	13	96322098	C	T	HS6ST3	0.03	0	7.9784E-10	0	3.92	0.788514	2.628E-09	1
rs11787621	9	11064821	C	T	PTPRD	-0.03	0	7.9786E-10	0	6.59	0.4727547	2.628E-09	1
rs2985826	1	66947235	G	C	MIER1	0.03	0	7.979E-10	0	4.18	0.7591072	2.628E-09	1
rs1996928	20	52644875	G	A	TSHZ2	-0.04	0	7.993E-10	32	10.36	0.1689382	4.118E-09	1
rs2985817	1	66932924	G	C	MIER1	0.03	0	7.9966E-10	0	4.17	0.7599017	2.634E-09	1
rs58982057	9	11144237	C	T	PTPRD	-0.04	0	7.9996E-10	12	7.99	0.3335836	3.444E-09	1
rs12740884	1	66994172	C	A	SLC35D1	-0.03	0	8.0024E-10	0	4.17	0.7604494	2.636E-09	1
rs2985830	1	66954908	C	G	MIER1	0.03	0	8.0037E-10	0	4.17	0.7594209	2.636E-09	1
rs349700	5	144476352	A	G	KCTD16	0.03	0	8.0043E-10	0	6.67	0.464018	2.162E-09	1
rs3008871	1	66953406	G	A	MIER1	0.03	0	8.0291E-10	0	4.18	0.7589548	2.644E-09	1
rs2985794	1	66959628	T	G	MIER1	0.03	0	8.0311E-10	0	4.18	0.7583872	2.645E-09	1
rs10002489	4	34377320	A	C	ARAP2	0.04	0	8.0493E-10	17	8.43	0.2958643	3.745E-09	1
rs35249294	4	34377248	T	TGATA	ARAP2	0.04	0	8.0551E-10	17	8.43	0.2958559	3.748E-09	1
rs80310742	2	2346450	G	A	MYT1L	-0.11	0	8.0576E-10	9	7.72	0.3582855	3.102E-09	1
rs72646416	13	98580662	C	G	STK24	0.03	0	8.0591E-10	39	11.59	0.1148354	1.518E-09	1
rs3008865	1	66937155	T	C	MIER1	0.03	0	8.0625E-10	0	4.18	0.7584273	2.655E-09	1
rs34367328	1	66979638	T	C	MIER1	-0.03	0	8.0638E-10	0	4.18	0.7590602	2.655E-09	1
rs12901462	15	58024289	A	G	ALDH1A2	0.03	0	8.0649E-10	52	14.73	0.039567	1.065E-09	2.41355E-10
rs12225506	11	115110746	G	A	CADM1	-0.04	0	8.0656E-10	19	8.74	0.2717711	4.423E-09	1

Table S2

rs912797	1	66947795	A	G	MIER1	0.03	0	8.069E-10	0	4.18	0.7584135	2.657E-09	1
rs1925413	1	66951418	T	C	MIER1	0.03	0	8.0693E-10	0	4.18	0.7584089	2.657E-09	1
rs2025608	1	66956867	C	T	MIER1	0.03	0	8.0693E-10	0	4.18	0.7584089	2.657E-09	1
rs2985797	1	66965816	T	C	MIER1	0.03	0	8.0693E-10	0	4.18	0.7584089	2.657E-09	1
rs3008874	1	66965682	A	T	MIER1	0.03	0	8.0693E-10	0	4.18	0.7584089	2.657E-09	1
rs7511948	1	66964744	A	G	MIER1	0.03	0	8.0693E-10	0	4.18	0.7584089	2.657E-09	1
rs75849167	1	66950838	ATC	A	MIER1	0.03	0	8.0693E-10	0	4.18	0.7584089	2.657E-09	1
rs11208976	1	66968728	A	G	MIER1	-0.03	0	8.0699E-10	0	4.18	0.7584837	2.657E-09	1
rs12131222	1	66972852	A	T	MIER1	-0.03	0	8.0699E-10	0	4.18	0.7584837	2.657E-09	1
rs12137403	1	66971360	C	T	MIER1	-0.03	0	8.0699E-10	0	4.18	0.7584837	2.657E-09	1
rs3008875	1	66966348	C	T	MIER1	-0.03	0	8.0699E-10	0	4.18	0.7584837	2.657E-09	1
rs35365746	1	66973217	G	A	MIER1	-0.03	0	8.0699E-10	0	4.18	0.7584837	2.657E-09	1
rs1925412	1	66939374	G	A	MIER1	0.03	0	8.0749E-10	0	4.18	0.7584512	2.659E-09	1
rs72837273	17	49566388	C	T	NXPH3	-0.05	0	8.0777E-10	29	9.98	0.1898274	4.004E-09	1
rs2985821	1	66938104	G	A	MIER1	0.03	0	8.0815E-10	0	4.18	0.7583992	2.661E-09	1
rs2389631	13	96280614	A	C	HS6ST3	0.03	0	8.082E-10	0	4.52	0.7188503	2.661E-09	1
rs62302746	4	46614259	C	G	COX7B2	0.04	0	8.082E-10	0	5.99	0.5412983	2.661E-09	1
rs113890824	15	58024168	GGAAGA	G	ALDH1A2	0.03	0	8.0828E-10	52	14.73	0.0395643	1.067E-09	2.41355E-10
rs16894116	6	28447190	G	T	ZSCAN23	-0.05	0	8.0922E-10	1	7.13	0.4152694	2.832E-09	1
rs4772104	13	98583423	G	A	STK24	0.03	0	8.1009E-10	36	10.99	0.1391374	1.933E-09	1
rs7553994	1	115793919	C	G	CASQ2	0.11	0	8.1079E-10	0	4.19	0.7571204	2.67E-09	1
rs2985825	1	66947139	T	G	MIER1	0.03	0	8.1088E-10	0	4.19	0.7573819	2.67E-09	1
rs2815351	1	67012297	A	G	SLC35D1	0.03	0	8.1195E-10	0	4.17	0.7605272	2.673E-09	1
rs11322381	1	66958474	TA	T	MIER1	0.03	0	8.1226E-10	0	4.19	0.758101	2.674E-09	1
rs9554338	13	96314060	G	A	HS6ST3	0.03	0	8.1435E-10	0	3.94	0.7862051	2.681E-09	1
rs2056925	6	27723126	A	G	HIST1H2BL	-0.04	0	8.1438E-10	0	6.63	0.4679474	2.681E-09	1
rs2734835	11	113420621	T	G	DRD2	-0.03	0	8.1468E-10	0	5.98	0.5422698	2.682E-09	1
rs57064082	9	11141831	TAC	T	PTPRD	-0.04	0	8.1499E-10	12	7.96	0.335953	3.488E-09	1
rs2815373	1	67040097	C	T	SLC35D1	0.03	0	8.1583E-10	0	4.2	0.7560773	2.686E-09	1
rs1433718	6	40390527	C	T	LRFN2	0.03	0	8.1697E-10	0	1.29	0.9886142	2.69E-09	1

Table S2

rs12911071	15	58022650	G	A	ALDH1A2	0.03	0	8.1716E-10	52	14.74	0.0394741	1.078E-09	2.41355E-10
rs1892928	11	67026637	T	C	SYT12	-0.03	0	8.1758E-10	7	7.57	0.3722863	3.082E-09	1
rs35499003	3	35739148	T	C	ARPP21	0.04	0	8.1862E-10	27	9.69	0.2066258	4.767E-09	1
rs12910752	15	58022481	G	A	ALDH1A2	0.03	0	8.1906E-10	52	14.74	0.0394597	1.08E-09	2.41355E-10
rs1474870	6	40012620	A	G	MOCS1	0.03	0	8.1945E-10	20	8.8	0.2670013	2.069E-09	1
rs75700029	13	96327209	T	C	HS6ST3	0.03	0	8.1997E-10	0	4.32	0.7423669	2.699E-09	1
rs7765989	6	28432518	T	C	ZSCAN23	-0.05	0	8.203E-10	1	7.11	0.4173115	2.845E-09	1
rs71559082	6	28404415	C	T	ZSCAN12	-0.05	0	8.2071E-10	1	7.11	0.4173066	2.846E-09	1
rs6458154	6	40386267	A	G	LRFN2	0.03	0	8.216E-10	0	1.29	0.9886102	2.705E-09	1
rs1925119	13	96287332	C	A	HS6ST3	0.03	0	8.2247E-10	0	4.58	0.7114295	2.707E-09	1
rs9465305	6	19227627	C	T	ID4	0.03	0	8.2315E-10	36	11.03	0.1373795	1.787E-09	1
rs12800853	11	113431792	C	T	DRD2	-0.03	0	8.2472E-10	0	5.82	0.5608866	2.715E-09	1
rs2475496	6	39996111	T	C	MOCS1	-0.03	0	8.2521E-10	25	9.36	0.2276406	1.842E-09	1
rs2727764	7	105934982	A	C	CDHR3	-0.03	0	8.2571E-10	0	5.73	0.5711392	2.718E-09	1
rs7131440	11	113429188	C	T	DRD2	-0.03	0	8.3028E-10	0	5.81	0.5618708	2.733E-09	1
rs7869639	9	11141119	G	A	PTPRD	-0.04	0	8.3098E-10	12	7.96	0.3365492	3.55E-09	1
rs6922574	6	27725224	A	T	HIST1H2BL	-0.04	0	8.3333E-10	0	6.07	0.5311008	2.742E-09	1
rs200949	6	27867657	A	G	HIST1H1B	-0.07	0	8.3478E-10	17	8.52	0.2886797	4.698E-09	1
rs3784263	15	57960864	C	T	ALDH1A2	0.03	0	8.3591E-10	46	13.12	0.0692339	1.849E-09	1
rs12041926	1	66968919	C	T	MIER1	-0.03	0	8.3672E-10	0	4.21	0.7557479	2.753E-09	1
rs16882003	6	19302552	C	T	ID4	0.05	0	8.4003E-10	76	29.19	0.0001336	1.876E-11	3.67036E-12
rs1923461	6	40016931	A	T	MOCS1	-0.03	0	8.4009E-10	26	9.5	0.2189618	1.829E-09	1
rs56083336	6	19302252	G	A	ID4	0.05	0	8.4016E-10	76	29.19	0.0001334	1.874E-11	3.67036E-12
rs7710751	5	62208562	G	A	KIF2A	0.03	0	8.4125E-10	0	4.08	0.7710312	2.768E-09	1
rs11675976	2	59890356	A	G	BCL11A	0.04	0	8.4165E-10	24	9.22	0.2372391	4.147E-09	1
rs9554341	13	96328495	G	A	HS6ST3	0.03	0	8.4257E-10	0	4.26	0.7495858	2.772E-09	1
rs1544850	2	59940071	C	T	BCL11A	0.03	0	8.4527E-10	42	12.2	0.094313	3.211E-09	1
rs10533001	13	98581777	AATC	A	STK24	0.03	0	8.4667E-10	39	11.59	0.1147333	1.585E-09	1
rs7131465	11	113429300	A	C	DRD2	-0.03	0	8.4773E-10	0	5.79	0.5648188	2.789E-09	1
rs72954140	2	207484043	G	A	CREB1	0.04	0	8.4836E-10	27	9.7	0.2061593	2.732E-09	1

Table S2

rs7131681	11	113429330	C	T	DRD2	-0.03	0	8.4902E-10	0	5.79	0.5642087	2.793E-09	1
rs485565	6	153209533	G	T	RGS17	0.03	0	8.4926E-10	0	3.32	0.8534323	2.794E-09	1
rs72954144	2	207485802	G	A	CREB1	0.04	0	8.4933E-10	27	9.7	0.2062075	2.735E-09	1
rs548987	6	25869143	G	C	SLC17A3	-0.06	0	8.4994E-10	42	12.08	0.0978527	1.462E-09	3.30522E-10
rs7190185	16	29951031	A	G	TMEM219	-0.03	0	8.5068E-10	20	8.79	0.2683727	4.269E-09	1
rs9347909	6	164707444	G	T	C6orf118	0.03	0	8.5091E-10	0	1.88	0.9661902	2.799E-09	1
rs7323056	13	96303946	C	A	HS6ST3	0.03	0	8.5171E-10	0	3.95	0.7851546	2.802E-09	1
rs67869107	6	27726260	GTGACTAT	G	HIST1H2BL	-0.04	0	8.5546E-10	0	6.08	0.5309642	2.814E-09	1
rs11642612	16	30018874	A	C	DOC2A	-0.03	0	8.5571E-10	30	10.05	0.1858275	4.612E-09	1
rs7131627	11	113429107	G	A	DRD2	-0.03	0	8.5684E-10	0	5.79	0.5649078	2.818E-09	1
rs1925115	13	96306563	G	A	HS6ST3	0.03	0	8.5715E-10	0	3.95	0.7860439	2.819E-09	1
rs55666766	2	207483644	G	A	CREB1	0.04	0	8.5731E-10	27	9.7	0.2060852	2.76E-09	1
rs12798900	11	113428274	G	T	DRD2	-0.03	0	8.5849E-10	0	5.79	0.5648883	2.824E-09	1
rs568234	13	55981953	A	G	PRR20A	0.06	0	8.6008E-10	0	6.22	0.5140497	2.829E-09	1
rs9379874	6	26440201	A	T	BTN3A3	-0.03	0	8.6032E-10	0	4.62	0.7057211	2.829E-09	1
rs200465	6	27789875	T	A	HIST1H2BL	-0.04	0	8.6238E-10	0	6.7	0.4612216	2.836E-09	1
rs35613794	1	231025063	C	T	FAM89A	0.03	0	8.6331E-10	24	9.25	0.2350489	4.016E-09	1
rs7759622	6	40146996	C	T	MOCS1	0.03	0	8.6435E-10	16	8.42	0.2966207	2.362E-09	1
rs4771932	13	96298288	G	A	HS6ST3	0.03	0	8.644E-10	0	3.96	0.7843621	2.843E-09	1
rs62404524	6	19309218	G	C	ID4	0.05	0	8.6473E-10	76	29.17	0.0001348	1.956E-11	3.86477E-12
rs16927425	12	24293581	G	C	SOX5	-0.07	0	8.6485E-10	0	3.17	0.8686661	2.844E-09	1
rs12205682	6	19232210	C	T	ID4	0.03	0	8.6506E-10	36	11.04	0.1368217	1.87E-09	1
rs2734839	11	113415768	C	T	DRD2	-0.03	0	8.6677E-10	0	5.93	0.5475824	2.85E-09	1
rs2734837	11	113416107	C	T	DRD2	-0.03	0	8.6698E-10	0	5.93	0.5475712	2.851E-09	1
rs1107162	11	113418315	G	A	DRD2	-0.03	0	8.6862E-10	0	5.93	0.5475113	2.856E-09	1
rs138296701	11	48389572	C	T	OR4C5	-0.07	0	8.69E-10	10	7.85	0.3457255	2.539E-09	1
rs6491285	13	96292676	T	A	HS6ST3	0.03	0	8.704E-10	0	3.95	0.7850265	2.862E-09	1
rs2200442	16	77019881	A	C	MON1B	-0.03	0	8.7193E-10	0	6.85	0.4448653	2.867E-09	1
rs7200003	16	72152788	A	T	PMFBP1	0.03	0	8.721E-10	0	3.03	0.8824561	2.867E-09	1
rs7988861	13	96330370	C	T	HS6ST3	0.03	0	8.7273E-10	0	4.38	0.734831	2.869E-09	1

rs471508	6	153209312	C	T	RGS17	0.03	0	8.7376E-10	0	3.34	0.8518604	2.873E-09	1
rs16953068	13	96297073	C	G	HS6ST3	0.03	0	8.744E-10	0	3.96	0.7849132	2.875E-09	1
rs7204797	16	29956694	C	T	TMEM219	-0.03	0	8.7783E-10	20	8.77	0.2698223	4.401E-09	1
rs12376469	9	11142835	C	G	PTPRD	-0.04	0	8.7785E-10	12	8.04	0.3290032	3.824E-09	1
rs113293097	2	22619321	C	CA	KLHL29	-0.03	0	8.7824E-10	0	6.48	0.4847641	2.887E-09	1
rs7642109	3	61127485	A	G	FHIT	-0.03	0	8.7921E-10	0	6.21	0.515547	2.89E-09	1
rs9554339	13	96318020	G	C	HS6ST3	0.03	0	8.7952E-10	0	3.94	0.7861932	2.891E-09	1
rs200954	6	27870986	C	G	HIST1H3I	-0.07	0	8.803E-10	21	8.89	0.2607563	5.41E-09	1
rs147007430	15	46225288	C	T	SQRDL	0.05	0	8.8041E-10	46	13.17	0.0681743	2.894E-09	1
rs17725532	11	46073622	C	T	PHF21A	0.04	0	8.8087E-10	18	8.54	0.2876261	2.727E-09	1
rs9393710	6	26367605	A	G	BTN3A2	-0.06	0	8.8089E-10	0	2.01	0.9595072	2.896E-09	1
rs7724666	5	157390368	C	T	CYFIP2	-0.05	0	8.827E-10	0	5.87	0.5548868	2.902E-09	1
rs61966875	13	96284271	C	A	HS6ST3	0.03	0	8.855E-10	0	3.89	0.7924558	2.911E-09	1
rs3923570	7	71303668	G	T	WBSCR17	0.04	0	8.8792E-10	0	5.05	0.6543852	2.909E-09	1
rs76542911	17	68059778	G	A	KPNA2	0.04	0	8.8795E-10	0	6.86	0.4438411	2.919E-09	1
rs7866090	9	11140883	A	G	PTPRD	-0.04	0	8.8896E-10	12	8.02	0.3309964	3.868E-09	1
rs9329214	8	10094413	G	A	MSRA	-0.04	0	8.8986E-10	0	3.06	0.879496	2.925E-09	1
rs11150576	16	29954175	C	T	TMEM219	-0.03	0	8.9034E-10	20	8.85	0.2638416	4.495E-09	1
rs9348775	6	27727550	C	T	HIST1H2BL	-0.04	0	8.9084E-10	0	6.09	0.5295366	2.928E-09	1
rs28654624	4	34374628	A	C	ARAP2	0.04	0	8.9154E-10	17	8.51	0.2898855	4.193E-09	1
rs1506659	3	44870951	A	G	KIF15	-0.03	0	8.9161E-10	20	8.83	0.2654483	3.363E-09	1
rs11432080	13	96318665	G	GT	HS6ST3	0.03	0	8.9211E-10	0	3.95	0.7860457	2.932E-09	1
rs7337506	13	96284724	G	A	HS6ST3	0.03	0	8.9315E-10	0	3.88	0.7930898	2.935E-09	1
rs2755240	1	67011656	T	G	SLC35D1	0.03	0	8.9458E-10	0	4.06	0.7731084	2.94E-09	1
rs12233703	4	142709024	A	T	INPP4B	0.03	0	8.9627E-10	43	12.49	0.0856945	5.586E-09	1
rs11710798	3	48533253	A	C	PFKFB4	-0.04	0	8.9629E-10	0	4.39	0.7339646	2.945E-09	1
rs1961836	4	142707997	G	A	INPP4B	0.03	0	8.9853E-10	43	12.49	0.0856679	5.598E-09	1
rs11214605	11	113429879	C	T	DRD2	-0.03	0	8.9983E-10	0	5.77	0.5665555	2.957E-09	1
rs13005495	2	59929962	T	G	BCL11A	0.03	0	9.0147E-10	20	8.81	0.2665096	4.163E-09	1
rs9468223	6	27772887	C	T	HIST1H2BL	-0.04	0	9.015E-10	0	6.64	0.4668797	2.962E-09	1

rs2179094	6	27774046	T	C	HIST1H2BL	-0.04	0	9.0217E-10	0	6.64	0.466962	2.964E-09	1
rs1985099	6	27774256	A	G	HIST1H2BL	-0.04	0	9.0242E-10	0	6.64	0.4669729	2.965E-09	1
rs144009148	11	47198576	T	C	PACSIN3	-0.08	0	9.0257E-10	0	5.11	0.6463728	2.962E-09	1
rs7865888	9	11140428	G	C	PTPRD	-0.04	0	9.0311E-10	12	8	0.33262	3.9E-09	1
rs11922386	3	18662792	G	C	SATB1	0.03	0	9.0553E-10	12	8.04	0.3293295	4.222E-09	1
rs12723140	1	230460074	T	A	PGBD5	0.03	0	9.0767E-10	10	7.79	0.3519269	3.887E-09	1
rs34515214	1	230460069	A	G	PGBD5	0.03	0	9.0799E-10	10	7.79	0.3519186	3.888E-09	1
rs11649535	16	71557623	A	G	ZNF19	0.04	0	9.0815E-10	0	3.97	0.7827924	2.984E-09	1
rs2237236	6	26451325	A	G	BTN3A3	-0.03	0	9.1039E-10	0	4.66	0.7011598	2.991E-09	1
rs4788196	16	29956113	A	G	TMEM219	-0.03	0	9.1189E-10	20	8.84	0.2641168	4.608E-09	1
rs7193532	16	29951481	G	A	TMEM219	-0.03	0	9.1232E-10	20	8.85	0.2639141	4.612E-09	1
rs11646127	16	29954956	G	C	TMEM219	-0.03	0	9.1363E-10	20	8.84	0.264248	4.615E-09	1
rs140224092	16	28863069	T	C	SH2B1	0.11	0	9.137E-10	0	5.11	0.6460673	3.001E-09	1
rs1547089	9	111644941	G	A	DNAJC25,DN	0.03	0	9.1381E-10	0	3.75	0.807653	3.002E-09	1
rs7981845	13	96290279	C	T	HS6ST3	0.03	0	9.1394E-10	0	3.95	0.7859575	3.002E-09	1
rs7981931	13	96281922	C	T	HS6ST3	0.03	0	9.1417E-10	0	3.91	0.7899983	3.003E-09	1
rs4972572	2	173462349	C	G	CDCA7	-0.03	0	9.158E-10	0	6.52	0.4806495	3.008E-09	1
rs2200443	16	77020003	T	G	MON1B	-0.04	0	9.1604E-10	0	4.59	0.7098823	3.009E-09	1
rs9556551	13	96294969	T	A	HS6ST3	0.03	0	9.1677E-10	0	3.96	0.7848023	3.011E-09	1
rs35497369	3	35739243	T	C	ARPP21	0.04	0	9.1698E-10	28	9.73	0.2046749	5.278E-09	1
rs11597992	10	90970475	C	T	ANKRD1	-0.04	0	9.175E-10	52	14.75	0.0393102	5.383E-09	1
rs12364441	11	46035522	T	C	PHF21A	0.04	0	9.1883E-10	18	8.6	0.2827287	2.821E-09	1
rs1267067	2	161151237	T	C	TANK	-0.03	0	9.2223E-10	0	3.15	0.8705968	3.029E-09	1
rs589249	1	36696751	A	G	GRIK3	0.03	0	9.2247E-10	38	11.47	0.1193766	2.395E-09	1
rs963593	8	10115861	G	C	MSRA	0.04	0	9.2253E-10	0	3.09	0.8765876	3.03E-09	1
rs349681	5	144469827	G	C	KCTD16	0.03	0	9.2375E-10	0	6.87	0.4423025	2.429E-09	1
rs12871045	13	96319467	G	T	HS6ST3	0.03	0	9.2376E-10	0	3.94	0.7865691	3.034E-09	1
rs1267068	2	161155624	T	G	TANK	-0.03	0	9.246E-10	0	3.15	0.8705997	3.037E-09	1
rs10178778	2	22677755	T	C	KLHL29	0.03	0	9.2585E-10	1	7.12	0.4160892	3.244E-09	1
rs10635165	6	151957526	A	ATTGTT	ESR1	-0.03	0	9.2621E-10	0	4.93	0.668385	3.042E-09	1

rs7320065	13	96285484	C	G	HS6ST3	0.03	0	9.2721E-10	0	3.94	0.7872072	3.045E-09	1
rs1107379	13	98546667	C	T	STK24	0.03	0	9.2796E-10	25	9.36	0.2276194	2.29E-09	1
rs61857869	10	90999181	A	T	ANKRD1	-0.05	0	9.2802E-10	0	5.29	0.6246611	3.048E-09	1
rs61971163	13	98536629	G	A	STK24	0.03	0	9.2864E-10	24	9.25	0.235372	2.338E-09	1
rs2983118	1	36698277	A	G	GRIK3	0.03	0	9.2876E-10	39	11.57	0.1156049	2.373E-09	1
rs1267079	2	161177343	T	C	TANK	-0.03	0	9.2893E-10	0	3.42	0.8431382	3.051E-09	1
rs11357135	6	151957665	GT	G	ESR1	-0.03	0	9.2957E-10	0	4.95	0.6661803	3.053E-09	1
rs4772099	13	98543867	A	C	STK24	0.03	0	9.3453E-10	25	9.36	0.2278353	2.306E-09	1
rs7991843	13	96318732	C	T	HS6ST3	0.03	0	9.3487E-10	0	3.94	0.7867777	3.07E-09	1
rs7555990	1	162872114	C	T	CCDC190	0.04	0	9.352E-10	40	11.83	0.1063544	1.035E-08	1
rs2092075	6	27781551	G	C	HIST1H2BL	-0.04	0	9.3588E-10	0	6.66	0.464618	3.073E-09	1
rs189794341	2	196053373	A	C	DNAH7	0.07	0	9.3689E-10	0	4.47	0.724286	3.076E-09	1
rs2394002	6	27780236	G	A	HIST1H2BL	-0.04	0	9.3694E-10	0	6.67	0.4643349	3.076E-09	1
rs2893931	6	27780231	G	A	HIST1H2BL	-0.04	0	9.3694E-10	0	6.67	0.4643349	3.076E-09	1
rs148714825	6	25923189	A	AAAAC	SLC17A2	-0.06	0	9.3752E-10	0	5.75	0.5696747	3.078E-09	1
rs56374954	10	90999330	G	A	ANKRD1	-0.05	0	9.3772E-10	0	5.29	0.6246033	3.079E-09	1
rs9468229	6	27782307	G	A	HIST1H2BL	-0.04	0	9.3777E-10	0	6.66	0.4647744	3.079E-09	1
rs13211701	6	27782300	T	C	HIST1H2BL	-0.04	0	9.3777E-10	0	6.66	0.4647748	3.079E-09	1
rs56357652	9	11054422	G	A	PTPRD	-0.03	0	9.3809E-10	1	7.08	0.4204817	3.08E-09	1
rs149001690	20	55748796	G	A	CBLN4	-0.09	0	9.3904E-10	27	9.69	0.20662	5.193E-09	1
rs9556969	13	98543694	T	C	STK24	0.03	0	9.424E-10	25	9.37	0.2270967	2.325E-09	1
rs73259281	16	86091263	C	G	IRF8	-0.04	0	9.4568E-10	17	8.52	0.2889	2.898E-09	1
rs139416013	3	44375077	A	G	TCAIM	0.07	0	9.4882E-10	0	5.37	0.6144897	3.115E-09	1
rs9348774	6	27721151	C	T	HIST1H2BL	-0.05	0	9.5162E-10	0	4.78	0.6873202	3.124E-09	1
rs10495728	2	22677249	G	A	KLHL29	0.03	0	9.5285E-10	1	7.12	0.4167529	3.326E-09	1
rs2032862	5	144481090	G	C	KCTD16	0.03	0	9.5555E-10	0	6.83	0.4468358	2.515E-09	1
rs2985795	1	66960540	A	G	MIER1	0.03	0	9.5736E-10	0	4.17	0.7599164	3.142E-09	1
rs349695	5	144478721	C	T	KCTD16	0.03	0	9.5779E-10	0	6.91	0.4382302	2.493E-09	1
rs11585829	1	230459063	C	G	PGBD5	0.03	0	9.5811E-10	10	7.78	0.3524299	4.093E-09	1
rs4788195	16	29949272	T	C	TMEM219	-0.03	0	9.5835E-10	20	8.78	0.2687781	4.786E-09	1

rs349683	5	144469634	C	G	KCTD16	0.03	0	9.5844E-10	0	6.92	0.436833	2.5E-09	1
rs10959576	9	11165729	C	G	PTPRD	-0.04	0	9.5936E-10	16	8.34	0.303448	4.44E-09	1
rs2842442	6	19232561	T	A	ID4	0.03	0	9.6122E-10	36	11.05	0.1363704	2.061E-09	1
rs11222031	11	99955646	G	A	CNTN5	0.04	0	9.6341E-10	0	6.97	0.4321791	3.161E-09	1
rs6537127	4	142816205	A	T	INPP4B	-0.03	0	9.6364E-10	36	11.07	0.1355572	5.948E-09	1
rs78002591	10	90929377	T	C	ANKRD1	-0.05	0	9.6409E-10	17	8.52	0.2890892	3.164E-09	1
rs12918652	16	29953036	T	C	TMEM219	-0.03	0	9.6565E-10	20	8.78	0.2689382	4.824E-09	1
rs144643298	16	72075779	T	C	HPR,TXNL4I	0.07	0	9.657E-10	17	8.49	0.2910841	3.076E-09	1
rs147610022	9	11054587	AC	A	PTPRD	-0.03	0	9.6634E-10	0	7.01	0.4280582	3.171E-09	1
rs6893431	5	144484859	T	A	KCTD16	0.03	0	9.6733E-10	0	6.84	0.4460293	2.547E-09	1
rs9554478	13	98535538	G	A	STK24	0.03	0	9.6759E-10	25	9.39	0.225779	2.416E-09	1
rs2734838	11	113415779	A	G	DRD2	-0.03	0	9.6801E-10	0	5.9	0.5520189	3.176E-09	1
rs604149	1	36697775	A	C	GRIK3	0.03	0	9.6818E-10	38	11.46	0.1198749	2.513E-09	1
rs183236088	16	72079171	T	C	TXNL4B	0.07	0	9.6926E-10	17	8.5	0.2908598	3.087E-09	1
rs187034	5	144475041	C	T	KCTD16	0.03	0	9.7081E-10	0	6.84	0.4452355	2.552E-09	1
rs6565173	16	29962846	G	A	TMEM219	-0.03	0	9.7218E-10	20	8.78	0.269206	4.865E-09	1
rs112426660	6	19274823	CA	C	ID4	0.03	0	9.7463E-10	35	10.77	0.1488433	2.177E-09	1
rs11038752	11	46050986	C	T	PHF21A	0.04	0	9.7481E-10	18	8.59	0.2838283	2.986E-09	1
rs10203319	2	22671691	A	G	KLHL29	0.03	0	9.7497E-10	3	7.23	0.405102	3.602E-09	1
rs13428710	2	22676463	C	T	KLHL29	0.03	0	9.7513E-10	1	7.11	0.4173211	3.392E-09	1
rs349697	5	144477466	A	G	KCTD16	0.03	0	9.7645E-10	0	6.84	0.4454775	2.568E-09	1
rs712173	5	144472181	G	A	KCTD16	0.03	0	9.7658E-10	0	6.84	0.4454215	2.568E-09	1
rs712174	5	144472206	G	A	KCTD16	0.03	0	9.7658E-10	0	6.84	0.4454215	2.568E-09	1
rs712171	5	144471280	G	A	KCTD16	0.03	0	9.7911E-10	0	6.85	0.444968	2.568E-09	1
rs10059945	5	144494616	G	A	KCTD16	0.03	0	9.8063E-10	0	6.82	0.4474144	2.587E-09	1
rs9924964	16	72051662	T	A	TXNL4B	0.03	0	9.8068E-10	0	3.09	0.8765127	3.217E-09	1
rs60512641	18	54856246	G	A	RAB27B	0.03	0	9.8097E-10	0	3.05	0.8805687	3.218E-09	1
rs34002685	16	58910604	T	C	GOT2	-0.04	0	9.824E-10	20	8.85	0.2634193	4.454E-09	1
rs16825755	1	21648721	A	G	RAP1GAP	0.05	0	9.832E-10	35	10.78	0.1485851	3.225E-09	1
rs349699	5	144476692	C	G	KCTD16	0.03	0	9.854E-10	0	6.85	0.4444179	2.588E-09	1

Table S2

rs11038754	11	46055713	G	A	PHF21A	0.04	0	9.8638E-10	18	8.59	0.2837455	3.02E-09	1
rs17497828	1	66986639	G	A	MIER1	-0.03	0	9.8817E-10	0	4.15	0.762498	3.241E-09	1
rs200995	6	27845916	T	C	HIST1H2BN	-0.07	0	9.8959E-10	24	9.25	0.2352906	6.63E-09	1
rs12528162	6	19267694	G	T	ID4	0.03	0	9.8997E-10	36	10.99	0.1391151	2.143E-09	1
rs12363125	11	113415194	C	T	DRD2	-0.03	0	9.9224E-10	0	5.91	0.5503867	3.254E-09	1
rs11749671	5	144486686	A	G	KCTD16	0.03	0	9.925E-10	0	6.86	0.4431374	2.602E-09	1
rs138737043	2	196032517	C	T	DNAH7	0.07	0	9.9255E-10	0	4.47	0.7241742	3.255E-09	1
rs2305555	5	144485707	A	G	KCTD16	0.03	0	9.9295E-10	0	6.88	0.4417232	2.598E-09	1
rs10838746	11	47684739	A	G	AGBL2	0.03	0	9.9365E-10	0	6.77	0.4530044	3.259E-09	1
rs11039337	11	47685604	T	C	AGBL2	0.03	0	9.9365E-10	0	6.77	0.4530044	3.259E-09	1
rs71042700	11	47685063	AG	A	AGBL2	0.03	0	9.9365E-10	0	6.77	0.4530044	3.259E-09	1
rs61824827	1	230468998	C	T	PGBD5	0.03	0	9.9405E-10	22	9.06	0.2483664	7.192E-09	1
rs10769285	11	47687660	C	T	AGBL2	0.03	0	9.9428E-10	0	6.77	0.4530708	3.261E-09	1
rs6892869	5	144484548	T	C	KCTD16	0.03	0	9.9576E-10	0	6.88	0.4416115	2.604E-09	1
rs7936948	11	47682648	T	G	AGBL2	0.03	0	9.9625E-10	0	6.77	0.4532903	3.267E-09	1
rs3758655	11	47682391	T	C	AGBL2	0.03	0	9.9672E-10	0	6.81	0.4493618	3.269E-09	1
rs10959490	9	11054949	G	C	PTPRD	-0.03	0	9.9826E-10	0	6.92	0.4370482	3.274E-09	1
rs61857871	10	91000027	A	G	ANKRD1	-0.05	0	9.9884E-10	0	5.31	0.6226283	3.275E-09	1
rs11278087	5	144480335	AAGCTTG	A	KCTD16	0.03	0	1.0002E-09	0	6.88	0.441813	2.616E-09	1
rs349693	5	144480160	T	C	KCTD16	0.03	0	1.0002E-09	0	6.88	0.441813	2.616E-09	1
rs349694	5	144479500	G	A	KCTD16	0.03	0	1.0002E-09	0	6.88	0.441813	2.616E-09	1
rs7996549	13	96322921	T	G	HS6ST3	0.03	0	1.0013E-09	0	3.92	0.7884744	3.283E-09	1
rs16962190	16	13505160	G	C	SHISA9	-0.03	0	1.0018E-09	0	5.41	0.6098577	3.285E-09	1
rs3784260	15	57961071	T	G	ALDH1A2	0.03	0	1.0023E-09	45	12.86	0.0754694	2.596E-09	1
rs72773529	16	13505287	T	C	SHISA9	-0.03	0	1.0035E-09	0	5.41	0.6103602	3.291E-09	1
rs2009319	1	67015387	G	T	SLC35D1	0.03	0	1.0039E-09	0	4.15	0.7619081	3.292E-09	1
rs6477838	9	111649001	G	A	DNAJC25,DN	0.03	0	1.0051E-09	0	3.67	0.8163888	3.296E-09	1
rs149949	6	28043738	T	C	ZNF165	-0.06	0	1.0065E-09	19	8.73	0.2725682	5.267E-09	1
rs6868013	5	144484712	C	G	KCTD16	0.03	0	1.0065E-09	0	6.89	0.440892	2.629E-09	1
rs3852784	16	72151102	G	A	PMFBP1	0.03	0	1.0075E-09	0	2.96	0.8886343	3.303E-09	1

Table S2

rs349704	5	144475468	A	G	KCTD16	0.03	0	1.0081E-09	0	6.9	0.4398726	2.629E-09	1
rs7754477	6	19303750	G	A	ID4	0.03	0	1.0094E-09	60	17.92	0.0123285	7.336E-10	1.62995E-10
rs358652	5	144509259	A	C	KCTD16	0.03	0	1.0094E-09	0	6.87	0.4424768	2.644E-09	1
rs394437	5	144503292	G	A	KCTD16	0.03	0	1.0097E-09	0	6.87	0.4422135	2.642E-09	1
rs458717	5	144499049	A	T	KCTD16	0.03	0	1.0108E-09	0	6.87	0.4423471	2.646E-09	1
rs77848312	5	144499399	C	G	KCTD16	0.03	0	1.0109E-09	0	6.87	0.4423579	2.646E-09	1
rs358670	5	144499249	A	G	KCTD16	0.03	0	1.011E-09	0	6.87	0.4423524	2.646E-09	1
rs3957497	5	144494835	A	C	KCTD16	0.03	0	1.0114E-09	0	6.87	0.4425419	2.648E-09	1
rs1207082	5	144496564	A	C	KCTD16	0.03	0	1.0117E-09	0	6.87	0.4424409	2.649E-09	1
rs349701	5	144476090	G	C	KCTD16	0.03	0	1.0121E-09	0	6.89	0.4399549	2.64E-09	1
rs465772	5	144498274	T	G	KCTD16	0.03	0	1.0127E-09	0	6.87	0.4424264	2.651E-09	1
rs4712364	6	19219009	A	G	ID4	0.05	0	1.016E-09	73	26.85	0.0003549	5.568E-11	1.11729E-11
rs9465329	6	19275269	C	A	ID4	0.03	0	1.0172E-09	35	10.85	0.1453866	2.251E-09	1
rs142899232	10	90929031	T	TGAGAGA	ANKRD1	-0.05	0	1.0182E-09	18	8.55	0.2867707	3.338E-09	1
rs8180595	6	164727540	A	G	C6orf118	0.03	0	1.0193E-09	0	1.32	0.9879242	3.341E-09	1
rs184788884	14	42970427	C	T	LRFN5	0.05	0	1.021E-09	13	8.11	0.323273	3.141E-09	1
rs1624214	1	36778083	A	G	GRIK3	0.03	0	1.0223E-09	0	5.1	0.6473919	3.351E-09	1
rs358666	5	144497290	T	G	KCTD16	0.03	0	1.0231E-09	0	6.89	0.4408676	2.672E-09	1
rs59640213	17	67896164	G	A	BPTF	0.03	0	1.0252E-09	15	8.25	0.3111035	4.884E-09	1
rs1010345	13	96315769	A	G	HS6ST3	0.03	0	1.026E-09	0	4.2	0.7569337	3.363E-09	1
rs7772095	6	66533443	T	C	EYS	0.06	0	1.0264E-09	0	3.21	0.8648609	3.364E-09	1
rs10172483	2	207436217	A	T	CREB1	0.04	0	1.0267E-09	14	8.23	0.3130417	4.256E-09	1
rs4712363	6	19218937	T	A	ID4	0.05	0	1.0278E-09	73	26.78	0.0003658	5.812E-11	1.17682E-11
rs10501316	11	46068999	C	T	PHF21A	0.04	0	1.0302E-09	18	8.57	0.2846408	3.151E-09	1
rs3208733	6	26414197	C	T	BTN3A1	-0.03	0	1.0302E-09	0	4.58	0.7111839	3.376E-09	1
rs7560837	2	59935309	G	C	BCL11A	0.03	0	1.0306E-09	38	11.32	0.1253699	4.216E-09	1
rs11109663	12	98907385	G	A	ANKS1B	0.06	0	1.0318E-09	0	0.89	0.9964766	3.381E-09	1
rs3774800	3	49297335	G	A	USP4	-0.03	0	1.0321E-09	0	3.08	0.8778583	3.382E-09	1
rs9465281	6	19218512	G	C	ID4	0.05	0	1.0321E-09	73	26.78	0.0003648	5.832E-11	1.17682E-11
rs7170896	15	57960195	T	A	ALDH1A2	0.03	0	1.0359E-09	53	14.98	0.0362323	3.395E-09	1

rs1422960	5	144482344	A	C	KCTD16	0.03	0	1.0383E-09	0	6.93	0.4362938	2.693E-09	1
rs1422961	5	144481792	T	A	KCTD16	0.03	0	1.0383E-09	0	6.93	0.4362981	2.693E-09	1
rs6885441	5	144481431	G	A	KCTD16	0.03	0	1.0383E-09	0	6.93	0.4362975	2.693E-09	1
rs3096072	5	144502889	A	G	KCTD16	0.03	0	1.0391E-09	0	6.88	0.4417089	2.715E-09	1
rs11124553	2	22557692	C	G	KLHL29	0.03	0	1.0399E-09	6	7.46	0.3826154	4.174E-09	1
rs10842290	12	24183481	T	C	SOX5	-0.03	0	1.0401E-09	0	3.77	0.8055924	3.408E-09	1
rs2815357	1	67026171	T	C	SLC35D1	0.03	0	1.041E-09	0	4.09	0.7695811	3.411E-09	1
rs4801102	18	54855610	C	T	RAB27B	0.03	0	1.0411E-09	0	2.95	0.889698	3.411E-09	1
rs4320356	6	26423332	C	T	BTN3A1	-0.03	0	1.0425E-09	0	4.78	0.6863202	3.416E-09	1
rs61567226	6	26363883	G	GA	BTN3A2	-0.03	0	1.0445E-09	0	2.79	0.9037907	3.422E-09	1
rs2755244	1	67018787	T	C	SLC35D1	0.03	0	1.0448E-09	0	4.1	0.7679949	3.423E-09	1
rs59031357	12	24261170	GA	G	SOX5	0.04	0	1.0452E-09	0	6.13	0.5242607	3.424E-09	1
rs1372236	4	142926187	C	G	INPP4B	-0.03	0	1.0457E-09	37	11.22	0.1291468	3.426E-09	1
rs2755245	1	67022281	C	G	SLC35D1	0.03	0	1.0461E-09	0	4.1	0.7679815	3.427E-09	1
rs2815352	1	67016421	A	G	SLC35D1	0.03	0	1.0473E-09	0	4.11	0.7675526	3.431E-09	1
rs2815353	1	67017689	A	G	SLC35D1	0.03	0	1.0473E-09	0	4.11	0.7675526	3.431E-09	1
rs6921055	6	162810383	T	A	PACRG	-0.03	0	1.0474E-09	0	1.02	0.9944729	3.431E-09	1
rs6749216	2	27117951	T	C	CGREF1	-0.03	0	1.0494E-09	8	7.64	0.3656647	4.441E-09	1
rs17044091	2	22605221	G	A	KLHL29	0.03	0	1.051E-09	26	9.52	0.2175983	7.847E-09	1
rs2755246	1	67023301	A	G	SLC35D1	0.03	0	1.0521E-09	0	4.1	0.7683067	3.446E-09	1
rs4430605	13	28834867	A	G	MTUS2	-0.03	0	1.0523E-09	0	1.36	0.9868131	3.447E-09	1
rs8056535	16	29949147	G	A	TMEM219	-0.03	0	1.0524E-09	18	8.59	0.283801	5.154E-09	1
rs501220	6	25872797	C	A	SLC17A3	-0.05	0	1.0533E-09	42	12.11	0.0969392	1.798E-09	4.18543E-10
rs28637608	13	56432432	A	G	PRR20A	0.06	0	1.0541E-09	0	6.78	0.4517651	3.453E-09	1
rs2755248	1	67026941	A	G	SLC35D1	0.03	0	1.0579E-09	0	4.11	0.7675582	3.465E-09	1
rs1884426	1	231100663	G	T	FAM89A	-0.04	0	1.0583E-09	0	2.45	0.9311619	3.466E-09	1
rs34658047	16	58913337	A	AC	GOT2	-0.04	0	1.0643E-09	30	10.14	0.1805444	5.731E-09	1
rs144904538	9	11148249	C	CA	PTPRD	-0.04	0	1.0654E-09	11	7.91	0.3403213	4.511E-09	1
rs4788200	16	29959944	G	T	TMEM219	-0.03	0	1.0657E-09	20	8.85	0.2636006	5.369E-09	1
rs4788197	16	29959513	G	A	TMEM219	-0.03	0	1.0674E-09	20	8.85	0.2635773	5.378E-09	1

rs4788198	16	29959514	C	T	TMEM219	-0.03	0	1.0674E-09	20	8.85	0.2635773	5.378E-09	1
rs9347689	6	162797083	A	C	PACRG	-0.03	0	1.0682E-09	0	1.06	0.9937529	3.498E-09	1
rs78175056	6	164710788	T	C	C6orf118	0.03	0	1.0698E-09	0	1.34	0.9873528	3.503E-09	1
rs9935197	16	13506599	C	A	SHISA9	-0.03	0	1.0699E-09	0	5.43	0.6077097	3.504E-09	1
rs2175896	6	162804844	C	G	PACRG	-0.03	0	1.0708E-09	0	1.01	0.9946403	3.506E-09	1
rs4712366	6	19220978	T	G	ID4	0.05	0	1.0717E-09	73	26.51	0.000408	6.726E-11	1.37506E-11
rs12664922	6	162814510	G	A	PACRG	-0.03	0	1.0718E-09	0	1.02	0.9944965	3.51E-09	1
rs9458648	6	162805029	G	A	PACRG	-0.03	0	1.0719E-09	0	1.02	0.9945171	3.51E-09	1
rs9460308	6	19212842	C	G	ID4	0.05	0	1.0727E-09	73	26.9	0.0003469	5.859E-11	1.17682E-11
rs76862363	10	90930133	C	T	ANKRD1	-0.05	0	1.0742E-09	16	8.38	0.3002787	3.517E-09	1
rs9465279	6	19212996	G	A	ID4	0.05	0	1.0768E-09	73	26.89	0.0003486	5.907E-11	1.20775E-11
rs9465278	6	19212941	G	A	ID4	0.05	0	1.0778E-09	73	26.89	0.0003484	5.91E-11	1.20775E-11
rs72830526	6	19217607	G	T	ID4	0.05	0	1.0807E-09	73	26.75	0.00037	6.262E-11	1.27209E-11
rs6916188	6	19212215	T	A	ID4	0.05	0	1.0808E-09	73	26.92	0.0003448	5.872E-11	1.17682E-11
rs1333958	6	162812229	C	A	PACRG	-0.03	0	1.0821E-09	0	1.02	0.9945031	3.543E-09	1
rs345903	2	8551029	T	G	ID2	0.03	0	1.0828E-09	0	4.6	0.7082179	3.545E-09	1
rs72830528	6	19217608	C	A	ID4	0.05	0	1.0842E-09	73	26.75	0.00037	6.282E-11	1.27209E-11
rs62405324	6	19216578	A	G	ID4	0.05	0	1.0862E-09	73	26.79	0.0003635	6.225E-11	1.27209E-11
rs349703	5	144475519	G	A	KCTD16	0.03	0	1.0896E-09	0	6.99	0.429834	2.813E-09	1
rs62404514	6	19293508	T	G	ID4	0.05	0	1.09E-09	75	28.68	0.0001657	3.01E-11	5.99363E-12
rs2815370	1	67038044	G	A	SLC35D1	0.03	0	1.0915E-09	0	4.14	0.7636748	3.573E-09	1
rs3890640	17	68056912	C	T	KPNA2	-0.04	0	1.0942E-09	0	6.8	0.4500338	3.582E-09	1
rs7213585	17	68066200	A	T	KPNA2	-0.04	0	1.0943E-09	0	6.8	0.4500331	3.582E-09	1
rs62084741	17	68066544	T	C	KPNA2	0.04	0	1.0949E-09	0	6.8	0.4498078	3.584E-09	1
rs11069311	13	98549847	G	T	STK24	0.03	0	1.095E-09	25	9.38	0.2265093	2.705E-09	1
rs74327441	2	27784205	G	A	MRPL33,RBI	-0.03	0	1.0966E-09	0	5.9	0.5512394	3.589E-09	1
rs2755249	1	67027979	A	G	SLC35D1	0.03	0	1.0968E-09	0	4.12	0.7664329	3.59E-09	1
rs4146005	2	22557157	A	G	KLHL29	0.03	0	1.0976E-09	5	7.43	0.3858084	4.347E-09	1
rs2755250	1	67029600	A	G	SLC35D1	0.03	0	1.0988E-09	0	4.1	0.7676793	3.596E-09	1
rs2985811	1	66912039	G	T	WDR78	0.03	0	1.0989E-09	0	3.94	0.7870489	3.597E-09	1

Table S2

rs1862920	18	55998167	G	T	TCF4	0.05	0	1.1001E-09	0	1.43	0.9845299	3.601E-09	1
rs7588792	2	211762192	A	C	ERBB4	0.04	0	1.1014E-09	40	11.72	0.1102872	2.518E-09	1
rs1441413	4	142902686	G	A	INPP4B	-0.03	0	1.1015E-09	37	11.25	0.1281227	3.605E-09	1
rs13121251	4	142908606	T	C	INPP4B	-0.03	0	1.103E-09	37	11.25	0.1281853	3.61E-09	1
rs56145663	5	120781659	G	A	PRR16	0.04	0	1.1053E-09	0	4.68	0.6986434	3.617E-09	1
rs4358370	4	46621556	C	T	COX7B2	0.04	0	1.1054E-09	0	6.08	0.5308857	3.618E-09	1
rs59285308	1	246161774	T	G	SMYD3	-0.04	0	1.1055E-09	0	5.44	0.6063877	3.59E-09	1
rs11864022	16	13490018	C	A	SHISA9	-0.03	0	1.1065E-09	0	7.04	0.424377	3.621E-09	1
rs2815359	1	67028691	T	C	SLC35D1	0.03	0	1.1074E-09	0	4.12	0.7662397	3.624E-09	1
rs761718	1	36695662	A	G	GRIK3	0.03	0	1.1077E-09	39	11.52	0.1175591	2.862E-09	1
rs60232159	16	71561119	T	C	ZNF19	0.04	0	1.1094E-09	0	4.04	0.7749389	3.63E-09	1
rs192182152	6	19225508	G	A	ID4	0.05	0	1.1111E-09	73	26.79	0.0003637	6.226E-11	1.27209E-11
rs8072723	17	68060854	T	A	KPNA2	-0.04	0	1.1124E-09	0	6.84	0.4462028	3.64E-09	1
rs6504578	17	68061850	G	A	KPNA2	-0.04	0	1.1125E-09	0	6.79	0.4513937	3.64E-09	1
rs12528882	6	19222405	A	G	ID4	0.05	0	1.1137E-09	73	26.8	0.0003625	6.306E-11	1.27209E-11
rs11859355	16	13486782	G	A	SHISA9	-0.03	0	1.1192E-09	0	7.07	0.4218261	3.662E-09	1
rs2670416	6	66541703	A	G	EYS	0.06	0	1.1231E-09	0	3.28	0.8579211	3.674E-09	1
rs16962221	16	13508943	G	A	SHISA9	-0.03	0	1.1247E-09	0	5.39	0.6128731	3.68E-09	1
rs8115649	20	55769579	C	T	CBLN4	-0.05	0	1.1271E-09	0	3.16	0.8702888	3.687E-09	1
rs4369598	15	58026405	G	T	ALDH1A2	0.03	0	1.1283E-09	53	14.92	0.0370044	1.418E-09	3.2197E-10
rs1842806	3	43445431	C	T	ANO10	-0.03	0	1.1298E-09	43	12.41	0.0879045	1.185E-09	2.6801E-10
rs10212378	3	44625794	C	G	ZNF197	-0.03	0	1.1302E-09	4	7.34	0.3939104	3.697E-09	1
rs9556567	13	96332782	A	G	HS6ST3	0.03	0	1.1313E-09	0	4.35	0.7390494	3.7E-09	1
rs9388289	6	123900430	G	A	NKAIN2	0.03	0	1.1322E-09	0	3.1	0.8752413	3.704E-09	1
rs118002336	14	41509894	A	T	LRFN5	-0.07	0	1.1335E-09	0	2.28	0.9428972	3.708E-09	1
rs76016273	6	164739287	G	A	C6orf118	0.03	0	1.1342E-09	0	1.77	0.9716838	3.71E-09	1
rs34843489	17	68057215	T	C	KPNA2	0.04	0	1.1352E-09	0	6.83	0.4467158	3.713E-09	1
rs7773938	6	26473816	C	T	BTN2A1	-0.05	0	1.1354E-09	0	3.23	0.8632789	3.714E-09	1
rs56176327	3	49669303	G	C	BSN	0.06	0	1.136E-09	0	1.77	0.9715907	3.716E-09	1
rs2514374	11	115112457	G	T	CADM1	0.03	0	1.1369E-09	54	15.26	0.0327648	2.303E-09	1

rs10924515	1	246142923	T	C	SMYD3	-0.04	0	1.1378E-09	0	5.14	0.6429925	3.717E-09	1
rs2815371	1	67038630	A	G	SLC35D1	0.03	0	1.1398E-09	0	4.18	0.7582677	3.728E-09	1
rs3799380	6	26466954	T	C	BTN2A1	-0.05	0	1.1412E-09	0	3.3	0.8564298	3.732E-09	1
rs1573931	3	43252822	C	T	SNRK	-0.04	0	1.1425E-09	31	10.19	0.1778697	1.629E-09	3.76835E-10
rs189008015	16	22744344	T	C	HS3ST2	-0.08	0	1.1447E-09	24	9.22	0.2372358	2.794E-09	1
rs112610580	6	164737328	C	G	C6orf118	0.03	0	1.1449E-09	0	1.76	0.9718727	3.744E-09	1
rs11130032	3	44662591	G	A	ZNF35	-0.03	0	1.1467E-09	4	7.35	0.3930505	3.75E-09	1
rs35170297	1	59874855	G	A	HOOK1	0.04	0	1.1469E-09	12	8.03	0.3301321	4.759E-09	1
rs6583310	3	196444114	G	C	UBXN7	-0.03	0	1.1475E-09	0	3.84	0.7974904	3.753E-09	1
rs7982697	13	96336585	A	G	HS6ST3	0.03	0	1.1504E-09	0	4.35	0.7382189	3.762E-09	1
rs9934680	16	13506655	G	A	SHISA9	-0.03	0	1.151E-09	0	5.31	0.6220016	3.764E-09	1
rs12930702	16	72043101	C	G	TXNL4B	0.03	0	1.152E-09	0	3.04	0.8813739	3.767E-09	1
rs4788201	16	29961369	C	T	TMEM219	-0.03	0	1.1568E-09	20	8.83	0.2653689	5.81E-09	1
rs11852540	15	58029266	A	G	ALDH1A2	0.03	0	1.1579E-09	52	14.87	0.0376357	1.489E-09	3.39303E-10
rs13330029	16	13503769	C	T	SHISA9	-0.03	0	1.1589E-09	0	5.47	0.6031079	3.789E-09	1
rs13338837	16	13504229	A	T	SHISA9	-0.03	0	1.1589E-09	0	5.47	0.6031079	3.789E-09	1
rs9356260	6	164730195	G	A	C6orf118	0.03	0	1.1592E-09	0	1.77	0.9714801	3.79E-09	1
rs8088528	18	52988014	A	G	DCC	0.03	0	1.1605E-09	0	3.19	0.8670154	3.794E-09	1
rs12871890	13	96335656	G	A	HS6ST3	0.03	0	1.1629E-09	0	4.34	0.7395755	3.802E-09	1
rs4260403	3	43252264	A	G	SNRK	-0.04	0	1.1632E-09	31	10.2	0.1773173	1.652E-09	3.76835E-10
rs1912669	6	164734384	G	A	C6orf118	0.03	0	1.1633E-09	0	1.75	0.972221	3.803E-09	1
rs4788202	16	29966682	C	T	TMEM219	-0.03	0	1.1637E-09	20	8.77	0.2692546	5.788E-09	1
rs4787486	16	29966241	A	T	TMEM219	-0.03	0	1.1638E-09	20	8.77	0.2692546	5.789E-09	1
rs12866328	13	96334402	G	A	HS6ST3	0.03	0	1.1702E-09	0	4.34	0.7398932	3.825E-09	1
rs10469011	18	52613139	T	C	DCC	0.03	0	1.1707E-09	0	2.26	0.9443094	3.827E-09	1
rs7767498	6	66533205	A	C	EYS	0.06	0	1.1708E-09	0	4.79	0.6852892	3.827E-09	1
rs2439043	6	51552246	C	T	PKHD1	-0.06	0	1.1722E-09	12	8.02	0.3310368	4.324E-09	1
rs187656431	2	195932768	C	T	DNAH7	0.07	0	1.1726E-09	0	4.32	0.7428285	3.833E-09	1
rs137932117	6	164736404	G	A	C6orf118	0.03	0	1.1735E-09	0	1.77	0.9716893	3.836E-09	1
rs78581636	6	164709780	C	A	C6orf118	0.03	0	1.1737E-09	0	1.88	0.9659813	3.836E-09	1

Table S2

rs8075604	17	68066985	C	T	KPNA2	0.04	0	1.1755E-09	0	6.71	0.4598703	3.842E-09	1
rs10571051	16	72170035	CTT	C	PMFBP1	0.03	0	1.1768E-09	0	6.56	0.4761342	3.846E-09	1
rs144768012	6	164735471	G	A	C6orf118	0.03	0	1.1773E-09	0	1.76	0.971777	3.848E-09	1
rs191295127	15	46157759	T	G	SQRDL	0.05	0	1.1778E-09	44	12.59	0.0828061	5.123E-09	1
rs9358945	6	26471886	A	G	BTN2A1	-0.05	0	1.1791E-09	0	3.23	0.8631106	3.854E-09	1
rs2328351	6	19212055	C	G	ID4	0.05	0	1.1792E-09	73	26.87	0.0003515	6.662E-11	1.33984E-11
rs2888296	3	43242102	T	C	SNRK	-0.04	0	1.1797E-09	31	10.16	0.1799267	1.643E-09	3.76835E-10
rs6798619	3	43225802	G	A	SNRK	-0.04	0	1.1804E-09	31	10.19	0.1781489	1.608E-09	3.67078E-10
rs74784904	16	76596252	T	C	RP11-58C22.	-0.04	0	1.1806E-09	0	4.23	0.752617	3.859E-09	1
rs7756567	6	26481414	T	G	BTN2A1	-0.05	0	1.1818E-09	0	3.06	0.8794178	3.862E-09	1
rs35347450	3	43251182	CAG	C	SNRK	-0.04	0	1.186E-09	31	10.29	0.1725822	1.641E-09	3.76835E-10
rs1006436	16	72198417	A	G	PMFBP1	0.03	0	1.1864E-09	0	5.6	0.5868198	3.877E-09	1
rs7164408	15	57967138	A	G	ALDH1A2	0.03	0	1.1883E-09	53	14.93	0.0368646	1.46E-09	3.30522E-10
rs58645304	16	13513578	A	G	SHISA9	-0.03	0	1.1887E-09	0	5.36	0.6161796	3.885E-09	1
rs79356577	6	19225738	T	C	ID4	0.05	0	1.1888E-09	73	26.72	0.0003749	6.986E-11	1.4112E-11
rs74685378	6	164733567	T	A	C6orf118	0.03	0	1.1895E-09	0	1.76	0.9719782	3.887E-09	1
rs77063087	6	164732987	A	G	C6orf118	0.03	0	1.1898E-09	0	1.76	0.9719818	3.888E-09	1
rs9358946	6	26478699	G	A	BTN2A1	-0.05	0	1.1913E-09	0	3.31	0.854428	3.893E-09	1
rs4772097	13	98542398	C	A	STK24	0.03	0	1.1921E-09	19	8.65	0.2785554	3.552E-09	1
rs77802717	6	164744653	A	G	C6orf118	0.03	0	1.193E-09	0	1.81	0.9694923	3.898E-09	1
rs9852399	3	43251746	A	G	SNRK	-0.04	0	1.1977E-09	31	10.22	0.1764807	1.692E-09	3.86853E-10
rs7005072	8	14603416	T	C	SGCZ	-0.03	0	1.1985E-09	0	4.88	0.6740116	3.916E-09	1
rs76617303	6	164709833	G	A	C6orf118	0.03	0	1.2018E-09	0	2	0.9597672	3.927E-09	1
rs3130099	6	33314404	A	G	ZBTB22	0.03	0	1.2025E-09	2	7.17	0.4112992	4.163E-09	1
rs3812984	16	72173898	C	T	PMFBP1	0.03	0	1.2044E-09	0	6.72	0.4586655	3.935E-09	1
rs4588671	6	66545792	A	C	EYS	0.06	0	1.2044E-09	0	4.81	0.6832454	3.935E-09	1
rs2179095	6	27783079	C	T	HIST1H2BL	-0.04	0	1.2054E-09	0	6.55	0.4774988	3.938E-09	1
rs2670415	6	66541759	A	C	EYS	0.06	0	1.2103E-09	0	4.81	0.6836834	3.954E-09	1
rs9358944	6	26469647	A	C	BTN2A1	-0.05	0	1.2113E-09	0	3.2	0.8659413	3.957E-09	1
rs9302502	16	13515963	T	C	SHISA9	-0.03	0	1.2123E-09	0	5.35	0.6168763	3.96E-09	1

rs2888295	3	43235358	A	T	SNRK	0.04	0	1.2126E-09	31	10.24	0.1752965	1.662E-09	3.76835E-10
rs4132769	18	25115368	A	G	ZNF521	0.03	0	1.2142E-09	0	2.13	0.9525696	3.966E-09	1
rs6499558	16	72068914	G	C	HPR,TXNL4I	0.04	0	1.2166E-09	0	5.32	0.6208248	3.974E-09	1
rs9356256	6	164707372	T	C	C6orf118	0.03	0	1.2183E-09	0	1.92	0.9640719	3.979E-09	1
rs9295740	6	27721723	G	A	HIST1H2BL	-0.05	0	1.2192E-09	0	4.8	0.6837832	3.982E-09	1
rs13066699	3	43239031	G	A	SNRK	-0.04	0	1.2196E-09	32	10.3	0.1720552	1.674E-09	3.86853E-10
rs181172995	16	72104659	T	C	DHX38	0.07	0	1.2204E-09	13	8.1	0.323778	3.929E-09	1
rs73078305	3	48547380	C	T	PFKFB4	-0.04	0	1.2207E-09	0	3.66	0.8175663	3.987E-09	1
rs12477908	2	27764179	A	C	MRPL33	0.03	0	1.225E-09	0	5.8	0.5628914	4.001E-09	1
rs6783449	3	82397362	T	A	GBE1	-0.04	0	1.227E-09	8	7.65	0.364759	3.897E-09	1
rs56332787	3	43249554	C	CAT	SNRK	-0.04	0	1.2318E-09	32	10.31	0.1715474	1.691E-09	3.86853E-10
rs1224526	6	66539639	T	C	EYS	0.06	0	1.2324E-09	0	4.74	0.6916028	4.025E-09	1
rs246488	5	151332173	C	T	SLC36A2	-0.03	0	1.2327E-09	44	12.52	0.0847508	1.098E-08	1
rs7165247	15	57959588	T	C	ALDH1A2	0.03	0	1.234E-09	53	15.14	0.0342705	1.819E-09	4.18543E-10
rs17241236	16	58912831	A	T	GOT2	-0.04	0	1.2353E-09	28	9.82	0.1988921	6.258E-09	1
rs9364672	6	162810052	T	C	PACRG	-0.03	0	1.2354E-09	0	1.04	0.9941031	4.034E-09	1
rs36052625	4	15133515	AT	A	CPEB2	-0.03	0	1.2357E-09	0	6.6	0.4718463	3.876E-09	1
rs187372	16	84318222	G	A	WFDC1	0.03	0	1.2368E-09	30	10.05	0.1858425	3.614E-09	1
rs145124508	16	71682982	C	G	PHLPP2	0.04	0	1.2373E-09	7	7.6	0.3691646	4.539E-09	1
rs9846724	3	114364927	T	C	ZBTB20	-0.03	0	1.2392E-09	7	7.54	0.374768	4.713E-09	1
rs1848111	1	36713780	G	A	GRIK3	-0.03	0	1.2429E-09	42	12.27	0.0919632	2.765E-09	1
rs9921860	16	13514229	G	A	SHISA9	-0.03	0	1.2434E-09	0	5.3	0.6237103	4.06E-09	1
rs4652925	1	36713910	T	C	GRIK3	-0.03	0	1.2435E-09	42	12.27	0.0919592	2.766E-09	1
rs3106190	6	33312852	C	G	TAPBP	0.03	0	1.2445E-09	2	7.15	0.4132245	4.282E-09	1
rs191451367	16	72067334	T	C	HPR,TXNL4I	0.07	0	1.2462E-09	18	8.55	0.286612	3.951E-09	1
rs75399919	15	46235357	G	C	SQRDL	0.05	0	1.2474E-09	46	13.17	0.0681113	4.073E-09	1
rs12208734	6	123897329	T	C	NKAIN2	0.03	0	1.2475E-09	0	3.08	0.8778861	4.073E-09	1
rs9927526	16	72155285	C	G	PMFBP1	0.03	0	1.2492E-09	0	3.28	0.8583355	4.078E-09	1
rs9364759	6	164724727	G	A	C6orf118	0.03	0	1.2504E-09	0	1.82	0.9692351	4.082E-09	1
rs9356257	6	164707373	G	A	C6orf118	0.03	0	1.2522E-09	0	1.9	0.965016	4.088E-09	1

Table S2

rs11214608	11	113444633	C	T	DRD2	-0.03	0	1.2526E-09	0	6.56	0.4762087	4.089E-09	1
rs145274568	2	196295262	G	A	HECW2	0.05	0	1.253E-09	0	2.74	0.9078743	4.09E-09	1
rs1424241	16	72045008	G	A	TXNL4B	0.04	0	1.253E-09	0	5.42	0.6091375	4.09E-09	1
rs5848652	3	43216734	G	GAACAGAA	SNRK	-0.04	0	1.2561E-09	30	10.01	0.1878037	1.8E-09	4.18543E-10
rs2093169	6	26494871	C	T	BTN1A1	-0.05	0	1.2569E-09	0	3.08	0.877942	4.103E-09	1
rs2241411	16	72110594	T	C	DHX38	0.03	0	1.2593E-09	0	3.82	0.8005205	4.11E-09	1
rs147692406	6	164735517	T	G	C6orf118	0.03	0	1.26E-09	0	1.73	0.9734672	4.113E-09	1
rs1430256	2	124295591	T	C	CNTNAP5	-0.03	0	1.2613E-09	59	17.19	0.0161876	5.749E-09	1
rs9311335	3	43233487	G	T	SNRK	-0.04	0	1.2628E-09	29	9.99	0.1889637	1.83E-09	4.18543E-10
rs3799379	6	26404466	C	T	BTN3A1	-0.03	0	1.2642E-09	0	3.99	0.7807672	4.126E-09	1
rs58328352	13	56512840	A	T	PRR20A	-0.04	0	1.2652E-09	0	6.62	0.4693955	4.129E-09	1
rs4800205	18	25113657	G	T	ZNF521	0.03	0	1.2666E-09	0	1.98	0.9608952	4.134E-09	1
rs11047179	12	23969997	C	T	SOX5	0.07	0	1.2669E-09	0	6.33	0.5021978	4.135E-09	1
rs349698	5	144476965	T	C	KCTD16	0.03	0	1.2679E-09	1	7.12	0.4164375	3.253E-09	1
rs10162048	13	56516696	G	A	PRR20A	-0.04	0	1.2681E-09	0	6.64	0.4671196	4.139E-09	1
rs4897581	6	123896840	C	T	NKAIN2	0.03	0	1.2697E-09	0	3.03	0.8826085	4.144E-09	1
rs10959554	9	11131371	A	T	PTPRD	-0.04	0	1.2716E-09	20	8.84	0.2643401	5.784E-09	1
rs3008894	1	66912056	A	G	WDR78	0.03	0	1.2719E-09	0	3.92	0.7894844	4.151E-09	1
rs34695208	6	40148383	A	AG	MOCS1	0.03	0	1.2724E-09	15	8.28	0.308535	3.569E-09	1
rs147397301	6	164725300	A	G	C6orf118	0.03	0	1.2735E-09	0	1.82	0.9689574	4.156E-09	1
rs10759507	9	111654415	A	G	DNAJC25-GN	0.03	0	1.2743E-09	0	3.7	0.8132961	4.158E-09	1
rs9347915	6	164719165	C	T	C6orf118	0.03	0	1.2764E-09	0	1.84	0.9682998	4.165E-09	1
rs11914608	3	18662807	A	G	SATB1	0.03	0	1.2777E-09	10	7.82	0.3490218	5.556E-09	1
rs6123193	20	52621364	C	T	TSHZ2	-0.04	0	1.2784E-09	35	10.92	0.1420609	7.884E-09	1
rs72794549	16	77031324	G	A	MON1B	-0.04	0	1.2784E-09	0	4.41	0.7321101	4.171E-09	1
rs9327163	5	120786981	A	T	PRR16	0.05	0	1.2786E-09	0	1.02	0.9945333	4.172E-09	1
rs1320158	3	43243904	G	T	SNRK	-0.04	0	1.279E-09	31	10.16	0.1795607	1.803E-09	4.18543E-10
rs113272593	2	173471744	A	AT	CDCA7	-0.03	0	1.2811E-09	0	6.53	0.479524	4.18E-09	1
rs541474884	15	46105829	T	A	SQRDL	0.05	0	1.2812E-09	45	12.95	0.0733924	5.643E-09	1
rs8025493	15	57929529	G	A	ALDH1A2	-0.03	0	1.2813E-09	38	11.39	0.1224629	4.181E-09	1

rs3008848	1	66913601	C	T	WDR78	0.03	0	1.2836E-09	0	3.93	0.7878897	4.188E-09	1
rs4916496	3	196464909	G	A	RNF168	0.03	0	1.2847E-09	0	5.88	0.5536775	4.192E-09	1
rs8180643	6	164729221	A	G	C6orf118	0.03	0	1.2869E-09	0	1.8	0.9700961	4.199E-09	1
rs2182143	1	66913253	T	C	WDR78	0.03	0	1.2873E-09	0	3.94	0.7862851	4.2E-09	1
rs10678141	22	20015967	C	CAG	ARVCF	0.05	0	1.2898E-09	16	8.37	0.3007257	5.258E-09	1
rs6803264	3	49216994	T	C	CCDC36	-0.04	0	1.2914E-09	13	8.11	0.3227148	3.994E-09	1
rs10477241	5	144484133	C	T	KCTD16	0.03	0	1.2945E-09	9	7.7	0.3593299	3.14E-09	1
rs140966150	15	46114479	G	C	SQRDL	0.05	0	1.2948E-09	45	12.92	0.0740357	5.719E-09	1
rs147233456	13	56389721	CTTTG	C	PRR20A	0.05	0	1.2953E-09	0	6.78	0.4521323	4.225E-09	1
rs75952763	6	164716933	A	G	C6orf118	0.03	0	1.2963E-09	0	1.84	0.9683422	4.229E-09	1
rs2985810	1	66910479	T	C	WDR78	0.03	0	1.2996E-09	0	3.94	0.7865271	4.239E-09	1
rs6548814	3	82396840	A	T	GBE1	-0.04	0	1.3057E-09	8	7.69	0.3610714	4.135E-09	1
rs76395633	6	164726480	G	T	C6orf118	0.03	0	1.3068E-09	0	1.81	0.9697097	4.262E-09	1
rs7611596	3	82395840	C	T	GBE1	-0.04	0	1.3078E-09	8	7.68	0.3613284	4.142E-09	1
rs56707923	1	66922333	T	C	WDR78	0.03	0	1.3082E-09	0	3.95	0.7858454	4.267E-09	1
rs75868869	17	68102013	A	G	KPNA2	-0.03	0	1.3083E-09	26	9.52	0.2174701	8.461E-09	1
rs6894880	5	144488164	G	A	KCTD16	0.03	0	1.3096E-09	8	7.69	0.3607826	3.188E-09	1
rs1013331	16	13491043	C	A	SHISA9	-0.03	0	1.3104E-09	0	6.79	0.4508124	4.274E-09	1
rs55855028	6	164715189	A	G	C6orf118	0.03	0	1.3108E-09	0	1.83	0.9688442	4.275E-09	1
rs3008858	1	66924733	G	C	WDR78	0.03	0	1.3109E-09	0	4.26	0.7498948	4.276E-09	1
rs111599092	3	49465346	G	A	DAG1	-0.04	0	1.312E-09	0	4.5	0.7204822	4.279E-09	1
rs80163988	6	164715555	T	A	C6orf118	0.03	0	1.3126E-09	0	1.83	0.9687632	4.281E-09	1
rs10701425	1	66922332	T	TGA	WDR78	0.03	0	1.3159E-09	0	3.95	0.7852992	4.291E-09	1
rs3008856	1	66922218	T	C	WDR78	0.03	0	1.316E-09	0	3.95	0.7853168	4.292E-09	1
rs6759802	2	195581493	A	G	SLC39A10	0.04	0	1.3163E-09	16	8.4	0.2983188	4.293E-09	1
rs2985816	1	66922067	G	T	WDR78	0.03	0	1.3165E-09	0	3.95	0.7852175	4.293E-09	1
rs4419357	3	43244549	G	A	SNRK	-0.04	0	1.3168E-09	31	10.16	0.1794794	1.86E-09	4.29676E-10
rs2419405	2	59924047	T	C	BCL11A	0.03	0	1.3184E-09	39	11.63	0.1133842	5.422E-09	1
rs12432926	14	42983222	C	T	LRFN5	0.05	0	1.3186E-09	26	9.51	0.2178145	3.671E-09	1
rs3008852	1	66917733	G	A	WDR78	0.03	0	1.3187E-09	0	3.96	0.7849171	4.3E-09	1

Table S2

rs62083421	18	52612495	T	C	DCC	0.03	0	1.3205E-09	0	2.23	0.9460524	4.306E-09	1
rs3008859	1	66925316	G	C	MIER1	0.03	0	1.3214E-09	0	4.2	0.7560894	4.309E-09	1
rs3008860	1	66925320	G	C	MIER1	0.03	0	1.3214E-09	0	4.2	0.7560894	4.309E-09	1
rs3008854	1	66920268	T	C	WDR78	0.03	0	1.3217E-09	0	3.95	0.7852065	4.31E-09	1
rs9468206	6	27722674	G	T	HIST1H2BL	-0.04	0	1.3248E-09	0	6.03	0.5365458	4.32E-09	1
rs200474	6	27799862	G	A	HIST1H2BL	-0.05	0	1.3262E-09	0	5.29	0.6250782	4.324E-09	1
rs9340908	6	151950858	GA	G	ESR1	-0.03	0	1.3276E-09	0	4.7	0.6969719	4.193E-09	1
rs11129996	3	43244153	A	C	SNRK	-0.04	0	1.3277E-09	31	10.15	0.1800385	1.878E-09	4.29676E-10
rs35163119	13	56536263	A	AT	PRR20A	-0.04	0	1.3335E-09	0	5.09	0.6490138	4.348E-09	1
rs35428295	13	56506344	CTGA	C	PRR20A	-0.04	0	1.3345E-09	0	6.52	0.4800073	4.351E-09	1
rs1361586	13	56492422	T	C	PRR20A	-0.04	0	1.3357E-09	0	6.53	0.47919	4.355E-09	1
rs149688767	13	56490431	ATACGTTT	A	PRR20A	-0.04	0	1.3358E-09	0	6.53	0.4791839	4.355E-09	1
rs78089341	6	164716734	C	T	C6orf118	0.03	0	1.3362E-09	0	1.81	0.9693855	4.356E-09	1
rs113673027	10	90932106	C	T	ANKRD1	-0.05	0	1.3364E-09	11	7.95	0.3366486	4.357E-09	1
rs13378557	13	56497855	T	C	PRR20A	-0.04	0	1.3365E-09	0	6.53	0.4792851	4.357E-09	1
rs7617959	3	16821052	C	G	PLCL2	-0.03	0	1.3394E-09	0	5	0.6603852	4.367E-09	1
rs13059783	3	43243433	G	T	SNRK	-0.04	0	1.3403E-09	31	10.15	0.1803823	1.895E-09	4.41107E-10
rs185552757	12	21725590	A	C	LDHB	-0.1	0	1.3417E-09	39	11.55	0.1161935	4.374E-09	1
rs6988046	8	10090923	C	A	MSRA	-0.04	0	1.3421E-09	0	2.96	0.8883521	4.375E-09	1
rs4655658	1	66923925	C	T	WDR78	0.03	0	1.3433E-09	0	3.93	0.7878695	4.379E-09	1
rs9591765	13	56490782	T	C	PRR20A	-0.04	0	1.3434E-09	0	6.54	0.47846	4.379E-09	1
rs3008855	1	66920521	C	T	WDR78	0.03	0	1.3456E-09	0	3.96	0.7844714	4.386E-09	1
rs3909541	16	72167220	A	G	PMFBP1	0.03	0	1.3459E-09	0	6.5	0.4824241	4.387E-09	1
rs2372356	3	43244044	T	C	SNRK	-0.04	0	1.3485E-09	31	10.16	0.179905	1.905E-09	4.41107E-10
rs9357045	6	27721148	G	A	HIST1H2BL	-0.05	0	1.3493E-09	0	4.76	0.6896173	4.398E-09	1
rs6537109	4	142552326	A	G	INPP4B	0.04	0	1.3501E-09	25	9.39	0.226156	4.401E-09	1
rs56074213	3	43230723	G	GTA	SNRK	0.04	0	1.3504E-09	30	10.09	0.1834001	1.927E-09	4.41107E-10
rs9827911	3	43234675	G	A	SNRK	-0.04	0	1.3508E-09	30	10.12	0.1818559	1.914E-09	4.41107E-10
rs111227564	1	66911832	C	CACTGAG	WDR78	0.03	0	1.3518E-09	0	3.96	0.7841123	4.406E-09	1
rs140043301	4	46628070	C	A	COX7B2	0.04	0	1.3538E-09	0	6.32	0.5034524	4.413E-09	1

rs137951974	6	164734934	C	T	C6orf118	0.03	0	1.3542E-09	0	1.78	0.9707931	4.414E-09	1
rs7627198	3	43242726	C	T	SNRK	-0.04	0	1.3556E-09	30	10.14	0.1808866	1.918E-09	4.41107E-10
rs6534898	4	132626974	A	T	PCDH10	-0.04	0	1.3558E-09	0	3.69	0.8146026	4.419E-09	1
rs201428899	1	66975989	T	TG	MIER1	-0.03	0	1.3585E-09	0	4.25	0.7505044	4.428E-09	1
rs11733459	4	46637162	A	G	COX7B2	0.04	0	1.3592E-09	0	6.3	0.5048074	4.43E-09	1
rs7639584	3	43224819	G	A	SNRK	-0.04	0	1.3593E-09	30	10.08	0.1843416	1.925E-09	4.41107E-10
rs4404425	3	43241964	A	G	SNRK	-0.04	0	1.3598E-09	30	10.13	0.1812334	1.924E-09	4.41107E-10
rs10842252	12	23966756	T	A	SOX5	0.07	0	1.3624E-09	0	6.25	0.5112926	4.44E-09	1
rs17016354	4	142551543	T	C	INPP4B	0.04	0	1.3627E-09	25	9.37	0.2271594	5.338E-09	1
rs9826849	3	43241448	A	G	SNRK	-0.04	0	1.3674E-09	30	10.13	0.1814202	1.936E-09	4.52844E-10
rs60856756	14	42982276	T	C	LRFN5	0.05	0	1.3689E-09	23	9.14	0.2427559	3.928E-09	1
rs8183283	20	52620434	G	A	TSHZ2	-0.04	0	1.369E-09	35	10.88	0.1438899	8.376E-09	1
rs1476122	4	142548083	G	A	INPP4B	0.04	0	1.3701E-09	25	9.36	0.2275109	4.464E-09	1
rs9861529	3	43223904	A	G	SNRK	-0.04	0	1.3704E-09	30	10.11	0.1824525	1.947E-09	4.52844E-10
rs13074235	3	43233911	A	G	SNRK	-0.04	0	1.372E-09	30	10.11	0.1823626	1.948E-09	4.52844E-10
rs1944869	11	134724845	G	T	B3GAT1	-0.09	0	1.3724E-09	0	1.87	0.9668264	4.472E-09	1
rs5875703	6	40142144	C	CA	MOCS1	0.03	0	1.3729E-09	17	8.49	0.2915451	3.705E-09	1
rs10842250	12	23966522	G	A	SOX5	0.07	0	1.3729E-09	0	6.24	0.5122872	4.474E-09	1
rs76277761	3	44199051	T	A	TOPAZ1	0.06	0	1.373E-09	19	8.72	0.2732585	6.613E-09	1
rs4975313	4	142547580	G	T	INPP4B	0.04	0	1.3733E-09	25	9.36	0.2275536	5.379E-09	1
rs17016344	4	142547908	G	A	INPP4B	0.04	0	1.3734E-09	25	9.36	0.2275471	4.475E-09	1
rs16998558	4	142550064	T	C	INPP4B	0.04	0	1.3742E-09	25	9.37	0.2271607	4.478E-09	1
rs4888599	16	77120329	C	G	MON1B	-0.03	0	1.3746E-09	0	5.96	0.5439442	4.479E-09	1
rs1577120	9	11108586	C	A	PTPRD	-0.04	0	1.3751E-09	0	6.03	0.5356701	4.481E-09	1
rs200476	6	27800570	A	T	HIST1H2BL	-0.05	0	1.3756E-09	0	5.26	0.6283291	4.482E-09	1
rs117574183	15	46183820	T	C	SQRDL	0.05	0	1.377E-09	47	13.25	0.0663001	4.487E-09	1
rs4637262	3	43236805	G	C	SNRK	-0.04	0	1.3817E-09	30	10.12	0.1818019	1.957E-09	4.52844E-10
rs9822961	3	43230587	A	T	SNRK	-0.04	0	1.3817E-09	30	10.12	0.1818019	1.957E-09	4.52844E-10
rs9860364	3	43230169	G	T	SNRK	-0.04	0	1.3817E-09	30	10.12	0.1818019	1.957E-09	4.52844E-10
rs11927798	3	43229173	T	C	SNRK	-0.04	0	1.3818E-09	30	10.12	0.1817996	1.957E-09	4.52844E-10

rs13085652	3	43235489	C	T	SNRK	-0.04	0	1.3818E-09	30	10.12	0.1817996	1.957E-09	4.52844E-10
rs4444688	3	43236490	C	A	SNRK	-0.04	0	1.3818E-09	30	10.12	0.1817996	1.957E-09	4.52844E-10
rs7756952	6	19313150	T	C	ID4	0.03	0	1.382E-09	63	19.03	0.0080909	7.487E-10	1.67315E-10
rs13060695	3	43238125	C	G	SNRK	-0.04	0	1.382E-09	30	10.12	0.1817897	1.957E-09	4.52844E-10
rs6912584	6	28341813	T	C	ZSCAN31	-0.05	0	1.3821E-09	0	3.89	0.7918883	4.503E-09	1
rs12715388	3	43238494	G	A	SNRK	-0.04	0	1.3826E-09	30	10.12	0.181785	1.958E-09	4.52844E-10
rs6762503	3	43230099	A	C	SNRK	0.04	0	1.3828E-09	30	10.12	0.1818144	1.958E-09	4.52844E-10
rs11215361	11	115114170	G	A	CADM1	-0.03	0	1.383E-09	7	7.55	0.3741547	5.472E-09	1
rs6537124	4	142778688	A	G	INPP4B	-0.03	0	1.385E-09	40	11.74	0.1092923	8.512E-09	1
rs11674401	2	173471150	A	G	CDCA7	-0.03	0	1.386E-09	0	6.51	0.4815321	4.515E-09	1
rs2372354	3	43242246	G	A	SNRK	-0.04	0	1.3867E-09	32	10.33	0.1708778	1.864E-09	4.29676E-10
rs34565965	6	26350582	T	A	BTN3A2	-0.03	0	1.3878E-09	0	2.26	0.9440033	4.521E-09	1
rs10791064	11	99952931	T	G	CNTN5	-0.04	0	1.3878E-09	4	7.3	0.398732	5.033E-09	1
rs10492776	16	13488055	A	C	SHISA9	-0.03	0	1.3879E-09	0	6.74	0.456201	4.521E-09	1
rs7671198	4	142549776	T	A	INPP4B	0.04	0	1.3892E-09	25	9.38	0.2267514	4.526E-09	1
rs6679100	1	198319579	A	G	NEK7	0.03	0	1.3945E-09	46	13.09	0.070036	8.973E-09	1
rs3008853	1	66919805	C	T	WDR78	0.03	0	1.3955E-09	0	3.99	0.7808733	4.546E-09	1
rs6852570	4	142779205	G	T	INPP4B	-0.03	0	1.3959E-09	40	11.73	0.1096592	8.582E-09	1
rs4653213	1	36713902	C	A	GRIK3	-0.03	0	1.3965E-09	43	12.31	0.0909282	3.09E-09	1
rs9366700	6	27729172	C	T	HIST1H2BL	-0.04	0	1.3986E-09	0	6.34	0.5002845	4.556E-09	1
rs9393777	6	26974248	T	C	HIST1H2BJ	-0.05	0	1.399E-09	3	7.24	0.4043026	5.025E-09	1
rs966457	4	142787165	T	C	INPP4B	-0.03	0	1.3991E-09	40	11.72	0.110113	8.596E-09	1
rs181897510	16	72098485	C	T	DHX38	0.07	0	1.3999E-09	12	8.04	0.3291738	4.527E-09	1
rs579450	9	94591141	G	T	FBP2	-0.04	0	1.401E-09	45	12.91	0.0743599	4.563E-09	1
rs1546965	6	40031410	T	C	MOCS1	-0.03	0	1.4028E-09	0	4.24	0.7520775	4.569E-09	1
rs62303509	4	46720057	C	T	COX7B2	0.04	0	1.4033E-09	6	7.46	0.3822218	5.232E-09	1
rs34442253	4	142779666	A	T	INPP4B	-0.03	0	1.4044E-09	40	11.71	0.1104715	8.633E-09	1
rs7182927	15	46703267	T	C	AC066615.1	0.05	0	1.4045E-09	0	6.16	0.5208878	4.574E-09	1
rs6944573	7	29799377	C	G	WIPF3	0.04	0	1.4062E-09	0	3.08	0.8777047	4.58E-09	1
rs190593866	5	139224820	T	C	SIL1	0.1	0	1.4069E-09	0	4.9	0.6722332	4.582E-09	1

rs1371371	5	125281539	T	A	ZNF608	0.04	0	1.4071E-09	32	10.35	0.1696082	8.133E-09	1
rs6805075	3	43222371	T	A	SNRK	-0.04	0	1.4085E-09	30	10.1	0.1832307	2.002E-09	4.64895E-10
rs3799378	6	26404146	A	G	BTN3A1	-0.04	0	1.4095E-09	0	4.58	0.7116244	4.59E-09	1
rs12238737	9	80552619	T	C	TLE4	0.03	0	1.4096E-09	0	2.98	0.8870857	4.591E-09	1
rs9365764	6	164753574	T	C	C6orf118	0.03	0	1.4106E-09	0	1.81	0.9697965	4.594E-09	1
rs113494811	4	111248580	G	A	PITX2	-0.06	0	1.411E-09	0	3.73	0.8108251	4.595E-09	1
rs8046629	16	71609213	G	A	MARVELD3	0.04	0	1.4112E-09	9	7.72	0.3582942	4.41E-09	1
rs11998077	8	64681439	C	A	CYP7B1	0.03	0	1.4131E-09	0	6.41	0.4924619	4.203E-09	1
rs9934874	16	13493672	T	A	SHISA9	-0.03	0	1.4148E-09	0	5.94	0.5462231	4.607E-09	1
rs3008829	6	39986224	C	T	MOCS1	0.03	0	1.4159E-09	18	8.62	0.2810759	3.722E-09	1
rs28437770	16	13491978	A	G	SHISA9	-0.03	0	1.4172E-09	0	6	0.5401675	4.615E-09	1
rs10959525	9	11107496	G	T	PTPRD	-0.04	0	1.4174E-09	0	5.96	0.5447226	4.615E-09	1
rs1577119	9	11108671	G	A	PTPRD	-0.04	0	1.4175E-09	0	6.03	0.5366986	4.616E-09	1
rs7595950	2	59916057	T	C	BCL11A	0.03	0	1.4182E-09	42	12.14	0.0960355	4.19E-09	1
rs61517249	12	23965163	C	T	SOX5	0.07	0	1.4194E-09	0	6.23	0.5127629	4.622E-09	1
rs59556093	12	23965147	A	C	SOX5	0.07	0	1.4195E-09	0	6.23	0.512763	4.622E-09	1
rs1121462	9	11108118	C	T	PTPRD	-0.04	0	1.4221E-09	0	6.02	0.5375763	4.631E-09	1
rs139757496	16	72014732	G	T	DHODH	0.07	0	1.4227E-09	20	8.75	0.2710524	4.431E-09	1
rs11047194	12	23996153	G	A	SOX5	0.07	0	1.424E-09	0	6.52	0.4807024	4.637E-09	1
rs7865595	9	11110336	A	T	PTPRD	-0.04	0	1.4258E-09	0	6.04	0.5351823	4.642E-09	1
rs9826102	3	43240931	A	G	SNRK	-0.04	0	1.4266E-09	30	10.14	0.1809415	2.016E-09	4.64895E-10
rs9365765	6	164753911	T	C	C6orf118	0.03	0	1.4278E-09	0	1.81	0.9697623	4.649E-09	1
rs9921617	16	13493538	G	A	SHISA9	-0.03	0	1.4298E-09	0	5.93	0.5479467	4.655E-09	1
rs7865211	9	11110022	A	G	PTPRD	-0.04	0	1.43E-09	0	6.04	0.5351271	4.656E-09	1
rs140966251	16	13494427	T	TTTC	SHISA9	-0.03	0	1.4301E-09	0	5.93	0.5479644	4.656E-09	1
rs16962153	16	13494157	A	G	SHISA9	-0.03	0	1.4301E-09	0	5.93	0.5479644	4.656E-09	1
rs16962155	16	13494478	A	G	SHISA9	-0.03	0	1.4303E-09	0	5.93	0.5479616	4.657E-09	1
rs7875185	9	11109553	G	A	PTPRD	-0.04	0	1.4305E-09	0	5.97	0.5432071	4.657E-09	1
rs13338621	16	13492860	G	T	SHISA9	-0.03	0	1.4307E-09	0	5.93	0.5475451	4.658E-09	1
rs4262575	1	59831912	T	C	HOOK1	0.04	0	1.4312E-09	14	8.16	0.31894	6.042E-09	1

rs7875597	9	11109813	G	A	PTPRD	-0.04	0	1.4312E-09	0	5.98	0.5426331	4.66E-09	1
rs9311336	3	43233567	C	T	SNRK	-0.04	0	1.4335E-09	31	10.17	0.1793525	2.005E-09	4.64895E-10
rs67822851	3	196441176	A	G	UBXN7	-0.03	0	1.4338E-09	0	2.55	0.9235077	4.668E-09	1
rs28501162	16	13492064	C	A	SHISA9	-0.03	0	1.4342E-09	0	5.93	0.548318	4.669E-09	1
rs6442144	3	43221894	A	T	SNRK	-0.04	0	1.4352E-09	30	10.12	0.1821047	2.029E-09	4.64895E-10
rs139918514	15	87407771	C	T	AGBL1	0.08	0	1.4355E-09	27	9.65	0.2094278	4.673E-09	1
rs3213419	16	72008529	T	C	DHODH	-0.04	0	1.436E-09	0	6.69	0.4623133	4.675E-09	1
rs3213421	16	72008543	T	C	DHODH	-0.04	0	1.4364E-09	0	6.69	0.4623133	4.676E-09	1
rs185947477	12	21743464	T	A	LDHB	-0.1	0	1.4366E-09	39	11.49	0.118655	4.677E-09	1
rs10531773	2	27831894	GAA	G	MRPL33,RBF	-0.03	0	1.437E-09	0	6.43	0.4908127	4.678E-09	1
rs6816424	4	142784292	A	G	INPP4B	-0.03	0	1.4379E-09	40	11.69	0.111184	8.844E-09	1
rs7861637	9	11109904	T	C	PTPRD	-0.04	0	1.4406E-09	0	5.98	0.5423432	4.69E-09	1
rs9860007	3	43240914	C	T	SNRK	-0.04	0	1.4408E-09	30	10.07	0.1848651	2.046E-09	4.77269E-10
rs7875707	9	11109905	G	A	PTPRD	-0.04	0	1.4409E-09	0	5.98	0.5423576	4.691E-09	1
rs12715387	3	43238186	C	A	SNRK	-0.04	0	1.4413E-09	32	10.33	0.1704388	1.927E-09	4.41107E-10
rs331948	4	142758701	T	C	INPP4B	-0.03	0	1.4417E-09	40	11.69	0.111153	8.87E-09	1
rs12466847	2	22699052	G	T	KLHL29	0.03	0	1.4431E-09	9	7.72	0.3579403	6.645E-09	1
rs1743971	6	40128188	A	C	MOCS1	-0.03	0	1.4466E-09	17	8.46	0.2939354	3.831E-09	1
rs4388680	1	66915939	T	C	WDR78	0.03	0	1.4471E-09	0	3.95	0.7860223	4.71E-09	1
rs8033270	15	57925591	G	C	ALDH1A2	-0.03	0	1.4495E-09	48	13.49	0.0611333	4.718E-09	1
rs6917453	6	40024647	A	G	MOCS1	-0.03	0	1.4506E-09	0	4.22	0.754044	4.721E-09	1
rs2322701	6	164754793	C	T	C6orf118	0.03	0	1.4528E-09	0	1.81	0.9695799	4.728E-09	1
rs13330249	16	13504831	T	C	SHISA9	-0.03	0	1.4555E-09	0	5.55	0.5936541	4.737E-09	1
rs35261046	4	34417784	A	AG	ARAP2	0.04	0	1.46E-09	17	8.51	0.2896948	6.701E-09	1
rs828432	5	144508797	C	T	KCTD16	0.03	0	1.4619E-09	9	7.74	0.3563396	3.46E-09	1
rs9369156	6	40025986	T	C	MOCS1	-0.03	0	1.4625E-09	0	4.22	0.7541804	4.759E-09	1
rs331963	4	142752698	G	A	INPP4B	-0.03	0	1.4626E-09	40	11.68	0.1116218	8.999E-09	1
rs143738722	10	92831340	C	A	EXOC6	-0.07	0	1.4639E-09	0	2.4	0.9341013	4.764E-09	1
rs9380924	6	40026436	G	C	MOCS1	-0.03	0	1.4655E-09	0	4.22	0.7543019	4.769E-09	1
rs4737198	8	64685197	G	A	CYP7B1	0.03	0	1.4663E-09	0	6.38	0.4964104	4.356E-09	1

Table S2

rs11642912	16	77029529	C	T	MON1B	-0.04	0	1.4667E-09	0	4.3	0.7442396	4.773E-09	1
rs11943980	4	34418781	T	C	ARAP2	0.04	0	1.4709E-09	17	8.53	0.288554	6.767E-09	1
rs10867574	9	80555079	G	A	TLE4	0.03	0	1.4728E-09	0	2.97	0.8878642	4.792E-09	1
rs13146157	4	132615994	T	G	PCDH10	-0.04	0	1.4769E-09	0	3.58	0.8269878	4.805E-09	1
rs6925661	6	40027324	T	C	MOCS1	-0.03	0	1.477E-09	0	4.22	0.7542111	4.806E-09	1
rs10680589	6	27802238	C	CCTT	HIST1H2BL	-0.05	0	1.4773E-09	0	5.2	0.6350485	4.807E-09	1
rs1820374	4	34418274	T	C	ARAP2	0.04	0	1.4776E-09	17	8.52	0.2886384	6.799E-09	1
rs2360520	4	34417786	T	G	ARAP2	0.04	0	1.4802E-09	17	8.52	0.2886838	6.811E-09	1
rs165522	5	144515270	T	G	KCTD16	0.03	0	1.4805E-09	0	6.95	0.4335965	3.838E-09	1
rs10930599	2	173476430	C	T	CDCA7	0.03	0	1.4814E-09	18	8.58	0.2838682	4.82E-09	1
rs11047182	12	23974157	C	T	SOX5	0.07	0	1.4816E-09	0	6.41	0.4922908	4.82E-09	1
rs9853795	3	43211803	A	G	SNRK	-0.04	0	1.4872E-09	30	10.13	0.181357	2.118E-09	4.89975E-10
rs4406437	8	64675240	A	G	CYP7B1	0.03	0	1.4878E-09	0	6.4	0.4933572	4.424E-09	1
rs9858012	3	43212083	A	G	SNRK	-0.04	0	1.4881E-09	30	10.13	0.1814148	2.12E-09	4.89975E-10
rs10081461	8	64689517	G	C	CYP7B1	0.03	0	1.4887E-09	0	6.41	0.4929702	4.423E-09	1
rs9820946	3	43212217	G	C	SNRK	-0.04	0	1.4911E-09	30	10.13	0.1811917	2.123E-09	4.89975E-10
rs11649274	16	30015148	G	A	DOC2A	-0.03	0	1.4914E-09	28	9.85	0.1972253	7.819E-09	1
rs10930600	2	173476463	C	T	CDCA7	0.03	0	1.4925E-09	18	8.58	0.2842005	4.855E-09	1
rs17729514	4	142566298	G	T	INPP4B	-0.06	0	1.4931E-09	26	9.48	0.2200878	7.183E-09	1
rs55740035	14	42981572	A	G	LRFN5	0.05	0	1.4948E-09	25	9.41	0.2247509	4.154E-09	1
rs4683363	3	43210715	T	A	SNRK	0.04	0	1.495E-09	30	10.13	0.1810903	2.128E-09	4.89975E-10
rs4683364	3	43212615	C	T	SNRK	0.04	0	1.4953E-09	30	10.13	0.1812304	2.128E-09	4.89975E-10
rs76847583	12	23975472	C	T	SOX5	0.07	0	1.496E-09	0	6.41	0.4925453	4.866E-09	1
rs202906	6	28043874	T	C	ZNF165	-0.06	0	1.5021E-09	22	9.05	0.2490443	8.176E-09	1
rs148911115	6	164751794	TTTTG	T	C6orf118	0.03	0	1.5028E-09	0	1.87	0.9666021	4.888E-09	1
rs12286198	11	30481647	C	A	MPPED2	-0.03	0	1.5042E-09	0	5.49	0.6005094	4.737E-09	1
rs185150116	6	164705827	C	G	C6orf118	0.03	0	1.5047E-09	0	1.88	0.965941	4.894E-09	1
rs76149263	6	164757470	C	T	C6orf118	0.03	0	1.505E-09	0	1.7	0.9746094	4.895E-09	1
rs144860583	6	164704922	T	C	C6orf118	0.03	0	1.506E-09	0	1.88	0.9659696	4.898E-09	1
rs4864126	4	132636925	T	C	PCDH10	-0.04	0	1.5061E-09	0	3.59	0.8253474	4.899E-09	1

rs9356265	6	164752555	C	T	C6orf118	0.03	0	1.5087E-09	0	1.82	0.9690649	4.907E-09	1
rs6874554	5	144486224	C	A	KCTD16	0.03	0	1.509E-09	9	7.74	0.3560821	3.575E-09	1
rs9364758	6	164704976	T	C	C6orf118	0.03	0	1.5099E-09	0	1.88	0.9660565	4.911E-09	1
rs5794032	11	99954358	TA	T	CNTN5	-0.04	0	1.5103E-09	36	10.96	0.1402175	4.054E-09	1
rs10028493	4	34466632	A	G	ARAP2	0.05	0	1.5114E-09	13	8.07	0.3263549	7.068E-09	1
rs10591593	6	28347765	CCAAT	C	ZSCAN31	-0.05	0	1.5115E-09	0	3.96	0.7840637	4.915E-09	1
rs10031476	4	34476222	C	A	ARAP2	0.05	0	1.5116E-09	13	8.07	0.3262709	7.071E-09	1
rs10517317	4	34472205	C	T	ARAP2	0.05	0	1.5116E-09	13	8.07	0.3262709	7.071E-09	1
rs28786546	4	34475014	A	T	ARAP2	0.05	0	1.5116E-09	13	8.07	0.3262709	7.071E-09	1
rs28852435	4	34475244	G	T	ARAP2	0.05	0	1.5116E-09	13	8.07	0.3262709	7.071E-09	1
rs33973643	4	34471393	CA	C	ARAP2	0.05	0	1.5116E-09	13	8.07	0.3262709	7.071E-09	1
rs7671695	4	34473536	A	G	ARAP2	0.05	0	1.5116E-09	13	8.07	0.3262709	7.071E-09	1
rs7656418	4	34469696	C	T	ARAP2	0.05	0	1.5117E-09	13	8.07	0.3262702	7.071E-09	1
rs1825071	4	34474453	A	T	ARAP2	0.05	0	1.5121E-09	13	8.07	0.3262666	7.073E-09	1
rs349696	5	144477760	C	A	KCTD16	0.03	0	1.5122E-09	9	7.74	0.3563049	3.582E-09	1
rs16989701	4	34469158	A	T	ARAP2	0.05	0	1.5122E-09	13	8.07	0.3262659	7.073E-09	1
rs7201866	16	72052635	A	T	TXNL4B	0.03	0	1.5132E-09	0	3.71	0.8125176	4.921E-09	1
rs60156090	4	34467033	G	T	ARAP2	0.05	0	1.5135E-09	13	8.07	0.3262729	7.079E-09	1
rs189785827	16	72048521	C	T	TXNL4B	0.07	0	1.5139E-09	18	8.64	0.279455	4.747E-09	1
rs9992241	4	34468372	T	C	ARAP2	0.05	0	1.5141E-09	13	8.07	0.3262616	7.082E-09	1
rs1004998	16	49599821	G	A	ZNF423	-0.03	0	1.5144E-09	56	16.07	0.0244692	2.803E-09	1
rs200475	6	27800322	A	G	HIST1H2BL	-0.05	0	1.5148E-09	0	5.33	0.6202348	4.926E-09	1
rs3812988	16	72015722	T	C	DHODH	-0.04	0	1.5148E-09	0	6.87	0.4421852	4.926E-09	1
rs55838477	16	13502230	G	C	SHISA9	-0.03	0	1.5149E-09	0	6.05	0.5336291	4.926E-09	1
rs17075335	3	43215696	T	C	SNRK	0.04	0	1.5152E-09	31	10.25	0.1750261	2.126E-09	4.89975E-10
rs59808482	14	42979317	A	G	LRFN5	0.05	0	1.5157E-09	25	9.39	0.2261689	4.211E-09	1
rs16989674	4	34463299	C	T	ARAP2	0.05	0	1.5157E-09	13	8.07	0.3265509	7.084E-09	1
rs6781696	3	43215213	G	C	SNRK	0.04	0	1.5164E-09	31	10.25	0.174697	2.125E-09	4.89975E-10
rs9833793	3	43216253	T	G	SNRK	-0.04	0	1.5169E-09	30	10.13	0.1815493	2.162E-09	5.03021E-10
rs6848806	4	34462898	T	C	ARAP2	0.05	0	1.5176E-09	13	8.07	0.3263059	7.098E-09	1

rs9861337	3	43223728	A	G	SNRK	-0.04	0	1.518E-09	30	10.07	0.184509	2.163E-09	5.03021E-10
rs147746050	13	103017433	G	A	SLC10A2	0.08	0	1.5181E-09	0	4.56	0.7130373	4.937E-09	1
rs79316535	6	164710794	A	T	C6orf118	0.03	0	1.5181E-09	0	1.9	0.9652065	4.937E-09	1
rs13105716	4	34478182	G	A	ARAP2	0.05	0	1.519E-09	13	8.07	0.3262457	7.105E-09	1
rs7636673	3	43219344	A	G	SNRK	-0.04	0	1.5206E-09	30	10.12	0.1817274	2.169E-09	5.03021E-10
rs6903652	6	28354343	C	G	ZKSCAN3,ZS	-0.05	0	1.5209E-09	0	3.95	0.7852601	4.946E-09	1
rs149981	6	28024447	G	A	ZNF165	-0.06	0	1.5218E-09	22	9.08	0.2468166	8.303E-09	1
rs74429612	2	27770976	C	T	MRPL33	-0.03	0	1.5224E-09	0	5.45	0.6050297	4.95E-09	1
rs7639605	3	43219590	T	C	SNRK	-0.04	0	1.5225E-09	30	10.12	0.1816619	2.171E-09	5.03021E-10
rs72787038	16	72032203	A	C	DHODH	0.04	0	1.5234E-09	0	4.94	0.6668555	4.953E-09	1
rs4016130	3	43220325	G	A	SNRK	-0.04	0	1.5246E-09	30	10.12	0.1817454	2.175E-09	5.03021E-10
rs117139701	15	46681532	C	G	AC066615.1	0.05	0	1.5265E-09	0	6.15	0.5220595	4.963E-09	1
rs12966942	18	54799819	G	A	RAB27B	-0.03	0	1.5268E-09	8	7.61	0.367794	6.026E-09	1
rs12903474	15	57984549	C	A	ALDH1A2	0.03	0	1.5282E-09	51	14.4	0.0444412	1.966E-09	4.52844E-10
rs76975191	15	46686592	C	T	AC066615.1	0.05	0	1.5305E-09	0	6.18	0.5185836	4.976E-09	1
rs7107792	11	47647697	A	C	MTCH2	0.03	0	1.5307E-09	11	7.88	0.3433157	4.977E-09	1
rs165520	5	144515794	A	G	KCTD16	0.03	0	1.5317E-09	0	6.98	0.4312083	3.958E-09	1
rs180711784	6	45843616	C	A	CLIC5	0.09	0	1.5326E-09	35	10.89	0.143516	2.999E-09	1
rs9356250	6	164705327	G	C	C6orf118	0.03	0	1.5326E-09	0	1.89	0.9657991	4.983E-09	1
rs9356249	6	164705302	G	A	C6orf118	0.03	0	1.5328E-09	0	1.89	0.9657948	4.983E-09	1
rs165524	5	144505570	G	C	KCTD16	0.03	0	1.5336E-09	9	7.73	0.357028	3.636E-09	1
rs7940	16	72112542	C	G	DHX38,PMFI	0.03	0	1.5342E-09	0	3.84	0.7984016	4.988E-09	1
rs2419226	4	132619234	A	C	PCDH10	-0.04	0	1.5343E-09	0	3.59	0.8260845	4.988E-09	1
rs6537110	4	142552405	G	C	INPP4B	0.04	0	1.5348E-09	24	9.33	0.229674	4.99E-09	1
rs34019338	17	79817699	G	A	CBX4	0.05	0	1.5363E-09	39	11.66	0.11239	1.063E-08	1
rs56006972	6	164708251	C	T	C6orf118	0.03	0	1.5364E-09	0	1.88	0.9659528	4.995E-09	1
rs200717859	6	164706568	T	C	C6orf118	0.03	0	1.5364E-09	0	1.89	0.9657758	4.995E-09	1
rs183785627	6	164706774	T	C	C6orf118	0.03	0	1.537E-09	0	1.89	0.965795	4.997E-09	1
rs61301417	3	143378975	T	C	SLC9A9	0.04	0	1.5404E-09	3	7.22	0.4059449	4.724E-09	1
rs117417069	6	164708416	T	C	C6orf118	0.03	0	1.5421E-09	0	1.89	0.9658955	5.013E-09	1

rs9371563	6	151940534	T	A	ESR1	-0.03	0	1.543E-09	33	10.52	0.1609689	2.34E-09	5.44295E-10
rs183530078	6	164704264	G	C	C6orf118	0.03	0	1.5441E-09	0	1.89	0.9657488	5.019E-09	1
rs7437439	4	132619496	G	A	PCDH10	-0.04	0	1.5483E-09	0	3.57	0.8279583	5.033E-09	1
rs1836568	4	132639552	T	G	PCDH10	-0.04	0	1.5499E-09	0	3.65	0.8192901	5.038E-09	1
rs1836567	4	132639581	C	T	PCDH10	-0.04	0	1.5502E-09	0	3.65	0.8192033	5.039E-09	1
rs169262	6	27803112	C	T	HIST1H2BL	-0.05	0	1.5505E-09	0	5.18	0.6385078	5.04E-09	1
rs1836569	4	132639512	G	A	PCDH10	-0.04	0	1.5509E-09	0	3.65	0.8192909	5.041E-09	1
rs9371564	6	151940978	A	G	ESR1	-0.03	0	1.5541E-09	33	10.52	0.1608415	2.355E-09	5.44295E-10
rs1547405	16	13501494	A	G	SHISA9	-0.03	0	1.5546E-09	0	6.01	0.5385542	5.053E-09	1
rs1553859	6	164746997	G	C	C6orf118	0.03	0	1.5556E-09	0	1.82	0.9691359	5.056E-09	1
rs1553858	6	164747149	A	T	C6orf118	0.03	0	1.5562E-09	0	1.82	0.9692042	5.058E-09	1
rs11099197	4	132619650	G	A	PCDH10	-0.04	0	1.5567E-09	0	3.54	0.8307309	5.06E-09	1
rs9311334	3	43209486	G	A	SNRK	-0.04	0	1.5568E-09	31	10.24	0.1755875	2.143E-09	5.03021E-10
rs3844426	16	72196362	G	A	PMFBP1	0.03	0	1.5573E-09	0	5.52	0.5962095	5.061E-09	1
rs13127661	4	132617550	C	T	PCDH10	-0.04	0	1.5576E-09	0	3.59	0.8256875	5.062E-09	1
rs499732	18	79786006	G	A	CTDP1	-0.08	0	1.5591E-09	18	8.54	0.2873681	8.29E-09	1
rs116990413	14	41971268	T	G	LRFN5	-0.08	0	1.5604E-09	0	2.7	0.9110096	5.071E-09	1
rs165521	5	144515697	T	C	KCTD16	0.03	0	1.5614E-09	0	6.96	0.4326902	4.043E-09	1
rs9679543	2	27828084	C	T	MRPL33,RBI	-0.03	0	1.5622E-09	0	6.28	0.5077782	5.077E-09	1
rs6827819	4	132640214	T	C	PCDH10	-0.04	0	1.5626E-09	0	3.65	0.8195251	5.078E-09	1
rs7667183	4	142802418	T	C	INPP4B	-0.03	0	1.5626E-09	36	11.07	0.1353903	9.235E-09	1
rs12127270	1	162880166	C	T	CCDC190	-0.03	0	1.5638E-09	33	10.56	0.1589228	1.559E-08	1
rs1140239	16	30010081	C	T	DOC2A	-0.03	0	1.5642E-09	28	9.73	0.2043574	8.277E-09	1
rs1359986	9	80556935	T	C	TLE4	0.03	0	1.5649E-09	0	3.11	0.8742771	5.086E-09	1
rs1435314	4	132640886	C	T	PCDH10	-0.04	0	1.5656E-09	0	3.65	0.8193683	5.088E-09	1
rs11933763	4	142811273	G	A	INPP4B	-0.03	0	1.5678E-09	37	11.17	0.131211	9.037E-09	1
rs77460182	6	164746216	A	C	C6orf118	0.03	0	1.5692E-09	0	1.81	0.969426	5.099E-09	1
rs17016777	4	142799883	T	A	INPP4B	-0.03	0	1.5751E-09	36	11.05	0.1365341	9.322E-09	1
rs9591767	13	56532831	T	G	PRR20A	-0.04	0	1.5766E-09	0	5.78	0.5661938	5.123E-09	1
rs6824812	4	14965319	A	T	CPEB2	-0.03	0	1.578E-09	0	5.11	0.6470007	5.127E-09	1

Table S2

rs117933984	15	46678622	G	A	AC066615.1	0.05	0	1.5819E-09	0	6.16	0.521697	5.14E-09	1
rs58194884	4	132621041	TGTA	T	PCDH10	-0.04	0	1.5836E-09	0	3.58	0.8264681	5.145E-09	1
rs1550560	3	19476777	G	A	KCNH8	-0.03	0	1.5838E-09	0	1.04	0.9941809	5.146E-09	1
rs13102994	4	132620716	A	T	PCDH10	-0.04	0	1.5854E-09	0	3.58	0.8269872	5.151E-09	1
rs13119821	4	132616186	G	A	PCDH10	-0.04	0	1.5856E-09	0	3.66	0.8179142	5.152E-09	1
rs13119679	4	132616309	C	G	PCDH10	-0.04	0	1.5863E-09	0	3.53	0.8315401	5.154E-09	1
rs10018735	4	132631339	T	A	PCDH10	-0.04	0	1.5863E-09	0	3.56	0.8289137	5.154E-09	1
rs17044236	2	22696918	A	G	KLHL29	0.03	0	1.5894E-09	8	7.69	0.360987	7.204E-09	1
rs7112375	11	99984990	A	G	CNTN5	0.04	0	1.5934E-09	2	7.16	0.412617	5.475E-09	1
rs2419224	4	132623329	G	C	PCDH10	-0.04	0	1.594E-09	0	3.57	0.8273953	5.178E-09	1
rs11109662	12	98906425	C	T	ANKS1B	0.06	0	1.5973E-09	0	1.11	0.9927879	5.189E-09	1
rs55909091	3	13080692	C	T	IQSEC1	0.06	0	1.5991E-09	0	1.77	0.9714132	5.195E-09	1
rs11933449	4	132625148	T	C	PCDH10	-0.04	0	1.5995E-09	0	3.57	0.8273537	5.196E-09	1
rs11790468	9	11101010	T	C	PTPRD	-0.04	0	1.5999E-09	6	7.46	0.3827953	5.197E-09	1
rs79425743	3	143380120	C	T	SLC9A9	0.04	0	1.6036E-09	2	7.17	0.4111372	4.944E-09	1
rs140524012	20	61654896	CCGCTCTG	C	CDH4	0.03	0	1.6056E-09	66	20.93	0.0038693	4.022E-09	1
rs139431083	3	45375953	G	A	LARS2	0.09	0	1.6076E-09	0	3.59	0.8254916	5.221E-09	1
rs9925478	16	13487835	C	G	SHISA9	-0.03	0	1.6093E-09	0	6.79	0.451402	5.227E-09	1
rs1435295	4	132627731	G	A	PCDH10	-0.04	0	1.6113E-09	0	3.54	0.8312753	5.233E-09	1
rs17050497	2	59928558	C	T	BCL11A	0.04	0	1.6121E-09	20	8.83	0.264828	8.735E-09	1
rs7776351	6	27758952	C	T	HIST1H2BL	-0.04	0	1.6128E-09	0	6.68	0.4627263	5.238E-09	1
rs11099196	4	132619565	G	A	PCDH10	-0.04	0	1.6163E-09	0	3.56	0.8287491	5.249E-09	1
rs11099199	4	132619769	G	A	PCDH10	-0.04	0	1.6163E-09	0	3.56	0.8287491	5.249E-09	1
rs11099200	4	132619886	A	G	PCDH10	-0.04	0	1.6163E-09	0	3.56	0.8287491	5.249E-09	1
rs13148998	4	132620495	A	G	PCDH10	-0.04	0	1.6163E-09	0	3.56	0.8287491	5.249E-09	1
rs13149064	4	132620253	G	A	PCDH10	-0.04	0	1.6163E-09	0	3.56	0.8287491	5.249E-09	1
rs13149120	4	132620418	C	G	PCDH10	-0.04	0	1.6163E-09	0	3.56	0.8287491	5.249E-09	1
rs13149398	4	132620642	A	C	PCDH10	-0.04	0	1.6163E-09	0	3.56	0.8287491	5.249E-09	1
rs13149534	4	132620492	G	C	PCDH10	-0.04	0	1.6163E-09	0	3.56	0.8287491	5.249E-09	1
rs1347411	4	132621720	G	A	PCDH10	-0.04	0	1.6163E-09	0	3.56	0.8287491	5.249E-09	1

rs2419227	4	132619171	A	C	PCDH10	-0.04	0	1.6163E-09	0	3.56	0.8287491	5.249E-09	1
rs2900845	4	132619061	C	G	PCDH10	-0.04	0	1.6163E-09	0	3.56	0.8287491	5.249E-09	1
rs371783417	4	132621050	ATGT	A	PCDH10	-0.04	0	1.6163E-09	0	3.56	0.8287491	5.249E-09	1
rs376067157	4	132621055	A	AT	PCDH10	-0.04	0	1.6163E-09	0	3.56	0.8287491	5.249E-09	1
rs376597483	4	132621047	T	A	PCDH10	-0.04	0	1.6163E-09	0	3.56	0.8287491	5.249E-09	1
rs6840977	4	132621113	A	G	PCDH10	-0.04	0	1.6163E-09	0	3.56	0.8287491	5.249E-09	1
rs6841517	4	132621271	C	G	PCDH10	-0.04	0	1.6163E-09	0	3.56	0.8287491	5.249E-09	1
rs1435287	4	132622946	T	C	PCDH10	-0.04	0	1.6169E-09	0	3.56	0.8287595	5.251E-09	1
rs9347031	6	164721025	A	T	C6orf118	0.03	0	1.617E-09	0	1.84	0.9684002	5.252E-09	1
rs2419225	4	132622454	T	C	PCDH10	-0.04	0	1.6181E-09	0	3.56	0.8292803	5.255E-09	1
rs10776510	4	132618864	T	C	PCDH10	-0.04	0	1.6181E-09	0	3.56	0.8286708	5.255E-09	1
rs6827287	4	132618865	G	A	PCDH10	-0.04	0	1.6181E-09	0	3.56	0.8286708	5.255E-09	1
rs7854879	9	11104838	G	A	PTPRD	-0.04	0	1.6182E-09	0	4.69	0.6981013	5.255E-09	1
rs76065745	6	51601469	C	T	PKHD1	-0.05	0	1.6186E-09	0	6.62	0.470029	5.257E-09	1
rs6782465	3	143382471	C	T	SLC9A9	0.04	0	1.6187E-09	3	7.25	0.4029579	4.955E-09	1
rs4141843	2	59928185	A	T	BCL11A	0.04	0	1.619E-09	20	8.83	0.2651607	8.769E-09	1
rs13125902	4	132616838	A	T	PCDH10	-0.04	0	1.6201E-09	0	3.56	0.8289446	5.261E-09	1
rs13147694	4	132616636	T	A	PCDH10	-0.04	0	1.6201E-09	0	3.56	0.8289446	5.261E-09	1
rs1579587	4	132618285	A	C	PCDH10	-0.04	0	1.6201E-09	0	3.56	0.8289446	5.261E-09	1
rs1579588	4	132618058	T	G	PCDH10	-0.04	0	1.6201E-09	0	3.56	0.8289446	5.261E-09	1
rs5022835	4	132617286	G	A	PCDH10	-0.04	0	1.6201E-09	0	3.56	0.8289446	5.261E-09	1
rs13146391	4	132616103	T	G	PCDH10	-0.04	0	1.6201E-09	0	3.56	0.8289458	5.261E-09	1
rs5022834	4	132617264	C	A	PCDH10	-0.04	0	1.6207E-09	0	3.56	0.8289391	5.263E-09	1
rs1369372	4	132615878	A	G	PCDH10	-0.04	0	1.6207E-09	0	3.56	0.8293385	5.263E-09	1
rs12325400	16	30012465	C	G	DOC2A	-0.03	0	1.6216E-09	28	9.81	0.1993995	8.501E-09	1
rs72891333	6	66474340	A	G	EYS	-0.06	0	1.6229E-09	0	3.8	0.8021569	5.27E-09	1
rs13123392	4	132625710	T	C	PCDH10	-0.04	0	1.6241E-09	0	3.56	0.8286883	5.274E-09	1
rs3050746	4	132623258	C	CTCT	PCDH10	-0.04	0	1.6254E-09	0	3.56	0.8288963	5.278E-09	1
rs2419223	4	132623456	C	A	PCDH10	-0.04	0	1.6264E-09	0	3.56	0.8289184	5.282E-09	1
rs35957409	6	27750493	T	C	HIST1H2BL	-0.04	0	1.6265E-09	0	6.58	0.4738209	5.282E-09	1

rs79861884	4	111267775	T	C	PITX2	-0.06	0	1.6284E-09	0	3.99	0.7807315	5.288E-09	1
rs28710320	6	40393403	C	T	LRFN2	-0.04	0	1.6285E-09	0	3.46	0.8391127	5.288E-09	1
rs7241433	18	54803448	T	A	RAB27B	-0.03	0	1.6296E-09	2	7.19	0.4093289	5.643E-09	1
rs1547403	16	13500129	G	A	SHISA9	-0.03	0	1.6314E-09	0	5.95	0.5456351	5.297E-09	1
rs1547404	16	13500222	C	G	SHISA9	-0.03	0	1.6314E-09	0	5.95	0.5456351	5.297E-09	1
rs57179728	4	142807796	T	TAA	INPP4B	-0.03	0	1.6315E-09	36	10.96	0.1405931	9.481E-09	1
rs144650388	16	13502222	C	CAAGT	SHISA9	-0.03	0	1.632E-09	0	5.95	0.5456969	5.299E-09	1
rs16962161	16	13500990	A	G	SHISA9	-0.03	0	1.632E-09	0	5.95	0.5456969	5.299E-09	1
rs16962168	16	13501349	T	A	SHISA9	-0.03	0	1.632E-09	0	5.95	0.5456969	5.299E-09	1
rs13333495	16	13502181	A	G	SHISA9	-0.03	0	1.6322E-09	0	5.95	0.5456911	5.3E-09	1
rs1369374	4	132615524	T	C	PCDH10	-0.04	0	1.6329E-09	0	3.57	0.8281902	5.302E-09	1
rs6822958	4	132627008	T	A	PCDH10	-0.04	0	1.633E-09	0	3.56	0.8290976	5.302E-09	1
rs67193996	6	164722505	G	GT	C6orf118	0.03	0	1.633E-09	0	1.83	0.9687489	5.302E-09	1
rs1480978	4	34464661	T	C	ARAP2	0.05	0	1.6332E-09	12	8	0.3329906	7.482E-09	1
rs7764688	6	40147703	G	T	MOCS1	0.03	0	1.6335E-09	16	8.38	0.3004781	4.438E-09	1
rs66632842	4	132624684	G	T	PCDH10	-0.04	0	1.635E-09	0	3.56	0.8292643	5.309E-09	1
rs7681944	4	132626326	A	G	PCDH10	-0.04	0	1.6352E-09	0	3.56	0.8292979	5.31E-09	1
rs2419222	4	132628888	A	C	PCDH10	-0.04	0	1.6361E-09	0	3.55	0.8301874	5.312E-09	1
rs4915276	1	198314484	A	G	NEK7	0.03	0	1.6382E-09	47	13.24	0.0664466	1.061E-08	1
rs56131013	6	28352900	G	A	ZKSCAN3,ZS	-0.05	0	1.6426E-09	0	3.95	0.7851159	5.333E-09	1
rs6661361	1	198324895	G	A	NEK7	0.03	0	1.6439E-09	46	13.13	0.0689582	1.046E-08	1
rs6844375	4	132609466	A	G	PCDH10	-0.04	0	1.6461E-09	0	3.59	0.8261414	5.344E-09	1
rs6534896	4	132611419	A	G	PCDH10	-0.04	0	1.6466E-09	0	3.6	0.8249343	5.346E-09	1
rs73144749	3	143380229	G	A	SLC9A9	0.04	0	1.6479E-09	3	7.22	0.4064304	5.053E-09	1
rs13103352	4	132617630	T	C	PCDH10	-0.04	0	1.6495E-09	0	3.55	0.8304146	5.355E-09	1
rs13128272	4	132617631	G	A	PCDH10	-0.04	0	1.6495E-09	0	3.55	0.8304146	5.355E-09	1
rs7870514	9	111657124	T	C	DNAJC25-GN	0.03	0	1.6516E-09	0	3.75	0.8082885	5.362E-09	1
rs58243949	18	54842602	C	T	RAB27B	-0.03	0	1.6521E-09	26	9.47	0.2204246	6.89E-09	1
rs1390897	16	77020459	A	G	MON1B	-0.03	0	1.6522E-09	5	7.4	0.3882848	6.329E-09	1
rs35647652	4	132630467	T	TA	PCDH10	-0.04	0	1.6539E-09	0	3.55	0.8303475	5.369E-09	1

rs67841855	2	59928656	T	TCCA	BCL11A	0.04	0	1.6552E-09	20	8.83	0.2647992	8.971E-09	1
rs142241159	1	246185291	G	A	SMYD3	-0.05	0	1.6553E-09	0	6.28	0.5078535	5.372E-09	1
rs6912925	6	123895881	C	G	NKAIN2	0.03	0	1.6558E-09	0	3.18	0.8677597	5.375E-09	1
rs7436943	4	132631232	G	A	PCDH10	-0.04	0	1.6586E-09	0	3.54	0.8314524	5.384E-09	1
rs7747606	6	164713123	T	C	C6orf118	0.03	0	1.6607E-09	0	1.84	0.968333	5.39E-09	1
rs4607225	4	132631145	T	C	PCDH10	-0.04	0	1.6624E-09	0	3.54	0.8306019	5.396E-09	1
rs7739999	6	51596721	T	C	PKHD1	-0.05	0	1.6635E-09	0	6.66	0.4647832	5.399E-09	1
rs36068063	1	59872521	T	TG	HOOK1	0.04	0	1.6662E-09	14	8.23	0.3127897	7.036E-09	1
rs6838461	4	34383681	C	T	ARAP2	0.04	0	1.6673E-09	19	8.65	0.2789521	8.195E-09	1
rs76200347	1	246023362	C	T	SMYD3	-0.05	0	1.6675E-09	0	4.7	0.6964688	5.412E-09	1
rs1355175	2	22538931	C	T	KLHL29	-0.03	0	1.6676E-09	14	8.22	0.3135576	8.287E-09	1
rs62519821	8	64551938	G	A	BHLHE22	-0.04	0	1.672E-09	0	2.83	0.900507	5.427E-09	1
rs116295002	6	51600025	T	A	PKHD1	-0.05	0	1.6732E-09	0	6.65	0.4656676	5.43E-09	1
rs4311209	3	143394147	A	C	SLC9A9	0.04	0	1.6741E-09	3	7.28	0.4000147	5.141E-09	1
rs179508	4	142736422	A	C	INPP4B	-0.03	0	1.6749E-09	40	11.7	0.1108551	1.022E-08	1
rs4521222	3	143394134	C	G	SLC9A9	0.04	0	1.6758E-09	3	7.28	0.3999521	5.145E-09	1
rs553882816	14	42982553	G	GTTT	LRFN5	0.05	0	1.676E-09	23	9.15	0.2422792	4.782E-09	1
rs13200462	6	28250421	A	C	ZKSCAN4	-0.06	0	1.6767E-09	34	10.75	0.1500103	1.718E-08	1
rs62083414	18	52600634	T	C	DCC	0.03	0	1.6771E-09	0	2.02	0.958888	5.443E-09	1
rs9347684	6	162730792	T	C	PACRG	0.03	0	1.6785E-09	3	7.25	0.4034178	6.13E-09	1
rs16853522	3	143379650	C	G	SLC9A9	0.04	0	1.68E-09	2	7.21	0.407281	5.152E-09	1
rs184726267	16	71993180	C	T	PKD1L3	0.07	0	1.6808E-09	23	9.13	0.2435279	5.212E-09	1
rs331955	4	142746801	A	G	INPP4B	-0.03	0	1.6833E-09	40	11.7	0.1109424	1.028E-08	1
rs13091206	3	49201285	A	G	CCDC36	-0.04	0	1.6847E-09	11	7.95	0.3369327	5.243E-09	1
rs7638562	3	196531081	T	C	SMCO1	-0.03	0	1.6847E-09	45	12.92	0.0741228	9.959E-09	1
rs4972576	2	173474396	T	C	CDCA7	-0.03	0	1.6863E-09	0	6.37	0.4972379	5.472E-09	1
rs148996702	3	143395397	G	A	SLC9A9	0.04	0	1.6875E-09	3	7.28	0.4001372	5.189E-09	1
rs10594287	16	72113572	GTT	G	PMFBP1	0.03	0	1.6886E-09	0	3.97	0.7828248	5.479E-09	1
rs201955412	4	142747176	G	GA	INPP4B	-0.03	0	1.6898E-09	40	11.7	0.1109758	1.032E-08	1
rs12644329	4	142713593	G	A	INPP4B	0.03	0	1.6902E-09	38	11.35	0.1239885	1.026E-08	1

rs11921228	3	82350276	C	T	GBE1	-0.04	0	1.6904E-09	30	10.09	0.1837227	5.175E-09	1
rs34528959	6	51580672	TAGAG	T	PKHD1	-0.05	0	1.6904E-09	0	6.66	0.4647656	5.485E-09	1
rs1449852	3	82347227	G	A	GBE1	-0.04	0	1.6906E-09	30	10.09	0.1837004	5.176E-09	1
rs62481569	7	135361407	C	T	CNOT4	-0.04	0	1.691E-09	61	18.25	0.0108854	5.037E-10	1.10105E-10
rs115274059	5	120756560	T	A	PRR16	0.04	0	1.6916E-09	0	5.1	0.6477671	5.489E-09	1
rs331950	4	142742386	G	A	INPP4B	-0.03	0	1.6924E-09	40	11.7	0.1110121	1.033E-08	1
rs11916850	3	82353641	A	C	GBE1	-0.04	0	1.6924E-09	30	10.09	0.1836742	5.181E-09	1
rs331949	4	142742053	T	C	INPP4B	-0.03	0	1.6931E-09	40	11.69	0.1112391	1.034E-08	1
rs331957	4	142747370	C	A	INPP4B	-0.03	0	1.6932E-09	40	11.7	0.110946	1.034E-08	1
rs7030405	9	111657384	A	G	DNAJC25-GN	0.03	0	1.6947E-09	0	3.74	0.8091711	5.499E-09	1
rs1349259	3	82349192	G	A	GBE1	-0.04	0	1.695E-09	30	10.09	0.1835892	5.188E-09	1
rs11857461	15	58027492	C	T	ALDH1A2	0.03	0	1.6954E-09	40	11.79	0.1077605	3.23E-09	1
rs111533129	3	49400167	G	C	RHOA	-0.04	0	1.6986E-09	0	5.35	0.6177595	5.511E-09	1
rs9995147	4	132643409	T	A	PCDH10	-0.04	0	1.6994E-09	0	3.54	0.830941	5.514E-09	1
rs12908953	15	57985614	A	G	ALDH1A2	0.03	0	1.7022E-09	50	14.23	0.0471879	2.261E-09	5.30171E-10
rs4762215	12	98886173	C	T	ANKS1B	0.06	0	1.7055E-09	0	1.43	0.9845808	5.533E-09	1
rs6848844	4	132615102	G	A	PCDH10	-0.04	0	1.7057E-09	0	3.55	0.8302293	5.534E-09	1
rs9283883	6	27747691	T	A	HIST1H2BL	-0.04	0	1.7094E-09	0	6.57	0.4747061	5.545E-09	1
rs9366658	6	26469638	G	A	BTN2A1	-0.05	0	1.7098E-09	0	3.03	0.8823592	5.547E-09	1
rs9932951	16	72041442	A	G	TXNL4B	0.03	0	1.7115E-09	0	3.77	0.805428	5.552E-09	1
rs2316662	3	82396403	A	G	GBE1	-0.04	0	1.7133E-09	12	8	0.3322146	5.318E-09	1
rs149661410	10	71476310	G	A	CDH23	0.1	0	1.7146E-09	0	5.58	0.5896995	5.562E-09	1
rs1956589	14	28880393	C	T	FOXG1	-0.04	0	1.7173E-09	0	4.05	0.7737443	5.571E-09	1
rs6817183	4	34496643	A	C	ARAP2	-0.03	0	1.7184E-09	0	2.77	0.9056032	5.574E-09	1
rs7688275	4	142806088	T	G	INPP4B	-0.03	0	1.7204E-09	35	10.91	0.1426896	1.003E-08	1
rs34195838	13	56537055	A	AC	PRR20A	-0.04	0	1.7258E-09	0	5.71	0.5736645	5.597E-09	1
rs11588882	1	198322577	A	G	NEK7	0.03	0	1.7275E-09	46	13.12	0.0691902	1.098E-08	1
rs70977268	6	26351841	TAAG	T	BTN3A2	-0.03	0	1.7304E-09	0	2.27	0.9436811	5.612E-09	1
rs10917624	1	162880051	T	C	CCDC190	-0.03	0	1.7305E-09	33	10.59	0.1573717	1.724E-08	1
rs1347414	4	132614865	G	A	PCDH10	-0.04	0	1.7316E-09	0	3.54	0.8305528	5.616E-09	1

rs200562283	16	22659398	A	G	NPIPB5	-0.07	0	1.7329E-09	0	5.88	0.5541624	5.62E-09	1
rs9556974	13	98564048	G	C	STK24	0.03	0	1.734E-09	33	10.58	0.1578231	3.603E-09	1
rs2216933	2	59900098	C	G	BCL11A	0.03	0	1.7344E-09	36	11.06	0.1361901	4.594E-09	1
rs1341972	1	230502215	A	G	PGBD5	0.03	0	1.7348E-09	20	8.76	0.2703086	1.06E-08	1
rs10801664	1	198315778	T	C	NEK7	0.03	0	1.7361E-09	46	13.13	0.0689447	1.101E-08	1
rs12373651	2	95406660	G	A	FAHD2A	-0.03	0	1.7363E-09	0	4.53	0.7173937	5.631E-09	1
rs11047330	12	24252452	C	T	SOX5	0.04	0	1.7373E-09	0	6.19	0.5173504	5.634E-09	1
rs17536094	10	91001492	G	C	ANKRD1	-0.05	0	1.7379E-09	0	3.99	0.7811702	5.636E-09	1
rs1347415	4	132614743	G	C	PCDH10	-0.04	0	1.7395E-09	0	3.54	0.8306699	5.641E-09	1
rs79621462	6	151932980	A	G	ESR1	-0.03	0	1.7411E-09	12	8.02	0.3309277	4.791E-09	1
rs12046569	1	198315082	G	C	NEK7	0.03	0	1.7411E-09	46	13.13	0.0689816	1.104E-08	1
rs12444108	16	30016373	G	A	DOC2A	-0.03	0	1.7418E-09	28	9.81	0.199776	9.119E-09	1
rs11215362	11	115114186	G	A	CADM1	-0.03	0	1.7422E-09	7	7.55	0.3741814	6.865E-09	1
rs28850355	17	68068281	C	T	KPNA2	-0.04	0	1.743E-09	0	6.76	0.454697	5.652E-09	1
rs4292260	3	49111457	T	C	USP19	-0.04	0	1.7471E-09	17	8.45	0.2943719	5.371E-09	1
rs73088122	3	49394971	C	T	RHOA	-0.04	0	1.7473E-09	0	5.33	0.6197987	5.666E-09	1
rs4955411	3	49107871	A	G	USP19	-0.04	0	1.7533E-09	18	8.62	0.2808724	5.296E-09	1
rs1418133	1	230499707	G	A	PGBD5	0.03	0	1.7543E-09	19	8.75	0.2713095	1.064E-08	1
rs11099194	4	132614557	T	C	PCDH10	-0.04	0	1.7589E-09	0	3.54	0.8307789	5.703E-09	1
rs6936016	6	40129274	T	C	MOCS1	0.03	0	1.763E-09	12	7.98	0.3342803	4.879E-09	1
rs34978288	1	198323075	C	CG	NEK7	0.03	0	1.7638E-09	46	13.13	0.0689032	1.11E-08	1
rs200123053	12	121742191	CAG	C	TMEM120B	0.08	0	1.7662E-09	0	4.83	0.6802288	5.726E-09	1
rs7160968	14	42972305	T	C	LRFN5	0.05	0	1.7679E-09	26	9.54	0.2164303	4.725E-09	1
rs9940829	16	13499562	A	T	SHISA9	-0.03	0	1.7687E-09	0	5.99	0.5413266	5.734E-09	1
rs16891717	6	26476915	T	A	BTN2A1	-0.05	0	1.7774E-09	0	2.96	0.8887357	5.761E-09	1
rs9358947	6	26478772	G	A	BTN2A1	-0.05	0	1.7774E-09	0	2.96	0.8887357	5.761E-09	1
rs4800623	18	25116101	T	G	ZNF521	0.03	0	1.7794E-09	0	2.2	0.9478797	5.768E-09	1
rs80002998	1	198310756	T	C	NEK7	0.03	0	1.7807E-09	46	13.13	0.0689071	1.125E-08	1
rs6456727	6	26470927	T	C	BTN2A1	-0.04	0	1.7816E-09	0	2.82	0.9012018	5.775E-09	1
rs11207535	1	59894523	A	G	CYP2J2	0.04	0	1.7819E-09	15	8.28	0.3083433	7.519E-09	1

Table S2

rs10024696	4	142726725	T	C	INPP4B	0.03	0	1.7834E-09	33	10.6	0.156906	1.051E-08	1
rs2043514	4	132613084	A	G	PCDH10	-0.04	0	1.7855E-09	0	3.54	0.8308147	5.787E-09	1
rs11970439	6	28335687	C	G	ZSCAN31	-0.05	0	1.7865E-09	0	3.77	0.8056695	5.79E-09	1
rs1373032	4	142719370	C	A	INPP4B	0.03	0	1.7868E-09	38	11.44	0.1205168	1.086E-08	1
rs4915144	1	198326695	A	G	NEK7	0.03	0	1.7887E-09	46	13.16	0.068308	1.135E-08	1
rs11222115	11	99973902	T	C	CNTN5	0.04	0	1.7899E-09	40	11.79	0.1078042	4.225E-09	1
rs13105063	4	132614125	G	A	PCDH10	-0.04	0	1.7909E-09	0	3.54	0.8312217	5.804E-09	1
rs11251830	10	3282964	C	T	PITRM1	0.03	0	1.7921E-09	37	11.15	0.1320438	1.122E-08	1
rs7539335	1	198315301	T	C	NEK7	0.03	0	1.7924E-09	46	13.13	0.0689173	1.127E-08	1
rs12935701	16	30015427	C	T	DOC2A	-0.03	0	1.7944E-09	28	9.79	0.2006829	9.401E-09	1
rs56296968	6	26474343	C	T	BTN2A1	-0.05	0	1.7948E-09	0	2.96	0.8886439	5.817E-09	1
rs1408479	1	59894355	C	T	CYP2J2	0.04	0	1.7954E-09	15	8.28	0.3082805	7.575E-09	1
rs11432623	6	26473868	G	GT	BTN2A1	-0.05	0	1.7967E-09	0	2.96	0.8886468	5.823E-09	1
rs11432622	6	26473975	T	TA	BTN2A1	-0.05	0	1.7969E-09	0	2.96	0.8886474	5.823E-09	1
rs79671580	2	22618663	GCTAA	G	KLHL29	0.03	0	1.7984E-09	13	8.11	0.3226407	9.371E-09	1
rs141093574	15	87461095	A	G	NTRK3	0.08	0	1.7986E-09	29	9.91	0.1935745	5.829E-09	1
rs4659647	1	235215871	G	A	ARID4B	0.03	0	1.7993E-09	23	9.14	0.2425442	1.262E-08	1
rs7655283	4	34469821	T	G	ARAP2	0.05	0	1.7997E-09	12	8.04	0.3287266	8.34E-09	1
rs4732123	7	135367474	C	T	CNOT4	-0.04	0	1.8002E-09	61	18	0.0119849	5.875E-10	1.2881E-10
rs13222757	7	135402283	T	C	CNOT4	-0.04	0	1.803E-09	61	18.02	0.011872	5.824E-10	1.2881E-10
rs9348719	6	26469804	T	C	BTN2A1	-0.05	0	1.8032E-09	0	2.96	0.8884447	5.843E-09	1
rs11100754	4	142716275	T	C	INPP4B	0.03	0	1.8032E-09	38	11.32	0.1253166	1.098E-08	1
rs1377566	11	100008627	A	G	CNTN5	0.04	0	1.8062E-09	41	12.06	0.0985426	3.897E-09	1
rs9837568	3	196495498	C	T	RNF168	-0.03	0	1.8072E-09	0	6.94	0.4351854	5.856E-09	1
rs1946688	4	132613302	T	G	PCDH10	-0.04	0	1.808E-09	0	3.54	0.8313851	5.859E-09	1
rs2043513	4	132613306	T	C	PCDH10	-0.04	0	1.808E-09	0	3.54	0.8313851	5.859E-09	1
rs10838739	11	47651191	C	T	AGBL2	0.03	0	1.8087E-09	13	8.13	0.3215376	5.861E-09	1
rs1842531	4	34501380	T	C	ARAP2	-0.03	0	1.8105E-09	0	3.13	0.8725735	5.866E-09	1
rs1443185	4	142712688	T	C	INPP4B	0.03	0	1.8135E-09	38	11.3	0.1259138	1.105E-08	1
rs1443186	4	142712640	C	T	INPP4B	0.03	0	1.8135E-09	38	11.3	0.125914	1.105E-08	1

rs61857751	10	90939717	G	A	ANKRD1	-0.05	0	1.8139E-09	9	7.77	0.3537165	5.877E-09	1
rs507249	1	36788738	T	C	GRIK3	0.03	0	1.8169E-09	0	5.5	0.5989876	5.887E-09	1
rs148271316	11	47739956	TTTTGTTTG	T	FNBP4	-0.03	0	1.817E-09	0	6.26	0.5094218	5.887E-09	1
rs3757150	6	26476554	T	A	BTN2A1	-0.05	0	1.8178E-09	0	2.95	0.8895202	5.89E-09	1
rs9368530	6	27769826	A	G	HIST1H2BL	-0.04	0	1.8229E-09	0	6.69	0.4613731	5.906E-09	1
rs572900581	14	42976266	G	GT	LRFN5	0.05	0	1.8229E-09	23	9.2	0.2383034	5.128E-09	1
rs11764781	7	135408795	C	A	CNOT4	-0.04	0	1.8254E-09	61	17.97	0.0120871	6.017E-10	1.32223E-10
rs2132403	6	19281191	G	T	ID4	0.03	0	1.8258E-09	35	10.89	0.1434061	3.858E-09	1
rs201201	6	104292423	C	G	HACE1	0.04	0	1.8271E-09	21	8.87	0.2623176	1.158E-08	1
rs2900844	4	132619410	T	A	PCDH10	-0.04	0	1.8276E-09	0	3.58	0.826866	5.921E-09	1
rs4462678	18	53096025	A	G	DCC	0.03	0	1.8295E-09	0	2.78	0.9049682	5.927E-09	1
rs6659288	1	198308548	A	G	NEK7	0.03	0	1.8301E-09	46	13.11	0.0694055	1.158E-08	1
rs6548811	3	82372574	G	T	GBE1	-0.04	0	1.831E-09	14	8.17	0.317839	5.742E-09	1
rs331942	4	142736442	C	T	INPP4B	-0.03	0	1.8333E-09	35	10.83	0.1461225	1.09E-08	1
rs8018666	14	42974845	T	A	LRFN5	0.05	0	1.8359E-09	23	9.19	0.2389835	5.167E-09	1
rs200468	6	27790076	C	G	HIST1H2BL	-0.05	0	1.8374E-09	0	5.34	0.618023	5.952E-09	1
rs74049854	14	42974195	A	T	LRFN5	0.05	0	1.8376E-09	23	9.19	0.2391335	5.17E-09	1
rs74049855	14	42974208	G	A	LRFN5	0.05	0	1.8383E-09	23	9.19	0.2391714	5.172E-09	1
rs11344459	3	50139619	TC	T	SEMA3F	-0.04	0	1.8416E-09	6	7.48	0.3809792	6.854E-09	1
rs165519	5	144517184	G	A	KCTD16	0.03	0	1.8417E-09	0	7.02	0.427289	4.735E-09	1
rs4535200	3	43487936	A	C	ANO10	-0.03	0	1.8433E-09	42	12.11	0.0969941	2.025E-09	4.64895E-10
rs11761277	7	29800584	T	C	WIPF3	0.03	0	1.844E-09	0	3.09	0.876872	5.973E-09	1
rs144630651	16	72005073	T	A	DHODH	0.07	0	1.8485E-09	20	8.82	0.2657098	5.707E-09	1
rs541301	1	36784453	T	C	GRIK3	0.03	0	1.8488E-09	0	5.86	0.5563354	5.988E-09	1
rs3736594	2	27772914	A	C	MRPL33	0.03	0	1.8507E-09	0	5.8	0.5630374	5.994E-09	1
rs4246729	4	142547218	G	A	INPP4B	0.04	0	1.8511E-09	25	9.42	0.224176	5.995E-09	1
rs113525567	14	42973300	C	T	LRFN5	0.05	0	1.8517E-09	23	9.19	0.2395766	5.209E-09	1
rs11630835	15	57977264	C	T	ALDH1A2	0.03	0	1.8528E-09	50	14.21	0.0475689	2.453E-09	5.73689E-10
rs9393716	6	26376640	A	G	BTN3A2	-0.04	0	1.8529E-09	0	6.65	0.4662911	6.001E-09	1
rs149943	6	28034610	G	A	ZNF165	-0.06	0	1.8542E-09	7	7.57	0.371913	7.073E-09	1

Table S2

rs199796774	14	42970820	T	C	LRFN5	0.05	0	1.8554E-09	23	9.16	0.2412805	5.223E-09	1
rs77793612	13	61239475	C	A	PCDH20	-0.1	0	1.8563E-09	0	6.56	0.4760508	6.012E-09	1
rs4740477	9	11100586	C	G	PTPRD	0.04	0	1.8564E-09	5	7.39	0.38926	6.012E-09	1
rs370169675	14	42970817	T	C	LRFN5	0.05	0	1.8572E-09	23	9.16	0.2413016	5.227E-09	1
rs190757625	14	42970548	G	C	LRFN5	0.05	0	1.859E-09	23	9.16	0.2411581	5.232E-09	1
rs11124582	2	22611998	G	A	KLHL29	0.03	0	1.8597E-09	13	8.08	0.3260191	9.557E-09	1
rs2491424	6	51575256	G	A	PKHD1	-0.05	0	1.8597E-09	0	6.78	0.4520415	6.023E-09	1
rs3008840	6	40093767	A	G	MOCS1	0.03	0	1.8598E-09	20	8.78	0.2686451	4.605E-09	1
rs17535328	10	90937956	A	C	ANKRD1	-0.05	0	1.8619E-09	11	7.87	0.3437793	6.03E-09	1
rs9844068	3	196497167	C	T	RNF168	-0.03	0	1.8647E-09	0	6.93	0.4359756	6.038E-09	1
rs17498521	12	24268114	C	G	SOX5	0.04	0	1.8647E-09	0	5.72	0.5733085	6.038E-09	1
rs9468203	6	27720888	A	G	HIST1H2BL	-0.04	0	1.8674E-09	0	5.84	0.5583922	6.047E-09	1
rs1833280	18	54801894	T	A	RAB27B	-0.03	0	1.8674E-09	4	7.3	0.3985976	6.671E-09	1
rs2588469	18	56001187	G	A	TCF4	0.05	0	1.8678E-09	0	1.92	0.9642292	6.048E-09	1
rs3812278	7	135387389	T	C	CNOT4	-0.04	0	1.8685E-09	61	18.05	0.0117605	6.086E-10	1.32223E-10
rs3106189	6	33314225	C	T	TAPBP	0.03	0	1.8722E-09	5	7.45	0.3838979	6.974E-09	1
rs9468204	6	27721030	C	T	HIST1H2BL	-0.04	0	1.8746E-09	0	5.84	0.5584491	6.07E-09	1
rs345906	2	8549601	T	C	ID2	0.03	0	1.8754E-09	0	5.26	0.6287091	6.072E-09	1
rs1877075	4	140004716	G	A	MAML3	-0.03	0	1.8771E-09	0	1.82	0.9688932	6.078E-09	1
rs7125588	11	113565350	A	G	DRD2	-0.03	0	1.882E-09	0	5.66	0.5803031	5.924E-09	1
rs4518487	6	26467303	A	G	BTN2A1	-0.04	0	1.886E-09	0	2.84	0.8998174	6.106E-09	1
rs6449102	4	15125724	C	T	CPEB2	-0.03	0	1.8861E-09	0	6.47	0.4862425	5.898E-09	1
rs12026120	1	198326196	C	G	NEK7	0.03	0	1.8864E-09	46	13.16	0.0682529	1.194E-08	1
rs3734544	6	26468432	G	A	BTN2A1	-0.05	0	1.8872E-09	0	2.97	0.8874997	6.11E-09	1
rs9936784	16	72196795	T	G	PMFBP1	0.03	0	1.8875E-09	0	6.93	0.4365558	6.11E-09	1
rs77475786	1	246012367	C	T	SMYD3	-0.05	0	1.8884E-09	0	4.85	0.6777176	6.114E-09	1
rs68141011	6	28250019	G	T	ZKSCAN4	-0.06	0	1.8935E-09	34	10.7	0.1522501	1.924E-08	1
rs192681946	16	71998455	T	G	PKD1L3	0.07	0	1.8978E-09	20	8.83	0.265109	5.861E-09	1
rs3750069	7	135363494	G	A	CNOT4	-0.04	0	1.8979E-09	61	18.08	0.0116179	6.13E-10	1.35726E-10
rs2243865	6	51570926	T	C	PKHD1	-0.05	0	1.9004E-09	0	6.79	0.4508997	6.152E-09	1

Table S2

rs165523	5	144513609	C	T	KCTD16	0.03	0	1.9006E-09	10	7.78	0.3525314	4.476E-09	1
rs9461405	6	27751596	G	T	HIST1H2BL	-0.04	0	1.901E-09	0	6.58	0.4744099	6.154E-09	1
rs34871384	15	57987676	C	A	ALDH1A2	0.03	0	1.9022E-09	50	14.19	0.0478525	2.514E-09	5.8898E-10
rs73641867	9	10181476	C	G	PTPRD	-0.05	0	1.9026E-09	0	5.16	0.640055	6.159E-09	1
rs7656350	4	15125772	C	T	CPEB2	-0.03	0	1.9039E-09	0	6.46	0.4870442	5.955E-09	1
rs12736983	1	162875340	T	C	CCDC190	-0.03	0	1.9053E-09	31	10.21	0.1772293	1.736E-08	1
rs1455211	4	15123186	C	T	CPEB2	-0.03	0	1.9054E-09	0	6.51	0.4813774	6E-09	1
rs9865051	3	49128636	C	T	LAMB2	-0.04	0	1.9092E-09	13	8.06	0.3270925	5.863E-09	1
rs75593520	14	42964960	A	G	LRFN5	0.05	0	1.9098E-09	23	9.14	0.2430642	5.375E-09	1
rs112399731	14	42964950	C	CCTAT	LRFN5	0.05	0	1.9103E-09	23	9.14	0.2430604	5.377E-09	1
rs72696235	9	11230856	A	C	PTPRD	-0.04	0	1.9113E-09	19	8.72	0.2731671	1.046E-08	1
rs6589386	11	113573031	C	T	DRD2	-0.03	0	1.9123E-09	0	5.71	0.573869	5.993E-09	1
rs3812986	16	72125051	T	C	PMFBP1	0.03	0	1.9127E-09	0	2.98	0.8869133	6.191E-09	1
rs2551443	18	55973810	A	G	TCF4	0.05	0	1.9127E-09	0	1.85	0.9678466	6.191E-09	1
rs76788735	16	71709266	T	C	PHLPP2	0.04	0	1.914E-09	0	6.86	0.4437821	6.195E-09	1
rs9829067	3	43525443	G	A	ANO10	-0.03	0	1.9172E-09	38	11.39	0.1223169	2.462E-09	5.73689E-10
rs73144760	3	143405108	G	A	SLC9A9	0.04	0	1.9191E-09	5	7.4	0.3879739	5.832E-09	1
rs2801208	1	208254067	T	A	PLXNA2	-0.03	0	1.926E-09	0	5.03	0.6563885	6.233E-09	1
rs7623687	3	49411133	A	C	RHOA	-0.04	0	1.927E-09	0	5.24	0.6307249	6.236E-09	1
rs34919929	7	100414711	G	A	ZCWPW1	-0.03	0	1.9293E-09	36	10.99	0.138946	8.352E-09	1
rs78149910	1	246013515	G	A	SMYD3	-0.05	0	1.9326E-09	0	4.86	0.6771984	6.254E-09	1
rs10939598	4	14921019	T	A	CPEB2	-0.03	0	1.9343E-09	10	7.81	0.3498884	6.259E-09	1
rs141944942	1	246013027	AAC	A	SMYD3	-0.05	0	1.9351E-09	0	4.85	0.6780759	6.262E-09	1
rs10786925	10	106211142	C	T	SORCS1	-0.03	0	1.9364E-09	0	5.73	0.5712097	6.266E-09	1
rs61687445	11	113567370	C	A	DRD2	-0.03	0	1.9366E-09	0	5.66	0.5800231	6.094E-09	1
rs4505672	3	43469974	G	C	ANO10	-0.03	0	1.9367E-09	42	12.15	0.0956516	2.106E-09	4.89975E-10
rs1625107	11	99636736	T	C	CNTN5	-0.03	0	1.939E-09	0	3.52	0.8326662	6.274E-09	1
rs76745293	6	40110619	T	TGC	MOCS1	0.03	0	1.943E-09	14	8.18	0.3173964	5.272E-09	1
rs12735998	1	162881966	T	C	CCDC190	-0.03	0	1.9438E-09	31	10.21	0.177247	1.774E-08	1
rs17113715	14	42964216	T	C	LRFN5	0.05	0	1.9458E-09	23	9.09	0.245926	5.513E-09	1

rs4741111	9	11100680	A	G	PTPRD	0.04	0	1.9472E-09	4	7.37	0.3915968	6.3E-09	1
rs201333072	14	42971498	C	A	LRFN5	0.05	0	1.9477E-09	23	9.17	0.2409987	5.476E-09	1
rs4257651	4	15127087	C	T	CPEB2	-0.03	0	1.949E-09	0	6.47	0.4865543	6.088E-09	1
rs12457428	18	45152381	C	T	SLC14A2	-0.03	0	1.949E-09	0	2.8	0.9031935	6.306E-09	1
rs190983132	14	42971485	C	G	LRFN5	0.05	0	1.9506E-09	23	9.17	0.2409631	5.484E-09	1
rs156743	6	27999311	T	C	OR2B6	-0.06	0	1.952E-09	22	9.05	0.249291	1.053E-08	1
rs111327216	3	49487785	C	T	DAG1	-0.04	0	1.9521E-09	0	5.1	0.648092	6.316E-09	1
rs9348720	6	26482240	G	A	BTN2A1	-0.05	0	1.9524E-09	0	2.92	0.8926504	6.316E-09	1
rs9358948	6	26483578	G	A	BTN2A1	-0.05	0	1.9534E-09	0	2.92	0.8926145	6.32E-09	1
rs4690699	4	142718345	C	T	INPP4B	0.03	0	1.9543E-09	38	11.41	0.1216451	1.191E-08	1
rs4752860	11	47683463	C	A	AGBL2	-0.03	0	1.9552E-09	3	7.28	0.4006949	6.326E-09	1
rs12707227	7	135366127	G	A	CNOT4	-0.04	0	1.9567E-09	60	17.94	0.0122222	6.621E-10	1.46804E-10
rs9366702	6	27766691	T	C	HIST1H2BL	-0.04	0	1.958E-09	0	6.56	0.4763402	6.334E-09	1
rs13084997	3	114365877	G	A	ZBTB20	-0.03	0	1.9583E-09	17	8.53	0.288242	9.021E-09	1
rs9845200	3	61135345	T	G	FHIT	0.03	0	1.96E-09	0	5.22	0.6328053	6.341E-09	1
rs544230455	6	36421424	G	C	PXT1	0.09	0	1.9624E-09	0	4.12	0.7658555	6.348E-09	1
rs564282165	6	36421423	T	A	PXT1	0.09	0	1.9624E-09	0	4.12	0.7658555	6.348E-09	1
rs12928365	16	72133967	G	A	PMFBP1	0.03	0	1.9624E-09	0	3.35	0.8506522	6.348E-09	1
rs546573387	6	36421425	C	A	PXT1	0.09	0	1.9626E-09	0	4.12	0.7658536	6.349E-09	1
rs9393851	6	27731802	A	T	HIST1H2BL	-0.04	0	1.9629E-09	0	6.44	0.4896615	6.35E-09	1
rs9393848	6	27720590	G	A	HIST1H2BL	-0.04	0	1.9634E-09	0	5.87	0.5547878	6.352E-09	1
rs12903551	15	57976174	C	T	ALDH1A2	0.03	0	1.9636E-09	50	14.2	0.0476921	2.599E-09	6.04682E-10
rs61857752	10	90939786	T	G	ANKRD1	-0.05	0	1.964E-09	9	7.76	0.3538106	6.353E-09	1
rs1458727	11	30496449	C	T	MPPED2	-0.03	0	1.9643E-09	0	5.74	0.570126	6.081E-09	1
rs11755255	6	123921986	G	A	NKAIN2	0.03	0	1.9644E-09	0	1.68	0.9752126	6.355E-09	1
rs12286337	11	30481750	G	A	MPPED2	-0.03	0	1.9646E-09	0	5.72	0.5723735	6.106E-09	1
rs331940	4	142734745	G	A	INPP4B	-0.03	0	1.9661E-09	35	10.82	0.1467389	1.143E-08	1
rs10488821	11	30480628	A	G	MPPED2	-0.03	0	1.9661E-09	0	5.72	0.5723944	6.111E-09	1
rs1923489	6	40055349	T	C	MOCS1	-0.03	0	1.9671E-09	25	9.43	0.2235091	4.536E-09	1
rs6061696	20	61651374	A	G	CDH4	0.03	0	1.9675E-09	65	20.56	0.0044712	5.176E-09	1

rs1458726	11	30484332	G	T	MPPED2	-0.03	0	1.969E-09	0	5.72	0.5723566	6.121E-09	1
rs56270304	2	207467716	T	C	CREB1	0.04	0	1.9697E-09	14	8.23	0.3126182	8.094E-09	1
rs6903160	6	27336807	T	A	POM121L2	-0.03	0	1.9747E-09	0	6.43	0.490638	6.387E-09	1
rs60738304	7	100414956	A	C	ZCWPW1	-0.03	0	1.9748E-09	36	10.98	0.1392763	8.57E-09	1
rs4294187	8	10103941	A	G	MSRA	0.04	0	1.9759E-09	0	5.55	0.5930184	6.391E-09	1
rs34888377	2	59913057	G	GA	BCL11A	0.03	0	1.9763E-09	13	8.09	0.324451	8.069E-09	1
rs78971530	16	72861093	G	T	ZFHX3	0.07	0	1.9771E-09	17	8.49	0.2916998	5.487E-09	1
rs9467772	6	26496350	A	T	BTN1A1	-0.04	0	1.9829E-09	0	2.79	0.9040314	6.413E-09	1
rs6813458	4	142717729	G	A	INPP4B	0.03	0	1.9839E-09	36	11.08	0.135305	1.161E-08	1
rs12405073	1	59840168	G	C	HOOK1	0.04	0	1.9862E-09	13	8.12	0.3219042	8.265E-09	1
rs3828955	7	135369619	G	A	CNOT4	-0.04	0	1.9892E-09	60	17.92	0.0123134	6.773E-10	1.50694E-10
rs4859283	4	34525680	G	A	ARAP2	0.03	0	1.9895E-09	0	3.08	0.8774368	6.434E-09	1
rs218989	1	36701114	G	T	GRIK3	0.03	0	1.9909E-09	43	12.39	0.088427	4.238E-09	1
rs12536331	7	135406576	G	A	CNOT4	-0.04	0	1.9927E-09	60	17.87	0.0125751	6.95E-10	1.54688E-10
rs117196247	16	22656864	T	G	NPIPB5	-0.07	0	1.9935E-09	0	5.73	0.5716721	6.447E-09	1
rs115961201	2	27482029	G	A	IFT172	-0.07	0	1.9943E-09	0	6.75	0.4549955	6.449E-09	1
rs1025128	2	59948340	G	C	BCL11A	0.03	0	1.9981E-09	39	11.59	0.1147602	1.011E-08	1
rs1351631	3	43476675	T	G	ANO10	-0.03	0	1.9985E-09	39	11.57	0.1157322	2.464E-09	5.73689E-10
rs1455207	4	15127009	A	G	CPEB2	-0.03	0	2.0049E-09	0	6.22	0.5137643	6.394E-09	1
rs9379880	6	26496688	G	A	BTN1A1	-0.05	0	2.0049E-09	0	2.91	0.8927552	6.483E-09	1
rs2343493	1	162875896	A	G	CCDC190	-0.03	0	2.0054E-09	31	10.2	0.1773645	1.825E-08	1
rs2880638	1	162877578	A	T	CCDC190	-0.03	0	2.0054E-09	31	10.2	0.1773645	1.825E-08	1
rs2343478	1	162884204	G	A	CCDC190	-0.03	0	2.0073E-09	34	10.69	0.1529435	2.028E-08	1
rs2101064	3	43521840	A	C	ANO10	-0.03	0	2.0074E-09	39	11.61	0.1141038	2.46E-09	5.73689E-10
rs12401290	1	59869434	T	C	HOOK1	0.04	0	2.0087E-09	13	8.11	0.3229782	8.367E-09	1
rs1377567	11	100008807	A	G	CNTN5	0.04	0	2.0098E-09	42	12.15	0.0956518	4.266E-09	1
rs7934723	11	99991440	C	T	CNTN5	0.04	0	2.0163E-09	44	12.64	0.0813161	4.193E-09	1
rs9347028	6	164697310	T	C	C6orf118	0.03	0	2.0172E-09	0	1.89	0.965709	6.522E-09	1
rs35987611	1	198311306	T	TG	NEK7	0.03	0	2.0199E-09	47	13.45	0.0618226	1.276E-08	1
rs35511675	15	57974780	T	A	ALDH1A2	0.03	0	2.0209E-09	50	14.21	0.0476428	2.674E-09	6.20806E-10

Table S2

rs2311212	18	54800910	T	C	RAB27B	-0.03	0	2.0215E-09	8	7.62	0.3673684	7.802E-09	1
rs4502065	12	24264519	G	A	SOX5	0.04	0	2.022E-09	0	3.86	0.7961424	6.537E-09	1
rs6061693	20	61649441	A	G	CDH4	0.03	0	2.0221E-09	63	19.19	0.0076133	6.888E-09	1
rs937930	2	22543682	A	G	KLHL29	0.03	0	2.0229E-09	11	7.94	0.3377734	9.285E-09	1
rs3812265	7	135364052	C	T	CNOT4	-0.04	0	2.027E-09	61	18.2	0.0111073	6.1E-10	1.35726E-10
rs9873316	3	43514173	C	T	ANO10	-0.03	0	2.0281E-09	39	11.63	0.1132287	2.495E-09	5.8898E-10
rs139635157	6	27735767	TTTTG	T	HIST1H2BL	-0.04	0	2.0319E-09	0	6.47	0.4855326	6.568E-09	1
rs10214440	6	27734661	A	C	HIST1H2BL	-0.04	0	2.0334E-09	0	6.47	0.4855255	6.573E-09	1
rs66725070	15	57975218	GACAT	G	ALDH1A2	0.03	0	2.0335E-09	50	14.2	0.0476548	2.69E-09	6.37363E-10
rs9461400	6	27732780	A	G	HIST1H2BL	-0.04	0	2.0352E-09	0	6.47	0.4855383	6.579E-09	1
rs10603146	6	114751515	CAT	C	HS3ST5	0.04	0	2.0358E-09	36	10.98	0.1395904	1.225E-08	1
rs7529192	1	198317710	T	C	NEK7	0.03	0	2.0361E-09	45	12.84	0.0759871	1.326E-08	1
rs56294861	10	90939075	A	G	ANKRD1	-0.05	0	2.0372E-09	10	7.85	0.3457702	7.478E-09	1
rs1324489	1	59880575	T	C	HOOK1	0.04	0	2.0407E-09	29	9.86	0.1965729	1.269E-08	1
rs1512141	4	46845333	T	G	COX7B2	0.03	0	2.0415E-09	28	9.82	0.199011	1.044E-08	1
rs9468214	6	27745520	G	C	HIST1H2BL	-0.04	0	2.0419E-09	0	6.51	0.4814745	6.6E-09	1
rs9347683	6	162728023	A	C	PACRG	0.03	0	2.045E-09	0	7.01	0.4280474	6.636E-09	1
rs1970022	20	61654160	C	T	CDH4	0.03	0	2.0472E-09	66	20.65	0.0043233	5.32E-09	1
rs9814737	3	43508478	T	C	ANO10	-0.03	0	2.0488E-09	39	11.52	0.1176307	2.579E-09	6.04682E-10
rs111271782	3	49403135	G	A	RHOA	-0.04	0	2.0493E-09	0	5.27	0.6269287	6.623E-09	1
rs4925265	20	61650817	G	A	CDH4	0.03	0	2.0514E-09	66	20.71	0.0042237	5.223E-09	1
rs74011415	15	47367997	G	A	SEMA6D	0.04	0	2.0515E-09	0	5.76	0.5686147	6.63E-09	1
rs10007431	4	132648974	A	G	PCDH10	-0.04	0	2.0522E-09	0	3.44	0.8412814	6.633E-09	1
rs11680336	2	207474913	C	T	CREB1	0.04	0	2.0536E-09	20	8.78	0.2688724	6.468E-09	1
rs3890860	16	72069510	A	G	HPR,TXNL4I	0.03	0	2.0546E-09	0	3.8	0.8021384	6.64E-09	1
rs208237	20	42799328	T	C	PTPRT	0.03	0	2.055E-09	0	7.07	0.4220337	6.707E-09	1
rs12746889	1	162876801	T	C	CCDC190	-0.03	0	2.0559E-09	31	10.21	0.1771584	1.869E-08	1
rs35609076	4	142751489	A	ACT	INPP4B	-0.03	0	2.059E-09	36	10.95	0.1406288	1.216E-08	1
rs61884729	11	30494135	G	C	MPPED2	-0.03	0	2.0603E-09	0	5.69	0.5767566	6.399E-09	1
rs9311340	3	43475931	C	A	ANO10	-0.03	0	2.0613E-09	39	11.51	0.1178761	2.582E-09	6.04682E-10

Table S2

rs9295742	6	27735053	G	A	HIST1H2BL	-0.04	0	2.0615E-09	0	6.49	0.4842577	6.662E-09	1
rs201002	6	27840414	A	G	HIST1H2BN	-0.06	0	2.0644E-09	19	8.74	0.2719514	1.178E-08	1
rs11859054	16	13489620	A	G	SHISA9	-0.03	0	2.0658E-09	0	5.7	0.5746102	6.676E-09	1
rs9379945	6	26940052	T	C	HIST1H2BJ	-0.05	0	2.066E-09	15	8.32	0.305064	1.047E-08	1
rs1564434	3	43498560	G	A	ANO10	-0.03	0	2.0661E-09	39	11.6	0.1144482	2.529E-09	5.8898E-10
rs35704262	9	125230596	T	C	RABEPK	0.03	0	2.0667E-09	0	4.05	0.774499	6.679E-09	1
rs7767277	6	32885265	C	A	PSMB9	0.05	0	2.0671E-09	12	7.98	0.3345045	1.011E-08	1
rs9461401	6	27735512	G	A	HIST1H2BL	-0.04	0	2.0681E-09	0	6.46	0.4872518	6.683E-09	1
rs13330778	16	13489329	T	C	SHISA9	-0.03	0	2.0688E-09	0	5.7	0.5746653	6.685E-09	1
rs9393847	6	27720194	G	A	HIST1H2BL	-0.04	0	2.0711E-09	0	5.91	0.5507577	6.692E-09	1
rs7760523	6	27750330	A	G	HIST1H2BL	-0.04	0	2.0747E-09	0	6.59	0.4729894	6.704E-09	1
rs11852835	15	57936401	A	G	ALDH1A2	0.03	0	2.0755E-09	46	13.19	0.0676033	3.605E-09	1
rs7503050	17	68052346	G	T	KPNA2	0.03	0	2.0759E-09	32	10.36	0.1692747	1.552E-08	1
rs35559309	6	27719168	CAA	C	HIST1H2BL	-0.04	0	2.081E-09	0	5.91	0.5502192	6.724E-09	1
rs2394000	6	27719212	A	G	HIST1H2BL	-0.04	0	2.0817E-09	0	5.91	0.5504065	6.726E-09	1
rs7506909	18	53093717	A	G	DCC	0.03	0	2.0841E-09	0	2.7	0.9116726	6.734E-09	1
rs1975997	3	43485760	C	T	ANO10	-0.03	0	2.0853E-09	39	11.58	0.1153604	2.574E-09	6.04682E-10
rs176380	20	42799298	A	C	PTPRT	0.03	0	2.0857E-09	0	7.07	0.4217097	6.809E-09	1
rs2589994	4	142739007	T	A	INPP4B	-0.03	0	2.0866E-09	35	10.93	0.1418116	1.232E-08	1
rs1443183	4	142739605	G	A	INPP4B	-0.03	0	2.0868E-09	35	10.93	0.1418104	1.232E-08	1
rs73132359	1	246021642	T	C	SMYD3	-0.05	0	2.0887E-09	0	4.83	0.6805653	6.748E-09	1
rs9937842	16	13487431	T	G	SHISA9	-0.03	0	2.0892E-09	0	5.7	0.5747014	6.75E-09	1
rs74781276	1	246019485	C	T	SMYD3	-0.05	0	2.0903E-09	0	4.83	0.6805822	6.753E-09	1
rs145732766	1	246018695	TC	T	SMYD3	-0.05	0	2.0934E-09	0	4.83	0.6805939	6.763E-09	1
rs13027254	2	124288241	T	A	CNTNAP5	-0.03	0	2.0935E-09	59	17.43	0.01482	9.352E-09	1
rs80247159	1	246018571	G	T	SMYD3	-0.05	0	2.0946E-09	0	4.83	0.6806176	6.767E-09	1
rs1384435	3	43517605	T	C	ANO10	-0.03	0	2.0971E-09	39	11.55	0.1162477	2.591E-09	6.04682E-10
rs112950587	1	246015620	T	C	SMYD3	-0.05	0	2.0983E-09	0	4.83	0.680887	6.778E-09	1
rs78783427	1	246015630	C	T	SMYD3	-0.05	0	2.0983E-09	0	4.83	0.680887	6.778E-09	1
rs112732168	1	246016308	C	T	SMYD3	-0.05	0	2.0991E-09	0	4.83	0.6809302	6.781E-09	1

Table S2

rs331939	4	142733736	G	A	INPP4B	-0.03	0	2.0996E-09	35	10.83	0.1463149	1.227E-08	1
rs9380012	6	27716875	A	G	HIST1H2BL	-0.04	0	2.1067E-09	0	5.92	0.5496635	6.805E-09	1
rs9368529	6	27716852	G	A	HIST1H2BL	-0.04	0	2.107E-09	0	5.92	0.5495918	6.806E-09	1
rs6913341	6	162801234	G	A	PACRG	-0.03	0	2.1086E-09	0	1.09	0.9932576	6.811E-09	1
rs1822360	4	142731840	C	T	INPP4B	-0.03	0	2.1092E-09	35	10.81	0.1472812	1.231E-08	1
rs9881028	3	43450484	C	T	ANO10	-0.03	0	2.1103E-09	39	11.59	0.114803	2.589E-09	6.04682E-10
rs61857750	10	90939609	C	T	ANKRD1	-0.05	0	2.1135E-09	10	7.85	0.3459412	7.751E-09	1
rs111795916	1	246014179	C	G	SMYD3	-0.05	0	2.1137E-09	0	4.82	0.6816771	6.827E-09	1
rs7947050	11	99954519	G	A	CNTN5	-0.04	0	2.1162E-09	36	10.97	0.1398374	5.608E-09	1
rs62084708	17	68053591	G	A	KPNA2	0.03	0	2.1164E-09	32	10.35	0.1693721	1.588E-08	1
rs9815196	3	43478715	T	C	ANO10	-0.03	0	2.1165E-09	39	11.54	0.1166864	2.621E-09	6.20806E-10
rs1965828	4	142731164	T	C	INPP4B	0.03	0	2.1175E-09	35	10.8	0.147702	1.235E-08	1
rs9837270	3	114387229	G	A	ZBTB20	0.03	0	2.118E-09	0	2.57	0.9221158	6.841E-09	1
rs6913782	6	114764161	C	T	HS3ST5	0.04	0	2.1193E-09	35	10.9	0.1428928	1.276E-08	1
rs9380011	6	27716145	A	G	HIST1H2BL	-0.04	0	2.1204E-09	0	5.92	0.5497063	6.849E-09	1
rs12640389	4	142730953	C	A	INPP4B	0.03	0	2.1219E-09	35	10.79	0.147888	1.238E-08	1
rs10637586	4	142749871	T	TCAAA	INPP4B	-0.03	0	2.1224E-09	40	11.7	0.1107482	1.29E-08	1
rs9368528	6	27716019	G	A	HIST1H2BL	-0.04	0	2.1248E-09	0	5.92	0.549588	6.862E-09	1
rs6902689	6	27741662	C	T	HIST1H2BL	-0.04	0	2.1253E-09	0	6.44	0.4891723	6.864E-09	1
rs13102690	4	14921851	C	T	CPEB2	-0.03	0	2.1266E-09	15	8.33	0.3042558	6.868E-09	1
rs742046	6	27771475	T	C	HIST1H2BL	-0.04	0	2.1292E-09	0	6.55	0.4766998	6.876E-09	1
rs6922111	6	28357531	C	T	ZKSCAN3	-0.05	0	2.1296E-09	0	4.87	0.6759788	6.878E-09	1
rs34752872	6	27715465	A	T	HIST1H2BL	-0.04	0	2.1299E-09	0	5.92	0.549115	6.879E-09	1
rs9830697	3	43490559	C	T	ANO10	-0.03	0	2.1301E-09	39	11.57	0.1155792	2.632E-09	6.20806E-10
rs9835793	3	43491265	G	A	ANO10	-0.03	0	2.1304E-09	39	11.57	0.1155823	2.633E-09	6.20806E-10
rs147144253	16	13488672	CA	C	SHISA9	-0.03	0	2.1308E-09	0	5.67	0.5788711	6.881E-09	1
rs1224522	6	66530960	A	G	EYS	0.06	0	2.1316E-09	0	4.85	0.6786317	6.884E-09	1
rs4788609	16	72132087	C	T	PMFBP1	0.03	0	2.1357E-09	0	3.34	0.8517944	6.897E-09	1
rs4562171	6	114754950	C	T	HS3ST5	0.04	0	2.1381E-09	35	10.9	0.1432257	1.287E-08	1
rs11581828	1	230501037	C	T	PGBD5	0.03	0	2.1416E-09	16	8.37	0.3008112	1.179E-08	1

Table S2

rs7772027	6	27715135	G	T	HIST1H2BL	-0.04	0	2.1417E-09	0	5.92	0.5487684	6.916E-09	1
rs7105607	11	99949856	C	T	CNTN5	-0.04	0	2.1421E-09	35	10.93	0.1418518	5.407E-09	1
rs4788610	16	72132143	G	C	PMFBP1	0.03	0	2.1484E-09	0	3.3	0.8558694	6.937E-09	1
rs9468200	6	27715284	T	A	HIST1H2BL	-0.04	0	2.1503E-09	0	5.94	0.5467605	6.943E-09	1
rs75764790	20	41930465	G	T	PTPRT	0.09	0	2.1512E-09	0	5.6	0.587555	6.946E-09	1
rs1530997	11	99953254	G	A	CNTN5	-0.04	0	2.1546E-09	38	11.3	0.1260448	5.301E-09	1
rs1118393	1	66900985	A	G	WDR78	0.03	0	2.1586E-09	0	3.93	0.7882086	6.969E-09	1
rs10469012	18	52613154	C	T	DCC	0.03	0	2.1596E-09	0	2.58	0.9205903	6.973E-09	1
rs35621060	11	30490891	AT	A	MPPED2	-0.03	0	2.1596E-09	0	5.71	0.5737727	6.711E-09	1
rs537958	1	36788700	A	G	GRIK3	0.03	0	2.16E-09	0	5.59	0.5879565	6.974E-09	1
rs4804087	19	8860227	C	T	MUC16	-0.08	0	2.1604E-09	11	7.9	0.3417852	8.333E-09	1
rs12486736	3	43533520	G	A	ANO10	-0.03	0	2.1605E-09	39	11.61	0.1142824	2.634E-09	6.20806E-10
rs13400113	2	173463485	G	C	CDCA7	-0.03	0	2.1637E-09	0	6.64	0.4671871	6.985E-09	1
rs62161934	2	124033997	A	G	CNTNAP5	0.09	0	2.1639E-09	1	7.09	0.4197992	7.192E-09	1
rs737516	3	43516593	T	C	ANO10	-0.03	0	2.1652E-09	39	11.58	0.1153299	2.645E-09	6.20806E-10
rs6061303	20	61654772	C	T	CDH4	0.03	0	2.1691E-09	65	20.57	0.0044699	5.72E-09	1
rs4774494	15	47358964	T	C	SEMA6D	0.04	0	2.1695E-09	0	5.79	0.5640268	7.004E-09	1
rs12038460	1	231081323	G	A	FAM89A	-0.04	0	2.1695E-09	0	2.45	0.9306099	7.004E-09	1
rs4264704	3	43492753	G	A	ANO10	-0.03	0	2.1696E-09	39	11.6	0.1143422	2.662E-09	6.20806E-10
rs7847271	9	115068533	G	A	TNC	-0.05	0	2.1705E-09	0	2.4	0.9341189	7.007E-09	1
rs111268660	4	142729513	G	GGAGT	INPP4B	0.03	0	2.1741E-09	34	10.77	0.1491962	1.268E-08	1
rs571524696	11	115105516	G	C	CADM1	-0.03	0	2.1748E-09	19	8.73	0.2724331	1.173E-08	1
rs143856063	11	115105511	CGTGT	C	CADM1	-0.03	0	2.1759E-09	19	8.73	0.2724313	1.173E-08	1
rs199607701	11	115105501	G	GT	CADM1	-0.03	0	2.1764E-09	19	8.73	0.2724287	1.173E-08	1
rs9835664	3	43491340	C	T	ANO10	-0.03	0	2.1783E-09	39	11.57	0.1154806	2.687E-09	6.37363E-10
rs991795	6	123924195	C	G	NKAIN2	0.03	0	2.1787E-09	0	1.79	0.9706643	7.033E-09	1
rs13117185	4	142729169	C	T	INPP4B	0.03	0	2.1793E-09	34	10.76	0.1493896	1.271E-08	1
rs1925408	1	66899351	C	T	WDR78	0.03	0	2.1795E-09	0	3.94	0.7866252	7.035E-09	1
rs11839257	13	28792145	G	A	MTUS2	0.03	0	2.1796E-09	0	2.81	0.9019701	7.036E-09	1
rs2294947	1	59848976	A	C	HOOK1	0.04	0	2.1838E-09	13	8.05	0.3279694	8.931E-09	1

rs1465962	4	142731416	A	T	INPP4B	0.03	0	2.1846E-09	35	10.82	0.1468118	1.273E-08	1
rs1373031	4	142728258	G	A	INPP4B	0.03	0	2.1865E-09	34	10.75	0.1498438	1.275E-08	1
rs10959577	9	11168641	C	G	PTPRD	-0.04	0	2.1881E-09	10	7.78	0.3521803	8.99E-09	1
rs6499563	16	72146648	T	C	PMFBP1	0.03	0	2.1895E-09	0	3.23	0.8627802	7.067E-09	1
rs2294948	1	59848941	A	G	HOOK1	0.04	0	2.192E-09	13	8.06	0.32738	8.973E-09	1
rs4690726	4	142727066	A	G	INPP4B	0.03	0	2.1922E-09	34	10.75	0.1501198	1.278E-08	1
rs4972573	2	173465306	G	C	CDCA7	-0.03	0	2.1928E-09	0	5.98	0.5416236	7.078E-09	1
rs2985808	1	66902058	T	C	WDR78	0.03	0	2.1933E-09	0	3.94	0.7870639	7.079E-09	1
rs10769288	11	47707628	G	A	AGBL2	0.03	0	2.1972E-09	0	6.44	0.4898541	7.091E-09	1
rs1925411	1	66904609	C	T	WDR78	0.03	0	2.1977E-09	0	3.93	0.7874224	7.093E-09	1
rs77086479	11	134725047	G	C	B3GAT1	-0.08	0	2.1982E-09	0	1.85	0.9678061	7.094E-09	1
rs6917417	6	40136889	T	C	MOCS1	0.03	0	2.2007E-09	15	8.27	0.3097623	5.921E-09	1
rs145169734	2	60013339	G	A	BCL11A	0.08	0	2.207E-09	0	5.29	0.6246811	7.122E-09	1
rs199756818	14	42971417	A	G	LRFN5	0.05	0	2.2128E-09	22	9.03	0.2501712	6.251E-09	1
rs1867214	4	142729105	T	C	INPP4B	0.03	0	2.2143E-09	34	10.74	0.1505335	1.291E-08	1
rs73088161	3	49427729	C	T	NICN1,RP11-	-0.04	0	2.2169E-09	0	5.29	0.6250333	7.154E-09	1
rs7943213	11	47693972	T	C	AGBL2	0.03	0	2.2186E-09	0	6.77	0.4529442	7.159E-09	1
rs1822361	4	142723010	A	G	INPP4B	0.03	0	2.2187E-09	34	10.72	0.1513087	1.29E-08	1
rs4774495	15	47359165	T	C	SEMA6D	0.04	0	2.2191E-09	0	5.79	0.5640737	7.161E-09	1
rs33968287	4	15125114	AT	A	CPEB2	-0.03	0	2.2208E-09	0	6.52	0.4803533	6.957E-09	1
rs117809628	3	45426192	C	T	LARS2	0.08	0	2.2234E-09	0	4.08	0.7706484	7.174E-09	1
rs1324491	1	59884944	G	A	CYP2J2	0.04	0	2.2244E-09	14	8.18	0.31692	9.277E-09	1
rs504383	1	36789061	T	G	GRIK3	0.03	0	2.2245E-09	0	5.6	0.5869975	7.178E-09	1
rs73078304	3	48541976	A	G	PFKFB4	-0.04	0	2.2325E-09	0	4.63	0.7054562	7.203E-09	1
rs192020506	12	23891930	A	G	SOX5	-0.09	0	2.233E-09	0	3.12	0.8739794	7.204E-09	1
rs9537336	13	56201490	C	T	PRR20A	-0.05	0	2.2331E-09	0	5.43	0.6078386	7.205E-09	1
rs9537337	13	56201493	G	A	PRR20A	-0.05	0	2.2332E-09	0	5.43	0.6078347	7.205E-09	1
rs4646611	15	57972885	T	C	ALDH1A2	0.03	0	2.235E-09	50	14.18	0.048131	2.966E-09	7.08405E-10
rs200727912	14	42968448	T	G	LRFN5	0.05	0	2.2369E-09	22	9.01	0.2517738	6.314E-09	1
rs10121756	9	125227031	G	A	RABEPK	0.03	0	2.2388E-09	0	4.09	0.769525	7.223E-09	1

Table S2

rs78112607	1	246167432	G	C	SMYD3	-0.05	0	2.2417E-09	1	7.11	0.4176164	6.56E-09	1
rs12638282	3	43549650	G	A	ANO10	-0.03	0	2.2421E-09	39	11.52	0.1174382	2.774E-09	6.54365E-10
rs10857399	4	142723408	A	G	INPP4B	0.03	0	2.2423E-09	34	10.73	0.1509148	1.305E-08	1
rs10959580	9	11174784	T	C	PTPRD	-0.04	0	2.2449E-09	4	7.3	0.3984013	8.022E-09	1
rs2984445	6	40102196	C	T	MOCS1	0.03	0	2.245E-09	13	8.09	0.3246158	6.185E-09	1
rs149506768	14	42968331	T	G	LRFN5	0.05	0	2.2483E-09	22	9.01	0.2521201	6.344E-09	1
rs10733224	9	11100175	T	A	PTPRD	0.04	0	2.2507E-09	4	7.35	0.3936307	7.26E-09	1
rs114437376	1	246165555	G	A	SMYD3	-0.05	0	2.2563E-09	1	7.11	0.4178011	6.605E-09	1
rs940352	6	40145875	C	T	MOCS1	0.03	0	2.2571E-09	23	9.2	0.2386855	5.116E-09	1
rs4788461	16	72122101	C	A	PMFBP1	0.03	0	2.26E-09	0	3.31	0.8551832	7.29E-09	1
rs3008888	1	66903282	C	T	WDR78	0.03	0	2.2611E-09	0	3.96	0.7847803	7.293E-09	1
rs2949019	6	40083461	C	T	MOCS1	0.03	0	2.2643E-09	13	8.11	0.323029	6.228E-09	1
rs8077219	17	67996908	G	A	C17orf58	-0.03	0	2.2652E-09	34	10.75	0.1498665	1.422E-08	1
rs430961	5	151320998	C	G	SLC36A2	-0.03	0	2.2706E-09	46	13.07	0.0704914	1.586E-08	1
rs76012758	1	246161769	T	C	SMYD3	-0.05	0	2.2711E-09	1	7.11	0.4176961	6.649E-09	1
rs55820140	14	42967237	A	G	LRFN5	0.05	0	2.2729E-09	22	9.03	0.2504668	6.415E-09	1
rs4646593	15	58010269	A	G	ALDH1A2	0.03	0	2.2756E-09	51	14.49	0.0431607	2.586E-09	6.04682E-10
rs1387907	6	123913214	G	A	NKAIN2	0.03	0	2.279E-09	0	1.61	0.9781752	7.35E-09	1
rs510159	1	36787887	T	C	GRIK3	0.03	0	2.2819E-09	0	5.6	0.5869039	7.359E-09	1
rs4646612	15	57972879	C	T	ALDH1A2	0.03	0	2.2823E-09	50	14.17	0.0481741	3.031E-09	7.08405E-10
rs7186155	16	72144297	A	G	PMFBP1	0.03	0	2.2832E-09	0	3.15	0.8707352	7.363E-09	1
rs8060770	16	72121795	C	A	PMFBP1	0.03	0	2.2835E-09	0	3.13	0.8730668	7.364E-09	1
rs7843906	8	10118995	C	T	MSRA	0.03	0	2.2839E-09	0	2.43	0.9325783	7.365E-09	1
rs77811505	14	42975849	G	A	LRFN5	0.05	0	2.2869E-09	15	8.32	0.30494	7.164E-09	1
rs4273128	18	54800586	T	A	RAB27B	-0.03	0	2.2884E-09	6	7.51	0.377878	8.679E-09	1
rs11263940	1	36716885	C	T	GRIK3	-0.03	0	2.2897E-09	39	11.58	0.115162	5.373E-09	1
rs1817187	4	15126551	G	A	CPEB2	-0.03	0	2.2955E-09	0	6.48	0.4852024	7.144E-09	1
rs1404002	6	40096861	C	T	MOCS1	0.03	0	2.2973E-09	14	8.17	0.3177402	6.295E-09	1
rs1562720	14	42966285	C	T	LRFN5	0.05	0	2.299E-09	22	9.01	0.2517408	6.493E-09	1
rs1838082	4	142728465	C	A	INPP4B	0.03	0	2.3001E-09	34	10.7	0.1521392	1.342E-08	1

Table S2

rs6677366	1	36721903	A	G	GRIK3	-0.03	0	2.3002E-09	39	11.56	0.1158381	5.415E-09	1
rs7502578	17	67996073	C	G	C17orf58	-0.03	0	2.3022E-09	11	7.95	0.3372869	1.001E-08	1
rs9840313	3	82332222	A	G	GBE1	-0.04	0	2.3052E-09	30	10.02	0.1876182	7.046E-09	1
rs4652927	1	36723098	G	T	GRIK3	-0.03	0	2.306E-09	39	11.56	0.1158973	5.43E-09	1
rs2984446	6	40098344	C	T	MOCS1	0.03	0	2.3097E-09	14	8.17	0.3176093	6.327E-09	1
rs35170741	6	40097521	CT	C	MOCS1	0.03	0	2.3097E-09	14	8.17	0.3176093	6.327E-09	1
rs111574702	17	44669816	C	T	MEIOC	0.07	0	2.3105E-09	45	12.79	0.0774651	1.218E-08	1
rs150634184	14	42968199	A	T	LRFN5	0.05	0	2.314E-09	22	9.02	0.251384	6.53E-09	1
rs12612862	2	22684778	C	T	KLHL29	0.03	0	2.3186E-09	7	7.53	0.3757701	9.748E-09	1
rs10838740	11	47658428	A	G	AGBL2	0.03	0	2.3197E-09	0	6.54	0.4781134	7.478E-09	1
rs1037298	14	42965961	G	T	LRFN5	0.05	0	2.3223E-09	22	9.01	0.2521209	6.561E-09	1
rs186436350	17	46724128	T	C	NSF	-0.11	0	2.3264E-09	0	5.45	0.6057841	7.5E-09	1
rs11995512	8	64691025	A	G	CYP7B1	0.03	0	2.3268E-09	0	6.45	0.4878068	6.877E-09	1
rs761798	6	40119775	T	C	MOCS1	0.03	0	2.3295E-09	14	8.15	0.3199082	6.361E-09	1
rs10959581	9	11174994	A	G	PTPRD	-0.04	0	2.3306E-09	3	7.28	0.4007632	8.255E-09	1
rs1013330	16	13490971	G	A	SHISA9	-0.03	0	2.3323E-09	0	5.77	0.5664133	7.518E-09	1
rs1372368	15	58005165	C	T	ALDH1A2	0.03	0	2.3334E-09	49	13.92	0.0526232	2.955E-09	6.89872E-10
rs1678536	12	57585407	C	G	KIF5A	-0.03	0	2.3352E-09	0	3.74	0.8093148	7.527E-09	1
rs13152749	4	14921861	G	A	CPEB2	-0.03	0	2.3378E-09	14	8.17	0.3181133	7.535E-09	1
rs9348739	6	26955320	G	C	HIST1H2BJ	-0.05	0	2.3419E-09	15	8.25	0.3113421	1.166E-08	1
rs7107535	11	47654533	G	A	AGBL2	0.03	0	2.3426E-09	0	6.54	0.4777582	7.551E-09	1
rs8055291	16	73680931	C	T	PSMD7	0.03	0	2.3461E-09	20	8.78	0.2689216	6.577E-09	1
rs1946687	4	132613428	A	C	PCDH10	-0.04	0	2.3492E-09	0	3.41	0.8445407	7.572E-09	1
rs9295743	6	27747323	G	C	HIST1H2BL	-0.04	0	2.35E-09	0	6.54	0.4777931	7.574E-09	1
rs2983143	6	40077111	G	T	MOCS1	0.03	0	2.3526E-09	14	8.14	0.3200868	6.53E-09	1
rs151014850	6	40105341	CCAGT	C	MOCS1	0.03	0	2.3572E-09	14	8.16	0.318333	6.465E-09	1
rs7933184	11	47660850	C	T	AGBL2	0.03	0	2.36E-09	0	6.54	0.4785939	7.606E-09	1
rs12148907	15	58004252	T	A	ALDH1A2	0.03	0	2.3605E-09	49	13.93	0.0524934	2.988E-09	7.08405E-10
rs10495727	2	22684344	A	G	KLHL29	0.03	0	2.362E-09	7	7.54	0.3753206	9.947E-09	1
rs1349783	11	99959824	G	A	CNTN5	-0.03	0	2.3626E-09	37	11.19	0.1305771	6.072E-09	1

Table S2

rs12069333	1	226112029	A	G	ACBD3	0.03	0	2.3659E-09	0	6.5	0.4824931	7.624E-09	1
rs73118540	12	58819744	T	A	LRIG3	-0.05	0	2.3676E-09	68	22.37	0.0021955	6.852E-09	1
rs77138605	1	36777068	C	T	GRIK3	-0.05	0	2.3687E-09	15	8.28	0.3086108	7.556E-09	1
rs3008839	6	40084921	G	A	MOCS1	0.03	0	2.3711E-09	13	8.05	0.3279617	6.537E-09	1
rs11039329	11	47663356	T	C	AGBL2	0.03	0	2.3767E-09	0	6.53	0.4792189	7.658E-09	1
rs12192551	6	123917034	C	T	NKAIN2	0.03	0	2.3799E-09	0	1.84	0.9681334	7.669E-09	1
rs62527046	9	11099993	C	G	PTPRD	-0.04	0	2.3838E-09	4	7.34	0.3946032	7.681E-09	1
rs67074127	6	123923123	CCAAAAAA	C	NKAIN2	0.03	0	2.3882E-09	0	1.84	0.9682027	7.694E-09	1
rs11214598	11	113395980	T	C	ANKK1	-0.03	0	2.3902E-09	0	6.16	0.5209241	7.701E-09	1
rs59806432	4	142557522	TG	T	INPP4B	0.04	0	2.3908E-09	17	8.5	0.2906293	7.703E-09	1
rs12491672	3	114373624	C	T	ZBTB20	-0.03	0	2.3926E-09	17	8.48	0.2922169	1.076E-08	1
rs34050644	6	40074040	C	CA	MOCS1	0.03	0	2.3942E-09	13	8.12	0.3224975	6.67E-09	1
rs10742817	11	47667791	C	T	AGBL2	0.03	0	2.3953E-09	0	6.54	0.4787828	7.717E-09	1
rs13339654	16	13489352	A	G	SHISA9	-0.03	0	2.3957E-09	0	5.75	0.5691611	7.718E-09	1
rs9283880	6	27747464	A	C	HIST1H2BL	-0.04	0	2.3959E-09	0	6.54	0.4781737	7.719E-09	1
rs544625	11	30494949	A	G	MPPED2	-0.03	0	2.3978E-09	1	7.14	0.4143097	7.509E-09	1
rs13330735	16	13489243	T	A	SHISA9	-0.03	0	2.3995E-09	0	5.75	0.5693545	7.73E-09	1
rs56247127	16	13488376	A	G	SHISA9	-0.03	0	2.3997E-09	0	5.73	0.5719202	7.731E-09	1
rs11791444	9	11064546	A	T	PTPRD	-0.04	0	2.4004E-09	0	5.35	0.6173432	7.733E-09	1
rs17301128	6	28340257	C	G	ZSCAN31	-0.05	0	2.4007E-09	0	3.86	0.795586	7.734E-09	1
rs6921919	6	28357424	C	G	ZKSCAN3	-0.05	0	2.4007E-09	0	4.87	0.6755555	7.734E-09	1
rs890191	4	142564131	T	C	INPP4B	0.04	0	2.402E-09	16	8.42	0.2970235	7.738E-09	1
rs4732122	7	135367292	A	C	CNOT4	-0.03	0	2.405E-09	61	18.21	0.0110758	7.4E-10	1.62995E-10
rs11346856	6	40104495	TA	T	MOCS1	0.03	0	2.4075E-09	14	8.14	0.3200474	6.619E-09	1
rs9283881	6	27747476	A	T	HIST1H2BL	-0.04	0	2.4076E-09	0	6.54	0.4783029	7.756E-09	1
rs9283882	6	27747479	A	C	HIST1H2BL	-0.04	0	2.4079E-09	0	6.54	0.4783027	7.757E-09	1
rs11997469	8	90210426	C	T	CALB1	0.03	0	2.4089E-09	0	4.84	0.6799216	7.76E-09	1
rs78472595	13	98485447	C	CAAGT	STK24	0.03	0	2.4118E-09	19	8.66	0.2776794	6.674E-09	1
rs17693632	11	99991975	C	G	CNTN5	0.04	0	2.4141E-09	45	12.78	0.0777623	4.859E-09	1
rs7740487	6	28248708	C	G	ZKSCAN4	-0.06	0	2.417E-09	37	11.13	0.1330803	2.593E-08	1

rs4646586	15	58013146	C	A	ALDH1A2	0.03	0	2.4184E-09	49	13.92	0.0526603	3.113E-09	7.27437E-10
rs147977836	19	49480204	A	G	CTD-3148I10	0.09	0	2.419E-09	36	11.08	0.1349957	7.792E-09	1
rs11154198	6	123919090	A	T	NKAIN2	0.03	0	2.4291E-09	0	1.84	0.9681365	7.824E-09	1
rs1494948	4	14970937	C	T	CPEB2	-0.03	0	2.4299E-09	0	5.04	0.6545854	7.826E-09	1
rs2072804	6	26390962	G	A	BTN2A2	-0.03	0	2.4326E-09	0	2.21	0.9475006	7.835E-09	1
rs1395455	1	36719589	A	G	GRIK3	-0.03	0	2.4336E-09	39	11.64	0.1129659	5.638E-09	1
rs12680437	8	60694203	T	C	CHD7	-0.03	0	2.4352E-09	0	5.51	0.5974312	7.843E-09	1
rs1338443	6	19258667	G	A	ID4	0.03	0	2.437E-09	28	9.84	0.1978775	5.808E-09	1
rs11943687	4	142558574	G	A	INPP4B	0.04	0	2.438E-09	17	8.52	0.2886904	9.345E-09	1
rs1970021	20	61654314	A	G	CDH4	0.03	0	2.4459E-09	65	20.53	0.0045394	6.423E-09	1
rs4750048	10	11378819	G	C	CELF2	0.03	0	2.4467E-09	0	2.93	0.891094	7.879E-09	1
rs912330	13	98479040	C	T	STK24	0.03	0	2.4485E-09	21	8.9	0.2599657	6.663E-09	1
rs55650680	15	47334969	G	T	SEMA6D	0.05	0	2.4495E-09	2	7.21	0.4074141	7.888E-09	1
rs60083773	15	47334968	A	G	SEMA6D	0.05	0	2.4495E-09	2	7.21	0.4074141	7.888E-09	1
rs892511	1	109535633	C	G	GPR61	0.07	0	2.4523E-09	34	10.76	0.149473	1.086E-08	1
rs4976976	8	142230292	G	A	TSNARE1	-0.03	0	2.4555E-09	0	6.18	0.5193657	7.907E-09	1
rs35034437	4	142556709	GA	G	INPP4B	0.04	0	2.4634E-09	17	8.53	0.2882982	7.932E-09	1
rs1823946	4	15128883	A	G	CPEB2	-0.03	0	2.468E-09	0	6.28	0.5078293	7.594E-09	1
rs3172494	3	48694054	G	T	IP6K2	-0.04	0	2.4764E-09	0	4.28	0.7476012	7.973E-09	1
rs9986596	6	28251883	G	A	ZKSCAN4	-0.06	0	2.4766E-09	37	11.14	0.1326671	2.656E-08	1
rs7116970	11	47673956	G	A	AGBL2	0.03	0	2.4795E-09	0	6.44	0.4890139	7.983E-09	1
rs12009	9	125235024	G	A	HSPA5	0.03	0	2.4802E-09	0	4.11	0.7670843	7.985E-09	1
rs4443157	3	16116240	G	T	GALNT15	-0.03	0	2.4826E-09	0	5.17	0.638699	7.992E-09	1
rs12474585	2	27648726	C	T	GPN1	-0.03	0	2.4834E-09	0	4.04	0.7750533	7.995E-09	1
rs10106513	8	90212533	T	C	CALB1	0.03	0	2.4862E-09	0	4.89	0.6737746	8.004E-09	1
rs62527917	9	11057611	G	A	PTPRD	-0.04	0	2.4868E-09	0	5.54	0.594464	8.006E-09	1
rs1439579	5	125282177	G	A	ZNF608	0.04	0	2.4875E-09	21	8.89	0.2609629	1.391E-08	1
rs62265723	3	114365251	G	A	ZBTB20	-0.03	0	2.4966E-09	14	8.22	0.3137265	1.081E-08	1
rs76375621	14	42984460	T	C	LRFN5	0.07	0	2.4973E-09	29	10	0.1887561	8.039E-09	1
rs1524087	6	40089765	A	G	MOCS1	0.03	0	2.5026E-09	14	8.17	0.3181817	6.818E-09	1

Table S2

rs59820190	6	104444341	G	A	HACE1	0.04	0	2.5049E-09	0	5.06	0.652368	8.063E-09	1
rs12110430	6	66465862	A	T	EYS	-0.06	0	2.5052E-09	0	4	0.7796589	8.064E-09	1
rs7773070	6	27761048	T	C	HIST1H2BL	-0.04	0	2.507E-09	0	6.55	0.4776299	8.069E-09	1
rs4955426	3	49106005	C	A	QARS	-0.04	0	2.5109E-09	18	8.63	0.2801909	7.62E-09	1
rs6914924	6	27743751	C	T	HIST1H2BL	-0.04	0	2.5124E-09	0	6.54	0.4779188	8.086E-09	1
rs6930992	6	27744341	A	C	HIST1H2BL	-0.04	0	2.5174E-09	0	6.54	0.4786179	8.102E-09	1
rs7034246	9	11234635	A	G	PTPRD	-0.04	0	2.5184E-09	21	8.9	0.2601876	1.436E-08	1
rs13192934	6	123923419	A	C	NKAIN2	0.03	0	2.5203E-09	0	1.81	0.9694253	8.111E-09	1
rs12521542	5	120765088	C	T	PRR16	0.04	0	2.5299E-09	0	5.5	0.5987148	8.141E-09	1
rs11580603	1	214397908	A	C	PTPN14	0.03	0	2.5303E-09	0	5.57	0.59019	8.143E-09	1
rs62405349	6	19223992	A	C	ID4	0.05	0	2.5314E-09	72	25.58	0.0005977	2.366E-10	5.03269E-11
rs11149964	16	77121934	A	G	MON1B	-0.03	0	2.533E-09	0	5.6	0.5865843	8.151E-09	1
rs7815299	8	90215807	C	G	CALB1	0.03	0	2.534E-09	0	4.88	0.6748066	8.155E-09	1
rs79686899	11	95248580	T	C	SESN3	-0.11	0	2.5342E-09	44	12.55	0.0837863	8.155E-09	1
rs4147222	1	36710821	G	A	GRIK3	-0.03	0	2.536E-09	43	12.44	0.0871261	5.313E-09	1
rs4653212	1	36709728	G	C	GRIK3	-0.03	0	2.5382E-09	43	12.44	0.0871121	5.317E-09	1
rs11293962	3	43474903	AT	A	ANO10	-0.03	0	2.5463E-09	38	11.42	0.1212456	3.228E-09	7.67052E-10
rs8047490	16	73678657	G	A	PSMD7	0.03	0	2.5495E-09	22	9.02	0.2514989	6.967E-09	1
rs12824361	12	22875270	G	A	ETNK1	-0.05	0	2.5497E-09	48	13.49	0.0610958	1.028E-08	1
rs16846341	3	143376099	C	T	SLC9A9	0.04	0	2.5534E-09	8	7.62	0.3672168	7.294E-09	1
rs158967	5	58646045	T	G	RAB3C	0.04	0	2.5624E-09	0	2.97	0.8877203	8.244E-09	1
rs12614303	2	124289603	C	T	CNTNAP5	-0.03	0	2.5625E-09	59	17.16	0.0164204	1.153E-08	1
rs55803708	16	73661442	C	T	ZFHX3	0.03	0	2.5709E-09	21	8.87	0.2618834	7.172E-09	1
rs11939291	4	142557882	A	T	INPP4B	0.04	0	2.579E-09	17	8.49	0.2912953	8.296E-09	1
rs3825430	13	98477399	C	T	STK24	0.03	0	2.5801E-09	21	8.94	0.2573466	7.026E-09	1
rs4772088	13	98486016	T	G	STK24	0.03	0	2.5814E-09	18	8.64	0.279418	7.134E-09	1
rs9554474	13	98488617	G	A	STK24	0.03	0	2.5904E-09	18	8.63	0.2799882	7.18E-09	1
rs115686967	3	46100614	C	T	CCR3	0.1	0	2.5905E-09	0	2.34	0.9389285	8.332E-09	1
rs111925419	14	42967595	G	A	LRFN5	0.05	0	2.5918E-09	22	9.05	0.2491324	7.31E-09	1
rs8063377	16	73678273	G	A	PSMD7	0.03	0	2.5921E-09	22	9.01	0.251777	7.085E-09	1

Table S2

rs73562049	11	99700225	A	C	CNTN5	-0.04	0	2.5944E-09	0	2.91	0.8930277	8.345E-09	1
rs200840555	16	22653685	T	C	NPIPB5	-0.07	0	2.5949E-09	0	5.64	0.5823637	8.346E-09	1
rs1334040	9	11099699	T	C	PTPRD	0.04	0	2.5951E-09	4	7.32	0.3966277	8.347E-09	1
rs499005	8	9939120	G	A	MSRA	-0.04	0	2.5977E-09	0	5.79	0.5644656	8.355E-09	1
rs12044359	1	231106958	A	T	TRIM67	-0.04	0	2.6004E-09	0	1.91	0.964859	8.364E-09	1
rs662634	3	13094075	C	T	IQSEC1	0.04	0	2.6048E-09	0	1.87	0.9666351	8.378E-09	1
rs62389569	6	22979407	A	G	HDGFL1	-0.05	0	2.6102E-09	0	3.9	0.7911702	8.395E-09	1
rs72902622	18	45154649	G	A	SLC14A2	-0.03	0	2.615E-09	0	2.55	0.923312	8.41E-09	1
rs2551442	18	55971764	C	T	TCF4	0.05	0	2.62E-09	0	2	0.9600626	8.425E-09	1
rs56398112	16	73657315	G	T	ZFHX3	0.03	0	2.6216E-09	21	8.97	0.2545346	7.312E-09	1
rs10877461	12	60864548	G	A	FAM19A2	0.03	0	2.625E-09	50	14.06	0.0500406	1.977E-08	1
rs66532783	18	45154283	C	A	SLC14A2	-0.03	0	2.6469E-09	0	2.55	0.9232342	8.51E-09	1
rs2755256	1	67006009	A	T	SLC35D1	0.03	0	2.6473E-09	0	4.28	0.746704	8.511E-09	1
rs12148093	15	58036742	A	T	ALDH1A2	0.03	0	2.6501E-09	51	14.55	0.0422881	3.076E-09	7.27437E-10
rs76518845	16	77167612	T	C	MON1B	0.04	0	2.6594E-09	16	8.42	0.2973565	1.312E-08	1
rs10802323	1	246047928	A	T	SMYD3	-0.03	0	2.6622E-09	0	5.56	0.5924118	8.558E-09	1
rs7759217	6	27762684	A	G	HIST1H2BL	-0.04	0	2.6623E-09	0	6.4	0.4943377	8.558E-09	1
rs2044752	3	82391108	T	C	GBE1	-0.04	0	2.666E-09	13	8.13	0.3216634	8.206E-09	1
rs78496681	17	68049047	C	CA	KPNA2	0.04	0	2.667E-09	38	11.31	0.1254997	2.261E-08	1
rs550691	3	13094093	A	G	IQSEC1	0.04	0	2.6704E-09	0	1.86	0.9673053	8.584E-09	1
rs10746661	9	80557862	A	G	TLE4	0.03	0	2.6767E-09	0	2.96	0.8883416	8.604E-09	1
rs1569788	6	152007481	T	C	ESR1	0.03	0	2.6773E-09	21	8.91	0.2590357	8.606E-09	1
rs2189259	8	90216583	T	G	CALB1	0.03	0	2.6779E-09	0	4.88	0.6746181	8.608E-09	1
rs2189260	8	90216584	T	C	CALB1	0.03	0	2.6779E-09	0	4.88	0.6746181	8.608E-09	1
rs56371996	16	73657271	A	G	ZFHX3	0.03	0	2.678E-09	22	8.98	0.2539516	7.46E-09	1
rs1484665	2	22575707	T	A	KLHL29	0.03	0	2.6797E-09	13	8.05	0.3285442	1.288E-08	1
rs12149591	16	60637930	T	G	RP11-457D20	-0.03	0	2.681E-09	0	5.2	0.6356706	8.617E-09	1
rs12037213	1	231023999	A	G	FAM89A	0.03	0	2.6853E-09	29	9.98	0.1899588	1.781E-08	1
rs10780429	9	80557741	T	C	TLE4	0.03	0	2.6901E-09	0	2.96	0.8882875	8.646E-09	1
rs67900719	4	142560176	C	T	INPP4B	0.04	0	2.6965E-09	17	8.48	0.2919597	8.666E-09	1

rs6449103	4	15132989	A	C	CPEB2	-0.03	0	2.6975E-09	0	5.34	0.6188743	8.669E-09	1
rs479714	1	36774437	A	G	GRIK3	0.03	0	2.6984E-09	0	5.45	0.6054162	8.672E-09	1
rs4577996	8	90223107	T	C	CALB1	0.03	0	2.6992E-09	0	4.89	0.6727838	8.675E-09	1
rs1263550	7	157677720	C	T	PTPRN2	0.05	0	2.7008E-09	0	4.97	0.6641816	8.68E-09	1
rs11207531	1	59874502	T	A	HOOK1	0.04	0	2.7012E-09	31	10.19	0.1780335	1.689E-08	1
rs1408478	1	59877388	T	A	HOOK1	0.04	0	2.7012E-09	31	10.19	0.1780335	1.689E-08	1
rs6696530	1	59876811	G	A	HOOK1	0.04	0	2.7012E-09	31	10.19	0.1780335	1.689E-08	1
rs502845	1	36774261	A	G	GRIK3	0.03	0	2.7022E-09	0	5.45	0.6055025	8.684E-09	1
rs213209	6	33209181	C	T	RING1	0.03	0	2.7045E-09	18	8.64	0.2798427	8.691E-09	1
rs6901520	6	27746796	G	T	HIST1H2BL	-0.04	0	2.7067E-09	0	6.53	0.4792728	8.698E-09	1
rs3935148	2	27798099	T	A	MRPL33,RBI	-0.03	0	2.7079E-09	0	6.17	0.5205158	8.702E-09	1
rs13147098	4	34519206	G	A	ARAP2	0.03	0	2.7122E-09	0	3.08	0.8771181	8.716E-09	1
rs6728994	2	59584749	C	T	BCL11A	-0.03	0	2.7129E-09	0	6.97	0.4321511	8.718E-09	1
rs79855263	14	42977545	T	G	LRFN5	0.07	0	2.7131E-09	30	10.08	0.1839412	8.718E-09	1
rs2139034	2	155750874	A	T	NR4A2	-0.03	0	2.719E-09	0	5.8	0.5633926	8.737E-09	1
rs4646563	15	58061137	T	C	ALDH1A2	0.03	0	2.7191E-09	50	14.28	0.0463762	3.279E-09	7.87664E-10
rs4477313	1	59863942	A	G	HOOK1	0.04	0	2.7223E-09	31	10.19	0.1779863	1.702E-08	1
rs552488886	14	42969750	T	TC	LRFN5	0.05	0	2.7227E-09	23	9.15	0.2419425	7.566E-09	1
rs6545765	2	59892609	T	C	BCL11A	0.03	0	2.7285E-09	31	10.23	0.1760254	1.37E-08	1
rs55861489	20	61648272	T	G	CDH4	0.03	0	2.7364E-09	65	20.14	0.0052765	7.843E-09	1
rs142262847	17	46747538	C	T	NSF	-0.11	0	2.7413E-09	0	5.5	0.5993895	8.807E-09	1
rs1559709	4	142562302	T	C	INPP4B	0.04	0	2.7417E-09	17	8.47	0.2930521	8.808E-09	1
rs61313191	14	42979408	T	C	LRFN5	0.07	0	2.7429E-09	30	10.06	0.1849591	8.68E-09	1
rs61142249	4	142560448	T	C	INPP4B	0.04	0	2.7444E-09	17	8.48	0.2924574	8.817E-09	1
rs6806415	3	61117936	C	T	FHIT	-0.04	0	2.7461E-09	57	16.34	0.022213	3.761E-09	8.9936E-10
rs360754	3	13097050	C	T	IQSEC1	0.06	0	2.7534E-09	0	2.19	0.9483514	8.845E-09	1
rs4859322	4	34520296	T	C	ARAP2	0.03	0	2.7562E-09	0	3.08	0.8775482	8.854E-09	1
rs59732892	4	142563619	C	T	INPP4B	0.04	0	2.7577E-09	17	8.48	0.2924452	8.859E-09	1
rs7630000	3	82394412	A	G	GBE1	-0.04	0	2.7584E-09	14	8.2	0.3156759	8.451E-09	1
rs7629934	3	82394406	A	C	GBE1	-0.04	0	2.7592E-09	14	8.2	0.3156379	8.454E-09	1

rs10786398	10	98166813	G	T	R3HCC1L	0.03	0	2.7592E-09	41	11.88	0.104723	1.282E-08	1
rs35860169	8	90225576	T	TAGAA	CALB1	0.03	0	2.7604E-09	0	4.9	0.6723978	8.867E-09	1
rs10663211	3	82389418	A	ATTCT	GBE1	-0.04	0	2.7696E-09	14	8.17	0.3178593	8.49E-09	1
rs9815134	3	82393058	A	G	GBE1	-0.04	0	2.7727E-09	14	8.2	0.3154786	8.494E-09	1
rs141943159	16	86091019	AG	A	IRF8	-0.04	0	2.7781E-09	15	8.24	0.3117025	8.479E-09	1
rs73074855	3	49568952	G	A	BSN	-0.04	0	2.7789E-09	0	4.74	0.6911882	8.926E-09	1
rs1931397	9	11225712	T	C	PTPRD	-0.04	0	2.78E-09	21	8.86	0.2625897	1.577E-08	1
rs11207523	1	59836742	C	T	HOOK1	0.04	0	2.7834E-09	29	9.9	0.1943782	1.715E-08	1
rs77496389	18	25143158	T	C	ZNF521	-0.04	0	2.7859E-09	0	2.52	0.925294	8.948E-09	1
rs12473093	2	173472204	C	T	CDCA7	-0.03	0	2.7867E-09	0	6.54	0.4782522	8.95E-09	1
rs2197216	4	142635938	A	G	INPP4B	0.03	0	2.788E-09	27	9.62	0.2109628	1.527E-08	1
rs7554538	1	198301699	A	G	NEK7	0.03	0	2.7915E-09	46	12.97	0.0728903	1.696E-08	1
rs9597422	13	56496499	T	A	PRR20A	-0.04	0	2.7931E-09	0	6.16	0.5214106	8.97E-09	1
rs10111402	8	90223414	C	A	CALB1	0.03	0	2.7938E-09	0	4.84	0.6800404	8.972E-09	1
rs7920460	10	79078894	C	T	ZMIZ1	0.05	0	2.7948E-09	10	7.86	0.3453932	8.975E-09	1
rs12473340	2	27800930	G	A	MRPL33,RBI	-0.03	0	2.7963E-09	0	6.16	0.5213766	8.98E-09	1
rs58078405	4	142560355	A	C	INPP4B	0.04	0	2.7999E-09	18	8.58	0.284363	8.991E-09	1
rs3784262	15	57960908	T	C	ALDH1A2	0.03	0	2.8016E-09	51	14.41	0.044296	3.961E-09	9.48371E-10
rs9868998	3	82388983	A	C	GBE1	-0.04	0	2.8094E-09	14	8.2	0.3156643	8.602E-09	1
rs607898	6	153205884	T	C	RGS17	0.03	0	2.8181E-09	0	1.4	0.9855266	9.049E-09	1
rs4856387	3	82392661	G	T	GBE1	-0.04	0	2.8198E-09	15	8.33	0.3043769	8.441E-09	1
rs6720515	2	155747023	A	T	NR4A2	-0.03	0	2.8269E-09	0	5.83	0.5603087	9.076E-09	1
rs1409405	10	106210245	T	C	SORCS1	-0.03	0	2.8289E-09	5	7.38	0.3899903	1.052E-08	1
rs6061692	20	61647346	C	A	CDH4	0.03	0	2.8303E-09	65	20.02	0.0055271	8.364E-09	1
rs9835750	3	177151987	G	C	TBL1XR1	-0.03	0	2.8347E-09	13	8.11	0.3231927	1.225E-08	1
rs8054556	16	29946895	G	A	TMEM219	-0.03	0	2.8351E-09	37	11.24	0.1284237	1.54E-08	1
rs5467	16	72054381	C	T	TXNL4B	0.04	0	2.8391E-09	0	4.45	0.726886	9.115E-09	1
rs9812425	3	196443190	G	A	UBXN7	-0.03	0	2.8434E-09	0	2.8	0.9030597	9.128E-09	1
rs59862588	16	58911076	C	T	GOT2	-0.04	0	2.8475E-09	27	9.67	0.2082822	1.394E-08	1
rs1920017	3	44550649	A	G	ZKSCAN7	0.03	0	2.8519E-09	2	7.21	0.4072988	9.066E-09	1

Table S2

rs78804367	14	42982405	T	G	LRFN5	0.07	0	2.8524E-09	29	9.91	0.1937358	9.088E-09	1
rs35850432	13	56496269	TGA	T	PRR20A	-0.04	0	2.8562E-09	0	6.18	0.5184404	9.168E-09	1
rs9846450	3	82388098	T	C	GBE1	-0.04	0	2.8626E-09	14	8.19	0.3157555	8.765E-09	1
rs10507610	13	56503810	G	C	PRR20A	-0.04	0	2.8631E-09	0	6.19	0.5183022	9.19E-09	1
rs1721409	6	40144700	A	T	MOCS1	-0.03	0	2.8632E-09	21	8.88	0.2613751	6.856E-09	1
rs62491960	8	9876325	G	T	TNKS	0.04	0	2.8678E-09	0	4.73	0.6931423	9.205E-09	1
rs4646628	15	57963084	T	C	ALDH1A2	0.03	0	2.8678E-09	46	12.98	0.0727032	9.205E-09	1
rs58152051	16	72106439	A	G	DHX38	0.03	0	2.8702E-09	0	3.77	0.8060495	9.212E-09	1
rs843079	8	91605640	G	A	SLC26A7	0.03	0	2.8704E-09	0	5.58	0.5894885	9.213E-09	1
rs77350364	2	27643272	A	G	GPN1	-0.03	0	2.8787E-09	0	4.15	0.761832	9.239E-09	1
rs9845967	3	82387792	T	C	GBE1	-0.04	0	2.8796E-09	14	8.18	0.3169902	8.835E-09	1
rs13019037	2	27801775	C	T	MRPL33,RBI	-0.03	0	2.8822E-09	0	6.15	0.5229147	9.25E-09	1
rs13099659	3	44547414	C	G	ZKSCAN7	0.03	0	2.8849E-09	3	7.22	0.4066622	9.165E-09	1
rs78662102	16	71606648	A	T	MARVELD3	0.04	0	2.8869E-09	0	3.99	0.7810261	9.265E-09	1
rs56413200	6	40142468	GT	G	MOCS1	-0.03	0	2.8874E-09	20	8.81	0.2663893	6.994E-09	1
rs1375807	3	82384122	G	T	GBE1	-0.04	0	2.888E-09	14	8.18	0.3165775	8.845E-09	1
rs11707173	3	44545004	T	A	ZKSCAN7	0.03	0	2.8893E-09	3	7.22	0.4064245	9.178E-09	1
rs17035665	1	109271097	C	T	CELSR2	-0.04	0	2.8918E-09	55	15.76	0.0274142	1.703E-08	1
rs7625596	3	44544180	C	G	ZKSCAN7	0.03	0	2.8918E-09	3	7.22	0.4065077	9.186E-09	1
rs2271798	1	59907633	A	G	CYP2J2	0.04	0	2.8922E-09	32	10.4	0.1669691	1.829E-08	1
rs2785834	13	57051555	G	A	PRR20A	-0.03	0	2.8939E-09	0	3.47	0.8386299	9.287E-09	1
rs2350818	2	155782908	C	G	NR4A2	-0.03	0	2.8941E-09	0	5.84	0.558479	9.288E-09	1
rs9875308	3	82384621	A	T	GBE1	-0.04	0	2.8942E-09	14	8.19	0.3160066	8.859E-09	1
rs58427689	18	53013982	C	T	DCC	0.03	0	2.8944E-09	0	6.39	0.4948738	9.288E-09	1
rs1140763	9	125235313	G	A	HSPA5	0.03	0	2.8952E-09	0	4.22	0.754184	9.291E-09	1
rs2372774	3	44550342	C	T	ZKSCAN7	0.03	0	2.8954E-09	3	7.22	0.4063766	9.197E-09	1
rs7744763	6	123924691	G	A	NKAIN2	0.03	0	2.8967E-09	0	1.77	0.9715772	9.296E-09	1
rs1375808	3	82384422	T	A	GBE1	-0.04	0	2.8985E-09	14	8.19	0.316031	8.873E-09	1
rs11756897	6	32931362	A	G	HLA-DMB	0.03	0	2.9017E-09	2	7.18	0.4104371	1E-08	1
rs200339945	6	164703801	TG	T	C6orf118	0.05	0	2.9019E-09	0	5.82	0.5605362	9.312E-09	1

rs11870879	17	49670286	C	T	SPOP	-0.03	0	2.9025E-09	0	2.93	0.8913815	9.314E-09	1
rs2372775	3	44550060	G	A	ZKSCAN7	0.03	0	2.9036E-09	3	7.22	0.4065798	9.222E-09	1
rs147764919	16	22652192	G	A	NPIPB5	-0.07	0	2.9088E-09	0	5.57	0.5910268	9.334E-09	1
rs55740371	6	151944147	A	AT	ESR1	-0.03	0	2.9112E-09	13	8.09	0.3247123	7.747E-09	1
rs9468201	6	27719256	C	T	HIST1H2BL	-0.04	0	2.9119E-09	0	5.98	0.5422172	9.344E-09	1
rs62488709	8	10119313	G	C	MSRA	0.03	0	2.9133E-09	0	2.45	0.930963	9.348E-09	1
rs1985049	18	55966555	T	C	TCF4	0.05	0	2.9181E-09	0	1.98	0.9610923	9.363E-09	1
rs13045751	20	61649681	T	C	CDH4	0.03	0	2.9182E-09	65	20.35	0.0048702	7.856E-09	1
rs1603505	15	47335853	C	T	SEMA6D	0.05	0	2.9192E-09	2	7.22	0.4068306	9.366E-09	1
rs1061783	6	33314851	C	T	ZBTB22	0.03	0	2.9267E-09	7	7.55	0.3736759	1.121E-08	1
rs55867170	15	47334305	T	A	SEMA6D	0.05	0	2.9269E-09	2	7.22	0.4067916	9.391E-09	1
rs1364913	4	34418442	C	T	ARAP2	0.04	0	2.9275E-09	15	8.3	0.3065198	1.302E-08	1
rs1449850	3	82367151	T	C	GBE1	-0.04	0	2.9312E-09	14	8.17	0.318091	8.984E-09	1
rs1345660	5	120919490	G	T	PRR16	-0.03	0	2.9348E-09	0	1.96	0.9621308	9.416E-09	1
rs9832026	3	82374162	T	C	GBE1	-0.04	0	2.9357E-09	14	8.17	0.3182112	8.998E-09	1
rs6773011	3	82373349	C	G	GBE1	-0.04	0	2.9369E-09	14	8.17	0.3182406	9.002E-09	1
rs2034475	3	44571522	G	T	ZKSCAN7	0.03	0	2.9374E-09	3	7.24	0.4044331	9.299E-09	1
rs9851438	3	82367815	G	A	GBE1	-0.04	0	2.9375E-09	14	8.17	0.3180667	9.002E-09	1
rs1817017	3	82368192	G	C	GBE1	-0.04	0	2.9383E-09	14	8.17	0.3180681	9.004E-09	1
rs7770020	6	19252154	G	T	ID4	0.03	0	2.9395E-09	48	13.61	0.0585782	3.632E-09	8.75816E-10
rs6796468	3	82376339	T	C	GBE1	-0.04	0	2.9414E-09	14	8.16	0.3183477	9.015E-09	1
rs62084690	17	68039295	A	G	KPNA2	-0.03	0	2.9417E-09	29	9.94	0.1917156	1.796E-08	1
rs35076386	3	82377572	AT	A	GBE1	-0.04	0	2.9441E-09	14	8.16	0.3183712	9.024E-09	1
rs6793570	3	82375970	T	C	GBE1	-0.04	0	2.9452E-09	14	8.17	0.3182361	9.026E-09	1
rs6777045	3	82374774	G	T	GBE1	-0.04	0	2.9455E-09	14	8.17	0.3181044	9.026E-09	1
rs7482934	11	48559847	C	T	OR4A47	-0.06	0	2.9471E-09	13	8.09	0.3245089	8.264E-09	1
rs73162283	7	82613706	G	A	PCLO	-0.06	0	2.9498E-09	0	2.73	0.9086436	9.463E-09	1
rs9855963	3	82375775	A	G	GBE1	-0.04	0	2.9516E-09	13	8.09	0.3248753	9.081E-09	1
rs2253393	6	39986082	G	A	MOCS1	-0.03	0	2.9528E-09	22	9.05	0.2491124	6.687E-09	1
rs11047298	12	24177221	G	C	SOX5	-0.03	0	2.956E-09	0	3.57	0.827956	9.482E-09	1

rs2187689	6	32884870	T	C	PSMB9	0.05	0	2.9599E-09	10	7.84	0.3469101	1.374E-08	1
rs72891308	6	66454674	T	C	EYS	-0.06	0	2.9617E-09	0	4.04	0.7750941	9.5E-09	1
rs9309900	3	82392598	A	G	GBE1	-0.04	0	2.965E-09	13	8.12	0.3221008	9.062E-09	1
rs6777740	3	19461804	C	T	KCNH8	-0.03	0	2.9651E-09	0	2.22	0.9464161	9.511E-09	1
rs12386385	3	44416048	A	G	LINC00694	-0.03	0	2.9758E-09	0	6.2	0.5170729	9.3E-09	1
rs8731	2	27650459	C	G	GPN1	-0.03	0	2.9761E-09	0	4.17	0.7599032	9.545E-09	1
rs736471	3	50481961	T	C	CACNA2D2	0.03	0	2.9773E-09	51	14.39	0.0445907	9.683E-09	1
rs35985209	13	57023293	C	CA	PRR20A	-0.03	0	2.9818E-09	0	3.21	0.8653468	9.563E-09	1
rs111376508	3	133127472	CAA	C	TMEM108	-0.06	0	2.9839E-09	0	3.48	0.8369988	9.57E-09	1
rs1764052	6	165197357	T	C	C6orf118	0.03	0	2.9869E-09	0	5.41	0.6101218	9.49E-09	1
rs79680674	14	42967357	T	C	LRFN5	0.07	0	2.9954E-09	30	10.12	0.1816764	9.606E-09	1
rs13212936	6	25588587	C	T	LRRC16A	-0.06	0	2.9988E-09	0	3.89	0.7922981	9.617E-09	1
rs9325	15	57953788	T	A	ALDH1A2	0.03	0	2.9996E-09	51	14.34	0.0453957	4.231E-09	1.02697E-09
rs66492249	9	80561468	A	T	TLE4	0.03	0	3.0027E-09	0	2.96	0.8885307	9.629E-09	1
rs149825483	16	22652039	T	C	NPIPB5	-0.07	0	3.0029E-09	0	5.56	0.5913683	9.629E-09	1
rs1550574	15	57921170	T	G	ALDH1A2	-0.03	0	3.0037E-09	35	10.79	0.1480756	6.381E-09	1
rs10867575	9	80559181	C	T	TLE4	0.03	0	3.0088E-09	0	2.96	0.8883547	9.648E-09	1
rs12409242	1	59867487	G	A	HOOK1	0.04	0	3.0094E-09	31	10.18	0.1788383	1.865E-08	1
rs2019756	11	29748869	A	G	KCNA4	0.03	0	3.0178E-09	30	10.14	0.1809622	1.462E-08	1
rs77963803	14	42966865	G	A	LRFN5	0.07	0	3.0186E-09	30	10.12	0.1817321	9.679E-09	1
rs416223	5	104655775	C	A	NUDT12	-0.03	0	3.0191E-09	0	6.27	0.5085814	9.68E-09	1
rs9340969	6	152010995	T	C	ESR1	0.03	0	3.0194E-09	21	8.91	0.2591835	9.681E-09	1
rs11207526	1	59861445	G	A	HOOK1	0.04	0	3.0326E-09	30	10.05	0.1857256	1.894E-08	1
rs592238	6	153207019	T	A	RGS17	0.03	0	3.0335E-09	0	1.44	0.9841562	9.726E-09	1
rs1419183	6	28275017	A	C	RP5-874C20.8	-0.05	0	3.0408E-09	29	9.87	0.1958075	2.675E-08	1
rs77983625	14	42965354	A	G	LRFN5	0.07	0	3.0409E-09	30	10.11	0.1822111	9.749E-09	1
rs1992417	4	142815651	C	A	INPP4B	-0.03	0	3.0493E-09	41	11.87	0.1050721	2.042E-08	1
rs7928017	11	113578040	C	A	DRD2	-0.03	0	3.0494E-09	0	5.67	0.5792596	9.557E-09	1
rs1469049	5	120917388	C	T	PRR16	-0.03	0	3.0494E-09	0	2.03	0.9580103	9.775E-09	1
rs1424552	7	135418248	T	C	CNOT4	-0.03	0	3.0512E-09	61	18.15	0.0113303	9.468E-10	2.11743E-10

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rs10569707	1	246055990	AAG	A	SMYD3	-0.04	0	3.0544E-09	0	5.5	0.5987766	9.791E-09	1
rs10851630	15	57949950	C	T	ALDH1A2	0.03	0	3.0633E-09	52	14.59	0.0415613	4.453E-09	1.08297E-09
rs8123896	20	61649126	C	A	CDH4	0.03	0	3.0645E-09	65	20.5	0.0045784	7.959E-09	1
rs112759562	3	133113663	C	A	TMEM108	-0.06	0	3.0655E-09	0	3.48	0.8369896	9.826E-09	1
rs11109645	12	98880762	C	T	ANKS1B	0.06	0	3.0678E-09	0	1.55	0.980483	9.833E-09	1
rs12707230	7	135419942	C	A	CNOT4	-0.03	0	3.0683E-09	62	18.53	0.0098058	8.087E-10	1.80976E-10
rs35674836	16	58928726	T	C	GOT2	-0.04	0	3.0693E-09	41	11.99	0.1009775	1.767E-08	1
rs12497206	3	82390275	A	C	GBE1	-0.04	0	3.0716E-09	13	8.12	0.3221333	9.447E-09	1
rs140412108	9	115067346	TTTTG	T	TNC	-0.05	0	3.0755E-09	0	2.4	0.9344547	9.857E-09	1
rs72787027	16	71999902	G	T	PKD1L3	0.04	0	3.076E-09	0	2.92	0.8920473	9.859E-09	1
rs4938016	11	113399293	G	C	ANKK1	-0.03	0	3.0766E-09	0	6.23	0.5127103	9.861E-09	1
rs879358806	9	80456753	A	C	TLE4	-0.06	0	3.0769E-09	3	7.23	0.4049394	1.054E-08	1
rs78790189	16	72815849	G	A	ZFHX3	0.07	0	3.0805E-09	25	9.39	0.2255389	7.124E-09	1
rs10125922	9	125237619	G	C	HSPA5	0.03	0	3.0814E-09	0	4.18	0.7593531	9.876E-09	1
rs78779846	11	99999342	C	T	CNTN5	0.03	0	3.084E-09	35	10.87	0.1444383	9.462E-09	1
rs62043045	16	73656659	A	G	ZFHX3	0.03	0	3.0858E-09	23	9.14	0.2427279	8.358E-09	1
rs73014622	3	13092903	C	T	IQSEC1	0.04	0	3.0869E-09	0	1.83	0.9687723	9.893E-09	1
rs61605444	11	99697704	C	G	CNTN5	-0.04	0	3.0883E-09	0	2.86	0.8980042	9.897E-09	1
rs546359738	7	140479529	G	C	MKRN1	-0.1	0	3.0981E-09	0	5.08	0.6503901	9.928E-09	1
rs12539172	7	100494172	T	C	NYAP1	-0.03	0	3.0982E-09	9	7.72	0.3582446	1.179E-08	1
rs7836928	8	14650758	T	C	SGCZ	0.03	0	3.1063E-09	0	5.12	0.6451752	9.954E-09	1
rs739924	17	50554246	T	C	SPATA20	0.03	0	3.1067E-09	7	7.6	0.3691306	1.304E-08	1
rs9913430	17	50551109	T	A	SPATA20	0.03	0	3.1087E-09	8	7.67	0.3623246	1.337E-08	1
rs10922919	1	90766497	G	A	BARHL2	0.03	0	3.116E-09	33	10.46	0.1641439	5.028E-09	1.23681E-09
rs10501936	11	99948564	T	C	CNTN5	0.04	0	3.1163E-09	0	6.99	0.4297649	9.985E-09	1
rs74344827	16	71576373	G	A	TAT	0.04	0	3.1247E-09	0	3.97	0.7836154	1.001E-08	1
rs4925267	20	61651270	T	A	CDH4	0.03	0	3.1271E-09	65	20.57	0.0044545	7.963E-09	1
rs7619297	3	82373013	C	T	GBE1	-0.04	0	3.1293E-09	13	8.09	0.3250006	9.573E-09	1
rs9366283	6	19242962	C	G	ID4	0.03	0	3.1299E-09	48	13.62	0.0583385	3.896E-09	9.23539E-10
rs2151719	9	11136403	G	A	PTPRD	-0.04	0	3.1317E-09	0	7	0.4293855	1.003E-08	1

Table S2

rs12540773	7	135427993	G	A	CNOT4	-0.03	0	3.1325E-09	61	18.37	0.0103913	8.661E-10	1.95754E-10
rs2036826	8	14592419	T	C	SGCZ	-0.03	0	3.1348E-09	0	1.79	0.9706541	1.004E-08	1
rs10756174	9	11052553	T	C	PTPRD	0.04	0	3.1373E-09	0	5.62	0.5847631	1.005E-08	1
rs218987	1	36701732	G	T	GRIK3	0.03	0	3.1394E-09	42	12.13	0.096222	6.994E-09	1
rs6061697	20	61651410	C	G	CDH4	0.03	0	3.1401E-09	65	20.57	0.0044539	7.994E-09	1
rs11943259	4	41054224	G	A	APBB2	-0.04	0	3.1422E-09	19	8.66	0.2776392	1.633E-08	1
rs57667614	2	207361187	GT	G	CREB1	0.03	0	3.1443E-09	24	9.3	0.2318748	1.007E-08	1
rs4975317	4	142536692	T	C	INPP4B	0.04	0	3.1544E-09	29	9.97	0.1901663	1.371E-08	1
rs11718098	3	44569741	C	A	ZKSCAN7	0.03	0	3.1586E-09	3	7.25	0.4036857	9.982E-09	1
rs35038882	20	61654198	A	G	CDH4	0.03	0	3.1595E-09	67	21.64	0.0029337	5.832E-09	1
rs7933896	11	47861230	C	T	NUP160	0.03	0	3.1604E-09	0	6.22	0.5142465	1.012E-08	1
rs62042367	16	73685278	C	T	PSMD7	0.03	0	3.1653E-09	21	8.94	0.2566772	9.078E-09	1
rs12286721	11	47679976	C	A	AGBL2	-0.03	0	3.1749E-09	2	7.2	0.4087235	1.017E-08	1
rs11719869	3	44576138	G	A	ZKSCAN7	0.03	0	3.1779E-09	3	7.24	0.403979	1.004E-08	1
rs76705967	16	71574016	A	G	TAT	0.04	0	3.1801E-09	0	3.97	0.7833141	1.019E-08	1
rs10851631	15	57949995	C	T	ALDH1A2	0.03	0	3.1802E-09	51	14.58	0.041834	1.019E-08	1
rs13075175	3	44573426	A	C	ZKSCAN7	0.03	0	3.1809E-09	3	7.25	0.4035635	1.005E-08	1
rs12638703	3	9211314	C	T	SRGAP3	0.05	0	3.1815E-09	6	7.48	0.3806422	1.139E-08	1
rs6061699	20	61652107	G	A	CDH4	0.03	0	3.1829E-09	65	20.57	0.00446	8.111E-09	1
rs11100748	4	142539770	A	G	INPP4B	0.04	0	3.1863E-09	29	9.94	0.1918912	1.385E-08	1
rs11481736	20	61652344	A	AC	CDH4	0.03	0	3.1898E-09	65	20.57	0.0044668	8.136E-09	1
rs11468716	20	61652346	TAA	T	CDH4	0.03	0	3.1933E-09	65	20.57	0.0044671	8.145E-09	1
rs11707572	3	44579449	C	T	ZKSCAN7,ZI	0.03	0	3.1944E-09	3	7.25	0.4032797	1.009E-08	1
rs11720950	3	44577127	C	A	ZKSCAN7	0.03	0	3.1947E-09	3	7.25	0.403275	1.009E-08	1
rs6773415	3	44577715	C	T	ZKSCAN7	0.03	0	3.1948E-09	3	7.25	0.4032808	1.009E-08	1
rs61909175	11	99999821	G	A	CNTN5	0.03	0	3.1974E-09	44	12.61	0.0823314	6.517E-09	1
rs11863700	16	73663174	T	C	ZFHX3	0.03	0	3.1983E-09	24	9.23	0.2364934	8.732E-09	1
rs188637031	16	72687954	A	G	ZFHX3	0.07	0	3.1991E-09	31	10.25	0.1749921	6.001E-09	1
rs7495968	15	57951905	C	G	ALDH1A2	0.03	0	3.2001E-09	50	14.04	0.0505556	4.655E-09	1.11212E-09
rs10924535	1	246188418	A	T	SMYD3	-0.04	0	3.2007E-09	0	4.5	0.7209752	1.025E-08	1

rs7870385	9	11111846	A	T	PTPRD	-0.04	0	3.2014E-09	0	5.5	0.5989973	1.025E-08	1
rs572903	6	153207635	G	C	RGS17	0.03	0	3.2041E-09	0	1.36	0.9866373	1.026E-08	1
rs10809395	9	11233740	T	G	PTPRD	-0.04	0	3.2194E-09	20	8.82	0.2658132	1.805E-08	1
rs4435128	13	57028678	G	A	PRR20A	-0.03	0	3.2221E-09	0	3.33	0.8526974	1.032E-08	1
rs4646636	15	57958836	A	G	ALDH1A2	0.03	0	3.2235E-09	45	12.77	0.0779242	6.14E-09	1
rs12194361	6	40148525	T	G	MOCS1	0.03	0	3.2279E-09	20	8.81	0.2668734	7.799E-09	1
rs7230034	18	53247740	T	C	DCC	0.04	0	3.2328E-09	0	6.77	0.4529302	1.035E-08	1
rs9861605	3	44573662	C	G	ZKSCAN7	0.03	0	3.2404E-09	3	7.24	0.4040609	1.024E-08	1
rs188148895	16	71589613	C	A	TAT	0.04	0	3.2414E-09	0	4	0.779258	1.038E-08	1
rs10464004	5	104393277	A	G	NUDT12	0.03	0	3.2426E-09	0	4.11	0.766927	1.036E-08	1
rs62413771	4	41054287	C	T	APBB2	-0.03	0	3.2474E-09	18	8.64	0.2794597	1.676E-08	1
rs10838768	11	47794500	G	A	NUP160	0.03	0	3.2654E-09	0	6.33	0.5015216	1.045E-08	1
rs495596	1	36792330	G	T	GRIK3	0.03	0	3.2666E-09	0	5.1	0.6473945	1.046E-08	1
rs193047490	2	123050488	A	G	CNTNAP5	-0.1	0	3.2691E-09	28	9.83	0.1985378	2.078E-08	1
rs3852782	16	72135124	T	G	PMFBP1	0.03	0	3.2701E-09	0	3.02	0.882797	1.047E-08	1
rs11751659	6	33113855	A	G	HLA-DPB1	-0.04	0	3.2706E-09	0	3.5	0.8350396	1.047E-08	1
rs6061698	20	61651443	C	T	CDH4	0.03	0	3.2792E-09	65	20.46	0.0046529	8.62E-09	1
rs16914255	10	51120631	A	G	PRKG1	0.07	0	3.2798E-09	0	3.67	0.8173997	1.05E-08	1
rs36100279	6	153207608	T	TCTG	RGS17	0.03	0	3.2843E-09	0	1.36	0.9868249	1.051E-08	1
rs12504375	4	142535647	C	T	INPP4B	0.04	0	3.2849E-09	29	9.98	0.1897319	1.423E-08	1
rs113017561	20	63986740	G	A	PRPF6	0.04	0	3.2867E-09	0	3.59	0.8252143	1.052E-08	1
rs11222015	11	99952664	G	A	CNTN5	0.04	0	3.2879E-09	3	7.25	0.4030816	1.153E-08	1
rs138194964	15	87386850	C	T	AGBL1	0.08	0	3.2885E-09	33	10.46	0.1642193	1.053E-08	1
rs76111238	14	42973701	G	T	LRFN5	0.07	0	3.2931E-09	29	9.96	0.1906406	1.177E-08	1
rs10924534	1	246187429	T	C	SMYD3	-0.04	0	3.2942E-09	0	4.54	0.7163866	1.054E-08	1
rs112782564	16	71999132	G	A	PKD1L3	0.04	0	3.295E-09	0	2.78	0.904637	1.055E-08	1
rs191203690	14	42973137	G	A	LRFN5	0.07	0	3.2969E-09	29	9.97	0.1902062	1.178E-08	1
rs1263556	7	157683768	A	G	PTPRN2	0.05	0	3.2998E-09	0	5.04	0.6556618	1.056E-08	1
rs78836473	14	42974337	G	A	LRFN5	0.07	0	3.3008E-09	29	9.96	0.190642	1.044E-08	1
rs36035825	2	27795264	T	G	MRPL33,RBI	-0.03	0	3.3024E-09	0	6.24	0.5122259	1.057E-08	1

rs12329315	2	207364777	C	T	CREB1	-0.03	0	3.3036E-09	0	3.72	0.8110142	1.057E-08	1
rs149973073	16	72688631	C	G	ZFHX3	0.07	0	3.3109E-09	32	10.32	0.1713656	6.106E-09	1
rs12715402	3	44598437	T	C	ZNF197,ZNF	0.03	0	3.3149E-09	0	6.84	0.4461916	1.061E-08	1
rs4771306	13	98491407	T	C	STK24	0.03	0	3.3207E-09	18	8.6	0.2825815	9.158E-09	1
rs6771411	3	44572994	A	C	ZKSCAN7	0.03	0	3.3278E-09	3	7.27	0.4016865	1.049E-08	1
rs4666012	2	27795426	A	G	MRPL33,RBF	-0.03	0	3.332E-09	0	6.24	0.5120976	1.066E-08	1
rs11039419	11	47829802	C	T	NUP160	0.03	0	3.3378E-09	0	6.16	0.5210104	1.068E-08	1
rs1551063	3	44623793	C	T	ZNF197	0.03	0	3.3426E-09	0	6.84	0.4452088	1.069E-08	1
rs142387254	16	72674228	C	T	ZFHX3	0.07	0	3.3452E-09	32	10.34	0.1700312	6.311E-09	1
rs1036810	15	87444620	G	C	NTRK3	-0.03	0	3.3497E-09	0	4.75	0.6902937	1.072E-08	1
rs62084689	17	68039173	T	C	KPNA2	0.03	0	3.3502E-09	40	11.78	0.1081155	2.876E-08	1
rs56262554	12	71596027	C	A	LGR5	0.05	0	3.3508E-09	0	5.63	0.5837248	1.072E-08	1
rs4658173	1	90767580	A	G	BARHL2	0.03	0	3.356E-09	35	10.92	0.1422858	5.066E-09	1.23681E-09
rs12203465	6	123928301	C	G	NKAIN2	0.03	0	3.3626E-09	0	3.06	0.8789765	1.076E-08	1
rs421446	6	33207006	A	G	HSD17B8	0.03	0	3.3641E-09	18	8.64	0.2798946	1.076E-08	1
rs200605707	16	21794161	CATT	C	OTOA	-0.07	0	3.367E-09	0	4.64	0.7037795	1.077E-08	1
rs117567100	16	22650320	A	G	NPIPB5	-0.07	0	3.3719E-09	0	5.42	0.6089005	1.079E-08	1
rs67640609	3	43445418	CTTG	C	ANO10	-0.03	0	3.373E-09	41	11.89	0.1041709	4.225E-09	1.02697E-09
rs4788464	16	72190000	T	C	PMFBP1	0.03	0	3.3769E-09	9	7.75	0.3553547	1.08E-08	1
rs11109646	12	98881431	T	A	ANKS1B	0.05	0	3.3787E-09	0	2.33	0.9394031	1.081E-08	1
rs2117135	2	173474011	A	G	CDCA7	0.03	0	3.3864E-09	5	7.42	0.3866391	1.083E-08	1
rs6504674	17	50553453	T	C	SPATA20	0.03	0	3.3869E-09	9	7.72	0.3579717	1.476E-08	1
rs12145214	1	246049875	T	C	SMYD3	-0.04	0	3.388E-09	0	5.55	0.5933266	1.084E-08	1
rs1778511	6	28261633	G	A	NKAPL	0.05	0	3.3882E-09	32	10.38	0.1679916	3.273E-08	1
rs1579744	15	57937325	G	A	ALDH1A2	-0.03	0	3.3908E-09	47	13.31	0.0649117	5.838E-09	1
rs6780701	3	82393083	A	G	GBE1	-0.04	0	3.3909E-09	12	7.97	0.3348995	1.047E-08	1
rs3796129	3	196472333	G	T	RNF168	0.03	0	3.395E-09	0	6.96	0.4328683	1.086E-08	1
rs9682646	3	44634669	T	C	ZNF197	0.03	0	3.3971E-09	0	6.85	0.4444911	1.087E-08	1
rs12614586	2	173474419	A	G	CDCA7	0.03	0	3.3997E-09	5	7.39	0.3889997	1.087E-08	1
rs138455282	3	45356690	A	G	LARS2	0.08	0	3.4002E-09	0	3.6	0.8241025	1.088E-08	1

Table S2

rs74354868	17	68049715	G	A	KPNA2	0.03	0	3.4034E-09	37	11.14	0.1327909	2.787E-08	1
rs78000202	16	72822147	T	C	ZFHX3	0.07	0	3.4045E-09	25	9.37	0.2274261	7.896E-09	1
rs4925190	20	61651648	C	T	CDH4	0.03	0	3.4057E-09	65	20.36	0.0048355	9.195E-09	1
rs9340954	6	151999037	T	G	ESR1	0.03	0	3.4104E-09	21	8.88	0.2612434	1.091E-08	1
rs9401713	6	123929014	C	T	NKAIN2	0.03	0	3.4121E-09	0	3.21	0.8650196	1.091E-08	1
rs11966348	6	152005533	T	C	ESR1	0.03	0	3.4145E-09	21	8.88	0.2611314	1.092E-08	1
rs6756642	2	173476287	T	C	CDCA7	0.03	0	3.4158E-09	4	7.34	0.3943225	1.092E-08	1
rs13099991	3	44607771	C	A	ZNF197	0.03	0	3.4194E-09	0	6.86	0.4436499	1.094E-08	1
rs16988500	4	32999128	G	A	PCDH7	0.07	0	3.42E-09	32	10.41	0.1664851	1.856E-08	1
rs7533352	1	198313976	A	G	NEK7	0.03	0	3.4214E-09	45	12.9	0.0744833	1.957E-08	1
rs13100959	3	44625114	G	C	ZNF197	0.03	0	3.4307E-09	0	6.87	0.4430312	1.097E-08	1
rs3863060	3	44634857	G	T	ZNF197	0.03	0	3.4311E-09	0	6.87	0.4430303	1.097E-08	1
rs9845057	3	44635295	C	T	ZNF197	0.03	0	3.4311E-09	0	6.87	0.4430303	1.097E-08	1
rs3906955	3	44628688	T	C	ZNF197	0.03	0	3.4324E-09	0	6.87	0.4429974	1.098E-08	1
rs6769283	3	44629725	G	T	ZNF197	0.03	0	3.4324E-09	0	6.87	0.4429974	1.098E-08	1
rs6769288	3	44629738	G	A	ZNF197	0.03	0	3.4324E-09	0	6.87	0.4429974	1.098E-08	1
rs882450	3	44633523	A	G	ZNF197	0.03	0	3.4324E-09	0	6.87	0.4429974	1.098E-08	1
rs13013484	2	27765954	G	A	MRPL33	0.03	0	3.4355E-09	0	5.28	0.6258798	1.099E-08	1
rs2240218	17	50553219	A	T	SPATA20	0.03	0	3.4356E-09	9	7.73	0.3574477	1.5E-08	1
rs1568515	3	44621577	C	T	ZNF197	0.03	0	3.4378E-09	0	6.87	0.4430147	1.099E-08	1
rs13376689	1	246064779	G	A	SMYD3	-0.04	0	3.4379E-09	0	5.55	0.5931272	1.099E-08	1
rs7766964	6	32885151	A	T	PSMB9	0.05	0	3.4392E-09	13	8.07	0.3267521	1.718E-08	1
rs113347350	4	142816802	C	CTATT	INPP4B	-0.03	0	3.4392E-09	40	11.71	0.1106231	2.263E-08	1
rs2217016	4	142543466	G	A	INPP4B	0.04	0	3.4423E-09	29	9.95	0.1913364	1.101E-08	1
rs35299873	3	44599677	G	A	ZNF197,ZNF	0.03	0	3.449E-09	0	6.85	0.4446924	1.103E-08	1
rs12052509	2	22576938	A	G	KLHL29	0.03	0	3.4495E-09	15	8.29	0.3079194	1.766E-08	1
rs75011360	6	104445052	ATATAAG	A	HACE1	0.04	0	3.4499E-09	0	5.28	0.6261239	1.103E-08	1
rs13100919	3	44602365	C	T	ZNF197	0.03	0	3.4542E-09	0	6.85	0.4443727	1.104E-08	1
rs1480567	16	73672949	T	C	ZFHX3	0.03	0	3.4542E-09	23	9.13	0.2437059	9.449E-09	1
rs3130270	6	33340444	A	G	DAXX	0.03	0	3.4581E-09	8	7.64	0.3657748	1.349E-08	1

Table S2

rs10454570	13	56526803	C	T	PRR20A	-0.04	0	3.4585E-09	0	5.6	0.587211	1.106E-08	1
rs34810080	13	56522262	CA	C	PRR20A	-0.04	0	3.4591E-09	0	5.6	0.5871137	1.106E-08	1
rs9591766	13	56522053	A	G	PRR20A	-0.04	0	3.4591E-09	0	5.6	0.587113	1.106E-08	1
rs6721013	2	155791141	C	A	NR4A2	-0.03	0	3.4607E-09	0	6.02	0.5373096	1.106E-08	1
rs6816875	4	142542880	T	C	INPP4B	0.04	0	3.4612E-09	28	9.85	0.1972729	1.312E-08	1
rs9867464	3	44599000	G	A	ZNF197,ZNF	0.03	0	3.4613E-09	0	6.85	0.4443826	1.107E-08	1
rs9311360	3	44607180	G	A	ZNF197	0.03	0	3.4614E-09	0	6.85	0.4444064	1.107E-08	1
rs9833370	3	44605131	A	G	ZNF197	0.03	0	3.4617E-09	0	6.85	0.4444069	1.107E-08	1
rs10212298	3	44593137	C	T	ZKSCAN7,ZI	0.03	0	3.4671E-09	0	6.85	0.4444521	1.108E-08	1
rs12124651	1	246065840	A	G	SMYD3	-0.04	0	3.4678E-09	0	5.54	0.5940577	1.109E-08	1
rs12621980	2	155827641	G	C	NR4A2	-0.03	0	3.4679E-09	0	5.46	0.6042916	1.109E-08	1
rs1678509	12	57557011	G	T	KIF5A	-0.03	0	3.4684E-09	0	2.02	0.9585689	1.109E-08	1
rs1456185	3	117908840	C	A	LSAMP	0.03	0	3.4685E-09	0	2.24	0.9451623	1.109E-08	1
rs11604605	11	115123870	T	C	CADM1	0.03	0	3.4686E-09	42	12.19	0.0945307	8.565E-09	1
rs189021033	16	72684723	G	A	ZFHX3	0.07	0	3.4717E-09	32	10.41	0.1664861	6.44E-09	1
rs2009644	3	44619364	T	C	ZNF197	0.03	0	3.4727E-09	0	6.88	0.4413192	1.11E-08	1
rs62084694	17	68041478	G	T	KPNA2	0.03	0	3.474E-09	37	11.15	0.1322788	2.838E-08	1
rs62084703	17	68047268	C	T	KPNA2	0.03	0	3.474E-09	37	11.15	0.1322788	2.838E-08	1
rs13060513	3	44611266	T	C	ZNF197	0.03	0	3.4745E-09	0	6.87	0.4428416	1.111E-08	1
rs11707533	3	44609441	C	T	ZNF197	0.03	0	3.4797E-09	0	6.87	0.4429008	1.112E-08	1
rs9834025	3	18773089	A	G	SATB1	0.03	0	3.4824E-09	4	7.34	0.3939983	1.225E-08	1
rs11710959	3	44633172	C	T	ZNF197	0.03	0	3.4864E-09	0	6.84	0.4454974	1.115E-08	1
rs349688	5	144462786	T	C	KCTD16	0.03	0	3.4872E-09	8	7.62	0.3668229	8.269E-09	1
rs916978	17	50553091	T	C	SPATA20	0.03	0	3.4879E-09	9	7.73	0.3574513	1.522E-08	1
rs4646629	15	57963017	A	G	ALDH1A2	0.03	0	3.4948E-09	51	14.53	0.042525	4.821E-09	1.1728E-09
rs188468712	16	72698614	G	A	ZFHX3	0.07	0	3.4982E-09	32	10.41	0.1663403	6.482E-09	1
rs1490350	6	123927643	C	A	NKAIN2	0.03	0	3.4996E-09	0	3.24	0.8622654	1.119E-08	1
rs11124568	2	22589357	T	A	KLHL29	0.03	0	3.5023E-09	12	8.04	0.3288789	1.672E-08	1
rs12184698	13	56525903	T	A	PRR20A	-0.04	0	3.5033E-09	0	5.59	0.5879759	1.12E-08	1
rs62527045	9	11098979	G	T	PTPRD	-0.04	0	3.5039E-09	3	7.27	0.4009194	1.12E-08	1

Table S2

rs201909892	9	127887238	T	TC	ST6GALNAC	0.09	0	3.5062E-09	0	4.01	0.7784778	1.121E-08	1
rs60147425	11	47784654	G	A	NUP160	-0.08	0	3.5074E-09	0	5.86	0.5562509	1.121E-08	1
rs9834481	3	196443061	A	G	UBXN7	-0.03	0	3.5083E-09	0	3.82	0.8000792	1.121E-08	1
rs7226002	17	68034719	T	C	KPNA2	0.03	0	3.5086E-09	40	11.74	0.1093688	3.042E-08	1
rs146286181	17	68039012	CTA	C	KPNA2	0.03	0	3.5088E-09	39	11.62	0.1137001	2.975E-08	1
rs2330614	5	30848603	T	C	CDH6	0.03	0	3.5091E-09	27	9.72	0.2049849	1.702E-08	1
rs11711191	3	44600334	A	G	ZNF197	0.03	0	3.5106E-09	0	6.86	0.4435682	1.122E-08	1
rs12620935	2	173474198	C	T	CDCA7	0.03	0	3.5107E-09	5	7.44	0.3848377	1.122E-08	1
rs7214119	17	68036182	G	A	KPNA2	0.03	0	3.5109E-09	40	11.74	0.109351	3.043E-08	1
rs722208	6	152001750	A	G	ESR1	0.03	0	3.5164E-09	21	8.89	0.2603162	1.124E-08	1
rs10830212	11	89117937	G	T	GRM5	0.03	0	3.5164E-09	61	18.29	0.0107315	5.129E-09	1.23681E-09
rs6762498	3	44604211	C	T	ZNF197	0.03	0	3.5181E-09	0	6.83	0.4472307	1.124E-08	1
rs4420272	11	89117214	A	T	GRM5	0.03	0	3.5198E-09	61	18.29	0.0107198	5.128E-09	1.23681E-09
rs17840761	9	125241700	G	A	HSPA5	0.03	0	3.5213E-09	0	4.19	0.7580117	1.125E-08	1
rs4646638	15	57956585	A	G	ALDH1A2	0.03	0	3.5287E-09	49	13.99	0.0513515	4.979E-09	1.20437E-09
rs7184650	16	73683542	T	C	PSMD7	0.03	0	3.5293E-09	25	9.34	0.2289741	9.592E-09	1
rs4147095	2	173475757	C	T	CDCA7	-0.03	0	3.5301E-09	0	6.14	0.5232869	1.128E-08	1
rs11861513	16	71590439	G	A	TAT	0.04	0	3.5318E-09	0	4.07	0.771451	1.129E-08	1
rs41501346	9	11098891	C	T	PTPRD	-0.04	0	3.5326E-09	3	7.26	0.4019278	1.129E-08	1
rs56000442	18	53365266	A	T	DCC	-0.03	0	3.5355E-09	2	7.18	0.4101247	1.201E-08	1
rs73338243	17	50553963	T	C	SPATA20	0.03	0	3.5393E-09	7	7.55	0.3734965	1.451E-08	1
rs4711163	6	27759734	G	A	HIST1H2BL	-0.04	0	3.5494E-09	0	6.62	0.4695464	1.134E-08	1
rs59064438	18	53365257	A	T	DCC	-0.03	0	3.5555E-09	2	7.18	0.4108692	1.205E-08	1
rs57330392	18	53365256	C	A	DCC	-0.03	0	3.5558E-09	2	7.18	0.4108706	1.206E-08	1
rs10830215	11	89121367	A	G	GRM5	0.03	0	3.5603E-09	61	18.16	0.0112662	5.701E-09	1.41269E-09
rs61908465	11	115123357	G	A	CADM1	0.03	0	3.5659E-09	42	12.26	0.0924451	8.724E-09	1
rs1504743	18	53363167	G	C	DCC	-0.03	0	3.5701E-09	2	7.17	0.4108927	1.21E-08	1
rs13023003	2	27809270	G	C	MRPL33,RBI	-0.03	0	3.5744E-09	0	6.15	0.5222666	1.142E-08	1
rs1443191	4	142622183	G	A	INPP4B	0.03	0	3.5747E-09	25	9.4	0.2253082	1.885E-08	1
rs7122228	11	113396620	A	G	ANKK1	-0.03	0	3.5788E-09	0	6.24	0.5123269	1.143E-08	1

Table S2

rs62527044	9	11098937	T	C	PTPRD	-0.04	0	3.5812E-09	3	7.26	0.4026199	1.144E-08	1
rs72951679	2	207360044	G	A	CREB1	0.03	0	3.5826E-09	25	9.41	0.2243923	1.145E-08	1
rs9913677	17	50551220	T	A	SPATA20	0.03	0	3.5835E-09	9	7.77	0.3530402	1.583E-08	1
rs1921117	5	30876656	G	A	CDH6	0.03	0	3.5839E-09	33	10.45	0.164381	1.841E-08	1
rs882928	13	57076688	C	A	PRR20A	0.03	0	3.5841E-09	0	3.48	0.837313	1.145E-08	1
rs7617289	3	196458543	T	C	RNF168	0.03	0	3.5917E-09	0	2.93	0.8916584	1.147E-08	1
rs10742824	11	47843290	C	T	NUP160	0.03	0	3.5968E-09	0	6.34	0.5010757	1.149E-08	1
rs4665509	2	22592855	A	G	KLHL29	0.03	0	3.5987E-09	13	8.06	0.3276221	1.725E-08	1
rs28597402	4	34412736	C	T	ARAP2	0.04	0	3.6013E-09	21	8.97	0.2551254	1.698E-08	1
rs62084697	17	68042440	G	A	KPNA2	0.03	0	3.603E-09	37	11.15	0.1323373	2.944E-08	1
rs1977199	6	26466161	G	A	BTN2A1	0.04	0	3.6106E-09	0	3.62	0.8219448	1.153E-08	1
rs2240217	17	50552441	C	T	SPATA20	0.03	0	3.6118E-09	9	7.72	0.3583217	1.569E-08	1
rs7110300	11	47826890	T	G	NUP160	0.03	0	3.6128E-09	0	6.38	0.4961823	1.154E-08	1
rs10786828	10	104850142	A	G	SORCS3	-0.03	0	3.6166E-09	11	7.92	0.3395599	1.347E-08	1
rs1977200	6	26466164	G	A	BTN2A1	0.04	0	3.6198E-09	0	3.62	0.8220391	1.156E-08	1
rs2178487	5	30843681	T	A	CDH6	0.03	0	3.6276E-09	30	10.02	0.1876358	2.255E-08	1
rs2431079	5	151343114	G	A	SLC36A2	-0.03	0	3.6291E-09	46	13	0.0720125	3.43E-08	1
rs8066368	17	50552389	A	C	SPATA20	0.03	0	3.6294E-09	9	7.72	0.3582506	1.577E-08	1
rs28874900	4	34410113	T	G	ARAP2	0.04	0	3.6295E-09	21	8.96	0.2558231	1.706E-08	1
rs12921753	16	30007399	C	T	DOC2A	-0.03	0	3.6306E-09	32	10.44	0.1649108	2.039E-08	1
rs11865021	16	71584557	T	C	TAT	0.04	0	3.6373E-09	0	4.06	0.7730924	1.162E-08	1
rs62084681	17	68034876	G	A	KPNA2	0.03	0	3.6384E-09	40	11.74	0.1094146	3.155E-08	1
rs8075764	17	68036993	C	A	KPNA2	0.03	0	3.6384E-09	40	11.74	0.1094146	3.155E-08	1
rs148986231	16	71588964	G	A	TAT	0.04	0	3.6397E-09	0	4.06	0.7723581	1.162E-08	1
rs1465487	2	59996923	G	A	BCL11A	0.03	0	3.644E-09	34	10.75	0.1500652	1.665E-08	1
rs1921111	5	30870751	G	A	CDH6	0.03	0	3.645E-09	34	10.7	0.1522723	1.856E-08	1
rs6441858	3	44584132	T	C	ZKSCAN7,ZI	0.03	0	3.6459E-09	6	7.52	0.3771936	1.141E-08	1
rs66827053	17	45173286	A	G	HEXIM2	0.03	0	3.6466E-09	61	17.96	0.0121697	5.117E-09	1.23681E-09
rs74980062	16	86091160	G	T	IRF8	-0.04	0	3.6493E-09	9	7.77	0.3530565	1.15E-08	1
rs200153469	2	139840769	TG	T	LRP1B	0.05	0	3.6494E-09	0	1.92	0.9639461	1.165E-08	1

rs11122223	1	231070262	A	G	FAM89A	-0.03	0	3.653E-09	0	6.84	0.44576	1.049E-08	1
rs6775313	3	117912930	C	A	LSAMP	0.03	0	3.6561E-09	0	2.24	0.9456945	1.168E-08	1
rs7930256	11	89116266	T	C	GRM5	0.03	0	3.6617E-09	61	18.37	0.0104046	5.431E-09	1.33949E-09
rs4538222	2	195398860	A	G	SLC39A10	-0.04	0	3.6676E-09	0	5.13	0.6439549	1.171E-08	1
rs11122222	1	231070260	A	G	FAM89A	-0.03	0	3.6724E-09	0	6.84	0.4455862	1.055E-08	1
rs17489826	5	152942568	T	C	NMUR2	0.04	0	3.6763E-09	15	8.31	0.3058203	1.469E-08	1
rs112598676	16	71999042	C	T	PKD1L3	0.04	0	3.6765E-09	0	2.84	0.8990947	1.174E-08	1
rs7527440	1	90768569	A	T	BARHL2	0.03	0	3.6775E-09	38	11.37	0.1234446	5.152E-09	1.23681E-09
rs12377112	9	11235823	T	A	PTPRD	-0.04	0	3.6792E-09	20	8.8	0.2670187	2.052E-08	1
rs11936046	4	14919224	G	A	CPEB2	-0.03	0	3.6814E-09	16	8.39	0.2997167	1.175E-08	1
rs11646371	16	7697025	T	C	RBFOX1	-0.03	0	3.6834E-09	56	16.12	0.0240352	2.319E-08	1
rs6822676	4	34411442	G	A	ARAP2	0.04	0	3.6836E-09	22	8.98	0.2539723	1.739E-08	1
rs10769300	11	47844008	C	T	NUP160	0.03	0	3.6838E-09	0	6.31	0.5045104	1.176E-08	1
rs2395379	6	33330701	A	G	DAXX	0.03	0	3.6839E-09	7	7.57	0.3723129	1.405E-08	1
rs4850363	2	195394373	A	T	SLC39A10	0.04	0	3.6883E-09	0	5.15	0.6416661	1.178E-08	1
rs77730597	6	104449737	CA	C	HACE1	0.04	0	3.6926E-09	0	5.25	0.6292644	1.179E-08	1
rs35679500	2	27797099	T	C	MRPL33,RBF	-0.03	0	3.697E-09	0	6.45	0.4879863	1.176E-08	1
rs10458915	11	47842840	T	A	NUP160	0.03	0	3.6979E-09	0	6.3	0.5051154	1.181E-08	1
rs9542319	13	70436975	C	T	KLHL1	0.03	0	3.6983E-09	0	6.08	0.5307969	1.181E-08	1
rs10173720	2	27632530	A	T	GPN1	-0.03	0	3.7028E-09	0	3.94	0.786552	1.182E-08	1
rs6854016	4	34411244	T	C	ARAP2	0.04	0	3.7031E-09	21	8.97	0.2547853	1.745E-08	1
rs10013227	4	34415022	T	A	ARAP2	0.04	0	3.7042E-09	21	8.97	0.2547791	1.746E-08	1
rs4646640	15	57955365	C	G	ALDH1A2	0.03	0	3.7062E-09	50	14.2	0.0476945	5.23E-09	1.27012E-09
rs6838272	4	34413704	C	T	ARAP2	0.04	0	3.7066E-09	21	8.97	0.2547836	1.747E-08	1
rs139399443	4	34413808	A	ATAT	ARAP2	0.04	0	3.7067E-09	21	8.97	0.2547832	1.747E-08	1
rs2894334	6	33330567	A	C	DAXX	0.03	0	3.7077E-09	7	7.56	0.3726566	1.412E-08	1
rs28529601	4	34406023	A	G	ARAP2	0.04	0	3.7109E-09	21	8.97	0.2550157	1.748E-08	1
rs10857397	4	142658600	G	A	INPP4B	0.03	0	3.7118E-09	26	9.56	0.2147458	2.023E-08	1
rs521222	6	153205806	G	A	RGS17	0.03	0	3.7122E-09	0	1.41	0.9852623	1.185E-08	1
rs67796716	4	34406189	G	A	ARAP2	0.04	0	3.7156E-09	21	8.97	0.2550406	1.75E-08	1

rs218988	1	36701595	C	A	GRIK3	0.03	0	3.7198E-09	41	12.06	0.0984484	8.399E-09	1
rs4840464	8	10149154	T	A	MSRA	0.04	0	3.7206E-09	0	1.68	0.9754647	1.188E-08	1
rs10838777	11	47839402	A	C	NUP160	0.03	0	3.7231E-09	0	6.31	0.5041622	1.189E-08	1
rs6909540	6	104448554	A	C	HACE1	0.04	0	3.7248E-09	0	5.27	0.6274608	1.189E-08	1
rs6780744	3	44562839	G	A	ZKSCAN7	0.03	0	3.7269E-09	2	7.2	0.4085943	1.176E-08	1
rs4334914	5	144460304	A	G	KCTD16	0.03	0	3.7274E-09	8	7.66	0.3631687	8.649E-09	1
rs12910113	15	57956175	A	C	ALDH1A2	0.03	0	3.7317E-09	50	14.18	0.048102	5.217E-09	1.27012E-09
rs62392365	6	25371141	A	T	LRRC16A	-0.08	0	3.7387E-09	0	6.8	0.450124	1.193E-08	1
rs3130100	6	33315989	T	C	ZBTB22	0.03	0	3.7389E-09	9	7.77	0.353309	1.55E-08	1
rs6778955	3	44564579	T	C	ZKSCAN7	0.03	0	3.7403E-09	2	7.2	0.40834	1.18E-08	1
rs13070879	3	44567429	A	G	ZKSCAN7	0.03	0	3.7418E-09	2	7.2	0.4083331	1.18E-08	1
rs111925155	16	72003159	G	C	PKD1L3	0.04	0	3.7424E-09	0	3.33	0.8533855	1.195E-08	1
rs10922920	1	90766510	C	T	BARHL2	0.03	0	3.7445E-09	35	10.86	0.1449011	5.67E-09	1.3756E-09
rs13081859	3	44565521	T	C	ZKSCAN7	0.03	0	3.7446E-09	2	7.19	0.4089547	1.181E-08	1
rs6768789	3	44569013	G	A	ZKSCAN7	0.03	0	3.7474E-09	2	7.2	0.4083169	1.182E-08	1
rs34372842	8	14601958	A	G	SGCZ	-0.03	0	3.7491E-09	0	5.31	0.6226945	1.197E-08	1
rs11039429	11	47845507	C	T	NUP160	0.03	0	3.7566E-09	0	6.1	0.5281643	1.199E-08	1
rs2874907	4	142875334	G	T	INPP4B	-0.04	0	3.7599E-09	40	11.84	0.105857	1.099E-08	1
rs60163287	13	70435185	A	G	KLHL1	0.03	0	3.7675E-09	23	9.2	0.2384947	1.62E-08	1
rs180974190	16	72712369	A	G	ZFHX3	0.07	0	3.7713E-09	32	10.36	0.1689312	7.058E-09	1
rs35069907	6	27778913	T	C	HIST1H2BL	-0.04	0	3.7719E-09	0	6.61	0.4705684	1.204E-08	1
rs12153857	6	104447831	G	T	HACE1	0.04	0	3.7748E-09	0	5.27	0.6272248	1.205E-08	1
rs11291018	16	71995284	AC	A	PKD1L3	0.04	0	3.7749E-09	0	2.91	0.8933923	1.205E-08	1
rs72694213	9	11098584	T	C	PTPRD	-0.04	0	3.7766E-09	2	7.18	0.410776	1.205E-08	1
rs218985	1	36704064	C	T	GRIK3	0.03	0	3.7767E-09	43	12.34	0.0900155	8.134E-09	1
rs12191191	6	104447611	G	C	HACE1	0.04	0	3.7769E-09	0	5.27	0.6267865	1.205E-08	1
rs2895225	5	144460140	T	C	KCTD16	0.03	0	3.7769E-09	8	7.69	0.3609936	8.724E-09	1
rs11737891	4	16683383	C	T	LDB2	-0.03	0	3.7776E-09	0	1.98	0.9608489	1.206E-08	1
rs34557659	13	98584029	G	A	STK24	0.03	0	3.7815E-09	41	12.02	0.0998269	9.281E-09	1
rs72929707	2	195574859	C	T	SLC39A10	0.04	0	3.7819E-09	28	9.74	0.2039832	1.96E-08	1

Table S2

rs5857372	4	34413371	C	CA	ARAP2	0.04	0	3.7838E-09	21	8.96	0.2552468	1.785E-08	1
rs2873615	6	123886631	G	A	NKAIN2	0.03	0	3.789E-09	0	2.55	0.9229547	1.209E-08	1
rs9467736	6	26379804	A	G	BTN3A2	-0.03	0	3.79E-09	0	1.87	0.9668453	1.209E-08	1
rs2217013	4	34413434	G	A	ARAP2	0.04	0	3.7976E-09	22	8.98	0.2540011	1.789E-08	1
rs4951542	1	210712393	C	T	KCNH1	0.03	0	3.8028E-09	20	8.81	0.2667843	1.883E-08	1
rs1425518	4	142541284	C	T	INPP4B	0.04	0	3.8069E-09	30	10.01	0.1877289	1.215E-08	1
rs11156398	6	104447236	C	T	HACE1	0.04	0	3.8112E-09	0	5.27	0.6265812	1.216E-08	1
rs735765	6	28202519	G	A	ZSCAN9	-0.05	0	3.8166E-09	41	11.98	0.1011101	4.151E-08	1
rs4539273	11	47673147	C	T	AGBL2	-0.03	0	3.8211E-09	0	6.98	0.4310519	1.219E-08	1
rs633442	3	13092110	T	C	IQSEC1	0.04	0	3.8215E-09	0	1.74	0.9726196	1.219E-08	1
rs2271800	1	59907994	A	C	CYP2J2	0.04	0	3.8219E-09	32	10.33	0.170883	2.361E-08	1
rs7696018	4	142865684	A	C	INPP4B	-0.04	0	3.8232E-09	41	11.87	0.1048498	1.101E-08	1
rs6595598	5	125222860	G	A	ZNF608	0.03	0	3.8253E-09	6	7.48	0.3809503	1.22E-08	1
rs11717797	3	44639901	C	T	ZNF197	0.03	0	3.8254E-09	0	6.99	0.4303029	1.22E-08	1
rs76834425	2	161248438	T	G	TANK	-0.07	0	3.8295E-09	14	8.22	0.3138096	2.003E-08	1
rs56365411	1	90766892	G	C	BARHL2	0.03	0	3.8418E-09	36	11.05	0.1366556	6.073E-09	1.48991E-09
rs9556962	13	98504394	C	T	STK24	0.03	0	3.8453E-09	17	8.5	0.2906839	1.034E-08	1
rs11269751	2	22589137	ATAGCCTC	A	KLHL29	0.03	0	3.8453E-09	13	8.07	0.326205	1.848E-08	1
rs8082568	17	50551951	G	C	SPATA20	0.03	0	3.8456E-09	9	7.72	0.3575177	1.673E-08	1
rs687051	6	153207654	T	C	RGS17	0.03	0	3.847E-09	0	1.38	0.9862144	1.227E-08	1
rs13148401	4	41057930	T	C	APBB2	-0.03	0	3.8474E-09	18	8.63	0.2803613	1.983E-08	1
rs13067173	3	44561659	C	T	ZKSCAN7	0.03	0	3.8499E-09	2	7.21	0.4075136	1.213E-08	1
rs10043391	5	144490196	A	G	KCTD16	0.03	0	3.8523E-09	0	6.25	0.5103316	1.103E-08	1
rs10871332	16	73653269	A	G	ZFHX3	0.03	0	3.8564E-09	23	9.13	0.2431123	1.046E-08	1
rs141378988	16	72418999	G	A	AC004158.1	0.07	0	3.858E-09	31	10.29	0.1726339	7.798E-09	1
rs11718769	3	44640460	C	T	ZNF197	0.03	0	3.8606E-09	0	6.99	0.4302721	1.231E-08	1
rs2869024	11	47652549	G	A	AGBL2	-0.03	0	3.8618E-09	0	6.99	0.4304163	1.232E-08	1
rs9865272	3	44644514	G	T	ZNF197	0.03	0	3.862E-09	0	6.99	0.4302777	1.232E-08	1
rs1608006	3	44641073	A	G	ZNF197	0.03	0	3.8624E-09	0	6.99	0.43024	1.232E-08	1
rs11295760	16	73676797	TA	T	ZFHX3	0.03	0	3.8631E-09	22	8.98	0.2542037	1.054E-08	1

rs6850278	4	142869507	T	C	INPP4B	-0.04	0	3.868E-09	41	11.9	0.10375	1.114E-08	1
rs72691909	1	166578901	C	T	POGK	0.04	0	3.8724E-09	0	6.43	0.49068	1.235E-08	1
rs12202811	6	104446196	C	G	HACE1	0.04	0	3.877E-09	0	5.31	0.6225603	1.237E-08	1
rs877032	4	142867307	C	T	INPP4B	-0.04	0	3.8792E-09	41	11.9	0.1040136	1.117E-08	1
rs1880949	7	100124643	G	T	CNPY4	0.03	0	3.8841E-09	45	12.77	0.0780077	2.881E-08	1
rs6849626	4	142869182	T	C	INPP4B	-0.04	0	3.8844E-09	41	11.9	0.1040563	1.12E-08	1
rs11941320	4	142871351	A	C	INPP4B	-0.04	0	3.8878E-09	41	11.91	0.1034765	1.119E-08	1
rs9556963	13	98504772	G	A	STK24	0.03	0	3.8892E-09	17	8.49	0.2910097	1.046E-08	1
rs11071356	15	57948320	T	G	ALDH1A2	0.03	0	3.8978E-09	48	13.72	0.0563768	1.243E-08	1
rs28841990	4	142870563	C	A	INPP4B	-0.04	0	3.8982E-09	41	11.9	0.1038704	1.123E-08	1
rs35523137	3	196494108	C	CA	RNF168	-0.03	0	3.8994E-09	0	6.01	0.538073	1.244E-08	1
rs9527595	13	57063259	T	C	PRR20A	0.03	0	3.9025E-09	0	3.37	0.8491006	1.245E-08	1
rs9401712	6	123925602	C	T	NKAIN2	0.03	0	3.9049E-09	0	4.22	0.7535631	1.245E-08	1
rs10938507	4	41056008	T	C	APBB2	-0.03	0	3.9078E-09	18	8.64	0.2795937	2.015E-08	1
rs12064249	1	59886446	A	G	CYP2J2	0.04	0	3.9105E-09	32	10.34	0.1698607	2.418E-08	1
rs6061301	20	61652311	T	G	CDH4	0.03	0	3.9107E-09	66	20.7	0.0042412	9.495E-09	1
rs35991721	7	100131167	G	T	MBLAC1	0.03	0	3.9121E-09	44	12.66	0.0808354	2.932E-08	1
rs2280275	1	59901568	T	C	CYP2J2	0.04	0	3.9127E-09	32	10.35	0.1698249	2.419E-08	1
rs9854297	3	49380463	A	T	RHOA	-0.04	0	3.9183E-09	18	8.57	0.2853209	1.131E-08	1
rs7562330	2	22638623	T	C	KLHL29	0.03	0	3.9189E-09	12	7.96	0.3361991	1.786E-08	1
rs6824743	4	142873970	A	T	INPP4B	-0.04	0	3.9212E-09	41	11.93	0.102895	1.127E-08	1
rs12194884	6	104449538	G	A	HACE1	0.04	0	3.925E-09	0	5.26	0.6277792	1.252E-08	1
rs10889159	1	59894850	C	T	CYP2J2	0.04	0	3.9287E-09	32	10.34	0.1702002	2.429E-08	1
rs117566322	16	22646733	G	A	NPIPB5	-0.07	0	3.9326E-09	0	5.01	0.6582984	1.254E-08	1
rs2147397	1	59895437	A	C	CYP2J2	0.04	0	3.933E-09	32	10.34	0.1702002	2.432E-08	1
rs113439968	16	71617515	T	C	MARVELD3	0.03	0	3.9336E-09	12	8	0.3325567	1.254E-08	1
rs10889160	1	59896449	T	C	CYP2J2	0.04	0	3.935E-09	32	10.34	0.1702152	2.433E-08	1
rs117399779	11	47807358	T	C	NUP160	-0.08	0	3.9372E-09	0	5.93	0.5484658	1.255E-08	1
rs6721370	2	22638972	G	A	KLHL29	0.03	0	3.9395E-09	12	7.96	0.3361906	1.796E-08	1
rs3012031	1	36794583	A	G	GRIK3	0.03	0	3.9397E-09	0	5.2	0.6356147	1.256E-08	1

rs113512179	4	142877419	T	TTTAAA	INPP4B	-0.04	0	3.9399E-09	41	11.93	0.1027473	1.134E-08	1
rs1441425	4	142878380	T	A	INPP4B	-0.04	0	3.9413E-09	41	11.95	0.1023405	1.133E-08	1
rs71537699	7	135468443	G	A	CNOT4	-0.03	0	3.9425E-09	61	18.02	0.0118832	1.233E-09	2.82427E-10
rs111391726	4	142747875	T	TG	INPP4B	-0.03	0	3.9464E-09	39	11.58	0.1152565	2.552E-08	1
rs73077107	3	49633604	G	A	BSN	-0.04	0	3.9516E-09	0	5.44	0.6063052	1.26E-08	1
rs6718998	2	195578245	C	T	SLC39A10	0.04	0	3.9539E-09	15	8.29	0.3080424	1.593E-08	1
rs1441428	4	142883863	T	C	INPP4B	-0.04	0	3.9549E-09	41	12.01	0.1003218	1.128E-08	1
rs9295421	6	19218610	G	A	ID4	0.03	0	3.9599E-09	36	11.02	0.1377976	8.033E-09	1
rs4690731	4	142878813	A	T	INPP4B	-0.04	0	3.965E-09	41	11.94	0.102388	1.14E-08	1
rs1621023	1	208245886	G	A	PLXNA2	-0.03	0	3.9678E-09	0	4.98	0.6620071	1.265E-08	1
rs6711601	2	22639303	A	G	KLHL29	0.03	0	3.9746E-09	12	7.96	0.3364014	1.811E-08	1
rs593994	6	153206637	G	T	RGS17	0.03	0	3.9747E-09	0	1.38	0.9862246	1.267E-08	1
rs28525561	2	22641281	G	A	KLHL29	0.03	0	3.9773E-09	12	7.96	0.3362535	1.813E-08	1
rs9807005	16	49600729	C	T	ZNF423	-0.03	0	3.9773E-09	57	16.31	0.0224148	7.296E-09	1
rs11505847	7	100137038	G	A	MBLAC1	0.03	0	3.9778E-09	44	12.69	0.0799932	2.973E-08	1
rs3130018	6	33322625	G	A	DAXX	0.03	0	3.9788E-09	10	7.84	0.3469613	1.609E-08	1
rs17016873	4	142881443	T	C	INPP4B	-0.04	0	3.983E-09	41	11.96	0.1019111	1.145E-08	1
rs7191463	16	71995157	G	A	PKD1L3	0.04	0	3.9859E-09	0	2.94	0.8902207	1.271E-08	1
rs331951	4	142743681	A	C	INPP4B	-0.03	0	3.9879E-09	39	11.57	0.1156964	2.578E-08	1
rs13091395	3	29551921	A	G	RBMS3,RP11	-0.07	0	3.9884E-09	19	8.67	0.2774274	1.265E-08	1
rs113691886	2	196686076	C	T	CCDC150	0.06	0	3.9899E-09	33	10.52	0.1610928	1.771E-08	1
rs760587	6	27772521	C	A	HIST1H2BL	-0.04	0	3.99E-09	0	6.54	0.4781083	1.272E-08	1
rs150979916	16	58917541	A	T	GOT2	-0.04	0	3.9935E-09	46	12.99	0.0722434	2.179E-08	1
rs62399870	6	34281564	T	C	NUDT3	-0.04	0	3.9973E-09	0	2.74	0.9082379	1.274E-08	1
rs7115678	11	99998151	G	C	CNTN5	0.03	0	4.0011E-09	45	12.86	0.0757179	7.472E-09	1
rs2036825	8	14592162	G	A	SGCZ	-0.03	0	4.0128E-09	0	2.17	0.950125	1.279E-08	1
rs10959536	9	11112874	G	C	PTPRD	-0.04	0	4.0137E-09	0	5.23	0.632396	1.279E-08	1
rs10959538	9	11113176	A	G	PTPRD	-0.04	0	4.0147E-09	0	5.17	0.6397619	1.28E-08	1
rs146850210	12	98913656	C	T	ANKS1B	0.06	0	4.0155E-09	0	0.55	0.9992449	1.28E-08	1
rs1530293	15	57918200	G	A	ALDH1A2	0.03	0	4.0162E-09	35	10.85	0.1453184	8.634E-09	1

Table S2

rs12715403	3	44639567	C	G	ZNF197	0.03	0	4.0167E-09	0	6.92	0.4374236	1.28E-08	1
rs76028698	1	246193012	C	T	SMYD3	-0.05	0	4.0201E-09	4	7.36	0.3925621	1.143E-08	1
rs174578	11	61838027	T	A	FADS2	0.03	0	4.0241E-09	42	12.22	0.0936844	1.54E-08	1
rs2209517	6	66542971	G	A	EYS	0.05	0	4.0342E-09	0	3.66	0.8183974	1.286E-08	1
rs73072380	3	48260110	G	A	ZNF589	-0.04	0	4.0369E-09	0	4.39	0.7336632	1.287E-08	1
rs138923574	11	113147038	GT	G	NCAM1	0.04	0	4.0401E-09	20	8.85	0.2635916	1.636E-08	1
rs10010791	4	34384717	T	C	ARAP2	0.04	0	4.0404E-09	22	9.07	0.2477854	1.916E-08	1
rs7191441	16	71995123	G	C	PKD1L3	0.04	0	4.0414E-09	0	2.95	0.8896566	1.288E-08	1
rs10786829	10	104851501	A	G	SORCS3	-0.03	0	4.0421E-09	11	7.94	0.3377534	1.501E-08	1
rs117458287	3	29556329	C	T	RBMS3,RP11	-0.07	0	4.0469E-09	21	8.96	0.2556814	1.278E-08	1
rs1767672	6	40136368	G	T	MOCS1	-0.03	0	4.0488E-09	14	8.21	0.3146928	1.018E-08	1
rs9633830	11	47827918	T	G	NUP160	0.03	0	4.0519E-09	0	6.28	0.5078392	1.291E-08	1
rs35129870	11	47833810	TG	T	NUP160	0.03	0	4.0569E-09	0	6.28	0.5072571	1.293E-08	1
rs4886001	13	57041170	T	C	PRR20A	-0.03	0	4.0631E-09	0	3.37	0.8483833	1.295E-08	1
rs9537582	13	57043373	T	C	PRR20A	-0.03	0	4.0656E-09	0	3.33	0.8525848	1.295E-08	1
rs2046377	11	47887761	C	T	NUP160	0.03	0	4.0659E-09	0	5.35	0.6178046	1.296E-08	1
rs1942484	11	89122460	G	A	TYR	0.03	0	4.0704E-09	61	18.4	0.0103083	5.812E-09	1.41269E-09
rs4646627	15	57963107	A	G	ALDH1A2	0.03	0	4.073E-09	51	14.44	0.0438135	5.703E-09	1.41269E-09
rs35619282	4	15049978	T	G	CPEB2	-0.03	0	4.0741E-09	0	5.25	0.6300825	1.298E-08	1
rs174581	11	61839211	G	A	FADS2	0.03	0	4.0796E-09	44	12.57	0.0832215	1.3E-08	1
rs11718980	3	196485411	G	A	RNF168	0.03	0	4.0812E-09	0	6.97	0.4315757	1.3E-08	1
rs148000660	3	48263683	C	T	ZNF589	-0.04	0	4.0816E-09	0	4.41	0.7318341	1.3E-08	1
rs199625944	2	211783022	A	ATTTG	ERBB4	0.03	0	4.0832E-09	26	9.46	0.2213205	9.585E-09	1
rs2352496	6	66541111	A	G	EYS	0.05	0	4.0881E-09	0	3.66	0.8185253	1.302E-08	1
rs7932703	11	47748384	A	C	FNBP4	0.03	0	4.0928E-09	0	6.27	0.5084957	1.304E-08	1
rs12918721	16	58933413	C	T	GOT2	-0.04	0	4.0935E-09	40	11.85	0.1055943	2.332E-08	1
rs3113593	4	142738515	C	T	INPP4B	-0.03	0	4.0939E-09	39	11.57	0.1157534	2.654E-08	1
rs75603022	8	90189168	A	C	CALB1	0.06	0	4.0949E-09	26	9.51	0.2182728	2.139E-08	1
rs9537575	13	57039401	C	T	PRR20A	-0.03	0	4.0971E-09	0	3.35	0.8510912	1.305E-08	1
rs11393042	13	57029119	T	TA	PRR20A	-0.03	0	4.0979E-09	0	3.33	0.8530369	1.306E-08	1

rs6795322	3	44707024	G	C	ZNF502	0.03	0	4.1001E-09	0	6.36	0.4987483	1.306E-08	1
rs174554	11	61811991	A	G	FADS1,FADS	0.03	0	4.1003E-09	49	13.91	0.0527546	1.285E-08	1
rs79895410	16	72858823	C	T	ZFHX3	0.07	0	4.1016E-09	16	8.42	0.2968394	1.105E-08	1
rs1881915	3	44538426	C	A	ZKSCAN7	0.03	0	4.1022E-09	12	8	0.3323623	1.282E-08	1
rs6441850	3	44538115	G	A	ZKSCAN7	0.03	0	4.1034E-09	12	8	0.3323693	1.283E-08	1
rs79021989	2	27677702	A	G	SLC4A1AP	-0.07	0	4.1034E-09	0	5.26	0.6284222	1.307E-08	1
rs1968876	2	22635996	C	G	KLHL29	0.03	0	4.1056E-09	12	7.97	0.3354633	1.872E-08	1
rs7739915	6	28802906	G	T	TRIM27	-0.05	0	4.1086E-09	42	12.15	0.0957029	3.141E-08	1
rs2237234	6	26391166	G	A	BTN2A2	-0.03	0	4.1114E-09	0	2.25	0.9445377	1.31E-08	1
rs10838774	11	47834562	A	G	NUP160	0.03	0	4.1127E-09	0	6.28	0.5075628	1.31E-08	1
rs13144360	4	15056243	T	C	CPEB2	-0.03	0	4.113E-09	0	5.26	0.6286362	1.31E-08	1
rs76965115	16	72852694	T	C	ZFHX3	0.07	0	4.115E-09	16	8.36	0.3020138	1.106E-08	1
rs35682749	11	47820982	CCT	C	NUP160	0.03	0	4.1159E-09	0	6.33	0.5019248	1.311E-08	1
rs4850364	2	195394536	G	A	SLC39A10	0.04	0	4.1194E-09	0	5.14	0.6425474	1.312E-08	1
rs2869534	11	47719110	G	A	FNBP4	0.03	0	4.1199E-09	0	6.32	0.5024149	1.312E-08	1
rs6724210	2	45766871	C	T	PRKCE	-0.03	0	4.121E-09	8	7.67	0.363026	1.658E-08	1
rs61824833	1	230487909	C	T	PGBD5	0.03	0	4.122E-09	3	7.23	0.4055932	1.471E-08	1
rs11039415	11	47824262	A	G	NUP160	0.03	0	4.1233E-09	0	6.27	0.5083303	1.313E-08	1
rs2170815	11	47854358	T	C	NUP160	0.03	0	4.1239E-09	0	5.98	0.5418449	1.314E-08	1
rs990211	3	48683607	A	G	NCKIPSD	-0.04	0	4.1242E-09	0	2.9	0.893898	1.314E-08	1
rs8053623	16	71613626	A	G	MARVELD3	0.03	0	4.1254E-09	12	8.03	0.3299805	1.314E-08	1
rs10959537	9	11112901	A	C	PTPRD	-0.04	0	4.1259E-09	0	5.16	0.6399252	1.314E-08	1
rs76561045	2	178961679	G	A	CCDC141	0.06	0	4.126E-09	32	10.41	0.1665184	3.006E-08	1
rs77989957	5	125199504	G	T	ZNF608	0.03	0	4.1265E-09	0	6.62	0.4692638	1.314E-08	1
rs1402753	3	44660246	A	G	ZNF35	0.03	0	4.1281E-09	0	6.99	0.4295098	1.315E-08	1
rs13334169	16	72853273	G	A	ZFHX3	0.07	0	4.1302E-09	16	8.36	0.3020524	1.111E-08	1
rs1952992	13	57071653	A	G	PRR20A	0.03	0	4.1311E-09	0	3.35	0.8505811	1.316E-08	1
rs1443187	4	142710538	G	A	INPP4B	0.03	0	4.1338E-09	37	11.28	0.1267934	2.654E-08	1
rs1999801	13	57032482	A	G	PRR20A	-0.03	0	4.1365E-09	0	3.33	0.852883	1.318E-08	1
rs6907236	6	123925202	A	T	NKAIN2	0.03	0	4.1379E-09	0	4.23	0.7534412	1.318E-08	1

rs67762330	2	195395731	T	A	SLC39A10	0.04	0	4.1382E-09	0	5.14	0.6424705	1.318E-08	1
rs2777625	13	57061923	T	G	PRR20A	0.03	0	4.1389E-09	0	3.35	0.8506888	1.318E-08	1
rs13074938	3	44580488	C	G	ZKSCAN7,ZI	0.03	0	4.1395E-09	7	7.6	0.3695317	1.318E-08	1
rs9527589	13	57043356	C	A	PRR20A	-0.03	0	4.1438E-09	0	3.34	0.8522568	1.32E-08	1
rs9537576	13	57042558	C	A	PRR20A	-0.03	0	4.1444E-09	0	3.36	0.8498999	1.32E-08	1
rs6765468	3	44568134	G	A	ZKSCAN7	0.03	0	4.1478E-09	12	8.03	0.3297478	1.308E-08	1
rs11039402	11	47804538	A	C	NUP160	0.03	0	4.151E-09	0	6.24	0.5121519	1.322E-08	1
rs34815312	12	120468559	G	A	SRSF9	-0.05	0	4.1516E-09	0	4.15	0.7618619	1.322E-08	1
rs6456236	6	19212174	A	G	ID4	0.03	0	4.1527E-09	36	11.01	0.1381851	8.463E-09	1
rs6485778	11	47760524	C	T	FNBP4	0.03	0	4.1536E-09	0	6.23	0.5133324	1.323E-08	1
rs7929014	11	47754731	C	T	FNBP4	0.03	0	4.155E-09	0	6.23	0.5135576	1.323E-08	1
rs7102205	11	47723822	C	T	FNBP4	0.03	0	4.1551E-09	0	6.33	0.5022785	1.323E-08	1
rs10838751	11	47722842	C	A	FNBP4	0.03	0	4.1554E-09	0	6.33	0.50226	1.323E-08	1
rs17324276	4	76757659	C	T	SHROOM3	-0.07	0	4.1565E-09	0	1.15	0.9920997	1.324E-08	1
rs141227745	2	178923462	TA	T	CCDC141	0.06	0	4.1567E-09	34	10.64	0.1551027	3.081E-08	1
rs7108479	11	47759908	G	T	FNBP4	0.03	0	4.1567E-09	0	6.23	0.5135603	1.324E-08	1
rs754434	11	47792728	A	G	NUP160	0.03	0	4.1584E-09	0	6.28	0.5069384	1.324E-08	1
rs10865313	2	59890162	A	G	BCL11A	0.03	0	4.1591E-09	5	7.41	0.3878622	1.486E-08	1
rs143896067	15	57918233	C	CCTA	ALDH1A2	-0.03	0	4.1593E-09	35	10.85	0.1451203	8.925E-09	1
rs12225854	11	47809038	T	C	NUP160	0.03	0	4.1615E-09	0	6.3	0.5051321	1.325E-08	1
rs75850040	11	113140961	C	T	NCAM1	0.04	0	4.1647E-09	11	7.94	0.3382625	1.326E-08	1
rs4916431	3	196475951	C	A	RNF168	0.03	0	4.1666E-09	0	6.96	0.4328628	1.327E-08	1
rs17599080	1	230488526	C	A	PGBD5	0.03	0	4.1676E-09	5	7.41	0.3874548	1.618E-08	1
rs11039401	11	47804038	G	A	NUP160	0.03	0	4.1687E-09	0	6.29	0.5059986	1.328E-08	1
rs2904127	11	47795738	A	G	NUP160	0.03	0	4.1687E-09	0	6.29	0.5059986	1.328E-08	1
rs7112248	11	47801504	C	T	NUP160	0.03	0	4.1687E-09	0	6.29	0.5059986	1.328E-08	1
rs174580	11	61839170	A	G	FADS2	0.03	0	4.1695E-09	46	13.15	0.0685997	1.328E-08	1
rs67391420	16	58926517	G	A	GOT2	-0.04	0	4.172E-09	41	12.02	0.0999696	2.364E-08	1
rs11712337	3	44680188	T	A	ZNF35	0.03	0	4.1721E-09	0	6.88	0.4416449	1.329E-08	1
rs13089400	3	44679407	T	C	ZNF35	0.03	0	4.1739E-09	0	6.88	0.4416197	1.329E-08	1

rs7649387	3	44678290	C	T	ZNF35	0.03	0	4.1743E-09	0	6.88	0.4416173	1.329E-08	1
rs16840084	2	195396642	G	T	SLC39A10	0.04	0	4.1754E-09	0	5.15	0.6422456	1.33E-08	1
rs790331	13	57059504	G	A	PRR20A	0.03	0	4.1757E-09	0	3.35	0.8508675	1.33E-08	1
rs28689569	4	142872941	G	A	INPP4B	-0.04	0	4.1764E-09	41	11.9	0.1039281	1.2E-08	1
rs4520719	13	57023911	G	A	PRR20A	-0.03	0	4.1775E-09	0	3.34	0.8517043	1.33E-08	1
rs72787018	16	71994301	G	A	PKD1L3	0.04	0	4.1827E-09	0	2.96	0.8891299	1.332E-08	1
rs10511563	9	11089482	C	A	PTPRD	-0.04	0	4.1842E-09	8	7.61	0.368101	1.332E-08	1
rs2356742	16	49984256	G	A	CNEP1R1	0.05	0	4.1882E-09	0	4.81	0.6827992	1.334E-08	1
rs62086897	17	68011928	A	C	C17orf58	0.03	0	4.1892E-09	42	12.16	0.0955725	3.596E-08	1
rs68156774	13	57067973	TAGAC	T	PRR20A	0.03	0	4.1903E-09	0	3.35	0.8503645	1.334E-08	1
rs174574	11	61832870	A	C	FADS2	-0.03	0	4.1938E-09	41	11.95	0.1023347	1.701E-08	1
rs6561913	13	57037666	G	A	PRR20A	-0.03	0	4.202E-09	0	3.35	0.8513162	1.338E-08	1
rs281244	15	47371163	C	T	SEMA6D	-0.03	0	4.2028E-09	0	4.31	0.7436014	1.338E-08	1
rs11222295	11	100002947	G	A	CNTN5	0.03	0	4.2054E-09	46	13.06	0.0706026	7.512E-09	1
rs174577	11	61837342	C	A	FADS2	0.03	0	4.2067E-09	42	12.26	0.0923096	1.339E-08	1
rs9527585	13	57036675	A	G	PRR20A	-0.03	0	4.2086E-09	0	3.35	0.8513309	1.34E-08	1
rs112149509	5	137664792	C	T	KLHL3	0.09	0	4.2097E-09	30	10.13	0.1811073	1.254E-08	1
rs9537570	13	57026022	G	A	PRR20A	-0.03	0	4.2113E-09	0	3.34	0.8514997	1.341E-08	1
rs66935095	13	57065477	AT	A	PRR20A	0.03	0	4.2113E-09	0	3.36	0.8503142	1.341E-08	1
rs9471244	6	40124592	C	T	MOCS1	0.03	0	4.2149E-09	14	8.23	0.3127424	1.126E-08	1
rs6772216	3	44707767	C	T	ZNF502	0.03	0	4.2153E-09	0	6.29	0.5066636	1.342E-08	1
rs8052739	16	73676990	C	T	ZFHX3	0.03	0	4.2161E-09	22	8.98	0.254229	1.157E-08	1
rs6706010	2	211743751	A	G	ERBB4	0.04	0	4.2177E-09	35	10.84	0.1458536	1.116E-08	1
rs790327	13	57056071	G	A	PRR20A	0.03	0	4.2226E-09	0	3.35	0.8512335	1.344E-08	1
rs10461013	3	43471536	C	G	ANO10	-0.03	0	4.2263E-09	40	11.69	0.1111769	5.203E-09	1.27012E-09
rs9527599	13	57068146	C	T	PRR20A	0.03	0	4.2269E-09	0	3.36	0.8496668	1.346E-08	1
rs138134554	13	57027996	TTA	T	PRR20A	-0.03	0	4.2273E-09	0	3.34	0.8514811	1.346E-08	1
rs4267192	13	57028016	G	A	PRR20A	-0.03	0	4.2273E-09	0	3.34	0.8514811	1.346E-08	1
rs7326228	13	57029159	C	T	PRR20A	-0.03	0	4.2278E-09	0	3.34	0.8514775	1.346E-08	1
rs1929623	13	57069030	C	T	PRR20A	0.03	0	4.2281E-09	0	3.36	0.8496522	1.346E-08	1

rs7334354	13	57039305	C	T	PRR20A	-0.03	0	4.2287E-09	0	3.35	0.8513316	1.346E-08	1
rs7334683	13	57039302	G	T	PRR20A	-0.03	0	4.2287E-09	0	3.35	0.8513316	1.346E-08	1
rs9527590	13	57047012	G	A	PRR20A	-0.03	0	4.2288E-09	0	3.35	0.8513326	1.346E-08	1
rs7338630	13	57045101	C	A	PRR20A	-0.03	0	4.229E-09	0	3.35	0.8513317	1.346E-08	1
rs9316900	13	57042448	A	G	PRR20A	-0.03	0	4.229E-09	0	3.35	0.8513324	1.346E-08	1
rs9563446	13	57040632	T	A	PRR20A	-0.03	0	4.229E-09	0	3.35	0.8513324	1.346E-08	1
rs790330	13	57059337	C	T	PRR20A	0.03	0	4.2291E-09	0	3.35	0.8512354	1.346E-08	1
rs9537586	13	57048830	T	C	PRR20A	-0.03	0	4.2293E-09	0	3.35	0.8513323	1.347E-08	1
rs4283103	13	57035684	C	T	PRR20A	-0.03	0	4.2294E-09	0	3.34	0.8515182	1.347E-08	1
rs9527581	13	57025959	T	C	PRR20A	-0.03	0	4.2294E-09	0	3.34	0.8514793	1.347E-08	1
rs9316899	13	57031710	T	A	PRR20A	-0.03	0	4.2301E-09	0	3.34	0.8515018	1.347E-08	1
rs9527584	13	57034787	A	G	PRR20A	-0.03	0	4.2302E-09	0	3.34	0.8515171	1.347E-08	1
rs2785837	13	57062303	C	T	PRR20A	0.03	0	4.2302E-09	0	3.35	0.8512366	1.347E-08	1
rs4885999	13	57033197	G	T	PRR20A	-0.03	0	4.2304E-09	0	3.34	0.8515073	1.347E-08	1
rs4886000	13	57033259	A	T	PRR20A	-0.03	0	4.2307E-09	0	3.34	0.8515061	1.347E-08	1
rs2777626	13	57062006	T	C	PRR20A	0.03	0	4.2308E-09	0	3.35	0.8512381	1.347E-08	1
rs9537573	13	57036251	T	A	PRR20A	-0.03	0	4.2313E-09	0	3.34	0.8515119	1.347E-08	1
rs8001557	13	57030525	G	A	PRR20A	-0.03	0	4.2314E-09	0	3.34	0.8514526	1.347E-08	1
rs174537	11	61785208	G	T	MYRF,TMEM	0.03	0	4.2322E-09	47	13.36	0.0637434	1.347E-08	1
rs2785836	13	57061613	G	A	PRR20A	0.03	0	4.2323E-09	0	3.35	0.8512367	1.347E-08	1
rs9316897	13	57030003	G	A	PRR20A	-0.03	0	4.2325E-09	0	3.34	0.8515131	1.347E-08	1
rs9316898	13	57030094	C	T	PRR20A	-0.03	0	4.2325E-09	0	3.34	0.8515131	1.347E-08	1
rs6561912	13	57030855	C	A	PRR20A	-0.03	0	4.2326E-09	0	3.34	0.8515134	1.348E-08	1
rs11598058	10	90961562	T	C	ANKRD1	-0.04	0	4.2332E-09	52	14.6	0.0414583	2.652E-08	1
rs796902	13	57060360	C	G	PRR20A	0.03	0	4.2335E-09	0	3.35	0.851258	1.348E-08	1
rs479779	1	36790462	A	G	GRIK3	0.03	0	4.234E-09	0	5.11	0.6464781	1.348E-08	1
rs1336935	13	57025056	A	G	PRR20A	-0.03	0	4.2343E-09	0	3.34	0.8515015	1.348E-08	1
rs1331726	13	57074363	T	C	PRR20A	0.03	0	4.235E-09	0	3.36	0.8496452	1.348E-08	1
rs9316894	13	57029647	A	T	PRR20A	-0.03	0	4.2351E-09	0	3.35	0.8510101	1.348E-08	1
rs6457711	6	33077495	C	A	HLA-DPA1,H	-0.03	0	4.2351E-09	0	3.71	0.812468	1.348E-08	1

rs9316903	13	57071328	G	A	PRR20A	0.03	0	4.2352E-09	0	3.36	0.8495802	1.348E-08	1
rs1336934	13	57024945	C	T	PRR20A	-0.03	0	4.2368E-09	0	3.34	0.851581	1.349E-08	1
rs57967063	13	57034510	AT	A	PRR20A	-0.03	0	4.2375E-09	0	3.35	0.8511993	1.349E-08	1
rs7336021	13	57075483	T	G	PRR20A	0.03	0	4.2425E-09	0	3.37	0.8492952	1.351E-08	1
rs1331727	13	57074842	G	C	PRR20A	0.03	0	4.2434E-09	0	3.36	0.8499577	1.351E-08	1
rs9537590	13	57076130	G	C	PRR20A	0.03	0	4.2435E-09	0	3.37	0.8492345	1.351E-08	1
rs35874668	10	90963705	T	C	ANKRD1	-0.04	0	4.2439E-09	52	14.6	0.0415012	2.661E-08	1
rs7334973	13	57075675	C	T	PRR20A	0.03	0	4.2462E-09	0	3.37	0.8491154	1.352E-08	1
rs556684652	7	140462038	T	C	MKRN1	-0.1	0	4.2463E-09	0	5.23	0.6313645	1.352E-08	1
rs7114813	11	47779549	A	G	NUP160	0.03	0	4.2493E-09	0	6.29	0.5059212	1.353E-08	1
rs4527691	6	19210488	G	A	ID4	0.03	0	4.2493E-09	36	11.03	0.1373968	8.682E-09	1
rs200501	6	27821164	C	T	HIST1H4J	-0.06	0	4.2494E-09	32	10.37	0.1688034	3.028E-08	1
rs9527598	13	57065386	G	A	PRR20A	0.03	0	4.2512E-09	0	3.35	0.8506149	1.353E-08	1
rs6800701	3	44616169	T	C	ZNF197	0.03	0	4.2521E-09	0	6.81	0.448689	1.354E-08	1
rs9527597	13	57064768	A	G	PRR20A	0.03	0	4.2527E-09	0	3.35	0.8506365	1.354E-08	1
rs141927623	2	178923609	A	ATTTT	CCDC141	0.06	0	4.2529E-09	34	10.64	0.1553501	3.15E-08	1
rs9652209	13	57065852	C	T	PRR20A	0.03	0	4.2548E-09	0	3.35	0.8506086	1.354E-08	1
rs201377405	2	178923610	C	A	CCDC141	0.06	0	4.2548E-09	34	10.64	0.1553472	3.151E-08	1
rs1991873	6	40393742	C	G	LRFN2	0.04	0	4.2553E-09	0	3.4	0.8453998	1.355E-08	1
rs7201692	16	58911780	A	G	GOT2	-0.04	0	4.2555E-09	32	10.38	0.1680131	2.209E-08	1
rs78822921	10	90962725	G	A	ANKRD1	-0.04	0	4.2564E-09	52	14.6	0.0414829	2.668E-08	1
rs78187521	11	47770292	T	A	FNBP4	0.03	0	4.2576E-09	0	6.27	0.5083746	1.355E-08	1
rs75716035	11	47630320	G	C	MTCH2	-0.08	0	4.2579E-09	0	5.76	0.5675006	1.355E-08	1
rs76592243	2	178923643	A	G	CCDC141	0.06	0	4.2599E-09	34	10.63	0.1553602	3.154E-08	1
rs1115673	2	22663373	T	A	KLHL29	-0.03	0	4.2617E-09	18	8.6	0.2825995	2.296E-08	1
rs1439596	5	125193410	T	C	ZNF608	0.03	0	4.2694E-09	20	8.83	0.2652616	2.146E-08	1
rs11039379	11	47769451	C	T	FNBP4	0.03	0	4.27E-09	0	6.32	0.5029932	1.359E-08	1
rs7868584	9	11114436	T	G	PTPRD	-0.04	0	4.2701E-09	0	6	0.5391847	1.359E-08	1
rs10838758	11	47749924	T	C	FNBP4	0.03	0	4.2717E-09	0	6.23	0.5129645	1.36E-08	1
rs7853406	9	11114607	C	T	PTPRD	-0.04	0	4.276E-09	0	6.02	0.5377978	1.361E-08	1

rs4430622	13	57026687	G	A	PRR20A	-0.03	0	4.2766E-09	0	3.33	0.8533422	1.361E-08	1
rs1004867	16	49601221	G	A	ZNF423	-0.03	0	4.2781E-09	57	16.46	0.0212521	7.669E-09	1
rs61895760	11	47772986	G	C	NUP160	0.03	0	4.2802E-09	0	6.29	0.5064216	1.362E-08	1
rs11039376	11	47767997	G	T	FNBP4	0.03	0	4.2805E-09	0	6.29	0.5064026	1.362E-08	1
rs67450550	11	47767111	CGGTGGT	C	FNBP4	0.03	0	4.2805E-09	0	6.29	0.5064026	1.362E-08	1
rs10838760	11	47764862	A	G	FNBP4	0.03	0	4.2812E-09	0	6.29	0.5064091	1.363E-08	1
rs10838763	11	47773250	C	T	NUP160	0.03	0	4.2831E-09	0	6.29	0.506493	1.363E-08	1
rs59014274	7	38958912	G	A	POU6F2	0.1	0	4.2845E-09	0	5.68	0.5780106	1.364E-08	1
rs35392358	11	47828597	CAT	C	NUP160	0.03	0	4.2866E-09	0	6.22	0.5141431	1.364E-08	1
rs4636797	13	57064070	T	C	PRR20A	0.03	0	4.2885E-09	0	3.35	0.850872	1.365E-08	1
rs1372241	4	142882994	C	T	INPP4B	-0.04	0	4.2896E-09	41	11.94	0.1024024	1.234E-08	1
rs2777629	13	57061320	G	A	PRR20A	0.03	0	4.2911E-09	0	3.3	0.8557505	1.366E-08	1
rs13104990	4	16687158	A	T	LDB2	-0.03	0	4.2931E-09	0	1.72	0.9736375	1.366E-08	1
rs11018484	11	89124485	G	A	TYR	0.03	0	4.2999E-09	62	18.47	0.0100107	6.133E-09	1.48991E-09
rs78482596	16	72856816	C	A	ZFHX3	0.07	0	4.3034E-09	16	8.35	0.302512	1.158E-08	1
rs11162812	1	79753306	A	T	ADGRL4	-0.03	0	4.3035E-09	0	4.45	0.7261888	1.37E-08	1
rs7982295	13	57049006	C	T	PRR20A	-0.03	0	4.3048E-09	0	3.34	0.851369	1.37E-08	1
rs35473591	11	61818856	C	CT	FADS1,FADS	0.03	0	4.3062E-09	49	13.73	0.0562122	1.353E-08	1
rs4772105	13	98583825	T	G	STK24	0.03	0	4.3106E-09	41	11.88	0.1046584	1.372E-08	1
rs7208466	17	45194580	A	G	HEXIM2	-0.03	0	4.3117E-09	33	10.56	0.1588966	1.978E-08	1
rs790329	13	57058487	C	T	PRR20A	0.03	0	4.3135E-09	0	3.36	0.8498259	1.373E-08	1
rs201673002	4	142993659	A	G	INPP4B	-0.04	0	4.3156E-09	48	13.64	0.0578954	9.765E-09	1
rs2165820	4	142683820	A	T	INPP4B	0.03	0	4.3184E-09	25	9.34	0.2291198	2.298E-08	1
rs11039434	11	47862708	T	C	NUP160	0.03	0	4.3196E-09	0	6.01	0.5390514	1.375E-08	1
rs12366244	11	47860578	C	A	NUP160	0.03	0	4.3237E-09	0	5.99	0.5407813	1.376E-08	1
rs9537584	13	57044016	T	C	PRR20A	-0.03	0	4.3249E-09	0	3.33	0.853331	1.376E-08	1
rs6561911	13	57027253	G	T	PRR20A	-0.03	0	4.327E-09	0	3.36	0.8498075	1.377E-08	1
rs9316895	13	57029719	T	C	PRR20A	-0.03	0	4.3275E-09	0	3.36	0.8499307	1.377E-08	1
rs7191148	16	71993292	T	A	PKD1L3	0.04	0	4.3303E-09	0	2.98	0.8872012	1.378E-08	1
rs12894657	14	103722583	G	A	ZFYVE21	0.03	0	4.3363E-09	13	8.09	0.324682	1.626E-08	1

rs61969456	13	98522545	C	G	STK24	0.03	0	4.354E-09	19	8.73	0.2724999	1.144E-08	1
rs10959540	9	11113825	C	T	PTPRD	-0.04	0	4.355E-09	0	5.95	0.5457136	1.386E-08	1
rs7178497	15	57948135	C	T	ALDH1A2	0.03	0	4.3559E-09	50	14.04	0.0505441	6.683E-09	1.65741E-09
rs10268748	7	29787495	A	G	WIPF3	0.03	0	4.3597E-09	0	4.2	0.7560547	1.387E-08	1
rs3886262	11	47795458	T	G	NUP160	0.03	0	4.3598E-09	0	6.3	0.505355	1.387E-08	1
rs10239605	7	29787481	G	A	WIPF3	0.03	0	4.3617E-09	0	4.2	0.7559936	1.388E-08	1
rs10239613	7	29787490	G	A	WIPF3	0.03	0	4.3629E-09	0	4.2	0.756044	1.388E-08	1
rs174576	11	61836038	C	A	FADS2	0.03	0	4.3662E-09	43	12.31	0.0908345	1.64E-08	1
rs58429864	9	11114190	TC	T	PTPRD	-0.04	0	4.3803E-09	0	5.95	0.5456807	1.394E-08	1
rs58507340	9	11114192	TC	T	PTPRD	-0.04	0	4.3804E-09	0	5.95	0.5457124	1.394E-08	1
rs7853113	9	11114224	G	A	PTPRD	-0.04	0	4.3817E-09	0	5.95	0.54566	1.394E-08	1
rs10959541	9	11113925	T	C	PTPRD	-0.04	0	4.3827E-09	0	5.95	0.5453007	1.394E-08	1
rs56201508	11	89132858	C	T	TYR	0.03	0	4.3866E-09	62	18.51	0.0098612	6.356E-09	1.57141E-09
rs112018552	9	11113970	T	TCTC	PTPRD	-0.04	0	4.3887E-09	0	5.95	0.5455627	1.396E-08	1
rs7111606	11	47765986	G	A	FNBP4	0.03	0	4.4036E-09	0	6.25	0.5104983	1.401E-08	1
rs11516134	9	137387833	T	C	EXD3	0.03	0	4.4055E-09	22	9.07	0.2477896	1.633E-08	1
rs7941399	11	47868869	A	T	NUP160	0.03	0	4.4058E-09	0	6.01	0.5389369	1.401E-08	1
rs9537583	13	57043857	T	A	PRR20A	-0.03	0	4.4074E-09	0	3.32	0.8540421	1.402E-08	1
rs6485786	11	47815856	G	C	NUP160	0.03	0	4.4103E-09	0	6.28	0.5072661	1.403E-08	1
rs9537262	13	55755954	C	A	PRR20A	-0.04	0	4.4181E-09	4	7.32	0.3964434	1.405E-08	1
rs9868821	3	44539850	C	T	ZKSCAN7	0.03	0	4.4208E-09	12	8.02	0.3311876	1.38E-08	1
rs3858776	13	98509203	C	T	STK24	0.03	0	4.4219E-09	19	8.71	0.2738526	1.167E-08	1
rs79909795	13	98508907	TG	T	STK24	0.03	0	4.4237E-09	19	8.66	0.2776328	1.179E-08	1
rs34644184	16	49596851	C	T	ZNF423	-0.03	0	4.4288E-09	56	16.05	0.0246701	7.661E-09	1
rs944578	13	57076270	C	A	PRR20A	0.03	0	4.4333E-09	0	3.33	0.8524216	1.41E-08	1
rs6905370	6	152005062	G	A	ESR1	0.03	0	4.4344E-09	20	8.78	0.2688887	1.61E-08	1
rs76214060	16	21693571	C	T	OTOA	-0.07	0	4.4425E-09	0	4.07	0.7716097	1.413E-08	1
rs77546008	9	80546334	G	A	TLE4	0.03	0	4.4429E-09	53	15.09	0.0348455	7.912E-09	1
rs10002209	4	34407108	A	C	ARAP2	0.04	0	4.4433E-09	24	9.27	0.23352	2.196E-08	1
rs11512331	11	48654047	G	A	OR4A47	-0.06	0	4.4448E-09	11	7.94	0.3381971	1.253E-08	1

rs7500325	16	72872888	C	T	ZFHX3	0.07	0	4.4494E-09	15	8.3	0.3068514	1.205E-08	1
rs142217494	3	48237169	C	T	ZNF589	-0.04	0	4.4521E-09	0	4.5	0.7208565	1.416E-08	1
rs7201449	16	13537113	T	C	SHISA9	-0.03	0	4.4572E-09	12	8	0.3328696	1.214E-08	1
rs9554477	13	98508125	C	T	STK24	0.03	0	4.4713E-09	20	8.82	0.2659798	1.158E-08	1
rs77683334	12	22943353	C	T	ETNK1	-0.08	0	4.4723E-09	37	11.19	0.1307166	9.135E-09	1
rs6441852	3	44542016	A	G	ZKSCAN7	0.03	0	4.4731E-09	12	8.04	0.3286553	1.395E-08	1
rs6441851	3	44542007	G	A	ZKSCAN7	0.03	0	4.4748E-09	12	8.05	0.3285925	1.396E-08	1
rs62084692	17	68039728	C	T	KPNA2	0.03	0	4.4769E-09	39	11.61	0.1140601	3.786E-08	1
rs28820052	4	142870512	G	A	INPP4B	-0.04	0	4.4774E-09	40	11.84	0.1060914	1.269E-08	1
rs4342712	9	11097623	T	C	PTPRD	0.04	0	4.478E-09	2	7.15	0.413858	1.424E-08	1
rs6441853	3	44542083	T	G	ZKSCAN7	0.03	0	4.4812E-09	12	8.05	0.3286374	1.398E-08	1
rs215011	6	25384133	C	T	LRRC16A	-0.08	0	4.4871E-09	0	5.72	0.5724509	1.427E-08	1
rs58308766	13	98509849	GCT	G	STK24	0.03	0	4.4882E-09	19	8.67	0.27754	1.195E-08	1
rs9826207	3	82357669	G	C	GBE1	-0.04	0	4.4979E-09	10	7.84	0.3472573	1.392E-08	1
rs10838767	11	47789065	C	T	NUP160	0.03	0	4.4997E-09	0	6.3	0.5049926	1.431E-08	1
rs7195072	16	71993680	C	G	PKD1L3	0.04	0	4.5E-09	0	3.03	0.8823621	1.431E-08	1
rs60833271	9	80546850	G	A	TLE4	0.03	0	4.5095E-09	53	15.08	0.0349836	8.065E-09	1
rs73072377	3	48240749	G	A	ZNF589	-0.04	0	4.5121E-09	0	4.5	0.7210599	1.435E-08	1
rs8022097	14	42981251	C	T	LRFN5	0.05	0	4.5167E-09	24	9.24	0.2357961	1.209E-08	1
rs11172254	12	57574955	G	A	KIF5A	0.03	0	4.518E-09	0	1.86	0.9670142	1.436E-08	1
rs2382263	9	11097934	A	G	PTPRD	0.04	0	4.5236E-09	2	7.15	0.4136744	1.438E-08	1
rs12576933	11	47856712	G	A	NUP160	0.03	0	4.5253E-09	0	6.01	0.5387744	1.439E-08	1
rs172328	6	28822751	C	T	TRIM27	-0.05	0	4.5313E-09	42	12.08	0.0978648	3.484E-08	1
rs12226431	11	47784304	G	A	NUP160	0.03	0	4.5331E-09	0	6.34	0.5007516	1.441E-08	1
rs2382264	9	11098027	C	A	PTPRD	0.04	0	4.5332E-09	2	7.15	0.4135385	1.441E-08	1
rs2100302	15	87377658	A	G	AGBL1	-0.03	0	4.54E-09	0	3.27	0.8590433	1.443E-08	1
rs13079703	3	61130831	A	G	FHIT	-0.03	0	4.5415E-09	0	6.44	0.4897095	1.443E-08	1
rs4861358	4	41013882	C	T	APBB2	0.04	0	4.5445E-09	25	9.42	0.2236886	2.261E-08	1
rs7103013	11	47653382	G	A	AGBL2	0.03	0	4.5454E-09	0	7.05	0.4241129	1.445E-08	1
rs11855259	15	57957179	C	G	ALDH1A2	0.03	0	4.5508E-09	50	14.25	0.0469495	5.996E-09	1.48991E-09

rs7929725	11	47860188	A	G	NUP160	0.03	0	4.5554E-09	0	6	0.5396406	1.448E-08	1
rs2178389	3	44549859	T	C	ZKSCAN7	0.03	0	4.5573E-09	13	8.05	0.3283134	1.421E-08	1
rs138830009	6	104410232	TTTATTTTA	T	HACE1	0.04	0	4.5606E-09	15	8.29	0.307416	1.892E-08	1
rs7625504	3	44544088	C	T	ZKSCAN7	0.03	0	4.5629E-09	13	8.05	0.3281161	1.423E-08	1
rs11717830	3	44544876	C	T	ZKSCAN7	0.03	0	4.5645E-09	13	8.05	0.3281353	1.423E-08	1
rs1078817	3	44543326	T	A	ZKSCAN7	0.03	0	4.565E-09	13	8.05	0.3281038	1.423E-08	1
rs1881917	3	44543375	A	G	ZKSCAN7	0.03	0	4.565E-09	13	8.05	0.3281038	1.423E-08	1
rs10802331	1	246079404	T	G	SMYD3	-0.04	0	4.5656E-09	21	8.9	0.2595904	1.43E-08	1
rs1078816	3	44543177	G	T	ZKSCAN7	0.03	0	4.5676E-09	13	8.05	0.3280567	1.424E-08	1
rs62527042	9	11097889	C	T	PTPRD	-0.04	0	4.5698E-09	0	7.03	0.4253677	1.453E-08	1
rs34604118	7	157644116	CA	C	PTPRN2	0.03	0	4.573E-09	6	7.5	0.3787979	1.625E-08	1
rs7105791	11	47680267	T	C	AGBL2	0.03	0	4.5739E-09	0	7.04	0.4247223	1.454E-08	1
rs7638643	3	49528409	C	T	DAG1	-0.04	0	4.5744E-09	0	5.15	0.6420076	1.454E-08	1
rs3080641	3	44549919	C	CAG	ZKSCAN7	0.03	0	4.5745E-09	13	8.05	0.3280783	1.426E-08	1
rs6441855	3	44549621	A	G	ZKSCAN7	0.03	0	4.5745E-09	13	8.05	0.3280783	1.426E-08	1
rs11130029	3	44546552	T	A	ZKSCAN7	0.03	0	4.5755E-09	13	8.05	0.3280839	1.427E-08	1
rs181952542	16	72725937	A	C	ZFHX3	0.07	0	4.5759E-09	30	10.06	0.1852157	8.801E-09	1
rs6801887	3	44546361	T	C	ZKSCAN7	0.03	0	4.5759E-09	13	8.05	0.3280853	1.427E-08	1
rs12362318	11	47661119	T	C	AGBL2	0.03	0	4.5759E-09	0	7.04	0.4249177	1.454E-08	1
rs6809619	3	44545933	G	A	ZKSCAN7	0.03	0	4.5771E-09	13	8.05	0.3281045	1.427E-08	1
rs9301872	13	93360045	T	C	GPC6	0.03	0	4.5773E-09	0	6.16	0.5213193	1.455E-08	1
rs17500053	12	24301337	T	C	SOX5	-0.07	0	4.5776E-09	0	1.85	0.9674885	1.455E-08	1
rs74985463	2	178924190	A	G	CCDC141	0.06	0	4.5788E-09	34	10.62	0.15626	3.383E-08	1
rs4543938	11	47663802	C	T	AGBL2	-0.03	0	4.5806E-09	0	7.04	0.4249036	1.456E-08	1
rs4752858	11	47664277	C	T	AGBL2	-0.03	0	4.5806E-09	0	7.04	0.4249036	1.456E-08	1
rs74608150	11	47674662	A	T	AGBL2	0.03	0	4.5823E-09	0	7.04	0.4249661	1.456E-08	1
rs11039432	11	47851775	G	A	NUP160	0.03	0	4.5877E-09	0	5.99	0.5410733	1.458E-08	1
rs11642105	16	76957212	G	A	RP11-58C22.	0.03	0	4.5903E-09	0	1.64	0.9769281	1.459E-08	1
rs11039431	11	47850460	G	T	NUP160	0.03	0	4.5955E-09	0	5.99	0.5406759	1.461E-08	1
rs4953250	2	45767248	C	T	PRKCE	-0.03	0	4.6006E-09	1	7.12	0.4163064	1.535E-08	1

rs61042099	3	9211842	AT	A	SRGAP3	0.05	0	4.6021E-09	13	8.05	0.3280119	1.786E-08	1
rs1920014	3	44550895	T	A	ZKSCAN7	0.03	0	4.6054E-09	13	8.06	0.3277179	1.435E-08	1
rs1920015	3	44550822	A	T	ZKSCAN7	0.03	0	4.6054E-09	13	8.06	0.3277179	1.435E-08	1
rs28882430	2	207379037	C	T	CREB1	-0.03	0	4.6058E-09	0	3.81	0.8016311	1.464E-08	1
rs7847266	9	11097491	G	C	PTPRD	-0.04	0	4.6063E-09	2	7.15	0.4138458	1.464E-08	1
rs10959637	9	11222778	A	G	PTPRD	-0.04	0	4.6063E-09	21	8.87	0.2620293	2.54E-08	1
rs8021554	14	42980994	A	G	LRFN5	0.05	0	4.6075E-09	24	9.24	0.2357038	1.232E-08	1
rs12092576	1	59844626	C	T	HOOK1	0.04	0	4.6102E-09	31	10.16	0.1798543	2.815E-08	1
rs62043048	16	73658337	G	A	ZFHX3	0.03	0	4.6107E-09	24	9.22	0.2370735	1.237E-08	1
rs138861071	11	47693538	TGA	T	AGBL2	-0.03	0	4.6159E-09	2	7.21	0.4072867	1.467E-08	1
rs34289067	8	538785	G	C	TDRP	0.05	0	4.6164E-09	9	7.71	0.3585198	1.971E-08	1
rs6441856	3	44554657	A	G	ZKSCAN7	0.03	0	4.6171E-09	13	8.05	0.3279353	1.438E-08	1
rs6790388	3	19461762	A	G	KCNH8	-0.03	0	4.6189E-09	0	1.52	0.9815406	1.468E-08	1
rs6441857	3	44555404	T	C	ZKSCAN7	0.03	0	4.6203E-09	13	8.06	0.3275628	1.44E-08	1
rs1010031	3	44552031	C	T	ZKSCAN7	0.03	0	4.6209E-09	13	8.06	0.3275626	1.44E-08	1
rs6441854	3	44547771	G	A	ZKSCAN7	0.03	0	4.6242E-09	13	8.05	0.3278693	1.441E-08	1
rs35810826	6	152003803	TA	T	ESR1	0.03	0	4.6309E-09	21	8.89	0.2607975	1.472E-08	1
rs36146202	4	142991182	G	A	INPP4B	-0.04	0	4.6309E-09	49	13.82	0.054498	1.025E-08	1
rs10756185	9	11097217	C	G	PTPRD	0.04	0	4.631E-09	2	7.15	0.4136207	1.472E-08	1
rs283987	16	76980735	T	A	RP11-58C22.	0.03	0	4.6341E-09	0	5.33	0.6198385	1.473E-08	1
rs201881038	16	58918200	G	GC	GOT2	-0.04	0	4.6381E-09	45	12.78	0.0776858	2.528E-08	1
rs1074952	3	82357071	A	G	GBE1	-0.04	0	4.6404E-09	11	7.87	0.3443293	1.433E-08	1
rs1079887	3	82357280	A	G	GBE1	-0.04	0	4.6421E-09	11	7.87	0.3440599	1.433E-08	1
rs1514340	6	162795660	T	C	PACRG	-0.03	0	4.6422E-09	0	3.2	0.8662538	1.475E-08	1
rs1449851	3	82355811	T	C	GBE1	-0.04	0	4.6438E-09	11	7.87	0.3440769	1.434E-08	1
rs4666010	2	27655819	T	C	SUPT7L	-0.03	0	4.6445E-09	0	4.13	0.7650806	1.476E-08	1
rs9841577	3	82360471	C	T	GBE1	-0.04	0	4.6461E-09	11	7.87	0.3440537	1.434E-08	1
rs2183792	13	57067038	A	G	PRR20A	0.03	0	4.6521E-09	0	3.36	0.8496237	1.478E-08	1
rs7858303	9	11096315	T	C	PTPRD	0.04	0	4.656E-09	2	7.18	0.4099739	1.479E-08	1
rs6852412	4	142874194	G	A	INPP4B	-0.04	0	4.6601E-09	39	11.66	0.1122256	1.338E-08	1

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rs117092217	11	48738684	C	T	OR4A47	-0.06	0	4.6642E-09	5	7.39	0.3898644	1.367E-08	1
rs1449865	3	82364335	C	T	GBE1	-0.04	0	4.6662E-09	11	7.87	0.3440761	1.44E-08	1
rs9357324	6	40395655	C	A	LRFN2	0.04	0	4.669E-09	0	3.37	0.8482861	1.483E-08	1
rs9369199	6	40395590	T	A	LRFN2	0.04	0	4.6769E-09	0	3.37	0.8482859	1.486E-08	1
rs7119517	11	47653764	T	C	AGBL2	0.03	0	4.6805E-09	0	6.98	0.4310124	1.487E-08	1
rs144639701	9	11097338	AG	A	PTPRD	-0.04	0	4.6915E-09	1	7.13	0.4151137	1.49E-08	1
rs73072389	3	48277934	T	G	ZNF589	-0.04	0	4.6928E-09	0	4.82	0.682485	1.491E-08	1
rs12747808	1	59882674	T	C	HOOK1	0.04	0	4.6955E-09	31	10.16	0.1795547	2.851E-08	1
rs2034476	3	44571403	C	G	ZKSCAN7	0.03	0	4.698E-09	13	8.07	0.3265683	1.458E-08	1
rs2089358	1	36728502	C	T	GRIK3	-0.03	0	4.6998E-09	41	11.96	0.1019934	1.196E-08	1
rs10838741	11	47662213	A	G	AGBL2	0.03	0	4.7034E-09	0	7.01	0.4280253	1.494E-08	1
rs1510140	4	142990330	C	T	INPP4B	-0.04	0	4.704E-09	48	13.66	0.0576265	1.057E-08	1
rs3130101	6	33325111	A	G	DAXX	0.03	0	4.708E-09	12	8.02	0.3312357	1.928E-08	1
rs2082557	6	40395105	G	A	LRFN2	-0.04	0	4.7095E-09	0	3.37	0.8484865	1.496E-08	1
rs2382262	9	11097562	T	C	PTPRD	0.04	0	4.7142E-09	1	7.13	0.4149641	1.497E-08	1
rs2382265	9	11098031	G	A	PTPRD	0.04	0	4.7155E-09	2	7.18	0.4099408	1.498E-08	1
rs116418977	6	25365660	C	T	LRRC16A	-0.08	0	4.7177E-09	0	6.5	0.4830063	1.499E-08	1
rs6846999	4	34366947	G	A	ARAP2	0.04	0	4.7202E-09	2	7.19	0.4098714	1.499E-08	1
rs2801194	1	208252570	A	C	PLXNA2	-0.03	0	4.7273E-09	0	4.01	0.7787209	1.501E-08	1
rs10015459	4	41016954	T	C	APBB2	0.04	0	4.7344E-09	26	9.48	0.219803	2.35E-08	1
rs117999167	8	61589229	T	G	AC090094.1,A	-0.08	0	4.741E-09	0	6.61	0.4701094	1.506E-08	1
rs181741261	16	72433045	T	C	AC004158.1	0.07	0	4.7456E-09	33	10.47	0.1635889	8.691E-09	1
rs10924497	1	246080034	A	G	SMYD3	-0.04	0	4.7488E-09	21	8.94	0.2569061	1.484E-08	1
rs11077214	16	7696937	G	T	RBFOX1	-0.03	0	4.7517E-09	53	15.06	0.0352942	3.35E-08	1
rs416525	5	151342389	C	T	SLC36A2	-0.03	0	4.7522E-09	45	12.8	0.0770801	4.447E-08	1
rs13066574	3	44709318	C	T	ZNF502	0.03	0	4.7555E-09	0	6.12	0.5254602	1.51E-08	1
rs174583	11	61842278	C	T	FADS2	0.03	0	4.7573E-09	42	12.14	0.0959683	1.511E-08	1
rs575860630	16	72785272	T	TATGGATA	ZFHX3	0.07	0	4.7714E-09	31	10.25	0.1750064	9.061E-09	1
rs10872271	6	123888179	G	A	NKAIN2	0.03	0	4.7836E-09	0	2.59	0.9205408	1.519E-08	1
rs28437494	11	89135443	G	A	TYR	0.03	0	4.7847E-09	60	17.89	0.0124675	8.306E-09	1

rs147621919	17	44648615	T	G	MEIOC	0.07	0	4.787E-09	47	13.28	0.0654808	2.202E-08	1
rs11585920	1	37635248	A	G	RSPO1	-0.03	0	4.7996E-09	9	7.74	0.3557193	1.524E-08	1
rs151111900	1	230447091	C	G	PGBD5	0.03	0	4.8049E-09	0	5.34	0.6189811	1.526E-08	1
rs12162419	2	173471991	T	C	CDCA7	0.03	0	4.812E-09	5	7.43	0.3859926	1.528E-08	1
rs9380954	6	40395646	G	A	LRFN2	0.04	0	4.8319E-09	0	3.37	0.8489092	1.534E-08	1
rs33979623	4	14947021	C	G	CPEB2	-0.03	0	4.8408E-09	0	2.44	0.9314057	1.537E-08	1
rs4772090	13	98498420	T	C	STK24	0.03	0	4.8448E-09	18	8.54	0.2870575	1.298E-08	1
rs142007125	16	72758991	A	G	ZFHX3	0.07	0	4.8463E-09	31	10.18	0.178766	9.282E-09	1
rs8182219	16	21721816	T	C	OTOA	-0.03	0	4.8508E-09	0	6.35	0.4999995	1.54E-08	1
rs10959631	9	11220986	C	T	PTPRD	-0.04	0	4.8529E-09	24	9.32	0.2303698	2.89E-08	1
rs10959632	9	11220987	A	G	PTPRD	-0.04	0	4.8529E-09	24	9.32	0.2303698	2.89E-08	1
rs1148532	12	58779890	T	A	LRIG3	-0.03	0	4.8693E-09	45	12.94	0.0735789	2.082E-08	1
rs3003917	6	151945333	G	A	ESR1	-0.03	0	4.8709E-09	6	7.45	0.3835777	1.752E-08	1
rs17428815	4	16717533	T	C	LDB2	-0.03	0	4.8743E-09	0	1.39	0.9857573	1.547E-08	1
rs6485773	11	47741957	A	G	FNBP4	0.03	0	4.8826E-09	0	6.2	0.5168878	1.55E-08	1
rs10830216	11	89125229	G	A	TYR	0.03	0	4.8859E-09	61	18.2	0.0110789	7.84E-09	1.94506E-09
rs114235860	17	44557317	G	C	FZD2	0.04	0	4.8875E-09	0	6.47	0.4856268	1.551E-08	1
rs7773310	6	49820583	C	G	CRISP1	0.03	0	4.8924E-09	0	5.93	0.5473774	1.553E-08	1
rs283038	4	16715800	C	A	LDB2	-0.03	0	4.8933E-09	0	2.08	0.9553982	1.553E-08	1
rs7298474	12	24176481	C	T	SOX5	-0.03	0	4.9043E-09	0	3.61	0.8234486	1.556E-08	1
rs11076282	16	58914439	A	C	GOT2	-0.04	0	4.9069E-09	45	12.91	0.0744107	2.726E-08	1
rs767563	9	80550038	A	G	TLE4	0.03	0	4.9121E-09	53	14.94	0.0367255	9.376E-09	1
rs12918956	16	72190436	C	T	PMFBP1	0.03	0	4.9175E-09	10	7.83	0.3482561	1.544E-08	1
rs3135407	6	33342053	T	C	DAXX	0.03	0	4.918E-09	5	7.42	0.386808	1.792E-08	1
rs6503428	17	45196500	T	A	FMNL1	-0.03	0	4.9182E-09	31	10.28	0.173417	2.239E-08	1
rs12699336	7	12243624	T	A	TMEM106B	0.03	0	4.9196E-09	0	6.08	0.5308676	1.561E-08	1
rs79561713	16	58917898	G	A	GOT2	-0.04	0	4.9203E-09	45	12.88	0.075038	2.747E-08	1
rs62302691	4	46456337	A	T	GABRA2	0.04	0	4.921E-09	0	5.15	0.6422513	1.562E-08	1
rs79048677	10	24323588	G	A	KIAA1217	-0.06	0	4.922E-09	23	9.19	0.2393567	3.518E-08	1
rs4573	6	26546580	T	C	HMGN4	0.03	0	4.9339E-09	0	2.79	0.9034958	1.566E-08	1

rs7505453	18	53018428	T	A	DCC	0.03	0	4.9379E-09	0	6	0.5392145	1.567E-08	1
rs143297171	3	45578125	C	T	LIMD1	0.09	0	4.9435E-09	0	3.97	0.7836792	1.569E-08	1
rs3731507	3	48180863	C	T	CDC25A	-0.04	0	4.9462E-09	0	4	0.7803072	1.57E-08	1
rs1966821	3	44572723	G	A	ZKSCAN7	0.03	0	4.9501E-09	13	8.05	0.3284415	1.535E-08	1
rs59295157	1	198309546	G	A	NEK7	0.03	0	4.9503E-09	51	14.58	0.0417862	2.79E-08	1
rs7933981	11	113567346	G	A	DRD2	-0.03	0	4.9522E-09	0	5.76	0.5681766	1.532E-08	1
rs7111509	11	47712892	G	A	AGBL2	0.03	0	4.954E-09	0	6.16	0.5209024	1.572E-08	1
rs1977626	6	162779127	C	T	PACRG	-0.03	0	4.9621E-09	0	3.24	0.862007	1.574E-08	1
rs2413876	15	47357589	A	T	SEMA6D	-0.03	0	4.9726E-09	0	4.19	0.7573617	1.578E-08	1
rs117711182	16	22650872	A	C	NPIPB5	-0.07	0	4.9745E-09	0	5.48	0.6015557	1.578E-08	1
rs191762	4	142762549	T	C	INPP4B	-0.03	0	4.975E-09	41	11.97	0.1015485	2.965E-08	1
rs7925346	11	89127759	T	C	TYR	0.03	0	4.98E-09	61	18.22	0.011014	7.864E-09	1.94506E-09
rs11740543	5	30853532	G	A	CDH6	0.03	0	4.9939E-09	31	10.2	0.1776584	2.449E-08	1
rs99780	11	61829161	C	T	FADS1,FADS	0.03	0	4.9944E-09	40	11.72	0.1100424	2.082E-08	1
rs78610798	3	29546457	A	G	RBMS3,RP11	-0.07	0	4.9983E-09	6	7.52	0.3771621	1.586E-08	1
rs12785949	11	47708218	C	T	AGBL2	0.03	0	5.0046E-09	0	6.17	0.5205332	1.588E-08	1
rs174568	11	61826344	C	T	FADS1,FADS	0.03	0	5.0064E-09	44	12.72	0.0793114	1.585E-08	1
rs6903823	6	28354519	A	G	ZKSCAN3,ZS	-0.05	0	5.0103E-09	0	4.14	0.7636149	1.589E-08	1
rs12145554	1	246047006	A	G	SMYD3	-0.03	0	5.0109E-09	0	5.69	0.5760111	1.59E-08	1
rs4279348	5	30855105	C	A	CDH6	0.03	0	5.0128E-09	31	10.21	0.1767781	2.46E-08	1
rs1588408	4	142986327	G	A	INPP4B	-0.04	0	5.0134E-09	48	13.65	0.0577253	1.133E-08	1
rs12082752	1	198302166	G	A	NEK7	0.03	0	5.0159E-09	51	14.56	0.0420263	2.828E-08	1
rs6662366	1	90765252	A	G	BARHL2	0.03	0	5.0173E-09	33	10.53	0.160268	8.131E-09	2.05178E-09
rs1328503	9	80551175	G	A	TLE4	0.03	0	5.0205E-09	52	14.81	0.0385249	9.597E-09	1
rs12145410	1	198327981	G	A	NEK7	-0.03	0	5.0235E-09	52	14.63	0.0410309	2.842E-08	1
rs320474	1	213484647	G	A	RPS6KC1	0.04	0	5.0322E-09	14	8.15	0.3198656	2.414E-08	1
rs13012903	2	22665258	A	G	KLHL29	-0.03	0	5.033E-09	17	8.54	0.287719	2.658E-08	1
rs7695234	4	142992713	G	A	INPP4B	-0.04	0	5.0357E-09	48	13.61	0.0586329	1.135E-08	1
rs7349190	2	173471449	C	T	CDCA7	0.03	0	5.0401E-09	9	7.73	0.3572743	1.599E-08	1
rs113226079	3	133081837	A	G	TMEM108	-0.06	0	5.0456E-09	0	3.6	0.8249915	1.6E-08	1

Table S2

rs9835485	3	44570404	A	G	ZKSCAN7	0.03	0	5.0528E-09	13	8.07	0.32639	1.565E-08	1
rs118152225	11	47910458	C	T	NUP160	-0.07	0	5.0529E-09	3	7.23	0.405807	1.508E-08	1
rs209181	6	28824700	G	A	TRIM27	-0.05	0	5.059E-09	42	12.17	0.0952538	3.847E-08	1
rs1743969	6	40129179	A	G	MOCS1	-0.03	0	5.0599E-09	21	8.88	0.2612692	1.181E-08	1
rs80285220	11	47699992	C	CTAT	AGBL2	0.03	0	5.0616E-09	0	6.2	0.5170964	1.605E-08	1
rs17598581	4	46834312	T	C	COX7B2	0.03	0	5.0652E-09	27	9.61	0.2117069	2.545E-08	1
rs4888601	16	73670755	T	C	ZFHX3	0.03	0	5.0666E-09	24	9.26	0.2345172	1.345E-08	1
rs72902951	2	173472141	G	T	CDCA7	0.03	0	5.0731E-09	9	7.72	0.357738	1.609E-08	1
rs6428602	1	90765598	C	A	BARHL2	0.03	0	5.0749E-09	33	10.5	0.1618335	8.284E-09	2.05178E-09
rs7646565	3	13099866	G	C	IQSEC1	0.06	0	5.0762E-09	0	2.22	0.9469563	1.61E-08	1
rs58001278	14	42983948	AT	A	LRFN5	0.05	0	5.0812E-09	25	9.44	0.222874	1.611E-08	1
rs6793877	3	43645781	G	A	ANO10	-0.03	0	5.0837E-09	49	13.77	0.055517	5.484E-09	1.33949E-09
rs4387754	2	173473043	G	A	CDCA7	0.03	0	5.0841E-09	9	7.72	0.3578917	1.612E-08	1
rs12997647	2	173472433	G	A	CDCA7	0.03	0	5.0842E-09	9	7.72	0.3578927	1.612E-08	1
rs72860788	3	44580877	G	C	ZKSCAN7,ZI	0.03	0	5.0856E-09	13	8.07	0.3263081	1.575E-08	1
rs11688731	2	173473250	C	T	CDCA7	0.03	0	5.0863E-09	9	7.72	0.357917	1.613E-08	1
rs11694767	2	173473216	T	G	CDCA7	0.03	0	5.0864E-09	9	7.72	0.3579186	1.613E-08	1
rs4597485	2	173472780	T	A	CDCA7	0.03	0	5.0889E-09	9	7.72	0.3579521	1.614E-08	1
rs6777333	3	44579834	T	C	ZKSCAN7,ZI	0.03	0	5.0896E-09	13	8.07	0.3262622	1.576E-08	1
rs6785876	3	44579793	G	A	ZKSCAN7,ZI	0.03	0	5.0896E-09	13	8.07	0.3262622	1.576E-08	1
rs7653558	3	44579227	C	T	ZKSCAN7,ZI	0.03	0	5.0896E-09	13	8.07	0.3262622	1.576E-08	1
rs146766682	15	61838774	T	C	VPS13C	-0.08	0	5.0906E-09	0	7.06	0.4230697	1.614E-08	1
rs6770567	3	44578138	A	G	ZKSCAN7	0.03	0	5.1019E-09	13	8.08	0.3255547	1.58E-08	1
rs67042826	2	173472316	A	C	CDCA7	0.03	0	5.103E-09	9	7.71	0.3588624	1.618E-08	1
rs2024970	6	26497292	T	A	BTN1A1	0.03	0	5.1056E-09	0	0.96	0.9955036	1.619E-08	1
rs35039217	4	14931768	A	G	CPEB2	-0.03	0	5.1214E-09	0	4.08	0.7706592	1.624E-08	1
rs139682949	3	48226466	G	C	CAMP	-0.04	0	5.1265E-09	0	4.47	0.7238722	1.625E-08	1
rs11222026	11	99954651	A	G	CNTN5	0.03	0	5.1346E-09	40	11.83	0.106412	1.192E-08	1
rs9318840	13	82196569	G	T	SLITRK1	0.03	0	5.1354E-09	0	5.2	0.6350846	1.628E-08	1
rs529528456	8	56419927	C	T	PENK	0.1	0	5.1363E-09	0	3.34	0.8517595	1.629E-08	1

rs6779941	3	44580002	T	C	ZKSCAN7,ZI	0.03	0	5.1399E-09	13	8.08	0.3252678	1.591E-08	1
rs9965625	18	55163048	A	G	TCF4	0.03	0	5.1416E-09	32	10.4	0.1671087	2.307E-08	1
rs10842289	12	24176243	C	T	SOX5	-0.03	0	5.1493E-09	0	3.58	0.8270756	1.633E-08	1
rs2787995	1	246068887	C	G	SMYD3	-0.03	0	5.1533E-09	24	9.32	0.2306764	1.333E-08	1
rs529509	4	16719190	A	G	LDB2	-0.03	0	5.154E-09	0	1.4	0.9856149	1.634E-08	1
rs62078771	17	44513661	G	A	GPATCH8	0.05	0	5.1578E-09	47	13.21	0.0670422	8.114E-09	2.05178E-09
rs11076281	16	58914258	G	C	GOT2	-0.04	0	5.1622E-09	45	12.87	0.0753068	2.884E-08	1
rs7503810	17	68053415	G	A	KPNA2	0.03	0	5.1682E-09	31	10.17	0.179266	3.713E-08	1
rs325502	5	104672432	G	A	NUDT12	-0.03	0	5.1846E-09	0	6.76	0.4540615	1.644E-08	1
rs72673173	8	87845177	A	C	DCAF4L2	0.04	0	5.1944E-09	0	0.48	0.999529	1.647E-08	1
rs34040031	8	14650784	G	C	SGCZ	-0.03	0	5.1971E-09	0	5.03	0.6560214	1.647E-08	1
rs174584	11	61843278	G	A	FADS2	0.03	0	5.1982E-09	41	12.07	0.0983818	1.99E-08	1
rs11287663	7	157675539	CA	C	PTPRN2	0.05	0	5.1989E-09	0	4.6	0.7087197	1.648E-08	1
rs1031051	8	14646395	T	C	SGCZ	0.03	0	5.1991E-09	0	4.56	0.7131283	1.648E-08	1
rs2082559	6	40394914	G	A	LRFN2	-0.04	0	5.2005E-09	0	3.38	0.8475122	1.648E-08	1
rs1847162	16	77028012	C	T	MON1B	-0.03	0	5.2027E-09	28	9.79	0.2006884	3.226E-08	1
rs12190473	6	27056908	C	T	HIST1H2BJ	-0.03	0	5.2028E-09	0	3.2	0.8663369	1.649E-08	1
rs1778508	6	28262103	C	T	NKAPL	0.05	0	5.2114E-09	32	10.33	0.1705202	4.955E-08	1
rs200229165	16	22644900	G	A	NPIPB5	-0.07	0	5.2427E-09	0	5.12	0.6459054	1.662E-08	1
rs12636896	3	29540599	T	G	RBMS3,RP11	-0.07	0	5.2519E-09	0	6.93	0.435907	1.664E-08	1
rs4498546	8	10153255	G	C	MSRA	0.04	0	5.252E-09	0	2.8	0.9026537	1.664E-08	1
rs67660249	9	80634548	TATGAGTC	T	TLE4	0.03	0	5.2534E-09	0	4.13	0.7650207	1.665E-08	1
rs6901575	6	28283207	G	A	PGBD1	-0.05	0	5.2616E-09	33	10.58	0.157851	5.211E-08	1
rs1390801	4	16716838	C	T	LDB2	-0.03	0	5.2686E-09	0	1.39	0.9858926	1.67E-08	1
rs35406800	17	68145269	G	A	KPNA2	0.03	0	5.2708E-09	0	5.75	0.5690987	1.67E-08	1
rs77752969	6	145209441	T	C	EPM2A	-0.11	0	5.2712E-09	0	5.25	0.6296444	1.67E-08	1
rs270853	1	230400220	A	G	PGBD5	0.03	0	5.2739E-09	0	6.73	0.4578589	1.671E-08	1
rs58185311	7	100148821	CG	C	LAMTOR4	0.03	0	5.274E-09	47	13.28	0.0655186	3.685E-08	1
rs12600266	16	77110103	C	G	MON1B	-0.03	0	5.2751E-09	0	2.71	0.9105654	1.672E-08	1
rs847753	6	40064420	A	G	MOCS1	-0.03	0	5.2777E-09	21	8.89	0.2606552	1.249E-08	1

rs1567788	3	133393353	G	T	TMEM108	-0.05	0	5.279E-09	54	15.37	0.0314916	1.161E-08	1
rs7205340	16	71611767	A	T	MARVELD3	0.03	0	5.2804E-09	11	7.94	0.3375179	1.673E-08	1
rs7935344	11	47701271	C	G	AGBL2	0.03	0	5.2816E-09	0	6.14	0.5239421	1.674E-08	1
rs7935528	11	47701267	G	A	AGBL2	0.03	0	5.2821E-09	0	6.14	0.5239393	1.674E-08	1
rs2658507	4	16717420	T	A	LDB2	-0.03	0	5.2824E-09	0	1.39	0.9858806	1.674E-08	1
rs3834458	11	61827448	CT	C	FADS1,FADS	0.03	0	5.2865E-09	44	12.65	0.0810289	1.672E-08	1
rs11771139	7	100138436	G	A	MBLAC1	0.03	0	5.2956E-09	47	13.28	0.065507	3.7E-08	1
rs7105539	11	99998753	A	C	CNTN5	0.03	0	5.2959E-09	32	10.34	0.1702297	1.8E-08	1
rs13004696	2	173473631	C	T	CDCA7	0.03	0	5.3027E-09	9	7.69	0.3603574	1.68E-08	1
rs145933528	3	49544690	C	CA	DAG1	0.04	0	5.3037E-09	19	8.72	0.2735083	1.432E-08	1
rs62045660	16	18096568	G	C	NPIPA8	0.03	0	5.3151E-09	0	2.76	0.9063579	1.684E-08	1
rs13005309	2	173473676	G	T	CDCA7	0.03	0	5.3167E-09	9	7.69	0.3603655	1.684E-08	1
rs428064	5	151316937	G	A	SLC36A2	-0.03	0	5.3189E-09	48	13.66	0.0575385	3.721E-08	1
rs12080926	1	90765213	C	A	BARHL2	0.03	0	5.3198E-09	33	10.51	0.1616122	8.675E-09	2.16445E-09
rs56353619	1	90765098	A	G	BARHL2	0.03	0	5.3274E-09	33	10.51	0.1616517	8.685E-09	2.16445E-09
rs102275	11	61790331	T	C	TMEM258	0.03	0	5.3327E-09	48	13.7	0.0568715	1.689E-08	1
rs7935521	11	47701246	G	A	AGBL2	0.03	0	5.3366E-09	0	6.12	0.525279	1.691E-08	1
rs1828855	4	16717297	C	A	LDB2	-0.03	0	5.3395E-09	0	1.39	0.9858774	1.692E-08	1
rs10756181	9	11094230	A	G	PTPRD	0.03	0	5.3407E-09	1	7.07	0.4212181	1.692E-08	1
rs1962759	1	198329192	C	G	NEK7	0.03	0	5.3412E-09	51	14.56	0.0420058	3.057E-08	1
rs4953251	2	45767447	C	T	PRKCE	-0.03	0	5.3449E-09	0	7.05	0.4231995	1.731E-08	1
rs7711675	5	144490976	G	T	KCTD16	0.03	0	5.3512E-09	0	7.06	0.422874	1.44E-08	1
rs8074621	17	68143293	T	C	KPNA2	0.03	0	5.3527E-09	0	5.73	0.5717434	1.696E-08	1
rs17171515	5	137615744	G	A	KLHL3	0.09	0	5.3623E-09	23	9.19	0.2396057	1.642E-08	1
rs2658508	4	16717492	C	A	LDB2	-0.03	0	5.3656E-09	0	1.39	0.9857394	1.7E-08	1
rs4353614	2	173472983	A	G	CDCA7	0.03	0	5.3738E-09	9	7.69	0.3604557	1.702E-08	1
rs35530521	1	230449337	GA	G	PGBD5	0.03	0	5.3757E-09	47	13.28	0.0656212	3.235E-08	1
rs4121729	11	89129972	G	T	TYR	0.03	0	5.378E-09	61	18.24	0.010933	8.412E-09	2.10735E-09
rs3785199	16	7696267	C	G	RBFOX1	-0.03	0	5.3863E-09	57	16.6	0.0201334	3.362E-08	1
rs4951765	1	210696502	C	A	KCNH1	0.03	0	5.3881E-09	19	8.66	0.2776643	2.401E-08	1

rs283035	4	16712831	A	G	LDB2	-0.03	0	5.3921E-09	0	1.39	0.9859239	1.708E-08	1
rs283034	4	16712397	T	C	LDB2	-0.03	0	5.4009E-09	0	1.39	0.9859489	1.711E-08	1
rs12563928	1	90764411	G	A	BARHL2	0.03	0	5.4014E-09	33	10.51	0.1615096	8.809E-09	2.22312E-09
rs174564	11	61820833	A	G	FADS1,FADS	0.03	0	5.4023E-09	48	13.68	0.0571743	1.69E-08	1
rs9316889	13	57015867	G	A	PRR20A	-0.03	0	5.4108E-09	0	3.37	0.8487256	1.714E-08	1
rs6691718	1	90763398	C	A	BARHL2	0.03	0	5.4186E-09	33	10.51	0.1615702	8.842E-09	2.22312E-09
rs6704223	1	90763408	A	G	BARHL2	0.03	0	5.4241E-09	33	10.51	0.1616035	8.85E-09	2.22312E-09
rs9316888	13	57015570	A	G	PRR20A	-0.03	0	5.4256E-09	0	3.36	0.8496531	1.718E-08	1
rs1514794	12	100890630	C	G	ANO4	0.04	0	5.4277E-09	5	7.44	0.3846835	1.663E-08	1
rs10922918	1	90763368	G	C	BARHL2	0.03	0	5.432E-09	33	10.51	0.161677	8.869E-09	2.22312E-09
rs9569580	13	57014753	C	T	PRR20A	-0.03	0	5.4354E-09	0	3.35	0.8512164	1.721E-08	1
rs3018458	11	113129016	C	A	NCAM1	0.04	0	5.4412E-09	4	7.37	0.391755	1.723E-08	1
rs115046204	3	45997981	G	C	FYCO1	0.09	0	5.4453E-09	0	2.49	0.9276335	1.724E-08	1
rs59676064	13	57014501	TAATC	T	PRR20A	-0.03	0	5.4458E-09	0	3.36	0.8493429	1.725E-08	1
rs56077961	9	11095327	G	C	PTPRD	-0.03	0	5.4515E-09	0	6.93	0.4366959	1.726E-08	1
rs35531210	3	196441617	C	CCA	UBXN7	-0.03	0	5.4563E-09	0	3.53	0.8318769	1.728E-08	1
rs102274	11	61790354	T	C	TMEM258	0.03	0	5.4591E-09	53	15.08	0.0350352	1.534E-08	1
rs139349652	14	42983849	T	TGATACTTC	LRFN5	0.05	0	5.4664E-09	24	9.28	0.2331359	1.942E-08	1
rs10780426	9	80547581	A	G	TLE4	0.03	0	5.4685E-09	52	14.86	0.0378152	1.034E-08	1
rs17131164	1	90762475	C	T	BARHL2	0.03	0	5.4744E-09	33	10.52	0.1610246	8.93E-09	2.22312E-09
rs2671920	4	16719868	T	C	LDB2	-0.03	0	5.4755E-09	0	1.4	0.9856611	1.734E-08	1
rs72787028	16	72001411	G	C	PKD1L3	0.04	0	5.4802E-09	0	2.93	0.8915609	1.735E-08	1
rs9537566	13	57021431	G	A	PRR20A	-0.03	0	5.4821E-09	0	3.37	0.8487442	1.736E-08	1
rs149870856	13	57020898	CCCAGTCTC	C	PRR20A	-0.03	0	5.4889E-09	0	3.35	0.8510923	1.738E-08	1
rs3130271	6	33343202	G	A	DAXX	0.03	0	5.4901E-09	5	7.42	0.3867867	1.995E-08	1
rs58836297	13	70435291	G	A	KLHL1	0.03	0	5.5039E-09	2	7.22	0.4066997	1.843E-08	1
rs10922916	1	90762741	T	C	BARHL2	0.03	0	5.5039E-09	33	10.51	0.1612378	8.986E-09	2.2834E-09
rs7019400	9	80783688	C	T	TLE1	0.03	0	5.5045E-09	0	3.96	0.7845059	1.743E-08	1
rs56348498	9	11094742	C	T	PTPRD	-0.03	0	5.5046E-09	1	7.14	0.4145158	1.743E-08	1
rs9939774	16	30057033	C	T	ALDOA	-0.03	0	5.5072E-09	29	9.89	0.1948715	2.716E-08	1

rs10045097	5	144459027	G	A	KCTD16	0.03	0	5.5092E-09	18	8.58	0.2841261	1.137E-08	1
rs12061544	1	90762678	A	C	BARHL2	0.03	0	5.5129E-09	33	10.51	0.1612695	9.001E-09	2.2834E-09
rs9324960	5	144459290	T	A	KCTD16	0.03	0	5.5135E-09	18	8.58	0.2841031	1.138E-08	1
rs56323675	9	11095082	C	A	PTPRD	-0.03	0	5.5154E-09	2	7.18	0.4104456	1.746E-08	1
rs10838784	11	47860789	G	A	NUP160	0.03	0	5.5185E-09	0	6.01	0.5384652	1.747E-08	1
rs7331328	13	57013748	C	T	PRR20A	-0.03	0	5.5187E-09	0	3.36	0.84969	1.747E-08	1
rs7946265	11	99714441	A	T	CNTN5	-0.04	0	5.5217E-09	0	4.23	0.7524922	1.748E-08	1
rs9563443	13	57020809	C	A	PRR20A	-0.03	0	5.5285E-09	0	3.36	0.8497881	1.75E-08	1
rs34224012	13	57021488	G	GT	PRR20A	-0.03	0	5.5338E-09	0	3.36	0.8496581	1.752E-08	1
rs10879304	12	71581063	G	A	LGR5	0.04	0	5.5343E-09	0	5.51	0.5978003	1.752E-08	1
rs9316892	13	57020006	A	G	PRR20A	-0.03	0	5.5393E-09	0	3.36	0.8496213	1.753E-08	1
rs9316891	13	57019811	C	T	PRR20A	-0.03	0	5.5395E-09	0	3.36	0.8496231	1.754E-08	1
rs4581598	13	57041708	C	A	PRR20A	-0.03	0	5.5409E-09	0	3.25	0.861402	1.754E-08	1
rs7324069	13	57019585	C	T	PRR20A	-0.03	0	5.542E-09	0	3.36	0.8496117	1.754E-08	1
rs7332532	13	57022792	A	G	PRR20A	-0.03	0	5.5444E-09	0	3.36	0.8495977	1.755E-08	1
rs7332678	13	57022783	C	T	PRR20A	-0.03	0	5.5444E-09	0	3.36	0.8495977	1.755E-08	1
rs4713121	6	27754285	T	C	HIST1H2BL	-0.04	0	5.5451E-09	0	6.61	0.4708188	1.755E-08	1
rs4713697	6	33858813	T	C	MLN	0.03	0	5.5594E-09	56	16	0.0250861	1.781E-08	1
rs72951890	6	114858022	G	A	HS3ST5	0.04	0	5.5681E-09	41	11.9	0.1040131	3.4E-08	1
rs36051751	3	16105208	C	T	GALNT15	-0.05	0	5.5734E-09	0	2.04	0.9577769	1.764E-08	1
rs701717	19	49491997	A	G	RPL13A	0.06	0	5.5804E-09	0	6.95	0.4345025	1.59E-08	1
rs4411931	4	142996477	C	T	INPP4B	-0.04	0	5.5832E-09	36	11.1	0.1341218	1.726E-08	1
rs10872275	6	123915590	C	T	NKAIN2	0.03	0	5.5848E-09	0	3.7	0.8135508	1.768E-08	1
rs10872274	6	123915362	C	T	NKAIN2	0.03	0	5.6019E-09	0	3.7	0.8134459	1.773E-08	1
rs192431017	13	61375534	T	A	PCDH20	-0.1	0	5.6255E-09	0	5.89	0.5529111	1.78E-08	1
rs1886686	1	66924785	C	G	WDR78	0.03	0	5.6266E-09	0	4.38	0.7351636	1.781E-08	1
rs280443	13	56154405	A	C	PRR20A	-0.05	0	5.6282E-09	26	9.46	0.2211834	1.781E-08	1
rs9569439	13	56156152	T	C	PRR20A	-0.05	0	5.6296E-09	26	9.46	0.2213064	1.781E-08	1
rs66954418	13	57014190	CCTA	C	PRR20A	-0.03	0	5.6337E-09	0	3.36	0.8501216	1.783E-08	1
rs7318213	13	57018741	G	A	PRR20A	-0.03	0	5.6352E-09	0	3.44	0.8419634	1.783E-08	1

rs6501426	17	68140179	G	C	KPNA2	0.03	0	5.6413E-09	0	5.69	0.5758525	1.785E-08	1
rs2083781	4	142635183	C	T	INPP4B	0.03	0	5.6425E-09	24	9.29	0.2327642	2.962E-08	1
rs6442644	3	16811351	G	T	PLCL2	-0.03	0	5.6668E-09	0	2.94	0.8905097	1.793E-08	1
rs13207365	6	27063201	T	C	HIST1H2BJ	-0.03	0	5.6686E-09	0	3.05	0.8803152	1.794E-08	1
rs1336936	13	57011675	G	A	PRR20A	-0.03	0	5.6699E-09	0	3.36	0.8496682	1.794E-08	1
rs12203454	6	27063321	C	T	HIST1H2BJ	-0.03	0	5.6706E-09	0	3.05	0.8803337	1.794E-08	1
rs12204280	6	27065325	T	C	HIST1H2BJ	-0.03	0	5.6706E-09	0	3.05	0.8803337	1.794E-08	1
rs36048693	6	27064932	T	G	HIST1H2BJ	-0.03	0	5.6706E-09	0	3.05	0.8803337	1.794E-08	1
rs35403550	5	144459959	GT	G	KCTD16	0.03	0	5.6727E-09	18	8.6	0.2822741	1.167E-08	1
rs11178871	12	71592718	A	C	LGR5	0.04	0	5.676E-09	0	5.46	0.6044249	1.796E-08	1
rs10118338	9	11236474	T	G	PTPRD	-0.04	0	5.6819E-09	21	8.93	0.2577331	3.075E-08	1
rs10194181	2	22747682	T	C	KLHL29	-0.03	0	5.6857E-09	33	10.53	0.1604144	5.134E-08	1
rs1418134	1	230500087	A	C	PGBD5	0.03	0	5.6908E-09	0	5.43	0.6075834	1.8E-08	1
rs847759	6	40056744	G	A	MOCS1	-0.03	0	5.6911E-09	18	8.59	0.2835345	1.395E-08	1
rs80209284	2	178926054	T	C	CCDC141	0.06	0	5.6935E-09	33	10.54	0.159785	4.168E-08	1
rs9325199	12	71593180	G	T	LGR5	0.04	0	5.6938E-09	0	5.45	0.6047163	1.801E-08	1
rs12530276	6	123915051	G	A	NKAIN2	0.03	0	5.6984E-09	0	3.68	0.8154073	1.803E-08	1
rs35872351	8	539613	C	T	TDRP	0.05	0	5.7019E-09	17	8.44	0.2952268	2.984E-08	1
rs62391099	6	23163726	T	C	HDGFL1	-0.04	0	5.7078E-09	25	9.33	0.2295887	3.187E-08	1
rs5847004	3	18729288	C	CATAAT	SATB1	0.03	0	5.7113E-09	0	6.83	0.4465736	1.807E-08	1
rs1721412	6	40132867	T	G	MOCS1	-0.03	0	5.7128E-09	21	8.94	0.2570159	1.315E-08	1
rs4590514	9	80548078	G	T	TLE4	0.03	0	5.7128E-09	52	14.8	0.0386138	1.098E-08	1
rs1512645	13	56213592	A	G	PRR20A	-0.05	0	5.7176E-09	26	9.47	0.220707	1.809E-08	1
rs1483988	11	47877478	C	T	NUP160	0.03	0	5.7237E-09	0	6.15	0.5229113	1.811E-08	1
rs1390211055	16	29967744	A	ATG	TMEM219	-0.03	0	5.7246E-09	16	8.41	0.2975348	2.784E-08	1
rs11791453	9	11217308	C	G	PTPRD	-0.04	0	5.7301E-09	23	9.12	0.2439277	3.286E-08	1
rs2055976	13	56203565	C	T	PRR20A	-0.05	0	5.7334E-09	26	9.47	0.2206221	1.814E-08	1
rs4788204	16	29983897	G	A	TAOK2	-0.03	0	5.737E-09	39	11.64	0.1131997	3.662E-08	1
rs5875697	6	40070338	C	CA	MOCS1	-0.03	0	5.7391E-09	21	8.88	0.2610619	1.357E-08	1
rs9569576	13	57010812	A	C	PRR20A	-0.03	0	5.7392E-09	0	3.35	0.8511585	1.815E-08	1

Table S2

rs55776706	16	73672073	T	C	ZFHX3	0.03	0	5.7461E-09	25	9.44	0.2227571	1.482E-08	1
rs3998107	6	33865228	G	A	MLN	0.03	0	5.7541E-09	54	15.28	0.032614	2.957E-08	1
rs200365556	16	22641638	A	T	NPIPB5	-0.07	0	5.7557E-09	0	5.05	0.6538607	1.82E-08	1
rs188825708	3	196200555	C	T	ZDHHC19	0.09	0	5.7614E-09	0	6.62	0.4695041	1.822E-08	1
rs28548463	8	499137	A	C	TDRP	0.04	0	5.7618E-09	0	4.75	0.6909308	1.822E-08	1
rs10959634	9	11221604	G	T	PTPRD	-0.04	0	5.767E-09	23	9.21	0.2380999	3.372E-08	1
rs60572054	12	24163635	A	AAG	SOX5	-0.03	0	5.7752E-09	0	4.95	0.6655115	1.827E-08	1
rs17131162	1	90762369	C	A	BARHL2	0.03	0	5.7763E-09	33	10.46	0.1637349	9.464E-09	2.40898E-09
rs847755	6	40062639	T	C	MOCS1	-0.03	0	5.7811E-09	21	8.88	0.2611397	1.367E-08	1
rs7983071	13	93353480	G	A	GPC6	0.03	0	5.784E-09	0	6.29	0.5067574	1.829E-08	1
rs7985067	13	93353873	C	T	GPC6	0.03	0	5.7857E-09	0	6.28	0.506939	1.83E-08	1
rs1721411	6	40134651	T	G	MOCS1	-0.03	0	5.7863E-09	21	8.93	0.2578114	1.333E-08	1
rs7990402	13	93353954	T	C	GPC6	0.03	0	5.7889E-09	0	6.28	0.5069125	1.831E-08	1
rs72803761	16	71987841	A	C	PKD1L3	0.04	0	5.7933E-09	0	3.15	0.8706826	1.832E-08	1
rs521547	3	13094931	G	A	IQSEC1	0.05	0	5.8054E-09	0	2.24	0.9452784	1.836E-08	1
rs358664	5	144523526	G	A	KCTD16	0.03	0	5.8087E-09	0	6.64	0.4668651	1.831E-08	1
rs325501	5	104671732	G	C	NUDT12	-0.03	0	5.8174E-09	0	5.93	0.5473976	1.84E-08	1
rs149589760	17	44520923	C	T	GPATCH8	0.05	0	5.8189E-09	47	13.23	0.0667847	9.063E-09	2.2834E-09
rs11122524	1	230496291	T	A	PGBD5	0.03	0	5.825E-09	0	5.44	0.6059168	1.842E-08	1
rs72803757	16	71985889	A	G	PKD1L3	0.04	0	5.8415E-09	0	3.16	0.8698241	1.847E-08	1
rs34437313	6	28049325	A	AAAAC	ZNF165	-0.06	0	5.8448E-09	33	10.56	0.1588822	3.517E-08	1
rs9939911	16	71992291	T	A	PKD1L3	0.04	0	5.853E-09	0	3.15	0.870493	1.851E-08	1
rs75540627	3	44870987	G	C	KIF15	0.05	0	5.8631E-09	25	9.43	0.223491	2.708E-08	1
rs9508150	13	28788036	G	A	MTUS2	0.03	0	5.872E-09	0	4.52	0.718634	1.856E-08	1
rs62078786	17	44524544	G	A	GPATCH8	0.05	0	5.8745E-09	46	13.14	0.0687326	9.292E-09	2.34534E-09
rs61969451	13	98515400	A	T	STK24	0.03	0	5.8747E-09	18	8.63	0.2802792	1.54E-08	1
rs7318564	13	57009958	T	C	PRR20A	-0.03	0	5.8753E-09	0	3.32	0.8537677	1.857E-08	1
rs4502111	13	56222315	T	C	PRR20A	-0.05	0	5.9024E-09	25	9.38	0.2262273	1.866E-08	1
rs7313790	12	24167824	G	A	SOX5	-0.03	0	5.9047E-09	0	4.81	0.6833105	1.867E-08	1
rs9471247	6	40137579	A	G	MOCS1	0.03	0	5.9075E-09	23	9.1	0.2457511	1.354E-08	1

rs190999720	16	72249356	T	C	PMFBP1	0.07	0	5.9109E-09	29	9.91	0.1939818	1.275E-08	1
rs4690741	4	142976517	G	A	INPP4B	-0.04	0	5.9115E-09	49	13.81	0.0545873	1.351E-08	1
rs1503584	12	60609012	T	C	SLC16A7	-0.03	0	5.9126E-09	58	16.79	0.0188269	1.412E-08	1
rs13071218	3	44567635	A	G	ZKSCAN7	0.03	0	5.9225E-09	12	8.03	0.3295908	1.831E-08	1
rs226008	16	21628001	A	G	METTL9	0.03	0	5.9235E-09	0	2.98	0.8869446	1.872E-08	1
rs12199218	6	27057502	T	C	HIST1H2BJ	-0.03	0	5.9262E-09	0	3.09	0.8764214	1.873E-08	1
rs6808641	3	44568895	T	C	ZKSCAN7	0.03	0	5.9294E-09	12	8.03	0.3295239	1.833E-08	1
rs9867336	3	44568966	C	T	ZKSCAN7	0.03	0	5.9295E-09	12	8.03	0.3295226	1.833E-08	1
rs10581333	16	30056216	TCTC	T	ALDOA	-0.03	0	5.9322E-09	28	9.84	0.1978667	2.926E-08	1
rs360752	3	13097365	G	A	IQSEC1	0.05	0	5.9336E-09	0	2.23	0.9457337	1.875E-08	1
rs2275294	20	63962894	G	A	ZNF512B	0.03	0	5.934E-09	0	0.87	0.996694	1.876E-08	1
rs466360	5	144518462	G	A	KCTD16	0.03	0	5.9362E-09	22	9.07	0.2477101	1.049E-08	1
rs7982050	13	93349775	C	G	GPC6	0.03	0	5.939E-09	0	6.3	0.5054209	1.877E-08	1
rs1490360	6	123915173	C	T	NKAIN2	0.03	0	5.9421E-09	0	3.64	0.8199239	1.878E-08	1
rs55860223	9	11171013	T	C	PTPRD	-0.04	0	5.9515E-09	0	6.97	0.432363	1.881E-08	1
rs8002965	13	93349895	G	A	GPC6	0.03	0	5.9602E-09	0	6.3	0.5055017	1.884E-08	1
rs1159636	13	56240419	T	C	PRR20A	-0.05	0	5.9606E-09	23	9.11	0.2448276	1.884E-08	1
rs12530238	6	123914962	C	G	NKAIN2	0.03	0	5.9631E-09	0	3.64	0.8196792	1.885E-08	1
rs360750	3	13097938	C	T	IQSEC1	0.05	0	5.9702E-09	0	2.24	0.9456513	1.887E-08	1
rs7987095	13	93350205	C	T	GPC6	0.03	0	5.9715E-09	0	6.3	0.5056162	1.887E-08	1
rs3130266	6	33336212	G	A	DAXX	0.03	0	5.9726E-09	5	7.42	0.38648	2.166E-08	1
rs144526530	3	29537199	T	TAGTTTGTC	RBMS3,RP11	-0.07	0	5.984E-09	0	6.96	0.4326328	1.891E-08	1
rs1267072	2	161191070	C	T	TANK	-0.03	0	5.9934E-09	0	2.43	0.9322961	1.894E-08	1
rs165568	3	13099083	G	T	IQSEC1	0.05	0	5.9936E-09	0	2.23	0.945977	1.894E-08	1
rs17080528	3	49352409	C	T	GPX1	-0.03	0	6.0095E-09	0	6.49	0.4833736	1.898E-08	1
rs35208438	5	144518373	ACT	A	KCTD16	0.03	0	6.0105E-09	22	9.05	0.2488744	1.063E-08	1
rs433751	5	58619444	G	A	RAB3C	-0.04	0	6.0126E-09	0	3.11	0.8749806	1.9E-08	1
rs1535	11	61830500	A	G	FADS2	0.03	0	6.013E-09	43	12.33	0.0903514	1.9E-08	1
rs1397293	8	14648039	G	C	SGCZ	-0.03	0	6.0146E-09	0	4.65	0.702263	1.901E-08	1
rs7191717	16	71995404	C	T	PKD1L3	0.04	0	6.0233E-09	0	2.91	0.8932401	1.903E-08	1

rs847784	6	40085533	A	G	MOCS1	-0.03	0	6.0356E-09	20	8.78	0.268725	1.416E-08	1
rs10771067	12	24182016	T	C	SOX5	-0.03	0	6.0389E-09	0	3.82	0.8002492	1.908E-08	1
rs281276	15	47367873	A	G	SEMA6D	0.04	0	6.0394E-09	0	5.52	0.5968102	1.908E-08	1
rs281272	15	47365754	G	A	SEMA6D	0.04	0	6.0399E-09	0	5.52	0.5968091	1.908E-08	1
rs165569	3	13098972	G	A	IQSEC1	0.05	0	6.0419E-09	0	2.23	0.9459504	1.909E-08	1
rs10192503	2	2601038	G	C	MYT1L	0.03	0	6.0439E-09	0	3.23	0.8628216	1.91E-08	1
rs847750	6	40106511	G	A	MOCS1	-0.03	0	6.046E-09	20	8.8	0.2674931	1.412E-08	1
rs4283241	16	29977028	G	A	TAOK2	-0.03	0	6.0706E-09	38	11.43	0.1208213	3.96E-08	1
rs847743	6	40119415	C	G	MOCS1	-0.03	0	6.0783E-09	20	8.81	0.2662429	1.415E-08	1
rs184229944	17	44363894	G	T	FAM171A2	0.05	0	6.0791E-09	44	12.68	0.0802681	1.095E-08	1
rs12920434	16	60641078	T	G	RP11-457D20	-0.03	0	6.0795E-09	0	5.66	0.5795588	1.921E-08	1
rs560869200	15	47371483	AATGAT	A	SEMA6D	0.06	0	6.0817E-09	3	7.25	0.4035025	1.921E-08	1
rs4690744	4	142983330	A	C	INPP4B	-0.04	0	6.0849E-09	47	13.42	0.0625264	1.454E-08	1
rs1743973	6	40126810	T	G	MOCS1	-0.03	0	6.0868E-09	21	8.89	0.2603795	1.411E-08	1
rs11208985	1	66998983	G	A	SLC35D1	-0.03	0	6.0934E-09	0	4.31	0.7436629	1.925E-08	1
rs1678542	12	57574932	C	G	KIF5A	-0.03	0	6.0962E-09	0	1.93	0.9634479	1.926E-08	1
rs4597702	3	117908698	A	C	LSAMP	0.03	0	6.0983E-09	0	2.08	0.9551701	1.926E-08	1
rs13066939	3	44561342	G	A	ZKSCAN7	0.03	0	6.1012E-09	12	8.04	0.3286987	1.885E-08	1
rs9853203	3	44560966	G	T	ZKSCAN7	0.03	0	6.1012E-09	12	8.04	0.3286987	1.885E-08	1
rs9810216	3	44560124	A	T	ZKSCAN7	0.03	0	6.1045E-09	13	8.05	0.3284174	1.885E-08	1
rs60268187	3	13099847	CT	C	IQSEC1	0.05	0	6.1122E-09	0	2.2	0.947714	1.931E-08	1
rs814419	8	10081784	A	C	MSRA	-0.04	0	6.1135E-09	0	7.01	0.4276526	1.941E-08	1
rs1503583	12	60609415	T	C	SLC16A7	-0.03	0	6.1144E-09	58	16.8	0.0187003	1.451E-08	1
rs113790169	20	54874543	T	C	DOK5	-0.03	0	6.1144E-09	0	5.17	0.6387235	1.931E-08	1
rs17678540	4	142978330	A	C	INPP4B	-0.04	0	6.1166E-09	47	13.46	0.0616309	1.447E-08	1
rs62081255	17	44470040	G	A	GPATCH8	0.05	0	6.1178E-09	45	12.92	0.0740874	9.81E-09	2.47439E-09
rs62081256	17	44470102	C	T	GPATCH8	0.05	0	6.1178E-09	45	12.92	0.0740874	9.81E-09	2.47439E-09
rs1489185	9	11221999	A	G	PTPRD	-0.04	0	6.1202E-09	24	9.27	0.2341499	3.628E-08	1
rs1933530	1	246068375	T	G	SMYD3	-0.03	0	6.1282E-09	10	7.82	0.3490422	1.394E-08	1
rs2787970	1	246068368	T	C	SMYD3	-0.03	0	6.1362E-09	10	7.82	0.3487284	1.397E-08	1

rs11208978	1	66976527	C	T	MIER1	-0.03	0	6.1371E-09	0	4.31	0.743404	1.938E-08	1
rs9347116	6	166257515	A	G	PRR18	0.04	0	6.1407E-09	44	12.57	0.0833626	5.083E-08	1
rs7770443	6	34278937	C	A	NUDT3	-0.04	0	6.1436E-09	0	3.74	0.8097344	1.94E-08	1
rs72689893	1	166570153	A	C	POGK	0.04	0	6.1458E-09	0	6.35	0.499061	1.941E-08	1
rs7950696	11	47459981	T	C	CELF1	0.03	0	6.1481E-09	0	6.21	0.5160199	1.942E-08	1
rs3106195	6	33333899	A	T	DAXX	0.03	0	6.1496E-09	5	7.4	0.3882473	2.22E-08	1
rs847777	6	40088015	C	T	MOCS1	-0.03	0	6.1581E-09	21	8.88	0.2614963	1.438E-08	1
rs4690711	4	142979370	A	T	INPP4B	-0.04	0	6.1617E-09	47	13.43	0.0622911	1.47E-08	1
rs79586487	14	42975929	C	G	LRFN5	0.05	0	6.1672E-09	22	9.08	0.2468512	1.648E-08	1
rs184733242	13	61353268	G	A	PCDH20	-0.1	0	6.1699E-09	0	6.14	0.5235666	1.949E-08	1
rs1002656	1	36727140	C	T	GRIK3	-0.03	0	6.1725E-09	43	12.31	0.090675	1.503E-08	1
rs174566	11	61824890	A	G	FADS1,FADS	0.03	0	6.1744E-09	44	12.5	0.0852397	1.95E-08	1
rs17017081	4	142981403	A	C	INPP4B	-0.04	0	6.1823E-09	47	13.43	0.0623208	1.475E-08	1
rs35411008	3	29543358	GA	G	RBMS3,RP11	-0.07	0	6.1833E-09	10	7.85	0.3461081	1.953E-08	1
rs36120127	3	44196670	CAG	C	TOPAZ1	0.03	0	6.1889E-09	33	10.45	0.1644526	4.026E-08	1
rs11642430	16	30034468	C	G	FAM57B	-0.03	0	6.1896E-09	28	9.81	0.1993435	3.147E-08	1
rs66682110	4	142981042	A	T	INPP4B	-0.04	0	6.19E-09	47	13.43	0.0623598	1.477E-08	1
rs1912393	4	142980034	A	G	INPP4B	-0.04	0	6.1916E-09	47	13.43	0.0623642	1.478E-08	1
rs6822997	4	142977664	G	C	INPP4B	-0.04	0	6.1977E-09	47	13.43	0.0623532	1.479E-08	1
rs9823063	3	117907386	G	T	LSAMP	0.03	0	6.1982E-09	0	2.15	0.9513607	1.957E-08	1
rs151242101	9	80559498	AGCTCCAG	A	TLE4	0.03	0	6.2013E-09	50	14.09	0.0496489	1.958E-08	1
rs142490303	11	113295362	T	C	NCAM1	-0.06	0	6.2021E-09	0	3.83	0.7990785	1.959E-08	1
rs2242081	11	47478715	T	C	CELF1	0.03	0	6.2052E-09	0	6.19	0.5174171	1.959E-08	1
rs11814118	10	51043833	G	A	PRKG1	0.06	0	6.2095E-09	0	2.54	0.9237897	1.961E-08	1
rs7748703	6	99896201	G	T	MCHR2	-0.03	0	6.2149E-09	0	1.94	0.9632875	1.962E-08	1
rs1530092	3	61095675	T	C	FHIT	-0.03	0	6.2181E-09	30	10.1	0.1831795	2.276E-08	1
rs1598535	3	117907847	C	A	LSAMP	0.03	0	6.2216E-09	0	2.09	0.9548507	1.965E-08	1
rs2993076	1	36795484	A	G	GRIK3	0.03	0	6.2218E-09	0	6.28	0.5072337	1.882E-08	1
rs3814877	16	30031356	G	T	FAM57B	-0.03	0	6.2224E-09	28	9.73	0.2041533	3.111E-08	1
rs13090388	3	49353649	C	T	GPX1	-0.03	0	6.2234E-09	0	6.48	0.4849877	1.965E-08	1

Table S2

rs11711536	3	49353807	C	T	GPX1	-0.03	0	6.2295E-09	0	6.44	0.4888836	1.967E-08	1
rs2203712	11	47513412	T	C	CELF1	0.03	0	6.2347E-09	0	6.09	0.5288706	1.969E-08	1
rs2104362	6	33857581	G	A	MLN	0.03	0	6.2442E-09	53	14.96	0.0365533	3.239E-08	1
rs1002655	1	36727076	C	G	GRIK3	-0.03	0	6.2459E-09	43	12.32	0.0906531	1.524E-08	1
rs72970603	2	207468712	A	G	CREB1	0.04	0	6.2517E-09	11	7.88	0.3430443	1.974E-08	1
rs114909746	5	58497821	G	A	GAPT	0.07	0	6.2571E-09	32	10.41	0.1665832	2.748E-08	1
rs139350162	16	72523434	G	A	AC004158.1	0.07	0	6.2708E-09	39	11.62	0.1137919	8.633E-09	2.16445E-09
rs62302699	4	46486477	C	T	GABRA2	0.04	0	6.2712E-09	0	5.21	0.6345804	1.98E-08	1
rs6601417	8	10132301	G	C	MSRA	0.03	0	6.2798E-09	0	5.17	0.6388308	1.983E-08	1
rs1456186	3	117908558	G	C	LSAMP	0.03	0	6.2826E-09	0	2.09	0.9547813	1.983E-08	1
rs4787489	16	29984559	G	A	TAOK2	-0.03	0	6.2827E-09	38	11.45	0.1201976	4.099E-08	1
rs115690621	16	13493225	G	T	SHISA9	-0.03	0	6.2856E-09	0	6.09	0.5293293	1.984E-08	1
rs13094045	3	117905163	C	T	LSAMP	0.03	0	6.2892E-09	0	2.09	0.9549848	1.985E-08	1
rs13073833	3	117905108	T	G	LSAMP	0.03	0	6.291E-09	0	2.09	0.9549858	1.986E-08	1
rs16948663	13	93344359	G	C	GPC6	0.03	0	6.2918E-09	0	6.09	0.5289361	1.986E-08	1
rs4854688	3	133079507	G	A	TMEM108	-0.06	0	6.2971E-09	0	3.63	0.8208753	1.988E-08	1
rs12326258	18	53008619	G	T	DCC	-0.04	0	6.2971E-09	0	4.48	0.7234205	1.988E-08	1
rs1317909	1	198176748	C	T	NEK7	0.03	0	6.2979E-09	0	5.82	0.5608094	1.988E-08	1
rs174567	11	61825533	A	G	FADS1,FADS	0.03	0	6.3027E-09	48	13.5	0.0608102	1.967E-08	1
rs4752865	11	47738289	G	A	FNBP4	-0.03	0	6.306E-09	0	6.77	0.4535708	1.991E-08	1
rs62078770	17	44505999	C	T	GPATCH8	0.05	0	6.3084E-09	46	13.21	0.0672273	9.855E-09	2.47439E-09
rs6902033	6	99897108	T	C	MCHR2	-0.03	0	6.3119E-09	0	1.89	0.9657167	1.992E-08	1
rs7742038	6	123919415	G	T	NKAIN2	0.03	0	6.3153E-09	0	3.72	0.8116269	1.993E-08	1
rs10867576	9	80560263	A	T	TLE4	0.03	0	6.3161E-09	48	13.72	0.056422	1.994E-08	1
rs12380191	9	11180739	A	G	PTPRD	-0.04	0	6.3164E-09	19	8.64	0.2791618	3.23E-08	1
rs200503	6	27818104	A	G	HIST1H2BM	-0.04	0	6.3169E-09	0	6.94	0.4354898	1.994E-08	1
rs9807088	17	44512552	A	G	GPATCH8	0.05	0	6.3225E-09	47	13.21	0.0671957	9.872E-09	2.47439E-09
rs2799079	6	28267398	A	C	RP5-874C20.8	-0.05	0	6.3256E-09	33	10.55	0.1595284	6.244E-08	1
rs2059513	4	142539309	G	C	INPP4B	0.04	0	6.3329E-09	33	10.55	0.1596827	2.683E-08	1
rs62078773	17	44519043	T	C	GPATCH8	0.05	0	6.3356E-09	47	13.22	0.0670315	9.86E-09	2.47439E-09

rs2071889	6	33304935	C	A	TAPBP	0.03	0	6.3382E-09	9	7.73	0.3567916	2.467E-08	1
rs11646662	16	72075347	C	T	HPR,TXNL4I	0.04	0	6.3614E-09	0	5.86	0.5556891	2.008E-08	1
rs4583255	16	29977620	A	G	TAOK2	-0.03	0	6.3627E-09	38	11.46	0.1199478	4.133E-08	1
rs10157311	1	198272409	C	T	NEK7	0.03	0	6.3633E-09	39	11.6	0.1145838	3.865E-08	1
rs2031495	1	66956031	G	T	MIER1	0.03	0	6.3657E-09	0	4.31	0.742969	2.009E-08	1
rs58773947	1	66950709	A	AC	MIER1	0.03	0	6.3657E-09	0	4.31	0.742969	2.009E-08	1
rs10547271	11	47744420	CAT	C	FNBP4	0.03	0	6.3659E-09	0	6.33	0.5014424	2.009E-08	1
rs72696226	9	11219740	C	T	PTPRD	-0.04	0	6.3703E-09	22	9.06	0.2480545	3.596E-08	1
rs1664234	1	208259880	T	G	PLXNA2	-0.03	0	6.3772E-09	0	6.27	0.5086601	2.013E-08	1
rs189297943	2	208618196	A	G	PTH2R	0.1	0	6.385E-09	0	1.95	0.9623837	2.015E-08	1
rs3935873	16	30007179	C	T	DOC2A	-0.03	0	6.3853E-09	37	11.26	0.1277798	4.143E-08	1
rs281279	15	47368705	T	C	SEMA6D	-0.04	0	6.3918E-09	0	5.5	0.5995064	2.017E-08	1
rs73225032	12	120699771	G	A	MLEC	-0.05	0	6.392E-09	0	6.84	0.4452544	2.017E-08	1
rs3814884	16	29983415	T	A	TAOK2	-0.03	0	6.3944E-09	38	11.46	0.119806	4.15E-08	1
rs7868965	9	11114715	T	C	PTPRD	-0.04	0	6.3999E-09	0	6.22	0.5137444	2.02E-08	1
rs79608350	10	90929505	C	T	ANKRD1	-0.03	0	6.4013E-09	51	14.33	0.0456038	4.892E-08	1
rs12231916	12	57568130	C	T	KIF5A	-0.03	0	6.405E-09	0	1.96	0.9620656	2.021E-08	1
rs73225031	12	120699526	T	C	MLEC	-0.05	0	6.4056E-09	0	6.84	0.4453339	2.021E-08	1
rs9925915	16	29982365	G	C	TAOK2	-0.03	0	6.4068E-09	38	11.46	0.1198129	4.158E-08	1
rs72884606	3	60131696	C	T	FHIT	0.05	0	6.4092E-09	33	10.46	0.1642152	4.047E-08	1
rs11642046	16	29981787	C	G	TAOK2	-0.03	0	6.4105E-09	38	11.46	0.1198176	4.16E-08	1
rs2744236	6	25353146	A	G	LRRC16A	-0.03	0	6.4138E-09	0	6.08	0.5303097	2.024E-08	1
rs11901	16	29972749	C	G	TMEM219	-0.03	0	6.416E-09	38	11.46	0.1198019	4.164E-08	1
rs12530266	6	123915139	C	T	NKAIN2	0.03	0	6.43E-09	0	3.58	0.826288	2.029E-08	1
rs2278557	16	30082458	C	G	PPP4C	-0.03	0	6.4391E-09	27	9.59	0.212719	3.037E-08	1
rs11648622	16	72159137	G	A	PMFBP1	0.03	0	6.4473E-09	0	1.17	0.9915839	2.034E-08	1
rs3816605	11	47835701	T	C	NUP160	0.03	0	6.4485E-09	0	6.72	0.4589389	2.035E-08	1
rs9301873	13	93360153	G	C	GPC6	0.03	0	6.4529E-09	0	6.21	0.515669	2.036E-08	1
rs72927801	2	195565736	C	T	SLC39A10	0.04	0	6.4557E-09	26	9.5	0.2186992	3.328E-08	1
rs59703071	4	41041666	T	A	APBB2	-0.04	0	6.4627E-09	42	12.09	0.0976084	3.264E-08	1

rs4975306	4	142532728	A	G	INPP4B	0.04	0	6.4665E-09	33	10.52	0.1611506	2.784E-08	1
rs117211930	19	49507546	G	A	FCGRT	0.06	0	6.4698E-09	0	6.99	0.4299755	1.88E-08	1
rs3129683	6	29318893	C	G	OR14J1	-0.05	0	6.4725E-09	21	8.93	0.2580009	3.781E-08	1
rs9925102	16	29971827	T	C	TMEM219	-0.03	0	6.4727E-09	38	11.46	0.1198388	4.201E-08	1
rs56091449	12	120698237	G	A	MLEC	-0.05	0	6.4746E-09	0	6.85	0.4442117	2.043E-08	1
rs10786387	10	98101555	C	G	R3HCC1L	0.03	0	6.4869E-09	33	10.6	0.1568041	3.329E-08	1
rs8295	12	120701585	C	T	MLEC	-0.05	0	6.4892E-09	0	6.84	0.4456802	2.047E-08	1
rs62043044	16	73651310	T	C	ZFHX3	0.03	0	6.4904E-09	18	8.56	0.2859977	1.86E-08	1
rs10842288	12	24169797	T	C	SOX5	-0.03	0	6.4941E-09	0	4.91	0.6709827	2.049E-08	1
rs117868582	13	103011922	A	G	SLC10A2	0.08	0	6.4961E-09	0	5.01	0.6582195	2.049E-08	1
rs10871451	16	29974884	C	G	TAOK2	-0.03	0	6.4972E-09	38	11.46	0.1198924	4.218E-08	1
rs11150577	16	29975204	G	A	TAOK2	-0.03	0	6.4972E-09	38	11.46	0.1198924	4.218E-08	1
rs1323974	13	93357225	T	C	GPC6	0.03	0	6.4976E-09	0	6.19	0.5182773	2.05E-08	1
rs74707951	12	24170192	GA	G	SOX5	-0.03	0	6.498E-09	0	4.91	0.6711053	2.05E-08	1
rs113391780	20	55768582	T	C	CBLN4	-0.05	0	6.4985E-09	0	2.95	0.8894472	2.05E-08	1
rs9932196	16	29971798	G	T	TMEM219	-0.03	0	6.4991E-09	38	11.46	0.1198983	4.219E-08	1
rs9873227	3	48735675	G	C	IP6K2	-0.04	0	6.5047E-09	0	6.36	0.4980738	2.049E-08	1
rs9301871	13	93360040	G	A	GPC6	0.03	0	6.5091E-09	0	6.24	0.5117197	2.053E-08	1
rs9556285	13	93360237	C	T	GPC6	0.03	0	6.5167E-09	0	6.24	0.5118369	2.056E-08	1
rs1328502	9	80552842	T	G	TLE4	0.03	0	6.5182E-09	0	2.85	0.8986925	2.056E-08	1
rs61340731	5	30781937	G	A	CDH6	-0.05	0	6.5209E-09	0	0.84	0.9970478	2.057E-08	1
rs76228091	5	58634933	A	C	RAB3C	0.07	0	6.5253E-09	29	9.95	0.1915137	2.992E-08	1
rs35105141	16	30045827	C	T	FAM57B	-0.03	0	6.5406E-09	27	9.66	0.2085596	3.246E-08	1
rs56323139	2	195567001	A	G	SLC39A10	0.04	0	6.5415E-09	26	9.52	0.2172358	3.382E-08	1
rs1328501	9	80553196	A	C	TLE4	0.03	0	6.5473E-09	0	2.85	0.8987332	2.065E-08	1
rs17717651	4	142531926	A	C	INPP4B	0.04	0	6.5509E-09	33	10.49	0.1622687	2.816E-08	1
rs73225027	12	120696769	T	C	MLEC	-0.05	0	6.5617E-09	0	6.86	0.4438603	2.07E-08	1
rs6805998	3	48734197	T	C	IP6K2	-0.04	0	6.5619E-09	0	6.34	0.5004448	2.067E-08	1
rs2059510	4	142538754	C	T	INPP4B	0.04	0	6.5628E-09	33	10.56	0.1591496	2.766E-08	1
rs62078765	17	44475787	A	C	GPATCH8	0.05	0	6.5667E-09	45	12.86	0.075631	1.048E-08	2.68164E-09

rs13101590	4	142973444	C	G	INPP4B	-0.04	0	6.5668E-09	48	13.48	0.0611546	1.549E-08	1
rs9932702	16	29971640	C	T	TMEM219	-0.03	0	6.5762E-09	38	11.45	0.1200888	4.271E-08	1
rs995810	13	93356953	A	G	GPC6	0.03	0	6.5785E-09	0	6.21	0.5149457	2.075E-08	1
rs4885958	13	56223689	T	C	PRR20A	-0.05	0	6.5791E-09	23	9.11	0.2448793	2.463E-08	1
rs17820823	15	57947160	A	G	ALDH1A2	0.03	0	6.5856E-09	51	14.35	0.0453688	8.809E-09	2.22312E-09
rs73225026	12	120696109	C	T	MLEC	-0.05	0	6.587E-09	0	6.86	0.4431594	2.077E-08	1
rs11936467	4	142971699	C	G	INPP4B	-0.04	0	6.5887E-09	48	13.48	0.061228	1.556E-08	1
rs112802981	20	55768549	G	A	CBLN4	-0.05	0	6.5901E-09	0	3.03	0.8817817	2.078E-08	1
rs144345457	11	47878773	GTGGC	G	NUP160	-0.08	0	6.5915E-09	0	6.65	0.4665094	2.064E-08	1
rs2147838	1	66933783	T	C	MIER1	0.03	0	6.5975E-09	0	4.36	0.7372812	2.081E-08	1
rs10742814	11	47532785	G	A	CELF1	0.03	0	6.6029E-09	0	6.17	0.520405	2.082E-08	1
rs3130263	6	33333199	G	A	DAXX	0.03	0	6.603E-09	3	7.23	0.4048518	2.262E-08	1
rs1490359	6	123915076	T	C	NKAIN2	0.03	0	6.61E-09	0	3.67	0.8171228	2.084E-08	1
rs72884607	3	60131750	A	G	FHIT	0.05	0	6.6124E-09	33	10.48	0.1631132	4.185E-08	1
rs34999548	3	29534596	G	A	RBMS3,RP11	-0.07	0	6.6124E-09	0	6.99	0.4303148	2.085E-08	1
rs1679732	6	28253486	G	A	ZKSCAN4	0.05	0	6.6208E-09	35	10.87	0.1443017	6.853E-08	1
rs1408210	13	93355471	A	T	GPC6	0.03	0	6.6249E-09	0	6.24	0.5114524	2.089E-08	1
rs11791731	9	11170765	A	T	PTPRD	-0.04	0	6.6283E-09	0	6.97	0.4317029	2.09E-08	1
rs73083799	12	23301528	G	A	SOX5	-0.09	0	6.6318E-09	0	1.07	0.9935625	2.091E-08	1
rs11222166	11	99982545	A	G	CNTN5	0.03	0	6.6319E-09	45	12.85	0.0757222	1.327E-08	1
rs11754346	6	99895371	C	T	MCHR2	-0.03	0	6.6383E-09	0	1.96	0.9622677	2.093E-08	1
rs6971558	7	100482234	A	T	NYAP1	-0.03	0	6.6394E-09	0	7.04	0.4251476	2.116E-08	1
rs1530057	3	29533972	G	T	RBMS3,RP11	-0.07	0	6.641E-09	0	6.7	0.4612227	2.094E-08	1
rs11464297	6	28261683	G	GA	NKAPL	0.05	0	6.6418E-09	35	10.87	0.1442959	6.875E-08	1
rs11646364	16	72074788	A	T	HPR,TXNL4I	0.04	0	6.6418E-09	0	5.89	0.5529087	2.094E-08	1
rs12334515	8	140253239	C	A	TRAPPC9	0.03	0	6.6489E-09	0	6.44	0.4896124	2.096E-08	1
rs4775005	15	57915967	G	A	ALDH1A2	-0.03	0	6.6514E-09	35	10.89	0.14349	1.355E-08	1
rs57105322	8	10120812	G	A	MSRA	0.03	0	6.6595E-09	0	2.49	0.9277256	2.1E-08	1
rs10801654	1	198220645	T	A	NEK7	0.03	0	6.6693E-09	38	11.36	0.1236192	4.173E-08	1
rs10194569	2	22748225	A	T	KLHL29	-0.03	0	6.6709E-09	32	10.36	0.1690987	5.888E-08	1

Table S2

rs1021052	16	73649420	C	G	ZFHX3	-0.03	0	6.6804E-09	0	5.32	0.6213897	2.106E-08	1
rs11785047	8	87850255	C	A	DCAF4L2	0.04	0	6.6881E-09	0	0.47	0.9995337	2.109E-08	1
rs2787993	1	246068081	A	G	SMYD3	-0.03	0	6.6913E-09	11	7.87	0.3444174	1.487E-08	1
rs1968514	3	29533772	G	A	RBMS3,RP11	-0.07	0	6.6925E-09	0	6.69	0.4613177	2.11E-08	1
rs4858800	3	48718387	A	G	IP6K2	-0.03	0	6.7043E-09	0	6.99	0.4301628	2.105E-08	1
rs2059511	4	142538927	A	G	INPP4B	0.04	0	6.7288E-09	33	10.55	0.159488	2.83E-08	1
rs7859480	9	11181046	C	T	PTPRD	-0.04	0	6.7362E-09	18	8.62	0.2810316	3.424E-08	1
rs202231020	13	93363176	T	C	GPC6	0.03	0	6.7383E-09	0	6.22	0.5143184	2.124E-08	1
rs76975994	7	42775440	C	T	C7orf25	-0.09	0	6.7393E-09	3	7.22	0.4066851	2.124E-08	1
rs12149380	16	72009647	G	C	DHODH	-0.03	0	6.7438E-09	0	6.66	0.4652746	2.126E-08	1
rs1822235	15	87441092	A	C	AGBL1	-0.03	0	6.7498E-09	0	3.9	0.7916756	2.128E-08	1
rs72694301	9	11195988	G	C	PTPRD	-0.04	0	6.7554E-09	20	8.79	0.2680512	3.641E-08	1
rs12924875	16	7697727	A	T	RBFOX1	-0.03	0	6.7561E-09	58	16.97	0.0175607	3.73E-08	1
rs201000	6	27841381	C	T	HIST1H2BN	-0.04	0	6.7575E-09	0	5.83	0.5599186	2.13E-08	1
rs1056668	6	26510377	C	T	BTN1A1	0.03	0	6.758E-09	0	2.76	0.9063784	2.13E-08	1
rs12892189	14	103853652	C	A	PPP1R13B	0.03	0	6.7612E-09	0	6.01	0.5391177	2.131E-08	1
rs201001	6	27841121	T	C	HIST1H2BN	-0.04	0	6.7613E-09	0	5.83	0.5599718	2.131E-08	1
rs74493799	2	176606188	A	G	MTX2	-0.04	0	6.7622E-09	0	3.49	0.8360871	2.131E-08	1
rs199511027	13	93362692	T	C	GPC6	0.03	0	6.7706E-09	0	5.8	0.563283	2.134E-08	1
rs72696211	9	11211186	T	C	PTPRD	-0.04	0	6.771E-09	23	9.12	0.2443921	3.893E-08	1
rs10959585	9	11179452	G	T	PTPRD	-0.04	0	6.7714E-09	19	8.65	0.2786784	3.462E-08	1
rs10801827	1	90758687	G	A	BARHL2	0.03	0	6.7803E-09	32	10.44	0.1651502	1.123E-08	2.82955E-09
rs34508544	6	166252291	AT	A	PRR18	0.04	0	6.789E-09	39	11.57	0.1157735	5.159E-08	1
rs141292606	4	76715183	G	GTA	SHROOM3	-0.07	0	6.8028E-09	0	1.16	0.9918196	2.144E-08	1
rs1050450	3	49357401	G	A	GPX1	-0.03	0	6.8039E-09	0	6.5	0.4821718	2.143E-08	1
rs3833842	16	30086868	GTGA	G	TBX6	-0.03	0	6.8107E-09	26	9.55	0.2153127	3.224E-08	1
rs58359140	6	164893998	G	T	C6orf118	-0.04	0	6.8197E-09	17	8.5	0.2907703	3.952E-08	1
rs10519675	4	142964218	T	C	INPP4B	-0.04	0	6.8203E-09	48	13.5	0.0607442	1.611E-08	1
rs463245	5	144518625	T	C	KCTD16	0.03	0	6.8216E-09	23	9.09	0.2461482	1.2E-08	1
rs2513689	11	115124532	T	C	CADM1	-0.03	0	6.8225E-09	42	12.16	0.0953212	2.15E-08	1

Table S2

rs12634441	3	29527500	T	G	RBMS3,RP11	-0.07	0	6.8245E-09	0	6.93	0.436617	2.151E-08	1
rs10771064	12	24163816	T	A	SOX5	-0.03	0	6.8373E-09	0	4.93	0.6690918	2.155E-08	1
rs1323984	13	93347401	G	T	GPC6	0.03	0	6.8473E-09	0	6.28	0.5077003	2.158E-08	1
rs1475422	1	198254490	T	A	NEK7	0.03	0	6.86E-09	40	11.72	0.110253	4.15E-08	1
rs10184811	2	161101430	C	T	TANK	-0.03	0	6.8683E-09	0	2.15	0.9508958	2.164E-08	1
rs182254333	6	36702648	G	A	RAB44	0.09	0	6.8738E-09	0	2.32	0.9398383	2.166E-08	1
rs3934406	1	90760604	C	T	BARHL2	0.03	0	6.8751E-09	33	10.46	0.1638987	1.133E-08	2.9066E-09
rs3934407	1	90761014	G	A	BARHL2	0.03	0	6.8769E-09	33	10.47	0.1634204	1.13E-08	2.9066E-09
rs77088973	16	72948974	C	T	ZFHX3	0.06	0	6.8771E-09	44	12.58	0.0831228	1.169E-08	2.98578E-09
rs4530676	4	46496528	T	C	GABRA2	0.04	0	6.8805E-09	0	5.19	0.6362202	2.168E-08	1
rs1873625	3	49629531	C	A	BSN	-0.03	0	6.8825E-09	0	6.34	0.5007422	2.168E-08	1
rs4975316	4	142536832	A	G	INPP4B	0.04	0	6.8866E-09	33	10.56	0.1588375	2.896E-08	1
rs1800668	3	49358324	G	A	GPX1	-0.03	0	6.8877E-09	0	6.51	0.4816791	2.169E-08	1
rs59181734	4	46498820	T	C	GABRA2	0.04	0	6.8889E-09	0	5.2	0.6361231	2.17E-08	1
rs1475424	1	198254283	T	C	NEK7	0.03	0	6.891E-09	40	11.72	0.1102244	4.168E-08	1
rs7068511	10	90939648	T	C	ANKRD1	-0.03	0	6.8913E-09	45	12.77	0.0779111	4.622E-08	1
rs114212226	4	46826501	C	A	COX7B2	0.03	0	6.8914E-09	28	9.74	0.2038606	3.474E-08	1
rs7988183	13	93350811	C	G	GPC6	0.03	0	6.8916E-09	0	6.29	0.5065921	2.171E-08	1
rs28577925	4	142964644	T	C	INPP4B	-0.04	0	6.8986E-09	48	13.51	0.060626	1.626E-08	1
rs3213423	16	72008926	T	G	DHODH	-0.03	0	6.8991E-09	0	6.94	0.4349727	2.174E-08	1
rs11039280	11	47537306	G	A	CELF1	0.03	0	6.9137E-09	0	6.26	0.5101294	2.178E-08	1
rs7539136	1	198212848	G	A	NEK7	0.03	0	6.915E-09	37	11.26	0.1275534	4.287E-08	1
rs34742917	3	29522646	A	T	RBMS3,RP11	-0.07	0	6.9272E-09	0	6.93	0.4357294	2.182E-08	1
rs2102341	1	36728307	T	C	GRIK3	-0.03	0	6.9393E-09	42	12.26	0.0923879	1.691E-08	1
rs12666107	7	100180396	G	C	STAG3	0.03	0	6.9395E-09	32	10.3	0.172046	4.904E-08	1
rs117756554	19	49509271	G	A	FCGRT	0.06	0	6.9399E-09	0	7.01	0.4278402	2.011E-08	1
rs200502	6	27820284	C	T	HIST1H4J	-0.04	0	6.9414E-09	0	6.91	0.4388378	2.187E-08	1
rs12064799	1	90761658	G	A	BARHL2	0.03	0	6.9437E-09	35	10.85	0.1451641	1.076E-08	2.75459E-09
rs10922917	1	90763123	T	C	BARHL2	0.03	0	6.9476E-09	38	11.47	0.1192813	9.744E-09	2.47439E-09
rs1323986	13	93347519	G	A	GPC6	0.03	0	6.9497E-09	0	6.29	0.5065281	2.189E-08	1

Table S2

rs28850637	4	142966743	T	C	INPP4B	-0.04	0	6.9536E-09	48	13.5	0.0608241	1.638E-08	1
rs12059603	1	198260106	G	A	NEK7	0.03	0	6.9539E-09	40	11.71	0.1103312	4.205E-08	1
rs1563439	3	117906972	C	T	LSAMP	0.03	0	6.9617E-09	0	2.11	0.9537494	2.193E-08	1
rs5847574	3	29523724	C	CT	RBMS3,RP11	-0.07	0	6.962E-09	0	6.93	0.4366697	2.193E-08	1
rs12060129	1	90761841	A	C	BARHL2	0.03	0	6.9709E-09	33	10.48	0.1630823	1.143E-08	2.9066E-09
rs17678304	4	142964484	C	T	INPP4B	-0.04	0	6.9792E-09	47	13.43	0.0623647	1.719E-08	1
rs4525719	2	104244799	C	T	POU3F3	-0.09	0	6.9802E-09	0	6.58	0.4733327	2.199E-08	1
rs17527216	4	41052672	G	C	APBB2	-0.04	0	6.9831E-09	17	8.53	0.2878713	3.613E-08	1
rs34496206	1	198223145	AT	A	NEK7	0.03	0	6.9852E-09	38	11.4	0.1220832	4.31E-08	1
rs12076564	1	198222688	G	A	NEK7	0.03	0	6.9868E-09	38	11.4	0.1220879	4.308E-08	1
rs34483143	4	142965869	A	AG	INPP4B	-0.04	0	6.9881E-09	48	13.5	0.0607273	1.644E-08	1
rs35668471	4	142965791	G	A	INPP4B	-0.04	0	6.9979E-09	48	13.5	0.0607569	1.647E-08	1
rs4658172	1	90760037	T	C	BARHL2	0.03	0	7.0021E-09	33	10.5	0.1620506	1.144E-08	2.9066E-09
rs117432945	17	44370201	C	T	ITGA2B	0.05	0	7.0056E-09	45	12.84	0.0759796	1.229E-08	1
rs2298703	11	113263883	G	A	NCAM1	-0.04	0	7.0116E-09	0	3.19	0.866683	2.208E-08	1
rs174530	11	61779120	A	G	MYRF,TMEM	0.03	0	7.0129E-09	45	12.9	0.0744908	2.767E-08	1
rs10026166	4	142965389	G	A	INPP4B	-0.04	0	7.0226E-09	48	13.51	0.0606709	1.651E-08	1
rs1822236	15	87441128	A	G	AGBL1	-0.03	0	7.0274E-09	0	3.93	0.7875429	2.213E-08	1
rs79158807	2	176605889	G	T	MTX2	-0.04	0	7.0309E-09	0	3.52	0.8328224	2.214E-08	1
rs62302696	4	46480436	C	T	GABRA2	0.04	0	7.0396E-09	0	5.11	0.6469855	2.217E-08	1
rs145313871	16	21772640	T	G	OTOA	-0.07	0	7.0441E-09	0	5.24	0.6301012	2.218E-08	1
rs12411523	10	98102974	C	T	R3HCC1L	0.03	0	7.0455E-09	33	10.59	0.157557	3.597E-08	1
rs1555685	6	33863027	T	C	MLN	0.03	0	7.0528E-09	53	14.98	0.0362913	3.597E-08	1
rs10959625	9	11214620	A	G	PTPRD	-0.04	0	7.0742E-09	24	9.24	0.2361112	4.136E-08	1
rs2743555	6	28273304	G	A	RP5-874C20.8	-0.05	0	7.0886E-09	35	10.91	0.1424685	7.365E-08	1
rs10783833	12	57567779	A	G	KIF5A	-0.03	0	7.0897E-09	0	1.92	0.9642335	2.232E-08	1
rs9561330	13	93363891	C	A	GPC6	0.03	0	7.0916E-09	0	6.32	0.5033764	2.233E-08	1
rs10780428	9	80554757	T	G	TLE4	0.03	0	7.108E-09	50	14.19	0.0479422	2.238E-08	1
rs12360643	11	47757493	T	C	FNBP4	0.03	0	7.115E-09	0	6.57	0.4747964	2.24E-08	1
rs10769299	11	47843608	G	T	NUP160	0.03	0	7.1176E-09	0	6.8	0.4499895	2.241E-08	1

rs174547	11	61803311	T	C	FADS1,FADS	0.03	0	7.1192E-09	51	14.43	0.0440273	2.133E-08	1
rs5850569	3	82396597	CA	C	GBE1	-0.04	0	7.1227E-09	12	8.02	0.3308146	2.578E-08	1
rs17640672	4	46505013	T	C	GABRA2	0.04	0	7.1292E-09	0	5.13	0.6440003	2.245E-08	1
rs7945312	11	47633828	C	T	MTCH2	0.03	0	7.1317E-09	0	6.22	0.5145961	2.245E-08	1
rs72673174	8	87851263	G	A	DCAF4L2	0.04	0	7.143E-09	0	0.47	0.999534	2.249E-08	1
rs9368503	6	27335966	A	T	POM121L2	-0.03	0	7.1668E-09	0	2.83	0.8998556	2.256E-08	1
rs1934618	1	210713637	A	G	KCNH1	0.03	0	7.1684E-09	26	9.49	0.2192071	3.585E-08	1
rs12504378	4	142535673	C	T	INPP4B	0.04	0	7.1775E-09	33	10.58	0.1581803	3.007E-08	1
rs4318227	16	29973518	C	G	TAOK2	-0.03	0	7.1832E-09	38	11.3	0.1261022	4.653E-08	1
rs28496790	2	161093536	A	C	TANK	-0.03	0	7.1956E-09	0	2.22	0.9469081	2.265E-08	1
rs141124089	16	13493223	C	CA	SHISA9	-0.03	0	7.1973E-09	0	6.16	0.5210003	2.265E-08	1
rs62432600	6	99885348	A	G	MCHR2	-0.03	0	7.2198E-09	0	2	0.9598077	2.272E-08	1
rs143311886	3	49583934	C	T	BSN	-0.03	0	7.2332E-09	0	5.33	0.6203147	2.277E-08	1
rs72673175	8	87851353	G	T	DCAF4L2	0.04	0	7.2342E-09	0	0.47	0.9995364	2.277E-08	1
rs12445982	16	29971163	G	A	TMEM219	-0.03	0	7.2406E-09	38	11.31	0.1256516	4.684E-08	1
rs1535937	6	33866654	T	C	MLN	0.03	0	7.2441E-09	53	14.98	0.0363185	3.759E-08	1
rs10959633	9	11221407	G	A	PTPRD	-0.04	0	7.2611E-09	24	9.3	0.2317581	4.268E-08	1
rs34268709	1	230444822	A	G	PGBD5	0.03	0	7.266E-09	29	9.97	0.1903825	5.525E-08	1
rs1555687	6	33867433	C	T	MLN	0.03	0	7.2672E-09	52	14.64	0.0409152	3.751E-08	1
rs9394174	6	33863895	T	C	MLN	0.03	0	7.2723E-09	54	15.27	0.0327089	3.678E-08	1
rs174533	11	61781553	G	A	MYRF,TMEM	0.03	0	7.2771E-09	51	14.5	0.0429322	2.172E-08	1
rs3008861	1	66930539	T	G	MIER1	0.03	0	7.2821E-09	0	4.22	0.7546202	2.292E-08	1
rs174546	11	61802358	C	T	FADS1,FADS	0.03	0	7.2847E-09	51	14.44	0.0438107	2.181E-08	1
rs6873352	5	120892701	T	C	PRR16	0.03	0	7.2867E-09	0	3.24	0.8623871	2.293E-08	1
rs6485763	11	47605750	C	T	C1QTNF4	0.03	0	7.2931E-09	0	6.25	0.5111799	2.295E-08	1
rs78531070	17	5663642	G	A	NLRP1	0.06	0	7.2993E-09	0	5.57	0.5907358	2.297E-08	1
rs1921115	5	30875118	A	G	CDH6	0.03	0	7.3049E-09	33	10.48	0.1631247	3.756E-08	1
rs34513909	12	57566010	A	G	KIF5A	-0.03	0	7.3151E-09	0	1.98	0.9608787	2.302E-08	1
rs55796551	7	100179799	G	A	STAG3	0.03	0	7.3157E-09	32	10.3	0.1723304	5.163E-08	1
rs75314634	2	178928326	C	T	CCDC141	0.06	0	7.3175E-09	32	10.4	0.166944	5.254E-08	1

rs34479500	4	14937765	G	A	CPEB2	-0.03	0	7.3185E-09	0	4.08	0.7707969	2.303E-08	1
rs11172250	12	57566768	A	G	KIF5A	-0.03	0	7.3341E-09	0	1.97	0.9612247	2.308E-08	1
rs111959130	1	246004971	G	A	SMYD3	-0.05	0	7.3356E-09	0	1.56	0.9800267	2.308E-08	1
rs78738128	1	81022578	A	G	ADGRL2	0.05	0	7.3369E-09	0	6.86	0.4436714	2.308E-08	1
rs62302698	4	46485734	C	T	GABRA2	0.04	0	7.3382E-09	0	5.14	0.642684	2.309E-08	1
rs34673526	3	61098732	A	C	FHIT	-0.03	0	7.3394E-09	23	9.19	0.2392076	2.163E-08	1
rs7638707	3	61099984	T	G	FHIT	-0.03	0	7.3395E-09	12	8.04	0.3294749	2.143E-08	1
rs10519649	4	142533400	C	T	INPP4B	0.04	0	7.3405E-09	33	10.51	0.1614175	3.081E-08	1
rs139210191	4	41053610	AT	A	APBB2	-0.04	0	7.3405E-09	18	8.56	0.285578	3.817E-08	1
rs35229997	17	68033474	T	G	KPNA2	0.03	0	7.3449E-09	39	11.66	0.1122894	6.662E-08	1
rs1781021	1	208257416	C	T	PLXNA2	-0.03	0	7.3521E-09	0	5.68	0.5773882	2.313E-08	1
rs283992	16	76982622	C	T	RP11-58C22.	-0.03	0	7.3598E-09	0	1.71	0.9742458	2.316E-08	1
rs1987628	3	49361826	G	A	RHOA	-0.03	0	7.3657E-09	0	6.48	0.4846025	2.316E-08	1
rs76687611	19	49487208	G	A	RPL13A	0.06	0	7.3694E-09	0	6.58	0.4743531	2.156E-08	1
rs13142663	4	41049688	G	C	APBB2	-0.03	0	7.3754E-09	16	8.35	0.3026263	3.553E-08	1
rs12479064	2	99429576	C	T	REV1	0.04	0	7.3814E-09	51	14.46	0.0435373	5.278E-09	1.27012E-09
rs61104737	4	142534285	C	T	INPP4B	0.04	0	7.3883E-09	33	10.55	0.1595944	3.094E-08	1
rs2702548	4	15110019	A	G	CPEB2	-0.03	0	7.391E-09	0	3.16	0.8701945	2.325E-08	1
rs17640666	4	46504957	G	A	GABRA2	0.04	0	7.4069E-09	0	5.11	0.6466932	2.33E-08	1
rs4404585	4	46485150	G	A	GABRA2	0.04	0	7.4072E-09	0	5.11	0.6470013	2.33E-08	1
rs201832519	4	46502637	CT	C	GABRA2	0.04	0	7.408E-09	0	5.11	0.6466932	2.33E-08	1
rs572062425	4	46502635	GT	G	GABRA2	0.04	0	7.408E-09	0	5.11	0.6466932	2.33E-08	1
rs11788082	9	11218170	A	G	PTPRD	-0.04	0	7.4167E-09	22	9.08	0.2467819	4.212E-08	1
rs79667446	2	178940914	T	C	CCDC141	0.06	0	7.4226E-09	32	10.41	0.1667152	5.36E-08	1
rs10838753	11	47736979	A	G	FNBP4	0.03	0	7.429E-09	0	6.61	0.4704332	2.337E-08	1
rs10838754	11	47736980	A	C	FNBP4	0.03	0	7.429E-09	0	6.61	0.4704332	2.337E-08	1
rs7190158	16	77117015	G	A	MON1B	0.03	0	7.4322E-09	0	4.32	0.7424983	2.338E-08	1
rs7116320	11	47737123	G	A	FNBP4	-0.03	0	7.4324E-09	0	6.61	0.47041	2.338E-08	1
rs11076279	16	58901986	T	C	GOT2	-0.03	0	7.4335E-09	0	4.08	0.7707145	2.338E-08	1
rs10838732	11	47586388	C	G	FAM180B	0.03	0	7.4338E-09	0	6.18	0.5187817	2.338E-08	1

rs10959622	9	11211722	G	C	PTPRD	-0.04	0	7.4349E-09	23	9.13	0.243698	4.27E-08	1
rs115871595	5	152790752	G	A	NMUR2	0.04	0	7.4368E-09	0	4.52	0.7181932	2.339E-08	1
rs12489520	3	133055480	A	G	TMEM108	-0.06	0	7.4483E-09	0	3.36	0.8496616	2.343E-08	1
rs72694296	9	11193902	A	T	PTPRD	-0.04	0	7.4507E-09	19	8.67	0.2770477	3.856E-08	1
rs12498671	4	46462755	G	C	GABRA2	0.04	0	7.4534E-09	0	5.1	0.647786	2.344E-08	1
rs12510295	4	46492104	A	G	GABRA2	0.04	0	7.4534E-09	0	5.1	0.6472064	2.344E-08	1
rs935151026	16	72213202	G	GC	PMFBP1	0.07	0	7.4561E-09	27	9.71	0.2057536	1.429E-08	1
rs72787060	16	72071472	T	C	HPR,TXNL4I	0.04	0	7.4615E-09	0	5.84	0.5582455	2.347E-08	1
rs4658171	1	90760009	G	A	BARHL2	0.03	0	7.4837E-09	33	10.57	0.158469	1.207E-08	3.06717E-09
rs184449764	13	61119898	C	T	PCDH20	-0.1	0	7.4912E-09	0	6.89	0.4408982	2.356E-08	1
rs3814881	16	29989580	G	A	TAOK2	-0.03	0	7.4989E-09	37	11.2	0.1303328	4.885E-08	1
rs34855001	16	30055011	CCT	C	ALDOA	-0.03	0	7.499E-09	27	9.6	0.2124054	3.581E-08	1
rs77245699	5	58643615	C	T	RAB3C	0.07	0	7.501E-09	29	9.96	0.1909641	3.417E-08	1
rs59357103	3	49853534	G	A	TRAIP	0.05	0	7.5035E-09	0	6.37	0.4970783	2.36E-08	1
rs2099835	4	46457983	T	C	GABRA2	0.04	0	7.506E-09	0	5.1	0.6482491	2.36E-08	1
rs11932202	4	41062421	C	A	APBB2	-0.04	0	7.5151E-09	18	8.58	0.2844271	3.92E-08	1
rs12127544	1	231070189	G	T	FAM89A	0.03	0	7.5257E-09	0	5.45	0.6047516	2.031E-08	1
rs775322	12	57564530	A	G	KIF5A	-0.03	0	7.5369E-09	0	1.98	0.9607368	2.37E-08	1
rs145245126	13	61340330	A	G	PCDH20	-0.1	0	7.539E-09	0	6.15	0.5229139	2.371E-08	1
rs6581328	12	60574795	A	C	SLC16A7	-0.03	0	7.54E-09	55	15.76	0.0273687	1.968E-08	1
rs4788209	16	30001945	C	T	INO80E	-0.03	0	7.5472E-09	37	11.18	0.130826	4.913E-08	1
rs11150579	16	29989009	T	G	TAOK2	-0.03	0	7.5515E-09	37	11.2	0.1301703	4.923E-08	1
rs12124156	1	231070182	A	C	FAM89A	0.03	0	7.5584E-09	0	5.45	0.6048377	2.04E-08	1
rs7641050	3	48725074	T	C	IP6K2	-0.03	0	7.5588E-09	2	7.15	0.4136051	2.377E-08	1
rs4457429	9	11210897	A	G	PTPRD	-0.04	0	7.5658E-09	23	9.13	0.2435382	4.343E-08	1
rs599197	11	99650324	G	T	CNTN5	-0.03	0	7.5823E-09	12	7.98	0.3341835	1.859E-08	1
rs9508156	13	28799553	G	A	MTUS2	-0.03	0	7.5901E-09	0	1.97	0.9614553	2.386E-08	1
rs7522204	1	198234475	T	C	NEK7	0.03	0	7.5962E-09	38	11.34	0.1244934	4.661E-08	1
rs2893929	6	27770953	A	T	HIST1H2BL	-0.04	0	7.6042E-09	0	6.53	0.4792355	2.391E-08	1
rs905559	12	60595413	A	T	SLC16A7	-0.03	0	7.608E-09	58	16.91	0.0180006	1.782E-08	1

rs3814880	16	30006574	T	C	DOC2A	-0.03	0	7.6273E-09	37	11.18	0.1308172	4.966E-08	1
rs17497947	1	66991516	G	T	MIER1	-0.03	0	7.6354E-09	0	4.24	0.7520503	2.4E-08	1
rs4788210	16	30002353	C	G	INO80E	-0.03	0	7.6362E-09	37	11.18	0.1308422	4.973E-08	1
rs9924686	16	29991755	G	A	TAOK2	-0.03	0	7.6384E-09	37	11.19	0.1304298	4.976E-08	1
rs292993	5	58644031	G	A	RAB3C	0.04	0	7.6394E-09	0	3.03	0.8822247	2.402E-08	1
rs11150580	16	30003243	C	T	INO80E	-0.03	0	7.6435E-09	37	11.18	0.130846	4.978E-08	1
rs6732347	2	178945802	C	T	CCDC141	0.06	0	7.6442E-09	32	10.41	0.1663411	5.497E-08	1
rs5824984	18	53003222	C	CT	DCC	0.03	0	7.6455E-09	0	6.59	0.4726742	2.403E-08	1
rs55976793	8	86942645	C	G	CNBD1	0.03	0	7.6509E-09	0	4.62	0.7056202	2.405E-08	1
rs76762651	2	178928740	T	C	CCDC141	0.06	0	7.6523E-09	32	10.39	0.1676012	5.483E-08	1
rs7116346	11	47862328	G	A	NUP160	-0.03	0	7.6595E-09	0	6.56	0.4763612	2.408E-08	1
rs4732125	7	135486350	A	G	CNOT4	-0.03	0	7.6697E-09	59	17.46	0.0146714	2.887E-09	6.71824E-10
rs16971436	16	72958864	T	G	ZFHX3	0.06	0	7.6714E-09	41	12	0.1006661	1.037E-08	2.61067E-09
rs16926680	11	35002695	T	A	PDHX	-0.06	0	7.675E-09	0	5.58	0.5901422	2.412E-08	1
rs12921996	16	30000297	C	T	INO80E	-0.03	0	7.6855E-09	37	11.18	0.1309077	5.006E-08	1
rs71480061	11	34969242	G	A	PDHX	-0.06	0	7.6864E-09	0	6.1	0.5280201	2.416E-08	1
rs320465	1	213477299	C	T	RPS6KC1	0.04	0	7.6915E-09	20	8.76	0.2704748	4.26E-08	1
rs138990730	13	61027767	G	A	PCDH20	-0.1	0	7.6983E-09	0	6.02	0.5371088	2.42E-08	1
rs72694290	9	11188613	G	T	PTPRD	-0.04	0	7.7035E-09	19	8.7	0.2751512	4E-08	1
rs140330350	13	102982983	G	A	SLC10A2	0.08	0	7.7039E-09	0	4.98	0.6627174	2.421E-08	1
rs12065365	1	246045955	C	G	SMYD3	-0.03	0	7.713E-09	0	5.7	0.5745901	2.424E-08	1
rs11753738	6	99888760	C	T	MCHR2	-0.03	0	7.7181E-09	0	2.02	0.9589906	2.426E-08	1
rs187359443	16	72386027	C	T	AC004158.1	0.07	0	7.7214E-09	29	9.96	0.1911376	1.617E-08	1
rs28538552	3	192162283	A	G	FGF12	-0.03	0	7.7277E-09	0	2.78	0.9043561	2.429E-08	1
rs7756968	6	27767175	C	G	HIST1H2BL	-0.04	0	7.7336E-09	0	6.52	0.4801413	2.43E-08	1
rs10865953	3	48722129	C	T	IP6K2	-0.03	0	7.7336E-09	0	6.89	0.4399615	2.423E-08	1
rs2893930	6	27771027	T	C	HIST1H2BL	-0.04	0	7.7453E-09	0	6.52	0.4800884	2.434E-08	1
rs4140646	6	27771022	G	A	HIST1H2BL	-0.04	0	7.7453E-09	0	6.52	0.4800884	2.434E-08	1
rs12564979	1	198224061	A	G	NEK7	0.03	0	7.763E-09	38	11.32	0.1251684	4.781E-08	1
rs7619073	3	49088219	G	C	QRICH1	-0.04	0	7.7684E-09	0	6.37	0.4973319	2.432E-08	1

rs6435671	2	211791382	T	C	ERBB4	0.03	0	7.7716E-09	25	9.44	0.2222898	1.739E-08	1
rs11154195	6	123888213	T	A	NKAIN2	0.03	0	7.772E-09	0	2.57	0.9217167	2.442E-08	1
rs158956	5	58659827	A	G	RAB3C	0.04	0	7.7745E-09	0	3.13	0.8723878	2.443E-08	1
rs60059960	2	178950386	G	A	CCDC141	0.06	0	7.7747E-09	32	10.37	0.1684159	5.559E-08	1
rs2290851	11	47731818	C	T	FNBP4	-0.03	0	7.7995E-09	0	6.77	0.4526906	2.451E-08	1
rs7123952	11	47830505	T	C	NUP160	0.03	0	7.8042E-09	0	6.77	0.4530989	2.452E-08	1
rs10838775	11	47834830	C	G	NUP160	0.03	0	7.8056E-09	0	6.77	0.4530935	2.453E-08	1
rs599610	11	99650375	C	T	CNTN5	-0.03	0	7.8085E-09	12	8.02	0.3307481	1.897E-08	1
rs11778400	8	87853086	T	C	DCAF4L2	0.04	0	7.815E-09	0	0.47	0.9995442	2.456E-08	1
rs1488627	3	44185431	C	G	TOPAZ1	0.03	0	7.8197E-09	32	10.42	0.1660101	5.129E-08	1
rs292973	5	58655746	A	G	RAB3C	0.04	0	7.8244E-09	0	3.15	0.8710126	2.458E-08	1
rs916288	3	50475726	A	G	CACNA2D2	0.03	0	7.8265E-09	56	15.94	0.025666	9.319E-09	2.34534E-09
rs62055611	17	5737645	G	C	WSCD1	-0.03	0	7.8292E-09	0	4.92	0.6694075	2.46E-08	1
rs11154197	6	123918957	T	C	NKAIN2	0.03	0	7.8293E-09	0	3.62	0.8224024	2.46E-08	1
rs159005	5	58665745	G	T	RAB3C	0.04	0	7.8294E-09	0	3.14	0.87194	2.46E-08	1
rs4975318	4	142532952	C	T	INPP4B	0.04	0	7.8433E-09	33	10.52	0.1611858	3.257E-08	1
rs9465280	6	19216658	C	A	ID4	0.03	0	7.8606E-09	45	12.78	0.0776655	1.087E-08	2.75459E-09
rs72780259	5	120276909	G	A	PRR16	0.07	0	7.8657E-09	0	3.47	0.8386947	2.471E-08	1
rs78443056	2	178934005	G	A	CCDC141	0.06	0	7.8735E-09	32	10.37	0.168508	5.629E-08	1
rs4752798	11	47864812	T	C	NUP160	-0.03	0	7.8826E-09	0	6.52	0.4809194	2.476E-08	1
rs685341	6	153208028	C	T	RGS17	0.03	0	7.884E-09	0	2.89	0.8952623	2.477E-08	1
rs158971	5	58648306	A	T	RAB3C	0.04	0	7.8851E-09	0	3.02	0.882719	2.477E-08	1
rs61102363	3	43497801	G	T	ANO10	-0.03	0	7.8858E-09	39	11.55	0.1163616	9.935E-09	2.5416E-09
rs149603375	13	79927997	T	C	NDFIP2	0.09	0	7.8948E-09	16	8.37	0.3015025	1.991E-08	1
rs58483157	2	195399397	C	T	SLC39A10	0.04	0	7.9037E-09	0	5.47	0.6024072	2.483E-08	1
rs7833876	8	86951381	G	A	CNBD1	0.03	0	7.9083E-09	0	4.04	0.7751843	2.484E-08	1
rs174551	11	61806212	T	C	FADS1,FADS	0.03	0	7.9135E-09	47	13.4	0.0628379	2.486E-08	1
rs139297614	12	58484695	T	C	LRIG3	0.1	0	7.916E-09	0	6.11	0.5273243	2.487E-08	1
rs28617307	11	47819070	T	C	NUP160	-0.03	0	7.9216E-09	0	6.83	0.4472372	2.488E-08	1
rs4752796	11	47820310	A	G	NUP160	-0.03	0	7.9216E-09	0	6.83	0.4472372	2.488E-08	1

Table S2

rs379849	5	58649849	G	T	RAB3C	0.04	0	7.9218E-09	0	3.02	0.882816	2.488E-08	1
rs4831630	8	14649272	A	G	SGCZ	-0.03	0	7.9396E-09	0	5.22	0.6333354	2.494E-08	1
rs4710894	6	19256529	T	C	ID4	0.05	0	7.9418E-09	70	23.45	0.0014226	1.345E-09	3.05526E-10
rs2125838	11	47790381	A	G	NUP160	0.03	0	7.9427E-09	0	6.79	0.4514349	2.495E-08	1
rs57117956	2	178941765	A	G	CCDC141	0.06	0	7.9475E-09	32	10.43	0.1656047	5.724E-08	1
rs79397987	2	178943451	A	G	CCDC141	0.06	0	7.9475E-09	32	10.43	0.1656047	5.724E-08	1
rs6485775	11	47751966	A	G	FNBP4	-0.03	0	7.9498E-09	0	6.72	0.4584042	2.497E-08	1
rs7122217	11	47756368	G	C	FNBP4	-0.03	0	7.9513E-09	0	6.72	0.4583799	2.497E-08	1
rs12421563	11	47758670	G	A	FNBP4	-0.03	0	7.9516E-09	0	6.72	0.4583816	2.497E-08	1
rs17131160	1	90761506	T	C	BARHL2	0.03	0	7.9535E-09	32	10.38	0.168164	1.327E-08	3.41605E-09
rs62086906	17	68023810	T	C	KPNA2	0.03	0	7.9545E-09	46	13.07	0.0705104	7.031E-08	1
rs174553	11	61807686	A	G	FADS1,FADS	0.03	0	7.9591E-09	51	14.53	0.0424446	2.363E-08	1
rs7122182	11	47821581	A	C	NUP160	-0.03	0	7.9593E-09	0	6.8	0.4495997	2.5E-08	1
rs7944084	11	47865535	T	C	NUP160	0.03	0	7.9609E-09	0	6.52	0.4807495	2.5E-08	1
rs3117433	6	29335587	T	C	OR5V1	-0.05	0	7.9666E-09	22	8.99	0.2536617	4.685E-08	1
rs4390145	1	246045071	C	G	SMYD3	-0.03	0	7.9672E-09	0	5.69	0.5761296	2.502E-08	1
rs12542905	8	87821084	T	C	DCAF4L2	0.04	0	7.9689E-09	0	2.36	0.9372976	2.503E-08	1
rs34617930	6	27740197	AC	A	HIST1H2BL	-0.04	0	7.9694E-09	0	6.6	0.4721057	2.503E-08	1
rs10955125	8	86950600	G	A	CNBD1	0.03	0	7.9707E-09	0	4.04	0.7750014	2.503E-08	1
rs10955124	8	86950592	G	A	CNBD1	0.03	0	7.9742E-09	0	4.04	0.7750079	2.504E-08	1
rs9524020	13	93365794	T	A	GPC6	0.03	0	7.9748E-09	0	6.29	0.5065344	2.505E-08	1
rs1328500	9	80557265	T	G	TLE4	0.03	0	7.9757E-09	0	3	0.8846095	2.505E-08	1
rs7948468	11	47822816	G	A	NUP160	-0.03	0	7.9788E-09	0	6.85	0.4450389	2.506E-08	1
rs437788	5	58650324	A	G	RAB3C	0.04	0	7.982E-09	0	3.05	0.8807564	2.507E-08	1
rs9350111	6	19217408	G	A	ID4	0.03	0	7.9836E-09	45	12.8	0.0771	1.093E-08	2.75459E-09
rs79951662	2	178929276	C	T	CCDC141	0.06	0	7.9855E-09	32	10.37	0.1684379	5.71E-08	1
rs55646428	16	58899927	A	G	GOT2	-0.03	0	7.9931E-09	0	4.13	0.7641325	2.51E-08	1
rs6746063	2	211768991	A	C	ERBB4	0.04	0	7.9985E-09	40	11.7	0.1110191	1.706E-08	1
rs10838766	11	47787284	C	G	NUP160	-0.03	0	7.9995E-09	0	6.78	0.4521423	2.512E-08	1
rs148668568	16	29344973	A	G	NPIPB11	0.09	0	7.9999E-09	1	7.11	0.4173749	2.654E-08	1

rs4616929	5	120710150	T	A	PRR16	-0.03	0	8E-09	15	8.3	0.3071548	3.576E-08	1
rs9366279	6	19225791	T	A	ID4	0.03	0	8.0047E-09	45	12.74	0.0787567	1.114E-08	2.82955E-09
rs7532447	1	246045055	C	T	SMYD3	-0.03	0	8.007E-09	0	5.71	0.5743455	2.515E-08	1
rs158959	5	58661050	A	G	RAB3C	0.04	0	8.0191E-09	0	3.14	0.8720398	2.518E-08	1
rs10838769	11	47803781	A	G	NUP160	-0.03	0	8.0211E-09	0	6.79	0.4512827	2.519E-08	1
rs7115228	11	47807436	C	T	NUP160	-0.03	0	8.0211E-09	0	6.79	0.4512827	2.519E-08	1
rs7532934	1	246045542	C	T	SMYD3	-0.03	0	8.0235E-09	0	5.71	0.5741647	2.52E-08	1
rs1476679	7	100406823	C	T	ZCWPW1	-0.03	0	8.0237E-09	20	8.77	0.2693391	3.399E-08	1
rs111937633	1	246045616	C	A	SMYD3	-0.03	0	8.0318E-09	0	5.71	0.574085	2.522E-08	1
rs35775568	6	27740201	T	A	HIST1H2BL	-0.04	0	8.0458E-09	0	6.59	0.4728426	2.526E-08	1
rs600627	11	99653098	T	G	CNTN5	-0.03	0	8.046E-09	11	7.94	0.3376904	1.977E-08	1
rs1001880	1	36679201	T	C	GRIK3	0.03	0	8.0463E-09	52	14.66	0.0405643	1.2E-08	3.06717E-09
rs1105023	3	44180859	T	G	TOPAZ1	-0.03	0	8.0581E-09	34	10.69	0.1528741	6.184E-08	1
rs11039414	11	47823031	T	C	NUP160	0.03	0	8.0624E-09	0	6.83	0.4462742	2.532E-08	1
rs6279	11	113410351	G	C	DRD2	-0.03	0	8.0676E-09	0	6.54	0.4783433	2.533E-08	1
rs79095603	2	178929329	C	T	CCDC141	0.06	0	8.0704E-09	32	10.43	0.1654306	5.816E-08	1
rs9882443	3	48711631	G	A	IP6K2	-0.03	0	8.0744E-09	0	7.03	0.4259185	2.533E-08	1
rs11251825	10	3275172	C	T	PITRM1	0.03	0	8.0748E-09	0	6.76	0.4541557	2.535E-08	1
rs10790872	11	99650383	T	G	CNTN5	0.03	0	8.0766E-09	13	8.09	0.3245186	1.942E-08	1
rs59630497	8	87818351	T	C	DCAF4L2	0.04	0	8.0841E-09	0	2.43	0.9323774	2.538E-08	1
rs35930604	4	34039357	C	G	ARAP2	0.06	0	8.0878E-09	6	7.51	0.3773134	2.961E-08	1
rs9468217	6	27758688	G	A	HIST1H2BL	-0.04	0	8.0909E-09	0	6.55	0.4772761	2.54E-08	1
rs62097939	18	53009738	A	G	DCC	0.03	0	8.0947E-09	0	6.57	0.4749031	2.541E-08	1
rs12531813	7	135372394	A	G	CNOT4	-0.03	0	8.1164E-09	60	17.69	0.0134648	3.114E-09	7.27437E-10
rs9524022	13	93366508	G	A	GPC6	0.03	0	8.1183E-09	0	6.29	0.5059933	2.549E-08	1
rs113148293	8	87818634	C	CA	DCAF4L2	0.04	0	8.1204E-09	0	2.43	0.9326165	2.549E-08	1
rs10742820	11	47759505	C	T	FNBP4	-0.03	0	8.1209E-09	0	6.69	0.4619717	2.55E-08	1
rs1563820	11	47811846	A	T	NUP160	-0.03	0	8.1219E-09	0	6.8	0.4497763	2.55E-08	1
rs7681616	4	142885070	C	A	INPP4B	-0.04	0	8.1251E-09	45	12.74	0.0787998	2.171E-08	1
rs141984222	6	153205081	TGA	T	RGS17	0.03	0	8.1275E-09	0	2.08	0.9551015	2.552E-08	1

rs6818484	4	142869463	G	T	INPP4B	-0.04	0	8.1294E-09	44	12.55	0.0839081	2.195E-08	1
rs7747471	6	19254989	C	G	ID4	0.05	0	8.1329E-09	69	23.15	0.0016028	1.546E-09	3.57574E-10
rs112527584	1	246045723	A	G	SMYD3	-0.03	0	8.1379E-09	0	5.71	0.5742728	2.555E-08	1
rs113460334	1	246045730	C	G	SMYD3	-0.03	0	8.1379E-09	0	5.71	0.5742728	2.555E-08	1
rs10924462	1	246047612	A	G	SMYD3	-0.03	0	8.139E-09	0	5.65	0.5805645	2.555E-08	1
rs2815354	1	67017959	A	T	SLC35D1	0.03	0	8.1423E-09	0	4.23	0.7526427	2.556E-08	1
rs7683962	4	142867721	G	A	INPP4B	-0.04	0	8.1435E-09	44	12.55	0.0839836	2.198E-08	1
rs1468447	7	28757338	G	A	CREB5	0.03	0	8.1463E-09	8	7.65	0.3646447	3.486E-08	1
rs610132	11	99715983	A	T	CNTN5	0.04	0	8.1464E-09	0	3.99	0.7811686	2.557E-08	1
rs10484401	6	27778811	A	T	HIST1H2BL	-0.04	0	8.1515E-09	0	6.49	0.4835479	2.559E-08	1
rs114702133	5	58441629	A	G	PLK2	0.07	0	8.154E-09	28	9.86	0.1967257	3.571E-08	1
rs7683364	4	142867411	G	A	INPP4B	-0.04	0	8.1563E-09	44	12.54	0.0841397	2.202E-08	1
rs7819401	8	87819487	A	G	DCAF4L2	0.04	0	8.1568E-09	0	2.42	0.9328064	2.561E-08	1
rs6844759	4	142869376	A	G	INPP4B	-0.04	0	8.1576E-09	44	12.51	0.0849656	2.218E-08	1
rs4752792	11	47794150	G	A	NUP160	-0.03	0	8.158E-09	0	6.8	0.4502054	2.561E-08	1
rs7819427	8	87819537	A	G	DCAF4L2	0.04	0	8.1617E-09	0	2.42	0.9329253	2.562E-08	1
rs7925211	11	47783866	G	C	NUP160	-0.03	0	8.1628E-09	0	6.79	0.4512425	2.562E-08	1
rs11039392	11	47777201	A	G	NUP160	0.03	0	8.1685E-09	0	6.79	0.4512394	2.564E-08	1
rs7101597	11	47776365	A	T	NUP160	0.03	0	8.1685E-09	0	6.79	0.4512394	2.564E-08	1
rs4423749	3	16121106	C	T	GALNT15	-0.03	0	8.1711E-09	0	6.9	0.4390438	2.565E-08	1
rs12127520	1	231070147	G	A	FAM89A	0.03	0	8.1717E-09	0	5.5	0.5988699	2.185E-08	1
rs56066549	8	87817474	C	T	DCAF4L2	0.04	0	8.1737E-09	0	2.42	0.9332557	2.566E-08	1
rs75972606	3	192328051	T	C	FGF12	0.05	0	8.1837E-09	0	2.59	0.9203888	2.569E-08	1
rs10838759	11	47763795	T	C	FNBP4	0.03	0	8.1861E-09	0	6.79	0.4514398	2.57E-08	1
rs11039373	11	47763733	G	C	FNBP4	0.03	0	8.1861E-09	0	6.79	0.4514398	2.57E-08	1
rs2869541	11	47769877	C	T	FNBP4	-0.03	0	8.1869E-09	0	6.79	0.4514645	2.57E-08	1
rs4732127	7	135506410	G	C	CNOT4	-0.03	0	8.192E-09	59	17.29	0.0155962	3.362E-09	7.87664E-10
rs6495247	15	77777089	T	C	LINGO1	0.03	0	8.1953E-09	12	8.01	0.3317087	3.237E-08	1
rs1284464	12	57570834	G	A	KIF5A	-0.03	0	8.2055E-09	0	1.9	0.9653484	2.575E-08	1
rs2683791	3	114378608	A	G	ZBTB20	-0.03	0	8.2067E-09	0	5.61	0.5856477	2.576E-08	1

Table S2

rs6426267	1	246044537	C	T	SMYD3	-0.03	0	8.208E-09	0	5.71	0.5734881	2.576E-08	1
rs2722007	3	114378610	C	G	ZBTB20	-0.03	0	8.2089E-09	0	5.61	0.5856361	2.577E-08	1
rs682120	11	99655702	T	C	CNTN5	-0.03	0	8.217E-09	12	7.96	0.3362228	2.02E-08	1
rs218990	1	36671161	T	G	GRIK3	0.03	0	8.2259E-09	51	14.55	0.0421723	1.362E-08	3.50945E-09
rs60495341	16	73650470	G	T	ZFHX3	0.03	0	8.2278E-09	19	8.67	0.2770136	2.349E-08	1
rs4642489	6	155048624	C	T	TIAM2	-0.03	0	8.236E-09	12	8.01	0.3320154	2.984E-08	1
rs6426265	1	246044376	C	T	SMYD3	-0.03	0	8.2453E-09	0	5.71	0.573531	2.588E-08	1
rs75714073	1	246046058	A	G	SMYD3	-0.03	0	8.2492E-09	0	5.71	0.5735557	2.589E-08	1
rs12065362	1	246045951	C	T	SMYD3	-0.03	0	8.2499E-09	0	5.71	0.5735551	2.589E-08	1
rs1200697540	20	55508698	TAGC	T	CBLN4	-0.06	0	8.2521E-09	22	9.02	0.2513856	4.728E-08	1
rs7520201	1	246043913	G	T	SMYD3	-0.03	0	8.2544E-09	0	5.71	0.5736842	2.59E-08	1
rs7533411	1	246043676	A	G	SMYD3	-0.03	0	8.2547E-09	0	5.71	0.5736862	2.591E-08	1
rs7536171	1	246043667	T	C	SMYD3	-0.03	0	8.2547E-09	0	5.71	0.5736862	2.591E-08	1
rs7118747	11	47867993	C	T	NUP160	-0.03	0	8.2559E-09	0	6.5	0.4831011	2.591E-08	1
rs6595606	5	125281135	A	G	ZNF608	0.04	0	8.2573E-09	44	12.65	0.0810288	4.416E-08	1
rs111581295	11	113128537	CATGGTGA	C	NCAM1	0.04	0	8.2662E-09	18	8.57	0.2853229	2.594E-08	1
rs174550	11	61804006	T	C	FADS1,FADS	0.03	0	8.2694E-09	51	14.5	0.0430348	2.45E-08	1
rs12068913	1	246043294	C	T	SMYD3	-0.03	0	8.2702E-09	0	5.71	0.5742247	2.595E-08	1
rs73074830	3	49539584	A	C	DAG1	-0.03	0	8.2708E-09	0	5.08	0.6504935	2.596E-08	1
rs17732791	4	142814045	A	T	INPP4B	-0.03	0	8.2783E-09	40	11.74	0.1094483	5.082E-08	1
rs2153023	1	246046480	C	T	SMYD3	-0.03	0	8.2794E-09	0	5.71	0.5738145	2.598E-08	1
rs34187306	11	99654894	GA	G	CNTN5	-0.03	0	8.2907E-09	12	7.99	0.3331314	2.022E-08	1
rs56049603	3	49547810	C	G	BSN	0.04	0	8.3038E-09	21	8.9	0.2601087	2.171E-08	1
rs5792235	11	61828850	CA	C	FADS1,FADS	0.03	0	8.3069E-09	45	12.93	0.0737893	2.607E-08	1
rs2584133	15	87439094	T	C	AGBL1	-0.03	0	8.3074E-09	0	3.81	0.8014892	2.607E-08	1
rs10030770	4	142874118	T	C	INPP4B	-0.04	0	8.3189E-09	44	12.56	0.0836039	2.248E-08	1
rs6426268	1	246044691	G	A	SMYD3	-0.03	0	8.3246E-09	0	5.72	0.5730355	2.612E-08	1
rs72787056	16	72065795	C	T	HPR,TXNL4I	0.04	0	8.3271E-09	0	5.8	0.5638046	2.613E-08	1
rs184474340	16	71791853	C	T	AP1G1	0.06	0	8.3366E-09	31	10.16	0.179574	1.508E-08	1
rs2584145	15	87454194	T	G	NTRK3	-0.03	0	8.337E-09	0	3.61	0.8234367	2.616E-08	1

rs34451111	13	93363584	G	A	GPC6	0.03	0	8.3458E-09	0	6.23	0.5129362	2.619E-08	1
rs2922308	2	176614398	A	T	MTX2	-0.04	0	8.3465E-09	0	3.15	0.871236	2.619E-08	1
rs182451512	8	87822998	C	T	DCAF4L2	0.04	0	8.3534E-09	0	2.34	0.9383412	2.621E-08	1
rs34983219	11	113399320	G	A	ANKK1	-0.06	0	8.3619E-09	0	4.8	0.6837841	2.623E-08	1
rs679179	11	99655050	G	A	CNTN5	-0.03	0	8.3679E-09	12	8	0.3326758	2.038E-08	1
rs678818	11	99655111	A	G	CNTN5	-0.03	0	8.3703E-09	12	8	0.3326662	2.039E-08	1
rs9830950	3	61136645	C	T	FHIT	0.03	0	8.3715E-09	0	5.46	0.603812	2.626E-08	1
rs684888	11	99655106	T	C	CNTN5	-0.03	0	8.377E-09	12	8	0.3326422	2.04E-08	1
rs55967339	1	37638784	A	G	RSPO1	-0.03	0	8.379E-09	14	8.21	0.3146998	2.6E-08	1
rs55967019	11	99651228	CACAA	C	CNTN5	-0.03	0	8.3803E-09	12	8.01	0.3319979	2.037E-08	1
rs174562	11	61817672	A	G	FADS1,FADS	0.03	0	8.388E-09	51	14.36	0.0451003	2.483E-08	1
rs12596337	16	58909607	G	A	GOT2	-0.03	0	8.3927E-09	0	3.87	0.7948589	2.633E-08	1
rs12924654	16	7697932	C	T	RBFOX1	-0.03	0	8.3974E-09	58	17.06	0.0170438	4.56E-08	1
rs10842287	12	24162070	A	T	SOX5	-0.03	0	8.4004E-09	0	4.61	0.7070439	2.635E-08	1
rs34995835	7	100392741	T	G	PILRA	-0.03	0	8.4006E-09	20	8.82	0.2657384	3.556E-08	1
rs10891797	11	115097182	T	G	CADM1	-0.03	0	8.403E-09	52	14.89	0.0374748	4.34E-08	1
rs1334032	9	11092481	T	C	PTPRD	-0.03	0	8.408E-09	0	6.39	0.4945135	2.638E-08	1
rs75209341	2	178941849	G	A	CCDC141	0.06	0	8.4131E-09	32	10.34	0.1701867	6.09E-08	1
rs628694	11	99651483	T	A	CNTN5	-0.03	0	8.419E-09	12	8.02	0.3309987	2.048E-08	1
rs629219	11	99651323	A	G	CNTN5	-0.03	0	8.419E-09	12	8.02	0.3309987	2.048E-08	1
rs140992383	2	74814102	C	CAGGT	HK2	-0.09	0	8.4261E-09	59	17.42	0.01489	2.643E-08	1
rs9468350	6	28351330	A	G	ZKSCAN3,ZS	-0.04	0	8.4294E-09	0	3.38	0.8474271	2.644E-08	1
rs61708995	9	11189662	C	CA	PTPRD	-0.04	0	8.4461E-09	19	8.7	0.2752328	4.381E-08	1
rs1992418	4	142816006	G	A	INPP4B	-0.03	0	8.4465E-09	39	11.59	0.1147485	5.238E-08	1
rs3130805	6	29338679	G	A	OR5V1	-0.05	0	8.4537E-09	21	8.96	0.2558308	4.909E-08	1
rs4858830	3	48696569	T	C	IP6K2	-0.03	0	8.4605E-09	0	7.04	0.4252351	2.648E-08	1
rs113594988	3	133067234	T	C	TMEM108	-0.06	0	8.4608E-09	0	3.38	0.8481775	2.654E-08	1
rs72673176	8	87854563	G	C	DCAF4L2	0.04	0	8.462E-09	0	0.47	0.9995441	2.654E-08	1
rs10924463	1	246047734	A	G	SMYD3	-0.03	0	8.466E-09	0	5.65	0.5805831	2.655E-08	1
rs112662521	3	133068762	A	C	TMEM108	-0.06	0	8.467E-09	0	3.38	0.847931	2.656E-08	1

rs10959602	9	11189845	T	C	PTPRD	-0.04	0	8.469E-09	19	8.7	0.2752106	4.393E-08	1
rs34531032	16	71811950	C	T	AP1G1	0.03	0	8.4723E-09	31	10.15	0.1804277	1.746E-08	1
rs10802322	1	246047763	A	G	SMYD3	-0.03	0	8.4753E-09	0	5.66	0.5801761	2.658E-08	1
rs6801211	3	48736987	C	G	IP6K2	-0.04	0	8.4767E-09	0	6.35	0.4993944	2.655E-08	1
rs117315995	16	72847050	C	T	ZFHX3	0.06	0	8.4777E-09	23	9.14	0.2428448	1.994E-08	1
rs76331187	11	113129502	A	G	NCAM1	0.04	0	8.4851E-09	18	8.55	0.2867934	2.661E-08	1
rs7982302	13	28791341	A	T	MTUS2	-0.03	0	8.4907E-09	0	4.52	0.7180025	2.663E-08	1
rs11583361	1	230451696	G	A	PGBD5	0.03	0	8.4981E-09	29	9.9	0.1944857	6.499E-08	1
rs34606033	4	142882496	C	T	INPP4B	-0.04	0	8.4992E-09	44	12.6	0.0824202	2.289E-08	1
rs62475248	7	157703969	C	T	PTPRN2	-0.05	0	8.5072E-09	0	5.51	0.5975854	2.668E-08	1
rs2815369	1	67035211	T	C	SLC35D1	0.03	0	8.5081E-09	0	4.28	0.7466812	2.668E-08	1
rs694478	11	99656025	G	T	CNTN5	-0.03	0	8.5096E-09	12	8	0.3327354	2.069E-08	1
rs10915971	1	226320944	C	T	LIN9	-0.03	0	8.5102E-09	0	5.51	0.5982421	2.669E-08	1
rs6806356	3	48690203	G	A	IP6K2	-0.03	0	8.5132E-09	0	6.98	0.4308921	2.665E-08	1
rs17151147	8	10125859	C	A	MSRA	0.03	0	8.5223E-09	0	2.51	0.9265781	2.673E-08	1
rs1043020	5	58454088	G	A	PLK2	0.07	0	8.5254E-09	29	9.92	0.1933087	3.745E-08	1
rs28452679	7	135741960	G	T	FAM180A	-0.04	0	8.5256E-09	0	6.66	0.4655634	2.407E-08	1
rs2341040	4	59271200	A	T	ADGRL3	-0.04	0	8.5277E-09	0	5.15	0.6415206	2.674E-08	1
rs9848268	3	48724838	C	T	IP6K2	-0.03	0	8.5331E-09	3	7.24	0.4044848	2.676E-08	1
rs7745768	6	29347187	C	T	OR5V1	-0.05	0	8.5347E-09	21	8.95	0.2565051	4.946E-08	1
rs35590258	4	59271176	CCAAA	C	ADGRL3	-0.04	0	8.5376E-09	0	5.15	0.6416796	2.677E-08	1
rs58855494	4	46408829	G	A	GABRA2	0.04	0	8.541E-09	0	4.8	0.6845749	2.678E-08	1
rs6442129	3	48697823	T	C	IP6K2	-0.03	0	8.5446E-09	0	7.03	0.4255116	2.674E-08	1
rs2722006	3	114378658	T	C	ZBTB20	-0.03	0	8.5518E-09	0	5.59	0.588362	2.682E-08	1
rs11100760	4	142811466	T	G	INPP4B	-0.03	0	8.5532E-09	33	10.54	0.1602265	4.801E-08	1
rs201768680	2	161414140	T	TGAGGGCA	TBR1	-0.07	0	8.5577E-09	11	7.89	0.3428232	3.958E-08	1
rs315413	6	153204027	T	C	RGS17	0.03	0	8.5622E-09	0	2.05	0.9572205	2.685E-08	1
rs320483	1	213471074	A	G	RPS6KC1	0.04	0	8.5625E-09	21	8.87	0.2621534	4.871E-08	1
rs635067	11	99656565	C	T	CNTN5	-0.03	0	8.5722E-09	12	7.99	0.3336355	2.087E-08	1
rs10938444	4	46501773	T	C	GABRA2	0.04	0	8.5735E-09	0	5.25	0.629414	2.688E-08	1

rs1617992	11	99659049	G	A	CNTN5	-0.03	0	8.5983E-09	12	8	0.3330179	2.092E-08	1
rs146877949	2	123995880	C	T	CNTNAP5	0.08	0	8.5998E-09	9	7.73	0.3573003	3.084E-08	1
rs13259744	8	86948575	T	C	CNBD1	0.03	0	8.6037E-09	0	3.97	0.7835778	2.698E-08	1
rs150254595	6	29310629	G	A	OR14J1	-0.05	0	8.6057E-09	20	8.76	0.270256	4.842E-08	1
rs11783526	8	86947508	C	T	CNBD1	0.03	0	8.6077E-09	0	3.97	0.7835918	2.699E-08	1
rs56964	1	213481163	G	A	RPS6KC1	0.04	0	8.6101E-09	19	8.66	0.2777289	4.663E-08	1
rs7822655	8	86945984	T	C	CNBD1	0.03	0	8.6305E-09	0	3.98	0.7818875	2.706E-08	1
rs678693	11	99659410	G	C	CNTN5	-0.03	0	8.6535E-09	12	8	0.3326422	2.106E-08	1
rs2722005	3	114378713	T	A	ZBTB20	-0.03	0	8.6588E-09	0	5.64	0.5817891	2.715E-08	1
rs7518613	1	59948218	T	C	CYP2J2	0.04	0	8.6725E-09	32	10.3	0.1720909	5.453E-08	1
rs7680006	4	142884256	C	T	INPP4B	-0.04	0	8.6775E-09	44	12.62	0.0819476	2.334E-08	1
rs73792935	5	137609406	G	C	KLHL3	0.09	0	8.6777E-09	39	11.66	0.1124018	2.005E-08	1
rs7504478	18	53003289	C	T	DCC	0.03	0	8.6794E-09	0	6.66	0.465469	2.721E-08	1
rs9813263	3	196342613	G	C	TM4SF19	-0.03	0	8.6834E-09	0	4.81	0.6826346	2.722E-08	1
rs1348258	15	87436839	G	A	AGBL1	-0.03	0	8.6865E-09	0	3.9	0.7912814	2.723E-08	1
rs116103488	6	153205084	A	C	RGS17	0.03	0	8.6882E-09	0	2.04	0.9576056	2.724E-08	1
rs13058822	3	44690238	G	A	ZNF502	0.03	0	8.6983E-09	0	6.64	0.466782	2.727E-08	1
rs2348369	15	87377332	G	A	AGBL1	-0.03	0	8.7019E-09	0	4.21	0.7551076	2.728E-08	1
rs9368043	6	19224674	C	T	ID4	0.03	0	8.706E-09	45	12.73	0.0788928	1.208E-08	3.06717E-09
rs12065447	1	246046175	C	T	SMYD3	-0.03	0	8.7076E-09	0	5.79	0.5644111	2.73E-08	1
rs34816482	4	59271131	C	CA	ADGRL3	-0.04	0	8.7107E-09	0	5.16	0.6408566	2.73E-08	1
rs13097653	3	44698340	T	C	ZNF502	0.03	0	8.7118E-09	0	6.73	0.457266	2.731E-08	1
rs200943290	4	59271135	T	A	ADGRL3	-0.04	0	8.7124E-09	0	5.16	0.6408638	2.731E-08	1
rs112396704	11	47910185	G	A	NUP160	-0.04	0	8.72E-09	0	3.74	0.8087113	2.733E-08	1
rs1014779	6	33308689	G	A	TAPBP	0.03	0	8.7236E-09	15	8.28	0.308593	3.641E-08	1
rs3773065	3	29539495	T	C	RBMS3,RP11	-0.07	0	8.7285E-09	0	6.68	0.4632096	2.736E-08	1
rs7919534	10	24340266	C	T	KIAA1217	0.03	0	8.7464E-09	0	4.53	0.7174645	2.741E-08	1
rs9257761	6	29351572	C	A	OR5V1	-0.05	0	8.7509E-09	21	8.92	0.2583418	5.042E-08	1
rs7560060	2	27834657	T	C	MRPL33,RBF	-0.03	0	8.7525E-09	0	5.55	0.5926851	2.743E-08	1
rs12463914	2	27834492	C	T	MRPL33,RBF	-0.03	0	8.7528E-09	0	5.55	0.5926863	2.743E-08	1

Table S2

rs77320730	2	178875644	G	A	CCDC141	0.06	0	8.7565E-09	12	8.01	0.3314472	3.783E-08	1
rs36089043	8	86946709	TTAA	T	CNBD1	0.03	0	8.7615E-09	0	3.97	0.7826981	2.746E-08	1
rs149289131	7	42833171	G	A	C7orf25	-0.09	0	8.7615E-09	0	5.96	0.5445053	2.746E-08	1
rs7553303	1	79765194	C	G	ADGRL4	-0.03	0	8.7648E-09	0	4.96	0.6647297	2.747E-08	1
rs9456814	6	162852161	A	G	PACRG	-0.03	0	8.7683E-09	0	3.68	0.8157581	2.748E-08	1
rs113703017	11	99656525	G	GAAGA	CNTN5	-0.03	0	8.7738E-09	12	8.02	0.3309329	2.128E-08	1
rs11709024	3	44686061	G	A	ZNF35	0.03	0	8.7808E-09	0	6.66	0.4648456	2.752E-08	1
rs67485053	3	49367731	A	G	RHOA	-0.03	0	8.7879E-09	0	6.41	0.4927072	2.752E-08	1
rs608806	11	99671185	C	T	CNTN5	-0.03	0	8.7902E-09	30	10.14	0.1809918	1.602E-08	1
rs7950674	11	47849465	T	C	NUP160	0.03	0	8.7996E-09	0	6.47	0.4855617	2.758E-08	1
rs284974	16	77114471	A	G	MON1B	0.03	0	8.8013E-09	0	4.48	0.7226611	2.758E-08	1
rs10838782	11	47856248	A	G	NUP160	0.03	0	8.8042E-09	0	6.49	0.4834635	2.759E-08	1
rs728711	1	230450044	A	G	PGBD5	0.03	0	8.8164E-09	28	9.85	0.1974483	6.656E-08	1
rs12530210	6	123914771	C	T	NKAIN2	0.03	0	8.8204E-09	0	3.78	0.8048497	2.764E-08	1
rs2304270	12	71580007	C	G	LGR5	0.04	0	8.833E-09	0	4.19	0.7573291	2.768E-08	1
rs2744239	6	25356122	A	G	LRRC16A	-0.08	0	8.833E-09	0	6.31	0.5043413	2.768E-08	1
rs7986338	13	28788471	G	T	MTUS2	-0.03	0	8.8348E-09	0	4.59	0.7102616	2.769E-08	1
rs11587142	1	231039252	A	G	FAM89A	0.03	0	8.8354E-09	0	4.13	0.7643719	2.769E-08	1
rs9506049	13	28816004	G	C	MTUS2	-0.03	0	8.8417E-09	0	1.7	0.9743759	2.771E-08	1
rs7165939	15	87364383	G	A	AGBL1	-0.07	0	8.843E-09	31	10.28	0.1730904	2.354E-08	1
rs79250542	13	28788025	C	T	MTUS2	-0.05	0	8.8455E-09	14	8.16	0.3184504	3.531E-08	1
rs11585662	1	230452054	A	G	PGBD5	0.03	0	8.8463E-09	29	9.92	0.1931895	6.782E-08	1
rs13058913	3	44690521	A	T	ZNF502	0.03	0	8.8704E-09	0	6.66	0.4650486	2.779E-08	1
rs6936741	6	47264876	A	G	TNFRSF21	0.03	0	8.8724E-09	0	4.21	0.7554161	2.78E-08	1
rs219012	1	36671598	C	T	GRIK3	0.03	0	8.8798E-09	51	14.44	0.0438752	1.478E-08	3.80565E-09
rs9839520	3	44694282	G	C	ZNF502	0.03	0	8.9084E-09	0	6.65	0.4656649	2.791E-08	1
rs147269275	4	46403391	CAACTGGG	C	GABRA2	0.04	0	8.9117E-09	0	4.85	0.6788464	2.792E-08	1
rs57404010	4	59268292	C	A	ADGRL3	-0.04	0	8.9123E-09	0	5.16	0.6410478	2.792E-08	1
rs501200	6	153204964	A	G	RGS17	0.03	0	8.9181E-09	0	2.02	0.9585325	2.794E-08	1
rs28851549	3	44693698	C	T	ZNF502	0.03	0	8.9291E-09	0	6.66	0.4655775	2.797E-08	1

rs12144675	1	246186679	G	A	SMYD3	-0.03	0	8.9355E-09	31	10.24	0.1752802	2.556E-08	1
rs1404456	8	86952445	A	G	CNBD1	0.03	0	8.9421E-09	0	3.86	0.7960142	2.801E-08	1
rs9257779	6	29360739	A	G	OR5V1	-0.05	0	8.9433E-09	21	8.89	0.2604218	5.119E-08	1
rs587925	11	99650100	A	G	CNTN5	-0.03	0	8.9484E-09	13	8.12	0.3218076	2.161E-08	1
rs61821362	1	214329887	T	C	SMYD2	-0.05	0	8.9517E-09	41	11.91	0.1034571	8.111E-09	2.05178E-09
rs622828	6	153204810	A	G	RGS17	0.03	0	8.9541E-09	0	2.02	0.958679	2.805E-08	1
rs79052819	6	93595280	A	C	EPHA7	-0.05	0	8.9755E-09	36	10.95	0.1410301	4.635E-08	1
rs111366684	14	105451333	C	G	MTA1	0.08	0	8.9816E-09	17	8.49	0.2915585	2.688E-08	1
rs1683405	16	77112374	G	A	MON1B	0.03	0	8.9954E-09	0	4.41	0.7321017	2.818E-08	1
rs4346585	3	44695001	T	C	ZNF502	0.03	0	9.0074E-09	0	6.66	0.4655858	2.821E-08	1
rs13265084	8	14645316	A	C	SGCZ	0.03	0	9.0105E-09	0	4.63	0.7053676	2.822E-08	1
rs761716	1	36671132	C	G	GRIK3	0.03	0	9.0134E-09	51	14.44	0.0438856	1.505E-08	3.90998E-09
rs10489700	1	230450756	C	A	PGBD5	0.03	0	9.015E-09	29	9.92	0.1929342	6.9E-08	1
rs11157330	14	42984831	A	G	LRFN5	0.05	0	9.0199E-09	32	10.31	0.1717508	2.476E-08	1
rs11088193	21	31914280	T	G	HUNK	0.03	0	9.022E-09	27	9.59	0.2130677	4.511E-08	1
rs12617171	2	27815932	C	T	MRPL33,RBI	-0.03	0	9.0234E-09	0	5.32	0.6206962	2.826E-08	1
rs1615146	1	208245227	T	C	PLXNA2	-0.03	0	9.0341E-09	0	3.52	0.8328147	2.83E-08	1
rs4666021	2	27833014	A	G	MRPL33,RBI	-0.03	0	9.0346E-09	0	5.55	0.5929862	2.83E-08	1
rs634583	11	99656446	C	T	CNTN5	-0.03	0	9.0348E-09	11	7.95	0.3369207	2.21E-08	1
rs145520076	17	68024495	G	A	KPNA2	0.03	0	9.0449E-09	46	13.13	0.0691054	7.887E-08	1
rs544211667	6	26538128	G	GT	HMGN4	0.03	0	9.0449E-09	0	3.22	0.8634953	2.833E-08	1
rs315419	6	153202248	A	G	RGS17	0.03	0	9.0521E-09	0	2.01	0.959315	2.835E-08	1
rs6426269	1	246044793	G	A	SMYD3	-0.03	0	9.0552E-09	0	5.74	0.570994	2.836E-08	1
rs6064124	20	54871588	C	T	DOK5	-0.03	0	9.056E-09	0	4.97	0.6636556	2.836E-08	1
rs2348368	15	87377235	G	A	AGBL1	-0.03	0	9.0585E-09	0	4.15	0.7626046	2.837E-08	1
rs4653743	1	226465777	G	T	PARP1	-0.03	0	9.0609E-09	47	13.44	0.0621782	3.255E-08	1
rs7269132	20	54876635	T	G	DOK5	-0.03	0	9.0648E-09	0	4.96	0.6653053	2.839E-08	1
rs11416838	11	99716025	T	TA	CNTN5	0.04	0	9.0664E-09	0	4	0.7797233	2.839E-08	1
rs174545	11	61801834	C	G	FADS1,FADS	0.03	0	9.0778E-09	51	14.47	0.0434572	2.704E-08	1
rs7610519	3	48708994	C	G	IP6K2	-0.03	0	9.0847E-09	0	6.96	0.4331085	2.841E-08	1

rs11933545	4	59233064	T	C	ADGRL3	-0.04	0	9.0991E-09	0	5.23	0.6322994	2.849E-08	1
rs6848835	4	59233306	A	T	ADGRL3	-0.04	0	9.0991E-09	0	5.23	0.6322994	2.849E-08	1
rs10959620	9	11208711	A	G	PTPRD	-0.04	0	9.1015E-09	23	9.1	0.2455415	5.171E-08	1
rs1119211	6	28341359	G	C	ZSCAN31	-0.04	0	9.1024E-09	0	2.9	0.894023	2.85E-08	1
rs76693511	2	176605908	T	C	MTX2	-0.04	0	9.1067E-09	0	3.26	0.8601394	2.852E-08	1
rs7349512	3	35701566	G	A	ARPP21	0.03	0	9.1094E-09	24	9.27	0.2336951	4.347E-08	1
rs3749570	4	15065956	T	G	CPEB2	-0.03	0	9.115E-09	0	5.35	0.6176695	2.854E-08	1
rs6936624	6	19298183	T	A	ID4	0.03	0	9.1155E-09	55	15.67	0.0282596	1.105E-08	2.82955E-09
rs6550631	3	18761390	T	C	SATB1	0.03	0	9.1183E-09	6	7.48	0.3805202	3.228E-08	1
rs62302678	4	46400317	C	T	GABRA2	0.04	0	9.1234E-09	0	4.81	0.682602	2.857E-08	1
rs11039345	11	47698676	A	G	AGBL2	0.03	0	9.1355E-09	0	6.61	0.4708138	2.861E-08	1
rs17151140	8	10124595	C	T	MSRA	0.03	0	9.1367E-09	0	2.78	0.904373	2.861E-08	1
rs72694288	9	11186828	A	C	PTPRD	-0.04	0	9.1385E-09	19	8.73	0.2723828	4.741E-08	1
rs958026	20	54891429	A	T	DOK5	-0.03	0	9.1399E-09	0	5.09	0.6491933	2.862E-08	1
rs320481	1	213469121	T	G	RPS6KC1	0.04	0	9.1439E-09	21	8.9	0.259723	5.233E-08	1
rs5814290	15	87451737	T	TA	NTRK3	-0.03	0	9.1491E-09	0	3.64	0.8205896	2.865E-08	1
rs3922717	6	27063145	A	G	HIST1H2BJ	-0.03	0	9.1515E-09	0	3.24	0.8616774	2.866E-08	1
rs12720495	1	186853613	T	C	PLA2G4A	-0.03	0	9.1548E-09	27	9.64	0.2096055	5.555E-08	1
rs75919753	2	176605444	T	G	MTX2	-0.04	0	9.1586E-09	0	3.26	0.8599968	2.868E-08	1
rs16873813	8	87828545	T	G	DCAF4L2	0.04	0	9.1837E-09	0	0.39	0.9997614	2.875E-08	1
rs62055612	17	5737647	G	A	WSCD1	-0.03	0	9.1958E-09	0	4.76	0.6888194	2.879E-08	1
rs320485	1	213473223	T	C	RPS6KC1	0.04	0	9.1983E-09	20	8.85	0.2636082	5.273E-08	1
rs12961146	18	52292697	C	T	DCC	-0.05	0	9.2041E-09	0	6.49	0.4838282	2.814E-08	1
rs17000338	20	54891561	C	T	DOK5	-0.03	0	9.2138E-09	0	5.09	0.6489832	2.885E-08	1
rs12380100	9	11187013	G	A	PTPRD	-0.04	0	9.2142E-09	19	8.73	0.2722848	4.781E-08	1
rs10015057	4	142994250	T	C	INPP4B	-0.04	0	9.2143E-09	48	13.72	0.0564667	1.916E-08	1
rs189628481	17	68024502	C	T	KPNA2	0.03	0	9.2184E-09	46	13.14	0.068815	8.013E-08	1
rs192988621	17	68024504	C	T	KPNA2	0.03	0	9.2184E-09	46	13.14	0.068815	8.013E-08	1
rs183763906	17	68024506	C	T	KPNA2	0.03	0	9.2184E-09	46	13.14	0.0688147	8.013E-08	1
rs200026262	17	68024507	A	G	KPNA2	0.03	0	9.2184E-09	46	13.14	0.0688147	8.013E-08	1

rs7977936	12	97406298	C	T	NEDD1	0.03	0	9.2324E-09	0	5.6	0.5874097	2.89E-08	1
rs190669592	6	39736998	C	T	KIF6	0.1	0	9.2472E-09	0	3.04	0.8816143	2.895E-08	1
rs72694287	9	11186820	C	A	PTPRD	-0.04	0	9.2475E-09	19	8.74	0.2721562	4.799E-08	1
rs14018	3	48746837	G	A	PRKAR2A	-0.04	0	9.2479E-09	0	6.27	0.5082868	2.864E-08	1
rs4714290	6	40035763	T	C	MOCS1	-0.03	0	9.2705E-09	8	7.67	0.3625025	2.577E-08	1
rs6537131	4	142880194	C	G	INPP4B	-0.04	0	9.273E-09	43	12.47	0.0860832	2.554E-08	1
rs6442131	3	48745140	C	A	PRKAR2A	-0.04	0	9.2749E-09	0	6.32	0.5031682	2.867E-08	1
rs178364	6	153200571	G	C	RGS17	0.03	0	9.2778E-09	0	1.99	0.9603229	2.904E-08	1
rs4714291	6	40035893	G	A	MOCS1	-0.03	0	9.278E-09	8	7.67	0.3625695	2.58E-08	1
rs62534170	9	1846000	C	G	SMARCA2	0.07	0	9.2805E-09	0	5.05	0.6543105	2.905E-08	1
rs284976	16	77115023	A	G	MON1B	0.03	0	9.3053E-09	0	4.55	0.7149056	2.913E-08	1
rs7136263	12	24257305	A	G	SOX5	0.03	0	9.3055E-09	0	3.77	0.8063172	2.913E-08	1
rs78562826	16	76979394	A	G	RP11-58C22.	0.04	0	9.3116E-09	0	5.81	0.5618236	2.915E-08	1
rs11039377	11	47768224	C	T	FNBP4	0.03	0	9.3208E-09	0	6.81	0.4485554	2.917E-08	1
rs936749	8	10118511	A	G	MSRA	0.03	0	9.3216E-09	0	2.25	0.944455	2.918E-08	1
rs1942490	11	89091008	C	T	GRM5	0.03	0	9.3302E-09	60	17.89	0.0124662	1.642E-08	1
rs7138805	12	60566383	G	C	SLC16A7	-0.03	0	9.3605E-09	57	16.61	0.0200624	2.337E-08	1
rs4988606	7	100628789	A	T	TFR2	-0.04	0	9.3681E-09	0	5.27	0.626454	2.932E-08	1
rs10259095	7	132791650	A	G	CHCHD3	0.04	0	9.3793E-09	0	3.59	0.825962	2.935E-08	1
rs137978402	11	47807835	G	GTATAA	NUP160	0.03	0	9.3824E-09	0	6.79	0.450919	2.936E-08	1
rs74478726	4	142996331	T	G	INPP4B	-0.04	0	9.389E-09	48	13.71	0.0565586	1.95E-08	1
rs12423855	12	60562280	T	C	SLC16A7	-0.03	0	9.3918E-09	57	16.62	0.0200518	2.344E-08	1
rs11189503	10	98176188	A	C	R3HCC1L	0.03	0	9.394E-09	38	11.38	0.1226915	4.834E-08	1
rs7437066	4	142996135	G	C	INPP4B	-0.04	0	9.3945E-09	48	13.71	0.0565218	1.95E-08	1
rs165815	22	19971950	C	T	ARVCF	0.04	0	9.3968E-09	0	6.33	0.5022967	2.941E-08	1
rs11131349	4	59232548	G	T	ADGRL3	-0.04	0	9.4076E-09	0	5.23	0.6318997	2.944E-08	1
rs62084669	17	68028054	A	G	KPNA2	0.03	0	9.4091E-09	46	13.05	0.070974	8.307E-08	1
rs8076753	17	68026725	G	A	KPNA2	0.03	0	9.4091E-09	46	13.05	0.070974	8.307E-08	1
rs987399	4	15058363	A	G	CPEB2	-0.03	0	9.4098E-09	0	5.38	0.6142891	2.945E-08	1
rs1349999	4	15058364	A	G	CPEB2	-0.03	0	9.4105E-09	0	5.38	0.6142867	2.945E-08	1

rs7405987	17	68025278	A	G	KPNA2	0.03	0	9.4215E-09	46	13.11	0.0694264	8.307E-08	1
rs531106	11	128800413	T	C	FLI1	-0.03	0	9.444E-09	0	5.52	0.5964337	2.955E-08	1
rs12376660	9	11185487	A	G	PTPRD	-0.04	0	9.4486E-09	19	8.65	0.2785927	4.833E-08	1
rs59207179	4	59265785	C	CA	ADGRL3	-0.04	0	9.4519E-09	0	5.06	0.6525148	2.958E-08	1
rs10959614	9	11205022	G	C	PTPRD	-0.04	0	9.4544E-09	23	9.12	0.243976	5.399E-08	1
rs4788199	16	29959536	C	G	TMEM219	-0.03	0	9.4599E-09	28	9.85	0.1974098	4.514E-08	1
rs56324858	3	49506796	A	G	DAG1	0.04	0	9.4639E-09	22	9.04	0.2500496	2.413E-08	1
rs3020399	6	151961171	A	G	ESR1	-0.03	0	9.4655E-09	21	8.87	0.2619052	3.817E-08	1
rs78640478	2	178850633	T	C	CCDC141	0.06	0	9.4682E-09	12	7.96	0.336416	4.018E-08	1
rs12127455	1	214326381	C	T	SMYD2	-0.05	0	9.4771E-09	42	12.23	0.0933159	7.431E-09	1.84395E-09
rs35828961	1	88331750	AG	A	PKN2	0.03	0	9.4964E-09	0	2.46	0.9303335	2.971E-08	1
rs9556979	13	98589253	T	G	STK24	0.03	0	9.4982E-09	45	12.96	0.0730357	1.444E-08	3.70417E-09
rs4758869	12	60563012	A	C	SLC16A7	-0.03	0	9.4982E-09	57	16.62	0.0200382	2.368E-08	1
rs7263291	20	54874165	T	C	DOK5	-0.03	0	9.507E-09	0	4.89	0.6730499	2.974E-08	1
rs72631011	4	59269972	G	A	ADGRL3	-0.04	0	9.5261E-09	0	5.02	0.6575475	2.98E-08	1
rs11173529	12	60576122	C	G	SLC16A7	-0.03	0	9.5333E-09	57	16.6	0.0201801	2.42E-08	1
rs9468220	6	27765197	C	T	HIST1H2BL	-0.04	0	9.535E-09	0	6.43	0.4910135	2.983E-08	1
rs72631013	4	59270132	C	T	ADGRL3	-0.04	0	9.5421E-09	0	5.02	0.6578996	2.985E-08	1
rs16874026	8	87843679	C	T	DCAF4L2	0.04	0	9.5438E-09	0	0.39	0.9997568	2.986E-08	1
rs1606263	20	54870931	T	C	DOK5	-0.03	0	9.5446E-09	0	4.89	0.6738449	2.986E-08	1
rs7267461	20	54876392	T	C	DOK5	-0.03	0	9.5447E-09	0	4.9	0.6724383	2.986E-08	1
rs6796790	3	48742884	G	A	PRKAR2A	-0.04	0	9.5453E-09	0	6.27	0.5086052	2.956E-08	1
rs11965538	6	28272137	G	A	RP5-874C20.8	-0.05	0	9.5511E-09	34	10.77	0.1491832	9.579E-08	1
rs376078132	4	142996302	A	C	INPP4B	-0.04	0	9.5568E-09	48	13.71	0.0564955	1.98E-08	1
rs371833608	4	142996300	A	G	INPP4B	-0.04	0	9.5573E-09	48	13.71	0.05649	1.98E-08	1
rs2679090	15	87411024	G	T	AGBL1	-0.03	0	9.5725E-09	0	4.09	0.769287	2.994E-08	1
rs61824821	1	230456280	C	A	PGBD5	0.03	0	9.577E-09	30	10.09	0.183407	7.567E-08	1
rs10959619	9	11207039	C	G	PTPRD	-0.04	0	9.5849E-09	23	9.09	0.2459997	5.434E-08	1
rs9878943	3	49397221	G	A	RHOA	-0.03	0	9.5998E-09	0	6.56	0.4758684	3.001E-08	1
rs2317914	13	112172921	C	T	SOX1	0.04	0	9.6005E-09	0	1.1	0.9930131	3.003E-08	1

rs12331654	4	142995406	T	C	INPP4B	-0.04	0	9.6051E-09	49	13.73	0.0562774	1.988E-08	1
rs992981	20	54888021	A	G	DOK5	-0.03	0	9.6078E-09	0	5	0.6598053	3.005E-08	1
rs61909174	11	99999721	A	G	CNTN5	0.04	0	9.6125E-09	42	12.21	0.0939954	2.009E-08	1
rs58143939	11	118772020	GT	G	DDX6	-0.03	0	9.656E-09	25	9.35	0.228477	5.677E-08	1
rs16843093	1	198447545	A	G	ATP6V1G3	0.06	0	9.6589E-09	51	14.48	0.0432803	5.433E-08	1
rs4814820	20	19014188	G	A	SLC24A3	-0.04	0	9.6936E-09	0	5.77	0.5669468	3.031E-08	1
rs1800838	6	33304764	A	T	TAPBP	0.03	0	9.7067E-09	14	8.22	0.313216	4.006E-08	1
rs6711924	2	173479628	T	G	CDCA7	-0.03	0	9.7325E-09	0	5.51	0.5976482	3.043E-08	1
rs111456762	3	19496467	T	A	KCNH8	0.06	0	9.7351E-09	38	11.43	0.1209051	4.647E-08	1
rs11947589	4	59232256	C	A	ADGRL3	-0.04	0	9.7423E-09	0	5.2	0.6349909	3.046E-08	1
rs72673163	8	87832428	A	G	DCAF4L2	0.04	0	9.7482E-09	0	0.4	0.9997324	3.048E-08	1
rs4500754	16	30365370	G	A	TBC1D10B	-0.06	0	9.7662E-09	0	1.09	0.9932519	3.054E-08	1
rs6734125	2	178950956	C	T	CCDC141	0.06	0	9.7814E-09	33	10.57	0.1585887	7.261E-08	1
rs3020397	6	151960449	A	G	ESR1	-0.03	0	9.7851E-09	21	8.89	0.2608208	3.964E-08	1
rs3885019	8	87826240	G	T	DCAF4L2	0.04	0	9.7941E-09	0	0.41	0.9997198	3.062E-08	1
rs78294873	14	42984960	T	C	LRFN5	0.05	0	9.7964E-09	30	10.11	0.1822172	2.728E-08	1
rs41279716	1	109270888	A	T	CELSR2	-0.04	0	9.81E-09	56	16.26	0.0228411	6.231E-08	1
rs12959805	18	52289442	A	C	DCC	-0.05	0	9.8278E-09	0	6.53	0.4799174	2.996E-08	1
rs67679715	8	87834656	C	G	DCAF4L2	0.04	0	9.8395E-09	0	0.4	0.9997331	3.076E-08	1
rs10489699	1	230452163	G	C	PGBD5	0.03	0	9.8406E-09	30	10.14	0.1806573	7.792E-08	1
rs9458641	6	162741540	A	T	PACRG	0.03	0	9.8446E-09	0	6.87	0.4421595	3.078E-08	1
rs9322313	6	151296185	C	T	AKAP12	-0.03	0	9.8555E-09	26	9.57	0.2144092	1.322E-08	3.41605E-09
rs74163407	1	246114905	CAGGCGTG	C	SMYD3	0.03	0	9.8565E-09	0	5.99	0.5414201	2.998E-08	1
rs9516222	13	93325443	T	G	GPC6	0.03	0	9.8596E-09	0	5.96	0.5443895	3.082E-08	1
rs143737680	8	87858639	G	T	DCAF4L2	0.04	0	9.8648E-09	0	0.51	0.9993924	3.084E-08	1
rs10986629	9	125192365	T	G	PPP6C	0.03	0	9.8696E-09	0	4.91	0.670947	3.085E-08	1
rs12115063	8	10114149	C	A	MSRA	0.03	0	9.8831E-09	0	2.8	0.9026591	3.089E-08	1
rs4729600	7	100639734	T	C	TFR2	-0.04	0	9.8892E-09	0	5.03	0.6559845	3.091E-08	1
rs7212192	17	45200285	T	C	FMNL1	-0.03	0	9.9072E-09	23	9.17	0.2407793	4.222E-08	1
rs5781431	1	226457644	TC	T	PARP1	-0.03	0	9.9073E-09	46	13.21	0.0672359	3.614E-08	1

rs8031133	15	57967741	G	T	ALDH1A2	0.03	0	9.9106E-09	51	14.33	0.0455733	1.628E-08	4.24098E-09
rs58293956	18	52280511	G	A	DCC	-0.05	0	9.9116E-09	0	6.5	0.482227	3.025E-08	1
rs12961390	18	52285560	C	T	DCC	-0.05	0	9.9125E-09	0	6.5	0.4821811	3.025E-08	1
rs226007	16	21613612	G	T	METTL9	0.03	0	9.9228E-09	0	2.62	0.917807	3.102E-08	1
rs6722351	2	173475919	C	T	CDCA7	0.03	0	9.9256E-09	0	5.82	0.5614966	3.102E-08	1
rs34536601	3	35720179	CTG	C	ARPP21	0.03	0	9.9263E-09	20	8.78	0.2691749	4.404E-08	1
rs1373752	18	52274878	A	G	DCC	-0.05	0	9.9292E-09	0	6.51	0.4819887	3.029E-08	1
rs11616510	13	112175650	C	T	SOX1	0.04	0	9.9449E-09	0	1.07	0.9936046	3.108E-08	1
rs12215241	6	27055302	G	A	HIST1H2BJ	-0.03	0	9.9532E-09	0	3.6	0.8250195	3.111E-08	1
rs7142958	14	42985754	G	T	LRFN5	0.05	0	9.9537E-09	30	10.08	0.183888	2.757E-08	1
rs9365484	6	162734709	G	T	PACRG	0.03	0	9.9649E-09	0	6.9	0.4397501	3.114E-08	1
rs7610118	3	16807866	T	C	PLCL2	-0.03	0	9.9673E-09	0	3.1	0.8756164	3.115E-08	1
rs11933769	4	59264363	A	C	ADGRL3	-0.04	0	9.9939E-09	0	5.12	0.6450062	3.123E-08	1
rs80225139	4	59262763	A	C	ADGRL3	-0.04	0	9.9997E-09	0	5.14	0.6428137	3.125E-08	1
rs6550635	3	18761632	C	G	SATB1	0.03	0	1.0002E-08	6	7.47	0.3814187	3.531E-08	1
rs117592684	8	87859718	C	T	DCAF4L2	0.04	0	1.001E-08	0	0.55	0.9992608	3.128E-08	1
rs150494216	15	61948716	C	G	VPS13C	-0.08	0	1.0011E-08	0	6.51	0.4816055	3.129E-08	1
rs56040103	8	87857563	G	A	DCAF4L2	0.04	0	1.0015E-08	0	0.51	0.9993958	3.13E-08	1
rs2606151	15	87449510	A	G	NTRK3	-0.03	0	1.0016E-08	0	3.63	0.821037	3.13E-08	1
rs7939420	11	47702386	A	G	AGBL2	-0.03	0	1.0029E-08	0	6.63	0.4683199	3.134E-08	1
rs56269308	4	59274274	C	T	ADGRL3	-0.04	0	1.0031E-08	0	4.61	0.7073839	3.135E-08	1
rs35375543	18	52273133	T	C	DCC	-0.05	0	1.0035E-08	0	6.49	0.4835174	3.062E-08	1
rs113969904	8	87858013	T	C	DCAF4L2	0.04	0	1.0043E-08	0	0.54	0.9992741	3.138E-08	1
rs6854562	4	142992847	A	C	INPP4B	-0.04	0	1.0046E-08	49	13.74	0.0559664	2.07E-08	1
rs4690745	4	142993285	G	A	INPP4B	0.04	0	1.005E-08	49	13.73	0.0561089	2.073E-08	1
rs6766238	3	48764496	G	A	PRKAR2A	-0.03	0	1.0052E-08	0	6.24	0.5120824	3.111E-08	1
rs55855024	3	16809262	A	C	PLCL2	-0.03	0	1.0058E-08	0	3.1	0.8757087	3.143E-08	1
rs12648517	4	59230728	T	C	ADGRL3	-0.04	0	1.0059E-08	0	5.19	0.6369821	3.143E-08	1
rs7100	3	49015786	A	G	DALRD3,WD	-0.03	0	1.0064E-08	0	6.32	0.5024462	3.109E-08	1
rs112497356	8	87859922	T	C	DCAF4L2	0.04	0	1.0078E-08	0	0.54	0.9992748	3.149E-08	1

Table S2

rs625274	11	118828567	C	T	DDX6	-0.03	0	1.0081E-08	29	9.88	0.1957207	5.014E-08	1
rs9827708	3	49612556	C	G	BSN	-0.03	0	1.0091E-08	0	6.53	0.4797699	3.14E-08	1
rs7694538	4	59265251	C	T	ADGRL3	-0.04	0	1.0094E-08	0	5.12	0.6447141	3.154E-08	1
rs3003923	6	151959732	T	G	ESR1	-0.03	0	1.0111E-08	21	8.96	0.2555111	4.12E-08	1
rs2397678	6	99897362	A	G	MCHR2	0.03	0	1.0117E-08	0	1.08	0.9934393	3.161E-08	1
rs9971534	11	115125721	A	G	CADM1	-0.03	0	1.0119E-08	41	11.97	0.1016931	3.17E-08	1
rs36192672	4	142992673	G	A	INPP4B	0.04	0	1.0121E-08	49	13.74	0.0559628	2.085E-08	1
rs61824822	1	230457617	C	A	PGBD5	0.03	0	1.0132E-08	31	10.21	0.1772163	8.156E-08	1
rs1372420	8	14715712	C	T	SGCZ	-0.03	0	1.0133E-08	4	7.31	0.3975866	3.568E-08	1
rs226006	16	21609305	A	G	METTL9	0.03	0	1.0134E-08	0	2.67	0.9139044	3.166E-08	1
rs6760344	2	59997157	C	G	BCL11A	0.03	0	1.0142E-08	36	11.09	0.1345867	4.303E-08	1
rs219009	1	36678232	T	C	GRIK3	0.03	0	1.0152E-08	51	14.49	0.0430477	1.647E-08	4.35761E-09
rs42752	16	21615508	C	T	METTL9	0.03	0	1.0155E-08	0	2.64	0.9163366	3.173E-08	1
rs6434774	2	195400332	C	T	SLC39A10	-0.04	0	1.0166E-08	0	5.63	0.5838729	3.176E-08	1
rs1372611	15	87434301	T	C	AGBL1	-0.03	0	1.0177E-08	0	4.15	0.7626501	3.179E-08	1
rs7629352	3	16807327	A	G	PLCL2	0.03	0	1.0179E-08	0	3.1	0.8752067	3.18E-08	1
rs72631007	4	59262796	G	A	ADGRL3	-0.04	0	1.0183E-08	0	5.15	0.641691	3.181E-08	1
rs11610160	12	120521401	G	A	COQ5	-0.04	0	1.0197E-08	0	3.85	0.7964884	3.185E-08	1
rs9346929	6	162732341	G	A	PACRG	0.03	0	1.0202E-08	0	6.91	0.4386562	3.187E-08	1
rs1938380	1	198216602	A	G	NEK7	0.03	0	1.0216E-08	37	11.15	0.1324045	6.387E-08	1
rs682725	1	36689260	T	C	GRIK3	0.03	0	1.0221E-08	38	11.34	0.1246554	2.464E-08	1
rs6778410	3	44702501	G	A	ZNF502	-0.03	0	1.0229E-08	0	5.91	0.5505266	3.19E-08	1
rs11189513	10	98209811	A	G	R3HCC1L	0.03	0	1.0232E-08	39	11.64	0.1129464	4.851E-08	1
rs2878912	8	87842769	C	T	DCAF4L2	0.04	0	1.0239E-08	0	0.4	0.9997465	3.198E-08	1
rs12428483	13	70435421	A	G	KLHL1	0.03	0	1.0247E-08	0	6.62	0.4697182	3.201E-08	1
rs62404520	6	19301251	A	T	ID4	0.03	0	1.0247E-08	55	15.8	0.0269885	1.194E-08	3.06717E-09
rs74049857	14	42985819	T	C	LRFN5	0.05	0	1.0248E-08	30	10.03	0.1871435	2.842E-08	1
rs114941240	15	61963932	A	G	VPS13C	-0.08	0	1.0254E-08	0	6.62	0.46989	3.203E-08	1
rs113087200	1	198217412	C	CAACA	NEK7	0.03	0	1.0262E-08	37	11.14	0.1325492	6.417E-08	1
rs12925413	16	7191627	T	G	RBFOX1	0.06	0	1.0267E-08	32	10.41	0.1664568	6.069E-08	1

rs62302683	4	46410160	G	T	GABRA2	0.04	0	1.027E-08	0	4.76	0.6890027	3.208E-08	1
rs35639725	18	52310403	T	TG	DCC	-0.05	0	1.0279E-08	0	6.85	0.4451133	3.069E-08	1
rs17598763	1	230457155	G	A	PGBD5	0.03	0	1.0286E-08	30	10.13	0.1813071	8.157E-08	1
rs6455843	6	162658886	A	G	PARK2	0.03	0	1.0291E-08	0	6.19	0.5177345	3.214E-08	1
rs7630010	3	43645112	T	A	ANO10	-0.03	0	1.0294E-08	48	13.52	0.0604152	1.699E-08	4.47756E-09
rs67007465	10	98200255	TTGAG	T	R3HCC1L	0.03	0	1.0316E-08	37	11.28	0.1267259	5.118E-08	1
rs2683792	3	114378594	A	G	ZBTB20	-0.03	0	1.0317E-08	0	5.53	0.5961003	3.222E-08	1
rs59738671	4	59249218	C	T	ADGRL3	-0.04	0	1.0318E-08	0	5.15	0.6415582	3.222E-08	1
rs140508781	11	47757833	A	ATATG	FNBP4	0.03	0	1.0319E-08	0	6.5	0.4824464	3.223E-08	1
rs887199	22	19974432	A	G	ARVCF	0.04	0	1.0325E-08	0	6.37	0.4967724	3.224E-08	1
rs17827682	4	59241529	T	C	ADGRL3	-0.04	0	1.0327E-08	0	5.15	0.6418331	3.225E-08	1
rs60278718	4	59238160	C	T	ADGRL3	-0.04	0	1.0327E-08	0	5.15	0.6418339	3.225E-08	1
rs60325274	4	59238377	C	T	ADGRL3	-0.04	0	1.0327E-08	0	5.15	0.6418339	3.225E-08	1
rs6833550	4	59237174	T	C	ADGRL3	-0.04	0	1.0327E-08	0	5.15	0.6418339	3.225E-08	1
rs72629575	4	59236386	C	G	ADGRL3	-0.04	0	1.0327E-08	0	5.15	0.6418339	3.225E-08	1
rs72629579	4	59240116	G	T	ADGRL3	-0.04	0	1.0327E-08	0	5.15	0.6418339	3.225E-08	1
rs7668854	4	59238671	C	G	ADGRL3	-0.04	0	1.0327E-08	0	5.15	0.6418339	3.225E-08	1
rs7684595	4	59239629	A	G	ADGRL3	-0.04	0	1.0327E-08	0	5.15	0.6418339	3.225E-08	1
rs11936199	4	59235390	T	A	ADGRL3	-0.04	0	1.033E-08	0	5.15	0.6418433	3.226E-08	1
rs76961086	4	59235623	G	A	ADGRL3	-0.04	0	1.033E-08	0	5.15	0.6418433	3.226E-08	1
rs11947894	4	59235353	G	A	ADGRL3	-0.04	0	1.033E-08	0	5.16	0.6407814	3.226E-08	1
rs79312220	5	154328675	A	G	GALNT10	0.08	0	1.0335E-08	0	6.72	0.4585005	3.022E-08	1
rs62302679	4	46404613	G	C	GABRA2	0.04	0	1.034E-08	0	4.79	0.6858783	3.229E-08	1
rs34115597	8	14653178	T	G	SGCZ	-0.03	0	1.0341E-08	27	9.66	0.2088402	4.877E-08	1
rs72629595	4	59250555	G	T	ADGRL3	-0.04	0	1.0342E-08	0	5.15	0.6415157	3.23E-08	1
rs9847828	3	15496485	A	G	COLQ	0.04	0	1.0342E-08	9	7.7	0.3601079	3.188E-08	1
rs10567541	11	99663118	TAGAA	T	CNTN5	-0.03	0	1.0343E-08	13	8.1	0.3236369	2.473E-08	1
rs2296462	10	3267136	T	C	PITRM1	-0.03	0	1.0347E-08	23	9.2	0.2386485	5.275E-08	1
rs7440771	4	142991726	C	G	INPP4B	-0.04	0	1.0349E-08	49	13.75	0.0557203	2.126E-08	1
rs12508420	4	46522197	G	A	GABRA2	0.04	0	1.0361E-08	0	4.94	0.6674759	3.236E-08	1

rs6504572	17	68019745	T	C	KPNA2	-0.03	0	1.0362E-08	33	10.6	0.1570668	6.557E-08	1
rs8119241	20	54884555	C	T	DOK5	-0.03	0	1.0364E-08	0	5.08	0.6501664	3.236E-08	1
rs28828737	4	142991618	A	G	INPP4B	-0.04	0	1.037E-08	49	13.76	0.0556902	2.129E-08	1
rs283037	4	16714885	G	T	LDB2	-0.03	0	1.0379E-08	0	2.24	0.9451568	3.241E-08	1
rs1503578	12	60597935	C	T	SLC16A7	-0.03	0	1.038E-08	57	16.64	0.0198421	2.594E-08	1
rs200360580	6	164655049	G	T	C6orf118	0.03	0	1.0382E-08	0	5.87	0.5555008	3.242E-08	1
rs34978485	4	142991637	C	G	INPP4B	-0.04	0	1.0383E-08	49	13.76	0.0556964	2.132E-08	1
rs72780254	5	120246966	T	G	PRR16	0.07	0	1.0389E-08	0	4.16	0.7606927	3.244E-08	1
rs7027175	9	11250841	A	G	PTPRD	-0.04	0	1.0401E-08	0	6.71	0.4595383	3.248E-08	1
rs188411918	16	72531981	T	C	AC004158.1	0.06	0	1.0401E-08	34	10.66	0.1540032	1.818E-08	1
rs174528	11	61776027	T	C	MYRF,TMEM	0.03	0	1.0402E-08	43	12.45	0.0867484	4.338E-08	1
rs72629596	4	59251704	A	G	ADGRL3	-0.04	0	1.0403E-08	0	5.15	0.6413355	3.248E-08	1
rs182329420	16	72565372	T	C	AC004158.1	0.06	0	1.0404E-08	34	10.67	0.1537622	1.817E-08	1
rs117985010	16	21721817	G	A	OTOA	-0.07	0	1.0412E-08	0	4.9	0.6716078	3.251E-08	1
rs10086442	8	507132	G	A	TDRP	0.05	0	1.0418E-08	4	7.36	0.3928304	3.803E-08	1
rs73070918	2	195415272	T	C	SLC39A10	0.05	0	1.0419E-08	0	3.91	0.7895991	3.253E-08	1
rs3757859	7	100643540	A	C	ACTL6B	0.04	0	1.0443E-08	0	5.29	0.6250771	3.26E-08	1
rs23023	6	153199710	G	T	RGS17	0.03	0	1.0451E-08	0	1.95	0.9628063	3.263E-08	1
rs13123702	4	62979085	A	G	ADGRL3	-0.03	0	1.0458E-08	0	3.32	0.8540678	3.265E-08	1
rs56340449	4	59256822	C	A	ADGRL3	-0.04	0	1.046E-08	0	5.03	0.6560394	3.266E-08	1
rs34813479	17	68014941	A	G	C17orf58	-0.03	0	1.0461E-08	33	10.6	0.1570071	6.671E-08	1
rs62086901	17	68016095	G	C	KPNA2	-0.03	0	1.0461E-08	33	10.6	0.1570071	6.671E-08	1
rs7457868	7	100629565	A	C	TFR2	-0.04	0	1.0463E-08	0	5.13	0.6447097	3.267E-08	1
rs684987	11	99661581	C	T	CNTN5	-0.03	0	1.0484E-08	12	7.99	0.3330483	2.542E-08	1
rs28873525	4	142991197	C	T	INPP4B	-0.04	0	1.0488E-08	49	13.76	0.0556224	2.15E-08	1
rs62086904	17	68019980	C	T	KPNA2	0.03	0	1.0498E-08	46	13.07	0.0704354	9.074E-08	1
rs13292417	9	10180371	T	C	PTPRD	-0.05	0	1.0499E-08	0	6.32	0.5034603	3.277E-08	1
rs284000	16	76988802	C	G	RP11-58C22.	0.03	0	1.0517E-08	0	4.73	0.6924226	3.283E-08	1
rs36170055	4	142991075	G	A	INPP4B	0.04	0	1.0519E-08	49	13.76	0.0556187	2.155E-08	1
rs79246924	6	104392445	A	G	HACE1	0.04	0	1.052E-08	18	8.6	0.2824071	4.594E-08	1

rs157619	4	16711452	G	A	LDB2	-0.03	0	1.052E-08	0	1.32	0.9878387	3.284E-08	1
rs13109952	4	142992422	G	A	INPP4B	-0.04	0	1.0521E-08	48	13.69	0.0569182	2.194E-08	1
rs4671357	2	59909041	T	C	BCL11A	0.03	0	1.0529E-08	24	9.32	0.2307429	3.197E-08	1
rs2303378	11	113240943	G	A	NCAM1	-0.04	0	1.0535E-08	0	5.16	0.6408687	3.289E-08	1
rs1604693	6	104387759	A	G	HACE1	0.04	0	1.0544E-08	19	8.64	0.2792177	4.64E-08	1
rs4915269	1	198203273	T	G	NEK7	0.03	0	1.0547E-08	36	10.94	0.1410659	6.425E-08	1
rs10830206	11	89082969	T	A	GRM5	0.03	0	1.0553E-08	60	17.89	0.0124844	1.894E-08	1
rs4348755	1	198266234	A	G	NEK7	0.03	0	1.0554E-08	38	11.47	0.1193199	6.473E-08	1
rs115578938	6	25183412	T	C	LRRC16A	-0.09	0	1.0557E-08	0	5.94	0.5473537	3.295E-08	1
rs9391198	6	104389541	A	T	HACE1	0.04	0	1.0558E-08	18	8.62	0.28121	4.624E-08	1
rs72949822	6	114751919	G	A	HS3ST5	0.04	0	1.0563E-08	40	11.69	0.1112105	6.413E-08	1
rs9461406	6	27751985	T	C	HIST1H2BL	-0.04	0	1.0565E-08	0	6.57	0.4754116	3.298E-08	1
rs72838268	6	27053394	A	G	HIST1H2BJ	-0.03	0	1.0566E-08	0	3.56	0.8293604	3.298E-08	1
rs10815832	9	8354845	G	C	PTPRD	-0.03	0	1.0569E-08	41	12.02	0.0999973	5.458E-08	1
rs61824802	1	230417531	T	C	PGBD5	0.03	0	1.058E-08	43	12.36	0.0892961	8.301E-08	1
rs4530757	5	11784069	C	G	CTNND2	-0.27	0	1.0583E-08	15	8.32	0.305447	4.194E-08	1
rs12212526	6	104391313	C	A	HACE1	0.04	0	1.0583E-08	18	8.6	0.2824237	4.621E-08	1
rs12199819	6	104397037	G	A	HACE1	0.04	0	1.0583E-08	18	8.6	0.2826949	4.648E-08	1
rs9391196	6	104389442	A	G	HACE1	0.04	0	1.059E-08	18	8.62	0.2812108	4.636E-08	1
rs13072696	3	44527328	G	A	ZNF852	0.03	0	1.0591E-08	0	5.05	0.6537271	3.301E-08	1
rs7697188	4	59238823	G	C	ADGRL3	-0.04	0	1.0593E-08	0	5.15	0.6411289	3.306E-08	1
rs57856685	2	195565401	T	C	SLC39A10	0.03	0	1.0596E-08	9	7.7	0.3597617	4.079E-08	1
rs2341038	4	59269944	G	A	ADGRL3	-0.04	0	1.06E-08	0	5.05	0.6537426	3.308E-08	1
rs7127487	11	89081702	A	G	GRM5	0.03	0	1.0614E-08	60	17.87	0.0125736	1.9E-08	1
rs6809116	3	44670605	A	C	ZNF35	-0.03	0	1.0623E-08	7	7.53	0.3755498	3.028E-08	1
rs9864243	3	48945299	G	A	ARIH2	-0.03	0	1.0639E-08	0	6.21	0.5152092	3.301E-08	1
rs226010	16	21632156	A	G	METTL9	0.03	0	1.0639E-08	0	2.6	0.9191104	3.32E-08	1
rs12537757	7	135488981	G	A	CNOT4	-0.03	0	1.0641E-08	60	17.6	0.0138909	3.88E-09	9.23539E-10
rs138517103	4	46404874	AG	A	GABRA2	0.04	0	1.0641E-08	0	4.81	0.6832103	3.321E-08	1
rs325485	5	104659667	A	G	NUDT12	-0.03	0	1.0647E-08	0	3.05	0.8803205	3.323E-08	1

rs35230316	17	68102838	T	C	KPNA2	-0.03	0	1.0651E-08	36	11.09	0.1348439	5.497E-08	1
rs10959658	9	11245779	T	C	PTPRD	-0.04	0	1.0655E-08	0	6.95	0.4336892	3.325E-08	1
rs12212909	6	104392888	A	G	HACE1	0.04	0	1.0662E-08	18	8.58	0.2841704	4.637E-08	1
rs73581580	9	137357006	G	A	EXD3	0.04	0	1.0664E-08	16	8.38	0.3002107	3.244E-08	1
rs2237353	7	28758597	C	A	CREB5	0.03	0	1.0665E-08	9	7.73	0.357415	4.672E-08	1
rs147044092	6	164657500	G	A	C6orf118	0.03	0	1.0672E-08	0	5.64	0.5827562	3.33E-08	1
rs148149244	6	25182697	C	T	LRRC16A	-0.09	0	1.0673E-08	0	5.94	0.5462942	3.331E-08	1
rs67662140	6	114844874	A	G	HS3ST5	0.04	0	1.0675E-08	39	11.57	0.1156579	6.505E-08	1
rs320480	1	213468600	C	A	RPS6KC1	0.04	0	1.0676E-08	20	8.82	0.2657184	5.968E-08	1
rs1124493	11	113411573	T	G	DRD2	-0.03	0	1.0683E-08	0	6.69	0.4614663	3.334E-08	1
rs59406090	6	114763895	TCTC	T	HS3ST5	0.04	0	1.07E-08	40	11.68	0.1116882	6.5E-08	1
rs1317908	1	198176935	T	G	NEK7	0.03	0	1.0706E-08	0	5.77	0.5668025	3.341E-08	1
rs138707592	1	198419397	C	A	NEK7	0.06	0	1.0707E-08	51	14.4	0.0445554	6.044E-08	1
rs552005579	5	60700028	C	T	DEPDC1B	-0.09	0	1.0711E-08	0	4.26	0.7496931	3.342E-08	1
rs6069030	20	54882406	G	C	DOK5	-0.03	0	1.0722E-08	0	5.06	0.6521914	3.346E-08	1
rs6064132	20	54882440	A	G	DOK5	-0.03	0	1.0724E-08	0	5.06	0.6521953	3.346E-08	1
rs1938378	1	198177110	T	A	NEK7	0.03	0	1.0724E-08	0	5.77	0.5669212	3.346E-08	1
rs6069026	20	54879861	T	C	DOK5	-0.03	0	1.0724E-08	0	4.99	0.6613177	3.346E-08	1
rs200486	6	27811728	C	T	HIST1H3H	-0.04	0	1.0728E-08	0	5.73	0.5714573	3.347E-08	1
rs7944714	11	89097327	T	C	GRM5	0.03	0	1.0735E-08	60	17.89	0.0124864	1.926E-08	1
rs56258977	14	42984053	T	G	LRFN5	0.05	0	1.0739E-08	31	10.19	0.1783005	2.97E-08	1
rs4291686	11	118829848	A	G	DDX6	-0.03	0	1.0741E-08	27	9.6	0.2122687	5.208E-08	1
rs35438254	4	33998581	A	T	ARAP2	0.05	0	1.0743E-08	10	7.79	0.3517542	4.214E-08	1
rs34889542	16	21601780	TCAG	T	METTL9	0.03	0	1.0751E-08	0	2.83	0.9001192	3.355E-08	1
rs62537228	9	1762268	C	G	SMARCA2	0.06	0	1.0753E-08	8	7.61	0.3681843	3.975E-08	1
rs111586162	3	48687166	C	CCCACCTTC	NCKIPSD	-0.03	0	1.0762E-08	0	6.95	0.4339861	3.357E-08	1
rs4334678	3	44523333	G	A	ZNF852	0.03	0	1.0764E-08	0	5.05	0.6535971	3.354E-08	1
rs1561809	15	87403626	T	A	AGBL1	-0.03	0	1.0775E-08	0	3.93	0.7878328	3.362E-08	1
rs62404478	6	19264636	G	A	ID4	0.1	0	1.0776E-08	0	4.9	0.6727719	3.362E-08	1
rs12643112	4	59234538	T	G	ADGRL3	-0.04	0	1.0787E-08	0	5.16	0.6409699	3.365E-08	1

rs201004	6	27837156	T	C	HIST1H2BN	-0.04	0	1.0795E-08	0	5.68	0.5780844	3.368E-08	1
rs11934917	4	59264393	T	G	ADGRL3	-0.04	0	1.0809E-08	0	5.05	0.6542289	3.372E-08	1
rs72951850	6	114832979	A	C	HS3ST5	0.04	0	1.0809E-08	39	11.56	0.1159857	6.598E-08	1
rs925479	4	46837351	G	A	COX7B2	0.03	0	1.0809E-08	6	7.51	0.3776001	3.968E-08	1
rs6069034	20	54885342	A	G	DOK5	-0.03	0	1.0815E-08	0	5.05	0.6543451	3.374E-08	1
rs12593019	15	87400865	T	G	AGBL1	-0.03	0	1.0833E-08	0	4.21	0.7555392	3.379E-08	1
rs1479552	3	2522768	A	G	CNTN4	-0.03	0	1.084E-08	0	7.04	0.4245262	3.18E-08	1
rs12194263	6	104394274	G	A	HACE1	0.04	0	1.0841E-08	18	8.57	0.2847364	4.703E-08	1
rs4368839	6	114836947	T	A	HS3ST5	0.04	0	1.0841E-08	40	11.77	0.1083384	6.589E-08	1
rs80172774	4	59224579	T	TTA	ADGRL3	-0.04	0	1.0844E-08	0	5.03	0.656896	3.383E-08	1
rs1679709	6	28260564	A	G	NKAPL	0.05	0	1.0851E-08	36	10.99	0.138964	1.133E-07	1
rs10765184	11	89093645	T	C	GRM5	0.03	0	1.0853E-08	60	17.88	0.0125022	1.947E-08	1
rs4345518	8	91726531	C	T	RUNX1T1	-0.03	0	1.0861E-08	0	5.49	0.5999253	3.388E-08	1
rs71644491	6	104396922	GCTGT	G	HACE1	0.04	0	1.0862E-08	18	8.56	0.2860101	4.693E-08	1
rs79117915	6	104396920	A	C	HACE1	0.04	0	1.0866E-08	18	8.56	0.2860114	4.695E-08	1
rs9930651	16	58929716	C	T	GOT2	-0.04	0	1.0875E-08	44	12.65	0.0811754	7.041E-08	1
rs9804879	12	24169939	G	A	SOX5	-0.03	0	1.0876E-08	29	9.92	0.193344	5.796E-08	1
rs35992988	3	16810163	C	T	PLCL2	-0.04	0	1.0879E-08	0	6.91	0.4379757	3.393E-08	1
rs7851132	9	125165037	G	A	PPP6C	0.03	0	1.088E-08	0	4.88	0.6749203	3.394E-08	1
rs1990361	7	38303300	C	G	TRGV10	-0.04	0	1.0881E-08	0	3.75	0.8085051	3.394E-08	1
rs75481458	6	104395747	C	A	HACE1	0.04	0	1.0895E-08	18	8.56	0.2860382	4.71E-08	1
rs189766383	12	23509137	C	A	SOX5	-0.08	0	1.0897E-08	7	7.58	0.3711602	3.375E-08	1
rs17456916	10	90941805	T	C	ANKRD1	-0.04	0	1.0898E-08	17	8.44	0.29519	4.937E-08	1
rs72631004	4	59261667	T	A	ADGRL3	-0.04	0	1.0899E-08	0	5.19	0.6370108	3.4E-08	1
rs200775148	6	114800877	A	G	HS3ST5	0.04	0	1.09E-08	40	11.69	0.1110613	6.615E-08	1
rs12199929	6	104397206	G	C	HACE1	0.04	0	1.0903E-08	18	8.55	0.2863604	4.704E-08	1
rs2359371	1	198229292	A	C	NEK7	0.03	0	1.0905E-08	37	11.16	0.13167	6.735E-08	1
rs693930	6	153190441	T	A	RGS17	0.03	0	1.0907E-08	0	1.9	0.9651361	3.402E-08	1
rs80264471	6	104396088	T	C	HACE1	0.04	0	1.0909E-08	18	8.56	0.2858571	4.718E-08	1
rs4403652	1	198231995	A	G	NEK7	0.03	0	1.0909E-08	37	11.16	0.1317064	6.738E-08	1

rs12664090	6	114773745	C	T	HS3ST5	0.04	0	1.0909E-08	40	11.68	0.1116859	6.626E-08	1
rs67575180	6	114789465	T	A	HS3ST5	0.04	0	1.0909E-08	40	11.68	0.1116859	6.626E-08	1
rs68186215	6	114775656	C	T	HS3ST5	0.04	0	1.0909E-08	40	11.68	0.1116859	6.626E-08	1
rs61360902	4	59228603	A	G	ADGRL3	-0.04	0	1.0913E-08	0	5.14	0.6426638	3.404E-08	1
rs10758963	9	8369521	G	C	PTPRD	-0.03	0	1.0921E-08	46	13.05	0.0707921	6.852E-08	1
rs62389618	6	23107943	C	T	HDGFL1	-0.07	0	1.0922E-08	34	10.76	0.1494288	7.652E-08	1
rs191897901	15	61973272	G	A	VPS13C	-0.08	0	1.0936E-08	0	6.59	0.4728142	3.411E-08	1
rs34354535	20	54888850	A	T	DOK5	-0.03	0	1.0939E-08	0	4.88	0.674443	3.412E-08	1
rs10758964	9	8370016	A	G	PTPRD	-0.03	0	1.0946E-08	47	13.23	0.0666887	7.032E-08	1
rs72673177	8	87855843	G	A	DCAF4L2	0.04	0	1.0956E-08	0	0.48	0.9995088	3.417E-08	1
rs6064133	20	54883162	T	G	DOK5	-0.03	0	1.0972E-08	0	5.01	0.6591979	3.422E-08	1
rs7429596	3	48771098	T	C	PRKAR2A	-0.03	0	1.0974E-08	0	6.32	0.5025851	3.389E-08	1
rs13038124	20	54883647	G	A	DOK5	-0.03	0	1.0979E-08	0	5.06	0.6527233	3.424E-08	1
rs144618812	2	208220924	G	A	IDH1	0.09	0	1.098E-08	0	5.42	0.6092716	3.424E-08	1
rs144372278	1	198227784	A	G	NEK7	0.03	0	1.0984E-08	37	11.12	0.1335402	6.729E-08	1
rs143939057	1	198422402	AG	A	NEK7	0.06	0	1.0992E-08	49	13.8	0.0548015	6.863E-08	1
rs1355258	4	142986816	C	T	INPP4B	-0.04	0	1.1001E-08	49	13.8	0.0548424	2.232E-08	1
rs75684474	6	104395839	T	C	HACE1	0.04	0	1.1002E-08	18	8.56	0.285941	4.756E-08	1
rs60068035	20	54886144	T	A	DOK5	-0.03	0	1.1005E-08	0	5.06	0.6530514	3.432E-08	1
rs10456362	6	28254038	A	G	ZKSCAN4	0.05	0	1.1015E-08	35	10.92	0.1419684	1.138E-07	1
rs17451127	4	15082116	A	G	CPEB2	-0.03	0	1.1015E-08	0	5.35	0.617603	3.435E-08	1
rs2870372	20	54886950	A	G	DOK5	-0.03	0	1.1016E-08	0	5.06	0.653245	3.435E-08	1
rs455332	16	21735622	G	T	OTOA	-0.03	0	1.1016E-08	0	4.81	0.6832321	3.435E-08	1
rs11935431	4	142986609	A	C	INPP4B	-0.04	0	1.1018E-08	49	13.8	0.0548885	2.236E-08	1
rs6504573	17	68019847	T	C	KPNA2	-0.03	0	1.1022E-08	33	10.59	0.1574316	6.977E-08	1
rs6577067	13	112172492	T	C	SOX1	0.04	0	1.1023E-08	0	1.09	0.9931851	3.437E-08	1
rs6940638	6	27078471	A	G	HIST1H2BJ	-0.03	0	1.1028E-08	0	3.36	0.8495837	3.439E-08	1
rs71615429	3	44526831	C	T	ZNF852	0.03	0	1.1028E-08	0	5.04	0.6554173	3.434E-08	1
rs1398118	20	54886913	G	A	DOK5	-0.03	0	1.104E-08	0	5.09	0.6494374	3.443E-08	1
rs67077747	6	114815507	C	T	HS3ST5	0.04	0	1.1044E-08	39	11.63	0.113467	6.719E-08	1

rs9404546	6	104389539	A	C	HACE1	0.04	0	1.1046E-08	18	8.64	0.2796367	4.837E-08	1
rs142338029	2	208468350	C	T	PTH2R	0.09	0	1.1048E-08	0	4.6	0.7086811	3.445E-08	1
rs17684830	3	60949298	T	C	FHIT	0.04	0	1.106E-08	0	2.15	0.9513658	3.449E-08	1
rs76784355	6	164660264	G	A	C6orf118	0.03	0	1.1064E-08	0	5.81	0.5625582	3.45E-08	1
rs11870697	17	45200391	T	C	FMNL1	-0.03	0	1.1084E-08	18	8.64	0.2794649	4.503E-08	1
rs1588407	4	142986050	C	T	INPP4B	-0.04	0	1.1086E-08	49	13.8	0.0548096	2.248E-08	1
rs72629570	4	59227977	A	G	ADGRL3	-0.04	0	1.1091E-08	0	5.13	0.6439096	3.458E-08	1
rs35577344	11	99665951	GT	G	CNTN5	-0.03	0	1.1099E-08	0	7.06	0.4226977	3.026E-08	1
rs1231704010	16	21301371	GGCGCATG	G	CRYM	-0.07	0	1.1099E-08	0	4.88	0.674236	3.461E-08	1
rs2722008	3	114370723	C	T	ZBTB20	-0.03	0	1.1115E-08	16	8.36	0.302278	4.626E-08	1
rs9921724	16	21640204	T	C	IGSF6,METT	-0.03	0	1.1122E-08	0	2.54	0.9240842	3.468E-08	1
rs4690712	4	142985308	G	A	INPP4B	-0.04	0	1.1136E-08	49	13.8	0.0547841	2.257E-08	1
rs745485	9	11241909	A	C	PTPRD	-0.04	0	1.1141E-08	0	6.6	0.4718477	3.474E-08	1
rs10212852	4	142984615	T	C	INPP4B	-0.04	0	1.1144E-08	49	13.8	0.0547683	2.258E-08	1
rs10213025	4	142984541	G	A	INPP4B	-0.04	0	1.1144E-08	49	13.8	0.0547727	2.259E-08	1
rs9311431	3	48811354	T	A	PRKAR2A	-0.03	0	1.1146E-08	0	6.3	0.5050323	3.444E-08	1
rs140470996	6	104418698	AAAG	A	HACE1	0.04	0	1.1149E-08	14	8.23	0.3126731	4.528E-08	1
rs41289598	3	45524281	G	T	LARS2	0.08	0	1.115E-08	0	4.31	0.7429354	3.476E-08	1
rs112366207	9	11240255	A	G	PTPRD	-0.04	0	1.1151E-08	0	6.6	0.4713005	3.476E-08	1
rs9859473	3	48799749	T	C	PRKAR2A	-0.03	0	1.1152E-08	0	6.31	0.5044239	3.445E-08	1
rs7611628	3	48800931	T	C	PRKAR2A	-0.03	0	1.1153E-08	0	6.31	0.5044345	3.445E-08	1
rs6069029	20	54880476	G	A	DOK5	-0.03	0	1.1157E-08	0	4.98	0.6624584	3.478E-08	1
rs167573	6	153186651	A	T	RGS17	-0.03	0	1.1161E-08	0	1.91	0.9646843	3.479E-08	1
rs315425	6	153196241	C	T	RGS17	0.03	0	1.1164E-08	0	1.91	0.9648207	3.481E-08	1
rs10959647	9	11237650	G	A	PTPRD	-0.04	0	1.117E-08	0	6.61	0.4710403	3.482E-08	1
rs12661361	6	114826802	C	T	HS3ST5	0.04	0	1.1171E-08	39	11.63	0.1132545	6.786E-08	1
rs79228128	11	113597283	T	A	TMPRSS5	-0.06	0	1.1173E-08	0	3.69	0.8148689	3.483E-08	1
rs7046663	9	11237297	A	G	PTPRD	-0.04	0	1.1182E-08	0	6.61	0.4710632	3.486E-08	1
rs9467776	6	26531726	C	T	HMGN4	0.03	0	1.1189E-08	0	2.74	0.9079607	3.488E-08	1
rs6069031	20	54882413	T	C	DOK5	-0.03	0	1.1195E-08	0	4.98	0.6629121	3.49E-08	1

rs315423	6	153198442	G	A	RGS17	0.03	0	1.1198E-08	0	1.89	0.9655946	3.491E-08	1
rs2203127	20	54884743	C	T	DOK5	-0.03	0	1.1205E-08	0	5.04	0.6546726	3.493E-08	1
rs6731782	2	59997194	A	T	BCL11A	0.03	0	1.1227E-08	36	10.98	0.1396117	4.735E-08	1
rs11696214	20	54881773	G	T	DOK5	-0.03	0	1.124E-08	0	5.03	0.6560169	3.503E-08	1
rs4791907	17	9900458	T	A	RCVRN	0.08	0	1.1248E-08	0	7.03	0.4252615	3.558E-08	1
rs1538278	13	112174798	G	A	SOX1	0.04	0	1.1252E-08	0	1.17	0.9915673	3.507E-08	1
rs7505465	18	53018501	T	C	DCC	0.03	0	1.1253E-08	0	4.43	0.7287219	3.508E-08	1
rs360004	9	125175963	A	G	PPP6C	-0.03	0	1.1254E-08	0	4.85	0.6779638	3.508E-08	1
rs9868960	3	44529208	C	T	ZNF852	0.03	0	1.1255E-08	0	5	0.6601211	3.503E-08	1
rs1442313	15	87434147	T	C	AGBL1	-0.03	0	1.1259E-08	0	4.05	0.7742651	3.509E-08	1
rs6834625	4	142940195	A	G	INPP4B	-0.04	0	1.1272E-08	42	12.14	0.0959688	3.145E-08	1
rs6456814	6	28338035	C	A	ZSCAN31	-0.04	0	1.129E-08	0	2.85	0.8981005	3.519E-08	1
rs3921492	20	54884780	G	A	DOK5	-0.03	0	1.1293E-08	0	5.03	0.6565556	3.52E-08	1
rs57470978	4	59226862	G	T	ADGRL3	-0.04	0	1.1306E-08	0	5.13	0.6443906	3.524E-08	1
rs76059378	2	27822746	TAGAA	T	MRPL33,RBF	-0.03	0	1.1325E-08	0	5.36	0.6159216	3.53E-08	1
rs112942303	6	164656345	G	C	C6orf118	0.03	0	1.1328E-08	0	5.82	0.5610216	3.531E-08	1
rs148426120	6	164656361	C	T	C6orf118	0.03	0	1.1328E-08	0	5.82	0.5610216	3.531E-08	1
rs2584142	15	87449647	G	T	NTRK3	-0.03	0	1.1332E-08	0	3.58	0.8261424	3.532E-08	1
rs72843798	2	123979124	G	A	CNTNAP5	0.08	0	1.1334E-08	11	7.94	0.3382416	4.176E-08	1
rs150687831	12	26069694	C	T	RASSF8	0.09	0	1.1337E-08	32	10.33	0.1707038	4.99E-08	1
rs55979263	8	87817647	C	A	DCAF4L2	0.04	0	1.1337E-08	0	2	0.9600646	3.533E-08	1
rs11643902	16	58903172	A	G	GOT2	-0.03	0	1.1348E-08	0	4.15	0.7626437	3.536E-08	1
rs1500322	9	8370659	G	C	PTPRD	-0.03	0	1.1353E-08	45	12.95	0.0734499	7.016E-08	1
rs72631005	4	59261820	A	G	ADGRL3	-0.04	0	1.1379E-08	0	5.21	0.6347081	3.546E-08	1
rs9284885	3	48845667	A	C	PRKAR2A	-0.03	0	1.1381E-08	0	6.3	0.5052359	3.516E-08	1
rs111839082	3	133042348	A	G	TMEM108	-0.05	0	1.1392E-08	0	3.45	0.8400924	3.55E-08	1
rs529784633	15	87680135	CATT	C	NTRK3	0.08	0	1.1421E-08	21	8.92	0.2586088	3.413E-08	1
rs36033340	20	54881154	T	C	DOK5	-0.03	0	1.1421E-08	0	4.93	0.6681231	3.559E-08	1
rs58276423	14	42980776	T	TAACA	LRFN5	0.07	0	1.1441E-08	26	9.5	0.2187022	3.854E-08	1
rs1884264	1	36652378	T	A	GRIK3	0.03	0	1.1446E-08	45	12.82	0.076615	3.494E-08	1

Table S2

rs10883053	10	98212366	T	G	R3HCC1L	0.03	0	1.1451E-08	37	11.28	0.1269035	5.647E-08	1
rs35368389	15	87400726	A	AG	AGBL1	-0.03	0	1.1452E-08	0	4.23	0.7530992	3.568E-08	1
rs11018471	11	89097935	G	A	GRM5	0.03	0	1.1456E-08	61	18.38	0.0103693	1.565E-08	4.12756E-09
rs3003922	6	151958532	G	C	ESR1	-0.03	0	1.1461E-08	30	10.08	0.1838714	4.696E-08	1
rs187005169	13	60824315	T	A	TDRD3	-0.1	0	1.1467E-08	0	4.49	0.7220163	3.573E-08	1
rs11347436	4	59254091	CA	C	ADGRL3	-0.04	0	1.1472E-08	0	5.24	0.6309213	3.574E-08	1
rs55732649	3	43462709	G	C	ANO10	-0.03	0	1.1474E-08	51	14.51	0.0427854	3.064E-08	1
rs316290	6	153185807	G	T	RGS17	-0.03	0	1.1479E-08	0	1.89	0.9656536	3.576E-08	1
rs316288	6	153187326	T	C	RGS17	-0.03	0	1.1479E-08	0	1.9	0.965313	3.576E-08	1
rs1123710	10	21084359	G	C	NEBL	0.05	0	1.1489E-08	60	17.58	0.0140235	7.176E-09	1.79541E-09
rs78174786	6	104404000	TAAG	T	HACE1	0.04	0	1.1491E-08	16	8.4	0.2987786	4.846E-08	1
rs7695842	4	59225075	C	T	ADGRL3	-0.04	0	1.1494E-08	0	5.04	0.6554169	3.581E-08	1
rs117794753	20	55749066	C	A	CBLN4	-0.07	0	1.1498E-08	24	9.21	0.2377825	5.995E-08	1
rs9879978	3	48809167	T	G	PRKAR2A	-0.03	0	1.1501E-08	0	6.3	0.5052617	3.552E-08	1
rs76452362	1	198228299	T	C	NEK7	0.03	0	1.1507E-08	37	11.21	0.1298764	7.247E-08	1
rs2174177	12	60600734	T	A	SLC16A7	-0.03	0	1.1512E-08	58	16.77	0.0189334	2.779E-08	1
rs610990	1	229261088	T	C	TMEM78	0.03	0	1.1515E-08	0	1.78	0.97103	3.587E-08	1
rs7538180	1	198241945	G	A	NEK7	0.03	0	1.1527E-08	38	11.39	0.1224479	7.148E-08	1
rs73134628	20	52962479	T	C	TSHZ2	-0.09	0	1.1528E-08	0	6.93	0.435682	3.591E-08	1
rs1442312	15	87434122	G	C	AGBL1	-0.03	0	1.1533E-08	0	4.05	0.7743259	3.593E-08	1
rs11018467	11	89092495	G	T	GRM5	0.03	0	1.1537E-08	60	17.87	0.012584	2.058E-08	1
rs6698514	1	36653664	T	C	GRIK3	0.03	0	1.1558E-08	45	12.81	0.0767595	3.601E-08	1
rs573283120	11	47797155	A	AAATGT	NUP160	-0.03	0	1.1568E-08	0	6.75	0.4553198	3.603E-08	1
rs11076280	16	58905314	G	A	GOT2	-0.03	0	1.1583E-08	0	4.09	0.768883	3.608E-08	1
rs7542416	1	198251217	T	G	NEK7	0.03	0	1.1586E-08	38	11.41	0.1215471	7.152E-08	1
rs847747	6	40112330	G	T	MOCS1	-0.03	0	1.16E-08	18	8.64	0.2794527	2.73E-08	1
rs6832453	4	41029410	G	C	APBB2	0.04	0	1.16E-08	20	8.76	0.270474	5.15E-08	1
rs117781084	2	195507483	T	A	SLC39A10	0.06	0	1.1612E-08	0	3.65	0.8191225	3.617E-08	1
rs2983117	1	36656434	T	C	GRIK3	0.03	0	1.1613E-08	45	12.8	0.0772314	3.568E-08	1
rs142561415	11	89109704	C	CCTCA	GRM5	0.03	0	1.1618E-08	60	17.86	0.0126005	2.08E-08	1

Table S2

rs1567232	4	41031979	A	G	APBB2	0.04	0	1.1622E-08	20	8.77	0.2694648	5.166E-08	1
rs9467778	6	26534515	T	C	HMGN4	0.03	0	1.1623E-08	0	2.84	0.8996085	3.62E-08	1
rs75192494	6	164665254	A	T	C6orf118	0.03	0	1.1656E-08	0	5.81	0.562689	3.63E-08	1
rs4974088	3	48861316	T	C	SLC25A20	-0.03	0	1.1665E-08	0	6.29	0.5057792	3.599E-08	1
rs77482156	6	25199625	T	C	LRRC16A	-0.09	0	1.1668E-08	0	6.23	0.5127443	3.634E-08	1
rs72629600	4	59255841	C	T	ADGRL3	-0.04	0	1.1672E-08	0	5.24	0.6310178	3.635E-08	1
rs1604694	6	104388000	T	C	HACE1	0.04	0	1.1683E-08	19	8.68	0.2764283	5.188E-08	1
rs12196855	6	104403948	A	T	HACE1	0.04	0	1.1688E-08	16	8.42	0.2973161	4.939E-08	1
rs10852511	16	72150060	G	A	PMFBP1	0.03	0	1.1689E-08	0	3.04	0.8809887	3.64E-08	1
rs9393729	6	26513938	C	T	BTN1A1	0.03	0	1.169E-08	0	2.86	0.897803	3.641E-08	1
rs6446204	3	48997446	T	C	P4HTM	-0.03	0	1.169E-08	0	6.29	0.506779	3.596E-08	1
rs6928376	6	123901435	T	G	NKAIN2	0.03	0	1.1696E-08	0	2.78	0.9049473	3.643E-08	1
rs7190339	16	21673852	T	C	OTOA	-0.03	0	1.1705E-08	0	2.6	0.9197475	3.645E-08	1
rs10883050	10	98183811	C	T	R3HCC1L	0.03	0	1.1738E-08	38	11.4	0.1220504	5.81E-08	1
rs157618	4	16710998	A	G	LDB2	-0.03	0	1.1739E-08	0	1.33	0.9877397	3.656E-08	1
rs35146414	20	54880948	G	A	DOK5	-0.03	0	1.1739E-08	0	4.95	0.6666573	3.656E-08	1
rs116986998	16	21290382	C	T	CRYM	-0.07	0	1.174E-08	0	4.73	0.6927073	3.656E-08	1
rs6446200	3	48975943	G	C	ARIH2	-0.03	0	1.1746E-08	0	6.19	0.5178234	3.639E-08	1
rs113872520	6	164655061	A	G	C6orf118	0.03	0	1.1748E-08	0	5.8	0.5637497	3.658E-08	1
rs3861922	1	198241440	G	A	NEK7	-0.03	0	1.1749E-08	38	11.37	0.1234624	7.283E-08	1
rs9467775	6	26513207	G	A	BTN1A1	0.03	0	1.1752E-08	0	2.86	0.8980549	3.66E-08	1
rs10883049	10	98183165	G	A	R3HCC1L	0.03	0	1.1753E-08	38	11.4	0.1220494	5.817E-08	1
rs9295694	6	26512766	A	T	BTN1A1	0.03	0	1.1759E-08	0	2.85	0.8981081	3.662E-08	1
rs10675648	3	48970191	C	CTTAT	ARIH2	-0.03	0	1.1762E-08	0	6.19	0.5178407	3.643E-08	1
rs4974083	3	48963193	A	G	ARIH2	-0.03	0	1.1779E-08	0	6.19	0.5178376	3.648E-08	1
rs9467783	6	26542666	C	T	HMGN4	0.03	0	1.1782E-08	0	2.86	0.8979814	3.669E-08	1
rs35355150	6	26525811	G	A	HMGN4	0.03	0	1.1783E-08	0	2.62	0.9175973	3.669E-08	1
rs200966	6	27894374	T	C	HIST1H2BO	-0.04	0	1.1788E-08	34	10.66	0.1540922	4.602E-08	1
rs1851392	3	152566848	C	A	MBNL1	0.04	0	1.1802E-08	0	6.53	0.4795804	3.675E-08	1
rs746359507	11	47797153	G	GTTCACT	NUP160	-0.03	0	1.1805E-08	0	6.74	0.4564628	3.676E-08	1

Table S2

rs6843867	4	59254705	G	A	ADGRL3	-0.04	0	1.1809E-08	0	5.22	0.633051	3.677E-08	1
rs11018479	11	89112267	C	A	GRM5	0.03	0	1.1816E-08	60	17.91	0.0124057	2.105E-08	1
rs10736123	10	98165397	G	A	R3HCC1L	0.03	0	1.1822E-08	40	11.72	0.1100559	5.853E-08	1
rs7973385	12	24187307	T	C	SOX5	-0.03	0	1.1832E-08	4	7.3	0.3985368	4.049E-08	1
rs174536	11	61784455	A	C	MYRF,TMEM	0.03	0	1.1833E-08	46	13.12	0.0692491	4.648E-08	1
rs1851393	3	152566798	T	A	MBNL1	0.04	0	1.1848E-08	0	6.52	0.4805289	3.689E-08	1
rs11047301	12	24185141	G	C	SOX5	-0.03	0	1.1854E-08	0	4.27	0.7478709	3.691E-08	1
rs2584123	15	87424655	A	G	AGBL1	-0.03	0	1.1858E-08	0	4.13	0.7643576	3.692E-08	1
rs2679082	15	87424656	T	A	AGBL1	-0.03	0	1.1858E-08	0	4.13	0.7643576	3.692E-08	1
rs4121738	11	89083370	C	T	GRM5	0.03	0	1.1868E-08	60	17.81	0.0128334	2.154E-08	1
rs3814883	16	29983601	C	T	TAOK2	-0.03	0	1.1871E-08	35	10.84	0.1455427	7.559E-08	1
rs74374362	8	10125895	AT	A	MSRA	0.03	0	1.1879E-08	0	2.51	0.9260631	3.698E-08	1
rs6913398	6	26540365	T	G	HMGN4	0.03	0	1.1884E-08	0	2.84	0.8993039	3.7E-08	1
rs113619661	9	11248921	G	A	PTPRD	-0.04	0	1.1884E-08	0	6.65	0.4664238	3.7E-08	1
rs10765187	11	89111175	C	A	GRM5	0.03	0	1.1889E-08	61	18.39	0.0103168	1.611E-08	4.24098E-09
rs3740699	11	47482523	G	T	CELF1	0.03	0	1.1889E-08	0	5.88	0.5534142	3.701E-08	1
rs3087866	3	49017259	T	C	DALRD3	-0.03	0	1.1894E-08	0	6.13	0.5251515	3.676E-08	1
rs112805079	11	113597198	A	G	TMPRSS5	-0.06	0	1.1905E-08	0	3.69	0.8150886	3.706E-08	1
rs200976	6	27887185	A	G	HIST1H3J	-0.04	0	1.1908E-08	34	10.68	0.1530624	4.644E-08	1
rs2587550	11	113402203	G	A	ANKK1	-0.03	0	1.1921E-08	0	6.55	0.4774945	3.711E-08	1
rs169287	6	27886982	C	A	HIST1H3J	-0.04	0	1.1921E-08	34	10.68	0.153001	4.648E-08	1
rs77247429	6	164690116	T	C	C6orf118	0.03	0	1.1925E-08	0	5.93	0.5478527	3.712E-08	1
rs200973	6	27890643	A	G	HIST1H3J	-0.04	0	1.1929E-08	34	10.68	0.153091	4.653E-08	1
rs13075954	3	152565868	A	T	MBNL1	0.04	0	1.1932E-08	0	6.51	0.4813486	3.714E-08	1
rs200974	6	27888067	A	G	HIST1H3J	-0.04	0	1.1932E-08	34	10.68	0.1529933	3.714E-08	1
rs4289330	3	16110025	C	G	GALNT15	-0.03	0	1.1932E-08	0	6.11	0.5265857	3.714E-08	1
rs62026673	15	90887762	T	C	FES	0.09	0	1.1935E-08	0	4.23	0.7524815	3.715E-08	1
rs1408514777	14	103131983	AGAGGGGC	A	TNFAIP2	0.07	0	1.1936E-08	0	3.14	0.8719866	3.716E-08	1
rs16843078	1	198439191	G	A	ATP6V1G3	0.04	0	1.1936E-08	55	15.75	0.0274987	2.215E-08	1
rs12205194	6	104405442	G	A	HACE1	0.04	0	1.1944E-08	16	8.39	0.2997666	5.022E-08	1

rs76666362	16	21297768	C	T	CRYM	-0.07	0	1.195E-08	0	4.41	0.7312206	3.72E-08	1
rs3785198	16	7696452	A	C	RBFOX1	-0.03	0	1.1959E-08	59	17.45	0.0147299	6.085E-08	1
rs494887	6	27883095	G	A	HIST1H3J	-0.04	0	1.1964E-08	34	10.68	0.1529835	4.663E-08	1
rs2164183	9	80513053	G	T	TLE4	0.03	0	1.1965E-08	0	3.78	0.8052804	3.724E-08	1
rs147474949	10	98193097	TCAA	T	R3HCC1L	0.03	0	1.1967E-08	38	11.4	0.1219682	5.926E-08	1
rs4416416	3	44532692	G	A	ZNF852	0.03	0	1.1977E-08	0	5.1	0.6482018	3.723E-08	1
rs2870371	20	54880137	T	C	DOK5	-0.03	0	1.1986E-08	0	4.98	0.6628564	3.731E-08	1
rs9998897	4	40991515	A	G	APBB2	-0.04	0	1.199E-08	18	8.63	0.2799436	5.237E-08	1
rs742047	6	27771601	A	G	HIST1H2BL	-0.04	0	1.1994E-08	0	6.47	0.4865198	3.733E-08	1
rs7623659	3	49377358	C	T	RHOA	-0.03	0	1.1996E-08	0	6.34	0.50075	3.733E-08	1
rs41341649	1	229260325	C	A	TMEM78	0.03	0	1.1997E-08	0	1.81	0.9697769	3.734E-08	1
rs524716	6	153205470	A	T	RGS17	0.03	0	1.1997E-08	0	2	0.9597255	3.734E-08	1
rs9467779	6	26536459	A	T	HMGN4	0.03	0	1.1999E-08	0	2.81	0.9021378	3.735E-08	1
rs4666020	2	27823161	G	A	MRPL33,RBI	-0.03	0	1.2003E-08	0	5.34	0.6181894	3.736E-08	1
rs4736157	8	140249888	G	A	TRAPPC9	0.03	0	1.2007E-08	0	5.85	0.5578916	3.737E-08	1
rs12446900	16	21291840	G	A	CRYM	-0.07	0	1.2011E-08	0	4.39	0.7344019	3.738E-08	1
rs2122355	3	82397595	T	C	GBE1	-0.04	0	1.2011E-08	12	8.04	0.328962	3.739E-08	1
rs10946837	6	26540616	G	A	HMGN4	0.03	0	1.2013E-08	0	2.59	0.9202183	3.739E-08	1
rs61947079	12	100892486	A	G	ANO4	0.03	0	1.2015E-08	0	6.95	0.4341785	3.735E-08	1
rs2584128	15	87436373	G	A	AGBL1	-0.03	0	1.2018E-08	0	3.9	0.7908668	3.741E-08	1
rs9825823	3	61096480	T	C	FHIT	-0.03	0	1.2026E-08	35	10.85	0.1454995	4.336E-08	1
rs77125704	16	21294090	G	A	CRYM	-0.07	0	1.203E-08	0	4.39	0.7337844	3.744E-08	1
rs78097337	16	21293313	C	T	CRYM	-0.07	0	1.2033E-08	0	4.39	0.7339835	3.745E-08	1
rs1056347	6	26527296	G	C	HMGN4	0.03	0	1.2034E-08	0	2.81	0.9017266	3.745E-08	1
rs7757003	6	28339474	G	A	ZSCAN31	-0.04	0	1.204E-08	0	3.01	0.8836269	3.747E-08	1
rs7434187	3	48995534	C	T	P4HTM	-0.03	0	1.2049E-08	0	6.31	0.5040365	3.701E-08	1
rs79575294	16	21297541	T	A	CRYM	-0.07	0	1.2049E-08	0	4.41	0.7316196	3.75E-08	1
rs117734491	16	21295454	G	T	CRYM	-0.07	0	1.205E-08	0	4.4	0.7328576	3.75E-08	1
rs11754138	6	26526713	G	C	HMGN4	0.03	0	1.2054E-08	0	2.81	0.9017478	3.752E-08	1
rs12447154	16	21300775	T	C	CRYM	-0.07	0	1.2054E-08	0	4.44	0.7275612	3.752E-08	1

rs11756120	6	26529580	G	C	HMGN4	0.03	0	1.2056E-08	0	2.8	0.9027528	3.752E-08	1
rs28558133	6	26531205	G	C	HMGN4	0.03	0	1.2061E-08	0	2.81	0.9017077	3.754E-08	1
rs10237302	7	51011583	G	A	COBL	0.05	0	1.2063E-08	0	6.64	0.4668064	3.754E-08	1
rs201992989	1	198442277	CCCA	C	ATP6V1G3	0.06	0	1.2068E-08	47	13.36	0.0638279	7.769E-08	1
rs6809216	3	49375126	G	A	RHOA	-0.03	0	1.2071E-08	0	6.34	0.5004349	3.756E-08	1
rs749640	6	104416956	T	C	HACE1	0.04	0	1.2075E-08	16	8.4	0.2987751	5.047E-08	1
rs1491459723	11	47797151	AGG	A	NUP160	-0.03	0	1.2076E-08	0	6.71	0.4592258	3.758E-08	1
rs1041634	6	162799055	T	G	PACRG	-0.03	0	1.2076E-08	0	3.13	0.8726394	3.758E-08	1
rs77953603	1	198448522	G	C	ATP6V1G3	0.06	0	1.208E-08	47	13.36	0.0638283	7.776E-08	1
rs145747805	16	21299557	G	A	CRYM	-0.07	0	1.2081E-08	0	4.43	0.7290952	3.76E-08	1
rs6446264	3	49379810	C	A	RHOA	-0.03	0	1.2082E-08	0	6.34	0.5003733	3.759E-08	1
rs12404460	1	198427113	A	G	ATP6V1G3	0.04	0	1.209E-08	55	15.75	0.0274628	2.24E-08	1
rs77054372	4	142994832	T	C	INPP4B	-0.04	0	1.2093E-08	47	13.33	0.064538	2.61E-08	1
rs139565444	16	21290862	CT	C	CRYM	-0.07	0	1.2101E-08	0	4.4	0.7330836	3.766E-08	1
rs607472	11	118809363	C	G	DDX6	-0.03	0	1.2103E-08	24	9.33	0.2300402	7.012E-08	1
rs1321480	6	26532514	A	G	HMGN4	0.03	0	1.2108E-08	0	2.81	0.9018579	3.768E-08	1
rs11086476	20	54893182	A	G	DOK5	-0.03	0	1.211E-08	0	5.12	0.6457531	3.768E-08	1
rs74670026	16	21290605	A	G	CRYM	-0.07	0	1.211E-08	0	4.4	0.7327016	3.769E-08	1
rs76719139	16	21300970	C	T	CRYM	-0.07	0	1.211E-08	0	4.46	0.7259096	3.769E-08	1
rs13081128	3	44535051	T	C	ZKSCAN7	0.03	0	1.2114E-08	0	5.07	0.6519654	3.766E-08	1
rs76445617	16	21296242	T	A	CRYM	-0.07	0	1.2114E-08	0	4.4	0.7324583	3.77E-08	1
rs2436729	6	40379051	A	G	LRFN2	-0.04	0	1.2118E-08	0	3.18	0.8679143	3.771E-08	1
rs752220	1	59967598	A	G	C1orf87	0.04	0	1.2121E-08	32	10.44	0.1650465	7.433E-08	1
rs12879529	14	103841217	G	A	PPP1R13B	0.03	0	1.2123E-08	0	6.06	0.5324728	3.773E-08	1
rs13100967	3	44534949	C	T	ZKSCAN7	0.03	0	1.2125E-08	0	5.07	0.6520062	3.769E-08	1
rs13058792	3	44534983	G	A	ZKSCAN7	0.03	0	1.2128E-08	0	5.07	0.6519887	3.77E-08	1
rs10946834	6	26533436	G	C	HMGN4	0.03	0	1.2136E-08	0	2.81	0.9019861	3.776E-08	1
rs42750	16	21619377	T	G	METTL9	0.03	0	1.2136E-08	0	2.67	0.9137321	3.777E-08	1
rs10946835	6	26533529	C	T	HMGN4	0.03	0	1.2138E-08	0	2.81	0.9019952	3.777E-08	1
rs190001837	6	46097810	A	G	CLIC5	0.09	0	1.2138E-08	14	8.19	0.3163144	3.763E-08	1

Table S2

rs118135923	16	21290365	A	G	CRYM	-0.07	0	1.2141E-08	0	4.4	0.7322675	3.778E-08	1
rs2393670	6	26535313	A	G	HMGN4	0.03	0	1.2142E-08	0	2.81	0.9019977	3.778E-08	1
rs77350882	2	195422181	T	A	SLC39A10	0.06	0	1.2145E-08	0	4.58	0.7107997	3.779E-08	1
rs146078573	15	62063333	T	C	VPS13C	-0.08	0	1.2147E-08	3	7.27	0.4015313	3.78E-08	1
rs7372883	3	48953822	G	A	ARIH2	-0.03	0	1.216E-08	0	6.19	0.5182108	3.765E-08	1
rs2734842	11	113409552	G	C	DRD2	-0.03	0	1.217E-08	0	6.57	0.4749889	3.787E-08	1
rs34588335	3	49370227	G	C	RHOA	-0.03	0	1.2172E-08	0	6.34	0.5001201	3.787E-08	1
rs72830539	6	19246349	T	C	ID4	0.1	0	1.2175E-08	0	4.9	0.6716875	3.788E-08	1
rs9461270	6	26543882	A	G	HMGN4	0.03	0	1.2178E-08	0	2.83	0.8998924	3.789E-08	1
rs1154899	6	164667071	T	C	C6orf118	0.03	0	1.2179E-08	0	5.82	0.5609677	3.789E-08	1
rs78022288	6	104435717	T	A	HACE1	0.04	0	1.2181E-08	16	8.35	0.3025571	5.079E-08	1
rs13087851	3	49371541	A	G	RHOA	-0.03	0	1.2186E-08	0	6.35	0.5000813	3.791E-08	1
rs10786400	10	98167102	A	G	R3HCC1L	0.03	0	1.2188E-08	40	11.72	0.1101604	6.038E-08	1
rs17391213	1	54120976	G	A	TCEANC2	0.07	0	1.2189E-08	0	2.52	0.925521	3.792E-08	1
rs4870062	6	151916483	G	T	ESR1	-0.03	0	1.2194E-08	32	10.39	0.1676727	2.609E-08	1
rs9461267	6	26525227	T	G	HMGN4	0.03	0	1.2194E-08	0	2.86	0.8978782	3.794E-08	1
rs7937640	11	99718020	A	T	CNTN5	0.03	0	1.2199E-08	7	7.59	0.3702167	3.648E-08	1
rs11707968	3	48915916	C	T	ARIH2OS	-0.03	0	1.2202E-08	0	6.18	0.5185162	3.778E-08	1
rs1784300	11	118808920	A	T	DDX6	-0.03	0	1.2205E-08	24	9.31	0.231457	7.046E-08	1
rs143389895	16	72595375	T	A	AC004158.1	0.06	0	1.222E-08	37	11.12	0.1334713	1.913E-08	5.13056E-09
rs649597	10	21088438	G	T	NEBL	0.05	0	1.2221E-08	64	19.69	0.0062767	4.963E-09	1.20437E-09
rs940404	6	25343216	T	A	LRRC16A	-0.08	0	1.223E-08	0	6.22	0.5140083	3.805E-08	1
rs73228261	4	30531179	A	T	PCDH7	-0.03	0	1.2234E-08	52	14.65	0.0407386	2.667E-08	1
rs3811699	3	49358927	T	C	RHOA	-0.03	0	1.2255E-08	0	6.29	0.5063642	3.812E-08	1
rs2866430	4	101717044	A	G	BANK1	-0.03	0	1.2258E-08	0	2.84	0.8990606	3.813E-08	1
rs67700133	10	104700851	A	T	SORCS3	0.04	0	1.2259E-08	0	2.83	0.9004107	3.814E-08	1
rs6576007	14	103857440	G	T	PPP1R13B	-0.03	0	1.2273E-08	0	6.17	0.5201434	3.818E-08	1
rs11018466	11	89089200	G	A	GRM5	0.03	0	1.2277E-08	61	18.32	0.0105938	1.677E-08	4.35761E-09
rs964282	16	77089320	G	A	MON1B	0.03	0	1.2293E-08	0	4.87	0.6756672	3.824E-08	1
rs2847566	18	50856646	A	G	ME2	-0.04	0	1.2293E-08	0	5.02	0.6581318	3.824E-08	1

rs315415	6	153203004	C	G	RGS17	0.03	0	1.2319E-08	0	1.98	0.9608072	3.832E-08	1
rs145365961	5	60623172	T	C	DEPDC1B	-0.09	0	1.2332E-08	0	3.7	0.8134831	3.836E-08	1
rs315418	6	153202290	G	A	RGS17	0.03	0	1.2332E-08	0	1.98	0.9608254	3.836E-08	1
rs75285154	6	104434182	G	A	HACE1	0.04	0	1.2334E-08	16	8.36	0.3020987	5.146E-08	1
rs187181866	8	17144721	A	G	ZDHHC2	-0.09	0	1.2347E-08	0	5.06	0.6524311	3.841E-08	1
rs7941957	11	89097583	A	G	GRM5	0.03	0	1.2347E-08	60	17.94	0.0122342	2.192E-08	1
rs747926828	9	98006093	G	GGAGCTGA	ANP32B	0.06	0	1.2356E-08	18	8.56	0.2858504	3.445E-08	1
rs12190859	6	27072494	T	A	HIST1H2BJ	-0.03	0	1.236E-08	0	3.55	0.8300794	3.845E-08	1
rs1884946	6	26545080	C	G	HMGN4	0.03	0	1.2375E-08	0	2.82	0.9008611	3.849E-08	1
rs59837830	16	21286906	C	A	CRYM	-0.07	0	1.2384E-08	0	4.46	0.7259582	3.852E-08	1
rs6932865	6	26539938	C	A	HMGN4	0.03	0	1.2384E-08	0	2.82	0.9008397	3.852E-08	1
rs6933176	6	26539950	G	A	HMGN4	0.03	0	1.2384E-08	0	2.82	0.9008397	3.852E-08	1
rs201548601	6	164655030	G	A	C6orf118	0.03	0	1.2393E-08	0	5.83	0.5600527	3.855E-08	1
rs1321481	6	26537982	A	T	HMGN4	0.03	0	1.2395E-08	0	2.82	0.9008086	3.855E-08	1
rs4713008	6	26538040	T	C	HMGN4	0.03	0	1.2395E-08	0	2.82	0.9008086	3.855E-08	1
rs78644736	5	60692459	T	C	DEPDC1B	-0.09	0	1.242E-08	0	3.72	0.8111012	3.863E-08	1
rs174529	11	61776489	T	C	MYRF,TMEM	0.03	0	1.2427E-08	46	13.06	0.0706241	4.786E-08	1
rs77509279	11	47931934	A	C	PTPRJ	-0.04	0	1.2429E-08	0	4.31	0.7435437	3.866E-08	1
rs7611358	3	48890423	C	T	SLC25A20	-0.03	0	1.2434E-08	0	6.24	0.5124492	3.842E-08	1
rs7621226	3	48891326	T	C	SLC25A20	-0.03	0	1.2434E-08	0	6.24	0.5124492	3.842E-08	1
rs60376668	7	157709694	T	C	PTPRN2	-0.05	0	1.2448E-08	0	5.23	0.6319303	3.871E-08	1
rs9810318	3	49038638	T	C	QRICH1	-0.03	0	1.2458E-08	0	6.06	0.5332438	3.874E-08	1
rs9665831	11	89100989	G	T	GRM5	0.03	0	1.2459E-08	60	17.85	0.0126755	2.216E-08	1
rs12446309	16	21286029	C	G	CRYM	-0.07	0	1.2486E-08	0	4.47	0.7239916	3.883E-08	1
rs12446342	16	21285966	G	A	CRYM	-0.07	0	1.2509E-08	0	4.48	0.7237077	3.89E-08	1
rs12641663	4	14929835	T	C	CPEB2	-0.03	0	1.2535E-08	0	3.99	0.7812551	3.898E-08	1
rs6931694	6	104427276	A	T	HACE1	0.04	0	1.2545E-08	16	8.42	0.2968287	5.293E-08	1
rs58467411	16	21285483	C	T	CRYM	-0.07	0	1.2561E-08	0	4.48	0.7226047	3.906E-08	1
rs7648841	3	49379392	G	A	RHOA	-0.03	0	1.2577E-08	0	6.21	0.5156143	3.911E-08	1
rs12522729	5	61245455	T	A	SMIM15	-0.09	0	1.2577E-08	0	3.97	0.7837426	3.911E-08	1

Table S2

rs184663	1	229261326	A	G	TMEM78	0.03	0	1.2579E-08	0	1.82	0.9693217	3.911E-08	1
rs9890900	17	44382729	T	C	ITGA2B	0.05	0	1.2598E-08	46	12.97	0.0727356	1.986E-08	5.2726E-09
rs556168223	6	164663637	G	GT	C6orf118	0.03	0	1.2598E-08	0	6.25	0.5113404	3.917E-08	1
rs7331020	13	112172318	G	A	SOX1	0.04	0	1.2601E-08	0	1.14	0.9922054	3.918E-08	1
rs34873994	6	123909878	T	C	NKAIN2	0.03	0	1.2602E-08	0	2.77	0.9052442	3.918E-08	1
rs3743700	16	21275756	C	A	CRYM	-0.07	0	1.261E-08	0	4.54	0.7163805	3.921E-08	1
rs6557171	6	151913458	T	C	ESR1	-0.03	0	1.2611E-08	32	10.33	0.1704062	2.708E-08	1
rs7969854	12	24186766	T	C	SOX5	-0.03	0	1.262E-08	2	7.16	0.4128162	4.128E-08	1
rs28691226	16	22295430	A	C	POLR3E	-0.07	0	1.2627E-08	0	3.53	0.8324435	3.926E-08	1
rs149990	6	28030480	G	A	ZNF165	-0.06	0	1.2628E-08	29	9.89	0.1946157	7.223E-08	1
rs9393731	6	26529146	C	T	HMGN4	0.03	0	1.2633E-08	0	2.79	0.903481	3.928E-08	1
rs55776777	6	164659476	G	C	C6orf118	0.03	0	1.2635E-08	0	4.79	0.6859751	3.928E-08	1
rs1187417	14	103843688	C	T	PPP1R13B	0.03	0	1.264E-08	0	5.88	0.553545	3.93E-08	1
rs13161723	5	157331914	T	C	CYFIP2	-0.04	0	1.2642E-08	0	5.6	0.5869961	3.93E-08	1
rs74648182	6	164649781	T	G	C6orf118	0.03	0	1.2666E-08	0	6.24	0.5116971	3.938E-08	1
rs6925703	6	26521361	G	A	BTN1A1	0.03	0	1.2674E-08	0	2.88	0.8962879	3.94E-08	1
rs1796518	6	26388444	C	T	BTN2A2	-0.03	0	1.2697E-08	0	4.61	0.7079014	3.947E-08	1
rs9462616	6	40388442	T	G	LRFN2	0.04	0	1.2698E-08	0	3.19	0.8668594	3.947E-08	1
rs34923793	12	102909084	T	C	PAH	-0.05	0	1.27E-08	13	8.08	0.3256878	4.943E-08	1
rs11515171	9	11251849	T	C	PTPRD	-0.04	0	1.27E-08	0	6.43	0.4900065	3.948E-08	1
rs2272026	8	9900090	C	T	TNKS	-0.03	0	1.2704E-08	27	9.66	0.2088897	5.457E-08	1
rs34081956	3	152565310	G	GT	MBNL1	0.04	0	1.2707E-08	0	6.57	0.4752486	3.95E-08	1
rs1908066	1	198419802	T	A	NEK7	0.06	0	1.2709E-08	47	13.3	0.0650494	8.195E-08	1
rs1433719	6	40387317	A	G	LRFN2	0.04	0	1.2716E-08	0	3.19	0.8670013	3.953E-08	1
rs3805122	12	102913805	A	G	PAH	-0.05	0	1.2722E-08	13	8.06	0.3271429	4.944E-08	1
rs11130181	3	49072486	G	A	QRICH1	-0.03	0	1.2728E-08	0	6.12	0.5255542	3.956E-08	1
rs2897875	8	6117518	C	T	MCPH1	-0.03	0	1.2733E-08	0	4.75	0.6901545	3.958E-08	1
rs3921012	11	89093175	G	A	GRM5	0.03	0	1.2758E-08	60	17.9	0.0124287	2.266E-08	1
rs6024402	20	55770848	T	C	CBLN4	-0.04	0	1.276E-08	0	6.84	0.4454207	3.966E-08	1
rs10200252	2	139829343	A	G	LRP1B	0.05	0	1.2763E-08	0	2.15	0.9509615	3.967E-08	1

rs55707162	12	23138248	T	G	SOX5	-0.09	0	1.2773E-08	0	0.74	0.997996	3.97E-08	1
rs117525955	16	21281751	A	G	CRYM	-0.07	0	1.2781E-08	0	4.53	0.7175894	3.973E-08	1
rs140072675	16	21281509	G	A	CRYM	-0.07	0	1.2781E-08	0	4.53	0.7175894	3.973E-08	1
rs147495587	16	21281385	C	T	CRYM	-0.07	0	1.2781E-08	0	4.53	0.7175894	3.973E-08	1
rs72266993	16	21282972	AAG	A	CRYM	-0.07	0	1.2781E-08	0	4.53	0.7175894	3.973E-08	1
rs76843505	16	21283373	G	A	CRYM	-0.07	0	1.2781E-08	0	4.53	0.7175894	3.973E-08	1
rs28539407	4	40993678	T	C	APBB2	-0.04	0	1.2797E-08	18	8.61	0.2818115	5.587E-08	1
rs56168412	9	11245459	G	C	PTPRD	-0.04	0	1.2811E-08	0	6.87	0.4426706	3.982E-08	1
rs72493511	4	30531838	C	T	PCDH7	-0.03	0	1.2813E-08	52	14.63	0.0410384	3.982E-08	1
rs6414614	3	49023895	T	C	NDUFAF3	-0.03	0	1.2816E-08	0	6.09	0.5292066	3.983E-08	1
rs79011498	2	195461415	C	G	SLC39A10	0.06	0	1.2825E-08	0	3.54	0.8311068	3.986E-08	1
rs4974081	3	49033066	C	T	QRICH1	-0.03	0	1.2826E-08	0	6.16	0.5210404	3.985E-08	1
rs6918717	6	104424854	A	C	HACE1	0.04	0	1.2826E-08	17	8.44	0.2957929	5.414E-08	1
rs71466243	12	102914474	T	A	PAH	-0.05	0	1.2829E-08	13	8.07	0.3267843	4.987E-08	1
rs7621347	3	49073456	T	C	QRICH1	-0.03	0	1.2836E-08	0	6.09	0.5292552	3.989E-08	1
rs34425560	12	102912281	T	C	PAH	-0.05	0	1.2841E-08	13	8.07	0.3263429	4.997E-08	1
rs66825608	11	118796677	GTGAT	G	DDX6	-0.03	0	1.2842E-08	24	9.22	0.2371232	7.346E-08	1
rs78712602	6	25195289	C	T	LRRC16A	-0.09	0	1.2854E-08	0	6.05	0.5333877	3.995E-08	1
rs3805120	12	102915954	C	T	PAH	-0.05	0	1.2856E-08	12	8.01	0.3320041	4.965E-08	1
rs617357	11	118029088	G	A	AP002962.1,T	0.03	0	1.2857E-08	0	5.38	0.614057	3.996E-08	1
rs34596177	14	103810844	T	A	PPP1R13B	0.03	0	1.2871E-08	0	6.02	0.537973	4E-08	1
rs74131299	13	112170936	A	T	SOX1	0.04	0	1.2877E-08	0	1.08	0.9933769	4.002E-08	1
rs4145199	6	40384102	G	A	LRFN2	0.04	0	1.2894E-08	0	3.19	0.8672946	4.007E-08	1
rs113364586	11	134643693	C	T	B3GAT1	-0.09	0	1.291E-08	0	2	0.9597491	4.012E-08	1
rs12918159	16	7701728	A	G	RBFOX1	-0.03	0	1.2912E-08	55	15.57	0.0293231	7.972E-08	1
rs722207	6	152002057	G	A	ESR1	0.03	0	1.2912E-08	11	7.95	0.3372005	4.013E-08	1
rs6576008	14	103857846	A	G	PPP1R13B	-0.03	0	1.2913E-08	0	6.17	0.5200522	4.013E-08	1
rs1275509	2	27151141	G	A	TCF23	0.03	0	1.2918E-08	0	6.21	0.515332	4.014E-08	1
rs77042011	6	25204355	A	G	LRRC16A	-0.09	0	1.293E-08	0	6.05	0.5340897	4.018E-08	1
rs76152345	6	25198507	G	A	LRRC16A	-0.09	0	1.2934E-08	0	6.05	0.5343948	4.019E-08	1

rs6888945	5	120900842	T	C	PRR16	0.03	0	1.2938E-08	0	3.24	0.8623064	4.02E-08	1
rs11646892	16	58901517	G	A	GOT2	-0.03	0	1.2939E-08	0	4.2	0.7568221	4.021E-08	1
rs6820975	4	142972938	T	C	INPP4B	-0.04	0	1.294E-08	47	13.44	0.0619985	2.875E-08	1
rs80331120	6	25204546	G	A	LRRC16A	-0.09	0	1.2941E-08	0	6.05	0.5341844	4.021E-08	1
rs149580548	11	113588815	G	A	TMPRSS5	-0.06	0	1.2949E-08	0	3.97	0.7834404	4.024E-08	1
rs2587543	11	113408397	A	G	DRD2	-0.03	0	1.2952E-08	0	6.63	0.4679766	4.025E-08	1
rs2377313	1	226349667	T	A	PARP1	-0.03	0	1.296E-08	27	9.63	0.2103558	5.415E-08	1
rs116877134	11	134728801	A	T	B3GAT1	-0.06	0	1.2964E-08	0	2.76	0.9059709	4.028E-08	1
rs75352463	11	47577770	T	C	KBTBD4,ND	-0.08	0	1.297E-08	0	5.88	0.5535689	4.028E-08	1
rs9365753	6	164688880	C	T	C6orf118	0.03	0	1.2974E-08	0	5.84	0.5580852	4.031E-08	1
rs9277935	6	33192648	G	T	COL11A2	0.03	0	1.2975E-08	22	9.05	0.2490674	4.031E-08	1
rs1275511	2	27150802	T	C	TCF23	0.03	0	1.2998E-08	0	6.2	0.5164599	4.039E-08	1
rs3828473	12	102916395	G	C	PAH	-0.05	0	1.3001E-08	13	8.05	0.3284088	5.04E-08	1
rs174535	11	61783884	T	C	MYRF,TMEM	0.03	0	1.3014E-08	49	13.96	0.0518181	4.043E-08	1
rs4788203	16	29967506	G	A	TMEM219	-0.03	0	1.3014E-08	20	8.76	0.2701479	6.583E-08	1
rs898834	1	226483094	C	T	STUM	-0.03	0	1.3022E-08	49	13.91	0.052886	4.113E-08	1
rs35277443	20	52616461	C	A	TSHZ2	-0.04	0	1.3025E-08	46	13	0.0720135	6.825E-08	1
rs892369	6	40381638	G	A	LRFN2	-0.04	0	1.3048E-08	0	3.18	0.8676661	4.054E-08	1
rs10865977	3	52869430	C	T	TMEM110,TI	0.03	0	1.3063E-08	0	5.06	0.6523446	4.058E-08	1
rs4955416	3	49070995	T	C	QRICH1	-0.03	0	1.307E-08	0	6.15	0.5218986	4.06E-08	1
rs4906379	14	103849154	A	G	PPP1R13B	-0.03	0	1.3085E-08	0	5.9	0.5510489	4.065E-08	1
rs59715676	16	22293807	C	A	POLR3E	-0.07	0	1.309E-08	0	3.56	0.8283612	4.067E-08	1
rs111521816	16	22299897	GGC	G	POLR3E	-0.07	0	1.3095E-08	0	3.56	0.8284291	4.068E-08	1
rs199712377	16	22299901	G	T	POLR3E	-0.07	0	1.3095E-08	0	3.56	0.8284291	4.068E-08	1
rs13333149	16	22298994	G	A	POLR3E	-0.07	0	1.3107E-08	0	3.56	0.8284812	4.072E-08	1
rs9355497	6	164654608	A	T	C6orf118	0.03	0	1.3113E-08	0	6.12	0.5261897	4.073E-08	1
rs34962617	16	21274021	TCGA	T	CRYM	-0.07	0	1.3126E-08	0	4.54	0.7161123	4.077E-08	1
rs12123239	1	198270681	G	A	NEK7	-0.03	0	1.3128E-08	42	12.1	0.0972458	8.892E-08	1
rs11214602	11	113406829	C	A	DRD2	-0.03	0	1.313E-08	0	6.63	0.4684333	4.079E-08	1
rs7539539	1	59968809	C	G	C1orf87	0.04	0	1.3141E-08	32	10.38	0.1681525	8.028E-08	1

Table S2

rs144597176	4	59245206	ATATCTCA(	A	ADGRL3	-0.04	0	1.3141E-08	0	5.2	0.6355631	4.082E-08	1
rs9358954	6	26530950	A	G	HMGN4	0.03	0	1.3149E-08	0	2.8	0.9028491	4.084E-08	1
rs2916256	6	40383313	T	C	LRFN2	-0.04	0	1.3153E-08	0	3.18	0.8679417	4.085E-08	1
rs60824528	16	7697515	ACATG	A	RBFOX1	0.03	0	1.3153E-08	35	10.78	0.1485977	9.424E-08	1
rs2202985	8	14644297	C	A	SGCZ	-0.03	0	1.3154E-08	0	5.05	0.6543784	4.086E-08	1
rs16972397	16	22304110	A	C	POLR3E	-0.07	0	1.3159E-08	0	3.57	0.8274541	4.087E-08	1
rs2305967	16	22305004	G	C	POLR3E	-0.07	0	1.3159E-08	0	3.57	0.8274541	4.087E-08	1
rs1841649	1	226480645	C	A	STUM	-0.03	0	1.3167E-08	49	13.91	0.0527999	4.229E-08	1
rs66676135	14	103805167	G	A	PPP1R13B	0.03	0	1.3169E-08	0	5.86	0.5557603	4.09E-08	1
rs550687738	3	43392268	T	TC	ANO10,SNRI	-0.03	0	1.3177E-08	50	14.18	0.0480933	7.297E-09	1.79541E-09
rs12648423	4	101720916	A	G	BANK1	-0.03	0	1.3213E-08	0	3.25	0.8613993	4.104E-08	1
rs6787808	3	49041672	T	C	QRICH1	-0.03	0	1.3217E-08	0	6.09	0.529371	4.105E-08	1
rs4583204	15	86375087	A	C	AGBL1	-0.03	0	1.3218E-08	5	7.42	0.3866795	4.371E-08	1
rs10758967	9	8370165	A	G	PTPRD	-0.03	0	1.3222E-08	46	13.19	0.0677231	8.424E-08	1
rs6798112	3	49055944	A	G	QRICH1	-0.03	0	1.3235E-08	0	6.09	0.5294195	4.111E-08	1
rs17086323	6	123916099	A	T	NKAIN2	0.03	0	1.3245E-08	0	2.15	0.9511917	4.114E-08	1
rs6446247	3	49064568	A	T	QRICH1	-0.03	0	1.3271E-08	0	6.09	0.5295381	4.122E-08	1
rs4906376	14	103805828	A	C	PPP1R13B	0.03	0	1.3274E-08	0	5.85	0.557198	4.122E-08	1
rs7701280	5	157358155	G	A	CYFIP2	-0.04	0	1.3287E-08	0	5.57	0.5902536	4.126E-08	1
rs10010043	4	46536556	C	G	GABRA2	0.04	0	1.3293E-08	0	4.59	0.7104151	4.128E-08	1
rs1942497	11	89108291	T	C	GRM5	0.03	0	1.3314E-08	61	18.37	0.0103884	1.846E-08	4.85827E-09
rs138607377	2	139093444	TAAAATTG(	T	NXPH2	0.04	0	1.3316E-08	0	4.06	0.7727126	4.135E-08	1
rs72743364	15	73812581	C	A	C15orf59	-0.05	0	1.3317E-08	45	12.95	0.0732534	2.947E-08	1
rs13270648	8	56878178	C	T	IMPAD1	0.03	0	1.3321E-08	25	9.44	0.2226079	4.128E-08	1
rs59034682	6	164660964	A	G	C6orf118	0.03	0	1.3332E-08	0	4.7	0.6965184	4.14E-08	1
rs7570	11	66843174	G	C	C11orf80,RCI	-0.03	0	1.3348E-08	41	12.03	0.0994719	3.868E-08	1
rs7633840	3	48682205	T	C	NCKIPSD	-0.03	0	1.3356E-08	0	5.91	0.5502766	4.147E-08	1
rs11964869	6	104435662	T	C	HACE1	0.04	0	1.3356E-08	16	8.41	0.2980312	5.587E-08	1
rs7359702	17	44408345	C	T	GPATCH8	0.05	0	1.3362E-08	46	13.01	0.0719088	2.1E-08	5.56908E-09
rs114528092	3	44568516	A	G	ZKSCAN7	0.05	0	1.3375E-08	28	9.81	0.1997457	6.181E-08	1

rs76657905	8	61624381	C	T	AC090094.1,A	-0.07	0	1.3378E-08	0	6.8	0.4497737	4.154E-08	1
rs2242592	11	113408708	G	A	DRD2	-0.03	0	1.3379E-08	0	6.65	0.4664789	4.154E-08	1
rs2136644	4	142983355	C	T	INPP4B	-0.04	0	1.339E-08	48	13.51	0.06058	2.931E-08	1
rs13259984	8	14650658	T	G	SGCZ	-0.03	0	1.3396E-08	0	4.86	0.677627	4.159E-08	1
rs12919033	16	58933615	C	T	GOT2	-0.04	0	1.3406E-08	45	12.88	0.0749798	7.509E-08	1
rs73367497	12	60528972	C	T	SLC16A7	-0.03	0	1.3408E-08	52	14.65	0.0408218	6.033E-08	1
rs12770769	10	90933990	A	G	ANKRD1	0.03	0	1.3414E-08	0	2.73	0.9087393	4.165E-08	1
rs76593946	16	21272252	G	A	CRYM	-0.07	0	1.3421E-08	0	4.55	0.7147854	4.167E-08	1
rs9508158	13	28805989	T	C	MTUS2	-0.03	0	1.3431E-08	0	1.51	0.9818098	4.17E-08	1
rs73467288	7	129105633	A	T	RP11-286H14	-0.06	0	1.3433E-08	0	5.61	0.5858218	4.17E-08	1
rs33910621	4	142982894	TA	T	INPP4B	-0.04	0	1.3434E-08	48	13.54	0.0600673	2.926E-08	1
rs9871960	3	16108357	C	A	GALNT15	-0.03	0	1.3458E-08	0	5.99	0.5406052	4.178E-08	1
rs73539819	16	22289918	C	T	EEF2K	-0.07	0	1.346E-08	0	3.55	0.8294591	4.179E-08	1
rs66953418	14	103805133	G	A	PPP1R13B	0.03	0	1.346E-08	0	5.85	0.5572613	4.179E-08	1
rs12379731	9	80513596	C	T	TLE4	0.03	0	1.3466E-08	0	3.79	0.8039781	4.181E-08	1
rs9355493	6	164654190	C	T	C6orf118	0.03	0	1.3467E-08	0	6.04	0.5347539	4.181E-08	1
rs2397673	6	99895113	T	C	MCHR2	0.03	0	1.3472E-08	0	1.88	0.9663026	4.183E-08	1
rs12447139	16	21273114	T	C	CRYM	-0.07	0	1.3477E-08	0	4.55	0.7148585	4.184E-08	1
rs10003726	4	142979849	T	A	INPP4B	-0.04	0	1.348E-08	48	13.55	0.0598162	2.924E-08	1
rs12215773	6	27071454	T	C	HIST1H2BJ	-0.03	0	1.3481E-08	0	3.57	0.827315	4.185E-08	1
rs11642740	16	30049334	A	G	FAM57B	-0.03	0	1.3484E-08	24	9.22	0.2370959	6.367E-08	1
rs17151145	8	10125701	C	T	MSRA	0.03	0	1.349E-08	0	2.52	0.925284	4.188E-08	1
rs62338516	5	3277265	C	T	IRX1	0.08	0	1.3494E-08	0	2.31	0.9407585	4.189E-08	1
rs4900597	14	103800327	C	T	PPP1R13B	0.03	0	1.3502E-08	0	5.85	0.5569887	4.191E-08	1
rs4906377	14	103812519	G	A	PPP1R13B	0.03	0	1.3507E-08	0	5.85	0.5568054	4.193E-08	1
rs62086899	17	68013018	C	T	C17orf58	0.03	0	1.3509E-08	46	12.98	0.0725256	1.172E-07	1
rs35085624	14	103810559	G	T	PPP1R13B	0.03	0	1.3511E-08	0	5.86	0.5567302	4.194E-08	1
rs143422639	10	91095234	A	C	PCGF5	0.1	0	1.3516E-08	0	6.14	0.5240011	4.196E-08	1
rs12885509	14	103806988	T	C	PPP1R13B	0.03	0	1.3516E-08	0	5.85	0.5569695	4.196E-08	1
rs75226174	1	81021745	T	C	ADGRL2	0.05	0	1.3519E-08	0	6.94	0.4348892	4.197E-08	1

rs12883337	14	103797800	G	C	PPP1R13B	0.03	0	1.3528E-08	0	5.86	0.5567515	4.199E-08	1
rs35878673	4	41052033	C	A	APBB2	-0.04	0	1.3531E-08	15	8.28	0.3088674	6.532E-08	1
rs13154298	5	157327651	C	T	CYFIP2	-0.04	0	1.3536E-08	0	5.54	0.5941487	4.202E-08	1
rs4900599	14	103817107	G	T	PPP1R13B	0.03	0	1.3537E-08	0	5.85	0.5567794	4.202E-08	1
rs4906378	14	103817108	C	T	PPP1R13B	0.03	0	1.3537E-08	0	5.85	0.5567799	4.202E-08	1
rs1500323	9	8370763	A	G	PTPRD	-0.03	0	1.354E-08	46	13.17	0.0681102	8.344E-08	1
rs2859543	11	113404857	T	C	ANKK1	-0.03	0	1.355E-08	0	6.62	0.4696026	4.206E-08	1
rs6703459	1	198353320	G	A	NEK7	0.03	0	1.3552E-08	48	13.68	0.0571867	7.82E-08	1
rs116956155	16	22632555	A	G	NPIPB5	-0.07	0	1.3555E-08	0	4.95	0.6664236	4.208E-08	1
rs9999108	4	142979778	A	G	INPP4B	-0.04	0	1.3563E-08	48	13.53	0.0601099	2.953E-08	1
rs1859266	7	51011018	G	A	COBL	0.05	0	1.3563E-08	0	6.66	0.4656144	4.21E-08	1
rs62086898	17	68013004	A	G	C17orf58	0.03	0	1.3566E-08	46	12.98	0.0726845	1.175E-07	1
rs28493626	4	142980882	C	G	INPP4B	-0.04	0	1.3566E-08	48	13.53	0.060108	2.954E-08	1
rs113307456	4	142981180	T	G	INPP4B	-0.04	0	1.3566E-08	48	13.53	0.0601087	2.954E-08	1
rs28497592	4	142980970	A	G	INPP4B	-0.04	0	1.3566E-08	48	13.53	0.0601085	2.954E-08	1
rs17017056	4	142978258	G	T	INPP4B	-0.04	0	1.3567E-08	48	13.54	0.0600916	2.953E-08	1
rs7673332	4	142978898	G	A	INPP4B	-0.04	0	1.3567E-08	48	13.54	0.0600917	2.953E-08	1
rs10032057	4	142979584	C	T	INPP4B	-0.04	0	1.3569E-08	48	13.53	0.0601065	2.954E-08	1
rs6678108	1	36636329	C	T	CSF3R	0.03	0	1.3576E-08	44	12.5	0.0851558	5.411E-08	1
rs34821714	4	142977706	C	CTA	INPP4B	-0.04	0	1.3577E-08	48	13.54	0.0600848	2.955E-08	1
rs77952688	3	44748439	A	G	KIAA1143	0.05	0	1.3578E-08	27	9.68	0.2073036	6.632E-08	1
rs2799077	6	28266819	C	T	ZSCAN26	-0.05	0	1.3589E-08	30	10.14	0.1807276	1.224E-07	1
rs9308158	4	142977422	T	C	INPP4B	-0.04	0	1.3594E-08	48	13.57	0.0593783	2.933E-08	1
rs112518238	4	142981174	T	TA	INPP4B	-0.04	0	1.3596E-08	48	13.53	0.060152	2.962E-08	1
rs2859544	11	113404719	G	A	ANKK1	-0.03	0	1.3601E-08	0	6.62	0.4697043	4.222E-08	1
rs9938382	16	72046506	C	T	TXNL4B	0.03	0	1.3605E-08	0	2.65	0.9152145	4.223E-08	1
rs1927246	1	198347569	A	G	NEK7	0.03	0	1.3613E-08	48	13.66	0.0575969	7.784E-08	1
rs12656	12	54286558	A	T	HNRNPA1	-0.03	0	1.3615E-08	13	8.13	0.3215347	6.1E-08	1
rs200965	6	27898606	G	A	HIST1H2BO	-0.04	0	1.362E-08	33	10.6	0.1572255	4.227E-08	1
rs6910899	6	26524111	A	G	BTN1A1	0.03	0	1.3632E-08	0	2.93	0.8915168	4.231E-08	1

Table S2

rs12174848	6	164647668	T	A	C6orf118	0.03	0	1.3635E-08	0	6.13	0.524822	4.232E-08	1
rs73009656	6	151857260	C	T	ESR1	-0.03	0	1.3639E-08	0	5.21	0.6345523	4.233E-08	1
rs6910930	6	26523833	G	A	BTN1A1	0.03	0	1.364E-08	0	2.93	0.8915159	4.233E-08	1
rs8017200	14	103836546	G	A	PPP1R13B	0.03	0	1.3647E-08	0	6.06	0.5325431	4.236E-08	1
rs2118999	5	125280135	C	T	ZNF608	0.04	0	1.365E-08	43	12.32	0.090536	6.873E-08	1
rs2308095	6	40095108	C	CAG	MOCS1	-0.03	0	1.3657E-08	0	4.17	0.7599078	4.239E-08	1
rs17791722	14	103819873	C	T	PPP1R13B	0.03	0	1.3668E-08	0	5.98	0.5426088	4.242E-08	1
rs11901133	2	27846846	T	G	MRPL33,RBI	-0.03	0	1.3674E-08	0	5	0.6599205	4.244E-08	1
rs871816	10	3269753	G	A	PITRM1	0.03	0	1.3688E-08	0	6.79	0.4513864	4.248E-08	1
rs10908311	1	36635549	A	G	CSF3R	0.03	0	1.3709E-08	44	12.5	0.0852195	5.472E-08	1
rs5795145	11	118790800	C	CG	DDX6	-0.03	0	1.3721E-08	23	9.16	0.2412311	7.825E-08	1
rs7105462	11	113041326	G	A	NCAM1	-0.03	0	1.3724E-08	29	9.9	0.1944957	5.777E-08	1
rs150360496	6	164690041	AT	A	C6orf118	0.03	0	1.3731E-08	0	5.82	0.5606829	4.261E-08	1
rs10032156	4	142979688	C	T	INPP4B	-0.04	0	1.3732E-08	48	13.52	0.0603573	3E-08	1
rs72631017	4	59272865	A	T	ADGRL3	-0.04	0	1.3734E-08	0	4.65	0.7027282	4.262E-08	1
rs3858778	13	98519995	C	A	STK24	0.03	0	1.3749E-08	18	8.61	0.2816364	3.575E-08	1
rs13122590	4	142937061	A	G	INPP4B	-0.04	0	1.3753E-08	43	12.41	0.0877534	3.664E-08	1
rs6591222	11	66783672	C	T	C11orf80	-0.03	0	1.3755E-08	40	11.85	0.1055673	4.129E-08	1
rs10938445	4	46520011	T	C	GABRA2	0.04	0	1.3759E-08	0	4.82	0.682373	4.27E-08	1
rs199504856	6	164655032	A	G	C6orf118	0.03	0	1.3776E-08	0	5.7	0.5756431	4.275E-08	1
rs6275	11	113412755	A	G	DRD2	-0.03	0	1.378E-08	0	6.51	0.4815286	4.276E-08	1
rs200504	6	27818042	T	C	HIST1H2BM	-0.04	0	1.3801E-08	0	5.64	0.5820204	4.282E-08	1
rs2073525	6	33323048	A	G	DAXX	0.03	0	1.3801E-08	1	7.11	0.4172974	4.46E-08	1
rs12037681	1	36635840	T	C	CSF3R	0.03	0	1.3809E-08	44	12.5	0.0852251	5.514E-08	1
rs112710801	11	134728766	T	C	B3GAT1	-0.06	0	1.3816E-08	0	2.75	0.9072489	4.287E-08	1
rs112628017	9	98023064	C	CATTAT	ANP32B	-0.03	0	1.3829E-08	9	7.77	0.353439	4.291E-08	1
rs76197220	16	21302562	G	A	CRYM	-0.07	0	1.3839E-08	0	4.66	0.701017	4.294E-08	1
rs11644659	16	7701591	A	G	RBFOX1	-0.03	0	1.3846E-08	52	14.88	0.0375815	9.608E-08	1
rs28545716	8	91856674	C	T	RUNX1T1	0.09	0	1.3851E-08	40	11.76	0.1088311	5.903E-08	1
rs2272559	16	21269752	C	G	CRYM	-0.07	0	1.3853E-08	0	4.58	0.7105512	4.298E-08	1

rs1003641	11	113402914	A	G	ANKK1	-0.03	0	1.3862E-08	0	6.61	0.4703714	4.301E-08	1
rs12890822	14	103851704	C	T	PPP1R13B	0.03	0	1.3879E-08	0	5.89	0.5525673	4.306E-08	1
rs141656434	15	46143370	G	A	SQRDL	0.05	0	1.3892E-08	40	11.73	0.1097337	6.162E-08	1
rs77814269	13	103277085	G	A	SLC10A2	0.07	0	1.3893E-08	0	5.85	0.5576767	4.31E-08	1
rs9308160	4	142977556	G	A	INPP4B	-0.04	0	1.3928E-08	48	13.54	0.0600255	3.024E-08	1
rs9365747	6	164654673	G	C	C6orf118	0.03	0	1.3936E-08	0	6.02	0.5368848	4.323E-08	1
rs71501060	9	10184340	A	C	PTPRD	-0.05	0	1.3937E-08	0	6.49	0.4838927	4.324E-08	1
rs149273785	16	21269016	C	T	CRYM	-0.07	0	1.3947E-08	0	4.6	0.7090143	4.326E-08	1
rs9308159	4	142977532	T	C	INPP4B	-0.04	0	1.3982E-08	48	13.54	0.059942	3.034E-08	1
rs1864638	15	86373239	A	G	AGBL1	-0.03	0	1.3986E-08	5	7.42	0.3869137	4.619E-08	1
rs13110491	4	142976996	T	C	INPP4B	-0.04	0	1.3992E-08	48	13.55	0.0597166	3.033E-08	1
rs4482806	4	40998760	T	C	APBB2	0.04	0	1.4005E-08	18	8.58	0.2845868	6.049E-08	1
rs2584137	15	87445389	A	G	NTRK3	-0.03	0	1.4013E-08	0	3.71	0.8124075	4.347E-08	1
rs10505938	12	24248023	T	C	SOX5	0.03	0	1.4026E-08	0	3.62	0.822635	4.351E-08	1
rs62412092	4	41002950	A	G	APBB2	-0.04	0	1.4031E-08	18	8.57	0.2853005	6.051E-08	1
rs145901025	17	44382750	T	TGCA	ITGA2B	0.05	0	1.4042E-08	47	13.35	0.0639569	2.09E-08	5.56908E-09
rs4555299	2	27848323	A	G	MRPL33,RBI	-0.03	0	1.4055E-08	0	4.99	0.660989	4.359E-08	1
rs6576006	14	103856057	A	C	PPP1R13B	-0.03	0	1.4058E-08	0	6.15	0.5219453	4.36E-08	1
rs17755617	2	161078913	C	A	TANK	-0.03	0	1.408E-08	0	2.55	0.9232593	4.367E-08	1
rs4666024	2	27850112	C	G	MRPL33,RBI	-0.03	0	1.4091E-08	0	5.01	0.6592477	4.37E-08	1
rs140373060	16	71324662	TCTGCTAAT	T	CALB2	0.06	0	1.4115E-08	0	6.52	0.4808191	4.377E-08	1
rs112258494	5	137633979	T	G	KLHL3	0.1	0	1.4123E-08	41	11.89	0.1042098	4.38E-08	1
rs1535276	6	26520713	T	C	BTN1A1	0.03	0	1.4124E-08	0	2.95	0.8898701	4.38E-08	1
rs11938835	4	142973364	C	G	INPP4B	-0.04	0	1.4128E-08	48	13.63	0.0582318	3.011E-08	1
rs13147901	4	142975241	T	A	INPP4B	-0.04	0	1.4129E-08	48	13.56	0.0596843	3.061E-08	1
rs9379887	6	26518434	A	G	BTN1A1	0.03	0	1.4131E-08	0	2.95	0.8896757	4.382E-08	1
rs9884946	4	142976078	A	G	INPP4B	-0.04	0	1.4135E-08	48	13.55	0.0596997	3.063E-08	1
rs28686840	4	142975969	C	T	INPP4B	-0.04	0	1.4136E-08	48	13.55	0.0596993	3.063E-08	1
rs4690742	4	142976527	G	C	INPP4B	-0.04	0	1.4138E-08	48	13.55	0.0596958	3.063E-08	1
rs4690743	4	142976607	A	G	INPP4B	-0.04	0	1.4138E-08	48	13.55	0.0596958	3.063E-08	1

rs4713006	6	26519644	A	G	BTN1A1	0.03	0	1.4139E-08	0	2.95	0.88969	4.385E-08	1
rs609264	8	60635987	T	G	RAB2A	0.03	0	1.4142E-08	0	1.96	0.9621744	4.386E-08	1
rs4419196	2	27852431	A	G	MRPL33,RBI	-0.03	0	1.4155E-08	0	5	0.6593619	4.39E-08	1
rs4564736	2	27846676	A	T	MRPL33,RBI	-0.03	0	1.4155E-08	0	5	0.6593619	4.39E-08	1
rs4583413	2	27851957	C	T	MRPL33,RBI	-0.03	0	1.4155E-08	0	5	0.6593619	4.39E-08	1
rs1971559	12	71669875	C	T	THAP2	0.03	0	1.4171E-08	0	4.6	0.7081259	4.395E-08	1
rs13280296	8	14638408	G	A	SGCZ	-0.03	0	1.4174E-08	0	4.22	0.7538198	4.395E-08	1
rs12487379	3	52861769	G	A	TMEM110,TI	-0.03	0	1.4189E-08	0	5.1	0.6476318	4.4E-08	1
rs62410359	4	40972647	C	A	APBB2	-0.05	0	1.4198E-08	36	11.05	0.1364074	6.325E-08	1
rs1022017	4	41005796	T	C	APBB2	0.04	0	1.4206E-08	18	8.58	0.284093	6.135E-08	1
rs113790488	5	144508754	C	CTTTTTTG	KCTD16	0.03	0	1.4235E-08	0	6.22	0.5143921	3.911E-08	1
rs72696245	9	11238710	C	T	PTPRD	-0.04	0	1.4258E-08	0	6.54	0.4786767	4.421E-08	1
rs4736162	8	140260652	G	C	TRAPPC9	0.03	0	1.4262E-08	0	6.35	0.4996522	4.422E-08	1
rs34265575	4	41002913	C	CTA	APBB2	0.04	0	1.4266E-08	18	8.61	0.2818908	6.183E-08	1
rs4713139	6	28124907	C	T	ZSCAN16	-0.05	0	1.4282E-08	47	13.46	0.0617359	1.6E-07	1
rs7528244	1	198251091	C	G	NEK7	0.03	0	1.4285E-08	36	11.01	0.1380922	8.538E-08	1
rs79770303	6	164669875	C	G	C6orf118	0.03	0	1.4294E-08	0	5.86	0.5563472	4.432E-08	1
rs10889165	1	59954699	T	C	CYP2J2	0.04	0	1.4307E-08	33	10.57	0.1583753	9.058E-08	1
rs73226757	4	14924324	A	T	CPEB2	-0.03	0	1.4308E-08	0	4.77	0.6880966	4.436E-08	1
rs9355494	6	164654557	C	G	C6orf118	0.03	0	1.4314E-08	0	6.02	0.5378673	4.438E-08	1
rs9355495	6	164654559	A	G	C6orf118	0.03	0	1.4314E-08	0	6.02	0.5378673	4.438E-08	1
rs7433963	3	43163665	G	A	POMGNT2	-0.03	0	1.435E-08	0	4.63	0.7055771	4.449E-08	1
rs3812288	7	135421199	A	G	CNOT4	-0.03	0	1.435E-08	61	18.01	0.0119221	4.789E-09	1.1728E-09
rs13128465	4	142973452	A	G	INPP4B	-0.04	0	1.4351E-08	48	13.59	0.0590497	3.09E-08	1
rs62175144	2	173480305	C	T	CDCA7	-0.03	0	1.4361E-08	0	5.09	0.6486778	4.452E-08	1
rs201640100	16	71881415	AAC	A	ATXN1L,IST	0.06	0	1.4364E-08	37	11.24	0.1285374	3.043E-08	1
rs138864823	6	164653221	T	C	C6orf118	0.03	0	1.4378E-08	0	6.13	0.5244872	4.457E-08	1
rs6671879	1	198171808	A	G	NEK7	0.03	0	1.4386E-08	0	5.62	0.5847739	4.46E-08	1
rs13139834	4	142973799	T	C	INPP4B	-0.04	0	1.4393E-08	48	13.58	0.0591223	3.102E-08	1
rs11936427	4	142971669	C	T	INPP4B	-0.04	0	1.4394E-08	48	13.58	0.0590878	3.101E-08	1

Table S2

rs56846012	11	113401146	T	TA	ANKK1	-0.03	0	1.4396E-08	0	6.6	0.4719641	4.463E-08	1
rs13101986	4	142973622	C	T	INPP4B	-0.04	0	1.4398E-08	48	13.58	0.059122	3.103E-08	1
rs12619989	2	52105582	C	T	NRXN1	0.03	0	1.4398E-08	0	4.4	0.7330005	4.463E-08	1
rs200964	6	27899165	G	C	HIST1H2BO	-0.04	0	1.4399E-08	33	10.56	0.1592147	4.464E-08	1
rs11943509	4	142973296	A	C	INPP4B	-0.04	0	1.44E-08	48	13.58	0.05912	3.103E-08	1
rs16972395	16	22304236	A	G	POLR3E	-0.07	0	1.4402E-08	0	3.62	0.8221615	4.464E-08	1
rs1052897	7	100643148	A	T	ACTL6B	-0.04	0	1.4404E-08	0	6.76	0.4537871	4.465E-08	1
rs6837806	4	142972898	G	A	INPP4B	-0.04	0	1.441E-08	48	13.58	0.0591146	3.105E-08	1
rs28460827	4	142972444	A	G	INPP4B	-0.04	0	1.4412E-08	48	13.58	0.0591104	3.105E-08	1
rs6815888	4	142972944	A	T	INPP4B	-0.04	0	1.4412E-08	48	13.58	0.0591131	3.106E-08	1
rs28625957	4	142972433	T	A	INPP4B	-0.04	0	1.4413E-08	48	13.58	0.0591094	3.106E-08	1
rs13221067	7	129116472	C	T	RP11-286H14	-0.06	0	1.4413E-08	0	5.62	0.5847887	4.468E-08	1
rs13139051	4	142971582	C	T	INPP4B	-0.04	0	1.4414E-08	48	13.58	0.0591078	3.106E-08	1
rs1605952	4	142971895	C	T	INPP4B	-0.04	0	1.4414E-08	48	13.58	0.0591089	3.106E-08	1
rs1605953	4	142971897	A	G	INPP4B	-0.04	0	1.4415E-08	48	13.58	0.0591095	3.106E-08	1
rs12444750	16	21266460	A	G	CRYM	-0.07	0	1.4416E-08	0	4.64	0.703587	4.469E-08	1
rs7656332	4	142971316	T	C	INPP4B	-0.04	0	1.4419E-08	48	13.58	0.0591091	3.107E-08	1
rs9365745	6	164654566	G	C	C6orf118	0.03	0	1.4425E-08	0	6.01	0.5381893	4.471E-08	1
rs7668605	4	142970967	C	G	INPP4B	-0.04	0	1.4427E-08	48	13.58	0.0591058	3.108E-08	1
rs7668378	4	142970798	C	T	INPP4B	-0.04	0	1.4431E-08	48	13.58	0.0591046	3.109E-08	1
rs13140271	4	142974014	T	C	INPP4B	-0.04	0	1.4437E-08	48	13.58	0.0591899	3.114E-08	1
rs6845018	4	142974045	G	A	INPP4B	-0.04	0	1.4437E-08	48	13.58	0.0591911	3.114E-08	1
rs7692119	4	142970767	A	T	INPP4B	-0.04	0	1.4445E-08	48	13.58	0.0590896	3.112E-08	1
rs13099075	3	49062872	T	C	QRICH1	-0.03	0	1.445E-08	0	6.09	0.5287067	4.479E-08	1
rs8182213	16	72046106	C	T	TXNL4B	0.03	0	1.4463E-08	0	2.65	0.9151767	4.483E-08	1
rs4283704	4	46521591	G	T	GABRA2	0.04	0	1.4463E-08	0	4.72	0.6941278	4.483E-08	1
rs6887078	5	11796759	A	C	CTNND2	-0.27	0	1.4467E-08	29	9.99	0.1889784	6.106E-08	1
rs1392446	5	30831280	C	T	CDH6	0.03	0	1.4469E-08	0	6.27	0.5088024	4.485E-08	1
rs13072537	3	52862016	C	A	TMEM110,TI	-0.03	0	1.4473E-08	0	5.12	0.6453995	4.486E-08	1
rs181141525	16	72879750	C	G	ZFHX3	0.06	0	1.4474E-08	26	9.52	0.2176549	3.05E-08	1

rs190467087	2	208622865	C	T	PTH2R	0.09	0	1.4485E-08	0	3.71	0.8121371	4.49E-08	1
rs9866935	3	196529302	T	G	SMCO1	-0.03	0	1.4496E-08	45	12.96	0.0730836	1.136E-07	1
rs4930390	11	66792552	A	G	C11orf80	-0.03	0	1.4497E-08	41	11.87	0.1050729	4.344E-08	1
rs9308162	4	142981199	G	A	INPP4B	-0.04	0	1.4513E-08	48	13.5	0.0607728	3.183E-08	1
rs6822869	4	142970354	G	A	INPP4B	-0.04	0	1.4522E-08	48	13.59	0.059037	3.128E-08	1
rs4701920	5	11795800	A	G	CTNND2	-0.27	0	1.4522E-08	29	10	0.1886733	6.127E-08	1
rs2449215	8	3630816	A	G	CSMD1	-0.04	0	1.4524E-08	20	8.86	0.2631208	6.63E-08	1
rs76438729	2	22571972	A	T	KLHL29	0.08	0	1.4537E-08	0	5.4	0.6109508	4.505E-08	1
rs9467784	6	26547514	T	A	HMGN4	0.03	0	1.4541E-08	0	2.85	0.8989096	4.507E-08	1
rs10746549	5	11795158	T	C	CTNND2	-0.27	0	1.4545E-08	30	10	0.1885161	6.135E-08	1
rs6927110	6	104429961	C	G	HACE1	0.04	0	1.457E-08	14	8.22	0.3134006	5.926E-08	1
rs10896135	11	66783531	G	C	C11orf80	-0.03	0	1.4576E-08	40	11.84	0.1058304	4.369E-08	1
rs870615	8	14596342	T	C	SGCZ	-0.03	0	1.4577E-08	0	5.33	0.6192726	4.518E-08	1
rs71276077	6	26881319	C	T	ZNF322	-0.05	0	1.4584E-08	4	7.35	0.3934171	5.276E-08	1
rs9357010	6	26527717	C	G	HMGN4	0.03	0	1.4585E-08	0	2.71	0.9106946	4.52E-08	1
rs12618482	2	195341649	A	G	SLC39A10	0.04	0	1.4587E-08	0	5.45	0.6046465	4.521E-08	1
rs10791892	11	66782269	C	G	C11orf80	-0.03	0	1.4593E-08	40	11.84	0.1058723	4.374E-08	1
rs2587552	11	113401051	G	A	ANKK1	-0.03	0	1.4594E-08	0	6.59	0.4730383	4.523E-08	1
rs4939725	18	53257495	A	T	DCC	0.04	0	1.4597E-08	0	7.01	0.4279755	4.523E-08	1
rs365552	9	125225230	C	A	RABEPK	0.03	0	1.46E-08	0	5.28	0.6257109	4.524E-08	1
rs184781612	13	61066866	A	C	PCDH20	-0.1	0	1.4617E-08	0	6.45	0.4881556	4.529E-08	1
rs10750790	11	66814739	A	G	C11orf80	-0.03	0	1.4629E-08	40	11.86	0.1052287	4.381E-08	1
rs6508212	18	53229949	A	G	DCC	0.04	0	1.4629E-08	4	7.36	0.3924441	4.533E-08	1
rs1426081	1	59957735	C	A	C1orf87	0.04	0	1.4629E-08	33	10.49	0.162669	9.344E-08	1
rs7692881	4	142971099	A	C	INPP4B	-0.04	0	1.4636E-08	48	13.59	0.0590099	3.148E-08	1
rs3083817	4	142965089	C	CAA	INPP4B	-0.04	0	1.464E-08	48	13.61	0.0586677	3.155E-08	1
rs112946719	4	142970028	TCTTTA	T	INPP4B	-0.04	0	1.4643E-08	48	13.59	0.0590476	3.154E-08	1
rs633777	8	9942505	G	A	MSRA	-0.03	0	1.4649E-08	0	5.51	0.5979416	4.539E-08	1
rs62064964	16	58899078	C	T	GOT2	-0.03	0	1.465E-08	0	4.27	0.748374	4.539E-08	1
rs62067794	16	58899066	C	T	GOT2	-0.03	0	1.4654E-08	0	4.27	0.7482427	4.541E-08	1

rs4810739	20	47955787	G	A	SULF2	-0.03	0	1.4657E-08	0	5.43	0.607088	4.542E-08	1
rs56070655	9	11179005	C	T	PTPRD	-0.04	0	1.468E-08	15	8.33	0.304598	6.965E-08	1
rs151029544	5	154399187	C	G	GALNT10	0.08	0	1.4683E-08	0	6.58	0.4736583	4.183E-08	1
rs12785137	10	90935950	G	A	ANKRD1	0.03	0	1.4714E-08	0	3.23	0.8627756	4.559E-08	1
rs7999616	13	93322846	G	T	GPC6	0.03	0	1.4718E-08	12	8.01	0.3320574	6.375E-08	1
rs192506357	12	21902530	A	G	ABCC9	-0.09	0	1.4718E-08	30	10.01	0.1880003	4.56E-08	1
rs9284886	3	48923139	A	G	ARIH2	-0.03	0	1.4732E-08	0	6.1	0.5285383	4.533E-08	1
rs4316822	18	53259306	T	C	DCC	0.04	0	1.4735E-08	0	7.03	0.4257458	4.565E-08	1
rs1664228	1	208261091	A	C	PLXNA2	-0.03	0	1.4736E-08	0	5.74	0.5703328	4.566E-08	1
rs7373072	3	48922584	T	A	ARIH2	-0.03	0	1.4744E-08	0	6.1	0.5284114	4.536E-08	1
rs7653408	3	48934918	A	C	ARIH2	-0.03	0	1.4753E-08	0	6.07	0.5318738	4.544E-08	1
rs7701113	5	62674795	T	C	IPO11	-0.03	0	1.4753E-08	0	3.09	0.8761568	4.571E-08	1
rs10752590	1	36633565	C	T	CSF3R	0.03	0	1.4758E-08	43	12.45	0.0867208	5.809E-08	1
rs10791891	11	66761223	T	C	C11orf80	-0.03	0	1.4766E-08	40	11.85	0.1055846	4.425E-08	1
rs56145866	7	129118671	A	C	RP11-286H14	-0.06	0	1.478E-08	0	5.62	0.5852942	4.579E-08	1
rs113590514	1	59958524	G	GCCACTTG	C1orf87	0.04	0	1.4806E-08	33	10.45	0.164334	9.438E-08	1
rs113399544	7	149667784	G	A	KRBA1	0.03	0	1.481E-08	28	9.82	0.1990876	4.588E-08	1
rs9888591	14	103785183	C	T	PPP1R13B	0.03	0	1.4823E-08	0	5.84	0.5587808	4.592E-08	1
rs6830308	4	132667297	G	A	PCDH10	-0.04	0	1.4825E-08	0	3.75	0.8082949	4.593E-08	1
rs714766	11	66767852	A	G	C11orf80	-0.03	0	1.4831E-08	40	11.85	0.105724	4.444E-08	1
rs10758965	9	8370082	G	A	PTPRD	-0.03	0	1.4831E-08	47	13.27	0.0658497	9.444E-08	1
rs325481	5	104665051	G	A	NUDT12	-0.03	0	1.4844E-08	0	5.7	0.5749521	4.598E-08	1
rs11921590	3	49606760	T	C	BSN	-0.03	0	1.4847E-08	0	6.5	0.4822293	4.587E-08	1
rs11207547	1	59953080	T	C	CYP2J2	0.04	0	1.4867E-08	33	10.54	0.1599391	9.462E-08	1
rs13064576	3	49604997	C	T	BSN	-0.03	0	1.487E-08	0	6.5	0.4823306	4.593E-08	1
rs6817822	4	59237041	C	T	ADGRL3	-0.04	0	1.4893E-08	0	5.74	0.5699423	4.613E-08	1
rs75348631	11	47671630	T	G	AGBL2	-0.08	0	1.49E-08	0	6.32	0.5026072	4.589E-08	1
rs1632609	1	208264265	T	C	PLXNA2	-0.03	0	1.4902E-08	0	5.77	0.5665684	4.616E-08	1
rs35872725	1	198173676	C	CAGA	NEK7	0.03	0	1.4904E-08	0	5.6	0.5871417	4.617E-08	1
rs7519843	1	198163436	T	C	NEK7	0.03	0	1.4904E-08	0	5.6	0.5871417	4.617E-08	1

Table S2

rs12886637	14	103756555	C	T	PPP1R13B	0.03	0	1.4905E-08	0	6.06	0.5323626	4.617E-08	1
rs45542442	11	113401147	G	A	ANKK1	-0.03	0	1.4922E-08	0	6.62	0.4694968	4.622E-08	1
rs7201518	16	30071187	G	T	ALDOA	-0.03	0	1.4925E-08	12	8.04	0.3287115	4.622E-08	1
rs7834767	8	54968141	T	C	RP1	0.03	0	1.4927E-08	53	15.04	0.0354511	6.931E-09	1.70217E-09
rs113891660	3	133034383	G	A	TMEM108	-0.05	0	1.493E-08	0	3.46	0.8398055	4.624E-08	1
rs2859545	11	113400618	C	T	ANKK1	-0.03	0	1.4931E-08	0	6.59	0.4727797	4.625E-08	1
rs7653985	4	41000497	C	G	APBB2	0.04	0	1.4932E-08	18	8.64	0.2799002	6.471E-08	1
rs1026186	18	45161445	G	A	SLC14A2	-0.03	0	1.4937E-08	0	4.1	0.768063	4.627E-08	1
rs12890354	14	103769525	C	A	PPP1R13B	0.03	0	1.4938E-08	0	6.06	0.5327015	4.627E-08	1
rs2187041	11	66767045	T	C	C11orf80	-0.03	0	1.4944E-08	40	11.86	0.105311	4.475E-08	1
rs4491576	17	48331274	A	T	SKAP1	-0.04	0	1.4956E-08	53	14.93	0.0369278	1.456E-08	3.80565E-09
rs61924980	12	60504663	C	A	SLC16A7	-0.03	0	1.4959E-08	52	14.6	0.0414528	6.525E-08	1
rs21126	5	104678081	G	A	NUDT12	-0.03	0	1.4968E-08	0	6.56	0.476234	4.636E-08	1
rs4930184	11	66753623	G	T	C11orf80	-0.03	0	1.4968E-08	40	11.85	0.1055927	4.485E-08	1
rs149254026	16	72392091	T	C	AC004158.1	0.06	0	1.4984E-08	29	9.96	0.1905696	3.119E-08	1
rs9932605	16	30080727	A	G	PPP4C	-0.03	0	1.5E-08	12	8.05	0.3286167	4.645E-08	1
rs35471678	6	26530634	T	TA	HMGN4	0.03	0	1.5002E-08	0	2.41	0.933989	4.646E-08	1
rs4080	15	57909143	G	C	ALDH1A2	-0.03	0	1.5009E-08	32	10.4	0.1669092	3.365E-08	1
rs7930203	11	66816288	A	G	C11orf80	-0.03	0	1.501E-08	41	11.87	0.1048064	4.489E-08	1
rs12588797	14	103833683	T	C	PPP1R13B	0.03	0	1.5018E-08	0	6.01	0.5386352	4.651E-08	1
rs62412063	4	40978965	A	C	APBB2	-0.05	0	1.5031E-08	36	11.02	0.1375893	6.69E-08	1
rs10247962	7	100622306	G	A	TFR2	-0.04	0	1.504E-08	0	5.14	0.6427368	4.658E-08	1
rs6793308	3	49386850	C	T	RHOA	-0.03	0	1.505E-08	0	6.16	0.5207291	4.661E-08	1
rs112417871	6	164657275	G	C	C6orf118	0.03	0	1.5066E-08	0	5.84	0.558389	4.666E-08	1
rs4713118	6	27709015	A	G	HIST1H2BL	-0.04	0	1.507E-08	0	6.31	0.5041677	4.667E-08	1
rs606803	11	99643362	A	T	CNTN5	-0.03	0	1.5076E-08	29	9.88	0.1952329	3.492E-08	1
rs1336189	10	24345035	C	A	KIAA1217	-0.03	0	1.5077E-08	0	4.51	0.7199398	4.669E-08	1
rs28699350	3	44631938	G	C	ZNF197	0.03	0	1.5078E-08	0	5.81	0.562593	4.669E-08	1
rs6432020	2	9585791	C	T	YWHAQ	-0.03	0	1.5081E-08	11	7.92	0.3398776	4.553E-08	1
rs6761985	3	44529948	A	G	ZNF852	0.03	0	1.5082E-08	0	5.58	0.5895947	4.642E-08	1

rs188327963	16	21263734	C	T	CRYM	-0.07	0	1.5093E-08	0	4.71	0.6953873	4.674E-08	1
rs12888002	14	103772310	T	C	PPP1R13B	0.03	0	1.5109E-08	0	6.06	0.5325028	4.679E-08	1
rs6827913	4	142966095	C	G	INPP4B	-0.04	0	1.5109E-08	48	13.6	0.0587239	3.247E-08	1
rs3003920	6	151957183	T	C	ESR1	-0.03	0	1.512E-08	30	10.09	0.183367	4.682E-08	1
rs3792252	2	27773064	G	A	MRPL33	0.03	0	1.5138E-08	0	5.57	0.5901542	4.687E-08	1
rs1807019	18	50851736	G	T	MRO	-0.03	0	1.5143E-08	0	4.9	0.6715779	4.689E-08	1
rs2397670	6	99890080	G	A	MCHR2	0.03	0	1.5169E-08	0	1.88	0.9659366	4.697E-08	1
rs9347681	6	162713276	C	T	PARK2	0.03	0	1.517E-08	0	6.26	0.5093145	4.697E-08	1
rs292974	5	58656083	C	A	RAB3C	0.04	0	1.5171E-08	0	3.3	0.8561812	4.697E-08	1
rs116871689	16	22633811	G	A	NPIPB5	-0.07	0	1.5177E-08	0	4.88	0.6747543	4.699E-08	1
rs34743594	6	123909880	A	G	NKAIN2	0.03	0	1.5181E-08	0	2.8	0.9029209	4.7E-08	1
rs55662358	6	164671025	T	C	C6orf118	0.03	0	1.519E-08	0	5.84	0.5581462	4.703E-08	1
rs10791889	11	66726354	C	T	SPTBN2	-0.03	0	1.5191E-08	41	11.88	0.1045184	4.543E-08	1
rs118057621	16	22625875	G	A	NPIPB5	-0.07	0	1.5196E-08	0	4.93	0.6685093	4.705E-08	1
rs9467782	6	26542545	G	A	HMGN4	0.03	0	1.5216E-08	0	2.74	0.9081773	4.711E-08	1
rs1940734	11	113024306	G	C	NCAM1	0.03	0	1.522E-08	20	8.82	0.2656199	6.007E-08	1
rs7223967	17	44382890	C	A	ITGA2B	0.05	0	1.522E-08	46	13.1	0.0696638	2.302E-08	6.21547E-09
rs10750022	11	113025591	G	T	NCAM1	0.03	0	1.5223E-08	20	8.82	0.2656203	6.008E-08	1
rs4884120	13	55036547	A	G	OLFM4	-0.04	0	1.5227E-08	0	5.11	0.645996	4.714E-08	1
rs7516502	1	59951356	G	A	CYP2J2	0.04	0	1.5233E-08	33	10.57	0.1583128	9.714E-08	1
rs1938379	1	198174201	T	C	NEK7	0.03	0	1.5233E-08	0	5.59	0.5883011	4.716E-08	1
rs62302700	4	46526837	C	A	GABRA2	0.04	0	1.5261E-08	0	4.65	0.7030693	4.724E-08	1
rs943576	1	198341172	A	G	NEK7	0.03	0	1.5263E-08	47	13.44	0.0620594	8.443E-08	1
rs35559280	7	132783245	CTG	C	CHCHD3	0.04	0	1.527E-08	0	3.42	0.8432625	4.727E-08	1
rs543866446	3	49398203	T	TAGCCAAG	RHOA	-0.03	0	1.5271E-08	0	6.17	0.519518	4.728E-08	1
rs9467774	6	26504808	C	A	BTN1A1	0.03	0	1.5282E-08	0	2.87	0.8967406	4.731E-08	1
rs201456385	5	60560950	A	G	DEPDC1B	-0.09	0	1.5293E-08	0	3.63	0.8216982	4.734E-08	1
rs7239818	18	53280100	A	T	DCC	0.04	0	1.5297E-08	1	7.09	0.4190746	4.735E-08	1
rs2155290	11	112980346	C	G	NCAM1	0.03	0	1.53E-08	17	8.48	0.2925445	5.834E-08	1
rs192870213	11	47886938	C	T	NUP160	-0.07	0	1.5321E-08	12	7.98	0.3345243	4.278E-08	1

rs11706370	3	49403658	G	A	RHOA	-0.03	0	1.533E-08	0	6.21	0.5150245	4.745E-08	1
rs4906364	14	103748005	C	G	PPP1R13B	0.03	0	1.5336E-08	0	6.02	0.5370648	4.747E-08	1
rs147070584	2	208877831	G	A	PTH2R	0.09	0	1.5341E-08	0	0.67	0.9985745	4.749E-08	1
rs6733526	2	195380988	G	A	SLC39A10	0.04	0	1.5347E-08	0	5.38	0.6136426	4.751E-08	1
rs2135986	4	41011719	T	C	APBB2	0.04	0	1.5348E-08	19	8.67	0.2773803	6.67E-08	1
rs4436844	18	53257137	G	A	DCC	0.04	0	1.5351E-08	0	6.81	0.4487306	4.752E-08	1
rs113967514	3	133027205	A	G	TMEM108	-0.05	0	1.5356E-08	0	3.44	0.8417064	4.753E-08	1
rs11047297	12	24174710	G	T	SOX5	-0.03	0	1.5362E-08	0	4.37	0.7357381	4.755E-08	1
rs11693766	2	176615240	C	G	MTX2	0.04	0	1.5366E-08	0	3.84	0.7980276	4.756E-08	1
rs12902298	15	77793076	C	T	LINGO1	0.03	0	1.5375E-08	7	7.53	0.3756744	5.741E-08	1
rs11922013	3	49420922	G	C	AMT,RP11-9	-0.03	0	1.5377E-08	0	6.1	0.5275749	4.76E-08	1
rs1664241	1	208263678	G	C	PLXNA2	-0.03	0	1.5378E-08	0	5.78	0.5653962	4.76E-08	1
rs3020328	6	151984370	C	T	ESR1	-0.03	0	1.5383E-08	0	3.13	0.8727562	4.762E-08	1
rs1416067	1	246065943	T	C	SMYD3	0.03	0	1.5392E-08	0	5.61	0.5859409	4.764E-08	1
rs28845848	3	61099304	T	C	FHIT	-0.03	0	1.5411E-08	16	8.43	0.2959498	4.368E-08	1
rs11838404	13	112169036	C	T	SOX1	0.04	0	1.5423E-08	0	1.06	0.9938613	4.774E-08	1
rs703434	10	118309605	T	C	FAM204A	0.06	0	1.5424E-08	33	10.5	0.1621869	1.206E-07	1
rs3020407	6	151986126	G	A	ESR1	-0.03	0	1.5425E-08	0	5.23	0.6314202	4.774E-08	1
rs2310	9	8370008	T	C	PTPRD	-0.03	0	1.5443E-08	47	13.3	0.0650576	9.718E-08	1
rs9971479	11	115125413	G	C	CADM1	-0.03	0	1.5447E-08	41	11.94	0.1025966	4.094E-08	1
rs141592068	3	45905271	C	A	LZTFL1	0.09	0	1.5462E-08	0	2.25	0.944698	4.785E-08	1
rs4008953	11	66893478	A	G	PC	-0.03	0	1.5462E-08	47	13.35	0.0641173	3.516E-08	1
rs1100103	6	40072685	T	C	MOCS1	-0.03	0	1.5464E-08	0	3.99	0.7804334	4.786E-08	1
rs4504431	5	109564474	C	T	MAN2A1	-0.04	0	1.5464E-08	0	1.69	0.9749346	4.786E-08	1
rs12445971	16	21262958	A	G	CRYM	-0.07	0	1.5465E-08	0	4.74	0.6910732	4.786E-08	1
rs9393732	6	26530670	G	A	HMGN4	0.03	0	1.5465E-08	0	2.63	0.9168498	4.786E-08	1
rs10631977	1	226397464	C	CAAG	PARP1	0.03	0	1.5469E-08	34	10.64	0.1552462	7.35E-08	1
rs8180562	6	28173682	G	A	ZKSCAN8	-0.05	0	1.5471E-08	47	13.37	0.0635896	1.721E-07	1
rs7769890	6	99890278	T	C	MCHR2	0.03	0	1.5476E-08	0	1.88	0.966132	4.79E-08	1
rs72087025	6	28162633	AGAG	A	ZKSCAN8	-0.05	0	1.5485E-08	47	13.37	0.0635741	1.723E-07	1

Table S2

rs4713140	6	28129415	G	A	ZSCAN16	-0.05	0	1.5487E-08	47	13.32	0.0647839	1.708E-07	1
rs11110580	12	100899681	G	T	ANO4	0.03	0	1.5495E-08	8	7.61	0.36832	4.718E-08	1
rs2130749	5	109563570	A	G	MAN2A1	-0.04	0	1.5518E-08	0	1.69	0.9750231	4.802E-08	1
rs8045107	16	21636448	T	C	METTL9	-0.03	0	1.5529E-08	0	2.32	0.9399082	4.806E-08	1
rs13322572	3	16105092	C	T	GALNT15	-0.04	0	1.5529E-08	0	3.14	0.8719238	4.806E-08	1
rs13195186	6	162738155	A	G	PACRG	-0.03	0	1.5535E-08	0	6.16	0.5207194	4.807E-08	1
rs11371617	4	142940033	A	AT	INPP4B	-0.04	0	1.5547E-08	43	12.36	0.089405	4.19E-08	1
rs12673102	7	100621544	A	G	TFR2	-0.04	0	1.555E-08	0	5.02	0.6569777	4.812E-08	1
rs2298526	11	112981742	T	C	NCAM1	0.03	0	1.5558E-08	20	8.84	0.2645557	6.159E-08	1
rs9295695	6	26528022	T	C	HMGN4	0.03	0	1.5558E-08	0	2.66	0.9143959	4.814E-08	1
rs1510134	4	142980561	A	C	INPP4B	-0.04	0	1.559E-08	48	13.55	0.0598514	3.369E-08	1
rs847752	6	40066818	T	C	MOCS1	-0.03	0	1.5594E-08	0	4	0.7797803	4.825E-08	1
rs847751	6	40067868	A	G	MOCS1	-0.03	0	1.56E-08	0	3.98	0.7818399	4.827E-08	1
rs12824765	12	66897593	G	A	GRIP1	0.04	0	1.561E-08	0	3.76	0.8069416	4.83E-08	1
rs78579943	11	34976208	A	C	PDHX	-0.06	0	1.5625E-08	0	6.65	0.465957	4.835E-08	1
rs117449410	16	22625521	G	A	NPIPB5	-0.07	0	1.5626E-08	0	4.95	0.6658806	4.835E-08	1
rs3960	3	44530953	T	C	ZNF852	0.03	0	1.5634E-08	0	5.58	0.5896243	4.81E-08	1
rs73367467	12	60512179	C	T	SLC16A7	-0.03	0	1.5643E-08	52	14.67	0.0405199	6.838E-08	1
rs7925102	11	89110892	A	G	GRM5	0.03	0	1.5644E-08	62	18.45	0.0101148	2.675E-08	1
rs12116808	1	246184842	T	C	SMYD3	-0.03	0	1.5646E-08	30	10.1	0.1828422	4.446E-08	1
rs7163336	15	77795430	G	A	LINGO1	0.03	0	1.565E-08	6	7.52	0.3770929	5.854E-08	1
rs2298527	11	112981239	G	C	NCAM1	-0.03	0	1.5669E-08	29	9.89	0.1949122	6.696E-08	1
rs12890430	14	103827197	G	A	PPP1R13B	0.03	0	1.5674E-08	0	5.84	0.558703	4.85E-08	1
rs12891399	14	103827196	T	C	PPP1R13B	0.03	0	1.5674E-08	0	5.84	0.558703	4.85E-08	1
rs7106434	11	112989857	T	C	NCAM1	-0.03	0	1.5675E-08	29	9.89	0.1949854	6.699E-08	1
rs61924983	12	60514246	A	T	SLC16A7	-0.03	0	1.5698E-08	52	14.67	0.0404034	6.861E-08	1
rs12585563	13	96339593	A	G	HS6ST3	0.03	0	1.5724E-08	0	3.41	0.8444808	4.865E-08	1
rs11072774	15	78660355	C	T	CHRNB4	-0.04	0	1.5729E-08	0	3.17	0.8685621	4.866E-08	1
rs9506050	13	28825880	T	C	MTUS2	-0.03	0	1.573E-08	0	1.65	0.9765741	4.866E-08	1
rs10750021	11	113025492	C	G	NCAM1	0.03	0	1.5731E-08	20	8.81	0.2664645	6.212E-08	1

rs4483629	12	60586035	T	C	SLC16A7	-0.03	0	1.5752E-08	56	16.23	0.0230897	3.749E-08	1
rs2202989	8	14615588	G	T	SGCZ	-0.03	0	1.5757E-08	0	3.75	0.8078449	4.875E-08	1
rs9458647	6	162799397	A	G	PACRG	-0.03	0	1.5757E-08	0	3.13	0.8725722	4.875E-08	1
rs11302043	2	195384652	AT	A	SLC39A10	0.04	0	1.5763E-08	0	5.38	0.6137092	4.877E-08	1
rs10922418	1	198415856	T	C	NEK7	0.03	0	1.5765E-08	61	18.2	0.0110904	4.602E-08	1
rs4888594	16	77087162	A	T	MON1B	0.03	0	1.5766E-08	7	7.59	0.3699427	4.877E-08	1
rs6446272	3	49425854	G	A	NICN1,RP11-	-0.03	0	1.5772E-08	0	6.12	0.5258158	4.879E-08	1
rs9651448	10	98188732	G	A	R3HCC1L	0.03	0	1.5777E-08	38	11.3	0.1262105	7.792E-08	1
rs11156777	14	32927512	C	G	NPAS3	-0.04	0	1.5778E-08	30	10.13	0.1813184	6.292E-08	1
rs9376528	6	99886533	A	C	MCHR2	0.03	0	1.5798E-08	0	2.08	0.9553739	4.887E-08	1
rs7218751	17	79822638	A	G	CBX4	0.04	0	1.58E-08	26	9.48	0.2198127	7.442E-08	1
rs1816360	18	53282489	G	C	DCC	0.04	0	1.5807E-08	1	7.1	0.4187277	4.89E-08	1
rs72824741	17	44384738	G	C	ITGA2B	0.05	0	1.5845E-08	45	12.92	0.0741388	2.477E-08	6.75172E-09
rs11629421	14	32928006	G	T	NPAS3	-0.04	0	1.5847E-08	30	10.13	0.1813452	6.317E-08	1
rs13235698	7	129119854	C	G	RP11-286H14	-0.06	0	1.5851E-08	0	5.63	0.5840022	4.903E-08	1
rs114457874	1	246147949	C	A	SMYD3	-0.05	0	1.5853E-08	0	2.7	0.9113378	4.904E-08	1
rs12810479	12	66895230	C	T	GRIP1	0.04	0	1.5856E-08	0	3.74	0.8091599	4.905E-08	1
rs4751240	10	127338145	G	A	DOCK1	0.04	0	1.5872E-08	0	1.85	0.9675305	4.909E-08	1
rs61096451	7	149679437	C	T	KRBA1	0.03	0	1.5884E-08	20	8.85	0.2638767	5.73E-08	1
rs7947502	11	113038674	C	T	NCAM1	-0.03	0	1.5893E-08	28	9.85	0.1973228	6.685E-08	1
rs1227990	6	164906142	C	T	C6orf118	0.03	0	1.5895E-08	18	8.59	0.2837389	4.691E-08	1
rs78646692	1	246006476	C	T	SMYD3	-0.05	0	1.5903E-08	0	1.54	0.9807964	4.919E-08	1
rs10934419	3	117824495	A	C	LSAMP	0.03	0	1.5917E-08	0	2.25	0.9448661	4.923E-08	1
rs138785764	17	44992666	T	C	C1QL1	0.07	0	1.5921E-08	49	13.86	0.053645	1.082E-07	1
rs9468195	6	27708530	A	G	HIST1H2BL	-0.04	0	1.5932E-08	0	6.34	0.5001823	4.928E-08	1
rs10640	3	49416844	G	A	AMT,RP11-9	-0.03	0	1.5934E-08	0	6.14	0.5238898	4.928E-08	1
rs7207765	17	5735757	C	T	WSCD1	-0.03	0	1.5939E-08	0	5	0.6595546	4.93E-08	1
rs1931224	6	162805468	G	A	PACRG	-0.03	0	1.5962E-08	0	3	0.88481	4.937E-08	1
rs2217951	16	58936251	A	C	GOT2	-0.03	0	1.599E-08	42	12.26	0.0922101	9.023E-08	1
rs550424408	8	14637575	G	GT	SGCZ	-0.03	0	1.5992E-08	0	4.2	0.7561173	4.946E-08	1

rs10891490	11	113014805	T	C	NCAM1	-0.03	0	1.5997E-08	29	9.88	0.19576	6.832E-08	1
rs34135167	11	99649744	GT	G	CNTN5	-0.03	0	1.6014E-08	26	9.55	0.2152829	3.731E-08	1
rs10815839	9	8369710	G	A	PTPRD	-0.03	0	1.6025E-08	46	13.08	0.0700942	1.003E-07	1
rs10815840	9	8369713	A	T	PTPRD	-0.03	0	1.6025E-08	46	13.08	0.0700961	1.003E-07	1
rs12038642	1	21659502	C	T	RAP1GAP	0.04	0	1.6038E-08	0	6.38	0.4956884	4.959E-08	1
rs6997	3	49416401	C	T	TCTA	-0.03	0	1.6048E-08	0	6.14	0.5239935	4.963E-08	1
rs11917431	3	49606579	C	T	BSN	-0.03	0	1.606E-08	0	6.52	0.4805987	4.947E-08	1
rs586533	11	99649777	G	T	CNTN5	-0.03	0	1.6062E-08	26	9.56	0.2150003	3.74E-08	1
rs11716974	3	49394420	G	A	RHOA	-0.03	0	1.6067E-08	0	6.18	0.5191686	4.968E-08	1
rs1856965	13	28831821	A	G	MTUS2	-0.03	0	1.6072E-08	0	1.64	0.9769756	4.97E-08	1
rs77562083	16	21260990	G	A	CRYM	-0.07	0	1.6076E-08	0	4.79	0.685261	4.971E-08	1
rs11715915	3	49417897	C	T	AMT,RP11-9	-0.03	0	1.6079E-08	0	6.13	0.524144	4.972E-08	1
rs6779524	3	49413016	C	T	TCTA	-0.03	0	1.6079E-08	0	6.13	0.524144	4.972E-08	1
rs9814873	3	49416679	A	G	AMT	-0.03	0	1.6079E-08	0	6.13	0.524144	4.972E-08	1
rs75535393	2	178946442	C	T	CCDC141	0.06	0	1.608E-08	27	9.62	0.2113695	1.013E-07	1
rs72694269	9	11155055	G	T	PTPRD	-0.05	0	1.6105E-08	0	6.93	0.4360888	4.98E-08	1
rs35467921	16	30037232	C	T	FAM57B	-0.03	0	1.6111E-08	23	9.12	0.2438916	7.548E-08	1
rs9302725	16	60682101	T	G	RP11-457D20	-0.03	0	1.6111E-08	0	5.74	0.5703791	4.982E-08	1
rs2075522	16	21261771	C	T	CRYM	-0.07	0	1.6111E-08	0	4.79	0.6851976	4.982E-08	1
rs75164345	1	246006624	G	T	SMYD3	-0.05	0	1.6116E-08	0	1.54	0.9808428	4.983E-08	1
rs6024397	20	55769143	T	A	CBLN4	-0.04	0	1.6123E-08	0	6.41	0.4932711	4.985E-08	1
rs722637	14	103795386	A	C	PPP1R13B	0.03	0	1.6137E-08	0	5.74	0.570728	4.99E-08	1
rs34768045	15	86308810	G	C	AGBL1	0.03	0	1.6161E-08	27	9.59	0.2128687	2.796E-08	1
rs13215072	6	27709949	A	G	HIST1H2BL	-0.04	0	1.6163E-08	0	6.33	0.501418	4.997E-08	1
rs9506051	13	28829041	A	G	MTUS2	-0.03	0	1.6163E-08	0	1.64	0.9769762	4.997E-08	1
rs35200461	3	49441555	CT	C	NICN1	-0.03	0	1.617E-08	0	5.94	0.5473297	5E-08	1
rs12766869	10	90936802	A	G	ANKRD1	0.03	0	1.6176E-08	0	3.23	0.8626193	5.001E-08	1
rs113142991	2	8512906	C	A	ID2	0.07	0	1.6178E-08	0	5.79	0.5647163	5.002E-08	1
rs2427653	11	115124173	A	T	CADM1	-0.03	0	1.6184E-08	41	12.02	0.0999111	4.221E-08	1
rs215891	16	21693999	A	G	OTOA	0.05	0	1.619E-08	0	5.63	0.5841463	5.006E-08	1

rs78843055	1	246006636	G	A	SMYD3	-0.05	0	1.6194E-08	0	1.54	0.9807811	5.007E-08	1
rs9368561	6	28200565	C	T	ZSCAN9	-0.05	0	1.6198E-08	48	13.51	0.0605495	1.773E-07	1
rs12222165	11	89112374	G	T	GRM5	0.03	0	1.62E-08	62	18.74	0.0090494	2.152E-08	5.72379E-09
rs78217336	6	90836790	G	A	MAP3K7	0.1	0	1.6202E-08	0	3.43	0.8421306	5.009E-08	1
rs9871380	3	49400788	G	A	RHOA	-0.03	0	1.6214E-08	0	6.13	0.5241036	5.013E-08	1
rs59327154	5	157517887	A	G	ADAM19	-0.04	0	1.6223E-08	12	8.03	0.3296138	6.945E-08	1
rs10210705	2	139091092	C	T	NXPH2	0.04	0	1.6239E-08	0	4.08	0.7708716	5.02E-08	1
rs187945353	16	71908179	C	A	IST1	0.06	0	1.6242E-08	36	11.04	0.1370193	3.522E-08	1
rs72668841	14	41783935	G	A	LRFN5	-0.06	0	1.6277E-08	0	2.9	0.8944487	5.032E-08	1
rs4412625	1	198392289	G	T	NEK7	0.03	0	1.6288E-08	62	18.54	0.0097652	4.174E-08	1
rs12504770	4	142531566	T	C	INPP4B	0.04	0	1.6292E-08	35	10.92	0.1422795	6.832E-08	1
rs1139226	6	27707511	A	T	HIST1H2BL	-0.04	0	1.6295E-08	0	6.33	0.5013814	5.037E-08	1
rs75992606	6	35196197	C	A	SCUBE3	-0.06	0	1.6297E-08	0	5.11	0.6467337	5.038E-08	1
rs138878154	3	18706950	A	AC	SATB1	0.03	0	1.6309E-08	32	10.35	0.1695327	8.848E-08	1
rs9508174	13	28834341	G	T	MTUS2	-0.03	0	1.6313E-08	0	1.64	0.976953	5.043E-08	1
rs4508299	13	28834908	G	A	MTUS2	-0.03	0	1.6317E-08	0	1.64	0.9770197	5.044E-08	1
rs6725600	2	2592849	T	A	MYT1L	0.03	0	1.6324E-08	0	2.28	0.9424525	5.046E-08	1
rs62007851	15	77794082	G	A	LINGO1	0.03	0	1.6324E-08	5	7.44	0.3843456	5.926E-08	1
rs35169793	3	49385841	A	G	RHOA	-0.03	0	1.6326E-08	0	6.19	0.5179788	5.046E-08	1
rs4871	6	26545404	G	A	HMGN4	0.03	0	1.6329E-08	0	2.72	0.9097381	5.048E-08	1
rs584310	11	99649310	C	T	CNTN5	-0.03	0	1.6333E-08	26	9.58	0.213652	3.779E-08	1
rs594808	11	99715096	G	A	CNTN5	0.04	0	1.6337E-08	0	3.3	0.8558686	5.05E-08	1
rs75975573	2	8514329	C	T	ID2	0.07	0	1.6359E-08	0	5.82	0.5612253	5.057E-08	1
rs4788218	16	30044429	T	C	FAM57B	-0.03	0	1.6361E-08	23	9.17	0.2404236	7.69E-08	1
rs149553470	1	86425879	C	G	CLCA2	0.1	0	1.6361E-08	26	9.58	0.2139559	7.398E-08	1
rs3804580	3	44850541	G	A	KIF15	-0.03	0	1.6369E-08	0	6.38	0.4960312	5.06E-08	1
rs7337334	13	28824082	A	G	MTUS2	-0.03	0	1.6379E-08	0	1.64	0.9769433	5.063E-08	1
rs28437694	16	7699213	G	A	RBFOX1	0.03	0	1.6383E-08	51	14.39	0.0446369	1.2E-07	1
rs4323529	9	94614969	T	C	FBP1	-0.04	0	1.6388E-08	44	12.56	0.0835415	6.231E-08	1
rs4526415	9	94615243	C	T	FBP1	-0.04	0	1.6391E-08	44	12.56	0.0835352	6.238E-08	1

Table S2

rs7592427	2	161080845	A	C	TANK	-0.03	0	1.6394E-08	0	2.51	0.9266601	5.067E-08	1
rs9365750	6	164674795	G	A	C6orf118	0.03	0	1.64E-08	0	5.81	0.5620326	5.069E-08	1
rs17151108	8	10113609	G	A	MSRA	0.03	0	1.6421E-08	0	2.95	0.8896175	5.075E-08	1
rs146131456	6	164653174	C	A	C6orf118	0.03	0	1.6426E-08	0	6.15	0.5228783	5.077E-08	1
rs78759155	8	14620633	C	T	SGCZ	-0.03	0	1.6432E-08	0	4.22	0.7544891	5.079E-08	1
rs12632223	3	43654139	A	T	ANO10	-0.03	0	1.6452E-08	6	7.46	0.3824648	4.727E-08	1
rs11947590	4	142970585	T	C	INPP4B	-0.04	0	1.6458E-08	49	13.98	0.051537	3.404E-08	1
rs36186043	8	14620830	C	T	SGCZ	-0.03	0	1.6466E-08	0	4.22	0.75446	5.089E-08	1
rs6446277	3	49435644	G	A	NICN1	-0.03	0	1.6479E-08	0	6.15	0.5225415	5.093E-08	1
rs7646366	3	49433235	G	A	NICN1	-0.03	0	1.6479E-08	0	6.15	0.5225415	5.093E-08	1
rs680022	11	99648873	G	A	CNTN5	-0.03	0	1.6483E-08	26	9.54	0.2158809	3.787E-08	1
rs7265061	20	55763945	A	G	CBLN4	-0.04	0	1.6485E-08	0	6.32	0.5034011	5.095E-08	1
rs148160203	1	86422685	A	G	CLCA2	0.1	0	1.6492E-08	26	9.58	0.2138009	7.45E-08	1
rs61818898	1	213694706	A	G	PROX1	-0.09	0	1.6495E-08	0	5.09	0.6494665	5.098E-08	1
rs13079643	3	49440033	G	A	NICN1	-0.03	0	1.6496E-08	0	6.04	0.5347394	5.098E-08	1
rs17450892	4	15079785	C	T	CPEB2	-0.03	0	1.6504E-08	0	4.94	0.6674302	5.101E-08	1
rs3008892	1	66907875	A	T	WDR78	0.03	0	1.6511E-08	0	3.93	0.7877297	5.102E-08	1
rs56169455	17	5738740	G	A	WSCD1	-0.03	0	1.6579E-08	0	5.38	0.6131809	5.123E-08	1
rs6973981	7	70781195	G	C	AUTS2	0.04	0	1.6584E-08	4	7.36	0.3924016	5.55E-08	1
rs940343	2	195344443	T	C	SLC39A10	0.04	0	1.66E-08	0	5.83	0.5591842	5.129E-08	1
rs4906363	14	103743902	G	A	PPP1R13B	0.03	0	1.6627E-08	0	6.14	0.5232675	5.137E-08	1
rs4659823	1	235122425	C	T	TOMM20	0.03	0	1.6635E-08	0	1.84	0.9681714	5.14E-08	1
rs7639370	3	48800484	C	T	PRKAR2A	-0.03	0	1.6662E-08	0	6.51	0.4810832	5.068E-08	1
rs6670631	1	198380954	T	C	NEK7	0.03	0	1.6664E-08	62	18.53	0.0098102	4.259E-08	1
rs72803753	16	71983538	T	C	PKD1L3	0.03	0	1.6664E-08	0	2.97	0.8881178	5.149E-08	1
rs56324456	17	5738643	A	G	WSCD1	-0.03	0	1.667E-08	0	5.38	0.6131727	5.15E-08	1
rs150892361	1	86417812	T	C	CLCA2	0.1	0	1.6676E-08	26	9.58	0.213488	7.525E-08	1
rs191820258	16	71901122	G	A	IST1	0.06	0	1.6679E-08	37	11.12	0.1336015	3.569E-08	1
rs74590737	16	71902571	A	T	IST1	0.06	0	1.6679E-08	37	11.12	0.1336015	3.569E-08	1
rs7199261	16	72048889	A	G	TXNL4B	0.03	0	1.6684E-08	0	2.88	0.8961759	5.155E-08	1

rs6499557	16	72048755	A	G	TXNL4B	0.03	0	1.6685E-08	0	2.88	0.8961847	5.155E-08	1
rs62399101	6	23180767	G	A	HDGFL1	-0.04	0	1.669E-08	39	11.49	0.1186588	9.853E-08	1
rs78348930	6	162734514	C	CTA	PACRG	-0.03	0	1.6698E-08	0	6.5	0.4827557	5.159E-08	1
rs144965203	14	41693524	A	G	LRFN5	-0.07	0	1.6714E-08	0	2.93	0.8915237	5.164E-08	1
rs157615	4	16708810	T	C	LDB2	-0.03	0	1.6714E-08	0	1.42	0.9848354	5.164E-08	1
rs6867416	5	11775283	C	T	CTNND2	-0.25	0	1.6727E-08	7	7.6	0.3696181	6.134E-08	1
rs9837341	3	49627334	A	G	BSN	-0.03	0	1.6738E-08	0	6.4	0.4936788	5.159E-08	1
rs3858205	10	21364887	A	G	CASC10	0.03	0	1.6744E-08	0	6.9	0.4392856	5.173E-08	1
rs905679	2	8515568	G	A	ID2	0.07	0	1.6754E-08	0	6.2	0.5165467	5.176E-08	1
rs2864143	20	38386275	A	G	LBP	-0.06	0	1.6756E-08	8	7.67	0.3623524	6.749E-08	1
rs12218614	10	98212916	C	G	R3HCC1L	0.03	0	1.6758E-08	35	10.85	0.1454729	8.217E-08	1
rs4281426	10	98124671	C	A	R3HCC1L	0.03	0	1.6761E-08	37	11.28	0.1267063	7.55E-08	1
rs72803749	16	71980423	G	A	PKD1L3	0.03	0	1.6763E-08	0	2.97	0.8878323	5.179E-08	1
rs3742366	14	103732014	T	C	ZFYVE21	0.03	0	1.6807E-08	0	7.04	0.4246694	5.192E-08	1
rs37634	7	74462434	C	T	GTF2IRD1	0.03	0	1.6812E-08	0	4.77	0.6878214	5.193E-08	1
rs114924505	6	35270406	T	G	ZNF76	-0.06	0	1.6814E-08	0	5.48	0.601196	5.194E-08	1
rs4729596	7	100623192	T	G	TFR2	-0.04	0	1.6822E-08	0	5.06	0.6528785	5.196E-08	1
rs2604541	4	15080414	C	T	CPEB2	-0.03	0	1.6827E-08	0	4.93	0.6683194	5.198E-08	1
rs1397638	6	164893371	A	G	C6orf118	-0.03	0	1.6828E-08	42	12.15	0.0955831	1.48E-07	1
rs12355087	10	118305092	C	T	FAM204A	-0.06	0	1.6849E-08	33	10.52	0.1611612	1.318E-07	1
rs76164696	1	246007480	G	A	SMYD3	-0.05	0	1.6853E-08	0	1.54	0.9810201	5.206E-08	1
rs11305825	6	152124694	GA	G	ESR1,SYNE1	0.04	0	1.6853E-08	0	3.9	0.7917397	5.206E-08	1
rs34222696	4	41049989	A	G	APBB2	-0.04	0	1.6867E-08	13	8.13	0.3212197	7.801E-08	1
rs112169999	16	21796017	C	CG	OTOA	-0.07	0	1.6868E-08	0	4.39	0.7340349	5.21E-08	1
rs2380760	11	66879960	T	C	PC	-0.03	0	1.6871E-08	54	15.55	0.0295894	2.532E-08	6.94116E-09
rs2380759	11	66879959	T	G	PC	-0.03	0	1.6872E-08	54	15.55	0.0295891	2.532E-08	6.94116E-09
rs75845894	2	139115833	G	A	NXPH2	0.04	0	1.6873E-08	0	4.17	0.7605794	5.212E-08	1
rs150584	16	21692185	G	A	OTOA	0.05	0	1.6874E-08	0	5.62	0.5842103	5.212E-08	1
rs55787825	7	129121248	T	C	RP11-286H14	-0.06	0	1.6877E-08	0	5.61	0.5864711	5.213E-08	1
rs2380345	16	73687402	A	G	PSMD7	-0.03	0	1.6887E-08	39	11.66	0.1123346	5.882E-08	1

rs1502443	16	77026169	C	G	MON1B	-0.03	0	1.6899E-08	24	9.23	0.2368317	9.549E-08	1
rs12641086	4	59234356	C	T	ADGRL3	-0.04	0	1.6902E-08	0	5.18	0.6382743	5.221E-08	1
rs35348936	16	72047451	G	GC	TXNL4B	0.03	0	1.6904E-08	0	2.87	0.8963925	5.221E-08	1
rs28786777	9	94616850	C	T	FBP1	-0.04	0	1.6914E-08	44	12.58	0.0831027	6.426E-08	1
rs4498080	3	44532989	G	T	ZKSCAN7	0.03	0	1.6937E-08	0	5.62	0.584421	5.201E-08	1
rs220335	10	24364954	A	G	KIAA1217	0.03	0	1.6939E-08	0	3.89	0.7918879	5.232E-08	1
rs10786397	10	98147025	A	G	R3HCC1L	0.03	0	1.6963E-08	41	12.01	0.100326	7.929E-08	1
rs35115732	3	49437722	T	C	NICN1	-0.03	0	1.6963E-08	0	6.07	0.5316242	5.239E-08	1
rs62247856	3	43157437	C	T	POMGNT2	0.04	0	1.6964E-08	0	6.79	0.4510379	5.239E-08	1
rs1812167	16	77021667	T	C	MON1B	0.03	0	1.6966E-08	31	10.21	0.1771635	1.027E-07	1
rs1871400	6	153218083	C	T	RGS17	0.03	0	1.6971E-08	0	5.02	0.6572948	5.241E-08	1
rs117737549	16	21252319	G	A	ANKS4B,CR	-0.07	0	1.6984E-08	0	4.79	0.6860958	5.245E-08	1
rs2347419	16	7701919	G	A	RBFOX1	-0.03	0	1.7001E-08	52	14.86	0.0377973	1.176E-07	1
rs367888499	9	109270067	G	GTGCAGGA	EPB41L4B	0.08	0	1.7002E-08	0	5.91	0.5502604	5.226E-08	1
rs9380064	6	28175340	A	G	ZKSCAN8	-0.05	0	1.701E-08	48	13.53	0.0601605	1.909E-07	1
rs215889	16	21694691	T	C	OTOA	0.05	0	1.7017E-08	0	5.64	0.5826978	5.255E-08	1
rs1925059	13	55041004	C	T	OLFM4	-0.04	0	1.702E-08	0	5.38	0.6142709	5.256E-08	1
rs13435685	4	142939033	A	G	INPP4B	-0.04	0	1.7048E-08	43	12.44	0.0869307	4.555E-08	1
rs147871305	1	86415032	C	T	CLCA2	0.1	0	1.7054E-08	26	9.59	0.2131514	7.698E-08	1
rs74887156	6	164682467	C	T	C6orf118	0.03	0	1.7076E-08	0	5.88	0.5540813	5.273E-08	1
rs79027483	16	21253169	T	G	ANKS4B,CR	-0.07	0	1.7081E-08	0	4.78	0.6862588	5.275E-08	1
rs141353770	15	62006259	C	T	VPS13C	-0.08	0	1.7087E-08	0	6.45	0.4886436	5.276E-08	1
rs10799350	1	226432166	G	A	PARP1	-0.03	0	1.7091E-08	47	13.29	0.0654545	6.116E-08	1
rs6803222	3	49628543	T	G	BSN	-0.03	0	1.7095E-08	0	6.42	0.4918356	5.266E-08	1
rs140731282	1	86414879	T	G	CLCA2	0.1	0	1.7115E-08	27	9.59	0.2130576	7.726E-08	1
rs9468300	6	28159062	C	T	ZKSCAN8	-0.05	0	1.7164E-08	46	13.17	0.0681297	1.891E-07	1
rs9841110	3	49455048	C	G	DAG1	-0.03	0	1.7178E-08	0	5.96	0.5441325	5.304E-08	1
rs905680	2	8515627	C	T	ID2	0.07	0	1.718E-08	0	6.21	0.5155064	5.305E-08	1
rs9824092	3	49636714	C	G	BSN	-0.03	0	1.7197E-08	0	6.34	0.5004088	5.298E-08	1
rs11710037	3	49637901	C	G	BSN	-0.03	0	1.7199E-08	0	6.34	0.5004069	5.299E-08	1

Table S2

rs9862080	3	49637025	A	G	BSN	-0.03	0	1.7205E-08	0	6.33	0.501577	5.302E-08	1
rs2095365	10	98150276	C	T	R3HCC1L	0.03	0	1.7208E-08	41	12.01	0.1003087	8.047E-08	1
rs10786390	10	98133786	C	T	R3HCC1L	0.03	0	1.7213E-08	37	11.29	0.1264877	7.768E-08	1
rs6589354	11	113007825	T	A	NCAM1	0.03	0	1.7215E-08	21	8.93	0.2578773	7.066E-08	1
rs13249798	8	102446513	C	G	UBR5	-0.05	0	1.7231E-08	0	5.8	0.5626982	5.32E-08	1
rs73070928	2	195422195	C	G	SLC39A10	0.05	0	1.7237E-08	0	4.53	0.7167826	5.322E-08	1
rs12463568	2	59984103	G	A	BCL11A	0.04	0	1.7257E-08	0	1.5	0.9821749	5.328E-08	1
rs4678803	3	35733835	G	A	ARPP21	0.03	0	1.7261E-08	17	8.47	0.2929432	7.511E-08	1
rs9393908	6	28223052	T	A	ZSCAN9	-0.05	0	1.7267E-08	37	11.18	0.1311438	1.627E-07	1
rs3861678	14	103855689	A	G	PPP1R13B	-0.03	0	1.727E-08	0	6.15	0.5220417	5.332E-08	1
rs142938328	4	16709096	T	TTCTG	LDB2	-0.03	0	1.7292E-08	0	1.55	0.9805986	5.338E-08	1
rs7231742	18	53236132	G	A	DCC	0.04	0	1.7296E-08	2	7.19	0.4095834	5.339E-08	1
rs67216675	3	49455718	G	T	DAG1	-0.03	0	1.7309E-08	0	5.97	0.5435489	5.343E-08	1
rs10124577	9	94620995	T	C	FBP1	-0.04	0	1.7312E-08	44	12.61	0.0822188	6.56E-08	1
rs11629621	15	77788395	C	G	LINGO1	0.03	0	1.7323E-08	7	7.6	0.3689023	6.682E-08	1
rs763692240	17	44580396	TATGATGA	T	FZD2	0.04	0	1.7332E-08	0	4.67	0.6997769	5.35E-08	1
rs4353126	1	198395107	G	C	NEK7	0.03	0	1.7339E-08	62	18.45	0.0101054	4.551E-08	1
rs200144227	5	62676694	G	GTC	IPO11	-0.03	0	1.7343E-08	0	3.07	0.878693	5.354E-08	1
rs10119826	9	94619758	C	T	FBP1	-0.04	0	1.7349E-08	44	12.59	0.0826181	6.576E-08	1
rs78317246	8	61857956	C	T	ASPH	-0.08	0	1.7365E-08	0	6.25	0.5103676	5.36E-08	1
rs3215789	6	33673419	T	TG	ITPR3	0.03	0	1.737E-08	0	3.69	0.8143617	5.362E-08	1
rs7949294	11	99641525	C	T	CNTN5	-0.03	0	1.7388E-08	27	9.68	0.2076718	4.056E-08	1
rs7614725	3	49612962	G	A	BSN	-0.03	0	1.74E-08	0	6.38	0.4961797	5.363E-08	1
rs11933029	4	41046297	G	C	APBB2	-0.04	0	1.7426E-08	13	8.13	0.3211759	8.053E-08	1
rs78621769	14	41619779	A	G	LRFN5	-0.07	0	1.7434E-08	0	2.83	0.9001581	5.381E-08	1
rs687326	11	128802686	A	C	FLI1	-0.03	0	1.7449E-08	0	5.37	0.6145597	5.386E-08	1
rs4333568	8	54977876	T	C	RP1	0.03	0	1.745E-08	52	14.61	0.041372	8.388E-09	2.10735E-09
rs150121191	6	164881631	T	C	C6orf118	0.05	0	1.7479E-08	0	6.29	0.5067952	5.14E-08	1
rs138510622	6	104373055	G	A	HACE1	0.05	0	1.7481E-08	0	5.49	0.6006392	5.395E-08	1
rs733093	20	54862483	G	A	DOK5	-0.03	0	1.749E-08	0	4.38	0.7356153	5.398E-08	1

rs2141575	3	44535628	A	G	ZKSCAN7	0.03	0	1.7496E-08	0	5.6	0.5869907	5.373E-08	1
rs2141576	3	44535598	T	C	ZKSCAN7	0.03	0	1.7498E-08	0	5.6	0.5869316	5.374E-08	1
rs55821510	17	5735334	C	T	WSCD1	-0.03	0	1.75E-08	0	5.11	0.6460211	5.401E-08	1
rs77827241	3	192255911	T	C	FGF12	0.06	0	1.7512E-08	0	1.97	0.9613012	5.405E-08	1
rs12655042	5	62677224	A	G	IPO11	-0.03	0	1.7523E-08	0	3.06	0.8797536	5.408E-08	1
rs76452321	6	164666350	C	T	C6orf118	0.03	0	1.7533E-08	0	5.43	0.6079618	5.411E-08	1
rs6785272	3	44535918	T	C	ZKSCAN7	0.03	0	1.7537E-08	0	5.6	0.5871	5.386E-08	1
rs2156123	11	89115691	G	A	GRM5	0.03	0	1.7543E-08	60	17.77	0.0130385	3.215E-08	1
rs17598931	1	230478153	T	C	PGBD5	0.03	0	1.7546E-08	0	6.77	0.4530159	5.415E-08	1
rs1372604	15	87434582	C	G	AGBL1	-0.03	0	1.7552E-08	0	4.01	0.7788448	5.417E-08	1
rs7005708	8	64642412	A	G	CYP7B1	0.03	0	1.7565E-08	44	12.71	0.0793699	1.486E-08	3.90998E-09
rs35106887	6	28073889	A	ACC	ZNF165	-0.05	0	1.7566E-08	47	13.33	0.0643906	1.943E-07	1
rs13104770	4	41049003	C	T	APBB2	-0.04	0	1.7589E-08	14	8.16	0.3188119	8.183E-08	1
rs16898345	4	30531436	C	A	PCDH7	-0.03	0	1.7596E-08	54	15.23	0.0331574	3.375E-08	1
rs13124448	4	41059199	G	A	APBB2	-0.04	0	1.7601E-08	14	8.17	0.317658	8.213E-08	1
rs10033548	4	142897769	G	A	INPP4B	-0.04	0	1.7603E-08	41	11.94	0.1026132	4.703E-08	1
rs9461432	6	28119105	T	C	ZSCAN16	-0.05	0	1.7604E-08	47	13.29	0.0652874	1.943E-07	1
rs4327886	8	64635099	C	T	CYP7B1	0.03	0	1.7619E-08	44	12.7	0.0797572	1.492E-08	3.90998E-09
rs142542574	12	24723917	C	T	BCAT1	-0.06	0	1.7621E-08	0	6.81	0.4484207	5.438E-08	1
rs12715430	3	48905422	A	C	SLC25A20	-0.03	0	1.7637E-08	0	6.55	0.4771438	5.357E-08	1
rs13202664	6	28683314	T	G	ZBED9	-0.05	0	1.764E-08	30	10.06	0.1851623	1.09E-07	1
rs3130016	6	33328453	T	G	DAXX	0.03	0	1.7641E-08	5	7.43	0.3853543	6.243E-08	1
rs114484676	12	120293100	C	T	SIRT4	-0.07	0	1.7643E-08	22	8.98	0.2542543	3.841E-08	1
rs28679790	8	64641328	T	C	CYP7B1	0.03	0	1.7664E-08	44	12.72	0.0793373	1.493E-08	3.90998E-09
rs17727076	2	74779841	T	G	HK2	-0.08	0	1.7676E-08	35	10.88	0.1441448	9.591E-08	1
rs6697670	1	246184642	A	G	SMYD3	-0.03	0	1.7699E-08	32	10.35	0.1696571	4.973E-08	1
rs71557353	6	26873086	T	G	ZNF322	-0.05	0	1.7706E-08	3	7.29	0.3996366	6.189E-08	1
rs13145390	4	41059554	C	A	APBB2	-0.04	0	1.7708E-08	14	8.16	0.3188674	8.236E-08	1
rs1007439658	11	133630062	C	G	OPCML	-0.07	0	1.7713E-08	2	7.19	0.409183	5.901E-08	1
rs3802848	11	113041665	A	C	NCAM1	0.03	0	1.7726E-08	21	8.95	0.2562238	6.916E-08	1

rs6910361	6	28684003	G	A	ZBED9	-0.05	0	1.7735E-08	30	10.07	0.1848209	1.096E-07	1
rs12915693	15	58028610	T	C	ALDH1A2	0.03	0	1.7739E-08	44	12.65	0.0811802	3.601E-08	1
rs4486067	6	28682746	T	C	ZBED9	-0.05	0	1.774E-08	30	10.07	0.1846561	1.096E-07	1
rs75772577	6	23192903	T	C	HDGFL1	-0.04	0	1.7754E-08	26	9.52	0.217263	1.072E-07	1
rs10225027	7	110396275	C	T	IMMP2L	0.03	0	1.7754E-08	41	12.06	0.0986586	1.608E-07	1
rs521833	17	48815074	A	G	TTLL6	-0.03	0	1.7756E-08	0	5.57	0.591186	5.478E-08	1
rs28507996	4	41058343	T	C	APBB2	-0.04	0	1.7757E-08	14	8.16	0.3190759	8.249E-08	1
rs17276523	16	86519859	T	C	FOXF1	-0.07	0	1.7763E-08	0	5.01	0.6591038	5.48E-08	1
rs4415603	1	198202879	A	T	NEK7	0.03	0	1.777E-08	39	11.59	0.1146916	1.038E-07	1
rs1012012	4	142938690	G	A	INPP4B	-0.04	0	1.7813E-08	44	12.53	0.0843092	4.675E-08	1
rs921231	8	91348168	T	C	SLC26A7	0.05	0	1.7819E-08	0	5.34	0.6189456	5.497E-08	1
rs200776829	16	21885708	A	C	NPIPB4	-0.07	0	1.7822E-08	0	4.8	0.6839956	5.498E-08	1
rs150216329	15	47382942	A	AT	SEMA6D	-0.03	0	1.7827E-08	0	6.01	0.5389038	5.5E-08	1
rs13395259	2	28096429	C	T	BRE	0.03	0	1.7842E-08	0	4.88	0.6742873	5.504E-08	1
rs62413772	4	41058675	G	A	APBB2	-0.04	0	1.7845E-08	14	8.16	0.3189428	8.292E-08	1
rs75286119	16	21687918	C	T	OTOA	-0.07	0	1.7855E-08	0	4.09	0.7699314	5.508E-08	1
rs3802847	11	113041581	T	C	NCAM1	0.03	0	1.7861E-08	21	8.94	0.2566442	6.97E-08	1
rs4144892	11	112995734	C	T	NCAM1	0.03	0	1.7862E-08	21	8.92	0.258608	7.053E-08	1
rs847771	6	40080847	T	C	MOCS1	-0.03	0	1.7878E-08	0	4.01	0.7785111	5.515E-08	1
rs202207709	16	22623997	G	A	NPIPB5	-0.07	0	1.7909E-08	0	4.95	0.6661443	5.524E-08	1
rs7942723	11	113041117	T	G	NCAM1	0.03	0	1.7932E-08	21	8.94	0.2567051	6.996E-08	1
rs10121388	9	98027807	C	T	ANP32B	-0.03	0	1.7933E-08	0	6.92	0.4369007	5.532E-08	1
rs74653173	7	100625434	G	GTC	TFR2	-0.04	0	1.7935E-08	0	5.06	0.6529769	5.532E-08	1
rs12796102	11	118791319	C	T	DDX6	-0.03	0	1.7937E-08	23	9.16	0.2411412	1.021E-07	1
rs1012011	4	142938499	A	G	INPP4B	-0.04	0	1.7939E-08	43	12.46	0.0863103	4.781E-08	1
rs4737196	8	64645679	C	A	CYP7B1	0.03	0	1.7945E-08	45	12.73	0.0789155	1.511E-08	3.90998E-09
rs12915095	15	47301836	C	T	SEMA6D	0.03	0	1.7946E-08	0	6.38	0.4965577	5.535E-08	1
rs847769	6	40082432	T	C	MOCS1	-0.03	0	1.7946E-08	0	3.97	0.78288	5.536E-08	1
rs4831619	8	14615991	G	A	SGCZ	-0.03	0	1.797E-08	0	3.97	0.7831854	5.543E-08	1
rs4888561	16	73646346	G	C	ZFHX3	0.03	0	1.7978E-08	19	8.67	0.2773213	5.017E-08	1

Table S2

rs12736950	1	226345746	G	T	PARP1	-0.03	0	1.7993E-08	0	4.58	0.7112211	5.55E-08	1
rs9508163	13	28810931	T	C	MTUS2	-0.03	0	1.7997E-08	0	1.57	0.9798781	5.551E-08	1
rs4887311	15	87611928	C	A	NTRK3	0.04	0	1.8005E-08	50	14.1	0.0494612	2.301E-08	6.21547E-09
rs7022556	9	98027798	A	G	ANP32B	-0.03	0	1.8021E-08	0	6.91	0.4378257	5.558E-08	1
rs11599236	10	104694914	T	C	SORCS3	-0.03	0	1.8028E-08	2	7.19	0.409488	5.894E-08	1
rs12444079	16	58875773	A	G	GOT2	-0.03	0	1.8062E-08	0	3.71	0.8124487	5.57E-08	1
rs7938812	11	113040282	T	G	NCAM1	0.03	0	1.8069E-08	22	8.98	0.2543638	7.04E-08	1
rs6441859	3	44584405	G	A	ZKSCAN7,ZI	0.03	0	1.8088E-08	30	10.1	0.1829591	4.717E-08	1
rs4236934	8	64663044	C	T	CYP7B1	0.03	0	1.8106E-08	45	12.75	0.078329	1.512E-08	3.90998E-09
rs2155292	11	113040061	A	G	NCAM1	0.03	0	1.8106E-08	21	8.97	0.2550411	7.063E-08	1
rs7948327	11	113039355	C	A	NCAM1	0.03	0	1.8115E-08	21	8.97	0.2550499	7.066E-08	1
rs10891492	11	113039023	C	T	NCAM1	0.03	0	1.8115E-08	21	8.97	0.2550611	7.066E-08	1
rs7004685	8	64652527	A	G	CYP7B1	0.03	0	1.8147E-08	45	12.75	0.0783707	1.518E-08	3.90998E-09
rs7837784	8	64649373	T	C	CYP7B1	0.03	0	1.815E-08	45	12.75	0.0783721	1.518E-08	3.90998E-09
rs1321505	6	28085045	A	C	ZNF165	-0.05	0	1.8168E-08	48	13.5	0.0608928	1.999E-07	1
rs34712084	6	28076050	A	G	ZNF165	-0.05	0	1.8168E-08	48	13.5	0.0608928	1.999E-07	1
rs5794952	11	115126656	A	AT	CADM1	-0.03	0	1.8178E-08	42	12.12	0.0967816	5.606E-08	1
rs201534634	11	115126659	A	G	CADM1	-0.03	0	1.8181E-08	42	12.11	0.0969162	4.543E-08	1
rs11198356	10	118294543	A	C	FAM204A	-0.06	0	1.8196E-08	33	10.51	0.1612419	1.424E-07	1
rs957906	6	162548892	T	G	PARK2	0.03	0	1.8197E-08	0	4.67	0.7003385	5.611E-08	1
rs59132471	11	115126657	A	C	CADM1	-0.03	0	1.8207E-08	42	12.12	0.0968194	5.614E-08	1
rs11757229	6	164891575	G	A	C6orf118	-0.03	0	1.8208E-08	43	12.43	0.0872153	1.632E-07	1
rs2208331	6	26507091	A	G	BTN1A1	0.03	0	1.8214E-08	0	2.78	0.9043846	5.616E-08	1
rs141925396	16	22622563	AC	A	NPIPB5	-0.07	0	1.8224E-08	0	4.91	0.6709511	5.619E-08	1
rs11198357	10	118299064	G	A	FAM204A	-0.06	0	1.8232E-08	33	10.52	0.1611553	1.427E-07	1
rs2545787	5	58653141	C	A	RAB3C	0.04	0	1.8235E-08	0	2.49	0.9281435	5.623E-08	1
rs6759058	2	45773347	A	G	PRKCE	-0.03	0	1.8253E-08	0	4.29	0.7456213	5.628E-08	1
rs4727457	7	100638970	T	C	TFR2	-0.04	0	1.8261E-08	0	5.16	0.6404493	5.63E-08	1
rs3736782	6	26505175	C	A	BTN1A1	0.03	0	1.8263E-08	0	2.78	0.9043598	5.631E-08	1
rs7243601	18	53223828	T	G	DCC	0.04	0	1.8266E-08	5	7.37	0.391144	5.632E-08	1

rs325500	5	104670966	A	G	NUDT12	-0.03	0	1.8276E-08	0	5.75	0.5696993	5.635E-08	1
rs117299500	16	22622862	A	G	NPIPB5	-0.07	0	1.8285E-08	0	4.93	0.6687321	5.638E-08	1
rs4743154	9	98032763	T	C	ANP32B	-0.03	0	1.8285E-08	0	6.64	0.467804	5.638E-08	1
rs3757151	6	26497937	C	T	BTN1A1	0.03	0	1.829E-08	0	2.79	0.9038094	5.639E-08	1
rs3736781	6	26505134	G	A	BTN1A1	0.03	0	1.8294E-08	0	2.73	0.9085767	5.64E-08	1
rs6675587	1	198357550	C	A	NEK7	-0.03	0	1.8299E-08	61	18.29	0.0107374	4.706E-08	1
rs1921086	5	30840032	G	T	CDH6	0.03	0	1.8301E-08	0	6.26	0.509725	5.643E-08	1
rs3130102	6	33325157	G	A	DAXX	0.03	0	1.8316E-08	5	7.44	0.3842376	6.505E-08	1
rs5794951	11	115126655	A	ACC	CADM1	-0.03	0	1.8323E-08	42	12.15	0.0958628	5.649E-08	1
rs139892200	11	134671937	C	T	B3GAT1	-0.09	0	1.8332E-08	0	2.06	0.9566029	5.652E-08	1
rs146107714	11	134671877	C	G	B3GAT1	-0.09	0	1.8332E-08	0	2.06	0.9566029	5.652E-08	1
rs147649493	11	134670568	C	G	B3GAT1	-0.09	0	1.8363E-08	0	2.06	0.9566721	5.661E-08	1
rs2747657	6	152138434	A	C	SYNE1	0.04	0	1.837E-08	0	5.41	0.6101303	5.663E-08	1
rs6428449	1	198289796	A	T	NEK7	0.03	0	1.8387E-08	34	10.68	0.1533998	9.81E-08	1
rs2679065	15	87456577	C	T	NTRK3	-0.03	0	1.8398E-08	0	3.59	0.8253561	5.672E-08	1
rs2236765	16	72055266	G	A	HP,TXNL4B	0.03	0	1.8402E-08	0	3.31	0.8552844	5.673E-08	1
rs12917999	16	72055552	T	C	HP,TXNL4B	0.03	0	1.8416E-08	0	3.31	0.8551291	5.677E-08	1
rs9833611	3	49613777	G	A	BSN	-0.03	0	1.842E-08	0	6.4	0.4935639	5.669E-08	1
rs9346928	6	162714620	C	T	PARK2	0.03	0	1.842E-08	0	6.09	0.5288628	5.678E-08	1
rs4671360	2	59982304	G	A	BCL11A	0.04	0	1.843E-08	0	1.97	0.9615412	5.681E-08	1
rs34953859	6	28689681	A	G	ZBED9	-0.05	0	1.8432E-08	9	7.76	0.3546268	7.499E-08	1
rs28858103	1	248338353	G	T	OR14C36	0.03	0	1.8434E-08	0	4.81	0.6826216	5.683E-08	1
rs1877016	8	14633936	G	A	SGCZ	-0.03	0	1.8441E-08	0	3.9	0.7917606	5.685E-08	1
rs7949313	11	99641580	C	T	CNTN5	-0.03	0	1.8453E-08	26	9.58	0.2138223	4.334E-08	1
rs1514335	6	162800516	C	T	PACRG	-0.03	0	1.846E-08	0	2.95	0.8896269	5.69E-08	1
rs4554301	6	162715805	T	A	PARK2	0.03	0	1.8475E-08	0	6.09	0.5291737	5.695E-08	1
rs9365483	6	162716102	G	A	PARK2	0.03	0	1.8499E-08	0	6.09	0.5291879	5.702E-08	1
rs117740578	5	60543186	C	A	PDE4D	-0.09	0	1.8505E-08	0	3.63	0.8217916	5.704E-08	1
rs10025259	4	142938009	A	G	INPP4B	-0.04	0	1.8513E-08	43	12.49	0.0855668	4.922E-08	1
rs11647069	16	72121338	T	C	PMFBP1	0.03	0	1.8518E-08	0	1.73	0.9731382	5.708E-08	1

rs10945859	6	162721570	T	C	PARK2	0.03	0	1.8524E-08	0	6.09	0.5287657	5.71E-08	1
rs2606177	15	87456004	A	G	NTRK3	-0.03	0	1.8525E-08	0	3.61	0.8236568	5.71E-08	1
rs1690812	11	99641823	C	G	CNTN5	-0.03	0	1.8527E-08	26	9.49	0.219052	4.291E-08	1
rs2793382	1	226395716	C	T	PARP1	0.03	0	1.8528E-08	33	10.53	0.1604589	8.666E-08	1
rs2922309	2	176615326	A	G	MTX2	-0.04	0	1.8538E-08	0	3.79	0.804048	5.714E-08	1
rs12914590	15	58028582	C	A	ALDH1A2	0.03	0	1.8545E-08	44	12.62	0.0820081	3.808E-08	1
rs55736627	1	86428548	C	T	CLCA2	0.1	0	1.8549E-08	26	9.56	0.2146478	8.332E-08	1
rs13273892	8	56887681	C	A	IMPAD1	0.03	0	1.8557E-08	52	14.64	0.0408709	4.009E-08	1
rs35885541	15	77789118	CAT	C	LINGO1	0.03	0	1.8565E-08	7	7.59	0.370536	7.111E-08	1
rs79478603	6	164680745	A	C	C6orf118	0.03	0	1.8617E-08	0	4.77	0.6877645	5.738E-08	1
rs11130660	3	58629943	T	C	FAM107A	0.03	0	1.8633E-08	0	2.5	0.9274505	5.743E-08	1
rs10893640	11	99639721	C	T	CNTN5	-0.03	0	1.8642E-08	27	9.62	0.211085	4.337E-08	1
rs9847116	3	82391685	C	T	GBE1	-0.04	0	1.8656E-08	14	8.14	0.3203305	6.607E-08	1
rs12591307	15	77789187	C	T	LINGO1	0.03	0	1.8659E-08	7	7.59	0.370305	7.152E-08	1
rs71648946	4	41059834	C	CTG	APBB2	-0.04	0	1.8672E-08	14	8.19	0.3165072	8.728E-08	1
rs1370257	16	58931795	G	T	GOT2	0.03	0	1.8672E-08	43	12.45	0.0865935	7.983E-08	1
rs71548310	6	28215464	T	TTCTGAGG	ZSCAN9	-0.05	0	1.8673E-08	40	11.75	0.109155	1.859E-07	1
rs10575041	3	82391414	ATG	A	GBE1	-0.04	0	1.8681E-08	14	8.15	0.3193344	6.625E-08	1
rs9277767	6	33129529	C	G	COL11A2	0.03	0	1.8681E-08	2	7.2	0.4086518	5.757E-08	1
rs556437	11	118835044	G	A	DDX6	-0.03	0	1.8683E-08	30	10.02	0.1875991	9.455E-08	1
rs112734594	11	99636793	TG	T	CNTN5	-0.03	0	1.8686E-08	27	9.62	0.2109898	4.315E-08	1
rs2793380	1	226401276	C	G	PARP1	0.03	0	1.8702E-08	33	10.53	0.160474	8.746E-08	1
rs28711200	16	60696378	T	G	RP11-457D20	-0.03	0	1.8723E-08	0	5.48	0.6017783	5.77E-08	1
rs1370256	16	58931796	G	C	GOT2	0.03	0	1.8727E-08	43	12.45	0.0865665	8.005E-08	1
rs11072674	15	77789316	G	A	LINGO1	0.03	0	1.8741E-08	7	7.59	0.3701612	7.186E-08	1
rs9456813	6	162799578	C	T	PACRG	-0.03	0	1.8743E-08	0	2.96	0.8886607	5.776E-08	1
rs11697282	20	54896092	A	G	DOK5	-0.03	0	1.8743E-08	0	4.97	0.6642286	5.776E-08	1
rs28379349	15	57910296	A	G	ALDH1A2	-0.03	0	1.8744E-08	36	10.96	0.1405551	3.65E-08	1
rs11697295	20	54896091	C	A	DOK5	-0.03	0	1.8745E-08	0	4.97	0.6642267	5.776E-08	1
rs1790266	11	99641693	A	G	CNTN5	-0.03	0	1.8746E-08	27	9.63	0.2106749	4.352E-08	1

rs7703110	5	109554344	A	C	MAN2A1	-0.04	0	1.875E-08	0	1.56	0.9803079	5.778E-08	1
rs13002562	2	45773644	A	G	PRKCE	-0.03	0	1.8756E-08	0	4.27	0.7484793	5.78E-08	1
rs9282487	6	33286779	C	CG	WDR46	0.03	0	1.8758E-08	18	8.57	0.2846915	7.832E-08	1
rs75516423	5	157713262	T	C	THG1L	-0.05	0	1.8766E-08	60	17.94	0.0122649	3.508E-08	1
rs1940713	11	113035563	T	C	NCAM1	0.03	0	1.8797E-08	21	8.91	0.2589015	7.402E-08	1
rs7037663	9	98027814	C	T	ANP32B	-0.03	0	1.8815E-08	0	6.82	0.4474572	5.797E-08	1
rs608626	11	99643793	T	C	CNTN5	-0.03	0	1.8819E-08	27	9.69	0.2069878	4.348E-08	1
rs593913	11	99671328	C	T	CNTN5	-0.03	0	1.8823E-08	0	6.81	0.4494274	5.183E-08	1
rs609318	11	99671336	A	T	CNTN5	-0.03	0	1.8828E-08	0	6.81	0.4493393	5.185E-08	1
rs158966	5	58640038	G	T	RAB3C	0.04	0	1.8832E-08	0	2.38	0.9359698	5.802E-08	1
rs7665881	4	103621708	A	G	TACR3	-0.03	0	1.8844E-08	31	10.23	0.1761626	9.19E-08	1
rs7121508	11	99645512	G	T	CNTN5	-0.03	0	1.8845E-08	27	9.64	0.209913	4.375E-08	1
rs112134588	1	86401386	G	C	ODF2L	0.1	0	1.8854E-08	26	9.58	0.2133619	8.508E-08	1
rs62413768	4	41046656	A	C	APBB2	-0.04	0	1.8856E-08	12	8	0.3322776	8.405E-08	1
rs111814256	1	86388164	G	A	ODF2L	0.1	0	1.8857E-08	26	9.59	0.2133197	8.502E-08	1
rs2787999	1	246070328	A	G	SMYD3	-0.03	0	1.8861E-08	22	9.05	0.2492618	4.7E-08	1
rs112520043	1	86399845	G	A	ODF2L	0.1	0	1.8865E-08	26	9.58	0.213352	8.511E-08	1
rs138626088	1	86401619	A	G	ODF2L	0.1	0	1.8865E-08	26	9.58	0.2133621	8.512E-08	1
rs77685291	16	86096064	C	T	IRF8	-0.04	0	1.8867E-08	0	6.65	0.465837	5.753E-08	1
rs145383803	11	118817865	CTTG	C	DDX6	-0.03	0	1.8871E-08	24	9.27	0.2337955	1.071E-07	1
rs4551650	1	235112974	C	T	TOMM20	0.03	0	1.8873E-08	0	2	0.9598816	5.815E-08	1
rs113524619	1	86386679	C	A	ODF2L	0.1	0	1.8873E-08	26	9.59	0.2132818	8.507E-08	1
rs113915894	1	86387980	A	T	ODF2L	0.1	0	1.8875E-08	26	9.59	0.2133263	8.509E-08	1
rs55741258	16	72078581	C	T	TXNL4B	0.04	0	1.8875E-08	11	7.92	0.3394281	7.85E-08	1
rs7107609	11	99645513	A	G	CNTN5	-0.03	0	1.8875E-08	27	9.64	0.2097468	4.381E-08	1
rs7121613	11	99645519	G	A	CNTN5	-0.03	0	1.8875E-08	27	9.64	0.2097459	4.381E-08	1
rs76351660	11	99645526	G	A	CNTN5	-0.03	0	1.8875E-08	27	9.64	0.2097459	4.381E-08	1
rs76640763	11	99645534	C	G	CNTN5	-0.03	0	1.8875E-08	27	9.64	0.2097459	4.381E-08	1
rs34593817	11	99645491	T	C	CNTN5	-0.03	0	1.8877E-08	27	9.64	0.209749	4.381E-08	1
rs35661685	11	99645461	A	G	CNTN5	-0.03	0	1.8877E-08	27	9.64	0.209749	4.381E-08	1

rs72983607	11	99645495	T	C	CNTN5	-0.03	0	1.8877E-08	27	9.64	0.2097484	4.381E-08	1
rs111235659	1	86366495	T	C	ODF2L	0.1	0	1.8877E-08	26	9.59	0.213268	8.508E-08	1
rs112024601	1	86365483	A	G	ODF2L	0.1	0	1.8877E-08	26	9.59	0.213268	8.508E-08	1
rs112368234	1	86366320	A	G	ODF2L	0.1	0	1.8877E-08	26	9.59	0.213268	8.508E-08	1
rs114030321	1	86380270	G	A	ODF2L	0.1	0	1.8877E-08	26	9.59	0.213268	8.508E-08	1
rs142030502	1	86374972	G	A	ODF2L	0.1	0	1.8877E-08	26	9.59	0.213268	8.508E-08	1
rs200130390	1	86362659	A	ATT	ODF2L	0.1	0	1.8877E-08	26	9.59	0.213268	8.508E-08	1
rs200762791	1	86385191	AG	A	ODF2L	0.1	0	1.8877E-08	26	9.59	0.213268	8.508E-08	1
rs201617165	1	86387293	ACT	A	ODF2L	0.1	0	1.8878E-08	26	9.59	0.2133172	8.51E-08	1
rs201582852	1	86391790	CAA	C	ODF2L	0.1	0	1.888E-08	26	9.59	0.213283	8.513E-08	1
rs653601	11	99639349	T	C	CNTN5	-0.03	0	1.8884E-08	27	9.65	0.2095445	4.384E-08	1
rs142723643	1	86391904	A	C	ODF2L	0.1	0	1.8887E-08	26	9.59	0.2132847	8.517E-08	1
rs10758966	9	8370089	A	G	PTPRD	-0.03	0	1.8888E-08	45	12.93	0.0738506	1.161E-07	1
rs7142769	14	103762504	C	T	PPP1R13B	0.03	0	1.8935E-08	0	6.2	0.5166676	5.834E-08	1
rs10945860	6	162722167	C	T	PARK2	0.03	0	1.8947E-08	0	6.08	0.5306357	5.837E-08	1
rs12583988	13	96339348	G	A	HS6ST3	0.03	0	1.8948E-08	0	3.47	0.8380625	5.837E-08	1
rs1940724	11	112982224	A	G	NCAM1	0.03	0	1.8949E-08	21	8.97	0.2545438	7.507E-08	1
rs7622748	3	82228042	A	T	GBE1	0.04	0	1.8956E-08	22	9.04	0.2494945	7.195E-08	1
rs4754635	11	99641688	T	C	CNTN5	0.03	0	1.8983E-08	27	9.68	0.2076242	4.386E-08	1
rs1484678	2	22651000	C	A	KLHL29	0.03	0	1.8984E-08	19	8.68	0.2762784	1.067E-07	1
rs2453260	11	99644943	C	T	CNTN5	-0.03	0	1.8986E-08	27	9.65	0.2092459	4.4E-08	1
rs13004784	2	161022320	A	G	TANK	-0.04	0	1.8988E-08	0	3.12	0.8741309	5.849E-08	1
rs6738528	2	26926390	T	A	DPYSL5	-0.03	0	1.8996E-08	0	5.45	0.6048527	5.852E-08	1
rs5814288	15	87429470	AT	A	AGBL1	-0.03	0	1.9002E-08	0	4.7	0.6963315	5.854E-08	1
rs2048424	1	226395306	G	C	PARP1	0.03	0	1.901E-08	33	10.51	0.1612561	8.871E-08	1
rs9456812	6	162799458	G	A	PACRG	-0.03	0	1.9017E-08	0	2.96	0.8889412	5.858E-08	1
rs2453259	11	99644892	A	T	CNTN5	-0.03	0	1.903E-08	27	9.66	0.2089051	4.409E-08	1
rs1801143	3	49532767	C	T	DAG1	-0.03	0	1.9036E-08	0	6.21	0.5153308	5.856E-08	1
rs10520578	15	83483510	G	T	SH3GL3	0.03	0	1.9038E-08	0	1.76	0.9719408	5.864E-08	1
rs10790869	11	99647259	G	T	CNTN5	0.03	0	1.9058E-08	27	9.68	0.207301	4.399E-08	1

rs9309888	3	82286814	G	A	GBE1	-0.04	0	1.9067E-08	21	8.87	0.2618435	7.227E-08	1
rs2141574	3	44535744	T	C	ZKSCAN7	0.03	0	1.907E-08	0	5.58	0.5896109	5.848E-08	1
rs112496788	7	117300614	T	A	WNT2	0.03	0	1.9079E-08	16	8.42	0.2971213	7.437E-08	1
rs6753161	2	195421684	G	A	SLC39A10	0.05	0	1.9082E-08	0	4.5	0.7204158	5.878E-08	1
rs7943198	11	113011457	T	G	NCAM1	0.03	0	1.9084E-08	20	8.81	0.2664285	7.423E-08	1
rs2132082	4	14953774	T	C	CPEB2	-0.03	0	1.9106E-08	0	3.54	0.8309597	5.885E-08	1
rs10011128	4	142937606	C	T	INPP4B	-0.04	0	1.9112E-08	44	12.51	0.0849514	5.066E-08	1
rs10893641	11	99639763	C	T	CNTN5	-0.03	0	1.9113E-08	27	9.66	0.208441	4.423E-08	1
rs2655462	2	8550363	C	T	ID2	0.03	0	1.9117E-08	0	4.28	0.7470068	5.888E-08	1
rs7122777	11	99645745	C	T	CNTN5	0.03	0	1.9126E-08	27	9.69	0.2069649	4.411E-08	1
rs146972908	1	235107368	GCAT	G	TOMM20	0.03	0	1.9141E-08	0	2	0.95964	5.896E-08	1
rs2655463	2	8550360	C	T	ID2	0.03	0	1.9154E-08	0	4.28	0.7468208	5.899E-08	1
rs1690809	11	99641306	C	T	CNTN5	-0.03	0	1.9164E-08	27	9.67	0.2082726	4.43E-08	1
rs957388	1	198333507	T	C	NEK7	0.03	0	1.9178E-08	47	13.38	0.0634423	1.07E-07	1
rs2458169	11	99647209	A	T	CNTN5	-0.03	0	1.9202E-08	27	9.67	0.2081548	4.436E-08	1
rs61910885	11	99645776	C	G	CNTN5	-0.03	0	1.9224E-08	27	9.67	0.2079432	4.441E-08	1
rs608165	11	99643659	G	A	CNTN5	-0.03	0	1.9226E-08	27	9.67	0.2079114	4.443E-08	1
rs12707228	7	135366242	A	G	CNOT4	-0.03	0	1.9231E-08	66	21.08	0.00366	1.529E-09	3.48318E-10
rs681294	11	99637940	G	A	CNTN5	-0.03	0	1.9231E-08	27	9.67	0.2081932	4.44E-08	1
rs284943	16	77027182	T	C	MON1B	0.03	0	1.9247E-08	34	10.71	0.1515821	1.186E-07	1
rs76700778	6	90842902	T	A	MAP3K7	0.1	0	1.9251E-08	0	3.31	0.8549818	5.929E-08	1
rs651391	11	99642477	C	T	CNTN5	-0.03	0	1.9252E-08	27	9.68	0.2077319	4.446E-08	1
rs598046	11	99645737	T	G	CNTN5	-0.03	0	1.9254E-08	27	9.68	0.2076969	4.449E-08	1
rs670477	11	99637813	C	T	CNTN5	-0.03	0	1.9258E-08	27	9.67	0.2077616	4.446E-08	1
rs2458171	11	99642947	G	A	CNTN5	-0.03	0	1.9274E-08	27	9.68	0.2076348	4.449E-08	1
rs2510973	11	99643113	G	C	CNTN5	-0.03	0	1.9274E-08	27	9.68	0.2076348	4.449E-08	1
rs2510974	11	99643126	G	C	CNTN5	-0.03	0	1.9274E-08	27	9.68	0.2076348	4.449E-08	1
rs4754638	11	99642805	A	G	CNTN5	-0.03	0	1.9274E-08	27	9.68	0.2076348	4.449E-08	1
rs4754639	11	99642811	A	G	CNTN5	-0.03	0	1.9274E-08	27	9.68	0.2076348	4.449E-08	1
rs5000318	11	99642909	T	C	CNTN5	-0.03	0	1.9274E-08	27	9.68	0.2076348	4.449E-08	1

Table S2

rs604534	11	99640285	C	G	CNTN5	-0.03	0	1.9274E-08	27	9.68	0.2076348	4.449E-08	1
rs616533	11	99640677	C	T	CNTN5	-0.03	0	1.9274E-08	27	9.68	0.2076348	4.449E-08	1
rs668189	11	99638363	C	G	CNTN5	-0.03	0	1.9274E-08	27	9.68	0.2076348	4.449E-08	1
rs688426	11	99640734	A	G	CNTN5	-0.03	0	1.9274E-08	27	9.68	0.2076348	4.449E-08	1
rs7618530	3	82318528	T	C	GBE1	-0.04	0	1.9275E-08	19	8.68	0.2767285	7.057E-08	1
rs617428	11	99640870	T	C	CNTN5	-0.03	0	1.9287E-08	27	9.68	0.2075791	4.451E-08	1
rs687917	11	99640867	C	G	CNTN5	-0.03	0	1.9287E-08	27	9.68	0.2075791	4.451E-08	1
rs2059251	16	60696886	T	A	RP11-457D20	-0.03	0	1.9289E-08	0	5.47	0.6027819	5.94E-08	1
rs34718230	11	99641409	ATCC	A	CNTN5	-0.03	0	1.9291E-08	27	9.68	0.2075544	4.452E-08	1
rs578096100	6	38993442	GT	G	DNAH8	-0.08	0	1.9291E-08	0	4.46	0.7251471	5.941E-08	1
rs1628747	11	99637219	C	T	CNTN5	-0.03	0	1.9293E-08	27	9.68	0.2074949	4.454E-08	1
rs35128564	6	28668003	T	C	ZBED9	-0.05	0	1.9296E-08	31	10.26	0.1741685	1.23E-07	1
rs4626350	5	30839344	G	A	CDH6	0.03	0	1.9296E-08	0	6.27	0.5089432	5.942E-08	1
rs34247791	11	99644163	G	GTC	CNTN5	-0.03	0	1.9296E-08	27	9.68	0.207573	4.454E-08	1
rs609996	11	99644137	T	C	CNTN5	-0.03	0	1.9296E-08	27	9.68	0.207573	4.454E-08	1
rs7614064	3	82239346	T	C	GBE1	0.04	0	1.9297E-08	21	8.97	0.2549881	7.314E-08	1
rs9863626	3	82387863	A	G	GBE1	-0.04	0	1.93E-08	12	8.01	0.3321341	6.684E-08	1
rs10893643	11	99641376	C	G	CNTN5	-0.03	0	1.9307E-08	27	9.68	0.207471	4.455E-08	1
rs150460197	11	99638078	GAAAC	G	CNTN5	-0.03	0	1.9307E-08	27	9.68	0.207471	4.455E-08	1
rs1690806	11	99637349	G	A	CNTN5	-0.03	0	1.9307E-08	27	9.68	0.207471	4.455E-08	1
rs1690810	11	99641781	C	T	CNTN5	-0.03	0	1.9307E-08	27	9.68	0.207471	4.455E-08	1
rs1690811	11	99641790	G	C	CNTN5	-0.03	0	1.9307E-08	27	9.68	0.207471	4.455E-08	1
rs1790264	11	99637398	A	C	CNTN5	-0.03	0	1.9307E-08	27	9.68	0.207471	4.455E-08	1
rs2510975	11	99643137	A	G	CNTN5	-0.03	0	1.9307E-08	27	9.68	0.207471	4.455E-08	1
rs4754637	11	99642789	C	A	CNTN5	-0.03	0	1.9307E-08	27	9.68	0.207471	4.455E-08	1
rs5000317	11	99642886	T	C	CNTN5	-0.03	0	1.9307E-08	27	9.68	0.207471	4.455E-08	1
rs5794010	11	99643229	A	ATATG	CNTN5	-0.03	0	1.9307E-08	27	9.68	0.207471	4.455E-08	1
rs586877	11	99638631	C	T	CNTN5	-0.03	0	1.9307E-08	27	9.68	0.207471	4.455E-08	1
rs587855	11	99638889	C	G	CNTN5	-0.03	0	1.9307E-08	27	9.68	0.207471	4.455E-08	1
rs589612	11	99639249	T	A	CNTN5	-0.03	0	1.9307E-08	27	9.68	0.207471	4.455E-08	1

rs656763	11	99638610	A	G	CNTN5	-0.03	0	1.9307E-08	27	9.68	0.207471	4.455E-08	1
rs669186	11	99638115	G	A	CNTN5	-0.03	0	1.9307E-08	27	9.68	0.207471	4.455E-08	1
rs671295	11	99637648	G	A	CNTN5	-0.03	0	1.9307E-08	27	9.68	0.207471	4.455E-08	1
rs687007	11	99641070	A	G	CNTN5	-0.03	0	1.9307E-08	27	9.68	0.207471	4.455E-08	1
rs688000	11	99640818	C	G	CNTN5	-0.03	0	1.9307E-08	27	9.68	0.207471	4.455E-08	1
rs689323	11	99640526	G	A	CNTN5	-0.03	0	1.9307E-08	27	9.68	0.207471	4.455E-08	1
rs9508164	13	28811109	C	G	MTUS2	-0.03	0	1.9315E-08	0	1.54	0.980984	5.948E-08	1
rs2122356	3	82309372	T	A	GBE1	-0.04	0	1.9317E-08	22	9.04	0.2497547	7.326E-08	1
rs1921087	5	30839500	A	C	CDH6	0.03	0	1.9319E-08	0	6.27	0.5087765	5.949E-08	1
rs35687320	11	99645920	A	AT	CNTN5	-0.03	0	1.9327E-08	27	9.68	0.2074061	4.459E-08	1
rs595719	11	99646218	A	G	CNTN5	-0.03	0	1.9327E-08	27	9.68	0.2074061	4.459E-08	1
rs595724	11	99646212	T	G	CNTN5	-0.03	0	1.9327E-08	27	9.68	0.2074061	4.459E-08	1
rs597084	11	99645966	A	G	CNTN5	-0.03	0	1.9327E-08	27	9.68	0.2074061	4.459E-08	1
rs597187	11	99645905	C	T	CNTN5	-0.03	0	1.9327E-08	27	9.68	0.2074061	4.459E-08	1
rs665801	11	99646084	C	T	CNTN5	-0.03	0	1.9327E-08	27	9.68	0.2074061	4.459E-08	1
rs11716664	3	82253462	A	G	GBE1	0.04	0	1.9329E-08	22	8.98	0.2537474	7.323E-08	1
rs4283593	3	82240309	T	G	GBE1	0.04	0	1.9329E-08	22	8.98	0.2537474	7.323E-08	1
rs4364188	3	82236092	A	C	GBE1	0.04	0	1.9329E-08	22	8.98	0.2537474	7.323E-08	1
rs5016049	3	82243936	A	G	GBE1	0.04	0	1.9329E-08	22	8.98	0.2537474	7.323E-08	1
rs6790985	3	82255153	G	A	GBE1	0.04	0	1.9329E-08	22	8.98	0.2537474	7.323E-08	1
rs35540308	11	99644228	C	CTGAG	CNTN5	-0.03	0	1.9329E-08	27	9.68	0.2074096	4.459E-08	1
rs2296335	6	33673417	C	T	ITPR3	0.03	0	1.933E-08	0	3.72	0.8110987	5.952E-08	1
rs609049	11	99643875	T	C	CNTN5	-0.03	0	1.9335E-08	27	9.68	0.2072479	4.464E-08	1
rs2654676	12	60607200	A	G	SLC16A7	-0.03	0	1.9343E-08	56	16.19	0.0234491	4.478E-08	1
rs1562730	3	82283562	T	C	GBE1	0.04	0	1.9345E-08	22	9	0.2525632	7.313E-08	1
rs4141842	2	59996077	A	G	BCL11A	0.03	0	1.935E-08	33	10.46	0.1639991	8.125E-08	1
rs879275	9	98019438	G	C	ANP32B	-0.03	0	1.9354E-08	0	6.82	0.4474154	5.959E-08	1
rs2105839	16	13513756	A	T	SHISA9	-0.03	0	1.9362E-08	2	7.16	0.4127347	5.962E-08	1
rs13110259	4	14941782	A	G	CPEB2	-0.03	0	1.9389E-08	0	3.6	0.82425	5.97E-08	1
rs750823887	8	14612250	ATG	A	SGCZ	-0.03	0	1.9391E-08	0	3.65	0.8185711	5.971E-08	1

rs12714529	3	82287455	T	C	GBE1	-0.04	0	1.9402E-08	22	9.02	0.2514911	7.355E-08	1
rs142582438	5	60716289	A	G	DEPDC1B	-0.09	0	1.9406E-08	0	4.22	0.7537921	5.975E-08	1
rs659277	11	99642628	G	T	CNTN5	-0.03	0	1.9411E-08	27	9.68	0.2074387	4.479E-08	1
rs1341330	13	28831245	G	A	MTUS2	-0.03	0	1.9415E-08	0	1.69	0.9751354	5.978E-08	1
rs1449854	3	82319845	T	C	GBE1	-0.04	0	1.9418E-08	19	8.67	0.2769092	7.107E-08	1
rs9838438	3	82384897	G	A	GBE1	-0.04	0	1.9427E-08	12	8	0.3325604	6.725E-08	1
rs1940718	11	112989145	C	T	NCAM1	0.03	0	1.9439E-08	22	8.98	0.2540702	7.734E-08	1
rs115899870	2	155634063	C	T	NR4A2	0.08	0	1.9441E-08	20	8.86	0.2631369	8.134E-08	1
rs7630869	3	49485110	C	T	DAG1	-0.03	0	1.9444E-08	0	6.05	0.5344212	5.987E-08	1
rs7232783	18	53243518	T	C	DCC	0.04	0	1.9445E-08	4	7.32	0.3964684	5.987E-08	1
rs7204169	16	21654576	T	C	METTL9	-0.03	0	1.9453E-08	0	2.51	0.9265616	5.989E-08	1
rs4708972	6	162682191	T	C	PARK2	0.03	0	1.9454E-08	0	6.16	0.52095	5.99E-08	1
rs9931205	16	60701916	T	G	RP11-457D20	-0.03	0	1.9455E-08	0	5.46	0.6036438	5.99E-08	1
rs2584124	15	87426217	G	C	AGBL1	-0.03	0	1.9456E-08	0	4.14	0.7640502	5.99E-08	1
rs9811089	3	82321801	A	G	GBE1	-0.04	0	1.9458E-08	19	8.71	0.2743092	7.124E-08	1
rs9880194	3	82320305	A	T	GBE1	-0.04	0	1.9459E-08	19	8.71	0.2745188	7.125E-08	1
rs7128314	11	113034317	C	T	NCAM1	0.03	0	1.9463E-08	21	8.89	0.2604047	7.665E-08	1
rs1041632	6	162798859	T	C	PACRG	-0.03	0	1.9463E-08	0	2.81	0.9020013	5.992E-08	1
rs7128648	11	113034407	G	A	NCAM1	0.03	0	1.9463E-08	21	8.89	0.2604057	7.665E-08	1
rs1940714	11	113035669	T	C	NCAM1	0.03	0	1.9467E-08	21	8.89	0.2604085	7.667E-08	1
rs1940712	11	113035496	G	C	NCAM1	0.03	0	1.9467E-08	21	8.89	0.260409	7.667E-08	1
rs4480572	11	113035054	C	T	NCAM1	0.03	0	1.9467E-08	21	8.89	0.260409	7.667E-08	1
rs4479020	11	112990721	G	A	NCAM1	0.03	0	1.9474E-08	21	8.9	0.2600441	7.674E-08	1
rs6796707	3	82320796	C	T	GBE1	-0.04	0	1.9474E-08	19	8.71	0.2743367	7.131E-08	1
rs199594048	8	14612254	G	GCA	SGCZ	-0.03	0	1.9482E-08	0	3.66	0.8180095	5.998E-08	1
rs11924750	3	82323743	G	A	GBE1	-0.04	0	1.9482E-08	19	8.71	0.2743257	7.132E-08	1
rs7935745	11	113036082	A	G	NCAM1	0.03	0	1.9484E-08	21	8.89	0.2603391	7.673E-08	1
rs6799557	3	82321092	G	A	GBE1	-0.04	0	1.9494E-08	19	8.71	0.2742837	7.137E-08	1
rs1892983	11	113028492	T	C	NCAM1	0.03	0	1.9505E-08	21	8.89	0.2604897	7.682E-08	1
rs11214469	11	113029621	T	A	NCAM1	0.03	0	1.9505E-08	21	8.89	0.2604902	7.682E-08	1

rs7127528	11	113033757	C	T	NCAM1	0.03	0	1.9506E-08	21	8.89	0.260414	7.682E-08	1
rs56127569	9	11015023	T	C	PTPRD	-0.03	0	1.9509E-08	15	8.32	0.3048897	5.955E-08	1
rs7926312	11	113023134	A	G	NCAM1	0.03	0	1.951E-08	21	8.89	0.2604918	7.684E-08	1
rs6796850	3	82320741	G	A	GBE1	-0.04	0	1.9516E-08	19	8.71	0.2743333	7.145E-08	1
rs10893644	11	99641426	G	C	CNTN5	-0.03	0	1.9519E-08	27	9.7	0.2064357	4.491E-08	1
rs12806028	11	99641440	C	A	CNTN5	-0.03	0	1.9519E-08	27	9.7	0.2064357	4.491E-08	1
rs145542883	14	41988771	G	A	LRFN5	-0.07	0	1.9522E-08	0	1.99	0.9601757	6.01E-08	1
rs10893639	11	99639699	A	G	CNTN5	-0.03	0	1.9523E-08	27	9.7	0.20639	4.492E-08	1
rs191068023	3	60089418	C	T	FHIT	0.08	0	1.9524E-08	60	17.6	0.0139012	1.397E-07	1
rs35017949	11	113030063	TA	T	NCAM1	0.03	0	1.9527E-08	21	8.89	0.2604396	7.691E-08	1
rs7113099	11	113033613	T	A	NCAM1	0.03	0	1.953E-08	21	8.89	0.2604462	7.692E-08	1
rs662511	11	99642669	C	T	CNTN5	-0.03	0	1.9535E-08	28	9.73	0.2044034	4.505E-08	1
rs719504	2	22695153	G	A	KLHL29	0.03	0	1.9538E-08	0	5.26	0.6282241	6.015E-08	1
rs142861910	11	113028513	TAATGTTT(	T	NCAM1	0.03	0	1.954E-08	21	8.89	0.2604658	7.696E-08	1
rs1892981	11	113028911	C	T	NCAM1	0.03	0	1.954E-08	21	8.89	0.2604658	7.696E-08	1
rs7945073	11	113032873	G	A	NCAM1	0.03	0	1.9541E-08	21	8.89	0.2604664	7.696E-08	1
rs1940699	11	113027706	A	T	NCAM1	0.03	0	1.9543E-08	21	8.89	0.2604739	7.697E-08	1
rs1320670	11	113031949	A	T	NCAM1	0.03	0	1.9543E-08	21	8.89	0.2604654	7.697E-08	1
rs9919620	11	113021848	G	A	NCAM1	0.03	0	1.9547E-08	21	8.89	0.2604694	7.698E-08	1
rs1940733	11	113021552	G	A	NCAM1	0.03	0	1.9548E-08	21	8.89	0.2604704	7.699E-08	1
rs578101397	5	60510240	C	T	PDE4D	-0.09	0	1.9553E-08	0	4.07	0.7715542	6.02E-08	1
rs3131344	6	28807545	G	A	TRIM27	-0.05	0	1.9561E-08	44	12.71	0.0795662	1.4E-07	1
rs6773417	3	177210869	T	C	TBL1XR1	0.03	0	1.9569E-08	46	13.2	0.0674292	1.778E-08	4.72778E-09
rs35905694	3	82241389	T	C	GBE1	0.04	0	1.957E-08	22	9	0.2526524	7.409E-08	1
rs1893537	6	162701188	T	G	PARK2	0.03	0	1.9572E-08	0	6.14	0.5230086	6.025E-08	1
rs656058	11	99643383	T	G	CNTN5	-0.03	0	1.9573E-08	27	9.7	0.2059545	4.497E-08	1
rs4524298	3	82266802	C	A	GBE1	0.04	0	1.9581E-08	22	9.03	0.2507284	7.417E-08	1
rs1954908	6	162695661	T	A	PARK2	0.03	0	1.9581E-08	0	6.14	0.5229949	6.028E-08	1
rs7188399	16	60679530	C	T	RP11-457D2(	-0.03	0	1.9582E-08	0	5.48	0.6011081	6.028E-08	1
rs1416090	1	246076463	A	C	SMYD3	-0.03	0	1.9597E-08	22	9.02	0.2509497	4.907E-08	1

rs4638990	3	82309964	A	T	GBE1	-0.04	0	1.9599E-08	22	9.02	0.2512025	7.423E-08	1
rs6548805	3	82308764	A	C	GBE1	-0.04	0	1.9599E-08	22	9.02	0.2512025	7.423E-08	1
rs6801380	3	82307957	T	C	GBE1	-0.04	0	1.9599E-08	22	9.02	0.2512025	7.423E-08	1
rs13120249	4	33908529	G	A	ARAP2	0.05	0	1.961E-08	15	8.27	0.3090428	8.3E-08	1
rs12905867	15	86360192	A	G	AGBL1	0.03	0	1.9622E-08	7	7.57	0.371618	6.623E-08	1
rs7558946	2	28097314	C	T	BRE	0.03	0	1.9622E-08	0	4.9	0.6725228	6.04E-08	1
rs648646	11	99641895	G	A	CNTN5	-0.03	0	1.9625E-08	27	9.68	0.2075518	4.529E-08	1
rs1100100	6	40092620	C	T	MOCS1	-0.03	0	1.9629E-08	0	3.98	0.782177	6.042E-08	1
rs2866486	16	13514223	C	G	SHISA9	-0.03	0	1.9644E-08	2	7.16	0.412262	6.14E-08	1
rs4294596	11	113010010	A	T	NCAM1	0.03	0	1.9652E-08	21	8.89	0.260514	7.737E-08	1
rs7113596	11	113013039	C	A	NCAM1	0.03	0	1.9652E-08	21	8.89	0.260514	7.737E-08	1
rs7108081	11	112994393	A	G	NCAM1	0.03	0	1.9653E-08	21	8.87	0.2618258	7.748E-08	1
rs10732853	11	113016688	C	G	NCAM1	0.03	0	1.9653E-08	21	8.89	0.2605149	7.738E-08	1
rs1781032	1	208250831	T	C	PLXNA2	-0.03	0	1.9657E-08	0	4.04	0.7749395	6.051E-08	1
rs75716805	3	82300305	C	T	GBE1	-0.04	0	1.9659E-08	22	9.02	0.2510272	7.443E-08	1
rs1100098	6	40058305	A	G	MOCS1	-0.03	0	1.9664E-08	0	3.94	0.7870185	6.053E-08	1
rs555649	11	118781100	T	C	DDX6	-0.03	0	1.9671E-08	22	9.01	0.2522579	1.086E-07	1
rs3015417	13	55817762	C	G	PRR20A	0.05	0	1.9674E-08	2	7.18	0.4104359	6.056E-08	1
rs74885736	3	82300619	C	T	GBE1	-0.04	0	1.9683E-08	22	9.02	0.2513932	7.45E-08	1
rs4708971	6	162680908	C	G	PARK2	0.03	0	1.9685E-08	0	6.14	0.5235031	6.059E-08	1
rs9465338	6	19331303	A	C	ID4	0.04	0	1.9692E-08	31	10.19	0.1782539	7.245E-08	1
rs7280197	21	15043411	T	C	NRIP1	-0.03	0	1.9704E-08	6	7.46	0.3829043	6.716E-08	1
rs2316638	13	55086146	A	G	OLFM4	-0.04	0	1.9719E-08	0	5.18	0.63781	6.07E-08	1
rs12491913	3	82296990	C	T	GBE1	-0.04	0	1.9723E-08	22	9.03	0.2508092	7.465E-08	1
rs28416064	3	82291512	G	A	GBE1	-0.04	0	1.9723E-08	22	9.03	0.2508092	7.465E-08	1
rs3785194	16	7700946	C	T	RBFOX1	-0.03	0	1.9725E-08	51	14.36	0.0450645	1.433E-07	1
rs2666428	1	226402008	C	T	PARP1	0.03	0	1.9732E-08	33	10.55	0.1595423	9.175E-08	1
rs11367878	11	99645917	CA	C	CNTN5	-0.03	0	1.9734E-08	27	9.71	0.2054262	4.528E-08	1
rs1588603	20	54898674	A	C	DOK5	-0.03	0	1.9734E-08	0	5.07	0.6516006	6.074E-08	1
rs597155	11	99645930	T	G	CNTN5	-0.03	0	1.9736E-08	27	9.71	0.2053155	4.53E-08	1

rs9459195	6	164758403	A	T	C6orf118	0.03	0	1.9742E-08	0	2	0.9597829	6.076E-08	1
rs2059250	16	60696638	T	C	RP11-457D20	-0.03	0	1.9748E-08	0	5.46	0.6036504	6.078E-08	1
rs999851	11	113019124	A	G	NCAM1	0.03	0	1.9752E-08	21	8.89	0.2606187	7.778E-08	1
rs889941779	11	113011339	C	T	NCAM1	0.03	0	1.9753E-08	21	8.89	0.2604583	7.78E-08	1
rs2212449	11	112981310	G	T	NCAM1	0.03	0	1.9753E-08	21	8.94	0.2570526	7.797E-08	1
rs141320484	11	134639066	C	G	B3GAT1	-0.08	0	1.9756E-08	0	2.02	0.9585557	6.08E-08	1
rs9919670	11	113006582	G	A	NCAM1	0.03	0	1.976E-08	21	8.89	0.2609083	7.779E-08	1
rs9832657	3	82374575	T	A	GBE1	-0.04	0	1.9762E-08	12	8.01	0.3319207	6.847E-08	1
rs62411779	4	14962635	G	C	CPEB2	-0.03	0	1.9765E-08	0	5.13	0.6440299	6.083E-08	1
rs11854838	15	87378746	A	G	AGBL1	-0.03	0	1.9767E-08	0	3.77	0.8054757	6.084E-08	1
rs4631770	10	21082066	T	C	NEBL	0.05	0	1.977E-08	59	17.44	0.0147683	1.305E-08	3.3252E-09
rs2075523	16	21261868	G	A	CRYM	-0.07	0	1.9776E-08	0	4.86	0.6770399	6.086E-08	1
rs112973964	11	99645782	A	ACAC	CNTN5	-0.03	0	1.9777E-08	27	9.72	0.2050285	4.539E-08	1
rs3924038	1	235117743	G	A	TOMM20	0.03	0	1.9785E-08	0	1.99	0.9602311	6.089E-08	1
rs9309898	3	82381073	C	G	GBE1	-0.04	0	1.9787E-08	12	8	0.3321567	6.854E-08	1
rs2186707	11	112979921	T	A	NCAM1	0.03	0	1.9787E-08	21	8.94	0.2570282	7.81E-08	1
rs2155284	11	112980048	G	C	NCAM1	0.03	0	1.9788E-08	21	8.94	0.2570292	7.81E-08	1
rs10750019	11	113005046	G	C	NCAM1	0.03	0	1.9788E-08	21	8.89	0.2608022	7.791E-08	1
rs1940697	11	113006164	G	A	NCAM1	0.03	0	1.9788E-08	21	8.89	0.2608022	7.791E-08	1
rs4589334	11	113008734	G	C	NCAM1	0.03	0	1.9788E-08	21	8.89	0.2608022	7.791E-08	1
rs7118907	11	113007532	C	A	NCAM1	0.03	0	1.9788E-08	21	8.89	0.2608022	7.791E-08	1
rs9919557	11	113006686	T	C	NCAM1	0.03	0	1.9788E-08	21	8.89	0.2608022	7.791E-08	1
rs9919558	11	113006687	T	A	NCAM1	0.03	0	1.9788E-08	21	8.89	0.2608022	7.791E-08	1
rs10736463	11	112983330	T	C	NCAM1	0.03	0	1.9789E-08	21	8.94	0.2570307	7.811E-08	1
rs1940726	11	112981889	T	G	NCAM1	0.03	0	1.9789E-08	21	8.94	0.2570307	7.811E-08	1
rs1954826	11	112982290	A	G	NCAM1	0.03	0	1.9789E-08	21	8.94	0.2570307	7.811E-08	1
rs9837922	3	82375561	T	A	GBE1	-0.04	0	1.9789E-08	12	8.01	0.3320523	6.856E-08	1
rs7127712	11	113003881	A	T	NCAM1	0.03	0	1.9792E-08	21	8.89	0.2608066	7.793E-08	1
rs7127930	11	113003923	C	A	NCAM1	0.03	0	1.9792E-08	21	8.89	0.2608066	7.793E-08	1
rs723599	11	113001583	A	G	NCAM1	0.03	0	1.9792E-08	21	8.89	0.2608076	7.793E-08	1

rs6783087	3	82376104	C	T	GBE1	-0.04	0	1.9794E-08	12	8.01	0.3320959	6.857E-08	1
rs6773283	3	82373424	G	A	GBE1	-0.04	0	1.9797E-08	12	8.01	0.3319949	6.859E-08	1
rs6548812	3	82373455	C	G	GBE1	-0.04	0	1.98E-08	12	8.01	0.3319753	6.094E-08	1
rs10891487	11	112998332	G	A	NCAM1	0.03	0	1.9801E-08	21	8.88	0.2611593	7.801E-08	1
rs1940725	11	112982037	T	C	NCAM1	0.03	0	1.9802E-08	21	8.94	0.2570224	7.816E-08	1
rs9309897	3	82379228	C	A	GBE1	-0.04	0	1.9803E-08	12	8	0.332174	6.86E-08	1
rs5779918	1	198289365	AT	A	NEK7	0.03	0	1.9808E-08	33	10.6	0.1570375	1.061E-07	1
rs9309896	3	82366615	A	G	GBE1	-0.04	0	1.9809E-08	12	8.01	0.3319103	6.096E-08	1
rs7989692	13	28831327	G	C	MTUS2	-0.03	0	1.9809E-08	0	1.69	0.9750127	6.096E-08	1
rs7195797	16	60667857	C	T	RP11-457D20	-0.03	0	1.9811E-08	0	5.48	0.6021318	6.097E-08	1
rs2793657	1	226403271	T	C	PARP1	0.03	0	1.9811E-08	33	10.55	0.1596719	9.209E-08	1
rs71324962	3	49450054	A	C	DAG1	-0.03	0	1.9812E-08	0	6.13	0.5247108	6.097E-08	1
rs6564809	16	74026386	A	G	PSMD7	0.03	0	1.9812E-08	19	8.66	0.2782966	6.094E-08	1
rs2027439	1	226388048	T	C	PARP1	0.03	0	1.9814E-08	27	9.62	0.2112142	9.088E-08	1
rs10507124	12	100910474	C	T	ANO4	0.03	0	1.9822E-08	0	6.98	0.4310512	6.1E-08	1
rs4439550	11	112982816	G	A	NCAM1	0.03	0	1.9824E-08	21	8.94	0.2571687	7.824E-08	1
rs7950836	11	112985415	T	C	NCAM1	0.03	0	1.9829E-08	21	8.89	0.2609722	7.813E-08	1
rs1940720	11	112986480	A	G	NCAM1	0.03	0	1.9831E-08	21	8.89	0.2609752	7.813E-08	1
rs4466874	11	112990712	T	C	NCAM1	0.03	0	1.9831E-08	20	8.83	0.2648228	7.764E-08	1
rs1449862	3	82309884	C	T	GBE1	-0.04	0	1.9833E-08	22	9.04	0.25007	7.505E-08	1
rs1494958	4	14947436	T	C	CPEB2	-0.03	0	1.9835E-08	0	3.57	0.8273092	6.104E-08	1
rs1940702	11	112996339	A	G	NCAM1	0.03	0	1.9836E-08	21	8.88	0.2611368	7.814E-08	1
rs1940701	11	112998682	T	C	NCAM1	0.03	0	1.9836E-08	21	8.88	0.2611373	7.814E-08	1
rs11294071	3	82288007	CA	C	GBE1	-0.04	0	1.984E-08	22	9.02	0.2509446	7.505E-08	1
rs10893642	11	99639764	A	G	CNTN5	-0.03	0	1.9844E-08	27	9.62	0.2108485	4.62E-08	1
rs1953329	1	208251177	A	G	PLXNA2	-0.03	0	1.9846E-08	0	3.98	0.7817948	6.107E-08	1
rs1940716	11	112989566	A	G	NCAM1	0.03	0	1.9846E-08	21	8.88	0.2610563	7.819E-08	1
rs2155282	11	112989626	A	T	NCAM1	0.03	0	1.9846E-08	21	8.88	0.2610563	7.819E-08	1
rs9827304	3	82382708	C	A	GBE1	-0.04	0	1.9851E-08	12	8	0.3322426	6.874E-08	1
rs7121047	11	112990171	A	T	NCAM1	0.03	0	1.9858E-08	21	8.88	0.2610393	7.823E-08	1

rs4381397	11	112995547	T	C	NCAM1	0.03	0	1.9865E-08	21	8.88	0.2610267	7.826E-08	1
rs1940727	11	112981866	G	T	NCAM1	0.03	0	1.987E-08	21	8.95	0.2564411	7.852E-08	1
rs1762470	1	208250505	C	T	PLXNA2	-0.03	0	1.9871E-08	0	4.05	0.7738603	6.115E-08	1
rs11606353	11	115076297	G	C	CADM1	0.03	0	1.9873E-08	28	9.81	0.199478	5.399E-08	1
rs144124893	11	44438695	C	T	CD82	0.1	0	1.9892E-08	0	2.47	0.9295559	6.122E-08	1
rs4953248	2	45764789	T	C	PRKCE	-0.03	0	1.9914E-08	0	4.43	0.7286288	6.128E-08	1
rs3741194	11	66858763	T	C	LRFN4,PC	-0.03	0	1.992E-08	52	14.6	0.0414192	4.384E-08	1
rs1805414	1	226385663	A	G	PARP1	0.03	0	1.992E-08	27	9.62	0.2113124	9.138E-08	1
rs592799	1	36690946	A	G	GRIK3	0.03	0	1.9924E-08	39	11.53	0.1169832	4.317E-08	1
rs10121358	9	11083979	G	T	PTPRD	0.03	0	1.9933E-08	35	10.84	0.1455992	1.066E-07	1
rs1341329	13	28821963	C	T	MTUS2	-0.03	0	1.9938E-08	0	1.69	0.9749823	6.135E-08	1
rs7322214	13	28827134	A	C	MTUS2	-0.03	0	1.9938E-08	0	1.69	0.9749823	6.135E-08	1
rs7328618	13	28828008	C	T	MTUS2	-0.03	0	1.9938E-08	0	1.69	0.9749823	6.135E-08	1
rs9508173	13	28826208	G	A	MTUS2	-0.03	0	1.9938E-08	0	1.69	0.9749823	6.135E-08	1
rs9467773	6	26498198	A	G	BTN1A1	0.03	0	1.9941E-08	0	2.75	0.907129	6.136E-08	1
rs7115165	11	112991865	T	C	NCAM1	0.03	0	1.9954E-08	21	8.88	0.2611834	7.862E-08	1
rs11717925	3	82270198	C	T	GBE1	0.04	0	1.9957E-08	22	9.04	0.2496866	7.547E-08	1
rs35741310	3	82275014	T	G	GBE1	0.04	0	1.9957E-08	22	9.04	0.2496866	7.547E-08	1
rs4339124	3	82267426	A	C	GBE1	0.04	0	1.9957E-08	22	9.04	0.2496866	7.547E-08	1
rs5850559	3	82275528	A	ATTAT	GBE1	0.04	0	1.9957E-08	22	9.04	0.2496866	7.547E-08	1
rs36099690	13	28831547	CAAA	C	MTUS2	-0.03	0	1.9963E-08	0	1.69	0.9749746	6.143E-08	1
rs11383304	13	28822711	G	GA	MTUS2	-0.03	0	1.9966E-08	0	1.72	0.9738221	6.144E-08	1
rs12643576	4	14941553	C	A	CPEB2	-0.03	0	1.997E-08	0	4.17	0.7597284	6.145E-08	1
rs623402	11	99644748	A	G	CNTN5	-0.03	0	1.9981E-08	28	9.73	0.2041455	4.572E-08	1
rs10925552	1	235107971	C	A	TOMM20	0.03	0	1.9999E-08	0	1.95	0.9625303	6.154E-08	1
rs113732309	1	86348685	T	A	ODF2L	0.1	0	2.0014E-08	27	9.64	0.209756	9.119E-08	1
rs2586755	18	50851284	G	A	MRO	-0.03	0	2.0032E-08	0	4.95	0.6664179	6.164E-08	1
rs2105300	13	28824479	G	A	MTUS2	-0.03	0	2.0033E-08	0	1.69	0.9749775	6.164E-08	1
rs6490332	13	28829549	T	C	MTUS2	-0.03	0	2.0033E-08	0	1.69	0.9749775	6.164E-08	1
rs7645576	3	82274160	A	G	GBE1	0.04	0	2.0045E-08	22	9.04	0.2497195	7.58E-08	1

Table S2

rs270799	8	54911978	T	C	RP1	-0.03	0	2.0046E-08	59	17.29	0.0156438	5.324E-09	1.30434E-09
rs112882590	11	134680334	C	A	B3GAT1	-0.09	0	2.0046E-08	0	2.11	0.953577	6.168E-08	1
rs12631263	3	82244709	T	C	GBE1	0.04	0	2.006E-08	21	8.95	0.2561967	7.583E-08	1
rs76663857	5	120270153	T	C	PRR16	0.07	0	2.0068E-08	0	3.63	0.8217004	6.174E-08	1
rs12795625	11	34938421	C	T	PDHX	-0.06	0	2.0077E-08	0	6.01	0.5391203	6.177E-08	1
rs71486288	11	115076751	A	G	CADM1	0.03	0	2.0085E-08	28	9.83	0.1984835	5.448E-08	1
rs1417765	1	226403542	T	G	PARP1	0.03	0	2.0086E-08	33	10.54	0.1600812	9.326E-08	1
rs150562173	6	32849775	TAAAC	T	PSMB9,TAP1	0.04	0	2.0105E-08	20	8.79	0.2679467	8.767E-08	1
rs4785001	16	58930287	T	C	GOT2	0.03	0	2.0111E-08	42	12.25	0.0926891	8.263E-08	1
rs4325162	1	198356844	G	A	NEK7	0.03	0	2.0131E-08	61	18.35	0.0104919	5.076E-08	1
rs60889597	2	195335435	T	C	SLC39A10	0.04	0	2.0133E-08	0	5.63	0.5831266	6.194E-08	1
rs2787998	1	246070190	G	C	SMYD3	-0.03	0	2.0163E-08	22	9.07	0.2473208	5.007E-08	1
rs4439551	11	112995184	T	C	NCAM1	0.03	0	2.0176E-08	21	8.89	0.2605338	7.963E-08	1
rs9367434	6	51480880	A	G	PKHD1	-0.05	0	2.0177E-08	10	7.83	0.3476134	6.207E-08	1
rs71586302	4	142757727	A	ATAAATC	INPP4B	-0.03	0	2.0178E-08	26	9.55	0.215543	9.097E-08	1
rs2787997	1	246070140	G	A	SMYD3	-0.03	0	2.0178E-08	22	9.07	0.2473961	5.012E-08	1
rs2083264	3	61088556	A	G	FHIT	-0.03	0	2.0185E-08	41	11.95	0.1023341	4.286E-08	1
rs107822	6	33207798	C	T	RING1	0.03	0	2.0186E-08	18	8.62	0.280732	6.988E-08	1
rs6023698	20	54906913	T	C	DOK5	-0.03	0	2.0204E-08	0	5.12	0.645238	6.215E-08	1
rs6981349	8	81054013	T	G	PAG1	-0.04	0	2.0204E-08	0	4.28	0.7468731	6.215E-08	1
rs6014210	20	54907051	A	G	DOK5	-0.03	0	2.0208E-08	0	5.12	0.6452696	6.216E-08	1
rs8001888	13	28833098	G	T	MTUS2	-0.03	0	2.0209E-08	0	1.69	0.9749536	6.217E-08	1
rs998456	13	28835896	G	C	MTUS2	-0.03	0	2.0209E-08	0	1.69	0.9749536	6.217E-08	1
rs190144610	13	60852738	T	G	TDRD3	-0.1	0	2.0216E-08	0	3.92	0.7886135	6.219E-08	1
rs1354257	4	59221203	T	G	ADGRL3	-0.04	0	2.0238E-08	0	5.57	0.5906396	6.225E-08	1
rs57477959	6	164890811	C	A	C6orf118	-0.03	0	2.0242E-08	43	12.33	0.0903003	1.79E-07	1
rs331966	4	142754564	A	C	INPP4B	-0.03	0	2.0245E-08	26	9.55	0.2156277	9.126E-08	1
rs2747655	6	152126186	T	C	ESR1,SYNE1	0.04	0	2.0246E-08	0	4.36	0.7375637	6.228E-08	1
rs16930329	12	26205923	T	C	SSPN	0.04	0	2.0247E-08	17	8.53	0.2879279	6.228E-08	1
rs34860831	4	14945972	T	A	CPEB2	-0.03	0	2.025E-08	0	3.56	0.8288543	6.229E-08	1

rs636521	1	36692470	T	G	GRIK3	0.03	0	2.0275E-08	39	11.55	0.1163495	4.37E-08	1
rs3927739	1	79767596	C	T	ADGRL4	-0.03	0	2.0291E-08	0	4.68	0.6995076	6.241E-08	1
rs114841437	11	134640405	T	A	B3GAT1	-0.08	0	2.0312E-08	0	2.03	0.9583116	6.248E-08	1
rs10924507	1	246105527	G	C	SMYD3	-0.03	0	2.0314E-08	8	7.64	0.3655475	4.477E-08	1
rs140925373	16	21804941	G	A	NPIPB4	-0.07	0	2.0331E-08	0	4.73	0.6927437	6.254E-08	1
rs139737667	16	21803382	G	T	NPIPB4	-0.07	0	2.0332E-08	0	4.73	0.692746	6.254E-08	1
rs200817567	16	21806502	TTAAAG	T	NPIPB4	-0.07	0	2.0335E-08	0	4.73	0.6927441	6.255E-08	1
rs60720443	16	21806790	C	T	NPIPB4	-0.07	0	2.0335E-08	0	4.73	0.6927441	6.255E-08	1
rs150206070	16	21805050	C	T	NPIPB4	-0.07	0	2.0335E-08	0	4.73	0.6927443	6.255E-08	1
rs150565382	16	21809942	C	T	NPIPB4	-0.07	0	2.0352E-08	0	4.73	0.6927343	6.26E-08	1
rs1899670	18	50845481	A	G	MRO	-0.03	0	2.0356E-08	0	4.94	0.6674329	6.261E-08	1
rs1899669	18	50845328	C	T	MRO	-0.03	0	2.0368E-08	0	4.94	0.6671348	6.265E-08	1
rs9356057	6	162723633	T	A	PARK2	0.03	0	2.0371E-08	0	6.05	0.533898	6.266E-08	1
rs6428437	1	198196249	G	T	NEK7	0.03	0	2.0379E-08	0	5.46	0.6041588	6.268E-08	1
rs6045173	20	18063283	C	T	OVOL2	-0.03	0	2.0394E-08	0	4.01	0.7780759	6.25E-08	1
rs682330	1	36689194	T	G	GRIK3	0.03	0	2.0394E-08	39	11.53	0.1171263	4.461E-08	1
rs10806763	6	162711497	C	T	PARK2	0.03	0	2.0402E-08	0	6.03	0.5359144	6.275E-08	1
rs62084740	17	68065068	C	T	KPNA2	0.04	0	2.0403E-08	16	8.38	0.3001942	1.129E-07	1
rs6589353	11	112984213	G	A	NCAM1	0.03	0	2.0428E-08	21	8.86	0.2627448	8.041E-08	1
rs6815956	4	103620691	A	G	TACR3	-0.03	0	2.0438E-08	31	10.27	0.1739409	9.958E-08	1
rs1552922	15	83506359	G	A	SH3GL3	0.03	0	2.0443E-08	0	1.71	0.9740563	6.287E-08	1
rs150110545	16	21815047	C	T	NPIPB4	-0.07	0	2.0451E-08	0	4.73	0.6930745	6.289E-08	1
rs11220769	11	99636817	G	C	CNTN5	-0.03	0	2.0461E-08	28	9.76	0.2026518	4.658E-08	1
rs1510443	8	14645971	C	T	SGCZ	0.03	0	2.0472E-08	0	4.61	0.7072241	6.296E-08	1
rs11214441	11	112975991	T	A	NCAM1	0.03	0	2.0476E-08	21	8.91	0.2590788	8.077E-08	1
rs5805962	13	96344258	A	AT	HS6ST3	0.03	0	2.0502E-08	0	3.47	0.8379832	6.305E-08	1
rs209681	5	58666866	T	C	RAB3C	0.04	0	2.0516E-08	0	2.63	0.9167387	6.309E-08	1
rs6718978	2	26938723	G	A	DPYSL5	0.03	0	2.0516E-08	0	5.73	0.5718644	6.309E-08	1
rs6069048	20	54903297	T	C	DOK5	-0.03	0	2.0534E-08	0	5.04	0.6547559	6.314E-08	1
rs11718666	3	152542915	G	A	MBNL1	0.04	0	2.0543E-08	0	6.38	0.4957201	6.317E-08	1

Table S2

rs2787964	1	246072715	A	G	SMYD3	-0.03	0	2.0549E-08	22	9.07	0.2475919	5.101E-08	1
rs150296031	5	62675199	A	G	IPO11	-0.03	0	2.0551E-08	0	2.97	0.8879253	6.32E-08	1
rs746157	16	49559482	T	C	ZNF423	0.04	0	2.0561E-08	0	4.06	0.772272	6.323E-08	1
rs74976757	17	68064790	G	T	KPNA2	0.04	0	2.0574E-08	16	8.39	0.2996377	1.141E-07	1
rs34627357	16	30085147	T	TG	PPP4C	-0.03	0	2.059E-08	6	7.5	0.3786606	6.331E-08	1
rs35985675	14	32921823	T	A	NPAS3	-0.04	0	2.0607E-08	26	9.53	0.2166506	5.133E-08	1
rs17710381	14	85520066	T	A	FLRT2	0.03	0	2.0617E-08	32	10.41	0.166512	1.587E-07	1
rs2849246	18	50845526	C	T	MRO	-0.03	0	2.062E-08	0	4.93	0.6679089	6.34E-08	1
rs6817258	4	14941049	A	G	CPEB2	-0.03	0	2.062E-08	0	3.55	0.8299042	6.34E-08	1
rs6064143	20	54910986	A	C	DOK5	-0.03	0	2.064E-08	0	4.96	0.665116	6.346E-08	1
rs11698210	20	54909837	A	G	DOK5	-0.03	0	2.065E-08	0	5.03	0.6560111	6.349E-08	1
rs7985665	13	28818477	A	G	MTUS2	-0.03	0	2.0652E-08	0	1.62	0.9779519	6.35E-08	1
rs62537234	9	1788045	A	G	SMARCA2	0.06	0	2.0659E-08	0	6.68	0.4626519	6.352E-08	1
rs12561959	1	198324444	G	A	NEK7	0.03	0	2.0669E-08	36	10.94	0.1412548	5.646E-08	1
rs4290824	3	82239719	T	C	GBE1	0.04	0	2.0681E-08	22	9.06	0.2487145	7.795E-08	1
rs7846691	8	54980760	C	T	RP1	0.03	0	2.0691E-08	51	14.53	0.0425055	1.012E-08	2.5416E-09
rs7074610	10	21081324	G	C	NEBL	0.05	0	2.0703E-08	60	17.55	0.0141957	1.364E-08	3.50945E-09
rs6473962	8	54981954	T	C	RP1	0.03	0	2.071E-08	51	14.52	0.0426619	1.015E-08	2.5416E-09
rs6473961	8	54980964	C	T	RP1	0.03	0	2.0717E-08	51	14.53	0.0425199	1.013E-08	2.5416E-09
rs2294479	6	33130612	G	C	COL11A2	0.03	0	2.0719E-08	0	6.77	0.45323	6.37E-08	1
rs6428460	1	198408330	C	T	NEK7	0.03	0	2.072E-08	61	18.31	0.0106587	5.623E-08	1
rs4998086	5	11782530	T	C	CTNND2	-0.27	0	2.0742E-08	15	8.24	0.3117612	8.08E-08	1
rs147391387	8	54989394	A	C	XKR4	0.03	0	2.0745E-08	52	14.67	0.0404615	9.667E-09	2.47439E-09
rs4698304	4	14958378	T	G	CPEB2	-0.03	0	2.0746E-08	0	5.23	0.6319949	6.378E-08	1
rs2105782	11	118789187	T	C	DDX6	-0.03	0	2.0771E-08	20	8.79	0.2679033	1.097E-07	1
rs7815146	8	134771475	T	C	ZFAT	0.03	0	2.0796E-08	0	5.21	0.6346526	6.393E-08	1
rs28690158	8	81054917	A	C	PAG1	-0.04	0	2.0808E-08	0	4.43	0.729373	6.397E-08	1
rs4771935	13	96344648	A	C	HS6ST3	0.03	0	2.081E-08	0	3.47	0.8386406	6.397E-08	1
rs34919829	12	26207707	C	CAACA	SSPN	0.04	0	2.0813E-08	21	8.88	0.2611853	6.398E-08	1
rs669176	11	99637604	G	A	CNTN5	-0.03	0	2.0824E-08	27	9.66	0.2089436	4.839E-08	1

rs4784062	16	58925260	C	A	GOT2	-0.03	0	2.0829E-08	46	13.04	0.0712429	1.25E-07	1
rs13143639	4	142627897	T	C	INPP4B	0.03	0	2.0841E-08	20	8.84	0.2641716	9.582E-08	1
rs9458637	6	162651044	G	A	PARK2	0.03	0	2.0848E-08	0	6	0.539856	6.409E-08	1
rs515523	11	118787366	A	G	DDX6	-0.03	0	2.0849E-08	22	9.01	0.2521566	1.148E-07	1
rs13215347	6	25364253	A	G	LRRC16A	-0.03	0	2.0855E-08	2	7.16	0.4124441	6.755E-08	1
rs4275195	8	134770560	G	A	ZFAT	0.03	0	2.0891E-08	0	5.21	0.634383	6.422E-08	1
rs55731338	6	35173215	G	A	TCP11	-0.06	0	2.0893E-08	0	5.5	0.5985875	6.422E-08	1
rs115009859	11	134638115	G	T	B3GAT1	-0.08	0	2.0903E-08	0	1.95	0.9627689	6.425E-08	1
rs12488263	3	82264251	A	G	GBE1	0.04	0	2.0923E-08	22	9.04	0.2499484	7.886E-08	1
rs10215187	7	55513305	C	G	VOPP1	-0.03	0	2.0956E-08	0	5.41	0.609571	6.441E-08	1
rs72696252	9	11250216	G	A	PTPRD	-0.04	0	2.0966E-08	0	6.68	0.4627358	6.444E-08	1
rs11336236	5	93042097	AC	A	NR2F1	0.03	0	2.0983E-08	25	9.35	0.2281784	3.69E-08	1
rs9461259	6	26504607	C	A	BTN1A1	0.03	0	2.0994E-08	0	2.8	0.9027992	6.453E-08	1
rs4659822	1	235122142	C	T	TOMM20	0.03	0	2.1027E-08	0	1.94	0.9631271	6.463E-08	1
rs7935457	11	99641606	A	G	CNTN5	-0.03	0	2.1043E-08	28	9.8	0.2003652	4.903E-08	1
rs7227727	18	50839702	A	G	MRO	0.03	0	2.1047E-08	0	5.2	0.6357043	6.469E-08	1
rs9357697	6	51495958	C	T	PKHD1	-0.05	0	2.1053E-08	10	7.79	0.3518221	6.47E-08	1
rs4515818	1	198356589	C	T	NEK7	0.03	0	2.1055E-08	62	18.44	0.0101378	5.062E-08	1
rs9513470	13	98735536	T	C	SLC15A1	0.03	0	2.1067E-08	21	8.93	0.2577639	9.273E-08	1
rs7985688	13	28818509	A	C	MTUS2	-0.03	0	2.1077E-08	0	1.62	0.9779404	6.478E-08	1
rs9508167	13	28817077	G	C	MTUS2	-0.03	0	2.1077E-08	0	1.62	0.9779404	6.478E-08	1
rs77777714	5	60517737	G	A	PDE4D	-0.09	0	2.108E-08	0	3.49	0.8362908	6.478E-08	1
rs8028506	15	25685868	A	G	ATP10A	0.04	0	2.1082E-08	0	2.68	0.9133053	6.479E-08	1
rs12682218	8	134766098	T	C	ZFAT	0.03	0	2.1103E-08	0	5.22	0.6335461	6.485E-08	1
rs9579248	13	28835778	A	G	MTUS2	-0.03	0	2.1113E-08	0	1.79	0.9703275	6.488E-08	1
rs182802532	4	17043300	T	C	LDB2	-0.06	0	2.1116E-08	8	7.69	0.3610038	8.214E-08	1
rs4904254	14	85525927	T	C	FLRT2	0.03	0	2.1116E-08	33	10.5	0.1620998	1.581E-07	1
rs9554345	13	96344879	A	C	HS6ST3	0.03	0	2.1118E-08	0	3.47	0.8382884	6.49E-08	1
rs56800035	3	152560015	G	T	MBNL1	0.04	0	2.1131E-08	0	7.03	0.4260896	6.571E-08	1
rs12893623	14	103824476	A	G	PPP1R13B	0.03	0	2.1132E-08	0	5.8	0.5629025	6.494E-08	1

rs1104600	13	28832163	C	T	MTUS2	-0.03	0	2.1154E-08	0	1.73	0.9731053	6.501E-08	1
rs2645251	4	16703178	T	C	LDB2	-0.03	0	2.1155E-08	0	1.55	0.9805702	6.501E-08	1
rs2071391	12	54281329	G	A	HNRNPA1	-0.03	0	2.1169E-08	15	8.33	0.3047628	9.807E-08	1
rs7668116	4	142943051	C	T	INPP4B	-0.04	0	2.1171E-08	51	14.55	0.0422629	4.569E-08	1
rs4129968	13	98575516	A	G	STK24	0.03	0	2.1184E-08	21	8.95	0.2560695	6.28E-08	1
rs8060511	16	30090275	C	A	TBX6	-0.03	0	2.1185E-08	10	7.79	0.3510183	6.51E-08	1
rs935725	3	82379999	G	A	GBE1	-0.04	0	2.1192E-08	13	8.1	0.323969	6.512E-08	1
rs11860299	16	22304431	C	T	POLR3E	-0.07	0	2.122E-08	0	3.7	0.8130631	6.52E-08	1
rs4672328	2	59887661	C	T	BCL11A	0.03	0	2.1223E-08	0	6.84	0.4459439	6.521E-08	1
rs12231334	12	71596825	A	T	LGR5	0.05	0	2.1229E-08	0	6.07	0.5310531	6.523E-08	1
rs17312661	6	28332559	A	G	ZSCAN31	-0.05	0	2.1236E-08	2	7.2	0.407859	7.093E-08	1
rs7330189	13	28807179	A	C	MTUS2	-0.03	0	2.1257E-08	0	1.62	0.9779202	6.532E-08	1
rs2191133	16	7694598	A	G	RBFOX1	-0.03	0	2.1257E-08	31	10.2	0.1772905	1.472E-07	1
rs3219090	1	226376990	T	C	PARP1	-0.03	0	2.1288E-08	33	10.46	0.1639586	9.918E-08	1
rs11757815	6	164892301	G	A	C6orf118	-0.03	0	2.1302E-08	43	12.37	0.0890614	1.907E-07	1
rs6014205	20	54901877	T	C	DOK5	-0.03	0	2.1313E-08	0	5.09	0.648687	6.548E-08	1
rs10908313	1	36642321	T	C	GRIK3	0.03	0	2.1334E-08	42	12.27	0.0920215	8.468E-08	1
rs2155646	11	113042089	T	C	NCAM1	0.03	0	2.1337E-08	21	8.94	0.2569314	8.258E-08	1
rs9937340	16	58919576	C	A	GOT2	-0.04	0	2.1338E-08	37	11.28	0.1269982	1.198E-07	1
rs10908312	1	36639676	T	C	GRIK3	0.03	0	2.134E-08	42	12.27	0.0920199	8.47E-08	1
rs11748404	5	157690912	G	T	C5orf52	-0.05	0	2.1352E-08	61	18.34	0.0105223	3.736E-08	1
rs2308096	6	40117811	T	TGA	MOCS1	-0.03	0	2.1352E-08	0	4.02	0.7779561	6.56E-08	1
rs138837355	3	44506051	A	ACAAT	ZNF852	0.03	0	2.1359E-08	0	4.62	0.7058843	6.562E-08	1
rs10633883	6	36115242	C	CTG	MAPK14	0.04	0	2.1374E-08	25	9.43	0.2230453	1.053E-07	1
rs4486246	8	64670080	A	G	CYP7B1	0.03	0	2.1379E-08	46	13.1	0.0697978	1.628E-08	4.24098E-09
rs4134074	20	54902062	G	A	DOK5	-0.03	0	2.1403E-08	0	5.09	0.6490465	6.575E-08	1
rs2186709	11	112972894	A	G	NCAM1	-0.03	0	2.1404E-08	21	8.94	0.2573224	8.455E-08	1
rs12773978	10	118293042	G	A	FAM204A	-0.05	0	2.1454E-08	33	10.55	0.1596275	1.685E-07	1
rs743655	16	13514489	C	A	SHISA9	-0.03	0	2.1454E-08	3	7.24	0.4040841	6.591E-08	1
rs12231611	12	71597205	A	G	LGR5	0.05	0	2.1457E-08	0	6.07	0.5313294	6.592E-08	1

rs4781852	16	18102831	C	A	NPIPA8	0.03	0	2.1471E-08	0	2.21	0.9476017	6.596E-08	1
rs157606	4	16698172	T	C	LDB2	-0.03	0	2.1479E-08	0	1.56	0.9802353	6.598E-08	1
rs35943063	4	14932628	T	C	CPEB2	-0.03	0	2.1485E-08	0	4.18	0.758349	6.6E-08	1
rs284983	16	77101109	G	A	MON1B	0.03	0	2.1503E-08	0	4.04	0.7752835	6.605E-08	1
rs1937371	13	82191779	C	T	SLITRK1	-0.03	0	2.1512E-08	0	4.06	0.7733432	6.608E-08	1
rs6069053	20	54910169	G	A	DOK5	-0.03	0	2.1522E-08	0	4.99	0.6606014	6.611E-08	1
rs34409850	7	110394906	CA	C	IMMP2L	0.03	0	2.153E-08	41	11.92	0.1033251	1.934E-07	1
rs847744	6	40117506	T	C	MOCS1	-0.03	0	2.1533E-08	0	4.01	0.778051	6.614E-08	1
rs10010316	4	142942765	C	A	INPP4B	-0.04	0	2.1538E-08	51	14.52	0.0426055	4.667E-08	1
rs34029647	4	142943532	T	TG	INPP4B	-0.04	0	2.1546E-08	51	14.52	0.0426089	4.669E-08	1
rs9508166	13	28813905	A	G	MTUS2	-0.03	0	2.1561E-08	0	1.58	0.9793655	6.623E-08	1
rs35272044	16	60671680	GA	G	RP11-457D2(	-0.03	0	2.1564E-08	0	5.57	0.5912719	6.624E-08	1
rs10024265	4	142943082	A	G	INPP4B	-0.04	0	2.1571E-08	51	14.52	0.0426417	4.677E-08	1
rs28758917	7	105625395	C	T	ATXN7L1	-0.04	0	2.1578E-08	0	6.37	0.4970439	6.628E-08	1
rs7672210	4	41043109	T	C	APBB2	-0.04	0	2.1586E-08	25	9.37	0.2272327	1.166E-07	1
rs1474425	3	114367797	A	G	ZBTB20	-0.03	0	2.1589E-08	2	7.2	0.4085858	7.159E-08	1
rs2280615	12	102917201	T	G	PAH	-0.05	0	2.1591E-08	11	7.89	0.342626	8.098E-08	1
rs4788211	16	30004244	C	T	INO80E	-0.03	0	2.1609E-08	38	11.44	0.12037	1.168E-07	1
rs10236673	7	132798427	C	T	CHCHD3	0.04	0	2.161E-08	0	3.49	0.8359678	6.638E-08	1
rs4646615	15	57969397	C	A	ALDH1A2	0.03	0	2.1615E-08	32	10.41	0.1663498	5.027E-08	1
rs77283404	1	246008966	G	A	SMYD3	-0.05	0	2.1617E-08	0	1.54	0.9810724	6.64E-08	1
rs62493794	8	9325538	C	T	PPP1R3B	0.03	0	2.1625E-08	54	15.4	0.0311592	3.436E-08	9.73334E-09
rs6778862	3	44510489	A	G	ZNF852	0.03	0	2.1625E-08	0	4.61	0.7071815	6.642E-08	1
rs10842245	12	23962702	A	G	SOX5	0.07	0	2.1639E-08	0	6.92	0.4371987	6.646E-08	1
rs9308155	4	142942518	T	C	INPP4B	-0.04	0	2.1663E-08	51	14.52	0.0426738	4.699E-08	1
rs7227870	18	50839712	C	G	MRO	0.03	0	2.168E-08	0	5.2	0.6351988	6.659E-08	1
rs1821950	7	149676538	T	C	KRBA1	0.03	0	2.1685E-08	25	9.4	0.225378	6.66E-08	1
rs476003	6	153554764	T	C	RGS17	0.04	0	2.1695E-08	51	14.5	0.0429009	5.077E-08	1
rs6766131	3	49501499	T	C	DAG1	-0.03	0	2.1705E-08	0	6.06	0.5330168	6.666E-08	1
rs17109475	12	54230590	T	C	CBX5	-0.03	0	2.1724E-08	20	8.76	0.2699718	1.079E-07	1

rs569410125	15	61900664	C	T	VPS13C	-0.08	0	2.1724E-08	0	6.28	0.5080246	6.672E-08	1
rs1511082	6	164890257	C	A	C6orf118	-0.03	0	2.1764E-08	42	12.24	0.0928485	1.934E-07	1
rs7516474	1	36640931	T	A	GRIK3	0.03	0	2.1778E-08	42	12.27	0.092107	8.659E-08	1
rs7524329	1	198180099	T	C	NEK7	0.03	0	2.1781E-08	0	5.35	0.6169024	6.689E-08	1
rs12162087	16	72053408	G	A	TXNL4B	0.03	0	2.1794E-08	0	3.5	0.835178	6.693E-08	1
rs78901286	9	109299617	T	A	EPB41L4B	0.08	0	2.18E-08	0	5.8	0.5635558	6.679E-08	1
rs9314921	13	28804677	A	G	MTUS2	-0.03	0	2.1802E-08	0	1.61	0.9780842	6.695E-08	1
rs12330269	3	49476477	G	A	DAG1	-0.03	0	2.1804E-08	0	6.06	0.5321832	6.696E-08	1
rs9827021	3	49477331	C	A	DAG1	-0.03	0	2.1804E-08	0	6.06	0.5321832	6.696E-08	1
rs7331179	13	28807678	A	G	MTUS2	-0.03	0	2.1822E-08	0	1.61	0.9780616	6.701E-08	1
rs11764362	7	55535932	T	C	VOPP1	-0.03	0	2.1822E-08	0	5.31	0.6226573	6.701E-08	1
rs1912888	20	54912166	G	A	DOK5	-0.03	0	2.1827E-08	0	5.07	0.6514863	6.703E-08	1
rs1056667	6	26510336	T	C	BTN1A1	0.03	0	2.1828E-08	0	2.63	0.9173227	6.703E-08	1
rs3117022	6	33124055	T	C	HLA-DPB1	0.03	0	2.1838E-08	2	7.2	0.4083135	6.926E-08	1
rs1372605	15	87411527	A	G	AGBL1	-0.03	0	2.1838E-08	0	4.2	0.7566713	6.706E-08	1
rs2870373	20	54898395	T	G	DOK5	-0.03	0	2.185E-08	0	5.02	0.6574133	6.71E-08	1
rs2186874	11	113042002	T	C	NCAM1	0.03	0	2.1851E-08	21	8.95	0.2560484	8.454E-08	1
rs2076310	6	33198257	A	G	RXRB	0.03	0	2.1854E-08	19	8.72	0.2730584	6.711E-08	1
rs34363169	3	49500279	G	A	DAG1	-0.03	0	2.1868E-08	0	6.07	0.5319939	6.715E-08	1
rs35261698	3	49500406	C	G	DAG1	-0.03	0	2.1868E-08	0	6.07	0.5319939	6.715E-08	1
rs6766581	3	49501968	T	C	DAG1	-0.03	0	2.1868E-08	0	6.07	0.5319939	6.715E-08	1
rs11712569	3	49502719	A	G	DAG1	-0.03	0	2.1878E-08	0	6.07	0.5312232	6.718E-08	1
rs2734841	11	113411054	A	C	DRD2	-0.03	0	2.1899E-08	3	7.25	0.4028486	7.399E-08	1
rs10801667	1	198402232	A	T	NEK7	0.03	0	2.1903E-08	61	18.33	0.010547	5.834E-08	1
rs2124528	12	54256157	C	T	CBX5	-0.03	0	2.1903E-08	20	8.76	0.2703503	1.095E-07	1
rs145582459	9	127879002	A	G	AK1	0.08	0	2.191E-08	0	3.72	0.8108587	6.728E-08	1
rs182979107	2	104366703	A	G	POU3F3	0.09	0	2.1914E-08	0	5.35	0.6177141	6.729E-08	1
rs9850072	3	49492049	C	T	DAG1	-0.03	0	2.1914E-08	0	6.07	0.531845	6.729E-08	1
rs530459385	7	84150994	C	T	SEMA3A	-0.07	0	2.1914E-08	0	4.44	0.7280941	6.729E-08	1
rs11719996	3	49488525	T	C	DAG1	-0.03	0	2.1915E-08	0	6.07	0.531802	6.729E-08	1

rs2412130	17	49729728	C	T	FAM117A	-0.03	0	2.1918E-08	0	1.43	0.984705	6.73E-08	1
rs6069045	20	54899324	C	A	DOK5	-0.03	0	2.1921E-08	0	5.1	0.6472261	6.731E-08	1
rs9804542	11	128053783	C	G	ETS1	0.05	0	2.1929E-08	36	11.06	0.1361616	9.198E-08	1
rs2527898	7	99936407	C	G	GJC3	0.03	0	2.1934E-08	35	10.87	0.1444046	1.413E-07	1
rs3754376	1	226373363	C	A	PARP1	-0.03	0	2.1939E-08	32	10.41	0.1666069	1.022E-07	1
rs76427635	7	100792306	G	T	ZAN	-0.03	0	2.1945E-08	8	7.69	0.3606314	8.423E-08	1
rs75379065	7	100792307	A	T	ZAN	-0.03	0	2.1947E-08	8	7.69	0.3606385	8.424E-08	1
rs115926496	11	134631133	C	T	B3GAT1	-0.08	0	2.1959E-08	0	1.98	0.9611981	6.742E-08	1
rs11725270	4	14930778	T	C	CPEB2	-0.03	0	2.1977E-08	0	4.19	0.7571337	6.748E-08	1
rs6069051	20	54907541	G	A	DOK5	-0.03	0	2.1981E-08	0	5.08	0.6498888	6.749E-08	1
rs283030	4	16697520	T	C	LDB2	-0.03	0	2.1992E-08	0	1.55	0.9804552	6.752E-08	1
rs16920973	8	54967126	T	C	RP1	0.03	0	2.1992E-08	52	14.61	0.0412858	1.042E-08	2.61067E-09
rs11653507	17	67895948	T	A	BPTF	-0.03	0	2.1997E-08	33	10.57	0.1585353	1.487E-07	1
rs78071762	2	195112243	C	G	SLC39A10	0.05	0	2.2006E-08	0	5.15	0.6421917	6.756E-08	1
rs2137220	20	54908227	C	A	DOK5	-0.03	0	2.201E-08	0	4.91	0.6708657	6.758E-08	1
rs11150003	16	73688421	C	T	PSMD7	-0.03	0	2.2023E-08	34	10.61	0.1564696	8.417E-08	1
rs10876549	12	54308112	A	G	COPZ1	-0.03	0	2.2029E-08	0	4.84	0.6796814	6.763E-08	1
rs12562201	1	231098120	C	T	FAM89A	0.04	0	2.2034E-08	0	5.01	0.6591904	6.765E-08	1
rs7691325	4	142958739	C	A	INPP4B	-0.04	0	2.2034E-08	51	14.49	0.0430887	4.742E-08	1
rs34004743	12	26206195	G	A	SSPN	0.04	0	2.2042E-08	19	8.7	0.2750454	6.767E-08	1
rs7972094	12	23998108	G	C	SOX5	0.06	0	2.2044E-08	15	8.27	0.3094246	8.673E-08	1
rs157608	4	16698924	T	C	LDB2	-0.03	0	2.2047E-08	0	1.55	0.9804893	6.769E-08	1
rs6457879	6	36112276	A	G	MAPK14	0.04	0	2.2065E-08	25	9.44	0.2226959	1.087E-07	1
rs157626	4	16702954	A	G	LDB2	-0.03	0	2.2066E-08	0	1.55	0.980488	6.774E-08	1
rs75704987	2	178975235	T	C	CCDC141	0.06	0	2.2091E-08	24	9.3	0.2320479	1.186E-07	1
rs10227271	7	117299994	A	G	WNT2	0.03	0	2.2095E-08	16	8.4	0.2988497	8.652E-08	1
rs35332534	8	14644015	A	AT	SGCZ	-0.03	0	2.2123E-08	0	4.68	0.6986759	6.791E-08	1
rs7625233	3	16811234	G	A	PLCL2	-0.03	0	2.2126E-08	0	6.58	0.4734436	6.792E-08	1
rs1511081	6	164890319	G	C	C6orf118	-0.03	0	2.2136E-08	43	12.39	0.0885296	1.995E-07	1
rs6442647	3	16831040	A	G	PLCL2	-0.03	0	2.2137E-08	0	2.34	0.9384051	6.796E-08	1

rs7194442	16	77105248	C	T	MON1B	0.03	0	2.2152E-08	0	3.53	0.8325185	6.8E-08	1
rs12149928	16	72950316	C	T	ZFHX3	0.06	0	2.2155E-08	44	12.58	0.0830969	3.348E-08	9.45892E-09
rs7548936	1	90742200	G	C	BARHL2	0.03	0	2.2156E-08	22	8.99	0.2531592	5.52E-08	1
rs76115445	20	54901200	C	G	DOK5	-0.03	0	2.216E-08	0	5	0.6596668	6.803E-08	1
rs12149946	16	72950441	G	A	ZFHX3	0.06	0	2.2161E-08	44	12.58	0.083095	3.349E-08	9.45892E-09
rs77768117	16	21694525	C	T	OTOA	-0.07	0	2.2189E-08	0	4.17	0.760196	6.811E-08	1
rs182337552	2	104396336	G	C	POU3F3	0.09	0	2.2195E-08	0	5.48	0.601053	6.813E-08	1
rs1437175	16	58931484	A	G	GOT2	0.03	0	2.2208E-08	43	12.32	0.0906026	9.504E-08	1
rs11287277	7	55532662	GA	G	VOPP1	-0.03	0	2.2208E-08	0	4.72	0.6943864	6.817E-08	1
rs7985195	13	28808970	T	C	MTUS2	-0.03	0	2.2209E-08	0	1.62	0.9780221	6.817E-08	1
rs7203426	16	72052656	T	C	TXNL4B	0.03	0	2.2226E-08	0	3.51	0.8338059	6.822E-08	1
rs34583201	12	26204317	T	A	SSPN	0.04	0	2.2236E-08	19	8.69	0.2757092	6.825E-08	1
rs7641833	3	82315897	C	G	GBE1	-0.04	0	2.2237E-08	20	8.75	0.2707659	8.246E-08	1
rs17075727	3	43459409	G	A	ANO10	-0.03	0	2.224E-08	48	13.61	0.0585828	6.826E-08	1
rs1981549	7	99944013	A	G	GJC3	0.03	0	2.2241E-08	35	10.87	0.1443288	1.437E-07	1
rs10088090	8	90188991	C	A	CALB1	0.03	0	2.225E-08	0	3.25	0.8613712	6.829E-08	1
rs7871118	9	11245272	T	C	PTPRD	-0.04	0	2.2258E-08	2	7.16	0.4128589	7.227E-08	1
rs60270599	6	164890917	C	T	C6orf118	-0.03	0	2.2263E-08	43	12.35	0.0895718	2.001E-07	1
rs59362927	6	164891114	G	A	C6orf118	-0.03	0	2.2274E-08	43	12.38	0.0887091	2.007E-07	1
rs78569773	6	114862330	T	C	HS3ST5	0.04	0	2.2296E-08	38	11.37	0.1230998	1.482E-07	1
rs74131223	13	112162866	A	C	SOX1	0.04	0	2.2308E-08	0	1.4	0.9855889	6.847E-08	1
rs11075949	16	72948173	A	G	ZFHX3	0.06	0	2.2309E-08	44	12.57	0.0831704	3.372E-08	9.45892E-09
rs1784543	11	118760944	A	T	DDX6	-0.03	0	2.2312E-08	22	9.09	0.2462941	1.245E-07	1
rs4326900	13	28809691	C	T	MTUS2	-0.03	0	2.2314E-08	0	1.62	0.9780084	6.849E-08	1
rs7337461	13	28808364	C	T	MTUS2	-0.03	0	2.2314E-08	0	1.62	0.9780084	6.849E-08	1
rs62231722	20	54900865	A	G	DOK5	-0.03	0	2.232E-08	0	5.01	0.659308	6.851E-08	1
rs117094271	11	134694206	G	A	B3GAT1	-0.08	0	2.2333E-08	0	1.85	0.9675294	6.855E-08	1
rs507890	11	118760579	T	C	DDX6	-0.03	0	2.2343E-08	22	9.08	0.2471535	1.244E-07	1
rs7337401	13	28808185	G	T	MTUS2	-0.03	0	2.2343E-08	0	1.62	0.9780001	6.857E-08	1
rs9506047	13	28809478	G	A	MTUS2	-0.03	0	2.2343E-08	0	1.62	0.9780001	6.857E-08	1

rs9506048	13	28810890	C	T	MTUS2	-0.03	0	2.2343E-08	0	1.62	0.9780001	6.857E-08	1
rs336616	3	18589197	A	G	SATB1	0.03	0	2.2347E-08	0	4.14	0.7635874	6.859E-08	1
rs7985894	13	28804170	A	T	MTUS2	-0.03	0	2.2352E-08	0	1.61	0.9780913	6.86E-08	1
rs11185538	3	196422796	C	T	UBXN7	0.03	0	2.2353E-08	0	1.39	0.9858354	6.86E-08	1
rs9508157	13	28804733	T	C	MTUS2	-0.03	0	2.2353E-08	0	1.62	0.9780565	6.86E-08	1
rs35603568	5	137073404	C	CA	SPOCK1	0.03	0	2.2355E-08	0	6.67	0.4641431	6.861E-08	1
rs4702830	5	11795697	G	A	CTNND2	-0.27	0	2.2367E-08	29	10	0.1888169	9.353E-08	1
rs35032992	6	47268622	G	GCCA	TNFRSF21	0.03	0	2.2369E-08	0	4.66	0.7009926	6.865E-08	1
rs199520795	8	90392078	CA	C	TMEM64	0.06	0	2.2377E-08	23	9.14	0.2427332	1.259E-07	1
rs2070937	16	72055841	A	G	HP,TXNL4B	0.03	0	2.2382E-08	0	3.28	0.8581054	6.869E-08	1
rs35444516	20	54907440	AG	A	DOK5	-0.03	0	2.2383E-08	0	5.06	0.6523133	6.87E-08	1
rs7983818	13	28809045	A	C	MTUS2	-0.03	0	2.2384E-08	0	1.62	0.9780065	6.87E-08	1
rs456261	6	33290666	G	A	PFDN6	0.03	0	2.2385E-08	19	8.74	0.2716836	9.614E-08	1
rs9853683	3	49475155	A	G	DAG1	-0.03	0	2.2391E-08	0	6.03	0.5357376	6.872E-08	1
rs614025	6	153558702	C	T	RGS17	0.04	0	2.2395E-08	51	14.29	0.0462758	5.287E-08	1
rs145761294	2	195391802	TTA	T	SLC39A10	0.06	0	2.2405E-08	0	3.95	0.7856633	6.876E-08	1
rs12582448	12	26204039	C	T	SSPN	0.04	0	2.2423E-08	19	8.69	0.2757136	6.882E-08	1
rs9458639	6	162666449	C	A	PARK2	0.03	0	2.2435E-08	0	6.15	0.5221453	6.885E-08	1
rs6926629	6	26499675	T	C	BTN1A1	0.03	0	2.2435E-08	0	2.68	0.9128724	6.885E-08	1
rs2153666	13	28837381	A	G	MTUS2	-0.03	0	2.2438E-08	0	1.74	0.9726313	6.886E-08	1
rs1822237	15	87431964	T	A	AGBL1	-0.03	0	2.244E-08	0	3.85	0.7972787	6.887E-08	1
rs78666263	6	164634104	C	T	C6orf118	0.04	0	2.2445E-08	0	4.69	0.6982532	6.888E-08	1
rs9508159	13	28806680	G	A	MTUS2	-0.03	0	2.2479E-08	0	1.61	0.9780867	6.898E-08	1
rs9458634	6	162650372	C	T	PARK2	0.03	0	2.2481E-08	0	5.96	0.544039	6.899E-08	1
rs2654674	12	60580999	T	A	SLC16A7	-0.03	0	2.2481E-08	57	16.34	0.0221751	5.113E-08	1
rs9858418	3	49505855	A	G	DAG1	-0.03	0	2.2485E-08	0	6.3	0.5054973	6.883E-08	1
rs400128	16	21731221	T	C	OTOA	-0.03	0	2.2488E-08	0	5.18	0.6375898	6.901E-08	1
rs555639	11	118758322	G	A	DDX6	-0.03	0	2.2495E-08	22	9.07	0.2473323	1.252E-07	1
rs6957632	7	55512524	C	A	VOPP1	-0.03	0	2.2501E-08	0	5.26	0.627804	6.905E-08	1
rs1572025	9	97978833	T	G	ANP32B	-0.03	0	2.2508E-08	0	6.69	0.4620534	6.907E-08	1

Table S2

rs10848580	12	1825251	G	C	CACNA2D4,1	-0.04	0	2.252E-08	0	6.84	0.446081	6.911E-08	1
rs11170861	12	54305802	T	A	COPZ1	-0.03	0	2.2532E-08	0	4.86	0.6766388	6.914E-08	1
rs9314920	13	28802464	A	T	MTUS2	-0.03	0	2.254E-08	0	1.62	0.9780511	6.917E-08	1
rs12583996	13	96339448	G	A	HS6ST3	0.03	0	2.2547E-08	0	3.38	0.8479422	6.919E-08	1
rs74570090	9	109297332	G	C	EPB41L4B	0.08	0	2.2555E-08	0	5.81	0.5626373	6.903E-08	1
rs113207282	13	28809481	G	GCCCCACA	MTUS2	-0.03	0	2.2571E-08	0	1.62	0.9780491	6.926E-08	1
rs3802850	11	113041796	A	C	NCAM1	0.03	0	2.2581E-08	21	8.87	0.2620941	8.652E-08	1
rs10954388	7	132795606	T	C	CHCHD3	0.04	0	2.2593E-08	0	3.56	0.829174	6.932E-08	1
rs10517312	4	34461178	A	G	ARAP2	0.04	0	2.2593E-08	0	6.34	0.5008404	6.933E-08	1
rs4781851	16	18102845	G	C	NPIPA8	0.03	0	2.2595E-08	0	2.2	0.9481109	6.933E-08	1
rs9456805	6	162653798	A	T	PARK2	0.03	0	2.2639E-08	0	5.96	0.5447335	6.946E-08	1
rs1690807	11	99637528	C	T	CNTN5	-0.03	0	2.2642E-08	26	9.51	0.2179457	5.321E-08	1
rs4292665	8	54964899	A	T	RP1	0.03	0	2.2645E-08	52	14.7	0.0400445	1.038E-08	2.61067E-09
rs4425570	6	162653164	T	C	PARK2	0.03	0	2.2668E-08	0	5.96	0.5444567	6.955E-08	1
rs9458638	6	162665994	T	G	PARK2	0.03	0	2.2673E-08	0	6.16	0.5206849	6.957E-08	1
rs1317992	1	198175816	G	T	NEK7	0.03	0	2.2677E-08	0	5.42	0.6089891	6.957E-08	1
rs7552616	1	198179782	C	G	NEK7	0.03	0	2.2677E-08	0	5.42	0.6089891	6.957E-08	1
rs2525535	7	99945554	G	A	GJC3	0.03	0	2.2688E-08	35	10.9	0.1430971	1.471E-07	1
rs2137225	20	54900040	T	G	DOK5	-0.03	0	2.2699E-08	0	5.05	0.6534131	6.964E-08	1
rs2329212	13	82192482	T	C	SLITRK1	-0.03	0	2.2719E-08	0	4.05	0.7739367	6.97E-08	1
rs7980317	12	56764399	C	T	HSD17B6	-0.03	0	2.2721E-08	0	2.01	0.9590123	6.971E-08	1
rs1006826	11	113264284	T	C	NCAM1	-0.04	0	2.2724E-08	0	1.57	0.9796103	6.972E-08	1
rs6903973	6	26499714	C	A	BTN1A1	0.03	0	2.2761E-08	0	2.97	0.8875839	6.983E-08	1
rs6069047	20	54902882	G	A	DOK5	-0.03	0	2.2765E-08	0	5.09	0.6492338	6.984E-08	1
rs2847575	18	50838719	A	T	MRO	-0.03	0	2.2768E-08	0	5.21	0.6342339	6.985E-08	1
rs9508168	13	28818722	A	G	MTUS2	-0.03	0	2.2775E-08	0	1.66	0.9762582	6.987E-08	1
rs34058981	7	128182372	CTT	C	LEP	0.03	0	2.2778E-08	0	5.34	0.6186772	6.988E-08	1
rs66508170	7	110395373	C	T	IMMP2L	0.03	0	2.2782E-08	42	12.19	0.0945636	2.113E-07	1
rs1781030	1	208250860	C	T	PLXNA2	-0.03	0	2.2784E-08	0	4.07	0.7715141	6.99E-08	1
rs7616113	3	44495979	T	C	ZNF852	0.03	0	2.2786E-08	0	4	0.7800143	6.99E-08	1

rs3835704	1	226371871	TA	T	PARP1	-0.03	0	2.2787E-08	32	10.39	0.1677662	1.061E-07	1
rs78069248	16	72946921	C	T	ZFHX3	0.06	0	2.2858E-08	44	12.56	0.0834974	3.459E-08	9.73334E-09
rs2207630	1	36643391	A	G	GRIK3	0.03	0	2.2883E-08	42	12.22	0.093456	8.947E-08	1
rs6064139	20	54905180	C	T	DOK5	-0.03	0	2.2886E-08	0	4.99	0.6615056	7.02E-08	1
rs6797664	3	49501789	G	A	DAG1	-0.03	0	2.2887E-08	0	6.06	0.5322303	7.02E-08	1
rs187482937	5	61227208	T	C	SMIM15	-0.09	0	2.2901E-08	0	4.41	0.7314606	7.025E-08	1
rs2372688	3	44444330	C	T	ZNF445	-0.03	0	2.2902E-08	0	4.23	0.753137	7.025E-08	1
rs1940728	11	112981473	G	T	NCAM1	0.03	0	2.2902E-08	20	8.86	0.2628971	9.013E-08	1
rs1940729	11	112981470	T	C	NCAM1	0.03	0	2.2902E-08	20	8.86	0.2628971	9.013E-08	1
rs11603966	11	115066841	C	T	CADM1	0.03	0	2.2912E-08	33	10.61	0.156793	6.185E-08	1
rs4462382	11	115067897	G	C	CADM1	0.03	0	2.2912E-08	33	10.61	0.156793	6.185E-08	1
rs56391055	11	115068302	C	T	CADM1	0.03	0	2.2912E-08	33	10.61	0.156793	6.185E-08	1
rs6956345	7	55517653	C	T	VOPP1	-0.03	0	2.2914E-08	0	4.88	0.6748463	7.029E-08	1
rs2431108	5	104612267	T	C	NUDT12	0.03	0	2.2921E-08	0	6.99	0.4295831	7.031E-08	1
rs1790265	11	99641256	A	G	CNTN5	-0.03	0	2.2928E-08	25	9.44	0.2225695	5.408E-08	1
rs11215347	11	115086746	C	T	CADM1	0.03	0	2.2941E-08	26	9.56	0.2150074	6.337E-08	1
rs147102595	7	23166230	T	C	KLHL7	0.07	0	2.296E-08	0	2.35	0.9377335	7.042E-08	1
rs7132541	12	24189167	C	T	SOX5	-0.03	0	2.2982E-08	0	3.97	0.7829064	7.049E-08	1
rs34209273	16	60687738	G	A	RP11-457D20	-0.03	0	2.3022E-08	0	6.13	0.5248415	7.061E-08	1
rs2903306	16	13510365	A	G	SHISA9	-0.03	0	2.303E-08	0	7.01	0.4278046	7.063E-08	1
rs6816412	4	14940468	T	C	CPEB2	-0.03	0	2.3054E-08	0	3.52	0.8328514	7.07E-08	1
rs12373027	16	72951194	G	T	ZFHX3	0.06	0	2.3055E-08	44	12.61	0.0822103	3.469E-08	9.73334E-09
rs76696160	16	72951220	A	G	ZFHX3	0.06	0	2.3055E-08	44	12.61	0.0821454	3.466E-08	9.73334E-09
rs7967600	12	56768208	A	G	HSD17B6	-0.03	0	2.3063E-08	0	2.01	0.9592608	7.073E-08	1
rs2586761	18	50840088	C	G	MRO	-0.03	0	2.3064E-08	0	5.2	0.6361224	7.074E-08	1
rs28868638	6	162678647	T	G	PARK2	0.03	0	2.3068E-08	0	6.1	0.528335	7.075E-08	1
rs11884880	2	195562897	T	C	SLC39A10	0.03	0	2.308E-08	21	8.92	0.258637	1.015E-07	1
rs546393	11	118753541	T	C	DDX6	-0.03	0	2.3085E-08	23	9.1	0.2457123	1.287E-07	1
rs192384444	13	79496144	T	C	NDFIP2	0.09	0	2.3093E-08	0	6.29	0.5059418	7.075E-08	1
rs7334814	13	28802735	T	C	MTUS2	-0.03	0	2.3108E-08	0	1.62	0.9779726	7.087E-08	1

rs17251320	8	14625504	G	T	SGCZ	-0.03	0	2.3136E-08	0	4.14	0.7636626	7.095E-08	1
rs7119426	11	66882141	A	G	PC	-0.03	0	2.315E-08	49	13.74	0.0559417	5.622E-08	1
rs17149760	8	9325697	G	A	PPP1R3B	0.03	0	2.3152E-08	55	15.84	0.0266033	7.1E-08	1
rs28444852	8	54963852	G	T	RP1	0.03	0	2.3161E-08	52	14.73	0.0395575	1.052E-08	2.68164E-09
rs36006839	4	14938751	A	T	CPEB2	-0.03	0	2.3173E-08	0	3.52	0.833404	7.106E-08	1
rs5798394	12	56769882	C	CT	HSD17B6	-0.03	0	2.318E-08	0	2.01	0.9591789	7.108E-08	1
rs9508169	13	28819071	G	C	MTUS2	-0.03	0	2.3183E-08	0	1.67	0.9756377	7.109E-08	1
rs2363478	12	60587967	C	G	SLC16A7	-0.03	0	2.3184E-08	57	16.35	0.0221262	5.254E-08	1
rs898611	12	56769532	C	T	HSD17B6	-0.03	0	2.3192E-08	0	2.01	0.9591518	7.112E-08	1
rs1999896	1	246042915	G	T	SMYD3	-0.03	0	2.3216E-08	0	3.59	0.8253305	7.119E-08	1
rs77641763	9	137371330	C	T	EXD3	0.04	0	2.3246E-08	29	9.97	0.1901036	6.792E-08	1
rs1393988	12	60593582	T	C	SLC16A7	-0.03	0	2.3261E-08	57	16.36	0.0219987	5.245E-08	1
rs9876888	3	16832102	A	G	PLCL2	-0.03	0	2.3263E-08	0	2.36	0.9369523	7.133E-08	1
rs74424394	6	164890686	C	CTT	C6orf118	-0.03	0	2.3269E-08	43	12.33	0.0902325	2.098E-07	1
rs66958241	3	152560723	C	T	MBNL1	0.04	0	2.3272E-08	0	6.65	0.4660766	7.136E-08	1
rs2049777	3	44536796	G	T	ZKSCAN7	0.03	0	2.3283E-08	0	5.71	0.5740397	7.071E-08	1
rs7274080	20	54906048	C	T	DOK5	-0.03	0	2.3294E-08	0	4.98	0.6620333	7.142E-08	1
rs7612199	3	82316391	T	C	GBE1	-0.04	0	2.3295E-08	18	8.61	0.2819213	7.143E-08	1
rs56267645	4	14936231	C	G	CPEB2	-0.03	0	2.3313E-08	0	3.52	0.8329483	7.148E-08	1
rs6428455	1	198376784	C	T	NEK7	0.03	0	2.3323E-08	62	18.59	0.0095827	6.149E-08	1
rs10922411	1	198369192	T	C	NEK7	0.03	0	2.3325E-08	62	18.59	0.0095824	6.149E-08	1
rs4326656	1	198371345	A	G	NEK7	0.03	0	2.3328E-08	62	18.59	0.0095807	6.149E-08	1
rs11207521	1	59826965	G	A	HOOK1	0.03	0	2.3337E-08	0	3.68	0.8156818	7.155E-08	1
rs111236666	3	152559875	G	A	MBNL1	0.04	0	2.3339E-08	0	6.65	0.4663978	7.156E-08	1
rs3117004	6	33128989	A	G	COL11A2	0.03	0	2.3342E-08	2	7.2	0.4088229	7.332E-08	1
rs143596217	16	21825552	G	A	NPIPB4	-0.07	0	2.3369E-08	0	4.99	0.6609075	7.165E-08	1
rs7159810	14	103827780	T	G	PPP1R13B	0.03	0	2.3371E-08	0	6.54	0.4781918	7.166E-08	1
rs60360194	11	118771297	TC	T	DDX6	-0.03	0	2.3376E-08	21	8.96	0.2558408	1.274E-07	1
rs2782504	13	54263131	G	C	OLFM4	0.09	0	2.3382E-08	13	8.11	0.3230977	6.614E-08	1
rs3129272	6	33128649	C	T	COL11A2	0.03	0	2.3382E-08	2	7.18	0.4108845	7.169E-08	1

rs35995364	18	50841268	C	CT	MRO	-0.03	0	2.3397E-08	0	5.19	0.6365421	7.173E-08	1
rs2586762	18	50841255	G	A	MRO	-0.03	0	2.3398E-08	0	5.19	0.6365309	7.174E-08	1
rs503460	1	88332586	A	C	PKN2	0.03	0	2.3402E-08	0	2.21	0.9473145	7.175E-08	1
rs142354466	8	81056325	C	T	PAG1	-0.04	0	2.3402E-08	0	4.5	0.7207886	7.175E-08	1
rs11182081	12	43450426	C	T	ADAMTS20	-0.03	0	2.3408E-08	0	2.06	0.9566831	7.177E-08	1
rs743015	1	36628220	G	A	CSF3R	0.03	0	2.3413E-08	43	12.38	0.0887546	9.071E-08	1
rs6601374	8	9846285	G	A	TNKS	0.03	0	2.3445E-08	0	2.59	0.9204809	7.188E-08	1
rs4360108	6	162671266	C	T	PARK2	0.03	0	2.3489E-08	0	6.1	0.5280284	7.201E-08	1
rs1042949	7	12232490	C	G	TMEM106B	0.03	0	2.3491E-08	0	6.34	0.500306	7.201E-08	1
rs35639002	1	229265468	T	TC	RAB4A	0.03	0	2.3502E-08	0	1.63	0.9775395	7.205E-08	1
rs16864405	3	152557412	T	C	MBNL1	0.04	0	2.3528E-08	0	6.65	0.4663102	7.213E-08	1
rs116861998	16	72962150	G	T	ZFHX3	0.06	0	2.3538E-08	51	14.31	0.0459096	2.33E-08	6.38905E-09
rs10739157	9	8346072	T	C	PTPRD	-0.03	0	2.3581E-08	43	12.29	0.0912954	1.245E-07	1
rs679169	16	77104549	T	C	MON1B	0.03	0	2.3589E-08	0	4	0.7796066	7.231E-08	1
rs4244138	1	198373252	A	G	NEK7	0.03	0	2.3596E-08	62	18.47	0.0100135	6.395E-08	1
rs35598010	5	125196775	T	C	ZNF608	0.03	0	2.3597E-08	0	6.98	0.4306859	7.233E-08	1
rs192193	5	151313029	A	G	SLC36A2	-0.03	0	2.3598E-08	47	13.24	0.0665578	1.369E-07	1
rs11160758	14	103750882	G	A	PPP1R13B	0.03	0	2.3608E-08	0	6.28	0.5073555	7.236E-08	1
rs1535097	14	103750312	C	T	PPP1R13B	0.03	0	2.3609E-08	0	6.28	0.507357	7.237E-08	1
rs1535098	14	103750176	T	A	PPP1R13B	0.03	0	2.3609E-08	0	6.28	0.507357	7.237E-08	1
rs3818085	14	103749648	C	T	PPP1R13B	0.03	0	2.3609E-08	0	6.28	0.507357	7.237E-08	1
rs5811117	14	103750199	T	TG	PPP1R13B	0.03	0	2.3609E-08	0	6.28	0.507357	7.237E-08	1
rs17065049	8	499089	C	A	TDRP	0.04	0	2.3624E-08	7	7.56	0.3733844	8.688E-08	1
rs6998340	8	81053301	G	A	PAG1	-0.04	0	2.3642E-08	0	4.16	0.7606655	7.247E-08	1
rs9652592	16	22323976	A	G	POLR3E	-0.07	0	2.3645E-08	0	3.15	0.87098	7.248E-08	1
rs1494725	5	62686105	A	G	IPO11	-0.03	0	2.3657E-08	0	3.11	0.8746129	7.251E-08	1
rs55918137	1	86428784	G	C	CLCA2	0.1	0	2.367E-08	22	9.03	0.2505377	9.775E-08	1
rs1548884	7	12240135	A	C	TMEM106B	0.03	0	2.3682E-08	0	6.35	0.4995407	7.259E-08	1
rs114301223	3	60080620	G	A	FHIT	0.08	0	2.3695E-08	59	17.15	0.0164602	1.748E-07	1
rs1397339	12	43450131	A	C	ADAMTS20	-0.03	0	2.3697E-08	0	2.05	0.9571356	7.263E-08	1

rs10945856	6	162673499	C	T	PARK2	0.03	0	2.3707E-08	0	6.1	0.5282422	7.266E-08	1
rs3117006	6	33128931	G	A	COL11A2	0.03	0	2.3715E-08	2	7.15	0.4132036	7.269E-08	1
rs199861628	16	18101425	A	AT	NPIPA8	0.03	0	2.3736E-08	0	2.39	0.9350392	7.275E-08	1
rs11650220	17	67804024	G	A	BPTF	-0.03	0	2.3749E-08	0	6.5	0.4827951	7.279E-08	1
rs55649128	5	104408031	C	T	NUDT12	0.03	0	2.3755E-08	0	5.77	0.5665782	7.281E-08	1
rs12973678	19	57147338	G	A	ZIM3	-0.03	0	2.3781E-08	32	10.31	0.1717847	5.128E-08	1
rs142954253	16	21691177	G	C	OTOA	-0.07	0	2.3795E-08	0	4.1	0.768076	7.293E-08	1
rs9804835	12	43448360	A	C	ADAMTS20	-0.03	0	2.3805E-08	0	2.05	0.9571429	7.296E-08	1
rs10806762	6	162673891	A	C	PARK2	0.03	0	2.3823E-08	0	6.1	0.5283353	7.301E-08	1
rs10281425	7	12241104	T	A	TMEM106B	0.03	0	2.3834E-08	0	6.36	0.4989511	7.304E-08	1
rs7805300	7	55529203	A	C	VOPP1	-0.03	0	2.384E-08	0	5.31	0.6220244	7.306E-08	1
rs34269894	6	33129165	AG	A	COL11A2	0.03	0	2.3872E-08	2	7.15	0.4133705	7.316E-08	1
rs4764767	12	100909890	G	A	ANO4	0.03	0	2.3888E-08	3	7.26	0.4024804	7.32E-08	1
rs7166783	15	83492359	A	G	SH3GL3	0.03	0	2.3895E-08	0	1.69	0.9749169	7.323E-08	1
rs7784952	7	55532419	A	G	VOPP1	-0.03	0	2.3907E-08	0	5.31	0.6223716	7.326E-08	1
rs7105494	11	115070986	C	T	CADM1	0.03	0	2.3929E-08	34	10.62	0.1559568	6.444E-08	1
rs624936	11	99682949	T	C	CNTN5	-0.03	0	2.3941E-08	0	6.45	0.488534	6.513E-08	1
rs665597	11	118029359	G	A	AP002962.1,T	0.03	0	2.395E-08	0	3.73	0.8107573	7.339E-08	1
rs60297128	11	134628617	C	T	B3GAT1	-0.08	0	2.3951E-08	0	1.94	0.9632134	7.339E-08	1
rs8037169	15	83476317	A	G	SH3GL3	0.03	0	2.3964E-08	0	1.41	0.9852747	7.343E-08	1
rs4785323	16	49562118	T	C	ZNF423	0.04	0	2.3991E-08	0	4.02	0.7769511	7.351E-08	1
rs76500931	4	48956369	A	G	CWH43	-0.08	0	2.3993E-08	0	1.03	0.9943656	7.352E-08	1
rs10236831	7	132798619	C	T	CHCHD3	0.04	0	2.3999E-08	0	3.55	0.8303111	7.354E-08	1
rs12595659	15	77800381	C	T	LINGO1	0.03	0	2.401E-08	8	7.63	0.3659594	9.266E-08	1
rs9931719	16	58917779	C	T	GOT2	-0.03	0	2.4013E-08	37	11.14	0.1326604	1.323E-07	1
rs3219112	1	226369803	A	C	PARP1	-0.03	0	2.4016E-08	32	10.35	0.1695447	1.115E-07	1
rs11781218	8	14643904	C	A	SGCZ	0.03	0	2.4038E-08	0	4.67	0.6997576	7.365E-08	1
rs1983866	10	98256556	A	T	LOXL4	0.03	0	2.4041E-08	36	10.99	0.1388534	1.176E-07	1
rs10447118	5	52350515	C	T	ITGA1	0.03	0	2.406E-08	28	9.83	0.1984104	4.862E-08	1
rs4337578	22	32506898	T	C	SYN3	-0.03	0	2.4063E-08	18	8.54	0.287171	6.143E-08	1

rs726283	6	151981874	G	A	ESR1	-0.03	0	2.4067E-08	0	2.96	0.8890545	7.374E-08	1
rs77260975	5	154346945	A	C	GALNT10	0.08	0	2.4079E-08	0	5.59	0.5880906	7.282E-08	1
rs74655564	15	58033314	G	C	ALDH1A2	0.03	0	2.4121E-08	59	17.37	0.0151529	7.39E-08	1
rs7237361	18	53261664	A	G	DCC	0.04	0	2.4122E-08	0	6.97	0.4315174	7.39E-08	1
rs157610	4	16699679	G	A	LDB2	-0.03	0	2.4126E-08	0	1.74	0.9727517	7.392E-08	1
rs283031	4	16700279	A	G	LDB2	-0.03	0	2.4126E-08	0	1.74	0.9727517	7.392E-08	1
rs6573504	14	63297332	T	C	RHOJ	-0.03	0	2.4131E-08	3	7.26	0.4027555	8.12E-08	1
rs4396095	1	246049968	A	G	SMYD3	-0.03	0	2.4139E-08	15	8.29	0.3078084	6.878E-08	1
rs187720367	5	60981704	T	A	NDUFAF2	-0.09	0	2.4164E-08	0	5.65	0.5811643	7.403E-08	1
rs1024346	11	115078626	C	T	CADM1	0.03	0	2.4168E-08	25	9.44	0.2226545	6.802E-08	1
rs72666517	13	107249457	G	A	FAM155A	-0.04	0	2.4171E-08	0	3.01	0.8841764	7.405E-08	1
rs138193937	11	134628319	TG	T	B3GAT1	-0.08	0	2.4181E-08	0	1.95	0.962711	7.408E-08	1
rs174544	11	61800281	C	A	FADS1,FADS	0.03	0	2.4183E-08	4	7.3	0.3983451	8.058E-08	1
rs4700015	5	62692976	A	G	IPO11	-0.03	0	2.4186E-08	0	3.13	0.8722545	7.409E-08	1
rs117282925	11	134731355	C	T	B3GAT1	-0.06	0	2.4197E-08	0	3.03	0.8822548	7.413E-08	1
rs73072687	12	23095902	C	A	ETNK1	-0.09	0	2.4206E-08	0	1.17	0.9916635	7.416E-08	1
rs1373036	4	142704109	G	A	INPP4B	0.04	0	2.4215E-08	11	7.94	0.3377899	8.893E-08	1
rs113317925	1	198212891	ATCATCAT	A	NEK7	0.04	0	2.4221E-08	24	9.32	0.2303611	1.107E-07	1
rs3219119	1	226368742	A	T	PARP1	-0.03	0	2.4232E-08	32	10.34	0.1701498	1.126E-07	1
rs3130267	6	33339017	T	G	DAXX	0.03	0	2.427E-08	3	7.27	0.4008613	8.197E-08	1
rs80095837	11	134628257	A	G	B3GAT1	-0.08	0	2.4272E-08	0	1.93	0.9634441	7.435E-08	1
rs112665860	7	156850466	G	A	LMBR1	-0.04	0	2.4286E-08	28	9.73	0.2042805	1.195E-07	1
rs10747770	12	56761435	G	A	HSD17B6	-0.03	0	2.4287E-08	0	2	0.9599898	7.44E-08	1
rs35562417	7	12230053	C	CA	TMEM106B	0.03	0	2.4303E-08	0	6.47	0.4861482	7.445E-08	1
rs8000737	13	82212473	T	C	SLITRK1	-0.03	0	2.4309E-08	0	4.11	0.7674642	7.446E-08	1
rs174556	11	61813163	C	T	FADS1,FADS	0.03	0	2.4335E-08	4	7.3	0.398525	8.102E-08	1
rs1024345	11	115079090	C	A	CADM1	0.03	0	2.434E-08	25	9.44	0.22288	6.852E-08	1
rs6803161	3	196478823	T	C	RNF168	0.03	0	2.4348E-08	10	7.85	0.3462023	7.458E-08	1
rs142227790	6	153570609	C	T	RGS17	-0.04	0	2.4367E-08	50	14.19	0.0479288	5.876E-08	1
rs9888712	15	83511609	A	G	SH3GL3	0.03	0	2.4378E-08	0	2.51	0.9262857	7.467E-08	1

rs35289191	12	100930588	TA	T	ANO4	0.03	0	2.4387E-08	1	7.13	0.4153793	7.47E-08	1
rs6504536	17	67781266	C	A	NOL11	0.05	0	2.44E-08	0	4.28	0.747055	7.474E-08	1
rs117448760	16	21690339	C	T	OTOA	-0.07	0	2.4415E-08	0	4.14	0.7638408	7.478E-08	1
rs11600943	11	115081399	G	A	CADM1	0.03	0	2.442E-08	25	9.44	0.2224935	6.865E-08	1
rs6862788	5	52350232	G	C	ITGA1	0.03	0	2.4422E-08	28	9.82	0.1990362	4.94E-08	1
rs6862792	5	52350233	G	A	ITGA1	0.03	0	2.4422E-08	28	9.82	0.1990362	4.94E-08	1
rs775672129	11	115079954	T	TCTTAGAC/	CADM1	0.03	0	2.4424E-08	25	9.43	0.223038	6.876E-08	1
rs879303990	11	115079952	CA	C	CADM1	0.03	0	2.4426E-08	25	9.43	0.2230412	6.877E-08	1
rs2071025	6	33175979	A	G	COL11A2	0.03	0	2.4436E-08	21	8.91	0.2592822	8.588E-08	1
rs2586765	18	50843214	G	A	MRO	-0.03	0	2.4474E-08	0	5.08	0.6507633	7.496E-08	1
rs13100355	3	152553472	T	G	MBNL1	0.04	0	2.4497E-08	0	6.61	0.4708668	7.503E-08	1
rs3826709	19	10559508	C	G	KRI1	0.03	0	2.4513E-08	0	2.62	0.9179149	7.507E-08	1
rs281248	15	47374636	A	G	SEMA6D	-0.03	0	2.4515E-08	0	5.13	0.6445308	7.508E-08	1
rs72917055	4	101756468	A	G	BANK1	-0.03	0	2.4527E-08	0	3.54	0.8306884	7.512E-08	1
rs676789	11	99692425	C	A	CNTN5	-0.03	0	2.4537E-08	8	7.68	0.3618693	6.394E-08	1
rs2705498	8	81047453	T	G	PAG1	0.04	0	2.4538E-08	0	4.19	0.7580214	7.515E-08	1
rs2226250	13	82213815	A	G	SLITRK1	-0.03	0	2.4549E-08	0	4.14	0.7636952	7.518E-08	1
rs12149167	16	72952111	G	A	ZFHX3	0.06	0	2.4575E-08	44	12.69	0.08004	3.646E-08	1.03095E-08
rs11441442	16	60682397	G	GT	RP11-457D20	-0.03	0	2.459E-08	0	5.53	0.5951751	7.53E-08	1
rs11964818	6	47299546	A	G	TNFRSF21	0.03	0	2.4598E-08	0	4.48	0.7230605	7.533E-08	1
rs78658100	2	195379304	G	C	SLC39A10	0.06	0	2.4601E-08	0	3.94	0.7869966	7.534E-08	1
rs75145751	16	21688577	G	A	OTOA	-0.07	0	2.4603E-08	0	4.08	0.7702457	7.534E-08	1
rs10828184	10	21080075	T	A	NEBL	0.05	0	2.4623E-08	72	25.31	0.0006694	1.539E-09	3.48318E-10
rs4525073	1	198330014	T	C	NEK7	0.03	0	2.4625E-08	38	11.32	0.1254473	1.423E-07	1
rs16956398	18	53232582	A	G	DCC	-0.04	0	2.4642E-08	1	7.09	0.4193508	7.546E-08	1
rs78034016	1	198330787	C	CCT	NEK7	0.03	0	2.4646E-08	38	11.32	0.1250779	1.425E-07	1
rs550615664	5	61118034	TC	T	NDUFAF2	-0.09	0	2.4647E-08	0	5.48	0.6016024	7.548E-08	1
rs7110863	11	112972416	A	G	NCAM1	0.03	0	2.4669E-08	22	9.01	0.25159	9.734E-08	1
rs79877315	16	72948892	A	G	ZFHX3	0.06	0	2.4677E-08	41	11.99	0.1008485	4.341E-08	1
rs747657	1	226363223	G	C	PARP1	-0.03	0	2.4693E-08	31	10.25	0.1746387	1.153E-07	1

rs12617403	2	4790345	C	T	SOX11	-0.03	0	2.4696E-08	0	7.01	0.4278487	7.575E-08	1
rs76794192	16	72949545	G	A	ZFHX3	0.06	0	2.4696E-08	44	12.57	0.0832603	3.738E-08	1.06121E-08
rs3130227	6	33124760	T	C	HLA-DPB1	0.03	0	2.4697E-08	2	7.17	0.4110519	7.778E-08	1
rs7184989	16	21727666	G	C	OTOA	-0.03	0	2.4713E-08	0	5.08	0.6504465	7.567E-08	1
rs17129071	1	86343811	A	G	ODF2L	0.1	0	2.4716E-08	28	9.85	0.1972025	1.157E-07	1
rs9556570	13	96346839	T	G	HS6ST3	0.03	0	2.472E-08	0	3.12	0.8738759	7.569E-08	1
rs16920958	8	54962508	T	C	RP1	0.03	0	2.4736E-08	52	14.78	0.0389466	1.106E-08	2.82955E-09
rs7788791	7	55525124	T	G	VOPP1	-0.03	0	2.4749E-08	0	5.31	0.6219125	7.578E-08	1
rs7785000	7	55525201	A	G	VOPP1	-0.03	0	2.4751E-08	0	5.31	0.621901	7.579E-08	1
rs7570834	2	4792624	T	C	SOX11	-0.03	0	2.4755E-08	0	6.87	0.4424048	7.58E-08	1
rs6063186	20	47956992	A	G	SULF2	0.03	0	2.4757E-08	0	5.51	0.5978846	7.581E-08	1
rs34793230	3	16831033	C	A	PLCL2	-0.03	0	2.4761E-08	0	2.37	0.9366242	7.582E-08	1
rs2496016	10	104837810	A	G	SORCS3	-0.04	0	2.4765E-08	0	5.6	0.5875175	7.583E-08	1
rs11295208	13	28812621	CT	C	MTUS2	-0.03	0	2.4773E-08	0	1.54	0.9809669	7.585E-08	1
rs11601486	11	115082432	C	A	CADM1	0.03	0	2.4783E-08	25	9.42	0.22371	6.974E-08	1
rs41442345	4	101759756	G	A	BANK1	-0.03	0	2.4796E-08	0	3.54	0.8312732	7.592E-08	1
rs3130228	6	33124797	T	C	HLA-DPB1	0.03	0	2.4796E-08	2	7.17	0.4111591	7.807E-08	1
rs12935266	16	72123101	C	G	PMFBP1	0.03	0	2.4815E-08	0	3.44	0.8417812	7.598E-08	1
rs7784706	7	55525021	A	G	VOPP1	-0.03	0	2.4816E-08	0	5.31	0.6218896	7.598E-08	1
rs62248679	3	43160143	G	A	POMGNT2	0.03	0	2.4819E-08	0	4.07	0.7714111	7.599E-08	1
rs77209626	16	72963314	C	A	ZFHX3	0.06	0	2.4843E-08	51	14.4	0.044497	2.327E-08	6.21547E-09
rs8047688	16	21687965	C	T	OTOA	-0.07	0	2.4857E-08	0	4.08	0.7705789	7.61E-08	1
rs11679899	2	95712414	A	G	TRIM43	-0.03	0	2.4907E-08	0	2.81	0.902308	7.625E-08	1
rs2654673	12	60581441	T	C	SLC16A7	-0.03	0	2.4919E-08	57	16.33	0.0222504	5.65E-08	1
rs2623023	8	81048007	C	T	PAG1	0.04	0	2.4939E-08	0	4.2	0.7562275	7.635E-08	1
rs13145336	4	14948452	G	T	CPEB2	-0.03	0	2.494E-08	0	4.09	0.7697782	7.635E-08	1
rs35209318	3	196453973	A	C	RNF168	0.03	0	2.494E-08	0	6.17	0.520014	7.635E-08	1
rs2153029	1	246069198	T	A	SMYD3	-0.03	0	2.4952E-08	10	7.84	0.3465509	5.246E-08	1
rs4610267	3	44444422	T	C	ZNF445	-0.03	0	2.4952E-08	0	4.22	0.7542553	7.639E-08	1
rs9381974	6	51498740	C	G	PKHD1	-0.05	0	2.4973E-08	8	7.67	0.3629661	7.645E-08	1

rs562348019	5	61115418	ACTG	A	NDUFAF2	-0.09	0	2.4992E-08	0	5.49	0.6005073	7.651E-08	1
rs1494946	4	14959245	T	A	CPEB2	-0.03	0	2.5001E-08	0	5.12	0.6450043	7.653E-08	1
rs7685660	4	101730298	G	A	BANK1	-0.03	0	2.5014E-08	0	3.54	0.8312682	7.657E-08	1
rs12149170	16	72952337	C	A	ZFHX3	0.06	0	2.5018E-08	44	12.71	0.0794704	3.698E-08	1.06121E-08
rs2040787	7	99947271	A	C	GJC3	0.03	0	2.5019E-08	35	10.93	0.1418181	1.623E-07	1
rs117020686	19	49239942	C	G	TRPM4	0.06	0	2.502E-08	11	7.91	0.3406914	6.457E-08	1
rs4788458	16	72054776	T	C	HP,TXNL4B	0.03	0	2.5022E-08	0	3.52	0.8336203	7.66E-08	1
rs7103627	11	66880612	A	G	PC	-0.03	0	2.5026E-08	52	14.79	0.038855	4.861E-08	1
rs2705497	8	81048280	T	C	PAG1	0.04	0	2.5029E-08	0	4.44	0.7283399	7.662E-08	1
rs573350903	5	61113011	CAG	C	NDUFAF2	-0.09	0	2.5034E-08	0	5.49	0.6007236	7.663E-08	1
rs34914127	17	68110503	T	C	KPNA2	-0.03	0	2.5053E-08	3	7.23	0.4057812	8.563E-08	1
rs4555547	3	82260953	A	G	GBE1	0.04	0	2.5066E-08	22	9.09	0.2462191	9.363E-08	1
rs6810315	3	82259287	A	G	GBE1	0.04	0	2.5066E-08	22	9.09	0.2462191	9.363E-08	1
rs3117012	6	33127907	A	G	COL11A2	0.03	0	2.5072E-08	1	7.09	0.4194223	7.788E-08	1
rs35997685	2	201940012	A	AG	CDK15	-0.09	0	2.5079E-08	0	4.46	0.725172	7.677E-08	1
rs4699254	4	101742562	T	C	BANK1	-0.03	0	2.5102E-08	0	5.16	0.6406587	7.684E-08	1
rs1867873	2	128976818	C	G	HS6ST1	0.03	0	2.5109E-08	27	9.59	0.2129478	1.655E-07	1
rs2654664	12	60600239	A	C	SLC16A7	-0.03	0	2.5136E-08	57	16.5	0.020924	5.468E-08	1
rs7178722	15	92500315	T	G	ST8SIA2	0.03	0	2.5145E-08	30	10.09	0.183467	1.28E-07	1
rs11047285	12	24155808	G	A	SOX5	-0.03	0	2.5152E-08	0	4.69	0.6974623	7.699E-08	1
rs1510138	4	142918487	A	G	INPP4B	-0.04	0	2.5176E-08	44	12.64	0.0813511	6.397E-08	1
rs1510139	4	142918372	C	T	INPP4B	-0.04	0	2.5202E-08	44	12.64	0.0813459	6.404E-08	1
rs9868739	3	16123188	C	T	GALNT15	-0.03	0	2.5227E-08	6	7.49	0.3795623	8.89E-08	1
rs11678856	2	161068932	C	T	TANK	-0.03	0	2.523E-08	0	2.01	0.9594204	7.722E-08	1
rs903480	4	14964040	C	G	CPEB2	-0.03	0	2.5231E-08	0	5.38	0.6141713	7.722E-08	1
rs138727503	6	39641994	G	A	KIF6	0.09	0	2.5246E-08	0	2.69	0.9124434	7.727E-08	1
rs1925107	13	96358413	T	C	HS6ST3	0.03	0	2.525E-08	0	3.96	0.7843159	7.728E-08	1
rs4595785	16	13510465	A	G	SHISA9	-0.03	0	2.5253E-08	0	6.93	0.4363463	7.729E-08	1
rs13195977	6	26742807	G	T	ZNF322	-0.05	0	2.5297E-08	12	8.02	0.330538	1.126E-07	1
rs333908	17	69397179	G	A	MAP2K6	-0.03	0	2.5309E-08	37	11.27	0.1272402	1.455E-07	1

Table S2

rs75533672	17	68111318	A	G	KPNA2	-0.03	0	2.5311E-08	3	7.23	0.4048321	8.686E-08	1
rs12818737	12	101223739	A	G	SLC5A8	-0.04	0	2.5342E-08	30	10.05	0.1855465	8.697E-08	1
rs17016967	4	142932790	A	G	INPP4B	-0.04	0	2.5349E-08	44	12.69	0.0800904	6.249E-08	1
rs12739051	1	235169859	G	A	ARID4B	0.03	0	2.5373E-08	0	6.08	0.5300494	7.765E-08	1
rs9887789	1	198138658	T	C	NEK7	0.03	0	2.5376E-08	0	5.53	0.5959877	7.765E-08	1
rs1526480	1	90744429	T	C	BARHL2	0.03	0	2.5387E-08	19	8.66	0.2781792	6.604E-08	1
rs200530511	16	18102132	A	G	NPIPA8	0.03	0	2.5395E-08	0	2.44	0.9317436	7.771E-08	1
rs2973163	5	120995930	A	G	PRR16	0.03	0	2.5397E-08	0	1.53	0.9812549	7.772E-08	1
rs11768022	7	55539496	T	C	VOPP1	-0.03	0	2.5413E-08	0	5.33	0.6202803	7.777E-08	1
rs1076562	11	113425286	A	G	DRD2	-0.03	0	2.5466E-08	0	5.1	0.6478115	7.792E-08	1
rs140286740	5	60822488	A	G	ELOVL7	-0.09	0	2.5485E-08	0	5.37	0.6145235	7.798E-08	1
rs12731779	1	235175062	G	A	ARID4B	0.03	0	2.5488E-08	0	5.9	0.5515127	7.799E-08	1
rs113823870	20	57997865	G	A	C20orf85	-0.06	0	2.5497E-08	37	11.26	0.1274732	1.06E-07	1
rs62059718	17	50560854	G	A	CACNA1G	0.05	0	2.5517E-08	0	2.65	0.9152781	7.808E-08	1
rs5795139	11	118777240	CAT	C	DDX6	-0.03	0	2.5518E-08	22	9.02	0.2509806	1.404E-07	1
rs12818904	12	101223768	C	T	SLC5A8	-0.04	0	2.552E-08	30	10.05	0.1859936	8.755E-08	1
rs10817200	9	111633306	A	G	DNAJC25,DN	0.03	0	2.5527E-08	0	5.26	0.6285202	7.811E-08	1
rs6034949	20	18059963	T	C	OVOL2	-0.03	0	2.5528E-08	0	4.56	0.7135669	7.687E-08	1
rs921234	8	91351290	C	T	SLC26A7	0.05	0	2.5529E-08	0	6.48	0.4853401	7.811E-08	1
rs9318841	13	82200647	T	A	SLITRK1	-0.03	0	2.5532E-08	0	4.05	0.7741924	7.812E-08	1
rs7202268	16	72052847	A	G	TXNL4B	0.03	0	2.5546E-08	0	3.51	0.8341553	7.816E-08	1
rs6790563	3	44443735	A	G	ZNF445	-0.03	0	2.5553E-08	0	4.25	0.7510767	7.818E-08	1
rs100043	17	69395900	C	T	MAP2K6	-0.03	0	2.5568E-08	37	11.27	0.1272499	1.469E-07	1
rs10802326	1	246053363	T	C	SMYD3	-0.03	0	2.557E-08	13	8.14	0.3208099	7.345E-08	1
rs4915266	1	198136431	G	A	NEK7	0.03	0	2.5571E-08	0	5.53	0.596084	7.824E-08	1
rs79518967	13	107254543	C	A	FAM155A	-0.04	0	2.5575E-08	0	2.9	0.8941576	7.825E-08	1
rs16864394	3	152547712	T	C	MBNL1	0.04	0	2.5579E-08	0	6.6	0.4714329	7.826E-08	1
rs325521	5	104707455	C	T	NUDT12	-0.03	0	2.5581E-08	0	6.54	0.4788066	7.827E-08	1
rs333906	17	69396127	C	T	MAP2K6	-0.03	0	2.5589E-08	38	11.29	0.1264109	1.47E-07	1
rs28651501	15	25688894	T	C	ATP10A	0.04	0	2.5612E-08	0	2.92	0.8919818	7.836E-08	1

rs149529723	6	19724804	C	T	ID4	-0.03	0	2.5624E-08	0	4.4	0.7331785	7.84E-08	1
rs410915	5	104698439	C	T	NUDT12	-0.03	0	2.5627E-08	0	7	0.4293847	7.84E-08	1
rs4349367	2	195374744	C	G	SLC39A10	0.06	0	2.5638E-08	0	3.94	0.7870857	7.844E-08	1
rs28637309	15	25689128	T	C	ATP10A	0.04	0	2.5641E-08	0	2.92	0.8919751	7.845E-08	1
rs3785193	16	7702725	A	G	RBFOX1	-0.03	0	2.5649E-08	36	11.08	0.1351609	2.076E-07	1
rs35471508	3	43656675	A	G	ANO10	-0.03	0	2.5675E-08	8	7.68	0.3618866	6.886E-08	1
rs12925456	16	49562734	T	A	ZNF423	0.04	0	2.5706E-08	0	4.02	0.7774702	7.864E-08	1
rs78736310	17	68113721	A	T	KPNA2	-0.03	0	2.5708E-08	3	7.24	0.4038445	8.847E-08	1
rs12820049	12	43461654	C	A	ADAMTS20	-0.03	0	2.5713E-08	0	2.06	0.956343	7.866E-08	1
rs7659763	4	101733739	G	A	BANK1	-0.03	0	2.5728E-08	0	5.15	0.6416218	7.871E-08	1
rs200979	6	27884579	G	A	HIST1H3J	-0.04	0	2.5736E-08	31	10.2	0.1774072	7.873E-08	1
rs12576867	11	115069979	C	T	CADM1	0.03	0	2.5736E-08	34	10.72	0.1511892	7.873E-08	1
rs72917046	4	101750836	A	G	BANK1	-0.03	0	2.5741E-08	0	3.54	0.831167	7.875E-08	1
rs9468287	6	28111963	C	A	ZSCAN16	-0.05	0	2.5756E-08	47	13.29	0.0654004	2.828E-07	1
rs12370400	12	100929182	C	T	ANO4	0.03	0	2.5765E-08	1	7.1	0.4190543	7.882E-08	1
rs180721206	5	60846061	G	A	ELOVL7	-0.09	0	2.5771E-08	0	5.29	0.625108	7.883E-08	1
rs8061126	16	21727163	T	C	OTOA	-0.03	0	2.5772E-08	0	5.14	0.642967	7.884E-08	1
rs12892186	14	103852450	C	T	PPP1R13B	0.03	0	2.5785E-08	0	6.55	0.4774255	7.888E-08	1
rs10748358	12	43469780	C	T	ADAMTS20	-0.03	0	2.5795E-08	0	2.06	0.956407	7.891E-08	1
rs10506228	12	43470149	G	T	ADAMTS20	-0.03	0	2.5801E-08	0	2.06	0.9564081	7.893E-08	1
rs10748359	12	43470009	G	T	ADAMTS20	-0.03	0	2.5813E-08	0	2.06	0.9564132	7.896E-08	1
rs72917042	4	101747901	C	T	BANK1	-0.03	0	2.5814E-08	0	5.15	0.6417484	7.897E-08	1
rs1826859	4	16706885	C	T	LDB2	-0.03	0	2.5816E-08	0	1.79	0.9706729	7.897E-08	1
rs12083719	1	198305583	T	C	NEK7	0.03	0	2.5831E-08	35	10.91	0.1427987	7.901E-08	1
rs7174559	15	25689454	T	C	ATP10A	0.04	0	2.5851E-08	0	2.86	0.8978646	7.907E-08	1
rs117251519	12	60263372	C	A	SLC16A7	0.04	0	2.5855E-08	55	15.72	0.0277548	7.909E-08	1
rs11650332	17	67979938	G	A	BPTF	-0.03	0	2.5863E-08	5	7.41	0.3873365	8.799E-08	1
rs1397291	8	14641859	T	C	SGCZ	-0.03	0	2.5871E-08	0	4.66	0.7012135	7.913E-08	1
rs75906516	11	48003192	A	T	PTPRJ	-0.07	0	2.5871E-08	13	8.05	0.3281233	7.227E-08	1
rs12406798	1	244098002	G	C	ZBTB18	0.04	0	2.5876E-08	0	6.99	0.4298581	7.915E-08	1

rs12785741	11	113237665	G	C	NCAM1	-0.03	0	2.5901E-08	0	4.04	0.7755029	7.922E-08	1
rs8054407	16	21726305	G	A	OTOA	-0.03	0	2.5915E-08	0	5.29	0.6240616	7.927E-08	1
rs10801825	1	90740613	C	A	BARHL2	0.03	0	2.5982E-08	16	8.34	0.303504	6.942E-08	1
rs6045171	20	18060461	A	G	OVOL2	-0.03	0	2.5984E-08	0	4.52	0.7183644	7.834E-08	1
rs28823709	2	4797465	T	C	SOX11	-0.03	0	2.602E-08	0	7.01	0.4282173	7.958E-08	1
rs2866485	16	13512823	T	G	SHISA9	-0.03	0	2.6024E-08	0	6.94	0.4350949	7.959E-08	1
rs4593803	1	90765675	A	G	BARHL2	0.03	0	2.6034E-08	43	12.28	0.0916441	2.437E-08	6.56775E-09
rs2301633	7	117297966	T	C	WNT2	0.03	0	2.6054E-08	17	8.53	0.2879181	1.018E-07	1
rs12584191	13	56416226	G	A	PRR20A	-0.04	0	2.6071E-08	0	6.01	0.5390401	7.973E-08	1
rs11642983	16	49563512	T	G	ZNF423	0.04	0	2.6074E-08	0	4.04	0.775497	7.974E-08	1
rs150919654	1	198417399	G	GT	NEK7	0.06	0	2.6082E-08	45	12.87	0.075358	1.663E-07	1
rs73583505	9	137365480	C	T	EXD3	0.04	0	2.6093E-08	29	9.99	0.1890426	8.487E-08	1
rs9257190	6	28797197	A	G	TRIM27	-0.05	0	2.6106E-08	45	12.78	0.0776868	1.816E-07	1
rs2005313	11	113419327	A	G	DRD2	-0.03	0	2.6111E-08	0	5.12	0.6457643	7.985E-08	1
rs3839692	7	12226694	G	GA	TMEM106B	0.03	0	2.6133E-08	0	5.65	0.5809987	7.992E-08	1
rs1397289	8	14641476	C	T	SGCZ	-0.03	0	2.6139E-08	0	4.63	0.7047338	7.994E-08	1
rs6997323	8	81049648	T	C	PAG1	-0.04	0	2.6149E-08	0	4.21	0.7555926	7.997E-08	1
rs7007670	8	81051375	T	C	PAG1	-0.04	0	2.616E-08	0	4.2	0.7566833	8E-08	1
rs281251	15	47377345	A	G	SEMA6D	-0.03	0	2.6164E-08	0	5.13	0.64432	8.001E-08	1
rs447135	19	6642437	C	T	TNFSF14	0.03	0	2.6183E-08	0	3	0.8849362	8.007E-08	1
rs6987319	8	81051342	A	C	PAG1	-0.04	0	2.6194E-08	0	4.2	0.7566966	8.01E-08	1
rs11722368	4	14932483	C	T	CPEB2	-0.03	0	2.6198E-08	0	4.2	0.7569401	8.011E-08	1
rs7819846	8	81051933	G	A	PAG1	-0.04	0	2.6257E-08	0	4.34	0.7393382	8.029E-08	1
rs72750712	1	231083251	T	C	FAM89A	0.04	0	2.6258E-08	1	7.09	0.4194934	8.247E-08	1
rs6778938	3	44474280	T	C	ZNF445	-0.03	0	2.6258E-08	0	4.15	0.7620784	8.029E-08	1
rs488219	11	118749988	T	C	DDX6	-0.03	0	2.6282E-08	21	8.92	0.2585927	1.419E-07	1
rs6987322	8	81051301	C	T	PAG1	-0.04	0	2.6283E-08	0	4.2	0.7567119	8.037E-08	1
rs8055493	16	21759695	A	G	OTOA	-0.03	0	2.6298E-08	0	4.6	0.7087416	8.041E-08	1
rs12409359	1	244097935	C	A	ZBTB18	0.04	0	2.6343E-08	0	7	0.4290212	8.054E-08	1
rs4700505	5	62683162	C	T	IPO11	-0.03	0	2.6346E-08	0	3.01	0.8836722	8.055E-08	1

Table S2

rs522467	6	165196782	G	A	C6orf118	0.03	0	2.6353E-08	0	4.41	0.7318986	7.892E-08	1
rs111940307	17	68111214	T	C	KPNA2	-0.03	0	2.636E-08	0	7.02	0.427226	8.126E-08	1
rs281250	15	47377230	A	G	SEMA6D	-0.03	0	2.6361E-08	0	5.13	0.6442018	8.06E-08	1
rs417919	6	28811646	A	G	TRIM27	-0.05	0	2.6369E-08	45	12.79	0.0774786	1.833E-07	1
rs28396265	4	46831277	C	G	COX7B2	0.03	0	2.6371E-08	6	7.51	0.3780006	9.298E-08	1
rs28653100	8	10121750	G	A	MSRA	0.03	0	2.6378E-08	0	2.46	0.9304407	8.065E-08	1
rs2071888	6	33305078	G	C	TAPBP	0.03	0	2.6379E-08	2	7.18	0.4103562	8.608E-08	1
rs62489494	8	9906399	G	C	TNKS	0.04	0	2.6397E-08	0	4.24	0.7515527	8.071E-08	1
rs281249	15	47375946	T	C	SEMA6D	-0.03	0	2.6404E-08	0	5.13	0.6441413	8.073E-08	1
rs12818201	12	26199828	T	C	SSPN	0.04	0	2.6407E-08	19	8.67	0.2776087	8.074E-08	1
rs11507683	9	137367972	C	T	EXD3	0.04	0	2.6408E-08	30	10.02	0.1873401	8.58E-08	1
rs62253032	3	43653358	G	A	ANO10	-0.03	0	2.6411E-08	9	7.74	0.355981	7.016E-08	1
rs4465006	8	64612882	C	T	CYP7B1	0.03	0	2.6421E-08	50	14.06	0.0502112	1.651E-08	4.35761E-09
rs11127766	3	82262560	A	G	GBE1	0.04	0	2.6471E-08	22	9.04	0.2495857	9.87E-08	1
rs1474426	3	114367701	C	G	ZBTB20	-0.03	0	2.6484E-08	6	7.5	0.3792006	9.734E-08	1
rs172329	6	28821489	T	C	TRIM27	-0.05	0	2.649E-08	41	11.98	0.1011864	1.817E-07	1
rs4906365	14	103762893	G	C	PPP1R13B	0.03	0	2.6507E-08	0	5.99	0.5412707	8.104E-08	1
rs607125	11	118746590	T	C	DDX6	-0.03	0	2.6508E-08	21	8.92	0.258524	1.431E-07	1
rs146009883	8	81052418	A	ACAGTATTT	PAG1	-0.04	0	2.6518E-08	0	4.21	0.7553647	8.107E-08	1
rs113727800	9	137364350	G	A	EXD3	0.04	0	2.653E-08	28	9.86	0.1967391	7.839E-08	1
rs13327361	3	16832587	A	G	PLCL2	-0.03	0	2.6532E-08	0	1.93	0.9634108	8.111E-08	1
rs9556576	13	96361434	A	G	HS6ST3	0.03	0	2.6552E-08	0	4.6	0.7084266	8.117E-08	1
rs12525548	6	47298105	A	G	TNFRSF21	0.03	0	2.6595E-08	0	4.84	0.6799844	8.13E-08	1
rs35722594	12	26197375	A	G	SSPN	0.04	0	2.6618E-08	18	8.63	0.2801857	8.136E-08	1
rs34981324	15	87421006	C	CT	AGBL1	-0.03	0	2.6623E-08	0	4.24	0.7513804	8.138E-08	1
rs6537137	4	142936158	G	C	INPP4B	-0.04	0	2.6632E-08	44	12.56	0.0836692	6.731E-08	1
rs79672283	3	44436775	A	AC	LINC00694,Z	-0.03	0	2.6645E-08	0	4.2	0.7564037	8.145E-08	1
rs10029071	4	142936151	G	C	INPP4B	-0.04	0	2.667E-08	44	12.55	0.0837486	6.745E-08	1
rs4886915	15	77782681	A	G	LINGO1	0.03	0	2.6671E-08	19	8.68	0.2763543	1.338E-07	1
rs1983524	16	21666102	A	C	METTL9	-0.03	0	2.6721E-08	0	3.09	0.8766386	8.168E-08	1

rs3112329	7	135671135	C	T	C7orf73	-0.03	0	2.6726E-08	48	13.69	0.0570076	2.576E-08	6.94116E-09
rs1937375	13	82211827	A	T	SLITRK1	-0.03	0	2.6755E-08	0	4.09	0.7698468	8.178E-08	1
rs7200854	16	72049419	G	A	TXNL4B	0.03	0	2.6758E-08	0	3.02	0.8830173	8.178E-08	1
rs7622843	3	44865736	A	G	KIF15	-0.03	0	2.6775E-08	12	7.96	0.336149	8.184E-08	1
rs601742	11	99677240	T	C	CNTN5	-0.03	0	2.6775E-08	0	6.53	0.4790209	7.341E-08	1
rs12044618	1	162869964	A	T	CCDC190	0.04	0	2.6778E-08	38	11.4	0.1220375	2.744E-07	1
rs80255575	2	4797192	A	T	SOX11	-0.03	0	2.6786E-08	0	6.99	0.4295637	8.187E-08	1
rs6034951	20	18060854	A	G	OVOL2	-0.03	0	2.6792E-08	0	4.48	0.7231634	8.085E-08	1
rs10019136	4	142936236	A	C	INPP4B	-0.04	0	2.6794E-08	44	12.56	0.0835053	6.762E-08	1
rs6441843	3	44461967	G	A	ZNF445	-0.03	0	2.6806E-08	0	4.2	0.7567962	8.193E-08	1
rs13322437	3	44461137	C	T	ZNF445	-0.03	0	2.6807E-08	0	4.2	0.7568297	8.193E-08	1
rs5885276	7	82196068	A	AG	CACNA2D1	0.03	0	2.681E-08	23	9.11	0.2447373	6.067E-08	1
rs4489281	8	81050697	A	C	PAG1	-0.04	0	2.6812E-08	0	4.21	0.7558665	8.194E-08	1
rs79122754	16	72865366	G	A	ZFHX3	0.06	0	2.6813E-08	34	10.72	0.1513332	4.026E-08	1.15845E-08
rs9311357	3	44456109	G	A	ZNF445	-0.03	0	2.6813E-08	0	4.2	0.7568298	8.195E-08	1
rs9813018	3	44453531	C	G	ZNF445	-0.03	0	2.6819E-08	0	4.2	0.7568871	8.197E-08	1
rs2022999	6	162512221	T	C	PARK2	0.03	0	2.6838E-08	0	4	0.7796401	8.202E-08	1
rs7294707	12	24145566	G	A	SOX5	-0.03	0	2.6841E-08	0	4.81	0.683537	8.203E-08	1
rs281246	15	47371862	A	G	SEMA6D	-0.03	0	2.6856E-08	0	5.15	0.6422677	8.208E-08	1
rs1106499	3	44453949	T	A	ZNF445	-0.03	0	2.6862E-08	0	4.2	0.7567603	8.209E-08	1
rs73738111	6	51501685	A	C	PKHD1	-0.05	0	2.6864E-08	8	7.68	0.3618556	8.21E-08	1
rs952685	8	56884403	G	A	IMPAD1	0.03	0	2.6875E-08	32	10.42	0.1661602	8.213E-08	1
rs2803489	13	56415322	T	G	PRR20A	0.04	0	2.6876E-08	0	5.86	0.5563786	8.214E-08	1
rs2886	3	44441714	A	T	ZNF445	-0.03	0	2.6898E-08	0	4.22	0.7538874	8.22E-08	1
rs2511521	11	113414577	G	A	DRD2	-0.03	0	2.6899E-08	0	5.15	0.6412751	8.221E-08	1
rs4553178	1	235201228	T	C	ARID4B	0.03	0	2.6919E-08	0	6.06	0.5321847	8.226E-08	1
rs3112328	7	135669834	G	A	C7orf73	-0.03	0	2.692E-08	48	13.68	0.0571441	2.6E-08	7.13624E-09
rs28536747	2	4797982	G	A	SOX11	-0.03	0	2.6921E-08	0	6.66	0.4656299	8.227E-08	1
rs4425088	2	4796418	G	A	SOX11	-0.03	0	2.6923E-08	0	6.99	0.429441	8.228E-08	1
rs281247	15	47373726	A	G	SEMA6D	-0.03	0	2.6927E-08	0	5.13	0.6439668	8.229E-08	1

rs140475751	2	161566123	T	C	SLC4A10	-0.07	0	2.695E-08	0	5.96	0.5450097	8.236E-08	1
rs4399792	20	61658419	G	T	CDH4	0.03	0	2.6951E-08	64	19.54	0.0066591	6.298E-08	1
rs281245	15	47371659	C	T	SEMA6D	-0.03	0	2.6952E-08	0	5.13	0.6441586	8.236E-08	1
rs1441415	4	142935162	A	G	INPP4B	-0.04	0	2.697E-08	44	12.57	0.0834275	6.815E-08	1
rs10808892	8	54961552	A	C	RP1	0.03	0	2.697E-08	55	15.74	0.0275926	1.137E-08	2.9066E-09
rs11638248	15	86357646	C	T	AGBL1	0.03	0	2.6973E-08	3	7.27	0.4010884	8.243E-08	1
rs8192906	8	64598053	C	G	CYP7B1	0.03	0	2.6979E-08	50	14.13	0.0490011	1.662E-08	4.35761E-09
rs1496924	15	47360333	G	A	SEMA6D	-0.03	0	2.6984E-08	0	5.13	0.6442999	8.246E-08	1
rs1542673	15	47360685	G	A	SEMA6D	-0.03	0	2.6984E-08	0	5.13	0.6442999	8.246E-08	1
rs281267	15	47362251	C	G	SEMA6D	-0.03	0	2.6984E-08	0	5.13	0.6442999	8.246E-08	1
rs281268	15	47363086	T	C	SEMA6D	-0.03	0	2.6984E-08	0	5.13	0.6442999	8.246E-08	1
rs281270	15	47363885	C	G	SEMA6D	-0.03	0	2.6984E-08	0	5.13	0.6442999	8.246E-08	1
rs6791565	3	44475771	G	A	ZNF445	0.03	0	2.6985E-08	0	4.17	0.7600183	8.246E-08	1
rs10429	3	44865254	A	G	KIF15,TMEM	-0.03	0	2.6986E-08	12	7.96	0.3359394	8.246E-08	1
rs1542674	15	47361781	G	A	SEMA6D	-0.03	0	2.7E-08	0	5.13	0.6444147	8.251E-08	1
rs12147741	14	103795086	T	C	PPP1R13B	0.03	0	2.7027E-08	4	7.34	0.3948347	8.259E-08	1
rs7324569	13	96377401	T	C	HS6ST3	0.03	0	2.7034E-08	0	4.87	0.6761333	8.261E-08	1
rs11956049	5	3553476	A	G	IRX1	-0.03	0	2.7036E-08	0	6.77	0.4536576	8.261E-08	1
rs28450368	8	81054669	C	T	PAG1	-0.04	0	2.7039E-08	0	4.2	0.7565121	8.262E-08	1
rs11735590	4	46831027	G	C	COX7B2	0.03	0	2.7041E-08	6	7.5	0.3783907	9.524E-08	1
rs2117508	7	12698408	T	A	ARL4A	0.03	0	2.7052E-08	0	3.81	0.8018214	8.266E-08	1
rs28780988	9	137363960	C	A	EXD3	0.04	0	2.7055E-08	29	9.99	0.1893726	7.917E-08	1
rs11123577	2	4793343	G	A	SOX11	-0.03	0	2.7059E-08	0	6.99	0.4295831	8.268E-08	1
rs34496898	8	14598265	CTCAA	C	SGCZ	-0.03	0	2.7061E-08	0	4.24	0.7518361	8.269E-08	1
rs1807237	15	47357598	A	C	SEMA6D	-0.03	0	2.7068E-08	0	5.13	0.6442618	8.271E-08	1
rs4547674	3	43435626	T	C	ANO10	-0.03	0	2.7069E-08	52	14.72	0.0396979	1.342E-08	3.50945E-09
rs737520	15	47357940	A	C	SEMA6D	-0.03	0	2.7075E-08	0	5.13	0.644268	8.273E-08	1
rs200252393	2	4795103	C	A	SOX11	-0.03	0	2.7077E-08	0	7	0.4293171	8.274E-08	1
rs34185642	2	4791362	AC	A	SOX11	-0.03	0	2.7077E-08	0	7	0.4293171	8.274E-08	1
rs62086903	17	68019890	T	C	KPNA2	0.03	0	2.7115E-08	45	12.74	0.0786229	2.087E-07	1

rs12810386	12	26198957	C	T	SSPN	0.04	0	2.7119E-08	19	8.65	0.2787737	8.286E-08	1
rs143012622	16	22266747	G	T	EEF2K	-0.07	0	2.7123E-08	0	4.89	0.6735438	8.287E-08	1
rs11930840	4	15064567	A	G	CPEB2	-0.03	0	2.7135E-08	0	5.37	0.6151249	8.291E-08	1
rs17303520	4	103622734	A	C	TACR3	-0.03	0	2.7146E-08	31	10.27	0.1740179	1.311E-07	1
rs118005014	11	44331789	A	G	ALX4	0.08	0	2.7147E-08	0	4.29	0.7462387	8.295E-08	1
rs2427192	20	61628566	C	G	CDH4	-0.03	0	2.7154E-08	0	5.5	0.5993472	8.297E-08	1
rs34218011	12	26199381	G	A	SSPN	0.04	0	2.7156E-08	19	8.65	0.2787775	8.297E-08	1
rs6441845	3	44462141	C	A	ZNF445	-0.03	0	2.7168E-08	0	4.16	0.7606755	8.301E-08	1
rs10737782	1	246052056	C	T	SMYD3	-0.03	0	2.718E-08	14	8.16	0.3183656	7.792E-08	1
rs10084818	4	142933770	C	G	INPP4B	-0.04	0	2.7181E-08	44	12.57	0.0834086	6.87E-08	1
rs28769345	4	142932173	C	T	INPP4B	-0.04	0	2.7182E-08	44	12.57	0.083296	6.867E-08	1
rs6555992	5	157393949	A	G	CYFIP2	-0.04	0	2.7187E-08	0	4.31	0.7432739	8.306E-08	1
rs11892464	2	178986107	G	C	CCDC141	0.06	0	2.7194E-08	19	8.72	0.2731923	1.349E-07	1
rs13145393	4	142933350	A	G	INPP4B	-0.04	0	2.7221E-08	44	12.57	0.0832998	6.877E-08	1
rs28624220	4	142932547	A	G	INPP4B	-0.04	0	2.723E-08	44	12.57	0.0832998	6.88E-08	1
rs9364666	6	162610543	G	A	PARK2	0.03	0	2.7232E-08	0	4.51	0.7189868	8.32E-08	1
rs4465996	4	142931415	G	A	INPP4B	-0.04	0	2.7236E-08	44	12.57	0.0832288	6.877E-08	1
rs6426277	1	246115897	C	G	SMYD3	-0.03	0	2.7242E-08	2	7.16	0.4122344	6.532E-08	1
rs71610403	4	142930669	C	T	INPP4B	-0.04	0	2.7244E-08	44	12.57	0.0832612	6.878E-08	1
rs34195155	4	142930704	A	C	INPP4B	-0.04	0	2.7247E-08	44	12.57	0.0832986	6.881E-08	1
rs2372689	3	44468218	T	C	ZNF445	-0.03	0	2.7249E-08	0	4.19	0.7573421	8.325E-08	1
rs34922059	4	142930802	T	A	INPP4B	-0.04	0	2.7255E-08	44	12.57	0.0832944	6.882E-08	1
rs4414905	4	142931231	A	C	INPP4B	-0.04	0	2.7262E-08	44	12.57	0.0832211	6.883E-08	1
rs9754736	3	44453162	C	T	ZNF445	-0.03	0	2.7264E-08	0	4.19	0.7572441	8.329E-08	1
rs72670411	14	41859265	T	C	LRFN5	-0.06	0	2.7267E-08	0	1.88	0.9661558	8.33E-08	1
rs61914719	11	48037539	C	T	PTPRJ	-0.04	0	2.7275E-08	0	4.27	0.7481825	8.333E-08	1
rs13270965	8	56886144	T	A	IMPAD1	0.03	0	2.7275E-08	32	10.4	0.1669241	8.333E-08	1
rs1910435	12	60606090	A	G	SLC16A7	-0.03	0	2.7289E-08	55	15.88	0.0262229	6.756E-08	1
rs3371	15	47357909	T	C	SEMA6D	-0.03	0	2.7294E-08	0	5.13	0.6440879	8.338E-08	1
rs16883928	4	30645560	T	C	PCDH7	-0.03	0	2.7297E-08	20	8.85	0.2639724	8.339E-08	1

rs670907	11	99637712	A	C	CNTN5	-0.03	0	2.7298E-08	27	9.64	0.2096499	6.192E-08	1
rs12035097	1	231086847	A	C	FAM89A	-0.03	0	2.731E-08	0	2.89	0.8945765	8.343E-08	1
rs12022431	1	246053334	A	T	SMYD3	-0.03	0	2.732E-08	13	8.07	0.3260291	7.905E-08	1
rs9458581	6	162549074	G	A	PARK2	0.03	0	2.7326E-08	0	4.57	0.7120471	8.348E-08	1
rs79684510	7	42716586	C	T	C7orf25	-0.07	0	2.7338E-08	0	2.96	0.8883263	8.351E-08	1
rs200218021	2	4795446	G	A	SOX11	-0.03	0	2.7352E-08	0	7	0.4289665	8.356E-08	1
rs113115953	3	152545420	A	T	MBNL1	0.04	0	2.7358E-08	0	6.57	0.4751429	8.358E-08	1
rs7985691	13	96354909	G	C	HS6ST3	0.03	0	2.7376E-08	0	4.1	0.7680084	8.363E-08	1
rs11628787	14	103857647	G	A	PPP1R13B	-0.03	0	2.7378E-08	0	7	0.4286204	8.369E-08	1
rs4764788	12	101228645	G	C	SLC5A8	-0.04	0	2.7388E-08	12	8.01	0.3315183	7.867E-08	1
rs117094553	11	134687074	A	G	B3GAT1	-0.08	0	2.7417E-08	0	1.87	0.9665941	8.375E-08	1
rs7662288	4	30559222	T	C	PCDH7	-0.04	0	2.7437E-08	40	11.85	0.1055578	1.223E-07	1
rs6692457	1	246053024	A	C	SMYD3	-0.03	0	2.7438E-08	14	8.16	0.3189716	7.867E-08	1
rs10017804	4	142929228	C	G	INPP4B	-0.04	0	2.7443E-08	44	12.58	0.0831301	6.924E-08	1
rs614554	11	118764443	T	C	DDX6	-0.03	0	2.7443E-08	23	9.09	0.2461013	1.528E-07	1
rs2185074	1	246050479	T	G	SMYD3	-0.03	0	2.7444E-08	14	8.16	0.3189655	7.869E-08	1
rs10802324	1	246050151	G	A	SMYD3	-0.03	0	2.7444E-08	14	8.16	0.3189658	7.869E-08	1
rs10802325	1	246050152	C	A	SMYD3	-0.03	0	2.7444E-08	14	8.16	0.3189658	7.869E-08	1
rs4953252	2	45770287	G	A	PRKCE	-0.03	0	2.7451E-08	0	6.72	0.4589806	8.385E-08	1
rs6826496	4	142928991	A	T	INPP4B	-0.04	0	2.7456E-08	44	12.58	0.0829471	6.92E-08	1
rs201519979	16	21390407	C	T	NPIPB3	-0.07	0	2.7497E-08	0	5.05	0.6535755	8.399E-08	1
rs41295190	22	19742253	G	A	TBX1	-0.07	0	2.7512E-08	0	3.68	0.8158898	8.403E-08	1
rs4407383	3	43425799	G	C	ANO10	-0.03	0	2.7525E-08	52	14.72	0.0397816	1.337E-08	3.41605E-09
rs9365475	6	162610015	C	A	PARK2	0.03	0	2.7554E-08	0	4.53	0.7170874	8.416E-08	1
rs2245805	11	113419977	T	G	DRD2	-0.03	0	2.7568E-08	0	5.14	0.6434846	8.42E-08	1
rs7126748	11	112972254	T	C	NCAM1	0.03	0	2.7568E-08	23	9.15	0.2421282	1.092E-07	1
rs146025934	11	134686671	T	C	B3GAT1	-0.08	0	2.7589E-08	0	1.88	0.9663941	8.426E-08	1
rs5006849	20	18061276	A	G	OVOL2	-0.03	0	2.7594E-08	0	4.45	0.7264538	8.331E-08	1
rs6537132	4	142889176	C	G	INPP4B	-0.04	0	2.7601E-08	44	12.55	0.083797	6.98E-08	1
rs8020234	14	103800007	G	A	PPP1R13B	0.03	0	2.7605E-08	0	6.46	0.4877124	8.431E-08	1

rs1372239	4	142928471	A	T	INPP4B	-0.04	0	2.7633E-08	44	12.59	0.0827752	6.962E-08	1
rs76234940	4	142932306	C	T	INPP4B	-0.04	0	2.764E-08	44	12.55	0.0838367	7.01E-08	1
rs75240627	6	51506664	A	G	PKHD1	-0.05	0	2.7654E-08	8	7.67	0.3622196	8.446E-08	1
rs7626688	3	61120648	T	G	FHIT	-0.03	0	2.7668E-08	16	8.36	0.3022579	8.45E-08	1
rs35437465	8	64700923	TTTG	T	CYP7B1	0.03	0	2.7671E-08	0	2.15	0.9513274	8.451E-08	1
rs4708970	6	162605346	C	T	PARK2	0.03	0	2.7684E-08	0	4.53	0.7174677	8.455E-08	1
rs9365473	6	162606078	G	T	PARK2	0.03	0	2.7684E-08	0	4.53	0.7174677	8.455E-08	1
rs369620923	16	21811933	TA	T	NPIPB4	-0.07	0	2.7691E-08	0	4.48	0.7230252	8.457E-08	1
rs10867598	9	80635888	T	C	TLE4	0.04	0	2.7705E-08	0	4.22	0.7538032	8.461E-08	1
rs528890030	16	21283730	GCGTCCCC	G	CRYM	-0.07	0	2.7716E-08	0	4.66	0.7014769	8.464E-08	1
rs71382160	17	68111294	C	T	KPNA2	-0.03	0	2.7723E-08	0	7.05	0.4236869	8.684E-08	1
rs66950944	20	18061420	A	G	OVOL2	-0.03	0	2.7769E-08	0	4.46	0.7253407	8.385E-08	1
rs946027	1	235182971	T	C	ARID4B	0.03	0	2.7772E-08	0	6.02	0.537675	8.481E-08	1
rs1321479	6	26501669	T	C	BTN1A1	0.03	0	2.7774E-08	0	2.69	0.9121143	8.482E-08	1
rs7384878	7	100334426	C	T	SPDYE3	-0.03	0	2.7778E-08	39	11.49	0.1185176	1.267E-07	1
rs6826881	4	30539804	C	T	PCDH7	-0.04	0	2.7824E-08	43	12.31	0.0908406	7.27E-08	1
rs7626576	3	61120502	T	G	FHIT	-0.03	0	2.7824E-08	16	8.36	0.3019457	8.497E-08	1
rs7683161	4	142887738	T	C	INPP4B	-0.04	0	2.7843E-08	44	12.52	0.0845854	7.077E-08	1
rs6555991	5	157393877	G	T	CYFIP2	-0.04	0	2.7855E-08	0	4.4	0.7324849	8.506E-08	1
rs7679474	4	142889951	C	T	INPP4B	-0.04	0	2.7871E-08	44	12.54	0.0842564	7.076E-08	1
rs270793	8	54937054	T	G	RP1	-0.03	0	2.7886E-08	58	16.8	0.0187369	8.5E-09	2.10735E-09
rs118087529	12	24323734	T	C	SOX5	-0.07	0	2.7904E-08	0	1.75	0.9724965	8.52E-08	1
rs28548961	4	142888617	C	A	INPP4B	-0.04	0	2.7909E-08	44	12.53	0.0843915	7.087E-08	1
rs77628269	3	95554780	G	A	MTRNR2L12	-0.05	0	2.791E-08	0	6.29	0.5063122	8.522E-08	1
rs687790	1	88320368	C	T	PKN2	0.03	0	2.7911E-08	0	3.21	0.8653967	8.522E-08	1
rs140119814	11	134697998	C	G	B3GAT1	-0.08	0	2.7915E-08	0	1.72	0.9735074	8.524E-08	1
rs1441414	4	142934919	A	G	INPP4B	-0.04	0	2.7918E-08	44	12.59	0.0828556	7.017E-08	1
rs10934269	3	114371666	T	A	ZBTB20	-0.03	0	2.7921E-08	0	6.8	0.4495238	8.526E-08	1
rs10399630	1	246049259	A	T	SMYD3	-0.03	0	2.7923E-08	14	8.16	0.318736	8.006E-08	1
rs4690705	4	142890222	C	A	INPP4B	-0.04	0	2.796E-08	44	12.53	0.0843088	7.103E-08	1

rs4690704	4	142890221	C	T	INPP4B	-0.04	0	2.7961E-08	44	12.53	0.0843068	7.103E-08	1
rs3173615	7	12229791	C	G	TMEM106B	0.03	0	2.7968E-08	0	6.7	0.4605174	8.54E-08	1
rs10806760	6	162608811	G	T	PARK2	0.03	0	2.7972E-08	0	4.51	0.7193884	8.541E-08	1
rs59177693	6	51509687	GC	G	PKHD1	-0.05	0	2.7985E-08	8	7.67	0.3624354	8.545E-08	1
rs281261	15	47381774	G	T	SEMA6D	-0.03	0	2.7996E-08	0	5.33	0.6194931	8.548E-08	1
rs12594864	15	87401013	C	T	AGBL1	-0.03	0	2.8001E-08	0	4.26	0.7494942	8.549E-08	1
rs35742360	4	142888751	C	T	INPP4B	-0.04	0	2.8002E-08	44	12.53	0.0845537	7.12E-08	1
rs7525240	1	231079470	C	A	FAM89A	-0.03	0	2.8004E-08	0	2.87	0.896404	8.55E-08	1
rs8085649	18	53226542	C	G	DCC	0.04	0	2.8017E-08	3	7.28	0.3999182	8.554E-08	1
rs56412463	8	134746975	G	C	ZFAT	0.03	0	2.8029E-08	0	6.03	0.5364869	8.558E-08	1
rs11779321	8	56876979	T	C	IMPAD1	0.03	0	2.8031E-08	25	9.44	0.2227515	8.558E-08	1
rs7660839	4	142889416	T	C	INPP4B	-0.04	0	2.8031E-08	44	12.51	0.0850565	7.192E-08	1
rs6825182	4	142890871	T	C	INPP4B	-0.04	0	2.805E-08	44	12.54	0.0842745	7.124E-08	1
rs6880851	5	157394614	G	T	CYFIP2	-0.04	0	2.8079E-08	0	4.42	0.7307458	8.573E-08	1
rs643614	16	77103299	G	A	MON1B	0.03	0	2.808E-08	0	3.96	0.7846229	8.573E-08	1
rs10004223	4	142891452	A	G	INPP4B	-0.04	0	2.8085E-08	44	12.54	0.0842577	7.136E-08	1
rs17542155	4	168655103	A	G	PALLD	-0.08	0	2.8092E-08	3	7.24	0.4041059	9.345E-08	1
rs4645250	4	46549740	G	A	GABRA2	0.04	0	2.8097E-08	0	4.23	0.7528925	8.578E-08	1
rs7635441	3	82313598	C	T	GBE1	-0.04	0	2.8107E-08	20	8.82	0.2655099	1.07E-07	1
rs10006846	4	142891668	T	A	INPP4B	-0.04	0	2.811E-08	44	12.55	0.0838965	7.128E-08	1
rs139943762	3	82311872	TCTTATTCA	T	GBE1	-0.04	0	2.8149E-08	20	8.82	0.2656884	1.072E-07	1
rs9926787	16	58918640	T	C	GOT2	-0.03	0	2.8154E-08	40	11.67	0.1119835	1.525E-07	1
rs3909542	16	72149606	C	T	PMFBP1	0.03	0	2.8158E-08	0	3.46	0.8395971	8.596E-08	1
rs28612442	14	103850282	C	A	PPP1R13B	-0.03	0	2.8163E-08	0	6.49	0.4841039	8.598E-08	1
rs59259347	2	178979074	T	G	CCDC141	0.06	0	2.8165E-08	21	8.93	0.257813	1.424E-07	1
rs9637990	6	153577825	C	T	OPRM1	-0.04	0	2.8165E-08	46	13	0.0720665	8.598E-08	1
rs57975992	2	178979244	T	A	CCDC141	0.06	0	2.8169E-08	21	8.93	0.2578147	1.424E-07	1
rs1833292	18	54740245	G	C	RAB27B	0.03	0	2.817E-08	0	6.9	0.4396995	8.6E-08	1
rs67140840	11	61636689	G	A	DAGLA	-0.04	0	2.8188E-08	40	11.81	0.1069999	1.042E-07	1
rs6548807	3	82311190	C	G	GBE1	-0.04	0	2.8198E-08	20	8.82	0.2655589	1.074E-07	1

rs10124468	9	11245830	A	G	PTPRD	-0.04	0	2.8208E-08	1	7.08	0.420722	8.864E-08	1
rs74951231	2	178977102	T	C	CCDC141	0.06	0	2.8212E-08	21	8.93	0.257793	1.426E-07	1
rs924799	2	178977096	A	G	CCDC141	0.06	0	2.8212E-08	21	8.93	0.257793	1.426E-07	1
rs10908314	1	36647666	G	A	GRIK3	0.03	0	2.8212E-08	42	12.22	0.0936954	1.088E-07	1
rs148801303	6	162600893	ATAAGCCA	A	PARK2	0.03	0	2.822E-08	0	4.52	0.7184837	8.615E-08	1
rs10945852	6	162609201	C	A	PARK2	0.03	0	2.8234E-08	0	4.5	0.7202211	8.619E-08	1
rs6914371	6	47269684	T	G	TNFRSF21	0.03	0	2.8247E-08	0	4.58	0.711086	8.623E-08	1
rs6919694	6	47270256	T	C	TNFRSF21	0.03	0	2.8247E-08	0	4.58	0.711086	8.623E-08	1
rs6458553	6	47275845	G	C	TNFRSF21	0.03	0	2.8252E-08	0	4.52	0.7183814	8.624E-08	1
rs6882578	5	104410123	G	C	NUDT12	0.03	0	2.8255E-08	0	5.55	0.592803	8.625E-08	1
rs28549831	7	12228491	C	T	TMEM106B	0.03	0	2.8261E-08	0	6.66	0.4653015	8.627E-08	1
rs2295262	6	47269099	T	C	TNFRSF21	0.03	0	2.8265E-08	0	4.59	0.7104011	8.628E-08	1
rs8005536	14	103841216	T	C	PPP1R13B	0.03	0	2.8282E-08	0	6.69	0.4620201	8.633E-08	1
rs12470245	2	58314103	G	A	FANCL	-0.05	0	2.8303E-08	11	7.91	0.3408601	1.038E-07	1
rs183815463	2	4795187	T	C	SOX11	-0.03	0	2.8312E-08	0	6.89	0.4406291	8.642E-08	1
rs34845931	4	142892296	T	TG	INPP4B	-0.04	0	2.8313E-08	44	12.54	0.0840618	7.186E-08	1
rs2084533	3	16831428	T	C	PLCL2	-0.03	0	2.8329E-08	0	2.39	0.9351844	8.647E-08	1
rs4909360	8	134746097	A	G	ZFAT	0.03	0	2.8331E-08	0	6.02	0.5374352	8.648E-08	1
rs3779870	8	64606609	A	G	CYP7B1	0.03	0	2.8336E-08	50	14.2	0.0477173	1.728E-08	4.60091E-09
rs9364664	6	162602022	C	T	PARK2	0.03	0	2.8367E-08	0	4.51	0.7190483	8.659E-08	1
rs7438213	4	142892429	A	G	INPP4B	-0.04	0	2.8375E-08	44	12.54	0.0840244	7.201E-08	1
rs61836127	1	235200425	T	G	ARID4B	0.03	0	2.8384E-08	0	6.05	0.5343254	8.664E-08	1
rs10927125	1	244097846	T	C	ZBTB18	0.04	0	2.8391E-08	1	7.07	0.4214495	8.666E-08	1
rs111502842	12	71633858	G	A	ZFC3H1	0.05	0	2.8392E-08	0	4.4	0.7329762	8.666E-08	1
rs2165501	4	142892544	T	A	INPP4B	-0.04	0	2.8407E-08	44	12.54	0.0840556	7.212E-08	1
rs7431379	3	117820408	T	C	LSAMP	0.03	0	2.8413E-08	0	3.11	0.8748429	8.672E-08	1
rs2322907	4	142892921	G	T	INPP4B	-0.04	0	2.8422E-08	44	12.55	0.0839759	7.213E-08	1
rs1155751	14	103820210	C	G	PPP1R13B	0.03	0	2.8424E-08	0	6.44	0.4891649	8.676E-08	1
rs4690735	4	142908126	C	G	INPP4B	-0.04	0	2.8426E-08	44	12.63	0.0815568	7.111E-08	1
rs35837712	14	103819767	A	ATC	PPP1R13B	0.03	0	2.8449E-08	0	6.44	0.4891683	8.683E-08	1

rs4690739	4	142945514	C	T	INPP4B	-0.03	0	2.8451E-08	52	14.73	0.0395652	5.709E-08	1
rs79661760	7	157711675	C	G	PTPRN2	-0.05	0	2.8456E-08	0	5.57	0.5908248	8.685E-08	1
rs4690732	4	142893158	T	C	INPP4B	-0.04	0	2.8461E-08	44	12.55	0.0838647	7.222E-08	1
rs127384	1	88325277	T	C	PKN2	0.03	0	2.8487E-08	0	3.2	0.865467	8.694E-08	1
rs4433382	1	235201678	C	A	ARID4B	0.03	0	2.8488E-08	0	6.05	0.5340694	8.695E-08	1
rs2368560	14	103806974	C	T	PPP1R13B	0.03	0	2.8494E-08	0	6.44	0.4894331	8.696E-08	1
rs12934072	16	21727700	C	T	OTOA	-0.03	0	2.8497E-08	0	5.16	0.6398818	8.697E-08	1
rs114983649	2	208590251	C	A	PTH2R	0.06	0	2.8502E-08	0	1.1	0.9931101	8.699E-08	1
rs3800552	6	47266509	T	A	TNFRSF21	0.03	0	2.8518E-08	0	4.51	0.7194696	8.703E-08	1
rs9356244	6	164696362	C	T	C6orf118	0.03	0	2.8521E-08	0	5.81	0.5615993	8.704E-08	1
rs2010205	15	47357258	T	C	SEMA6D	-0.03	0	2.8531E-08	0	5.26	0.6288153	8.707E-08	1
rs10876921	12	56782402	G	A	HSD17B6	0.03	0	2.8539E-08	0	5.48	0.6019235	8.71E-08	1
rs12886840	14	103835377	T	A	PPP1R13B	0.03	0	2.8542E-08	0	6.68	0.4633825	8.711E-08	1
rs4690733	4	142893455	T	G	INPP4B	-0.04	0	2.8545E-08	44	12.56	0.0836334	7.235E-08	1
rs6882097	5	157394615	C	T	CYFIP2	-0.04	0	2.8546E-08	0	4.4	0.7331427	8.712E-08	1
rs12886363	14	103807449	T	C	PPP1R13B	0.03	0	2.8547E-08	0	6.44	0.4894526	8.712E-08	1
rs58338888	6	51517702	C	T	PKHD1	-0.05	0	2.855E-08	9	7.7	0.3598119	8.713E-08	1
rs12880368	14	103800953	C	T	PPP1R13B	0.03	0	2.856E-08	0	6.44	0.4894761	8.716E-08	1
rs12880821	14	103809712	C	T	PPP1R13B	0.03	0	2.856E-08	0	6.44	0.4892826	8.716E-08	1
rs583095	15	47333171	C	T	SEMA6D	0.03	0	2.8565E-08	0	3.7	0.8140118	8.717E-08	1
rs12035188	1	235172502	C	T	ARID4B	0.03	0	2.8571E-08	0	6.01	0.5385514	8.719E-08	1
rs34355893	5	87665141	T	C	CCNH	-0.07	0	2.8577E-08	0	5.9	0.5517122	8.721E-08	1
rs8016014	14	103827461	G	C	PPP1R13B	0.03	0	2.8589E-08	0	6.44	0.4893241	8.725E-08	1
rs6490331	13	28812563	T	G	MTUS2	-0.03	0	2.8593E-08	0	1.57	0.9797103	8.726E-08	1
rs16952611	18	50856298	G	A	ME2	0.03	0	2.8596E-08	0	5.16	0.640922	8.727E-08	1
rs12749859	1	235171862	G	A	ARID4B	0.03	0	2.8607E-08	0	6.02	0.5369472	8.73E-08	1
rs6997536	8	134749470	G	A	ZFAT	0.03	0	2.8616E-08	0	6.03	0.5367908	8.733E-08	1
rs55908905	11	66710393	AT	A	SPTBN2	-0.03	0	2.8623E-08	40	11.72	0.1102705	8.083E-08	1
rs11160767	14	103850396	G	A	PPP1R13B	-0.03	0	2.8625E-08	0	6.48	0.4851302	8.735E-08	1
rs615171	8	9938679	T	C	MSRA	-0.03	0	2.8626E-08	0	4.9	0.6717793	8.736E-08	1

rs4764773	12	100940872	G	A	ANO4	0.03	0	2.8646E-08	1	7.12	0.4167055	8.742E-08	1
rs28698555	14	103850149	C	A	PPP1R13B	-0.03	0	2.8651E-08	0	6.48	0.4853309	8.743E-08	1
rs9791370	6	47270385	C	A	TNFRSF21	0.03	0	2.8655E-08	0	4.56	0.7136071	8.744E-08	1
rs10802438	1	235194228	A	G	ARID4B	0.03	0	2.8659E-08	0	6.02	0.5375775	8.745E-08	1
rs7683234	4	142893946	A	G	INPP4B	-0.04	0	2.8667E-08	44	12.55	0.0837244	7.272E-08	1
rs58395270	5	87660028	A	G	CCNH	-0.07	0	2.8667E-08	0	5.9	0.5511533	8.748E-08	1
rs28533661	14	103839457	A	G	PPP1R13B	0.03	0	2.8667E-08	0	6.68	0.4633383	8.748E-08	1
rs4408531	16	21728109	T	C	OTOA	-0.03	0	2.8667E-08	0	5.22	0.6335952	8.748E-08	1
rs112323509	11	134643918	C	A	B3GAT1	-0.08	0	2.8668E-08	0	1.86	0.9672942	8.748E-08	1
rs4690703	4	142890089	G	A	INPP4B	-0.04	0	2.8669E-08	43	12.49	0.0854379	7.342E-08	1
rs7688031	4	142893851	T	C	INPP4B	-0.04	0	2.8669E-08	44	12.56	0.0837153	7.27E-08	1
rs281255	15	47379177	T	C	SEMA6D	-0.03	0	2.8675E-08	0	5.21	0.6348887	8.75E-08	1
rs12434686	14	103849696	C	T	PPP1R13B	-0.03	0	2.8677E-08	0	6.48	0.4852063	8.751E-08	1
rs281257	15	47379660	T	G	SEMA6D	-0.03	0	2.8681E-08	0	5.21	0.6346818	8.752E-08	1
rs79120728	16	72954348	C	T	ZFHX3	0.06	0	2.8684E-08	45	12.89	0.0748235	4.104E-08	1.19323E-08
rs12405933	1	244097856	T	C	ZBTB18	0.04	0	2.8692E-08	1	7.08	0.420097	8.755E-08	1
rs2888583	7	149688031	C	T	KRBA1	0.03	0	2.8716E-08	20	8.82	0.2659964	8.763E-08	1
rs12737933	1	235200593	T	C	ARID4B	0.03	0	2.8721E-08	0	6.04	0.5348332	8.764E-08	1
rs921236	8	91351468	G	A	SLC26A7	0.05	0	2.8729E-08	0	6.43	0.4901802	8.766E-08	1
rs1547800	13	56441313	A	C	PRR20A	-0.04	0	2.8732E-08	0	6.35	0.4990416	8.767E-08	1
rs61966957	13	96363111	C	T	HS6ST3	0.03	0	2.8735E-08	0	4.63	0.7049404	8.768E-08	1
rs10083367	14	103847846	C	G	PPP1R13B	-0.03	0	2.8737E-08	0	6.47	0.4856301	8.769E-08	1
rs1548885	7	12239933	G	C	TMEM106B	0.03	0	2.8739E-08	0	5.99	0.5411163	8.769E-08	1
rs10083370	14	103847845	G	A	PPP1R13B	-0.03	0	2.8742E-08	0	6.47	0.4856385	8.77E-08	1
rs9356046	6	162555366	C	T	PARK2	0.03	0	2.8743E-08	0	4.54	0.7155674	8.771E-08	1
rs8013637	14	103811621	G	A	PPP1R13B	0.03	0	2.8748E-08	0	6.45	0.4883567	8.772E-08	1
rs281254	15	47378952	G	A	SEMA6D	-0.03	0	2.8752E-08	0	5.2	0.6350752	8.773E-08	1
rs10848579	12	1825242	G	A	CACNA2D4,	-0.04	0	2.8752E-08	0	6.93	0.4358411	8.773E-08	1
rs615583	1	88324998	C	T	PKN2	0.03	0	2.8753E-08	0	3.21	0.8644516	8.773E-08	1
rs59074142	16	77108499	G	A	MON1B	0.03	0	2.8762E-08	0	3.86	0.7960865	8.776E-08	1

rs10802441	1	235194383	A	T	ARID4B	0.03	0	2.8766E-08	0	6.03	0.536438	8.777E-08	1
rs281253	15	47378915	C	T	SEMA6D	-0.03	0	2.8768E-08	0	5.2	0.6350705	8.778E-08	1
rs7809700	7	12228108	G	A	TMEM106B	0.03	0	2.8768E-08	0	6.46	0.486971	8.778E-08	1
rs8093534	18	50841650	A	G	MRO	0.03	0	2.8785E-08	0	4.97	0.6636885	8.783E-08	1
rs12749180	1	235200790	G	C	ARID4B	0.03	0	2.8789E-08	0	6.04	0.5353503	8.784E-08	1
rs1393986	12	60625191	T	A	SLC16A7	-0.03	0	2.8811E-08	55	15.69	0.0281141	8.587E-08	1
rs17084318	6	153576942	C	A	OPRM1	-0.04	0	2.8816E-08	47	13.35	0.064054	8.138E-08	1
rs35180803	1	235193999	AT	A	ARID4B	0.03	0	2.8817E-08	0	6.03	0.5362229	8.793E-08	1
rs1900808	8	91357553	C	A	SLC26A7	0.05	0	2.885E-08	0	6.42	0.4916826	8.802E-08	1
rs2166187	4	142901150	T	C	INPP4B	-0.04	0	2.8861E-08	44	12.62	0.0818894	7.28E-08	1
rs1723898	7	55502612	C	A	VOPP1	0.03	0	2.8862E-08	0	5.21	0.6347738	8.806E-08	1
rs77234957	7	84043957	T	C	SEMA3A	-0.06	0	2.8873E-08	0	3.86	0.795622	8.809E-08	1
rs12698704	7	68522529	C	G	AUTS2	-0.03	0	2.888E-08	0	4.12	0.7659306	8.811E-08	1
rs7156697	14	103744799	G	A	PPP1R13B	0.03	0	2.8896E-08	0	6.63	0.4679449	8.816E-08	1
rs72787021	16	71996789	G	C	PKD1L3	0.03	0	2.8905E-08	0	3.81	0.8018732	8.819E-08	1
rs7141473	14	103849718	A	C	PPP1R13B	-0.03	0	2.8917E-08	0	6.47	0.4856303	8.822E-08	1
rs6982544	8	134749780	A	G	ZFAT	0.03	0	2.8925E-08	0	6.04	0.5356619	8.825E-08	1
rs10099092	8	91366554	C	T	SLC26A7	0.05	0	2.8929E-08	0	6.41	0.4925957	8.826E-08	1
rs61018047	17	48958931	C	T	GIP	0.03	0	2.8935E-08	48	13.68	0.0572624	1.345E-07	1
rs616021	8	9938864	G	C	MSRA	-0.03	0	2.8957E-08	0	4.93	0.668545	8.834E-08	1
rs281252	15	47378262	T	C	SEMA6D	-0.03	0	2.8958E-08	0	5.19	0.6373195	8.834E-08	1
rs2083619	4	142922142	G	T	INPP4B	-0.04	0	2.8967E-08	44	12.63	0.0817126	7.259E-08	1
rs1605955	4	142906569	A	G	INPP4B	-0.04	0	2.8972E-08	44	12.62	0.0819646	7.269E-08	1
rs12699335	7	12237394	T	C	TMEM106B	0.03	0	2.8981E-08	0	5.99	0.5411543	8.841E-08	1
rs1372238	4	142926649	C	G	INPP4B	-0.04	0	2.8999E-08	44	12.57	0.0831911	7.338E-08	1
rs6775754	3	114381825	A	C	ZBTB20	-0.03	0	2.9017E-08	5	7.39	0.3896947	1.023E-07	1
rs9308153	4	142909941	C	A	INPP4B	-0.04	0	2.9023E-08	44	12.57	0.0832872	7.355E-08	1
rs1876939	4	142926884	C	T	INPP4B	-0.04	0	2.9037E-08	44	12.57	0.0832158	7.35E-08	1
rs1876938	4	142926760	T	C	INPP4B	-0.04	0	2.9048E-08	44	12.57	0.0833359	7.357E-08	1
rs7805419	7	12242825	T	C	TMEM106B	0.03	0	2.9061E-08	0	5.83	0.5591469	8.865E-08	1

rs57902160	4	142897666	C	CTGG	INPP4B	-0.04	0	2.9082E-08	44	12.58	0.0830267	7.359E-08	1
rs12927881	16	60665205	T	A	RP11-457D20	-0.03	0	2.9087E-08	0	5.46	0.603721	8.873E-08	1
rs62302704	4	46542845	G	A	GABRA2	0.04	0	2.9092E-08	0	4.25	0.7510061	8.875E-08	1
rs2053451	3	16827477	T	A	PLCL2	-0.03	0	2.9099E-08	0	2.36	0.9370481	8.877E-08	1
rs28850132	4	142895971	G	T	INPP4B	-0.04	0	2.9101E-08	44	12.57	0.0832441	7.37E-08	1
rs166837	15	47378577	A	G	SEMA6D	-0.03	0	2.9101E-08	0	5.19	0.6373265	8.877E-08	1
rs6823663	4	142897334	T	C	INPP4B	-0.04	0	2.9103E-08	44	12.58	0.0830228	7.364E-08	1
rs16859452	4	46543065	G	C	GABRA2	0.04	0	2.9109E-08	0	4.24	0.7511913	8.88E-08	1
rs815934	7	55506323	G	A	VOPP1	0.03	0	2.9129E-08	0	5.22	0.6331745	8.886E-08	1
rs6537135	4	142898348	T	C	INPP4B	-0.04	0	2.9135E-08	44	12.58	0.0830124	7.37E-08	1
rs12435618	14	50828995	G	A	NIN	0.08	0	2.9137E-08	0	5.51	0.5977066	8.888E-08	1
rs13114894	4	142917699	G	A	INPP4B	-0.04	0	2.9145E-08	44	12.59	0.0827126	7.358E-08	1
rs10838773	11	47812794	G	A	NUP160	0.03	0	2.9157E-08	0	6.45	0.4886295	8.894E-08	1
rs6840593	4	142897335	G	C	INPP4B	-0.04	0	2.917E-08	44	12.58	0.0831304	7.386E-08	1
rs3087968	5	157395188	T	C	CYFIP2	-0.04	0	2.9172E-08	0	4.38	0.7349703	8.898E-08	1
rs10014390	4	142897816	C	A	INPP4B	-0.04	0	2.9172E-08	44	12.58	0.0831517	7.387E-08	1
rs10028292	4	142897928	T	A	INPP4B	-0.04	0	2.9177E-08	44	12.58	0.0831463	7.388E-08	1
rs139494031	12	71593252	C	CATAA	LGR5	0.05	0	2.9193E-08	0	5.8	0.5627446	8.905E-08	1
rs3765792	1	235192617	A	G	ARID4B	0.03	0	2.9201E-08	0	6.03	0.5361892	8.907E-08	1
rs10113087	8	91366255	A	C	SLC26A7	0.05	0	2.9205E-08	0	6.41	0.4922339	8.908E-08	1
rs35582432	4	142898332	C	G	INPP4B	-0.04	0	2.9208E-08	44	12.58	0.0831185	7.394E-08	1
rs3914496	12	101227923	G	A	SLC5A8	-0.04	0	2.921E-08	12	8.03	0.3300131	8.363E-08	1
rs62302703	4	46542760	C	T	GABRA2	0.04	0	2.9228E-08	0	4.25	0.7509081	8.915E-08	1
rs10073822	5	157395222	G	A	CYFIP2	-0.04	0	2.9233E-08	0	4.38	0.7352017	8.916E-08	1
rs2002453	11	113418576	T	C	DRD2	-0.03	0	2.9239E-08	0	5.18	0.6376154	8.918E-08	1
rs7696326	4	142962506	C	T	INPP4B	-0.03	0	2.9242E-08	51	14.48	0.0431994	5.884E-08	1
rs4690706	4	142899155	A	G	INPP4B	-0.04	0	2.9246E-08	44	12.58	0.0831494	7.407E-08	1
rs62064970	16	58917569	A	G	GOT2	-0.03	0	2.9253E-08	39	11.66	0.1123039	1.591E-07	1
rs9931544	16	58917567	C	T	GOT2	-0.03	0	2.9259E-08	39	11.66	0.1122995	1.591E-07	1
rs6833501	4	142886545	T	A	INPP4B	-0.04	0	2.9259E-08	43	12.41	0.0878458	7.605E-08	1

rs1372237	4	142926245	A	G	INPP4B	-0.04	0	2.9262E-08	44	12.57	0.0832018	7.408E-08	1
rs13433789	3	43571478	A	G	ANO10	-0.03	0	2.9266E-08	41	12.03	0.0994321	3.737E-08	1.06121E-08
rs77135201	2	178974072	T	G	CCDC141	0.06	0	2.9268E-08	21	8.92	0.2584359	1.474E-07	1
rs372038833	5	157723185	G	T	THG1L	-0.05	0	2.927E-08	60	17.55	0.0141662	6.115E-08	1
rs6548086	2	2596933	G	A	MYT1L	0.03	0	2.9279E-08	0	2.86	0.8980573	8.93E-08	1
rs2120844	4	142901190	A	G	INPP4B	-0.04	0	2.928E-08	44	12.58	0.082989	7.404E-08	1
rs10019031	4	142901198	A	T	INPP4B	-0.04	0	2.928E-08	44	12.58	0.0829891	7.404E-08	1
rs7550700	1	235190371	C	G	ARID4B	0.03	0	2.9282E-08	0	6.03	0.5367793	8.931E-08	1
rs112171203	6	164656959	A	G	C6orf118	0.03	0	2.9288E-08	0	6.84	0.4458755	8.933E-08	1
rs281281	15	47369234	G	A	SEMA6D	-0.03	0	2.929E-08	0	5.04	0.6545473	8.934E-08	1
rs4606645	14	103853381	G	A	PPP1R13B	-0.03	0	2.9299E-08	0	6.51	0.4817439	8.936E-08	1
rs28789215	4	142915217	A	G	INPP4B	-0.04	0	2.9305E-08	44	12.58	0.0829514	7.411E-08	1
rs3117016	6	33127739	G	A	COL11A2	0.03	0	2.9321E-08	0	7.06	0.4227261	9.036E-08	1
rs10236369	7	12241212	A	G	TMEM106B	0.03	0	2.9325E-08	0	6.02	0.5378731	8.944E-08	1
rs281278	15	47368557	G	A	SEMA6D	-0.03	0	2.9325E-08	0	5.11	0.6466641	8.944E-08	1
rs11801168	1	226357130	C	T	PARP1	-0.03	0	2.9329E-08	38	11.38	0.122842	9.244E-08	1
rs6548087	2	2596565	G	A	MYT1L	0.03	0	2.9336E-08	0	2.86	0.8977146	8.947E-08	1
rs36123465	3	81901696	T	G	GBE1	-0.06	0	2.9338E-08	0	5.25	0.6297183	8.948E-08	1
rs1503582	12	60612004	C	G	SLC16A7	-0.03	0	2.9343E-08	55	15.67	0.0283089	8.77E-08	1
rs281262	15	47382012	T	G	SEMA6D	-0.03	0	2.9359E-08	0	5.31	0.6223218	8.954E-08	1
rs13147030	4	142900418	A	G	INPP4B	-0.04	0	2.9362E-08	44	12.58	0.0830761	7.43E-08	1
rs2120843	4	142901349	C	T	INPP4B	-0.04	0	2.9363E-08	44	12.58	0.0831116	7.432E-08	1
rs200291040	4	142915785	T	C	INPP4B	-0.04	0	2.9375E-08	44	12.58	0.0830556	7.435E-08	1
rs12878678	14	103853393	T	C	PPP1R13B	0.03	0	2.9384E-08	0	6.5	0.4822675	8.962E-08	1
rs2322908	4	142899981	G	C	INPP4B	-0.04	0	2.9391E-08	44	12.58	0.0830984	7.438E-08	1
rs9365471	6	162600412	T	G	PARK2	0.03	0	2.9397E-08	0	4.52	0.7184147	8.965E-08	1
rs13122950	4	142905867	G	T	INPP4B	-0.04	0	2.9414E-08	44	12.58	0.0831124	7.444E-08	1
rs28749775	4	142907296	C	T	INPP4B	-0.04	0	2.9421E-08	44	12.58	0.0830721	7.444E-08	1
rs28854016	4	142905501	T	A	INPP4B	-0.04	0	2.9424E-08	44	12.58	0.0830948	7.445E-08	1
rs9683718	4	142907219	T	C	INPP4B	-0.04	0	2.9424E-08	44	12.58	0.0830733	7.444E-08	1

rs62330374	4	142914284	C	T	INPP4B	-0.04	0	2.9427E-08	44	12.58	0.0830789	7.448E-08	1
rs1532290	8	54953839	G	A	RP1	0.03	0	2.9432E-08	57	16.3	0.0225244	1.036E-08	2.61067E-09
rs9308154	4	142920816	T	C	INPP4B	-0.04	0	2.9433E-08	44	12.59	0.0828734	7.442E-08	1
rs4690708	4	142904095	C	A	INPP4B	-0.04	0	2.9433E-08	44	12.58	0.0830964	7.448E-08	1
rs4690734	4	142904185	G	A	INPP4B	-0.04	0	2.9433E-08	44	12.58	0.0830964	7.448E-08	1
rs28404663	4	142909485	C	T	INPP4B	-0.04	0	2.9438E-08	44	12.58	0.0831514	7.452E-08	1
rs13126927	4	142908866	T	C	INPP4B	-0.04	0	2.9439E-08	44	12.58	0.0831312	7.451E-08	1
rs28814581	4	142904721	A	C	INPP4B	-0.04	0	2.9446E-08	44	12.58	0.0830926	7.451E-08	1
rs4690709	4	142904550	T	C	INPP4B	-0.04	0	2.9452E-08	44	12.58	0.0830844	7.452E-08	1
rs35841093	4	142911446	CTG	C	INPP4B	-0.04	0	2.9455E-08	44	12.58	0.0831119	7.455E-08	1
rs2847567	18	50855999	G	T	ME2	-0.03	0	2.9468E-08	0	5.16	0.6405813	8.987E-08	1
rs6847097	4	142918578	T	A	INPP4B	-0.04	0	2.9469E-08	44	12.58	0.0830153	7.457E-08	1
rs113215917	6	164657609	T	G	C6orf118	0.03	0	2.9489E-08	0	6.8	0.4500393	8.993E-08	1
rs28693771	4	142919780	T	C	INPP4B	-0.04	0	2.9499E-08	44	12.58	0.0829784	7.464E-08	1
rs4690736	4	142920768	A	G	INPP4B	-0.04	0	2.95E-08	44	12.58	0.0829794	7.464E-08	1
rs28560068	4	142919967	G	A	INPP4B	-0.04	0	2.9509E-08	44	12.58	0.0829786	7.466E-08	1
rs1475007	14	103830810	A	G	PPP1R13B	0.03	0	2.951E-08	0	6.44	0.4890645	8.999E-08	1
rs732600	4	142921289	G	A	INPP4B	-0.04	0	2.9515E-08	44	12.58	0.0829813	7.468E-08	1
rs7156834	14	103744843	G	A	PPP1R13B	0.03	0	2.9518E-08	0	6.63	0.4680914	9.001E-08	1
rs34066675	6	162577249	G	GA	PARK2	0.03	0	2.9524E-08	0	4.56	0.7139507	9.003E-08	1
rs4131755	12	24160516	C	T	SOX5	-0.03	0	2.9527E-08	0	4.8	0.6840761	9.004E-08	1
rs6092174	20	55770720	G	A	CBLN4	-0.04	0	2.9535E-08	0	6.6	0.4720892	9.007E-08	1
rs6548085	2	2597001	C	A	MYT1L	0.03	0	2.954E-08	0	2.86	0.8975177	9.008E-08	1
rs78403836	17	44348838	C	G	GRN	0.04	0	2.9577E-08	28	9.74	0.2036245	1.159E-07	1
rs9931546	16	58917573	C	T	GOT2	-0.03	0	2.9578E-08	39	11.65	0.112584	1.61E-07	1
rs10017013	4	142925492	A	G	INPP4B	-0.04	0	2.9583E-08	44	12.58	0.0829457	7.481E-08	1
rs6537136	4	142925672	A	T	INPP4B	-0.04	0	2.9593E-08	44	12.58	0.0829681	7.485E-08	1
rs2003851	4	142921865	T	A	INPP4B	-0.04	0	2.9599E-08	44	12.58	0.0830025	7.489E-08	1
rs7323705	13	96377538	G	A	HS6ST3	0.03	0	2.9608E-08	0	4.86	0.6765201	9.028E-08	1
rs7567004	2	2596658	A	G	MYT1L	0.03	0	2.9615E-08	0	2.85	0.8981867	9.03E-08	1

rs116951297	11	134705478	G	A	B3GAT1	-0.08	0	2.9623E-08	0	1.67	0.9756814	9.033E-08	1
rs6276	11	113410675	C	T	DRD2	-0.03	0	2.9642E-08	0	7.05	0.4232654	9.231E-08	1
rs72929453	18	53380499	C	T	DCC	-0.04	0	2.9649E-08	0	5.47	0.6033106	9.04E-08	1
rs59318367	4	142924178	G	A	INPP4B	-0.04	0	2.9652E-08	44	12.58	0.0828928	7.496E-08	1
rs10139183	14	98167536	G	A	C14orf177	0.04	0	2.9659E-08	0	2.48	0.9283624	9.043E-08	1
rs13151684	4	142922903	T	A	INPP4B	-0.04	0	2.9662E-08	44	12.58	0.0829472	7.502E-08	1
rs2723740	12	60621298	A	C	SLC16A7	-0.03	0	2.9665E-08	55	15.7	0.0279905	8.805E-08	1
rs1899319	4	142922291	C	T	INPP4B	-0.04	0	2.967E-08	44	12.58	0.0829449	7.505E-08	1
rs2723739	12	60620355	A	C	SLC16A7	-0.03	0	2.9673E-08	55	15.7	0.0279894	8.805E-08	1
rs9458593	6	162558853	G	C	PARK2	0.03	0	2.9674E-08	0	4.69	0.6976116	9.048E-08	1
rs10004713	4	142924874	C	G	INPP4B	-0.04	0	2.9677E-08	44	12.59	0.0828217	7.5E-08	1
rs7972124	12	101226648	C	T	SLC5A8	-0.04	0	2.9687E-08	14	8.14	0.3201636	8.437E-08	1
rs59955684	7	149670164	G	A	KRBA1	0.03	0	2.9693E-08	21	8.91	0.2594107	9.054E-08	1
rs1925100	13	96371896	G	A	HS6ST3	0.03	0	2.9711E-08	0	5	0.6599241	9.059E-08	1
rs7995352	13	96371579	T	A	HS6ST3	0.03	0	2.9721E-08	0	5	0.6594385	9.062E-08	1
rs716878	4	142914153	A	G	INPP4B	-0.04	0	2.9721E-08	44	12.58	0.0830774	7.52E-08	1
rs28488824	14	98168537	G	A	C14orf177	0.04	0	2.9729E-08	0	2.47	0.9292965	9.064E-08	1
rs9554349	13	96371575	C	T	HS6ST3	0.03	0	2.9732E-08	0	5	0.6594548	9.065E-08	1
rs1925099	13	96372044	C	T	HS6ST3	0.03	0	2.9775E-08	0	5	0.6598978	9.078E-08	1
rs8011137	14	103842583	G	A	PPP1R13B	0.03	0	2.9804E-08	0	6.47	0.4860253	9.087E-08	1
rs3078545	2	205941060	AGC	A	INO80D	-0.03	0	2.981E-08	28	9.86	0.196783	8.815E-08	1
rs4758872	12	60577525	G	C	SLC16A7	-0.03	0	2.9822E-08	52	14.68	0.040307	9.092E-08	1
rs12486599	3	16834620	T	C	PLCL2	-0.03	0	2.9837E-08	0	2.04	0.9575189	9.097E-08	1
rs147691396	3	60109224	G	A	FHIT	0.08	0	2.9842E-08	57	16.41	0.0216369	2.422E-07	1
rs657741	16	77047492	T	C	MON1B	0.03	0	2.9844E-08	9	7.7	0.3598939	1.14E-07	1
rs7754089	6	23114818	G	A	HDGFL1	-0.04	0	2.9852E-08	22	9.08	0.2471547	1.5E-07	1
rs7973618	12	56625659	T	C	BAZ2A	0.03	0	2.9854E-08	0	3.98	0.7824388	9.101E-08	1
rs2148962	1	198349176	A	G	NEK7	0.03	0	2.9858E-08	53	15.04	0.0355162	1.603E-07	1
rs9824990	3	43434856	G	C	ANO10	-0.03	0	2.9859E-08	52	14.65	0.0407865	1.5E-08	3.90998E-09
rs74685254	11	134703385	A	G	B3GAT1	-0.08	0	2.9878E-08	0	1.68	0.975568	9.109E-08	1

rs7683834	4	142910893	T	C	INPP4B	-0.04	0	2.9912E-08	44	12.58	0.0829879	7.555E-08	1
rs2765220	6	28801894	T	C	TRIM27	-0.05	0	2.9913E-08	44	12.54	0.084119	2.066E-07	1
rs9790524	4	101723028	G	T	BANK1	-0.03	0	2.9926E-08	0	5.88	0.5539751	9.123E-08	1
rs10873539	14	103850708	C	T	PPP1R13B	-0.03	0	2.9934E-08	0	6.5	0.4831458	9.125E-08	1
rs4561805	3	43438193	G	A	ANO10	-0.03	0	2.994E-08	52	14.64	0.0409112	1.514E-08	3.90998E-09
rs76665123	11	134708529	T	A	B3GAT1	-0.08	0	2.9943E-08	0	1.68	0.9753296	9.128E-08	1
rs3215604	6	47264481	C	CT	TNFRSF21	0.03	0	2.9947E-08	0	4.32	0.7419636	9.129E-08	1
rs72798379	2	52321814	G	A	NRXN1	-0.05	0	2.9951E-08	46	13.04	0.0711645	2.979E-07	1
rs2347923	6	151906286	C	A	ESR1	-0.03	0	2.9951E-08	33	10.47	0.1635776	5.608E-08	1
rs4801025	18	54732384	A	G	RAB27B	0.03	0	2.9953E-08	18	8.61	0.2818731	1.234E-07	1
rs61503294	4	142911474	C	CAGAG	INPP4B	-0.04	0	2.9963E-08	44	12.58	0.08308	7.573E-08	1
rs10466546	11	100001201	A	G	CNTN5	0.03	0	2.9968E-08	56	16.07	0.0244768	2.494E-08	6.75172E-09
rs76811174	11	134713159	T	G	B3GAT1	-0.08	0	2.997E-08	0	1.7	0.9746801	9.136E-08	1
rs2723746	12	60604145	A	G	SLC16A7	-0.03	0	2.9971E-08	55	15.61	0.0289338	9.12E-08	1
rs9845142	3	43438166	G	T	ANO10	-0.03	0	2.9972E-08	52	14.64	0.0409044	1.516E-08	3.90998E-09
rs10976987	9	8354696	C	T	PTPRD	-0.03	0	2.9973E-08	47	13.33	0.06445	1.632E-07	1
rs7699632	4	142910844	G	C	INPP4B	-0.04	0	2.9982E-08	44	12.58	0.0830985	7.579E-08	1
rs79225518	6	162610653	CAAG	C	PARK2	0.03	0	2.9989E-08	0	4.33	0.7408663	9.142E-08	1
rs35080396	20	18061708	T	TG	OVOL2	-0.03	0	3.0006E-08	0	4.43	0.7287103	9.044E-08	1
rs9347903	6	164693371	C	T	C6orf118	0.03	0	3.0026E-08	0	5.84	0.5580142	9.153E-08	1
rs10487554	7	149670595	G	A	KRBA1	0.03	0	3.0029E-08	21	8.93	0.2576098	9.153E-08	1
rs3130229	6	33126498	T	C	COL11A2	0.03	0	3.0058E-08	1	7.11	0.4170451	9.338E-08	1
rs9298085	8	64588240	A	G	CYP7B1	0.03	0	3.0064E-08	52	14.68	0.0403418	1.644E-08	4.35761E-09
rs9308157	4	142942733	A	T	INPP4B	-0.03	0	3.0073E-08	51	14.56	0.0420568	6.34E-08	1
rs10034074	4	142942844	G	A	INPP4B	-0.03	0	3.0074E-08	51	14.56	0.0420575	6.34E-08	1
rs113954770	6	164656076	G	T	C6orf118	0.03	0	3.0078E-08	0	6.84	0.4453873	9.168E-08	1
rs9346921	6	162544307	G	C	PARK2	0.03	0	3.0081E-08	0	4.31	0.7434463	9.169E-08	1
rs111772336	11	134711163	C	T	B3GAT1	-0.08	0	3.0083E-08	0	1.69	0.9750053	9.17E-08	1
rs2525539	7	99947686	G	A	GJC3	0.03	0	3.0085E-08	35	10.89	0.1436138	1.938E-07	1
rs1129133	3	44491991	C	T	ZNF852	0.03	0	3.0087E-08	0	4.08	0.7705047	9.171E-08	1

rs439205	6	33206065	G	A	HSD17B8	0.03	0	3.0087E-08	19	8.64	0.2793294	1.038E-07	1
rs28458909	9	137362737	C	T	EXD3	0.04	0	3.0102E-08	30	10.03	0.1871422	9.733E-08	1
rs117553471	16	21678904	C	A	OTOA	-0.07	0	3.0117E-08	0	4.02	0.7769371	9.18E-08	1
rs76439118	11	134711536	G	A	B3GAT1	-0.08	0	3.0122E-08	0	1.69	0.9749737	9.181E-08	1
rs6501362	17	68131197	A	T	KPNA2	0.03	0	3.0123E-08	0	6.98	0.430528	9.182E-08	1
rs6969722	7	12238811	G	A	TMEM106B	0.03	0	3.0133E-08	0	5.81	0.5618304	9.185E-08	1
rs7252986	19	49455318	G	A	ALDH16A1	-0.03	0	3.0148E-08	0	6.07	0.5321035	9.189E-08	1
rs10268138	7	132801904	T	C	CHCHD3	0.04	0	3.0159E-08	0	3.51	0.8340798	9.192E-08	1
rs281256	15	47379589	T	C	SEMA6D	-0.03	0	3.0166E-08	0	5.23	0.6317792	9.194E-08	1
rs2173695	5	30758489	G	C	CDH6	-0.04	0	3.0169E-08	0	1.42	0.9849496	9.195E-08	1
rs2185073	1	246050039	G	A	SMYD3	-0.03	0	3.0171E-08	14	8.22	0.3140023	8.635E-08	1
rs3117013	6	33127859	A	G	COL11A2	0.03	0	3.0182E-08	1	7.11	0.4176304	9.368E-08	1
rs3117014	6	33127838	T	C	COL11A2	0.03	0	3.0182E-08	1	7.11	0.4176304	9.368E-08	1
rs9277762	6	33127960	G	A	COL11A2	0.03	0	3.0182E-08	1	7.11	0.4176304	9.368E-08	1
rs9277763	6	33127971	C	G	COL11A2	0.03	0	3.0182E-08	1	7.11	0.4176304	9.368E-08	1
rs1605954	4	142906694	G	C	INPP4B	-0.04	0	3.0202E-08	44	12.63	0.0816366	7.616E-08	1
rs6769576	3	43440189	T	C	ANO10	-0.03	0	3.0205E-08	52	14.66	0.0406208	1.52E-08	4.01726E-09
rs281277	15	47368510	G	A	SEMA6D	-0.03	0	3.0206E-08	0	5.16	0.6403744	9.206E-08	1
rs1866861	3	16827414	G	C	PLCL2	-0.03	0	3.021E-08	0	2.37	0.9366619	9.207E-08	1
rs9308156	4	142942568	A	G	INPP4B	-0.03	0	3.0214E-08	51	14.56	0.0420778	6.373E-08	1
rs4801024	18	54729090	T	G	RAB27B	0.03	0	3.0216E-08	18	8.62	0.2813949	1.243E-07	1
rs61427153	2	178971980	G	A	CCDC141	0.06	0	3.0222E-08	22	8.99	0.2532029	1.541E-07	1
rs7808634	7	94893736	C	T	PPP1R9A	-0.03	0	3.0249E-08	13	8.08	0.3252012	1.29E-07	1
rs9366858	6	34476759	T	C	PACSIN1	0.05	0	3.0253E-08	0	5.4	0.6117911	9.22E-08	1
rs117948450	7	24453411	C	T	MPP6	-0.08	0	3.026E-08	0	6.06	0.5332784	9.222E-08	1
rs12044579	1	162869699	T	C	CCDC190	0.04	0	3.0263E-08	39	11.55	0.1163881	3.117E-07	1
rs9347896	6	164656716	G	A	C6orf118	0.03	0	3.0263E-08	0	6.81	0.4491798	9.223E-08	1
rs34959108	4	142903207	A	G	INPP4B	-0.04	0	3.0267E-08	44	12.53	0.0845156	7.739E-08	1
rs12547840	8	134752089	G	C	ZFAT	0.03	0	3.0275E-08	0	5.94	0.5462553	9.227E-08	1
rs285010	16	77050510	T	A	MON1B	0.03	0	3.028E-08	7	7.53	0.3753843	1.103E-07	1

rs2453255	11	99665640	A	C	CNTN5	-0.03	0	3.0307E-08	0	7	0.4285661	8.036E-08	1
rs2023016	6	162560234	C	G	PARK2	0.03	0	3.0307E-08	0	4.68	0.6989691	9.237E-08	1
rs570806	11	118786602	C	A	DDX6	-0.03	0	3.0323E-08	21	8.97	0.2545172	1.64E-07	1
rs67367819	21	42737390	C	A	PDE9A	-0.03	0	3.0327E-08	34	10.62	0.1561708	2.119E-07	1
rs5011437	7	12229166	A	T	TMEM106B	0.03	0	3.0328E-08	0	6.5	0.4829931	9.243E-08	1
rs141379891	2	197137515	T	C	AC013264.1,A	0.06	0	3.0334E-08	0	6.68	0.4626748	9.245E-08	1
rs4690738	4	142944753	A	G	INPP4B	-0.03	0	3.0342E-08	51	14.55	0.0422707	6.422E-08	1
rs3117011	6	33128059	G	A	COL11A2	0.03	0	3.0354E-08	1	7.11	0.4175913	9.42E-08	1
rs2950387	12	56627222	T	C	BAZ2A	0.03	0	3.0356E-08	0	3.99	0.7805958	9.251E-08	1
rs7969572	12	100912564	T	C	ANO4	0.03	0	3.036E-08	19	8.69	0.2753229	9.252E-08	1
rs9364755	6	164696296	A	G	C6orf118	0.03	0	3.0367E-08	0	5.85	0.5571875	9.254E-08	1
rs114193956	1	245849983	G	A	SMYD3	-0.04	0	3.0374E-08	0	4.76	0.6895817	9.256E-08	1
rs139985165	7	68523426	A	ACAATATA	AUTS2	-0.03	0	3.0384E-08	0	4.15	0.762908	9.259E-08	1
rs3130265	6	33335109	G	A	DAXX	0.03	0	3.0387E-08	3	7.23	0.4057078	1.002E-07	1
rs7309733	12	60575644	A	G	SLC16A7	-0.03	0	3.0416E-08	55	15.75	0.0274633	9.277E-08	1
rs2733656	12	60615645	T	C	SLC16A7	-0.03	0	3.0423E-08	55	15.69	0.0280553	9.021E-08	1
rs6934289	6	33077179	T	C	HLA-DPA1,H	-0.04	0	3.0435E-08	0	2.82	0.9013641	9.275E-08	1
rs12933575	16	30011243	A	G	DOC2A	-0.03	0	3.0442E-08	30	10.09	0.1834171	1.229E-07	1
rs5011438	7	12229172	C	T	TMEM106B	0.03	0	3.0444E-08	0	6.5	0.4829949	9.277E-08	1
rs5011439	7	12229185	G	C	TMEM106B	0.03	0	3.0444E-08	0	6.5	0.4829949	9.277E-08	1
rs7696916	4	47103583	C	A	GABRB1	-0.03	0	3.0458E-08	0	2.85	0.8987289	9.281E-08	1
rs141556633	11	134647521	A	G	B3GAT1	-0.08	0	3.0462E-08	0	1.86	0.9671831	9.283E-08	1
rs7804736	7	12227241	G	T	TMEM106B	0.03	0	3.0464E-08	0	6.49	0.4841853	9.283E-08	1
rs42089	7	27663321	C	T	HIBADH	0.03	0	3.0472E-08	0	5.84	0.5586174	9.286E-08	1
rs7689462	4	142941483	T	C	INPP4B	-0.03	0	3.0496E-08	51	14.56	0.0420481	6.434E-08	1
rs4626957	1	210641083	T	G	HHAT	0.03	0	3.0504E-08	0	5.23	0.6324044	9.295E-08	1
rs534779	4	16708213	C	T	LDB2	-0.03	0	3.0512E-08	0	2.69	0.9118684	9.298E-08	1
rs7428847	3	117810620	T	C	LSAMP	0.03	0	3.052E-08	0	3.42	0.8437516	9.3E-08	1
rs111536226	7	149672551	G	A	KRBA1	0.03	0	3.054E-08	21	8.92	0.258238	9.306E-08	1
rs10948343	6	47273477	A	C	TNFRSF21	0.03	0	3.0569E-08	0	4.54	0.7159529	9.314E-08	1

rs2295263	6	47268809	C	A	TNFRSF21	0.03	0	3.0571E-08	0	4.58	0.7114707	9.315E-08	1
rs72929710	18	50846057	G	T	MRO	0.03	0	3.0575E-08	0	4.54	0.7159967	9.316E-08	1
rs10860655	12	100896401	C	T	ANO4	0.03	0	3.0585E-08	20	8.78	0.2689541	9.319E-08	1
rs117702129	5	61082276	T	C	NDUFAF2	-0.09	0	3.0587E-08	0	5.25	0.6298913	9.32E-08	1
rs174548	11	61803876	C	G	FADS1,FADS	0.03	0	3.0603E-08	11	7.89	0.3422768	1.164E-07	1
rs13230513	7	12228617	C	A	TMEM106B	0.03	0	3.0611E-08	0	6.5	0.4828042	9.327E-08	1
rs10143433	14	98156341	G	A	C14orf177	0.04	0	3.0624E-08	0	2.35	0.9381888	9.331E-08	1
rs72929734	18	50855620	A	T	ME2	0.03	0	3.0635E-08	0	5.24	0.6311031	9.334E-08	1
rs7689077	4	142941349	T	C	INPP4B	-0.03	0	3.0643E-08	51	14.56	0.042021	6.462E-08	1
rs3914497	12	101228099	G	A	SLC5A8	-0.04	0	3.0653E-08	11	7.93	0.3391545	8.844E-08	1
rs17096587	14	98168761	C	G	C14orf177	0.04	0	3.0655E-08	0	2.48	0.9284331	9.34E-08	1
rs6966602	7	12226113	C	G	TMEM106B	0.03	0	3.0661E-08	0	5.79	0.5648043	9.342E-08	1
rs2665566	18	50856444	T	C	ME2	-0.03	0	3.068E-08	0	5.2	0.6358754	9.347E-08	1
rs76491728	7	42775209	T	A	C7orf25	-0.08	0	3.0721E-08	0	6.09	0.5290853	9.36E-08	1
rs4758870	12	60577050	T	A	SLC16A7	-0.03	0	3.0738E-08	56	15.99	0.0252319	7.541E-08	1
rs5891635	8	56864219	TA	T	IMPAD1	0.03	0	3.0742E-08	31	10.15	0.1804016	9.366E-08	1
rs9791233	6	47274166	C	T	TNFRSF21	0.03	0	3.0754E-08	0	4.56	0.7132075	9.37E-08	1
rs58199976	2	27711657	T	C	SLC4A1AP	-0.03	0	3.0766E-08	0	5.74	0.5705073	9.373E-08	1
rs9791234	6	47274312	C	T	TNFRSF21	0.03	0	3.0772E-08	0	4.56	0.7132191	9.375E-08	1
rs9791275	6	47274071	T	C	TNFRSF21	0.03	0	3.0772E-08	0	4.56	0.7132191	9.375E-08	1
rs9365755	6	164699851	C	T	C6orf118	0.03	0	3.0779E-08	0	5.86	0.556484	9.377E-08	1
rs2692609	7	55506184	A	T	VOPP1	0.03	0	3.0832E-08	0	4.7	0.696116	9.392E-08	1
rs903980	15	47356902	A	G	SEMA6D	-0.03	0	3.0834E-08	0	4.81	0.6830177	9.393E-08	1
rs28837154	7	84052319	C	T	SEMA3A	-0.06	0	3.0841E-08	0	3.87	0.7940752	9.395E-08	1
rs28691243	14	98168600	T	C	C14orf177	0.04	0	3.0853E-08	0	2.48	0.928355	9.399E-08	1
rs12699332	7	12230136	G	T	TMEM106B	0.03	0	3.0865E-08	0	6.43	0.4906204	9.403E-08	1
rs1040813	14	103840359	T	C	PPP1R13B	0.03	0	3.0869E-08	0	6.64	0.4670109	9.404E-08	1
rs112333572	11	134651805	C	T	B3GAT1	-0.08	0	3.0872E-08	0	1.86	0.9671981	9.405E-08	1
rs116764123	11	134651917	C	T	B3GAT1	-0.08	0	3.0872E-08	0	1.86	0.9671981	9.405E-08	1
rs7210798	17	68124415	T	C	KPNA2	0.03	0	3.0888E-08	1	7.08	0.4206867	9.788E-08	1

rs7238284	18	50847506	C	A	MRO	0.03	0	3.0917E-08	0	4.55	0.7145347	9.418E-08	1
rs34037390	1	235128337	T	C	TOMM20	0.03	0	3.0932E-08	0	1.81	0.9693875	9.422E-08	1
rs13113139	4	142890561	A	C	INPP4B	-0.04	0	3.0935E-08	44	12.57	0.0833263	7.779E-08	1
rs72478863	14	98169067	A	G	C14orf177	0.04	0	3.0967E-08	0	2.48	0.9286814	9.433E-08	1
rs735999	15	47356910	G	A	SEMA6D	-0.03	0	3.0968E-08	0	4.86	0.676759	9.433E-08	1
rs7747927	6	47272740	G	A	TNFRSF21	0.03	0	3.0972E-08	0	4.57	0.7122537	9.434E-08	1
rs1187416	14	103845128	A	G	PPP1R13B	0.03	0	3.0997E-08	0	6.36	0.4988444	9.442E-08	1
rs7401843	14	103784404	G	A	PPP1R13B	0.03	0	3.1011E-08	0	6.34	0.5012055	9.446E-08	1
rs199535527	10	90991835	T	TAAAG	ANKRD1	-0.03	0	3.1017E-08	55	15.78	0.027181	1.721E-07	1
rs7855088	9	97979971	C	T	ANP32B	-0.03	0	3.1026E-08	0	6.76	0.4543097	9.45E-08	1
rs13081204	3	117811797	T	C	LSAMP	0.03	0	3.1037E-08	0	3.13	0.8723527	9.454E-08	1
rs10009395	4	142949730	G	A	INPP4B	-0.03	0	3.1039E-08	52	14.63	0.0411139	6.47E-08	1
rs12597371	16	22424243	A	G	CDR2	-0.07	0	3.1091E-08	0	4.88	0.6741609	9.47E-08	1
rs732601	4	142921305	T	C	INPP4B	-0.04	0	3.1115E-08	44	12.53	0.0844465	7.945E-08	1
rs76580355	16	21670753	A	G	OTOA	-0.07	0	3.1118E-08	0	4.02	0.7774729	9.478E-08	1
rs143300930	16	21670087	C	T	OTOA	-0.07	0	3.1126E-08	0	4.02	0.7778927	9.48E-08	1
rs111762460	11	134656175	A	G	B3GAT1	-0.08	0	3.1129E-08	0	1.86	0.967221	9.481E-08	1
rs2302632	7	12231341	A	G	TMEM106B	0.03	0	3.1131E-08	0	5.83	0.5599585	9.481E-08	1
rs60319372	8	109584253	G	T	SYBU	0.1	0	3.1132E-08	0	5.46	0.6037188	9.482E-08	1
rs77499437	16	21670739	C	G	OTOA	-0.07	0	3.1137E-08	0	4.02	0.7775158	9.483E-08	1
rs873839	17	50554496	G	A	SPATA20	0.03	0	3.1138E-08	15	8.28	0.3081717	1.427E-07	1
rs113755321	11	134656264	T	C	B3GAT1	-0.08	0	3.1141E-08	0	1.86	0.9672195	9.485E-08	1
rs8014294	14	103856646	C	T	PPP1R13B	-0.03	0	3.1146E-08	0	6.98	0.4305052	9.486E-08	1
rs11295713	14	103779181	TG	T	PPP1R13B	0.03	0	3.1153E-08	0	6.29	0.5066178	9.488E-08	1
rs4325902	3	43653776	C	T	ANO10	-0.03	0	3.1173E-08	45	12.92	0.0740464	6.996E-08	1
rs6736566	2	59968819	A	C	BCL11A	0.03	0	3.1202E-08	51	14.36	0.0451518	9.503E-08	1
rs1900993	3	82322808	G	A	GBE1	-0.04	0	3.1211E-08	14	8.15	0.3193739	1.119E-07	1
rs1371121	7	149677995	T	A	KRBA1	0.03	0	3.1227E-08	21	8.94	0.2569651	9.51E-08	1
rs10950397	7	12225111	C	T	TMEM106B	0.03	0	3.1232E-08	0	6.5	0.4831497	9.512E-08	1
rs12667950	7	12228842	G	T	TMEM106B	0.03	0	3.1232E-08	0	6.5	0.4831497	9.512E-08	1

rs13229988	7	12228211	A	G	TMEM106B	0.03	0	3.1232E-08	0	6.5	0.4831497	9.512E-08	1
rs7792410	7	12227988	T	C	TMEM106B	0.03	0	3.1232E-08	0	6.5	0.4831497	9.512E-08	1
rs11915851	3	53062031	A	G	RP11-894J14.	0.03	0	3.124E-08	7	7.6	0.3691459	9.514E-08	1
rs1123502	11	134657788	T	C	B3GAT1	-0.08	0	3.1244E-08	0	1.86	0.9672216	9.515E-08	1
rs1496923	15	47356713	A	G	SEMA6D	-0.03	0	3.1255E-08	0	4.73	0.6930117	9.519E-08	1
rs57594302	6	165080156	G	T	C6orf118	0.04	0	3.1277E-08	43	12.48	0.0859804	3.78E-08	1.09251E-08
rs12190823	6	162671611	G	A	PARK2	0.03	0	3.1309E-08	0	6.08	0.5300609	9.535E-08	1
rs12044028	1	235329657	T	G	GGPS1	0.03	0	3.1312E-08	0	7.03	0.425535	9.699E-08	1
rs9934006	16	58918724	G	A	GOT2	-0.03	0	3.1342E-08	39	11.6	0.1144589	1.721E-07	1
rs28609754	4	142954733	A	G	INPP4B	-0.03	0	3.1343E-08	51	14.5	0.0429818	6.616E-08	1
rs7200145	16	77018037	C	G	MON1B	-0.03	0	3.1349E-08	0	5.77	0.5664152	9.546E-08	1
rs1583709	7	149683609	C	T	KRBA1	0.03	0	3.1355E-08	21	8.93	0.2575166	9.548E-08	1
rs10809398	9	11242515	C	G	PTPRD	-0.04	0	3.1378E-08	0	6.79	0.4514206	9.555E-08	1
rs73070923	2	195418362	G	A	SLC39A10	0.05	0	3.138E-08	0	4.36	0.7377042	9.556E-08	1
rs3129273	6	33128024	C	T	COL11A2	0.03	0	3.1387E-08	1	7.09	0.4199368	9.697E-08	1
rs7160439	14	98171028	A	C	C14orf177	0.04	0	3.1392E-08	0	2.48	0.9289348	9.559E-08	1
rs7155953	14	98170198	T	C	C14orf177	0.04	0	3.1399E-08	0	2.49	0.9280583	9.561E-08	1
rs2586748	18	50845878	G	A	MRO	-0.03	0	3.1406E-08	0	4.54	0.7159553	9.563E-08	1
rs2586749	18	50845879	A	C	MRO	-0.03	0	3.1406E-08	0	4.54	0.7159553	9.563E-08	1
rs34046032	7	12228456	CTTAA	C	TMEM106B	0.03	0	3.1425E-08	0	6.49	0.4838374	9.569E-08	1
rs55731755	5	153420412	C	T	GRIA1	0.06	0	3.1457E-08	0	2.84	0.8990311	9.579E-08	1
rs12805200	11	34973399	C	T	PDHX	-0.05	0	3.1458E-08	0	5.94	0.5471949	9.579E-08	1
rs10948345	6	47302929	A	T	TNFRSF21	0.03	0	3.1474E-08	0	4.77	0.6884094	9.584E-08	1
rs7781691	7	110284204	T	C	IMMP2L	-0.03	0	3.149E-08	14	8.17	0.3174543	1.359E-07	1
rs7648887	3	196454398	T	G	RNF168	0.03	0	3.1507E-08	0	3.09	0.8769968	9.593E-08	1
rs3935182	15	77802465	G	C	LINGO1	0.03	0	3.1525E-08	12	8.04	0.329432	1.354E-07	1
rs1021820	4	59222920	T	C	ADGRL3	-0.04	0	3.1526E-08	0	4.83	0.6808082	9.599E-08	1
rs572516948	11	134649315	G	C	B3GAT1	-0.08	0	3.1532E-08	0	1.91	0.9645872	9.601E-08	1
rs2018501	6	32888431	T	C	PSMB9	0.03	0	3.1534E-08	3	7.26	0.402205	1.065E-07	1
rs9458630	6	162648671	G	A	PARK2	0.03	0	3.1535E-08	0	5.82	0.5605803	9.602E-08	1

rs9458631	6	162648673	C	A	PARK2	0.03	0	3.1535E-08	0	5.82	0.5605803	9.602E-08	1
rs173823	5	104619100	T	A	NUDT12	0.03	0	3.1541E-08	9	7.76	0.3544049	1.27E-07	1
rs13237715	7	12229949	G	C	TMEM106B	0.03	0	3.1542E-08	0	6.43	0.4907265	9.604E-08	1
rs7797705	7	12238147	G	A	TMEM106B	0.03	0	3.1544E-08	0	6.43	0.4907028	9.604E-08	1
rs66713719	6	162647479	T	TG	PARK2	0.03	0	3.1561E-08	0	5.83	0.5603058	9.609E-08	1
rs7154993	14	98170359	C	T	C14orf177	0.04	0	3.1565E-08	0	2.47	0.929047	9.611E-08	1
rs3742369	14	103784939	T	C	PPP1R13B	0.03	0	3.1565E-08	0	6.29	0.5059245	9.611E-08	1
rs56283150	4	142960288	C	G	INPP4B	-0.03	0	3.1581E-08	51	14.49	0.0431623	6.69E-08	1
rs59316545	4	142960291	C	CT	INPP4B	-0.03	0	3.1583E-08	51	14.49	0.043162	6.69E-08	1
rs56027920	4	142960157	A	G	INPP4B	-0.03	0	3.1587E-08	51	14.49	0.0431606	6.691E-08	1
rs2356065	7	12237259	T	C	TMEM106B	0.03	0	3.1592E-08	0	6.43	0.4910247	9.619E-08	1
rs8032781	15	47326926	G	C	SEMA6D	0.03	0	3.1617E-08	0	3.76	0.8069863	9.626E-08	1
rs3839691	7	12229634	A	ATGTT	TMEM106B	0.03	0	3.1621E-08	0	6.43	0.4910804	9.627E-08	1
rs4721060	7	12227926	G	A	TMEM106B	0.03	0	3.1622E-08	0	6.5	0.4826931	9.628E-08	1
rs4721061	7	12227933	G	C	TMEM106B	0.03	0	3.1622E-08	0	6.5	0.4826931	9.628E-08	1
rs9556574	13	96359395	T	G	HS6ST3	0.03	0	3.1626E-08	0	2.96	0.8889124	9.629E-08	1
rs34011238	4	142958971	G	A	INPP4B	-0.03	0	3.1633E-08	51	14.49	0.0431823	6.701E-08	1
rs9884401	4	142959989	C	T	INPP4B	-0.03	0	3.1643E-08	51	14.49	0.0431798	6.703E-08	1
rs10011348	4	142955466	G	A	INPP4B	-0.03	0	3.1644E-08	51	14.48	0.0432341	6.708E-08	1
rs13124363	4	142954491	T	C	INPP4B	-0.03	0	3.1644E-08	51	14.48	0.0432162	6.708E-08	1
rs7655380	4	142956630	A	T	INPP4B	-0.03	0	3.1644E-08	51	14.48	0.0432101	6.707E-08	1
rs7660391	4	142956668	T	C	INPP4B	-0.03	0	3.1644E-08	51	14.48	0.0432101	6.707E-08	1
rs7690592	4	142958351	C	T	INPP4B	-0.03	0	3.1649E-08	51	14.48	0.0431981	6.706E-08	1
rs7660803	4	142956866	T	C	INPP4B	-0.03	0	3.165E-08	51	14.48	0.0432107	6.708E-08	1
rs2302633	7	12231189	C	T	TMEM106B	0.03	0	3.1653E-08	0	6.43	0.4907773	9.637E-08	1
rs2302635	7	12230999	G	A	TMEM106B	0.03	0	3.1654E-08	0	6.43	0.490774	9.637E-08	1
rs3214372	7	12230939	A	AT	TMEM106B	0.03	0	3.1655E-08	0	6.43	0.4907751	9.637E-08	1
rs3815535	7	12230893	G	A	TMEM106B	0.03	0	3.1655E-08	0	6.43	0.4907751	9.637E-08	1
rs12699333	7	12230178	C	T	TMEM106B	0.03	0	3.1663E-08	0	6.43	0.490767	9.64E-08	1
rs12668625	7	12230191	G	A	TMEM106B	0.03	0	3.1664E-08	0	6.43	0.4907667	9.64E-08	1

rs12669919	7	12232371	G	A	TMEM106B	0.03	0	3.1664E-08	0	6.43	0.4907768	9.64E-08	1
rs7670901	4	142956030	G	A	INPP4B	-0.03	0	3.1666E-08	51	14.48	0.0432347	6.713E-08	1
rs34596213	4	142955127	A	G	INPP4B	-0.03	0	3.1671E-08	51	14.48	0.0432119	6.713E-08	1
rs4906373	14	103803471	A	G	PPP1R13B	0.03	0	3.1671E-08	0	6.38	0.4963848	9.642E-08	1
rs13141166	4	142954064	G	A	INPP4B	-0.03	0	3.1674E-08	51	14.48	0.0432118	6.714E-08	1
rs13141176	4	142954086	G	A	INPP4B	-0.03	0	3.1674E-08	51	14.48	0.0432118	6.714E-08	1
rs1441423	4	142953532	G	A	INPP4B	-0.03	0	3.1675E-08	51	14.48	0.0432129	6.714E-08	1
rs7681654	4	142953179	T	G	INPP4B	-0.03	0	3.1677E-08	51	14.48	0.0432133	6.714E-08	1
rs7159904	14	98170784	A	C	C14orf177	0.04	0	3.1707E-08	0	2.48	0.9288647	9.653E-08	1
rs2013891	6	33308095	A	G	TAPBP	0.03	0	3.1708E-08	5	7.42	0.3867118	1.104E-07	1
rs13116365	4	142945318	C	A	INPP4B	-0.03	0	3.1713E-08	52	14.58	0.0417215	6.635E-08	1
rs716815	5	120661714	A	G	PRR16	-0.03	0	3.1721E-08	38	11.4	0.1221327	1.397E-07	1
rs889975	8	56864914	G	A	IMPAD1	0.03	0	3.1732E-08	31	10.22	0.1763661	9.66E-08	1
rs12050064	13	96359216	T	A	HS6ST3	0.03	0	3.1738E-08	0	2.96	0.8886809	9.662E-08	1
rs12880167	14	103834492	C	T	PPP1R13B	0.03	0	3.1747E-08	0	6.65	0.4666	9.665E-08	1
rs10033342	4	142951750	A	G	INPP4B	-0.03	0	3.1757E-08	51	14.49	0.0431945	6.73E-08	1
rs28516045	4	142952590	T	G	INPP4B	-0.03	0	3.1769E-08	51	14.49	0.043197	6.732E-08	1
rs77567414	2	178990905	G	A	CCDC141	0.06	0	3.1784E-08	18	8.62	0.281009	1.553E-07	1
rs9998562	4	142951383	G	A	INPP4B	-0.03	0	3.1789E-08	51	14.49	0.0431901	6.736E-08	1
rs6797229	3	61100621	T	C	FHIT	-0.03	0	3.1805E-08	30	10.05	0.1859515	9.682E-08	1
rs2322943	4	142950515	C	T	INPP4B	-0.03	0	3.1808E-08	51	14.49	0.0431576	6.739E-08	1
rs2322944	4	142950735	C	T	INPP4B	-0.03	0	3.1811E-08	51	14.49	0.0431674	6.738E-08	1
rs11774756	8	134752544	T	G	ZFAT	0.03	0	3.1814E-08	0	5.92	0.5486702	9.685E-08	1
rs2322945	4	142950809	C	T	INPP4B	-0.03	0	3.1822E-08	51	14.49	0.0431758	6.742E-08	1
rs7160630	14	98171142	A	G	C14orf177	0.04	0	3.1826E-08	0	2.47	0.9289791	9.688E-08	1
rs10783794	12	56593395	A	G	RBMS2	0.03	0	3.1842E-08	0	2.37	0.936529	9.693E-08	1
rs5011434	7	12229091	C	T	TMEM106B	0.03	0	3.1854E-08	0	6.5	0.4822174	9.697E-08	1
rs6941209	6	162648244	T	C	PARK2	0.03	0	3.186E-08	0	5.82	0.5608469	9.698E-08	1
rs7937343	11	134726178	G	T	B3GAT1	-0.06	0	3.1879E-08	0	2.92	0.8921342	9.704E-08	1
rs8179392	1	198171243	G	A	NEK7	0.03	0	3.1917E-08	0	5.23	0.6323095	9.715E-08	1

rs10924451	1	246021901	G	A	SMYD3	-0.04	0	3.1943E-08	0	6.84	0.4456566	9.723E-08	1
rs7105098	11	134719919	T	A	B3GAT1	-0.08	0	3.1968E-08	0	1.72	0.9735721	9.731E-08	1
rs12527715	6	32849221	T	C	PSMB9,TAP1	0.03	0	3.1973E-08	3	7.26	0.4024356	1.053E-07	1
rs113513496	2	195416320	A	T	SLC39A10	0.05	0	3.1977E-08	0	4.35	0.7383445	9.733E-08	1
rs281273	15	47365816	A	G	SEMA6D	-0.03	0	3.1996E-08	0	5.01	0.6586347	9.739E-08	1
rs41282890	10	127338852	G	T	DOCK1	0.04	0	3.1997E-08	0	2.01	0.9593894	9.739E-08	1
rs9458629	6	162648463	C	T	PARK2	0.03	0	3.2008E-08	0	5.82	0.5610584	9.742E-08	1
rs10879303	12	71581035	A	G	LGR5	0.05	0	3.2022E-08	0	5.97	0.5426826	9.746E-08	1
rs150051446	2	60002684	C	T	BCL11A	0.07	0	3.2035E-08	0	5.36	0.6163527	9.75E-08	1
rs1461583	14	98171658	A	G	C14orf177	0.04	0	3.2037E-08	0	2.47	0.9292998	9.751E-08	1
rs1461584	14	98171659	A	G	C14orf177	0.04	0	3.2038E-08	0	2.47	0.9292994	9.751E-08	1
rs8064704	17	68127291	T	G	KPNA2	0.03	0	3.2043E-08	0	7.06	0.422963	1.004E-07	1
rs6802489	3	44489204	G	A	ZNF852	0.03	0	3.2048E-08	0	4.14	0.7638637	9.754E-08	1
rs2887282	14	103814397	T	C	PPP1R13B	0.03	0	3.2054E-08	0	6.41	0.4929405	9.756E-08	1
rs2328887	6	25429921	T	C	LRRC16A	0.06	0	3.206E-08	0	4.37	0.7367132	9.758E-08	1
rs147712987	16	21680785	G	A	OTOA	-0.07	0	3.2063E-08	0	4.04	0.7748707	9.759E-08	1
rs2723738	12	60618317	T	C	SLC16A7	-0.03	0	3.2087E-08	56	15.97	0.0254311	9.226E-08	1
rs2586750	18	50846146	G	A	MRO	-0.03	0	3.211E-08	0	4.54	0.7156274	9.773E-08	1
rs7145698	14	98171739	T	C	C14orf177	0.04	0	3.2127E-08	0	2.47	0.9293087	9.778E-08	1
rs8003653	14	103832499	A	G	PPP1R13B	0.03	0	3.2132E-08	0	6.65	0.4656671	9.779E-08	1
rs56230133	6	162527018	T	TA	PARK2	0.03	0	3.2133E-08	0	4.2	0.7561486	9.78E-08	1
rs498851	11	107840250	G	C	SLC35F2	0.04	0	3.2139E-08	0	2.89	0.8947727	9.781E-08	1
rs2455855	12	60594137	C	T	SLC16A7	-0.03	0	3.2172E-08	56	16.05	0.0247042	7.774E-08	1
rs11138416	9	79937437	C	T	TLE4	-0.03	0	3.2193E-08	0	5.88	0.554252	9.797E-08	1
rs180797383	12	123680114	T	A	TCTN2	0.07	0	3.22E-08	18	8.58	0.2843982	1.293E-07	1
rs3056108	17	68124068	C	CTA	KPNA2	0.03	0	3.2221E-08	2	7.17	0.4117234	1.064E-07	1
rs4646214	13	98732086	T	G	SLC15A1	0.03	0	3.2225E-08	24	9.3	0.2317356	1.403E-07	1
rs12730441	1	235334744	G	T	GGPS1	0.03	0	3.2226E-08	0	6.98	0.4312222	9.807E-08	1
rs138855665	5	60852971	G	A	ELOVL7	-0.09	0	3.2232E-08	0	5.21	0.6348463	9.809E-08	1
rs7356412	4	132892708	C	T	PCDH10	-0.08	0	3.2238E-08	12	7.99	0.333662	1.313E-07	1

rs4968876	17	68131217	T	C	KPNA2	0.03	0	3.224E-08	0	7.01	0.4280731	9.85E-08	1
rs17096600	14	98171907	T	C	C14orf177	0.04	0	3.2245E-08	0	2.47	0.9294413	9.813E-08	1
rs72743931	5	30745233	T	C	CDH6	-0.04	0	3.2267E-08	0	1.45	0.9840423	9.819E-08	1
rs11440004	14	98172014	G	GC	C14orf177	0.04	0	3.227E-08	0	2.47	0.929403	9.82E-08	1
rs2108618	17	68125159	G	A	KPNA2	0.03	0	3.2278E-08	0	7.05	0.4232646	1.009E-07	1
rs158996	5	58682349	T	G	RAB3C	0.04	0	3.2298E-08	0	2.34	0.9385934	9.828E-08	1
rs4655329	1	214288512	A	T	SMYD2	0.04	0	3.2329E-08	16	8.34	0.3039795	7.029E-08	1
rs190767201	2	104796008	C	A	POU3F3	0.09	0	3.233E-08	0	3.78	0.8044894	9.838E-08	1
rs623281	11	99664960	T	C	CNTN5	-0.03	0	3.2337E-08	0	7	0.4292339	8.602E-08	1
rs12567614	1	226356719	T	C	PARP1	-0.03	0	3.2348E-08	38	11.33	0.1249833	1.02E-07	1
rs6833521	4	142946746	T	C	INPP4B	-0.03	0	3.2358E-08	51	14.49	0.0430839	6.846E-08	1
rs10049511	4	142946612	T	C	INPP4B	-0.03	0	3.236E-08	51	14.49	0.0430834	6.847E-08	1
rs10050319	4	142946410	A	T	INPP4B	-0.03	0	3.2364E-08	51	14.49	0.0430802	6.847E-08	1
rs281269	15	47363640	T	C	SEMA6D	-0.03	0	3.2368E-08	0	5.14	0.6426742	9.849E-08	1
rs17017012	4	142946208	T	C	INPP4B	-0.03	0	3.2369E-08	51	14.49	0.0430797	6.848E-08	1
rs4721059	7	12227869	G	C	TMEM106B	0.03	0	3.2396E-08	0	6.49	0.4843861	9.858E-08	1
rs7855077	9	97979943	C	T	ANP32B	-0.03	0	3.2397E-08	0	6.74	0.4569532	9.858E-08	1
rs7188871	16	58918023	T	A	GOT2	-0.03	0	3.24E-08	39	11.59	0.1147692	1.784E-07	1
rs10008798	4	142949122	G	A	INPP4B	-0.03	0	3.2401E-08	51	14.49	0.0430923	6.856E-08	1
rs12853934	13	56461901	G	T	PRR20A	-0.04	0	3.2404E-08	0	6.25	0.5110092	9.86E-08	1
rs3130262	6	33333077	A	G	DAXX	0.03	0	3.2405E-08	1	7.1	0.4182021	1.024E-07	1
rs1444949	4	142826201	T	C	INPP4B	-0.03	0	3.241E-08	13	8.1	0.3236648	1.357E-07	1
rs60432762	5	30748376	CTG	C	CDH6	-0.04	0	3.2419E-08	0	1.43	0.9845585	9.864E-08	1
rs8005225	14	103833814	T	C	PPP1R13B	0.03	0	3.2427E-08	0	6.65	0.4657747	9.867E-08	1
rs2596473	6	31463022	G	T	MICB	0.03	0	3.2429E-08	0	2.26	0.9440041	9.868E-08	1
rs13092951	3	44488360	A	G	ZNF852	0.03	0	3.2437E-08	0	4.15	0.7625091	9.87E-08	1
rs13080308	3	58615320	C	T	FAM107A	0.03	0	3.2447E-08	15	8.3	0.3072838	9.873E-08	1
rs9924695	16	58918705	A	C	GOT2	-0.03	0	3.245E-08	38	11.48	0.1191933	1.741E-07	1
rs12994386	2	195389854	C	G	SLC39A10	0.04	0	3.2458E-08	0	4.33	0.7408894	9.876E-08	1
rs889974	8	56865015	A	G	IMPAD1	0.03	0	3.2482E-08	31	10.17	0.1789093	9.883E-08	1

Table S2

rs72792080	16	49973489	C	T	CNEP1R1	0.04	0	3.2489E-08	12	7.98	0.3344633	1.326E-07	1
rs13084236	3	44489985	T	C	ZNF852	0.03	0	3.2492E-08	0	4.15	0.7622329	9.886E-08	1
rs2919980	5	104383534	T	C	NUDT12	0.03	0	3.2519E-08	0	5.22	0.6326415	9.894E-08	1
rs12309140	12	60561707	A	G	SLC16A7	-0.03	0	3.2553E-08	56	16.16	0.023678	7.736E-08	1
rs73592761	16	72971040	T	A	ZFHX3	-0.03	0	3.2563E-08	27	9.65	0.2089882	8.797E-08	1
rs188699810	16	22050725	T	A	C16orf52	-0.07	0	3.2585E-08	0	5.36	0.616054	9.914E-08	1
rs113597328	16	22429528	A	G	CDR2	-0.07	0	3.2595E-08	0	4.8	0.6840825	9.917E-08	1
rs6799799	3	44488864	G	A	ZNF852	0.03	0	3.2596E-08	0	4.15	0.7622397	9.917E-08	1
rs12859440	13	56450234	C	T	PRR20A	-0.04	0	3.2602E-08	0	6.24	0.5124598	9.919E-08	1
rs17096602	14	98172599	A	G	C14orf177	0.04	0	3.2621E-08	0	2.47	0.9295139	9.924E-08	1
rs13359522	5	120910870	A	C	PRR16	-0.03	0	3.2656E-08	0	5.26	0.6281999	9.935E-08	1
rs4781850	16	18102953	C	T	NPIPA8	0.03	0	3.2673E-08	0	2.44	0.9314925	9.94E-08	1
rs62302707	4	46567127	G	A	GABRA2	0.04	0	3.2682E-08	0	5.17	0.6394988	9.943E-08	1
rs28818253	1	248337399	G	A	OR14C36	0.03	0	3.2684E-08	0	5.05	0.6541933	9.943E-08	1
rs2302634	7	12231144	T	A	TMEM106B	0.03	0	3.272E-08	0	6.44	0.4894568	9.954E-08	1
rs7840655	8	54935197	A	G	RP1	-0.03	0	3.2721E-08	58	16.99	0.0174513	9.124E-09	2.2834E-09
rs3848023	13	98403692	C	G	FARP1	-0.03	0	3.2722E-08	25	9.46	0.2214408	1.355E-07	1
rs898453	17	50555040	G	A	SPATA20	0.03	0	3.2727E-08	15	8.29	0.3076369	1.499E-07	1
rs10894861	11	134741282	A	G	B3GAT1	0.03	0	3.2737E-08	24	9.21	0.2376851	1.477E-07	1
rs41355450	3	60129735	T	G	FHIT	0.04	0	3.2754E-08	40	11.75	0.1091526	8.72E-08	1
rs12879612	14	103767281	T	A	PPP1R13B	0.03	0	3.2763E-08	0	6.45	0.4888116	9.967E-08	1
rs2723720	12	60590897	A	G	SLC16A7	-0.03	0	3.2763E-08	56	16.05	0.024688	7.917E-08	1
rs2723719	12	60590917	C	A	SLC16A7	-0.03	0	3.2765E-08	56	16.05	0.0246881	7.917E-08	1
rs1355937	12	101225440	G	A	SLC5A8	-0.04	0	3.2773E-08	28	9.82	0.1991468	9.97E-08	1
rs11466816	5	157480102	G	T	ADAM19	-0.04	0	3.2773E-08	0	3.64	0.8198675	9.97E-08	1
rs11625740	14	103755469	C	A	PPP1R13B	0.03	0	3.2775E-08	0	6.42	0.4915006	9.97E-08	1
rs7149024	14	103756341	C	T	PPP1R13B	0.03	0	3.2777E-08	0	6.42	0.4915027	9.971E-08	1
rs12880413	14	103801070	A	G	PPP1R13B	0.03	0	3.2801E-08	0	6.39	0.4951116	9.978E-08	1
rs139259106	16	21631210	A	G	METTL9	-0.07	0	3.2808E-08	0	4.04	0.7745882	9.98E-08	1
rs34340428	4	33892892	T	C	ARAP2	0.05	0	3.2816E-08	14	8.18	0.3172029	1.332E-07	1

rs75840637	17	57890517	C	G	CUEDC1	0.06	0	3.283E-08	4	7.36	0.3927548	9.987E-08	1
rs55824307	14	103804870	C	T	PPP1R13B	0.03	0	3.2833E-08	0	6.39	0.4949971	9.988E-08	1
rs28456	11	61822009	A	G	FADS1,FADS	0.03	0	3.2835E-08	9	7.75	0.3548279	1.205E-07	1
rs34813623	14	103796957	A	G	PPP1R13B	0.03	0	3.2836E-08	0	6.39	0.4948904	9.989E-08	1
rs2223937	14	103820043	A	G	PPP1R13B	0.03	0	3.284E-08	0	6.4	0.4944478	9.99E-08	1
rs34213597	7	99993398	C	T	AZGP1	0.03	0	3.2848E-08	0	5.9	0.5519046	9.992E-08	1
rs12757645	1	235334489	T	C	GGPS1	0.03	0	3.2863E-08	0	6.98	0.4310388	9.996E-08	1
rs1128397	8	21693288	A	T	GFRA2	0.03	0	3.2881E-08	0	2.79	0.903538	1E-07	1
rs117564330	16	22427998	G	C	CDR2	-0.07	0	3.2905E-08	0	4.91	0.6714511	1.001E-07	1
rs140016933	16	22429163	C	A	CDR2	-0.07	0	3.2905E-08	0	4.91	0.6714511	1.001E-07	1
rs2581789	3	53062214	C	T	RP11-894J14.	0.03	0	3.2906E-08	8	7.66	0.3636019	1.001E-07	1
rs10915986	1	226355412	C	T	PARP1	-0.03	0	3.2907E-08	38	11.38	0.1229361	1.001E-07	1
rs6677172	1	226354413	G	C	PARP1	-0.03	0	3.2907E-08	38	11.38	0.1229361	1.001E-07	1
rs200766885	16	22432419	C	T	CDR2	-0.07	0	3.2911E-08	0	4.82	0.6822144	1.001E-07	1
rs141242087	13	62663611	G	A	RP11-310K10	0.09	0	3.2921E-08	0	5.24	0.6305078	1.001E-07	1
rs1472263	5	62692027	T	C	IPO11	-0.03	0	3.2925E-08	0	3.25	0.8607987	1.001E-07	1
rs8011109	14	103813637	G	A	PPP1R13B	0.03	0	3.2935E-08	0	6.39	0.49454	1.002E-07	1
rs8005594	14	103813552	T	C	PPP1R13B	0.03	0	3.2935E-08	0	6.39	0.49454	1.002E-07	1
rs12598535	16	22313279	G	A	POLR3E	-0.07	0	3.2947E-08	0	4.94	0.6678148	1.002E-07	1
rs8018062	14	103815617	C	T	PPP1R13B	0.03	0	3.2948E-08	0	6.4	0.4944524	1.002E-07	1
rs1496922	15	47356611	A	G	SEMA6D	-0.03	0	3.2949E-08	0	4.94	0.667142	1.002E-07	1
rs4900598	14	103815204	T	C	PPP1R13B	0.03	0	3.2957E-08	0	6.39	0.4945205	1.002E-07	1
rs9365472	6	162604994	T	G	PARK2	0.03	0	3.2958E-08	0	4.42	0.7308263	1.002E-07	1
rs12889993	14	103807957	A	G	PPP1R13B	0.03	0	3.2958E-08	0	6.39	0.4947192	1.002E-07	1
rs10092618	8	64671286	G	A	CYP7B1	0.03	0	3.2962E-08	49	13.81	0.0546329	2.09E-08	5.56908E-09
rs12891175	14	103807829	T	C	PPP1R13B	0.03	0	3.2972E-08	0	6.39	0.4947175	1.003E-07	1
rs12885018	14	103807475	A	G	PPP1R13B	0.03	0	3.2976E-08	0	6.39	0.4947214	1.003E-07	1
rs11623546	14	103802761	A	G	PPP1R13B	0.03	0	3.298E-08	0	6.39	0.4948845	1.003E-07	1
rs1484679	2	22649032	G	A	KLHL29	-0.03	0	3.2987E-08	12	8	0.332737	1.572E-07	1
rs12880233	14	103800996	A	G	PPP1R13B	0.03	0	3.2998E-08	0	6.39	0.4948385	1.004E-07	1

rs28813072	1	248339010	G	A	OR14C36	0.03	0	3.3024E-08	0	4.89	0.6732261	1.003E-07	1
rs9867012	3	82361567	T	C	GBE1	-0.04	0	3.3031E-08	11	7.9	0.3418038	1.133E-07	1
rs509820	8	9936583	G	T	MSRA	-0.03	0	3.3034E-08	0	5.1	0.648296	1.005E-07	1
rs12102824	16	60644064	T	C	RP11-457D20	-0.03	0	3.3057E-08	0	5.64	0.5825926	1.005E-07	1
rs10771061	12	24146222	C	T	SOX5	-0.03	0	3.306E-08	0	4.78	0.6872668	1.005E-07	1
rs28603287	4	142954773	C	T	INPP4B	-0.03	0	3.307E-08	51	14.4	0.0444679	7.166E-08	1
rs4906372	14	103799326	A	C	PPP1R13B	0.03	0	3.3079E-08	0	6.39	0.4947911	1.006E-07	1
rs157625	4	16702946	C	T	LDB2	-0.03	0	3.3082E-08	0	1.8	0.969861	1.006E-07	1
rs8009147	14	103798325	A	G	PPP1R13B	0.03	0	3.3084E-08	0	6.39	0.4945701	1.006E-07	1
rs13112261	4	33831971	T	A	ARAP2	0.05	0	3.3102E-08	14	8.18	0.3172553	1.344E-07	1
rs112102810	6	23058697	T	C	HDGFL1	-0.04	0	3.3102E-08	23	9.19	0.2392679	1.701E-07	1
rs7252656	19	49455289	A	G	ALDH16A1	-0.03	0	3.3102E-08	0	6.06	0.5323332	1.007E-07	1
rs10244815	7	132800311	C	T	CHCHD3	0.04	0	3.3104E-08	0	3.69	0.8145931	1.007E-07	1
rs9347897	6	164664015	T	G	C6orf118	0.03	0	3.3123E-08	0	5.64	0.5823969	1.007E-07	1
rs7206083	16	58917991	C	G	GOT2	-0.03	0	3.3135E-08	39	11.59	0.1149974	1.83E-07	1
rs632124	11	118742526	T	A	DDX6	-0.03	0	3.3141E-08	20	8.78	0.2686792	1.719E-07	1
rs117289730	16	22425722	C	A	CDR2	-0.07	0	3.3154E-08	0	4.91	0.6713982	1.008E-07	1
rs118106967	16	22425620	G	A	CDR2	-0.07	0	3.3154E-08	0	4.91	0.6713982	1.008E-07	1
rs34243328	13	56434495	TACTC	T	PRR20A	-0.04	0	3.3163E-08	0	6.27	0.5083092	1.009E-07	1
rs11923572	3	53061863	C	T	RP11-894J14.	0.03	0	3.3164E-08	8	7.68	0.3616618	1.009E-07	1
rs72799204	5	109561772	G	A	MAN2A1	-0.04	0	3.317E-08	0	3.18	0.8680624	1.009E-07	1
rs77676026	6	164660690	T	C	C6orf118	0.03	0	3.318E-08	0	5.7	0.5755915	1.009E-07	1
rs4709641	6	162571672	A	G	PARK2	0.03	0	3.3181E-08	0	4.56	0.7133128	1.009E-07	1
rs9364752	6	164658645	T	C	C6orf118	0.03	0	3.3182E-08	0	5.7	0.5755661	1.009E-07	1
rs74439586	11	134620778	T	A	B3GAT1	-0.08	0	3.3199E-08	0	1.88	0.9663324	1.01E-07	1
rs9364753	6	164658801	T	C	C6orf118	0.03	0	3.3219E-08	0	5.7	0.5756659	1.01E-07	1
rs75590468	16	22378992	G	A	CDR2	-0.07	0	3.3244E-08	0	4.94	0.6676541	1.011E-07	1
rs71195271	13	56418236	C	CT	PRR20A	-0.04	0	3.3257E-08	0	6.27	0.5081138	1.011E-07	1
rs673406	15	47338150	A	C	SEMA6D	0.03	0	3.3291E-08	0	3.75	0.808264	1.012E-07	1
rs9597408	13	56426845	C	T	PRR20A	-0.04	0	3.3295E-08	0	6.28	0.5078987	1.012E-07	1

rs73405679	6	34480168	C	T	PACSIN1	-0.05	0	3.3296E-08	0	3.45	0.8402522	1.013E-07	1
rs62456278	7	68525376	C	T	AUTS2	-0.03	0	3.3312E-08	0	4.14	0.7631829	1.013E-07	1
rs7145913	14	98173778	C	T	C14orf177	0.04	0	3.3316E-08	0	2.46	0.930024	1.013E-07	1
rs12727192	1	244105306	T	C	ZBTB18	0.04	0	3.3318E-08	0	6.23	0.5133172	1.013E-07	1
rs62375332	5	109560795	G	A	MAN2A1	-0.04	0	3.3322E-08	0	3.17	0.8684072	1.013E-07	1
rs12723037	1	244105214	A	G	ZBTB18	0.04	0	3.3329E-08	0	6.23	0.5134317	1.013E-07	1
rs370649731	16	21850379	G	A	NPIPB4	-0.07	0	3.3331E-08	0	5.24	0.6302007	1.014E-07	1
rs9597409	13	56430472	T	C	PRR20A	-0.04	0	3.3346E-08	0	6.28	0.5077812	1.014E-07	1
rs17185508	8	56872734	G	A	IMPAD1	0.03	0	3.3347E-08	29	9.94	0.1919732	1.014E-07	1
rs1390862	15	86347255	C	A	AGBL1	0.03	0	3.3347E-08	3	7.26	0.4027304	1.014E-07	1
rs7146746	14	98174050	G	A	C14orf177	0.04	0	3.3354E-08	0	2.46	0.929794	1.014E-07	1
rs9591762	13	56433152	C	T	PRR20A	-0.04	0	3.3361E-08	0	6.28	0.5076557	1.014E-07	1
rs116470208	3	104722834	G	A	ALCAM	-0.06	0	3.3364E-08	53	15.15	0.0341608	7.993E-08	1
rs59873297	2	195525618	C	G	SLC39A10	0.06	0	3.3383E-08	0	3.55	0.8299953	1.015E-07	1
rs10956507	8	90192105	G	A	CALB1	0.03	0	3.3406E-08	0	2.44	0.9315915	1.016E-07	1
rs186847465	11	134721775	T	C	B3GAT1	-0.08	0	3.3413E-08	0	1.73	0.9732388	1.016E-07	1
rs7006223	8	134753849	C	T	ZFAT	0.03	0	3.3444E-08	0	5.68	0.5778901	1.017E-07	1
rs7334074	13	107384523	A	C	FAM155A	-0.04	0	3.3449E-08	53	15.01	0.0359078	8.559E-08	1
rs6426280	1	246121360	T	C	SMYD3	0.03	0	3.345E-08	0	5.71	0.573491	1.007E-07	1
rs9597405	13	56424533	C	T	PRR20A	-0.04	0	3.3461E-08	0	6.28	0.507367	1.017E-07	1
rs35146998	6	164895053	C	T	C6orf118	-0.03	0	3.3463E-08	46	13.14	0.0686824	2.953E-07	1
rs9597406	13	56424684	C	T	PRR20A	-0.04	0	3.3464E-08	0	6.28	0.5073683	1.017E-07	1
rs71428219	13	56437181	C	A	PRR20A	-0.04	0	3.3467E-08	0	6.28	0.5073814	1.018E-07	1
rs9597411	13	56436782	T	C	PRR20A	-0.04	0	3.3469E-08	0	6.28	0.5073902	1.018E-07	1
rs10594577	1	162875844	CTT	C	CCDC190	0.04	0	3.3479E-08	32	10.45	0.1646165	2.997E-07	1
rs9597412	13	56439331	C	T	PRR20A	-0.04	0	3.3484E-08	0	6.28	0.5073999	1.018E-07	1
rs117171369	11	134600931	C	T	B3GAT1	-0.08	0	3.3485E-08	0	1.83	0.9688409	1.018E-07	1
rs56064284	6	164894339	T	C	C6orf118	-0.03	0	3.3503E-08	47	13.25	0.0661599	2.974E-07	1
rs4547421	18	54755123	T	C	RAB27B	0.03	0	3.3513E-08	16	8.34	0.3037289	1.341E-07	1
rs9597410	13	56436722	A	G	PRR20A	-0.04	0	3.3518E-08	0	6.28	0.5073393	1.019E-07	1

Table S2

rs12715564	3	61137504	G	C	FHIT	0.03	0	3.352E-08	0	4.38	0.7345875	1.019E-07	1
rs7188372	16	22384854	T	C	CDR2	-0.07	0	3.3522E-08	0	4.91	0.6710288	1.019E-07	1
rs11864229	16	22410000	T	A	CDR2	-0.07	0	3.3542E-08	0	4.9	0.6715781	1.02E-07	1
rs1054168	7	12233787	C	T	TMEM106B	0.03	0	3.3546E-08	0	6.47	0.4863457	1.02E-07	1
rs55784848	6	164660012	G	A	C6orf118	0.03	0	3.3577E-08	0	5.67	0.5788124	1.021E-07	1
rs6428434	1	198141533	A	G	NEK7	0.03	0	3.3581E-08	0	5.35	0.6168235	1.021E-07	1
rs6862302	5	157394305	T	C	CYFIP2	-0.04	0	3.3592E-08	0	3.96	0.784624	1.021E-07	1
rs12035375	1	244103990	T	C	ZBTB18	0.04	0	3.3592E-08	0	6.23	0.5132567	1.021E-07	1
rs4467968	8	64612746	T	G	CYP7B1	0.03	0	3.3617E-08	52	14.59	0.0416027	1.846E-08	4.85827E-09
rs117299951	6	104503869	C	A	HACE1	0.06	0	3.3639E-08	42	12.28	0.0917125	6.414E-08	1
rs1473092	4	46838927	G	A	COX7B2	0.03	0	3.3641E-08	2	7.15	0.4132798	1.074E-07	1
rs62682460	3	82347199	TG	T	GBE1	-0.04	0	3.3644E-08	10	7.86	0.3450455	1.152E-07	1
rs4777995	15	92492163	T	C	ST8SIA2	0.03	0	3.3644E-08	32	10.44	0.1649202	2.815E-07	1
rs137966238	6	36281241	C	T	PNPLA1	0.08	0	3.3675E-08	0	3.98	0.7822577	1.024E-07	1
rs183666281	10	118411768	C	T	FAM204A	-0.09	0	3.3678E-08	0	4.77	0.688335	1.024E-07	1
rs8192899	8	64612185	C	A	CYP7B1	0.03	0	3.368E-08	51	14.51	0.0427553	1.873E-08	4.99249E-09
rs7514524	1	246098224	A	G	SMYD3	-0.03	0	3.3681E-08	9	7.77	0.3536092	7.126E-08	1
rs791158	13	56423524	C	T	PRR20A	0.04	0	3.3684E-08	0	6.18	0.5189943	1.024E-07	1
rs4885970	13	56429773	C	G	PRR20A	-0.04	0	3.3695E-08	0	6.3	0.505706	1.024E-07	1
rs117530864	16	72956622	C	A	ZFHX3	0.06	0	3.3696E-08	46	13.08	0.0703018	4.661E-08	1.38949E-08
rs171697	5	104620815	C	G	NUDT12	0.03	0	3.3719E-08	7	7.58	0.3712364	1.281E-07	1
rs34080972	5	157395866	T	A	ADAM19	-0.04	0	3.3767E-08	0	3.94	0.7861427	1.026E-07	1
rs34415945	16	76981373	G	GCT	RP11-58C22.	0.03	0	3.3768E-08	0	2.75	0.9070954	1.027E-07	1
rs7626945	3	82356606	T	C	GBE1	-0.04	0	3.3771E-08	10	7.84	0.3471906	1.151E-07	1
rs1524033	2	195406610	G	A	SLC39A10	0.05	0	3.3819E-08	0	4.27	0.7485377	1.028E-07	1
rs9747029	17	81729862	C	T	SLC25A10	0.04	0	3.3827E-08	0	5.43	0.6072794	1.028E-07	1
rs106459	10	21093259	G	C	NEBL	0.05	0	3.3936E-08	61	18.23	0.0109632	2.214E-08	5.883E-09
rs79556132	16	21665984	A	G	METTL9	-0.07	0	3.3936E-08	0	4.06	0.7723599	1.032E-07	1
rs6966915	7	12226362	C	T	TMEM106B	0.03	0	3.3937E-08	0	6.76	0.4540503	1.032E-07	1
rs13319147	3	43617957	T	C	ANO10	-0.03	0	3.3943E-08	43	12.38	0.0888399	4.001E-08	1.15845E-08

rs144961405	11	99667307	T	TC	CNTN5	-0.03	0	3.3944E-08	0	6.73	0.4579035	9.224E-08	1
rs2885258	1	246101507	T	C	SMYD3	-0.03	0	3.3953E-08	1	7.07	0.4213522	8.042E-08	1
rs56070621	5	30825577	T	A	CDH6	0.03	0	3.3971E-08	0	5.32	0.6208088	1.033E-07	1
rs927710	13	96352542	T	G	HS6ST3	0.03	0	3.3973E-08	0	3.1	0.8756942	1.033E-07	1
rs34510180	13	56463262	T	C	PRR20A	-0.04	0	3.399E-08	0	6.17	0.520511	1.033E-07	1
rs12655260	5	30777141	T	C	CDH6	-0.04	0	3.3996E-08	0	1.03	0.9943805	1.033E-07	1
rs9597419	13	56470081	T	C	PRR20A	-0.04	0	3.4003E-08	0	6.17	0.5204664	1.034E-07	1
rs192960403	5	138019841	G	A	FAM13B	0.08	0	3.4005E-08	59	17.15	0.0164666	6.662E-08	1
rs3901859	13	96470947	A	T	HS6ST3	-0.03	0	3.4031E-08	0	3.56	0.8286789	1.034E-07	1
rs80334136	16	72956656	G	T	ZFHX3	0.06	0	3.4038E-08	46	13.08	0.070241	4.705E-08	1.38949E-08
rs59666259	2	195406022	G	A	SLC39A10	0.05	0	3.4054E-08	0	4.27	0.7483406	1.035E-07	1
rs61188304	2	195406024	T	C	SLC39A10	0.05	0	3.4059E-08	0	4.27	0.7483351	1.035E-07	1
rs9830712	3	82358381	C	G	GBE1	-0.04	0	3.4069E-08	10	7.85	0.345955	1.162E-07	1
rs9597416	13	56454621	T	G	PRR20A	-0.04	0	3.407E-08	0	6.15	0.5221987	1.035E-07	1
rs9869128	3	82355214	G	A	GBE1	-0.04	0	3.4074E-08	10	7.85	0.3459973	1.163E-07	1
rs6967164	7	110427151	A	T	IMMP2L	0.05	0	3.4079E-08	0	6.61	0.4705944	1.036E-07	1
rs59977751	3	16797012	A	G	PLCL2	-0.04	0	3.4105E-08	7	7.53	0.3756944	1.178E-07	1
rs9591763	13	56456077	A	G	PRR20A	-0.04	0	3.4113E-08	0	6.15	0.5219815	1.037E-07	1
rs149301502	13	60925669	C	T	TDRD3	-0.09	0	3.4126E-08	0	4.01	0.7781645	1.037E-07	1
rs28578538	6	162568425	T	C	PARK2	0.03	0	3.4129E-08	0	4.54	0.7158058	1.037E-07	1
rs791160	13	56424037	C	G	PRR20A	0.04	0	3.4137E-08	0	6.22	0.514473	1.037E-07	1
rs583484	8	9936859	T	C	MSRA	-0.03	0	3.4139E-08	0	5.1	0.6481656	1.038E-07	1
rs13378787	13	112165055	C	A	SOX1	0.03	0	3.4142E-08	0	1.16	0.9918454	1.038E-07	1
rs7700672	5	168207220	A	C	TENM2	0.04	0	3.4167E-08	13	8.1	0.324229	1.162E-07	1
rs6819498	4	142796490	T	C	INPP4B	-0.03	0	3.4174E-08	36	10.99	0.1389772	2.061E-07	1
rs6786551	3	82363180	T	C	GBE1	-0.04	0	3.4195E-08	10	7.85	0.345963	1.167E-07	1
rs791163	13	56428051	G	A	PRR20A	0.04	0	3.42E-08	0	6.22	0.5143626	1.039E-07	1
rs791165	13	56428697	T	C	PRR20A	0.04	0	3.4202E-08	0	6.22	0.5143536	1.039E-07	1
rs56297802	6	164894211	G	A	C6orf118	-0.03	0	3.4232E-08	46	13.16	0.0684178	3.015E-07	1
rs4328653	2	195413881	T	C	SLC39A10	0.05	0	3.4253E-08	0	4.28	0.7465621	1.041E-07	1

Table S2

rs4473400	2	195413706	G	A	SLC39A10	0.05	0	3.4276E-08	0	4.28	0.7465369	1.042E-07	1
rs732528	18	50851864	T	C	MRO	0.03	0	3.4277E-08	0	5.14	0.6427224	1.042E-07	1
rs2375063	2	195413702	C	T	SLC39A10	0.05	0	3.4312E-08	0	4.28	0.7465392	1.043E-07	1
rs72973959	2	208538943	G	T	PTH2R	0.08	0	3.4323E-08	0	6.26	0.5100487	1.043E-07	1
rs111479670	8	9938044	T	A	MSRA	-0.03	0	3.4326E-08	0	4.87	0.6761033	1.043E-07	1
rs7147171	14	103798520	G	A	PPP1R13B	0.03	0	3.4373E-08	0	6.42	0.4920248	1.044E-07	1
rs56242242	10	90992103	C	T	ANKRD1	-0.03	0	3.4416E-08	55	15.68	0.0281769	1.939E-07	1
rs115955782	1	162879812	T	C	CCDC190	0.04	0	3.4424E-08	37	11.26	0.1278348	3.468E-07	1
rs13404751	2	45770070	G	A	PRKCE	0.03	0	3.4452E-08	0	6.75	0.4556212	1.047E-07	1
rs34159555	6	33110930	G	A	HLA-DPB1	-0.04	0	3.4453E-08	0	3.56	0.828881	1.047E-07	1
rs13274155	8	56864541	A	G	IMPAD1	0.03	0	3.4455E-08	31	10.19	0.1779634	1.128E-07	1
rs115653994	5	125785578	T	C	GRAMD3	0.08	0	3.4465E-08	0	6.9	0.4390521	1.047E-07	1
rs62517962	8	54880955	A	T	RP1	-0.07	0	3.449E-08	4	7.29	0.398956	1.162E-07	1
rs75027170	16	21315785	A	G	CRYM	-0.07	0	3.4501E-08	0	4.52	0.7184708	1.048E-07	1
rs12736645	1	198148355	C	A	NEK7	0.03	0	3.4513E-08	0	5.28	0.6260208	1.049E-07	1
rs1808460	8	56864258	C	T	IMPAD1	0.03	0	3.452E-08	31	10.17	0.1789314	1.049E-07	1
rs6717335	2	195407113	G	T	SLC39A10	0.05	0	3.4534E-08	0	4.27	0.7484968	1.049E-07	1
rs1987218	8	134725096	A	T	ZFAT	0.03	0	3.4557E-08	0	4.04	0.7757108	1.05E-07	1
rs6577752	8	134724546	G	A	ZFAT	0.03	0	3.4557E-08	0	4.04	0.7757108	1.05E-07	1
rs16970821	16	21032479	T	C	DNAH3	-0.04	0	3.456E-08	0	5.43	0.6078756	1.05E-07	1
rs7191849	16	30011836	T	C	DOC2A	-0.03	0	3.456E-08	31	10.24	0.1752177	1.413E-07	1
rs62389594	6	23047799	T	C	HDGFL1	-0.04	0	3.4563E-08	23	9.16	0.2413889	1.755E-07	1
rs889978	8	56863952	A	G	IMPAD1	0.03	0	3.4568E-08	31	10.2	0.1775102	1.05E-07	1
rs12550744	8	134752053	A	G	ZFAT	0.03	0	3.4568E-08	0	6.15	0.5222708	1.05E-07	1
rs2015063	8	56864155	G	A	IMPAD1	0.03	0	3.4569E-08	31	10.2	0.1777469	1.05E-07	1
rs112084281	11	134723162	G	C	B3GAT1	-0.08	0	3.4576E-08	0	1.74	0.9727388	1.051E-07	1
rs4483630	12	60586108	T	C	SLC16A7	-0.03	0	3.459E-08	55	15.79	0.0270887	1.032E-07	1
rs11714213	3	44483378	A	C	ZNF445	0.03	0	3.4594E-08	0	4.18	0.758561	1.051E-07	1
rs55872267	6	162572884	TC	T	PARK2	0.03	0	3.4596E-08	0	4.54	0.7159397	1.051E-07	1
rs116218948	3	29393846	C	T	RBMS3,RP11	-0.04	0	3.4604E-08	0	5.39	0.6127506	1.051E-07	1

rs28803590	4	142932056	G	A	INPP4B	-0.04	0	3.4615E-08	44	12.61	0.0820861	8.555E-08	1
rs9355498	6	164666174	C	G	C6orf118	0.03	0	3.462E-08	0	5.64	0.5819461	1.052E-07	1
rs76712264	2	161427329	G	T	SLC4A10	-0.07	0	3.4623E-08	0	6.54	0.4782058	1.052E-07	1
rs113650580	6	164665028	C	A	C6orf118	0.03	0	3.4627E-08	0	5.64	0.5819286	1.052E-07	1
rs9364754	6	164664394	T	A	C6orf118	0.03	0	3.4631E-08	0	5.64	0.5819108	1.052E-07	1
rs75315131	6	164664625	T	A	C6orf118	0.03	0	3.4632E-08	0	5.64	0.5819236	1.052E-07	1
rs77732361	6	164664527	C	T	C6orf118	0.03	0	3.4632E-08	0	5.64	0.5819236	1.052E-07	1
rs78562461	6	164664630	G	A	C6orf118	0.03	0	3.4632E-08	0	5.64	0.5819236	1.052E-07	1
rs28885506	4	142891149	T	C	INPP4B	-0.04	0	3.4646E-08	44	12.64	0.0812821	8.613E-08	1
rs4567997	2	45781541	G	C	PRKCE	-0.03	0	3.4652E-08	2	7.19	0.4091613	1.153E-07	1
rs396755	5	104686538	C	G	NUDT12	-0.03	0	3.4658E-08	0	6.33	0.5012536	1.053E-07	1
rs117634579	6	164723095	A	T	C6orf118	0.03	0	3.4692E-08	0	1.74	0.9726213	1.054E-07	1
rs2496038	10	104752196	T	G	SORCS3	-0.03	0	3.4699E-08	0	4	0.7803384	1.054E-07	1
rs4974084	3	48901647	G	A	SLC25A20	-0.03	0	3.472E-08	12	8.02	0.3304538	1.521E-07	1
rs11417832	4	47100202	G	GA	GABRB1	-0.03	0	3.4733E-08	0	2.65	0.915189	1.055E-07	1
rs28475169	4	47101114	C	A	GABRB1	-0.03	0	3.4744E-08	0	2.66	0.9149761	1.055E-07	1
rs2015032	8	56864123	C	A	IMPAD1	0.03	0	3.4772E-08	31	10.2	0.1776137	1.056E-07	1
rs2256332	3	52821849	G	A	ITIH4,RP5-96	-0.03	0	3.4784E-08	0	6.76	0.4546689	1.057E-07	1
rs11774515	8	56871387	C	T	IMPAD1	0.03	0	3.4787E-08	29	9.9	0.1940262	1.051E-07	1
rs2317794	8	56873475	C	A	IMPAD1	0.03	0	3.4787E-08	29	9.9	0.1940262	1.051E-07	1
rs61859614	10	90991427	G	A	ANKRD1	-0.03	0	3.4792E-08	55	15.73	0.0276794	1.951E-07	1
rs4134493	8	56869689	G	T	IMPAD1	0.03	0	3.4813E-08	29	9.91	0.1940018	1.052E-07	1
rs12144716	1	246104264	C	T	SMYD3	-0.03	0	3.4813E-08	0	7	0.4284475	8.337E-08	1
rs4900595	14	103791717	A	G	PPP1R13B	0.03	0	3.4836E-08	0	6.29	0.5062667	1.058E-07	1
rs7622302	3	49510128	T	C	DAG1	-0.03	0	3.4842E-08	0	6.08	0.5308746	1.058E-07	1
rs112333256	5	30823070	T	G	CDH6	0.03	0	3.4845E-08	0	5.12	0.6457953	1.058E-07	1
rs9458619	6	162641551	G	A	PARK2	0.03	0	3.4847E-08	0	5.83	0.5598511	1.059E-07	1
rs531901511	16	21803167	G	C	NPIPB4	-0.07	0	3.4858E-08	0	5.78	0.5662252	1.059E-07	1
rs7451965	6	162641771	G	T	PARK2	0.03	0	3.4865E-08	0	5.83	0.5598042	1.059E-07	1
rs12596007	16	22363790	G	A	CDR2	-0.07	0	3.4868E-08	0	4.95	0.6662435	1.059E-07	1

Table S2

rs9456802	6	162641186	T	C	PARK2	0.03	0	3.4877E-08	0	5.83	0.5599405	1.059E-07	1
rs10246824	7	93244401	G	A	VPS50	0.07	0	3.4886E-08	0	4.77	0.6880673	1.06E-07	1
rs34612871	6	162641306	CA	C	PARK2	0.03	0	3.4887E-08	0	5.83	0.5599453	1.06E-07	1
rs4308726	8	56864755	T	C	IMPAD1	0.03	0	3.4912E-08	31	10.18	0.1784066	1.06E-07	1
rs147467052	13	56419066	CCA	C	PRR20A	-0.04	0	3.4912E-08	0	6.19	0.5174616	1.06E-07	1
rs59069439	8	56865197	G	GC	IMPAD1	0.03	0	3.4912E-08	31	10.18	0.1785023	1.06E-07	1
rs2317780	8	56865198	G	T	IMPAD1	0.03	0	3.4925E-08	31	10.18	0.1784918	1.061E-07	1
rs199584547	2	178987717	A	T	CCDC141	0.06	0	3.4933E-08	19	8.68	0.2761675	1.716E-07	1
rs3128965	6	33088122	G	A	HLA-DPB1	0.04	0	3.4946E-08	1	7.07	0.4214056	1.061E-07	1
rs4481587	8	56864747	A	T	IMPAD1	0.03	0	3.4953E-08	31	10.18	0.1784906	1.062E-07	1
rs62375330	5	109555013	C	T	MAN2A1	-0.04	0	3.4956E-08	0	3.16	0.8699251	1.062E-07	1
rs148038397	3	29393791	CT	C	RBMS3,RP11	-0.04	0	3.4962E-08	0	5.51	0.5977156	1.062E-07	1
rs4272370	8	56864881	C	A	IMPAD1	0.03	0	3.4965E-08	31	10.18	0.178518	1.062E-07	1
rs851023	6	36038443	G	A	MAPK14	0.04	0	3.4973E-08	25	9.38	0.2262801	1.709E-07	1
rs112052450	6	164663335	C	T	C6orf118	0.03	0	3.4973E-08	0	5.64	0.5827752	1.062E-07	1
rs11160766	14	103833540	A	G	PPP1R13B	0.03	0	3.4995E-08	2	7.18	0.4105775	1.112E-07	1
rs112437837	16	21307467	T	G	CRYM	-0.07	0	3.5008E-08	0	4.49	0.7213652	1.063E-07	1
rs10922911	1	90740274	C	T	BARHL2	0.03	0	3.5009E-08	16	8.42	0.2968129	9.281E-08	1
rs12595936	16	22363519	C	T	CDR2	-0.07	0	3.502E-08	0	4.95	0.6662107	1.064E-07	1
rs182917328	16	71811764	C	G	AP1G1	0.06	0	3.5026E-08	32	10.33	0.1707748	6.4E-08	1
rs4906371	14	103790595	G	A	PPP1R13B	0.03	0	3.507E-08	0	6.27	0.5084466	1.065E-07	1
rs12323602	14	98161846	C	T	C14orf177	0.04	0	3.5076E-08	0	2.56	0.922882	1.065E-07	1
rs79400561	5	125785750	T	C	GRAMD3	0.08	0	3.5079E-08	0	6.91	0.4387663	1.065E-07	1
rs1899565	4	142698014	A	T	INPP4B	0.03	0	3.508E-08	43	12.48	0.0858872	1.59E-07	1
rs141259350	11	134723499	T	C	B3GAT1	-0.08	0	3.5084E-08	0	1.75	0.9725956	1.066E-07	1
rs1986957	1	162878464	G	A	CCDC190	0.04	0	3.5085E-08	34	10.61	0.1564219	3.262E-07	1
rs11400582	4	30646292	A	AC	PCDH7	-0.03	0	3.5101E-08	20	8.75	0.2708331	1.066E-07	1
rs7328493	13	96348244	T	G	HS6ST3	0.03	0	3.5101E-08	0	3.02	0.8830337	1.066E-07	1
rs2165502	4	142892852	T	C	INPP4B	-0.04	0	3.5104E-08	44	12.53	0.0844399	8.871E-08	1
rs75436575	16	22364498	T	C	CDR2	-0.07	0	3.5109E-08	0	4.95	0.666383	1.066E-07	1

rs79556490	3	16751418	T	G	PLCL2	-0.04	0	3.5125E-08	21	8.96	0.2557436	1.494E-07	1
rs56379949	3	51841349	A	G	IQCF3	0.07	0	3.514E-08	50	14.07	0.049965	1.715E-08	4.47756E-09
rs1352675	6	123881364	C	A	NKAIN2	0.03	0	3.5142E-08	0	2.38	0.935964	1.067E-07	1
rs10945854	6	162638270	C	T	PARK2	0.03	0	3.515E-08	0	5.83	0.5597546	1.068E-07	1
rs4800947	18	54734409	T	C	RAB27B	0.03	0	3.5153E-08	17	8.52	0.2889877	1.487E-07	1
rs5881485	6	162638035	TTATA	T	PARK2	0.03	0	3.5173E-08	0	5.83	0.5597728	1.068E-07	1
rs13281432	8	9938046	C	A	MSRA	-0.03	0	3.5177E-08	0	4.86	0.6765928	1.068E-07	1
rs73040681	3	29393938	C	T	RBMS3,RP11	-0.04	0	3.5187E-08	0	5.51	0.5976231	1.069E-07	1
rs116240038	8	9938050	G	A	MSRA	-0.03	0	3.5192E-08	0	4.86	0.6765893	1.069E-07	1
rs7451729	6	162636419	C	A	PARK2	0.03	0	3.5199E-08	0	5.83	0.5596116	1.069E-07	1
rs61859613	10	90991321	G	A	ANKRD1	-0.03	0	3.5201E-08	55	15.77	0.0273177	1.97E-07	1
rs73040679	3	29393923	A	T	RBMS3,RP11	-0.04	0	3.5202E-08	0	5.51	0.5976777	1.069E-07	1
rs1954805	6	162636656	T	C	PARK2	0.03	0	3.5206E-08	0	5.83	0.5596115	1.069E-07	1
rs1954804	6	162636802	T	C	PARK2	0.03	0	3.5212E-08	0	5.83	0.559609	1.069E-07	1
rs13133181	4	142689140	G	A	INPP4B	0.03	0	3.5215E-08	44	12.71	0.0795073	1.626E-07	1
rs10876920	12	56782391	C	T	HSD17B6	0.03	0	3.5217E-08	0	5.22	0.6332293	1.07E-07	1
rs11943397	4	142696151	T	C	INPP4B	0.03	0	3.522E-08	43	12.46	0.0863257	1.584E-07	1
rs11643833	16	60631754	A	G	RP11-457D20	-0.03	0	3.5227E-08	0	4.06	0.7730215	1.07E-07	1
rs889973	8	56865171	A	G	IMPAD1	0.03	0	3.523E-08	31	10.22	0.1762343	1.07E-07	1
rs2023014	6	162639512	C	A	PARK2	0.03	0	3.5252E-08	0	5.83	0.5598324	1.071E-07	1
rs76247422	14	98162916	C	T	C14orf177	0.04	0	3.5256E-08	0	2.55	0.9231403	1.071E-07	1
rs10976968	9	8335875	A	T	PTPRD	-0.03	0	3.5261E-08	49	13.76	0.0556419	1.669E-07	1
rs11756579	6	162634736	G	C	PARK2	0.03	0	3.5267E-08	0	5.83	0.5596268	1.071E-07	1
rs58292605	6	162634280	C	T	PARK2	0.03	0	3.527E-08	0	5.83	0.5595727	1.071E-07	1
rs34446162	6	28477508	CT	C	GPX6	-0.05	0	3.5296E-08	10	7.79	0.3516348	1.418E-07	1
rs5011431	7	12228925	G	A	TMEM106B	0.03	0	3.5306E-08	0	6.54	0.4788107	1.072E-07	1
rs13169047	5	153297608	C	T	GRIA1	-0.03	0	3.5308E-08	0	4.57	0.712074	1.072E-07	1
rs17701424	14	98162463	G	A	C14orf177	0.04	0	3.531E-08	0	2.56	0.9227502	1.072E-07	1
rs2079702	22	20013483	G	A	ARVCF	0.04	0	3.5325E-08	9	7.75	0.355102	1.331E-07	1
rs7138537	12	56795973	A	G	HSD17B6	0.03	0	3.5326E-08	0	5.22	0.6331412	1.073E-07	1

rs7227223	18	52861982	C	T	DCC	0.04	0	3.5331E-08	0	1.63	0.9775348	1.073E-07	1
rs138012771	16	22290405	T	C	EEF2K	-0.07	0	3.5332E-08	0	4.96	0.6652848	1.073E-07	1
rs9743799	14	103780240	G	C	PPP1R13B	0.03	0	3.5335E-08	0	6.25	0.5110321	1.073E-07	1
rs4297336	1	248334857	G	A	OR2M7	0.03	0	3.5344E-08	0	5.03	0.6568448	1.073E-07	1
rs7136081	12	56790407	A	G	HSD17B6	0.03	0	3.5345E-08	0	5.22	0.6333244	1.073E-07	1
rs9855152	3	44417238	T	C	LINC00694	-0.03	0	3.5347E-08	0	4.12	0.7657804	1.073E-07	1
rs34383378	12	56785755	A	AC	HSD17B6	0.03	0	3.5352E-08	0	5.22	0.6333254	1.074E-07	1
rs10494376	1	162877928	A	G	CCDC190	0.04	0	3.5364E-08	33	10.6	0.1570403	3.28E-07	1
rs34879082	6	164894589	T	C	C6orf118	-0.03	0	3.5364E-08	47	13.24	0.0664754	3.141E-07	1
rs12595896	16	22404239	A	G	CDR2	-0.07	0	3.5394E-08	0	4.84	0.6794698	1.075E-07	1
rs145063894	16	22403571	T	C	CDR2	-0.07	0	3.5394E-08	0	4.84	0.6794698	1.075E-07	1
rs117203517	16	22297190	C	T	POLR3E	-0.07	0	3.5396E-08	0	4.95	0.6665721	1.075E-07	1
rs142223219	16	22395766	G	A	CDR2	-0.07	0	3.5398E-08	0	4.84	0.6794112	1.075E-07	1
rs11866334	16	22420733	G	T	CDR2	-0.07	0	3.5407E-08	0	4.92	0.6691239	1.075E-07	1
rs145500058	16	22394887	T	G	CDR2	-0.07	0	3.5448E-08	0	4.93	0.6685524	1.076E-07	1
rs61168574	16	22390588	G	A	CDR2	-0.07	0	3.5448E-08	0	4.84	0.6793747	1.076E-07	1
rs118027680	16	22398932	C	T	CDR2	-0.07	0	3.5455E-08	0	4.93	0.6684764	1.077E-07	1
rs76658038	16	22367995	A	G	CDR2	-0.07	0	3.5458E-08	0	4.93	0.66809	1.077E-07	1
rs74596190	16	22392732	T	G	CDR2	-0.07	0	3.546E-08	0	4.93	0.6685031	1.077E-07	1
rs77016145	16	22369827	T	C	CDR2	-0.07	0	3.5464E-08	0	4.93	0.6681216	1.077E-07	1
rs2003259	8	134722769	G	A	ZFAT	0.03	0	3.5468E-08	0	4.03	0.7765684	1.077E-07	1
rs11860920	16	22374113	T	C	CDR2	-0.07	0	3.5499E-08	0	4.93	0.6681875	1.078E-07	1
rs10660981	16	22402228	T	TTTTG	CDR2	-0.07	0	3.5504E-08	0	4.93	0.6685821	1.078E-07	1
rs76985742	16	22375552	G	C	CDR2	-0.07	0	3.5509E-08	0	4.93	0.6682068	1.078E-07	1
rs80177724	16	22362197	G	A	CDR2	-0.07	0	3.5513E-08	0	4.95	0.6658986	1.078E-07	1
rs117328839	16	22405698	C	T	CDR2	-0.07	0	3.5516E-08	0	4.93	0.6688086	1.078E-07	1
rs3924010	16	22415282	G	A	CDR2	-0.07	0	3.5518E-08	0	4.84	0.679602	1.078E-07	1
rs4380045	16	58914426	A	G	GOT2	-0.03	0	3.5521E-08	39	11.58	0.115387	1.952E-07	1
rs1508089	8	56878679	A	T	IMPAD1	0.03	0	3.5523E-08	27	9.61	0.2115491	1.079E-07	1
rs58926605	16	22408768	G	A	CDR2	-0.07	0	3.5528E-08	0	4.93	0.6688305	1.079E-07	1

Table S2

rs12760893	1	198148512	T	C	NEK7	0.03	0	3.5539E-08	0	5.34	0.6189613	1.079E-07	1
rs79808122	16	22406645	G	C	CDR2	-0.07	0	3.5545E-08	0	4.93	0.6688146	1.079E-07	1
rs59301694	16	22408424	C	A	CDR2	-0.07	0	3.5545E-08	0	4.93	0.668886	1.079E-07	1
rs35505672	14	103786999	T	C	PPP1R13B	0.03	0	3.555E-08	0	6.23	0.5130082	1.079E-07	1
rs1925104	13	96367393	G	T	HS6ST3	0.03	0	3.5553E-08	0	4.7	0.6970259	1.079E-07	1
rs77088231	16	22407737	A	G	CDR2	-0.07	0	3.5557E-08	0	4.93	0.6688041	1.08E-07	1
rs76940952	16	22379558	C	T	CDR2	-0.07	0	3.5562E-08	0	4.93	0.6683392	1.08E-07	1
rs150085172	16	22380323	G	A	CDR2	-0.07	0	3.5563E-08	0	4.93	0.6683371	1.08E-07	1
rs57949020	16	22407010	A	G	CDR2	-0.07	0	3.5568E-08	0	4.93	0.6687893	1.08E-07	1
rs56148806	6	164894354	T	C	C6orf118	-0.03	0	3.5581E-08	46	13.18	0.0678054	3.135E-07	1
rs56285679	10	90992035	A	G	ANKRD1	-0.03	0	3.5588E-08	55	15.73	0.0276752	1.999E-07	1
rs2586759	18	50852694	T	C	ME2	-0.03	0	3.5606E-08	0	5.11	0.6465077	1.081E-07	1
rs112720317	16	22417287	T	TAAAAG	CDR2	-0.07	0	3.5612E-08	0	4.93	0.6690452	1.081E-07	1
rs3803648	16	22419849	C	T	CDR2	-0.07	0	3.5625E-08	0	4.84	0.6798506	1.082E-07	1
rs2120158	4	142698433	T	C	INPP4B	0.03	0	3.5638E-08	43	12.48	0.0857746	1.619E-07	1
rs7218526	17	79820061	C	A	CBX4	0.05	0	3.5639E-08	0	4.52	0.7183597	1.082E-07	1
rs935116	15	87430512	G	A	AGBL1	-0.03	0	3.564E-08	0	3.94	0.7872175	1.082E-07	1
rs62419303	6	101883959	A	G	GRIK2	0.03	0	3.5642E-08	26	9.59	0.2131193	6.639E-08	1
rs147774910	7	93486762	G	A	CALCR	0.09	0	3.5642E-08	0	6.71	0.4596797	1.082E-07	1
rs884810	10	98163826	T	G	R3HCC1L	0.03	0	3.5643E-08	43	12.46	0.0863604	2.068E-07	1
rs77209033	16	22418652	G	A	CDR2	-0.07	0	3.5643E-08	0	4.93	0.6689057	1.082E-07	1
rs8021682	14	103822668	C	T	PPP1R13B	0.03	0	3.5656E-08	0	6.35	0.4996311	1.083E-07	1
rs1348229	3	19441483	G	A	KCNH8	-0.03	0	3.5666E-08	0	1.41	0.9853936	1.083E-07	1
rs1508090	8	56878621	T	G	IMPAD1	0.03	0	3.5672E-08	27	9.62	0.2113724	1.083E-07	1
rs1997913	14	103747623	C	T	PPP1R13B	0.03	0	3.5677E-08	0	6.28	0.5071107	1.083E-07	1
rs2463506	5	9357830	A	G	SEMA5A	-0.04	0	3.5701E-08	0	3.58	0.8264881	1.084E-07	1
rs3008204	1	213751617	T	C	PROX1	0.03	0	3.5727E-08	0	2.39	0.9348335	1.085E-07	1
rs8009868	14	103832842	T	C	PPP1R13B	0.03	0	3.5731E-08	2	7.17	0.4109371	1.134E-07	1
rs851004	6	36102195	G	T	MAPK14	0.04	0	3.5743E-08	25	9.38	0.2265524	1.754E-07	1
rs34153056	13	112168285	C	T	SOX1	-0.03	0	3.575E-08	0	3.15	0.8707725	1.085E-07	1

Table S2

rs4692472	4	30559459	G	A	PCDH7	-0.04	0	3.5766E-08	43	12.33	0.090263	1.023E-07	1
rs6789603	3	82339535	T	C	GBE1	-0.04	0	3.5768E-08	11	7.87	0.3439677	1.221E-07	1
rs140316360	16	21664899	C	G	METTL9	-0.07	0	3.5781E-08	0	4.06	0.7723177	1.086E-07	1
rs2496037	10	104756048	T	C	SORCS3	-0.03	0	3.5801E-08	0	4.05	0.7738004	1.087E-07	1
rs9291977	5	52364692	G	A	ITGA1	0.03	0	3.5806E-08	28	9.73	0.2044348	7.219E-08	1
rs10151485	14	98161896	T	C	C14orf177	0.04	0	3.5809E-08	0	2.57	0.9217434	1.087E-07	1
rs7161307	14	98141346	C	T	C14orf177	0.04	0	3.582E-08	0	2.45	0.9309649	1.087E-07	1
rs7647861	3	82340479	A	G	GBE1	-0.04	0	3.5825E-08	11	7.87	0.3438156	1.223E-07	1
rs9860293	3	82341280	A	G	GBE1	-0.04	0	3.5827E-08	11	7.87	0.3438231	1.223E-07	1
rs9821311	3	49506223	C	T	DAG1	-0.03	0	3.5834E-08	0	6.07	0.5320032	1.088E-07	1
rs1910436	12	60606058	T	C	SLC16A7	-0.03	0	3.5838E-08	55	15.75	0.0274943	1.05E-07	1
rs12031695	1	162885692	C	A	CCDC190	0.04	0	3.5844E-08	37	11.18	0.1309627	3.606E-07	1
rs9356053	6	162625569	A	G	PARK2	0.03	0	3.5848E-08	0	5.82	0.5608497	1.088E-07	1
rs10069918	5	52363641	G	A	ITGA1	0.03	0	3.585E-08	28	9.73	0.2045169	7.231E-08	1
rs12202922	6	151254735	T	C	AKAP12	0.03	0	3.5852E-08	1	7.14	0.4142966	8.597E-08	1
rs11682182	2	95712462	T	C	TRIM43	-0.03	0	3.5852E-08	0	2.67	0.9136841	1.088E-07	1
rs1587740	12	60625681	G	A	SLC16A7	-0.03	0	3.5872E-08	53	14.97	0.0364287	1.139E-07	1
rs2723741	12	60624097	G	T	SLC16A7	-0.03	0	3.5883E-08	54	15.32	0.0321623	1.15E-07	1
rs10063046	5	52363658	A	T	ITGA1	0.03	0	3.5887E-08	28	9.73	0.2045177	7.238E-08	1
rs112139176	16	22339528	TAAGA	T	POLR3E	-0.07	0	3.5889E-08	0	4.67	0.7005271	1.089E-07	1
rs1054169	7	12233870	G	A	TMEM106B	0.03	0	3.5889E-08	0	6.4	0.4934789	1.089E-07	1
rs6693764	1	162884660	A	G	CCDC190	0.04	0	3.5904E-08	37	11.18	0.130941	3.612E-07	1
rs1475296	13	96352019	T	C	HS6ST3	0.03	0	3.5906E-08	0	3.08	0.8774785	1.09E-07	1
rs9597421	13	56479625	C	T	PRR20A	-0.04	0	3.5908E-08	0	6.18	0.5184822	1.09E-07	1
rs150547593	2	197108119	C	T	AC013264.1,A	0.06	0	3.5911E-08	0	6.52	0.4808604	1.09E-07	1
rs9848744	3	82351678	G	T	GBE1	-0.04	0	3.5915E-08	11	7.88	0.3437453	1.226E-07	1
rs9848200	3	82351550	C	T	GBE1	-0.04	0	3.5917E-08	11	7.87	0.3437453	1.226E-07	1
rs10801826	1	90741021	C	T	BARHL2	0.03	0	3.5933E-08	16	8.43	0.2962319	9.515E-08	1
rs6693792	1	162884744	A	G	CCDC190	0.04	0	3.5941E-08	37	11.18	0.130937	3.616E-07	1
rs77009305	13	105403081	G	A	DAOA	-0.04	0	3.5985E-08	0	6.69	0.4617546	1.092E-07	1

rs4856386	3	82354429	G	A	GBE1	-0.04	0	3.6003E-08	11	7.87	0.3438401	1.229E-07	1
rs6809919	3	82354517	G	A	GBE1	-0.04	0	3.6003E-08	11	7.87	0.3438401	1.229E-07	1
rs8015603	14	103827341	C	G	PPP1R13B	0.03	0	3.6005E-08	0	6.35	0.4996455	1.093E-07	1
rs8022783	14	103779236	T	C	PPP1R13B	0.03	0	3.6033E-08	0	6.24	0.5115323	1.094E-07	1
rs9927214	16	58919093	T	C	GOT2	-0.03	0	3.6035E-08	38	11.39	0.122675	1.962E-07	1
rs73228266	4	30533707	G	A	PCDH7	-0.03	0	3.6042E-08	41	12.03	0.0995052	9.557E-08	1
rs79926455	16	21664670	T	A	METTL9	-0.07	0	3.6049E-08	0	4.06	0.7730768	1.094E-07	1
rs2815806	6	36103178	G	A	MAPK14	0.04	0	3.6054E-08	25	9.38	0.226597	1.771E-07	1
rs34330483	17	68103876	G	T	KPNA2	-0.03	0	3.6058E-08	3	7.26	0.4023327	1.241E-07	1
rs56317050	1	198225973	A	G	NEK7	0.04	0	3.6058E-08	26	9.49	0.2193645	1.579E-07	1
rs78648240	13	58624331	G	A	PCDH17	-0.09	0	3.6075E-08	0	3.54	0.8312541	1.095E-07	1
rs33986262	8	9938047	TGG	T	MSRA	-0.03	0	3.6077E-08	0	4.86	0.6770165	1.095E-07	1
rs11160760	14	103782601	G	T	PPP1R13B	0.03	0	3.6082E-08	0	6.24	0.5116844	1.095E-07	1
rs143384357	14	103785234	G	GT	PPP1R13B	0.03	0	3.6091E-08	0	6.24	0.5116929	1.095E-07	1
rs17559249	5	125788512	A	C	GRAMD3	0.08	0	3.6094E-08	0	6.92	0.4373746	1.096E-07	1
rs11160761	14	103788519	A	T	PPP1R13B	0.03	0	3.6096E-08	0	6.24	0.5116842	1.096E-07	1
rs78267129	16	22390580	G	T	CDR2	-0.07	0	3.6097E-08	0	4.84	0.6794466	1.096E-07	1
rs77855383	16	21664519	A	G	METTL9	-0.07	0	3.6098E-08	0	4.05	0.7734632	1.096E-07	1
rs189811962	16	22408271	G	C	CDR2	-0.07	0	3.6101E-08	0	4.82	0.6822241	1.096E-07	1
rs144216790	16	21308216	G	A	CRYM	-0.07	0	3.611E-08	0	4.49	0.7213784	1.096E-07	1
rs6854665	4	30536498	G	C	PCDH7	-0.03	0	3.6115E-08	41	12.02	0.0999065	9.569E-08	1
rs79222572	6	164687522	T	G	C6orf118	0.03	0	3.6118E-08	0	5.74	0.570375	1.096E-07	1
rs3001932	10	104766861	T	G	SORCS3	-0.03	0	3.6121E-08	0	4.13	0.7642244	1.096E-07	1
rs74968674	16	21663118	C	A	METTL9	-0.07	0	3.6122E-08	0	4.37	0.73683	1.096E-07	1
rs11160762	14	103788746	G	A	PPP1R13B	0.03	0	3.6139E-08	0	6.24	0.5114808	1.097E-07	1
rs76315901	16	22385441	A	C	CDR2	-0.07	0	3.6144E-08	0	4.84	0.6793611	1.097E-07	1
rs2451461	10	104750951	C	T	SORCS3	-0.03	0	3.6152E-08	0	4.05	0.7743821	1.097E-07	1
rs1820248	16	72005706	G	T	DHODH	-0.03	0	3.6153E-08	0	6.51	0.4812123	1.097E-07	1
rs1059288	6	33299895	A	G	TAPBP	0.03	0	3.617E-08	0	7.03	0.4253804	1.112E-07	1
rs10789931	11	112972051	C	T	NCAM1	0.03	0	3.6189E-08	0	6.62	0.4689405	1.098E-07	1

Table S2

rs3800841	7	12232942	A	T	TMEM106B	0.03	0	3.6198E-08	0	6.3	0.5046443	1.099E-07	1
rs148442332	4	142693937	TTCTC	T	INPP4B	0.03	0	3.62E-08	44	12.65	0.0810241	1.706E-07	1
rs188605371	5	125786795	T	C	GRAMD3	0.08	0	3.6201E-08	0	6.92	0.4371929	1.099E-07	1
rs76112692	16	22375076	T	C	CDR2	-0.07	0	3.6223E-08	0	4.93	0.668195	1.099E-07	1
rs6136270	20	18062641	T	G	OVOL2	-0.03	0	3.6223E-08	0	4.03	0.7757758	1.095E-07	1
rs77611959	16	22375165	G	A	CDR2	-0.07	0	3.6226E-08	0	4.93	0.6681952	1.099E-07	1
rs141464151	5	30814625	G	GTTTCT	CDH6	0.03	0	3.6233E-08	0	5.29	0.6249517	1.1E-07	1
rs8095056	18	53279964	G	A	DCC	0.03	0	3.6234E-08	31	10.27	0.1737416	1.1E-07	1
rs7167646	15	71627820	C	A	THSD4	0.03	0	3.6242E-08	0	5.39	0.6121273	1.1E-07	1
rs150751467	16	22416730	T	C	CDR2	-0.07	0	3.6261E-08	0	4.93	0.6685771	1.1E-07	1
rs116907757	16	22383083	G	A	CDR2	-0.07	0	3.6269E-08	0	4.93	0.6683303	1.101E-07	1
rs77288428	16	22410081	C	A	CDR2	-0.07	0	3.6272E-08	0	4.93	0.668025	1.101E-07	1
rs2361364	1	246096073	G	A	SMYD3	-0.03	0	3.6272E-08	9	7.71	0.3588192	7.778E-08	1
rs1057141	6	32850997	T	C	PSMB9,TAP1	0.03	0	3.6281E-08	4	7.33	0.3949951	1.216E-07	1
rs1496007	6	164672142	A	G	C6orf118	0.03	0	3.6286E-08	0	5.71	0.5744595	1.101E-07	1
rs17149894	7	12215313	C	T	TMEM106B	0.03	0	3.6291E-08	0	5.67	0.5792703	1.101E-07	1
rs4850610	2	195357240	G	A	SLC39A10	0.04	0	3.632E-08	0	5.83	0.5596374	1.102E-07	1
rs73986793	2	195400100	T	A	SLC39A10	0.05	0	3.6321E-08	0	3.92	0.788825	1.102E-07	1
rs1880219	2	195358559	G	A	SLC39A10	0.04	0	3.6357E-08	0	5.83	0.5599137	1.103E-07	1
rs6852985	4	47108366	C	T	GABRB1	-0.03	0	3.6389E-08	0	2.66	0.91483	1.104E-07	1
rs2205935	6	25679732	A	G	SCGN	0.04	0	3.6407E-08	5	7.39	0.3893496	1.278E-07	1
rs3935210	3	44419588	G	A	LINC00694	-0.03	0	3.642E-08	0	4.55	0.7145075	1.105E-07	1
rs13378888	13	112165342	A	G	SOX1	0.03	0	3.6425E-08	0	1.15	0.9921152	1.105E-07	1
rs62390943	6	22941708	T	C	HDGFL1	-0.06	0	3.6431E-08	4	7.36	0.3925308	1.283E-07	1
rs1020004	7	12216152	T	C	TMEM106B	0.03	0	3.6449E-08	0	5.66	0.5794581	1.106E-07	1
rs9838823	3	116621678	T	C	LSAMP	-0.05	0	3.6489E-08	0	4.92	0.6695151	1.107E-07	1
rs59223558	16	21308383	G	T	CRYM	-0.07	0	3.6489E-08	0	4.49	0.7215015	1.107E-07	1
rs6791542	3	48749786	A	G	PRKAR2A	-0.03	0	3.6489E-08	0	6.36	0.4986812	1.107E-07	1
rs76893236	16	22336623	C	G	POLR3E	-0.07	0	3.6492E-08	0	4.97	0.6633749	1.107E-07	1
rs11786587	8	56882043	G	A	IMPAD1	0.03	0	3.6532E-08	26	9.55	0.2153689	1.108E-07	1

rs4738554	8	56880255	C	G	IMPAD1	0.03	0	3.6532E-08	26	9.55	0.2153689	1.108E-07	1
rs17123871	12	60491883	T	C	SLC16A7	-0.03	0	3.6532E-08	53	15.05	0.0354242	2.192E-07	1
rs1372504	5	104413727	G	A	NUDT12	0.03	0	3.6535E-08	0	5.76	0.5682558	1.109E-07	1
rs35653171	3	29570952	GGGTT	G	RBMS3,RP11	-0.04	0	3.6538E-08	33	10.59	0.1575284	8.479E-08	1
rs61859612	10	90991262	C	T	ANKRD1	-0.03	0	3.655E-08	55	15.76	0.0273827	2.054E-07	1
rs74684725	16	21662763	C	A	METTL9	-0.07	0	3.6589E-08	0	4.06	0.7726143	1.11E-07	1
rs59306698	16	21308400	A	G	CRYM	-0.07	0	3.6593E-08	0	4.49	0.7217916	1.11E-07	1
rs9368560	6	28192182	T	C	ZSCAN9	-0.04	0	3.6611E-08	47	13.26	0.065947	2.001E-07	1
rs530723151	11	113944101	C	T	HTR3B	-0.06	0	3.6618E-08	0	6.32	0.5027355	1.111E-07	1
rs2295140	14	103749956	C	T	PPP1R13B	0.03	0	3.6623E-08	0	6.33	0.5014299	1.111E-07	1
rs12596543	16	30017814	A	G	DOC2A	-0.03	0	3.6626E-08	31	10.24	0.1751762	1.494E-07	1
rs10090426	8	29152457	C	T	KIF13B	0.03	0	3.6626E-08	0	4.39	0.7336635	1.111E-07	1
rs34694345	10	104720438	A	C	SORCS3	0.03	0	3.6632E-08	0	3.61	0.823623	1.111E-07	1
rs191954621	6	33476040	C	A	ZBTB9	-0.07	0	3.6663E-08	0	4.12	0.7661627	1.112E-07	1
rs4694835	4	47113184	G	A	GABRB1	-0.03	0	3.6667E-08	0	2.68	0.9132263	1.112E-07	1
rs6575999	14	103784272	C	G	PPP1R13B	0.03	0	3.6677E-08	0	6.25	0.5108007	1.113E-07	1
rs7766356	6	28432761	T	C	ZSCAN23	-0.05	0	3.6684E-08	9	7.76	0.3542423	1.457E-07	1
rs28816799	16	58914880	C	T	GOT2	-0.03	0	3.6703E-08	39	11.56	0.1161075	2.026E-07	1
rs73098915	7	42713363	G	A	C7orf25	-0.07	0	3.6716E-08	0	2.15	0.95126	1.114E-07	1
rs1877405	4	30559667	C	A	PCDH7	-0.04	0	3.6725E-08	43	12.32	0.0904042	1.05E-07	1
rs12598883	16	22404863	T	G	CDR2	-0.07	0	3.6727E-08	0	4.91	0.6713962	1.114E-07	1
rs4692099	4	30559691	T	C	PCDH7	-0.04	0	3.674E-08	43	12.33	0.0903307	1.257E-07	1
rs10206338	2	59982846	G	A	BCL11A	0.03	0	3.6781E-08	53	15.16	0.0339956	1.663E-07	1
rs78563552	12	71602949	G	A	ZFC3H1	0.05	0	3.6795E-08	0	4.46	0.7257187	1.116E-07	1
rs2317779	8	56865190	C	T	IMPAD1	0.03	0	3.6799E-08	29	9.95	0.1913872	1.116E-07	1
rs12597096	16	22435807	G	A	CDR2	-0.07	0	3.6802E-08	0	4.86	0.6776263	1.116E-07	1
rs35466472	10	104718950	T	A	SORCS3	0.03	0	3.6817E-08	0	3.61	0.8232097	1.117E-07	1
rs1372491	4	47107343	A	G	GABRB1	-0.03	0	3.6819E-08	0	2.66	0.9145285	1.117E-07	1
rs79136172	12	71603588	T	C	ZFC3H1	0.05	0	3.6848E-08	0	4.46	0.7258445	1.118E-07	1
rs10517178	4	47100976	C	T	GABRB1	-0.03	0	3.6855E-08	0	2.64	0.9158374	1.118E-07	1

rs77227789	12	101232401	T	G	SLC5A8	-0.04	0	3.6862E-08	9	7.73	0.3569108	1.072E-07	1
rs6846798	4	30535157	C	T	PCDH7	-0.03	0	3.6864E-08	41	12.02	0.1000313	9.759E-08	1
rs6426279	1	246121332	C	T	SMYD3	0.03	0	3.6872E-08	0	5.87	0.5549329	1.107E-07	1
rs34631102	7	128181691	T	C	LEP	0.03	0	3.6913E-08	0	5.14	0.6427307	1.12E-07	1
rs10025590	4	47106333	G	C	GABRB1	-0.03	0	3.6932E-08	0	2.66	0.9146121	1.12E-07	1
rs114955707	16	21661093	C	T	METTL9	-0.07	0	3.6956E-08	0	4.06	0.7726758	1.121E-07	1
rs9356054	6	162627840	C	A	PARK2	0.03	0	3.6979E-08	0	5.82	0.5607837	1.122E-07	1
rs117887267	16	21660872	G	A	METTL9	-0.07	0	3.6991E-08	0	4.06	0.7724709	1.122E-07	1
rs10455913	6	162630074	T	C	PARK2	0.03	0	3.6992E-08	0	5.82	0.5608077	1.122E-07	1
rs6800583	3	16810253	A	G	PLCL2	-0.03	0	3.6992E-08	0	6.81	0.4490864	1.122E-07	1
rs6491287	13	96374769	C	T	HS6ST3	0.03	0	3.6995E-08	0	4.65	0.7031118	1.122E-07	1
rs9393728	6	26509102	C	G	BTN1A1	0.03	0	3.7013E-08	0	2.8	0.9025509	1.123E-07	1
rs34155397	14	103824955	TA	T	PPP1R13B	0.03	0	3.7017E-08	0	6.34	0.5002337	1.123E-07	1
rs3803647	16	22323242	C	T	POLR3E	-0.07	0	3.7019E-08	0	4.97	0.6632361	1.123E-07	1
rs4609835	16	58914197	A	G	GOT2	-0.03	0	3.7027E-08	38	11.45	0.1201171	2.009E-07	1
rs9597407	13	56426261	A	G	PRR20A	-0.04	0	3.7052E-08	0	6.25	0.5111756	1.124E-07	1
rs17614926	12	60489845	C	T	SLC16A7	-0.03	0	3.7076E-08	53	14.9	0.0373659	2.237E-07	1
rs12123726	1	210656684	G	A	HHAT	0.03	0	3.7077E-08	0	6.64	0.4675482	1.125E-07	1
rs4682538	3	114387684	T	C	ZBTB20	0.03	0	3.7086E-08	0	4.31	0.7439976	1.125E-07	1
rs11541286	12	71614641	T	C	ZFC3H1	0.05	0	3.7094E-08	0	4.42	0.7309023	1.125E-07	1
rs62389599	6	23060761	C	A	HDGFL1	-0.04	0	3.7117E-08	24	9.25	0.2355089	1.891E-07	1
rs557909333	19	54022689	C	G	CACNG6	-0.07	0	3.7121E-08	0	0.75	0.9979277	1.126E-07	1
rs4909625	8	134722282	C	T	ZFAT	0.03	0	3.7141E-08	0	4.01	0.7780743	1.127E-07	1
rs5811119	14	103820445	AT	A	PPP1R13B	0.03	0	3.7146E-08	0	6.23	0.5127285	1.127E-07	1
rs11160759	14	103765205	C	T	PPP1R13B	0.03	0	3.7162E-08	0	6.37	0.4972428	1.127E-07	1
rs16840328	2	195409387	T	C	SLC39A10	0.05	0	3.7164E-08	0	4.23	0.75251	1.127E-07	1
rs219004	1	36684720	T	C	GRIK3	0.03	0	3.7177E-08	47	13.27	0.0659013	8.928E-08	1
rs8018363	14	103815582	G	C	PPP1R13B	0.03	0	3.7197E-08	0	6.86	0.4441117	1.128E-07	1
rs10958507	8	56883394	A	G	IMPAD1	0.03	0	3.7219E-08	27	9.6	0.2122177	1.129E-07	1
rs10151901	14	98164118	G	A	C14orf177	0.04	0	3.722E-08	0	2.54	0.923679	1.129E-07	1

rs12676747	8	56884996	C	T	IMPAD1	0.03	0	3.7229E-08	27	9.6	0.212232	1.129E-07	1
rs516032	6	153558284	T	C	RGS17	0.03	0	3.7243E-08	52	14.63	0.0410871	8.284E-08	1
rs1547604	14	103804322	A	T	PPP1R13B	0.03	0	3.7245E-08	0	6.85	0.4443172	1.13E-07	1
rs4695191	4	47113121	C	T	GABRB1	-0.03	0	3.725E-08	0	2.66	0.9145978	1.13E-07	1
rs6447532	4	47112712	G	C	GABRB1	-0.03	0	3.7257E-08	0	2.66	0.9145939	1.13E-07	1
rs12894254	14	103824612	G	C	PPP1R13B	0.03	0	3.7268E-08	0	6.34	0.5005356	1.13E-07	1
rs75302324	12	71603077	C	G	ZFC3H1	0.05	0	3.7282E-08	0	4.46	0.7254112	1.131E-07	1
rs34303534	3	81923683	A	G	GBE1	-0.06	0	3.7339E-08	0	5.3	0.6234341	1.132E-07	1
rs12596086	16	22325095	T	C	POLR3E	-0.07	0	3.734E-08	0	4.98	0.6626437	1.132E-07	1
rs1880528	7	55554031	T	A	VOPP1	0.03	0	3.7352E-08	0	5.44	0.6065626	1.133E-07	1
rs12819149	12	100925606	G	A	ANO4	0.03	0	3.736E-08	18	8.62	0.2813828	1.133E-07	1
rs76817317	12	71605015	G	A	ZFC3H1	0.05	0	3.7396E-08	0	4.46	0.7253185	1.134E-07	1
rs1396186	8	10017694	T	C	MSRA	0.03	0	3.7416E-08	0	2.45	0.9308295	1.135E-07	1
rs1946320	5	52365543	T	C	ITGA1	0.03	0	3.7418E-08	27	9.71	0.2053891	7.579E-08	1
rs76938034	16	22295089	A	T	POLR3E	-0.07	0	3.743E-08	0	4.98	0.662582	1.135E-07	1
rs9316860	13	56487824	A	G	PRR20A	-0.04	0	3.7438E-08	0	6.22	0.5142315	1.135E-07	1
rs4885974	13	56482887	A	G	PRR20A	-0.04	0	3.7452E-08	0	6.22	0.514241	1.136E-07	1
rs10780430	9	80562189	G	A	TLE4	0.03	0	3.7459E-08	0	3.38	0.8480344	1.136E-07	1
rs4900600	14	103825502	A	G	PPP1R13B	0.03	0	3.7463E-08	0	6.35	0.499578	1.136E-07	1
rs748832	3	16809700	G	A	PLCL2	-0.03	0	3.7463E-08	0	6.81	0.4489636	1.136E-07	1
rs74982939	16	22306034	C	G	POLR3E	-0.07	0	3.7465E-08	0	4.98	0.6624522	1.136E-07	1
rs34091898	8	56883487	TG	T	IMPAD1	0.03	0	3.7477E-08	26	9.57	0.214461	1.136E-07	1
rs6830613	4	30536062	T	G	PCDH7	-0.03	0	3.7483E-08	41	11.95	0.1021322	1.006E-07	1
rs61859616	10	90992684	G	A	ANKRD1	-0.03	0	3.7488E-08	54	15.36	0.031626	2.139E-07	1
rs464865	6	33289409	A	G	PFDN6,WDR	0.03	0	3.7503E-08	10	7.85	0.3458165	1.422E-07	1
rs544515	8	9938105	C	T	MSRA	-0.03	0	3.7504E-08	0	4.82	0.6815066	1.137E-07	1
rs7152148	14	103768753	G	T	PPP1R13B	0.03	0	3.7506E-08	0	6.32	0.5033738	1.137E-07	1
rs1565420	10	104727342	A	G	SORCS3	-0.03	0	3.7516E-08	0	3.7	0.8131526	1.138E-07	1
rs56171903	4	46576007	C	T	GABRA2	0.04	0	3.7518E-08	0	5.16	0.6407078	1.138E-07	1
rs9347026	6	164654713	G	A	C6orf118	0.03	0	3.7526E-08	1	7.08	0.4205509	1.177E-07	1

Table S2

rs8013699	14	98143077	C	T	C14orf177	0.04	0	3.7527E-08	0	2.45	0.9308207	1.138E-07	1
rs7160371	14	98170787	G	A	C14orf177	0.04	0	3.753E-08	0	2.52	0.9255986	1.138E-07	1
rs8007838	14	98164947	A	G	C14orf177	0.04	0	3.7538E-08	0	2.55	0.923627	1.138E-07	1
rs10789930	11	112972027	T	G	NCAM1	0.03	0	3.7553E-08	0	6.63	0.4680231	1.139E-07	1
rs626913	8	60635935	A	C	RAB2A	0.03	0	3.7554E-08	0	2.1	0.9540642	1.139E-07	1
rs61324392	16	22357590	G	C	CDR2	-0.07	0	3.7565E-08	0	4.95	0.6658176	1.139E-07	1
rs76779070	16	22314697	G	A	POLR3E	-0.07	0	3.7607E-08	0	4.98	0.6622235	1.14E-07	1
rs117510172	16	22311648	C	T	POLR3E	-0.07	0	3.7609E-08	0	4.98	0.6622207	1.14E-07	1
rs12597260	16	22305694	C	G	POLR3E	-0.07	0	3.7609E-08	0	4.98	0.6622207	1.14E-07	1
rs59017003	16	22310397	C	A	POLR3E	-0.07	0	3.7609E-08	0	4.98	0.6622207	1.14E-07	1
rs61672348	16	22310390	G	A	POLR3E	-0.07	0	3.7609E-08	0	4.98	0.6622207	1.14E-07	1
rs77847928	16	22309346	C	G	POLR3E	-0.07	0	3.7609E-08	0	4.98	0.6622207	1.14E-07	1
rs76116699	16	22318798	T	C	POLR3E	-0.07	0	3.761E-08	0	4.98	0.6622322	1.14E-07	1
rs2926355	16	22314460	C	T	POLR3E	0.07	0	3.7611E-08	0	4.98	0.6622008	1.14E-07	1
rs10607302	5	30815486	TGC	T	CDH6	0.03	0	3.7611E-08	0	5.26	0.6279853	1.14E-07	1
rs111903490	14	103809826	A	AATTATT	PPP1R13B	0.03	0	3.7611E-08	0	6.31	0.5040872	1.14E-07	1
rs12598327	16	22318139	G	T	POLR3E	-0.07	0	3.7613E-08	0	4.98	0.6622283	1.141E-07	1
rs75258522	16	22315557	G	A	POLR3E	-0.07	0	3.7613E-08	0	4.98	0.6622283	1.141E-07	1
rs116944985	16	21311028	G	C	CRYM	-0.07	0	3.7616E-08	0	4.51	0.7193644	1.141E-07	1
rs35627219	2	22664035	C	CAA	KLHL29	0.03	0	3.7656E-08	16	8.34	0.3033222	1.893E-07	1
rs10497758	2	195410631	A	G	SLC39A10	0.05	0	3.7662E-08	0	4.23	0.7526138	1.142E-07	1
rs6868642	5	30815854	G	C	CDH6	0.03	0	3.7678E-08	0	5.26	0.628179	1.142E-07	1
rs11847468	14	103753958	G	A	PPP1R13B	0.03	0	3.7684E-08	0	6.29	0.5058049	1.143E-07	1
rs76718064	3	16751239	G	A	PLCL2	-0.04	0	3.7687E-08	21	8.88	0.2615345	1.579E-07	1
rs141718572	3	16750454	TCTTA	T	PLCL2	-0.04	0	3.7713E-08	21	8.87	0.2619943	1.577E-07	1
rs10922912	1	90741810	A	G	BARHL2	0.03	0	3.7753E-08	16	8.43	0.296177	1.001E-07	1
rs157617	4	16710066	G	T	LDB2	-0.03	0	3.7756E-08	0	1.66	0.9761555	1.145E-07	1
rs8009025	14	98164834	T	C	C14orf177	0.04	0	3.7774E-08	0	2.54	0.9237767	1.145E-07	1
rs56954792	10	90992573	G	A	ANKRD1	-0.03	0	3.7774E-08	55	15.58	0.0292443	2.143E-07	1
rs12323200	13	112166684	G	A	SOX1	0.03	0	3.7778E-08	0	1	0.9947677	1.145E-07	1

rs79258387	16	22327256	A	C	POLR3E	-0.07	0	3.7791E-08	0	4.98	0.6621873	1.146E-07	1
rs10607303	5	30815489	ATG	A	CDH6	0.03	0	3.7792E-08	0	5.34	0.618202	1.146E-07	1
rs118138543	16	22327411	C	G	POLR3E	-0.07	0	3.7793E-08	0	4.98	0.6621846	1.146E-07	1
rs117111739	16	22328859	C	G	POLR3E	-0.07	0	3.78E-08	0	4.98	0.6621889	1.146E-07	1
rs16883749	4	30537138	A	G	PCDH7	-0.03	0	3.7809E-08	41	11.95	0.1021037	1.146E-07	1
rs75854270	16	22330149	C	A	POLR3E	-0.07	0	3.7812E-08	0	4.98	0.6621919	1.146E-07	1
rs145234012	16	22331198	C	T	POLR3E	-0.07	0	3.7819E-08	0	4.98	0.6621968	1.147E-07	1
rs17701568	14	98165444	T	C	C14orf177	0.04	0	3.782E-08	0	2.54	0.9239428	1.147E-07	1
rs12599277	16	22331897	G	C	POLR3E	-0.07	0	3.7823E-08	0	4.98	0.6622003	1.147E-07	1
rs28384387	16	22296753	A	G	POLR3E	-0.07	0	3.783E-08	0	4.98	0.6622459	1.147E-07	1
rs117115694	16	22332577	T	C	POLR3E	-0.07	0	3.7833E-08	0	4.98	0.6622015	1.147E-07	1
rs56787125	2	84146645	A	AT	SUCLG1	-0.04	0	3.7849E-08	0	4.82	0.6813848	1.147E-07	1
rs117878677	16	22356315	G	A	CDR2	-0.07	0	3.7876E-08	0	4.96	0.6647792	1.148E-07	1
rs59618849	16	22336986	T	C	POLR3E	-0.07	0	3.7879E-08	0	4.98	0.662211	1.148E-07	1
rs2024667	14	103745192	T	G	PPP1R13B	0.03	0	3.7879E-08	0	6.29	0.5063131	1.148E-07	1
rs11367794	15	77777264	TG	T	LINGO1	0.03	0	3.7883E-08	22	8.98	0.2539716	1.982E-07	1
rs77587545	16	22338218	C	A	POLR3E	-0.07	0	3.7897E-08	0	4.98	0.6621947	1.149E-07	1
rs11866996	16	22338526	C	T	POLR3E	-0.07	0	3.7904E-08	0	4.98	0.6621965	1.149E-07	1
rs146179459	16	22338890	C	A	POLR3E	-0.07	0	3.791E-08	0	4.98	0.6621887	1.149E-07	1
rs1555689	6	33869476	T	C	MLN	0.03	0	3.7912E-08	55	15.63	0.0287362	2.052E-07	1
rs28740811	12	23992452	G	T	SOX5	0.06	0	3.7938E-08	12	8.04	0.3289393	1.45E-07	1
rs7948789	11	112968810	A	G	NCAM1	0.03	0	3.7941E-08	25	9.44	0.2226688	1.515E-07	1
rs76939095	16	22352955	T	C	CDR2	-0.07	0	3.7961E-08	0	4.97	0.6632497	1.151E-07	1
rs78821331	16	21707309	C	T	OTOA	-0.06	0	3.7962E-08	0	3.49	0.8367965	1.151E-07	1
rs11628481	14	103775162	C	T	PPP1R13B	0.03	0	3.7964E-08	0	6.32	0.5030189	1.151E-07	1
rs117557319	16	21659842	G	A	METTL9	-0.07	0	3.7967E-08	0	4.06	0.772854	1.151E-07	1
rs142052924	5	154217573	A	T	GALNT10,M	0.08	0	3.7972E-08	0	6.24	0.512015	1.079E-07	1
rs145086505	10	90992534	GTTC	G	ANKRD1	-0.03	0	3.7981E-08	55	15.58	0.029223	2.154E-07	1
rs2166172	1	90742957	A	C	BARHL2	0.03	0	3.8029E-08	16	8.43	0.2963249	1.008E-07	1
rs10884058	10	104861139	G	A	SORCS3	-0.03	0	3.8045E-08	14	8.22	0.313851	1.341E-07	1

rs567934755	17	67776490	T	C	NOL11	0.05	0	3.8091E-08	0	3.3	0.8562339	1.155E-07	1
rs12709063	16	60653083	A	G	RP11-457D20	-0.03	0	3.8104E-08	0	5.46	0.6043194	1.155E-07	1
rs12599010	16	22343728	C	T	CDR2	-0.07	0	3.8106E-08	0	4.99	0.6616768	1.155E-07	1
rs12596884	16	22343889	T	C	CDR2	-0.07	0	3.811E-08	0	4.99	0.6616753	1.155E-07	1
rs79203205	16	22336595	G	T	POLR3E	-0.07	0	3.8111E-08	0	4.98	0.6619206	1.155E-07	1
rs56772932	16	22346052	C	CAGA	CDR2	-0.07	0	3.8114E-08	0	4.99	0.6615935	1.155E-07	1
rs876002	14	103773360	G	A	PPP1R13B	0.03	0	3.8118E-08	0	6.32	0.5032899	1.155E-07	1
rs11628240	14	103751798	A	G	PPP1R13B	0.03	0	3.8121E-08	0	6.29	0.5059448	1.156E-07	1
rs17109948	12	71608532	G	A	ZFC3H1	0.05	0	3.8121E-08	0	4.46	0.7250727	1.156E-07	1
rs12878682	14	103767290	G	C	PPP1R13B	0.03	0	3.8125E-08	0	6.32	0.5034001	1.156E-07	1
rs12588489	14	103766677	A	G	PPP1R13B	0.03	0	3.8125E-08	0	6.32	0.5034015	1.156E-07	1
rs141516441	14	103755091	T	TTTC	PPP1R13B	0.03	0	3.8132E-08	0	6.29	0.5059353	1.156E-07	1
rs2166171	1	90742894	T	C	BARHL2	0.03	0	3.8135E-08	16	8.43	0.2964568	1.011E-07	1
rs7204355	16	58917790	G	T	GOT2	-0.03	0	3.814E-08	40	11.74	0.1093163	2.165E-07	1
rs74622827	16	22275281	A	G	EEF2K	-0.07	0	3.8144E-08	0	4.39	0.7333756	1.156E-07	1
rs145026901	16	22300443	CT	C	POLR3E	-0.07	0	3.8147E-08	0	4.98	0.6626533	1.156E-07	1
rs12891589	14	103756875	G	C	PPP1R13B	0.03	0	3.8147E-08	0	6.29	0.5059523	1.156E-07	1
rs138904832	16	22344741	A	T	CDR2	-0.07	0	3.8151E-08	0	4.99	0.6616541	1.156E-07	1
rs7299922	12	54308735	A	G	COPZ1	-0.03	0	3.8154E-08	0	4.49	0.7215779	1.157E-07	1
rs11624184	14	103774661	T	C	PPP1R13B	0.03	0	3.8172E-08	0	6.32	0.5033349	1.157E-07	1
rs11626377	14	103768020	G	A	PPP1R13B	0.03	0	3.8179E-08	0	6.32	0.5033506	1.157E-07	1
rs16840306	2	195408330	A	G	SLC39A10	0.05	0	3.8189E-08	0	4.23	0.7529186	1.158E-07	1
rs139699602	12	71658436	G	T	ZFC3H1	0.05	0	3.8204E-08	0	4.47	0.7245868	1.158E-07	1
rs2348370	15	87385590	A	C	AGBL1	-0.03	0	3.8218E-08	0	3.92	0.7884368	1.158E-07	1
rs118071679	16	22417251	G	A	CDR2	-0.07	0	3.8219E-08	0	4.95	0.6656247	1.158E-07	1
rs112630369	16	21311854	A	G	CRYM	-0.07	0	3.8219E-08	0	4.53	0.7175591	1.158E-07	1
rs12054231	3	44423127	T	C	LINC00694	-0.03	0	3.8223E-08	0	4.67	0.7007486	1.159E-07	1
rs10144091	14	98174115	C	T	C14orf177	0.04	0	3.8231E-08	0	2.52	0.9254684	1.159E-07	1
rs6575997	14	103762209	A	G	PPP1R13B	0.03	0	3.8248E-08	0	6.29	0.5060022	1.159E-07	1
rs9365456	6	162517484	C	T	PARK2	0.03	0	3.8263E-08	0	3.92	0.789277	1.16E-07	1

rs200975	6	27887847	G	T	HIST1H3J	-0.04	0	3.8263E-08	35	10.84	0.1456926	1.408E-07	1
rs10927126	1	244108330	A	C	ZBTB18	0.04	0	3.8286E-08	0	6.25	0.5108116	1.16E-07	1
rs11729583	4	30533200	T	G	PCDH7	-0.03	0	3.8289E-08	41	12.05	0.0989101	1.161E-07	1
rs61616314	16	22406853	A	G	CDR2	-0.07	0	3.8298E-08	0	4.96	0.665155	1.161E-07	1
rs73098922	7	42715923	T	C	C7orf25	-0.07	0	3.8321E-08	0	2.94	0.8904944	1.161E-07	1
rs9355496	6	164654577	C	T	C6orf118	0.03	0	3.8358E-08	0	7.07	0.4217737	1.197E-07	1
rs17110090	12	71648429	G	A	ZFC3H1	0.05	0	3.8378E-08	0	4.48	0.7232277	1.163E-07	1
rs34134431	14	103756925	AT	A	PPP1R13B	0.03	0	3.8387E-08	0	6.29	0.5064445	1.163E-07	1
rs78468743	16	22313320	G	A	POLR3E	-0.07	0	3.8411E-08	0	4.98	0.6623389	1.164E-07	1
rs78692422	16	22316455	C	T	POLR3E	-0.07	0	3.8415E-08	0	4.98	0.6623462	1.164E-07	1
rs2348371	15	87385592	A	G	AGBL1	-0.03	0	3.8449E-08	0	3.92	0.7884689	1.165E-07	1
rs150820796	12	71646404	GA	G	ZFC3H1	0.05	0	3.8467E-08	0	4.48	0.723158	1.166E-07	1
rs61377142	2	195167458	G	A	SLC39A10	0.04	0	3.8509E-08	17	8.48	0.2922254	9.822E-08	1
rs2030734	7	55556708	T	C	VOPP1	0.03	0	3.8514E-08	0	5.53	0.5956945	1.167E-07	1
rs62057756	16	30105932	G	A	GDPD3	-0.03	0	3.8515E-08	23	9.1	0.2454197	1.791E-07	1
rs11192210	10	104862388	C	T	SORCS3	-0.03	0	3.8533E-08	14	8.21	0.3140916	1.358E-07	1
rs149214504	12	71612228	TTTTC	T	ZFC3H1	0.05	0	3.854E-08	0	4.47	0.7242768	1.168E-07	1
rs115720873	16	22289790	G	A	EEF2K	-0.07	0	3.8544E-08	0	5	0.6602169	1.168E-07	1
rs9347658	6	162523534	G	A	PARK2	0.03	0	3.8554E-08	0	3.95	0.7851854	1.168E-07	1
rs77065014	6	50369480	C	A	RP11-397G17	-0.07	0	3.8555E-08	4	7.31	0.3969463	1.263E-07	1
rs55886424	10	90992025	A	G	ANKRD1	-0.03	0	3.8567E-08	55	15.64	0.0286185	2.179E-07	1
rs75791745	14	98166278	T	A	C14orf177	0.04	0	3.8568E-08	0	2.54	0.9241966	1.169E-07	1
rs111869404	1	81020166	C	T	ADGRL2	0.05	0	3.8568E-08	14	8.21	0.3143295	1.822E-07	1
rs150448582	12	71612181	AT	A	ZFC3H1	0.05	0	3.8585E-08	0	4.47	0.7242715	1.169E-07	1
rs147358991	16	22327933	CT	C	POLR3E	-0.07	0	3.8608E-08	0	4.98	0.6623	1.17E-07	1
rs9458574	6	162522376	G	A	PARK2	0.03	0	3.8609E-08	0	3.92	0.7883791	1.17E-07	1
rs11860639	16	22328345	A	G	POLR3E	-0.07	0	3.861E-08	0	4.98	0.6622984	1.17E-07	1
rs10133228	14	98143965	T	G	C14orf177	0.04	0	3.8619E-08	0	2.42	0.9327376	1.17E-07	1
rs12596547	16	22334543	A	G	POLR3E	-0.07	0	3.8641E-08	0	4.98	0.6623317	1.171E-07	1
rs851012	6	36070162	C	T	MAPK14	0.04	0	3.8642E-08	25	9.38	0.2264639	1.888E-07	1

rs851011	6	36070206	G	A	MAPK14	0.04	0	3.8648E-08	25	9.38	0.2264515	1.888E-07	1
rs116200552	5	120200055	G	A	PRR16	0.07	0	3.8667E-08	0	4.77	0.6882954	1.172E-07	1
rs7215646	17	68116851	G	A	KPNA2	-0.03	0	3.8671E-08	0	7.04	0.425068	1.194E-07	1
rs76905624	14	98166295	G	A	C14orf177	0.04	0	3.8681E-08	0	2.54	0.9242053	1.172E-07	1
rs146798013	16	21716398	C	T	OTOA	-0.06	0	3.8691E-08	0	3.75	0.8075701	1.172E-07	1
rs143448309	3	60927124	C	T	FHIT	0.04	0	3.8717E-08	9	7.72	0.3576317	1.586E-07	1
rs6450799	5	30813195	C	T	CDH6	0.03	0	3.873E-08	0	5.25	0.6300745	1.174E-07	1
rs13378568	13	112165093	G	A	SOX1	0.03	0	3.8762E-08	0	1.16	0.9917897	1.175E-07	1
rs17640404	11	56864380	G	C	OR9G4	-0.05	0	3.8766E-08	0	2.64	0.9165801	1.175E-07	1
rs146921035	16	21312411	A	G	CRYM	-0.07	0	3.8777E-08	0	4.53	0.7169005	1.175E-07	1
rs61859617	10	90992921	G	T	ANKRD1	-0.03	0	3.8779E-08	53	15.18	0.033818	2.24E-07	1
rs76766243	3	29556976	C	A	RBMS3,RP11	-0.07	0	3.8781E-08	22	9.03	0.250583	1.165E-07	1
rs76941299	16	22342251	C	A	CDR2	-0.07	0	3.8798E-08	0	4.98	0.6622303	1.176E-07	1
rs141214751	12	71614329	A	AT	ZFC3H1	0.05	0	3.8801E-08	0	4.47	0.7244867	1.176E-07	1
rs17110073	12	71641050	T	G	ZFC3H1	0.05	0	3.8803E-08	0	4.48	0.7234079	1.176E-07	1
rs75495527	12	71651385	T	C	ZFC3H1	0.05	0	3.8833E-08	0	4.47	0.7238106	1.177E-07	1
rs34484611	8	9937106	TG	T	MSRA	-0.03	0	3.8835E-08	0	4.78	0.6869242	1.177E-07	1
rs17110070	12	71640544	C	T	ZFC3H1	0.05	0	3.8845E-08	0	4.48	0.7234353	1.177E-07	1
rs455567	6	33284338	G	A	B3GALT4,W	0.03	0	3.8849E-08	12	8.05	0.3286371	1.511E-07	1
rs12413206	10	104710055	G	A	SORCS3	0.03	0	3.8853E-08	0	3.67	0.8168847	1.177E-07	1
rs139957293	12	71640618	CA	C	ZFC3H1	0.05	0	3.8856E-08	0	4.48	0.7234378	1.177E-07	1
rs2295141	14	103746612	T	C	PPP1R13B	0.03	0	3.886E-08	0	6.29	0.5060959	1.177E-07	1
rs11644740	16	71968409	G	A	PKD1L3	0.03	0	3.8886E-08	0	3.39	0.8466204	1.178E-07	1
rs113471201	12	71640227	G	A	ZFC3H1	0.05	0	3.8888E-08	0	4.48	0.7234318	1.178E-07	1
rs1065626	12	97474430	G	A	NEDD1	0.03	0	3.8889E-08	14	8.16	0.3183633	1.147E-07	1
rs143377824	13	60959664	T	A	TDRD3	-0.09	0	3.8891E-08	0	4.12	0.7660754	1.178E-07	1
rs79100540	12	71639421	G	A	ZFC3H1	0.05	0	3.8904E-08	0	4.48	0.7234422	1.179E-07	1
rs11348015	14	98146073	AT	A	C14orf177	0.04	0	3.8904E-08	0	2.42	0.9328444	1.179E-07	1
rs1928304	1	104144238	A	G	AMY1C	-0.03	0	3.8925E-08	0	2.47	0.9294294	1.179E-07	1
rs76226884	3	60128829	G	A	FHIT	0.04	0	3.8942E-08	39	11.51	0.1177953	1.18E-07	1

rs6841521	4	30534934	C	T	PCDH7	-0.04	0	3.896E-08	47	13.36	0.063796	1.18E-07	1
rs73023426	19	31971152	C	G	ZNF507	0.05	0	3.8968E-08	0	5.43	0.6074506	1.175E-07	1
rs62409230	3	196455450	T	C	RNF168	0.03	0	3.8988E-08	0	3.39	0.8462216	1.181E-07	1
rs4093833	4	14945057	A	G	CPEB2	-0.03	0	3.9006E-08	0	5.44	0.6068623	1.182E-07	1
rs143790929	16	21651201	T	C	IGSF6,METT	-0.07	0	3.9016E-08	0	4.06	0.7722812	1.182E-07	1
rs60881269	10	21071808	CT	C	NEBL	0.05	0	3.9024E-08	36	11.03	0.1370998	1.182E-07	1
rs11829754	12	71599676	A	G	ZFC3H1	0.05	0	3.9054E-08	0	4.44	0.7274376	1.183E-07	1
rs4792948	17	44560120	C	T	FZD2	0.04	0	3.9059E-08	0	4.98	0.6627074	1.183E-07	1
rs17109999	12	71616983	C	T	ZFC3H1	0.05	0	3.9063E-08	0	4.47	0.7237271	1.183E-07	1
rs77548727	4	99722325	C	T	RP11-766F14	0.08	0	3.9115E-08	27	9.65	0.2091641	1.009E-07	1
rs78030383	16	21033531	C	T	DNAH3	-0.04	0	3.9128E-08	0	5.47	0.6024283	1.185E-07	1
rs138813184	17	7437879	G	T	TMEM102	0.09	0	3.9143E-08	0	5.42	0.6087749	1.186E-07	1
rs3020406	6	151981329	A	C	ESR1	-0.03	0	3.9157E-08	0	2.9	0.8942462	1.186E-07	1
rs11100761	4	142821414	A	C	INPP4B	-0.03	0	3.9162E-08	38	11.39	0.1223015	2.081E-07	1
rs67768834	14	103754748	C	G	PPP1R13B	0.03	0	3.9165E-08	0	6.35	0.5000234	1.186E-07	1
rs7964939	12	71654579	C	T	ZFC3H1	0.05	0	3.9167E-08	0	4.48	0.723668	1.187E-07	1
rs183954943	16	22106302	T	C	VWA3A	-0.07	0	3.921E-08	0	5.17	0.6388891	1.188E-07	1
rs13383422	2	195131352	T	C	SLC39A10	0.04	0	3.9225E-08	0	5.88	0.5533806	1.188E-07	1
rs4850362	2	195368800	C	A	SLC39A10	0.04	0	3.9226E-08	0	5.81	0.5615326	1.188E-07	1
rs28415454	14	98150585	C	T	C14orf177	0.04	0	3.9233E-08	0	2.42	0.9332633	1.188E-07	1
rs35443079	16	22330791	G	GTC	POLR3E	-0.07	0	3.9262E-08	0	5	0.660377	1.189E-07	1
rs17109995	12	71616924	C	A	ZFC3H1	0.05	0	3.9263E-08	0	4.47	0.7241056	1.189E-07	1
rs12147808	14	98152368	C	A	C14orf177	0.04	0	3.9272E-08	0	2.41	0.9333673	1.19E-07	1
rs12594550	15	78666695	C	G	CHRNB4	-0.04	0	3.9273E-08	0	3.06	0.8791859	1.19E-07	1
rs10147461	14	98152466	A	G	C14orf177	0.04	0	3.9274E-08	0	2.41	0.9333668	1.19E-07	1
rs78771853	4	112861111	C	T	ANK2	0.09	0	3.9275E-08	0	2.1	0.9539813	1.19E-07	1
rs74895520	16	21658487	C	T	METTL9	-0.07	0	3.9277E-08	0	4.07	0.7717005	1.19E-07	1
rs6959814	7	141217756	T	G	TMEM178B	-0.03	0	3.9289E-08	0	6.74	0.4561424	1.19E-07	1
rs144137071	12	71618633	CT	C	ZFC3H1	0.05	0	3.9291E-08	0	4.47	0.7238509	1.19E-07	1
rs112415871	12	71626615	C	T	ZFC3H1	0.05	0	3.9308E-08	0	4.48	0.723545	1.191E-07	1

Table S2

rs113885552	12	71621511	C	T	ZFC3H1	0.05	0	3.9308E-08	0	4.48	0.723545	1.191E-07	1
rs17110038	12	71624019	A	G	ZFC3H1	0.05	0	3.9308E-08	0	4.48	0.723545	1.191E-07	1
rs76822244	12	71620637	C	T	ZFC3H1	0.05	0	3.9308E-08	0	4.48	0.723545	1.191E-07	1
rs78179549	12	71622359	C	A	ZFC3H1	0.05	0	3.9308E-08	0	4.48	0.723545	1.191E-07	1
rs142889446	12	71619097	C	CT	ZFC3H1	0.05	0	3.9312E-08	0	4.47	0.7239297	1.191E-07	1
rs75918612	16	21707317	C	A	OTOA	-0.06	0	3.9324E-08	0	3.4	0.8461321	1.191E-07	1
rs116318036	16	21314486	G	A	CRYM	-0.07	0	3.9327E-08	0	4.54	0.7161849	1.191E-07	1
rs14978	7	12233526	A	G	TMEM106B	0.03	0	3.9349E-08	0	6.09	0.5289477	1.192E-07	1
rs4764630	12	100927282	G	A	ANO4	0.03	0	3.9353E-08	17	8.53	0.2882092	1.192E-07	1
rs462093	6	33288319	A	T	WDR46	0.03	0	3.936E-08	10	7.85	0.3457074	1.491E-07	1
rs17110014	12	71619729	G	T	ZFC3H1	0.05	0	3.9366E-08	0	4.47	0.7238686	1.192E-07	1
rs851025	6	36031462	G	A	MAPK14	0.04	0	3.9371E-08	25	9.35	0.2284963	1.923E-07	1
rs194551	16	21598519	G	A	METTL9	-0.07	0	3.9428E-08	0	3.97	0.7835631	1.194E-07	1
rs8006659	14	98155773	C	A	C14orf177	0.04	0	3.9449E-08	0	2.42	0.9332581	1.195E-07	1
rs12323201	13	112167071	G	A	SOX1	0.03	0	3.946E-08	0	0.79	0.9975863	1.195E-07	1
rs9356035	6	162526518	C	T	PARK2	0.03	0	3.9471E-08	0	4.03	0.7765779	1.196E-07	1
rs76535267	6	103990058	A	G	HACE1	0.05	0	3.9474E-08	41	11.87	0.1048798	6.382E-08	2.04338E-08
rs851016	6	36061522	C	T	MAPK14	0.04	0	3.9529E-08	25	9.37	0.2271192	1.929E-07	1
rs78102821	8	70412875	A	T	NCOA2	0.06	0	3.9544E-08	0	4.07	0.7721803	1.198E-07	1
rs150024158	5	157688046	AAAG	A	C5orf52	-0.04	0	3.9555E-08	58	16.73	0.0192192	1.008E-07	1
rs17172109	7	42714452	T	C	C7orf25	-0.07	0	3.957E-08	0	2.91	0.893175	1.198E-07	1
rs2028549	15	87402043	T	A	AGBL1	-0.03	0	3.9581E-08	0	4.36	0.7371843	1.199E-07	1
rs80276174	16	22285640	C	T	EEF2K	-0.07	0	3.9589E-08	0	5.01	0.6584929	1.199E-07	1
rs79468223	16	22286694	C	T	EEF2K	-0.07	0	3.96E-08	0	5.01	0.6583179	1.199E-07	1
rs7204939	16	58918143	G	T	GOT2	-0.03	0	3.9603E-08	38	11.37	0.1232013	2.162E-07	1
rs10141336	14	98167678	A	G	C14orf177	0.04	0	3.9626E-08	0	2.53	0.9247417	1.2E-07	1
rs851015	6	36063453	A	G	MAPK14	0.04	0	3.9648E-08	25	9.37	0.2272912	1.934E-07	1
rs139367260	15	47390775	A	G	SEMA6D	0.06	0	3.9673E-08	0	4.38	0.7354676	1.201E-07	1
rs2071042	3	52830568	A	G	ITIH4,RP5-96	-0.03	0	3.9682E-08	0	6.56	0.4764355	1.202E-07	1
rs11122221	1	231070060	C	T	FAM89A	0.03	0	3.969E-08	0	5.47	0.6029015	1.057E-07	1

rs851022	6	36041118	A	C	MAPK14	0.04	0	3.9696E-08	25	9.34	0.2289028	1.934E-07	1
rs2290828	16	22285282	T	C	EEF2K	-0.07	0	3.9705E-08	0	5.01	0.6582915	1.202E-07	1
rs9314922	13	28805092	C	T	MTUS2	-0.03	0	3.9706E-08	0	1.98	0.9610827	1.202E-07	1
rs2273741	1	235152396	C	T	ARID4B,RBM	0.03	0	3.9713E-08	0	2.14	0.9518169	1.203E-07	1
rs6687018	1	246120862	G	C	SMYD3	0.03	0	3.9719E-08	0	5.71	0.5737401	1.194E-07	1
rs35375326	6	33113935	A	G	HLA-DPB1	-0.03	0	3.9739E-08	0	3.73	0.8100398	1.203E-07	1
rs6699397	1	90746659	A	G	BARHL2	0.03	0	3.9751E-08	16	8.39	0.29908	1.056E-07	1
rs34823653	6	33113930	C	T	HLA-DPB1	-0.03	0	3.9758E-08	0	3.73	0.810036	1.204E-07	1
rs76744069	12	71657413	G	C	ZFC3H1	0.05	0	3.98E-08	0	4.47	0.7238307	1.205E-07	1
rs6826998	4	30539682	G	A	PCDH7	-0.03	0	3.9802E-08	42	12.18	0.0947356	1.056E-07	1
rs75344862	16	21708082	C	T	OTOA	-0.06	0	3.9826E-08	0	3.47	0.8385043	1.206E-07	1
rs79014199	3	43181973	C	T	POMGNT2	0.04	0	3.9847E-08	0	5.77	0.5664646	1.207E-07	1
rs3066778	12	60600896	T	TA	SLC16A7	-0.03	0	3.9854E-08	56	15.96	0.0254612	1.142E-07	1
rs7571716	2	232576710	C	T	EIF4E2	0.03	0	3.9857E-08	40	11.85	0.105628	4.185E-07	1
rs1955660	14	103763648	C	T	PPP1R13B	0.03	0	3.9864E-08	0	6.62	0.4696631	1.207E-07	1
rs13378874	13	112164852	A	G	SOX1	0.03	0	3.9871E-08	0	1.24	0.9899559	1.207E-07	1
rs67057298	3	29389915	G	A	RBMS3,RP11	-0.04	0	3.9883E-08	0	4.69	0.6973901	1.208E-07	1
rs1441421	4	142952707	G	C	INPP4B	-0.03	0	3.9887E-08	52	14.63	0.0411009	8.159E-08	1
rs10252647	7	132798770	T	G	CHCHD3	0.04	0	3.989E-08	0	3.9	0.7907059	1.208E-07	1
rs12597956	16	21315566	C	T	CRYM	-0.07	0	3.9903E-08	0	4.53	0.7165199	1.208E-07	1
rs117783012	16	21655988	G	T	METTL9	-0.07	0	3.9903E-08	0	4.07	0.7715582	1.208E-07	1
rs7801194	7	132799395	T	A	CHCHD3	0.04	0	3.9914E-08	0	3.9	0.7907941	1.209E-07	1
rs2873555	8	56872429	A	G	IMPAD1	0.03	0	3.9925E-08	29	9.92	0.1931422	1.209E-07	1
rs78746729	16	21655393	C	T	METTL9	-0.07	0	3.9935E-08	0	4.07	0.7715955	1.209E-07	1
rs80171474	12	71630347	T	C	ZFC3H1	0.05	0	3.9944E-08	0	4.47	0.7244766	1.209E-07	1
rs117727304	16	21654529	G	A	METTL9	-0.07	0	3.9949E-08	0	4.07	0.7716026	1.21E-07	1
rs74333329	16	21707463	A	G	OTOA	-0.06	0	3.9955E-08	0	3.47	0.8383301	1.21E-07	1
rs3759991	16	21653133	C	T	METTL9	-0.07	0	3.9957E-08	0	4.07	0.771643	1.21E-07	1
rs188957838	13	61090507	G	T	PCDH20	0.06	0	3.9962E-08	26	9.54	0.2160782	1.663E-07	1
rs7652667	3	52832519	C	A	RP5-966M1.6	0.03	0	3.9963E-08	0	6.59	0.4731629	1.21E-07	1

rs139235809	16	21652285	C	CTTTG	IGSF6,METT	-0.07	0	3.9967E-08	0	4.07	0.7716496	1.21E-07	1
rs117687814	16	21653369	C	T	METTL9	-0.07	0	3.9969E-08	0	4.07	0.7716453	1.21E-07	1
rs4413540	5	30814573	C	T	CDH6	0.03	0	3.9988E-08	0	5.23	0.6320796	1.211E-07	1
rs7669427	4	14935938	A	G	CPEB2	-0.03	0	4.0012E-08	0	5.51	0.597408	1.211E-07	1
rs13108870	4	47073540	A	G	GABRB1	-0.03	0	4.0022E-08	0	0.93	0.995824	1.212E-07	1
rs10497756	2	195370588	G	A	SLC39A10	0.04	0	4.006E-08	0	5.81	0.5615277	1.213E-07	1
rs720023	11	112968145	A	T	NCAM1	0.03	0	4.0063E-08	26	9.53	0.2170755	1.602E-07	1
rs116843121	16	22004116	C	T	PDZD9	-0.07	0	4.0066E-08	0	4.48	0.723722	1.213E-07	1
rs194550	16	21598472	G	T	METTL9	-0.07	0	4.0077E-08	0	3.96	0.7842561	1.213E-07	1
rs4622862	3	29389826	G	A	RBMS3,RP11	-0.04	0	4.0077E-08	0	4.75	0.6907138	1.213E-07	1
rs10808908	8	56866950	T	C	IMPAD1	0.03	0	4.0099E-08	29	9.88	0.1956567	1.214E-07	1
rs78599970	15	93048773	G	T	RGMA	0.06	0	4.0109E-08	0	6.44	0.4888576	1.214E-07	1
rs13115045	4	142945462	G	A	INPP4B	-0.03	0	4.012E-08	52	14.77	0.0390865	8.178E-08	1
rs78543395	16	21010791	A	G	DNAH3	-0.04	0	4.014E-08	0	5.45	0.605161	1.215E-07	1
rs74542667	16	21641920	G	A	IGSF6,METT	-0.07	0	4.0164E-08	0	4.07	0.771633	1.216E-07	1
rs143375720	16	21642692	AT	A	IGSF6,METT	-0.07	0	4.0169E-08	0	4.07	0.7716324	1.216E-07	1
rs75889169	16	21643213	C	T	IGSF6,METT	-0.07	0	4.0171E-08	0	4.07	0.7716306	1.216E-07	1
rs141804055	16	21641440	A	AT	IGSF6,METT	-0.07	0	4.0172E-08	0	4.07	0.7716334	1.216E-07	1
rs8009116	14	103750614	T	C	PPP1R13B	0.03	0	4.0189E-08	0	6.32	0.5026075	1.217E-07	1
rs10958503	8	56866275	T	C	IMPAD1	0.03	0	4.0194E-08	28	9.83	0.198641	1.217E-07	1
rs2155494	6	162519277	C	T	PARK2	0.03	0	4.0221E-08	0	3.9	0.7914285	1.218E-07	1
rs2024669	14	103809265	G	C	PPP1R13B	0.03	0	4.0236E-08	0	6.57	0.4751939	1.218E-07	1
rs2317783	8	56865746	A	G	IMPAD1	0.03	0	4.0246E-08	29	9.88	0.1956667	1.218E-07	1
rs149376696	16	21640854	GT	G	IGSF6,METT	-0.07	0	4.025E-08	0	4.07	0.7721803	1.219E-07	1
rs11110585	12	100924844	C	G	ANO4	0.03	0	4.0258E-08	19	8.68	0.2763983	1.219E-07	1
rs1842807	3	43445251	C	G	ANO10	-0.03	0	4.027E-08	38	11.47	0.1195609	5.421E-08	1.73754E-08
rs534343173	16	22694429	C	G	HS3ST2	-0.07	0	4.0271E-08	0	6.13	0.5247465	1.219E-07	1
rs11160765	14	103833393	T	C	PPP1R13B	0.03	0	4.0285E-08	0	6.12	0.5254323	1.22E-07	1
rs4709633	6	162513345	G	A	PARK2	0.03	0	4.0295E-08	0	3.71	0.8122383	1.22E-07	1
rs6014491	20	55768543	C	T	CBLN4	-0.04	0	4.0315E-08	0	6.11	0.5267335	1.22E-07	1

rs4273846	8	56866312	G	A	IMPAD1	0.03	0	4.0336E-08	29	9.87	0.1958029	1.221E-07	1
rs582491	8	9936593	A	G	MSRA	-0.03	0	4.0357E-08	0	4.88	0.6740745	1.222E-07	1
rs17110144	12	71667226	C	G	THAP2,ZFC3	0.05	0	4.0364E-08	0	4.43	0.7295475	1.222E-07	1
rs4571729	8	56866501	G	A	IMPAD1	0.03	0	4.0377E-08	29	9.86	0.1965222	1.222E-07	1
rs9514682	13	107419033	A	T	FAM155A	0.04	0	4.0391E-08	55	15.62	0.0287935	8.608E-08	1
rs4636201	8	56866339	A	G	IMPAD1	0.03	0	4.0392E-08	29	9.87	0.195927	1.223E-07	1
rs12580075	12	60560286	A	G	SLC16A7	-0.03	0	4.0396E-08	51	14.54	0.0423821	2.123E-07	1
rs11628332	14	103774804	C	T	PPP1R13B	0.03	0	4.0401E-08	0	6.32	0.503107	1.223E-07	1
rs851021	6	36041606	G	A	MAPK14	0.04	0	4.0411E-08	25	9.34	0.2291187	1.969E-07	1
rs10838786	11	47882534	G	A	NUP160	0.03	0	4.0437E-08	0	3.57	0.8278147	1.224E-07	1
rs9356032	6	162518761	A	G	PARK2	0.03	0	4.0449E-08	0	3.89	0.7921037	1.224E-07	1
rs73176067	12	103035629	T	G	ASCL1	0.03	0	4.046E-08	0	6.9	0.4392315	1.225E-07	1
rs111402301	12	71665774	G	A	THAP2,ZFC3	0.05	0	4.0475E-08	0	4.43	0.7295394	1.225E-07	1
rs10606766	4	30536609	CTG	C	PCDH7	-0.03	0	4.0479E-08	47	13.26	0.0660763	1.225E-07	1
rs707994	6	36053484	A	G	MAPK14	0.04	0	4.0482E-08	25	9.35	0.2286009	1.974E-07	1
rs13186977	5	153325923	C	T	GRIA1	-0.03	0	4.0487E-08	0	4.7	0.6959624	1.226E-07	1
rs79837139	11	47979228	T	C	PTPRJ	-0.04	0	4.0489E-08	0	3.78	0.8046351	1.226E-07	1
rs10958504	8	56866816	C	A	IMPAD1	0.03	0	4.0498E-08	29	9.86	0.1964625	1.226E-07	1
rs10808906	8	56866884	A	G	IMPAD1	0.03	0	4.0502E-08	29	9.87	0.1963311	1.226E-07	1
rs2654670	12	60592669	A	C	SLC16A7	-0.03	0	4.0512E-08	55	15.78	0.0271589	1.201E-07	1
rs10958505	8	56866832	G	A	IMPAD1	0.03	0	4.0531E-08	29	9.86	0.1963571	1.227E-07	1
rs77653640	14	98177526	G	A	C14orf177	0.04	0	4.0544E-08	0	2.18	0.948922	1.227E-07	1
rs62305289	4	47073117	T	G	GABRB1	-0.03	0	4.0547E-08	0	0.94	0.9957805	1.227E-07	1
rs7074584	10	90997639	C	T	ANKRD1	-0.04	0	4.0553E-08	24	9.27	0.233984	2.314E-07	1
rs4708966	6	162513296	T	C	PARK2	0.03	0	4.0557E-08	0	3.71	0.8127718	1.228E-07	1
rs75680782	5	157656835	G	T	SOX30	-0.05	0	4.0567E-08	55	15.78	0.0272271	1.023E-07	1
rs17110139	12	71665919	T	C	THAP2,ZFC3	0.05	0	4.0571E-08	0	4.43	0.7293909	1.228E-07	1
rs73228276	4	30545993	C	A	PCDH7	-0.03	0	4.0574E-08	43	12.46	0.0864992	1.018E-07	1
rs17640325	11	56861041	C	T	OR9G4	-0.05	0	4.0577E-08	0	2.61	0.9188894	1.228E-07	1
rs10808907	8	56866915	T	C	IMPAD1	0.03	0	4.0586E-08	29	9.87	0.1961543	1.228E-07	1

rs73228278	4	30546150	G	C	PCDH7	-0.03	0	4.0592E-08	43	12.46	0.0865071	1.018E-07	1
rs9356031	6	162516083	C	T	PARK2	0.03	0	4.0604E-08	0	3.71	0.8121787	1.229E-07	1
rs12582353	12	60559493	G	A	SLC16A7	-0.03	0	4.0604E-08	51	14.54	0.0423889	2.134E-07	1
rs1508094	8	56867650	T	C	IMPAD1	0.03	0	4.0605E-08	29	9.86	0.1964622	1.229E-07	1
rs17110121	12	71662016	A	T	ZFC3H1	0.05	0	4.0613E-08	0	4.44	0.7277071	1.229E-07	1
rs12448388	16	21316534	C	A	CRYM	-0.07	0	4.0614E-08	0	4.54	0.7158579	1.229E-07	1
rs199690632	16	22059768	GTGGGGAT	G	C16orf52	-0.07	0	4.0619E-08	0	4.46	0.7254985	1.229E-07	1
rs72660666	4	104535919	G	A	CXXC4	-0.03	0	4.0623E-08	0	2.09	0.9547451	1.23E-07	1
rs1508093	8	56867671	G	A	IMPAD1	0.03	0	4.0625E-08	29	9.86	0.1965399	1.23E-07	1
rs34046680	8	56868177	T	TA	IMPAD1	0.03	0	4.0645E-08	29	9.86	0.1965254	1.23E-07	1
rs1508091	8	56867798	G	A	IMPAD1	0.03	0	4.0646E-08	29	9.86	0.1965259	1.23E-07	1
rs1508092	8	56867752	G	C	IMPAD1	0.03	0	4.0646E-08	29	9.86	0.1965259	1.23E-07	1
rs9356052	6	162582130	G	C	PARK2	0.03	0	4.0647E-08	0	4.31	0.7437579	1.23E-07	1
rs10958506	8	56868523	A	C	IMPAD1	0.03	0	4.0652E-08	29	9.86	0.1965244	1.23E-07	1
rs12576798	11	20274832	C	T	HTATIP2	-0.05	0	4.066E-08	0	2.92	0.8918731	1.231E-07	1
rs9925672	16	58913874	A	G	GOT2	-0.03	0	4.0674E-08	39	11.64	0.1131589	2.169E-07	1
rs7217406	17	68116383	T	C	KPNA2	-0.03	0	4.0682E-08	0	7.06	0.4228563	1.268E-07	1
rs474843	16	21601241	G	A	METTL9	-0.07	0	4.0693E-08	0	3.99	0.7812832	1.232E-07	1
rs74767061	11	56865426	G	A	OR9G4	-0.05	0	4.0711E-08	0	2.61	0.9186171	1.232E-07	1
rs76786112	11	56865427	G	C	OR9G4	-0.05	0	4.0711E-08	0	2.61	0.9186171	1.232E-07	1
rs7937151	11	112964302	T	G	NCAM1	0.03	0	4.0733E-08	27	9.62	0.2113822	1.625E-07	1
rs17110130	12	71665018	T	C	THAP2,ZFC3	0.05	0	4.0737E-08	0	4.43	0.7295771	1.233E-07	1
rs1402671	4	140023690	A	C	MAML3	-0.03	0	4.0738E-08	0	4.91	0.6713505	1.233E-07	1
rs1026829	8	81046071	G	A	PAG1	0.04	0	4.074E-08	0	4.09	0.7693849	1.233E-07	1
rs12358825	10	104716843	T	C	SORCS3	0.03	0	4.0745E-08	0	3.7	0.8135845	1.233E-07	1
rs1559578	5	52364848	C	T	ITGA1	0.03	0	4.0746E-08	27	9.7	0.2065147	8.263E-08	1
rs3821572	3	29554074	T	G	RBMS3,RP11	-0.07	0	4.0765E-08	21	8.88	0.2614062	1.228E-07	1
rs151136858	12	71664812	G	GT	THAP2,ZFC3	0.05	0	4.0771E-08	0	4.43	0.7296395	1.234E-07	1
rs2112494	16	21034047	A	G	DNAH3	-0.04	0	4.0822E-08	0	5.41	0.6102399	1.235E-07	1
rs7349100	1	210657245	G	A	HHAT	0.03	0	4.0822E-08	0	6.64	0.467009	1.235E-07	1

rs117861592	16	22289745	T	C	EEF2K	-0.07	0	4.0858E-08	0	5.02	0.6575414	1.236E-07	1
rs142440466	16	22290183	C	T	EEF2K	-0.07	0	4.086E-08	0	5.02	0.657547	1.237E-07	1
rs79043843	16	14042557	A	G	MKL2	-0.06	0	4.0863E-08	12	7.96	0.3363818	1.455E-07	1
rs74867403	3	43194211	G	A	POMGNT2	0.03	0	4.0885E-08	0	6.72	0.4583957	1.237E-07	1
rs72787023	16	71997206	T	C	PKD1L3	0.03	0	4.0907E-08	0	3.1	0.8758473	1.238E-07	1
rs4368973	8	56866311	A	C	IMPAD1	0.03	0	4.0919E-08	28	9.85	0.1971374	1.238E-07	1
rs780041	2	124250274	G	A	CNTNAP5	0.03	0	4.093E-08	46	13.05	0.0708158	5.404E-08	1.73754E-08
rs9928770	16	58915102	A	G	GOT2	-0.03	0	4.0968E-08	38	11.47	0.1194871	2.291E-07	1
rs117023858	16	21639440	G	A	METTL9	-0.07	0	4.0972E-08	0	4.06	0.7726225	1.24E-07	1
rs149648802	16	76811152	T	A	RP11-58C22.	0.05	0	4.0977E-08	0	2.73	0.9091803	1.24E-07	1
rs6808411	3	152547768	C	G	MBNL1	0.04	0	4.1034E-08	19	8.66	0.2780085	2.141E-07	1
rs2034796	4	15111254	A	G	CPEB2	-0.03	0	4.1036E-08	0	4.35	0.738191	1.242E-07	1
rs7621681	3	43637193	T	C	ANO10	-0.03	0	4.1054E-08	46	13.08	0.0700961	5.569E-08	1.77726E-08
rs3830645	2	232556574	CT	C	EIF4E2	-0.03	0	4.1056E-08	43	12.4	0.0882639	4.559E-07	1
rs986540	2	195172863	A	C	SLC39A10	0.04	0	4.1056E-08	17	8.47	0.2928687	1.048E-07	1
rs9458612	6	162576345	A	G	PARK2	0.03	0	4.108E-08	0	4.3	0.7444552	1.243E-07	1
rs143360534	20	54907127	TAA	T	DOK5	-0.03	0	4.109E-08	0	5.2	0.6360801	1.243E-07	1
rs9368	12	56594558	C	A	RBMS2	0.03	0	4.1095E-08	0	2.31	0.9403757	1.243E-07	1
rs2403304	5	104397549	T	C	NUDT12	0.03	0	4.1098E-08	0	5.51	0.5981118	1.244E-07	1
rs11217004	11	118736913	G	A	DDX6	-0.03	0	4.1132E-08	21	8.97	0.25469	2.235E-07	1
rs4783413	16	21724258	G	C	OTOA	-0.03	0	4.1133E-08	0	5.19	0.6372743	1.245E-07	1
rs16969938	13	107250027	T	A	FAM155A	-0.04	0	4.1147E-08	0	2.8	0.9028779	1.245E-07	1
rs72666520	13	107249944	C	T	FAM155A	-0.04	0	4.1151E-08	0	2.8	0.9028875	1.245E-07	1
rs16969937	13	107249921	A	C	FAM155A	-0.04	0	4.1156E-08	0	2.8	0.902895	1.245E-07	1
rs11606895	11	24885034	C	T	LUZP2	0.1	0	4.118E-08	0	5.39	0.612101	1.246E-07	1
rs7164665	15	78661577	T	C	CHRNB4	-0.03	0	4.1193E-08	0	2.89	0.895154	1.246E-07	1
rs7183003	15	61513117	G	C	RORA	-0.07	0	4.12E-08	0	4.31	0.7430232	1.247E-07	1
rs2348372	15	87400102	T	C	AGBL1	-0.03	0	4.121E-08	0	4.41	0.731152	1.247E-07	1
rs3774364	3	52829589	G	A	ITIH4,RP5-96	-0.03	0	4.1219E-08	0	6.58	0.4736535	1.247E-07	1
rs11160880	14	105824171	T	C	IGHD	0.06	0	4.1227E-08	30	10.12	0.1819026	1.117E-07	1

Table S2

rs2247583	8	14747243	G	A	SGCZ	-0.03	0	4.1256E-08	23	9.16	0.2412994	1.598E-07	1
rs75609499	6	164758567	A	T	C6orf118	0.03	0	4.1256E-08	0	3.06	0.8796757	1.248E-07	1
rs12475154	2	2596060	A	G	MYT1L	0.03	0	4.1258E-08	0	2.74	0.9082843	1.248E-07	1
rs140636871	16	21638324	G	GA	METTL9	-0.07	0	4.1272E-08	0	4.06	0.7730957	1.249E-07	1
rs200927730	16	21638328	G	A	METTL9	-0.07	0	4.1272E-08	0	4.06	0.7730957	1.249E-07	1
rs145976497	16	21638297	G	A	METTL9	-0.07	0	4.1285E-08	0	4.06	0.7730484	1.249E-07	1
rs7182996	15	61513106	G	A	RORA	-0.07	0	4.1327E-08	0	4.32	0.7425148	1.25E-07	1
rs4258814	2	195376169	C	T	SLC39A10	0.04	0	4.1332E-08	0	5.81	0.5623725	1.25E-07	1
rs9508626	13	30091989	A	G	KATNAL1	-0.03	0	4.1354E-08	5	7.44	0.3849732	1.523E-07	1
rs201389274	16	21664971	CATGA	C	METTL9	-0.07	0	4.1379E-08	0	4.03	0.7757491	1.252E-07	1
rs7633271	3	49518530	T	C	DAG1	-0.03	0	4.1392E-08	0	6.11	0.5272169	1.252E-07	1
rs9365748	6	164654698	T	C	C6orf118	0.03	0	4.1401E-08	0	6.86	0.4435429	1.253E-07	1
rs140262264	16	21637337	C	CAG	METTL9	-0.07	0	4.1403E-08	0	4.06	0.7731216	1.253E-07	1
rs17579636	6	84456310	C	T	CEP162	-0.04	0	4.1403E-08	0	5.89	0.552265	1.253E-07	1
rs219007	1	36681602	C	T	GRIK3	0.03	0	4.1405E-08	47	13.23	0.0666805	1.015E-07	1
rs142423453	16	21638135	G	T	METTL9	-0.07	0	4.1407E-08	0	4.06	0.773288	1.253E-07	1
rs481016	16	21601850	C	G	METTL9	-0.07	0	4.1414E-08	0	3.99	0.7808507	1.253E-07	1
rs117853959	16	21637536	C	T	METTL9	-0.07	0	4.1414E-08	0	4.05	0.7736937	1.253E-07	1
rs149691335	4	62005484	A	G	ADGRL3	0.09	0	4.1428E-08	0	3.53	0.8318388	1.253E-07	1
rs12633736	3	29552869	A	G	RBMS3,RP11	-0.07	0	4.145E-08	20	8.82	0.2660686	1.249E-07	1
rs12121954	1	210657087	T	C	HHAT	0.03	0	4.1469E-08	0	6.64	0.4676938	1.255E-07	1
rs4388951	12	103038754	T	C	ASCL1	0.03	0	4.1479E-08	0	6.88	0.4413952	1.255E-07	1
rs74378140	12	60558778	G	T	SLC16A7	-0.03	0	4.1485E-08	51	14.54	0.0423964	2.182E-07	1
rs7984433	13	107250272	C	T	FAM155A	-0.04	0	4.1488E-08	0	2.8	0.9028813	1.255E-07	1
rs79889230	11	56868628	C	A	OR5AK2	-0.05	0	4.1545E-08	0	2.57	0.9219658	1.257E-07	1
rs2144080	14	103792424	A	C	PPP1R13B	0.03	0	4.1599E-08	0	6.71	0.4594722	1.258E-07	1
rs12930285	16	72192419	T	G	PMFBP1	0.03	0	4.1616E-08	0	5.4	0.6109947	1.259E-07	1
rs17168250	7	14542777	G	C	DGKB	-0.06	0	4.1617E-08	0	5.33	0.6201965	1.259E-07	1
rs191847854	16	22014968	A	T	C16orf52	-0.07	0	4.163E-08	0	5.19	0.6367113	1.259E-07	1
rs1837537	10	21069496	A	G	NEBL	0.05	0	4.1642E-08	42	12.12	0.0965426	1.145E-07	1

rs117047654	16	22293852	G	A	POLR3E	-0.07	0	4.1644E-08	0	5.02	0.6576526	1.26E-07	1
rs150370711	3	82335961	G	A	GBE1	-0.04	0	4.1644E-08	10	7.86	0.3453088	1.411E-07	1
rs2604578	4	15044272	A	G	CPEB2	-0.03	0	4.1649E-08	0	5.9	0.5510873	1.26E-07	1
rs116934815	16	21636892	G	T	METTL9	-0.07	0	4.1674E-08	0	4.06	0.7729675	1.261E-07	1
rs61924991	12	60548776	A	G	SLC16A7	-0.03	0	4.1718E-08	52	14.6	0.0415476	2.189E-07	1
rs117199959	16	21637132	T	C	METTL9	-0.07	0	4.1718E-08	0	4.06	0.7730984	1.262E-07	1
rs117450694	16	21636859	G	A	METTL9	-0.07	0	4.1719E-08	0	4.06	0.7728862	1.262E-07	1
rs72665433	13	112165700	A	G	SOX1	0.03	0	4.1747E-08	0	0.99	0.9950511	1.263E-07	1
rs113729193	16	21318382	G	GCTT	CRYM	-0.07	0	4.1748E-08	0	4.54	0.7156516	1.263E-07	1
rs558545406	12	103039524	A	AAT	ASCL1	0.03	0	4.175E-08	0	6.88	0.4417428	1.263E-07	1
rs4940263	18	53516093	A	G	DCC	0.04	0	4.1751E-08	0	3.63	0.821724	1.263E-07	1
rs7160112	14	98170908	A	T	C14orf177	0.04	0	4.1756E-08	0	2.52	0.9253894	1.263E-07	1
rs58507364	16	88756652	C	T	PIEZO1	-0.03	0	4.1769E-08	23	9.19	0.239494	2.275E-07	1
rs2077491	6	31638599	T	C	BAG6	0.03	0	4.1774E-08	0	6.91	0.4384181	1.264E-07	1
rs2077492	6	31638615	G	A	BAG6	0.03	0	4.1774E-08	0	6.91	0.4384181	1.264E-07	1
rs1026831	8	81045900	G	A	PAG1	0.04	0	4.1787E-08	0	4.1	0.7676713	1.264E-07	1
rs199729368	1	210659063	C	CAG	HHAT	0.03	0	4.179E-08	0	6.65	0.4658517	1.264E-07	1
rs12419170	11	12625822	A	G	TEAD1	0.03	0	4.1791E-08	0	3.33	0.8532453	1.264E-07	1
rs4358357	4	30546773	G	C	PCDH7	-0.03	0	4.1796E-08	43	12.43	0.0873705	1.264E-07	1
rs73228268	4	30538843	T	C	PCDH7	-0.03	0	4.1817E-08	48	13.51	0.06052	1.265E-07	1
rs4940019	18	50806833	C	G	MRO	0.03	0	4.1844E-08	0	4.99	0.6617613	1.266E-07	1
rs7159827	14	98170631	C	A	C14orf177	0.04	0	4.1872E-08	0	2.53	0.9252023	1.266E-07	1
rs78790489	12	60558738	G	A	SLC16A7	-0.03	0	4.1903E-08	51	14.53	0.0425147	2.205E-07	1
rs8088468	18	53522687	T	C	DCC	0.04	0	4.1905E-08	0	3.7	0.8132686	1.267E-07	1
rs17109890	12	71574474	G	A	LGR5	0.05	0	4.1948E-08	0	4.06	0.7727308	1.269E-07	1
rs1961963	12	60557027	G	C	SLC16A7	-0.03	0	4.1976E-08	51	14.54	0.0423182	2.208E-07	1
rs9852219	3	82327624	C	T	GBE1	-0.04	0	4.198E-08	14	8.19	0.316076	1.488E-07	1
rs61924992	12	60550987	A	G	SLC16A7	-0.03	0	4.198E-08	51	14.54	0.0423552	2.209E-07	1
rs12116836	1	210658476	A	G	HHAT	0.03	0	4.1999E-08	0	6.66	0.4656022	1.27E-07	1
rs2155281	11	112967616	G	A	NCAM1	0.03	0	4.2003E-08	26	9.56	0.2151276	1.681E-07	1

rs57474356	2	195378751	T	C	SLC39A10	0.04	0	4.2038E-08	0	5.8	0.5628093	1.271E-07	1
rs12190251	6	164406467	A	G	QKI	-0.03	0	4.2047E-08	0	2.1	0.9541614	1.272E-07	1
rs4732435	7	82197831	A	G	CACNA2D1	0.03	0	4.2068E-08	20	8.81	0.2669388	9.92E-08	1
rs676086	11	99635808	T	C	CNTN5	-0.03	0	4.208E-08	34	10.66	0.1542586	8.735E-08	1
rs9379777	6	25677705	A	G	SCGN	0.04	0	4.2101E-08	3	7.25	0.4036344	1.402E-07	1
rs7727762	5	157646939	T	C	SOX30	-0.05	0	4.2103E-08	53	14.99	0.0360832	1.2E-07	1
rs4384407	12	60546114	T	A	SLC16A7	-0.03	0	4.2104E-08	51	14.54	0.0423648	2.216E-07	1
rs155031	16	21603825	T	C	METTL9	-0.07	0	4.2117E-08	0	4.3	0.7443702	1.274E-07	1
rs879607563	11	99645778	TTG	T	CNTN5	-0.03	0	4.2125E-08	28	9.76	0.2028109	9.656E-08	1
rs11738734	5	157647294	C	A	SOX30	-0.05	0	4.2148E-08	53	14.99	0.0360646	1.2E-07	1
rs851009	6	36074482	T	G	MAPK14	0.04	0	4.2161E-08	24	9.29	0.2323495	2.041E-07	1
rs4948031	7	55542319	A	C	VOPP1	0.03	0	4.2162E-08	0	5.41	0.6106144	1.275E-07	1
rs61924990	12	60545066	C	T	SLC16A7	-0.03	0	4.2178E-08	51	14.54	0.0423418	2.22E-07	1
rs28986425	6	33071758	A	T	HLA-DPA1	-0.03	0	4.219E-08	0	2.73	0.9085759	1.276E-07	1
rs55705924	16	58881102	A	C	GOT2	-0.03	0	4.2192E-08	0	4.35	0.7385738	1.276E-07	1
rs10506638	12	71600397	T	C	ZFC3H1	0.05	0	4.2198E-08	0	4.45	0.7268887	1.276E-07	1
rs155030	16	21603965	T	C	METTL9	-0.07	0	4.2198E-08	0	4.01	0.778951	1.276E-07	1
rs7570682	2	104366809	G	A	POU3F3	0.03	0	4.2202E-08	10	7.82	0.3490264	1.254E-07	1
rs726281	6	151981443	G	A	ESR1	-0.03	0	4.2214E-08	0	2.87	0.8963651	1.277E-07	1
rs79022679	4	14941526	A	G	CPEB2	-0.03	0	4.2215E-08	0	5.51	0.5975472	1.277E-07	1
rs116898131	16	21635828	G	A	METTL9	-0.07	0	4.2219E-08	0	4.05	0.7734399	1.277E-07	1
rs17835109	2	195312021	C	A	SLC39A10	0.05	0	4.222E-08	0	4.08	0.7702771	1.277E-07	1
rs148244125	3	82335944	T	C	GBE1	-0.04	0	4.2235E-08	10	7.86	0.3452281	1.438E-07	1
rs4551810	12	60543536	C	G	SLC16A7	-0.03	0	4.2235E-08	51	14.54	0.0423811	2.223E-07	1
rs155032	16	21603119	T	A	METTL9	-0.07	0	4.2236E-08	0	4	0.7794578	1.277E-07	1
rs10925128	1	235215452	T	G	ARID4B	0.03	0	4.2246E-08	1	7.09	0.4197339	1.335E-07	1
rs58591767	17	48948714	G	A	SNF8	0.03	0	4.2247E-08	48	13.62	0.0584525	2.079E-07	1
rs59270107	17	48948823	A	T	SNF8	0.03	0	4.2247E-08	48	13.62	0.0584525	2.079E-07	1
rs62078369	17	48949069	C	T	SNF8	0.03	0	4.2247E-08	48	13.62	0.0584525	2.079E-07	1
rs62078370	17	48949474	G	C	SNF8	0.03	0	4.2247E-08	48	13.62	0.0584525	2.079E-07	1

rs6576003	14	103824993	C	A	PPP1R13B	0.03	0	4.2253E-08	0	6.83	0.4468379	1.278E-07	1
rs12579868	12	120769344	C	T	SPPL3	0.03	0	4.2259E-08	0	3.06	0.8796238	1.278E-07	1
rs10750016	11	112967018	T	A	NCAM1	0.03	0	4.2259E-08	26	9.57	0.2143794	1.692E-07	1
rs7520116	1	246041473	C	G	SMYD3	-0.03	0	4.2262E-08	0	3.69	0.814534	1.278E-07	1
rs1461582	14	98171403	G	A	C14orf177	0.04	0	4.2277E-08	0	2.52	0.9256606	1.278E-07	1
rs61924988	12	60543687	A	G	SLC16A7	-0.03	0	4.2307E-08	51	14.54	0.0423804	2.227E-07	1
rs4947512	7	55542066	G	A	VOPP1	0.03	0	4.2346E-08	0	5.4	0.6109564	1.28E-07	1
rs75384172	15	71494338	C	G	THSD4	0.06	0	4.2356E-08	23	9.2	0.2384584	1.233E-07	1
rs139852150	19	49529826	G	A	RCN3	0.05	0	4.2393E-08	0	6.11	0.5272893	1.282E-07	1
rs3926569	3	49521283	C	T	DAG1	-0.03	0	4.2406E-08	0	6.12	0.5259931	1.282E-07	1
rs34989031	10	91074055	G	A	PCGF5	0.03	0	4.2411E-08	13	8.1	0.3236946	1.267E-07	1
rs74838542	1	226138000	TACTC	T	ACBD3	0.03	0	4.2411E-08	0	4.41	0.7314397	1.282E-07	1
rs531639	1	36689759	T	C	GRIK3	0.03	0	4.2427E-08	47	13.31	0.0649377	1.011E-07	1
rs2144079	14	103792547	C	T	PPP1R13B	0.03	0	4.2441E-08	0	6.7	0.4608055	1.283E-07	1
rs1608747	7	55543568	C	A	VOPP1	0.03	0	4.2448E-08	0	5.4	0.6109836	1.283E-07	1
rs1608748	7	55543721	T	G	VOPP1	0.03	0	4.245E-08	0	5.4	0.6109619	1.283E-07	1
rs549975878	7	42704954	ACAGC	A	C7orf25	-0.07	0	4.2478E-08	0	2.68	0.9125824	1.284E-07	1
rs4581486	12	60554187	A	G	SLC16A7	-0.03	0	4.2484E-08	51	14.54	0.0423527	2.235E-07	1
rs4858819	3	48436678	C	T	CCDC51	0.03	0	4.2497E-08	0	6.3	0.5047818	1.285E-07	1
rs199638164	16	21606864	T	TTTGTATTT	METTL9	-0.07	0	4.252E-08	0	3.98	0.7819399	1.286E-07	1
rs155029	16	21604327	T	C	METTL9	-0.07	0	4.253E-08	0	4.01	0.7780688	1.286E-07	1
rs4732436	7	82198112	A	G	CACNA2D1	0.03	0	4.2551E-08	20	8.81	0.2664733	1.002E-07	1
rs12737877	1	162885628	G	T	CCDC190	-0.03	0	4.2609E-08	45	12.83	0.0764854	4.665E-07	1
rs13156271	5	30823558	C	T	CDH6	0.03	0	4.267E-08	0	5.2	0.6351224	1.29E-07	1
rs78555509	13	61913820	A	C	RP11-310K10	0.09	0	4.2713E-08	42	12.16	0.095367	1.291E-07	1
rs72302444	10	93172506	CGTGAAAA	C	CYP26A1	-0.05	0	4.2722E-08	0	1.2	0.9909213	1.292E-07	1
rs17768330	16	77002236	C	G	RP11-58C22.	-0.04	0	4.2759E-08	0	2.94	0.8901493	1.293E-07	1
rs139908727	16	21633638	C	CA	METTL9	-0.07	0	4.2776E-08	0	4.05	0.773741	1.293E-07	1
rs55767234	6	33901791	A	G	MLN	-0.07	0	4.2797E-08	0	2.8	0.903291	1.294E-07	1
rs9636612	21	15024670	A	G	NRIP1	-0.03	0	4.2823E-08	0	6.56	0.4759596	1.295E-07	1

Table S2

rs11645203	16	77004348	T	A	RP11-58C22.	-0.04	0	4.2829E-08	0	2.95	0.8892059	1.295E-07	1
rs77446793	1	81018001	T	A	ADGRL2	0.05	0	4.2844E-08	23	9.2	0.2383257	2.422E-07	1
rs1651127	5	58334953	A	G	PLK2	0.03	0	4.2865E-08	7	7.59	0.3698108	1.249E-07	1
rs141820144	16	21633502	G	A	METTL9	-0.07	0	4.2865E-08	0	4.05	0.7736745	1.296E-07	1
rs56270766	1	90735200	G	GT	BARHL2	0.03	0	4.2871E-08	18	8.55	0.2862466	1.107E-07	1
rs139225891	16	21633491	AT	A	METTL9	-0.07	0	4.2877E-08	0	4.05	0.7736703	1.296E-07	1
rs34485227	1	235144299	CAT	C	ARID4B,RBM	0.03	0	4.2892E-08	0	2.24	0.9456273	1.297E-07	1
rs1807792	5	82644030	G	A	ATP6AP1L	0.03	0	4.2898E-08	0	5.14	0.6425812	1.297E-07	1
rs13163181	5	30655138	T	C	CDH6	-0.04	0	4.2898E-08	0	0.88	0.9964798	1.297E-07	1
rs149425797	6	33073411	AATTGATG	A	HLA-DPA1	-0.03	0	4.2913E-08	0	2.71	0.9102881	1.297E-07	1
rs566733	11	118737916	C	G	DDX6	-0.03	0	4.2916E-08	21	8.91	0.2592509	2.298E-07	1
rs117781460	16	21633391	T	C	METTL9	-0.07	0	4.2922E-08	0	4.05	0.7737423	1.297E-07	1
rs71513441	8	56870458	C	T	IMPAD1	0.03	0	4.2945E-08	25	9.39	0.2260034	1.462E-07	1
rs567680	11	118737823	C	G	DDX6	-0.03	0	4.2948E-08	21	8.91	0.2592186	2.3E-07	1
rs143853626	12	26071504	A	G	RASSF8	0.08	0	4.2977E-08	41	11.93	0.1027352	1.835E-07	1
rs435897	16	21611255	C	T	METTL9	-0.07	0	4.3018E-08	0	4.16	0.7610686	1.3E-07	1
rs143118012	16	76658840	T	C	RP11-58C22.	0.05	0	4.3026E-08	0	2.65	0.9156234	1.301E-07	1
rs67736021	1	235141902	G	A	ARID4B,RBM	0.03	0	4.3027E-08	0	2.23	0.945784	1.301E-07	1
rs12529313	6	32849353	A	G	PSMB9,TAP1	0.03	0	4.3039E-08	2	7.19	0.4093675	1.38E-07	1
rs866500	7	100242838	A	G	GATS	-0.03	0	4.3052E-08	32	10.39	0.1676086	2.997E-07	1
rs16900218	5	30771763	T	G	CDH6	-0.04	0	4.3107E-08	0	1	0.9948537	1.303E-07	1
rs12915515	15	77783213	A	T	LINGO1	0.03	0	4.3108E-08	18	8.54	0.2870109	2.079E-07	1
rs13433902	3	43195839	C	T	POMGNT2	0.03	0	4.3135E-08	0	6.71	0.4600363	1.304E-07	1
rs1391783	12	23982455	G	A	SOX5	0.06	0	4.3141E-08	12	8	0.3327381	1.633E-07	1
rs140999803	1	210660194	G	A	HHAT	0.03	0	4.3147E-08	0	6.67	0.4637921	1.304E-07	1
rs17701821	14	98173123	C	T	C14orf177	0.04	0	4.315E-08	0	2.51	0.9261118	1.304E-07	1
rs12148319	15	78663850	A	G	CHRNB4	-0.03	0	4.3161E-08	0	2.87	0.8970714	1.305E-07	1
rs139944588	1	235129945	AATGTCCT	A	TOMM20	0.03	0	4.3162E-08	0	2.2	0.9480586	1.305E-07	1
rs73228272	4	30541919	G	A	PCDH7	-0.03	0	4.3168E-08	42	12.28	0.0918294	1.305E-07	1
rs2317784	8	56865828	A	G	IMPAD1	0.03	0	4.3171E-08	29	9.93	0.1923327	1.305E-07	1

rs2420580	2	124247596	A	T	CNTNAP5	0.03	0	4.318E-08	45	12.95	0.073399	5.88E-08	1.86045E-08
rs567783438	9	1757304	CTTGGAAG	C	SMARCA2	0.06	0	4.3222E-08	0	6.04	0.5345526	1.306E-07	1
rs2306213	17	81462202	A	G	BAHCC1	-0.03	0	4.323E-08	30	10.01	0.1882876	1.847E-07	1
rs145252989	16	21632898	T	C	METTL9	-0.07	0	4.3246E-08	0	4.05	0.7736761	1.307E-07	1
rs11192168	10	104721653	T	G	SORCS3	0.03	0	4.3251E-08	0	3.68	0.8163017	1.307E-07	1
rs62067774	16	58880694	A	G	GOT2	-0.03	0	4.3265E-08	0	4.34	0.7398294	1.308E-07	1
rs113662499	1	210660078	G	A	HHAT	0.03	0	4.327E-08	0	6.67	0.4638567	1.308E-07	1
rs11641111	16	77001937	A	G	RP11-58C22.	-0.04	0	4.3288E-08	0	2.94	0.8901273	1.308E-07	1
rs12129019	1	210659721	C	T	HHAT	0.03	0	4.3291E-08	0	6.67	0.4643262	1.308E-07	1
rs11973762	7	42704624	G	A	C7orf25	-0.07	0	4.3291E-08	0	2.8	0.902717	1.308E-07	1
rs6656775	1	90753802	A	G	BARHL2	0.03	0	4.332E-08	34	10.64	0.1552708	8.293E-08	1
rs4948029	7	55520000	C	T	VOPP1	0.03	0	4.3323E-08	0	5.4	0.6110153	1.309E-07	1
rs13094241	3	196464022	T	G	RNF168	0.03	0	4.3337E-08	0	5.65	0.581027	1.31E-07	1
rs5834052	2	124247590	CA	C	CNTNAP5	0.03	0	4.3341E-08	45	12.95	0.0732814	5.9E-08	1.86045E-08
rs10927129	1	244108394	T	C	ZBTB18	0.04	0	4.3357E-08	0	6.24	0.5124085	1.31E-07	1
rs35701899	6	33111673	T	C	HLA-DPB1	-0.03	0	4.3392E-08	0	3.54	0.8308228	1.311E-07	1
rs11047185	12	23976888	G	T	SOX5	0.06	0	4.3392E-08	11	7.93	0.3392477	1.621E-07	1
rs9365786	6	164861309	G	A	C6orf118	0.03	0	4.3402E-08	0	3.74	0.8092722	1.312E-07	1
rs145618402	6	28200548	AAAC	A	ZSCAN9	-0.04	0	4.3434E-08	47	13.29	0.0653991	2.376E-07	1
rs76394659	16	21605919	G	T	METTL9	-0.07	0	4.3462E-08	0	4.02	0.7770853	1.313E-07	1
rs12193969	6	162618237	G	C	PARK2	0.03	0	4.3495E-08	0	5.81	0.561777	1.314E-07	1
rs9841576	3	43191629	G	C	POMGNT2	0.04	0	4.3503E-08	0	5.76	0.5683772	1.315E-07	1
rs12504586	4	46455348	C	T	GABRA2	0.04	0	4.3504E-08	0	5.63	0.5836106	1.315E-07	1
rs12207841	6	162618349	C	T	PARK2	0.03	0	4.3524E-08	0	5.81	0.5617663	1.315E-07	1
rs4692096	4	30545238	C	T	PCDH7	-0.03	0	4.3574E-08	49	13.76	0.0556405	1.317E-07	1
rs7215624	17	68116807	G	A	KPNA2	-0.03	0	4.3599E-08	0	6.97	0.4319061	1.317E-07	1
rs117152208	16	21631648	T	C	METTL9	-0.07	0	4.3614E-08	0	4.06	0.7734188	1.318E-07	1
rs174560	11	61814292	T	C	FADS1,FADS	0.03	0	4.3649E-08	0	7	0.4285268	1.32E-07	1
rs2176090	12	103034777	G	A	ASCL1	0.03	0	4.3656E-08	0	6.95	0.4345103	1.319E-07	1
rs11238367	7	55517491	G	A	VOPP1	0.03	0	4.3754E-08	0	5.45	0.6049263	1.322E-07	1

Table S2

rs12761138	10	104721196	G	A	SORCS3	0.03	0	4.3765E-08	0	3.69	0.814625	1.322E-07	1
rs34578708	10	104721416	G	T	SORCS3	0.03	0	4.3765E-08	0	3.69	0.814625	1.322E-07	1
rs145922952	19	49116793	G	A	LIN7B	0.07	0	4.3768E-08	32	10.39	0.1677699	1.026E-07	1
rs11646347	16	58879946	A	G	GOT2	-0.03	0	4.3771E-08	0	4.33	0.7405225	1.322E-07	1
rs75389851	11	134609283	G	A	B3GAT1	-0.08	0	4.3804E-08	0	1.8	0.9700527	1.323E-07	1
rs2887631	12	1825415	G	A	CACNA2D4,	-0.04	0	4.3806E-08	6	7.46	0.382365	1.324E-07	1
rs73228270	4	30540208	G	T	PCDH7	-0.03	0	4.3827E-08	42	12.21	0.0938038	1.15E-07	1
rs8017594	14	42974863	C	G	LRFN5	0.09	0	4.3835E-08	36	11	0.1387955	2.008E-07	1
rs4721058	7	12227630	C	T	TMEM106B	0.03	0	4.3855E-08	0	6.9	0.4393719	1.325E-07	1
rs7111153	11	112963431	T	C	NCAM1	0.03	0	4.3894E-08	26	9.53	0.216916	1.771E-07	1
rs2175556	4	30551011	G	A	PCDH7	-0.03	0	4.3908E-08	43	12.35	0.0894964	1.112E-07	1
rs12700814	7	27526696	T	A	HIBADH	-0.03	0	4.392E-08	0	5.15	0.6417754	1.327E-07	1
rs10235395	7	12246424	A	G	TMEM106B	0.03	0	4.3937E-08	0	6.37	0.4973878	1.327E-07	1
rs10251825	7	55535897	G	A	VOPP1	0.03	0	4.3938E-08	0	5.42	0.609227	1.327E-07	1
rs72973945	2	208511562	A	C	PTH2R	0.08	0	4.3964E-08	3	7.28	0.3999394	1.328E-07	1
rs6445190	3	61084781	T	C	FHIT	-0.03	0	4.3965E-08	42	12.22	0.0935346	7.815E-08	1
rs149263861	16	21630606	G	A	METTL9	-0.07	0	4.3978E-08	0	4.05	0.7743802	1.329E-07	1
rs10957996	8	81056991	G	A	PAG1	-0.04	0	4.4024E-08	0	4.15	0.762579	1.33E-07	1
rs112797180	16	21321167	C	T	CRYM	-0.07	0	4.4027E-08	0	4.59	0.7094186	1.33E-07	1
rs9835776	3	43190577	C	T	POMGNT2	0.04	0	4.4037E-08	0	5.76	0.568155	1.33E-07	1
rs2175555	4	30551056	C	T	PCDH7	-0.03	0	4.404E-08	43	12.36	0.0894625	1.115E-07	1
rs117061539	16	21630325	A	G	METTL9	-0.07	0	4.4046E-08	0	4.05	0.7743791	1.331E-07	1
rs12374418	4	30549297	C	A	PCDH7	-0.03	0	4.4051E-08	43	12.35	0.0896397	1.116E-07	1
rs1491159051	7	42701339	TTATC	T	C7orf25	-0.07	0	4.4055E-08	0	2.75	0.9071368	1.331E-07	1
rs4638190	1	210660894	C	T	HHAT	0.03	0	4.4059E-08	0	6.69	0.4622738	1.331E-07	1
rs188393692	16	71691250	C	T	PHLPP2	0.06	0	4.4064E-08	31	10.24	0.1751774	8.403E-08	1
rs6779394	3	49120338	G	A	USP19	-0.03	0	4.4088E-08	9	7.78	0.3527882	1.83E-07	1
rs2902673	20	38386556	G	A	LBP	-0.06	0	4.4088E-08	8	7.63	0.3667104	1.705E-07	1
rs10495361	1	235226233	C	T	ARID4B	0.03	0	4.4092E-08	0	6.93	0.4359946	1.332E-07	1
rs11842177	13	112167370	G	A	SOX1	0.03	0	4.4115E-08	0	0.83	0.9971555	1.333E-07	1

Table S2

rs2813550	6	152120452	C	A	ESR1	0.04	0	4.4167E-08	0	4.86	0.6776137	1.334E-07	1
rs17598303	11	113265358	C	T	NCAM1	-0.04	0	4.4172E-08	0	2.21	0.9473802	1.334E-07	1
rs74725095	2	195384260	GA	G	SLC39A10	0.04	0	4.4172E-08	0	5.8	0.5630069	1.334E-07	1
rs246486	5	151348319	T	C	SLC36A2	0.03	0	4.4201E-08	0	4.6	0.7089971	1.335E-07	1
rs7454819	6	162617898	T	C	PARK2	0.03	0	4.4254E-08	0	5.82	0.5604025	1.337E-07	1
rs139339252	16	21630149	T	C	METTL9	-0.07	0	4.4315E-08	0	4.05	0.7744847	1.339E-07	1
rs143364437	16	21630150	G	A	METTL9	-0.07	0	4.4315E-08	0	4.05	0.7744847	1.339E-07	1
rs11185540	3	196454200	G	A	RNF168	0.03	0	4.4339E-08	0	3.35	0.8505836	1.339E-07	1
rs76787767	16	21607838	A	G	METTL9	-0.07	0	4.4351E-08	0	4.05	0.7741751	1.34E-07	1
rs9937778	16	58920032	C	G	GOT2	-0.03	0	4.4353E-08	40	11.74	0.1093801	2.292E-07	1
rs34212316	17	68122378	A	G	KPNA2	0.03	0	4.439E-08	1	7.11	0.4179026	1.415E-07	1
rs149205	16	21607960	C	A	METTL9	-0.07	0	4.4413E-08	0	4.05	0.774091	1.341E-07	1
rs6939153	6	25678450	C	T	SCGN	0.04	0	4.4416E-08	3	7.23	0.4050415	1.47E-07	1
rs11716353	3	152561668	T	C	MBNL1	0.04	0	4.4425E-08	20	8.76	0.2706732	2.374E-07	1
rs155028	16	21608278	C	T	METTL9	-0.07	0	4.4467E-08	0	4.04	0.7747342	1.343E-07	1
rs139740329	5	120665606	C	A	PRR16	-0.03	0	4.447E-08	37	11.27	0.12733	2.052E-07	1
rs11846838	14	103718400	G	A	ZFYVE21	0.03	0	4.4475E-08	7	7.6	0.3691593	1.495E-07	1
rs7626635	3	114370806	G	C	ZBTB20	-0.03	0	4.4492E-08	9	7.7	0.3599405	1.705E-07	1
rs6802616	3	196454143	T	C	RNF168	0.03	0	4.4494E-08	0	3.37	0.8484078	1.344E-07	1
rs352701	5	151356913	A	G	SLC36A2	0.03	0	4.4495E-08	0	4.84	0.6791074	1.344E-07	1
rs6837550	4	154095950	G	A	DCHS2	0.05	0	4.4528E-08	0	3.21	0.8646053	1.345E-07	1
rs13066902	3	43417434	C	T	ANO10,SNRI	-0.03	0	4.4546E-08	50	14.01	0.0509401	2.714E-08	7.54539E-09
rs182453635	5	125782352	A	G	GRAMD3	0.08	0	4.4577E-08	0	6.83	0.4473045	1.346E-07	1
rs4328122	1	210661163	A	G	HHAT	0.03	0	4.4587E-08	0	6.69	0.4615544	1.347E-07	1
rs59711664	5	80175523	G	A	SERINC5	-0.05	0	4.4595E-08	10	7.8	0.350988	1.648E-07	1
rs149950928	6	162581762	A	AAT	PARK2	0.03	0	4.4598E-08	0	4.27	0.74842	1.347E-07	1
rs117553292	16	21629372	A	G	METTL9	-0.07	0	4.4622E-08	0	4.05	0.7740554	1.348E-07	1
rs57296294	16	7699278	ACCTCCTG(	A	RBFOX1	0.03	0	4.4674E-08	52	14.73	0.0395959	3.274E-07	1
rs73253360	6	165084423	T	C	C6orf118	0.04	0	4.4682E-08	52	14.62	0.0412075	3.364E-08	9.45892E-09
rs79686566	16	21629310	C	T	METTL9	-0.07	0	4.4683E-08	0	4.05	0.7742087	1.349E-07	1

rs930457	4	142864209	T	C	INPP4B	-0.03	0	4.4712E-08	0	6.28	0.5072479	1.35E-07	1
rs4796097	17	35533207	C	T	SLFN12L	0.03	0	4.473E-08	0	3.81	0.8016811	1.351E-07	1
rs77023402	3	16761078	G	A	PLCL2	-0.04	0	4.4736E-08	20	8.79	0.2680927	1.847E-07	1
rs76381532	14	98174947	G	T	C14orf177	0.04	0	4.474E-08	0	2.5	0.926881	1.351E-07	1
rs10876929	12	56814446	G	C	HSD17B6	0.03	0	4.4761E-08	0	5.33	0.6200092	1.352E-07	1
rs117070523	10	93170802	A	G	CYP26A1	-0.05	0	4.478E-08	0	1.27	0.9891904	1.352E-07	1
rs11208797	1	66088462	C	T	PDE4B	0.03	0	4.4797E-08	26	9.56	0.2147277	8.753E-08	1
rs4909631	8	134732513	C	T	ZFAT	0.03	0	4.4801E-08	0	4	0.7793198	1.353E-07	1
rs241408	6	32894934	A	G	PSMB9	0.03	0	4.4875E-08	3	7.28	0.4002269	1.521E-07	1
rs9517299	13	98442777	C	T	FARP1	-0.03	0	4.4878E-08	46	12.99	0.072314	2.259E-07	1
rs1367728	6	33067038	G	A	HLA-DPA1	-0.03	0	4.4905E-08	0	2.62	0.9178066	1.356E-07	1
rs17110053	12	71634496	T	C	ZFC3H1	0.05	0	4.4918E-08	0	4.46	0.7251092	1.356E-07	1
rs3742365	14	103731914	T	C	ZFYVE21	0.03	0	4.4958E-08	0	6.12	0.5254571	1.358E-07	1
rs12901558	15	77784037	G	A	LINGO1	0.03	0	4.4977E-08	18	8.55	0.2868984	2.168E-07	1
rs58191891	7	36287346	A	T	EEPD1	-0.05	0	4.4982E-08	11	7.93	0.3385989	1.52E-07	1
rs155026	16	21609685	T	A	METTL9	-0.07	0	4.4983E-08	0	4.05	0.7745624	1.358E-07	1
rs1154612	4	30561367	T	G	PCDH7	-0.03	0	4.4985E-08	43	12.3	0.0911153	1.358E-07	1
rs117042156	11	134614986	G	T	B3GAT1	-0.08	0	4.4986E-08	0	1.81	0.9696352	1.358E-07	1
rs117733706	11	134615118	G	A	B3GAT1	-0.08	0	4.4986E-08	0	1.81	0.9696352	1.358E-07	1
rs878366	1	226350167	C	T	PARP1	-0.03	0	4.5047E-08	39	11.65	0.1126871	1.36E-07	1
rs80145248	8	141191445	G	A	DENND3	0.05	0	4.5089E-08	32	10.44	0.1650328	2.274E-07	1
rs12455401	18	1986213	G	A	METTL4	-0.05	0	4.5119E-08	43	12.32	0.0906328	1.134E-07	1
rs155027	16	21609547	A	G	METTL9	-0.07	0	4.5124E-08	0	4.04	0.7747632	1.362E-07	1
rs75482761	16	21609126	A	G	METTL9	-0.07	0	4.5125E-08	0	4.05	0.7745677	1.362E-07	1
rs1154611	4	30561594	G	A	PCDH7	-0.03	0	4.5132E-08	43	12.3	0.0911712	1.281E-07	1
rs62444021	6	165081829	T	A	C6orf118	0.04	0	4.5152E-08	52	14.65	0.0407456	3.334E-08	9.45892E-09
rs6799185	3	53067564	C	T	RP11-894J14.	-0.03	0	4.5161E-08	11	7.9	0.3418086	1.363E-07	1
rs55704305	3	44422841	G	A	LINC00694	-0.03	0	4.5162E-08	0	4.49	0.7218092	1.364E-07	1
rs149429614	16	21611726	AT	A	METTL9	-0.07	0	4.519E-08	0	4.06	0.7723247	1.364E-07	1
rs200968	6	27891790	T	C	HIST1H3J	-0.04	0	4.5242E-08	32	10.39	0.1676012	1.366E-07	1

rs5018306	11	134613656	T	G	B3GAT1	-0.08	0	4.5277E-08	0	1.81	0.969752	1.367E-07	1
rs9862508	3	44422626	C	A	LINC00694	-0.03	0	4.5286E-08	0	4.49	0.7218478	1.367E-07	1
rs2223377	6	165082094	T	G	C6orf118	0.04	0	4.5293E-08	52	14.66	0.0405635	3.337E-08	9.45892E-09
rs80273305	16	21611916	A	G	METTL9	-0.07	0	4.5294E-08	0	4.07	0.7721905	1.367E-07	1
rs74357675	16	21611954	T	C	METTL9	-0.07	0	4.5299E-08	0	4.07	0.7721929	1.368E-07	1
rs13250309	8	56867554	C	T	IMPAD1	0.03	0	4.531E-08	28	9.78	0.201508	1.363E-07	1
rs10012348	4	30561963	G	A	PCDH7	-0.03	0	4.5311E-08	43	12.3	0.0910089	1.368E-07	1
rs12595350	15	78661122	G	A	CHRNB4	-0.03	0	4.5316E-08	0	2.82	0.9007991	1.368E-07	1
rs147332474	16	21627948	A	G	METTL9	-0.07	0	4.5335E-08	0	4.07	0.7718305	1.369E-07	1
rs1912528	4	140024812	C	T	MAML3	-0.03	0	4.5359E-08	0	4.98	0.6625612	1.369E-07	1
rs12641780	4	20215848	G	A	SLIT2	-0.09	0	4.5363E-08	33	10.57	0.1583452	3.721E-07	1
rs35802963	17	79821065	C	T	CBX4	0.05	0	4.5366E-08	0	3.85	0.7965236	1.37E-07	1
rs12900865	15	77783568	G	A	LINGO1	0.03	0	4.5367E-08	18	8.54	0.2874344	2.18E-07	1
rs79951617	16	21615936	G	C	METTL9	-0.07	0	4.5384E-08	0	4.07	0.7720276	1.37E-07	1
rs76363175	16	21627376	C	T	METTL9	-0.07	0	4.5396E-08	0	4.06	0.7723726	1.37E-07	1
rs2371561	12	56808940	C	T	HSD17B6	0.03	0	4.5413E-08	0	5.28	0.6257918	1.371E-07	1
rs13037451	20	17226325	C	G	PCSK2	-0.06	0	4.5418E-08	42	12.26	0.0921954	2.601E-07	1
rs116852501	16	21613068	G	A	METTL9	-0.07	0	4.5448E-08	0	4.07	0.7720734	1.372E-07	1
rs78201358	16	21615691	T	C	METTL9	-0.07	0	4.5449E-08	0	4.07	0.7720899	1.372E-07	1
rs117314255	16	21613422	A	G	METTL9	-0.07	0	4.545E-08	0	4.07	0.7721492	1.372E-07	1
rs72794864	5	109475639	G	T	PJA2	-0.04	0	4.5468E-08	0	3.62	0.8226471	1.373E-07	1
rs80325581	16	21620280	G	C	METTL9	-0.07	0	4.5472E-08	0	4.07	0.7719396	1.373E-07	1
rs79396949	11	134731960	C	T	B3GAT1	-0.06	0	4.5484E-08	0	2.24	0.9455484	1.373E-07	1
rs75137910	16	21612391	C	G	METTL9	-0.07	0	4.549E-08	0	4.07	0.7720938	1.373E-07	1
rs817571	17	69408809	C	T	MAP2K6	0.03	0	4.5497E-08	36	11.08	0.1351371	2.585E-07	1
rs80143869	16	21619347	G	A	METTL9	-0.07	0	4.5507E-08	0	4.07	0.7720118	1.374E-07	1
rs4128530	3	43394088	A	G	ANO10,SNRI	-0.03	0	4.5542E-08	48	13.71	0.0565438	3.164E-08	8.93547E-09
rs117595215	16	21618275	C	T	METTL9	-0.07	0	4.5556E-08	0	4.07	0.7720526	1.375E-07	1
rs72760086	15	88492258	A	G	DET1	-0.05	0	4.5632E-08	0	4.33	0.7414037	1.377E-07	1
rs140949059	16	21611048	G	GA	METTL9	-0.07	0	4.5655E-08	0	4.07	0.7717059	1.378E-07	1

rs5011432	7	12229042	A	C	TMEM106B	0.03	0	4.5662E-08	0	6.4	0.4940202	1.378E-07	1
rs3743703	16	21627147	T	A	METTL9	-0.07	0	4.5675E-08	0	4.06	0.7727373	1.379E-07	1
rs6790261	3	44422156	C	T	LINC00694	-0.03	0	4.5687E-08	0	4.49	0.7218197	1.379E-07	1
rs7433433	3	196446775	C	G	UBXN7	0.03	0	4.5695E-08	0	2.89	0.8951908	1.379E-07	1
rs6790566	3	44422443	C	A	LINC00694	-0.03	0	4.5698E-08	0	4.49	0.7216616	1.379E-07	1
rs7028304	9	8336879	A	C	PTPRD	-0.03	0	4.5806E-08	49	13.9	0.0529389	2.164E-07	1
rs4690740	4	142960579	A	T	INPP4B	-0.03	0	4.5809E-08	51	14.43	0.0440968	9.173E-08	1
rs9358866	6	25675626	C	T	SCGN	0.04	0	4.5866E-08	3	7.24	0.4043659	1.52E-07	1
rs34434613	4	30562443	T	TC	PCDH7	-0.03	0	4.5878E-08	43	12.3	0.0911611	1.385E-07	1
rs7923552	10	21398194	G	A	CASC10	0.03	0	4.5884E-08	3	7.26	0.4019522	1.459E-07	1
rs141420419	16	21625584	GTGT	G	METTL9	-0.07	0	4.5889E-08	0	4.05	0.7736194	1.385E-07	1
rs7682384	4	30564408	A	T	PCDH7	-0.03	0	4.5902E-08	43	12.3	0.0910392	1.551E-07	1
rs1110478	22	19975246	C	T	ARVCF	0.04	0	4.591E-08	33	10.56	0.1591389	1.808E-07	1
rs74768812	16	21323145	G	A	CRYM	-0.07	0	4.5925E-08	0	4.6	0.7086943	1.386E-07	1
rs12513045	4	140026941	T	C	MAML3	-0.03	0	4.5972E-08	0	4.84	0.6795211	1.387E-07	1
rs73228286	4	30562841	A	G	PCDH7	-0.03	0	4.5975E-08	43	12.31	0.090794	1.299E-07	1
rs7575160	2	195560896	T	C	SLC39A10	0.03	0	4.6036E-08	34	10.68	0.1532826	2.408E-07	1
rs4146669	1	90734634	T	C	BARHL2	0.03	0	4.6044E-08	12	7.99	0.3336735	1.006E-07	1
rs4623282	6	32849667	C	T	PSMB9,TAP1	0.04	0	4.607E-08	22	9.01	0.252047	2.002E-07	1
rs76103659	4	30552358	C	T	PCDH7	-0.03	0	4.6123E-08	48	13.64	0.0580048	1.392E-07	1
rs9876127	3	44421105	T	G	LINC00694	-0.03	0	4.6161E-08	0	4.49	0.7214564	1.393E-07	1
rs4406147	5	30833999	C	G	CDH6	0.03	0	4.6165E-08	0	5.25	0.6292466	1.393E-07	1
rs62543305	9	70699702	C	T	TRPM3	0.05	0	4.6171E-08	11	7.88	0.34351	1.758E-07	1
rs142931863	2	194543621	A	G	SLC39A10	0.06	0	4.6174E-08	0	6.48	0.4851712	1.393E-07	1
rs138928428	4	30552368	T	TAAG	PCDH7	-0.03	0	4.6175E-08	48	13.64	0.0580073	1.393E-07	1
rs1995471	12	60591263	A	G	SLC16A7	-0.03	0	4.6199E-08	54	15.55	0.0295366	1.441E-07	1
rs72787025	16	71997966	T	G	PKD1L3	0.03	0	4.6199E-08	0	3.11	0.8742352	1.394E-07	1
rs12022877	1	162886962	A	G	CCDC190	0.04	0	4.6207E-08	35	10.77	0.1488931	4.359E-07	1
rs143427057	7	23168968	A	T	KLHL7	0.07	0	4.6229E-08	0	2.59	0.9202772	1.395E-07	1
rs1100859	6	36086025	G	A	MAPK14	0.04	0	4.6253E-08	23	9.11	0.2450839	2.232E-07	1

Table S2

rs246482	5	151352296	G	C	SLC36A2	0.03	0	4.6255E-08	0	4.84	0.6800529	1.396E-07	1
rs2291473	19	10305105	T	C	ZGLP1	0.04	0	4.6289E-08	24	9.31	0.2311474	1.021E-07	1
rs2399038	3	104914165	G	C	ALCAM	0.04	0	4.63E-08	0	5.37	0.6155025	1.397E-07	1
rs12480881	20	52603448	C	T	TSHZ2	-0.03	0	4.6311E-08	3	7.23	0.4056061	1.568E-07	1
rs139450820	17	67824205	T	C	BPTF	0.05	0	4.6317E-08	0	2.96	0.8885197	1.398E-07	1
rs55993802	6	164681257	TA	T	C6orf118	0.03	0	4.6319E-08	0	5.73	0.5721096	1.398E-07	1
rs152087	5	151354858	C	T	SLC36A2	0.03	0	4.6329E-08	0	4.83	0.6804242	1.398E-07	1
rs941475	14	103774281	A	C	PPP1R13B	0.03	0	4.6331E-08	0	6.49	0.484174	1.398E-07	1
rs12105978	2	195388243	A	G	SLC39A10	0.04	0	4.6337E-08	0	5.8	0.5631025	1.398E-07	1
rs716784	1	198285259	C	T	NEK7	0.04	0	4.6342E-08	25	9.46	0.221602	1.99E-07	1
rs7163204	15	78661398	G	A	CHRNB4	-0.03	0	4.6356E-08	0	2.84	0.8992323	1.399E-07	1
rs16842692	1	198287438	T	C	NEK7	0.04	0	4.638E-08	25	9.46	0.2215624	1.992E-07	1
rs12447238	16	77089899	C	G	MON1B	0.03	0	4.6382E-08	4	7.34	0.3941489	1.399E-07	1
rs74880322	16	58896913	A	T	GOT2	-0.03	0	4.6386E-08	0	3.95	0.7855387	1.4E-07	1
rs4906368	14	103776060	A	C	PPP1R13B	0.03	0	4.6387E-08	0	6.49	0.4842182	1.4E-07	1
rs36090777	10	11307495	G	C	CELF2	-0.05	0	4.6391E-08	51	14.3	0.0461648	4.993E-08	1.53337E-08
rs1617856	18	51489070	T	G	MEX3C	-0.03	0	4.64E-08	0	6.72	0.4585837	1.4E-07	1
rs10494771	1	198289717	A	G	NEK7	0.04	0	4.6419E-08	25	9.45	0.2218391	1.993E-07	1
rs140276651	10	104725974	C	G	SORCS3	0.03	0	4.6476E-08	0	3.75	0.8079982	1.402E-07	1
rs28809189	10	104725341	T	C	SORCS3	0.03	0	4.6476E-08	0	3.75	0.8079982	1.402E-07	1
rs12359989	10	104724888	T	A	SORCS3	0.03	0	4.6476E-08	0	3.75	0.8079982	1.402E-07	1
rs181472550	16	71708466	C	T	PHLPP2	0.06	0	4.6488E-08	32	10.4	0.1669579	8.421E-08	1
rs16842663	1	198280589	T	C	NEK7	0.04	0	4.649E-08	25	9.46	0.2215589	1.996E-07	1
rs189839317	13	60988506	G	A	TDRD3	-0.09	0	4.6497E-08	0	4.11	0.7674465	1.403E-07	1
rs145635865	5	157644785	A	T	SOX30	-0.05	0	4.6506E-08	53	14.98	0.0363067	1.332E-07	1
rs6662804	1	198279453	A	G	NEK7	0.04	0	4.6512E-08	25	9.46	0.2215268	1.997E-07	1
rs16829976	1	198281170	T	C	NEK7	0.04	0	4.6513E-08	25	9.46	0.2215661	1.997E-07	1
rs6665857	1	198279986	A	G	NEK7	0.04	0	4.6521E-08	25	9.46	0.2215253	1.997E-07	1
rs6668469	1	198280065	T	C	NEK7	0.04	0	4.6521E-08	25	9.46	0.2215253	1.997E-07	1
rs1100856	6	36087438	G	A	MAPK14	0.04	0	4.6531E-08	23	9.1	0.2458476	2.251E-07	1

rs151245571	2	212158377	T	C	ERBB4	0.09	0	4.6548E-08	0	3.81	0.8019145	1.404E-07	1
rs4542627	15	77778401	A	T	LINGO1	0.03	0	4.6561E-08	18	8.56	0.2857299	2.243E-07	1
rs566917810	16	71722066	ATTCAGAG	A	PHLPP2	0.06	0	4.6566E-08	32	10.4	0.1670236	8.435E-08	1
rs143471946	20	38386204	GTTTCTGTA	G	LBP	-0.06	0	4.6598E-08	5	7.43	0.3857311	1.671E-07	1
rs7630742	3	48742648	A	G	PRKAR2A	-0.03	0	4.6604E-08	0	6.7	0.4603749	1.406E-07	1
rs1565421	10	104727418	G	A	SORCS3	-0.03	0	4.661E-08	0	3.75	0.8080624	1.406E-07	1
rs149332	16	21611578	C	T	METTL9	-0.07	0	4.6632E-08	0	4.07	0.7715256	1.407E-07	1
rs113617732	11	47992237	G	A	PTPRJ	-0.04	0	4.6652E-08	0	3.8	0.8028699	1.407E-07	1
rs6092172	20	55769922	G	T	CBLN4	-0.04	0	4.6661E-08	0	6.16	0.5214642	1.408E-07	1
rs284009	16	76999386	A	G	RP11-58C22.	0.04	0	4.6662E-08	0	2.94	0.8901408	1.408E-07	1
rs2089892	4	30563171	C	T	PCDH7	-0.03	0	4.6706E-08	43	12.29	0.091307	1.582E-07	1
rs6445191	3	61084939	A	T	FHIT	-0.03	0	4.6708E-08	42	12.16	0.0955091	8.393E-08	1
rs9933811	16	58918526	G	T	GOT2	-0.03	0	4.6711E-08	43	12.32	0.0904996	2.589E-07	1
rs7546420	1	198290550	G	A	NEK7	0.04	0	4.672E-08	25	9.45	0.2220043	2.006E-07	1
rs2874918	4	142952141	G	T	INPP4B	-0.03	0	4.6738E-08	51	14.4	0.0444641	9.399E-08	1
rs5848698	3	44419863	A	AG	LINC00694	-0.03	0	4.6749E-08	0	4.5	0.7209893	1.41E-07	1
rs11363251	2	28078343	GC	G	BRE	0.03	0	4.6751E-08	0	5.02	0.6572297	1.41E-07	1
rs964280	16	77089347	C	T	MON1B	0.03	0	4.6767E-08	4	7.33	0.3950007	1.411E-07	1
rs246483	5	151351501	C	G	SLC36A2	0.03	0	4.6796E-08	0	4.79	0.685495	1.412E-07	1
rs1441420	4	142952634	C	T	INPP4B	-0.03	0	4.6802E-08	51	14.4	0.0444669	9.411E-08	1
rs55726435	15	77778741	C	T	LINGO1	0.03	0	4.682E-08	18	8.56	0.286005	2.253E-07	1
rs11047192	12	23991794	T	C	SOX5	0.06	0	4.6839E-08	10	7.78	0.3522788	1.682E-07	1
rs12770567	10	104724140	T	C	SORCS3	0.03	0	4.6843E-08	0	3.76	0.8072778	1.413E-07	1
rs541708	8	9937760	G	A	MSRA	-0.03	0	4.6852E-08	0	4.88	0.6748209	1.413E-07	1
rs13433894	3	43195175	C	T	POMGNT2	0.03	0	4.6868E-08	0	6.75	0.4558757	1.414E-07	1
rs8058713	16	77003337	T	C	RP11-58C22.	-0.04	0	4.6915E-08	0	2.76	0.9063754	1.415E-07	1
rs1100857	6	36087348	G	A	MAPK14	0.04	0	4.6969E-08	23	9.09	0.2460227	2.272E-07	1
rs9276913	6	32889719	G	A	PSMB9	0.03	0	4.6985E-08	3	7.23	0.4051534	1.561E-07	1
rs9348106	6	166252400	G	T	PRR18	0.04	0	4.6986E-08	19	8.69	0.2757754	2.521E-07	1
rs116025241	6	35196172	T	A	SCUBE3	-0.06	0	4.7019E-08	0	5.29	0.6240893	1.418E-07	1

rs62444023	6	165087325	T	C	C6orf118	0.04	0	4.7022E-08	52	14.66	0.0405436	3.481E-08	9.73334E-09
rs12879501	14	103806297	G	T	PPP1R13B	0.03	0	4.7033E-08	0	6.65	0.4660525	1.419E-07	1
rs11076489	16	49617026	T	G	ZNF423	0.04	0	4.7036E-08	58	16.9	0.0180716	1.475E-07	1
rs1987170	3	18153497	C	G	TBC1D5	-0.05	0	4.7069E-08	35	10.92	0.1421012	7.894E-08	1
rs6501323	17	69409867	A	C	MAP2K6	0.03	0	4.7083E-08	36	11.09	0.1346597	2.669E-07	1
rs9865920	3	44419338	T	C	LINC00694	-0.03	0	4.7183E-08	0	4.5	0.7208623	1.423E-07	1
rs16842650	1	198272823	T	A	NEK7	0.04	0	4.719E-08	26	9.46	0.2210855	2.026E-07	1
rs3935211	3	44419511	G	A	LINC00694	-0.03	0	4.7205E-08	0	4.5	0.7208328	1.424E-07	1
rs73530179	16	30096460	A	G	YPEL3	-0.03	0	4.7255E-08	12	8.01	0.3313727	1.425E-07	1
rs4659549	1	235138941	T	C	ARID4B,RBM	0.03	0	4.7264E-08	0	2.2	0.9476309	1.425E-07	1
rs202065063	16	71757950	GCT	G	AP1G1	0.06	0	4.7267E-08	32	10.42	0.1662236	8.519E-08	1
rs9846407	3	44419546	C	T	LINC00694	-0.03	0	4.7268E-08	0	4.5	0.7207172	1.426E-07	1
rs9845909	3	44419251	C	T	LINC00694	-0.03	0	4.7269E-08	0	4.5	0.7208615	1.426E-07	1
rs174561	11	61815236	T	C	FADS1,FADS	0.03	0	4.7296E-08	8	7.69	0.3608805	1.69E-07	1
rs1349258	3	82332796	T	C	GBE1	-0.04	0	4.73E-08	12	7.98	0.3343035	1.623E-07	1
rs9833904	3	60128134	A	G	FHIT	0.04	0	4.7315E-08	37	11.13	0.133245	1.427E-07	1
rs12517438	5	30841947	T	G	CDH6	0.03	0	4.7323E-08	14	8.2	0.3150032	1.986E-07	1
rs1606277	4	30563603	A	G	PCDH7	-0.03	0	4.7334E-08	43	12.3	0.0911457	1.427E-07	1
rs34504950	1	235140597	C	T	ARID4B,RBM	0.03	0	4.7335E-08	0	2.21	0.9474634	1.428E-07	1
rs7649643	3	158553300	A	G	RSRC1	-0.03	0	4.7384E-08	0	5.17	0.6389146	1.429E-07	1
rs4504214	4	30824884	T	C	PCDH7	-0.03	0	4.7387E-08	38	11.39	0.1225051	1.429E-07	1
rs12643886	4	101722240	C	T	BANK1	-0.03	0	4.74E-08	0	5.64	0.5827463	1.429E-07	1
rs12649895	4	101722239	A	T	BANK1	-0.03	0	4.74E-08	0	5.64	0.5827463	1.429E-07	1
rs16842603	1	198253609	A	G	NEK7	0.04	0	4.7416E-08	26	9.54	0.2159347	2.036E-07	1
rs3774628	3	48764407	C	T	PRKAR2A	-0.03	0	4.7419E-08	0	6.67	0.4640834	1.43E-07	1
rs7618690	3	196419168	T	C	UBXN7	-0.03	0	4.742E-08	0	1.1	0.9931394	1.43E-07	1
rs11645550	16	60633363	A	C	RP11-457D20	-0.03	0	4.7433E-08	0	4.01	0.7780582	1.43E-07	1
rs6842478	4	41018690	G	A	APBB2	0.03	0	4.7436E-08	0	6.7	0.4605448	1.43E-07	1
rs62375328	5	109549240	T	C	PJA2	-0.04	0	4.7436E-08	0	3.78	0.8051735	1.43E-07	1
rs9934414	16	58919183	G	T	GOT2	-0.03	0	4.7469E-08	37	11.2	0.129934	2.622E-07	1

rs7159336	14	98176400	C	T	C14orf177	0.04	0	4.7481E-08	0	2.49	0.9278231	1.432E-07	1
rs11639899	16	60633135	G	A	RP11-457D20	-0.03	0	4.7498E-08	0	4.02	0.7779846	1.432E-07	1
rs10022517	4	30566397	T	C	PCDH7	-0.03	0	4.7502E-08	43	12.36	0.0894266	1.432E-07	1
rs6014910	20	38385925	C	T	LBP	-0.06	0	4.7525E-08	8	7.62	0.3669062	1.831E-07	1
rs17604550	15	86311526	A	G	AGBL1	0.03	0	4.7543E-08	8	7.66	0.3639347	1.113E-07	1
rs10402106	19	57051921	C	T	USP29	-0.09	0	4.7553E-08	0	3.59	0.8250695	1.434E-07	1
rs9460337	6	19331097	G	A	ID4	0.04	0	4.7557E-08	36	10.98	0.139404	1.724E-07	1
rs11919572	3	82334774	T	C	GBE1	-0.04	0	4.7602E-08	12	7.98	0.3341332	1.633E-07	1
rs13213003	6	19330867	A	G	ID4	0.04	0	4.7608E-08	36	10.99	0.1389798	1.724E-07	1
rs34305128	1	235130366	T	C	RBM34	0.03	0	4.7612E-08	0	2.17	0.9496262	1.436E-07	1
rs2155503	6	162614358	C	A	PARK2	0.03	0	4.7621E-08	0	5.94	0.5464904	1.436E-07	1
rs2155504	6	162614357	C	T	PARK2	0.03	0	4.7621E-08	0	5.94	0.5464904	1.436E-07	1
rs62375326	5	109537954	C	T	PJA2	-0.04	0	4.7622E-08	0	3.77	0.8059009	1.436E-07	1
rs4546248	4	101756679	G	T	BANK1	-0.03	0	4.7637E-08	0	5.64	0.5824302	1.436E-07	1
rs12649307	4	30564056	A	C	PCDH7	-0.03	0	4.7654E-08	43	12.3	0.0912235	1.611E-07	1
rs34216394	4	142948686	G	GT	INPP4B	-0.03	0	4.7664E-08	51	14.41	0.044341	9.57E-08	1
rs35399959	4	142948685	T	A	INPP4B	-0.03	0	4.7664E-08	51	14.41	0.044341	9.57E-08	1
rs4888595	16	77089068	G	A	MON1B	0.03	0	4.7671E-08	3	7.27	0.4012902	1.437E-07	1
rs9922041	16	30099146	T	C	YPEL3	-0.03	0	4.7689E-08	12	7.96	0.3365132	1.438E-07	1
rs10494768	1	198283322	G	T	NEK7	0.04	0	4.7698E-08	25	9.45	0.2218814	2.049E-07	1
rs117800165	16	22317568	A	G	POLR3E	-0.07	0	4.7707E-08	0	4.3	0.7443565	1.438E-07	1
rs7318390	13	107399611	T	C	FAM155A	-0.04	0	4.7716E-08	50	14.09	0.0496879	1.33E-07	1
rs2295146	14	103733019	C	T	ZFYVE21	0.03	0	4.7813E-08	0	5.8	0.5635949	1.442E-07	1
rs140023153	5	109540494	G	A	PJA2	-0.04	0	4.7826E-08	0	3.77	0.8062655	1.442E-07	1
rs1862743	16	60709930	C	A	RP11-457D20	-0.03	0	4.783E-08	0	5.09	0.6484552	1.442E-07	1
rs4640677	4	101736918	G	A	BANK1	-0.03	0	4.7837E-08	0	5.63	0.5830917	1.442E-07	1
rs1019467	5	151354762	A	G	SLC36A2	0.03	0	4.7847E-08	0	4.83	0.6812445	1.443E-07	1
rs8037968	15	77785420	C	T	LINGO1	0.03	0	4.7852E-08	18	8.55	0.2863434	2.308E-07	1
rs142459538	5	109531434	AG	A	PJA2	-0.04	0	4.7902E-08	0	3.76	0.8066568	1.444E-07	1
rs12878868	14	103767388	G	A	PPP1R13B	0.03	0	4.7908E-08	0	6.2	0.5169209	1.444E-07	1

rs10497750	2	195183939	C	A	SLC39A10	0.04	0	4.7935E-08	17	8.5	0.2905834	1.236E-07	1
rs35041609	4	33782155	C	T	ARAP2	0.05	0	4.7939E-08	12	7.99	0.3331364	1.832E-07	1
rs62191571	2	232576046	A	C	EIF4E2	0.03	0	4.7955E-08	42	12.15	0.095619	5.183E-07	1
rs228758	17	44070837	C	T	G6PC3	0.03	0	4.797E-08	0	4.88	0.6749362	1.446E-07	1
rs13333217	16	49616029	C	T	ZNF423	0.04	0	4.8053E-08	58	16.89	0.0181323	1.51E-07	1
rs2187143	18	50845195	G	C	MRO	0.03	0	4.8085E-08	0	5.14	0.6432	1.45E-07	1
rs17168246	7	14542480	G	T	DGKB	-0.06	0	4.8124E-08	0	5.43	0.6071072	1.451E-07	1
rs174555	11	61812288	T	C	FADS1,FADS	0.03	0	4.8144E-08	9	7.7	0.3602199	1.724E-07	1
rs2137259	4	30564595	G	A	PCDH7	-0.03	0	4.816E-08	37	11.16	0.1317074	1.331E-07	1
rs3942587	7	55510325	G	A	VOPP1	0.03	0	4.8162E-08	0	5.56	0.5921621	1.452E-07	1
rs79799664	3	29561368	A	C	RBMS3,RP11	-0.04	0	4.8178E-08	34	10.66	0.154278	1.092E-07	1
rs3117244	6	33102036	G	A	HLA-DPB1	-0.03	0	4.8198E-08	0	3.59	0.8251285	1.453E-07	1
rs9872863	3	82337058	G	A	GBE1	-0.04	0	4.8266E-08	12	7.97	0.3354321	1.652E-07	1
rs151117199	17	37260431	G	A	ACACA	-0.09	0	4.8289E-08	0	5.77	0.5669217	1.456E-07	1
rs72765804	1	244123272	C	T	ZBTB18	0.04	0	4.8346E-08	0	6.21	0.5155496	1.457E-07	1
rs113442486	4	101741322	G	A	BANK1	-0.03	0	4.8347E-08	0	5.63	0.5831205	1.457E-07	1
rs79156194	4	101741271	G	T	BANK1	-0.03	0	4.8347E-08	0	5.63	0.5831205	1.457E-07	1
rs144349275	11	112910573	T	C	NCAM1	-0.06	0	4.8356E-08	0	4.75	0.6908336	1.458E-07	1
rs806471	13	56418759	A	G	PRR20A	0.04	0	4.8368E-08	0	6.12	0.5259978	1.458E-07	1
rs1566788	12	60633354	G	A	SLC16A7	-0.03	0	4.8388E-08	54	15.49	0.0301846	1.867E-07	1
rs2137258	4	30564689	A	G	PCDH7	-0.03	0	4.8388E-08	43	12.29	0.0912972	1.37E-07	1
rs174549	11	61803910	G	A	FADS1,FADS	0.03	0	4.8401E-08	15	8.33	0.304203	1.955E-07	1
rs9277369	6	33082367	C	T	HLA-DPB1	0.04	0	4.8404E-08	3	7.27	0.4009208	1.452E-07	1
rs16842626	1	198257071	C	T	NEK7	0.04	0	4.843E-08	26	9.52	0.2173639	2.081E-07	1
rs6688481	1	198256528	T	C	NEK7	0.04	0	4.843E-08	26	9.52	0.2173639	2.081E-07	1
rs1510136	4	142961392	A	G	INPP4B	-0.03	0	4.8529E-08	51	14.56	0.0421188	9.473E-08	1
rs2179918	6	33094239	T	C	HLA-DPB1	-0.03	0	4.8533E-08	0	3.5	0.8357338	1.463E-07	1
rs10567965	7	135374393	CTGA	C	CNOT4	0.03	0	4.8535E-08	38	11.37	0.1233529	4.805E-08	1.43447E-08
rs887200	22	19976143	C	T	ARVCF	0.04	0	4.8548E-08	33	10.58	0.1578709	1.903E-07	1
rs10876930	12	56814947	G	A	HSD17B6	0.03	0	4.8574E-08	0	5.39	0.6125439	1.464E-07	1

Table S2

rs10647749	21	15054411	C	CAT	NRIP1	-0.03	0	4.8596E-08	2	7.17	0.4118043	1.524E-07	1
rs17031574	4	101730875	G	A	BANK1	-0.03	0	4.861E-08	0	5.63	0.5834656	1.465E-07	1
rs7159716	14	98176562	C	T	C14orf177	0.04	0	4.8616E-08	0	2.48	0.928236	1.465E-07	1
rs12457398	18	76759346	G	C	ZNF236	0.05	0	4.8622E-08	33	10.57	0.1586717	1.137E-07	1
rs75594993	16	58897080	T	C	GOT2	-0.03	0	4.8771E-08	0	3.94	0.7868132	1.47E-07	1
rs2301225	6	33068083	G	A	HLA-DPA1	-0.03	0	4.8779E-08	0	2.69	0.9118443	1.47E-07	1
rs1656368	3	158563232	A	G	MLF1	-0.03	0	4.8788E-08	0	5.16	0.640632	1.47E-07	1
rs6780570	3	104905352	A	T	ALCAM	0.04	0	4.8817E-08	0	5.49	0.6004646	1.471E-07	1
rs4659941	1	235143248	C	T	ARID4B,RBM	0.03	0	4.8861E-08	0	2.24	0.94563	1.472E-07	1
rs114398824	3	44618571	G	A	ZNF197	0.05	0	4.8864E-08	0	6.5	0.4822114	1.472E-07	1
rs10959465	9	11022146	G	A	PTPRD	0.03	0	4.8874E-08	5	7.43	0.3855427	1.473E-07	1
rs8548	14	103733243	A	C	ZFYVE21	0.03	0	4.8883E-08	0	7.07	0.4220971	1.473E-07	1
rs111468020	16	21328242	C	T	CRYM	-0.07	0	4.8892E-08	0	4.62	0.7067583	1.473E-07	1
rs1436350	3	104897412	T	C	ALCAM	0.04	0	4.8896E-08	0	5.49	0.6004439	1.473E-07	1
rs12445454	16	21328592	T	A	CRYM	-0.07	0	4.892E-08	0	4.61	0.7076332	1.474E-07	1
rs118000330	16	21977628	G	T	UQCRC2	-0.07	0	4.8931E-08	0	4.63	0.7045364	1.474E-07	1
rs3117245	6	33101790	C	A	HLA-DPB1	-0.03	0	4.8957E-08	0	3.49	0.8360809	1.475E-07	1
rs8039011	15	77786103	A	G	LINGO1	0.03	0	4.8964E-08	18	8.56	0.285457	2.367E-07	1
rs113383307	2	195547245	G	T	SLC39A10	0.03	0	4.8968E-08	31	10.24	0.1752094	2.488E-07	1
rs2295261	6	47269144	A	G	TNFRSF21	0.03	0	4.9001E-08	0	4.89	0.6736048	1.477E-07	1
rs1030320	2	59908861	C	G	BCL11A	0.04	0	4.9009E-08	0	6.1	0.5277445	1.477E-07	1
rs144210466	19	49562678	C	T	NOSIP	0.05	0	4.9019E-08	27	9.67	0.2080404	1.477E-07	1
rs2150132	13	82369964	G	A	SLITRK1	0.03	0	4.9025E-08	0	3.07	0.8783529	1.477E-07	1
rs59882354	1	198266248	A	T	NEK7	0.04	0	4.9026E-08	26	9.52	0.2172547	2.11E-07	1
rs588760	8	9937398	G	A	MSRA	-0.03	0	4.9048E-08	0	4.89	0.673696	1.478E-07	1
rs112895793	5	153007751	T	C	GRIA1	0.08	0	4.9073E-08	0	3.12	0.8733913	1.479E-07	1
rs7652261	3	82329408	C	A	GBE1	-0.04	0	4.9118E-08	12	8	0.3321562	1.693E-07	1
rs117002164	13	62263136	G	A	RP11-310K10	0.08	0	4.9122E-08	38	11.4	0.1222681	4.887E-07	1
rs80006580	14	85036191	T	C	FLRT2	0.04	0	4.9129E-08	0	6.06	0.5323943	1.48E-07	1
rs141167003	11	134701671	G	A	B3GAT1	-0.08	0	4.9169E-08	0	1.6	0.9784876	1.481E-07	1

Table S2

rs35153382	10	133116558	GC	G	ADGRA1	0.03	0	4.9183E-08	0	3.36	0.8502665	1.482E-07	1
rs548492444	16	86287266	C	G	FOXF1	-0.08	0	4.9195E-08	0	5.37	0.6144621	1.482E-07	1
rs142264107	4	30565541	CT	C	PCDH7	-0.03	0	4.9201E-08	43	12.29	0.0914631	1.662E-07	1
rs33984374	15	86291986	T	C	AGBL1	0.03	0	4.9207E-08	4	7.35	0.393701	1.124E-07	1
rs17178460	2	195555365	G	A	SLC39A10	0.03	0	4.9222E-08	31	10.26	0.1742004	2.505E-07	1
rs284999	16	77080799	G	T	MON1B	-0.03	0	4.9227E-08	0	6.17	0.5199899	1.483E-07	1
rs174594	11	61852357	C	A	FADS2	-0.03	0	4.9263E-08	34	10.64	0.1549062	2.065E-07	1
rs245491	5	58338028	C	T	PLK2	0.03	0	4.9283E-08	6	7.48	0.380257	1.443E-07	1
rs40465	5	104646025	T	G	NUDT12	0.03	0	4.9288E-08	11	7.95	0.3374501	2.02E-07	1
rs62375325	5	109535166	C	T	PJA2	-0.04	0	4.9294E-08	0	3.77	0.8062137	1.485E-07	1
rs12201124	6	145244099	C	T	EPM2A	-0.08	0	4.9335E-08	0	5.96	0.543899	1.486E-07	1
rs72917027	18	52614656	T	C	DCC	0.03	0	4.939E-08	0	4.49	0.7216681	1.465E-07	1
rs1164598	13	96449317	A	T	HS6ST3	0.03	0	4.9394E-08	0	4.04	0.7754348	1.488E-07	1
rs112814047	6	35994701	G	A	SLC26A8	-0.04	0	4.9461E-08	15	8.27	0.3096852	2.34E-07	1
rs1475425	1	198254156	G	T	NEK7	0.04	0	4.9479E-08	26	9.49	0.2192525	2.123E-07	1
rs111908883	16	21329099	A	G	CRYM	-0.07	0	4.9483E-08	0	4.62	0.7067558	1.491E-07	1
rs62300160	4	17092562	T	C	LDB2	0.09	0	4.9486E-08	0	4.5	0.7210731	1.491E-07	1
rs1556015	1	198265373	T	C	NEK7	0.04	0	4.9492E-08	27	9.61	0.2114997	2.124E-07	1
rs61924982	12	60510261	G	T	SLC16A7	-0.03	0	4.9571E-08	51	14.34	0.0455332	2.683E-07	1
rs2399039	3	104896121	G	A	ALCAM	0.04	0	4.9664E-08	0	5.44	0.6064827	1.496E-07	1
rs10638209	7	55539648	G	GCCC	VOPP1	0.03	0	4.9715E-08	0	5.43	0.6072814	1.498E-07	1
rs7798107	7	55539775	T	C	VOPP1	0.03	0	4.9724E-08	0	5.43	0.6072217	1.498E-07	1
rs67475806	1	198255536	G	A	NEK7	0.04	0	4.9728E-08	26	9.58	0.2136484	2.141E-07	1
rs1510137	4	142961860	A	G	INPP4B	-0.03	0	4.975E-08	51	14.49	0.0430555	9.31E-08	1
rs6817783	4	179820842	A	G	TENM3	-0.04	0	4.9782E-08	0	3.55	0.8299362	1.499E-07	1
rs236194	10	118338209	C	T	FAM204A	-0.05	0	4.9797E-08	29	9.96	0.1907079	3.685E-07	1
rs34419965	12	103040476	G	A	ASCL1	0.03	0	4.9802E-08	0	6.69	0.4622351	1.5E-07	1
rs2723742	12	60598161	G	A	SLC16A7	-0.03	0	4.9823E-08	55	15.56	0.0294703	1.551E-07	1
rs56342917	10	90992132	C	T	ANKRD1	-0.03	0	4.9841E-08	55	15.76	0.0273701	2.764E-07	1
rs17598295	4	46472836	A	G	GABRA2	0.04	0	4.9863E-08	0	4.99	0.6614988	1.502E-07	1

Table S2

rs1056387	11	47659818	T	G	AGBL2	0.03	0	4.9876E-08	0	6.03	0.5364691	1.502E-07	1
rs59017643	2	195546835	A	C	SLC39A10	0.03	0	4.9886E-08	31	10.24	0.1752668	2.537E-07	1
rs60350258	17	48955049	G	A	GIP	0.03	0	4.9901E-08	48	13.57	0.0593106	2.375E-07	1
rs114986280	10	93165528	G	A	CYP26A1	-0.05	0	4.9936E-08	0	1.29	0.9887823	1.504E-07	1
rs147611388	12	71578733	GT	G	LGR5	0.05	0	4.9942E-08	0	4.09	0.7699344	1.504E-07	1
rs4521268	3	49100471	G	T	QARS	-0.03	0	4.9981E-08	13	8.11	0.3225938	2.313E-07	1
rs4794003	17	48952542	C	T	GIP	0.03	0	4.9985E-08	48	13.57	0.0593214	2.378E-07	1
rs12602933	17	48951918	G	C	GIP	0.03	0	4.9985E-08	48	13.57	0.0593219	2.378E-07	1
rs72927766	2	195545003	A	T	SLC39A10	0.03	0	4.9988E-08	31	10.26	0.1741883	2.546E-07	1
rs113811135	2	195545859	TA	T	SLC39A10	0.03	0	4.9993E-08	31	10.26	0.1745553	2.545E-07	1
rs113360328	16	21329620	A	C	CRYM	-0.07	0	4.9995E-08	0	4.61	0.7070497	1.506E-07	1

Table S3

Significant SNPS from our GWAS meta-analysis Results using METASOFT with m-values

RSID	PVALUE_FE	BETA_FE	STD_FE	BETA_RE	STD_RE	PVALUE_RE2	P_SUIC	P_ADHD	P_ANX	P_AUD	P_BIP	P_DEP	P_GAD	P_PTSD	M_SUIC	M_ADHD	M_ANX	M_AUD	M_BIP	M_DEP	M_GAD	M_PTSD
rs12517895	1.7061E-19	-0.045665	0.00506	-0.045665	0.005057	4.58003E-19	0.13485	0.370256	5.18E-06	6.87E-05	0.014141	6.9E-09	0.1498	0.258692	0.946	0.902	1	1	0.991	1	0.941	0.921
rs6865302	1.7258E-19	-0.045623	0.00505	-0.045623	0.005053	4.63236E-19	0.16986	0.722857	4.61E-06	0.000111	0.016192	7.2E-09	0.05464	0.161589	0.938	0.838	1	1	0.99	1	0.973	0.94
rs1449164	3.4532E-19	-0.045777	0.00511	-0.045777	0.005113	9.1989E-19	0.52216	0.320024	7.44E-06	0.000587	0.002325	8.1E-09	0.04244	0.157466	0.876	0.911	1	0.999	0.997	1	0.978	0.942
rs1449163	3.5656E-19	-0.045758	0.00511	-0.045758	0.005113	9.49501E-19	0.52614	0.320246	7.4E-06	0.00061	0.002319	8E-09	0.0424	0.15759	0.875	0.911	1	0.999	0.997	1	0.978	0.942
rs281264	3.6426E-19	-0.04845	0.00541	-0.04845	0.005415	9.69777E-19	0.71377	0.713844	6.72E-07	4.97E-06	0.080597	7.3E-08	0.03923	0.035355	0.626	0.63	1	1	0.937	1	0.966	0.96
rs281265	3.6456E-19	-0.048449	0.00541	-0.048449	0.005415	9.70557E-19	0.71377	0.71385	6.71E-07	4.97E-06	0.080594	7.3E-08	0.03923	0.035354	0.626	0.63	1	1	0.937	1	0.966	0.96
rs10041474	4.4374E-19	-0.045545	0.0051	-0.045545	0.005103	1.17879E-18	0.64799	0.479126	1.18E-05	0.000752	0.002072	7.4E-09	0.01448	0.123376	0.849	0.88	1	0.999	0.998	1	0.988	0.948
rs10068422	5.6516E-19	0.0449836	0.00506	0.0449836	0.005055	1.4973E-18	0.12014	0.521996	5.2E-06	0.000108	0.022489	1E-08	0.14345	0.215707	0.948	0.875	1	1	0.987	1	0.942	0.929
rs13168806	5.7497E-19	-0.045417	0.0051	-0.045417	0.005105	1.523E-18	0.63807	0.488819	1.15E-05	0.001146	0.002508	6.3E-09	0.01253	0.116188	0.852	0.879	1	0.999	0.997	1	0.989	0.95
rs7708998	7.8272E-19	0.0448025	0.00506	0.0448025	0.005055	2.06612E-18	0.10117	0.455795	6.36E-06	0.000111	0.018959	1.6E-08	0.1508	0.212285	0.953	0.888	1	1	0.989	1	0.941	0.931
rs4605820	8.8184E-19	0.0447314	0.00505	0.0447314	0.005055	2.32462E-18	0.10158	0.463897	6.95E-06	0.000107	0.016686	1.7E-08	0.1621	0.218557	0.953	0.886	1	1	0.99	1	0.937	0.929
rs60385369	8.9009E-19	0.0447309	0.00506	0.0447309	0.005055	2.34614E-18	0.1003	0.493048	6.79E-06	0.000124	0.023075	1.1E-08	0.15145	0.227972	0.953	0.881	1	1	0.986	1	0.94	0.926
rs1125578	9.2681E-19	-0.04467	0.00505	-0.04467	0.005051	2.44179E-18	0.13921	0.798141	1.44E-05	9.06E-05	0.028515	9.1E-09	0.04183	0.193753	0.943	0.824	1	1	0.983	1	0.977	0.932
rs2034414	1.2899E-18	-0.044481	0.00505	-0.044481	0.005051	3.38563E-18	0.14632	0.787985	1.66E-05	0.000108	0.027532	1.1E-08	0.03656	0.181009	0.942	0.828	1	1	0.984	1	0.979	0.935
rs419055	1.6257E-18	0.0486695	0.00554	0.0486695	0.005543	4.2558E-18	0.79701	0.991759	3.04E-07	4.36E-06	0.229998	1.2E-07	0.05232	0.195822	0.644	0.696	1	1	0.826	1	0.955	0.892
rs2433018	1.6374E-18	0.0486642	0.00554	0.0486642	0.005543	4.28616E-18	0.79137	0.991854	3.02E-07	4.37E-06	0.230022	1.2E-07	0.05234	0.195738	0.642	0.696	1	1	0.825	1	0.955	0.892
rs6869423	1.6476E-18	0.044531	0.00507	0.044531	0.005072	4.31252E-18	0.15678	0.502457	8.37E-07	0.000115	0.039113	7.5E-08	0.16886	0.317112	0.937	0.873	1	1	0.978	1	0.931	0.904
rs6874581	1.796E-18	0.0444854	0.00507	0.0444854	0.005073	4.69613E-18	0.16422	0.538433	7.84E-07	0.000149	0.043975	6.9E-08	0.14551	0.298403	0.935	0.867	1	1	0.975	1	0.939	0.908
rs10055500	1.8269E-18	0.0447734	0.00511	0.0447734	0.005107	4.776E-18	0.25728	0.429674	5.21E-06	0.000827	0.006921	2.1E-08	0.07635	0.150687	0.924	0.895	1	0.999	0.995	1	0.966	0.945
rs1026124	2.1702E-18	0.0455562	0.00521	0.0455562	0.005208	5.66239E-18	0.66761	0.272875	2.36E-06	0.000232	0.005683	1.6E-07	0.02989	0.089921	0.681	0.907	1	1	0.994	1	0.979	0.951
rs10053752	2.2368E-18	-0.044312	0.00507	-0.044312	0.005067	5.83408E-18	0.21744	0.803996	1.83E-05	0.000178	0.013962	1.1E-08	0.09677	0.081198	0.927	0.824	1	1	0.99	1	0.957	0.958
rs5870922	2.2841E-18	0.0441673	0.00505	0.0441673	0.005052	5.95597E-18	0.07921	0.520132	1.26E-05	0.000113	0.035356	1.8E-08	0.10486	0.223706	0.958	0.878	1	1	0.981	1	0.956	0.928
rs10039454	2.5845E-18	0.0440987	0.00505	0.0440987	0.005052	6.72974E-18	0.08471	0.514662	1.26E-05	0.000125	0.035419	1.8E-08	0.10466	0.224094	0.957	0.879	1	1	0.981	1	0.956	0.928
rs58499616	3.1699E-18	0.0441119	0.00507	0.0441119	0.005067	8.2344E-18	0.16757	0.496678	1.11E-06	0.000133	0.037001	1E-07	0.15889	0.320864	0.935	0.875	1	1	0.979	1	0.935	0.904
rs13153752	4.1789E-18	-0.043857	0.00506	-0.043857	0.005056	1.08204E-17	0.10335	0.540419	1.64E-05	0.000104	0.0267	2.3E-08	0.14282	0.208795	0.951	0.873	1	1	0.985	1	0.943	0.93
rs1449171	4.2339E-18	-0.043855	0.00506	-0.043855	0.005057	1.09612E-17	0.10676	0.542962	1.61E-05	0.000103	0.026775	2.3E-08	0.14461	0.207183	0.951	0.873	1	1	0.984	1	0.943	0.93
rs9791112	4.2477E-18	-0.043847	0.00506	-0.043847	0.005056	1.09966E-17	0.10373	0.54109	1.61E-05	0.000107	0.026695	2.3E-08	0.14375	0.207879	0.951	0.873	1	1	0.985	1	0.943	0.93
rs4273626	4.3206E-18	-0.043839	0.00506	-0.043839	0.005056	1.11829E-17	0.10607	0.536679	1.6E-05	0.000106	0.02676	2.3E-08	0.14332	0.208294	0.951	0.874	1	1	0.985	1	0.943	0.93
rs1816980	4.4616E-18	-0.044204	0.0051	-0.044204	0.005101	1.15436E-17	0.36743	0.42248	1.79E-05	0.001168	0.007989	1.3E-08	0.03019	0.135664	0.905	0.896	1	0.999	0.994	1	0.982	0.948
rs12653270	5.1546E-18	-0.043776	0.00506	-0.043776	0.005061	1.3314E-17	0.27947	0.841771	1.9E-05	3.55E-05	0.024948	4.3E-08	0.07921	0.162495	0.912	0.812	1	1	0.984	1	0.961	0.936
rs34626100	6.8483E-18	-0.043945	0.0051	-0.043945	0.0051	1.76292E-17	0.36725	0.448476	1.54E-05	0.001854	0.009018	1.4E-08	0.03124	0.121245	0.905	0.892	1	0.998	0.993	1	0.982	0.951
rs13358641	9.6692E-18	0.0437445	0.0051	0.0437445	0.0051	2.47888E-17	0.39124	0.457699	1.62E-05	0.00171	0.008582	2E-08	0.03252	0.117964	0.901	0.89	1	0.999	0.994	1	0.981	0.951
rs6877942	1.0137E-17	0.0437773	0.00511	0.0437773	0.005107	2.59727E-17	0.48837	0.426303	9.93E-06	0.002148	0.006268	2.3E-08	0.04926	0.121935	0.883	0.893	1	0.998	0.995	1	0.974	0.949
rs6861861	1.0357E-17	0.0437065	0.0051	0.0437065	0.0051	2.65303E-17	0.38903	0.443273	1.62E-05	0.001871	0.009397	2E-08	0.03027	0.117832	0.901	0.893	1	0.998	0.993	1	0.982	0.951
rs11241565	1.111E-17	-0.043773	0.00511	-0.043773	0.005113	2.84356E-17	0.45639	0.422966	2.27E-05	0.001028	0.005347	3.1E-08	0.04077	0.119003	0.889	0.895	1	0.999	0.995	1	0.978	0.95
rs12522314	1.1603E-17	0.0436993	0.00511	0.0436993	0.005107	2.96814E-17	0.51224	0.432899	9.43E-06	0.001916	0.006464	2.8E-08	0.05191	0.123836	0.878	0.892	1	0.998	0.994	1	0.973	0.948
rs6878072	1.2117E-17	0.0436777	0.00511	0.0436777	0.005107	3.09791E-17	0.52342	0.425511	1E-05	0.002194	0.006259	2.5E-08	0.04914	0.121631	0.876	0.893	1	0.998	0.995	1	0.974	0.949
rs10040060	1.3369E-17	0.0435622	0.0051	0.0435622	0.005101	3.41408E-17	0.37312	0.447472	1.75E-05	0.001933	0.009402	2.3E-08	0.03179	0.11856	0.904	0.893	1	0.998	0.993	1	0.981	0.951
rs7728674	1.7228E-17	0.0434978	0.00511	0.0434978	0.005111	4.38595E-17	0.46939	0.460482	2.05E-05	0.00166	0.006649	2.5E-08	0.04483	0.107512	0.886	0.888	1	0.999	0.994	1	0.976	0.953
rs7728749	1.8951E-17	0.0434408	0.00511	0.0434408	0.005111	4.81914E-17	0.47105	0.460642	2.06E-05	0.001802	0.006657	2.5E-08	0.04483	0.107572	0.886	0.888	1	0.998	0.994	1	0.976	0.952
rs10059100	2.0033E-17	0.0434088	0.00511	0.0434088	0.005111	5.09087E-17	0.45662	0.460627	2.05E-05	0.001951	0.006665	2.5E-08	0.04489	0.107724	0.889	0.889	1	0.998	0.994	1	0.976	0.953
rs9790948	2.2356E-17	-0.043354	0.00511	-0.043354	0.005112	5.67357E-17	0.48657	0.456318	2.14E-05	0.001732	0.006724	2.9E-08	0.04364	0.112109	0.883	0.889	1	0.998	0.994	1	0.976	0.951
rs6863440	3.5841E-17	0.0442522	0.00525	0.0442522	0.005252	9.04315E-17	0.62547	0.27473	3.46E-05	6.67E-05	0.003595	1.8E-07	0.13493	0.090548	0.672	0.902	1	1	0.995	1	0.935	0.947
rs5870920	3.8484E-17	0.0442021	0.00525	0.0442021	0.005251	9.70139E-17	0.62063	0.276669	3.22E-05	7.34E-05	0.003643	1.9E-07	0.13524	0.090337	0.671	0.901	1	1	0.995	1	0.935	0.947
rs2406162	3.9864E-17	0.0440854	0.00524	0.0440854	0.00524	1.00449E-16	0.52096	0.20644	2.79E-05	0.000115	0.003387	1.9E-07	0.1062	0.103374	0.639	0.915	1	1	0.995	1	0.945	0.943
rs56162185	4.0698E-17	0.0429412	0.00511	0.0429412	0.005105	1.02526E-16	0.29573	0.811724	2.05E-07	0.000299	0.04165	4.3E-06	0.03255	0.155708	0.903	0.735	1	1	0.974	1	0.977	0.933
rs62379821	4.081E-17	0.0441939	0.00525	0.0441939	0.005255	1.02803E-16	0.58348	0.287811	3.12E-05	6.35E-05	0.003384	1.9E-07	0.15694	0.091334	0.655	0.897	1	1	0.995	1	0.926	0.945
rs6508210	4.2108E-17	0.0425031	0.00506	0.0425031	0.005056	1.0454E-16	0.05795	0.884514	4.13E-05	0.029057	0.052267	1.7E-10	0.0883	0.037218	0.96	0.81	1	0.956	0.972	1	0.959	0.97
rs62099231	4.7558E-17	0.0425079	0.00506	0.0425079	0.005065	1.18792E-16	0.15465	0.8444	3.98E-05	0.012824	0.069543	1E-10	0.05768	0.157215	0.931	0.741	1	0.983	0.96	1	0.966	0.932
rs6879947	4.7819E-17	-0.044095	0.00525	-0.044095	0.005254	1.20223E-16	0.59672	0.290513	3.34E-05	6.59E-05	0.0034	2.1E-07	0.15408	0.092832	0.661	0.897	1	1	0.995	1	0.927	0.945
rs2069191	5.1739E-17	0.0424562	0.00506	0.0424562	0.005065	1.28909E-16	0.1515	0.8444	3.98E-05	0.013861	0.069543	1E-10	0.05768	0.157215	0.931	0.741	1	0.981	0.96	1	0.966	0.932
rs7237747	5.2761E-17	0.0424984	0.00507	0.0424984	0.005071	1.32485E-16	0.30765	0.926414	3.72E-08	0.000693	0.069066	1.3E-05	0.01837	0.126372	0.903	0.766	1	0.999	0.962	1	0.984	0.941

Table S3

rs59180978	5.5803E-17	0.0428827	0.00512	0.0428827	0.005121	1.40026E-16	0.56502	0.494404	1.24E-05	0.003496	0.006055	4E-08	0.05821	0.142514	0.867	0.879	1	0.997	0.994	1	0.97	0.942
rs6876567	6.2767E-17	0.0429235	0.00513	0.0429235	0.005134	1.57267E-16	0.58215	0.26373	0.000144	0.001213	0.005838	6.8E-09	0.08218	0.19188	0.867	0.919	1	0.999	0.995	1	0.963	0.933
rs62094571	6.3229E-17	0.0424537	0.00508	0.0424537	0.005079	1.5841E-16	0.30263	0.974416	5.9E-08	0.000779	0.08547	7.7E-06	0.02007	0.131516	0.904	0.776	1	0.999	0.955	1	0.983	0.94
rs11447428	6.3889E-17	0.0430286	0.00515	0.0430286	0.005148	1.60044E-16	0.67669	0.496576	1.78E-06	0.002885	0.008794	2.3E-07	0.06159	0.208785	0.843	0.874	1	0.997	0.992	1	0.967	0.925
rs7734839	6.6765E-17	0.0437547	0.00524	0.0437547	0.005238	1.67156E-16	0.52164	0.197511	3.42E-05	0.000131	0.003692	2.3E-07	0.09727	0.1081	0.643	0.918	1	1	0.995	1	0.949	0.941
rs6869780	7.2099E-17	0.0430197	0.00516	0.0430197	0.005156	1.80337E-16	0.64201	0.506842	1.45E-06	0.003984	0.010884	2.1E-07	0.05947	0.196537	0.85	0.873	1	0.996	0.991	1	0.968	0.928
rs10041968	7.8754E-17	0.0422237	0.00507	0.0422237	0.005067	1.96763E-16	0.22077	0.53724	5.91E-06	7.01E-05	0.011493	1.3E-06	0.37606	0.139711	0.921	0.866	1	1	0.991	1	0.865	0.939
rs1449172	8.1485E-17	-0.043734	0.00525	-0.043734	0.005251	2.03497E-16	0.64263	0.26289	3.62E-05	8.09E-05	0.004577	2.8E-07	0.14278	0.094156	0.682	0.905	1	1	0.994	1	0.933	0.946
rs56412481	8.6475E-17	0.0433386	0.00521	0.0433386	0.005208	2.15797E-16	0.68378	0.12995	7.02E-05	0.000607	0.003218	7.2E-08	0.18431	0.13043	0.85	0.943	1	0.999	0.996	1	0.931	0.945
rs56366998	8.7965E-17	0.0433276	0.00521	0.0433276	0.005208	2.19469E-16	0.67933	0.129622	7.15E-05	0.000604	0.003226	7.2E-08	0.18325	0.131304	0.85	0.944	1	0.999	0.996	1	0.931	0.945
rs55833879	9.1225E-17	0.0432964	0.00521	0.0432964	0.005207	2.27497E-16	0.68169	0.130288	7.31E-05	0.000621	0.003244	7.1E-08	0.18185	0.132367	0.85	0.943	1	0.999	0.996	1	0.932	0.945
rs72783657	9.2641E-17	0.0433012	0.00521	0.0433012	0.005208	2.30982E-16	0.68124	0.131302	7.18E-05	0.000628	0.003262	7.3E-08	0.18233	0.129663	0.85	0.943	1	0.999	0.996	1	0.932	0.946
rs62379855	1.0901E-16	0.0426936	0.00515	0.0426936	0.005147	2.71222E-16	0.74216	0.498473	1.97E-06	0.002711	0.010077	3.1E-07	0.06125	0.210416	0.831	0.873	1	0.997	0.991	1	0.967	0.924
rs4412134	1.0992E-16	0.0431855	0.00521	0.0431855	0.005207	2.73461E-16	0.67656	0.126945	7.52E-05	0.000533	0.003341	1E-07	0.17879	0.128427	0.852	0.944	1	1	0.996	1	0.933	0.946
rs72781627	1.1016E-16	0.0431987	0.00521	0.0431987	0.005209	2.74069E-16	0.75253	0.152747	7.56E-05	0.00044	0.002792	1E-07	0.18279	0.136227	0.836	0.938	1	1	0.996	1	0.93	0.943
rs58897895	1.1285E-16	0.0431587	0.00521	0.0431587	0.005206	2.8066E-16	0.68004	0.129778	7.49E-05	0.000617	0.003347	8.4E-08	0.18522	0.133383	0.85	0.943	1	0.999	0.996	1	0.931	0.945
rs6869346	1.1686E-16	0.0431474	0.00521	0.0431474	0.005207	2.90503E-16	0.68288	0.126865	7.55E-05	0.000558	0.003338	1E-07	0.17862	0.12817	0.851	0.944	1	0.999	0.996	1	0.933	0.946
rs7735871	1.1906E-16	0.0431496	0.00521	0.0431496	0.005209	2.95894E-16	0.73454	0.129274	7.5E-05	0.000513	0.003278	1.1E-07	0.17762	0.130768	0.841	0.943	1	1	0.996	1	0.933	0.945
rs4317354	1.1962E-16	0.0431351	0.00521	0.0431351	0.005207	2.97268E-16	0.69081	0.12391	7.85E-05	0.000663	0.003211	9.2E-08	0.17214	0.124726	0.85	0.945	1	0.999	0.996	1	0.935	0.947
rs6891234	1.2051E-16	0.0434417	0.00524	0.0434417	0.005245	2.99473E-16	0.8722	0.127327	1.51E-05	0.000707	0.004311	3.8E-07	0.15628	0.142066	0.813	0.942	1	0.999	0.995	1	0.937	0.941
rs10633591	1.2145E-16	0.0431339	0.00521	0.0431339	0.005208	3.0177E-16	0.70507	0.122556	7.39E-05	0.000555	0.003525	1E-07	0.18323	0.125181	0.846	0.945	1	0.999	0.996	1	0.931	0.946
rs4576171	1.2184E-16	0.0431223	0.00521	0.0431223	0.005207	3.02728E-16	0.68991	0.126874	7.54E-05	0.000578	0.003337	1E-07	0.17896	0.128918	0.849	0.944	1	0.999	0.996	1	0.933	0.946
rs4624817	1.2224E-16	0.0431292	0.00521	0.0431292	0.005208	3.03716E-16	0.69081	0.130043	8.21E-05	0.000505	0.003353	1.1E-07	0.16986	0.13141	0.849	0.944	1	1	0.996	1	0.936	0.945
rs2406164	1.2336E-16	0.043106	0.00521	0.043106	0.005206	3.06453E-16	0.66432	0.130447	8.05E-05	0.000652	0.003301	8E-08	0.18851	0.135744	0.853	0.943	1	0.999	0.996	1	0.93	0.944
rs6595262	1.2353E-16	0.0431128	0.00521	0.0431128	0.005207	3.0686E-16	0.71018	0.126834	7.59E-05	0.00056	0.003338	1E-07	0.17858	0.12925	0.845	0.944	1	0.999	0.996	1	0.933	0.945
rs72783652	1.2511E-16	0.0431182	0.00521	0.0431182	0.005209	3.10743E-16	0.72282	0.122611	7.35E-05	0.000564	0.003525	1E-07	0.1836	0.124435	0.843	0.945	1	0.999	0.996	1	0.931	0.946
rs72783651	1.2511E-16	0.0431182	0.00521	0.0431182	0.005209	3.10744E-16	0.72282	0.122611	7.35E-05	0.000564	0.003525	1E-07	0.1836	0.124435	0.843	0.945	1	0.999	0.996	1	0.931	0.946
rs61358955	1.2809E-16	0.0431025	0.00521	0.0431025	0.005209	3.18042E-16	0.74954	0.152749	7.57E-05	0.00052	0.002793	1E-07	0.18279	0.136226	0.837	0.938	1	0.999	0.996	1	0.93	0.943
rs62379846	1.3788E-16	0.0430467	0.00521	0.0430467	0.005207	3.42037E-16	0.71619	0.128452	7.66E-05	0.000597	0.003346	1E-07	0.1792	0.130447	0.844	0.943	1	0.999	0.996	1	0.932	0.945
rs11966360	1.4271E-16	-0.086426	0.01046	-0.087307	0.011109	3.53872E-16	0.51052	0.134306	1.8E-05	0.000296	0.005218	1.5E-05	0.09528	0.000495	0.89	0.949	1	1	0.995	1	0.963	0.993
rs17487484	1.4803E-16	0.041869	0.00507	0.041869	0.00507	3.66811E-16	0.13472	0.685928	4.34E-05	0.013143	0.057146	2.4E-10	0.09708	0.147667	0.932	0.7	1	0.982	0.965	1	0.949	0.931
rs7230446	1.4803E-16	0.041869	0.00507	0.041869	0.00507	3.66811E-16	0.13472	0.685928	4.34E-05	0.013143	0.057146	2.4E-10	0.09708	0.147667	0.932	0.7	1	0.982	0.965	1	0.949	0.931
rs62379848	1.4922E-16	0.0430024	0.00521	0.0430024	0.005208	3.69792E-16	0.69799	0.128285	8.18E-05	0.000537	0.00328	1.2E-07	0.18276	0.131601	0.848	0.943	1	0.999	0.996	1	0.931	0.945
rs7230285	1.4996E-16	0.0418644	0.00507	0.0418644	0.00507	3.71537E-16	0.13948	0.685928	4.34E-05	0.013083	0.057146	2.4E-10	0.09708	0.147667	0.931	0.699	1	0.982	0.965	1	0.949	0.931
rs8084239	1.5634E-16	0.0417905	0.00506	0.0417905	0.005065	3.84133E-16	0.15978	0.813237	6.07E-05	0.013963	0.076702	1.6E-10	0.05963	0.170483	0.928	0.735	1	0.982	0.957	1	0.965	0.927
rs5870924	1.6199E-16	0.0429579	0.00521	0.0429579	0.005209	4.01023E-16	0.71241	0.123255	8.03E-05	0.000579	0.003689	1.1E-07	0.19371	0.126287	0.845	0.944	1	0.999	0.996	1	0.928	0.946
rs7726836	1.6707E-16	-0.043365	0.00526	-0.043365	0.00526	4.13439E-16	0.9747	0.526996	5.01E-05	0.000209	0.018392	5.8E-08	0.12647	0.119306	0.779	0.861	1	1	0.986	1	0.941	0.94
rs4529227	1.6714E-16	0.0429295	0.00521	0.0429295	0.005208	4.13598E-16	0.7186	0.128695	8.18E-05	0.00059	0.003341	1.2E-07	0.18502	0.130017	0.844	0.943	1	0.999	0.996	1	0.931	0.945
rs4594884	1.6714E-16	0.0429295	0.00521	0.0429295	0.005208	4.13598E-16	0.7186	0.128695	8.18E-05	0.00059	0.003341	1.2E-07	0.18502	0.130017	0.844	0.943	1	0.999	0.996	1	0.931	0.945
rs7710640	1.673E-16	-0.043364	0.00526	-0.043364	0.00526	4.13995E-16	0.97391	0.527295	5.02E-05	0.00021	0.018387	5.7E-08	0.12649	0.119319	0.779	0.861	1	1	0.986	1	0.941	0.94
rs4632195	1.8376E-16	0.0416712	0.00506	0.0416712	0.005062	4.52223E-16	0.05623	0.884433	6.41E-05	0.019019	0.037862	3.1E-10	0.22267	0.060823	0.957	0.756	1	0.974	0.976	1	0.91	0.958
rs2084516	1.8862E-16	0.0430095	0.00523	0.0430095	0.005227	4.66038E-16	0.78915	0.133882	9.04E-05	0.000534	0.002244	1.2E-07	0.23812	0.116153	0.828	0.94	1	0.999	0.997	1	0.913	0.946
rs76653090	1.9679E-16	0.0429686	0.00522	0.0429686	0.005225	4.85949E-16	0.78469	0.132784	9.15E-05	0.000569	0.002263	1.2E-07	0.23462	0.117277	0.829	0.941	1	0.999	0.997	1	0.914	0.946
rs7730641	1.9943E-16	0.042975	0.00523	0.042975	0.005227	4.92382E-16	0.78696	0.134246	9.07E-05	0.000565	0.002245	1.2E-07	0.23842	0.116129	0.829	0.94	1	0.999	0.997	1	0.913	0.947
rs10900741	2.037E-16	-0.042967	0.00523	-0.042967	0.005227	5.02788E-16	0.78917	0.133068	9.06E-05	0.000579	0.002202	1.3E-07	0.23545	0.11742	0.828	0.941	1	0.999	0.997	1	0.914	0.946
rs146903465	2.0418E-16	0.0429626	0.00523	0.0429626	0.005227	5.03962E-16	0.85324	0.133833	9.03E-05	0.000529	0.002248	1.2E-07	0.23805	0.116127	0.815	0.94	1	0.999	0.997	1	0.912	0.946
rs11241566	2.0651E-16	0.0429659	0.00523	0.0429659	0.005228	5.09641E-16	0.80947	0.129391	8.83E-05	0.000566	0.002374	1.3E-07	0.24369	0.112295	0.824	0.941	1	0.999	0.997	1	0.911	0.947
rs34488670	2.1443E-16	0.0493112	0.006	0.0485058	0.007034	5.28911E-16	0.24451	0.845341	1.6E-05	7.8E-06	0.199108	7.6E-08	0.04064	0.369093	0.437	0.715	1	1	0.84	1	0.955	0.824
rs281296	2.1849E-16	0.0440231	0.00536	0.0434686	0.00616	5.38808E-16	0.60217	0.345359	1.93E-06	1.54E-05	0.121848	7.2E-07	0.07435	0.099738	0.574	0.49	1	1	0.897	1	0.936	0.915
rs1025143	2.1898E-16	0.0440225	0.00536	0.0434668	0.006162	5.39994E-16	0.60167	0.345378	1.93E-06	1.55E-05	0.122009	7.2E-07	0.07419	0.099584	0.574	0.49	1	1	0.897	1	0.936	0.915
rs12907546	2.1914E-16	0.0492844	0.006	0.0484877	0.007021	5.40384E-16	0.24545	0.846385	1.61E-05	7.91E-06	0.199321	7.6E-08	0.04083	0.369072	0.438	0.715	1	1	0.84	1	0.955	0.824
rs796584893	2.261E-16	0.0492169	0.006	0.0484631	0.006949	5.57316E-16	0.25256	0.840246	1.57E-05	8.28E-06	0.209227	7.3E-08	0.04226	0.371714	0.441	0.716	1	1	0.833	1	0.954	0.823
rs35534970	2.2628E-16	0.0492165	0.006	0.0484645	0.006947	5.57753E-16	0.25294	0.840323	1.58E-05	8.28E-06	0.20943	7.2E-08	0.04233	0.371761	0.441	0.716	1	1	0.833	1	0.954	0.823
rs6873366	2.2821E-16	0.0427309	0.00521	0.0427309	0.005207	5.62445E-16	0.6986	0.137398	8.08E-05	0.000772	0.003759	1.1E-07	0.1921	0.133853	0.847	0.941	1	0.999	0.996	1	0.928	0.944
rs142735750	2.284E-16	0.0428907	0.00523	0.0428907	0.005227	5.62916E-16	0.80395	0.133572	9.27E-05	0.000601	0.002257	1.3E-07	0.2375	0.116144	0.825	0.94	1	0.999	0.997	1	0.913	0.946

Table S3

rs7231178	2.2962E-16	0.0414834	0.00506	0.0414834	0.005056	5.27867E-16	0.05064	0.81491	0.000138	0.033361	0.056938	1.7E-10	0.10557	0.041425	0.962	0.826	1	0.953	0.97	1	0.953	0.968
rs7174964	2.3609E-16	0.0491853	0.006	0.0484262	0.006956	5.81622E-16	0.25186	0.840547	1.6E-05	8.25E-06	0.209742	7.5E-08	0.04234	0.371962	0.441	0.716	1	1	0.833	1	0.954	0.823
rs4895286	2.4576E-16	0.041604	0.00508	0.041604	0.005075	6.05115E-16	0.25932	0.448136	1.57E-06	4.86E-05	0.019874	7.3E-06	0.45322	0.248862	0.909	0.876	1	1	0.985	1	0.836	0.911
rs11749221	2.5361E-16	0.0428158	0.00523	0.0428158	0.005226	6.24203E-16	0.79561	0.130236	0.000101	0.000464	0.002316	1.8E-07	0.22492	0.117227	0.828	0.941	1	1	0.997	1	0.917	0.946
rs12901436	2.5674E-16	0.0491296	0.006	0.0483731	0.006966	6.31799E-16	0.24743	0.83877	1.68E-05	8.62E-06	0.204255	7.8E-08	0.04143	0.370885	0.44	0.718	1	1	0.838	1	0.955	0.824
rs8033799	2.5768E-16	0.049126	0.006	0.0483652	0.00697	6.3409E-16	0.24721	0.839249	1.69E-05	8.61E-06	0.20454	7.8E-08	0.04145	0.370798	0.44	0.717	1	1	0.837	1	0.954	0.824
rs12910487	2.5771E-16	0.0491259	0.006	0.0483652	0.00697	6.34157E-16	0.24721	0.83925	1.69E-05	8.61E-06	0.204541	7.8E-08	0.04145	0.3708	0.44	0.717	1	1	0.837	1	0.954	0.824
rs8034190	2.5821E-16	0.0491245	0.006	0.0483635	0.00697	6.35372E-16	0.24722	0.839239	1.69E-05	8.61E-06	0.204639	7.8E-08	0.04146	0.3708	0.44	0.717	1	1	0.837	1	0.954	0.824
rs35175834	2.6083E-16	0.0491164	0.006	0.0483592	0.006965	6.41738E-16	0.24721	0.838834	1.69E-05	8.73E-06	0.20502	7.8E-08	0.04147	0.370345	0.44	0.718	1	1	0.837	1	0.954	0.824
rs34794623	2.6084E-16	0.0491164	0.006	0.0483593	0.006964	6.41746E-16	0.24721	0.838821	1.69E-05	8.73E-06	0.205019	7.8E-08	0.04147	0.370343	0.44	0.718	1	1	0.837	1	0.954	0.824
rs6493274	2.616E-16	0.0491129	0.006	0.0483985	0.006916	6.43606E-16	0.25216	0.838332	1.69E-05	8.89E-06	0.206098	7.7E-08	0.04152	0.369835	0.443	0.718	1	1	0.837	1	0.955	0.825
rs7174904	2.6169E-16	0.0491143	0.006	0.0484162	0.006896	6.43826E-16	0.25471	0.838687	1.71E-05	8.95E-06	0.206597	7.6E-08	0.04167	0.370265	0.445	0.718	1	1	0.836	1	0.954	0.825
rs7175414	2.6181E-16	0.0491139	0.006	0.0484144	0.006898	6.44102E-16	0.25448	0.838623	1.71E-05	8.96E-06	0.20665	7.6E-08	0.04162	0.37025	0.444	0.718	1	1	0.836	1	0.954	0.825
rs35473814	2.6301E-16	0.04911	0.006	0.04836	0.006956	6.47032E-16	0.24786	0.838714	1.69E-05	8.79E-06	0.205221	7.8E-08	0.0415	0.370315	0.44	0.718	1	1	0.837	1	0.954	0.824
rs8032333	2.6574E-16	0.0491024	0.006	0.048355	0.006952	6.53644E-16	0.24788	0.838661	1.69E-05	8.88E-06	0.205452	7.8E-08	0.04151	0.370297	0.44	0.718	1	1	0.837	1	0.954	0.824
rs12904595	2.6612E-16	0.0491004	0.006	0.0483302	0.006977	6.5458E-16	0.24556	0.838155	1.69E-05	8.81E-06	0.206115	7.8E-08	0.04147	0.369764	0.439	0.717	1	1	0.836	1	0.954	0.824
rs2132661	2.6645E-16	0.0490983	0.006	0.0483558	0.006946	6.55373E-16	0.2484	0.838155	1.69E-05	8.92E-06	0.206115	7.8E-08	0.04147	0.369764	0.441	0.718	1	1	0.836	1	0.954	0.824
rs2132660	2.6646E-16	0.0490983	0.006	0.0483558	0.006946	6.5539E-16	0.24839	0.838155	1.69E-05	8.92E-06	0.206115	7.8E-08	0.04147	0.369764	0.441	0.718	1	1	0.836	1	0.954	0.824
rs7166534	2.6646E-16	0.0490983	0.006	0.0483558	0.006946	6.55403E-16	0.2484	0.838155	1.69E-05	8.92E-06	0.206115	7.8E-08	0.04147	0.369764	0.441	0.718	1	1	0.836	1	0.954	0.824
rs8040226	2.6653E-16	0.0490987	0.006	0.0483473	0.006956	6.55564E-16	0.24747	0.838155	1.69E-05	8.89E-06	0.206117	7.8E-08	0.04147	0.369764	0.44	0.718	1	1	0.836	1	0.954	0.824
rs8041603	2.6676E-16	0.0490975	0.006	0.0483552	0.006946	6.56126E-16	0.24838	0.838155	1.69E-05	8.93E-06	0.206117	7.8E-08	0.04147	0.369764	0.441	0.718	1	1	0.836	1	0.954	0.824
rs34418589	2.6676E-16	0.0490997	0.006	0.0483592	0.006945	6.56137E-16	0.24858	0.838155	1.69E-05	8.94E-06	0.206115	7.8E-08	0.04147	0.369764	0.441	0.718	1	1	0.836	1	0.954	0.825
rs4485292	2.6939E-16	0.049092	0.006	0.0483672	0.006926	6.62521E-16	0.24983	0.838155	1.69E-05	9.1E-06	0.206115	7.8E-08	0.04147	0.369764	0.442	0.718	1	1	0.837	1	0.955	0.825
rs17503453	2.7523E-16	0.042758	0.00522	0.042758	0.005225	6.76683E-16	0.85578	0.130303	9.52E-05	0.000484	0.002114	1.9E-07	0.23279	0.115686	0.816	0.94	1	1	0.997	1	0.914	0.946
rs281287	2.7541E-16	0.0438353	0.00536	0.0432962	0.006133	6.77123E-16	0.6013	0.34364	2.15E-06	1.65E-05	0.121723	7.5E-07	0.07666	0.101671	0.575	0.491	1	1	0.898	1	0.934	0.914
rs5812385	2.8528E-16	0.0438103	0.00536	0.0432764	0.006125	7.01075E-16	0.60153	0.343902	2.18E-06	1.69E-05	0.12238	7.5E-07	0.07673	0.101438	0.575	0.492	1	1	0.897	1	0.934	0.914
rs62379838	2.9209E-16	0.0427207	0.00522	0.0427207	0.005225	7.17591E-16	0.85729	0.130677	9.92E-05	0.000509	0.002351	1.7E-07	0.22933	0.114945	0.816	0.94	1	0.999	0.997	1	0.915	0.946
rs62379840	2.9468E-16	0.042715	0.00522	0.042715	0.005225	7.23864E-16	0.85472	0.130686	9.94E-05	0.000512	0.002353	1.7E-07	0.22936	0.11502	0.816	0.94	1	0.999	0.997	1	0.915	0.946
rs62379842	2.9656E-16	0.0427124	0.00522	0.0427124	0.005225	7.28422E-16	0.84589	0.130954	9.94E-05	0.000523	0.00235	1.7E-07	0.22916	0.115016	0.818	0.94	1	0.999	0.997	1	0.915	0.946
rs62379841	2.9767E-16	0.0427086	0.00522	0.0427086	0.005225	7.31098E-16	0.85452	0.130707	9.94E-05	0.000517	0.002354	1.7E-07	0.22938	0.115027	0.816	0.94	1	0.999	0.997	1	0.915	0.946
rs17503473	2.997E-16	0.0427027	0.00522	0.0427027	0.005225	7.36019E-16	0.81367	0.130522	9.66E-05	0.000551	0.002122	1.9E-07	0.2313	0.116576	0.824	0.941	1	0.999	0.997	1	0.915	0.946
rs17444067	3.1161E-16	0.0426947	0.00523	0.0426947	0.005227	7.64885E-16	0.83913	0.129867	9.84E-05	0.000553	0.002294	1.8E-07	0.22715	0.116204	0.82	0.941	1	0.999	0.997	1	0.916	0.946
rs8040191	3.1207E-16	0.0489758	0.006	0.0482409	0.006928	7.66007E-16	0.24976	0.837449	1.73E-05	9.58E-06	0.214117	8.1E-08	0.04176	0.370227	0.442	0.718	1	1	0.831	1	0.954	0.824
rs12523559	3.5469E-16	0.0424346	0.0052	0.0424346	0.005205	8.69151E-16	0.70809	0.138226	8.12E-05	0.000735	0.004062	1.7E-07	0.19295	0.135328	0.846	0.941	1	0.999	0.995	1	0.928	0.943
rs12910916	3.6218E-16	0.0488589	0.00599	0.0478776	0.007176	8.87267E-16	0.22426	0.849606	2.07E-05	8.46E-06	0.200117	7.4E-08	0.04951	0.370898	0.426	0.713	1	1	0.839	1	0.948	0.822
rs6595264	3.8257E-16	0.041212	0.00506	0.041212	0.00506	9.36546E-16	0.20979	0.5777	5.44E-06	0.000134	0.066574	1.5E-06	0.21603	0.163025	0.924	0.863	1	1	0.965	1	0.918	0.935
rs6862391	3.9575E-16	0.0412562	0.00507	0.0412562	0.005068	9.68386E-16	0.28585	0.508144	5.2E-06	7.32E-05	0.020715	3.2E-06	0.41562	0.168729	0.906	0.868	1	1	0.985	1	0.851	0.93
rs8084351	4.0737E-16	0.0412567	0.00507	0.0412567	0.005071	9.95711E-16	0.1489	0.658722	6.43E-05	0.014023	0.060571	3.5E-10	0.09898	0.159388	0.928	0.694	1	0.982	0.963	1	0.948	0.927
rs10039677	4.435E-16	0.0411107	0.00506	0.0411107	0.005059	1.08358E-15	0.20227	0.680572	5.96E-06	0.000128	0.053055	1.6E-06	0.23394	0.170128	0.924	0.844	1	1	0.97	1	0.911	0.932
rs62379857	4.4732E-16	0.0423	0.00521	0.0423	0.005206	1.09278E-15	0.70694	0.138823	0.000101	0.00075	0.003936	1.8E-07	0.18214	0.135897	0.847	0.941	1	0.999	0.996	1	0.932	0.943
rs4128735	4.6191E-16	0.0410877	0.00506	0.0410877	0.005059	1.12795E-15	0.20665	0.689443	5.73E-06	0.000111	0.05437	1.8E-06	0.242	0.174712	0.923	0.842	1	1	0.97	1	0.908	0.93
rs8084280	4.8874E-16	0.0411435	0.00507	0.0411435	0.005071	1.1921E-15	0.14944	0.656722	6.61E-05	0.014125	0.063259	3.9E-10	0.10006	0.160354	0.927	0.694	1	0.981	0.962	1	0.947	0.926
rs62379837	4.9707E-16	0.042464	0.00523	0.042464	0.005235	1.21264E-15	0.97142	0.110452	0.000113	0.000387	0.004205	2.7E-07	0.16809	0.132921	0.796	0.945	1	1	0.995	1	0.933	0.942
rs141675706	5.0016E-16	0.0424818	0.00524	0.0424818	0.005237	1.22007E-15	0.96677	0.109775	0.000117	0.000417	0.004128	2.6E-07	0.16502	0.127311	0.797	0.945	1	1	0.995	1	0.934	0.943
rs62379847	5.287E-16	0.0420952	0.00519	0.0420952	0.005194	1.28873E-15	0.74227	0.150102	0.00011	0.001005	0.008365	1.4E-07	0.07058	0.188527	0.843	0.939	1	0.999	0.993	1	0.966	0.933
rs4895166	5.3173E-16	0.0410059	0.00506	0.0410059	0.00506	1.29603E-15	0.19837	0.58894	6.01E-06	0.000132	0.063453	1.9E-06	0.2307	0.16938	0.926	0.861	1	1	0.966	1	0.914	0.933
rs10075828	5.501E-16	0.0410563	0.00507	0.0410563	0.005069	1.3402E-15	0.2528	0.770961	9.12E-07	7.05E-05	0.025848	9.9E-06	0.51704	0.197129	0.903	0.81	1	1	0.98	1	0.805	0.916
rs6595266	5.7311E-16	0.0409681	0.00506	0.0409681	0.005061	1.39549E-15	0.21182	0.591895	5.88E-06	0.000149	0.06561	1.8E-06	0.22841	0.166147	0.923	0.86	1	1	0.965	1	0.914	0.933
rs4895284	5.7783E-16	0.0409565	0.00506	0.0409565	0.00506	1.40685E-15	0.20594	0.595607	6.18E-06	0.000128	0.066041	1.9E-06	0.22759	0.168673	0.924	0.86	1	1	0.965	1	0.914	0.933
rs6595267	5.8646E-16	0.0409461	0.00506	0.0409461	0.00506	1.42758E-15	0.19288	0.595517	6.29E-06	0.000134	0.066226	2E-06	0.22778	0.168509	0.927	0.86	1	1	0.965	1	0.915	0.933
rs66694560	6.2739E-16	0.0424255	0.00525	0.0424255	0.005248	1.52582E-15	0.91104	0.146753	1.36E-05	0.000924	0.005732	8.8E-07	0.18524	0.203637	0.804	0.935	1	0.999	0.994	1	0.927	0.925
rs6595265	6.3958E-16	0.0408927	0.00506	0.0408927	0.00506	1.55507E-15	0.20648	0.595324	6.25E-06	0.000139	0.065687	1.9E-06	0.23798	0.166339	0.924	0.859	1	1	0.965	1	0.911	0.933
rs62379853	7.0238E-16	0.0422582	0.00524	0.0422582	0.005236	1.70563E-15	0.98024	0.106721	0.00012	0.0004	0.003862	4E-07	0.16239	0.125789	0.796	0.945	1	1	0.995	1	0.935	0.943
rs9467714	7.0259E-16	-0.085396	0.01058	-0.085396	0.010582	1.70614E-15	0.39888	0.202028	3.24E-05	0.000496	0.025299	8.7E-06	0.06965	0.000968	0.907	0.937	1	1	0.986	1	0.97	0.991
rs62381087	7.0397E-16	0.0423816	0.00525	0.0423816	0.005252	1.70945E-15	0.85854	0.148646	1.34E-05	0.000886	0.007226	9.2E-07	0.18994	0.20759	0.814	0.935	1	0.999	0.993	1	0.926	0.925

Table S3

rs114444359	7.217E-16	0.0997535	0.01237	0.0997535	0.012366	1.7519E-15	0.99832	0.428853	0.000287	0.005588	0.008298	5.8E-08	0.00092	0.12735	0.791	0.887	0.999	0.995	0.993	1	0.997	0.942
rs62379825	7.495E-16	0.0422284	0.00524	0.0422284	0.005238	1.81846E-15	0.94248	0.132008	0.00012	0.000335	0.003608	3.8E-07	0.17082	0.136223	0.776	0.938	1	1	0.995	1	0.931	0.939
rs62381083	7.9837E-16	0.0422617	0.00525	0.0422617	0.005247	1.9354E-15	0.92673	0.142887	1.41E-05	0.000676	0.007145	1.2E-06	0.18424	0.206289	0.801	0.936	1	0.999	0.993	1	0.927	0.924
rs11291040	8.0172E-16	0.0407549	0.00506	0.0407549	0.00506	1.9434E-15	0.1904	0.586675	6.93E-06	0.000151	0.068259	2E-06	0.24212	0.177668	0.927	0.861	1	1	0.964	1	0.91	0.931
rs5787553	8.059E-16	-0.045264	0.00562	-0.047422	0.007472	1.9534E-15	0.29884	0.048316	0.000173	0.1244	0.000907	8.6E-08	0.00304	0.036815	0.908	0.962	0.999	0.778	0.998	1	0.994	0.969
rs7729364	8.0707E-16	0.0421812	0.00524	0.0421812	0.005238	1.95621E-15	0.90822	0.132071	0.000119	0.000349	0.003551	3.8E-07	0.17123	0.136525	0.768	0.938	1	1	0.995	1	0.93	0.939
rs7725293	8.0945E-16	0.0421791	0.00524	0.0421791	0.005238	1.96191E-15	0.90937	0.131968	0.000121	0.000343	0.003615	3.8E-07	0.17094	0.136062	0.769	0.938	1	1	0.995	1	0.93	0.939
rs10680011	8.2207E-16	0.0407393	0.00506	0.0407393	0.00506	1.99207E-15	0.20079	0.587424	7.01E-06	0.000148	0.068223	2E-06	0.24169	0.17871	0.925	0.86	1	1	0.964	1	0.91	0.93
rs9327168	8.4426E-16	0.0407488	0.00506	0.0407488	0.005063	2.04512E-15	0.14025	0.447825	2.72E-05	0.000286	0.040306	5.7E-07	0.19643	0.300513	0.94	0.887	1	1	0.977	1	0.927	0.91
rs146030245	8.6841E-16	0.0442593	0.0055	0.0442593	0.005502	2.1028E-15	0.13192	0.682586	2.92E-06	0.014179	0.021231	5.1E-06	0.00023	0.459126	0.942	0.851	1	0.985	0.986	1	0.998	0.882
rs62379822	8.7151E-16	0.042045	0.00523	0.042045	0.005227	2.11021E-15	0.8564	0.236728	0.000147	0.0004	0.003445	2.6E-07	0.14725	0.098232	0.755	0.916	1	1	0.995	1	0.937	0.947
rs6882937	9.0366E-16	0.0406813	0.00506	0.0406813	0.00506	2.18698E-15	0.1865	0.585229	6.84E-06	0.000178	0.06806	2E-06	0.24276	0.17747	0.928	0.861	1	1	0.964	1	0.91	0.931
rs62379824	9.1417E-16	0.0420997	0.00524	0.0420997	0.005238	2.21208E-15	0.93558	0.133745	0.00013	0.00034	0.003633	4.1E-07	0.16781	0.138488	0.775	0.938	1	1	0.995	1	0.932	0.939
rs72865044	9.4293E-16	0.0694174	0.00864	0.0692664	0.010037	2.04504E-15	0.83833	0.192658	0.000354	0.051235	0.001233	8.4E-10	0.03365	0.199487	0.738	0.919	0.999	0.916	0.997	1	0.974	0.918
rs1449149	9.4297E-16	0.0425397	0.00529	0.0425397	0.005295	2.28082E-15	0.75798	0.466438	8.79E-05	0.000155	0.021281	1.9E-07	0.12122	0.112451	0.719	0.867	1	1	0.983	1	0.94	0.939
rs4801097	9.9265E-16	0.0407169	0.00507	0.0407169	0.005072	2.3993E-15	0.33227	0.996839	1.3E-07	0.001154	0.077313	3.3E-05	0.02009	0.174077	0.899	0.787	1	0.999	0.959	1	0.982	0.93
rs1027190	1.0161E-15	-0.045107	0.00562	-0.047451	0.007632	2.45525E-15	0.29848	0.048168	0.000172	0.143999	0.000906	8.6E-08	0.00304	0.036764	0.905	0.96	0.999	0.733	0.998	1	0.994	0.968
rs7900775	1.0173E-15	-0.045103	0.00562	-0.047246	0.007476	2.45812E-15	0.30857	0.049321	0.000174	0.130056	0.000922	9.6E-08	0.00313	0.037062	0.906	0.961	0.999	0.767	0.998	1	0.994	0.968
rs79494381	1.0183E-15	0.0406412	0.00506	0.0406412	0.005065	2.46035E-15	0.14657	0.443114	2.94E-05	0.000215	0.039755	8.3E-07	0.19085	0.303493	0.938	0.888	1	1	0.978	1	0.928	0.909
rs9962851	1.0712E-15	-0.040682	0.00507	-0.040682	0.005074	2.58661E-15	0.29068	0.966566	1.07E-07	0.001224	0.071216	4.4E-05	0.02135	0.16109	0.907	0.783	1	0.999	0.962	1	0.982	0.933
rs17503168	1.0794E-15	0.0424426	0.00529	0.0424426	0.005294	2.60596E-15	0.74145	0.459201	0.000104	0.000142	0.022094	2E-07	0.11018	0.112475	0.716	0.869	1	1	0.983	1	0.944	0.939
rs281260	1.0942E-15	-0.042836	0.00534	-0.042836	0.005344	2.64118E-15	0.88371	0.916997	5.81E-06	3.57E-06	0.165419	7.8E-06	0.07423	0.133356	0.715	0.724	1	1	0.898	1	0.949	0.921
rs1839245	1.1331E-15	0.042418	0.00529	0.042418	0.005295	2.73387E-15	0.75133	0.470663	9.44E-05	0.000157	0.02135	2E-07	0.11884	0.114366	0.718	0.866	1	1	0.983	1	0.941	0.938
rs6803386	1.15E-15	0.0691909	0.00864	0.0690374	0.009935	2.50581E-15	0.83873	0.196693	0.000368	0.050937	0.001276	9.5E-10	0.03365	0.209264	0.739	0.918	0.999	0.918	0.997	1	0.974	0.916
rs281274	1.191E-15	-0.042792	0.00535	-0.042792	0.005345	2.87163E-15	0.8685	0.937506	5.37E-06	5.07E-06	0.168383	7.6E-06	0.07432	0.119947	0.713	0.73	1	1	0.897	1	0.949	0.925
rs5870927	1.1919E-15	0.0406119	0.00507	0.0406119	0.005073	2.87365E-15	0.21833	0.69527	1.61E-06	6.79E-05	0.036637	1.3E-05	0.45841	0.212446	0.914	0.83	1	1	0.976	1	0.833	0.916
rs281258	1.2027E-15	-0.042783	0.00535	-0.042783	0.005345	2.89944E-15	0.88506	0.920093	6.06E-06	3.92E-06	0.164341	7.6E-06	0.07867	0.131995	0.716	0.725	1	1	0.898	1	0.947	0.921
rs62379823	1.2114E-15	0.0418142	0.00522	0.0418142	0.005225	2.92016E-15	0.88578	0.247543	0.000141	0.000623	0.00379	2.1E-07	0.13463	0.135304	0.762	0.913	1	0.999	0.995	1	0.941	0.938
rs2496014	1.213E-15	-0.044995	0.00562	-0.047377	0.007671	2.92385E-15	0.30809	0.04717	0.000183	0.148291	0.000942	8.8E-08	0.003	0.037412	0.902	0.96	0.999	0.725	0.998	1	0.994	0.967
rs281259	1.2255E-15	-0.042769	0.00534	-0.042769	0.005345	2.95367E-15	0.881	0.920095	6.05E-06	4.02E-06	0.164308	7.6E-06	0.07863	0.131997	0.715	0.725	1	1	0.898	1	0.947	0.921
rs281280	1.227E-15	-0.042772	0.00535	-0.042772	0.005345	2.9572E-15	0.86111	0.937506	5.37E-06	5.21E-06	0.168383	7.6E-06	0.07432	0.119947	0.711	0.73	1	1	0.897	1	0.949	0.925
rs62379836	1.2475E-15	0.0420399	0.00526	0.0420399	0.005255	3.00595E-15	0.88048	0.113928	0.000145	0.000387	0.002947	4.5E-07	0.21965	0.117038	0.762	0.941	1	1	0.996	1	0.915	0.943
rs530758485	1.2847E-15	0.0641894	0.00803	0.0635374	0.010966	1.84117E-15	0.62907	0.162469	0.003027	0.008048	0.005578	5.4E-11	0.18149	0.073437	0.683	0.923	0.975	0.99	0.993	1	0.919	0.95
rs7715474	1.3726E-15	0.0404553	0.00506	0.0404553	0.005065	3.30307E-15	0.16823	0.451902	3.13E-05	0.000213	0.040725	9.3E-07	0.19172	0.312133	0.933	0.886	1	1	0.977	1	0.928	0.907
rs7245332	1.4076E-15	-0.040513	0.00507	-0.040513	0.005074	3.38612E-15	0.29268	0.952499	1.14E-07	0.001262	0.071018	5.3E-05	0.02006	0.162446	0.906	0.78	1	0.999	0.962	1	0.983	0.932
rs10884051	1.4489E-15	-0.044938	0.00563	-0.04627	0.006959	3.48426E-15	0.32938	0.05484	0.000161	0.122698	0.00122	1E-07	0.00449	0.041648	0.903	0.959	1	0.79	0.998	1	0.993	0.967
rs10553094	1.4575E-15	0.0404541	0.00507	0.0404541	0.005069	3.50448E-15	0.3446	0.998158	1.53E-07	0.001152	0.082452	3.3E-05	0.02253	0.202008	0.896	0.786	1	0.999	0.956	1	0.981	0.923
rs1375460	1.4843E-15	0.042236	0.00529	0.042236	0.005294	3.56798E-15	0.69894	0.462987	0.000101	0.00013	0.022016	2.9E-07	0.11479	0.11206	0.705	0.867	1	1	0.983	1	0.942	0.938
rs1584469	1.535E-15	0.0419095	0.00526	0.0419095	0.005256	3.68837E-15	0.88922	0.111613	0.00016	0.000302	0.003032	6.6E-07	0.20957	0.117022	0.766	0.942	1	1	0.996	1	0.919	0.943
rs62379839	1.711E-15	0.0418344	0.00526	0.0418344	0.005255	4.10495E-15	0.83475	0.11201	0.000157	0.000323	0.00308	6.4E-07	0.21375	0.114749	0.752	0.941	1	1	0.996	1	0.916	0.943
rs7628239	1.7572E-15	0.0687774	0.00864	0.068633	0.009643	3.83661E-15	0.84087	0.192366	0.00043	0.049398	0.001671	1.1E-09	0.03978	0.181482	0.743	0.919	0.998	0.924	0.997	1	0.972	0.923
rs57790719	1.7722E-15	0.0687682	0.00864	0.0686225	0.009652	3.86667E-15	0.84047	0.192366	0.00043	0.04968	0.001671	1.1E-09	0.03978	0.181482	0.743	0.919	0.998	0.924	0.997	1	0.972	0.923
rs3773087	1.7779E-15	-0.058079	0.0073	-0.060908	0.013346	1.01479E-15	0.0242	0.18557	1.22E-05	0.800011	0.010917	2.4E-09	0.00117	0.575968	0.952	0.87	1	0.026	0.984	1	0.994	0.725
rs72865095	1.8376E-15	0.0687296	0.00864	0.0685861	0.009636	3.9928E-15	0.85984	0.192366	0.00043	0.051943	0.001671	1.1E-09	0.03978	0.181482	0.747	0.919	0.998	0.919	0.997	1	0.972	0.923
rs962950	1.939E-15	0.0431747	0.00543	0.0415293	0.006991	4.644E-15	0.43573	0.423281	2.51E-06	6.74E-06	0.290834	1.4E-06	0.11516	0.204645	0.486	0.487	1	1	0.754	1	0.895	0.854
rs2008551	1.9831E-15	-0.040297	0.00507	-0.040297	0.005074	4.74814E-15	0.29513	0.948205	1.34E-07	0.001322	0.072023	5.7E-05	0.02168	0.16298	0.906	0.78	1	0.999	0.962	1	0.982	0.932
rs175979	1.9928E-15	-0.042423	0.00534	-0.042423	0.005342	4.7711E-15	0.84315	0.937715	6.72E-06	3.32E-06	0.179945	1.1E-05	0.07747	0.129356	0.706	0.729	1	1	0.89	1	0.947	0.921
rs962949	2.0186E-15	0.0431304	0.00543	0.0414961	0.006983	4.83197E-15	0.43622	0.422625	2.61E-06	6.73E-06	0.288956	1.4E-06	0.11524	0.206818	0.487	0.487	1	1	0.756	1	0.895	0.853
rs1025142	2.1801E-15	0.0427916	0.0054	0.04239	0.005825	5.21306E-15	0.62728	0.434672	2.15E-06	1.39E-05	0.260456	1.4E-06	0.12351	0.27122	0.567	0.512	1	1	0.789	1	0.897	0.84
rs1025144	2.1838E-15	0.0427929	0.0054	0.0423989	0.005818	5.22176E-15	0.6276	0.4352	2.15E-06	1.41E-05	0.260369	1.4E-06	0.12345	0.270947	0.567	0.513	1	1	0.789	1	0.897	0.84
rs17503224	2.2073E-15	0.0419649	0.00529	0.0419649	0.005293	5.27732E-15	0.72443	0.45691	0.000121	0.000164	0.022837	3.1E-07	0.10384	0.113421	0.715	0.869	1	1	0.982	1	0.947	0.938
rs59321834	2.234E-15	0.0427704	0.0054	0.0423586	0.005835	5.34023E-15	0.62613	0.433652	2.18E-06	1.39E-05	0.260493	1.4E-06	0.12348	0.271816	0.567	0.512	1	1	0.789	1	0.897	0.84
rs4338738	2.241E-15	0.0427661	0.00539	0.0423619	0.005827	5.35676E-15	0.62743	0.433637	2.18E-06	1.4E-05	0.26053	1.4E-06	0.12383	0.272565	0.567	0.512	1	1	0.789	1	0.897	0.84
rs4356418	2.2542E-15	0.0427628	0.00539	0.0423587	0.005827	5.3878E-15	0.62735	0.433519	2.19E-06	1.41E-05	0.26055	1.4E-06	0.12395	0.272467	0.567	0.512	1	1	0.789	1	0.897	0.84
rs140382589	2.2563E-15	0.0427638	0.0054	0.0423546	0.005832	5.39263E-15	0.62622	0.433623	2.18E-06	1.4E-05	0.26071	1.4E-06	0.12355	0.272005	0.567	0.512	1	1	0.789	1	0.897	0.84

Table S3

rs4404005	2.2602E-15	0.0427591	0.00539	0.0423609	0.005821	5.40185E-15	0.62777	0.433721	2.2E-06	1.41E-05	0.259989	1.4E-06	0.12378	0.272807	0.567	0.512	1	1	0.79	1	0.897	0.84
rs4511474	2.2612E-15	0.0427617	0.0054	0.0423556	0.005829	5.40432E-15	0.62677	0.433806	2.19E-06	1.4E-05	0.260729	1.4E-06	0.12375	0.272381	0.567	0.512	1	1	0.789	1	0.897	0.84
rs4497626	2.278E-15	0.0427567	0.0054	0.0423492	0.005828	5.44377E-15	0.62744	0.434416	2.23E-06	1.4E-05	0.262183	1.3E-06	0.125	0.274749	0.567	0.512	1	1	0.788	1	0.896	0.839
rs5812388	2.3205E-15	0.0427355	0.00539	0.0423507	0.005806	5.54402E-15	0.62866	0.434004	2.23E-06	1.43E-05	0.259813	1.4E-06	0.12443	0.272735	0.568	0.513	1	1	0.79	1	0.897	0.84
rs12515135	2.3638E-15	0.0414548	0.00523	0.0414548	0.005234	5.64614E-15	0.95257	0.116939	0.000133	0.000488	0.00533	6.5E-07	0.17746	0.135865	0.782	0.941	1	0.999	0.994	1	0.93	0.939
rs1025145	2.3843E-15	0.042987	0.00543	0.0413061	0.007008	5.69435E-15	0.43585	0.410935	3.22E-06	6.68E-06	0.283372	1.3E-06	0.11961	0.214571	0.487	0.483	1	1	0.76	1	0.892	0.85
rs12523006	2.3852E-15	0.0401847	0.00507	0.0401847	0.005074	5.69654E-15	0.27195	0.59039	1.38E-06	0.000115	0.039827	1.8E-05	0.41696	0.258143	0.904	0.85	1	1	0.974	1	0.849	0.907
rs74350316	2.4082E-15	0.0677802	0.00856	0.0677589	0.008699	5.42276E-15	0.94766	0.136591	0.00046	0.046671	0.002002	1.8E-09	0.05678	0.163768	0.774	0.934	0.999	0.934	0.997	1	0.966	0.93
rs4800967	2.4817E-15	0.0400287	0.00506	0.0400287	0.005058	5.92358E-15	0.46218	0.796271	2.25E-07	0.002522	0.024554	3.7E-05	0.04498	0.179965	0.881	0.829	1	0.998	0.984	1	0.972	0.93
rs74505206	2.4826E-15	0.0677452	0.00856	0.0677211	0.00872	5.58359E-15	0.94656	0.136337	0.000466	0.046986	0.001999	1.8E-09	0.05661	0.163888	0.773	0.934	0.998	0.934	0.997	1	0.966	0.93
rs62094572	2.5322E-15	0.040041	0.00506	0.040041	0.005061	6.04248E-15	0.45896	0.784999	2.56E-07	0.002479	0.022756	3.7E-05	0.04727	0.175299	0.882	0.831	1	0.998	0.985	1	0.972	0.931
rs281293	2.5427E-15	0.0426632	0.00539	0.0422821	0.0058	6.06731E-15	0.62661	0.433649	2.31E-06	1.48E-05	0.260284	1.4E-06	0.12589	0.275253	0.568	0.513	1	1	0.79	1	0.896	0.839
rs111948361	2.5936E-15	0.0426386	0.00539	0.0422748	0.005781	6.18685E-15	0.62816	0.435277	2.36E-06	1.48E-05	0.259927	1.4E-06	0.12633	0.276536	0.569	0.514	1	1	0.79	1	0.895	0.839
rs281291	2.5969E-15	0.0426377	0.00539	0.0422742	0.005781	6.19479E-15	0.62816	0.435299	2.36E-06	1.48E-05	0.259937	1.4E-06	0.12633	0.276538	0.569	0.514	1	1	0.79	1	0.895	0.839
rs281289	2.5992E-15	0.0426371	0.00539	0.0422718	0.005783	6.20008E-15	0.62789	0.435305	2.36E-06	1.48E-05	0.26001	1.4E-06	0.12633	0.276539	0.568	0.514	1	1	0.79	1	0.895	0.839
rs281286	2.6064E-15	0.0426349	0.00539	0.0422667	0.005785	6.21706E-15	0.62713	0.435287	2.37E-06	1.48E-05	0.260065	1.4E-06	0.12642	0.27653	0.568	0.514	1	1	0.79	1	0.895	0.839
rs281285	2.62E-15	0.0426324	0.00539	0.0422769	0.005773	6.24914E-15	0.62931	0.435301	2.36E-06	1.5E-05	0.260025	1.4E-06	0.12635	0.276523	0.569	0.514	1	1	0.791	1	0.896	0.839
rs5812386	2.6304E-15	0.042629	0.00539	0.0422495	0.005796	6.27349E-15	0.62361	0.435283	2.36E-06	1.49E-05	0.260075	1.4E-06	0.12637	0.276533	0.567	0.513	1	1	0.79	1	0.895	0.839
rs591143	2.6809E-15	-0.04196	0.00531	-0.04196	0.005308	6.39233E-15	0.85159	0.951248	1.76E-06	2.64E-05	0.263906	8.1E-06	0.0889	0.143788	0.701	0.746	1	1	0.841	1	0.939	0.914
rs11664943	2.7111E-15	-0.040027	0.00506	-0.040027	0.005064	6.4633E-15	0.47375	0.738837	3.61E-07	0.002482	0.03087	2.2E-05	0.05077	0.195894	0.879	0.838	1	0.998	0.981	1	0.97	0.927
rs4393653	2.8049E-15	-0.040008	0.00506	-0.040008	0.005065	6.6838E-15	0.47371	0.736739	3.75E-07	0.002458	0.031051	2.2E-05	0.05201	0.196403	0.879	0.839	1	0.998	0.981	1	0.97	0.927
rs10041997	2.9047E-15	0.0400023	0.00507	0.0400023	0.005067	6.91817E-15	0.1717	0.54458	1.05E-05	0.00021	0.029623	3.6E-06	0.51631	0.179873	0.926	0.861	1	1	0.98	1	0.822	0.926
rs78230729	3.0336E-15	0.0416544	0.00528	0.0416544	0.00528	7.22068E-15	0.80888	0.117832	2.44E-05	0.000503	0.007556	2.9E-06	0.17237	0.206342	0.745	0.938	1	0.999	0.992	1	0.928	0.921
rs10478485	3.0945E-15	0.0399137	0.00506	0.0399137	0.005061	7.36365E-15	0.37146	0.67764	1.36E-06	9.82E-05	0.101193	1.5E-05	0.24594	0.271542	0.885	0.835	1	1	0.945	1	0.901	0.903
rs6887646	3.2438E-15	0.0398925	0.00506	0.0398925	0.005062	7.71388E-15	0.28699	0.629728	1.39E-06	0.000147	0.111141	1.3E-05	0.25177	0.256802	0.903	0.846	1	1	0.942	1	0.901	0.908
rs75962789	3.7177E-15	0.0677873	0.00862	0.0676614	0.009479	7.9068E-15	0.89759	0.174961	0.000588	0.054149	0.001955	1.4E-09	0.04134	0.209551	0.758	0.923	0.998	0.919	0.996	1	0.971	0.917
rs60329676	3.7183E-15	0.067787	0.00862	0.0676609	0.009479	7.90807E-15	0.89757	0.174962	0.000587	0.054163	0.001956	1.4E-09	0.04134	0.209552	0.758	0.923	0.998	0.919	0.996	1	0.971	0.917
rs4512150	3.8362E-15	0.0408924	0.0052	0.0408924	0.005202	9.10121E-15	0.70884	0.239117	9.1E-05	0.00185	0.008235	3.5E-07	0.21191	0.105599	0.846	0.92	1	0.998	0.992	1	0.922	0.948
rs12967395	3.8596E-15	0.0398571	0.00507	0.0381503	0.007997	7.07066E-15	0.26809	0.98765	1.98E-07	0.35766	0.06935	7.1E-08	0.00044	0.923219	0.797	0.566	1	0.187	0.9	1	0.995	0.565
rs34330545	3.927E-15	-0.041725	0.00531	-0.041725	0.00531	9.3135E-15	0.86544	0.945904	1.95E-06	1.82E-05	0.335877	8.3E-06	0.11471	0.158414	0.694	0.737	1	1	0.795	1	0.924	0.904
rs7713588	4.0311E-15	0.0398727	0.00508	0.0398727	0.005077	9.55692E-15	0.2294	0.461956	5.67E-06	0.00023	0.057492	7E-06	0.198	0.431195	0.918	0.879	1	1	0.968	1	0.922	0.881
rs12956208	4.0341E-15	-0.04208	0.00536	-0.042067	0.005376	9.33362E-15	0.49791	0.235712	2.18E-09	0.033171	0.508753	2.9E-05	0.00489	0.418092	0.843	0.895	1	0.942	0.729	1	0.989	0.855
rs6493275	4.2863E-15	0.0479626	0.00611	0.0479626	0.006113	1.01533E-14	0.23327	0.853417	2.26E-05	0.000145	0.161159	2.5E-07	0.03379	0.231814	0.477	0.74	1	1	0.885	1	0.963	0.877
rs62381082	4.3124E-15	0.0414205	0.00528	0.0414205	0.00528	1.02141E-14	0.76373	0.122838	2.34E-05	0.000384	0.009282	4.4E-06	0.16876	0.207779	0.735	0.936	1	1	0.991	1	0.928	0.919
rs11739528	4.4468E-15	0.0414073	0.00528	0.0414073	0.00528	1.0528E-14	0.74046	0.124202	2.32E-05	0.000382	0.009328	4.4E-06	0.16839	0.20796	0.729	0.935	1	1	0.991	1	0.928	0.919
rs7245004	4.4808E-15	0.0396051	0.00505	0.0396051	0.005051	1.06074E-14	0.1468	0.737604	4.87E-05	0.037135	0.093776	5.3E-09	0.03228	0.130285	0.928	0.724	1	0.948	0.948	1	0.974	0.934
rs72865099	4.6725E-15	0.0675699	0.00862	0.0674586	0.009308	9.96593E-15	0.89976	0.181137	0.000636	0.052525	0.002048	1.5E-09	0.05018	0.183583	0.76	0.922	0.998	0.924	0.996	1	0.967	0.923
rs78788842	4.8246E-15	0.0690742	0.00882	0.0690197	0.009043	1.10369E-14	0.68388	0.173096	0.000565	0.030472	0.004116	2.2E-09	0.03468	0.232357	0.711	0.923	0.998	0.96	0.994	1	0.973	0.912
rs653298	4.8601E-15	-0.041621	0.00532	-0.041621	0.005315	1.1492E-14	0.88682	0.986886	2.49E-06	1.78E-05	0.278105	1.2E-05	0.10321	0.140905	0.709	0.738	1	1	0.834	1	0.932	0.914
rs7716620	4.9238E-15	0.0396268	0.00506	0.0396268	0.005062	1.16405E-14	0.30342	0.670176	1.25E-06	0.000156	0.071702	2.1E-05	0.33789	0.250783	0.898	0.837	1	1	0.959	1	0.874	0.908
rs10072469	4.9627E-15	0.0398257	0.00509	0.0398257	0.005088	1.1731E-14	0.21804	0.355946	7.6E-06	0.000206	0.080503	6.4E-06	0.18052	0.486627	0.92	0.897	1	1	0.959	1	0.928	0.872
rs35509548	5.0429E-15	-0.041902	0.00535	-0.041902	0.005354	1.1917E-14	0.45023	0.219534	4.73E-09	0.03344	0.483321	2.1E-05	0.00661	0.44001	0.856	0.901	1	0.944	0.748	1	0.988	0.854
rs12970424	5.1071E-15	-0.041911	0.00536	-0.041911	0.005357	1.20456E-14	0.45452	0.222101	4.2E-09	0.035923	0.487368	2.1E-05	0.00611	0.446202	0.853	0.9	1	0.938	0.744	1	0.988	0.851
rs11241570	5.3819E-15	0.0397756	0.00509	0.0397756	0.005088	1.27073E-14	0.21733	0.397908	8.56E-06	0.000164	0.078984	8E-06	0.16011	0.472945	0.921	0.89	1	1	0.959	1	0.934	0.875
rs7642287	5.3836E-15	0.0673878	0.00862	0.0672866	0.009201	1.15248E-14	0.90016	0.1842	0.000653	0.05223	0.002117	1.6E-09	0.05132	0.186138	0.76	0.921	0.998	0.925	0.996	1	0.967	0.923
rs148738106	5.4286E-15	0.0673787	0.00862	0.0672758	0.009211	1.16134E-14	0.89976	0.1842	0.000653	0.052525	0.002117	1.6E-09	0.05132	0.186138	0.76	0.921	0.998	0.925	0.996	1	0.967	0.923
rs1905181	5.4286E-15	0.0673787	0.00862	0.0672758	0.009211	1.16134E-14	0.89976	0.1842	0.000653	0.052525	0.002117	1.6E-09	0.05132	0.186138	0.76	0.921	0.998	0.925	0.996	1	0.967	0.923
rs57838122	5.4286E-15	0.0673787	0.00862	0.0672758	0.009211	1.16134E-14	0.89976	0.1842	0.000653	0.052525	0.002117	1.6E-09	0.05132	0.186138	0.76	0.921	0.998	0.925	0.996	1	0.967	0.923
rs72865102	5.4286E-15	0.0673787	0.00862	0.0672758	0.009211	1.16134E-14	0.89976	0.1842	0.000653	0.052525	0.002117	1.6E-09	0.05132	0.186138	0.76	0.921	0.998	0.925	0.996	1	0.967	0.923
rs10065049	5.5176E-15	0.0396472	0.00507	0.0396472	0.005074	1.30232E-14	0.24227	0.71657	2.54E-06	0.000114	0.043361	2E-05	0.4558	0.221372	0.908	0.827	1	1	0.972	1	0.836	0.913
rs17075829	5.5507E-15	0.0673401	0.00862	0.0672546	0.009161	1.1987E-14	0.90016	0.173854	0.000645	0.05223	0.002086	1.9E-09	0.04997	0.187444	0.761	0.924	0.998	0.926	0.996	1	0.968	0.923
rs590869	5.564E-15	0.0415458	0.00532	0.0415458	0.005317	1.31312E-14	0.88697	0.995253	2.64E-06	1.74E-05	0.286869	1.2E-05	0.10477	0.142045	0.708	0.736	1	1	0.829	1	0.931	0.913
rs56405820	5.5727E-15	0.0409539	0.00524	0.0409539	0.005242	1.31513E-14	0.90155	0.244331	1.53E-05	0.00157	0.013418	1.8E-06	0.21715	0.169163	0.806	0.914	1	0.998	0.989	1	0.916	0.93
rs590898	5.7006E-15	-0.041511	0.00531	-0.041511	0.005315	1.34489E-14	0.88579	0.99433	2.65E-06	1.77E-05	0.289058	1.2E-05	0.10379	0.14283	0.708	0.736	1	1	0.828	1	0.932	0.912
rs11152003	5.726E-15	-0.04186	0.00536	-0.04186	0.00536	1.3299E-14	0.46379	0.237796	2.72E-09	0.028351	0.534721	3.5E-05	0.00571	0.460035	0.849	0.895	1	0.953	0.718	1	0.988	0.846

Table S3

rs494065	5.8924E-15	0.0414796	0.00531	0.0414796	0.005314	1.38948E-14	0.89539	0.953877	2.65E-06	1.59E-05	0.289013	1.5E-05	0.09656	0.147208	0.713	0.747	1	1	0.83	1	0.936	0.912
rs12520572	5.9534E-15	0.0403036	0.00516	0.0403036	0.005164	1.40366E-14	0.41883	0.249762	3.91E-05	0.001086	0.006555	7.2E-06	0.09429	0.1564	0.898	0.924	1	0.999	0.994	1	0.96	0.941
rs2879567	5.9727E-15	0.0395832	0.00507	0.0379758	0.007972	1.1039E-14	0.25999	0.996244	2.84E-07	0.367338	0.06665	8.2E-08	0.00044	0.936519	0.802	0.575	1	0.188	0.904	1	0.994	0.565
rs12457761	5.9795E-15	-0.041832	0.00536	-0.041832	0.00536	1.38605E-14	0.46276	0.237787	2.72E-09	0.029398	0.534709	3.5E-05	0.00571	0.46003	0.849	0.894	1	0.951	0.718	1	0.988	0.846
rs12965081	6.1523E-15	-0.041811	0.00536	-0.041811	0.00536	1.42472E-14	0.47186	0.23777	2.72E-09	0.02973	0.534853	3.5E-05	0.00572	0.460021	0.847	0.894	1	0.95	0.718	1	0.988	0.845
rs10708455	6.1537E-15	-0.041811	0.00536	-0.041811	0.00536	1.42505E-14	0.47186	0.237768	2.72E-09	0.02973	0.534854	3.5E-05	0.00572	0.460023	0.847	0.894	1	0.95	0.718	1	0.988	0.845
rs12457101	6.1666E-15	-0.04181	0.00536	-0.04181	0.00536	1.42787E-14	0.47211	0.237787	2.72E-09	0.029736	0.534712	3.5E-05	0.00571	0.46003	0.847	0.894	1	0.95	0.718	1	0.988	0.845
rs531595	6.2878E-15	-0.041435	0.00531	-0.041435	0.005314	1.48135E-14	0.88914	0.953819	2.65E-06	1.73E-05	0.288812	1.5E-05	0.09648	0.147141	0.712	0.747	1	1	0.83	1	0.936	0.912
rs955686	6.3063E-15	-0.041432	0.00531	-0.041432	0.005313	1.48565E-14	0.86835	0.952101	2.66E-06	1.67E-05	0.288296	1.5E-05	0.09656	0.147329	0.706	0.746	1	1	0.83	1	0.935	0.912
rs7236335	6.3217E-15	-0.041792	0.00536	-0.041792	0.00536	1.46114E-14	0.45814	0.237599	2.72E-09	0.030858	0.53518	3.5E-05	0.00571	0.460821	0.85	0.894	1	0.948	0.718	1	0.988	0.845
rs7236320	6.3271E-15	-0.041791	0.00536	-0.041791	0.00536	1.46236E-14	0.45836	0.237599	2.72E-09	0.030863	0.535186	3.5E-05	0.00571	0.460821	0.85	0.894	1	0.948	0.718	1	0.988	0.845
rs516191	6.3287E-15	0.0414318	0.00531	0.0414318	0.005314	1.49084E-14	0.88679	0.953132	2.63E-06	1.78E-05	0.288145	1.5E-05	0.09785	0.146916	0.711	0.747	1	1	0.83	1	0.935	0.912
rs6566871	6.3405E-15	0.04179	0.00536	0.04179	0.00536	1.46552E-14	0.45802	0.237749	2.73E-09	0.030801	0.53487	3.5E-05	0.00572	0.460897	0.85	0.894	1	0.948	0.718	1	0.988	0.845
rs590777	6.3519E-15	0.0414349	0.00531	0.0414349	0.005314	1.49623E-14	0.88576	0.946188	2.64E-06	1.77E-05	0.289521	1.4E-05	0.10171	0.150077	0.71	0.748	1	1	0.829	1	0.933	0.911
rs578458	6.3609E-15	-0.041434	0.00531	-0.041434	0.005314	1.49832E-14	0.90102	0.943204	2.62E-06	1.85E-05	0.289984	1.5E-05	0.09529	0.144857	0.716	0.75	1	1	0.831	1	0.937	0.913
rs593094	6.3616E-15	-0.041427	0.00531	-0.041427	0.005313	1.49849E-14	0.87256	0.953538	2.64E-06	1.72E-05	0.28872	1.5E-05	0.09639	0.14714	0.707	0.746	1	1	0.83	1	0.935	0.912
rs569935	6.3741E-15	0.0414255	0.00531	0.0414255	0.005313	1.5014E-14	0.87267	0.953877	2.64E-06	1.72E-05	0.288818	1.5E-05	0.09648	0.147209	0.707	0.746	1	1	0.83	1	0.935	0.912
rs1486899	6.3885E-15	-0.041425	0.00531	-0.041425	0.005314	1.50475E-14	0.88655	0.953816	2.64E-06	1.78E-05	0.28861	1.5E-05	0.09639	0.147138	0.711	0.747	1	1	0.83	1	0.936	0.912
rs621423	6.3942E-15	-0.041425	0.00531	-0.041425	0.005314	1.50605E-14	0.88853	0.952794	2.63E-06	1.82E-05	0.28805	1.5E-05	0.09776	0.146848	0.712	0.747	1	1	0.831	1	0.935	0.912
rs6493273	6.3948E-15	0.0414239	0.00531	0.0414239	0.005314	1.5062E-14	0.88534	0.953873	2.64E-06	1.77E-05	0.288814	1.5E-05	0.09647	0.147209	0.711	0.747	1	1	0.83	1	0.936	0.912
rs8085272	6.3954E-15	0.0417836	0.00536	0.0417836	0.00536	1.48386E-14	0.47176	0.234573	2.84E-09	0.029665	0.538595	3.3E-05	0.00606	0.479459	0.846	0.894	1	0.95	0.715	1	0.988	0.84
rs12966541	6.4085E-15	-0.041783	0.00536	-0.041783	0.00536	1.48663E-14	0.47219	0.234389	2.83E-09	0.029679	0.538964	3.3E-05	0.00608	0.479828	0.846	0.894	1	0.95	0.715	1	0.987	0.84
rs2009198	6.4133E-15	-0.041782	0.00536	-0.041782	0.00536	1.48781E-14	0.47186	0.234548	2.84E-09	0.02972	0.538734	3.3E-05	0.00606	0.479526	0.846	0.894	1	0.95	0.715	1	0.988	0.84
rs11152005	6.4172E-15	-0.041781	0.00536	-0.041781	0.00536	1.48867E-14	0.47187	0.234548	2.84E-09	0.029732	0.538731	3.3E-05	0.00606	0.479523	0.846	0.894	1	0.95	0.715	1	0.988	0.84
rs12960257	6.4175E-15	-0.041781	0.00536	-0.041781	0.00536	1.48878E-14	0.47186	0.234553	2.84E-09	0.029719	0.538749	3.3E-05	0.00606	0.479537	0.846	0.894	1	0.95	0.715	1	0.988	0.84
rs6763411	6.4224E-15	0.0671718	0.00862	0.0670884	0.00903	1.39058E-14	0.89908	0.171306	0.000628	0.052804	0.002135	1.9E-09	0.05899	0.195874	0.76	0.924	0.998	0.925	0.996	1	0.964	0.92
rs653749	6.4282E-15	-0.04142	0.00531	-0.04142	0.005314	1.51395E-14	0.87814	0.95347	2.64E-06	1.77E-05	0.288645	1.5E-05	0.09641	0.147158	0.709	0.747	1	1	0.83	1	0.936	0.912
rs12968302	6.4295E-15	-0.04178	0.00536	-0.04178	0.00536	1.49144E-14	0.47186	0.234555	2.84E-09	0.029729	0.538735	3.3E-05	0.00606	0.47952	0.846	0.894	1	0.95	0.715	1	0.988	0.84
rs563298	6.447E-15	-0.04142	0.00531	-0.04142	0.005314	1.51833E-14	0.89436	0.953533	2.65E-06	1.8E-05	0.288915	1.5E-05	0.09647	0.147137	0.713	0.747	1	1	0.83	1	0.936	0.912
rs623549	6.4472E-15	0.0414186	0.00531	0.0414186	0.005314	1.51837E-14	0.88576	0.95388	2.65E-06	1.77E-05	0.289017	1.5E-05	0.09656	0.147208	0.711	0.747	1	1	0.83	1	0.936	0.912
rs488732	6.45E-15	0.0414183	0.00531	0.0414183	0.005314	1.51902E-14	0.88574	0.953872	2.65E-06	1.77E-05	0.289017	1.5E-05	0.09656	0.147209	0.711	0.747	1	1	0.83	1	0.936	0.912
rs606997	6.45E-15	0.0414183	0.00531	0.0414183	0.005314	1.51902E-14	0.88574	0.953872	2.65E-06	1.77E-05	0.289017	1.5E-05	0.09656	0.147209	0.711	0.747	1	1	0.83	1	0.936	0.912
rs518222	6.4519E-15	-0.041418	0.00531	-0.041418	0.005314	1.51946E-14	0.88783	0.953379	2.61E-06	1.84E-05	0.289255	1.5E-05	0.0966	0.147207	0.712	0.747	1	1	0.83	1	0.936	0.912
rs4611398	6.4538E-15	-0.041418	0.00531	-0.041418	0.005314	1.5199E-14	0.88682	0.953801	2.65E-06	1.78E-05	0.288808	1.5E-05	0.09648	0.147136	0.711	0.747	1	1	0.83	1	0.936	0.912
rs499491	6.4542E-15	-0.041418	0.00531	-0.041418	0.005314	1.52E-14	0.88682	0.953805	2.65E-06	1.78E-05	0.28881	1.5E-05	0.09648	0.147136	0.711	0.747	1	1	0.83	1	0.936	0.912
rs648585	6.4582E-15	-0.041417	0.00531	-0.041417	0.005314	1.52093E-14	0.88682	0.953805	2.65E-06	1.78E-05	0.28881	1.5E-05	0.09648	0.147136	0.711	0.747	1	1	0.83	1	0.936	0.912
rs651999	6.4668E-15	0.0414165	0.00531	0.0414165	0.005314	1.52292E-14	0.88679	0.954153	2.65E-06	1.78E-05	0.288908	1.5E-05	0.09657	0.147207	0.711	0.747	1	1	0.83	1	0.936	0.912
rs4270118	6.4674E-15	0.0414164	0.00531	0.0414164	0.005314	1.52306E-14	0.88679	0.954139	2.65E-06	1.78E-05	0.288902	1.5E-05	0.09656	0.147204	0.711	0.747	1	1	0.83	1	0.936	0.912
rs57500723	6.4687E-15	0.0414164	0.00531	0.0414164	0.005314	1.52335E-14	0.89436	0.954153	2.65E-06	1.81E-05	0.288908	1.5E-05	0.09657	0.147207	0.713	0.747	1	1	0.83	1	0.936	0.912
rs12908163	6.4707E-15	0.0414161	0.00531	0.0414161	0.005314	1.52383E-14	0.88679	0.954142	2.65E-06	1.78E-05	0.288904	1.5E-05	0.09656	0.147204	0.711	0.747	1	1	0.83	1	0.936	0.912
rs474356	6.4885E-15	-0.041414	0.00531	-0.041414	0.005314	1.52796E-14	0.88555	0.953805	2.65E-06	1.79E-05	0.28881	1.5E-05	0.09648	0.147136	0.711	0.747	1	1	0.83	1	0.936	0.912
rs8092503	6.5088E-15	-0.041773	0.00536	-0.041773	0.00536	1.50858E-14	0.47149	0.237841	2.89E-09	0.029653	0.535408	3.5E-05	0.00572	0.460267	0.847	0.894	1	0.95	0.718	1	0.988	0.845
rs489692	6.5186E-15	-0.041411	0.00531	-0.041411	0.005314	1.53495E-14	0.88748	0.953534	2.65E-06	1.81E-05	0.288921	1.5E-05	0.09648	0.14714	0.712	0.747	1	1	0.83	1	0.936	0.912
rs684920	6.5373E-15	-0.041409	0.00531	-0.041409	0.005314	1.53928E-14	0.88854	0.953537	2.65E-06	1.82E-05	0.288915	1.5E-05	0.09647	0.147138	0.712	0.747	1	1	0.83	1	0.936	0.912
rs607473	6.573E-15	-0.041406	0.00531	-0.041406	0.005314	1.54757E-14	0.88742	0.953533	2.65E-06	1.83E-05	0.288921	1.5E-05	0.09648	0.14714	0.712	0.747	1	1	0.83	1	0.936	0.912
rs955685	6.5822E-15	-0.041404	0.00531	-0.041404	0.005313	1.5497E-14	0.89226	0.952037	2.64E-06	1.89E-05	0.288306	1.5E-05	0.0963	0.147172	0.713	0.748	1	1	0.831	1	0.936	0.912
rs7497188	6.6055E-15	-0.041414	0.00532	-0.041414	0.005315	1.5551E-14	0.8955	0.953561	2.67E-06	1.84E-05	0.289764	1.5E-05	0.09589	0.149535	0.714	0.747	1	1	0.83	1	0.936	0.912
rs11632739	6.621E-15	-0.041415	0.00532	-0.041415	0.005315	1.55871E-14	0.8891	0.953253	2.56E-06	2.01E-05	0.291349	1.5E-05	0.0926	0.153032	0.712	0.747	1	1	0.829	1	0.937	0.91
rs499580	6.6343E-15	0.0414008	0.00531	0.0414008	0.005314	1.56179E-14	0.88138	0.944418	2.79E-06	1.75E-05	0.281499	1.6E-05	0.09713	0.146168	0.711	0.75	1	1	0.835	1	0.936	0.913
rs7243785	6.6376E-15	-0.041757	0.00536	-0.041757	0.00536	1.53623E-14	0.45832	0.23441	2.83E-09	0.030881	0.538986	3.3E-05	0.00603	0.480355	0.849	0.894	1	0.947	0.715	1	0.988	0.84
rs12956220	6.6542E-15	-0.041757	0.00536	-0.041757	0.00536	1.54355E-14	0.47194	0.235149	2.91E-09	0.029689	0.539366	3.3E-05	0.00609	0.479955	0.846	0.894	1	0.95	0.715	1	0.987	0.84
rs623254	6.6737E-15	0.0413953	0.00531	0.0413953	0.005314	1.57094E-14	0.87631	0.953872	2.65E-06	1.82E-05	0.289015	1.5E-05	0.09656	0.147207	0.709	0.746	1	1	0.83	1	0.935	0.912
rs685291	6.6805E-15	-0.041395	0.00531	-0.041395	0.005314	1.5725E-14	0.87622	0.953537	2.65E-06	1.83E-05	0.288915	1.5E-05	0.09647	0.147138	0.709	0.747	1	1	0.83	1	0.935	0.912
rs36000843	6.6866E-15	-0.041394	0.00531	-0.041394	0.005314	1.57392E-14	0.89147	0.953805	2.65E-06	1.89E-05	0.288808	1.5E-05	0.09648	0.147136	0.713	0.747	1	1	0.831	1	0.936	0.912
rs649483	6.6866E-15	-0.041394	0.00531	-0.041394	0.005314	1.57392E-14	0.89147	0.953805	2.65E-06	1.89E-05	0.288808	1.5E-05	0.09648	0.147136	0.713	0.747	1	1	0.831	1	0.936	0.912

Table S3

rs10851452	6.6881E-15	-0.041406	0.00532	-0.041406	0.005315	1.57427E-14	0.8935	0.953559	2.67E-06	1.87E-05	0.289761	1.5E-05	0.09589	0.149534	0.713	0.747	1	1	0.83	1	0.936	0.912
rs1027460	6.7156E-15	-0.041403	0.00532	-0.041403	0.005315	1.58067E-14	0.88789	0.953566	2.67E-06	1.85E-05	0.289822	1.5E-05	0.0959	0.14954	0.712	0.747	1	1	0.83	1	0.936	0.911
rs1496905	6.7449E-15	-0.0414	0.00532	-0.0414	0.005315	1.58745E-14	0.88535	0.953575	2.65E-06	1.88E-05	0.289651	1.5E-05	0.09576	0.149538	0.711	0.747	1	1	0.83	1	0.936	0.911
rs1390876	6.7587E-15	-0.041386	0.00531	-0.041386	0.005313	1.59066E-14	0.88909	0.952707	2.65E-06	1.94E-05	0.288499	1.5E-05	0.09645	0.147186	0.712	0.748	1	1	0.831	1	0.936	0.912
rs7719307	6.7667E-15	0.0396285	0.00509	0.0396285	0.005088	1.59251E-14	0.19024	0.400503	8.95E-06	0.00021	0.077707	8.7E-06	0.15708	0.474236	0.926	0.891	1	1	0.96	1	0.936	0.876
rs56043914	6.7818E-15	0.0408344	0.00524	0.0408344	0.005243	1.59601E-14	0.88815	0.240215	1.59E-05	0.001572	0.014088	2E-06	0.22951	0.166152	0.809	0.915	1	0.998	0.988	1	0.913	0.93
rs6566870	6.8338E-15	0.0417398	0.00536	0.0417398	0.00536	1.57428E-14	0.46626	0.237748	2.73E-09	0.032305	0.534867	3.5E-05	0.00572	0.460895	0.848	0.894	1	0.945	0.717	1	0.988	0.845
rs4611399	6.8748E-15	-0.041375	0.00531	-0.041375	0.005314	1.61759E-14	0.88328	0.953816	2.65E-06	1.93E-05	0.288812	1.5E-05	0.09648	0.147139	0.711	0.747	1	1	0.83	1	0.936	0.912
rs62381090	6.9995E-15	0.0396872	0.0051	0.0396872	0.005098	1.64651E-14	0.2457	0.182043	0.000387	8.5E-05	0.02092	5.2E-07	0.32818	0.537761	0.915	0.927	0.999	1	0.985	1	0.886	0.863
rs66653209	7.1015E-15	0.0407873	0.00524	0.0407873	0.005241	1.67014E-14	0.93836	0.238428	1.63E-05	0.001364	0.013863	2.4E-06	0.21013	0.165851	0.8	0.915	1	0.999	0.988	1	0.918	0.93
rs4895285	7.1347E-15	0.0393897	0.00506	0.0393897	0.005062	1.67784E-14	0.30338	0.668365	1.27E-06	0.000157	0.072458	2.7E-05	0.37104	0.240999	0.897	0.837	1	1	0.958	1	0.863	0.909
rs589497	7.1373E-15	-0.041354	0.00531	-0.041354	0.005314	1.67846E-14	0.92148	0.953533	2.65E-06	2.18E-05	0.288915	1.5E-05	0.09647	0.147137	0.721	0.749	1	1	0.832	1	0.936	0.913
rs665751	7.1855E-15	-0.041345	0.00531	-0.041345	0.005313	1.68962E-14	0.87553	0.95347	2.65E-06	2.03E-05	0.288845	1.5E-05	0.0965	0.147156	0.709	0.747	1	1	0.83	1	0.936	0.912
rs535072	7.2817E-15	-0.041337	0.00531	-0.041337	0.005314	1.71192E-14	0.87337	0.954035	2.66E-06	2.09E-05	0.288842	1.5E-05	0.09535	0.14721	0.708	0.747	1	1	0.83	1	0.936	0.912
rs281297	7.3005E-15	0.0409583	0.00527	0.0409583	0.005265	1.71627E-14	0.67621	0.967939	1.42E-05	8.95E-06	0.397258	3.8E-06	0.18357	0.147619	0.797	0.743	1	1	0.774	1	0.899	0.911
rs75854701	7.4438E-15	0.0686172	0.00882	0.0686172	0.008823	1.7069E-14	0.68384	0.159028	0.000649	0.02912	0.005196	3E-09	0.03995	0.202466	0.715	0.927	0.998	0.964	0.994	1	0.971	0.919
rs684499	7.4793E-15	-0.041318	0.00531	-0.041318	0.005313	1.7577E-14	0.87505	0.953536	2.65E-06	2.14E-05	0.288915	1.5E-05	0.09647	0.147138	0.709	0.747	1	1	0.83	1	0.936	0.912
rs1496919	7.6118E-15	0.0413056	0.00531	0.0413056	0.005313	1.7884E-14	0.86314	0.953787	2.65E-06	2.14E-05	0.288931	1.5E-05	0.09658	0.147217	0.706	0.746	1	1	0.83	1	0.935	0.912
rs606602	7.8819E-15	-0.041331	0.00532	-0.041331	0.00532	1.85092E-14	0.88964	0.978222	3.32E-06	1.76E-05	0.292952	1.3E-05	0.11031	0.156292	0.709	0.739	1	1	0.826	1	0.928	0.908
rs4476748	8.0987E-15	0.0407257	0.00524	0.0407257	0.005244	1.90109E-14	0.9052	0.242647	1.71E-05	0.001477	0.014575	2.4E-06	0.21367	0.162189	0.807	0.914	1	0.999	0.988	1	0.918	0.931
rs7167304	8.1101E-15	0.0412762	0.00532	0.0412762	0.005315	1.90372E-14	0.88025	0.978244	2.74E-06	2.13E-05	0.288192	1.5E-05	0.0959	0.152659	0.709	0.741	1	1	0.83	1	0.935	0.91
rs116759971	8.309E-15	0.0861884	0.0111	0.0898103	0.01559	1.94975E-14	0.70856	0.340341	0.001033	0.006416	0.006939	3.3E-07	5.5E-05	0.209098	0.728	0.896	0.997	0.994	0.993	1	0.999	0.92
rs7505145	8.4214E-15	0.0391845	0.00505	0.0391845	0.005049	1.97573E-14	0.20315	0.835783	9.33E-05	0.038906	0.079336	4.7E-09	0.03701	0.12394	0.917	0.75	1	0.948	0.956	1	0.973	0.936
rs8093506	9.2936E-15	-0.041513	0.00536	-0.041513	0.005357	2.17727E-14	0.41853	0.220154	6.1E-09	0.03328	0.517887	2.4E-05	0.00806	0.505678	0.859	0.899	1	0.945	0.731	1	0.986	0.837
rs10221412	9.4694E-15	0.0390885	0.00505	0.0390885	0.005046	2.21784E-14	0.19568	0.802821	0.000105	0.042698	0.084159	3.3E-09	0.03654	0.141049	0.917	0.74	1	0.94	0.953	1	0.972	0.931
rs12522060	9.4943E-15	0.0391993	0.00506	0.0391993	0.005061	2.22359E-14	0.34695	0.652863	1.66E-06	0.000154	0.087681	2.5E-05	0.32866	0.254954	0.889	0.839	1	1	0.951	1	0.876	0.906
rs10070730	1.0167E-14	0.039175	0.00506	0.039175	0.005063	2.37871E-14	0.35462	0.609224	1.61E-06	0.000141	0.089277	2.7E-05	0.36575	0.253253	0.887	0.845	1	1	0.95	1	0.864	0.906
rs9304439	1.0241E-14	0.0390444	0.00505	0.0390444	0.005047	2.39595E-14	0.20125	0.806313	0.00011	0.041399	0.085599	3.5E-09	0.03688	0.142058	0.916	0.741	1	0.943	0.952	1	0.972	0.931
rs6878559	1.0622E-14	0.0391785	0.00507	0.0391785	0.005067	2.48372E-14	0.154	0.374959	2.33E-05	0.000214	0.04384	5.9E-06	0.61006	0.129849	0.93	0.89	1	1	0.973	1	0.8	0.937
rs10051563	1.2133E-14	0.039046	0.00506	0.039046	0.005061	2.83143E-14	0.34642	0.646147	1.82E-06	0.000158	0.086528	2.7E-05	0.35658	0.251601	0.889	0.84	1	1	0.952	1	0.867	0.906
rs140743137	1.2133E-14	0.0390472	0.00506	0.0390472	0.005061	2.83149E-14	0.34546	0.639364	1.76E-06	0.000168	0.086652	2.7E-05	0.35662	0.248808	0.889	0.841	1	1	0.952	1	0.868	0.907
rs9586	1.2146E-14	-0.052877	0.00685	-0.052877	0.006854	2.83459E-14	0.36161	0.107598	0.002027	1.59E-05	0.00153	1.6E-06	0.23913	0.970743	0.888	0.937	0.991	1	0.997	1	0.905	0.763
rs10063944	1.2242E-14	0.0390627	0.00506	0.0390627	0.005064	2.85651E-14	0.33246	0.60503	1.61E-06	0.000183	0.091276	2.7E-05	0.36592	0.251008	0.891	0.847	1	1	0.95	1	0.865	0.907
rs12970682	1.2462E-14	-0.041331	0.00536	-0.041095	0.005671	2.81182E-14	0.48381	0.218497	2.83E-09	0.027301	0.673764	4.6E-05	0.00664	0.489297	0.835	0.891	1	0.952	0.639	1	0.986	0.829
rs17502651	1.2566E-14	0.0410319	0.00532	0.0410319	0.005322	2.93101E-14	0.70397	0.549676	0.000227	7.1E-05	0.04604	6.6E-07	0.09136	0.221121	0.706	0.848	0.999	1	0.969	1	0.948	0.908
rs6508209	1.315E-14	0.0389023	0.00505	0.0389023	0.005049	3.06516E-14	0.20088	0.824687	0.000111	0.049447	0.082653	3.6E-09	0.03808	0.143143	0.915	0.744	1	0.929	0.953	1	0.971	0.93
rs13066405	1.3166E-14	-0.057476	0.00746	-0.059677	0.012321	1.85755E-14	0.02002	0.115415	1.56E-05	0.569215	0.01401	3.9E-08	0.00233	0.835124	0.953	0.898	1	0.102	0.98	1	0.991	0.655
rs6508208	1.3853E-14	0.0388682	0.00505	0.0388682	0.005049	3.22669E-14	0.20173	0.827427	0.000112	0.049718	0.08256	3.7E-09	0.0385	0.143932	0.915	0.744	1	0.929	0.953	1	0.971	0.929
rs13084037	1.39E-14	-0.052717	0.00685	-0.052717	0.006849	3.23743E-14	0.36038	0.106134	0.001968	1.56E-05	0.001484	1.8E-06	0.24279	0.939052	0.888	0.937	0.991	1	0.997	1	0.903	0.756
rs9831648	1.4166E-14	-0.0527	0.00685	-0.0527	0.006849	3.29859E-14	0.36281	0.106138	0.001966	1.59E-05	0.001485	1.8E-06	0.24283	0.939004	0.888	0.937	0.991	1	0.997	1	0.903	0.756
rs7243019	1.4849E-14	0.0388315	0.00505	0.0388315	0.00505	3.4552E-14	0.21423	0.826736	0.000114	0.049651	0.081583	3.9E-09	0.03863	0.143655	0.912	0.744	1	0.93	0.953	1	0.971	0.929
rs1021362	1.5113E-14	-0.043373	0.00564	-0.045007	0.00727	3.51563E-14	0.33149	0.05214	0.000228	0.193526	0.000986	2.6E-07	0.01201	0.035014	0.892	0.954	0.999	0.671	0.998	1	0.986	0.965
rs1021363	1.5124E-14	-0.043373	0.00564	-0.044999	0.00726	3.51819E-14	0.33252	0.051976	0.000229	0.191844	0.000986	2.7E-07	0.01194	0.035132	0.892	0.955	0.999	0.675	0.998	1	0.986	0.965
rs12969597	1.5557E-14	0.0388456	0.00506	0.0388456	0.005056	3.61744E-14	0.33853	0.595184	0.000189	0.03157	0.056083	6.5E-09	0.01768	0.113668	0.887	0.689	1	0.959	0.965	1	0.981	0.936
rs7617480	1.6031E-14	-0.052587	0.00685	-0.052587	0.006848	3.72592E-14	0.36352	0.106735	0.002018	1.81E-05	0.001522	1.9E-06	0.23075	0.936181	0.888	0.937	0.991	1	0.997	1	0.907	0.756
rs1824223	1.6416E-14	-0.057268	0.00746	-0.059424	0.012302	2.30996E-14	0.02119	0.116606	1.64E-05	0.578779	0.014338	4.3E-08	0.00235	0.836776	0.952	0.897	1	0.1	0.98	1	0.991	0.655
rs10447270	1.6997E-14	-0.039733	0.00518	-0.039733	0.005179	3.94715E-14	0.354	0.753695	0.000235	0.003464	0.027417	1.4E-07	0.01879	0.259237	0.891	0.739	1	0.997	0.98	1	0.981	0.908
rs62000222	1.704E-14	-0.040804	0.00532	-0.040804	0.005319	3.95705E-14	0.83369	0.978035	2.3E-06	3.05E-05	0.366407	2.1E-05	0.09259	0.150888	0.69	0.733	1	1	0.784	1	0.933	0.906
rs62381120	1.7771E-14	0.0404638	0.00528	0.0404638	0.005278	4.12419E-14	0.80543	0.095515	3.88E-05	0.000553	0.001961	1.9E-05	0.3107	0.280939	0.826	0.944	1	0.999	0.996	1	0.892	0.908
rs114255265	1.8294E-14	0.084499	0.01103	0.0883951	0.015195	4.24369E-14	0.7105	0.266798	0.001127	0.007753	0.006586	7.6E-07	7.7E-05	0.149361	0.737	0.911	0.997	0.993	0.993	1	0.998	0.934
rs76138603	1.8445E-14	0.0844955	0.01103	0.0883618	0.015168	4.27821E-14	0.70936	0.2662	0.001107	0.007812	0.006615	7.8E-07	7.9E-05	0.148338	0.737	0.911	0.997	0.993	0.993	1	0.998	0.935
rs11877032	1.8704E-14	0.0392765	0.00513	0.037136	0.007569	4.3375E-14	0.51398	0.308592	1.03E-06	0.209	0.028463	6.8E-08	0.00362	0.619114	0.735	0.397	1	0.428	0.955	1	0.984	0.694
rs10502979	1.9531E-14	0.0388576	0.00508	0.0366276	0.007995	3.33333E-14	0.32002	0.935549	2.19E-07	0.404679	0.085966	1.1E-07	0.00094	0.947775	0.763	0.535	1	0.16	0.872	1	0.991	0.509
rs6446285	1.9818E-14	-0.062535	0.00817	-0.062535	0.008173	4.59189E-14	0.21291	0.416688	0.00048	0.001786	0.002179	1.4E-07	0.5759	0.393981	0.914	0.879	0.999	0.998	0.996	1	0.808	0.881
rs141165523	1.9822E-14	0.0625353	0.00817	0.0625353	0.008173	4.59272E-14	0.21321	0.416829	0.000479	0.001792	0.002175	1.4E-07	0.57569	0.393852	0.914	0.879	0.999	0.998	0.996	1	0.808	0.881

Table S3

rs7658785	2.022E-14	-0.043207	0.00565	-0.043207	0.005649	4.68362E-14	0.14408	0.017027	0.000385	0.000454	0.448152	2.6E-06	0.00315	0.386868	0.936	0.972	0.999	1	0.816	1	0.993	0.893
rs10038014	2.0293E-14	0.0399675	0.00523	0.0399675	0.005225	4.7003E-14	0.53727	0.210622	1.01E-05	0.000736	0.014601	5.7E-05	0.07364	0.263444	0.878	0.927	1	0.999	0.989	1	0.964	0.919
rs12327102	2.0371E-14	0.0386951	0.00506	0.0386951	0.005059	4.71811E-14	0.35813	0.620345	0.000201	0.036083	0.0524	6.8E-09	0.01899	0.115301	0.883	0.696	1	0.952	0.966	1	0.98	0.935
rs9869120	2.1055E-14	-0.062469	0.00817	-0.062469	0.008172	4.87406E-14	0.21744	0.41641	0.000479	0.00188	0.002176	1.4E-07	0.57625	0.394362	0.913	0.879	0.999	0.998	0.996	1	0.807	0.881
rs9869256	2.1058E-14	-0.062469	0.00817	-0.062469	0.008172	4.87474E-14	0.21744	0.41641	0.00048	0.00188	0.002176	1.4E-07	0.57626	0.394364	0.913	0.879	0.999	0.998	0.996	1	0.807	0.881
rs17443405	2.2182E-14	0.040631	0.00532	0.040631	0.00532	5.13114E-14	0.66901	0.547082	0.000252	7.35E-05	0.047772	1.1E-06	0.08109	0.209814	0.7	0.849	0.999	1	0.968	1	0.952	0.91
rs6446284	2.2263E-14	-0.062387	0.00817	-0.062387	0.008169	5.14943E-14	0.21428	0.413369	0.000464	0.001754	0.002232	1.7E-07	0.59273	0.392379	0.913	0.879	0.999	0.998	0.996	1	0.802	0.881
rs145321320	2.36E-14	-0.062331	0.00817	-0.062331	0.00817	5.45409E-14	0.21407	0.411891	0.000491	0.001746	0.002251	1.7E-07	0.5869	0.392537	0.914	0.88	0.999	0.998	0.996	1	0.804	0.881
rs71080535	2.3712E-14	-0.062326	0.00817	-0.062326	0.00817	5.47949E-14	0.21429	0.411888	0.000492	0.001754	0.002249	1.7E-07	0.58689	0.392902	0.914	0.88	0.999	0.998	0.996	1	0.804	0.881
rs11130208	2.3719E-14	-0.062326	0.00817	-0.062326	0.00817	5.48114E-14	0.2143	0.411883	0.000492	0.001754	0.002249	1.7E-07	0.58687	0.392895	0.914	0.88	0.999	0.998	0.996	1	0.804	0.881
rs6797299	2.3784E-14	-0.062323	0.00817	-0.062323	0.00817	5.49585E-14	0.21388	0.411898	0.000492	0.001757	0.002243	1.7E-07	0.58708	0.392891	0.914	0.88	0.999	0.998	0.996	1	0.804	0.881
rs1532204	2.3828E-14	-0.062321	0.00817	-0.062321	0.00817	5.5059E-14	0.21388	0.411894	0.000493	0.001757	0.002243	1.7E-07	0.5873	0.39314	0.914	0.88	0.999	0.998	0.996	1	0.804	0.881
rs9327165	2.3832E-14	0.0387652	0.00508	0.0387652	0.005082	5.50689E-14	0.28997	0.300306	0.000328	0.000219	0.029844	5.4E-07	0.4022	0.405698	0.904	0.902	0.999	1	0.98	1	0.863	0.883
rs3773093	2.4757E-14	-0.056958	0.00747	-0.059462	0.012362	3.46727E-14	0.01569	0.11661	2.04E-05	0.598514	0.01651	5.6E-08	0.00248	0.750987	0.957	0.899	1	0.1	0.978	1	0.991	0.688
rs34890793	2.5079E-14	-0.062264	0.00817	-0.062264	0.00817	5.79055E-14	0.2186	0.411908	0.000492	0.001838	0.002253	1.7E-07	0.58695	0.392185	0.913	0.88	0.999	0.998	0.996	1	0.805	0.881
rs11130207	2.5206E-14	-0.062265	0.00817	-0.062265	0.00817	5.81948E-14	0.21345	0.413104	0.000501	0.001751	0.002279	1.7E-07	0.59111	0.392897	0.914	0.879	0.999	0.998	0.996	1	0.803	0.881
rs2298606	2.5879E-14	0.0384405	0.00505	0.0384405	0.005046	5.97256E-14	0.20306	0.771978	0.000147	0.044651	0.091405	5.2E-09	0.03964	0.152839	0.914	0.734	1	0.94	0.949	1	0.97	0.926
rs7629322	2.6259E-14	-0.062218	0.00817	-0.062218	0.00817	6.05891E-14	0.21901	0.410775	0.000524	0.001841	0.002255	1.6E-07	0.58561	0.391768	0.913	0.88	0.999	0.998	0.996	1	0.805	0.881
rs10078559	2.6391E-14	0.11827	0.01553	0.116341	0.024204	6.08899E-14	0.2214	0.447069	7.61E-07	0.000657	0.063243	9.3E-05	0.01747	0.006988	0.48	0.587	1	0.999	0.948	1	0.973	0.975
rs55638820	2.6506E-14	0.0384651	0.00505	0.0384651	0.005052	6.11515E-14	0.19864	0.841552	0.000125	0.051809	0.091981	6.1E-09	0.03851	0.148781	0.915	0.749	1	0.928	0.949	1	0.97	0.928
rs6508207	2.7392E-14	0.0384042	0.00505	0.0384042	0.005046	6.31637E-14	0.20413	0.771248	0.000156	0.045464	0.092454	5.1E-09	0.03771	0.152892	0.913	0.734	1	0.939	0.948	1	0.971	0.926
rs1972044	2.8072E-14	0.0390109	0.00513	0.0368187	0.007641	6.47074E-14	0.51314	0.282888	1.23E-06	0.212778	0.028823	8.1E-08	0.00369	0.617912	0.735	0.387	1	0.428	0.954	1	0.984	0.694
rs1491983	2.8764E-14	-0.062288	0.00819	-0.062288	0.008192	6.62796E-14	0.1813	0.480825	0.000441	0.001424	0.002357	2.5E-07	0.65115	0.383584	0.918	0.866	0.999	0.998	0.995	1	0.782	0.88
rs4241405	2.8778E-14	-0.062288	0.00819	-0.062288	0.008192	6.63103E-14	0.18131	0.480822	0.000441	0.001424	0.002357	2.5E-07	0.65114	0.383581	0.918	0.866	0.999	0.998	0.995	1	0.782	0.88
rs10164055	2.9029E-14	0.0389813	0.00513	0.0367337	0.007632	6.68797E-14	0.47122	0.262299	1.35E-06	0.212593	0.030958	6.8E-08	0.00447	0.604196	0.747	0.379	1	0.43	0.952	1	0.982	0.699
rs11130211	2.9103E-14	-0.062276	0.00819	-0.062276	0.008192	6.70495E-14	0.1813	0.480398	0.000442	0.001425	0.002365	2.5E-07	0.65128	0.383653	0.918	0.866	0.999	0.998	0.995	1	0.782	0.88
rs12637313	2.9114E-14	-0.062275	0.00819	-0.062275	0.008192	6.70746E-14	0.1813	0.480403	0.000442	0.001425	0.002365	2.5E-07	0.65129	0.38366	0.918	0.866	0.999	0.998	0.995	1	0.782	0.88
rs2029591	2.9117E-14	-0.062275	0.00819	-0.062275	0.008192	6.70813E-14	0.18113	0.480894	0.000443	0.001429	0.002366	2.5E-07	0.65096	0.383225	0.918	0.866	0.999	0.998	0.995	1	0.782	0.88
rs11721148	2.9127E-14	-0.062274	0.00819	-0.062274	0.008192	6.71021E-14	0.18112	0.480469	0.000442	0.001431	0.00236	2.5E-07	0.65127	0.383267	0.918	0.866	0.999	0.998	0.995	1	0.782	0.88
rs1463728	2.994E-14	-0.062242	0.00819	-0.062242	0.008191	6.89484E-14	0.18049	0.482134	0.000444	0.001437	0.002395	2.6E-07	0.64861	0.37944	0.918	0.866	0.999	0.998	0.995	1	0.783	0.881
rs4435893	3.1423E-14	0.038503	0.00507	0.038503	0.005071	7.23108E-14	0.55366	0.467531	1.38E-05	0.000111	0.078741	9.7E-06	0.41533	0.330139	0.849	0.864	1	1	0.953	1	0.847	0.887
rs3132390	3.2228E-14	-0.08894	0.01172	-0.089764	0.012558	7.41351E-14	0.18453	0.431701	0.000108	0.000119	0.332318	3.7E-05	0.03742	0.001164	0.93	0.891	1	1	0.867	1	0.976	0.988
rs11749110	3.2634E-14	0.040011	0.00527	0.040011	0.005273	7.50558E-14	0.75378	0.215538	2.55E-05	0.000999	0.01727	6.2E-06	0.1998	0.170215	0.735	0.914	1	0.999	0.985	1	0.917	0.925
rs150583	3.3097E-14	0.0391861	0.00517	0.0391861	0.005166	7.61046E-14	0.32896	0.929421	4.53E-07	0.020128	0.200864	2.2E-05	0.001	0.330748	0.888	0.764	1	0.976	0.9	1	0.995	0.887
rs3949215	3.4137E-14	0.0913613	0.01205	0.0929015	0.013265	7.84578E-14	0.40556	0.312723	3.16E-05	0.000139	0.010377	0.0003	0.30325	0.000984	0.899	0.912	1	1	0.991	0.999	0.903	0.989
rs1954598	3.4515E-14	0.0913429	0.01205	0.0928973	0.013275	7.93152E-14	0.4056	0.31249	3.18E-05	0.000139	0.010385	0.00031	0.30352	0.000981	0.899	0.912	1	1	0.991	0.999	0.903	0.989
rs6456701	3.455E-14	0.0913428	0.01205	0.0928999	0.013278	7.93944E-14	0.40562	0.312505	3.18E-05	0.000139	0.010366	0.0003	0.30407	0.000981	0.899	0.912	1	1	0.991	0.999	0.903	0.989
rs9467626	3.4917E-14	-0.092139	0.01216	-0.093136	0.012946	8.02245E-14	0.44703	0.295339	4.33E-05	4.68E-05	0.01496	0.0003	0.33154	0.00165	0.891	0.914	1	1	0.989	0.999	0.894	0.987
rs114227873	3.737E-14	0.0915614	0.0121	0.0915614	0.012096	8.57732E-14	0.88505	0.437812	0.001344	0.016661	0.00718	1.3E-07	0.00083	0.273341	0.816	0.885	0.996	0.984	0.992	1	0.996	0.911
rs13381096	3.7432E-14	0.0388428	0.00513	0.0367986	0.007507	8.59121E-14	0.47718	0.292126	1.48E-06	0.195457	0.031627	1.1E-07	0.00351	0.671205	0.754	0.408	1	0.479	0.953	1	0.985	0.689
rs12250380	3.7613E-14	-0.041249	0.00545	-0.041405	0.005656	8.63224E-14	0.35215	0.039052	0.00021	0.120701	0.003651	7.7E-07	0.0034	0.182822	0.9	0.962	1	0.835	0.995	1	0.993	0.93
rs4236040	3.879E-14	0.0911635	0.01205	0.0930342	0.013522	8.89822E-14	0.41356	0.308359	3.45E-05	0.000134	0.01037	0.00032	0.30995	0.000931	0.898	0.913	1	1	0.991	0.999	0.901	0.989
rs4712969	3.8868E-14	0.0911526	0.01205	0.0929734	0.013481	8.91585E-14	0.40718	0.308627	3.44E-05	0.000138	0.010348	0.00032	0.30966	0.000932	0.899	0.913	1	1	0.991	0.999	0.901	0.989
rs5019113	3.8875E-14	0.0383102	0.00506	0.0383102	0.005064	8.91725E-14	0.32758	0.435575	0.000106	0.000141	0.063222	2.1E-06	0.50651	0.260496	0.893	0.875	1	1	0.963	1	0.827	0.905
rs6902211	3.8958E-14	0.0911497	0.01205	0.0929701	0.013481	8.93614E-14	0.40835	0.308603	3.44E-05	0.000138	0.010372	0.00032	0.30951	0.000933	0.898	0.913	1	1	0.991	0.999	0.901	0.989
rs76048911	3.9483E-14	0.0926714	0.01225	0.0926714	0.012254	9.05462E-14	0.75148	0.392487	0.001255	0.011642	0.004109	2.3E-07	0.00208	0.374913	0.84	0.894	0.997	0.99	0.995	1	0.994	0.895
rs12523352	3.9945E-14	0.0383372	0.00507	0.0383372	0.00507	9.1591E-14	0.5429	0.546898	1.4E-05	0.000106	0.064934	1.1E-05	0.48754	0.362496	0.846	0.846	1	1	0.958	1	0.82	0.876
rs215904	4.0024E-14	0.0390445	0.00516	0.0390445	0.005164	9.1769E-14	0.33364	0.985694	4.48E-07	0.017894	0.22274	2.7E-05	0.00094	0.374814	0.887	0.773	1	0.979	0.89	1	0.995	0.878
rs138792987	4.0384E-14	-0.088959	0.01177	-0.08941	0.012213	9.2581E-14	0.15334	0.539992	0.000154	0.000242	0.237754	2.8E-05	0.03339	0.001064	0.938	0.879	1	1	0.906	1	0.978	0.989
rs3131341	4.0939E-14	-0.08883	0.01175	-0.089068	0.011982	9.3835E-14	0.18407	0.429677	0.000132	0.00012	0.302389	4.2E-05	0.03369	0.001491	0.931	0.893	1	1	0.881	1	0.978	0.987
rs1892250	4.1997E-14	0.0912103	0.01207	0.0927965	0.013335	9.6223E-14	0.40742	0.322995	3.4E-05	0.000141	0.010802	0.00032	0.30806	0.000972	0.898	0.911	1	1	0.991	0.999	0.901	0.989
rs114990157	4.2696E-14	0.125296	0.01659	0.121047	0.026489	7.95316E-14	0.47903	0.8611	0.000151	0.211852	0.007036	4.6E-09	0.00105	0.456856	0.509	0.684	0.999	0.517	0.985	1	0.992	0.774
rs11082972	4.2868E-14	0.038137	0.00505	0.038137	0.00505	9.81882E-14	0.22709	0.818957	0.000175	0.05267	0.083481	5.9E-09	0.04205	0.161514	0.908	0.744	1	0.928	0.952	1	0.968	0.924
rs17598658	4.3035E-14	-0.091283	0.01209	-0.094833	0.015309	9.8564E-14	0.47926	0.493121	6.27E-05	0.00011	0.049591	0.00015	0.14095	0.000238	0.888	0.885	1	1	0.974	1	0.945	0.992
rs3132389	4.3323E-14	-0.08873	0.01175	-0.088956	0.01197	9.92139E-14	0.18091	0.447142	0.000128	0.000126	0.298436	4.4E-05	0.0346	0.001465	0.932	0.89	1	1	0.882	1	0.978	0.987

Table S3

rs3135299	4.3324E-14	-0.08873	0.01175	-0.088956	0.01197	9.92166E-14	0.1809	0.447142	0.000128	0.000126	0.298438	4.4E-05	0.0346	0.001465	0.932	0.89	1	1	0.882	1	0.978	0.987
rs3131336	4.3328E-14	-0.08873	0.01175	-0.088956	0.01197	9.92257E-14	0.18091	0.447142	0.000128	0.000126	0.298438	4.4E-05	0.0346	0.001465	0.932	0.89	1	1	0.882	1	0.978	0.987
rs3132385	4.3328E-14	-0.08873	0.01175	-0.088956	0.01197	9.92257E-14	0.18091	0.447142	0.000128	0.000126	0.298438	4.4E-05	0.0346	0.001465	0.932	0.89	1	1	0.882	1	0.978	0.987
rs3118359	4.4243E-14	-0.088703	0.01175	-0.088927	0.011969	1.0129E-13	0.18183	0.435439	0.000131	0.000127	0.302704	4.4E-05	0.03397	0.001481	0.932	0.892	1	1	0.881	1	0.978	0.987
rs12174489	4.4545E-14	0.0445473	0.0059	0.0445473	0.005903	1.0197E-13	0.37519	0.041366	6.04E-06	0.061524	0.007123	4.2E-05	0.00321	0.354846	0.903	0.963	1	0.933	0.993	1	0.993	0.905
rs2372546	4.5156E-14	-0.055561	0.00736	-0.055561	0.007364	1.03347E-13	0.98082	0.891803	0.000565	0.008959	0.021919	6.6E-09	0.24373	0.048497	0.769	0.746	0.998	0.99	0.98	1	0.894	0.952
rs7716347	4.5478E-14	0.0397812	0.00527	0.0397812	0.005273	1.04073E-13	0.77388	0.213777	2.72E-05	0.001008	0.01776	8.5E-06	0.19543	0.165445	0.742	0.915	1	0.999	0.985	1	0.919	0.926
rs9467621	4.6765E-14	-0.091717	0.01216	-0.09252	0.012831	1.06973E-13	0.46526	0.30122	4.2E-05	5.16E-05	0.016404	0.0003	0.37623	0.001765	0.887	0.911	1	1	0.988	0.999	0.88	0.986
rs6913795	4.6817E-14	-0.091715	0.01216	-0.092519	0.012832	1.07091E-13	0.46522	0.301248	4.2E-05	5.17E-05	0.016408	0.0003	0.37665	0.001765	0.887	0.911	1	1	0.988	0.999	0.88	0.986
rs3132392	4.715E-14	-0.088598	0.01175	-0.08864	0.011792	1.0784E-13	0.18102	0.428417	0.000129	0.000154	0.301058	4.2E-05	0.03311	0.001479	0.932	0.894	1	1	0.882	1	0.978	0.987
rs9257192	4.917E-14	-0.088539	0.01175	-0.088539	0.011752	1.12389E-13	0.18202	0.429683	0.000132	0.000156	0.301611	4.2E-05	0.03371	0.001492	0.932	0.893	1	1	0.882	1	0.978	0.987
rs12520103	4.986E-14	0.0381349	0.00506	0.0381349	0.005063	1.13942E-13	0.08252	0.498542	3.09E-05	0.000498	0.075635	6.2E-06	0.67789	0.134388	0.944	0.867	1	0.999	0.958	1	0.779	0.933
rs9467609	5.0433E-14	-0.091638	0.01217	-0.092536	0.012906	1.1523E-13	0.477	0.306356	4.61E-05	4.32E-05	0.017555	0.00032	0.35871	0.001816	0.886	0.911	1	1	0.987	0.999	0.885	0.986
rs9467607	5.0476E-14	-0.091637	0.01217	-0.092534	0.012906	1.15329E-13	0.47701	0.306358	4.61E-05	4.32E-05	0.017556	0.00032	0.35872	0.001816	0.886	0.911	1	1	0.987	0.999	0.885	0.986
rs9467606	5.049E-14	-0.091636	0.01217	-0.092533	0.012906	1.15359E-13	0.47703	0.306358	4.61E-05	4.33E-05	0.017556	0.00032	0.35872	0.001816	0.886	0.91	1	1	0.987	0.999	0.885	0.986
rs9461216	5.0545E-14	-0.091635	0.01217	-0.09254	0.012913	1.15484E-13	0.47704	0.306097	4.62E-05	4.33E-05	0.017533	0.00032	0.35885	0.001813	0.886	0.911	1	1	0.987	0.999	0.885	0.986
rs9467603	5.068E-14	-0.091633	0.01217	-0.092562	0.012933	1.15788E-13	0.47713	0.305854	4.63E-05	4.31E-05	0.017554	0.00032	0.35945	0.001803	0.885	0.911	1	1	0.987	0.999	0.885	0.986
rs9257191	5.0904E-14	-0.088486	0.01175	-0.088486	0.011752	1.16291E-13	0.18299	0.429683	0.000132	0.000163	0.301611	4.2E-05	0.03371	0.001492	0.931	0.893	1	1	0.882	1	0.978	0.987
rs7766699	5.0945E-14	-0.088485	0.01175	-0.088485	0.011752	1.16383E-13	0.18301	0.429683	0.000132	0.000163	0.301784	4.2E-05	0.03371	0.001492	0.931	0.893	1	1	0.882	1	0.978	0.987
rs9257217	5.0945E-14	-0.088485	0.01175	-0.088485	0.011752	1.16383E-13	0.18301	0.429683	0.000132	0.000163	0.301784	4.2E-05	0.03371	0.001492	0.931	0.893	1	1	0.882	1	0.978	0.987
rs7761321	5.0971E-14	-0.088484	0.01175	-0.088484	0.011752	1.16441E-13	0.18301	0.429683	0.000132	0.000163	0.301783	4.2E-05	0.03371	0.001492	0.931	0.893	1	1	0.882	1	0.978	0.987
rs13200921	5.0979E-14	-0.09163	0.01217	-0.092609	0.012975	1.16459E-13	0.4773	0.304892	4.67E-05	4.3E-05	0.017538	0.00032	0.35958	0.001784	0.885	0.911	1	1	0.987	0.999	0.885	0.986
rs3132373	5.1104E-14	-0.08848	0.01175	-0.08848	0.011752	1.16742E-13	0.18303	0.429683	0.000131	0.000163	0.302212	4.2E-05	0.03371	0.001492	0.931	0.893	1	1	0.881	1	0.978	0.987
rs9257223	5.1125E-14	-0.08848	0.01175	-0.08848	0.011752	1.16788E-13	0.18303	0.429681	0.000131	0.000163	0.302449	4.2E-05	0.0337	0.001492	0.931	0.893	1	1	0.881	1	0.978	0.987
rs9467600	5.1133E-14	-0.091624	0.01217	-0.092601	0.012972	1.16807E-13	0.4773	0.304911	4.66E-05	4.3E-05	0.017586	0.00032	0.35957	0.001784	0.885	0.911	1	1	0.987	0.999	0.885	0.986
rs9257227	5.1366E-14	-0.088469	0.01175	-0.088469	0.011751	1.1733E-13	0.18183	0.429647	0.000131	0.000162	0.303163	4.3E-05	0.03361	0.001489	0.932	0.893	1	1	0.881	1	0.978	0.987
rs71548384	5.1797E-14	-0.087152	0.01158	-0.088902	0.013149	1.183E-13	0.15833	0.505653	0.000163	0.000138	0.301258	5.3E-05	0.01988	0.001213	0.936	0.882	1	1	0.882	1	0.984	0.988
rs35195355	5.2202E-14	0.0386526	0.00514	0.0364567	0.008653	7.04656E-14	0.32527	0.621262	3.47E-06	0.50863	0.04278	1.9E-08	0.00082	0.850223	0.758	0.433	1	0.108	0.927	1	0.992	0.567
rs3135296	5.2939E-14	-0.088416	0.01175	-0.088416	0.011751	1.20869E-13	0.18016	0.442044	0.000128	0.000171	0.298688	4.3E-05	0.03421	0.001469	0.932	0.891	1	1	0.883	1	0.978	0.987
rs3131340	5.3032E-14	-0.088418	0.01175	-0.088418	0.011751	1.21078E-13	0.18108	0.429679	0.000131	0.000172	0.302562	4.2E-05	0.03369	0.001491	0.932	0.893	1	1	0.882	1	0.978	0.987
rs3132397	5.304E-14	-0.088417	0.01175	-0.088417	0.011751	1.21096E-13	0.18108	0.429676	0.000131	0.000172	0.302506	4.2E-05	0.03368	0.001491	0.932	0.893	1	1	0.882	1	0.978	0.987
rs3135307	5.3207E-14	-0.088407	0.01175	-0.088407	0.01175	1.21471E-13	0.17981	0.44643	0.000128	0.000171	0.296894	4.3E-05	0.03472	0.001462	0.932	0.891	1	1	0.884	1	0.978	0.987
rs3132396	5.3278E-14	-0.08841	0.01175	-0.08841	0.011751	1.21631E-13	0.1811	0.429663	0.000132	0.000172	0.302692	4.2E-05	0.03367	0.001491	0.932	0.893	1	1	0.881	1	0.978	0.987
rs71674967	5.3516E-14	-0.091521	0.01217	-0.092219	0.012726	1.22164E-13	0.45886	0.299133	5.01E-05	5.24E-05	0.016258	0.00031	0.34604	0.001783	0.889	0.912	1	1	0.988	0.999	0.889	0.986
rs4947247	5.3582E-14	-0.088396	0.01175	-0.088396	0.01175	1.22314E-13	0.18001	0.444929	0.000128	0.000171	0.298439	4.3E-05	0.03444	0.001467	0.932	0.891	1	1	0.883	1	0.978	0.987
rs35608874	5.3588E-14	-0.088396	0.01175	-0.088396	0.01175	1.22328E-13	0.17987	0.446545	0.000128	0.000171	0.297205	4.3E-05	0.03471	0.001462	0.932	0.891	1	1	0.883	1	0.978	0.987
rs3118358	5.3607E-14	-0.088395	0.01175	-0.088395	0.01175	1.22369E-13	0.17998	0.44543	0.000128	0.000171	0.298337	4.3E-05	0.03447	0.001466	0.932	0.891	1	1	0.883	1	0.978	0.987
rs4947303	5.3623E-14	-0.088395	0.01175	-0.088395	0.01175	1.22405E-13	0.17999	0.444926	0.000128	0.000171	0.29844	4.3E-05	0.03444	0.001467	0.932	0.891	1	1	0.883	1	0.978	0.987
rs9257249	5.3921E-14	-0.088385	0.01175	-0.088385	0.01175	1.23076E-13	0.17988	0.447145	0.000127	0.000171	0.298227	4.4E-05	0.03461	0.001465	0.932	0.891	1	1	0.883	1	0.978	0.987
rs9257250	5.3921E-14	-0.088385	0.01175	-0.088385	0.01175	1.23076E-13	0.17988	0.447145	0.000127	0.000171	0.298227	4.4E-05	0.03461	0.001465	0.932	0.891	1	1	0.883	1	0.978	0.987
rs3132376	5.3969E-14	-0.088383	0.01175	-0.088383	0.01175	1.23185E-13	0.1799	0.446805	0.000128	0.000171	0.298287	4.4E-05	0.03458	0.001465	0.932	0.891	1	1	0.883	1	0.978	0.987
rs3135294	5.4095E-14	-0.088385	0.01175	-0.088385	0.011751	1.23468E-13	0.18117	0.429634	0.000132	0.000172	0.303492	4.3E-05	0.0336	0.001489	0.932	0.893	1	1	0.881	1	0.978	0.987
rs3135297	5.41E-14	-0.088379	0.01175	-0.088379	0.01175	1.23479E-13	0.17988	0.447137	0.000128	0.000171	0.298193	4.4E-05	0.03461	0.001465	0.932	0.891	1	1	0.883	1	0.978	0.987
rs3135298	5.4158E-14	-0.088378	0.01175	-0.088378	0.01175	1.23607E-13	0.17988	0.447143	0.000128	0.000171	0.298459	4.4E-05	0.03461	0.001465	0.932	0.891	1	1	0.883	1	0.978	0.987
rs3118366	5.4223E-14	-0.088376	0.01175	-0.088376	0.01175	1.23753E-13	0.1799	0.447142	0.000128	0.000171	0.298438	4.4E-05	0.0346	0.001465	0.932	0.891	1	1	0.883	1	0.978	0.987
rs3135305	5.4223E-14	-0.088376	0.01175	-0.088376	0.01175	1.23753E-13	0.1799	0.447142	0.000128	0.000171	0.298438	4.4E-05	0.0346	0.001465	0.932	0.891	1	1	0.883	1	0.978	0.987
rs3135306	5.4223E-14	-0.088376	0.01175	-0.088376	0.01175	1.23753E-13	0.1799	0.447142	0.000128	0.000171	0.298438	4.4E-05	0.0346	0.001465	0.932	0.891	1	1	0.883	1	0.978	0.987
rs3132393	5.4241E-14	-0.088375	0.01175	-0.088375	0.01175	1.23795E-13	0.1799	0.447142	0.000128	0.000171	0.298438	4.4E-05	0.0346	0.001465	0.932	0.891	1	1	0.883	1	0.978	0.987
rs3132394	5.4241E-14	-0.088375	0.01175	-0.088375	0.01175	1.23795E-13	0.1799	0.447142	0.000128	0.000171	0.298438	4.4E-05	0.0346	0.001465	0.932	0.891	1	1	0.883	1	0.978	0.987
rs3132395	5.4241E-14	-0.088375	0.01175	-0.088375	0.01175	1.23795E-13	0.1799	0.447142	0.000128	0.000171	0.298438	4.4E-05	0.0346	0.001465	0.932	0.891	1	1	0.883	1	0.978	0.987
rs3131335	5.4244E-14	-0.088375	0.01175	-0.088375	0.01175	1.23802E-13	0.1799	0.447142	0.000128	0.000171	0.298438	4.4E-05	0.0346	0.001465	0.932	0.891	1	1	0.883	1	0.978	0.987
rs7760313	5.4244E-14	-0.088375	0.01175	-0.088375	0.01175	1.23803E-13	0.1799	0.447142	0.000128	0.000171	0.298438	4.4E-05	0.0346	0.001465	0.932	0.891	1	1	0.883	1	0.978	0.987
rs9257262	5.4244E-14	-0.088375	0.01175	-0.088375	0.01175	1.23803E-13	0.1799	0.447142	0.000128	0.000171	0.298438	4.4E-05	0.0346	0.001465	0.932	0.891	1	1	0.883	1	0.978	0.987
rs9257267	5.4245E-14	-0.088375	0.01175	-0.088375	0.01175	1.23803E-13	0.1799	0.447142	0.000128	0.000171	0.298438	4.4E-05	0.0346	0.001465	0.932	0.891	1	1	0.883	1	0.978	0.987
rs9257271	5.4245E-14	-0.088375	0.01175	-0.088375	0.01175	1.23804E-13	0.1799	0.447142	0.000128	0.000171	0.298438	4.4E-05	0.0346	0.001465	0.932	0.891	1	1	0.883	1	0.978	0.987

Table S3

rs9257272	5.4245E-14	-0.088375	0.01175	-0.088375	0.01175	1.23804E-13	0.1799	0.447142	0.000128	0.000171	0.298438	4.4E-05	0.0346	0.001465	0.932	0.891	1	1	0.883	1	0.978	0.987
rs3135300	5.4245E-14	-0.088375	0.01175	-0.088375	0.01175	1.23805E-13	0.17991	0.447142	0.000128	0.000171	0.298438	4.4E-05	0.0346	0.001465	0.932	0.891	1	1	0.883	1	0.978	0.987
rs3118367	5.4246E-14	-0.088375	0.01175	-0.088375	0.01175	1.23806E-13	0.17991	0.447142	0.000128	0.000171	0.298438	4.4E-05	0.0346	0.001465	0.932	0.891	1	1	0.883	1	0.978	0.987
rs3132388	5.4246E-14	-0.088375	0.01175	-0.088375	0.01175	1.23806E-13	0.17991	0.447142	0.000128	0.000171	0.298438	4.4E-05	0.0346	0.001465	0.932	0.891	1	1	0.883	1	0.978	0.987
rs3132391	5.4246E-14	-0.088375	0.01175	-0.088375	0.01175	1.23806E-13	0.17991	0.447142	0.000128	0.000171	0.298438	4.4E-05	0.0346	0.001465	0.932	0.891	1	1	0.883	1	0.978	0.987
rs3135302	5.4246E-14	-0.088375	0.01175	-0.088375	0.01175	1.23806E-13	0.17991	0.447142	0.000128	0.000171	0.298438	4.4E-05	0.0346	0.001465	0.932	0.891	1	1	0.883	1	0.978	0.987
rs34592554	5.4246E-14	-0.088375	0.01175	-0.088375	0.01175	1.23806E-13	0.17991	0.447142	0.000128	0.000171	0.298438	4.4E-05	0.0346	0.001465	0.932	0.891	1	1	0.883	1	0.978	0.987
rs66845243	5.4246E-14	-0.088375	0.01175	-0.088375	0.01175	1.23806E-13	0.17991	0.447142	0.000128	0.000171	0.298438	4.4E-05	0.0346	0.001465	0.932	0.891	1	1	0.883	1	0.978	0.987
rs7764642	5.4642E-14	-0.088373	0.01175	-0.088373	0.011751	1.24697E-13	0.18251	0.429683	0.000132	0.00018	0.301356	4.2E-05	0.03371	0.001492	0.932	0.893	1	1	0.882	1	0.978	0.987
rs3135304	5.4701E-14	-0.088368	0.01175	-0.088498	0.011876	1.24829E-13	0.18084	0.428692	0.000139	0.000152	0.301534	4.6E-05	0.03308	0.00148	0.932	0.894	1	1	0.882	1	0.978	0.987
rs3131093	5.4863E-14	-0.08836	0.01175	-0.08836	0.01175	1.25192E-13	0.18015	0.447142	0.000128	0.000173	0.298436	4.4E-05	0.0346	0.001465	0.932	0.891	1	1	0.883	1	0.978	0.987
rs3135295	5.5383E-14	-0.088348	0.01175	-0.088348	0.011751	1.26361E-13	0.18082	0.435438	0.000131	0.000173	0.302703	4.4E-05	0.03397	0.001481	0.932	0.892	1	1	0.881	1	0.978	0.987
rs3132384	5.6049E-14	-0.088328	0.01175	-0.088328	0.01175	1.27857E-13	0.17991	0.446094	0.00013	0.000171	0.292064	4.5E-05	0.03497	0.001449	0.932	0.891	1	1	0.886	1	0.977	0.987
rs138026462	5.6261E-14	0.0913249	0.01215	0.0913249	0.01215	1.28333E-13	0.95652	0.40211	0.001426	0.017751	0.006552	1.3E-07	0.00117	0.336909	0.802	0.888	0.996	0.983	0.993	1	0.995	0.898
rs9467623	5.7026E-14	-0.091427	0.01217	-0.092186	0.012775	1.30051E-13	0.4586	0.299549	5.09E-05	5.17E-05	0.016507	0.00032	0.34727	0.001781	0.889	0.912	1	1	0.988	0.999	0.889	0.986
rs3118357	5.7394E-14	-0.08831	0.01175	-0.088373	0.011814	1.30879E-13	0.18228	0.428664	0.000143	0.000164	0.301349	4.4E-05	0.03328	0.001474	0.932	0.894	1	1	0.882	1	0.978	0.987
rs3118370	5.7835E-14	-0.088281	0.01175	-0.088281	0.011751	1.31869E-13	0.17991	0.447142	0.000131	0.000171	0.299881	4.5E-05	0.03485	0.001465	0.932	0.891	1	1	0.883	1	0.977	0.987
rs72324954	5.8016E-14	-0.0914	0.01217	-0.092148	0.012769	1.32276E-13	0.4631	0.299549	5.09E-05	5.24E-05	0.016508	0.00032	0.34728	0.001781	0.888	0.912	1	1	0.988	0.999	0.889	0.986
rs9257188	5.8958E-14	-0.088295	0.01176	-0.088295	0.011756	1.3439E-13	0.18309	0.433605	0.000136	0.000168	0.303872	4.4E-05	0.03455	0.001521	0.931	0.893	1	1	0.881	1	0.978	0.987
rs3131094	5.9588E-14	-0.088235	0.01175	-0.088361	0.011873	1.35804E-13	0.18128	0.428516	0.000143	0.000156	0.302398	4.7E-05	0.03326	0.001486	0.932	0.894	1	1	0.882	1	0.978	0.987
rs57713596	6.0043E-14	-0.072304	0.00963	-0.072304	0.00963	1.36825E-13	0.15402	0.534151	4.74E-05	0.000128	0.078125	0.00021	0.08303	0.00558	0.94	0.885	1	1	0.966	1	0.964	0.983
rs71537559	6.142E-14	-0.090973	0.01212	-0.090973	0.012122	1.39914E-13	0.10391	0.472017	0.000225	0.000178	0.092133	8.1E-05	0.04014	0.002503	0.951	0.896	1	1	0.962	1	0.978	0.986
rs6939997	6.2203E-14	-0.091282	0.01217	-0.091701	0.012512	1.4167E-13	0.47189	0.306708	4.59E-05	5.97E-05	0.017606	0.00031	0.35822	0.00183	0.886	0.911	1	1	0.987	0.999	0.886	0.986
rs34351439	6.2385E-14	-0.09128	0.01217	-0.091668	0.012487	1.42078E-13	0.47345	0.306778	4.57E-05	6.09E-05	0.017582	0.00031	0.35823	0.001831	0.886	0.911	1	1	0.987	0.999	0.886	0.986
rs13199775	6.32E-14	-0.091258	0.01217	-0.091646	0.012488	1.43907E-13	0.47333	0.306708	4.58E-05	6.12E-05	0.017605	0.00031	0.35822	0.00183	0.886	0.911	1	1	0.987	0.999	0.886	0.986
rs9257187	6.3271E-14	-0.088197	0.01176	-0.088197	0.011758	1.44066E-13	0.18312	0.43543	0.000138	0.000171	0.305371	4.5E-05	0.03495	0.001536	0.931	0.892	1	1	0.881	1	0.977	0.987
rs34770320	6.3344E-14	-0.091254	0.01217	-0.091644	0.012489	1.44228E-13	0.47333	0.306708	4.58E-05	6.12E-05	0.017606	0.00031	0.35822	0.00183	0.886	0.911	1	1	0.987	0.999	0.886	0.986
rs66983783	6.3344E-14	-0.091254	0.01217	-0.091644	0.012489	1.44228E-13	0.47333	0.306708	4.58E-05	6.12E-05	0.017606	0.00031	0.35822	0.00183	0.886	0.911	1	1	0.987	0.999	0.886	0.986
rs36013569	6.3687E-14	-0.091245	0.01217	-0.09164	0.012493	1.44997E-13	0.4733	0.306697	4.6E-05	6.11E-05	0.017604	0.00032	0.35821	0.00183	0.886	0.911	1	1	0.987	0.999	0.886	0.986
rs9461219	6.5469E-14	-0.091184	0.01216	-0.091929	0.012786	1.48993E-13	0.47382	0.300387	4.36E-05	5.99E-05	0.017021	0.00034	0.37856	0.001773	0.886	0.911	1	1	0.987	0.999	0.88	0.986
rs9467613	6.5619E-14	-0.0912	0.01217	-0.091562	0.012466	1.49329E-13	0.47169	0.306372	4.6E-05	6.37E-05	0.017612	0.00032	0.35837	0.00182	0.887	0.911	1	1	0.987	0.999	0.886	0.986
rs13191296	6.5791E-14	-0.09486	0.01265	-0.096111	0.013789	1.49713E-13	0.55365	0.348715	3.95E-05	0.000125	0.01045	0.00026	0.40152	0.001368	0.872	0.901	1	1	0.99	0.999	0.871	0.987
rs3131343	6.6093E-14	-0.088104	0.01175	-0.088197	0.011844	1.5039E-13	0.18455	0.432489	0.000146	0.000153	0.306686	4.8E-05	0.03437	0.001518	0.931	0.893	1	1	0.88	1	0.978	0.987
rs41269265	6.6188E-14	-0.090599	0.01209	-0.090599	0.012088	1.50604E-13	0.12743	0.510309	0.000228	0.000365	0.089231	5.3E-05	0.03712	0.001597	0.946	0.89	1	1	0.963	1	0.979	0.988
rs11923546	6.6396E-14	0.0831995	0.0111	0.0877902	0.016484	1.5107E-13	0.50863	0.211428	0.001457	0.015746	0.008426	7.4E-07	8.6E-05	0.124359	0.684	0.917	0.996	0.985	0.991	1	0.998	0.937
rs34953377	6.7609E-14	-0.090741	0.01211	-0.090741	0.012111	1.53787E-13	0.10494	0.484071	0.000248	0.000254	0.087729	6.6E-05	0.04213	0.001916	0.951	0.895	1	1	0.964	1	0.977	0.987
rs66841633	6.7609E-14	-0.090741	0.01211	-0.090741	0.012111	1.53787E-13	0.10494	0.484071	0.000248	0.000254	0.087729	6.6E-05	0.04213	0.001916	0.951	0.895	1	1	0.964	1	0.977	0.987
rs35212793	6.7892E-14	-0.072156	0.00963	-0.072156	0.009631	1.54421E-13	0.15398	0.526456	4.85E-05	0.000136	0.077454	0.00023	0.08096	0.005826	0.94	0.886	1	1	0.966	1	0.964	0.983
rs62091462	6.8902E-14	-0.040333	0.00538	-0.040166	0.005653	1.49429E-13	0.43795	0.221391	5.75E-09	0.042246	0.556785	0.00012	0.00561	0.545831	0.852	0.895	1	0.933	0.72	1	0.987	0.827
rs28412066	6.9283E-14	0.090202	0.01204	0.0915592	0.013114	1.57534E-13	0.40558	0.315913	4.06E-05	0.000139	0.011484	0.00038	0.32625	0.001154	0.898	0.911	1	1	0.99	0.999	0.897	0.988
rs35769282	6.9509E-14	-0.072126	0.00963	-0.072126	0.009631	1.58041E-13	0.1557	0.526459	4.85E-05	0.00014	0.077422	0.00023	0.08096	0.005826	0.94	0.886	1	1	0.966	1	0.964	0.983
rs9257184	6.9512E-14	-0.088063	0.01176	-0.088063	0.011759	1.58048E-13	0.18316	0.437912	0.00014	0.000174	0.307282	4.7E-05	0.0355	0.001557	0.931	0.892	1	1	0.88	1	0.977	0.987
rs34864993	6.9517E-14	-0.072125	0.00963	-0.072125	0.009631	1.58058E-13	0.15567	0.526397	4.83E-05	0.000139	0.078009	0.00023	0.08083	0.005824	0.94	0.886	1	1	0.966	1	0.964	0.983
rs36022097	6.9525E-14	-0.072126	0.00963	-0.072126	0.009631	1.58077E-13	0.1557	0.52645	4.85E-05	0.000139	0.0775	0.00023	0.08095	0.005826	0.94	0.886	1	1	0.966	1	0.964	0.983
rs56874662	6.9561E-14	-0.072125	0.00963	-0.072125	0.009631	1.58158E-13	0.1557	0.526453	4.85E-05	0.00014	0.077501	0.00023	0.08095	0.005826	0.94	0.886	1	1	0.966	1	0.964	0.983
rs9717913	6.9561E-14	-0.072125	0.00963	-0.072125	0.009631	1.58158E-13	0.1557	0.526453	4.85E-05	0.00014	0.077501	0.00023	0.08095	0.005826	0.94	0.886	1	1	0.966	1	0.964	0.983
rs13196692	6.9973E-14	-0.090683	0.01211	-0.090683	0.012111	1.59081E-13	0.10577	0.480817	0.000237	0.000269	0.092246	6.8E-05	0.0411	0.00186	0.951	0.895	1	1	0.962	1	0.977	0.987
rs62091461	7.0083E-14	-0.040322	0.00539	-0.040166	0.005635	1.52183E-13	0.43883	0.221757	5.86E-09	0.041539	0.557513	0.00012	0.00564	0.546494	0.852	0.895	1	0.934	0.72	1	0.987	0.827
rs9257183	7.1518E-14	-0.088021	0.01176	-0.088021	0.01176	1.62539E-13	0.18445	0.438247	0.000141	0.000177	0.307453	4.7E-05	0.03557	0.00156	0.931	0.892	1	1	0.88	1	0.977	0.987
rs9517301	7.1955E-14	0.0382312	0.00511	0.0382312	0.005108	1.63516E-13	0.46571	0.339107	9.53E-06	0.001246	0.002775	0.00019	0.0118	0.282607	0.657	0.888	1	0.999	0.995	1	0.984	0.898
rs34452876	7.2023E-14	-0.090643	0.01211	-0.090643	0.012111	1.63668E-13	0.10622	0.484071	0.000248	0.000274	0.087729	6.6E-05	0.04213	0.001916	0.951	0.895	1	1	0.964	1	0.977	0.987
rs4324798	7.4274E-14	-0.087924	0.01175	-0.088148	0.011967	1.68703E-13	0.18423	0.434577	0.000139	0.000171	0.309794	5.7E-05	0.02931	0.001527	0.931	0.892	1	1	0.879	1	0.979	0.987
rs12969167	7.5113E-14	-0.040263	0.00538	-0.040146	0.005571	1.63556E-13	0.44036	0.224397	6.25E-09	0.041635	0.550747	0.00012	0.00577	0.551323	0.852	0.895	1	0.934	0.724	1	0.987	0.826
rs17443350	7.5119E-14	0.0398347	0.00533	0.0398347	0.005326	1.70592E-13	0.66523	0.543641	0.000306	0.000106	0.038466	2.3E-06	0.11614	0.19726	0.704	0.85	0.999	1	0.972	1	0.939	0.913
rs9278100	7.5172E-14	-0.088808	0.01188	-0.089986	0.013063	1.70711E-13	0.17991	0.398073	0.000129	0.000171	0.346986	5.7E-05	0.03877	0.000968	0.931	0.897	1	1	0.865	1	0.976	0.988

Table S3

rs11241568	7.5506E-14	0.0389711	0.00521	0.0389711	0.005211	1.71457E-13	0.67112	0.153555	0.000338	0.001084	0.00423	4.2E-06	0.21281	0.221808	0.855	0.934	0.999	0.999	0.994	1	0.924	0.923
rs1965662	7.5607E-14	-0.040255	0.00538	-0.040135	0.005576	1.64734E-13	0.43876	0.225217	6.32E-09	0.040928	0.556414	0.00012	0.00573	0.551918	0.852	0.894	1	0.936	0.721	1	0.987	0.826
rs9257189	7.5788E-14	-0.08787	0.01175	-0.08787	0.011751	1.72089E-13	0.19795	0.433401	0.000135	0.000225	0.303606	4.4E-05	0.0345	0.00152	0.928	0.892	1	1	0.882	1	0.977	0.987
rs3135309	7.5803E-14	-0.087207	0.01166	-0.087207	0.011663	1.72122E-13	0.13185	0.571438	0.000234	0.000147	0.262334	2.8E-05	0.04817	0.002587	0.94	0.872	1	1	0.897	1	0.972	0.985
rs6800306	7.6709E-14	0.0654737	0.00876	0.0651789	0.01003	1.65287E-13	0.69088	0.209766	0.000529	0.109318	0.002884	9.2E-09	0.0683	0.130999	0.694	0.903	0.998	0.822	0.994	1	0.953	0.924
rs2015502	7.6793E-14	0.0402459	0.00538	0.0401214	0.005583	1.67219E-13	0.44373	0.225194	6.32E-09	0.04119	0.556464	0.00012	0.00573	0.551791	0.851	0.894	1	0.935	0.721	1	0.987	0.826
rs9686731	7.7032E-14	0.03896	0.00521	0.03896	0.005212	1.7487E-13	0.68732	0.154438	0.000339	0.001066	0.004256	4.3E-06	0.21143	0.221478	0.853	0.934	0.999	0.999	0.994	1	0.924	0.923
rs71557344	7.7612E-14	-0.092762	0.01241	-0.092762	0.012411	1.76166E-13	0.3292	0.314528	0.000154	0.000179	0.15978	6.6E-05	0.0478	0.001946	0.912	0.914	1	1	0.938	1	0.974	0.987
rs2052326	7.7863E-14	0.0402333	0.00538	0.0401018	0.005594	1.69327E-13	0.43891	0.225194	6.32E-09	0.041856	0.556464	0.00012	0.00573	0.551791	0.852	0.894	1	0.934	0.721	1	0.987	0.826
rs7228688	7.7863E-14	0.0402333	0.00538	0.0401018	0.005594	1.69327E-13	0.43891	0.225194	6.32E-09	0.041856	0.556464	0.00012	0.00573	0.551791	0.852	0.894	1	0.934	0.721	1	0.987	0.826
rs2871673	7.8533E-14	-0.040227	0.00538	-0.040113	0.005565	1.71397E-13	0.44031	0.225267	6.65E-09	0.041988	0.556466	0.00012	0.00574	0.551952	0.852	0.894	1	0.934	0.721	1	0.987	0.826
rs1311912	7.8988E-14	-0.087895	0.01176	-0.087906	0.011774	1.7924E-13	0.18723	0.440301	0.000137	0.000204	0.300314	5E-05	0.03531	0.001383	0.93	0.892	1	1	0.883	1	0.977	0.987
rs34332556	7.9175E-14	-0.090525	0.01212	-0.090525	0.012116	1.79658E-13	0.10601	0.491835	0.000259	0.000255	0.091678	6.8E-05	0.04354	0.00196	0.95	0.893	1	1	0.962	1	0.976	0.987
rs4340941	7.9651E-14	0.0389369	0.00521	0.0389369	0.005212	1.80723E-13	0.72421	0.155096	0.000306	0.00137	0.003918	3.6E-06	0.22205	0.238798	0.845	0.933	1	0.999	0.994	1	0.92	0.919
rs9687387	8.0438E-14	0.0389353	0.00521	0.0389353	0.005213	1.8248E-13	0.65822	0.149167	0.000369	0.001014	0.004417	4.3E-06	0.21437	0.224878	0.857	0.935	0.999	0.999	0.994	1	0.923	0.923
rs13207689	8.0457E-14	-0.090464	0.01211	-0.090464	0.012111	1.82522E-13	0.10386	0.485602	0.000262	0.000295	0.088617	6.6E-05	0.0424	0.001929	0.951	0.894	1	1	0.963	1	0.977	0.987
rs71952517	8.0953E-14	-0.040207	0.00538	-0.040078	0.005589	1.75985E-13	0.43828	0.225587	6.45E-09	0.04195	0.557138	0.00012	0.00576	0.552585	0.852	0.894	1	0.934	0.721	1	0.987	0.826
rs12960467	8.1567E-14	-0.040201	0.00538	-0.040074	0.005588	1.7744E-13	0.4396	0.22502	6.54E-09	0.041163	0.559721	0.00012	0.00571	0.551192	0.852	0.894	1	0.935	0.72	1	0.987	0.826
rs3764516	8.3233E-14	0.0401861	0.00538	0.0400518	0.0056	1.80822E-13	0.43891	0.224996	6.54E-09	0.041856	0.559771	0.00012	0.00571	0.551064	0.852	0.894	1	0.934	0.719	1	0.987	0.826
rs7231263	8.3266E-14	0.0401858	0.00538	0.0400515	0.0056	1.80896E-13	0.43897	0.224996	6.54E-09	0.041858	0.55978	0.00012	0.00571	0.551064	0.852	0.894	1	0.934	0.719	1	0.987	0.826
rs12606265	8.342E-14	-0.040185	0.00538	-0.040049	0.005601	1.81202E-13	0.43901	0.22502	6.54E-09	0.041919	0.559721	0.00012	0.00571	0.551192	0.852	0.894	1	0.934	0.72	1	0.987	0.826
rs35413162	8.342E-14	-0.040185	0.00538	-0.040049	0.005601	1.81202E-13	0.43901	0.22502	6.54E-09	0.041919	0.559721	0.00012	0.00571	0.551192	0.852	0.894	1	0.934	0.72	1	0.987	0.826
rs1819886	8.3454E-14	-0.040184	0.00538	-0.040049	0.005601	1.81277E-13	0.43907	0.22502	6.54E-09	0.041921	0.559733	0.00012	0.00571	0.551192	0.852	0.894	1	0.934	0.719	1	0.987	0.826
rs12606230	8.363E-14	-0.040183	0.00538	-0.040047	0.005603	1.81634E-13	0.43936	0.22502	6.54E-09	0.041984	0.559721	0.00012	0.00571	0.551192	0.852	0.894	1	0.934	0.719	1	0.987	0.826
rs12454204	8.4521E-14	-0.040175	0.00538	-0.040068	0.005552	1.84515E-13	0.43682	0.221894	6.83E-09	0.041098	0.563702	0.00012	0.00605	0.572684	0.852	0.894	1	0.935	0.717	1	0.986	0.821
rs12959833	8.4835E-14	-0.040173	0.00538	-0.04005	0.005583	1.84491E-13	0.43989	0.225391	6.67E-09	0.041217	0.560451	0.00012	0.00574	0.55186	0.852	0.894	1	0.935	0.72	1	0.987	0.826
rs7767099	8.5081E-14	-0.087705	0.01175	-0.087887	0.011927	1.92846E-13	0.1847	0.43201	0.000156	0.000136	0.306056	5.7E-05	0.03941	0.001516	0.931	0.893	1	1	0.881	1	0.976	0.987
rs2014237	8.5177E-14	0.0401705	0.00538	0.0400425	0.005589	1.85233E-13	0.43945	0.225365	6.71E-09	0.041956	0.560825	0.00012	0.00574	0.551727	0.852	0.894	1	0.934	0.719	1	0.987	0.826
rs35006536	8.5642E-14	-0.040169	0.00538	-0.040025	0.005614	1.85773E-13	0.44251	0.22502	6.54E-09	0.042634	0.559721	0.00012	0.00571	0.551192	0.851	0.894	1	0.933	0.719	1	0.987	0.826
rs1833282	8.6755E-14	-0.040159	0.00538	-0.040012	0.005618	1.88192E-13	0.457	0.22502	6.54E-09	0.042255	0.559721	0.00012	0.00571	0.551192	0.848	0.894	1	0.933	0.719	1	0.987	0.825
rs12456731	8.6805E-14	-0.040157	0.00538	-0.040025	0.005597	1.88495E-13	0.43936	0.225391	6.67E-09	0.041976	0.56046	0.00012	0.00574	0.55186	0.852	0.894	1	0.934	0.719	1	0.987	0.826
rs12456002	8.7042E-14	-0.040153	0.00538	-0.040034	0.005569	1.89681E-13	0.43901	0.221894	6.82E-09	0.041919	0.56369	0.00012	0.00605	0.572684	0.851	0.894	1	0.934	0.717	1	0.986	0.821
rs12456067	8.7042E-14	-0.040153	0.00538	-0.040034	0.005569	1.89681E-13	0.43901	0.221894	6.82E-09	0.041919	0.56369	0.00012	0.00605	0.572684	0.851	0.894	1	0.934	0.717	1	0.986	0.821
rs12457769	8.7042E-14	-0.040153	0.00538	-0.040034	0.005569	1.89681E-13	0.43901	0.221894	6.82E-09	0.041919	0.56369	0.00012	0.00605	0.572684	0.851	0.894	1	0.934	0.717	1	0.986	0.821
rs3764515	8.7042E-14	-0.040153	0.00538	-0.040034	0.005569	1.89681E-13	0.43901	0.221894	6.82E-09	0.041919	0.56369	0.00012	0.00605	0.572684	0.851	0.894	1	0.934	0.717	1	0.986	0.821
rs12454336	8.7078E-14	-0.040153	0.00538	-0.040034	0.005569	1.8976E-13	0.43907	0.221894	6.83E-09	0.041921	0.563702	0.00012	0.00605	0.572684	0.851	0.894	1	0.934	0.717	1	0.986	0.821
rs9278145	8.7563E-14	-0.086841	0.01164	-0.086841	0.011643	1.98384E-13	0.18448	0.376954	0.000258	7.01E-05	0.457594	2.4E-05	0.04042	0.006538	0.926	0.894	1	1	0.814	1	0.973	0.979
rs3130777	8.7753E-14	-0.086736	0.01163	-0.086736	0.01163	1.98807E-13	0.23187	0.374712	0.000301	0.000107	0.310859	2.2E-05	0.03288	0.011205	0.922	0.9	1	1	0.879	1	0.978	0.978
rs3764513	8.7776E-14	-0.040148	0.00538	-0.040043	0.005547	1.91552E-13	0.43605	0.22226	6.96E-09	0.041157	0.564423	0.00012	0.00608	0.573364	0.852	0.894	1	0.935	0.717	1	0.986	0.821
rs3764512	8.8557E-14	-0.040147	0.00538	-0.040057	0.005525	1.93803E-13	0.43894	0.221063	7.26E-09	0.040788	0.565603	0.00012	0.0061	0.574487	0.851	0.894	1	0.936	0.716	1	0.986	0.821
rs9257248	8.8642E-14	-0.087443	0.01173	-0.087443	0.011727	2.0079E-13	0.17344	0.459075	0.000144	0.000171	0.296906	5.1E-05	0.04412	0.001735	0.933	0.889	1	1	0.884	1	0.974	0.986
rs12964118	8.9427E-14	-0.04014	0.00538	-0.040022	0.005568	1.94918E-13	0.43931	0.221045	6.96E-09	0.041975	0.565805	0.00012	0.0061	0.574554	0.851	0.894	1	0.933	0.716	1	0.986	0.82
rs76070504	8.9508E-14	-0.092798	0.01245	-0.095383	0.014854	2.02721E-13	0.65119	0.4365	4.94E-05	2.86E-05	0.019509	0.0004	0.35852	0.001414	0.855	0.886	1	1	0.985	0.999	0.88	0.986
rs62098330	9.0184E-14	0.0383462	0.00514	0.035818	0.008331	1.30184E-13	0.39709	0.629695	1.78E-06	0.515422	0.049623	3.5E-08	0.00186	0.867676	0.728	0.433	1	0.109	0.916	1	0.987	0.558
rs1833281	9.0571E-14	-0.040125	0.00538	-0.040009	0.005564	1.97308E-13	0.43936	0.22226	6.96E-09	0.041976	0.564432	0.00012	0.00608	0.573364	0.851	0.894	1	0.934	0.716	1	0.986	0.821
rs11954162	9.1109E-14	0.0391225	0.00525	0.0391225	0.005249	2.0629E-13	0.93149	0.139476	4.56E-05	0.000824	0.006475	2.5E-05	0.20814	0.341812	0.806	0.932	1	0.999	0.992	1	0.92	0.896
rs13195040	9.1384E-14	-0.090178	0.0121	-0.090178	0.0121	2.06904E-13	0.13339	0.473972	0.000274	0.000278	0.090395	6.7E-05	0.04181	0.001851	0.945	0.896	1	1	0.963	1	0.977	0.987
rs4682900	9.2677E-14	-0.047665	0.0064	-0.048703	0.007902	1.7065E-13	0.70037	0.124155	0.015593	0.001454	0.00192	4.9E-08	0.04546	0.135917	0.706	0.928	0.856	0.998	0.996	1	0.966	0.928
rs6940698	9.3438E-14	-0.090622	0.01216	-0.091778	0.013116	2.11481E-13	0.47481	0.300127	4.95E-05	5.76E-05	0.017077	0.00041	0.38189	0.001741	0.886	0.911	1	1	0.987	0.999	0.879	0.986
rs12457718	9.3975E-14	-0.040096	0.00538	-0.039973	0.005576	2.0439E-13	0.43661	0.221824	7.04E-09	0.042859	0.566382	0.00012	0.00609	0.569538	0.851	0.894	1	0.932	0.716	1	0.986	0.821
rs9278063	9.5223E-14	-0.0876	0.01176	-0.0876	0.011763	2.15458E-13	0.19302	0.442801	0.000151	0.000179	0.310804	5.2E-05	0.03765	0.001601	0.929	0.891	1	1	0.879	1	0.976	0.987
rs9257167	9.5401E-14	-0.087597	0.01176	-0.087597	0.011763	2.15854E-13	0.19308	0.442784	0.000152	0.000179	0.310829	5.2E-05	0.03766	0.001601	0.929	0.891	1	1	0.879	1	0.976	0.987
rs35433668	9.5727E-14	-0.040088	0.00538	-0.039876	0.005717	2.05237E-13	0.44015	0.225217	6.32E-09	0.048988	0.556414	0.00012	0.00573	0.551918	0.85	0.893	1	0.92	0.719	1	0.986	0.824
rs9257140	9.6173E-14	-0.087587	0.01176	-0.087587	0.011763	2.17575E-13	0.19292	0.442884	0.000153	0.000179	0.311333	5.2E-05	0.03773	0.001603	0.929	0.891	1	1	0.879	1	0.976	0.986
rs11241567	9.792E-14	0.0387889	0.00521	0.0387889	0.005211	2.21465E-13	0.70003	0.14926	0.000401	0.001075	0.00428	4.2E-06	0.22584	0.219558	0.85	0.934	0.999	0.999	0.994	1	0.92	0.923

Table S3

rs71394030	9.9711E-14	-0.040771	0.00548	-0.044991	0.009273	1.72105E-13	0.69476	0.004184	7.82E-05	1.43E-06	0.149678	0.00233	0.00125	0.990079	0.837	0.979	1	1	0.928	0.987	0.994	0.776
rs3135293	1.0037E-13	-0.093613	0.01258	-0.093613	0.012582	2.26921E-13	0.23237	0.397427	0.000275	9.41E-05	0.291265	1.9E-05	0.0737	0.007998	0.921	0.896	1	1	0.884	1	0.963	0.979
rs144161348	1.0098E-13	0.0384256	0.00517	0.039282	0.007761	2.28279E-13	0.53197	0.20367	1.81E-07	0.025814	0.000237	0.0007	0.00674	0.972521	0.648	0.901	1	0.965	0.998	0.997	0.986	0.745
rs28360634	1.0192E-13	-0.090135	0.01212	-0.090135	0.012118	2.30363E-13	0.09257	0.495934	0.000283	0.000229	0.095791	8.1E-05	0.04324	0.002462	0.953	0.893	1	1	0.961	1	0.976	0.986
rs9257137	1.0458E-13	-0.087461	0.01176	-0.087461	0.011763	2.36281E-13	0.19417	0.442947	0.000151	0.000211	0.310317	5.1E-05	0.03729	0.001583	0.929	0.891	1	1	0.879	1	0.976	0.986
rs11130008	1.0515E-13	-0.047599	0.0064	-0.048586	0.007841	1.93942E-13	0.71211	0.119919	0.015849	0.001531	0.002081	5E-08	0.04226	0.150982	0.709	0.93	0.856	0.998	0.996	1	0.968	0.924
rs114224165	1.0534E-13	0.0825205	0.0111	0.0857851	0.01614	2.3798E-13	0.62409	0.391609	0.002163	0.031698	0.001333	2.1E-07	0.00042	0.267186	0.704	0.88	0.992	0.963	0.997	1	0.997	0.902
rs3118365	1.0544E-13	-0.087295	0.01174	-0.087295	0.011743	2.38206E-13	0.22429	0.508709	0.000127	0.00018	0.279651	6.4E-05	0.03733	0.001683	0.923	0.881	1	1	0.89	1	0.976	0.986
rs2315520	1.073E-13	-0.042261	0.00569	-0.042261	0.005687	2.42324E-13	0.18578	0.016801	0.000725	0.000426	0.509966	4.4E-06	0.0054	0.338107	0.926	0.97	0.998	0.999	0.796	1	0.99	0.899
rs13127099	1.0785E-13	-0.042248	0.00569	-0.042248	0.005685	2.43552E-13	0.18822	0.015265	0.000688	0.000439	0.520828	4.4E-06	0.00569	0.345831	0.925	0.971	0.999	0.999	0.79	1	0.99	0.897
rs36014129	1.08E-13	-0.092354	0.01243	-0.095439	0.01518	2.43888E-13	0.63601	0.475829	4.82E-05	2.71E-05	0.018861	0.00055	0.3093	0.001305	0.859	0.881	1	1	0.986	0.999	0.895	0.986
rs55912630	1.0847E-13	-0.092376	0.01243	-0.0952	0.014924	2.44923E-13	0.64478	0.429627	5.83E-05	2.82E-05	0.019248	0.00047	0.31596	0.00136	0.858	0.889	1	1	0.986	0.999	0.894	0.986
rs3774792	1.0889E-13	-0.047555	0.0064	-0.048662	0.007972	1.96979E-13	0.70913	0.118075	0.016817	0.001554	0.001956	5E-08	0.04171	0.145494	0.705	0.929	0.843	0.998	0.996	1	0.967	0.925
rs9257133	1.089E-13	-0.087392	0.01176	-0.087392	0.011763	2.45894E-13	0.19194	0.44288	0.000149	0.000234	0.309743	5.1E-05	0.03697	0.001562	0.929	0.891	1	1	0.88	1	0.976	0.987
rs139871222	1.0947E-13	-0.087378	0.01176	-0.087378	0.011762	2.47152E-13	0.19193	0.443106	0.000147	0.000242	0.311146	5E-05	0.03673	0.001603	0.929	0.891	1	1	0.879	1	0.976	0.986
rs9257136	1.1235E-13	-0.087341	0.01176	-0.087341	0.011762	2.53564E-13	0.19191	0.442948	0.00015	0.000236	0.310353	5.1E-05	0.03723	0.001577	0.929	0.891	1	1	0.88	1	0.976	0.986
rs1238262	1.133E-13	-0.087328	0.01176	-0.087328	0.011762	2.55666E-13	0.1919	0.442947	0.000151	0.000237	0.310317	5.1E-05	0.03729	0.001583	0.929	0.891	1	1	0.88	1	0.976	0.986
rs1311917	1.1356E-13	-0.087319	0.01176	-0.087319	0.011762	2.56245E-13	0.19197	0.442963	0.000149	0.000242	0.311022	5.1E-05	0.0371	0.001602	0.929	0.891	1	1	0.879	1	0.976	0.986
rs1742743	1.1439E-13	-0.087312	0.01176	-0.087312	0.011762	2.58086E-13	0.1919	0.442959	0.000151	0.000237	0.310486	5.1E-05	0.03736	0.001586	0.929	0.891	1	1	0.88	1	0.976	0.986
rs13191227	1.1505E-13	-0.089871	0.01211	-0.089871	0.012108	2.59551E-13	0.12647	0.484658	0.000273	0.000307	0.095463	7.2E-05	0.04315	0.001902	0.946	0.894	1	1	0.961	1	0.976	0.987
rs34150729	1.1505E-13	-0.089871	0.01211	-0.089871	0.012108	2.59551E-13	0.12647	0.484658	0.000273	0.000307	0.095463	7.2E-05	0.04315	0.001902	0.946	0.894	1	1	0.961	1	0.976	0.987
rs71559024	1.1589E-13	-0.089887	0.01211	-0.089887	0.012112	2.6143E-13	0.1048	0.490159	0.000324	0.000248	0.093642	7.3E-05	0.04705	0.002006	0.95	0.894	1	1	0.962	1	0.975	0.987
rs35716472	1.1708E-13	-0.089816	0.0121	-0.089816	0.012105	2.64068E-13	0.13161	0.483285	0.000273	0.00029	0.093035	7.6E-05	0.04375	0.001904	0.945	0.894	1	1	0.962	1	0.976	0.987
rs1233623	1.1744E-13	-0.087265	0.01176	-0.087265	0.011761	2.64857E-13	0.192	0.442831	0.000151	0.000242	0.310873	5.2E-05	0.03748	0.001602	0.929	0.891	1	1	0.88	1	0.976	0.986
rs3774790	1.1752E-13	-0.047471	0.0064	-0.048505	0.007892	2.09469E-13	0.73328	0.111635	0.017891	0.001508	0.002391	4.5E-08	0.04421	0.14515	0.709	0.931	0.831	0.998	0.995	1	0.966	0.924
rs1233599	1.1798E-13	-0.087258	0.01176	-0.087258	0.011761	2.66049E-13	0.19168	0.44284	0.000152	0.00024	0.310883	5.2E-05	0.03766	0.001602	0.929	0.891	1	1	0.88	1	0.976	0.986
rs13198474	1.186E-13	-0.092262	0.01244	-0.095048	0.014915	2.67431E-13	0.64826	0.434511	5.47E-05	2.92E-05	0.019165	0.0005	0.32419	0.001408	0.857	0.887	1	1	0.986	0.999	0.891	0.986
rs139624725	1.1882E-13	-0.089901	0.01212	-0.089901	0.012119	2.67926E-13	0.10212	0.492727	0.000265	0.000254	0.096895	8.9E-05	0.04264	0.002529	0.951	0.893	1	1	0.961	1	0.977	0.986
rs1233609	1.1887E-13	-0.087245	0.01176	-0.087245	0.011761	2.68044E-13	0.19197	0.442797	0.000151	0.000241	0.310811	5.2E-05	0.03765	0.001601	0.929	0.891	1	1	0.88	1	0.976	0.986
rs1233611	1.1893E-13	-0.087244	0.01176	-0.087244	0.011761	2.68165E-13	0.19198	0.442796	0.000151	0.000241	0.310814	5.2E-05	0.03765	0.001601	0.929	0.891	1	1	0.88	1	0.976	0.986
rs1233610	1.1893E-13	-0.087244	0.01176	-0.087244	0.011761	2.68165E-13	0.19198	0.442796	0.000151	0.000241	0.310814	5.2E-05	0.03765	0.001601	0.929	0.891	1	1	0.88	1	0.976	0.986
rs1233612	1.1893E-13	-0.087244	0.01176	-0.087244	0.011761	2.68179E-13	0.19199	0.442789	0.000152	0.000241	0.310818	5.2E-05	0.03765	0.001601	0.929	0.891	1	1	0.88	1	0.976	0.986
rs1233600	1.1894E-13	-0.087245	0.01176	-0.087245	0.011761	2.68185E-13	0.19193	0.442812	0.000152	0.000241	0.310855	5.2E-05	0.03765	0.001601	0.929	0.891	1	1	0.88	1	0.976	0.986
rs13191474	1.1906E-13	-0.089787	0.0121	-0.089787	0.012104	2.68448E-13	0.13445	0.481393	0.000275	0.000291	0.093858	7.6E-05	0.04358	0.001897	0.945	0.894	1	1	0.961	1	0.976	0.987
rs1311914	1.1913E-13	-0.087242	0.01176	-0.087242	0.011761	2.68602E-13	0.19202	0.442784	0.000152	0.000242	0.310829	5.2E-05	0.03766	0.001601	0.929	0.891	1	1	0.88	1	0.976	0.986
rs1233594	1.2005E-13	-0.087232	0.01176	-0.087232	0.011762	2.70653E-13	0.19187	0.442883	0.000153	0.000241	0.311318	5.2E-05	0.03773	0.001603	0.929	0.891	1	1	0.879	1	0.976	0.986
rs1233593	1.2022E-13	-0.087229	0.01176	-0.087229	0.011762	2.71026E-13	0.19186	0.442887	0.000154	0.000241	0.311353	5.2E-05	0.03774	0.001604	0.929	0.891	1	1	0.879	1	0.976	0.986
rs145557701	1.2131E-13	-0.09219	0.01243	-0.094851	0.014846	2.73448E-13	0.6197	0.422191	4.86E-05	4.05E-05	0.018354	0.00046	0.36467	0.001293	0.861	0.889	1	1	0.986	0.999	0.88	0.986
rs35120058	1.2525E-13	-0.089713	0.01211	-0.089713	0.012105	2.82198E-13	0.09082	0.549026	0.000292	0.000358	0.087058	7.9E-05	0.03882	0.001932	0.953	0.886	1	1	0.964	1	0.978	0.987
rs2132083	1.2611E-13	-0.042115	0.00568	-0.042115	0.005683	2.84094E-13	0.1989	0.013009	0.000677	0.000484	0.557551	4E-06	0.00652	0.362069	0.921	0.971	0.999	0.999	0.773	1	0.989	0.893
rs34196306	1.2645E-13	-0.089692	0.0121	-0.089692	0.012104	2.84848E-13	0.136	0.481403	0.000276	0.000316	0.093857	7.5E-05	0.04358	0.001897	0.944	0.894	1	1	0.961	1	0.976	0.987
rs56136723	1.2654E-13	0.0475952	0.00642	0.0486935	0.007942	2.39619E-13	0.68889	0.116204	0.014996	0.002183	0.002518	6E-08	0.03672	0.098593	0.712	0.932	0.874	0.997	0.995	1	0.971	0.94
rs35950880	1.2794E-13	-0.040667	0.00549	-0.039852	0.008328	2.88162E-13	0.24609	0.061413	2.92E-06	0.009249	0.293228	7.4E-06	0.33689	0.00112	0.531	0.935	1	0.988	0.835	1	0.847	0.985
rs34573979	1.2821E-13	-0.089309	0.01206	-0.089309	0.012056	2.88754E-13	0.11603	0.422073	0.000307	0.000391	0.075818	7.1E-05	0.06184	0.001384	0.949	0.904	1	1	0.968	1	0.971	0.988
rs72839477	1.2887E-13	-0.089774	0.01212	-0.089774	0.01212	2.90218E-13	0.09421	0.5046	0.00029	0.000227	0.107374	8.4E-05	0.04416	0.00276	0.952	0.891	1	1	0.957	1	0.976	0.986
rs58616630	1.2888E-13	-0.089301	0.01206	-0.089301	0.012056	2.90233E-13	0.11616	0.422262	0.000308	0.000392	0.075858	7.1E-05	0.06188	0.001385	0.949	0.904	1	1	0.968	1	0.971	0.988
rs13211947	1.3373E-13	-0.092122	0.01244	-0.095702	0.015629	3.00997E-13	0.64655	0.435436	5.95E-05	3.18E-05	0.019144	0.00054	0.32188	0.000997	0.858	0.888	1	1	0.986	0.999	0.892	0.987
rs35537952	1.3714E-13	-0.040616	0.00549	-0.039796	0.008331	3.08544E-13	0.24748	0.061413	2.92E-06	0.00991	0.293228	7.4E-06	0.33689	0.00112	0.532	0.935	1	0.987	0.836	1	0.848	0.985
rs116086673	1.3754E-13	0.0823651	0.01113	0.0853731	0.015492	3.09425E-13	0.6368	0.353687	0.002551	0.028444	0.001845	2.4E-07	0.00062	0.193587	0.715	0.89	0.991	0.969	0.996	1	0.996	0.919
rs13201341	1.4054E-13	-0.091903	0.01243	-0.09438	0.014688	3.16076E-13	0.66172	0.427327	5.36E-05	3.32E-05	0.020312	0.0005	0.34504	0.001496	0.854	0.888	1	1	0.985	0.999	0.885	0.986
rs13212921	1.4628E-13	-0.072415	0.0098	-0.072415	0.009798	3.28766E-13	0.10738	0.778317	1.54E-05	0.000263	0.191749	0.00019	0.07207	0.007705	0.939	0.754	1	1	0.915	1	0.961	0.978
rs71557378	1.4943E-13	-0.08859	0.01199	-0.08859	0.011992	3.35735E-13	0.42757	0.335113	0.000395	0.000387	0.068078	3.9E-05	0.0724	0.000971	0.9	0.912	0.999	1	0.969	1	0.967	0.989
rs17526722	1.4966E-13	-0.091302	0.01236	-0.094098	0.014967	3.36251E-13	0.50635	0.546245	4.26E-05	4.74E-05	0.021465	0.00055	0.35206	0.001049	0.877	0.871	1	1	0.984	0.999	0.884	0.987
rs3884025	1.5495E-13	-0.091253	0.01236	-0.094127	0.015039	3.47943E-13	0.50635	0.546616	4.28E-05	4.74E-05	0.019909	0.00056	0.36497	0.001074	0.877	0.87	1	1	0.985	0.999	0.88	0.987
rs12940060	1.5879E-13	0.0405443	0.00549	0.0397526	0.008288	3.56424E-13	0.25323	0.061527	2.97E-06	0.010306	0.280106	8.3E-06	0.35167	0.001146	0.537	0.935	1	0.986	0.843	1	0.843	0.985

Table S3

rs4772079	1.6008E-13	0.0377693	0.00512	0.0380036	0.005436	3.59274E-13	0.40023	0.46041	1.4E-05	0.002905	0.001851	0.00024	0.00503	0.185059	0.638	0.866	1	0.997	0.996	0.999	0.989	0.917
rs7435318	1.6324E-13	-0.04124	0.00559	-0.04124	0.005591	3.66267E-13	0.47808	0.030074	0.000558	0.000714	0.37611	4.6E-06	0.01275	0.13023	0.883	0.964	0.999	0.999	0.855	1	0.985	0.941
rs35044849	1.6514E-13	-0.087389	0.01185	-0.087389	0.01185	3.70454E-13	0.25884	0.476736	0.000279	0.000114	0.190938	5.7E-05	0.06303	0.002239	0.92	0.888	1	1	0.925	1	0.968	0.985
rs56327309	1.6631E-13	0.0382043	0.00518	0.0382043	0.005181	3.73041E-13	0.36891	0.329088	3.05E-05	0.074798	0.091946	4E-08	0.07282	0.101354	0.857	0.572	1	0.871	0.935	1	0.944	0.923
rs56027651	1.6837E-13	0.0382405	0.00519	0.0382405	0.005187	3.77592E-13	0.38344	0.410824	3.71E-05	0.083209	0.074695	5.1E-08	0.06459	0.074346	0.858	0.609	1	0.861	0.947	1	0.95	0.935
rs62084748	1.7366E-13	0.0404809	0.00549	0.0397002	0.008252	3.89265E-13	0.26405	0.061527	2.97E-06	0.011494	0.280106	8.3E-06	0.35167	0.001146	0.544	0.935	1	0.985	0.844	1	0.844	0.985
rs77431211	1.7429E-13	0.0506343	0.00687	0.0506343	0.006873	3.41706E-13	0.40799	0.069206	0.000289	0.180059	0.058209	2.3E-09	0.18029	0.412629	0.857	0.935	0.999	0.703	0.957	1	0.906	0.854
rs13213957	1.761E-13	-0.091567	0.01243	-0.094843	0.015405	3.94639E-13	0.66376	0.409253	5.64E-05	3.46E-05	0.020286	0.00059	0.35396	0.00115	0.854	0.891	1	1	0.985	0.999	0.883	0.986
rs72866845	1.7693E-13	0.0644003	0.00874	0.0641447	0.009707	3.73408E-13	0.74954	0.211874	0.000723	0.117597	0.003431	1.2E-08	0.08674	0.126781	0.711	0.902	0.997	0.817	0.994	1	0.945	0.925
rs67554133	1.7776E-13	-0.090539	0.01229	-0.092134	0.013428	3.98289E-13	0.56001	0.285603	0.000153	5.1E-05	0.013736	0.00044	0.23209	0.001851	0.878	0.916	1	1	0.989	0.999	0.922	0.986
rs12943289	1.7808E-13	0.040462	0.00549	0.0396608	0.008291	3.99008E-13	0.25613	0.061527	2.97E-06	0.011563	0.280106	8.3E-06	0.35167	0.001146	0.54	0.935	1	0.985	0.844	1	0.844	0.985
rs9517298	1.7901E-13	0.0376823	0.00512	0.0376823	0.005117	4.01045E-13	0.41981	0.467041	1.29E-05	0.003068	0.001898	0.00011	0.01376	0.36474	0.636	0.86	1	0.997	0.995	1	0.981	0.876
rs13202592	1.8026E-13	-0.09098	0.01236	-0.094018	0.015187	4.0382E-13	0.50466	0.541004	4.19E-05	4.89E-05	0.019674	0.00063	0.3763	0.001051	0.877	0.871	1	1	0.985	0.998	0.877	0.987
rs528702995	1.8328E-13	0.0711956	0.00967	0.0711956	0.009673	4.10471E-13	0.62111	0.260606	0.00106	0.011477	0.037819	1.5E-07	0.01003	0.095747	0.716	0.908	0.998	0.989	0.975	1	0.986	0.944
rs68194335	1.8433E-13	-0.090759	0.01233	-0.095942	0.015733	4.12776E-13	0.5961	0.273122	0.000253	2.36E-05	0.007093	0.00062	0.2232	0.001697	0.873	0.918	1	1	0.992	0.999	0.925	0.986
rs6872181	1.8755E-13	0.0394696	0.00536	0.0394696	0.005365	4.19868E-13	0.71724	0.761677	0.000299	0.000343	0.037759	1.2E-06	0.16405	0.233309	0.71	0.808	0.999	0.999	0.971	1	0.919	0.9
rs34071253	1.8795E-13	-0.089446	0.01216	-0.089446	0.012158	4.2075E-13	0.125	0.472326	0.00034	0.000286	0.114639	7.6E-05	0.04811	0.002262	0.946	0.895	1	1	0.954	1	0.974	0.986
rs62084750	1.8855E-13	0.0403867	0.00549	0.0396021	0.008321	4.22081E-13	0.24968	0.065027	3.35E-06	0.009732	0.287734	9E-06	0.35344	0.00106	0.536	0.933	1	0.987	0.839	1	0.843	0.985
rs182153917	1.9673E-13	0.0816763	0.01111	0.0846363	0.015437	4.40096E-13	0.65965	0.356939	0.002592	0.031681	0.001859	2.9E-07	0.00057	0.228653	0.721	0.889	0.991	0.966	0.996	1	0.996	0.912
rs35869525	1.9708E-13	-0.088071	0.01198	-0.088071	0.011981	4.40872E-13	0.42661	0.34504	0.000387	0.000418	0.0703	4.4E-05	0.07575	0.001043	0.9	0.911	0.999	1	0.968	1	0.965	0.988
rs34816374	1.9745E-13	-0.088068	0.01198	-0.088068	0.011981	4.41673E-13	0.42676	0.345035	0.000387	0.000418	0.070245	4.4E-05	0.07576	0.001045	0.9	0.911	0.999	1	0.968	1	0.965	0.988
rs66488313	1.9758E-13	-0.089226	0.01214	-0.089226	0.012139	4.41962E-13	0.33634	0.35597	0.000357	0.000128	0.131	6.5E-05	0.0801	0.001717	0.911	0.908	0.999	1	0.947	1	0.964	0.986
rs35173303	1.9793E-13	-0.088064	0.01198	-0.088064	0.011981	4.42733E-13	0.4255	0.345049	0.000387	0.000424	0.07025	4.4E-05	0.07557	0.001043	0.9	0.911	0.999	1	0.968	1	0.965	0.988
rs80264589	1.9853E-13	-0.088059	0.01198	-0.088059	0.011981	4.4407E-13	0.42548	0.345058	0.000386	0.000427	0.070253	4.4E-05	0.07557	0.001039	0.9	0.911	0.999	1	0.968	1	0.965	0.988
rs71557395	1.9854E-13	-0.088059	0.01198	-0.088059	0.011981	4.44074E-13	0.42548	0.345053	0.000386	0.000427	0.070251	4.4E-05	0.07557	0.001039	0.9	0.911	0.999	1	0.968	1	0.965	0.988
rs7200447	2.0196E-13	0.0439203	0.00598	0.0456644	0.007795	4.51607E-13	0.01716	0.00333	0.000447	0.105301	0.028468	1E-06	0.03266	0.423974	0.973	0.984	0.999	0.883	0.983	1	0.978	0.895
rs34969311	2.0452E-13	-0.08917	0.01214	-0.08917	0.012139	4.5724E-13	0.33621	0.355973	0.000355	0.000137	0.130933	6.5E-05	0.08001	0.001715	0.911	0.908	0.999	1	0.947	1	0.964	0.986
rs144767380	2.0606E-13	-0.071752	0.00977	-0.071752	0.009769	4.60635E-13	0.17249	0.777726	3.17E-05	0.000216	0.151816	0.00022	0.11179	0.004728	0.931	0.842	1	1	0.936	1	0.952	0.982
rs1449153	2.0692E-13	0.0394015	0.00536	0.0394015	0.005365	4.6252E-13	0.73627	0.761421	0.000302	0.000389	0.03818	1.2E-06	0.16378	0.230199	0.715	0.809	0.999	0.999	0.971	1	0.919	0.901
rs67777156	2.0813E-13	-0.08914	0.01214	-0.08914	0.012139	4.65191E-13	0.33647	0.35597	0.000357	0.000137	0.131	6.5E-05	0.0801	0.001717	0.911	0.908	0.999	1	0.947	1	0.964	0.986
rs34105070	2.0887E-13	-0.088	0.01198	-0.088	0.011984	4.66805E-13	0.13047	0.439271	0.000368	0.000456	0.108208	4.6E-05	0.07143	0.002238	0.944	0.899	1	1	0.956	1	0.967	0.986
rs57440165	2.1031E-13	-0.089106	0.01214	-0.089106	0.012136	4.69975E-13	0.38516	0.384367	0.000419	0.000177	0.087198	5.6E-05	0.07999	0.00188	0.904	0.904	0.999	1	0.962	1	0.964	0.986
rs13217285	2.104E-13	-0.07173	0.00977	-0.07173	0.00977	4.70171E-13	0.17261	0.765323	3.22E-05	0.000218	0.148916	0.00023	0.11356	0.004835	0.931	0.844	1	1	0.937	1	0.951	0.982
rs13215879	2.1057E-13	-0.071729	0.00977	-0.071729	0.00977	4.70539E-13	0.17262	0.765317	3.22E-05	0.000218	0.14905	0.00023	0.11354	0.004835	0.931	0.844	1	1	0.937	1	0.951	0.982
rs2292042	2.1416E-13	0.0383604	0.00523	0.0361366	0.009892	2.64515E-13	0.16918	0.17177	1.88E-06	0.557668	0.061572	1.7E-07	0.00042	0.518463	0.822	0.254	1	0.092	0.902	1	0.994	0.677
rs13202775	2.1508E-13	-0.087953	0.01198	-0.087953	0.011984	4.80461E-13	0.13046	0.439277	0.000371	0.000463	0.108827	4.6E-05	0.07143	0.002238	0.944	0.899	0.999	1	0.956	1	0.967	0.986
rs67859638	2.1842E-13	-0.08823	0.01203	-0.08823	0.012025	4.878E-13	0.0844	0.380588	0.000288	0.000438	0.093487	0.00014	0.03797	0.002534	0.955	0.91	1	1	0.963	1	0.978	0.986
rs34724414	2.2223E-13	-0.086923	0.01185	-0.086923	0.011851	4.96187E-13	0.25882	0.484573	0.000323	0.000131	0.190836	5.4E-05	0.06576	0.002645	0.919	0.887	1	1	0.925	1	0.967	0.984
rs2451499	2.2301E-13	-0.041659	0.00568	-0.042878	0.007146	4.89245E-13	0.23911	0.12775	0.000405	0.308825	0.001545	4.5E-07	0.01243	0.058993	0.896	0.922	0.998	0.515	0.996	1	0.982	0.947
rs6908726	2.2379E-13	0.0859588	0.01172	0.0859588	0.011721	4.99605E-13	0.26946	0.422958	0.000274	0.000278	0.297462	3.2E-05	0.04776	0.00254	0.915	0.893	1	1	0.885	1	0.972	0.984
rs590247	2.2489E-13	-0.039692	0.00541	-0.039692	0.005413	5.02022E-13	0.71337	0.954472	1.44E-05	5.8E-06	0.431832	5.7E-05	0.11182	0.27895	0.65	0.705	1	1	0.745	1	0.916	0.858
rs1311918	2.2593E-13	-0.086238	0.01176	-0.086238	0.011761	5.04305E-13	0.19214	0.446381	0.000199	0.000243	0.324606	6.2E-05	0.04348	0.001637	0.928	0.89	1	1	0.875	1	0.973	0.986
rs35400317	2.2783E-13	-0.088998	0.01214	-0.088998	0.012139	5.08488E-13	0.336	0.349259	0.000383	0.000126	0.137108	6.7E-05	0.08122	0.001741	0.91	0.909	0.999	1	0.945	1	0.963	0.986
rs13201782	2.3031E-13	-0.089028	0.01215	-0.089028	0.012146	5.13929E-13	0.33634	0.351551	0.000401	0.000143	0.125957	6.4E-05	0.08028	0.001785	0.911	0.909	0.999	1	0.949	1	0.964	0.986
rs113735801	2.3128E-13	0.0640113	0.00873	0.0637829	0.009602	4.87496E-13	0.75187	0.200926	0.000803	0.118173	0.003623	1.3E-08	0.08636	0.134869	0.713	0.905	0.997	0.82	0.993	1	0.946	0.923
rs9393926	2.3221E-13	0.0863004	0.01178	0.0863004	0.011776	5.18102E-13	0.23463	0.452382	0.000206	0.000352	0.26471	5.2E-05	0.0494	0.001261	0.922	0.89	1	1	0.898	1	0.972	0.987
rs62381088	2.3351E-13	0.0384962	0.00525	0.0384962	0.005253	5.20963E-13	0.91393	0.170493	6.89E-05	0.001047	0.00798	2.7E-05	0.22854	0.318563	0.81	0.925	1	0.999	0.991	1	0.914	0.9
rs6769241	2.3526E-13	0.0640161	0.00874	0.0637869	0.009601	4.95351E-13	0.75651	0.201045	0.000803	0.121088	0.003625	1.3E-08	0.08631	0.134831	0.714	0.905	0.997	0.817	0.993	1	0.946	0.923
rs72866837	2.3702E-13	0.0639826	0.00873	0.063747	0.009629	4.98491E-13	0.75281	0.200956	0.000803	0.120236	0.003628	1.3E-08	0.08637	0.134756	0.713	0.904	0.997	0.817	0.993	1	0.945	0.923
rs9393929	2.3855E-13	0.0862248	0.01177	0.0862248	0.011771	5.32018E-13	0.23312	0.449399	0.000267	0.000312	0.258274	4.7E-05	0.04746	0.001237	0.923	0.891	1	1	0.901	1	0.972	0.987
rs1233620	2.3866E-13	-0.086168	0.01176	-0.086168	0.011763	5.32263E-13	0.193	0.444839	0.000199	0.000226	0.326757	7.3E-05	0.03892	0.001647	0.928	0.89	1	1	0.875	1	0.975	0.986
rs13191326	2.4104E-13	-0.071972	0.00983	-0.071972	0.009827	5.37474E-13	0.13482	0.912399	1.98E-05	0.000233	0.193822	0.00021	0.12041	0.006052	0.934	0.782	1	1	0.915	1	0.945	0.979
rs2451500	2.4132E-13	-0.041602	0.00568	-0.042811	0.007151	5.2748E-13	0.23784	0.137311	0.000405	0.314565	0.001565	4.5E-07	0.01228	0.058807	0.895	0.919	0.998	0.507	0.996	1	0.982	0.947
rs72845046	2.4309E-13	-0.087753	0.01198	-0.087753	0.011984	5.41982E-13	0.13034	0.443066	0.000385	0.000485	0.111116	4.6E-05	0.07272	0.002234	0.944	0.899	0.999	0.999	0.955	1	0.967	0.986
rs2451497	2.4328E-13	-0.041596	0.00568	-0.042811	0.007158	5.31271E-13	0.23741	0.137316	0.000405	0.315814	0.001566	4.6E-07	0.01228	0.058808	0.895	0.919	0.998	0.505	0.996	1	0.982	0.947

Table S3

rs2491376	2.4333E-13	-0.041596	0.00568	-0.042811	0.007158	5.31365E-13	0.23739	0.137316	0.000405	0.315851	0.001566	4.6E-07	0.01228	0.058808	0.895	0.919	0.998	0.505	0.996	1	0.982	0.947
rs11920552	2.4405E-13	0.0788821	0.01077	0.0814145	0.014523	5.44085E-13	0.64798	0.115536	0.001329	0.029015	0.005002	8.3E-07	0.00035	0.47571	0.72	0.934	0.997	0.97	0.993	1	0.997	0.868
rs3131079	2.4651E-13	-0.08549	0.01168	-0.08549	0.011678	5.49478E-13	0.17177	0.375271	0.000365	0.000125	0.31817	5E-05	0.04456	0.004779	0.932	0.901	0.999	1	0.879	1	0.973	0.981
rs13198716	2.4907E-13	-0.088748	0.01213	-0.088748	0.012125	5.55104E-13	0.37754	0.385971	0.000242	0.000143	0.1198	0.0001	0.07138	0.002923	0.904	0.903	1	1	0.951	1	0.966	0.984
rs74551139	2.5038E-13	0.0813549	0.01112	0.0842447	0.014699	5.57963E-13	0.72815	0.364195	0.003205	0.016837	0.001307	7.1E-07	0.00071	0.27397	0.741	0.89	0.989	0.984	0.997	1	0.996	0.905
rs35741362	2.506E-13	-0.071273	0.00974	-0.071273	0.009739	5.58457E-13	0.16408	0.696819	3.18E-05	0.000319	0.130411	0.00024	0.13371	0.004291	0.934	0.856	1	1	0.945	1	0.946	0.982
rs7711647	2.5377E-13	0.0382516	0.00523	0.0382516	0.005228	5.654E-13	0.83547	0.158454	0.000394	0.000762	0.004727	9.8E-06	0.26057	0.24592	0.826	0.929	0.999	0.999	0.993	1	0.908	0.915
rs2496022	2.5543E-13	-0.041561	0.00568	-0.042829	0.007213	5.53938E-13	0.23335	0.137316	0.000405	0.325528	0.001566	4.6E-07	0.01228	0.058808	0.895	0.918	0.998	0.491	0.996	1	0.982	0.946
rs1026888	2.5624E-13	0.0525997	0.00719	0.0508182	0.008851	3.07944E-13	0.80369	0.218043	0.000278	0.316916	0.07246	2.7E-10	0.13641	0.337757	0.714	0.856	0.998	0.413	0.926	1	0.89	0.821
rs147853699	2.5888E-13	0.0863492	0.01181	0.0863492	0.011806	5.76598E-13	0.429	0.837838	1.52E-06	0.031075	0.001992	0.00022	0.0262	0.229389	0.885	0.83	1	0.966	0.996	1	0.977	0.918
rs2372435	2.594E-13	0.0525874	0.00719	0.0507923	0.008865	3.10705E-13	0.80472	0.218043	0.000278	0.318563	0.072462	2.7E-10	0.13641	0.337758	0.713	0.856	0.998	0.411	0.926	1	0.89	0.821
rs77463213	2.6159E-13	0.0480876	0.00658	0.047224	0.007438	4.44652E-13	0.35863	0.042305	0.000251	0.196452	0.092598	1E-09	0.4249	0.46517	0.848	0.937	0.999	0.646	0.928	1	0.801	0.822
rs11459547	2.6162E-13	0.0382414	0.00523	0.0382414	0.005229	5.82594E-13	0.82085	0.157488	0.000384	0.000727	0.004664	1.1E-05	0.26747	0.24318	0.828	0.93	0.999	0.999	0.993	1	0.906	0.915
rs13217472	2.618E-13	-0.086319	0.0118	-0.086319	0.011804	5.82991E-13	0.22911	0.490007	0.000223	0.000273	0.250608	6.2E-05	0.04968	0.001542	0.923	0.885	1	1	0.904	1	0.972	0.986
rs6806759	2.6288E-13	-0.046017	0.00629	-0.047727	0.008581	4.2345E-13	0.72578	0.043895	0.021698	0.005817	0.004948	2.9E-08	0.02514	0.115419	0.71	0.952	0.805	0.992	0.993	1	0.976	0.933
rs72865025	2.6487E-13	0.0525673	0.00719	0.0507499	0.008889	3.15261E-13	0.80392	0.21803	0.000278	0.322023	0.072549	2.7E-10	0.1364	0.337747	0.712	0.856	0.998	0.406	0.926	1	0.89	0.821
rs3130834	2.6768E-13	-0.085352	0.01168	-0.085352	0.011677	5.95889E-13	0.15199	0.427244	0.000426	0.000107	0.312534	4.3E-05	0.04392	0.008388	0.936	0.893	0.999	1	0.881	1	0.973	0.978
rs35608615	2.6842E-13	-0.071826	0.00983	-0.071826	0.009827	5.9751E-13	0.13481	0.913245	2.28E-05	0.000233	0.193236	0.0002	0.12016	0.006036	0.934	0.783	1	1	0.916	1	0.945	0.979
rs3129120	2.6894E-13	-0.085466	0.01169	-0.085466	0.011693	5.98649E-13	0.17485	0.421699	0.000458	8.34E-05	0.369669	3.4E-05	0.05274	0.007319	0.929	0.891	0.999	1	0.857	1	0.969	0.978
rs35526527	2.6923E-13	-0.071823	0.00983	-0.071823	0.009827	5.99273E-13	0.13481	0.91322	2.29E-05	0.000233	0.193234	0.0002	0.12015	0.006036	0.934	0.783	1	1	0.916	1	0.945	0.979
rs141342723	2.7197E-13	-0.087558	0.01198	-0.087558	0.011982	6.05267E-13	0.12621	0.457828	0.000405	0.000525	0.117203	4.1E-05	0.08033	0.002209	0.945	0.896	0.999	0.999	0.953	1	0.964	0.986
rs34543938	2.7256E-13	-0.087555	0.01198	-0.087555	0.011982	6.06572E-13	0.12602	0.457833	0.000405	0.000526	0.117335	4.1E-05	0.08033	0.002209	0.945	0.896	0.999	0.999	0.953	1	0.964	0.986
rs3051208	2.7283E-13	-0.086212	0.0118	-0.086212	0.011798	6.07156E-13	0.20765	0.491162	0.000246	0.000254	0.255689	6.5E-05	0.04615	0.001704	0.927	0.885	1	1	0.902	1	0.973	0.986
rs13194504	2.7313E-13	-0.086596	0.01185	-0.086596	0.011851	6.07812E-13	0.26055	0.498279	0.000373	0.000129	0.184531	6.2E-05	0.05507	0.003	0.919	0.885	0.999	1	0.928	1	0.97	0.984
rs6441778	2.7376E-13	0.0525357	0.00719	0.0506794	0.00893	3.2266E-13	0.80613	0.218033	0.000278	0.327183	0.072512	2.7E-10	0.13641	0.337755	0.71	0.855	0.998	0.398	0.925	1	0.889	0.819
rs191169844	2.7454E-13	0.0872713	0.01194	0.0872713	0.011945	6.10906E-13	0.28035	0.763436	2.25E-06	0.02406	0.002714	0.00026	0.02216	0.310741	0.912	0.846	1	0.977	0.995	1	0.98	0.907
rs34038546	2.7746E-13	-0.087527	0.01198	-0.087527	0.011982	6.17301E-13	0.127	0.45941	0.000407	0.000522	0.117282	4.1E-05	0.08036	0.002209	0.944	0.896	0.999	0.999	0.953	1	0.964	0.986
rs13212093	2.7761E-13	-0.087526	0.01198	-0.087526	0.011982	6.17636E-13	0.12701	0.459411	0.000407	0.000522	0.117287	4.1E-05	0.08036	0.002209	0.944	0.896	0.999	0.999	0.953	1	0.964	0.986
rs34043431	2.7868E-13	-0.090787	0.01243	-0.093958	0.015226	6.1996E-13	0.64444	0.429365	8.56E-05	2.9E-05	0.021206	0.00063	0.34765	0.001392	0.858	0.888	1	1	0.984	0.999	0.886	0.985
rs7716293	2.8168E-13	0.03818	0.00523	0.03818	0.005228	6.26531E-13	0.82995	0.16263	0.000409	0.00077	0.004896	1E-05	0.25637	0.250096	0.827	0.928	0.999	0.999	0.993	1	0.909	0.914
rs1233579	2.8416E-13	-0.085657	0.01173	-0.087134	0.013063	6.31954E-13	0.25181	0.44226	0.000166	0.000357	0.258514	0.00012	0.02843	0.000776	0.92	0.893	1	1	0.902	1	0.98	0.988
rs2230683	2.8472E-13	-0.085445	0.0117	-0.085445	0.011703	6.33194E-13	0.16035	0.417155	0.0004	0.000147	0.311194	4E-05	0.05794	0.004343	0.934	0.895	0.999	1	0.882	1	0.969	0.982
rs2363585	2.8567E-13	-0.03778	0.00517	-0.040697	0.009831	6.35268E-13	0.00937	0.394346	0.000249	0.069988	0.039389	1.6E-06	3.1E-05	0.250055	0.968	0.859	0.999	0.886	0.968	1	0.998	0.507
rs3130725	2.8575E-13	-0.085323	0.01169	-0.085323	0.011687	6.35436E-13	0.1643	0.42409	0.000501	8.81E-05	0.387356	3E-05	0.05604	0.007169	0.931	0.89	0.999	1	0.849	1	0.968	0.978
rs1995514	2.8618E-13	-0.037778	0.00517	-0.040695	0.00983	6.36385E-13	0.00936	0.394399	0.000249	0.070024	0.03936	1.6E-06	3.1E-05	0.25018	0.968	0.859	0.999	0.886	0.968	1	0.998	0.507
rs10484399	2.8619E-13	-0.087435	0.01198	-0.087435	0.011976	6.36398E-13	0.15272	0.434584	0.000363	0.000416	0.099625	6.7E-05	0.07301	0.002171	0.94	0.9	1	1	0.959	1	0.967	0.986
rs67884160	2.8692E-13	-0.037719	0.00517	-0.041223	0.010051	6.38008E-13	0.0053	0.357574	0.000268	0.073458	0.048969	1.8E-06	2.3E-05	0.276172	0.973	0.868	0.999	0.881	0.963	1	0.998	0.524
rs35243068	2.878E-13	-0.086157	0.0118	-0.086157	0.011802	6.39928E-13	0.23838	0.490055	0.000222	0.000311	0.250161	6.1E-05	0.05009	0.001539	0.921	0.885	1	1	0.904	1	0.971	0.986
rs4947263	2.8795E-13	-0.085311	0.01169	-0.085311	0.011687	6.4025E-13	0.16432	0.423735	0.000498	8.86E-05	0.386872	3E-05	0.05591	0.007152	0.931	0.89	0.999	1	0.85	1	0.968	0.978
rs78113114	2.8811E-13	0.0805595	0.01104	0.0841454	0.014804	6.40604E-13	0.61509	0.16189	0.001594	0.016727	0.008533	2.8E-06	0.00019	0.141477	0.726	0.928	0.996	0.985	0.991	1	0.998	0.935
rs3117342	2.8884E-13	-0.085304	0.01169	-0.085304	0.011686	6.4221E-13	0.1642	0.423027	0.000486	9.14E-05	0.384889	3.1E-05	0.0555	0.007102	0.931	0.89	0.999	1	0.851	1	0.968	0.978
rs3131101	2.8908E-13	-0.085421	0.0117	-0.085421	0.011703	6.42721E-13	0.16036	0.417154	0.000402	0.000147	0.311394	4.1E-05	0.05797	0.004346	0.934	0.895	0.999	1	0.882	1	0.969	0.982
rs3132378	2.8908E-13	-0.085421	0.0117	-0.085421	0.011703	6.42721E-13	0.16036	0.417154	0.000402	0.000147	0.311394	4.1E-05	0.05797	0.004346	0.934	0.895	0.999	1	0.882	1	0.969	0.982
rs3132382	2.8908E-13	-0.085421	0.0117	-0.085421	0.011703	6.42721E-13	0.16036	0.417154	0.000402	0.000147	0.311394	4.1E-05	0.05797	0.004346	0.934	0.895	0.999	1	0.882	1	0.969	0.982
rs3132374	2.891E-13	-0.085421	0.0117	-0.085421	0.011703	6.42767E-13	0.16035	0.417154	0.000402	0.000147	0.311392	4.1E-05	0.05797	0.004346	0.934	0.895	0.999	1	0.882	1	0.969	0.982
rs3118363	2.8912E-13	-0.085421	0.0117	-0.085421	0.011703	6.42824E-13	0.16036	0.417154	0.000402	0.000147	0.311392	4.1E-05	0.05797	0.004346	0.934	0.895	0.999	1	0.882	1	0.969	0.982
rs13206458	2.8921E-13	-0.08542	0.0117	-0.08542	0.011703	6.43003E-13	0.16036	0.417155	0.000402	0.000147	0.311399	4.1E-05	0.05797	0.004346	0.934	0.895	0.999	1	0.882	1	0.969	0.982
rs3130892	2.9081E-13	-0.085411	0.0117	-0.085411	0.011703	6.46507E-13	0.16036	0.417175	0.000403	0.000147	0.311535	4.1E-05	0.05793	0.004346	0.934	0.895	0.999	1	0.882	1	0.969	0.982
rs3131069	2.9121E-13	-0.085409	0.0117	-0.085409	0.011703	6.47381E-13	0.16037	0.417178	0.000403	0.000147	0.311669	4.1E-05	0.05788	0.004346	0.934	0.895	0.999	1	0.882	1	0.969	0.982
rs3131068	2.9137E-13	-0.085408	0.0117	-0.085408	0.011703	6.47745E-13	0.16037	0.417177	0.000403	0.000147	0.311612	4.1E-05	0.05793	0.004346	0.934	0.895	0.999	1	0.882	1	0.969	0.982
rs3131071	2.9179E-13	-0.085406	0.0117	-0.085406	0.011703	6.48655E-13	0.16039	0.417176	0.000403	0.000147	0.311663	4.1E-05	0.05788	0.004346	0.934	0.895	0.999	1	0.882	1	0.969	0.982
rs7711644	2.9242E-13	0.0381558	0.00523	0.0381558	0.005228	6.5004E-13	0.83547	0.160667	0.000408	0.000761	0.00472	1.1E-05	0.25638	0.252573	0.826	0.929	0.999	0.999	0.993	1	0.909	0.914
rs3130895	2.9249E-13	-0.085403	0.0117	-0.085403	0.011703	6.50187E-13	0.16041	0.417177	0.000404	0.000147	0.311642	4.1E-05	0.05794	0.004346	0.934	0.895	0.999	1	0.882	1	0.969	0.982
rs149404333	2.9326E-13	-0.085282	0.01169	-0.085282	0.011687	6.51871E-13	0.16428	0.423607	0.000497	8.86E-05	0.386759	3.1E-05	0.05587	0.007145	0.931	0.89	0.999	1	0.85	1	0.968	0.978
rs13195636	2.938E-13	-0.08741	0.01198	-0.08741	0.011979	6.53045E-13	0.1568	0.44873	0.000416	0.000391	0.087436	6.8E-05	0.07044	0.00217	0.94	0.898	0.999	1	0.963	1	0.968	0.986

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rs4713177	2.9533E-13	0.0859237	0.01178	0.0859237	0.011776	6.56391E-13	0.24035	0.441155	0.000261	0.000277	0.259542	4.8E-05	0.05764	0.002269	0.921	0.892	1	1	0.9	1	0.969	0.985
rs6761983	2.9573E-13	-0.043903	0.00602	-0.043903	0.006017	6.57275E-13	0.90535	0.470555	0.00208	0.00298	0.020499	1.4E-07	0.08723	0.140233	0.777	0.875	0.994	0.997	0.983	1	0.954	0.933
rs140046499	2.9604E-13	0.0373372	0.00512	0.0368934	0.005616	6.57939E-13	0.33794	0.315539	8.94E-05	0.099306	0.057262	2.3E-08	0.04402	0.165583	0.859	0.561	1	0.825	0.953	1	0.957	0.901
rs146280065	2.9652E-13	-0.085376	0.0117	-0.085376	0.011702	6.58998E-13	0.15851	0.417154	0.000402	0.000153	0.311392	4.1E-05	0.05797	0.004346	0.934	0.895	0.999	1	0.882	1	0.969	0.982
rs3116829	2.9806E-13	-0.085256	0.01169	-0.085256	0.011687	6.62375E-13	0.16424	0.423587	0.000496	9.05E-05	0.38667	3.1E-05	0.05586	0.007145	0.931	0.89	0.999	1	0.85	1	0.968	0.978
rs3129794	2.9889E-13	-0.085353	0.0117	-0.085353	0.0117	6.64187E-13	0.17095	0.408405	0.000444	0.000121	0.3409	3.6E-05	0.05392	0.005893	0.931	0.894	0.999	1	0.87	1	0.969	0.98
rs3130894	2.9889E-13	-0.085353	0.0117	-0.085353	0.0117	6.64187E-13	0.17095	0.408405	0.000444	0.000121	0.3409	3.6E-05	0.05392	0.005893	0.931	0.894	0.999	1	0.87	1	0.969	0.98
rs3131081	2.9889E-13	-0.085353	0.0117	-0.085353	0.0117	6.64187E-13	0.17095	0.408405	0.000444	0.000121	0.3409	3.6E-05	0.05392	0.005893	0.931	0.894	0.999	1	0.87	1	0.969	0.98
rs9257611	2.9918E-13	-0.08525	0.01169	-0.08525	0.011687	6.6481E-13	0.16422	0.42358	0.000496	9.12E-05	0.386625	3.1E-05	0.05586	0.007145	0.931	0.89	0.999	1	0.85	1	0.968	0.978
rs3130808	2.9954E-13	-0.085248	0.01169	-0.085248	0.011687	6.65595E-13	0.16422	0.423579	0.000496	9.14E-05	0.386616	3.1E-05	0.05586	0.007145	0.931	0.89	0.999	1	0.85	1	0.968	0.978
rs3130828	2.9954E-13	-0.085248	0.01169	-0.085248	0.011687	6.65595E-13	0.16422	0.423579	0.000496	9.14E-05	0.386616	3.1E-05	0.05586	0.007145	0.931	0.89	0.999	1	0.85	1	0.968	0.978
rs56405707	2.9971E-13	-0.087397	0.01198	-0.087397	0.011981	6.65966E-13	0.12491	0.456482	0.00041	0.00058	0.118047	4.1E-05	0.08035	0.00221	0.945	0.896	0.999	0.999	0.953	1	0.964	0.986
rs3130891	2.9974E-13	-0.085349	0.0117	-0.085349	0.0117	6.66048E-13	0.17095	0.408405	0.000444	0.000121	0.34094	3.6E-05	0.05394	0.005893	0.931	0.894	0.999	1	0.87	1	0.969	0.98
rs140729339	3.0141E-13	-0.08534	0.0117	-0.08534	0.0117	6.69689E-13	0.17097	0.408387	0.000449	0.000121	0.340814	3.6E-05	0.05392	0.005893	0.931	0.894	0.999	1	0.87	1	0.969	0.98
rs3117146	3.0141E-13	-0.08534	0.0117	-0.08534	0.0117	6.69689E-13	0.17097	0.408387	0.000449	0.000121	0.340814	3.6E-05	0.05392	0.005893	0.931	0.894	0.999	1	0.87	1	0.969	0.98
rs3129797	3.0141E-13	-0.08534	0.0117	-0.08534	0.0117	6.69689E-13	0.17097	0.408387	0.000449	0.000121	0.340814	3.6E-05	0.05392	0.005893	0.931	0.894	0.999	1	0.87	1	0.969	0.98
rs3129798	3.0141E-13	-0.08534	0.0117	-0.08534	0.0117	6.69689E-13	0.17097	0.408387	0.000449	0.000121	0.340814	3.6E-05	0.05392	0.005893	0.931	0.894	0.999	1	0.87	1	0.969	0.98
rs3129799	3.0141E-13	-0.08534	0.0117	-0.08534	0.0117	6.69689E-13	0.17097	0.408387	0.000449	0.000121	0.340814	3.6E-05	0.05392	0.005893	0.931	0.894	0.999	1	0.87	1	0.969	0.98
rs68006638	3.0163E-13	-0.091293	0.01252	-0.095795	0.016823	6.70168E-13	0.67581	0.460421	6.7E-05	3.29E-05	0.022741	0.00075	0.38123	0.000689	0.851	0.881	1	1	0.983	0.998	0.875	0.987
rs3135317	3.0166E-13	-0.085338	0.0117	-0.085338	0.0117	6.70241E-13	0.17096	0.408387	0.000449	0.000121	0.340813	3.6E-05	0.05392	0.005893	0.931	0.894	0.999	1	0.87	1	0.969	0.98
rs3130896	3.0213E-13	-0.085336	0.0117	-0.085336	0.0117	6.71257E-13	0.17095	0.408388	0.000449	0.000121	0.340816	3.6E-05	0.05392	0.005893	0.931	0.895	0.999	1	0.87	1	0.969	0.98
rs3131082	3.0213E-13	-0.085336	0.0117	-0.085336	0.0117	6.71257E-13	0.17095	0.408388	0.000449	0.000121	0.340816	3.6E-05	0.05392	0.005893	0.931	0.895	0.999	1	0.87	1	0.969	0.98
rs35353359	3.024E-13	-0.086817	0.0119	-0.086817	0.011904	6.71851E-13	0.18532	0.518457	0.0004	0.000318	0.163307	4.9E-05	0.05105	0.002344	0.933	0.885	0.999	1	0.936	1	0.972	0.985
rs3130890	3.0663E-13	-0.085314	0.0117	-0.085314	0.011701	6.81092E-13	0.17177	0.408405	0.000444	0.000125	0.340902	3.6E-05	0.05392	0.005893	0.931	0.894	0.999	1	0.87	1	0.969	0.98
rs3130887	3.084E-13	-0.085313	0.0117	-0.085313	0.011702	6.84965E-13	0.16044	0.418611	0.000422	0.00015	0.317917	3.9E-05	0.0552	0.004846	0.934	0.894	0.999	1	0.879	1	0.969	0.981
rs3130888	3.0888E-13	-0.085303	0.0117	-0.085303	0.011701	6.86026E-13	0.17185	0.408405	0.000444	0.000126	0.340902	3.6E-05	0.05392	0.005893	0.931	0.894	0.999	1	0.87	1	0.969	0.98
rs35715914	3.0956E-13	-0.087693	0.01203	-0.087693	0.012029	6.87495E-13	0.14945	0.525501	0.000379	0.000426	0.140475	4.7E-05	0.05742	0.002983	0.939	0.885	0.999	1	0.945	1	0.97	0.984
rs7775835	3.1213E-13	0.0831894	0.01141	0.0831894	0.011413	6.93117E-13	0.22413	0.420479	6.31E-05	0.001731	0.254329	5.2E-05	0.08742	0.001119	0.924	0.895	1	0.998	0.902	1	0.96	0.987
rs3130838	3.1224E-13	-0.08529	0.0117	-0.08529	0.011701	6.93355E-13	0.15842	0.467745	0.000387	0.000175	0.310645	3.9E-05	0.05791	0.003686	0.934	0.887	0.999	1	0.881	1	0.968	0.982
rs62097975	3.1445E-13	0.0372969	0.00512	0.0368193	0.005652	6.98186E-13	0.3418	0.31554	8.94E-05	0.103087	0.057261	2.3E-08	0.04402	0.165583	0.857	0.559	1	0.817	0.953	1	0.957	0.9
rs3129112	3.1715E-13	-0.085207	0.01169	-0.085207	0.011693	7.04095E-13	0.18546	0.420418	0.000458	0.0001	0.368542	3.4E-05	0.05252	0.007352	0.927	0.891	0.999	1	0.857	1	0.969	0.978
rs3130773	3.1715E-13	-0.085207	0.01169	-0.085207	0.011693	7.04095E-13	0.18546	0.420418	0.000458	0.0001	0.368542	3.4E-05	0.05252	0.007352	0.927	0.891	0.999	1	0.857	1	0.969	0.978
rs3130715	3.175E-13	-0.085205	0.01169	-0.085205	0.011693	7.04839E-13	0.18546	0.420967	0.000458	0.0001	0.368645	3.4E-05	0.05251	0.007351	0.927	0.891	0.999	1	0.857	1	0.969	0.978
rs71550120	3.1774E-13	-0.085204	0.01169	-0.085204	0.011693	7.05374E-13	0.18546	0.42097	0.000458	0.0001	0.368657	3.4E-05	0.05252	0.007352	0.927	0.891	0.999	1	0.857	1	0.969	0.978
rs3129791	3.1852E-13	-0.085254	0.0117	-0.085254	0.011701	7.07085E-13	0.18734	0.417185	0.000367	0.00014	0.326957	4.4E-05	0.05402	0.005374	0.928	0.893	0.999	1	0.875	1	0.969	0.98
rs35848276	3.2207E-13	-0.087594	0.01202	-0.087594	0.012024	7.14824E-13	0.18062	0.49555	0.000351	0.000345	0.124214	6.8E-05	0.05553	0.002918	0.934	0.89	1	1	0.95	1	0.971	0.984
rs144022448	3.2444E-13	-0.086017	0.01181	-0.086017	0.011809	7.20002E-13	0.10455	0.286359	0.000846	0.000437	0.032034	8.5E-05	0.1011	0.002056	0.951	0.924	0.999	1	0.983	1	0.961	0.987
rs34864796	3.2444E-13	-0.086017	0.01181	-0.086017	0.011809	7.20002E-13	0.10455	0.286359	0.000846	0.000437	0.032034	8.5E-05	0.1011	0.002056	0.951	0.924	0.999	1	0.983	1	0.961	0.987
rs67240003	3.2444E-13	-0.086017	0.01181	-0.086017	0.011809	7.20002E-13	0.10455	0.286359	0.000846	0.000437	0.032034	8.5E-05	0.1011	0.002056	0.951	0.924	0.999	1	0.983	1	0.961	0.987
rs4452638	3.2519E-13	-0.071571	0.00983	-0.071571	0.009826	7.21634E-13	0.10383	0.988841	1.93E-05	0.000382	0.182402	0.00029	0.08764	0.007459	0.942	0.802	1	1	0.923	0.999	0.957	0.978
rs1961639	3.2538E-13	-0.041371	0.00568	-0.04254	0.007128	7.07818E-13	0.2402	0.14089	0.000428	0.325089	0.001647	5.1E-07	0.01275	0.060414	0.894	0.917	0.998	0.498	0.996	1	0.982	0.946
rs67652222	3.2783E-13	-0.087252	0.01198	-0.087252	0.011981	7.27405E-13	0.1293	0.466621	0.000425	0.000524	0.116085	4.6E-05	0.08049	0.002214	0.944	0.895	0.999	0.999	0.953	1	0.964	0.986
rs13209332	3.3001E-13	-0.087209	0.01198	-0.087209	0.011977	7.32158E-13	0.16359	0.435648	0.000392	0.000406	0.102087	6.5E-05	0.07796	0.002164	0.938	0.899	0.999	1	0.958	1	0.965	0.986
rs34965299	3.3555E-13	-0.087181	0.01198	-0.087181	0.011977	7.44263E-13	0.15585	0.435645	0.000392	0.000427	0.102329	6.5E-05	0.07792	0.002163	0.94	0.899	0.999	1	0.958	1	0.965	0.986
rs34493019	3.3625E-13	-0.090175	0.01239	-0.092289	0.014306	7.45778E-13	0.62038	0.430082	7.65E-05	6.89E-05	0.015432	0.00053	0.40326	0.001558	0.86	0.887	1	1	0.987	0.999	0.87	0.985
rs66785117	3.3704E-13	-0.087173	0.01198	-0.087173	0.011976	7.47496E-13	0.1558	0.435084	0.000392	0.000428	0.102637	6.5E-05	0.07788	0.002163	0.94	0.9	0.999	1	0.958	1	0.965	0.986
rs17410557	3.3825E-13	0.0375445	0.00516	0.0375445	0.005158	7.50142E-13	0.31305	0.405571	8.57E-05	0.077406	0.102363	2.8E-08	0.12027	0.054968	0.873	0.613	1	0.878	0.932	1	0.927	0.943
rs3130885	3.3832E-13	-0.085161	0.0117	-0.085161	0.011701	7.50302E-13	0.16054	0.417414	0.000424	0.000151	0.318392	4.3E-05	0.05519	0.004851	0.934	0.894	0.999	1	0.879	1	0.969	0.981
rs35491132	3.412E-13	-0.087152	0.01198	-0.087152	0.011976	7.56589E-13	0.15566	0.433757	0.00039	0.000432	0.103441	6.6E-05	0.07773	0.002161	0.94	0.9	0.999	1	0.958	1	0.965	0.986
rs72409223	3.4156E-13	-0.085083	0.01169	-0.085083	0.011692	7.57377E-13	0.18546	0.421113	0.000495	0.0001	0.366612	3.4E-05	0.05231	0.00728	0.927	0.891	0.999	1	0.859	1	0.969	0.978
rs9278146	3.4252E-13	-0.085079	0.01169	-0.085079	0.011692	7.59462E-13	0.18543	0.42113	0.000496	0.0001	0.366727	3.4E-05	0.05231	0.007277	0.927	0.891	0.999	1	0.859	1	0.969	0.978
rs3131085	3.4344E-13	-0.085075	0.01169	-0.085075	0.011692	7.61477E-13	0.18546	0.421113	0.000496	0.0001	0.366695	3.4E-05	0.05233	0.007279	0.927	0.891	0.999	1	0.859	1	0.969	0.978
rs3129800	3.4388E-13	-0.085073	0.01169	-0.085073	0.011692	7.62426E-13	0.18543	0.420725	0.000496	0.0001	0.366922	3.4E-05	0.05231	0.007277	0.927	0.891	0.999	1	0.858	1	0.969	0.978
rs3130747	3.4388E-13	-0.085073	0.01169	-0.085073	0.011692	7.62426E-13	0.18543	0.420725	0.000496	0.0001	0.366922	3.4E-05	0.05231	0.007277	0.927	0.891	0.999	1	0.858	1	0.969	0.978
rs3130844	3.4471E-13	-0.085131	0.0117	-0.085131	0.011701	7.64237E-13	0.16054	0.417421	0.000425	0.000151	0.318563	4.3E-05	0.0552	0.004857	0.934	0.894	0.999	1	0.879	1	0.969	0.981

Table S3

rs114825981	3.4475E-13	0.0650954	0.00895	0.0650199	0.009162	7.61226E-13	0.54449	0.174045	0.000797	0.073692	0.008705	2.4E-08	0.06927	0.146239	0.677	0.914	0.998	0.901	0.989	1	0.954	0.923
rs148696809	3.4485E-13	-0.085131	0.0117	-0.085131	0.011701	7.64537E-13	0.16054	0.417424	0.000425	0.000151	0.318569	4.3E-05	0.0552	0.004858	0.934	0.894	0.999	1	0.879	1	0.969	0.981
rs3131076	3.4488E-13	-0.08513	0.0117	-0.08513	0.011701	7.64613E-13	0.16054	0.417424	0.000425	0.000151	0.318569	4.3E-05	0.0552	0.004858	0.934	0.894	0.999	1	0.879	1	0.969	0.981
rs3130846	3.4496E-13	-0.08513	0.0117	-0.08513	0.011701	7.6479E-13	0.16054	0.417425	0.000425	0.000151	0.318574	4.3E-05	0.0552	0.004858	0.934	0.894	0.999	1	0.879	1	0.969	0.981
rs3130847	3.4496E-13	-0.08513	0.0117	-0.08513	0.011701	7.6479E-13	0.16054	0.417425	0.000425	0.000151	0.318574	4.3E-05	0.0552	0.004858	0.934	0.894	0.999	1	0.879	1	0.969	0.981
rs3131072	3.4496E-13	-0.08513	0.0117	-0.08513	0.011701	7.6479E-13	0.16054	0.417425	0.000425	0.000151	0.318574	4.3E-05	0.0552	0.004858	0.934	0.894	0.999	1	0.879	1	0.969	0.981
rs3116815	3.454E-13	-0.085044	0.01169	-0.085044	0.011689	7.65752E-13	0.17457	0.423606	0.000497	0.000105	0.386769	3.1E-05	0.05587	0.007145	0.929	0.89	0.999	1	0.85	1	0.968	0.978
rs3117141	3.4582E-13	-0.085057	0.01169	-0.085057	0.011691	7.66668E-13	0.17548	0.421576	0.00051	9.84E-05	0.372948	3.4E-05	0.05191	0.007306	0.929	0.891	0.999	1	0.856	1	0.969	0.978
rs35337219	3.484E-13	-0.087114	0.01198	-0.087114	0.011976	7.72278E-13	0.15257	0.432316	0.000391	0.000436	0.104511	6.7E-05	0.07767	0.002161	0.94	0.9	0.999	1	0.958	1	0.965	0.986
rs3130746	3.4872E-13	-0.085029	0.01169	-0.085029	0.011689	7.72981E-13	0.17455	0.423594	0.000496	0.000107	0.386711	3.1E-05	0.05587	0.007145	0.929	0.89	0.999	1	0.85	1	0.968	0.978
rs3734537	3.5018E-13	-0.071331	0.00981	-0.07208	0.010533	7.76165E-13	0.40926	0.19414	0.000129	0.011659	0.038444	5.4E-05	0.02542	0.000736	0.905	0.935	1	0.99	0.98	1	0.982	0.989
rs3130831	3.5146E-13	-0.085016	0.01169	-0.085016	0.011689	7.78962E-13	0.17451	0.423579	0.000496	0.000109	0.386616	3.1E-05	0.05586	0.007145	0.929	0.89	0.999	1	0.85	1	0.968	0.978
rs1311911	3.5188E-13	-0.08579	0.0118	-0.08579	0.011796	7.79879E-13	0.23513	0.491162	0.000246	0.000323	0.255736	6.5E-05	0.04615	0.001705	0.922	0.885	1	1	0.902	1	0.973	0.986
rs3130837	3.5199E-13	-0.08507	0.0117	-0.08507	0.011697	7.80116E-13	0.15775	0.407465	0.00044	0.000148	0.331755	4E-05	0.05974	0.004637	0.934	0.895	0.999	1	0.874	1	0.968	0.981
rs13198809	3.5227E-13	-0.086501	0.01189	-0.086501	0.011894	7.80717E-13	0.17933	0.510547	0.000523	0.000222	0.169748	5.3E-05	0.0549	0.002236	0.933	0.886	0.999	1	0.934	1	0.971	0.985
rs35744819	3.5227E-13	-0.086526	0.0119	-0.086526	0.011897	7.80729E-13	0.18488	0.529153	0.000525	0.000216	0.171	5.1E-05	0.05378	0.002306	0.932	0.883	0.999	1	0.934	1	0.971	0.985
rs6456835	3.5271E-13	0.0857864	0.0118	0.0857864	0.011796	7.81689E-13	0.2352	0.491162	0.000247	0.000323	0.255779	6.5E-05	0.04616	0.001705	0.922	0.885	1	1	0.902	1	0.973	0.986
rs2362250	3.5568E-13	-0.058276	0.00801	-0.058276	0.008014	7.4769E-13	0.16688	0.147057	0.000202	1.05E-06	0.108259	0.00172	0.0659	0.216705	0.937	0.94	1	1	0.955	0.995	0.968	0.93
rs7749305	3.718E-13	-0.08531	0.01174	-0.08531	0.011742	8.23285E-13	0.14877	0.291445	0.00075	0.000333	0.023251	0.00012	0.12358	0.00211	0.943	0.922	0.999	1	0.986	1	0.955	0.986
rs3116830	3.722E-13	-0.084958	0.01169	-0.084958	0.011694	8.24168E-13	0.18612	0.452747	0.000537	0.000104	0.37264	3.1E-05	0.05142	0.00745	0.927	0.886	0.999	1	0.856	1	0.969	0.978
rs62100780	3.7278E-13	0.0371865	0.00512	0.0365599	0.005836	8.25425E-13	0.34442	0.286333	9.3E-05	0.105189	0.053905	2.5E-08	0.04316	0.17168	0.855	0.545	1	0.811	0.954	1	0.957	0.897
rs62100781	3.7278E-13	0.0371865	0.00512	0.0365599	0.005836	8.25425E-13	0.34442	0.286333	9.3E-05	0.105189	0.053905	2.5E-08	0.04316	0.17168	0.855	0.545	1	0.811	0.954	1	0.957	0.897
rs72152395	3.7498E-13	-0.084984	0.0117	-0.084984	0.011699	8.30219E-13	0.16928	0.408405	0.000444	0.000167	0.340902	3.6E-05	0.05392	0.005893	0.931	0.895	0.999	1	0.87	1	0.969	0.98
rs966311	3.7539E-13	-0.041082	0.00566	-0.041082	0.005655	8.31106E-13	0.26518	0.016632	0.000584	0.000724	0.482081	8.3E-06	0.00868	0.396764	0.91	0.969	0.999	0.999	0.811	1	0.987	0.889
rs62097974	3.7552E-13	0.0371813	0.00512	0.036551	0.00584	8.31396E-13	0.34535	0.286333	9.3E-05	0.10558	0.053905	2.5E-08	0.04316	0.17168	0.854	0.545	1	0.81	0.954	1	0.957	0.897
rs142808087	3.7802E-13	-0.086445	0.0119	-0.086445	0.011902	8.36837E-13	0.18566	0.512732	0.00041	0.000306	0.16011	6.2E-05	0.05307	0.002305	0.933	0.886	0.999	1	0.938	1	0.971	0.985
rs1233581	3.8067E-13	-0.085709	0.0118	-0.085709	0.011802	8.42604E-13	0.22802	0.491137	0.000243	0.000378	0.255618	6.4E-05	0.04614	0.001704	0.923	0.885	1	1	0.902	1	0.973	0.986
rs3131073	3.8243E-13	-0.084911	0.01169	-0.084911	0.011693	8.46451E-13	0.1606	0.401078	0.000412	0.000151	0.32185	4.6E-05	0.05813	0.005771	0.934	0.897	0.999	1	0.878	1	0.968	0.98
rs2315507	3.8697E-13	-0.040895	0.00563	-0.040895	0.005633	8.56321E-13	0.21546	0.016483	0.000756	0.00071	0.396078	1.1E-05	0.00827	0.3434	0.923	0.97	0.999	0.999	0.851	1	0.988	0.903
rs56114371	3.9075E-13	-0.08865	0.01221	-0.08865	0.012213	8.64558E-13	0.20284	0.65138	0.000246	0.000188	0.130369	0.0001	0.07811	0.003247	0.928	0.865	1	1	0.946	1	0.963	0.983
rs3733155	3.9178E-13	-0.045642	0.00629	-0.045642	0.006288	8.6325E-13	0.57133	0.290436	0.006415	0.002762	0.002616	2.1E-07	0.05078	0.153417	0.7	0.898	0.969	0.997	0.995	1	0.965	0.926
rs62409270	3.974E-13	0.0407889	0.00562	0.0407889	0.005621	8.79035E-13	0.43424	0.020052	0.000588	0.000753	0.448323	8.4E-06	0.01571	0.154529	0.887	0.968	0.999	0.999	0.828	1	0.983	0.934
rs3117333	3.9848E-13	-0.084673	0.01167	-0.084673	0.011669	8.81367E-13	0.15379	0.390072	0.000693	0.000103	0.387033	2.6E-05	0.05558	0.008525	0.933	0.896	0.999	1	0.852	1	0.968	0.977
rs3131095	3.9927E-13	-0.084901	0.0117	-0.084901	0.011701	8.831E-13	0.15426	0.413907	0.000353	0.000226	0.312139	5.2E-05	0.05732	0.003477	0.935	0.895	0.999	1	0.883	1	0.969	0.983
rs35909544	3.9942E-13	-0.071106	0.0098	-0.071106	0.0098	8.83429E-13	0.14237	0.916828	2.29E-05	0.000193	0.176196	0.0003	0.12287	0.011195	0.932	0.785	1	1	0.923	0.999	0.945	0.976
rs3135312	4.046E-13	-0.084858	0.0117	-0.084858	0.011698	8.94693E-13	0.15612	0.41622	0.00041	0.000196	0.309146	4.6E-05	0.05838	0.004309	0.935	0.895	0.999	1	0.884	1	0.968	0.982
rs3135313	4.046E-13	-0.084858	0.0117	-0.084858	0.011698	8.94693E-13	0.15612	0.41622	0.00041	0.000196	0.309146	4.6E-05	0.05838	0.004309	0.935	0.895	0.999	1	0.884	1	0.968	0.982
rs3135310	4.0481E-13	-0.084857	0.0117	-0.084857	0.011698	8.95159E-13	0.15612	0.416217	0.00041	0.000196	0.309144	4.6E-05	0.05838	0.004309	0.935	0.895	0.999	1	0.884	1	0.968	0.982
rs3135311	4.0481E-13	-0.084857	0.0117	-0.084857	0.011698	8.95159E-13	0.15612	0.416217	0.00041	0.000196	0.309144	4.6E-05	0.05838	0.004309	0.935	0.895	0.999	1	0.884	1	0.968	0.982
rs17749927	4.1065E-13	-0.086821	0.01197	-0.086821	0.011972	9.07854E-13	0.14362	0.457128	0.000474	0.000554	0.126845	4.4E-05	0.07991	0.00206	0.941	0.896	0.999	0.999	0.95	1	0.964	0.986
rs35016036	4.1218E-13	-0.086265	0.0119	-0.086265	0.011896	9.11184E-13	0.18488	0.533765	0.000571	0.000238	0.173422	5E-05	0.05266	0.002356	0.932	0.882	0.999	1	0.933	1	0.971	0.985
rs3129104	4.124E-13	-0.084697	0.01168	-0.084697	0.01168	9.11652E-13	0.16677	0.401091	0.000615	0.000118	0.386411	2.7E-05	0.05574	0.008097	0.93	0.894	0.999	1	0.852	1	0.968	0.977
rs3117339	4.1307E-13	-0.084694	0.01168	-0.084694	0.01168	9.13106E-13	0.16676	0.401117	0.000616	0.000118	0.386354	2.7E-05	0.05573	0.008097	0.93	0.894	0.999	1	0.852	1	0.968	0.977
rs3117337	4.17E-13	-0.084676	0.01168	-0.084676	0.01168	9.21653E-13	0.16674	0.400454	0.000621	0.000119	0.386536	2.7E-05	0.05574	0.008138	0.93	0.894	0.999	1	0.852	1	0.968	0.977
rs13219354	4.2031E-13	-0.07104	0.0098	-0.07104	0.0098	9.28849E-13	0.14488	0.924771	2.16E-05	0.000267	0.199167	0.0003	0.08557	0.012333	0.932	0.787	1	1	0.915	0.999	0.956	0.975
rs923546	4.2119E-13	-0.041187	0.00568	-0.042458	0.007261	8.91788E-13	0.23143	0.147107	0.000454	0.354286	0.001672	4.9E-07	0.01331	0.061598	0.892	0.913	0.998	0.457	0.996	1	0.981	0.944
rs12065115	4.2803E-13	-0.044464	0.00614	-0.044464	0.006136	9.4502E-13	0.11123	0.150522	7.89E-06	0.00065	0.016567	0.00651	0.02592	0.068355	0.951	0.943	1	0.999	0.989	0.969	0.982	0.962
rs13217619	4.2886E-13	-0.086166	0.01189	-0.086166	0.011891	9.47443E-13	0.21091	0.542511	0.000521	0.000216	0.181873	4.8E-05	0.05866	0.002901	0.927	0.88	0.999	1	0.929	1	0.969	0.984
rs35030260	4.2886E-13	-0.086166	0.01189	-0.086166	0.011891	9.47443E-13	0.21091	0.542511	0.000521	0.000216	0.181873	4.8E-05	0.05866	0.002901	0.927	0.88	0.999	1	0.929	1	0.969	0.984
rs67457459	4.2949E-13	-0.071021	0.0098	-0.071021	0.009801	9.48812E-13	0.1459	0.92378	2.09E-05	0.000252	0.20064	0.00031	0.08629	0.012417	0.931	0.787	1	1	0.914	0.999	0.956	0.975
rs12060229	4.2999E-13	-0.04446	0.00614	-0.04446	0.006136	9.49277E-13	0.11123	0.150516	7.92E-06	0.000651	0.016575	0.00652	0.02589	0.068355	0.951	0.943	1	0.999	0.989	0.969	0.982	0.962
rs71206067	4.3077E-13	-0.087651	0.0121	-0.087651	0.012097	9.51588E-13	0.33538	0.396666	0.000445	0.000205	0.100953	7.9E-05	0.0934	0.001988	0.911	0.902	0.999	1	0.957	1	0.96	0.985
rs67340775	4.3126E-13	-0.086157	0.01189	-0.086157	0.011891	9.52649E-13	0.21094	0.542512	0.000522	0.000216	0.181941	4.8E-05	0.0587	0.002902	0.927	0.88	0.999	1	0.929	1	0.969	0.984
rs3129788	4.3465E-13	-0.084687	0.01169	-0.084687	0.01169	9.60024E-13	0.1843	0.453214	0.000485	9.58E-05	0.373868	4.3E-05	0.05153	0.007472	0.927	0.886	0.999	1	0.856	1	0.969	0.978
rs3033761	4.3647E-13	-0.040778	0.00563	-0.040778	0.005629	9.63984E-13	0.46139	0.024311	0.000569	0.000896	0.431737	8E-06	0.01402	0.160602	0.883	0.965	0.999	0.999	0.835	1	0.984	0.933

Table S3

rs67123130	4.3923E-13	-0.084513	0.01167	-0.084513	0.011668	9.69975E-13	0.16222	0.388157	0.000665	0.000118	0.378285	2.8E-05	0.05401	0.008329	0.932	0.896	0.999	1	0.856	1	0.969	0.977
rs3131096	4.3989E-13	-0.084725	0.0117	-0.084725	0.011698	9.71397E-13	0.15426	0.41323	0.000369	0.000226	0.313604	5.3E-05	0.05878	0.003569	0.935	0.895	0.999	1	0.882	1	0.968	0.982
rs3131097	4.399E-13	-0.084728	0.0117	-0.084728	0.011699	9.71421E-13	0.1544	0.413271	0.000373	0.000224	0.313592	5.2E-05	0.05864	0.003605	0.935	0.895	0.999	1	0.882	1	0.968	0.982
rs78131568	4.4037E-13	0.0475638	0.00657	0.0470444	0.00705	7.92009E-13	0.38547	0.044738	0.000314	0.162246	0.10106	1.5E-09	0.4639	0.517998	0.848	0.937	0.999	0.723	0.926	1	0.798	0.818
rs3135308	4.406E-13	-0.084723	0.0117	-0.084723	0.011698	9.72946E-13	0.15426	0.413227	0.000369	0.000226	0.313602	5.3E-05	0.05877	0.003569	0.935	0.895	0.999	1	0.882	1	0.968	0.982
rs3118364	4.4345E-13	-0.084712	0.0117	-0.084712	0.011698	9.79148E-13	0.15428	0.41313	0.000371	0.000226	0.31363	5.3E-05	0.05877	0.003568	0.935	0.895	0.999	1	0.882	1	0.968	0.982
rs56862318	4.4417E-13	-0.070974	0.0098	-0.070974	0.009801	9.80705E-13	0.14485	0.92376	2.09E-05	0.000266	0.200653	0.00031	0.08623	0.012418	0.932	0.787	1	1	0.914	0.999	0.956	0.975
rs1858513	4.4622E-13	0.0543616	0.00751	0.0624237	0.01628	1.15363E-13	0.00126	0.209502	0.022436	9.96E-07	9.41E-05	4.3E-05	0.38309	0.461812	0.98	0.852	0.613	1	0.999	0.998	0.27	0.769
rs4947336	4.481E-13	-0.085773	0.01185	-0.085773	0.011847	9.89233E-13	0.26014	0.516401	0.000446	0.00016	0.183558	6.2E-05	0.06931	0.002546	0.919	0.882	0.999	1	0.928	1	0.965	0.984
rs370057132	4.4845E-13	0.058915	0.00814	0.058915	0.008137	9.89997E-13	0.25278	0.488737	0.000705	0.00357	0.003001	7.6E-07	0.66524	0.395578	0.902	0.864	0.998	0.996	0.994	1	0.786	0.877
rs2932559	4.4935E-13	-0.041146	0.00568	-0.042309	0.007173	9.54678E-13	0.23443	0.154418	0.000482	0.345276	0.001697	4.8E-07	0.01397	0.062877	0.893	0.911	0.998	0.473	0.996	1	0.98	0.943
rs143520892	4.5266E-13	0.0645422	0.00892	0.0645422	0.008916	9.99148E-13	0.57921	0.193538	0.000616	0.051973	0.008503	6.5E-08	0.08379	0.191923	0.695	0.912	0.999	0.938	0.989	1	0.95	0.915
rs3117326	4.5552E-13	-0.084456	0.01167	-0.084456	0.011669	1.00534E-12	0.16232	0.388153	0.000673	0.000119	0.378997	2.9E-05	0.05414	0.008338	0.932	0.896	0.999	1	0.855	1	0.969	0.977
rs12663351	4.5659E-13	-0.059699	0.00825	-0.060411	0.009946	1.00767E-12	0.22472	0.14278	2.88E-05	0.324674	0.000341	3.9E-06	0.04258	0.51853	0.881	0.903	1	0.434	0.998	1	0.958	0.808
rs35017208	4.6141E-13	-0.086083	0.0119	-0.086083	0.011896	1.01814E-12	0.1866	0.50908	0.000454	0.000284	0.164239	6.8E-05	0.05466	0.002246	0.932	0.886	0.999	1	0.936	1	0.971	0.985
rs13213152	4.618E-13	-0.086082	0.0119	-0.086082	0.011896	1.01897E-12	0.1866	0.509078	0.000455	0.000284	0.164236	6.8E-05	0.05466	0.002246	0.932	0.886	0.999	1	0.936	1	0.971	0.985
rs11192193	4.6434E-13	-0.039499	0.00546	-0.039499	0.005459	1.0245E-12	0.35493	0.062172	0.000657	0.046517	0.012674	4.2E-06	0.00641	0.113562	0.912	0.959	0.999	0.962	0.99	1	0.991	0.95
rs72843784	4.6472E-13	-0.087748	0.01213	-0.087748	0.012128	1.02531E-12	0.40361	0.396584	0.000292	0.000119	0.120556	0.00013	0.09133	0.003058	0.9	0.9	1	1	0.95	1	0.959	0.983
rs967808	4.6602E-13	-0.040674	0.00562	-0.040674	0.005622	1.02813E-12	0.43895	0.020447	0.000592	0.000827	0.456933	8.6E-06	0.01588	0.1559	0.886	0.967	0.999	0.999	0.825	1	0.983	0.933
rs1390877	4.7291E-13	-0.039182	0.00542	-0.039182	0.005417	1.04309E-12	0.73674	0.948355	1.91E-05	4.84E-06	0.459918	9E-05	0.12275	0.270801	0.658	0.705	1	1	0.735	1	0.911	0.86
rs67981811	4.7609E-13	-0.08603	0.0119	-0.08603	0.011896	1.04999E-12	0.18655	0.509023	0.000469	0.000284	0.164136	6.8E-05	0.05468	0.002245	0.932	0.887	0.999	1	0.936	1	0.971	0.985
rs13213986	4.7643E-13	-0.086029	0.0119	-0.086029	0.011896	1.05073E-12	0.18655	0.509021	0.00047	0.000284	0.164131	6.8E-05	0.05468	0.002245	0.932	0.887	0.999	1	0.936	1	0.971	0.985
rs36092177	4.7643E-13	-0.086029	0.0119	-0.086029	0.011896	1.05073E-12	0.18655	0.509021	0.00047	0.000284	0.164131	6.8E-05	0.05468	0.002245	0.932	0.887	0.999	1	0.936	1	0.971	0.985
rs1948505	4.7897E-13	-0.040702	0.00563	-0.040702	0.005629	1.05623E-12	0.48955	0.021489	0.0006	0.00107	0.42833	7E-06	0.016	0.147106	0.88	0.967	0.999	0.999	0.836	1	0.983	0.935
rs1486901	4.8928E-13	0.0391578	0.00542	0.0391578	0.005417	1.0786E-12	0.74089	0.947036	1.9E-05	5.18E-06	0.459737	9E-05	0.1226	0.270863	0.66	0.705	1	1	0.735	1	0.911	0.86
rs3130893	4.9344E-13	-0.084489	0.01169	-0.084489	0.011691	1.08762E-12	0.18389	0.405072	0.000552	0.000119	0.38371	3.9E-05	0.05159	0.006659	0.927	0.893	0.999	1	0.853	1	0.969	0.978
rs9257681	4.9424E-13	-0.084264	0.01166	-0.084264	0.01166	1.08936E-12	0.1523	0.384829	0.000767	9.96E-05	0.369248	3.1E-05	0.0594	0.008094	0.934	0.897	0.999	1	0.86	1	0.967	0.977
rs587939	4.9517E-13	0.0391426	0.00542	0.0391426	0.005416	1.09138E-12	0.72981	0.950604	1.89E-05	5.32E-06	0.459643	8.9E-05	0.12222	0.269895	0.657	0.706	1	1	0.735	1	0.911	0.86
rs17411339	4.9523E-13	0.0370131	0.00512	0.0369598	0.005178	1.0915E-12	0.34637	0.360733	9.4E-05	0.103517	0.063279	3.3E-08	0.04849	0.177942	0.858	0.584	1	0.824	0.95	1	0.955	0.898
rs62097976	4.9739E-13	0.037006	0.00512	0.0363915	0.005807	1.09617E-12	0.35736	0.296406	9.43E-05	0.114392	0.056851	2.8E-08	0.04517	0.170966	0.85	0.547	1	0.794	0.951	1	0.955	0.896
rs9570465	5.0376E-13	-0.090903	0.01258	-0.095733	0.018417	1.10999E-12	0.70376	0.042922	0.00015	9.03E-05	0.960542	0.00015	0.00248	0.01907	0.803	0.947	1	1	0.501	1	0.99	0.964
rs4600907	5.0459E-13	-0.040882	0.00566	-0.040882	0.005659	1.11178E-12	0.26789	0.015069	0.000569	0.000738	0.512698	9.8E-06	0.01016	0.391354	0.909	0.969	0.999	0.999	0.799	1	0.986	0.888
rs9849038	5.0498E-13	-0.058367	0.00808	-0.058367	0.00808	1.11264E-12	0.24463	0.560821	0.000976	0.002095	0.004209	6.9E-07	0.69332	0.379654	0.902	0.851	0.998	0.998	0.993	1	0.775	0.878
rs34119086	5.0806E-13	-0.085568	0.01185	-0.085568	0.011846	1.11932E-12	0.26016	0.522114	0.000462	0.000178	0.182293	6.5E-05	0.06988	0.002243	0.919	0.882	0.999	1	0.929	1	0.965	0.984
rs569842	5.1291E-13	-0.039124	0.00542	-0.039124	0.005417	1.12981E-12	0.73626	0.94726	1.91E-05	5.45E-06	0.460298	9E-05	0.12261	0.270508	0.659	0.705	1	1	0.735	1	0.911	0.86
rs143888777	5.1777E-13	0.0542158	0.00751	0.0624594	0.016349	1.2854E-13	0.00112	0.208766	0.024138	1.13E-06	9.19E-05	4.3E-05	0.38431	0.462921	0.98	0.849	0.587	1	0.999	0.998	0.265	0.765
rs34197618	5.1778E-13	-0.089153	0.01235	-0.09229	0.015507	1.14037E-12	0.68983	0.52457	6.64E-05	7.06E-05	0.021755	0.00065	0.38857	0.000925	0.848	0.87	1	1	0.983	0.998	0.872	0.986
rs11130217	5.1854E-13	-0.058317	0.00808	-0.058317	0.008077	1.14202E-12	0.21582	0.572141	0.000813	0.002986	0.003782	6.7E-07	0.72487	0.384286	0.907	0.848	0.998	0.997	0.993	1	0.765	0.876
rs35506517	5.1882E-13	-0.089148	0.01235	-0.092248	0.015492	1.14261E-12	0.68866	0.528509	6.71E-05	7.01E-05	0.021772	0.00064	0.39497	0.000938	0.847	0.869	1	1	0.983	0.999	0.87	0.986
rs34961555	5.1911E-13	-0.087418	0.01211	-0.091492	0.015612	1.14326E-12	0.51122	0.525404	0.000141	0.000153	0.049971	0.00042	0.15288	0.000287	0.883	0.881	1	1	0.974	0.999	0.942	0.99
rs557899	5.1931E-13	-0.039114	0.00542	-0.039114	0.005417	1.14369E-12	0.72847	0.946964	1.9E-05	5.55E-06	0.459879	9E-05	0.12251	0.270513	0.656	0.705	1	1	0.735	1	0.911	0.86
rs565085	5.2011E-13	-0.039116	0.00542	-0.039116	0.005418	1.14541E-12	0.73909	0.956591	2E-05	5.28E-06	0.450038	9.3E-05	0.12344	0.268881	0.661	0.709	1	1	0.742	1	0.911	0.861
rs201202687	5.2055E-13	0.0587239	0.00813	0.0587239	0.008134	1.14636E-12	0.26472	0.490485	0.000722	0.004038	0.003144	7.6E-07	0.63414	0.404095	0.9	0.864	0.998	0.996	0.994	1	0.796	0.876
rs59684465	5.215E-13	0.0586546	0.00812	0.0586546	0.008124	1.14842E-12	0.22644	0.491548	0.000752	0.003507	0.003285	9E-07	0.64181	0.398896	0.908	0.865	0.998	0.996	0.994	1	0.795	0.878
rs9460314	5.2159E-13	0.0542082	0.00751	0.0624522	0.016348	1.29587E-13	0.00112	0.208566	0.024169	1.13E-06	9.22E-05	4.3E-05	0.38432	0.463005	0.98	0.849	0.587	1	0.999	0.998	0.265	0.765
rs5848662	5.2265E-13	0.047433	0.00657	0.0467985	0.007208	9.11387E-13	0.32047	0.044427	0.000358	0.185217	0.098694	1.6E-09	0.45887	0.463835	0.86	0.937	0.998	0.686	0.927	1	0.798	0.828
rs61557789	5.2398E-13	0.058649	0.00812	0.058649	0.008124	1.1538E-12	0.22662	0.491548	0.000752	0.003523	0.003285	9E-07	0.64182	0.398898	0.908	0.865	0.998	0.996	0.994	1	0.795	0.878
rs4712371	5.2449E-13	0.0542036	0.00751	0.062465	0.016349	1.30304E-13	0.00112	0.20847	0.023961	1.13E-06	9.1E-05	4.5E-05	0.38511	0.463533	0.98	0.85	0.591	1	0.999	0.998	0.267	0.766
rs13210041	5.2836E-13	-0.08912	0.01235	-0.092209	0.015487	1.16328E-12	0.68915	0.529222	6.75E-05	6.9E-05	0.021992	0.00064	0.39718	0.00095	0.847	0.869	1	1	0.983	0.999	0.869	0.986
rs34888489	5.3128E-13	-0.089115	0.01235	-0.092238	0.015495	1.1696E-12	0.69115	0.524617	6.66E-05	7.24E-05	0.021758	0.00065	0.38862	0.000925	0.847	0.87	1	1	0.983	0.998	0.872	0.986
rs638818	5.3301E-13	-0.039095	0.00542	-0.039095	0.005417	1.17335E-12	0.74497	0.946965	1.91E-05	5.89E-06	0.460154	9E-05	0.12262	0.270516	0.661	0.706	1	1	0.736	1	0.911	0.86
rs36109883	5.381E-13	-0.089104	0.01235	-0.092772	0.01612	1.18437E-12	0.62012	0.521808	6.83E-05	6.01E-05	0.020704	0.00068	0.478	0.000818	0.856	0.869	1	1	0.984	0.998	0.846	0.986
rs17487256	5.4798E-13	0.0369777	0.00513	0.0369777	0.005127	1.20577E-12	0.22271	0.454502	5.29E-05	0.107204	0.161092	4.3E-08	0.09055	0.089528	0.886	0.618	1	0.821	0.898	1	0.935	0.925
rs56029819	5.4849E-13	0.0473789	0.00657	0.0464686	0.007489	9.25936E-13	0.33842	0.040275	0.000334	0.198024	0.102869	1.5E-09	0.46675	0.481561	0.851	0.937	0.998	0.656	0.921	1	0.788	0.818
rs7650267	5.4983E-13	0.0473667	0.00657	0.0464454	0.007497	9.26014E-13	0.34078	0.04036	0.000332	0.199158	0.102952	1.5E-09	0.46573	0.482429	0.85	0.937	0.998	0.653	0.921	1	0.787	0.817

Table S3

rs13217620	5.5106E-13	-0.086721	0.01202	-0.086721	0.012025	1.21242E-12	0.16945	0.528814	0.000448	0.000504	0.159615	4.9E-05	0.05978	0.002938	0.935	0.884	0.999	0.999	0.938	1	0.969	0.984
rs78879443	5.5491E-13	0.0517472	0.00718	0.0499404	0.008843	6.44925E-13	0.78127	0.223866	0.000371	0.334013	0.072608	3.5E-10	0.16552	0.348762	0.717	0.852	0.997	0.406	0.925	1	0.873	0.816
rs72865013	5.597E-13	0.0517628	0.00718	0.0500389	0.008775	6.58885E-13	0.75735	0.209982	0.000386	0.326756	0.081531	3.6E-10	0.16062	0.342992	0.726	0.858	0.997	0.42	0.919	1	0.878	0.82
rs58339610	5.6125E-13	0.0585732	0.00812	0.0585732	0.008124	1.23448E-12	0.22622	0.492045	0.000766	0.003491	0.003426	9.3E-07	0.64411	0.399191	0.908	0.865	0.998	0.996	0.994	1	0.795	0.878
rs144447022	5.6153E-13	-0.08481	0.01176	-0.08481	0.011764	1.23508E-12	0.1621	0.387462	0.000743	0.000118	0.416883	3.1E-05	0.0504	0.010835	0.931	0.895	0.999	1	0.841	1	0.969	0.977
rs1799844	5.6239E-13	0.0585709	0.00812	0.0585709	0.008124	1.23695E-12	0.22628	0.492045	0.000766	0.003498	0.003426	9.3E-07	0.64411	0.399191	0.908	0.865	0.998	0.996	0.994	1	0.795	0.878
rs28535523	5.6239E-13	0.0585709	0.00812	0.0585709	0.008124	1.23695E-12	0.22628	0.492045	0.000766	0.003498	0.003426	9.3E-07	0.64411	0.399191	0.908	0.865	0.998	0.996	0.994	1	0.795	0.878
rs6802567	5.6356E-13	0.0517458	0.00718	0.0499795	0.008793	6.56484E-13	0.75519	0.210096	0.000395	0.322486	0.084235	3.3E-10	0.16639	0.349996	0.727	0.858	0.997	0.426	0.917	1	0.875	0.818
rs7649428	5.6602E-13	0.0582624	0.00808	0.0582624	0.008083	1.24479E-12	0.2387	0.570196	0.000934	0.00253	0.003891	7.3E-07	0.70109	0.37416	0.903	0.849	0.998	0.997	0.993	1	0.773	0.879
rs11659803	5.6788E-13	0.0369805	0.00513	0.0369805	0.00513	1.24881E-12	0.27529	0.433318	3.73E-05	0.09276	0.173975	5E-08	0.10689	0.112297	0.872	0.609	1	0.845	0.89	1	0.927	0.916
rs35872411	5.6935E-13	0.0404723	0.00562	0.0464169	0.008768	1.252E-12	0.20053	0.001109	0.001581	0.051309	0.035185	1.8E-05	0.00455	0.008654	0.938	0.989	0.997	0.96	0.983	1	0.993	0.983
rs13192965	5.697E-13	-0.086324	0.01198	-0.086324	0.011977	1.25274E-12	0.14591	0.466009	0.0005	0.000616	0.132621	4.7E-05	0.08358	0.00218	0.94	0.894	0.999	0.999	0.948	1	0.963	0.985
rs13210634	5.7258E-13	-0.086318	0.01198	-0.086318	0.011977	1.25898E-12	0.14591	0.46672	0.0005	0.000618	0.131503	4.8E-05	0.08371	0.002182	0.94	0.894	0.999	0.999	0.948	1	0.963	0.985
rs41266779	5.734E-13	-0.08898	0.01235	-0.092086	0.015505	1.26076E-12	0.68951	0.530282	6.82E-05	6.85E-05	0.022281	0.00067	0.39992	0.000963	0.847	0.869	1	1	0.983	0.998	0.868	0.986
rs13215275	5.7366E-13	-0.086315	0.01198	-0.086315	0.011977	1.26132E-12	0.14591	0.466721	0.0005	0.000618	0.131502	4.8E-05	0.08371	0.002182	0.94	0.894	0.999	0.999	0.948	1	0.963	0.985
rs127101579	5.7378E-13	0.0806156	0.01119	0.0837515	0.016177	1.26157E-12	0.56289	0.397356	0.003851	0.02853	0.003918	3.8E-07	0.00034	0.24648	0.695	0.878	0.986	0.969	0.993	1	0.996	0.905
rs6772068	5.7631E-13	0.0517171	0.00718	0.0500311	0.008733	6.83063E-13	0.74737	0.22245	0.000379	0.332597	0.073598	3.8E-10	0.16624	0.3481	0.727	0.854	0.997	0.413	0.925	1	0.875	0.818
rs72865005	5.7656E-13	0.0517287	0.00718	0.0500335	0.008748	6.82442E-13	0.75633	0.210206	0.000394	0.325083	0.081584	3.7E-10	0.16056	0.342725	0.727	0.859	0.997	0.424	0.92	1	0.878	0.821
rs13191038	5.7668E-13	-0.085606	0.01188	-0.085606	0.01188	1.26785E-12	0.22874	0.487753	0.000542	0.000266	0.178757	6.3E-05	0.05412	0.002194	0.925	0.888	0.999	1	0.931	1	0.971	0.985
rs34676049	5.7702E-13	-0.085605	0.01188	-0.085605	0.01188	1.26858E-12	0.22875	0.487729	0.000542	0.000266	0.178759	6.3E-05	0.05412	0.002194	0.925	0.888	0.999	1	0.931	1	0.971	0.985
rs10510737	5.798E-13	0.0517086	0.00718	0.0500119	0.008741	6.87282E-13	0.75688	0.22245	0.000379	0.331294	0.073598	3.8E-10	0.16624	0.3481	0.725	0.854	0.997	0.414	0.925	1	0.874	0.818
rs71550133	5.8127E-13	-0.084027	0.01166	-0.084027	0.011663	1.27777E-12	0.16203	0.384843	0.000768	0.000119	0.369331	3.1E-05	0.0594	0.008095	0.932	0.897	0.999	1	0.86	1	0.967	0.977
rs66975207	5.8754E-13	-0.087065	0.01209	-0.087065	0.012087	1.29133E-12	0.33458	0.408785	0.000443	0.000226	0.10433	9E-05	0.09785	0.002141	0.91	0.9	0.999	1	0.956	1	0.958	0.985
rs2702519	5.8903E-13	-0.0405	0.00562	-0.0405	0.005623	1.29455E-12	0.46546	0.02498	0.000599	0.000852	0.459587	8.9E-06	0.01558	0.169353	0.881	0.964	0.999	0.999	0.824	1	0.983	0.93
rs75919775	5.8929E-13	0.0473073	0.00657	0.0463274	0.007567	9.76858E-13	0.34149	0.040284	0.000356	0.201018	0.102895	1.4E-09	0.46879	0.482903	0.85	0.937	0.998	0.651	0.921	1	0.786	0.817
rs753966714	5.9072E-13	0.0585121	0.00812	0.0585121	0.008124	1.29819E-12	0.23167	0.492178	0.00076	0.003772	0.003426	9.2E-07	0.63701	0.399286	0.907	0.865	0.998	0.996	0.994	1	0.797	0.878
rs3761010	5.9186E-13	-0.039529	0.00549	-0.039529	0.005488	1.30067E-12	0.92906	0.399674	4.09E-07	0.05268	0.05164	0.00021	0.00363	0.326524	0.801	0.882	1	0.941	0.968	1	0.99	0.893
rs1233618	5.9233E-13	-0.084598	0.01175	-0.086011	0.013103	1.30169E-12	0.18522	0.596321	0.000262	0.000234	0.341674	0.00012	0.02938	0.001381	0.927	0.867	1	1	0.87	1	0.978	0.986
rs7636753	5.9374E-13	0.0516998	0.00718	0.0499711	0.008784	6.96677E-13	0.75674	0.210196	0.000394	0.329853	0.081584	3.7E-10	0.16056	0.342714	0.726	0.858	0.997	0.417	0.919	1	0.878	0.82
rs62260723	5.9383E-13	0.0582104	0.00808	0.0582104	0.008083	1.30492E-12	0.24012	0.568649	0.000945	0.00261	0.003873	7.3E-07	0.70002	0.374609	0.903	0.849	0.998	0.997	0.993	1	0.774	0.879
rs17075754	5.9445E-13	0.0516842	0.00718	0.0499595	0.008771	6.99029E-13	0.75494	0.22245	0.000379	0.335914	0.073598	3.8E-10	0.16624	0.3481	0.724	0.853	0.997	0.407	0.924	1	0.874	0.817
rs35129566	5.9455E-13	0.0582089	0.00808	0.0582089	0.008083	1.30647E-12	0.24015	0.568584	0.000945	0.002611	0.003873	7.3E-07	0.7	0.374555	0.903	0.849	0.998	0.997	0.993	1	0.774	0.879
rs113758058	5.9501E-13	0.0516975	0.00718	0.0499657	0.008787	6.97564E-13	0.75656	0.210196	0.000394	0.330268	0.081641	3.7E-10	0.16055	0.342723	0.726	0.858	0.997	0.416	0.919	1	0.878	0.82
rs1996664	5.9507E-13	0.0582297	0.00809	0.0582297	0.008086	1.3076E-12	0.23536	0.560286	0.000948	0.002497	0.003966	7.4E-07	0.72377	0.369703	0.903	0.85	0.998	0.997	0.993	1	0.766	0.879
rs113875112	5.9523E-13	0.0516972	0.00718	0.0499657	0.008786	6.97877E-13	0.75657	0.2102	0.000394	0.330304	0.081584	3.7E-10	0.16056	0.342728	0.726	0.858	0.997	0.416	0.919	1	0.878	0.82
rs6904596	5.9546E-13	-0.084463	0.01173	-0.084463	0.011728	1.30844E-12	0.14014	0.303002	0.00091	0.000528	0.040052	8.1E-05	0.09974	0.003009	0.944	0.921	0.999	0.999	0.98	1	0.961	0.985
rs61282240	5.9585E-13	-0.059375	0.00824	-0.060011	0.009781	1.30928E-12	0.24849	0.137363	2.96E-05	0.314847	0.000333	5.1E-06	0.04656	0.508387	0.876	0.906	1	0.459	0.998	1	0.956	0.813
rs34546498	5.9749E-13	-0.087037	0.01209	-0.087037	0.012087	1.31283E-12	0.33613	0.408749	0.000444	0.000226	0.104188	9E-05	0.09798	0.002154	0.91	0.9	0.999	1	0.956	1	0.958	0.985
rs3117439	5.9897E-13	-0.083567	0.01161	-0.083567	0.011605	1.31603E-12	0.13052	0.322831	0.000973	9.16E-05	0.323347	5.2E-05	0.04653	0.007423	0.94	0.91	0.998	1	0.882	1	0.973	0.979
rs72865027	5.9979E-13	0.0516897	0.00718	0.0499504	0.008794	7.01847E-13	0.7569	0.210193	0.000394	0.331331	0.081682	3.7E-10	0.16055	0.342715	0.725	0.858	0.997	0.415	0.919	1	0.878	0.82
rs72865029	5.9986E-13	0.0516896	0.00718	0.0499503	0.008794	7.0193E-13	0.7569	0.210193	0.000394	0.331331	0.081683	3.7E-10	0.16055	0.342715	0.725	0.858	0.997	0.415	0.919	1	0.878	0.82
rs13191445	6.0565E-13	-0.088885	0.01235	-0.091907	0.015423	1.33046E-12	0.68658	0.530261	6.81E-05	7.48E-05	0.022277	0.00067	0.3999	0.000963	0.848	0.869	1	1	0.983	0.998	0.869	0.986
rs62098329	6.07E-13	0.0376848	0.00523	0.0346197	0.009873	6.69974E-13	0.24241	0.1592	1.85E-06	0.624636	0.069901	1.7E-07	0.00084	0.600826	0.778	0.239	1	0.074	0.886	1	0.99	0.635
rs785324	6.0719E-13	0.0390165	0.00542	0.0390165	0.00542	1.33379E-12	0.72155	0.90836	1.91E-05	6.47E-06	0.492978	8.1E-05	0.12963	0.258682	0.649	0.691	1	1	0.714	1	0.905	0.859
rs6493272	6.0729E-13	0.0390084	0.00542	0.0390084	0.005419	1.33401E-12	0.72674	0.947447	1.93E-05	6.78E-06	0.462089	9E-05	0.12224	0.272839	0.657	0.706	1	1	0.735	1	0.911	0.859
rs35345226	6.0984E-13	-0.085863	0.01193	-0.085863	0.011928	1.33952E-12	0.24325	0.606034	0.000511	0.000178	0.183374	4.4E-05	0.06656	0.008547	0.92	0.868	0.999	1	0.927	1	0.965	0.977
rs62262730	6.1086E-13	0.0584753	0.00812	0.0584753	0.008124	1.34171E-12	0.23167	0.492045	0.000766	0.003772	0.003426	9.3E-07	0.64411	0.399191	0.907	0.865	0.998	0.996	0.994	1	0.795	0.878
rs7613603	6.1086E-13	0.0584753	0.00812	0.0584753	0.008124	1.34171E-12	0.23167	0.492045	0.000766	0.003772	0.003426	9.3E-07	0.64411	0.399191	0.907	0.865	0.998	0.996	0.994	1	0.795	0.878
rs148383796	6.1232E-13	0.0584725	0.00812	0.0584725	0.008124	1.34487E-12	0.2317	0.492045	0.000767	0.003773	0.003427	9.3E-07	0.64416	0.399191	0.907	0.865	0.998	0.996	0.994	1	0.795	0.878
rs4516168	6.1351E-13	0.0389925	0.00542	0.0389925	0.005418	1.34745E-12	0.75361	0.947051	1.91E-05	7.48E-06	0.460011	9E-05	0.12271	0.270862	0.665	0.708	1	1	0.738	1	0.911	0.861
rs1659711	6.1516E-13	0.037225	0.00517	0.037225	0.005172	1.35101E-12	0.20847	0.016491	0.000158	0.000259	0.046382	0.00046	0.37964	0.019888	0.931	0.973	1	1	0.977	0.999	0.894	0.975
rs11953061	6.1676E-13	0.0374582	0.0052	0.0374582	0.005205	1.35445E-12	0.69565	0.258005	0.000386	0.002057	0.008708	8.6E-06	0.23911	0.177647	0.851	0.913	0.999	0.998	0.991	1	0.916	0.929
rs73442823	6.1885E-13	-0.059329	0.00824	-0.059941	0.009688	1.35898E-12	0.2448	0.13336	2.9E-05	0.313028	0.000368	5.7E-06	0.04361	0.49969	0.878	0.908	1	0.465	0.997	1	0.958	0.817
rs3020779	6.2162E-13	-0.058149	0.00808	-0.058149	0.008081	1.36496E-12	0.25609	0.569438	0.000961	0.002468	0.004017	7.6E-07	0.69614	0.375281	0.899	0.849	0.998	0.997	0.993	1	0.775	0.878
rs1431197	6.2195E-13	0.0365324	0.00508	0.0364105	0.005239	1.19498E-12	0.29301	0.746753	0.001031	0.094221	0.094108	3.4E-09	0.02603	0.22396	0.885	0.717	0.996	0.865	0.941	1	0.972	0.899

Table S3

rs7574004	6.2398E-13	0.0372266	0.00517	0.0372266	0.005174	1.37005E-12	0.21052	0.015721	0.000146	0.000243	0.051332	0.00047	0.40182	0.020202	0.93	0.973	1	1	0.975	0.999	0.888	0.974
rs922642	6.2439E-13	0.0516405	0.00718	0.0498616	0.008829	7.22909E-13	0.75038	0.22245	0.000379	0.345796	0.073598	3.8E-10	0.16624	0.3481	0.723	0.852	0.997	0.395	0.924	1	0.873	0.815
rs148477891	6.2477E-13	-0.083884	0.01166	-0.083884	0.011659	1.37176E-12	0.13926	0.387487	0.000799	0.000134	0.3746	3.1E-05	0.06063	0.008196	0.936	0.897	0.999	1	0.859	1	0.967	0.977
rs1233583	6.2772E-13	-0.084731	0.01178	-0.084731	0.011778	1.37813E-12	0.20469	0.505069	0.00034	0.000361	0.252413	6.6E-05	0.05183	0.002597	0.927	0.883	1	1	0.904	1	0.97	0.984
rs2702515	6.3095E-13	-0.04044	0.00562	-0.04044	0.005622	1.3851E-12	0.46424	0.022848	0.000579	0.000888	0.473715	9.2E-06	0.01641	0.173025	0.881	0.965	0.999	0.999	0.818	1	0.982	0.929
rs11728134	6.3134E-13	0.0404594	0.00562	0.0404594	0.005624	1.38595E-12	0.46669	0.02533	0.000609	0.000896	0.467533	8.7E-06	0.01553	0.170643	0.881	0.964	0.999	0.999	0.82	1	0.983	0.929
rs62099230	6.3205E-13	0.0368979	0.00513	0.0368979	0.005129	1.38748E-12	0.24537	0.496719	4.52E-05	0.117032	0.147281	6.3E-08	0.09469	0.07851	0.88	0.63	1	0.806	0.905	1	0.933	0.929
rs34817112	6.353E-13	-0.070481	0.0098	-0.070481	0.009799	1.3945E-12	0.14154	0.930014	2.44E-05	0.00025	0.206821	0.00035	0.10399	0.012116	0.932	0.788	1	1	0.912	0.999	0.95	0.975
rs13204572	6.3534E-13	-0.087029	0.0121	-0.090974	0.015475	1.39459E-12	0.49739	0.519239	0.000148	0.000199	0.053852	0.00042	0.14116	0.000278	0.886	0.882	1	1	0.972	0.999	0.945	0.99
rs374577630	6.3557E-13	-0.086951	0.01209	-0.086951	0.012089	1.39508E-12	0.32876	0.403796	0.000442	0.000291	0.103066	8.5E-05	0.09613	0.002076	0.911	0.901	0.999	1	0.957	1	0.959	0.985
rs62260720	6.3676E-13	0.0581336	0.00808	0.0581336	0.008083	1.39765E-12	0.23976	0.569179	0.000962	0.002591	0.004036	7.6E-07	0.70236	0.374888	0.902	0.849	0.998	0.997	0.993	1	0.773	0.879
rs2232429	6.3875E-13	-0.085537	0.01189	-0.085537	0.011893	1.40194E-12	0.18715	0.511233	0.000507	0.000289	0.165686	8E-05	0.05515	0.002268	0.932	0.886	0.999	1	0.936	1	0.97	0.985
rs62100766	6.4004E-13	0.036897	0.00513	0.036897	0.005131	1.40472E-12	0.23176	0.468847	5.58E-05	0.119018	0.163256	3.8E-08	0.09516	0.086899	0.881	0.616	1	0.797	0.894	1	0.931	0.924
rs62100778	6.4061E-13	0.0364479	0.00507	0.0362098	0.005429	1.40597E-12	0.13178	0.777237	0.000124	0.168092	0.094854	4.2E-08	0.1703	0.019652	0.912	0.702	1	0.728	0.935	1	0.906	0.961
rs2232426	6.4123E-13	-0.085484	0.01189	-0.085484	0.011887	1.40729E-12	0.18382	0.509878	0.000579	0.000249	0.14754	8.2E-05	0.06092	0.002198	0.933	0.887	0.999	1	0.942	1	0.969	0.985
rs7583384	6.4429E-13	-0.03925	0.00546	-0.042902	0.009054	1.08139E-12	0.61719	0.008419	8.73E-05	2.2E-06	0.214492	0.00411	0.00154	0.888232	0.844	0.972	1	1	0.898	0.976	0.993	0.747
rs12715437	6.4482E-13	-0.05811	0.00808	-0.05811	0.008081	1.41504E-12	0.25551	0.569205	0.000962	0.002523	0.004037	7.6E-07	0.7024	0.374907	0.899	0.849	0.998	0.997	0.993	1	0.773	0.878
rs1275513	6.4616E-13	0.0371805	0.00517	0.0371805	0.005171	1.41794E-12	0.21564	0.015924	0.000205	0.000189	0.045026	0.00049	0.36271	0.020927	0.93	0.974	1	1	0.977	0.999	0.898	0.974
rs11720705	6.4699E-13	-0.058111	0.00808	-0.058111	0.008082	1.41972E-12	0.26428	0.569205	0.000963	0.002471	0.004038	7.6E-07	0.70246	0.374909	0.898	0.849	0.998	0.997	0.993	1	0.772	0.878
rs1233604	6.4853E-13	-0.084441	0.01174	-0.084441	0.011744	1.42305E-12	0.15203	0.493718	0.00026	0.000436	0.322376	9.9E-05	0.02917	0.002522	0.935	0.884	1	0.999	0.88	1	0.978	0.984
rs9870858	6.4879E-13	-0.058104	0.00808	-0.058104	0.008081	1.42362E-12	0.25437	0.569205	0.000963	0.002542	0.004038	7.6E-07	0.70246	0.374908	0.9	0.849	0.998	0.997	0.993	1	0.773	0.878
rs7628207	6.5267E-13	-0.058097	0.00808	-0.058097	0.008081	1.43198E-12	0.25563	0.569205	0.000965	0.002524	0.004041	7.6E-07	0.70271	0.374909	0.899	0.849	0.998	0.997	0.993	1	0.773	0.878
rs9291634	6.577E-13	0.0404284	0.00562	0.0404284	0.005624	1.44284E-12	0.46648	0.025316	0.000616	0.0009	0.466437	8.9E-06	0.01551	0.171332	0.881	0.964	0.999	0.999	0.821	1	0.983	0.929
rs9295778	6.6148E-13	0.0780952	0.01087	0.0780952	0.010866	1.45099E-12	0.15715	0.295687	4.79E-05	0.002388	0.243098	7.3E-05	0.11978	0.013026	0.935	0.914	1	0.998	0.909	1	0.951	0.977
rs13093525	6.6257E-13	-0.058078	0.00808	-0.058078	0.008081	1.45335E-12	0.25795	0.570305	0.000995	0.002535	0.004055	7.4E-07	0.6988	0.37705	0.899	0.849	0.998	0.997	0.993	1	0.774	0.878
rs13212534	6.6702E-13	-0.088656	0.01234	-0.091905	0.015533	1.46294E-12	0.67506	0.524414	8.39E-05	7.08E-05	0.020602	0.00068	0.39538	0.000946	0.85	0.871	1	1	0.984	0.998	0.871	0.986
rs7621797	6.7134E-13	0.0580667	0.00808	0.0580667	0.008081	1.47227E-12	0.25546	0.569179	0.000962	0.002642	0.004036	7.6E-07	0.70236	0.374888	0.899	0.849	0.998	0.997	0.993	1	0.773	0.878
rs9835157	6.7134E-13	0.0580667	0.00808	0.0580667	0.008081	1.47227E-12	0.25546	0.569179	0.000962	0.002642	0.004036	7.6E-07	0.70236	0.374888	0.899	0.849	0.998	0.997	0.993	1	0.773	0.878
rs1659677	6.7576E-13	0.0371594	0.00517	0.0371594	0.005172	1.4818E-12	0.20899	0.01685	0.000163	0.000246	0.044986	0.00051	0.38634	0.019903	0.931	0.973	1	1	0.977	0.999	0.892	0.975
rs67381177	6.7603E-13	-0.085448	0.01189	-0.085448	0.011894	1.48237E-12	0.19215	0.512121	0.000537	0.000283	0.176155	7.5E-05	0.05637	0.002128	0.931	0.886	0.999	1	0.932	1	0.97	0.985
rs2439076	6.7777E-13	0.0371549	0.00517	0.0371549	0.005172	1.48612E-12	0.20758	0.016725	0.000164	0.000254	0.046946	0.00048	0.38349	0.020183	0.931	0.973	1	1	0.977	0.999	0.893	0.975
rs62100767	6.7788E-13	0.0368647	0.00513	0.0368647	0.005132	1.48637E-12	0.2362	0.459359	5.63E-05	0.117119	0.159399	4.1E-08	0.09851	0.087805	0.88	0.614	1	0.801	0.896	1	0.93	0.924
rs2232423	6.8062E-13	-0.085446	0.0119	-0.085446	0.011895	1.49228E-12	0.18787	0.515089	0.000506	0.000288	0.169391	8.2E-05	0.05577	0.002294	0.932	0.885	0.999	1	0.935	1	0.97	0.985
rs6426278	6.8089E-13	-0.043905	0.00611	-0.043905	0.006112	1.49286E-12	0.12312	0.153781	1.06E-05	0.001223	0.012437	0.00508	0.04119	0.052537	0.949	0.943	1	0.999	0.991	0.981	0.977	0.966
rs13007929	6.8283E-13	-0.039092	0.00544	-0.04307	0.009059	1.11051E-12	0.54926	0.006991	0.000119	2.04E-06	0.229828	0.00411	0.00147	0.974513	0.858	0.974	1	1	0.896	0.977	0.993	0.77
rs17408393	6.8914E-13	0.036843	0.00513	0.036843	0.00513	1.51065E-12	0.25502	0.498197	4.51E-05	0.124365	0.145028	6.4E-08	0.09149	0.079314	0.877	0.627	1	0.791	0.904	1	0.933	0.928
rs9829155	6.9073E-13	0.058039	0.00808	0.058039	0.008082	1.51408E-12	0.24503	0.569229	0.000964	0.002801	0.004038	7.5E-07	0.70241	0.374912	0.901	0.849	0.998	0.997	0.993	1	0.773	0.878
rs71548333	6.9091E-13	-0.085408	0.01189	-0.085408	0.011893	1.51445E-12	0.18784	0.512773	0.000526	0.000287	0.168746	8.1E-05	0.05555	0.002288	0.932	0.886	0.999	1	0.935	1	0.97	0.985
rs13201681	6.9091E-13	-0.085408	0.01189	-0.085408	0.011893	1.51447E-12	0.18784	0.512773	0.000526	0.000287	0.168746	8.1E-05	0.05555	0.002288	0.932	0.886	0.999	1	0.935	1	0.97	0.985
rs62260663	6.9116E-13	0.058039	0.00808	0.058039	0.008082	1.515E-12	0.24534	0.569179	0.000962	0.002798	0.004036	7.6E-07	0.70236	0.374888	0.901	0.849	0.998	0.997	0.993	1	0.773	0.878
rs35883476	6.915E-13	-0.085406	0.01189	-0.085406	0.011893	1.51572E-12	0.18786	0.512773	0.000526	0.000287	0.168746	8.1E-05	0.05555	0.002288	0.932	0.886	0.999	1	0.935	1	0.97	0.985
rs34546986	6.9272E-13	-0.085403	0.01189	-0.085403	0.011893	1.51837E-12	0.18786	0.512709	0.000526	0.000287	0.168709	8.1E-05	0.05569	0.002287	0.932	0.886	0.999	1	0.935	1	0.97	0.985
rs34871267	6.9272E-13	-0.085403	0.01189	-0.085403	0.011893	1.51837E-12	0.18786	0.512709	0.000526	0.000287	0.168709	8.1E-05	0.05569	0.002287	0.932	0.886	0.999	1	0.935	1	0.97	0.985
rs9836756	6.9532E-13	0.0580325	0.00808	0.0580325	0.008082	1.52397E-12	0.24554	0.569179	0.000962	0.002816	0.004036	7.6E-07	0.70236	0.374888	0.901	0.849	0.998	0.997	0.993	1	0.773	0.878
rs9851651	6.9532E-13	0.0580325	0.00808	0.0580325	0.008082	1.52397E-12	0.24554	0.569179	0.000962	0.002816	0.004036	7.6E-07	0.70236	0.374888	0.901	0.849	0.998	0.997	0.993	1	0.773	0.878
rs9851930	6.9532E-13	0.0580325	0.00808	0.0580325	0.008082	1.52397E-12	0.24554	0.569179	0.000962	0.002816	0.004036	7.6E-07	0.70236	0.374888	0.901	0.849	0.998	0.997	0.993	1	0.773	0.878
rs7637711	6.954E-13	0.0580324	0.00808	0.0580324	0.008082	1.52414E-12	0.24554	0.569179	0.000962	0.002816	0.004036	7.6E-07	0.70237	0.374888	0.901	0.849	0.998	0.997	0.993	1	0.773	0.878
rs9257800	7.0096E-13	-0.083604	0.01165	-0.083604	0.011645	1.53611E-12	0.13858	0.363355	0.00091	0.000161	0.39277	2.1E-05	0.07835	0.010669	0.935	0.899	0.998	1	0.852	1	0.961	0.977
rs77578399	7.0107E-13	-0.068066	0.00948	-0.071596	0.015218	9.11422E-13	0.05281	0.10564	3.42E-06	0.687659	0.00026	1E-05	0.09273	0.587194	0.927	0.899	1	0.096	0.998	1	0.917	0.742
rs7651078	7.0212E-13	0.051535	0.00718	0.0496998	0.008869	8.02871E-13	0.75747	0.211041	0.000406	0.340074	0.082005	3.7E-10	0.16238	0.369947	0.722	0.855	0.997	0.404	0.917	1	0.875	0.809
rs34160346	7.1017E-13	0.0367415	0.00512	0.0340885	0.008386	8.49555E-13	0.28337	0.596903	7.89E-06	0.624288	0.090788	2.6E-08	0.00292	0.836596	0.768	0.43	1	0.091	0.865	1	0.982	0.573
rs17487277	7.1023E-13	0.0368149	0.00513	0.0368149	0.005129	1.5561E-12	0.23924	0.499537	4.71E-05	0.11941	0.149997	6.6E-08	0.09553	0.079183	0.881	0.631	1	0.802	0.903	1	0.932	0.929
rs13197574	7.1028E-13	-0.085608	0.01193	-0.085608	0.011927	1.5562E-12	0.24144	0.603128	0.000525	0.000203	0.182713	4.3E-05	0.07518	0.008487	0.92	0.869	0.999	1	0.927	1	0.963	0.977
rs17417046	7.1377E-13	0.0367375	0.00512	0.0340818	0.00839	8.51683E-13	0.28374	0.596895	7.89E-06	0.625464	0.090743	2.6E-08	0.00292	0.836606	0.768	0.43	1	0.09	0.865	1	0.982	0.573
rs62097992	7.1489E-13	0.0367588	0.00512	0.0367588	0.005122	1.56613E-12	0.35614	0.378621	9.16E-05	0.113635	0.064712	4.7E-08	0.04718	0.180536	0.855	0.589	1	0.808	0.948	1	0.955	0.896

Table S3

rs62100771	7.1634E-13	0.0368128	0.00513	0.0368128	0.00513	1.56927E-12	0.22772	0.471646	5.39E-05	0.125006	0.155041	4.5E-08	0.09401	0.090872	0.881	0.616	1	0.787	0.898	1	0.931	0.923
rs146798531	7.1659E-13	0.0515149	0.00718	0.0496581	0.008893	8.14297E-13	0.75669	0.211034	0.000406	0.343629	0.082002	3.7E-10	0.16237	0.36993	0.721	0.855	0.997	0.399	0.917	1	0.874	0.809
rs200287431	7.3894E-13	0.0579696	0.00808	0.0579696	0.008083	1.61793E-12	0.29336	0.569179	0.000962	0.002686	0.004036	7.6E-07	0.70236	0.374888	0.892	0.848	0.998	0.997	0.993	1	0.772	0.877
rs17488727	7.4112E-13	0.0364637	0.00508	0.03604	0.005884	1.62262E-12	0.10063	0.750322	8.63E-05	0.183836	0.109959	8.2E-08	0.16913	0.01247	0.92	0.69	1	0.698	0.925	1	0.904	0.966
rs57450848	7.4118E-13	-0.059121	0.00824	-0.059687	0.009615	1.62276E-12	0.24725	0.13508	3.02E-05	0.313803	0.000384	6.2E-06	0.04488	0.504164	0.878	0.907	1	0.469	0.997	1	0.957	0.816
rs10502966	7.4216E-13	0.0364613	0.00508	0.0360325	0.005815	1.62486E-12	0.08881	0.697646	6.84E-05	0.192099	0.123935	8.7E-08	0.1371	0.01887	0.922	0.672	1	0.678	0.915	1	0.915	0.959
rs138583020	7.4422E-13	0.0367865	0.00513	0.0367865	0.00513	1.62931E-12	0.22614	0.471393	5.43E-05	0.125191	0.155604	4.7E-08	0.09419	0.090936	0.882	0.617	1	0.787	0.897	1	0.931	0.923
rs6885643	7.4865E-13	0.0377301	0.00526	0.0377301	0.005262	1.63885E-12	0.79024	0.143078	0.000614	0.000668	0.006265	1.9E-05	0.23391	0.291445	0.836	0.932	0.999	0.999	0.992	1	0.916	0.908
rs62099232	7.4882E-13	0.0367814	0.00513	0.0367814	0.00513	1.6392E-12	0.2276	0.471398	5.43E-05	0.125	0.155602	4.7E-08	0.09419	0.090932	0.881	0.617	1	0.788	0.898	1	0.931	0.923
rs13202688	7.5018E-13	-0.088527	0.01235	-0.091685	0.015494	1.64212E-12	0.66641	0.533142	7.31E-05	7.55E-05	0.021749	0.00077	0.4025	0.000973	0.851	0.869	1	1	0.983	0.998	0.869	0.986
rs62262722	7.5509E-13	0.0579455	0.00808	0.0579455	0.008083	1.65271E-12	0.29399	0.569179	0.000962	0.002748	0.004036	7.6E-07	0.70236	0.374888	0.892	0.848	0.998	0.997	0.993	1	0.772	0.877
rs35781323	7.5525E-13	-0.08554	0.01193	-0.08554	0.011932	1.65305E-12	0.24398	0.603926	0.000565	0.00022	0.18819	4E-05	0.06774	0.008718	0.919	0.869	0.999	1	0.926	1	0.965	0.977
rs6809879	7.5946E-13	0.0579421	0.00808	0.0579421	0.008083	1.6621E-12	0.28565	0.558724	0.0009	0.003062	0.004018	8E-07	0.6893	0.372958	0.894	0.851	0.998	0.997	0.993	1	0.777	0.879
rs4855882	7.6155E-13	-0.057904	0.00808	-0.057904	0.008078	1.6666E-12	0.23554	0.581523	0.000958	0.002728	0.004082	8.3E-07	0.71603	0.384374	0.903	0.847	0.998	0.997	0.993	1	0.769	0.876
rs66886492	7.6182E-13	-0.085502	0.01193	-0.085502	0.011929	1.6672E-12	0.24429	0.607184	0.000562	0.000217	0.191671	4.1E-05	0.06753	0.008684	0.919	0.868	0.999	1	0.924	1	0.965	0.977
rs72229355	7.6253E-13	-0.088574	0.01236	-0.091848	0.01562	1.66871E-12	0.6866	0.533135	7.32E-05	7.31E-05	0.021748	0.00077	0.40251	0.000973	0.848	0.869	1	1	0.983	0.998	0.868	0.986
rs71559072	7.6343E-13	-0.085503	0.01193	-0.085503	0.011929	1.67066E-12	0.24422	0.607204	0.00056	0.000219	0.190952	4.1E-05	0.06755	0.008681	0.919	0.868	0.999	1	0.925	1	0.965	0.977
rs35749575	7.6379E-13	-0.085498	0.01193	-0.085498	0.011929	1.67142E-12	0.24407	0.607171	0.000562	0.000219	0.19157	4.1E-05	0.06754	0.008685	0.919	0.868	0.999	1	0.924	1	0.965	0.977
rs6456834	7.6391E-13	0.0778253	0.01086	0.0778253	0.010858	1.67168E-12	0.15645	0.296802	5.34E-05	0.002617	0.266954	6.8E-05	0.10724	0.013108	0.935	0.913	1	0.998	0.901	1	0.954	0.976
rs72846780	7.641E-13	-0.085497	0.01193	-0.085497	0.011929	1.6721E-12	0.24404	0.60716	0.000561	0.000219	0.191552	4.1E-05	0.06754	0.008685	0.919	0.868	0.999	1	0.924	1	0.965	0.977
rs35098436	7.642E-13	-0.085497	0.01193	-0.085497	0.011929	1.6723E-12	0.24403	0.60715	0.000561	0.000219	0.191539	4E-05	0.06753	0.008685	0.919	0.868	0.999	1	0.924	1	0.965	0.977
rs34505829	7.6438E-13	-0.085497	0.01193	-0.085497	0.011929	1.67269E-12	0.24403	0.607154	0.000561	0.000219	0.191543	4.1E-05	0.06753	0.008685	0.919	0.868	0.999	1	0.924	1	0.965	0.977
rs34765154	7.6438E-13	-0.085497	0.01193	-0.085497	0.011929	1.67269E-12	0.24403	0.607154	0.000561	0.000219	0.191543	4.1E-05	0.06753	0.008685	0.919	0.868	0.999	1	0.924	1	0.965	0.977
rs6795944	7.6685E-13	0.0514439	0.00718	0.0498133	0.008674	9.21519E-13	0.74737	0.206517	0.000407	0.332597	0.082653	4.6E-10	0.18459	0.319854	0.729	0.859	0.997	0.421	0.919	1	0.866	0.827
rs34832585	7.6736E-13	-0.085489	0.01193	-0.085489	0.011928	1.67911E-12	0.24378	0.607014	0.000565	0.000221	0.191413	4E-05	0.06749	0.008685	0.919	0.868	0.999	1	0.924	1	0.965	0.977
rs13217984	7.6777E-13	-0.085489	0.01193	-0.085489	0.011929	1.67999E-12	0.24279	0.607144	0.000561	0.000222	0.191529	4E-05	0.06753	0.008685	0.92	0.868	0.999	1	0.924	1	0.965	0.977
rs75782365	7.6827E-13	-0.086216	0.01203	-0.086216	0.01203	1.68106E-12	0.39786	0.266579	0.000829	0.000115	0.10571	0.00011	0.09493	0.001759	0.903	0.921	0.999	1	0.956	1	0.959	0.986
rs34349668	7.7039E-13	-0.085269	0.0119	-0.085269	0.011899	1.68562E-12	0.20927	0.504245	0.000585	0.000273	0.178468	7.6E-05	0.05809	0.001943	0.928	0.886	0.999	1	0.932	1	0.969	0.985
rs2702536	7.7198E-13	-0.040329	0.00563	-0.040329	0.005628	1.68905E-12	0.46961	0.025668	0.000577	0.001044	0.487535	9.5E-06	0.01569	0.165706	0.88	0.963	0.999	0.999	0.813	1	0.982	0.93
rs4456576	7.7222E-13	0.0364379	0.00508	0.0359547	0.005909	1.68956E-12	0.09609	0.767622	8.61E-05	0.183864	0.123914	6.6E-08	0.19748	0.013299	0.92	0.691	1	0.696	0.916	1	0.892	0.964
rs62084747	7.7391E-13	0.0392379	0.00548	0.0388587	0.008195	1.6932E-12	0.26747	0.060334	4.76E-06	0.011198	0.264034	3.1E-05	0.33927	0.00103	0.566	0.936	1	0.987	0.86	1	0.855	0.985
rs55690788	7.7506E-13	-0.085258	0.0119	-0.085258	0.011898	1.69567E-12	0.20932	0.504195	0.000586	0.000274	0.178142	7.6E-05	0.0581	0.001943	0.928	0.886	0.999	1	0.932	1	0.969	0.985
rs138024639	7.7687E-13	-0.085254	0.0119	-0.085254	0.011898	1.69958E-12	0.20935	0.504194	0.000586	0.000275	0.17815	7.6E-05	0.05811	0.001943	0.928	0.886	0.999	1	0.932	1	0.969	0.985
rs976950	7.7775E-13	-0.040513	0.00565	-0.040513	0.005654	1.70147E-12	0.25404	0.017625	0.000732	0.000703	0.494558	1.2E-05	0.01041	0.409607	0.912	0.967	0.999	0.999	0.809	1	0.985	0.886
rs3794923	7.7945E-13	0.0367576	0.00513	0.0367576	0.00513	1.70512E-12	0.23637	0.471507	5.36E-05	0.129417	0.155231	4.6E-08	0.09405	0.090851	0.878	0.614	1	0.779	0.897	1	0.93	0.922
rs13207082	7.827E-13	-0.087445	0.01221	-0.087445	0.012206	1.7121E-12	0.23875	0.663863	0.000323	0.000319	0.117502	8.5E-05	0.09019	0.004456	0.921	0.862	1	1	0.95	1	0.959	0.981
rs71909458	7.8375E-13	-0.08847	0.01235	-0.091623	0.015506	1.71438E-12	0.67965	0.533135	7.32E-05	7.82E-05	0.021748	0.00077	0.40251	0.000973	0.849	0.869	1	1	0.983	0.998	0.868	0.986
rs72231003	7.8375E-13	-0.08847	0.01235	-0.091623	0.015506	1.71438E-12	0.67965	0.533135	7.32E-05	7.82E-05	0.021748	0.00077	0.40251	0.000973	0.849	0.869	1	1	0.983	0.998	0.868	0.986
rs34371502	7.8497E-13	-0.085481	0.01193	-0.085481	0.011933	1.71699E-12	0.24325	0.608847	0.000555	0.000233	0.184165	4.2E-05	0.06769	0.008614	0.92	0.868	0.999	1	0.927	1	0.965	0.977
rs1494949	7.8633E-13	-0.040309	0.00563	-0.040309	0.005627	1.71992E-12	0.44447	0.025219	0.000552	0.000909	0.519238	1E-05	0.01767	0.16083	0.882	0.963	0.999	0.999	0.799	1	0.981	0.93
rs11709734	7.8645E-13	-0.057871	0.00808	-0.057871	0.008079	1.72018E-12	0.23528	0.581239	0.000956	0.002784	0.004099	8.3E-07	0.72245	0.384099	0.902	0.846	0.998	0.997	0.993	1	0.767	0.876
rs1491985	7.8645E-13	-0.057871	0.00808	-0.057871	0.008079	1.72018E-12	0.23528	0.581239	0.000956	0.002784	0.004099	8.3E-07	0.72245	0.384099	0.902	0.846	0.998	0.997	0.993	1	0.767	0.876
rs17486305	7.87E-13	0.0367642	0.00513	0.0367642	0.005132	1.72137E-12	0.25015	0.484587	5.48E-05	0.126697	0.151429	4.7E-08	0.09519	0.09107	0.876	0.62	1	0.785	0.9	1	0.931	0.922
rs67092078	7.876E-13	-0.087491	0.01221	-0.087491	0.012214	1.72266E-12	0.23702	0.646835	0.000351	0.000267	0.126498	7.9E-05	0.1136	0.003281	0.921	0.864	1	1	0.947	1	0.952	0.982
rs13203816	7.9196E-13	-0.085465	0.01193	-0.085465	0.011932	1.73202E-12	0.24325	0.607589	0.000549	0.000233	0.185491	4.2E-05	0.0677	0.00867	0.92	0.868	0.999	1	0.927	1	0.965	0.977
rs34166054	7.9196E-13	-0.085465	0.01193	-0.085465	0.011932	1.73202E-12	0.24325	0.607589	0.000549	0.000233	0.185491	4.2E-05	0.0677	0.00867	0.92	0.868	0.999	1	0.927	1	0.965	0.977
rs34588114	7.9196E-13	-0.085465	0.01193	-0.085465	0.011932	1.73202E-12	0.24325	0.607589	0.000549	0.000233	0.185491	4.2E-05	0.0677	0.00867	0.92	0.868	0.999	1	0.927	1	0.965	0.977
rs34662244	7.9196E-13	-0.085465	0.01193	-0.085465	0.011932	1.73202E-12	0.24325	0.607589	0.000549	0.000233	0.185491	4.2E-05	0.0677	0.00867	0.92	0.868	0.999	1	0.927	1	0.965	0.977
rs35902873	7.9196E-13	-0.085465	0.01193	-0.085465	0.011932	1.73202E-12	0.24325	0.607589	0.000549	0.000233	0.185491	4.2E-05	0.0677	0.00867	0.92	0.868	0.999	1	0.927	1	0.965	0.977
rs35952432	7.9196E-13	-0.085465	0.01193	-0.085465	0.011932	1.73202E-12	0.24325	0.607589	0.000549	0.000233	0.185491	4.2E-05	0.0677	0.00867	0.92	0.868	0.999	1	0.927	1	0.965	0.977
rs71559070	7.9196E-13	-0.085465	0.01193	-0.085465	0.011932	1.73202E-12	0.24325	0.607589	0.000549	0.000233	0.185491	4.2E-05	0.0677	0.00867	0.92	0.868	0.999	1	0.927	1	0.965	0.977
rs72029806	7.9196E-13	-0.085465	0.01193	-0.085465	0.011932	1.73202E-12	0.24325	0.607589	0.000549	0.000233	0.185491	4.2E-05	0.0677	0.00867	0.92	0.868	0.999	1	0.927	1	0.965	0.977
rs7729632	7.9202E-13	0.0372849	0.00521	0.0372849	0.005206	1.73217E-12	0.71489	0.260151	0.000373	0.002088	0.00971	9.6E-06	0.24576	0.192999	0.847	0.912	0.999	0.998	0.99	1	0.913	0.925
rs6790568	7.9462E-13	0.057894	0.00808	0.057894	0.008083	1.73774E-12	0.28366	0.569179	0.000962	0.002976	0.004036	7.6E-07	0.70236	0.374888	0.894	0.848	0.998	0.997	0.993	1	0.773	0.878
rs13201308	7.9523E-13	-0.085437	0.01193	-0.085437	0.011929	1.73905E-12	0.2442	0.6197	0.000551	0.000223	0.19177	4.2E-05	0.06844	0.008432	0.919	0.866	0.999	1	0.924	1	0.964	0.977

Table S3

rs1842805	7.9551E-13	0.0514052	0.00718	0.0497293	0.008718	9.47066E-13	0.75534	0.206477	0.000407	0.336574	0.082762	4.6E-10	0.18453	0.319778	0.726	0.858	0.997	0.415	0.918	1	0.865	0.826
rs34661691	7.9576E-13	-0.08198	0.01145	-0.085196	0.013798	1.7402E-12	0.2407	0.344446	0.000361	0.000628	0.052276	0.00023	0.11701	0.000283	0.927	0.913	1	0.999	0.975	1	0.955	0.991
rs41266839	7.9639E-13	-0.086156	0.01203	-0.086156	0.01203	1.74155E-12	0.3982	0.266664	0.000839	0.000115	0.105915	0.00012	0.09522	0.001763	0.903	0.921	0.999	1	0.956	1	0.959	0.986
rs2072803	7.9759E-13	-0.063081	0.00881	-0.063081	0.008808	1.74414E-12	0.42863	0.213061	7.81E-05	0.003843	0.023592	0.00042	0.03692	0.004788	0.904	0.932	1	0.997	0.986	0.999	0.978	0.983
rs3129682	7.9843E-13	-0.083415	0.01165	-0.083415	0.011648	1.74595E-12	0.14044	0.33621	0.001042	0.000208	0.367193	2.5E-05	0.05928	0.006934	0.937	0.906	0.998	1	0.864	1	0.967	0.978
rs3130845	7.9896E-13	-0.083632	0.01168	-0.083632	0.011678	1.74708E-12	0.15065	0.395982	0.000655	0.000168	0.305034	6.2E-05	0.06057	0.00412	0.936	0.899	0.999	1	0.887	1	0.968	0.981
rs55834529	8.0545E-13	-0.087464	0.01222	-0.087464	0.012215	1.76103E-12	0.23662	0.644362	0.000315	0.000264	0.131269	8.9E-05	0.11364	0.003271	0.921	0.864	1	1	0.945	1	0.952	0.982
rs9468413	8.055E-13	0.0777233	0.01085	0.0777233	0.010855	1.76114E-12	0.15399	0.292295	5.13E-05	0.002373	0.266736	7.7E-05	0.12032	0.012781	0.935	0.914	1	0.998	0.901	1	0.95	0.976
rs62084693	8.057E-13	-0.040295	0.00563	-0.039321	0.00857	1.76157E-12	0.34731	0.060632	7.78E-06	0.021923	0.409707	5.6E-06	0.40353	0.000909	0.577	0.931	1	0.969	0.782	1	0.823	0.984
rs7405743	8.1003E-13	-0.040124	0.0056	-0.039345	0.008425	1.77089E-12	0.37773	0.02712	1.27E-05	0.015571	0.438002	5.3E-06	0.43555	0.001626	0.59	0.948	1	0.979	0.771	1	0.815	0.982
rs1431196	8.1017E-13	0.0367007	0.00513	0.0366372	0.005194	1.77119E-12	0.40921	0.369098	0.000115	0.114076	0.050146	4.2E-08	0.04819	0.195958	0.843	0.584	1	0.806	0.956	1	0.954	0.891
rs66462181	8.1107E-13	-0.087452	0.01222	-0.087452	0.012215	1.77312E-12	0.23662	0.644354	0.000315	0.000264	0.131282	9E-05	0.11363	0.003271	0.921	0.864	1	1	0.945	1	0.952	0.982
rs9257793	8.1301E-13	-0.081705	0.01141	-0.081705	0.011413	1.7773E-12	0.18292	0.309932	0.000517	0.000535	0.432677	1.4E-05	0.10837	0.006195	0.926	0.905	0.999	0.999	0.834	1	0.95	0.978
rs13195291	8.1621E-13	-0.085376	0.01193	-0.085376	0.011927	1.78418E-12	0.24324	0.606379	0.000599	0.000226	0.183941	4.1E-05	0.0674	0.008683	0.92	0.868	0.999	1	0.927	1	0.965	0.977
rs2072806	8.1733E-13	-0.063198	0.00883	-0.063198	0.008829	1.78658E-12	0.38103	0.195247	6.77E-05	0.005839	0.022491	0.00034	0.03984	0.007189	0.91	0.935	1	0.996	0.986	1	0.977	0.981
rs10786831	8.1888E-13	-0.039092	0.00546	-0.039092	0.005461	1.78991E-12	0.35191	0.045882	0.000345	0.178523	0.004472	2.5E-06	0.01458	0.158352	0.894	0.955	0.999	0.776	0.993	1	0.983	0.93
rs72839445	8.2295E-13	-0.087459	0.01222	-0.087459	0.01222	1.79865E-12	0.24295	0.690396	0.000309	0.000334	0.125985	8.4E-05	0.09517	0.003546	0.92	0.858	1	1	0.947	1	0.957	0.982
rs11663596	8.2309E-13	0.0376048	0.00525	0.0376048	0.005254	1.79896E-12	0.14593	0.70342	1.3E-05	0.013329	0.051751	4.3E-05	0.09394	0.221192	0.935	0.854	1	0.989	0.972	1	0.956	0.923
rs199771699	8.2643E-13	0.0483817	0.00676	0.0483817	0.00676	1.80614E-12	0.18888	0.019147	0.001218	0.068027	0.012798	8.5E-07	0.05745	0.212635	0.933	0.971	0.998	0.939	0.99	1	0.97	0.931
rs13200214	8.2765E-13	-0.085397	0.01193	-0.085397	0.011933	1.80875E-12	0.24431	0.607452	0.000535	0.000233	0.185918	4.5E-05	0.06773	0.00865	0.919	0.868	0.999	1	0.926	1	0.965	0.977
rs7503834	8.2786E-13	-0.040101	0.0056	-0.039404	0.008565	1.80921E-12	0.37807	0.03048	1.23E-05	0.016033	0.452904	6E-06	0.40426	0.001153	0.591	0.946	1	0.978	0.765	1	0.825	0.984
rs71557312	8.2839E-13	-0.088392	0.01235	-0.091617	0.015563	1.81036E-12	0.67083	0.533892	7.47E-05	7.5E-05	0.022211	0.0008	0.40414	0.000971	0.85	0.869	1	1	0.983	0.998	0.868	0.985
rs9379875	8.3359E-13	-0.063358	0.00885	-0.063358	0.008854	1.82153E-12	0.41724	0.24654	0.000101	0.011515	0.016071	0.00017	0.03077	0.004976	0.905	0.927	1	0.992	0.989	1	0.98	0.983
rs35942482	8.3361E-13	-0.063358	0.00885	-0.063358	0.008854	1.82156E-12	0.41724	0.24654	0.000101	0.011516	0.016071	0.00017	0.03077	0.004976	0.905	0.927	1	0.992	0.989	1	0.98	0.983
rs35706035	8.3579E-13	0.0483719	0.00676	0.0483719	0.00676	1.82624E-12	0.18909	0.019127	0.001214	0.068638	0.012828	8.6E-07	0.05723	0.212824	0.933	0.971	0.998	0.939	0.99	1	0.97	0.931
rs3118361	8.4381E-13	-0.083688	0.0117	-0.083688	0.011698	1.84347E-12	0.15847	0.465373	0.000411	0.000224	0.33205	7.5E-05	0.06585	0.002736	0.933	0.887	0.999	1	0.876	1	0.965	0.983
rs13214169	8.4675E-13	-0.079437	0.0111	-0.085979	0.014796	1.84979E-12	0.34482	0.374764	0.00014	4.28E-05	0.012252	0.00431	0.08408	0.001382	0.911	0.907	1	1	0.99	0.984	0.963	0.987
rs13197176	8.4978E-13	-0.085328	0.01193	-0.085328	0.011929	1.85631E-12	0.24394	0.600692	0.000548	0.000264	0.179726	4.4E-05	0.06691	0.008636	0.92	0.87	0.999	1	0.929	1	0.965	0.977
rs3117425	8.5385E-13	-0.083006	0.01161	-0.083006	0.011606	1.86504E-12	0.12089	0.448697	0.001034	0.000134	0.365424	3.4E-05	0.05255	0.010645	0.94	0.888	0.998	1	0.863	1	0.969	0.977
rs114701812	8.5401E-13	0.0793394	0.01109	0.0824785	0.01465	1.8654E-12	0.75485	0.340605	0.004168	0.022323	0.001164	1.5E-06	0.00085	0.261002	0.752	0.894	0.987	0.979	0.997	1	0.995	0.908
rs7717562	8.609E-13	0.0376876	0.00527	0.0376876	0.00527	1.88019E-12	0.95697	0.162249	9.6E-05	0.000745	0.008584	6E-05	0.27728	0.375078	0.784	0.923	1	0.999	0.99	1	0.898	0.886
rs9379873	8.6437E-13	-0.063192	0.00884	-0.063192	0.008837	1.88763E-12	0.37268	0.231534	6.81E-05	0.007474	0.028257	0.00028	0.02699	0.007574	0.911	0.93	1	0.995	0.984	1	0.981	0.981
rs17528178	8.655E-13	-0.088265	0.01234	-0.09149	0.015564	1.89006E-12	0.68611	0.529667	7.64E-05	7.59E-05	0.021846	0.00081	0.40323	0.000977	0.848	0.869	1	1	0.983	0.998	0.868	0.985
rs113722340	8.656E-13	0.0367447	0.00514	0.0367447	0.005139	1.89029E-12	0.72095	0.372937	0.000755	0.000372	0.009058	4.3E-06	0.55633	0.388845	0.823	0.878	0.998	0.999	0.988	1	0.812	0.874
rs3117427	8.6953E-13	-0.08313	0.01163	-0.08313	0.011627	1.89871E-12	0.12601	0.45338	0.000824	0.000155	0.358578	3.7E-05	0.0612	0.007666	0.938	0.887	0.999	1	0.866	1	0.966	0.977
rs7714971	8.8191E-13	0.0383799	0.00537	0.0383799	0.005369	1.9253E-12	0.84484	0.826372	0.000536	0.000552	0.045473	2.6E-06	0.13905	0.20594	0.748	0.807	0.999	0.999	0.968	1	0.93	0.909
rs9393718	8.8252E-13	-0.063269	0.00885	-0.063269	0.008852	1.9266E-12	0.40916	0.241069	9.77E-05	0.011653	0.018483	0.00018	0.02907	0.004763	0.906	0.928	1	0.992	0.988	1	0.98	0.983
rs13197175	8.8334E-13	-0.085269	0.01193	-0.085269	0.01193	1.92836E-12	0.24403	0.600379	0.00054	0.000219	0.218524	4E-05	0.07507	0.008532	0.918	0.868	0.999	1	0.914	1	0.962	0.977
rs17473118	8.8436E-13	0.0474308	0.00664	0.0473036	0.006746	1.64826E-12	0.42667	0.045056	0.00036	0.149159	0.163114	2.4E-09	0.42714	0.484811	0.843	0.937	0.999	0.758	0.896	1	0.815	0.828
rs9358939	8.866E-13	-0.063263	0.00885	-0.063263	0.008852	1.93535E-12	0.40926	0.241063	9.77E-05	0.011659	0.018489	0.00018	0.02907	0.004764	0.906	0.928	1	0.992	0.987	1	0.98	0.983
rs74652506	8.8991E-13	0.0474251	0.00664	0.0472902	0.006752	1.65702E-12	0.42703	0.045056	0.00036	0.14969	0.163108	2.4E-09	0.42713	0.484805	0.842	0.937	0.999	0.757	0.896	1	0.815	0.828
rs9830730	8.983E-13	-0.057746	0.00808	-0.057746	0.008082	1.96047E-12	0.25417	0.558583	0.000945	0.002386	0.004955	1E-06	0.72275	0.375014	0.899	0.85	0.998	0.997	0.992	1	0.768	0.878
rs9824435	8.9842E-13	-0.057746	0.00808	-0.057746	0.008082	1.96072E-12	0.25418	0.558583	0.000945	0.002386	0.004955	1E-06	0.72275	0.375014	0.899	0.85	0.998	0.997	0.992	1	0.768	0.878
rs1586827	8.9885E-13	-0.057746	0.00808	-0.057746	0.008082	1.96166E-12	0.2542	0.558582	0.000945	0.002388	0.004955	1E-06	0.72275	0.375008	0.899	0.85	0.998	0.997	0.992	1	0.768	0.878
rs2329021	9.0021E-13	-0.057748	0.00808	-0.057748	0.008082	1.96457E-12	0.25132	0.563543	0.000988	0.002267	0.005116	1E-06	0.7131	0.374526	0.9	0.85	0.998	0.998	0.992	1	0.771	0.878
rs1994942	9.0064E-13	-0.040519	0.00567	-0.040519	0.005671	1.9655E-12	0.32242	0.01301	0.000736	0.000859	0.600991	9.3E-06	0.00879	0.399358	0.896	0.969	0.999	0.999	0.76	1	0.986	0.882
rs147932924	9.0498E-13	0.0474149	0.00664	0.0472572	0.006773	1.68284E-12	0.42756	0.044645	0.000368	0.148089	0.161941	2.3E-09	0.43636	0.483706	0.842	0.937	0.999	0.76	0.896	1	0.812	0.829
rs7730659	9.0631E-13	0.0373814	0.00523	0.0373814	0.005233	1.97766E-12	0.62712	0.21539	0.000502	0.001858	0.01141	1.1E-05	0.19781	0.211191	0.863	0.922	0.999	0.998	0.989	1	0.928	0.924
rs34788973	9.1202E-13	-0.085185	0.01193	-0.085185	0.011925	1.98992E-12	0.23671	0.598131	0.000542	0.000303	0.180743	4.5E-05	0.06495	0.008398	0.921	0.87	0.999	1	0.929	1	0.966	0.977
rs75507005	9.1318E-13	0.0474026	0.00664	0.0472567	0.006762	1.69769E-12	0.42786	0.045081	0.000362	0.150377	0.163227	2.4E-09	0.42847	0.484981	0.842	0.937	0.999	0.756	0.896	1	0.814	0.828
rs7437974	9.1545E-13	-0.040175	0.00562	-0.040175	0.005625	1.99726E-12	0.46586	0.024356	0.000639	0.000929	0.495595	1.1E-05	0.01691	0.166968	0.88	0.964	0.999	0.999	0.81	1	0.982	0.929
rs78301985	9.1582E-13	0.0473996	0.00664	0.0472854	0.006735	1.71284E-12	0.41819	0.044326	0.000369	0.147428	0.163308	2.5E-09	0.43202	0.488901	0.845	0.938	0.999	0.763	0.896	1	0.814	0.828
rs1994943	9.1995E-13	-0.040507	0.00567	-0.040507	0.005672	2.00694E-12	0.31982	0.014291	0.000801	0.000847	0.581331	9.2E-06	0.00831	0.393518	0.897	0.968	0.998	0.999	0.77	1	0.987	0.884
rs1352889	9.2313E-13	-0.057715	0.00808	-0.057715	0.008082	2.01375E-12	0.25608	0.558615	0.000943	0.002485	0.004953	1E-06	0.72223	0.37492	0.899	0.85	0.998	0.997	0.992	1	0.768	0.878
rs3749971	9.2386E-13	-0.081024	0.01135	-0.081078	0.011414	2.01531E-12	0.08339	0.558609	0.000747	0.0001	0.598797	3.1E-05	0.05955	0.008042	0.942	0.859	0.998	1	0.758	1	0.963	0.975

Table S3

rs7676255	9.2433E-13	-0.040503	0.00567	-0.040503	0.005672	2.01632E-12	0.31964	0.014299	0.000798	0.000846	0.582921	9.3E-06	0.00836	0.393707	0.897	0.968	0.998	0.999	0.769	1	0.986	0.884
rs1796520	9.2489E-13	-0.036158	0.00506	-0.036158	0.005063	2.01753E-12	0.18759	0.11957	3.55E-05	0.000513	0.268103	0.00024	0.1323	0.095949	0.929	0.941	1	0.999	0.9	1	0.947	0.949
rs62262672	9.2967E-13	0.0577075	0.00808	0.0577075	0.008082	2.02778E-12	0.256	0.558722	0.000943	0.002481	0.004954	1E-06	0.72236	0.374987	0.899	0.85	0.998	0.997	0.992	1	0.768	0.878
rs4855848	9.2986E-13	-0.057707	0.00808	-0.057707	0.008082	2.02818E-12	0.256	0.558563	0.000943	0.002482	0.004955	1E-06	0.72239	0.375005	0.899	0.85	0.998	0.997	0.992	1	0.768	0.878
rs4855849	9.2986E-13	-0.057707	0.00808	-0.057707	0.008082	2.02818E-12	0.256	0.558563	0.000943	0.002482	0.004955	1E-06	0.72239	0.375005	0.899	0.85	0.998	0.997	0.992	1	0.768	0.878
rs67035515	9.309E-13	-0.057706	0.00808	-0.057706	0.008082	2.03042E-12	0.256	0.558588	0.000944	0.002481	0.004956	1E-06	0.72241	0.375015	0.899	0.85	0.998	0.997	0.992	1	0.768	0.878
rs35155148	9.3094E-13	-0.057706	0.00808	-0.057706	0.008082	2.0305E-12	0.256	0.558589	0.000944	0.002481	0.004956	1E-06	0.72241	0.375015	0.899	0.85	0.998	0.997	0.992	1	0.768	0.878
rs4855833	9.3094E-13	-0.057706	0.00808	-0.057706	0.008082	2.0305E-12	0.256	0.558589	0.000944	0.002481	0.004956	1E-06	0.72241	0.375015	0.899	0.85	0.998	0.997	0.992	1	0.768	0.878
rs13096480	9.3114E-13	-0.057706	0.00808	-0.057706	0.008082	2.03092E-12	0.256	0.558589	0.000944	0.002481	0.004956	1E-06	0.72242	0.375016	0.899	0.85	0.998	0.997	0.992	1	0.768	0.878
rs9883000	9.3346E-13	-0.057703	0.00808	-0.057703	0.008082	2.03591E-12	0.256	0.558587	0.000945	0.002483	0.004955	1E-06	0.7224	0.375013	0.899	0.85	0.998	0.997	0.992	1	0.768	0.878
rs115638313	9.3435E-13	0.0473877	0.00664	0.0473539	0.006666	1.76576E-12	0.43444	0.044473	0.000353	0.147075	0.163982	2.6E-09	0.42365	0.495795	0.841	0.938	0.999	0.763	0.896	1	0.817	0.827
rs7633180	9.4023E-13	0.036352	0.00509	0.036352	0.005092	2.05041E-12	0.60191	0.122513	0.001094	0.000844	0.290088	1.6E-05	0.00491	0.065242	0.868	0.94	0.998	0.999	0.89	1	0.99	0.956
rs2131108	9.4362E-13	-0.05769	0.00808	-0.05769	0.008082	2.05769E-12	0.25657	0.558587	0.00095	0.002483	0.004965	1E-06	0.72259	0.375014	0.899	0.85	0.998	0.997	0.992	1	0.768	0.878
rs4855846	9.4732E-13	-0.057688	0.00808	-0.057688	0.008082	2.06562E-12	0.25417	0.563542	0.000988	0.002386	0.005116	1E-06	0.71309	0.374526	0.899	0.85	0.998	0.997	0.992	1	0.771	0.878
rs6446286	9.474E-13	-0.057688	0.00808	-0.057688	0.008082	2.0658E-12	0.25417	0.563542	0.000988	0.002386	0.005116	1E-06	0.7131	0.374526	0.899	0.85	0.998	0.997	0.992	1	0.771	0.878
rs4855845	9.4968E-13	-0.057686	0.00808	-0.057686	0.008082	2.07067E-12	0.25093	0.563317	0.000984	0.002434	0.005128	1E-06	0.71336	0.375021	0.9	0.85	0.998	0.997	0.992	1	0.771	0.878
rs6774202	9.517E-13	-0.057683	0.00808	-0.057683	0.008082	2.07501E-12	0.25417	0.56355	0.00099	0.002386	0.005122	1E-06	0.71346	0.374894	0.899	0.85	0.998	0.997	0.992	1	0.771	0.878
rs67040724	9.523E-13	-0.085111	0.01193	-0.085111	0.011925	2.0763E-12	0.23934	0.662673	0.000542	0.000294	0.180037	4.4E-05	0.06423	0.0083	0.92	0.86	0.999	1	0.928	1	0.966	0.977
rs2186800	9.5316E-13	-0.036133	0.00506	-0.035733	0.006001	2.07815E-12	0.36674	0.035652	3.09E-05	0.000167	0.601396	1.6E-05	0.44753	0.088921	0.827	0.933	1	1	0.286	1	0.769	0.912
rs742090	9.5382E-13	-0.036139	0.00506	-0.036139	0.005064	2.07956E-12	0.18088	0.106103	3.49E-05	0.000695	0.269638	0.00022	0.13022	0.091957	0.931	0.944	1	0.999	0.9	1	0.948	0.95
rs10452032	9.5746E-13	-0.057676	0.00808	-0.057676	0.008082	2.08737E-12	0.25417	0.563542	0.000992	0.002386	0.005118	1E-06	0.71315	0.37455	0.899	0.85	0.998	0.997	0.992	1	0.771	0.878
rs9358938	9.5815E-13	-0.062923	0.00882	-0.062923	0.008817	2.08883E-12	0.38036	0.191518	6.82E-05	0.005833	0.024236	0.00034	0.04446	0.007815	0.91	0.936	1	0.996	0.985	1	0.975	0.981
rs4855885	9.6038E-13	-0.057673	0.00808	-0.057673	0.008082	2.09361E-12	0.25416	0.564038	0.000992	0.002385	0.005121	1E-06	0.7135	0.374901	0.899	0.85	0.998	0.997	0.992	1	0.771	0.878
rs1078341	9.6174E-13	-0.057671	0.00808	-0.057671	0.008082	2.09653E-12	0.25417	0.56355	0.000994	0.002386	0.005124	1E-06	0.71352	0.374919	0.899	0.85	0.998	0.997	0.992	1	0.771	0.878
rs13197633	9.6719E-13	-0.085129	0.01193	-0.085129	0.011931	2.10821E-12	0.24317	0.607108	0.000628	0.000241	0.183375	4.4E-05	0.06832	0.008372	0.92	0.869	0.999	1	0.928	1	0.965	0.977
rs35594666	9.7121E-13	-0.039995	0.00561	-0.039256	0.008278	2.11683E-12	0.40491	0.028614	1.24E-05	0.016855	0.426299	6.2E-06	0.44471	0.001708	0.604	0.948	1	0.978	0.78	1	0.815	0.982
rs8078543	9.7365E-13	-0.039968	0.0056	-0.039274	0.008591	2.12206E-12	0.37751	0.030337	1.28E-05	0.016665	0.459777	6.5E-06	0.40634	0.001133	0.591	0.946	1	0.978	0.762	1	0.825	0.983
rs6796823	9.7608E-13	-0.042998	0.00603	-0.042998	0.006027	2.12727E-12	0.67343	0.497549	0.003041	0.003988	0.025382	1.7E-07	0.068	0.129039	0.728	0.865	0.991	0.996	0.98	1	0.958	0.931
rs35072899	9.7847E-13	-0.084793	0.01189	-0.084793	0.011887	2.13238E-12	0.16145	0.571502	0.000603	0.000311	0.210497	5.9E-05	0.06415	0.003713	0.934	0.875	0.999	1	0.92	1	0.967	0.982
rs13214023	9.7954E-13	-0.084694	0.01187	-0.084694	0.011873	2.13469E-12	0.24474	0.526947	0.000642	0.000242	0.159193	8.4E-05	0.04702	0.004545	0.922	0.883	0.999	1	0.938	1	0.973	0.981
rs5812377	9.8825E-13	0.038762	0.00543	0.038762	0.005435	2.15335E-12	0.72344	0.963036	2.54E-05	5.02E-06	0.446398	0.00015	0.12375	0.254846	0.663	0.715	1	1	0.75	1	0.912	0.866
rs11663824	9.8828E-13	0.0365861	0.00513	0.0365861	0.00513	2.15341E-12	0.2406	0.473621	6.11E-05	0.127207	0.168342	4.5E-08	0.09626	0.099461	0.876	0.616	1	0.784	0.89	1	0.929	0.918
rs2315506	1.0006E-12	-0.040444	0.00567	-0.040444	0.005672	2.17971E-12	0.33827	0.014266	0.000769	0.000813	0.616444	9E-06	0.01054	0.353334	0.893	0.967	0.998	0.999	0.754	1	0.984	0.89
rs13202295	1.0007E-12	-0.085348	0.01197	-0.085348	0.01197	2.18004E-12	0.19736	0.663779	0.000376	0.000572	0.173526	5.6E-05	0.06803	0.004607	0.927	0.862	0.999	0.999	0.931	1	0.965	0.981
rs7842714	1.0037E-12	0.0371923	0.00522	0.0367277	0.005585	2.15248E-12	0.57684	0.594236	9.09E-09	0.007108	0.203495	0.00022	0.89772	0.148368	0.783	0.612	1	0.988	0.853	0.999	0.622	0.887
rs11642529	1.0143E-12	0.0484802	0.0068	0.0484802	0.006801	2.20905E-12	0.22589	0.019148	0.001097	0.04908	0.016018	1.2E-06	0.0792	0.206314	0.928	0.971	0.998	0.96	0.988	1	0.964	0.932
rs9860285	1.0226E-12	-0.046283	0.00649	-0.046283	0.006494	2.17392E-12	0.84407	0.180087	0.0105	3.4E-05	0.043433	8.9E-07	0.18698	0.501407	0.809	0.915	0.944	1	0.97	1	0.917	0.858
rs9366656	1.0241E-12	-0.06309	0.00885	-0.06309	0.008852	2.23014E-12	0.38717	0.246541	0.000101	0.014632	0.016073	0.00017	0.03077	0.004977	0.909	0.927	1	0.99	0.988	1	0.98	0.983
rs62262675	1.0246E-12	0.057609	0.00808	0.057609	0.008083	2.23122E-12	0.29318	0.558717	0.000945	0.002523	0.004954	1E-06	0.7227	0.374987	0.891	0.849	0.998	0.997	0.992	1	0.767	0.877
rs11720542	1.0254E-12	-0.046279	0.00649	-0.046279	0.006493	2.17985E-12	0.84698	0.180094	0.010506	3.41E-05	0.043367	8.8E-07	0.18699	0.501391	0.808	0.915	0.944	1	0.97	1	0.917	0.858
rs6504576	1.0381E-12	0.0399181	0.0056	0.0392174	0.008597	2.26004E-12	0.3789	0.030332	1.28E-05	0.017736	0.459708	6.5E-06	0.40631	0.001134	0.592	0.946	1	0.976	0.763	1	0.825	0.983
rs62084696	1.0389E-12	-0.039917	0.0056	-0.039217	0.008597	2.26187E-12	0.37884	0.030337	1.28E-05	0.017726	0.459777	6.5E-06	0.40634	0.001133	0.592	0.946	1	0.976	0.763	1	0.825	0.983
rs11642526	1.04E-12	0.0484421	0.0068	0.0484421	0.006799	2.26413E-12	0.21198	0.019029	0.001132	0.052091	0.015908	1.2E-06	0.08046	0.191254	0.93	0.971	0.998	0.957	0.988	1	0.963	0.935
rs11305764	1.0414E-12	0.0366583	0.00515	0.0366583	0.005145	2.2671E-12	0.07185	0.129084	0.000777	0.024123	0.008757	4.3E-05	0.04685	0.007431	0.96	0.949	0.999	0.984	0.993	1	0.976	0.983
rs111481406	1.0432E-12	0.0484419	0.0068	0.0484419	0.006799	2.27098E-12	0.22757	0.019048	0.001123	0.049557	0.016051	1.3E-06	0.08023	0.189759	0.928	0.971	0.998	0.96	0.988	1	0.963	0.935
rs78363264	1.0448E-12	0.0472705	0.00663	0.0470871	0.006794	1.94092E-12	0.41823	0.043543	0.000384	0.149882	0.164368	2.6E-09	0.43849	0.496733	0.844	0.938	0.999	0.759	0.895	1	0.811	0.826
rs75236169	1.045E-12	0.0399288	0.0056	0.0393056	0.008575	2.27486E-12	0.3841	0.028817	1.27E-05	0.016857	0.458096	7.4E-06	0.39437	0.001142	0.596	0.947	1	0.978	0.765	1	0.83	0.984
rs143618681	1.0529E-12	-0.084633	0.01188	-0.084633	0.011881	2.29168E-12	0.1597	0.570533	0.000601	0.000324	0.209483	6E-05	0.06908	0.003655	0.934	0.875	0.999	1	0.92	1	0.965	0.982
rs17488580	1.0533E-12	0.0362149	0.00508	0.0357468	0.006029	2.29268E-12	0.08724	0.737548	8.38E-05	0.211397	0.127042	1E-07	0.1359	0.014029	0.921	0.679	1	0.651	0.912	1	0.914	0.963
rs56075693	1.0575E-12	-0.084626	0.01188	-0.084626	0.011881	2.30161E-12	0.15972	0.570564	0.000601	0.000324	0.209792	6E-05	0.06901	0.003655	0.934	0.875	0.999	1	0.92	1	0.965	0.982
rs62084691	1.0609E-12	0.0399206	0.0056	0.0393478	0.008557	2.30893E-12	0.40031	0.027402	1.27E-05	0.01832	0.443328	7.5E-06	0.39862	0.001122	0.604	0.949	1	0.976	0.774	1	0.83	0.984
rs1233580	1.0618E-12	-0.083937	0.01179	-0.083937	0.011785	2.31071E-12	0.22057	0.481844	0.000385	0.000361	0.244474	0.00012	0.038	0.002593	0.925	0.888	0.999	1	0.909	1	0.975	0.984
rs62262673	1.0624E-12	0.0575681	0.00808	0.0575681	0.008083	2.31207E-12	0.29519	0.558719	0.000944	0.002625	0.004954	1E-06	0.72236	0.374987	0.891	0.849	0.998	0.997	0.992	1	0.767	0.877
rs11710434	1.0647E-12	-0.046248	0.00649	-0.046248	0.006494	2.26408E-12	0.84397	0.180739	0.010511	3.42E-05	0.043713	9.2E-07	0.18741	0.500375	0.809	0.915	0.945	1	0.969	1	0.917	0.858
rs9881860	1.0684E-12	-0.046248	0.00649	-0.046248	0.006494	2.27254E-12	0.8493	0.18008	0.010495	3.58E-05	0.043503	8.9E-07	0.18699	0.501398	0.808	0.915	0.945	1	0.97	1	0.917	0.858

Table S3

rs138278759	1.0695E-12	-0.084937	0.01193	-0.084937	0.011927	2.32724E-12	0.236	0.607205	0.000536	0.000356	0.195061	4.2E-05	0.06639	0.008631	0.92	0.868	0.999	1	0.924	1	0.965	0.977
rs13218875	1.0716E-12	-0.084924	0.01193	-0.084924	0.011926	2.33178E-12	0.22949	0.655417	0.000655	0.000275	0.179703	4.7E-05	0.05657	0.008437	0.922	0.862	0.999	1	0.929	1	0.968	0.977
rs4880603	1.0729E-12	0.0399596	0.00561	0.0461798	0.008863	2.3345E-12	0.19217	0.000934	0.002214	0.052853	0.03551	2.1E-05	0.00504	0.009899	0.939	0.989	0.996	0.96	0.982	1	0.992	0.982
rs13190888	1.074E-12	-0.0846	0.01188	-0.0846	0.011881	2.33696E-12	0.15979	0.570546	0.0006	0.000324	0.209744	6.1E-05	0.06901	0.003655	0.934	0.875	0.999	1	0.92	1	0.965	0.982
rs34661125	1.0791E-12	-0.084592	0.01188	-0.084592	0.011881	2.34785E-12	0.15997	0.571236	0.000601	0.000324	0.210108	6.1E-05	0.069	0.003655	0.934	0.875	0.999	1	0.92	1	0.965	0.982
rs13199649	1.0793E-12	-0.085018	0.01194	-0.085018	0.011941	2.34831E-12	0.23278	0.604958	0.000559	0.000331	0.182048	4.8E-05	0.06521	0.007961	0.922	0.869	0.999	1	0.928	1	0.966	0.977
rs13193295	1.0844E-12	-0.084922	0.01193	-0.084922	0.011928	2.35922E-12	0.24318	0.606974	0.000547	0.000261	0.186863	5.3E-05	0.06798	0.008617	0.919	0.868	0.999	1	0.926	1	0.965	0.977
rs138234416	1.0847E-12	-0.084922	0.01193	-0.084922	0.011928	2.35981E-12	0.24319	0.606974	0.000547	0.000261	0.186865	5.3E-05	0.06798	0.008617	0.919	0.868	0.999	1	0.926	1	0.965	0.977
rs71546588	1.0847E-12	-0.084922	0.01193	-0.084922	0.011928	2.35981E-12	0.24319	0.606974	0.000547	0.000261	0.186865	5.3E-05	0.06798	0.008617	0.919	0.868	0.999	1	0.926	1	0.965	0.977
rs71559067	1.0847E-12	-0.084922	0.01193	-0.084922	0.011928	2.35981E-12	0.24319	0.606974	0.000547	0.000261	0.186865	5.3E-05	0.06798	0.008617	0.919	0.868	0.999	1	0.926	1	0.965	0.977
rs2393667	1.085E-12	-0.063	0.00885	-0.063	0.008849	2.36036E-12	0.37945	0.241063	9.77E-05	0.014777	0.018489	0.00018	0.02907	0.004764	0.91	0.928	1	0.99	0.987	1	0.98	0.983
rs4638	1.0853E-12	-0.039906	0.00561	-0.039131	0.008339	2.36101E-12	0.39068	0.028614	1.24E-05	0.018231	0.426299	6.2E-06	0.44471	0.001708	0.598	0.947	1	0.976	0.779	1	0.814	0.981
rs62084702	1.0853E-12	-0.039906	0.00561	-0.039131	0.008339	2.36101E-12	0.39068	0.028614	1.24E-05	0.018231	0.426299	6.2E-06	0.44471	0.001708	0.598	0.947	1	0.976	0.779	1	0.814	0.981
rs11185541	1.0856E-12	0.039543	0.00555	0.039543	0.005554	2.36176E-12	0.27533	0.803775	5.95E-05	0.027689	0.292246	3.4E-06	0.00978	0.119374	0.904	0.825	1	0.973	0.877	1	0.985	0.936
rs34273322	1.0857E-12	-0.062999	0.00885	-0.062999	0.008849	2.36192E-12	0.37948	0.241063	9.77E-05	0.014785	0.018489	0.00018	0.02907	0.004764	0.91	0.928	1	0.99	0.987	1	0.98	0.983
rs35453056	1.0877E-12	-0.039905	0.00561	-0.039129	0.00834	2.36618E-12	0.39046	0.028614	1.24E-05	0.018266	0.426299	6.2E-06	0.44471	0.001708	0.598	0.947	1	0.975	0.779	1	0.814	0.981
rs71537572	1.0896E-12	-0.084914	0.01193	-0.084914	0.011928	2.3703E-12	0.24052	0.606974	0.000547	0.000265	0.186865	5.3E-05	0.06798	0.008617	0.92	0.869	0.999	1	0.926	1	0.965	0.977
rs34950484	1.0905E-12	-0.084574	0.01188	-0.084574	0.011881	2.37225E-12	0.16252	0.57284	0.000605	0.00032	0.213452	6E-05	0.06843	0.00365	0.934	0.875	0.999	1	0.919	1	0.965	0.982
rs13191786	1.0911E-12	-0.084573	0.01188	-0.084573	0.011881	2.37339E-12	0.16251	0.57284	0.000605	0.00032	0.213452	6E-05	0.06843	0.00365	0.934	0.875	0.999	1	0.919	1	0.965	0.982
rs36005309	1.0919E-12	-0.084572	0.01188	-0.084572	0.011881	2.37515E-12	0.16249	0.57284	0.000605	0.000321	0.213452	6E-05	0.06843	0.00365	0.934	0.875	0.999	1	0.919	1	0.965	0.982
rs3117143	1.0939E-12	-0.083275	0.0117	-0.083275	0.011699	2.37942E-12	0.25059	0.406602	0.000558	0.000118	0.404323	5.9E-05	0.05986	0.007485	0.914	0.891	0.999	1	0.846	1	0.965	0.976
rs62084679	1.0943E-12	-0.039887	0.0056	-0.039261	0.008574	2.38043E-12	0.3857	0.029271	1.31E-05	0.016914	0.460131	7.5E-06	0.39739	0.001126	0.597	0.947	1	0.978	0.765	1	0.829	0.984
rs56189111	1.0954E-12	-0.084566	0.01188	-0.084566	0.011881	2.38263E-12	0.1624	0.57284	0.000605	0.000322	0.213452	6E-05	0.06843	0.00365	0.934	0.875	0.999	1	0.919	1	0.965	0.982
rs35436081	1.0956E-12	-0.079215	0.01113	-0.082942	0.013404	2.38311E-12	0.45739	0.345348	0.000104	5.39E-05	0.018301	0.00369	0.10394	0.002009	0.895	0.91	1	1	0.987	0.988	0.957	0.985
rs72854513	1.0959E-12	-0.084565	0.01188	-0.084565	0.011881	2.38376E-12	0.16239	0.57284	0.000605	0.000322	0.213452	6E-05	0.06843	0.00365	0.934	0.875	0.999	1	0.919	1	0.965	0.982
rs16891725	1.0982E-12	-0.062809	0.00882	-0.062809	0.008824	2.38872E-12	0.50943	0.339522	7.82E-05	0.012362	0.022421	0.00018	0.02423	0.004598	0.891	0.912	1	0.991	0.985	1	0.981	0.983
rs148418547	1.1095E-12	-0.084873	0.01193	-0.084873	0.011927	2.41276E-12	0.24041	0.600623	0.000572	0.000325	0.182356	4.7E-05	0.06549	0.008502	0.92	0.87	0.999	1	0.928	1	0.966	0.977
rs149583087	1.1095E-12	-0.084873	0.01193	-0.084873	0.011927	2.41276E-12	0.24041	0.600623	0.000572	0.000325	0.182356	4.7E-05	0.06549	0.008502	0.92	0.87	0.999	1	0.928	1	0.966	0.977
rs71559054	1.1095E-12	-0.084873	0.01193	-0.084873	0.011927	2.41276E-12	0.24041	0.600623	0.000572	0.000325	0.182356	4.7E-05	0.06549	0.008502	0.92	0.87	0.999	1	0.928	1	0.966	0.977
rs67662114	1.1187E-12	-0.08487	0.01193	-0.08487	0.011928	2.43242E-12	0.24307	0.606777	0.000548	0.000273	0.186785	5.3E-05	0.06795	0.008614	0.919	0.869	0.999	1	0.926	1	0.965	0.977
rs13216117	1.1205E-12	-0.084867	0.01193	-0.084867	0.011928	2.43634E-12	0.24306	0.606974	0.000547	0.000273	0.186865	5.3E-05	0.06798	0.008617	0.919	0.869	0.999	1	0.926	1	0.965	0.977
rs28360499	1.1205E-12	-0.084867	0.01193	-0.084867	0.011928	2.43634E-12	0.24306	0.606974	0.000547	0.000273	0.186865	5.3E-05	0.06798	0.008617	0.919	0.869	0.999	1	0.926	1	0.965	0.977
rs36101351	1.1205E-12	-0.084867	0.01193	-0.084867	0.011928	2.43634E-12	0.24306	0.606974	0.000547	0.000273	0.186865	5.3E-05	0.06798	0.008617	0.919	0.869	0.999	1	0.926	1	0.965	0.977
rs17750747	1.1218E-12	-0.08481	0.01192	-0.08481	0.011921	2.43913E-12	0.17	0.593473	0.000472	0.000632	0.143922	5.6E-05	0.09357	0.003467	0.933	0.874	0.999	0.999	0.942	1	0.958	0.982
rs35501037	1.1218E-12	-0.08481	0.01192	-0.08481	0.011921	2.43913E-12	0.17	0.593473	0.000472	0.000632	0.143922	5.6E-05	0.09357	0.003467	0.933	0.874	0.999	0.999	0.942	1	0.958	0.982
rs72847313	1.1218E-12	-0.08481	0.01192	-0.08481	0.011921	2.43913E-12	0.17	0.593473	0.000472	0.000632	0.143922	5.6E-05	0.09357	0.003467	0.933	0.874	0.999	0.999	0.942	1	0.958	0.982
rs11877496	1.1267E-12	0.0361579	0.00508	0.0361579	0.005083	2.18166E-12	0.33599	0.766991	0.001295	0.090659	0.085725	4.8E-09	0.02966	0.252086	0.877	0.725	0.996	0.876	0.946	1	0.969	0.894
rs35565446	1.1278E-12	-0.086881	0.01221	-0.086881	0.012213	2.45198E-12	0.2342	0.636824	0.000334	0.000303	0.131544	9.6E-05	0.12727	0.003539	0.921	0.865	1	1	0.945	1	0.948	0.982
rs4619804	1.1304E-12	0.0379688	0.00534	0.0379688	0.005337	2.45759E-12	0.97115	0.402084	7.24E-05	0.003853	0.357109	7E-06	0.04146	0.066397	0.777	0.876	1	0.996	0.843	1	0.967	0.946
rs56305452	1.1323E-12	-0.040992	0.00576	-0.041376	0.009729	2.46161E-12	0.74612	0.022644	5.86E-06	0.054238	0.714432	1.1E-05	0.22472	0.000228	0.687	0.951	1	0.915	0.651	1	0.884	0.989
rs62084701	1.1353E-12	-0.039871	0.00561	-0.039098	0.00834	2.46794E-12	0.39054	0.028614	1.27E-05	0.018234	0.427359	6.3E-06	0.44613	0.001709	0.599	0.947	1	0.976	0.779	1	0.813	0.981
rs62084704	1.1364E-12	-0.039872	0.00561	-0.039103	0.008332	2.4704E-12	0.3934	0.028614	1.27E-05	0.018343	0.427359	6.3E-06	0.44613	0.001709	0.6	0.947	1	0.975	0.779	1	0.814	0.981
rs12752	1.1435E-12	0.0398522	0.0056	0.0392289	0.008574	2.48544E-12	0.38563	0.029265	1.34E-05	0.016926	0.46116	7.6E-06	0.39869	0.001127	0.597	0.947	1	0.978	0.764	1	0.829	0.983
rs7214869	1.1442E-12	0.0398519	0.0056	0.0392285	0.008574	2.48696E-12	0.38561	0.029265	1.34E-05	0.016936	0.46116	7.6E-06	0.39869	0.001127	0.597	0.947	1	0.978	0.764	1	0.829	0.983
rs17411548	1.1488E-12	0.0364537	0.00513	0.0364537	0.005126	2.49676E-12	0.36834	0.400493	9.86E-05	0.132919	0.062788	5.5E-08	0.05261	0.183081	0.849	0.592	1	0.775	0.948	1	0.95	0.892
rs75756883	1.153E-12	-0.039837	0.0056	-0.039174	0.008054	2.5059E-12	0.36928	0.02295	1.87E-05	0.017951	0.421192	5.1E-06	0.35037	0.003002	0.599	0.952	1	0.977	0.788	1	0.848	0.979
rs35343279	1.1555E-12	-0.043579	0.00613	-0.043579	0.006129	2.5093E-12	0.10547	0.126126	1.32E-05	0.000925	0.01768	0.00839	0.02175	0.073789	0.951	0.947	1	0.999	0.988	0.962	0.983	0.96
rs1353307	1.1789E-12	-0.040306	0.00567	-0.040306	0.005671	2.56123E-12	0.32152	0.013782	0.000797	0.000865	0.612402	1.1E-05	0.00934	0.385041	0.896	0.968	0.998	0.999	0.757	1	0.985	0.885
rs4334749	1.1812E-12	-0.040305	0.00567	-0.040305	0.005671	2.56614E-12	0.32288	0.013788	0.000799	0.000857	0.612182	1.1E-05	0.00935	0.385151	0.895	0.968	0.998	0.999	0.757	1	0.985	0.885
rs5821444	1.1815E-12	-0.040811	0.00574	-0.041544	0.009683	2.56671E-12	0.74984	0.021245	7.94E-06	0.043613	0.64558	1.4E-05	0.23771	0.000169	0.701	0.954	1	0.939	0.695	1	0.886	0.991
rs58473556	1.1941E-12	-0.040296	0.00567	-0.040296	0.005671	2.59359E-12	0.32255	0.013813	0.000801	0.000859	0.612152	1.1E-05	0.00937	0.385594	0.896	0.968	0.998	0.999	0.758	1	0.985	0.885
rs9467632	1.1957E-12	-0.079541	0.01119	-0.086538	0.01526	2.32225E-12	0.42521	0.349684	0.000159	1.28E-05	0.019283	0.0059	0.08814	0.002171	0.898	0.908	1	1	0.986	0.974	0.961	0.985
rs11646401	1.2091E-12	0.0369427	0.0052	0.0369085	0.005701	2.62572E-12	0.3707	0.926546	3.36E-06	0.073549	0.169351	4.6E-05	0.00024	0.525187	0.874	0.785	1	0.905	0.911	1	0.996	0.845
rs78549997	1.2458E-12	0.0630234	0.00888	0.0630234	0.008876	2.70387E-12	0.77868	0.158674	0.001111	0.073433	0.006088	1.3E-07	0.09612	0.134549	0.749	0.922	0.997	0.917	0.991	1	0.948	0.93
rs7701853	1.2506E-12	0.0370529	0.00522	0.0370529	0.005219	2.71417E-12	0.82709	0.277876	0.000347	0.002007	0.007451	1.5E-05	0.28093	0.196526	0.827	0.907	0.999	0.998	0.991	1	0.902	0.922

Table S3

rs10209020	1.2732E-12	0.0399462	0.00563	0.0399462	0.005628	2.76248E-12	0.08865	0.012846	4.45E-06	0.032578	0.050569	0.00029	0.24437	0.179157	0.951	0.974	1	0.975	0.975	1	0.924	0.936
rs75429814	1.2741E-12	-0.042736	0.00602	-0.042736	0.006022	2.76442E-12	0.69493	0.020806	1.4E-06	0.033547	0.006509	0.00072	0.08194	0.486755	0.854	0.967	1	0.971	0.992	0.999	0.959	0.88
rs7749823	1.284E-12	-0.081478	0.01148	-0.083987	0.013308	2.78538E-12	0.23981	0.379057	0.000295	0.000916	0.040872	0.00035	0.11954	0.000365	0.927	0.908	1	0.999	0.979	1	0.954	0.99
rs7718040	1.2846E-12	0.037226	0.00525	0.037226	0.005246	2.78665E-12	0.88029	0.287056	6.94E-05	0.002292	0.010982	5.2E-05	0.23014	0.276327	0.817	0.904	1	0.998	0.988	1	0.914	0.906
rs77154381	1.286E-12	-0.039937	0.00563	-0.039937	0.005628	2.78982E-12	0.08827	0.012854	4.43E-06	0.033218	0.050653	0.00029	0.24433	0.178149	0.951	0.974	1	0.975	0.975	1	0.924	0.937
rs2274051	1.2912E-12	0.0365853	0.00516	0.0365853	0.005156	2.80074E-12	0.60675	0.773714	2.56E-05	0.00177	0.002463	0.00062	0.0086	0.322225	0.703	0.817	1	0.998	0.994	0.999	0.985	0.888
rs62381109	1.2959E-12	0.0376281	0.0053	0.0376281	0.005304	2.81093E-12	0.86786	0.133077	0.000132	0.000794	0.010384	7.9E-05	0.23947	0.408315	0.82	0.931	1	0.999	0.989	1	0.912	0.885
rs33932084	1.2979E-12	-0.084186	0.01187	-0.084186	0.011866	2.81512E-12	0.15476	0.560913	0.000776	0.000346	0.227449	4.5E-05	0.07198	0.004546	0.935	0.876	0.999	1	0.914	1	0.964	0.981
rs4955424	1.3037E-12	-0.046062	0.00649	-0.046062	0.006493	2.74998E-12	0.88505	0.183727	0.011263	3.45E-05	0.043382	9.5E-07	0.18841	0.505161	0.8	0.913	0.939	1	0.969	1	0.916	0.855
rs2235251	1.3122E-12	-0.062834	0.00886	-0.062834	0.008859	2.84558E-12	0.41732	0.226951	0.000122	0.011534	0.018077	0.0002	0.03253	0.005195	0.905	0.93	1	0.992	0.988	1	0.979	0.983
rs138693036	1.3126E-12	0.0632866	0.00892	0.0632866	0.008922	2.84638E-12	0.87603	0.207621	0.001459	0.066651	0.006023	1.3E-07	0.0745	0.135543	0.772	0.915	0.997	0.928	0.992	1	0.956	0.932
rs968365	1.3217E-12	-0.039858	0.00562	-0.039858	0.00562	2.86579E-12	0.44065	0.027947	0.000668	0.001007	0.455516	1.5E-05	0.01662	0.187072	0.885	0.962	0.999	0.999	0.829	1	0.982	0.926
rs546445407	1.3246E-12	-0.126701	0.01787	-0.126701	0.017866	2.87203E-12	0.3081	0.676946	1.63E-05	0.000915	0.003062	0.00218	0.00741	0.76122	0.902	0.849	1	0.999	0.994	0.993	0.986	0.826
rs56146709	1.3279E-12	-0.056851	0.00802	-0.05745	0.008377	2.38811E-12	0.13458	0.109953	0.000177	1.29E-06	0.101778	0.0055	0.04426	0.365442	0.941	0.945	1	1	0.956	0.978	0.973	0.904
rs3129173	1.3398E-12	-0.084504	0.01192	-0.084504	0.011919	2.90442E-12	0.17454	0.732462	0.000837	0.000107	0.403807	5.5E-05	0.04028	0.005811	0.925	0.841	0.999	1	0.843	1	0.971	0.977
rs7766531	1.3533E-12	-0.078667	0.0111	-0.085323	0.014858	2.93315E-12	0.38863	0.35929	0.000159	4.69E-05	0.012275	0.00499	0.08492	0.001428	0.905	0.909	1	1	0.99	0.981	0.962	0.987
rs118061440	1.3629E-12	-0.096957	0.01368	-0.096957	0.013679	2.95367E-12	0.75942	0.209783	9.04E-05	0.006766	0.17847	2.7E-05	0.01575	0.090738	0.842	0.923	1	0.995	0.926	1	0.983	0.949
rs182656281	1.3633E-12	-0.126643	0.01787	-0.126643	0.017868	2.95444E-12	0.31585	0.676467	1.63E-05	0.000924	0.00307	0.00218	0.00744	0.763434	0.901	0.849	1	0.999	0.994	0.993	0.986	0.825
rs73074316	1.3684E-12	-0.049414	0.00697	-0.049414	0.006972	2.9654E-12	0.91361	0.56872	1.46E-05	0.059888	0.051511	4.1E-06	0.13047	0.057166	0.762	0.849	1	0.927	0.965	1	0.934	0.949
rs35037868	1.4071E-12	-0.084779	0.01197	-0.084779	0.011969	3.04772E-12	0.19763	0.667312	0.000465	0.00054	0.177761	6.2E-05	0.06894	0.004719	0.927	0.861	0.999	0.999	0.93	1	0.965	0.98
rs7750960	1.4237E-12	-0.078596	0.0111	-0.085303	0.014891	3.07592E-12	0.38286	0.363579	0.000156	4.64E-05	0.01248	0.00523	0.08566	0.001439	0.906	0.908	1	1	0.99	0.98	0.962	0.987
rs2369818	1.4452E-12	0.0367844	0.0052	0.036751	0.005878	3.12896E-12	0.3632	0.951913	3.19E-06	0.072867	0.185777	5.5E-05	0.00021	0.514771	0.874	0.78	1	0.907	0.903	1	0.996	0.846
rs1624440	1.4544E-12	-0.035849	0.00506	-0.035849	0.005064	3.14849E-12	0.19995	0.101288	4.43E-05	0.000571	0.295906	0.00027	0.13071	0.092813	0.927	0.944	1	0.999	0.891	1	0.947	0.949
rs7233123	1.4549E-12	0.0361364	0.0051	0.0361364	0.005105	3.14951E-12	0.32679	0.571247	9.63E-05	0.132745	0.139292	4.7E-08	0.10409	0.084168	0.861	0.65	1	0.787	0.908	1	0.927	0.925
rs76887862	1.4709E-12	0.0469364	0.00663	0.0469364	0.006632	2.86755E-12	0.44005	0.0613	0.000306	0.151196	0.15027	4.2E-09	0.46478	0.54873	0.836	0.928	0.999	0.758	0.9	1	0.8	0.812
rs13202291	1.4815E-12	-0.084342	0.01192	-0.084342	0.011919	3.20615E-12	0.17014	0.592841	0.000519	0.000711	0.144065	6E-05	0.09373	0.00347	0.933	0.874	0.999	0.999	0.943	1	0.958	0.982
rs13193480	1.4816E-12	-0.084342	0.01192	-0.084342	0.011919	3.20629E-12	0.17014	0.592841	0.000519	0.000711	0.144065	6E-05	0.09373	0.00347	0.933	0.874	0.999	0.999	0.943	1	0.958	0.982
rs13193542	1.4816E-12	-0.084342	0.01192	-0.084342	0.011919	3.20629E-12	0.17014	0.592841	0.000519	0.000711	0.144065	6E-05	0.09373	0.00347	0.933	0.874	0.999	0.999	0.943	1	0.958	0.982
rs55836177	1.4859E-12	0.0469133	0.00663	0.0469133	0.00663	2.90673E-12	0.44166	0.061207	0.000293	0.14953	0.154979	4.3E-09	0.47589	0.552984	0.835	0.927	0.999	0.759	0.897	1	0.796	0.81
rs1233619	1.4915E-12	-0.082494	0.01166	-0.082832	0.011979	3.22739E-12	0.2044	0.474849	0.000418	0.000223	0.344572	0.00014	0.04878	0.001765	0.924	0.885	0.999	1	0.872	1	0.97	0.984
rs13212318	1.5008E-12	-0.084321	0.01192	-0.084321	0.011919	3.24708E-12	0.17007	0.597236	0.000519	0.000716	0.143871	6E-05	0.09379	0.003467	0.933	0.873	0.999	0.999	0.943	1	0.958	0.982
rs34064842	1.5031E-12	-0.084319	0.01192	-0.084319	0.011919	3.25202E-12	0.17006	0.597248	0.000518	0.000717	0.143747	6.1E-05	0.09385	0.003466	0.933	0.873	0.999	0.999	0.943	1	0.958	0.982
rs2702557	1.5141E-12	-0.039827	0.00563	-0.039827	0.005631	3.27549E-12	0.46997	0.026458	0.000723	0.001075	0.494746	1.2E-05	0.02053	0.166364	0.879	0.962	0.999	0.999	0.813	1	0.979	0.929
rs1416087	1.5163E-12	-0.040572	0.00574	-0.044133	0.007408	3.28013E-12	0.01985	0.084315	3.96E-05	0.010761	0.002577	0.00635	0.00454	0.100303	0.974	0.957	1	0.993	0.996	0.978	0.992	0.956
rs4144192	1.517E-12	-0.038643	0.00546	-0.0425	0.009186	2.3005E-12	0.6508	0.006772	0.000117	1.96E-06	0.213979	0.00601	0.00223	0.915956	0.838	0.972	1	1	0.898	0.962	0.992	0.753
rs2604543	1.521E-12	-0.039822	0.00563	-0.039822	0.005631	3.29013E-12	0.47086	0.026465	0.000712	0.001073	0.495365	1.2E-05	0.0205	0.165818	0.879	0.962	0.999	0.999	0.812	1	0.979	0.929
rs1416086	1.5352E-12	-0.040563	0.00574	-0.044124	0.007418	3.3203E-12	0.01955	0.084743	3.76E-05	0.011884	0.002556	0.0062	0.00457	0.100296	0.974	0.957	1	0.992	0.996	0.979	0.992	0.956
rs61742093	1.5528E-12	-0.084159	0.0119	-0.084159	0.011904	3.35771E-12	0.22459	0.571163	0.000685	0.000558	0.163586	4.8E-05	0.05787	0.007548	0.924	0.876	0.999	0.999	0.936	1	0.968	0.978
rs4643406	1.5533E-12	0.035926	0.00508	0.035926	0.005082	3.03319E-12	0.29527	0.812982	0.001185	0.103147	0.106019	6.3E-09	0.03218	0.235453	0.884	0.733	0.996	0.859	0.936	1	0.968	0.896
rs11873021	1.5581E-12	0.0362211	0.00512	0.0361999	0.005146	3.36902E-12	0.39693	0.312943	0.000152	0.096954	0.055702	5.7E-08	0.06425	0.202463	0.847	0.573	1	0.846	0.954	1	0.946	0.89
rs1919840	1.5598E-12	-0.038621	0.00546	-0.042456	0.009176	2.38265E-12	0.65935	0.006779	0.000118	2.02E-06	0.213895	0.00599	0.00224	0.917152	0.836	0.972	1	1	0.898	0.963	0.991	0.754
rs34448212	1.5622E-12	-0.03982	0.00563	-0.03982	0.005633	3.37775E-12	0.49694	0.027343	0.00099	0.000631	0.49418	1.3E-05	0.01802	0.182827	0.875	0.962	0.998	0.999	0.812	1	0.981	0.925
rs2788006	1.5647E-12	-0.040557	0.00574	-0.044297	0.007498	3.38294E-12	0.02092	0.08101	3.74E-05	0.012707	0.002274	0.00628	0.00426	0.10561	0.974	0.957	1	0.992	0.996	0.978	0.992	0.955
rs6795061	1.5896E-12	0.0375794	0.00532	0.0375794	0.005318	3.43587E-12	0.93167	0.340262	9.93E-05	0.004527	0.35993	6.6E-06	0.03421	0.080635	0.771	0.886	1	0.995	0.843	1	0.97	0.942
rs34691223	1.5902E-12	-0.084016	0.01189	-0.084016	0.01189	3.43729E-12	0.16433	0.59323	0.000441	0.000414	0.232707	8.1E-05	0.07147	0.004865	0.932	0.871	0.999	0.999	0.912	1	0.964	0.98
rs17405916	1.5958E-12	0.0468499	0.00663	0.0468499	0.00663	3.11188E-12	0.45584	0.060003	0.000297	0.151531	0.158155	4.4E-09	0.47469	0.547446	0.832	0.927	0.999	0.756	0.895	1	0.795	0.81
rs3135316	1.6013E-12	-0.082517	0.01168	-0.082517	0.011679	3.46087E-12	0.15018	0.447834	0.000545	0.000205	0.404447	9.4E-05	0.05908	0.003199	0.933	0.887	0.999	1	0.85	1	0.966	0.981
rs112539101	1.6257E-12	0.105656	0.01496	0.105656	0.014958	3.51257E-12	0.58017	0.489262	0.000176	0.133603	0.060568	3.2E-08	0.07666	0.7647	0.821	0.838	1	0.798	0.952	1	0.941	0.783
rs10496632	1.6263E-12	-0.038491	0.00545	-0.042603	0.009188	2.35768E-12	0.58642	0.006247	0.000148	1.72E-06	0.2173	0.00628	0.00224	0.961348	0.85	0.974	1	1	0.899	0.962	0.992	0.766
rs56201719	1.6317E-12	-0.038489	0.00545	-0.042602	0.009191	2.36235E-12	0.58946	0.006262	0.000149	1.71E-06	0.217101	0.00627	0.00224	0.961881	0.85	0.973	1	1	0.899	0.962	0.992	0.766
rs13195402	1.6344E-12	-0.084888	0.01202	-0.084888	0.012019	3.5311E-12	0.31968	0.284186	0.001357	0.000146	0.103606	0.00014	0.06988	0.002438	0.915	0.92	0.998	1	0.958	1	0.967	0.984
rs6729514	1.6347E-12	-0.038486	0.00545	-0.042596	0.009183	2.3744E-12	0.5861	0.006262	0.000149	1.73E-06	0.217096	0.00626	0.00225	0.961882	0.85	0.973	1	1	0.899	0.962	0.992	0.766
rs389419	1.6368E-12	-0.081336	0.01152	-0.081336	0.011517	3.53623E-12	0.15874	0.335628	0.000824	0.000485	0.39902	2.6E-05	0.07288	0.007634	0.931	0.904	0.999	0.999	0.853	1	0.962	0.977
rs2787969	1.6371E-12	-0.040518	0.00574	-0.044329	0.007524	3.53689E-12	0.02074	0.080577	3.91E-05	0.01254	0.002275	0.0064	0.00421	0.105069	0.974	0.957	1	0.992	0.996	0.978	0.992	0.955
rs7721615	1.6379E-12	0.0368564	0.00522	0.0368564	0.005219	3.53845E-12	0.81905	0.274814	0.000368	0.002296	0.007689	1.5E-05	0.29989	0.206868	0.828	0.906	0.999	0.998	0.99	1	0.897	0.92

Table S3

rs62170849	1.643E-12	-0.038485	0.00545	-0.042533	0.009097	2.41162E-12	0.58632	0.007037	0.000153	1.73E-06	0.204171	0.00624	0.00233	0.965662	0.851	0.973	1	1	0.905	0.963	0.992	0.768
rs34218844	1.6443E-12	-0.083786	0.01186	-0.083786	0.011865	3.55204E-12	0.15593	0.563256	0.000692	0.000389	0.214843	6.4E-05	0.06928	0.004492	0.935	0.877	0.999	0.999	0.919	1	0.965	0.981
rs1796521	1.6521E-12	-0.035786	0.00507	-0.035786	0.005068	3.56863E-12	0.19243	0.117959	4.23E-05	0.000657	0.264825	0.00028	0.14339	0.098409	0.928	0.941	1	0.999	0.902	1	0.944	0.948
rs56023784	1.6586E-12	0.0463326	0.00656	0.0459871	0.006896	2.9843E-12	0.33872	0.046804	0.000556	0.168228	0.107804	3.3E-09	0.51456	0.50411	0.859	0.936	0.998	0.735	0.924	1	0.787	0.823
rs10623191	1.6668E-12	-0.057373	0.00813	-0.057373	0.008127	3.59997E-12	0.20863	0.696771	0.000768	0.004352	0.00594	1.6E-06	0.6301	0.341165	0.909	0.834	0.998	0.996	0.991	1	0.8	0.886
rs76520479	1.6876E-12	0.0475194	0.00673	0.0475194	0.006733	3.64402E-12	0.15716	0.028275	0.001498	0.060558	0.023536	1.2E-06	0.06287	0.16649	0.939	0.967	0.998	0.95	0.985	1	0.968	0.939
rs12923444	1.6917E-12	0.0366173	0.00519	0.0366082	0.006026	3.6528E-12	0.36297	0.99911	2.93E-06	0.072478	0.168048	7.3E-05	0.00019	0.528076	0.874	0.773	1	0.908	0.911	1	0.996	0.844
rs35806784	1.6937E-12	-0.040491	0.00574	-0.044289	0.007519	3.65697E-12	0.02089	0.080773	3.95E-05	0.012698	0.002288	0.00643	0.00422	0.105102	0.974	0.957	1	0.992	0.996	0.978	0.992	0.955
rs2788009	1.6996E-12	-0.040478	0.00574	-0.044079	0.007432	3.66958E-12	0.01966	0.084387	3.98E-05	0.011997	0.002578	0.00636	0.00454	0.100299	0.974	0.957	1	0.992	0.996	0.978	0.992	0.956
rs10900742	1.7069E-12	0.0374753	0.00531	0.0374753	0.005311	3.6849E-12	0.98623	0.14498	0.000134	0.000588	0.010104	0.00011	0.23682	0.412519	0.793	0.927	1	0.999	0.988	1	0.91	0.881
rs2788008	1.7095E-12	-0.040484	0.00574	-0.044277	0.007517	3.69058E-12	0.02092	0.080821	3.96E-05	0.012707	0.002293	0.00644	0.00422	0.105122	0.974	0.957	1	0.992	0.996	0.978	0.992	0.955
rs7624323	1.7177E-12	0.0359327	0.00509	0.0359327	0.005093	3.70792E-12	0.60261	0.120968	0.00165	0.000844	0.285488	1.8E-05	0.00461	0.070921	0.869	0.94	0.997	0.999	0.893	1	0.99	0.954
rs5846999	1.7202E-12	0.0375244	0.00532	0.0375244	0.005318	3.71315E-12	0.92921	0.340013	0.000103	0.004575	0.362614	6.7E-06	0.03425	0.080639	0.771	0.886	1	0.995	0.843	1	0.97	0.942
rs6833049	1.7254E-12	-0.040026	0.00567	-0.040026	0.005673	3.72433E-12	0.32266	0.013067	0.000897	0.000897	0.647139	1.2E-05	0.00953	0.403014	0.894	0.967	0.998	0.999	0.743	1	0.985	0.88
rs1796522	1.7347E-12	-0.035729	0.00506	-0.035729	0.005065	3.74406E-12	0.18879	0.114646	4.37E-05	0.000667	0.29364	0.00028	0.13094	0.092816	0.928	0.941	1	0.999	0.892	1	0.947	0.949
rs150657497	1.7401E-12	0.0368159	0.00522	0.0368159	0.005219	3.75546E-12	0.82152	0.272274	0.000378	0.002224	0.007675	1.6E-05	0.29593	0.208941	0.827	0.907	0.999	0.998	0.99	1	0.898	0.919
rs4588383	1.7469E-12	0.0375127	0.00532	0.0375127	0.005318	3.76989E-12	0.93123	0.339997	0.000104	0.004599	0.362925	6.7E-06	0.03422	0.080755	0.771	0.886	1	0.995	0.843	1	0.97	0.942
rs112439757	1.7615E-12	0.041602	0.0059	0.041602	0.005899	3.80086E-12	0.85572	0.069432	0.000637	0.014017	0.137883	3.7E-07	0.10225	0.357246	0.822	0.946	0.999	0.988	0.937	1	0.949	0.893
rs10154992	1.795E-12	-0.043347	0.00615	-0.044248	0.00818	2.70796E-12	0.68146	0.074387	0.029319	1.39E-05	0.008149	8.6E-07	0.34921	0.910376	0.769	0.917	0.702	1	0.985	1	0.811	0.667
rs1233578	1.8261E-12	-0.076498	0.01086	-0.076498	0.010855	3.93775E-12	0.13745	0.285538	7.65E-05	0.003702	0.221155	0.00011	0.09494	0.015988	0.94	0.917	1	0.997	0.919	1	0.958	0.975
rs1417998	1.8291E-12	-0.080943	0.01149	-0.084311	0.013987	3.94418E-12	0.2411	0.374538	0.000303	0.000935	0.05012	0.0004	0.1343	0.000267	0.926	0.908	1	0.999	0.975	0.999	0.95	0.991
rs1529290	1.8503E-12	-0.038391	0.00545	-0.04254	0.009206	2.64366E-12	0.58619	0.006263	0.000157	1.72E-06	0.218544	0.00657	0.00224	0.962465	0.85	0.973	1	1	0.899	0.96	0.992	0.766
rs34937122	1.8738E-12	0.0389881	0.00554	0.0383746	0.008375	4.03878E-12	0.30482	0.081934	1.25E-05	0.016643	0.397117	1.4E-05	0.31417	0.000732	0.576	0.925	1	0.979	0.798	1	0.859	0.985
rs34432857	1.886E-12	-0.083954	0.01192	-0.083954	0.011921	4.06468E-12	0.17117	0.606096	0.000551	0.000775	0.13377	6.6E-05	0.10226	0.003453	0.933	0.872	0.999	0.999	0.946	1	0.956	0.982
rs6923139	1.8861E-12	-0.081596	0.01159	-0.081596	0.011586	4.06486E-12	0.62054	0.183058	0.000241	0.000584	0.031624	0.00034	0.19702	0.003497	0.873	0.932	1	0.999	0.981	1	0.932	0.982
rs34409918	1.8877E-12	-0.083953	0.01192	-0.083953	0.011921	4.06839E-12	0.17117	0.606131	0.000551	0.000776	0.133514	6.6E-05	0.10235	0.003452	0.933	0.872	0.999	0.999	0.946	1	0.956	0.982
rs28483507	1.8961E-12	0.0383108	0.00544	0.0394375	0.007673	4.08618E-12	0.39378	0.623517	6.47E-07	0.00341	0.265802	0.00314	0.01724	0.001733	0.879	0.718	1	0.997	0.882	0.987	0.979	0.984
rs12493769	1.8963E-12	0.0462088	0.00656	0.0458395	0.006918	3.39672E-12	0.35045	0.046481	0.00058	0.169661	0.108271	3.4E-09	0.5137	0.516969	0.855	0.935	0.998	0.734	0.923	1	0.787	0.82
rs62084742	1.9032E-12	0.0389767	0.00554	0.0383328	0.008424	4.10123E-12	0.29763	0.081467	1.2E-05	0.017909	0.397445	1.4E-05	0.31225	0.000728	0.573	0.925	1	0.977	0.797	1	0.859	0.985
rs66868086	1.9219E-12	-0.084332	0.01198	-0.084332	0.011979	4.14069E-12	0.20643	0.660924	0.000481	0.000621	0.186107	6.4E-05	0.071	0.00552	0.925	0.862	0.999	0.999	0.927	1	0.964	0.979
rs2076030	1.9246E-12	-0.062324	0.00885	-0.062324	0.008853	4.14645E-12	0.37948	0.221789	0.000125	0.014788	0.020717	0.00021	0.03423	0.004973	0.91	0.931	1	0.99	0.986	1	0.978	0.983
rs2491373	1.9485E-12	-0.040404	0.00574	-0.041374	0.006867	4.19708E-12	0.31339	0.135813	0.001191	0.267537	0.001538	1.2E-06	0.01365	0.073509	0.888	0.924	0.996	0.643	0.996	1	0.981	0.944
rs12953529	1.9761E-12	0.0361819	0.00514	0.0336093	0.008467	2.70482E-12	0.35719	0.499777	2.06E-05	0.55774	0.063619	4.5E-08	0.00227	0.952453	0.742	0.41	1	0.132	0.899	1	0.983	0.544
rs13004388	1.9889E-12	-0.038443	0.00546	-0.042306	0.00914	2.96786E-12	0.65894	0.007879	0.000136	1.98E-06	0.201423	0.00656	0.00223	0.917524	0.837	0.971	1	1	0.904	0.959	0.991	0.755
rs4296324	2.0376E-12	0.0354977	0.00505	0.0354977	0.005048	4.38551E-12	0.11022	0.829757	4.21E-05	0.01736	0.167393	2.2E-06	0.42642	0.11375	0.927	0.75	1	0.982	0.915	1	0.847	0.929
rs59956089	2.0517E-12	0.0409738	0.00583	0.0406823	0.008335	4.41541E-12	0.69509	0.055213	1.76E-05	0.010194	0.710484	1.8E-05	0.30724	0.000733	0.685	0.934	1	0.987	0.666	1	0.86	0.985
rs34107459	2.0553E-12	-0.083595	0.01189	-0.084034	0.01225	4.423E-12	0.65055	0.339952	0.000245	0.00015	0.065074	0.00056	0.1549	0.001305	0.866	0.906	1	1	0.968	0.999	0.941	0.985
rs55706012	2.0725E-12	-0.083587	0.01189	-0.083837	0.012097	4.45938E-12	0.66263	0.341396	0.000249	0.000166	0.059093	0.00054	0.15956	0.001343	0.864	0.906	1	1	0.97	0.999	0.94	0.985
rs190517593	2.0761E-12	-0.127081	0.01808	-0.127081	0.018079	4.46714E-12	0.3586	0.605282	2.23E-05	0.001611	0.001983	0.00197	0.00748	0.784903	0.895	0.859	1	0.998	0.995	0.994	0.986	0.823
rs17751184	2.077E-12	-0.083805	0.01192	-0.083805	0.011922	4.46884E-12	0.1723	0.600331	0.000552	0.000775	0.1544	6.5E-05	0.09748	0.003626	0.932	0.872	0.999	0.999	0.939	1	0.957	0.982
rs34718920	2.077E-12	-0.083805	0.01192	-0.083805	0.011922	4.46884E-12	0.1723	0.600331	0.000552	0.000775	0.1544	6.5E-05	0.09748	0.003626	0.932	0.872	0.999	0.999	0.939	1	0.957	0.982
rs35706352	2.077E-12	-0.083805	0.01192	-0.083805	0.011922	4.46884E-12	0.1723	0.600331	0.000552	0.000775	0.1544	6.5E-05	0.09748	0.003626	0.932	0.872	0.999	0.999	0.939	1	0.957	0.982
rs67101035	2.077E-12	-0.083805	0.01192	-0.083805	0.011922	4.46884E-12	0.1723	0.600331	0.000552	0.000775	0.1544	6.5E-05	0.09748	0.003626	0.932	0.872	0.999	0.999	0.939	1	0.957	0.982
rs71546575	2.077E-12	-0.083805	0.01192	-0.083805	0.011922	4.46884E-12	0.1723	0.600331	0.000552	0.000775	0.1544	6.5E-05	0.09748	0.003626	0.932	0.872	0.999	0.999	0.939	1	0.957	0.982
rs71559050	2.077E-12	-0.083805	0.01192	-0.083805	0.011922	4.46884E-12	0.1723	0.600331	0.000552	0.000775	0.1544	6.5E-05	0.09748	0.003626	0.932	0.872	0.999	0.999	0.939	1	0.957	0.982
rs13212651	2.0783E-12	-0.083804	0.01192	-0.083804	0.011922	4.47172E-12	0.1723	0.600331	0.000552	0.000775	0.154445	6.5E-05	0.09748	0.003627	0.932	0.872	0.999	0.999	0.939	1	0.957	0.982
rs35819751	2.0839E-12	-0.083799	0.01192	-0.083799	0.011922	4.48359E-12	0.17233	0.600292	0.000551	0.000776	0.154644	6.5E-05	0.09752	0.003627	0.932	0.872	0.999	0.999	0.939	1	0.957	0.982
rs13220522	2.0864E-12	-0.08357	0.01189	-0.083808	0.012086	4.48882E-12	0.66559	0.341943	0.000248	0.000165	0.059368	0.00054	0.15959	0.001351	0.863	0.906	1	1	0.97	0.999	0.94	0.985
rs34706883	2.0975E-12	-0.083769	0.01192	-0.083769	0.01192	4.51238E-12	0.17116	0.598789	0.000556	0.000829	0.152277	6.4E-05	0.09628	0.003596	0.932	0.873	0.999	0.999	0.94	1	0.957	0.982
rs4321259	2.1015E-12	0.0354722	0.00505	0.0354722	0.005048	4.52067E-12	0.10983	0.830914	3.99E-05	0.017953	0.170333	2.3E-06	0.41853	0.115131	0.927	0.75	1	0.981	0.914	1	0.849	0.929
rs13195401	2.1105E-12	-0.084433	0.01202	-0.084433	0.012016	4.53971E-12	0.32544	0.294588	0.001048	0.000121	0.119114	0.00021	0.0816	0.002579	0.913	0.917	0.998	1	0.952	1	0.963	0.984
rs62100765	2.1171E-12	0.0360424	0.00513	0.0360424	0.005129	4.55367E-12	0.24208	0.446757	8.28E-05	0.131963	0.169249	7.1E-08	0.09717	0.099785	0.875	0.611	1	0.785	0.89	1	0.928	0.917
rs118397959	2.1199E-12	-0.083762	0.01192	-0.083762	0.011921	4.55962E-12	0.17854	0.600473	0.000515	0.000875	0.154838	6.7E-05	0.09427	0.003349	0.931	0.872	0.999	0.999	0.939	1	0.958	0.982
rs9467704	2.1302E-12	-0.08137	0.01158	-0.08137	0.011582	4.58146E-12	0.60556	0.188899	0.00031	0.000836	0.029014	0.00024	0.17848	0.004563	0.875	0.932	1	0.999	0.982	1	0.937	0.981
rs408623	2.1526E-12	-0.08094	0.01152	-0.08094	0.011523	4.62886E-12	0.1613	0.33935	0.001001	0.000509	0.406611	2.4E-05	0.07485	0.007918	0.931	0.903	0.998	0.999	0.85	1	0.961	0.976

Table S3

rs4305732	2.1584E-12	-0.036531	0.0052	-0.035568	0.008634	3.11458E-12	0.86276	0.14876	0.008415	0.007577	0.001941	1.2E-08	0.43676	0.055482	0.66	0.884	0.909	0.985	0.993	1	0.363	0.926
rs67998226	2.179E-12	-0.083411	0.01188	-0.083411	0.011878	4.68454E-12	0.17483	0.61533	0.000513	0.00038	0.257411	8.5E-05	0.07023	0.004864	0.929	0.867	0.999	0.999	0.903	1	0.963	0.979
rs76473767	2.1826E-12	0.0477879	0.00681	0.0477879	0.006805	4.69209E-12	0.22336	0.01713	0.00188	0.058541	0.010881	1.3E-06	0.09305	0.21287	0.927	0.971	0.997	0.952	0.99	1	0.959	0.93
rs413670	2.1848E-12	-0.080919	0.01152	-0.080919	0.011523	4.69677E-12	0.16108	0.339346	0.001001	0.00052	0.406576	2.4E-05	0.07485	0.007918	0.931	0.903	0.998	0.999	0.85	1	0.961	0.976
rs2082923	2.1994E-12	-0.043182	0.00615	-0.044038	0.008126	3.37579E-12	0.71407	0.080398	0.029216	1.59E-05	0.007589	9.4E-07	0.35512	0.911742	0.763	0.914	0.71	1	0.986	1	0.81	0.669
rs11121	2.2111E-12	0.0360475	0.00513	0.0370655	0.005915	4.75233E-12	0.08901	0.019873	0.000124	6.82E-05	0.101478	0.00191	0.64603	0.015965	0.948	0.969	1	1	0.955	0.995	0.825	0.974
rs7526153	2.2191E-12	-0.042755	0.00609	-0.042755	0.00609	4.74685E-12	0.10842	0.141913	1.56E-05	0.00056	0.018356	0.0105	0.0378	0.099272	0.948	0.942	1	0.999	0.987	0.949	0.977	0.953
rs34878803	2.2206E-12	-0.083386	0.01188	-0.083386	0.011879	4.7725E-12	0.1693	0.58956	0.000515	0.000416	0.248265	8.5E-05	0.07452	0.004884	0.931	0.871	0.999	0.999	0.907	1	0.962	0.979
rs6446257	2.2586E-12	-0.04316	0.00615	-0.044017	0.008129	3.46665E-12	0.71336	0.080322	0.029326	1.59E-05	0.007592	9.6E-07	0.35583	0.909697	0.763	0.914	0.709	1	0.986	1	0.81	0.668
rs13194781	2.2623E-12	-0.08366	0.01192	-0.08366	0.011922	4.86055E-12	0.17289	0.600612	0.000559	0.000796	0.155623	6.8E-05	0.09781	0.003632	0.932	0.872	0.999	0.999	0.939	1	0.957	0.981
rs1245129	2.2963E-12	0.0356344	0.00508	0.0365638	0.006448	4.93227E-12	0.41771	0.756592	0.005552	0.000195	0.003263	8.4E-06	0.95786	0.007051	0.865	0.811	0.975	1	0.993	1	0.688	0.974
rs2604548	2.3108E-12	-0.039799	0.00567	-0.039799	0.005674	4.96295E-12	0.39605	0.092538	0.001326	0.001643	0.43784	6.4E-06	0.01101	0.179461	0.891	0.942	0.998	0.998	0.837	1	0.985	0.927
rs34396849	2.3163E-12	-0.083333	0.01188	-0.083333	0.011881	4.97443E-12	0.1748	0.587835	0.000505	0.000461	0.243612	8.4E-05	0.07478	0.004888	0.93	0.871	0.999	0.999	0.908	1	0.962	0.979
rs61733127	2.3248E-12	0.0475028	0.00677	0.0475028	0.006773	4.9925E-12	0.16434	0.021069	0.002121	0.060868	0.012945	1.3E-06	0.0918	0.179062	0.937	0.97	0.996	0.95	0.989	1	0.96	0.936
rs17695758	2.3249E-12	-0.083627	0.01192	-0.083627	0.011924	4.99258E-12	0.17284	0.602014	0.000568	0.000795	0.156161	6.8E-05	0.09825	0.003665	0.932	0.872	0.999	0.999	0.938	1	0.956	0.981
rs17763089	2.3263E-12	-0.083626	0.01192	-0.083626	0.011924	4.99556E-12	0.17284	0.602012	0.000568	0.000795	0.156169	6.8E-05	0.09825	0.003665	0.932	0.872	0.999	0.999	0.938	1	0.956	0.981
rs13199906	2.3274E-12	-0.083625	0.01192	-0.083625	0.011924	4.99797E-12	0.17284	0.602014	0.000568	0.000795	0.156174	6.8E-05	0.09826	0.003665	0.932	0.872	0.999	0.999	0.938	1	0.956	0.981
rs9330556	2.3295E-12	0.038853	0.00554	0.0381967	0.008044	5.00223E-12	0.33013	0.080635	1.27E-05	0.020038	0.359445	1.4E-05	0.3485	0.001081	0.591	0.926	1	0.975	0.818	1	0.85	0.983
rs35202262	2.331E-12	-0.08465	0.01207	-0.08465	0.01207	5.00546E-12	0.18079	0.626575	0.000576	0.00096	0.139616	6E-05	0.08794	0.004586	0.931	0.869	0.999	0.999	0.944	1	0.959	0.98
rs35339855	2.331E-12	-0.08465	0.01207	-0.08465	0.01207	5.00546E-12	0.18079	0.626575	0.000576	0.00096	0.139616	6E-05	0.08794	0.004586	0.931	0.869	0.999	0.999	0.944	1	0.959	0.98
rs425335	2.331E-12	-0.08465	0.01207	-0.08465	0.01207	5.00546E-12	0.18079	0.626575	0.000576	0.00096	0.139616	6E-05	0.08794	0.004586	0.931	0.869	0.999	0.999	0.944	1	0.959	0.98
rs34194357	2.3336E-12	-0.08362	0.01192	-0.08362	0.011924	5.01095E-12	0.17287	0.60201	0.000568	0.000796	0.156199	6.8E-05	0.09827	0.003665	0.932	0.872	0.999	0.999	0.938	1	0.956	0.981
rs36116761	2.3336E-12	-0.08362	0.01192	-0.08362	0.011924	5.01095E-12	0.17287	0.60201	0.000568	0.000796	0.156199	6.8E-05	0.09827	0.003665	0.932	0.872	0.999	0.999	0.938	1	0.956	0.981
rs6940007	2.3495E-12	-0.078243	0.01116	-0.085186	0.014897	5.04444E-12	0.33007	0.404592	0.000272	0.000101	0.008997	0.00438	0.0671	0.001365	0.914	0.904	1	1	0.991	0.986	0.968	0.987
rs12957162	2.3529E-12	-0.038122	0.00544	-0.038122	0.005437	4.82872E-12	0.48982	0.148303	3.03E-08	0.074328	0.445356	0.0005	0.00936	0.64454	0.848	0.912	1	0.9	0.793	0.998	0.982	0.817
rs13096411	2.3777E-12	-0.051049	0.00728	-0.055369	0.013476	2.05748E-12	0.05858	0.019109	0.000108	0.863186	0.06938	3E-07	0.0007	0.872907	0.919	0.947	0.999	0.063	0.927	1	0.993	0.651
rs2731465	2.3834E-12	-0.035923	0.00512	-0.039207	0.01009	5.11612E-12	0.00442	0.341969	0.000208	0.080826	0.041177	1.3E-05	6.4E-05	0.145278	0.972	0.865	1	0.876	0.965	1	0.997	0.452
rs6769821	2.389E-12	-0.043115	0.00615	-0.043989	0.00812	3.66806E-12	0.68043	0.080011	0.029697	1.62E-05	0.007629	1E-06	0.35843	0.897539	0.769	0.914	0.708	1	0.986	1	0.809	0.666
rs4955427	2.4032E-12	-0.04311	0.00615	-0.043933	0.008213	3.67098E-12	0.79097	0.080479	0.029235	1.57E-05	0.007612	9.4E-07	0.35544	0.912918	0.744	0.913	0.707	1	0.986	1	0.807	0.666
rs9517313	2.4191E-12	0.0356707	0.00509	0.0357331	0.005385	5.1913E-12	0.46712	0.383644	4.03E-07	0.006987	0.006304	0.00243	0.02025	0.685654	0.655	0.87	1	0.992	0.99	0.99	0.975	0.814
rs9867285	2.4219E-12	-0.043103	0.00615	-0.043953	0.00815	3.71729E-12	0.72667	0.080291	0.029488	1.62E-05	0.007601	9.8E-07	0.35772	0.904172	0.759	0.914	0.708	1	0.986	1	0.808	0.666
rs2655871	2.4238E-12	-0.03591	0.00512	-0.039196	0.010088	5.20118E-12	0.00442	0.341728	0.000209	0.080905	0.041083	1.3E-05	6.5E-05	0.145226	0.972	0.865	1	0.876	0.965	1	0.997	0.453
rs1119988	2.4295E-12	-0.035909	0.00512	-0.039195	0.010087	5.21334E-12	0.00442	0.341371	0.00021	0.080902	0.041092	1.3E-05	6.5E-05	0.145217	0.972	0.865	1	0.876	0.965	1	0.997	0.453
rs4955439	2.4318E-12	-0.043099	0.00615	-0.043958	0.008144	3.73158E-12	0.70929	0.080044	0.029607	1.61E-05	0.007626	1E-06	0.35821	0.899352	0.763	0.914	0.708	1	0.986	1	0.808	0.665
rs13205911	2.4372E-12	-0.083455	0.01191	-0.083455	0.01191	5.22955E-12	0.23784	0.581916	0.000615	0.000233	0.18641	0.00011	0.07747	0.007721	0.92	0.873	0.999	1	0.928	1	0.962	0.977
rs215890	2.4436E-12	0.0371954	0.00531	0.0371623	0.005666	5.243E-12	0.35226	0.893789	1.8E-06	0.076766	0.283265	0.00011	0.00039	0.32805	0.877	0.791	1	0.904	0.865	1	0.995	0.881
rs7626076	2.4626E-12	-0.04308	0.00615	-0.043954	0.008121	3.76464E-12	0.71489	0.080865	0.029947	1.51E-05	0.008009	1E-06	0.34478	0.907935	0.762	0.914	0.706	1	0.985	1	0.814	0.668
rs12204714	2.4702E-12	-0.036428	0.0052	-0.03543	0.00868	3.4634E-12	0.86274	0.151716	0.009008	0.007744	0.002123	1.2E-08	0.42756	0.05245	0.657	0.882	0.9	0.985	0.993	1	0.357	0.927
rs2655879	2.4931E-12	-0.035903	0.00513	-0.039129	0.010041	5.34727E-12	0.00523	0.342969	0.00022	0.079571	0.040892	1.2E-05	6.1E-05	0.147409	0.97	0.865	0.999	0.879	0.965	1	0.997	0.455
rs147681743	2.4962E-12	-0.043078	0.00615	-0.043914	0.008178	3.82687E-12	0.75675	0.080272	0.02947	1.62E-05	0.007618	9.7E-07	0.35737	0.905711	0.752	0.913	0.708	1	0.986	1	0.807	0.665
rs1910677	2.5023E-12	-0.0359	0.00513	-0.039131	0.010047	5.36672E-12	0.00515	0.343409	0.000219	0.079848	0.040924	1.2E-05	6.1E-05	0.147092	0.971	0.865	0.999	0.879	0.965	1	0.997	0.455
rs6903228	2.508E-12	-0.078025	0.01114	-0.084792	0.014842	5.37876E-12	0.32523	0.399154	0.000277	8.63E-05	0.014615	0.00452	0.0582	0.001191	0.915	0.905	1	1	0.989	0.986	0.97	0.987
rs7619016	2.52E-12	-0.043061	0.00615	-0.04391	0.00814	3.83603E-12	0.71557	0.080929	0.030121	1.54E-05	0.008042	1E-06	0.36138	0.910433	0.76	0.913	0.703	1	0.985	1	0.806	0.666
rs62085660	2.5231E-12	-0.038792	0.00554	-0.038331	0.007117	5.41064E-12	0.35501	0.088333	1.41E-05	0.025178	0.300601	1.3E-05	0.24568	0.002693	0.614	0.927	1	0.97	0.852	1	0.889	0.98
rs1352653	2.536E-12	-0.040186	0.00574	-0.041118	0.00684	5.43787E-12	0.31688	0.13841	0.001239	0.276466	0.001619	1.4E-06	0.01405	0.0752	0.887	0.922	0.996	0.634	0.996	1	0.981	0.943
rs77145152	2.5546E-12	0.0464481	0.00664	0.0464481	0.006635	5.04361E-12	0.41257	0.059375	0.000373	0.150521	0.16283	6.7E-09	0.46982	0.540444	0.844	0.929	0.999	0.77	0.896	1	0.803	0.817
rs78741618	2.558E-12	0.0358332	0.00512	0.0358332	0.005119	5.48415E-12	0.35594	0.566674	0.006162	0.000731	0.011243	2.4E-06	0.55716	0.02381	0.892	0.862	0.979	0.999	0.988	1	0.83	0.966
rs111815923	2.56E-12	-0.056274	0.00804	-0.056274	0.008039	4.92053E-12	0.06617	0.1293	0.000242	3.97E-06	0.074925	0.00622	0.04443	0.35962	0.956	0.942	1	1	0.966	0.977	0.973	0.907
rs62404522	2.5612E-12	0.051861	0.00741	0.0611365	0.016793	3.20111E-13	0.00093	0.169322	0.032161	3.71E-07	0.00016	0.00019	0.3083	0.427291	0.98	0.855	0.517	1	0.998	0.979	0.226	0.763
rs8086812	2.5652E-12	0.0357783	0.00511	0.0357783	0.005111	5.49923E-12	0.26614	0.392563	0.000111	0.123569	0.123519	6.1E-08	0.15626	0.08729	0.87	0.596	1	0.801	0.914	1	0.904	0.921
rs2099526	2.5746E-12	-0.043041	0.00615	-0.043886	0.008125	3.93676E-12	0.71684	0.081181	0.03002	1.58E-05	0.008016	1E-06	0.35991	0.909179	0.761	0.913	0.705	1	0.985	1	0.807	0.667
rs9467701	2.5771E-12	-0.081201	0.0116	-0.081201	0.011602	5.52436E-12	0.62756	0.190879	0.000273	0.000689	0.036075	0.00032	0.18286	0.004101	0.872	0.931	1	0.999	0.979	1	0.936	0.981
rs6902389	2.5825E-12	-0.081198	0.0116	-0.081198	0.011602	5.53571E-12	0.62744	0.190902	0.000273	0.00069	0.036154	0.00032	0.18286	0.004101	0.872	0.931	1	0.999	0.979	1	0.936	0.981
rs6902392	2.5838E-12	-0.081197	0.0116	-0.081197	0.011602	5.53841E-12	0.62743	0.190902	0.000273	0.00069	0.036156	0.00032	0.18287	0.004101	0.872	0.931	1	0.999	0.979	1	0.936	0.981
rs4955414	2.5857E-12	-0.043038	0.00615	-0.043896	0.008139	3.93767E-12	0.71519	0.080808	0.030314	1.57E-05	0.007971	1E-06	0.35711	0.907711	0.761	0.913	0.702	1	0.985	1	0.808	0.666

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rs6908156	2.586E-12	-0.081196	0.0116	-0.081196	0.011602	5.5431E-12	0.62743	0.190949	0.000273	0.00069	0.036159	0.00032	0.18288	0.004101	0.872	0.931	1	0.999	0.979	1	0.936	0.981
rs2496023	2.5998E-12	-0.040167	0.00574	-0.041114	0.006856	5.57222E-12	0.31544	0.138567	0.001244	0.279468	0.001619	1.4E-06	0.0141	0.075283	0.887	0.922	0.995	0.63	0.996	1	0.981	0.943
rs4955417	2.6082E-12	-0.043031	0.00615	-0.04388	0.008101	4.02346E-12	0.71806	0.08067	0.029398	1.51E-05	0.008222	1.1E-06	0.35654	0.908686	0.763	0.914	0.715	1	0.985	1	0.811	0.67
rs6778080	2.6154E-12	-0.043027	0.00615	-0.043919	0.008145	3.97941E-12	0.71624	0.081097	0.030503	1.52E-05	0.00776	1.1E-06	0.34536	0.905834	0.761	0.913	0.701	1	0.986	1	0.813	0.666
rs9467635	2.6421E-12	-0.077942	0.01114	-0.084621	0.014805	5.66134E-12	0.33577	0.399169	0.000277	9.05E-05	0.014618	0.00452	0.0582	0.001191	0.913	0.905	1	1	0.989	0.986	0.97	0.987
rs11130187	2.6479E-12	-0.043018	0.00615	-0.043878	0.008137	4.03298E-12	0.71445	0.080793	0.030424	1.57E-05	0.007991	1E-06	0.35758	0.90831	0.761	0.913	0.701	1	0.985	1	0.808	0.666
rs138334840	2.6542E-12	0.0464007	0.00663	0.0464007	0.006633	5.23474E-12	0.41645	0.058253	0.000384	0.149799	0.161058	6.8E-09	0.48179	0.531415	0.843	0.929	0.999	0.771	0.897	1	0.799	0.818
rs13199772	2.668E-12	-0.083391	0.01192	-0.083391	0.011923	5.71571E-12	0.17289	0.603885	0.000618	0.0008	0.156385	6.9E-05	0.0986	0.003729	0.932	0.872	0.999	0.999	0.938	1	0.956	0.981
rs13195728	2.6727E-12	-0.083339	0.01192	-0.083339	0.011916	5.72563E-12	0.24502	0.599934	0.000546	0.000883	0.153596	6.4E-05	0.0972	0.003615	0.92	0.871	0.999	0.999	0.939	1	0.956	0.981
rs74463492	2.6802E-12	0.046395	0.00663	0.046395	0.006634	5.26781E-12	0.41619	0.055652	0.000389	0.15196	0.159857	6.7E-09	0.48646	0.531192	0.843	0.93	0.999	0.768	0.897	1	0.797	0.818
rs79877168	2.6905E-12	0.0463868	0.00663	0.0463868	0.006633	5.30441E-12	0.41662	0.058121	0.000386	0.150203	0.160757	6.8E-09	0.4833	0.530609	0.843	0.929	0.999	0.771	0.897	1	0.799	0.819
rs35710087	2.7028E-12	0.0464414	0.00664	0.0464414	0.006642	5.33123E-12	0.41607	0.060242	0.000377	0.150621	0.16603	6.8E-09	0.4628	0.547845	0.843	0.928	0.999	0.77	0.894	1	0.805	0.815
rs4955443	2.7123E-12	-0.042995	0.00615	-0.043834	0.008115	4.15544E-12	0.71748	0.081164	0.030146	1.6E-05	0.008147	1E-06	0.36116	0.907954	0.761	0.913	0.706	1	0.985	1	0.807	0.667
rs6903015	2.7227E-12	-0.081116	0.0116	-0.081116	0.011602	5.83098E-12	0.62723	0.190941	0.000279	0.000687	0.03628	0.00033	0.18336	0.004109	0.872	0.931	1	0.999	0.979	1	0.936	0.981
rs11130186	2.7629E-12	-0.042958	0.00615	-0.043792	0.008102	4.19941E-12	0.6927	0.082294	0.031068	1.69E-05	0.008348	9.7E-07	0.35751	0.898381	0.764	0.912	0.695	1	0.985	1	0.807	0.662
rs10865752	2.7683E-12	0.0371805	0.00532	0.0371805	0.00532	5.92682E-12	0.98958	0.368845	0.000112	0.009187	0.293092	9.1E-06	0.02799	0.059417	0.794	0.887	1	0.992	0.877	1	0.974	0.951
rs7638475	2.777E-12	0.0371759	0.00532	0.0371759	0.00532	5.94518E-12	0.98774	0.367251	0.000112	0.008752	0.292674	9.2E-06	0.02851	0.059047	0.79	0.887	1	0.992	0.876	1	0.973	0.95
rs6808036	2.7796E-12	-0.042987	0.00615	-0.043849	0.008163	4.26377E-12	0.70424	0.079549	0.030197	1.67E-05	0.007683	1.1E-06	0.36125	0.884657	0.763	0.914	0.705	1	0.986	1	0.806	0.661
rs13207673	2.7898E-12	-0.078552	0.01124	-0.085323	0.015036	5.73442E-12	0.38965	0.389347	0.000342	2.26E-05	0.022282	0.00522	0.06223	0.002045	0.905	0.904	1	1	0.985	0.982	0.968	0.985
rs79621756	2.7962E-12	0.0463516	0.00663	0.0463516	0.006633	5.50085E-12	0.42031	0.058012	0.000393	0.151124	0.160075	6.9E-09	0.48621	0.529673	0.842	0.929	0.999	0.769	0.897	1	0.798	0.818
rs2491381	2.7967E-12	-0.040114	0.00574	-0.041215	0.006937	5.98654E-12	0.32626	0.130789	0.001341	0.264614	0.001269	1.8E-06	0.01485	0.069594	0.887	0.925	0.995	0.657	0.996	1	0.981	0.946
rs35942569	2.7968E-12	-0.082573	0.01182	-0.082573	0.011817	5.98682E-12	0.5799	0.411998	0.000355	0.000236	0.085115	0.00025	0.17747	0.002211	0.873	0.894	1	1	0.96	1	0.934	0.983
rs728423	2.7987E-12	-0.040086	0.00574	-0.041118	0.006961	5.99075E-12	0.31652	0.14145	0.001148	0.305253	0.002192	1.3E-06	0.01266	0.062016	0.883	0.919	0.996	0.591	0.995	1	0.981	0.946
rs34525648	2.8001E-12	-0.077829	0.01114	-0.084591	0.014832	5.99383E-12	0.32341	0.459134	0.000281	7.73E-05	0.015515	0.00496	0.04654	0.001435	0.914	0.897	1	1	0.988	0.984	0.974	0.986
rs77245213	2.8095E-12	0.0463452	0.00663	0.0463452	0.006633	5.51412E-12	0.40215	0.058062	0.000397	0.153173	0.159572	6.9E-09	0.48727	0.529941	0.845	0.929	0.999	0.766	0.897	1	0.797	0.818
rs62381112	2.8259E-12	0.0367883	0.00527	0.0367883	0.005266	6.04806E-12	0.77607	0.142281	0.000794	0.000817	0.005428	3.5E-05	0.35456	0.282064	0.835	0.93	0.999	0.999	0.992	1	0.885	0.907
rs56403804	2.8312E-12	0.0463433	0.00663	0.0463433	0.006634	5.55105E-12	0.4155	0.05805	0.000386	0.15553	0.160644	6.8E-09	0.48404	0.530083	0.842	0.929	0.999	0.762	0.896	1	0.797	0.817
rs4835267	2.8341E-12	0.0445526	0.00638	0.0463882	0.010469	6.06515E-12	0.86216	0.933329	2.5E-05	0.128631	0.234793	2.2E-05	0.00257	0.000289	0.779	0.746	1	0.813	0.873	1	0.99	0.989
rs13208096	2.841E-12	-0.08299	0.01188	-0.08299	0.011881	6.07977E-12	0.17639	0.597274	0.00058	0.000421	0.250253	9.1E-05	0.07365	0.004913	0.929	0.87	0.999	0.999	0.906	1	0.962	0.979
rs12544798	2.8601E-12	0.0446712	0.0064	0.0446712	0.006396	6.12E-12	0.14526	0.650251	0.000126	0.039999	0.033265	4.4E-06	0.08991	0.408815	0.931	0.856	1	0.965	0.977	1	0.954	0.888
rs138887541	2.8753E-12	-0.082971	0.01188	-0.082971	0.011881	6.15187E-12	0.17647	0.597462	0.000582	0.000422	0.2504	9.2E-05	0.07369	0.004916	0.929	0.87	0.999	0.999	0.906	1	0.962	0.979
rs3734523	2.8863E-12	-0.07779	0.01114	-0.084144	0.014589	6.17506E-12	0.32395	0.399502	0.000274	8.95E-05	0.014911	0.00489	0.05427	0.001456	0.915	0.905	1	1	0.989	0.984	0.971	0.986
rs35469757	2.8877E-12	0.0371424	0.00532	0.0371424	0.005319	6.17799E-12	0.93294	0.345737	0.00012	0.004602	0.385402	9.7E-06	0.03119	0.081867	0.772	0.885	1	0.995	0.835	1	0.971	0.941
rs9848614	2.9069E-12	0.0371499	0.00532	0.0371499	0.005321	6.21837E-12	0.9446	0.372477	0.000102	0.009063	0.283875	1E-05	0.02785	0.060058	0.782	0.885	1	0.992	0.879	1	0.974	0.95
rs74885759	2.935E-12	0.0356869	0.00511	0.0356869	0.005112	6.27732E-12	0.27432	0.395655	0.000115	0.123131	0.12618	6.5E-08	0.15811	0.088054	0.868	0.598	1	0.804	0.913	1	0.903	0.921
rs34569761	2.9513E-12	-0.081005	0.01161	-0.081005	0.011605	6.31154E-12	0.62016	0.192441	0.000293	0.000644	0.040187	0.00034	0.17764	0.004004	0.873	0.93	1	0.999	0.977	1	0.937	0.981
rs62084759	2.954E-12	-0.038764	0.00555	-0.038299	0.006833	6.31729E-12	0.39748	0.133678	1.64E-05	0.024503	0.364206	1.1E-05	0.21076	0.002726	0.626	0.914	1	0.971	0.824	1	0.899	0.979
rs149177087	2.9595E-12	0.0361772	0.00518	0.0361772	0.005183	6.32877E-12	0.26031	0.880677	0.00023	0.006913	0.091247	3.4E-06	0.37055	0.039211	0.902	0.773	1	0.994	0.95	1	0.872	0.956
rs9310571	2.9631E-12	0.0371347	0.00532	0.0371347	0.005321	6.33632E-12	0.94439	0.372372	0.000105	0.009057	0.28324	1E-05	0.02781	0.060496	0.782	0.886	1	0.992	0.879	1	0.974	0.95
rs12576197	2.9921E-12	0.0357174	0.00512	0.0357174	0.005119	6.3974E-12	0.36333	0.588035	0.00609	0.000679	0.013263	2.8E-06	0.54741	0.021511	0.891	0.859	0.98	0.999	0.987	1	0.833	0.967
rs11128895	3.0005E-12	0.03713	0.00532	0.03713	0.005321	6.41509E-12	0.94383	0.37762	0.000102	0.009012	0.282072	1E-05	0.02744	0.061937	0.782	0.885	1	0.992	0.88	1	0.974	0.949
rs9379882	3.0048E-12	-0.060905	0.00873	-0.060905	0.008729	6.42393E-12	0.85473	0.373639	0.000123	0.022247	0.051415	0.00011	0.00812	0.002773	0.839	0.902	1	0.983	0.973	1	0.987	0.983
rs215894	3.0134E-12	0.036349	0.00521	0.0363493	0.006773	6.44208E-12	0.54767	0.748876	7.08E-06	0.090922	0.17546	4.3E-05	0.00013	0.283149	0.834	0.715	1	0.876	0.901	1	0.996	0.881
rs17587226	3.0487E-12	-0.079123	0.01134	-0.086223	0.015944	6.01887E-12	0.45915	0.533491	0.000154	1.51E-05	0.028833	0.00695	0.10298	0.001532	0.89	0.879	1	1	0.981	0.97	0.954	0.985
rs75687318	3.0824E-12	-0.056489	0.0081	-0.056489	0.0081	5.72696E-12	0.11981	0.159853	0.000317	1.21E-06	0.093772	0.00467	0.08958	0.355365	0.942	0.935	1	1	0.959	0.985	0.959	0.905
rs9461223	3.1268E-12	-0.077652	0.01114	-0.084024	0.014621	6.68029E-12	0.32483	0.397306	0.000285	9.8E-05	0.014497	0.00472	0.06083	0.001316	0.914	0.905	1	1	0.989	0.985	0.969	0.987
rs9855153	3.1379E-12	0.0370908	0.00532	0.0370908	0.00532	6.70348E-12	0.94796	0.372079	0.000107	0.009153	0.286098	1.1E-05	0.02661	0.060598	0.783	0.886	1	0.992	0.878	1	0.974	0.95
rs3091404	3.1582E-12	0.036123	0.00518	0.0360875	0.005813	6.74609E-12	0.38861	0.970307	3.51E-06	0.10102	0.17005	7.3E-05	0.00031	0.383807	0.867	0.764	1	0.868	0.908	1	0.995	0.866
rs67491322	3.1604E-12	-0.079048	0.01134	-0.08611	0.015937	6.22998E-12	0.44953	0.536418	0.000154	1.45E-05	0.032006	0.00697	0.10199	0.001531	0.891	0.879	1	1	0.98	0.97	0.955	0.985
rs7406141	3.1694E-12	-0.038851	0.00557	-0.038285	0.009077	6.76959E-12	0.40732	0.017518	1.09E-05	0.015761	0.666249	2E-05	0.42724	0.001012	0.589	0.95	1	0.978	0.663	1	0.809	0.982
rs11128896	3.1781E-12	0.0370833	0.00532	0.0370833	0.005321	6.78782E-12	0.93541	0.37257	0.000105	0.009407	0.284217	1E-05	0.02788	0.060553	0.78	0.885	1	0.991	0.879	1	0.973	0.95
rs10502971	3.1794E-12	0.0355945	0.00511	0.0352455	0.005478	6.79065E-12	0.40302	0.306597	0.000151	0.123811	0.073525	8.7E-08	0.03303	0.288617	0.837	0.559	1	0.796	0.939	1	0.959	0.862
rs116652041	3.2086E-12	0.0462287	0.00663	0.0462287	0.006634	6.3211E-12	0.42036	0.058862	0.000413	0.150321	0.160864	7.5E-09	0.49031	0.533769	0.842	0.929	0.999	0.772	0.897	1	0.797	0.818
rs6931120	3.2229E-12	-0.07761	0.01114	-0.08402	0.014639	6.88181E-12	0.32483	0.397583	0.000286	9.8E-05	0.013501	0.00483	0.06394	0.001343	0.914	0.905	1	1	0.989	0.985	0.968	0.987
rs62405343	3.2422E-12	0.0534755	0.00768	0.0615836	0.016375	8.97821E-13	0.00102	0.308815	0.043361	1.35E-06	0.000192	6.6E-05	0.53609	0.580102	0.978	0.797	0.433	1	0.998	0.996	0.298	0.705

Table S3

rs1892253	3.2489E-12	0.0767563	0.01102	0.0816824	0.014141	6.93635E-12	0.49108	0.403253	0.000142	0.000101	0.018572	0.00438	0.11919	0.001108	0.889	0.9	1	1	0.986	0.986	0.952	0.987
rs3799383	3.254E-12	-0.060734	0.00872	-0.060734	0.008718	6.94715E-12	0.87407	0.384022	0.000133	0.021088	0.058618	1E-04	0.00871	0.002814	0.835	0.9	1	0.984	0.97	1	0.987	0.983
rs13205211	3.2559E-12	-0.082856	0.01189	-0.082856	0.011894	6.95103E-12	0.18505	0.640036	0.000874	0.000396	0.214112	7.3E-05	0.07297	0.005371	0.928	0.865	0.999	0.999	0.918	1	0.963	0.979
rs6939978	3.2675E-12	-0.08083	0.0116	-0.08083	0.011604	6.97551E-12	0.61442	0.192583	0.000287	0.000737	0.040297	0.00035	0.17833	0.004027	0.874	0.93	1	0.999	0.977	1	0.937	0.981
rs6939799	3.2704E-12	-0.080829	0.0116	-0.080829	0.011604	6.98149E-12	0.61443	0.192586	0.000287	0.000737	0.0403	0.00035	0.17834	0.004027	0.874	0.93	1	0.999	0.977	1	0.937	0.981
rs6910549	3.2753E-12	0.0767433	0.01102	0.0816789	0.014147	6.99172E-12	0.49107	0.403823	0.000142	0.000101	0.018571	0.0044	0.11918	0.001108	0.889	0.9	1	1	0.986	0.986	0.952	0.987
rs9467708	3.2808E-12	-0.080823	0.0116	-0.080823	0.011604	7.00337E-12	0.61517	0.192571	0.000287	0.000737	0.040313	0.00035	0.17848	0.004026	0.874	0.93	1	0.999	0.977	1	0.937	0.981
rs34354280	3.2895E-12	-0.056365	0.00809	-0.056365	0.008093	6.03673E-12	0.11958	0.191352	0.000295	1.26E-06	0.0875	0.0052	0.0797	0.364145	0.942	0.929	1	1	0.96	0.982	0.961	0.903
rs7232543	3.2997E-12	0.0356253	0.00512	0.0356253	0.005115	7.04296E-12	0.29963	0.439242	0.000103	0.136249	0.112205	8.8E-08	0.16477	0.077406	0.862	0.611	1	0.784	0.919	1	0.9	0.925
rs6550575	3.3068E-12	0.0372796	0.00535	0.0372796	0.005353	7.05782E-12	0.79729	0.465757	9.87E-05	0.015968	0.315597	5.3E-06	0.01465	0.070212	0.745	0.864	1	0.984	0.859	1	0.979	0.943
rs78756554	3.3069E-12	0.0462117	0.00664	0.0462117	0.006636	6.53896E-12	0.4133	0.057956	0.000445	0.14246	0.156226	7.7E-09	0.49926	0.558221	0.845	0.93	0.999	0.787	0.901	1	0.797	0.815
rs113201630	3.3281E-12	0.0356036	0.00511	0.0356036	0.005113	7.10246E-12	0.27466	0.387031	0.000121	0.123092	0.131697	6.5E-08	0.16497	0.087467	0.867	0.595	1	0.804	0.909	1	0.9	0.92
rs6504574	3.3332E-12	-0.038812	0.00557	-0.038242	0.009079	7.1132E-12	0.40914	0.017518	1.09E-05	0.016581	0.666249	2E-05	0.42724	0.001012	0.59	0.95	1	0.976	0.664	1	0.809	0.982
rs7406031	3.3332E-12	-0.038812	0.00557	-0.038242	0.009079	7.1132E-12	0.40914	0.017518	1.09E-05	0.016581	0.666249	2E-05	0.42724	0.001012	0.59	0.95	1	0.976	0.664	1	0.809	0.982
rs6864919	3.3337E-12	0.0365863	0.00525	0.0365863	0.005254	7.11431E-12	0.78235	0.240636	0.000569	0.00159	0.009946	2.9E-05	0.24078	0.233816	0.837	0.914	0.999	0.998	0.989	1	0.914	0.916
rs1937126	3.347E-12	0.0767197	0.01102	0.0817539	0.014213	7.1421E-12	0.49141	0.399893	0.000143	1E-04	0.018723	0.00447	0.12089	0.001075	0.889	0.901	1	1	0.986	0.986	0.951	0.987
rs141331058	3.3553E-12	0.0412777	0.00593	0.040965	0.009659	7.15964E-12	0.77218	0.109695	9.99E-06	0.00637	0.851907	5E-05	0.48121	0.000132	0.678	0.906	1	0.991	0.583	1	0.788	0.989
rs132361114	3.3671E-12	-0.077074	0.01107	-0.077074	0.011072	7.1843E-12	0.6723	0.910333	0.00053	0.000545	0.161465	0.00012	0.00826	0.008951	0.852	0.816	0.999	0.999	0.93	1	0.986	0.974
rs3857546	3.3691E-12	-0.079836	0.01147	-0.081517	0.012729	7.18842E-12	0.23245	0.360163	0.000408	0.001249	0.04988	0.00038	0.13671	0.000458	0.927	0.91	1	0.999	0.975	0.999	0.95	0.989
rs3131337	3.3828E-12	-0.077919	0.01119	-0.078479	0.011681	7.2172E-12	0.08434	0.371736	0.000559	0.000248	0.446135	0.00023	0.04879	0.003391	0.947	0.9	0.999	1	0.84	1	0.97	0.981
rs4327409	3.3833E-12	0.0370366	0.00532	0.0370366	0.005321	7.21816E-12	0.94588	0.377246	0.000108	0.009249	0.290781	1.1E-05	0.02669	0.061277	0.782	0.884	1	0.992	0.876	1	0.974	0.949
rs7503096	3.3837E-12	0.03838	0.00551	0.0373813	0.008099	7.21912E-12	0.28019	0.084516	1.17E-05	0.027764	0.363576	1E-05	0.38186	0.00155	0.563	0.921	1	0.962	0.809	1	0.833	0.981
rs61472021	3.4124E-12	-0.076117	0.01094	-0.077093	0.011505	7.27932E-12	0.49754	0.270915	0.000268	4.97E-05	0.022252	0.00335	0.10977	0.004865	0.89	0.92	1	1	0.985	0.991	0.955	0.981
rs45509595	3.4235E-12	-0.083224	0.01196	-0.083224	0.011959	7.3024E-12	0.19574	0.655841	0.000636	0.000605	0.194325	9.2E-05	0.06795	0.004647	0.927	0.863	0.999	0.999	0.925	1	0.964	0.98
rs529266437	3.4349E-12	0.0842649	0.01211	0.0842649	0.012109	7.3263E-12	0.83473	0.252019	0.003231	0.004665	0.009389	1.3E-05	0.00257	0.463457	0.834	0.914	0.994	0.996	0.99	1	0.992	0.883
rs116885553	3.4514E-12	0.0504049	0.00724	0.0504049	0.007244	7.36103E-12	0.31424	0.055873	0.000208	0.105802	0.231582	1.6E-07	0.1798	0.342168	0.889	0.944	1	0.864	0.893	1	0.918	0.884
rs9467707	3.4807E-12	-0.08073	0.0116	-0.08073	0.011605	7.42242E-12	0.61518	0.192611	0.000293	0.000737	0.04047	0.00036	0.17895	0.004033	0.874	0.93	1	0.999	0.977	1	0.937	0.981
rs10900744	3.4842E-12	0.0368568	0.0053	0.0368568	0.005298	7.42975E-12	0.88317	0.110658	0.000359	0.000917	0.00475	6E-05	0.50715	0.356823	0.81	0.932	0.999	0.999	0.992	1	0.838	0.887
rs185158567	3.5298E-12	-0.123744	0.01779	-0.123744	0.017793	7.52513E-12	0.35218	0.81359	1.69E-05	0.001641	0.002477	0.00248	0.01237	0.777393	0.892	0.826	1	0.998	0.994	0.992	0.983	0.82
rs7429661	3.5334E-12	-0.042783	0.00615	-0.043652	0.008199	5.4139E-12	0.69326	0.078688	0.031274	1.75E-05	0.007812	1.2E-06	0.368	0.858729	0.764	0.913	0.7	1	0.985	1	0.803	0.653
rs1245131	3.5458E-12	0.0353151	0.00508	0.0363548	0.006624	7.55883E-12	0.43662	0.745093	0.006791	0.000238	0.002694	8.6E-06	0.99483	0.00729	0.86	0.811	0.968	1	0.993	1	0.675	0.973
rs1892251	3.5488E-12	0.0766413	0.01102	0.0817799	0.014279	7.56503E-12	0.49108	0.399622	0.000147	9.49E-05	0.019022	0.00464	0.12225	0.001078	0.889	0.901	1	1	0.986	0.985	0.951	0.987
rs13195279	3.5517E-12	-0.078156	0.01124	-0.085168	0.015174	7.20301E-12	0.38848	0.381681	0.000351	2.33E-05	0.022456	0.00586	0.0679	0.001953	0.904	0.905	1	1	0.985	0.979	0.966	0.985
rs35169013	3.5517E-12	-0.078156	0.01124	-0.085168	0.015174	7.20301E-12	0.38848	0.381681	0.000351	2.33E-05	0.022456	0.00586	0.0679	0.001953	0.904	0.905	1	1	0.985	0.979	0.966	0.985
rs1367633	3.5629E-12	0.0352844	0.00507	0.0347626	0.005927	7.59448E-12	0.11447	0.623654	0.000143	0.21163	0.096431	1.3E-07	0.22323	0.019021	0.908	0.651	1	0.665	0.927	1	0.877	0.956
rs55906054	3.6034E-12	0.0355677	0.00512	0.0355677	0.005116	7.67934E-12	0.28004	0.421476	0.000111	0.142894	0.117302	7.1E-08	0.1647	0.09091	0.863	0.6	1	0.769	0.915	1	0.898	0.918
rs142708876	3.6176E-12	-0.039923	0.00574	-0.040907	0.006939	7.64252E-12	0.30863	0.152491	0.001425	0.302162	0.001656	1.2E-06	0.01539	0.078192	0.885	0.916	0.994	0.6	0.995	1	0.979	0.94
rs17586784	3.6346E-12	-0.078115	0.01124	-0.085177	0.015193	7.3087E-12	0.3871	0.380906	0.000327	2.41E-05	0.020877	0.00629	0.07023	0.002001	0.904	0.905	1	1	0.985	0.977	0.966	0.985
rs34116162	3.6433E-12	-0.078109	0.01124	-0.085143	0.015176	7.33688E-12	0.38726	0.380852	0.000326	2.45E-05	0.020839	0.00628	0.07022	0.002006	0.904	0.905	1	1	0.986	0.977	0.966	0.985
rs34233736	3.6449E-12	-0.078115	0.01124	-0.085173	0.015192	7.33366E-12	0.38737	0.381045	0.000332	2.39E-05	0.020923	0.00623	0.07047	0.002001	0.904	0.905	1	1	0.985	0.977	0.966	0.985
rs4373086	3.6566E-12	0.0369813	0.00532	0.0369813	0.005321	7.79071E-12	0.98747	0.351427	0.000138	0.008781	0.313134	1.1E-05	0.02567	0.052722	0.79	0.889	1	0.992	0.869	1	0.975	0.952
rs34804024	3.6614E-12	-0.078114	0.01124	-0.085153	0.015186	7.39066E-12	0.38848	0.381953	0.000353	2.33E-05	0.020983	0.006	0.07133	0.001993	0.904	0.905	1	1	0.985	0.979	0.965	0.985
rs17586553	3.6622E-12	-0.078114	0.01124	-0.085153	0.015186	7.39245E-12	0.38849	0.381953	0.000353	2.33E-05	0.020983	0.006	0.07133	0.001993	0.904	0.905	1	1	0.985	0.979	0.965	0.985
rs948178	3.6636E-12	-0.035518	0.00511	-0.035518	0.005111	7.80545E-12	0.61825	0.274132	0.010112	0.000137	0.062807	3.7E-06	0.1021	0.190483	0.86	0.909	0.964	1	0.966	1	0.95	0.924
rs67844427	3.6637E-12	-0.078113	0.01124	-0.085152	0.015186	7.39535E-12	0.38849	0.381953	0.000353	2.33E-05	0.020984	0.006	0.07133	0.001993	0.904	0.905	1	1	0.985	0.979	0.965	0.985
rs62097947	3.6829E-12	0.0360224	0.00518	0.0360224	0.005184	7.84581E-12	0.28156	0.852298	0.000212	0.006798	0.095217	3.7E-06	0.3999	0.046534	0.897	0.765	1	0.993	0.948	1	0.861	0.952
rs4129439	3.6926E-12	0.0360121	0.00518	0.0360121	0.005183	7.86607E-12	0.27205	0.849178	0.000226	0.00782	0.091588	3.5E-06	0.37932	0.041639	0.899	0.766	1	0.993	0.95	1	0.868	0.955
rs1245133	3.6946E-12	0.035285	0.00508	0.0363386	0.006618	7.87019E-12	0.43857	0.730398	0.007005	0.000237	0.00267	8.9E-06	0.991	0.007332	0.86	0.813	0.967	1	0.993	1	0.677	0.973
rs9852522	3.7013E-12	0.0369555	0.00532	0.0369555	0.005319	7.88427E-12	0.98682	0.352222	0.000114	0.008716	0.302127	1.2E-05	0.0289	0.066443	0.79	0.889	1	0.992	0.873	1	0.973	0.948
rs142831935	3.7151E-12	0.0841256	0.01211	0.0841256	0.012109	7.91306E-12	0.84218	0.251745	0.003231	0.005172	0.009447	1.2E-05	0.00258	0.463719	0.833	0.914	0.994	0.996	0.99	1	0.992	0.882
rs9819708	3.7258E-12	0.0369681	0.00532	0.0369681	0.005321	7.93553E-12	0.98799	0.351924	0.000137	0.008757	0.313369	1.1E-05	0.02556	0.052652	0.791	0.889	1	0.992	0.869	1	0.975	0.952
rs11130183	3.7278E-12	-0.042736	0.00615	-0.043593	0.008171	5.74787E-12	0.69428	0.078697	0.031334	1.88E-05	0.007833	1.2E-06	0.36803	0.858673	0.764	0.913	0.702	1	0.985	1	0.803	0.654
rs2295593	3.7454E-12	-0.060518	0.00871	-0.060518	0.008712	7.97654E-12	0.86157	0.361331	0.000123	0.022352	0.056849	0.00012	0.01029	0.002501	0.838	0.903	1	0.983	0.971	1	0.986	0.984
rs201241244	3.7508E-12	0.0369281	0.00532	0.0369281	0.005316	7.98778E-12	0.99621	0.129049	0.000159	0.00055	0.008932	0.00017	0.34517	0.394754	0.793	0.928	1	0.999	0.989	1	0.881	0.882
rs6550553	3.7518E-12	0.0369453	0.00532	0.0369453	0.005319	7.99E-12	0.98585	0.352	0.000114	0.008887	0.301857	1.2E-05	0.0289	0.066463	0.79	0.889	1	0.992	0.873	1	0.973	0.948

Table S3

rs62100772	3.8173E-12	0.0355189	0.00512	0.0355189	0.005115	8.12686E-12	0.28007	0.411104	0.000118	0.142842	0.121133	6.8E-08	0.16301	0.089401	0.863	0.596	1	0.769	0.912	1	0.898	0.918
rs4267657	3.8358E-12	0.0369296	0.00532	0.0369296	0.005319	8.16557E-12	0.99086	0.35192	0.000114	0.009239	0.302348	1.2E-05	0.02899	0.066549	0.794	0.889	1	0.992	0.874	1	0.973	0.948
rs111911908	3.8469E-12	0.0869895	0.01253	0.0869895	0.01253	8.18893E-12	0.50507	0.059607	0.001534	0.001151	0.102826	3E-06	0.18958	0.79841	0.87	0.947	0.997	0.999	0.949	1	0.923	0.823
rs112669240	3.8469E-12	0.0869895	0.01253	0.0869895	0.01253	8.18893E-12	0.50507	0.059607	0.001534	0.001151	0.102826	3E-06	0.18958	0.79841	0.87	0.947	0.997	0.999	0.949	1	0.923	0.823
rs11959709	3.8508E-12	0.0368886	0.00531	0.0368886	0.005313	8.19706E-12	0.99706	0.131035	0.000156	0.000707	0.009057	0.00016	0.31824	0.402402	0.794	0.928	1	0.999	0.989	1	0.888	0.882
rs13191776	3.8514E-12	-0.078021	0.01124	-0.084998	0.015147	7.77935E-12	0.38776	0.381125	0.000333	2.52E-05	0.021234	0.00628	0.07043	0.002006	0.904	0.905	1	1	0.985	0.977	0.966	0.985
rs11959710	3.8686E-12	0.0368852	0.00531	0.0368852	0.005313	8.23427E-12	0.99703	0.131121	0.000156	0.000707	0.009066	0.00016	0.31828	0.402283	0.794	0.928	1	0.999	0.989	1	0.888	0.882
rs4870063	3.9052E-12	-0.036611	0.00527	-0.035178	0.007783	4.87195E-12	0.68256	0.308267	0.009268	0.014814	0.023825	2.1E-09	0.55239	0.050339	0.775	0.851	0.919	0.974	0.971	1	0.447	0.933
rs34191997	3.918E-12	-0.056173	0.00809	-0.056173	0.008094	7.40502E-12	0.127	0.172983	0.000305	1.59E-06	0.0996	0.00501	0.07618	0.366105	0.94	0.932	1	1	0.956	0.984	0.962	0.903
rs13204012	3.9203E-12	-0.082546	0.01189	-0.082546	0.011894	8.34234E-12	0.18648	0.643334	0.000951	0.000439	0.207343	7.6E-05	0.07318	0.005416	0.928	0.865	0.999	0.999	0.921	1	0.962	0.979
rs404240	3.9401E-12	-0.079786	0.0115	-0.079786	0.011498	8.38372E-12	0.14995	0.323588	0.001118	0.000635	0.449764	3.2E-05	0.07137	0.008295	0.932	0.904	0.998	0.999	0.836	1	0.962	0.975
rs17515923	3.9474E-12	0.0364256	0.00525	0.0339702	0.01004	2.7063E-12	0.20235	0.255385	7.81E-06	0.924608	0.060484	1.5E-07	0.00102	0.599586	0.8	0.296	1	0.032	0.902	1	0.989	0.645
rs9393727	3.9749E-12	-0.060408	0.00871	-0.060408	0.008707	8.45641E-12	0.87253	0.344208	0.000147	0.022854	0.056219	0.00011	0.01165	0.002282	0.837	0.906	1	0.983	0.971	1	0.986	0.984
rs11128900	3.9758E-12	0.035431	0.00511	0.035431	0.005107	8.45842E-12	0.65993	0.170779	0.002161	0.001551	0.32733	1.4E-05	0.00262	0.08583	0.857	0.927	0.996	0.998	0.876	1	0.992	0.948
rs6809851	3.9787E-12	-0.042621	0.00614	-0.043286	0.00758	6.78984E-12	0.73342	0.07901	0.026242	2.32E-05	0.010137	1.5E-06	0.34782	0.941846	0.777	0.92	0.778	1	0.984	1	0.83	0.7
rs2235233	3.9898E-12	0.0405354	0.00584	0.0405354	0.005843	8.48766E-12	0.18383	0.025814	4.52E-05	0.061283	0.034203	0.00016	0.00868	0.527083	0.931	0.966	1	0.95	0.98	1	0.988	0.882
rs10050852	3.9909E-12	0.0365415	0.00527	0.0365415	0.005267	8.48981E-12	0.89957	0.20979	0.000217	0.000732	0.006035	6.9E-05	0.55289	0.312848	0.763	0.905	1	0.999	0.99	1	0.816	0.888
rs11128901	4.007E-12	0.0354262	0.00511	0.0354262	0.005107	8.52362E-12	0.66199	0.171463	0.002154	0.001645	0.324747	1.4E-05	0.00251	0.086783	0.857	0.927	0.996	0.998	0.877	1	0.992	0.948
rs12575544	4.0073E-12	0.0355155	0.00512	0.0355155	0.00512	8.52413E-12	0.39487	0.599706	0.006847	0.000885	0.012681	2.6E-06	0.523	0.021255	0.886	0.857	0.977	0.999	0.987	1	0.839	0.967
rs4631209	4.0454E-12	0.0368523	0.00531	0.0368523	0.005314	8.60384E-12	0.99791	0.131303	0.000157	0.000739	0.009072	0.00016	0.31878	0.401969	0.795	0.928	1	0.999	0.989	1	0.888	0.882
rs28461583	4.0499E-12	-0.056145	0.0081	-0.056145	0.008095	7.49377E-12	0.12246	0.176617	0.000321	1.43E-06	0.092507	0.00528	0.07855	0.375395	0.941	0.931	1	1	0.959	0.983	0.961	0.901
rs10221371	4.0514E-12	0.0354787	0.00512	0.0354787	0.005116	8.61623E-12	0.28812	0.410878	0.000118	0.142656	0.121705	7.1E-08	0.16388	0.089469	0.861	0.597	1	0.77	0.912	1	0.898	0.918
rs34417254	4.0851E-12	-0.038431	0.00554	-0.038002	0.006987	8.68677E-12	0.37968	0.092893	1.98E-05	0.025711	0.338484	1.4E-05	0.23635	0.00281	0.625	0.925	1	0.97	0.837	1	0.892	0.979
rs7506245	4.0853E-12	0.0359388	0.00518	0.0359388	0.005183	8.68722E-12	0.27998	0.847369	0.000229	0.006702	0.096359	3.7E-06	0.40605	0.047584	0.896	0.763	1	0.994	0.947	1	0.86	0.952
rs7506451	4.1114E-12	0.035934	0.00518	0.035934	0.005183	8.74175E-12	0.28023	0.847367	0.000229	0.006734	0.096309	3.7E-06	0.4061	0.047584	0.896	0.763	1	0.993	0.947	1	0.86	0.952
rs7763910	4.1124E-12	0.0354351	0.00511	0.0354351	0.005111	8.74373E-12	0.57053	0.663136	1.12E-05	0.003265	0.109683	0.00061	0.02813	0.114071	0.868	0.857	1	0.997	0.949	0.999	0.976	0.941
rs7506328	4.1163E-12	0.0359331	0.00518	0.0359331	0.005183	8.75179E-12	0.28028	0.847369	0.000229	0.00674	0.096258	3.7E-06	0.40609	0.047616	0.896	0.763	1	0.993	0.947	1	0.86	0.952
rs34243448	4.1336E-12	-0.082452	0.01189	-0.082452	0.011894	8.78811E-12	0.18693	0.644251	0.000973	0.000451	0.205901	7.6E-05	0.07318	0.005438	0.928	0.864	0.999	0.999	0.921	1	0.962	0.978
rs35656932	4.1336E-12	-0.082452	0.01189	-0.082452	0.011894	8.78811E-12	0.18693	0.644251	0.000973	0.000451	0.205901	7.6E-05	0.07318	0.005438	0.928	0.864	0.999	0.999	0.921	1	0.962	0.978
rs62100775	4.135E-12	0.0353157	0.00509	0.0348706	0.005931	8.75553E-12	0.08324	0.794236	0.000235	0.241104	0.124698	8.9E-08	0.16909	0.021635	0.92	0.692	0.999	0.631	0.913	1	0.899	0.954
rs4273390	4.1446E-12	0.0368991	0.00532	0.0368991	0.005323	8.81094E-12	0.94453	0.355217	0.000134	0.009287	0.309124	1.2E-05	0.02401	0.054024	0.783	0.888	1	0.992	0.87	1	0.975	0.951
rs62099173	4.148E-12	0.0359449	0.00519	0.0359449	0.005185	8.8182E-12	0.2444	0.793804	0.000219	0.008171	0.09534	3.7E-06	0.37867	0.043081	0.903	0.755	1	0.992	0.948	1	0.867	0.954
rs9257803	4.1501E-12	-0.076703	0.01107	-0.076703	0.011065	8.82258E-12	0.11395	0.526451	0.000613	0.000333	0.686512	2.9E-05	0.1664	0.006027	0.929	0.856	0.999	0.999	0.722	1	0.924	0.974
rs13211507	4.1609E-12	-0.082255	0.01187	-0.082255	0.011867	8.84512E-12	0.18829	0.68846	0.000554	0.000472	0.230455	0.00011	0.08018	0.00586	0.926	0.856	0.999	0.999	0.912	1	0.96	0.978
rs62381111	4.162E-12	0.0363808	0.00525	0.0363808	0.005249	8.84742E-12	0.72389	0.263527	0.000704	0.001696	0.009386	2.7E-05	0.27054	0.227814	0.845	0.91	0.999	0.998	0.989	1	0.907	0.917
rs147726906	4.1921E-12	0.0840495	0.01213	0.0840495	0.012127	8.9102E-12	0.82216	0.244424	0.003191	0.006692	0.010419	1.1E-05	0.00189	0.538448	0.834	0.914	0.994	0.994	0.989	1	0.993	0.87
rs6446256	4.2035E-12	-0.042632	0.00615	-0.043505	0.008228	6.4333E-12	0.68636	0.078163	0.032083	1.82E-05	0.007898	1.3E-06	0.37269	0.839049	0.764	0.912	0.695	1	0.985	1	0.8	0.647
rs71386942	4.2125E-12	0.0412483	0.00595	0.0417598	0.007105	8.95285E-12	0.01901	0.017728	0.000928	0.222082	0.031323	6E-07	0.11369	0.422654	0.964	0.964	0.998	0.731	0.977	1	0.942	0.875
rs4870060	4.2191E-12	-0.036152	0.00522	-0.03509	0.008731	6.18958E-12	0.84911	0.153422	0.009271	0.007059	0.002141	2.1E-08	0.38026	0.057275	0.652	0.879	0.902	0.986	0.992	1	0.337	0.923
rs74381227	4.2195E-12	-0.056157	0.0081	-0.056157	0.008104	7.7794E-12	0.12045	0.180533	0.000343	1.38E-06	0.091934	0.00528	0.07856	0.376743	0.942	0.93	1	1	0.959	0.983	0.961	0.901
rs11661483	4.2221E-12	0.0359155	0.00518	0.0359155	0.005183	8.9729E-12	0.28682	0.847586	0.000228	0.006896	0.096138	3.7E-06	0.40599	0.047571	0.895	0.763	1	0.993	0.947	1	0.86	0.952
rs12176129	4.2432E-12	-0.060361	0.00871	-0.060361	0.008712	9.01678E-12	0.81336	0.37339	0.000127	0.02176	0.058516	0.00014	0.01087	0.002513	0.845	0.902	1	0.984	0.97	1	0.986	0.983
rs13088994	4.2545E-12	0.035382	0.00511	0.035382	0.005107	9.04037E-12	0.66198	0.17079	0.002169	0.001645	0.327848	1.4E-05	0.00263	0.085924	0.857	0.927	0.996	0.998	0.876	1	0.992	0.948
rs67048424	4.2552E-12	0.0353819	0.00511	0.0353819	0.005107	9.04191E-12	0.66198	0.170794	0.002169	0.001645	0.327862	1.4E-05	0.00263	0.085927	0.857	0.927	0.996	0.998	0.876	1	0.992	0.948
rs11714200	4.2621E-12	0.0353962	0.00511	0.0353962	0.005109	9.05631E-12	0.6975	0.169934	0.002087	0.001705	0.318475	1.6E-05	0.00235	0.08325	0.852	0.927	0.996	0.998	0.88	1	0.992	0.948
rs62084675	4.2667E-12	-0.038618	0.00557	-0.038085	0.008952	9.06586E-12	0.42827	0.018056	1.34E-05	0.015685	0.661113	2.3E-05	0.44103	0.001094	0.6	0.95	1	0.978	0.671	1	0.807	0.982
rs12714223	4.2702E-12	0.0389111	0.00562	0.0389111	0.005617	9.07324E-12	0.17515	0.016107	8.02E-06	0.034207	0.051038	0.00032	0.27474	0.18955	0.933	0.971	1	0.974	0.973	1	0.915	0.932
rs10500526	4.2867E-12	0.0350847	0.00506	0.0350847	0.005065	9.10768E-12	0.82139	0.049034	0.000787	0.008757	0.04487	3.1E-05	0.005	0.353176	0.843	0.957	0.999	0.993	0.975	1	0.99	0.904
rs58427198	4.2902E-12	0.0868054	0.01253	0.0868054	0.012531	9.11489E-12	0.50507	0.059704	0.001612	0.001151	0.102633	3.2E-06	0.19	0.799198	0.87	0.947	0.997	0.999	0.949	1	0.923	0.823
rs9678824	4.3281E-12	-0.038899	0.00562	-0.038899	0.005616	9.19403E-12	0.17421	0.016083	8.1E-06	0.034088	0.05159	0.00032	0.27589	0.188281	0.933	0.971	1	0.974	0.973	1	0.915	0.932
rs72540422	4.3552E-12	-0.038894	0.00562	-0.038894	0.005616	9.25072E-12	0.16698	0.016065	8.06E-06	0.035253	0.051227	0.00032	0.27532	0.188745	0.934	0.971	1	0.973	0.973	1	0.915	0.932
rs62100777	4.3789E-12	0.0351475	0.00508	0.0348393	0.00558	9.08135E-12	0.12656	0.869844	0.00042	0.214017	0.098994	4.8E-08	0.2097	0.0239	0.909	0.719	0.999	0.683	0.93	1	0.889	0.954
rs10900743	4.383E-12	0.0367945	0.00531	0.0367945	0.005314	9.30865E-12	0.99883	0.128782	0.000154	0.000716	0.008963	0.00017	0.34583	0.394238	0.794	0.928	1	0.999	0.989	1	0.881	0.882
rs13202371	4.409E-12	-0.077799	0.01124	-0.08441	0.014935	9.09828E-12	0.38527	0.38084	0.000326	3.3E-05	0.020869	0.0063	0.07021	0.002002	0.905	0.905	1	1	0.985	0.978	0.966	0.985
rs16901784	4.4277E-12	-0.060312	0.00871	-0.060312	0.008712	9.4018E-12	0.82761	0.374909	0.000131	0.024619	0.056896	0.00013	0.01033	0.002519	0.843	0.902	1	0.981	0.971	1	0.986	0.983

Table S3

rs9826966	4.4413E-12	0.0370402	0.00535	0.0370402	0.005351	9.43013E-12	0.78652	0.450863	0.000117	0.015	0.31098	6.9E-06	0.01319	0.076043	0.745	0.867	1	0.985	0.862	1	0.98	0.941
rs146307530	4.4482E-12	0.0867408	0.01253	0.0867408	0.012531	9.44456E-12	0.50508	0.059912	0.001571	0.001151	0.104137	3.4E-06	0.19105	0.800072	0.87	0.946	0.997	0.999	0.948	1	0.923	0.823
rs2012801	4.4604E-12	-0.035236	0.00509	-0.036149	0.006616	9.47E-12	0.3955	0.991967	0.00896	0.000204	0.002861	6.1E-06	0.90651	0.011942	0.863	0.765	0.952	1	0.993	1	0.696	0.967
rs57627853	4.4898E-12	0.0867255	0.01253	0.0867255	0.012531	9.53148E-12	0.50532	0.059927	0.001574	0.00116	0.104248	3.4E-06	0.19121	0.798902	0.87	0.946	0.997	0.999	0.948	1	0.923	0.823
rs7432077	4.5173E-12	-0.042571	0.00615	-0.043443	0.008223	6.9304E-12	0.68268	0.078003	0.032343	1.91E-05	0.007913	1.4E-06	0.37425	0.833887	0.764	0.912	0.695	1	0.985	1	0.799	0.646
rs12522598	4.5223E-12	0.0367722	0.00531	0.0367722	0.005314	9.59924E-12	0.99826	0.13008	0.000154	0.000729	0.008944	0.00017	0.34579	0.393842	0.794	0.928	1	0.999	0.989	1	0.881	0.882
rs13192713	4.5499E-12	-0.077747	0.01124	-0.084282	0.014894	9.42687E-12	0.38612	0.381081	0.000334	3.39E-05	0.02101	0.00622	0.07045	0.002006	0.905	0.905	1	1	0.985	0.978	0.966	0.985
rs13208859	4.5502E-12	-0.078157	0.0113	-0.08658	0.015944	8.30875E-12	0.48544	0.348405	0.000474	1.51E-05	0.01739	0.00729	0.05989	0.002271	0.891	0.908	0.999	1	0.987	0.972	0.968	0.984
rs13193424	4.5618E-12	-0.077743	0.01124	-0.084278	0.014895	9.45082E-12	0.38611	0.38108	0.000334	3.39E-05	0.021039	0.00622	0.07045	0.002006	0.905	0.905	1	1	0.985	0.978	0.966	0.985
rs2051539	4.5721E-12	-0.077739	0.01124	-0.084274	0.014895	9.47202E-12	0.38611	0.381079	0.000334	3.39E-05	0.021068	0.00622	0.07045	0.002006	0.905	0.905	1	1	0.985	0.978	0.966	0.985
rs34796805	4.5721E-12	-0.077739	0.01124	-0.084274	0.014895	9.47202E-12	0.38611	0.381079	0.000334	3.39E-05	0.021068	0.00622	0.07045	0.002006	0.905	0.905	1	1	0.985	0.978	0.966	0.985
rs35778245	4.5721E-12	-0.077739	0.01124	-0.084274	0.014895	9.47202E-12	0.38611	0.381079	0.000334	3.39E-05	0.021068	0.00622	0.07045	0.002006	0.905	0.905	1	1	0.985	0.978	0.966	0.985
rs6547796	4.5893E-12	0.0388327	0.00561	0.0388327	0.005614	9.73879E-12	0.16915	0.01568	8.57E-06	0.030364	0.055828	0.00036	0.27594	0.177082	0.934	0.971	1	0.978	0.972	1	0.915	0.934
rs9677663	4.5945E-12	0.0388343	0.00561	0.0388343	0.005614	9.74961E-12	0.16975	0.01577	8.53E-06	0.030449	0.055762	0.00036	0.27555	0.177309	0.934	0.971	1	0.977	0.972	1	0.915	0.934
rs12063895	4.6035E-12	-0.055994	0.00809	-0.055994	0.008095	8.40016E-12	0.1207	0.175783	0.000366	1.34E-06	0.094512	0.00538	0.07803	0.373513	0.941	0.931	1	1	0.958	0.983	0.962	0.902
rs10201247	4.6074E-12	0.03883	0.00561	0.03883	0.005614	9.77663E-12	0.16916	0.015695	8.59E-06	0.030313	0.055816	0.00036	0.27611	0.177265	0.934	0.971	1	0.978	0.972	1	0.915	0.934
rs11645898	4.6292E-12	0.0408606	0.00591	0.0408606	0.005908	9.82194E-12	0.88042	0.036461	0.000768	0.021042	0.193282	2.7E-07	0.27023	0.240437	0.812	0.953	0.999	0.981	0.913	1	0.899	0.908
rs9915591	4.6541E-12	0.0407974	0.0059	0.0403028	0.009691	9.87398E-12	0.61302	0.060754	1.36E-05	0.010605	0.803516	3E-05	0.50622	0.000226	0.64	0.923	1	0.985	0.603	1	0.779	0.987
rs34718543	4.6696E-12	-0.043182	0.00624	-0.043182	0.006244	9.90626E-12	0.25544	0.143809	8.68E-06	0.006107	0.021684	0.00632	0.03334	0.031871	0.926	0.942	1	0.996	0.986	0.98	0.978	0.97
rs57238885	4.6995E-12	-0.038815	0.00561	-0.038815	0.005614	9.96853E-12	0.1696	0.015752	8.64E-06	0.030476	0.055993	0.00036	0.27637	0.177098	0.934	0.971	1	0.977	0.972	1	0.915	0.934
rs35069699	4.7299E-12	-0.07798	0.01128	-0.08471	0.015013	9.40393E-12	0.3877	0.303995	0.000329	2.53E-05	0.02313	0.00727	0.07856	0.002313	0.904	0.915	1	1	0.985	0.973	0.963	0.984
rs7615602	4.736E-12	0.0370105	0.00535	0.0370105	0.005354	1.00445E-11	0.82038	0.492263	0.00013	0.015546	0.307913	6.2E-06	0.01359	0.07466	0.751	0.861	1	0.985	0.864	1	0.98	0.942
rs11756123	4.7512E-12	-0.036137	0.00523	-0.035256	0.008883	5.63675E-12	0.82323	0.111564	0.013092	0.013369	0.002378	8.6E-09	0.48608	0.052346	0.643	0.892	0.848	0.969	0.992	1	0.381	0.925
rs137872780	4.7741E-12	0.0353039	0.00511	0.0353039	0.005108	1.01239E-11	0.69926	0.173019	0.002156	0.00174	0.322769	1.5E-05	0.00242	0.087661	0.851	0.926	0.996	0.998	0.878	1	0.992	0.947
rs62098013	4.7768E-12	0.0365787	0.00529	0.0365787	0.005292	1.01295E-11	0.34199	0.400884	0.000145	0.045168	0.077931	1.3E-06	0.06186	0.117615	0.879	0.651	1	0.949	0.951	1	0.955	0.926
rs34294155	4.7779E-12	-0.055951	0.00809	-0.055951	0.008095	8.71678E-12	0.12051	0.175759	0.000367	1.36E-06	0.096137	0.00543	0.07803	0.373389	0.941	0.931	1	1	0.957	0.982	0.961	0.902
rs35631096	4.7795E-12	-0.055951	0.00809	-0.055951	0.008095	8.72002E-12	0.12055	0.175759	0.000367	1.36E-06	0.096137	0.00543	0.07803	0.373389	0.941	0.931	1	1	0.957	0.982	0.961	0.902
rs71954424	4.7822E-12	-0.043249	0.00626	-0.043249	0.006257	1.01407E-11	0.09318	0.675054	0.000263	0.010619	0.014009	5.8E-05	0.02502	0.195705	0.942	0.754	1	0.991	0.987	1	0.977	0.924
rs72447896	4.7836E-12	-0.055952	0.0081	-0.055952	0.008095	8.94697E-12	0.12065	0.176035	0.000345	1.64E-06	0.093725	0.00534	0.07822	0.374194	0.941	0.931	1	1	0.958	0.983	0.961	0.902
rs7636195	4.7839E-12	0.0353024	0.00511	0.0353024	0.005108	1.01444E-11	0.69994	0.173019	0.002155	0.001748	0.322675	1.5E-05	0.00242	0.087659	0.851	0.926	0.996	0.998	0.878	1	0.992	0.947
rs35847416	4.7914E-12	-0.055948	0.00809	-0.055948	0.008095	8.74587E-12	0.12059	0.175759	0.000367	1.36E-06	0.096137	0.00543	0.07803	0.373389	0.941	0.931	1	1	0.957	0.982	0.961	0.902
rs11128898	4.7919E-12	0.0353012	0.00511	0.0353012	0.005108	1.01611E-11	0.69719	0.173019	0.002156	0.001753	0.322769	1.5E-05	0.00242	0.087663	0.851	0.926	0.996	0.998	0.878	1	0.992	0.947
rs4458386	4.7922E-12	0.0353012	0.00511	0.0353012	0.005108	1.01615E-11	0.69995	0.173019	0.002156	0.001749	0.322679	1.5E-05	0.00242	0.08766	0.851	0.926	0.996	0.998	0.878	1	0.992	0.947
rs6794840	4.7956E-12	0.0353006	0.00511	0.0353006	0.005108	1.01688E-11	0.69995	0.173019	0.002156	0.001749	0.322764	1.5E-05	0.00242	0.087661	0.851	0.926	0.996	0.998	0.878	1	0.992	0.947
rs11128897	4.7966E-12	0.0353005	0.00511	0.0353005	0.005108	1.01707E-11	0.69995	0.173019	0.002156	0.001749	0.322766	1.5E-05	0.00242	0.087661	0.851	0.926	0.996	0.998	0.878	1	0.992	0.947
rs11128899	4.7973E-12	0.0353004	0.00511	0.0353004	0.005108	1.01722E-11	0.69995	0.173019	0.002156	0.001749	0.322769	1.5E-05	0.00242	0.087662	0.851	0.926	0.996	0.998	0.878	1	0.992	0.947
rs9340850	4.8028E-12	-0.036151	0.00523	-0.035271	0.008966	5.61498E-12	0.80321	0.108906	0.013664	0.012283	0.002371	8.8E-09	0.47386	0.049705	0.633	0.892	0.837	0.971	0.992	1	0.371	0.926
rs3052860	4.8089E-12	-0.055944	0.00809	-0.055944	0.008095	8.77894E-12	0.12057	0.175788	0.000367	1.37E-06	0.096354	0.00544	0.07803	0.373372	0.941	0.931	1	1	0.957	0.982	0.961	0.902
rs57960429	4.8146E-12	0.0369636	0.00535	0.0369636	0.005349	1.02082E-11	0.80174	0.460013	0.000204	0.013792	0.236975	6.3E-06	0.01224	0.080526	0.755	0.87	1	0.987	0.894	1	0.981	0.942
rs13084910	4.8272E-12	0.0352969	0.00511	0.0352969	0.005108	1.02345E-11	0.69419	0.173126	0.002152	0.001753	0.322651	1.6E-05	0.00242	0.087671	0.852	0.926	0.996	0.998	0.878	1	0.992	0.947
rs6791643	4.8343E-12	0.0352968	0.00511	0.0352968	0.005108	1.02492E-11	0.69028	0.173019	0.002156	0.001791	0.322762	1.5E-05	0.00242	0.087661	0.853	0.927	0.996	0.998	0.878	1	0.992	0.947
rs6699465	4.8344E-12	-0.055938	0.00809	-0.055938	0.008095	8.82561E-12	0.12055	0.175781	0.000367	1.37E-06	0.096617	0.00544	0.07803	0.373363	0.941	0.931	1	1	0.957	0.982	0.961	0.902
rs67234939	4.8393E-12	-0.060198	0.00871	-0.060198	0.008711	1.02597E-11	0.8637	0.373887	0.000127	0.023077	0.058592	0.00014	0.01087	0.002514	0.838	0.901	1	0.983	0.97	1	0.986	0.983
rs4955423	4.8522E-12	-0.042505	0.00615	-0.043379	0.008246	7.42906E-12	0.68229	0.077726	0.03273	1.91E-05	0.00795	1.4E-06	0.37626	0.824241	0.764	0.912	0.693	1	0.985	1	0.798	0.643
rs7618456	4.8559E-12	0.0369903	0.00535	0.0369903	0.005353	1.02942E-11	0.79045	0.488502	0.000127	0.016324	0.302418	6E-06	0.01425	0.074045	0.745	0.861	1	0.984	0.865	1	0.979	0.942
rs12635326	4.8691E-12	0.0352894	0.00511	0.0352894	0.005107	1.03218E-11	0.70014	0.173048	0.002159	0.001752	0.323334	1.6E-05	0.00243	0.087775	0.851	0.926	0.996	0.998	0.878	1	0.992	0.947
rs10924473	4.8694E-12	-0.043264	0.00626	-0.043264	0.006262	1.03224E-11	0.30037	0.177948	5.36E-06	0.00729	0.027411	0.00649	0.02733	0.032329	0.919	0.936	1	0.995	0.983	0.979	0.98	0.969
rs7622818	4.9185E-12	0.0369818	0.00535	0.0369818	0.005354	1.04246E-11	0.80744	0.492263	0.00013	0.015882	0.307913	6.2E-06	0.01359	0.07466	0.749	0.86	1	0.984	0.864	1	0.98	0.941
rs13220488	4.9284E-12	-0.078039	0.0113	-0.086483	0.015954	8.95706E-12	0.47705	0.351262	0.000473	1.53E-05	0.017976	0.0076	0.05982	0.00227	0.892	0.908	0.999	1	0.986	0.97	0.968	0.984
rs12521338	4.9375E-12	0.0366979	0.00531	0.0366979	0.005313	1.04641E-11	0.9976	0.144279	0.000169	0.000723	0.009103	0.00017	0.31983	0.402765	0.794	0.925	1	0.999	0.989	1	0.888	0.881
rs6504568	4.956E-12	-0.039394	0.0057	-0.039189	0.009423	1.05027E-11	0.43617	0.034324	2.34E-05	0.02989	0.615709	1.3E-05	0.32739	0.000352	0.614	0.941	1	0.959	0.702	1	0.849	0.987
rs62097994	4.9573E-12	0.0353397	0.00512	0.0347806	0.005728	1.05055E-11	0.37352	0.220319	0.000156	0.115917	0.058795	1.3E-07	0.06023	0.224126	0.844	0.526	1	0.814	0.948	1	0.944	0.878
rs6794713	4.9833E-12	0.0352759	0.00511	0.0352759	0.005108	1.05595E-11	0.69995	0.174121	0.002171	0.001749	0.323786	1.6E-05	0.00247	0.088867	0.851	0.926	0.996	0.998	0.878	1	0.992	0.947
rs62100769	4.9955E-12	0.0353364	0.00512	0.0353364	0.005117	1.05849E-11	0.27552	0.398123	0.000129	0.138144	0.129792	8.2E-08	0.1668	0.089391	0.865	0.596	1	0.781	0.908	1	0.897	0.918
rs192619538	5.0013E-12	0.0819318	0.01186	0.0819318	0.011865	1.05969E-11	0.0773	0.119315	0.000178	0.001345	0.001776	0.00375	0.03333	0.480925	0.954	0.944	1	0.999	0.996	0.992	0.977	0.894

Table S3

rs34539883	5.0406E-12	-0.05589	0.00809	-0.05589	0.008095	9.20157E-12	0.12036	0.175789	0.000367	1.39E-06	0.098809	0.00551	0.07819	0.373105	0.941	0.931	1	1	0.956	0.982	0.961	0.902
rs9838564	5.0514E-12	0.0369609	0.00535	0.0369609	0.005353	1.07013E-11	0.79312	0.492263	0.00013	0.016015	0.307924	6.2E-06	0.01359	0.07466	0.745	0.86	1	0.984	0.863	1	0.98	0.941
rs35001169	5.0567E-12	-0.081691	0.01183	-0.081691	0.011833	1.07123E-11	0.18413	0.58589	0.001093	0.000297	0.253591	0.00012	0.06841	0.003372	0.928	0.872	0.998	1	0.906	1	0.964	0.981
rs62086889	5.0817E-12	0.0393709	0.0057	0.0391728	0.009324	1.07642E-11	0.43404	0.035109	2.61E-05	0.027799	0.594801	1.3E-05	0.33108	0.000381	0.617	0.941	1	0.963	0.713	1	0.85	0.987
rs75756093	5.0817E-12	0.0393709	0.0057	0.0391728	0.009324	1.07642E-11	0.43404	0.035109	2.61E-05	0.027799	0.594801	1.3E-05	0.33108	0.000381	0.617	0.941	1	0.963	0.713	1	0.85	0.987
rs62097995	5.0858E-12	0.0353216	0.00512	0.0347522	0.00574	1.07728E-11	0.37312	0.219933	0.000157	0.117253	0.058762	1.4E-07	0.06026	0.224687	0.843	0.525	1	0.811	0.948	1	0.944	0.877
rs1079021	5.0973E-12	-0.035117	0.00509	-0.035979	0.006516	1.07967E-11	0.38211	0.960074	0.008823	0.000254	0.002852	6.2E-06	0.92241	0.012308	0.866	0.772	0.955	0.999	0.993	1	0.694	0.967
rs8081714	5.1228E-12	-0.039364	0.0057	-0.039167	0.009321	1.08498E-11	0.43563	0.035118	2.61E-05	0.028008	0.594876	1.3E-05	0.3312	0.000381	0.617	0.941	1	0.962	0.713	1	0.85	0.987
rs4955421	5.1296E-12	-0.042456	0.00615	-0.043333	0.00826	7.84498E-12	0.68019	0.077429	0.033019	1.92E-05	0.007979	1.5E-06	0.37769	0.817372	0.764	0.912	0.691	1	0.985	1	0.797	0.641
rs5021426	5.1525E-12	0.0369491	0.00535	0.0369491	0.005354	1.09114E-11	0.82258	0.470088	0.000108	0.017386	0.310729	8.4E-06	0.01339	0.06137	0.753	0.865	1	0.983	0.864	1	0.98	0.946
rs62097996	5.1618E-12	0.035311	0.00512	0.0347324	0.00575	1.09309E-11	0.37331	0.219933	0.000157	0.118492	0.058761	1.4E-07	0.06026	0.224682	0.843	0.525	1	0.809	0.948	1	0.943	0.877
rs12451721	5.2386E-12	0.0406668	0.00589	0.0401993	0.009784	1.10906E-11	0.68293	0.054253	1.38E-05	0.013172	0.894055	2.7E-05	0.4849	0.000219	0.652	0.925	1	0.981	0.561	1	0.782	0.987
rs12059622	5.2422E-12	-0.056057	0.00813	-0.056057	0.008126	1.04897E-11	0.12851	0.190321	0.000308	3.04E-06	0.088274	0.0049	0.07336	0.375123	0.94	0.929	1	1	0.96	0.985	0.963	0.902
rs9461222	5.2467E-12	-0.076809	0.01113	-0.083063	0.014487	1.11074E-11	0.31869	0.392101	0.000444	7.67E-05	0.01931	0.00508	0.04996	0.001709	0.915	0.906	0.999	1	0.986	0.985	0.972	0.985
rs74743707	5.2603E-12	0.0455131	0.0066	0.0455131	0.006598	1.09968E-11	0.91047	0.044669	0.001775	0.023195	0.063387	2E-08	0.76906	0.685056	0.772	0.939	0.995	0.972	0.952	1	0.734	0.803
rs6920256	5.2888E-12	-0.060085	0.00871	-0.060085	0.008711	1.11949E-11	0.86371	0.374774	0.000134	0.023077	0.058335	0.00014	0.01085	0.002512	0.838	0.901	1	0.983	0.97	1	0.986	0.983
rs4368222	5.321E-12	0.03479	0.00504	0.03479	0.005044	1.12619E-11	0.15422	0.896254	7.71E-05	0.024661	0.170212	1.7E-06	0.44456	0.126357	0.915	0.762	1	0.974	0.913	1	0.842	0.924
rs4468701	5.3213E-12	0.0347899	0.00504	0.0347899	0.005044	1.12625E-11	0.15422	0.896246	7.71E-05	0.024666	0.170291	1.7E-06	0.44456	0.126357	0.915	0.762	1	0.974	0.913	1	0.842	0.924
rs7631586	5.3229E-12	-0.042428	0.00615	-0.043274	0.008274	8.15916E-12	0.72444	0.077679	0.032823	1.98E-05	0.007977	1.4E-06	0.3772	0.823859	0.754	0.911	0.692	1	0.985	1	0.796	0.641
rs12637346	5.3462E-12	-0.042474	0.00616	-0.043184	0.00807	8.15808E-12	0.71355	0.105172	0.032347	1.58E-05	0.010534	1.3E-06	0.36526	0.841003	0.757	0.9	0.698	1	0.981	1	0.802	0.647
rs9467711	5.385E-12	-0.08104	0.01175	-0.08104	0.011753	1.13949E-11	0.62069	0.137886	0.000399	0.000661	0.042962	0.00035	0.22262	0.006722	0.872	0.939	1	0.999	0.976	1	0.926	0.978
rs11663694	5.3884E-12	0.0357468	0.00518	0.0357468	0.005184	1.14021E-11	0.28491	0.841798	0.000246	0.007784	0.094649	3.9E-06	0.41048	0.048224	0.895	0.763	1	0.993	0.947	1	0.859	0.951
rs8065296	5.3989E-12	-0.03842	0.00557	-0.037869	0.009031	1.14239E-11	0.41742	0.015785	1.65E-05	0.01811	0.676182	2E-05	0.44005	0.001175	0.596	0.951	1	0.975	0.664	1	0.806	0.981
rs8182243	5.3989E-12	-0.03842	0.00557	-0.037869	0.009031	1.14239E-11	0.41742	0.015785	1.65E-05	0.01811	0.676182	2E-05	0.44005	0.001175	0.596	0.951	1	0.975	0.664	1	0.806	0.981
rs62097900	5.4083E-12	0.0354206	0.00514	0.0354206	0.005138	1.14435E-11	0.16609	0.378047	6.85E-05	0.008868	0.089751	2.7E-05	0.49573	0.138198	0.925	0.892	1	0.993	0.955	1	0.852	0.933
rs9834003	5.5012E-12	-0.042393	0.00615	-0.043273	0.008268	8.41198E-12	0.67479	0.077329	0.033346	1.94E-05	0.008014	1.5E-06	0.37981	0.809833	0.764	0.912	0.69	1	0.985	1	0.796	0.639
rs1833935	5.5077E-12	0.0348833	0.00506	0.0348833	0.005062	1.16499E-11	0.84973	0.052742	0.000872	0.00922	0.049821	3E-05	0.00487	0.359359	0.838	0.955	0.999	0.993	0.973	1	0.99	0.902
rs12444759	5.5378E-12	0.0348832	0.00506	0.0348832	0.005062	1.17124E-11	0.84864	0.052879	0.000875	0.009248	0.049956	3E-05	0.00489	0.358959	0.838	0.955	0.999	0.993	0.973	1	0.99	0.902
rs7622320	5.5829E-12	0.036888	0.00535	0.036888	0.005354	1.18061E-11	0.7933	0.496348	0.000134	0.016589	0.309786	6.2E-06	0.01376	0.075287	0.745	0.859	1	0.984	0.863	1	0.979	0.941
rs8098405	5.6255E-12	0.0349422	0.00507	0.0345681	0.005718	1.15997E-11	0.11585	0.854657	0.000409	0.234632	0.12305	5.8E-08	0.16795	0.023657	0.91	0.711	0.999	0.653	0.916	1	0.902	0.953
rs62084711	5.6476E-12	-0.037938	0.00551	-0.036884	0.008021	1.19405E-11	0.27913	0.092692	1.37E-05	0.027543	0.385448	1.3E-05	0.40843	0.001715	0.563	0.916	1	0.963	0.799	1	0.824	0.979
rs796392045	5.6531E-12	0.0354177	0.00514	0.0346423	0.006048	1.19519E-11	0.39667	0.19759	0.00014	0.12659	0.050019	1.8E-07	0.05232	0.218842	0.835	0.508	1	0.788	0.952	1	0.946	0.876
rs34503060	5.6545E-12	-0.037937	0.00551	-0.036882	0.008023	1.19548E-11	0.27892	0.092692	1.37E-05	0.027562	0.385448	1.3E-05	0.40843	0.001715	0.563	0.916	1	0.963	0.799	1	0.824	0.979
rs7503056	5.6549E-12	0.0379372	0.00551	0.0368821	0.008022	1.19557E-11	0.27912	0.092673	1.37E-05	0.027568	0.385514	1.3E-05	0.40845	0.001716	0.563	0.916	1	0.963	0.799	1	0.824	0.979
rs7503206	5.6549E-12	0.0379372	0.00551	0.0368821	0.008022	1.19557E-11	0.27912	0.092673	1.37E-05	0.027568	0.385514	1.3E-05	0.40845	0.001716	0.563	0.916	1	0.963	0.799	1	0.824	0.979
rs34702735	5.6649E-12	-0.055618	0.00807	-0.057027	0.008943	9.29178E-12	0.09722	0.164323	0.000333	1.18E-06	0.102581	0.00806	0.06061	0.393377	0.946	0.932	1	1	0.955	0.968	0.966	0.898
rs28407265	5.7059E-12	0.0362051	0.00526	0.0362051	0.005257	1.20617E-11	0.83013	0.282841	0.000213	0.000645	0.007386	9.2E-05	0.51092	0.273286	0.75	0.891	1	0.999	0.989	1	0.827	0.894
rs62381113	5.7248E-12	0.0365822	0.00531	0.0365822	0.005312	1.21008E-11	0.99871	0.147036	0.000174	0.000687	0.008834	0.00019	0.3476	0.400313	0.794	0.924	1	0.999	0.989	1	0.88	0.881
rs111550232	5.7253E-12	-0.055715	0.00809	-0.055961	0.008242	1.01499E-11	0.12059	0.159405	0.000336	1.36E-06	0.10499	0.00643	0.07579	0.389165	0.941	0.933	1	1	0.954	0.978	0.962	0.899
rs7755997	5.7756E-12	0.0352007	0.00511	0.0352007	0.005113	1.22063E-11	0.57801	0.672289	9.98E-06	0.004006	0.105496	0.00073	0.02866	0.123016	0.867	0.855	1	0.997	0.951	0.999	0.975	0.938
rs75885145	5.8012E-12	0.0379191	0.00551	0.0368	0.008051	1.22593E-11	0.27572	0.099502	1.45E-05	0.027345	0.40313	1.1E-05	0.40674	0.001672	0.559	0.913	1	0.963	0.789	1	0.822	0.979
rs150826473	5.8052E-12	0.0835453	0.01214	0.0835453	0.012136	1.22678E-11	0.81776	0.282422	0.003457	0.006642	0.012096	1.2E-05	0.00176	0.533318	0.834	0.908	0.993	0.995	0.987	1	0.993	0.871
rs200945156	5.8065E-12	0.0365703	0.00531	0.0365703	0.005312	1.22704E-11	0.98929	0.14583	0.000175	0.000699	0.008881	0.00019	0.3485	0.400867	0.796	0.924	1	0.999	0.989	1	0.88	0.881
rs148188065	5.8528E-12	-0.122768	0.01784	-0.122768	0.017836	1.23665E-11	0.30359	0.748531	2.81E-05	0.001549	0.005137	0.00256	0.00742	0.762462	0.902	0.839	1	0.998	0.992	0.993	0.985	0.827
rs28873404	5.971E-12	0.0361148	0.00525	0.0338938	0.010114	4.96381E-12	0.22987	0.177306	1.15E-05	0.837495	0.052982	2.7E-07	0.00071	0.518496	0.789	0.266	1	0.048	0.913	1	0.991	0.677
rs11109659	5.9736E-12	0.0606175	0.00881	0.0606175	0.00881	1.26171E-11	0.26804	0.421761	0.000301	0.007008	0.059943	4.6E-05	0.0873	0.080621	0.918	0.897	1	0.995	0.97	1	0.959	0.952
rs11663217	5.9852E-12	0.0353653	0.00514	0.0353653	0.00514	1.26411E-11	0.17612	0.374919	6.66E-05	0.010308	0.088269	2.7E-05	0.49061	0.137064	0.923	0.892	1	0.991	0.955	1	0.853	0.933
rs1105643	5.9872E-12	0.0361045	0.00525	0.0339329	0.010184	4.97742E-12	0.21208	0.160042	1.25E-05	0.832179	0.047641	2.8E-07	0.00072	0.520103	0.798	0.257	1	0.048	0.92	1	0.991	0.677
rs9973932	6.0204E-12	0.0444411	0.00646	0.0444411	0.00646	1.27141E-11	0.08555	0.272361	0.006933	2.79E-05	0.015025	0.00017	0.42263	0.051132	0.948	0.916	0.982	1	0.987	1	0.881	0.959
rs35580353	6.0323E-12	0.0350429	0.00509	0.0346983	0.005524	1.27388E-11	0.122	0.585676	0.000203	0.17713	0.083362	1.1E-07	0.34151	0.036897	0.905	0.65	0.999	0.728	0.935	1	0.838	0.943
rs4702	6.0647E-12	-0.034866	0.00507	-0.034866	0.005069	1.2806E-11	0.0305	0.452316	4.58E-05	0.006018	0.195953	0.00029	0.05576	0.163359	0.964	0.893	1	0.995	0.927	1	0.968	0.936
rs7214557	6.0737E-12	0.0378795	0.00551	0.0367965	0.008037	1.28247E-11	0.27572	0.093261	1.45E-05	0.027345	0.393052	1.2E-05	0.41363	0.001738	0.56	0.915	1	0.963	0.795	1	0.821	0.979
rs72832596	6.1122E-12	-0.077285	0.01124	-0.083765	0.014889	1.27034E-11	0.41527	0.379587	0.000372	3.74E-05	0.021276	0.00644	0.07254	0.001984	0.9	0.905	1	1	0.985	0.978	0.965	0.984
rs11109660	6.1127E-12	0.0605956	0.00881	0.0605956	0.008811	1.29056E-11	0.26908	0.420832	0.000304	0.007042	0.060104	4.6E-05	0.08815	0.080574	0.918	0.898	1	0.995	0.97	1	0.959	0.952
rs145024643	6.1254E-12	-0.037873	0.00551	-0.036795	0.008027	1.29318E-11	0.27842	0.09328	1.45E-05	0.0277	0.392982	1.2E-05	0.41361	0.001738	0.562	0.915	1	0.963	0.795	1	0.821	0.979

Table S3

rs11664320	6.1424E-12	0.0351881	0.00512	0.0343082	0.006093	1.29671E-11	0.3968	0.192739	0.00015	0.129651	0.050894	1.5E-07	0.05016	0.279894	0.832	0.5	1	0.783	0.951	1	0.946	0.858
rs11109648	6.1475E-12	0.0605771	0.00881	0.0605771	0.00881	1.29777E-11	0.26587	0.42003	0.000295	0.007176	0.059586	4.8E-05	0.08751	0.08026	0.918	0.898	1	0.995	0.97	1	0.959	0.952
rs6693295	6.1491E-12	-0.043055	0.00626	-0.043055	0.006262	1.29811E-11	0.30047	0.1722	5.69E-06	0.007277	0.025981	0.0073	0.02871	0.036024	0.918	0.936	1	0.995	0.984	0.976	0.979	0.968
rs13206443	6.1602E-12	-0.076885	0.01118	-0.084411	0.015532	1.26447E-11	0.47369	0.38161	0.000486	2.43E-05	0.031506	0.00568	0.0607	0.001446	0.893	0.904	0.999	1	0.981	0.982	0.968	0.985
rs4791295	6.1839E-12	0.0392153	0.0057	0.038957	0.009479	1.30531E-11	0.41575	0.034207	2.41E-05	0.033569	0.621188	1.3E-05	0.32628	0.000369	0.607	0.94	1	0.953	0.698	1	0.848	0.986
rs62085991	6.2598E-12	0.0404995	0.00589	0.040082	0.009769	1.32106E-11	0.68543	0.054741	1.54E-05	0.012707	0.896698	3E-05	0.48581	0.000217	0.655	0.924	1	0.982	0.563	1	0.783	0.987
rs11109647	6.2702E-12	0.0605558	0.00881	0.0605558	0.00881	1.3232E-11	0.26572	0.420458	0.000296	0.007208	0.059576	4.9E-05	0.08765	0.080362	0.918	0.898	1	0.995	0.97	1	0.959	0.952
rs56393562	6.2778E-12	0.0404971	0.00589	0.0400787	0.00977	1.32478E-11	0.68512	0.054741	1.54E-05	0.012743	0.896699	3E-05	0.48581	0.000217	0.654	0.924	1	0.981	0.563	1	0.783	0.987
rs61676547	6.3149E-12	0.040305	0.00586	0.0404639	0.009381	1.33246E-11	0.98197	0.125267	2.73E-05	0.002713	0.972296	8.3E-05	0.39253	0.000148	0.723	0.901	1	0.996	0.516	1	0.819	0.989
rs73338706	6.3227E-12	0.0404783	0.00589	0.0400701	0.009773	1.33408E-11	0.70449	0.047177	1.7E-05	0.011775	0.905571	2.9E-05	0.51937	0.000239	0.657	0.928	1	0.983	0.557	1	0.771	0.987
rs112021469	6.3498E-12	0.045251	0.00659	0.045251	0.006585	1.3397E-11	0.07432	0.201856	0.004474	4.22E-05	0.010844	0.00039	0.43114	0.040093	0.952	0.928	0.991	1	0.99	0.999	0.882	0.964
rs5821447	6.3677E-12	0.0404851	0.00589	0.0400616	0.009776	1.34341E-11	0.68203	0.054741	1.54E-05	0.012873	0.896703	3E-05	0.48581	0.000217	0.654	0.924	1	0.981	0.563	1	0.783	0.987
rs10924474	6.39E-12	-0.043021	0.00626	-0.043021	0.006262	1.34803E-11	0.30012	0.172186	5.98E-06	0.007284	0.025969	0.00729	0.0287	0.036012	0.918	0.936	1	0.995	0.984	0.976	0.979	0.968
rs12132524	6.4007E-12	-0.043019	0.00626	-0.043019	0.006262	1.35025E-11	0.30042	0.172185	5.98E-06	0.007292	0.025969	0.00729	0.0287	0.036012	0.918	0.936	1	0.995	0.984	0.976	0.979	0.968
rs34784543	6.4007E-12	-0.043019	0.00626	-0.043019	0.006262	1.35025E-11	0.30042	0.172185	5.98E-06	0.007292	0.025969	0.00729	0.0287	0.036012	0.918	0.936	1	0.995	0.984	0.976	0.979	0.968
rs6693092	6.4009E-12	-0.043019	0.00626	-0.043019	0.006262	1.35028E-11	0.30043	0.172185	5.98E-06	0.007293	0.025969	0.00729	0.0287	0.036012	0.918	0.936	1	0.995	0.984	0.976	0.979	0.968
rs10924478	6.4014E-12	-0.043019	0.00626	-0.043019	0.006262	1.35039E-11	0.30043	0.172185	5.98E-06	0.007293	0.025969	0.00729	0.0287	0.036012	0.918	0.936	1	0.995	0.984	0.976	0.979	0.968
rs10924472	6.4022E-12	-0.043019	0.00626	-0.043019	0.006262	1.35057E-11	0.30042	0.172186	5.98E-06	0.007293	0.02597	0.00729	0.0287	0.036012	0.918	0.936	1	0.995	0.984	0.976	0.979	0.968
rs35757106	6.4045E-12	-0.043019	0.00626	-0.043019	0.006262	1.35104E-11	0.30043	0.172185	5.98E-06	0.007293	0.02597	0.00729	0.0287	0.036012	0.918	0.936	1	0.995	0.984	0.976	0.979	0.968
rs72917329	6.415E-12	0.0350459	0.0051	0.0350459	0.005101	1.35321E-11	0.14296	0.713984	7.77E-05	0.00586	0.300424	1.9E-05	0.34203	0.061078	0.925	0.837	1	0.995	0.875	1	0.881	0.948
rs13214027	6.4263E-12	-0.058882	0.00857	-0.059404	0.009162	1.35556E-11	0.82813	0.546174	0.000307	0.022504	0.059244	8.8E-05	0.00411	0.003064	0.841	0.877	1	0.983	0.969	1	0.99	0.982
rs1431188	6.4759E-12	0.035439	0.00516	0.0342055	0.00645	1.08039E-11	0.3018	0.491181	0.000473	0.276957	0.080488	8.5E-09	0.05212	0.326023	0.831	0.563	0.997	0.529	0.92	1	0.937	0.824
rs190517796	6.4843E-12	0.0888725	0.01294	0.0888725	0.012939	1.36757E-11	0.20182	0.072677	0.004756	0.000654	0.224847	1.3E-06	0.06956	0.607256	0.908	0.936	0.986	0.999	0.897	1	0.953	0.694
rs9967838	6.4865E-12	0.0385998	0.00562	0.0385998	0.00562	1.36802E-11	0.14066	0.01643	7.9E-06	0.031104	0.064557	0.00052	0.28322	0.153579	0.939	0.97	1	0.977	0.969	0.999	0.914	0.939
rs11677973	6.4914E-12	0.0452261	0.00658	0.0452261	0.006585	1.36903E-11	0.07717	0.180262	0.004525	5.35E-05	0.011342	0.00035	0.43268	0.037369	0.951	0.932	0.991	1	0.989	1	0.883	0.965
rs11662416	6.5112E-12	0.0351457	0.00512	0.0344412	0.005885	1.37314E-11	0.36942	0.207911	0.000163	0.12523	0.058054	1.4E-07	0.05667	0.258826	0.841	0.515	1	0.796	0.947	1	0.944	0.866
rs13418151	6.5255E-12	-0.03687	0.00537	-0.041059	0.009264	5.39588E-12	0.856	0.015323	0.000381	2.23E-07	0.244559	0.01201	0.00455	0.702181	0.801	0.963	0.998	1	0.882	0.915	0.988	0.819
rs10924477	6.5448E-12	-0.042998	0.00626	-0.042998	0.006261	1.3801E-11	0.2998	0.172185	5.98E-06	0.007475	0.025969	0.00729	0.0287	0.036012	0.918	0.936	1	0.995	0.984	0.976	0.979	0.968
rs35825164	6.5745E-12	-0.076766	0.01118	-0.084113	0.015425	1.36452E-11	0.47145	0.38161	0.000486	2.73E-05	0.031506	0.00568	0.0607	0.001446	0.893	0.904	0.999	1	0.981	0.982	0.968	0.985
rs35484309	6.5755E-12	-0.076766	0.01118	-0.084112	0.015425	1.36471E-11	0.47145	0.381609	0.000486	2.73E-05	0.031506	0.00568	0.06071	0.001446	0.893	0.904	0.999	1	0.981	0.982	0.968	0.985
rs6799759	6.5867E-12	0.0350774	0.00511	0.0350774	0.005109	1.38877E-11	0.73773	0.168762	0.002619	0.001734	0.345189	1.3E-05	0.00278	0.10123	0.844	0.926	0.995	0.998	0.869	1	0.991	0.942
rs56084230	6.5943E-12	0.0452257	0.00659	0.0452257	0.006587	1.39034E-11	0.07635	0.201755	0.004484	5.25E-05	0.011202	0.00033	0.43768	0.040838	0.951	0.928	0.991	1	0.989	1	0.881	0.963
rs9379891	6.5965E-12	-0.058835	0.00857	-0.059273	0.009069	1.39081E-11	0.82462	0.544662	0.000306	0.022375	0.058588	8.9E-05	0.00443	0.003033	0.841	0.877	1	0.983	0.969	1	0.99	0.982
rs148810956	6.6081E-12	-0.076758	0.01118	-0.084095	0.01542	1.37236E-11	0.47168	0.38161	0.000486	2.75E-05	0.031506	0.00568	0.0607	0.001446	0.893	0.904	0.999	1	0.981	0.982	0.968	0.985
rs11689266	6.6188E-12	0.0452034	0.00658	0.0452034	0.006584	1.39541E-11	0.07631	0.198949	0.00455	5.1E-05	0.011631	0.00033	0.42973	0.041241	0.951	0.929	0.991	1	0.989	1	0.883	0.963
rs7590074	6.626E-12	0.0452157	0.00659	0.0452157	0.006586	1.39691E-11	0.07609	0.201935	0.004477	4.38E-05	0.010825	0.00039	0.43134	0.040077	0.951	0.928	0.991	1	0.99	0.999	0.882	0.964
rs12602556	6.6293E-12	0.040487	0.0059	0.0398894	0.009712	1.3976E-11	0.60759	0.059456	1.44E-05	0.010475	0.842492	3.5E-05	0.53561	0.000259	0.634	0.921	1	0.985	0.583	1	0.766	0.986
rs5020052	6.6387E-12	0.0346225	0.00504	0.0346225	0.005043	1.39954E-11	0.11865	0.744647	6.62E-05	0.027045	0.143231	2.1E-06	0.5741	0.103965	0.92	0.726	1	0.97	0.92	1	0.8	0.927
rs56106733	6.6683E-12	0.0451962	0.00658	0.0451962	0.006584	1.40567E-11	0.07631	0.19934	0.004551	5.12E-05	0.011629	0.00033	0.42969	0.041233	0.951	0.929	0.991	1	0.989	1	0.883	0.963
rs11685591	6.6892E-12	0.0452003	0.00658	0.0452003	0.006585	1.40999E-11	0.07578	0.198964	0.004508	4.96E-05	0.01081	0.00036	0.428	0.041131	0.951	0.929	0.991	1	0.99	1	0.883	0.963
rs7748167	6.6937E-12	-0.076202	0.0111	-0.080531	0.013434	1.41093E-11	0.3759	0.346716	0.000364	0.000137	0.014625	0.0052	0.05881	0.002395	0.908	0.911	1	1	0.988	0.985	0.969	0.984
rs11689163	6.6973E-12	0.0451935	0.00658	0.0451935	0.006584	1.41167E-11	0.0763	0.198633	0.004567	5.11E-05	0.011639	0.00033	0.42998	0.041337	0.951	0.929	0.991	1	0.989	1	0.883	0.963
rs9845140	6.7027E-12	0.036739	0.00535	0.036739	0.005353	1.41278E-11	0.79397	0.47409	0.000131	0.015966	0.317542	7.8E-06	0.0138	0.083776	0.746	0.862	1	0.984	0.86	1	0.979	0.938
rs11676081	6.7031E-12	0.0452012	0.00659	0.0452012	0.006585	1.41288E-11	0.07653	0.20147	0.004491	4.52E-05	0.010959	0.00038	0.43131	0.040276	0.951	0.928	0.991	1	0.99	0.999	0.882	0.964
rs72953771	6.7056E-12	0.0451945	0.00658	0.0451945	0.006584	1.41338E-11	0.07589	0.199343	0.00457	5.08E-05	0.011631	0.00034	0.42967	0.041233	0.951	0.929	0.991	1	0.989	1	0.883	0.963
rs11677847	6.708E-12	0.0451928	0.00658	0.0451928	0.006584	1.41388E-11	0.07637	0.198637	0.004572	5.11E-05	0.011622	0.00033	0.42966	0.041333	0.951	0.929	0.991	1	0.989	1	0.883	0.963
rs72951700	6.7206E-12	0.0451922	0.00658	0.0451922	0.006584	1.41649E-11	0.07639	0.19819	0.004579	5.13E-05	0.011628	0.00033	0.43023	0.041355	0.951	0.929	0.991	1	0.989	1	0.883	0.963
rs16839694	6.7328E-12	0.0451875	0.00658	0.0451875	0.006584	1.41903E-11	0.07627	0.199341	0.004562	5.14E-05	0.01163	0.00033	0.42968	0.041233	0.951	0.929	0.991	1	0.989	1	0.883	0.963
rs111967199	6.7361E-12	0.045191	0.00658	0.045191	0.006585	1.4197E-11	0.08254	0.201957	0.00447	4.32E-05	0.010804	0.00039	0.43126	0.040075	0.95	0.928	0.991	1	0.99	0.999	0.882	0.964
rs72953773	6.7452E-12	0.0451856	0.00658	0.0451856	0.006584	1.42159E-11	0.07621	0.199344	0.004571	5.12E-05	0.011631	0.00034	0.42968	0.041234	0.951	0.929	0.991	1	0.989	1	0.883	0.963
rs72955720	6.7486E-12	0.045189	0.00658	0.045189	0.006585	1.42229E-11	0.07697	0.202951	0.004434	4.32E-05	0.010548	0.00041	0.43207	0.039681	0.951	0.928	0.991	1	0.99	0.999	0.882	0.964
rs9393735	6.7562E-12	-0.058805	0.00857	-0.059243	0.009068	1.42387E-11	0.81813	0.544676	0.000307	0.023039	0.058601	8.9E-05	0.00443	0.003033	0.842	0.877	1	0.982	0.969	1	0.99	0.982
rs62084208	6.7678E-12	0.0404688	0.0059	0.0398681	0.009709	1.42627E-11	0.60736	0.059632	1.45E-05	0.010542	0.843053	3.5E-05	0.5357	0.00026	0.634	0.921	1	0.985	0.583	1	0.766	0.986
rs11688473	6.7757E-12	0.0451883	0.00659	0.0451883	0.006585	1.42789E-11	0.07676	0.201601	0.004484	4.6E-05	0.010898	0.00038	0.43131	0.040168	0.951	0.928	0.991	1	0.99	0.999	0.882	0.964
rs72955719	6.7771E-12	0.0451851	0.00658	0.0451851	0.006585	1.42818E-11	0.07704	0.202946	0.004432	4.36E-05	0.010547	0.00041	0.432	0.039677	0.951	0.928	0.991	1	0.99	0.999	0.882	0.964

Table S3

rs141801930	6.7973E-12	0.0451852	0.00658	0.0451852	0.006585	1.43237E-11	0.07681	0.201763	0.004481	4.59E-05	0.010854	0.00038	0.43124	0.04016	0.951	0.928	0.991	1	0.99	0.999	0.882	0.964
rs113683378	6.8116E-12	0.045183	0.00658	0.045183	0.006585	1.43532E-11	0.07686	0.201898	0.004479	4.57E-05	0.010834	0.00039	0.43126	0.0401	0.951	0.928	0.991	1	0.99	0.999	0.882	0.964
rs3785083	6.8221E-12	0.0355951	0.00519	0.0356711	0.006749	1.43751E-11	0.38277	0.949378	2.82E-06	0.138936	0.169889	0.00014	0.00016	0.433413	0.859	0.748	1	0.809	0.901	1	0.996	0.848
rs11688902	6.8266E-12	0.0451762	0.00658	0.0451762	0.006584	1.43842E-11	0.07596	0.199539	0.004595	5.05E-05	0.011576	0.00034	0.42943	0.041145	0.951	0.929	0.991	1	0.989	1	0.883	0.963
rs113309880	6.8307E-12	0.0451809	0.00659	0.0451809	0.006585	1.43928E-11	0.07671	0.201168	0.004508	4.72E-05	0.011024	0.00037	0.43082	0.04034	0.951	0.928	0.991	1	0.99	0.999	0.883	0.964
rs11679776	6.8311E-12	0.0451804	0.00658	0.0451804	0.006585	1.43936E-11	0.07646	0.200973	0.004522	4.77E-05	0.011142	0.00037	0.43076	0.040462	0.951	0.928	0.991	1	0.989	1	0.883	0.964
rs56149684	6.8345E-12	0.0451802	0.00659	0.0451802	0.006585	1.44007E-11	0.07666	0.20126	0.00451	4.68E-05	0.011005	0.00038	0.43099	0.040347	0.951	0.928	0.991	1	0.99	0.999	0.883	0.964
rs35163685	6.8361E-12	0.0451781	0.00658	0.0451781	0.006585	1.4404E-11	0.077	0.202639	0.004454	4.44E-05	0.010645	0.0004	0.43196	0.039851	0.951	0.928	0.991	1	0.99	0.999	0.882	0.964
rs11680443	6.8389E-12	0.045173	0.00658	0.045173	0.006584	1.44097E-11	0.07614	0.19935	0.004592	5.13E-05	0.011632	0.00034	0.42966	0.041235	0.951	0.929	0.991	1	0.989	1	0.883	0.963
rs13200888	6.8531E-12	-0.076701	0.01118	-0.08407	0.015438	1.41955E-11	0.47206	0.38192	0.000493	2.73E-05	0.031637	0.00576	0.06082	0.001448	0.893	0.904	0.999	1	0.981	0.982	0.968	0.985
rs10932190	6.857E-12	0.0451705	0.00658	0.0451705	0.006584	1.44472E-11	0.07604	0.199352	0.004595	5.13E-05	0.011633	0.00034	0.42967	0.041234	0.951	0.929	0.991	1	0.989	1	0.883	0.963
rs10932191	6.8589E-12	0.0451703	0.00658	0.0451703	0.006584	1.44511E-11	0.07604	0.199352	0.004596	5.13E-05	0.011633	0.00034	0.42966	0.041234	0.951	0.929	0.991	1	0.989	1	0.883	0.963
rs11677814	6.8668E-12	0.0451707	0.00658	0.0451707	0.006584	1.44675E-11	0.07603	0.19954	0.004593	5.1E-05	0.011576	0.00034	0.42943	0.041145	0.951	0.929	0.991	1	0.989	1	0.883	0.963
rs35347400	6.8678E-12	0.0451735	0.00658	0.0451735	0.006585	1.44696E-11	0.07629	0.197358	0.004604	5.13E-05	0.011683	0.00034	0.43109	0.041445	0.951	0.929	0.991	1	0.989	1	0.882	0.963
rs11695858	6.8696E-12	0.0451755	0.00659	0.0451755	0.006585	1.44733E-11	0.0762	0.19678	0.004621	5.1E-05	0.011678	0.00034	0.43056	0.041482	0.951	0.929	0.991	1	0.989	1	0.883	0.963
rs141212431	6.8801E-12	0.0451771	0.00659	0.0451771	0.006585	1.4495E-11	0.07623	0.200066	0.004546	4.98E-05	0.011368	0.00035	0.42937	0.041234	0.951	0.929	0.991	1	0.989	1	0.883	0.963
rs34569535	6.8923E-12	0.0358929	0.00523	0.0358929	0.005232	1.45202E-11	0.06229	0.967951	3.29E-05	0.004693	0.123565	0.00012	0.67103	0.020505	0.944	0.797	1	0.995	0.937	1	0.795	0.964
rs60939828	6.8934E-12	0.0350676	0.00511	0.0350676	0.005112	1.45226E-11	0.2895	0.371619	0.000163	0.130217	0.131672	9.2E-08	0.1619	0.095069	0.862	0.592	1	0.8	0.909	1	0.9	0.916
rs1883215	6.913E-12	-0.080093	0.01168	-0.080093	0.011676	1.4563E-11	0.66026	0.247881	0.000347	0.000618	0.054622	0.00037	0.18245	0.007301	0.865	0.919	1	0.999	0.971	0.999	0.934	0.977
rs79731121	6.9216E-12	0.0746697	0.01089	0.0746697	0.010886	1.45808E-11	0.05881	0.908394	3.13E-05	0.1344	0.05101	7.5E-06	0.04419	0.52555	0.94	0.763	1	0.835	0.963	1	0.961	0.846
rs10924475	6.9561E-12	-0.042945	0.00626	-0.042945	0.006261	1.46522E-11	0.30405	0.172186	5.98E-06	0.007897	0.025969	0.00729	0.0287	0.036012	0.918	0.936	1	0.995	0.984	0.977	0.979	0.968
rs62097981	6.9854E-12	0.0353878	0.00516	0.0343611	0.006178	1.27636E-11	0.27344	0.434402	0.000477	0.213879	0.103997	1.2E-08	0.05883	0.316442	0.849	0.572	0.998	0.641	0.911	1	0.937	0.838
rs72953784	7.0449E-12	0.0451482	0.00658	0.0451482	0.006585	1.48358E-11	0.07565	0.199455	0.00461	5.26E-05	0.011611	0.00034	0.42984	0.041206	0.951	0.929	0.991	1	0.989	1	0.883	0.963
rs7613681	7.0519E-12	0.0350825	0.00512	0.0361105	0.00907	1.48503E-11	0.49861	0.002081	0.002088	0.067414	0.001385	7.8E-07	0.04306	0.576151	0.637	0.974	0.992	0.904	0.995	1	0.957	0.632
rs62098017	7.0684E-12	0.0350866	0.00512	0.0343223	0.005947	1.48844E-11	0.38886	0.199235	0.000147	0.129108	0.056475	1.7E-07	0.05604	0.259566	0.835	0.507	1	0.787	0.948	1	0.943	0.864
rs68149500	7.0718E-12	-0.076641	0.01118	-0.083807	0.015316	1.48345E-11	0.46796	0.38161	0.000486	3.1E-05	0.031506	0.00568	0.0607	0.001446	0.894	0.904	0.999	1	0.981	0.982	0.968	0.985
rs11685176	7.1145E-12	0.0451149	0.00658	0.0451149	0.006581	1.49799E-11	0.08211	0.178785	0.004668	4.44E-05	0.012534	0.00037	0.42472	0.040574	0.95	0.932	0.991	1	0.989	0.999	0.884	0.964
rs11663393	7.1341E-12	0.0346004	0.00505	0.0346004	0.005048	1.50202E-11	0.12988	0.691262	4.45E-05	0.016164	0.215892	3.2E-06	0.61737	0.121715	0.912	0.704	1	0.981	0.884	1	0.778	0.917
rs62085661	7.147E-12	-0.038551	0.00562	-0.037744	0.007254	1.50471E-11	0.43336	0.105543	5.28E-06	0.097719	0.177883	1.5E-05	0.4417	0.004178	0.621	0.913	1	0.858	0.893	1	0.816	0.973
rs11690588	7.1528E-12	0.0451106	0.00658	0.0451106	0.006581	1.5059E-11	0.08214	0.179081	0.004665	4.4E-05	0.012448	0.00038	0.42483	0.040421	0.95	0.932	0.991	1	0.989	0.999	0.884	0.964
rs336610	7.1733E-12	0.0351345	0.00513	0.0351345	0.005126	1.51013E-11	0.37516	0.368338	0.005418	0.0003	0.163479	2.7E-05	0.01064	0.131847	0.9	0.901	0.988	1	0.935	1	0.985	0.94
rs201027130	7.1797E-12	0.0792749	0.01157	0.0888512	0.021036	1.51146E-11	0.42329	0.657977	0.000265	0.329056	0.000832	2.5E-05	0.03626	0.000177	0.837	0.662	0.999	0.539	0.996	1	0.959	0.991
rs11683849	7.1845E-12	0.0451372	0.00659	0.0451372	0.006586	1.51245E-11	0.09075	0.202679	0.004452	4.29E-05	0.010635	0.0004	0.43195	0.039811	0.948	0.928	0.991	1	0.99	0.999	0.882	0.964
rs6697845	7.1965E-12	-0.042915	0.00626	-0.042915	0.006262	1.51494E-11	0.29987	0.171932	6.18E-06	0.007579	0.027117	0.00742	0.0287	0.036012	0.918	0.936	1	0.995	0.983	0.976	0.979	0.968
rs72955717	7.2245E-12	0.0451204	0.00658	0.0451204	0.006584	1.52073E-11	0.08302	0.203717	0.00453	3.98E-05	0.010709	0.00042	0.43186	0.040509	0.949	0.928	0.991	1	0.99	0.999	0.882	0.963
rs72953779	7.2469E-12	0.0450933	0.00658	0.0450933	0.00658	1.52536E-11	0.0819	0.177984	0.004734	4.66E-05	0.012865	0.00036	0.4241	0.04098	0.95	0.932	0.99	1	0.989	1	0.884	0.963
rs62099235	7.2751E-12	0.0350309	0.00511	0.0350309	0.005112	1.53118E-11	0.29029	0.367299	0.00017	0.130213	0.13585	8.6E-08	0.16148	0.100224	0.862	0.59	1	0.799	0.906	1	0.9	0.914
rs2604551	7.286E-12	-0.03883	0.00567	-0.03883	0.005667	1.53344E-11	0.39322	0.076685	0.001998	0.001744	0.488234	1E-05	0.01463	0.181476	0.89	0.944	0.996	0.998	0.822	1	0.982	0.925
rs58764043	7.3059E-12	0.0428479	0.00625	0.0428479	0.006254	1.53754E-11	0.04043	0.853265	0.00024	0.014878	0.032986	8.7E-05	0.03371	0.092575	0.959	0.796	1	0.989	0.979	1	0.975	0.948
rs4790973	7.3079E-12	0.0403571	0.00589	0.0399359	0.00979	1.53795E-11	0.6992	0.0478	1.76E-05	0.012544	0.911268	3E-05	0.51916	0.000238	0.656	0.927	1	0.982	0.556	1	0.771	0.987
rs11684690	7.3127E-12	0.0451187	0.00659	0.0451187	0.006585	1.53894E-11	0.09065	0.197448	0.004594	5.08E-05	0.011677	0.00034	0.4306	0.041426	0.948	0.929	0.991	1	0.989	1	0.882	0.963
rs74541577	7.3279E-12	0.0403286	0.00589	0.0397969	0.009714	1.54208E-11	0.64093	0.058541	1.37E-05	0.01402	0.904036	3.3E-05	0.45649	0.000254	0.643	0.922	1	0.979	0.56	1	0.792	0.987
rs7227069	7.3383E-12	0.0350151	0.00511	0.0350151	0.005111	1.54424E-11	0.28207	0.370443	0.000166	0.130584	0.13533	9.5E-08	0.16127	0.095873	0.864	0.592	1	0.799	0.907	1	0.9	0.916
rs7227402	7.389E-12	0.0350484	0.00512	0.0344369	0.005757	1.55471E-11	0.38981	0.21526	0.000155	0.125253	0.059531	1.6E-07	0.05947	0.274435	0.836	0.519	1	0.797	0.946	1	0.942	0.861
rs62099234	7.4177E-12	0.0350103	0.00511	0.0350103	0.005111	1.56066E-11	0.29029	0.370443	0.000166	0.130213	0.13533	9.5E-08	0.16127	0.095873	0.862	0.592	1	0.8	0.907	1	0.9	0.916
rs62099236	7.4177E-12	0.0350103	0.00511	0.0350103	0.005111	1.56066E-11	0.29029	0.370443	0.000166	0.130213	0.13533	9.5E-08	0.16127	0.095873	0.862	0.592	1	0.8	0.907	1	0.9	0.916
rs12277922	7.4324E-12	0.0350575	0.00512	0.0350575	0.005119	1.56369E-11	0.2721	0.645858	0.007095	0.000774	0.013856	5.5E-06	0.58245	0.023066	0.905	0.851	0.978	0.999	0.986	1	0.826	0.965
rs28628885	7.5037E-12	0.0347571	0.00508	0.0343475	0.005783	1.51967E-11	0.12293	0.882068	0.000425	0.265002	0.116661	6.1E-08	0.17519	0.024213	0.905	0.708	0.999	0.608	0.916	1	0.895	0.951
rs2347867	7.5535E-12	-0.035793	0.00523	-0.034779	0.008736	9.52272E-12	0.82102	0.11904	0.013275	0.012055	0.002773	1.3E-08	0.45989	0.065846	0.644	0.889	0.855	0.974	0.991	1	0.375	0.917
rs2237228	7.5582E-12	-0.07656	0.01118	-0.083703	0.015326	1.58916E-11	0.49143	0.381611	0.000486	3.22E-05	0.031507	0.00568	0.06071	0.001446	0.89	0.904	0.999	1	0.981	0.982	0.968	0.985
rs12601759	7.5702E-12	0.040253	0.00588	0.0400468	0.009873	1.59215E-11	0.74453	0.045186	2.5E-05	0.010177	0.86998	3E-05	0.59767	0.000177	0.669	0.929	1	0.985	0.576	1	0.748	0.988
rs12925372	7.5975E-12	0.0347174	0.00507	0.0347174	0.005071	1.59779E-11	0.83139	0.055548	0.000994	0.010286	0.053765	3E-05	0.00524	0.345407	0.841	0.954	0.999	0.992	0.971	1	0.989	0.904
rs11128904	7.6148E-12	0.0366453	0.00535	0.0366453	0.005353	1.60136E-11	0.80552	0.463048	0.000141	0.016129	0.32582	8E-06	0.0142	0.085385	0.749	0.864	1	0.984	0.858	1	0.979	0.938
rs71743943	7.684E-12	-0.037885	0.00554	-0.037398	0.007368	1.61565E-11	0.35967	0.080551	1.23E-05	0.027339	0.391476	3.4E-05	0.24871	0.002482	0.616	0.926	1	0.968	0.814	1	0.886	0.979
rs34158769	7.6991E-12	-0.080833	0.01181	-0.080833	0.011811	1.61878E-11	0.59975	0.352169	0.000519	0.000218	0.07324	0.00048	0.20668	0.002317	0.871	0.903	0.999	1	0.964	0.999	0.927	0.982

Table S3

rs4869748	7.7052E-12	-0.035782	0.00523	-0.034753	0.008805	9.41777E-12	0.80221	0.119454	0.01385	0.012373	0.002781	1.2E-08	0.46189	0.062031	0.636	0.887	0.845	0.972	0.991	1	0.372	0.918
rs62084210	7.7079E-12	0.0403541	0.0059	0.0397623	0.009715	1.62058E-11	0.60823	0.059505	1.51E-05	0.010884	0.85057	3.7E-05	0.53457	0.000261	0.635	0.921	1	0.984	0.581	1	0.766	0.986
rs143861937	7.7144E-12	-0.045113	0.00659	-0.045113	0.006592	1.62193E-11	0.95521	0.519803	9.5E-05	0.053901	0.01908	1.4E-06	0.733	0.088303	0.746	0.836	1	0.929	0.978	1	0.742	0.927
rs6550597	7.741E-12	0.0366319	0.00535	0.0366319	0.005353	1.62742E-11	0.79557	0.463048	0.000141	0.016167	0.325876	8E-06	0.0142	0.085385	0.747	0.864	1	0.984	0.857	1	0.979	0.937
rs117021806	7.7616E-12	-0.125875	0.0184	-0.125875	0.018395	1.63166E-11	0.35313	0.750317	9.72E-06	0.004871	0.003709	0.00287	0.01185	0.793506	0.892	0.836	1	0.996	0.992	0.992	0.983	0.82
rs4635727	7.7662E-12	0.0366306	0.00535	0.0366306	0.005353	1.63261E-11	0.82588	0.495437	0.000135	0.01646	0.316024	8.7E-06	0.01521	0.075797	0.754	0.86	1	0.984	0.862	1	0.978	0.941
rs142281315	7.812E-12	0.0350133	0.00512	0.0342878	0.005885	1.64208E-11	0.38886	0.203074	0.000155	0.129086	0.053731	1.6E-07	0.0626	0.278956	0.834	0.51	1	0.788	0.949	1	0.94	0.858
rs62097985	7.8416E-12	0.0353007	0.00516	0.0345129	0.005971	1.42542E-11	0.27952	0.546125	0.000432	0.265193	0.082173	1.6E-08	0.05299	0.334955	0.843	0.593	0.998	0.563	0.923	1	0.939	0.829
rs62098020	7.865E-12	0.0350037	0.00512	0.0344219	0.005735	1.653E-11	0.38302	0.217676	0.000163	0.126311	0.057855	1.7E-07	0.05964	0.2737	0.838	0.521	1	0.797	0.947	1	0.942	0.862
rs4975311	7.8757E-12	0.0397844	0.00582	0.0437056	0.008085	1.65521E-11	0.17271	0.0277	0.002025	0.042092	0.014744	0.00011	0.00013	0.331567	0.937	0.967	0.997	0.97	0.989	1	0.997	0.915
rs17412636	7.9279E-12	0.0349963	0.00512	0.0344119	0.005736	1.666E-11	0.3872	0.217676	0.000163	0.126324	0.057855	1.7E-07	0.05964	0.2737	0.837	0.521	1	0.796	0.947	1	0.942	0.862
rs17412782	7.9279E-12	0.0349963	0.00512	0.0344119	0.005736	1.666E-11	0.3872	0.217676	0.000163	0.126324	0.057855	1.7E-07	0.05964	0.2737	0.837	0.521	1	0.796	0.947	1	0.942	0.862
rs56030110	7.9279E-12	0.0349963	0.00512	0.0344119	0.005736	1.666E-11	0.3872	0.217676	0.000163	0.126324	0.057855	1.7E-07	0.05964	0.2737	0.837	0.521	1	0.796	0.947	1	0.942	0.862
rs62098022	7.9279E-12	0.0349963	0.00512	0.0344119	0.005736	1.666E-11	0.3872	0.217676	0.000163	0.126324	0.057855	1.7E-07	0.05964	0.2737	0.837	0.521	1	0.796	0.947	1	0.942	0.862
rs4517559	7.9749E-12	-0.034713	0.00508	-0.034713	0.005076	1.66883E-11	0.65919	0.288249	0.01604	9.08E-05	0.036057	4.4E-06	0.24322	0.163399	0.845	0.9	0.93	1	0.974	1	0.907	0.924
rs5468	7.9775E-12	0.0502803	0.00735	0.0502803	0.007352	1.67622E-11	0.33116	0.511428	4.3E-05	0.223301	0.089312	8.3E-06	0.04395	0.022194	0.881	0.852	1	0.721	0.946	1	0.962	0.961
rs11664259	8.0439E-12	0.0357633	0.00523	0.0357633	0.00523	1.68991E-11	0.12658	0.58681	2.64E-05	0.011132	0.084904	0.00016	0.16537	0.183074	0.937	0.871	1	0.991	0.959	1	0.936	0.928
rs1504746	8.0534E-12	0.0349871	0.00512	0.0342226	0.005932	1.69188E-11	0.39478	0.199451	0.00016	0.12893	0.05635	1.6E-07	0.05858	0.275085	0.833	0.508	1	0.789	0.947	1	0.942	0.859
rs13220395	8.0817E-12	-0.076754	0.01123	-0.083016	0.01486	1.69772E-11	0.53329	0.367283	0.000514	3.81E-05	0.022842	0.00527	0.07372	0.001874	0.885	0.906	0.999	1	0.984	0.984	0.964	0.984
rs1823949	8.0848E-12	-0.039163	0.00573	-0.039163	0.005728	1.69835E-11	0.66356	0.060029	0.001274	0.003888	0.255373	1.4E-05	0.01516	0.222899	0.859	0.951	0.998	0.997	0.904	1	0.982	0.921
rs17503448	8.0861E-12	0.0349843	0.00512	0.0342204	0.005931	1.69863E-11	0.39498	0.199476	0.00016	0.12892	0.056393	1.6E-07	0.05859	0.274942	0.833	0.508	1	0.789	0.947	1	0.942	0.859
rs1346914	8.0901E-12	0.0350155	0.00512	0.0345029	0.005664	1.69946E-11	0.39065	0.236624	0.000168	0.136082	0.054833	1.6E-07	0.06772	0.24289	0.836	0.529	1	0.78	0.949	1	0.938	0.869
rs13200797	8.0932E-12	-0.076443	0.01118	-0.083691	0.015379	1.66523E-11	0.47202	0.389724	0.00049	2.81E-05	0.032717	0.00621	0.06089	0.001545	0.893	0.903	0.999	1	0.98	0.98	0.968	0.985
rs13073498	8.1514E-12	0.0348973	0.00511	0.0348973	0.005105	1.7121E-11	0.74387	0.152723	0.002399	0.002011	0.358926	1.7E-05	0.00311	0.084807	0.843	0.929	0.995	0.998	0.865	1	0.99	0.946
rs4665386	8.1585E-12	-0.042948	0.00628	-0.042948	0.006283	1.71355E-11	0.42092	0.039541	6.37E-06	0.06022	0.011381	0.00067	0.06058	0.477138	0.893	0.958	1	0.949	0.989	0.999	0.965	0.884
rs3852788	8.1724E-12	0.0346773	0.00507	0.0346773	0.005073	1.71642E-11	0.40512	0.653702	0.000265	0.012827	0.356765	5.1E-08	0.19499	0.653691	0.569	0.771	0.999	0.979	0.782	1	0.872	0.764
rs13096484	8.1796E-12	0.0348931	0.0051	0.0348931	0.005105	1.71791E-11	0.73426	0.152723	0.002399	0.002047	0.358926	1.7E-05	0.00311	0.084807	0.845	0.929	0.995	0.998	0.865	1	0.991	0.946
rs4405620	8.2223E-12	0.0349751	0.00512	0.0344451	0.005671	1.72671E-11	0.3872	0.22259	0.000164	0.126324	0.055093	1.7E-07	0.06359	0.287661	0.837	0.523	1	0.797	0.949	1	0.94	0.858
rs61447311	8.2239E-12	0.0348893	0.0051	0.0348893	0.005105	1.72704E-11	0.73296	0.152724	0.002399	0.002064	0.358926	1.7E-05	0.00311	0.084807	0.845	0.929	0.995	0.998	0.865	1	0.991	0.946
rs7216064	8.233E-12	0.0402688	0.00589	0.0397501	0.00972	1.72892E-11	0.68767	0.058182	1.82E-05	0.012594	0.937714	3E-05	0.48579	0.000248	0.652	0.921	1	0.981	0.544	1	0.781	0.986
rs6550560	8.2556E-12	0.0365872	0.00535	0.0365872	0.005354	1.73358E-11	0.80484	0.497945	0.000137	0.016993	0.316476	8.7E-06	0.01473	0.07682	0.749	0.859	1	0.983	0.861	1	0.979	0.94
rs7209959	8.2771E-12	-0.037516	0.00549	-0.036907	0.008228	1.73801E-11	0.26126	0.070829	1.14E-05	0.024405	0.348658	4.1E-05	0.3557	0.001252	0.571	0.927	1	0.97	0.824	1	0.848	0.982
rs3783007	8.3024E-12	0.0349379	0.00511	0.0349594	0.005237	1.74323E-11	0.43253	0.448215	7.4E-07	0.008021	0.007337	0.00299	0.02679	0.655525	0.648	0.857	1	0.991	0.988	0.989	0.969	0.818
rs34457121	8.3518E-12	0.0348785	0.0051	0.0348785	0.005105	1.75341E-11	0.75185	0.152723	0.002399	0.002046	0.358926	1.7E-05	0.00311	0.084807	0.842	0.929	0.995	0.998	0.865	1	0.99	0.946
rs80034976	8.3676E-12	0.034957	0.00512	0.0343635	0.005735	1.75668E-11	0.38854	0.215859	0.000159	0.126528	0.062456	1.7E-07	0.05961	0.274427	0.836	0.52	1	0.796	0.944	1	0.942	0.861
rs13084638	8.4038E-12	0.0348738	0.0051	0.0348738	0.005105	1.76413E-11	0.75384	0.152724	0.002399	0.002056	0.358926	1.7E-05	0.00311	0.084807	0.842	0.929	0.995	0.998	0.865	1	0.99	0.946
rs142667158	8.4263E-12	0.0354637	0.00519	0.0354637	0.005192	1.76877E-11	0.3936	0.953599	0.000252	0.009191	0.111833	4.8E-06	0.42042	0.032183	0.878	0.782	1	0.991	0.941	1	0.857	0.957
rs62098048	8.4691E-12	0.0349478	0.00512	0.0343285	0.005768	1.77759E-11	0.40017	0.213796	0.000159	0.12808	0.058427	1.8E-07	0.05879	0.276912	0.833	0.518	1	0.793	0.946	1	0.942	0.86
rs8099160	8.488E-12	0.0346671	0.00508	0.034268	0.005757	1.72031E-11	0.12343	0.88071	0.000436	0.264922	0.12103	6.7E-08	0.17525	0.024352	0.905	0.708	0.998	0.611	0.914	1	0.895	0.951
rs35162296	8.5252E-12	-0.080626	0.01181	-0.080626	0.011806	1.78916E-11	0.57513	0.35443	0.000517	0.000286	0.067597	0.00047	0.21411	0.002415	0.875	0.903	0.999	1	0.966	0.999	0.926	0.982
rs9257805	8.5291E-12	-0.07539	0.01104	-0.075559	0.01139	1.78996E-11	0.10259	0.634025	0.000588	0.000233	0.766079	6.2E-05	0.16459	0.006087	0.928	0.834	0.999	0.999	0.687	1	0.921	0.972
rs61820769	8.531E-12	-0.092651	0.01357	-0.093403	0.017047	1.2612E-11	0.61166	0.867339	5.65E-08	0.002337	0.049933	0.01402	0.0257	0.21704	0.662	0.768	1	0.996	0.957	0.861	0.968	0.889
rs62098023	8.6106E-12	0.0349384	0.00512	0.0342997	0.005788	1.80674E-11	0.38783	0.214045	0.000162	0.130193	0.06026	1.7E-07	0.06023	0.272456	0.835	0.517	1	0.789	0.945	1	0.941	0.861
rs9479138	8.6749E-12	-0.035695	0.00523	-0.034705	0.008796	1.04992E-11	0.82327	0.120445	0.014535	0.012722	0.002761	1.2E-08	0.4598	0.062588	0.64	0.887	0.838	0.971	0.991	1	0.372	0.917
rs17504372	8.7598E-12	0.0349235	0.00512	0.0343763	0.005692	1.83748E-11	0.39173	0.214156	0.000163	0.122329	0.061527	1.9E-07	0.05899	0.276261	0.837	0.521	1	0.805	0.945	1	0.942	0.862
rs60724671	8.8703E-12	0.0610856	0.00895	0.0610856	0.008952	1.86025E-11	0.26299	0.243284	0.000152	0.019182	0.052131	6.9E-05	0.09454	0.100069	0.919	0.922	1	0.987	0.973	1	0.958	0.948
rs2365764	8.8935E-12	0.0401853	0.00589	0.0397434	0.009755	1.86502E-11	0.61553	0.053537	1.61E-05	0.013578	0.86128	3.8E-05	0.4856	0.000244	0.641	0.925	1	0.981	0.582	1	0.785	0.987
rs7210027	8.9102E-12	-0.040032	0.00587	-0.039616	0.009104	1.86846E-11	0.66602	0.066481	1.93E-05	0.026969	0.704338	2.3E-05	0.40469	0.000341	0.676	0.925	1	0.964	0.671	1	0.826	0.986
rs11334985	8.9239E-12	-0.034611	0.00507	-0.034611	0.005073	1.87127E-11	0.12107	0.154455	9.25E-05	0.000624	0.281914	0.00057	0.15752	0.128933	0.939	0.932	1	0.999	0.898	0.999	0.939	0.94
rs62098042	8.9527E-12	0.0349072	0.00512	0.0343358	0.005716	1.87721E-11	0.39621	0.213912	0.000162	0.124596	0.061533	1.9E-07	0.05891	0.275761	0.835	0.52	1	0.801	0.945	1	0.942	0.861
rs1504744	8.9752E-12	0.0349053	0.00512	0.0343496	0.005703	1.88184E-11	0.3872	0.217785	0.000168	0.126324	0.060602	1.8E-07	0.05957	0.273617	0.837	0.522	1	0.798	0.946	1	0.942	0.862
rs4510098	8.9759E-12	0.0353735	0.00519	0.0353735	0.005185	1.88198E-11	0.22307	0.744115	0.000223	0.007123	0.117936	7.3E-06	0.41292	0.044695	0.905	0.744	1	0.993	0.937	1	0.857	0.951
rs62098043	8.9761E-12	0.0349052	0.00512	0.0343342	0.005715	1.88203E-11	0.39621	0.213895	0.000162	0.124588	0.061561	1.9E-07	0.05892	0.275851	0.835	0.52	1	0.801	0.945	1	0.942	0.861
rs62098046	9.0125E-12	0.0349022	0.00512	0.034333	0.005713	1.88952E-11	0.39594	0.213906	0.000162	0.124561	0.061551	1.9E-07	0.05897	0.276199	0.835	0.52	1	0.801	0.945	1	0.942	0.861
rs62098044	9.0132E-12	0.0349022	0.00512	0.0343334	0.005713	1.88967E-11	0.3962	0.213897	0.000162	0.124503	0.061566	1.9E-07	0.05897	0.27621	0.835	0.52	1	0.801	0.945	1	0.942	0.861

Table S3

rs2655878	9.019E-12	-0.034813	0.0051	-0.039354	0.009925	1.89085E-11	0.00225	0.241711	0.00011	0.11509	0.045761	0.00011	7.1E-05	0.262986	0.977	0.891	1	0.844	0.964	1	0.997	0.547
rs771639121	9.0271E-12	0.0349014	0.00512	0.0343196	0.005727	1.89253E-11	0.39454	0.214341	0.000162	0.126223	0.061541	1.9E-07	0.05897	0.275524	0.835	0.52	1	0.798	0.945	1	0.942	0.861
rs11155821	9.0444E-12	-0.035664	0.00523	-0.03466	0.008805	1.09103E-11	0.81696	0.120444	0.014537	0.013163	0.002761	1.2E-08	0.45982	0.062586	0.639	0.886	0.839	0.97	0.991	1	0.372	0.917
rs62086046	9.0538E-12	0.0400229	0.00587	0.0396483	0.009107	1.89802E-11	0.66865	0.065251	1.89E-05	0.028073	0.693766	2.4E-05	0.39931	0.000334	0.678	0.926	1	0.963	0.677	1	0.829	0.987
rs10804162	9.1653E-12	0.0448942	0.00658	0.0448942	0.006584	1.92096E-11	0.07625	0.207333	0.004375	5.01E-05	0.01403	0.00042	0.40819	0.046229	0.951	0.927	0.992	1	0.988	0.999	0.888	0.962
rs11643192	9.1658E-12	0.0345927	0.00507	0.0345927	0.005073	1.92106E-11	0.46801	0.702642	0.0003	0.01653	0.338526	5E-08	0.17033	0.620671	0.598	0.769	0.999	0.974	0.797	1	0.886	0.778
rs2788021	9.1966E-12	-0.038917	0.00571	-0.042158	0.007225	1.9274E-11	0.01901	0.08515	8.22E-05	0.009802	0.003128	0.01051	0.00728	0.137698	0.973	0.954	1	0.994	0.995	0.963	0.989	0.947
rs62098047	9.2194E-12	0.0348854	0.00512	0.0343156	0.005715	1.93209E-11	0.39828	0.213758	0.000163	0.125144	0.061304	1.9E-07	0.05876	0.276149	0.834	0.52	1	0.8	0.945	1	0.942	0.861
rs11998591	9.2459E-12	0.0425353	0.00624	0.0425353	0.006239	1.93755E-11	0.04252	0.892249	0.00022	0.013875	0.034939	0.00012	0.03694	0.097278	0.958	0.804	1	0.99	0.978	1	0.973	0.947
rs11109650	9.2977E-12	0.0601296	0.00882	0.0601296	0.008821	1.94821E-11	0.26466	0.420906	0.000329	0.006848	0.057193	7.4E-05	0.07645	0.087377	0.918	0.898	1	0.995	0.971	1	0.962	0.95
rs11728466	9.3129E-12	-0.193383	0.02837	-0.193383	0.028369	1.95133E-11	0.55584	0.21282	0.000919	0.000547	0.004273	0.00012	0.34941	0.548398	0.866	0.913	0.999	0.999	0.993	1	0.888	0.867
rs7830315	9.3312E-12	0.0359282	0.00527	0.0359282	0.005271	1.95511E-11	0.20888	0.9391	1.07E-07	0.007431	0.246975	0.00117	0.48518	0.265065	0.899	0.782	1	0.992	0.879	0.997	0.825	0.889
rs62098012	9.3812E-12	0.0348747	0.00512	0.0341339	0.005903	1.96539E-11	0.39597	0.199074	0.000165	0.129352	0.059131	1.8E-07	0.05862	0.275526	0.833	0.509	1	0.79	0.946	1	0.942	0.859
rs4506980	9.3856E-12	0.03534	0.00519	0.03534	0.005185	1.96628E-11	0.22305	0.742515	0.000228	0.00711	0.118616	7.4E-06	0.41491	0.044858	0.904	0.744	1	0.993	0.937	1	0.856	0.951
rs2787953	9.432E-12	-0.038869	0.0057	-0.042135	0.007236	1.97583E-11	0.01867	0.085175	8.22E-05	0.010089	0.003129	0.01051	0.00728	0.137719	0.973	0.954	1	0.993	0.995	0.963	0.989	0.947
rs4790941	9.4407E-12	0.0399836	0.00587	0.0395622	0.009111	1.97761E-11	0.6682	0.066469	1.93E-05	0.028507	0.704215	2.3E-05	0.40465	0.000341	0.676	0.925	1	0.962	0.671	1	0.826	0.986
rs4791212	9.441E-12	0.0399855	0.00587	0.0396212	0.009089	1.97768E-11	0.68377	0.065491	1.92E-05	0.028264	0.698332	2.5E-05	0.40158	0.000333	0.682	0.926	1	0.963	0.676	1	0.828	0.986
rs7927508	9.4504E-12	-0.034596	0.00508	-0.034596	0.005077	1.97734E-11	0.70042	0.301569	0.01524	9.72E-05	0.043326	4.7E-06	0.2418	0.145352	0.839	0.897	0.937	1	0.971	1	0.907	0.928
rs1893699	9.4584E-12	-0.03461	0.00508	-0.03461	0.005079	1.97897E-11	0.69946	0.300425	0.015265	9.75E-05	0.043748	4.7E-06	0.24069	0.145279	0.84	0.898	0.937	1	0.971	1	0.907	0.928
rs11079709	9.5221E-12	0.0401141	0.00589	0.0395649	0.009655	1.99437E-11	0.61929	0.05814	1.36E-05	0.013432	0.87358	4.3E-05	0.48793	0.000285	0.641	0.922	1	0.981	0.576	1	0.783	0.986
rs1273044	9.5485E-12	-0.034714	0.0051	-0.035459	0.006581	1.9998E-11	0.50751	0.865497	0.010971	0.000299	0.004825	5E-06	0.99463	0.009691	0.84	0.781	0.941	0.999	0.99	1	0.666	0.968
rs62098049	9.5512E-12	0.0348591	0.00512	0.0342924	0.005712	2.00035E-11	0.39953	0.213652	0.000164	0.125614	0.060993	2E-07	0.05873	0.27768	0.834	0.52	1	0.799	0.945	1	0.942	0.86
rs16891264	9.5973E-12	-0.076399	0.01121	-0.081592	0.014306	2.00983E-11	0.51708	0.443239	0.000367	8.66E-05	0.023002	0.00523	0.06689	0.001676	0.886	0.895	1	1	0.984	0.985	0.966	0.984
rs150282240	9.6002E-12	0.084781	0.01245	0.084781	0.012445	2.01043E-11	0.99768	0.648604	0.004927	0.010119	0.005351	5.8E-06	0.00208	0.528448	0.795	0.847	0.988	0.991	0.991	1	0.992	0.861
rs7213292	9.6072E-12	0.0401438	0.00589	0.0396353	0.009759	2.01187E-11	0.62059	0.051185	1.5E-05	0.014383	0.870582	3.9E-05	0.50329	0.000268	0.64	0.925	1	0.979	0.577	1	0.778	0.986
rs2523431	9.6247E-12	-0.078562	0.01153	-0.078562	0.011533	2.01546E-11	0.2079	0.303849	0.001453	0.000543	0.465379	5E-05	0.08448	0.008317	0.92	0.905	0.998	0.999	0.832	1	0.956	0.974
rs4382947	9.6303E-12	-0.034976	0.00513	-0.040918	0.011077	1.4124E-11	0.00066	0.14509	0.000231	0.213158	0.009269	4.7E-05	0.00024	0.1208	0.98	0.895	0.999	0.636	0.984	1	0.995	0.396
rs12661921	9.657E-12	-0.062128	0.00912	-0.063523	0.011137	2.0221E-11	0.04527	0.057464	5.16E-05	0.384197	0.001682	4.2E-05	0.08771	0.463308	0.942	0.935	1	0.463	0.994	1	0.938	0.836
rs62086045	9.7053E-12	0.0399597	0.00587	0.0395419	0.009111	2.03203E-11	0.66864	0.066351	1.96E-05	0.028465	0.703865	2.3E-05	0.4068	0.000341	0.676	0.925	1	0.962	0.672	1	0.825	0.986
rs62086044	9.7098E-12	0.0399613	0.00587	0.0395812	0.009113	2.03296E-11	0.66985	0.065587	1.92E-05	0.02833	0.698917	2.5E-05	0.40204	0.000334	0.678	0.926	1	0.963	0.675	1	0.828	0.986
rs12929749	9.8191E-12	0.0343432	0.00504	0.0343432	0.005044	2.03008E-11	0.93586	0.79625	0.000764	0.018598	0.394822	1.2E-08	0.17668	0.453899	0.706	0.681	0.997	0.972	0.776	1	0.885	0.815
rs8071463	9.8653E-12	-0.040112	0.00589	-0.039629	0.00977	2.06491E-11	0.64179	0.054629	1.54E-05	0.013937	0.895789	4E-05	0.49415	0.000247	0.645	0.923	1	0.98	0.566	1	0.781	0.986
rs17411025	9.8859E-12	0.0351384	0.00516	0.0338909	0.006406	1.71576E-11	0.2954	0.42268	0.000505	0.249665	0.099182	1.2E-08	0.06056	0.310234	0.835	0.553	0.997	0.58	0.909	1	0.932	0.831
rs1416089	9.923E-12	-0.038823	0.0057	-0.041963	0.007187	2.07678E-11	0.01892	0.085561	7.96E-05	0.010322	0.003166	0.01055	0.00744	0.146503	0.973	0.954	1	0.993	0.995	0.963	0.989	0.946
rs62084240	9.9301E-12	0.0400902	0.00589	0.0395576	0.009703	2.07822E-11	0.6242	0.052997	1.55E-05	0.015157	0.869733	3.7E-05	0.49617	0.000279	0.642	0.924	1	0.978	0.579	1	0.781	0.986
rs2043145	9.9391E-12	0.0348674	0.00512	0.034236	0.00578	2.08007E-11	0.38913	0.226776	0.000166	0.144869	0.055526	1.7E-07	0.06613	0.272076	0.832	0.519	1	0.763	0.947	1	0.937	0.858
rs72791121	9.9559E-12	0.0403317	0.00592	0.0403317	0.005925	2.08354E-11	0.98245	0.08695	0.000917	0.024064	0.223965	2.8E-07	0.27218	0.165697	0.792	0.934	0.998	0.977	0.9	1	0.896	0.919
rs9849654	1.0022E-11	-0.035477	0.00521	-0.035477	0.005212	2.09713E-11	0.10968	0.312068	7.3E-05	0.007336	0.276392	0.00013	0.10325	0.097885	0.941	0.908	1	0.994	0.9	1	0.953	0.946
rs7950569	1.0051E-11	-0.034571	0.00508	-0.034571	0.00508	2.09926E-11	0.69654	0.300303	0.015839	9.45E-05	0.04337	4.9E-06	0.23877	0.143845	0.84	0.897	0.934	1	0.971	1	0.908	0.928
rs2787962	1.0223E-11	-0.038796	0.0057	-0.041924	0.007181	2.13842E-11	0.0189	0.085931	8.14E-05	0.010164	0.003217	0.01065	0.00745	0.146358	0.973	0.954	1	0.993	0.995	0.963	0.989	0.946
rs2788010	1.0249E-11	-0.038794	0.0057	-0.041921	0.00718	2.1437E-11	0.0189	0.08598	8.15E-05	0.010171	0.00322	0.01065	0.00745	0.146355	0.973	0.954	1	0.993	0.995	0.963	0.989	0.946
rs2788011	1.025E-11	-0.038794	0.0057	-0.041921	0.00718	2.1439E-11	0.0189	0.08598	8.15E-05	0.010171	0.00322	0.01065	0.00745	0.146356	0.973	0.954	1	0.993	0.995	0.963	0.989	0.946
rs2788012	1.0274E-11	-0.038792	0.0057	-0.041918	0.00718	2.14876E-11	0.0189	0.085965	8.16E-05	0.010153	0.003226	0.01066	0.00745	0.146357	0.973	0.954	1	0.993	0.995	0.963	0.989	0.946
rs2787960	1.0299E-11	-0.03879	0.0057	-0.041914	0.007179	2.15392E-11	0.0189	0.08605	8.18E-05	0.010127	0.003227	0.01067	0.00746	0.146385	0.973	0.954	1	0.993	0.995	0.963	0.989	0.946
rs7827287	1.0332E-11	0.0358297	0.00527	0.0358297	0.005268	2.16074E-11	0.21127	0.953698	1.15E-07	0.007262	0.250258	0.00122	0.48676	0.258902	0.898	0.779	1	0.992	0.877	0.997	0.824	0.89
rs17501820	1.0333E-11	0.0351066	0.00516	0.0338676	0.006401	1.79397E-11	0.29472	0.423332	0.000512	0.251188	0.098949	1.2E-08	0.0606	0.309536	0.835	0.554	0.997	0.579	0.909	1	0.932	0.832
rs2788016	1.0341E-11	-0.038787	0.0057	-0.041935	0.007188	2.16257E-11	0.01891	0.085817	8.29E-05	0.010125	0.003215	0.01067	0.00741	0.145733	0.973	0.954	1	0.993	0.995	0.963	0.989	0.946
rs11660187	1.0364E-11	0.0351114	0.00516	0.0338972	0.006367	1.79746E-11	0.29012	0.435221	0.000511	0.251127	0.101973	1.2E-08	0.0604	0.319201	0.837	0.558	0.997	0.579	0.907	1	0.932	0.829
rs62097980	1.0367E-11	0.035104	0.00516	0.0338326	0.006426	1.7779E-11	0.2937	0.427553	0.000525	0.252522	0.101385	1.1E-08	0.06063	0.316637	0.835	0.554	0.997	0.576	0.907	1	0.932	0.829
rs2788014	1.0396E-11	-0.038782	0.0057	-0.041907	0.007179	2.17382E-11	0.0189	0.086057	8.24E-05	0.010131	0.003229	0.01068	0.00746	0.146406	0.973	0.954	1	0.993	0.995	0.963	0.989	0.946
rs10445361	1.0444E-11	0.0398976	0.00587	0.0394804	0.009112	2.18367E-11	0.67037	0.067403	2.01E-05	0.028485	0.710972	2.4E-05	0.40575	0.000339	0.677	0.924	1	0.962	0.669	1	0.826	0.986
rs35069141	1.0459E-11	0.0459266	0.00675	0.0465383	0.009417	2.08598E-11	0.00964	0.054338	0.000315	0.511017	0.162834	3.4E-07	0.19365	0.095785	0.963	0.93	0.999	0.344	0.888	1	0.886	0.918
rs7209675	1.0483E-11	0.0400526	0.00589	0.0394893	0.009733	2.1918E-11	0.61264	0.057698	1.59E-05	0.012449	0.874736	4.2E-05	0.52221	0.000265	0.637	0.921	1	0.982	0.574	1	0.771	0.986
rs2885262	1.0504E-11	-0.038778	0.0057	-0.04203	0.007236	2.19599E-11	0.01843	0.085468	8.24E-05	0.010856	0.003178	0.0106	0.00733	0.141334	0.973	0.954	1	0.993	0.995	0.963	0.989	0.947
rs10414837	1.0527E-11	-0.037885	0.00557	-0.037885	0.005572	2.20077E-11	0.81833	0.407291	2.68E-06	0.042386	0.111531	0.00069	0.00318	0.263775	0.828	0.885	1	0.962	0.946	0.999	0.99	0.907

Table S3

rs35601686	1.0546E-11	0.040563	0.00597	0.0414009	0.007447	2.20476E-11	0.01733	0.014356	0.001787	0.208855	0.035713	8.1E-07	0.10014	0.491157	0.965	0.966	0.995	0.767	0.975	1	0.947	0.867
rs1124435	1.0562E-11	0.0344117	0.00506	0.0344117	0.005062	2.20803E-11	0.86782	0.048178	0.000788	0.0121	0.057571	4.1E-05	0.00533	0.388763	0.835	0.955	0.999	0.991	0.969	1	0.989	0.897
rs10802329	1.0568E-11	-0.03877	0.0057	-0.041868	0.007169	2.20919E-11	0.01925	0.085975	8.15E-05	0.010419	0.003221	0.01065	0.00745	0.146353	0.972	0.954	1	0.993	0.995	0.963	0.989	0.946
rs2788017	1.0586E-11	-0.038769	0.0057	-0.041892	0.007178	2.21297E-11	0.01926	0.085793	8.27E-05	0.010381	0.003211	0.01066	0.0074	0.145295	0.972	0.954	1	0.993	0.995	0.963	0.989	0.946
rs2787961	1.06E-11	-0.038784	0.00571	-0.041952	0.007199	2.21579E-11	0.01824	0.089467	8.95E-05	0.009945	0.002851	0.01041	0.00746	0.163139	0.973	0.953	1	0.994	0.995	0.964	0.989	0.943
rs7211282	1.0623E-11	-0.037761	0.00555	-0.037386	0.009126	2.22042E-11	0.37106	0.01559	9.96E-06	0.017805	0.656806	6.6E-05	0.42953	0.001153	0.589	0.951	1	0.976	0.68	1	0.813	0.981
rs34027471	1.063E-11	-0.076312	0.01123	-0.082533	0.014837	2.22194E-11	0.53317	0.388455	0.00055	3.69E-05	0.022073	0.0059	0.07636	0.002113	0.884	0.902	0.999	1	0.984	0.982	0.963	0.983
rs2787959	1.0633E-11	-0.038765	0.0057	-0.041884	0.007177	2.2225E-11	0.01926	0.085814	8.27E-05	0.010387	0.003213	0.01066	0.00741	0.145709	0.972	0.954	1	0.993	0.995	0.963	0.989	0.946
rs10484435	1.0644E-11	-0.076317	0.01123	-0.083002	0.015105	2.20771E-11	0.53077	0.371774	0.000549	3.35E-05	0.023993	0.00624	0.07561	0.001899	0.885	0.904	0.999	1	0.983	0.981	0.963	0.984
rs28360595	1.0659E-11	-0.076334	0.01123	-0.082875	0.015044	2.21712E-11	0.53313	0.373364	0.000505	3.5E-05	0.024576	0.00639	0.07661	0.001914	0.884	0.904	0.999	1	0.983	0.98	0.963	0.984
rs2061786	1.0751E-11	0.0343935	0.00506	0.0343935	0.005061	2.24686E-11	0.86219	0.050007	0.000853	0.011376	0.057542	4E-05	0.0055	0.39022	0.836	0.955	0.999	0.991	0.969	1	0.989	0.896
rs10492269	1.0759E-11	0.0607365	0.00894	0.0607365	0.008937	2.24847E-11	0.27758	0.264786	0.000223	0.020887	0.040237	5.4E-05	0.09356	0.116252	0.917	0.919	1	0.986	0.977	1	0.957	0.945
rs16891235	1.0778E-11	-0.076001	0.01118	-0.083785	0.01579	2.19768E-11	0.53175	0.385053	0.000479	2.93E-05	0.038807	0.00709	0.05662	0.001272	0.884	0.902	0.999	1	0.978	0.976	0.968	0.985
rs336614	1.0818E-11	0.0347911	0.00512	0.0347911	0.00512	2.26051E-11	0.40512	0.268622	0.009939	0.000465	0.144251	2.8E-05	0.00653	0.072576	0.898	0.916	0.973	0.999	0.942	1	0.988	0.954
rs1431181	1.0824E-11	0.0350726	0.00516	0.0337982	0.006441	1.86161E-11	0.29186	0.42333	0.000512	0.259032	0.098951	1.2E-08	0.0606	0.309539	0.835	0.551	0.997	0.566	0.908	1	0.931	0.83
rs453585	1.0865E-11	0.0348508	0.00513	0.0348508	0.005129	2.27018E-11	0.38308	0.370235	0.0055	0.000345	0.172952	3.2E-05	0.01131	0.134368	0.898	0.9	0.988	0.999	0.932	1	0.985	0.938
rs62099183	1.0894E-11	0.0342732	0.00504	0.0342732	0.005045	2.27614E-11	0.14058	0.751535	8.85E-05	0.021278	0.138545	3.3E-06	0.59504	0.112142	0.914	0.729	1	0.977	0.923	1	0.796	0.924
rs7681288	1.0917E-11	-0.038925	0.00573	-0.038925	0.005729	2.28074E-11	0.65212	0.064508	0.001502	0.003089	0.303658	1.7E-05	0.01472	0.198634	0.859	0.949	0.998	0.997	0.888	1	0.982	0.924
rs13195692	1.0927E-11	-0.075999	0.01119	-0.083666	0.015709	2.26842E-11	0.52611	0.400938	0.000528	3.23E-05	0.040057	0.00652	0.05021	0.001269	0.885	0.9	0.999	1	0.977	0.979	0.971	0.985
rs12452511	1.0955E-11	0.0399946	0.00589	0.0393884	0.009598	2.2887E-11	0.61622	0.060991	1.66E-05	0.013532	0.847421	3.9E-05	0.52405	0.000294	0.641	0.921	1	0.981	0.589	1	0.773	0.986
rs400750	1.0962E-11	0.0348441	0.00513	0.0348441	0.005129	2.2901E-11	0.38376	0.370384	0.005499	0.000352	0.173034	3.2E-05	0.01132	0.134365	0.898	0.9	0.988	0.999	0.932	1	0.985	0.938
rs149604876	1.0983E-11	0.0347448	0.00511	0.0347448	0.005115	2.29441E-11	0.29648	0.388247	0.000177	0.150693	0.13301	1.1E-07	0.16844	0.098184	0.857	0.592	1	0.767	0.905	1	0.894	0.912
rs12449073	1.1005E-11	0.0342603	0.00504	0.0342603	0.005044	2.26719E-11	0.96357	0.796933	0.000768	0.020819	0.394712	1.3E-08	0.18	0.453707	0.712	0.682	0.997	0.968	0.777	1	0.884	0.815
rs35367169	1.1076E-11	-0.075979	0.01119	-0.083641	0.01571	2.29773E-11	0.52636	0.401415	0.00053	3.21E-05	0.040322	0.00654	0.05048	0.001272	0.885	0.9	0.999	1	0.977	0.979	0.97	0.985
rs2061787	1.1077E-11	0.0343719	0.00506	0.0343719	0.005061	2.31361E-11	0.86169	0.049273	0.000844	0.011343	0.057529	4.3E-05	0.0053	0.384734	0.836	0.955	0.999	0.992	0.969	1	0.989	0.897
rs11639843	1.1098E-11	0.0405003	0.00596	0.0416454	0.007756	2.31792E-11	0.01737	0.010678	0.001828	0.220418	0.031614	8.8E-07	0.10739	0.49138	0.964	0.969	0.995	0.751	0.976	1	0.944	0.865
rs62084246	1.1117E-11	0.0399833	0.00589	0.039466	0.009734	2.32181E-11	0.6231	0.055531	1.64E-05	0.013918	0.876499	4.1E-05	0.50952	0.00026	0.641	0.923	1	0.98	0.575	1	0.776	0.986
rs35335639	1.1147E-11	-0.075969	0.01119	-0.083629	0.01571	2.31174E-11	0.52647	0.401642	0.000531	3.2E-05	0.040454	0.00655	0.05061	0.001273	0.885	0.9	0.999	1	0.977	0.979	0.97	0.985
rs17411061	1.1171E-11	0.035017	0.00516	0.0337165	0.006474	1.94991E-11	0.29659	0.389523	0.000569	0.23708	0.097067	1.2E-08	0.05694	0.330502	0.836	0.547	0.997	0.603	0.911	1	0.935	0.828
rs4459619	1.1175E-11	0.0342577	0.00504	0.0342577	0.005045	2.33378E-11	0.13917	0.755574	8.88E-05	0.021806	0.138626	3.3E-06	0.5953	0.112455	0.914	0.73	1	0.977	0.923	1	0.796	0.924
rs1881394	1.1176E-11	-0.041828	0.00616	-0.041828	0.00616	2.33383E-11	0.54339	0.043913	7.57E-06	0.044722	0.010825	0.00122	0.05129	0.333926	0.88	0.958	1	0.965	0.989	0.998	0.969	0.907
rs1535039	1.1206E-11	-0.078396	0.01155	-0.078396	0.011546	2.34013E-11	0.1664	0.376984	0.001274	0.000504	0.551129	4.7E-05	0.10222	0.011892	0.923	0.89	0.998	0.999	0.797	1	0.949	0.972
rs745631	1.1231E-11	0.0346686	0.00511	0.0346686	0.005106	2.34528E-11	0.544	0.686586	0.007027	0.001095	0.008857	4E-06	0.80442	0.01296	0.851	0.83	0.975	0.999	0.988	1	0.75	0.968
rs34791189	1.1274E-11	-0.075952	0.01119	-0.083605	0.01571	2.33692E-11	0.52665	0.402006	0.000532	3.19E-05	0.040664	0.00657	0.05082	0.001276	0.885	0.9	0.999	1	0.977	0.979	0.97	0.985
rs4527503	1.1301E-11	0.0432615	0.00637	0.0446558	0.009066	2.35958E-11	0.65228	0.283876	0.003497	0.001781	0.620817	1E-05	4.2E-05	0.579764	0.825	0.885	0.989	0.998	0.738	1	0.997	0.832
rs12450907	1.1348E-11	0.0399786	0.00589	0.0395749	0.009756	2.36913E-11	0.62088	0.052983	1.8E-05	0.014343	0.86501	4.1E-05	0.48882	0.000244	0.644	0.925	1	0.98	0.584	1	0.785	0.986
rs17768587	1.1398E-11	-0.049398	0.00728	-0.049398	0.007278	2.37935E-11	0.22788	0.157895	0.001467	0.001349	0.022868	0.00032	0.13139	0.02264	0.929	0.939	0.998	0.999	0.985	1	0.952	0.972
rs4791046	1.1405E-11	0.0399614	0.00589	0.0394402	0.009737	2.38092E-11	0.62253	0.055531	1.64E-05	0.014256	0.876576	4.1E-05	0.50953	0.000261	0.641	0.923	1	0.979	0.576	1	0.776	0.986
rs188721049	1.1437E-11	0.0848902	0.01251	0.0848902	0.012508	2.38742E-11	0.9404	0.613561	0.005609	0.01028	0.005248	4.5E-06	0.0028	0.593684	0.782	0.849	0.985	0.991	0.991	1	0.99	0.848
rs59950564	1.1467E-11	0.0399566	0.00589	0.0394344	0.009738	2.39366E-11	0.62232	0.055531	1.64E-05	0.014329	0.876575	4.1E-05	0.50953	0.000261	0.641	0.923	1	0.979	0.576	1	0.776	0.986
rs58141639	1.1504E-11	0.0399537	0.00589	0.0394294	0.00974	2.40109E-11	0.62087	0.055532	1.64E-05	0.014345	0.876579	4.1E-05	0.50953	0.000261	0.641	0.923	1	0.979	0.576	1	0.776	0.986
rs62084235	1.1505E-11	0.0399538	0.00589	0.0394309	0.009739	2.40143E-11	0.62201	0.055531	1.64E-05	0.01437	0.876576	4.1E-05	0.50953	0.000261	0.641	0.923	1	0.979	0.576	1	0.776	0.986
rs12450072	1.1506E-11	0.0399538	0.00589	0.0394308	0.009739	2.40149E-11	0.62201	0.055531	1.64E-05	0.01437	0.876576	4.1E-05	0.50953	0.000261	0.641	0.923	1	0.979	0.576	1	0.776	0.986
rs34872586	1.1509E-11	0.0399533	0.00589	0.039429	0.00974	2.40224E-11	0.62086	0.055531	1.64E-05	0.014352	0.876578	4.1E-05	0.50953	0.000261	0.641	0.923	1	0.979	0.576	1	0.776	0.986
rs4790905	1.1509E-11	0.0399533	0.00589	0.039429	0.00974	2.40224E-11	0.62086	0.055531	1.64E-05	0.014352	0.876578	4.1E-05	0.50953	0.000261	0.641	0.923	1	0.979	0.576	1	0.776	0.986
rs3935969	1.1511E-11	0.0399532	0.00589	0.039429	0.00974	2.40254E-11	0.62079	0.055531	1.64E-05	0.014359	0.876414	4.1E-05	0.50949	0.000261	0.641	0.923	1	0.979	0.576	1	0.776	0.986
rs6504545	1.1515E-11	0.0399825	0.00589	0.039505	0.009801	2.40349E-11	0.62346	0.053807	1.95E-05	0.013907	0.887401	3.7E-05	0.50643	0.000242	0.641	0.923	1	0.98	0.571	1	0.777	0.986
rs4318247	1.1533E-11	0.0399516	0.00589	0.0394269	0.009741	2.40702E-11	0.62059	0.055531	1.64E-05	0.014383	0.876414	4.1E-05	0.50949	0.000261	0.641	0.923	1	0.979	0.576	1	0.776	0.986
rs7208663	1.1533E-11	0.0399516	0.00589	0.0394269	0.009741	2.40702E-11	0.62059	0.055531	1.64E-05	0.014383	0.876414	4.1E-05	0.50949	0.000261	0.641	0.923	1	0.979	0.576	1	0.776	0.986
rs75231441	1.1533E-11	0.0399516	0.00589	0.0394269	0.009741	2.40702E-11	0.62059	0.055531	1.64E-05	0.014383	0.876414	4.1E-05	0.50949	0.000261	0.641	0.923	1	0.979	0.576	1	0.776	0.986
rs8079291	1.1533E-11	0.0399516	0.00589	0.0394269	0.009741	2.40702E-11	0.62059	0.055531	1.64E-05	0.014383	0.876414	4.1E-05	0.50949	0.000261	0.641	0.923	1	0.979	0.576	1	0.776	0.986
rs6531314	1.1533E-11	0.0432421	0.00637	0.0446295	0.009064	2.40706E-11	0.65543	0.28383	0.003495	0.001817	0.620901	1E-05	4.2E-05	0.579741	0.824	0.885	0.989	0.998	0.738	1	0.997	0.832
rs56321819	1.1538E-11	0.0432421	0.00637	0.0446302	0.009061	2.40809E-11	0.65289	0.283564	0.0035	0.001819	0.621009	1E-05	4.3E-05	0.579703	0.825	0.885	0.989	0.998	0.738	1	0.997	0.832
rs6739686	1.1541E-11	-0.03647	0.00537	-0.040604	0.009176	9.6403E-12	0.77806	0.02382	0.000607	2.48E-07	0.305113	0.01112	0.00333	0.680485	0.816	0.957	0.997	1	0.862	0.931	0.989	0.825
rs6531313	1.1562E-11	0.0432448	0.00637	0.044634	0.009067	2.413E-11	0.65671	0.283825	0.003497	0.001817	0.620858	1E-05	4.2E-05	0.579741	0.824	0.885	0.989	0.998	0.738	1	0.997	0.832

Table S3

rs1364061	1.157E-11	0.0343433	0.00506	0.0343433	0.005061	2.41462E-11	0.88938	0.052972	0.000879	0.011124	0.064147	3.8E-05	0.00516	0.38808	0.831	0.953	0.999	0.992	0.967	1	0.989	0.896
rs385816	1.161E-11	-0.078034	0.0115	-0.078034	0.011501	2.42278E-11	0.20054	0.2937	0.001709	0.00081	0.486439	3.5E-05	0.08861	0.010413	0.92	0.906	0.997	0.999	0.825	1	0.955	0.974
rs8079754	1.1613E-11	0.0399454	0.00589	0.0394163	0.009745	2.42341E-11	0.62065	0.055539	1.59E-05	0.014513	0.877607	4.2E-05	0.50988	0.000261	0.641	0.923	1	0.979	0.575	1	0.776	0.986
rs2128792	1.1614E-11	0.0399448	0.00589	0.0393813	0.009736	2.42365E-11	0.61553	0.057002	1.58E-05	0.013578	0.882792	4.3E-05	0.51624	0.000268	0.638	0.922	1	0.98	0.571	1	0.773	0.986
rs3094569	1.1617E-11	-0.078033	0.0115	-0.078033	0.011501	2.42434E-11	0.20053	0.293699	0.001709	0.000811	0.48643	3.5E-05	0.08861	0.010414	0.92	0.906	0.997	0.999	0.825	1	0.955	0.974
rs75352663	1.1644E-11	0.0399439	0.00589	0.0394214	0.009737	2.42987E-11	0.62361	0.055531	1.64E-05	0.014572	0.876576	4.1E-05	0.50953	0.000261	0.642	0.923	1	0.979	0.576	1	0.776	0.986
rs62084238	1.1686E-11	0.0399405	0.00589	0.0394119	0.009745	2.4385E-11	0.61886	0.055531	1.64E-05	0.014535	0.876576	4.1E-05	0.50953	0.000261	0.64	0.923	1	0.979	0.576	1	0.776	0.986
rs12500604	1.1693E-11	-0.034574	0.0051	-0.034574	0.005096	2.43989E-11	0.05016	0.097554	0.002147	0.005387	0.369502	1.4E-05	0.00433	0.720477	0.953	0.94	0.996	0.995	0.865	1	0.989	0.843
rs4762524	1.1701E-11	0.0609027	0.00898	0.0609027	0.008978	2.44149E-11	0.28226	0.212723	0.000164	0.019031	0.049163	9.5E-05	0.08553	0.106844	0.917	0.927	1	0.987	0.974	1	0.96	0.947
rs2086744	1.1739E-11	0.0399369	0.00589	0.0394135	0.00974	2.44927E-11	0.62286	0.05569	1.62E-05	0.014211	0.880146	4.2E-05	0.51031	0.000261	0.641	0.923	1	0.979	0.574	1	0.776	0.986
rs74561219	1.1827E-11	0.0399314	0.00589	0.0394342	0.009702	2.46727E-11	0.64734	0.055531	1.64E-05	0.015243	0.876576	4.1E-05	0.50953	0.000261	0.649	0.923	1	0.978	0.578	1	0.778	0.986
rs11869819	1.183E-11	0.0399313	0.00589	0.0394101	0.009735	2.468E-11	0.6263	0.055531	1.64E-05	0.014863	0.876499	4.1E-05	0.50952	0.00026	0.643	0.923	1	0.979	0.576	1	0.777	0.986
rs12450363	1.1839E-11	0.039946	0.00589	0.0392869	0.009437	2.46973E-11	0.68651	0.075696	1.49E-05	0.016602	0.836875	3.8E-05	0.53267	0.000285	0.661	0.915	1	0.976	0.598	1	0.772	0.986
rs17700957	1.1892E-11	-0.049353	0.00728	-0.049353	0.007278	2.4807E-11	0.24738	0.157808	0.001479	0.001311	0.02296	0.00033	0.13185	0.022571	0.926	0.939	0.998	0.999	0.985	1	0.951	0.972
rs10484433	1.1909E-11	-0.075818	0.01118	-0.083677	0.015841	2.43089E-11	0.52585	0.385752	0.000493	3.01E-05	0.043003	0.00721	0.05454	0.001212	0.885	0.902	0.999	1	0.976	0.976	0.969	0.985
rs2052187	1.1911E-11	0.0399211	0.00589	0.0393566	0.009602	2.48445E-11	0.6764	0.060363	1.68E-05	0.01352	0.886934	4.2E-05	0.5349	0.000282	0.654	0.92	1	0.98	0.572	1	0.768	0.986
rs2124219	1.1918E-11	-0.038858	0.00573	-0.038858	0.00573	2.48592E-11	0.65913	0.064274	0.00149	0.003507	0.302895	1.7E-05	0.01445	0.197788	0.859	0.949	0.998	0.997	0.888	1	0.982	0.924
rs13387659	1.1947E-11	-0.036439	0.00537	-0.040542	0.00913	1.02575E-11	0.77534	0.024142	0.000599	2.75E-07	0.304064	0.01115	0.00332	0.677835	0.817	0.957	0.997	1	0.863	0.931	0.989	0.826
rs8074078	1.1962E-11	0.0399171	0.00589	0.039355	0.009599	2.49493E-11	0.6771	0.060305	1.68E-05	0.013465	0.887118	4.2E-05	0.53507	0.000282	0.654	0.92	1	0.981	0.572	1	0.768	0.986
rs11647889	1.2021E-11	0.0460585	0.00679	0.0460585	0.006793	2.507E-11	0.21036	0.059014	0.000294	0.096814	0.031901	1.8E-05	0.04471	0.290599	0.924	0.953	1	0.916	0.979	1	0.97	0.913
rs146079696	1.2034E-11	0.0819208	0.01208	0.0819208	0.012083	2.50967E-11	0.92171	0.261077	0.004816	0.004853	0.013092	2.3E-05	0.00166	0.473884	0.82	0.91	0.99	0.996	0.987	1	0.993	0.879
rs3206817	1.2053E-11	0.0399257	0.00589	0.0394743	0.009769	2.51354E-11	0.64336	0.055087	1.64E-05	0.014433	0.898125	4.4E-05	0.49498	0.000245	0.647	0.923	1	0.979	0.568	1	0.781	0.986
rs4271626	1.2061E-11	0.039928	0.00589	0.0394101	0.00978	2.51525E-11	0.64221	0.055665	1.76E-05	0.014563	0.89958	3.9E-05	0.51423	0.000246	0.644	0.922	1	0.979	0.565	1	0.774	0.986
rs5817543	1.2062E-11	0.0343141	0.00506	0.0343141	0.005061	2.5154E-11	0.89865	0.053252	0.000899	0.010874	0.065019	3.8E-05	0.00526	0.39108	0.83	0.953	0.999	0.992	0.966	1	0.989	0.895
rs35249036	1.2076E-11	-0.07584	0.01119	-0.083543	0.015742	2.48786E-11	0.52709	0.40302	0.000536	3.15E-05	0.041196	0.00681	0.05134	0.001282	0.885	0.9	0.999	1	0.977	0.978	0.97	0.985
rs7107356	1.2103E-11	0.0348461	0.00514	0.0348461	0.00514	2.52389E-11	0.5437	0.327584	0.000138	5.87E-06	0.837142	0.00061	0.03169	0.817348	0.817	0.857	1	1	0.613	0.998	0.96	0.761
rs62085992	1.2152E-11	0.0399166	0.00589	0.0394209	0.009766	2.53392E-11	0.6425	0.055842	1.67E-05	0.014523	0.903765	4.2E-05	0.50066	0.00025	0.645	0.922	1	0.979	0.564	1	0.779	0.986
rs62085993	1.2152E-11	0.0399166	0.00589	0.0394209	0.009766	2.53392E-11	0.6425	0.055842	1.67E-05	0.014523	0.903765	4.2E-05	0.50066	0.00025	0.645	0.922	1	0.979	0.564	1	0.779	0.986
rs2523432	1.2156E-11	-0.077896	0.01149	-0.077896	0.011492	2.53463E-11	0.20541	0.30186	0.001724	0.000601	0.5	3.9E-05	0.09863	0.008422	0.919	0.904	0.997	0.999	0.819	1	0.951	0.973
rs12452823	1.2179E-11	0.0399053	0.00589	0.0393768	0.009742	2.53945E-11	0.62322	0.055531	1.64E-05	0.015228	0.876414	4.1E-05	0.50949	0.000261	0.642	0.923	1	0.978	0.577	1	0.777	0.986
rs336613	1.2184E-11	0.0346953	0.00512	0.0346953	0.005119	2.54034E-11	0.41016	0.268787	0.010022	0.000518	0.144607	2.8E-05	0.00656	0.072559	0.897	0.916	0.973	0.999	0.942	1	0.988	0.953
rs34733047	1.2229E-11	0.039902	0.00589	0.0393826	0.009738	2.54955E-11	0.62207	0.055687	1.69E-05	0.014334	0.879782	4.2E-05	0.51042	0.000262	0.641	0.923	1	0.979	0.575	1	0.776	0.986
rs13203673	1.2231E-11	-0.076127	0.01123	-0.082812	0.015081	2.5263E-11	0.51718	0.376661	0.000531	3.86E-05	0.021839	0.00688	0.07762	0.001943	0.886	0.904	0.999	1	0.984	0.978	0.962	0.984
rs56355004	1.2252E-11	-0.0522	0.0077	-0.0522	0.007702	2.55429E-11	0.04343	0.673193	3.21E-05	0.000713	0.736599	0.00013	0.55349	0.103546	0.938	0.806	1	0.999	0.665	1	0.788	0.921
rs35451370	1.2255E-11	-0.038627	0.0057	-0.038627	0.0057	2.55497E-11	0.8509	0.740158	0.000427	0.001359	0.068745	0.00033	0.06488	0.001832	0.831	0.847	0.999	0.999	0.964	1	0.962	0.984
rs56360439	1.2268E-11	0.0346646	0.00512	0.0346646	0.005115	2.5577E-11	0.38868	0.611	0.007599	0.00098	0.008958	6.3E-06	0.65265	0.026993	0.883	0.852	0.976	0.999	0.988	1	0.805	0.962
rs11656743	1.2269E-11	-0.03959	0.00584	-0.039228	0.008427	2.55772E-11	0.73804	0.095334	2.84E-05	0.020981	0.731375	2.9E-05	0.33245	0.000493	0.7	0.917	1	0.974	0.671	1	0.853	0.985
rs7224923	1.2271E-11	0.0398932	0.00589	0.0393629	0.009856	2.5583E-11	0.61582	0.059107	1.74E-05	0.01349	0.902359	4.2E-05	0.51695	0.000222	0.636	0.92	1	0.98	0.561	1	0.771	0.986
rs10029034	1.2283E-11	-0.038832	0.00573	-0.038832	0.00573	2.56069E-11	0.65974	0.064577	0.001495	0.003526	0.303858	1.7E-05	0.01454	0.198319	0.858	0.949	0.998	0.997	0.888	1	0.982	0.924
rs8081856	1.2286E-11	0.0398971	0.00589	0.0393381	0.009735	2.56134E-11	0.61582	0.057155	1.63E-05	0.013487	0.886007	4.4E-05	0.51714	0.000269	0.638	0.921	1	0.98	0.571	1	0.773	0.986
rs8081517	1.229E-11	0.0398969	0.00589	0.0393379	0.009735	2.56202E-11	0.61582	0.057155	1.63E-05	0.01349	0.886007	4.4E-05	0.51714	0.000269	0.638	0.921	1	0.98	0.571	1	0.773	0.986
rs17587597	1.2352E-11	-0.076109	0.01123	-0.082779	0.015072	2.55276E-11	0.51705	0.376702	0.000529	3.91E-05	0.021871	0.0069	0.07762	0.001943	0.886	0.904	0.999	1	0.984	0.978	0.962	0.984
rs2046323	1.2377E-11	0.0398907	0.00589	0.0393302	0.009736	2.57983E-11	0.6153	0.057153	1.63E-05	0.013579	0.885988	4.4E-05	0.51711	0.000269	0.638	0.921	1	0.98	0.571	1	0.773	0.986
rs62084234	1.2381E-11	0.0398915	0.00589	0.0393358	0.00973	2.58081E-11	0.61922	0.057154	1.63E-05	0.013654	0.885993	4.4E-05	0.51713	0.000269	0.639	0.921	1	0.98	0.571	1	0.773	0.986
rs11867517	1.2441E-11	0.039928	0.00589	0.0394428	0.009828	2.59296E-11	0.62652	0.050683	1.72E-05	0.014038	0.911893	4.3E-05	0.50387	0.000259	0.64	0.924	1	0.979	0.559	1	0.776	0.986
rs2702554	1.246E-11	-0.038819	0.00573	-0.038819	0.00573	2.59696E-11	0.66878	0.064226	0.00148	0.003686	0.301964	1.7E-05	0.01438	0.19806	0.857	0.949	0.998	0.997	0.889	1	0.982	0.924
rs55745018	1.2493E-11	-0.034554	0.0051	-0.034554	0.005101	2.60373E-11	0.06193	0.103906	0.001626	0.004902	0.465936	1.3E-05	0.00481	0.75861	0.947	0.936	0.997	0.996	0.826	1	0.988	0.831
rs1979914	1.2512E-11	0.0346955	0.00512	0.0339847	0.005859	2.60758E-11	0.41204	0.215835	0.000171	0.148508	0.052412	1.9E-07	0.06589	0.293389	0.825	0.511	1	0.757	0.948	1	0.936	0.851
rs215897	1.2541E-11	0.0358502	0.00529	0.0358502	0.005292	2.61341E-11	0.32889	0.773241	2.02E-05	0.072453	0.281544	3.1E-05	0.0013	0.368602	0.875	0.731	1	0.914	0.863	1	0.991	0.868
rs7549378	1.2559E-11	-0.05471	0.00808	-0.05471	0.008077	2.26619E-11	0.09553	0.189277	0.000468	2.25E-06	0.091373	0.00753	0.08121	0.407883	0.945	0.928	0.999	1	0.958	0.975	0.96	0.896
rs1836799	1.2564E-11	0.0346077	0.00511	0.0346077	0.005109	2.61808E-11	0.39514	0.64308	0.006762	0.000905	0.008502	9.4E-06	0.64873	0.019356	0.883	0.848	0.98	0.999	0.989	1	0.806	0.966
rs1836798	1.2578E-11	0.0346068	0.00511	0.0346068	0.005109	2.62095E-11	0.39514	0.643132	0.006765	0.000906	0.008502	9.4E-06	0.64877	0.019356	0.883	0.848	0.98	0.999	0.989	1	0.806	0.966
rs1585084	1.2585E-11	-0.03532	0.00521	-0.03532	0.005215	2.62243E-11	0.10845	0.316946	8.4E-05	0.006994	0.273301	0.00014	0.10648	0.099707	0.941	0.907	1	0.995	0.901	1	0.952	0.946
rs1585083	1.2585E-11	-0.03532	0.00521	-0.03532	0.005215	2.62255E-11	0.10845	0.316934	8.4E-05	0.006994	0.273297	0.00014	0.10648	0.099706	0.941	0.907	1	0.995	0.901	1	0.952	0.946
rs35156113	1.2673E-11	0.0346859	0.00512	0.0339741	0.00586	2.64039E-11	0.41295	0.215945	0.000171	0.148882	0.052426	1.9E-07	0.06588	0.293531	0.825	0.511	1	0.756	0.948	1	0.936	0.851

Table S3

rs72834623	1.2682E-11	-0.075758	0.01119	-0.083344	0.01567	2.63306E-11	0.52496	0.403038	0.000538	3.42E-05	0.04119	0.00679	0.05137	0.001283	0.885	0.9	0.999	1	0.977	0.978	0.97	0.985
rs658689	1.281E-11	-0.035975	0.00531	-0.035975	0.005313	2.66849E-11	0.11317	0.293052	0.000221	0.104982	0.232631	2.5E-06	0.02761	0.380861	0.932	0.899	1	0.892	0.901	1	0.973	0.885
rs2956517	1.2814E-11	-0.03466	0.00512	-0.036731	0.009638	2.66925E-11	0.00829	0.417312	0.000196	0.115901	0.02882	2.1E-05	0.00033	0.106672	0.962	0.84	1	0.82	0.97	1	0.994	0.417
rs34821024	1.285E-11	-0.049277	0.00728	-0.049277	0.007278	2.67659E-11	0.22807	0.157431	0.001523	0.001401	0.023464	0.00033	0.13234	0.022348	0.929	0.939	0.998	0.999	0.985	1	0.951	0.972
rs62411781	1.2869E-11	-0.034531	0.0051	-0.034531	0.0051	2.68055E-11	0.0642	0.103962	0.001618	0.005026	0.466297	1.3E-05	0.0048	0.758449	0.946	0.936	0.997	0.996	0.826	1	0.988	0.831
rs5821446	1.2944E-11	-0.039512	0.00584	-0.038992	0.008363	2.69578E-11	0.7319	0.11164	2.4E-05	0.021675	0.752373	2.9E-05	0.34573	0.000546	0.694	0.91	1	0.972	0.658	1	0.846	0.984
rs10058763	1.2979E-11	0.108755	0.01607	0.108755	0.016067	2.70296E-11	0.32515	0.940172	0.000134	0.001759	0.014039	0.00016	0.06475	0.127144	0.621	0.784	1	0.998	0.982	1	0.95	0.919
rs1186396	1.2985E-11	0.0346494	0.00512	0.0438861	0.009608	8.45963E-12	0.55767	0.008089	3.46E-05	0.000714	0.059511	0.07151	6E-05	0.065039	0.808	0.97	1	0.999	0.951	0.378	0.998	0.939
rs8065906	1.2995E-11	0.0398486	0.00589	0.0393943	0.009781	2.70633E-11	0.65886	0.047487	1.82E-05	0.014236	0.906994	4.2E-05	0.52885	0.00027	0.649	0.926	1	0.979	0.563	1	0.769	0.986
rs3857142	1.2997E-11	-0.03879	0.00573	-0.03879	0.005731	2.70679E-11	0.64724	0.061905	0.001415	0.00417	0.319752	1.6E-05	0.01501	0.18953	0.86	0.949	0.998	0.996	0.883	1	0.982	0.925
rs1115529	1.303E-11	0.0342567	0.00506	0.0342567	0.005061	2.71354E-11	0.89281	0.052698	0.000935	0.010909	0.066552	3.9E-05	0.00529	0.386809	0.831	0.953	0.999	0.992	0.966	1	0.989	0.896
rs12600941	1.3102E-11	0.0398394	0.00589	0.0393409	0.009778	2.72821E-11	0.658	0.048154	1.85E-05	0.014325	0.912639	4E-05	0.53472	0.000275	0.647	0.925	1	0.979	0.559	1	0.767	0.986
rs1170578	1.3125E-11	0.0346469	0.00512	0.0435254	0.009502	8.82893E-12	0.55445	0.010059	3.17E-05	0.000619	0.06488	0.0722	6.6E-05	0.068787	0.807	0.968	1	0.999	0.947	0.372	0.998	0.937
rs17488531	1.3187E-11	0.034395	0.00508	0.0339092	0.005915	2.73057E-11	0.11252	0.703699	0.000471	0.217763	0.085495	1.1E-07	0.31417	0.022033	0.908	0.679	0.999	0.685	0.934	1	0.849	0.952
rs7223813	1.3233E-11	0.0398315	0.00589	0.0393299	0.009782	2.75501E-11	0.65595	0.048152	1.86E-05	0.01434	0.912629	4E-05	0.53549	0.000275	0.647	0.925	1	0.979	0.559	1	0.766	0.986
rs13213200	1.3292E-11	-0.074361	0.01099	-0.074361	0.010991	2.76701E-11	0.73552	0.876578	0.000642	0.000559	0.192229	0.00025	0.01568	0.006687	0.843	0.822	0.999	0.999	0.92	1	0.981	0.975
rs56195001	1.3311E-11	-0.075699	0.01119	-0.083497	0.01574	2.72971E-11	0.51157	0.406486	0.000568	3.42E-05	0.036898	0.00714	0.05206	0.001303	0.887	0.9	0.999	1	0.978	0.977	0.97	0.985
rs13125551	1.3386E-11	-0.034505	0.0051	-0.034505	0.005101	2.78616E-11	0.06379	0.103652	0.001648	0.005124	0.466436	1.3E-05	0.00491	0.759448	0.946	0.936	0.997	0.995	0.826	1	0.988	0.83
rs35116528	1.3405E-11	-0.075688	0.01119	-0.083499	0.015748	2.74664E-11	0.51161	0.40647	0.000571	3.41E-05	0.036894	0.00715	0.0521	0.001303	0.887	0.9	0.999	1	0.978	0.977	0.97	0.985
rs7223357	1.3431E-11	0.039819	0.00589	0.0393139	0.009785	2.79535E-11	0.65454	0.048152	1.86E-05	0.014527	0.912628	4E-05	0.53549	0.000275	0.646	0.925	1	0.979	0.559	1	0.766	0.986
rs56294283	1.3465E-11	-0.07568	0.01119	-0.083487	0.015745	2.75957E-11	0.51157	0.406484	0.00057	3.42E-05	0.036928	0.00717	0.0521	0.001303	0.887	0.9	0.999	1	0.978	0.977	0.97	0.985
rs66790453	1.3469E-11	-0.075536	0.01117	-0.081719	0.014743	2.80319E-11	0.45037	0.366453	0.000593	6.2E-05	0.035244	0.00542	0.06532	0.001375	0.896	0.907	0.999	1	0.979	0.985	0.966	0.985
rs1170599	1.3487E-11	0.034629	0.00512	0.0441085	0.009682	8.05979E-12	0.51928	0.007458	3.04E-05	0.00077	0.059318	0.07868	6.2E-05	0.063384	0.812	0.971	1	0.999	0.95	0.331	0.998	0.939
rs2702552	1.3499E-11	-0.038751	0.00573	-0.038751	0.00573	2.80924E-11	0.65444	0.065132	0.001527	0.003567	0.308189	1.8E-05	0.01481	0.199114	0.859	0.948	0.998	0.997	0.887	1	0.982	0.924
rs3964019	1.3504E-11	0.0342542	0.00506	0.0342542	0.005065	2.81039E-11	0.87178	0.045147	0.001043	0.009878	0.051294	4.8E-05	0.00584	0.410676	0.835	0.956	0.999	0.993	0.972	1	0.988	0.893
rs7752448	1.3514E-11	-0.075875	0.01122	-0.075875	0.011219	2.81229E-11	0.43035	0.409132	0.000474	0.000472	0.252575	0.00017	0.12241	0.024048	0.888	0.891	0.999	0.999	0.904	1	0.946	0.966
rs779976	1.3514E-11	0.0346295	0.00512	0.0441092	0.009683	8.03E-12	0.51842	0.007462	3.02E-05	0.000762	0.058795	0.07934	6.2E-05	0.064103	0.811	0.971	1	0.999	0.95	0.327	0.998	0.938
rs6449094	1.3526E-11	-0.034497	0.0051	-0.034497	0.005101	2.81472E-11	0.06358	0.104292	0.001648	0.005078	0.467016	1.3E-05	0.0049	0.759774	0.946	0.936	0.997	0.995	0.826	1	0.988	0.83
rs1170598	1.3565E-11	0.0346247	0.00512	0.0441036	0.009682	8.10776E-12	0.51927	0.007459	3.05E-05	0.00077	0.059357	0.07874	6.2E-05	0.063433	0.812	0.971	1	0.999	0.949	0.331	0.998	0.939
rs62084245	1.3572E-11	0.0398141	0.00589	0.039283	0.009735	2.82421E-11	0.62321	0.055989	1.72E-05	0.015229	0.881617	4.3E-05	0.51205	0.000265	0.642	0.922	1	0.978	0.575	1	0.776	0.986
rs16891334	1.3617E-11	-0.07547	0.01116	-0.081555	0.0147	2.83347E-11	0.4508	0.399964	0.000531	7.25E-05	0.0354	0.00556	0.05917	0.001345	0.896	0.902	0.999	1	0.979	0.985	0.968	0.985
rs780042	1.3621E-11	0.0346252	0.00512	0.0436834	0.009545	8.69744E-12	0.51538	0.009381	2.76E-05	0.000731	0.062917	0.07749	6.8E-05	0.06691	0.813	0.968	1	0.999	0.947	0.339	0.998	0.937
rs780044	1.3642E-11	0.0346239	0.00512	0.0436753	0.009542	8.72594E-12	0.51534	0.009388	2.76E-05	0.000731	0.062999	0.07744	6.8E-05	0.066977	0.813	0.968	1	0.999	0.947	0.339	0.998	0.937
rs4790908	1.3647E-11	0.039825	0.00589	0.039317	0.009844	2.8395E-11	0.63254	0.056298	1.57E-05	0.016453	0.878846	4.4E-05	0.52871	0.000225	0.643	0.922	1	0.976	0.575	1	0.77	0.986
rs779985	1.3656E-11	0.0346231	0.00512	0.0436821	0.00954	8.68818E-12	0.51657	0.009488	2.79E-05	0.000721	0.061207	0.07798	6.9E-05	0.06716	0.812	0.968	1	0.999	0.948	0.335	0.998	0.937
rs1170575	1.3662E-11	0.0346246	0.00512	0.0437406	0.009575	8.37065E-12	0.51793	0.009483	2.55E-05	0.00071	0.063558	0.08126	7.1E-05	0.063145	0.809	0.968	1	0.999	0.946	0.314	0.998	0.938
rs1455208	1.3665E-11	-0.038739	0.00573	-0.038739	0.005729	2.84309E-11	0.65488	0.064976	0.001584	0.003411	0.308359	1.8E-05	0.01508	0.198653	0.859	0.948	0.998	0.997	0.887	1	0.981	0.924
rs17151193	1.3719E-11	0.0423217	0.00626	0.0423217	0.00626	2.85431E-11	0.05152	0.82246	0.000146	0.016545	0.022198	0.00027	0.024	0.135604	0.955	0.791	1	0.988	0.983	1	0.978	0.938
rs35299677	1.3725E-11	-0.036231	0.00536	-0.036231	0.005359	2.85545E-11	0.80573	0.65094	0.002203	0.010189	0.235441	6.5E-08	0.41301	0.058154	0.727	0.818	0.994	0.988	0.878	1	0.838	0.937
rs36012762	1.3726E-11	-0.075647	0.01119	-0.083427	0.01573	2.81677E-11	0.51133	0.406565	0.000566	3.5E-05	0.037064	0.00722	0.0521	0.001303	0.887	0.9	0.999	1	0.978	0.977	0.97	0.985
rs745936705	1.3729E-11	0.0398189	0.00589	0.0393605	0.009813	2.85617E-11	0.62938	0.053287	1.84E-05	0.013952	0.899643	4.5E-05	0.51367	0.000244	0.642	0.923	1	0.98	0.567	1	0.774	0.986
rs775942045	1.3729E-11	0.0398189	0.00589	0.0393605	0.009813	2.85617E-11	0.62938	0.053287	1.84E-05	0.013952	0.899643	4.5E-05	0.51367	0.000244	0.642	0.923	1	0.98	0.567	1	0.774	0.986
rs2702551	1.3785E-11	-0.038734	0.00573	-0.038734	0.00573	2.86772E-11	0.65795	0.06524	0.001538	0.003568	0.308312	1.8E-05	0.01485	0.199443	0.858	0.948	0.998	0.997	0.887	1	0.982	0.923
rs8179607	1.3792E-11	-0.036351	0.00538	-0.040411	0.009301	1.10918E-11	0.863	0.022314	0.000577	2.34E-07	0.302138	0.01204	0.00359	0.716602	0.798	0.957	0.996	1	0.859	0.921	0.988	0.814
rs13192365	1.3807E-11	-0.075637	0.01119	-0.083409	0.015725	2.83465E-11	0.51122	0.406591	0.000564	3.54E-05	0.037066	0.00724	0.05209	0.001303	0.887	0.9	0.999	1	0.978	0.977	0.97	0.985
rs2604568	1.3833E-11	-0.03873	0.00573	-0.03873	0.00573	2.87748E-11	0.65832	0.065389	0.001545	0.003524	0.309212	1.8E-05	0.01495	0.198933	0.858	0.948	0.998	0.997	0.886	1	0.981	0.923
rs35528636	1.3835E-11	-0.075633	0.01119	-0.083406	0.015726	2.8401E-11	0.51122	0.406595	0.000564	3.54E-05	0.037116	0.00725	0.05209	0.001303	0.887	0.9	0.999	1	0.978	0.977	0.97	0.985
rs13206501	1.3854E-11	-0.075488	0.01117	-0.081598	0.0147	2.88179E-11	0.44806	0.366455	0.000593	6.52E-05	0.035244	0.00542	0.06532	0.001375	0.897	0.907	0.999	1	0.979	0.985	0.966	0.985
rs62262671	1.3864E-11	0.0582625	0.00862	0.0582625	0.00862	2.88393E-11	0.66328	0.517521	0.000664	0.003632	0.015979	5.7E-06	0.62205	0.478976	0.83	0.851	0.999	0.996	0.981	1	0.797	0.855
rs6844060	1.3891E-11	0.04308	0.00637	0.0445194	0.009132	2.88936E-11	0.63683	0.284657	0.003712	0.001764	0.629585	1.2E-05	4.1E-05	0.607854	0.827	0.884	0.989	0.998	0.735	1	0.997	0.827
rs116201501	1.3901E-11	-0.075625	0.01119	-0.083407	0.015731	2.85163E-11	0.51093	0.406585	0.000561	3.54E-05	0.037203	0.0073	0.05204	0.001301	0.887	0.9	0.999	1	0.978	0.976	0.97	0.985
rs72834617	1.3901E-11	-0.075625	0.01119	-0.083407	0.015731	2.85163E-11	0.51093	0.406585	0.000561	3.54E-05	0.037203	0.0073	0.05204	0.001301	0.887	0.9	0.999	1	0.978	0.976	0.97	0.985
rs11665242	1.3922E-11	0.0345668	0.00511	0.0340478	0.005666	2.89567E-11	0.41152	0.21066	0.000186	0.126673	0.060043	2.6E-07	0.05799	0.288439	0.832	0.522	1	0.802	0.946	1	0.942	0.858
rs13197334	1.3939E-11	-0.075485	0.01117	-0.081614	0.014715	2.8991E-11	0.45417	0.366455	0.000593	6.47E-05	0.035244	0.00542	0.06532	0.001375	0.896	0.907	0.999	1	0.979	0.985	0.966	0.985
rs13415020	1.3972E-11	-0.036359	0.00538	-0.040424	0.009294	1.10399E-11	0.87321	0.026095	0.0006	2.23E-07	0.309411	0.01204	0.00324	0.679482	0.796	0.954	0.996	1	0.856	0.921	0.989	0.82

Table S3

rs17488316	1.3989E-11	0.034326	0.00508	0.0338253	0.005936	2.89264E-11	0.10326	0.693976	0.000419	0.237045	0.104271	1.2E-07	0.25482	0.023628	0.91	0.673	0.999	0.656	0.923	1	0.866	0.95
rs3020377	1.3995E-11	-0.036213	0.00536	-0.036213	0.005359	2.91051E-11	0.80112	0.652625	0.002222	0.010125	0.23502	6.6E-08	0.41316	0.05862	0.726	0.817	0.994	0.988	0.878	1	0.838	0.937
rs6819236	1.3995E-11	-0.03872	0.00573	-0.03872	0.005729	2.91058E-11	0.66762	0.064954	0.001523	0.003714	0.307199	1.8E-05	0.01477	0.199056	0.857	0.948	0.998	0.997	0.887	1	0.982	0.923
rs13214280	1.4024E-11	-0.07561	0.01119	-0.083427	0.015751	2.87021E-11	0.51025	0.406509	0.000557	3.53E-05	0.037431	0.0074	0.05189	0.001296	0.887	0.9	0.999	1	0.978	0.976	0.97	0.985
rs779995	1.4027E-11	0.0345974	0.00512	0.0440655	0.009678	8.43976E-12	0.52226	0.00751	3.13E-05	0.000778	0.059763	0.07856	6.2E-05	0.063015	0.812	0.971	1	0.999	0.949	0.334	0.998	0.939
rs7243008	1.4044E-11	0.0343235	0.00508	0.0338215	0.005941	2.90367E-11	0.10286	0.69457	0.00042	0.237397	0.104442	1.2E-07	0.25485	0.023534	0.91	0.673	0.999	0.656	0.923	1	0.866	0.95
rs12602912	1.4062E-11	0.0397625	0.00588	0.0394421	0.009793	2.92421E-11	0.61862	0.053739	2.1E-05	0.014663	0.867781	4.5E-05	0.48313	0.000221	0.646	0.925	1	0.979	0.586	1	0.789	0.987
rs3020314	1.4067E-11	-0.036211	0.00536	-0.036211	0.005359	2.92533E-11	0.8233	0.652146	0.002269	0.0104	0.233202	6.5E-08	0.41342	0.058604	0.731	0.818	0.994	0.988	0.879	1	0.838	0.937
rs6819476	1.4075E-11	-0.038715	0.00573	-0.038715	0.005729	2.9269E-11	0.66732	0.064999	0.001526	0.00372	0.307483	1.8E-05	0.01476	0.199184	0.857	0.948	0.998	0.997	0.887	1	0.982	0.923
rs1913475	1.4117E-11	-0.035701	0.00528	-0.034713	0.00748	1.88787E-11	0.64495	0.227464	0.01307	0.01975	0.021329	6.9E-09	0.59584	0.061767	0.788	0.872	0.901	0.967	0.973	1	0.484	0.927
rs6504546	1.4142E-11	0.0398023	0.00589	0.0394465	0.009844	2.94057E-11	0.62089	0.050884	2.06E-05	0.014342	0.888714	4.5E-05	0.49358	0.000229	0.643	0.925	1	0.98	0.574	1	0.783	0.986
rs437638	1.4157E-11	0.0457936	0.00678	0.0457936	0.006778	2.94358E-11	0.21441	0.078711	0.000339	0.128253	0.018176	1.8E-05	0.03025	0.3103	0.921	0.946	1	0.88	0.985	1	0.975	0.906
rs34522419	1.416E-11	-0.042462	0.00628	-0.042462	0.006285	2.94434E-11	0.35698	0.192133	1.07E-05	0.009096	0.031589	0.0058	0.02768	0.048537	0.91	0.932	1	0.994	0.981	0.985	0.979	0.963
rs61857747	1.4164E-11	-0.049246	0.00729	-0.050786	0.009303	2.94513E-11	0.00325	0.378491	0.001456	0.17979	0.059647	3.1E-06	0.00919	0.286385	0.977	0.89	0.997	0.807	0.965	1	0.985	0.904
rs1807922	1.4201E-11	-0.036345	0.00538	-0.040492	0.009357	1.0933E-11	0.87652	0.02361	0.000602	2.19E-07	0.308734	0.01245	0.00324	0.683571	0.795	0.956	0.996	1	0.855	0.917	0.989	0.819
rs11709892	1.4202E-11	-0.040291	0.00596	-0.036478	0.009061	8.32273E-12	0.61551	0.247954	0.004218	0.154847	0.142774	9.5E-11	0.84097	0.29785	0.729	0.818	0.929	0.672	0.85	1	0.495	0.803
rs9296321	1.4227E-11	0.0347228	0.00514	0.035919	0.007064	2.37268E-11	0.0217	0.848259	0.037219	0.000187	0.004807	1.9E-06	0.55965	0.352666	0.948	0.687	0.699	0.999	0.989	1	0.748	0.841
rs2702550	1.4256E-11	-0.038715	0.00573	-0.038715	0.005731	2.96381E-11	0.64637	0.061412	0.001488	0.004029	0.321463	1.7E-05	0.01651	0.189029	0.86	0.949	0.998	0.997	0.882	1	0.981	0.925
rs13395031	1.4284E-11	-0.036341	0.00538	-0.040483	0.009367	1.08729E-11	0.87229	0.023782	0.000607	2.09E-07	0.311644	0.01245	0.00329	0.687071	0.795	0.955	0.996	1	0.854	0.917	0.989	0.818
rs11867537	1.4321E-11	0.0397782	0.00589	0.0392993	0.009827	2.97715E-11	0.62089	0.053349	1.87E-05	0.014342	0.90025	4.4E-05	0.51439	0.000245	0.64	0.923	1	0.979	0.566	1	0.774	0.986
rs12451511	1.4321E-11	0.0397782	0.00589	0.0392993	0.009827	2.97715E-11	0.62089	0.053349	1.87E-05	0.014342	0.90025	4.4E-05	0.51439	0.000245	0.64	0.923	1	0.979	0.566	1	0.774	0.986
rs62084248	1.4321E-11	0.0397782	0.00589	0.0392993	0.009827	2.97715E-11	0.62089	0.053349	1.87E-05	0.014342	0.90025	4.4E-05	0.51439	0.000245	0.64	0.923	1	0.979	0.566	1	0.774	0.986
rs62084249	1.4321E-11	0.0397782	0.00589	0.0392993	0.009827	2.97715E-11	0.62089	0.053349	1.87E-05	0.014342	0.90025	4.4E-05	0.51439	0.000245	0.64	0.923	1	0.979	0.566	1	0.774	0.986
rs9913471	1.4321E-11	0.0397782	0.00589	0.0392993	0.009827	2.97715E-11	0.62089	0.053349	1.87E-05	0.014342	0.90025	4.4E-05	0.51439	0.000245	0.64	0.923	1	0.979	0.566	1	0.774	0.986
rs9915108	1.4321E-11	0.0397782	0.00589	0.0392993	0.009827	2.97715E-11	0.62089	0.053349	1.87E-05	0.014342	0.90025	4.4E-05	0.51439	0.000245	0.64	0.923	1	0.979	0.566	1	0.774	0.986
rs779977	1.4328E-11	0.03459	0.00512	0.0436846	0.009569	8.95886E-12	0.51764	0.009285	2.78E-05	0.000709	0.064935	0.07938	6.8E-05	0.067125	0.811	0.968	1	0.999	0.945	0.329	0.998	0.937
rs55939964	1.4362E-11	0.0397757	0.00589	0.0392958	0.009828	2.98547E-11	0.62058	0.053348	1.87E-05	0.014384	0.900327	4.4E-05	0.51441	0.000245	0.64	0.923	1	0.979	0.566	1	0.774	0.986
rs9912084	1.4363E-11	0.0397757	0.00589	0.0392957	0.009828	2.98573E-11	0.62058	0.053348	1.87E-05	0.014384	0.900329	4.4E-05	0.51441	0.000245	0.64	0.923	1	0.979	0.566	1	0.774	0.986
rs9912770	1.4363E-11	0.0397757	0.00589	0.0392957	0.009828	2.98573E-11	0.62058	0.053348	1.87E-05	0.014384	0.900329	4.4E-05	0.51441	0.000245	0.64	0.923	1	0.979	0.566	1	0.774	0.986
rs62084251	1.4366E-11	0.0397755	0.00589	0.0392958	0.009828	2.98632E-11	0.62059	0.053349	1.87E-05	0.014383	0.900247	4.4E-05	0.51439	0.000245	0.64	0.923	1	0.979	0.566	1	0.774	0.986
rs9892803	1.4366E-11	0.0397755	0.00589	0.0392958	0.009828	2.98632E-11	0.62059	0.053349	1.87E-05	0.014383	0.900247	4.4E-05	0.51439	0.000245	0.64	0.923	1	0.979	0.566	1	0.774	0.986
rs4569324	1.4367E-11	0.0397754	0.00589	0.0392958	0.009828	2.98657E-11	0.62059	0.053349	1.87E-05	0.014383	0.90025	4.4E-05	0.51439	0.000245	0.64	0.923	1	0.979	0.566	1	0.774	0.986
rs62084247	1.4367E-11	0.0397754	0.00589	0.0392958	0.009828	2.98657E-11	0.62059	0.053349	1.87E-05	0.014383	0.90025	4.4E-05	0.51439	0.000245	0.64	0.923	1	0.979	0.566	1	0.774	0.986
rs4848924	1.4384E-11	-0.036234	0.00536	-0.040568	0.00932	1.07621E-11	0.78376	0.020515	0.000699	2.02E-07	0.307026	0.01254	0.00368	0.675931	0.813	0.958	0.995	1	0.859	0.919	0.988	0.823
rs4494619	1.4396E-11	0.0340701	0.00504	0.0340701	0.005045	2.99251E-11	0.13762	0.722895	9.26E-05	0.022123	0.151667	3.4E-06	0.60798	0.121639	0.913	0.721	1	0.976	0.916	1	0.79	0.92
rs11877505	1.4456E-11	0.034897	0.00517	0.0339664	0.006075	2.58576E-11	0.3348	0.462975	0.000592	0.241677	0.08135	1.7E-08	0.06703	0.35597	0.829	0.576	0.997	0.606	0.923	1	0.929	0.824
rs11870068	1.4474E-11	0.0397556	0.00589	0.0392521	0.009789	3.00828E-11	0.65417	0.048787	1.92E-05	0.014573	0.918403	4.1E-05	0.53448	0.000274	0.646	0.925	1	0.979	0.557	1	0.766	0.986
rs13212652	1.4496E-11	-0.075416	0.01117	-0.081542	0.014708	3.01281E-11	0.44892	0.36677	0.000602	6.56E-05	0.035389	0.0055	0.06545	0.001377	0.896	0.907	0.999	1	0.979	0.985	0.966	0.985
rs3734528	1.4499E-11	-0.075534	0.01119	-0.082451	0.015252	2.99864E-11	0.52464	0.402732	0.000566	3.41E-05	0.041178	0.00684	0.05132	0.001705	0.885	0.9	0.999	1	0.977	0.979	0.97	0.984
rs35402046	1.4518E-11	-0.075421	0.01117	-0.081573	0.014728	3.01723E-11	0.45477	0.366768	0.000601	6.48E-05	0.035387	0.0055	0.06544	0.001376	0.896	0.907	0.999	1	0.979	0.985	0.966	0.985
rs10957321	1.4526E-11	0.0355752	0.00527	0.0355752	0.005268	3.01895E-11	0.22009	0.953765	1.12E-07	0.008623	0.259016	0.00134	0.49702	0.259621	0.895	0.778	1	0.99	0.873	0.996	0.821	0.888
rs4788616	1.4569E-11	0.0342781	0.00508	0.0342781	0.005077	3.02765E-11	0.55926	0.640624	0.00034	0.013288	0.382225	9E-08	0.17829	0.729123	0.624	0.781	0.999	0.98	0.78	1	0.883	0.757
rs12447803	1.4625E-11	0.0341772	0.00506	0.0341772	0.005062	3.03904E-11	0.91082	0.052683	0.001207	0.010838	0.058229	3.8E-05	0.00573	0.34113	0.829	0.954	0.998	0.992	0.969	1	0.988	0.904
rs189331782	1.4632E-11	0.0817436	0.01211	0.0817436	0.012108	3.04047E-11	0.94479	0.247284	0.004414	0.007784	0.016569	1.9E-05	0.00136	0.470114	0.817	0.912	0.991	0.994	0.985	1	0.993	0.88
rs811901	1.4647E-11	0.0345716	0.00512	0.0436661	0.009564	9.22531E-12	0.51466	0.009326	2.83E-05	0.000727	0.065374	0.07898	6.7E-05	0.066521	0.812	0.968	1	0.999	0.945	0.333	0.998	0.937
rs779996	1.4651E-11	0.0345713	0.00512	0.0436657	0.009564	9.22981E-12	0.51463	0.009326	2.83E-05	0.000727	0.065373	0.07897	6.7E-05	0.066521	0.812	0.968	1	0.999	0.945	0.333	0.998	0.937
rs13414601	1.4679E-11	-0.036319	0.00538	-0.040444	0.009343	1.13913E-11	0.8732	0.023776	0.000607	2.23E-07	0.311626	0.01241	0.00328	0.68587	0.796	0.955	0.996	1	0.854	0.918	0.989	0.819
rs13389404	1.4682E-11	-0.036319	0.00538	-0.040442	0.009343	1.13928E-11	0.8732	0.023809	0.000607	2.23E-07	0.311751	0.01241	0.00328	0.686077	0.796	0.955	0.996	1	0.854	0.918	0.989	0.818
rs12451707	1.4685E-11	0.0397579	0.00589	0.0392784	0.009827	3.05128E-11	0.62282	0.053349	1.87E-05	0.014743	0.90025	4.4E-05	0.51439	0.000245	0.641	0.923	1	0.979	0.566	1	0.774	0.986
rs7558767	1.4688E-11	-0.036319	0.00538	-0.040442	0.009348	1.13715E-11	0.87602	0.023782	0.000607	2.21E-07	0.311622	0.01242	0.00329	0.686506	0.795	0.955	0.996	1	0.854	0.918	0.989	0.818
rs140912776	1.4697E-11	0.0397579	0.00589	0.0392793	0.009826	3.05382E-11	0.62357	0.053349	1.87E-05	0.014774	0.900247	4.4E-05	0.51439	0.000245	0.641	0.923	1	0.979	0.567	1	0.774	0.986
rs2420571	1.4734E-11	-0.036316	0.00538	-0.040439	0.009349	1.14004E-11	0.87601	0.023782	0.000607	2.21E-07	0.311635	0.01244	0.00329	0.68673	0.795	0.955	0.996	1	0.854	0.917	0.988	0.818
rs1919841	1.4734E-11	-0.036316	0.00538	-0.040439	0.009349	1.14004E-11	0.87601	0.023782	0.000607	2.21E-07	0.311635	0.01244	0.00329	0.68673	0.795	0.955	0.996	1	0.854	0.917	0.988	0.818
rs2178357	1.4735E-11	-0.036316	0.00538	-0.040439	0.009349	1.14014E-11	0.87602	0.023782	0.000607	2.21E-07	0.311635	0.01244	0.00329	0.686732	0.795	0.955	0.996	1	0.854	0.917	0.988	0.818
rs6707012	1.4764E-11	-0.036317	0.00538	-0.04045	0.009351	1.1396E-11	0.87292	0.023782	0.000607	2.21E-07	0.311644	0.01245	0.00329	0.687071	0.795	0.955	0.996	1	0.854	0.917	0.988	0.818

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rs6719774	1.479E-11	-0.036313	0.00538	-0.040437	0.00935	1.14365E-11	0.87598	0.023782	0.000607	2.21E-07	0.311644	0.01245	0.00329	0.687071	0.795	0.955	0.996	1	0.854	0.917	0.988	0.818
rs1919842	1.479E-11	-0.036313	0.00538	-0.040436	0.009349	1.14479E-11	0.87623	0.023782	0.000607	2.22E-07	0.311637	0.01245	0.00329	0.686741	0.795	0.955	0.996	1	0.854	0.917	0.988	0.818
rs8074644	1.4798E-11	0.0397505	0.00589	0.0392688	0.009829	3.07438E-11	0.62192	0.053349	1.87E-05	0.014837	0.900247	4.4E-05	0.51439	0.000245	0.64	0.923	1	0.978	0.566	1	0.774	0.986
rs79695845	1.4807E-11	-0.049194	0.00729	-0.050731	0.009298	3.07626E-11	0.00327	0.378099	0.001478	0.180846	0.059467	3.2E-06	0.00925	0.286821	0.977	0.89	0.997	0.806	0.965	1	0.985	0.904
rs34213745	1.4831E-11	-0.036312	0.00538	-0.040436	0.009335	1.15606E-11	0.86911	0.02387	0.00061	2.27E-07	0.312074	0.0124	0.00328	0.685799	0.796	0.955	0.996	1	0.854	0.918	0.989	0.819
rs62084252	1.4846E-11	0.0397478	0.00589	0.0392653	0.00983	3.08416E-11	0.62162	0.053349	1.87E-05	0.014879	0.900247	4.4E-05	0.51439	0.000245	0.64	0.923	1	0.978	0.566	1	0.774	0.986
rs11647125	1.4876E-11	0.0399633	0.00592	0.0399633	0.005921	3.09028E-11	0.97738	0.102467	0.000923	0.019642	0.280595	3.4E-07	0.31905	0.173829	0.787	0.927	0.998	0.981	0.876	1	0.88	0.914
rs35515443	1.4878E-11	-0.036209	0.00537	-0.04058	0.009369	1.06947E-11	0.79047	0.020754	0.000721	1.82E-07	0.308483	0.01287	0.00368	0.675015	0.811	0.958	0.995	1	0.857	0.915	0.988	0.822
rs35902160	1.495E-11	-0.075345	0.01116	-0.081401	0.014689	3.10534E-11	0.45201	0.36324	0.000636	6.53E-05	0.033289	0.00519	0.07652	0.00133	0.896	0.907	0.999	1	0.98	0.986	0.963	0.985
rs55971695	1.4952E-11	-0.049182	0.00729	-0.050713	0.00929	3.10579E-11	0.00328	0.378583	0.001479	0.180601	0.05943	3.2E-06	0.00929	0.286829	0.977	0.889	0.997	0.807	0.966	1	0.985	0.904
rs3752417	1.4969E-11	-0.075741	0.01122	-0.080987	0.014269	3.10923E-11	0.51612	0.370987	0.000489	8.27E-05	0.023536	0.00596	0.07455	0.001888	0.887	0.905	0.999	1	0.984	0.983	0.963	0.984
rs35789010	1.5038E-11	-0.087535	0.01297	-0.089909	0.01503	3.12334E-11	0.93888	0.75693	0.000552	1.03E-05	0.02286	0.00229	0.25706	0.012235	0.809	0.833	0.999	1	0.98	0.994	0.905	0.97
rs6753736	1.5096E-11	0.0380554	0.00564	0.0380554	0.00564	3.1352E-11	0.17762	0.026106	9.6E-06	0.032996	0.071203	0.00071	0.20475	0.216941	0.931	0.965	1	0.976	0.966	0.999	0.931	0.927
rs142501809	1.5196E-11	-0.074275	0.01101	-0.074275	0.01101	3.15551E-11	0.6997	0.873919	0.000732	0.000579	0.205262	0.00023	0.01483	0.008001	0.848	0.822	0.999	0.999	0.915	1	0.981	0.973
rs4324325	1.5212E-11	-0.036293	0.00538	-0.040391	0.00926	1.21957E-11	0.8518	0.024716	0.000582	2.52E-07	0.315655	0.01269	0.00339	0.663246	0.8	0.955	0.996	1	0.854	0.917	0.988	0.823
rs142979871	1.5224E-11	0.0403	0.00597	0.0403	0.005974	3.16125E-11	0.72021	0.080856	0.001737	0.017516	0.14745	8.9E-07	0.15117	0.279842	0.845	0.942	0.997	0.986	0.935	1	0.935	0.907
rs978164	1.5255E-11	-0.034117	0.00506	-0.034117	0.005058	3.16747E-11	0.44088	0.941553	2.95E-05	0.001852	0.37751	0.00036	0.01157	0.2695	0.866	0.774	1	0.998	0.839	0.999	0.98	0.895
rs6504555	1.5273E-11	-0.039592	0.00587	-0.039282	0.009396	3.17128E-11	0.73003	0.100341	2.59E-05	0.010003	0.906491	5.5E-05	0.43651	0.000201	0.675	0.908	1	0.986	0.577	1	0.807	0.987
rs1367638	1.5275E-11	0.0342636	0.00508	0.0337233	0.006069	3.14547E-11	0.09808	0.689861	0.000447	0.24451	0.102899	1.2E-07	0.25732	0.021811	0.911	0.67	0.999	0.646	0.923	1	0.864	0.951
rs4086434	1.5345E-11	-0.038643	0.00573	-0.038643	0.00573	3.186E-11	0.66092	0.065245	0.001606	0.003515	0.311124	1.8E-05	0.01592	0.195622	0.858	0.948	0.998	0.997	0.886	1	0.981	0.924
rs149118465	1.537E-11	-0.075851	0.01125	-0.082602	0.015175	3.19107E-11	0.4658	0.368292	0.000925	2.8E-05	0.032183	0.00538	0.08356	0.001701	0.894	0.906	0.999	1	0.98	0.986	0.961	0.984
rs801923	1.5472E-11	0.0345322	0.00512	0.043586	0.009566	9.83579E-12	0.53629	0.009309	2.82E-05	0.000754	0.065426	0.07897	6.7E-05	0.066556	0.807	0.968	1	0.999	0.945	0.335	0.998	0.937
rs2702549	1.5515E-11	-0.03865	0.00573	-0.03865	0.005732	3.22051E-11	0.64402	0.060621	0.001542	0.003958	0.324371	1.7E-05	0.01718	0.189202	0.86	0.949	0.998	0.997	0.882	1	0.98	0.925
rs7223930	1.5628E-11	0.0396903	0.00589	0.0391195	0.00991	3.24365E-11	0.61582	0.05889	1.96E-05	0.01349	0.916231	4.4E-05	0.55084	0.000219	0.634	0.919	1	0.98	0.555	1	0.758	0.986
rs12711676	1.5695E-11	-0.036183	0.00537	-0.040598	0.009377	1.12171E-11	0.79759	0.021762	0.000739	1.91E-07	0.316025	0.0131	0.00335	0.64755	0.809	0.957	0.994	1	0.854	0.914	0.989	0.827
rs13399760	1.5707E-11	-0.036183	0.00537	-0.040602	0.009378	1.11959E-11	0.79554	0.021769	0.00074	1.9E-07	0.316234	0.01314	0.00336	0.647442	0.81	0.957	0.994	1	0.854	0.913	0.989	0.827
rs4917465	1.5751E-11	-0.035088	0.00521	-0.035121	0.005236	3.26871E-11	0.16232	0.403484	0.000159	0.002201	0.447104	0.00108	0.0153	0.002645	0.931	0.895	1	0.998	0.847	0.998	0.982	0.984
rs13403332	1.5858E-11	-0.036175	0.00537	-0.04059	0.009376	1.13361E-11	0.79723	0.021769	0.00074	1.92E-07	0.316228	0.01314	0.00336	0.647438	0.809	0.957	0.994	1	0.854	0.913	0.989	0.827
rs7575558	1.5877E-11	-0.036175	0.00537	-0.040588	0.009374	1.13638E-11	0.79734	0.021769	0.00074	1.93E-07	0.316228	0.01314	0.00336	0.647438	0.809	0.957	0.994	1	0.854	0.913	0.989	0.827
rs4788614	1.5903E-11	0.0402601	0.00597	0.0402601	0.005974	3.29966E-11	0.69966	0.080327	0.001751	0.018443	0.146028	9.1E-07	0.15231	0.279393	0.848	0.942	0.997	0.985	0.936	1	0.935	0.907
rs13391053	1.5929E-11	-0.036172	0.00537	-0.040587	0.009377	1.13768E-11	0.79711	0.021769	0.000743	1.92E-07	0.31621	0.01316	0.00337	0.647754	0.809	0.957	0.994	1	0.854	0.913	0.989	0.827
rs7558880	1.5932E-11	-0.036175	0.00537	-0.040596	0.00938	1.13521E-11	0.7973	0.021801	0.00074	1.92E-07	0.316563	0.01319	0.00336	0.64613	0.809	0.957	0.994	1	0.854	0.913	0.989	0.827
rs9899520	1.5944E-11	-0.039558	0.00587	-0.03917	0.009119	3.30783E-11	0.75335	0.066948	3.18E-05	0.011881	0.887959	4E-05	0.47116	0.000373	0.683	0.92	1	0.984	0.587	1	0.797	0.985
rs10188021	1.5948E-11	-0.036171	0.00537	-0.040582	0.009367	1.14662E-11	0.79411	0.021849	0.00074	1.96E-07	0.316738	0.01313	0.00336	0.646946	0.81	0.957	0.994	1	0.854	0.914	0.989	0.827
rs10197517	1.5961E-11	-0.036171	0.00537	-0.040582	0.009367	1.14777E-11	0.79412	0.021848	0.00074	1.96E-07	0.316756	0.01313	0.00335	0.646929	0.81	0.957	0.994	1	0.854	0.914	0.989	0.827
rs10208745	1.5962E-11	-0.036171	0.00537	-0.040581	0.009367	1.1475E-11	0.79412	0.021849	0.00074	1.96E-07	0.316786	0.01313	0.00336	0.646954	0.81	0.957	0.994	1	0.854	0.914	0.989	0.827
rs9824903	1.5974E-11	-0.035333	0.00524	-0.035333	0.005243	3.31405E-11	0.08073	0.458514	6.66E-05	0.005913	0.424741	0.00015	0.12856	0.064593	0.943	0.881	1	0.995	0.845	1	0.942	0.951
rs1968831	1.5981E-11	0.0341119	0.00506	0.0341119	0.005062	3.31555E-11	0.85787	0.045295	0.000974	0.011984	0.060968	4.9E-05	0.00527	0.402821	0.837	0.956	0.999	0.991	0.968	1	0.989	0.895
rs13216484	1.5992E-11	-0.074198	0.01101	-0.074198	0.011011	3.31764E-11	0.69957	0.877057	0.000744	0.000583	0.206388	0.00023	0.01536	0.007947	0.848	0.822	0.999	0.999	0.915	1	0.981	0.973
rs12711674	1.6002E-11	-0.036169	0.00537	-0.040578	0.009365	1.15229E-11	0.79393	0.02188	0.000741	1.97E-07	0.316747	0.01312	0.00335	0.646945	0.81	0.957	0.994	1	0.854	0.914	0.989	0.827
rs6783146	1.6028E-11	-0.035326	0.00524	-0.035326	0.005243	3.32494E-11	0.0812	0.457947	6.52E-05	0.006189	0.425195	0.00015	0.12825	0.064404	0.943	0.881	1	0.995	0.845	1	0.942	0.951
rs34244947	1.6035E-11	-0.074194	0.01101	-0.074194	0.011011	3.32646E-11	0.69958	0.877001	0.000745	0.000583	0.206467	0.00023	0.01535	0.007923	0.848	0.822	0.999	0.999	0.915	1	0.981	0.973
rs28645478	1.6042E-11	-0.035326	0.00524	-0.035326	0.005243	3.32785E-11	0.08114	0.45796	6.52E-05	0.006175	0.425195	0.00015	0.12825	0.064406	0.943	0.881	1	0.995	0.845	1	0.942	0.951
rs9845443	1.6043E-11	0.0357828	0.00531	0.0357828	0.00531	3.32799E-11	0.95357	0.459431	0.000143	0.014592	0.292235	1.6E-05	0.03611	0.091007	0.783	0.869	1	0.987	0.876	1	0.968	0.937
rs7578495	1.6075E-11	-0.036165	0.00537	-0.040568	0.00938	1.1506E-11	0.80636	0.021769	0.00074	1.93E-07	0.316228	0.01314	0.00336	0.647438	0.808	0.957	0.994	1	0.854	0.913	0.989	0.827
rs1045537	1.6076E-11	-0.075315	0.01118	-0.08148	0.014701	3.33484E-11	0.45735	0.361563	0.000571	8.36E-05	0.035006	0.00595	0.05562	0.001377	0.896	0.907	0.999	1	0.979	0.984	0.969	0.985
rs2604558	1.6079E-11	-0.038624	0.00573	-0.038624	0.005732	3.33541E-11	0.65476	0.061084	0.001535	0.00406	0.326722	1.7E-05	0.0169	0.190477	0.858	0.949	0.998	0.996	0.881	1	0.98	0.925
rs9828034	1.6122E-11	-0.035322	0.00524	-0.035322	0.005243	3.3442E-11	0.08119	0.457959	6.53E-05	0.006205	0.425195	0.00015	0.12825	0.064406	0.943	0.881	1	0.995	0.845	1	0.942	0.951
rs2237235	1.6174E-11	-0.037964	0.00564	-0.037964	0.005635	3.35484E-11	0.46818	0.43324	1.19E-05	0.003472	0.525136	0.00089	0.05281	0.020802	0.872	0.878	1	0.997	0.801	0.998	0.963	0.965
rs6541944	1.6187E-11	-0.03616	0.00537	-0.040571	0.009359	1.16947E-11	0.79152	0.021769	0.000743	2E-07	0.31621	0.01316	0.00337	0.647754	0.81	0.957	0.994	1	0.854	0.914	0.989	0.827
rs4791300	1.6269E-11	0.0394826	0.00586	0.0390478	0.009167	3.37415E-11	0.72801	0.070231	2.62E-05	0.010358	0.941012	5E-05	0.44502	0.000392	0.672	0.918	1	0.986	0.559	1	0.802	0.985
rs62097986	1.6273E-11	0.0348026	0.00517	0.0342169	0.005721	3.01435E-11	0.30198	0.541155	0.000469	0.264189	0.099174	2.5E-08	0.06631	0.326277	0.837	0.596	0.998	0.58	0.911	1	0.93	0.831
rs12994085	1.6389E-11	0.0379827	0.00564	0.0379827	0.00564	3.39847E-11	0.1769	0.023684	9.47E-06	0.033862	0.072172	0.00077	0.2073	0.213626	0.931	0.966	1	0.976	0.966	0.999	0.93	0.927
rs13252547	1.6425E-11	0.0355634	0.00528	0.0355634	0.005281	3.40591E-11	0.27955	0.740881	1.06E-07	0.012184	0.253408	0.00089	0.4031	0.293299	0.877	0.715	1	0.986	0.869	0.998	0.839	0.876
rs6698425	1.6478E-11	-0.039463	0.00586	-0.042057	0.007244	3.41665E-11	0.09677	0.081344	3.8E-05	0.057667	0.003318	0.00664	0.00621	0.043038	0.951	0.954	1	0.959	0.995	0.982	0.99	0.966

Table S3

rs7416945	1.6512E-11	-0.039461	0.00586	-0.042059	0.007246	3.4236E-11	0.09657	0.081344	3.8E-05	0.057801	0.003318	0.00664	0.00621	0.043038	0.951	0.954	1	0.959	0.995	0.982	0.99	0.966
rs28419077	1.6548E-11	0.0402177	0.00597	0.0402177	0.005973	3.43097E-11	0.67812	0.080413	0.001782	0.017729	0.155326	8.9E-07	0.16446	0.27566	0.851	0.942	0.997	0.986	0.932	1	0.932	0.907
rs72787094	1.6567E-11	0.0402297	0.00597	0.0402297	0.005975	3.4348E-11	0.71958	0.08034	0.001843	0.017092	0.15472	8.7E-07	0.14932	0.295081	0.845	0.941	0.997	0.986	0.932	1	0.935	0.904
rs12993377	1.6569E-11	0.0379738	0.00564	0.0379738	0.00564	3.43516E-11	0.17692	0.023639	9.51E-06	0.033849	0.07233	0.00077	0.20756	0.213638	0.931	0.966	1	0.976	0.966	0.999	0.93	0.927
rs56653693	1.6615E-11	0.0403334	0.00599	0.0438579	0.008087	3.44459E-11	0.0392	0.446778	0.001731	0.001083	6.37E-05	0.00175	0.51198	0.065438	0.959	0.892	0.997	0.999	0.999	0.997	0.862	0.954
rs2296461	1.6636E-11	-0.036737	0.00546	-0.04096	0.007668	3.44875E-11	0.11228	0.00294	0.000715	0.037716	0.080958	0.00068	0.00433	0.018001	0.95	0.984	0.999	0.977	0.968	0.999	0.992	0.976
rs192012479	1.6659E-11	0.108688	0.01614	0.103461	0.020848	2.39239E-11	0.20441	0.94692	0.000843	0.280841	0.160238	4.5E-09	0.0449	0.868447	0.846	0.665	0.995	0.535	0.861	1	0.934	0.627
rs12630897	1.6686E-11	-0.038441	0.00571	-0.038441	0.00571	3.45885E-11	0.75886	0.652321	0.001459	0.017161	0.153244	2.3E-07	0.06789	0.353299	0.733	0.828	0.997	0.982	0.918	1	0.95	0.874
rs12548518	1.6719E-11	0.0355497	0.00528	0.0355497	0.005281	3.46569E-11	0.2803	0.741556	1.05E-07	0.012136	0.253024	0.00091	0.40175	0.292217	0.877	0.716	1	0.986	0.869	0.998	0.839	0.876
rs665539	1.6793E-11	-0.034034	0.00506	-0.033921	0.008019	1.76687E-11	0.04062	0.091309	0.000544	0.635688	0.604108	1.9E-08	0.08179	0.065021	0.919	0.89	0.995	0.178	0.569	1	0.913	0.909
rs4790981	1.6815E-11	0.0394827	0.00587	0.0389982	0.009181	3.48527E-11	0.68788	0.079721	2.43E-05	0.011235	0.926588	5.1E-05	0.42286	0.000374	0.664	0.914	1	0.984	0.566	1	0.809	0.985
rs17604349	1.6859E-11	0.0395493	0.00588	0.0395493	0.005876	3.49417E-11	0.83232	0.094907	0.001187	0.02998	0.283341	3E-07	0.0808	0.29398	0.757	0.93	0.998	0.971	0.876	1	0.948	0.891
rs13210399	1.6905E-11	-0.075191	0.01117	-0.08115	0.014635	3.50342E-11	0.4743	0.366881	0.000605	7.61E-05	0.035447	0.00553	0.06549	0.001377	0.893	0.906	0.999	1	0.979	0.985	0.966	0.985
rs11648479	1.6905E-11	0.0402123	0.00597	0.0402123	0.005975	3.50357E-11	0.7236	0.080394	0.001839	0.017422	0.154712	8.7E-07	0.1494	0.295158	0.844	0.941	0.997	0.986	0.932	1	0.935	0.903
rs34759227	1.6938E-11	0.0340661	0.00506	0.0340661	0.005062	3.51022E-11	0.88044	0.051116	0.001023	0.012186	0.064596	4.5E-05	0.00505	0.377	0.833	0.954	0.999	0.991	0.967	1	0.989	0.898
rs4698315	1.6954E-11	-0.038572	0.00573	-0.038572	0.005731	3.51353E-11	0.66264	0.063282	0.001715	0.003494	0.306638	1.9E-05	0.0167	0.19976	0.858	0.948	0.997	0.997	0.887	1	0.98	0.923
rs113365769	1.7019E-11	0.045686	0.00679	0.045686	0.006789	3.52659E-11	0.2178	0.064027	0.000324	0.109017	0.035888	1.8E-05	0.04037	0.279309	0.922	0.95	1	0.904	0.977	1	0.971	0.913
rs4671358	1.7032E-11	0.0379361	0.00564	0.0433405	0.009018	3.52935E-11	0.08784	0.002132	0.00805	0.002371	0.000961	0.00021	0.04022	0.681468	0.945	0.981	0.979	0.998	0.997	1	0.971	0.745
rs4788615	1.7038E-11	0.0402065	0.00597	0.0402065	0.005975	3.53061E-11	0.72064	0.080503	0.001841	0.017545	0.15474	8.7E-07	0.14941	0.295184	0.845	0.941	0.997	0.986	0.932	1	0.935	0.903
rs71638315	1.7109E-11	-0.054091	0.00804	-0.055903	0.009132	2.71239E-11	0.07603	0.176056	0.000462	1.94E-06	0.102292	0.0112	0.0629	0.414162	0.949	0.929	0.999	1	0.954	0.954	0.964	0.893
rs60244972	1.7166E-11	0.0365925	0.00544	0.0365925	0.005439	3.5566E-11	0.26776	0.457705	0.01584	0.001319	0.092842	1.2E-06	0.11133	0.20875	0.908	0.881	0.946	0.999	0.953	1	0.946	0.919
rs1233488	1.7206E-11	-0.077607	0.01154	-0.077607	0.011535	3.56479E-11	0.21287	0.308268	0.001544	0.000673	0.505875	5.7E-05	0.09248	0.008897	0.917	0.903	0.997	0.999	0.818	1	0.953	0.972
rs2155293	1.727E-11	0.0365878	0.00544	0.0365878	0.005439	3.57766E-11	0.26789	0.457619	0.015772	0.001337	0.092774	1.2E-06	0.11124	0.20858	0.908	0.881	0.946	0.999	0.953	1	0.946	0.919
rs35076545	1.7278E-11	-0.073974	0.011	-0.073974	0.010996	3.57934E-11	0.68671	0.868568	0.000708	0.000527	0.250212	0.00025	0.01515	0.007528	0.848	0.821	0.999	0.999	0.9	1	0.981	0.973
rs12288908	1.7286E-11	0.0365873	0.00544	0.0365873	0.005439	3.58107E-11	0.26595	0.457619	0.015771	0.001345	0.092772	1.2E-06	0.11124	0.20858	0.908	0.881	0.946	0.998	0.953	1	0.946	0.919
rs4312109	1.7347E-11	0.0584979	0.0087	0.0584979	0.008696	3.59327E-11	0.27609	0.514906	0.000312	0.003334	0.065329	0.0002	0.09731	0.071391	0.915	0.885	1	0.997	0.967	1	0.955	0.953
rs4545595	1.7375E-11	-0.034159	0.00508	-0.034159	0.005078	3.58952E-11	0.66708	0.291862	0.018124	0.000118	0.04749	5E-06	0.26368	0.173355	0.842	0.897	0.925	1	0.968	1	0.899	0.92
rs215896	1.7396E-11	0.0392116	0.00583	0.0391905	0.005976	3.60343E-11	0.02372	0.963961	0.000301	0.264758	0.097614	1.7E-06	0.02434	0.137322	0.952	0.752	0.999	0.66	0.936	1	0.97	0.914
rs71557316	1.7466E-11	-0.075472	0.01122	-0.080454	0.014107	3.61759E-11	0.51717	0.388455	0.00055	8.39E-05	0.022073	0.0059	0.07636	0.002113	0.887	0.903	0.999	1	0.984	0.984	0.963	0.983
rs13212985	1.7473E-11	-0.073956	0.011	-0.073956	0.010996	3.6189E-11	0.68699	0.868577	0.000711	0.000529	0.250286	0.00025	0.01516	0.007531	0.848	0.821	0.999	0.999	0.9	1	0.981	0.973
rs72694238	1.7495E-11	-0.049033	0.00729	-0.049033	0.007291	3.62352E-11	0.53808	0.542153	0.000198	0.015432	0.090199	0.00042	0.01287	0.001465	0.882	0.882	1	0.989	0.96	0.999	0.984	0.985
rs11641424	1.7499E-11	0.0456599	0.00679	0.0456599	0.006789	3.62427E-11	0.21738	0.063632	0.00035	0.107608	0.035552	1.8E-05	0.03993	0.279102	0.922	0.95	1	0.906	0.977	1	0.971	0.913
rs77596502	1.7524E-11	0.0394403	0.00586	0.0390388	0.009115	3.62936E-11	0.62664	0.066024	2.05E-05	0.03008	0.701793	3.6E-05	0.40992	0.000374	0.669	0.924	1	0.961	0.676	1	0.825	0.985
rs34781270	1.7574E-11	-0.073954	0.011	-0.073954	0.010997	3.63947E-11	0.68702	0.870772	0.000727	0.000528	0.250081	0.00024	0.01546	0.007615	0.848	0.821	0.999	0.999	0.9	1	0.981	0.973
rs17114702	1.7585E-11	0.0365734	0.00544	0.0365734	0.005439	3.6417E-11	0.26741	0.457619	0.015772	0.001369	0.092774	1.2E-06	0.11124	0.20858	0.908	0.881	0.946	0.998	0.953	1	0.946	0.919
rs12287147	1.7586E-11	0.0365734	0.00544	0.0365734	0.005439	3.64188E-11	0.26741	0.457619	0.015772	0.00137	0.092772	1.2E-06	0.11124	0.20858	0.908	0.881	0.946	0.998	0.953	1	0.946	0.919
rs11867401	1.7601E-11	-0.039365	0.00585	-0.038747	0.009141	3.64501E-11	0.644	0.087091	2.42E-05	0.007089	0.981234	6.3E-05	0.42759	0.000473	0.645	0.909	1	0.99	0.534	1	0.802	0.983
rs8057899	1.7612E-11	0.0340346	0.00506	0.0340346	0.005061	3.64721E-11	0.88498	0.04949	0.001048	0.011256	0.068004	4.7E-05	0.00492	0.397866	0.832	0.954	0.999	0.992	0.965	1	0.989	0.895
rs12401773	1.7656E-11	0.0348705	0.00519	0.0348705	0.005186	3.65616E-11	0.00847	0.933913	0.003894	0.001651	0.111811	2.5E-05	0.30745	0.018467	0.973	0.825	0.993	0.998	0.95	1	0.902	0.969
rs16891261	1.7673E-11	-0.075453	0.01122	-0.080436	0.014109	3.6596E-11	0.51759	0.388543	0.000552	8.39E-05	0.02212	0.00592	0.07641	0.002115	0.887	0.903	0.999	1	0.984	0.984	0.963	0.983
rs13196552	1.7673E-11	-0.075103	0.01117	-0.082417	0.015431	3.64567E-11	0.56873	0.376201	0.000544	4.43E-05	0.034974	0.00789	0.05157	0.001543	0.879	0.903	0.999	1	0.979	0.974	0.97	0.984
rs17114705	1.7749E-11	0.0365658	0.00544	0.0365658	0.005439	3.675E-11	0.26741	0.457619	0.015838	0.001369	0.092864	1.2E-06	0.11128	0.208578	0.908	0.881	0.946	0.998	0.953	1	0.946	0.919
rs9891146	1.7767E-11	-0.037106	0.00552	-0.03623	0.008046	3.67864E-11	0.5064	0.04264	1.42E-05	0.059326	0.66795	1.8E-05	0.31607	0.002221	0.631	0.932	1	0.914	0.679	1	0.848	0.976
rs12285372	1.7818E-11	0.0365629	0.00544	0.0365629	0.005439	3.68901E-11	0.26642	0.457708	0.015833	0.001382	0.092888	1.2E-06	0.11136	0.208793	0.908	0.881	0.946	0.998	0.953	1	0.946	0.919
rs133803241	1.7821E-11	-0.074279	0.01105	-0.074279	0.011049	3.68965E-11	0.69954	0.884067	0.000694	0.000583	0.20364	0.00027	0.01702	0.0104	0.848	0.821	0.999	0.999	0.916	1	0.98	0.973
rs72787042	1.7858E-11	0.0456391	0.00679	0.0456391	0.006789	3.69722E-11	0.21888	0.063632	0.00035	0.108901	0.035553	1.8E-05	0.03993	0.279102	0.921	0.95	1	0.905	0.977	1	0.971	0.913
rs8050058	1.7973E-11	0.0401267	0.00597	0.0411456	0.007698	3.7206E-11	0.01835	0.014975	0.001866	0.266034	0.034467	9.5E-07	0.09175	0.494268	0.962	0.963	0.995	0.693	0.973	1	0.946	0.858
rs12471347	1.799E-11	-0.038316	0.0057	-0.038316	0.005701	3.72395E-11	0.17285	0.008821	1.31E-05	0.062364	0.045505	0.00057	0.27532	0.16663	0.931	0.973	1	0.951	0.975	0.999	0.914	0.934
rs13190739	1.799E-11	-0.073918	0.011	-0.073918	0.010997	3.72405E-11	0.68702	0.869587	0.000731	0.000528	0.252548	0.00024	0.01549	0.007654	0.848	0.821	0.999	0.999	0.899	1	0.981	0.973
rs4666011	1.8032E-11	-0.038314	0.0057	-0.038314	0.005701	3.73249E-11	0.17285	0.008816	1.31E-05	0.062309	0.045442	0.00057	0.27519	0.167424	0.931	0.973	1	0.952	0.975	0.999	0.914	0.934
rs13203358	1.8079E-11	-0.059163	0.0088	-0.060634	0.01026	3.74208E-11	0.87531	0.283436	0.000663	0.032612	0.071898	9.1E-05	0.00525	0.002018	0.839	0.914	0.999	0.976	0.965	1	0.989	0.983
rs4595579	1.8086E-11	0.036551	0.00544	0.036551	0.005439	3.74347E-11	0.26781	0.457705	0.015841	0.001407	0.092843	1.2E-06	0.11133	0.20875	0.908	0.881	0.946	0.998	0.953	1	0.946	0.919
rs12273652	1.8088E-11	0.0365509	0.00544	0.0365509	0.005439	3.7439E-11	0.26781	0.457705	0.01584	0.001408	0.092842	1.2E-06	0.11133	0.20875	0.908	0.881	0.946	0.998	0.953	1	0.946	0.919
rs4322430	1.8104E-11	0.036551	0.00544	0.036551	0.005439	3.74714E-11	0.2766	0.457434	0.01577	0.001401	0.092776	1.2E-06	0.11139	0.208691	0.906	0.881	0.946	0.998	0.953	1	0.946	0.919
rs35243555	1.8161E-11	0.0395927	0.00589	0.0390206	0.009864	3.75876E-11	0.60425	0.053517	1.89E-05	0.014855	0.915692	4.8E-05	0.53566	0.000263	0.633	0.921	1	0.978	0.558	1	0.765	0.985

Table S3

rs3733156	1.8262E-11	-0.038449	0.00572	-0.038449	0.005722	3.77926E-11	0.75333	0.651534	0.002259	0.016437	0.142585	9E-08	0.0905	0.467686	0.726	0.824	0.994	0.982	0.92	1	0.939	0.85
rs11683456	1.8275E-11	0.0442483	0.00659	0.0442483	0.006585	3.7819E-11	0.11859	0.150597	0.006863	3.13E-05	0.016609	0.00048	0.47895	0.043015	0.94	0.934	0.985	1	0.986	0.999	0.871	0.961
rs61820796	1.8295E-11	-0.090804	0.01351	-0.091452	0.015312	3.08582E-11	0.66562	0.835347	1.72E-07	0.002851	0.05034	0.01354	0.02517	0.209026	0.693	0.787	1	0.996	0.96	0.895	0.969	0.897
rs36061290	1.8297E-11	0.0410175	0.0061	0.0410175	0.006105	3.78643E-11	0.81089	0.211882	0.000784	0.088729	0.041881	1.9E-06	0.09011	0.082635	0.832	0.915	0.999	0.918	0.972	1	0.952	0.944
rs2155289	1.8374E-11	0.0365392	0.00544	0.0365392	0.005439	3.80202E-11	0.26628	0.457687	0.015977	0.001425	0.092806	1.2E-06	0.1113	0.208739	0.908	0.881	0.946	0.998	0.953	1	0.946	0.919
rs13216785	1.8477E-11	-0.074952	0.01116	-0.08051	0.014357	3.82303E-11	0.50064	0.371805	0.000532	7.08E-05	0.037655	0.00665	0.05109	0.001964	0.889	0.905	0.999	1	0.978	0.981	0.97	0.983
rs501084	1.8488E-11	0.0357026	0.00531	0.0357026	0.005315	3.82522E-11	0.63187	0.207811	0.00122	0.005859	0.759915	1.4E-05	0.00195	0.087916	0.839	0.906	0.998	0.994	0.703	1	0.991	0.936
rs2384655	1.8608E-11	0.0378505	0.00564	0.0378505	0.005635	3.84963E-11	0.18444	0.022799	1.45E-05	0.035278	0.059576	0.00061	0.22691	0.231936	0.93	0.966	1	0.975	0.97	0.999	0.926	0.924
rs12731586	1.869E-11	-0.054032	0.00805	-0.055943	0.009212	2.96426E-11	0.09229	0.131819	0.000518	1.81E-06	0.118701	0.0106	0.06277	0.423352	0.945	0.936	0.999	1	0.949	0.959	0.964	0.892
rs9257809	1.8701E-11	-0.077559	0.01155	-0.077559	0.011549	3.86841E-11	0.16865	0.343689	0.001542	0.000532	0.538094	6.3E-05	0.10728	0.012495	0.923	0.896	0.997	0.999	0.806	1	0.948	0.971
rs70981105	1.8725E-11	-0.073888	0.011	-0.073888	0.011002	3.87338E-11	0.68701	0.860552	0.00077	0.000571	0.241205	0.00024	0.01505	0.00775	0.849	0.823	0.999	0.999	0.903	1	0.981	0.973
rs11640722	1.8744E-11	0.0400936	0.00597	0.0400936	0.00597	3.87716E-11	0.67147	0.067886	0.001665	0.015972	0.126419	1.4E-06	0.18222	0.3417	0.852	0.945	0.997	0.987	0.942	1	0.928	0.897
rs1559625	1.8858E-11	0.0379163	0.00565	0.0424286	0.008548	3.90029E-11	0.1089	0.002529	0.005142	0.003047	0.000876	0.00027	0.05554	0.747898	0.941	0.98	0.989	0.997	0.997	1	0.967	0.762
rs6672297	1.8987E-11	-0.054013	0.00805	-0.055946	0.009226	3.00487E-11	0.09237	0.132187	0.00052	1.81E-06	0.119307	0.01069	0.06203	0.424463	0.945	0.936	0.999	1	0.948	0.958	0.965	0.892
rs12965339	1.8999E-11	0.0351652	0.00524	0.0351652	0.005238	3.92889E-11	0.12871	0.6161	3.69E-05	0.011333	0.105874	0.0002	0.17713	0.196361	0.934	0.865	1	0.991	0.951	1	0.932	0.924
rs6911230	1.9063E-11	-0.035476	0.00528	-0.034489	0.007408	2.55435E-11	0.65329	0.227012	0.014205	0.018892	0.023067	8.2E-09	0.59457	0.069639	0.785	0.871	0.894	0.968	0.971	1	0.484	0.923
rs594759	1.9077E-11	-0.033929	0.00505	-0.033569	0.007862	1.99932E-11	0.05112	0.109563	0.000643	0.603993	0.624711	1.5E-08	0.07936	0.070813	0.911	0.88	0.994	0.199	0.561	1	0.913	0.905
rs17075971	1.9134E-11	0.0399291	0.00595	0.0420935	0.008676	2.65973E-11	0.79242	0.022634	0.042943	0.034431	0.019536	1.1E-07	0.01487	0.125104	0.713	0.955	0.72	0.941	0.979	1	0.978	0.92
rs7895858	1.9158E-11	-0.048867	0.00728	-0.050322	0.009131	3.96122E-11	0.00335	0.548404	0.002002	0.166787	0.038317	3.6E-06	0.01377	0.210296	0.977	0.868	0.996	0.828	0.975	1	0.982	0.919
rs57841322	1.9276E-11	0.0341162	0.00508	0.033566	0.00608	3.92608E-11	0.10548	0.716266	0.000465	0.267605	0.097364	1.3E-07	0.26779	0.022236	0.906	0.67	0.998	0.614	0.924	1	0.857	0.949
rs12080174	1.9277E-11	-0.053431	0.00796	-0.054469	0.008628	3.19231E-11	0.11733	0.170582	0.000638	1.23E-06	0.081354	0.00802	0.11262	0.510067	0.939	0.928	0.999	1	0.96	0.973	0.949	0.878
rs4791299	1.9294E-11	0.0393368	0.00586	0.0389609	0.009136	3.98868E-11	0.74557	0.070415	3.08E-05	0.010107	0.966805	5.3E-05	0.4247	0.000404	0.677	0.918	1	0.986	0.551	1	0.809	0.984
rs7896058	1.9295E-11	-0.038189	0.00569	-0.046761	0.010156	3.98899E-11	2E-05	0.236156	0.004804	0.036996	0.008506	0.00013	0.03563	0.14961	0.994	0.93	0.992	0.976	0.992	1	0.977	0.944
rs78873302	1.9296E-11	0.0782193	0.01165	0.0782193	0.011655	3.98916E-11	0.79539	0.350098	0.000159	0.043778	0.052467	5.7E-05	0.01853	0.088695	0.842	0.9	1	0.966	0.97	1	0.979	0.946
rs7540406	1.9298E-11	-0.05395	0.00804	-0.055822	0.009171	3.04392E-11	0.07594	0.176273	0.000484	1.97E-06	0.102545	0.01152	0.06271	0.427682	0.948	0.928	0.999	1	0.954	0.953	0.964	0.891
rs67296946	1.9364E-11	-0.075033	0.01118	-0.081534	0.014999	4.00298E-11	0.51157	0.407378	0.000555	7.49E-05	0.038672	0.00658	0.05041	0.001327	0.887	0.9	0.999	1	0.978	0.981	0.97	0.985
rs60856912	1.9409E-11	0.0407674	0.00608	0.0400076	0.011347	4.01208E-11	0.83735	0.089716	2E-06	0.060005	0.776806	8.1E-05	0.92826	4.61E-05	0.658	0.895	1	0.888	0.584	1	0.614	0.989
rs6927072	1.9437E-11	-0.035452	0.00528	-0.034431	0.007438	2.59087E-11	0.6642	0.227838	0.013909	0.019995	0.023133	7.9E-09	0.59134	0.06809	0.783	0.87	0.896	0.966	0.971	1	0.483	0.923
rs72694237	1.9462E-11	-0.048919	0.00729	-0.048919	0.00729	4.02281E-11	0.49112	0.542987	0.000198	0.017937	0.090137	0.00043	0.01295	0.001468	0.889	0.882	1	0.987	0.96	0.999	0.984	0.985
rs3909543	1.9492E-11	0.0338476	0.00504	0.0338476	0.005045	4.00185E-11	0.93122	0.765215	0.00088	0.017169	0.418141	2.1E-08	0.16878	0.571146	0.7	0.67	0.997	0.973	0.762	1	0.885	0.786
rs9890629	1.9511E-11	0.0395028	0.00589	0.0390994	0.009862	4.03283E-11	0.63832	0.050228	1.97E-05	0.01625	0.902562	5.2E-05	0.52805	0.000237	0.646	0.924	1	0.977	0.569	1	0.771	0.986
rs62097987	1.9519E-11	0.0346724	0.00517	0.033851	0.005946	3.50464E-11	0.29583	0.499597	0.000525	0.269322	0.100539	2.2E-08	0.072	0.334953	0.835	0.58	0.998	0.57	0.908	1	0.925	0.825
rs72787093	1.9609E-11	0.0400808	0.00597	0.0400808	0.005974	4.05257E-11	0.71879	0.084307	0.0022	0.017221	0.150271	7.6E-07	0.15844	0.305884	0.844	0.94	0.996	0.986	0.933	1	0.933	0.901
rs3852785	1.978E-11	0.0400619	0.00597	0.0400619	0.005973	4.08742E-11	0.77138	0.079345	0.002248	0.014456	0.164768	8.1E-07	0.18314	0.256198	0.836	0.941	0.996	0.988	0.928	1	0.926	0.909
rs1170597	1.9813E-11	0.0343505	0.00512	0.0433617	0.009546	1.2769E-11	0.53403	0.009502	3.01E-05	0.000847	0.066269	0.08174	7E-05	0.067854	0.808	0.967	1	0.999	0.944	0.333	0.998	0.936
rs62097989	1.9883E-11	0.0346643	0.00517	0.0338383	0.005941	3.56187E-11	0.30312	0.502357	0.00051	0.272305	0.096642	2.2E-08	0.0737	0.354046	0.832	0.579	0.998	0.564	0.91	1	0.923	0.819
rs145913703	1.9883E-11	0.03465	0.00517	0.0338305	0.005944	3.56522E-11	0.30292	0.503901	0.000524	0.272315	0.101515	2.2E-08	0.07004	0.331692	0.833	0.581	0.998	0.566	0.908	1	0.926	0.826
rs72787091	2.0023E-11	0.0400637	0.00597	0.0400637	0.005974	4.13666E-11	0.73486	0.080117	0.001875	0.019275	0.153904	9E-07	0.1499	0.295988	0.842	0.941	0.997	0.984	0.932	1	0.935	0.903
rs113191211	2.0105E-11	0.0455234	0.00679	0.0455234	0.006789	4.15325E-11	0.22135	0.063635	0.000352	0.117395	0.035559	1.8E-05	0.03994	0.279125	0.92	0.95	1	0.896	0.977	1	0.971	0.912
rs8049508	2.0186E-11	0.0400212	0.00597	0.0412676	0.007892	4.16962E-11	0.01585	0.0153	0.002025	0.278252	0.031437	1E-06	0.08908	0.498006	0.963	0.963	0.994	0.678	0.975	1	0.947	0.856
rs62086043	2.0446E-11	0.0393079	0.00586	0.0388598	0.009129	4.22235E-11	0.62573	0.067726	2.15E-05	0.032447	0.712421	3.6E-05	0.41457	0.000381	0.668	0.923	1	0.957	0.671	1	0.823	0.985
rs149123117	2.0493E-11	-0.07372	0.011	-0.07372	0.010999	4.23196E-11	0.65907	0.86112	0.000772	0.000669	0.241951	0.00024	0.01515	0.007763	0.853	0.824	0.999	0.999	0.903	1	0.981	0.973
rs11665486	2.056E-11	0.0351246	0.00524	0.0351246	0.005241	4.2454E-11	0.13056	0.641298	3.47E-05	0.011742	0.112501	0.00022	0.17173	0.184581	0.934	0.862	1	0.991	0.949	1	0.933	0.926
rs4648325	2.0563E-11	-0.034067	0.00508	-0.034067	0.005083	4.23465E-11	0.6672	0.30546	0.018387	0.000105	0.045906	5.7E-06	0.27976	0.191871	0.84	0.893	0.924	1	0.968	1	0.894	0.915
rs76586169	2.0621E-11	-0.0417	0.00622	-0.0417	0.006222	4.25782E-11	0.54262	0.027364	6.59E-06	0.057291	0.020725	0.00146	0.03823	0.426316	0.878	0.962	1	0.954	0.984	0.997	0.972	0.892
rs8047881	2.07E-11	0.0400099	0.00597	0.0400099	0.005971	4.27389E-11	0.71367	0.068579	0.001784	0.018713	0.146458	1.2E-06	0.1642	0.28699	0.846	0.944	0.997	0.985	0.935	1	0.932	0.905
rs13208916	2.0881E-11	-0.058979	0.0088	-0.060381	0.010198	4.31045E-11	0.87495	0.285717	0.000655	0.032571	0.07445	0.0001	0.00533	0.002067	0.839	0.913	0.999	0.976	0.964	1	0.988	0.983
rs28360517	2.0881E-11	-0.058979	0.0088	-0.060381	0.010198	4.31045E-11	0.87495	0.285717	0.000655	0.032571	0.07445	0.0001	0.00533	0.002067	0.839	0.913	0.999	0.976	0.964	1	0.988	0.983
rs9348726	2.0881E-11	-0.058979	0.0088	-0.060381	0.010198	4.31045E-11	0.87495	0.285717	0.000655	0.032571	0.07445	0.0001	0.00533	0.002067	0.839	0.913	0.999	0.976	0.964	1	0.988	0.983
rs9379899	2.0881E-11	-0.058979	0.0088	-0.060381	0.010198	4.31045E-11	0.87495	0.285717	0.000655	0.032571	0.07445	0.0001	0.00533	0.002067	0.839	0.913	0.999	0.976	0.964	1	0.988	0.983
rs9379901	2.0881E-11	-0.058979	0.0088	-0.060381	0.010198	4.31045E-11	0.87495	0.285717	0.000655	0.032571	0.07445	0.0001	0.00533	0.002067	0.839	0.913	0.999	0.976	0.964	1	0.988	0.983
rs72694236	2.0928E-11	-0.048836	0.00729	-0.048836	0.00729	4.32007E-11	0.51917	0.544241	0.0002	0.018014	0.090173	0.00043	0.01299	0.001477	0.885	0.882	1	0.987	0.96	0.999	0.984	0.985
rs72613829	2.0933E-11	-0.041689	0.00622	-0.041689	0.006223	4.32093E-11	0.54898	0.027364	6.59E-06	0.057688	0.02073	0.00146	0.0382	0.42633	0.877	0.962	1	0.954	0.984	0.997	0.972	0.892
rs398580	2.0982E-11	0.0452271	0.00675	0.0452271	0.006751	4.33091E-11	0.26841	0.096216	0.000305	0.151092	0.015475	2.1E-05	0.03035	0.319007	0.909	0.939	1	0.853	0.985	1	0.973	0.901
rs4665385	2.1026E-11	-0.041684	0.00622	-0.041684	0.006223	4.33984E-11	0.54293	0.027127	6.29E-06	0.057299	0.020973	0.00152	0.03842	0.42615	0.878	0.962	1	0.954	0.984	0.997	0.972	0.892

Table S3

rs7865295	2.1164E-11	-0.04882	0.00729	-0.04882	0.007289	4.36787E-11	0.52038	0.545229	0.0002	0.018064	0.089897	0.00043	0.01306	0.00148	0.885	0.882	1	0.987	0.96	0.999	0.984	0.985
rs2161768	2.1269E-11	0.0440219	0.00657	0.0440219	0.006573	4.38905E-11	0.12165	0.143319	0.006859	3.97E-05	0.020738	0.00048	0.46731	0.034308	0.94	0.936	0.986	1	0.984	0.999	0.874	0.964
rs12197646	2.1274E-11	0.0464209	0.00693	0.0465927	0.008775	4.39E-11	0.49406	0.919255	0.000273	0.00814	0.000276	6.4E-05	0.67987	0.058722	0.644	0.761	0.999	0.99	0.997	1	0.749	0.934
rs7875617	2.1427E-11	-0.048813	0.00729	-0.048813	0.00729	4.4211E-11	0.5609	0.545478	0.000201	0.017231	0.08963	0.00044	0.0131	0.001482	0.879	0.881	1	0.988	0.96	0.999	0.984	0.985
rs6589368	2.1448E-11	-0.034037	0.00508	-0.034037	0.005083	4.4131E-11	0.66545	0.3067	0.018511	0.000104	0.046626	5.8E-06	0.2828	0.1937	0.84	0.893	0.924	1	0.968	1	0.893	0.914
rs8067892	2.1593E-11	0.0394321	0.00589	0.038886	0.009394	4.45459E-11	0.67725	0.059693	2.11E-05	0.015569	0.877484	5.3E-05	0.52372	0.000377	0.661	0.921	1	0.978	0.587	1	0.777	0.984
rs34229567	2.1756E-11	-0.058931	0.0088	-0.060284	0.010158	4.48761E-11	0.87531	0.286117	0.000674	0.032612	0.07522	0.0001	0.00544	0.002098	0.839	0.913	0.999	0.976	0.964	1	0.988	0.983
rs7875257	2.1766E-11	-0.048787	0.00729	-0.048787	0.007289	4.48959E-11	0.55461	0.545525	0.000201	0.017642	0.08972	0.00044	0.01309	0.001482	0.88	0.881	1	0.988	0.96	0.999	0.984	0.985
rs13201821	2.1815E-11	-0.074826	0.01118	-0.081208	0.014924	4.4996E-11	0.5131	0.41887	0.000595	7.43E-05	0.037678	0.00667	0.05142	0.001425	0.887	0.898	0.999	1	0.978	0.981	0.97	0.984
rs35378061	2.2067E-11	-0.075085	0.01122	-0.080275	0.014241	4.55065E-11	0.51897	0.380236	0.000529	8.45E-05	0.023572	0.00686	0.08157	0.002055	0.886	0.903	0.999	1	0.983	0.98	0.961	0.983
rs2702575	2.2091E-11	-0.03507	0.00524	-0.03507	0.005241	4.55549E-11	0.9341	0.123522	0.005522	0.007071	0.15518	3.3E-06	0.00854	0.198883	0.798	0.932	0.988	0.994	0.933	1	0.985	0.921
rs6472147	2.214E-11	0.0353116	0.00528	0.0353116	0.005277	4.56527E-11	0.30004	0.722782	1.35E-07	0.012762	0.245865	0.00095	0.38552	0.296633	0.874	0.714	1	0.985	0.873	0.997	0.844	0.875
rs1121463	2.2188E-11	-0.048757	0.00729	-0.048757	0.007287	4.57516E-11	0.55669	0.547401	0.000201	0.017669	0.089007	0.00044	0.01319	0.001499	0.88	0.881	1	0.988	0.96	0.999	0.984	0.985
rs1234844	2.2357E-11	-0.077284	0.01155	-0.077284	0.011553	4.60917E-11	0.17167	0.343312	0.001662	0.000581	0.544922	6.2E-05	0.11093	0.012718	0.922	0.896	0.997	0.999	0.804	1	0.946	0.971
rs72694225	2.2499E-11	-0.048745	0.00729	-0.048745	0.007288	4.63797E-11	0.55804	0.546748	0.000202	0.017637	0.088837	0.00044	0.01321	0.001513	0.879	0.881	1	0.988	0.96	0.999	0.984	0.985
rs4881131	2.255E-11	0.0369041	0.00552	0.0369041	0.005518	4.64835E-11	0.07578	0.129294	0.000635	0.064789	0.040312	0.00025	0.0123	0.008673	0.955	0.945	0.999	0.956	0.979	1	0.986	0.98
rs11109651	2.2605E-11	0.0580101	0.00867	0.0580101	0.008674	4.65931E-11	0.25776	0.516327	0.00026	0.00313	0.092319	0.00024	0.12099	0.066139	0.916	0.883	1	0.997	0.958	1	0.948	0.953
rs2143668	2.2673E-11	-0.077252	0.01155	-0.077252	0.011551	4.67315E-11	0.17186	0.336274	0.00173	0.000583	0.534606	6.3E-05	0.10958	0.012377	0.923	0.897	0.997	0.999	0.808	1	0.947	0.971
rs11593966	2.2724E-11	0.0368816	0.00552	0.0368816	0.005515	4.68344E-11	0.07861	0.136758	0.000376	0.072323	0.037278	0.00037	0.0133	0.008203	0.954	0.943	1	0.949	0.98	1	0.985	0.98
rs11079707	2.2791E-11	0.0393826	0.00589	0.0387419	0.009373	4.69712E-11	0.67204	0.062957	2.19E-05	0.015928	0.879428	4.8E-05	0.54206	0.000394	0.658	0.919	1	0.978	0.584	1	0.77	0.984
rs2901199	2.2861E-11	-0.035875	0.00537	-0.040095	0.009165	1.93108E-11	0.79475	0.018627	0.000857	3.14E-07	0.316563	0.01217	0.00432	0.655476	0.814	0.959	0.995	1	0.859	0.929	0.987	0.83
rs532928	2.3058E-11	-0.040211	0.00601	-0.040211	0.006015	4.75097E-11	0.23263	0.713149	0.000298	0.010518	0.00571	0.00053	0.00975	0.141574	0.916	0.769	1	0.992	0.992	0.999	0.985	0.934
rs55754265	2.3099E-11	0.057755	0.00864	0.057755	0.00864	4.75931E-11	0.68075	0.496139	0.000672	0.003818	0.016366	7.1E-06	0.67242	0.587329	0.823	0.85	0.999	0.996	0.98	1	0.78	0.833
rs10164593	2.3189E-11	-0.048451	0.00725	-0.048451	0.007248	4.77752E-11	0.40929	0.812062	0.000212	0.011759	0.005572	7.2E-05	0.3768	0.179028	0.882	0.827	1	0.99	0.991	1	0.876	0.921
rs11694393	2.3252E-11	0.0440324	0.00659	0.0440324	0.006588	4.7903E-11	0.12699	0.148947	0.007096	3.76E-05	0.016666	0.0005	0.48661	0.043686	0.938	0.934	0.985	1	0.986	0.999	0.869	0.96
rs3759213	2.3265E-11	0.05897	0.00882	0.05897	0.008823	4.79278E-11	0.25355	0.378115	0.000429	0.006953	0.075106	0.00011	0.0865	0.096773	0.919	0.903	1	0.995	0.965	1	0.958	0.947
rs12742623	2.3307E-11	-0.053777	0.00805	-0.055611	0.00915	3.7224E-11	0.07941	0.168801	0.000486	2.52E-06	0.092938	0.01227	0.05521	0.494528	0.947	0.929	0.999	1	0.956	0.95	0.966	0.88
rs12075850	2.3335E-11	-0.053764	0.00804	-0.055653	0.009187	3.67266E-11	0.08551	0.168058	0.000501	2.23E-06	0.093057	0.01234	0.0561	0.492009	0.946	0.929	0.999	1	0.956	0.949	0.966	0.88
rs80135947	2.3336E-11	0.0393628	0.00589	0.0387291	0.009371	4.80717E-11	0.67206	0.062957	2.17E-05	0.015949	0.878979	5E-05	0.54159	0.000395	0.658	0.919	1	0.978	0.585	1	0.77	0.984
rs8082512	2.3357E-11	0.039362	0.00589	0.0387288	0.009371	4.81145E-11	0.67207	0.062951	2.18E-05	0.015949	0.878835	5E-05	0.54161	0.000395	0.658	0.919	1	0.978	0.585	1	0.77	0.984
rs75873575	2.3363E-11	0.0393742	0.00589	0.0386992	0.009508	4.81266E-11	0.60475	0.061492	2.02E-05	0.015066	0.877971	5.4E-05	0.53385	0.000384	0.64	0.919	1	0.979	0.582	1	0.77	0.984
rs10112206	2.3373E-11	0.0352624	0.00528	0.0352624	0.005276	4.81461E-11	0.3021	0.718962	1.44E-07	0.012539	0.245336	0.00096	0.3908	0.298167	0.873	0.713	1	0.986	0.873	0.997	0.842	0.875
rs12197511	2.3413E-11	0.046333	0.00693	0.0466023	0.009184	4.82277E-11	0.45456	0.917711	0.000284	0.008692	0.000199	7.4E-05	0.65239	0.056191	0.634	0.762	0.999	0.989	0.997	1	0.757	0.935
rs62084214	2.3446E-11	0.0393599	0.00589	0.0386825	0.009513	4.82946E-11	0.60384	0.061066	2E-05	0.015277	0.882642	5.4E-05	0.52953	0.000386	0.639	0.919	1	0.978	0.579	1	0.771	0.984
rs7623007	2.3479E-11	-0.038225	0.00572	-0.038225	0.00572	4.83603E-11	0.7618	0.651527	0.00251	0.01615	0.140811	1.1E-07	0.09406	0.471705	0.729	0.824	0.994	0.983	0.921	1	0.938	0.849
rs3768003	2.3497E-11	0.0578126	0.00865	0.0539066	0.01317	4.83968E-11	0.40653	0.250812	0.000371	5.05E-07	0.648167	0.00011	0.64952	0.376022	0.782	0.468	0.999	1	0.603	1	0.671	0.788
rs11665461	2.3497E-11	0.0350206	0.00524	0.0350206	0.005241	4.83973E-11	0.12948	0.649261	3.79E-05	0.011716	0.112267	0.00023	0.17257	0.183468	0.934	0.861	1	0.991	0.949	1	0.932	0.926
rs4127469	2.3517E-11	-0.03397	0.00508	-0.03397	0.005084	4.8362E-11	0.6606	0.311587	0.01847	0.000117	0.04606	5.9E-06	0.28086	0.196805	0.841	0.892	0.925	1	0.968	1	0.894	0.914
rs1599859	2.3527E-11	0.0393556	0.00589	0.0387208	0.009372	4.84588E-11	0.67151	0.062952	2.18E-05	0.016051	0.878838	5E-05	0.54161	0.000395	0.658	0.919	1	0.977	0.585	1	0.77	0.984
rs1966410	2.3527E-11	0.0393556	0.00589	0.0387208	0.009372	4.84588E-11	0.67151	0.062952	2.18E-05	0.016051	0.878838	5E-05	0.54161	0.000395	0.658	0.919	1	0.977	0.585	1	0.77	0.984
rs2523443	2.3576E-11	-0.077131	0.01154	-0.077131	0.011543	4.8557E-11	0.17082	0.384762	0.001756	0.000547	0.539937	6.1E-05	0.10902	0.012587	0.922	0.889	0.997	0.999	0.805	1	0.947	0.971
rs12935106	2.3597E-11	0.0381783	0.00571	0.0390682	0.007533	4.15613E-11	0.01756	0.058527	0.005324	0.282129	0.109928	1.3E-07	0.04329	0.247715	0.961	0.941	0.974	0.668	0.937	1	0.963	0.898
rs7208909	2.3634E-11	0.0393605	0.00589	0.0386759	0.009511	4.86735E-11	0.60168	0.06055	1.97E-05	0.015447	0.882899	5.4E-05	0.52845	0.000394	0.638	0.919	1	0.978	0.579	1	0.771	0.984
rs1976054	2.3644E-11	0.0393506	0.00589	0.0386817	0.009368	4.86949E-11	0.66508	0.064578	2.11E-05	0.01511	0.884654	5.2E-05	0.54856	0.000406	0.655	0.918	1	0.979	0.581	1	0.767	0.984
rs4682901	2.3646E-11	-0.03822	0.00572	-0.03822	0.00572	4.86984E-11	0.76026	0.651605	0.002515	0.016166	0.140715	1.1E-07	0.0941	0.471833	0.729	0.824	0.994	0.983	0.921	1	0.938	0.849
rs11718672	2.3736E-11	-0.038216	0.00572	-0.038216	0.00572	4.88813E-11	0.76053	0.651479	0.002511	0.016335	0.14067	1.1E-07	0.09405	0.471739	0.729	0.824	0.994	0.983	0.921	1	0.938	0.849
rs11570051	2.3844E-11	-0.074629	0.01117	-0.074629	0.011172	4.78079E-11	0.10768	0.274874	0.017242	0.001258	0.17522	5E-07	0.11048	0.801029	0.93	0.897	0.923	0.998	0.916	1	0.94	0.811
rs186232984	2.3879E-11	0.0802986	0.01202	0.0802986	0.012021	4.91701E-11	0.99366	0.310765	0.003616	0.003121	0.023537	5.8E-05	0.00238	0.39256	0.811	0.902	0.994	0.997	0.981	1	0.991	0.891
rs140005264	2.3919E-11	0.073341	0.01098	0.0748939	0.012373	3.92622E-11	0.26489	0.098174	0.072257	0.000646	0.193655	2E-06	0.01998	0.050605	0.885	0.925	0.583	0.999	0.888	1	0.974	0.947
rs4532631	2.3986E-11	0.0362343	0.00542	0.0362343	0.005425	4.4953E-11	0.19126	0.865045	1.92E-08	0.030929	0.261657	0.00217	0.35961	0.27209	0.898	0.745	1	0.965	0.87	0.993	0.855	0.883
rs7197104	2.3991E-11	0.0383088	0.00574	0.0391725	0.007487	4.22913E-11	0.01459	0.072286	0.00645	0.244587	0.121703	1.2E-07	0.0657	0.154712	0.964	0.939	0.971	0.723	0.936	1	0.956	0.922
rs35521801	2.4006E-11	-0.038207	0.00572	-0.038207	0.00572	4.94266E-11	0.75978	0.651508	0.002507	0.016506	0.140837	1.1E-07	0.09403	0.471651	0.729	0.824	0.994	0.982	0.921	1	0.938	0.849
rs10924485	2.4094E-11	-0.053726	0.00804	-0.055617	0.009186	3.80733E-11	0.08172	0.168058	0.000507	2.35E-06	0.093117	0.01243	0.05617	0.491961	0.946	0.929	0.999	1	0.956	0.949	0.966	0.88
rs17603936	2.4165E-11	0.0398602	0.00597	0.0398602	0.005969	4.97476E-11	0.70237	0.067999	0.001665	0.017316	0.121302	1.7E-06	0.1817	0.334059	0.848	0.944	0.997	0.986	0.944	1	0.927	0.898
rs2039069	2.4307E-11	0.0908352	0.0136	0.0959078	0.017731	4.95198E-11	0.67219	0.640223	0.000493	1.57E-05	0.008402	0.00484	0.12294	0.021762	0.744	0.847	0.999	1	0.988	0.984	0.94	0.964

Table S3

rs11868959	2.4368E-11	0.0393276	0.00589	0.0386927	0.009512	5.01571E-11	0.61056	0.059691	2.11E-05	0.016114	0.877936	5.3E-05	0.52372	0.000377	0.643	0.92	1	0.977	0.583	1	0.774	0.984
rs11871285	2.4375E-11	0.0393273	0.00589	0.0386924	0.009512	5.01721E-11	0.61056	0.059692	2.11E-05	0.016114	0.877942	5.3E-05	0.52372	0.000377	0.643	0.92	1	0.977	0.583	1	0.774	0.984
rs2365466	2.4405E-11	0.0393263	0.00589	0.0386908	0.009513	5.02326E-11	0.61025	0.05969	2.11E-05	0.016133	0.877934	5.3E-05	0.52371	0.000377	0.642	0.92	1	0.977	0.583	1	0.774	0.984
rs4461935	2.4416E-11	0.0352569	0.00528	0.0352569	0.00528	5.02541E-11	0.29545	0.744459	1.25E-07	0.012757	0.260572	0.00097	0.4333	0.290397	0.873	0.715	1	0.985	0.865	0.997	0.829	0.875
rs4632883	2.4427E-11	0.0908249	0.0136	0.0958953	0.017729	4.9754E-11	0.67219	0.64029	0.000494	1.57E-05	0.008364	0.00485	0.12311	0.021876	0.744	0.847	0.999	1	0.988	0.984	0.94	0.964
rs35370634	2.4589E-11	0.0398466	0.00597	0.0398466	0.005969	5.06034E-11	0.67941	0.072426	0.001686	0.018001	0.131886	1.5E-06	0.17364	0.352171	0.85	0.943	0.997	0.985	0.94	1	0.929	0.895
rs10484439	2.4621E-11	-0.078751	0.0118	-0.078751	0.011797	5.06682E-11	0.56436	0.38279	0.000732	0.000387	0.075142	0.00058	0.23863	0.002578	0.875	0.898	0.999	0.999	0.963	0.999	0.919	0.98
rs62303495	2.4824E-11	0.0415769	0.00623	0.0415769	0.006229	5.10784E-11	0.20166	0.60056	0.000877	0.000787	0.00044	0.00088	0.64925	0.105736	0.917	0.861	0.999	0.999	0.997	0.999	0.818	0.938
rs58551145	2.4914E-11	0.0393063	0.00589	0.0386662	0.009374	5.12594E-11	0.67392	0.062952	2.18E-05	0.017034	0.878838	5E-05	0.54161	0.000395	0.659	0.919	1	0.976	0.586	1	0.77	0.984
rs12601921	2.4946E-11	0.0395296	0.00592	0.0384403	0.009704	5.13247E-11	0.60513	0.069148	1.16E-05	0.016881	0.829374	6E-05	0.7307	0.000386	0.627	0.911	1	0.974	0.588	1	0.699	0.983
rs667315	2.5149E-11	-0.033723	0.00505	-0.033198	0.006965	3.78142E-11	0.05245	0.132808	0.000628	0.462902	0.609294	4.5E-08	0.06793	0.106207	0.916	0.88	0.996	0.341	0.616	1	0.927	0.895
rs112222385	2.5198E-11	0.0393034	0.00589	0.0386873	0.009478	5.18331E-11	0.61551	0.060268	2.2E-05	0.016334	0.865005	5.3E-05	0.52767	0.000378	0.646	0.92	1	0.977	0.591	1	0.774	0.984
rs7774567	2.5298E-11	0.0907396	0.0136	0.0953819	0.01734	5.20336E-11	0.67818	0.638309	0.000476	2.07E-05	0.008727	0.00463	0.11929	0.02064	0.746	0.848	0.999	1	0.988	0.985	0.941	0.965
rs78452260	2.5322E-11	0.0393079	0.00589	0.0387829	0.009527	5.20826E-11	0.61341	0.05698	2.32E-05	0.016994	0.866417	5.3E-05	0.50268	0.000353	0.647	0.922	1	0.976	0.592	1	0.784	0.984
rs2066026	2.5411E-11	-0.053618	0.00804	-0.055625	0.009262	3.96138E-11	0.07578	0.176452	0.000535	2.05E-06	0.103008	0.0123	0.06234	0.459933	0.948	0.927	0.999	1	0.953	0.95	0.964	0.885
rs7218014	2.5424E-11	0.0392515	0.00588	0.0386742	0.009282	5.22896E-11	0.72933	0.075498	1.59E-05	0.014797	0.875181	7.8E-05	0.55613	0.000359	0.674	0.914	1	0.979	0.59	1	0.768	0.984
rs7499467	2.5456E-11	0.0451101	0.00676	0.0451101	0.006762	5.2354E-11	0.27145	0.078512	0.000313	0.127085	0.030596	2.1E-05	0.04002	0.287369	0.911	0.945	1	0.885	0.978	1	0.97	0.909
rs10924489	2.5505E-11	-0.053615	0.00804	-0.055543	0.009215	4.01516E-11	0.07564	0.176952	0.000517	2.19E-06	0.102993	0.01229	0.06095	0.471662	0.948	0.927	0.999	1	0.953	0.95	0.964	0.883
rs10865954	2.5529E-11	-0.037562	0.00563	-0.037562	0.005631	5.25006E-11	0.86638	0.087162	4.15E-05	0.010736	0.012066	4.3E-05	0.78347	0.917834	0.721	0.916	1	0.987	0.981	1	0.718	0.716
rs11130010	2.561E-11	-0.038165	0.00572	-0.038165	0.005722	5.26633E-11	0.76594	0.643973	0.002558	0.016626	0.139553	1.1E-07	0.10306	0.473135	0.73	0.825	0.994	0.982	0.921	1	0.935	0.849
rs4955420	2.5704E-11	-0.037536	0.00563	-0.037536	0.005628	5.28543E-11	0.86678	0.086879	4.12E-05	0.010705	0.011814	4.5E-05	0.7854	0.918236	0.721	0.916	1	0.987	0.981	1	0.718	0.716
rs55824906	2.5766E-11	0.0450982	0.00676	0.0450982	0.006762	5.29785E-11	0.27159	0.078513	0.000314	0.127771	0.030599	2.1E-05	0.04002	0.28738	0.91	0.944	1	0.884	0.978	1	0.97	0.909
rs12078766	2.5898E-11	-0.053596	0.00804	-0.055548	0.00923	4.06592E-11	0.07565	0.17701	0.000523	2.16E-06	0.103147	0.01234	0.06125	0.471249	0.948	0.927	0.999	1	0.953	0.95	0.964	0.883
rs12078763	2.5925E-11	-0.053595	0.00804	-0.055543	0.009228	4.07173E-11	0.07565	0.177006	0.000523	2.17E-06	0.10311	0.01234	0.06122	0.471314	0.948	0.927	0.999	1	0.953	0.95	0.964	0.883
rs9379897	2.5974E-11	-0.058666	0.0088	-0.06025	0.010408	5.33985E-11	0.91712	0.328533	0.000691	0.034472	0.072165	0.0001	0.00544	0.001912	0.832	0.906	0.999	0.974	0.964	1	0.988	0.983
rs7634751	2.6271E-11	-0.034546	0.00518	-0.036108	0.008268	3.03326E-11	0.13198	0.100803	1.76E-05	0.907276	0.006426	9.7E-06	0.24753	0.025389	0.888	0.9	1	0.047	0.987	1	0.838	0.947
rs4788459	2.6445E-11	0.0397813	0.00597	0.0397813	0.005969	5.43488E-11	0.69304	0.067408	0.001666	0.019157	0.120291	1.7E-06	0.18287	0.333701	0.849	0.945	0.997	0.985	0.944	1	0.927	0.898
rs7221651	2.6649E-11	0.0392496	0.00589	0.0384958	0.009473	5.47592E-11	0.60654	0.064638	2.11E-05	0.015961	0.883611	5.2E-05	0.54829	0.000406	0.639	0.916	1	0.977	0.579	1	0.764	0.983
rs12060886	2.6848E-11	-0.053549	0.00804	-0.055568	0.009271	4.18311E-11	0.07567	0.176803	0.00054	2.09E-06	0.103201	0.01247	0.06204	0.469392	0.948	0.927	0.999	1	0.953	0.949	0.964	0.883
rs57383363	2.6871E-11	-0.037824	0.00568	-0.046635	0.010278	5.52065E-11	1.6E-05	0.265992	0.005307	0.035521	0.007186	0.00016	0.03674	0.178402	0.994	0.925	0.991	0.977	0.992	1	0.976	0.939
rs34832584	2.6905E-11	0.0397548	0.00597	0.0397548	0.005967	5.52758E-11	0.71044	0.05396	0.001913	0.01935	0.10742	1.6E-06	0.1886	0.350099	0.847	0.949	0.997	0.985	0.949	1	0.926	0.895
rs75565404	2.6978E-11	-0.053543	0.00804	-0.055574	0.009279	4.19797E-11	0.07568	0.17679	0.000542	2.08E-06	0.103222	0.0125	0.06215	0.469365	0.948	0.927	0.999	1	0.953	0.949	0.964	0.883
rs1233491	2.701E-11	-0.076947	0.01155	-0.076947	0.01155	5.54871E-11	0.16998	0.341438	0.001657	0.000672	0.533837	6.5E-05	0.12215	0.012592	0.923	0.896	0.997	0.999	0.809	1	0.943	0.971
rs6441861	2.7179E-11	-0.033834	0.00508	-0.033424	0.005681	5.58274E-11	0.44045	0.277923	0.00369	0.0036	0.503735	2E-07	0.01584	0.767216	0.609	0.86	0.985	0.995	0.741	1	0.969	0.762
rs34467796	2.7284E-11	-0.05353	0.00804	-0.055575	0.009288	4.23888E-11	0.07573	0.176508	0.000548	2.07E-06	0.10326	0.01252	0.06226	0.468705	0.948	0.927	0.999	1	0.953	0.949	0.964	0.884
rs13319803	2.7307E-11	-0.03383	0.00508	-0.033419	0.005684	5.60847E-11	0.44004	0.277954	0.003701	0.003594	0.503883	2E-07	0.01585	0.767371	0.609	0.86	0.985	0.995	0.741	1	0.969	0.762
rs10924498	2.7445E-11	-0.053522	0.00804	-0.05557	0.009289	4.26339E-11	0.07571	0.176558	0.00055	2.07E-06	0.103278	0.01253	0.06226	0.469519	0.948	0.927	0.999	1	0.953	0.949	0.964	0.883
rs78602238	2.7626E-11	-0.050082	0.00752	-0.050082	0.007521	5.6728E-11	0.33695	0.257587	0.001383	0.000252	0.052308	0.00046	0.22088	0.060187	0.907	0.918	0.998	1	0.972	0.999	0.926	0.956
rs9638618	2.7692E-11	0.038933	0.00585	0.038933	0.005847	5.66928E-11	0.23812	0.080749	6.87E-07	0.012582	0.346994	0.00657	0.01906	0.444681	0.912	0.942	1	0.99	0.871	0.979	0.979	0.881
rs4634439	2.778E-11	-0.058591	0.0088	-0.059882	0.010123	5.70385E-11	0.86872	0.304692	0.000696	0.034398	0.079745	0.00011	0.00584	0.002032	0.839	0.91	0.999	0.975	0.962	1	0.988	0.983
rs58461030	2.7935E-11	0.0415254	0.00624	0.0415254	0.006238	5.7351E-11	0.17833	0.560355	0.000641	0.001109	0.000629	0.00096	0.63281	0.122551	0.922	0.867	0.999	0.999	0.997	0.998	0.824	0.935
rs11641721	2.7966E-11	0.0397194	0.00597	0.0397194	0.005967	5.74139E-11	0.68428	0.053445	0.002064	0.017791	0.112441	1.7E-06	0.1871	0.368949	0.851	0.949	0.997	0.986	0.947	1	0.926	0.893
rs72785856	2.8048E-11	0.0356459	0.00536	0.0356459	0.005355	5.75785E-11	0.99881	0.14473	0.0003	0.000715	0.010599	0.00033	0.48835	0.384297	0.791	0.92	1	0.999	0.986	0.999	0.844	0.88
rs72787046	2.8076E-11	0.0449046	0.00675	0.0449046	0.006746	5.76343E-11	0.28712	0.110358	0.000327	0.147637	0.018074	2E-05	0.0336	0.345139	0.905	0.935	1	0.859	0.984	1	0.971	0.896
rs3812985	2.8079E-11	0.0398263	0.00598	0.0398263	0.005983	5.76405E-11	0.69498	0.087543	0.002026	0.016525	0.13399	1.6E-06	0.18487	0.255547	0.85	0.94	0.997	0.987	0.94	1	0.927	0.911
rs7129926	2.8123E-11	0.0361967	0.00544	0.0361967	0.005438	5.77296E-11	0.26852	0.454124	0.018388	0.001461	0.102653	1.4E-06	0.10822	0.212043	0.906	0.88	0.937	0.998	0.949	1	0.946	0.917
rs1320163	2.8188E-11	-0.043562	0.00655	-0.043562	0.006545	5.54899E-11	0.36749	0.070792	0.000445	0.260883	0.143144	5.8E-08	0.53551	0.383036	0.838	0.914	0.998	0.633	0.897	1	0.769	0.834
rs11079706	2.8237E-11	0.0392048	0.00589	0.0385285	0.009425	5.79595E-11	0.67272	0.062533	2.55E-05	0.01584	0.892457	4.8E-05	0.57423	0.00039	0.656	0.918	1	0.977	0.578	1	0.758	0.984
rs2372351	2.8251E-11	0.0435321	0.00654	0.0435321	0.006541	5.56892E-11	0.35909	0.083201	0.000382	0.274081	0.15361	6.1E-08	0.50167	0.377742	0.838	0.908	0.999	0.612	0.89	1	0.776	0.833
rs12919271	2.8344E-11	0.038162	0.00573	0.0389285	0.007401	5.02145E-11	0.01493	0.080087	0.006453	0.246571	0.128737	1.3E-07	0.065	0.156145	0.964	0.937	0.971	0.723	0.933	1	0.956	0.921
rs16891315	2.8364E-11	-0.074045	0.01113	-0.080752	0.015055	5.82154E-11	0.51981	0.390702	0.000657	6.57E-05	0.040005	0.00746	0.05825	0.001389	0.886	0.902	0.999	1	0.977	0.978	0.967	0.984
rs72787078	2.8469E-11	0.0397177	0.00597	0.0397177	0.005969	5.84252E-11	0.68429	0.067373	0.001801	0.017794	0.126819	1.7E-06	0.18023	0.352367	0.85	0.944	0.997	0.986	0.942	1	0.928	0.895
rs17075415	2.8533E-11	0.0435515	0.00655	0.0435515	0.006545	5.61973E-11	0.36777	0.070786	0.000448	0.260401	0.143298	5.9E-08	0.53546	0.383227	0.838	0.915	0.998	0.634	0.897	1	0.769	0.834
rs1320161	2.8543E-11	-0.04355	0.00655	-0.04355	0.006545	5.6191E-11	0.36759	0.070879	0.000447	0.261163	0.143189	5.9E-08	0.53505	0.382413	0.838	0.914	0.998	0.632	0.897	1	0.769	0.834
rs1320162	2.8622E-11	-0.043547	0.00655	-0.043547	0.006545	5.63319E-11	0.36761	0.070789	0.000448	0.261187	0.143239	5.8E-08	0.53562	0.383134	0.838	0.914	0.998	0.632	0.897	1	0.769	0.834

Table S3

rs1320160	2.8624E-11	-0.043547	0.00654	-0.043547	0.006545	5.63496E-11	0.36763	0.070953	0.000447	0.261179	0.143256	5.9E-08	0.53508	0.382422	0.838	0.914	0.998	0.632	0.897	1	0.769	0.834
rs2372361	2.8659E-11	-0.043546	0.00655	-0.043546	0.006545	5.64112E-11	0.36766	0.070795	0.000449	0.260801	0.143187	5.8E-08	0.53598	0.383471	0.838	0.914	0.998	0.633	0.897	1	0.769	0.834
rs7433886	2.8683E-11	-0.034696	0.00521	-0.034696	0.005215	5.88568E-11	0.09943	0.321008	0.00012	0.008167	0.27903	0.00019	0.11447	0.102762	0.942	0.906	1	0.994	0.9	1	0.949	0.944
rs4788611	2.8759E-11	0.0397056	0.00597	0.0397056	0.005968	5.9009E-11	0.71666	0.072709	0.001767	0.018148	0.125687	1.6E-06	0.1869	0.336793	0.845	0.943	0.997	0.985	0.942	1	0.926	0.896
rs6964131	2.8863E-11	0.0389024	0.00585	0.0389024	0.005848	5.90216E-11	0.24715	0.080933	6.9E-07	0.012697	0.336377	0.00677	0.01925	0.44383	0.911	0.942	1	0.99	0.874	0.978	0.978	0.882
rs6977328	2.8882E-11	0.0389019	0.00585	0.0389019	0.005848	5.90627E-11	0.24716	0.08091	6.92E-07	0.012688	0.336046	0.00676	0.01928	0.443986	0.911	0.942	1	0.99	0.874	0.978	0.978	0.882
rs9257566	2.9051E-11	-0.07307	0.01099	-0.07307	0.010986	5.95986E-11	0.23929	0.407173	0.001015	0.00172	0.309511	4.9E-05	0.14619	0.042235	0.914	0.891	0.999	0.998	0.887	1	0.939	0.958
rs1317402	2.9204E-11	0.043524	0.00654	0.043524	0.006544	5.74454E-11	0.36423	0.071892	0.000446	0.263579	0.143442	5.9E-08	0.53478	0.382181	0.839	0.914	0.998	0.629	0.897	1	0.768	0.834
rs3923569	2.923E-11	0.0388958	0.00585	0.0388958	0.005849	5.97715E-11	0.24835	0.080388	7.04E-07	0.012599	0.336976	0.00677	0.01925	0.445371	0.911	0.942	1	0.99	0.874	0.978	0.978	0.881
rs654782	2.9264E-11	-0.033637	0.00506	-0.033225	0.007897	3.0572E-11	0.04921	0.105341	0.000667	0.616121	0.670667	2E-08	0.08669	0.076651	0.91	0.879	0.994	0.194	0.535	1	0.906	0.899
rs35377660	2.9287E-11	0.039769	0.00598	0.0404314	0.007453	6.00727E-11	0.02394	0.017229	0.001973	0.258792	0.036327	1E-06	0.09593	0.647858	0.957	0.96	0.994	0.706	0.972	1	0.944	0.83
rs1996497	2.9356E-11	0.0435179	0.00654	0.0435179	0.006544	5.77023E-11	0.3639	0.072116	0.000446	0.264881	0.143164	5.9E-08	0.53425	0.381556	0.838	0.914	0.998	0.627	0.897	1	0.768	0.834
rs2746150	2.9377E-11	-0.076813	0.01155	-0.076813	0.011551	6.02543E-11	0.16926	0.343964	0.002026	0.000592	0.567968	6E-05	0.11112	0.012825	0.922	0.895	0.996	0.999	0.796	1	0.946	0.97
rs2372360	2.9534E-11	-0.043511	0.00654	-0.043511	0.006544	5.8051E-11	0.36208	0.072435	0.000445	0.2652	0.143212	6E-08	0.53488	0.381996	0.839	0.913	0.998	0.627	0.897	1	0.768	0.834
rs72787070	2.9568E-11	0.0396717	0.00597	0.0396717	0.005967	6.06372E-11	0.67577	0.049303	0.001851	0.023689	0.10052	1.6E-06	0.19461	0.370917	0.852	0.95	0.997	0.981	0.951	1	0.924	0.892
rs9295675	2.9573E-11	-0.073304	0.01103	-0.079648	0.014302	5.97561E-11	0.26496	0.373956	0.000615	0.000107	0.016986	0.0102	0.07385	0.002691	0.92	0.906	0.999	1	0.986	0.965	0.964	0.982
rs442694	2.9643E-11	-0.076824	0.01156	-0.076824	0.011555	6.07889E-11	0.14482	0.396477	0.002001	0.000479	0.582186	6.6E-05	0.11453	0.013121	0.926	0.886	0.996	0.999	0.789	1	0.944	0.97
rs1467085	2.968E-11	-0.033607	0.00506	-0.033607	0.005055	6.08623E-11	0.51476	0.984142	3.95E-05	0.001606	0.333829	0.00046	0.01849	0.313295	0.855	0.783	1	0.998	0.858	0.999	0.975	0.887
rs56412846	2.9817E-11	0.0435014	0.00654	0.0435014	0.006544	5.86387E-11	0.36397	0.072976	0.00044	0.265798	0.144615	6E-08	0.53302	0.380883	0.838	0.913	0.998	0.626	0.896	1	0.768	0.834
rs55990908	2.9872E-11	0.0434996	0.00654	0.0434996	0.006544	5.87436E-11	0.36402	0.072975	0.000439	0.265992	0.144918	6.1E-08	0.53293	0.381136	0.838	0.913	0.998	0.626	0.895	1	0.768	0.834
rs146892484	2.9883E-11	-0.041158	0.00619	-0.041158	0.006192	6.1271E-11	0.756	0.023939	7.44E-06	0.058932	0.017642	0.00094	0.07114	0.59584	0.842	0.961	1	0.95	0.984	0.998	0.958	0.86
rs7646966	2.9985E-11	-0.043497	0.00654	-0.043497	0.006544	5.89639E-11	0.36148	0.072576	0.000432	0.268099	0.145801	6.1E-08	0.53369	0.38112	0.838	0.913	0.999	0.623	0.895	1	0.767	0.833
rs72787077	3E-11	0.0396572	0.00597	0.0396572	0.005967	6.15078E-11	0.69184	0.053445	0.002064	0.018881	0.112441	1.7E-06	0.1871	0.368949	0.85	0.948	0.997	0.985	0.947	1	0.926	0.892
rs62084213	3.0039E-11	0.0391596	0.00589	0.0385338	0.009598	6.15846E-11	0.61529	0.061916	2.56E-05	0.013578	0.939628	5.8E-05	0.52063	0.000356	0.639	0.917	1	0.98	0.555	1	0.772	0.984
rs5848654	3.0248E-11	0.0434865	0.00654	0.0434865	0.006544	5.96873E-11	0.37023	0.074264	0.000427	0.263607	0.147928	6.3E-08	0.53124	0.379963	0.837	0.913	0.999	0.629	0.894	1	0.769	0.834
rs6808396	3.0274E-11	0.043486	0.00654	0.043486	0.006544	5.97753E-11	0.36849	0.074184	0.000427	0.263026	0.148324	6.3E-08	0.5311	0.380488	0.838	0.913	0.999	0.63	0.894	1	0.769	0.834
rs6801151	3.0334E-11	0.0434847	0.00654	0.0434847	0.006544	5.96841E-11	0.36591	0.073448	0.000434	0.266457	0.14604	6.2E-08	0.53254	0.381154	0.838	0.913	0.999	0.625	0.895	1	0.768	0.833
rs60898966	3.0353E-11	0.0388419	0.00585	0.0388419	0.005845	6.20064E-11	0.24025	0.082011	7.19E-07	0.01249	0.341378	0.00692	0.01905	0.446419	0.912	0.942	1	0.99	0.873	0.977	0.978	0.881
rs6791341	3.0403E-11	0.0434814	0.00654	0.0434814	0.006544	5.99849E-11	0.37046	0.074228	0.000426	0.263937	0.148287	6.3E-08	0.5311	0.380377	0.837	0.912	0.999	0.629	0.894	1	0.769	0.834
rs6805108	3.0403E-11	0.0434814	0.00654	0.0434814	0.006544	5.99657E-11	0.37062	0.074297	0.000425	0.264328	0.148424	6.3E-08	0.53108	0.380361	0.837	0.912	0.999	0.628	0.894	1	0.769	0.834
rs4719109	3.0516E-11	0.0388387	0.00585	0.0388387	0.005846	6.2339E-11	0.24129	0.081818	7.21E-07	0.012545	0.341321	0.0069	0.0191	0.445927	0.912	0.942	1	0.99	0.873	0.978	0.978	0.881
rs73072912	3.0528E-11	0.0434771	0.00654	0.0434771	0.006544	6.01973E-11	0.37173	0.07465	0.000423	0.264885	0.149054	6.3E-08	0.53094	0.37988	0.836	0.912	0.999	0.627	0.893	1	0.769	0.834
rs62084744	3.0687E-11	0.0378324	0.00569	0.0373911	0.008282	6.28875E-11	0.23217	0.034315	1.14E-05	0.074456	0.373002	6.6E-05	0.12153	0.006974	0.567	0.941	1	0.906	0.818	1	0.924	0.969
rs55919553	3.0724E-11	0.0434721	0.00654	0.0434721	0.006544	6.0452E-11	0.36726	0.073859	0.000432	0.267067	0.146908	6.2E-08	0.53187	0.380831	0.837	0.912	0.999	0.624	0.894	1	0.768	0.833
rs6767019	3.0754E-11	0.0434721	0.00654	0.0434721	0.006544	6.0387E-11	0.36416	0.07343	0.000434	0.269478	0.145941	6.1E-08	0.5327	0.381217	0.837	0.912	0.998	0.621	0.894	1	0.767	0.833
rs60971695	3.0785E-11	0.0434701	0.00654	0.0434701	0.006544	6.0523E-11	0.36743	0.073785	0.000432	0.268022	0.146718	6.2E-08	0.53186	0.380528	0.837	0.912	0.999	0.623	0.894	1	0.768	0.833
rs11641113	3.0826E-11	0.0380102	0.00572	0.0392138	0.007737	5.27375E-11	0.01515	0.063443	0.006945	0.283645	0.106671	1.5E-07	0.04228	0.19687	0.962	0.94	0.964	0.671	0.939	1	0.964	0.909
rs1077190	3.0891E-11	-0.039623	0.00597	-0.039623	0.005965	6.32993E-11	0.08231	0.661877	0.000167	0.123045	0.011099	0.00012	0.00753	0.349117	0.942	0.854	1	0.884	0.988	1	0.985	0.896
rs9296320	3.0952E-11	0.034161	0.00514	0.0353566	0.006938	5.09534E-11	0.02733	0.883845	0.042407	0.000116	0.006112	4.2E-06	0.58258	0.358865	0.942	0.693	0.683	1	0.987	1	0.74	0.838
rs141303426	3.1204E-11	0.0434561	0.00654	0.0434561	0.006544	6.14226E-11	0.37694	0.074761	0.00042	0.267481	0.149647	6.3E-08	0.53017	0.380169	0.835	0.912	0.999	0.623	0.892	1	0.768	0.833
rs10238960	3.1218E-11	0.0388076	0.00584	0.0388076	0.005844	6.36958E-11	0.23984	0.082167	7.18E-07	0.012438	0.349288	0.00704	0.01845	0.446882	0.912	0.942	1	0.99	0.87	0.977	0.979	0.881
rs1029956	3.1375E-11	0.0350311	0.00528	0.0350311	0.005276	6.42709E-11	0.46127	0.953708	0.000773	0.000474	0.030908	0.00017	0.79594	0.00857	0.863	0.792	0.999	0.999	0.974	1	0.756	0.97
rs55988644	3.1388E-11	0.0434499	0.00654	0.0434499	0.006544	6.17489E-11	0.37439	0.074745	0.000421	0.26852	0.149626	6.3E-08	0.53035	0.380119	0.835	0.912	0.999	0.622	0.892	1	0.768	0.833
rs73829200	3.143E-11	0.0434409	0.00654	0.0434409	0.006543	6.18466E-11	0.37002	0.076334	0.000411	0.268816	0.152683	6.4E-08	0.52862	0.379397	0.835	0.911	0.999	0.62	0.89	1	0.768	0.833
rs1233494	3.1485E-11	-0.076452	0.01151	-0.076452	0.011515	6.44921E-11	0.14894	0.301364	0.001685	0.000764	0.562601	5.5E-05	0.17831	0.012553	0.925	0.9	0.997	0.999	0.797	1	0.927	0.97
rs4788605	3.1689E-11	0.0396207	0.00597	0.0396207	0.005968	6.49029E-11	0.68337	0.068137	0.001923	0.020345	0.129603	1.7E-06	0.16651	0.336353	0.851	0.944	0.997	0.984	0.941	1	0.931	0.897
rs56291522	3.1774E-11	0.043437	0.00654	0.043437	0.006544	6.248E-11	0.37663	0.075483	0.000416	0.269403	0.151384	6.3E-08	0.53006	0.379152	0.834	0.911	0.999	0.62	0.891	1	0.767	0.832
rs17254786	3.1849E-11	0.0434331	0.00654	0.0434331	0.006543	6.2635E-11	0.37663	0.076022	0.000412	0.269777	0.152675	6.3E-08	0.52898	0.379252	0.834	0.911	0.999	0.62	0.89	1	0.767	0.832
rs56796226	3.1943E-11	0.0347356	0.00523	0.0347356	0.005233	6.54124E-11	0.05546	0.807909	0.00015	0.006712	0.106342	0.00012	0.62752	0.034523	0.947	0.83	1	0.994	0.947	1	0.818	0.958
rs7633546	3.1972E-11	0.0434302	0.00654	0.0434302	0.006543	6.28694E-11	0.37838	0.075904	0.000414	0.26959	0.152272	6.3E-08	0.52957	0.37948	0.833	0.911	0.999	0.62	0.89	1	0.767	0.832
rs72787085	3.2011E-11	0.0396153	0.00597	0.0396153	0.005969	6.5549E-11	0.71332	0.072127	0.001889	0.017741	0.131058	1.6E-06	0.18557	0.354272	0.845	0.942	0.997	0.986	0.94	1	0.926	0.893
rs73072908	3.2027E-11	0.0434258	0.00654	0.0434258	0.006543	6.2977E-11	0.37421	0.077188	0.00041	0.270503	0.152855	6.4E-08	0.52863	0.378859	0.834	0.91	0.999	0.619	0.89	1	0.767	0.832
rs75169602	3.2059E-11	0.043425	0.00654	0.043425	0.006543	6.30264E-11	0.37464	0.077175	0.000411	0.270586	0.152823	6.4E-08	0.52884	0.378826	0.834	0.91	0.999	0.618	0.89	1	0.767	0.832
rs1402751	3.2227E-11	-0.033746	0.00509	-0.03347	0.005476	6.46377E-11	0.69968	0.251606	0.005192	0.008403	0.367345	8.2E-08	0.01712	0.921745	0.687	0.873	0.979	0.989	0.81	1	0.97	0.715
rs2878494	3.2535E-11	0.0393204	0.00593	0.0405573	0.007878	6.66003E-11	0.02575	0.008233	0.002659	0.252842	0.034184	1.2E-06	0.09513	0.617594	0.957	0.969	0.992	0.719	0.973	1	0.945	0.839

Table S3

rs13212562	3.2544E-11	-0.071512	0.01078	-0.073133	0.012062	6.66202E-11	0.30003	0.677472	0.00243	0.000138	0.231297	0.00049	0.04756	0.002349	0.908	0.86	0.996	1	0.914	0.999	0.969	0.981
rs73072920	3.2707E-11	0.0434147	0.00654	0.0434147	0.006544	6.44579E-11	0.36693	0.075155	0.000432	0.266854	0.147228	6.6E-08	0.53143	0.387415	0.837	0.912	0.999	0.626	0.894	1	0.769	0.832
rs56053383	3.2731E-11	0.0433912	0.00654	0.0433912	0.006541	6.44005E-11	0.3611	0.082841	0.000404	0.2731	0.153911	6.6E-08	0.52452	0.375999	0.837	0.908	0.999	0.616	0.889	1	0.768	0.833
rs73088732	3.2731E-11	0.0433912	0.00654	0.0433912	0.006541	6.44005E-11	0.3611	0.082841	0.000404	0.2731	0.153911	6.6E-08	0.52452	0.375999	0.837	0.908	0.999	0.616	0.889	1	0.768	0.833
rs11130182	3.2771E-11	-0.037333	0.00563	-0.037333	0.005628	6.7075E-11	0.86491	0.087724	4.59E-05	0.011037	0.012057	4.9E-05	0.78939	0.914159	0.721	0.915	1	0.986	0.981	1	0.718	0.716
rs17320570	3.2777E-11	0.0434005	0.00654	0.0434005	0.006543	6.44262E-11	0.37299	0.078816	0.000411	0.271754	0.153376	6.4E-08	0.52753	0.378458	0.834	0.909	0.999	0.617	0.89	1	0.767	0.832
rs502235	3.322E-11	0.0353538	0.00533	0.0353538	0.005331	6.79761E-11	0.66804	0.235875	0.002135	0.002256	0.814397	1.9E-05	0.00415	0.077442	0.83	0.898	0.995	0.997	0.682	1	0.987	0.937
rs7641590	3.3282E-11	0.0433773	0.00654	0.0433773	0.006541	6.5539E-11	0.36108	0.08399	0.000402	0.273116	0.156282	6.7E-08	0.521	0.374482	0.837	0.907	0.999	0.616	0.888	1	0.77	0.833
rs73088757	3.3297E-11	0.0433792	0.00654	0.0433792	0.006542	6.5463E-11	0.36566	0.081225	0.00041	0.272742	0.153899	6.6E-08	0.52671	0.377059	0.836	0.908	0.999	0.616	0.889	1	0.768	0.832
rs10871329	3.347E-11	-0.048784	0.00736	-0.048784	0.007358	6.84773E-11	0.29004	0.151715	0.001546	0.000915	0.034103	0.00083	0.11011	0.024609	0.92	0.939	0.998	0.999	0.98	0.999	0.956	0.97
rs8053906	3.3518E-11	0.0392928	0.00593	0.040484	0.007834	6.85753E-11	0.02575	0.008345	0.00255	0.252887	0.034599	1.3E-06	0.09623	0.619937	0.957	0.969	0.993	0.72	0.973	1	0.945	0.838
rs4504148	3.3708E-11	0.0433624	0.00654	0.0433624	0.006541	6.6286E-11	0.3614	0.082946	0.000408	0.273818	0.154459	6.7E-08	0.52547	0.376327	0.837	0.908	0.999	0.615	0.889	1	0.768	0.832
rs55650554	3.3708E-11	0.0433624	0.00654	0.0433624	0.006541	6.6286E-11	0.3614	0.082946	0.000408	0.273818	0.154459	6.7E-08	0.52547	0.376327	0.837	0.908	0.999	0.615	0.889	1	0.768	0.832
rs6766079	3.3708E-11	0.0433624	0.00654	0.0433624	0.006541	6.6286E-11	0.3614	0.082946	0.000408	0.273818	0.154459	6.7E-08	0.52547	0.376327	0.837	0.908	0.999	0.615	0.889	1	0.768	0.832
rs73088738	3.3708E-11	0.0433624	0.00654	0.0433624	0.006541	6.6286E-11	0.3614	0.082946	0.000408	0.273818	0.154459	6.7E-08	0.52547	0.376327	0.837	0.908	0.999	0.615	0.889	1	0.768	0.832
rs17254504	3.3712E-11	0.0433634	0.00654	0.0433634	0.006541	6.63021E-11	0.36209	0.082545	0.000408	0.273507	0.15447	6.7E-08	0.52557	0.376409	0.836	0.908	0.999	0.615	0.889	1	0.768	0.833
rs56745072	3.3732E-11	0.0433618	0.00654	0.0433618	0.006541	6.63327E-11	0.36142	0.082946	0.000408	0.273845	0.154463	6.7E-08	0.52548	0.376332	0.837	0.908	0.999	0.615	0.889	1	0.768	0.832
rs73088748	3.3754E-11	0.0433611	0.00654	0.0433611	0.006541	6.63749E-11	0.36143	0.082946	0.000408	0.273867	0.154468	6.7E-08	0.5255	0.376338	0.836	0.908	0.999	0.615	0.889	1	0.768	0.832
rs57757985	3.3801E-11	0.0433603	0.00654	0.0433603	0.006541	6.64487E-11	0.36002	0.082946	0.000408	0.274513	0.154468	6.7E-08	0.5255	0.376338	0.837	0.908	0.999	0.614	0.889	1	0.768	0.832
rs4713637	3.3913E-11	0.0353939	0.00534	0.0353939	0.00534	6.93672E-11	0.60818	0.31268	0.001886	0.001524	0.779235	2.5E-05	0.00696	0.081733	0.84	0.885	0.996	0.998	0.697	1	0.984	0.936
rs2372350	3.4044E-11	0.0433572	0.00654	0.0433572	0.006542	6.68897E-11	0.36066	0.082946	0.000408	0.275992	0.154459	6.7E-08	0.52547	0.376327	0.836	0.908	0.999	0.612	0.889	1	0.768	0.832
rs10852507	3.4423E-11	0.0394383	0.00595	0.0408353	0.008026	7.03911E-11	0.01735	0.012221	0.002527	0.273982	0.029335	1.3E-06	0.09507	0.592373	0.961	0.964	0.992	0.691	0.975	1	0.944	0.84
rs34486623	3.466E-11	0.0347627	0.00525	0.0347627	0.005247	7.08658E-11	0.19422	0.810594	0.000173	0.002295	0.119497	0.00022	0.15488	0.232594	0.919	0.835	1	0.998	0.944	1	0.934	0.914
rs185802481	3.5156E-11	0.0777849	0.01174	0.0858742	0.02219	7.18598E-11	0.30244	0.446406	0.000325	0.419776	0.004974	1.8E-05	0.08831	6.02E-05	0.846	0.581	0.999	0.447	0.988	1	0.923	0.992
rs7185027	3.5207E-11	0.0392542	0.00593	0.0405283	0.007902	7.19622E-11	0.02566	0.008287	0.002872	0.251646	0.03295	1.2E-06	0.09639	0.620789	0.957	0.969	0.991	0.722	0.974	1	0.945	0.838
rs1923466	3.5294E-11	-0.034695	0.00524	-0.035952	0.006793	4.54593E-11	0.25953	0.747249	0.0712	9.5E-05	0.002818	3.1E-06	0.59835	0.145665	0.84	0.723	0.455	1	0.991	1	0.683	0.879
rs11665656	3.5703E-11	0.0347069	0.00524	0.0347069	0.005242	7.29567E-11	0.14398	0.623046	0.000125	0.004665	0.132742	0.00024	0.15074	0.203014	0.931	0.864	1	0.996	0.942	1	0.938	0.922
rs1976052	3.583E-11	0.0391384	0.00591	0.0380935	0.009867	7.32117E-11	0.60711	0.063369	1.61E-05	0.016299	0.897484	6.3E-05	0.73731	0.000342	0.624	0.911	1	0.975	0.558	1	0.693	0.983
rs495659	3.583E-11	0.0352871	0.00533	0.0352871	0.00533	7.32119E-11	0.65455	0.237547	0.002308	0.0022	0.828685	1.9E-05	0.00394	0.079101	0.831	0.897	0.995	0.997	0.676	1	0.987	0.936
rs72844462	3.5893E-11	-0.072669	0.01098	-0.072669	0.010977	7.3337E-11	0.74865	0.946903	0.000574	0.000618	0.225439	0.00044	0.01781	0.012667	0.839	0.809	0.999	0.999	0.907	0.999	0.979	0.97
rs114178241	3.5894E-11	0.109925	0.0166	0.109925	0.016605	7.33387E-11	0.87506	0.725847	9.13E-06	0.004768	0.226653	0.00037	0.05593	0.155732	0.748	0.73	1	0.994	0.888	0.999	0.951	0.909
rs12449442	3.5913E-11	0.0389119	0.00588	0.0381157	0.00985	7.33767E-11	0.58483	0.05562	2.09E-05	0.014871	0.949147	6.3E-05	0.61551	0.000328	0.623	0.917	1	0.978	0.541	1	0.734	0.984
rs508298	3.5957E-11	0.0352844	0.00533	0.0352844	0.00533	7.34648E-11	0.66094	0.237193	0.002305	0.002192	0.828199	1.9E-05	0.00393	0.079206	0.83	0.897	0.995	0.997	0.676	1	0.987	0.936
rs17075328	3.6193E-11	0.043294	0.00654	0.043294	0.006541	7.12638E-11	0.36198	0.086662	0.000406	0.2728	0.153384	7E-08	0.54487	0.369166	0.836	0.906	0.999	0.617	0.889	1	0.762	0.834
rs7223643	3.6201E-11	0.0391348	0.00591	0.0380912	0.009867	7.39544E-11	0.60674	0.063652	1.63E-05	0.015995	0.897508	6.3E-05	0.73969	0.000342	0.624	0.911	1	0.975	0.558	1	0.692	0.983
rs35277236	3.622E-11	-0.072655	0.01098	-0.072655	0.010977	7.39925E-11	0.75102	0.946794	0.000574	0.000612	0.226532	0.00045	0.01798	0.01266	0.838	0.809	0.999	0.999	0.907	0.999	0.978	0.97
rs371152854	3.6238E-11	-0.072818	0.011	-0.072818	0.011002	7.40278E-11	0.75401	0.910089	0.000968	0.000738	0.220693	0.00024	0.02131	0.008353	0.839	0.816	0.999	0.999	0.909	1	0.977	0.971
rs374593247	3.6259E-11	-0.072817	0.011	-0.072817	0.011002	7.40707E-11	0.75401	0.910108	0.000968	0.000738	0.220705	0.00024	0.02131	0.008353	0.839	0.816	0.999	0.999	0.909	1	0.977	0.971
rs7634209	3.6281E-11	0.043292	0.00654	0.043292	0.006541	7.14422E-11	0.36195	0.086667	0.000407	0.272719	0.153353	7.1E-08	0.54469	0.369945	0.836	0.906	0.999	0.617	0.889	1	0.762	0.833
rs56032317	3.6286E-11	0.0432902	0.00654	0.0432902	0.006541	7.14975E-11	0.36132	0.086616	0.000406	0.272428	0.153374	7.1E-08	0.54476	0.369437	0.836	0.906	0.999	0.618	0.889	1	0.762	0.834
rs73088703	3.6313E-11	0.0432911	0.00654	0.0432911	0.006541	7.14974E-11	0.36198	0.086668	0.000407	0.272805	0.153397	7E-08	0.54488	0.369953	0.836	0.906	0.999	0.617	0.889	1	0.762	0.833
rs6791526	3.6318E-11	0.0432902	0.00654	0.0432902	0.006541	7.15178E-11	0.36178	0.08666	0.000406	0.272832	0.153416	7.1E-08	0.54492	0.369571	0.836	0.906	0.999	0.617	0.889	1	0.762	0.834
rs6796424	3.6331E-11	0.0432898	0.00654	0.0432898	0.006541	7.15418E-11	0.36182	0.086751	0.000406	0.27298	0.153413	7.1E-08	0.54494	0.369568	0.836	0.906	0.999	0.617	0.889	1	0.762	0.833
rs146617821	3.6332E-11	0.113013	0.01708	0.113013	0.017076	7.42176E-11	0.60585	0.821856	0.000101	0.004089	0.01307	0.0004	0.05894	0.2029	0.72	0.818	1	0.996	0.984	0.999	0.956	0.909
rs73086702	3.6336E-11	0.0432905	0.00654	0.0432905	0.006541	7.15457E-11	0.36197	0.086665	0.000407	0.272797	0.153396	7.1E-08	0.54487	0.369945	0.836	0.906	0.999	0.617	0.889	1	0.762	0.833
rs10891538	3.6379E-11	-0.033585	0.00507	-0.033029	0.005964	7.4312E-11	0.69348	0.011708	9.75E-06	0.011825	0.701066	6.6E-05	0.38155	0.101566	0.772	0.95	1	0.983	0.399	1	0.813	0.907
rs58504881	3.6519E-11	0.0432838	0.00654	0.0432838	0.006541	7.19635E-11	0.36133	0.086491	0.000406	0.272484	0.153513	7.2E-08	0.54451	0.369614	0.836	0.906	0.999	0.618	0.889	1	0.762	0.834
rs11109655	3.6567E-11	0.0589826	0.00891	0.0589826	0.008913	7.46884E-11	0.25695	0.247625	0.000373	0.02055	0.054398	9.8E-05	0.09186	0.119748	0.919	0.92	1	0.986	0.972	1	0.957	0.943
rs11493880	3.6622E-11	-0.033581	0.00507	-0.033027	0.005959	7.47982E-11	0.6946	0.011737	9.8E-06	0.011777	0.701282	6.6E-05	0.38167	0.101865	0.772	0.95	1	0.983	0.399	1	0.813	0.906
rs6790914	3.6768E-11	-0.037237	0.00563	-0.037237	0.005628	7.50906E-11	0.83223	0.09432	4.67E-05	0.011219	0.012375	5E-05	0.78268	0.916949	0.715	0.912	1	0.986	0.98	1	0.719	0.716
rs2023463	3.6832E-11	-0.076184	0.01151	-0.076184	0.011515	7.52196E-11	0.1494	0.30209	0.001756	0.000778	0.574082	5.8E-05	0.17889	0.012627	0.925	0.9	0.997	0.999	0.793	1	0.926	0.97
rs35555795	3.6834E-11	-0.072622	0.01098	-0.072622	0.010976	7.52236E-11	0.74306	0.921788	0.000602	0.000565	0.238388	0.00043	0.01931	0.012665	0.839	0.813	0.999	0.999	0.903	0.999	0.978	0.97
rs13220261	3.6929E-11	-0.072616	0.01098	-0.072616	0.010976	7.54126E-11	0.74286	0.921645	0.000606	0.000562	0.237947	0.00044	0.01927	0.012645	0.839	0.813	0.999	0.999	0.903	0.999	0.978	0.97
rs8046044	3.705E-11	0.0392067	0.00593	0.0403864	0.00787	7.56555E-11	0.02564	0.008962	0.002773	0.249481	0.033956	1.2E-06	0.0948	0.68037	0.956	0.968	0.992	0.724	0.973	1	0.945	0.828
rs73088726	3.7239E-11	0.0432753	0.00654	0.0432753	0.006542	7.31728E-11	0.37277	0.086834	0.000409	0.277491	0.15313	7.1E-08	0.51047	0.392214	0.833	0.906	0.999	0.611	0.889	1	0.772	0.828

Table S3

rs11214585	3.7327E-11	-0.033566	0.00507	-0.033009	0.005963	7.62097E-11	0.6921	0.011716	9.78E-06	0.012047	0.701021	6.6E-05	0.38225	0.101631	0.772	0.95	1	0.982	0.399	1	0.813	0.906
rs7939992	3.771E-11	-0.033559	0.00507	-0.033002	0.005961	7.69762E-11	0.69253	0.011788	9.81E-06	0.012032	0.700614	6.7E-05	0.38271	0.101523	0.772	0.95	1	0.983	0.399	1	0.813	0.906
rs145548091	3.7723E-11	0.035199	0.00532	0.035199	0.005323	7.70036E-11	0.6231	0.242944	0.002176	0.002025	0.881801	2E-05	0.00432	0.083778	0.833	0.894	0.995	0.997	0.651	1	0.986	0.933
rs35023999	3.7794E-11	-0.033409	0.00505	-0.033409	0.005052	7.71454E-11	0.87205	0.039821	3.71E-05	0.003043	0.998753	7.8E-05	0.49467	0.053279	0.756	0.932	1	0.995	0.548	1	0.791	0.931
rs3088285	3.7856E-11	0.0393291	0.00595	0.0405556	0.007995	7.72685E-11	0.02306	0.009184	0.003008	0.250342	0.036164	9.8E-07	0.10367	0.676081	0.957	0.968	0.991	0.721	0.972	1	0.941	0.828
rs113573560	3.7905E-11	0.106731	0.01614	0.1012	0.02083	5.29117E-11	0.22022	0.81471	0.001267	0.275131	0.135476	5.2E-09	0.07437	0.85771	0.84	0.641	0.992	0.563	0.876	1	0.913	0.628
rs138310177	3.8209E-11	0.0489949	0.00741	0.0502889	0.015106	2.56137E-11	0.37803	0.357144	0.000332	0.685143	0.001518	2.6E-06	5.8E-05	0.971406	0.39	0.751	0.997	0.124	0.991	1	0.996	0.546
rs13330178	3.8325E-11	0.0391752	0.00593	0.0403867	0.007909	7.8209E-11	0.02523	0.008962	0.002773	0.255326	0.033956	1.2E-06	0.0948	0.68037	0.956	0.968	0.992	0.716	0.973	1	0.944	0.827
rs35028754	3.8325E-11	0.0391752	0.00593	0.0403867	0.007909	7.8209E-11	0.02523	0.008962	0.002773	0.255326	0.033956	1.2E-06	0.0948	0.68037	0.956	0.968	0.992	0.716	0.973	1	0.944	0.827
rs34982111	3.8454E-11	0.0351449	0.00532	0.0351449	0.005317	7.84662E-11	0.71483	0.258694	0.002109	0.002538	0.830261	1.6E-05	0.00453	0.082596	0.82	0.891	0.995	0.997	0.672	1	0.986	0.934
rs35209006	3.849E-11	0.0391714	0.00593	0.0403823	0.00791	7.85392E-11	0.0253	0.008962	0.002773	0.255836	0.033956	1.2E-06	0.0948	0.68037	0.956	0.968	0.992	0.716	0.973	1	0.944	0.827
rs2746149	3.8542E-11	-0.076091	0.01151	-0.076091	0.011512	7.86423E-11	0.14786	0.309688	0.001722	0.000791	0.554978	5.8E-05	0.20005	0.013027	0.925	0.899	0.997	0.999	0.8	1	0.921	0.969
rs561642562	3.8578E-11	0.0763647	0.01155	0.0763647	0.011554	7.87138E-11	0.28628	0.581874	2.34E-05	0.024563	0.000717	0.00532	0.02346	0.423046	0.91	0.872	1	0.982	0.997	0.987	0.976	0.89
rs2294950	3.9335E-11	0.0571058	0.00864	0.0532862	0.013302	7.7423E-11	0.40444	0.247593	0.000388	4.58E-07	0.686359	0.00019	0.60871	0.360165	0.784	0.473	0.999	1	0.594	0.999	0.69	0.794
rs144502861	3.9337E-11	-0.120168	0.01819	-0.120489	0.021437	8.02341E-11	0.52136	0.128489	0.009433	0.000348	0.103947	4.7E-06	0.01507	0.795592	0.654	0.909	0.961	0.999	0.931	1	0.974	0.7
rs11125820	3.942E-11	0.0364023	0.00551	0.0386457	0.007101	8.03985E-11	0.06562	0.007093	0.008776	0.003071	0.002715	0.00012	0.10843	0.86878	0.95	0.974	0.98	0.997	0.994	1	0.951	0.787
rs141305769	3.9438E-11	0.0449868	0.00681	0.0449868	0.00681	8.04353E-11	0.21574	0.067214	0.000448	0.138241	0.033971	2.2E-05	0.04143	0.292672	0.919	0.947	0.999	0.876	0.977	1	0.969	0.908
rs112128680	3.9744E-11	0.0449795	0.00681	0.0449795	0.00681	8.10466E-11	0.21506	0.067214	0.000448	0.139156	0.03397	2.2E-05	0.04143	0.292667	0.919	0.947	0.999	0.875	0.977	1	0.969	0.908
rs138757175	3.9875E-11	-0.072641	0.011	-0.072641	0.010999	8.13098E-11	0.75447	0.910076	0.000995	0.000741	0.218634	0.00024	0.02322	0.008348	0.839	0.816	0.999	0.999	0.91	1	0.976	0.971
rs200487745	3.993E-11	-0.072639	0.011	-0.072639	0.010999	8.14196E-11	0.75512	0.909723	0.000994	0.000744	0.218823	0.00024	0.02335	0.00836	0.839	0.816	0.999	0.999	0.91	1	0.976	0.971
rs77666565	3.9932E-11	-0.072639	0.011	-0.072639	0.010999	8.14238E-11	0.75557	0.909631	0.000993	0.000747	0.218499	0.00024	0.02341	0.008373	0.839	0.816	0.999	0.999	0.91	1	0.976	0.971
rs2059367	3.998E-11	0.0370845	0.00562	0.0508684	0.011886	2.81647E-12	0.45387	0.02441	0.014809	2.43E-06	7.88E-06	0.04241	0.0749	0.066815	0.665	0.941	0.28	1	1	0.208	0.863	0.899
rs190945449	4.0109E-11	-0.072632	0.011	-0.072632	0.010999	8.17776E-11	0.75444	0.90992	0.000997	0.000742	0.218976	0.00024	0.02331	0.008368	0.839	0.816	0.999	0.999	0.91	1	0.976	0.971
rs55664827	4.0172E-11	-0.072629	0.011	-0.072629	0.010999	8.19023E-11	0.75446	0.909972	0.000998	0.000741	0.21901	0.00024	0.02329	0.00837	0.839	0.816	0.999	0.999	0.91	1	0.976	0.971
rs74689501	4.027E-11	-0.072624	0.011	-0.072624	0.010999	8.20985E-11	0.75686	0.90903	0.000988	0.000763	0.218737	0.00024	0.02361	0.008377	0.838	0.816	0.999	0.999	0.91	1	0.976	0.971
rs191631470	4.0298E-11	0.0763072	0.01156	0.0763072	0.011557	8.21553E-11	0.29888	0.580604	2.31E-05	0.024501	0.000767	0.00538	0.02308	0.422796	0.908	0.872	1	0.982	0.997	0.987	0.977	0.89
rs34063917	4.0322E-11	0.0372535	0.00564	0.0424955	0.008934	8.22028E-11	0.07675	0.00324	0.008004	0.00334	0.00101	0.00033	0.03703	0.624273	0.946	0.978	0.981	0.997	0.996	1	0.972	0.735
rs34148261	4.0434E-11	-0.072472	0.01098	-0.072472	0.010977	8.24267E-11	0.75462	0.930857	0.000605	0.000568	0.237074	0.00046	0.0192	0.012646	0.838	0.812	0.999	0.999	0.903	0.999	0.978	0.969
rs28507440	4.0436E-11	0.0404085	0.00612	0.0404085	0.00612	8.2431E-11	0.17713	0.575426	0.001068	0.000934	0.000623	0.00095	0.81908	0.052658	0.92	0.861	0.998	0.999	0.997	0.998	0.775	0.951
rs6798590	4.1054E-11	-0.033517	0.00508	-0.033517	0.005078	8.28461E-11	0.99063	0.372367	0.005742	0.018662	0.248621	1E-07	0.01838	0.831664	0.773	0.868	0.982	0.98	0.879	1	0.972	0.789
rs11214582	4.1069E-11	-0.033494	0.00507	-0.032903	0.005995	8.36958E-11	0.72743	0.011768	9.8E-06	0.01273	0.701321	6.6E-05	0.38205	0.101595	0.765	0.95	1	0.981	0.399	1	0.812	0.906
rs10924495	4.1107E-11	-0.053028	0.00803	-0.055427	0.009525	6.11587E-11	0.0757	0.169133	0.00057	2.08E-06	0.122868	0.01496	0.06261	0.456981	0.946	0.927	0.999	1	0.945	0.937	0.963	0.883
rs1898910	4.1124E-11	0.0370051	0.00561	0.0370051	0.005607	8.38054E-11	0.20386	0.248529	0.007034	0.00167	0.003594	4.2E-05	0.07298	0.766257	0.915	0.907	0.983	0.998	0.993	1	0.956	0.753
rs11572285	4.1133E-11	0.0570027	0.00864	0.0528394	0.013371	8.043E-11	0.39405	0.255648	0.000413	4.82E-07	0.723567	0.00015	0.66232	0.379324	0.78	0.466	0.998	1	0.568	0.999	0.663	0.783
rs7747058	4.158E-11	-0.03336	0.00506	-0.03336	0.005056	8.47185E-11	0.55477	0.979371	4.21E-05	0.001684	0.358912	0.00051	0.01638	0.343942	0.847	0.78	1	0.998	0.847	0.999	0.975	0.879
rs35595148	4.1614E-11	0.0391071	0.00593	0.0403405	0.007955	8.47856E-11	0.02497	0.008927	0.002787	0.258296	0.034041	1.2E-06	0.0944	0.708242	0.956	0.968	0.991	0.712	0.973	1	0.944	0.821
rs2293600	4.174E-11	-0.03355	0.00509	-0.033294	0.005441	8.31411E-11	0.6997	0.257424	0.005624	0.008403	0.37921	8.9E-08	0.01895	0.921455	0.686	0.871	0.977	0.989	0.805	1	0.968	0.714
rs10203072	4.194E-11	0.0371173	0.00563	0.0414858	0.008524	8.54367E-11	0.09615	0.00285	0.010585	0.002584	0.00203	0.00019	0.04827	0.673458	0.941	0.978	0.972	0.998	0.995	1	0.968	0.744
rs16943	4.1941E-11	0.0338032	0.00512	0.033766	0.006488	7.93386E-11	0.20025	0.087862	1.34E-05	0.76668	0.010952	1.7E-05	0.40953	0.077095	0.86	0.9	1	0.154	0.98	1	0.768	0.911
rs2311059	4.1963E-11	0.0338024	0.00512	0.0337537	0.006422	8.03394E-11	0.20243	0.087934	1.39E-05	0.752494	0.011059	1.7E-05	0.41098	0.0773	0.86	0.9	1	0.161	0.98	1	0.768	0.911
rs562027	4.2403E-11	0.0351344	0.00533	0.0351344	0.005327	8.63611E-11	0.64784	0.246556	0.002464	0.002125	0.84103	2.1E-05	0.00408	0.079719	0.832	0.895	0.994	0.997	0.672	1	0.987	0.935
rs12202102	4.2411E-11	0.0351341	0.00533	0.0351341	0.005327	8.63788E-11	0.64787	0.246593	0.002463	0.002127	0.840989	2.1E-05	0.00408	0.079735	0.832	0.895	0.994	0.997	0.672	1	0.987	0.935
rs72845428	4.2456E-11	-0.07239	0.01098	-0.07239	0.010976	8.64674E-11	0.75921	0.946417	0.000598	0.000596	0.229972	0.00049	0.01849	0.012659	0.837	0.809	0.999	0.999	0.906	0.999	0.978	0.969
rs76150334	4.2661E-11	-0.088653	0.01344	-0.088653	0.013443	8.68774E-11	0.24265	0.073115	5.23E-06	0.028551	0.123743	0.00126	0.00915	0.556698	0.903	0.939	1	0.974	0.937	0.998	0.982	0.691
rs628310	4.2674E-11	-0.034062	0.00517	-0.034062	0.005165	8.69039E-11	0.1151	0.520201	0.000447	0.143358	0.039783	4E-06	0.07781	0.451514	0.928	0.862	0.999	0.854	0.971	1	0.952	0.87
rs11737443	4.2748E-11	0.0403396	0.00612	0.0403396	0.006117	8.70507E-11	0.17733	0.580222	0.001099	0.000944	0.000646	0.00094	0.81991	0.052997	0.919	0.861	0.998	0.999	0.997	0.998	0.775	0.951
rs562899	4.2781E-11	0.0351273	0.00533	0.0351273	0.005327	8.71173E-11	0.65677	0.246479	0.002452	0.002157	0.839306	2.1E-05	0.00407	0.079398	0.83	0.895	0.994	0.997	0.672	1	0.987	0.936
rs4355585	4.2803E-11	-0.033336	0.00506	-0.033336	0.005056	8.71599E-11	0.55385	0.979548	4.29E-05	0.001664	0.36999	0.00051	0.01634	0.343913	0.847	0.779	1	0.998	0.842	0.999	0.975	0.878
rs471461	4.2994E-11	0.035126	0.00533	0.035126	0.005327	8.75416E-11	0.6567	0.246254	0.002454	0.002173	0.839038	2.1E-05	0.00406	0.079358	0.83	0.895	0.994	0.997	0.672	1	0.987	0.936
rs34246779	4.3029E-11	-0.072367	0.01098	-0.072367	0.010976	8.76125E-11	0.76157	0.946298	0.000598	0.00059	0.23115	0.00049	0.01865	0.012652	0.837	0.809	0.999	0.999	0.905	0.999	0.978	0.969
rs79415988	4.3048E-11	0.0416132	0.00631	0.0416132	0.006312	8.76499E-11	0.38261	0.02234	0.000168	0.001469	0.488786	0.00017	0.1081	0.094272	0.644	0.951	1	0.998	0.793	1	0.934	0.928
rs4712936	4.317E-11	0.0898657	0.01363	0.0954024	0.01809	8.6562E-11	0.64995	0.678834	0.000694	1.88E-05	0.00662	0.0055	0.112	0.025189	0.74	0.841	0.999	1	0.989	0.982	0.942	0.961
rs7191848	4.3247E-11	0.0392345	0.00595	0.0406062	0.008003	8.80473E-11	0.01792	0.012312	0.002617	0.280904	0.030015	1.5E-06	0.09647	0.594933	0.96	0.964	0.992	0.686	0.975	1	0.943	0.839
rs12967277	4.3403E-11	0.0345375	0.00524	0.0345375	0.005239	8.83595E-11	0.20844	0.657974	0.000228	0.003743	0.078776	0.00023	0.14034	0.23203	0.92	0.86	1	0.997	0.96	1	0.94	0.917
rs525819	4.3408E-11	0.0351249	0.00533	0.0351249	0.005328	8.8368E-11	0.66934	0.23865	0.0024	0.002242	0.832938	2.2E-05	0.00381	0.078453	0.829	0.896	0.995	0.997	0.675	1	0.987	0.936

Table S3

rs1560520	4.3437E-11	0.0345864	0.00525	0.0345864	0.005247	8.84271E-11	0.13668	0.647075	0.000129	0.004883	0.140143	0.00024	0.16788	0.203166	0.931	0.86	1	0.996	0.939	1	0.933	0.921
rs12966968	4.359E-11	0.0345342	0.00524	0.0345342	0.005239	8.87319E-11	0.20846	0.657974	0.000228	0.00375	0.078785	0.00023	0.14044	0.232031	0.92	0.86	1	0.997	0.96	1	0.94	0.917
rs4100041	4.3689E-11	0.0332807	0.00505	0.0332807	0.005049	8.89294E-11	0.22294	0.651756	0.003001	0.059262	0.078038	2.9E-07	0.02681	0.459783	0.901	0.725	0.993	0.94	0.951	1	0.97	0.861
rs11735302	4.3756E-11	0.04031	0.00612	0.04031	0.006116	8.9064E-11	0.1773	0.583178	0.001108	0.000954	0.000652	0.00093	0.8208	0.053116	0.919	0.86	0.998	0.999	0.997	0.998	0.774	0.951
rs511007	4.3829E-11	0.0351127	0.00533	0.0351127	0.005328	8.92096E-11	0.65971	0.24247	0.002426	0.002248	0.836906	2.1E-05	0.00393	0.079224	0.83	0.895	0.995	0.997	0.674	1	0.987	0.936
rs1334028	4.3892E-11	-0.037252	0.00565	-0.037756	0.006587	8.93344E-11	0.52962	0.521631	8.41E-06	0.012236	0.122326	0.00301	0.00976	0.009663	0.712	0.864	1	0.989	0.939	0.993	0.982	0.971
rs4282138	4.3899E-11	0.0403083	0.00612	0.0403083	0.006116	8.93498E-11	0.17773	0.581746	0.001108	0.000951	0.000653	0.00094	0.82094	0.052944	0.919	0.86	0.998	0.999	0.997	0.998	0.774	0.951
rs510153	4.3906E-11	0.0351098	0.00533	0.0351098	0.005328	8.93622E-11	0.66316	0.242891	0.002441	0.002218	0.837301	2.1E-05	0.00397	0.079226	0.83	0.895	0.995	0.997	0.673	1	0.987	0.936
rs112676175	4.3987E-11	0.0403119	0.00612	0.0403119	0.006117	8.95242E-11	0.17768	0.581198	0.001109	0.000948	0.000648	0.00095	0.82072	0.053084	0.919	0.86	0.998	0.999	0.997	0.998	0.774	0.951
rs523892	4.3997E-11	0.0351124	0.00533	0.0351124	0.005328	8.9545E-11	0.66835	0.24011	0.002416	0.002257	0.834224	2.2E-05	0.00386	0.078934	0.829	0.896	0.995	0.997	0.675	1	0.987	0.936
rs56819084	4.4018E-11	0.0403287	0.00612	0.0403287	0.00612	8.95865E-11	0.17696	0.577806	0.001112	0.000933	0.000634	0.00097	0.82232	0.053033	0.919	0.861	0.998	0.999	0.997	0.998	0.774	0.951
rs523852	4.412E-11	0.0351103	0.00533	0.0351103	0.005328	8.97896E-11	0.66807	0.240111	0.002414	0.002268	0.833934	2.2E-05	0.00386	0.078961	0.829	0.896	0.995	0.997	0.675	1	0.987	0.936
rs5858037	4.4173E-11	0.0403144	0.00612	0.0403144	0.006118	8.98968E-11	0.17062	0.600008	0.000996	0.001002	0.000626	0.00098	0.80872	0.063352	0.92	0.858	0.999	0.999	0.997	0.998	0.777	0.948
rs62303504	4.4282E-11	0.0403213	0.00612	0.0403213	0.006119	9.0114E-11	0.17686	0.578054	0.001112	0.000937	0.000637	0.00096	0.82316	0.053227	0.919	0.861	0.998	0.999	0.997	0.998	0.774	0.951
rs62530676	4.4424E-11	-0.037245	0.00565	-0.037803	0.006701	9.03975E-11	0.5053	0.522059	8.44E-06	0.011969	0.122833	0.00302	0.00967	0.009439	0.705	0.863	1	0.989	0.939	0.992	0.982	0.971
rs4694830	4.4468E-11	0.0403191	0.00612	0.0403191	0.00612	9.0484E-11	0.17696	0.577282	0.001115	0.000937	0.000636	0.00097	0.82269	0.053155	0.919	0.861	0.998	0.999	0.997	0.998	0.774	0.951
rs12958755	4.4522E-11	0.0332889	0.00505	0.0332889	0.005053	9.05931E-11	0.22	0.753048	0.002885	0.06266	0.088068	3.2E-07	0.02762	0.434861	0.903	0.748	0.994	0.938	0.948	1	0.97	0.867
rs9940234	4.4604E-11	0.0392075	0.00595	0.0405327	0.007959	9.07551E-11	0.0177	0.013029	0.002514	0.282187	0.030089	1.6E-06	0.09421	0.604517	0.96	0.963	0.992	0.685	0.975	1	0.944	0.837
rs12957519	4.4614E-11	0.0332873	0.00505	0.0332873	0.005053	9.07767E-11	0.22	0.753056	0.002886	0.06266	0.088114	3.2E-07	0.02764	0.435102	0.903	0.748	0.994	0.938	0.948	1	0.97	0.867
rs12934512	4.4624E-11	0.0392071	0.00595	0.0405336	0.00796	9.07965E-11	0.0177	0.013018	0.002515	0.282226	0.030092	1.6E-06	0.09417	0.604526	0.96	0.963	0.992	0.685	0.975	1	0.944	0.837
rs72841536	4.4864E-11	-0.06006	0.00912	-0.06006	0.009118	9.12744E-11	0.47371	0.580237	9.53E-05	0.006976	0.053523	0.00075	0.08227	0.059065	0.887	0.873	1	0.995	0.97	0.999	0.958	0.954
rs35433030	4.487E-11	-0.072297	0.01098	-0.072297	0.010976	9.12876E-11	0.76752	0.944107	0.000601	0.000575	0.234765	0.0005	0.01905	0.012662	0.836	0.809	0.999	0.999	0.904	0.999	0.978	0.969
rs66941101	4.4872E-11	-0.072296	0.01098	-0.072296	0.010976	9.12904E-11	0.76752	0.944107	0.000601	0.000575	0.234765	0.0005	0.01905	0.012662	0.836	0.809	0.999	0.999	0.904	0.999	0.978	0.969
rs11214583	4.4909E-11	-0.033428	0.00507	-0.032792	0.006069	9.13638E-11	0.68478	0.012557	1.15E-05	0.011259	0.655953	6.5E-05	0.39865	0.099089	0.77	0.948	1	0.983	0.376	1	0.804	0.906
rs12149307	4.5426E-11	0.0391854	0.00595	0.0404678	0.007904	9.2395E-11	0.01795	0.013337	0.002468	0.27915	0.030629	1.7E-06	0.09034	0.610191	0.96	0.963	0.993	0.69	0.974	1	0.945	0.837
rs34739687	4.5612E-11	0.0385613	0.00586	0.0380197	0.009164	9.27671E-11	0.67681	0.08567	3.01E-05	0.014002	0.971863	7.7E-05	0.43398	0.000423	0.662	0.909	1	0.981	0.554	1	0.805	0.983
rs8077872	4.5628E-11	0.038561	0.00586	0.0380194	0.009164	9.27983E-11	0.67681	0.08567	3.01E-05	0.014008	0.971861	7.7E-05	0.43398	0.000423	0.662	0.909	1	0.981	0.554	1	0.805	0.983
rs12445641	4.5827E-11	0.0391776	0.00595	0.0404679	0.007914	9.31963E-11	0.0179	0.013337	0.002468	0.280758	0.030629	1.7E-06	0.09034	0.610189	0.96	0.963	0.993	0.688	0.974	1	0.945	0.836
rs12149325	4.5828E-11	0.0391775	0.00595	0.0404678	0.007914	9.31982E-11	0.0179	0.013337	0.002468	0.280755	0.030629	1.7E-06	0.09034	0.610191	0.96	0.963	0.993	0.688	0.974	1	0.945	0.836
rs6504549	4.5875E-11	0.0385565	0.00586	0.0380137	0.009165	9.32904E-11	0.67604	0.08567	3.01E-05	0.014084	0.971686	7.7E-05	0.43378	0.000423	0.662	0.909	1	0.981	0.555	1	0.805	0.983
rs6504548	4.6021E-11	0.0385536	0.00586	0.0380099	0.009166	9.3582E-11	0.67575	0.08567	3.01E-05	0.014129	0.971692	7.7E-05	0.43378	0.000423	0.662	0.909	1	0.981	0.555	1	0.805	0.983
rs62303490	4.6086E-11	0.0406101	0.00617	0.0406101	0.006169	9.37117E-11	0.14177	0.456317	0.001081	0.000733	0.000497	0.0012	0.91715	0.091331	0.925	0.875	0.998	0.999	0.997	0.998	0.748	0.939
rs11708420	4.623E-11	0.033626	0.00511	0.0344943	0.006169	9.33478E-11	0.88327	0.086897	0.016158	0.039276	0.005245	1.9E-06	0.23151	0.009167	0.825	0.941	0.948	0.966	0.992	1	0.916	0.974
rs78115154	4.6328E-11	0.0699157	0.01062	0.072995	0.014618	9.41953E-11	0.28145	0.007856	0.010476	0.017382	0.000737	8.6E-06	0.24984	0.630468	0.898	0.971	0.971	0.985	0.996	1	0.904	0.718
rs11861296	4.6504E-11	0.0376281	0.00572	0.0390998	0.007892	9.14138E-11	0.00537	0.066951	0.004035	0.31133	0.13388	5.7E-07	0.05249	0.183611	0.973	0.938	0.984	0.652	0.928	1	0.959	0.912
rs9356253	4.6796E-11	0.0457658	0.00695	0.0457658	0.006954	9.51279E-11	0.19736	0.897226	0.000765	0.000206	0.505577	0.00011	0.01844	0.845162	0.898	0.788	0.999	0.999	0.785	1	0.972	0.786
rs62303499	4.6872E-11	0.0402431	0.00612	0.0402431	0.006115	9.52784E-11	0.17007	0.59945	0.001149	0.000987	0.000611	0.0009	0.82116	0.063895	0.92	0.858	0.998	0.999	0.997	0.999	0.774	0.947
rs17358402	4.7086E-11	0.0391535	0.00595	0.0404578	0.007922	9.57063E-11	0.01806	0.013328	0.002463	0.284305	0.030208	1.8E-06	0.08962	0.607873	0.96	0.963	0.993	0.684	0.974	1	0.945	0.836
rs79993364	4.7104E-11	0.0385467	0.00586	0.038118	0.009174	9.57413E-11	0.67937	0.082278	3.39E-05	0.013792	0.963428	8E-05	0.41567	0.000399	0.666	0.912	1	0.981	0.562	1	0.813	0.984
rs4713636	4.7208E-11	0.0350372	0.00533	0.0350372	0.005325	9.59486E-11	0.63711	0.234302	0.002316	0.002108	0.884264	2.4E-05	0.00408	0.080517	0.831	0.896	0.995	0.997	0.653	1	0.986	0.934
rs9457017	4.7503E-11	0.0337735	0.00513	0.0345987	0.006397	9.65363E-11	0.02677	0.584874	0.019454	0.000126	0.035723	1.9E-05	0.04766	0.930845	0.951	0.697	0.91	1	0.969	1	0.958	0.771
rs76343838	4.7677E-11	0.0747794	0.01137	0.0747794	0.011368	9.68832E-11	0.57906	0.576206	4.25E-05	0.020862	0.000754	0.00513	0.01174	0.291206	0.87	0.872	1	0.984	0.997	0.988	0.982	0.908
rs1484638	4.7809E-11	0.0412262	0.00627	0.0412262	0.006268	9.7147E-11	0.09435	0.882603	0.000279	0.020983	0.025593	0.00019	0.03345	0.218369	0.941	0.799	1	0.984	0.98	1	0.972	0.92
rs140141706	4.7831E-11	0.0748091	0.01137	0.0748091	0.011373	9.719E-11	0.57833	0.584772	4.43E-05	0.020702	0.000744	0.00494	0.01228	0.290759	0.87	0.871	1	0.984	0.997	0.989	0.982	0.909
rs2194701	4.7946E-11	0.0358307	0.00545	0.0377073	0.006584	9.74199E-11	0.06996	0.013378	0.006818	0.001408	0.003079	0.00049	0.05122	0.948341	0.95	0.97	0.987	0.999	0.994	0.999	0.968	0.807
rs1614887	4.8073E-11	-0.033232	0.00505	-0.033232	0.005053	9.76726E-11	0.13054	0.162077	0.000241	0.000143	0.426274	0.00078	0.51609	0.107139	0.926	0.919	1	1	0.838	0.999	0.841	0.934
rs7749414	4.8183E-11	-0.073546	0.01118	-0.079734	0.014652	9.78923E-11	0.5049	0.37934	0.000987	7.98E-05	0.020312	0.00811	0.08282	0.002163	0.888	0.903	0.999	1	0.984	0.978	0.96	0.982
rs9295661	4.8335E-11	0.0890964	0.01355	0.0934092	0.017222	9.8194E-11	0.62945	0.677714	0.000575	1.82E-05	0.018691	0.00532	0.09643	0.01985	0.737	0.841	0.999	1	0.982	0.983	0.947	0.964
rs12149460	4.8543E-11	0.0375914	0.00572	0.039092	0.007929	9.49412E-11	0.00535	0.067324	0.004023	0.320096	0.133931	5.7E-07	0.05234	0.183398	0.972	0.937	0.984	0.64	0.928	1	0.959	0.911
rs4791048	4.8582E-11	0.0385067	0.00586	0.0379686	0.009163	9.86875E-11	0.67666	0.085897	3.1E-05	0.014023	0.974947	7.9E-05	0.4345	0.000425	0.662	0.909	1	0.981	0.554	1	0.805	0.983
rs34053338	4.862E-11	0.0375898	0.00572	0.0390902	0.007927	9.51355E-11	0.00534	0.06698	0.004041	0.318909	0.134028	5.7E-07	0.05254	0.183496	0.972	0.937	0.984	0.642	0.928	1	0.959	0.911
rs369418517	4.8687E-11	-0.080755	0.01228	-0.080755	0.012282	9.88951E-11	0.48499	0.287939	0.001917	0.010285	0.253791	1E-05	0.01459	0.321333	0.877	0.905	0.997	0.992	0.901	1	0.98	0.9
rs900236716	4.8716E-11	0.0753526	0.01146	0.0763688	0.019745	8.86195E-11	0.35599	0.596185	0.001507	0.348165	0.001875	4.6E-07	0.69799	0.001646	0.81	0.591	0.989	0.48	0.991	1	0.67	0.974
rs7212293	4.8816E-11	0.0385062	0.00586	0.0379141	0.009175	9.91525E-11	0.66961	0.087673	3.16E-05	0.013288	0.9773	7.7E-05	0.45332	0.00043	0.658	0.908	1	0.982	0.55	1	0.798	0.983
rs7227448	4.8874E-11	0.033257	0.00506	0.033257	0.005059	9.92685E-11	0.88268	0.511581	4.84E-05	0.000152	0.613698	0.00025	0.07629	0.267013	0.69	0.613	1	0.999	0.681	0.999	0.926	0.852

Table S3

rs913455	4.9031E-11	0.0896195	0.01363	0.0946965	0.017767	9.95809E-11	0.63972	0.685352	0.000624	2.41E-05	0.006891	0.00562	0.11477	0.025803	0.738	0.84	0.999	1	0.989	0.982	0.941	0.961
rs7752195	4.9094E-11	0.0896193	0.01363	0.0946956	0.017767	9.97063E-11	0.63996	0.685903	0.000625	2.41E-05	0.006883	0.00561	0.11471	0.025806	0.738	0.84	0.999	1	0.989	0.982	0.941	0.961
rs17203016	4.9139E-11	0.0409394	0.00623	0.0409394	0.006228	9.97964E-11	0.1976	0.192781	0.002686	0.000777	0.006641	0.00024	0.94754	0.041052	0.917	0.917	0.995	0.999	0.99	1	0.745	0.956
rs140088666	4.9201E-11	-0.094312	0.01435	-0.09458	0.014959	9.99187E-11	0.57402	0.069516	2.52E-06	0.120401	0.168688	0.00169	0.00237	0.254951	0.86	0.943	1	0.881	0.925	0.996	0.989	0.908
rs28840107	4.9382E-11	0.0401623	0.00611	0.0401623	0.00611	1.0028E-10	0.14848	0.596389	0.000915	0.001077	0.00075	0.00094	0.84964	0.081824	0.924	0.857	0.999	0.999	0.996	0.998	0.765	0.942
rs493063	4.9452E-11	0.0349494	0.00532	0.0349494	0.005317	1.00419E-10	0.69424	0.19797	0.001431	0.002464	0.869162	3.8E-05	0.00364	0.108974	0.823	0.902	0.997	0.997	0.659	1	0.987	0.926
rs11075906	4.9467E-11	0.0389836	0.00593	0.0407183	0.008462	1.00449E-10	0.01854	0.008265	0.003432	0.27852	0.02871	1.1E-06	0.10505	0.758321	0.958	0.968	0.988	0.684	0.974	1	0.938	0.807
rs6541947	4.9774E-11	-0.035474	0.0054	-0.04005	0.009544	3.95008E-11	0.92723	0.018964	0.000826	6.55E-07	0.353186	0.01735	0.00184	0.646578	0.78	0.956	0.993	1	0.833	0.886	0.99	0.818
rs548147	4.978E-11	0.0349897	0.00532	0.0349897	0.005324	1.01073E-10	0.63775	0.237394	0.002384	0.00212	0.884078	2.3E-05	0.00427	0.085	0.831	0.895	0.995	0.997	0.653	1	0.986	0.933
rs550127	4.992E-11	0.034989	0.00532	0.034989	0.005325	1.01351E-10	0.64133	0.235903	0.002382	0.002143	0.883626	2.3E-05	0.00422	0.084918	0.831	0.895	0.995	0.997	0.654	1	0.986	0.933
rs11645704	4.9939E-11	0.0375702	0.00572	0.0384327	0.007546	8.87541E-11	0.01399	0.064016	0.006132	0.285728	0.138103	2E-07	0.05412	0.234817	0.962	0.938	0.972	0.677	0.925	1	0.958	0.9
rs574186	5.0094E-11	0.0350138	0.00533	0.0350138	0.005329	1.01698E-10	0.67091	0.233932	0.002668	0.002406	0.823377	2.2E-05	0.00366	0.077129	0.83	0.898	0.994	0.997	0.682	1	0.987	0.937
rs11572325	5.0256E-11	0.0567419	0.00864	0.0527178	0.013184	1.01926E-10	0.40546	0.255598	0.000418	6.52E-07	0.727484	0.00015	0.6631	0.380108	0.777	0.468	0.998	1	0.569	0.999	0.663	0.782
rs1980772	5.0293E-11	0.0349856	0.00532	0.0349856	0.005325	1.02094E-10	0.64427	0.234714	0.002381	0.002176	0.88255	2.3E-05	0.00414	0.084493	0.83	0.895	0.995	0.997	0.654	1	0.986	0.933
rs13431415	5.0411E-11	0.0462033	0.00703	0.0462033	0.007033	1.02328E-10	0.13957	0.336281	5.66E-05	0.001071	0.003169	0.01331	0.05898	0.798389	0.93	0.899	1	0.999	0.993	0.952	0.962	0.832
rs66540516	5.0488E-11	0.0462019	0.00703	0.0462019	0.007033	1.02482E-10	0.13953	0.336295	5.66E-05	0.001068	0.00317	0.01333	0.05899	0.798439	0.93	0.899	1	0.999	0.993	0.952	0.962	0.832
rs74182380	5.0667E-11	-0.061685	0.00939	-0.061685	0.00939	1.02838E-10	0.85248	0.34089	6.02E-05	0.000627	0.685262	5.4E-05	0.70109	0.235557	0.744	0.838	1	0.998	0.656	1	0.714	0.864
rs141783988	5.0984E-11	0.0747069	0.01137	0.0747069	0.011374	1.0347E-10	0.59362	0.586147	4.41E-05	0.02165	0.000731	0.00497	0.01236	0.28815	0.868	0.87	1	0.984	0.997	0.989	0.982	0.909
rs12213869	5.1029E-11	0.0349736	0.00532	0.0349736	0.005325	1.03559E-10	0.6433	0.234904	0.002443	0.002158	0.882891	2.3E-05	0.00415	0.084681	0.83	0.895	0.994	0.997	0.654	1	0.986	0.933
rs111938697	5.1037E-11	-0.037385	0.00569	-0.037385	0.005692	1.03575E-10	0.26616	0.010434	1.88E-05	0.064433	0.052889	0.00075	0.30425	0.146281	0.914	0.971	1	0.951	0.971	0.999	0.906	0.935
rs71386939	5.1287E-11	0.0389499	0.00593	0.0405785	0.008375	1.04071E-10	0.02059	0.008258	0.003454	0.274708	0.0293	1.1E-06	0.10497	0.758083	0.957	0.968	0.988	0.69	0.974	1	0.939	0.808
rs4538458	5.1393E-11	0.0401153	0.00611	0.0401153	0.006109	1.04282E-10	0.16479	0.621635	0.0012	0.000868	0.000596	0.00097	0.85375	0.063251	0.92	0.853	0.998	0.999	0.997	0.998	0.764	0.947
rs68072215	5.1835E-11	-0.059736	0.0091	-0.059736	0.009098	1.05163E-10	0.52026	0.601532	0.000132	0.00841	0.048584	0.00064	0.06985	0.048278	0.881	0.871	1	0.994	0.972	0.999	0.961	0.957
rs55896768	5.1915E-11	0.0384466	0.00586	0.0378925	0.009242	1.05321E-10	0.686	0.075131	3.39E-05	0.013567	0.991993	7.5E-05	0.4568	0.000446	0.661	0.912	1	0.981	0.537	1	0.796	0.983
rs34991172	5.2056E-11	-0.090497	0.01378	-0.093103	0.016131	1.05601E-10	0.66987	0.682373	0.000339	1.99E-05	0.028778	0.00566	0.12363	0.025567	0.743	0.839	0.999	1	0.976	0.982	0.938	0.96
rs12646450	5.2257E-11	-0.033358	0.00508	-0.033358	0.005082	1.06001E-10	0.07424	0.176783	0.000198	0.001648	0.935935	5.3E-05	0.05635	0.708084	0.919	0.889	1	0.997	0.582	1	0.946	0.664
rs34664834	5.2272E-11	0.0389352	0.00593	0.0405782	0.008394	1.06031E-10	0.02046	0.008258	0.003454	0.27831	0.0293	1.1E-06	0.10497	0.758083	0.957	0.968	0.988	0.686	0.974	1	0.938	0.807
rs4790974	5.2336E-11	-0.038441	0.00586	-0.037959	0.00921	1.06159E-10	0.7112	0.075087	3.43E-05	0.013097	0.991922	8.2E-05	0.45128	0.000435	0.668	0.913	1	0.982	0.54	1	0.799	0.983
rs336606	5.2365E-11	0.0353393	0.00538	0.0353393	0.005384	1.06216E-10	0.81072	0.801236	0.000612	0.004948	0.213491	2.5E-05	0.06208	0.129843	0.822	0.824	0.999	0.995	0.906	1	0.957	0.927
rs12149917	5.2613E-11	0.0389301	0.00593	0.0405369	0.00836	1.0671E-10	0.02059	0.008406	0.003388	0.275227	0.028816	1.1E-06	0.10606	0.7661	0.957	0.967	0.988	0.69	0.974	1	0.938	0.806
rs67603684	5.2663E-11	0.046157	0.00703	0.046157	0.007033	1.0681E-10	0.13953	0.336753	5.78E-05	0.001068	0.00319	0.01349	0.05928	0.799042	0.93	0.899	1	0.999	0.993	0.952	0.962	0.832
rs9907491	5.267E-11	-0.03848	0.00586	-0.037995	0.009313	1.06823E-10	0.71073	0.079206	3.83E-05	0.013008	0.976198	7.4E-05	0.45038	0.000377	0.666	0.911	1	0.982	0.531	1	0.798	0.983
rs1233493	5.2683E-11	-0.075575	0.01152	-0.075575	0.011515	1.06849E-10	0.14829	0.308228	0.001879	0.000909	0.588468	6E-05	0.20121	0.013064	0.924	0.898	0.997	0.999	0.788	1	0.919	0.969
rs1233480	5.2936E-11	-0.075148	0.01145	-0.075148	0.011451	1.07352E-10	0.23039	0.340415	0.002162	0.001502	0.505266	5.2E-05	0.11151	0.00891	0.912	0.896	0.996	0.998	0.822	1	0.946	0.971
rs9807185	5.3215E-11	0.0343551	0.00524	0.0343551	0.005236	1.07906E-10	0.05226	0.888103	0.000163	0.005912	0.141698	0.00014	0.66877	0.033664	0.945	0.814	1	0.994	0.932	1	0.805	0.956
rs71142114	5.326E-11	-0.038425	0.00586	-0.037905	0.009205	1.07996E-10	0.71225	0.076053	3.5E-05	0.013354	0.986271	7.8E-05	0.45665	0.000444	0.667	0.912	1	0.981	0.536	1	0.797	0.983
rs76892966	5.343E-11	-0.033363	0.00508	-0.033072	0.005487	1.06147E-10	0.66836	0.256599	0.005735	0.0095	0.376661	1E-07	0.0186	0.925469	0.68	0.87	0.977	0.987	0.806	1	0.968	0.715
rs12921459	5.3493E-11	0.038913	0.00593	0.0405463	0.008391	1.08459E-10	0.02089	0.008258	0.003454	0.280691	0.029309	1.1E-06	0.10497	0.758103	0.957	0.967	0.988	0.682	0.974	1	0.938	0.807
rs7198834	5.3493E-11	0.038913	0.00593	0.0405463	0.008391	1.08459E-10	0.02089	0.008258	0.003454	0.280691	0.029309	1.1E-06	0.10497	0.758103	0.957	0.967	0.988	0.682	0.974	1	0.938	0.807
rs336605	5.3568E-11	0.0353189	0.00538	0.0353189	0.005383	1.08608E-10	0.82983	0.801616	0.000608	0.004939	0.213533	2.5E-05	0.06217	0.129906	0.819	0.823	0.999	0.995	0.906	1	0.956	0.927
rs75888697	5.3682E-11	0.0445207	0.00679	0.0445207	0.006786	1.08835E-10	0.10502	0.061865	0.001697	0.12934	0.027372	3.1E-06	0.20374	0.363565	0.937	0.947	0.997	0.885	0.979	1	0.923	0.894
rs4665394	5.3815E-11	-0.036603	0.00558	-0.036603	0.00558	1.09099E-10	0.38567	0.033029	9.71E-07	0.15548	0.046425	0.00226	0.05264	0.474243	0.885	0.954	1	0.846	0.969	0.994	0.962	0.871
rs28631322	5.4029E-11	0.0401154	0.00612	0.0401154	0.006116	1.09525E-10	0.17053	0.606916	0.001143	0.000981	0.000654	0.00098	0.8266	0.064718	0.92	0.856	0.998	0.999	0.996	0.998	0.773	0.947
rs59058422	5.4146E-11	0.0401198	0.00612	0.0401198	0.006117	1.09757E-10	0.17066	0.60542	0.001145	0.000977	0.000653	0.00098	0.82744	0.064748	0.92	0.856	0.998	0.999	0.996	0.998	0.772	0.947
rs11660938	5.4161E-11	0.0339409	0.00517	0.0337115	0.005372	1.01297E-10	0.25915	0.529612	0.000687	0.252401	0.11388	4.4E-08	0.11474	0.371002	0.848	0.606	0.997	0.625	0.904	1	0.904	0.822
rs4266263	5.4413E-11	0.0401134	0.00612	0.0401134	0.006116	1.10288E-10	0.17051	0.606083	0.001147	0.000981	0.000653	0.00098	0.82749	0.064676	0.92	0.856	0.998	0.999	0.996	0.998	0.772	0.947
rs62097903	5.4588E-11	0.0343291	0.00523	0.0343291	0.005235	1.10635E-10	0.05316	0.885381	0.00017	0.005611	0.141834	0.00014	0.67359	0.034076	0.945	0.814	1	0.995	0.932	1	0.803	0.956
rs2206853	5.462E-11	-0.075424	0.0115	-0.075424	0.011502	1.10699E-10	0.16489	0.326818	0.001872	0.000709	0.663265	5.7E-05	0.21478	0.011359	0.917	0.891	0.997	0.999	0.756	1	0.913	0.969
rs62303501	5.4629E-11	0.0401012	0.00612	0.0401012	0.006115	1.10717E-10	0.17015	0.609066	0.001153	0.00099	0.000657	0.00097	0.82575	0.064131	0.92	0.856	0.998	0.999	0.996	0.998	0.773	0.947
rs4666022	5.4664E-11	-0.03659	0.00558	-0.03659	0.00558	1.10787E-10	0.38819	0.033028	9.72E-07	0.156639	0.046422	0.00226	0.05268	0.474238	0.884	0.954	1	0.845	0.969	0.994	0.962	0.87
rs35938312	5.5072E-11	0.034375	0.00524	0.034375	0.005243	1.11598E-10	0.21277	0.669575	0.000196	0.004381	0.078779	0.00026	0.15854	0.240122	0.918	0.858	1	0.996	0.96	1	0.935	0.915
rs10456045	5.5569E-11	-0.035569	0.00543	-0.035569	0.005426	1.12585E-10	0.75091	0.324359	6.45E-05	0.001386	0.375327	0.0009	0.07143	0.080356	0.836	0.894	1	0.998	0.858	0.999	0.955	0.942
rs56183156	5.5699E-11	0.0343146	0.00524	0.0343146	0.005235	1.12844E-10	0.05229	0.889864	0.000166	0.005959	0.142104	0.00014	0.67118	0.033963	0.945	0.814	1	0.994	0.932	1	0.804	0.956
rs140854233	5.584E-11	0.0343109	0.00523	0.0343109	0.005235	1.13123E-10	0.05484	0.885381	0.00017	0.005681	0.141835	0.00014	0.67359	0.034076	0.944	0.814	1	0.995	0.932	1	0.803	0.956
rs4395923	5.5857E-11	0.0355664	0.00543	0.0355664	0.005426	1.04713E-10	0.21075	0.862378	3.61E-08	0.032744	0.299494	0.00284	0.34106	0.222786	0.893	0.747	1	0.964	0.857	0.99	0.861	0.893

Table S3

rs11640135	5.588E-11	0.0388583	0.00593	0.0399296	0.007702	1.13203E-10	0.02939	0.009283	0.002927	0.256951	0.033034	1.7E-06	0.09665	0.655858	0.954	0.968	0.992	0.723	0.973	1	0.944	0.832
rs12124268	5.5915E-11	-0.040123	0.00612	-0.040123	0.006122	1.13273E-10	0.18061	0.174075	3.47E-05	0.002968	0.034778	0.01671	0.02377	0.094952	0.931	0.932	1	0.998	0.979	0.94	0.979	0.949
rs12923326	5.603E-11	-0.033592	0.00513	-0.033659	0.005181	1.13501E-10	0.02561	0.050254	0.000372	0.079386	0.034999	0.00044	0.14958	0.010245	0.967	0.959	1	0.946	0.98	1	0.947	0.978
rs117605916	5.6096E-11	0.0716234	0.01093	0.0721935	0.011455	9.84801E-11	0.26908	0.113281	0.07138	0.001164	0.183995	3.1E-06	0.02039	0.050609	0.888	0.922	0.637	0.998	0.9	1	0.974	0.948
rs56404791	5.6189E-11	0.0383992	0.00586	0.0379214	0.009289	1.13817E-10	0.69688	0.08302	3.49E-05	0.013342	0.976886	8.5E-05	0.43013	0.000383	0.664	0.909	1	0.982	0.533	1	0.805	0.983
rs66823108	5.6201E-11	-0.05974	0.00912	-0.05974	0.009116	1.1384E-10	0.47596	0.599686	0.000102	0.007079	0.055046	0.00088	0.07518	0.056435	0.886	0.871	1	0.995	0.97	0.999	0.96	0.955
rs56148300	5.6227E-11	0.0384005	0.00586	0.0379602	0.009295	1.13893E-10	0.69676	0.081983	3.43E-05	0.013355	0.982533	8.9E-05	0.42493	0.000375	0.665	0.91	1	0.982	0.536	1	0.807	0.983
rs12209172	5.6403E-11	0.0349012	0.00533	0.0349012	0.005326	1.14243E-10	0.6473	0.244804	0.002501	0.002162	0.878368	2.4E-05	0.00419	0.083894	0.83	0.893	0.994	0.997	0.657	1	0.986	0.933
rs76872858	5.6422E-11	0.0745293	0.01137	0.074998	0.015545	1.14279E-10	0.98967	0.360915	0.008027	0.000403	0.028125	1.6E-05	0.00285	0.970099	0.74	0.612	0.967	0.999	0.968	1	0.986	0.736
rs12624161	5.6425E-11	0.0361809	0.00552	0.041291	0.009042	1.14285E-10	0.08169	0.004046	0.011918	0.003919	0.000808	0.00017	0.04605	0.472266	0.941	0.975	0.965	0.996	0.996	1	0.966	0.687
rs11885959	5.644E-11	-0.036563	0.00558	-0.036563	0.00558	1.14314E-10	0.38818	0.032987	9.98E-07	0.156633	0.04642	0.00229	0.05253	0.473891	0.884	0.954	1	0.845	0.969	0.994	0.962	0.871
rs12617110	5.6484E-11	-0.036562	0.00558	-0.036562	0.00558	1.14403E-10	0.38818	0.032988	9.99E-07	0.156624	0.04642	0.00229	0.05253	0.473893	0.884	0.954	1	0.845	0.969	0.994	0.962	0.871
rs12617113	5.6484E-11	-0.036562	0.00558	-0.036562	0.00558	1.14403E-10	0.38818	0.032988	9.99E-07	0.156624	0.04642	0.00229	0.05253	0.473893	0.884	0.954	1	0.845	0.969	0.994	0.962	0.871
rs34096628	5.6485E-11	-0.036562	0.00558	-0.036562	0.00558	1.14405E-10	0.38818	0.032988	9.99E-07	0.156615	0.04642	0.00229	0.05253	0.473894	0.884	0.954	1	0.845	0.969	0.994	0.962	0.871
rs9897982	5.6522E-11	0.0383851	0.00586	0.0378775	0.009256	1.14478E-10	0.67653	0.082579	3.42E-05	0.014038	0.995639	8.3E-05	0.43822	0.000399	0.661	0.91	1	0.981	0.545	1	0.803	0.983
rs4462754	5.6538E-11	-0.036561	0.00558	-0.036561	0.00558	1.1451E-10	0.38817	0.032983	9.99E-07	0.156628	0.046416	0.00229	0.05252	0.47415	0.884	0.954	1	0.845	0.969	0.994	0.962	0.87
rs9678336	5.655E-11	-0.036561	0.00558	-0.036561	0.00558	1.14534E-10	0.38817	0.032986	9.99E-07	0.15663	0.046417	0.00229	0.05252	0.474154	0.884	0.954	1	0.845	0.969	0.994	0.962	0.87
rs62305180	5.6606E-11	0.0393949	0.00601	0.0422921	0.007738	1.14644E-10	0.03165	0.342346	0.002538	0.001319	0.000159	0.00216	0.58814	0.080855	0.961	0.904	0.996	0.999	0.998	0.996	0.848	0.949
rs4840461	5.6648E-11	-0.040801	0.00623	-0.040801	0.006227	1.14729E-10	0.12075	0.642878	0.000427	0.019061	0.020469	0.00012	0.03043	0.274944	0.932	0.751	0.999	0.985	0.982	1	0.972	0.906
rs7535626	5.697E-11	-0.05214	0.00796	-0.053817	0.009085	8.79979E-11	0.10437	0.185588	0.000855	1.27E-06	0.108119	0.01061	0.12667	0.538413	0.938	0.923	0.999	1	0.95	0.964	0.943	0.871
rs11075903	5.723E-11	0.0374447	0.00572	0.0382793	0.007526	1.0084E-10	0.01407	0.073088	0.006559	0.284596	0.149331	2E-07	0.05103	0.222939	0.962	0.935	0.97	0.68	0.92	1	0.959	0.902
rs7672199	5.7267E-11	0.0400308	0.00611	0.0400308	0.006111	1.15958E-10	0.1611	0.617565	0.001136	0.000962	0.000676	0.001	0.84616	0.067729	0.921	0.854	0.998	0.999	0.996	0.998	0.767	0.946
rs79489472	5.7358E-11	0.0440057	0.00672	0.0440057	0.006718	1.16138E-10	0.12146	0.041974	0.001777	0.171713	0.023557	2.2E-06	0.2113	0.396952	0.93	0.95	0.997	0.833	0.979	1	0.916	0.883
rs28415895	5.774E-11	0.0400223	0.00611	0.0400223	0.006111	1.16897E-10	0.16008	0.617583	0.001132	0.00095	0.000682	0.00102	0.84353	0.067811	0.921	0.854	0.998	0.999	0.996	0.998	0.768	0.946
rs62097940	5.7754E-11	0.0342854	0.00523	0.0342854	0.005235	1.16924E-10	0.05243	0.88506	0.00017	0.006015	0.141644	0.00014	0.67305	0.034031	0.945	0.815	1	0.994	0.932	1	0.804	0.956
rs9356454	5.7776E-11	0.0454546	0.00694	0.0456657	0.009325	1.16967E-10	0.48457	0.998882	0.000285	0.008497	0.000238	0.00014	0.76559	0.053396	0.639	0.743	0.999	0.989	0.997	1	0.722	0.933
rs12992890	5.7873E-11	-0.036543	0.00558	-0.036543	0.00558	1.1716E-10	0.38537	0.032988	9.99E-07	0.1598	0.04642	0.00229	0.05253	0.473894	0.884	0.954	1	0.841	0.969	0.994	0.962	0.87
rs35149938	5.7885E-11	0.0374867	0.00572	0.0424391	0.008711	1.17184E-10	0.06808	0.003654	0.00808	0.004612	0.000568	0.00039	0.0831	0.876093	0.95	0.978	0.983	0.996	0.997	0.999	0.958	0.792
rs72242462	5.7917E-11	0.0454517	0.00694	0.0456641	0.009326	1.17248E-10	0.48554	0.998939	0.000285	0.008542	0.000237	0.00014	0.76585	0.05325	0.639	0.744	0.999	0.989	0.997	1	0.722	0.933
rs629444	5.7966E-11	-0.060204	0.00919	-0.074562	0.016462	5.01908E-11	0.66074	0.293627	0.005888	1.51E-05	0.001335	0.01241	0.0968	0.000984	0.858	0.907	0.972	1	0.995	0.938	0.952	0.985
rs9678430	5.7974E-11	-0.03654	0.00558	-0.03654	0.00558	1.1736E-10	0.38696	0.032986	9.99E-07	0.159669	0.046416	0.00228	0.05257	0.473885	0.884	0.954	1	0.841	0.969	0.994	0.962	0.87
rs2702576	5.801E-11	-0.034278	0.00523	-0.034278	0.005234	1.17431E-10	0.93072	0.126807	0.008161	0.00761	0.165651	4.4E-06	0.0092	0.218691	0.797	0.93	0.981	0.993	0.928	1	0.984	0.915
rs2156286	5.806E-11	0.0342836	0.00524	0.0342836	0.005235	1.17531E-10	0.14913	0.546277	0.000181	0.006512	0.096505	0.00029	0.13981	0.213823	0.931	0.877	1	0.995	0.955	1	0.942	0.922
rs11729099	5.827E-11	0.0400208	0.00611	0.0400208	0.006112	1.17948E-10	0.14928	0.586835	0.000888	0.001224	0.000834	0.00099	0.84731	0.082851	0.924	0.858	0.999	0.998	0.996	0.998	0.767	0.941
rs9365976	5.8278E-11	0.0454452	0.00694	0.0456552	0.009321	1.17963E-10	0.48521	0.998889	0.000285	0.00856	0.000239	0.00014	0.76566	0.053424	0.639	0.744	0.999	0.989	0.997	1	0.722	0.933
rs9365977	5.8333E-11	0.0454442	0.00694	0.0456542	0.00932	1.18073E-10	0.48522	0.998885	0.000285	0.008561	0.000239	0.00014	0.76567	0.053424	0.639	0.744	0.999	0.989	0.997	1	0.722	0.933
rs56225534	5.8418E-11	0.0454428	0.00694	0.0456521	0.009319	1.18242E-10	0.4852	0.998846	0.000284	0.008565	0.000239	0.00014	0.76578	0.053436	0.639	0.744	0.999	0.989	0.997	1	0.722	0.933
rs1494957	5.8558E-11	-0.033226	0.00507	-0.033226	0.005075	1.1852E-10	0.04299	0.155556	0.00011	0.003595	0.877371	7.8E-05	0.09254	0.899603	0.937	0.901	1	0.995	0.627	1	0.934	0.724
rs1610313	5.8575E-11	0.0454388	0.00694	0.0456111	0.009269	1.18553E-10	0.48298	0.998123	0.00028	0.008744	0.000251	0.00013	0.76696	0.055335	0.638	0.743	0.999	0.989	0.997	1	0.721	0.932
rs1610312	5.8601E-11	0.0454384	0.00694	0.0456115	0.009269	1.18605E-10	0.48302	0.998204	0.000281	0.008736	0.000251	0.00013	0.76696	0.055308	0.638	0.743	0.999	0.989	0.997	1	0.721	0.932
rs9356453	5.8649E-11	0.0454389	0.00694	0.0456453	0.009342	1.18701E-10	0.48359	0.999191	0.000283	0.008828	0.000235	0.00014	0.76558	0.053006	0.639	0.744	0.999	0.989	0.997	1	0.722	0.933
rs1610314	5.8774E-11	0.0454347	0.00694	0.0456099	0.009249	1.18948E-10	0.48744	0.998113	0.00028	0.008786	0.000252	0.00013	0.76738	0.055414	0.639	0.743	0.999	0.989	0.997	1	0.721	0.932
rs1979	5.8916E-11	-0.059566	0.0091	-0.059566	0.009099	1.19231E-10	0.53506	0.558018	0.000123	0.006518	0.057829	0.0009	0.06345	0.051158	0.879	0.876	1	0.995	0.969	0.999	0.963	0.956
rs9365979	5.9287E-11	0.0454273	0.00694	0.045635	0.009316	1.19966E-10	0.48468	0.998704	0.000286	0.008589	0.00024	0.00014	0.76574	0.053687	0.639	0.744	0.999	0.989	0.997	1	0.722	0.933
rs10008839	5.9491E-11	-0.033201	0.00507	-0.033201	0.005073	1.20372E-10	0.0428	0.152726	0.000112	0.003732	0.877639	7.7E-05	0.09269	0.905097	0.937	0.902	1	0.995	0.628	1	0.934	0.725
rs12464988	5.9562E-11	-0.036523	0.00558	-0.036523	0.00558	1.20512E-10	0.36087	0.031872	1.03E-06	0.181438	0.043906	0.00192	0.0571	0.52202	0.885	0.953	1	0.813	0.969	0.995	0.959	0.859
rs11865456	5.9573E-11	0.038953	0.00595	0.04041	0.008162	1.20533E-10	0.0195	0.012318	0.00262	0.331406	0.03	1.5E-06	0.09643	0.594897	0.957	0.962	0.991	0.623	0.973	1	0.94	0.83
rs55827098	5.96E-11	0.0342771	0.00524	0.0342771	0.005237	1.20588E-10	0.13967	0.510979	9.49E-05	0.015521	0.089895	0.00027	0.16257	0.186435	0.933	0.881	1	0.989	0.957	1	0.936	0.927
rs782048344	5.9614E-11	0.0372801	0.0057	0.0368082	0.008214	1.20615E-10	0.2369	0.03669	1.56E-05	0.079448	0.410338	7.7E-05	0.12318	0.007487	0.57	0.938	1	0.901	0.804	1	0.922	0.967
rs112852979	5.9759E-11	0.0400472	0.00612	0.0400472	0.006119	1.20902E-10	0.14604	0.575521	0.000865	0.0012	0.000917	0.00107	0.83001	0.079649	0.925	0.861	0.999	0.999	0.996	0.998	0.773	0.943
rs17387036	5.9956E-11	0.0343414	0.00525	0.0343414	0.005248	1.21294E-10	0.16427	0.663609	0.000105	0.004767	0.154316	0.00034	0.16339	0.207253	0.925	0.857	1	0.996	0.934	1	0.933	0.919
rs11645725	6.0455E-11	0.0374586	0.00573	0.0385581	0.007698	1.05522E-10	0.01329	0.058871	0.007363	0.291156	0.12283	2.3E-07	0.05976	0.204043	0.963	0.94	0.965	0.674	0.932	1	0.955	0.906
rs140647325	6.05E-11	0.0348988	0.00533	0.0348988	0.005334	1.22372E-10	0.678	0.240148	0.00274	0.002438	0.837269	2.5E-05	0.00381	0.076005	0.828	0.896	0.994	0.997	0.677	1	0.987	0.936
rs13401341	6.083E-11	0.0460111	0.00703	0.0460111	0.007034	1.23027E-10	0.13951	0.344127	6.18E-05	0.001067	0.003286	0.01409	0.05885	0.798046	0.93	0.897	1	0.999	0.993	0.95	0.962	0.832
rs9379856	6.1345E-11	-0.059534	0.0091	-0.059534	0.009103	1.24049E-10	0.50966	0.604827	0.000127	0.005995	0.04517	0.00106	0.08373	0.037596	0.883	0.871	1	0.995	0.973	0.999	0.958	0.961

Table S3

rs1355433	6.1598E-11	0.0460051	0.00703	0.0460051	0.007035	1.2455E-10	0.1394	0.342336	6.25E-05	0.001066	0.003304	0.01402	0.05979	0.799842	0.93	0.897	1	0.999	0.993	0.95	0.962	0.832
rs113078366	6.185E-11	0.0399685	0.00611	0.0399685	0.006112	1.2505E-10	0.14838	0.58117	0.000881	0.001215	0.000856	0.00105	0.84419	0.083653	0.924	0.859	0.999	0.998	0.996	0.998	0.769	0.941
rs7652150	6.1875E-11	0.0349041	0.00534	0.0349041	0.005338	1.25099E-10	0.76678	0.379594	0.000263	0.024238	0.335254	2.2E-05	0.01812	0.104057	0.749	0.877	1	0.978	0.86	1	0.975	0.93
rs10808738	6.1891E-11	0.0354863	0.00543	0.0354863	0.005427	1.15661E-10	0.21417	0.857493	3.71E-08	0.03269	0.307157	0.00291	0.34442	0.225546	0.892	0.745	1	0.964	0.853	0.99	0.859	0.891
rs76877263	6.2004E-11	-0.037246	0.0057	-0.036762	0.008249	1.25355E-10	0.23234	0.036699	1.57E-05	0.081244	0.410261	7.7E-05	0.12319	0.007488	0.568	0.938	1	0.898	0.803	1	0.921	0.967
rs35060233	6.2966E-11	0.0453634	0.00694	0.04556	0.009285	1.27261E-10	0.48347	0.99825	0.000287	0.008698	0.000248	0.00014	0.76611	0.054731	0.639	0.744	0.999	0.989	0.997	1	0.722	0.933
rs28512206	6.3396E-11	-0.037226	0.0057	-0.036737	0.008263	1.28113E-10	0.23105	0.036699	1.57E-05	0.082469	0.410261	7.7E-05	0.12319	0.007488	0.567	0.938	1	0.896	0.803	1	0.921	0.967
rs62084752	6.3396E-11	-0.037226	0.0057	-0.036737	0.008263	1.28113E-10	0.23105	0.036699	1.57E-05	0.082469	0.410261	7.7E-05	0.12319	0.007488	0.567	0.938	1	0.896	0.803	1	0.921	0.967
rs6999999	6.3409E-11	0.0354802	0.00543	0.0354802	0.005429	1.17471E-10	0.21352	0.876126	3.45E-08	0.032937	0.307663	0.00301	0.35353	0.233529	0.892	0.748	1	0.963	0.853	0.99	0.857	0.889
rs4452822	6.3518E-11	0.0354642	0.00543	0.0354642	0.005427	1.18306E-10	0.2141	0.856829	3.67E-08	0.032768	0.306265	0.00298	0.34607	0.225737	0.892	0.745	1	0.964	0.854	0.99	0.859	0.891
rs4527450	6.361E-11	0.0399433	0.00611	0.0399433	0.006112	1.28537E-10	0.14841	0.581307	0.000884	0.001242	0.000858	0.00106	0.84299	0.084143	0.924	0.859	0.999	0.998	0.996	0.998	0.769	0.941
rs10896145	6.3872E-11	-0.034189	0.00523	-0.035779	0.00654	1.29057E-10	0.41221	0.031197	0.000183	0.069758	8.53E-05	0.00117	0.38009	0.152344	0.892	0.959	1	0.945	0.998	0.998	0.887	0.932
rs78352159	6.3988E-11	0.037233	0.0057	0.0367815	0.008194	1.29285E-10	0.24999	0.035418	1.63E-05	0.075951	0.436816	8.2E-05	0.12478	0.007255	0.577	0.939	1	0.906	0.794	1	0.921	0.967
rs8072225	6.4326E-11	0.0382703	0.00586	0.0377092	0.009179	1.29956E-10	0.71145	0.084474	3.74E-05	0.013288	0.978522	8.3E-05	0.46212	0.000445	0.667	0.908	1	0.982	0.534	1	0.794	0.982
rs10105184	6.4375E-11	0.0354531	0.00543	0.0354531	0.005427	1.1992E-10	0.21445	0.857247	3.7E-08	0.032853	0.306579	0.00298	0.34666	0.225628	0.892	0.745	1	0.964	0.854	0.99	0.859	0.891
rs4581093	6.4399E-11	0.0354527	0.00543	0.0354527	0.005427	1.19964E-10	0.21445	0.857247	3.7E-08	0.032863	0.306577	0.00298	0.34666	0.225629	0.892	0.745	1	0.964	0.854	0.99	0.859	0.891
rs2113798	6.4406E-11	0.0364414	0.00558	0.0405614	0.008078	1.30113E-10	0.10033	0.006334	0.006001	0.001938	0.002241	0.00082	0.02198	0.688508	0.941	0.974	0.989	0.998	0.995	0.999	0.978	0.755
rs57852066	6.4524E-11	0.0743647	0.01138	0.0687723	0.018663	4.9173E-11	0.06272	0.442945	3.72E-06	0.858212	0.278855	6.5E-07	0.04683	0.8901	0.877	0.724	1	0.031	0.71	1	0.916	0.516
rs6674153	6.4656E-11	-0.051962	0.00795	-0.053463	0.008959	9.99549E-11	0.12107	0.183899	0.000823	1.35E-06	0.115833	0.01129	0.11736	0.52662	0.935	0.923	0.999	1	0.947	0.961	0.946	0.872
rs62097899	6.4987E-11	0.0342022	0.00524	0.0342022	0.005236	1.31263E-10	0.05265	0.883403	0.000182	0.006062	0.141608	0.00015	0.6763	0.034173	0.945	0.815	1	0.994	0.932	1	0.803	0.956
rs17123748	6.5164E-11	-0.036855	0.00564	-0.04057	0.010512	1.30659E-10	0.01636	0.310026	0.004655	0.171054	0.046544	2.7E-06	9.1E-05	0.34185	0.954	0.868	0.978	0.77	0.96	1	0.996	0.576
rs9298088	6.5234E-11	0.0354471	0.00543	0.0354471	0.005427	1.20904E-10	0.21779	0.868711	3.54E-08	0.032455	0.307058	0.00307	0.35146	0.230477	0.891	0.746	1	0.964	0.853	0.989	0.857	0.89
rs6681900	6.5264E-11	-0.051944	0.00795	-0.053407	0.008938	1.01384E-10	0.12021	0.182116	0.00081	1.37E-06	0.112671	0.01124	0.12565	0.535109	0.935	0.923	0.999	1	0.948	0.961	0.943	0.871
rs2419407	6.5329E-11	0.0360603	0.00552	0.0411538	0.009036	1.31941E-10	0.08158	0.004043	0.012091	0.004126	0.000799	0.00018	0.04871	0.473028	0.941	0.975	0.965	0.996	0.996	1	0.965	0.688
rs147179190	6.5573E-11	0.0354375	0.00543	0.0354375	0.005427	1.22022E-10	0.21376	0.85724	3.71E-08	0.0334	0.306579	0.00298	0.34682	0.225632	0.892	0.745	1	0.963	0.854	0.99	0.859	0.891
rs11214594	6.5598E-11	-0.033034	0.00506	-0.033034	0.005058	1.32473E-10	0.72727	0.024433	7.91E-05	0.003893	0.981718	6.2E-05	0.47972	0.084069	0.787	0.942	1	0.995	0.555	1	0.802	0.92
rs55652326	6.6091E-11	0.0580166	0.00889	0.0546643	0.01218	1.3345E-10	0.9002	0.245314	0.001738	4.85E-05	0.561869	4.3E-06	0.25482	0.160385	0.69	0.829	0.992	1	0.664	1	0.826	0.405
rs149661230	6.6183E-11	-0.103296	0.01582	-0.119347	0.022374	1.11952E-10	0.02893	0.069692	0.00941	0.000262	0.006224	0.0055	0.00472	0.219251	0.967	0.956	0.981	1	0.992	0.987	0.989	0.933
rs8057568	6.6287E-11	0.0373851	0.00573	0.0385064	0.007715	1.15705E-10	0.0126	0.063245	0.007718	0.285933	0.134911	2.4E-07	0.05768	0.190606	0.963	0.938	0.964	0.682	0.927	1	0.956	0.91
rs16926933	6.6325E-11	-0.037222	0.0057	-0.038148	0.006954	1.33914E-10	0.56036	0.306875	1.17E-05	0.00936	0.144433	0.0053	0.01028	0.00711	0.726	0.897	1	0.992	0.933	0.985	0.982	0.974
rs4382514	6.6349E-11	0.0354284	0.00543	0.0354284	0.005427	1.2326E-10	0.21392	0.85875	3.69E-08	0.033402	0.307429	0.00302	0.34634	0.224992	0.892	0.745	1	0.963	0.853	0.99	0.859	0.891
rs4507804	6.637E-11	0.0354281	0.00543	0.0354281	0.005427	1.23306E-10	0.21368	0.858785	3.69E-08	0.033412	0.307407	0.00302	0.34636	0.225	0.892	0.745	1	0.963	0.853	0.99	0.859	0.891
rs11996031	6.64E-11	0.0354277	0.00543	0.0354277	0.005427	1.23362E-10	0.21393	0.858785	3.69E-08	0.033408	0.307407	0.00302	0.34636	0.225	0.892	0.745	1	0.963	0.853	0.99	0.859	0.891
rs188173485	6.6417E-11	0.0743354	0.01139	0.0687398	0.018578	5.48672E-11	0.05114	0.46167	3.26E-06	0.900234	0.293062	8.3E-07	0.05117	0.861805	0.885	0.716	1	0.036	0.698	1	0.911	0.506
rs34652711	6.6422E-11	0.0354318	0.00543	0.0354318	0.005427	1.23047E-10	0.21408	0.866334	3.58E-08	0.033135	0.307148	0.00306	0.35056	0.229326	0.891	0.746	1	0.963	0.853	0.989	0.857	0.89
rs11985376	6.6455E-11	0.0354272	0.00543	0.0354272	0.005427	1.23452E-10	0.21393	0.858815	3.69E-08	0.033405	0.307422	0.00302	0.34649	0.225135	0.892	0.745	1	0.963	0.853	0.99	0.859	0.891
rs6817225	6.6565E-11	-0.033105	0.00507	-0.033105	0.005071	1.34389E-10	0.04315	0.150908	0.000119	0.003834	0.876449	8E-05	0.09292	0.907469	0.937	0.902	1	0.995	0.63	1	0.934	0.727
rs4549814	6.6566E-11	0.0354306	0.00543	0.0354306	0.005427	1.23229E-10	0.21427	0.867951	3.56E-08	0.033095	0.307187	0.00308	0.35131	0.230281	0.891	0.746	1	0.963	0.853	0.989	0.857	0.89
rs12681856	6.6596E-11	0.0354303	0.00543	0.0354303	0.005427	1.23287E-10	0.21435	0.868392	3.56E-08	0.033105	0.307208	0.00307	0.35163	0.230513	0.891	0.746	1	0.963	0.853	0.989	0.857	0.89
rs59030950	6.698E-11	0.0342017	0.00524	0.0343326	0.005437	1.3521E-10	0.10367	0.010442	0.000861	0.02484	0.048071	8.1E-05	0.92979	0.025111	0.938	0.969	0.999	0.981	0.971	1	0.759	0.965
rs11659401	6.7105E-11	0.0341717	0.00524	0.0341717	0.005235	1.35456E-10	0.17216	0.526994	0.000204	0.006236	0.099949	0.00032	0.13522	0.18609	0.927	0.879	1	0.995	0.954	1	0.943	0.927
rs113909596	6.7192E-11	0.0953165	0.0146	0.0953165	0.014604	1.35629E-10	0.22562	0.883367	0.001547	0.109629	0.097541	1.6E-07	0.1383	0.693908	0.892	0.793	0.997	0.881	0.938	1	0.922	0.814
rs2513657	6.7389E-11	-0.034155	0.00523	-0.035855	0.006639	1.36019E-10	0.41032	0.029643	0.000176	0.080404	8.67E-05	0.00112	0.3769	0.14633	0.892	0.959	1	0.935	0.998	0.998	0.887	0.933
rs7197486	6.7526E-11	0.0386474	0.00592	0.0398112	0.007799	1.36291E-10	0.02363	0.009511	0.003106	0.239749	0.030409	2.1E-06	0.11008	0.741132	0.957	0.967	0.991	0.747	0.975	1	0.94	0.82
rs12550244	6.7811E-11	0.0402644	0.00617	0.0403079	0.006283	1.36854E-10	0.07516	0.425052	0.000395	0.109467	0.010362	5.2E-05	0.02221	0.107835	0.937	0.684	0.999	0.892	0.986	1	0.974	0.932
rs58060922	6.7979E-11	-0.071746	0.011	-0.071746	0.010996	1.37187E-10	0.74847	0.930756	0.000955	0.000979	0.232429	0.0003	0.02672	0.008803	0.839	0.813	0.999	0.999	0.906	1	0.973	0.97
rs12521161	6.816E-11	0.0365622	0.0056	0.0365622	0.005604	1.37544E-10	0.22617	0.279871	0.009119	0.001293	0.004647	4.3E-05	0.09723	0.826555	0.91	0.901	0.977	0.998	0.991	1	0.947	0.764
rs71557332	6.8176E-11	-0.059348	0.0091	-0.059348	0.009096	1.37577E-10	0.48865	0.609476	0.000112	0.006582	0.05639	0.00103	0.07225	0.052939	0.885	0.87	1	0.995	0.969	0.999	0.961	0.956
rs215903	6.8344E-11	0.0425725	0.00653	0.0425725	0.006525	1.37909E-10	0.26374	0.913466	9.54E-05	0.019563	0.011856	0.00048	0.09173	0.284014	0.909	0.825	1	0.985	0.987	0.999	0.952	0.907
rs4146949	6.8442E-11	0.0457093	0.00701	0.0457093	0.007006	1.38103E-10	0.13417	0.340409	7.79E-05	0.000751	0.003318	0.01707	0.05116	0.796717	0.93	0.896	1	0.999	0.993	0.933	0.964	0.83
rs10171674	6.8469E-11	0.0457084	0.00701	0.0457084	0.007006	1.38155E-10	0.13299	0.340411	7.79E-05	0.000756	0.003318	0.01707	0.05116	0.79672	0.93	0.896	1	0.999	0.993	0.933	0.964	0.83
rs2200865	6.8509E-11	0.045708	0.00701	0.045708	0.007006	1.38234E-10	0.133	0.340395	7.79E-05	0.000756	0.00332	0.01707	0.05116	0.796694	0.93	0.896	1	0.999	0.993	0.933	0.964	0.83
rs2702560	6.873E-11	-0.034198	0.00524	-0.034198	0.005242	1.38671E-10	0.93764	0.127396	0.008331	0.007676	0.166058	4.8E-06	0.01038	0.2179	0.799	0.929	0.981	0.993	0.928	1	0.982	0.915
rs10200499	6.884E-11	0.0457026	0.00701	0.0457026	0.007006	1.3889E-10	0.13306	0.340138	7.81E-05	0.000757	0.003319	0.01709	0.05117	0.796795	0.93	0.897	1	0.999	0.993	0.933	0.964	0.83
rs10187223	6.8843E-11	0.0457025	0.00701	0.0457025	0.007006	1.38895E-10	0.13306	0.340138	7.81E-05	0.000757	0.003319	0.01709	0.05117	0.796795	0.93	0.897	1	0.999	0.993	0.933	0.964	0.83

Table S3

rs10210267	6.8843E-11	0.0457025	0.00701	0.0457025	0.007006	1.38895E-10	0.13306	0.340138	7.81E-05	0.000757	0.003319	0.01709	0.05117	0.796795	0.93	0.897	1	0.999	0.993	0.933	0.964	0.83
rs16837228	6.8854E-11	0.0457024	0.00701	0.0457024	0.007006	1.38917E-10	0.13306	0.340138	7.81E-05	0.000757	0.003319	0.01709	0.05117	0.796797	0.93	0.897	1	0.999	0.993	0.933	0.964	0.83
rs1473222	6.8893E-11	0.0377458	0.00579	0.0426404	0.008601	1.38995E-10	0.12296	0.041228	0.004875	0.063958	0.016017	0.00017	9.5E-05	0.487427	0.941	0.959	0.992	0.955	0.987	1	0.997	0.891
rs1104893	6.8996E-11	0.0331285	0.00508	0.0329419	0.006315	1.39198E-10	0.01167	0.065631	0.003128	0.014135	0.091997	1.3E-06	0.63554	0.604565	0.959	0.93	0.992	0.985	0.94	1	0.565	0.823
rs11986615	6.9234E-11	0.035397	0.00543	0.035397	0.005427	1.28582E-10	0.21383	0.855506	3.78E-08	0.033441	0.306422	0.00306	0.34756	0.227029	0.891	0.744	1	0.963	0.854	0.989	0.858	0.891
rs2130343	6.9506E-11	0.0456927	0.00701	0.0456927	0.007006	1.40207E-10	0.1333	0.340151	7.85E-05	0.000754	0.003327	0.01714	0.0512	0.796845	0.93	0.896	1	0.999	0.993	0.933	0.964	0.83
rs2372362	6.9545E-11	-0.0398	0.0061	-0.039935	0.008217	1.40284E-10	0.35874	0.006817	0.009146	0.019553	0.025601	7E-07	0.32189	0.294297	0.647	0.967	0.971	0.981	0.975	1	0.875	0.886
rs34494800	6.9924E-11	0.0456933	0.00701	0.0456933	0.007007	1.41033E-10	0.133	0.339253	7.86E-05	0.000755	0.003349	0.01712	0.05166	0.797146	0.93	0.897	1	0.999	0.993	0.933	0.964	0.83
rs16837888	7.0162E-11	0.0456891	0.00701	0.0456891	0.007007	1.41503E-10	0.13256	0.326459	7E-05	0.001004	0.003284	0.01684	0.04648	0.803889	0.931	0.899	1	0.999	0.993	0.935	0.966	0.83
rs56262979	7.022E-11	-0.048625	0.00746	-0.048625	0.007458	1.41619E-10	0.57004	0.619968	5.05E-05	0.021503	0.104929	0.00196	0.01896	0.002541	0.875	0.869	1	0.985	0.953	0.997	0.98	0.981
rs28631938	7.0239E-11	0.0456796	0.00701	0.0456796	0.007006	1.41657E-10	0.13575	0.340138	7.81E-05	0.000769	0.003319	0.01709	0.05117	0.796795	0.93	0.896	1	0.999	0.993	0.934	0.964	0.83
rs56167101	7.0253E-11	-0.048624	0.00746	-0.048624	0.007458	1.41683E-10	0.57003	0.619967	5.05E-05	0.021502	0.10493	0.00196	0.01896	0.002541	0.875	0.869	1	0.985	0.953	0.997	0.98	0.981
rs6686676	7.0488E-11	-0.051851	0.00795	-0.053409	0.009002	1.08267E-10	0.11999	0.18212	0.000845	1.34E-06	0.112549	0.01159	0.12561	0.53507	0.934	0.923	0.999	1	0.948	0.96	0.943	0.87
rs6681796	7.0525E-11	-0.051851	0.00795	-0.05341	0.009003	1.08297E-10	0.11999	0.182132	0.000844	1.34E-06	0.11255	0.0116	0.12563	0.535113	0.934	0.923	0.999	1	0.948	0.959	0.943	0.87
rs6681797	7.0525E-11	-0.051851	0.00795	-0.05341	0.009003	1.08297E-10	0.11999	0.182132	0.000844	1.34E-06	0.11255	0.0116	0.12563	0.535113	0.934	0.923	0.999	1	0.948	0.959	0.943	0.87
rs7683782	7.0577E-11	-0.046867	0.00719	-0.046867	0.007189	1.42325E-10	0.09819	0.429172	0.002029	0.02481	0.199675	5.2E-05	0.00084	0.364758	0.941	0.892	0.997	0.982	0.925	1	0.994	0.9
rs814421	7.075E-11	0.0400834	0.00615	0.0400834	0.006149	1.42665E-10	0.14338	0.680861	0.000495	0.024209	0.074962	8.2E-05	0.02769	0.07165	0.928	0.763	0.999	0.981	0.96	1	0.973	0.947
rs148582489	7.0828E-11	0.0442243	0.00678	0.0442243	0.006784	1.4282E-10	0.29882	0.057867	0.001764	0.267286	0.058693	8.6E-07	0.07522	0.277979	0.887	0.939	0.996	0.709	0.959	1	0.949	0.891
rs35060524	7.0941E-11	0.0353745	0.00543	0.0353745	0.005427	1.31344E-10	0.21951	0.858814	3.69E-08	0.035038	0.307425	0.00302	0.34649	0.225136	0.89	0.745	1	0.961	0.853	0.99	0.858	0.891
rs2702561	7.0966E-11	-0.034169	0.00524	-0.034169	0.005242	1.43093E-10	0.94786	0.127191	0.008288	0.008352	0.165942	4.7E-06	0.01017	0.21813	0.8	0.93	0.981	0.993	0.929	1	0.983	0.916
rs71386932	7.1081E-11	0.0373356	0.00573	0.0384454	0.007718	1.25202E-10	0.01246	0.0574	0.00749	0.287882	0.135464	2.6E-07	0.05961	0.209243	0.963	0.94	0.965	0.681	0.927	1	0.955	0.905
rs6681902	7.1135E-11	-0.05184	0.00795	-0.053396	0.009	1.09273E-10	0.12001	0.182101	0.000848	1.35E-06	0.112653	0.01161	0.12561	0.535033	0.934	0.923	0.999	1	0.948	0.96	0.943	0.87
rs72694244	7.1247E-11	-0.048605	0.00746	-0.048605	0.007457	1.4365E-10	0.57584	0.621513	5.1E-05	0.021286	0.104737	0.00197	0.01906	0.002563	0.874	0.869	1	0.985	0.953	0.997	0.98	0.981
rs34489362	7.1589E-11	-0.051829	0.00795	-0.053618	0.009162	1.07516E-10	0.11649	0.181535	0.000909	1.2E-06	0.113266	0.01168	0.12529	0.533657	0.935	0.923	0.998	1	0.947	0.959	0.943	0.871
rs6689428	7.1701E-11	-0.051831	0.00795	-0.053398	0.009007	1.10023E-10	0.11995	0.181822	0.000857	1.34E-06	0.112681	0.01161	0.12556	0.534502	0.934	0.923	0.999	1	0.948	0.96	0.943	0.87
rs7202840	7.1744E-11	0.0373249	0.00573	0.0384226	0.007704	1.26662E-10	0.01271	0.055976	0.007449	0.287698	0.135167	2.6E-07	0.0604	0.210101	0.963	0.941	0.966	0.682	0.927	1	0.955	0.905
rs2200866	7.1856E-11	0.0456573	0.00701	0.0456573	0.007006	1.44851E-10	0.13302	0.34061	7.98E-05	0.000754	0.003341	0.01731	0.05144	0.797444	0.93	0.896	1	0.999	0.993	0.933	0.964	0.83
rs16837885	7.2399E-11	0.045654	0.00701	0.045654	0.007007	1.45925E-10	0.13062	0.348124	7.7E-05	0.00085	0.003249	0.01699	0.05046	0.79514	0.931	0.896	1	0.999	0.993	0.935	0.965	0.83
rs72915846	7.2514E-11	0.0456524	0.00701	0.0456524	0.007007	1.46152E-10	0.13061	0.348429	7.7E-05	0.000849	0.003254	0.017	0.05046	0.795122	0.931	0.895	1	0.999	0.993	0.935	0.965	0.83
rs149735550	7.2579E-11	0.0341682	0.00524	0.0341682	0.005244	1.4628E-10	0.15157	0.657748	0.000156	0.004779	0.153728	0.0003	0.16235	0.196673	0.928	0.858	1	0.996	0.935	1	0.934	0.922
rs7661334	7.2851E-11	-0.046835	0.00719	-0.046835	0.007189	1.46817E-10	0.0885	0.450098	0.00197	0.024389	0.199483	5.8E-05	0.00076	0.385847	0.943	0.889	0.997	0.983	0.924	1	0.994	0.897
rs814427	7.2938E-11	-0.040033	0.00615	-0.040033	0.006145	1.4699E-10	0.26844	0.88082	0.000365	0.021035	0.031313	0.00023	0.01417	0.146492	0.91	0.799	1	0.984	0.977	1	0.981	0.932
rs1933638	7.3128E-11	0.0611426	0.00939	0.0654624	0.020321	1.18242E-11	0.00135	0.951728	0.038757	2.73E-08	0.000924	0.0052	0.52392	0.829345	0.977	0.482	0.443	1	0.993	0.602	0.263	0.512
rs12090318	7.3315E-11	-0.051803	0.00795	-0.053384	0.009016	1.12342E-10	0.11995	0.181717	0.000874	1.34E-06	0.112833	0.01163	0.12546	0.53421	0.934	0.923	0.999	1	0.948	0.96	0.943	0.871
rs34897669	7.3438E-11	0.0452541	0.00695	0.0454539	0.009362	1.47977E-10	0.46782	0.998961	0.000313	0.009244	0.000249	0.00014	0.7626	0.053308	0.636	0.744	0.999	0.989	0.997	1	0.724	0.933
rs149019403	7.3756E-11	0.0389907	0.00599	0.0389907	0.005987	1.48605E-10	0.5331	0.17008	0.000208	0.004167	0.111117	0.00508	0.0017	0.048343	0.886	0.932	1	0.997	0.955	0.99	0.993	0.96
rs7685796	7.3799E-11	-0.046812	0.00719	-0.046812	0.007188	1.48691E-10	0.09118	0.450266	0.001969	0.024292	0.199847	5.8E-05	0.00076	0.384597	0.942	0.889	0.997	0.983	0.924	1	0.994	0.897
rs9295286	7.4061E-11	-0.033105	0.00508	-0.033105	0.005083	1.49207E-10	0.55229	0.630013	8.38E-05	0.000622	0.434657	0.00098	0.01958	0.420309	0.851	0.84	1	0.999	0.826	0.998	0.973	0.869
rs4307728	7.4134E-11	-0.034063	0.00523	-0.035514	0.006419	1.49353E-10	0.428	0.034237	0.000203	0.073404	9.36E-05	0.00117	0.34389	0.146115	0.891	0.957	1	0.942	0.998	0.998	0.896	0.934
rs149882971	7.4201E-11	-0.062953	0.00967	-0.062953	0.009667	1.49485E-10	0.88931	0.408375	0.002925	0.002175	0.088812	6.2E-05	0.17018	0.01058	0.826	0.889	0.996	0.998	0.956	1	0.932	0.973
rs918876	7.4291E-11	-0.036555	0.00561	-0.050704	0.01188	5.29973E-12	0.4445	0.026503	0.018628	4.45E-06	7.81E-06	0.0456	0.06193	0.057293	0.664	0.938	0.235	1	1	0.178	0.884	0.908
rs2048426	7.4466E-11	0.0330584	0.00508	0.0328849	0.006523	1.50008E-10	0.00971	0.062102	0.003498	0.013853	0.094158	1.3E-06	0.6292	0.631588	0.961	0.931	0.991	0.985	0.939	1	0.562	0.817
rs35170928	7.4581E-11	0.0330665	0.00508	0.0328773	0.006308	1.50235E-10	0.01187	0.066985	0.003095	0.014856	0.089741	1.4E-06	0.62492	0.595819	0.959	0.93	0.992	0.984	0.941	1	0.561	0.824
rs12921279	7.46E-11	0.0385844	0.00593	0.0397262	0.007796	1.50272E-10	0.02809	0.008759	0.003262	0.244	0.030246	2E-06	0.10772	0.749601	0.954	0.968	0.991	0.743	0.975	1	0.94	0.818
rs2377013	7.4636E-11	0.0330659	0.00508	0.0328767	0.006308	1.50343E-10	0.01187	0.066983	0.003096	0.014852	0.089764	1.4E-06	0.62487	0.595829	0.959	0.93	0.992	0.984	0.941	1	0.561	0.824
rs72800614	7.4641E-11	-0.080439	0.01235	-0.080439	0.012354	1.50353E-10	0.09097	0.261554	7.41E-05	0.00874	0.040157	0.00357	0.02814	0.352852	0.948	0.92	1	0.994	0.977	0.994	0.977	0.908
rs2793377	7.4842E-11	0.0330638	0.00508	0.0328741	0.006313	1.5075E-10	0.01182	0.066977	0.003097	0.014918	0.089706	1.4E-06	0.62464	0.596137	0.959	0.93	0.992	0.984	0.941	1	0.561	0.824
rs6673742	7.5452E-11	-0.051765	0.00795	-0.053486	0.009112	1.14016E-10	0.11839	0.181449	0.000925	1.26E-06	0.113392	0.0117	0.12521	0.533425	0.935	0.923	0.998	1	0.947	0.959	0.943	0.871
rs66511457	7.5609E-11	-0.051763	0.00795	-0.053486	0.009113	1.14231E-10	0.1184	0.181439	0.000927	1.26E-06	0.113434	0.0117	0.1252	0.533386	0.935	0.923	0.998	1	0.947	0.959	0.943	0.871
rs78351802	7.5624E-11	0.0389529	0.00598	0.0389529	0.005984	1.52294E-10	0.53132	0.168353	0.000223	0.004177	0.113241	0.00499	0.00167	0.045653	0.887	0.933	1	0.997	0.954	0.99	0.993	0.961
rs35535529	7.5709E-11	0.0385665	0.00593	0.0399433	0.008027	1.52463E-10	0.02204	0.008838	0.003257	0.265187	0.031461	2E-06	0.10682	0.721387	0.957	0.967	0.99	0.715	0.974	1	0.939	0.819
rs12447094	7.5754E-11	0.0372742	0.00573	0.0383799	0.007725	1.32978E-10	0.01263	0.057252	0.007524	0.292619	0.137238	2.6E-07	0.05958	0.211218	0.963	0.94	0.965	0.676	0.925	1	0.955	0.904
rs11047571	7.5866E-11	-0.080025	0.0123	-0.080025	0.012295	1.52773E-10	0.71742	0.17417	9.03E-05	0.006349	0.143411	0.00077	0.05078	0.047012	0.759	0.921	1	0.995	0.936	0.999	0.964	0.954
rs2249844	7.5929E-11	0.0330512	0.00508	0.0328585	0.006328	1.52896E-10	0.01173	0.067293	0.003104	0.015239	0.089283	1.4E-06	0.62165	0.593631	0.959	0.929	0.992	0.984	0.941	1	0.56	0.824
rs11679836	7.5979E-11	0.0389469	0.00598	0.0389469	0.005984	1.52995E-10	0.52715	0.168389	0.000226	0.004181	0.113614	0.00498	0.00167	0.045546	0.887	0.933	1	0.997	0.954	0.991	0.993	0.961

Table S3

rs7535917	7.6062E-11	-0.051756	0.00795	-0.05348	0.009115	1.14879E-10	0.11839	0.181423	0.000929	1.26E-06	0.113578	0.01172	0.12517	0.533317	0.935	0.923	0.998	1	0.947	0.959	0.943	0.871
rs7528464	7.6178E-11	-0.051753	0.00795	-0.05347	0.009112	1.14754E-10	0.12263	0.181423	0.000929	1.23E-06	0.113578	0.01171	0.12517	0.533323	0.934	0.923	0.998	1	0.947	0.959	0.943	0.871
rs7538217	7.6218E-11	-0.051753	0.00795	-0.053478	0.009115	1.1511E-10	0.11838	0.181422	0.000929	1.26E-06	0.113688	0.01172	0.12517	0.533306	0.935	0.923	0.998	1	0.947	0.959	0.943	0.871
rs1872324	7.6405E-11	0.0340984	0.00524	0.0342213	0.005431	1.53835E-10	0.10948	0.010451	0.000861	0.027694	0.047945	8E-05	0.92945	0.02514	0.937	0.969	0.999	0.979	0.971	1	0.759	0.964
rs1334035	7.6595E-11	-0.046656	0.00717	-0.046656	0.00717	1.5421E-10	0.52181	0.591245	0.000115	0.017306	0.07192	0.00181	0.01281	0.005907	0.884	0.876	1	0.988	0.965	0.997	0.983	0.978
rs12094685	7.6685E-11	-0.051746	0.00795	-0.053468	0.009113	1.15844E-10	0.11837	0.181414	0.00093	1.26E-06	0.113994	0.01174	0.12516	0.533273	0.935	0.923	0.998	1	0.947	0.959	0.943	0.871
rs2702565	7.6685E-11	-0.034092	0.00524	-0.034092	0.005239	1.54389E-10	0.93033	0.12591	0.00877	0.007874	0.16112	5.2E-06	0.0099	0.218339	0.798	0.93	0.98	0.993	0.93	1	0.983	0.915
rs62305178	7.6818E-11	0.0389914	0.00599	0.0419549	0.007816	1.54651E-10	0.04643	0.509713	0.002005	0.001182	9.95E-05	0.00325	0.55507	0.088927	0.954	0.881	0.997	0.999	0.998	0.994	0.852	0.946
rs5023021	7.6841E-11	-0.04681	0.00719	-0.04681	0.007194	1.54697E-10	0.65911	0.424194	0.000115	0.016328	0.093375	0.00138	0.0209	0.005676	0.867	0.895	1	0.989	0.958	0.998	0.979	0.978
rs12091007	7.6917E-11	-0.051742	0.00795	-0.053463	0.009112	1.16213E-10	0.11835	0.181411	0.00093	1.26E-06	0.11411	0.01174	0.12515	0.53326	0.935	0.923	0.998	1	0.947	0.959	0.943	0.871
rs12927458	7.6924E-11	0.0332572	0.00511	0.0332572	0.005111	1.54859E-10	0.9487	0.029634	0.001383	0.025406	0.060044	0.00012	0.00714	0.17529	0.83	0.961	0.998	0.982	0.969	1	0.987	0.931
rs11421226	7.6924E-11	-0.09164	0.01408	-0.09164	0.014084	1.5486E-10	0.89938	0.737461	0.001014	6.25E-05	0.021383	0.00399	0.04221	0.032634	0.795	0.843	0.999	1	0.981	0.991	0.968	0.96
rs7541394	7.6925E-11	-0.051742	0.00795	-0.053463	0.009112	1.16227E-10	0.11835	0.181411	0.00093	1.26E-06	0.114161	0.01174	0.12515	0.533243	0.935	0.923	0.998	1	0.947	0.959	0.943	0.871
rs7541479	7.6952E-11	-0.051742	0.00795	-0.053462	0.009112	1.16266E-10	0.11835	0.181415	0.00093	1.27E-06	0.114181	0.01175	0.12515	0.533245	0.935	0.923	0.998	1	0.947	0.959	0.943	0.871
rs7541560	7.6973E-11	-0.051742	0.00795	-0.053461	0.009112	1.16307E-10	0.11835	0.181415	0.00093	1.27E-06	0.114181	0.01175	0.12515	0.533245	0.935	0.923	0.998	1	0.947	0.959	0.943	0.871
rs2408311	7.6989E-11	0.0364805	0.00561	0.0364805	0.005607	1.54989E-10	0.22007	0.250919	0.009666	0.001477	0.00425	4.5E-05	0.10178	0.827212	0.911	0.906	0.976	0.998	0.992	1	0.946	0.765
rs9817547	7.7197E-11	0.0346461	0.00533	0.0346461	0.005325	1.55398E-10	0.70878	0.542863	0.000217	0.020889	0.276564	3.2E-05	0.01946	0.125206	0.736	0.851	1	0.98	0.878	1	0.973	0.923
rs2666427	7.7289E-11	0.033037	0.00508	0.0328457	0.006335	1.55581E-10	0.01154	0.067443	0.003088	0.01542	0.089097	1.4E-06	0.62119	0.593689	0.959	0.929	0.992	0.983	0.941	1	0.56	0.824
rs113954731	7.7348E-11	0.0578414	0.00889	0.0544451	0.012241	1.55697E-10	0.89279	0.243418	0.00169	4.92E-05	0.572786	5.3E-06	0.24843	0.152938	0.692	0.829	0.992	1	0.659	1	0.829	0.402
rs13387779	7.7423E-11	-0.047157	0.00725	-0.047157	0.007249	1.55845E-10	0.51939	0.885498	0.000229	0.010779	0.005847	0.00024	0.37009	0.114044	0.866	0.818	1	0.991	0.99	1	0.878	0.933
rs146762167	7.7433E-11	-0.117734	0.0181	-0.133129	0.02787	1.55864E-10	0.46779	0.03388	0.001204	0.014272	0.008323	0.00135	0.0001	0.886872	0.888	0.959	0.999	0.99	0.989	0.998	0.996	0.827
rs2513659	7.7466E-11	-0.034028	0.00523	-0.035448	0.006403	1.55929E-10	0.428	0.035241	0.000197	0.073402	9.42E-05	0.00121	0.35055	0.148155	0.89	0.957	1	0.942	0.998	0.998	0.894	0.933
rs4437694	7.7519E-11	0.0353122	0.00543	0.0353122	0.005428	1.4339E-10	0.21427	0.869398	3.89E-08	0.033098	0.316956	0.00317	0.35849	0.233505	0.891	0.746	1	0.963	0.849	0.989	0.855	0.889
rs1828445	7.7602E-11	0.0330335	0.00508	0.0328418	0.006339	1.56198E-10	0.01148	0.067443	0.003086	0.015516	0.089107	1.4E-06	0.62118	0.593703	0.959	0.929	0.992	0.983	0.941	1	0.56	0.824
rs1865222	7.7624E-11	0.0330333	0.00508	0.0328417	0.006339	1.56242E-10	0.01148	0.067443	0.003088	0.015514	0.089097	1.4E-06	0.62119	0.593691	0.959	0.929	0.992	0.983	0.941	1	0.56	0.824
rs1865221	7.7625E-11	0.0330333	0.00508	0.0328417	0.006339	1.56243E-10	0.01148	0.067444	0.003088	0.015514	0.089097	1.4E-06	0.62118	0.593689	0.959	0.929	0.992	0.983	0.941	1	0.56	0.824
rs2793654	7.7627E-11	0.0330332	0.00508	0.0328417	0.006339	1.56247E-10	0.01148	0.067444	0.003089	0.01551	0.089098	1.4E-06	0.62119	0.593695	0.959	0.929	0.992	0.983	0.941	1	0.56	0.824
rs1828446	7.7751E-11	0.033032	0.00508	0.03284	0.006339	1.56492E-10	0.01149	0.067443	0.003087	0.015548	0.089108	1.4E-06	0.62117	0.593707	0.959	0.929	0.992	0.983	0.941	1	0.56	0.824
rs2695235	7.7804E-11	0.0330314	0.00508	0.03284	0.00634	1.56596E-10	0.01148	0.067445	0.003092	0.015527	0.089079	1.4E-06	0.62123	0.593655	0.959	0.929	0.992	0.983	0.941	1	0.56	0.824
rs1931399	7.7836E-11	-0.038604	0.00593	-0.038604	0.005935	1.5666E-10	0.59771	0.347581	1.41E-05	0.000508	0.275946	0.00836	0.04048	0.027972	0.716	0.881	1	0.999	0.879	0.968	0.964	0.956
rs1397550	7.7932E-11	0.0330301	0.00508	0.0328383	0.006338	1.5685E-10	0.01149	0.067413	0.003086	0.01557	0.089077	1.4E-06	0.62134	0.593924	0.959	0.929	0.992	0.983	0.941	1	0.56	0.824
rs946150	7.8018E-11	-0.051726	0.00795	-0.053442	0.00911	1.17906E-10	0.11831	0.181421	0.000931	1.27E-06	0.114927	0.01178	0.12517	0.53321	0.935	0.923	0.998	1	0.947	0.959	0.943	0.871
rs7545261	7.8097E-11	-0.051724	0.00795	-0.05344	0.00911	1.18041E-10	0.1183	0.181408	0.000931	1.27E-06	0.114976	0.01179	0.12516	0.533189	0.935	0.923	0.998	1	0.947	0.959	0.943	0.871
rs946149	7.8145E-11	-0.051724	0.00795	-0.05344	0.00911	1.18108E-10	0.1183	0.18141	0.000931	1.27E-06	0.114995	0.01179	0.12516	0.533198	0.935	0.923	0.998	1	0.947	0.959	0.943	0.871
rs1890333	7.8173E-11	-0.051723	0.00795	-0.053439	0.00911	1.18149E-10	0.1183	0.181413	0.000931	1.27E-06	0.115016	0.01179	0.12517	0.533199	0.935	0.923	0.998	1	0.947	0.959	0.943	0.871
rs6426273	7.8227E-11	-0.051722	0.00795	-0.053437	0.009109	1.18254E-10	0.1183	0.181413	0.000931	1.28E-06	0.115068	0.01179	0.12516	0.533182	0.935	0.923	0.998	1	0.947	0.959	0.943	0.871
rs6426274	7.8243E-11	-0.051722	0.00795	-0.053436	0.009108	1.18285E-10	0.11829	0.181413	0.000931	1.28E-06	0.115068	0.01179	0.12516	0.533182	0.935	0.923	0.998	1	0.947	0.959	0.943	0.871
rs61824823	7.8335E-11	0.0334577	0.00514	0.0334577	0.005144	1.57644E-10	0.50417	0.076732	0.000145	0.006026	0.022953	6.2E-05	0.22298	0.436777	0.643	0.917	1	0.992	0.972	1	0.882	0.6
rs11726563	7.8376E-11	0.0391239	0.00602	0.0412789	0.00737	1.57725E-10	0.03502	0.400651	0.002292	0.001281	0.000244	0.00221	0.64364	0.085589	0.958	0.895	0.997	0.999	0.998	0.996	0.833	0.947
rs9938500	7.8429E-11	0.0332186	0.00511	0.0332186	0.005108	1.5783E-10	0.96346	0.029556	0.001458	0.025063	0.056153	0.00012	0.00649	0.175311	0.828	0.961	0.998	0.983	0.97	1	0.987	0.931
rs12448086	7.8458E-11	0.0385337	0.00593	0.0399328	0.008063	1.57887E-10	0.02195	0.008698	0.003282	0.26306	0.030169	2E-06	0.10963	0.750204	0.957	0.967	0.99	0.717	0.974	1	0.938	0.814
rs1865220	7.8689E-11	0.0330236	0.00508	0.0328309	0.00634	1.58343E-10	0.0115	0.067444	0.00309	0.015707	0.089087	1.4E-06	0.62121	0.593667	0.959	0.929	0.992	0.983	0.941	1	0.56	0.824
rs6862425	7.8748E-11	0.0364403	0.0056	0.0364403	0.005604	1.58458E-10	0.22901	0.274419	0.009314	0.001425	0.004504	4.3E-05	0.10732	0.833404	0.909	0.902	0.977	0.998	0.991	1	0.944	0.765
rs1418131	7.8844E-11	0.0334122	0.00514	0.0334122	0.005138	1.58649E-10	0.56477	0.084617	0.000142	0.007684	0.014152	7.9E-05	0.17044	0.371378	0.661	0.916	1	0.99	0.979	1	0.901	0.582
rs3924835	7.9096E-11	0.0435454	0.0067	0.0463362	0.009275	1.59146E-10	0.31561	0.532401	2.3E-05	0.410376	0.000821	0.00115	0.00558	0.096351	0.867	0.828	1	0.509	0.995	0.995	0.983	0.923
rs12092502	7.9122E-11	-0.051709	0.00795	-0.053421	0.009108	1.19614E-10	0.11827	0.181404	0.000932	1.28E-06	0.115612	0.01182	0.12517	0.533155	0.935	0.923	0.998	1	0.947	0.959	0.943	0.871
rs2888389	7.9153E-11	-0.032997	0.00507	-0.032997	0.005075	1.55701E-10	0.95384	0.405879	0.007984	0.017985	0.23528	1E-07	0.0256	0.94116	0.775	0.859	0.973	0.98	0.881	1	0.966	0.767
rs12082560	7.9158E-11	-0.051708	0.00795	-0.053421	0.009108	1.1967E-10	0.11827	0.181406	0.000932	1.28E-06	0.115686	0.01182	0.12516	0.53314	0.935	0.923	0.998	1	0.947	0.959	0.943	0.871
rs12087830	7.9158E-11	-0.051708	0.00795	-0.053421	0.009108	1.1967E-10	0.11827	0.181406	0.000932	1.28E-06	0.115686	0.01182	0.12516	0.53314	0.935	0.923	0.998	1	0.947	0.959	0.943	0.871
rs12092637	7.9158E-11	-0.051708	0.00795	-0.053421	0.009108	1.1967E-10	0.11827	0.181406	0.000932	1.28E-06	0.115686	0.01182	0.12516	0.53314	0.935	0.923	0.998	1	0.947	0.959	0.943	0.871
rs35617001	7.9158E-11	-0.051708	0.00795	-0.053421	0.009108	1.1967E-10	0.11827	0.181406	0.000932	1.28E-06	0.115686	0.01182	0.12516	0.53314	0.935	0.923	0.998	1	0.947	0.959	0.943	0.871
rs7868483	7.973E-11	-0.048451	0.00745	-0.048451	0.007453	1.60395E-10	0.55236	0.629429	5.2E-05	0.022322	0.102978	0.00203	0.0201	0.002709	0.877	0.868	1	0.984	0.954	0.997	0.979	0.981
rs8056939	8.0025E-11	0.0432039	0.00665	0.0432039	0.006646	1.60976E-10	0.3535	0.041535	0.005813	0.163929	0.054529	1.1E-06	0.05632	0.120535	0.895	0.952	0.986	0.849	0.967	1	0.962	0.935
rs6751255	8.0709E-11	0.0372105	0.00573	0.0420815	0.008522	1.62327E-10	0.05551	0.005558	0.00718	0.004888	0.000518	0.00068	0.07529	0.948014	0.954	0.975	0.987	0.996	0.997	0.999	0.961	0.808
rs17357420	8.077E-11	0.0385035	0.00592	0.0398793	0.008048	1.62445E-10	0.02206	0.008811	0.003234	0.265425	0.030689	2E-06	0.10936	0.751782	0.956	0.967	0.99	0.714	0.974	1	0.938	0.814

Table S3

rs10500567	8.0825E-11	0.038503	0.00592	0.0398784	0.008047	1.62555E-10	0.02206	0.008811	0.003236	0.26524	0.030696	2E-06	0.10939	0.751804	0.956	0.967	0.99	0.715	0.974	1	0.938	0.814
rs71391418	8.0825E-11	0.038503	0.00592	0.0398784	0.008047	1.62555E-10	0.02206	0.008811	0.003236	0.26524	0.030696	2E-06	0.10939	0.751804	0.956	0.967	0.99	0.715	0.974	1	0.938	0.814
rs2793378	8.0843E-11	0.0330065	0.00508	0.0328039	0.006258	1.62589E-10	0.01274	0.065332	0.003188	0.015474	0.09374	1.4E-06	0.6391	0.611072	0.958	0.93	0.992	0.983	0.939	1	0.568	0.821
rs12092007	8.094E-11	-0.051682	0.00795	-0.053388	0.009105	1.22425E-10	0.11817	0.181423	0.000932	1.29E-06	0.1172	0.01189	0.12513	0.532995	0.935	0.922	0.998	1	0.946	0.959	0.943	0.871
rs78158665	8.1139E-11	-0.056316	0.00867	-0.056316	0.008666	1.63173E-10	0.39269	0.159626	0.000272	4.28E-05	0.122176	0.00962	0.06981	0.197122	0.896	0.93	1	1	0.947	0.973	0.961	0.926
rs5023023	8.1202E-11	-0.046754	0.00719	-0.046754	0.007195	1.63298E-10	0.62565	0.425537	0.000125	0.016209	0.09341	0.00138	0.02129	0.005773	0.871	0.895	1	0.989	0.958	0.998	0.979	0.977
rs2793655	8.1808E-11	0.0329937	0.00508	0.0327962	0.006327	1.64493E-10	0.01176	0.067445	0.003094	0.016203	0.08912	1.4E-06	0.62123	0.593655	0.959	0.929	0.992	0.983	0.941	1	0.561	0.824
rs9379871	8.19E-11	-0.05913	0.0091	-0.05913	0.009101	1.64673E-10	0.47828	0.628469	0.000121	0.007043	0.057639	0.0011	0.06614	0.052927	0.886	0.867	1	0.995	0.968	0.998	0.962	0.955
rs73245866	8.2174E-11	0.0390823	0.00602	0.0412412	0.007372	1.65214E-10	0.03462	0.40073	0.002322	0.001295	0.000249	0.00225	0.64438	0.085763	0.958	0.895	0.997	0.999	0.998	0.996	0.833	0.947
rs11645783	8.2192E-11	0.043174	0.00665	0.043174	0.006646	1.65249E-10	0.35525	0.041857	0.005855	0.165161	0.054804	1.1E-06	0.05593	0.120478	0.894	0.952	0.986	0.848	0.967	1	0.962	0.935
rs7513243	8.2417E-11	-0.05166	0.00795	-0.053362	0.009103	1.24688E-10	0.11807	0.181428	0.000931	1.3E-06	0.118396	0.01195	0.1252	0.532849	0.935	0.922	0.998	1	0.946	0.959	0.943	0.871
rs10908310	8.2507E-11	0.0344016	0.0053	0.043321	0.00986	7.60286E-11	0.43694	0.011893	1.4E-05	0.009874	0.1968	0.06562	0.00015	0.010557	0.85	0.964	1	0.985	0.882	0.542	0.997	0.97
rs6655957	8.2507E-11	0.0344016	0.0053	0.043321	0.00986	7.60286E-11	0.43694	0.011893	1.4E-05	0.009874	0.1968	0.06562	0.00015	0.010557	0.85	0.964	1	0.985	0.882	0.542	0.997	0.97
rs12933007	8.2602E-11	0.0370957	0.00571	0.038477	0.007952	1.36895E-10	0.00943	0.075503	0.009246	0.302018	0.142729	2.2E-07	0.0512	0.195004	0.966	0.932	0.951	0.66	0.921	1	0.958	0.906
rs9646824	8.3005E-11	0.04551	0.00701	0.04551	0.007007	1.6685E-10	0.133	0.347755	8.57E-05	0.000753	0.003426	0.01801	0.05137	0.796692	0.93	0.895	1	0.999	0.993	0.93	0.964	0.829
rs9366654	8.3013E-11	-0.059115	0.0091	-0.059115	0.009102	1.66867E-10	0.48221	0.62857	0.000122	0.007073	0.057728	0.0011	0.0663	0.052976	0.885	0.867	1	0.995	0.968	0.998	0.962	0.955
rs6775484	8.3134E-11	0.0346828	0.00534	0.0346481	0.005792	1.67106E-10	0.19583	0.889484	0.001021	0.248908	0.157077	1.7E-06	0.01303	0.027664	0.896	0.743	0.997	0.703	0.91	1	0.976	0.952
rs12092055	8.3275E-11	-0.051653	0.00795	-0.053306	0.009067	1.26682E-10	0.11879	0.181427	0.000932	1.35E-06	0.117309	0.01189	0.12512	0.532968	0.934	0.922	0.998	1	0.946	0.959	0.943	0.871
rs12096848	8.3275E-11	-0.051653	0.00795	-0.053306	0.009067	1.26682E-10	0.11879	0.181427	0.000932	1.35E-06	0.117309	0.01189	0.12512	0.532968	0.934	0.922	0.998	1	0.946	0.959	0.943	0.871
rs139537655	8.3575E-11	-0.053167	0.00819	-0.055317	0.009421	1.67975E-10	0.25714	0.501541	0.000215	0.002593	0.002764	0.01108	0.13731	0.004723	0.919	0.888	1	0.998	0.994	0.967	0.946	0.979
rs72694240	8.3621E-11	-0.048394	0.00745	-0.048394	0.007452	1.68065E-10	0.58968	0.63167	5.23E-05	0.021907	0.102673	0.00205	0.02023	0.002722	0.872	0.867	1	0.984	0.954	0.997	0.979	0.981
rs2073529	8.3702E-11	-0.059099	0.0091	-0.059099	0.009101	1.68224E-10	0.47933	0.62839	0.00012	0.007216	0.057598	0.00111	0.06609	0.052898	0.886	0.867	1	0.994	0.968	0.998	0.962	0.955
rs2073530	8.3702E-11	-0.059099	0.0091	-0.059099	0.009101	1.68224E-10	0.47933	0.62839	0.00012	0.007216	0.057598	0.00111	0.06609	0.052898	0.886	0.867	1	0.994	0.968	0.998	0.962	0.955
rs2073531	8.3702E-11	-0.059099	0.0091	-0.059099	0.009101	1.68224E-10	0.47933	0.62839	0.00012	0.007216	0.057598	0.00111	0.06609	0.052898	0.886	0.867	1	0.994	0.968	0.998	0.962	0.955
rs9298087	8.376E-11	0.0352365	0.00543	0.0352365	0.005426	1.53667E-10	0.24378	0.809233	3.82E-08	0.032551	0.296391	0.00342	0.35317	0.218962	0.884	0.735	1	0.964	0.856	0.988	0.855	0.891
rs9393715	8.3832E-11	-0.059098	0.0091	-0.059098	0.009101	1.68481E-10	0.47941	0.628423	0.000121	0.007221	0.057617	0.00111	0.06611	0.052911	0.886	0.867	1	0.994	0.968	0.998	0.962	0.955
rs9348716	8.3833E-11	-0.059098	0.0091	-0.059098	0.009101	1.68482E-10	0.47941	0.628423	0.000121	0.007222	0.057617	0.00111	0.06611	0.052911	0.886	0.867	1	0.994	0.968	0.998	0.962	0.955
rs17150950	8.4058E-11	0.0351883	0.00542	0.0351883	0.005419	1.68925E-10	0.76874	0.456646	0.000123	0.034967	0.002312	0.00072	0.22376	0.034373	0.844	0.883	1	0.974	0.994	0.999	0.919	0.96
rs16837931	8.4124E-11	0.0455013	0.00701	0.0455013	0.007008	1.69056E-10	0.12252	0.35213	7.71E-05	0.00107	0.00322	0.01703	0.05009	0.794486	0.932	0.895	1	0.999	0.993	0.936	0.965	0.831
rs3757138	8.4168E-11	-0.059096	0.0091	-0.059096	0.009102	1.69141E-10	0.47954	0.628529	0.000121	0.007252	0.057676	0.0011	0.06619	0.052948	0.886	0.867	1	0.994	0.968	0.998	0.962	0.955
rs2793376	8.4202E-11	0.0329739	0.00508	0.0327841	0.006339	1.69209E-10	0.01142	0.066771	0.003097	0.016312	0.088268	1.5E-06	0.62509	0.602022	0.959	0.93	0.992	0.983	0.942	1	0.563	0.823
rs12174602	8.4382E-11	-0.059086	0.0091	-0.059086	0.009101	1.69564E-10	0.47974	0.628218	0.000119	0.007309	0.057507	0.00112	0.06602	0.052843	0.886	0.867	1	0.994	0.968	0.998	0.962	0.955
rs35815698	8.4382E-11	-0.059086	0.0091	-0.059086	0.009101	1.69564E-10	0.47974	0.628218	0.000119	0.007309	0.057507	0.00112	0.06602	0.052843	0.886	0.867	1	0.994	0.968	0.998	0.962	0.955
rs9379864	8.4382E-11	-0.059086	0.0091	-0.059086	0.009101	1.69564E-10	0.47974	0.628218	0.000119	0.007309	0.057507	0.00112	0.06602	0.052843	0.886	0.867	1	0.994	0.968	0.998	0.962	0.955
rs12174631	8.4384E-11	-0.059086	0.0091	-0.059086	0.009101	1.69567E-10	0.47974	0.628218	0.000119	0.007309	0.057507	0.00112	0.06602	0.052843	0.886	0.867	1	0.994	0.968	0.998	0.962	0.955
rs9379863	8.4423E-11	-0.059085	0.0091	-0.059085	0.009101	1.69645E-10	0.47974	0.628218	0.000119	0.007309	0.057506	0.00112	0.06602	0.052843	0.886	0.867	1	0.994	0.968	0.998	0.962	0.955
rs9358937	8.4434E-11	-0.059086	0.0091	-0.059086	0.009101	1.69666E-10	0.47977	0.628241	0.000119	0.007306	0.05752	0.00112	0.06604	0.05285	0.886	0.867	1	0.994	0.968	0.998	0.962	0.955
rs2375240	8.4528E-11	0.0454961	0.00701	0.0454961	0.007008	1.69852E-10	0.12251	0.35213	7.74E-05	0.00107	0.003224	0.01703	0.0501	0.794486	0.932	0.895	1	0.999	0.993	0.936	0.965	0.831
rs4269101	8.4616E-11	0.0345294	0.00532	0.0345294	0.005319	1.70025E-10	0.68028	0.672707	0.000133	0.021979	0.249297	6.9E-05	0.01443	0.092462	0.73	0.832	1	0.979	0.888	1	0.976	0.932
rs9366655	8.4638E-11	-0.059087	0.0091	-0.059087	0.009101	1.70068E-10	0.47968	0.628594	0.000122	0.007224	0.057796	0.0011	0.06631	0.052981	0.886	0.867	1	0.994	0.968	0.998	0.962	0.955
rs1978	8.4794E-11	-0.059085	0.0091	-0.059085	0.009101	1.70376E-10	0.47974	0.628604	0.000122	0.007233	0.057802	0.0011	0.06639	0.052985	0.886	0.867	1	0.994	0.968	0.998	0.962	0.955
rs2073527	8.4902E-11	-0.05908	0.0091	-0.05908	0.009101	1.70587E-10	0.48007	0.628387	0.00012	0.00732	0.057596	0.00111	0.06608	0.052896	0.886	0.867	1	0.994	0.968	0.998	0.962	0.955
rs8053677	8.4929E-11	0.0431377	0.00665	0.0431377	0.006645	1.70641E-10	0.35727	0.041936	0.005862	0.167258	0.054963	1.1E-06	0.05578	0.120467	0.894	0.952	0.986	0.846	0.967	1	0.962	0.935
rs71557315	8.5125E-11	-0.073113	0.01126	-0.081205	0.016149	1.55901E-10	0.52626	0.484307	0.000797	3.22E-05	0.060751	0.01416	0.05184	0.001772	0.879	0.884	0.999	1	0.967	0.948	0.967	0.982
rs34338862	8.5125E-11	-0.051612	0.00795	-0.053247	0.009066	1.30052E-10	0.11838	0.17737	0.000997	1.26E-06	0.121909	0.01119	0.13751	0.524652	0.935	0.923	0.998	1	0.945	0.963	0.94	0.872
rs1121465	8.5466E-11	-0.047213	0.00727	-0.047213	0.007274	1.71698E-10	0.51401	0.579601	0.000386	0.020777	0.085096	0.00049	0.02454	0.002801	0.884	0.877	1	0.986	0.961	0.999	0.977	0.981
rs4390955	8.5523E-11	0.0345479	0.00532	0.0345479	0.005323	1.71811E-10	0.68986	0.527068	0.000211	0.020445	0.284078	3.7E-05	0.01985	0.120529	0.732	0.853	1	0.981	0.875	1	0.973	0.924
rs7000542	8.5707E-11	0.0352165	0.00543	0.0352165	0.005426	1.72172E-10	0.74938	0.489104	0.000139	0.046809	0.001942	0.00059	0.21131	0.026568	0.846	0.879	1	0.964	0.994	0.999	0.922	0.963
rs3047288	8.5883E-11	-0.059067	0.0091	-0.059067	0.009101	1.72519E-10	0.48467	0.628561	0.000122	0.007343	0.057692	0.0011	0.06621	0.052963	0.885	0.867	1	0.994	0.968	0.998	0.962	0.955
rs17151188	8.5901E-11	0.0380901	0.00587	0.0380901	0.005869	1.72556E-10	0.04769	0.743359	0.001276	0.005308	0.007127	0.00017	0.22312	0.260133	0.95	0.771	0.998	0.995	0.989	1	0.917	0.908
rs5023022	8.6157E-11	-0.046683	0.00719	-0.046683	0.007194	1.73058E-10	0.66127	0.422191	0.000122	0.015701	0.096807	0.00146	0.02096	0.005699	0.866	0.895	1	0.989	0.957	0.998	0.979	0.977
rs7553693	8.6216E-11	-0.051605	0.00795	-0.053261	0.009076	1.30173E-10	0.11701	0.202081	0.000948	1.28E-06	0.117218	0.01196	0.12444	0.532186	0.935	0.919	0.998	1	0.946	0.959	0.943	0.87
rs1858301	8.6235E-11	0.0454749	0.00701	0.0454749	0.007008	1.73212E-10	0.1215	0.355864	7.79E-05	0.001093	0.003208	0.01703	0.04999	0.79394	0.933	0.895	1	0.999	0.993	0.937	0.965	0.831
rs9930311	8.6267E-11	0.0331634	0.00511	0.0331634	0.005111	1.73276E-10	0.94055	0.029342	0.001453	0.026943	0.059793	0.00012	0.0071	0.172928	0.832	0.961	0.998	0.981	0.969	1	0.987	0.931
rs35196924	8.6413E-11	-0.056212	0.00866	-0.056212	0.008663	1.73562E-10	0.39396	0.158666	0.000269	4.36E-05	0.126829	0.00954	0.07215	0.20364	0.896	0.929	1	1	0.946	0.974	0.96	0.924

Table S3

rs9348721	8.6706E-11	-0.06018	0.00927	-0.06018	0.009275	1.74139E-10	0.47684	0.705805	0.000496	0.006206	0.036777	0.00091	0.03396	0.018628	0.889	0.861	0.999	0.995	0.977	0.999	0.974	0.969
rs77823468	8.6768E-11	0.0370417	0.00571	0.0384937	0.008059	1.40315E-10	0.00998	0.065068	0.008751	0.335157	0.132662	2.1E-07	0.05864	0.194699	0.965	0.934	0.951	0.617	0.922	1	0.953	0.903
rs7568498	8.6816E-11	-0.046665	0.00719	-0.046665	0.007192	1.74357E-10	0.46946	0.90718	0.000349	0.012713	0.004251	0.00019	0.34904	0.12674	0.874	0.816	1	0.989	0.991	1	0.884	0.93
rs150071566	8.688E-11	0.0384374	0.00592	0.0398119	0.00804	1.74483E-10	0.02202	0.008852	0.003323	0.264872	0.03095	2.1E-06	0.10977	0.753096	0.956	0.967	0.99	0.717	0.974	1	0.938	0.814
rs7188591	8.688E-11	0.0384374	0.00592	0.0398119	0.00804	1.74483E-10	0.02202	0.008852	0.003323	0.264872	0.03095	2.1E-06	0.10977	0.753096	0.956	0.967	0.99	0.717	0.974	1	0.938	0.814
rs4528577	8.6892E-11	0.0384375	0.00592	0.0398128	0.008041	1.74506E-10	0.022	0.008852	0.003323	0.264946	0.03095	2.1E-06	0.10977	0.753096	0.956	0.967	0.99	0.717	0.974	1	0.938	0.814
rs35404791	8.6963E-11	0.038443	0.00593	0.039852	0.008073	1.74646E-10	0.02208	0.00862	0.003228	0.264286	0.029325	2.3E-06	0.10999	0.775469	0.956	0.967	0.991	0.717	0.974	1	0.938	0.81
rs8088141	8.726E-11	0.0327932	0.00505	0.0327932	0.005055	1.7523E-10	0.84509	0.504397	6.8E-05	0.000168	0.621663	0.00028	0.07844	0.276939	0.683	0.613	1	0.999	0.68	0.999	0.924	0.848
rs12445564	8.7335E-11	0.0384328	0.00592	0.0398076	0.008041	1.75378E-10	0.02204	0.008852	0.003327	0.265187	0.030959	2.1E-06	0.10979	0.753136	0.956	0.967	0.99	0.716	0.974	1	0.938	0.814
rs12713413	8.7373E-11	0.0357665	0.00551	0.0377215	0.006878	1.75452E-10	0.07611	0.006825	0.00875	0.004037	0.002566	0.0002	0.13403	0.960852	0.947	0.973	0.982	0.997	0.994	1	0.945	0.806
rs1995942	8.7383E-11	-0.032992	0.00509	-0.032992	0.005086	1.75473E-10	0.55623	0.604549	8.75E-05	0.000644	0.428631	0.00105	0.02114	0.436766	0.851	0.844	1	0.999	0.829	0.998	0.972	0.866
rs75637410	8.7504E-11	-0.062222	0.00959	-0.062222	0.009592	1.7571E-10	0.94936	0.333757	0.002801	0.002861	0.103949	7.5E-05	0.12487	0.007632	0.819	0.9	0.996	0.997	0.951	1	0.944	0.974
rs35035147	8.7621E-11	-0.056189	0.00866	-0.056189	0.008662	1.75941E-10	0.38921	0.158667	0.000269	4.52E-05	0.126834	0.00954	0.07215	0.20365	0.897	0.93	1	1	0.946	0.974	0.96	0.924
rs8051878	8.8442E-11	0.037047	0.00571	0.0385026	0.008072	1.43377E-10	0.00971	0.06482	0.008587	0.338781	0.130481	2.2E-07	0.05701	0.209194	0.965	0.934	0.952	0.613	0.923	1	0.954	0.899
rs2744301	8.8484E-11	-0.096752	0.01492	-0.097249	0.015252	1.77639E-10	0.97953	0.625251	0.004492	0.00013	0.038746	0.0011	0.02251	0.013528	0.813	0.863	0.992	1	0.975	0.998	0.977	0.97
rs11130185	8.8585E-11	-0.034772	0.00536	-0.034772	0.005362	1.77837E-10	0.59068	0.061677	0.000639	0.004421	0.02534	8.7E-06	0.87534	0.888499	0.651	0.917	0.999	0.993	0.968	1	0.68	0.697
rs4279123	8.8869E-11	0.0345002	0.00532	0.0345002	0.00532	1.78397E-10	0.6583	0.666854	0.000127	0.023492	0.249628	6.8E-05	0.01472	0.092138	0.725	0.832	1	0.978	0.887	1	0.976	0.931
rs6900665	8.8933E-11	-0.060144	0.00927	-0.060144	0.009275	1.78523E-10	0.47682	0.705704	0.0005	0.006241	0.036956	0.00091	0.03426	0.018637	0.889	0.861	0.999	0.995	0.977	0.999	0.974	0.969
rs12174623	8.9129E-11	-0.059002	0.0091	-0.059002	0.009099	1.78909E-10	0.46243	0.628218	0.000119	0.007981	0.057507	0.00112	0.06602	0.052843	0.888	0.868	1	0.994	0.969	0.998	0.962	0.955
rs117234222	8.9261E-11	0.0745149	0.01149	0.075019	0.016455	1.79168E-10	0.87712	0.273608	0.008377	0.000257	0.050151	3E-05	0.00188	0.944786	0.763	0.584	0.967	0.999	0.954	1	0.988	0.741
rs71386940	8.9602E-11	0.0384129	0.00592	0.0397454	0.008009	1.79838E-10	0.02333	0.008852	0.003323	0.266958	0.03095	2.1E-06	0.10977	0.753096	0.955	0.967	0.99	0.715	0.974	1	0.938	0.814
rs12174639	8.9606E-11	-0.059006	0.0091	-0.059006	0.009101	1.79846E-10	0.48052	0.631995	0.000117	0.007416	0.058022	0.00116	0.06643	0.053439	0.885	0.867	1	0.994	0.968	0.998	0.962	0.955
rs12750611	8.9698E-11	-0.056157	0.00866	-0.056157	0.008662	1.80028E-10	0.39473	0.158876	0.000284	4.11E-05	0.128358	0.00963	0.07187	0.203216	0.896	0.929	1	1	0.945	0.973	0.96	0.924
rs16891727	8.9725E-11	-0.060132	0.00927	-0.060132	0.009275	1.80081E-10	0.47682	0.705689	0.000502	0.006253	0.037012	0.00091	0.03433	0.018641	0.889	0.861	0.999	0.995	0.977	0.999	0.974	0.969
rs6504543	9.0278E-11	0.0379812	0.00586	0.0373493	0.00879	1.81168E-10	0.72888	0.095834	4.16E-05	0.015665	0.970288	8.7E-05	0.47605	0.000623	0.678	0.905	1	0.979	0.565	1	0.795	0.981
rs4417032	9.0517E-11	-0.037728	0.00582	-0.039271	0.006652	1.81639E-10	0.09301	0.082537	7.75E-05	0.050738	0.004066	0.0111	0.01018	0.067944	0.95	0.951	1	0.966	0.993	0.971	0.986	0.958
rs66739676	9.0659E-11	-0.056141	0.00866	-0.056141	0.008661	1.81918E-10	0.39519	0.158945	0.000287	4.07E-05	0.128619	0.00966	0.07191	0.203341	0.896	0.929	1	1	0.945	0.973	0.96	0.924
rs10433657	9.0774E-11	-0.03433	0.0053	-0.037511	0.009013	1.82145E-10	0.10748	0.399013	0.003742	0.058228	0.227035	1.7E-05	8.6E-05	0.025111	0.928	0.677	0.992	0.945	0.899	1	0.996	0.959
rs12751188	9.0828E-11	-0.056138	0.00866	-0.056138	0.008661	1.82249E-10	0.39496	0.158949	0.000286	4.1E-05	0.12861	0.00966	0.0719	0.203343	0.896	0.929	1	1	0.945	0.973	0.96	0.924
rs34475394	9.0984E-11	-0.056136	0.00866	-0.056136	0.008661	1.82558E-10	0.39496	0.158941	0.000287	4.1E-05	0.128607	0.00966	0.0719	0.203341	0.896	0.929	1	1	0.945	0.973	0.96	0.924
rs34587828	9.0984E-11	-0.056136	0.00866	-0.056136	0.008661	1.82558E-10	0.39496	0.158941	0.000287	4.1E-05	0.128607	0.00966	0.0719	0.203341	0.896	0.929	1	1	0.945	0.973	0.96	0.924
rs12748550	9.101E-11	-0.056136	0.00866	-0.056136	0.008661	1.82609E-10	0.39498	0.158942	0.000287	4.1E-05	0.128608	0.00966	0.0719	0.203341	0.896	0.929	1	1	0.945	0.973	0.96	0.924
rs34225987	9.102E-11	-0.056136	0.00866	-0.056136	0.008661	1.82629E-10	0.39498	0.158942	0.000287	4.1E-05	0.12861	0.00966	0.0719	0.203341	0.896	0.929	1	1	0.945	0.973	0.96	0.924
rs35700971	9.1045E-11	-0.056135	0.00866	-0.056135	0.008661	1.82676E-10	0.39499	0.158943	0.000287	4.1E-05	0.128612	0.00966	0.0719	0.203341	0.896	0.929	1	1	0.945	0.973	0.96	0.924
rs35792493	9.1045E-11	-0.056135	0.00866	-0.056135	0.008661	1.82676E-10	0.39499	0.158943	0.000287	4.1E-05	0.128612	0.00966	0.0719	0.203341	0.896	0.929	1	1	0.945	0.973	0.96	0.924
rs35468688	9.1064E-11	-0.056135	0.00866	-0.056135	0.008661	1.82714E-10	0.39499	0.158943	0.000287	4.1E-05	0.128614	0.00966	0.0719	0.203341	0.896	0.929	1	1	0.945	0.973	0.96	0.924
rs34230056	9.1066E-11	-0.056135	0.00866	-0.056135	0.008661	1.82718E-10	0.39499	0.158943	0.000287	4.1E-05	0.128614	0.00966	0.0719	0.203341	0.896	0.929	1	1	0.945	0.973	0.96	0.924
rs35148287	9.1085E-11	-0.056135	0.00866	-0.056135	0.008661	1.82755E-10	0.395	0.158944	0.000287	4.11E-05	0.128616	0.00966	0.0719	0.203341	0.896	0.929	1	1	0.945	0.973	0.96	0.924
rs10852505	9.1224E-11	0.0385884	0.00595	0.0391035	0.007173	1.83029E-10	0.03706	0.019999	0.003442	0.297889	0.038857	1.2E-06	0.10082	0.526329	0.948	0.956	0.989	0.677	0.969	1	0.94	0.848
rs9379851	9.1444E-11	-0.058883	0.00909	-0.058883	0.009086	1.83462E-10	0.47112	0.532228	0.000201	0.00742	0.048657	0.00105	0.05524	0.053068	0.889	0.882	1	0.994	0.972	0.999	0.966	0.956
rs1995943	9.2138E-11	-0.03295	0.00509	-0.03295	0.005085	1.84826E-10	0.55538	0.616876	8.62E-05	0.000641	0.448353	0.00106	0.02074	0.436691	0.849	0.841	1	0.999	0.821	0.998	0.972	0.865
rs6773385	9.2505E-11	0.034481	0.00532	0.034481	0.005322	1.85548E-10	0.64254	0.659048	0.000118	0.025824	0.251663	6.7E-05	0.01534	0.091044	0.721	0.832	1	0.975	0.886	1	0.976	0.931
rs6691368	9.2648E-11	0.034317	0.0053	0.0432856	0.009863	8.33731E-11	0.42181	0.010951	1.37E-05	0.010094	0.193306	0.07014	0.00018	0.010826	0.85	0.965	1	0.984	0.881	0.514	0.996	0.969
rs7195988	9.271E-11	0.038365	0.00592	0.039671	0.007953	1.85951E-10	0.02065	0.009796	0.003316	0.264701	0.032247	2.3E-06	0.11102	0.729426	0.957	0.966	0.99	0.719	0.973	1	0.938	0.819
rs9366653	9.2889E-11	-0.058942	0.0091	-0.058942	0.009099	1.86303E-10	0.48737	0.622115	0.000128	0.007001	0.055733	0.00111	0.07761	0.051664	0.884	0.868	1	0.995	0.969	0.998	0.959	0.956
rs2017146	9.3093E-11	0.0360558	0.00557	0.0398655	0.007901	1.86704E-10	0.07837	0.026861	0.005083	0.029226	0.08543	0.0002	0.00014	0.518559	0.95	0.964	0.993	0.981	0.963	1	0.997	0.888
rs2056923	9.3366E-11	-0.051448	0.00794	-0.051448	0.007943	1.87239E-10	0.12807	0.409465	5.6E-05	0.043952	0.081414	0.00059	0.21172	0.019984	0.936	0.896	1	0.969	0.961	0.999	0.927	0.968
rs10865314	9.3822E-11	0.0361153	0.00558	0.0403649	0.008137	1.88137E-10	0.09138	0.006364	0.007507	0.001768	0.002294	0.0009	0.02628	0.689324	0.943	0.973	0.985	0.998	0.994	0.999	0.976	0.756
rs11719470	9.4323E-11	0.0328601	0.00507	0.0347791	0.008616	6.88173E-11	0.22152	0.230139	4.21E-06	0.76173	0.001656	9.2E-05	0.22295	0.029713	0.851	0.848	1	0.033	0.993	1	0.844	0.939
rs12928939	9.4372E-11	0.0372471	0.00575	0.0381381	0.007578	1.55249E-10	0.01587	0.074796	0.011265	0.265505	0.119464	1.7E-07	0.09816	0.149335	0.96	0.934	0.945	0.707	0.933	1	0.941	0.918
rs2365468	9.4434E-11	0.0379509	0.00586	0.0373261	0.008926	1.8934E-10	0.66591	0.094306	3.73E-05	0.015633	0.972568	0.0001	0.44602	0.000592	0.663	0.905	1	0.979	0.563	1	0.803	0.981
rs6438417	9.4721E-11	-0.033789	0.00522	-0.033789	0.005218	1.89904E-10	0.08896	0.394987	0.000236	0.005923	0.361953	0.00036	0.16349	0.036958	0.942	0.893	1	0.995	0.875	1	0.935	0.959
rs3029927	9.4773E-11	0.0379358	0.00586	0.0373129	0.008924	1.90005E-10	0.66483	0.091573	3.85E-05	0.015767	0.973275	9.8E-05	0.44674	0.000603	0.663	0.906	1	0.979	0.563	1	0.803	0.981
rs2365467	9.4811E-11	0.0379354	0.00586	0.0373123	0.008923	1.9008E-10	0.66483	0.091571	3.85E-05	0.015768	0.973266	9.8E-05	0.44673	0.000604	0.663	0.906	1	0.979	0.563	1	0.803	0.981
rs7192848	9.5053E-11	0.0326478	0.00504	0.0319166	0.005485	1.69858E-10	0.83397	0.765571	0.001526	0.033399	0.648564	1.4E-08	0.20314	0.384547	0.659	0.647	0.993	0.941	0.647	1	0.856	0.806

Table S3

rs71638311	9.5166E-11	-0.056081	0.00866	-0.056081	0.008662	1.90778E-10	0.39507	0.158905	0.000296	4.01E-05	0.129224	0.00976	0.073	0.203193	0.895	0.929	1	1	0.945	0.973	0.96	0.924
rs140286069	9.5229E-11	0.107153	0.01655	0.107153	0.01655	1.90901E-10	0.76676	0.770573	1.85E-05	0.006938	0.203548	0.00045	0.03518	0.199057	0.732	0.741	1	0.992	0.898	0.999	0.96	0.899
rs67685647	9.5254E-11	-0.056079	0.00866	-0.056079	0.008662	1.9095E-10	0.39508	0.158901	0.000296	4.02E-05	0.129245	0.00977	0.07292	0.203217	0.895	0.929	1	1	0.945	0.973	0.96	0.924
rs62084755	9.5414E-11	-0.036895	0.0057	-0.036437	0.008132	1.91264E-10	0.2491	0.038803	2.2E-05	0.080254	0.45528	8.4E-05	0.11663	0.007747	0.578	0.936	1	0.901	0.788	1	0.923	0.966
rs7624552	9.5622E-11	-0.038465	0.00594	-0.040545	0.010614	1.18134E-10	0.01048	0.237937	0.028105	1.42E-06	0.12258	0.00013	0.14676	0.188671	0.957	0.872	0.828	1	0.913	0.999	0.905	0.487
rs73782432	9.58E-11	0.0362683	0.0056	0.0362683	0.005603	1.92024E-10	0.2415	0.291335	0.009057	0.00132	0.004633	5.1E-05	0.11723	0.821769	0.906	0.898	0.978	0.998	0.991	1	0.941	0.762
rs71557335	9.6667E-11	-0.058888	0.0091	-0.058888	0.009099	1.93727E-10	0.48728	0.620368	0.00013	0.006998	0.05596	0.00114	0.07772	0.051783	0.885	0.868	1	0.995	0.969	0.998	0.959	0.955
rs145281382	9.6688E-11	0.0726999	0.01123	0.0718422	0.013967	1.92159E-10	0.17763	0.896817	1.26E-05	0.710101	0.046552	1.8E-05	0.11447	0.031677	0.859	0.645	1	0.203	0.944	1	0.897	0.93
rs73139826	9.67E-11	-0.054055	0.00835	-0.056891	0.010015	1.48567E-10	0.05123	0.336422	0.000642	9.25E-06	0.02221	0.02288	0.05786	0.696146	0.95	0.895	0.999	1	0.981	0.891	0.961	0.839
rs1994223	9.6787E-11	0.0390702	0.00604	0.0390702	0.006037	1.93962E-10	0.13698	0.747955	0.000318	0.012302	0.017965	0.00031	0.06035	0.311479	0.928	0.773	1	0.99	0.983	1	0.96	0.9
rs2695236	9.7045E-11	0.0328649	0.00508	0.0326502	0.006104	1.94468E-10	0.01605	0.067444	0.003094	0.017448	0.089118	1.4E-06	0.62124	0.593646	0.954	0.929	0.992	0.981	0.941	1	0.562	0.824
rs60331817	9.7146E-11	0.0393356	0.00608	0.0443632	0.009247	1.94667E-10	0.02865	0.227061	0.003047	0.001972	3.29E-05	0.00253	0.86214	0.130059	0.959	0.915	0.995	0.998	0.999	0.995	0.778	0.935
rs4414519	9.746E-11	-0.034074	0.00527	-0.032395	0.007442	1.68969E-10	0.22919	0.551687	4.22E-05	0.606742	0.348671	7E-07	0.078	0.03115	0.81	0.497	1	0.205	0.696	1	0.897	0.916
rs12176317	9.7998E-11	-0.058849	0.0091	-0.058849	0.009096	1.96339E-10	0.49022	0.604174	0.000154	0.007233	0.055999	0.00115	0.05821	0.05126	0.885	0.871	1	0.994	0.969	0.998	0.965	0.956
rs68112369	9.8018E-11	-0.058869	0.0091	-0.058869	0.009099	1.9638E-10	0.48791	0.620352	0.00013	0.007111	0.05595	0.00114	0.07771	0.051781	0.884	0.868	1	0.994	0.969	0.998	0.959	0.955
rs36004866	9.8244E-11	-0.051502	0.00796	-0.053315	0.009207	1.46459E-10	0.11681	0.192	0.001044	1.21E-06	0.12231	0.01211	0.12558	0.553336	0.934	0.92	0.998	1	0.944	0.959	0.942	0.867
rs73004016	9.8483E-11	-0.053456	0.00826	-0.05493	0.010507	1.97293E-10	0.41909	0.013241	0.001408	3.78E-05	0.162209	0.00091	0.05947	0.61065	0.675	0.96	0.998	1	0.919	0.998	0.955	0.837
rs1976053	9.8621E-11	0.0378988	0.00586	0.0371849	0.008883	1.97563E-10	0.66028	0.098432	3.84E-05	0.014813	0.979997	9.7E-05	0.46941	0.000648	0.659	0.903	1	0.98	0.557	1	0.794	0.98
rs34998650	9.9305E-11	0.0369259	0.00571	0.0383345	0.008	1.61788E-10	0.01013	0.068982	0.009	0.336189	0.12923	2.4E-07	0.05932	0.193167	0.965	0.933	0.95	0.62	0.924	1	0.953	0.903
rs9835270	9.9461E-11	-0.032849	0.00508	-0.032849	0.005079	1.91246E-10	0.86058	0.362081	0.009316	0.014658	0.22641	9.3E-08	0.02553	0.884255	0.732	0.857	0.964	0.982	0.877	1	0.964	0.722
rs62083314	9.9501E-11	0.0339529	0.00525	0.0339529	0.00525	1.99291E-10	0.17355	0.654902	0.000202	0.004538	0.133279	0.00037	0.16138	0.189682	0.924	0.86	1	0.996	0.942	1	0.934	0.923
rs147864582	9.9735E-11	-0.046515	0.00719	-0.046515	0.007192	1.9975E-10	0.47133	0.906751	0.000338	0.014032	0.004422	0.0002	0.35161	0.127999	0.873	0.816	1	0.988	0.991	1	0.883	0.93
rs9393713	9.9754E-11	-0.05879	0.00909	-0.05879	0.00909	1.99786E-10	0.48464	0.543373	0.000131	0.007846	0.054583	0.00119	0.07162	0.056725	0.886	0.879	1	0.994	0.97	0.998	0.961	0.955
rs9393706	9.9929E-11	-0.058844	0.0091	-0.058844	0.009099	2.00131E-10	0.48722	0.620415	0.000132	0.006989	0.056067	0.00116	0.07787	0.051821	0.884	0.868	1	0.995	0.969	0.998	0.959	0.955
rs62305172	1.0036E-10	0.0385064	0.00595	0.0405409	0.007364	2.0097E-10	0.0598	0.541761	0.000796	0.004739	0.000121	0.00301	0.64281	0.061795	0.949	0.875	0.999	0.996	0.998	0.994	0.831	0.951
rs9379855	1.0042E-10	-0.05881	0.00909	-0.05881	0.009095	2.01093E-10	0.48454	0.596295	0.000132	0.006858	0.060525	0.00121	0.07336	0.049763	0.885	0.871	1	0.995	0.967	0.998	0.96	0.956
rs60807346	1.0044E-10	0.0385056	0.00595	0.0405402	0.007364	2.01142E-10	0.0598	0.541764	0.000796	0.004741	0.000121	0.00301	0.64283	0.061796	0.949	0.875	0.999	0.996	0.998	0.994	0.831	0.951
rs28592929	1.0049E-10	0.0404157	0.00625	0.0404157	0.00625	2.01238E-10	0.34916	0.028133	0.000192	0.002273	0.533688	0.00015	0.13651	0.122279	0.629	0.945	1	0.997	0.773	1	0.921	0.915
rs78429175	1.0049E-10	0.0404157	0.00625	0.0404157	0.00625	2.01238E-10	0.34916	0.028133	0.000192	0.002273	0.533688	0.00015	0.13651	0.122279	0.629	0.945	1	0.997	0.773	1	0.921	0.915
rs12631989	1.0058E-10	-0.03465	0.00536	-0.03465	0.005359	2.0141E-10	0.55938	0.060997	0.000636	0.004541	0.026368	9.9E-06	0.86787	0.927861	0.646	0.918	0.999	0.993	0.967	1	0.684	0.706
rs13064780	1.0072E-10	-0.034667	0.00536	-0.034667	0.005362	2.01677E-10	0.56461	0.060341	0.000647	0.004643	0.025266	9.5E-06	0.87492	0.907462	0.646	0.918	0.998	0.993	0.968	1	0.681	0.701
rs139345647	1.008E-10	-0.040417	0.00625	-0.040417	0.006251	2.01845E-10	0.3541	0.028142	0.000192	0.002301	0.53348	0.00015	0.13653	0.122302	0.631	0.945	1	0.997	0.773	1	0.921	0.916
rs77194282	1.0081E-10	0.0404128	0.00625	0.0404128	0.00625	2.01852E-10	0.34872	0.028133	0.000192	0.00228	0.533688	0.00015	0.13651	0.122279	0.629	0.945	1	0.997	0.772	1	0.921	0.915
rs67509210	1.0116E-10	-0.058835	0.0091	-0.058835	0.0091	2.02555E-10	0.48921	0.625793	0.000121	0.006603	0.061621	0.00121	0.07859	0.0523	0.884	0.867	1	0.995	0.967	0.998	0.958	0.955
rs62084734	1.0132E-10	0.0404065	0.00625	0.0404065	0.00625	2.02851E-10	0.34916	0.028233	0.000192	0.002273	0.530329	0.00015	0.1381	0.122922	0.63	0.945	1	0.997	0.774	1	0.92	0.915
rs437955	1.0199E-10	-0.07446	0.01152	-0.07446	0.011519	2.04166E-10	0.14682	0.342863	0.002503	0.001084	0.601285	8.5E-05	0.157	0.011878	0.924	0.893	0.996	0.999	0.789	1	0.931	0.969
rs34550936	1.0202E-10	-0.058822	0.0091	-0.058822	0.0091	2.04235E-10	0.48865	0.624105	0.000122	0.006582	0.061712	0.00122	0.0785	0.052377	0.884	0.867	1	0.995	0.967	0.998	0.958	0.955
rs34622023	1.0202E-10	-0.058822	0.0091	-0.058822	0.0091	2.04235E-10	0.48865	0.624105	0.000122	0.006582	0.061712	0.00122	0.0785	0.052377	0.884	0.867	1	0.995	0.967	0.998	0.958	0.955
rs9358932	1.0202E-10	-0.058822	0.0091	-0.058822	0.0091	2.04235E-10	0.48865	0.624105	0.000122	0.006582	0.061712	0.00122	0.0785	0.052377	0.884	0.867	1	0.995	0.967	0.998	0.958	0.955
rs9358934	1.0202E-10	-0.058822	0.0091	-0.058822	0.0091	2.04235E-10	0.48865	0.624105	0.000122	0.006582	0.061712	0.00122	0.0785	0.052377	0.884	0.867	1	0.995	0.967	0.998	0.958	0.955
rs9393707	1.0202E-10	-0.058822	0.0091	-0.058822	0.0091	2.04235E-10	0.48865	0.624105	0.000122	0.006582	0.061712	0.00122	0.0785	0.052377	0.884	0.867	1	0.995	0.967	0.998	0.958	0.955
rs72836482	1.021E-10	-0.058821	0.0091	-0.058821	0.0091	2.04393E-10	0.48865	0.624105	0.000122	0.006582	0.061712	0.00122	0.0785	0.052377	0.884	0.867	1	0.995	0.967	0.998	0.958	0.955
rs9348709	1.021E-10	-0.058821	0.0091	-0.058821	0.0091	2.04393E-10	0.48865	0.624105	0.000122	0.006582	0.061712	0.00122	0.0785	0.052377	0.884	0.867	1	0.995	0.967	0.998	0.958	0.955
rs9379852	1.021E-10	-0.058821	0.0091	-0.058821	0.0091	2.04393E-10	0.48865	0.624105	0.000122	0.006582	0.061712	0.00122	0.0785	0.052377	0.884	0.867	1	0.995	0.967	0.998	0.958	0.955
rs9357006	1.0215E-10	-0.05882	0.0091	-0.05882	0.0091	2.04486E-10	0.48871	0.624105	0.000122	0.006591	0.061712	0.00122	0.0785	0.052377	0.884	0.867	1	0.995	0.967	0.998	0.958	0.955
rs28362606	1.0215E-10	-0.05882	0.0091	-0.05882	0.0091	2.04498E-10	0.48871	0.624105	0.000122	0.006591	0.061713	0.00122	0.0785	0.052377	0.884	0.867	1	0.995	0.967	0.998	0.958	0.955
rs71557334	1.0215E-10	-0.05882	0.0091	-0.05882	0.0091	2.04498E-10	0.48871	0.624105	0.000122	0.006591	0.061713	0.00122	0.0785	0.052377	0.884	0.867	1	0.995	0.967	0.998	0.958	0.955
rs9348712	1.0215E-10	-0.05882	0.0091	-0.05882	0.0091	2.04498E-10	0.48871	0.624105	0.000122	0.006591	0.061713	0.00122	0.0785	0.052377	0.884	0.867	1	0.995	0.967	0.998	0.958	0.955
rs35934643	1.0216E-10	-0.05882	0.0091	-0.05882	0.0091	2.04499E-10	0.48923	0.624107	0.000122	0.006592	0.061711	0.00122	0.07844	0.052375	0.884	0.867	1	0.995	0.967	0.998	0.958	0.955
rs34029919	1.0226E-10	0.0383023	0.00593	0.0396235	0.008014	2.04707E-10	0.0225	0.008816	0.003423	0.267609	0.032074	2.2E-06	0.11813	0.749607	0.956	0.967	0.99	0.716	0.973	1	0.935	0.814
rs7652746	1.0261E-10	-0.034638	0.00536	-0.034638	0.005359	2.05392E-10	0.58941	0.060534	0.00067	0.004756	0.025008	9.4E-06	0.87974	0.902725	0.653	0.918	0.998	0.993	0.968	1	0.68	0.701
rs1977	1.0263E-10	-0.05876	0.00909	-0.05876	0.009092	2.05434E-10	0.47688	0.582484	0.00016	0.006441	0.0665	0.00106	0.07712	0.046818	0.886	0.873	1	0.995	0.965	0.999	0.959	0.957
rs2117938	1.0264E-10	-0.034638	0.00536	-0.034638	0.005359	2.05444E-10	0.5894	0.060541	0.000669	0.004756	0.025024	9.4E-06	0.8797	0.902739	0.653	0.918	0.998	0.993	0.968	1	0.68	0.701
rs1866560	1.0273E-10	0.033514	0.00519	0.0341808	0.00572	2.05626E-10	0.06166	0.005906	0.005961	0.003456	0.214416	0.00014	0.27419	0.025424	0.954	0.976	0.991	0.997	0.927	1	0.919	0.968
rs72925321	1.0278E-10	-0.059231	0.00916	-0.059231	0.009165	2.05724E-10	0.16252	0.954001	0.001247	0.0279	0.617257	6.6E-06	0.03394	0.030413	0.914	0.796	0.998	0.974	0.764	1	0.966	0.955

Table S3

rs9379854	1.0287E-10	-0.058811	0.0091	-0.058811	0.0091	2.059E-10	0.48891	0.624105	0.000122	0.006642	0.061712	0.00122	0.0785	0.052377	0.884	0.867	1	0.995	0.967	0.998	0.958	0.955
rs4772087	1.0293E-10	0.033125	0.00513	0.0328754	0.005997	2.06021E-10	0.38356	0.475082	9.67E-07	0.061409	0.008674	0.00191	0.03257	0.975501	0.62	0.836	1	0.925	0.984	0.994	0.959	0.743
rs2334958	1.0307E-10	-0.034636	0.00536	-0.034636	0.00536	2.06295E-10	0.56282	0.060317	0.000672	0.00453	0.024925	9.4E-06	0.88051	0.898131	0.645	0.917	0.998	0.993	0.968	1	0.678	0.698
rs1872510	1.0359E-10	-0.033124	0.00513	-0.033124	0.005126	2.07322E-10	0.02715	0.065232	0.000467	0.082787	0.034752	0.00055	0.15353	0.009663	0.966	0.954	1	0.944	0.98	0.999	0.946	0.977
rs4917466	1.0367E-10	-0.033651	0.00521	-0.034266	0.005741	2.07469E-10	0.15449	0.354052	0.000495	0.001524	0.490741	0.00182	0.05016	0.001356	0.93	0.9	0.999	0.998	0.838	0.997	0.966	0.985
rs11717524	1.0373E-10	-0.034629	0.00536	-0.034629	0.005359	2.07591E-10	0.56497	0.060525	0.000668	0.004686	0.024964	9.3E-06	0.87934	0.902751	0.646	0.917	0.998	0.993	0.968	1	0.679	0.7
rs3856519	1.0393E-10	0.0370245	0.00573	0.0416502	0.008705	2.0797E-10	0.06905	0.002721	0.008287	0.00552	0.00087	0.00038	0.12144	0.824238	0.948	0.978	0.983	0.996	0.996	0.999	0.947	0.782
rs17693963	1.0433E-10	-0.069593	0.01077	-0.069593	0.010772	2.08769E-10	0.41624	0.720033	0.003301	0.005536	0.171925	4E-05	0.14278	0.001421	0.889	0.851	0.995	0.995	0.93	1	0.939	0.982
rs145398340	1.0439E-10	-0.09092	0.01407	-0.09092	0.014073	2.08882E-10	0.88154	0.122956	0.000164	0.007576	0.216548	0.00019	0.09576	0.295873	0.819	0.929	1	0.993	0.91	1	0.948	0.9
rs149039865	1.044E-10	-0.09092	0.01407	-0.09092	0.014073	2.08898E-10	0.88154	0.122956	0.000164	0.007576	0.216545	0.00019	0.09576	0.295859	0.819	0.929	1	0.993	0.91	1	0.948	0.9
rs66827971	1.0443E-10	-0.05879	0.0091	-0.05879	0.0091	2.0895E-10	0.49025	0.624105	0.000122	0.006742	0.061713	0.00122	0.0785	0.052377	0.884	0.867	1	0.995	0.967	0.998	0.958	0.955
rs4940252	1.0485E-10	0.0326549	0.00506	0.0326549	0.005055	2.09784E-10	0.26105	0.735163	0.004183	0.060848	0.081311	4.4E-07	0.0305	0.499048	0.893	0.744	0.99	0.941	0.95	1	0.967	0.855
rs11172247	1.0528E-10	0.0327182	0.00507	0.0327182	0.005065	2.10633E-10	0.9549	0.289546	0.000356	0.023348	0.085221	0.00023	0.00905	0.126788	0.822	0.907	1	0.983	0.958	1	0.984	0.936
rs6987670	1.0538E-10	0.0350123	0.00542	0.0350123	0.005421	2.10814E-10	0.8118	0.441131	0.000115	0.030742	0.002312	0.00087	0.26195	0.041829	0.837	0.884	1	0.977	0.994	0.999	0.91	0.956
rs67748032	1.0545E-10	0.0384638	0.00596	0.0405276	0.007385	2.10964E-10	0.05776	0.541766	0.000798	0.005072	0.000121	0.00302	0.64289	0.061796	0.949	0.875	0.999	0.996	0.998	0.994	0.831	0.951
rs4955432	1.0583E-10	-0.034612	0.00536	-0.034612	0.005359	2.11698E-10	0.5885	0.060663	0.000665	0.004748	0.025523	9.6E-06	0.88002	0.902826	0.653	0.918	0.998	0.993	0.968	1	0.68	0.701
rs17600713	1.062E-10	-0.032653	0.00506	-0.032653	0.005056	2.12422E-10	0.72754	0.024184	9.91E-05	0.003765	0.938599	7.6E-05	0.50982	0.078545	0.784	0.941	1	0.995	0.538	1	0.791	0.92
rs9379859	1.0633E-10	-0.058734	0.0091	-0.058734	0.009095	2.12689E-10	0.48924	0.600433	0.000149	0.007045	0.056716	0.00113	0.07581	0.050811	0.885	0.871	1	0.995	0.969	0.998	0.959	0.956
rs9379857	1.068E-10	-0.058761	0.0091	-0.058761	0.0091	2.13604E-10	0.48871	0.624163	0.000124	0.006591	0.061888	0.00125	0.07869	0.052433	0.884	0.867	1	0.995	0.967	0.998	0.958	0.955
rs35304979	1.0688E-10	-0.05876	0.0091	-0.05876	0.0091	2.13767E-10	0.48871	0.624162	0.000124	0.006591	0.061887	0.00125	0.07869	0.052433	0.884	0.867	1	0.995	0.967	0.998	0.958	0.955
rs6775319	1.0737E-10	0.0344096	0.00533	0.0344096	0.00533	2.14726E-10	0.63217	0.466628	0.00024	0.024804	0.284757	3.4E-05	0.01821	0.127122	0.72	0.861	1	0.977	0.875	1	0.974	0.922
rs61859608	1.0746E-10	-0.047958	0.00743	-0.049636	0.009476	2.14904E-10	0.0016	0.289259	0.004526	0.109284	0.145706	7.2E-06	0.01849	0.292639	0.98	0.909	0.992	0.911	0.94	1	0.979	0.909
rs140653283	1.0778E-10	-0.061908	0.00959	-0.061908	0.00959	2.15533E-10	0.93753	0.333781	0.002799	0.003735	0.103957	7.5E-05	0.12479	0.007633	0.822	0.9	0.996	0.997	0.951	1	0.944	0.974
rs13088309	1.0782E-10	-0.040366	0.00625	-0.040617	0.007026	1.75211E-10	0.95187	0.115085	0.046949	4.66E-05	0.039354	3.4E-06	0.47041	0.797904	0.716	0.892	0.692	1	0.953	1	0.771	0.734
rs17075283	1.0793E-10	0.0394164	0.00611	0.0394854	0.007868	2.15821E-10	0.38287	0.00775	0.009098	0.019298	0.028996	1E-06	0.34044	0.312855	0.658	0.966	0.973	0.981	0.973	1	0.871	0.883
rs13027427	1.0842E-10	-0.036019	0.00558	-0.036019	0.00558	2.16784E-10	0.35888	0.03768	1.27E-06	0.173356	0.055871	0.00268	0.05538	0.454857	0.887	0.951	1	0.831	0.964	0.993	0.96	0.872
rs1307771	1.0843E-10	-0.0616	0.00954	-0.0616	0.009543	2.16794E-10	0.98571	0.326459	0.002038	0.003142	0.1158	8.7E-05	0.13828	0.014313	0.808	0.899	0.997	0.997	0.946	1	0.939	0.97
rs11127125	1.0853E-10	-0.036022	0.00558	-0.036022	0.005581	2.17004E-10	0.35811	0.038051	1.31E-06	0.174404	0.053714	0.00264	0.0564	0.458139	0.887	0.95	1	0.83	0.965	0.993	0.959	0.871
rs76254124	1.0887E-10	-0.049596	0.00768	-0.049596	0.007684	2.1766E-10	0.39093	0.174271	0.001742	0.000157	0.084687	0.00143	0.20827	0.057229	0.9	0.929	0.998	1	0.961	0.998	0.929	0.956
rs71384781	1.0897E-10	0.0382489	0.00593	0.0396328	0.008088	2.17862E-10	0.0221	0.008477	0.003489	0.264646	0.032986	2.3E-06	0.112	0.795344	0.956	0.967	0.99	0.719	0.972	1	0.937	0.806
rs12621229	1.0957E-10	0.036981	0.00573	0.041562	0.00868	2.19038E-10	0.07146	0.002728	0.008345	0.005191	0.000908	0.00041	0.12255	0.822404	0.947	0.978	0.983	0.996	0.996	0.999	0.947	0.782
rs10891539	1.0969E-10	-0.032693	0.00507	-0.032211	0.006209	2.1926E-10	0.56317	0.010037	2.46E-05	0.005891	0.720522	0.00017	0.59857	0.070841	0.798	0.951	1	0.991	0.423	1	0.747	0.917
rs215902	1.0987E-10	0.0420778	0.00652	0.0420778	0.006521	2.19626E-10	0.27972	0.888401	0.000109	0.017201	0.012216	0.00066	0.09915	0.310994	0.906	0.828	1	0.987	0.986	0.999	0.949	0.902
rs7570730	1.1006E-10	-0.03601	0.00558	-0.03601	0.005581	2.19987E-10	0.35747	0.038063	1.3E-06	0.173778	0.053742	0.00269	0.05637	0.458164	0.887	0.95	1	0.831	0.965	0.993	0.96	0.871
rs11920267	1.1034E-10	-0.034576	0.00536	-0.034576	0.005359	2.2054E-10	0.58743	0.060828	0.000661	0.004731	0.026183	1E-05	0.88084	0.9029	0.652	0.918	0.998	0.993	0.967	1	0.68	0.701
rs12629637	1.1034E-10	-0.034576	0.00536	-0.034576	0.005359	2.2054E-10	0.58743	0.060828	0.000661	0.004731	0.026183	1E-05	0.88084	0.9029	0.652	0.918	0.998	0.993	0.967	1	0.68	0.701
rs7638154	1.1035E-10	-0.034576	0.00536	-0.034576	0.005359	2.20567E-10	0.58682	0.060512	0.000671	0.004635	0.026019	1E-05	0.8772	0.902467	0.653	0.918	0.998	0.993	0.967	1	0.682	0.701
rs10891547	1.1049E-10	-0.032596	0.00505	-0.032596	0.005052	2.20834E-10	0.87919	0.054656	5.12E-05	0.002646	0.961047	0.00013	0.60588	0.053304	0.748	0.92	1	0.996	0.533	1	0.753	0.926
rs35307327	1.1053E-10	-0.058705	0.0091	-0.058705	0.009099	2.20916E-10	0.47971	0.624106	0.000122	0.007307	0.061713	0.00122	0.0785	0.052377	0.885	0.867	1	0.994	0.967	0.998	0.958	0.955
rs34436535	1.1055E-10	-0.058705	0.0091	-0.058705	0.009099	2.20946E-10	0.47973	0.624106	0.000122	0.007308	0.061713	0.00122	0.0785	0.052377	0.885	0.867	1	0.994	0.967	0.998	0.958	0.955
rs34878490	1.1055E-10	-0.058705	0.0091	-0.058705	0.009099	2.20946E-10	0.47973	0.624106	0.000122	0.007308	0.061713	0.00122	0.0785	0.052377	0.885	0.867	1	0.994	0.967	0.998	0.958	0.955
rs9358935	1.1055E-10	-0.058705	0.0091	-0.058705	0.009099	2.20946E-10	0.47973	0.624106	0.000122	0.007308	0.061713	0.00122	0.0785	0.052377	0.885	0.867	1	0.994	0.967	0.998	0.958	0.955
rs8052358	1.1055E-10	0.0383998	0.00595	0.0392214	0.007609	2.20947E-10	0.02739	0.019081	0.003651	0.315731	0.036361	1.3E-06	0.09995	0.614948	0.951	0.956	0.988	0.656	0.969	1	0.939	0.829
rs9358936	1.1055E-10	-0.058705	0.0091	-0.058705	0.009099	2.20958E-10	0.47974	0.624106	0.000122	0.007309	0.061713	0.00122	0.0785	0.052377	0.885	0.867	1	0.994	0.967	0.998	0.958	0.955
rs9393711	1.1055E-10	-0.058705	0.0091	-0.058705	0.009099	2.20958E-10	0.47974	0.624106	0.000122	0.007309	0.061713	0.00122	0.0785	0.052377	0.885	0.867	1	0.994	0.967	0.998	0.958	0.955
rs860068	1.1056E-10	0.0401508	0.00622	0.0401508	0.006223	2.20972E-10	0.08823	0.679234	0.000829	0.020483	0.029912	9.9E-05	0.05023	0.175275	0.94	0.764	0.999	0.984	0.977	1	0.964	0.925
rs12173854	1.106E-10	-0.058704	0.0091	-0.058704	0.009099	2.21061E-10	0.47974	0.624109	0.000122	0.007309	0.061715	0.00122	0.07851	0.052377	0.885	0.867	1	0.994	0.967	0.998	0.958	0.955
rs9393712	1.106E-10	-0.058704	0.0091	-0.058704	0.009099	2.21061E-10	0.47974	0.624109	0.000122	0.007309	0.061715	0.00122	0.07851	0.052377	0.885	0.867	1	0.994	0.967	0.998	0.958	0.955
rs11127126	1.1076E-10	-0.036005	0.00558	-0.036005	0.005581	2.21356E-10	0.35664	0.038058	1.3E-06	0.173951	0.053695	0.00271	0.05667	0.458503	0.887	0.95	1	0.831	0.965	0.993	0.959	0.871
rs139388510	1.1078E-10	-0.086145	0.01335	-0.094472	0.019493	2.2141E-10	0.01457	0.268711	0.000599	0.224785	0.000264	0.00031	0.01917	0.722395	0.964	0.898	0.999	0.754	0.997	0.999	0.976	0.824
rs12919399	1.1092E-10	0.0326684	0.00506	0.0326684	0.005064	2.2167E-10	0.95567	0.041161	0.002001	0.01805	0.069962	7.4E-05	0.00646	0.442698	0.823	0.954	0.997	0.987	0.963	1	0.986	0.886
rs16945226	1.1094E-10	-0.049201	0.00763	-0.049201	0.007627	2.21723E-10	0.25807	0.092132	0.003954	0.000735	0.006938	0.00296	0.08697	0.03725	0.925	0.949	0.995	0.999	0.991	0.996	0.962	0.966
rs1078	1.11E-10	-0.032682	0.00507	-0.032205	0.006209	2.21839E-10	0.55191	0.010136	2.51E-05	0.005678	0.716243	0.00017	0.60045	0.071109	0.8	0.951	1	0.992	0.422	1	0.746	0.917
rs35218722	1.1126E-10	-0.034571	0.00536	-0.034571	0.005359	2.22335E-10	0.59054	0.060828	0.000661	0.004799	0.026183	1E-05	0.88084	0.9029	0.653	0.918	0.998	0.993	0.967	1	0.681	0.701
rs11214595	1.1157E-10	-0.032615	0.00506	-0.032615	0.005056	2.22944E-10	0.72422	0.024182	9.83E-05	0.004102	0.940944	7.5E-05	0.51112	0.078461	0.785	0.941	1	0.994	0.54	1	0.791	0.92

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rs12804573	1.119E-10	-0.032675	0.00507	-0.032198	0.006209	2.23605E-10	0.55092	0.010123	2.5E-05	0.005771	0.716318	0.00017	0.60055	0.071159	0.8	0.951	1	0.991	0.422	1	0.747	0.917
rs12473400	1.1219E-10	-0.035996	0.00558	-0.035996	0.005581	2.24157E-10	0.3558	0.037992	1.3E-06	0.174349	0.053627	0.00272	0.05699	0.459656	0.887	0.95	1	0.83	0.965	0.993	0.959	0.871
rs9379858	1.1219E-10	-0.058657	0.00909	-0.058657	0.009095	2.24172E-10	0.48537	0.598925	0.000142	0.007151	0.056149	0.00126	0.07456	0.050211	0.885	0.871	1	0.994	0.969	0.998	0.96	0.956
rs35174559	1.1233E-10	-0.034562	0.00536	-0.034562	0.005359	2.24448E-10	0.56284	0.060828	0.000661	0.00466	0.026183	1E-05	0.88084	0.9029	0.645	0.917	0.998	0.993	0.967	1	0.679	0.7
rs12805699	1.1244E-10	-0.032672	0.00507	-0.032195	0.006208	2.24656E-10	0.55073	0.010136	2.51E-05	0.005771	0.716251	0.00017	0.6005	0.071109	0.8	0.951	1	0.991	0.422	1	0.747	0.917
rs10891548	1.1252E-10	-0.032581	0.00505	-0.032581	0.005052	2.24815E-10	0.88231	0.054656	5.12E-05	0.002695	0.961047	0.00013	0.60588	0.053304	0.747	0.92	1	0.996	0.533	1	0.753	0.926
rs34601878	1.1317E-10	-0.032598	0.00506	-0.032598	0.005055	2.26082E-10	0.73135	0.024533	9.99E-05	0.003955	0.937494	7.7E-05	0.50752	0.078281	0.783	0.94	1	0.994	0.538	1	0.792	0.92
rs2734849	1.1326E-10	-0.032575	0.00505	-0.032575	0.005052	2.26258E-10	0.88788	0.055208	5.46E-05	0.002577	0.956661	0.00013	0.61666	0.048777	0.745	0.919	1	0.996	0.53	1	0.748	0.928
rs406511	1.1415E-10	-0.074238	0.01152	-0.074238	0.011515	2.28012E-10	0.14682	0.343409	0.002616	0.001078	0.607151	8.6E-05	0.16403	0.011898	0.923	0.892	0.996	0.998	0.787	1	0.929	0.969
rs2551762	1.1455E-10	-0.036196	0.00561	-0.050407	0.011927	7.55263E-12	0.44452	0.026568	0.020765	4.29E-06	8.54E-06	0.05182	0.06568	0.060164	0.651	0.936	0.192	1	1	0.139	0.872	0.901
rs761719	1.1467E-10	0.0340555	0.00528	0.0411969	0.009526	1.04409E-10	0.61007	0.031584	3.24E-06	0.014582	0.220988	0.07698	0.00051	0.005947	0.795	0.945	1	0.97	0.85	0.451	0.995	0.973
rs10174929	1.1532E-10	0.0361959	0.00562	0.0401961	0.008018	2.30296E-10	0.06872	0.005321	0.004069	0.003285	0.000885	0.00148	0.09812	0.880742	0.949	0.975	0.994	0.997	0.996	0.998	0.954	0.797
rs2359199	1.1548E-10	0.0340473	0.00528	0.0412469	0.00951	1.05255E-10	0.55794	0.031567	3.27E-06	0.015834	0.221534	0.07636	0.0005	0.005939	0.807	0.946	1	0.968	0.851	0.459	0.995	0.973
rs5773535	1.1574E-10	0.0340461	0.00528	0.0412413	0.009508	1.05557E-10	0.5583	0.031561	3.28E-06	0.015815	0.221201	0.07641	0.00051	0.005955	0.807	0.946	1	0.968	0.852	0.459	0.995	0.973
rs3751820	1.1584E-10	0.0381824	0.00592	0.0394418	0.00785	2.31306E-10	0.02275	0.009007	0.003561	0.252582	0.032966	2.9E-06	0.11221	0.723121	0.956	0.967	0.99	0.74	0.973	1	0.939	0.823
rs12995865	1.1602E-10	-0.035969	0.00558	-0.035969	0.005581	2.31659E-10	0.35491	0.037865	1.31E-06	0.174862	0.053752	0.00277	0.05741	0.460707	0.887	0.95	1	0.83	0.965	0.993	0.959	0.871
rs60020658	1.1615E-10	-0.038886	0.00603	-0.04378	0.0087	2.31925E-10	0.00052	0.069047	0.006471	0.030433	0.044023	0.00026	0.04249	0.079893	0.987	0.956	0.991	0.982	0.978	1	0.975	0.957
rs13001060	1.1638E-10	-0.035966	0.00558	-0.035966	0.005581	2.32376E-10	0.35513	0.037879	1.31E-06	0.174711	0.053784	0.00277	0.05744	0.460793	0.887	0.95	1	0.83	0.965	0.993	0.959	0.871
rs1233489	1.1657E-10	-0.074342	0.01154	-0.074342	0.011537	2.32743E-10	0.1666	0.380364	0.00258	0.0009	0.685273	0.00011	0.10338	0.011909	0.918	0.885	0.996	0.999	0.757	1	0.945	0.968
rs79249301	1.1673E-10	-0.096629	0.015	-0.096629	0.014996	2.33061E-10	0.91757	0.52207	0.006666	0.000143	0.042676	0.0007	0.0352	0.020694	0.83	0.878	0.988	1	0.973	0.999	0.972	0.967
rs79926713	1.1676E-10	0.0406528	0.00631	0.0407305	0.009295	2.33106E-10	0.40911	0.024031	9.84E-05	2.78E-05	0.473046	0.00185	0.06162	0.697527	0.82	0.935	1	1	0.302	0.992	0.935	0.757
rs28498823	1.1709E-10	-0.033637	0.00522	-0.033637	0.005221	2.33764E-10	0.60073	0.272497	4.67E-05	7.67E-05	0.841666	0.00194	0.02804	0.80365	0.8	0.86	1	1	0.618	0.993	0.958	0.681
rs10891540	1.1743E-10	-0.03264	0.00507	-0.032149	0.006214	2.34413E-10	0.56667	0.010032	2.48E-05	0.006176	0.718815	0.00017	0.59976	0.070914	0.797	0.951	1	0.991	0.423	1	0.747	0.917
rs2186799	1.1816E-10	-0.032633	0.00507	-0.032154	0.006205	2.3585E-10	0.55337	0.010154	2.53E-05	0.006006	0.71601	0.00017	0.60045	0.0712	0.8	0.95	1	0.991	0.423	1	0.747	0.917
rs6940230	1.1823E-10	-0.09654	0.01499	-0.09654	0.014987	2.35977E-10	0.91741	0.494483	0.006366	0.000142	0.045497	0.00069	0.04052	0.021639	0.83	0.881	0.989	1	0.972	0.999	0.97	0.966
rs11604671	1.1829E-10	-0.032543	0.00505	-0.032543	0.005052	2.36093E-10	0.8997	0.054861	5.52E-05	0.002636	0.956965	0.00012	0.62084	0.052288	0.742	0.919	1	0.996	0.529	1	0.746	0.926
rs10876988	1.1858E-10	0.0326628	0.00507	0.0326628	0.005071	2.36668E-10	0.93106	0.321559	0.000136	0.009914	0.242717	0.00023	0.02033	0.277338	0.788	0.891	1	0.991	0.899	1	0.974	0.899
rs974495	1.2018E-10	-0.040239	0.00625	-0.040557	0.007364	1.84744E-10	0.99369	0.112491	0.053286	4.58E-05	0.039277	2.9E-06	0.46237	0.82303	0.693	0.886	0.637	1	0.95	1	0.759	0.714
rs9393708	1.2093E-10	-0.058552	0.00909	-0.058552	0.009095	2.41274E-10	0.48665	0.59891	0.000146	0.007665	0.061398	0.00116	0.07503	0.050528	0.885	0.871	1	0.994	0.967	0.998	0.959	0.956
rs6438418	1.2137E-10	-0.033591	0.00522	-0.033591	0.005218	2.42125E-10	0.09012	0.395157	0.00025	0.006186	0.377976	0.0004	0.16439	0.036587	0.941	0.893	1	0.995	0.87	0.999	0.934	0.959
rs11678980	1.2218E-10	0.0334865	0.0052	0.0334865	0.005203	2.43714E-10	0.34081	0.452263	9.99E-05	0.001736	0.06891	0.00235	0.0443	0.074832	0.889	0.705	1	0.998	0.959	0.995	0.964	0.942
rs74548903	1.2226E-10	-0.096466	0.01499	-0.096466	0.014987	2.43871E-10	0.91885	0.494528	0.006349	0.000148	0.045582	0.00069	0.04056	0.021652	0.83	0.881	0.989	1	0.972	0.999	0.97	0.966
rs186361256	1.2229E-10	0.0760885	0.01182	0.0760885	0.011822	2.43931E-10	0.48328	0.445375	8.73E-05	0.023824	0.000978	0.00526	0.01555	0.379212	0.884	0.889	1	0.983	0.996	0.989	0.98	0.897
rs145802336	1.2255E-10	0.0883809	0.01373	0.0883809	0.013732	2.4443E-10	0.28812	0.895692	0.003905	0.093315	0.066062	2.7E-07	0.06462	0.673179	0.887	0.802	0.991	0.91	0.955	1	0.951	0.827
rs11639885	1.2298E-10	-0.050389	0.00783	-0.050389	0.00783	2.45278E-10	0.41829	0.105336	0.003705	0.000171	0.045621	0.00165	0.17615	0.033486	0.9	0.943	0.995	1	0.975	0.998	0.938	0.964
rs17720293	1.2345E-10	-0.06454	0.01003	-0.06454	0.010029	2.46185E-10	0.52584	0.657132	0.000462	0.015399	0.230301	0.0004	0.01817	0.001491	0.877	0.861	0.999	0.989	0.914	1	0.979	0.982
rs74979580	1.2349E-10	-0.096442	0.01499	-0.096442	0.014987	2.46278E-10	0.91895	0.494508	0.006408	0.000148	0.045547	0.00069	0.04053	0.021643	0.83	0.881	0.989	1	0.972	0.999	0.97	0.966
rs138739848	1.2366E-10	-0.096437	0.01499	-0.096437	0.014987	2.46598E-10	0.91769	0.494465	0.006545	0.000142	0.045504	0.00069	0.04048	0.021633	0.83	0.881	0.988	1	0.972	0.999	0.97	0.966
rs12629759	1.2379E-10	-0.034494	0.00536	-0.034494	0.005361	2.4685E-10	0.59524	0.059437	0.000693	0.005091	0.024963	1E-05	0.88854	0.885148	0.654	0.918	0.998	0.993	0.968	1	0.678	0.698
rs74983924	1.2384E-10	-0.096436	0.01499	-0.096436	0.014987	2.46945E-10	0.91897	0.494508	0.006419	0.000148	0.045546	0.00069	0.04053	0.021643	0.83	0.881	0.989	1	0.972	0.999	0.97	0.966
rs11891769	1.2387E-10	-0.035915	0.00558	-0.035915	0.005582	2.47005E-10	0.35396	0.037849	1.31E-06	0.181141	0.05367	0.0028	0.05773	0.461205	0.887	0.95	1	0.823	0.965	0.992	0.959	0.87
rs10104911	1.2438E-10	0.0401609	0.00624	0.0401609	0.006242	2.48004E-10	0.16695	0.793164	0.000243	0.019318	0.029344	0.00053	0.03612	0.110566	0.925	0.787	1	0.986	0.978	0.999	0.97	0.939
rs4425103	1.2456E-10	0.033687	0.00524	0.033687	0.005236	2.48365E-10	0.22922	0.011677	0.000578	0.012932	0.106038	0.00018	0.9194	0.022984	0.913	0.966	0.999	0.99	0.949	1	0.76	0.964
rs12092543	1.2493E-10	-0.050971	0.00792	-0.052819	0.0092	1.80343E-10	0.11998	0.200645	0.000939	1.23E-06	0.108526	0.01457	0.16682	0.513172	0.932	0.917	0.998	1	0.947	0.947	0.931	0.871
rs10500560	1.2504E-10	0.0370296	0.00576	0.0385067	0.007725	2.26521E-10	0.00912	0.055835	0.012929	0.233902	0.101958	5.5E-07	0.07182	0.173874	0.969	0.944	0.947	0.761	0.945	1	0.954	0.918
rs77951490	1.2508E-10	-0.096406	0.01499	-0.096406	0.014986	2.49366E-10	0.91349	0.490872	0.006753	0.000143	0.043076	0.0007	0.04083	0.021533	0.831	0.882	0.988	1	0.973	0.999	0.97	0.966
rs62251383	1.2512E-10	-0.032673	0.00508	-0.032673	0.005079	2.37594E-10	0.83579	0.414432	0.01036	0.011414	0.268566	9.9E-08	0.02553	0.874009	0.72	0.843	0.957	0.985	0.855	1	0.962	0.713
rs112273702	1.2515E-10	-0.049996	0.00777	-0.049996	0.007772	2.49516E-10	0.33579	0.833379	0.000109	0.003744	0.420528	0.00023	0.35869	0.025163	0.882	0.812	1	0.996	0.829	1	0.87	0.957
rs56393513	1.2539E-10	-0.038774	0.00603	-0.04438	0.00897	2.49974E-10	0.00043	0.071874	0.00673	0.034009	0.036829	0.00029	0.03748	0.076441	0.988	0.955	0.991	0.98	0.98	1	0.976	0.958
rs10098474	1.2541E-10	-0.039129	0.00608	-0.039129	0.006083	2.50013E-10	0.18347	0.976902	0.001183	0.01298	0.025112	0.00027	0.02608	0.098769	0.926	0.827	0.999	0.991	0.981	1	0.976	0.944
rs138267301	1.2555E-10	-0.096406	0.01499	-0.096406	0.014987	2.50292E-10	0.91591	0.493424	0.006536	0.000145	0.044629	0.0007	0.041	0.02165	0.83	0.882	0.988	1	0.973	0.999	0.97	0.966
rs12360992	1.2584E-10	-0.032504	0.00505	-0.032504	0.005053	2.50857E-10	0.73721	0.025171	0.000102	0.004073	0.929399	8.1E-05	0.49984	0.077754	0.782	0.94	1	0.994	0.536	1	0.794	0.92
rs7824803	1.2591E-10	0.0347809	0.00541	0.0347809	0.005407	2.51002E-10	0.78738	0.555726	0.000159	0.034708	0.00264	0.00063	0.23871	0.038979	0.839	0.868	1	0.974	0.993	0.999	0.914	0.956
rs75672316	1.2601E-10	-0.096395	0.01499	-0.096395	0.014987	2.51188E-10	0.91914	0.494476	0.006507	0.000148	0.045514	0.00069	0.04049	0.021635	0.83	0.881	0.988	1	0.972	0.999	0.97	0.966
rs12637576	1.2623E-10	-0.034473	0.00536	-0.034473	0.00536	2.5163E-10	0.59525	0.059506	0.000699	0.005097	0.025227	1E-05	0.8866	0.878661	0.654	0.918	0.998	0.993	0.968	1	0.679	0.696

Table S3

rs117447488	1.2654E-10	0.0750867	0.01168	0.0750867	0.011675	2.52226E-10	0.89655	0.368588	0.00027	0.080132	0.057632	1E-04	0.01637	0.080736	0.825	0.892	1	0.936	0.966	1	0.978	0.943
rs34104395	1.2668E-10	-0.070023	0.01089	-0.070023	0.010888	2.525E-10	0.66041	0.825656	0.001675	0.000567	0.229465	0.00065	0.01669	0.013045	0.856	0.833	0.998	0.999	0.91	0.999	0.979	0.969
rs543361280	1.2695E-10	0.107205	0.01667	0.107205	0.016671	2.53019E-10	0.76292	0.6832	1.27E-05	0.010084	0.207321	0.00048	0.04196	0.188935	0.727	0.721	1	0.989	0.894	0.999	0.956	0.898
rs115949281	1.2752E-10	-0.096369	0.01499	-0.096369	0.014987	2.54134E-10	0.91594	0.49282	0.0066	0.000147	0.044262	0.0007	0.04099	0.021635	0.831	0.882	0.988	1	0.973	0.999	0.97	0.966
rs76266945	1.2769E-10	-0.096367	0.01499	-0.096367	0.014987	2.54474E-10	0.91613	0.492978	0.006591	0.000147	0.044408	0.0007	0.04101	0.02164	0.83	0.882	0.988	1	0.973	0.999	0.97	0.966
rs148380803	1.2841E-10	0.0751033	0.01168	0.0751033	0.011682	2.55886E-10	0.77591	0.360741	0.000295	0.071616	0.066856	0.0001	0.01868	0.079322	0.843	0.895	1	0.945	0.963	1	0.977	0.945
rs4423852	1.287E-10	0.0400569	0.00623	0.0431492	0.008583	2.56445E-10	0.03991	0.354208	0.004138	0.001789	6.03E-05	0.00104	0.91466	0.258368	0.951	0.89	0.993	0.998	0.998	0.998	0.755	0.906
rs77006546	1.2892E-10	-0.096449	0.015	-0.096449	0.015004	2.56874E-10	0.84184	0.490326	0.006764	0.000185	0.040685	0.00065	0.04515	0.021829	0.841	0.883	0.988	1	0.974	0.999	0.969	0.966
rs76798435	1.29E-10	-0.096326	0.01498	-0.096326	0.014985	2.57031E-10	0.90604	0.490344	0.00676	0.000153	0.042904	0.0007	0.04075	0.021507	0.832	0.882	0.988	1	0.973	0.999	0.97	0.966
rs4353824	1.2905E-10	0.0341801	0.00532	0.0341801	0.005317	2.57123E-10	0.58981	0.656919	9.87E-05	0.031622	0.282558	7.3E-05	0.01639	0.090307	0.705	0.829	1	0.969	0.872	1	0.974	0.929
rs7190257	1.2958E-10	0.0426167	0.00663	0.0426167	0.00663	2.58166E-10	0.29381	0.031282	0.001314	0.062967	0.068757	1.7E-05	0.10826	0.502493	0.907	0.957	0.998	0.953	0.964	1	0.949	0.879
rs1341336	1.2975E-10	0.0326584	0.00508	0.032401	0.006406	2.58495E-10	0.01224	0.062789	0.00348	0.017231	0.106957	1.5E-06	0.61854	0.649684	0.957	0.929	0.991	0.981	0.932	1	0.561	0.813
rs6784203	1.3052E-10	-0.040183	0.00625	-0.04045	0.007076	2.09196E-10	0.9507	0.1177	0.049769	4.71E-05	0.0394	3.7E-06	0.4757	0.80382	0.713	0.889	0.676	1	0.952	1	0.766	0.729
rs62303544	1.3054E-10	0.0390583	0.00608	0.0398887	0.006807	2.60035E-10	0.07806	0.648269	0.000895	0.007323	0.000116	0.00125	0.74764	0.143859	0.94	0.854	0.999	0.994	0.998	0.998	0.798	0.928
rs3448	1.31E-10	-0.040172	0.00625	-0.040449	0.007101	2.09063E-10	0.97816	0.115402	0.050711	4.78E-05	0.040582	3.6E-06	0.4524	0.798794	0.706	0.889	0.67	1	0.951	1	0.773	0.729
rs77914161	1.3104E-10	-0.09629	0.01498	-0.09629	0.014985	2.61019E-10	0.90694	0.491156	0.006767	0.000156	0.042909	0.0007	0.04075	0.021507	0.832	0.882	0.988	1	0.973	0.999	0.97	0.966
rs111656223	1.3132E-10	-0.04992	0.00777	-0.04992	0.007769	2.61563E-10	0.33705	0.825042	9.88E-05	0.003381	0.440434	0.00028	0.34662	0.027236	0.881	0.812	1	0.996	0.822	1	0.872	0.955
rs201320279	1.314E-10	0.0426212	0.00663	0.0426212	0.006633	2.61707E-10	0.92151	0.060727	0.002578	0.020461	0.134343	2.3E-07	0.75686	0.895909	0.736	0.922	0.993	0.975	0.913	1	0.736	0.757
rs200381132	1.3196E-10	0.0426171	0.00663	0.0426171	0.006633	2.62813E-10	0.92155	0.060767	0.002578	0.020471	0.134508	2.3E-07	0.75696	0.895624	0.736	0.922	0.993	0.975	0.913	1	0.736	0.757
rs13195509	1.3231E-10	-0.070134	0.01092	-0.070134	0.010917	2.635E-10	0.64998	0.741902	0.001826	0.000544	0.244662	0.00065	0.01737	0.012869	0.858	0.845	0.997	0.999	0.907	0.999	0.979	0.97
rs4665392	1.3251E-10	-0.035865	0.00558	-0.035865	0.005583	2.63888E-10	0.35154	0.037504	1.42E-06	0.174705	0.050952	0.00293	0.06055	0.474818	0.888	0.95	1	0.832	0.966	0.992	0.958	0.869
rs62305173	1.3274E-10	0.0390414	0.00608	0.0398668	0.006804	2.64334E-10	0.07836	0.64762	0.000895	0.007355	0.000116	0.00126	0.74908	0.144779	0.94	0.854	0.999	0.994	0.998	0.998	0.798	0.928
rs4955425	1.3322E-10	-0.040173	0.00625	-0.040426	0.007083	2.14852E-10	0.99746	0.122289	0.048832	4.94E-05	0.038952	3.6E-06	0.46957	0.800765	0.704	0.887	0.682	1	0.953	1	0.768	0.73
rs61240383	1.3356E-10	-0.047462	0.00739	-0.047462	0.007389	2.65936E-10	0.30803	0.181564	0.002096	0.000831	0.042297	0.00192	0.07354	0.036554	0.916	0.932	0.998	0.999	0.977	0.998	0.964	0.965
rs4955430	1.3395E-10	-0.040159	0.00625	-0.04043	0.0071	2.14118E-10	0.95298	0.117385	0.049965	4.63E-05	0.04001	3.7E-06	0.48018	0.805232	0.711	0.888	0.674	1	0.952	1	0.763	0.728
rs7593136	1.3403E-10	-0.035846	0.00558	-0.035846	0.005581	2.66796E-10	0.34602	0.039078	1.36E-06	0.178245	0.049346	0.00308	0.05627	0.478961	0.888	0.949	1	0.827	0.967	0.991	0.959	0.867
rs116090114	1.3404E-10	-0.096246	0.01499	-0.096246	0.014986	2.66862E-10	0.91919	0.495758	0.006842	0.000147	0.045404	0.0007	0.04032	0.021617	0.83	0.881	0.988	1	0.972	0.999	0.97	0.966
rs6744348	1.3432E-10	-0.035845	0.00558	-0.035845	0.005581	2.67358E-10	0.34557	0.039097	1.36E-06	0.17857	0.049319	0.00308	0.05642	0.478915	0.888	0.949	1	0.827	0.967	0.991	0.959	0.867
rs3734543	1.3482E-10	-0.069921	0.01089	-0.069921	0.010888	2.68385E-10	0.66858	0.825679	0.001694	0.000576	0.231352	0.00066	0.01693	0.01305	0.854	0.833	0.998	0.999	0.91	0.999	0.979	0.969
rs114032189	1.3542E-10	0.106494	0.01659	0.106494	0.016586	2.6956E-10	0.78965	0.683887	1.32E-05	0.009701	0.206547	0.00052	0.04311	0.192387	0.735	0.723	1	0.989	0.895	0.999	0.955	0.898
rs34039719	1.3584E-10	-0.034006	0.0053	-0.036956	0.008888	2.7038E-10	0.11162	0.366767	0.003838	0.054405	0.229337	2.2E-05	0.0001	0.029515	0.926	0.669	0.992	0.949	0.898	1	0.996	0.956
rs7871350	1.3614E-10	-0.03635	0.00566	-0.03635	0.005662	2.70957E-10	0.5493	0.619879	1.63E-05	0.008885	0.10289	0.00455	0.01292	0.024069	0.72	0.85	1	0.992	0.946	0.989	0.979	0.96
rs12801450	1.3645E-10	-0.032622	0.00508	-0.032622	0.005081	2.71575E-10	0.64696	0.292378	0.023183	0.000198	0.06828	1.3E-05	0.28888	0.25759	0.841	0.892	0.919	0.999	0.957	1	0.89	0.899
rs10891549	1.3663E-10	-0.032413	0.00505	-0.032413	0.005049	2.71919E-10	0.82827	0.025469	0.000107	0.002564	0.987764	0.00014	0.52273	0.063102	0.772	0.941	1	0.996	0.576	1	0.792	0.927
rs3734542	1.367E-10	-0.0699	0.01089	-0.0699	0.010889	2.72046E-10	0.67776	0.825677	0.001694	0.000578	0.23135	0.00066	0.01693	0.01305	0.853	0.833	0.998	0.999	0.91	0.999	0.979	0.969
rs11923032	1.3683E-10	-0.040146	0.00625	-0.040488	0.007388	2.07946E-10	0.97373	0.116762	0.05627	4.64E-05	0.037429	3.1E-06	0.46637	0.772304	0.683	0.884	0.621	1	0.951	1	0.755	0.722
rs9393703	1.3744E-10	-0.0584	0.0091	-0.0584	0.009098	2.73499E-10	0.48865	0.619926	0.000143	0.006582	0.067474	0.0013	0.08328	0.051115	0.884	0.868	1	0.995	0.965	0.998	0.957	0.955
rs17701060	1.3754E-10	-0.047228	0.00736	-0.047228	0.007358	2.73685E-10	0.44366	0.205445	0.003015	0.000754	0.041773	0.00158	0.04913	0.025616	0.899	0.928	0.996	0.999	0.976	0.998	0.97	0.968
rs7555230	1.3758E-10	0.0339824	0.00529	0.0427539	0.009767	1.28992E-10	0.43074	0.012633	1.77E-05	0.009853	0.194274	0.07423	0.0002	0.011012	0.848	0.963	1	0.984	0.881	0.51	0.996	0.969
rs55708748	1.3766E-10	-0.032518	0.00507	-0.031962	0.006336	2.73923E-10	0.55646	0.010736	2.88E-05	0.005625	0.673458	0.00017	0.62147	0.068965	0.795	0.949	1	0.991	0.4	1	0.736	0.916
rs6795756	1.3767E-10	-0.034404	0.00536	-0.034404	0.00536	2.73949E-10	0.59937	0.058867	0.000721	0.004986	0.025469	1.1E-05	0.89179	0.864453	0.655	0.918	0.998	0.993	0.967	1	0.677	0.693
rs12465012	1.3796E-10	-0.035826	0.00558	-0.035826	0.005582	2.74499E-10	0.37263	0.035568	1.39E-06	0.181823	0.047503	0.00295	0.06222	0.475137	0.883	0.95	1	0.823	0.967	0.992	0.957	0.867
rs10789942	1.3799E-10	-0.032518	0.00507	-0.031964	0.006326	2.74572E-10	0.55324	0.010718	2.86E-05	0.005824	0.675399	0.00017	0.62006	0.069016	0.796	0.949	1	0.991	0.401	1	0.737	0.917
rs12623170	1.381E-10	-0.035823	0.00558	-0.035823	0.005582	2.74675E-10	0.34403	0.039033	1.35E-06	0.18105	0.049433	0.00312	0.0567	0.479434	0.888	0.949	1	0.824	0.966	0.991	0.959	0.867
rs1503579	1.3819E-10	-0.036759	0.00573	-0.04057	0.010656	2.74959E-10	0.01055	0.278207	0.002289	0.191489	0.06227	1.2E-05	0.00011	0.294512	0.958	0.872	0.992	0.753	0.95	1	0.995	0.559
rs4666013	1.3834E-10	-0.035821	0.00558	-0.035821	0.005582	2.75159E-10	0.35162	0.03909	1.36E-06	0.180883	0.049358	0.00309	0.05651	0.479089	0.887	0.949	1	0.824	0.966	0.991	0.959	0.867
rs62302748	1.3857E-10	0.0402969	0.00628	0.0402969	0.006279	2.75701E-10	0.2629	0.499473	0.001226	0.00184	0.000626	0.00107	0.82639	0.106078	0.903	0.869	0.998	0.998	0.996	0.998	0.776	0.934
rs183712207	1.3906E-10	0.0746538	0.01163	0.0746538	0.011634	2.76654E-10	0.67624	0.48812	0.000118	0.02475	0.000812	0.00437	0.01689	0.265245	0.858	0.882	1	0.982	0.996	0.992	0.978	0.912
rs10490064	1.3908E-10	0.0357521	0.00557	0.0383434	0.007222	2.76689E-10	0.04167	0.010227	0.010692	0.005149	0.001412	0.0003	0.16884	0.896168	0.957	0.971	0.978	0.996	0.995	1	0.937	0.831
rs11214603	1.3908E-10	-0.0324	0.00505	-0.0324	0.005049	2.76692E-10	0.82883	0.024194	0.000109	0.002573	0.991516	0.00014	0.52573	0.063786	0.771	0.941	1	0.996	0.574	1	0.791	0.926
rs10809326	1.3912E-10	-0.036334	0.00566	-0.036334	0.005662	2.76777E-10	0.55135	0.621594	1.56E-05	0.008991	0.101482	0.00479	0.01297	0.023612	0.72	0.849	1	0.992	0.946	0.988	0.979	0.96
rs62259944	1.3914E-10	0.0401901	0.00626	0.0404691	0.007021	2.25753E-10	0.97319	0.115654	0.051037	5.55E-05	0.036237	4E-06	0.42173	0.757753	0.702	0.891	0.675	1	0.956	1	0.787	0.742
rs10796888	1.3921E-10	0.0339739	0.00529	0.0427642	0.009777	1.29434E-10	0.43042	0.012531	1.74E-05	0.009978	0.194302	0.07493	0.0002	0.011039	0.847	0.963	1	0.984	0.881	0.506	0.996	0.969
rs4666014	1.3942E-10	-0.035813	0.00558	-0.035813	0.005581	2.77324E-10	0.34531	0.039357	1.41E-06	0.174735	0.049245	0.0032	0.05655	0.478553	0.889	0.95	1	0.832	0.967	0.991	0.959	0.868
rs10809329	1.4013E-10	-0.036324	0.00566	-0.036324	0.005662	2.7874E-10	0.54448	0.619503	1.64E-05	0.009079	0.103051	0.00453	0.01294	0.024142	0.719	0.849	1	0.992	0.945	0.989	0.979	0.96

Table S3

rs10155014	1.4018E-10	-0.040183	0.00626	-0.040459	0.007012	2.27698E-10	0.97328	0.115626	0.051023	5.63E-05	0.036237	4E-06	0.42169	0.757662	0.702	0.891	0.676	1	0.956	1	0.787	0.742
rs11214596	1.4048E-10	-0.032408	0.00505	-0.032408	0.005052	2.79414E-10	0.74163	0.025512	0.000105	0.004303	0.922972	8.3E-05	0.49582	0.077202	0.782	0.939	1	0.994	0.534	1	0.796	0.92
rs11039216	1.405E-10	0.0326096	0.00508	0.0326042	0.005094	2.7947E-10	0.79123	0.739946	0.000174	8.47E-06	0.750858	0.00033	0.35943	0.63855	0.724	0.637	0.999	1	0.601	0.999	0.795	0.747
rs2046398	1.4066E-10	0.039693	0.00619	0.039693	0.006187	2.79771E-10	0.06099	0.986286	0.000317	0.012781	0.034722	0.00059	0.0545	0.2779	0.949	0.822	1	0.991	0.976	0.999	0.964	0.911
rs6550617	1.4072E-10	0.0340982	0.00532	0.0340982	0.005315	2.79892E-10	0.60288	0.65824	0.000107	0.031627	0.280078	7.6E-05	0.01653	0.088209	0.71	0.829	1	0.969	0.873	1	0.974	0.93
rs7028951	1.4083E-10	-0.037862	0.0059	-0.037862	0.005902	2.801E-10	0.55909	0.296895	2.06E-05	0.001058	0.31707	0.00604	0.0485	0.024994	0.711	0.889	1	0.998	0.867	0.981	0.96	0.957
rs7237127	1.4146E-10	0.0324363	0.00506	0.0324363	0.005057	2.81341E-10	0.22116	0.636258	0.002835	0.046889	0.089724	9.3E-07	0.03626	0.720812	0.897	0.72	0.994	0.954	0.944	1	0.962	0.815
rs7538860	1.4152E-10	0.0339795	0.0053	0.0427743	0.009773	1.32205E-10	0.42396	0.012633	1.77E-05	0.010273	0.194274	0.07423	0.0002	0.011012	0.849	0.963	1	0.984	0.881	0.51	0.996	0.969
rs78771277	1.4236E-10	0.0773235	0.01206	0.0774298	0.012171	2.83079E-10	0.2867	0.015329	0.019367	0.005889	0.009947	2.5E-05	0.05466	0.852472	0.904	0.963	0.95	0.995	0.988	1	0.962	0.778
rs4850595	1.431E-10	-0.044876	0.007	-0.044876	0.006998	2.84524E-10	0.10894	0.401299	8.22E-05	0.002064	0.002794	0.01731	0.05265	0.754023	0.935	0.889	1	0.998	0.994	0.941	0.964	0.839
rs13096474	1.4311E-10	-0.040116	0.00626	-0.040455	0.007468	2.15491E-10	0.98412	0.12024	0.056259	4.35E-05	0.036979	3.2E-06	0.49353	0.793658	0.682	0.881	0.617	1	0.951	1	0.742	0.714
rs7024802	1.4312E-10	-0.037846	0.0059	-0.037846	0.005902	2.84557E-10	0.54527	0.297753	2.04E-05	0.001076	0.315018	0.00597	0.0486	0.025698	0.708	0.889	1	0.998	0.867	0.982	0.96	0.957
rs12001095	1.4353E-10	-0.037843	0.0059	-0.037843	0.005902	2.8537E-10	0.54464	0.298416	2.05E-05	0.001075	0.314939	0.00598	0.04852	0.025662	0.708	0.889	1	0.998	0.867	0.982	0.96	0.957
rs5896433	1.4361E-10	-0.037842	0.0059	-0.037842	0.005902	2.85522E-10	0.54562	0.297743	2.04E-05	0.001075	0.315407	0.00599	0.04863	0.025614	0.708	0.889	1	0.998	0.867	0.982	0.959	0.957
rs2341396	1.4426E-10	-0.033911	0.00529	-0.037289	0.009271	2.86784E-10	0.23678	0.490636	0.004772	0.065146	0.30518	1.5E-05	7.3E-05	0.009176	0.899	0.696	0.988	0.936	0.869	1	0.996	0.968
rs6434757	1.4508E-10	-0.044861	0.007	-0.044861	0.006998	2.88379E-10	0.10931	0.401407	8.23E-05	0.002101	0.002792	0.01729	0.05266	0.754067	0.935	0.889	1	0.998	0.994	0.941	0.964	0.839
rs1554929	1.4522E-10	-0.032369	0.00505	-0.032369	0.00505	2.88647E-10	0.82934	0.024262	0.000113	0.002595	0.995825	0.00014	0.52894	0.064171	0.771	0.941	1	0.996	0.572	1	0.79	0.926
rs6434755	1.4538E-10	-0.044859	0.007	-0.044859	0.006998	2.88971E-10	0.10931	0.401492	8.24E-05	0.002098	0.002795	0.0173	0.05268	0.754099	0.935	0.889	1	0.998	0.994	0.941	0.964	0.839
rs4850596	1.4592E-10	-0.044862	0.007	-0.044862	0.006999	2.90017E-10	0.10894	0.400029	8.3E-05	0.002064	0.00282	0.01735	0.05316	0.754426	0.935	0.889	1	0.998	0.993	0.941	0.963	0.839
rs4646620	1.4623E-10	0.0323498	0.00505	0.0344003	0.008722	1.53165E-10	0.35106	0.330124	3.96E-07	0.018967	0.025588	0.04626	0.00038	0.453858	0.52	0.825	1	0.951	0.964	0.583	0.993	0.792
rs11720657	1.4635E-10	-0.040061	0.00625	-0.040377	0.007226	2.29112E-10	0.98151	0.115402	0.053604	4.78E-05	0.037935	3.7E-06	0.46528	0.804793	0.7	0.887	0.649	1	0.952	1	0.763	0.722
rs966971	1.4637E-10	0.0352875	0.00551	0.0367578	0.006338	2.90896E-10	0.05206	0.020562	0.007379	0.002294	0.001906	0.00104	0.08488	0.819272	0.955	0.966	0.988	0.998	0.995	0.999	0.959	0.847
rs2155463	1.4643E-10	-0.032469	0.00507	-0.031918	0.006326	2.91017E-10	0.54746	0.010865	2.93E-05	0.005806	0.670897	0.00017	0.62222	0.069264	0.797	0.948	1	0.991	0.4	1	0.736	0.916
rs4666015	1.4661E-10	-0.035774	0.00558	-0.035774	0.005582	2.91368E-10	0.35005	0.039159	1.49E-06	0.169583	0.049886	0.00327	0.05553	0.494681	0.888	0.95	1	0.839	0.967	0.991	0.96	0.866
rs6790105	1.4719E-10	-0.040055	0.00625	-0.040372	0.007236	2.3035E-10	0.98709	0.115403	0.053609	4.78E-05	0.037925	3.7E-06	0.46528	0.804789	0.699	0.887	0.648	1	0.952	1	0.763	0.722
rs549163626	1.4751E-10	-0.076314	0.01191	-0.07814	0.015269	2.9311E-10	0.27353	0.206342	0.006243	0.00042	0.001665	0.00014	0.12161	0.481603	0.883	0.581	0.983	0.999	0.993	1	0.928	0.846
rs528053698	1.4753E-10	-0.076314	0.01191	-0.07814	0.015269	2.93161E-10	0.27352	0.206338	0.006243	0.00042	0.001665	0.00014	0.12161	0.481606	0.883	0.581	0.983	0.999	0.993	1	0.928	0.846
rs79215447	1.4809E-10	0.0771591	0.01204	0.0771591	0.012042	2.94239E-10	0.28028	0.014853	0.018575	0.006065	0.010266	2.6E-05	0.05929	0.853942	0.905	0.963	0.954	0.995	0.988	1	0.961	0.779
rs11130184	1.4847E-10	-0.034343	0.00536	-0.034343	0.00536	2.94977E-10	0.60257	0.058289	0.000734	0.00506	0.025616	1.1E-05	0.89491	0.854224	0.656	0.918	0.998	0.993	0.967	1	0.676	0.691
rs11716334	1.4987E-10	-0.034338	0.00536	-0.034338	0.005361	2.97706E-10	0.60274	0.058592	0.00073	0.005047	0.025433	1.2E-05	0.89327	0.856092	0.656	0.918	0.998	0.993	0.967	1	0.677	0.692
rs10809328	1.5016E-10	-0.036269	0.00566	-0.036269	0.005662	2.98275E-10	0.56003	0.622528	1.77E-05	0.008663	0.105712	0.00464	0.01318	0.024453	0.723	0.849	1	0.992	0.945	0.989	0.979	0.96
rs34358623	1.5054E-10	0.0368598	0.00576	0.0383321	0.007768	2.7422E-10	0.00812	0.05826	0.012398	0.242515	0.119416	6.1E-07	0.06807	0.184957	0.969	0.942	0.95	0.753	0.937	1	0.954	0.915
rs137917260	1.5061E-10	0.0337832	0.00527	0.0339433	0.006338	2.72276E-10	0.90721	0.590607	4.24E-07	0.045317	0.043105	0.01066	0.00302	0.822607	0.757	0.833	1	0.949	0.963	0.952	0.987	0.791
rs7575465	1.5084E-10	0.0332029	0.00518	0.0338433	0.00568	2.99605E-10	0.05338	0.008896	0.006751	0.002889	0.18212	0.0002	0.34	0.021294	0.956	0.973	0.99	0.998	0.936	1	0.906	0.969
rs4850597	1.5126E-10	-0.044822	0.007	-0.044822	0.006999	3.00407E-10	0.10982	0.405811	8.35E-05	0.002127	0.002772	0.01763	0.05076	0.75925	0.935	0.888	1	0.998	0.994	0.94	0.964	0.838
rs4315696	1.5128E-10	0.0340472	0.00532	0.0340472	0.005316	3.00448E-10	0.59386	0.658681	0.000107	0.031587	0.286915	7.8E-05	0.01695	0.08804	0.707	0.829	1	0.969	0.871	1	0.973	0.93
rs6945641	1.5153E-10	0.0358325	0.0056	0.0497155	0.011719	1.28507E-11	0.49468	0.030443	0.017688	9.32E-06	8.21E-06	0.05562	0.05218	0.057507	0.655	0.933	0.276	1	1	0.192	0.905	0.909
rs1559536	1.5155E-10	-0.035832	0.0056	-0.049717	0.011719	1.28454E-11	0.49401	0.030414	0.0177	9.32E-06	8.19E-06	0.05561	0.0522	0.057632	0.655	0.933	0.275	1	1	0.192	0.905	0.909
rs34731378	1.5218E-10	0.0368565	0.00576	0.0381438	0.007621	2.78301E-10	0.00962	0.058756	0.012202	0.237519	0.12513	6E-07	0.06885	0.178912	0.968	0.942	0.952	0.76	0.935	1	0.954	0.917
rs2983140	1.5237E-10	0.0331322	0.00517	0.0338301	0.006031	2.67734E-10	0.10266	0.995645	0.049799	0.000404	0.002525	1E-05	0.53768	0.293619	0.909	0.734	0.713	0.999	0.992	1	0.775	0.861
rs78756484	1.5242E-10	-0.071698	0.0112	-0.07709	0.016119	2.80407E-10	0.13725	0.251382	0.000459	0.602029	0.000268	6.6E-05	0.0616	0.097859	0.9	0.869	0.999	0.297	0.997	1	0.944	0.916
rs11732825	1.5244E-10	-0.036214	0.00566	-0.036214	0.005656	3.02719E-10	0.32278	0.169297	0.010908	0.00038	0.336791	9.9E-05	0.0306	0.135676	0.902	0.925	0.977	0.999	0.882	1	0.973	0.934
rs9570498	1.5279E-10	-0.066182	0.01034	-0.067318	0.014971	3.03399E-10	0.71035	0.006853	0.002747	0.00706	0.962768	1.3E-05	0.0232	0.053807	0.699	0.959	0.993	0.992	0.561	1	0.967	0.936
rs34884299	1.5286E-10	0.0388231	0.00606	0.0388231	0.006064	3.03531E-10	0.8714	0.2246	0.000904	0.117175	0.055546	6.1E-06	0.14346	0.092328	0.817	0.906	0.999	0.894	0.963	1	0.932	0.936
rs11725004	1.5358E-10	0.0393234	0.00614	0.0393234	0.006143	3.0493E-10	0.13955	0.536481	0.001201	0.001115	0.000714	0.00199	0.81868	0.112384	0.925	0.867	0.998	0.999	0.996	0.997	0.781	0.934
rs61859618	1.5375E-10	-0.047522	0.00742	-0.048591	0.009286	3.0525E-10	0.0024	0.419141	0.003435	0.16241	0.197971	4.5E-06	0.02601	0.195006	0.976	0.883	0.993	0.851	0.917	1	0.973	0.918
rs1474850	1.5401E-10	0.0339358	0.0053	0.0419816	0.009571	1.61991E-10	0.40827	0.015726	1.52E-05	0.010514	0.243282	0.0678	0.00024	0.012376	0.854	0.96	1	0.984	0.86	0.556	0.996	0.967
rs9832550	1.5431E-10	0.0340331	0.00532	0.0340331	0.005317	3.06346E-10	0.58501	0.658604	0.000107	0.031699	0.287696	7.9E-05	0.01701	0.087873	0.705	0.828	1	0.969	0.87	1	0.973	0.93
rs41281664	1.5434E-10	0.0884778	0.01382	0.0884778	0.013823	3.06414E-10	0.60646	0.835212	0.00011	0.005402	0.142952	0.00014	0.17946	0.420174	0.839	0.763	1	0.994	0.924	1	0.913	0.864
rs72791117	1.544E-10	0.0378402	0.00591	0.0378402	0.005912	3.06519E-10	0.90052	0.139018	0.002871	0.042238	0.195392	7.8E-07	0.25383	0.207588	0.809	0.919	0.995	0.963	0.912	1	0.901	0.909
rs754672	1.5498E-10	-0.032399	0.00506	-0.031718	0.006609	3.07645E-10	0.65691	0.009276	4.44E-05	0.004511	0.698345	0.00013	0.73435	0.057516	0.771	0.949	1	0.993	0.403	1	0.694	0.919
rs1582634	1.5535E-10	-0.035812	0.0056	-0.049673	0.011715	1.33149E-11	0.50086	0.030398	0.017698	9.61E-06	8.17E-06	0.05555	0.05223	0.057659	0.653	0.933	0.279	1	1	0.195	0.905	0.909
rs7615925	1.5579E-10	0.0340257	0.00532	0.0340257	0.005317	3.09221E-10	0.59187	0.660239	0.000109	0.031528	0.287373	7.9E-05	0.01693	0.088139	0.707	0.828	1	0.969	0.87	1	0.973	0.93
rs2551760	1.5588E-10	-0.035808	0.0056	-0.04967	0.011708	1.34627E-11	0.49604	0.030432	0.017671	9.83E-06	8.16E-06	0.05556	0.05221	0.057605	0.656	0.933	0.281	1	1	0.197	0.905	0.909
rs7576017	1.562E-10	0.0366959	0.00573	0.0403802	0.008148	3.10025E-10	0.07794	0.004366	0.007291	0.007182	0.000989	0.00045	0.12152	0.872266	0.946	0.975	0.987	0.994	0.996	0.999	0.947	0.793

Table S3

rs35627490	1.5641E-10	-0.069819	0.01091	-0.069819	0.010911	3.10422E-10	0.61097	0.741059	0.001593	0.000661	0.247781	0.00078	0.01834	0.01289	0.863	0.846	0.998	0.999	0.906	0.999	0.978	0.969
rs9869437	1.565E-10	-0.034708	0.00542	-0.034687	0.006029	3.10607E-10	0.25333	0.542809	0.000813	0.117797	0.256603	8.2E-06	0.00564	0.034567	0.89	0.696	0.998	0.874	0.879	1	0.983	0.949
rs7909129	1.5653E-10	0.0388	0.00606	0.0388	0.006064	3.10659E-10	0.83329	0.22555	0.000937	0.119862	0.055456	6.1E-06	0.14168	0.092211	0.823	0.906	0.999	0.891	0.964	1	0.932	0.936
rs112292441	1.568E-10	-0.036651	0.00573	-0.040364	0.010622	3.11181E-10	0.01219	0.278222	0.002324	0.199751	0.062271	1.2E-05	0.00011	0.294327	0.956	0.871	0.992	0.742	0.95	1	0.995	0.557
rs17117590	1.5681E-10	0.0910493	0.01423	0.0910493	0.01423	3.11206E-10	0.97613	0.269812	0.000319	0.051346	0.075408	6.2E-05	0.44625	0.003414	0.798	0.899	1	0.958	0.956	1	0.861	0.979
rs111642431	1.5681E-10	-0.036651	0.00573	-0.040365	0.010622	3.11218E-10	0.0122	0.278199	0.002325	0.199862	0.062217	1.2E-05	0.00011	0.294315	0.956	0.871	0.992	0.742	0.95	1	0.995	0.557
rs61925034	1.5681E-10	-0.036651	0.00573	-0.040365	0.010622	3.11218E-10	0.0122	0.278199	0.002325	0.199862	0.062217	1.2E-05	0.00011	0.294315	0.956	0.871	0.992	0.742	0.95	1	0.995	0.557
rs61925033	1.5684E-10	-0.03665	0.00573	-0.040364	0.010622	3.11259E-10	0.01219	0.278214	0.002324	0.199783	0.062263	1.2E-05	0.00011	0.294312	0.956	0.871	0.992	0.742	0.95	1	0.995	0.557
rs12580804	1.5686E-10	-0.03665	0.00573	-0.040364	0.010622	3.11298E-10	0.0122	0.2782	0.002324	0.199869	0.062217	1.2E-05	0.00011	0.294315	0.956	0.871	0.992	0.742	0.95	1	0.995	0.557
rs1994224	1.5758E-10	0.0399359	0.00624	0.0399359	0.006242	3.12711E-10	0.15889	0.795537	0.000273	0.019392	0.026393	0.0005	0.03966	0.176725	0.926	0.786	1	0.986	0.979	0.999	0.968	0.925
rs17672559	1.5778E-10	-0.036644	0.00573	-0.040365	0.010635	3.13094E-10	0.01206	0.278211	0.002293	0.203375	0.062255	1.2E-05	0.00011	0.294475	0.956	0.87	0.992	0.736	0.949	1	0.995	0.555
rs12416372	1.5814E-10	0.0387904	0.00606	0.0387904	0.006064	3.13797E-10	0.8703	0.22497	0.000942	0.119645	0.055073	6E-06	0.14086	0.092181	0.817	0.906	0.999	0.891	0.964	1	0.932	0.936
rs17114365	1.5897E-10	-0.061039	0.00954	-0.061039	0.009543	3.15401E-10	0.95284	0.354141	0.002397	0.002558	0.124146	0.0001	0.14919	0.015114	0.801	0.894	0.997	0.997	0.943	1	0.935	0.968
rs1170630	1.5906E-10	-0.038745	0.00606	-0.040079	0.006879	3.1559E-10	0.57696	0.159826	0.00051	0.001187	0.205714	0.00878	0.00108	0.029728	0.878	0.931	0.999	0.999	0.926	0.98	0.993	0.964
rs1170634	1.5906E-10	-0.038745	0.00606	-0.040079	0.006879	3.1559E-10	0.57696	0.159826	0.00051	0.001187	0.205714	0.00878	0.00108	0.029728	0.878	0.931	0.999	0.999	0.926	0.98	0.993	0.964
rs1464569	1.5909E-10	-0.03999	0.00625	-0.04033	0.007355	2.4155E-10	0.98776	0.124168	0.057679	4.73E-05	0.036201	3.5E-06	0.4653	0.793949	0.685	0.88	0.617	1	0.952	1	0.755	0.716
rs73371347	1.591E-10	-0.036651	0.00573	-0.040385	0.010664	3.15656E-10	0.01237	0.27628	0.002508	0.202323	0.064085	1.1E-05	0.00011	0.294949	0.955	0.871	0.991	0.737	0.948	1	0.995	0.556
rs35680819	1.5938E-10	-0.069789	0.01091	-0.069789	0.010911	3.16201E-10	0.61452	0.741062	0.001583	0.000679	0.247833	0.00078	0.01837	0.012862	0.863	0.846	0.998	0.999	0.906	0.999	0.978	0.969
rs1170602	1.5951E-10	-0.038742	0.00606	-0.04008	0.006881	3.1646E-10	0.57686	0.159737	0.000511	0.001188	0.205569	0.00879	0.00108	0.029698	0.878	0.931	0.999	0.999	0.926	0.98	0.993	0.964
rs1170608	1.5972E-10	-0.038741	0.00606	-0.040077	0.00688	3.16874E-10	0.57688	0.159685	0.000511	0.001187	0.205829	0.0088	0.00108	0.029725	0.878	0.931	0.999	0.999	0.926	0.98	0.993	0.964
rs3823158	1.5978E-10	-0.069784	0.01091	-0.069784	0.010911	3.16978E-10	0.61353	0.741054	0.001594	0.000678	0.24776	0.00078	0.01834	0.01289	0.863	0.846	0.998	0.999	0.906	0.999	0.978	0.969
rs36033628	1.5979E-10	-0.069785	0.01091	-0.069785	0.010911	3.16992E-10	0.61412	0.741065	0.001587	0.000679	0.24778	0.00078	0.01837	0.012862	0.863	0.846	0.998	0.999	0.906	0.999	0.978	0.969
rs1345868	1.5986E-10	0.0368177	0.00576	0.0381813	0.007674	2.92405E-10	0.01218	0.060768	0.010299	0.285725	0.113222	6.9E-07	0.05784	0.151769	0.964	0.94	0.957	0.703	0.938	1	0.957	0.92
rs12733808	1.5991E-10	-0.055512	0.00868	-0.055512	0.00868	3.17225E-10	0.36708	0.16796	0.000446	4.81E-05	0.11527	0.01055	0.06257	0.229464	0.899	0.927	0.999	1	0.949	0.971	0.963	0.92
rs2699359	1.5992E-10	-0.038744	0.00606	-0.040145	0.006927	3.17251E-10	0.5983	0.158216	0.0005	0.001038	0.213624	0.00911	0.00111	0.030557	0.874	0.931	0.999	0.999	0.923	0.978	0.993	0.964
rs1170611	1.6009E-10	-0.038734	0.00606	-0.040065	0.006892	3.17591E-10	0.61057	0.155762	0.000506	0.000932	0.227925	0.00888	0.00117	0.031958	0.872	0.931	0.999	0.999	0.918	0.979	0.993	0.963
rs34605993	1.6119E-10	-0.069767	0.01091	-0.069767	0.010911	3.19719E-10	0.6105	0.741065	0.001569	0.000707	0.247718	0.00078	0.01851	0.01277	0.864	0.846	0.998	0.999	0.906	0.999	0.978	0.97
rs2699360	1.618E-10	-0.038734	0.00606	-0.040139	0.006931	3.20914E-10	0.60566	0.15822	0.0005	0.001041	0.213627	0.00911	0.00111	0.030558	0.873	0.931	0.999	0.999	0.923	0.979	0.993	0.963
rs686147	1.6192E-10	0.0330895	0.00518	0.0330895	0.005175	3.21131E-10	0.3887	0.628081	0.000434	0.008046	0.081885	0.00012	0.03841	0.360312	0.879	0.736	0.999	0.992	0.952	1	0.964	0.883
rs72794561	1.6199E-10	-0.047039	0.00736	-0.047039	0.007357	3.21269E-10	0.42247	0.205527	0.003047	0.000955	0.042016	0.00159	0.04921	0.025515	0.901	0.928	0.996	0.999	0.976	0.998	0.97	0.968
rs112535944	1.6265E-10	0.0396222	0.0062	0.0407766	0.007189	3.22552E-10	0.04844	0.587266	0.000191	0.001474	0.652891	0.0054	0.00839	0.016249	0.949	0.863	1	0.998	0.782	0.987	0.984	0.967
rs6856297	1.6274E-10	0.0394513	0.00617	0.03976	0.006924	3.2274E-10	0.94644	0.286074	0.00969	0.002888	0.422099	1.4E-05	0.00051	0.61054	0.788	0.885	0.972	0.996	0.826	1	0.993	0.833
rs73244152	1.633E-10	0.0400933	0.00627	0.0400933	0.006272	3.23826E-10	0.04286	0.829804	0.001174	0.004297	0.001543	0.00145	0.50216	0.055089	0.954	0.841	0.999	0.996	0.995	0.998	0.863	0.953
rs138759369	1.6351E-10	-0.036629	0.00573	-0.040308	0.010627	3.24222E-10	0.01245	0.281559	0.00242	0.197836	0.064131	1.2E-05	0.00011	0.291899	0.955	0.87	0.992	0.745	0.949	1	0.995	0.556
rs10459865	1.6379E-10	-0.047245	0.00739	-0.047245	0.007391	3.24771E-10	0.31521	0.182406	0.002166	0.000909	0.04222	0.00203	0.07584	0.036758	0.915	0.932	0.998	0.999	0.976	0.997	0.963	0.964
rs429479	1.6389E-10	-0.073537	0.0115	-0.073537	0.011505	3.24962E-10	0.14557	0.34964	0.003141	0.001022	0.629	9E-05	0.18221	0.012295	0.922	0.89	0.995	0.998	0.78	1	0.923	0.968
rs6446262	1.6403E-10	-0.03996	0.00625	-0.040287	0.007301	2.52849E-10	0.99004	0.119428	0.056164	4.83E-05	0.03777	3.7E-06	0.4636	0.799187	0.689	0.883	0.631	1	0.951	1	0.759	0.719
rs11708541	1.6447E-10	0.0428321	0.0067	0.0458939	0.009443	3.18995E-10	0.30926	0.558427	2.4E-05	0.422615	0.001015	0.00192	0.00443	0.105937	0.868	0.824	1	0.515	0.995	0.991	0.984	0.918
rs11720102	1.6447E-10	0.0428321	0.0067	0.0458939	0.009443	3.18995E-10	0.30926	0.558427	2.4E-05	0.422615	0.001015	0.00192	0.00443	0.105937	0.868	0.824	1	0.515	0.995	0.991	0.984	0.918
rs7803353	1.646E-10	0.0357677	0.0056	0.0496256	0.011707	1.44611E-11	0.51168	0.03034	0.01816	1.05E-05	8.28E-06	0.05491	0.05096	0.055953	0.649	0.933	0.28	1	1	0.198	0.907	0.91
rs1477503	1.6504E-10	0.0342405	0.00536	0.0365489	0.006871	3.27205E-10	0.06886	0.017298	0.011153	0.002742	0.003014	0.00039	0.04698	0.723703	0.947	0.965	0.976	0.997	0.993	0.999	0.967	0.763
rs6415715	1.6507E-10	0.0414881	0.00649	0.0414881	0.006492	3.27269E-10	0.84572	0.136196	2.01E-05	0.005605	0.205674	0.00487	0.13436	0.02253	0.835	0.93	1	0.995	0.919	0.99	0.941	0.964
rs11953183	1.6537E-10	0.0341648	0.00535	0.0341648	0.005346	3.27833E-10	0.9305	0.249516	0.00058	0.000823	0.013445	0.00082	0.33801	0.428474	0.81	0.903	0.999	0.999	0.984	0.999	0.885	0.876
rs71638309	1.6545E-10	-0.055442	0.00868	-0.055442	0.008676	3.27993E-10	0.36897	0.172945	0.000419	4.69E-05	0.124487	0.01046	0.06789	0.227716	0.899	0.926	0.999	1	0.946	0.972	0.961	0.92
rs1056303	1.6574E-10	0.0367857	0.00576	0.0381515	0.007674	3.02966E-10	0.0122	0.060776	0.010436	0.285903	0.113561	7E-07	0.05793	0.151848	0.964	0.94	0.957	0.703	0.938	1	0.957	0.92
rs1170607	1.658E-10	-0.038707	0.00606	-0.040026	0.006872	3.28686E-10	0.5816	0.159694	0.000512	0.001234	0.205832	0.0088	0.00108	0.029727	0.877	0.931	0.999	0.999	0.926	0.98	0.993	0.964
rs35670428	1.6641E-10	-0.055439	0.00868	-0.055439	0.008677	3.29854E-10	0.36791	0.1662	0.000459	4.58E-05	0.120839	0.01052	0.06491	0.224892	0.899	0.928	0.999	1	0.948	0.972	0.962	0.92
rs117462985	1.6653E-10	0.0575033	0.009	0.0575033	0.009	3.30086E-10	0.4272	0.866727	0.001377	0.000618	0.37401	1.2E-05	0.0384	0.970989	0.605	0.747	0.996	0.998	0.796	1	0.947	0.718
rs11075922	1.6662E-10	0.0322867	0.00505	0.0322867	0.005053	3.29229E-10	0.9151	0.815991	0.002466	0.019266	0.352428	7.5E-08	0.33749	0.468993	0.746	0.702	0.992	0.974	0.81	1	0.836	0.818
rs6824402	1.6666E-10	0.0394255	0.00617	0.0397311	0.006924	3.3034E-10	0.95105	0.28542	0.009735	0.002926	0.421682	1.4E-05	0.00051	0.613391	0.788	0.885	0.972	0.996	0.826	1	0.993	0.832
rs12578303	1.6693E-10	-0.036615	0.00573	-0.040287	0.010626	3.30866E-10	0.01239	0.284432	0.002444	0.194355	0.064743	1.2E-05	0.00011	0.28973	0.956	0.87	0.992	0.75	0.949	1	0.995	0.557
rs2363475	1.6697E-10	-0.036598	0.00573	-0.040336	0.010657	3.30946E-10	0.01204	0.278134	0.002336	0.208364	0.062521	1.2E-05	0.00011	0.294048	0.955	0.87	0.992	0.729	0.949	1	0.995	0.554
rs74838273	1.67E-10	-0.060947	0.00954	-0.060947	0.009539	3.31016E-10	0.98649	0.349762	0.002336	0.003248	0.120479	0.0001	0.14571	0.014929	0.808	0.895	0.997	0.997	0.944	1	0.936	0.968
rs10021178	1.6742E-10	0.0394205	0.00617	0.0397252	0.006922	3.31814E-10	0.95148	0.285839	0.009745	0.002927	0.421794	1.4E-05	0.00051	0.613415	0.787	0.885	0.972	0.996	0.826	1	0.993	0.832
rs11907168	1.6771E-10	-0.052396	0.0082	-0.052396	0.008202	3.32386E-10	0.90789	0.97841	7.55E-05	0.00775	0.024733	0.00165	0.00441	0.614507	0.773	0.792	1	0.992	0.976	0.997	0.985	0.838

Table S3

rs2127856	1.6785E-10	0.039418	0.00617	0.0397231	0.006924	3.32666E-10	0.9519	0.285999	0.009754	0.002928	0.421667	1.4E-05	0.00051	0.613756	0.787	0.885	0.972	0.996	0.826	1	0.993	0.832
rs34181670	1.6794E-10	-0.035714	0.00559	-0.035714	0.005591	3.31374E-10	0.34209	0.047523	1.15E-06	0.21116	0.057296	0.003	0.05244	0.482482	0.884	0.944	1	0.787	0.961	0.991	0.959	0.861
rs9884438	1.6804E-10	0.0394168	0.00617	0.0397224	0.006925	3.33019E-10	0.95196	0.28604	0.009759	0.002929	0.421665	1.4E-05	0.00051	0.613807	0.787	0.885	0.972	0.996	0.826	1	0.993	0.832
rs814424	1.6815E-10	0.0397383	0.00622	0.0397383	0.006221	3.33235E-10	0.08833	0.688063	0.000867	0.018154	0.036887	0.00013	0.05599	0.185989	0.939	0.766	0.999	0.986	0.974	1	0.962	0.922
rs4835866	1.6815E-10	0.0356569	0.00558	0.0356569	0.005582	3.33244E-10	0.27224	0.253138	0.00774	0.00143	0.003881	9.9E-05	0.15585	0.826027	0.901	0.904	0.984	0.998	0.992	1	0.93	0.765
rs10019000	1.683E-10	0.0394121	0.00617	0.039713	0.00692	3.33537E-10	0.95559	0.286086	0.009719	0.002937	0.421648	1.4E-05	0.00052	0.615517	0.787	0.885	0.972	0.996	0.826	1	0.993	0.832
rs62302741	1.6866E-10	0.0400836	0.00628	0.0400836	0.006275	3.34222E-10	0.04086	0.829205	0.001147	0.004158	0.001475	0.0016	0.51727	0.052729	0.954	0.841	0.999	0.996	0.995	0.998	0.859	0.953
rs11130190	1.6867E-10	-0.039934	0.00625	-0.040264	0.007317	2.58945E-10	0.98423	0.120527	0.056856	4.84E-05	0.037734	3.7E-06	0.46314	0.797223	0.687	0.882	0.627	1	0.951	1	0.758	0.718
rs34556721	1.6874E-10	-0.055416	0.00868	-0.055416	0.008676	3.34391E-10	0.37014	0.172946	0.000419	4.82E-05	0.124489	0.01046	0.06789	0.227717	0.898	0.926	0.999	1	0.946	0.972	0.961	0.92
rs6845705	1.6891E-10	0.0394092	0.00617	0.0397112	0.006921	3.34718E-10	0.95518	0.285793	0.009713	0.002935	0.422091	1.4E-05	0.00052	0.615469	0.787	0.885	0.972	0.996	0.826	1	0.993	0.832
rs1021851	1.6896E-10	-0.036594	0.00573	-0.040438	0.010685	3.3481E-10	0.01191	0.26395	0.002322	0.19852	0.063952	1.4E-05	0.0001	0.28699	0.956	0.874	0.992	0.745	0.949	1	0.995	0.555
rs12644434	1.6934E-10	0.0394069	0.00617	0.0397108	0.006925	3.35548E-10	0.95515	0.285882	0.00973	0.00294	0.422182	1.4E-05	0.00052	0.615208	0.787	0.885	0.972	0.996	0.826	1	0.993	0.832
rs111981346	1.6954E-10	-0.036579	0.00573	-0.040316	0.010626	3.35942E-10	0.01196	0.278635	0.002362	0.199393	0.064245	1.3E-05	0.00011	0.295478	0.956	0.871	0.992	0.744	0.949	1	0.995	0.559
rs2202276	1.6965E-10	-0.036579	0.00573	-0.040316	0.010626	3.36145E-10	0.01196	0.278647	0.002363	0.199415	0.064224	1.3E-05	0.00011	0.295451	0.956	0.871	0.992	0.744	0.949	1	0.995	0.559
rs28713219	1.6976E-10	0.0394053	0.00617	0.0397089	0.006923	3.3637E-10	0.95431	0.28574	0.009724	0.002939	0.422368	1.4E-05	0.00051	0.615096	0.787	0.885	0.972	0.996	0.826	1	0.993	0.832
rs13147249	1.6998E-10	0.0394037	0.00617	0.0397074	0.006924	3.368E-10	0.95503	0.285905	0.009737	0.002941	0.422273	1.4E-05	0.00052	0.615	0.787	0.885	0.972	0.996	0.826	1	0.993	0.832
rs7678053	1.7013E-10	0.0394036	0.00617	0.0397073	0.006922	3.3709E-10	0.95388	0.285558	0.009746	0.002939	0.42234	1.4E-05	0.00052	0.614634	0.787	0.885	0.972	0.996	0.826	1	0.993	0.832
rs4481216	1.7028E-10	0.0392807	0.00615	0.0392807	0.006151	3.37377E-10	0.15081	0.500644	0.00119	0.001186	0.000804	0.00221	0.79668	0.098676	0.924	0.873	0.998	0.998	0.996	0.996	0.789	0.938
rs12733342	1.7075E-10	-0.055431	0.00868	-0.055431	0.008681	3.38278E-10	0.36722	0.169878	0.000468	4.83E-05	0.120478	0.01021	0.06409	0.232268	0.899	0.927	0.999	1	0.948	0.973	0.962	0.919
rs9812360	1.708E-10	-0.039925	0.00625	-0.040256	0.007325	2.62137E-10	0.97978	0.12056	0.056916	4.88E-05	0.037702	3.7E-06	0.46309	0.797474	0.686	0.882	0.627	1	0.951	1	0.758	0.718
rs4646616	1.7117E-10	0.0322316	0.00505	0.034274	0.008567	1.91041E-10	0.37345	0.312764	5.02E-07	0.019961	0.024657	0.04483	0.00044	0.471848	0.541	0.834	1	0.952	0.966	0.614	0.993	0.794
rs1307770	1.7197E-10	0.0609014	0.00954	0.0609014	0.009539	3.40656E-10	0.98633	0.34856	0.002322	0.003447	0.119804	1E-04	0.14524	0.014887	0.808	0.895	0.997	0.997	0.944	1	0.937	0.968
rs62303507	1.7215E-10	0.0393439	0.00616	0.0393439	0.006163	3.40998E-10	0.16239	0.487368	0.001383	0.001273	0.000633	0.0021	0.82409	0.078288	0.922	0.874	0.998	0.998	0.996	0.996	0.782	0.943
rs6545768	1.7244E-10	0.0360644	0.00565	0.0399412	0.007811	3.41563E-10	0.06905	0.010078	0.006264	0.003161	0.001259	0.00168	0.03904	0.917369	0.95	0.971	0.99	0.997	0.996	0.998	0.972	0.806
rs189712206	1.7318E-10	0.0758469	0.01188	0.0758469	0.011882	3.42995E-10	0.4654	0.63783	9.83E-05	0.02504	0.000879	0.00507	0.02054	0.345028	0.884	0.864	1	0.982	0.996	0.99	0.976	0.9
rs7298983	1.7479E-10	-0.036552	0.00573	-0.040297	0.01064	3.4612E-10	0.01191	0.278653	0.002355	0.204152	0.064278	1.3E-05	0.00011	0.295528	0.956	0.87	0.992	0.737	0.948	1	0.995	0.557
rs2891550	1.7484E-10	0.0330714	0.00518	0.0339978	0.005939	3.46215E-10	0.05286	0.00576	0.006507	0.004397	0.235012	0.00016	0.31587	0.02488	0.955	0.975	0.99	0.997	0.921	1	0.91	0.967
rs4370966	1.7501E-10	-0.032459	0.00509	-0.032459	0.005086	3.46553E-10	0.86395	0.024212	4.02E-05	0.014565	0.912621	7.8E-05	0.52618	0.052837	0.755	0.938	1	0.981	0.524	1	0.781	0.927
rs11214587	1.758E-10	-0.032461	0.00509	-0.032461	0.005087	3.48075E-10	0.86641	0.024734	4E-05	0.014337	0.905592	8E-05	0.50716	0.053198	0.755	0.938	1	0.981	0.522	1	0.787	0.927
rs4260511	1.7637E-10	0.0392926	0.00616	0.0392926	0.006158	3.49184E-10	0.16323	0.490969	0.001418	0.001175	0.000715	0.00216	0.80761	0.076214	0.922	0.874	0.998	0.998	0.996	0.996	0.787	0.944
rs1170612	1.7677E-10	-0.038648	0.00606	-0.040009	0.00691	3.49958E-10	0.59941	0.155975	0.000479	0.001023	0.22681	0.0096	0.00116	0.031993	0.873	0.931	0.999	0.999	0.919	0.977	0.993	0.963
rs7307420	1.77E-10	-0.036542	0.00573	-0.040282	0.010637	3.50417E-10	0.01197	0.278656	0.002369	0.204153	0.064321	1.3E-05	0.00011	0.295367	0.956	0.87	0.992	0.737	0.948	1	0.995	0.557
rs61925030	1.773E-10	-0.03654	0.00573	-0.04028	0.010637	3.50999E-10	0.01198	0.278677	0.002371	0.204226	0.064286	1.3E-05	0.00011	0.295356	0.956	0.87	0.992	0.737	0.948	1	0.995	0.557
rs151241745	1.7734E-10	-0.0614	0.00962	-0.0614	0.009624	3.51065E-10	0.9533	0.432039	0.002508	0.002354	0.110107	9.2E-05	0.20159	0.019769	0.813	0.882	0.996	0.997	0.947	1	0.921	0.965
rs17328524	1.775E-10	0.0345167	0.00541	0.0371112	0.007399	3.51388E-10	0.06175	0.01036	0.015963	0.005363	0.002542	0.00011	0.11429	0.663284	0.946	0.968	0.957	0.995	0.993	1	0.945	0.742
rs113079128	1.779E-10	0.0574203	0.009	0.0574203	0.009001	3.52163E-10	0.42481	0.862628	0.00136	0.000607	0.390929	1.3E-05	0.03806	0.967035	0.603	0.747	0.996	0.998	0.788	1	0.947	0.718
rs4881129	1.7806E-10	0.0352983	0.00553	0.0352983	0.005533	3.52471E-10	0.1063	0.151145	0.000545	0.064141	0.037855	0.00134	0.01214	0.017233	0.946	0.939	0.999	0.96	0.979	0.998	0.984	0.972
rs2363477	1.7847E-10	-0.036535	0.00573	-0.040273	0.010637	3.53265E-10	0.012	0.278656	0.002376	0.204214	0.064389	1.3E-05	0.00011	0.295109	0.956	0.87	0.992	0.737	0.948	1	0.995	0.557
rs2885790	1.785E-10	-0.036534	0.00573	-0.040273	0.010637	3.53312E-10	0.012	0.278656	0.002377	0.204209	0.064389	1.3E-05	0.00011	0.29511	0.956	0.87	0.992	0.737	0.948	1	0.995	0.557
rs6446275	1.7879E-10	0.0398796	0.00625	0.0402246	0.007398	2.69686E-10	0.96801	0.124167	0.059113	4.68E-05	0.037518	3.7E-06	0.46444	0.79249	0.679	0.879	0.61	1	0.95	1	0.753	0.714
rs1170621	1.7893E-10	-0.038634	0.00606	-0.040006	0.006918	3.54162E-10	0.60396	0.155744	0.000477	0.00101	0.228522	0.00968	0.00117	0.032142	0.873	0.931	0.999	0.999	0.918	0.977	0.993	0.963
rs12959099	1.7912E-10	0.0324202	0.00508	0.0320088	0.005637	3.54522E-10	0.40231	0.458676	0.000287	0.332585	0.163782	1.2E-06	0.04132	0.067098	0.814	0.585	0.999	0.547	0.875	1	0.944	0.912
rs60389053	1.7925E-10	-0.036531	0.00573	-0.040268	0.010637	3.54778E-10	0.01203	0.278661	0.002378	0.20466	0.064374	1.3E-05	0.00011	0.295106	0.956	0.87	0.992	0.737	0.948	1	0.995	0.557
rs11737113	1.799E-10	0.0392698	0.00616	0.0392698	0.006157	3.56038E-10	0.16195	0.491652	0.001415	0.001231	0.000718	0.00215	0.80534	0.076586	0.922	0.874	0.998	0.998	0.996	0.996	0.787	0.943
rs749196	1.8048E-10	-0.038627	0.00606	-0.04	0.006919	3.57168E-10	0.60426	0.15562	0.00048	0.001011	0.228392	0.0097	0.00117	0.032142	0.873	0.931	0.999	0.999	0.918	0.977	0.993	0.963
rs62259933	1.8112E-10	0.0398672	0.00625	0.0402066	0.00737	2.74008E-10	0.97376	0.124167	0.059113	4.83E-05	0.037518	3.7E-06	0.46444	0.79249	0.681	0.879	0.612	1	0.95	1	0.754	0.715
rs10191489	1.8134E-10	-0.056703	0.00889	-0.056703	0.008893	3.58831E-10	0.5399	0.381005	0.000141	0.021306	0.282885	2.7E-05	0.11127	0.993057	0.843	0.867	1	0.978	0.87	1	0.932	0.765
rs12466227	1.8135E-10	0.0344765	0.00541	0.0378317	0.007751	3.58837E-10	0.07181	0.011692	0.014627	0.006826	0.001137	0.00018	0.0679	0.638018	0.944	0.967	0.963	0.994	0.995	1	0.959	0.739
rs1170619	1.8146E-10	-0.038622	0.00606	-0.039997	0.00692	3.59063E-10	0.60395	0.155831	0.000482	0.001009	0.228316	0.00971	0.00117	0.03216	0.873	0.931	0.999	0.999	0.918	0.977	0.993	0.963
rs814422	1.8149E-10	0.0391214	0.00614	0.0391214	0.006136	3.59108E-10	0.17824	0.684319	0.000621	0.024844	0.082314	0.00013	0.02665	0.092456	0.92	0.764	0.999	0.981	0.957	1	0.973	0.94
rs61925027	1.817E-10	-0.036517	0.00573	-0.040254	0.010677	3.59515E-10	0.01187	0.278488	0.002338	0.199397	0.065008	1.4E-05	0.00011	0.27934	0.956	0.87	0.992	0.744	0.948	1	0.995	0.551
rs34527699	1.8176E-10	-0.055353	0.00868	-0.055353	0.008681	3.59639E-10	0.36706	0.17248	0.000472	4.98E-05	0.12096	0.01032	0.06423	0.236455	0.899	0.926	0.999	1	0.948	0.973	0.962	0.918
rs73088137	1.8177E-10	0.0398634	0.00625	0.0402025	0.007374	2.74995E-10	0.971	0.124167	0.059113	4.83E-05	0.037518	3.7E-06	0.46444	0.79249	0.68	0.879	0.612	1	0.95	1	0.754	0.715
rs8897	1.8177E-10	0.0398634	0.00625	0.0402025	0.007374	2.74995E-10	0.971	0.124167	0.059113	4.83E-05	0.037518	3.7E-06	0.46444	0.79249	0.68	0.879	0.612	1	0.95	1	0.754	0.715
rs940045	1.8179E-10	-0.039863	0.00625	-0.040202	0.007374	2.75021E-10	0.97099	0.124167	0.059114	4.83E-05	0.037518	3.7E-06	0.46444	0.792492	0.68	0.879	0.612	1	0.95	1	0.754	0.715

Table S3

rs12578905	1.8193E-10	-0.036516	0.00573	-0.040255	0.010677	3.59977E-10	0.01186	0.278452	0.002341	0.199251	0.064988	1.4E-05	0.00011	0.279388	0.956	0.87	0.992	0.744	0.948	1	0.995	0.551
rs7620024	1.8208E-10	0.0398622	0.00625	0.040201	0.007372	2.75514E-10	0.97122	0.124167	0.059113	4.85E-05	0.037518	3.7E-06	0.46444	0.79249	0.68	0.879	0.612	1	0.95	1	0.754	0.715
rs17615742	1.8212E-10	-0.036515	0.00573	-0.040255	0.010678	3.60346E-10	0.01186	0.278436	0.002342	0.199279	0.064978	1.4E-05	0.00011	0.279409	0.956	0.87	0.992	0.744	0.948	1	0.995	0.551
rs35547829	1.8224E-10	-0.055349	0.00868	-0.055349	0.008681	3.60577E-10	0.36706	0.172465	0.000472	4.98E-05	0.121017	0.01032	0.06429	0.23643	0.899	0.926	0.999	1	0.948	0.973	0.962	0.918
rs13061396	1.8228E-10	-0.039861	0.00625	-0.040199	0.007372	2.75849E-10	0.97064	0.124167	0.059114	4.85E-05	0.037518	3.7E-06	0.46444	0.792492	0.68	0.879	0.612	1	0.95	1	0.754	0.715
rs78252389	1.823E-10	-0.095482	0.01498	-0.095482	0.014976	3.60695E-10	0.91625	0.557767	0.007349	0.000138	0.049523	0.0008	0.03913	0.020882	0.829	0.872	0.987	1	0.97	0.999	0.97	0.966
rs4438071	1.8317E-10	-0.032422	0.00509	-0.032422	0.005086	3.62367E-10	0.86081	0.02429	4.12E-05	0.01463	0.910353	8.3E-05	0.50534	0.053029	0.757	0.938	1	0.981	0.526	1	0.789	0.928
rs66757203	1.8338E-10	-0.069442	0.01089	-0.069442	0.010893	3.62782E-10	0.58995	0.806445	0.001642	0.000561	0.242854	0.00091	0.01892	0.014243	0.865	0.837	0.998	0.999	0.907	0.999	0.978	0.968
rs4955413	1.8381E-10	-0.039855	0.00625	-0.040197	0.007371	2.78093E-10	0.97128	0.1242	0.059221	4.82E-05	0.037633	3.7E-06	0.46194	0.7928	0.68	0.879	0.612	1	0.95	1	0.755	0.715
rs3795855	1.8431E-10	0.0566865	0.00889	0.0566865	0.008894	3.64574E-10	0.54572	0.381786	0.000138	0.021823	0.281429	3.3E-05	0.09673	0.949489	0.845	0.869	1	0.978	0.872	1	0.938	0.778
rs867282	1.8433E-10	0.036401	0.00571	0.036401	0.005711	3.64626E-10	0.31654	0.015333	2.61E-05	0.062489	0.065582	0.00143	0.23389	0.202855	0.906	0.966	1	0.955	0.966	0.998	0.921	0.924
rs11639600	1.8446E-10	-0.048662	0.00763	-0.048662	0.007635	3.64879E-10	0.24058	0.092162	0.004279	0.000743	0.008398	0.00364	0.09361	0.042275	0.927	0.949	0.995	0.999	0.99	0.995	0.96	0.964
rs11719762	1.845E-10	-0.039849	0.00625	-0.040188	0.007366	2.79385E-10	0.97064	0.1242	0.059221	4.85E-05	0.037633	3.7E-06	0.46194	0.7928	0.68	0.879	0.612	1	0.95	1	0.755	0.715
rs6775069	1.845E-10	-0.039849	0.00625	-0.040188	0.007366	2.79385E-10	0.97064	0.1242	0.059221	4.85E-05	0.037633	3.7E-06	0.46194	0.7928	0.68	0.879	0.612	1	0.95	1	0.755	0.715
rs6796147	1.845E-10	-0.039849	0.00625	-0.040188	0.007366	2.79385E-10	0.97064	0.1242	0.059221	4.85E-05	0.037633	3.7E-06	0.46194	0.7928	0.68	0.879	0.612	1	0.95	1	0.755	0.715
rs2140270	1.8467E-10	0.0398482	0.00625	0.0401876	0.007371	2.79444E-10	0.97064	0.124179	0.059259	4.85E-05	0.037569	3.7E-06	0.4639	0.792742	0.68	0.879	0.611	1	0.95	1	0.754	0.715
rs2177268	1.8467E-10	0.0398482	0.00625	0.0401876	0.007371	2.79444E-10	0.97064	0.124179	0.059259	4.85E-05	0.037569	3.7E-06	0.4639	0.792742	0.68	0.879	0.611	1	0.95	1	0.754	0.715
rs56127630	1.8467E-10	0.0398482	0.00625	0.0401876	0.007371	2.79444E-10	0.97064	0.124179	0.059259	4.85E-05	0.037569	3.7E-06	0.4639	0.792742	0.68	0.879	0.611	1	0.95	1	0.754	0.715
rs7648995	1.8467E-10	0.0398482	0.00625	0.0401876	0.007371	2.79444E-10	0.97064	0.124179	0.059259	4.85E-05	0.037569	3.7E-06	0.4639	0.792742	0.68	0.879	0.611	1	0.95	1	0.754	0.715
rs7602545	1.8488E-10	0.036523	0.00573	0.0403949	0.008178	3.65683E-10	0.06725	0.005345	0.009358	0.006491	0.001028	0.00047	0.10229	0.875921	0.949	0.974	0.982	0.995	0.996	0.999	0.952	0.794
rs6769744	1.85E-10	-0.039847	0.00625	-0.040185	0.007364	2.8022E-10	0.9703	0.1242	0.059221	4.87E-05	0.037633	3.7E-06	0.46194	0.7928	0.68	0.879	0.612	1	0.95	1	0.755	0.715
rs12957545	1.8559E-10	-0.042543	0.00668	-0.043839	0.0102	3.54614E-10	0.40443	0.803181	7.61E-05	0.129627	0.046579	2.2E-05	0.43803	0.000927	0.813	0.684	1	0.568	0.949	1	0.794	0.974
rs1367635	1.8651E-10	0.0322157	0.00506	0.0322157	0.005056	3.68842E-10	0.16804	0.470471	0.002734	0.055993	0.063217	1.3E-06	0.04953	0.615361	0.906	0.683	0.994	0.945	0.955	1	0.956	0.83
rs1170626	1.8683E-10	-0.038597	0.00606	-0.039893	0.006871	3.69471E-10	0.5998	0.159106	0.000488	0.001022	0.22865	0.00964	0.00118	0.032671	0.873	0.93	0.999	0.999	0.918	0.977	0.993	0.962
rs6785045	1.8687E-10	0.0398399	0.00625	0.0401793	0.007377	2.82813E-10	0.96617	0.124179	0.059259	4.9E-05	0.037569	3.7E-06	0.4639	0.792742	0.679	0.879	0.611	1	0.95	1	0.754	0.715
rs4844662	1.8705E-10	-0.032061	0.00503	-0.032061	0.005032	3.6988E-10	0.10805	0.154938	0.00088	0.032789	0.04641	0.00034	0.00423	0.892932	0.939	0.93	0.999	0.977	0.972	1	0.988	0.829
rs11736668	1.8725E-10	0.0392439	0.00616	0.0392439	0.006159	3.70274E-10	0.16137	0.489842	0.001439	0.001224	0.00071	0.0022	0.8078	0.076451	0.922	0.875	0.998	0.998	0.996	0.996	0.787	0.943
rs6809204	1.8768E-10	-0.039839	0.00625	-0.040263	0.007592	2.89497E-10	0.94908	0.106389	0.054854	4.64E-05	0.026021	5E-06	0.61017	0.811437	0.697	0.886	0.635	1	0.961	1	0.706	0.713
rs62259947	1.878E-10	0.0398328	0.00625	0.0401691	0.007369	2.84561E-10	0.96644	0.124179	0.059259	4.95E-05	0.037569	3.7E-06	0.4639	0.792742	0.679	0.879	0.612	1	0.95	1	0.754	0.715
rs1484685	1.879E-10	-0.03344	0.00525	-0.03344	0.005249	3.71527E-10	0.26586	0.010554	0.000741	0.030901	0.121065	0.0001	0.71758	0.021255	0.909	0.968	0.999	0.977	0.946	1	0.814	0.965
rs10756179	1.8806E-10	-0.036068	0.00566	-0.036068	0.005662	3.71847E-10	0.54778	0.605159	1.62E-05	0.00867	0.117307	0.00517	0.01579	0.024491	0.72	0.851	1	0.992	0.94	0.987	0.977	0.959
rs61404973	1.8808E-10	-0.036487	0.00573	-0.040233	0.010688	3.71879E-10	0.01182	0.278436	0.00235	0.202704	0.064989	1.4E-05	0.00011	0.279168	0.956	0.87	0.992	0.739	0.948	1	0.995	0.55
rs6766334	1.8811E-10	-0.032355	0.00508	-0.032307	0.005148	3.43949E-10	0.77371	0.373058	0.013599	0.012654	0.257943	9.4E-08	0.03003	0.930682	0.708	0.849	0.941	0.983	0.858	1	0.959	0.723
rs36025948	1.8835E-10	-0.036067	0.00566	-0.036067	0.005661	3.72411E-10	0.54781	0.604873	1.62E-05	0.008676	0.117335	0.00517	0.01577	0.024506	0.72	0.851	1	0.992	0.94	0.987	0.977	0.959
rs10167951	1.8869E-10	-0.056645	0.00889	-0.056645	0.008892	3.73069E-10	0.54957	0.384531	0.000143	0.022197	0.287305	2.6E-05	0.10695	0.993564	0.841	0.866	1	0.978	0.868	1	0.933	0.765
rs7617003	1.8922E-10	0.0338712	0.00532	0.0338712	0.005317	3.74087E-10	0.56334	0.660047	0.000106	0.036272	0.291865	8E-05	0.0173	0.087906	0.699	0.827	1	0.964	0.867	1	0.972	0.929
rs77852537	1.8968E-10	-0.061294	0.00962	-0.061294	0.009623	3.74984E-10	0.95375	0.43242	0.002515	0.002328	0.118461	9.4E-05	0.20118	0.019771	0.813	0.882	0.996	0.997	0.944	1	0.921	0.965
rs11202612	1.8972E-10	0.0493622	0.00775	0.0493622	0.00775	3.75065E-10	0.17914	0.195324	0.012477	0.000731	0.410159	0.00011	0.00541	0.259985	0.922	0.919	0.973	0.999	0.86	1	0.987	0.911
rs4646617	1.8974E-10	0.0321527	0.00505	0.0341646	0.008657	2.00649E-10	0.3602	0.336826	4.41E-07	0.020347	0.026131	0.04801	0.00042	0.45803	0.525	0.823	1	0.948	0.963	0.582	0.993	0.79
rs62303505	1.8987E-10	0.0392484	0.00616	0.0392484	0.006162	3.75346E-10	0.16118	0.484073	0.001424	0.001214	0.000733	0.00226	0.80904	0.076049	0.922	0.875	0.998	0.998	0.996	0.996	0.787	0.944
rs12935232	1.9009E-10	0.0323953	0.00509	0.0323953	0.005086	3.75773E-10	0.53226	0.6351	0.001038	0.022347	0.381739	1.9E-07	0.38368	0.508097	0.629	0.783	0.997	0.968	0.788	1	0.813	0.801
rs4930401	1.9042E-10	-0.033715	0.00529	-0.037851	0.008175	3.76421E-10	0.5313	0.132682	0.000708	0.076114	2.67E-06	0.00199	0.12078	0.329547	0.876	0.931	0.999	0.942	0.999	0.997	0.945	0.902
rs73078367	1.9064E-10	-0.039162	0.00615	-0.039162	0.006149	3.76846E-10	0.69804	0.07841	0.000693	0.035316	0.095943	4.5E-06	0.62366	0.244215	0.722	0.926	0.999	0.964	0.939	1	0.794	0.891
rs2220152	1.9089E-10	-0.033408	0.00525	-0.033408	0.005246	3.77317E-10	0.27564	0.011021	0.000711	0.031148	0.122089	0.00011	0.71558	0.020777	0.908	0.967	0.999	0.977	0.945	1	0.814	0.965
rs61859604	1.9093E-10	-0.04704	0.00739	-0.048625	0.009446	3.77401E-10	0.00165	0.303773	0.005109	0.131173	0.149285	7.4E-06	0.02273	0.29781	0.979	0.904	0.99	0.891	0.937	1	0.976	0.906
rs12903792	1.9173E-10	0.0321445	0.00505	0.0341511	0.008662	2.02764E-10	0.35784	0.336808	4.41E-07	0.020479	0.026148	0.04796	0.00043	0.458296	0.524	0.823	1	0.948	0.963	0.582	0.993	0.79
rs61859606	1.9184E-10	-0.047035	0.00739	-0.048597	0.009456	3.79155E-10	0.00173	0.305812	0.005156	0.133874	0.149658	6.9E-06	0.02194	0.312531	0.978	0.903	0.99	0.888	0.936	1	0.976	0.903
rs10255837	1.9215E-10	0.0356662	0.0056	0.0493786	0.011761	1.54764E-11	0.44753	0.022965	0.023108	6.41E-06	8.73E-06	0.05046	0.07392	0.086754	0.658	0.939	0.222	1	1	0.171	0.863	0.876
rs74177455	1.9241E-10	-0.038415	0.00603	-0.040274	0.007307	3.80272E-10	0.30724	0.718755	0.000656	0.039721	0.000471	0.002	0.10425	0.006128	0.91	0.861	0.999	0.973	0.997	0.997	0.953	0.977
rs6765486	1.9296E-10	0.0338368	0.00531	0.0338368	0.005315	3.8133E-10	0.63062	0.621681	0.000101	0.039143	0.28186	9.4E-05	0.01927	0.076799	0.718	0.836	1	0.963	0.874	1	0.972	0.934
rs76110027	1.9299E-10	-0.060752	0.00954	-0.060752	0.009542	3.81382E-10	0.99673	0.355465	0.002407	0.002971	0.126884	0.00011	0.14567	0.015615	0.809	0.894	0.997	0.997	0.942	1	0.936	0.968
rs6723552	1.9302E-10	-0.033406	0.00525	-0.033406	0.005247	3.81456E-10	0.26757	0.010892	0.00075	0.030447	0.122123	0.00011	0.7198	0.020876	0.909	0.967	0.999	0.978	0.945	1	0.813	0.965
rs61925002	1.9315E-10	-0.036465	0.00573	-0.04021	0.010667	3.81704E-10	0.012	0.262856	0.002485	0.195914	0.06784	1.4E-05	0.00011	0.276502	0.956	0.874	0.992	0.75	0.947	1	0.995	0.552
rs9358199	1.9361E-10	0.0444177	0.00698	0.0508248	0.014895	5.07757E-11	0.0034	0.383409	0.031221	1.48E-06	0.000288	0.00154	0.28995	0.563507	0.964	0.79	0.699	1	0.997	0.917	0.305	0.738
rs11119561	1.9389E-10	0.0337727	0.00531	0.0338059	0.005339	3.83128E-10	0.00922	0.753582	0.019088	0.001271	0.156215	4.1E-05	0.22479	0.033684	0.97	0.848	0.951	0.998	0.934	1	0.919	0.96

Table S3

rs12924631	1.9413E-10	0.0365967	0.00575	0.0378844	0.007707	3.45304E-10	0.01008	0.062058	0.01176	0.27997	0.125149	5.7E-07	0.06567	0.198086	0.966	0.938	0.95	0.709	0.932	1	0.953	0.908
rs17114364	1.9452E-10	-0.060722	0.00954	-0.060722	0.009539	3.8436E-10	0.98741	0.354123	0.002408	0.003383	0.124263	0.0001	0.14928	0.015119	0.808	0.894	0.997	0.997	0.943	1	0.935	0.968
rs61925026	1.9464E-10	-0.036458	0.00573	-0.040211	0.010665	3.84593E-10	0.01201	0.261828	0.002492	0.196303	0.067555	1.4E-05	0.00011	0.277149	0.956	0.874	0.992	0.75	0.947	1	0.995	0.553
rs61925037	1.9485E-10	-0.036458	0.00573	-0.040141	0.010572	3.84996E-10	0.01454	0.318087	0.002305	0.204502	0.064227	1.5E-05	8.5E-05	0.321271	0.953	0.863	0.992	0.74	0.948	1	0.995	0.569
rs3952715	1.9531E-10	0.0354275	0.00557	0.0354953	0.008962	2.40173E-10	0.95697	0.042331	0.000481	0.897805	0.014929	5.1E-07	0.41793	0.027932	0.627	0.91	0.997	0.109	0.971	1	0.739	0.929
rs2019950	1.9538E-10	-0.03339	0.00525	-0.03339	0.005246	3.86012E-10	0.25914	0.010999	0.000753	0.030955	0.122078	0.00011	0.71897	0.02078	0.91	0.967	0.999	0.977	0.945	1	0.814	0.965
rs4855869	1.9633E-10	-0.039792	0.00625	-0.040143	0.007485	2.90201E-10	0.97387	0.123781	0.061586	4.51E-05	0.039445	3.6E-06	0.47597	0.801898	0.675	0.877	0.593	1	0.947	1	0.744	0.707
rs62302758	1.9655E-10	0.039158	0.00615	0.039158	0.006153	3.88284E-10	0.14527	0.516642	0.001434	0.001205	0.000698	0.00214	0.82322	0.095054	0.924	0.87	0.998	0.998	0.996	0.996	0.782	0.938
rs6734579	1.9685E-10	0.0344411	0.00541	0.0371342	0.007305	3.88862E-10	0.06677	0.010122	0.013456	0.006615	0.001557	0.00019	0.10959	0.784534	0.947	0.969	0.969	0.995	0.995	1	0.948	0.773
rs10506412	1.9689E-10	-0.036452	0.00573	-0.040179	0.010645	3.88936E-10	0.012	0.265469	0.002501	0.195911	0.067512	1.4E-05	0.00012	0.279549	0.956	0.874	0.992	0.751	0.947	1	0.995	0.554
rs1881557	1.969E-10	-0.033386	0.00525	-0.033386	0.005246	3.88966E-10	0.27134	0.010982	0.000752	0.030584	0.122226	0.00011	0.72048	0.020732	0.908	0.967	0.999	0.978	0.945	1	0.813	0.965
rs11642616	1.9744E-10	-0.046837	0.00736	-0.046837	0.00736	3.9001E-10	0.44365	0.207658	0.003476	0.000754	0.047255	0.00163	0.05315	0.027737	0.898	0.927	0.996	0.999	0.974	0.998	0.968	0.967
rs9878064	1.9768E-10	0.0338132	0.00531	0.0338132	0.005314	3.90468E-10	0.63172	0.622244	9.78E-05	0.039373	0.287283	9.8E-05	0.01913	0.076315	0.718	0.836	1	0.962	0.872	1	0.972	0.934
rs12468914	1.9796E-10	0.036462	0.00573	0.0403927	0.008195	3.91008E-10	0.06647	0.005299	0.009497	0.006217	0.001046	0.00052	0.10135	0.877982	0.949	0.974	0.982	0.995	0.996	0.999	0.952	0.795
rs1813627	1.9819E-10	-0.033379	0.00525	-0.033379	0.005246	3.91447E-10	0.27003	0.010981	0.000755	0.031378	0.122156	0.0001	0.71975	0.020776	0.908	0.967	0.999	0.977	0.945	1	0.813	0.965
rs72652256	1.9844E-10	0.083944	0.01319	0.0847903	0.014957	3.08723E-10	0.15658	0.587817	3.24E-07	0.03528	0.111612	0.03039	0.00437	0.708398	0.91	0.839	1	0.958	0.934	0.851	0.986	0.816
rs12579281	1.9865E-10	-0.036441	0.00573	-0.040217	0.010702	3.92341E-10	0.01195	0.27711	0.002421	0.206907	0.064774	1.4E-05	0.00011	0.280989	0.955	0.87	0.992	0.734	0.948	1	0.995	0.55
rs6805609	1.991E-10	0.0397809	0.00625	0.0401164	0.007349	3.01618E-10	0.97679	0.124305	0.059893	5.07E-05	0.037833	3.8E-06	0.46706	0.794165	0.681	0.879	0.61	1	0.95	1	0.753	0.715
rs9654010	1.9924E-10	0.0397745	0.00625	0.0401194	0.007465	2.95427E-10	0.9739	0.123769	0.061565	4.63E-05	0.039438	3.6E-06	0.47591	0.801849	0.675	0.877	0.594	1	0.947	1	0.745	0.708
rs138084484	1.9945E-10	0.0397734	0.00625	0.0401181	0.007465	2.95775E-10	0.97373	0.123769	0.061565	4.64E-05	0.039438	3.6E-06	0.47591	0.801849	0.675	0.877	0.594	1	0.947	1	0.745	0.708
rs142665618	1.9963E-10	-0.039773	0.00625	-0.040117	0.007465	2.96008E-10	0.97373	0.123781	0.061586	4.64E-05	0.039445	3.6E-06	0.47597	0.801898	0.675	0.877	0.594	1	0.947	1	0.744	0.708
rs57273516	1.9963E-10	-0.039773	0.00625	-0.040117	0.007465	2.96008E-10	0.97373	0.123781	0.061586	4.64E-05	0.039445	3.6E-06	0.47597	0.801898	0.675	0.877	0.594	1	0.947	1	0.744	0.708
rs7710483	1.9966E-10	0.0357986	0.00563	0.0357986	0.005627	3.94295E-10	0.2111	0.212035	0.016259	0.001596	0.003107	6.3E-05	0.11284	0.755187	0.91	0.909	0.955	0.998	0.992	1	0.941	0.749
rs2042559	1.9992E-10	0.0354788	0.00558	0.0394838	0.00808	3.94804E-10	0.08534	0.005895	0.011074	0.001844	0.003498	0.00077	0.0376	0.663378	0.943	0.973	0.976	0.998	0.993	0.999	0.97	0.751
rs34264700	2.0036E-10	-0.05037	0.00792	-0.053548	0.010004	2.61959E-10	0.07496	0.163646	0.001102	1.8E-06	0.122163	0.02206	0.0967	0.563354	0.942	0.922	0.997	1	0.941	0.91	0.948	0.861
rs4524148	2.0064E-10	-0.033369	0.00525	-0.033369	0.005246	3.962E-10	0.27398	0.011	0.000752	0.030911	0.122078	0.00011	0.71897	0.020781	0.908	0.967	0.999	0.977	0.945	1	0.814	0.965
rs12624148	2.0067E-10	-0.036325	0.00571	-0.036325	0.005711	3.96252E-10	0.31461	0.015649	2.73E-05	0.0622	0.067813	0.00146	0.23824	0.197898	0.907	0.966	1	0.956	0.965	0.998	0.92	0.925
rs62084746	2.0069E-10	0.0361758	0.00569	0.0343122	0.009362	3.96294E-10	0.27308	0.059308	8.24E-06	0.087595	0.193145	9.9E-05	0.78922	0.002821	0.526	0.907	1	0.861	0.862	1	0.546	0.967
rs72694248	2.0084E-10	-0.046566	0.00732	-0.046566	0.007321	3.96583E-10	0.5896	0.643451	2.58E-05	0.021051	0.080503	0.00647	0.01831	0.010129	0.871	0.865	1	0.985	0.96	0.986	0.979	0.973
rs80146508	2.0084E-10	-0.060696	0.00954	-0.060696	0.009542	3.96585E-10	0.99329	0.356215	0.002442	0.003054	0.126944	0.00011	0.14612	0.015614	0.809	0.894	0.997	0.997	0.942	1	0.936	0.968
rs4665510	2.009E-10	-0.033369	0.00525	-0.033369	0.005246	3.96692E-10	0.27364	0.010984	0.000754	0.030781	0.12238	0.00011	0.72051	0.020783	0.908	0.967	0.999	0.977	0.945	1	0.813	0.965
rs4665511	2.0096E-10	-0.033369	0.00525	-0.033369	0.005246	3.96802E-10	0.27364	0.010983	0.000754	0.030781	0.12238	0.00011	0.72051	0.020783	0.908	0.967	0.999	0.977	0.945	1	0.813	0.965
rs11685129	2.0101E-10	-0.033369	0.00525	-0.033369	0.005246	3.96901E-10	0.27376	0.010983	0.000754	0.030745	0.12243	0.00011	0.72046	0.020784	0.908	0.967	0.999	0.977	0.945	1	0.813	0.965
rs1881558	2.0106E-10	-0.033368	0.00525	-0.033368	0.005246	3.97009E-10	0.27397	0.010999	0.000753	0.030908	0.122072	0.00011	0.71942	0.02078	0.908	0.967	0.999	0.977	0.945	1	0.813	0.965
rs9393705	2.0117E-10	-0.05784	0.00909	-0.05784	0.009094	3.97221E-10	0.48263	0.591549	0.000165	0.008244	0.0599	0.00164	0.07303	0.0497	0.886	0.872	1	0.994	0.967	0.998	0.96	0.956
rs4367098	2.0158E-10	-0.034089	0.00536	-0.034089	0.00536	3.98011E-10	0.61338	0.056653	0.000794	0.005327	0.026204	1.3E-05	0.90762	0.815591	0.658	0.918	0.998	0.992	0.966	1	0.673	0.683
rs174541	2.0164E-10	0.0321694	0.00506	0.0347966	0.008799	3.2668E-10	0.09704	0.565438	0.011096	0.071322	3.37E-06	1.6E-05	0.31193	0.393554	0.921	0.699	0.961	0.923	0.999	1	0.872	0.863
rs990069	2.0184E-10	-0.033365	0.00525	-0.033365	0.005246	3.98523E-10	0.26905	0.010985	0.000755	0.0312	0.122224	0.00011	0.71983	0.020785	0.909	0.967	0.999	0.977	0.945	1	0.813	0.965
rs7563504	2.0258E-10	0.0364421	0.00573	0.0403416	0.008187	3.99953E-10	0.06711	0.005317	0.009675	0.006473	0.001053	0.00049	0.10192	0.876475	0.948	0.974	0.982	0.995	0.996	0.999	0.952	0.795
rs11075924	2.0259E-10	0.0320521	0.00504	0.0320521	0.00504	3.9997E-10	0.75079	0.936317	0.00073	0.004993	0.272325	1.1E-06	0.36383	0.96186	0.661	0.698	0.998	0.991	0.825	1	0.81	0.688
rs17114362	2.0295E-10	-0.060658	0.00954	-0.060658	0.009539	4.00661E-10	0.98769	0.35411	0.002407	0.003557	0.124353	0.0001	0.14923	0.015114	0.808	0.894	0.997	0.997	0.943	1	0.935	0.968
rs4936278	2.0319E-10	-0.036277	0.0057	-0.036277	0.005705	3.92451E-10	0.34342	0.709337	3.51E-06	0.000109	0.330005	0.01044	0.41566	0.775661	0.854	0.795	1	1	0.83	0.945	0.825	0.777
rs138388436	2.0322E-10	-0.046965	0.00739	-0.048505	0.009407	4.01186E-10	0.0017	0.307076	0.005132	0.131586	0.152475	7.6E-06	0.02294	0.294129	0.979	0.904	0.99	0.891	0.935	1	0.976	0.906
rs11715581	2.0332E-10	-0.034076	0.00536	-0.034076	0.005359	4.01373E-10	0.58211	0.059495	0.000855	0.004955	0.025892	1.2E-05	0.89944	0.814347	0.65	0.916	0.998	0.993	0.966	1	0.674	0.681
rs6277	2.0437E-10	-0.032099	0.00505	-0.032099	0.005049	4.03405E-10	0.84482	0.024838	0.000131	0.002653	0.980606	0.00017	0.52544	0.065149	0.771	0.941	1	0.996	0.585	1	0.794	0.926
rs56021312	2.0533E-10	-0.046576	0.00733	-0.046576	0.007326	4.05259E-10	0.58853	0.634664	2.49E-05	0.021641	0.080634	0.00659	0.01793	0.009596	0.871	0.866	1	0.984	0.96	0.986	0.979	0.972
rs1916647	2.057E-10	-0.038344	0.00603	-0.040185	0.007295	4.0598E-10	0.28556	0.718196	0.000633	0.043064	0.000518	0.00205	0.10292	0.006043	0.913	0.862	0.999	0.971	0.997	0.997	0.953	0.977
rs72791112	2.0599E-10	0.0378667	0.00596	0.0378667	0.005957	4.06541E-10	0.952	0.083909	0.003934	0.031471	0.24625	1E-06	0.22881	0.225822	0.802	0.931	0.993	0.973	0.896	1	0.907	0.905
rs59606976	2.0611E-10	-0.036408	0.00573	-0.04007	0.010636	4.06776E-10	0.012	0.300227	0.002382	0.204224	0.064602	1.4E-05	0.00011	0.286943	0.955	0.865	0.992	0.739	0.948	1	0.995	0.554
rs61753635	2.0626E-10	0.0365582	0.00575	0.0378064	0.00756	3.78884E-10	0.01119	0.070408	0.011551	0.268444	0.11884	7.8E-07	0.06387	0.15028	0.964	0.937	0.955	0.728	0.936	1	0.955	0.921
rs10470769	2.0645E-10	0.0391154	0.00615	0.0391154	0.006154	4.07421E-10	0.14549	0.515235	0.001383	0.001206	0.000723	0.00228	0.81949	0.096717	0.924	0.87	0.998	0.998	0.996	0.996	0.783	0.938
rs1916648	2.0699E-10	-0.038339	0.00603	-0.040182	0.007297	4.0847E-10	0.28598	0.718132	0.000633	0.043303	0.000518	0.00205	0.10292	0.006043	0.913	0.862	0.999	0.971	0.997	0.997	0.953	0.977
rs6467589	2.0727E-10	0.0355938	0.0056	0.0491469	0.011715	1.79442E-11	0.46452	0.021631	0.021283	7.11E-06	9.28E-06	0.0527	0.07669	0.089883	0.657	0.941	0.25	1	1	0.186	0.861	0.874
rs61924999	2.0729E-10	-0.036407	0.00573	-0.040045	0.010678	4.09058E-10	0.01205	0.277561	0.002508	0.192192	0.072697	1.4E-05	0.00011	0.267926	0.955	0.871	0.992	0.755	0.944	1	0.995	0.549
rs6844927	2.0736E-10	0.0398504	0.00627	0.0398504	0.00627	4.09191E-10	0.04858	0.853866	0.0012	0.005115	0.001435	0.00142	0.52905	0.055678	0.951	0.837	0.999	0.996	0.995	0.998	0.856	0.952

Table S3

rs12956821	2.0777E-10	-0.03347	0.00527	-0.033205	0.005914	4.09968E-10	0.38387	0.432334	0.000215	0.124386	0.036956	1.4E-05	0.50593	0.007655	0.852	0.645	1	0.851	0.963	1	0.806	0.963
rs6126631	2.0783E-10	-0.038334	0.00603	-0.040172	0.007294	4.10102E-10	0.28542	0.716987	0.000639	0.043279	0.000512	0.00204	0.1035	0.0061	0.913	0.862	0.999	0.971	0.997	0.997	0.953	0.977
rs8052408	2.0791E-10	0.0321195	0.00505	0.0321195	0.005054	4.08342E-10	0.92491	0.803912	0.002687	0.020185	0.356849	7.8E-08	0.33659	0.478309	0.743	0.698	0.992	0.972	0.807	1	0.835	0.815
rs59387603	2.0808E-10	-0.036403	0.00573	-0.040041	0.010678	4.10583E-10	0.01205	0.277578	0.002512	0.192196	0.072836	1.4E-05	0.00011	0.267925	0.955	0.871	0.992	0.755	0.944	1	0.995	0.549
rs59357257	2.0827E-10	-0.036402	0.00573	-0.04004	0.010677	4.10938E-10	0.01204	0.277836	0.002512	0.192121	0.072834	1.4E-05	0.00011	0.267888	0.955	0.871	0.992	0.755	0.944	1	0.995	0.549
rs12579240	2.0905E-10	-0.036399	0.00573	-0.040075	0.010686	4.12445E-10	0.01201	0.27216	0.002489	0.198298	0.071279	1.4E-05	0.00011	0.270896	0.955	0.871	0.992	0.746	0.944	1	0.995	0.548
rs13094224	2.1043E-10	0.0373876	0.00588	0.0390023	0.009	4.15117E-10	0.11878	0.81587	0.007472	0.0006	0.013238	0.00019	0.00294	0.221861	0.91	0.729	0.977	0.999	0.981	1	0.986	0.548
rs200394766	2.1065E-10	0.0450595	0.00709	0.0450595	0.007092	4.15542E-10	0.12494	0.384693	0.000129	0.001064	0.005723	0.01711	0.05152	0.876947	0.931	0.89	1	0.999	0.99	0.945	0.963	0.82
rs12108134	2.1076E-10	-0.032231	0.00507	-0.032231	0.005073	4.03146E-10	0.89741	0.430284	0.009414	0.025196	0.281935	1.3E-07	0.0299	0.974033	0.78	0.851	0.969	0.972	0.861	1	0.962	0.758
rs75979098	2.1143E-10	-0.06061	0.00954	-0.06061	0.009541	4.17043E-10	0.9826	0.354461	0.002448	0.003354	0.127136	0.00011	0.14889	0.01553	0.807	0.894	0.997	0.997	0.942	1	0.935	0.968
rs61925000	2.1146E-10	-0.036389	0.00573	-0.04004	0.010687	4.17107E-10	0.01194	0.27716	0.002512	0.195235	0.072518	1.4E-05	0.00011	0.268361	0.955	0.87	0.992	0.751	0.944	1	0.995	0.548
rs553672759	2.1147E-10	0.10457	0.01646	0.10457	0.016461	4.17122E-10	0.82798	0.569845	1.08E-05	0.011131	0.332398	0.00048	0.0645	0.130308	0.729	0.689	1	0.987	0.842	0.999	0.942	0.907
rs7428918	2.1149E-10	0.0338117	0.00532	0.0338117	0.005322	4.17168E-10	0.65724	0.628176	0.000105	0.040222	0.287971	9.4E-05	0.01946	0.080778	0.724	0.835	1	0.962	0.872	1	0.972	0.932
rs113741748	2.1166E-10	0.039714	0.00625	0.0400821	0.007546	3.04018E-10	0.97373	0.124759	0.066351	4.64E-05	0.039941	3.4E-06	0.48018	0.776993	0.667	0.873	0.562	1	0.946	1	0.736	0.706
rs2329025	2.1171E-10	-0.039714	0.00625	-0.040082	0.007547	3.04023E-10	0.97375	0.124771	0.066375	4.64E-05	0.03995	3.4E-06	0.48024	0.777043	0.667	0.873	0.562	1	0.946	1	0.736	0.706
rs9368050	2.1179E-10	0.0443263	0.00698	0.0506718	0.014834	5.85701E-11	0.00363	0.383523	0.031224	1.67E-06	0.000288	0.00154	0.28993	0.563153	0.963	0.792	0.706	1	0.997	0.922	0.309	0.741
rs1264194	2.12E-10	-0.03543	0.00558	-0.03543	0.005577	4.18157E-10	0.5951	0.082348	0.002086	0.002097	0.044547	3.9E-05	0.5495	0.374501	0.712	0.927	0.996	0.997	0.964	1	0.819	0.871
rs4844661	2.1272E-10	-0.031971	0.00503	-0.031971	0.005033	4.19536E-10	0.1242	0.148925	0.000818	0.038422	0.046365	0.00033	0.00403	0.925743	0.935	0.93	0.999	0.973	0.972	1	0.988	0.823
rs61925001	2.1276E-10	-0.036383	0.00573	-0.040036	0.010688	4.19628E-10	0.01196	0.276629	0.00251	0.196051	0.072439	1.4E-05	0.00011	0.268428	0.955	0.87	0.992	0.75	0.944	1	0.995	0.548
rs61859605	2.128E-10	-0.046914	0.00739	-0.048446	0.009408	4.19697E-10	0.00173	0.306699	0.005259	0.131102	0.156451	7.6E-06	0.02268	0.297191	0.978	0.903	0.99	0.891	0.934	1	0.976	0.906
rs62303497	2.1287E-10	0.0390994	0.00616	0.0390994	0.006156	4.19823E-10	0.15471	0.514807	0.001432	0.001266	0.000723	0.00221	0.80976	0.092001	0.923	0.871	0.998	0.998	0.996	0.996	0.786	0.939
rs1484663	2.1293E-10	0.0332475	0.00523	0.0337449	0.005891	4.19951E-10	0.11365	0.007787	0.001601	0.019602	0.040712	0.00014	0.91327	0.035159	0.933	0.97	0.998	0.985	0.972	1	0.718	0.958
rs62303498	2.1294E-10	0.0391059	0.00616	0.0391059	0.006157	4.19959E-10	0.14749	0.514989	0.001433	0.001303	0.000722	0.00221	0.80864	0.092044	0.924	0.871	0.998	0.998	0.996	0.996	0.786	0.939
rs1484664	2.1313E-10	0.0332467	0.00523	0.0337445	0.005891	4.20333E-10	0.11359	0.007788	0.001602	0.019592	0.040757	0.00014	0.91308	0.035155	0.933	0.97	0.998	0.985	0.972	1	0.718	0.958
rs2888390	2.1366E-10	-0.03222	0.00507	-0.03222	0.005073	4.08481E-10	0.89882	0.430249	0.009456	0.025244	0.282267	1.3E-07	0.02997	0.97421	0.78	0.85	0.969	0.972	0.861	1	0.961	0.758
rs4431151	2.1386E-10	-0.032219	0.00507	-0.032219	0.005073	4.08849E-10	0.89884	0.430249	0.009458	0.025263	0.282289	1.3E-07	0.02997	0.974224	0.78	0.85	0.969	0.972	0.861	1	0.961	0.758
rs9819766	2.1389E-10	-0.032219	0.00507	-0.032219	0.005073	4.09283E-10	0.89889	0.430259	0.009422	0.025172	0.282062	1.3E-07	0.02993	0.974053	0.78	0.851	0.969	0.972	0.861	1	0.962	0.758
rs61924994	2.1502E-10	-0.036374	0.00573	-0.040015	0.010691	4.23975E-10	0.01204	0.278068	0.002508	0.196591	0.072921	1.4E-05	0.00011	0.267658	0.955	0.87	0.992	0.749	0.944	1	0.995	0.547
rs200497	2.1505E-10	-0.06777	0.01067	-0.070588	0.013498	4.24036E-10	0.39425	0.544202	0.003255	0.00301	0.225241	0.00025	0.11315	0.000277	0.895	0.876	0.995	0.997	0.917	1	0.948	0.986
rs57608022	2.156E-10	-0.036372	0.00573	-0.040013	0.01069	4.25096E-10	0.01204	0.278058	0.002511	0.196617	0.072871	1.4E-05	0.00011	0.267684	0.955	0.87	0.992	0.749	0.944	1	0.995	0.547
rs75067080	2.1578E-10	-0.069454	0.01094	-0.073261	0.014598	4.25458E-10	0.151	0.295043	0.000355	0.512229	0.000415	0.00014	0.07888	0.066134	0.901	0.867	0.999	0.404	0.996	1	0.938	0.932
rs61859607	2.1608E-10	-0.046895	0.00739	-0.048443	0.00943	4.26031E-10	0.00175	0.305362	0.005325	0.133873	0.156258	7.4E-06	0.02261	0.296729	0.978	0.903	0.99	0.888	0.934	1	0.976	0.905
rs55863711	2.1619E-10	-0.046894	0.00739	-0.048443	0.00943	4.26233E-10	0.00175	0.305355	0.005327	0.133906	0.156253	7.4E-06	0.02261	0.296722	0.978	0.903	0.99	0.888	0.934	1	0.976	0.905
rs4580630	2.1666E-10	0.0390592	0.00615	0.0390592	0.006152	4.27147E-10	0.13938	0.505505	0.001107	0.001489	0.000887	0.00219	0.83837	0.114588	0.925	0.871	0.999	0.998	0.996	0.996	0.778	0.933
rs62303502	2.1681E-10	0.0390899	0.00616	0.0390899	0.006157	4.27433E-10	0.15491	0.515142	0.001449	0.001265	0.00072	0.00222	0.81003	0.092114	0.923	0.871	0.998	0.998	0.996	0.996	0.786	0.939
rs1364925	2.1699E-10	0.0358143	0.00564	0.0388411	0.007577	4.27795E-10	0.07715	0.038853	0.005775	0.028549	0.098942	0.00029	0.00021	0.53963	0.949	0.959	0.992	0.982	0.958	1	0.996	0.885
rs6769609	2.1712E-10	-0.032207	0.00507	-0.032207	0.005073	4.15176E-10	0.89794	0.430264	0.009423	0.02559	0.282055	1.3E-07	0.02993	0.974058	0.78	0.851	0.969	0.971	0.861	1	0.961	0.758
rs144063354	2.1728E-10	0.0390569	0.00615	0.0390569	0.006152	4.28346E-10	0.13907	0.505012	0.001106	0.001495	0.000888	0.00219	0.83837	0.114807	0.925	0.871	0.999	0.998	0.996	0.996	0.778	0.933
rs200491	2.1805E-10	-0.06776	0.01067	-0.070608	0.013533	4.29828E-10	0.39464	0.548832	0.003219	0.003144	0.225329	0.00025	0.11129	0.000271	0.895	0.876	0.995	0.997	0.917	1	0.949	0.986
rs12445161	2.1863E-10	0.036456	0.00574	0.0384338	0.008232	3.76569E-10	0.00546	0.063938	0.014133	0.282386	0.134284	5.8E-07	0.0644	0.185846	0.971	0.937	0.934	0.701	0.926	1	0.952	0.909
rs11727011	2.1901E-10	0.0390724	0.00616	0.0390724	0.006156	4.3169E-10	0.14549	0.519092	0.001437	0.001206	0.000742	0.00231	0.8198	0.093086	0.924	0.87	0.998	0.998	0.996	0.996	0.783	0.939
rs2507898	2.1929E-10	-0.03533	0.00557	-0.035404	0.009057	2.57971E-10	0.94021	0.042076	0.000478	0.928333	0.014743	5.2E-07	0.41784	0.028275	0.62	0.91	0.997	0.099	0.971	1	0.737	0.928
rs1393430	2.1929E-10	-0.048442	0.00763	-0.048442	0.007632	4.32234E-10	0.24794	0.096891	0.003991	0.000799	0.010095	0.00388	0.09279	0.044363	0.925	0.947	0.995	0.999	0.989	0.994	0.959	0.963
rs4280707	2.1941E-10	0.039048	0.00615	0.039048	0.006152	4.32468E-10	0.14396	0.524594	0.00141	0.001196	0.000748	0.00229	0.82942	0.096316	0.924	0.869	0.998	0.998	0.996	0.996	0.78	0.937
rs7113566	2.195E-10	0.0328425	0.00517	0.0320856	0.006156	3.72221E-10	0.11547	0.493144	0.000136	0.664332	0.464236	7.2E-07	0.02604	0.374	0.865	0.752	0.999	0.212	0.658	1	0.947	0.78
rs4264808	2.1966E-10	0.0390846	0.00616	0.0390846	0.006158	4.32935E-10	0.15596	0.513385	0.001457	0.001256	0.000719	0.00224	0.81143	0.092196	0.923	0.871	0.998	0.998	0.996	0.996	0.786	0.939
rs4414926	2.2045E-10	0.0390829	0.00616	0.0390829	0.006158	4.34472E-10	0.15533	0.512507	0.001458	0.001258	0.000719	0.00225	0.81227	0.091962	0.923	0.871	0.998	0.998	0.996	0.996	0.785	0.939
rs56091266	2.205E-10	0.0390374	0.00615	0.0390374	0.006151	4.34554E-10	0.15376	0.512789	0.001115	0.001478	0.000853	0.00215	0.84112	0.11322	0.922	0.869	0.998	0.998	0.996	0.996	0.776	0.933
rs62303494	2.206E-10	0.0390486	0.00615	0.0390486	0.006153	4.3476E-10	0.14307	0.524287	0.001438	0.001202	0.000743	0.00226	0.82955	0.096137	0.925	0.869	0.998	0.998	0.996	0.996	0.78	0.938
rs10011680	2.2092E-10	0.039146	0.00617	0.0394505	0.006968	4.35366E-10	0.97503	0.260794	0.011019	0.003216	0.418406	1.4E-05	0.00056	0.655032	0.783	0.888	0.968	0.996	0.826	1	0.993	0.825
rs10024620	2.2101E-10	0.0390414	0.00615	0.0390414	0.006152	4.35545E-10	0.14556	0.52454	0.001414	0.001205	0.000747	0.00228	0.82961	0.096274	0.924	0.869	0.998	0.998	0.996	0.996	0.78	0.937
rs62302759	2.2107E-10	0.0390416	0.00615	0.0390416	0.006152	4.35656E-10	0.14665	0.524581	0.001414	0.00119	0.000746	0.0023	0.82869	0.09632	0.924	0.869	0.998	0.998	0.996	0.996	0.781	0.937
rs1385265	2.2108E-10	0.0332173	0.00523	0.033702	0.005881	4.35678E-10	0.11337	0.007733	0.001568	0.020085	0.042779	0.00014	0.915	0.034971	0.933	0.97	0.998	0.985	0.971	1	0.718	0.958
rs28437075	2.2109E-10	0.0390408	0.00615	0.0390408	0.006152	4.3571E-10	0.14562	0.524565	0.00141	0.001206	0.000747	0.00229	0.82927	0.096297	0.924	0.869	0.998	0.998	0.996	0.996	0.78	0.937
rs7201225	2.211E-10	0.0320135	0.00504	0.0309313	0.005693	3.89422E-10	0.77064	0.696193	0.001809	0.033862	0.692818	2.4E-08	0.22025	0.37745	0.638	0.625	0.992	0.939	0.624	1	0.843	0.8

Table S3

rs62303486	2.2112E-10	0.0390403	0.00615	0.0390403	0.006152	4.35765E-10	0.14564	0.524592	0.001408	0.001206	0.000748	0.00229	0.82911	0.096314	0.924	0.869	0.998	0.998	0.996	0.996	0.78	0.937
rs62303489	2.2119E-10	0.0390406	0.00615	0.0390406	0.006152	4.35899E-10	0.14556	0.52454	0.001414	0.001205	0.000747	0.00228	0.82962	0.096275	0.924	0.869	0.998	0.998	0.996	0.996	0.78	0.937
rs62303493	2.2121E-10	0.0390417	0.00615	0.0390417	0.006152	4.3594E-10	0.14541	0.52447	0.001424	0.001205	0.000745	0.00227	0.82981	0.096209	0.924	0.869	0.998	0.998	0.996	0.996	0.78	0.937
rs7655134	2.2128E-10	0.0390412	0.00615	0.0390412	0.006152	4.3607E-10	0.14542	0.524477	0.001423	0.001205	0.000745	0.00227	0.82958	0.096219	0.924	0.869	0.998	0.998	0.996	0.996	0.78	0.937
rs10028240	2.213E-10	0.0390406	0.00615	0.0390406	0.006152	4.36104E-10	0.1455	0.524529	0.001417	0.001205	0.000746	0.00228	0.82979	0.096253	0.924	0.869	0.998	0.998	0.996	0.996	0.78	0.937
rs62303488	2.2141E-10	0.0390394	0.00615	0.0390394	0.006152	4.36321E-10	0.14562	0.524574	0.00141	0.001207	0.000747	0.00229	0.8293	0.096301	0.924	0.869	0.998	0.998	0.996	0.996	0.78	0.937
rs73244170	2.215E-10	0.0390399	0.00615	0.0390399	0.006152	4.36496E-10	0.1455	0.52451	0.001419	0.001205	0.000746	0.00228	0.82976	0.09625	0.924	0.869	0.998	0.998	0.996	0.996	0.78	0.937
rs28564331	2.2151E-10	0.0390399	0.00615	0.0390399	0.006152	4.36506E-10	0.1455	0.52451	0.001419	0.001205	0.000746	0.00228	0.82976	0.09625	0.924	0.869	0.998	0.998	0.996	0.996	0.78	0.937
rs62303492	2.2151E-10	0.0390399	0.00615	0.0390399	0.006152	4.36516E-10	0.1455	0.52451	0.001419	0.001205	0.000746	0.00228	0.82976	0.09625	0.924	0.869	0.998	0.998	0.996	0.996	0.78	0.937
rs62303491	2.2152E-10	0.0390398	0.00615	0.0390398	0.006152	4.36523E-10	0.1455	0.52451	0.001419	0.001205	0.000746	0.00228	0.82976	0.09625	0.924	0.869	0.998	0.998	0.996	0.996	0.78	0.937
rs4246215	2.2159E-10	0.0320872	0.00506	0.0346977	0.008661	3.62691E-10	0.07454	0.61309	0.012109	0.087932	6.09E-06	1.2E-05	0.33019	0.342238	0.927	0.708	0.955	0.903	0.999	1	0.866	0.871
rs62303485	2.2176E-10	0.0390376	0.00615	0.0390376	0.006152	4.37002E-10	0.14564	0.52459	0.00141	0.001206	0.000748	0.00229	0.82912	0.096315	0.924	0.869	0.998	0.998	0.996	0.996	0.78	0.937
rs11409407	2.2182E-10	0.0397498	0.00626	0.0401217	0.007375	3.3657E-10	0.97497	0.110064	0.06214	5.52E-05	0.038042	4.2E-06	0.45703	0.781289	0.682	0.885	0.604	1	0.95	1	0.757	0.718
rs9291288	2.2201E-10	0.0390366	0.00615	0.0390366	0.006152	4.37471E-10	0.14564	0.524594	0.00141	0.001206	0.000748	0.00229	0.82942	0.096316	0.924	0.869	0.998	0.998	0.996	0.996	0.78	0.937
rs6441844	2.2203E-10	-0.03219	0.00507	-0.03219	0.005073	4.224E-10	0.89918	0.429869	0.009759	0.025403	0.286082	1.2E-07	0.03046	0.974452	0.779	0.85	0.967	0.971	0.859	1	0.961	0.757
rs111620454	2.2203E-10	0.0390366	0.00615	0.0390366	0.006152	4.37526E-10	0.14549	0.524594	0.001411	0.001207	0.000748	0.00229	0.82896	0.096318	0.924	0.869	0.998	0.998	0.996	0.996	0.781	0.937
rs28591655	2.2249E-10	0.0390348	0.00615	0.0390348	0.006152	4.38399E-10	0.1455	0.52458	0.001414	0.001206	0.000746	0.0023	0.82869	0.096321	0.924	0.869	0.998	0.998	0.996	0.996	0.781	0.937
rs7661781	2.2251E-10	0.0390347	0.00615	0.0390347	0.006152	4.38436E-10	0.1455	0.524581	0.001414	0.001206	0.000746	0.0023	0.82869	0.096321	0.924	0.869	0.998	0.998	0.996	0.996	0.781	0.937
rs200996	2.2267E-10	-0.067715	0.01067	-0.070536	0.013517	4.38748E-10	0.39506	0.550262	0.003208	0.003236	0.225856	0.00025	0.11136	0.000271	0.895	0.876	0.996	0.997	0.917	1	0.949	0.986
rs11729863	2.2292E-10	0.039033	0.00615	0.039033	0.006152	4.39235E-10	0.14549	0.524566	0.001416	0.001206	0.000746	0.0023	0.82865	0.096315	0.924	0.869	0.998	0.998	0.996	0.996	0.781	0.937
rs62303460	2.2301E-10	0.0390325	0.00615	0.0390325	0.006152	4.39402E-10	0.14585	0.524592	0.001416	0.001202	0.000747	0.0023	0.82885	0.096323	0.924	0.869	0.998	0.998	0.996	0.996	0.781	0.937
rs141013358	2.2313E-10	-0.085597	0.01349	-0.087308	0.01524	4.39629E-10	0.35337	0.026072	0.025173	0.003433	0.282051	1.4E-05	0.00381	0.583702	0.889	0.956	0.913	0.996	0.886	1	0.986	0.855
rs4546219	2.2314E-10	0.0390396	0.00615	0.0390396	0.006153	4.39665E-10	0.14531	0.524141	0.001442	0.001204	0.000738	0.00227	0.82945	0.096042	0.924	0.869	0.998	0.998	0.996	0.996	0.78	0.938
rs9291287	2.2321E-10	0.0390318	0.00615	0.0390318	0.006152	4.39792E-10	0.14678	0.524566	0.001415	0.001202	0.000746	0.0023	0.82865	0.096317	0.924	0.869	0.998	0.998	0.996	0.996	0.781	0.937
rs4694827	2.233E-10	0.0390317	0.00615	0.0390317	0.006152	4.39959E-10	0.14526	0.524524	0.001419	0.001204	0.000747	0.0023	0.82814	0.096306	0.924	0.869	0.998	0.998	0.996	0.996	0.781	0.937
rs3922601	2.2332E-10	0.0390313	0.00615	0.0390313	0.006152	4.40004E-10	0.14538	0.524548	0.001418	0.001205	0.000746	0.0023	0.82865	0.096309	0.924	0.869	0.998	0.998	0.996	0.996	0.781	0.937
rs55783045	2.2373E-10	-0.032185	0.00507	-0.032185	0.005073	4.25496E-10	0.89896	0.429869	0.009759	0.025604	0.286082	1.2E-07	0.03046	0.974452	0.779	0.85	0.967	0.971	0.859	1	0.961	0.757
rs12325266	2.239E-10	0.0322723	0.00509	0.0322723	0.005087	4.41133E-10	0.6861	0.73105	0.00139	0.019479	0.308772	2.3E-07	0.39642	0.575345	0.674	0.776	0.996	0.973	0.827	1	0.817	0.797
rs11888341	2.2391E-10	0.0358473	0.00565	0.039551	0.007764	4.41137E-10	0.07285	0.008321	0.006115	0.003393	0.001308	0.00176	0.05587	0.919399	0.948	0.972	0.991	0.997	0.995	0.998	0.966	0.806
rs140327315	2.2473E-10	0.107988	0.01702	0.107988	0.017024	4.42733E-10	0.98974	0.884086	4.11E-05	0.00861	0.186236	0.00043	0.08434	0.191664	0.782	0.771	1	0.991	0.909	0.999	0.942	0.904
rs58545098	2.248E-10	0.0397368	0.00626	0.0401051	0.007367	3.41603E-10	0.97329	0.110064	0.06214	5.63E-05	0.038042	4.2E-06	0.45703	0.781289	0.682	0.885	0.605	1	0.95	1	0.758	0.719
rs9842132	2.248E-10	0.0397368	0.00626	0.0401051	0.007367	3.41603E-10	0.97329	0.110064	0.06214	5.63E-05	0.038042	4.2E-06	0.45703	0.781289	0.682	0.885	0.605	1	0.95	1	0.758	0.719
rs3049053	2.2487E-10	-0.039737	0.00626	-0.040105	0.007367	3.417E-10	0.97328	0.110065	0.062144	5.63E-05	0.038043	4.2E-06	0.45703	0.781294	0.682	0.885	0.605	1	0.95	1	0.758	0.719
rs11644671	2.2497E-10	-0.046903	0.00739	-0.046903	0.007394	4.4318E-10	0.32067	0.187202	0.002249	0.000949	0.045977	0.00236	0.07501	0.036384	0.914	0.931	0.998	0.999	0.975	0.997	0.963	0.964
rs55955726	2.2497E-10	0.0377461	0.00595	0.0377461	0.005951	4.43182E-10	0.97267	0.074494	0.003526	0.033132	0.234403	1.4E-06	0.24005	0.218518	0.8	0.934	0.994	0.971	0.9	1	0.905	0.907
rs200489	2.2502E-10	-0.067694	0.01067	-0.070514	0.013511	4.43289E-10	0.39149	0.548832	0.003219	0.003295	0.225329	0.00025	0.11129	0.000271	0.895	0.876	0.996	0.997	0.917	1	0.949	0.986
rs200493	2.2502E-10	-0.067694	0.01067	-0.070514	0.013511	4.43289E-10	0.39149	0.548832	0.003219	0.003295	0.225329	0.00025	0.11129	0.000271	0.895	0.876	0.996	0.997	0.917	1	0.949	0.986
rs11670	2.2534E-10	0.036604	0.00577	0.0382602	0.007809	3.97469E-10	0.01078	0.049171	0.017228	0.237706	0.096408	7.5E-07	0.05575	0.218238	0.966	0.944	0.927	0.756	0.945	1	0.958	0.907
rs1433721	2.2607E-10	0.0320203	0.00505	0.0320203	0.005049	4.45319E-10	0.26863	0.627292	0.00439	0.002401	0.198882	5.1E-05	0.08078	0.160585	0.908	0.862	0.993	0.997	0.921	1	0.954	0.927
rs349691	2.2619E-10	0.0327492	0.00516	0.032483	0.00539	3.54707E-10	0.84676	0.218408	0.001282	0.361044	0.391311	4.2E-08	0.06971	0.425246	0.71	0.842	0.993	0.502	0.743	1	0.918	0.791
rs10959500	2.2639E-10	-0.035819	0.00565	-0.035819	0.005648	4.45919E-10	0.55541	0.622721	1.68E-05	0.013477	0.102109	0.00473	0.01387	0.025647	0.723	0.849	1	0.988	0.946	0.989	0.978	0.958
rs113068148	2.2707E-10	0.0390166	0.00615	0.0390166	0.006152	4.4724E-10	0.14505	0.524424	0.001428	0.001205	0.000752	0.00232	0.82737	0.096282	0.924	0.869	0.998	0.998	0.996	0.996	0.781	0.937
rs2604572	2.272E-10	-0.035756	0.00564	-0.035756	0.005638	4.47485E-10	0.30223	0.167758	0.01163	0.000631	0.362382	0.00013	0.02392	0.089846	0.906	0.925	0.977	0.999	0.877	1	0.975	0.944
rs4453910	2.2772E-10	0.0390637	0.00616	0.0390637	0.00616	4.48486E-10	0.15438	0.509966	0.00147	0.001269	0.000715	0.00229	0.81428	0.092147	0.923	0.871	0.998	0.998	0.996	0.996	0.785	0.939
rs56972052	2.2772E-10	0.0390142	0.00615	0.0390142	0.006152	4.48489E-10	0.14496	0.524387	0.001431	0.001205	0.000753	0.00232	0.82684	0.096272	0.924	0.869	0.998	0.998	0.996	0.996	0.781	0.937
rs146838239	2.278E-10	-0.071622	0.01129	-0.074154	0.014462	4.48656E-10	0.22133	0.313666	0.000311	0.480459	0.000255	1E-04	0.12482	0.128229	0.879	0.858	0.999	0.424	0.997	1	0.916	0.907
rs72792509	2.2798E-10	0.0337237	0.00532	0.0344728	0.006601	4.48998E-10	0.25975	0.007123	0.000204	0.022111	0.365999	0.00047	0.71156	0.004395	0.905	0.969	1	0.983	0.867	0.999	0.807	0.977
rs2250092	2.2883E-10	-0.056373	0.00889	-0.056373	0.008891	4.5063E-10	0.53908	0.381712	0.000159	0.024733	0.278211	2.7E-05	0.11147	0.995814	0.843	0.867	1	0.975	0.872	1	0.932	0.766
rs61925050	2.2895E-10	-0.036323	0.00573	-0.039921	0.01058	4.5086E-10	0.01516	0.328468	0.002511	0.205191	0.068819	1.5E-05	8.5E-05	0.315885	0.952	0.86	0.992	0.741	0.946	1	0.995	0.567
rs9936642	2.2898E-10	0.0319882	0.00505	0.0308534	0.005725	4.03124E-10	0.75048	0.695079	0.001838	0.033065	0.692326	2.4E-08	0.22128	0.377966	0.634	0.624	0.992	0.94	0.624	1	0.842	0.799
rs71403864	2.295E-10	0.0365075	0.00576	0.0382437	0.007964	3.99357E-10	0.00904	0.055014	0.014243	0.291885	0.094359	6.8E-07	0.07442	0.174537	0.967	0.94	0.935	0.695	0.943	1	0.949	0.912
rs149192104	2.305E-10	0.0390048	0.00615	0.0390048	0.006153	4.53854E-10	0.13962	0.52453	0.001418	0.001299	0.000746	0.00228	0.82984	0.096261	0.925	0.869	0.998	0.998	0.996	0.996	0.781	0.938
rs2874871	2.3113E-10	0.0357629	0.00564	0.0388016	0.007594	4.55065E-10	0.07642	0.036692	0.00584	0.029886	0.101338	0.00028	0.00022	0.546025	0.949	0.959	0.992	0.981	0.958	1	0.996	0.884
rs201949202	2.3143E-10	-0.050863	0.00802	-0.052501	0.009149	3.93777E-10	0.05192	0.172298	0.000943	5.57E-06	0.112488	0.01537	0.12376	0.768823	0.949	0.921	0.998	1	0.946	0.948	0.941	0.834
rs78143474	2.3177E-10	-0.064396	0.01016	-0.064396	0.010159	4.56302E-10	0.47777	0.073292	0.000492	0.001657	0.112692	0.00037	0.15959	0.316757	0.698	0.934	0.999	0.998	0.94	0.999	0.924	0.888

Table S3

rs6499562	2.3219E-10	0.0320298	0.00505	0.0320298	0.005053	4.56212E-10	0.93166	0.791552	0.002408	0.021501	0.362157	9.1E-08	0.35134	0.469552	0.741	0.695	0.993	0.97	0.804	1	0.829	0.815
rs184189607	2.3365E-10	-0.071578	0.01129	-0.07412	0.014482	4.5992E-10	0.22404	0.313666	0.000311	0.484159	0.000255	0.0001	0.12482	0.128233	0.878	0.858	0.999	0.421	0.997	1	0.916	0.906
rs200252406	2.3587E-10	0.0679193	0.01072	0.0679193	0.01072	4.64201E-10	0.06714	0.660127	0.000136	0.001495	0.292321	0.00032	0.76116	0.121673	0.924	0.815	1	0.998	0.858	0.999	0.621	0.911
rs527295088	2.3591E-10	0.067919	0.01072	0.067919	0.01072	4.64278E-10	0.06714	0.660127	0.000136	0.001495	0.292325	0.00032	0.76116	0.121676	0.924	0.815	1	0.998	0.858	0.999	0.621	0.911
rs7836997	2.3647E-10	0.0329918	0.00521	0.0329918	0.005207	4.65358E-10	0.31252	0.721404	0.000129	0.033914	0.301925	0.00043	0.03988	0.014053	0.9	0.849	1	0.975	0.89	0.999	0.967	0.968
rs7116782	2.3651E-10	-0.032084	0.00506	-0.031684	0.00607	4.65445E-10	0.653	0.011591	4.21E-05	0.00742	0.777155	0.0002	0.62356	0.053164	0.786	0.948	1	0.989	0.464	1	0.747	0.926
rs2507900	2.3664E-10	-0.035281	0.00557	-0.035384	0.009156	2.70034E-10	0.90877	0.040649	0.000478	0.945942	0.01414	5.3E-07	0.41596	0.0285	0.61	0.91	0.997	0.094	0.972	1	0.736	0.928
rs1341333	2.3674E-10	0.0321198	0.00507	0.0316074	0.007038	4.65885E-10	0.0064	0.141877	0.003153	0.029051	0.085078	1.5E-06	0.44067	0.581641	0.961	0.899	0.991	0.966	0.938	1	0.478	0.813
rs150252649	2.37E-10	0.0390079	0.00616	0.0390079	0.006157	4.6639E-10	0.15058	0.51574	0.001573	0.001348	0.000703	0.00217	0.79948	0.09615	0.924	0.871	0.998	0.998	0.996	0.996	0.789	0.938
rs138554681	2.3748E-10	0.0720295	0.01137	0.0693797	0.014584	3.76142E-10	0.11917	0.360026	9.67E-06	0.843499	0.351002	5.1E-06	0.03459	0.821862	0.853	0.77	1	0.123	0.704	1	0.932	0.641
rs2513691	2.3872E-10	-0.035275	0.00557	-0.035378	0.009154	2.72997E-10	0.90705	0.040711	0.000479	0.945327	0.014128	5.4E-07	0.41564	0.028475	0.61	0.91	0.997	0.094	0.972	1	0.736	0.928
rs200990	2.3882E-10	-0.0676	0.01067	-0.070399	0.013501	4.69893E-10	0.39292	0.55194	0.003249	0.003335	0.227134	0.00026	0.11202	0.000274	0.895	0.875	0.995	0.997	0.916	1	0.948	0.986
rs349690	2.3884E-10	0.0327052	0.00516	0.0324367	0.00539	3.75923E-10	0.84816	0.22098	0.001208	0.368011	0.397243	4.5E-08	0.06914	0.430281	0.707	0.84	0.993	0.492	0.738	1	0.917	0.788
rs60017783	2.3923E-10	-0.036281	0.00573	-0.039977	0.01064	4.70673E-10	0.01435	0.322319	0.002383	0.225678	0.06587	1.5E-05	8.5E-05	0.319365	0.952	0.859	0.992	0.71	0.946	1	0.995	0.562
rs200977	2.3932E-10	-0.067814	0.01071	-0.070198	0.013226	4.70857E-10	0.43523	0.612661	0.002932	0.003003	0.262242	0.00027	0.08417	0.000371	0.888	0.866	0.996	0.997	0.905	1	0.955	0.985
rs11640830	2.4001E-10	0.0364613	0.00576	0.0381488	0.007941	4.18203E-10	0.00895	0.056303	0.014527	0.284499	0.104415	6.8E-07	0.07318	0.173568	0.967	0.94	0.934	0.704	0.939	1	0.95	0.913
rs34680964	2.4008E-10	0.036423	0.00575	0.037606	0.007513	4.38844E-10	0.01154	0.071131	0.011976	0.273022	0.11399	8.1E-07	0.06748	0.161349	0.964	0.936	0.953	0.725	0.938	1	0.953	0.918
rs540376246	2.4009E-10	-0.052065	0.00822	-0.052065	0.008221	4.72336E-10	0.91043	0.999476	7.66E-05	0.006869	0.028267	0.00225	0.00418	0.625341	0.773	0.788	1	0.993	0.974	0.995	0.985	0.836
rs12579759	2.4018E-10	-0.036282	0.00573	-0.039877	0.010591	4.72504E-10	0.01531	0.328851	0.002515	0.211263	0.068712	1.5E-05	8.5E-05	0.315987	0.951	0.859	0.992	0.732	0.945	1	0.995	0.566
rs12448022	2.4036E-10	0.0363295	0.00574	0.0381268	0.008212	4.07622E-10	0.00631	0.066973	0.012142	0.32415	0.145882	5.4E-07	0.05755	0.207643	0.968	0.933	0.94	0.652	0.918	1	0.953	0.901
rs197261	2.406E-10	-0.038126	0.00602	-0.038126	0.00602	4.73323E-10	0.59121	0.446528	0.000359	0.007263	0.00769	0.00065	0.35215	0.241079	0.862	0.88	1	0.994	0.988	0.999	0.887	0.91
rs2089058	2.4095E-10	-0.036275	0.00573	-0.039976	0.010648	4.73988E-10	0.01428	0.322615	0.002383	0.227132	0.066016	1.5E-05	8.5E-05	0.319168	0.952	0.858	0.992	0.708	0.946	1	0.995	0.561
rs493161	2.41E-10	-0.067801	0.01071	-0.070189	0.013229	4.74096E-10	0.43534	0.612705	0.002956	0.002994	0.262392	0.00027	0.08425	0.000372	0.888	0.866	0.996	0.997	0.905	1	0.955	0.985
rs35366602	2.4177E-10	-0.067582	0.01067	-0.07038	0.013501	4.75585E-10	0.39314	0.551946	0.003254	0.003355	0.227257	0.00026	0.11204	0.000274	0.895	0.875	0.995	0.997	0.916	1	0.948	0.986
rs200950	2.419E-10	-0.067581	0.01067	-0.070379	0.013501	4.75829E-10	0.39316	0.551942	0.003254	0.003356	0.227266	0.00026	0.11205	0.000274	0.895	0.875	0.995	0.997	0.916	1	0.948	0.986
rs200952	2.4196E-10	-0.067581	0.01067	-0.070379	0.013501	4.75949E-10	0.39316	0.551946	0.003255	0.003356	0.227268	0.00026	0.11205	0.000274	0.895	0.875	0.995	0.997	0.916	1	0.948	0.986
rs200989	2.4201E-10	-0.06758	0.01067	-0.070381	0.013503	4.76047E-10	0.39323	0.55194	0.003258	0.003344	0.227321	0.00026	0.11207	0.000274	0.895	0.875	0.995	0.997	0.916	1	0.948	0.986
rs200948	2.4214E-10	-0.067579	0.01067	-0.070378	0.013501	4.76281E-10	0.39321	0.551943	0.003255	0.003356	0.22728	0.00026	0.11205	0.000274	0.895	0.875	0.995	0.997	0.916	1	0.948	0.986
rs200981	2.4218E-10	-0.067579	0.01067	-0.070377	0.013501	4.76361E-10	0.39318	0.551943	0.003256	0.003356	0.227284	0.00026	0.11205	0.000274	0.895	0.875	0.995	0.997	0.916	1	0.948	0.986
rs200983	2.4241E-10	-0.067578	0.01067	-0.070376	0.013501	4.76803E-10	0.3932	0.551943	0.003256	0.003356	0.227298	0.00026	0.11206	0.000274	0.895	0.875	0.995	0.997	0.916	1	0.948	0.986
rs34295134	2.425E-10	-0.067577	0.01067	-0.070375	0.013501	4.76972E-10	0.39321	0.551941	0.003257	0.003356	0.227303	0.00026	0.11206	0.000274	0.895	0.875	0.995	0.997	0.916	1	0.948	0.986
rs145810861	2.4279E-10	0.0331474	0.00524	0.0336188	0.005864	4.77549E-10	0.11678	0.007846	0.001592	0.020884	0.041467	0.00015	0.91635	0.035084	0.932	0.97	0.998	0.984	0.972	1	0.719	0.958
rs3036133	2.4374E-10	-0.035684	0.00564	-0.035684	0.005637	4.79362E-10	0.70526	0.334893	0.000777	0.01125	0.014886	0.00029	0.40854	0.043269	0.851	0.898	0.999	0.991	0.984	1	0.878	0.955
rs12489887	2.4409E-10	-0.032145	0.00508	-0.032145	0.005078	4.53396E-10	0.94602	0.393839	0.011341	0.018415	0.28355	1.1E-07	0.03062	0.837081	0.742	0.847	0.956	0.977	0.851	1	0.958	0.709
rs200985	2.445E-10	-0.067928	0.01073	-0.071196	0.013976	4.80825E-10	0.35997	0.522966	0.002798	0.003375	0.234727	0.00032	0.12839	0.000208	0.899	0.879	0.996	0.997	0.915	1	0.944	0.987
rs483143	2.4464E-10	-0.067773	0.01071	-0.070169	0.013235	4.81095E-10	0.43566	0.612766	0.003001	0.002976	0.262658	0.00027	0.08441	0.000372	0.888	0.866	0.996	0.997	0.905	1	0.955	0.985
rs114541334	2.4464E-10	0.10772	0.01702	0.10772	0.017017	4.81112E-10	0.86508	0.844365	5.91E-05	0.012021	0.205043	0.00026	0.08347	0.190573	0.804	0.766	1	0.988	0.903	1	0.942	0.905
rs62302755	2.4486E-10	0.0389983	0.00616	0.0389983	0.006161	4.81527E-10	0.14295	0.494353	0.001084	0.001672	0.000989	0.00229	0.82063	0.110959	0.925	0.873	0.999	0.998	0.995	0.996	0.784	0.934
rs7981741	2.4582E-10	0.0321186	0.00507	0.0316883	0.006014	3.98745E-10	0.88791	0.584481	9.75E-08	0.178587	0.245811	0.00333	0.00793	0.403242	0.719	0.806	1	0.771	0.856	0.981	0.976	0.836
rs62302756	2.4592E-10	0.0389457	0.00615	0.0389457	0.006153	4.83576E-10	0.14598	0.501901	0.001104	0.001676	0.000907	0.00221	0.83597	0.115448	0.924	0.871	0.999	0.998	0.996	0.996	0.779	0.933
rs10891544	2.4626E-10	-0.032045	0.00506	-0.031645	0.006091	4.84231E-10	0.65964	0.012049	4.57E-05	0.006309	0.765133	0.00021	0.63072	0.053078	0.784	0.947	1	0.991	0.457	0.999	0.744	0.925
rs17535998	2.4711E-10	-0.046705	0.00738	-0.048279	0.009444	4.85854E-10	0.00182	0.326536	0.006508	0.123106	0.173477	6.7E-06	0.02255	0.267584	0.978	0.901	0.987	0.899	0.929	1	0.976	0.91
rs6097050	2.4726E-10	-0.034612	0.00547	-0.034618	0.005474	4.86154E-10	0.14682	0.792234	0.000552	0.009077	0.069452	0.00171	0.14581	0.000962	0.933	0.854	0.999	0.993	0.965	0.998	0.943	0.985
rs3870339	2.4735E-10	-0.039524	0.00625	-0.039861	0.007711	3.48172E-10	0.91247	0.121136	0.070273	5.9E-05	0.03971	2.8E-06	0.45691	0.83084	0.644	0.87	0.534	1	0.944	1	0.736	0.684
rs62302751	2.4851E-10	0.038993	0.00616	0.038993	0.006162	4.88556E-10	0.13424	0.486097	0.001072	0.001618	0.001037	0.00244	0.81292	0.112683	0.927	0.874	0.999	0.998	0.995	0.996	0.786	0.934
rs631131	2.4923E-10	-0.081842	0.01293	-0.07371	0.019486	4.8994E-10	0.41538	0.535007	3.45E-06	0.198614	0.002442	3.8E-05	0.85898	0.347857	0.454	0.484	1	0.573	0.983	1	0.527	0.747
rs9809237	2.4958E-10	-0.03954	0.00625	-0.039939	0.007713	3.46112E-10	0.95354	0.123136	0.073349	5.38E-05	0.03706	3.1E-06	0.45325	0.825197	0.651	0.87	0.519	1	0.946	1	0.736	0.684
rs63450962	2.4961E-10	-0.067514	0.01067	-0.070271	0.013463	4.90669E-10	0.38108	0.548832	0.003219	0.003823	0.225329	0.00025	0.11129	0.000271	0.897	0.876	0.996	0.997	0.917	1	0.949	0.986
rs12617557	2.4981E-10	0.0331248	0.00524	0.0336055	0.005873	4.91053E-10	0.11785	0.00789	0.001601	0.020898	0.040618	0.00015	0.913	0.034955	0.932	0.969	0.998	0.984	0.972	1	0.718	0.958
rs4532156	2.4997E-10	0.0336752	0.00532	0.0336752	0.005322	4.91358E-10	0.52788	0.58582	0.000133	0.036828	0.294606	8.6E-05	0.01704	0.093155	0.693	0.838	1	0.964	0.867	1	0.972	0.927
rs62302754	2.5098E-10	0.0389776	0.00616	0.0389776	0.006161	4.93312E-10	0.14281	0.4922	0.001088	0.001682	0.001003	0.00232	0.81962	0.111119	0.925	0.873	0.999	0.998	0.995	0.996	0.784	0.934
rs61859609	2.5101E-10	-0.046711	0.00738	-0.048295	0.009469	4.93364E-10	0.00173	0.314061	0.006287	0.130302	0.159581	6.8E-06	0.02454	0.286672	0.978	0.902	0.988	0.893	0.933	1	0.975	0.907
rs11283658	2.5113E-10	-0.032035	0.00506	-0.031626	0.006098	4.93603E-10	0.65195	0.01175	4.42E-05	0.007032	0.764662	0.0002	0.62643	0.053168	0.785	0.948	1	0.99	0.458	1	0.745	0.925
rs10000763	2.5123E-10	0.0390276	0.00617	0.0393066	0.006937	4.93798E-10	0.97222	0.278175	0.011263	0.003112	0.430871	1.4E-05	0.00059	0.663223	0.782	0.884	0.967	0.996	0.821	1	0.992	0.822
rs13125809	2.5123E-10	0.0390276	0.00617	0.0393066	0.006937	4.93798E-10	0.97222	0.278175	0.011263	0.003112	0.430871	1.4E-05	0.00059	0.663223	0.782	0.884	0.967	0.996	0.821	1	0.992	0.822

Table S3

rs57339789	2.5123E-10	0.0390276	0.00617	0.0393066	0.006937	4.93798E-10	0.97222	0.278175	0.011263	0.003112	0.430871	1.4E-05	0.00059	0.663223	0.782	0.884	0.967	0.996	0.821	1	0.992	0.822
rs58220776	2.5123E-10	0.0390276	0.00617	0.0393066	0.006937	4.93798E-10	0.97222	0.278175	0.011263	0.003112	0.430871	1.4E-05	0.00059	0.663223	0.782	0.884	0.967	0.996	0.821	1	0.992	0.822
rs71655221	2.5123E-10	0.0390276	0.00617	0.0393066	0.006937	4.93798E-10	0.97222	0.278175	0.011263	0.003112	0.430871	1.4E-05	0.00059	0.663223	0.782	0.884	0.967	0.996	0.821	1	0.992	0.822
rs75809309	2.5123E-10	0.0390276	0.00617	0.0393066	0.006937	4.93798E-10	0.97222	0.278175	0.011263	0.003112	0.430871	1.4E-05	0.00059	0.663223	0.782	0.884	0.967	0.996	0.821	1	0.992	0.822
rs7696728	2.5135E-10	0.0390271	0.00617	0.0393069	0.006938	4.94017E-10	0.972	0.278377	0.011268	0.003111	0.431023	1.4E-05	0.00059	0.662775	0.782	0.884	0.967	0.996	0.821	1	0.992	0.822
rs7656385	2.5136E-10	0.0390271	0.00617	0.0393068	0.006938	4.9404E-10	0.97201	0.278377	0.011268	0.003111	0.431023	1.4E-05	0.00059	0.662775	0.782	0.884	0.967	0.996	0.821	1	0.992	0.822
rs12446005	2.5142E-10	0.0363777	0.00575	0.037606	0.007555	4.56854E-10	0.01134	0.070644	0.012349	0.27467	0.11442	8.1E-07	0.06726	0.162469	0.964	0.936	0.951	0.722	0.937	1	0.953	0.917
rs7485265	2.5238E-10	-0.036236	0.00573	-0.039925	0.010656	4.95995E-10	0.01433	0.324299	0.00242	0.229888	0.066938	1.5E-05	8.5E-05	0.318409	0.952	0.858	0.992	0.705	0.945	1	0.995	0.56
rs12579742	2.5259E-10	-0.036238	0.00573	-0.039836	0.010592	4.96406E-10	0.01537	0.328588	0.002544	0.212844	0.06907	1.5E-05	8.5E-05	0.315649	0.951	0.859	0.991	0.731	0.945	1	0.995	0.565
rs9835977	2.5288E-10	0.0336022	0.00531	0.0336022	0.005312	4.96974E-10	0.57514	0.60211	0.0001	0.038363	0.293882	0.00012	0.01843	0.076739	0.706	0.837	1	0.963	0.869	1	0.972	0.933
rs28443175	2.5313E-10	0.0390208	0.00617	0.0392981	0.006933	4.97445E-10	0.97173	0.278159	0.011254	0.003148	0.430625	1.4E-05	0.00059	0.66316	0.782	0.884	0.967	0.996	0.821	1	0.992	0.822
rs10003696	2.5369E-10	0.0390184	0.00617	0.0392958	0.006934	4.98523E-10	0.97209	0.278175	0.011263	0.00315	0.430871	1.4E-05	0.00059	0.663223	0.782	0.884	0.967	0.996	0.821	1	0.992	0.822
rs7083785	2.537E-10	-0.046697	0.00738	-0.048281	0.00947	4.98537E-10	0.00173	0.31501	0.00631	0.130298	0.160291	6.8E-06	0.02453	0.285943	0.978	0.902	0.988	0.893	0.933	1	0.975	0.907
rs1154992	2.5377E-10	-0.035743	0.00565	-0.035743	0.005651	4.98674E-10	0.32831	0.168379	0.012258	0.000413	0.347426	0.00012	0.0327	0.136369	0.901	0.924	0.975	0.999	0.88	1	0.971	0.933
rs75070471	2.5451E-10	0.0718972	0.01137	0.0692495	0.014568	4.03149E-10	0.11957	0.363691	9.88E-06	0.845336	0.352402	5.3E-06	0.03482	0.823888	0.853	0.768	1	0.124	0.703	1	0.932	0.64
rs12193097	2.5497E-10	-0.032907	0.0052	-0.032907	0.005204	5.00981E-10	0.91869	0.436365	0.003132	0.000188	0.245777	0.00015	0.28766	0.072391	0.806	0.871	0.995	0.999	0.895	1	0.892	0.939
rs12577640	2.5536E-10	0.034533	0.00546	0.0354691	0.008822	3.78928E-10	0.9434	0.017047	0.000505	0.848578	0.008443	2E-06	0.42135	0.03312	0.667	0.936	0.998	0.14	0.981	1	0.751	0.928
rs1892252	2.5559E-10	0.0577925	0.00914	0.0617899	0.012916	2.82298E-10	0.14358	0.624423	7.65E-05	4.63E-06	0.143659	0.0464	0.53673	0.030386	0.896	0.797	1	1	0.898	0.663	0.768	0.945
rs2702544	2.5578E-10	-0.035736	0.00565	-0.035736	0.005651	5.0255E-10	0.32719	0.168125	0.012287	0.000416	0.347338	0.00012	0.03278	0.136413	0.901	0.924	0.975	0.999	0.88	1	0.971	0.933
rs146724653	2.5614E-10	0.114142	0.01805	0.114142	0.018051	5.03237E-10	0.49615	0.349396	0.000363	0.021026	0.005025	0.00057	0.12746	0.546579	0.877	0.896	1	0.984	0.991	0.999	0.941	0.871
rs9873072	2.5648E-10	-0.032106	0.00508	-0.032106	0.005078	4.75895E-10	0.94291	0.393797	0.011348	0.01907	0.283846	1.1E-07	0.03067	0.836977	0.742	0.847	0.956	0.976	0.851	1	0.958	0.709
rs56234157	2.5653E-10	-0.032105	0.00508	-0.032105	0.005078	4.75943E-10	0.94291	0.393794	0.011355	0.019069	0.283851	1.1E-07	0.03067	0.836975	0.742	0.847	0.956	0.976	0.851	1	0.958	0.709
rs12186073	2.5668E-10	-0.032105	0.00508	-0.032105	0.005078	4.76188E-10	0.94288	0.393794	0.011357	0.019073	0.283864	1.1E-07	0.03067	0.836968	0.742	0.847	0.956	0.976	0.851	1	0.958	0.709
rs13313937	2.5678E-10	-0.032105	0.00508	-0.032105	0.005078	4.76013E-10	0.94275	0.3938	0.011383	0.01912	0.284046	1.1E-07	0.0307	0.836836	0.741	0.847	0.956	0.976	0.851	1	0.958	0.709
rs10004008	2.5703E-10	0.0390331	0.00617	0.0392989	0.006929	5.04948E-10	0.97994	0.282248	0.011167	0.003164	0.440452	1.4E-05	0.00061	0.650273	0.78	0.883	0.967	0.996	0.817	1	0.992	0.824
rs4888582	2.5762E-10	0.036996	0.00585	0.036996	0.005852	5.06081E-10	0.90841	0.704943	2.27E-05	0.006757	0.684032	0.00131	0.10378	0.005996	0.788	0.818	1	0.992	0.731	0.997	0.933	0.969
rs6836122	2.5763E-10	0.0387411	0.00613	0.0392289	0.007149	5.06108E-10	0.98546	0.200519	0.009487	0.004036	0.365985	2.3E-05	0.00041	0.698182	0.783	0.902	0.975	0.995	0.849	1	0.993	0.823
rs4855858	2.5826E-10	-0.039507	0.00625	-0.039899	0.007694	3.55989E-10	0.9539	0.127127	0.074481	5.29E-05	0.038846	3.1E-06	0.44744	0.819177	0.65	0.867	0.514	1	0.944	1	0.737	0.685
rs6783003	2.5843E-10	0.0395096	0.00625	0.0399026	0.007696	3.56018E-10	0.95444	0.12712	0.0745	5.29E-05	0.038843	3.1E-06	0.44742	0.819137	0.65	0.867	0.514	1	0.944	1	0.737	0.685
rs28666383	2.5859E-10	0.0387372	0.00613	0.0392243	0.00715	5.07958E-10	0.9845	0.200435	0.009481	0.004046	0.366426	2.3E-05	0.00041	0.698638	0.782	0.902	0.975	0.995	0.849	1	0.993	0.822
rs56231820	2.5866E-10	-0.032099	0.00508	-0.032099	0.005078	4.79843E-10	0.94401	0.393815	0.011332	0.0193	0.283671	1.1E-07	0.03064	0.837063	0.742	0.847	0.956	0.976	0.851	1	0.958	0.709
rs9855433	2.587E-10	-0.032108	0.00508	-0.032108	0.005079	4.75225E-10	0.94458	0.38087	0.012124	0.0186	0.283893	1E-07	0.03014	0.821338	0.741	0.848	0.952	0.976	0.85	1	0.958	0.705
rs7651372	2.5928E-10	0.0395035	0.00625	0.0398936	0.007691	3.57591E-10	0.95354	0.127126	0.074478	5.32E-05	0.038845	3.1E-06	0.44743	0.819175	0.65	0.868	0.514	1	0.944	1	0.737	0.685
rs7374731	2.5931E-10	-0.039503	0.00625	-0.039893	0.007691	3.57639E-10	0.95353	0.127127	0.074481	5.32E-05	0.038846	3.1E-06	0.44744	0.819177	0.65	0.868	0.514	1	0.944	1	0.737	0.685
rs75206158	2.5938E-10	0.0335902	0.00531	0.0335902	0.005314	5.09476E-10	0.5747	0.604929	0.000106	0.038134	0.295605	0.00012	0.01815	0.077698	0.706	0.837	1	0.963	0.869	1	0.972	0.932
rs10642047	2.5954E-10	0.0335812	0.00531	0.0335812	0.005312	5.09774E-10	0.57944	0.608014	0.000102	0.037367	0.301864	0.00012	0.01757	0.077004	0.707	0.836	1	0.964	0.866	1	0.972	0.932
rs8044868	2.5954E-10	0.0319428	0.00505	0.0319428	0.005053	5.08314E-10	0.92995	0.794202	0.002563	0.021253	0.372326	9.2E-08	0.34943	0.488408	0.74	0.694	0.992	0.97	0.799	1	0.829	0.81
rs147710324	2.5959E-10	-0.088958	0.01407	-0.089684	0.015595	5.09869E-10	0.00742	0.684189	0.000227	0.043952	0.109825	0.00039	0.0086	0.453675	0.965	0.755	1	0.964	0.945	0.999	0.981	0.875
rs148930185	2.5984E-10	0.0375805	0.00595	0.0375805	0.005945	5.10364E-10	0.87169	0.077374	0.003341	0.040638	0.225999	1.5E-06	0.23424	0.241397	0.815	0.934	0.994	0.966	0.903	1	0.907	0.903
rs61859611	2.5996E-10	-0.046666	0.00738	-0.048254	0.009473	5.10596E-10	0.00172	0.317477	0.006358	0.130239	0.161296	6.9E-06	0.02452	0.284437	0.978	0.902	0.988	0.893	0.932	1	0.975	0.907
rs7912022	2.6048E-10	-0.046663	0.00738	-0.048251	0.009472	5.11588E-10	0.00172	0.317149	0.006363	0.130214	0.161368	6.9E-06	0.02454	0.284438	0.978	0.902	0.988	0.893	0.932	1	0.975	0.907
rs1009051	2.6101E-10	-0.039497	0.00625	-0.039886	0.007686	3.60287E-10	0.95354	0.127121	0.074502	5.38E-05	0.038844	3.1E-06	0.44743	0.819138	0.65	0.868	0.514	1	0.944	1	0.737	0.685
rs67243795	2.6122E-10	0.0387272	0.00613	0.0392182	0.007157	5.13008E-10	0.98379	0.200704	0.009482	0.004049	0.367139	2.3E-05	0.0004	0.698358	0.782	0.902	0.975	0.995	0.849	1	0.993	0.822
rs7107223	2.6203E-10	-0.031998	0.00506	-0.031595	0.006086	5.14577E-10	0.65442	0.011911	4.51E-05	0.007018	0.766029	0.00021	0.62894	0.05313	0.785	0.947	1	0.99	0.459	0.999	0.745	0.925
rs62302752	2.6238E-10	0.0389395	0.00616	0.0389395	0.006162	5.15234E-10	0.13664	0.48562	0.001071	0.001744	0.001028	0.00243	0.81375	0.112395	0.926	0.874	0.999	0.998	0.995	0.996	0.786	0.934
rs59523644	2.635E-10	-0.036193	0.00573	-0.039713	0.010581	5.17386E-10	0.01179	0.295817	0.002444	0.188321	0.070725	1.8E-05	0.00013	0.261877	0.955	0.868	0.992	0.765	0.945	1	0.995	0.551
rs62302749	2.6362E-10	0.0388892	0.00615	0.0388892	0.006155	5.17625E-10	0.13048	0.491115	0.001094	0.00175	0.00096	0.00238	0.82733	0.118071	0.927	0.873	0.999	0.998	0.995	0.996	0.782	0.932
rs11936559	2.6414E-10	0.0387173	0.00613	0.0391949	0.007158	5.18624E-10	0.97581	0.201732	0.009305	0.00403	0.374855	2.3E-05	0.00041	0.700662	0.78	0.901	0.976	0.995	0.845	1	0.993	0.821
rs62302747	2.6429E-10	0.0388868	0.00615	0.0388868	0.006155	5.18918E-10	0.13041	0.491459	0.001094	0.001754	0.000962	0.00238	0.82668	0.11802	0.927	0.873	0.999	0.998	0.995	0.996	0.783	0.932
rs3844425	2.6455E-10	0.0319287	0.00505	0.0319287	0.005053	5.19409E-10	0.73471	0.457418	0.001986	0.004441	0.431565	3.4E-07	0.35867	0.807405	0.747	0.591	0.993	0.992	0.75	1	0.806	0.726
rs11214589	2.6493E-10	-0.032101	0.00508	-0.03156	0.006422	5.20142E-10	0.66048	0.010397	3.46E-05	0.004354	0.750661	0.0003	0.75141	0.063544	0.775	0.948	1	0.993	0.44	0.999	0.698	0.917
rs4681698	2.6575E-10	0.0329563	0.00522	0.0329563	0.005217	5.2172E-10	0.42993	0.904929	0.000489	0.042749	0.077842	4.4E-05	0.10955	0.103436	0.878	0.791	0.999	0.965	0.955	1	0.942	0.933
rs7083909	2.6654E-10	-0.046641	0.00738	-0.048224	0.00948	5.23236E-10	0.00175	0.315669	0.006311	0.134319	0.160595	6.8E-06	0.02458	0.285779	0.978	0.901	0.988	0.889	0.932	1	0.975	0.907
rs751442676	2.6655E-10	0.0389849	0.00617	0.039271	0.007011	5.23263E-10	0.98202	0.278102	0.011101	0.003263	0.429404	1.4E-05	0.00059	0.669113	0.774	0.883	0.968	0.996	0.82	1	0.992	0.82
rs4682745	2.6667E-10	-0.032076	0.00508	-0.032076	0.005078	4.91675E-10	0.94272	0.393435	0.01172	0.019117	0.287829	1E-07	0.03119	0.836679	0.741	0.846	0.954	0.976	0.848	1	0.958	0.708

Table S3

rs7914213	2.6706E-10	-0.04665	0.00739	-0.048018	0.009282	5.24243E-10	0.0021	0.312365	0.00544	0.143547	0.160942	7.5E-06	0.0227	0.290862	0.977	0.901	0.99	0.879	0.932	1	0.975	0.905
rs1806579	2.6712E-10	-0.032074	0.00508	-0.032074	0.005078	4.92483E-10	0.94251	0.393435	0.011719	0.019138	0.287827	1E-07	0.03119	0.836684	0.741	0.846	0.954	0.976	0.848	1	0.958	0.708
rs9812663	2.6787E-10	-0.032072	0.00508	-0.032072	0.005078	4.93402E-10	0.94352	0.393436	0.01174	0.019298	0.287877	1E-07	0.0312	0.836606	0.741	0.846	0.954	0.976	0.848	1	0.958	0.708
rs62261183	2.6825E-10	0.0394691	0.00625	0.039861	0.007718	3.68081E-10	0.94932	0.127687	0.074977	5.05E-05	0.039836	3.2E-06	0.44901	0.820576	0.648	0.867	0.512	1	0.943	1	0.735	0.683
rs146038204	2.6869E-10	-0.070828	0.01121	-0.076271	0.01625	4.76005E-10	0.14921	0.236613	0.000596	0.642525	0.00027	6.9E-05	0.06672	0.109638	0.894	0.87	0.998	0.279	0.997	1	0.939	0.91
rs9827285	2.6886E-10	0.0335524	0.00531	0.0335524	0.005312	5.27693E-10	0.58687	0.607218	0.000102	0.038542	0.30063	0.00013	0.01774	0.076938	0.709	0.837	1	0.963	0.867	1	0.972	0.932
rs62302753	2.6998E-10	0.0388652	0.00615	0.0388652	0.006154	5.29848E-10	0.13931	0.495923	0.00109	0.00183	0.000932	0.00232	0.83207	0.116035	0.925	0.872	0.999	0.998	0.995	0.996	0.781	0.933
rs1009543	2.7043E-10	0.0324542	0.00514	0.0360997	0.008278	3.67906E-10	0.27802	0.000568	0.090754	0.03088	0.058523	7.9E-07	0.10018	0.283868	0.876	0.982	0.559	0.949	0.953	1	0.932	0.875
rs8061728	2.7045E-10	-0.035511	0.00562	-0.034172	0.006975	5.04555E-10	0.34656	0.369784	1.71E-07	0.00394	0.462376	0.00384	0.84596	0.135709	0.556	0.816	1	0.992	0.737	0.979	0.658	0.878
rs9847248	2.7052E-10	0.0335465	0.00531	0.0335465	0.005312	5.30887E-10	0.5906	0.605251	0.000103	0.037851	0.304192	0.00013	0.01809	0.076955	0.71	0.837	1	0.964	0.866	1	0.972	0.932
rs877137	2.7149E-10	-0.031969	0.00506	-0.031564	0.006084	5.32758E-10	0.65532	0.012059	4.56E-05	0.00706	0.764207	0.00021	0.63079	0.053041	0.785	0.947	1	0.99	0.459	0.999	0.744	0.925
rs1514339	2.719E-10	-0.034521	0.00547	-0.034521	0.005467	5.33547E-10	0.5223	0.76163	0.000123	0.009833	0.06345	0.00111	0.11008	0.105186	0.874	0.845	1	0.992	0.964	0.998	0.946	0.938
rs201841492	2.7212E-10	0.0389525	0.00617	0.0392445	0.007015	5.33965E-10	0.98154	0.278175	0.011263	0.003232	0.430871	1.4E-05	0.00059	0.663223	0.774	0.883	0.967	0.996	0.82	1	0.992	0.821
rs1819881	2.7223E-10	0.0355433	0.00563	0.0355433	0.005629	5.34166E-10	0.95348	0.501008	1.64E-05	0.008719	0.936975	0.00024	0.02692	0.567991	0.728	0.807	1	0.987	0.524	0.999	0.956	0.791
rs7622860	2.7229E-10	0.0335418	0.00531	0.0335418	0.005312	5.34292E-10	0.58661	0.607098	0.000103	0.038606	0.300883	0.00013	0.0178	0.076987	0.709	0.837	1	0.963	0.867	1	0.972	0.932
rs9998170	2.7262E-10	0.0386813	0.00613	0.0391632	0.007141	5.34927E-10	0.9844	0.202302	0.009541	0.004016	0.3703	2.4E-05	0.00041	0.699773	0.782	0.901	0.975	0.995	0.847	1	0.993	0.822
rs7107215	2.7307E-10	-0.038968	0.00617	-0.038968	0.006172	5.35787E-10	0.01563	0.587994	0.000125	0.234497	0.307172	3.2E-05	0.24997	0.038126	0.954	0.834	1	0.752	0.858	1	0.889	0.946
rs4432663	2.7311E-10	0.0335393	0.00531	0.0335393	0.005312	5.35871E-10	0.59043	0.606862	0.000103	0.03801	0.303575	0.00013	0.01806	0.076798	0.71	0.837	1	0.964	0.866	1	0.972	0.933
rs9867083	2.7418E-10	0.0335354	0.00531	0.0335354	0.005312	5.37912E-10	0.59039	0.60563	0.000103	0.038049	0.304242	0.00013	0.01811	0.076972	0.71	0.837	1	0.964	0.866	1	0.972	0.932
rs4672332	2.7455E-10	0.0327599	0.00519	0.0364349	0.008073	5.38623E-10	0.10287	0.015138	0.03749	0.00155	0.000637	0.00011	0.1813	0.543353	0.924	0.958	0.838	0.998	0.996	1	0.913	0.673
rs2042560	2.7544E-10	0.0338106	0.00536	0.0361756	0.006901	5.40349E-10	0.06868	0.017201	0.013682	0.002701	0.003124	0.00046	0.05552	0.728737	0.946	0.964	0.97	0.997	0.993	0.999	0.964	0.765
rs7139717	2.7588E-10	-0.032021	0.00507	-0.031589	0.006021	4.42672E-10	0.91064	0.587944	1E-07	0.188183	0.241104	0.00343	0.00795	0.416705	0.721	0.804	1	0.759	0.856	0.98	0.975	0.831
rs12331102	2.7681E-10	0.038667	0.00613	0.0391412	0.007124	5.4298E-10	0.9927	0.202464	0.009536	0.004111	0.37104	2.4E-05	0.00041	0.699741	0.784	0.901	0.975	0.995	0.847	1	0.993	0.822
rs113698514	2.7713E-10	0.0386662	0.00613	0.0391397	0.007122	5.43595E-10	0.9926	0.202416	0.009542	0.004122	0.370505	2.4E-05	0.00041	0.699463	0.784	0.901	0.975	0.995	0.848	1	0.993	0.822
rs79848337	2.7738E-10	0.072025	0.01141	0.0697307	0.015063	4.21918E-10	0.17351	0.320838	7.22E-06	0.928728	0.224701	1.2E-05	0.02005	0.828296	0.838	0.79	1	0.104	0.795	1	0.951	0.65
rs4859282	2.779E-10	0.0386629	0.00613	0.0391383	0.007126	5.45059E-10	0.99289	0.202432	0.009541	0.004118	0.371377	2.4E-05	0.00041	0.699839	0.784	0.901	0.975	0.995	0.847	1	0.993	0.822
rs11648483	2.7912E-10	0.0361962	0.00574	0.0379751	0.008172	4.66089E-10	0.00694	0.067323	0.013536	0.324903	0.134343	5.5E-07	0.06096	0.205491	0.967	0.932	0.932	0.652	0.922	1	0.951	0.9
rs34905263	2.7923E-10	-0.054617	0.00866	-0.054617	0.008656	5.4762E-10	0.35431	0.152167	0.00048	7.78E-05	0.118925	0.01219	0.05933	0.257578	0.9	0.929	0.999	1	0.948	0.968	0.963	0.915
rs115630006	2.7961E-10	0.103791	0.01645	0.103791	0.01645	5.48357E-10	0.78746	0.546805	1.09E-05	0.012632	0.321541	0.00061	0.04806	0.139593	0.722	0.685	1	0.986	0.846	0.999	0.949	0.904
rs34590006	2.8017E-10	0.0579607	0.00919	0.0625404	0.013814	3.02751E-10	0.14325	0.727338	8.57E-05	4.46E-06	0.195824	0.04428	0.53006	0.013445	0.894	0.776	1	1	0.869	0.675	0.768	0.957
rs369697606	2.8074E-10	0.0361935	0.00574	0.0379593	0.008159	4.6995E-10	0.00696	0.067485	0.013604	0.322776	0.13428	5.6E-07	0.06119	0.205553	0.967	0.932	0.932	0.655	0.923	1	0.951	0.901
rs12968035	2.809E-10	-0.035508	0.00563	-0.035508	0.005628	5.5083E-10	0.96777	0.50175	1.66E-05	0.008198	0.872501	0.00025	0.02097	0.564501	0.719	0.803	1	0.987	0.491	0.999	0.96	0.787
rs72711012	2.82E-10	-0.035597	0.00564	-0.035597	0.005643	5.52931E-10	0.54944	0.628327	1.7E-05	0.013247	0.104747	0.00557	0.012	0.029846	0.722	0.848	1	0.988	0.944	0.986	0.979	0.956
rs6848780	2.8241E-10	0.0386495	0.00613	0.0391199	0.007113	5.53723E-10	0.97547	0.198059	0.008752	0.004004	0.383935	2.7E-05	0.00041	0.686551	0.781	0.902	0.978	0.995	0.843	1	0.993	0.824
rs1610315	2.8247E-10	0.0437056	0.00693	0.0437056	0.006928	5.53832E-10	0.42346	0.911604	0.000406	0.005113	0.002134	0.00049	0.4514	0.064867	0.659	0.783	0.999	0.994	0.992	0.999	0.833	0.933
rs7185575	2.828E-10	0.0361324	0.00573	0.0374008	0.00772	4.9839E-10	0.00894	0.084686	0.011499	0.311957	0.140883	6.8E-07	0.05838	0.190136	0.965	0.928	0.95	0.675	0.923	1	0.954	0.906
rs6835532	2.8303E-10	0.03897	0.00618	0.0391812	0.006724	5.54925E-10	0.98737	0.291858	0.012039	0.003195	0.389948	1.5E-05	0.00067	0.64014	0.782	0.883	0.966	0.996	0.837	1	0.992	0.828
rs2695238	2.8448E-10	0.0319655	0.00507	0.0314974	0.006988	5.57703E-10	0.0071	0.128741	0.003501	0.030608	0.08011	1.6E-06	0.45582	0.610245	0.96	0.903	0.99	0.965	0.94	1	0.488	0.809
rs11933862	2.8555E-10	0.0389538	0.00618	0.0392239	0.006875	5.59761E-10	0.94423	0.283784	0.011708	0.003035	0.432924	1.6E-05	0.0006	0.655117	0.787	0.884	0.966	0.996	0.821	1	0.992	0.824
rs6834819	2.8569E-10	0.0389555	0.00618	0.039224	0.006869	5.60016E-10	0.94288	0.28492	0.011676	0.003027	0.432805	1.7E-05	0.0006	0.654576	0.787	0.884	0.966	0.996	0.822	1	0.992	0.824
rs4364183	2.8572E-10	0.0335044	0.00531	0.0335044	0.005313	5.60078E-10	0.64302	0.620604	0.000121	0.040251	0.306452	0.00011	0.0179	0.073906	0.722	0.836	1	0.962	0.866	1	0.972	0.934
rs12635457	2.866E-10	0.0336803	0.00534	0.0336344	0.005509	5.6176E-10	0.27443	0.73963	0.001151	0.257948	0.172623	2.8E-06	0.01958	0.033502	0.873	0.71	0.997	0.702	0.899	1	0.968	0.944
rs1341335	2.8668E-10	0.031961	0.00507	0.0314917	0.006978	5.61912E-10	0.00719	0.129113	0.003515	0.030451	0.080228	1.6E-06	0.45574	0.610324	0.96	0.903	0.99	0.965	0.94	1	0.488	0.809
rs6817229	2.867E-10	0.0389517	0.00618	0.0392197	0.00687	5.61959E-10	0.94377	0.284739	0.011677	0.003034	0.433481	1.6E-05	0.0006	0.654814	0.787	0.884	0.966	0.996	0.821	1	0.992	0.824
rs2136875	2.8675E-10	0.0319606	0.00507	0.0314979	0.006994	5.62065E-10	0.00772	0.13098	0.003407	0.029581	0.072701	1.8E-06	0.42808	0.593407	0.959	0.902	0.991	0.966	0.944	1	0.475	0.811
rs2895226	2.8697E-10	0.0325804	0.00517	0.0321832	0.005508	4.36864E-10	0.85065	0.220596	0.00135	0.387288	0.386274	4.4E-08	0.07	0.436588	0.704	0.838	0.992	0.473	0.74	1	0.915	0.784
rs13408168	2.8705E-10	0.0386147	0.00612	0.0386147	0.006124	5.62626E-10	0.11462	0.30154	0.009237	0.000865	0.008999	0.00017	0.89967	0.058249	0.926	0.893	0.979	0.999	0.987	1	0.701	0.945
rs74011406	2.8705E-10	0.0552339	0.00876	0.0517935	0.01215	5.62636E-10	0.94189	0.169476	0.002403	7.7E-05	0.516995	9.3E-06	0.39149	0.143675	0.686	0.849	0.99	1	0.692	1	0.776	0.409
rs2570368	2.8766E-10	0.0319579	0.00507	0.0314887	0.00699	5.63812E-10	0.00708	0.129184	0.003516	0.030697	0.080334	1.6E-06	0.45559	0.609904	0.96	0.903	0.99	0.965	0.94	1	0.488	0.809
rs4955419	2.877E-10	-0.033791	0.00536	-0.033791	0.005359	5.63884E-10	0.57325	0.061086	0.000884	0.005592	0.027444	1.5E-05	0.89494	0.802394	0.649	0.915	0.998	0.992	0.965	1	0.677	0.68
rs9997913	2.8816E-10	0.0386316	0.00613	0.0391132	0.00713	5.64771E-10	0.99832	0.197774	0.009062	0.004448	0.37772	2.6E-05	0.00039	0.691696	0.785	0.902	0.977	0.995	0.846	1	0.993	0.824
rs34028112	2.8843E-10	0.0362076	0.00574	0.0381021	0.008067	5.0042E-10	0.00661	0.062497	0.016201	0.275761	0.111705	7.6E-07	0.07068	0.179344	0.969	0.937	0.927	0.714	0.936	1	0.95	0.911
rs1341334	2.8902E-10	0.0319534	0.00507	0.0314837	0.006985	5.66415E-10	0.00713	0.129101	0.003514	0.030794	0.080198	1.6E-06	0.45575	0.610322	0.96	0.903	0.99	0.965	0.94	1	0.488	0.809
rs9860055	2.8924E-10	0.0393941	0.00625	0.0397381	0.007461	4.12478E-10	0.98307	0.132646	0.071991	5.86E-05	0.040844	3.4E-06	0.45966	0.802179	0.665	0.868	0.541	1	0.944	1	0.74	0.696
rs7613491	2.9003E-10	0.0393905	0.00625	0.0397349	0.007468	4.13547E-10	0.98076	0.132312	0.07202	5.87E-05	0.040739	3.4E-06	0.46015	0.802612	0.664	0.868	0.541	1	0.944	1	0.74	0.696

Table S3

rs35242305	2.9101E-10	0.0319484	0.00507	0.0314905	0.006985	5.70239E-10	0.00707	0.128431	0.003567	0.030222	0.080096	1.7E-06	0.45654	0.609659	0.96	0.903	0.99	0.965	0.94	1	0.489	0.809
rs2695239	2.9139E-10	0.0319472	0.00507	0.0314767	0.006985	5.70958E-10	0.00714	0.129149	0.003517	0.030948	0.080195	1.6E-06	0.4557	0.610366	0.96	0.903	0.99	0.964	0.94	1	0.488	0.809
rs61925040	2.9169E-10	-0.036106	0.00573	-0.039711	0.010599	5.7153E-10	0.01465	0.327051	0.002542	0.229591	0.068016	1.5E-05	9.5E-05	0.317443	0.951	0.857	0.991	0.708	0.945	1	0.995	0.562
rs6499564	2.9229E-10	0.0318463	0.00505	0.0318463	0.005053	5.72694E-10	0.78704	0.445573	0.001781	0.004959	0.439459	3.9E-07	0.33576	0.795903	0.737	0.587	0.994	0.991	0.746	1	0.812	0.727
rs4912974	2.9369E-10	0.0325617	0.00517	0.0321298	0.005539	4.44074E-10	0.85159	0.220656	0.001348	0.392835	0.386072	4.4E-08	0.07002	0.436839	0.702	0.837	0.992	0.467	0.739	1	0.915	0.783
rs10078316	2.9375E-10	0.0325614	0.00517	0.0321312	0.005538	4.44255E-10	0.85167	0.220681	0.001349	0.392687	0.385862	4.4E-08	0.07008	0.436862	0.702	0.837	0.992	0.467	0.739	1	0.915	0.783
rs9840153	2.9451E-10	-0.042252	0.0067	-0.044893	0.009139	5.7694E-10	0.30787	0.581307	3.28E-05	0.412548	0.00123	0.00219	0.00506	0.116403	0.87	0.823	1	0.544	0.994	0.991	0.983	0.916
rs12808482	2.9457E-10	-0.031858	0.00506	-0.031858	0.005056	5.77063E-10	0.69621	0.102101	0.000871	0.000497	0.421995	0.00015	0.89061	0.037528	0.807	0.912	0.998	0.999	0.808	1	0.651	0.941
rs7649834	2.952E-10	-0.031995	0.00508	-0.031995	0.005078	5.44668E-10	0.93994	0.395172	0.011871	0.01932	0.290215	1.1E-07	0.03143	0.835382	0.74	0.846	0.954	0.976	0.847	1	0.957	0.708
rs4712972	2.9525E-10	0.0578278	0.00918	0.0625052	0.013772	3.16195E-10	0.13658	0.720309	8.71E-05	4.75E-06	0.188534	0.04655	0.51598	0.013927	0.896	0.776	1	1	0.872	0.66	0.771	0.957
rs7647973	2.9614E-10	0.03937	0.00625	0.0397122	0.007461	4.22546E-10	0.98018	0.132681	0.072187	5.93E-05	0.040894	3.4E-06	0.45999	0.80276	0.664	0.868	0.541	1	0.944	1	0.74	0.696
rs63071961	2.9622E-10	-0.042245	0.0067	-0.044863	0.009127	5.80228E-10	0.31585	0.581307	3.28E-05	0.410635	0.00123	0.00219	0.00506	0.116403	0.868	0.823	1	0.546	0.994	0.991	0.983	0.916
rs142095221	2.9667E-10	-0.039404	0.00625	-0.039785	0.008086	3.82262E-10	0.80221	0.158171	0.084697	7.32E-05	0.026414	2.3E-06	0.416	0.833197	0.591	0.845	0.441	1	0.953	1	0.728	0.658
rs10193842	2.9669E-10	0.0332329	0.00527	0.0332532	0.005325	5.81134E-10	0.47319	0.009623	0.00052	0.027551	0.275212	0.00018	0.58313	0.00759	0.878	0.967	0.999	0.979	0.897	1	0.839	0.973
rs188015	2.9679E-10	-0.065842	0.01045	-0.068435	0.01329	5.81316E-10	0.55448	0.533073	0.008285	0.001081	0.174215	0.00013	0.23675	0.000451	0.87	0.872	0.984	0.998	0.928	1	0.915	0.984
rs9842965	2.9716E-10	-0.042256	0.00671	-0.045155	0.009281	5.82031E-10	0.30393	0.577185	3.14E-05	0.424261	0.001301	0.00237	0.00571	0.081125	0.87	0.823	1	0.533	0.994	0.989	0.982	0.927
rs12986980	2.9794E-10	-0.035147	0.00558	-0.035147	0.005579	5.81537E-10	0.35376	0.043808	1.4E-06	0.201143	0.065812	0.00388	0.06596	0.467067	0.883	0.945	1	0.807	0.958	0.989	0.953	0.865
rs58684404	2.9797E-10	0.0385996	0.00613	0.0390366	0.007042	5.83576E-10	0.99986	0.196218	0.008815	0.004451	0.381717	2.7E-05	0.00042	0.686459	0.786	0.903	0.978	0.995	0.845	1	0.993	0.825
rs4856383	2.98E-10	-0.042241	0.00671	-0.044883	0.009144	5.83642E-10	0.31031	0.581307	3.28E-05	0.414288	0.00123	0.00219	0.00506	0.116403	0.869	0.823	1	0.543	0.994	0.991	0.983	0.916
rs62143649	2.983E-10	0.0328495	0.00521	0.035595	0.006744	5.84213E-10	0.06701	0.030769	0.024017	0.00058	0.0012	0.00092	0.13089	0.833256	0.947	0.958	0.937	0.999	0.995	0.998	0.943	0.834
rs401763	2.9836E-10	-0.067055	0.01064	-0.070041	0.013746	5.84326E-10	0.36832	0.552708	0.004216	0.00243	0.241296	0.00023	0.16222	0.000263	0.896	0.873	0.994	0.997	0.911	1	0.935	0.986
rs558717779	2.9898E-10	-0.051698	0.00821	-0.051698	0.008207	5.8551E-10	0.91419	0.989355	8.32E-05	0.007193	0.030156	0.00233	0.00431	0.631072	0.774	0.787	1	0.993	0.973	0.995	0.984	0.835
rs6830620	2.9921E-10	0.0385913	0.00613	0.0390321	0.00705	5.85963E-10	0.99893	0.198072	0.008754	0.004436	0.383974	2.7E-05	0.00041	0.686594	0.786	0.902	0.978	0.995	0.844	1	0.993	0.825
rs4472158	3.0017E-10	0.0385925	0.00613	0.0390267	0.007033	5.87804E-10	0.99847	0.196024	0.008724	0.004456	0.380478	2.8E-05	0.00042	0.68607	0.786	0.903	0.978	0.995	0.845	1	0.993	0.825
rs6858128	3.0077E-10	0.0385892	0.00613	0.0390285	0.007047	5.88954E-10	0.99766	0.1969	0.008815	0.004437	0.382138	2.7E-05	0.00041	0.686391	0.785	0.903	0.978	0.995	0.845	1	0.993	0.825
rs718746	3.0168E-10	0.0385856	0.00613	0.0390247	0.007047	5.90699E-10	0.99699	0.196951	0.008797	0.004444	0.382375	2.7E-05	0.00041	0.686075	0.785	0.903	0.978	0.995	0.845	1	0.993	0.825
rs2078224	3.0183E-10	0.0334096	0.0053	0.0338623	0.00575	5.9098E-10	0.00693	0.815812	0.020922	0.002141	0.122942	4.8E-05	0.23752	0.02912	0.972	0.841	0.948	0.998	0.945	1	0.916	0.961
rs4955418	3.0212E-10	-0.033755	0.00536	-0.033755	0.00536	5.91538E-10	0.57573	0.061249	0.000866	0.006091	0.029342	1.4E-05	0.88743	0.800471	0.651	0.914	0.998	0.991	0.963	1	0.68	0.68
rs1559623	3.0232E-10	0.0352037	0.00559	0.0382959	0.007574	5.91918E-10	0.11559	0.005097	0.007312	0.003132	0.003349	0.00108	0.05561	0.75407	0.937	0.974	0.988	0.997	0.993	0.999	0.964	0.774
rs6778876	3.0258E-10	-0.042221	0.0067	-0.044912	0.009186	5.92409E-10	0.31348	0.581327	3.29E-05	0.419659	0.001192	0.00218	0.00506	0.116437	0.868	0.822	1	0.535	0.994	0.991	0.983	0.915
rs3008833	3.0281E-10	0.0325829	0.00517	0.0337894	0.006532	4.61235E-10	0.09163	0.963291	0.076236	0.000243	0.002749	1.6E-05	0.53879	0.306068	0.902	0.708	0.557	0.999	0.99	1	0.742	0.839
rs11127767	3.0286E-10	0.0422221	0.0067	0.0448626	0.009149	5.92962E-10	0.31511	0.581296	3.28E-05	0.415719	0.00123	0.00219	0.00506	0.1164	0.868	0.822	1	0.541	0.994	0.991	0.983	0.915
rs4487260	3.0289E-10	-0.04222	0.0067	-0.044898	0.009171	5.93016E-10	0.30537	0.581307	3.28E-05	0.4193	0.00123	0.00219	0.00506	0.116403	0.87	0.822	1	0.536	0.994	0.99	0.983	0.915
rs71367541	3.0296E-10	-0.081456	0.01294	-0.073251	0.019549	5.93153E-10	0.40918	0.544043	4.1E-06	0.194215	0.00223	4E-05	0.89126	0.367787	0.454	0.487	1	0.583	0.984	1	0.518	0.741
rs73331922	3.0399E-10	0.053233	0.00845	0.0684989	0.015214	2.74466E-10	0.39711	0.015357	0.000217	0.023327	0.006146	0.06265	6.9E-05	0.103953	0.878	0.963	0.999	0.974	0.991	0.684	0.997	0.935
rs184624619	3.0458E-10	-0.070648	0.01122	-0.07622	0.016369	5.26211E-10	0.15334	0.233599	0.000655	0.65836	0.000265	6.6E-05	0.06123	0.123046	0.892	0.869	0.998	0.269	0.997	1	0.942	0.904
rs11600349	3.0471E-10	0.0351836	0.00559	0.0350948	0.008982	3.90851E-10	0.85923	0.065447	0.000379	0.919205	0.017241	8.8E-07	0.40944	0.019298	0.599	0.893	0.998	0.106	0.967	1	0.74	0.936
rs4515071	3.0476E-10	-0.042214	0.0067	-0.044865	0.009157	5.96598E-10	0.31403	0.581307	3.28E-05	0.41725	0.00123	0.00219	0.00506	0.116403	0.868	0.822	1	0.539	0.994	0.991	0.983	0.915
rs11916178	3.0493E-10	-0.042214	0.0067	-0.04487	0.00916	5.96918E-10	0.31292	0.581307	3.28E-05	0.417942	0.00123	0.00219	0.00506	0.116403	0.868	0.822	1	0.538	0.994	0.991	0.983	0.915
rs6800774	3.0493E-10	-0.042214	0.0067	-0.04487	0.00916	5.96918E-10	0.31292	0.581307	3.28E-05	0.417942	0.00123	0.00219	0.00506	0.116403	0.868	0.822	1	0.538	0.994	0.991	0.983	0.915
rs9846605	3.0493E-10	-0.042214	0.0067	-0.04487	0.00916	5.96918E-10	0.31292	0.581307	3.28E-05	0.417942	0.00123	0.00219	0.00506	0.116403	0.868	0.822	1	0.538	0.994	0.991	0.983	0.915
rs9846891	3.0493E-10	-0.042214	0.0067	-0.04487	0.00916	5.96918E-10	0.31292	0.581307	3.28E-05	0.417942	0.00123	0.00219	0.00506	0.116403	0.868	0.822	1	0.538	0.994	0.991	0.983	0.915
rs1559624	3.0685E-10	0.0351969	0.00559	0.0381522	0.007492	6.00594E-10	0.11439	0.005809	0.007613	0.003229	0.003377	0.00101	0.05351	0.752169	0.937	0.973	0.987	0.997	0.993	0.999	0.965	0.773
rs945358	3.0688E-10	0.0324299	0.00515	0.0324299	0.005151	6.00668E-10	0.70293	0.243056	0.011839	0.000136	0.004228	0.00024	0.61546	0.413168	0.833	0.898	0.97	1	0.99	1	0.814	0.872
rs13069992	3.069E-10	0.042206	0.0067	0.0448662	0.009165	6.00704E-10	0.31335	0.581296	3.28E-05	0.418994	0.00123	0.00219	0.00506	0.1164	0.868	0.822	1	0.537	0.994	0.99	0.983	0.915
rs1562731	3.069E-10	0.042206	0.0067	0.0448662	0.009165	6.00704E-10	0.31335	0.581296	3.28E-05	0.418994	0.00123	0.00219	0.00506	0.1164	0.868	0.822	1	0.537	0.994	0.99	0.983	0.915
rs4398455	3.069E-10	0.042206	0.0067	0.0448662	0.009165	6.00704E-10	0.31335	0.581296	3.28E-05	0.418994	0.00123	0.00219	0.00506	0.1164	0.868	0.822	1	0.537	0.994	0.99	0.983	0.915
rs4611844	3.069E-10	0.042206	0.0067	0.0448662	0.009165	6.00704E-10	0.31335	0.581296	3.28E-05	0.418994	0.00123	0.00219	0.00506	0.1164	0.868	0.822	1	0.537	0.994	0.99	0.983	0.915
rs5850560	3.069E-10	0.042206	0.0067	0.0448662	0.009165	6.00704E-10	0.31335	0.581296	3.28E-05	0.418994	0.00123	0.00219	0.00506	0.1164	0.868	0.822	1	0.537	0.994	0.99	0.983	0.915
rs5850562	3.069E-10	0.042206	0.0067	0.0448662	0.009165	6.00704E-10	0.31335	0.581296	3.28E-05	0.418994	0.00123	0.00219	0.00506	0.1164	0.868	0.822	1	0.537	0.994	0.99	0.983	0.915
rs7637723	3.069E-10	0.042206	0.0067	0.0448662	0.009165	6.00704E-10	0.31335	0.581296	3.28E-05	0.418994	0.00123	0.00219	0.00506	0.1164	0.868	0.822	1	0.537	0.994	0.99	0.983	0.915
rs13095307	3.0694E-10	-0.042206	0.0067	-0.044866	0.009165	6.00771E-10	0.31336	0.581307	3.28E-05	0.419029	0.00123	0.00219	0.00506	0.116403	0.868	0.822	1	0.537	0.994	0.99	0.983	0.915
rs4283592	3.0694E-10	-0.042206	0.0067	-0.044866	0.009165	6.00771E-10	0.31336	0.581307	3.28E-05	0.419029	0.00123	0.00219	0.00506	0.116403	0.868	0.822	1	0.537	0.994	0.99	0.983	0.915
rs4339123	3.0694E-10	-0.042206	0.0067	-0.044866	0.009165	6.00771E-10	0.31336	0.581307	3.28E-05	0.419029	0.00123	0.00219	0.00506	0.116403	0.868	0.822	1	0.537	0.994	0.99	0.983	0.915
rs4343647	3.0694E-10	-0.042206	0.0067	-0.044866	0.009165	6.00771E-10	0.31336	0.581307	3.28E-05	0.419029	0.00123	0.00219	0.00506	0.116403	0.868	0.822	1	0.537	0.994	0.99	0.983	0.915

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rs4370049	3.0694E-10	-0.042206	0.0067	-0.044866	0.009165	6.00771E-10	0.31336	0.581307	3.28E-05	0.419029	0.00123	0.00219	0.00506	0.116403	0.868	0.822	1	0.537	0.994	0.99	0.983	0.915
rs4518153	3.0694E-10	-0.042206	0.0067	-0.044866	0.009165	6.00771E-10	0.31336	0.581307	3.28E-05	0.419029	0.00123	0.00219	0.00506	0.116403	0.868	0.822	1	0.537	0.994	0.99	0.983	0.915
rs4603977	3.0694E-10	-0.042206	0.0067	-0.044866	0.009165	6.00771E-10	0.31336	0.581307	3.28E-05	0.419029	0.00123	0.00219	0.00506	0.116403	0.868	0.822	1	0.537	0.994	0.99	0.983	0.915
rs4856213	3.0694E-10	-0.042206	0.0067	-0.044866	0.009165	6.00771E-10	0.31336	0.581307	3.28E-05	0.419029	0.00123	0.00219	0.00506	0.116403	0.868	0.822	1	0.537	0.994	0.99	0.983	0.915
rs6779320	3.0694E-10	-0.042206	0.0067	-0.044866	0.009165	6.00771E-10	0.31336	0.581307	3.28E-05	0.419029	0.00123	0.00219	0.00506	0.116403	0.868	0.822	1	0.537	0.994	0.99	0.983	0.915
rs7619609	3.0694E-10	-0.042206	0.0067	-0.044866	0.009165	6.00771E-10	0.31336	0.581307	3.28E-05	0.419029	0.00123	0.00219	0.00506	0.116403	0.868	0.822	1	0.537	0.994	0.99	0.983	0.915
rs9811672	3.0694E-10	-0.042206	0.0067	-0.044866	0.009165	6.00771E-10	0.31336	0.581307	3.28E-05	0.419029	0.00123	0.00219	0.00506	0.116403	0.868	0.822	1	0.537	0.994	0.99	0.983	0.915
rs9847402	3.0694E-10	-0.042206	0.0067	-0.044866	0.009165	6.00771E-10	0.31336	0.581307	3.28E-05	0.419029	0.00123	0.00219	0.00506	0.116403	0.868	0.822	1	0.537	0.994	0.99	0.983	0.915
rs554005300	3.0708E-10	0.107344	0.01705	0.104877	0.019925	5.73271E-10	0.33082	0.820732	1.47E-07	0.180756	0.036719	0.00159	0.2469	0.211225	0.588	0.754	1	0.775	0.954	0.993	0.858	0.866
rs3924834	3.0766E-10	0.0422035	0.0067	0.0448651	0.009167	6.02154E-10	0.31357	0.581296	3.28E-05	0.419462	0.00123	0.00219	0.00506	0.1164	0.868	0.822	1	0.536	0.994	0.99	0.983	0.915
rs1449863	3.0767E-10	-0.042205	0.0067	-0.044867	0.009167	6.02182E-10	0.31344	0.581307	3.28E-05	0.419759	0.00123	0.00219	0.00506	0.116403	0.868	0.822	1	0.536	0.994	0.99	0.983	0.915
rs9878507	3.094E-10	-0.042241	0.00671	-0.044793	0.009046	6.05492E-10	0.30877	0.533729	3.39E-05	0.408509	0.001315	0.00227	0.00503	0.122813	0.871	0.832	1	0.552	0.994	0.99	0.983	0.915
rs9850129	3.0977E-10	-0.031957	0.00508	-0.031957	0.005078	5.71211E-10	0.91798	0.394051	0.01155	0.021194	0.284947	1.1E-07	0.03082	0.83603	0.737	0.846	0.956	0.973	0.85	1	0.957	0.708
rs2570369	3.1097E-10	0.0318956	0.00507	0.0314334	0.00702	6.08493E-10	0.0075	0.133283	0.003574	0.029367	0.07333	1.8E-06	0.42541	0.596827	0.959	0.901	0.99	0.966	0.943	1	0.474	0.81
rs1514338	3.1112E-10	-0.03443	0.00547	-0.03443	0.005471	6.08794E-10	0.54857	0.761147	0.000127	0.017721	0.067141	0.00071	0.11944	0.08386	0.87	0.844	1	0.987	0.962	0.999	0.943	0.942
rs4515072	3.1151E-10	0.0422444	0.00671	0.0447298	0.009103	6.09536E-10	0.31277	0.597474	3.28E-05	0.42406	0.001424	0.00198	0.00457	0.131992	0.867	0.817	1	0.528	0.993	0.992	0.983	0.91
rs4381966	3.116E-10	0.042168	0.0067	0.0447467	0.009025	6.09712E-10	0.32766	0.598562	3.85E-05	0.365654	0.001213	0.00244	0.00445	0.120542	0.871	0.827	1	0.603	0.994	0.99	0.984	0.917
rs9309889	3.1198E-10	-0.042191	0.0067	-0.044862	0.009178	6.10432E-10	0.31433	0.581307	3.28E-05	0.42248	0.00123	0.00219	0.00506	0.116403	0.867	0.821	1	0.533	0.994	0.99	0.983	0.915
rs6504550	3.1207E-10	0.0350367	0.00557	0.0345369	0.006424	6.10604E-10	0.71956	0.127436	5.54E-05	0.055167	0.80731	4.9E-05	0.3809	0.005066	0.692	0.897	1	0.931	0.651	1	0.831	0.965
rs4536858	3.1237E-10	-0.033723	0.00536	-0.033723	0.005359	6.1118E-10	0.58085	0.060873	0.000928	0.005557	0.027345	1.5E-05	0.90705	0.800366	0.651	0.914	0.998	0.992	0.965	1	0.674	0.68
rs79425166	3.1362E-10	0.0718571	0.01142	0.0689511	0.016375	4.01301E-10	0.16445	0.341583	6.19E-06	0.981372	0.281813	9.8E-06	0.01501	0.853651	0.834	0.775	1	0.074	0.745	1	0.955	0.629
rs35829247	3.1377E-10	0.0421828	0.0067	0.0448657	0.009187	6.13859E-10	0.31277	0.581296	3.28E-05	0.42406	0.00123	0.00219	0.00506	0.1164	0.867	0.821	1	0.531	0.994	0.99	0.983	0.915
rs4261899	3.1377E-10	0.0421828	0.0067	0.0448657	0.009187	6.13859E-10	0.31277	0.581296	3.28E-05	0.42406	0.00123	0.00219	0.00506	0.1164	0.867	0.821	1	0.531	0.994	0.99	0.983	0.915
rs4306886	3.1377E-10	0.0421828	0.0067	0.0448657	0.009187	6.13859E-10	0.31277	0.581296	3.28E-05	0.42406	0.00123	0.00219	0.00506	0.1164	0.867	0.821	1	0.531	0.994	0.99	0.983	0.915
rs4314191	3.1377E-10	0.0421828	0.0067	0.0448657	0.009187	6.13859E-10	0.31277	0.581296	3.28E-05	0.42406	0.00123	0.00219	0.00506	0.1164	0.867	0.821	1	0.531	0.994	0.99	0.983	0.915
rs4315700	3.1377E-10	0.0421828	0.0067	0.0448657	0.009187	6.13859E-10	0.31277	0.581296	3.28E-05	0.42406	0.00123	0.00219	0.00506	0.1164	0.867	0.821	1	0.531	0.994	0.99	0.983	0.915
rs4346572	3.1377E-10	0.0421828	0.0067	0.0448657	0.009187	6.13859E-10	0.31277	0.581296	3.28E-05	0.42406	0.00123	0.00219	0.00506	0.1164	0.867	0.821	1	0.531	0.994	0.99	0.983	0.915
rs4524299	3.1377E-10	0.0421828	0.0067	0.0448657	0.009187	6.13859E-10	0.31277	0.581296	3.28E-05	0.42406	0.00123	0.00219	0.00506	0.1164	0.867	0.821	1	0.531	0.994	0.99	0.983	0.915
rs4525893	3.1377E-10	0.0421828	0.0067	0.0448657	0.009187	6.13859E-10	0.31277	0.581296	3.28E-05	0.42406	0.00123	0.00219	0.00506	0.1164	0.867	0.821	1	0.531	0.994	0.99	0.983	0.915
rs4528973	3.1377E-10	0.0421828	0.0067	0.0448657	0.009187	6.13859E-10	0.31277	0.581296	3.28E-05	0.42406	0.00123	0.00219	0.00506	0.1164	0.867	0.821	1	0.531	0.994	0.99	0.983	0.915
rs6783944	3.1377E-10	0.0421828	0.0067	0.0448657	0.009187	6.13859E-10	0.31277	0.581296	3.28E-05	0.42406	0.00123	0.00219	0.00506	0.1164	0.867	0.821	1	0.531	0.994	0.99	0.983	0.915
rs7615603	3.1377E-10	0.0421828	0.0067	0.0448657	0.009187	6.13859E-10	0.31277	0.581296	3.28E-05	0.42406	0.00123	0.00219	0.00506	0.1164	0.867	0.821	1	0.531	0.994	0.99	0.983	0.915
rs7617188	3.1377E-10	0.0421828	0.0067	0.0448657	0.009187	6.13859E-10	0.31277	0.581296	3.28E-05	0.42406	0.00123	0.00219	0.00506	0.1164	0.867	0.821	1	0.531	0.994	0.99	0.983	0.915
rs7636973	3.1377E-10	0.0421828	0.0067	0.0448657	0.009187	6.13859E-10	0.31277	0.581296	3.28E-05	0.42406	0.00123	0.00219	0.00506	0.1164	0.867	0.821	1	0.531	0.994	0.99	0.983	0.915
rs13059618	3.1378E-10	0.0421828	0.0067	0.0448655	0.009187	6.13879E-10	0.31283	0.581296	3.28E-05	0.424048	0.00123	0.00219	0.00506	0.1164	0.867	0.821	1	0.531	0.994	0.99	0.983	0.915
rs13097001	3.1378E-10	0.0421828	0.0067	0.0448655	0.009187	6.13879E-10	0.31283	0.581296	3.28E-05	0.424048	0.00123	0.00219	0.00506	0.1164	0.867	0.821	1	0.531	0.994	0.99	0.983	0.915
rs35025076	3.1378E-10	0.0421828	0.0067	0.0448655	0.009187	6.13879E-10	0.31283	0.581296	3.28E-05	0.424048	0.00123	0.00219	0.00506	0.1164	0.867	0.821	1	0.531	0.994	0.99	0.983	0.915
rs36003809	3.1378E-10	0.0421828	0.0067	0.0448655	0.009187	6.13879E-10	0.31283	0.581296	3.28E-05	0.424048	0.00123	0.00219	0.00506	0.1164	0.867	0.821	1	0.531	0.994	0.99	0.983	0.915
rs4610246	3.1378E-10	0.0421828	0.0067	0.0448655	0.009187	6.13879E-10	0.31283	0.581296	3.28E-05	0.424048	0.00123	0.00219	0.00506	0.1164	0.867	0.821	1	0.531	0.994	0.99	0.983	0.915
rs5850558	3.1378E-10	0.0421828	0.0067	0.0448655	0.009187	6.13879E-10	0.31283	0.581296	3.28E-05	0.424048	0.00123	0.00219	0.00506	0.1164	0.867	0.821	1	0.531	0.994	0.99	0.983	0.915
rs4499638	3.1389E-10	-0.033719	0.00536	-0.033719	0.005359	6.14082E-10	0.58083	0.060883	0.000928	0.005558	0.027368	1.5E-05	0.90722	0.800191	0.651	0.914	0.998	0.992	0.965	1	0.674	0.68
rs5848864	3.142E-10	-0.033718	0.00536	-0.033718	0.005359	6.1469E-10	0.58072	0.060883	0.000928	0.005571	0.027363	1.5E-05	0.9072	0.800193	0.651	0.914	0.998	0.992	0.965	1	0.674	0.68
rs4308307	3.1486E-10	-0.033717	0.00536	-0.033717	0.005359	6.15955E-10	0.58241	0.060883	0.000928	0.005598	0.027363	1.5E-05	0.9072	0.800193	0.652	0.914	0.998	0.992	0.965	1	0.674	0.68
rs12490393	3.15E-10	-0.033716	0.00536	-0.033716	0.005359	6.16222E-10	0.58086	0.060883	0.00093	0.005556	0.027382	1.5E-05	0.90755	0.800156	0.651	0.914	0.998	0.992	0.965	1	0.674	0.68
rs5850561	3.1536E-10	0.0421788	0.0067	0.0448492	0.009182	6.16898E-10	0.31738	0.581296	3.28E-05	0.423562	0.00123	0.00219	0.00506	0.1164	0.867	0.821	1	0.532	0.994	0.99	0.983	0.915
rs9873661	3.1577E-10	-0.042178	0.0067	-0.044868	0.009194	6.17698E-10	0.31236	0.581307	3.28E-05	0.425883	0.00123	0.00219	0.00506	0.116403	0.867	0.821	1	0.529	0.994	0.99	0.983	0.915
rs12050859	3.1586E-10	0.0551029	0.00876	0.0517134	0.012082	6.17858E-10	0.94817	0.169406	0.002405	8.8E-05	0.518887	9.2E-06	0.39206	0.144243	0.685	0.849	0.99	0.999	0.692	1	0.776	0.41
rs2695240	3.164E-10	0.0318954	0.00507	0.0314072	0.007019	6.18888E-10	0.00766	0.135342	0.003543	0.03115	0.07495	1.7E-06	0.42592	0.590433	0.959	0.9	0.99	0.964	0.942	1	0.474	0.811
rs76415716	3.1703E-10	0.0631814	0.01004	0.0670276	0.014396	6.20109E-10	0.15885	0.189338	0.004451	0.010761	0.001537	0.00025	0.05353	0.033414	0.594	0.909	0.992	0.99	0.994	1	0.958	0.953
rs1923465	3.198E-10	0.0325487	0.00518	0.0337673	0.006535	4.84142E-10	0.09154	0.943949	0.077618	0.000233	0.002773	1.7E-05	0.54259	0.312395	0.902	0.711	0.552	0.999	0.99	1	0.74	0.837
rs2570370	3.1984E-10	0.0318876	0.00507	0.0313967	0.007018	6.25478E-10	0.00768	0.135858	0.003558	0.031216	0.07514	1.7E-06	0.42558	0.590541	0.959	0.9	0.99	0.964	0.942	1	0.474	0.811
rs28889955	3.2002E-10	-0.042167	0.00671	-0.044934	0.009246	6.25825E-10	0.2951	0.581307	3.28E-05	0.436085	0.00123	0.00219	0.00506	0.116403	0.87	0.82	1	0.519	0.994	0.99	0.983	0.914
rs911818	3.2064E-10	0.0325379	0.00517	0.0337469	0.006533	4.87657E-10	0.09166	0.963002	0.077196	0.000248	0.002765	1.6E-05	0.54006	0.305166	0.902	0.708	0.554	0.999	0.99	1	0.741	0.839
rs1165163	3.2086E-10	-0.05673	0.00902	-0.06838	0.015083	2.67245E-10	0.72278	0.159696	0.013099	7.05E-06	0.002688	0.01324	0.17129	0.007058	0.84	0.922	0.935	1	0.993	0.926	0.924	0.973
rs9295689	3.2132E-10	0.0318573	0.00507	0.0318573	0.005066	6.28311E-10	0.27005	0.217723	0.000134	0.001246	0.364868	0.00246	0.17883	0.167572	0.905	0.913	1	0.998	0.871	0.996	0.927	0.924

Table S3

rs2984430	3.2189E-10	0.0325346	0.00517	0.0337444	0.006537	4.88983E-10	0.09197	0.964204	0.077279	0.000244	0.002765	1.6E-05	0.53981	0.308358	0.901	0.707	0.553	0.999	0.99	1	0.741	0.838
rs7633157	3.221E-10	-0.032912	0.00523	-0.032912	0.005234	6.29802E-10	0.12047	0.517194	0.000446	0.011036	0.439023	0.00032	0.12726	0.022504	0.931	0.874	0.999	0.991	0.851	1	0.941	0.963
rs1480992	3.2221E-10	0.0388383	0.00618	0.03909	0.006842	6.30013E-10	0.94372	0.252467	0.011782	0.003032	0.463067	1.7E-05	0.00068	0.658059	0.786	0.888	0.966	0.996	0.811	1	0.992	0.823
rs4672331	3.2238E-10	0.0347928	0.00553	0.038992	0.00861	6.30341E-10	0.12391	0.00453	0.014881	0.006835	0.001085	0.00026	0.07433	0.503602	0.929	0.972	0.963	0.994	0.995	1	0.955	0.704
rs71633696	3.2268E-10	0.042159	0.00671	0.0448397	0.009198	6.30912E-10	0.31999	0.581296	3.28E-05	0.42816	0.00123	0.00219	0.00506	0.1164	0.866	0.821	1	0.527	0.994	0.99	0.983	0.914
rs3734557	3.227E-10	0.0317628	0.00505	0.0317628	0.005052	6.30955E-10	0.1092	0.754516	0.001613	0.005205	0.157204	5.6E-05	0.3186	0.270348	0.93	0.839	0.998	0.995	0.93	1	0.892	0.903
rs7192860	3.2328E-10	0.0361549	0.00575	0.0372662	0.007505	5.77188E-10	0.01401	0.07339	0.012109	0.306851	0.117927	8.1E-07	0.06603	0.16069	0.96	0.933	0.949	0.686	0.933	1	0.951	0.914
rs2984433	3.2359E-10	0.0325347	0.00517	0.0337459	0.006538	4.91428E-10	0.09185	0.9643	0.077319	0.000242	0.002776	1.7E-05	0.53918	0.309693	0.901	0.707	0.553	0.999	0.99	1	0.741	0.838
rs10052462	3.2457E-10	0.14396	0.0229	0.14401	0.023135	6.34548E-10	0.79179	0.158106	4.75E-05	0.050877	0.31706	0.00072	0.0007	0.627837	0.822	0.915	1	0.955	0.872	0.999	0.99	0.84
rs1923462	3.2588E-10	0.0325269	0.00517	0.0337413	0.006542	4.94435E-10	0.09174	0.96388	0.077545	0.000244	0.002766	1.7E-05	0.54009	0.309672	0.901	0.707	0.552	0.999	0.99	1	0.74	0.838
rs56807129	3.2679E-10	-0.034391	0.00547	-0.034391	0.005472	6.38796E-10	0.55238	0.764847	0.000126	0.017876	0.064431	0.00074	0.12202	0.085235	0.869	0.844	1	0.986	0.963	0.999	0.942	0.942
rs143546002	3.2753E-10	-0.032685	0.0052	-0.034247	0.006556	6.40197E-10	0.54385	0.112539	0.000617	0.077659	3.18E-05	0.00114	0.37899	0.167504	0.87	0.932	0.999	0.94	0.999	0.998	0.884	0.925
rs6554567	3.2773E-10	0.143598	0.02285	0.143598	0.022848	6.40585E-10	0.76564	0.178029	5.01E-05	0.048392	0.303547	0.00076	0.00067	0.624127	0.827	0.912	1	0.958	0.878	0.999	0.99	0.841
rs1858550	3.282E-10	0.0318777	0.00507	0.0313629	0.007012	6.41485E-10	0.00788	0.139556	0.003598	0.032177	0.076412	1.6E-06	0.42576	0.588454	0.958	0.899	0.99	0.963	0.941	1	0.474	0.811
rs140180248	3.286E-10	0.0655601	0.01043	0.0655601	0.010432	6.42252E-10	0.41849	0.214408	0.014775	0.003993	0.030838	3.3E-05	0.63753	0.012798	0.885	0.914	0.969	0.996	0.976	1	0.829	0.968
rs35126602	3.2887E-10	-0.031882	0.00507	-0.03097	0.00652	6.42764E-10	0.72285	0.008404	3.07E-05	0.017886	0.581605	9.6E-05	0.47511	0.118959	0.758	0.949	1	0.974	0.363	1	0.777	0.892
rs11125819	3.2938E-10	0.0343318	0.00546	0.036556	0.006972	6.43742E-10	0.07217	0.019839	0.012346	0.008761	0.00079	0.00031	0.12632	0.91083	0.945	0.963	0.975	0.993	0.996	1	0.945	0.799
rs188338811	3.2962E-10	-0.071036	0.0113	-0.073282	0.014205	6.442E-10	0.21788	0.31003	0.00033	0.499297	0.000337	0.00012	0.12265	0.131438	0.879	0.858	0.999	0.416	0.996	1	0.916	0.905
rs72791115	3.2977E-10	0.0373709	0.00595	0.0373709	0.005947	6.44482E-10	0.87846	0.075677	0.003802	0.040583	0.231491	1.6E-06	0.23674	0.258245	0.814	0.933	0.993	0.966	0.901	1	0.906	0.9
rs646420	3.299E-10	-0.03247	0.00517	-0.03247	0.005167	6.4473E-10	0.12052	0.494768	0.000968	0.15219	0.05037	1.7E-05	0.07927	0.341371	0.927	0.869	0.999	0.867	0.966	1	0.951	0.89
rs4464229	3.3045E-10	-0.035239	0.00561	-0.035239	0.005608	6.45787E-10	0.41749	0.058225	2.32E-06	0.134269	0.067779	0.00403	0.04665	0.633521	0.879	0.942	1	0.881	0.959	0.99	0.962	0.847
rs13199893	3.3085E-10	-0.034382	0.00547	-0.034382	0.005472	6.46562E-10	0.55596	0.764847	0.000126	0.018033	0.064427	0.00074	0.12202	0.085235	0.869	0.844	1	0.986	0.963	0.999	0.942	0.942
rs1796237	3.3099E-10	0.0497117	0.00791	0.0497117	0.007911	6.46815E-10	0.05674	0.522257	0.000535	0.041789	0.007136	0.00043	0.59986	0.041932	0.948	0.876	0.999	0.969	0.989	0.999	0.841	0.956
rs11214609	3.3128E-10	-0.032129	0.00511	-0.031615	0.006196	6.47379E-10	0.60982	0.127704	0.000855	0.000781	0.843593	3.5E-05	0.62595	0.018988	0.775	0.881	0.998	0.998	0.585	1	0.492	0.94
rs8049163	3.3203E-10	0.0361196	0.00575	0.0384127	0.008487	5.39614E-10	0.00565	0.0545	0.016477	0.324763	0.127745	6.1E-07	0.06267	0.204082	0.969	0.936	0.913	0.649	0.924	1	0.95	0.899
rs1858548	3.3209E-10	0.0318642	0.00507	0.031361	0.00702	6.48938E-10	0.00773	0.138401	0.003607	0.031697	0.075872	1.7E-06	0.42482	0.590782	0.958	0.899	0.99	0.963	0.942	1	0.474	0.811
rs35380305	3.3231E-10	0.0318637	0.00507	0.031359	0.007016	6.49356E-10	0.00779	0.138424	0.003607	0.031829	0.0759	1.7E-06	0.42503	0.590148	0.958	0.899	0.99	0.963	0.942	1	0.474	0.811
rs12364051	3.3446E-10	-0.031839	0.00507	-0.031839	0.005068	6.5346E-10	0.68694	0.105312	0.000819	0.000513	0.468892	0.00016	0.89497	0.038583	0.805	0.91	0.998	0.999	0.789	1	0.649	0.94
rs189055804	3.3493E-10	-0.083661	0.01332	-0.083661	0.013318	6.33732E-10	0.1202	0.0667	0.051042	0.002957	0.183348	1.2E-05	0.0163	0.3983	0.927	0.94	0.792	0.997	0.913	1	0.977	0.877
rs73331935	3.3518E-10	0.0531133	0.00846	0.0681894	0.015137	3.15015E-10	0.39778	0.01519	0.000225	0.025045	0.00611	0.06133	7.8E-05	0.102359	0.879	0.964	0.999	0.972	0.991	0.698	0.997	0.935
rs77814874	3.3545E-10	-0.083658	0.01332	-0.083658	0.013318	6.3472E-10	0.12027	0.0667	0.051042	0.002962	0.183348	1.2E-05	0.0163	0.3983	0.927	0.94	0.792	0.997	0.913	1	0.977	0.877
rs6919088	3.3592E-10	-0.034368	0.00547	-0.034368	0.005472	6.56246E-10	0.55137	0.764271	0.000129	0.017901	0.06428	0.00075	0.12174	0.08511	0.869	0.844	1	0.986	0.963	0.999	0.942	0.942
rs13185476	3.3676E-10	0.0392909	0.00626	0.0392909	0.006256	6.57852E-10	0.10729	0.206894	3.35E-05	0.016058	0.001154	0.01041	0.33462	0.816566	0.932	0.914	1	0.987	0.995	0.973	0.891	0.828
rs7122246	3.3681E-10	-0.031824	0.00507	-0.031824	0.005067	6.57961E-10	0.68694	0.106095	0.000836	0.000506	0.467263	0.00016	0.88861	0.038929	0.805	0.91	0.998	0.999	0.789	1	0.647	0.939
rs11716603	3.3707E-10	0.0421136	0.00671	0.044764	0.009157	6.58463E-10	0.31335	0.588211	3.44E-05	0.418994	0.001249	0.00226	0.00505	0.117424	0.868	0.821	1	0.539	0.994	0.99	0.983	0.915
rs1333960	3.3718E-10	-0.034365	0.00547	-0.034365	0.005472	6.58661E-10	0.5522	0.766869	0.000129	0.017846	0.064756	0.00075	0.12266	0.085069	0.869	0.843	1	0.986	0.963	0.999	0.942	0.942
rs140629005	3.3897E-10	0.0364426	0.0058	0.0362705	0.008397	6.62093E-10	0.2746	0.052863	4.98E-05	0.105599	0.490625	0.00013	0.07847	0.005536	0.591	0.927	1	0.873	0.779	1	0.936	0.967
rs11608185	3.3928E-10	-0.031751	0.00506	-0.031751	0.005056	6.62678E-10	0.68246	0.102028	0.000908	0.000471	0.432132	0.00017	0.87218	0.038196	0.808	0.912	0.998	0.999	0.804	1	0.645	0.94
rs13407664	3.4085E-10	0.038446	0.00612	0.038446	0.006123	6.65685E-10	0.11428	0.298208	0.009526	0.00086	0.010068	0.00018	0.89712	0.059154	0.926	0.893	0.978	0.999	0.986	1	0.702	0.944
rs11214577	3.4165E-10	-0.031854	0.00507	-0.030818	0.006681	6.6722E-10	0.70099	0.008067	2.55E-05	0.017296	0.554846	0.00011	0.51635	0.122887	0.758	0.949	1	0.974	0.347	1	0.759	0.889
rs11695841	3.4213E-10	0.0384423	0.00612	0.0384423	0.006123	6.68134E-10	0.11461	0.298122	0.009539	0.000864	0.010102	0.00018	0.89721	0.059209	0.926	0.893	0.978	0.999	0.986	1	0.702	0.944
rs73078357	3.4227E-10	-0.038489	0.00613	-0.038489	0.00613	6.68393E-10	0.77746	0.068324	0.000589	0.045264	0.095848	6.9E-06	0.70379	0.310133	0.734	0.926	0.999	0.953	0.938	1	0.772	0.875
rs1425522	3.4274E-10	0.0524332	0.00835	0.0524332	0.008352	6.69302E-10	0.80394	0.365934	0.001161	0.019812	0.296721	0.0003	0.00133	0.04319	0.839	0.893	0.999	0.985	0.891	1	0.991	0.955
rs11608109	3.4306E-10	-0.031796	0.00506	-0.031796	0.005065	6.69905E-10	0.69081	0.106811	0.00084	0.000503	0.461998	0.00016	0.88671	0.039367	0.805	0.909	0.998	0.999	0.791	1	0.647	0.939
rs146650656	3.4405E-10	0.0728644	0.01161	0.0797777	0.020893	6.718E-10	0.361	0.524502	0.000596	0.529713	0.00627	4.2E-05	0.09118	0.000175	0.827	0.605	0.998	0.392	0.985	1	0.918	0.987
rs1019643	3.4475E-10	0.0524171	0.00835	0.0524171	0.00835	6.73144E-10	0.81765	0.366314	0.001189	0.018499	0.297069	0.00031	0.00132	0.043239	0.837	0.893	0.999	0.986	0.891	1	0.991	0.955
rs56217133	3.4539E-10	-0.037891	0.00604	-0.037891	0.006037	6.7436E-10	0.74773	0.276453	8.23E-06	0.004498	0.227508	0.00803	0.13376	0.033543	0.758	0.896	1	0.995	0.902	0.978	0.933	0.953
rs10786826	3.4621E-10	-0.033878	0.0054	-0.036476	0.007366	6.75931E-10	0.23367	0.038382	0.008154	0.376135	0.003589	2E-05	0.00846	0.155527	0.898	0.946	0.969	0.62	0.991	1	0.982	0.916
rs74737973	3.4678E-10	0.0717965	0.01144	0.0690896	0.015635	4.89456E-10	0.16615	0.308629	7.38E-06	0.966295	0.279977	1E-05	0.02056	0.850172	0.835	0.787	1	0.091	0.751	1	0.948	0.636
rs75272187	3.468E-10	0.0717962	0.01144	0.0690876	0.015635	4.89426E-10	0.16618	0.309192	7.38E-06	0.966314	0.279904	1E-05	0.02056	0.850281	0.835	0.787	1	0.091	0.751	1	0.948	0.636
rs77518531	3.4702E-10	0.0717956	0.01144	0.0690885	0.015636	4.89704E-10	0.16615	0.308585	7.38E-06	0.966442	0.280029	1E-05	0.02055	0.850124	0.835	0.787	1	0.091	0.751	1	0.948	0.636
rs62302740	3.4728E-10	0.0404895	0.00645	0.0404895	0.006451	6.77964E-10	0.08449	0.754818	0.001662	0.006214	0.001079	0.00131	0.51841	0.07864	0.941	0.849	0.998	0.995	0.995	0.998	0.859	0.945
rs10786823	3.4803E-10	-0.033043	0.00527	-0.035064	0.006919	6.79401E-10	0.23423	0.030134	0.006525	0.255569	0.009855	3.2E-05	0.00223	0.457999	0.906	0.953	0.983	0.763	0.987	1	0.99	0.871
rs13392707	3.483E-10	0.0384338	0.00612	0.0384338	0.006124	6.79925E-10	0.12097	0.271529	0.009796	0.000773	0.010734	0.00019	0.90434	0.058836	0.925	0.898	0.978	0.999	0.985	1	0.705	0.944
rs6855641	3.4896E-10	0.0393102	0.00626	0.0393102	0.006264	6.8118E-10	0.0533	0.843463	0.001613	0.005001	0.001213	0.00181	0.52931	0.056555	0.949	0.839	0.998	0.996	0.995	0.997	0.857	0.951

Table S3

rs72791120	3.5032E-10	0.0373948	0.00596	0.0373948	0.00596	6.83779E-10	0.96197	0.119689	0.00408	0.02982	0.278905	1.3E-06	0.28861	0.173574	0.784	0.919	0.992	0.973	0.881	1	0.889	0.911
rs11680147	3.5048E-10	0.0384271	0.00612	0.0384271	0.006124	6.84092E-10	0.1222	0.271529	0.009818	0.00077	0.010733	0.00019	0.90435	0.058836	0.925	0.898	0.978	0.999	0.985	1	0.704	0.944
rs9973923	3.5144E-10	0.0384148	0.00612	0.0384148	0.006123	6.85913E-10	0.12153	0.298656	0.009676	0.000792	0.010267	0.00019	0.89717	0.060172	0.924	0.893	0.978	0.999	0.986	1	0.702	0.944
rs13041661	3.5148E-10	-0.037801	0.00602	-0.040374	0.007827	6.85994E-10	0.27482	0.767518	0.000772	0.066097	0.00069	0.00178	0.10718	0.003266	0.912	0.854	0.999	0.954	0.996	0.998	0.95	0.98
rs6126635	3.5148E-10	-0.037801	0.00602	-0.040374	0.007827	6.85994E-10	0.27482	0.767518	0.000772	0.066097	0.00069	0.00178	0.10718	0.003266	0.912	0.854	0.999	0.954	0.996	0.998	0.95	0.98
rs8126232	3.5148E-10	-0.037801	0.00602	-0.040374	0.007827	6.85994E-10	0.27482	0.767518	0.000772	0.066097	0.00069	0.00178	0.10718	0.003266	0.912	0.854	0.999	0.954	0.996	0.998	0.95	0.98
rs34788820	3.5151E-10	-0.037801	0.00602	-0.040374	0.007827	6.86048E-10	0.27482	0.767517	0.000772	0.066106	0.00069	0.00178	0.10718	0.003266	0.912	0.854	0.999	0.954	0.996	0.998	0.95	0.98
rs11692198	3.5198E-10	0.0384236	0.00612	0.0384236	0.006124	6.86952E-10	0.12207	0.271499	0.009766	0.000788	0.010738	0.00019	0.90439	0.058828	0.925	0.898	0.978	0.999	0.985	1	0.705	0.944
rs2296465	3.5236E-10	0.03416	0.00544	0.0360186	0.006614	6.87672E-10	0.213	0.004745	0.007645	0.072011	0.044658	0.00018	0.01438	0.049608	0.929	0.978	0.989	0.955	0.976	1	0.983	0.961
rs62084738	3.5241E-10	0.0391405	0.00624	0.0391405	0.006239	6.87773E-10	0.42214	0.033175	0.000234	0.004578	0.528419	0.00022	0.15854	0.140995	0.663	0.941	1	0.994	0.785	1	0.915	0.911
rs1531921	3.5274E-10	0.0330754	0.00527	0.0331713	0.005482	6.88414E-10	0.47063	0.008787	0.000541	0.027195	0.284699	0.00022	0.56206	0.007058	0.879	0.968	0.999	0.98	0.895	1	0.845	0.974
rs4938017	3.5315E-10	0.031778	0.00507	0.031778	0.005065	6.89197E-10	0.69085	0.10597	0.000837	0.000516	0.461395	0.00016	0.89035	0.039272	0.805	0.91	0.998	0.999	0.792	1	0.648	0.939
rs3852787	3.5395E-10	0.031624	0.00504	0.031624	0.005041	6.90725E-10	0.58047	0.917736	0.000663	0.003602	0.369962	1.6E-06	0.39891	0.936228	0.601	0.672	0.998	0.992	0.763	1	0.78	0.659
rs1800498	3.5421E-10	-0.031715	0.00506	-0.031715	0.005056	6.91211E-10	0.69613	0.103783	0.000907	0.000498	0.428793	0.00016	0.87613	0.040233	0.806	0.911	0.998	0.999	0.805	1	0.646	0.939
rs3734540	3.5463E-10	0.0317816	0.00507	0.0317816	0.005067	6.92023E-10	0.27891	0.216651	0.000132	0.001393	0.346341	0.00266	0.17384	0.167219	0.904	0.913	1	0.998	0.877	0.996	0.929	0.924
rs35319755	3.553E-10	0.0336616	0.00537	0.0336616	0.005367	6.93289E-10	0.53313	0.465658	0.002194	0.000205	0.001961	0.00137	0.704	0.516907	0.853	0.863	0.996	0.999	0.993	0.998	0.792	0.854
rs144446730	3.555E-10	0.0384153	0.00612	0.0384153	0.006124	6.93686E-10	0.12089	0.2715	0.009768	0.000802	0.010738	0.00019	0.90439	0.058828	0.925	0.898	0.978	0.999	0.985	1	0.705	0.944
rs9973582	3.5555E-10	0.0384037	0.00612	0.0384037	0.006123	6.93773E-10	0.122	0.298795	0.009676	0.000804	0.010282	0.00019	0.89724	0.060202	0.924	0.893	0.978	0.999	0.986	1	0.702	0.944
rs17202925	3.5568E-10	0.0384135	0.00612	0.0384135	0.006124	6.94015E-10	0.12209	0.2715	0.009768	0.000799	0.010738	0.00019	0.90439	0.058828	0.925	0.898	0.978	0.999	0.985	1	0.705	0.944
rs2734831	3.5611E-10	-0.03171	0.00506	-0.03171	0.005056	6.94836E-10	0.69623	0.101602	0.000905	0.000497	0.429647	0.00016	0.87516	0.040535	0.806	0.912	0.998	0.999	0.805	1	0.646	0.939
rs2734832	3.5612E-10	-0.03171	0.00506	-0.03171	0.005056	6.9486E-10	0.69623	0.101602	0.000905	0.000497	0.429644	0.00016	0.87516	0.040535	0.806	0.912	0.998	0.999	0.805	1	0.646	0.939
rs750859	3.5625E-10	0.038412	0.00612	0.038412	0.006124	6.95118E-10	0.12208	0.2715	0.009772	0.000799	0.010738	0.00019	0.90439	0.058829	0.925	0.898	0.978	0.999	0.985	1	0.705	0.944
rs34554234	3.5793E-10	-0.031707	0.00506	-0.031707	0.005056	6.98321E-10	0.69474	0.103579	0.000919	0.000496	0.431085	0.00016	0.87282	0.040459	0.806	0.911	0.998	0.999	0.804	1	0.645	0.939
rs79791535	3.5823E-10	0.0384064	0.00612	0.0384064	0.006124	6.98892E-10	0.12209	0.271529	0.009793	0.0008	0.010734	0.00019	0.90434	0.058836	0.925	0.898	0.978	0.999	0.985	1	0.705	0.944
rs5838070	3.588E-10	0.038405	0.00612	0.038405	0.006124	6.99985E-10	0.12209	0.271509	0.0098	0.000801	0.01074	0.00019	0.90438	0.05883	0.925	0.898	0.978	0.999	0.985	1	0.705	0.944
rs1077639	3.5882E-10	0.038405	0.00612	0.038405	0.006124	7.00029E-10	0.12209	0.271509	0.0098	0.000801	0.01074	0.00019	0.90438	0.058831	0.925	0.898	0.978	0.999	0.985	1	0.705	0.944
rs10221687	3.6044E-10	0.0384006	0.00612	0.0384006	0.006124	7.03109E-10	0.12209	0.271529	0.009818	0.0008	0.010733	0.00019	0.90435	0.058836	0.925	0.898	0.978	0.999	0.985	1	0.705	0.944
rs11691382	3.6044E-10	0.0384006	0.00612	0.0384006	0.006124	7.03109E-10	0.12209	0.271529	0.009818	0.0008	0.010733	0.00019	0.90435	0.058836	0.925	0.898	0.978	0.999	0.985	1	0.705	0.944
rs11694427	3.6044E-10	0.0384006	0.00612	0.0384006	0.006124	7.03109E-10	0.12209	0.271529	0.009818	0.0008	0.010733	0.00019	0.90435	0.058836	0.925	0.898	0.978	0.999	0.985	1	0.705	0.944
rs11694560	3.6044E-10	0.0384006	0.00612	0.0384006	0.006124	7.03109E-10	0.12209	0.271529	0.009818	0.0008	0.010733	0.00019	0.90435	0.058836	0.925	0.898	0.978	0.999	0.985	1	0.705	0.944
rs13391493	3.6044E-10	0.0384006	0.00612	0.0384006	0.006124	7.03109E-10	0.12209	0.271529	0.009818	0.0008	0.010733	0.00019	0.90435	0.058836	0.925	0.898	0.978	0.999	0.985	1	0.705	0.944
rs67213986	3.6044E-10	0.0384006	0.00612	0.0384006	0.006124	7.03109E-10	0.12209	0.271529	0.009818	0.0008	0.010733	0.00019	0.90435	0.058836	0.925	0.898	0.978	0.999	0.985	1	0.705	0.944
rs751810272	3.6044E-10	0.0384006	0.00612	0.0384006	0.006124	7.03109E-10	0.12209	0.271529	0.009818	0.0008	0.010733	0.00019	0.90435	0.058836	0.925	0.898	0.978	0.999	0.985	1	0.705	0.944
rs764502110	3.6044E-10	0.0384006	0.00612	0.0384006	0.006124	7.03109E-10	0.12209	0.271529	0.009818	0.0008	0.010733	0.00019	0.90435	0.058836	0.925	0.898	0.978	0.999	0.985	1	0.705	0.944
rs76980718	3.6044E-10	0.0384006	0.00612	0.0384006	0.006124	7.03109E-10	0.12209	0.271529	0.009818	0.0008	0.010733	0.00019	0.90435	0.058836	0.925	0.898	0.978	0.999	0.985	1	0.705	0.944
rs13392734	3.6054E-10	0.0384004	0.00612	0.0384004	0.006124	7.03308E-10	0.12209	0.271529	0.009821	0.0008	0.010733	0.00019	0.90435	0.058836	0.925	0.898	0.978	0.999	0.985	1	0.705	0.944
rs13415468	3.606E-10	0.0384002	0.00612	0.0384002	0.006124	7.03414E-10	0.12209	0.271529	0.009821	0.0008	0.010733	0.00019	0.90435	0.058836	0.925	0.898	0.978	0.999	0.985	1	0.705	0.944
rs62404527	3.618E-10	0.0529033	0.00844	0.0633597	0.021141	3.52252E-12	0.00106	0.55244	0.066683	1.48E-08	8.23E-05	0.01038	0.39733	0.873037	0.98	0.32	0.011	1	0.999	0.024	0.011	0.157
rs78711661	3.6182E-10	0.071701	0.01144	0.0689832	0.015682	5.07085E-10	0.16605	0.309801	7.35E-06	0.972512	0.279428	1.1E-05	0.02034	0.853152	0.835	0.786	1	0.089	0.752	1	0.949	0.635
rs10502172	3.6185E-10	-0.031818	0.00507	-0.030839	0.006601	7.05807E-10	0.70333	0.009205	3.54E-05	0.015808	0.541295	9.2E-05	0.50036	0.115537	0.758	0.947	1	0.976	0.342	1	0.765	0.892
rs113643332	3.6243E-10	0.0389411	0.00621	0.0389411	0.006211	7.06917E-10	0.15081	0.550934	0.001499	0.0011	0.001199	0.0024	0.88564	0.123838	0.921	0.862	0.998	0.998	0.995	0.996	0.765	0.929
rs12478766	3.6294E-10	-0.035154	0.00561	-0.035154	0.005607	7.07892E-10	0.3998	0.061572	2.75E-06	0.128999	0.067638	0.00409	0.04494	0.654671	0.882	0.941	1	0.888	0.959	0.99	0.963	0.845
rs10221909	3.6332E-10	0.0383937	0.00612	0.0383937	0.006124	7.08613E-10	0.12148	0.271529	0.009818	0.000811	0.010733	0.00019	0.90435	0.058836	0.925	0.898	0.978	0.999	0.985	1	0.705	0.944
rs10221910	3.6332E-10	0.0383937	0.00612	0.0383937	0.006124	7.08613E-10	0.12148	0.271529	0.009818	0.000811	0.010733	0.00019	0.90435	0.058836	0.925	0.898	0.978	0.999	0.985	1	0.705	0.944
rs4740475	3.6339E-10	-0.037204	0.00593	-0.037646	0.006685	7.08742E-10	0.55626	0.174658	2.48E-05	0.001145	0.412788	0.01032	0.0638	0.015595	0.709	0.907	1	0.998	0.832	0.963	0.952	0.961
rs11039448	3.6343E-10	-0.032911	0.00525	-0.032911	0.00525	7.0883E-10	0.41726	0.266866	0.000246	6.48E-05	0.587326	0.00316	0.02386	0.764293	0.853	0.879	1	1	0.757	0.991	0.965	0.713
rs71648193	3.646E-10	-0.034835	0.00556	-0.034835	0.005557	7.11051E-10	0.71924	0.076348	0.003179	0.00731	0.558229	4.9E-05	0.01574	0.211685	0.84	0.936	0.995	0.993	0.806	1	0.976	0.911
rs4788463	3.6469E-10	0.0373584	0.00596	0.0373584	0.00596	7.1122E-10	0.93084	0.119575	0.004086	0.030038	0.278389	1.3E-06	0.28885	0.173549	0.778	0.919	0.992	0.973	0.881	1	0.888	0.911
rs35195170	3.647E-10	-0.031718	0.00506	-0.031718	0.00506	7.11247E-10	0.02892	0.387283	0.021602	0.000198	0.009026	0.00026	0.26415	0.954117	0.954	0.883	0.939	0.999	0.987	1	0.902	0.8
rs4741102	3.6488E-10	-0.037205	0.00594	-0.037675	0.00674	7.1159E-10	0.5442	0.175002	2.51E-05	0.0011	0.413659	0.01033	0.06404	0.015621	0.706	0.907	1	0.998	0.831	0.963	0.951	0.961
rs9858020	3.6531E-10	-0.033494	0.00534	-0.03343	0.00567	7.12415E-10	0.24174	0.651956	0.001239	0.199735	0.235886	4.6E-06	0.01604	0.02856	0.884	0.706	0.997	0.78	0.879	1	0.972	0.948
rs2187987	3.6624E-10	0.03468	0.00553	0.0342343	0.008323	5.1387E-10	0.92535	0.068941	0.000428	0.861392	0.013037	9.2E-07	0.45965	0.047841	0.619	0.89	0.998	0.131	0.972	1	0.72	0.91
rs4666016	3.6746E-10	-0.035143	0.00561	-0.035143	0.005607	7.16513E-10	0.40661	0.061755	2.59E-06	0.135572	0.068079	0.00404	0.04458	0.651097	0.88	0.94	1	0.881	0.959	0.99	0.963	0.844
rs4233716	3.6776E-10	-0.035144	0.00561	-0.035144	0.005608	7.17088E-10	0.40923	0.061785	2.6E-06	0.135091	0.068215	0.00403	0.04453	0.650851	0.88	0.94	1	0.881	0.959	0.99	0.963	0.844
rs4420671	3.6829E-10	-0.035141	0.00561	-0.035141	0.005607	7.18092E-10	0.40693	0.061842	2.59E-06	0.135564	0.068038	0.00404	0.04465	0.651345	0.88	0.94	1	0.881	0.959	0.99	0.963	0.844

Table S3

rs4233717	3.6841E-10	-0.035141	0.00561	-0.035141	0.005607	7.18322E-10	0.40697	0.061787	2.6E-06	0.135452	0.068209	0.00404	0.04455	0.650836	0.88	0.94	1	0.881	0.959	0.99	0.963	0.844
rs7754113	3.6861E-10	0.0527158	0.00841	0.0633967	0.020989	4.04631E-12	0.00102	0.552685	0.06769	1.74E-08	8.51E-05	0.01005	0.42683	0.874661	0.981	0.323	0.012	1	0.999	0.026	0.012	0.16
rs113846786	3.6961E-10	-0.035268	0.00563	-0.03597	0.006284	7.20628E-10	0.40382	0.67635	0.000246	0.073159	0.000179	0.00242	0.01467	0.610455	0.884	0.85	1	0.941	0.997	0.996	0.978	0.854
rs34626667	3.7035E-10	-0.049605	0.00792	-0.052879	0.010136	4.71987E-10	0.07515	0.182378	0.001346	1.89E-06	0.123654	0.02479	0.10194	0.645509	0.939	0.916	0.997	1	0.939	0.9	0.945	0.845
rs10924494	3.7061E-10	-0.049602	0.00792	-0.05285	0.010116	4.74687E-10	0.07458	0.182378	0.001338	1.93E-06	0.123639	0.02478	0.10194	0.645487	0.939	0.916	0.997	1	0.939	0.9	0.945	0.846
rs12069507	3.7078E-10	-0.049601	0.00792	-0.052876	0.010135	4.73603E-10	0.07385	0.182358	0.001347	1.92E-06	0.123673	0.02481	0.10194	0.645513	0.94	0.916	0.997	1	0.939	0.9	0.945	0.846
rs74449057	3.7088E-10	0.0383749	0.00612	0.0383749	0.006124	7.23035E-10	0.1206	0.271529	0.009818	0.000837	0.010733	0.00019	0.90435	0.058836	0.925	0.898	0.978	0.999	0.985	1	0.705	0.944
rs117218721	3.7099E-10	0.082119	0.01311	0.082119	0.013106	7.23251E-10	0.6014	0.38658	2.83E-05	0.01281	0.219314	0.00081	0.01721	0.369334	0.831	0.666	1	0.987	0.893	0.998	0.97	0.866
rs146995172	3.7198E-10	0.0383716	0.00612	0.0383716	0.006124	7.25139E-10	0.1212	0.271529	0.009821	0.000838	0.010733	0.00019	0.90435	0.058836	0.925	0.898	0.978	0.999	0.985	1	0.705	0.944
rs10924496	3.7205E-10	-0.049597	0.00792	-0.052845	0.010116	4.7657E-10	0.07458	0.182383	0.001342	1.93E-06	0.123649	0.02478	0.10194	0.645506	0.939	0.916	0.997	1	0.939	0.9	0.945	0.846
rs13426173	3.7286E-10	0.0383593	0.00612	0.0383593	0.006123	7.26816E-10	0.12115	0.298744	0.009675	0.000863	0.010286	0.00019	0.89734	0.060181	0.924	0.893	0.978	0.999	0.986	1	0.702	0.944
rs34793141	3.733E-10	-0.049593	0.00792	-0.052844	0.010118	4.77958E-10	0.07459	0.182378	0.001346	1.93E-06	0.123628	0.02479	0.10194	0.645502	0.939	0.916	0.997	1	0.939	0.9	0.945	0.846
rs12069587	3.7374E-10	-0.049591	0.00792	-0.052845	0.01012	4.78348E-10	0.07459	0.182136	0.001347	1.93E-06	0.123639	0.0248	0.10196	0.645569	0.939	0.916	0.997	1	0.939	0.9	0.945	0.846
rs4607842	3.7375E-10	-0.038954	0.00622	-0.038954	0.006218	7.28525E-10	0.1305	0.124994	2.99E-05	0.013218	0.035178	0.02601	0.03735	0.121999	0.937	0.937	1	0.99	0.977	0.915	0.972	0.941
rs12069551	3.7386E-10	-0.049591	0.00792	-0.052844	0.010119	4.78559E-10	0.07459	0.182136	0.001347	1.93E-06	0.123639	0.0248	0.10196	0.645569	0.939	0.916	0.997	1	0.939	0.9	0.945	0.846
rs3008870	3.7425E-10	0.0329832	0.00527	0.0329832	0.005265	7.29471E-10	0.9289	0.664594	0.002253	0.129031	0.045541	1.6E-06	0.1518	0.112233	0.768	0.827	0.995	0.87	0.962	1	0.919	0.921
rs116340144	3.743E-10	0.0360337	0.00575	0.0357249	0.008444	7.29565E-10	0.26865	0.052277	5.3E-05	0.105861	0.540196	0.00011	0.10079	0.004641	0.587	0.926	1	0.873	0.756	1	0.926	0.968
rs1184930	3.7778E-10	-0.038009	0.00607	-0.039061	0.006749	7.36214E-10	0.59988	0.220111	0.000621	0.001025	0.252766	0.01116	0.00132	0.032469	0.871	0.918	0.999	0.999	0.91	0.974	0.992	0.961
rs9995220	3.7782E-10	0.0373213	0.00596	0.0386606	0.00689	7.36284E-10	0.0631	0.6583	0.001062	0.007794	0.000203	0.00417	0.53664	0.066202	0.947	0.862	0.999	0.994	0.998	0.993	0.857	0.949
rs76312308	3.7807E-10	0.0351286	0.00561	0.0351286	0.005609	7.3676E-10	0.24546	0.214835	0.01483	0.001871	0.002742	9.4E-05	0.14931	0.695572	0.902	0.906	0.963	0.998	0.992	1	0.929	0.737
rs75805805	3.7816E-10	0.0710883	0.01135	0.0690781	0.014706	6.28225E-10	0.21839	0.316331	8.42E-06	0.847136	0.265133	2.1E-05	0.01043	0.886878	0.821	0.79	1	0.139	0.771	1	0.965	0.638
rs4714292	3.7831E-10	-0.03284	0.00524	-0.034161	0.007064	4.82806E-10	0.21951	0.897417	0.099587	0.000249	0.003132	7.3E-06	0.77749	0.137643	0.836	0.671	0.394	0.999	0.988	1	0.601	0.869
rs1177441	3.786E-10	-0.056506	0.00902	-0.068086	0.015055	3.14037E-10	0.72278	0.156119	0.013152	7.05E-06	0.002884	0.0143	0.17551	0.007434	0.838	0.922	0.933	1	0.993	0.92	0.921	0.972
rs139945272	3.7865E-10	0.064456	0.01029	0.0627005	0.012086	7.3787E-10	0.87776	0.745534	0.003705	7.12E-05	0.720486	5.8E-06	0.21659	0.375086	0.694	0.72	0.982	0.999	0.61	1	0.838	0.509
rs4395475	3.8023E-10	0.0373138	0.00596	0.0386602	0.006891	7.40887E-10	0.06283	0.654457	0.001071	0.007352	0.000205	0.00431	0.53893	0.067229	0.947	0.863	0.999	0.994	0.998	0.993	0.857	0.949
rs11736008	3.8031E-10	0.0373151	0.00596	0.038644	0.006883	7.4103E-10	0.06332	0.657419	0.00106	0.007811	0.000204	0.00419	0.53596	0.0663	0.947	0.862	0.999	0.994	0.998	0.993	0.857	0.949
rs1116313	3.8091E-10	-0.031654	0.00506	-0.031654	0.005055	7.42184E-10	0.70632	0.106965	0.000928	0.000522	0.417449	0.00017	0.86997	0.039439	0.804	0.91	0.998	0.999	0.81	1	0.645	0.94
rs62303536	3.818E-10	0.0373117	0.00596	0.0386607	0.006895	7.43867E-10	0.06295	0.655801	0.001081	0.007751	0.000203	0.00418	0.53605	0.065978	0.947	0.863	0.999	0.994	0.998	0.993	0.857	0.949
rs614514	3.8222E-10	-0.031613	0.00505	-0.031281	0.008244	3.71484E-10	0.04414	0.335672	0.000363	0.925753	0.767004	2.7E-07	0.06007	0.040061	0.901	0.781	0.998	0.09	0.465	1	0.915	0.911
rs12662236	3.8534E-10	0.0527952	0.00843	0.063274	0.021006	4.41897E-12	0.00101	0.551721	0.065565	1.99E-08	8.33E-05	0.01031	0.40609	0.872948	0.981	0.325	0.014	1	0.999	0.028	0.013	0.162
rs1931400	3.8561E-10	-0.03552	0.00567	-0.036221	0.006957	7.51142E-10	0.4558	0.411039	1.63E-05	0.015698	0.163533	0.00666	0.01938	0.006951	0.701	0.876	1	0.986	0.923	0.983	0.974	0.97
rs75847797	3.8572E-10	0.071573	0.01143	0.0688444	0.015724	5.36843E-10	0.16615	0.309679	7.46E-06	0.979441	0.279438	1.1E-05	0.02029	0.856996	0.835	0.786	1	0.088	0.751	1	0.948	0.633
rs9807529	3.8605E-10	0.031836	0.00509	0.0299369	0.007717	7.51988E-10	0.31146	0.375476	9.6E-05	0.403381	0.073234	4.7E-06	0.00372	0.625794	0.782	0.467	1	0.385	0.902	1	0.975	0.51
rs12524891	3.861E-10	0.0528016	0.00844	0.0633534	0.021081	4.10794E-12	0.00096	0.550427	0.066578	1.85E-08	8.3E-05	0.01042	0.40145	0.873194	0.981	0.324	0.012	1	0.999	0.026	0.012	0.16
rs4666017	3.8694E-10	-0.035097	0.00561	-0.035097	0.005607	7.5367E-10	0.41371	0.06154	2.61E-06	0.138111	0.068239	0.00406	0.04503	0.65113	0.879	0.94	1	0.878	0.958	0.99	0.962	0.844
rs3852786	3.8856E-10	0.0315524	0.00504	0.0315524	0.005041	7.56774E-10	0.59485	0.914294	0.000696	0.003093	0.368586	2E-06	0.39765	0.902075	0.604	0.671	0.998	0.993	0.764	1	0.78	0.652
rs77043447	3.8975E-10	0.0715501	0.01143	0.0688203	0.015736	5.41614E-10	0.16596	0.309216	7.46E-06	0.980848	0.279794	1.1E-05	0.02023	0.857456	0.835	0.786	1	0.088	0.751	1	0.949	0.633
rs2234690	3.9015E-10	-0.031642	0.00506	-0.031642	0.005056	7.59805E-10	0.69314	0.103694	0.000907	0.000573	0.428827	0.00016	0.87609	0.040237	0.806	0.911	0.998	0.999	0.806	1	0.647	0.939
rs72830557	3.903E-10	0.052779	0.00843	0.0632627	0.021011	4.45384E-12	0.00101	0.551299	0.065773	1.99E-08	8.31E-05	0.01035	0.40493	0.872745	0.981	0.326	0.013	1	0.999	0.028	0.012	0.162
rs186390916	3.9048E-10	0.0715233	0.01143	0.0687903	0.015792	5.37783E-10	0.16557	0.307529	7.32E-06	0.987737	0.277185	1.1E-05	0.02004	0.857499	0.835	0.787	1	0.086	0.753	1	0.949	0.633
rs4665393	3.9177E-10	-0.035088	0.00561	-0.035088	0.005608	7.62889E-10	0.40667	0.061653	2.75E-06	0.135803	0.06771	0.00408	0.04487	0.652956	0.88	0.94	1	0.881	0.959	0.99	0.963	0.844
rs9465337	3.9195E-10	0.0526101	0.00841	0.0630853	0.020967	4.45186E-12	0.00106	0.610765	0.068536	2.1E-08	7.51E-05	0.00953	0.41468	0.843193	0.98	0.295	0.013	1	0.999	0.029	0.013	0.169
rs13125362	3.922E-10	0.035277	0.00564	0.0380162	0.007465	7.637E-10	0.07619	0.042707	0.006083	0.036558	0.098894	0.00031	0.00026	0.606989	0.948	0.956	0.992	0.977	0.957	1	0.995	0.875
rs13026758	3.934E-10	-0.035096	0.00561	-0.035096	0.005609	7.65994E-10	0.40614	0.059786	2.62E-06	0.135858	0.068194	0.00421	0.04459	0.662813	0.88	0.941	1	0.88	0.958	0.99	0.963	0.842
rs11127764	3.9353E-10	0.0419366	0.0067	0.0446179	0.009249	7.66248E-10	0.31633	0.639445	3.17E-05	0.439663	0.001385	0.00234	0.00505	0.111604	0.864	0.809	1	0.516	0.993	0.989	0.982	0.914
rs10791066	3.9358E-10	-0.038643	0.00618	-0.038643	0.006176	7.66328E-10	0.01153	0.651812	0.000172	0.220688	0.344396	3.5E-05	0.25458	0.035392	0.957	0.826	1	0.772	0.847	1	0.888	0.947
rs12529149	3.9404E-10	0.0527669	0.00843	0.0632507	0.021015	4.47452E-12	0.00102	0.551083	0.065969	1.99E-08	8.31E-05	0.01037	0.40404	0.872786	0.981	0.326	0.013	1	0.999	0.028	0.012	0.162
rs118034653	3.9523E-10	0.041029	0.00656	0.041029	0.006558	7.69476E-10	0.10264	0.03927	0.002171	0.30135	0.051172	2.8E-06	0.28297	0.386658	0.921	0.941	0.995	0.693	0.96	1	0.882	0.866
rs6445195	3.9626E-10	-0.036893	0.0059	-0.038722	0.009805	5.24248E-10	0.02879	0.229855	0.052146	6.27E-06	0.101333	8.2E-05	0.14073	0.216835	0.933	0.86	0.687	1	0.913	1	0.896	0.475
rs11039447	3.9627E-10	-0.03284	0.00525	-0.03284	0.00525	7.71454E-10	0.41784	0.267327	0.000251	6.48E-05	0.599056	0.00324	0.02418	0.762135	0.853	0.878	1	1	0.752	0.991	0.965	0.712
rs62405608	3.963E-10	0.0525863	0.00841	0.0629894	0.020966	4.52257E-12	0.00106	0.619628	0.069126	2.17E-08	7.36E-05	0.0093	0.41229	0.845645	0.98	0.291	0.014	1	0.999	0.03	0.013	0.169
rs76517802	3.9631E-10	-0.070061	0.0112	-0.07461	0.015657	7.48869E-10	0.13762	0.276797	0.000508	0.62687	0.000359	0.0001	0.07472	0.113945	0.898	0.861	0.999	0.303	0.996	1	0.935	0.908
rs1019614	3.9641E-10	0.0353846	0.00566	0.0386856	0.007608	7.71726E-10	0.0705	0.007795	0.008002	0.004125	0.001785	0.00147	0.07488	0.919132	0.948	0.971	0.987	0.997	0.995	0.998	0.96	0.807
rs72116399	3.9691E-10	0.0463813	0.00741	0.0463813	0.007415	7.72688E-10	0.54326	0.055215	0.010672	0.000788	0.063095	0.00112	0.05196	0.023096	0.887	0.953	0.984	0.999	0.969	0.999	0.968	0.968
rs1425523	3.9699E-10	0.0522331	0.00835	0.0522331	0.00835	7.72825E-10	0.84437	0.365815	0.00119	0.020844	0.296611	0.00031	0.00133	0.043166	0.833	0.893	0.999	0.984	0.891	1	0.991	0.954

Table S3

rs1076563	3.97E-10	-0.031619	0.00505	-0.031619	0.005055	7.7285E-10	0.70245	0.111836	0.000994	0.000497	0.408328	0.00017	0.87063	0.039315	0.806	0.909	0.998	0.999	0.814	1	0.647	0.94
rs73913948	3.9723E-10	-0.051294	0.0082	-0.051294	0.0082	7.73282E-10	0.85856	0.984422	9.32E-05	0.006698	0.033063	0.00257	0.00439	0.63248	0.764	0.785	1	0.993	0.971	0.995	0.984	0.833
rs4666018	3.9863E-10	-0.035073	0.00561	-0.035073	0.005608	7.75956E-10	0.40491	0.061673	2.75E-06	0.135793	0.066905	0.00413	0.0457	0.657857	0.88	0.94	1	0.881	0.959	0.99	0.962	0.843
rs36162392	3.9901E-10	-0.068317	0.01092	-0.068317	0.010923	7.76684E-10	0.69678	0.929691	0.001336	0.000834	0.310773	0.00102	0.02654	0.00874	0.845	0.814	0.998	0.999	0.882	0.998	0.972	0.968
rs1931402	3.9918E-10	-0.037123	0.00594	-0.037586	0.00672	7.76999E-10	0.5536	0.173676	2.63E-05	0.001094	0.417058	0.01076	0.06479	0.015788	0.708	0.907	1	0.998	0.83	0.961	0.951	0.961
rs41398044	3.9936E-10	0.0525863	0.00841	0.0630618	0.020954	4.60409E-12	0.00106	0.609207	0.068514	2.16E-08	7.53E-05	0.00958	0.41517	0.843845	0.98	0.296	0.014	1	0.999	0.029	0.013	0.17
rs1933637	4.0125E-10	0.0527541	0.00844	0.063157	0.021024	4.42616E-12	0.00112	0.550826	0.066686	1.83E-08	8.29E-05	0.01041	0.40095	0.872758	0.98	0.325	0.013	1	0.999	0.027	0.012	0.161
rs896436	4.015E-10	-0.032635	0.00522	-0.033736	0.006083	7.8143E-10	0.33124	0.043239	0.000312	0.089449	0.000138	0.00262	0.27672	0.224071	0.902	0.952	1	0.935	0.998	0.996	0.911	0.919
rs9460336	4.0156E-10	0.0525743	0.00841	0.0630103	0.02095	4.65879E-12	0.00107	0.614526	0.068801	2.21E-08	7.44E-05	0.00944	0.414	0.844357	0.98	0.294	0.014	1	0.999	0.029	0.013	0.17
rs143328184	4.0169E-10	0.0714833	0.01143	0.0687451	0.015757	5.55783E-10	0.16634	0.309924	7.43E-06	0.984617	0.279764	1.1E-05	0.0202	0.858742	0.835	0.786	1	0.087	0.751	1	0.949	0.633
rs62405600	4.0277E-10	0.0525838	0.00841	0.0627359	0.021031	4.44931E-12	0.00107	0.604884	0.069493	2.21E-08	7.25E-05	0.00881	0.39048	0.886705	0.98	0.297	0.014	1	0.999	0.031	0.013	0.157
rs16882031	4.033E-10	0.0527268	0.00843	0.0630598	0.020934	4.87443E-12	0.00115	0.551636	0.065722	2.05E-08	8.31E-05	0.01034	0.40575	0.873052	0.979	0.327	0.014	1	0.999	0.029	0.013	0.164
rs13425956	4.0532E-10	0.0382934	0.00613	0.0382934	0.006125	7.88704E-10	0.13986	0.306355	0.012194	0.000813	0.008909	0.00016	0.86862	0.056175	0.919	0.89	0.97	0.999	0.986	1	0.69	0.944
rs1559622	4.0692E-10	0.035388	0.00566	0.0379823	0.00722	7.91756E-10	0.07911	0.009363	0.007596	0.003548	0.002471	0.00147	0.07171	0.923773	0.946	0.97	0.988	0.997	0.994	0.998	0.961	0.807
rs75257146	4.0698E-10	0.0526221	0.00842	0.0529796	0.013466	7.91857E-10	0.09063	0.145893	0.002531	0.027033	0.432303	1.6E-05	0.00197	0.057445	0.5	0.9	0.994	0.971	0.803	1	0.988	0.932
rs4740474	4.0728E-10	-0.037105	0.00594	-0.037565	0.006716	7.92426E-10	0.55406	0.174267	2.66E-05	0.001095	0.418328	0.01078	0.06505	0.015781	0.708	0.907	1	0.998	0.83	0.961	0.951	0.961
rs143424112	4.0748E-10	0.0382615	0.00612	0.0382615	0.006121	7.92806E-10	0.12416	0.276175	0.010031	0.000932	0.009883	0.0002	0.91411	0.06046	0.924	0.897	0.978	0.999	0.986	1	0.709	0.944
rs62086042	4.0769E-10	-0.034836	0.00557	-0.034334	0.00633	7.93213E-10	0.69606	0.118929	6.57E-05	0.068673	0.776362	3.7E-05	0.41791	0.006776	0.684	0.897	1	0.913	0.659	1	0.818	0.961
rs9426568	4.0772E-10	-0.031696	0.00507	-0.031241	0.006897	7.9328E-10	0.00753	0.1257	0.003498	0.030104	0.086711	2.3E-06	0.45012	0.621522	0.959	0.903	0.991	0.966	0.937	1	0.49	0.807
rs1982861	4.0805E-10	-0.039093	0.00625	-0.039491	0.007958	5.19884E-10	0.95052	0.126584	0.089046	5.19E-05	0.043233	3.2E-06	0.47367	0.834326	0.628	0.858	0.442	1	0.935	1	0.708	0.661
rs1931403	4.0839E-10	-0.037102	0.00594	-0.037562	0.006713	7.9454E-10	0.5536	0.174148	2.67E-05	0.001094	0.417976	0.01077	0.06503	0.015835	0.708	0.907	1	0.998	0.83	0.961	0.951	0.96
rs34096377	4.0872E-10	0.0527101	0.00843	0.0630421	0.02094	4.91257E-12	0.00115	0.551082	0.065964	2.05E-08	8.32E-05	0.01037	0.40405	0.872757	0.979	0.328	0.014	1	0.999	0.029	0.013	0.164
rs7770791	4.0931E-10	0.052577	0.00841	0.0629195	0.021022	4.50337E-12	0.00106	0.585315	0.068412	2.1E-08	7.56E-05	0.00951	0.39819	0.88052	0.98	0.307	0.013	1	0.999	0.028	0.012	0.159
rs80060958	4.1032E-10	0.0714389	0.01143	0.0687045	0.015762	5.67126E-10	0.16631	0.309863	7.5E-06	0.986647	0.278991	1.1E-05	0.02019	0.859406	0.835	0.786	1	0.087	0.752	1	0.949	0.633
rs17149332	4.1045E-10	0.038058	0.00609	0.038058	0.006089	7.98465E-10	0.13178	0.818633	0.000857	0.014112	0.033891	0.00036	0.05577	0.263493	0.929	0.791	0.999	0.989	0.975	1	0.961	0.909
rs9324959	4.1052E-10	0.0323202	0.00517	0.0310599	0.006319	5.59659E-10	0.93597	0.22484	0.001108	0.466185	0.440592	4.6E-08	0.05315	0.40793	0.627	0.817	0.992	0.368	0.681	1	0.917	0.766
rs11227627	4.1123E-10	-0.033075	0.00529	-0.037726	0.008307	7.99954E-10	0.54186	0.092349	0.001462	0.080718	3.29E-06	0.00223	0.10026	0.328069	0.876	0.939	0.998	0.941	0.999	0.996	0.95	0.903
rs11662175	4.1135E-10	0.0316448	0.00506	0.0316448	0.005063	8.00185E-10	0.40217	0.483699	0.000431	0.32757	0.186555	1.1E-06	0.07126	0.09535	0.813	0.597	0.999	0.572	0.863	1	0.924	0.897
rs78576265	4.1209E-10	0.0715368	0.01145	0.0688058	0.015805	5.66483E-10	0.16578	0.319341	7.61E-06	0.986523	0.271492	1.1E-05	0.01999	0.86623	0.835	0.783	1	0.086	0.757	1	0.949	0.631
rs62404534	4.1234E-10	0.0525716	0.00841	0.0630083	0.021	4.62463E-12	0.00105	0.571626	0.0673	2.1E-08	7.83E-05	0.00989	0.40165	0.877617	0.98	0.314	0.013	1	0.999	0.028	0.012	0.16
rs41470445	4.129E-10	0.0525694	0.00841	0.0629905	0.021004	4.60909E-12	0.00106	0.573819	0.067559	2.09E-08	7.79E-05	0.00984	0.4011	0.878058	0.98	0.313	0.013	1	0.999	0.028	0.012	0.16
rs62404532	4.1298E-10	0.0525701	0.00841	0.0630182	0.020998	4.63902E-12	0.00105	0.569985	0.067157	2.1E-08	7.87E-05	0.00994	0.40195	0.877075	0.98	0.315	0.013	1	0.999	0.027	0.012	0.16
rs1889305	4.1356E-10	-0.037099	0.00594	-0.0375	0.006618	8.04394E-10	0.54654	0.178494	2.7E-05	0.001115	0.40975	0.01056	0.06409	0.017105	0.707	0.906	1	0.998	0.833	0.963	0.951	0.96
rs1334029	4.1357E-10	-0.037093	0.00594	-0.037537	0.006689	8.04406E-10	0.55226	0.175276	2.7E-05	0.001099	0.416487	0.01074	0.06492	0.016126	0.708	0.907	1	0.998	0.831	0.962	0.951	0.96
rs188087993	4.1471E-10	0.0643061	0.01029	0.0623703	0.01225	8.0658E-10	0.88496	0.7479	0.003851	6.63E-05	0.731119	6.1E-06	0.21805	0.370792	0.691	0.718	0.981	1	0.604	1	0.836	0.506
rs60933862	4.1519E-10	-0.032041	0.00513	-0.03148	0.006401	8.07501E-10	0.90599	0.021628	0.005211	0.035188	0.019676	1.2E-06	0.41465	0.461484	0.738	0.943	0.985	0.96	0.973	1	0.831	0.627
rs143384544	4.1622E-10	-0.035683	0.00571	-0.035683	0.005711	8.09461E-10	0.53896	0.475012	4.01E-05	0.013123	0.095818	0.00467	0.0227	0.019606	0.728	0.872	1	0.989	0.949	0.99	0.973	0.962
rs75101764	4.1639E-10	0.0713937	0.01143	0.0686149	0.015952	5.5694E-10	0.1659	0.2954	6.82E-06	0.993386	0.287321	1.2E-05	0.02007	0.846817	0.835	0.79	1	0.082	0.745	1	0.949	0.635
rs10924530	4.1662E-10	-0.039069	0.00625	-0.039069	0.006253	8.10213E-10	0.1805	0.130244	2.52E-05	0.017972	0.034775	0.02216	0.03326	0.149312	0.928	0.936	1	0.987	0.977	0.934	0.973	0.935
rs180763627	4.1729E-10	-0.083609	0.01338	-0.092459	0.019604	8.11494E-10	0.02289	0.232399	0.001934	0.249085	0.000174	0.0003	0.02727	0.646477	0.957	0.904	0.997	0.755	0.997	0.999	0.971	0.839
rs2551769	4.179E-10	-0.035015	0.0056	-0.048888	0.011891	2.86622E-11	0.49355	0.022158	0.030037	5.23E-06	1.22E-05	0.06024	0.09045	0.072952	0.606	0.937	0.138	1	1	0.103	0.82	0.879
rs1858549	4.1878E-10	0.0316859	0.00507	0.0311299	0.007157	8.14326E-10	0.00746	0.138667	0.003833	0.035081	0.076277	1.7E-06	0.40455	0.607706	0.958	0.898	0.989	0.959	0.941	1	0.464	0.806
rs10791895	4.1931E-10	-0.03306	0.00529	-0.037703	0.008304	8.15345E-10	0.54108	0.092741	0.001469	0.08137	3.32E-06	0.00223	0.10034	0.328245	0.876	0.939	0.998	0.941	0.999	0.996	0.95	0.903
rs59028806	4.1934E-10	-0.035752	0.00572	-0.039541	0.010627	8.15392E-10	0.01476	0.269213	0.002859	0.210425	0.060809	2.4E-05	0.00011	0.261955	0.952	0.871	0.991	0.743	0.95	1	0.995	0.551
rs7355800	4.1952E-10	0.039032	0.00625	0.0394247	0.007639	5.79613E-10	0.95354	0.133102	0.07937	5.38E-05	0.042264	4.4E-06	0.44633	0.837298	0.65	0.864	0.509	1	0.94	1	0.737	0.68
rs1019615	4.1985E-10	0.0353604	0.00566	0.0379353	0.007211	8.16373E-10	0.07963	0.009364	0.007597	0.003675	0.002471	0.00147	0.07171	0.923765	0.946	0.97	0.988	0.997	0.994	0.998	0.961	0.807
rs7750346	4.2033E-10	0.0525438	0.00841	0.0629259	0.021017	4.64326E-12	0.00106	0.581078	0.068467	2.12E-08	7.65E-05	0.00969	0.39885	0.879239	0.98	0.309	0.013	1	0.999	0.028	0.012	0.159
rs1931401	4.2036E-10	-0.037074	0.00594	-0.037489	0.006638	8.17334E-10	0.5581	0.173695	2.61E-05	0.001206	0.412751	0.01072	0.06497	0.016083	0.71	0.907	1	0.998	0.833	0.962	0.951	0.96
rs12583	4.2126E-10	0.0390674	0.00625	0.0394718	0.007861	5.46871E-10	0.95437	0.11937	0.088062	5.41E-05	0.047642	3.4E-06	0.45879	0.815218	0.635	0.864	0.455	1	0.932	1	0.719	0.671
rs75914203	4.2213E-10	0.112498	0.01801	0.112498	0.018012	8.20696E-10	0.34161	0.565443	0.000737	0.026396	0.004185	0.00062	0.0687	0.456779	0.899	0.872	0.999	0.981	0.992	0.999	0.957	0.884
rs13400096	4.224E-10	0.0382904	0.00613	0.0382904	0.006131	8.21223E-10	0.11737	0.279763	0.009006	0.000918	0.013192	0.00018	0.86164	0.064885	0.925	0.895	0.98	0.999	0.983	1	0.691	0.942
rs78747715	4.229E-10	0.0713777	0.01143	0.0686282	0.015801	5.80036E-10	0.1653	0.315372	7.47E-06	0.992823	0.277306	1.2E-05	0.02013	0.859742	0.835	0.784	1	0.086	0.753	1	0.949	0.632
rs184775744	4.2298E-10	0.0759304	0.01216	0.0759304	0.012158	8.22314E-10	0.35705	0.200232	0.000284	0.00121	0.013536	0.01032	0.01772	0.755068	0.89	0.912	1	0.998	0.984	0.976	0.975	0.758
rs77250485	4.2356E-10	0.0713801	0.01143	0.0686177	0.015801	5.79674E-10	0.17043	0.309278	7.51E-06	0.99416	0.278348	1.1E-05	0.02013	0.859334	0.833	0.786	1	0.085	0.752	1	0.948	0.632
rs1889304	4.2407E-10	-0.037076	0.00594	-0.037471	0.006608	8.24387E-10	0.54655	0.179068	2.76E-05	0.001115	0.410324	0.01058	0.06436	0.017175	0.707	0.906	1	0.998	0.833	0.963	0.951	0.959

Table S3

rs1242786	4.2435E-10	0.0494162	0.00791	0.0494162	0.007913	8.2493E-10	0.05929	0.54715	0.000585	0.040663	0.006949	0.00048	0.63815	0.039995	0.946	0.872	0.999	0.97	0.989	0.999	0.832	0.956
rs10791065	4.2539E-10	-0.038504	0.00617	-0.038504	0.006166	8.26905E-10	0.01256	0.716048	0.00016	0.201745	0.346777	4.4E-05	0.27226	0.02874	0.957	0.819	1	0.795	0.848	1	0.885	0.95
rs7168241	4.2545E-10	0.115087	0.01843	0.121611	0.035023	8.27021E-10	0.01662	0.015147	0.00044	0.006625	0.087264	0.00108	0.00322	0.139758	0.953	0.373	0.999	0.993	0.942	0.998	0.984	0.912
rs36122414	4.2623E-10	-0.032515	0.00521	-0.032515	0.005207	8.28514E-10	0.26638	0.139346	0.000251	0.055409	0.000291	0.00346	0.26727	0.187986	0.913	0.932	1	0.962	0.997	0.995	0.915	0.926
rs11679664	4.2701E-10	0.038302	0.00613	0.038302	0.006134	8.29985E-10	0.1181	0.263562	0.010166	0.000857	0.012038	0.0002	0.89809	0.057061	0.925	0.899	0.978	0.999	0.984	1	0.704	0.945
rs11682446	4.2701E-10	0.038302	0.00613	0.038302	0.006134	8.29985E-10	0.1181	0.263562	0.010166	0.000857	0.012038	0.0002	0.89809	0.057061	0.925	0.899	0.978	0.999	0.984	1	0.704	0.945
rs11692026	4.2701E-10	0.038302	0.00613	0.038302	0.006134	8.29985E-10	0.1181	0.263562	0.010166	0.000857	0.012038	0.0002	0.89809	0.057061	0.925	0.899	0.978	0.999	0.984	1	0.704	0.945
rs3906401	4.2708E-10	0.0314997	0.00504	0.0314997	0.005045	8.30123E-10	0.63075	0.66519	0.004692	0.000597	0.108274	8E-05	0.03747	0.770503	0.834	0.83	0.991	0.999	0.937	1	0.961	0.732
rs11692326	4.2748E-10	0.0383009	0.00613	0.0383009	0.006134	8.30878E-10	0.11815	0.263562	0.010152	0.00086	0.012044	0.0002	0.89791	0.057064	0.925	0.899	0.978	0.999	0.984	1	0.704	0.945
rs4347474	4.2793E-10	-0.076215	0.01221	-0.076215	0.012207	8.31746E-10	0.19071	0.536938	0.0022	0.106888	0.115492	4.3E-06	0.03408	0.158823	0.904	0.716	0.996	0.902	0.936	1	0.963	0.913
rs2073526	4.2933E-10	-0.031656	0.00507	-0.031656	0.005071	8.34395E-10	0.159	0.166997	0.000195	0.000484	0.199553	0.00433	0.4634	0.226013	0.922	0.921	1	0.999	0.919	0.992	0.865	0.913
rs7121038	4.3036E-10	-0.032777	0.00525	-0.032777	0.00525	8.36364E-10	0.425	0.2692	0.000264	6.42E-05	0.599594	0.00328	0.02484	0.763771	0.851	0.877	1	1	0.752	0.991	0.964	0.712
rs2081474	4.3057E-10	0.052113	0.00835	0.052113	0.008348	8.36771E-10	0.78286	0.367458	0.001138	0.026054	0.296827	0.00029	0.00136	0.042559	0.841	0.893	0.999	0.981	0.892	1	0.991	0.955
rs10756183	4.3073E-10	0.037149	0.00595	0.037149	0.005951	8.37071E-10	0.69673	0.235834	1.7E-05	0.001419	0.400788	0.01181	0.08049	0.018623	0.738	0.896	1	0.998	0.838	0.958	0.946	0.959
rs2695237	4.3081E-10	0.0316518	0.00507	0.0311917	0.006903	8.37219E-10	0.0076	0.126754	0.003611	0.030209	0.087118	2.3E-06	0.44814	0.623185	0.958	0.903	0.991	0.966	0.937	1	0.489	0.807
rs1334033	4.3104E-10	-0.037051	0.00594	-0.037431	0.006575	8.37662E-10	0.57872	0.174195	2.57E-05	0.001303	0.418657	0.01069	0.065	0.015655	0.715	0.907	1	0.998	0.831	0.963	0.951	0.961
rs76385734	4.3188E-10	0.0382968	0.00614	0.0382968	0.006135	8.3926E-10	0.1149	0.300793	0.010232	0.00093	0.010052	0.00019	0.88906	0.060258	0.926	0.893	0.977	0.999	0.986	1	0.7	0.943
rs10490563	4.3266E-10	-0.03846	0.00616	-0.03846	0.006162	8.40736E-10	0.55683	0.610653	0.000337	0.008234	0.013201	0.00094	0.25563	0.228754	0.867	0.861	1	0.993	0.984	0.999	0.909	0.912
rs117186866	4.3332E-10	0.0713318	0.01143	0.0685645	0.015826	5.91103E-10	0.16492	0.320718	7.43E-06	0.996712	0.277307	1.2E-05	0.02008	0.859574	0.835	0.782	1	0.085	0.752	1	0.949	0.632
rs4646619	4.3346E-10	0.0314989	0.00505	0.033902	0.009136	3.37838E-10	0.27795	0.264837	4.44E-07	0.019511	0.022934	0.08141	0.0005	0.439362	0.417	0.812	1	0.932	0.96	0.35	0.992	0.756
rs10756184	4.3397E-10	0.0371401	0.00595	0.0371401	0.005951	8.43226E-10	0.67584	0.236033	1.7E-05	0.001391	0.400866	0.01181	0.08047	0.018601	0.734	0.896	1	0.998	0.837	0.957	0.945	0.959
rs4741104	4.3433E-10	-0.03704	0.00593	-0.03741	0.006552	8.43909E-10	0.58375	0.173696	2.6E-05	0.001309	0.417257	0.01073	0.06483	0.015699	0.716	0.908	1	0.998	0.832	0.963	0.951	0.961
rs7027297	4.3471E-10	0.0370392	0.00593	0.0374099	0.006554	8.44636E-10	0.58315	0.173687	2.6E-05	0.00131	0.417231	0.01074	0.06482	0.015698	0.716	0.908	1	0.998	0.832	0.963	0.951	0.961
rs10680443	4.3569E-10	-0.033028	0.00529	-0.03769	0.008321	8.46497E-10	0.5412	0.092349	0.001464	0.084329	3.3E-06	0.00224	0.10036	0.328074	0.876	0.939	0.998	0.938	0.999	0.996	0.95	0.902
rs11130204	4.3785E-10	-0.039028	0.00625	-0.039422	0.007871	5.65339E-10	0.95502	0.124285	0.088873	5.4E-05	0.046962	3.3E-06	0.46351	0.82274	0.633	0.861	0.451	1	0.932	1	0.716	0.667
rs6940116	4.3866E-10	-0.049123	0.00787	-0.049123	0.007873	8.52154E-10	0.23465	0.5178	0.000178	0.044612	0.061043	0.00083	0.21031	0.015391	0.916	0.881	1	0.969	0.966	0.999	0.926	0.968
rs2155462	4.3878E-10	-0.031651	0.00507	-0.030678	0.006681	8.52369E-10	0.69853	0.007561	3.09E-05	0.016854	0.555211	0.00013	0.50792	0.121313	0.761	0.949	1	0.975	0.353	1	0.765	0.89
rs4855837	4.3908E-10	-0.039025	0.00625	-0.039418	0.007872	5.66949E-10	0.95436	0.124286	0.08889	5.41E-05	0.046928	3.3E-06	0.46395	0.823138	0.633	0.861	0.451	1	0.932	1	0.715	0.667
rs4855838	4.3908E-10	-0.039025	0.00625	-0.039418	0.007872	5.66949E-10	0.95436	0.124286	0.08889	5.41E-05	0.046928	3.3E-06	0.46395	0.823138	0.633	0.861	0.451	1	0.932	1	0.715	0.667
rs4855853	4.3908E-10	-0.039025	0.00625	-0.039418	0.007872	5.66949E-10	0.95436	0.124286	0.08889	5.41E-05	0.046928	3.3E-06	0.46395	0.823138	0.633	0.861	0.451	1	0.932	1	0.715	0.667
rs3870341	4.3914E-10	-0.039025	0.00625	-0.039418	0.00787	5.67181E-10	0.95437	0.124286	0.088882	5.41E-05	0.046964	3.3E-06	0.46352	0.822744	0.633	0.861	0.451	1	0.932	1	0.716	0.667
rs1334031	4.3961E-10	-0.03703	0.00594	-0.037408	0.006571	8.53952E-10	0.57831	0.173557	2.58E-05	0.001333	0.417393	0.01074	0.06478	0.015672	0.715	0.908	1	0.998	0.832	0.963	0.951	0.961
rs1407045	4.4022E-10	0.0316352	0.00507	0.0316352	0.005071	8.55106E-10	0.25216	0.27811	0.000103	0.002713	0.260218	0.00239	0.12326	0.400218	0.908	0.904	1	0.997	0.902	0.996	0.941	0.887
rs10865956	4.406E-10	-0.039018	0.00625	-0.039395	0.007891	5.75449E-10	0.9314	0.126364	0.086654	5.57E-05	0.043902	3.4E-06	0.47331	0.832604	0.629	0.86	0.46	1	0.935	1	0.712	0.666
rs66518420	4.4067E-10	0.0390223	0.00625	0.039416	0.007869	5.69361E-10	0.95447	0.124254	0.088852	5.43E-05	0.04694	3.4E-06	0.46387	0.823089	0.633	0.861	0.451	1	0.932	1	0.716	0.667
rs11150581	4.4091E-10	-0.032523	0.00521	-0.032893	0.007142	8.56432E-10	0.96875	0.716221	0.004867	0.00027	0.000993	0.00027	0.15189	0.267107	0.747	0.789	0.986	0.999	0.993	0.999	0.904	0.547
rs17605038	4.4166E-10	0.0473424	0.00759	0.0473424	0.007589	8.57856E-10	0.27518	0.069453	9.54E-05	0.00215	0.013393	0.00296	0.94324	0.947151	0.886	0.929	1	0.997	0.981	0.993	0.723	0.763
rs4930395	4.4183E-10	-0.033021	0.00529	-0.03764	0.008291	8.58166E-10	0.5416	0.093723	0.001514	0.081641	3.42E-06	0.00224	0.09936	0.331332	0.876	0.939	0.998	0.94	0.999	0.996	0.95	0.902
rs2161990	4.4232E-10	0.0353168	0.00566	0.0377092	0.007102	8.59097E-10	0.08228	0.010085	0.007325	0.003941	0.00246	0.00153	0.06964	0.927311	0.945	0.97	0.989	0.997	0.994	0.998	0.961	0.808
rs62261249	4.4282E-10	0.0390175	0.00625	0.0394098	0.00786	5.73075E-10	0.95395	0.124188	0.088805	5.47E-05	0.047178	3.4E-06	0.46292	0.82138	0.633	0.861	0.452	1	0.932	1	0.716	0.668
rs3905330	4.4288E-10	-0.039019	0.00625	-0.039415	0.007856	5.74635E-10	0.95487	0.122724	0.088218	5.31E-05	0.048366	3.5E-06	0.46073	0.821415	0.635	0.862	0.456	1	0.931	1	0.718	0.669
rs77716838	4.4313E-10	0.0758872	0.01217	0.0758872	0.012165	8.60645E-10	0.37668	0.02571	0.012913	0.018833	0.010185	5.4E-05	0.02915	0.909143	0.893	0.957	0.976	0.986	0.987	1	0.971	0.795
rs41272623	4.432E-10	-0.040574	0.0065	-0.040574	0.006504	8.60776E-10	0.04508	0.949395	0.000997	0.306496	0.034334	5.7E-06	0.18862	0.140936	0.934	0.75	0.998	0.664	0.966	1	0.9	0.907
rs12422241	4.4387E-10	0.076146	0.01221	0.076146	0.012207	8.62045E-10	0.19324	0.537146	0.002258	0.106653	0.115507	4.3E-06	0.03446	0.15868	0.904	0.717	0.996	0.902	0.936	1	0.963	0.913
rs61258990	4.4392E-10	0.0536483	0.0086	0.0631045	0.020974	9.50386E-12	0.00183	0.641883	0.066713	1.05E-07	2.62E-05	0.0064	0.49696	0.885376	0.971	0.304	0.037	1	1	0.079	0.032	0.131
rs77621608	4.4442E-10	0.0712759	0.01143	0.0684425	0.016042	5.81604E-10	0.16224	0.322819	6.96E-06	0.975821	0.276523	1.2E-05	0.02005	0.849022	0.836	0.781	1	0.078	0.752	1	0.949	0.634
rs1242788	4.4539E-10	0.0493628	0.00791	0.0493628	0.007914	8.64936E-10	0.05627	0.547688	0.000571	0.041202	0.007025	0.00053	0.6219	0.03923	0.947	0.872	0.999	0.97	0.989	0.999	0.836	0.956
rs9871024	4.4635E-10	0.0390088	0.00625	0.0394008	0.007844	5.8056E-10	0.95434	0.122712	0.088158	5.4E-05	0.048378	3.5E-06	0.46068	0.820999	0.635	0.862	0.457	1	0.931	1	0.719	0.67
rs13322887	4.4647E-10	0.0390085	0.00625	0.0394004	0.007843	5.80758E-10	0.95435	0.122712	0.088157	5.4E-05	0.048377	3.5E-06	0.46068	0.820997	0.635	0.862	0.457	1	0.931	1	0.719	0.67
rs7756048	4.4732E-10	0.0524471	0.00841	0.0625899	0.020954	5.321E-12	0.00114	0.600902	0.069617	2.52E-08	7.19E-05	0.00911	0.39337	0.884248	0.979	0.302	0.015	1	0.999	0.032	0.013	0.16
rs10511562	4.484E-10	-0.037017	0.00594	-0.037328	0.006455	8.70665E-10	0.57777	0.177421	2.68E-05	0.001325	0.410863	0.01056	0.0645	0.016836	0.715	0.907	1	0.998	0.835	0.964	0.951	0.96
rs1253434	4.4881E-10	-0.032542	0.00522	-0.033543	0.006012	8.71431E-10	0.35711	0.040182	0.000306	0.092727	0.00017	0.00271	0.27297	0.206722	0.899	0.953	1	0.932	0.998	0.996	0.911	0.922
rs16882045	4.4881E-10	0.0525888	0.00843	0.0630777	0.020951	5.50338E-12	0.00102	0.551742	0.067197	2.41E-08	8.4E-05	0.01047	0.40547	0.873608	0.98	0.328	0.014	1	0.999	0.03	0.013	0.165
rs10511561	4.4937E-10	-0.037017	0.00594	-0.037324	0.006451	8.72495E-10	0.57687	0.177688	2.69E-05	0.001331	0.41042	0.01055	0.06413	0.016944	0.715	0.907	1	0.998	0.835	0.964	0.951	0.96
rs7625857	4.4945E-10	-0.039004	0.00625	-0.039395	0.007853	5.82016E-10	0.95591	0.124172	0.088992	5.54E-05	0.04725	3.4E-06	0.46392	0.821578	0.634	0.861	0.452	1	0.932	1	0.716	0.668

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rs1253435	4.4974E-10	-0.032584	0.00523	-0.033697	0.006091	8.73214E-10	0.21333	0.036076	0.000322	0.10188	0.00022	0.00254	0.3212	0.201625	0.919	0.955	1	0.925	0.997	0.996	0.902	0.923
rs200362632	4.4996E-10	0.0452273	0.00725	0.0452273	0.007253	8.73629E-10	0.07514	0.051831	0.005295	0.128704	0.032273	1.7E-05	0.02544	0.929686	0.941	0.946	0.991	0.897	0.975	1	0.973	0.814
rs1263540	4.5045E-10	0.0493985	0.00792	0.0493985	0.007922	8.74563E-10	0.05875	0.579195	0.000579	0.04558	0.00839	0.00046	0.58311	0.034143	0.947	0.869	0.999	0.967	0.988	0.999	0.844	0.958
rs73158379	4.5057E-10	-0.040558	0.0065	-0.040558	0.006504	8.74785E-10	0.04506	0.949639	0.001002	0.306661	0.034467	5.8E-06	0.1885	0.141281	0.934	0.75	0.998	0.664	0.966	1	0.9	0.907
rs139254555	4.5139E-10	0.075162	0.01205	0.0854067	0.017768	8.76346E-10	0.00068	0.104823	0.002763	0.021205	0.002759	0.00265	0.52432	0.086687	0.987	0.943	0.997	0.987	0.994	0.997	0.874	0.949
rs4888596	4.5152E-10	-0.049906	0.008	-0.049906	0.008004	8.76585E-10	0.31465	0.108276	0.004469	0.000114	0.025166	0.00591	0.17853	0.080086	0.912	0.941	0.994	1	0.981	0.99	0.937	0.95
rs538457339	4.5272E-10	0.032208	0.00517	0.0317105	0.005603	6.81714E-10	0.88468	0.229326	0.001387	0.42402	0.405137	6.3E-08	0.06626	0.398195	0.69	0.831	0.992	0.439	0.725	1	0.915	0.787
rs3866330	4.5334E-10	-0.038993	0.00625	-0.039388	0.007874	5.8478E-10	0.95435	0.124401	0.089421	5.41E-05	0.047079	3.4E-06	0.46471	0.823821	0.633	0.86	0.449	1	0.932	1	0.715	0.667
rs9862534	4.5353E-10	-0.038997	0.00626	-0.039389	0.00785	5.87756E-10	0.95246	0.124373	0.088931	5.46E-05	0.04783	3.4E-06	0.46219	0.818104	0.633	0.861	0.453	1	0.932	1	0.717	0.669
rs6742571	4.5474E-10	0.0363008	0.00582	0.0363008	0.005823	8.82705E-10	0.31551	0.030888	5.3E-05	0.097755	0.086834	0.00087	0.23344	0.157588	0.903	0.956	1	0.927	0.957	0.999	0.918	0.928
rs4740473	4.5482E-10	-0.037001	0.00594	-0.037338	0.006497	8.82857E-10	0.58048	0.175845	2.7E-05	0.001321	0.415233	0.01067	0.06479	0.016312	0.716	0.907	1	0.998	0.833	0.963	0.951	0.96
rs12617351	4.5482E-10	0.0328799	0.00527	0.032922	0.005367	8.82866E-10	0.4654	0.008874	0.000615	0.028866	0.277019	0.00024	0.56234	0.007863	0.88	0.968	0.999	0.979	0.897	1	0.846	0.973
rs2217017	4.5516E-10	0.0351457	0.00564	0.0380719	0.007557	8.83505E-10	0.07454	0.041608	0.0065	0.037654	0.097915	0.00034	0.00025	0.601021	0.948	0.956	0.991	0.976	0.958	1	0.995	0.876
rs4918130	4.5522E-10	-0.032843	0.00527	-0.034773	0.006849	8.8362E-10	0.19648	0.034422	0.006776	0.263533	0.010348	3.7E-05	0.00247	0.468889	0.912	0.951	0.983	0.758	0.986	1	0.989	0.869
rs1334030	4.5547E-10	-0.036998	0.00594	-0.037346	0.006516	8.84091E-10	0.58157	0.175034	2.69E-05	0.001317	0.416592	0.01074	0.06494	0.016132	0.716	0.907	1	0.998	0.833	0.963	0.951	0.96
rs4582035	4.5574E-10	-0.04184	0.00671	-0.04184	0.006712	8.84606E-10	0.20115	0.035567	0.006002	0.062735	0.032272	5.3E-05	0.04265	0.346658	0.926	0.958	0.992	0.958	0.978	1	0.97	0.907
rs6831966	4.5616E-10	0.0351257	0.00563	0.0378866	0.007442	8.85409E-10	0.07917	0.037603	0.006542	0.035159	0.098817	0.00035	0.00029	0.583535	0.947	0.958	0.991	0.978	0.958	1	0.995	0.878
rs13429850	4.5622E-10	0.0382154	0.00613	0.0382154	0.006131	8.85515E-10	0.11737	0.281114	0.008997	0.000918	0.013641	0.00019	0.85427	0.065969	0.924	0.895	0.98	0.999	0.983	1	0.689	0.941
rs76206989	4.5657E-10	0.0712771	0.01143	0.0683332	0.015932	6.05493E-10	0.1611	0.357519	6.97E-06	0.987877	0.272517	1.1E-05	0.02135	0.873796	0.835	0.77	1	0.08	0.753	1	0.946	0.625
rs6719345	4.578E-10	0.0342124	0.00549	0.0357048	0.006499	8.88517E-10	0.22137	0.0117	0.006117	0.019171	0.003329	0.00061	0.01591	0.948657	0.92	0.968	0.991	0.987	0.993	0.999	0.98	0.81
rs71332797	4.5829E-10	0.0369952	0.00594	0.0373293	0.006494	8.89445E-10	0.57992	0.176151	2.71E-05	0.001323	0.414547	0.01071	0.06477	0.016388	0.716	0.907	1	0.998	0.833	0.963	0.951	0.96
rs62527007	4.5881E-10	-0.037002	0.00594	-0.037193	0.006248	8.90444E-10	0.60185	0.181715	2.8E-05	0.001376	0.405138	0.01041	0.06382	0.017833	0.722	0.907	1	0.998	0.838	0.965	0.952	0.96
rs62410578	4.5989E-10	-0.033039	0.0053	-0.03576	0.00864	8.92484E-10	0.11293	0.394396	0.005757	0.060126	0.241361	3.5E-05	0.00013	0.04396	0.924	0.684	0.988	0.947	0.895	1	0.995	0.948
rs62410579	4.5999E-10	-0.033039	0.0053	-0.035759	0.00864	8.92675E-10	0.11293	0.394399	0.005757	0.060127	0.241361	3.5E-05	0.00013	0.043959	0.924	0.684	0.988	0.947	0.895	1	0.995	0.948
rs7644148	4.6084E-10	0.0389773	0.00625	0.0393951	0.007923	5.87373E-10	0.95323	0.12388	0.091436	5.26E-05	0.045831	3.5E-06	0.46309	0.823997	0.63	0.86	0.439	1	0.933	1	0.713	0.664
rs74471041	4.6171E-10	0.0389755	0.00625	0.0393927	0.007926	5.884E-10	0.9514	0.12388	0.091436	5.26E-05	0.045831	3.5E-06	0.46309	0.823997	0.629	0.86	0.439	1	0.933	1	0.713	0.664
rs190212723	4.6268E-10	-0.106074	0.01702	-0.106074	0.017023	8.97791E-10	0.03218	0.992402	7.36E-05	0.056373	0.155806	0.00033	0.01873	0.806136	0.945	0.784	1	0.947	0.92	0.999	0.972	0.737
rs4961178	4.6359E-10	0.0329567	0.00529	0.0329567	0.005289	8.99516E-10	0.24365	0.569387	0.000216	0.023795	0.416571	0.00102	0.05169	0.002873	0.911	0.869	1	0.983	0.86	0.999	0.963	0.979
rs74866429	4.644E-10	0.0712035	0.01143	0.0683763	0.015834	6.27824E-10	0.16857	0.337559	7.32E-06	0.998366	0.278081	1.2E-05	0.02008	0.860958	0.832	0.776	1	0.084	0.751	1	0.948	0.631
rs9287807	4.6442E-10	-0.038391	0.00616	-0.038391	0.006162	9.01085E-10	0.55346	0.608306	0.000363	0.008647	0.012911	0.00089	0.25314	0.243984	0.867	0.861	1	0.993	0.985	0.999	0.91	0.91
rs4241407	4.6564E-10	-0.038971	0.00626	-0.039365	0.007852	6.03019E-10	0.95266	0.12445	0.089313	5.44E-05	0.047962	3.5E-06	0.46325	0.818932	0.633	0.861	0.452	1	0.931	1	0.716	0.669
rs77623358	4.667E-10	0.0711977	0.01143	0.068363	0.0159	6.25871E-10	0.16466	0.336184	7.31E-06	0.991875	0.278122	1.2E-05	0.02008	0.860989	0.834	0.777	1	0.082	0.751	1	0.948	0.63
rs16926935	4.6729E-10	-0.036983	0.00594	-0.037131	0.006173	9.06536E-10	0.63044	0.178715	2.77E-05	0.001405	0.408264	0.01055	0.06826	0.017118	0.728	0.908	1	0.998	0.838	0.965	0.95	0.96
rs2530400	4.6834E-10	0.0493381	0.00792	0.0493381	0.00792	9.08533E-10	0.05757	0.564759	0.000566	0.044352	0.007704	0.0005	0.59999	0.038907	0.947	0.87	0.999	0.967	0.988	0.999	0.84	0.956
rs192095319	4.6979E-10	0.0712463	0.01144	0.0682547	0.016098	6.09852E-10	0.17148	0.369907	6.7E-06	0.98105	0.291646	1.2E-05	0.01802	0.848353	0.829	0.765	1	0.078	0.739	1	0.95	0.63
rs6937110	4.7043E-10	-0.034104	0.00548	-0.034104	0.005475	9.12504E-10	0.55914	0.794469	0.00015	0.017608	0.07631	0.0008	0.14252	0.064935	0.867	0.839	1	0.986	0.958	0.999	0.936	0.946
rs6937111	4.7043E-10	-0.034104	0.00548	-0.034104	0.005475	9.12504E-10	0.55914	0.794469	0.00015	0.017608	0.07631	0.0008	0.14252	0.064935	0.867	0.839	1	0.986	0.958	0.999	0.936	0.946
rs149273410	4.7268E-10	0.0389528	0.00625	0.0393648	0.007909	6.04661E-10	0.95032	0.12388	0.091436	5.46E-05	0.045831	3.5E-06	0.46309	0.823997	0.63	0.86	0.44	1	0.933	1	0.714	0.665
rs13013777	4.7274E-10	-0.044568	0.00716	-0.044568	0.007156	9.16883E-10	0.55363	0.966572	0.000389	0.013012	0.007226	0.00047	0.40106	0.154819	0.858	0.804	0.999	0.989	0.987	0.999	0.869	0.92
rs144500327	4.7327E-10	-0.087689	0.01408	-0.087689	0.01408	9.179E-10	0.67721	0.26209	0.000314	0.037678	0.158623	0.00016	0.02096	0.191689	0.744	0.898	1	0.968	0.925	1	0.972	0.913
rs401754	4.7355E-10	-0.066363	0.01066	-0.06929	0.013743	9.18434E-10	0.37623	0.569494	0.005033	0.002161	0.259751	0.00027	0.17608	0.000299	0.894	0.87	0.992	0.998	0.905	1	0.93	0.985
rs1471712	4.7476E-10	-0.032692	0.00525	-0.032692	0.00525	9.20723E-10	0.42731	0.266205	0.000309	6.27E-05	0.574845	0.00324	0.02626	0.753612	0.852	0.879	0.999	1	0.763	0.991	0.964	0.713
rs56016006	4.75E-10	-0.032391	0.0052	-0.033938	0.006522	9.21179E-10	0.55136	0.113645	0.000754	0.074547	3.32E-05	0.00133	0.37475	0.177954	0.87	0.932	0.999	0.944	0.998	0.998	0.885	0.923
rs13073551	4.7521E-10	-0.033011	0.0053	-0.035736	0.008649	9.21579E-10	0.11195	0.394305	0.005755	0.06214	0.241201	3.5E-05	0.00013	0.044049	0.924	0.683	0.988	0.945	0.895	1	0.995	0.948
rs10775503	4.7566E-10	0.0314042	0.00504	0.0314042	0.005043	9.22436E-10	0.22516	0.95624	0.000644	0.003139	0.12209	8.4E-05	0.9822	0.193322	0.888	0.778	0.999	0.996	0.926	1	0.701	0.897
rs4741101	4.7715E-10	-0.036957	0.00594	-0.037344	0.006603	9.25249E-10	0.55171	0.17598	2.7E-05	0.001333	0.415249	0.01071	0.06478	0.01631	0.709	0.907	1	0.998	0.832	0.963	0.951	0.96
rs10471540	4.7744E-10	0.031394	0.00504	0.031394	0.005042	9.25799E-10	0.62523	0.735257	0.00556	0.000496	0.099562	7.6E-05	0.04441	0.7792	0.833	0.819	0.988	0.999	0.939	1	0.957	0.732
rs12523566	4.7823E-10	0.0349225	0.00561	0.0349225	0.005609	9.27312E-10	0.23239	0.216599	0.015928	0.001484	0.003405	0.00011	0.16204	0.666478	0.903	0.905	0.96	0.998	0.991	1	0.925	0.73
rs10676551	4.783E-10	-0.034176	0.00549	-0.036911	0.008465	9.27438E-10	0.00736	0.236523	0.005017	0.006613	0.935112	0.00015	0.00053	0.697453	0.964	0.895	0.989	0.993	0.655	1	0.992	0.822
rs34676253	4.7833E-10	0.0329446	0.00529	0.0329446	0.005291	9.27499E-10	0.24654	0.560968	0.000225	0.023378	0.397127	0.00105	0.05466	0.002914	0.911	0.871	1	0.983	0.866	0.999	0.962	0.979
rs148440960	4.7863E-10	-0.043529	0.00699	-0.043529	0.006991	9.2806E-10	0.11062	0.295651	0.000166	0.001904	0.00519	0.02357	0.05512	0.764296	0.933	0.902	1	0.998	0.991	0.924	0.962	0.838
rs9873741	4.7883E-10	-0.040482	0.0065	-0.040482	0.006502	9.28447E-10	0.04494	0.957027	0.00104	0.306457	0.035078	5.9E-06	0.1882	0.141218	0.934	0.752	0.998	0.667	0.965	1	0.9	0.907
rs17203403	4.7966E-10	0.0381397	0.00613	0.0381397	0.006126	9.30015E-10	0.11802	0.265406	0.009946	0.000888	0.013361	0.00022	0.91432	0.056904	0.926	0.899	0.978	0.999	0.983	1	0.711	0.945
rs72966484	4.8092E-10	0.0382205	0.00614	0.0382205	0.00614	9.32418E-10	0.11145	0.287258	0.010466	0.000968	0.011327	0.0002	0.89441	0.057921	0.927	0.895	0.977	0.999	0.985	1	0.703	0.944
rs62530677	4.8099E-10	-0.036959	0.00594	-0.037206	0.006353	9.32538E-10	0.56997	0.181907	2.81E-05	0.001385	0.404276	0.0104	0.06382	0.017986	0.714	0.906	1	0.998	0.837	0.965	0.952	0.959

Table S3

rs6831927	4.8111E-10	-0.034163	0.00549	-0.036936	0.008488	9.32765E-10	0.00742	0.234209	0.005048	0.006585	0.936129	0.00015	0.00051	0.699556	0.964	0.896	0.989	0.993	0.655	1	0.992	0.821
rs200484	4.8147E-10	-0.066269	0.01065	-0.068994	0.013568	9.33461E-10	0.38828	0.556294	0.004789	0.003512	0.249066	0.00023	0.15492	0.000284	0.893	0.872	0.993	0.997	0.909	1	0.936	0.985
rs7894737	4.8175E-10	-0.033583	0.00539	-0.036147	0.007361	9.33987E-10	0.23073	0.037828	0.008945	0.392746	0.00382	2.1E-05	0.0093	0.164127	0.896	0.945	0.965	0.608	0.991	1	0.981	0.912
rs13435565	4.8197E-10	-0.034157	0.00549	-0.036962	0.008499	9.34412E-10	0.00731	0.229826	0.005197	0.006435	0.937745	0.00015	0.00051	0.69507	0.964	0.897	0.989	0.993	0.654	1	0.992	0.822
rs79388664	4.826E-10	0.0711366	0.01143	0.0682724	0.015935	6.41911E-10	0.16458	0.343838	7.29E-06	0.98623	0.277857	1.2E-05	0.02007	0.861268	0.834	0.774	1	0.081	0.751	1	0.948	0.63
rs74958639	4.843E-10	0.07113	0.01143	0.0682625	0.015939	6.43634E-10	0.16457	0.344736	7.28E-06	0.985662	0.277848	1.2E-05	0.02007	0.861262	0.834	0.774	1	0.081	0.751	1	0.948	0.63
rs13395671	4.8437E-10	0.0741617	0.01192	0.0741617	0.011915	9.38963E-10	0.0664	0.28485	0.004224	0.006607	0.047045	4.3E-05	0.58812	0.597177	0.94	0.899	0.994	0.994	0.967	1	0.838	0.856
rs9990398	4.8514E-10	-0.040475	0.0065	-0.040475	0.006503	9.40423E-10	0.04627	0.957429	0.001042	0.305824	0.035164	6E-06	0.18853	0.141491	0.933	0.753	0.998	0.668	0.965	1	0.9	0.907
rs62410577	4.8541E-10	-0.033625	0.0054	-0.037312	0.008634	9.40934E-10	0.13736	0.730311	0.005246	0.070423	0.169318	0.0001	5.1E-05	0.037994	0.926	0.77	0.991	0.944	0.927	1	0.996	0.955
rs75757159	4.8682E-10	0.0727958	0.0117	0.0693496	0.016479	6.4006E-10	0.07952	0.55552	1.16E-05	0.987042	0.372735	5.5E-06	0.03156	0.749426	0.868	0.711	1	0.083	0.681	1	0.932	0.648
rs7010298	4.8724E-10	0.0329127	0.00529	0.0329127	0.005289	9.44401E-10	0.24289	0.572912	0.000225	0.023351	0.40993	0.00106	0.05276	0.002764	0.911	0.869	1	0.983	0.862	0.999	0.963	0.979
rs186599242	4.8796E-10	0.0707373	0.01137	0.0665325	0.016149	5.86594E-10	0.09539	0.570831	9.82E-06	0.967113	0.273643	3.6E-06	0.05678	0.971763	0.855	0.699	1	0.069	0.736	1	0.906	0.581
rs6845583	4.8804E-10	-0.03415	0.00549	-0.036928	0.008486	9.45921E-10	0.00741	0.233785	0.005115	0.006544	0.9372	0.00015	0.00051	0.695146	0.964	0.896	0.989	0.993	0.654	1	0.992	0.822
rs28420913	4.8825E-10	-0.034146	0.00549	-0.036949	0.008498	9.46308E-10	0.00732	0.230068	0.005199	0.00646	0.938381	0.00015	0.00052	0.695203	0.964	0.896	0.989	0.993	0.654	1	0.992	0.822
rs67260454	4.9161E-10	0.0389028	0.00625	0.0392763	0.007544	6.62067E-10	0.95436	0.136476	0.085886	5.4E-05	0.053328	4.2E-06	0.45914	0.725196	0.646	0.861	0.485	1	0.929	1	0.729	0.702
rs2312462	4.9173E-10	-0.038918	0.00626	-0.039303	0.007885	6.34713E-10	0.93131	0.124382	0.090312	5.65E-05	0.047913	3.5E-06	0.46284	0.818221	0.627	0.86	0.448	1	0.931	1	0.715	0.667
rs143273550	4.9234E-10	0.0326169	0.00524	0.0324123	0.006737	7.37906E-10	0.76938	0.543813	1.51E-07	0.097907	0.111155	0.01247	0.00467	0.684275	0.711	0.821	1	0.875	0.92	0.93	0.981	0.794
rs149133223	4.9234E-10	0.0326169	0.00524	0.0324123	0.006737	7.37906E-10	0.76938	0.543813	1.51E-07	0.097907	0.111155	0.01247	0.00467	0.684275	0.711	0.821	1	0.875	0.92	0.93	0.981	0.794
rs1030318	4.925E-10	0.0351941	0.00566	0.0383691	0.007545	9.54372E-10	0.07379	0.007855	0.009073	0.003618	0.0021	0.00151	0.07996	0.914474	0.947	0.971	0.985	0.997	0.994	0.998	0.958	0.806
rs200885114	4.9265E-10	0.0788963	0.01268	0.0788963	0.012681	9.54664E-10	0.75679	0.110831	0.008097	0.003642	0.155282	5E-06	0.24133	0.857707	0.817	0.916	0.982	0.996	0.919	1	0.895	0.751
rs34814102	4.9301E-10	0.0484162	0.00778	0.0484162	0.007782	9.55343E-10	0.56241	0.75787	7.43E-07	0.10869	0.049812	0.0003	0.42532	0.708548	0.613	0.655	1	0.836	0.938	0.999	0.782	0.743
rs76898249	4.9329E-10	0.0710964	0.01143	0.0682159	0.015955	6.53058E-10	0.16451	0.348202	7.26E-06	0.982965	0.27799	1.2E-05	0.02006	0.861103	0.834	0.773	1	0.08	0.75	1	0.948	0.63
rs74866145	4.9334E-10	0.0710948	0.01143	0.0682152	0.015967	6.52862E-10	0.16185	0.351358	7.25E-06	0.982898	0.277929	1.2E-05	0.02005	0.86175	0.835	0.772	1	0.08	0.75	1	0.948	0.629
rs144948701	4.9352E-10	0.0710974	0.01143	0.0682126	0.015954	6.53906E-10	0.16388	0.351332	7.24E-06	0.982974	0.277417	1.2E-05	0.02005	0.861689	0.834	0.772	1	0.081	0.751	1	0.948	0.629
rs2427657	4.9394E-10	-0.034624	0.00557	-0.034462	0.008805	6.00588E-10	0.94379	0.05482	0.000667	0.928346	0.016946	6.7E-07	0.44361	0.032978	0.624	0.899	0.996	0.112	0.967	1	0.728	0.922
rs62410576	4.9426E-10	-0.032986	0.0053	-0.035678	0.008642	9.5772E-10	0.11678	0.393073	0.005693	0.063216	0.242404	3.5E-05	0.00013	0.043456	0.923	0.683	0.988	0.944	0.895	1	0.995	0.948
rs1165184	4.9589E-10	-0.055866	0.00898	-0.065762	0.014036	5.46638E-10	0.73415	0.125428	0.012592	1.92E-05	0.002411	0.01268	0.18477	0.011651	0.847	0.932	0.955	1	0.993	0.947	0.926	0.97
rs4267532	4.9684E-10	-0.089849	0.01445	-0.089849	0.014445	9.62603E-10	0.0549	0.517447	0.00332	0.009573	0.119801	6E-05	0.18643	0.044403	0.943	0.737	0.995	0.992	0.942	1	0.922	0.95
rs147251271	4.9688E-10	0.0710831	0.01143	0.0681963	0.015963	6.5681E-10	0.16449	0.349599	7.26E-06	0.981967	0.277947	1.2E-05	0.02005	0.861775	0.834	0.772	1	0.08	0.75	1	0.948	0.629
rs147251621	4.971E-10	-0.076546	0.01231	-0.076546	0.012306	9.63099E-10	0.12664	0.32944	9.51E-05	0.019084	0.047261	0.00449	0.03393	0.452272	0.936	0.906	1	0.987	0.972	0.993	0.972	0.89
rs6844306	4.9721E-10	-0.034134	0.00549	-0.036903	0.00848	9.6331E-10	0.00747	0.233334	0.00512	0.006687	0.936919	0.00015	0.00051	0.695145	0.964	0.896	0.989	0.993	0.655	1	0.992	0.822
rs11864960	4.9732E-10	0.0710808	0.01143	0.0681903	0.015966	6.56754E-10	0.16445	0.35134	7.24E-06	0.981311	0.277405	1.2E-05	0.02005	0.861673	0.834	0.772	1	0.08	0.751	1	0.948	0.629
rs11864131	4.9733E-10	0.0710808	0.01143	0.0681902	0.015966	6.56764E-10	0.16446	0.35134	7.24E-06	0.981308	0.277405	1.2E-05	0.02005	0.861673	0.834	0.772	1	0.08	0.751	1	0.948	0.629
rs11864089	4.9733E-10	0.0710808	0.01143	0.0681902	0.015966	6.56766E-10	0.16446	0.35134	7.24E-06	0.981306	0.277405	1.2E-05	0.02005	0.861673	0.834	0.772	1	0.08	0.751	1	0.948	0.629
rs74594395	4.9733E-10	0.0710808	0.01143	0.0681902	0.015966	6.56766E-10	0.16446	0.35134	7.24E-06	0.981306	0.277405	1.2E-05	0.02005	0.861673	0.834	0.772	1	0.08	0.751	1	0.948	0.629
rs147965099	4.9764E-10	0.0710796	0.01143	0.0681893	0.015966	6.57219E-10	0.16445	0.351332	7.24E-06	0.981321	0.277417	1.2E-05	0.02005	0.861689	0.834	0.772	1	0.08	0.751	1	0.948	0.629
rs74662138	4.9764E-10	0.0710796	0.01143	0.0681893	0.015966	6.57219E-10	0.16445	0.351332	7.24E-06	0.981321	0.277417	1.2E-05	0.02005	0.861689	0.834	0.772	1	0.08	0.751	1	0.948	0.629
rs78570035	4.9764E-10	0.0710796	0.01143	0.0681893	0.015966	6.57219E-10	0.16445	0.351332	7.24E-06	0.981321	0.277417	1.2E-05	0.02005	0.861689	0.834	0.772	1	0.08	0.751	1	0.948	0.629
rs78937262	4.9785E-10	0.0710789	0.01143	0.0681888	0.015965	6.57531E-10	0.16445	0.35133	7.25E-06	0.981335	0.277428	1.2E-05	0.02005	0.861691	0.834	0.772	1	0.08	0.751	1	0.948	0.629
rs77658025	4.9799E-10	0.0710787	0.01143	0.068192	0.015959	6.58293E-10	0.16443	0.351242	7.26E-06	0.981645	0.276999	1.2E-05	0.02009	0.861645	0.834	0.772	1	0.08	0.751	1	0.948	0.629
rs1137656	4.9825E-10	-0.032783	0.00527	-0.032783	0.005271	9.65279E-10	0.9297	0.697232	0.002756	0.136241	0.048261	1.1E-06	0.16912	0.148567	0.762	0.818	0.994	0.86	0.959	1	0.911	0.908
rs11693885	4.9845E-10	0.0317804	0.00511	0.0353218	0.007563	8.48473E-10	0.08325	0.035523	0.055787	0.000223	0.002896	0.00032	0.09162	0.612078	0.927	0.944	0.752	0.999	0.992	0.999	0.939	0.677
rs10055205	4.9847E-10	0.0313631	0.00504	0.0313631	0.005043	9.65691E-10	0.62473	0.735777	0.005766	0.000502	0.099414	7.5E-05	0.0441	0.772225	0.833	0.818	0.988	0.999	0.939	1	0.957	0.731
rs149209160	4.9883E-10	0.0710758	0.01143	0.0681848	0.015967	6.58726E-10	0.16446	0.350825	7.25E-06	0.981299	0.277925	1.2E-05	0.02005	0.861756	0.833	0.772	1	0.08	0.75	1	0.948	0.629
rs1072195	4.9938E-10	0.0313616	0.00504	0.0313616	0.005043	9.67423E-10	0.62473	0.7361	0.005765	0.000502	0.099506	7.5E-05	0.0441	0.771938	0.833	0.818	0.988	0.999	0.939	1	0.957	0.73
rs8066358	4.9954E-10	-0.035109	0.00565	-0.036216	0.006627	9.67734E-10	0.28972	0.711826	0.000174	0.095592	0.000188	0.0037	0.01473	0.553636	0.9	0.845	1	0.922	0.997	0.993	0.978	0.862
rs11862948	4.9973E-10	0.0710725	0.01143	0.0681795	0.015969	6.59615E-10	0.16446	0.351348	7.25E-06	0.980993	0.277924	1.2E-05	0.02005	0.861747	0.833	0.772	1	0.08	0.75	1	0.948	0.629
rs75811565	4.9986E-10	0.0710721	0.01143	0.0681791	0.015969	6.59778E-10	0.16446	0.351358	7.25E-06	0.98098	0.277928	1.2E-05	0.02005	0.861747	0.833	0.772	1	0.08	0.75	1	0.948	0.629
rs80034230	4.9986E-10	0.0710721	0.01143	0.0681791	0.015969	6.59778E-10	0.16446	0.351358	7.25E-06	0.98098	0.277928	1.2E-05	0.02005	0.861747	0.833	0.772	1	0.08	0.75	1	0.948	0.629
rs78025462	5.0191E-10	0.071065	0.01143	0.0681774	0.015958	6.63553E-10	0.16447	0.351273	7.29E-06	0.981488	0.277088	1.2E-05	0.02012	0.862394	0.834	0.772	1	0.08	0.751	1	0.948	0.629
rs113870227	5.0192E-10	-0.052121	0.00838	-0.052121	0.008382	9.72235E-10	0.09717	0.638094	0.000685	0.001616	0.02073	0.00459	0.145	0.041129	0.937	0.763	0.999	0.998	0.981	0.992	0.937	0.956
rs8066164	5.0453E-10	-0.0351	0.00565	-0.036157	0.00658	9.7719E-10	0.28817	0.711288	0.000179	0.092035	0.000185	0.00375	0.01567	0.550785	0.9	0.846	1	0.925	0.997	0.993	0.977	0.863
rs10057876	5.0491E-10	0.0313527	0.00504	0.0313527	0.005043	9.77898E-10	0.62667	0.735933	0.005767	0.000506	0.099547	7.5E-05	0.04419	0.772872	0.833	0.818	0.988	0.999	0.939	1	0.957	0.731
rs11928090	5.0492E-10	-0.038901	0.00626	-0.03928	0.007792	6.62503E-10	0.93828	0.124635	0.088783	5.74E-05	0.050347	3.7E-06	0.45861	0.80566	0.633	0.861	0.461	1	0.93	1	0.721	0.675
rs7895087	5.0542E-10	-0.033541	0.00539	-0.036024	0.007322	9.78866E-10	0.23092	0.038451	0.009439	0.389094	0.004001	2E-05	0.00962	0.167172	0.896	0.945	0.963	0.612	0.991	1	0.98	0.912

Table S3

rs184972073	5.065E-10	0.0756014	0.01216	0.0756014	0.01216	9.80916E-10	0.35534	0.203618	0.000286	0.001392	0.013828	0.01065	0.01793	0.752635	0.89	0.912	1	0.998	0.984	0.975	0.975	0.758
rs9311358	5.0661E-10	-0.031622	0.00509	-0.031622	0.005086	9.6793E-10	0.97937	0.486786	0.010313	0.023845	0.299804	2.6E-07	0.03305	0.990443	0.764	0.837	0.967	0.973	0.852	1	0.957	0.748
rs16901847	5.0671E-10	-0.052391	0.00843	-0.052629	0.008763	9.81308E-10	0.01596	0.689767	0.000198	0.013581	0.680193	0.00173	0.03789	0.017158	0.961	0.848	1	0.989	0.773	0.997	0.967	0.964
rs13359224	5.0718E-10	0.0313501	0.00504	0.0313501	0.005043	9.82199E-10	0.62391	0.736406	0.0058	0.000503	0.099606	7.5E-05	0.04406	0.770526	0.833	0.818	0.988	0.999	0.939	1	0.957	0.73
rs2003622	5.0778E-10	-0.052108	0.00838	-0.052108	0.008382	9.8334E-10	0.09686	0.630412	0.000676	0.001625	0.020819	0.00463	0.14555	0.040936	0.937	0.762	0.999	0.998	0.981	0.992	0.937	0.956
rs10050495	5.0864E-10	0.0313459	0.00504	0.0313459	0.005042	9.84967E-10	0.63612	0.736163	0.005778	0.000498	0.0997	7.6E-05	0.04436	0.776054	0.831	0.818	0.988	0.999	0.939	1	0.957	0.731
rs75909464	5.0884E-10	0.0710431	0.01143	0.0681623	0.015933	6.75643E-10	0.16437	0.351338	7.38E-06	0.983352	0.276498	1.2E-05	0.02027	0.865127	0.834	0.772	1	0.081	0.751	1	0.948	0.629
rs7646174	5.0897E-10	0.0332028	0.00534	0.0332028	0.005341	9.85593E-10	0.29067	0.734757	0.001556	0.215948	0.208717	4.5E-06	0.01865	0.031491	0.875	0.723	0.997	0.768	0.89	1	0.969	0.946
rs4783340	5.0907E-10	-0.052103	0.00838	-0.052103	0.008382	9.85782E-10	0.09688	0.636548	0.000684	0.001627	0.0207	0.00463	0.14536	0.04119	0.937	0.763	0.999	0.998	0.981	0.992	0.937	0.956
rs17805961	5.0924E-10	-0.034251	0.00551	-0.03493	0.006145	9.86112E-10	0.26788	0.682062	0.000616	0.039935	0.01834	0.00131	0.1993	0.000708	0.913	0.864	0.999	0.973	0.983	0.998	0.929	0.985
rs741718	5.0975E-10	-0.052108	0.00838	-0.052108	0.008383	9.87084E-10	0.09614	0.63705	0.00068	0.001676	0.020709	0.00457	0.14531	0.041267	0.938	0.763	0.999	0.998	0.981	0.992	0.937	0.956
rs75182609	5.0995E-10	0.0418443	0.00673	0.0418443	0.006732	9.87463E-10	0.13141	0.040036	0.002858	0.206539	0.024665	7.6E-06	0.22638	0.566829	0.921	0.945	0.995	0.813	0.976	1	0.908	0.852
rs75832282	5.1043E-10	0.0710376	0.01143	0.0681558	0.015937	6.77514E-10	0.16412	0.351337	7.38E-06	0.983092	0.276688	1.2E-05	0.02028	0.865599	0.834	0.772	1	0.081	0.751	1	0.948	0.628
rs79169855	5.1054E-10	0.0418393	0.00673	0.0418393	0.006731	9.88579E-10	0.12817	0.040296	0.002952	0.206146	0.023914	7.6E-06	0.22493	0.564902	0.922	0.946	0.995	0.813	0.977	1	0.908	0.852
rs10939933	5.1119E-10	0.0313391	0.00504	0.0313391	0.005042	9.89809E-10	0.62696	0.736637	0.005793	0.000501	0.100199	7.6E-05	0.04465	0.778802	0.833	0.818	0.988	0.999	0.939	1	0.957	0.732
rs16839729	5.1412E-10	0.0381242	0.00613	0.0381242	0.006134	9.95351E-10	0.11875	0.265911	0.010987	0.000895	0.012371	0.00021	0.89031	0.058118	0.925	0.898	0.975	0.999	0.984	1	0.702	0.944
rs9807752	5.1447E-10	0.0313397	0.00504	0.0313397	0.005043	9.96026E-10	0.23185	0.960689	0.000659	0.003137	0.123958	8.5E-05	0.9885	0.194736	0.886	0.777	0.999	0.996	0.925	1	0.699	0.896
rs72966483	5.1463E-10	0.03814	0.00614	0.03814	0.006137	9.96316E-10	0.11145	0.292238	0.010702	0.000968	0.011265	0.00021	0.88292	0.058426	0.926	0.894	0.976	0.999	0.985	1	0.699	0.944
rs11185543	5.1491E-10	0.0332019	0.00534	0.033181	0.00543	9.96854E-10	0.26856	0.699325	0.001568	0.223337	0.20492	4.3E-06	0.01865	0.032569	0.878	0.714	0.996	0.758	0.89	1	0.969	0.945
rs7724362	5.162E-10	-0.046224	0.00744	-0.046224	0.007439	9.99302E-10	0.92133	0.035637	0.000161	0.104875	0.137967	0.00067	0.00366	0.284383	0.82	0.951	1	0.915	0.937	0.999	0.987	0.903
rs74980679	5.1716E-10	0.0450377	0.00725	0.0450377	0.007248	1.00111E-09	0.08482	0.052463	0.005579	0.128647	0.032877	1.6E-05	0.02686	0.93943	0.938	0.946	0.99	0.896	0.975	1	0.972	0.812
rs77832972	5.1719E-10	0.0450373	0.00725	0.0450373	0.007248	1.00117E-09	0.08442	0.052439	0.005549	0.128414	0.033092	1.6E-05	0.02674	0.936187	0.938	0.946	0.99	0.897	0.975	1	0.972	0.812
rs6752125	5.178E-10	0.035092	0.00565	0.0385515	0.007629	1.00233E-09	0.06411	0.010132	0.011304	0.003134	0.001887	0.00155	0.06777	0.925319	0.949	0.969	0.98	0.997	0.994	0.998	0.961	0.808
rs74885315	5.1796E-10	0.0331281	0.00533	0.0331281	0.005332	1.00264E-09	0.25415	0.406322	0.000596	0.00061	0.175382	0.00272	0.0537	0.483036	0.909	0.889	0.999	0.999	0.928	0.996	0.962	0.878
rs149816958	5.1902E-10	0.11251	0.01811	0.11251	0.018108	1.00464E-09	0.34176	0.641251	0.000792	0.026412	0.005196	0.00066	0.05732	0.43311	0.899	0.863	0.999	0.981	0.991	0.999	0.961	0.887
rs10511560	5.1978E-10	-0.036882	0.00594	-0.036928	0.006013	1.00608E-09	0.56221	0.196971	2.98E-05	0.001377	0.397527	0.01	0.05961	0.023823	0.713	0.903	1	0.998	0.84	0.967	0.953	0.955
rs200481	5.2118E-10	-0.066029	0.01063	-0.068861	0.013681	1.00873E-09	0.37769	0.550656	0.004664	0.002952	0.258885	0.00027	0.17988	0.000272	0.894	0.872	0.993	0.997	0.906	1	0.929	0.985
rs13073564	5.2147E-10	-0.032935	0.0053	-0.035664	0.008649	1.00927E-09	0.11195	0.389271	0.005733	0.062117	0.243249	3.8E-05	0.00013	0.043737	0.924	0.682	0.988	0.945	0.895	1	0.995	0.948
rs7858827	5.2195E-10	0.036967	0.00595	0.036967	0.005951	1.01018E-09	0.67601	0.236997	1.8E-05	0.001393	0.410252	0.01256	0.08281	0.019147	0.733	0.895	1	0.998	0.834	0.954	0.944	0.958
rs349687	5.2199E-10	0.0321031	0.00517	0.0320361	0.005228	8.25559E-10	0.73811	0.183288	0.001205	0.482387	0.340252	1.2E-07	0.08475	0.351055	0.726	0.849	0.994	0.403	0.764	1	0.907	0.805
rs17604518	5.2297E-10	-0.04642	0.00747	-0.046966	0.008753	1.01213E-09	0.18705	0.425189	6.34E-06	0.246212	0.001737	0.00364	0.03801	0.881496	0.893	0.849	1	0.726	0.992	0.985	0.957	0.726
rs35350832	5.2366E-10	-0.038853	0.00625	-0.038853	0.006255	1.01343E-09	0.38875	0.327088	7.58E-06	0.034626	0.006748	0.00441	0.21593	0.151812	0.868	0.649	1	0.967	0.986	0.989	0.902	0.912
rs150292648	5.245E-10	0.0418115	0.00673	0.0418115	0.006731	1.01502E-09	0.12852	0.040296	0.002952	0.209787	0.023914	7.6E-06	0.22493	0.564902	0.922	0.945	0.994	0.81	0.977	1	0.908	0.852
rs17518473	5.2452E-10	0.0348627	0.00561	0.0348627	0.005613	1.01506E-09	0.24385	0.224033	0.016506	0.001883	0.002715	0.0001	0.15635	0.637999	0.9	0.903	0.958	0.998	0.992	1	0.925	0.723
rs117278919	5.2476E-10	-0.074701	0.01203	-0.074701	0.012026	1.01551E-09	0.77136	0.247442	0.000205	0.035676	0.372436	0.00025	0.07871	0.032768	0.835	0.904	1	0.971	0.863	1	0.951	0.956
rs7646273	5.2508E-10	0.0331848	0.00534	0.0331502	0.005489	1.01611E-09	0.26516	0.700003	0.001549	0.231559	0.204483	4.2E-06	0.01861	0.032561	0.878	0.712	0.996	0.747	0.89	1	0.969	0.945
rs62084749	5.2696E-10	0.0329475	0.0053	0.0313937	0.007482	1.01968E-09	0.24556	0.190804	5.91E-05	0.097702	0.700303	2.3E-05	0.27964	0.005799	0.533	0.863	1	0.857	0.656	1	0.841	0.958
rs4895287	5.2768E-10	-0.031702	0.0051	-0.031702	0.005105	1.02104E-09	0.10569	0.415638	0.003192	0.006148	0.019649	9.8E-05	0.96541	0.133399	0.927	0.876	0.995	0.994	0.979	1	0.721	0.924
rs34196595	5.2851E-10	0.0331785	0.00534	0.0331266	0.005591	1.02262E-09	0.25666	0.726262	0.001595	0.258056	0.181567	3.9E-06	0.02037	0.030379	0.877	0.713	0.996	0.715	0.897	1	0.967	0.945
rs10891535	5.2937E-10	-0.031504	0.00507	-0.030457	0.006769	1.02424E-09	0.68726	0.008153	3.62E-05	0.015967	0.516469	0.00012	0.52978	0.118333	0.76	0.947	1	0.976	0.334	1	0.755	0.889
rs9554480	5.2944E-10	0.0325702	0.00524	0.0323197	0.00689	7.73671E-10	0.75218	0.54655	1.4E-07	0.08677	0.121884	0.01386	0.00432	0.740707	0.704	0.818	1	0.885	0.913	0.921	0.981	0.781
rs9598227	5.31E-10	-0.032698	0.00527	-0.033972	0.007467	1.02732E-09	0.56819	0.009415	0.001808	0.027371	0.474523	9.2E-05	0.0656	0.004798	0.726	0.963	0.997	0.977	0.826	1	0.954	0.973
rs7420620	5.3107E-10	-0.043005	0.00693	-0.043005	0.006926	1.02651E-09	0.16981	0.439483	8.89E-05	0.005087	0.001145	0.02923	0.05957	0.631596	0.919	0.878	1	0.995	0.995	0.894	0.958	0.85
rs4052546	5.3117E-10	-0.039037	0.00629	-0.039296	0.007778	7.43713E-10	0.89029	0.117876	0.077606	7.55E-05	0.048211	3.5E-06	0.51689	0.839312	0.633	0.866	0.518	1	0.933	1	0.707	0.675
rs7647487	5.3274E-10	0.0331647	0.00534	0.0331044	0.005648	1.03061E-09	0.2512	0.726121	0.001594	0.261636	0.183937	3.9E-06	0.01992	0.029973	0.878	0.712	0.996	0.711	0.896	1	0.968	0.945
rs1253439	5.3339E-10	-0.032406	0.00522	-0.033182	0.005833	1.03184E-09	0.33624	0.045397	0.000336	0.080171	0.000173	0.00311	0.2777	0.237922	0.902	0.952	1	0.943	0.998	0.995	0.911	0.917
rs10214468	5.34E-10	-0.055943	0.00901	-0.067156	0.015067	5.81117E-10	0.77936	0.26176	0.008952	2.08E-05	0.003397	0.01698	0.16676	0.002339	0.838	0.906	0.964	1	0.992	0.929	0.928	0.979
rs62667860	5.3458E-10	0.0331698	0.00534	0.0331348	0.005491	1.03411E-09	0.26462	0.699482	0.001559	0.231981	0.20476	4.2E-06	0.01864	0.032578	0.878	0.712	0.996	0.747	0.889	1	0.969	0.945
rs13084212	5.3473E-10	0.0331696	0.00534	0.0331346	0.005491	1.03438E-09	0.26462	0.699483	0.001559	0.231978	0.20476	4.2E-06	0.01864	0.032578	0.878	0.712	0.996	0.747	0.889	1	0.969	0.945
rs13098146	5.3488E-10	0.0331615	0.00534	0.0331009	0.00565	1.03467E-09	0.25123	0.726117	0.001594	0.262065	0.183956	3.9E-06	0.01992	0.029973	0.878	0.712	0.996	0.71	0.895	1	0.968	0.945
rs28360585	5.3504E-10	-0.055939	0.00901	-0.067153	0.015067	5.82137E-10	0.77933	0.261496	0.00895	2.08E-05	0.003406	0.01701	0.16674	0.002338	0.838	0.906	0.964	1	0.992	0.929	0.928	0.979
rs7612450	5.3563E-10	0.0331681	0.00534	0.033133	0.005491	1.03609E-09	0.26463	0.69949	0.00156	0.23207	0.204798	4.2E-06	0.01864	0.032578	0.878	0.712	0.996	0.747	0.889	1	0.969	0.945
rs12206050	5.3634E-10	0.0334027	0.00538	0.0334027	0.005381	1.03743E-09	0.64048	0.349808	0.010179	0.00127	0.886502	5.8E-05	0.00535	0.067267	0.83	0.873	0.972	0.998	0.67	1	0.983	0.934
rs7423607	5.3711E-10	-0.042988	0.00692	-0.042988	0.006925	1.03741E-09	0.16996	0.444473	8.85E-05	0.005125	0.001127	0.02966	0.0578	0.634626	0.918	0.877	1	0.995	0.995	0.892	0.959	0.849
rs1858512	5.3778E-10	0.05334	0.00859	0.0624228	0.021148	9.55781E-12	0.00178	0.667421	0.065955	8.06E-08	2.96E-05	0.00734	0.4475	0.873964	0.972	0.282	0.028	1	1	0.059	0.023	0.118

Table S3

rs7643192	5.4015E-10	0.0331621	0.00534	0.0331295	0.00548	1.04465E-09	0.26459	0.700386	0.001564	0.232061	0.204331	4.3E-06	0.01867	0.032757	0.878	0.712	0.996	0.747	0.89	1	0.969	0.945
rs56375082	5.4018E-10	-0.043277	0.00697	-0.043694	0.009058	1.0447E-09	0.06127	0.614637	0.000389	0.393579	0.024528	3.5E-05	0.00411	0.696717	0.915	0.787	0.999	0.52	0.967	1	0.98	0.639
rs7611980	5.4086E-10	0.0331555	0.00534	0.0330963	0.00568	1.04599E-09	0.25133	0.747581	0.00171	0.261714	0.182209	3.8E-06	0.02164	0.026108	0.879	0.717	0.996	0.713	0.897	1	0.967	0.948
rs8052338	5.4122E-10	0.0313783	0.00506	0.0313783	0.005056	1.04163E-09	0.95036	0.721074	0.003088	0.019415	0.467054	1.2E-07	0.36711	0.488873	0.725	0.669	0.99	0.971	0.753	1	0.815	0.8
rs1893695	5.4148E-10	-0.031484	0.00507	-0.030428	0.00678	1.04716E-09	0.68883	0.00811	3.59E-05	0.016371	0.514802	0.00012	0.52846	0.118308	0.759	0.947	1	0.975	0.334	1	0.755	0.889
rs12662740	5.4177E-10	0.0533401	0.00859	0.0624465	0.02102	1.11299E-11	0.00182	0.648874	0.063232	9.6E-08	3.11E-05	0.00734	0.45609	0.870874	0.971	0.297	0.034	1	0.999	0.068	0.027	0.124
rs349686	5.426E-10	0.0320712	0.00517	0.031956	0.005272	8.52446E-10	0.74321	0.183307	0.001196	0.490379	0.340706	1.2E-07	0.08479	0.351119	0.723	0.848	0.994	0.395	0.762	1	0.906	0.804
rs145716	5.4358E-10	0.03207	0.00517	0.0319691	0.005259	8.55862E-10	0.74668	0.183306	0.001209	0.487001	0.340708	1.2E-07	0.08479	0.35112	0.723	0.849	0.994	0.398	0.763	1	0.906	0.805
rs4916499	5.4415E-10	0.0331553	0.00534	0.0331178	0.0055	1.05222E-09	0.26718	0.69949	0.001558	0.234025	0.204752	4.2E-06	0.01864	0.032578	0.877	0.711	0.996	0.745	0.889	1	0.969	0.944
rs927456	5.4426E-10	0.0322046	0.00519	0.0328525	0.00598	1.05243E-09	0.09783	0.022321	0.009216	0.054154	0.005563	3E-05	0.93962	0.089503	0.935	0.958	0.982	0.958	0.99	1	0.759	0.94
rs4393941	5.452E-10	0.0331545	0.00534	0.0331194	0.005488	1.0542E-09	0.27184	0.69949	0.001558	0.23304	0.204749	4.2E-06	0.01864	0.032578	0.876	0.712	0.996	0.746	0.889	1	0.969	0.944
rs7831194	5.453E-10	0.0328184	0.00529	0.0328184	0.005289	1.05439E-09	0.24273	0.573562	0.000237	0.023821	0.414142	0.00108	0.05344	0.002788	0.911	0.869	1	0.983	0.861	0.999	0.962	0.979
rs239471	5.4533E-10	0.0320671	0.00517	0.031945	0.005278	8.55784E-10	0.74342	0.183308	0.001196	0.491539	0.340708	1.2E-07	0.08479	0.35112	0.723	0.848	0.994	0.393	0.762	1	0.906	0.804
rs3020400	5.4666E-10	-0.03361	0.00542	-0.03361	0.005417	1.05697E-09	0.80996	0.385071	0.002865	0.0452	0.339564	9.5E-07	0.30919	0.076219	0.744	0.862	0.994	0.955	0.849	1	0.872	0.927
rs67637684	5.4677E-10	0.0323054	0.00521	0.0323054	0.005206	1.05717E-09	0.90852	0.470504	0.000782	0.00524	0.003137	0.00097	0.11401	0.63916	0.786	0.869	0.999	0.995	0.991	0.999	0.938	0.843
rs12525684	5.4963E-10	0.0314784	0.00507	0.0314784	0.005074	1.06258E-09	0.24872	0.289155	0.000105	0.003348	0.261836	0.00244	0.12333	0.398538	0.908	0.902	1	0.997	0.902	0.996	0.941	0.887
rs34722299	5.5029E-10	0.0331446	0.00534	0.0331021	0.005525	1.06383E-09	0.26253	0.699483	0.001559	0.23689	0.20476	4.2E-06	0.01864	0.032578	0.877	0.711	0.996	0.741	0.889	1	0.969	0.944
rs58080123	5.5081E-10	0.0533069	0.00859	0.0623898	0.021143	9.82068E-12	0.00178	0.668034	0.06629	8.11E-08	3E-05	0.00739	0.44738	0.87474	0.972	0.282	0.028	1	0.999	0.058	0.023	0.118
rs10891536	5.5118E-10	-0.031467	0.00507	-0.030408	0.006789	1.06552E-09	0.69499	0.008073	3.62E-05	0.01608	0.513324	0.00013	0.52837	0.118468	0.758	0.947	1	0.976	0.333	1	0.755	0.889
rs11719920	5.5182E-10	0.0331475	0.00534	0.0330836	0.005658	1.06672E-09	0.25906	0.730052	0.001573	0.268308	0.182757	3.9E-06	0.01998	0.029989	0.876	0.711	0.996	0.703	0.895	1	0.967	0.945
rs4587762	5.5188E-10	-0.031457	0.00507	-0.031457	0.005071	1.06683E-09	0.7292	0.102377	0.000723	0.000716	0.552253	0.00016	0.808	0.039407	0.788	0.905	0.999	0.998	0.748	1	0.61	0.935
rs1267074	5.5471E-10	-0.034811	0.00561	-0.034811	0.005612	1.07219E-09	0.64927	0.37811	0.001086	0.015767	0.01286	0.00034	0.43921	0.047003	0.858	0.891	0.999	0.988	0.985	1	0.872	0.952
rs1863161	5.5514E-10	0.0333972	0.00538	0.0357411	0.006895	1.07302E-09	0.05532	0.021588	0.010338	0.005637	0.001007	0.00085	0.13188	0.869579	0.95	0.961	0.982	0.995	0.995	0.999	0.943	0.795
rs149369040	5.5541E-10	0.0449412	0.00725	0.0449412	0.007246	1.07351E-09	0.07697	0.047071	0.005624	0.13709	0.024681	1.7E-05	0.02888	0.941215	0.938	0.946	0.99	0.887	0.978	1	0.97	0.79
rs62405601	5.5599E-10	0.0521452	0.00841	0.0625073	0.02099	6.14165E-12	0.00108	0.619186	0.075085	2.28E-08	8.31E-05	0.01	0.40288	0.858399	0.98	0.291	0.012	1	0.999	0.027	0.012	0.165
rs1863158	5.5651E-10	0.0332457	0.00536	0.0354965	0.006901	1.0756E-09	0.06408	0.016147	0.019364	0.002813	0.004647	0.00039	0.07563	0.703328	0.945	0.963	0.954	0.997	0.991	0.999	0.956	0.757
rs6474630	5.5761E-10	0.0368991	0.00595	0.0368991	0.00595	1.07768E-09	0.67548	0.237145	1.88E-05	0.001389	0.410342	0.0128	0.08367	0.019276	0.733	0.895	1	0.998	0.834	0.954	0.943	0.958
rs3020396	5.5828E-10	-0.033518	0.0054	-0.033518	0.005405	1.07895E-09	0.73773	0.33056	0.002772	0.046929	0.339051	8E-07	0.33741	0.093557	0.728	0.868	0.994	0.952	0.846	1	0.862	0.92
rs10924523	5.5839E-10	-0.038587	0.00622	-0.038587	0.006222	1.07915E-09	0.14173	0.143866	3.38E-05	0.013468	0.033707	0.02687	0.04499	0.140921	0.933	0.932	1	0.99	0.977	0.916	0.968	0.936
rs10733223	5.5935E-10	0.036897	0.00595	0.0369568	0.006055	1.08097E-09	0.64534	0.236864	1.86E-05	0.001361	0.410555	0.01275	0.0835	0.019227	0.726	0.894	1	0.998	0.832	0.953	0.943	0.957
rs7643983	5.6067E-10	-0.031387	0.00506	-0.031387	0.005061	1.08346E-09	0.02929	0.412665	0.024154	0.000194	0.01043	0.00031	0.26782	0.928802	0.953	0.879	0.933	0.999	0.985	0.999	0.901	0.803
rs1165168	5.6181E-10	-0.055968	0.00903	-0.067553	0.015079	4.4622E-10	0.72097	0.15556	0.015104	6.82E-06	0.003043	0.01583	0.1847	0.008391	0.833	0.919	0.917	1	0.992	0.905	0.914	0.97
rs6876062	5.6213E-10	0.0315004	0.00508	0.0315004	0.00508	1.08623E-09	0.1708	0.379955	0.001635	0.001624	0.03482	0.00022	0.81179	0.265588	0.906	0.87	0.997	0.998	0.969	1	0.66	0.89
rs10891537	5.6227E-10	-0.031451	0.00507	-0.030389	0.006789	1.0865E-09	0.69438	0.008073	3.62E-05	0.01643	0.513314	0.00013	0.52837	0.118468	0.758	0.947	1	0.975	0.333	1	0.755	0.889
rs6474633	5.6477E-10	0.0368865	0.00595	0.0369439	0.006051	1.09121E-09	0.64474	0.23719	1.87E-05	0.001365	0.410362	0.01275	0.08362	0.019253	0.726	0.894	1	0.998	0.833	0.953	0.943	0.957
rs77219797	5.6529E-10	0.053284	0.00859	0.0622938	0.021076	1.09086E-11	0.00191	0.665527	0.06501	9.32E-08	2.89E-05	0.00726	0.44842	0.870438	0.97	0.287	0.032	1	0.999	0.065	0.025	0.121
rs10400963	5.6645E-10	0.0313408	0.00506	0.0313408	0.005055	1.08911E-09	0.894	0.720153	0.003127	0.020952	0.466209	1.3E-07	0.36837	0.489726	0.737	0.671	0.99	0.969	0.755	1	0.816	0.802
rs116935504	5.6754E-10	0.0966148	0.01559	0.0966148	0.015585	1.09645E-09	0.20414	0.524733	0.000865	0.002237	0.027022	0.00164	0.07462	0.831403	0.916	0.874	0.999	0.998	0.977	0.998	0.954	0.834
rs56113204	5.6819E-10	0.053263	0.00859	0.0623533	0.021139	1.01453E-11	0.00179	0.668891	0.066775	8.17E-08	3.03E-05	0.00745	0.44719	0.876684	0.971	0.282	0.028	1	0.999	0.058	0.023	0.118
rs1267073	5.6843E-10	-0.034789	0.00561	-0.034789	0.005612	1.09813E-09	0.65299	0.380495	0.001089	0.015753	0.013013	0.00034	0.44426	0.047428	0.857	0.89	0.999	0.988	0.985	1	0.87	0.952
rs4741106	5.6993E-10	0.0368775	0.00595	0.0369351	0.006051	1.10097E-09	0.6451	0.237161	1.88E-05	0.001359	0.410279	0.01281	0.08369	0.019279	0.726	0.894	1	0.998	0.833	0.953	0.943	0.957
rs6474632	5.7005E-10	0.0368775	0.00595	0.0369354	0.006052	1.10119E-09	0.64478	0.237189	1.88E-05	0.001364	0.410567	0.0128	0.08368	0.019279	0.726	0.894	1	0.998	0.832	0.953	0.943	0.957
rs1253440	5.7094E-10	-0.032467	0.00524	-0.032467	0.005238	1.10288E-09	0.36198	0.066567	0.000475	0.060292	0.000288	0.00311	0.20873	0.198435	0.902	0.947	0.999	0.96	0.997	0.996	0.928	0.925
rs56106726	5.7103E-10	-0.045485	0.00734	-0.045485	0.007338	1.10306E-09	0.592	0.705093	3.73E-05	0.024426	0.088621	0.00921	0.02077	0.007042	0.869	0.856	1	0.982	0.956	0.98	0.976	0.973
rs6434763	5.7213E-10	-0.04292	0.00692	-0.04292	0.006925	1.10291E-09	0.1707	0.451597	8.92E-05	0.005247	0.001116	0.03042	0.05594	0.642134	0.918	0.876	1	0.995	0.995	0.889	0.959	0.847
rs4421134	5.7258E-10	-0.031659	0.00511	-0.031659	0.005108	1.10597E-09	0.10231	0.390293	0.003177	0.006209	0.017838	0.0001	0.90962	0.145244	0.927	0.878	0.995	0.994	0.98	1	0.704	0.92
rs35875412	5.727E-10	-0.052278	0.00843	-0.052337	0.008515	1.10621E-09	0.01761	0.540525	0.000253	0.01405	0.711533	0.00166	0.0373	0.017289	0.96	0.868	1	0.989	0.766	0.997	0.968	0.965
rs12724208	5.743E-10	-0.043512	0.00702	-0.046963	0.008613	1.10924E-09	0.01906	0.080432	0.003737	0.000841	0.012663	0.0148	0.01265	0.505388	0.967	0.949	0.995	0.999	0.987	0.966	0.983	0.89
rs1413379	5.7767E-10	0.0368679	0.00595	0.0368713	0.005955	1.11561E-09	0.69216	0.236438	2.04E-05	0.00124	0.416891	0.01348	0.08021	0.019692	0.736	0.895	1	0.998	0.831	0.95	0.945	0.957
rs523383	5.7838E-10	-0.055655	0.00898	-0.065852	0.014142	6.12985E-10	0.7371	0.12421	0.014474	1.95E-05	0.002378	0.0129	0.17097	0.011683	0.845	0.931	0.946	1	0.993	0.942	0.928	0.97
rs11585740	5.7872E-10	0.0319502	0.00516	0.0318312	0.005398	1.11758E-09	0.43286	0.076929	0.00027	0.006134	0.03096	0.00013	0.32772	0.356875	0.621	0.909	0.999	0.991	0.962	1	0.843	0.574
rs555460	5.7929E-10	-0.055653	0.00898	-0.06585	0.014142	6.13863E-10	0.7371	0.12421	0.014483	1.95E-05	0.002379	0.01291	0.17099	0.011683	0.845	0.931	0.946	1	0.993	0.942	0.928	0.97
rs2888410	5.8063E-10	-0.03161	0.0051	-0.031421	0.005312	1.12118E-09	0.4902	0.292263	0.004235	0.010004	0.768112	8.2E-07	0.02881	0.838916	0.617	0.844	0.985	0.985	0.639	1	0.952	0.738
rs11275533	5.814E-10	0.0369913	0.00597	0.0377968	0.008249	1.12264E-09	0.25893	0.738072	0.011774	0.001318	0.00867	9E-05	0.00922	0.268211	0.875	0.712	0.962	0.998	0.983	1	0.976	0.569
rs11729045	5.8181E-10	-0.060655	0.00979	-0.060655	0.009791	1.12341E-09	0.77347	0.094112	2.62E-05	0.000653	0.172328	0.01487	0.16558	0.477716	0.828	0.929	1	0.999	0.92	0.951	0.923	0.865

Table S3

rs73004672	5.8198E-10	0.0346547	0.00559	0.0346547	0.005594	1.12264E-09	0.17263	0.228497	0.036425	0.001196	0.215151	5.4E-06	0.33633	0.312771	0.909	0.898	0.878	0.998	0.899	1	0.875	0.885
rs10891493	5.8217E-10	0.0346544	0.00559	0.0346544	0.005594	1.123E-09	0.17263	0.22851	0.036425	0.001197	0.215171	5.4E-06	0.33616	0.312778	0.909	0.898	0.878	0.998	0.899	1	0.875	0.885
rs7108388	5.8365E-10	-0.03279	0.00529	-0.037303	0.008261	1.12689E-09	0.55478	0.098735	0.00168	0.086198	3.64E-06	0.00225	0.1044	0.336089	0.873	0.937	0.998	0.937	0.999	0.996	0.948	0.9
rs6752231	5.8424E-10	0.0349951	0.00565	0.0383549	0.007578	1.12801E-09	0.0673	0.010118	0.011143	0.003366	0.002044	0.00163	0.06393	0.921398	0.948	0.969	0.981	0.997	0.994	0.998	0.962	0.807
rs1376769	5.8455E-10	-0.039013	0.0063	-0.039013	0.006298	1.1286E-09	0.07246	0.953257	0.000199	0.002149	0.239816	0.00049	0.26462	0.969706	0.927	0.786	1	0.997	0.887	0.999	0.887	0.764
rs1376770	5.854E-10	-0.039012	0.0063	-0.039012	0.006298	1.1302E-09	0.07246	0.953263	0.000199	0.002149	0.239936	0.00049	0.26463	0.969697	0.927	0.786	1	0.997	0.887	0.999	0.887	0.764
rs73004014	5.8596E-10	-0.063426	0.01024	-0.063426	0.01024	1.13127E-09	0.48778	0.102537	0.000622	0.002889	0.278388	0.00021	0.11358	0.371429	0.692	0.92	0.999	0.996	0.876	1	0.932	0.871
rs35420934	5.8609E-10	0.0540826	0.00873	0.0573307	0.010876	1.11297E-09	0.52773	0.037668	3.55E-05	0.040746	0.008869	0.03327	0.00271	0.416086	0.87	0.952	1	0.966	0.988	0.878	0.99	0.884
rs9556972	5.8624E-10	0.0324765	0.00524	0.0322126	0.006808	8.61583E-10	0.73969	0.527866	1.45E-07	0.094384	0.10825	0.01351	0.00536	0.760809	0.702	0.82	1	0.876	0.92	0.923	0.979	0.777
rs11222087	5.8701E-10	0.0382536	0.00618	0.0382536	0.006176	1.13325E-09	0.01028	0.612156	0.000172	0.230469	0.368742	4.6E-05	0.29201	0.038838	0.959	0.829	1	0.764	0.837	1	0.876	0.943
rs13188689	5.8752E-10	0.0315098	0.00509	0.0322692	0.006478	1.13421E-09	0.63857	0.164299	0.000159	0.000477	0.026583	0.00856	0.08341	0.050815	0.827	0.579	1	0.999	0.972	0.972	0.941	0.94
rs4771307	5.8813E-10	0.0324841	0.00524	0.0322642	0.006819	8.49066E-10	0.8347	0.546617	1.42E-07	0.101354	0.122192	0.01376	0.00432	0.741438	0.718	0.817	1	0.867	0.912	0.92	0.981	0.78
rs74441113	5.8862E-10	-0.045759	0.00739	-0.046988	0.009079	1.13628E-09	0.00206	0.298143	0.00731	0.136575	0.1623	1.2E-05	0.03134	0.296436	0.976	0.903	0.986	0.892	0.932	1	0.971	0.905
rs62403365	5.8983E-10	0.0532192	0.00859	0.0623649	0.021119	1.10304E-11	0.00169	0.668524	0.066417	9.45E-08	3E-05	0.00739	0.4477	0.875327	0.972	0.284	0.03	1	0.999	0.062	0.024	0.12
rs11214491	5.9074E-10	0.033245	0.00537	0.033245	0.005368	1.14028E-09	0.9037	0.853905	0.022006	0.004753	0.056029	5.5E-06	0.31953	0.022318	0.801	0.809	0.935	0.995	0.959	1	0.88	0.956
rs3020398	5.9135E-10	-0.033523	0.00541	-0.033523	0.005413	1.14144E-09	0.81877	0.370954	0.002867	0.048127	0.341519	9.4E-07	0.31827	0.080022	0.745	0.864	0.994	0.952	0.848	1	0.869	0.926
rs10959491	5.9201E-10	-0.035092	0.00567	-0.035092	0.005667	1.14269E-09	0.5383	0.588014	1.72E-05	0.027376	0.098436	0.00593	0.0096	0.040837	0.722	0.853	1	0.977	0.946	0.986	0.98	0.95
rs145565981	5.9338E-10	0.0324763	0.00524	0.0321944	0.006955	8.56028E-10	0.73617	0.546436	1.39E-07	0.09437	0.121765	0.01383	0.00432	0.740696	0.698	0.815	1	0.874	0.912	0.919	0.981	0.778
rs73244155	5.9348E-10	0.0391102	0.00632	0.0391102	0.006316	1.14546E-09	0.03666	0.747038	0.001458	0.005696	0.001648	0.00288	0.51514	0.075682	0.954	0.853	0.998	0.995	0.994	0.996	0.863	0.946
rs62412101	5.9449E-10	-0.046047	0.00744	-0.047138	0.009275	1.14736E-09	0.72459	0.022078	7.93E-05	0.057742	0.773964	0.00132	0.00291	0.072032	0.83	0.953	1	0.949	0.723	0.998	0.987	0.938
rs9556975	5.9589E-10	0.0324729	0.00524	0.0321913	0.006955	8.59622E-10	0.73622	0.54662	1.4E-07	0.094382	0.121804	0.01384	0.00431	0.74079	0.698	0.815	1	0.874	0.912	0.919	0.981	0.778
rs4637426	5.9666E-10	0.0380739	0.00615	0.0384317	0.006968	1.15147E-09	0.98497	0.24127	0.01212	0.004708	0.390895	2.9E-05	0.00049	0.714657	0.785	0.892	0.969	0.995	0.84	1	0.992	0.818
rs10956510	5.9679E-10	0.0327421	0.00529	0.0327421	0.005288	1.15172E-09	0.24248	0.574021	0.000247	0.024212	0.417636	0.0011	0.05384	0.002817	0.911	0.869	1	0.982	0.86	0.999	0.962	0.979
rs370155	5.99E-10	-0.065926	0.01065	-0.068699	0.013629	1.15589E-09	0.38976	0.561632	0.005034	0.003182	0.253601	0.00027	0.17094	0.000286	0.892	0.871	0.993	0.997	0.907	1	0.932	0.985
rs72694247	5.9921E-10	-0.045418	0.00734	-0.045418	0.007337	1.15628E-09	0.55289	0.715138	3.9E-05	0.025698	0.088777	0.00902	0.02131	0.007243	0.874	0.855	1	0.982	0.956	0.981	0.976	0.973
rs11227632	5.9993E-10	-0.032822	0.0053	-0.03791	0.008853	9.74497E-10	0.54983	0.110388	0.002021	0.129834	1.3E-06	0.00134	0.13235	0.348009	0.867	0.931	0.997	0.896	0.999	0.997	0.938	0.893
rs10511565	6.0029E-10	-0.036824	0.00595	-0.036824	0.005949	1.15832E-09	0.66764	0.231229	2.13E-05	0.001379	0.406188	0.01275	0.08109	0.020116	0.732	0.896	1	0.998	0.836	0.955	0.944	0.957
rs28513069	6.0073E-10	0.0380646	0.00615	0.0384227	0.006971	1.15915E-09	0.98502	0.24261	0.012021	0.004726	0.392741	2.9E-05	0.00049	0.715097	0.785	0.892	0.969	0.995	0.84	1	0.992	0.818
rs59539521	6.0103E-10	0.0380631	0.00615	0.0384247	0.00698	1.15972E-09	0.98553	0.24252	0.011994	0.004738	0.393596	2.9E-05	0.00049	0.714647	0.785	0.892	0.969	0.994	0.839	1	0.992	0.818
rs76340457	6.0275E-10	0.0703587	0.01137	0.0660571	0.016339	7.10419E-10	0.09145	0.560113	1.06E-05	0.953675	0.294857	3.9E-06	0.05427	0.993803	0.856	0.7	1	0.068	0.72	1	0.907	0.573
rs1334026	6.0309E-10	0.0368283	0.00595	0.03693	0.006127	1.16361E-09	0.64257	0.235996	1.95E-05	0.001311	0.41589	0.01339	0.07991	0.019524	0.725	0.894	1	0.998	0.83	0.95	0.944	0.957
rs4682987	6.0671E-10	-0.031575	0.0051	-0.031315	0.005388	1.17045E-09	0.47238	0.295688	0.004385	0.010869	0.749064	7.5E-07	0.02873	0.843872	0.613	0.843	0.985	0.984	0.647	1	0.952	0.737
rs72711010	6.072E-10	-0.035054	0.00566	-0.035054	0.005664	1.17137E-09	0.54041	0.581407	1.8E-05	0.026902	0.097616	0.00597	0.01025	0.040929	0.723	0.854	1	0.978	0.946	0.986	0.98	0.95
rs62527037	6.084E-10	-0.036819	0.00595	-0.036919	0.006123	1.17362E-09	0.64266	0.236071	1.97E-05	0.00131	0.416171	0.0134	0.07994	0.019578	0.725	0.894	1	0.998	0.83	0.95	0.944	0.957
rs77333198	6.0875E-10	-0.049075	0.00793	-0.049075	0.00793	1.1743E-09	0.09144	0.264476	0.001261	0.188029	0.257313	1.9E-05	0.05647	0.08137	0.933	0.901	0.998	0.835	0.896	1	0.958	0.939
rs148768231	6.0893E-10	0.0595888	0.00963	0.0606998	0.013283	1.09689E-09	0.65255	0.300923	0.028628	0.04623	0.288848	1.2E-06	0.00085	0.128738	0.71	0.874	0.895	0.946	0.862	1	0.991	0.912
rs12216900	6.093E-10	-0.035054	0.00566	-0.035054	0.005665	1.17533E-09	0.54525	0.588508	1.76E-05	0.027519	0.101097	0.00566	0.0097	0.04665	0.723	0.852	1	0.977	0.945	0.987	0.98	0.948
rs2984431	6.1035E-10	0.0320755	0.00518	0.0332423	0.006596	8.93389E-10	0.10765	0.896591	0.08993	0.000321	0.003335	1.5E-05	0.69208	0.252544	0.888	0.705	0.5	0.999	0.988	1	0.673	0.843
rs2162103	6.1151E-10	0.0380481	0.00615	0.0384001	0.006954	1.1795E-09	0.97351	0.242823	0.011976	0.004852	0.394814	2.9E-05	0.00049	0.715132	0.787	0.892	0.97	0.994	0.839	1	0.992	0.818
rs79367933	6.1205E-10	-0.04572	0.00739	-0.046912	0.009051	1.18051E-09	0.00216	0.303865	0.007626	0.137843	0.160058	1.1E-05	0.03183	0.296498	0.976	0.902	0.986	0.891	0.932	1	0.971	0.904
rs56226914	6.1341E-10	-0.045718	0.00739	-0.046912	0.009055	1.18309E-09	0.00216	0.303864	0.007617	0.138277	0.160019	1.1E-05	0.03183	0.296478	0.976	0.902	0.986	0.89	0.932	1	0.971	0.904
rs9556978	6.1347E-10	0.0325239	0.00526	0.0319834	0.00805	6.92844E-10	0.50789	0.590994	6.69E-08	0.079379	0.126767	0.02114	0.00259	0.732146	0.61	0.778	1	0.854	0.889	0.832	0.982	0.745
rs12635624	6.1359E-10	-0.031567	0.0051	-0.031284	0.005413	1.18343E-09	0.46626	0.295688	0.004385	0.010911	0.749064	7.5E-07	0.02873	0.843872	0.611	0.843	0.985	0.984	0.647	1	0.952	0.736
rs4421446	6.1425E-10	0.0368112	0.00595	0.0369074	0.006118	1.18467E-09	0.64253	0.23664	1.99E-05	0.001313	0.416489	0.01338	0.07995	0.019577	0.725	0.894	1	0.998	0.83	0.951	0.944	0.957
rs61859575	6.1514E-10	-0.045714	0.00739	-0.046909	0.009056	1.18636E-09	0.00216	0.30387	0.007627	0.138319	0.160091	1.1E-05	0.03183	0.296501	0.976	0.902	0.986	0.89	0.932	1	0.971	0.904
rs61859576	6.1514E-10	-0.045714	0.00739	-0.046909	0.009056	1.18636E-09	0.00216	0.30387	0.007627	0.138319	0.160091	1.1E-05	0.03183	0.296501	0.976	0.902	0.986	0.89	0.932	1	0.971	0.904
rs61859580	6.1514E-10	-0.045714	0.00739	-0.046909	0.009056	1.18636E-09	0.00216	0.30387	0.007627	0.138319	0.160091	1.1E-05	0.03183	0.296501	0.976	0.902	0.986	0.89	0.932	1	0.971	0.904
rs56075405	6.1529E-10	-0.045714	0.00739	-0.046909	0.009056	1.18664E-09	0.00216	0.30387	0.007627	0.138343	0.160091	1.1E-05	0.03183	0.296501	0.976	0.902	0.986	0.89	0.932	1	0.971	0.904
rs1267063	6.1547E-10	-0.036094	0.00583	-0.036094	0.005834	1.18697E-09	0.73476	0.331794	0.000369	0.019314	0.017728	0.00057	0.5579	0.047878	0.842	0.893	1	0.985	0.981	0.999	0.841	0.95
rs137958504	6.1558E-10	-0.045713	0.00739	-0.046908	0.009056	1.18719E-09	0.00216	0.303865	0.007628	0.138319	0.160165	1.1E-05	0.03183	0.296493	0.976	0.902	0.986	0.89	0.932	1	0.971	0.904
rs61859573	6.1558E-10	-0.045713	0.00739	-0.046908	0.009056	1.18719E-09	0.00216	0.303865	0.007628	0.138319	0.160165	1.1E-05	0.03183	0.296493	0.976	0.902	0.986	0.89	0.932	1	0.971	0.904
rs139526565	6.1566E-10	-0.045713	0.00739	-0.046908	0.009056	1.18733E-09	0.00216	0.303865	0.007628	0.138319	0.160166	1.1E-05	0.03183	0.296493	0.976	0.902	0.986	0.89	0.932	1	0.971	0.904
rs61859574	6.1566E-10	-0.045713	0.00739	-0.046908	0.009056	1.18733E-09	0.00216	0.303865	0.007628	0.138319	0.160166	1.1E-05	0.03183	0.296493	0.976	0.902	0.986	0.89	0.932	1	0.971	0.904
rs4741107	6.1589E-10	0.0368104	0.00595	0.0368905	0.006089	1.18777E-09	0.6486	0.236721	1.97E-05	0.001341	0.416285	0.01337	0.08017	0.019519	0.726	0.894	1	0.998	0.83	0.951	0.944	0.957
rs1334024	6.1626E-10	0.0368087	0.00595	0.0369053	0.006119	1.18847E-09	0.64255	0.236584	1.99E-05	0.001311	0.41663	0.0134	0.08019	0.01958	0.725	0.894	1	0.998	0.83	0.95	0.944	0.957

Table S3

rs1981912	6.1791E-10	0.0349399	0.00565	0.0385128	0.007698	1.19159E-09	0.06066	0.009447	0.01165	0.003497	0.002069	0.00161	0.06627	0.916548	0.95	0.969	0.98	0.997	0.994	0.998	0.962	0.807
rs62527036	6.1799E-10	-0.036804	0.00595	-0.036902	0.006121	1.19173E-09	0.64276	0.235922	1.99E-05	0.001309	0.416304	0.01346	0.07999	0.019608	0.725	0.894	1	0.998	0.83	0.95	0.944	0.957
rs3020394	6.1799E-10	-0.033399	0.0054	-0.033399	0.005399	1.19174E-09	0.77435	0.292854	0.003325	0.064418	0.318393	5.9E-07	0.326	0.086463	0.735	0.875	0.993	0.935	0.854	1	0.866	0.923
rs12468757	6.1838E-10	0.0377047	0.0061	0.0375033	0.0083	1.18628E-09	0.3552	0.391266	0.021064	0.000334	0.091178	7.3E-06	0.3118	0.041278	0.833	0.826	0.885	0.999	0.922	1	0.387	0.928
rs12713412	6.1894E-10	0.0349432	0.00565	0.038129	0.007491	1.19351E-09	0.06853	0.01113	0.011098	0.00321	0.001983	0.00167	0.07047	0.921197	0.947	0.968	0.981	0.997	0.994	0.998	0.96	0.807
rs7648154	6.1943E-10	-0.036583	0.00591	-0.033717	0.00845	4.86872E-10	0.58087	0.156598	0.007942	0.244004	0.237295	2.9E-09	0.8216	0.273288	0.721	0.83	0.899	0.586	0.78	1	0.494	0.794
rs6783201	6.2181E-10	0.0329642	0.00533	0.0329642	0.00533	1.19893E-09	0.97907	0.334746	0.002666	0.057668	0.015921	0.00018	0.00592	0.160053	0.82	0.899	0.997	0.959	0.983	1	0.985	0.927
rs6531309	6.2226E-10	0.0380448	0.00615	0.0383769	0.00694	1.19978E-09	0.98492	0.235769	0.01156	0.005603	0.399392	2.8E-05	0.00049	0.699004	0.786	0.893	0.971	0.994	0.838	1	0.992	0.821
rs17490390	6.2264E-10	0.0458539	0.00741	0.0458539	0.007414	1.20051E-09	0.16234	0.531022	0.000501	0.021922	0.004431	0.00667	0.01573	0.14715	0.932	0.887	0.999	0.986	0.992	0.989	0.98	0.936
rs7761976	6.2334E-10	0.0531409	0.00859	0.0622911	0.021109	1.17238E-11	0.0017	0.670511	0.067211	9.61E-08	3.08E-05	0.00749	0.44677	0.878926	0.972	0.284	0.029	1	0.999	0.061	0.024	0.121
rs11222057	6.2337E-10	0.0381979	0.00618	0.0381979	0.006176	1.20189E-09	0.01055	0.607406	0.000182	0.230701	0.370325	4.6E-05	0.29016	0.039501	0.959	0.83	1	0.765	0.836	1	0.877	0.943
rs72711050	6.2367E-10	-0.036795	0.00595	-0.036818	0.005987	1.20244E-09	0.67368	0.236381	2.04E-05	0.001338	0.416903	0.01348	0.08022	0.019694	0.732	0.894	1	0.998	0.831	0.951	0.944	0.957
rs28561074	6.264E-10	0.0330725	0.00535	0.0330725	0.005348	1.2076E-09	0.73944	0.724943	0.00034	0.023982	0.0145	0.00018	0.12509	0.575932	0.743	0.823	0.999	0.978	0.98	1	0.929	0.84
rs200953	6.2689E-10	-0.065848	0.01065	-0.068616	0.013628	1.20853E-09	0.3873	0.568222	0.005375	0.002962	0.257888	0.00026	0.17275	0.0003	0.892	0.87	0.992	0.997	0.906	1	0.931	0.985
rs7317938	6.2768E-10	0.032081	0.00519	0.0318375	0.006158	9.4033E-10	0.94069	0.488237	1.33E-07	0.146539	0.086638	0.00971	0.01144	0.935734	0.755	0.826	1	0.82	0.931	0.944	0.971	0.747
rs7710965	6.2799E-10	0.0311846	0.00504	0.0311846	0.005043	1.21059E-09	0.64585	0.763498	0.00594	0.000462	0.107217	9.1E-05	0.04205	0.777204	0.829	0.814	0.987	0.999	0.936	1	0.957	0.731
rs4741108	6.2833E-10	0.0367907	0.00595	0.0368623	0.006076	1.21124E-09	0.64477	0.235512	1.95E-05	0.001362	0.41411	0.01332	0.08465	0.01939	0.725	0.894	1	0.998	0.831	0.951	0.942	0.957
rs6912296	6.2839E-10	0.0531392	0.00859	0.0621967	0.020903	1.44409E-11	0.00201	0.661262	0.064424	1.19E-07	3.04E-05	0.00736	0.47346	0.864991	0.969	0.296	0.038	1	0.999	0.074	0.03	0.127
rs993409	6.287E-10	0.078386	0.01268	0.0775434	0.016391	1.21193E-09	0.52589	0.966124	7.41E-05	0.569313	0.036352	4.3E-05	0.0018	0.941538	0.759	0.674	1	0.325	0.946	1	0.984	0.663
rs10514933	6.2924E-10	0.0311883	0.00504	0.0311883	0.005044	1.21295E-09	0.51525	0.771761	0.003662	0.001003	0.103829	0.00011	0.05319	0.838887	0.852	0.818	0.993	0.998	0.939	1	0.954	0.749
rs16926968	6.2963E-10	-0.036787	0.00595	-0.036882	0.006114	1.21369E-09	0.64255	0.236695	2.02E-05	0.00131	0.41709	0.01347	0.0802	0.01966	0.725	0.894	1	0.998	0.83	0.95	0.944	0.957
rs4712378	6.3018E-10	0.0531369	0.00859	0.062095	0.020972	1.32487E-11	0.00209	0.655492	0.065583	9.87E-08	3.18E-05	0.00743	0.4534	0.870658	0.969	0.295	0.034	1	0.999	0.068	0.027	0.124
rs28704798	6.3072E-10	0.0375342	0.00607	0.0378837	0.00742	1.21575E-09	0.78454	0.189111	0.00721	0.00399	0.532116	3.6E-05	0.00057	0.794669	0.734	0.894	0.982	0.995	0.781	1	0.991	0.792
rs1812006	6.3518E-10	0.0628327	0.01016	0.0628327	0.010165	1.22415E-09	0.15845	0.018769	0.000177	0.043782	0.033329	0.00135	0.07839	0.768762	0.926	0.959	1	0.963	0.975	0.998	0.954	0.77
rs62302744	6.3624E-10	0.0390401	0.00632	0.0390401	0.006316	1.22615E-09	0.03713	0.748581	0.00147	0.005194	0.001625	0.00318	0.51431	0.080818	0.954	0.852	0.998	0.996	0.994	0.995	0.863	0.945
rs72711049	6.3627E-10	-0.036776	0.00595	-0.036868	0.006109	1.22622E-09	0.64265	0.236609	2.04E-05	0.001308	0.41706	0.01348	0.08024	0.019697	0.725	0.894	1	0.998	0.83	0.95	0.944	0.957
rs151071492	6.3683E-10	0.0682781	0.01105	0.0665724	0.015041	1.01743E-09	0.04475	0.184538	0.000234	0.785606	0.530185	1.3E-06	0.03778	0.563375	0.902	0.836	0.999	0.177	0.635	1	0.934	0.73
rs890068	6.3692E-10	0.0351425	0.00569	0.0384129	0.008088	1.22744E-09	0.10937	0.002465	0.011331	0.004063	0.005175	0.00058	0.13075	0.671517	0.934	0.976	0.978	0.996	0.99	0.999	0.941	0.753
rs1334023	6.3729E-10	0.0367735	0.00595	0.0367735	0.00595	1.22813E-09	0.65169	0.24549	1.96E-05	0.001321	0.421963	0.01333	0.07589	0.023165	0.726	0.892	1	0.998	0.828	0.951	0.945	0.954
rs6720574	6.3891E-10	-0.03259	0.00527	-0.03259	0.005273	1.23118E-09	0.29413	0.007608	0.00082	0.04242	0.161286	0.00027	0.58482	0.017358	0.906	0.97	0.999	0.97	0.934	1	0.848	0.966
rs142029494	6.3902E-10	-0.062367	0.01009	-0.062367	0.010091	1.2314E-09	0.33912	0.120168	0.000182	0.004031	0.050084	0.00114	0.27597	0.252504	0.658	0.918	1	0.995	0.962	0.998	0.89	0.894
rs748211	6.3967E-10	0.0351387	0.00569	0.0384094	0.008088	1.23261E-09	0.10941	0.002465	0.011343	0.004064	0.005178	0.00059	0.13079	0.671517	0.934	0.976	0.978	0.996	0.99	0.999	0.941	0.753
rs72694252	6.3988E-10	-0.045333	0.00734	-0.045333	0.007335	1.23301E-09	0.61283	0.669598	4.05E-05	0.02879	0.080739	0.00908	0.02005	0.006986	0.867	0.861	1	0.98	0.959	0.981	0.977	0.973
rs10756182	6.4069E-10	0.036773	0.00595	0.0368393	0.006067	1.23454E-09	0.64485	0.236115	1.98E-05	0.00136	0.41501	0.01332	0.08492	0.01945	0.726	0.894	1	0.998	0.831	0.951	0.942	0.957
rs61041167	6.4195E-10	0.0390513	0.00632	0.0390513	0.006319	1.23691E-09	0.03373	0.727308	0.001472	0.005439	0.001743	0.0033	0.49084	0.080105	0.956	0.856	0.998	0.995	0.994	0.995	0.869	0.945
rs9845345	6.4516E-10	-0.033014	0.00534	-0.036656	0.008868	1.24298E-09	0.0544	0.336871	0.00763	0.044632	0.155375	9E-05	0.00019	0.039542	0.943	0.68	0.985	0.964	0.928	1	0.995	0.952
rs143870588	6.4656E-10	0.109744	0.01776	0.109744	0.017762	1.2456E-09	0.39503	0.327221	0.000574	0.016945	0.003208	0.00158	0.14081	0.515381	0.892	0.9	0.999	0.988	0.993	0.998	0.939	0.877
rs62527008	6.4696E-10	-0.036756	0.00595	-0.036842	0.006096	1.24636E-09	0.6466	0.235566	2.11E-05	0.001269	0.416598	0.01364	0.08017	0.019901	0.726	0.894	1	0.998	0.83	0.95	0.944	0.956
rs9366657	6.4818E-10	-0.031292	0.00506	-0.031292	0.005065	1.24866E-09	0.3816	0.079767	0.000773	0.000192	0.753008	0.00165	0.24312	0.126367	0.875	0.93	0.999	0.999	0.732	0.997	0.9	0.922
rs7329463	6.4857E-10	-0.055679	0.00901	-0.055679	0.009012	1.2494E-09	0.86435	0.269077	1.96E-06	0.085821	0.151015	0.00029	0.10987	0.543915	0.692	0.553	1	0.882	0.887	0.999	0.904	0.789
rs6449590	6.4894E-10	0.0311673	0.00504	0.0311673	0.005045	1.25009E-09	0.65211	0.760903	0.006048	0.000471	0.106123	9.2E-05	0.04249	0.787209	0.828	0.814	0.987	0.999	0.936	1	0.957	0.733
rs61859572	6.5054E-10	-0.045646	0.00739	-0.046856	0.009062	1.2531E-09	0.00213	0.314212	0.007969	0.136721	0.156501	1.1E-05	0.03201	0.296281	0.976	0.901	0.985	0.892	0.934	1	0.971	0.904
rs3809366	6.5278E-10	0.0324787	0.00526	0.031928	0.008027	7.35399E-10	0.52631	0.566533	6.72E-08	0.081563	0.124867	0.02128	0.00273	0.783613	0.613	0.781	1	0.85	0.889	0.831	0.982	0.735
rs3020401	6.5396E-10	-0.033465	0.00542	-0.033465	0.005418	1.25955E-09	0.83687	0.401551	0.003052	0.048165	0.340799	1E-06	0.30888	0.07432	0.749	0.859	0.994	0.952	0.849	1	0.872	0.928
rs17808090	6.5572E-10	-0.03652	0.00591	-0.03652	0.005913	1.26286E-09	0.58476	0.407089	4.82E-05	0.000931	0.260338	0.01006	0.05405	0.046738	0.722	0.871	1	0.998	0.887	0.97	0.956	0.945
rs56104176	6.5707E-10	0.0530721	0.00859	0.0620977	0.021043	1.29339E-11	0.00195	0.671896	0.067286	9.76E-08	3.1E-05	0.00752	0.44711	0.881662	0.97	0.285	0.031	1	0.999	0.063	0.025	0.123
rs62302737	6.5711E-10	0.039037	0.00632	0.039037	0.006321	1.26549E-09	0.03041	0.685994	0.001428	0.005677	0.002184	0.00345	0.45976	0.080709	0.957	0.862	0.998	0.995	0.994	0.995	0.876	0.946
rs10065228	6.5726E-10	0.0311664	0.00505	0.0311664	0.005046	1.26576E-09	0.65708	0.755242	0.006154	0.000477	0.104394	9.1E-05	0.04294	0.78849	0.828	0.815	0.987	0.999	0.937	1	0.957	0.734
rs7762189	6.5762E-10	0.0530694	0.00859	0.0620511	0.02115	1.18318E-11	0.00177	0.689004	0.067349	9.17E-08	3.04E-05	0.00764	0.43307	0.881031	0.971	0.274	0.028	1	0.999	0.058	0.022	0.119
rs10809319	6.5844E-10	-0.034988	0.00567	-0.034988	0.005665	1.268E-09	0.53184	0.597269	1.81E-05	0.026469	0.100584	0.006	0.00954	0.047278	0.72	0.851	1	0.978	0.945	0.986	0.98	0.947
rs9556973	6.5855E-10	0.0323796	0.00524	0.0321087	0.006806	9.62974E-10	0.73724	0.531267	1.5E-07	0.094397	0.110993	0.01405	0.00551	0.763614	0.7	0.819	1	0.876	0.918	0.92	0.979	0.776
rs17598137	6.5956E-10	0.0620907	0.01005	0.0620907	0.010054	1.2701E-09	0.83995	0.681571	0.001756	0.00994	0.01992	5.9E-05	0.25551	0.616864	0.815	0.836	0.997	0.99	0.977	1	0.898	0.841
rs4103176	6.6015E-10	0.031165	0.00505	0.031165	0.005047	1.27122E-09	0.65725	0.754261	0.006194	0.000477	0.103973	9.1E-05	0.04304	0.789133	0.828	0.815	0.987	0.999	0.937	1	0.957	0.734
rs7648243	6.6023E-10	-0.032817	0.00531	-0.03548	0.008709	1.27137E-09	0.08733	0.431132	0.008519	0.07312	0.296051	2E-05	0.00019	0.043188	0.928	0.689	0.979	0.932	0.875	1	0.994	0.947
rs349685	6.6226E-10	0.0319112	0.00517	0.0319042	0.005174	1.04434E-09	0.73421	0.195896	0.001289	0.487775	0.349114	1.3E-07	0.0874	0.348494	0.726	0.844	0.993	0.402	0.76	1	0.904	0.805

Table S3

rs140374970	6.6253E-10	0.0374617	0.00607	0.0374617	0.006067	1.2757E-09	0.17187	0.486071	0.001128	0.000893	0.002019	0.00526	0.82267	0.118075	0.917	0.873	0.999	0.999	0.993	0.99	0.785	0.931
rs55756745	6.6497E-10	0.0530596	0.00859	0.06211	0.021048	1.30172E-11	0.00195	0.6702	0.066517	9.75E-08	3.07E-05	0.00775	0.44759	0.880862	0.97	0.285	0.03	1	0.999	0.061	0.024	0.122
rs61294200	6.665E-10	0.0329353	0.00533	0.0328713	0.005629	1.28318E-09	0.29467	0.651091	0.001544	0.23629	0.202406	5.2E-06	0.01601	0.033851	0.87	0.7	0.996	0.742	0.889	1	0.97	0.943
rs200482	6.6723E-10	-0.06571	0.01064	-0.068282	0.013321	1.28455E-09	0.38383	0.554279	0.006248	0.002881	0.24352	0.00026	0.16454	0.000366	0.893	0.872	0.99	0.997	0.911	1	0.933	0.984
rs17732348	6.6726E-10	-0.070379	0.0114	-0.071122	0.012416	1.28461E-09	0.33086	0.299163	0.00078	0.011627	0.824337	0.0007	0.00723	0.007226	0.889	0.894	0.999	0.99	0.713	0.999	0.982	0.969
rs2734833	6.6814E-10	-0.031205	0.00505	-0.031205	0.005055	1.28627E-09	0.70327	0.12633	0.00123	0.000707	0.41195	0.00014	0.80001	0.044697	0.802	0.902	0.998	0.998	0.81	1	0.623	0.935
rs12520974	6.6909E-10	0.031135	0.00504	0.031135	0.005044	1.28806E-09	0.65129	0.763588	0.006059	0.000473	0.107136	9.2E-05	0.04228	0.778043	0.828	0.813	0.987	0.999	0.935	1	0.957	0.731
rs62404485	6.6962E-10	0.0530587	0.0086	0.0620724	0.020941	1.48698E-11	0.00199	0.655096	0.065456	1.16E-07	3.18E-05	0.00741	0.45381	0.870561	0.969	0.298	0.036	1	0.999	0.072	0.029	0.127
rs138297474	6.7151E-10	0.0394798	0.0064	0.0394798	0.006396	1.29261E-09	0.64844	0.740244	0.00023	0.098814	0.006536	0.00013	0.06657	0.652218	0.825	0.736	1	0.903	0.986	1	0.945	0.82
rs2371220	6.7181E-10	0.0311331	0.00504	0.0311331	0.005044	1.29318E-09	0.65136	0.763212	0.006085	0.000472	0.107044	9.2E-05	0.04234	0.778231	0.828	0.814	0.987	0.999	0.936	1	0.957	0.731
rs60157091	6.7255E-10	0.0311292	0.00504	0.0311292	0.005043	1.29456E-09	0.64835	0.764203	0.006037	0.000474	0.107709	9.3E-05	0.0423	0.777986	0.829	0.813	0.987	0.999	0.935	1	0.957	0.731
rs1324088	6.7269E-10	-0.055703	0.00902	-0.067103	0.015059	5.35779E-10	0.71984	0.174509	0.01497	6.8E-06	0.003065	0.01682	0.20012	0.008343	0.831	0.914	0.916	1	0.992	0.9	0.909	0.97
rs56103269	6.7291E-10	0.0311315	0.00504	0.0311315	0.005044	1.29524E-09	0.65044	0.761465	0.006067	0.000471	0.107275	9.3E-05	0.04263	0.780023	0.828	0.814	0.987	0.999	0.935	1	0.957	0.732
rs1413378	6.7346E-10	0.0367221	0.00595	0.0367823	0.006055	1.29628E-09	0.64438	0.235901	2.06E-05	0.001352	0.415678	0.01346	0.08505	0.019666	0.726	0.894	1	0.998	0.831	0.951	0.942	0.957
rs2146079	6.7351E-10	0.0323037	0.00523	0.0323037	0.005234	1.29637E-09	0.11939	0.602473	0.004181	0.000297	0.029234	0.00327	0.09652	0.206473	0.936	0.875	0.995	0.999	0.978	0.995	0.953	0.924
rs2747054	6.758E-10	-0.065731	0.01065	-0.068451	0.013597	1.30068E-09	0.39055	0.566221	0.005184	0.003254	0.257568	0.00028	0.17391	0.000295	0.892	0.87	0.992	0.997	0.906	1	0.931	0.985
rs12373763	6.7727E-10	0.0352504	0.00571	0.0383289	0.007423	1.30346E-09	0.12888	0.011374	0.006542	0.018689	0.001409	0.00178	0.01815	0.854909	0.938	0.969	0.991	0.988	0.995	0.998	0.979	0.845
rs6868941	6.7759E-10	0.0345979	0.00561	0.0345979	0.005606	1.30407E-09	0.25358	0.22625	0.017042	0.002028	0.003466	0.00011	0.15829	0.6971	0.899	0.903	0.958	0.997	0.991	1	0.925	0.738
rs62410580	6.7834E-10	-0.032972	0.00534	-0.036731	0.008941	1.30547E-09	0.05442	0.329112	0.007732	0.044651	0.155215	9.6E-05	0.00018	0.036981	0.943	0.678	0.985	0.963	0.928	1	0.995	0.953
rs12470692	6.7861E-10	0.0332075	0.00538	0.0332075	0.005381	1.30597E-09	0.17627	0.026784	0.007644	0.018604	0.004369	0.00043	0.03588	0.897349	0.927	0.96	0.989	0.987	0.992	1	0.971	0.834
rs10809359	6.8042E-10	-0.042185	0.00684	-0.043566	0.007867	1.30939E-09	0.35641	0.88299	0.000224	0.032867	0.015604	0.00745	0.02371	0.002909	0.902	0.841	1	0.978	0.985	0.986	0.976	0.979
rs11309093	6.8107E-10	0.0326528	0.00529	0.0326528	0.005292	1.31062E-09	0.24388	0.570026	0.000258	0.024213	0.428599	0.00114	0.05618	0.00287	0.91	0.869	1	0.982	0.857	0.998	0.961	0.979
rs12521971	6.8236E-10	0.0311168	0.00504	0.0311168	0.005043	1.31305E-09	0.64901	0.764129	0.006026	0.000487	0.107518	9.3E-05	0.04229	0.777673	0.829	0.813	0.987	0.999	0.935	1	0.957	0.731
rs3935212	6.8263E-10	-0.031348	0.00508	-0.031348	0.005081	1.25801E-09	0.90595	0.340799	0.012779	0.023716	0.316482	1.9E-07	0.03617	0.798612	0.734	0.852	0.953	0.97	0.837	1	0.953	0.701
rs9865162	6.8369E-10	-0.031477	0.0051	-0.03113	0.00548	1.31555E-09	0.47239	0.295838	0.004592	0.010873	0.780376	7.5E-07	0.02891	0.842237	0.61	0.841	0.984	0.983	0.633	1	0.951	0.735
rs8091083	6.8454E-10	0.0312182	0.00506	0.0312182	0.00506	1.31714E-09	0.19432	0.488341	0.003404	0.057376	0.085037	2.2E-06	0.07127	0.735014	0.896	0.687	0.993	0.944	0.943	1	0.943	0.807
rs2801617	6.8494E-10	0.0555585	0.00901	0.0555585	0.009005	1.3179E-09	0.90793	0.361327	1.53E-06	0.094494	0.083696	0.00039	0.10923	0.954324	0.696	0.58	1	0.868	0.92	0.999	0.903	0.71
rs4714293	6.863E-10	-0.032365	0.00525	-0.033548	0.006912	9.18788E-10	0.22442	0.908567	0.099967	0.000263	0.003795	1.1E-05	0.8143	0.149596	0.836	0.675	0.424	0.999	0.987	1	0.599	0.864
rs61910571	6.8784E-10	0.0380971	0.00618	0.0380971	0.006176	1.32336E-09	0.01087	0.613078	0.000171	0.249749	0.372187	4.7E-05	0.29209	0.038587	0.957	0.825	1	0.742	0.832	1	0.873	0.942
rs12404559	6.8854E-10	-0.038438	0.00623	-0.038438	0.006231	1.32468E-09	0.18349	0.120953	4.84E-05	0.011298	0.040834	0.02483	0.0459	0.144211	0.927	0.937	1	0.992	0.974	0.928	0.968	0.935
rs8124744	6.9018E-10	-0.03637	0.0059	-0.040933	0.008419	1.32777E-09	0.09047	0.739924	0.004239	0.051309	0.000463	0.00175	0.07486	0.004136	0.945	0.864	0.995	0.968	0.997	0.998	0.961	0.979
rs58830312	6.9094E-10	0.0311068	0.00504	0.0311068	0.005043	1.3292E-09	0.64956	0.764203	0.006037	0.000492	0.107708	9.3E-05	0.0423	0.777988	0.829	0.813	0.987	0.999	0.935	1	0.957	0.731
rs34915829	6.9129E-10	-0.039395	0.00639	-0.039395	0.006387	1.32985E-09	0.57048	0.118353	0.000273	0.003673	0.113595	0.01133	0.08211	0.0052	0.88	0.938	1	0.997	0.952	0.976	0.958	0.977
rs4680469	6.9176E-10	-0.040066	0.0065	-0.040066	0.006496	1.33073E-09	0.06229	0.902566	0.001198	0.327537	0.039521	5.4E-06	0.18851	0.120578	0.924	0.738	0.997	0.645	0.961	1	0.897	0.91
rs7709712	6.9219E-10	0.0318364	0.00516	0.0318113	0.005183	1.028E-09	0.64353	0.279888	0.001273	0.55296	0.276132	1.1E-07	0.09537	0.369107	0.737	0.818	0.993	0.345	0.791	1	0.898	0.795
rs12714923	6.9253E-10	-0.041295	0.0067	-0.041295	0.006695	1.33219E-09	0.18381	0.031697	0.008333	0.069836	0.028516	5.1E-05	0.05239	0.330945	0.927	0.959	0.988	0.954	0.979	1	0.966	0.908
rs761801	6.9331E-10	-0.032416	0.00526	-0.033854	0.007039	8.77011E-10	0.20678	0.860417	0.109396	0.000156	0.004364	1.6E-05	0.78244	0.132575	0.841	0.683	0.39	0.999	0.986	1	0.606	0.871
rs58148619	6.9335E-10	0.0380955	0.00618	0.0380955	0.006177	1.33372E-09	0.01076	0.616149	0.000165	0.244873	0.372413	5E-05	0.29834	0.038831	0.957	0.825	1	0.748	0.833	1	0.872	0.942
rs3845513	6.9449E-10	-0.050802	0.00824	-0.050802	0.008237	1.33588E-09	0.05304	0.104263	0.001763	3.09E-05	0.210851	0.01035	0.152	0.429946	0.95	0.937	0.998	1	0.921	0.977	0.937	0.889
rs117047829	6.9477E-10	0.0328524	0.00533	0.0328524	0.005327	1.3364E-09	0.24073	0.49852	0.000429	0.001423	0.151545	0.00238	0.07044	0.502865	0.91	0.876	0.999	0.998	0.935	0.997	0.956	0.874
rs72830533	6.9542E-10	0.0530016	0.00859	0.0620806	0.021027	1.42679E-11	0.00185	0.67054	0.067243	1.13E-07	3.08E-05	0.0075	0.44663	0.878913	0.97	0.288	0.032	1	0.999	0.067	0.026	0.125
rs975451	6.967E-10	0.0324997	0.00527	0.0324997	0.00527	1.34003E-09	0.94108	0.701112	0.0029	0.133983	0.052363	1.5E-06	0.17117	0.143954	0.767	0.819	0.994	0.866	0.957	1	0.911	0.91
rs9369159	6.9671E-10	-0.032411	0.00526	-0.033823	0.007014	8.87808E-10	0.21169	0.860224	0.108574	0.000163	0.00435	1.6E-05	0.78165	0.131908	0.84	0.684	0.394	0.999	0.986	1	0.607	0.872
rs9556971	6.9696E-10	0.0323324	0.00524	0.0320613	0.006807	1.02158E-09	0.7312	0.526415	1.57E-07	0.094201	0.112416	0.0142	0.0055	0.767488	0.699	0.819	1	0.876	0.917	0.919	0.979	0.775
rs3020316	6.9715E-10	-0.033324	0.0054	-0.033324	0.005404	1.34088E-09	0.8318	0.283036	0.003262	0.083197	0.30519	5.6E-07	0.33009	0.083862	0.744	0.876	0.993	0.915	0.858	1	0.864	0.923
rs10033503	6.9724E-10	0.0374223	0.00607	0.0377809	0.007402	1.34105E-09	0.80137	0.196547	0.007691	0.003742	0.530289	3.8E-05	0.00058	0.810864	0.737	0.892	0.98	0.995	0.782	1	0.991	0.79
rs12798681	6.9728E-10	0.0337102	0.00547	0.0350892	0.009224	9.25514E-10	0.93162	0.01308	0.001048	0.908841	0.010386	2.2E-06	0.37682	0.028153	0.639	0.939	0.994	0.134	0.977	1	0.771	0.93
rs73073007	6.9817E-10	-0.037145	0.00602	-0.037145	0.006024	1.34279E-09	0.76509	0.131448	0.001087	0.097639	0.044528	2.5E-06	0.57938	0.612332	0.717	0.9	0.998	0.89	0.957	1	0.79	0.811
rs12663823	7.0041E-10	0.0529907	0.00859	0.0620758	0.02102	1.44404E-11	0.00185	0.671907	0.067309	1.13E-07	3.1E-05	0.00752	0.44709	0.881651	0.97	0.287	0.032	1	0.999	0.067	0.026	0.126
rs146058500	7.008E-10	0.0529898	0.00859	0.0620752	0.02102	1.44464E-11	0.00185	0.671908	0.067318	1.13E-07	3.1E-05	0.00752	0.44708	0.881643	0.97	0.287	0.032	1	0.999	0.067	0.026	0.126
rs56402806	7.0159E-10	0.0529888	0.00859	0.0620673	0.021026	1.43949E-11	0.00185	0.671114	0.067389	1.13E-07	3.09E-05	0.00751	0.44642	0.879456	0.97	0.288	0.032	1	0.999	0.066	0.026	0.125
rs62488697	7.0245E-10	0.0370175	0.006	0.0370175	0.006004	1.35085E-09	0.10175	0.37117	0.001257	0.069092	0.016528	0.00012	0.04301	0.154958	0.928	0.687	0.998	0.943	0.981	1	0.962	0.92
rs200485	7.0255E-10	-0.065668	0.01065	-0.068395	0.013601	1.35104E-09	0.39111	0.566227	0.005242	0.003268	0.258177	0.00028	0.17419	0.000295	0.892	0.87	0.992	0.997	0.906	1	0.93	0.985
rs553467330	7.0538E-10	-0.032401	0.00526	-0.03381	0.007009	9.00391E-10	0.21133	0.860258	0.108641	0.000166	0.004349	1.6E-05	0.78167	0.131758	0.84	0.684	0.395	0.999	0.986	1	0.607	0.872
rs116870615	7.0625E-10	-0.079302	0.01286	-0.079302	0.012864	1.34165E-09	0.10204	0.172048	0.0429	0.002996	0.287525	8.6E-06	0.03079	0.521753	0.927	0.911	0.842	0.996	0.875	1	0.967	0.853

Table S3

rs56346470	7.0655E-10	-0.047249	0.00766	-0.047249	0.007665	1.35856E-09	0.25809	0.069113	0.005848	0.001289	0.011331	0.00469	0.12419	0.044604	0.923	0.951	0.993	0.999	0.988	0.994	0.951	0.961
rs28588623	7.0845E-10	-0.04018	0.00652	-0.04018	0.006518	1.36213E-09	0.04481	0.899332	0.002024	0.310584	0.028693	4.2E-06	0.1977	0.131593	0.933	0.743	0.995	0.668	0.969	1	0.896	0.909
rs1484687	7.0863E-10	-0.032811	0.00532	-0.03292	0.005975	1.36248E-09	0.398	0.014273	0.000222	0.082275	0.258609	0.0002	0.84612	0.007341	0.876	0.958	1	0.929	0.891	1	0.765	0.969
rs1304602	7.1116E-10	-0.032327	0.00524	-0.033641	0.007007	9.14299E-10	0.22893	0.883359	0.10813	0.000266	0.003421	1.1E-05	0.79748	0.140533	0.832	0.674	0.39	0.999	0.987	1	0.597	0.866
rs12521969	7.1177E-10	0.0310842	0.00504	0.0310842	0.005043	1.36838E-09	0.64114	0.763916	0.006066	0.00052	0.107342	9.3E-05	0.04237	0.777478	0.83	0.814	0.987	0.999	0.936	1	0.957	0.732
rs4968896	7.1188E-10	0.0311995	0.00506	0.0311995	0.005062	1.36858E-09	0.58588	0.768021	0.000312	0.083216	0.304245	4.8E-05	0.04427	0.011466	0.702	0.807	0.999	0.917	0.861	1	0.955	0.96
rs117121702	7.1268E-10	-0.074053	0.01202	-0.074053	0.012015	1.37009E-09	0.72119	0.23838	0.000194	0.037651	0.453662	0.00031	0.07505	0.030571	0.839	0.904	1	0.969	0.837	1	0.951	0.956
rs2396	7.1685E-10	0.0312389	0.00507	0.0314435	0.00558	1.37793E-09	0.76124	0.031473	0.000111	0.003985	0.010086	0.00379	0.14532	0.478391	0.738	0.942	1	0.995	0.983	0.991	0.92	0.661
rs11738586	7.1708E-10	-0.045808	0.00743	-0.045808	0.007434	1.37836E-09	0.89644	0.038335	0.000175	0.113252	0.132127	0.00074	0.00392	0.314413	0.822	0.95	1	0.909	0.938	0.999	0.986	0.897
rs2027619	7.1807E-10	0.0336856	0.00547	0.0350774	0.00925	9.41565E-10	0.92863	0.013031	0.001046	0.916709	0.010354	2.2E-06	0.37783	0.028087	0.638	0.939	0.994	0.131	0.977	1	0.77	0.93
rs138786615	7.1899E-10	0.0328426	0.00533	0.0328426	0.00533	1.38196E-09	0.22907	0.352076	0.000578	0.000786	0.159867	0.00305	0.07347	0.541974	0.913	0.896	0.999	0.999	0.933	0.995	0.955	0.871
rs3048471	7.2104E-10	0.0324712	0.00527	0.0324712	0.00527	1.38581E-09	0.95838	0.674822	0.003146	0.13168	0.053637	1.5E-06	0.17422	0.145894	0.771	0.824	0.993	0.869	0.957	1	0.91	0.91
rs4741105	7.2198E-10	0.0366433	0.00595	0.036717	0.00607	1.38759E-09	0.64484	0.235182	2.57E-05	0.00136	0.403791	0.0131	0.08493	0.017307	0.728	0.895	1	0.998	0.837	0.954	0.943	0.958
rs60829979	7.2263E-10	-0.036771	0.00597	-0.038867	0.011363	6.48299E-10	0.01273	0.214656	0.045582	1.08E-06	0.17045	0.00034	0.14114	0.122289	0.945	0.86	0.732	1	0.873	0.997	0.893	0.425
rs62488714	7.2331E-10	0.0360064	0.00584	0.0360064	0.005844	1.39008E-09	0.09543	0.607091	0.001555	0.004988	0.013598	0.00058	0.20247	0.280844	0.932	0.748	0.998	0.995	0.983	0.999	0.918	0.9
rs200490	7.2498E-10	-0.065608	0.01065	-0.068306	0.013629	1.39321E-09	0.38975	0.563886	0.005069	0.003433	0.276147	0.00028	0.17268	0.000291	0.891	0.87	0.993	0.997	0.9	1	0.931	0.985
rs9556555	7.2592E-10	0.0313296	0.00509	0.0313296	0.005086	1.39499E-09	0.12783	0.249566	0.000665	0.001281	0.250912	0.00219	0.5119	0.023565	0.93	0.909	0.999	0.998	0.907	0.997	0.859	0.962
rs73158380	7.2603E-10	-0.04001	0.00649	-0.04001	0.006495	1.3952E-09	0.06241	0.90752	0.00123	0.328861	0.039857	5.6E-06	0.18807	0.120389	0.924	0.739	0.997	0.645	0.961	1	0.897	0.91
rs34049315	7.2678E-10	-0.032318	0.00525	-0.033621	0.006987	9.3429E-10	0.23038	0.881828	0.109192	0.000267	0.003526	1.1E-05	0.78894	0.139822	0.832	0.675	0.388	0.999	0.987	1	0.6	0.867
rs61969458	7.2743E-10	0.032295	0.00524	0.0319842	0.006828	1.07248E-09	0.73005	0.529875	1.61E-07	0.101834	0.114878	0.01319	0.00536	0.782172	0.698	0.818	1	0.867	0.915	0.925	0.979	0.771
rs112206316	7.2899E-10	-0.065683	0.01066	-0.066634	0.012439	1.22277E-09	0.06175	0.06804	0.061476	0.005596	0.110264	1.8E-06	0.1085	0.736649	0.927	0.925	0.708	0.992	0.924	1	0.925	0.683
rs200483	7.3084E-10	-0.065602	0.01065	-0.068304	0.013578	1.40424E-09	0.39049	0.565181	0.00511	0.003514	0.256705	0.00029	0.17327	0.000292	0.892	0.87	0.993	0.996	0.906	1	0.931	0.985
rs9736596	7.3133E-10	-0.038051	0.00618	-0.038051	0.006178	1.40515E-09	0.01068	0.633268	0.000187	0.241552	0.377558	4.7E-05	0.29549	0.037874	0.958	0.823	1	0.752	0.831	1	0.873	0.942
rs12044278	7.322E-10	-0.03246	0.00527	-0.03246	0.00527	1.4068E-09	0.93362	0.67323	0.003136	0.135803	0.054349	1.4E-06	0.17046	0.144069	0.765	0.823	0.993	0.864	0.956	1	0.911	0.91
rs4353243	7.3241E-10	-0.038049	0.00618	-0.038049	0.006178	1.40718E-09	0.0107	0.632749	0.000188	0.241288	0.377898	4.7E-05	0.2952	0.037927	0.958	0.823	1	0.753	0.831	1	0.873	0.942
rs2815350	7.3288E-10	0.0324589	0.00527	0.0324589	0.00527	1.40806E-09	0.93715	0.674822	0.003146	0.131187	0.053637	1.5E-06	0.17422	0.145894	0.767	0.823	0.993	0.87	0.957	1	0.91	0.91
rs10959560	7.3486E-10	-0.042085	0.00683	-0.043669	0.008008	1.4118E-09	0.35835	0.901857	0.000237	0.034881	0.014911	0.00751	0.0219	0.002887	0.901	0.839	1	0.977	0.985	0.986	0.977	0.979
rs3846846	7.3615E-10	-0.031196	0.00507	-0.031196	0.005066	1.41421E-09	0.3937	0.077378	0.00078	0.000193	0.757117	0.00187	0.23464	0.123527	0.874	0.93	0.999	0.999	0.732	0.997	0.903	0.923
rs62410572	7.364E-10	-0.032687	0.00531	-0.035389	0.008803	1.41468E-09	0.09202	0.387826	0.00822	0.066342	0.306451	2.4E-05	0.00016	0.045346	0.926	0.677	0.98	0.939	0.871	1	0.994	0.945
rs3846845	7.3642E-10	-0.031196	0.00507	-0.031196	0.005066	1.41471E-09	0.3937	0.077378	0.00078	0.000193	0.757117	0.00187	0.23464	0.123527	0.874	0.93	0.999	0.999	0.732	0.997	0.903	0.923
rs7320054	7.365E-10	0.0313369	0.00509	0.0313369	0.005089	1.41487E-09	0.13475	0.282836	0.00063	0.001139	0.275762	0.00251	0.48829	0.016002	0.928	0.904	0.999	0.998	0.899	0.996	0.863	0.965
rs9517304	7.3754E-10	-0.031429	0.0051	-0.033415	0.009933	1.00942E-09	0.61476	0.077835	1.12E-05	0.196877	0.000249	0.00657	0.00249	0.262789	0.618	0.897	1	0.701	0.996	0.94	0.983	0.491
rs67019224	7.405E-10	-0.032453	0.00527	-0.032453	0.005271	1.42239E-09	0.9473	0.682494	0.003139	0.131926	0.052619	1.5E-06	0.17518	0.14786	0.769	0.822	0.993	0.869	0.957	1	0.91	0.909
rs3020390	7.4061E-10	-0.033266	0.0054	-0.033266	0.005403	1.42259E-09	0.78872	0.328186	0.003766	0.066799	0.324422	5.3E-07	0.34043	0.081791	0.736	0.867	0.991	0.931	0.85	1	0.861	0.923
rs7320735	7.4102E-10	0.0313319	0.00509	0.0313319	0.005089	1.42337E-09	0.13469	0.282938	0.000632	0.00114	0.275675	0.00252	0.48841	0.016018	0.928	0.904	0.999	0.998	0.899	0.996	0.863	0.965
rs3792253	7.4177E-10	-0.034786	0.00565	-0.034786	0.00565	1.42478E-09	0.49786	0.033594	4.02E-06	0.26287	0.049475	0.00294	0.09149	0.418139	0.854	0.945	1	0.745	0.962	0.992	0.94	0.865
rs4772101	7.4297E-10	0.0322794	0.00524	0.0320138	0.00686	1.084E-09	0.74632	0.518217	1.66E-07	0.105091	0.108536	0.01382	0.00507	0.780708	0.7	0.819	1	0.862	0.918	0.92	0.979	0.771
rs11398094	7.4348E-10	-0.033267	0.0054	-0.033267	0.005403	1.42798E-09	0.75244	0.326992	0.003803	0.066303	0.325546	5E-07	0.33973	0.082205	0.728	0.867	0.991	0.931	0.849	1	0.86	0.922
rs143562407	7.4464E-10	0.0593226	0.00964	0.0601896	0.012998	1.38306E-09	0.6615	0.28634	0.022604	0.05952	0.310737	1.5E-06	0.00097	0.12508	0.717	0.879	0.925	0.935	0.858	1	0.991	0.915
rs180792990	7.4465E-10	0.0736317	0.01196	0.0736317	0.01196	1.43019E-09	0.43247	0.234502	0.00043	0.000904	0.021816	0.00734	0.02967	0.693187	0.876	0.904	0.999	0.999	0.978	0.984	0.968	0.745
rs2551445	7.4627E-10	0.0481219	0.00782	0.0481219	0.007817	1.43322E-09	0.65235	0.310808	0.002393	0.028102	0.088431	4.4E-05	0.21417	0.08734	0.858	0.9	0.997	0.979	0.954	1	0.92	0.941
rs175597	7.4828E-10	-0.06558	0.01065	-0.067835	0.013123	1.43701E-09	0.38784	0.560884	0.005476	0.003003	0.265678	0.00028	0.1742	0.000395	0.892	0.871	0.992	0.997	0.904	1	0.93	0.984
rs1439004	7.4899E-10	-0.036735	0.00597	-0.038774	0.011371	6.73726E-10	0.01272	0.215097	0.04506	1.08E-06	0.17453	0.00034	0.14488	0.120362	0.945	0.86	0.736	1	0.87	0.997	0.891	0.424
rs12125969	7.5122E-10	-0.038318	0.00623	-0.038318	0.006226	1.44253E-09	0.15792	0.159492	3.93E-05	0.016456	0.031505	0.02684	0.0416	0.13382	0.93	0.929	1	0.988	0.978	0.92	0.969	0.937
rs113090214	7.5136E-10	-0.032441	0.00527	-0.032441	0.005271	1.44278E-09	0.92651	0.645257	0.003191	0.130632	0.054575	1.5E-06	0.18063	0.142022	0.766	0.828	0.993	0.871	0.957	1	0.908	0.911
rs34818702	7.519E-10	0.0313203	0.00509	0.0313203	0.005089	1.4438E-09	0.13361	0.283493	0.000637	0.001127	0.276229	0.00254	0.48857	0.016174	0.928	0.904	0.999	0.998	0.899	0.996	0.863	0.965
rs11208979	7.522E-10	-0.032437	0.00527	-0.032437	0.00527	1.44437E-09	0.93177	0.681448	0.002982	0.137343	0.052907	1.5E-06	0.17434	0.147514	0.764	0.821	0.994	0.862	0.957	1	0.909	0.909
rs9556554	7.5231E-10	0.0313032	0.00509	0.0313032	0.005086	1.44458E-09	0.12479	0.261831	0.000683	0.001253	0.250461	0.00224	0.51491	0.022486	0.93	0.908	0.999	0.998	0.907	0.997	0.858	0.962
rs9356262	7.5287E-10	0.0322811	0.00525	0.0322811	0.005245	1.44562E-09	0.21916	0.732864	0.000415	0.002524	0.121624	0.00189	0.07441	0.402097	0.913	0.848	0.999	0.997	0.944	0.997	0.954	0.888
rs11647352	7.5326E-10	-0.047349	0.00769	-0.047349	0.007693	1.44635E-09	0.48883	0.243183	0.004383	0.000119	0.118623	0.00321	0.11217	0.057444	0.886	0.916	0.994	1	0.949	0.995	0.949	0.953
rs12615147	7.5337E-10	0.0336332	0.00546	0.0357263	0.006965	1.44657E-09	0.0665	0.018607	0.017748	0.010155	0.00124	0.00027	0.16581	0.883246	0.944	0.961	0.962	0.992	0.995	1	0.933	0.792
rs145191754	7.544E-10	0.053714	0.00873	0.0561562	0.010412	1.44154E-09	0.52374	0.036044	3.56E-05	0.045227	0.010182	0.03176	0.00378	0.428313	0.872	0.952	1	0.963	0.987	0.891	0.988	0.883
rs1870830	7.5535E-10	-0.039968	0.00649	-0.039968	0.006495	1.45028E-09	0.06241	0.908039	0.001271	0.329119	0.039912	5.6E-06	0.1886	0.120807	0.924	0.739	0.997	0.646	0.961	1	0.897	0.909
rs35092596	7.5677E-10	0.0313144	0.00509	0.0313144	0.005089	1.45296E-09	0.13459	0.283263	0.000634	0.001146	0.276268	0.00254	0.48828	0.016147	0.928	0.904	0.999	0.998	0.899	0.996	0.863	0.965
rs111981302	7.5749E-10	0.0537079	0.00873	0.0561443	0.010408	1.44726E-09	0.52362	0.036071	3.56E-05	0.045227	0.010188	0.03179	0.00379	0.428255	0.872	0.952	1	0.963	0.987	0.891	0.988	0.883

Table S3

rs2815361	7.5859E-10	0.0324287	0.00527	0.0324287	0.00527	1.45637E-09	0.93511	0.67335	0.003119	0.1354	0.053319	1.5E-06	0.17346	0.145594	0.766	0.823	0.993	0.865	0.957	1	0.91	0.909
rs13100782	7.6247E-10	-0.032651	0.00531	-0.035393	0.008819	1.46366E-09	0.09207	0.384885	0.008406	0.066402	0.302231	2.5E-05	0.00016	0.044513	0.926	0.677	0.98	0.939	0.872	1	0.994	0.946
rs4916518	7.6307E-10	-0.03265	0.00531	-0.035389	0.008816	1.46479E-09	0.09194	0.385	0.008432	0.066089	0.302599	2.5E-05	0.00016	0.04469	0.926	0.677	0.98	0.939	0.872	1	0.994	0.946
rs9937546	7.6333E-10	-0.032021	0.0052	-0.030832	0.006594	1.46528E-09	0.32951	0.543319	6.48E-05	0.497866	0.347557	5.4E-06	0.17225	0.018782	0.791	0.544	1	0.356	0.735	1	0.847	0.927
rs1972855	7.6335E-10	-0.036717	0.00597	-0.038746	0.011367	6.88564E-10	0.01278	0.215411	0.045041	1.09E-06	0.174945	0.00034	0.14554	0.120101	0.945	0.86	0.737	1	0.87	0.997	0.891	0.424
rs2365059	7.6336E-10	-0.036717	0.00597	-0.038746	0.011367	6.88568E-10	0.01278	0.215411	0.045041	1.09E-06	0.174947	0.00034	0.14554	0.120101	0.945	0.86	0.737	1	0.87	0.997	0.891	0.424
rs7942348	7.6381E-10	-0.032574	0.00529	-0.037074	0.008261	1.46617E-09	0.55473	0.096312	0.001949	0.090713	3.94E-06	0.00225	0.10424	0.353006	0.872	0.937	0.997	0.934	0.999	0.996	0.948	0.897
rs7107922	7.6408E-10	0.0320807	0.00521	0.0320576	0.005523	1.46668E-09	0.68993	0.196132	5.54E-05	0.000116	0.773754	0.00379	0.05216	0.889122	0.77	0.865	1	0.999	0.465	0.984	0.937	0.726
rs79459927	7.6461E-10	0.0380086	0.00618	0.0380086	0.006178	1.46768E-09	0.01025	0.639503	0.000179	0.23588	0.381883	5.2E-05	0.30451	0.03715	0.958	0.823	1	0.759	0.831	1	0.871	0.943
rs6445193	7.6567E-10	-0.036721	0.00597	-0.038769	0.011341	7.08728E-10	0.01271	0.212969	0.04446	1.18E-06	0.175844	0.00034	0.14229	0.120389	0.945	0.861	0.742	1	0.871	0.997	0.893	0.426
rs146392518	7.6606E-10	0.0324231	0.00527	0.0324231	0.005271	1.4704E-09	0.93675	0.682279	0.003098	0.137351	0.052425	1.5E-06	0.17453	0.147594	0.765	0.821	0.993	0.862	0.957	1	0.909	0.909
rs11313486	7.6664E-10	0.0324211	0.00527	0.0324211	0.00527	1.47149E-09	0.93538	0.674828	0.003147	0.135479	0.05364	1.5E-06	0.17422	0.145897	0.766	0.822	0.993	0.865	0.957	1	0.91	0.909
rs7129797	7.6718E-10	0.0320777	0.00521	0.0320548	0.00555	1.47251E-09	0.68995	0.185327	5.5E-05	0.000116	0.764943	0.00389	0.05344	0.86636	0.77	0.868	1	0.999	0.462	0.983	0.936	0.731
rs7627230	7.6724E-10	-0.036718	0.00597	-0.038766	0.011342	7.08865E-10	0.01274	0.213143	0.044531	1.18E-06	0.175876	0.00034	0.14245	0.120525	0.945	0.861	0.742	1	0.871	0.997	0.893	0.426
rs147195452	7.6738E-10	0.0511919	0.00832	0.0557784	0.013942	1.47288E-09	0.53367	0.349857	0.005987	0.122703	1.73E-05	0.00011	0.04233	0.115115	0.843	0.656	0.985	0.877	0.999	1	0.957	0.919
rs7615464	7.676E-10	-0.032647	0.00531	-0.035389	0.008817	1.47328E-09	0.09205	0.385286	0.008421	0.066376	0.302324	2.5E-05	0.00016	0.044587	0.926	0.677	0.98	0.939	0.872	1	0.994	0.946
rs2009311	7.6835E-10	0.032419	0.00527	0.032419	0.00527	1.4747E-09	0.93369	0.674822	0.003146	0.135556	0.053637	1.5E-06	0.17422	0.145894	0.765	0.822	0.993	0.865	0.957	1	0.91	0.909
rs975452	7.6846E-10	0.0324189	0.00527	0.0324189	0.00527	1.4749E-09	0.93367	0.674822	0.003146	0.135568	0.053637	1.5E-06	0.17422	0.145894	0.765	0.822	0.993	0.865	0.957	1	0.91	0.909
rs1479551	7.6862E-10	-0.031157	0.00507	-0.029869	0.005961	1.2567E-09	0.97864	0.800524	2.65E-06	0.659368	0.242765	1.8E-05	0.0507	0.851607	0.568	0.621	1	0.191	0.739	1	0.899	0.594
rs2985822	7.6921E-10	0.0324195	0.00527	0.0324195	0.00527	1.47631E-09	0.91587	0.677713	0.003185	0.130315	0.054067	1.5E-06	0.17516	0.146511	0.763	0.822	0.993	0.871	0.957	1	0.91	0.909
rs6772452	7.6935E-10	-0.036365	0.00591	-0.036273	0.008411	1.47657E-09	0.36352	0.013943	0.023405	0.000331	0.05416	1.4E-05	0.41534	0.869805	0.605	0.944	0.894	0.999	0.947	1	0.815	0.7
rs1324087	7.6954E-10	-0.055532	0.00903	-0.066993	0.015065	6.13567E-10	0.7229	0.158703	0.014574	7.36E-06	0.003184	0.01847	0.20381	0.00851	0.829	0.916	0.915	1	0.992	0.892	0.907	0.969
rs10198465	7.697E-10	-0.056313	0.00915	-0.061273	0.01335	1.47722E-09	0.15657	0.169409	0.001025	0.388482	0.085004	0.00024	8.2E-05	0.277643	0.909	0.905	0.998	0.622	0.945	1	0.996	0.886
rs4841280	7.6989E-10	-0.03695	0.00601	-0.03695	0.006007	1.4776E-09	0.26362	0.793204	0.000621	0.02914	0.024562	0.00074	0.02831	0.159543	0.907	0.788	0.999	0.979	0.978	0.999	0.971	0.926
rs2065001	7.6995E-10	0.0324174	0.00527	0.0324174	0.00527	1.4777E-09	0.93336	0.674822	0.003146	0.135738	0.053637	1.5E-06	0.17422	0.145894	0.765	0.822	0.993	0.865	0.957	1	0.91	0.909
rs2815348	7.7076E-10	0.0324164	0.00527	0.0324164	0.00527	1.47922E-09	0.93339	0.674828	0.003147	0.135803	0.05364	1.5E-06	0.17422	0.145897	0.765	0.822	0.993	0.864	0.957	1	0.91	0.909
rs34882801	7.7076E-10	0.0324164	0.00527	0.0324164	0.00527	1.47922E-09	0.93339	0.674828	0.003147	0.135803	0.05364	1.5E-06	0.17422	0.145897	0.765	0.822	0.993	0.864	0.957	1	0.91	0.909
rs345904	7.7076E-10	0.0323909	0.00527	0.0323909	0.005266	1.47923E-09	0.80445	0.92174	0.000625	0.079991	0.001369	0.00014	0.28004	0.165442	0.814	0.776	0.999	0.928	0.993	1	0.888	0.91
rs12044492	7.7077E-10	-0.032416	0.00527	-0.032416	0.00527	1.47925E-09	0.93362	0.674833	0.003147	0.135803	0.053642	1.5E-06	0.17423	0.1459	0.765	0.822	0.993	0.864	0.957	1	0.91	0.909
rs12143044	7.7077E-10	-0.032416	0.00527	-0.032416	0.00527	1.47925E-09	0.93362	0.674833	0.003147	0.135803	0.053642	1.5E-06	0.17423	0.1459	0.765	0.822	0.993	0.864	0.957	1	0.91	0.909
rs2065000	7.7077E-10	-0.032416	0.00527	-0.032416	0.00527	1.47925E-09	0.93362	0.674833	0.003147	0.135803	0.053642	1.5E-06	0.17423	0.1459	0.765	0.822	0.993	0.864	0.957	1	0.91	0.909
rs6673462	7.7077E-10	-0.032416	0.00527	-0.032416	0.00527	1.47925E-09	0.93362	0.674833	0.003147	0.135803	0.053642	1.5E-06	0.17423	0.1459	0.765	0.822	0.993	0.864	0.957	1	0.91	0.909
rs12132532	7.7105E-10	-0.032416	0.00527	-0.032416	0.00527	1.47976E-09	0.93362	0.674833	0.003147	0.135805	0.053644	1.5E-06	0.17423	0.1459	0.765	0.822	0.993	0.864	0.957	1	0.91	0.909
rs12377572	7.7128E-10	-0.04205	0.00684	-0.043511	0.007918	1.48019E-09	0.33281	0.883102	0.000235	0.03544	0.015609	0.00771	0.02371	0.002914	0.905	0.842	1	0.976	0.985	0.986	0.976	0.979
rs67651198	7.7201E-10	-0.036396	0.00592	-0.036174	0.008506	1.48156E-09	0.32696	0.014367	0.022848	0.00034	0.059407	1.3E-05	0.41539	0.8804	0.591	0.943	0.896	0.999	0.943	1	0.813	0.7
rs35463245	7.7209E-10	-0.03475	0.00565	-0.03475	0.00565	1.48172E-09	0.49913	0.033613	4.03E-06	0.273814	0.049586	0.00286	0.0917	0.418284	0.852	0.944	1	0.733	0.961	0.992	0.939	0.863
rs9556550	7.7286E-10	0.0312756	0.00509	0.0312756	0.005085	1.48316E-09	0.12482	0.256753	0.000708	0.001359	0.241623	0.00226	0.4993	0.022161	0.93	0.909	0.999	0.998	0.91	0.997	0.863	0.962
rs9365754	7.7361E-10	0.032274	0.00525	0.032274	0.005248	1.48456E-09	0.23808	0.716992	0.000421	0.002278	0.128094	0.002	0.06859	0.408624	0.91	0.85	0.999	0.997	0.941	0.997	0.956	0.886
rs2985824	7.738E-10	0.032424	0.00527	0.032424	0.005272	1.48493E-09	0.93479	0.675608	0.002949	0.138903	0.054073	1.5E-06	0.17664	0.146741	0.765	0.821	0.994	0.861	0.956	1	0.908	0.909
rs7613052	7.7425E-10	-0.04003	0.00651	-0.04003	0.006509	1.48578E-09	0.03807	0.909314	0.001725	0.287525	0.032953	6.4E-06	0.20111	0.140486	0.938	0.751	0.996	0.701	0.967	1	0.898	0.909
rs10934270	7.7711E-10	-0.03191	0.00519	-0.03191	0.005189	1.49114E-09	0.70235	0.971387	0.001127	0.02169	0.00478	0.00063	0.00506	0.415632	0.747	0.798	0.998	0.981	0.989	0.999	0.983	0.871
rs3008873	7.7789E-10	0.0324089	0.00527	0.0324089	0.00527	1.4926E-09	0.97345	0.677762	0.003185	0.137463	0.054076	1.5E-06	0.17518	0.146518	0.772	0.822	0.993	0.864	0.957	1	0.91	0.909
rs7117396	7.7804E-10	-0.035102	0.00571	-0.037142	0.007145	1.49288E-09	0.89802	0.002949	0.008226	0.016841	0.013663	0.00052	0.06322	0.0649	0.816	0.976	0.988	0.989	0.986	0.999	0.963	0.952
rs2985818	7.788E-10	0.0324081	0.00527	0.0324081	0.00527	1.49432E-09	0.93403	0.677576	0.003182	0.133241	0.054135	1.5E-06	0.1752	0.146602	0.766	0.822	0.993	0.868	0.957	1	0.909	0.909
rs2365058	7.8121E-10	-0.036695	0.00597	-0.038712	0.011344	7.14672E-10	0.01298	0.215411	0.044979	1.14E-06	0.174872	0.00034	0.14547	0.120101	0.944	0.86	0.739	1	0.871	0.997	0.891	0.425
rs17006242	7.8175E-10	-0.034738	0.00565	-0.034738	0.00565	1.49985E-09	0.50031	0.033613	4.02E-06	0.276346	0.04955	0.00286	0.09167	0.418282	0.851	0.944	1	0.73	0.961	0.992	0.939	0.863
rs34042835	7.8182E-10	-0.031345	0.0051	-0.030966	0.005476	1.49999E-09	0.48255	0.46759	0.003728	0.018205	0.694916	6.8E-07	0.02017	0.904118	0.613	0.807	0.987	0.973	0.666	1	0.957	0.723
rs2278764	7.8281E-10	0.0454046	0.00738	0.0454046	0.007385	1.50184E-09	0.63694	0.445805	0.000637	0.000345	0.036252	0.00035	0.83365	0.547581	0.796	0.635	0.999	0.999	0.958	0.999	0.708	0.807
rs144234480	7.8307E-10	0.0511181	0.00831	0.0554069	0.013813	1.50233E-09	0.54866	0.332269	0.005394	0.118884	1.99E-05	0.00012	0.04314	0.123892	0.84	0.65	0.987	0.881	0.999	1	0.956	0.916
rs10946310	7.8347E-10	0.0330788	0.00538	0.0350255	0.007909	1.01346E-09	0.15048	0.821283	0.008985	6.09E-07	0.27703	0.00341	0.68517	0.027471	0.91	0.812	0.977	1	0.878	0.989	0.794	0.952
rs9364756	7.8355E-10	0.0322623	0.00525	0.0322623	0.005247	1.50323E-09	0.23748	0.720339	0.000418	0.002281	0.127874	0.00203	0.06869	0.409675	0.91	0.85	0.999	0.997	0.941	0.997	0.956	0.886
rs9554340	7.8473E-10	0.031267	0.00509	0.031267	0.005086	1.50544E-09	0.12272	0.258526	0.000675	0.00127	0.24805	0.00236	0.50649	0.023866	0.931	0.908	0.999	0.998	0.908	0.997	0.861	0.961
rs76686883	7.8483E-10	0.0324009	0.00527	0.0324009	0.00527	1.50564E-09	0.93183	0.677762	0.003185	0.133935	0.054076	1.5E-06	0.17518	0.146518	0.765	0.822	0.993	0.867	0.956	1	0.909	0.909
rs6719762	7.86E-10	0.0319313	0.00519	0.0357386	0.008232	1.4988E-09	0.10233	0.014159	0.052837	0.001974	0.000776	0.00013	0.20334	0.514143	0.918	0.955	0.772	0.997	0.995	1	0.899	0.65
rs10517307	7.8659E-10	0.0373028	0.00607	0.0376063	0.007399	1.50894E-09	0.78191	0.205989	0.007482	0.004248	0.538513	3.6E-05	0.0006	0.825398	0.732	0.889	0.981	0.994	0.778	1	0.991	0.786

Table S3

rs144715921	7.8757E-10	0.0710986	0.01157	0.0710986	0.011566	1.51078E-09	0.72792	0.437373	9.23E-05	0.010113	0.004709	0.00807	0.12513	0.337422	0.846	0.882	1	0.992	0.991	0.984	0.94	0.896
rs6456802	7.8981E-10	-0.039239	0.00638	-0.039239	0.006384	1.51497E-09	0.56055	0.144104	0.000259	0.00349	0.131733	0.01176	0.08139	0.005091	0.88	0.932	1	0.997	0.946	0.975	0.957	0.976
rs761799	7.9008E-10	-0.032243	0.00525	-0.033565	0.00706	9.90764E-10	0.22933	0.885885	0.112765	0.00025	0.003536	1.1E-05	0.81207	0.148594	0.828	0.668	0.371	0.999	0.987	1	0.584	0.86
rs2395543	7.9171E-10	-0.032285	0.00525	-0.033512	0.006968	1.02829E-09	0.23498	0.895768	0.105829	0.000225	0.003723	1.3E-05	0.81495	0.162809	0.829	0.672	0.402	0.999	0.986	1	0.592	0.856
rs182197453	7.9195E-10	-0.065552	0.01066	-0.06608	0.012183	1.34733E-09	0.08466	0.053266	0.052219	0.006041	0.141568	1.3E-06	0.16469	0.713506	0.919	0.93	0.759	0.992	0.91	1	0.905	0.685
rs36128756	7.9195E-10	-0.065552	0.01066	-0.06608	0.012183	1.34733E-09	0.08466	0.053266	0.052219	0.006041	0.141568	1.3E-06	0.16469	0.713506	0.919	0.93	0.759	0.992	0.91	1	0.905	0.685
rs554331752	7.9195E-10	-0.065552	0.01066	-0.06608	0.012183	1.34733E-09	0.08466	0.053266	0.052219	0.006041	0.141568	1.3E-06	0.16469	0.713506	0.919	0.93	0.759	0.992	0.91	1	0.905	0.685
rs12376448	7.9361E-10	-0.042021	0.00684	-0.043418	0.007882	1.52211E-09	0.35826	0.885359	0.000234	0.034724	0.01576	0.00772	0.02372	0.00295	0.902	0.841	1	0.977	0.984	0.986	0.976	0.979
rs12039172	7.9385E-10	-0.032392	0.00527	-0.032392	0.00527	1.52256E-09	0.93362	0.677103	0.003191	0.135803	0.053857	1.5E-06	0.17465	0.146135	0.765	0.822	0.993	0.865	0.957	1	0.909	0.909
rs12117131	7.9385E-10	-0.032392	0.00527	-0.032392	0.00527	1.52256E-09	0.93362	0.677103	0.003191	0.135803	0.053857	1.5E-06	0.17465	0.146135	0.765	0.822	0.993	0.865	0.957	1	0.909	0.909
rs142144569	7.9385E-10	-0.032392	0.00527	-0.032392	0.00527	1.52256E-09	0.93362	0.677103	0.003191	0.135803	0.053857	1.5E-06	0.17465	0.146135	0.765	0.822	0.993	0.865	0.957	1	0.909	0.909
rs4620509	7.9385E-10	-0.032392	0.00527	-0.032392	0.00527	1.52256E-09	0.93362	0.677103	0.003191	0.135803	0.053857	1.5E-06	0.17465	0.146135	0.765	0.822	0.993	0.865	0.957	1	0.909	0.909
rs58680688	7.9385E-10	-0.032392	0.00527	-0.032392	0.00527	1.52256E-09	0.93362	0.677103	0.003191	0.135803	0.053857	1.5E-06	0.17465	0.146135	0.765	0.822	0.993	0.865	0.957	1	0.909	0.909
rs12132068	7.941E-10	-0.032391	0.00527	-0.032391	0.00527	1.52302E-09	0.93362	0.677103	0.003191	0.135805	0.053859	1.5E-06	0.17465	0.146135	0.765	0.822	0.993	0.865	0.957	1	0.909	0.909
rs4655659	7.9681E-10	0.0323889	0.00527	0.0323889	0.00527	1.52811E-09	0.93623	0.677661	0.003181	0.136109	0.054086	1.5E-06	0.17514	0.146504	0.766	0.822	0.993	0.864	0.956	1	0.909	0.909
rs13316352	7.9717E-10	-0.039916	0.0065	-0.039916	0.006495	1.52879E-09	0.06242	0.908841	0.001237	0.344484	0.040086	5.6E-06	0.18851	0.120821	0.923	0.736	0.997	0.628	0.96	1	0.895	0.908
rs9556559	7.9784E-10	0.0312544	0.00509	0.0312544	0.005086	1.53004E-09	0.12177	0.258736	0.000676	0.001296	0.248236	0.00237	0.50635	0.02391	0.931	0.908	0.999	0.998	0.908	0.997	0.861	0.961
rs11787621	7.9786E-10	-0.034804	0.00566	-0.034804	0.005663	1.53008E-09	0.54046	0.567248	1.68E-05	0.026912	0.108075	0.00677	0.0132	0.040929	0.723	0.855	1	0.977	0.942	0.984	0.977	0.949
rs2985826	7.979E-10	0.0323871	0.00527	0.0323871	0.00527	1.53014E-09	0.92997	0.677762	0.003185	0.135417	0.054076	1.5E-06	0.17518	0.146518	0.765	0.822	0.993	0.865	0.956	1	0.909	0.909
rs1996928	7.993E-10	-0.036233	0.0059	-0.040813	0.008424	1.53278E-09	0.09014	0.738916	0.004412	0.053006	0.000458	0.00184	0.07506	0.00432	0.945	0.864	0.995	0.967	0.997	0.998	0.961	0.979
rs2985817	7.9966E-10	0.0323856	0.00527	0.0323856	0.00527	1.53345E-09	0.93283	0.677573	0.003183	0.135725	0.054154	1.5E-06	0.1752	0.1466	0.765	0.822	0.993	0.865	0.956	1	0.909	0.909
rs58982057	7.9996E-10	-0.04201	0.00684	-0.043439	0.007903	1.53401E-09	0.3581	0.885605	0.000235	0.034886	0.015657	0.00775	0.02363	0.002926	0.902	0.841	1	0.977	0.985	0.986	0.976	0.979
rs12740884	8.0024E-10	-0.032384	0.00527	-0.032384	0.00527	1.53454E-09	0.9634	0.674833	0.003147	0.142888	0.053642	1.5E-06	0.17423	0.1459	0.769	0.822	0.993	0.857	0.956	1	0.909	0.909
rs2985830	8.0037E-10	0.0323882	0.00527	0.0323882	0.005271	1.53478E-09	0.93155	0.674137	0.00317	0.136981	0.053915	1.5E-06	0.17331	0.148738	0.765	0.822	0.993	0.863	0.956	1	0.91	0.908
rs349700	8.0043E-10	0.031688	0.00516	0.031688	0.005157	1.25949E-09	0.62889	0.249172	0.001547	0.504551	0.285685	1.4E-07	0.09701	0.358224	0.752	0.833	0.992	0.402	0.797	1	0.901	0.807
rs3008871	8.0291E-10	0.0323817	0.00527	0.0323817	0.00527	1.53955E-09	0.93262	0.677762	0.003185	0.136329	0.054076	1.5E-06	0.17518	0.146518	0.765	0.822	0.993	0.864	0.956	1	0.909	0.909
rs2985794	8.0312E-10	0.0323819	0.00527	0.0323819	0.00527	1.53993E-09	0.92918	0.677762	0.003185	0.136012	0.054076	1.5E-06	0.17518	0.146518	0.764	0.822	0.993	0.864	0.956	1	0.909	0.909
rs10002489	8.0493E-10	0.0372843	0.00607	0.0375809	0.007377	1.54333E-09	0.78189	0.206717	0.007635	0.004256	0.5391	3.6E-05	0.00062	0.821539	0.732	0.889	0.98	0.994	0.777	1	0.991	0.786
rs35249294	8.0551E-10	0.0372836	0.00607	0.0375801	0.007377	1.54443E-09	0.78188	0.206714	0.007639	0.00426	0.539108	3.6E-05	0.00062	0.82153	0.732	0.889	0.98	0.994	0.777	1	0.991	0.786
rs80310742	8.0576E-10	-0.109342	0.0178	-0.109433	0.019862	1.54489E-09	0.75987	0.224618	4.43E-05	0.22292	0.002791	0.00041	0.92839	0.038599	0.782	0.875	1	0.727	0.988	0.999	0.683	0.937
rs72646416	8.0591E-10	0.0322995	0.00526	0.0317204	0.008083	8.84643E-10	0.51188	0.578084	6.97E-08	0.083869	0.125382	0.02297	0.00279	0.785186	0.603	0.774	1	0.84	0.885	0.815	0.981	0.728
rs3008865	8.0625E-10	0.0323782	0.00527	0.0323782	0.00527	1.54582E-09	0.93196	0.677661	0.003181	0.136804	0.054087	1.5E-06	0.17515	0.146505	0.765	0.821	0.993	0.863	0.956	1	0.909	0.909
rs34367328	8.0638E-10	-0.032381	0.00527	-0.032381	0.005271	1.54606E-09	0.94019	0.677103	0.003191	0.138276	0.053857	1.5E-06	0.17465	0.146135	0.766	0.822	0.993	0.862	0.956	1	0.909	0.909
rs12901462	8.0649E-10	0.0309978	0.00505	0.0337457	0.008936	6.25471E-10	0.41031	0.364542	8.44E-07	0.029256	0.008871	0.09166	0.00059	0.498159	0.465	0.779	1	0.895	0.978	0.339	0.991	0.735
rs12225506	8.0656E-10	-0.035076	0.00571	-0.037134	0.007156	1.5464E-09	0.89597	0.003012	0.008307	0.017245	0.013	0.00053	0.06386	0.06491	0.816	0.976	0.988	0.988	0.986	0.999	0.962	0.952
rs912797	8.069E-10	0.0323775	0.00527	0.0323775	0.00527	1.54702E-09	0.93216	0.677762	0.003185	0.136784	0.054076	1.5E-06	0.17518	0.146518	0.765	0.821	0.993	0.863	0.956	1	0.909	0.909
rs1925413	8.0693E-10	0.0323775	0.00527	0.0323775	0.00527	1.54709E-09	0.93215	0.677762	0.003185	0.136788	0.054076	1.5E-06	0.17518	0.146518	0.765	0.821	0.993	0.863	0.956	1	0.909	0.909
rs2025608	8.0693E-10	0.0323775	0.00527	0.0323775	0.00527	1.54709E-09	0.93215	0.677762	0.003185	0.136788	0.054076	1.5E-06	0.17518	0.146518	0.765	0.821	0.993	0.863	0.956	1	0.909	0.909
rs2985797	8.0693E-10	0.0323775	0.00527	0.0323775	0.00527	1.54709E-09	0.93215	0.677762	0.003185	0.136788	0.054076	1.5E-06	0.17518	0.146518	0.765	0.821	0.993	0.863	0.956	1	0.909	0.909
rs3008874	8.0693E-10	0.0323775	0.00527	0.0323775	0.00527	1.54709E-09	0.93215	0.677762	0.003185	0.136788	0.054076	1.5E-06	0.17518	0.146518	0.765	0.821	0.993	0.863	0.956	1	0.909	0.909
rs7511948	8.0693E-10	0.0323775	0.00527	0.0323775	0.00527	1.54709E-09	0.93215	0.677762	0.003185	0.136788	0.054076	1.5E-06	0.17518	0.146518	0.765	0.821	0.993	0.863	0.956	1	0.909	0.909
rs75849167	8.0693E-10	0.0323775	0.00527	0.0323775	0.00527	1.54709E-09	0.93215	0.677762	0.003185	0.136788	0.054076	1.5E-06	0.17518	0.146518	0.765	0.821	0.993	0.863	0.956	1	0.909	0.909
rs11208976	8.0699E-10	-0.032377	0.00527	-0.032377	0.00527	1.54719E-09	0.93239	0.677767	0.003185	0.136786	0.054078	1.5E-06	0.17519	0.14652	0.765	0.821	0.993	0.864	0.956	1	0.909	0.909
rs12131222	8.0699E-10	-0.032377	0.00527	-0.032377	0.00527	1.54719E-09	0.93239	0.677767	0.003185	0.136786	0.054078	1.5E-06	0.17519	0.14652	0.765	0.821	0.993	0.864	0.956	1	0.909	0.909
rs12137403	8.0699E-10	-0.032377	0.00527	-0.032377	0.00527	1.54719E-09	0.93239	0.677767	0.003185	0.136786	0.054078	1.5E-06	0.17519	0.14652	0.765	0.821	0.993	0.864	0.956	1	0.909	0.909
rs3008875	8.0699E-10	-0.032377	0.00527	-0.032377	0.00527	1.54719E-09	0.93239	0.677767	0.003185	0.136786	0.054078	1.5E-06	0.17519	0.14652	0.765	0.821	0.993	0.864	0.956	1	0.909	0.909
rs35365746	8.0699E-10	-0.032377	0.00527	-0.032377	0.00527	1.54719E-09	0.93239	0.677767	0.003185	0.136786	0.054078	1.5E-06	0.17519	0.14652	0.765	0.821	0.993	0.864	0.956	1	0.909	0.909
rs1925412	8.0749E-10	0.0323769	0.00527	0.0323769	0.00527	1.54814E-09	0.93219	0.677713	0.003185	0.136804	0.054067	1.5E-06	0.17516	0.146511	0.765	0.821	0.993	0.863	0.956	1	0.909	0.909
rs72837273	8.0777E-10	-0.050736	0.00826	-0.048167	0.01146	1.54866E-09	0.51323	0.895409	2.8E-05	0.011597	0.267254	0.00018	0.00854	0.282086	0.769	0.693	1	0.979	0.184	0.999	0.968	0.824
rs2985821	8.0815E-10	0.0323762	0.00527	0.0323762	0.00527	1.54938E-09	0.93196	0.677704	0.003186	0.136814	0.05409	1.5E-06	0.17516	0.146508	0.765	0.821	0.993	0.863	0.956	1	0.909	0.909
rs2389631	8.082E-10	0.0310741	0.00506	0.0310741	0.005058	1.54947E-09	0.29586	0.527667	0.000558	0.000708	0.479293	0.00089	0.67039	0.017438	0.883	0.85	0.999	0.999	0.814	0.999	0.796	0.957
rs62302746	8.0821E-10	0.0388083	0.00632	0.0388083	0.006317	1.54948E-09	0.0447	0.742895	0.001535	0.006229	0.001603	0.00306	0.51425	0.087524	0.951	0.853	0.998	0.995	0.994	0.996	0.863	0.942
rs113890824	8.0828E-10	0.030996	0.00505	0.0337438	0.008936	6.26795E-10	0.41038	0.364542	8.44E-07	0.029322	0.008871	0.09166	0.00059	0.498159	0.465	0.779	1	0.895	0.978	0.339	0.991	0.735
rs16894116	8.0922E-10	-0.051811	0.00843	-0.051959	0.008631	1.55139E-09	0.01776	0.545833	0.00029	0.014081	0.731493	0.00191	0.038	0.017292	0.959	0.866	1	0.989	0.761	0.997	0.967	0.964
rs4772104	8.1009E-10	0.0324259	0.00528	0.0316899	0.00784	1.12611E-09	0.42756	0.523719	1.44E-07	0.081295	0.135007	0.01422	0.00318	0.849471	0.612	0.804	1	0.878	0.896	0.908	0.981	0.742

Table S3

rs7553994	8.1079E-10	0.110822	0.01804	0.110822	0.018041	1.55433E-09	0.02376	0.504409	5.56E-05	0.18193	0.157354	0.0005	0.14796	0.144119	0.954	0.866	1	0.846	0.927	0.999	0.93	0.924
rs2985825	8.1088E-10	0.0323742	0.00527	0.0323742	0.00527	1.55449E-09	0.92838	0.677762	0.003185	0.136931	0.054076	1.5E-06	0.17518	0.146518	0.764	0.821	0.993	0.863	0.956	1	0.909	0.909
rs2815351	8.1195E-10	0.0323811	0.00527	0.0323811	0.005272	1.5565E-09	0.92935	0.67627	0.003157	0.136022	0.053941	1.5E-06	0.1746	0.146664	0.765	0.822	0.993	0.864	0.956	1	0.909	0.909
rs11322381	8.1226E-10	0.0323735	0.00527	0.0323735	0.00527	1.55708E-09	0.9333	0.677762	0.003185	0.137675	0.054076	1.5E-06	0.17518	0.146518	0.765	0.821	0.993	0.863	0.956	1	0.909	0.909
rs9554338	8.1435E-10	0.0312292	0.00508	0.0312292	0.005084	1.561E-09	0.12527	0.258123	0.000733	0.001288	0.246981	0.00224	0.51458	0.02299	0.93	0.908	0.999	0.998	0.908	0.997	0.859	0.962
rs2056925	8.1438E-10	-0.0392	0.00638	-0.0392	0.006382	1.56105E-09	0.57175	0.122846	0.00031	0.00286	0.140031	0.01273	0.07976	0.003961	0.878	0.936	1	0.997	0.944	0.972	0.958	0.978
rs2734835	8.1468E-10	-0.031056	0.00506	-0.031056	0.005056	1.56163E-09	0.68931	0.101841	0.001364	0.000516	0.488644	0.00022	0.87086	0.036476	0.805	0.909	0.997	0.999	0.785	1	0.648	0.939
rs57064082	8.1499E-10	-0.041994	0.00684	-0.043385	0.007878	1.56221E-09	0.35999	0.886795	0.000236	0.034891	0.015774	0.00775	0.02385	0.00296	0.901	0.841	1	0.977	0.984	0.986	0.976	0.979
rs2815373	8.1583E-10	0.0323739	0.00527	0.0323739	0.005271	1.56377E-09	0.91087	0.675057	0.003178	0.135107	0.055526	1.5E-06	0.17039	0.146243	0.762	0.822	0.993	0.865	0.956	1	0.91	0.909
rs1433718	8.1697E-10	0.0310191	0.00505	0.0310191	0.005051	1.56592E-09	0.1178	0.788062	0.002383	0.006162	0.178142	7.3E-05	0.26452	0.32525	0.926	0.834	0.997	0.994	0.922	1	0.903	0.893
rs12911071	8.1716E-10	0.0309875	0.00505	0.0337335	0.008938	6.33289E-10	0.40966	0.364542	8.44E-07	0.029613	0.008871	0.09166	0.00059	0.498159	0.465	0.778	1	0.894	0.978	0.339	0.991	0.735
rs1892928	8.1758E-10	-0.032036	0.00522	-0.032644	0.00571	1.56705E-09	0.32941	0.06077	0.000384	0.091324	0.00017	0.00324	0.27932	0.240001	0.901	0.946	1	0.935	0.997	0.995	0.909	0.915
rs35499003	8.1862E-10	0.0366517	0.00597	0.0374379	0.008115	1.56902E-09	0.26505	0.776419	0.010732	0.001652	0.009563	0.00012	0.00878	0.256471	0.875	0.723	0.968	0.997	0.982	1	0.977	0.571
rs12910752	8.1906E-10	0.0309856	0.00505	0.0337313	0.008938	6.34683E-10	0.40958	0.364542	8.44E-07	0.029677	0.008871	0.09166	0.00059	0.498159	0.465	0.778	1	0.894	0.978	0.339	0.991	0.735
rs1474870	8.1945E-10	0.031839	0.00518	0.0329295	0.00654	1.20544E-09	0.11738	0.906083	0.092999	0.000374	0.003417	1.6E-05	0.70495	0.257865	0.883	0.701	0.497	0.999	0.988	1	0.669	0.84
rs75700029	8.1997E-10	0.0312494	0.00509	0.0312494	0.005089	1.57154E-09	0.13467	0.284614	0.000646	0.001176	0.277698	0.0026	0.48894	0.016458	0.928	0.904	0.999	0.998	0.899	0.996	0.863	0.965
rs7765989	8.203E-10	-0.051788	0.00843	-0.051916	0.008601	1.57215E-09	0.01768	0.543631	0.000293	0.014421	0.717943	0.00194	0.03765	0.017205	0.96	0.867	1	0.989	0.766	0.997	0.967	0.964
rs71559082	8.2071E-10	-0.051788	0.00843	-0.051915	0.008601	1.57293E-09	0.01768	0.543632	0.000293	0.014423	0.717961	0.00194	0.03765	0.017205	0.96	0.867	1	0.989	0.766	0.997	0.967	0.964
rs6458154	8.216E-10	0.0310143	0.00505	0.0310143	0.005051	1.5746E-09	0.11824	0.787942	0.002447	0.006248	0.170201	7.2E-05	0.26939	0.32635	0.926	0.834	0.997	0.994	0.925	1	0.902	0.893
rs1925119	8.2247E-10	0.0310565	0.00506	0.0310565	0.005058	1.57623E-09	0.29441	0.520064	0.000558	0.000689	0.484825	0.00089	0.68663	0.017469	0.883	0.85	0.999	0.999	0.811	0.998	0.791	0.957
rs9465305	8.2315E-10	0.0330145	0.00538	0.0350026	0.00801	1.04203E-09	0.13413	0.791829	0.008842	5.85E-07	0.281386	0.00355	0.74545	0.027844	0.913	0.814	0.976	1	0.876	0.989	0.778	0.951
rs12800853	8.2472E-10	-0.031092	0.00506	-0.031092	0.005064	1.58044E-09	0.71101	0.182175	0.001193	0.000816	0.569757	8.8E-05	0.77776	0.042538	0.785	0.879	0.997	0.998	0.736	1	0.596	0.93
rs2475496	8.2521E-10	-0.032243	0.00525	-0.033456	0.00696	1.07342E-09	0.23284	0.901905	0.107045	0.000248	0.003802	1.2E-05	0.81512	0.158072	0.83	0.67	0.399	0.999	0.986	1	0.591	0.858
rs2727764	8.2571E-10	-0.031672	0.00516	-0.031672	0.005158	1.58231E-09	0.66556	0.396618	0.008267	0.041596	0.00266	0.00011	0.18386	0.016685	0.862	0.893	0.987	0.971	0.993	1	0.93	0.966
rs7131440	8.3028E-10	-0.031061	0.00506	-0.031061	0.00506	1.59087E-09	0.73148	0.180112	0.001281	0.000831	0.528538	8.7E-05	0.76701	0.041491	0.784	0.881	0.997	0.998	0.754	1	0.596	0.931
rs7869639	8.3098E-10	-0.041975	0.00684	-0.043357	0.007872	1.59218E-09	0.35993	0.886731	0.000237	0.035011	0.015779	0.00779	0.02396	0.002976	0.901	0.841	1	0.977	0.984	0.986	0.976	0.979
rs6922574	8.3333E-10	-0.039185	0.00638	-0.039185	0.006384	1.59659E-09	0.56	0.144547	0.000266	0.003463	0.132219	0.012	0.08176	0.005113	0.88	0.932	1	0.997	0.946	0.975	0.957	0.976
rs200949	8.3478E-10	-0.065157	0.01062	-0.067487	0.013054	1.5993E-09	0.38315	0.500113	0.005678	0.004326	0.264334	0.00028	0.14513	0.000375	0.894	0.88	0.992	0.996	0.906	1	0.938	0.984
rs3784263	8.3591E-10	0.0309492	0.00504	0.033115	0.008363	1.09574E-09	0.39542	0.389629	2.22E-06	0.028872	0.025733	0.0485	0.00036	0.445691	0.579	0.825	1	0.943	0.965	0.672	0.992	0.811
rs12041926	8.3672E-10	-0.032348	0.00527	-0.032348	0.00527	1.60294E-09	0.93597	0.677767	0.003185	0.140987	0.054078	1.5E-06	0.17519	0.14652	0.765	0.821	0.993	0.859	0.956	1	0.909	0.908
rs16882003	8.4003E-10	0.0516865	0.00842	0.0620068	0.02083	1.1031E-11	0.00132	0.567633	0.079951	3.71E-08	7.72E-05	0.01088	0.39602	0.880235	0.977	0.324	0.013	1	0.999	0.031	0.013	0.167
rs1923461	8.4009E-10	-0.032191	0.00525	-0.033492	0.007028	1.06597E-09	0.22105	0.886264	0.112652	0.00028	0.003535	1.1E-05	0.81247	0.150684	0.832	0.67	0.376	0.999	0.987	1	0.587	0.86
rs56083336	8.4016E-10	0.0516872	0.00842	0.0620128	0.020831	1.10193E-11	0.00132	0.567179	0.079983	3.72E-08	7.68E-05	0.01089	0.39606	0.880222	0.977	0.324	0.013	1	0.999	0.031	0.013	0.167
rs7710751	8.4125E-10	0.0309567	0.00504	0.0309567	0.005044	1.61143E-09	0.63981	0.816268	0.006085	0.00054	0.108734	0.0001	0.04104	0.76257	0.829	0.805	0.987	0.999	0.934	1	0.957	0.728
rs11675976	8.4165E-10	0.0350796	0.00572	0.0382679	0.007488	1.61216E-09	0.12882	0.011626	0.00709	0.024496	0.001319	0.00167	0.01743	0.826893	0.937	0.969	0.991	0.985	0.995	0.998	0.98	0.849
rs9554341	8.4257E-10	0.0312251	0.00509	0.0312251	0.005088	1.6139E-09	0.12883	0.283885	0.000634	0.001379	0.275684	0.00251	0.48621	0.016519	0.929	0.904	0.999	0.998	0.9	0.996	0.864	0.965
rs1544850	8.4527E-10	0.0318602	0.00519	0.0356767	0.008245	1.59685E-09	0.08946	0.012571	0.056392	0.001894	0.001007	0.00012	0.22231	0.527693	0.921	0.956	0.753	0.997	0.994	1	0.891	0.649
rs10533001	8.4667E-10	0.032255	0.00526	0.031686	0.008084	9.24164E-10	0.5138	0.582697	7.09E-08	0.08294	0.125585	0.02373	0.0028	0.784487	0.602	0.772	1	0.84	0.884	0.809	0.981	0.727
rs7131465	8.4773E-10	-0.031045	0.00506	-0.031045	0.00506	1.62357E-09	0.72668	0.179607	0.00128	0.000868	0.528523	8.7E-05	0.76738	0.04144	0.785	0.881	0.997	0.998	0.754	1	0.596	0.931
rs72954140	8.4836E-10	0.0373314	0.00608	0.0371275	0.008293	1.61006E-09	0.29406	0.39446	0.023023	0.000337	0.098747	8.3E-06	0.29663	0.05083	0.844	0.824	0.875	0.999	0.917	1	0.38	0.921
rs7131681	8.4902E-10	-0.031044	0.00506	-0.031044	0.00506	1.62597E-09	0.72696	0.179587	0.00128	0.00087	0.529185	8.6E-05	0.76681	0.04137	0.785	0.881	0.997	0.998	0.754	1	0.596	0.931
rs485565	8.4926E-10	0.0322642	0.00526	0.0322642	0.005259	1.62642E-09	0.20968	0.878719	0.000369	0.150195	0.156236	5.6E-05	0.01585	0.456172	0.9	0.806	0.999	0.862	0.92	1	0.973	0.861
rs72954144	8.4933E-10	0.0373303	0.00608	0.0371261	0.008292	1.61191E-09	0.29424	0.39446	0.023024	0.000338	0.098748	8.3E-06	0.29663	0.05083	0.844	0.824	0.876	0.999	0.917	1	0.38	0.921
rs548987	8.4994E-10	-0.05509	0.00898	-0.06541	0.014235	8.54317E-10	0.73223	0.118112	0.017482	1.75E-05	0.002631	0.01364	0.19047	0.012525	0.841	0.93	0.93	1	0.992	0.933	0.919	0.969
rs7190185	8.5068E-10	-0.031303	0.0051	-0.031935	0.006427	1.62908E-09	0.32744	0.326591	0.0073	0.005155	0.000439	0.00013	0.24831	0.278839	0.871	0.871	0.983	0.994	0.995	1	0.888	0.595
rs9347909	8.5092E-10	0.032752	0.00534	0.032752	0.005338	1.62953E-09	0.24357	0.398787	0.000743	0.000724	0.169456	0.00272	0.06241	0.58633	0.909	0.888	0.999	0.999	0.929	0.996	0.958	0.863
rs7323056	8.5171E-10	0.0311916	0.00508	0.0311916	0.005084	1.63101E-09	0.1252	0.256331	0.000744	0.001316	0.245175	0.00231	0.51173	0.02275	0.93	0.908	0.999	0.998	0.909	0.997	0.86	0.962
rs67869107	8.5546E-10	-0.039159	0.00638	-0.039159	0.006384	1.63805E-09	0.56052	0.144567	0.000268	0.00349	0.132505	0.01208	0.0819	0.005116	0.879	0.932	1	0.997	0.946	0.975	0.957	0.976
rs11642612	8.5571E-10	-0.031964	0.00521	-0.032309	0.007282	1.63851E-09	0.99378	0.757531	0.005454	0.000248	0.001043	0.00041	0.165	0.255283	0.742	0.781	0.985	0.999	0.993	0.999	0.897	0.545
rs7131627	8.5684E-10	-0.031034	0.00506	-0.031034	0.005059	1.64062E-09	0.72639	0.179942	0.001281	0.000872	0.52851	8.7E-05	0.76654	0.041426	0.785	0.881	0.997	0.998	0.754	1	0.596	0.931
rs1925115	8.5715E-10	0.0311864	0.00508	0.0311864	0.005084	1.64121E-09	0.12623	0.256331	0.000744	0.001322	0.245175	0.00231	0.51173	0.02275	0.93	0.908	0.999	0.998	0.909	0.997	0.86	0.962
rs55666766	8.5731E-10	0.0373213	0.00608	0.0371179	0.008293	1.6267E-09	0.29419	0.39446	0.023083	0.000337	0.098826	8.3E-06	0.29647	0.050831	0.844	0.824	0.875	0.999	0.917	1	0.38	0.921
rs12798900	8.5849E-10	-0.031026	0.00506	-0.031026	0.005058	1.64372E-09	0.72546	0.180113	0.001282	0.000857	0.526047	8.8E-05	0.76434	0.041717	0.785	0.881	0.997	0.998	0.755	1	0.596	0.931
rs568234	8.6008E-10	0.0554156	0.00904	0.0554156	0.009035	1.64668E-09	0.93754	0.394628	1.9E-06	0.074365	0.090227	0.00049	0.13718	0.957764	0.71	0.6	1	0.901	0.92	0.999	0.895	0.719
rs9379874	8.6032E-10	-0.031072	0.00507	-0.031072	0.005066	1.64714E-09	0.36528	0.078693	0.000811	0.000215	0.76473	0.00196	0.23785	0.125166	0.878	0.93	0.999	0.999	0.731	0.997	0.902	0.922

Table S3

rs200465	8.6238E-10	-0.039016	0.00636	-0.039016	0.006362	1.65101E-09	0.79594	0.162313	0.00031	0.003605	0.09919	0.01122	0.07591	0.003529	0.851	0.928	1	0.997	0.955	0.976	0.958	0.978
rs35613794	8.6331E-10	0.0340967	0.00556	0.0365328	0.007301	1.65274E-09	0.03172	0.532603	0.000154	0.002873	0.187949	0.02222	0.17955	0.001668	0.957	0.877	1	0.997	0.927	0.936	0.931	0.982
rs7759622	8.6435E-10	0.031765	0.00518	0.0326904	0.006291	1.37545E-09	0.11009	0.977531	0.081451	0.000483	0.002499	2.1E-05	0.54186	0.404669	0.893	0.709	0.579	0.999	0.99	1	0.746	0.815
rs4771932	8.644E-10	0.0311804	0.00508	0.0311804	0.005084	1.65478E-09	0.12395	0.256566	0.000747	0.001329	0.245881	0.00232	0.51117	0.022738	0.93	0.908	0.999	0.998	0.909	0.997	0.86	0.962
rs62404524	8.6473E-10	0.0516437	0.00842	0.0619883	0.020821	1.14982E-11	0.00129	0.565728	0.080522	3.86E-08	7.84E-05	0.01089	0.39635	0.880617	0.977	0.326	0.013	1	0.999	0.031	0.013	0.167
rs16927425	8.6485E-10	-0.072473	0.01182	-0.072473	0.011818	1.65563E-09	0.77453	0.090531	0.004534	0.001133	0.413072	7.8E-05	0.09624	0.702023	0.82	0.926	0.992	0.998	0.838	1	0.94	0.825
rs12205682	8.6506E-10	0.0329735	0.00538	0.0350226	0.008016	1.09029E-09	0.13559	0.784445	0.009043	6.08E-07	0.274138	0.00375	0.73796	0.026304	0.913	0.816	0.976	1	0.879	0.988	0.781	0.952
rs2734839	8.6677E-10	-0.031004	0.00506	-0.031004	0.005056	1.65922E-09	0.69936	0.108165	0.001397	0.000543	0.475085	0.00022	0.86613	0.035306	0.804	0.908	0.997	0.999	0.791	1	0.648	0.94
rs2734837	8.6698E-10	-0.031004	0.00506	-0.031004	0.005056	1.65961E-09	0.69935	0.108165	0.001397	0.000543	0.475094	0.00022	0.86613	0.035306	0.804	0.908	0.997	0.999	0.791	1	0.648	0.94
rs1107162	8.6862E-10	-0.031002	0.00506	-0.031002	0.005056	1.66268E-09	0.69935	0.108165	0.001398	0.000543	0.475145	0.00022	0.86608	0.035307	0.804	0.908	0.997	0.999	0.791	1	0.648	0.94
rs138296701	8.69E-10	-0.065409	0.01067	-0.065898	0.012123	1.47835E-09	0.08757	0.053264	0.052186	0.006654	0.141465	1.3E-06	0.16467	0.713521	0.918	0.93	0.762	0.991	0.91	1	0.905	0.686
rs6491285	8.704E-10	0.0311759	0.00508	0.0311759	0.005085	1.66601E-09	0.12576	0.257648	0.000743	0.001308	0.248401	0.00234	0.50778	0.022758	0.93	0.908	0.999	0.998	0.908	0.997	0.861	0.962
rs2200442	8.7193E-10	-0.031564	0.00515	-0.031564	0.005148	1.66887E-09	0.01657	0.058102	0.001044	0.104765	0.043352	0.00102	0.16966	0.025741	0.967	0.952	0.999	0.934	0.975	0.999	0.94	0.966
rs7200003	8.721E-10	0.0311075	0.00507	0.0311075	0.005074	1.66919E-09	0.61182	0.912528	0.001771	0.005583	0.375443	3.7E-06	0.42087	0.804153	0.8	0.727	0.996	0.991	0.809	1	0.817	0.763
rs7988861	8.7273E-10	0.0311997	0.00509	0.0311997	0.005089	1.67038E-09	0.12463	0.289643	0.00066	0.001205	0.277676	0.0027	0.48986	0.016392	0.93	0.903	0.999	0.998	0.899	0.996	0.863	0.965
rs471508	8.7376E-10	0.032244	0.00526	0.032244	0.005259	1.67229E-09	0.20926	0.889083	0.000385	0.150332	0.155862	5.5E-05	0.01598	0.45476	0.9	0.804	0.999	0.862	0.92	1	0.973	0.861
rs16953068	8.744E-10	0.031172	0.00508	0.031172	0.005084	1.67349E-09	0.12404	0.257043	0.000745	0.001337	0.247258	0.00233	0.5092	0.022764	0.93	0.908	0.999	0.998	0.908	0.997	0.86	0.962
rs7204797	8.7783E-10	-0.031273	0.0051	-0.031887	0.006415	1.67992E-09	0.34249	0.348271	0.007062	0.005105	0.00042	0.00014	0.24691	0.281278	0.868	0.867	0.983	0.994	0.995	1	0.888	0.595
rs12376469	8.7785E-10	-0.041872	0.00683	-0.043376	0.007946	1.67995E-09	0.33622	0.878183	0.000246	0.036133	0.016372	0.00788	0.02555	0.002654	0.904	0.842	1	0.976	0.984	0.986	0.975	0.979
rs113293097	8.7825E-10	-0.032287	0.00527	-0.032287	0.005267	1.6807E-09	0.32125	0.008566	0.000866	0.046689	0.166409	0.00029	0.59723	0.016209	0.901	0.968	0.999	0.967	0.932	1	0.844	0.966
rs7642109	8.7921E-10	-0.030977	0.00505	-0.030977	0.005053	1.68251E-09	0.05964	0.391536	0.036371	0.000384	0.007605	0.00019	0.23288	0.886998	0.939	0.877	0.887	0.999	0.987	1	0.905	0.803
rs9554339	8.7952E-10	0.0311709	0.00509	0.0311709	0.005085	1.68308E-09	0.12461	0.260465	0.000753	0.001257	0.248952	0.00234	0.51466	0.023681	0.93	0.908	0.999	0.998	0.908	0.997	0.859	0.961
rs200954	8.803E-10	-0.065293	0.01065	-0.067987	0.013577	1.68455E-09	0.39321	0.570431	0.005694	0.003347	0.263765	0.0003	0.17751	0.000309	0.891	0.869	0.992	0.997	0.904	1	0.929	0.984
rs147007430	8.8041E-10	0.0510227	0.00832	0.0555449	0.013833	1.68475E-09	0.53057	0.350998	0.00633	0.120164	1.99E-05	0.00012	0.04199	0.117091	0.844	0.658	0.985	0.881	0.999	1	0.957	0.918
rs17725532	8.8087E-10	0.0388768	0.00634	0.0379821	0.007802	1.58889E-09	0.96671	0.148358	0.000473	0.64552	0.061231	1.7E-06	0.0225	0.985733	0.643	0.851	0.998	0.267	0.923	1	0.949	0.639
rs9393710	8.8089E-10	-0.055459	0.00905	-0.055459	0.009048	1.68565E-09	0.48205	0.601197	0.000335	0.009625	0.055963	0.00261	0.09394	0.053471	0.884	0.871	1	0.993	0.967	0.996	0.952	0.952
rs7724666	8.827E-10	-0.04556	0.00743	-0.04556	0.007433	1.68904E-09	0.85	0.042863	0.000191	0.129668	0.122348	0.00075	0.00376	0.328087	0.827	0.947	1	0.895	0.941	0.999	0.986	0.894
rs61966875	8.855E-10	0.031166	0.00509	0.031166	0.005085	1.69427E-09	0.12624	0.26225	0.000738	0.001351	0.251524	0.00239	0.48393	0.023035	0.93	0.908	0.999	0.998	0.907	0.997	0.866	0.962
rs3923570	8.8793E-10	0.035483	0.00579	0.035483	0.00579	1.69368E-09	0.21338	0.150275	1.34E-06	0.04038	0.501768	0.00936	0.04744	0.597018	0.902	0.914	1	0.964	0.814	0.974	0.958	0.844
rs76542911	8.8795E-10	0.0381123	0.00622	0.0381123	0.006219	1.69886E-09	0.28478	0.029702	0.000474	0.002617	0.520225	0.00036	0.18632	0.1229	0.62	0.94	0.999	0.996	0.786	0.999	0.903	0.912
rs7866090	8.8896E-10	-0.041857	0.00683	-0.043317	0.007924	1.70075E-09	0.35251	0.879887	0.000251	0.036915	0.016172	0.00757	0.02549	0.002666	0.902	0.842	1	0.975	0.984	0.987	0.975	0.979
rs9329214	8.8986E-10	-0.036482	0.00595	-0.036482	0.005953	1.70244E-09	0.24636	0.781635	0.00074	0.02838	0.020443	0.00065	0.03439	0.215191	0.908	0.785	0.999	0.979	0.98	0.999	0.968	0.915
rs11150576	8.9034E-10	-0.031268	0.0051	-0.031915	0.006465	1.70333E-09	0.33522	0.348298	0.007315	0.004901	0.000404	0.00014	0.25066	0.280595	0.87	0.867	0.983	0.994	0.996	1	0.887	0.595
rs9348775	8.9084E-10	-0.039107	0.00638	-0.039107	0.006382	1.70427E-09	0.57856	0.148675	0.000287	0.003421	0.13245	0.01201	0.07754	0.005129	0.877	0.931	1	0.997	0.946	0.975	0.958	0.976
rs28654624	8.9154E-10	0.0372271	0.00608	0.0375225	0.007442	1.70557E-09	0.77023	0.207116	0.007811	0.004295	0.556568	3.7E-05	0.00062	0.814572	0.729	0.888	0.98	0.994	0.771	1	0.991	0.786
rs1506659	8.9161E-10	-0.032422	0.00529	-0.031447	0.006691	1.7057E-09	0.89751	0.418546	0.001382	0.139361	0.944103	1.2E-06	0.00348	0.277971	0.68	0.804	0.995	0.791	0.511	1	0.978	0.835
rs11432080	8.9211E-10	0.0311638	0.00509	0.0311638	0.005086	1.70665E-09	0.12449	0.260051	0.000757	0.001259	0.248136	0.00237	0.51308	0.023681	0.93	0.908	0.999	0.998	0.908	0.997	0.859	0.961
rs7337506	8.9315E-10	0.031159	0.00509	0.031159	0.005085	1.70859E-09	0.12663	0.262253	0.000738	0.001366	0.251287	0.00239	0.484	0.023	0.93	0.908	0.999	0.998	0.908	0.997	0.866	0.962
rs2755240	8.9458E-10	0.0322996	0.00527	0.0322996	0.005272	1.71126E-09	0.94114	0.670824	0.003321	0.131171	0.055221	1.7E-06	0.17967	0.146198	0.768	0.824	0.993	0.871	0.956	1	0.909	0.91
rs12233703	8.9627E-10	0.034483	0.00563	0.0384163	0.00907	1.71444E-09	0.00479	0.343302	0.005278	0.002392	0.873423	0.00079	0.00038	0.613029	0.967	0.881	0.99	0.997	0.691	0.999	0.993	0.841
rs11710798	8.9629E-10	-0.038573	0.0063	-0.038573	0.006296	1.71447E-09	0.663	0.101007	0.000263	0.073063	0.217768	1.3E-05	0.72241	0.171126	0.696	0.907	0.999	0.918	0.88	1	0.753	0.893
rs1961836	8.9853E-10	0.0344808	0.00563	0.038415	0.00907	1.71866E-09	0.00479	0.343302	0.005289	0.002392	0.873416	0.00079	0.00038	0.613035	0.967	0.881	0.99	0.997	0.691	0.999	0.993	0.841
rs11214605	8.9983E-10	-0.031003	0.00506	-0.031003	0.005061	1.72109E-09	0.72541	0.191232	0.001218	0.000868	0.546798	9.1E-05	0.77038	0.041334	0.784	0.878	0.997	0.998	0.746	1	0.596	0.931
rs13005495	9.0147E-10	0.0335011	0.00547	0.0355052	0.006907	1.72416E-09	0.06401	0.020825	0.017767	0.009503	0.001361	0.00031	0.16342	0.853804	0.945	0.96	0.963	0.992	0.994	1	0.933	0.787
rs9468223	9.015E-10	-0.03896	0.00636	-0.03896	0.00636	1.72422E-09	0.79124	0.160822	0.000345	0.00351	0.104878	0.01045	0.08091	0.003419	0.852	0.928	1	0.997	0.953	0.979	0.957	0.978
rs2179094	9.0217E-10	-0.038959	0.00636	-0.038959	0.00636	1.72547E-09	0.79137	0.16083	0.000345	0.003514	0.104896	0.01044	0.08092	0.003419	0.852	0.928	1	0.997	0.953	0.979	0.957	0.978
rs1985099	9.0242E-10	-0.038959	0.00636	-0.038959	0.00636	1.72593E-09	0.79139	0.160833	0.000345	0.003515	0.104903	0.01044	0.08093	0.00342	0.852	0.928	1	0.997	0.953	0.979	0.957	0.978
rs144009148	9.0257E-10	-0.078556	0.01282	-0.078556	0.012824	1.72427E-09	0.1067	0.156637	0.039782	0.004408	0.265632	1.2E-05	0.02897	0.486509	0.929	0.917	0.871	0.995	0.889	1	0.969	0.865
rs7865888	9.0311E-10	-0.041844	0.00683	-0.043285	0.007908	1.72723E-09	0.36017	0.879444	0.000249	0.034688	0.016409	0.00795	0.02581	0.002681	0.901	0.842	1	0.977	0.984	0.986	0.975	0.979
rs11922386	9.0553E-10	0.0308222	0.00503	0.0314874	0.005853	1.73175E-09	0.52956	0.246436	0.003465	0.006236	0.889134	0.00033	0.00374	0.011048	0.858	0.898	0.994	0.994	0.692	1	0.986	0.965
rs12723140	9.0767E-10	0.0310415	0.00507	0.031264	0.005714	1.73575E-09	0.74408	0.0355	8.95E-05	0.004244	0.011399	0.00453	0.13967	0.43614	0.732	0.939	1	0.995	0.982	0.989	0.92	0.647
rs34515214	9.0799E-10	0.0310412	0.00507	0.0312638	0.005714	1.73635E-09	0.74409	0.0355	8.95E-05	0.004244	0.011399	0.00453	0.13967	0.436138	0.732	0.939	1	0.995	0.982	0.989	0.92	0.647
rs11649535	9.0815E-10	0.0397734	0.00649	0.0397734	0.006494	1.73665E-09	0.38267	0.053055	0.005107	0.140204	0.125778	6.1E-06	0.07106	0.343935	0.886	0.943	0.991	0.888	0.94	1	0.953	0.892
rs2237236	9.1039E-10	-0.031022	0.00507	-0.031022	0.005065	1.74084E-09	0.39697	0.073868	0.001073	0.000175	0.724397	0.00184	0.24261	0.130776	0.874	0.932	0.998	0.999	0.746	0.997	0.902	0.921
rs4788196	9.1189E-10	-0.031248	0.0051	-0.031896	0.006462	1.74365E-09	0.33412	0.348263	0.007257	0.005017	0.000402	0.00014	0.25034	0.280488	0.87	0.867	0.983	0.994	0.996	1	0.888	0.595

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rs7193532	9.1232E-10	-0.031248	0.0051	-0.031896	0.006464	1.74445E-09	0.33421	0.348087	0.007259	0.005014	0.000401	0.00014	0.25014	0.280261	0.87	0.867	0.983	0.994	0.996	1	0.888	0.595
rs11646127	9.1363E-10	-0.031247	0.0051	-0.031893	0.006461	1.7469E-09	0.33618	0.348322	0.007261	0.004992	0.000402	0.00014	0.25038	0.280451	0.869	0.867	0.983	0.994	0.995	1	0.887	0.595
rs140224092	9.137E-10	0.107559	0.01756	0.107559	0.017564	1.74703E-09	0.2575	0.101161	0.000118	0.026907	0.047321	0.00018	0.54184	0.452705	0.614	0.909	1	0.973	0.956	1	0.809	0.842
rs1547089	9.1381E-10	0.0320605	0.00524	0.0320605	0.005235	1.74724E-09	0.11796	0.705717	0.004434	0.000288	0.029027	0.00341	0.1132	0.209553	0.935	0.861	0.994	0.999	0.978	0.995	0.948	0.922
rs7981845	9.1394E-10	0.03114	0.00509	0.03114	0.005085	1.74749E-09	0.12551	0.261016	0.000741	0.001322	0.255198	0.00241	0.4984	0.022863	0.93	0.908	0.999	0.998	0.906	0.997	0.862	0.962
rs7981931	9.1417E-10	0.0311409	0.00509	0.0311409	0.005085	1.74791E-09	0.12571	0.262989	0.000754	0.00132	0.252397	0.00244	0.48488	0.023078	0.93	0.908	0.999	0.998	0.907	0.997	0.866	0.962
rs4972572	9.158E-10	-0.030913	0.00505	-0.030913	0.005048	1.75095E-09	0.74113	0.870637	0.000744	0.005702	0.143006	0.00178	0.00158	0.085034	0.763	0.819	0.999	0.994	0.932	0.997	0.989	0.936
rs2200443	9.1604E-10	-0.044534	0.00727	-0.044534	0.007273	1.7514E-09	0.1778	0.096776	0.009223	0.000709	0.031214	0.00226	0.21709	0.051934	0.931	0.944	0.988	0.999	0.979	0.997	0.93	0.957
rs9556551	9.1677E-10	0.0311349	0.00508	0.0311349	0.005085	1.75277E-09	0.11869	0.257657	0.000744	0.00145	0.248207	0.00234	0.50801	0.022761	0.931	0.908	0.999	0.998	0.908	0.997	0.861	0.962
rs35497369	9.1698E-10	0.0365419	0.00597	0.0373089	0.008135	1.75315E-09	0.24951	0.743012	0.011825	0.001506	0.009878	0.00012	0.01023	0.259313	0.877	0.716	0.964	0.997	0.982	1	0.975	0.571
rs11597992	9.175E-10	-0.036687	0.00599	-0.044627	0.010618	1.75413E-09	3.4E-05	0.207815	0.032403	0.043986	0.046251	8.5E-05	0.03616	0.308012	0.99	0.922	0.922	0.969	0.972	1	0.971	0.909
rs12364441	9.1883E-10	0.0388218	0.00634	0.0379513	0.007849	1.64359E-09	0.95815	0.135451	0.000492	0.664687	0.063706	1.8E-06	0.02175	0.921441	0.642	0.857	0.998	0.257	0.922	1	0.95	0.655
rs1267067	9.2223E-10	-0.033654	0.0055	-0.033654	0.005497	1.76298E-09	0.80673	0.430166	0.001101	0.032022	0.009008	0.00029	0.3972	0.045034	0.835	0.881	0.999	0.976	0.986	1	0.878	0.951
rs589249	9.2247E-10	0.0328977	0.00537	0.038496	0.008199	1.42958E-09	0.21137	0.403887	0.000189	0.00452	0.070171	0.07396	0.00102	0.006386	0.904	0.87	1	0.995	0.954	0.652	0.992	0.974
rs963593	9.2253E-10	0.0357688	0.00584	0.0357688	0.005842	1.76353E-09	0.09909	0.696006	0.001359	0.003903	0.023743	0.00084	0.15201	0.371499	0.931	0.766	0.998	0.996	0.978	0.999	0.931	0.888
rs349681	9.2375E-10	0.03158	0.00516	0.03158	0.005158	1.41449E-09	0.6207	0.242388	0.001444	0.547953	0.289129	1.5E-07	0.09751	0.363742	0.746	0.83	0.993	0.362	0.789	1	0.898	0.8
rs12871045	9.2376E-10	0.0311323	0.00509	0.0311323	0.005085	1.76583E-09	0.12262	0.261371	0.000762	0.001286	0.249929	0.00237	0.51529	0.023983	0.93	0.907	0.999	0.998	0.907	0.997	0.859	0.961
rs1267068	9.246E-10	-0.03365	0.0055	-0.03365	0.005497	1.76741E-09	0.80629	0.430161	0.001102	0.032051	0.009013	0.00029	0.39722	0.045034	0.835	0.881	0.999	0.976	0.986	1	0.878	0.951
rs10178778	9.2585E-10	0.0321045	0.00524	0.0321432	0.00536	1.76974E-09	0.58348	0.016755	0.001234	0.043347	0.191541	0.00013	0.69755	0.006157	0.861	0.958	0.998	0.967	0.92	1	0.813	0.973
rs10635165	9.2621E-10	-0.033078	0.0054	-0.033078	0.005403	1.77042E-09	0.83806	0.32548	0.003669	0.083657	0.336186	5.4E-07	0.33572	0.084071	0.742	0.866	0.991	0.914	0.845	1	0.86	0.921
rs7320065	9.2721E-10	0.0311293	0.00509	0.0311293	0.005085	1.77229E-09	0.12503	0.261231	0.000742	0.001358	0.255506	0.0024	0.49714	0.02286	0.93	0.908	0.999	0.998	0.906	0.997	0.863	0.962
rs1107379	9.2796E-10	0.032092	0.00524	0.0317627	0.006947	1.33387E-09	0.70162	0.532355	1.7E-07	0.106278	0.116628	0.01452	0.00516	0.778578	0.688	0.813	1	0.858	0.911	0.914	0.978	0.767
rs61857869	9.2802E-10	-0.049898	0.00815	-0.049898	0.008151	1.7738E-09	0.0265	0.282193	0.004197	0.149587	0.25881	1.3E-05	0.06039	0.103752	0.956	0.903	0.993	0.88	0.901	1	0.959	0.936
rs61971163	9.2864E-10	0.0320943	0.00524	0.0318098	0.006881	1.36147E-09	0.73845	0.521605	1.92E-07	0.107013	0.11588	0.01417	0.00485	0.800231	0.697	0.817	1	0.859	0.913	0.918	0.979	0.766
rs2983118	9.2876E-10	0.032885	0.00537	0.0385983	0.008242	1.41555E-09	0.2179	0.379857	0.000184	0.004708	0.070108	0.07582	0.00096	0.006396	0.902	0.873	1	0.994	0.954	0.641	0.993	0.974
rs1267079	9.2893E-10	-0.033646	0.0055	-0.033646	0.005497	1.77551E-09	0.86851	0.423837	0.001178	0.028729	0.008686	0.00027	0.452	0.041038	0.825	0.88	0.999	0.978	0.986	1	0.864	0.951
rs11357135	9.2957E-10	-0.033073	0.0054	-0.033073	0.005403	1.77669E-09	0.83087	0.32552	0.003672	0.08328	0.336353	5.4E-07	0.33588	0.084124	0.741	0.866	0.991	0.914	0.845	1	0.86	0.921
rs4772099	9.3453E-10	0.0320856	0.00524	0.031759	0.006945	1.34315E-09	0.7039	0.531178	1.71E-07	0.106062	0.116869	0.01459	0.00515	0.780875	0.688	0.813	1	0.858	0.911	0.914	0.978	0.767
rs7991843	9.3487E-10	0.031122	0.00509	0.031122	0.005085	1.78661E-09	0.11964	0.260949	0.000758	0.001359	0.249542	0.00235	0.51494	0.023846	0.931	0.908	0.999	0.998	0.908	0.997	0.859	0.961
rs7555990	9.352E-10	0.0432762	0.00707	0.0438715	0.011029	1.78722E-09	0.11366	0.00299	0.00011	0.060441	0.027005	0.00063	0.39342	0.140504	0.543	0.969	1	0.941	0.971	0.999	0.85	0.909
rs2092075	9.3588E-10	-0.038932	0.00636	-0.038932	0.006361	1.78849E-09	0.79921	0.160501	0.000325	0.003679	0.100515	0.01121	0.07749	0.00359	0.85	0.928	1	0.997	0.954	0.977	0.958	0.978
rs189794341	9.3689E-10	0.0735629	0.01202	0.0735629	0.012021	1.79037E-09	0.52821	0.776033	0.000144	0.013033	0.001386	0.00956	0.07897	0.36765	0.87	0.843	1	0.989	0.994	0.98	0.952	0.89
rs2394002	9.3694E-10	-0.038931	0.00636	-0.038931	0.006361	1.79048E-09	0.79915	0.159927	0.000325	0.003679	0.100533	0.01122	0.0775	0.00359	0.85	0.928	1	0.997	0.954	0.977	0.958	0.978
rs2893931	9.3694E-10	-0.038931	0.00636	-0.038931	0.006361	1.79048E-09	0.79915	0.159927	0.000325	0.003679	0.100533	0.01122	0.0775	0.00359	0.85	0.928	1	0.997	0.954	0.977	0.958	0.978
rs148714825	9.3752E-10	-0.063221	0.01033	-0.063221	0.010331	1.79157E-09	0.34071	0.511776	0.003086	0.000875	0.004717	0.00587	0.25191	0.023357	0.904	0.884	0.996	0.999	0.991	0.99	0.918	0.964
rs56374954	9.3772E-10	-0.049884	0.00815	-0.049884	0.008151	1.79194E-09	0.02649	0.282255	0.004213	0.149636	0.259054	1.3E-05	0.06062	0.103543	0.956	0.903	0.993	0.881	0.901	1	0.959	0.936
rs9468229	9.3777E-10	-0.03893	0.00636	-0.03893	0.006362	1.79202E-09	0.79925	0.160848	0.000325	0.00368	0.100508	0.01121	0.07748	0.00359	0.85	0.928	1	0.997	0.954	0.977	0.958	0.978
rs13211701	9.3777E-10	-0.03893	0.00636	-0.03893	0.006362	1.79203E-09	0.79925	0.160848	0.000325	0.00368	0.100508	0.01121	0.07748	0.00359	0.85	0.928	1	0.997	0.954	0.977	0.958	0.978
rs56357652	9.3809E-10	-0.034699	0.00567	-0.034734	0.005752	1.79263E-09	0.54169	0.644423	1.33E-05	0.026339	0.122896	0.00843	0.01201	0.035734	0.72	0.843	1	0.977	0.936	0.979	0.977	0.95
rs149001690	9.3904E-10	-0.086226	0.01409	-0.090199	0.019186	1.79439E-09	0.88322	0.505114	0.000169	0.007086	0.006567	0.00843	0.00191	0.252476	0.76	0.698	1	0.992	0.986	0.976	0.986	0.893
rs9556969	9.424E-10	0.0320782	0.00524	0.031748	0.006952	1.35384E-09	0.70109	0.531426	1.71E-07	0.1062	0.116839	0.0146	0.00515	0.781882	0.687	0.813	1	0.858	0.911	0.914	0.978	0.766
rs73259281	9.4568E-10	-0.044404	0.00726	-0.046569	0.008907	1.69074E-09	0.1281	0.088017	0.000759	3.44E-05	0.06863	0.02429	0.05642	0.65091	0.921	0.93	0.998	1	0.956	0.906	0.956	0.72
rs139416013	9.4882E-10	0.0706585	0.01155	0.0706585	0.01155	1.81267E-09	0.71457	0.49039	0.0088	0.007266	0.07094	8E-05	0.00292	0.507987	0.755	0.864	0.984	0.993	0.955	1	0.987	0.86
rs9348774	9.5162E-10	-0.046527	0.00761	-0.046527	0.007606	1.8179E-09	0.24365	0.444796	0.000392	0.0485	0.10249	0.00069	0.28111	0.003663	0.913	0.888	1	0.967	0.952	0.999	0.909	0.976
rs10495728	9.5285E-10	0.0320778	0.00524	0.0321142	0.005354	1.82021E-09	0.58344	0.016864	0.001222	0.044352	0.191286	0.00013	0.69714	0.006176	0.861	0.958	0.998	0.966	0.92	1	0.813	0.972
rs2032862	9.5555E-10	0.0315518	0.00516	0.0315518	0.005158	1.46442E-09	0.5969	0.241513	0.001495	0.542699	0.296427	1.5E-07	0.10186	0.362769	0.752	0.831	0.992	0.368	0.786	1	0.896	0.801
rs2985795	9.5737E-10	0.0322343	0.00527	0.0322343	0.00527	1.82864E-09	0.93195	0.677004	0.003456	0.138957	0.054531	1.5E-06	0.17457	0.156852	0.765	0.821	0.993	0.862	0.956	1	0.909	0.906
rs349695	9.5779E-10	0.0315505	0.00516	0.0315505	0.005158	1.4519E-09	0.61957	0.241513	0.00146	0.550328	0.296555	1.5E-07	0.1019	0.362769	0.745	0.83	0.992	0.36	0.784	1	0.895	0.799
rs11585829	9.5811E-10	0.0309978	0.00507	0.0312228	0.00571	1.83003E-09	0.74725	0.035317	9.38E-05	0.004235	0.011428	0.00459	0.13989	0.435827	0.733	0.939	1	0.995	0.981	0.989	0.92	0.647
rs4788195	9.5835E-10	-0.031209	0.0051	-0.03185	0.006424	1.83047E-09	0.33386	0.347126	0.007461	0.00475	0.000431	0.00015	0.24909	0.281756	0.87	0.868	0.982	0.994	0.995	1	0.888	0.596
rs349683	9.5844E-10	0.0315493	0.00516	0.0315493	0.005158	1.45557E-09	0.62428	0.242388	0.001444	0.55645	0.289129	1.5E-07	0.09751	0.363742	0.744	0.829	0.992	0.355	0.788	1	0.898	0.799
rs10959576	9.5936E-10	-0.041898	0.00685	-0.04378	0.008246	1.83237E-09	0.25514	0.948893	0.000237	0.048581	0.017818	0.00744	0.01963	0.002972	0.915	0.833	1	0.968	0.983	0.987	0.977	0.979
rs2842442	9.6122E-10	0.0328833	0.00538	0.0349119	0.008021	1.20137E-09	0.13805	0.79382	0.009713	6.07E-07	0.283361	0.00366	0.73089	0.026924	0.912	0.814	0.974	1	0.875	0.988	0.782	0.951
rs11222031	9.6341E-10	0.0378808	0.00619	0.0378808	0.006194	1.83993E-09	0.01083	0.533576	0.000406	0.257171	0.33635	3.7E-05	0.28024	0.032447	0.958	0.842	0.999	0.748	0.851	1	0.881	0.947
rs6537127	9.6365E-10	-0.033411	0.00546	-0.036497	0.008162	1.84037E-09	0.00933	0.145651	0.010614	0.006943	0.687863	0.00021	0.00061	0.715129	0.964	0.92	0.978	0.993	0.766	1	0.992	0.835

Table S3

rs78002591	9.6409E-10	-0.045997	0.00752	-0.046731	0.009217	1.8412E-09	0.00455	0.692975	0.006882	0.219533	0.146766	5.3E-06	0.02942	0.252117	0.967	0.834	0.983	0.798	0.926	1	0.967	0.898
rs12918652	9.6565E-10	-0.031204	0.0051	-0.031848	0.006424	1.84412E-09	0.32704	0.347069	0.007448	0.004866	0.000431	0.00015	0.24919	0.281803	0.871	0.868	0.983	0.994	0.995	1	0.888	0.597
rs144643298	9.657E-10	0.0680521	0.01113	0.0668446	0.013659	1.79476E-09	0.0305	0.256543	0.000276	0.666216	0.432903	3.2E-06	0.04609	0.64114	0.917	0.826	0.999	0.275	0.715	1	0.931	0.733
rs147610022	9.6634E-10	-0.034673	0.00567	-0.034676	0.005678	1.84539E-09	0.55925	0.644947	1.34E-05	0.028178	0.122891	0.00829	0.012	0.035766	0.724	0.843	1	0.976	0.936	0.979	0.977	0.95
rs6893431	9.6733E-10	0.0315434	0.00516	0.0315434	0.005159	1.48292E-09	0.61661	0.241547	0.001487	0.541476	0.296693	1.5E-07	0.1017	0.362972	0.748	0.831	0.992	0.369	0.786	1	0.896	0.8
rs9554478	9.6759E-10	0.0320605	0.00524	0.0317556	0.006964	1.40667E-09	0.71084	0.517418	1.92E-07	0.111908	0.113676	0.01409	0.00471	0.795207	0.69	0.816	1	0.852	0.913	0.917	0.979	0.765
rs2734838	9.6801E-10	-0.030911	0.00506	-0.030911	0.005055	1.84852E-09	0.69675	0.113545	0.001484	0.000532	0.470163	0.00023	0.86418	0.03571	0.805	0.906	0.997	0.999	0.793	1	0.648	0.939
rs604149	9.6818E-10	0.0328529	0.00537	0.0384314	0.008192	1.49994E-09	0.2155	0.401902	0.000189	0.004639	0.070188	0.07473	0.00104	0.006393	0.903	0.87	1	0.995	0.954	0.65	0.992	0.974
rs183236088	9.6927E-10	0.0680457	0.01113	0.0668379	0.013663	1.80091E-09	0.03049	0.256308	0.000277	0.666661	0.433134	3.2E-06	0.04609	0.640589	0.917	0.826	0.999	0.275	0.715	1	0.931	0.733
rs187034	9.7081E-10	0.0315397	0.00516	0.0315397	0.005159	1.48586E-09	0.61557	0.241507	0.001493	0.542669	0.296304	1.5E-07	0.10191	0.362518	0.748	0.831	0.992	0.368	0.786	1	0.896	0.801
rs6565173	9.7218E-10	-0.031193	0.0051	-0.031798	0.00642	1.8563E-09	0.34183	0.32315	0.007411	0.005322	0.000442	0.00013	0.26457	0.279046	0.868	0.871	0.983	0.994	0.995	1	0.883	0.595
rs112426660	9.7463E-10	0.032884	0.00538	0.0348054	0.007889	1.26861E-09	0.15272	0.830949	0.008747	6.73E-07	0.27883	0.00389	0.69629	0.027956	0.909	0.81	0.977	1	0.877	0.988	0.791	0.951
rs11038752	9.7481E-10	0.038809	0.00635	0.0379009	0.007847	1.73915E-09	0.98788	0.135752	0.000435	0.679933	0.058261	1.9E-06	0.02606	0.97893	0.645	0.855	0.998	0.246	0.925	1	0.945	0.638
rs10203319	9.7497E-10	0.0320429	0.00524	0.0321152	0.005454	1.86152E-09	0.59209	0.017027	0.001153	0.046679	0.210927	0.00013	0.65921	0.005368	0.86	0.958	0.999	0.965	0.914	1	0.822	0.973
rs13428710	9.7513E-10	0.0320581	0.00524	0.0320929	0.005348	1.86182E-09	0.58418	0.016974	0.001235	0.04415	0.193009	0.00013	0.69585	0.006156	0.86	0.958	0.998	0.966	0.919	1	0.814	0.972
rs349697	9.7645E-10	0.0315345	0.00516	0.0315345	0.005158	1.49525E-09	0.6185	0.241516	0.001495	0.541993	0.296432	1.5E-07	0.10186	0.362549	0.747	0.831	0.992	0.369	0.786	1	0.896	0.8
rs712173	9.7658E-10	0.0315344	0.00516	0.0315344	0.005158	1.49521E-09	0.61852	0.241508	0.001495	0.542053	0.296397	1.5E-07	0.10195	0.362521	0.747	0.831	0.992	0.369	0.786	1	0.896	0.8
rs712174	9.7658E-10	0.0315344	0.00516	0.0315344	0.005158	1.49521E-09	0.61852	0.241508	0.001495	0.542053	0.296397	1.5E-07	0.10195	0.362521	0.747	0.831	0.992	0.369	0.786	1	0.896	0.8
rs712171	9.7911E-10	0.0315321	0.00516	0.0315321	0.005158	1.4952E-09	0.59533	0.241514	0.001513	0.545982	0.296447	1.5E-07	0.10197	0.362545	0.752	0.831	0.992	0.366	0.786	1	0.896	0.801
rs10059945	9.8063E-10	0.0315422	0.00516	0.0315422	0.00516	1.50617E-09	0.62041	0.240295	0.001445	0.541086	0.299114	1.6E-07	0.10375	0.371115	0.746	0.83	0.993	0.369	0.784	1	0.894	0.798
rs9924964	9.8068E-10	0.031001	0.00507	0.031001	0.005072	1.87218E-09	0.62551	0.835428	0.001008	0.009798	0.282617	6E-06	0.30564	0.920602	0.798	0.715	0.998	0.987	0.845	1	0.85	0.716
rs60512641	9.8097E-10	0.0317041	0.00519	0.0317041	0.005187	1.87273E-09	0.02108	0.390261	0.0002	0.010494	0.364886	0.00157	0.11124	0.433157	0.958	0.889	1	0.991	0.874	0.998	0.944	0.883
rs34002685	9.824E-10	-0.038821	0.00635	-0.041446	0.008047	1.87539E-09	0.23596	0.540798	0.003607	0.000953	0.013137	0.00682	0.02591	0.010129	0.913	0.75	0.995	0.999	0.985	0.987	0.973	0.97
rs16825755	9.832E-10	0.0483863	0.00792	0.0538359	0.011621	1.72627E-09	0.02122	0.032829	1.67E-05	0.138444	0.001438	0.02952	0.3139	0.200532	0.957	0.951	1	0.865	0.994	0.878	0.887	0.912
rs349699	9.854E-10	0.0315267	0.00516	0.0315267	0.005158	1.5069E-09	0.62272	0.241516	0.001495	0.543032	0.296432	1.5E-07	0.10186	0.362549	0.746	0.83	0.992	0.368	0.786	1	0.896	0.8
rs11038754	9.8638E-10	0.038797	0.00635	0.0378888	0.007848	1.75949E-09	0.98698	0.135755	0.000436	0.680396	0.058312	2E-06	0.02607	0.97898	0.644	0.855	0.998	0.246	0.925	1	0.945	0.638
rs17497828	9.8817E-10	-0.032356	0.00529	-0.032356	0.005294	1.88616E-09	0.94783	0.6716	0.003596	0.128527	0.048139	1.7E-06	0.2283	0.130333	0.769	0.824	0.992	0.874	0.959	1	0.895	0.913
rs200995	9.8959E-10	-0.065156	0.01066	-0.068244	0.014034	1.88881E-09	0.41157	0.59211	0.005485	0.003446	0.293696	0.00033	0.15935	0.000253	0.887	0.866	0.992	0.996	0.895	1	0.933	0.985
rs12528162	9.8998E-10	0.0328673	0.00538	0.0348465	0.007993	1.24917E-09	0.13698	0.834468	0.009457	6.14E-07	0.291223	0.00373	0.7029	0.028372	0.912	0.808	0.975	1	0.872	0.988	0.788	0.95
rs12363125	9.9224E-10	-0.030891	0.00506	-0.030891	0.005055	1.89376E-09	0.6974	0.110253	0.001472	0.000556	0.471959	0.00023	0.86196	0.03565	0.805	0.907	0.997	0.999	0.792	1	0.648	0.939
rs11749671	9.925E-10	0.0315245	0.00516	0.0315245	0.005159	1.51518E-09	0.62012	0.241251	0.001486	0.545891	0.29734	1.5E-07	0.10178	0.363903	0.746	0.83	0.992	0.365	0.785	1	0.895	0.8
rs138737043	9.9255E-10	0.0734176	0.01201	0.0734176	0.012015	1.89433E-09	0.48937	0.771924	0.000144	0.015011	0.001357	0.00956	0.07914	0.364944	0.875	0.844	1	0.988	0.994	0.981	0.952	0.891
rs2305555	9.9295E-10	0.0315214	0.00516	0.0315214	0.005159	1.51274E-09	0.621	0.241322	0.001486	0.547475	0.296711	1.5E-07	0.10167	0.363152	0.746	0.83	0.992	0.363	0.785	1	0.895	0.8
rs10838746	9.9365E-10	0.0320202	0.00524	0.0320202	0.00524	1.8964E-09	0.5405	0.201298	0.000203	6.79E-05	0.85262	0.00617	0.02685	0.978951	0.825	0.883	1	1	0.657	0.979	0.96	0.749
rs11039337	9.9365E-10	0.0320202	0.00524	0.0320202	0.00524	1.8964E-09	0.5405	0.201298	0.000203	6.79E-05	0.85262	0.00617	0.02685	0.978951	0.825	0.883	1	1	0.657	0.979	0.96	0.749
rs71042700	9.9365E-10	0.0320202	0.00524	0.0320202	0.00524	1.8964E-09	0.5405	0.201298	0.000203	6.79E-05	0.85262	0.00617	0.02685	0.978951	0.825	0.883	1	1	0.657	0.979	0.96	0.749
rs61824827	9.9405E-10	0.0315534	0.00516	0.031212	0.006673	1.89713E-09	0.47638	0.029717	0.001059	0.007716	0.025351	0.00012	0.13982	0.245729	0.648	0.935	0.998	0.99	0.968	1	0.91	0.55
rs10769285	9.9428E-10	0.0320196	0.00524	0.0320196	0.00524	1.89757E-09	0.54056	0.201298	0.000203	6.8E-05	0.85262	0.00617	0.02685	0.978951	0.825	0.883	1	1	0.657	0.979	0.96	0.749
rs6892869	9.9576E-10	0.031518	0.00516	0.031518	0.005158	1.51614E-09	0.62115	0.241513	0.001492	0.547524	0.296346	1.5E-07	0.10182	0.362768	0.746	0.83	0.992	0.364	0.785	1	0.895	0.8
rs7936948	9.9625E-10	0.0320181	0.00524	0.0320181	0.00524	1.90124E-09	0.5406	0.201298	0.000203	6.82E-05	0.85262	0.00617	0.02685	0.978951	0.825	0.883	1	1	0.657	0.979	0.96	0.749
rs3758655	9.9672E-10	0.0320193	0.00524	0.0320193	0.005241	1.90212E-09	0.54039	0.206987	0.000198	6.77E-05	0.864877	0.00619	0.02656	0.975845	0.824	0.881	1	1	0.651	0.979	0.96	0.748
rs10959490	9.9826E-10	-0.034636	0.00567	-0.034636	0.005669	1.90499E-09	0.55279	0.666158	1.39E-05	0.02809	0.12534	0.00788	0.01106	0.042039	0.722	0.839	1	0.976	0.935	0.981	0.978	0.947
rs61857871	9.9884E-10	-0.0498	0.00815	-0.0498	0.008151	1.90607E-09	0.02646	0.283494	0.004211	0.153802	0.260061	1.4E-05	0.06148	0.10409	0.955	0.902	0.993	0.877	0.901	1	0.958	0.935
rs11278087	1.0002E-09	0.0315148	0.00516	0.0315148	0.005158	1.52303E-09	0.6188	0.241513	0.001495	0.548075	0.296427	1.5E-07	0.10186	0.362768	0.746	0.83	0.992	0.363	0.785	1	0.895	0.8
rs349693	1.0002E-09	0.0315148	0.00516	0.0315148	0.005158	1.52303E-09	0.6188	0.241513	0.001495	0.548075	0.296427	1.5E-07	0.10186	0.362768	0.746	0.83	0.992	0.363	0.785	1	0.895	0.8
rs349694	1.0002E-09	0.0315148	0.00516	0.0315148	0.005158	1.52303E-09	0.6188	0.241513	0.001495	0.548075	0.296427	1.5E-07	0.10186	0.362768	0.746	0.83	0.992	0.363	0.785	1	0.895	0.8
rs7996549	1.0013E-09	0.031067	0.00509	0.031067	0.005085	1.9107E-09	0.1239	0.263493	0.000782	0.001261	0.252143	0.00246	0.51567	0.024753	0.93	0.907	0.999	0.998	0.907	0.997	0.859	0.96
rs16962190	1.0018E-09	-0.032403	0.0053	-0.032403	0.005304	1.91165E-09	0.66389	0.187755	0.003446	5.63E-05	0.014211	0.00267	0.32042	0.929134	0.839	0.907	0.994	1	0.981	0.995	0.884	0.775
rs3784260	1.0023E-09	0.0308025	0.00504	0.0329509	0.008266	1.33214E-09	0.42391	0.405366	2.51E-06	0.030528	0.026489	0.04941	0.00038	0.441487	0.591	0.823	1	0.941	0.964	0.677	0.992	0.813
rs72773529	1.0036E-09	-0.032402	0.0053	-0.032402	0.005304	1.91486E-09	0.66388	0.187751	0.003451	5.65E-05	0.014214	0.00266	0.32045	0.92912	0.839	0.907	0.994	1	0.981	0.995	0.884	0.775
rs2009319	1.0039E-09	0.0321993	0.00527	0.0321993	0.005271	1.91544E-09	0.89664	0.681438	0.003483	0.129466	0.055974	1.7E-06	0.17927	0.148591	0.76	0.821	0.993	0.873	0.955	1	0.908	0.908
rs6477838	1.0051E-09	0.0319834	0.00524	0.0319834	0.005236	1.9178E-09	0.11953	0.706814	0.004441	0.000327	0.028923	0.00342	0.11327	0.210132	0.935	0.861	0.994	0.999	0.978	0.995	0.948	0.922
rs149949	1.0065E-09	-0.063893	0.01046	-0.066268	0.013145	1.92038E-09	0.63458	0.582862	0.010734	0.001418	0.161592	0.00019	0.28741	0.00058	0.857	0.862	0.979	0.998	0.93	1	0.901	0.981
rs6868013	1.0065E-09	0.0315094	0.00516	0.0315094	0.005158	1.53055E-09	0.6196	0.241513	0.001495	0.549425	0.296427	1.5E-07	0.10186	0.362769	0.746	0.83	0.992	0.362	0.785	1	0.895	0.8
rs3852784	1.0075E-09	0.030984	0.00507	0.030984	0.005073	1.92232E-09	0.56189	0.912976	0.001822	0.005975	0.37166	4.2E-06	0.44159	0.803892	0.809	0.729	0.996	0.991	0.812	1	0.813	0.765

Table S3

rs349704	1.0081E-09	0.0315078	0.00516	0.0315078	0.005158	1.53084E-09	0.62193	0.241507	0.001493	0.550392	0.296304	1.5E-07	0.10191	0.362518	0.745	0.83	0.992	0.361	0.785	1	0.895	0.799
rs7754477	1.0094E-09	0.0331454	0.00543	0.0380443	0.010647	4.29565E-10	0.09841	0.928765	0.01235	1.33E-07	0.201428	0.01234	0.90375	0.001199	0.892	0.716	0.851	1	0.819	0.842	0.65	0.978
rs358652	1.0094E-09	0.031519	0.00516	0.031519	0.00516	1.53964E-09	0.62546	0.240453	0.00144	0.548139	0.299291	1.6E-07	0.10346	0.371678	0.744	0.829	0.993	0.362	0.782	1	0.894	0.796
rs394437	1.0097E-09	0.0315178	0.00516	0.0315178	0.00516	1.53846E-09	0.62032	0.240332	0.001445	0.549301	0.29905	1.6E-07	0.10372	0.371174	0.745	0.829	0.992	0.361	0.783	1	0.894	0.797
rs458717	1.0108E-09	0.0315169	0.00516	0.0315169	0.00516	1.54037E-09	0.62029	0.240314	0.001446	0.549231	0.299025	1.6E-07	0.10376	0.371139	0.745	0.829	0.992	0.361	0.783	1	0.894	0.797
rs77848312	1.0109E-09	0.0315167	0.00516	0.0315167	0.00516	1.54064E-09	0.62029	0.240312	0.001446	0.549224	0.299028	1.6E-07	0.10377	0.371143	0.745	0.829	0.992	0.361	0.783	1	0.894	0.797
rs358670	1.011E-09	0.0315167	0.00516	0.0315167	0.00516	1.54069E-09	0.62029	0.240312	0.001446	0.549233	0.299028	1.6E-07	0.10377	0.371143	0.745	0.829	0.992	0.361	0.783	1	0.894	0.797
rs3957497	1.0114E-09	0.0315163	0.00516	0.0315163	0.00516	1.54186E-09	0.62028	0.240295	0.001445	0.549069	0.299114	1.6E-07	0.10375	0.371115	0.745	0.83	0.992	0.362	0.783	1	0.894	0.797
rs1207082	1.0117E-09	0.031516	0.00516	0.031516	0.00516	1.5421E-09	0.6203	0.240297	0.001446	0.54916	0.299123	1.6E-07	0.10376	0.371124	0.745	0.829	0.992	0.361	0.783	1	0.894	0.797
rs349701	1.0121E-09	0.0315046	0.00516	0.0315046	0.005158	1.53713E-09	0.62209	0.241514	0.001494	0.550488	0.296412	1.5E-07	0.10185	0.362529	0.745	0.83	0.992	0.361	0.785	1	0.895	0.799
rs465772	1.0128E-09	0.0315152	0.00516	0.0315152	0.00516	1.54357E-09	0.62029	0.240302	0.001446	0.54923	0.299129	1.6E-07	0.10376	0.37113	0.745	0.829	0.992	0.361	0.783	1	0.894	0.797
rs4712364	1.016E-09	0.0537741	0.00881	0.0634987	0.020968	3.26718E-11	0.00156	0.838251	0.100221	1.28E-07	6.73E-05	0.00623	0.75548	0.852375	0.971	0.245	0.036	1	0.999	0.102	0.055	0.137
rs9465329	1.0172E-09	0.0328481	0.00538	0.0347759	0.007926	1.31157E-09	0.15234	0.82692	0.008869	6.61E-07	0.282029	0.00391	0.71122	0.02763	0.909	0.81	0.977	1	0.876	0.988	0.787	0.951
rs142899232	1.0182E-09	-0.045936	0.00752	-0.046679	0.009246	1.94226E-09	0.00461	0.6933	0.006901	0.22672	0.146456	5.3E-06	0.02945	0.252255	0.967	0.833	0.983	0.791	0.926	1	0.967	0.897
rs8180595	1.0193E-09	0.0320303	0.00525	0.0320303	0.005245	1.94433E-09	0.22101	0.751997	0.000458	0.002492	0.120341	0.00216	0.07748	0.423566	0.912	0.845	0.999	0.997	0.944	0.997	0.953	0.884
rs184788884	1.021E-09	0.0520019	0.00852	0.0544003	0.009994	1.82954E-09	0.47982	0.058376	4.93E-05	0.020269	0.010796	0.05197	0.00389	0.360092	0.868	0.942	1	0.981	0.986	0.788	0.988	0.885
rs1624214	1.0223E-09	0.0328547	0.00538	0.0328547	0.005381	1.9498E-09	0.19816	0.80434	1.13E-05	0.040422	0.307623	0.00815	0.02478	0.042472	0.914	0.837	1	0.97	0.888	0.983	0.972	0.952
rs358666	1.0231E-09	0.0315069	0.00516	0.0315069	0.00516	1.55576E-09	0.62112	0.240301	0.001446	0.551716	0.299134	1.6E-07	0.10376	0.371131	0.744	0.829	0.992	0.359	0.782	1	0.894	0.796
rs59640213	1.0252E-09	0.0341122	0.00559	0.0332689	0.006662	1.95532E-09	0.85078	0.133212	3.72E-05	0.079402	0.882049	7.4E-05	0.69978	0.006969	0.692	0.88	1	0.89	0.602	1	0.721	0.955
rs1010345	1.026E-09	0.0310389	0.00508	0.0310389	0.005084	1.9567E-09	0.13295	0.278604	0.000774	0.001191	0.299418	0.00232	0.51632	0.019531	0.927	0.903	0.999	0.998	0.892	0.997	0.856	0.962
rs7772095	1.0264E-09	0.0557673	0.00913	0.0557673	0.009134	1.95749E-09	0.32658	0.616134	0.002786	0.000121	0.08451	0.00249	0.07331	0.640639	0.895	0.858	0.996	1	0.954	0.996	0.954	0.852
rs10172483	1.0267E-09	0.0372106	0.00609	0.0383209	0.007249	1.95805E-09	0.04757	0.286985	0.015299	0.000751	0.011929	0.0003	0.66599	0.056686	0.94	0.888	0.96	0.999	0.983	0.999	0.626	0.941
rs4712363	1.0278E-09	0.0537555	0.00881	0.0634319	0.020941	3.41009E-11	0.00157	0.838794	0.099554	1.34E-07	6.81E-05	0.00616	0.75275	0.851227	0.971	0.247	0.038	1	0.999	0.106	0.057	0.139
rs10501316	1.0302E-09	0.03874	0.00635	0.0378294	0.007836	1.83538E-09	0.98567	0.134675	0.000451	0.680619	0.059333	1.9E-06	0.02661	0.980086	0.645	0.855	0.998	0.247	0.924	1	0.945	0.638
rs3208733	1.0303E-09	-0.030926	0.00507	-0.030926	0.005066	1.96467E-09	0.39542	0.086068	0.000805	0.000199	0.759933	0.00218	0.24734	0.130358	0.872	0.927	0.999	0.999	0.732	0.996	0.899	0.92
rs7560837	1.0306E-09	0.0317074	0.00519	0.0350929	0.007869	1.96531E-09	0.10828	0.020174	0.045098	0.002834	0.000708	0.00017	0.18965	0.54303	0.92	0.952	0.831	0.996	0.995	1	0.909	0.678
rs11109663	1.0318E-09	0.0568294	0.00931	0.0568294	0.00931	1.96749E-09	0.426	0.323376	0.000523	0.02066	0.09529	0.00088	0.06977	0.156411	0.891	0.904	0.999	0.986	0.955	0.999	0.958	0.93
rs3774800	1.0321E-09	-0.03354	0.00549	-0.03354	0.005494	1.96803E-09	0.78847	0.18202	0.002034	0.022351	0.065082	9.5E-06	0.69443	0.444496	0.741	0.896	0.996	0.978	0.95	1	0.779	0.851
rs9465281	1.0321E-09	0.0537499	0.00881	0.0634246	0.020943	3.42198E-11	0.00157	0.839757	0.099613	1.35E-07	6.79E-05	0.00616	0.75202	0.851297	0.971	0.247	0.038	1	0.999	0.106	0.057	0.139
rs7170896	1.0359E-09	0.0307954	0.00505	0.0333654	0.009018	9.57373E-10	0.27712	0.340323	1.21E-06	0.029772	0.018885	0.07666	0.00043	0.365801	0.455	0.8	1	0.91	0.966	0.438	0.992	0.79
rs1422960	1.0383E-09	0.0314836	0.00516	0.0314836	0.005158	1.56783E-09	0.6224	0.241513	0.001495	0.556683	0.296429	1.5E-07	0.10186	0.362769	0.744	0.829	0.992	0.356	0.784	1	0.895	0.799
rs1422961	1.0383E-09	0.0314836	0.00516	0.0314836	0.005158	1.56791E-09	0.6224	0.241513	0.001495	0.556683	0.296429	1.5E-07	0.10186	0.362769	0.744	0.829	0.992	0.356	0.784	1	0.895	0.799
rs6885441	1.0383E-09	0.0314836	0.00516	0.0314836	0.005158	1.56792E-09	0.6224	0.241513	0.001495	0.556684	0.296429	1.5E-07	0.10186	0.362769	0.744	0.829	0.992	0.356	0.784	1	0.895	0.799
rs3096072	1.0391E-09	0.0314941	0.00516	0.0314941	0.00516	1.58066E-09	0.61983	0.240349	0.001469	0.55061	0.299206	1.6E-07	0.10378	0.371209	0.745	0.829	0.992	0.361	0.783	1	0.894	0.797
rs11124553	1.0399E-09	0.0318291	0.00522	0.0321734	0.005621	1.98262E-09	0.14814	0.030091	0.003212	0.039862	0.040737	0.00022	0.87921	0.007512	0.927	0.955	0.996	0.972	0.972	1	0.785	0.973
rs10842290	1.0401E-09	-0.03124	0.00512	-0.03124	0.005119	1.98311E-09	0.65051	0.32214	0.000148	0.00532	0.292463	0.00285	0.00579	0.8295	0.844	0.887	1	0.994	0.883	0.995	0.983	0.815
rs2815357	1.041E-09	0.0321684	0.00527	0.0321684	0.005271	1.98464E-09	0.9278	0.682187	0.00352	0.132043	0.056209	1.7E-06	0.18017	0.149346	0.766	0.822	0.993	0.871	0.955	1	0.908	0.908
rs4801102	1.0411E-09	0.0316572	0.00519	0.0316572	0.005187	1.98495E-09	0.02303	0.391163	0.000201	0.010628	0.365656	0.00158	0.11154	0.432026	0.957	0.888	1	0.991	0.873	0.998	0.943	0.883
rs4320356	1.0425E-09	-0.030921	0.00507	-0.030921	0.005067	1.98746E-09	0.39296	0.076464	0.000871	0.000199	0.78487	0.00213	0.23995	0.125955	0.872	0.929	0.999	0.999	0.724	0.996	0.9	0.921
rs61567226	1.0445E-09	-0.030955	0.00507	-0.030955	0.005072	1.99123E-09	0.14698	0.203522	0.000269	0.000539	0.226249	0.00479	0.53697	0.262069	0.921	0.91	1	0.999	0.909	0.991	0.847	0.903
rs2755244	1.0448E-09	0.0321643	0.00527	0.0321643	0.005271	1.99185E-09	0.92525	0.682409	0.003504	0.132939	0.056099	1.7E-06	0.18006	0.14929	0.765	0.821	0.993	0.87	0.955	1	0.908	0.908
rs59031357	1.0452E-09	0.0383852	0.00629	0.0383852	0.00629	1.99261E-09	0.25028	0.940629	0.000149	0.010914	0.490372	0.00283	0.05853	0.004164	0.903	0.815	1	0.991	0.831	0.995	0.957	0.975
rs1372236	1.0457E-09	-0.03474	0.00569	-0.038178	0.008583	1.99345E-09	0.10968	0.323261	0.007845	0.000101	0.832261	0.00254	0.00031	0.449116	0.922	0.883	0.982	1	0.705	0.994	0.993	0.864
rs2755245	1.0461E-09	0.0321635	0.00527	0.0321635	0.005271	1.99422E-09	0.92523	0.682421	0.003505	0.132974	0.056126	1.7E-06	0.18006	0.149285	0.765	0.821	0.993	0.87	0.955	1	0.908	0.908
rs2815352	1.0473E-09	0.0321624	0.00527	0.0321624	0.005271	1.99637E-09	0.92495	0.68241	0.003503	0.13328	0.056087	1.7E-06	0.18004	0.149277	0.765	0.821	0.993	0.869	0.955	1	0.908	0.908
rs2815353	1.0473E-09	0.0321624	0.00527	0.0321624	0.005271	1.99637E-09	0.92495	0.68241	0.003503	0.13328	0.056087	1.7E-06	0.18004	0.149277	0.765	0.821	0.993	0.869	0.955	1	0.908	0.908
rs6921055	1.0474E-09	-0.032094	0.00526	-0.032094	0.00526	1.99662E-09	0.80536	0.562538	8.33E-05	0.006318	0.200725	0.00163	0.10985	0.371873	0.824	0.855	1	0.994	0.911	0.997	0.938	0.88
rs6749216	1.0494E-09	-0.031879	0.00522	-0.03241	0.005775	2.00033E-09	0.10087	0.013048	0.005764	0.004346	0.388481	0.00034	0.50728	0.012527	0.936	0.964	0.992	0.996	0.872	1	0.863	0.969
rs17044091	1.051E-09	0.0324161	0.00531	0.0340542	0.007133	2.00338E-09	0.14946	0.001783	0.00214	0.03066	0.055057	0.00034	0.88862	0.038988	0.923	0.977	0.997	0.977	0.965	1	0.72	0.954
rs2755246	1.0521E-09	0.0321588	0.00527	0.0321588	0.005271	2.00541E-09	0.92542	0.68218	0.003521	0.132758	0.056218	1.7E-06	0.18017	0.149356	0.765	0.821	0.993	0.87	0.955	1	0.908	0.908
rs4430605	1.0523E-09	-0.030876	0.00506	-0.030876	0.005061	2.00576E-09	0.22391	0.578792	0.000439	0.020547	0.553101	0.00011	0.08991	0.340541	0.899	0.848	0.999	0.982	0.8	1	0.942	0.881
rs8056535	1.0524E-09	-0.031121	0.0051	-0.031693	0.0063	2.00588E-09	0.28277	0.366983	0.006685	0.003689	0.000539	0.00019	0.30716	0.283349	0.878	0.864	0.985	0.995	0.995	1	0.872	0.596
rs501220	1.0533E-09	-0.054812	0.00898	-0.065172	0.014263	1.04967E-09	0.73644	0.120775	0.01799	1.92E-05	0.002472	0.01483	0.19574	0.012937	0.838	0.928	0.926	1	0.993	0.926	0.916	0.968
rs28637608	1.0541E-09	0.0550536	0.00902	0.0550536	0.009024	2.00909E-09	0.9169	0.21599	4.03E-06	0.077749	0.11306	0.00025	0.15797	0.664756	0.699	0.532	1	0.894	0.904	0.999	0.882	0.764
rs2755248	1.0579E-09	0.0321542	0.00527	0.0321542	0.005271	2.01628E-09	0.92482	0.682189	0.00352	0.133347	0.05621	1.7E-06	0.18017	0.149348	0.765	0.821	0.993	0.869	0.955	1	0.908	0.908

Table S3

rs1884426	1.0583E-09	-0.037927	0.00622	-0.037927	0.006217	2.01691E-09	0.82539	0.868785	0.000223	0.001928	0.016967	0.00207	0.35569	0.584446	0.809	0.804	1	0.997	0.978	0.996	0.869	0.839
rs34658047	1.0643E-09	-0.038402	0.0063	-0.04239	0.008858	2.02822E-09	0.14234	0.533725	0.00352	0.001338	0.01253	0.00736	0.04831	0.003206	0.929	0.751	0.995	0.998	0.985	0.986	0.965	0.978
rs144904538	1.0654E-09	-0.041678	0.00683	-0.043019	0.007827	2.03016E-09	0.35144	0.865577	0.000287	0.035194	0.01692	0.00805	0.02621	0.002758	0.902	0.844	1	0.977	0.984	0.986	0.974	0.979
rs4788200	1.0657E-09	-0.03112	0.0051	-0.031741	0.006466	2.03074E-09	0.3491	0.344859	0.007577	0.005217	0.000407	0.00014	0.26712	0.279744	0.866	0.867	0.982	0.994	0.995	1	0.882	0.595
rs4788197	1.0674E-09	-0.031119	0.0051	-0.03174	0.006466	2.03394E-09	0.3491	0.344869	0.007582	0.005217	0.000407	0.00014	0.26717	0.279708	0.866	0.867	0.982	0.994	0.995	1	0.882	0.595
rs4788198	1.0674E-09	-0.031119	0.0051	-0.03174	0.006466	2.03394E-09	0.3491	0.344869	0.007582	0.005217	0.000407	0.00014	0.26717	0.279708	0.866	0.867	0.982	0.994	0.995	1	0.882	0.595
rs9347689	1.0682E-09	-0.032089	0.00526	-0.032089	0.005261	2.03537E-09	0.80667	0.599481	8.52E-05	0.006333	0.189969	0.00162	0.10159	0.402872	0.823	0.85	1	0.994	0.914	0.997	0.94	0.875
rs78175056	1.0698E-09	0.0319923	0.00525	0.0319923	0.005246	2.03847E-09	0.22603	0.748842	0.000474	0.002257	0.122757	0.00224	0.07918	0.431903	0.91	0.845	0.999	0.997	0.943	0.997	0.952	0.882
rs9935197	1.0699E-09	-0.032368	0.00531	-0.032368	0.005307	2.03858E-09	0.67551	0.192786	0.003582	5.58E-05	0.01416	0.00266	0.32445	0.930537	0.838	0.906	0.994	1	0.981	0.995	0.882	0.775
rs2175896	1.0708E-09	-0.032075	0.00526	-0.032075	0.00526	2.04024E-09	0.80142	0.562561	8.34E-05	0.006507	0.200762	0.00163	0.1098	0.371915	0.825	0.855	1	0.993	0.911	0.997	0.938	0.88
rs4712366	1.0717E-09	0.0537029	0.00881	0.0633789	0.020846	3.94534E-11	0.00161	0.841294	0.096701	1.66E-07	6.53E-05	0.00622	0.75832	0.855053	0.971	0.253	0.044	1	0.999	0.116	0.062	0.146
rs12664922	1.0718E-09	-0.032075	0.00526	-0.032075	0.00526	2.04205E-09	0.80448	0.564277	8.46E-05	0.00628	0.201473	0.00164	0.11045	0.371394	0.824	0.855	1	0.994	0.911	0.997	0.938	0.88
rs9458648	1.0719E-09	-0.032075	0.00526	-0.032075	0.00526	2.04225E-09	0.80297	0.564302	8.47E-05	0.006272	0.201523	0.00164	0.11036	0.371443	0.825	0.855	1	0.994	0.911	0.997	0.938	0.88
rs9460308	1.0727E-09	0.05371	0.00881	0.0633132	0.020993	3.43768E-11	0.00156	0.856162	0.100856	1.34E-07	6.63E-05	0.00616	0.74245	0.851855	0.971	0.239	0.036	1	0.999	0.103	0.054	0.137
rs76862363	1.0742E-09	-0.045861	0.00752	-0.046506	0.009084	2.04654E-09	0.0049	0.691528	0.006993	0.220241	0.146534	5.6E-06	0.03035	0.257535	0.966	0.834	0.983	0.799	0.926	1	0.967	0.897
rs9465279	1.0768E-09	0.0537043	0.00881	0.0633058	0.020989	3.46556E-11	0.00156	0.856117	0.100864	1.35E-07	6.64E-05	0.00616	0.74255	0.851893	0.971	0.24	0.037	1	0.999	0.103	0.055	0.137
rs9465278	1.0778E-09	0.0537032	0.00881	0.0633031	0.020989	3.46737E-11	0.00156	0.856137	0.100854	1.35E-07	6.64E-05	0.00616	0.74215	0.851891	0.971	0.24	0.037	1	0.999	0.103	0.055	0.137
rs72830526	1.0807E-09	0.0536929	0.00881	0.0634043	0.020935	3.67358E-11	0.00152	0.840676	0.099691	1.48E-07	6.77E-05	0.00616	0.7508	0.852024	0.971	0.248	0.039	1	0.999	0.109	0.058	0.141
rs6916188	1.0808E-09	0.0537009	0.00881	0.0632982	0.020999	3.4453E-11	0.00157	0.857112	0.101029	1.35E-07	6.56E-05	0.00617	0.74033	0.852309	0.971	0.239	0.036	1	0.999	0.102	0.054	0.137
rs1333958	1.0821E-09	-0.032067	0.00526	-0.032067	0.00526	2.0613E-09	0.80527	0.564282	8.46E-05	0.006338	0.201518	0.00164	0.11048	0.37142	0.824	0.855	1	0.994	0.911	0.997	0.938	0.88
rs345903	1.0828E-09	0.0321439	0.00527	0.0321439	0.005272	2.06265E-09	0.82301	0.924134	0.000668	0.076674	0.001632	0.00018	0.2791	0.169306	0.812	0.778	0.999	0.932	0.993	1	0.888	0.909
rs72830528	1.0842E-09	0.0536881	0.00881	0.0633993	0.020934	3.68508E-11	0.00152	0.840676	0.099747	1.49E-07	6.77E-05	0.00617	0.75063	0.852024	0.971	0.248	0.039	1	0.999	0.108	0.058	0.141
rs62405324	1.0862E-09	0.0536866	0.00881	0.0634598	0.02095	3.65207E-11	0.00148	0.841021	0.100278	1.51E-07	6.64E-05	0.00621	0.75345	0.852972	0.972	0.247	0.039	1	0.999	0.107	0.058	0.14
rs349703	1.0896E-09	0.0314463	0.00516	0.0314463	0.005159	1.63747E-09	0.62224	0.242268	0.001401	0.576088	0.297661	1.7E-07	0.09973	0.3609	0.742	0.827	0.993	0.339	0.781	1	0.895	0.797
rs62404514	1.09E-09	0.0512965	0.00842	0.0609099	0.020667	1.76829E-11	0.00175	0.610912	0.084037	5.84E-08	6.6E-05	0.00926	0.40978	0.979416	0.972	0.307	0.018	1	0.999	0.042	0.017	0.147
rs2815370	1.0915E-09	0.0321297	0.00527	0.0321297	0.005271	2.07875E-09	0.90219	0.681304	0.003644	0.130335	0.056448	1.8E-06	0.17539	0.149567	0.762	0.822	0.992	0.873	0.955	1	0.909	0.908
rs3890640	1.0942E-09	-0.037892	0.00622	-0.037892	0.006217	2.08391E-09	0.28101	0.030981	0.000512	0.002713	0.519304	0.00038	0.19423	0.127898	0.62	0.938	0.999	0.996	0.786	0.999	0.9	0.91
rs7213585	1.0943E-09	-0.037892	0.00622	-0.037892	0.006217	2.084E-09	0.28101	0.030981	0.000512	0.002713	0.519307	0.00038	0.19423	0.127898	0.62	0.938	0.999	0.996	0.786	0.999	0.9	0.91
rs62084741	1.0949E-09	0.0378909	0.00622	0.0378909	0.006217	2.0852E-09	0.28085	0.030973	0.000512	0.002715	0.519606	0.00038	0.19423	0.127882	0.62	0.938	0.999	0.996	0.786	0.999	0.9	0.91
rs11069311	1.095E-09	0.0319685	0.00525	0.0316874	0.00696	1.57501E-09	0.71051	0.506932	2.02E-07	0.12685	0.103909	0.01422	0.00504	0.771101	0.687	0.815	1	0.833	0.917	0.914	0.978	0.766
rs74327441	1.0966E-09	-0.034464	0.00565	-0.034464	0.005655	2.0883E-09	0.43896	0.034839	3.77E-06	0.277292	0.058587	0.00399	0.09556	0.372546	0.862	0.943	1	0.737	0.957	0.988	0.938	0.872
rs2755249	1.0968E-09	0.0321239	0.00527	0.0321239	0.005271	2.08867E-09	0.92482	0.68129	0.003635	0.133345	0.056012	1.8E-06	0.17991	0.149198	0.765	0.822	0.992	0.87	0.955	1	0.908	0.908
rs4146005	1.0976E-09	0.0317859	0.00522	0.0321078	0.005594	2.09021E-09	0.14698	0.030444	0.003247	0.037756	0.041787	0.00024	0.88779	0.007641	0.927	0.955	0.996	0.974	0.972	1	0.784	0.973
rs2755250	1.0988E-09	0.0321231	0.00527	0.0321231	0.005271	2.09246E-09	0.9273	0.681302	0.003646	0.133025	0.056045	1.8E-06	0.17997	0.14922	0.766	0.822	0.992	0.87	0.955	1	0.908	0.908
rs2985811	1.0989E-09	0.0321244	0.00527	0.0321244	0.005271	2.09265E-09	0.92432	0.704995	0.00371	0.115577	0.060888	2E-06	0.18022	0.147769	0.768	0.821	0.992	0.889	0.954	1	0.909	0.91
rs1862920	1.1001E-09	0.0476437	0.00782	0.0476437	0.007818	2.09488E-09	0.66769	0.312369	0.002423	0.033709	0.098612	4.7E-05	0.2194	0.08989	0.855	0.898	0.997	0.975	0.95	1	0.918	0.939
rs7588792	1.1014E-09	0.039795	0.00653	0.0446015	0.010112	1.48415E-09	0.47837	0.983305	0.095	0.040351	0.000956	1.1E-05	0.02547	0.013016	0.823	0.734	0.56	0.929	0.994	1	0.964	0.959
rs1441413	1.1015E-09	-0.034692	0.00569	-0.038128	0.008595	2.09745E-09	0.10906	0.321562	0.008174	0.000106	0.843873	0.00243	0.00031	0.449159	0.922	0.883	0.981	1	0.701	0.994	0.993	0.863
rs13121251	1.103E-09	-0.034691	0.00569	-0.038125	0.008594	2.10025E-09	0.10906	0.3221	0.008175	0.000106	0.844084	0.00243	0.00031	0.448931	0.922	0.882	0.981	1	0.7	0.994	0.993	0.863
rs56145663	1.1053E-09	0.0363523	0.00597	0.0363523	0.005966	2.10445E-09	0.43734	0.693243	0.009579	0.003476	0.022293	9.1E-06	0.76763	0.372548	0.841	0.803	0.973	0.995	0.97	1	0.619	0.852
rs4358370	1.1054E-09	0.0384449	0.00631	0.0384449	0.006309	2.1047E-09	0.04627	0.717333	0.001945	0.005618	0.001626	0.00349	0.52544	0.0849	0.95	0.856	0.998	0.995	0.994	0.995	0.861	0.943
rs59285308	1.1055E-09	-0.037668	0.00618	-0.037668	0.006182	2.09426E-09	0.16143	0.185864	5.3E-05	0.010737	0.030895	0.04313	0.03362	0.097326	0.925	0.92	1	0.991	0.977	0.844	0.971	0.941
rs11864022	1.1065E-09	-0.032349	0.00531	-0.032389	0.00535	2.10676E-09	0.71977	0.18861	0.005174	2.34E-05	0.01105	0.00249	0.34751	0.729413	0.824	0.902	0.99	1	0.982	0.995	0.871	0.729
rs2815359	1.1074E-09	0.0321159	0.00527	0.0321159	0.005271	2.10833E-09	0.92385	0.681299	0.003644	0.133519	0.056044	1.8E-06	0.17997	0.149218	0.765	0.822	0.992	0.869	0.955	1	0.908	0.908
rs761718	1.1077E-09	0.0327443	0.00537	0.0383915	0.008221	1.7089E-09	0.20651	0.401334	0.000193	0.005037	0.071915	0.07701	0.00107	0.006151	0.904	0.87	1	0.994	0.953	0.644	0.992	0.974
rs60232159	1.1094E-09	0.039563	0.00649	0.039563	0.006493	2.1122E-09	0.38311	0.052542	0.005492	0.147061	0.12631	6.5E-06	0.07084	0.340131	0.885	0.943	0.991	0.883	0.939	1	0.953	0.892
rs192182152	1.1111E-09	0.0536497	0.00881	0.0633848	0.020947	3.65247E-11	0.00156	0.839403	0.101731	1.38E-07	6.88E-05	0.00631	0.75319	0.855001	0.971	0.246	0.037	1	0.999	0.103	0.056	0.139
rs8072723	1.1124E-09	-0.037889	0.00622	-0.037889	0.006219	2.11773E-09	0.28021	0.030969	0.00046	0.002737	0.522725	0.00043	0.18994	0.125172	0.62	0.938	0.999	0.996	0.785	0.999	0.902	0.911
rs6504578	1.1125E-09	-0.037874	0.00622	-0.037874	0.006217	2.1179E-09	0.28021	0.03109	0.000514	0.002737	0.516027	0.00038	0.1963	0.128564	0.62	0.938	0.999	0.996	0.788	0.999	0.9	0.91
rs12528882	1.1137E-09	0.0536623	0.00881	0.0634468	0.020958	3.69902E-11	0.00151	0.838767	0.100861	1.46E-07	6.82E-05	0.00626	0.75394	0.853023	0.972	0.246	0.038	1	0.999	0.104	0.056	0.139
rs11859355	1.1192E-09	-0.03234	0.00531	-0.032402	0.005374	2.13036E-09	0.73369	0.188361	0.005178	2.32E-05	0.011067	0.00249	0.34777	0.729689	0.821	0.901	0.99	1	0.982	0.995	0.87	0.729
rs2670416	1.1231E-09	0.0555966	0.00913	0.0555966	0.009128	2.1376E-09	0.31493	0.657257	0.00283	0.000103	0.086056	0.00254	0.08854	0.636311	0.895	0.852	0.996	1	0.953	0.996	0.949	0.852
rs16962221	1.1248E-09	-0.032335	0.00531	-0.032335	0.005309	2.14072E-09	0.68501	0.195604	0.003601	5.9E-05	0.014125	0.00264	0.3253	0.932627	0.836	0.905	0.994	1	0.981	0.995	0.882	0.775
rs8115649	1.1271E-09	-0.050327	0.00826	-0.050327	0.008264	2.14517E-09	0.64375	0.599362	0.000572	0.003335	0.030863	0.00222	0.0219	0.967542	0.847	0.853	0.999	0.996	0.973	0.996	0.971	0.786
rs4369598	1.1283E-09	0.0307293	0.00505	0.0334795	0.008999	8.32513E-10	0.40165	0.366085	8.37E-07	0.037526	0.00822	0.09634	0.00063	0.497732	0.454	0.771	1	0.86	0.978	0.324	0.99	0.727

Table S3

rs1842806	1.1298E-09	-0.031382	0.00515	-0.030847	0.008265	6.91393E-10	0.99764	0.050413	0.010316	0.810927	0.037838	2.4E-08	0.07504	0.516218	0.618	0.892	0.853	0.161	0.938	1	0.9	0.726
rs10212378	1.1302E-09	-0.031037	0.0051	-0.030754	0.005398	2.15077E-09	0.48849	0.449093	0.004768	0.016512	0.681653	9.3E-07	0.0199	0.92114	0.621	0.813	0.984	0.976	0.677	1	0.958	0.724
rs9556567	1.1313E-09	0.0309719	0.00509	0.0309719	0.005086	2.15282E-09	0.12797	0.292481	0.000782	0.001128	0.285151	0.00283	0.49941	0.017877	0.928	0.902	0.999	0.998	0.897	0.996	0.861	0.964
rs9388289	1.1322E-09	0.0317905	0.00522	0.0317905	0.00522	2.15462E-09	0.99619	0.287389	0.001501	0.009386	0.004394	0.00093	0.08835	0.614006	0.81	0.899	0.998	0.992	0.99	0.999	0.948	0.854
rs118002336	1.1335E-09	-0.069704	0.01145	-0.069704	0.011447	2.15696E-09	0.2029	0.72336	0.000311	0.044926	0.192491	1.9E-05	0.44575	0.969436	0.887	0.805	0.999	0.953	0.894	1	0.83	0.747
rs76016273	1.1342E-09	0.0324562	0.00533	0.0324562	0.00533	2.15837E-09	0.23743	0.378557	0.000692	0.000848	0.170051	0.00339	0.07515	0.528869	0.91	0.891	0.999	0.999	0.93	0.995	0.954	0.871
rs34843489	1.1352E-09	0.0378543	0.00622	0.0378543	0.006217	2.16023E-09	0.27619	0.030973	0.000512	0.002812	0.519604	0.00038	0.19423	0.127882	0.618	0.938	0.999	0.996	0.786	0.999	0.9	0.91
rs7773938	1.1354E-09	-0.045718	0.00751	-0.045718	0.007508	2.16051E-09	0.85266	0.420402	0.001652	0.003917	0.073697	0.0013	0.02784	0.082515	0.797	0.886	0.998	0.996	0.959	0.998	0.971	0.942
rs56176327	1.136E-09	0.0605504	0.00994	0.0605504	0.009944	2.16172E-09	0.88922	0.777011	0.002721	0.006707	0.027966	5.6E-05	0.30876	0.579644	0.805	0.819	0.996	0.993	0.971	1	0.882	0.842
rs2514374	1.1369E-09	0.0321076	0.00527	0.0337406	0.009526	1.36518E-09	0.65615	0.011702	0.001021	0.955639	0.010981	2.9E-06	0.40681	0.014652	0.556	0.937	0.994	0.114	0.975	1	0.747	0.941
rs10924515	1.1378E-09	-0.037137	0.0061	-0.037137	0.006099	2.16353E-09	0.18327	0.194161	0.000138	0.003377	0.043343	0.0408	0.02833	0.109829	0.922	0.919	1	0.997	0.972	0.856	0.973	0.938
rs2815371	1.1398E-09	0.032095	0.00527	0.032095	0.005271	2.16871E-09	0.86705	0.681627	0.003589	0.128879	0.058506	1.8E-06	0.17599	0.149881	0.755	0.821	0.992	0.874	0.954	1	0.908	0.907
rs3799380	1.1412E-09	-0.045516	0.00748	-0.045516	0.007476	2.17126E-09	0.79351	0.357342	0.001302	0.00583	0.060315	0.0014	0.02512	0.096781	0.788	0.894	0.998	0.995	0.964	0.998	0.973	0.938
rs1573931	1.1425E-09	-0.035976	0.00591	-0.033144	0.008348	9.49698E-10	0.57341	0.150279	0.007529	0.271585	0.264858	5.2E-09	0.80267	0.290435	0.717	0.827	0.908	0.559	0.762	1	0.485	0.784
rs189008015	1.1447E-09	-0.078128	0.01283	-0.076927	0.016762	1.62676E-09	0.22184	0.365453	1.08E-07	0.072937	0.180144	0.01234	0.24064	0.078331	0.88	0.638	1	0.911	0.893	0.941	0.878	0.921
rs112610580	1.1449E-09	0.0324481	0.00533	0.0324481	0.00533	2.17824E-09	0.23712	0.378805	0.000692	0.000857	0.170114	0.0034	0.07519	0.528854	0.91	0.891	0.999	0.999	0.93	0.995	0.954	0.871
rs11130032	1.1467E-09	-0.031023	0.0051	-0.030726	0.005405	2.18157E-09	0.48323	0.453726	0.004381	0.018055	0.701575	9.3E-07	0.02003	0.898363	0.618	0.811	0.985	0.974	0.668	1	0.957	0.726
rs35170297	1.1469E-09	0.0446622	0.00734	0.0436783	0.008531	2.18192E-09	0.65459	0.316318	0.000137	6.73E-05	0.914343	0.00062	0.55929	0.237415	0.735	0.521	1	0.999	0.536	0.998	0.718	0.826
rs6583310	1.1475E-09	-0.032365	0.00532	-0.032365	0.005317	2.18309E-09	0.38968	0.815933	0.001824	0.024763	0.273118	0.00013	0.0029	0.415438	0.881	0.828	0.998	0.98	0.892	1	0.987	0.877
rs7982697	1.1504E-09	0.0309556	0.00509	0.0309556	0.005086	2.18843E-09	0.12647	0.293167	0.000787	0.00112	0.28585	0.00287	0.49948	0.01805	0.928	0.902	0.999	0.998	0.896	0.996	0.861	0.963
rs9934680	1.151E-09	-0.032307	0.00531	-0.032307	0.005308	2.18956E-09	0.66428	0.193176	0.00358	6.42E-05	0.01419	0.00266	0.32436	0.931015	0.839	0.906	0.994	1	0.981	0.995	0.883	0.776
rs12930702	1.152E-09	0.0308628	0.00507	0.0308628	0.00507	2.19146E-09	0.58431	0.857163	0.001296	0.008952	0.279204	5.3E-06	0.41504	0.996627	0.804	0.718	0.997	0.987	0.846	1	0.819	0.729
rs4788201	1.1568E-09	-0.031055	0.0051	-0.031653	0.006452	2.2003E-09	0.35706	0.345074	0.007621	0.005761	0.00041	0.00014	0.26759	0.279726	0.865	0.867	0.982	0.993	0.995	1	0.882	0.595
rs11852540	1.1579E-09	0.0307053	0.00505	0.0334508	0.008983	8.74598E-10	0.40332	0.367143	8.78E-07	0.040085	0.008203	0.09309	0.00061	0.493953	0.459	0.772	1	0.853	0.978	0.341	0.99	0.73
rs13330029	1.1589E-09	-0.032288	0.00531	-0.032288	0.005305	2.20432E-09	0.68415	0.18818	0.003578	5.56E-05	0.015255	0.00268	0.32763	0.907043	0.836	0.906	0.994	1	0.98	0.995	0.881	0.77
rs13338837	1.1589E-09	-0.032288	0.00531	-0.032288	0.005305	2.20432E-09	0.68415	0.18818	0.003578	5.56E-05	0.015255	0.00268	0.32763	0.907043	0.836	0.906	0.994	1	0.98	0.995	0.881	0.77
rs9356260	1.1592E-09	0.0324415	0.00533	0.0324415	0.005331	2.20473E-09	0.24272	0.380218	0.000723	0.000821	0.17009	0.00335	0.07519	0.529889	0.909	0.891	0.999	0.999	0.93	0.995	0.954	0.871
rs8088528	1.1605E-09	0.0306911	0.00504	0.0306911	0.005043	2.20722E-09	0.18285	0.909628	0.001031	0.003185	0.115836	0.00012	0.96559	0.18936	0.894	0.757	0.998	0.995	0.928	1	0.689	0.895
rs12871890	1.1629E-09	0.0309471	0.00509	0.0309471	0.005086	2.21169E-09	0.12792	0.293167	0.000787	0.001128	0.285863	0.00287	0.49949	0.018051	0.928	0.902	0.999	0.998	0.896	0.996	0.861	0.963
rs4260403	1.1632E-09	-0.035958	0.00591	-0.033112	0.008354	9.631E-10	0.57747	0.151374	0.007522	0.273429	0.265218	5.2E-09	0.80278	0.290148	0.715	0.826	0.907	0.556	0.761	1	0.484	0.783
rs1912669	1.1633E-09	0.0324351	0.00533	0.0324351	0.00533	2.21247E-09	0.23736	0.379903	0.000722	0.000861	0.169583	0.00332	0.07475	0.528445	0.91	0.891	0.999	0.999	0.93	0.995	0.954	0.872
rs4788202	1.1637E-09	-0.031048	0.0051	-0.031655	0.00642	2.21323E-09	0.34866	0.344049	0.007781	0.005163	0.000438	0.00015	0.2663	0.280957	0.867	0.867	0.982	0.994	0.995	1	0.883	0.596
rs4787486	1.1638E-09	-0.031048	0.0051	-0.031655	0.00642	2.21333E-09	0.34858	0.344049	0.007781	0.005164	0.000438	0.00015	0.2663	0.280957	0.867	0.867	0.982	0.994	0.995	1	0.883	0.596
rs12866328	1.1702E-09	0.0309416	0.00509	0.0309416	0.005086	2.2252E-09	0.12771	0.293167	0.000788	0.001138	0.285882	0.00287	0.49951	0.018051	0.928	0.902	0.999	0.998	0.896	0.996	0.861	0.963
rs10469011	1.1707E-09	0.031492	0.00518	0.031492	0.005176	2.22623E-09	0.598	0.624148	3.34E-05	0.004676	0.027389	0.00485	0.49657	0.598029	0.842	0.839	1	0.995	0.972	0.99	0.839	0.84
rs7767498	1.1708E-09	0.0580348	0.00954	0.0580348	0.009539	2.22638E-09	0.2372	0.383721	0.004723	3.89E-05	0.049317	0.00358	0.12262	0.89833	0.907	0.887	0.993	1	0.967	0.994	0.94	0.817
rs2439043	1.1722E-09	-0.055201	0.00907	-0.055981	0.010522	2.22891E-09	0.75363	0.553312	0.003418	0.266324	0.000274	3.6E-05	0.0762	0.24721	0.802	0.834	0.992	0.718	0.996	1	0.94	0.885
rs187656431	1.1726E-09	0.0730695	0.01201	0.0730695	0.01201	2.22975E-09	0.49048	0.765721	0.000151	0.015402	0.00158	0.00965	0.07997	0.373018	0.875	0.844	1	0.988	0.994	0.981	0.951	0.89
rs137932117	1.1735E-09	0.0324274	0.00533	0.0324274	0.00533	2.23145E-09	0.23958	0.379676	0.000723	0.000844	0.169864	0.00337	0.07486	0.529283	0.91	0.891	0.999	0.999	0.93	0.995	0.954	0.871
rs78581636	1.1737E-09	0.0324295	0.00533	0.0324295	0.00533	2.23178E-09	0.24033	0.384703	0.000732	0.000714	0.17664	0.00351	0.07406	0.546457	0.909	0.89	0.999	0.999	0.927	0.995	0.954	0.868
rs8075604	1.1755E-09	0.0378206	0.00622	0.0378206	0.006217	2.23517E-09	0.28824	0.030973	0.000512	0.003024	0.519606	0.00038	0.19423	0.127882	0.623	0.938	0.999	0.996	0.787	0.999	0.901	0.91
rs10571051	1.1768E-09	0.0307424	0.00505	0.0307424	0.005054	2.23745E-09	0.87489	0.436179	0.002988	0.008836	0.546896	3.3E-07	0.39703	0.738859	0.71	0.575	0.989	0.983	0.695	1	0.782	0.727
rs144768012	1.1773E-09	0.032424	0.00533	0.032424	0.00533	2.23846E-09	0.23706	0.379673	0.000722	0.000855	0.169858	0.00337	0.07486	0.52928	0.91	0.891	0.999	0.999	0.93	0.995	0.954	0.871
rs191295127	1.1778E-09	0.0505659	0.00831	0.054642	0.013452	2.23932E-09	0.56993	0.375646	0.005678	0.125219	2.5E-05	0.00014	0.04659	0.128299	0.838	0.666	0.987	0.878	0.998	1	0.954	0.915
rs9358945	1.1791E-09	-0.04567	0.00751	-0.04567	0.007508	2.24172E-09	0.84271	0.454185	0.001645	0.004108	0.073432	0.00124	0.02783	0.082673	0.794	0.881	0.998	0.996	0.959	0.998	0.971	0.941
rs2328351	1.1792E-09	0.0535885	0.00881	0.0633025	0.020986	3.90768E-11	0.00146	0.857602	0.101839	1.6E-07	6.48E-05	0.00624	0.74229	0.854364	0.972	0.241	0.038	1	0.999	0.106	0.056	0.14
rs2888296	1.1797E-09	-0.035926	0.00591	-0.033015	0.008322	9.57784E-10	0.56985	0.177265	0.007033	0.283119	0.280072	4.9E-09	0.81583	0.28785	0.712	0.814	0.91	0.541	0.749	1	0.482	0.78
rs6798619	1.1804E-09	-0.035937	0.00591	-0.033069	0.008343	9.37404E-10	0.56665	0.163254	0.007715	0.284387	0.2717	4.5E-09	0.84332	0.305784	0.713	0.818	0.9	0.539	0.752	1	0.49	0.775
rs74784904	1.1806E-09	-0.044854	0.00737	-0.044854	0.007374	2.24461E-09	0.0504	0.376026	0.001079	0.066038	0.042115	0.00061	0.01038	0.72335	0.949	0.896	0.999	0.954	0.972	0.999	0.981	0.852
rs7756567	1.1818E-09	-0.04566	0.00751	-0.04566	0.007507	2.24683E-09	0.86696	0.416782	0.001525	0.004337	0.082468	0.00124	0.02997	0.081816	0.798	0.886	0.998	0.996	0.956	0.998	0.97	0.942
rs35347450	1.186E-09	-0.035937	0.00591	-0.033011	0.008405	9.56598E-10	0.58279	0.154049	0.007466	0.28008	0.268185	4.9E-09	0.80094	0.292583	0.71	0.823	0.905	0.544	0.755	1	0.478	0.779
rs1006436	1.1864E-09	0.0310297	0.0051	0.0310297	0.005102	2.25537E-09	0.87559	0.3649	5.27E-05	0.015372	0.646369	3.6E-05	0.15589	0.645223	0.665	0.554	1	0.973	0.655	1	0.871	0.745
rs7164408	1.1883E-09	0.0306895	0.00505	0.03331	0.009005	8.57029E-10	0.34494	0.286565	7.63E-07	0.020559	0.020385	0.11296	0.00063	0.475643	0.424	0.796	1	0.926	0.961	0.265	0.991	0.734
rs58645304	1.1887E-09	-0.032303	0.00531	-0.032303	0.005311	2.25969E-09	0.68723	0.200317	0.003692	6.16E-05	0.014026	0.00261	0.32812	0.930612	0.836	0.904	0.994	1	0.981	0.995	0.881	0.775
rs79356577	1.1888E-09	0.0535604	0.00881	0.063354	0.020923	4.09746E-11	0.00148	0.839464	0.101816	1.61E-07	6.89E-05	0.00631	0.7531	0.854924	0.972	0.249	0.039	1	0.999	0.108	0.058	0.142

Table S3

rs74685378	1.1895E-09	0.0324153	0.00533	0.0324153	0.00533	2.26111E-09	0.23741	0.379945	0.000723	0.000862	0.169948	0.00337	0.07491	0.529299	0.91	0.891	0.999	0.999	0.93	0.995	0.954	0.871
rs77063087	1.1898E-09	0.0324151	0.00533	0.0324151	0.00533	2.26162E-09	0.23742	0.379949	0.000723	0.000862	0.16995	0.00337	0.07491	0.529304	0.91	0.891	0.999	0.999	0.93	0.995	0.954	0.871
rs9358946	1.1913E-09	-0.045656	0.00751	-0.045656	0.007507	2.26451E-09	0.81746	0.420093	0.001738	0.003883	0.073658	0.00125	0.02795	0.082913	0.791	0.885	0.998	0.996	0.959	0.998	0.971	0.941
rs4772097	1.1921E-09	0.0317072	0.00521	0.0314442	0.006481	2.06671E-09	0.67979	0.555374	5.6E-07	0.069537	0.103361	0.01153	0.00539	0.981401	0.699	0.82	1	0.917	0.925	0.949	0.979	0.74
rs77802717	1.193E-09	0.0324159	0.00533	0.0324159	0.005331	2.26758E-09	0.2401	0.390554	0.000679	0.000816	0.18953	0.00341	0.07232	0.526011	0.909	0.889	0.999	0.999	0.924	0.995	0.955	0.871
rs9852399	1.1977E-09	-0.035929	0.00591	-0.033068	0.008363	9.86284E-10	0.58059	0.152053	0.007514	0.276811	0.265944	5.3E-09	0.80334	0.290567	0.713	0.825	0.906	0.551	0.759	1	0.482	0.782
rs7005072	1.1985E-09	-0.033273	0.00547	-0.033273	0.005472	2.27786E-09	0.44347	0.014494	0.00061	0.139431	0.011482	0.00026	0.25356	0.555038	0.877	0.96	0.999	0.889	0.984	1	0.906	0.861
rs76617303	1.2018E-09	0.032406	0.00533	0.032406	0.00533	2.28406E-09	0.23739	0.359715	0.000771	0.000685	0.172025	0.00379	0.06922	0.557925	0.91	0.893	0.999	0.999	0.929	0.994	0.956	0.868
rs3130099	1.2025E-09	0.0306144	0.00504	0.0304843	0.005187	2.28527E-09	0.29671	0.601633	0.000638	0.000138	0.735644	9.5E-05	0.61398	0.321227	0.517	0.751	0.998	0.999	0.609	1	0.706	0.808
rs3812984	1.2044E-09	0.0307202	0.00505	0.0307202	0.005053	2.28877E-09	0.95141	0.432604	0.002948	0.008084	0.559562	3.4E-07	0.40173	0.720393	0.692	0.57	0.988	0.984	0.685	1	0.777	0.726
rs4588671	1.2044E-09	0.0579602	0.00953	0.0579602	0.009533	2.28881E-09	0.232	0.405211	0.004701	3.5E-05	0.049311	0.0035	0.14555	0.887332	0.907	0.883	0.993	1	0.967	0.994	0.933	0.817
rs2179095	1.2054E-09	-0.038685	0.00636	-0.038685	0.006363	2.29077E-09	0.80085	0.170101	0.000343	0.003757	0.098747	0.01222	0.08197	0.003928	0.85	0.926	1	0.997	0.954	0.975	0.956	0.977
rs2670415	1.2103E-09	0.0579324	0.00953	0.0579324	0.00953	2.29972E-09	0.23282	0.410315	0.004738	3.54E-05	0.049064	0.00348	0.14307	0.887884	0.907	0.883	0.993	1	0.967	0.994	0.934	0.817
rs9358944	1.2113E-09	-0.045637	0.00751	-0.045637	0.007508	2.30158E-09	0.84233	0.418416	0.00175	0.003817	0.07319	0.00127	0.03042	0.082698	0.795	0.886	0.998	0.996	0.959	0.998	0.97	0.941
rs9302502	1.2123E-09	-0.03229	0.00531	-0.03229	0.005312	2.30356E-09	0.69052	0.202362	0.003734	6.18E-05	0.013907	0.00262	0.32835	0.936234	0.835	0.904	0.994	1	0.981	0.995	0.881	0.776
rs2888295	1.2127E-09	0.0360206	0.00593	0.0330996	0.008397	9.68798E-10	0.56664	0.167099	0.007318	0.284418	0.272312	4.8E-09	0.81372	0.294539	0.712	0.817	0.906	0.535	0.752	1	0.48	0.777
rs4132769	1.2142E-09	0.0306759	0.00505	0.0306759	0.005047	2.30708E-09	0.27202	0.548654	6.41E-05	0.00239	0.5383	0.00158	0.51971	0.216711	0.881	0.84	1	0.996	0.79	0.997	0.824	0.894
rs6499558	1.2166E-09	0.0389507	0.00641	0.0389507	0.006408	2.31144E-09	0.23086	0.018413	0.001185	0.142098	0.017631	0.00067	0.04153	0.261934	0.918	0.962	0.999	0.902	0.983	0.999	0.968	0.915
rs9356256	1.2183E-09	0.032422	0.00533	0.032422	0.005334	2.31462E-09	0.23689	0.365004	0.00068	0.000719	0.178723	0.00387	0.07614	0.547609	0.91	0.892	0.999	0.999	0.927	0.994	0.954	0.868
rs9295740	1.2192E-09	-0.046172	0.0076	-0.046172	0.007597	2.31634E-09	0.25815	0.402191	0.000467	0.053325	0.105365	0.00069	0.27675	0.003612	0.911	0.893	0.999	0.964	0.951	0.999	0.91	0.976
rs13066699	1.2196E-09	-0.035877	0.0059	-0.032963	0.008403	9.75519E-10	0.54155	0.147549	0.007487	0.284918	0.29273	4.9E-09	0.81883	0.299218	0.717	0.824	0.903	0.538	0.74	1	0.482	0.776
rs181172995	1.2204E-09	0.0677443	0.01115	0.0666764	0.013099	2.29026E-09	0.03925	0.24932	0.000299	0.651266	0.440111	3.8E-06	0.04547	0.656057	0.91	0.829	0.999	0.296	0.716	1	0.931	0.732
rs73078305	1.2207E-09	-0.038617	0.00635	-0.038617	0.006354	2.31905E-09	0.68929	0.208072	0.000186	0.09271	0.180389	2.5E-05	0.61267	0.137043	0.706	0.882	1	0.899	0.896	1	0.785	0.902
rs12477908	1.225E-09	0.0326762	0.00538	0.0326762	0.005377	2.3271E-09	0.12844	0.023848	7.99E-06	0.201504	0.240405	0.00276	0.20433	0.180506	0.921	0.952	1	0.828	0.899	0.994	0.914	0.914
rs6783449	1.227E-09	-0.037721	0.00621	-0.038455	0.006872	2.26698E-09	0.32927	0.290522	1.56E-05	0.237492	0.006488	0.01372	0.01147	0.109006	0.886	0.892	1	0.783	0.988	0.945	0.979	0.929
rs56332787	1.2318E-09	-0.035901	0.00591	-0.032951	0.008416	9.85331E-10	0.58338	0.156275	0.00744	0.285125	0.270077	4.9E-09	0.80136	0.292495	0.708	0.821	0.904	0.537	0.753	1	0.476	0.778
rs1224526	1.2324E-09	0.0578901	0.00953	0.0578901	0.009528	2.34091E-09	0.23192	0.412937	0.004686	3.84E-05	0.048569	0.00346	0.14192	0.887895	0.907	0.882	0.993	1	0.967	0.994	0.934	0.817
rs246488	1.2327E-09	-0.031973	0.00526	-0.032867	0.008483	2.34139E-09	0.05715	0.518422	0.006908	0.033571	0.024834	3.5E-05	0.01332	0.021498	0.488	0.841	0.984	0.967	0.972	1	0.973	0.952
rs7165247	1.234E-09	0.0306485	0.00504	0.0334126	0.009068	1.07479E-09	0.3057	0.303595	1.3E-06	0.031332	0.019599	0.08436	0.00035	0.402451	0.456	0.806	1	0.901	0.964	0.404	0.992	0.775
rs17241236	1.2353E-09	-0.038272	0.0063	-0.042009	0.008657	2.34629E-09	0.10099	0.499984	0.003199	0.00137	0.011467	0.00909	0.04002	0.00713	0.936	0.744	0.996	0.998	0.986	0.982	0.968	0.973
rs9364672	1.2354E-09	-0.031953	0.00526	-0.031953	0.005259	2.34639E-09	0.80278	0.561177	9E-05	0.006171	0.208675	0.00177	0.10892	0.370816	0.825	0.855	1	0.994	0.909	0.997	0.938	0.88
rs36052625	1.2357E-09	-0.031878	0.00525	-0.031878	0.005247	2.2652E-09	0.71274	0.707884	0.073645	0.001369	0.066227	3.3E-05	0.00691	0.170109	0.805	0.806	0.706	0.998	0.949	1	0.98	0.901
rs187372	1.2368E-09	0.0340343	0.0056	0.0349702	0.007828	2.11503E-09	0.12042	0.611819	2.65E-06	0.343868	0.003352	0.0067	0.19927	0.053384	0.898	0.667	1	0.611	0.989	0.959	0.883	0.927
rs145124508	1.2373E-09	0.0438799	0.00722	0.0442891	0.007947	2.34995E-09	0.05347	0.049211	0.008307	0.173525	0.034011	1.6E-05	0.02619	0.885887	0.942	0.942	0.982	0.853	0.972	1	0.969	0.775
rs9846724	1.2392E-09	-0.031224	0.00514	-0.031522	0.005605	2.35343E-09	0.76782	0.916634	0.004855	0.096569	0.006313	8.5E-05	0.00131	0.514423	0.826	0.807	0.991	0.917	0.987	1	0.989	0.857
rs1848111	1.2429E-09	-0.032648	0.00537	-0.038852	0.008553	1.6462E-09	0.13057	0.478835	0.000103	0.005563	0.084243	0.103	0.00169	0.004384	0.912	0.84	1	0.992	0.941	0.495	0.99	0.975
rs9921860	1.2434E-09	-0.032265	0.00531	-0.032265	0.005312	2.3613E-09	0.67953	0.200996	0.003717	6.55E-05	0.014031	0.00264	0.32835	0.936014	0.837	0.904	0.994	1	0.981	0.995	0.881	0.776
rs4652925	1.2435E-09	-0.032648	0.00537	-0.038852	0.008553	1.64699E-09	0.13052	0.478845	0.000103	0.005562	0.084248	0.10301	0.00169	0.004384	0.912	0.84	1	0.992	0.941	0.495	0.99	0.975
rs3106190	1.2445E-09	0.0305884	0.00504	0.0304722	0.005171	2.36325E-09	0.28108	0.607269	0.000716	0.000154	0.702577	8.4E-05	0.61144	0.32339	0.514	0.752	0.998	0.999	0.625	1	0.709	0.809
rs191451367	1.2462E-09	0.0675792	0.01113	0.0663417	0.013735	2.30463E-09	0.0311	0.255069	0.000286	0.680088	0.441191	3.8E-06	0.04512	0.669409	0.915	0.825	0.999	0.27	0.71	1	0.93	0.725
rs75399919	1.2474E-09	0.0505894	0.00833	0.0550191	0.013842	2.36876E-09	0.52741	0.335196	0.007075	0.124793	2.19E-05	0.00013	0.04577	0.119483	0.843	0.654	0.983	0.877	0.998	1	0.954	0.916
rs12208734	1.2475E-09	0.0317049	0.00522	0.0317049	0.00522	2.36883E-09	0.97915	0.306552	0.001538	0.008572	0.004071	0.00108	0.09767	0.582224	0.812	0.896	0.998	0.993	0.99	0.999	0.946	0.859
rs9927526	1.2492E-09	0.0308112	0.00507	0.0308112	0.005073	2.37205E-09	0.56593	0.826843	0.002394	0.005317	0.423774	3.7E-06	0.44849	0.688212	0.805	0.711	0.994	0.992	0.79	1	0.808	0.781
rs9364759	1.2504E-09	0.0323754	0.00533	0.0323754	0.00533	2.37432E-09	0.23488	0.385644	0.000715	0.000832	0.173508	0.00352	0.07403	0.547057	0.91	0.89	0.999	0.999	0.928	0.995	0.954	0.869
rs9356257	1.2522E-09	0.0324222	0.00534	0.0324222	0.005338	2.37768E-09	0.23659	0.359835	0.00081	0.000712	0.150427	0.00391	0.07801	0.538396	0.911	0.894	0.999	0.999	0.936	0.994	0.953	0.871
rs11214608	1.2526E-09	-0.030965	0.0051	-0.030965	0.005098	2.3783E-09	0.67789	0.151025	0.001083	0.001419	0.744371	7.1E-05	0.71494	0.037666	0.778	0.879	0.997	0.997	0.657	1	0.559	0.927
rs145274568	1.253E-09	0.0512517	0.00844	0.0512517	0.008439	2.37908E-09	0.18945	0.984414	0.001725	0.008885	0.006154	0.0009	0.12413	0.554216	0.916	0.817	0.998	0.992	0.989	0.999	0.939	0.865
rs1424241	1.253E-09	0.0390364	0.00643	0.0390364	0.006428	2.37915E-09	0.18851	0.014987	0.001314	0.131643	0.023071	0.00068	0.04326	0.258638	0.925	0.965	0.999	0.911	0.981	0.999	0.968	0.917
rs5848652	1.2561E-09	-0.035853	0.0059	-0.033026	0.008235	1.04891E-09	0.56806	0.190732	0.007029	0.283308	0.261534	5.5E-09	0.8067	0.290668	0.715	0.811	0.914	0.546	0.762	1	0.483	0.782
rs2093169	1.2569E-09	-0.045569	0.0075	-0.045569	0.007504	2.38637E-09	0.87187	0.408345	0.001683	0.00445	0.081761	0.0012	0.02986	0.080356	0.8	0.888	0.998	0.996	0.957	0.998	0.97	0.942
rs2241411	1.2593E-09	0.0308872	0.00509	0.0308872	0.005086	2.39077E-09	0.6966	0.786874	0.002769	0.013124	0.451209	1.2E-06	0.30211	0.669286	0.784	0.703	0.993	0.982	0.78	1	0.848	0.784
rs147692406	1.26E-09	0.0323687	0.00533	0.0323687	0.00533	2.39202E-09	0.24215	0.379562	0.000725	0.000914	0.170014	0.00338	0.07494	0.529512	0.909	0.891	0.999	0.999	0.93	0.995	0.954	0.871
rs1430256	1.2613E-09	-0.030699	0.00506	-0.036537	0.009718	2.39445E-09	0.34719	0.001057	0.000255	0.027602	0.013663	0.01628	0.00047	0.709465	0.67	0.977	0.999	0.975	0.982	0.946	0.993	0.827
rs9311335	1.2628E-09	-0.035856	0.00591	-0.033095	0.008225	1.06622E-09	0.56694	0.168925	0.007318	0.278486	0.275811	5.7E-09	0.82978	0.291336	0.718	0.82	0.911	0.554	0.756	1	0.493	0.783
rs3799379	1.2642E-09	-0.030771	0.00507	-0.030771	0.005068	2.39996E-09	0.37525	0.101057	0.000691	0.000423	0.785835	0.00171	0.25977	0.132415	0.874	0.922	0.999	0.999	0.723	0.997	0.894	0.918

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rs58328352	1.2652E-09	-0.040819	0.00672	-0.040819	0.006723	2.40167E-09	0.59084	0.103867	1.25E-06	0.193146	0.309192	0.00139	0.06112	0.438431	0.668	0.9	1	0.775	0.835	0.996	0.937	0.829
rs4800205	1.2666E-09	0.0306884	0.00505	0.0306884	0.005054	2.4044E-09	0.37165	0.555145	8.59E-05	0.002963	0.3518	0.00157	0.63145	0.125058	0.871	0.846	1	0.996	0.855	0.997	0.806	0.917
rs11047179	1.2669E-09	0.0714677	0.01177	0.0714677	0.011771	2.40486E-09	0.20536	0.319878	0.003182	0.086588	0.208923	5.4E-06	0.04381	0.104101	0.895	0.657	0.994	0.92	0.898	1	0.955	0.92
rs349698	1.2679E-09	0.0312802	0.00515	0.0311554	0.005263	1.9156E-09	0.75886	0.193458	0.00173	0.531422	0.326181	1.4E-07	0.12332	0.321761	0.717	0.841	0.991	0.379	0.768	1	0.882	0.808
rs10162048	1.2681E-09	-0.040814	0.00672	-0.040814	0.006722	2.40714E-09	0.58398	0.103983	1.25E-06	0.192014	0.309324	0.00139	0.06111	0.438417	0.667	0.9	1	0.776	0.835	0.996	0.937	0.829
rs4897581	1.2697E-09	0.0316918	0.00522	0.0316918	0.00522	2.41003E-09	0.97846	0.303514	0.001445	0.008474	0.004234	0.00114	0.10162	0.579526	0.812	0.897	0.998	0.993	0.99	0.998	0.944	0.859
rs10959554	1.2716E-09	-0.039697	0.00654	-0.040987	0.008273	2.41356E-09	0.61143	0.857116	3.28E-05	0.166026	0.025181	0.00482	0.01621	0.006164	0.846	0.775	1	0.852	0.975	0.988	0.974	0.969
rs3008894	1.2719E-09	0.0319993	0.00527	0.0319993	0.005271	2.41419E-09	0.93005	0.70283	0.004072	0.114138	0.061876	2.1E-06	0.18508	0.146593	0.77	0.822	0.992	0.892	0.953	1	0.908	0.91
rs34695208	1.2724E-09	0.0314598	0.00518	0.0322769	0.006197	2.07646E-09	0.0988	0.999183	0.081511	0.000596	0.00317	2.4E-05	0.58865	0.382834	0.897	0.709	0.597	0.998	0.988	1	0.736	0.822
rs147397301	1.2735E-09	0.032359	0.00533	0.032359	0.00533	2.41709E-09	0.2356	0.385421	0.000716	0.00083	0.173792	0.00356	0.07414	0.547917	0.91	0.89	0.999	0.999	0.928	0.995	0.954	0.868
rs10759507	1.2743E-09	0.0317956	0.00524	0.0317956	0.005238	2.41861E-09	0.12424	0.709885	0.004849	0.000331	0.029618	0.0037	0.117	0.203359	0.933	0.86	0.994	0.999	0.977	0.995	0.946	0.922
rs9347915	1.2764E-09	0.0323594	0.00533	0.0323594	0.005331	2.4225E-09	0.23475	0.376909	0.000735	0.000828	0.177172	0.0035	0.07295	0.550822	0.91	0.891	0.999	0.999	0.927	0.995	0.954	0.868
rs11914608	1.2777E-09	0.0305355	0.00503	0.0310861	0.005694	2.42496E-09	0.50908	0.240508	0.004115	0.006494	0.87058	0.00037	0.00422	0.011963	0.862	0.9	0.993	0.994	0.704	0.999	0.985	0.964
rs6123193	1.2784E-09	-0.038249	0.0063	-0.042528	0.009328	2.42618E-09	0.10478	0.629017	0.000677	0.042274	0.001161	0.00613	0.12065	0.003083	0.935	0.768	0.999	0.97	0.995	0.989	0.944	0.977
rs72794549	1.2784E-09	-0.044195	0.00728	-0.044195	0.007281	2.42619E-09	0.19741	0.105887	0.011227	0.001212	0.032098	0.00166	0.21547	0.043949	0.927	0.941	0.984	0.999	0.978	0.998	0.93	0.959
rs9327163	1.2786E-09	0.0500488	0.00825	0.0500488	0.008245	2.42658E-09	0.97052	0.435483	0.000187	0.011186	0.318289	0.00026	0.29008	0.241405	0.789	0.861	1	0.989	0.864	1	0.883	0.893
rs1320158	1.279E-09	-0.035851	0.00591	-0.032984	0.008326	1.05038E-09	0.57343	0.164694	0.007502	0.278216	0.273693	5.3E-09	0.80571	0.291459	0.713	0.819	0.906	0.549	0.754	1	0.482	0.78
rs113272593	1.2811E-09	-0.030584	0.00504	-0.030584	0.005039	2.43118E-09	0.81859	0.86751	0.001371	0.003988	0.130102	0.00207	0.00143	0.093301	0.78	0.823	0.998	0.996	0.937	0.997	0.99	0.934
rs541474884	1.2812E-09	0.0504871	0.00832	0.054565	0.01369	2.43136E-09	0.56512	0.305727	0.006289	0.122363	3.17E-05	0.00013	0.04194	0.117839	0.837	0.643	0.985	0.879	0.998	1	0.956	0.916
rs8025493	1.2813E-09	-0.030846	0.00508	-0.032285	0.007729	2.14924E-09	0.50792	0.512346	5.64E-06	0.016695	0.052169	0.03558	0.00038	0.656203	0.65	0.822	1	0.976	0.951	0.806	0.992	0.793
rs3008848	1.2836E-09	0.0319921	0.00527	0.0319921	0.005271	2.43592E-09	0.92571	0.702846	0.004075	0.114644	0.061833	2.1E-06	0.18503	0.146622	0.769	0.821	0.992	0.891	0.953	1	0.908	0.91
rs4916496	1.2847E-09	0.0338559	0.00558	0.0338559	0.005578	2.43789E-09	0.17197	0.714428	0.001386	0.464926	0.08866	8.7E-06	0.04191	0.076217	0.889	0.791	0.996	0.517	0.933	1	0.952	0.921
rs8180643	1.2869E-09	0.0323508	0.00533	0.0323508	0.00533	2.44198E-09	0.23726	0.384806	0.000713	0.000857	0.173644	0.00352	0.07427	0.548368	0.91	0.89	0.999	0.999	0.928	0.995	0.954	0.868
rs2182143	1.2873E-09	0.0319885	0.00527	0.0319885	0.005271	2.44273E-09	0.92469	0.702833	0.004064	0.115652	0.061756	2.1E-06	0.18491	0.146576	0.768	0.821	0.992	0.89	0.953	1	0.908	0.91
rs10678141	1.2898E-09	0.0460658	0.00759	0.047079	0.00917	2.44737E-09	0.69673	0.829573	0.001732	0.000169	0.001574	0.00344	0.96528	0.114014	0.808	0.738	0.997	0.999	0.992	0.991	0.681	0.913
rs6803264	1.2914E-09	-0.039002	0.00643	-0.039031	0.007548	2.32343E-09	0.69308	0.085497	0.038356	7.32E-05	0.096559	1.6E-05	0.53416	0.9726	0.664	0.897	0.811	1	0.915	1	0.765	0.702
rs10477241	1.2945E-09	0.0313795	0.00517	0.0307675	0.00577	1.8275E-09	0.77256	0.226969	0.001247	0.639673	0.331086	1.8E-07	0.07584	0.322248	0.697	0.822	0.993	0.282	0.75	1	0.904	0.797
rs140966150	1.2948E-09	0.0504725	0.00832	0.0545319	0.013673	2.45666E-09	0.57734	0.309325	0.006255	0.120931	3.13E-05	0.00013	0.04172	0.119829	0.835	0.645	0.985	0.881	0.998	1	0.956	0.916
rs147233456	1.2953E-09	0.0547662	0.00903	0.0547662	0.009025	2.45752E-09	0.9046	0.21832	4.32E-06	0.080176	0.117823	0.00027	0.15933	0.671514	0.696	0.533	1	0.89	0.901	0.999	0.881	0.762
rs75952763	1.2963E-09	0.0323444	0.00533	0.0323444	0.00533	2.45936E-09	0.23229	0.38378	0.000733	0.000826	0.176538	0.00355	0.07403	0.547587	0.911	0.89	0.999	0.999	0.927	0.995	0.954	0.868
rs2985810	1.2997E-09	0.0319809	0.00527	0.0319809	0.005271	2.46565E-09	0.92475	0.702736	0.004086	0.115515	0.061805	2.1E-06	0.185	0.146556	0.769	0.821	0.992	0.89	0.953	1	0.908	0.91
rs6548814	1.3057E-09	-0.03766	0.00621	-0.038432	0.006909	2.40507E-09	0.33233	0.290524	1.57E-05	0.244446	0.0065	0.01377	0.01148	0.10901	0.885	0.891	1	0.775	0.988	0.944	0.979	0.928
rs76395633	1.3068E-09	0.0323373	0.00533	0.0323373	0.00533	2.47899E-09	0.23484	0.385422	0.000716	0.00086	0.173793	0.00356	0.07419	0.547919	0.91	0.89	0.999	0.999	0.928	0.995	0.954	0.868
rs7611596	1.3078E-09	-0.037658	0.00621	-0.038427	0.006906	2.40912E-09	0.33252	0.290568	1.57E-05	0.244174	0.006505	0.01378	0.01149	0.109024	0.885	0.891	1	0.776	0.988	0.944	0.978	0.928
rs56707923	1.3082E-09	0.0319736	0.00527	0.0319736	0.005271	2.48158E-09	0.92304	0.70218	0.004055	0.116437	0.062011	2.1E-06	0.18515	0.146377	0.768	0.821	0.992	0.889	0.953	1	0.908	0.91
rs75868869	1.3083E-09	-0.034878	0.00575	-0.034659	0.007729	2.4817E-09	0.34373	0.04426	5.93E-05	0.162146	0.494436	0.00023	0.06963	0.014341	0.62	0.927	1	0.819	0.778	0.999	0.937	0.952
rs6894880	1.3096E-09	0.0313786	0.00517	0.0307753	0.005759	1.8554E-09	0.77111	0.226095	0.001232	0.637984	0.334995	1.8E-07	0.07546	0.327878	0.697	0.822	0.993	0.283	0.747	1	0.904	0.795
rs1013331	1.3104E-09	-0.032204	0.00531	-0.032204	0.005309	2.48551E-09	0.71144	0.188634	0.005177	3.19E-05	0.011055	0.00249	0.34761	0.729389	0.825	0.902	0.99	1	0.982	0.995	0.871	0.731
rs55855028	1.3108E-09	0.0323341	0.00533	0.0323341	0.00533	2.48632E-09	0.23497	0.384022	0.000731	0.000833	0.176584	0.00355	0.07405	0.547528	0.91	0.89	0.999	0.999	0.927	0.995	0.954	0.868
rs3008858	1.3109E-09	0.0319775	0.00527	0.0319775	0.005272	2.48656E-09	0.8955	0.684233	0.003568	0.146309	0.06177	1.7E-06	0.18159	0.14994	0.756	0.817	0.992	0.854	0.951	1	0.905	0.905
rs111599092	1.312E-09	-0.036586	0.00603	-0.036586	0.006031	2.48851E-09	0.78359	0.142903	0.001288	0.116184	0.049486	2.9E-06	0.58292	0.636293	0.716	0.893	0.997	0.869	0.952	1	0.786	0.803
rs80163988	1.3126E-09	0.0323328	0.00533	0.0323328	0.00533	2.48963E-09	0.23488	0.384063	0.000732	0.000831	0.176636	0.00355	0.07408	0.547601	0.91	0.89	0.999	0.999	0.927	0.995	0.954	0.868
rs10701425	1.3159E-09	0.0319689	0.00527	0.0319689	0.005271	2.49573E-09	0.92287	0.702296	0.004066	0.116769	0.061939	2.1E-06	0.18536	0.146449	0.768	0.821	0.992	0.889	0.953	1	0.907	0.91
rs3008856	1.316E-09	0.0319688	0.00527	0.0319688	0.005271	2.49602E-09	0.92287	0.702294	0.004066	0.116769	0.061939	2.1E-06	0.18536	0.146448	0.768	0.821	0.992	0.889	0.953	1	0.907	0.91
rs6759802	1.3163E-09	0.0378738	0.00624	0.0394672	0.00756	2.49654E-09	0.00703	0.606187	0.000134	0.005028	0.006241	0.0238	0.75672	0.112561	0.968	0.855	1	0.995	0.989	0.926	0.795	0.93
rs2985816	1.3165E-09	0.0319686	0.00527	0.0319686	0.005271	2.49683E-09	0.92249	0.702294	0.004066	0.116769	0.061938	2.1E-06	0.18536	0.146448	0.768	0.821	0.992	0.889	0.953	1	0.907	0.91
rs4419357	1.3169E-09	-0.035827	0.00591	-0.032964	0.008328	1.08366E-09	0.57572	0.162962	0.007485	0.28133	0.272333	5.5E-09	0.80528	0.291182	0.713	0.82	0.907	0.546	0.754	1	0.481	0.78
rs2419405	1.3184E-09	0.0315078	0.00519	0.034941	0.008009	2.50042E-09	0.10175	0.018456	0.048807	0.002514	0.000895	0.00018	0.20831	0.485254	0.92	0.952	0.812	0.996	0.995	1	0.9	0.656
rs12432926	1.3186E-09	0.0523386	0.00863	0.0572145	0.011577	2.15158E-09	0.61833	0.052981	4.51E-05	0.029112	0.007631	0.06589	0.00223	0.3052	0.836	0.939	1	0.967	0.987	0.71	0.989	0.884
rs3008852	1.3187E-09	0.0319676	0.00527	0.0319676	0.005271	2.50095E-09	0.92257	0.702327	0.004069	0.11702	0.061952	2.1E-06	0.18519	0.146584	0.768	0.821	0.992	0.889	0.953	1	0.907	0.909
rs62083421	1.3205E-09	0.0313867	0.00518	0.0313867	0.005175	2.50426E-09	0.59165	0.635156	3.52E-05	0.004746	0.028544	0.00506	0.49435	0.589969	0.843	0.838	1	0.994	0.971	0.989	0.84	0.841
rs3008859	1.3214E-09	0.0319698	0.00527	0.0319698	0.005271	2.50601E-09	0.88614	0.686015	0.00363	0.13894	0.060828	1.8E-06	0.1836	0.15105	0.756	0.818	0.992	0.863	0.952	1	0.905	0.906
rs3008860	1.3214E-09	0.0319698	0.00527	0.0319698	0.005271	2.50601E-09	0.88614	0.686015	0.00363	0.13894	0.060828	1.8E-06	0.1836	0.15105	0.756	0.818	0.992	0.863	0.952	1	0.905	0.906
rs3008854	1.3217E-09	0.0319652	0.00527	0.0319652	0.005271	2.50645E-09	0.92248	0.702276	0.004071	0.116868	0.061967	2.1E-06	0.18535	0.146563	0.768	0.821	0.992	0.889	0.953	1	0.907	0.909
rs9468206	1.3248E-09	-0.038873	0.00641	-0.038873	0.00641	2.51222E-09	0.65794	0.138685	0.000654	0.003332	0.098609	0.01088	0.06182	0.006225	0.87	0.933	0.999	0.997	0.956	0.98	0.963	0.975

Table S3

rs200474	1.3262E-09	-0.045502	0.0075	-0.045502	0.007503	2.51497E-09	0.37072	0.529198	0.000293	0.048361	0.11436	0.00081	0.33446	0.002402	0.892	0.873	1	0.966	0.946	0.999	0.894	0.977
rs9340908	1.3276E-09	-0.033261	0.00548	-0.033261	0.005485	2.4577E-09	0.43617	0.943526	0.019487	0.01514	0.287684	3.4E-07	0.39366	0.204532	0.846	0.757	0.937	0.982	0.859	1	0.843	0.888
rs11129996	1.3277E-09	-0.035818	0.00591	-0.03296	0.008321	1.09433E-09	0.57485	0.163576	0.007481	0.281694	0.272548	5.6E-09	0.8058	0.29123	0.713	0.819	0.907	0.546	0.754	1	0.482	0.78
rs35163119	1.3335E-09	-0.041174	0.00679	-0.041174	0.006791	2.52843E-09	0.83037	0.104497	3.29E-06	0.160574	0.356519	0.00102	0.06962	0.426669	0.732	0.907	1	0.827	0.831	0.998	0.938	0.844
rs35428295	1.3345E-09	-0.040741	0.00672	-0.040741	0.006719	2.53028E-09	0.58629	0.102467	1.4E-06	0.192612	0.294951	0.00137	0.0648	0.440355	0.669	0.901	1	0.777	0.841	0.996	0.936	0.83
rs1361586	1.3357E-09	-0.040739	0.00672	-0.040739	0.006719	2.53257E-09	0.58477	0.102452	1.4E-06	0.19262	0.295516	0.00137	0.06483	0.439422	0.668	0.901	1	0.777	0.841	0.996	0.936	0.83
rs149688767	1.3358E-09	-0.040739	0.00672	-0.040739	0.006719	2.53267E-09	0.58476	0.102452	1.4E-06	0.192624	0.295516	0.00137	0.06483	0.439422	0.668	0.901	1	0.777	0.841	0.996	0.936	0.83
rs78089341	1.3362E-09	0.032318	0.00533	0.032318	0.00533	2.53339E-09	0.23371	0.38378	0.000733	0.000858	0.176539	0.00355	0.07403	0.547587	0.91	0.89	0.999	0.999	0.927	0.995	0.954	0.868
rs113673027	1.3364E-09	-0.045718	0.00754	-0.046189	0.008677	2.53378E-09	0.00654	0.499715	0.006956	0.225305	0.177217	7.7E-06	0.02329	0.290041	0.964	0.862	0.984	0.8	0.917	1	0.97	0.892
rs13378557	1.3365E-09	-0.040739	0.00672	-0.040739	0.006719	2.53404E-09	0.58476	0.102456	1.4E-06	0.192583	0.295534	0.00137	0.06488	0.4394	0.668	0.901	1	0.777	0.841	0.996	0.936	0.83
rs7617959	1.3394E-09	-0.031536	0.0052	-0.031536	0.005202	2.53942E-09	0.3199	0.846534	0.000534	0.149502	0.343632	4.5E-07	0.87284	0.607045	0.814	0.72	0.998	0.78	0.779	1	0.647	0.755
rs13059783	1.3403E-09	-0.035806	0.00591	-0.032951	0.008317	1.10395E-09	0.57227	0.165002	0.007486	0.282534	0.273341	5.6E-09	0.80667	0.291204	0.713	0.819	0.907	0.545	0.754	1	0.482	0.78
rs185552757	1.3417E-09	-0.097223	0.01604	-0.104729	0.024445	1.95552E-09	0.64977	0.012952	1.51E-06	0.083539	0.545302	0.02712	0.01404	0.033767	0.82	0.957	1	0.89	0.767	0.862	0.974	0.948
rs6988046	1.3421E-09	-0.036902	0.00609	-0.036902	0.006087	2.54429E-09	0.10724	0.877899	0.000814	0.029626	0.03547	0.00084	0.03605	0.274731	0.933	0.803	0.999	0.979	0.974	0.999	0.968	0.907
rs4655658	1.3433E-09	0.031952	0.00527	0.031952	0.005271	2.54659E-09	0.92307	0.703976	0.004101	0.116157	0.063054	2.1E-06	0.18376	0.151743	0.768	0.821	0.992	0.89	0.952	1	0.908	0.908
rs9591765	1.3434E-09	-0.040734	0.00672	-0.040734	0.006719	2.54683E-09	0.58419	0.102452	1.4E-06	0.193345	0.295516	0.00137	0.06483	0.439422	0.668	0.901	1	0.776	0.841	0.996	0.936	0.83
rs3008855	1.3456E-09	0.0319501	0.00527	0.0319501	0.005271	2.55082E-09	0.92263	0.702271	0.004084	0.117848	0.061999	2.1E-06	0.18545	0.146576	0.768	0.821	0.992	0.888	0.953	1	0.907	0.909
rs3909541	1.3459E-09	0.0306432	0.00506	0.0306432	0.005055	2.55145E-09	0.92753	0.434108	0.003031	0.006434	0.546071	4.9E-07	0.44512	0.700815	0.698	0.572	0.988	0.987	0.693	1	0.765	0.731
rs2372356	1.3485E-09	-0.035803	0.00591	-0.032943	0.008323	1.10983E-09	0.57544	0.163823	0.007518	0.282277	0.273259	5.6E-09	0.80601	0.291243	0.712	0.819	0.906	0.545	0.754	1	0.481	0.78
rs9357045	1.3494E-09	-0.046121	0.00761	-0.046121	0.007609	2.55779E-09	0.2229	0.454699	0.000405	0.04981	0.108438	0.00089	0.27947	0.00396	0.916	0.886	1	0.966	0.95	0.999	0.91	0.975
rs6537109	1.3501E-09	0.0384851	0.00635	0.0357681	0.008446	2.55925E-09	0.256	0.778421	2.63E-06	0.167224	0.919062	0.00011	0.01729	0.696173	0.789	0.581	1	0.678	0.419	0.999	0.943	0.542
rs56074213	1.3504E-09	0.0357921	0.00591	0.0329599	0.008283	1.12299E-09	0.57107	0.168932	0.007471	0.279241	0.275311	5.7E-09	0.80765	0.291106	0.714	0.818	0.908	0.55	0.754	1	0.484	0.781
rs9827911	1.3508E-09	-0.035793	0.00591	-0.032948	0.0083	1.11506E-09	0.56627	0.168662	0.007434	0.283671	0.27466	5.6E-09	0.8085	0.29085	0.714	0.817	0.907	0.544	0.753	1	0.482	0.78
rs111227564	1.3518E-09	0.0319473	0.00527	0.0319473	0.005271	2.5624E-09	0.92703	0.702812	0.004072	0.119355	0.061874	2.1E-06	0.18507	0.146592	0.768	0.821	0.992	0.886	0.953	1	0.907	0.909
rs140043301	1.3538E-09	0.0382499	0.00631	0.0382499	0.006311	2.56612E-09	0.0467	0.737267	0.001988	0.006424	0.00136	0.00401	0.51365	0.08191	0.95	0.854	0.998	0.995	0.994	0.994	0.864	0.943
rs137951974	1.3542E-09	0.0323136	0.00533	0.0323136	0.005332	2.56673E-09	0.23749	0.367762	0.000782	0.000817	0.171552	0.00348	0.08035	0.548259	0.91	0.892	0.999	0.999	0.929	0.995	0.952	0.869
rs7627198	1.3556E-09	-0.035794	0.00591	-0.032941	0.008311	1.11766E-09	0.57129	0.16589	0.007489	0.282797	0.274089	5.6E-09	0.80701	0.291535	0.713	0.818	0.907	0.545	0.753	1	0.482	0.78
rs6534898	1.3558E-09	-0.040927	0.00675	-0.040927	0.006753	2.56972E-09	0.20081	0.172547	0.010749	0.000713	0.226556	0.00091	0.01933	0.309941	0.921	0.925	0.984	0.999	0.919	0.999	0.976	0.907
rs201428899	1.3585E-09	-0.031976	0.00528	-0.031976	0.005276	2.57479E-09	0.90921	0.687788	0.004231	0.140007	0.054684	1.8E-06	0.16194	0.159663	0.762	0.82	0.991	0.863	0.955	1	0.912	0.905
rs11733459	1.3592E-09	0.0382453	0.00631	0.0382453	0.006311	2.5761E-09	0.04746	0.737337	0.001982	0.006387	0.001358	0.00403	0.51428	0.08191	0.949	0.854	0.998	0.995	0.994	0.994	0.864	0.943
rs7639584	1.3593E-09	-0.035784	0.0059	-0.032952	0.008273	1.12165E-09	0.57354	0.170452	0.007499	0.281762	0.282536	5.5E-09	0.82499	0.292723	0.713	0.817	0.907	0.547	0.749	1	0.488	0.78
rs4404425	1.3598E-09	-0.03579	0.00591	-0.03294	0.008307	1.12128E-09	0.56992	0.166836	0.007485	0.283162	0.274313	5.7E-09	0.80768	0.291426	0.714	0.818	0.907	0.544	0.753	1	0.482	0.78
rs10842252	1.3624E-09	0.0712961	0.01177	0.0712961	0.011765	2.58189E-09	0.20257	0.327256	0.003319	0.087252	0.205235	5.6E-06	0.04557	0.105467	0.896	0.66	0.994	0.92	0.9	1	0.954	0.92
rs17016354	1.3627E-09	0.0384737	0.00635	0.0357633	0.008435	2.58249E-09	0.25968	0.779149	2.65E-06	0.166571	0.918552	0.00011	0.0174	0.695444	0.788	0.581	1	0.679	0.419	0.999	0.942	0.542
rs9826849	1.3674E-09	-0.035783	0.00591	-0.032934	0.008305	1.12777E-09	0.56861	0.167582	0.007472	0.283907	0.274533	5.7E-09	0.80774	0.291162	0.714	0.818	0.907	0.544	0.753	1	0.482	0.78
rs60856756	1.3689E-09	0.0521372	0.0086	0.0562836	0.01119	2.29774E-09	0.65897	0.075255	4.43E-05	0.029707	0.007969	0.06114	0.00212	0.293519	0.833	0.933	1	0.968	0.987	0.739	0.99	0.888
rs8183283	1.369E-09	-0.038177	0.0063	-0.042436	0.009304	2.59413E-09	0.10478	0.63202	0.000679	0.041709	0.001184	0.00649	0.12042	0.003175	0.935	0.768	0.999	0.971	0.995	0.989	0.944	0.977
rs1476122	1.3701E-09	0.0384681	0.00635	0.0357616	0.008431	2.59617E-09	0.26012	0.779068	2.66E-06	0.166536	0.919307	0.00011	0.01743	0.694722	0.788	0.581	1	0.679	0.419	0.999	0.942	0.542
rs9861529	1.3704E-09	-0.035779	0.00591	-0.03294	0.008294	1.13411E-09	0.56596	0.168849	0.007474	0.282744	0.275278	5.7E-09	0.80765	0.291141	0.715	0.817	0.907	0.546	0.753	1	0.482	0.78
rs13074235	1.372E-09	-0.035778	0.00591	-0.032935	0.008295	1.13517E-09	0.56995	0.168833	0.007471	0.282475	0.275322	5.7E-09	0.80771	0.291114	0.714	0.817	0.907	0.546	0.753	1	0.482	0.78
rs1944869	1.3724E-09	-0.085847	0.01417	-0.085847	0.014169	2.60055E-09	0.82663	0.706234	0.000364	0.008918	0.155825	0.00124	0.02259	0.275161	0.827	0.843	1	0.992	0.929	0.998	0.972	0.9
rs5875703	1.3729E-09	0.0313783	0.00518	0.032348	0.006332	2.15573E-09	0.09511	0.965492	0.091227	0.000634	0.002876	2.4E-05	0.58208	0.364692	0.896	0.707	0.55	0.998	0.989	1	0.729	0.821
rs10842250	1.373E-09	0.0712789	0.01176	0.0712789	0.011765	2.60152E-09	0.20224	0.328385	0.003343	0.087033	0.205567	5.6E-06	0.04564	0.105476	0.896	0.661	0.994	0.92	0.899	1	0.954	0.92
rs76277761	1.373E-09	0.0552911	0.00913	0.0555271	0.011424	2.60165E-09	0.28438	0.125399	0.008287	0.040556	0.267032	1E-05	0.003	0.2568	0.637	0.912	0.982	0.962	0.879	1	0.985	0.888
rs4975313	1.3733E-09	0.0384658	0.00635	0.0357597	0.008431	2.60214E-09	0.26044	0.779082	2.66E-06	0.166722	0.919598	0.00011	0.01743	0.694732	0.788	0.581	1	0.679	0.419	0.999	0.942	0.542
rs17016344	1.3734E-09	0.0384657	0.00635	0.0357594	0.008431	2.60238E-09	0.26046	0.779069	2.66E-06	0.166729	0.91957	0.00011	0.01743	0.694729	0.788	0.581	1	0.679	0.419	0.999	0.942	0.542
rs16998558	1.3742E-09	0.038465	0.00635	0.0357539	0.008435	2.60383E-09	0.25966	0.778715	2.66E-06	0.166706	0.918668	0.00011	0.01743	0.694655	0.788	0.581	1	0.679	0.419	0.999	0.942	0.541
rs4888599	1.3746E-09	-0.030558	0.00504	-0.030558	0.005044	2.60457E-09	0.08926	0.630598	0.031883	0.038738	0.012533	1.5E-05	0.26714	0.034032	0.936	0.859	0.921	0.97	0.985	1	0.907	0.956
rs1577120	1.3751E-09	-0.038842	0.00641	-0.038842	0.006411	2.60556E-09	0.12365	0.418606	0.001751	0.012409	0.021863	0.00711	0.03842	0.008712	0.94	0.903	0.998	0.992	0.983	0.99	0.972	0.974
rs200476	1.3756E-09	-0.04546	0.0075	-0.04546	0.007504	2.60638E-09	0.37106	0.538104	0.000295	0.048831	0.115136	0.00081	0.33397	0.002463	0.892	0.871	1	0.965	0.946	0.999	0.894	0.977
rs117574183	1.377E-09	0.0503063	0.0083	0.054801	0.013851	2.60907E-09	0.52096	0.315857	0.006074	0.130046	2.34E-05	0.00016	0.04608	0.105248	0.844	0.648	0.986	0.873	0.998	1	0.954	0.92
rs4637262	1.3817E-09	-0.035771	0.00591	-0.032924	0.0083	1.13992E-09	0.56665	0.168833	0.007471	0.284387	0.275322	5.7E-09	0.80771	0.291114	0.714	0.817	0.907	0.543	0.752	1	0.482	0.78
rs9822961	1.3817E-09	-0.035771	0.00591	-0.032924	0.0083	1.13992E-09	0.56665	0.168833	0.007471	0.284387	0.275322	5.7E-09	0.80771	0.291114	0.714	0.817	0.907	0.543	0.752	1	0.482	0.78
rs9860364	1.3817E-09	-0.035771	0.00591	-0.032924	0.0083	1.13992E-09	0.56665	0.168833	0.007471	0.284387	0.275322	5.7E-09	0.80771	0.291114	0.714	0.817	0.907	0.543	0.752	1	0.482	0.78
rs11927798	1.3818E-09	-0.035771	0.00591	-0.032924	0.0083	1.13996E-09	0.56665	0.168833	0.007471	0.284393	0.275322	5.7E-09	0.80771	0.291114	0.714	0.817	0.907	0.543	0.752	1	0.482	0.78

Table S3

rs13085652	1.3818E-09	-0.035771	0.00591	-0.032924	0.0083	1.13996E-09	0.56665	0.168833	0.007471	0.284393	0.275322	5.7E-09	0.80771	0.291114	0.714	0.817	0.907	0.543	0.752	1	0.482	0.78
rs4444688	1.3818E-09	-0.035771	0.00591	-0.032924	0.0083	1.13996E-09	0.56665	0.168833	0.007471	0.284393	0.275322	5.7E-09	0.80771	0.291114	0.714	0.817	0.907	0.543	0.752	1	0.482	0.78
rs7756952	1.382E-09	0.0329287	0.00544	0.0379275	0.010992	4.3811E-10	0.08294	0.949568	0.013433	8.11E-08	0.235796	0.01483	0.97334	0.001205	0.873	0.64	0.744	1	0.723	0.73	0.555	0.976
rs13060695	1.382E-09	-0.03577	0.00591	-0.032924	0.008301	1.14014E-09	0.56667	0.168831	0.007471	0.284418	0.275324	5.7E-09	0.80771	0.291116	0.714	0.817	0.907	0.543	0.752	1	0.482	0.78
rs6912584	1.3821E-09	-0.047656	0.00787	-0.047656	0.007867	2.61838E-09	0.05552	0.509857	0.000264	0.039267	0.483436	0.00106	0.0341	0.072037	0.945	0.875	1	0.972	0.842	0.999	0.968	0.944
rs12715388	1.3826E-09	-0.03577	0.00591	-0.032923	0.008301	1.14054E-09	0.56668	0.168831	0.007472	0.284427	0.275329	5.7E-09	0.8077	0.291122	0.714	0.817	0.907	0.543	0.752	1	0.482	0.78
rs6762503	1.3828E-09	0.0357699	0.00591	0.0329231	0.0083	1.1408E-09	0.56664	0.168932	0.007471	0.284418	0.275311	5.7E-09	0.80765	0.291106	0.714	0.817	0.907	0.543	0.752	1	0.482	0.78
rs11215361	1.383E-09	-0.034603	0.00571	-0.035275	0.006234	2.62005E-09	0.87033	0.007364	0.009611	0.019645	0.00925	0.00046	0.08129	0.093557	0.81	0.97	0.986	0.987	0.988	0.999	0.956	0.943
rs6537124	1.385E-09	-0.033298	0.0055	-0.036544	0.008531	2.62384E-09	0.00822	0.21	0.011025	0.006023	0.798113	0.00023	0.00048	0.76396	0.963	0.903	0.975	0.994	0.721	1	0.992	0.82
rs11674401	1.386E-09	-0.030523	0.00504	-0.030523	0.005039	2.62568E-09	0.81871	0.865903	0.00142	0.003989	0.129814	0.00214	0.00146	0.094347	0.78	0.823	0.998	0.996	0.937	0.997	0.989	0.934
rs2372354	1.3867E-09	-0.035768	0.00591	-0.03277	0.008419	1.08595E-09	0.57763	0.168871	0.007594	0.291266	0.278222	4.9E-09	0.80016	0.29493	0.705	0.812	0.899	0.527	0.744	1	0.471	0.773
rs34565965	1.3878E-09	-0.034578	0.00571	-0.034578	0.005709	2.62895E-09	0.47278	0.655642	6.05E-05	0.013989	0.644744	0.00113	0.07677	0.14211	0.858	0.834	1	0.986	0.766	0.998	0.944	0.914
rs10791064	1.3878E-09	-0.039486	0.00652	-0.039386	0.006855	2.62899E-09	0.00964	0.841926	0.000115	0.224249	0.44786	0.0001	0.1534	0.073634	0.955	0.737	1	0.766	0.8	1	0.908	0.923
rs10492776	1.3879E-09	-0.032133	0.00531	-0.032133	0.005305	2.62925E-09	0.73334	0.19242	0.005726	3.34E-05	0.010299	0.00236	0.35654	0.76677	0.823	0.901	0.989	1	0.983	0.995	0.869	0.738
rs7671198	1.3893E-09	0.0384538	0.00635	0.0357359	0.008439	2.63171E-09	0.26026	0.778721	2.66E-06	0.167869	0.91884	0.00011	0.01743	0.694658	0.788	0.58	1	0.677	0.419	0.999	0.942	0.541
rs6679100	1.3945E-09	0.0315214	0.0052	0.0327802	0.008623	2.64142E-09	0.19584	0.038605	0.000349	0.000184	0.021191	0.01299	0.17963	0.05263	0.89	0.457	0.999	0.999	0.973	0.949	0.903	0.934
rs3008853	1.3955E-09	0.0319274	0.00527	0.0319274	0.005272	2.64333E-09	0.91301	0.703928	0.004183	0.117636	0.062848	2E-06	0.18798	0.14894	0.766	0.82	0.991	0.888	0.952	1	0.906	0.908
rs6852570	1.3959E-09	-0.033291	0.0055	-0.03653	0.008526	2.64407E-09	0.00827	0.209998	0.01102	0.00607	0.798172	0.00023	0.00048	0.763936	0.963	0.903	0.975	0.994	0.721	1	0.992	0.82
rs4653213	1.3965E-09	-0.032548	0.00537	-0.038807	0.008567	1.83942E-09	0.13052	0.478367	0.000113	0.005562	0.084078	0.1055	0.00168	0.004376	0.912	0.84	1	0.992	0.941	0.49	0.99	0.975
rs9366700	1.3986E-09	-0.038679	0.00639	-0.038679	0.006387	2.64902E-09	0.62317	0.123556	0.000378	0.003488	0.112229	0.01423	0.09506	0.004916	0.872	0.935	1	0.997	0.951	0.97	0.953	0.976
rs9393777	1.399E-09	-0.049763	0.00822	-0.050222	0.008562	2.64974E-09	0.31911	0.075333	0.001767	0.121942	0.037824	0.00115	0.02412	0.005799	0.911	0.947	0.998	0.921	0.976	0.999	0.977	0.975
rs966457	1.3991E-09	-0.033288	0.0055	-0.036517	0.00852	2.65003E-09	0.0084	0.209304	0.011038	0.006081	0.798112	0.00023	0.00048	0.764447	0.962	0.903	0.975	0.994	0.721	1	0.992	0.82
rs181897510	1.3999E-09	0.0676116	0.01117	0.066651	0.013024	2.64131E-09	0.03881	0.240719	0.000297	0.651478	0.434938	4.9E-06	0.04354	0.645898	0.911	0.833	0.999	0.302	0.722	1	0.933	0.737
rs579450	1.401E-09	-0.036678	0.00606	-0.042543	0.00995	1.96567E-09	0.04185	0.388768	5.34E-06	0.082425	0.048549	0.06548	0.14535	0.000673	0.942	0.862	1	0.882	0.96	0.678	0.918	0.985
rs1546965	1.4028E-09	-0.032935	0.00544	-0.032935	0.005439	2.65675E-09	0.56528	0.414418	0.024052	0.000261	0.018839	0.00021	0.50486	0.182991	0.854	0.874	0.939	0.999	0.979	1	0.844	0.912
rs62303509	1.4033E-09	0.0361652	0.00597	0.0367807	0.00644	2.65781E-09	0.04456	0.72984	0.001587	0.008985	0.000502	0.00458	0.6426	0.093549	0.949	0.85	0.998	0.993	0.996	0.993	0.834	0.939
rs34442253	1.4044E-09	-0.033285	0.0055	-0.036507	0.008516	2.65983E-09	0.00842	0.20999	0.011012	0.006094	0.798137	0.00023	0.00048	0.763902	0.962	0.903	0.975	0.994	0.721	1	0.992	0.82
rs7182927	1.4045E-09	0.0542311	0.00896	0.0542311	0.008956	2.6599E-09	0.40784	0.901869	0.002189	0.001119	0.410087	3.2E-05	0.0428	0.897028	0.606	0.74	0.994	0.997	0.784	1	0.94	0.694
rs6944573	1.4062E-09	0.035244	0.00582	0.035244	0.005821	2.66306E-09	0.03936	0.580996	0.001141	0.014702	0.09386	0.00063	0.04169	0.93698	0.95	0.866	0.999	0.989	0.952	0.999	0.965	0.816
rs190593866	1.4069E-09	0.0962328	0.01589	0.0962328	0.015894	2.66445E-09	0.05989	0.301382	0.002197	0.004584	0.344411	0.00204	0.0033	0.48265	0.945	0.905	0.998	0.996	0.887	0.997	0.989	0.882
rs1371371	1.4071E-09	0.04034	0.00666	0.0411363	0.009499	2.66476E-09	0.742	0.002274	0.006252	0.143282	0.011183	9E-06	0.18336	0.840445	0.736	0.968	0.985	0.859	0.982	1	0.908	0.792
rs6805075	1.4085E-09	-0.035754	0.00591	-0.032917	0.008286	1.16646E-09	0.56691	0.170541	0.007443	0.284746	0.278474	5.8E-09	0.81079	0.289919	0.714	0.816	0.908	0.543	0.751	1	0.483	0.78
rs3799378	1.4095E-09	-0.038695	0.00639	-0.038695	0.006391	2.66927E-09	0.06644	0.100729	0.004245	0.003972	0.156927	0.00196	0.14112	0.026192	0.95	0.943	0.995	0.997	0.944	0.998	0.946	0.965
rs12238737	1.4096E-09	0.03313	0.00547	0.03313	0.005472	2.66945E-09	0.35133	0.140654	0.0002	0.007718	0.366153	0.00153	0.52797	0.035755	0.888	0.921	1	0.993	0.867	0.998	0.847	0.952
rs9365764	1.4106E-09	0.032293	0.00533	0.032293	0.005334	2.67116E-09	0.23433	0.345222	0.000785	0.000919	0.178991	0.00366	0.07277	0.515797	0.911	0.896	0.999	0.999	0.927	0.995	0.955	0.874
rs113494811	1.411E-09	-0.059977	0.00991	-0.059977	0.009907	2.67202E-09	0.70891	0.122309	3.18E-05	0.000997	0.193987	0.01967	0.16261	0.425885	0.835	0.921	1	0.998	0.912	0.937	0.923	0.872
rs8046629	1.4112E-09	0.0354803	0.00586	0.0358436	0.00655	2.56464E-09	0.02538	0.098492	0.020846	0.260303	0.071795	2.4E-06	0.07206	0.253222	0.951	0.925	0.929	0.759	0.953	1	0.949	0.897
rs11998077	1.4131E-09	0.0326628	0.0054	0.0326628	0.005395	2.47408E-09	0.25754	0.725263	1.8E-07	0.022268	0.562102	0.00736	0.4558	0.289263	0.859	0.695	1	0.97	0.741	0.969	0.806	0.855
rs9934874	1.4149E-09	-0.032092	0.0053	-0.032092	0.005301	2.67911E-09	0.64002	0.205247	0.004454	4.38E-05	0.012036	0.00309	0.34371	0.88008	0.841	0.902	0.992	1	0.982	0.994	0.877	0.765
rs3008829	1.4159E-09	0.0312754	0.00517	0.0323776	0.006401	2.1656E-09	0.10444	0.986553	0.090537	0.000213	0.003703	4.7E-05	0.536	0.404929	0.892	0.698	0.555	0.999	0.987	1	0.744	0.812
rs28437770	1.4172E-09	-0.032097	0.0053	-0.032097	0.005302	2.68346E-09	0.63433	0.202372	0.00455	4.3E-05	0.012025	0.003	0.35205	0.868462	0.841	0.902	0.992	1	0.982	0.994	0.874	0.763
rs10959525	1.4174E-09	-0.03881	0.00641	-0.03881	0.006411	2.68377E-09	0.13553	0.41841	0.001751	0.012167	0.02188	0.00714	0.03861	0.008772	0.938	0.903	0.998	0.992	0.983	0.99	0.972	0.974
rs1577119	1.4175E-09	-0.038813	0.00641	-0.038813	0.006412	2.68395E-09	0.12421	0.419465	0.001771	0.012516	0.021988	0.00712	0.03856	0.008729	0.94	0.903	0.998	0.992	0.983	0.99	0.972	0.974
rs7595950	1.4182E-09	0.0314769	0.0052	0.0360578	0.008234	2.55383E-09	0.10859	0.021095	0.056223	0.000887	0.001519	0.00062	0.04727	0.481962	0.92	0.952	0.784	0.998	0.993	0.998	0.957	0.657
rs61517249	1.4194E-09	0.0712086	0.01176	0.0712086	0.011764	2.68759E-09	0.19945	0.333508	0.003352	0.090688	0.203379	5.7E-06	0.04574	0.105365	0.896	0.662	0.994	0.916	0.9	1	0.954	0.92
rs59556093	1.4195E-09	0.0712085	0.01176	0.0712085	0.011764	2.68766E-09	0.19945	0.333508	0.003352	0.090689	0.203379	5.7E-06	0.04574	0.105365	0.896	0.662	0.994	0.916	0.9	1	0.954	0.92
rs1121462	1.4221E-09	-0.038808	0.00641	-0.038808	0.006411	2.69252E-09	0.12395	0.420212	0.001779	0.012418	0.021922	0.00713	0.03877	0.008796	0.94	0.903	0.998	0.992	0.983	0.99	0.972	0.974
rs139757496	1.4227E-09	0.0673234	0.01112	0.0659393	0.014009	2.58327E-09	0.03095	0.258445	0.000272	0.709801	0.46031	3.8E-06	0.04626	0.677365	0.913	0.82	0.999	0.25	0.695	1	0.928	0.717
rs11047194	1.424E-09	0.0716905	0.01184	0.0716905	0.011844	2.696E-09	0.19073	0.35438	0.004181	0.096625	0.190875	5.3E-06	0.0366	0.092576	0.899	0.671	0.992	0.912	0.906	1	0.959	0.924
rs7865595	1.4258E-09	-0.038819	0.00641	-0.038819	0.006414	2.69946E-09	0.12422	0.416214	0.001783	0.01254	0.022349	0.00712	0.03834	0.008605	0.94	0.903	0.998	0.992	0.983	0.99	0.972	0.974
rs9826102	1.4266E-09	-0.035746	0.00591	-0.032894	0.008311	1.17421E-09	0.56763	0.167472	0.007601	0.283928	0.276123	5.8E-09	0.80478	0.291136	0.713	0.817	0.905	0.543	0.752	1	0.481	0.779
rs9365765	1.4278E-09	0.0322831	0.00533	0.0322831	0.005334	2.7031E-09	0.2344	0.345688	0.000787	0.00092	0.179224	0.00367	0.07285	0.51652	0.911	0.896	0.999	0.999	0.927	0.995	0.955	0.874
rs9921617	1.4298E-09	-0.032082	0.0053	-0.032082	0.005301	2.70677E-09	0.6403	0.205247	0.004454	4.46E-05	0.012036	0.00309	0.34371	0.88008	0.841	0.902	0.992	1	0.982	0.994	0.877	0.765
rs7865211	1.43E-09	-0.038812	0.00641	-0.038812	0.006413	2.70713E-09	0.12382	0.417171	0.001783	0.012609	0.022264	0.00711	0.03841	0.008619	0.94	0.903	0.998	0.992	0.983	0.99	0.972	0.974
rs140966251	1.4301E-09	-0.032082	0.0053	-0.032082	0.005301	2.70733E-09	0.6403	0.205248	0.004454	4.46E-05	0.012039	0.00309	0.34372	0.880079	0.841	0.902	0.992	1	0.982	0.994	0.877	0.765

Table S3

rs16962153	1.4301E-09	-0.032082	0.0053	-0.032082	0.005301	2.70733E-09	0.6403	0.205248	0.004454	4.46E-05	0.012039	0.00309	0.34372	0.880079	0.841	0.902	0.992	1	0.982	0.994	0.877	0.765
rs16962155	1.4303E-09	-0.032081	0.0053	-0.032081	0.005301	2.70767E-09	0.64038	0.205248	0.004454	4.46E-05	0.012039	0.00309	0.34372	0.880079	0.841	0.902	0.992	1	0.982	0.994	0.877	0.765
rs7875185	1.4305E-09	-0.038807	0.00641	-0.038807	0.006412	2.708E-09	0.13504	0.418322	0.001775	0.012205	0.022093	0.0071	0.03849	0.008666	0.938	0.903	0.998	0.992	0.983	0.99	0.972	0.974
rs13338621	1.4307E-09	-0.032081	0.0053	-0.032081	0.005301	2.70852E-09	0.64206	0.205247	0.004454	4.45E-05	0.012036	0.00309	0.34371	0.88008	0.84	0.902	0.992	1	0.982	0.994	0.877	0.765
rs4262575	1.4312E-09	0.0444002	0.00734	0.0433277	0.008661	2.70937E-09	0.67046	0.310057	0.000156	7.21E-05	0.986074	0.00068	0.47269	0.225511	0.733	0.521	0.999	0.999	0.512	0.997	0.747	0.83
rs7875597	1.4313E-09	-0.038807	0.00641	-0.038807	0.006412	2.70946E-09	0.13455	0.417649	0.001779	0.01219	0.022142	0.00711	0.03855	0.008639	0.938	0.903	0.998	0.992	0.983	0.99	0.972	0.974
rs9311336	1.4335E-09	-0.035737	0.00591	-0.032868	0.008327	1.16808E-09	0.55966	0.168833	0.007471	0.292715	0.275322	5.7E-09	0.80771	0.291114	0.713	0.816	0.905	0.532	0.75	1	0.479	0.778
rs67822851	1.4338E-09	-0.033115	0.00547	-0.033115	0.005472	2.71414E-09	0.27789	0.892624	0.000753	0.055396	0.053633	0.00015	0.02745	0.872682	0.894	0.814	0.999	0.955	0.962	1	0.967	0.809
rs28501162	1.4342E-09	-0.032079	0.0053	-0.032079	0.005301	2.71498E-09	0.64066	0.205247	0.004454	4.48E-05	0.012036	0.00309	0.34371	0.88008	0.84	0.902	0.992	1	0.982	0.994	0.877	0.765
rs6442144	1.4352E-09	-0.035739	0.00591	-0.032887	0.008299	1.18196E-09	0.56769	0.170469	0.007443	0.288428	0.278361	5.8E-09	0.81094	0.29003	0.713	0.816	0.907	0.539	0.75	1	0.481	0.779
rs139918514	1.4355E-09	0.0771294	0.01275	0.076226	0.017295	2.71732E-09	0.50306	0.960032	0.000185	0.65146	0.038068	3E-05	0.00167	0.988617	0.756	0.666	0.999	0.277	0.942	1	0.983	0.638
rs3213419	1.436E-09	-0.035228	0.00582	-0.035228	0.005821	2.71821E-09	0.09468	0.201426	0.00289	0.116677	0.022473	0.00074	0.00137	0.399156	0.94	0.922	0.997	0.922	0.981	0.999	0.991	0.897
rs3213421	1.4364E-09	-0.035228	0.00582	-0.035228	0.005821	2.71899E-09	0.09468	0.201427	0.002891	0.116677	0.022474	0.00074	0.00137	0.399162	0.94	0.922	0.997	0.922	0.981	0.999	0.991	0.897
rs185947477	1.4366E-09	-0.097015	0.01603	-0.104332	0.024349	2.10076E-09	0.64777	0.013832	1.53E-06	0.089071	0.547143	0.02633	0.01399	0.03386	0.82	0.956	1	0.884	0.767	0.866	0.974	0.948
rs10531773	1.437E-09	-0.034241	0.00566	-0.034241	0.005659	2.72008E-09	0.55604	0.033945	5.18E-06	0.323506	0.042159	0.00406	0.06634	0.40243	0.838	0.941	1	0.686	0.963	0.987	0.946	0.86
rs6816424	1.4379E-09	-0.033264	0.0055	-0.03647	0.008507	2.72176E-09	0.00854	0.209692	0.011019	0.006243	0.79802	0.00023	0.00048	0.764182	0.962	0.903	0.975	0.994	0.722	1	0.992	0.82
rs7861637	1.4406E-09	-0.038802	0.00641	-0.038802	0.006413	2.72673E-09	0.13461	0.41717	0.001784	0.012194	0.022199	0.00712	0.0385	0.00863	0.938	0.903	0.998	0.992	0.983	0.99	0.972	0.974
rs9860007	1.4408E-09	-0.035736	0.00591	-0.032885	0.008269	1.1919E-09	0.57157	0.172269	0.007376	0.284857	0.283851	5.8E-09	0.81821	0.300227	0.712	0.815	0.908	0.543	0.747	1	0.484	0.776
rs7875707	1.4409E-09	-0.038801	0.00641	-0.038801	0.006413	2.72731E-09	0.13461	0.417169	0.001784	0.012194	0.022207	0.00713	0.03849	0.00863	0.938	0.903	0.998	0.992	0.983	0.99	0.972	0.974
rs12715387	1.4413E-09	-0.035727	0.0059	-0.032718	0.008422	1.12283E-09	0.57551	0.171164	0.007582	0.296041	0.279198	5E-09	0.80043	0.294748	0.704	0.811	0.899	0.521	0.742	1	0.469	0.772
rs331948	1.4417E-09	-0.033262	0.0055	-0.036472	0.008507	2.72875E-09	0.00846	0.211856	0.010988	0.006159	0.798448	0.00024	0.00048	0.762609	0.962	0.902	0.975	0.994	0.721	1	0.992	0.82
rs12466847	1.4431E-09	0.0317589	0.00525	0.0320388	0.005867	2.73138E-09	0.55151	0.010806	0.001115	0.034591	0.237158	0.00027	0.74089	0.005857	0.864	0.962	0.999	0.974	0.906	1	0.804	0.972
rs1743971	1.4466E-09	-0.031768	0.00525	-0.032434	0.0064	2.22884E-09	0.35628	0.878544	0.083215	0.000462	0.004418	1.4E-05	0.91823	0.16373	0.808	0.702	0.546	0.999	0.985	1	0.6	0.864
rs4388680	1.4471E-09	0.0318991	0.00527	0.0318991	0.005272	2.7387E-09	0.92842	0.695293	0.004404	0.116805	0.058559	2.1E-06	0.19304	0.154187	0.769	0.822	0.991	0.889	0.954	1	0.905	0.908
rs8033270	1.4495E-09	-0.03048	0.00504	-0.032619	0.00849	1.62897E-09	0.50447	0.474939	1.92E-06	0.033492	0.021971	0.06323	0.00031	0.632621	0.572	0.785	1	0.918	0.964	0.57	0.992	0.745
rs6917453	1.4506E-09	-0.032905	0.00544	-0.032905	0.005439	2.74524E-09	0.56922	0.413925	0.024122	0.000269	0.018674	0.00021	0.50284	0.184675	0.854	0.874	0.939	0.999	0.979	1	0.845	0.912
rs2322701	1.4528E-09	0.0322696	0.00533	0.0322696	0.005334	2.74928E-09	0.23462	0.358876	0.000742	0.000922	0.187608	0.00372	0.07247	0.51882	0.91	0.893	0.999	0.999	0.925	0.995	0.955	0.873
rs13330249	1.4555E-09	-0.0321	0.00531	-0.0321	0.005306	2.75437E-09	0.66391	0.179902	0.003968	5.56E-05	0.015021	0.00308	0.33598	0.920689	0.839	0.908	0.994	1	0.98	0.994	0.88	0.774
rs35261046	1.46E-09	0.0368573	0.00609	0.0374008	0.007464	2.7627E-09	0.84919	0.193457	0.011497	0.004862	0.464445	5.9E-05	0.00045	0.788451	0.754	0.895	0.972	0.994	0.812	1	0.992	0.8
rs828432	1.4619E-09	0.0312388	0.00516	0.0306009	0.005787	2.02187E-09	0.78974	0.244144	0.001377	0.659416	0.292467	1.7E-07	0.07768	0.347657	0.693	0.817	0.992	0.272	0.77	1	0.902	0.789
rs9369156	1.4625E-09	-0.032898	0.00544	-0.032898	0.005439	2.76733E-09	0.57035	0.413834	0.024161	0.000271	0.018706	0.00021	0.50309	0.184294	0.854	0.874	0.939	0.999	0.979	1	0.845	0.912
rs331963	1.4626E-09	-0.03325	0.0055	-0.036452	0.008501	2.76747E-09	0.00849	0.212871	0.011004	0.006167	0.798587	0.00024	0.00049	0.761538	0.962	0.902	0.975	0.994	0.722	1	0.992	0.82
rs143738722	1.4639E-09	-0.073426	0.01214	-0.073426	0.01214	2.76984E-09	0.68044	0.294327	0.000334	0.040627	0.440529	0.00027	0.07993	0.052917	0.843	0.894	1	0.967	0.842	1	0.948	0.946
rs9380924	1.4655E-09	-0.032896	0.00544	-0.032896	0.005439	2.77277E-09	0.57088	0.413883	0.024161	0.000272	0.018704	0.00021	0.50311	0.184094	0.853	0.874	0.939	0.999	0.979	1	0.845	0.912
rs4737198	1.4663E-09	0.0326374	0.0054	0.0326374	0.005396	2.5643E-09	0.26559	0.743211	1.86E-07	0.020315	0.568755	0.00762	0.4742	0.296102	0.857	0.696	1	0.972	0.738	0.968	0.8	0.852
rs11642912	1.4667E-09	-0.044025	0.00728	-0.044025	0.007279	2.77512E-09	0.18848	0.103358	0.01136	0.001167	0.0315	0.00173	0.23796	0.053854	0.928	0.941	0.984	0.999	0.978	0.998	0.925	0.956
rs11943980	1.4709E-09	0.0368501	0.00609	0.0373938	0.007475	2.78275E-09	0.84298	0.192698	0.011541	0.004912	0.463279	5.8E-05	0.00045	0.788762	0.753	0.895	0.972	0.994	0.812	1	0.992	0.8
rs10867574	1.4728E-09	0.0330921	0.00547	0.0330921	0.005472	2.78634E-09	0.35333	0.140264	0.000199	0.008204	0.365679	0.00152	0.52759	0.035725	0.888	0.921	1	0.993	0.867	0.998	0.847	0.952
rs13146157	1.4769E-09	-0.040779	0.00674	-0.040779	0.006744	2.79387E-09	0.20114	0.160516	0.009992	0.000715	0.230633	0.00097	0.02315	0.322951	0.921	0.926	0.986	0.999	0.918	0.999	0.974	0.905
rs6925661	1.477E-09	-0.03289	0.00544	-0.03289	0.005439	2.79412E-09	0.57152	0.414234	0.02421	0.000273	0.018701	0.00021	0.50347	0.183977	0.853	0.874	0.938	0.999	0.979	1	0.844	0.912
rs10680589	1.4773E-09	-0.045375	0.0075	-0.045375	0.007504	2.79473E-09	0.37195	0.558612	0.000297	0.049967	0.116752	0.00081	0.33141	0.002597	0.891	0.869	1	0.964	0.945	0.999	0.894	0.976
rs1820374	1.4776E-09	0.0368439	0.00609	0.0373875	0.007474	2.79525E-09	0.84329	0.193456	0.011505	0.004895	0.464254	5.9E-05	0.00045	0.788444	0.753	0.895	0.972	0.994	0.812	1	0.992	0.8
rs2360520	1.4802E-09	0.0368421	0.00609	0.0373851	0.007473	2.79998E-09	0.84329	0.193457	0.011497	0.004908	0.464445	5.9E-05	0.00045	0.788451	0.753	0.895	0.972	0.994	0.812	1	0.992	0.8
rs165522	1.4806E-09	0.0312456	0.00517	0.0312456	0.005168	2.23275E-09	0.63355	0.247216	0.001344	0.581445	0.325666	2E-07	0.10052	0.413944	0.734	0.821	0.993	0.336	0.762	1	0.891	0.779
rs10930599	1.4814E-09	0.0310508	0.00514	0.0329016	0.00634	2.80231E-09	0.5159	0.888454	0.020093	0.000163	0.137238	0.0023	0.00355	0.024168	0.874	0.83	0.958	0.999	0.939	0.996	0.987	0.96
rs11047182	1.4816E-09	0.0711893	0.01177	0.0711893	0.011774	2.80268E-09	0.20893	0.312663	0.00331	0.090185	0.213152	5.7E-06	0.04327	0.103194	0.893	0.654	0.994	0.916	0.896	1	0.954	0.919
rs9853795	1.4872E-09	-0.035705	0.00591	-0.032836	0.008306	1.23396E-09	0.5674	0.174818	0.007466	0.283523	0.274052	6.1E-09	0.78564	0.286327	0.713	0.814	0.908	0.544	0.753	1	0.475	0.781
rs4406437	1.4878E-09	0.0326135	0.00539	0.0326135	0.005395	2.6036E-09	0.25853	0.723514	1.86E-07	0.022308	0.561574	0.00749	0.45673	0.289732	0.859	0.694	1	0.97	0.742	0.969	0.806	0.854
rs9858012	1.4882E-09	-0.035704	0.00591	-0.032837	0.008306	1.23519E-09	0.56699	0.174789	0.007468	0.283474	0.274233	6.1E-09	0.78567	0.286117	0.713	0.814	0.908	0.544	0.753	1	0.475	0.781
rs10081461	1.4887E-09	0.032626	0.0054	0.032626	0.005397	2.60323E-09	0.25742	0.727612	1.84E-07	0.022774	0.565312	0.00743	0.45539	0.289482	0.859	0.695	1	0.969	0.74	0.969	0.806	0.854
rs9820946	1.4911E-09	-0.035702	0.00591	-0.032833	0.008308	1.2366E-09	0.56693	0.174527	0.007476	0.283699	0.274398	6.1E-09	0.78556	0.286134	0.713	0.814	0.908	0.544	0.753	1	0.475	0.781
rs11649274	1.4914E-09	-0.031511	0.00521	-0.031867	0.00718	2.82071E-09	0.9729	0.746685	0.00672	0.000297	0.001215	0.00046	0.17792	0.253115	0.748	0.784	0.981	0.999	0.992	0.999	0.893	0.55
rs10930600	1.4925E-09	0.0310449	0.00514	0.0328926	0.006338	2.82271E-09	0.51588	0.886873	0.020151	0.000163	0.137302	0.00231	0.00355	0.024222	0.874	0.83	0.958	0.999	0.939	0.996	0.987	0.96
rs17729514	1.4931E-09	-0.059091	0.00977	-0.064924	0.013088	2.82393E-09	0.3055	0.032367	0.003359	0.001944	0.444045	0.00733	0.00265	0.020326	0.91	0.957	0.996	0.998	0.864	0.988	0.989	0.966
rs55740035	1.4948E-09	0.0521544	0.00863	0.0568528	0.011475	2.43181E-09	0.62091	0.050962	4.47E-05	0.029533	0.007939	0.06851	0.00268	0.290776	0.835	0.94	1	0.967	0.987	0.701	0.989	0.886

Table S3

rs4683363	1.495E-09	0.0357004	0.00591	0.0328304	0.008309	1.23947E-09	0.56792	0.174435	0.007491	0.283595	0.274353	6.1E-09	0.78539	0.285799	0.713	0.814	0.907	0.544	0.753	1	0.475	0.781
rs4683364	1.4953E-09	0.0356988	0.00591	0.0328296	0.008307	1.23987E-09	0.56694	0.174678	0.007487	0.283609	0.27455	6.1E-09	0.78561	0.286291	0.713	0.814	0.907	0.544	0.752	1	0.475	0.781
rs76847583	1.496E-09	0.0711711	0.01177	0.0711711	0.011774	2.82928E-09	0.2095	0.31264	0.00333	0.090109	0.213368	5.7E-06	0.04344	0.103193	0.893	0.654	0.994	0.916	0.896	1	0.954	0.919
rs202906	1.5021E-09	-0.063221	0.01046	-0.066133	0.013545	2.84056E-09	0.61427	0.598527	0.012254	0.001207	0.161425	0.00029	0.28625	0.000516	0.859	0.86	0.976	0.998	0.93	1	0.901	0.981
rs148911115	1.5028E-09	0.0322366	0.00533	0.0322366	0.005334	2.84177E-09	0.23238	0.355232	0.000787	0.000862	0.192113	0.00379	0.07162	0.515994	0.911	0.894	0.999	0.999	0.923	0.994	0.955	0.873
rs12286198	1.5042E-09	-0.034482	0.00571	-0.034482	0.005705	2.77079E-09	0.35547	0.18241	0.078091	0.007055	0.052795	1.9E-05	0.01585	0.279985	0.876	0.906	0.72	0.992	0.961	1	0.975	0.889
rs185150116	1.5047E-09	0.0322188	0.00533	0.0322188	0.005331	2.84529E-09	0.24467	0.390917	0.00082	0.000727	0.171578	0.00381	0.07756	0.553087	0.908	0.889	0.999	0.999	0.929	0.994	0.953	0.867
rs76149263	1.505E-09	0.0322782	0.00534	0.0322782	0.005341	2.84586E-09	0.23542	0.352077	0.000776	0.001035	0.179063	0.0035	0.07627	0.519051	0.911	0.895	0.999	0.998	0.927	0.995	0.954	0.873
rs144860583	1.506E-09	0.0322191	0.00533	0.0322191	0.005331	2.84774E-09	0.2448	0.389552	0.000823	0.000727	0.17194	0.0038	0.07758	0.552716	0.908	0.889	0.999	0.999	0.928	0.994	0.953	0.867
rs4864126	1.5062E-09	-0.040755	0.00674	-0.040755	0.006743	2.84798E-09	0.20162	0.162616	0.009993	0.000656	0.231351	0.00102	0.02394	0.325003	0.92	0.926	0.986	0.999	0.918	0.999	0.974	0.905
rs9356265	1.5087E-09	0.0322341	0.00533	0.0322341	0.005334	2.85271E-09	0.23477	0.354358	0.000767	0.000927	0.190699	0.00373	0.07167	0.516231	0.91	0.894	0.999	0.999	0.924	0.995	0.955	0.873
rs6874554	1.509E-09	0.0311963	0.00516	0.030559	0.005786	2.08909E-09	0.80094	0.244002	0.001419	0.656461	0.291795	1.7E-07	0.07681	0.347081	0.691	0.817	0.992	0.275	0.771	1	0.903	0.789
rs9364758	1.5099E-09	0.0322169	0.00533	0.0322169	0.005331	2.85494E-09	0.24436	0.389753	0.000823	0.00073	0.171949	0.0038	0.07762	0.552453	0.908	0.889	0.999	0.999	0.929	0.994	0.953	0.867
rs5794032	1.5103E-09	-0.035371	0.00585	-0.03554	0.008693	2.36981E-09	0.01876	0.323868	0.000352	0.934278	0.341514	4.4E-06	0.18653	0.034442	0.932	0.814	0.999	0.145	0.758	1	0.858	0.924
rs10028493	1.5114E-09	0.0510258	0.00844	0.0510959	0.009857	2.85767E-09	0.48536	0.977265	0.002674	0.008123	0.572479	0.0001	0.00038	0.891561	0.835	0.765	0.995	0.99	0.762	1	0.992	0.731
rs10591593	1.5115E-09	-0.047579	0.00787	-0.047579	0.007873	2.85781E-09	0.05116	0.474794	0.0003	0.040852	0.433365	0.00127	0.03148	0.069906	0.947	0.882	1	0.972	0.86	0.998	0.97	0.945
rs10031476	1.5116E-09	0.0510254	0.00844	0.051095	0.009858	2.85813E-09	0.48579	0.977321	0.002673	0.008118	0.57271	0.0001	0.00038	0.891552	0.835	0.765	0.995	0.99	0.762	1	0.992	0.731
rs10517317	1.5116E-09	0.0510254	0.00844	0.051095	0.009858	2.85813E-09	0.48579	0.977321	0.002673	0.008118	0.57271	0.0001	0.00038	0.891552	0.835	0.765	0.995	0.99	0.762	1	0.992	0.731
rs28786546	1.5116E-09	0.0510254	0.00844	0.051095	0.009858	2.85813E-09	0.48579	0.977321	0.002673	0.008118	0.57271	0.0001	0.00038	0.891552	0.835	0.765	0.995	0.99	0.762	1	0.992	0.731
rs28852435	1.5116E-09	0.0510254	0.00844	0.051095	0.009858	2.85813E-09	0.48579	0.977321	0.002673	0.008118	0.57271	0.0001	0.00038	0.891552	0.835	0.765	0.995	0.99	0.762	1	0.992	0.731
rs33973643	1.5116E-09	0.0510254	0.00844	0.051095	0.009858	2.85813E-09	0.48579	0.977321	0.002673	0.008118	0.57271	0.0001	0.00038	0.891552	0.835	0.765	0.995	0.99	0.762	1	0.992	0.731
rs7671695	1.5116E-09	0.0510254	0.00844	0.051095	0.009858	2.85813E-09	0.48579	0.977321	0.002673	0.008118	0.57271	0.0001	0.00038	0.891552	0.835	0.765	0.995	0.99	0.762	1	0.992	0.731
rs7656418	1.5117E-09	0.0510253	0.00844	0.0510949	0.009858	2.85829E-09	0.48579	0.977321	0.002673	0.008118	0.572712	0.0001	0.00038	0.891551	0.835	0.765	0.995	0.99	0.762	1	0.992	0.731
rs1825071	1.5121E-09	0.0510249	0.00844	0.0510945	0.009858	2.85902E-09	0.48589	0.977321	0.002674	0.008119	0.572716	0.0001	0.00038	0.891552	0.835	0.765	0.995	0.99	0.762	1	0.992	0.731
rs349696	1.5122E-09	0.0311939	0.00516	0.030559	0.005784	2.09287E-09	0.79852	0.244017	0.001425	0.657027	0.291306	1.7E-07	0.07697	0.34649	0.692	0.817	0.992	0.275	0.771	1	0.903	0.79
rs16989701	1.5122E-09	0.0510249	0.00844	0.0510944	0.009858	2.85918E-09	0.48589	0.977321	0.002674	0.008119	0.572718	0.0001	0.00038	0.891551	0.835	0.765	0.995	0.99	0.762	1	0.992	0.731
rs7201866	1.5132E-09	0.0307266	0.00508	0.0307266	0.005085	2.86105E-09	0.70957	0.766539	0.002427	0.014367	0.441791	1.6E-06	0.30944	0.67819	0.781	0.699	0.994	0.98	0.783	1	0.845	0.781
rs60156090	1.5135E-09	0.0510239	0.00844	0.0510939	0.009858	2.86152E-09	0.48536	0.977249	0.002675	0.008123	0.572787	0.0001	0.00038	0.891563	0.835	0.765	0.995	0.99	0.762	1	0.992	0.731
rs189785827	1.5139E-09	0.0672258	0.01112	0.0659229	0.013861	2.76729E-09	0.03166	0.25691	0.000295	0.699223	0.456211	4E-06	0.04553	0.672334	0.913	0.822	0.999	0.26	0.7	1	0.929	0.721
rs9992241	1.5141E-09	0.0510234	0.00844	0.0510931	0.009858	2.86267E-09	0.4858	0.977249	0.002675	0.008123	0.572787	0.0001	0.00038	0.891564	0.835	0.765	0.995	0.99	0.762	1	0.992	0.731
rs1004998	1.5144E-09	-0.033271	0.00551	-0.041725	0.010224	1.67406E-09	0.94295	0.028243	0.001523	0.000125	0.295618	0.05908	0.00444	0.001364	0.755	0.947	0.989	1	0.851	0.706	0.985	0.98
rs200475	1.5148E-09	-0.045341	0.0075	-0.045341	0.007503	2.86389E-09	0.36162	0.535146	0.000294	0.054553	0.114816	0.00081	0.33379	0.002439	0.893	0.871	1	0.961	0.945	0.999	0.894	0.976
rs3812988	1.5148E-09	-0.035191	0.00582	-0.035191	0.005824	2.8639E-09	0.10154	0.196093	0.003294	0.128992	0.018607	0.00067	0.00138	0.387775	0.939	0.922	0.996	0.912	0.983	0.999	0.991	0.897
rs55838477	1.5149E-09	-0.032042	0.0053	-0.032042	0.005303	2.86415E-09	0.64582	0.211973	0.004537	3.84E-05	0.012828	0.00319	0.34915	0.863441	0.839	0.9	0.992	1	0.982	0.994	0.875	0.761
rs17075335	1.5152E-09	0.0356829	0.00591	0.0327375	0.008373	1.23826E-09	0.57453	0.173696	0.007211	0.29273	0.279808	6.1E-09	0.77549	0.272104	0.708	0.813	0.908	0.53	0.746	1	0.467	0.783
rs59808482	1.5157E-09	0.052135	0.00863	0.0567984	0.011455	2.46476E-09	0.61856	0.051014	4.43E-05	0.029829	0.00808	0.06878	0.00273	0.28615	0.835	0.94	1	0.966	0.987	0.7	0.989	0.887
rs16989674	1.5157E-09	0.0510222	0.00844	0.0510924	0.009855	2.8657E-09	0.48457	0.97718	0.002675	0.008131	0.57271	0.0001	0.00038	0.891543	0.836	0.765	0.995	0.99	0.762	1	0.992	0.731
rs6781696	1.5164E-09	0.035683	0.00591	0.0327327	0.008377	1.23758E-09	0.57507	0.173725	0.007209	0.292964	0.280032	6E-09	0.77507	0.271922	0.708	0.812	0.908	0.529	0.746	1	0.467	0.783
rs9833793	1.5169E-09	-0.035683	0.00591	-0.032819	0.008303	1.25931E-09	0.56693	0.174511	0.007502	0.28428	0.274765	6.2E-09	0.78606	0.286252	0.713	0.814	0.907	0.544	0.752	1	0.475	0.781
rs6848806	1.5176E-09	0.0510211	0.00844	0.0510911	0.009858	2.86921E-09	0.48503	0.977031	0.002673	0.008144	0.573017	0.0001	0.00037	0.891578	0.835	0.765	0.995	0.99	0.762	1	0.992	0.731
rs9861337	1.518E-09	-0.035687	0.00591	-0.032847	0.008273	1.25999E-09	0.56661	0.172226	0.007506	0.284538	0.288092	6.1E-09	0.81177	0.291528	0.713	0.815	0.907	0.544	0.745	1	0.483	0.779
rs147746050	1.5181E-09	0.082346	0.01363	0.082346	0.013628	2.87007E-09	0.60348	0.354842	3.07E-05	0.014379	0.162255	0.00209	0.03231	0.444972	0.831	0.666	1	0.985	0.913	0.996	0.959	0.853
rs79316535	1.5181E-09	0.0322082	0.00533	0.0322082	0.00533	2.87016E-09	0.24484	0.392511	0.000817	0.000712	0.171659	0.00387	0.07805	0.555231	0.908	0.888	0.999	0.999	0.929	0.994	0.953	0.867
rs13105716	1.519E-09	0.0510188	0.00844	0.0510887	0.009859	2.87168E-09	0.48579	0.977335	0.002678	0.008118	0.572918	0.0001	0.00038	0.891512	0.835	0.765	0.995	0.99	0.762	1	0.992	0.731
rs7636673	1.5206E-09	-0.03568	0.00591	-0.032819	0.008301	1.26319E-09	0.56686	0.17449	0.007505	0.284307	0.274988	6.2E-09	0.78649	0.286061	0.713	0.814	0.907	0.544	0.752	1	0.475	0.781
rs6903652	1.5209E-09	-0.047499	0.00786	-0.047499	0.007861	2.87525E-09	0.04575	0.430632	0.000321	0.045632	0.394903	0.00122	0.04039	0.060765	0.95	0.888	1	0.969	0.872	0.999	0.967	0.949
rs149981	1.5218E-09	-0.063196	0.01046	-0.066154	0.013582	2.8769E-09	0.60784	0.600517	0.012357	0.001163	0.162062	0.0003	0.28875	0.000513	0.86	0.86	0.976	0.998	0.929	1	0.9	0.981
rs74429612	1.5224E-09	-0.034229	0.00567	-0.034229	0.005665	2.878E-09	0.51681	0.037921	4.41E-06	0.202042	0.07021	0.00576	0.08494	0.419053	0.859	0.944	1	0.823	0.955	0.985	0.945	0.871
rs7639605	1.5225E-09	-0.035679	0.00591	-0.032816	0.008302	1.26467E-09	0.56686	0.174496	0.007503	0.284304	0.275224	6.2E-09	0.78615	0.286072	0.713	0.814	0.907	0.544	0.752	1	0.475	0.781
rs72787038	1.5234E-09	0.0387688	0.00642	0.0387688	0.006417	2.87984E-09	0.23525	0.014149	0.00119	0.121647	0.035295	0.00068	0.05294	0.235576	0.918	0.965	0.999	0.919	0.976	0.999	0.965	0.92
rs4016130	1.5246E-09	-0.035681	0.00591	-0.032816	0.008302	1.26689E-09	0.56809	0.174502	0.007497	0.284869	0.275193	6.2E-09	0.7864	0.285854	0.713	0.814	0.907	0.543	0.752	1	0.475	0.781
rs117139701	1.5265E-09	0.0541092	0.00896	0.0541092	0.008956	2.88565E-09	0.41136	0.898359	0.002145	0.001119	0.4278	3.4E-05	0.04262	0.897732	0.606	0.74	0.994	0.997	0.777	1	0.94	0.693
rs12966942	1.5268E-09	-0.030866	0.00511	-0.03083	0.005629	2.8861E-09	0.57522	0.440323	0.000107	0.000625	0.26251	0.00356	0.01245	0.47853	0.667	0.641	1	0.998	0.856	0.99	0.969	0.824
rs12903474	1.5282E-09	0.0304819	0.00505	0.0328272	0.008826	1.15057E-09	0.37115	0.320477	7.43E-07	0.022859	0.020983	0.11206	0.00084	0.514602	0.439	0.785	1	0.919	0.96	0.282	0.989	0.723
rs76975191	1.5305E-09	0.0541083	0.00896	0.0541083	0.008957	2.893E-09	0.40774	0.898313	0.002205	0.00111	0.426366	3.4E-05	0.04251	0.899503	0.605	0.74	0.994	0.997	0.778	1	0.94	0.694

Table S3

rs7107792	1.5307E-09	0.0314857	0.00521	0.0313875	0.005948	2.89337E-09	0.73474	0.194516	6.43E-05	0.000122	0.702823	0.00512	0.05001	0.904597	0.756	0.861	1	0.999	0.436	0.976	0.935	0.717
rs165520	1.5317E-09	0.0312246	0.00517	0.0312246	0.005169	2.30222E-09	0.6348	0.248726	0.001318	0.58647	0.32885	2E-07	0.10027	0.419965	0.732	0.82	0.993	0.332	0.759	1	0.89	0.776
rs180711784	1.5326E-09	0.0862989	0.01429	0.091273	0.021137	1.74715E-09	0.24955	0.031891	1.19E-06	0.68293	0.004893	0.01172	0.15919	0.230683	0.852	0.927	1	0.315	0.987	0.888	0.886	0.858
rs9356250	1.5326E-09	0.0322026	0.00533	0.0322026	0.005331	2.89692E-09	0.24475	0.390067	0.000822	0.000729	0.172009	0.00385	0.0777	0.553384	0.908	0.889	0.999	0.999	0.928	0.994	0.953	0.867
rs9356249	1.5328E-09	0.0322026	0.00533	0.0322026	0.005331	2.8972E-09	0.24476	0.389798	0.000822	0.000729	0.17201	0.00385	0.0777	0.553093	0.908	0.889	0.999	0.999	0.928	0.994	0.953	0.867
rs165524	1.5336E-09	0.0311929	0.00516	0.0305559	0.00578	2.12479E-09	0.80067	0.242871	0.00138	0.658142	0.293833	1.7E-07	0.0784	0.355351	0.69	0.817	0.992	0.274	0.769	1	0.901	0.786
rs7940	1.5343E-09	0.0307272	0.00509	0.0307272	0.005087	2.89992E-09	0.70353	0.788456	0.00284	0.013782	0.465645	1.3E-06	0.31428	0.668819	0.781	0.702	0.993	0.981	0.773	1	0.843	0.782
rs2419226	1.5343E-09	-0.040719	0.00674	-0.040719	0.006741	2.89998E-09	0.20077	0.162921	0.010091	0.000713	0.23285	0.00099	0.02314	0.321564	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs6537110	1.5348E-09	0.0383626	0.00635	0.0357248	0.00841	2.90097E-09	0.25921	0.792875	2.82E-06	0.166861	0.911544	0.00012	0.01674	0.702025	0.79	0.586	1	0.683	0.42	0.999	0.944	0.546
rs34019338	1.5363E-09	0.0464371	0.00769	0.0489057	0.011853	2.90371E-09	0.60266	0.915773	0.012582	0.016273	0.002117	8.6E-05	0.56557	0.001093	0.716	0.793	0.97	0.984	0.992	1	0.816	0.979
rs56006972	1.5364E-09	0.0321987	0.00533	0.0321987	0.00533	2.90382E-09	0.24443	0.392062	0.000817	0.000733	0.171747	0.00385	0.07793	0.554566	0.908	0.888	0.999	0.999	0.929	0.994	0.953	0.867
rs200717859	1.5364E-09	0.0321998	0.00533	0.0321998	0.005331	2.90386E-09	0.24538	0.390831	0.00082	0.000728	0.171953	0.00385	0.07778	0.554087	0.908	0.889	0.999	0.999	0.928	0.994	0.953	0.867
rs183785627	1.537E-09	0.0321993	0.00533	0.0321993	0.005331	2.90494E-09	0.24466	0.390858	0.00082	0.00073	0.171839	0.00385	0.07777	0.554386	0.908	0.889	0.999	0.999	0.928	0.994	0.953	0.867
rs61301417	1.5404E-09	0.0441094	0.0073	0.0436528	0.007592	2.74686E-09	0.77095	0.21258	1.02E-05	0.549725	0.785829	9.1E-06	0.40661	0.181278	0.635	0.782	1	0.281	0.471	1	0.693	0.798
rs117417069	1.5421E-09	0.0321954	0.00533	0.0321954	0.00533	2.91434E-09	0.2445	0.392096	0.000817	0.000732	0.171797	0.00386	0.07796	0.554664	0.908	0.888	0.999	0.999	0.928	0.994	0.953	0.867
rs9371563	1.543E-09	-0.032556	0.00539	-0.031916	0.007777	1.36272E-09	0.16261	0.475183	0.085704	0.023066	0.028412	4.6E-08	0.59811	0.225991	0.836	0.744	0.457	0.927	0.947	1	0.385	0.815
rs183530078	1.5441E-09	0.0321974	0.00533	0.0321974	0.005331	2.91806E-09	0.24491	0.389214	0.000826	0.000729	0.172133	0.00385	0.07772	0.553276	0.908	0.889	0.999	0.999	0.928	0.994	0.953	0.867
rs7437439	1.5483E-09	-0.040706	0.00674	-0.040706	0.00674	2.92581E-09	0.20077	0.164156	0.010088	0.000713	0.231798	0.00099	0.02343	0.323468	0.921	0.926	0.985	0.999	0.918	0.999	0.974	0.905
rs1836568	1.5499E-09	-0.040742	0.00675	-0.040742	0.006746	2.92876E-09	0.2267	0.153052	0.010103	0.000702	0.24642	0.00096	0.02154	0.320263	0.916	0.927	0.985	0.999	0.913	0.999	0.975	0.905
rs1836567	1.5502E-09	-0.040742	0.00675	-0.040742	0.006746	2.92943E-09	0.22671	0.152936	0.010111	0.000702	0.246391	0.00096	0.02154	0.320128	0.916	0.927	0.985	0.999	0.913	0.999	0.975	0.905
rs169262	1.5505E-09	-0.045315	0.0075	-0.045315	0.007504	2.92999E-09	0.37243	0.569781	0.000299	0.050591	0.117864	0.00081	0.33048	0.002673	0.891	0.867	1	0.964	0.944	0.999	0.894	0.976
rs1836569	1.5509E-09	-0.040741	0.00675	-0.040741	0.006746	2.93069E-09	0.22669	0.153053	0.010105	0.000703	0.246415	0.00096	0.02154	0.320264	0.916	0.927	0.985	0.999	0.913	0.999	0.975	0.905
rs9371564	1.5541E-09	-0.03255	0.00539	-0.03191	0.007778	1.37142E-09	0.16238	0.475328	0.085954	0.023008	0.028416	4.6E-08	0.59782	0.226792	0.836	0.744	0.456	0.927	0.947	1	0.385	0.815
rs1547405	1.5546E-09	-0.03202	0.0053	-0.03202	0.005303	2.93749E-09	0.64906	0.212491	0.004527	4.16E-05	0.012593	0.00313	0.35178	0.859919	0.838	0.9	0.992	1	0.982	0.994	0.874	0.761
rs1553859	1.5556E-09	0.0321897	0.00533	0.0321897	0.005331	2.93935E-09	0.2395	0.379435	0.000779	0.000873	0.190003	0.00363	0.07343	0.53977	0.909	0.89	0.999	0.999	0.923	0.995	0.954	0.869
rs1553858	1.5562E-09	0.0321894	0.00533	0.0321894	0.005331	2.94041E-09	0.23859	0.379458	0.000777	0.000878	0.190051	0.00363	0.07342	0.539747	0.909	0.89	0.999	0.999	0.923	0.995	0.954	0.869
rs11099197	1.5567E-09	-0.040761	0.00675	-0.040761	0.00675	2.94147E-09	0.20718	0.168903	0.010409	0.000727	0.22656	0.001	0.0228	0.301544	0.92	0.925	0.985	0.999	0.919	0.999	0.975	0.908
rs9311334	1.5568E-09	-0.03569	0.00591	-0.032736	0.008375	1.24813E-09	0.58472	0.176252	0.007926	0.282057	0.276409	5.6E-09	0.78453	0.289948	0.706	0.811	0.899	0.541	0.747	1	0.47	0.776
rs3844426	1.5573E-09	0.0304776	0.00505	0.0304776	0.005047	2.94241E-09	0.53817	0.770007	0.000488	0.0037	0.437751	1.4E-05	0.23609	0.834725	0.597	0.648	0.999	0.992	0.74	1	0.838	0.643
rs13127661	1.5576E-09	-0.040769	0.00675	-0.040769	0.006752	2.94299E-09	0.19991	0.163418	0.010253	0.000678	0.23405	0.00102	0.02337	0.322902	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs499732	1.5591E-09	-0.082752	0.0137	-0.079598	0.016809	2.94573E-09	0.61696	0.400428	0.000115	0.032123	0.003861	8.1E-05	0.95272	0.404392	0.61	0.556	1	0.947	0.982	1	0.583	0.796
rs116990413	1.5604E-09	-0.07569	0.01254	-0.07569	0.012536	2.94829E-09	0.18011	0.610254	0.000564	0.027252	0.811355	4.8E-05	0.06968	0.496564	0.895	0.826	0.999	0.972	0.689	1	0.942	0.84
rs165521	1.5614E-09	0.0312031	0.00517	0.0312031	0.005168	2.3518E-09	0.63558	0.24761	0.00134	0.584834	0.32916	2.1E-07	0.10035	0.419625	0.733	0.82	0.993	0.334	0.759	1	0.891	0.776
rs9679543	1.5622E-09	-0.034145	0.00566	-0.034145	0.005655	2.95153E-09	0.56785	0.030786	5.61E-06	0.290857	0.050446	0.0044	0.06559	0.409154	0.841	0.944	1	0.725	0.96	0.987	0.948	0.863
rs6827819	1.5626E-09	-0.040734	0.00675	-0.040734	0.006747	2.95228E-09	0.22668	0.152877	0.010104	0.000703	0.246434	0.00097	0.02162	0.320269	0.916	0.927	0.985	0.999	0.913	0.999	0.975	0.905
rs7667183	1.5626E-09	-0.033741	0.00559	-0.036527	0.008354	2.95233E-09	0.00661	0.238941	0.013009	0.003002	0.834135	0.00024	0.00142	0.758276	0.964	0.896	0.968	0.996	0.705	1	0.989	0.817
rs12127270	1.5639E-09	-0.03493	0.00579	-0.033392	0.008382	2.95458E-09	0.0321	0.043579	7.35E-05	0.02646	0.09236	0.00034	0.19022	0.576398	0.42	0.924	1	0.969	0.929	0.999	0.889	0.806
rs1140239	1.5643E-09	-0.031502	0.00522	-0.031852	0.007123	2.95532E-09	0.9981	0.738515	0.006275	0.000325	0.001363	0.00049	0.16144	0.251405	0.744	0.786	0.983	0.999	0.991	0.999	0.899	0.55
rs1359986	1.5649E-09	0.0330348	0.00547	0.0330348	0.005472	2.95658E-09	0.36283	0.128093	0.000187	0.008807	0.360522	0.00162	0.55024	0.034377	0.886	0.923	1	0.992	0.869	0.998	0.842	0.953
rs1435314	1.5656E-09	-0.040732	0.00675	-0.040732	0.006747	2.95788E-09	0.22667	0.1527	0.010106	0.000703	0.246528	0.00097	0.02162	0.319998	0.916	0.927	0.985	0.999	0.913	0.999	0.975	0.905
rs11933763	1.5678E-09	-0.033734	0.00559	-0.036694	0.008402	2.96197E-09	0.00633	0.217034	0.014847	0.002818	0.82301	0.00024	0.00148	0.72848	0.964	0.9	0.962	0.996	0.71	1	0.989	0.822
rs77460182	1.5692E-09	0.0321821	0.00533	0.0321821	0.005331	2.96446E-09	0.23924	0.379229	0.000778	0.000884	0.190115	0.00364	0.07347	0.539259	0.909	0.89	0.999	0.999	0.923	0.995	0.954	0.869
rs17016777	1.5751E-09	-0.033737	0.00559	-0.036502	0.008342	2.97543E-09	0.00667	0.241496	0.012893	0.003036	0.833605	0.00024	0.00142	0.758098	0.963	0.895	0.968	0.996	0.706	1	0.989	0.817
rs9591767	1.5766E-09	-0.040709	0.00674	-0.040709	0.006744	2.97805E-09	0.77107	0.106909	1.98E-06	0.165312	0.34442	0.00177	0.05356	0.440966	0.72	0.905	1	0.822	0.834	0.995	0.945	0.84
rs6824812	1.578E-09	-0.033203	0.0055	-0.033203	0.005501	2.9807E-09	0.58283	0.03195	0.004535	0.006087	0.638817	0.00022	0.013	0.308335	0.857	0.949	0.993	0.994	0.788	1	0.977	0.894
rs117933984	1.5819E-09	0.0540567	0.00896	0.0540567	0.008956	2.98796E-09	0.4111	0.896642	0.002233	0.001143	0.427677	3.3E-05	0.04261	0.898415	0.607	0.741	0.994	0.997	0.778	1	0.94	0.694
rs58194884	1.5836E-09	-0.04075	0.00675	-0.04075	0.006752	2.99107E-09	0.19511	0.163418	0.010253	0.000706	0.23405	0.00102	0.02337	0.322902	0.922	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs1550560	1.5838E-09	-0.031028	0.00514	-0.031028	0.005141	2.99139E-09	0.97054	0.566522	0.000833	0.010576	0.199988	0.00018	0.10091	0.296435	0.793	0.852	0.999	0.99	0.91	1	0.939	0.89
rs13102994	1.5854E-09	-0.040751	0.00675	-0.040751	0.006752	2.99442E-09	0.19985	0.163418	0.010253	0.000695	0.23405	0.00102	0.02337	0.322902	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs13119821	1.5856E-09	-0.040762	0.00675	-0.040762	0.006754	2.99483E-09	0.20093	0.156142	0.010392	0.000715	0.224484	0.00109	0.02168	0.315513	0.921	0.927	0.985	0.999	0.92	0.999	0.975	0.906
rs13119679	1.5863E-09	-0.040747	0.00675	-0.040747	0.006751	2.99604E-09	0.20093	0.164704	0.010198	0.000715	0.234777	0.00099	0.02371	0.323827	0.921	0.926	0.986	0.999	0.917	0.999	0.974	0.905
rs10018735	1.5863E-09	-0.04069	0.00674	-0.04069	0.006742	2.99612E-09	0.19759	0.164522	0.010103	0.000712	0.231292	0.001	0.02396	0.326458	0.921	0.926	0.985	0.999	0.918	0.999	0.974	0.904
rs17044236	1.5894E-09	0.0316746	0.00525	0.031946	0.005841	3.00179E-09	0.55074	0.01088	0.001191	0.034767	0.234071	0.00028	0.74195	0.006003	0.864	0.962	0.998	0.974	0.907	1	0.805	0.972
rs7112375	1.5934E-09	0.037403	0.0062	0.037381	0.006371	3.00913E-09	0.0098	0.517431	0.000375	0.260702	0.375147	5.6E-05	0.33093	0.03182	0.958	0.841	0.999	0.747	0.836	1	0.865	0.945
rs2419224	1.594E-09	-0.040744	0.00675	-0.040744	0.006752	3.01022E-09	0.20086	0.163938	0.010299	0.000689	0.234417	0.00102	0.0235	0.323274	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905

Table S3

rs11109662	1.5973E-09	0.0583408	0.00967	0.0583408	0.009668	3.01634E-09	0.73822	0.662459	0.000192	0.023956	0.104155	0.00108	0.07171	0.200072	0.843	0.852	1	0.982	0.946	0.999	0.952	0.913
rs55909091	1.5991E-09	0.0586601	0.00972	0.0586601	0.009722	3.01966E-09	0.11002	0.270844	0.003196	0.049443	0.043444	5.8E-05	0.29517	0.469631	0.931	0.905	0.996	0.966	0.97	1	0.903	0.879
rs11933449	1.5995E-09	-0.040743	0.00675	-0.040743	0.006752	3.02043E-09	0.20183	0.163966	0.010299	0.000688	0.234564	0.00102	0.02351	0.323468	0.92	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs11790468	1.5999E-09	-0.036228	0.006	-0.036519	0.00647	3.0211E-09	0.65221	0.247895	3.32E-05	0.002122	0.427543	0.01741	0.06548	0.014422	0.729	0.891	1	0.997	0.829	0.939	0.948	0.959
rs79425743	1.6036E-09	0.0440436	0.0073	0.0436869	0.007524	2.87426E-09	0.77545	0.218512	1.07E-05	0.541557	0.791422	9.2E-06	0.40974	0.178942	0.635	0.78	1	0.288	0.471	1	0.693	0.799
rs140524012	1.6056E-09	0.0304057	0.00504	0.0266392	0.010699	2.33956E-09	0.29474	0.11885	0.003071	0.00012	0.411613	0.00036	4.1E-05	0.855036	0.481	0.407	0.986	0.999	0.718	0.998	0.993	0.607
rs139431083	1.6076E-09	0.086111	0.01427	0.086111	0.014273	3.03529E-09	0.51797	0.431222	0.000791	0.000874	0.048207	0.01139	0.01532	0.514012	0.875	0.885	0.999	0.999	0.968	0.979	0.976	0.874
rs9925478	1.6093E-09	-0.032014	0.00531	-0.032014	0.005306	3.03842E-09	0.7474	0.192876	0.005949	3.37E-05	0.011091	0.00236	0.36442	0.745469	0.819	0.9	0.989	1	0.982	0.995	0.866	0.733
rs1435295	1.6113E-09	-0.040736	0.00675	-0.040736	0.006752	3.04223E-09	0.20162	0.163869	0.010054	0.00071	0.234817	0.00103	0.0237	0.324638	0.92	0.926	0.986	0.999	0.917	0.999	0.974	0.905
rs17050497	1.6121E-09	0.0353179	0.00585	0.0371122	0.007406	3.0436E-09	0.07589	0.011137	0.008496	0.013064	0.002669	0.00055	0.24108	0.651204	0.939	0.964	0.987	0.99	0.992	0.999	0.913	0.749
rs7776351	1.6128E-09	-0.038336	0.00635	-0.038336	0.006355	3.045E-09	0.7652	0.170332	0.000378	0.003868	0.116634	0.01279	0.09427	0.003243	0.853	0.925	1	0.996	0.949	0.974	0.952	0.977
rs11099196	1.6163E-09	-0.040728	0.00675	-0.040728	0.006752	3.05147E-09	0.20077	0.163418	0.010253	0.000713	0.23405	0.00102	0.02337	0.322902	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs11099199	1.6163E-09	-0.040728	0.00675	-0.040728	0.006752	3.05147E-09	0.20077	0.163418	0.010253	0.000713	0.23405	0.00102	0.02337	0.322902	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs11099200	1.6163E-09	-0.040728	0.00675	-0.040728	0.006752	3.05147E-09	0.20077	0.163418	0.010253	0.000713	0.23405	0.00102	0.02337	0.322902	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs13148998	1.6163E-09	-0.040728	0.00675	-0.040728	0.006752	3.05147E-09	0.20077	0.163418	0.010253	0.000713	0.23405	0.00102	0.02337	0.322902	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs13149064	1.6163E-09	-0.040728	0.00675	-0.040728	0.006752	3.05147E-09	0.20077	0.163418	0.010253	0.000713	0.23405	0.00102	0.02337	0.322902	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs13149120	1.6163E-09	-0.040728	0.00675	-0.040728	0.006752	3.05147E-09	0.20077	0.163418	0.010253	0.000713	0.23405	0.00102	0.02337	0.322902	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs13149398	1.6163E-09	-0.040728	0.00675	-0.040728	0.006752	3.05147E-09	0.20077	0.163418	0.010253	0.000713	0.23405	0.00102	0.02337	0.322902	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs13149534	1.6163E-09	-0.040728	0.00675	-0.040728	0.006752	3.05147E-09	0.20077	0.163418	0.010253	0.000713	0.23405	0.00102	0.02337	0.322902	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs1347411	1.6163E-09	-0.040728	0.00675	-0.040728	0.006752	3.05147E-09	0.20077	0.163418	0.010253	0.000713	0.23405	0.00102	0.02337	0.322902	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs2419227	1.6163E-09	-0.040728	0.00675	-0.040728	0.006752	3.05147E-09	0.20077	0.163418	0.010253	0.000713	0.23405	0.00102	0.02337	0.322902	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs2900845	1.6163E-09	-0.040728	0.00675	-0.040728	0.006752	3.05147E-09	0.20077	0.163418	0.010253	0.000713	0.23405	0.00102	0.02337	0.322902	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs371783417	1.6163E-09	-0.040728	0.00675	-0.040728	0.006752	3.05147E-09	0.20077	0.163418	0.010253	0.000713	0.23405	0.00102	0.02337	0.322902	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs376067157	1.6163E-09	-0.040728	0.00675	-0.040728	0.006752	3.05147E-09	0.20077	0.163418	0.010253	0.000713	0.23405	0.00102	0.02337	0.322902	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs376597483	1.6163E-09	-0.040728	0.00675	-0.040728	0.006752	3.05147E-09	0.20077	0.163418	0.010253	0.000713	0.23405	0.00102	0.02337	0.322902	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs6840977	1.6163E-09	-0.040728	0.00675	-0.040728	0.006752	3.05147E-09	0.20077	0.163418	0.010253	0.000713	0.23405	0.00102	0.02337	0.322902	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs6841517	1.6163E-09	-0.040728	0.00675	-0.040728	0.006752	3.05147E-09	0.20077	0.163418	0.010253	0.000713	0.23405	0.00102	0.02337	0.322902	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs1435287	1.6169E-09	-0.040728	0.00675	-0.040728	0.006752	3.05258E-09	0.20077	0.163596	0.010268	0.000712	0.234042	0.00102	0.0234	0.32295	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs9347031	1.617E-09	0.0321538	0.00533	0.0321538	0.00533	3.05271E-09	0.2392	0.390351	0.0008	0.000826	0.17149	0.00386	0.07794	0.554715	0.909	0.889	0.999	0.999	0.929	0.994	0.953	0.867
rs2419225	1.6181E-09	-0.040726	0.00675	-0.040726	0.006752	3.05472E-09	0.20453	0.163461	0.010251	0.000705	0.234151	0.00102	0.02338	0.322926	0.92	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs10776510	1.6181E-09	-0.040728	0.00675	-0.040728	0.006752	3.05474E-09	0.20083	0.163418	0.010253	0.000714	0.23405	0.00102	0.02337	0.322902	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs6827287	1.6181E-09	-0.040728	0.00675	-0.040728	0.006752	3.05474E-09	0.20083	0.163418	0.010253	0.000714	0.23405	0.00102	0.02337	0.322902	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs7854879	1.6182E-09	-0.041426	0.00687	-0.041426	0.006867	3.05487E-09	0.70154	0.29425	0.000343	0.090373	0.065736	0.00184	0.01608	0.021888	0.858	0.906	1	0.938	0.964	0.998	0.978	0.963
rs76065745	1.6186E-09	-0.054627	0.00906	-0.054627	0.009056	3.05566E-09	0.68236	0.613041	0.003439	0.18834	0.00047	7.1E-05	0.08512	0.253245	0.83	0.841	0.994	0.824	0.995	1	0.942	0.894
rs6782465	1.6187E-09	0.044023	0.0073	0.0435064	0.007624	2.88087E-09	0.78727	0.219788	1.04E-05	0.548318	0.795809	9.1E-06	0.40777	0.177109	0.63	0.778	1	0.281	0.466	1	0.691	0.799
rs4141843	1.619E-09	0.0353136	0.00585	0.0371083	0.007403	3.05636E-09	0.07632	0.011108	0.008423	0.012984	0.002665	0.00056	0.24023	0.651482	0.939	0.964	0.987	0.99	0.992	0.999	0.913	0.749
rs13125902	1.6201E-09	-0.040725	0.00675	-0.040725	0.006752	3.05834E-09	0.20092	0.163418	0.010253	0.000715	0.23405	0.00102	0.02337	0.322902	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs13147694	1.6201E-09	-0.040725	0.00675	-0.040725	0.006752	3.05834E-09	0.20092	0.163418	0.010253	0.000715	0.23405	0.00102	0.02337	0.322902	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs1579587	1.6201E-09	-0.040725	0.00675	-0.040725	0.006752	3.05834E-09	0.20092	0.163418	0.010253	0.000715	0.23405	0.00102	0.02337	0.322902	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs1579588	1.6201E-09	-0.040725	0.00675	-0.040725	0.006752	3.05834E-09	0.20092	0.163418	0.010253	0.000715	0.23405	0.00102	0.02337	0.322902	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs5022835	1.6201E-09	-0.040725	0.00675	-0.040725	0.006752	3.05834E-09	0.20092	0.163418	0.010253	0.000715	0.23405	0.00102	0.02337	0.322902	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs13146391	1.6201E-09	-0.040725	0.00675	-0.040725	0.006752	3.05837E-09	0.20093	0.163418	0.010253	0.000715	0.23405	0.00102	0.02337	0.322902	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs5022834	1.6207E-09	-0.040725	0.00675	-0.040725	0.006752	3.05951E-09	0.20092	0.163418	0.010253	0.000715	0.23405	0.00102	0.02337	0.322902	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs1369372	1.6207E-09	-0.040724	0.00675	-0.040724	0.006751	3.05953E-09	0.20598	0.163411	0.010253	0.000701	0.234473	0.00102	0.02337	0.322916	0.92	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs12325400	1.6216E-09	-0.031441	0.00521	-0.031798	0.00716	3.06119E-09	0.97018	0.746637	0.006768	0.000313	0.001238	0.00048	0.17775	0.251703	0.748	0.784	0.981	0.999	0.992	0.999	0.893	0.55
rs72891333	1.6229E-09	-0.05768	0.00956	-0.05768	0.009563	3.06353E-09	0.23491	0.314217	0.005677	0.000116	0.078026	0.00186	0.1168	0.946636	0.907	0.896	0.992	1	0.956	0.997	0.941	0.81
rs13123392	1.6241E-09	-0.040724	0.00675	-0.040724	0.006752	3.06574E-09	0.20087	0.163969	0.010301	0.000706	0.234481	0.00102	0.02351	0.323496	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs3050746	1.6254E-09	-0.040723	0.00675	-0.040723	0.006752	3.06822E-09	0.20075	0.163915	0.010296	0.00071	0.234302	0.00102	0.02348	0.323283	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs2419223	1.6264E-09	-0.040722	0.00675	-0.040722	0.006752	3.07012E-09	0.20075	0.163938	0.010299	0.00071	0.234417	0.00102	0.0235	0.323274	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs35957409	1.6265E-09	-0.038346	0.00636	-0.038346	0.006358	3.07018E-09	0.74246	0.195821	0.000467	0.003462	0.104608	0.01282	0.08197	0.003487	0.857	0.922	0.999	0.997	0.953	0.974	0.956	0.977
rs79861884	1.6284E-09	-0.059567	0.00988	-0.059567	0.009877	3.07367E-09	0.68803	0.113386	3.08E-05	0.000932	0.195479	0.02378	0.1663	0.412728	0.836	0.922	1	0.998	0.91	0.919	0.92	0.872
rs28710320	1.6285E-09	-0.037578	0.00623	-0.037578	0.006231	3.07387E-09	0.42123	0.875576	0.011374	0.006973	0.068895	4.3E-06	0.82449	0.31628	0.854	0.79	0.971	0.992	0.948	1	0.746	0.871
rs7241433	1.6297E-09	-0.03081	0.00511	-0.030811	0.00528	3.07604E-09	0.60893	0.450573	0.000108	0.00072	0.248996	0.00374	0.01471	0.431852	0.68	0.649	1	0.998	0.865	0.99	0.967	0.836
rs1547403	1.6314E-09	-0.031979	0.0053	-0.031979	0.005303	3.07919E-09	0.644	0.211973	0.004537	4.38E-05	0.012828	0.00319	0.34915	0.863441	0.839	0.9	0.992	1	0.981	0.994	0.875	0.762
rs1547404	1.6314E-09	-0.031979	0.0053	-0.031979	0.005303	3.07919E-09	0.644	0.211973	0.004537	4.38E-05	0.012828	0.00319	0.34915	0.863441	0.839	0.9	0.992	1	0.981	0.994	0.875	0.762

Table S3

rs57179728	1.6315E-09	-0.033685	0.00559	-0.036425	0.00829	3.07946E-09	0.00705	0.224965	0.013638	0.002745	0.833791	0.00025	0.00159	0.756155	0.963	0.898	0.966	0.996	0.706	1	0.988	0.818
rs144650388	1.632E-09	-0.031978	0.0053	-0.031978	0.005303	3.08041E-09	0.644	0.211973	0.004537	4.39E-05	0.012828	0.00319	0.34915	0.863441	0.839	0.9	0.992	1	0.981	0.994	0.875	0.762
rs16962161	1.632E-09	-0.031978	0.0053	-0.031978	0.005303	3.08041E-09	0.644	0.211973	0.004537	4.39E-05	0.012828	0.00319	0.34915	0.863441	0.839	0.9	0.992	1	0.981	0.994	0.875	0.762
rs16962168	1.632E-09	-0.031978	0.0053	-0.031978	0.005303	3.08041E-09	0.644	0.211973	0.004537	4.39E-05	0.012828	0.00319	0.34915	0.863441	0.839	0.9	0.992	1	0.981	0.994	0.875	0.762
rs13333495	1.6322E-09	-0.031978	0.0053	-0.031978	0.005303	3.08074E-09	0.64408	0.211973	0.004537	4.39E-05	0.012828	0.00319	0.34915	0.863441	0.839	0.9	0.992	1	0.981	0.994	0.875	0.762
rs1369374	1.6329E-09	-0.040718	0.00675	-0.040718	0.006752	3.08203E-09	0.20364	0.163388	0.01025	0.000701	0.236222	0.00103	0.02338	0.323008	0.92	0.926	0.985	0.999	0.916	0.999	0.974	0.905
rs6822958	1.633E-09	-0.040718	0.00675	-0.040718	0.006752	3.08222E-09	0.20076	0.164064	0.010303	0.000711	0.23445	0.00102	0.02352	0.323471	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs67193996	1.633E-09	0.0321454	0.00533	0.0321454	0.00533	3.08222E-09	0.24006	0.390349	0.000799	0.000835	0.171487	0.00386	0.07794	0.554713	0.909	0.889	0.999	0.999	0.929	0.994	0.953	0.867
rs1480978	1.6332E-09	0.0509138	0.00844	0.0509935	0.009768	3.08255E-09	0.48655	0.980179	0.002709	0.008281	0.566871	0.00011	0.00038	0.904391	0.836	0.766	0.995	0.99	0.765	1	0.992	0.735
rs7764688	1.6335E-09	0.0312409	0.00518	0.0321339	0.006261	2.58081E-09	0.10388	0.972751	0.092104	0.000684	0.002949	2.5E-05	0.58677	0.368883	0.892	0.706	0.554	0.998	0.989	1	0.729	0.82
rs66632842	1.635E-09	-0.040716	0.00675	-0.040716	0.006752	3.08585E-09	0.20082	0.163965	0.010297	0.000714	0.234516	0.00102	0.0235	0.323453	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs7681944	1.6352E-09	-0.040716	0.00675	-0.040716	0.006752	3.08635E-09	0.20082	0.164067	0.010305	0.000713	0.23445	0.00102	0.02352	0.323478	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs2419222	1.6361E-09	-0.040722	0.00675	-0.040722	0.006753	3.08788E-09	0.20165	0.163537	0.010256	0.000706	0.23373	0.00102	0.02378	0.325238	0.92	0.926	0.985	0.999	0.917	0.999	0.974	0.904
rs4915276	1.6382E-09	0.0313817	0.0052	0.0325904	0.008681	3.09179E-09	0.19509	0.035495	0.000378	0.000185	0.021722	0.01315	0.18408	0.054315	0.889	0.452	0.999	0.999	0.973	0.949	0.901	0.932
rs56131013	1.6426E-09	-0.047399	0.00786	-0.047399	0.007861	3.09999E-09	0.04518	0.437175	0.000356	0.043808	0.390748	0.00126	0.0401	0.060229	0.95	0.888	1	0.97	0.873	0.998	0.967	0.949
rs6661361	1.6439E-09	0.0313816	0.0052	0.0326466	0.00864	3.10228E-09	0.19577	0.03801	0.000373	0.000185	0.021437	0.01375	0.18117	0.053893	0.889	0.457	0.999	0.999	0.973	0.946	0.902	0.933
rs6844375	1.6461E-09	-0.040725	0.00675	-0.040725	0.006754	3.10636E-09	0.2228	0.16246	0.010457	0.000675	0.239768	0.00101	0.02263	0.318752	0.917	0.926	0.985	0.999	0.915	0.999	0.974	0.905
rs6534896	1.6466E-09	-0.04072	0.00675	-0.04072	0.006754	3.10738E-09	0.21982	0.162806	0.010391	0.000658	0.241425	0.00102	0.02284	0.320463	0.917	0.926	0.985	0.999	0.915	0.999	0.974	0.905
rs73144749	1.6479E-09	0.0440103	0.0073	0.0435616	0.007583	2.93739E-09	0.77858	0.218563	1.07E-05	0.54913	0.79114	9.2E-06	0.40948	0.178908	0.633	0.779	1	0.282	0.469	1	0.692	0.799
rs13103352	1.6496E-09	-0.040706	0.00675	-0.040706	0.006752	3.11275E-09	0.20166	0.163418	0.010253	0.000732	0.23405	0.00102	0.02337	0.322902	0.92	0.926	0.986	0.999	0.917	0.999	0.974	0.905
rs13128272	1.6496E-09	-0.040706	0.00675	-0.040706	0.006752	3.11275E-09	0.20166	0.163418	0.010253	0.000732	0.23405	0.00102	0.02337	0.322902	0.92	0.926	0.986	0.999	0.917	0.999	0.974	0.905
rs7870514	1.6516E-09	0.0315886	0.00524	0.0315886	0.00524	3.11648E-09	0.12946	0.695816	0.005189	0.000334	0.031957	0.00434	0.10628	0.203531	0.932	0.862	0.994	0.999	0.976	0.994	0.949	0.922
rs58243949	1.6521E-09	-0.033515	0.00556	-0.032608	0.007435	3.11743E-09	0.32292	0.171042	2.89E-06	0.079528	0.877375	0.00161	0.00506	0.674773	0.832	0.867	1	0.887	0.507	0.994	0.975	0.632
rs1390897	1.6522E-09	-0.031046	0.00515	-0.031506	0.005503	3.11765E-09	0.01257	0.072468	0.001223	0.127361	0.035995	0.00145	0.17005	0.023956	0.968	0.948	0.999	0.919	0.977	0.998	0.939	0.966
rs35647652	1.6539E-09	-0.040711	0.00675	-0.040711	0.006753	3.12085E-09	0.20208	0.163919	0.010278	0.000705	0.233756	0.00103	0.02382	0.325799	0.92	0.926	0.985	0.999	0.917	0.999	0.974	0.904
rs67841855	1.6552E-09	0.035293	0.00585	0.037092	0.007406	3.12325E-09	0.07593	0.011136	0.008457	0.013068	0.002665	0.00057	0.2409	0.65124	0.939	0.964	0.987	0.99	0.992	0.999	0.913	0.749
rs142241159	1.6553E-09	-0.049695	0.00824	-0.049695	0.008243	3.12285E-09	0.05446	0.121618	0.002331	3.81E-05	0.210902	0.01351	0.1537	0.441624	0.947	0.931	0.997	1	0.92	0.97	0.936	0.886
rs6912925	1.6558E-09	0.0314589	0.00522	0.0314589	0.005218	3.12429E-09	0.94349	0.332331	0.001703	0.007575	0.005046	0.0012	0.0838	0.612224	0.8	0.891	0.998	0.993	0.989	0.998	0.948	0.853
rs7436943	1.6586E-09	-0.040714	0.00675	-0.040714	0.006754	3.12945E-09	0.20154	0.167651	0.010328	0.000702	0.233518	0.00102	0.02383	0.325473	0.92	0.925	0.985	0.999	0.917	0.999	0.974	0.904
rs7747606	1.6607E-09	0.0321308	0.00533	0.0321308	0.00533	3.13323E-09	0.23927	0.392238	0.000817	0.000826	0.171495	0.00387	0.07799	0.555224	0.909	0.888	0.999	0.999	0.929	0.994	0.953	0.867
rs4607225	1.6624E-09	-0.040707	0.00675	-0.040707	0.006753	3.13644E-09	0.20205	0.16378	0.010275	0.000705	0.233549	0.00104	0.02392	0.325892	0.92	0.926	0.985	0.999	0.917	0.999	0.974	0.904
rs7739999	1.6635E-09	-0.054584	0.00906	-0.054584	0.009056	3.13851E-09	0.68664	0.612349	0.003447	0.192546	0.000466	7.1E-05	0.08462	0.253221	0.829	0.84	0.994	0.819	0.995	1	0.942	0.893
rs36068063	1.6662E-09	0.0441687	0.00733	0.0429649	0.008722	3.14348E-09	0.64536	0.316702	0.000145	7.14E-05	0.978997	0.00072	0.57345	0.240613	0.733	0.517	1	0.999	0.509	0.997	0.71	0.822
rs6838461	1.6673E-09	0.0374581	0.00621	0.0379498	0.00772	3.14547E-09	0.84241	0.436386	0.008249	0.007355	0.334192	7.3E-05	0.00024	0.910331	0.753	0.855	0.982	0.992	0.854	1	0.993	0.781
rs76200347	1.6675E-09	-0.053627	0.0089	-0.053627	0.008897	3.14587E-09	0.26197	0.120418	0.001671	0.000141	0.230885	0.0125	0.05374	0.207029	0.912	0.933	0.998	1	0.917	0.975	0.963	0.922
rs1355175	1.6676E-09	-0.030777	0.00511	-0.031998	0.006068	3.14596E-09	0.02678	0.023432	0.008635	0.026953	0.059611	0.00034	0.61702	0.01383	0.96	0.961	0.989	0.983	0.968	1	0.853	0.97
rs62519821	1.6721E-09	-0.040502	0.00672	-0.040502	0.00672	3.15424E-09	0.07608	0.716684	0.001042	0.004796	0.117018	0.0004	0.15376	0.729177	0.93	0.831	0.999	0.995	0.936	0.999	0.923	0.739
rs116295002	1.6732E-09	-0.054578	0.00906	-0.054578	0.009056	3.15642E-09	0.68651	0.613233	0.003447	0.192372	0.000468	7.1E-05	0.08502	0.253339	0.829	0.84	0.994	0.819	0.995	1	0.942	0.893
rs4311209	1.6741E-09	0.0440016	0.0073	0.0434304	0.007663	2.98839E-09	0.78811	0.215633	1.13E-05	0.541095	0.81315	8.9E-06	0.4117	0.170673	0.63	0.78	1	0.286	0.46	1	0.69	0.802
rs179508	1.6749E-09	-0.033132	0.0055	-0.036346	0.008512	3.15952E-09	0.00849	0.215563	0.011706	0.006126	0.803823	0.00025	0.0005	0.764313	0.962	0.901	0.973	0.994	0.72	1	0.992	0.819
rs4521222	1.6758E-09	0.0440005	0.0073	0.043428	0.007664	2.99113E-09	0.78812	0.215624	1.13E-05	0.54123	0.813167	8.9E-06	0.41171	0.170675	0.63	0.78	1	0.286	0.46	1	0.69	0.802
rs553882816	1.676E-09	0.0519989	0.00863	0.0562617	0.011227	2.79705E-09	0.62028	0.051929	5.08E-05	0.029314	0.007595	0.06615	0.00315	0.30404	0.838	0.94	1	0.968	0.987	0.721	0.988	0.886
rs13200462	1.6767E-09	-0.055869	0.00927	-0.058282	0.0136	3.16275E-09	0.89946	0.986741	0.00065	0.020612	0.357485	0.00081	0.05253	0.000161	0.813	0.801	0.999	0.983	0.865	0.999	0.957	0.984
rs62083414	1.6771E-09	0.0312078	0.00518	0.0312078	0.005179	3.16361E-09	0.58267	0.713878	4.03E-05	0.003099	0.064071	0.00407	0.5288	0.644014	0.839	0.822	1	0.996	0.952	0.992	0.826	0.827
rs9347684	1.6785E-09	0.034464	0.00572	0.0345865	0.005968	3.1662E-09	0.27352	0.194909	0.001226	0.021666	0.984195	0.00037	0.03823	0.004716	0.892	0.905	0.998	0.981	0.653	0.999	0.962	0.972
rs16853522	1.68E-09	0.043992	0.0073	0.0435599	0.007573	2.99489E-09	0.77653	0.218498	1.08E-05	0.549509	0.791742	9.3E-06	0.4093	0.179624	0.634	0.779	1	0.282	0.469	1	0.692	0.798
rs184726267	1.6808E-09	0.0669904	0.01112	0.0656642	0.014503	3.04258E-09	0.02342	0.260455	0.00028	0.733616	0.44875	4.7E-06	0.0443	0.70413	0.92	0.819	0.999	0.24	0.701	1	0.929	0.711
rs331955	1.6833E-09	-0.033127	0.0055	-0.036338	0.00851	3.1749E-09	0.00851	0.21491	0.011702	0.006195	0.804151	0.00025	0.0005	0.764209	0.962	0.901	0.973	0.994	0.72	1	0.992	0.819
rs13091206	1.6847E-09	-0.038732	0.00643	-0.038759	0.007404	3.04794E-09	0.7085	0.085024	0.039235	9.38E-05	0.09678	1.7E-05	0.54298	0.955811	0.669	0.897	0.813	0.999	0.915	1	0.764	0.7
rs7638562	1.6847E-09	-0.032208	0.00535	-0.035378	0.008783	3.17751E-09	0.06657	0.393557	0.015421	0.054849	0.264825	4E-05	0.00036	0.029347	0.934	0.689	0.962	0.952	0.888	1	0.993	0.953
rs4972576	1.6863E-09	-0.030375	0.00504	-0.030375	0.005041	3.18049E-09	0.82517	0.874509	0.001392	0.004042	0.140704	0.00232	0.00164	0.096751	0.781	0.822	0.998	0.996	0.933	0.997	0.989	0.933
rs148996702	1.6876E-09	0.0439955	0.0073	0.0434268	0.007662	3.01655E-09	0.78985	0.214623	1.15E-05	0.538498	0.816528	8.9E-06	0.41249	0.169835	0.63	0.78	1	0.288	0.459	1	0.69	0.802
rs10594287	1.6886E-09	0.0306506	0.00509	0.0306506	0.005087	3.18471E-09	0.7422	0.771224	0.003071	0.012535	0.476555	1.3E-06	0.30937	0.674517	0.773	0.697	0.992	0.982	0.767	1	0.843	0.779
rs201955412	1.6898E-09	-0.033124	0.0055	-0.036334	0.00851	3.18699E-09	0.00851	0.214951	0.011724	0.006191	0.80418	0.00025	0.0005	0.764483	0.962	0.901	0.973	0.994	0.72	1	0.992	0.819
rs12644329	1.6902E-09	0.0331242	0.0055	0.036136	0.008349	3.18779E-09	0.00965	0.220623	0.011671	0.005856	0.78774	0.00025	0.00055	0.75581	0.961	0.901	0.974	0.994	0.727	1	0.992	0.821

Table S3

rs11921228	1.6904E-09	-0.039842	0.00661	-0.042442	0.009272	3.05118E-09	0.41144	0.702268	3.22E-05	0.495722	0.001905	0.00462	0.00478	0.138631	0.838	0.789	1	0.49	0.991	0.975	0.981	0.899
rs34528959	1.6904E-09	-0.05456	0.00906	-0.05456	0.009056	3.18806E-09	0.68667	0.611657	0.003461	0.193255	0.000468	7.1E-05	0.08467	0.253083	0.829	0.84	0.994	0.818	0.995	1	0.942	0.893
rs1449852	1.6906E-09	-0.039841	0.00661	-0.042442	0.009273	3.0517E-09	0.41139	0.702227	3.22E-05	0.495687	0.001904	0.00462	0.00478	0.138607	0.838	0.789	1	0.49	0.991	0.975	0.981	0.899
rs62481569	1.691E-09	-0.035349	0.00587	-0.044964	0.011642	2.94423E-10	0.77141	0.037266	0.016635	3.08E-06	3.69E-05	0.06334	0.33278	0.26989	0.535	0.897	0.415	1	0.999	0.296	0.583	0.715
rs115274059	1.6916E-09	0.0360001	0.00598	0.0360001	0.005975	3.1902E-09	0.514	0.821859	0.010461	0.002869	0.01884	1.2E-05	0.73295	0.413149	0.822	0.775	0.969	0.995	0.971	1	0.6	0.838
rs331950	1.6924E-09	-0.033123	0.0055	-0.036333	0.00851	3.19172E-09	0.00853	0.215367	0.011725	0.006167	0.804341	0.00025	0.0005	0.763878	0.962	0.901	0.973	0.994	0.72	1	0.992	0.819
rs11916850	1.6925E-09	-0.03984	0.00661	-0.04244	0.009273	3.05461E-09	0.41177	0.702271	3.22E-05	0.49594	0.001905	0.00462	0.00478	0.138633	0.838	0.789	1	0.49	0.991	0.975	0.98	0.899
rs331949	1.6931E-09	-0.033122	0.0055	-0.036328	0.008507	3.19297E-09	0.00854	0.215563	0.011707	0.006198	0.803813	0.00025	0.0005	0.764297	0.962	0.901	0.973	0.994	0.72	1	0.992	0.819
rs331957	1.6932E-09	-0.033122	0.0055	-0.036333	0.00851	3.19321E-09	0.00851	0.214956	0.011737	0.006188	0.804183	0.00025	0.0005	0.764485	0.962	0.901	0.973	0.994	0.72	1	0.992	0.819
rs7030405	1.6947E-09	0.0315706	0.00524	0.0315706	0.00524	3.19594E-09	0.13028	0.695029	0.005221	0.000338	0.032138	0.00437	0.10539	0.203996	0.932	0.862	0.993	0.999	0.976	0.994	0.949	0.922
rs1349259	1.695E-09	-0.039839	0.00661	-0.042441	0.009274	3.05869E-09	0.41151	0.70225	3.22E-05	0.496106	0.001904	0.00462	0.00478	0.13862	0.838	0.789	1	0.49	0.991	0.975	0.98	0.899
rs11857461	1.6954E-09	0.0303334	0.00503	0.0319177	0.007828	1.88367E-09	0.65966	0.550894	8.8E-07	0.062769	0.020772	0.05848	0.00118	0.505759	0.617	0.772	1	0.854	0.965	0.606	0.987	0.776
rs111533129	1.6986E-09	-0.036087	0.00599	-0.036087	0.00599	3.20314E-09	0.68305	0.094074	0.001013	0.138532	0.04624	3.9E-06	0.66825	0.643618	0.686	0.901	0.998	0.836	0.951	1	0.753	0.791
rs9995147	1.6994E-09	-0.04074	0.00676	-0.04074	0.006763	3.2047E-09	0.22538	0.151351	0.010079	0.000744	0.242308	0.00101	0.02302	0.328332	0.917	0.927	0.986	0.999	0.915	0.999	0.974	0.904
rs12908953	1.7022E-09	0.0303905	0.00504	0.0326991	0.008767	1.32297E-09	0.36812	0.320813	8.29E-07	0.02255	0.021614	0.11209	0.00091	0.508896	0.442	0.787	1	0.922	0.959	0.29	0.989	0.727
rs4762215	1.7055E-09	0.0570128	0.00946	0.0570128	0.009465	3.21584E-09	0.65183	0.786443	0.000173	0.009323	0.110478	0.00265	0.07759	0.169717	0.854	0.838	1	0.992	0.945	0.996	0.951	0.919
rs6848844	1.7057E-09	-0.04067	0.00675	-0.04067	0.006752	3.21624E-09	0.20957	0.163345	0.010243	0.000711	0.239162	0.00104	0.02341	0.323127	0.919	0.926	0.986	0.999	0.915	0.999	0.974	0.905
rs9283883	1.7094E-09	-0.038315	0.00636	-0.038315	0.006361	3.22307E-09	0.73501	0.171072	0.000556	0.003205	0.10775	0.01248	0.08296	0.003698	0.858	0.926	0.999	0.997	0.952	0.975	0.956	0.977
rs9366658	1.7098E-09	-0.045218	0.00751	-0.045218	0.007507	3.2239E-09	0.81059	0.425689	0.00193	0.004171	0.079927	0.0012	0.0332	0.100058	0.789	0.883	0.998	0.996	0.956	0.998	0.968	0.936
rs9932951	1.7115E-09	0.0306137	0.00508	0.0306137	0.005083	3.22702E-09	0.67583	0.791534	0.003039	0.012816	0.4358	1.4E-06	0.41811	0.61161	0.785	0.703	0.992	0.982	0.784	1	0.814	0.792
rs2316662	1.7133E-09	-0.037384	0.00621	-0.03849	0.007194	3.09279E-09	0.31229	0.293877	1.68E-05	0.281319	0.006283	0.01439	0.01119	0.107716	0.883	0.886	1	0.736	0.987	0.936	0.978	0.926
rs149661410	1.7146E-09	0.104973	0.01743	0.104973	0.017429	3.23264E-09	0.684	0.643944	0.000263	0.122517	0.058225	0.00028	0.10035	0.012193	0.743	0.839	1	0.895	0.957	1	0.936	0.96
rs1956589	1.7173E-09	-0.036322	0.00603	-0.036322	0.006031	3.23769E-09	0.88531	0.034199	0.007796	0.002801	0.062949	0.00013	0.65704	0.211045	0.818	0.947	0.987	0.997	0.959	1	0.817	0.909
rs6817183	1.7184E-09	-0.033825	0.00562	-0.033825	0.005616	3.23966E-09	0.53052	0.418665	0.009071	0.007265	0.199521	0.00013	0.0103	0.298678	0.872	0.885	0.986	0.994	0.921	1	0.98	0.902
rs7688275	1.7204E-09	-0.033648	0.00559	-0.03635	0.008269	3.24334E-09	0.00717	0.23256	0.013483	0.002888	0.831252	0.00025	0.00155	0.756306	0.963	0.897	0.967	0.996	0.708	1	0.988	0.818
rs34195838	1.7258E-09	-0.040674	0.00675	-0.040674	0.006755	3.25331E-09	0.77295	0.110186	2.04E-06	0.162056	0.338695	0.00193	0.05434	0.441806	0.723	0.905	1	0.828	0.838	0.995	0.945	0.841
rs11588882	1.7275E-09	0.0313397	0.0052	0.032606	0.008636	3.25639E-09	0.19593	0.038066	0.000386	0.000185	0.021482	0.01384	0.18236	0.054302	0.889	0.458	0.999	0.999	0.973	0.946	0.901	0.932
rs70977268	1.7304E-09	-0.034379	0.00571	-0.034379	0.00571	3.26179E-09	0.51208	0.653321	6.11E-05	0.015715	0.647201	0.00116	0.07846	0.143846	0.851	0.833	1	0.985	0.765	0.998	0.943	0.913
rs10917624	1.7305E-09	-0.034829	0.00578	-0.033284	0.008398	3.26204E-09	0.03107	0.044905	7.68E-05	0.030683	0.094342	0.00032	0.18469	0.540276	0.42	0.923	1	0.965	0.928	0.999	0.891	0.812
rs1347414	1.7316E-09	-0.040653	0.00675	-0.040653	0.006752	3.26399E-09	0.21201	0.16333	0.010242	0.000711	0.240593	0.00104	0.02341	0.323205	0.919	0.925	0.986	0.999	0.915	0.999	0.974	0.904
rs200562283	1.7329E-09	-0.074154	0.01232	-0.074154	0.012316	3.26637E-09	0.32264	0.810068	1.48E-06	0.100625	0.492717	0.00062	0.74139	0.087573	0.836	0.692	1	0.863	0.748	0.998	0.714	0.901
rs9556974	1.7341E-09	0.0315366	0.00524	0.0309751	0.007586	2.09607E-09	0.76671	0.555196	1.3E-07	0.151138	0.1654	0.01685	0.00299	0.889153	0.663	0.78	1	0.77	0.864	0.867	0.979	0.714
rs2216933	1.7345E-09	0.0308755	0.00513	0.0348076	0.007654	2.71438E-09	0.05227	0.046195	0.078989	0.00035	0.001872	0.00057	0.14928	0.77282	0.934	0.936	0.685	0.999	0.993	0.997	0.915	0.706
rs1341972	1.7348E-09	0.0310966	0.00516	0.032021	0.006491	3.26993E-09	0.7788	0.014715	0.002529	0.007417	0.018979	0.00089	0.02418	0.303406	0.821	0.955	0.996	0.993	0.978	0.999	0.968	0.633
rs10801664	1.7361E-09	0.0313357	0.0052	0.0326015	0.00864	3.27222E-09	0.19516	0.037995	0.000384	0.000184	0.02158	0.01394	0.18252	0.054497	0.889	0.457	0.999	0.999	0.973	0.946	0.901	0.932
rs12373651	1.7363E-09	-0.030853	0.00512	-0.030853	0.005125	3.27264E-09	0.89542	0.544441	0.000169	0.032007	0.443189	0.00131	0.00704	0.062408	0.814	0.858	1	0.974	0.84	0.998	0.981	0.94
rs11047330	1.7373E-09	0.038021	0.00632	0.038021	0.006315	3.27451E-09	0.24202	0.929519	0.000227	0.01396	0.489945	0.00226	0.06319	0.004239	0.902	0.796	1	0.988	0.831	0.997	0.954	0.974
rs17536094	1.7379E-09	-0.04772	0.00793	-0.04772	0.007926	3.27553E-09	0.08634	0.284297	0.002257	0.183164	0.27335	2.6E-05	0.06885	0.091999	0.932	0.897	0.997	0.85	0.892	1	0.953	0.934
rs1347415	1.7395E-09	-0.040648	0.00675	-0.040648	0.006752	3.27848E-09	0.21297	0.163322	0.010238	0.00071	0.241146	0.00104	0.02341	0.323212	0.918	0.925	0.986	0.999	0.915	0.999	0.974	0.904
rs79621462	1.7411E-09	-0.031999	0.00532	-0.031364	0.006168	2.78635E-09	0.75403	0.378774	0.018946	0.043144	0.040505	1.7E-07	0.57444	0.162681	0.764	0.828	0.914	0.937	0.951	1	0.518	0.879
rs12046569	1.7412E-09	0.0313338	0.0052	0.0325996	0.00864	3.28159E-09	0.19497	0.038014	0.000384	0.000184	0.021644	0.01397	0.18246	0.054568	0.889	0.457	0.999	0.999	0.973	0.945	0.901	0.932
rs12444108	1.7418E-09	-0.031379	0.00521	-0.031723	0.007156	3.28284E-09	0.97437	0.775529	0.006742	0.000308	0.001279	0.0005	0.17654	0.254785	0.747	0.779	0.981	0.999	0.992	0.999	0.893	0.552
rs11215362	1.7422E-09	-0.034352	0.00571	-0.035024	0.006227	3.28349E-09	0.87313	0.006747	0.01056	0.018565	0.012228	0.0005	0.08138	0.088318	0.811	0.97	0.985	0.987	0.986	0.999	0.956	0.944
rs28850355	1.743E-09	-0.037418	0.00622	-0.037418	0.006216	3.28507E-09	0.28294	0.034013	0.000658	0.002663	0.541516	0.00043	0.20291	0.126471	0.622	0.936	0.999	0.996	0.78	0.999	0.897	0.909
rs4292260	1.7471E-09	-0.038709	0.00643	-0.03855	0.007841	3.1221E-09	0.6912	0.085246	0.038519	9.44E-05	0.104429	1.3E-05	0.561	0.808055	0.653	0.891	0.805	0.999	0.906	1	0.748	0.66
rs73088122	1.7473E-09	-0.03601	0.00598	-0.03601	0.005982	3.29288E-09	0.72471	0.088096	0.000909	0.148146	0.052948	3.9E-06	0.69824	0.634466	0.691	0.902	0.998	0.824	0.946	1	0.743	0.791
rs4955411	1.7533E-09	-0.03869	0.00643	-0.03855	0.007975	3.0787E-09	0.72051	0.083516	0.041724	8.37E-05	0.09621	1.3E-05	0.56887	0.790527	0.653	0.891	0.783	0.999	0.908	1	0.741	0.65
rs1418133	1.7543E-09	0.0310757	0.00516	0.0319908	0.00648	3.30578E-09	0.78973	0.015257	0.002724	0.006652	0.019157	0.00087	0.02503	0.301476	0.82	0.955	0.996	0.993	0.978	0.999	0.968	0.632
rs11099194	1.7589E-09	-0.040636	0.00675	-0.040636	0.006752	3.31433E-09	0.21445	0.163318	0.010246	0.000709	0.242046	0.00105	0.02342	0.323276	0.918	0.925	0.986	0.999	0.915	0.999	0.974	0.904
rs6936016	1.763E-09	0.0311656	0.00518	0.0318507	0.005982	2.83775E-09	0.15441	0.985501	0.088058	0.000434	0.00361	3.5E-05	0.57146	0.327875	0.877	0.71	0.582	0.999	0.987	1	0.74	0.833
rs34978288	1.7638E-09	0.0313253	0.00521	0.0326041	0.008642	3.32336E-09	0.1952	0.038648	0.000374	0.000182	0.022483	0.01441	0.1821	0.05266	0.889	0.458	0.999	0.999	0.972	0.943	0.901	0.933
rs200123053	1.7662E-09	0.0763256	0.01268	0.0763256	0.012683	3.32771E-09	0.46433	0.040233	0.004713	0.004121	0.058241	0.00018	0.84297	0.116196	0.866	0.942	0.992	0.995	0.959	1	0.697	0.924
rs7160968	1.7679E-09	0.0519552	0.00863	0.0568346	0.011604	2.7628E-09	0.59074	0.046109	3.93E-05	0.03169	0.007474	0.07639	0.00324	0.316713	0.834	0.94	1	0.962	0.987	0.661	0.987	0.877
rs9940829	1.7687E-09	-0.03192	0.0053	-0.03192	0.005304	3.3324E-09	0.66399	0.215272	0.004574	4.38E-05	0.013567	0.00308	0.35911	0.838754	0.835	0.898	0.992	1	0.981	0.994	0.871	0.756
rs16891717	1.7774E-09	-0.045167	0.00751	-0.045167	0.007507	3.34836E-09	0.81309	0.42035	0.001884	0.004138	0.081086	0.00123	0.03643	0.099195	0.789	0.884	0.998	0.996	0.956	0.998	0.967	0.936

Table S3

rs9358947	1.7774E-09	-0.045167	0.00751	-0.045167	0.007507	3.34836E-09	0.81309	0.42035	0.001884	0.004138	0.081086	0.00123	0.03643	0.099195	0.789	0.884	0.998	0.996	0.956	0.998	0.967	0.936
rs4800623	1.7794E-09	0.0303906	0.00505	0.0303906	0.005051	3.35201E-09	0.18991	0.640499	0.00017	0.001352	0.531781	0.00136	0.51116	0.322687	0.895	0.827	1	0.998	0.792	0.998	0.825	0.873
rs80002998	1.7807E-09	0.0313185	0.00521	0.0325863	0.008642	3.35441E-09	0.1932	0.038109	0.000386	0.000182	0.021998	0.01414	0.18324	0.05472	0.889	0.458	0.999	0.999	0.972	0.945	0.901	0.932
rs6456727	1.7816E-09	-0.044978	0.00748	-0.044978	0.007476	3.35605E-09	0.81018	0.361037	0.001493	0.006477	0.067921	0.0013	0.03412	0.117056	0.79	0.892	0.998	0.994	0.961	0.998	0.968	0.933
rs11207535	1.7819E-09	0.0440915	0.00733	0.0428629	0.008774	3.35657E-09	0.64088	0.320912	0.000152	6.54E-05	0.986638	0.00078	0.57008	0.240011	0.734	0.519	0.999	0.999	0.508	0.997	0.712	0.822
rs10024696	1.7834E-09	0.0336574	0.00559	0.0360768	0.008122	3.35946E-09	0.00764	0.261499	0.012314	0.003293	0.83077	0.00024	0.00165	0.762366	0.962	0.892	0.971	0.996	0.708	1	0.988	0.817
rs2043514	1.7855E-09	-0.040621	0.00675	-0.040621	0.006752	3.36323E-09	0.21969	0.16302	0.010246	0.000708	0.244275	0.00105	0.02325	0.322677	0.917	0.925	0.986	0.999	0.914	0.999	0.974	0.904
rs11970439	1.7865E-09	-0.047351	0.00787	-0.047351	0.007871	3.36508E-09	0.05732	0.497709	0.000288	0.041493	0.455638	0.00124	0.03486	0.075684	0.944	0.877	1	0.971	0.852	0.998	0.968	0.943
rs1373032	1.7868E-09	0.0330783	0.0055	0.0361329	0.008392	3.36565E-09	0.00948	0.215671	0.011903	0.006112	0.795581	0.00025	0.00054	0.762468	0.961	0.901	0.973	0.994	0.724	1	0.992	0.82
rs4915144	1.7887E-09	0.0313094	0.0052	0.0325683	0.008651	3.36907E-09	0.1963	0.037535	0.000383	0.000186	0.021633	0.01409	0.1832	0.054181	0.889	0.456	0.999	0.999	0.973	0.945	0.901	0.932
rs11222115	1.7899E-09	0.03526	0.00586	0.0355921	0.009121	2.46793E-09	0.0177	0.245475	0.000224	0.94847	0.395365	5.5E-06	0.18292	0.039416	0.932	0.829	0.999	0.101	0.718	1	0.855	0.919
rs13105063	1.7909E-09	-0.040616	0.00675	-0.040616	0.006752	3.37316E-09	0.2179	0.163288	0.010234	0.000708	0.244017	0.00105	0.02342	0.323344	0.918	0.925	0.986	0.999	0.914	0.999	0.974	0.904
rs11251830	1.7921E-09	0.0343896	0.00572	0.0396699	0.008572	3.37539E-09	0.26741	0.000675	0.011954	0.088556	0.046319	0.00054	0.01519	0.060823	0.92	0.984	0.984	0.946	0.974	0.999	0.981	0.955
rs7539335	1.7924E-09	0.0313121	0.00521	0.0325861	0.008642	3.37591E-09	0.19496	0.038577	0.000371	0.000183	0.022659	0.01455	0.18228	0.052843	0.889	0.458	0.999	0.999	0.972	0.942	0.901	0.933
rs12935701	1.7944E-09	-0.031354	0.00521	-0.031695	0.007148	3.37963E-09	0.97521	0.775511	0.006762	0.000317	0.001289	0.0005	0.17642	0.25412	0.747	0.779	0.981	0.999	0.991	0.999	0.893	0.551
rs56296968	1.7948E-09	-0.045155	0.00751	-0.045155	0.007507	3.38039E-09	0.81312	0.420373	0.001892	0.004137	0.081149	0.00124	0.03646	0.099205	0.789	0.884	0.998	0.996	0.956	0.998	0.967	0.936
rs1408479	1.7954E-09	0.0440824	0.00733	0.0428533	0.008775	3.38149E-09	0.64109	0.320909	0.000153	6.54E-05	0.986935	0.00078	0.57029	0.240013	0.734	0.52	0.999	0.999	0.508	0.997	0.712	0.822
rs11432623	1.7967E-09	-0.045154	0.00751	-0.045154	0.007507	3.38393E-09	0.81315	0.420371	0.001893	0.004139	0.081147	0.00124	0.03646	0.099204	0.789	0.884	0.998	0.996	0.956	0.998	0.967	0.936
rs11432622	1.7969E-09	-0.045154	0.00751	-0.045154	0.007507	3.38417E-09	0.81314	0.420371	0.001893	0.004139	0.081147	0.00124	0.03646	0.099204	0.789	0.884	0.998	0.996	0.956	0.998	0.967	0.936
rs79671580	1.7984E-09	0.0320487	0.00533	0.0327684	0.006255	3.38704E-09	0.14208	0.003515	0.002261	0.029083	0.0775	0.0004	0.95417	0.048308	0.924	0.973	0.997	0.979	0.957	0.999	0.742	0.95
rs141093574	1.7986E-09	0.0774548	0.01288	0.0773131	0.017822	3.38737E-09	0.40588	0.973038	0.000223	0.625552	0.039251	5.2E-05	0.00096	0.989196	0.787	0.676	0.999	0.311	0.944	1	0.987	0.657
rs4659647	1.7993E-09	0.0317791	0.00528	0.0327563	0.006873	3.38869E-09	0.51766	0.676518	0.002363	0.007711	0.243136	0.00059	0.03294	0.001085	0.72	0.84	0.997	0.993	0.898	0.999	0.965	0.98
rs7655283	1.7997E-09	0.0508048	0.00845	0.0508625	0.00983	3.38945E-09	0.46216	0.977321	0.002673	0.010288	0.572712	0.0001	0.00038	0.891551	0.84	0.766	0.995	0.988	0.764	1	0.992	0.732
rs4732123	1.8002E-09	-0.035263	0.00586	-0.044836	0.011551	3.43329E-10	0.78979	0.038492	0.015607	4.25E-06	3.44E-05	0.06522	0.29873	0.276043	0.557	0.9	0.465	1	0.999	0.327	0.634	0.729
rs13222757	1.803E-09	-0.035262	0.00586	-0.044665	0.011559	3.40336E-10	0.82299	0.037153	0.016183	3.14E-06	4.54E-05	0.0631	0.32187	0.26842	0.533	0.899	0.441	1	0.999	0.316	0.604	0.723
rs9348719	1.8032E-09	-0.04515	0.00751	-0.04515	0.007507	3.39591E-09	0.81236	0.420373	0.001892	0.004142	0.081149	0.00124	0.03646	0.099203	0.789	0.884	0.998	0.996	0.956	0.998	0.967	0.936
rs11100754	1.8032E-09	0.0330706	0.0055	0.0360421	0.008334	3.39591E-09	0.00987	0.220018	0.011606	0.006195	0.793448	0.00025	0.00056	0.75772	0.961	0.901	0.974	0.994	0.725	1	0.992	0.821
rs1377566	1.8062E-09	0.0352916	0.00587	0.035558	0.009264	2.27352E-09	0.02211	0.292698	0.000185	0.886048	0.385258	5.2E-06	0.175	0.033166	0.926	0.813	0.999	0.082	0.718	1	0.857	0.923
rs9837568	1.8072E-09	-0.032333	0.00538	-0.032333	0.005376	3.40321E-09	0.30052	0.614761	0.00189	0.202133	0.27678	1.1E-05	0.01647	0.038651	0.87	0.703	0.996	0.795	0.865	1	0.969	0.939
rs1946688	1.808E-09	-0.040605	0.00675	-0.040605	0.006752	3.40471E-09	0.21963	0.163276	0.010239	0.000707	0.244949	0.00105	0.02342	0.323396	0.917	0.925	0.986	0.999	0.914	0.999	0.974	0.904
rs2043513	1.808E-09	-0.040605	0.00675	-0.040605	0.006752	3.40471E-09	0.21963	0.163276	0.010239	0.000707	0.244949	0.00105	0.02342	0.323396	0.917	0.925	0.986	0.999	0.914	0.999	0.974	0.904
rs10838739	1.8087E-09	0.0313409	0.00521	0.0311846	0.006126	3.40599E-09	0.74344	0.197383	6.83E-05	0.000112	0.665124	0.00535	0.05181	0.909492	0.751	0.857	1	0.999	0.418	0.975	0.933	0.712
rs1842531	1.8105E-09	-0.033755	0.00561	-0.033755	0.005613	3.4092E-09	0.55267	0.409527	0.010152	0.008477	0.189905	0.00011	0.00723	0.350288	0.868	0.886	0.984	0.993	0.923	1	0.983	0.894
rs1443185	1.8135E-09	0.0330657	0.0055	0.0360275	0.008327	3.41471E-09	0.00989	0.220831	0.011582	0.006221	0.792734	0.00025	0.00056	0.75733	0.96	0.901	0.974	0.994	0.725	1	0.992	0.821
rs1443186	1.8135E-09	0.0330657	0.0055	0.0360275	0.008327	3.41477E-09	0.00989	0.220831	0.011582	0.006221	0.792734	0.00025	0.00056	0.75733	0.96	0.901	0.974	0.994	0.725	1	0.992	0.821
rs61857751	1.8139E-09	-0.045269	0.00753	-0.045659	0.008459	3.41554E-09	0.00639	0.503319	0.007729	0.214334	0.170399	1E-05	0.0259	0.301014	0.964	0.863	0.983	0.816	0.92	1	0.969	0.892
rs507249	1.8169E-09	0.032208	0.00536	0.032208	0.005356	3.42101E-09	0.17486	0.684374	5.09E-06	0.068727	0.461269	0.0091	0.02453	0.076413	0.911	0.842	1	0.944	0.835	0.978	0.969	0.936
rs148271316	1.817E-09	-0.03157	0.00525	-0.03157	0.00525	3.42123E-09	0.80572	0.174959	0.000602	9.58E-05	0.76175	0.00394	0.02359	0.926317	0.791	0.891	0.999	0.999	0.702	0.99	0.962	0.766
rs3757150	1.8178E-09	-0.045142	0.00751	-0.045142	0.007507	3.42273E-09	0.81338	0.42035	0.001884	0.004259	0.081086	0.00123	0.03643	0.099195	0.79	0.884	0.998	0.996	0.956	0.998	0.967	0.936
rs9368530	1.8229E-09	-0.038224	0.00636	-0.038224	0.006357	3.43201E-09	0.8015	0.167361	0.000413	0.004058	0.112901	0.01317	0.08468	0.00352	0.849	0.925	1	0.996	0.95	0.973	0.954	0.977
rs572900581	1.8229E-09	0.0518778	0.00863	0.0562249	0.011283	2.99853E-09	0.61518	0.051187	4.67E-05	0.032285	0.008214	0.06883	0.0032	0.281659	0.837	0.94	1	0.964	0.987	0.709	0.988	0.888
rs11764781	1.8254E-09	-0.035252	0.00586	-0.044632	0.011545	3.51607E-10	0.82094	0.03719	0.016202	3.3E-06	4.5E-05	0.06226	0.32615	0.268077	0.537	0.899	0.448	1	0.999	0.323	0.605	0.726
rs2132403	1.8258E-09	0.0324193	0.00539	0.0343784	0.007964	2.24487E-09	0.13461	0.841802	0.010068	6.88E-07	0.269545	0.00523	0.74572	0.03653	0.91	0.805	0.973	1	0.878	0.982	0.778	0.944
rs201201	1.8271E-09	0.0394483	0.00656	0.0378684	0.00834	3.43978E-09	0.1412	0.532456	0.000113	0.047031	0.136106	9E-05	0.01875	0.46219	0.499	0.634	1	0.938	0.897	1	0.958	0.808
rs2900844	1.8276E-09	-0.040601	0.00675	-0.040601	0.006753	3.44081E-09	0.2016	0.160746	0.010665	0.000713	0.233874	0.00108	0.02402	0.326341	0.92	0.926	0.985	0.999	0.917	0.999	0.974	0.904
rs4462678	1.8295E-09	0.0307404	0.00511	0.0307404	0.005113	3.44422E-09	0.16536	0.77489	0.002	0.002492	0.101615	0.00011	0.94463	0.428678	0.898	0.805	0.997	0.996	0.934	1	0.69	0.852
rs6659288	1.8301E-09	0.0312961	0.00521	0.0325572	0.008634	3.44537E-09	0.19367	0.038172	0.000386	0.000185	0.022247	0.01422	0.18361	0.054739	0.889	0.458	0.999	0.999	0.972	0.944	0.901	0.932
rs6548811	1.831E-09	-0.037336	0.00621	-0.03867	0.007341	3.34484E-09	0.4334	0.315325	2.19E-05	0.240204	0.005064	0.01571	0.00934	0.091287	0.868	0.885	1	0.779	0.989	0.935	0.979	0.931
rs331942	1.8333E-09	-0.033616	0.00559	-0.036247	0.008236	3.45117E-09	0.00703	0.267738	0.012541	0.003318	0.813938	0.00027	0.0014	0.757526	0.963	0.891	0.971	0.996	0.715	1	0.989	0.818
rs8018666	1.8359E-09	0.0518665	0.00863	0.0562	0.011273	3.02074E-09	0.6137	0.0513	4.69E-05	0.032393	0.00826	0.06889	0.00322	0.279439	0.837	0.94	1	0.964	0.987	0.709	0.988	0.889
rs200468	1.8374E-09	-0.045112	0.0075	-0.045112	0.007504	3.45878E-09	0.36624	0.525242	0.000306	0.055759	0.120162	0.00088	0.34202	0.002433	0.891	0.872	1	0.96	0.944	0.999	0.892	0.976
rs74049854	1.8377E-09	0.0518642	0.00863	0.0561928	0.011271	3.02269E-09	0.61355	0.05134	4.67E-05	0.032419	0.008296	0.06896	0.00322	0.279048	0.837	0.939	1	0.964	0.987	0.709	0.988	0.889
rs74049855	1.8383E-09	0.0518638	0.00863	0.0561914	0.01127	3.02367E-09	0.61355	0.05134	4.67E-05	0.0324	0.008306	0.06898	0.00322	0.279046	0.837	0.939	1	0.964	0.987	0.709	0.988	0.889
rs11344459	1.8416E-09	-0.041795	0.00695	-0.042106	0.007513	3.46654E-09	0.8098	0.358555	0.000295	0.091231	0.000111	0.00169	0.24998	0.424835	0.761	0.875	1	0.921	0.997	0.997	0.896	0.865
rs165519	1.8417E-09	0.0310678	0.00517	0.0310507	0.005183	2.75309E-09	0.63961	0.250596	0.00131	0.600654	0.339722	2.3E-07	0.09936	0.435787	0.728	0.817	0.993	0.323	0.751	1	0.889	0.769

Table S3

rs4535200	1.8433E-09	-0.030927	0.00514	-0.030322	0.008132	1.17947E-09	0.98858	0.055817	0.011746	0.80855	0.043583	3.2E-08	0.07643	0.525973	0.616	0.886	0.841	0.171	0.93	1	0.897	0.722
rs11761277	1.844E-09	0.0349942	0.00582	0.0349942	0.005822	3.4709E-09	0.03975	0.566223	0.001235	0.014742	0.100436	0.00072	0.04218	0.950219	0.949	0.867	0.999	0.989	0.95	0.999	0.964	0.814
rs144630651	1.8485E-09	0.0668434	0.01112	0.0654279	0.014104	3.32517E-09	0.03114	0.257385	0.000293	0.726661	0.474189	4.3E-06	0.04662	0.68542	0.912	0.818	0.999	0.244	0.687	1	0.927	0.714
rs541301	1.8488E-09	0.0322323	0.00536	0.0322323	0.005363	3.47974E-09	0.19439	0.729594	4.3E-06	0.071816	0.46112	0.00992	0.02046	0.071395	0.907	0.834	1	0.94	0.833	0.974	0.971	0.937
rs3736594	1.8507E-09	0.0323092	0.00538	0.0323092	0.005376	3.48323E-09	0.12592	0.022962	9.83E-06	0.199945	0.24473	0.00314	0.2383	0.184834	0.921	0.952	1	0.833	0.898	0.994	0.905	0.912
rs4246729	1.8511E-09	0.0381538	0.00635	0.0354552	0.008465	3.48396E-09	0.25824	0.765598	2.91E-06	0.161078	0.905353	0.00015	0.01665	0.685365	0.791	0.583	1	0.696	0.422	0.999	0.944	0.545
rs113525567	1.8517E-09	0.0518522	0.00863	0.0561708	0.011264	3.04477E-09	0.61294	0.051302	4.67E-05	0.032439	0.008313	0.06915	0.00326	0.278127	0.837	0.939	1	0.964	0.987	0.708	0.988	0.889
rs11630835	1.8528E-09	0.0303211	0.00504	0.0326498	0.008759	1.43481E-09	0.37188	0.320306	8.91E-07	0.021928	0.021574	0.11553	0.00093	0.515183	0.442	0.786	1	0.925	0.959	0.282	0.988	0.724
rs9393716	1.8529E-09	-0.039722	0.00661	-0.039722	0.006609	3.48735E-09	0.13661	0.969982	9.81E-06	0.202527	0.006851	0.00804	0.12757	0.098868	0.915	0.786	1	0.817	0.986	0.976	0.93	0.927
rs149943	1.8542E-09	-0.06279	0.01045	-0.063711	0.011459	3.48975E-09	0.60401	0.638283	0.013586	0.001239	0.154876	0.00025	0.27756	0.00154	0.859	0.855	0.973	0.998	0.931	1	0.902	0.976
rs199796774	1.8554E-09	0.0518458	0.00863	0.0561225	0.011239	3.05243E-09	0.61085	0.051525	4.63E-05	0.032545	0.008449	0.06915	0.0033	0.274964	0.838	0.939	1	0.964	0.987	0.708	0.988	0.89
rs77793612	1.8563E-09	-0.104408	0.01737	-0.104408	0.017373	3.49354E-09	0.0271	0.769838	1.48E-05	0.080407	0.861658	0.00059	0.04498	0.861938	0.934	0.782	1	0.907	0.643	0.999	0.946	0.757
rs4740477	1.8564E-09	0.0359789	0.00599	0.0362458	0.006387	3.49378E-09	0.8091	0.230405	3.8E-05	0.001438	0.469907	0.02005	0.11093	0.011299	0.754	0.893	1	0.998	0.814	0.927	0.932	0.961
rs370169675	1.8572E-09	0.0518445	0.00863	0.0561205	0.011239	3.05524E-09	0.61085	0.051521	4.63E-05	0.032545	0.008459	0.06917	0.0033	0.27496	0.838	0.939	1	0.964	0.987	0.708	0.988	0.89
rs190757625	1.859E-09	0.0518423	0.00863	0.0561224	0.011241	3.05807E-09	0.61075	0.051446	4.63E-05	0.032609	0.008466	0.06918	0.0033	0.27416	0.838	0.939	1	0.964	0.987	0.708	0.988	0.89
rs11124582	1.8597E-09	0.0320127	0.00533	0.0327042	0.006225	3.49972E-09	0.14663	0.003568	0.002274	0.029332	0.077647	0.00041	0.95516	0.048126	0.923	0.972	0.997	0.979	0.957	0.999	0.742	0.95
rs2491424	1.8597E-09	-0.054423	0.00906	-0.054423	0.009056	3.49982E-09	0.68553	0.612975	0.003513	0.203318	0.000452	7.4E-05	0.08467	0.242677	0.828	0.839	0.993	0.808	0.995	1	0.941	0.894
rs3008840	1.8598E-09	0.0311328	0.00518	0.0322565	0.006522	2.67745E-09	0.10748	0.968567	0.112604	0.000556	0.003088	2.3E-05	0.57856	0.356813	0.883	0.685	0.457	0.998	0.988	1	0.708	0.81
rs17535328	1.8619E-09	-0.045263	0.00753	-0.045695	0.008583	3.50385E-09	0.00666	0.499036	0.00751	0.233963	0.17155	9.3E-06	0.02528	0.298763	0.963	0.861	0.983	0.795	0.918	1	0.969	0.89
rs9844068	1.8647E-09	-0.032309	0.00538	-0.032309	0.005377	3.50892E-09	0.30141	0.615771	0.001903	0.202682	0.278327	1.1E-05	0.01644	0.038895	0.87	0.703	0.996	0.795	0.864	1	0.969	0.939
rs17498521	1.8647E-09	0.0378096	0.00629	0.0378096	0.006292	3.50896E-09	0.24368	0.940749	0.00027	0.011039	0.533779	0.00236	0.06584	0.005465	0.902	0.814	1	0.99	0.819	0.996	0.953	0.972
rs9468203	1.8674E-09	-0.03855	0.00642	-0.03855	0.006415	3.5139E-09	0.61009	0.157826	0.000602	0.003781	0.103694	0.01276	0.06972	0.006524	0.874	0.929	0.999	0.997	0.954	0.976	0.96	0.974
rs1833280	1.8674E-09	-0.030694	0.00511	-0.030689	0.005371	3.514E-09	0.59821	0.441398	0.000118	0.000648	0.254321	0.00381	0.01543	0.460645	0.676	0.645	1	0.998	0.862	0.989	0.966	0.829
rs2588469	1.8678E-09	0.0461792	0.00769	0.0461792	0.007685	3.51469E-09	0.46698	0.241146	0.004948	0.037437	0.112176	4.4E-05	0.24849	0.067558	0.882	0.91	0.994	0.974	0.947	1	0.914	0.946
rs3812278	1.8685E-09	-0.03521	0.00586	-0.044824	0.011562	3.55621E-10	0.79697	0.037325	0.016039	4.42E-06	3.39E-05	0.06474	0.30472	0.267108	0.552	0.901	0.457	1	0.999	0.324	0.627	0.732
rs3106189	1.8722E-09	0.0302533	0.00504	0.0299101	0.005416	3.52281E-09	0.27806	0.630447	0.000709	0.000142	0.75323	0.00012	0.65283	0.307192	0.508	0.742	0.998	0.999	0.601	1	0.692	0.808
rs9468204	1.8746E-09	-0.038546	0.00642	-0.038546	0.006415	3.52719E-09	0.61011	0.157839	0.000604	0.003783	0.103792	0.01276	0.06977	0.006524	0.874	0.929	0.999	0.997	0.954	0.976	0.96	0.974
rs345906	1.8754E-09	0.0316934	0.00527	0.0316934	0.005275	3.52858E-09	0.85974	0.949981	0.000651	0.124332	0.001269	0.00013	0.39395	0.210526	0.792	0.766	0.999	0.879	0.992	1	0.849	0.891
rs1877075	1.8771E-09	-0.032348	0.00538	-0.032348	0.005384	3.53183E-09	0.73333	0.163111	0.000126	0.03224	0.581113	0.00032	0.12584	0.325018	0.822	0.905	1	0.971	0.785	0.999	0.927	0.879
rs7125588	1.882E-09	-0.034332	0.00571	-0.034332	0.005715	3.44501E-09	0.36597	0.703567	6.59E-06	0.000215	0.41566	0.01723	0.50594	0.922486	0.832	0.776	1	0.999	0.782	0.909	0.783	0.732
rs4518487	1.886E-09	-0.04491	0.00748	-0.04491	0.007476	3.54813E-09	0.80522	0.36078	0.001529	0.006494	0.068156	0.00132	0.03432	0.116928	0.79	0.892	0.998	0.994	0.96	0.998	0.968	0.933
rs6449102	1.8861E-09	-0.031472	0.00524	-0.031472	0.005239	3.44145E-09	0.7344	0.692243	0.078208	0.001699	0.067528	3.7E-05	0.00751	0.179164	0.801	0.808	0.701	0.997	0.947	1	0.979	0.897
rs12026120	1.8864E-09	0.0312647	0.0052	0.0325398	0.008652	3.54897E-09	0.1962	0.037643	0.000401	0.000186	0.021584	0.01424	0.18317	0.054085	0.889	0.457	0.999	0.999	0.973	0.945	0.901	0.932
rs3734544	1.8872E-09	-0.045095	0.00751	-0.045095	0.007507	3.55044E-09	0.8078	0.420366	0.001914	0.004153	0.081603	0.00127	0.03674	0.09919	0.789	0.884	0.998	0.996	0.956	0.998	0.967	0.936
rs9936784	1.8875E-09	0.0303656	0.00505	0.0303656	0.005055	3.55074E-09	0.96861	0.456527	0.002999	0.00774	0.654051	3.9E-07	0.52274	0.662129	0.676	0.562	0.987	0.983	0.636	1	0.727	0.725
rs77475786	1.8884E-09	-0.053515	0.00891	-0.053515	0.008909	3.55255E-09	0.26671	0.118583	0.001699	0.000131	0.2264	0.01417	0.05502	0.202309	0.911	0.933	0.998	1	0.918	0.97	0.963	0.922
rs68141011	1.8935E-09	-0.0557	0.00927	-0.057985	0.013562	3.56192E-09	0.90669	0.998563	0.000625	0.021639	0.366505	0.00084	0.05446	0.000171	0.811	0.798	0.999	0.982	0.862	0.999	0.956	0.984
rs192681946	1.8978E-09	0.0668028	0.01112	0.065393	0.014116	3.41521E-09	0.0309	0.257798	0.000292	0.728514	0.473442	4.4E-06	0.04642	0.687257	0.912	0.818	0.999	0.243	0.688	1	0.927	0.713
rs3750069	1.8979E-09	-0.035222	0.00586	-0.044668	0.01158	3.58183E-10	0.79199	0.035312	0.015133	3.65E-06	4.01E-05	0.06653	0.34127	0.278225	0.546	0.901	0.456	1	0.999	0.315	0.596	0.72
rs2243865	1.9004E-09	-0.05439	0.00906	-0.05439	0.009056	3.57457E-09	0.68539	0.613311	0.003528	0.204665	0.000452	7.5E-05	0.0846	0.242214	0.827	0.838	0.993	0.807	0.995	1	0.941	0.894
rs165523	1.9006E-09	0.0310451	0.00517	0.0303565	0.005824	2.6139E-09	0.80896	0.248389	0.001319	0.678002	0.30767	2E-07	0.07678	0.380219	0.684	0.811	0.992	0.262	0.757	1	0.9	0.776
rs9461405	1.901E-09	-0.038151	0.00635	-0.038151	0.006352	3.5758E-09	0.74524	0.177463	0.000442	0.00436	0.110597	0.01321	0.07919	0.003585	0.857	0.924	0.999	0.996	0.951	0.974	0.956	0.977
rs34871384	1.9022E-09	0.0303005	0.00505	0.0326362	0.008753	1.47031E-09	0.37525	0.320652	8.86E-07	0.022746	0.021733	0.11575	0.00093	0.50952	0.444	0.786	1	0.922	0.959	0.283	0.988	0.726
rs73641867	1.9026E-09	-0.051096	0.00851	-0.051096	0.008508	3.5786E-09	0.11619	0.436771	0.01657	0.040703	0.001301	0.0001	0.18996	0.289543	0.933	0.887	0.97	0.972	0.994	1	0.928	0.907
rs7656350	1.9039E-09	-0.031464	0.00524	-0.031464	0.005239	3.47449E-09	0.733	0.69214	0.078225	0.001718	0.067519	3.7E-05	0.00751	0.179148	0.801	0.808	0.701	0.997	0.947	1	0.979	0.897
rs12736983	1.9053E-09	-0.03478	0.00579	-0.03301	0.008192	3.5836E-09	0.03113	0.065824	7.27E-05	0.032655	0.124499	0.00023	0.20193	0.545252	0.414	0.911	1	0.961	0.911	1	0.882	0.806
rs1455211	1.9054E-09	-0.031481	0.00524	-0.031481	0.005242	3.49787E-09	0.71425	0.730226	0.075003	0.001563	0.074302	4.2E-05	0.00692	0.166351	0.806	0.805	0.717	0.997	0.945	1	0.98	0.902
rs9865051	1.9092E-09	-0.038565	0.00642	-0.038551	0.007498	3.40698E-09	0.74747	0.10178	0.042142	0.000106	0.079417	1.5E-05	0.56876	0.851118	0.667	0.887	0.791	0.999	0.922	1	0.748	0.671
rs75593520	1.9099E-09	0.0517934	0.00862	0.056028	0.011212	3.14082E-09	0.60777	0.051805	4.63E-05	0.033007	0.008609	0.06955	0.00336	0.269687	0.838	0.939	1	0.964	0.986	0.708	0.987	0.891
rs112399731	1.9104E-09	0.051793	0.00862	0.0560278	0.011212	3.14161E-09	0.60777	0.051805	4.63E-05	0.033007	0.008609	0.06956	0.00336	0.269689	0.838	0.939	1	0.964	0.986	0.708	0.987	0.891
rs72696235	1.9113E-09	-0.040239	0.0067	-0.042437	0.008387	3.59459E-09	0.1105	0.824768	0.000873	0.068032	0.014722	0.00325	0.03872	0.002862	0.936	0.804	0.999	0.955	0.984	0.996	0.968	0.978
rs6589386	1.9123E-09	-0.034322	0.00572	-0.034322	0.005716	3.48513E-09	0.35423	0.702304	6.65E-06	0.000209	0.415987	0.01796	0.50099	0.925063	0.833	0.776	1	0.999	0.781	0.904	0.783	0.731
rs3812986	1.9127E-09	0.0304715	0.00507	0.0304715	0.005074	3.59727E-09	0.6543	0.885259	0.001755	0.006758	0.416387	6.5E-06	0.42244	0.815435	0.79	0.72	0.996	0.99	0.793	1	0.814	0.758
rs2551443	1.9127E-09	0.0473194	0.00788	0.0473194	0.00788	3.5973E-09	0.67349	0.262292	0.002239	0.039802	0.136184	8.4E-05	0.226	0.053008	0.854	0.905	0.997	0.971	0.938	1	0.916	0.948
rs76788735	1.914E-09	0.0431457	0.00719	0.0431457	0.007185	3.59959E-09	0.06551	0.057211	0.008706	0.177026	0.031868	2.8E-05	0.02486	0.956461	0.939	0.94	0.983	0.858	0.973	1	0.97	0.804

Table S3

rs9829067	1.9173E-09	-0.030868	0.00514	-0.030176	0.007821	1.43381E-09	0.98246	0.068843	0.009266	0.80266	0.038336	5E-08	0.08639	0.545201	0.636	0.881	0.89	0.185	0.939	1	0.894	0.727
rs73144760	1.9192E-09	0.0438433	0.0073	0.043045	0.007811	3.38926E-09	0.81376	0.211788	1.2E-05	0.551248	0.822623	9E-06	0.41668	0.168543	0.621	0.779	1	0.278	0.453	1	0.685	0.8
rs2801208	1.926E-09	-0.030194	0.00503	-0.030194	0.005029	3.62172E-09	0.4387	0.170951	0.00031	0.091969	0.383955	0.00049	0.00196	0.603989	0.871	0.91	1	0.925	0.856	0.999	0.988	0.847
rs7623687	1.927E-09	-0.035944	0.00599	-0.035944	0.005987	3.62344E-09	0.71782	0.090298	0.001181	0.137392	0.046968	4.1E-06	0.66256	0.64745	0.696	0.903	0.997	0.842	0.951	1	0.758	0.794
rs34919929	1.9293E-09	-0.033344	0.00555	-0.032084	0.008257	3.62766E-09	0.42757	0.141866	1.38E-05	0.512398	0.006482	0.00026	0.0624	0.403651	0.766	0.401	1	0.355	0.978	0.999	0.911	0.77
rs78149910	1.9326E-09	-0.053455	0.0089	-0.053455	0.008904	3.63376E-09	0.2655	0.120041	0.001747	0.000127	0.22547	0.01422	0.05535	0.2058	0.911	0.933	0.998	1	0.918	0.97	0.962	0.921
rs10939598	1.9343E-09	-0.030295	0.00505	-0.03075	0.005705	3.63693E-09	0.33254	0.843854	0.025535	0.000256	0.04685	0.00021	0.00998	0.647368	0.867	0.746	0.918	0.999	0.958	1	0.975	0.694
rs141944942	1.9351E-09	-0.053462	0.00891	-0.053462	0.008906	3.63848E-09	0.26592	0.119419	0.001728	0.000129	0.226057	0.01425	0.05529	0.204224	0.911	0.933	0.998	1	0.918	0.97	0.962	0.921
rs10786925	1.9364E-09	-0.031252	0.00521	-0.031252	0.005206	3.64075E-09	0.16213	0.228478	0.001685	0.005014	0.486621	0.00251	0.07018	0.005422	0.926	0.916	0.998	0.996	0.851	0.997	0.958	0.975
rs61687445	1.9366E-09	-0.034303	0.00571	-0.034303	0.005714	3.54327E-09	0.36175	0.702154	6.78E-06	0.000215	0.417689	0.01737	0.5057	0.923124	0.832	0.776	1	0.999	0.781	0.908	0.783	0.732
rs4505672	1.9367E-09	-0.030884	0.00514	-0.03028	0.008149	1.22659E-09	0.985	0.055873	0.011867	0.81541	0.043597	3.3E-08	0.07637	0.525707	0.614	0.886	0.839	0.169	0.93	1	0.897	0.721
rs1625107	1.939E-09	-0.031126	0.00519	-0.031126	0.005185	3.6456E-09	0.13506	0.586866	0.001725	0.247631	0.024338	3.6E-05	0.08299	0.390048	0.914	0.845	0.997	0.78	0.974	1	0.943	0.871
rs76745293	1.943E-09	0.0310602	0.00517	0.0318928	0.006116	3.06503E-09	0.11743	0.932839	0.093121	0.000384	0.003886	4E-05	0.59143	0.358994	0.888	0.717	0.562	0.999	0.987	1	0.731	0.824
rs12735998	1.9438E-09	-0.034762	0.00579	-0.033002	0.008192	3.6543E-09	0.031	0.065815	7.36E-05	0.031935	0.124385	0.00024	0.2018	0.545253	0.414	0.911	1	0.962	0.911	0.999	0.882	0.807
rs17113715	1.9458E-09	0.0517653	0.00862	0.0559383	0.011171	3.2211E-09	0.60671	0.051953	4.84E-05	0.032895	0.008627	0.06876	0.00338	0.270464	0.839	0.939	1	0.964	0.986	0.713	0.987	0.891
rs4741111	1.9472E-09	0.036059	0.00601	0.0362892	0.006387	3.66056E-09	0.66815	0.286566	3.33E-05	0.002301	0.443934	0.01812	0.06204	0.015075	0.731	0.883	1	0.997	0.823	0.937	0.949	0.958
rs201333072	1.9477E-09	0.0517773	0.00863	0.0560731	0.011243	3.20022E-09	0.58102	0.051604	4.65E-05	0.035356	0.008403	0.0691	0.00328	0.275735	0.842	0.939	1	0.961	0.987	0.711	0.988	0.89
rs4257651	1.949E-09	-0.03144	0.00524	-0.03144	0.005238	3.5518E-09	0.73376	0.692808	0.078944	0.001706	0.067805	3.7E-05	0.0076	0.179443	0.8	0.807	0.698	0.997	0.947	1	0.979	0.897
rs12457428	1.949E-09	-0.031645	0.00527	-0.031645	0.005272	3.66395E-09	0.1148	0.657051	9.55E-05	0.014705	0.3937	0.00046	0.20223	0.560296	0.91	0.721	1	0.984	0.832	0.999	0.899	0.832
rs190983132	1.9506E-09	0.0517751	0.00863	0.0560719	0.011244	3.20451E-09	0.58102	0.051607	4.65E-05	0.035356	0.008404	0.06914	0.00328	0.275742	0.842	0.939	1	0.961	0.987	0.711	0.988	0.89
rs156743	1.952E-09	-0.062779	0.01046	-0.065677	0.013541	3.66945E-09	0.61099	0.604011	0.013203	0.001236	0.165831	0.00032	0.29678	0.000536	0.859	0.859	0.974	0.998	0.928	1	0.898	0.981
rs111327216	1.9521E-09	-0.036047	0.00601	-0.036047	0.006006	3.6697E-09	0.66784	0.120052	0.00174	0.133362	0.04827	2.9E-06	0.5877	0.54812	0.693	0.897	0.996	0.851	0.952	1	0.782	0.815
rs9348720	1.9524E-09	-0.04505	0.00751	-0.04505	0.007506	3.67013E-09	0.81658	0.420333	0.001885	0.004678	0.081113	0.00123	0.03644	0.099198	0.79	0.884	0.998	0.995	0.956	0.998	0.967	0.936
rs9358948	1.9534E-09	-0.045049	0.00751	-0.045049	0.007506	3.672E-09	0.81649	0.420286	0.001886	0.004679	0.081074	0.00123	0.03644	0.099201	0.79	0.884	0.998	0.995	0.956	0.998	0.967	0.936
rs4690699	1.9543E-09	0.0329969	0.0055	0.0360557	0.008378	3.6737E-09	0.00954	0.217024	0.011803	0.006206	0.793609	0.00028	0.00054	0.759896	0.961	0.901	0.974	0.994	0.726	1	0.992	0.821
rs4752860	1.9552E-09	-0.031434	0.00524	-0.031533	0.005489	3.6754E-09	0.58612	0.199634	0.000233	6.9E-05	0.927622	0.00823	0.02563	0.994598	0.812	0.878	0.999	1	0.626	0.97	0.959	0.74
rs12707227	1.9567E-09	-0.035189	0.00586	-0.044499	0.011535	3.86836E-10	0.82119	0.035779	0.01476	3.72E-06	4.39E-05	0.06651	0.33281	0.282433	0.546	0.901	0.474	1	0.999	0.328	0.611	0.723
rs9366702	1.958E-09	-0.038163	0.00636	-0.038163	0.006359	3.68041E-09	0.76576	0.170409	0.000394	0.004284	0.111976	0.01394	0.08642	0.003804	0.854	0.925	1	0.996	0.95	0.972	0.954	0.976
rs13084997	1.9583E-09	-0.030937	0.00516	-0.031645	0.006329	3.68107E-09	0.97771	0.96393	0.003346	0.153887	0.004614	0.00012	0.00135	0.372657	0.784	0.777	0.994	0.857	0.988	1	0.988	0.868
rs9845200	1.96E-09	0.0304633	0.00508	0.0304633	0.005076	3.68412E-09	0.03738	0.377129	0.028818	0.000394	0.041437	0.00021	0.38164	0.761833	0.946	0.881	0.928	0.999	0.968	1	0.873	0.827
rs544230455	1.9624E-09	0.0942402	0.0157	0.0942402	0.015704	3.68854E-09	0.4718	0.013483	0.000191	0.03425	0.415572	0.00019	0.50119	0.776562	0.853	0.949	1	0.969	0.836	1	0.835	0.808
rs564282165	1.9624E-09	0.0942402	0.0157	0.0942402	0.015704	3.68854E-09	0.4718	0.013483	0.000191	0.03425	0.415572	0.00019	0.50119	0.776562	0.853	0.949	1	0.969	0.836	1	0.835	0.808
rs12928365	1.9624E-09	0.030443	0.00507	0.030443	0.005073	3.68862E-09	0.69587	0.867818	0.002128	0.005113	0.42346	5.1E-06	0.54991	0.733015	0.776	0.709	0.995	0.991	0.783	1	0.773	0.765
rs546573387	1.9626E-09	0.0942399	0.0157	0.0942399	0.015704	3.68894E-09	0.4718	0.013483	0.000191	0.03425	0.415578	0.00019	0.5012	0.776564	0.853	0.949	1	0.969	0.836	1	0.835	0.808
rs9393851	1.9629E-09	-0.038168	0.00636	-0.038168	0.00636	3.68943E-09	0.77924	0.185823	0.000558	0.003463	0.106718	0.01238	0.08096	0.004057	0.853	0.923	0.999	0.997	0.952	0.976	0.956	0.976
rs9393848	1.9634E-09	-0.038504	0.00642	-0.038504	0.006416	3.69046E-09	0.6178	0.159217	0.000613	0.003855	0.101844	0.01294	0.07066	0.006371	0.874	0.929	0.999	0.996	0.955	0.975	0.96	0.974
rs12903551	1.9636E-09	0.0302733	0.00504	0.0325978	0.008756	1.51996E-09	0.374	0.320335	8.94E-07	0.023234	0.021574	0.11562	0.00093	0.515988	0.444	0.786	1	0.92	0.959	0.284	0.988	0.724
rs61857752	1.964E-09	-0.045167	0.00753	-0.045546	0.008457	3.69142E-09	0.00641	0.50236	0.007747	0.217647	0.17162	1E-05	0.02594	0.31711	0.964	0.862	0.983	0.813	0.919	1	0.969	0.889
rs1458727	1.9643E-09	-0.034231	0.0057	-0.034231	0.005704	3.5611E-09	0.35527	0.169439	0.085143	0.008653	0.062291	1.7E-05	0.01359	0.286494	0.873	0.906	0.696	0.99	0.955	1	0.976	0.886
rs11755255	1.9644E-09	0.032204	0.00537	0.032204	0.005367	3.69223E-09	0.93181	0.520207	0.000906	0.03326	0.022818	0.0002	0.13338	0.501752	0.789	0.859	0.999	0.973	0.976	1	0.93	0.86
rs12286337	1.9646E-09	-0.034242	0.00571	-0.034242	0.005706	3.57347E-09	0.34907	0.169605	0.084373	0.0086	0.059532	1.9E-05	0.01361	0.280989	0.875	0.907	0.701	0.99	0.957	1	0.976	0.887
rs331940	1.9661E-09	-0.03355	0.00559	-0.036196	0.008229	3.69536E-09	0.00723	0.260933	0.014002	0.003072	0.811531	0.00026	0.00151	0.75556	0.963	0.892	0.966	0.996	0.716	1	0.988	0.818
rs10488821	1.9661E-09	-0.034241	0.00571	-0.034241	0.005706	3.57637E-09	0.34905	0.169606	0.084355	0.008611	0.059538	1.9E-05	0.0136	0.280995	0.875	0.907	0.701	0.99	0.957	1	0.976	0.887
rs1923489	1.9671E-09	-0.031506	0.00525	-0.03264	0.006996	2.63763E-09	0.24813	0.983568	0.111457	0.000294	0.004491	1.9E-05	0.90345	0.150816	0.821	0.651	0.415	0.999	0.984	1	0.565	0.857
rs6061696	1.9675E-09	0.0302176	0.00504	0.0265462	0.010598	3.00879E-09	0.33532	0.113533	0.003748	0.000115	0.434389	0.00034	5.2E-05	0.855338	0.498	0.406	0.982	0.999	0.708	0.999	0.993	0.609
rs1458726	1.969E-09	-0.034239	0.00571	-0.034239	0.005706	3.58221E-09	0.34923	0.169615	0.08422	0.00867	0.059396	1.9E-05	0.01355	0.281942	0.875	0.907	0.702	0.99	0.957	1	0.976	0.887
rs56270304	1.9697E-09	0.0367948	0.00613	0.0373251	0.007297	3.70196E-09	0.08113	0.418871	0.021268	0.002625	0.066285	4E-05	0.59692	0.017351	0.922	0.857	0.936	0.996	0.951	1	0.587	0.954
rs6903160	1.9747E-09	-0.032748	0.00546	-0.032748	0.005458	3.7111E-09	0.93158	0.853804	0.000118	0.015576	0.00341	0.01414	0.02374	0.156638	0.81	0.782	1	0.986	0.99	0.963	0.97	0.918
rs60738304	1.9748E-09	-0.033322	0.00555	-0.032078	0.008253	3.7114E-09	0.42757	0.140202	1.39E-05	0.512398	0.006663	0.00027	0.06333	0.384255	0.767	0.401	1	0.356	0.978	0.999	0.911	0.776
rs4294187	1.9759E-09	0.0359788	0.006	0.0359788	0.005997	3.71342E-09	0.10323	0.382171	0.00194	0.066066	0.01816	0.00019	0.05473	0.167811	0.926	0.697	0.997	0.948	0.979	1	0.956	0.916
rs34888377	1.9763E-09	0.0324801	0.00541	0.0339155	0.006341	3.714E-09	0.06086	0.03003	0.018712	0.006548	0.002372	0.00089	0.10374	0.903307	0.946	0.956	0.966	0.994	0.993	0.999	0.949	0.802
rs78971530	1.9771E-09	0.0667906	0.01113	0.06385	0.013656	3.18931E-09	0.17104	0.181244	0.000107	0.651745	0.944868	1.7E-06	0.11486	0.699671	0.807	0.801	0.999	0.222	0.414	1	0.852	0.65
rs9467772	1.9829E-09	-0.044846	0.00748	-0.044846	0.007475	3.72621E-09	0.81372	0.36073	0.001507	0.007292	0.068216	0.0013	0.03413	0.117229	0.791	0.892	0.998	0.994	0.96	0.998	0.968	0.933
rs6813458	1.9839E-09	0.0329702	0.0055	0.0358539	0.008213	3.728E-09	0.01237	0.213401	0.013688	0.006357	0.760665	0.00023	0.00054	0.745306	0.959	0.902	0.969	0.993	0.738	1	0.992	0.824
rs12405073	1.9862E-09	0.0440126	0.00734	0.0429314	0.008627	3.73234E-09	0.66696	0.314045	0.000167	7.85E-05	0.982419	0.00074	0.53462	0.240375	0.731	0.521	0.999	0.999	0.513	0.997	0.725	0.823

Table S3

rs3828955	1.9892E-09	-0.035157	0.00586	-0.044436	0.011523	3.95697E-10	0.81912	0.035739	0.014649	3.75E-06	4.43E-05	0.06691	0.33388	0.287667	0.548	0.901	0.477	1	0.999	0.33	0.611	0.721
rs4859283	1.9895E-09	0.0336581	0.00561	0.0336581	0.005611	3.73831E-09	0.49666	0.421301	0.010284	0.008996	0.184309	0.00012	0.00726	0.383679	0.875	0.884	0.984	0.992	0.925	1	0.983	0.889
rs218989	1.9909E-09	0.0322235	0.00537	0.0387337	0.008598	2.5078E-09	0.20134	0.374387	0.000172	0.005601	0.073913	0.11345	0.00099	0.005797	0.893	0.858	0.999	0.992	0.946	0.477	0.992	0.972
rs12536331	1.9927E-09	-0.035157	0.00586	-0.044412	0.011506	4.05996E-10	0.84143	0.035092	0.014731	3.75E-06	4.82E-05	0.06597	0.33071	0.275732	0.545	0.903	0.482	1	0.999	0.336	0.617	0.73
rs117196247	1.9935E-09	-0.073987	0.01233	-0.073987	0.012335	3.7457E-09	0.33142	0.81715	1.71E-06	0.09496	0.48669	0.00068	0.74851	0.088476	0.836	0.697	1	0.873	0.754	0.998	0.716	0.902
rs115961201	1.9943E-09	-0.072473	0.01208	-0.072473	0.012082	3.74707E-09	0.14884	0.008894	0.003033	0.017866	0.004827	0.00193	0.1808	0.811658	0.93	0.965	0.997	0.988	0.99	0.998	0.933	0.846
rs1025128	1.9981E-09	0.0326932	0.00545	0.0372025	0.008391	3.75419E-09	0.06802	0.005517	0.02824	0.004604	0.001319	0.00083	0.15417	0.680683	0.94	0.969	0.932	0.995	0.994	0.999	0.932	0.751
rs1351631	1.9985E-09	-0.030832	0.00514	-0.030142	0.007896	1.4346E-09	0.98025	0.065317	0.009463	0.819809	0.041597	4.7E-08	0.08396	0.539875	0.634	0.883	0.886	0.176	0.935	1	0.895	0.727
rs1455207	2.0049E-09	-0.031421	0.00524	-0.031421	0.005239	3.721E-09	0.72637	0.729174	0.06833	0.001762	0.080596	4.1E-05	0.00711	0.18996	0.809	0.809	0.752	0.997	0.943	1	0.98	0.898
rs9379880	2.0049E-09	-0.045018	0.00751	-0.045018	0.007506	3.76659E-09	0.81588	0.419693	0.001919	0.004675	0.081807	0.00123	0.03659	0.099411	0.79	0.884	0.998	0.995	0.955	0.998	0.967	0.936
rs2343493	2.0054E-09	-0.034732	0.00579	-0.032971	0.008191	3.76759E-09	0.03109	0.065815	7.39E-05	0.032757	0.124516	0.00024	0.2019	0.545253	0.415	0.911	1	0.961	0.911	0.999	0.882	0.807
rs2880638	2.0054E-09	-0.034732	0.00579	-0.032971	0.008191	3.76759E-09	0.03109	0.065815	7.39E-05	0.032757	0.124516	0.00024	0.2019	0.545253	0.415	0.911	1	0.961	0.911	0.999	0.882	0.807
rs2343478	2.0074E-09	-0.03467	0.00578	-0.032997	0.008442	3.77109E-09	0.02745	0.051319	7.73E-05	0.025858	0.098866	0.00036	0.20962	0.531014	0.411	0.919	1	0.97	0.925	0.999	0.881	0.812
rs2101064	2.0074E-09	-0.030829	0.00514	-0.030105	0.007915	1.4323E-09	0.99492	0.069248	0.009152	0.826763	0.037913	4.7E-08	0.08613	0.545808	0.627	0.88	0.889	0.172	0.938	1	0.893	0.724
rs12401290	2.0087E-09	0.043937	0.00733	0.0428072	0.008601	3.77358E-09	0.69555	0.316702	0.000145	8.94E-05	0.978997	0.00072	0.57345	0.240613	0.723	0.517	1	0.999	0.51	0.997	0.71	0.821
rs1377567	2.0098E-09	0.0351903	0.00587	0.0354621	0.009307	2.48825E-09	0.02203	0.292724	0.000185	0.874379	0.398306	5.4E-06	0.1748	0.033162	0.926	0.812	0.999	0.08	0.71	1	0.856	0.922
rs7934723	2.0163E-09	0.035254	0.00588	0.0361707	0.009551	2.45173E-09	0.01758	0.206036	0.000385	0.886163	0.359387	3.8E-06	0.18555	0.028499	0.933	0.844	0.998	0.086	0.741	1	0.856	0.929
rs9347028	2.0172E-09	0.031349	0.00523	0.031349	0.005228	3.78924E-09	0.26339	0.834139	0.000421	0.002521	0.126234	0.00345	0.0501	0.608375	0.901	0.831	0.999	0.997	0.939	0.995	0.959	0.854
rs35987611	2.0199E-09	0.0312123	0.00521	0.0324057	0.008763	3.79407E-09	0.19397	0.03305	0.000373	0.000186	0.021979	0.01498	0.18337	0.057547	0.888	0.446	0.999	0.999	0.972	0.94	0.899	0.93
rs35511675	2.0209E-09	0.0302494	0.00504	0.0325692	0.008757	1.56365E-09	0.37435	0.320275	8.93E-07	0.024016	0.021551	0.11551	0.00093	0.516885	0.444	0.786	1	0.917	0.959	0.286	0.988	0.723
rs2311212	2.0215E-09	-0.030615	0.00511	-0.030613	0.005629	3.79713E-09	0.64822	0.388965	9.43E-05	0.000683	0.231379	0.00526	0.01406	0.443617	0.687	0.634	1	0.998	0.871	0.984	0.967	0.833
rs4502065	2.022E-09	0.0370899	0.00619	0.0370899	0.006186	3.79795E-09	0.33272	0.653898	0.000601	0.005702	0.464237	0.00178	0.09363	0.013197	0.893	0.854	0.999	0.995	0.844	0.998	0.946	0.964
rs6061693	2.0221E-09	0.0301941	0.00504	0.0268702	0.010242	3.79813E-09	0.38047	0.143648	0.004237	0.000128	0.402582	0.00028	8.6E-05	0.767052	0.521	0.434	0.98	0.999	0.73	0.999	0.992	0.597
rs937930	2.0229E-09	0.0305843	0.0051	0.0315178	0.005866	3.79963E-09	0.03118	0.023901	0.008311	0.030662	0.059594	0.00035	0.61755	0.015024	0.958	0.96	0.989	0.981	0.968	1	0.853	0.969
rs3812265	2.027E-09	-0.035164	0.00586	-0.044831	0.01162	3.56409E-10	0.73897	0.037089	0.017806	3.5E-06	3.67E-05	0.06473	0.34325	0.271082	0.54	0.896	0.401	1	0.999	0.287	0.572	0.711
rs9873316	2.0282E-09	-0.030822	0.00514	-0.030076	0.007926	1.45261E-09	0.96963	0.069248	0.009152	0.822581	0.037913	4.7E-08	0.08613	0.545808	0.621	0.879	0.889	0.173	0.938	1	0.893	0.724
rs139635157	2.0319E-09	-0.038132	0.00636	-0.038132	0.00636	3.81621E-09	0.77922	0.185749	0.000549	0.003463	0.106441	0.0129	0.08083	0.004044	0.852	0.923	0.999	0.997	0.952	0.975	0.956	0.976
rs10214440	2.0334E-09	-0.038131	0.00636	-0.038131	0.00636	3.81893E-09	0.77922	0.18575	0.000549	0.003463	0.10652	0.0129	0.08083	0.004044	0.852	0.923	0.999	0.997	0.952	0.975	0.956	0.976
rs66725070	2.0336E-09	0.0302442	0.00504	0.0325653	0.008757	1.57316E-09	0.37435	0.320368	8.97E-07	0.024014	0.021567	0.1157	0.00093	0.51652	0.444	0.786	1	0.917	0.959	0.286	0.988	0.723
rs9461400	2.0352E-09	-0.03813	0.00636	-0.03813	0.00636	3.82226E-09	0.77926	0.185752	0.000549	0.003463	0.106541	0.0129	0.08084	0.004045	0.852	0.923	0.999	0.997	0.952	0.975	0.956	0.976
rs10603146	2.0358E-09	0.0430589	0.00718	0.0496988	0.010653	3.82323E-09	0.0264	0.07586	0.006604	0.096139	0.202364	0.00114	0.00305	0.005506	0.962	0.948	0.992	0.943	0.933	0.999	0.99	0.978
rs7529192	2.0361E-09	0.031209	0.00521	0.0323835	0.008531	3.82388E-09	0.18976	0.039836	0.000382	0.000203	0.028521	0.0136	0.18959	0.050915	0.89	0.464	0.999	0.999	0.968	0.949	0.899	0.934
rs56294861	2.0372E-09	-0.04514	0.00753	-0.045558	0.008556	3.82591E-09	0.00671	0.500841	0.007651	0.236233	0.171214	9.8E-06	0.0258	0.300593	0.963	0.86	0.983	0.794	0.918	1	0.968	0.89
rs1324489	2.0407E-09	0.038041	0.00635	0.0375113	0.008756	3.83237E-09	0.13746	0.102384	0.001361	8.85E-05	0.192588	0.00089	0.76963	0.115482	0.889	0.507	0.997	0.999	0.882	0.998	0.726	0.899
rs1512141	2.0415E-09	0.0343562	0.00573	0.0365309	0.007872	3.83371E-09	0.03168	0.456777	0.001755	0.007228	0.000145	0.00384	0.81372	0.391977	0.946	0.864	0.997	0.993	0.997	0.993	0.68	0.873
rs9468214	2.0419E-09	-0.038097	0.00636	-0.038097	0.006355	3.83456E-09	0.7406	0.186858	0.000579	0.003356	0.105771	0.01329	0.07987	0.003894	0.857	0.923	0.999	0.997	0.952	0.974	0.956	0.976
rs9347683	2.045E-09	0.0335916	0.0056	0.0335944	0.005612	3.84012E-09	0.21231	0.350364	0.000865	0.012325	0.791871	0.00052	0.03697	0.009757	0.894	0.871	0.999	0.988	0.563	0.999	0.959	0.963
rs1970022	2.0472E-09	0.0301904	0.00504	0.0264139	0.010622	3.09269E-09	0.30931	0.116031	0.00345	0.000106	0.422893	0.00039	5.6E-05	0.837021	0.488	0.407	0.984	0.999	0.713	0.998	0.993	0.604
rs9814737	2.0488E-09	-0.030811	0.00514	-0.030092	0.007874	1.50153E-09	0.98897	0.068843	0.009266	0.81398	0.038336	5E-08	0.08639	0.545201	0.627	0.88	0.889	0.179	0.938	1	0.893	0.725
rs111271782	2.0493E-09	-0.035887	0.00599	-0.035887	0.005987	3.84806E-09	0.6841	0.090901	0.001165	0.137223	0.047895	4.4E-06	0.6562	0.633444	0.69	0.903	0.997	0.842	0.95	1	0.759	0.796
rs4925265	2.0514E-09	0.0301844	0.00504	0.0264773	0.010635	3.03628E-09	0.31782	0.114332	0.003738	0.000111	0.430425	0.00036	5E-05	0.860006	0.492	0.407	0.982	0.999	0.71	0.998	0.993	0.61
rs74011415	2.0515E-09	0.0392311	0.00655	0.0392311	0.006545	3.85215E-09	0.54097	0.857102	0.000627	0.000851	0.572179	4E-05	0.26622	0.85439	0.592	0.658	0.998	0.997	0.683	1	0.822	0.642
rs10007431	2.0522E-09	-0.040596	0.00677	-0.040596	0.006773	3.85342E-09	0.23643	0.143796	0.010523	0.000635	0.224408	0.00121	0.03002	0.328854	0.915	0.928	0.985	0.999	0.919	0.999	0.971	0.904
rs11680336	2.0536E-09	0.0361533	0.00603	0.0363632	0.007597	3.76553E-09	0.13697	0.499937	0.034186	0.000161	0.157763	2.6E-05	0.4848	0.078016	0.884	0.808	0.837	0.999	0.888	1	0.482	0.909
rs3890860	2.0546E-09	0.0304712	0.00508	0.0304712	0.005084	3.85786E-09	0.72423	0.810401	0.00293	0.012672	0.477191	1.8E-06	0.30567	0.757831	0.776	0.704	0.992	0.982	0.768	1	0.844	0.765
rs208237	2.055E-09	0.0349176	0.00583	0.0349101	0.005895	3.85846E-09	0.84172	0.945108	0.001686	8.58E-06	0.177837	0.00099	0.50332	0.683828	0.754	0.722	0.996	1	0.88	0.997	0.786	0.658
rs12746889	2.0559E-09	-0.034708	0.00579	-0.032949	0.008193	3.86025E-09	0.03104	0.065948	7.22E-05	0.032595	0.124827	0.00025	0.20224	0.545501	0.415	0.911	1	0.961	0.911	0.999	0.882	0.807
rs35609076	2.059E-09	-0.033507	0.00559	-0.036209	0.008298	3.86583E-09	0.00684	0.259839	0.013377	0.003258	0.836198	0.00027	0.00146	0.753259	0.963	0.892	0.968	0.996	0.707	1	0.988	0.818
rs61884729	2.0603E-09	-0.034191	0.00571	-0.034191	0.005705	3.74444E-09	0.35122	0.170787	0.08452	0.008641	0.062312	1.9E-05	0.01388	0.289259	0.874	0.906	0.702	0.99	0.956	1	0.976	0.885
rs9311340	2.0613E-09	-0.030807	0.00514	-0.030122	0.007872	1.50333E-09	0.98129	0.065336	0.009495	0.815901	0.04168	4.9E-08	0.08402	0.540074	0.635	0.883	0.886	0.179	0.935	1	0.895	0.727
rs9295742	2.0615E-09	-0.038117	0.00636	-0.038117	0.00636	3.87047E-09	0.78904	0.185746	0.000549	0.00348	0.106474	0.0129	0.08083	0.004044	0.851	0.923	0.999	0.997	0.952	0.975	0.956	0.976
rs201002	2.0644E-09	-0.06365	0.01062	-0.06617	0.013348	3.87573E-09	0.3608	0.561652	0.00848	0.003805	0.280118	0.00034	0.20407	0.000391	0.893	0.869	0.987	0.996	0.899	1	0.922	0.982
rs11859054	2.0658E-09	-0.031751	0.0053	-0.031751	0.005298	3.87842E-09	0.67484	0.209662	0.00512	6.26E-05	0.012071	0.00293	0.36022	0.896723	0.836	0.9	0.991	1	0.982	0.995	0.873	0.768
rs9379945	2.066E-09	-0.050583	0.00844	-0.053067	0.010145	3.87865E-09	0.42313	0.169107	0.002932	0.069741	0.068255	0.00141	0.01486	0.001474	0.899	0.93	0.997	0.958	0.966	0.998	0.981	0.981
rs1564434	2.0661E-09	-0.030803	0.00514	-0.030107	0.007911	1.4728E-09	0.98653	0.06536	0.009493	0.824058	0.041665	4.7E-08	0.08402	0.540372	0.632	0.882	0.885	0.174	0.935	1	0.895	0.726

Table S3

rs35704262	2.0667E-09	0.0315491	0.00526	0.0315491	0.005265	3.88008E-09	0.68004	0.856365	0.005606	0.009393	0.162229	0.00011	0.07626	0.021649	0.846	0.787	0.992	0.992	0.926	1	0.95	0.958
rs7767277	2.0671E-09	0.0500787	0.00836	0.0513411	0.009661	3.8807E-09	0.00075	0.173707	0.001855	0.056908	0.027416	0.00074	0.35703	0.594245	0.982	0.923	0.998	0.963	0.977	0.999	0.896	0.869
rs9461401	2.0681E-09	-0.038113	0.00636	-0.038113	0.00636	3.88258E-09	0.77443	0.185749	0.000549	0.003566	0.106441	0.0129	0.08083	0.004044	0.853	0.923	0.999	0.997	0.952	0.975	0.956	0.976
rs13330778	2.0688E-09	-0.03175	0.0053	-0.03175	0.005298	3.88381E-09	0.67484	0.209696	0.005123	6.26E-05	0.012075	0.00293	0.36028	0.896911	0.836	0.9	0.991	1	0.982	0.995	0.873	0.768
rs9393847	2.0711E-09	-0.038448	0.00642	-0.038448	0.006416	3.88806E-09	0.62553	0.160491	0.000623	0.003923	0.10008	0.01316	0.07177	0.006217	0.873	0.929	0.999	0.996	0.955	0.975	0.959	0.974
rs7760523	2.0747E-09	-0.038095	0.00636	-0.038095	0.006358	3.89475E-09	0.74305	0.179946	0.000534	0.003469	0.108504	0.01388	0.08185	0.003767	0.857	0.924	0.999	0.997	0.951	0.972	0.955	0.976
rs11852835	2.0755E-09	0.0302071	0.00504	0.0327094	0.008388	2.11303E-09	0.6222	0.433775	2.29E-06	0.032649	0.019404	0.08444	0.00038	0.612085	0.58	0.784	1	0.913	0.965	0.467	0.992	0.737
rs7503050	2.0759E-09	0.0343165	0.00573	0.0336804	0.008183	3.89686E-09	0.25844	0.053726	9.84E-05	0.159017	0.514588	0.00013	0.18848	0.006944	0.579	0.917	1	0.814	0.76	1	0.886	0.958
rs35559309	2.081E-09	-0.038443	0.00642	-0.038443	0.006416	3.90617E-09	0.62729	0.160531	0.000625	0.003924	0.099785	0.01318	0.07185	0.006206	0.872	0.929	0.999	0.996	0.955	0.975	0.959	0.974
rs2394000	2.0817E-09	-0.038443	0.00642	-0.038443	0.006416	3.90745E-09	0.6263	0.160531	0.000625	0.003933	0.099784	0.01318	0.07185	0.006206	0.872	0.929	0.999	0.996	0.955	0.975	0.959	0.974
rs7506909	2.0841E-09	0.0306391	0.00511	0.0306391	0.005114	3.91186E-09	0.17944	0.765986	0.002187	0.002381	0.107325	0.00012	0.95786	0.432683	0.895	0.806	0.996	0.996	0.931	1	0.694	0.852
rs1975997	2.0853E-09	-0.030797	0.00514	-0.030102	0.0079	1.49883E-09	0.98695	0.065279	0.009401	0.824036	0.041649	4.9E-08	0.08409	0.540376	0.632	0.882	0.887	0.175	0.935	1	0.895	0.727
rs176380	2.0857E-09	0.0348997	0.00583	0.0348909	0.005898	3.91485E-09	0.79895	0.93679	0.001586	8.62E-06	0.187474	0.00102	0.51779	0.676451	0.76	0.719	0.996	1	0.876	0.997	0.781	0.655
rs2589994	2.0866E-09	-0.033494	0.00559	-0.036177	0.008284	3.91649E-09	0.00694	0.261295	0.013321	0.00329	0.836269	0.00028	0.00145	0.75263	0.963	0.891	0.968	0.996	0.707	1	0.988	0.818
rs1443183	2.0868E-09	-0.033494	0.00559	-0.036177	0.008284	3.91683E-09	0.00694	0.261295	0.013321	0.00329	0.836274	0.00028	0.00145	0.752628	0.963	0.891	0.968	0.996	0.707	1	0.988	0.818
rs73132359	2.0888E-09	-0.053309	0.0089	-0.053309	0.008899	3.92046E-09	0.26479	0.122503	0.001803	0.000129	0.223316	0.01443	0.05579	0.210579	0.911	0.932	0.998	1	0.919	0.97	0.962	0.92
rs9937842	2.0892E-09	-0.031742	0.0053	-0.031742	0.005299	3.92135E-09	0.67626	0.209407	0.005131	6.3E-05	0.012082	0.00293	0.36041	0.896435	0.835	0.9	0.991	1	0.982	0.995	0.873	0.768
rs74781276	2.0903E-09	-0.053308	0.0089	-0.053308	0.008899	3.92329E-09	0.26481	0.122507	0.001804	0.000129	0.223372	0.01442	0.05574	0.210592	0.911	0.932	0.998	1	0.919	0.97	0.962	0.92
rs145732766	2.0934E-09	-0.053306	0.0089	-0.053306	0.008899	3.92892E-09	0.26481	0.122525	0.001805	0.000129	0.223338	0.01443	0.05576	0.210625	0.911	0.932	0.998	1	0.919	0.97	0.962	0.92
rs13027254	2.0935E-09	-0.030265	0.00505	-0.036142	0.009781	3.92924E-09	0.32129	0.000915	0.000283	0.029326	0.015873	0.01928	0.00054	0.69315	0.662	0.977	0.999	0.973	0.98	0.936	0.992	0.828
rs80247159	2.0946E-09	-0.053305	0.0089	-0.053305	0.008899	3.93117E-09	0.26481	0.122528	0.001805	0.000129	0.223338	0.01443	0.05578	0.210641	0.911	0.932	0.998	1	0.919	0.97	0.962	0.92
rs1384435	2.0971E-09	-0.030791	0.00514	-0.030092	0.00789	1.5084E-09	0.98548	0.068843	0.009266	0.829118	0.038336	5E-08	0.08639	0.545201	0.632	0.88	0.889	0.172	0.938	1	0.893	0.725
rs112950587	2.0983E-09	-0.053303	0.0089	-0.053303	0.008899	3.93791E-09	0.2657	0.12254	0.001804	0.000129	0.223386	0.01443	0.05579	0.210647	0.91	0.932	0.998	1	0.919	0.97	0.962	0.92
rs78783427	2.0983E-09	-0.053303	0.0089	-0.053303	0.008899	3.93791E-09	0.2657	0.12254	0.001804	0.000129	0.223386	0.01443	0.05579	0.210647	0.91	0.932	0.998	1	0.919	0.97	0.962	0.92
rs112732168	2.0991E-09	-0.053302	0.0089	-0.053302	0.008899	3.93946E-09	0.26536	0.122532	0.001805	0.000129	0.223378	0.01443	0.05578	0.210645	0.911	0.932	0.998	1	0.919	0.97	0.962	0.92
rs331939	2.0996E-09	-0.033489	0.00559	-0.036125	0.008233	3.94038E-09	0.00728	0.259322	0.013715	0.003185	0.826635	0.00027	0.00151	0.752739	0.962	0.892	0.967	0.996	0.711	1	0.988	0.818
rs9380012	2.1068E-09	-0.038429	0.00642	-0.038429	0.006416	3.95347E-09	0.6286	0.160794	0.000627	0.00395	0.099519	0.01322	0.07204	0.006179	0.872	0.928	0.999	0.996	0.955	0.975	0.959	0.974
rs9368529	2.107E-09	-0.038429	0.00642	-0.038429	0.006416	3.95394E-09	0.62859	0.160788	0.000627	0.003949	0.099474	0.01322	0.07203	0.006179	0.872	0.928	0.999	0.996	0.955	0.975	0.959	0.974
rs6913341	2.1086E-09	-0.031526	0.00526	-0.031526	0.005264	3.95693E-09	0.85782	0.648737	0.000118	0.006575	0.228878	0.0017	0.12614	0.347875	0.814	0.84	1	0.993	0.9	0.997	0.93	0.88
rs1822360	2.1092E-09	-0.033485	0.00559	-0.036107	0.008223	3.95794E-09	0.00736	0.258752	0.013707	0.003179	0.827065	0.00027	0.00152	0.752507	0.962	0.892	0.967	0.996	0.711	1	0.988	0.818
rs9881028	2.1103E-09	-0.030786	0.00514	-0.030078	0.007907	1.50754E-09	0.9759	0.065147	0.009494	0.823568	0.04135	4.8E-08	0.08436	0.562493	0.634	0.882	0.885	0.174	0.935	1	0.894	0.72
rs61857750	2.1135E-09	-0.045088	0.00753	-0.045507	0.008553	3.96593E-09	0.00674	0.501436	0.007716	0.237877	0.170309	1E-05	0.02587	0.300924	0.963	0.86	0.983	0.793	0.918	1	0.968	0.889
rs111795916	2.1137E-09	-0.053323	0.0089	-0.053323	0.008904	3.96615E-09	0.26577	0.121595	0.001833	0.00013	0.227264	0.01416	0.05634	0.208836	0.91	0.932	0.998	1	0.918	0.971	0.962	0.921
rs7947050	2.1162E-09	-0.035051	0.00585	-0.03527	0.008697	3.27532E-09	0.02406	0.33217	0.000405	0.957539	0.365811	5.2E-06	0.1594	0.029409	0.926	0.811	0.999	0.142	0.745	1	0.871	0.927
rs62084708	2.1164E-09	0.0342981	0.00573	0.033664	0.008182	3.97112E-09	0.25637	0.053726	0.0001	0.156654	0.515718	0.00013	0.18925	0.006945	0.579	0.917	1	0.817	0.76	1	0.886	0.958
rs9815196	2.1165E-09	-0.030789	0.00514	-0.030133	0.007886	1.52584E-09	0.97503	0.065037	0.009911	0.816268	0.041583	4.9E-08	0.08299	0.536165	0.635	0.883	0.88	0.179	0.935	1	0.896	0.728
rs1965828	2.1175E-09	0.033481	0.00559	0.0360973	0.008218	3.97324E-09	0.00739	0.258479	0.013719	0.003178	0.827369	0.00027	0.00152	0.752389	0.962	0.892	0.967	0.996	0.711	1	0.988	0.819
rs9837270	2.118E-09	0.0303885	0.00507	0.0303885	0.005074	3.97417E-09	0.97421	0.120542	0.00283	0.037462	0.030979	0.00024	0.05163	0.360619	0.821	0.929	0.997	0.974	0.975	1	0.961	0.894
rs6913782	2.1193E-09	0.0429786	0.00718	0.0494744	0.010597	3.97651E-09	0.02678	0.076423	0.006522	0.097357	0.206702	0.00114	0.00302	0.005824	0.962	0.948	0.992	0.942	0.932	0.999	0.99	0.978
rs9380011	2.1204E-09	-0.038422	0.00642	-0.038422	0.006416	3.97851E-09	0.62927	0.161046	0.000629	0.003955	0.099377	0.01323	0.07209	0.006182	0.872	0.928	0.999	0.996	0.955	0.975	0.959	0.974
rs12640389	2.1219E-09	0.0334791	0.00559	0.0360926	0.008216	3.98116E-09	0.00741	0.258472	0.013722	0.003178	0.827463	0.00027	0.00153	0.752403	0.962	0.892	0.967	0.996	0.711	1	0.988	0.818
rs10637586	2.1224E-09	-0.032936	0.0055	-0.036181	0.008517	3.98216E-09	0.0082	0.210873	0.012804	0.006691	0.79947	0.00026	0.00053	0.767528	0.962	0.902	0.971	0.993	0.724	1	0.992	0.819
rs9368528	2.1248E-09	-0.03842	0.00642	-0.03842	0.006416	3.9866E-09	0.62933	0.161004	0.00063	0.003955	0.09932	0.01324	0.07215	0.00618	0.872	0.928	0.999	0.996	0.955	0.975	0.959	0.974
rs6902689	2.1253E-09	-0.038025	0.00635	-0.038025	0.00635	3.9875E-09	0.71122	0.173014	0.00056	0.003765	0.101832	0.0142	0.07419	0.00436	0.861	0.925	0.999	0.996	0.954	0.972	0.958	0.976
rs13102690	2.1266E-09	-0.030241	0.00505	-0.030868	0.006073	3.98982E-09	0.34807	0.812507	0.028535	0.000255	0.046404	0.00018	0.00893	0.587894	0.859	0.733	0.902	0.999	0.957	1	0.975	0.673
rs742046	2.1292E-09	-0.038074	0.00636	-0.038074	0.006359	3.99465E-09	0.76721	0.170347	0.00039	0.004368	0.111991	0.01437	0.09218	0.003788	0.853	0.925	1	0.996	0.95	0.971	0.952	0.976
rs6922111	2.1296E-09	-0.047653	0.00796	-0.047653	0.007959	3.99539E-09	0.03304	0.36848	0.000711	0.042632	0.338934	0.00173	0.02453	0.045256	0.956	0.9	0.999	0.973	0.892	0.998	0.975	0.955
rs34752872	2.1299E-09	-0.038417	0.00642	-0.038417	0.006416	3.99596E-09	0.63	0.161128	0.00063	0.00396	0.099128	0.01326	0.0722	0.006162	0.872	0.928	0.999	0.996	0.955	0.975	0.959	0.974
rs9830697	2.1301E-09	-0.030778	0.00514	-0.030087	0.007898	1.5326E-09	0.98695	0.065335	0.009495	0.824036	0.041684	4.9E-08	0.08401	0.540078	0.632	0.882	0.886	0.175	0.935	1	0.895	0.727
rs9835793	2.1304E-09	-0.030778	0.00514	-0.030087	0.007898	1.53285E-09	0.98695	0.065335	0.009495	0.824036	0.041685	4.9E-08	0.08401	0.540078	0.632	0.882	0.886	0.175	0.935	1	0.895	0.727
rs147144253	2.1308E-09	-0.031725	0.0053	-0.031725	0.005298	3.99754E-09	0.67576	0.209695	0.005123	6.57E-05	0.012074	0.00293	0.36028	0.896915	0.835	0.9	0.991	1	0.982	0.995	0.873	0.768
rs1224522	2.1316E-09	0.056607	0.00945	0.056607	0.009454	3.99903E-09	0.20545	0.595488	0.002906	4.79E-05	0.111538	0.00456	0.09225	0.979683	0.907	0.854	0.996	1	0.942	0.992	0.945	0.798
rs4788609	2.1357E-09	0.0303825	0.00507	0.0303825	0.005075	4.00662E-09	0.7176	0.861129	0.001876	0.005841	0.450193	5.8E-06	0.44236	0.842269	0.772	0.707	0.995	0.99	0.773	1	0.801	0.745
rs4562171	2.1381E-09	0.0429701	0.00718	0.0494553	0.010593	4.01097E-09	0.02682	0.076443	0.00651	0.097541	0.206506	0.00115	0.00304	0.005827	0.962	0.948	0.992	0.942	0.932	0.999	0.99	0.978
rs11581828	2.1416E-09	0.030911	0.00516	0.0316425	0.006239	4.0174E-09	0.77428	0.015742	0.002538	0.007081	0.021978	0.00096	0.02882	0.31434	0.823	0.954	0.996	0.993	0.976	0.999	0.966	0.639

Table S3

rs7772027	2.1418E-09	-0.038411	0.00642	-0.038411	0.006416	4.01763E-09	0.63043	0.161119	0.000631	0.003965	0.099098	0.01329	0.0723	0.006153	0.872	0.928	0.999	0.996	0.955	0.975	0.959	0.974
rs7105607	2.1421E-09	-0.035085	0.00586	-0.035146	0.008684	3.15174E-09	0.02598	0.275993	0.000331	0.991445	0.354743	4.9E-06	0.17877	0.040137	0.923	0.823	0.999	0.122	0.747	1	0.86	0.919
rs4788610	2.1485E-09	0.0303782	0.00507	0.0303782	0.005075	4.02991E-09	0.70934	0.858742	0.001857	0.005861	0.443498	6E-06	0.44487	0.840018	0.774	0.707	0.995	0.99	0.776	1	0.801	0.747
rs9468200	2.1503E-09	-0.038409	0.00642	-0.038409	0.006416	4.03337E-09	0.63006	0.160381	0.000628	0.003962	0.098911	0.01344	0.07212	0.006136	0.872	0.928	0.999	0.996	0.955	0.974	0.959	0.974
rs75764790	2.1512E-09	0.0941063	0.01572	0.0941063	0.015721	4.03488E-09	0.84587	0.043236	0.001253	0.177218	0.022384	0.00024	0.01325	0.609	0.825	0.943	0.998	0.863	0.976	1	0.975	0.85
rs1530997	2.1546E-09	-0.035077	0.00586	-0.035441	0.008878	3.09342E-09	0.02093	0.274857	0.000441	0.983931	0.349781	4.4E-06	0.15305	0.039173	0.929	0.826	0.998	0.121	0.753	1	0.874	0.921
rs1118393	2.1586E-09	0.0315472	0.00527	0.0315472	0.005271	4.04856E-09	0.94968	0.676848	0.00461	0.128353	0.074149	2.3E-06	0.22139	0.13779	0.77	0.822	0.99	0.879	0.946	1	0.896	0.909
rs10469012	2.1596E-09	0.030296	0.00506	0.030296	0.005062	4.05039E-09	0.7819	0.741921	0.000198	0.001362	0.084762	0.00367	0.1387	0.473852	0.755	0.822	1	0.998	0.946	0.993	0.924	0.856
rs35621060	2.1597E-09	-0.034157	0.00571	-0.034157	0.005707	3.9257E-09	0.35867	0.168707	0.084568	0.009313	0.059291	1.9E-05	0.01361	0.282058	0.873	0.907	0.704	0.99	0.957	1	0.976	0.887
rs537958	2.16E-09	0.0320585	0.00536	0.0320585	0.005356	4.05116E-09	0.18378	0.704272	5.07E-06	0.070701	0.458282	0.01003	0.02439	0.074463	0.909	0.838	1	0.942	0.835	0.975	0.969	0.936
rs4804087	2.1604E-09	-0.076027	0.0127	-0.075851	0.014517	4.05185E-09	0.98072	0.304363	0.000793	0.314615	0.336215	2.6E-05	0.00147	0.192989	0.737	0.854	0.998	0.653	0.822	1	0.984	0.88
rs12486736	2.1605E-09	-0.030767	0.00514	-0.030064	0.007913	1.53355E-09	0.98586	0.068843	0.009266	0.838523	0.038336	5E-08	0.08639	0.545201	0.631	0.88	0.888	0.168	0.938	1	0.893	0.724
rs13400113	2.1637E-09	-0.030615	0.00512	-0.030615	0.005115	4.05788E-09	0.56719	0.583208	0.018819	0.000827	0.12276	0.00152	0.00271	0.054127	0.872	0.871	0.966	0.999	0.945	0.998	0.988	0.95
rs62161934	2.1639E-09	0.0860927	0.01438	0.0862886	0.014608	4.05821E-09	0.00397	0.413386	0.011216	0.000842	0.623636	0.0005	0.2276	0.109296	0.973	0.881	0.982	0.999	0.798	0.999	0.912	0.931
rs737516	2.1652E-09	-0.030764	0.00514	-0.03004	0.0079	1.54016E-09	0.98465	0.068866	0.009218	0.836319	0.038469	4.9E-08	0.0899	0.545604	0.632	0.88	0.889	0.169	0.938	1	0.891	0.724
rs6061303	2.1691E-09	0.030143	0.00504	0.0264195	0.0106	3.32452E-09	0.31522	0.117218	0.00345	0.000107	0.425665	0.00041	5.7E-05	0.836484	0.491	0.409	0.984	0.999	0.713	0.998	0.993	0.605
rs4774494	2.1695E-09	0.03917	0.00655	0.03917	0.006545	4.06848E-09	0.54065	0.853504	0.000645	0.000852	0.577365	4.1E-05	0.26466	0.847271	0.592	0.656	0.998	0.997	0.681	1	0.822	0.64
rs12038460	2.1695E-09	-0.0372	0.00622	-0.0372	0.006216	4.06856E-09	0.81986	0.827318	0.000401	0.001752	0.017762	0.0024	0.3793	0.626549	0.81	0.81	0.999	0.997	0.977	0.996	0.863	0.832
rs4264704	2.1696E-09	-0.030762	0.00514	-0.030068	0.007912	1.54997E-09	0.99071	0.065334	0.009496	0.828608	0.041682	4.9E-08	0.08401	0.540069	0.631	0.882	0.886	0.173	0.935	1	0.895	0.726
rs7847271	2.1705E-09	-0.047632	0.00796	-0.047632	0.007959	4.07036E-09	0.15894	0.077079	0.002893	0.019389	0.031087	0.00124	0.17401	0.175021	0.932	0.946	0.997	0.988	0.978	0.999	0.938	0.932
rs111268660	2.1741E-09	0.0334571	0.00559	0.0360504	0.008201	4.077E-09	0.00751	0.258167	0.013714	0.003258	0.827791	0.00028	0.00153	0.752041	0.962	0.892	0.967	0.996	0.711	1	0.988	0.819
rs571524696	2.1748E-09	-0.034109	0.0057	-0.036149	0.00714	4.07819E-09	0.88797	0.002929	0.010399	0.020009	0.014689	0.00076	0.07283	0.07365	0.815	0.975	0.985	0.987	0.985	0.999	0.959	0.948
rs143856063	2.1759E-09	-0.034108	0.0057	-0.036149	0.00714	4.0802E-09	0.88798	0.002929	0.0104	0.020014	0.01469	0.00076	0.07283	0.073652	0.815	0.975	0.985	0.987	0.985	0.999	0.959	0.948
rs199607701	2.1764E-09	-0.034108	0.0057	-0.036149	0.00714	4.08118E-09	0.88797	0.002929	0.010401	0.020014	0.01469	0.00077	0.07283	0.073653	0.815	0.975	0.985	0.987	0.985	0.999	0.959	0.948
rs9835664	2.1783E-09	-0.030765	0.00514	-0.030081	0.0079	1.56455E-09	0.98695	0.065669	0.009621	0.824036	0.041679	5E-08	0.08337	0.540622	0.632	0.882	0.884	0.175	0.935	1	0.895	0.726
rs991795	2.1787E-09	0.0321156	0.00537	0.0321156	0.005367	4.0853E-09	0.89967	0.521352	0.000869	0.035828	0.022199	0.00022	0.12925	0.488731	0.784	0.859	0.999	0.971	0.976	1	0.931	0.862
rs13117185	2.1793E-09	0.0334549	0.00559	0.0360451	0.008199	4.08652E-09	0.00753	0.258154	0.013715	0.003263	0.827873	0.00028	0.00153	0.752037	0.962	0.892	0.967	0.996	0.711	1	0.988	0.819
rs1925408	2.1795E-09	0.0315405	0.00527	0.0315405	0.005271	4.08676E-09	0.94623	0.676588	0.004605	0.129304	0.07426	2.3E-06	0.22117	0.137548	0.769	0.822	0.99	0.878	0.946	1	0.896	0.909
rs11839257	2.1796E-09	0.0343886	0.00575	0.0343886	0.005747	4.08701E-09	0.41199	0.670331	0.004365	0.003552	0.823393	2.9E-05	0.14535	0.220259	0.854	0.817	0.991	0.995	0.692	1	0.914	0.888
rs2294947	2.1838E-09	0.043901	0.00734	0.0429187	0.008556	4.09461E-09	0.65602	0.320195	0.000173	7.68E-05	0.968266	0.00083	0.53974	0.239838	0.736	0.527	0.999	0.999	0.523	0.997	0.727	0.825
rs1465962	2.1846E-09	0.033454	0.00559	0.0360841	0.008228	4.09617E-09	0.00739	0.259118	0.01387	0.003178	0.828527	0.00028	0.00151	0.753452	0.962	0.892	0.967	0.996	0.71	1	0.988	0.818
rs1373031	2.1865E-09	0.033452	0.00559	0.0360353	0.008194	4.09963E-09	0.00757	0.257966	0.013712	0.003261	0.828388	0.00028	0.00154	0.751824	0.962	0.892	0.967	0.996	0.711	1	0.988	0.819
rs10959577	2.1881E-09	-0.040855	0.00683	-0.041955	0.007693	4.10256E-09	0.21879	0.984383	0.000379	0.06294	0.013941	0.00681	0.03742	0.004008	0.918	0.829	1	0.959	0.985	0.989	0.969	0.976
rs6499563	2.1895E-09	0.0303629	0.00507	0.0303629	0.005075	4.1052E-09	0.65943	0.86015	0.001843	0.006326	0.443802	6.1E-06	0.45067	0.838856	0.783	0.709	0.996	0.99	0.777	1	0.801	0.748
rs2294948	2.1921E-09	0.043893	0.00734	0.0429006	0.008563	4.1098E-09	0.66352	0.320196	0.000173	7.65E-05	0.968261	0.00083	0.53973	0.239835	0.734	0.527	0.999	0.999	0.523	0.997	0.726	0.825
rs4690726	2.1922E-09	0.0334496	0.00559	0.0360288	0.008191	4.1101E-09	0.0076	0.257913	0.013716	0.00326	0.828526	0.00028	0.00154	0.751795	0.962	0.892	0.967	0.996	0.71	1	0.988	0.819
rs4972573	2.1928E-09	-0.030206	0.00505	-0.030206	0.005049	4.11124E-09	0.85754	0.845605	0.001713	0.002855	0.16108	0.00251	0.00205	0.123024	0.785	0.825	0.998	0.997	0.927	0.996	0.988	0.926
rs2985808	2.1933E-09	0.0315331	0.00527	0.0315331	0.005271	4.11204E-09	0.94908	0.676887	0.004612	0.129681	0.07416	2.3E-06	0.22146	0.137932	0.77	0.822	0.99	0.877	0.946	1	0.895	0.909
rs10769288	2.1972E-09	0.0323243	0.0054	0.0323243	0.005403	4.11929E-09	0.73231	0.328662	0.000216	0.000184	0.669895	0.00166	0.07494	0.627609	0.677	0.835	0.999	0.999	0.688	0.995	0.922	0.639
rs1925411	2.1978E-09	0.0315303	0.00527	0.0315303	0.00527	4.12025E-09	0.94627	0.676635	0.004612	0.129024	0.074289	2.3E-06	0.22179	0.138249	0.769	0.822	0.99	0.878	0.946	1	0.895	0.909
rs77086479	2.1982E-09	-0.084488	0.01412	-0.084488	0.014123	4.121E-09	0.84012	0.712242	0.000458	0.011063	0.137261	0.00147	0.02461	0.245366	0.828	0.844	0.999	0.99	0.935	0.998	0.97	0.905
rs6917417	2.2007E-09	0.0309735	0.00518	0.0318215	0.006181	3.44111E-09	0.12033	0.960874	0.095826	0.000417	0.003906	3.8E-05	0.61588	0.360574	0.884	0.706	0.549	0.999	0.987	1	0.718	0.82
rs145169734	2.207E-09	0.0835354	0.01396	0.0835354	0.013965	4.13714E-09	0.05086	0.815415	0.011111	0.000463	0.017739	0.00173	0.13402	0.3665	0.945	0.794	0.983	0.999	0.98	0.998	0.937	0.891
rs199756818	2.2128E-09	0.051629	0.00863	0.055701	0.011121	3.64814E-09	0.6095	0.064576	5.18E-05	0.032534	0.009105	0.07073	0.00289	0.265614	0.838	0.934	1	0.964	0.986	0.708	0.988	0.891
rs1867214	2.2143E-09	0.0334402	0.00559	0.0360127	0.008186	4.15051E-09	0.00764	0.258141	0.013716	0.003312	0.827937	0.00028	0.00153	0.752035	0.962	0.892	0.967	0.996	0.711	1	0.988	0.819
rs73088161	2.2169E-09	-0.0359	0.006	-0.0359	0.006002	4.15527E-09	0.63938	0.120774	0.001825	0.135616	0.041521	3.1E-06	0.60674	0.56045	0.685	0.895	0.996	0.847	0.955	1	0.776	0.811
rs7943213	2.2186E-09	0.031262	0.00523	0.031262	0.005227	4.15842E-09	0.76156	0.202823	0.000538	6.07E-05	0.785825	0.00627	0.02247	0.897876	0.797	0.884	0.999	1	0.692	0.982	0.963	0.769
rs1822361	2.2187E-09	0.0334404	0.00559	0.0360022	0.008178	4.15858E-09	0.00771	0.258465	0.013726	0.00322	0.829492	0.00028	0.00156	0.752075	0.962	0.892	0.967	0.996	0.71	1	0.988	0.819
rs4774495	2.2191E-09	0.039145	0.00655	0.039145	0.006545	4.15937E-09	0.54055	0.853266	0.000648	0.000857	0.578296	4.1E-05	0.26549	0.84673	0.592	0.656	0.998	0.997	0.68	1	0.822	0.64
rs33968287	2.2208E-09	-0.031342	0.00524	-0.031342	0.00524	4.05524E-09	0.71414	0.733096	0.078112	0.001495	0.076196	4.6E-05	0.00719	0.168575	0.804	0.802	0.708	0.997	0.943	1	0.979	0.9
rs117809628	2.2234E-09	0.0847119	0.01416	0.0847119	0.014165	4.16718E-09	0.4458	0.500678	0.001722	0.000506	0.04312	0.01042	0.01431	0.622726	0.882	0.876	0.998	0.999	0.97	0.982	0.976	0.86
rs1324491	2.2244E-09	0.0437983	0.00732	0.0426082	0.008669	4.16911E-09	0.68645	0.333371	0.000174	7.65E-05	0.990031	0.0007	0.61445	0.2397	0.723	0.521	0.999	0.999	0.505	0.997	0.696	0.82
rs504383	2.2245E-09	0.0320344	0.00536	0.0320344	0.005356	4.16933E-09	0.18402	0.703867	5.13E-06	0.072757	0.456768	0.00998	0.02436	0.074067	0.909	0.838	1	0.94	0.835	0.975	0.969	0.936
rs73078304	2.2325E-09	-0.037613	0.00629	-0.037613	0.00629	4.1839E-09	0.61705	0.103048	0.000296	0.104463	0.228469	1.9E-05	0.69731	0.169787	0.683	0.901	0.999	0.882	0.872	1	0.755	0.888
rs192020506	2.233E-09	-0.087612	0.01465	-0.087612	0.014651	4.18474E-09	0.34213	0.442247	1.48E-05	0.106156	0.143018	0.00361	0.02843	0.442606	0.887	0.874	1	0.914	0.931	0.994	0.967	0.873

Table S3

rs9537336	2.2331E-09	-0.054356	0.00909	-0.054356	0.00909	4.18492E-09	0.96102	0.46051	2.17E-06	0.075609	0.204041	0.00061	0.2027	0.822368	0.713	0.619	1	0.901	0.862	0.998	0.867	0.741
rs9537337	2.2332E-09	-0.054356	0.00909	-0.054356	0.00909	4.18509E-09	0.96101	0.46051	2.17E-06	0.075612	0.204041	0.00061	0.2027	0.822368	0.713	0.619	1	0.901	0.862	0.998	0.867	0.741
rs4646611	2.2351E-09	0.0301724	0.00505	0.0325892	0.008748	1.73439E-09	0.37277	0.33431	1.06E-06	0.023554	0.01953	0.11982	0.00097	0.483693	0.443	0.782	1	0.92	0.961	0.277	0.988	0.733
rs200727912	2.2369E-09	0.0516119	0.00863	0.055653	0.011099	3.6841E-09	0.60262	0.064634	5.15E-05	0.032647	0.009324	0.07115	0.00293	0.261547	0.839	0.934	1	0.964	0.986	0.706	0.988	0.892
rs10121756	2.2388E-09	0.0314711	0.00526	0.0314711	0.005263	4.19536E-09	0.69859	0.938916	0.006362	0.009411	0.174917	0.00011	0.07463	0.019191	0.844	0.8	0.99	0.992	0.923	1	0.951	0.959
rs78112607	2.2417E-09	-0.048722	0.00815	-0.048989	0.008307	3.81107E-09	0.08473	0.140987	0.003087	1.39E-05	0.206634	0.02149	0.12886	0.343157	0.938	0.926	0.995	1	0.919	0.944	0.94	0.897
rs12638282	2.2421E-09	-0.030735	0.00514	-0.030031	0.007876	1.61483E-09	0.98341	0.068711	0.009601	0.82622	0.038411	5.1E-08	0.08981	0.545189	0.633	0.88	0.885	0.175	0.938	1	0.891	0.725
rs10857399	2.2423E-09	0.0334304	0.00559	0.0359958	0.008183	4.20176E-09	0.00766	0.258397	0.013742	0.003258	0.830217	0.00028	0.00156	0.752396	0.962	0.892	0.967	0.996	0.71	1	0.988	0.818
rs10959580	2.2449E-09	-0.040852	0.00683	-0.041291	0.007186	4.20652E-09	0.23601	0.963897	0.000383	0.051792	0.016638	0.00716	0.03875	0.004662	0.916	0.832	1	0.966	0.983	0.989	0.968	0.975
rs2984445	2.245E-09	0.0309311	0.00517	0.0316818	0.006055	3.59458E-09	0.11951	0.953129	0.091766	0.000445	0.004167	3.9E-05	0.62131	0.347858	0.887	0.714	0.573	0.999	0.986	1	0.723	0.827
rs149506768	2.2483E-09	0.051604	0.00863	0.0556381	0.011094	3.70106E-09	0.59993	0.064662	5.15E-05	0.032678	0.009355	0.07133	0.00294	0.261621	0.839	0.934	1	0.964	0.986	0.706	0.988	0.892
rs10733224	2.2507E-09	0.0359061	0.00601	0.0361253	0.006365	4.21723E-09	0.66614	0.285496	3.59E-05	0.002336	0.445395	0.0188	0.06355	0.015347	0.731	0.883	1	0.997	0.822	0.935	0.948	0.957
rs114437376	2.2563E-09	-0.048713	0.00815	-0.048976	0.008304	3.83708E-09	0.08466	0.140928	0.003087	1.4E-05	0.207323	0.02151	0.12894	0.342668	0.938	0.926	0.995	1	0.919	0.944	0.94	0.897
rs940352	2.2571E-09	0.0313416	0.00524	0.0323107	0.006854	2.97427E-09	0.25506	0.947838	0.122422	0.00096	0.003002	8.6E-06	0.83819	0.191741	0.817	0.655	0.384	0.997	0.987	1	0.582	0.84
rs4788461	2.26E-09	0.0303348	0.00507	0.0303348	0.005074	4.23421E-09	0.72405	0.858742	0.001856	0.00611	0.443502	6.1E-06	0.44487	0.840019	0.772	0.707	0.995	0.99	0.776	1	0.801	0.746
rs3008888	2.2611E-09	0.0315066	0.00527	0.0315066	0.005271	4.23619E-09	0.94638	0.676606	0.004616	0.132063	0.074227	2.3E-06	0.22189	0.138344	0.769	0.822	0.99	0.875	0.946	1	0.895	0.909
rs2949019	2.2643E-09	0.030933	0.00517	0.0317114	0.00607	3.6197E-09	0.11578	0.965455	0.093213	0.000465	0.004012	4E-05	0.59228	0.348503	0.889	0.713	0.57	0.999	0.987	1	0.733	0.827
rs8077219	2.2652E-09	-0.03211	0.00537	-0.029905	0.007874	4.24373E-09	0.25338	0.137754	0.000163	0.091788	0.818602	1.5E-05	0.24189	0.016256	0.5	0.859	0.999	0.85	0.447	1	0.834	0.932
rs430961	2.2706E-09	-0.031432	0.00526	-0.032695	0.008697	4.2537E-09	0.05653	0.478207	0.020947	0.023331	0.013471	2.5E-05	0.01856	0.029646	0.485	0.842	0.931	0.975	0.979	1	0.968	0.945
rs76012758	2.2711E-09	-0.048705	0.00815	-0.04897	0.008306	3.86263E-09	0.0846	0.140841	0.00308	1.4E-05	0.208643	0.02156	0.12909	0.342123	0.938	0.926	0.995	1	0.918	0.944	0.94	0.897
rs55820140	2.2729E-09	0.0515873	0.00863	0.0556263	0.011117	3.7439E-09	0.64317	0.064766	5.13E-05	0.031301	0.00944	0.07156	0.00294	0.260464	0.832	0.934	1	0.965	0.985	0.704	0.988	0.891
rs4646593	2.2756E-09	0.0301499	0.00504	0.0326618	0.008853	1.51104E-09	0.4303	0.334926	6.76E-07	0.032204	0.017974	0.12969	0.00089	0.505861	0.443	0.772	1	0.876	0.962	0.239	0.988	0.715
rs1387907	2.279E-09	0.0321578	0.00538	0.0321578	0.005381	4.26907E-09	0.74386	0.503346	0.000888	0.016475	0.047059	0.00028	0.14065	0.413816	0.758	0.86	0.999	0.985	0.963	1	0.927	0.871
rs510159	2.2819E-09	0.0320124	0.00536	0.0320124	0.005357	4.27425E-09	0.1839	0.704152	5.2E-06	0.072771	0.458894	0.01005	0.02436	0.074415	0.909	0.838	1	0.94	0.835	0.975	0.968	0.936
rs4646612	2.2823E-09	0.030155	0.00505	0.0325678	0.008747	1.77199E-09	0.37359	0.334264	1.05E-06	0.024358	0.019507	0.11944	0.00096	0.483633	0.444	0.782	1	0.917	0.961	0.28	0.988	0.733
rs7186155	2.2832E-09	0.0303324	0.00508	0.0303324	0.005075	4.27664E-09	0.71654	0.896234	0.001779	0.005752	0.443916	7.2E-06	0.45272	0.836126	0.774	0.715	0.996	0.99	0.777	1	0.8	0.749
rs8060770	2.2835E-09	0.0303162	0.00507	0.0303162	0.005073	4.27731E-09	0.67415	0.824555	0.001853	0.005469	0.437321	8.1E-06	0.43791	0.778116	0.783	0.706	0.996	0.991	0.782	1	0.807	0.761
rs7843906	2.2839E-09	0.0340383	0.0057	0.0340383	0.005696	4.27803E-09	0.13968	0.863779	0.003955	0.004973	0.02996	0.00044	0.13885	0.492574	0.922	0.793	0.995	0.995	0.974	0.999	0.934	0.87
rs77811505	2.2869E-09	0.0523109	0.00875	0.0548488	0.010525	4.19406E-09	0.5257	0.036754	4.51E-05	0.045077	0.012486	0.04564	0.00484	0.508126	0.863	0.948	1	0.96	0.984	0.84	0.986	0.863
rs4273128	2.2884E-09	-0.030519	0.00511	-0.030489	0.005544	4.28623E-09	0.58809	0.419651	0.000121	0.000669	0.26462	0.00403	0.01496	0.483992	0.671	0.637	1	0.998	0.856	0.989	0.966	0.822
rs11263940	2.2897E-09	-0.032153	0.00538	-0.037731	0.00826	3.19584E-09	0.11723	0.520957	0.000144	0.005175	0.080769	0.11067	0.00295	0.005428	0.915	0.833	1	0.993	0.942	0.498	0.988	0.973
rs1817187	2.2955E-09	-0.031307	0.00524	-0.031307	0.005239	4.16701E-09	0.70319	0.72007	0.082277	0.001926	0.06713	3.9E-05	0.00785	0.166123	0.804	0.803	0.69	0.997	0.947	1	0.979	0.9
rs1404002	2.2973E-09	0.0309113	0.00517	0.0317121	0.006111	3.65827E-09	0.11554	0.954356	0.093237	0.000463	0.003971	3.9E-05	0.62349	0.348572	0.888	0.713	0.567	0.999	0.987	1	0.721	0.826
rs1562720	2.299E-09	0.0515696	0.00863	0.0555808	0.011099	3.78863E-09	0.64087	0.064971	5.15E-05	0.031293	0.009509	0.0717	0.00297	0.259673	0.832	0.934	1	0.965	0.985	0.704	0.988	0.892
rs1838082	2.3001E-09	0.0334063	0.00559	0.0359532	0.008169	4.30755E-09	0.00776	0.257972	0.013707	0.003459	0.828207	0.00028	0.00154	0.751795	0.962	0.892	0.968	0.996	0.711	1	0.988	0.819
rs6677366	2.3002E-09	-0.032149	0.00538	-0.037712	0.008252	3.22105E-09	0.11633	0.52036	0.000145	0.005202	0.080922	0.11029	0.00298	0.005443	0.915	0.833	1	0.993	0.942	0.5	0.988	0.973
rs7502578	2.3022E-09	-0.031805	0.00532	-0.031012	0.006127	4.3115E-09	0.38147	0.121239	0.00023	0.07364	0.831012	1.7E-05	0.49389	0.029366	0.587	0.879	0.999	0.898	0.621	1	0.776	0.927
rs9840313	2.3052E-09	-0.039515	0.00661	-0.042034	0.009228	4.15293E-09	0.40335	0.700706	3.68E-05	0.5212	0.00228	0.00473	0.00476	0.14091	0.837	0.787	1	0.474	0.99	0.975	0.98	0.897
rs4652927	2.306E-09	-0.032147	0.00538	-0.037708	0.008252	3.22998E-09	0.11631	0.520339	0.000145	0.005207	0.080928	0.1103	0.00299	0.005444	0.915	0.833	1	0.993	0.942	0.5	0.988	0.973
rs2984446	2.3097E-09	0.0309068	0.00517	0.0317085	0.006112	3.67673E-09	0.11557	0.954524	0.093364	0.000462	0.003974	4E-05	0.6236	0.34873	0.888	0.713	0.566	0.999	0.987	1	0.721	0.826
rs35170741	2.3097E-09	0.0309068	0.00517	0.0317085	0.006112	3.67673E-09	0.11557	0.954524	0.093364	0.000462	0.003974	4E-05	0.6236	0.34873	0.888	0.713	0.566	0.999	0.987	1	0.721	0.826
rs111574702	2.3105E-09	0.0739152	0.01237	0.0737599	0.020269	4.32671E-09	0.17509	0.146103	0.000897	0.517563	0.020892	1.1E-05	0.20859	0.00869	0.854	0.452	0.997	0.404	0.963	1	0.851	0.951
rs150634184	2.314E-09	0.0515737	0.00863	0.0556085	0.011107	3.81017E-09	0.61877	0.064697	5.14E-05	0.032965	0.009376	0.07131	0.00295	0.261435	0.836	0.934	1	0.964	0.986	0.706	0.988	0.892
rs12612862	2.3186E-09	0.031336	0.00525	0.0315521	0.005713	4.34149E-09	0.55306	0.010857	0.001432	0.035482	0.228415	0.00032	0.74778	0.007017	0.864	0.961	0.998	0.973	0.909	1	0.805	0.97
rs10838740	2.3197E-09	0.0313309	0.00524	0.0313309	0.005245	4.34351E-09	0.55146	0.202278	0.000285	8.02E-05	0.967533	0.00619	0.04492	0.93044	0.818	0.878	0.999	0.999	0.616	0.98	0.947	0.752
rs1037298	2.3223E-09	0.0515534	0.00863	0.0555527	0.011093	3.82856E-09	0.64281	0.065012	5.17E-05	0.031248	0.009551	0.07176	0.00298	0.260114	0.832	0.934	1	0.965	0.985	0.704	0.988	0.891
rs186436350	2.3264E-09	-0.106153	0.01777	-0.106153	0.017772	4.35578E-09	0.12943	0.727694	0.000408	0.003718	0.008299	0.00766	0.05422	0.920551	0.921	0.761	0.999	0.996	0.985	0.984	0.956	0.8
rs11995512	2.3268E-09	0.0322932	0.00541	0.0322932	0.005406	4.04284E-09	0.24831	0.690028	2.13E-07	0.030493	0.530681	0.0073	0.50557	0.313084	0.859	0.687	1	0.96	0.752	0.971	0.791	0.847
rs761798	2.3295E-09	0.0309158	0.00518	0.0317129	0.006097	3.69691E-09	0.1164	0.961666	0.094859	0.000456	0.003996	4E-05	0.59442	0.357213	0.888	0.711	0.562	0.999	0.987	1	0.73	0.824
rs10959581	2.3306E-09	-0.040809	0.00683	-0.041213	0.007159	4.36338E-09	0.25568	0.964051	0.000377	0.050783	0.016658	0.00736	0.03861	0.004656	0.913	0.831	1	0.967	0.983	0.988	0.968	0.975
rs1013330	2.3323E-09	-0.031667	0.0053	-0.031667	0.005302	4.36647E-09	0.69346	0.210806	0.004742	5.82E-05	0.013352	0.00331	0.36661	0.876503	0.832	0.899	0.992	1	0.981	0.994	0.87	0.764
rs1372368	2.3334E-09	0.0301303	0.00504	0.0325613	0.008657	1.72532E-09	0.44487	0.312977	8.68E-07	0.027434	0.019071	0.12529	0.00108	0.528046	0.463	0.786	1	0.903	0.962	0.264	0.988	0.718
rs1678536	2.3352E-09	-0.03158	0.00529	-0.03158	0.005287	4.37178E-09	0.54741	0.954172	3.64E-05	0.035214	0.146939	0.00333	0.00961	0.714165	0.852	0.801	1	0.97	0.926	0.994	0.977	0.826
rs13152749	2.3378E-09	-0.030164	0.00505	-0.030746	0.005963	4.37655E-09	0.34728	0.830009	0.030947	0.00025	0.047128	0.00018	0.00997	0.613932	0.859	0.736	0.893	0.999	0.956	1	0.974	0.678
rs9348739	2.3419E-09	-0.050394	0.00844	-0.052726	0.010059	4.38405E-09	0.45232	0.172468	0.002962	0.068874	0.069085	0.00148	0.01537	0.00151	0.896	0.93	0.997	0.959	0.966	0.998	0.98	0.981

Table S3

rs7107535	2.3426E-09	0.0313229	0.00524	0.0313229	0.005245	4.38532E-09	0.55179	0.202278	0.000285	8.03E-05	0.967596	0.00623	0.04491	0.930665	0.818	0.878	0.999	0.999	0.616	0.98	0.947	0.752
rs8055291	2.3461E-09	0.0340669	0.0057	0.0325793	0.007188	3.82137E-09	0.44759	0.573236	1.72E-07	0.019267	0.552173	0.00762	0.76046	0.074812	0.599	0.778	1	0.968	0.713	0.96	0.694	0.897
rs1946687	2.3492E-09	-0.040301	0.00675	-0.040301	0.006749	4.39751E-09	0.22693	0.165331	0.010155	0.000833	0.266644	0.00108	0.02482	0.327642	0.915	0.924	0.986	0.999	0.907	0.999	0.973	0.903
rs9295743	2.35E-09	-0.037957	0.00636	-0.037957	0.006356	4.39894E-09	0.74394	0.186658	0.000597	0.003422	0.106485	0.01413	0.08069	0.003915	0.857	0.923	0.999	0.997	0.952	0.972	0.956	0.976
rs2983143	2.3526E-09	0.0309095	0.00518	0.0316877	0.006096	3.79417E-09	0.11538	0.995	0.09075	0.000479	0.004059	4.1E-05	0.6161	0.338003	0.889	0.708	0.581	0.999	0.986	1	0.726	0.83
rs151014850	2.3572E-09	0.0308901	0.00517	0.031686	0.006107	3.75669E-09	0.11522	0.954939	0.093478	0.000472	0.003982	4E-05	0.62416	0.349229	0.888	0.713	0.567	0.999	0.987	1	0.721	0.826
rs7933184	2.36E-09	0.0313165	0.00524	0.0313165	0.005245	4.41719E-09	0.55259	0.202278	0.000285	8.11E-05	0.967596	0.00623	0.04491	0.930665	0.818	0.878	0.999	0.999	0.616	0.98	0.947	0.752
rs12148907	2.3605E-09	0.0301201	0.00504	0.0325488	0.008659	1.74468E-09	0.4439	0.312977	8.68E-07	0.027711	0.019069	0.12529	0.00108	0.528046	0.462	0.786	1	0.902	0.962	0.264	0.988	0.718
rs10495727	2.362E-09	0.0313196	0.00525	0.0315369	0.005716	4.42086E-09	0.55411	0.010857	0.001435	0.035921	0.228485	0.00032	0.74781	0.007014	0.864	0.961	0.998	0.973	0.909	1	0.805	0.97
rs1349783	2.3626E-09	-0.034968	0.00586	-0.035188	0.008816	3.54527E-09	0.02058	0.29771	0.000354	0.988944	0.387524	5.7E-06	0.17191	0.035379	0.928	0.817	0.999	0.13	0.73	1	0.863	0.922
rs12069333	2.3659E-09	0.0323258	0.00541	0.0323258	0.005414	4.42793E-09	0.23151	0.529896	0.002684	0.037659	0.020888	0.00111	0.26418	0.001765	0.918	0.882	0.997	0.976	0.981	0.999	0.916	0.981
rs73118540	2.3676E-09	-0.053369	0.00894	-0.076025	0.019642	3.98048E-09	1E-06	0.777063	0.022016	0.034319	0.020987	0.00183	0.0185	0.052184	0.993	0.861	0.961	0.977	0.982	0.996	0.978	0.956
rs77138605	2.3687E-09	-0.04749	0.00795	-0.049079	0.009506	4.38853E-09	0.83519	0.030749	9.39E-05	0.000776	0.438006	0.03467	0.02813	0.095665	0.752	0.944	1	0.998	0.818	0.855	0.965	0.925
rs3008839	2.3712E-09	0.0308898	0.00517	0.0316476	0.006029	3.79886E-09	0.11672	0.959022	0.09387	0.000464	0.004046	4.3E-05	0.57807	0.349926	0.889	0.715	0.571	0.999	0.987	1	0.739	0.828
rs11039329	2.3767E-09	0.031311	0.00524	0.031311	0.005245	4.44773E-09	0.55354	0.202278	0.000285	8.19E-05	0.967596	0.00623	0.04491	0.930665	0.818	0.878	0.999	0.999	0.616	0.98	0.947	0.752
rs12192551	2.38E-09	0.0320281	0.00537	0.0320281	0.005365	4.45368E-09	0.83508	0.49904	0.000909	0.031102	0.023232	0.00025	0.13642	0.468319	0.774	0.861	0.999	0.974	0.975	1	0.929	0.864
rs62527046	2.3838E-09	-0.035849	0.00601	-0.036063	0.006355	4.46077E-09	0.66487	0.28602	3.71E-05	0.002336	0.447599	0.01901	0.06398	0.015535	0.73	0.883	1	0.997	0.821	0.935	0.948	0.957
rs67074127	2.3882E-09	0.0320347	0.00537	0.0320347	0.005367	4.46869E-09	0.86988	0.51999	0.000909	0.0354	0.022753	0.00021	0.13332	0.502018	0.778	0.858	0.999	0.971	0.975	1	0.929	0.859
rs11214598	2.3902E-09	-0.031787	0.00533	-0.031787	0.005325	4.4725E-09	0.40067	0.075874	0.000557	0.001178	0.73854	0.00137	0.22955	0.054773	0.852	0.918	0.999	0.998	0.523	0.997	0.888	0.931
rs59806432	2.3909E-09	0.0381189	0.00639	0.0362272	0.007828	4.47361E-09	0.24188	0.942093	7.96E-06	0.191688	0.96524	7.4E-05	0.0229	0.642618	0.797	0.623	1	0.661	0.45	1	0.935	0.54
rs12491672	2.3926E-09	-0.030796	0.00516	-0.031467	0.006302	4.47673E-09	0.96765	0.971566	0.004651	0.142957	0.004452	9.7E-05	0.00167	0.375852	0.777	0.779	0.991	0.869	0.988	1	0.987	0.868
rs34050644	2.3942E-09	0.0308954	0.00518	0.0316558	0.006076	3.87531E-09	0.11537	0.996371	0.090449	0.000501	0.004057	4.1E-05	0.61522	0.336959	0.889	0.709	0.584	0.999	0.986	1	0.728	0.831
rs10742817	2.3953E-09	0.0313036	0.00524	0.0313036	0.005245	4.48181E-09	0.553	0.202278	0.000288	8.15E-05	0.968002	0.00625	0.04497	0.930671	0.818	0.878	0.999	0.999	0.616	0.98	0.947	0.752
rs13339654	2.3957E-09	-0.031631	0.0053	-0.031631	0.0053	4.4824E-09	0.69515	0.210187	0.005321	6.26E-05	0.012986	0.00293	0.36818	0.874858	0.832	0.899	0.991	1	0.981	0.995	0.87	0.763
rs9283880	2.3959E-09	-0.037937	0.00636	-0.037937	0.006356	4.48292E-09	0.74565	0.186654	0.000597	0.003493	0.106552	0.01415	0.08074	0.003914	0.856	0.923	0.999	0.997	0.952	0.972	0.956	0.976
rs544625	2.3978E-09	-0.033299	0.00558	-0.033479	0.005719	4.36097E-09	0.54669	0.161077	0.074419	0.01978	0.009035	4.2E-05	0.00656	0.367216	0.849	0.91	0.75	0.979	0.985	1	0.982	0.875
rs13330735	2.3995E-09	-0.03163	0.0053	-0.03163	0.0053	4.48938E-09	0.69528	0.210187	0.005321	6.27E-05	0.012986	0.00293	0.36818	0.874858	0.832	0.899	0.991	1	0.981	0.995	0.87	0.763
rs56247127	2.3997E-09	-0.031629	0.0053	-0.031629	0.0053	4.48985E-09	0.67646	0.212634	0.00529	6.27E-05	0.012434	0.00313	0.36419	0.892633	0.835	0.9	0.991	1	0.981	0.994	0.871	0.768
rs11791444	2.4004E-09	-0.035447	0.00594	-0.035447	0.005939	4.49106E-09	0.55038	0.365946	4.87E-05	0.002455	0.274096	0.01301	0.05456	0.080179	0.718	0.874	1	0.997	0.882	0.964	0.953	0.931
rs17301128	2.4007E-09	-0.046961	0.00787	-0.046961	0.007869	4.49155E-09	0.05739	0.48524	0.000323	0.043197	0.464504	0.00145	0.03344	0.075006	0.944	0.878	1	0.97	0.85	0.998	0.968	0.943
rs6921919	2.4007E-09	-0.047502	0.00796	-0.047502	0.007959	4.49165E-09	0.0329	0.370901	0.000726	0.042426	0.337715	0.00189	0.0249	0.045591	0.956	0.9	0.999	0.973	0.893	0.998	0.974	0.955
rs890191	2.402E-09	0.0381232	0.00639	0.036319	0.007765	4.49393E-09	0.24477	0.94355	8.42E-06	0.192571	0.981107	7.3E-05	0.02279	0.642903	0.797	0.625	1	0.662	0.457	1	0.936	0.542
rs4732122	2.405E-09	-0.034987	0.00586	-0.044636	0.011618	4.32183E-10	0.7841	0.037338	0.016318	4.44E-06	3.42E-05	0.07182	0.33051	0.269619	0.535	0.896	0.425	1	0.999	0.286	0.591	0.718
rs11346856	2.4075E-09	0.0308722	0.00517	0.0316555	0.006093	3.84576E-09	0.11528	0.954936	0.09345	0.000489	0.003979	4E-05	0.62392	0.349213	0.888	0.713	0.568	0.999	0.987	1	0.721	0.826
rs9283881	2.4077E-09	-0.037933	0.00636	-0.037933	0.006356	4.50431E-09	0.74615	0.186654	0.000597	0.003513	0.106552	0.01415	0.08074	0.003914	0.856	0.923	0.999	0.997	0.952	0.972	0.956	0.976
rs9283882	2.4079E-09	-0.037932	0.00636	-0.037932	0.006356	4.50479E-09	0.74615	0.186655	0.000597	0.003513	0.106554	0.01415	0.08074	0.003914	0.856	0.923	0.999	0.997	0.952	0.972	0.956	0.976
rs11997469	2.4089E-09	0.031006	0.0052	0.031006	0.005196	4.50657E-09	0.23602	0.683779	0.000137	0.038683	0.269932	0.00417	0.05139	0.008899	0.912	0.858	1	0.974	0.904	0.994	0.962	0.97
rs78472595	2.4118E-09	0.0311871	0.00523	0.0309061	0.006503	3.87762E-09	0.75369	0.691841	5.18E-07	0.113655	0.07657	0.01412	0.00748	0.943628	0.701	0.79	1	0.86	0.933	0.93	0.974	0.742
rs17693632	2.4141E-09	0.0350876	0.00588	0.036007	0.009612	2.83967E-09	0.01776	0.217787	0.000407	0.865849	0.3678	3.9E-06	0.18848	0.027547	0.932	0.839	0.998	0.083	0.735	1	0.854	0.929
rs7740487	2.417E-09	-0.05537	0.00928	-0.057942	0.013934	4.52139E-09	0.91981	0.975838	0.000696	0.023166	0.367939	0.00092	0.05246	0.000139	0.809	0.795	0.999	0.981	0.861	0.999	0.956	0.984
rs4646586	2.4184E-09	0.0300956	0.00504	0.0324065	0.008655	1.81747E-09	0.42524	0.316979	8.35E-07	0.028227	0.019391	0.1218	0.00115	0.544708	0.458	0.784	1	0.9	0.961	0.274	0.987	0.713
rs147977836	2.419E-09	0.0912692	0.0153	0.0982872	0.022829	4.52508E-09	0.38697	0.061653	0.060643	0.00596	0.908278	2.6E-05	0.00165	0.052498	0.844	0.92	0.758	0.991	0.565	1	0.988	0.93
rs11154198	2.4291E-09	0.0320107	0.00537	0.0320107	0.005365	4.54346E-09	0.83673	0.498601	0.000908	0.031622	0.023187	0.00025	0.13684	0.470007	0.775	0.861	0.999	0.974	0.975	1	0.929	0.864
rs1494948	2.4299E-09	-0.032826	0.0055	-0.032826	0.005502	4.54493E-09	0.58456	0.032568	0.00494	0.006178	0.66581	0.00028	0.01523	0.29899	0.856	0.947	0.993	0.994	0.781	1	0.975	0.895
rs2072804	2.4326E-09	-0.032888	0.00551	-0.032888	0.005513	4.54996E-09	0.57617	0.558343	0.000199	0.011489	0.479827	0.00153	0.09367	0.059329	0.855	0.857	1	0.99	0.832	0.998	0.943	0.941
rs1395455	2.4336E-09	-0.0321	0.00538	-0.037748	0.008287	3.35172E-09	0.11641	0.518292	0.000148	0.005103	0.081154	0.11381	0.00295	0.005413	0.914	0.832	1	0.993	0.942	0.486	0.988	0.972
rs12680437	2.4353E-09	-0.030128	0.00505	-0.030128	0.00505	4.55476E-09	0.36587	0.365262	0.000937	0.408402	0.004256	0.0001	0.22787	0.07592	0.859	0.859	0.998	0.607	0.988	1	0.888	0.925
rs1338443	2.437E-09	0.0319011	0.00535	0.0335345	0.007358	3.3756E-09	0.15943	0.631739	0.007713	1.15E-06	0.408636	0.0063	0.62233	0.043794	0.906	0.836	0.981	1	0.838	0.982	0.809	0.942
rs11943687	2.438E-09	0.0380997	0.00639	0.0361812	0.007848	4.55978E-09	0.24355	0.942143	7.89E-06	0.195005	0.96502	7.4E-05	0.02276	0.643609	0.796	0.622	1	0.656	0.448	1	0.935	0.539
rs1970021	2.4459E-09	0.0300451	0.00504	0.0262755	0.010591	3.73204E-09	0.31752	0.117445	0.00349	0.000107	0.453613	0.00042	6E-05	0.840039	0.491	0.409	0.984	0.999	0.699	0.998	0.992	0.605
rs4750048	2.4467E-09	0.0307763	0.00516	0.0307763	0.005159	4.57574E-09	0.32193	0.819035	0.000627	0.116455	0.143966	0.00011	0.01426	0.646592	0.881	0.816	0.999	0.901	0.925	1	0.973	0.834
rs912330	2.4485E-09	0.0311807	0.00523	0.0308609	0.006652	3.87117E-09	0.75919	0.702626	4.82E-07	0.116511	0.094683	0.01421	0.00575	0.920282	0.7	0.786	1	0.854	0.922	0.927	0.976	0.744
rs55650680	2.4496E-09	0.0484993	0.00813	0.0482814	0.008431	4.58089E-09	0.94581	0.31118	0.006174	0.000187	0.383618	2.1E-05	0.48966	0.335573	0.695	0.824	0.978	0.999	0.778	1	0.768	0.541
rs60083773	2.4496E-09	0.0484993	0.00813	0.0482814	0.008431	4.58089E-09	0.94581	0.31118	0.006174	0.000187	0.383618	2.1E-05	0.48966	0.335573	0.695	0.824	0.978	0.999	0.778	1	0.768	0.541
rs892511	2.4523E-09	0.068409	0.01147	0.0728718	0.016825	4.58598E-09	0.29324	0.014209	0.001615	0.494688	0.000653	0.00016	0.08751	0.949682	0.86	0.946	0.996	0.518	0.994	1	0.928	0.722

Table S3

rs4976976	2.4555E-09	-0.030304	0.00508	-0.030304	0.005081	4.59168E-09	0.29671	0.234199	0.000124	0.003963	0.046981	0.01179	0.05207	0.141943	0.663	0.898	1	0.995	0.964	0.971	0.956	0.918
rs35034437	2.4634E-09	0.0380857	0.00639	0.0361599	0.007851	4.60626E-09	0.24374	0.942433	7.94E-06	0.195943	0.964928	7.4E-05	0.02286	0.642252	0.795	0.621	1	0.654	0.448	1	0.935	0.538
rs1823946	2.468E-09	-0.03129	0.00525	-0.03129	0.005247	4.43133E-09	0.73805	0.718029	0.085412	0.001322	0.063495	3.7E-05	0.01129	0.23212	0.792	0.796	0.671	0.998	0.947	1	0.974	0.88
rs3172494	2.4764E-09	-0.036631	0.00614	-0.036631	0.006143	4.62996E-09	0.73448	0.047595	0.000841	0.080044	0.08952	2.7E-05	0.66498	0.339188	0.731	0.93	0.999	0.923	0.938	1	0.786	0.867
rs9986596	2.4766E-09	-0.055331	0.00928	-0.057924	0.013941	4.63032E-09	0.91966	0.976014	0.000688	0.023191	0.367366	0.00096	0.05228	0.000139	0.809	0.795	0.999	0.981	0.862	0.999	0.956	0.984
rs7116970	2.4795E-09	0.0312745	0.00524	0.0312745	0.005245	4.63562E-09	0.53464	0.202278	0.000285	9.13E-05	0.967596	0.00623	0.04491	0.930665	0.821	0.879	0.999	0.999	0.618	0.98	0.947	0.753
rs12009	2.4802E-09	0.0313751	0.00526	0.0313751	0.005262	4.63681E-09	0.72131	0.845964	0.005744	0.010064	0.177357	0.0001	0.07934	0.02178	0.839	0.784	0.991	0.991	0.921	1	0.948	0.957
rs4443157	2.4826E-09	-0.033983	0.0057	-0.033983	0.005699	4.64129E-09	0.34256	0.187951	0.018749	0.034855	0.009285	0.00025	0.00736	0.380768	0.903	0.923	0.969	0.977	0.987	1	0.984	0.898
rs12474585	2.4834E-09	-0.034931	0.00586	-0.034931	0.005858	4.6427E-09	0.24948	0.018043	0.000134	0.100756	0.126285	0.00239	0.16238	0.16927	0.912	0.96	1	0.933	0.945	0.997	0.935	0.926
rs10106513	2.4862E-09	0.0309718	0.00519	0.0309718	0.005195	4.6478E-09	0.2244	0.673623	0.000165	0.038109	0.295648	0.00368	0.05142	0.008325	0.913	0.859	1	0.974	0.897	0.995	0.962	0.971
rs62527917	2.4868E-09	-0.035471	0.00595	-0.035471	0.005949	4.64892E-09	0.56113	0.392054	5.22E-05	0.002466	0.270616	0.01389	0.04975	0.066404	0.72	0.871	1	0.997	0.883	0.961	0.955	0.935
rs1439579	2.4875E-09	0.0362244	0.00608	0.0362879	0.00772	4.65015E-09	0.81789	0.002138	0.003778	0.094757	0.056727	2E-05	0.18653	0.675977	0.808	0.968	0.993	0.914	0.956	1	0.909	0.718
rs62265723	2.4966E-09	-0.030732	0.00515	-0.031265	0.006122	4.66683E-09	0.96399	0.981092	0.003694	0.162307	0.005838	0.00011	0.00154	0.385383	0.786	0.778	0.993	0.85	0.986	1	0.987	0.865
rs76375621	2.4973E-09	0.0683264	0.01146	0.0765973	0.015926	4.66809E-09	0.94402	0.055813	0.000389	0.038187	0.002002	0.03973	0.00639	0.051889	0.824	0.945	0.999	0.971	0.994	0.884	0.985	0.95
rs1524087	2.5026E-09	0.0308468	0.00517	0.0316486	0.006109	3.96126E-09	0.11438	0.950838	0.095848	0.000452	0.004146	4.1E-05	0.61659	0.358662	0.887	0.712	0.559	0.999	0.986	1	0.722	0.823
rs59820190	2.5049E-09	0.0419482	0.00704	0.0419482	0.007037	4.68203E-09	0.80302	0.056497	0.001854	0.045948	0.358308	2.1E-05	0.04471	0.642993	0.802	0.926	0.997	0.956	0.846	1	0.952	0.704
rs12110430	2.5052E-09	-0.056956	0.00955	-0.056956	0.009555	4.68257E-09	0.24991	0.470171	0.007359	0.000127	0.059072	0.00175	0.11654	0.988406	0.901	0.872	0.989	0.999	0.961	0.997	0.938	0.797
rs7773070	2.507E-09	-0.037925	0.00636	-0.037925	0.006362	4.68586E-09	0.80705	0.170873	0.000461	0.004101	0.110472	0.01457	0.09064	0.004051	0.848	0.924	0.999	0.996	0.95	0.971	0.952	0.976
rs4955426	2.5109E-09	-0.038317	0.00643	-0.038137	0.007983	4.42569E-09	0.66494	0.088614	0.042205	9.59E-05	0.095335	1.6E-05	0.59263	0.797241	0.642	0.887	0.787	0.999	0.908	1	0.734	0.652
rs6914924	2.5124E-09	-0.037886	0.00636	-0.037886	0.006356	4.6956E-09	0.74698	0.187538	0.000618	0.003516	0.106259	0.01424	0.08064	0.003917	0.856	0.922	0.999	0.997	0.952	0.972	0.955	0.976
rs6930992	2.5174E-09	-0.037884	0.00636	-0.037884	0.006356	4.70478E-09	0.74378	0.187543	0.000617	0.003544	0.106265	0.01424	0.08064	0.003917	0.857	0.922	0.999	0.997	0.952	0.972	0.955	0.976
rs7034246	2.5184E-09	-0.04018	0.00674	-0.042474	0.008578	4.70665E-09	0.13342	0.78588	0.000683	0.06475	0.025551	0.00416	0.03398	0.002109	0.93	0.797	0.999	0.957	0.979	0.994	0.97	0.979
rs13192934	2.5203E-09	0.0319919	0.00537	0.0319919	0.005368	4.71015E-09	0.88903	0.519735	0.000905	0.038422	0.022771	0.00021	0.13331	0.502127	0.782	0.858	0.999	0.969	0.975	1	0.929	0.859
rs12521542	2.5299E-09	0.0359247	0.00603	0.0359247	0.006028	4.72757E-09	0.53549	0.764209	0.010084	0.003205	0.018391	1.8E-05	0.59189	0.312129	0.816	0.782	0.971	0.995	0.971	1	0.553	0.855
rs11580603	2.5303E-09	0.0310709	0.00521	0.0310709	0.005214	4.72832E-09	0.9782	0.068599	0.002319	0.006771	0.002413	0.0036	0.3877	0.098098	0.816	0.941	0.997	0.994	0.992	0.995	0.885	0.937
rs62405349	2.5314E-09	0.0523003	0.00878	0.0611104	0.020435	1.38463E-10	0.00172	0.867176	0.111017	3.73E-07	0.000108	0.00554	0.72579	0.788476	0.967	0.285	0.067	1	0.998	0.192	0.09	0.173
rs11149964	2.533E-09	-0.030024	0.00504	-0.030024	0.005038	4.73321E-09	0.10964	0.871859	0.030299	0.037073	0.016427	2.7E-05	0.18925	0.03568	0.93	0.83	0.932	0.972	0.982	1	0.924	0.954
rs7815299	2.534E-09	0.0309551	0.00519	0.0309551	0.005194	4.73518E-09	0.22915	0.673717	0.000165	0.038318	0.295993	0.00368	0.0515	0.008317	0.912	0.859	1	0.974	0.897	0.995	0.962	0.971
rs79686899	2.5342E-09	-0.106619	0.01789	-0.133015	0.029019	4.63015E-09	0.13073	0.014502	0.004417	0.001236	0.046366	0.03645	0.05047	0.002562	0.937	0.967	0.992	0.998	0.973	0.897	0.968	0.977
rs4147222	2.536E-09	-0.031957	0.00536	-0.038309	0.008602	3.14479E-09	0.17447	0.435842	0.000149	0.005646	0.095737	0.12149	0.001	0.006339	0.896	0.842	1	0.992	0.932	0.451	0.992	0.971
rs4653212	2.5382E-09	-0.031956	0.00536	-0.038309	0.008603	3.14717E-09	0.17447	0.435842	0.000149	0.005647	0.095739	0.12152	0.001	0.006339	0.896	0.842	1	0.992	0.932	0.451	0.992	0.971
rs11293962	2.5463E-09	-0.030646	0.00514	-0.029962	0.007836	1.87846E-09	0.98192	0.066912	0.010268	0.816674	0.041845	5.7E-08	0.08678	0.540952	0.634	0.881	0.88	0.182	0.934	1	0.893	0.726
rs8047490	2.5495E-09	0.0339565	0.0057	0.0322855	0.007341	4.04739E-09	0.42115	0.577469	1.52E-07	0.020873	0.533082	0.00806	0.77316	0.075402	0.59	0.775	1	0.965	0.718	0.956	0.688	0.895
rs12824361	2.5497E-09	-0.046953	0.00788	-0.048506	0.013239	4.7638E-09	0.03877	0.002789	3.93E-05	0.59617	0.975104	0.00011	0.13109	0.256976	0.908	0.951	1	0.278	0.425	1	0.874	0.819
rs16846341	2.5534E-09	0.0435836	0.00732	0.0424129	0.008074	4.23681E-09	0.8058	0.228514	1.12E-05	0.65776	0.730324	1E-05	0.42132	0.17419	0.616	0.768	1	0.218	0.48	1	0.677	0.794
rs158967	2.5624E-09	0.0414399	0.00696	0.0414399	0.006956	4.78704E-09	0.14804	0.604622	0.001531	0.030542	0.24401	0.00057	0.06789	0.028125	0.927	0.87	0.998	0.98	0.914	0.999	0.958	0.959
rs12614303	2.5625E-09	-0.030119	0.00506	-0.035729	0.009708	4.7871E-09	0.28062	0.00135	0.000208	0.039201	0.019841	0.02026	0.00051	0.577304	0.648	0.974	0.999	0.964	0.977	0.932	0.992	0.843
rs55803708	2.571E-09	0.0339453	0.0057	0.0323259	0.007245	4.1662E-09	0.4488	0.588567	1.72E-07	0.019305	0.586712	0.00727	0.78638	0.077398	0.593	0.771	1	0.967	0.695	0.961	0.682	0.893
rs11939291	2.579E-09	0.0380411	0.00639	0.0361347	0.007821	4.81727E-09	0.26309	0.941763	7.94E-06	0.196362	0.965145	7.4E-05	0.02286	0.64342	0.789	0.62	1	0.653	0.447	1	0.935	0.537
rs3825430	2.5801E-09	0.031135	0.00523	0.0308062	0.006674	4.08145E-09	0.75201	0.70432	5.01E-07	0.117201	0.092035	0.0143	0.0058	0.936646	0.698	0.785	1	0.853	0.923	0.926	0.976	0.74
rs4772088	2.5814E-09	0.0311295	0.00523	0.0308484	0.006489	4.14396E-09	0.75555	0.694838	5.31E-07	0.114289	0.07723	0.01439	0.00767	0.945779	0.701	0.789	1	0.859	0.932	0.928	0.973	0.741
rs9554474	2.5904E-09	0.031126	0.00523	0.030839	0.006484	4.17051E-09	0.7491	0.693665	5.35E-07	0.111507	0.08043	0.01436	0.0076	0.947537	0.701	0.79	1	0.863	0.931	0.929	0.973	0.741
rs115686967	2.5905E-09	0.0972174	0.01632	0.0972174	0.016324	4.8382E-09	0.36389	0.683046	0.002099	0.007129	0.095709	0.0004	0.12829	0.113224	0.885	0.766	0.997	0.993	0.947	0.999	0.934	0.926
rs111925419	2.5918E-09	0.0514205	0.00863	0.0554741	0.01114	4.26577E-09	0.63437	0.064814	5.14E-05	0.03622	0.009414	0.07142	0.00294	0.260903	0.833	0.934	1	0.96	0.985	0.709	0.988	0.891
rs8063377	2.5921E-09	0.0339396	0.0057	0.0322695	0.007338	4.11609E-09	0.42067	0.579325	1.53E-07	0.021003	0.533239	0.00806	0.77288	0.075552	0.59	0.775	1	0.965	0.718	0.956	0.688	0.895
rs73562049	2.5944E-09	-0.03865	0.00649	-0.03865	0.00649	4.84541E-09	0.20738	0.437088	0.007102	0.019601	0.288838	7.8E-05	0.01176	0.519485	0.912	0.88	0.99	0.985	0.894	1	0.978	0.869
rs200840555	2.5949E-09	-0.073593	0.01236	-0.073593	0.012357	4.84631E-09	0.34772	0.821771	1.99E-06	0.095852	0.478511	0.00078	0.7579	0.088424	0.833	0.699	1	0.875	0.759	0.998	0.716	0.902
rs1334040	2.5951E-09	0.0357587	0.006	0.0359612	0.006333	4.84654E-09	0.6646	0.284666	3.93E-05	0.002322	0.448745	0.01939	0.06511	0.015759	0.73	0.883	1	0.997	0.821	0.934	0.947	0.957
rs499005	2.5977E-09	-0.035554	0.00597	-0.035554	0.00597	4.85141E-09	0.41024	0.70905	0.009571	0.008655	0.000379	0.00069	0.46019	0.144365	0.882	0.847	0.985	0.992	0.996	0.999	0.865	0.924
rs12044359	2.6004E-09	-0.037278	0.00626	-0.037278	0.00626	4.85631E-09	0.78364	0.815173	0.000353	0.004433	0.017488	0.00245	0.29086	0.506764	0.823	0.82	0.999	0.995	0.978	0.996	0.89	0.857
rs662634	2.6048E-09	0.0419216	0.00704	0.0419216	0.00704	4.86439E-09	0.23777	0.054936	0.00056	0.057992	0.111939	0.00041	0.36644	0.338586	0.909	0.943	0.999	0.96	0.946	0.999	0.888	0.896
rs62389569	2.6102E-09	-0.049877	0.00838	-0.049877	0.008377	4.87424E-09	0.94497	0.093946	0.002287	0.00816	0.042685	0.00326	0.05462	0.051625	0.837	0.94	0.998	0.994	0.973	0.996	0.964	0.953
rs72902622	2.615E-09	-0.031367	0.00527	-0.031367	0.005268	4.88301E-09	0.11399	0.693584	0.00016	0.01424	0.38764	0.00043	0.20956	0.546584	0.911	0.731	1	0.985	0.837	0.999	0.898	0.836
rs2551442	2.62E-09	0.046861	0.00787	0.046861	0.007871	4.89211E-09	0.77376	0.243603	0.002311	0.049203	0.133736	8.3E-05	0.21469	0.058516	0.84	0.906	0.997	0.964	0.938	1	0.917	0.945
rs56398112	2.6216E-09	0.0339201	0.0057	0.0322339	0.007311	4.2473E-09	0.43781	0.593961	1.76E-07	0.019385	0.573078	0.00731	0.80241	0.073233	0.59	0.769	1	0.967	0.7	0.96	0.677	0.895

Table S3

rs10877461	2.625E-09	0.0314623	0.00528	0.0351473	0.009117	4.90122E-09	0.00683	0.200304	0.002458	0.127767	0.030372	0.00048	0.00112	0.209966	0.963	0.9	0.996	0.885	0.97	0.999	0.99	0.588
rs66532783	2.6469E-09	-0.031357	0.00527	-0.031357	0.005268	4.94115E-09	0.11411	0.693981	0.000159	0.014283	0.388645	0.00043	0.20927	0.547285	0.911	0.731	1	0.985	0.837	0.999	0.898	0.836
rs2755256	2.6473E-09	0.0311786	0.00524	0.0311786	0.005238	4.94192E-09	0.81652	0.524235	0.004484	0.145005	0.014671	7.4E-06	0.20806	0.233205	0.751	0.843	0.991	0.865	0.978	1	0.9	0.889
rs12148093	2.6501E-09	0.0300125	0.00504	0.0323115	0.008869	1.7968E-09	0.37512	0.33685	6.9E-07	0.030663	0.017747	0.12955	0.00111	0.534275	0.423	0.769	1	0.882	0.962	0.24	0.987	0.704
rs76518845	2.6594E-09	0.0433987	0.00729	0.0444828	0.008847	4.96398E-09	0.14819	0.902762	0.013162	0.0092	0.029843	0.00014	0.81516	0.002062	0.916	0.788	0.975	0.991	0.972	1	0.781	0.978
rs10802323	2.6622E-09	-0.030634	0.00515	-0.030634	0.005147	4.96894E-09	0.33431	0.030562	0.017776	0.079996	0.020759	1.3E-05	0.12406	0.883851	0.891	0.949	0.963	0.938	0.978	1	0.937	0.817
rs7759217	2.6623E-09	-0.037843	0.00636	-0.037843	0.006359	4.96917E-09	0.76028	0.168129	0.000435	0.003969	0.127989	0.01487	0.09714	0.004319	0.853	0.924	0.999	0.996	0.945	0.97	0.95	0.975
rs2044752	2.666E-09	-0.036885	0.0062	-0.038132	0.007287	4.77024E-09	0.39069	0.291566	2.18E-05	0.27832	0.006115	0.01689	0.01001	0.104892	0.87	0.885	1	0.741	0.987	0.926	0.978	0.925
rs78496681	2.667E-09	0.0351976	0.00591	0.0351666	0.008966	4.9778E-09	0.39753	0.019042	0.000313	0.143344	0.710375	9E-05	0.17177	0.004559	0.63	0.939	0.999	0.838	0.7	1	0.895	0.964
rs550691	2.6704E-09	0.0418931	0.00704	0.0418931	0.00704	4.98391E-09	0.23845	0.055103	0.000582	0.056858	0.113015	0.0004	0.36857	0.340044	0.909	0.943	0.999	0.961	0.946	0.999	0.888	0.896
rs10746661	2.6767E-09	0.0325462	0.00547	0.0325462	0.00547	4.99545E-09	0.3722	0.141187	0.000242	0.010239	0.369943	0.00172	0.5554	0.036616	0.884	0.919	1	0.991	0.866	0.998	0.841	0.95
rs1569788	2.6773E-09	0.0318229	0.00535	0.0323944	0.006812	4.99655E-09	0.76821	0.78103	0.018397	0.155692	0.002832	6.2E-06	0.42392	0.010192	0.805	0.804	0.941	0.843	0.99	1	0.842	0.96
rs2189259	2.6779E-09	0.0309079	0.00519	0.0309079	0.005194	4.99764E-09	0.23415	0.673718	0.000165	0.039993	0.296091	0.00368	0.05151	0.008318	0.911	0.859	1	0.973	0.897	0.995	0.962	0.97
rs2189260	2.6779E-09	0.0309079	0.00519	0.0309079	0.005194	4.99764E-09	0.23415	0.673718	0.000165	0.039993	0.296091	0.00368	0.05151	0.008318	0.911	0.859	1	0.973	0.897	0.995	0.962	0.97
rs56371996	2.678E-09	0.0339003	0.0057	0.0322048	0.007316	4.33315E-09	0.43674	0.59402	1.76E-07	0.019829	0.572853	0.00731	0.80279	0.073178	0.59	0.769	1	0.966	0.7	0.96	0.677	0.895
rs1484665	2.6797E-09	0.0310303	0.00522	0.0318297	0.006074	5.00089E-09	0.16037	0.021543	0.005373	0.032926	0.036305	0.00033	0.98384	0.010049	0.922	0.957	0.993	0.977	0.973	1	0.754	0.968
rs12149591	2.681E-09	-0.030032	0.00505	-0.030032	0.005047	5.00329E-09	0.49279	0.069697	0.002128	0.014285	0.539263	0.00022	0.44895	0.00929	0.867	0.934	0.997	0.988	0.817	1	0.861	0.966
rs12037213	2.6853E-09	0.0323438	0.00544	0.034891	0.007553	5.01119E-09	0.00756	0.682972	0.000868	0.003026	0.419372	0.00822	0.22579	0.002574	0.967	0.857	0.999	0.997	0.863	0.986	0.918	0.977
rs10780429	2.6901E-09	0.0325416	0.00547	0.0325416	0.00547	5.01993E-09	0.3722	0.14095	0.000243	0.010239	0.369919	0.00172	0.55543	0.036641	0.884	0.919	1	0.991	0.866	0.998	0.841	0.95
rs67900719	2.6966E-09	0.0379986	0.00639	0.036139	0.007815	5.03164E-09	0.24156	0.941919	8.36E-06	0.198113	0.972634	8E-05	0.02251	0.645642	0.797	0.623	1	0.655	0.454	1	0.936	0.541
rs6449103	2.6975E-09	-0.030972	0.00521	-0.030972	0.005206	5.03338E-09	0.74403	0.801649	0.053989	0.001975	0.085318	3.8E-05	0.01155	0.329799	0.812	0.805	0.822	0.997	0.942	1	0.975	0.873
rs479714	2.6984E-09	0.0320112	0.00538	0.0320112	0.005381	5.03509E-09	0.22507	0.823902	1.2E-05	0.049665	0.352325	0.01206	0.02482	0.042902	0.905	0.83	1	0.962	0.872	0.973	0.969	0.948
rs4577996	2.6992E-09	0.0309039	0.00519	0.0309039	0.005195	5.03648E-09	0.22346	0.666567	0.00017	0.039841	0.294634	0.00376	0.05134	0.008341	0.913	0.86	1	0.973	0.898	0.995	0.962	0.971
rs1263550	2.7008E-09	0.0475018	0.00799	0.0475018	0.007985	5.03937E-09	0.05737	0.460598	0.000934	0.070856	0.006032	0.00114	0.59296	0.058662	0.944	0.882	0.999	0.95	0.988	0.999	0.845	0.947
rs11207531	2.7012E-09	0.0385718	0.00648	0.0381373	0.009162	5.04011E-09	0.09255	0.141707	0.002235	8.97E-05	0.394101	0.00069	0.70216	0.060469	0.902	0.536	0.995	0.999	0.805	0.998	0.745	0.918
rs1408478	2.7012E-09	0.0385718	0.00648	0.0381373	0.009162	5.04011E-09	0.09255	0.141707	0.002235	8.97E-05	0.394101	0.00069	0.70216	0.060469	0.902	0.536	0.995	0.999	0.805	0.998	0.745	0.918
rs6696530	2.7012E-09	0.0385718	0.00648	0.0381373	0.009162	5.04011E-09	0.09255	0.141707	0.002235	8.97E-05	0.394101	0.00069	0.70216	0.060469	0.902	0.536	0.995	0.999	0.805	0.998	0.745	0.918
rs502845	2.7022E-09	0.03201	0.00538	0.03201	0.005381	5.04201E-09	0.22481	0.823914	1.2E-05	0.049613	0.352753	0.01206	0.02479	0.042974	0.905	0.83	1	0.962	0.871	0.973	0.969	0.948
rs213209	2.7045E-09	0.0333268	0.0056	0.0333615	0.006956	5.04617E-09	0.87813	0.388274	0.000367	0.750882	0.003806	5.4E-05	0.02739	0.339206	0.647	0.798	0.999	0.249	0.985	1	0.948	0.81
rs6901520	2.7068E-09	-0.03781	0.00636	-0.03781	0.006356	5.05023E-09	0.73589	0.181834	0.000584	0.003832	0.108811	0.0145	0.08889	0.003774	0.857	0.923	0.999	0.996	0.951	0.972	0.953	0.976
rs3935148	2.7079E-09	-0.033643	0.00566	-0.033643	0.005656	5.05225E-09	0.52812	0.035047	6.66E-06	0.315924	0.060858	0.00515	0.06806	0.388123	0.844	0.94	1	0.708	0.954	0.984	0.945	0.864
rs13147098	2.7122E-09	0.0333762	0.00561	0.0333762	0.005611	5.06014E-09	0.52822	0.426815	0.010928	0.009629	0.189348	0.00014	0.00745	0.365688	0.871	0.883	0.983	0.992	0.923	1	0.982	0.891
rs6728994	2.7129E-09	-0.030512	0.00513	-0.030512	0.00513	5.06138E-09	0.20798	0.279024	0.001461	0.000906	0.026749	0.0045	0.0753	0.128302	0.629	0.89	0.998	0.998	0.973	0.992	0.947	0.92
rs79855263	2.7131E-09	0.0681587	0.01146	0.0765853	0.016021	5.0618E-09	0.93777	0.056213	0.000325	0.038928	0.002554	0.0449	0.00607	0.04623	0.821	0.944	0.999	0.969	0.993	0.863	0.985	0.951
rs2139034	2.719E-09	-0.032937	0.00554	-0.032937	0.005538	5.07258E-09	0.28346	0.580402	0.000111	0.336456	0.28729	0.00014	0.00445	0.752119	0.853	0.801	1	0.634	0.837	1	0.978	0.767
rs4646563	2.7191E-09	0.0300333	0.00505	0.032126	0.008792	1.91353E-09	0.36491	0.36738	7.25E-07	0.023892	0.018752	0.13132	0.00137	0.564774	0.42	0.76	1	0.911	0.96	0.237	0.986	0.695
rs4477313	2.7223E-09	0.0385645	0.00648	0.0381289	0.009163	5.07854E-09	0.09266	0.141491	0.002238	9.01E-05	0.394871	0.0007	0.70152	0.0604	0.901	0.536	0.995	0.999	0.805	0.998	0.745	0.918
rs552488886	2.7227E-09	0.0513851	0.00864	0.055629	0.011247	4.4156E-09	0.62276	0.062294	5.33E-05	0.032972	0.009567	0.07593	0.00283	0.282767	0.832	0.934	1	0.963	0.985	0.687	0.988	0.885
rs6545765	2.7285E-09	0.0328827	0.00553	0.0365815	0.007827	5.08995E-09	0.06185	0.013664	0.021409	0.005867	0.001971	0.00144	0.07173	0.678827	0.944	0.963	0.958	0.995	0.993	0.998	0.956	0.761
rs55861489	2.7364E-09	0.0299402	0.00503	0.0264166	0.010488	4.55463E-09	0.3491	0.111133	0.004017	0.000119	0.429839	0.00041	6.7E-05	0.862911	0.509	0.412	0.982	0.999	0.716	0.998	0.992	0.616
rs142262847	2.7413E-09	-0.105936	0.01782	-0.105936	0.017815	5.11311E-09	0.11716	0.727692	0.000408	0.004696	0.008299	0.00766	0.05422	0.920551	0.923	0.761	0.999	0.995	0.985	0.984	0.956	0.801
rs1559709	2.7417E-09	0.0379838	0.00639	0.0361386	0.007805	5.11387E-09	0.24275	0.944876	8.43E-06	0.198666	0.972347	8E-05	0.02254	0.646588	0.797	0.624	1	0.654	0.454	1	0.936	0.542
rs61313191	2.7429E-09	0.0681365	0.01146	0.0765239	0.016	5.11617E-09	0.93934	0.056213	0.000335	0.038985	0.002502	0.04436	0.00606	0.047407	0.821	0.944	0.999	0.969	0.993	0.865	0.985	0.951
rs61142249	2.7444E-09	0.0379793	0.00639	0.0361263	0.00781	5.11885E-09	0.24177	0.943999	8.46E-06	0.198346	0.971465	8E-05	0.02257	0.645221	0.797	0.624	1	0.655	0.453	1	0.936	0.541
rs6806415	2.7461E-09	-0.035225	0.00592	-0.037497	0.011097	2.21018E-09	0.03127	0.149455	0.084957	2.15E-06	0.165469	0.00034	0.12233	0.122236	0.918	0.861	0.536	1	0.854	0.996	0.886	0.379
rs360754	2.7534E-09	0.0557759	0.00938	0.0557759	0.009381	5.13529E-09	0.25553	0.109091	0.006174	0.017051	0.021547	0.00022	0.41728	0.338216	0.909	0.932	0.992	0.988	0.979	1	0.882	0.899
rs4859322	2.7562E-09	0.0333606	0.00561	0.0333606	0.005611	5.14028E-09	0.52902	0.427458	0.010944	0.009653	0.189934	0.00014	0.00749	0.36596	0.871	0.883	0.983	0.992	0.923	1	0.982	0.891
rs59732892	2.7577E-09	0.0379799	0.00639	0.0361279	0.007811	5.14305E-09	0.24274	0.944511	8.45E-06	0.198711	0.971935	8E-05	0.02243	0.645729	0.797	0.624	1	0.654	0.454	1	0.936	0.541
rs7630000	2.7584E-09	-0.036873	0.0062	-0.038197	0.007353	4.91304E-09	0.39303	0.290839	2.12E-05	0.278358	0.006303	0.0173	0.00978	0.104038	0.869	0.885	1	0.74	0.987	0.924	0.978	0.925
rs7629934	2.7592E-09	-0.036873	0.0062	-0.038198	0.007353	4.91438E-09	0.39303	0.290839	2.12E-05	0.278433	0.006303	0.0173	0.00978	0.104037	0.869	0.885	1	0.74	0.987	0.924	0.978	0.925
rs10786398	2.7592E-09	0.033	0.00555	0.0353879	0.008661	5.14585E-09	0.64905	0.66768	0.014634	0.054227	0.00018	0.00017	0.00275	0.995359	0.825	0.726	0.963	0.948	0.996	1	0.985	0.766
rs35860169	2.7604E-09	0.0308842	0.00519	0.0308842	0.005195	5.148E-09	0.22168	0.664808	0.000171	0.040366	0.294501	0.00378	0.0513	0.008373	0.913	0.86	1	0.973	0.898	0.995	0.962	0.97
rs10663211	2.7696E-09	-0.036866	0.0062	-0.038164	0.007331	4.93526E-09	0.40321	0.294518	2.11E-05	0.271389	0.006356	0.01766	0.00964	0.104289	0.868	0.884	1	0.747	0.987	0.923	0.978	0.925
rs9815134	2.7728E-09	-0.036867	0.0062	-0.038194	0.007354	4.9377E-09	0.39323	0.290839	2.12E-05	0.278497	0.006305	0.01733	0.00977	0.104051	0.869	0.885	1	0.74	0.987	0.923	0.978	0.925
rs141943159	2.7781E-09	-0.0434	0.0073	-0.045213	0.008699	4.93031E-09	0.2291	0.084333	0.001169	4.61E-05	0.057858	0.02832	0.06675	0.623006	0.898	0.927	0.998	1	0.958	0.9	0.95	0.713

Table S3

rs73074855	2.7789E-09	-0.035886	0.00604	-0.035886	0.006037	5.18177E-09	0.65921	0.165549	0.002803	0.118304	0.047219	3E-06	0.52374	0.523486	0.701	0.889	0.994	0.875	0.954	1	0.805	0.825
rs1931397	2.78E-09	-0.040063	0.00674	-0.042309	0.008551	5.18369E-09	0.13649	0.777602	0.000708	0.064246	0.026842	0.00425	0.03385	0.002137	0.929	0.796	0.999	0.958	0.978	0.994	0.969	0.978
rs11207523	2.7834E-09	0.0385838	0.00649	0.0382943	0.008983	5.18995E-09	0.10326	0.139711	0.002366	0.000107	0.399192	0.00069	0.60346	0.05591	0.9	0.542	0.995	0.999	0.807	0.999	0.775	0.922
rs77496389	2.7859E-09	-0.035242	0.00593	-0.035242	0.005929	5.19449E-09	0.83793	0.310014	0.000195	0.087267	0.239158	0.00066	0.03457	0.112681	0.826	0.892	1	0.933	0.903	0.999	0.964	0.928
rs12473093	2.7867E-09	-0.029947	0.00504	-0.029947	0.005038	5.19592E-09	0.80509	0.844109	0.002344	0.004197	0.129916	0.00238	0.00158	0.09362	0.78	0.827	0.997	0.995	0.937	0.997	0.989	0.933
rs2197216	2.788E-09	0.0330324	0.00556	0.0362815	0.007522	5.19828E-09	0.09308	0.031194	0.00905	0.035688	0.124763	0.00127	0.00029	0.521992	0.942	0.958	0.989	0.978	0.95	0.999	0.994	0.886
rs7554538	2.7915E-09	0.030945	0.00521	0.0322972	0.00858	5.20465E-09	0.18958	0.042651	0.000449	0.000189	0.025485	0.01693	0.19249	0.050813	0.889	0.47	0.999	0.999	0.97	0.934	0.898	0.933
rs9597422	2.7931E-09	-0.040247	0.00677	-0.040247	0.006772	5.20746E-09	0.72021	0.14091	1.52E-06	0.182916	0.379655	0.00207	0.05538	0.552335	0.696	0.887	1	0.793	0.81	0.993	0.938	0.809
rs10111402	2.7938E-09	0.0308745	0.00519	0.0308745	0.005195	5.2088E-09	0.22355	0.666707	0.000172	0.039922	0.294394	0.00378	0.05134	0.008769	0.913	0.86	1	0.973	0.898	0.995	0.962	0.97
rs7920460	2.7948E-09	0.0468603	0.00788	0.0467039	0.008979	5.21063E-09	0.91037	0.703196	0.001155	0.59201	0.011428	1.4E-05	0.08446	0.046761	0.683	0.755	0.996	0.384	0.975	1	0.915	0.918
rs12473340	2.7963E-09	-0.033618	0.00566	-0.033618	0.005657	5.21332E-09	0.52556	0.035366	6.82E-06	0.317147	0.058506	0.00521	0.06969	0.39256	0.844	0.94	1	0.707	0.955	0.984	0.945	0.863
rs58078405	2.7999E-09	0.0379598	0.00639	0.0359997	0.007893	5.21987E-09	0.24083	0.945408	7.95E-06	0.201184	0.954181	8.2E-05	0.02234	0.648149	0.796	0.621	1	0.648	0.444	1	0.935	0.539
rs3784262	2.8016E-09	0.0299682	0.00504	0.0328557	0.008824	2.32386E-09	0.40305	0.339815	2E-06	0.031359	0.017562	0.11276	0.0005	0.430843	0.474	0.788	1	0.9	0.965	0.326	0.991	0.758
rs9868998	2.8094E-09	-0.036847	0.0062	-0.038173	0.007351	5.00053E-09	0.39051	0.29124	2.14E-05	0.278168	0.006332	0.01745	0.00976	0.104519	0.869	0.884	1	0.74	0.987	0.923	0.978	0.925
rs607898	2.8181E-09	0.0300288	0.00505	0.0300288	0.005054	5.25312E-09	0.4807	0.836582	0.000308	0.005042	0.074175	0.00162	0.25955	0.348024	0.862	0.774	1	0.994	0.952	0.998	0.897	0.88
rs4856387	2.8198E-09	-0.036823	0.0062	-0.038295	0.007456	4.90504E-09	0.39323	0.283864	1.89E-05	0.27861	0.005834	0.01944	0.01029	0.104145	0.867	0.884	1	0.734	0.987	0.909	0.978	0.924
rs6720515	2.8269E-09	-0.032902	0.00554	-0.032902	0.005538	5.26908E-09	0.28696	0.581252	0.000112	0.342382	0.287854	0.00014	0.00447	0.75264	0.851	0.8	1	0.627	0.836	1	0.977	0.765
rs1409405	2.8289E-09	-0.030823	0.00519	-0.031238	0.005529	5.27272E-09	0.13682	0.275912	0.001379	0.00461	0.551217	0.00518	0.05686	0.002386	0.929	0.908	0.998	0.996	0.833	0.992	0.961	0.979
rs6061692	2.8303E-09	0.0299139	0.00504	0.0264475	0.010458	4.85628E-09	0.35808	0.111638	0.004018	0.00013	0.429785	0.00041	6.7E-05	0.862676	0.513	0.414	0.982	0.999	0.717	0.998	0.992	0.618
rs9835750	2.8347E-09	-0.032972	0.00555	-0.033878	0.006511	5.28327E-09	0.31393	0.741321	0.001753	0.002113	0.004735	0.00526	0.01094	0.371681	0.881	0.823	0.997	0.997	0.988	0.989	0.976	0.65
rs8054556	2.8351E-09	-0.030242	0.00509	-0.03147	0.007679	5.28396E-09	0.30246	0.370618	0.015318	0.004499	0.000205	0.00022	0.22506	0.173363	0.868	0.856	0.956	0.994	0.996	1	0.888	0.541
rs5467	2.8391E-09	0.0355242	0.00598	0.0355242	0.00598	5.29124E-09	0.5166	0.110535	0.000497	0.20407	0.013201	0.00131	0.02846	0.185036	0.871	0.929	0.999	0.846	0.983	0.998	0.969	0.918
rs9812425	2.8434E-09	-0.031152	0.00524	-0.031152	0.005244	5.29917E-09	0.45907	0.942538	0.004119	0.048124	0.094874	7.6E-05	0.01478	0.314296	0.874	0.817	0.994	0.964	0.949	1	0.975	0.894
rs59862588	2.8475E-09	-0.037441	0.0063	-0.040935	0.008559	5.30666E-09	0.24479	0.477639	0.004847	0.001681	0.010941	0.00957	0.02199	0.008832	0.909	0.739	0.993	0.998	0.985	0.982	0.974	0.969
rs1920017	2.8519E-09	0.0313795	0.00528	0.0311657	0.005478	5.26338E-09	0.79498	0.394215	0.003903	0.097504	0.79517	5.7E-07	0.01908	0.806731	0.679	0.816	0.986	0.868	0.636	1	0.955	0.739
rs78804367	2.8524E-09	0.0680434	0.01146	0.0760845	0.015818	5.31558E-09	0.94205	0.057545	0.000379	0.0388	0.002253	0.0418	0.00628	0.053362	0.823	0.944	0.999	0.97	0.993	0.878	0.985	0.949
rs35850432	2.8562E-09	-0.040222	0.00677	-0.040222	0.006772	5.32235E-09	0.71739	0.14091	1.52E-06	0.185459	0.379655	0.00207	0.05538	0.552335	0.694	0.887	1	0.79	0.809	0.993	0.938	0.808
rs9846450	2.8626E-09	-0.03683	0.0062	-0.038148	0.007351	5.09494E-09	0.40301	0.291222	2.14E-05	0.278752	0.006327	0.01744	0.00976	0.10453	0.867	0.884	1	0.74	0.987	0.923	0.978	0.925
rs10507610	2.8631E-09	-0.04022	0.00677	-0.04022	0.006772	5.33485E-09	0.71737	0.141006	1.52E-06	0.18556	0.379422	0.00207	0.0553	0.553614	0.694	0.887	1	0.79	0.809	0.993	0.938	0.808
rs1721409	2.8632E-09	-0.031202	0.00525	-0.032142	0.006675	3.98274E-09	0.25326	0.931327	0.115686	0.00047	0.004327	1.9E-05	0.85888	0.193989	0.823	0.67	0.429	0.998	0.984	1	0.591	0.843
rs62491960	2.8678E-09	0.039247	0.00661	0.039247	0.006608	5.34353E-09	0.70868	0.446791	0.002164	0.039327	0.006082	4.9E-05	0.2499	0.599609	0.81	0.675	0.996	0.961	0.985	1	0.883	0.822
rs4646628	2.8678E-09	0.0299344	0.00504	0.0323799	0.008306	3.27659E-09	0.52215	0.387163	3.82E-06	0.029344	0.024023	0.08097	0.0004	0.56316	0.574	0.804	1	0.931	0.962	0.514	0.991	0.76
rs58152051	2.8702E-09	0.0302092	0.00509	0.0302092	0.005087	5.34792E-09	0.67065	0.803197	0.004316	0.014842	0.422163	1.7E-06	0.28825	0.771742	0.791	0.711	0.989	0.98	0.795	1	0.854	0.77
rs843079	2.8704E-09	0.0305719	0.00515	0.0305719	0.005148	5.34828E-09	0.13928	0.77999	0.004097	0.006129	0.034455	0.00176	0.16335	0.010017	0.928	0.796	0.995	0.995	0.974	0.998	0.933	0.97
rs77350364	2.8787E-09	-0.034791	0.00586	-0.034791	0.005859	5.36334E-09	0.24804	0.019762	0.000125	0.114825	0.122778	0.0027	0.14755	0.160565	0.912	0.959	1	0.922	0.946	0.996	0.937	0.927
rs9845967	2.8796E-09	-0.036828	0.0062	-0.038131	0.007339	5.1361E-09	0.40152	0.2904	2.19E-05	0.279885	0.006269	0.01723	0.0098	0.105477	0.867	0.884	1	0.74	0.987	0.924	0.978	0.924
rs13019037	2.8822E-09	-0.033595	0.00566	-0.033595	0.005657	5.36984E-09	0.52254	0.035287	6.93E-06	0.316221	0.058551	0.00531	0.07051	0.393692	0.845	0.94	1	0.709	0.955	0.984	0.944	0.863
rs13099659	2.8849E-09	0.0313684	0.00528	0.0311483	0.005484	5.32111E-09	0.79559	0.394216	0.003903	0.098447	0.795166	5.7E-07	0.01908	0.806733	0.679	0.815	0.986	0.867	0.635	1	0.955	0.738
rs78662102	2.887E-09	0.0386261	0.00651	0.0386261	0.006505	5.37841E-09	0.3392	0.050102	0.006233	0.158538	0.188368	1E-05	0.0882	0.33512	0.888	0.94	0.99	0.877	0.918	1	0.945	0.889
rs56413200	2.8874E-09	-0.031195	0.00525	-0.032115	0.006633	4.06308E-09	0.24327	0.926755	0.114929	0.000557	0.004212	1.8E-05	0.85247	0.192037	0.827	0.674	0.436	0.998	0.984	1	0.597	0.846
rs1375807	2.888E-09	-0.03682	0.0062	-0.038127	0.007343	5.141E-09	0.40389	0.291752	2.14E-05	0.278379	0.006359	0.01748	0.00978	0.104695	0.867	0.884	1	0.74	0.987	0.923	0.978	0.924
rs11707173	2.8893E-09	0.0313669	0.00528	0.0311445	0.005486	5.32852E-09	0.79531	0.394084	0.003897	0.098736	0.795064	5.7E-07	0.01908	0.80665	0.679	0.815	0.986	0.866	0.635	1	0.955	0.738
rs17035665	2.8918E-09	-0.040428	0.00681	-0.040803	0.012497	5.38719E-09	0.40234	0.092559	0.000458	0.000117	0.093736	0.01208	0.03002	0.010502	0.611	0.486	0.999	0.999	0.925	0.945	0.954	0.953
rs7625596	2.8918E-09	0.0313662	0.00528	0.0311445	0.005485	5.33312E-09	0.7953	0.394082	0.003898	0.098738	0.795058	5.7E-07	0.0191	0.806646	0.679	0.815	0.986	0.866	0.635	1	0.955	0.738
rs2271798	2.8922E-09	0.0384532	0.00648	0.0380623	0.009284	5.38788E-09	0.08968	0.143315	0.002076	8.41E-05	0.404897	0.00086	0.70373	0.052652	0.903	0.538	0.995	0.999	0.802	0.998	0.745	0.922
rs2785834	2.8939E-09	-0.030235	0.00509	-0.030235	0.005092	5.39108E-09	0.02805	0.222021	0.000685	0.032403	0.076896	0.00416	0.09508	0.140754	0.96	0.923	0.999	0.981	0.963	0.995	0.955	0.937
rs2350818	2.8942E-09	-0.032879	0.00554	-0.032879	0.005537	5.39151E-09	0.27728	0.581034	0.000116	0.343132	0.286156	0.00014	0.00442	0.751701	0.854	0.801	1	0.627	0.837	1	0.977	0.766
rs9875308	2.8942E-09	-0.036818	0.0062	-0.038132	0.007348	5.14943E-09	0.40319	0.291758	2.14E-05	0.279196	0.006353	0.01748	0.00978	0.104689	0.867	0.884	1	0.74	0.987	0.923	0.978	0.924
rs58427689	2.8944E-09	0.0300071	0.00505	0.0300071	0.005054	5.39191E-09	0.08653	0.54494	0.001297	0.002136	0.154893	0.00034	0.81232	0.05518	0.912	0.682	0.998	0.996	0.907	0.999	0.637	0.928
rs1140763	2.8952E-09	0.0312416	0.00526	0.0312416	0.005262	5.39342E-09	0.73603	0.80783	0.005549	0.011155	0.174581	0.00011	0.07729	0.021297	0.836	0.778	0.992	0.99	0.921	1	0.948	0.957
rs2372774	2.8954E-09	0.0313652	0.00528	0.0311423	0.005486	5.33934E-09	0.79531	0.394215	0.003903	0.098719	0.795166	5.7E-07	0.01908	0.80673	0.679	0.815	0.986	0.866	0.635	1	0.955	0.738
rs7744763	2.8967E-09	0.031875	0.00537	0.031875	0.005369	5.39607E-09	0.87157	0.507145	0.000956	0.035319	0.023535	0.00023	0.15144	0.5011	0.779	0.859	0.999	0.971	0.975	1	0.924	0.859
rs1375808	2.8986E-09	-0.036816	0.0062	-0.03813	0.007348	5.15725E-09	0.4032	0.291751	2.14E-05	0.279234	0.006356	0.01749	0.00977	0.104687	0.867	0.884	1	0.74	0.987	0.923	0.978	0.924
rs11756897	2.9017E-09	0.0324747	0.00547	0.0325578	0.005643	5.40519E-09	0.20023	0.003182	0.003567	0.131839	0.369168	8E-05	0.04636	0.316994	0.913	0.972	0.995	0.904	0.872	1	0.962	0.897
rs200339945	2.9019E-09	0.0463585	0.00781	0.0463585	0.007808	5.40559E-09	0.18076	0.350196	0.018064	0.001318	0.562774	0.00041	0.00304	0.342243	0.912	0.887	0.965	0.998	0.812	0.999	0.986	0.888

Table S3

rs11870879	2.9025E-09	-0.031052	0.00523	-0.031052	0.00523	5.40675E-09	0.65197	0.84522	2.92E-05	0.047652	0.060058	0.0034	0.15665	0.119439	0.842	0.778	1	0.962	0.958	0.994	0.923	0.923
rs2372775	2.9036E-09	0.0313629	0.00528	0.031142	0.005485	5.35379E-09	0.79708	0.394215	0.003903	0.099115	0.795164	5.7E-07	0.01908	0.806729	0.679	0.815	0.986	0.866	0.635	1	0.955	0.738
rs147764919	2.9088E-09	-0.073384	0.01236	-0.073384	0.012361	5.41821E-09	0.35779	0.824383	2.14E-06	0.094749	0.474002	0.00083	0.75742	0.089315	0.832	0.701	1	0.877	0.762	0.998	0.718	0.902
rs55740371	2.9113E-09	-0.031578	0.00532	-0.030927	0.006225	4.50044E-09	0.73379	0.392745	0.024246	0.042874	0.041001	2.1E-07	0.56331	0.173993	0.762	0.821	0.887	0.935	0.949	1	0.511	0.871
rs9468201	2.9119E-09	-0.038013	0.0064	-0.038013	0.006403	5.42386E-09	0.62317	0.189682	0.000639	0.00334	0.106795	0.0169	0.06836	0.006668	0.871	0.923	0.999	0.997	0.952	0.966	0.959	0.973
rs62488709	2.9133E-09	0.0338203	0.0057	0.0338203	0.005697	5.42644E-09	0.13326	0.856225	0.00433	0.004854	0.032728	0.00048	0.14783	0.492365	0.922	0.792	0.994	0.995	0.972	0.999	0.931	0.87
rs1985049	2.9181E-09	0.0467071	0.00787	0.0467071	0.007868	5.43513E-09	0.77291	0.239964	0.002399	0.047348	0.128692	9.4E-05	0.22854	0.05818	0.841	0.906	0.997	0.966	0.94	1	0.914	0.945
rs13045751	2.9182E-09	0.0298863	0.00503	0.0262618	0.01054	4.56236E-09	0.34214	0.117362	0.004378	0.000119	0.440219	0.00039	6.2E-05	0.820153	0.504	0.414	0.979	0.999	0.708	0.998	0.992	0.604
rs1603505	2.9192E-09	0.0482721	0.00813	0.0480491	0.00844	5.43704E-09	0.94639	0.308205	0.006384	0.000187	0.407124	2.3E-05	0.48313	0.337483	0.695	0.824	0.977	0.999	0.769	1	0.77	0.542
rs1061783	2.9267E-09	0.0299014	0.00504	0.029428	0.005503	5.45075E-09	0.27826	0.669594	0.000552	0.000237	0.817933	0.00013	0.7429	0.270936	0.498	0.726	0.998	0.999	0.567	1	0.655	0.81
rs55867170	2.927E-09	0.0482679	0.00813	0.0480444	0.00844	5.45119E-09	0.94581	0.308205	0.006387	0.000187	0.407169	2.3E-05	0.4832	0.337483	0.695	0.824	0.977	0.999	0.769	1	0.77	0.542
rs1364913	2.9275E-09	0.036091	0.00608	0.0365468	0.007288	5.45217E-09	0.78541	0.221181	0.012708	0.006385	0.3773	8E-05	0.00054	0.89044	0.746	0.889	0.971	0.992	0.842	1	0.991	0.786
rs1449850	2.9312E-09	-0.036805	0.0062	-0.038093	0.007328	5.22133E-09	0.40173	0.29122	2.17E-05	0.279148	0.006353	0.01743	0.00982	0.106605	0.867	0.884	1	0.74	0.987	0.924	0.978	0.924
rs1345660	2.9348E-09	-0.031041	0.00523	-0.031041	0.00523	5.46554E-09	0.50858	0.922569	0.000591	0.018751	0.058436	0.00024	0.68332	0.14173	0.85	0.776	0.999	0.982	0.955	1	0.795	0.912
rs9832026	2.9357E-09	-0.036804	0.0062	-0.038089	0.007327	5.22959E-09	0.40174	0.291447	2.17E-05	0.279281	0.006364	0.01742	0.00983	0.106521	0.867	0.884	1	0.74	0.987	0.924	0.978	0.924
rs6773011	2.9369E-09	-0.036803	0.0062	-0.038088	0.007326	5.23184E-09	0.40174	0.291444	2.17E-05	0.279316	0.006368	0.01742	0.00983	0.106519	0.867	0.884	1	0.74	0.987	0.924	0.978	0.924
rs2034475	2.9374E-09	0.0313545	0.00528	0.0311068	0.005504	5.39782E-09	0.7948	0.396967	0.003756	0.103567	0.802184	5.3E-07	0.02052	0.804221	0.676	0.813	0.986	0.858	0.63	1	0.953	0.736
rs9851438	2.9375E-09	-0.036803	0.0062	-0.038091	0.007328	5.23212E-09	0.40172	0.291391	2.17E-05	0.279299	0.006359	0.01743	0.00982	0.106602	0.867	0.884	1	0.74	0.987	0.923	0.978	0.924
rs1817017	2.9383E-09	-0.036803	0.0062	-0.03809	0.007328	5.23349E-09	0.40172	0.291392	2.17E-05	0.279299	0.006359	0.01744	0.00982	0.106603	0.867	0.884	1	0.74	0.987	0.923	0.978	0.924
rs7770020	2.9395E-09	0.0312816	0.00527	0.0340976	0.00893	2.11391E-09	0.16498	0.91045	0.007035	2.27E-07	0.290297	0.01767	0.7402	0.014455	0.888	0.768	0.948	1	0.842	0.906	0.748	0.953
rs6796468	2.9414E-09	-0.036802	0.0062	-0.038086	0.007325	5.23981E-09	0.40175	0.291496	2.17E-05	0.279235	0.006365	0.01743	0.00984	0.106534	0.867	0.884	1	0.74	0.987	0.924	0.978	0.924
rs62084690	2.9417E-09	-0.032069	0.0054	-0.030635	0.007499	5.47803E-09	0.3684	0.114768	0.000301	0.111121	0.986127	1.9E-05	0.26865	0.009254	0.573	0.878	0.999	0.844	0.546	1	0.839	0.947
rs35076386	2.9441E-09	-0.036801	0.0062	-0.038084	0.007325	5.24477E-09	0.40195	0.291502	2.17E-05	0.279229	0.006366	0.01743	0.00984	0.10654	0.867	0.884	1	0.74	0.987	0.924	0.978	0.924
rs6793570	2.9452E-09	-0.036801	0.0062	-0.038086	0.007326	5.24618E-09	0.40184	0.291496	2.17E-05	0.279459	0.006365	0.01743	0.00984	0.106534	0.867	0.884	1	0.74	0.987	0.923	0.978	0.924
rs6777045	2.9455E-09	-0.036801	0.0062	-0.038087	0.007328	5.24609E-09	0.40147	0.291475	2.17E-05	0.279684	0.006364	0.01743	0.00984	0.106524	0.867	0.884	1	0.74	0.987	0.923	0.978	0.924
rs7482934	2.9471E-09	-0.063422	0.01069	-0.064089	0.012503	4.79874E-09	0.0851	0.057611	0.07281	0.007037	0.148177	2.4E-06	0.18312	0.668731	0.91	0.921	0.686	0.989	0.898	1	0.889	0.658
rs73162283	2.9498E-09	-0.060865	0.01026	-0.060865	0.010256	5.4928E-09	0.2729	0.322661	0.000256	0.095561	0.061922	0.00266	0.02422	0.154474	0.909	0.903	1	0.935	0.965	0.997	0.973	0.929
rs9855963	2.9516E-09	-0.036782	0.0062	-0.037983	0.007256	5.27681E-09	0.40174	0.290917	2.25E-05	0.279232	0.006333	0.01729	0.0101	0.106265	0.868	0.885	1	0.741	0.987	0.925	0.978	0.924
rs2253393	2.9528E-09	-0.031056	0.00523	-0.032179	0.006752	3.88519E-09	0.25414	0.92869	0.124916	0.000227	0.004557	3.1E-05	0.79469	0.214634	0.82	0.667	0.399	0.999	0.984	1	0.607	0.835
rs11047298	2.956E-09	-0.030363	0.00512	-0.030363	0.005117	5.50403E-09	0.64554	0.367567	0.000177	0.006217	0.301938	0.00424	0.00842	0.879365	0.842	0.878	1	0.993	0.879	0.993	0.978	0.806
rs2187689	2.9599E-09	0.0495792	0.00836	0.0506605	0.009493	5.51116E-09	0.00078	0.172285	0.002141	0.05911	0.035122	0.0008	0.32186	0.622051	0.982	0.923	0.998	0.962	0.974	0.999	0.902	0.866
rs72891308	2.9617E-09	-0.056818	0.00958	-0.056818	0.009575	5.51438E-09	0.30065	0.522843	0.007578	0.000103	0.088667	0.00171	0.09298	0.991124	0.892	0.863	0.988	0.999	0.949	0.998	0.944	0.797
rs9309900	2.965E-09	-0.03678	0.0062	-0.038024	0.007284	5.26467E-09	0.39265	0.286654	2.15E-05	0.278625	0.006156	0.01805	0.01092	0.102659	0.869	0.885	1	0.74	0.987	0.921	0.977	0.925
rs6777740	2.9651E-09	-0.03124	0.00527	-0.03124	0.005265	5.52051E-09	0.89173	0.468029	0.001114	0.007552	0.372268	0.00024	0.03361	0.571506	0.77	0.855	0.998	0.992	0.849	1	0.96	0.839
rs12386385	2.9758E-09	-0.030138	0.00508	-0.030138	0.00508	5.42389E-09	0.88251	0.319366	0.018226	0.021836	0.342071	5.6E-07	0.05997	0.781844	0.729	0.852	0.938	0.972	0.827	1	0.936	0.698
rs8731	2.9761E-09	-0.034744	0.00586	-0.034744	0.005856	5.54053E-09	0.25199	0.018694	0.000133	0.118147	0.125658	0.00252	0.14481	0.169687	0.911	0.959	1	0.92	0.945	0.997	0.938	0.925
rs736471	2.9773E-09	0.030082	0.00507	0.0314296	0.008861	4.67775E-09	0.70197	0.006265	0.027152	0.211244	0.00361	2.1E-06	0.0409	0.548242	0.641	0.949	0.818	0.689	0.986	1	0.939	0.586
rs35985209	2.9818E-09	-0.030237	0.0051	-0.030237	0.005097	5.55103E-09	0.03308	0.188759	0.000679	0.033796	0.084655	0.00361	0.10986	0.148781	0.958	0.927	0.999	0.98	0.961	0.996	0.951	0.935
rs111376508	2.9839E-09	-0.057271	0.00965	-0.057271	0.009654	5.55468E-09	0.81061	0.02172	0.007025	0.020643	0.080872	8.2E-05	0.17932	0.549411	0.837	0.955	0.99	0.984	0.955	1	0.925	0.865
rs1764052	2.9869E-09	0.0315916	0.00533	0.0315916	0.005325	5.51386E-09	0.47701	0.237133	0.049794	0.068482	0.009921	1E-05	0.04686	0.225516	0.866	0.9	0.858	0.938	0.985	1	0.959	0.904
rs79680674	2.9954E-09	0.0679704	0.01146	0.0764905	0.016068	5.57572E-09	0.92316	0.055766	0.00031	0.041051	0.002461	0.04763	0.00723	0.041636	0.821	0.944	0.999	0.967	0.993	0.852	0.984	0.952
rs13212936	2.9988E-09	-0.063625	0.01073	-0.063625	0.010726	5.58188E-09	0.40097	0.768689	0.000859	0.001791	0.015756	0.00607	0.22849	0.106148	0.882	0.776	0.999	0.997	0.981	0.989	0.911	0.931
rs9325	2.9996E-09	0.0299166	0.00504	0.0326405	0.008802	2.47999E-09	0.41082	0.332451	1.76E-06	0.03399	0.017684	0.11122	0.00055	0.49409	0.474	0.787	1	0.889	0.964	0.331	0.99	0.738
rs66492249	3.0027E-09	0.0324719	0.00547	0.0324719	0.005475	5.58902E-09	0.3789	0.146279	0.000198	0.0108	0.38122	0.00204	0.54994	0.038696	0.882	0.917	1	0.99	0.862	0.997	0.842	0.949
rs149825483	3.0029E-09	-0.073324	0.01236	-0.073324	0.012362	5.58923E-09	0.35906	0.821816	2.19E-06	0.094645	0.47414	0.00084	0.75828	0.089153	0.831	0.701	1	0.878	0.762	0.998	0.718	0.902
rs1550574	3.0037E-09	-0.029934	0.00505	-0.031767	0.007408	3.70772E-09	0.69927	0.491923	3.88E-06	0.02007	0.017161	0.08744	0.00186	0.565794	0.623	0.786	1	0.956	0.97	0.501	0.985	0.765
rs10867575	3.0088E-09	0.0324588	0.00547	0.0324588	0.005473	5.60003E-09	0.37267	0.143993	0.000222	0.01086	0.37799	0.00191	0.5514	0.037648	0.883	0.918	1	0.99	0.864	0.997	0.842	0.95
rs12409242	3.0094E-09	0.0384575	0.00648	0.0380512	0.009153	5.60105E-09	0.09255	0.143808	0.002316	8.97E-05	0.398868	0.00074	0.69898	0.060292	0.902	0.539	0.995	0.999	0.804	0.998	0.747	0.918
rs2019756	3.0178E-09	0.0305669	0.00515	0.0326516	0.007247	5.61639E-09	0.07708	0.034334	0.020861	0.059426	0.002397	5.8E-05	0.76547	0.067264	0.931	0.945	0.948	0.949	0.992	1	0.671	0.938
rs77963803	3.0186E-09	0.0679547	0.01146	0.0764733	0.016067	5.61787E-09	0.9228	0.055727	0.00031	0.041017	0.002483	0.04781	0.00724	0.041473	0.821	0.944	0.999	0.967	0.993	0.852	0.984	0.952
rs416223	3.0191E-09	-0.030921	0.00521	-0.030921	0.005214	5.61882E-09	0.93097	0.010502	0.007784	0.031358	0.007079	9.8E-05	0.46637	0.651793	0.812	0.96	0.987	0.975	0.986	1	0.857	0.843
rs9340969	3.0194E-09	0.0317192	0.00535	0.0322941	0.006811	5.61924E-09	0.77562	0.798309	0.019207	0.154673	0.002932	6.6E-06	0.41609	0.010115	0.804	0.802	0.938	0.844	0.989	1	0.843	0.96
rs11207526	3.0326E-09	0.0384496	0.00648	0.0380142	0.009072	5.64324E-09	0.09554	0.141357	0.00224	0.000106	0.395138	0.00069	0.7019	0.060452	0.9	0.537	0.995	0.999	0.805	0.998	0.746	0.918
rs592238	3.0335E-09	0.0299582	0.00505	0.0299582	0.005052	5.64499E-09	0.43338	0.814342	0.000309	0.005366	0.078821	0.00175	0.24787	0.328797	0.869	0.773	1	0.994	0.95	0.997	0.9	0.884
rs1419183	3.0408E-09	-0.054698	0.00922	-0.056621	0.01275	5.6582E-09	0.83294	0.924742	0.001137	0.018966	0.353697	0.00077	0.08506	0.000209	0.824	0.812	0.999	0.984	0.869	0.999	0.946	0.983

Table S3

rs77983625	3.0409E-09	0.0679385	0.01146	0.0764357	0.016056	5.65843E-09	0.92239	0.05592	0.000309	0.04104	0.002491	0.04791	0.00728	0.041437	0.821	0.943	0.999	0.967	0.993	0.851	0.984	0.952
rs1992417	3.0493E-09	-0.03347	0.00565	-0.037072	0.008819	5.67361E-09	0.00406	0.233779	0.006424	0.005627	0.928511	0.00094	0.00089	0.602758	0.967	0.898	0.989	0.994	0.687	0.998	0.99	0.844
rs7928017	3.0494E-09	-0.033889	0.00572	-0.033889	0.005716	5.55057E-09	0.33863	0.701035	7.53E-06	0.000287	0.444747	0.01832	0.53006	0.964205	0.834	0.773	1	0.999	0.769	0.906	0.774	0.722
rs1469049	3.0494E-09	-0.030585	0.00516	-0.030585	0.005159	5.67381E-09	0.35871	0.648288	0.000679	0.012435	0.105026	0.00025	0.99322	0.128639	0.87	0.831	0.999	0.987	0.936	1	0.718	0.914
rs1424552	3.0512E-09	-0.034736	0.00586	-0.044448	0.011592	5.52687E-10	0.80269	0.038381	0.01737	5.11E-06	3.64E-05	0.07629	0.31445	0.256814	0.526	0.895	0.41	1	0.999	0.271	0.599	0.724
rs10569707	3.0544E-09	-0.043647	0.00736	-0.043647	0.007362	5.68298E-09	0.11077	0.07508	0.003054	0.00655	0.017974	0.01349	0.0167	0.246418	0.942	0.948	0.997	0.995	0.984	0.978	0.98	0.924
rs10851630	3.0633E-09	0.0298855	0.00504	0.0324811	0.008883	2.61616E-09	0.34587	0.346667	1.97E-06	0.027154	0.021433	0.10978	0.00049	0.490616	0.454	0.784	1	0.914	0.959	0.334	0.99	0.739
rs8123896	3.0645E-09	0.0298471	0.00503	0.0261762	0.010581	4.62177E-09	0.32386	0.11791	0.004374	0.000114	0.437332	0.00041	6E-05	0.823816	0.497	0.414	0.979	0.999	0.709	0.998	0.992	0.604
rs112759562	3.0655E-09	-0.057218	0.00965	-0.057218	0.009652	5.70306E-09	0.8092	0.021605	0.007034	0.02078	0.081261	8.3E-05	0.18029	0.550062	0.837	0.955	0.99	0.984	0.955	1	0.925	0.865
rs11109645	3.0678E-09	0.0563169	0.0095	0.0563169	0.0095	5.70729E-09	0.74864	0.795574	0.000197	0.010636	0.124421	0.00303	0.07952	0.16714	0.84	0.835	1	0.991	0.939	0.996	0.948	0.918
rs12707230	3.0683E-09	-0.034755	0.00586	-0.044536	0.011723	4.72086E-10	0.81132	0.04122	0.020805	3.05E-06	4.1E-05	0.0734	0.33296	0.245822	0.475	0.883	0.314	1	0.999	0.215	0.534	0.701
rs35674836	3.0693E-09	-0.037511	0.00633	-0.043484	0.009944	5.71003E-09	0.12712	0.63249	0.006167	0.002328	0.011718	0.00988	0.07491	0.000654	0.931	0.775	0.991	0.997	0.985	0.982	0.956	0.983
rs12497206	3.0716E-09	-0.036754	0.0062	-0.038001	0.007287	5.49042E-09	0.39066	0.289056	2.29E-05	0.278204	0.006824	0.01755	0.00971	0.104198	0.87	0.885	1	0.743	0.986	0.924	0.978	0.925
rs140412108	3.0755E-09	-0.047177	0.00796	-0.047177	0.007959	5.7212E-09	0.1593	0.078046	0.003108	0.019486	0.034034	0.0015	0.17483	0.174811	0.931	0.945	0.997	0.988	0.977	0.998	0.937	0.931
rs72787027	3.076E-09	0.037278	0.00629	0.037278	0.006289	5.72226E-09	0.12829	0.071274	0.001576	0.029804	0.016732	0.00126	0.22348	0.67548	0.931	0.942	0.998	0.98	0.982	0.999	0.922	0.86
rs4938016	3.0766E-09	-0.031567	0.00533	-0.031567	0.005326	5.72326E-09	0.38072	0.087246	0.000733	0.00124	0.687815	0.00137	0.17226	0.058602	0.855	0.914	0.999	0.998	0.505	0.997	0.904	0.929
rs879358806	3.077E-09	-0.064487	0.01088	-0.065007	0.011317	5.7239E-09	0.03956	0.177658	0.013358	0.001496	0.020153	0.00107	0.87102	0.045766	0.949	0.915	0.976	0.998	0.979	0.999	0.717	0.949
rs78790189	3.0805E-09	0.0665501	0.01123	0.0626074	0.014991	4.13802E-09	0.32117	0.177291	5.68E-05	0.861014	0.991685	3.1E-06	0.07503	0.462239	0.745	0.795	1	0.124	0.367	1	0.876	0.7
rs10125922	3.0815E-09	0.0311864	0.00526	0.0311864	0.005262	5.73207E-09	0.72386	0.819185	0.005791	0.011048	0.175642	0.00012	0.07792	0.021472	0.838	0.78	0.991	0.99	0.921	1	0.948	0.956
rs78779846	3.0841E-09	0.0340931	0.00575	0.0348713	0.008493	5.64342E-09	0.01939	0.099728	0.000625	0.808228	0.4688	1.2E-05	0.18464	0.032444	0.933	0.887	0.998	0.231	0.716	1	0.867	0.928
rs62043045	3.0858E-09	0.0337621	0.0057	0.0319792	0.007419	4.85321E-09	0.42749	0.575238	1.65E-07	0.02064	0.594325	0.00826	0.77855	0.072433	0.586	0.771	1	0.964	0.691	0.954	0.682	0.894
rs73014622	3.0869E-09	0.0417146	0.00704	0.0417146	0.007038	5.74192E-09	0.24214	0.057847	0.0006	0.060862	0.113237	0.0004	0.3695	0.350239	0.907	0.941	0.999	0.958	0.945	0.999	0.887	0.894
rs61605444	3.0883E-09	-0.03862	0.00652	-0.03862	0.006516	5.74452E-09	0.23443	0.434613	0.008753	0.025878	0.172841	8.6E-05	0.01123	0.518917	0.91	0.884	0.988	0.981	0.928	1	0.979	0.872
rs546359738	3.0981E-09	-0.10047	0.01695	-0.10047	0.016953	5.76236E-09	0.84691	0.662146	0.006537	9.32E-05	0.017861	0.00099	0.42305	0.645167	0.754	0.824	0.988	0.999	0.975	0.998	0.846	0.823
rs12539172	3.0982E-09	-0.032934	0.00556	-0.032742	0.006211	5.76245E-09	0.53611	0.295934	5.44E-05	0.345658	0.017308	0.00039	0.0322	0.248577	0.796	0.566	1	0.605	0.969	0.999	0.948	0.853
rs7836928	3.1063E-09	0.0327339	0.00552	0.0327339	0.005524	5.77716E-09	0.4253	0.017231	0.00205	0.181675	0.013295	1E-04	0.31837	0.541206	0.873	0.954	0.997	0.853	0.981	1	0.886	0.856
rs739924	3.1068E-09	0.0335708	0.00567	0.0338794	0.006231	5.77803E-09	0.01019	0.020692	0.005133	0.027948	0.0756	0.00016	0.42716	0.759595	0.963	0.955	0.993	0.979	0.956	1	0.871	0.766
rs9913430	3.1087E-09	0.0335339	0.00566	0.0338777	0.006287	5.78155E-09	0.01	0.022715	0.005587	0.026098	0.07087	0.00015	0.43022	0.72683	0.963	0.953	0.992	0.98	0.957	1	0.87	0.759
rs10922919	3.116E-09	0.0301732	0.00509	0.0318317	0.007318	2.92368E-09	0.30539	0.091041	1.87E-06	0.001254	0.480858	0.13954	0.44367	0.021767	0.798	0.876	1	0.996	0.628	0.264	0.712	0.932
rs10501936	3.1163E-09	0.0387638	0.00654	0.0387638	0.006542	5.79546E-09	0.00854	0.979009	0.000282	0.243894	0.435708	0.00011	0.17343	0.072847	0.956	0.772	0.999	0.765	0.813	1	0.904	0.924
rs74344827	3.1247E-09	0.0385106	0.0065	0.0385106	0.0065	5.81063E-09	0.34845	0.053424	0.006636	0.155902	0.191801	1.1E-05	0.07864	0.33562	0.887	0.939	0.989	0.88	0.917	1	0.948	0.889
rs4925267	3.1271E-09	0.0298312	0.00503	0.0261254	0.010599	4.62411E-09	0.31849	0.117409	0.004423	0.000109	0.438535	0.00042	6.1E-05	0.823492	0.495	0.413	0.979	0.999	0.708	0.998	0.992	0.604
rs7619297	3.1294E-09	-0.036721	0.0062	-0.037922	0.007254	5.56047E-09	0.40174	0.287312	2.2E-05	0.279316	0.006219	0.0181	0.01097	0.104918	0.867	0.885	1	0.74	0.987	0.921	0.977	0.924
rs9366283	3.1299E-09	0.0312336	0.00527	0.0340138	0.008936	2.26744E-09	0.17136	0.891956	0.007669	2.33E-07	0.290268	0.01651	0.77282	0.014029	0.886	0.77	0.945	1	0.841	0.91	0.739	0.953
rs2151719	3.1317E-09	-0.040435	0.00683	-0.040435	0.006825	5.82338E-09	0.31999	0.930807	0.000454	0.042939	0.014626	0.00871	0.04229	0.005402	0.904	0.835	0.999	0.972	0.984	0.986	0.967	0.974
rs12540773	3.1325E-09	-0.034738	0.00586	-0.044406	0.011675	5.05497E-10	0.82931	0.041727	0.020327	3.12E-06	4.5E-05	0.07347	0.32511	0.248052	0.478	0.883	0.331	1	0.999	0.226	0.549	0.704
rs2036826	3.1348E-09	-0.031757	0.00536	-0.031757	0.00536	5.82903E-09	0.18549	0.073388	0.000769	0.057569	0.139923	0.00044	0.32804	0.22047	0.919	0.94	0.999	0.962	0.939	0.999	0.898	0.916
rs10756174	3.1373E-09	0.0352378	0.00595	0.0352378	0.005948	5.83359E-09	0.55952	0.41756	4.2E-05	0.002454	0.303332	0.01587	0.05453	0.074062	0.715	0.863	1	0.996	0.87	0.953	0.951	0.93
rs218987	3.1394E-09	0.0318243	0.00537	0.0380507	0.00849	4.1414E-09	0.20635	0.384409	0.000221	0.005803	0.086585	0.11502	0.00101	0.006587	0.892	0.857	0.999	0.992	0.939	0.499	0.992	0.97
rs6061697	3.1401E-09	0.0298278	0.00504	0.0261211	0.010599	4.64218E-09	0.31851	0.117442	0.004426	0.00011	0.439166	0.00042	6.1E-05	0.823379	0.495	0.413	0.979	0.999	0.708	0.998	0.992	0.604
rs11943259	3.1422E-09	-0.035035	0.00591	-0.035732	0.007359	5.84245E-09	0.99899	0.862313	0.00414	0.069924	0.323913	0.0001	0.00058	0.036819	0.794	0.813	0.993	0.942	0.87	1	0.991	0.947
rs57667614	3.1443E-09	0.0330892	0.00559	0.0364863	0.007364	5.84621E-09	0.11637	0.028803	0.01252	0.000413	0.030687	0.01006	0.47053	0.010072	0.938	0.958	0.981	0.999	0.978	0.983	0.881	0.972
rs4975317	3.1544E-09	0.0379117	0.0064	0.0345629	0.00891	5.86457E-09	0.34267	0.584148	3.93E-06	0.13186	0.986167	0.00019	0.0157	0.489197	0.767	0.547	1	0.749	0.468	0.999	0.943	0.5
rs11718098	3.1586E-09	0.0312905	0.00528	0.0310356	0.005511	5.79371E-09	0.79375	0.399166	0.003827	0.105154	0.8064	5.5E-07	0.02048	0.80084	0.676	0.812	0.986	0.856	0.628	1	0.952	0.736
rs35038882	3.1595E-09	0.0298424	0.00504	0.0259882	0.010869	3.38919E-09	0.31896	0.112596	0.005595	7.31E-05	0.441498	0.00043	4.3E-05	0.783767	0.489	0.403	0.97	0.999	0.701	0.998	0.993	0.589
rs7933896	3.1604E-09	0.0309693	0.00523	0.0309693	0.005229	5.87552E-09	0.80069	0.238735	0.000633	0.000103	0.817657	0.00495	0.02376	0.866948	0.79	0.876	0.999	0.999	0.683	0.987	0.961	0.773
rs62042367	3.1653E-09	0.0340381	0.00575	0.0324514	0.007354	5.27032E-09	0.39251	0.488543	2.6E-07	0.017651	0.519435	0.00796	0.85608	0.075005	0.583	0.791	1	0.97	0.725	0.959	0.667	0.896
rs12286721	3.1749E-09	-0.031033	0.00524	-0.031089	0.005421	5.90188E-09	0.58108	0.172709	0.000274	7.52E-05	0.990723	0.00768	0.0434	0.974765	0.808	0.881	0.999	0.999	0.595	0.973	0.945	0.729
rs11719869	3.1779E-09	0.0312855	0.00528	0.0310336	0.005508	5.82753E-09	0.79719	0.398908	0.003829	0.10585	0.807026	5.6E-07	0.02044	0.800293	0.676	0.812	0.986	0.855	0.628	1	0.953	0.736
rs76705967	3.1801E-09	0.038494	0.0065	0.038494	0.0065	5.91118E-09	0.35045	0.053572	0.006629	0.156983	0.193586	1.1E-05	0.07946	0.337545	0.886	0.939	0.989	0.879	0.916	1	0.948	0.889
rs10851631	3.1802E-09	0.0298543	0.00504	0.0324478	0.008877	2.71507E-09	0.34958	0.346771	1.97E-06	0.028474	0.021424	0.10968	0.0005	0.490921	0.456	0.784	1	0.909	0.959	0.337	0.99	0.739
rs13075175	3.1809E-09	0.0312845	0.00528	0.0310285	0.005512	5.83288E-09	0.7955	0.39891	0.003829	0.105774	0.807026	5.6E-07	0.02044	0.800294	0.676	0.812	0.986	0.855	0.628	1	0.953	0.736
rs12638703	3.1815E-09	0.0454908	0.00768	0.0457874	0.008306	5.91381E-09	0.83699	0.302424	5.21E-05	0.166721	0.280268	0.00361	0.00072	0.147028	0.814	0.885	1	0.86	0.883	0.993	0.991	0.915
rs6061699	3.183E-09	0.0298169	0.00504	0.0261074	0.010598	4.71014E-09	0.31839	0.117267	0.004439	0.00011	0.439314	0.00042	6.1E-05	0.822596	0.495	0.413	0.979	0.999	0.708	0.998	0.992	0.603
rs11100748	3.1863E-09	0.037893	0.0064	0.0345526	0.008888	5.92245E-09	0.34209	0.602204	4.05E-06	0.124134	0.970511	0.00019	0.01615	0.494476	0.768	0.552	1	0.762	0.453	0.999	0.943	0.502

Table S3

rs11481736	3.1898E-09	0.0298155	0.00504	0.0261079	0.010597	4.72448E-09	0.31848	0.117311	0.004438	0.00011	0.439017	0.00042	6.1E-05	0.822396	0.495	0.413	0.979	0.999	0.708	0.998	0.992	0.603
rs11468716	3.1933E-09	0.0298145	0.00504	0.0261073	0.010597	4.72946E-09	0.31848	0.117305	0.004442	0.00011	0.438955	0.00042	6.1E-05	0.822367	0.495	0.413	0.979	0.999	0.708	0.998	0.992	0.603
rs11707572	3.1944E-09	0.0312807	0.00528	0.0310218	0.005514	5.85622E-09	0.79542	0.398908	0.003829	0.106119	0.807028	5.6E-07	0.02044	0.800292	0.676	0.812	0.986	0.855	0.628	1	0.952	0.736
rs11720950	3.1947E-09	0.0312806	0.00528	0.0310217	0.005514	5.8567E-09	0.79548	0.398908	0.003829	0.106145	0.807026	5.6E-07	0.02044	0.800293	0.676	0.812	0.986	0.855	0.628	1	0.952	0.736
rs6773415	3.1948E-09	0.0312806	0.00528	0.0310217	0.005514	5.85686E-09	0.79548	0.398909	0.003829	0.10614	0.807028	5.6E-07	0.02044	0.800293	0.676	0.812	0.986	0.855	0.628	1	0.952	0.736
rs61909175	3.1975E-09	0.0348043	0.00588	0.0356091	0.009532	3.80438E-09	0.01886	0.215592	0.000404	0.852897	0.380433	4.8E-06	0.18823	0.030821	0.93	0.838	0.998	0.083	0.728	1	0.853	0.925
rs11863700	3.1983E-09	0.0337136	0.00569	0.0318429	0.007474	5.0698E-09	0.39124	0.585605	1.75E-07	0.02071	0.577453	0.00799	0.77871	0.074146	0.576	0.769	1	0.964	0.697	0.956	0.681	0.893
rs188637031	3.1991E-09	0.0668315	0.01129	0.0618346	0.016077	3.48716E-09	0.3708	0.221094	8.45E-05	0.932579	0.920411	1.2E-06	0.07722	0.34115	0.72	0.77	1	0.094	0.313	1	0.87	0.729
rs7495968	3.2001E-09	0.029859	0.00504	0.0324253	0.008694	2.72504E-09	0.40859	0.375325	1.72E-06	0.032365	0.020353	0.11115	0.00064	0.44936	0.478	0.777	1	0.897	0.961	0.338	0.99	0.753
rs10924535	3.2007E-09	-0.036808	0.00622	-0.036808	0.006217	5.94856E-09	0.16569	0.132692	0.000108	0.011139	0.052178	0.03868	0.04524	0.16945	0.925	0.93	1	0.991	0.968	0.891	0.965	0.926
rs7870385	3.2014E-09	-0.037895	0.0064	-0.037895	0.0064	5.94995E-09	0.11552	0.433769	0.002598	0.013559	0.018718	0.00778	0.06164	0.012775	0.94	0.9	0.997	0.991	0.984	0.99	0.964	0.971
rs572903	3.2041E-09	0.0299021	0.00505	0.0299021	0.00505	5.95487E-09	0.42121	0.831361	0.000321	0.005459	0.0839	0.00168	0.2554	0.339188	0.87	0.775	1	0.994	0.948	0.998	0.898	0.882
rs10809395	3.2194E-09	-0.039921	0.00674	-0.042098	0.00852	5.98254E-09	0.13357	0.758824	0.000709	0.0647	0.026505	0.00452	0.03738	0.002261	0.929	0.793	0.999	0.957	0.978	0.994	0.968	0.978
rs4435128	3.2221E-09	-0.030179	0.0051	-0.030179	0.005098	5.98751E-09	0.03324	0.176415	0.000703	0.034084	0.063487	0.0039	0.16091	0.12905	0.957	0.928	0.999	0.98	0.967	0.995	0.94	0.939
rs4646636	3.2235E-09	0.0298449	0.00504	0.0321131	0.00823	3.59576E-09	0.55715	0.42584	3.12E-06	0.030298	0.029886	0.08406	0.00044	0.564779	0.578	0.792	1	0.927	0.955	0.501	0.991	0.756
rs12194361	3.2279E-09	0.0311128	0.00526	0.0320102	0.006632	4.52952E-09	0.25697	0.938844	0.116516	0.000534	0.004387	1.9E-05	0.85786	0.195493	0.822	0.67	0.433	0.998	0.984	1	0.594	0.843
rs7230034	3.2328E-09	0.0371821	0.00628	0.0371821	0.006281	6.00698E-09	0.10368	0.542944	0.00147	0.121029	0.694626	1.5E-06	0.39955	0.130216	0.888	0.641	0.996	0.843	0.678	1	0.808	0.883
rs9861605	3.2404E-09	0.0312685	0.00528	0.0310174	0.005507	5.94065E-09	0.79511	0.399266	0.003854	0.105711	0.807382	5.6E-07	0.0205	0.800816	0.676	0.812	0.985	0.856	0.628	1	0.952	0.736
rs188148895	3.2414E-09	0.0384765	0.0065	0.0384765	0.006501	6.02258E-09	0.3436	0.053683	0.006546	0.163253	0.191474	1.1E-05	0.07948	0.336159	0.887	0.939	0.989	0.873	0.917	1	0.947	0.889
rs10464004	3.2426E-09	0.0318357	0.00538	0.0318357	0.005379	6.01407E-09	0.6777	0.690235	0.031222	0.030095	0.024998	2.7E-06	0.14007	0.630978	0.825	0.824	0.912	0.97	0.971	1	0.92	0.828
rs62413771	3.2474E-09	-0.034993	0.00591	-0.035678	0.00734	6.03343E-09	0.99939	0.87504	0.004314	0.069562	0.318496	0.0001	0.00061	0.036917	0.794	0.812	0.993	0.942	0.872	1	0.99	0.947
rs10838768	3.2654E-09	0.0309102	0.00522	0.0309102	0.005223	6.06614E-09	0.6403	0.213772	0.000687	8.3E-05	0.815567	0.00559	0.02785	0.947362	0.815	0.882	0.999	0.999	0.686	0.985	0.959	0.763
rs495596	3.2666E-09	0.0314439	0.00531	0.0314439	0.005314	6.06822E-09	0.32983	0.621925	4.01E-06	0.079705	0.386549	0.01241	0.03337	0.079764	0.884	0.847	1	0.934	0.855	0.969	0.963	0.933
rs193047490	3.2691E-09	-0.098622	0.01667	-0.102068	0.022796	6.07281E-09	0.02039	0.051662	0.002006	0.002443	0.838477	0.00118	0.01162	0.904488	0.947	0.929	0.997	0.996	0.555	0.998	0.973	0.734
rs3852782	3.2701E-09	0.0301085	0.00509	0.0301085	0.005088	6.0746E-09	0.67464	0.893488	0.002025	0.005827	0.430833	1E-05	0.45945	0.861025	0.783	0.718	0.995	0.99	0.786	1	0.801	0.748
rs11751659	3.2706E-09	-0.037071	0.00626	-0.037071	0.006265	6.07555E-09	0.54376	0.720697	0.000453	0.01111	0.209359	3E-05	0.66567	0.779896	0.639	0.768	0.999	0.983	0.863	1	0.738	0.752
rs6061698	3.2792E-09	0.029792	0.00504	0.0261303	0.010571	5.00452E-09	0.32521	0.117435	0.004423	0.00012	0.439132	0.00042	6.1E-05	0.823369	0.499	0.414	0.979	0.999	0.709	0.998	0.992	0.605
rs16914255	3.2798E-09	0.0684994	0.01158	0.0684994	0.011577	6.09225E-09	0.95568	0.169039	0.001564	0.000714	0.024959	0.00258	0.82096	0.280108	0.801	0.906	0.998	0.998	0.973	0.996	0.776	0.89
rs36100279	3.2843E-09	0.029883	0.00505	0.029883	0.005051	6.10028E-09	0.41739	0.831168	0.00032	0.005683	0.083659	0.00169	0.25487	0.33886	0.871	0.775	1	0.994	0.949	0.997	0.899	0.883
rs12504375	3.2849E-09	0.037871	0.0064	0.0345088	0.008915	6.10139E-09	0.34464	0.583847	3.96E-06	0.133721	0.986531	0.00019	0.01583	0.488032	0.766	0.546	1	0.746	0.468	0.999	0.943	0.499
rs113017561	3.2867E-09	0.0386217	0.00653	0.0386217	0.006528	6.10468E-09	0.67843	0.891027	0.000416	0.145984	0.016552	0.00015	0.05968	0.736753	0.817	0.757	0.999	0.862	0.975	1	0.944	0.804
rs11222015	3.2879E-09	0.0387232	0.00654	0.0386601	0.006834	6.10679E-09	0.00832	0.996604	0.000281	0.261606	0.44311	0.0001	0.16966	0.06913	0.956	0.764	0.999	0.744	0.806	1	0.903	0.923
rs138194964	3.2885E-09	0.0763733	0.01291	0.0762009	0.018546	6.10797E-09	0.40467	0.90251	0.000373	0.620777	0.034101	5.1E-05	0.00095	0.899722	0.783	0.648	0.999	0.318	0.946	1	0.986	0.629
rs76111238	3.2931E-09	0.0677998	0.01146	0.0759132	0.015888	6.11635E-09	0.93376	0.055978	0.000333	0.042578	0.002627	0.04537	0.00719	0.044453	0.822	0.944	0.999	0.967	0.993	0.865	0.984	0.951
rs10924534	3.2942E-09	-0.036733	0.00621	-0.036733	0.006209	6.11825E-09	0.16067	0.153546	0.000107	0.012738	0.043283	0.03905	0.04339	0.167766	0.925	0.926	1	0.99	0.971	0.89	0.966	0.926
rs112782564	3.295E-09	0.0372117	0.00629	0.0372117	0.00629	6.1197E-09	0.1499	0.070361	0.001609	0.029071	0.017633	0.00125	0.2224	0.673359	0.927	0.942	0.998	0.981	0.982	0.999	0.922	0.86
rs191203690	3.2969E-09	0.0677975	0.01146	0.0759268	0.015897	6.12313E-09	0.93345	0.055901	0.000331	0.042698	0.002639	0.04552	0.0072	0.044139	0.822	0.944	0.999	0.966	0.993	0.864	0.984	0.952
rs1263556	3.2998E-09	0.0472409	0.00799	0.0472409	0.007985	6.12845E-09	0.04746	0.531906	0.000883	0.070143	0.007378	0.00143	0.55964	0.054634	0.947	0.874	0.999	0.951	0.987	0.998	0.852	0.948
rs78836473	3.3008E-09	0.0677959	0.01146	0.0759089	0.015888	6.1303E-09	0.93421	0.056054	0.000335	0.0427	0.002608	0.04524	0.00718	0.044656	0.822	0.944	0.999	0.967	0.993	0.865	0.984	0.951
rs36035825	3.3024E-09	-0.033467	0.00566	-0.033467	0.005657	6.13313E-09	0.51092	0.036385	7.11E-06	0.323804	0.053678	0.00588	0.06929	0.410438	0.846	0.939	1	0.702	0.957	0.982	0.944	0.86
rs12329315	3.3036E-09	-0.030127	0.00509	-0.030127	0.005093	6.1353E-09	0.40782	0.197043	0.009563	0.010329	0.131244	7.7E-05	0.70037	0.025065	0.882	0.911	0.985	0.991	0.937	1	0.816	0.956
rs149973073	3.3109E-09	0.0667689	0.01129	0.0617189	0.016154	3.54829E-09	0.36961	0.221094	8.45E-05	0.944499	0.920413	1.2E-06	0.07722	0.341149	0.72	0.77	1	0.091	0.313	1	0.87	0.728
rs12715402	3.3149E-09	0.0314805	0.00532	0.0314805	0.005322	6.15582E-09	0.68153	0.32881	0.004147	0.060602	0.867383	1.2E-06	0.02247	0.683275	0.669	0.835	0.987	0.921	0.623	1	0.954	0.77
rs4771306	3.3207E-09	0.030917	0.00523	0.0306225	0.006464	5.31645E-09	0.74842	0.703975	5.88E-07	0.109516	0.085193	0.01562	0.00807	0.965987	0.699	0.786	1	0.865	0.927	0.924	0.972	0.737
rs6771411	3.3278E-09	0.0312456	0.00528	0.0309704	0.005528	6.08593E-09	0.80053	0.39891	0.003829	0.110263	0.807026	5.6E-07	0.02044	0.800294	0.676	0.811	0.985	0.849	0.627	1	0.952	0.735
rs4666012	3.332E-09	-0.033458	0.00566	-0.033458	0.005657	6.18689E-09	0.51112	0.036393	7.13E-06	0.324009	0.05374	0.00591	0.06928	0.410448	0.845	0.939	1	0.702	0.957	0.982	0.944	0.86
rs11039419	3.3378E-09	0.0308912	0.00522	0.0308912	0.005223	6.19745E-09	0.74861	0.230133	0.000717	9.22E-05	0.800418	0.00474	0.02827	0.930887	0.798	0.878	0.999	0.999	0.69	0.988	0.958	0.764
rs1551063	3.3426E-09	0.0314673	0.00532	0.0314673	0.005321	6.20607E-09	0.67592	0.33825	0.004108	0.058662	0.881427	1.2E-06	0.02325	0.680926	0.666	0.832	0.987	0.923	0.616	1	0.953	0.769
rs142387254	3.3452E-09	0.0668019	0.0113	0.0618683	0.016193	3.66711E-09	0.37053	0.213719	8.09E-05	0.933376	0.901752	1.5E-06	0.07035	0.332068	0.721	0.774	1	0.093	0.307	1	0.877	0.733
rs1036810	3.3497E-09	-0.030013	0.00508	-0.030013	0.005075	6.21887E-09	0.15531	0.904306	0.001072	0.081474	0.802325	1.3E-05	0.03337	0.537308	0.887	0.737	0.998	0.91	0.677	1	0.952	0.817
rs62084689	3.3502E-09	0.0349604	0.00591	0.0350945	0.009194	6.21985E-09	0.40003	0.021551	0.000313	0.158687	0.739092	0.00011	0.15576	0.003217	0.627	0.935	0.999	0.82	0.687	1	0.899	0.966
rs56262554	3.3508E-09	0.0452104	0.00765	0.0452104	0.007645	6.22089E-09	0.47162	0.815585	0.000198	0.002381	0.106975	0.02865	0.05997	0.01415	0.875	0.835	1	0.997	0.946	0.925	0.957	0.963
rs4658173	3.356E-09	0.030254	0.00512	0.0322618	0.00757	2.94585E-09	0.25682	0.092716	2.06E-06	0.001241	0.46196	0.15626	0.44603	0.017277	0.812	0.875	1	0.996	0.631	0.225	0.707	0.938
rs12203465	3.3626E-09	0.0313664	0.0053	0.0313664	0.005305	6.24234E-09	0.74523	0.772166	0.000614	0.028706	0.011432	0.00049	0.10565	0.715394	0.747	0.817	0.999	0.974	0.981	0.999	0.932	0.819
rs421446	3.3641E-09	0.0331239	0.0056	0.0331536	0.006955	6.24513E-09	0.88935	0.397051	0.000369	0.766388	0.003747	6.2E-05	0.02847	0.353373	0.649	0.795	0.999	0.245	0.985	1	0.946	0.805

Table S3

rs200605707	3.367E-09	-0.070079	0.01185	-0.070079	0.011852	6.25025E-09	0.22699	0.567495	6.65E-06	0.010177	0.455251	0.00445	0.88653	0.133498	0.876	0.82	1	0.987	0.797	0.989	0.658	0.901
rs117567100	3.3719E-09	-0.073132	0.01237	-0.073132	0.012369	6.25922E-09	0.37272	0.829115	2.49E-06	0.090289	0.467101	0.00092	0.75902	0.089611	0.831	0.705	1	0.886	0.768	0.997	0.721	0.902
rs67640609	3.373E-09	-0.030446	0.00515	-0.029766	0.008047	2.45724E-09	0.93349	0.045457	0.010936	0.819943	0.045473	6.6E-08	0.09434	0.567073	0.61	0.892	0.871	0.181	0.929	1	0.885	0.715
rs4788464	3.3769E-09	0.0298741	0.00505	0.0288373	0.005669	6.26831E-09	0.88007	0.343319	0.003173	0.007429	0.678311	5.5E-07	0.50934	0.644793	0.635	0.518	0.986	0.983	0.615	1	0.72	0.717
rs11109646	3.3787E-09	0.0549681	0.0093	0.0549681	0.009298	6.27154E-09	0.75356	0.897307	0.000355	0.003461	0.209947	0.00256	0.09257	0.123853	0.83	0.787	0.999	0.996	0.908	0.996	0.941	0.921
rs2117135	3.3864E-09	0.0301922	0.00511	0.0307704	0.005471	6.28549E-09	0.57223	0.640681	0.025427	0.000519	0.130912	0.00202	0.00247	0.05083	0.868	0.861	0.951	0.999	0.941	0.997	0.988	0.95
rs6504674	3.3869E-09	0.0334781	0.00566	0.0338507	0.006331	6.28638E-09	0.00998	0.021872	0.005919	0.028192	0.070514	0.00015	0.4212	0.734962	0.963	0.954	0.992	0.979	0.958	1	0.872	0.761
rs12145214	3.388E-09	-0.043516	0.00736	-0.043516	0.007361	6.28836E-09	0.1107	0.074867	0.003232	0.006582	0.018148	0.01393	0.01655	0.245245	0.942	0.948	0.997	0.995	0.984	0.977	0.98	0.924
rs1778511	3.3882E-09	0.0546978	0.00925	0.0568383	0.013253	6.28883E-09	0.85692	0.941494	0.00109	0.02098	0.379367	0.00078	0.0809	0.000165	0.819	0.808	0.999	0.982	0.86	0.999	0.946	0.983
rs1579744	3.3908E-09	-0.029803	0.00504	-0.032344	0.008432	3.42018E-09	0.59582	0.434684	2.93E-06	0.036283	0.021884	0.09205	0.00036	0.59519	0.57	0.78	1	0.903	0.961	0.451	0.991	0.737
rs6780701	3.3909E-09	-0.036653	0.0062	-0.037746	0.00716	6.08087E-09	0.3928	0.289388	2.48E-05	0.275367	0.0067	0.01803	0.01056	0.105784	0.87	0.885	1	0.749	0.986	0.924	0.977	0.925
rs3796129	3.395E-09	0.0314788	0.00533	0.0314788	0.005325	6.30114E-09	0.30032	0.681234	0.002766	0.22189	0.276081	1.4E-05	0.02267	0.02642	0.871	0.719	0.994	0.785	0.867	1	0.964	0.945
rs9682646	3.3971E-09	0.0314525	0.00532	0.0314525	0.005321	6.30496E-09	0.67559	0.338242	0.00411	0.059431	0.881397	1.2E-06	0.02325	0.680912	0.666	0.832	0.987	0.922	0.616	1	0.953	0.769
rs12614586	3.3997E-09	0.0301932	0.00511	0.0307401	0.005452	6.30962E-09	0.56957	0.638661	0.02546	0.00052	0.13143	0.00202	0.00251	0.05098	0.869	0.861	0.951	0.999	0.941	0.997	0.988	0.949
rs138455282	3.4002E-09	0.0842289	0.01425	0.0842289	0.01425	6.31058E-09	0.46279	0.508612	0.000784	0.001373	0.057273	0.0143	0.01373	0.548131	0.88	0.874	0.999	0.998	0.964	0.974	0.976	0.868
rs74354868	3.4034E-09	0.0349711	0.00592	0.0349181	0.008877	6.31626E-09	0.41253	0.020195	0.000306	0.159429	0.694741	0.0001	0.17685	0.004779	0.634	0.937	0.999	0.822	0.706	1	0.893	0.963
rs78000202	3.4045E-09	0.0663822	0.01123	0.0624519	0.014959	4.5856E-09	0.32391	0.178363	5.89E-05	0.860921	0.995915	3.2E-06	0.07575	0.468791	0.744	0.794	1	0.125	0.366	1	0.875	0.698
rs4925190	3.4057E-09	0.0297612	0.00504	0.0261405	0.010546	5.33774E-09	0.33181	0.117387	0.004434	0.000129	0.439163	0.00042	6.1E-05	0.823156	0.502	0.416	0.979	0.999	0.71	0.998	0.992	0.606
rs9340954	3.4104E-09	0.0316095	0.00535	0.0321792	0.006793	6.32906E-09	0.77463	0.787299	0.019986	0.155096	0.002932	7E-06	0.42727	0.010421	0.803	0.803	0.936	0.844	0.989	1	0.84	0.959
rs9401713	3.4121E-09	0.0313566	0.00531	0.0313566	0.005305	6.33215E-09	0.69205	0.769019	0.000616	0.027431	0.011527	0.00048	0.10544	0.715758	0.737	0.816	0.999	0.975	0.981	0.999	0.932	0.818
rs11966348	3.4145E-09	0.031608	0.00535	0.0321782	0.006794	6.3364E-09	0.77515	0.786338	0.019987	0.155109	0.002925	7E-06	0.42798	0.010425	0.803	0.803	0.936	0.844	0.989	1	0.84	0.959
rs6756642	3.4158E-09	0.03021	0.00511	0.0306877	0.00541	6.33875E-09	0.56127	0.6287	0.026195	0.000517	0.130544	0.00197	0.00266	0.050978	0.87	0.862	0.949	0.999	0.941	0.997	0.988	0.949
rs13099991	3.4194E-09	0.0314478	0.00532	0.0314478	0.005321	6.34522E-09	0.6713	0.338376	0.004122	0.059024	0.881667	1.2E-06	0.02327	0.681117	0.665	0.832	0.987	0.922	0.616	1	0.953	0.768
rs16988500	3.42E-09	0.0702881	0.01189	0.0800731	0.016976	6.34636E-09	0.93972	0.004738	0.003576	0.025107	0.027659	0.01042	0.0039	0.042579	0.845	0.976	0.996	0.985	0.979	0.985	0.988	0.958
rs7533352	3.4214E-09	0.0308478	0.00522	0.0320954	0.008576	6.34895E-09	0.20545	0.043604	0.000387	0.00017	0.029464	0.02042	0.19215	0.057552	0.883	0.467	0.999	0.999	0.966	0.916	0.895	0.928
rs13100959	3.4307E-09	0.0314439	0.00532	0.0314439	0.005321	6.3657E-09	0.67217	0.338241	0.00411	0.059771	0.881397	1.2E-06	0.02325	0.680912	0.665	0.832	0.987	0.921	0.616	1	0.953	0.768
rs3863060	3.4311E-09	0.0314438	0.00532	0.0314438	0.005321	6.36646E-09	0.67217	0.338242	0.00411	0.059773	0.881397	1.2E-06	0.02325	0.680912	0.665	0.832	0.987	0.921	0.616	1	0.953	0.768
rs9845057	3.4311E-09	0.0314438	0.00532	0.0314438	0.005321	6.36646E-09	0.67217	0.338242	0.00411	0.059773	0.881397	1.2E-06	0.02325	0.680912	0.665	0.832	0.987	0.921	0.616	1	0.953	0.768
rs3906955	3.4324E-09	0.0314435	0.00532	0.0314435	0.005321	6.36881E-09	0.67212	0.338242	0.00411	0.059791	0.881397	1.2E-06	0.02325	0.680912	0.665	0.832	0.987	0.921	0.616	1	0.953	0.768
rs6769283	3.4324E-09	0.0314435	0.00532	0.0314435	0.005321	6.36881E-09	0.67212	0.338242	0.00411	0.059791	0.881397	1.2E-06	0.02325	0.680912	0.665	0.832	0.987	0.921	0.616	1	0.953	0.768
rs6769288	3.4324E-09	0.0314435	0.00532	0.0314435	0.005321	6.36881E-09	0.67212	0.338242	0.00411	0.059791	0.881397	1.2E-06	0.02325	0.680912	0.665	0.832	0.987	0.921	0.616	1	0.953	0.768
rs882450	3.4324E-09	0.0314435	0.00532	0.0314435	0.005321	6.36881E-09	0.67212	0.338242	0.00411	0.059791	0.881397	1.2E-06	0.02325	0.680912	0.665	0.832	0.987	0.921	0.616	1	0.953	0.768
rs13013484	3.4355E-09	0.0317237	0.00537	0.0317237	0.005368	6.37451E-09	0.20922	0.026666	1.35E-05	0.250968	0.199775	0.00281	0.22778	0.232583	0.9	0.946	1	0.786	0.906	0.994	0.902	0.898
rs2240218	3.4356E-09	0.0334615	0.00566	0.0338372	0.006335	6.37468E-09	0.00999	0.021842	0.005967	0.028203	0.070468	0.00015	0.42217	0.734659	0.963	0.954	0.991	0.979	0.958	1	0.872	0.761
rs1568515	3.4378E-09	0.0314424	0.00532	0.0314424	0.005321	6.37858E-09	0.67227	0.338252	0.004111	0.059868	0.881415	1.2E-06	0.02325	0.680924	0.665	0.832	0.987	0.921	0.616	1	0.953	0.768
rs13376689	3.4379E-09	-0.0435	0.00736	-0.0435	0.007361	6.37888E-09	0.11005	0.074867	0.003233	0.006711	0.01815	0.01393	0.01655	0.245245	0.942	0.948	0.997	0.995	0.984	0.978	0.98	0.924
rs7766964	3.4392E-09	0.0494326	0.00837	0.0508227	0.009774	6.38116E-09	0.00069	0.171098	0.002849	0.051894	0.034557	0.00077	0.35113	0.620491	0.982	0.923	0.997	0.967	0.974	0.999	0.897	0.866
rs113347350	3.4393E-09	-0.033366	0.00565	-0.036863	0.008747	6.38127E-09	0.0046	0.233252	0.006963	0.005088	0.933014	0.00098	0.00095	0.609172	0.966	0.898	0.988	0.994	0.686	0.998	0.99	0.843
rs2217016	3.4423E-09	0.0373232	0.00632	0.0339124	0.008779	6.38671E-09	0.24066	0.604764	3.15E-06	0.201196	0.879678	0.00013	0.02535	0.685436	0.777	0.521	1	0.616	0.388	0.999	0.925	0.518
rs35299873	3.449E-09	0.0314394	0.00532	0.0314394	0.005321	6.3989E-09	0.67611	0.338387	0.004123	0.059737	0.881686	1.2E-06	0.02327	0.681135	0.666	0.832	0.987	0.922	0.616	1	0.953	0.769
rs12052509	3.4495E-09	0.0307977	0.00521	0.0317803	0.006239	6.39978E-09	0.16236	0.02	0.005677	0.035905	0.032635	0.00038	0.9459	0.01014	0.921	0.957	0.992	0.975	0.974	1	0.745	0.968
rs75011360	3.4499E-09	0.0415794	0.00704	0.0415794	0.007037	6.40052E-09	0.80168	0.057322	0.002147	0.046794	0.381972	1.9E-05	0.05043	0.586732	0.798	0.923	0.996	0.954	0.835	1	0.947	0.689
rs13100919	3.4542E-09	0.031438	0.00532	0.031438	0.005321	6.4083E-09	0.67585	0.338379	0.00412	0.059921	0.88169	1.2E-06	0.02327	0.681131	0.666	0.832	0.987	0.921	0.616	1	0.953	0.768
rs1480567	3.4542E-09	0.0336572	0.0057	0.0318888	0.00741	5.48551E-09	0.40234	0.580595	1.91E-07	0.019596	0.573734	0.00854	0.78463	0.075718	0.58	0.77	1	0.966	0.699	0.953	0.681	0.893
rs3130270	3.4581E-09	0.0297673	0.00504	0.0292315	0.005568	6.41542E-09	0.28575	0.705918	0.0005	0.000225	0.841784	0.00018	0.74769	0.25151	0.5	0.718	0.998	0.999	0.559	0.999	0.653	0.815
rs10454570	3.4585E-09	-0.040156	0.0068	-0.040156	0.006797	6.41621E-09	0.91428	0.14664	2.13E-06	0.160975	0.438147	0.00265	0.04643	0.554106	0.741	0.891	1	0.828	0.8	0.992	0.946	0.817
rs34810080	3.4591E-09	-0.040156	0.0068	-0.040156	0.006797	6.41727E-09	0.91428	0.146643	2.13E-06	0.160985	0.438289	0.00265	0.04643	0.554108	0.741	0.891	1	0.828	0.8	0.992	0.946	0.817
rs9591766	3.4591E-09	-0.040156	0.0068	-0.040156	0.006797	6.41728E-09	0.91427	0.146643	2.13E-06	0.160985	0.438289	0.00265	0.04643	0.554108	0.741	0.891	1	0.828	0.8	0.992	0.946	0.817
rs6721013	3.4607E-09	-0.032714	0.00554	-0.032714	0.005537	6.42019E-09	0.28033	0.598123	0.000117	0.357968	0.284793	0.00015	0.00425	0.792778	0.85	0.794	1	0.611	0.834	1	0.977	0.755
rs6816875	3.4612E-09	0.0373177	0.00632	0.0339983	0.008713	6.42111E-09	0.24208	0.603321	3.38E-06	0.199577	0.896296	0.00012	0.02563	0.681076	0.778	0.523	1	0.622	0.396	0.999	0.925	0.519
rs9867464	3.4613E-09	0.0314362	0.00532	0.0314362	0.005321	6.42128E-09	0.67579	0.338389	0.004122	0.059943	0.881696	1.2E-06	0.02327	0.681141	0.666	0.832	0.987	0.921	0.616	1	0.953	0.768
rs9311360	3.4614E-09	0.0314361	0.00532	0.0314361	0.005321	6.42137E-09	0.6758	0.338376	0.004122	0.059939	0.881668	1.2E-06	0.02327	0.681119	0.666	0.832	0.987	0.921	0.616	1	0.953	0.768
rs9833370	3.4617E-09	0.0314361	0.00532	0.0314361	0.005321	6.42197E-09	0.6758	0.338379	0.004122	0.059939	0.881672	1.2E-06	0.02327	0.681125	0.666	0.832	0.987	0.921	0.616	1	0.953	0.768
rs10212298	3.4671E-09	0.0314343	0.00532	0.0314343	0.005321	6.43169E-09	0.67558	0.338375	0.004124	0.059853	0.881957	1.2E-06	0.02329	0.681363	0.666	0.832	0.987	0.921	0.616	1	0.953	0.768
rs12124651	3.4678E-09	-0.043489	0.00736	-0.043489	0.007361	6.43293E-09	0.11075	0.07511	0.003273	0.006552	0.018228	0.01399	0.01669	0.24526	0.942	0.948	0.997	0.995	0.984	0.977	0.98	0.924

Table S3

rs12621980	3.4679E-09	-0.032682	0.00553	-0.032682	0.005532	6.43323E-09	0.29915	0.518046	0.000152	0.323397	0.282122	0.00014	0.00513	0.765093	0.854	0.816	1	0.659	0.845	1	0.977	0.771
rs1678509	3.4684E-09	-0.029968	0.00507	-0.029968	0.005073	6.43401E-09	0.98055	0.162777	0.000658	0.024028	0.136482	0.00104	0.03037	0.433546	0.815	0.917	0.999	0.982	0.937	0.999	0.967	0.88
rs1456185	3.4685E-09	0.0304197	0.00515	0.0304197	0.005149	6.4343E-09	0.15498	0.283257	0.000305	0.018775	0.744228	0.00082	0.1408	0.164438	0.912	0.891	1	0.984	0.752	0.999	0.927	0.913
rs11604605	3.4686E-09	0.0334269	0.00566	0.0339667	0.00899	5.01785E-09	0.77645	0.028194	0.001575	0.902667	0.013929	4.1E-06	0.39447	0.040423	0.606	0.916	0.992	0.164	0.97	1	0.764	0.914
rs189021033	3.4717E-09	0.0667342	0.0113	0.061751	0.016269	3.74149E-09	0.36935	0.213747	8.08E-05	0.945522	0.901678	1.5E-06	0.07037	0.3321	0.721	0.774	1	0.09	0.306	1	0.877	0.732
rs2009644	3.4727E-09	0.0314369	0.00532	0.0314369	0.005322	6.44183E-09	0.6703	0.337649	0.004091	0.060361	0.882839	1.2E-06	0.02317	0.681782	0.664	0.832	0.987	0.921	0.615	1	0.953	0.768
rs62084694	3.474E-09	0.0349514	0.00592	0.0348976	0.008883	6.44425E-09	0.41348	0.020195	0.000306	0.162095	0.694741	0.0001	0.17685	0.004779	0.633	0.937	0.999	0.819	0.705	1	0.892	0.962
rs62084703	3.474E-09	0.0349514	0.00592	0.0348976	0.008883	6.44425E-09	0.41348	0.020195	0.000306	0.162095	0.694741	0.0001	0.17685	0.004779	0.633	0.937	0.999	0.819	0.705	1	0.892	0.962
rs13060513	3.4745E-09	0.0314329	0.00532	0.0314329	0.005321	6.4451E-09	0.6716	0.338356	0.00412	0.060006	0.881623	1.2E-06	0.02326	0.681086	0.665	0.832	0.987	0.921	0.616	1	0.953	0.768
rs11707533	3.4797E-09	0.0314316	0.00532	0.0314316	0.005321	6.45448E-09	0.67165	0.338376	0.004122	0.060009	0.881662	1.2E-06	0.02327	0.681115	0.665	0.832	0.987	0.921	0.616	1	0.953	0.768
rs9834025	3.4824E-09	0.0298945	0.00506	0.0299385	0.00536	6.45953E-09	0.33963	0.129986	2.42E-05	0.027132	0.41659	0.00636	0.02551	0.072442	0.662	0.911	1	0.975	0.834	0.986	0.965	0.93
rs11710959	3.4864E-09	0.0314285	0.00532	0.0314285	0.005321	6.46673E-09	0.69973	0.33928	0.004292	0.060797	0.886865	1.1E-06	0.0236	0.685341	0.67	0.832	0.986	0.92	0.614	1	0.952	0.768
rs349688	3.4872E-09	0.0305828	0.00518	0.0300109	0.005714	4.82807E-09	0.71341	0.168333	0.002164	0.621242	0.390448	2.2E-07	0.10428	0.44223	0.709	0.837	0.987	0.319	0.723	1	0.883	0.764
rs916978	3.4879E-09	0.0334461	0.00566	0.0338208	0.006335	6.46943E-09	0.00998	0.021941	0.005991	0.028271	0.070777	0.00015	0.42281	0.733853	0.963	0.954	0.991	0.979	0.957	1	0.872	0.761
rs4646629	3.4948E-09	0.0297821	0.00504	0.0325463	0.008863	2.82639E-09	0.38188	0.334938	1.99E-06	0.02948	0.020022	0.12027	0.00052	0.473588	0.458	0.784	1	0.904	0.961	0.303	0.99	0.741
rs188468712	3.4982E-09	0.06672	0.0113	0.0617341	0.016272	3.76604E-09	0.36994	0.213763	8.1E-05	0.94658	0.901876	1.5E-06	0.07039	0.332148	0.721	0.774	1	0.09	0.306	1	0.877	0.732
rs1490350	3.4996E-09	0.0313312	0.0053	0.0313312	0.005305	6.49054E-09	0.68791	0.773163	0.000609	0.02794	0.011357	0.00049	0.10634	0.714422	0.736	0.815	0.999	0.975	0.981	0.999	0.931	0.818
rs11124568	3.5023E-09	0.0307951	0.00521	0.0315879	0.00607	6.49543E-09	0.17183	0.021894	0.005611	0.035366	0.034009	0.00037	0.96767	0.010515	0.919	0.956	0.992	0.975	0.973	1	0.751	0.967
rs12184698	3.5033E-09	-0.040142	0.0068	-0.040142	0.006797	6.49731E-09	0.91428	0.146026	2.17E-06	0.16098	0.438023	0.00266	0.04644	0.553987	0.741	0.891	1	0.828	0.8	0.992	0.946	0.817
rs62527045	3.5039E-09	-0.035442	0.006	-0.035617	0.006287	6.49839E-09	0.64078	0.258296	4.4E-05	0.002129	0.444058	0.02163	0.0811	0.017655	0.724	0.885	1	0.997	0.821	0.925	0.94	0.954
rs201909892	3.5063E-09	0.0896583	0.01518	0.0896583	0.015181	6.50264E-09	0.12308	0.408944	0.033955	0.00867	0.00704	9.8E-05	0.43858	0.23491	0.926	0.883	0.934	0.992	0.987	1	0.871	0.908
rs60147425	3.5074E-09	-0.076552	0.01296	-0.076552	0.012962	6.50419E-09	0.08573	0.136684	0.042348	0.002461	0.371183	2.1E-05	0.06459	0.995284	0.922	0.909	0.861	0.996	0.842	1	0.947	0.77
rs9834481	3.5083E-09	-0.031363	0.00531	-0.031363	0.005311	6.50644E-09	0.34412	0.91139	0.003056	0.037436	0.245108	0.00013	0.00411	0.474478	0.885	0.815	0.996	0.971	0.9	1	0.984	0.867
rs7226002	3.5086E-09	0.0349254	0.00591	0.0351405	0.009179	6.50697E-09	0.40751	0.020706	0.00032	0.153408	0.739593	0.00012	0.15086	0.003197	0.633	0.937	0.999	0.828	0.691	1	0.902	0.966
rs146286181	3.5088E-09	0.0349294	0.00591	0.0349756	0.00912	6.50728E-09	0.40003	0.022429	0.000293	0.158687	0.737206	0.00011	0.16428	0.003458	0.627	0.934	0.999	0.819	0.688	1	0.895	0.965
rs2330614	3.5091E-09	0.0302875	0.00513	0.0318738	0.006991	6.50775E-09	0.82799	0.662966	0.000207	0.00359	0.004373	0.02313	0.22152	0.006726	0.756	0.731	1	0.995	0.988	0.923	0.899	0.966
rs11711191	3.5106E-09	0.0314242	0.00532	0.0314242	0.005321	6.51052E-09	0.67541	0.338387	0.00412	0.060788	0.881703	1.2E-06	0.02327	0.681141	0.666	0.832	0.987	0.92	0.616	1	0.953	0.768
rs12620935	3.5107E-09	0.0301638	0.00511	0.0307678	0.005486	6.51065E-09	0.56709	0.63952	0.026115	0.000518	0.130554	0.00204	0.00248	0.050879	0.869	0.861	0.949	0.999	0.941	0.997	0.988	0.949
rs7214119	3.5109E-09	0.0349249	0.00591	0.0351399	0.009179	6.51105E-09	0.40748	0.020706	0.00032	0.15349	0.739593	0.00012	0.15086	0.003197	0.633	0.937	0.999	0.828	0.691	1	0.902	0.966
rs722208	3.5164E-09	0.0315823	0.00535	0.032156	0.006801	6.52099E-09	0.76914	0.787138	0.020018	0.1583	0.002932	7.1E-06	0.42791	0.010427	0.804	0.803	0.936	0.841	0.989	1	0.84	0.959
rs10830212	3.5164E-09	0.0306199	0.00519	0.0346476	0.010289	2.98159E-09	0.95747	0.252968	0.000956	0.007951	1.15E-06	0.0262	0.03864	0.310836	0.762	0.602	0.996	0.988	0.999	0.887	0.952	0.862
rs6762498	3.5181E-09	0.0314226	0.00532	0.0314226	0.005321	6.52412E-09	0.67699	0.336632	0.004035	0.060893	0.880376	1.3E-06	0.02308	0.679713	0.666	0.832	0.988	0.92	0.617	1	0.953	0.769
rs4420272	3.5199E-09	0.0306192	0.00519	0.0346501	0.01029	2.98101E-09	0.95713	0.253097	0.000959	0.007939	1.15E-06	0.02622	0.03855	0.311227	0.762	0.602	0.996	0.988	0.999	0.887	0.952	0.862
rs17840761	3.5213E-09	0.0310733	0.00526	0.0310733	0.005262	6.52991E-09	0.7114	0.813578	0.006025	0.012184	0.176472	0.00012	0.07747	0.021465	0.84	0.779	0.991	0.989	0.921	1	0.948	0.956
rs4646638	3.5287E-09	0.029783	0.00504	0.0324347	0.00868	2.91238E-09	0.44434	0.357042	1.78E-06	0.03181	0.02111	0.11887	0.00061	0.474594	0.484	0.78	1	0.898	0.96	0.316	0.99	0.743
rs7184650	3.5293E-09	0.0334299	0.00566	0.0320482	0.007499	5.56847E-09	0.44498	0.376045	2.58E-07	0.020388	0.581884	0.01288	0.67952	0.038961	0.609	0.819	1	0.967	0.711	0.932	0.725	0.919
rs4147095	3.5301E-09	-0.029781	0.00504	-0.029781	0.005043	6.54592E-09	0.85801	0.794546	0.001812	0.00407	0.164121	0.00323	0.00176	0.111775	0.788	0.833	0.998	0.996	0.926	0.995	0.988	0.929
rs11861513	3.5318E-09	0.0383798	0.0065	0.0383798	0.0065	6.549E-09	0.3636	0.053551	0.006437	0.174208	0.19188	1.1E-05	0.07922	0.336778	0.883	0.938	0.989	0.863	0.915	1	0.947	0.887
rs41501346	3.5326E-09	-0.03543	0.006	-0.035599	0.006276	6.55042E-09	0.64117	0.25777	4.35E-05	0.002197	0.443553	0.02161	0.08084	0.017653	0.725	0.885	1	0.997	0.821	0.926	0.94	0.954
rs56000442	3.5355E-09	-0.031561	0.00535	-0.031513	0.005517	6.55555E-09	0.60711	0.605017	0.001559	0.174725	0.021042	2.9E-05	0.51188	0.011214	0.817	0.697	0.997	0.822	0.971	1	0.811	0.954
rs73338243	3.5393E-09	0.033447	0.00566	0.0337292	0.006191	6.56253E-09	0.00998	0.02361	0.00556	0.028109	0.074618	0.00016	0.42513	0.744164	0.963	0.953	0.992	0.979	0.956	1	0.871	0.763
rs4711163	3.5494E-09	-0.037715	0.00639	-0.037715	0.006388	6.58084E-09	0.80813	0.24084	0.000444	0.003831	0.162264	0.01569	0.07669	0.003715	0.845	0.911	0.999	0.996	0.934	0.968	0.954	0.975
rs59064438	3.5555E-09	-0.031554	0.00534	-0.03151	0.005509	6.59179E-09	0.60711	0.610844	0.001572	0.174725	0.020363	3E-05	0.50733	0.011102	0.818	0.699	0.997	0.823	0.971	1	0.813	0.955
rs57330392	3.5558E-09	-0.031554	0.00534	-0.031509	0.005509	6.59236E-09	0.60711	0.610844	0.001572	0.174725	0.020364	3E-05	0.50733	0.011102	0.818	0.699	0.997	0.823	0.971	1	0.813	0.955
rs10830215	3.5604E-09	0.0302062	0.00512	0.0341128	0.01012	3.31318E-09	0.73961	0.271096	0.000725	0.064943	7.75E-07	0.01001	0.02425	0.393151	0.806	0.627	0.996	0.933	0.999	0.967	0.962	0.855
rs61908465	3.5659E-09	0.0334025	0.00566	0.0339503	0.009021	5.11053E-09	0.78468	0.028178	0.001582	0.907565	0.013522	4.1E-06	0.41216	0.039738	0.607	0.916	0.992	0.162	0.97	1	0.756	0.914
rs1504743	3.5701E-09	-0.03155	0.00534	-0.031506	0.005509	6.61829E-09	0.60647	0.610837	0.001575	0.174817	0.020388	3E-05	0.50769	0.011103	0.818	0.699	0.997	0.823	0.971	1	0.813	0.955
rs13023003	3.5744E-09	-0.033402	0.00566	-0.033402	0.005659	6.62606E-09	0.5176	0.034949	7.69E-06	0.318955	0.053544	0.0058	0.07739	0.415858	0.845	0.939	1	0.709	0.957	0.982	0.941	0.859
rs1443191	3.5747E-09	0.0328008	0.00556	0.0358325	0.007389	6.62654E-09	0.0894	0.035026	0.011132	0.033334	0.123473	0.00125	0.00036	0.523549	0.942	0.956	0.986	0.98	0.95	0.999	0.994	0.885
rs7122228	3.5788E-09	-0.031438	0.00533	-0.031438	0.005326	6.63403E-09	0.39303	0.087545	0.000678	0.001299	0.685289	0.00159	0.17526	0.059008	0.853	0.914	0.999	0.998	0.506	0.997	0.903	0.929
rs62527044	3.5812E-09	-0.035418	0.006	-0.035583	0.006269	6.63841E-09	0.64194	0.258197	4.4E-05	0.002194	0.444018	0.02165	0.08112	0.017676	0.725	0.885	1	0.997	0.821	0.926	0.94	0.954
rs72951679	3.5826E-09	0.0329594	0.00558	0.0364947	0.007431	6.64084E-09	0.11519	0.02751	0.013723	0.000406	0.030358	0.01021	0.48092	0.010494	0.937	0.958	0.979	0.999	0.978	0.982	0.879	0.971
rs9913677	3.5835E-09	0.0333912	0.00566	0.0337871	0.006371	6.64246E-09	0.01023	0.022449	0.006353	0.030881	0.063403	0.00014	0.43816	0.759392	0.962	0.953	0.991	0.977	0.96	1	0.868	0.765
rs1921117	3.5839E-09	0.0302888	0.00513	0.0321634	0.007368	6.64326E-09	0.75777	0.658258	0.000193	0.004113	0.003861	0.02477	0.20659	0.004977	0.742	0.727	1	0.995	0.989	0.914	0.901	0.968
rs882928	3.5841E-09	0.0300401	0.00509	0.0300401	0.00509	6.64359E-09	0.03164	0.161254	0.000616	0.035904	0.089817	0.00457	0.11314	0.140179	0.958	0.931	0.999	0.979	0.959	0.995	0.95	0.937

Table S3

rs7617289	3.5918E-09	0.0330029	0.00559	0.0330029	0.005592	6.65745E-09	0.1787	0.704721	0.000391	0.095108	0.553149	0.00019	0.0316	0.219546	0.903	0.829	0.999	0.919	0.799	1	0.962	0.898
rs10742824	3.5968E-09	0.0308271	0.00522	0.0308271	0.005223	6.6666E-09	0.75749	0.220703	0.000667	9.09E-05	0.805092	0.00547	0.02703	0.938984	0.796	0.879	0.999	0.999	0.688	0.985	0.959	0.762
rs4665509	3.5987E-09	0.0307729	0.00521	0.0315776	0.00608	6.66998E-09	0.17236	0.021966	0.005629	0.035885	0.033464	0.00038	0.96692	0.010475	0.919	0.956	0.992	0.975	0.973	1	0.751	0.967
rs28597402	3.6013E-09	0.0359931	0.0061	0.0366297	0.007806	6.6747E-09	0.70777	0.206393	0.016909	0.005175	0.480174	7.1E-05	0.00049	0.755177	0.726	0.888	0.956	0.993	0.803	1	0.991	0.8
rs62084697	3.603E-09	0.0349154	0.00592	0.0348638	0.008882	6.67785E-09	0.41333	0.020195	0.000312	0.16211	0.696078	0.00011	0.17761	0.00478	0.634	0.937	0.999	0.819	0.705	1	0.892	0.962
rs1977199	3.6106E-09	0.0372741	0.00632	0.0372741	0.006316	6.6915E-09	0.38571	0.528314	0.000582	0.072707	0.003184	0.00292	0.14036	0.113128	0.893	0.876	0.999	0.952	0.991	0.996	0.938	0.935
rs2240217	3.6118E-09	0.0334031	0.00566	0.0337733	0.006325	6.69374E-09	0.00999	0.022371	0.006085	0.028101	0.070506	0.00015	0.42422	0.731347	0.963	0.953	0.991	0.979	0.957	1	0.871	0.76
rs7110300	3.6128E-09	0.030829	0.00522	0.030829	0.005224	6.69552E-09	0.78263	0.186105	0.000681	8.65E-05	0.794385	0.00572	0.02997	0.923565	0.794	0.887	0.999	0.999	0.693	0.985	0.957	0.766
rs10786828	3.6166E-09	-0.031126	0.00527	-0.031943	0.006051	6.70237E-09	0.24945	0.033908	0.008764	0.314316	0.010679	0.0001	0.00902	0.436295	0.898	0.946	0.981	0.74	0.984	1	0.98	0.871
rs1977200	3.6198E-09	0.0372715	0.00632	0.0372715	0.006316	6.70823E-09	0.38572	0.528292	0.000582	0.072727	0.003186	0.00292	0.14046	0.113131	0.893	0.876	0.999	0.952	0.991	0.996	0.938	0.935
rs2178487	3.6276E-09	0.0299481	0.00508	0.031011	0.007074	6.72234E-09	0.86067	0.310964	0.00041	0.000953	0.072061	0.01085	0.09275	0.00517	0.758	0.65	0.999	0.998	0.949	0.971	0.936	0.967
rs2431079	3.6291E-09	-0.031054	0.00526	-0.032108	0.008679	6.72508E-09	0.04722	0.591961	0.008694	0.028041	0.028657	9E-05	0.01283	0.018277	0.485	0.829	0.981	0.973	0.969	1	0.972	0.952
rs8066368	3.6294E-09	0.0333982	0.00566	0.0337688	0.006326	6.72561E-09	0.01	0.022388	0.006098	0.028093	0.070452	0.00016	0.42447	0.730913	0.963	0.953	0.991	0.979	0.957	1	0.871	0.76
rs28874900	3.6295E-09	0.0359876	0.0061	0.0366286	0.007799	6.72581E-09	0.71283	0.206393	0.017082	0.005087	0.481475	7.2E-05	0.00049	0.755179	0.727	0.888	0.955	0.993	0.803	1	0.991	0.8
rs12921753	3.6306E-09	-0.030847	0.00523	-0.031283	0.007507	6.72783E-09	0.91874	0.637618	0.006149	0.000487	0.00096	0.00098	0.18285	0.179755	0.759	0.802	0.985	0.999	0.992	0.998	0.892	0.525
rs11865021	3.6373E-09	0.0383493	0.0065	0.0383493	0.0065	6.73986E-09	0.36391	0.053695	0.006575	0.172522	0.192261	1.1E-05	0.07951	0.336662	0.883	0.938	0.989	0.865	0.915	1	0.947	0.887
rs62084681	3.6384E-09	0.0348895	0.00591	0.0351068	0.009178	6.74195E-09	0.40737	0.020706	0.000327	0.153421	0.740957	0.00013	0.15153	0.003198	0.633	0.937	0.999	0.829	0.691	1	0.901	0.966
rs8075764	3.6384E-09	0.0348895	0.00591	0.0351068	0.009178	6.74195E-09	0.40737	0.020706	0.000327	0.153421	0.740957	0.00013	0.15153	0.003198	0.633	0.937	0.999	0.829	0.691	1	0.901	0.966
rs148986231	3.6397E-09	0.0383472	0.0065	0.0383472	0.0065	6.74428E-09	0.36391	0.053694	0.006549	0.173579	0.191556	1.1E-05	0.0795	0.336417	0.883	0.938	0.989	0.864	0.915	1	0.947	0.887
rs1465487	3.644E-09	0.0314396	0.00533	0.0346927	0.007806	6.752E-09	0.10901	0.030064	0.036171	0.007572	0.000583	0.00044	0.14193	0.514592	0.924	0.948	0.903	0.992	0.995	0.999	0.928	0.7
rs1921111	3.645E-09	0.0302728	0.00513	0.0322695	0.007487	6.75374E-09	0.75754	0.661496	0.00017	0.004369	0.004012	0.02747	0.19569	0.004325	0.739	0.724	1	0.994	0.988	0.9	0.903	0.969
rs6441858	3.6459E-09	0.0311498	0.00528	0.0306553	0.005739	6.61788E-09	0.78372	0.403901	0.004356	0.104996	0.843781	5.6E-07	0.01773	0.77666	0.671	0.809	0.983	0.855	0.613	1	0.955	0.739
rs66827053	3.6466E-09	0.0336991	0.00571	0.0423216	0.011208	3.01098E-09	0.61872	0.532382	5.7E-05	0.036963	0.007381	0.11668	0.00148	0.000581	0.6	0.783	0.999	0.915	0.983	0.4	0.988	0.982
rs74980062	3.6493E-09	-0.043183	0.00732	-0.044379	0.008241	6.67981E-09	0.22754	0.100106	0.001356	6.52E-05	0.063806	0.02487	0.06251	0.605806	0.899	0.924	0.997	1	0.956	0.922	0.952	0.716
rs200153469	3.6494E-09	0.0543532	0.00921	0.0543532	0.009213	6.76181E-09	0.50215	0.529481	0.002932	0.004002	0.04547	0.00022	0.92161	0.294549	0.853	0.849	0.996	0.995	0.961	1	0.747	0.883
rs11122223	3.653E-09	-0.029934	0.00507	-0.029934	0.005074	6.16018E-09	0.02601	0.476048	8.48E-07	0.028046	0.483063	0.02661	0.24106	0.568784	0.941	0.844	1	0.968	0.798	0.898	0.886	0.828
rs6775313	3.6561E-09	0.0303741	0.00515	0.0303741	0.005149	6.77389E-09	0.155	0.283274	0.00031	0.018877	0.744802	0.00083	0.14536	0.164312	0.912	0.89	1	0.984	0.752	0.999	0.926	0.913
rs7930256	3.6617E-09	0.0305831	0.00518	0.0344421	0.010311	3.15686E-09	0.99751	0.242966	0.000878	0.008564	1.22E-06	0.02585	0.03843	0.312718	0.753	0.596	0.996	0.987	0.999	0.888	0.952	0.861
rs4538222	3.6676E-09	-0.042123	0.00714	-0.042123	0.007141	6.79464E-09	0.28798	0.242899	0.000468	0.017167	0.007363	0.01383	0.01235	0.915586	0.904	0.909	0.999	0.987	0.988	0.974	0.978	0.824
rs11122222	3.6724E-09	-0.02993	0.00507	-0.02993	0.005074	6.191E-09	0.02601	0.476017	8.5E-07	0.028071	0.483087	0.02668	0.24092	0.568735	0.941	0.844	1	0.968	0.798	0.897	0.886	0.828
rs17489826	3.6763E-09	0.0368094	0.00624	0.0385431	0.007485	6.81048E-09	0.55175	0.529448	0.010476	0.017985	6.15E-05	0.0017	0.33762	0.065832	0.871	0.873	0.985	0.987	0.998	0.998	0.895	0.944
rs112598676	3.6766E-09	0.0370981	0.00629	0.0370981	0.00629	6.81091E-09	0.1421	0.070356	0.001615	0.032912	0.017629	0.00125	0.22275	0.673901	0.928	0.942	0.998	0.978	0.982	0.999	0.922	0.86
rs7527440	3.6775E-09	0.0302501	0.00513	0.0324976	0.007791	2.99615E-09	0.25469	0.096551	2.24E-06	0.001046	0.457929	0.17175	0.46121	0.014206	0.808	0.871	1	0.997	0.622	0.19	0.691	0.941
rs12377112	3.6792E-09	-0.03978	0.00674	-0.041946	0.008509	6.81575E-09	0.1334	0.756142	0.000749	0.064657	0.027094	0.00474	0.03785	0.0023	0.929	0.793	0.999	0.957	0.977	0.993	0.968	0.978
rs11936046	3.6814E-09	-0.02974	0.00504	-0.030381	0.006101	6.8196E-09	0.3499	0.808673	0.038595	0.000204	0.054855	0.00019	0.01184	0.607625	0.853	0.724	0.86	0.999	0.95	0.999	0.971	0.668
rs11646371	3.6834E-09	-0.032158	0.00545	-0.035129	0.01014	6.82326E-09	0.18405	0.090427	0.000708	0.084941	0.550566	0.00082	4.7E-05	0.053148	0.579	0.913	0.999	0.914	0.771	0.998	0.995	0.931
rs6822676	3.6836E-09	0.0359704	0.0061	0.0366105	0.007817	6.82358E-09	0.7039	0.206393	0.017081	0.005122	0.48147	7.2E-05	0.00049	0.755175	0.725	0.888	0.955	0.993	0.803	1	0.991	0.8
rs10769300	3.6838E-09	0.0308055	0.00522	0.0308055	0.005223	6.82395E-09	0.75896	0.220639	0.000667	9.43E-05	0.804434	0.00547	0.02711	0.93842	0.796	0.879	0.999	0.999	0.688	0.985	0.958	0.762
rs2395379	3.6839E-09	0.0297134	0.00504	0.0292332	0.005514	6.82412E-09	0.29306	0.683008	0.000607	0.000223	0.835368	0.00015	0.76486	0.268743	0.503	0.723	0.998	0.999	0.562	0.999	0.649	0.81
rs4850363	3.6883E-09	0.0420977	0.00714	0.0420977	0.007138	6.83223E-09	0.29288	0.245262	0.000479	0.016847	0.006824	0.0138	0.01296	0.924144	0.903	0.909	0.999	0.987	0.988	0.974	0.978	0.823
rs77730597	3.6926E-09	0.0414883	0.00704	0.0414883	0.007035	6.83985E-09	0.80175	0.058095	0.002094	0.053507	0.371322	1.9E-05	0.05065	0.59669	0.798	0.923	0.996	0.948	0.839	1	0.947	0.691
rs35679500	3.697E-09	-0.033411	0.00567	-0.033411	0.005666	6.82464E-09	0.50661	0.038664	5.75E-06	0.374285	0.066093	0.00535	0.06726	0.413313	0.838	0.934	1	0.647	0.948	0.982	0.942	0.852
rs10458915	3.6979E-09	0.0308029	0.00522	0.0308029	0.005223	6.84958E-09	0.75819	0.220639	0.000667	9.5E-05	0.804434	0.00547	0.02711	0.93842	0.796	0.879	0.999	0.999	0.688	0.985	0.958	0.762
rs9542319	3.6983E-09	0.0314688	0.00534	0.0314688	0.005336	6.85027E-09	0.48688	0.573941	0.001319	0.001522	0.009617	0.0006	0.29612	0.742005	0.652	0.674	0.997	0.997	0.978	0.999	0.856	0.779
rs10173720	3.7028E-09	-0.034368	0.00583	-0.034368	0.005828	6.85838E-09	0.34835	0.01553	0.000151	0.123116	0.100775	0.0017	0.23372	0.25564	0.894	0.959	1	0.913	0.949	0.998	0.914	0.907
rs6854016	3.7031E-09	0.035965	0.0061	0.036603	0.007809	6.85896E-09	0.7067	0.206393	0.017081	0.005175	0.48147	7.2E-05	0.00049	0.755175	0.725	0.888	0.956	0.993	0.803	1	0.991	0.8
rs10013227	3.7042E-09	0.0359647	0.0061	0.0366026	0.007809	6.86095E-09	0.7067	0.206402	0.017085	0.005177	0.481485	7.2E-05	0.00049	0.755188	0.725	0.888	0.955	0.993	0.803	1	0.991	0.8
rs4646640	3.7062E-09	0.0297412	0.00504	0.0323535	0.008754	3.06185E-09	0.40892	0.355554	1.74E-06	0.035031	0.020702	0.11536	0.0006	0.472165	0.473	0.779	1	0.886	0.96	0.326	0.99	0.743
rs6838272	3.7066E-09	0.0359641	0.0061	0.0366021	0.007809	6.86526E-09	0.70671	0.206402	0.017087	0.005177	0.481495	7.2E-05	0.00049	0.755193	0.725	0.888	0.955	0.993	0.803	1	0.991	0.8
rs139399443	3.7067E-09	0.0359641	0.0061	0.036602	0.007809	6.86539E-09	0.70671	0.206402	0.017087	0.005177	0.481495	7.2E-05	0.00049	0.755193	0.725	0.888	0.955	0.993	0.803	1	0.991	0.8
rs2894334	3.7077E-09	0.029708	0.00504	0.0292306	0.005512	6.86731E-09	0.29293	0.683	0.000607	0.000225	0.835396	0.00015	0.76487	0.268743	0.503	0.723	0.998	0.999	0.562	0.999	0.649	0.81
rs28529601	3.7109E-09	0.0359632	0.0061	0.0366001	0.007807	6.87305E-09	0.70673	0.206442	0.017107	0.005166	0.481547	7.2E-05	0.0005	0.755276	0.725	0.888	0.955	0.993	0.803	1	0.991	0.8
rs10857397	3.7118E-09	0.0327715	0.00556	0.0359182	0.007487	6.87467E-09	0.09904	0.031629	0.009335	0.039712	0.13049	0.00135	0.0003	0.526761	0.94	0.957	0.988	0.976	0.948	0.998	0.994	0.885
rs521222	3.7122E-09	0.0297946	0.00505	0.0297946	0.005053	6.87533E-09	0.42748	0.806976	0.000311	0.006271	0.083812	0.00175	0.25553	0.332004	0.869	0.771	1	0.993	0.948	0.997	0.898	0.883
rs67796716	3.7156E-09	0.0359618	0.0061	0.0365988	0.007806	6.88162E-09	0.70671	0.206431	0.017104	0.005169	0.481522	7.2E-05	0.0005	0.755247	0.725	0.888	0.955	0.993	0.803	1	0.991	0.8

Table S3

rs218988	3.7198E-09	0.0316823	0.00537	0.0379524	0.008462	4.97103E-09	0.20592	0.367105	0.000279	0.005962	0.079418	0.11539	0.00104	0.006757	0.894	0.862	0.999	0.992	0.944	0.512	0.991	0.97
rs4840464	3.7206E-09	0.0396084	0.00672	0.0396084	0.006718	6.8905E-09	0.07665	0.723159	0.00177	0.009554	0.154922	0.00114	0.10936	0.218387	0.939	0.855	0.998	0.992	0.936	0.999	0.945	0.916
rs10838777	3.7231E-09	0.0307968	0.00522	0.0307968	0.005223	6.89508E-09	0.75897	0.220726	0.000664	9.43E-05	0.80434	0.00553	0.02718	0.938835	0.796	0.879	0.999	0.999	0.688	0.985	0.958	0.762
rs6909540	3.7248E-09	0.0414808	0.00704	0.0414808	0.007035	6.89825E-09	0.80121	0.057905	0.002102	0.053419	0.373431	1.9E-05	0.05068	0.594655	0.798	0.923	0.996	0.948	0.838	1	0.947	0.691
rs6780744	3.7269E-09	0.0311464	0.00528	0.0309411	0.005467	6.82158E-09	0.79092	0.402735	0.004188	0.101266	0.812669	6.1E-07	0.02114	0.807	0.676	0.812	0.984	0.863	0.628	1	0.952	0.736
rs4334914	3.7274E-09	0.030523	0.00518	0.029944	0.005744	5.04702E-09	0.69825	0.165668	0.002611	0.631564	0.339288	2E-07	0.1035	0.47407	0.716	0.84	0.984	0.318	0.752	1	0.885	0.759
rs12910113	3.7317E-09	0.029736	0.00504	0.0323606	0.008745	3.05326E-09	0.41877	0.355715	1.7E-06	0.03532	0.0208	0.1168	0.0006	0.472482	0.475	0.779	1	0.885	0.959	0.321	0.99	0.742
rs62392365	3.7387E-09	-0.084074	0.01426	-0.084074	0.014261	6.92329E-09	0.70742	0.71041	0.004369	5.1E-05	0.083609	0.00719	0.07744	0.065065	0.763	0.839	0.993	1	0.951	0.986	0.949	0.939
rs3130100	3.7389E-09	0.0297041	0.00504	0.0290407	0.005669	6.92362E-09	0.18805	0.741556	0.00047	0.000403	0.781572	0.00016	0.58512	0.261568	0.47	0.718	0.999	0.998	0.589	0.999	0.709	0.816
rs6778955	3.7403E-09	0.0311432	0.00528	0.0309353	0.005469	6.84483E-09	0.79071	0.402735	0.004188	0.101535	0.812674	6.1E-07	0.02114	0.807004	0.676	0.812	0.984	0.862	0.628	1	0.952	0.736
rs13070879	3.7418E-09	0.0311428	0.00528	0.0309349	0.005469	6.84751E-09	0.79071	0.402735	0.004188	0.101535	0.812724	6.1E-07	0.02114	0.807026	0.676	0.812	0.984	0.862	0.628	1	0.952	0.736
rs111925155	3.7424E-09	0.0371097	0.00629	0.0371097	0.006295	6.93003E-09	0.09388	0.06499	0.001665	0.026481	0.019459	0.00146	0.23649	0.788378	0.937	0.943	0.998	0.982	0.981	0.998	0.919	0.846
rs10922920	3.7445E-09	0.0300161	0.00509	0.0318802	0.007508	3.29675E-09	0.31389	0.077837	1.43E-06	0.002118	0.512537	0.15193	0.37348	0.018735	0.795	0.883	1	0.994	0.608	0.239	0.742	0.936
rs13081859	3.7446E-09	0.0311419	0.00528	0.0309402	0.005463	6.85511E-09	0.79112	0.402606	0.004177	0.101448	0.812784	6.2E-07	0.02112	0.807017	0.676	0.812	0.985	0.863	0.628	1	0.952	0.736
rs6768789	3.7474E-09	0.0311415	0.00528	0.0309334	0.005469	6.85754E-09	0.79082	0.403027	0.004187	0.101631	0.812838	6.1E-07	0.02113	0.806837	0.676	0.812	0.984	0.862	0.628	1	0.952	0.736
rs34372842	3.7491E-09	-0.032318	0.00548	-0.032318	0.005482	6.94215E-09	0.4359	0.013879	0.000519	0.247458	0.02021	0.00028	0.28133	0.591708	0.863	0.954	0.999	0.787	0.976	1	0.887	0.839
rs11039429	3.7566E-09	0.030792	0.00522	0.030792	0.005224	6.95567E-09	0.7381	0.237178	0.000554	0.000127	0.82313	0.00546	0.02613	0.92812	0.798	0.875	0.999	0.999	0.681	0.985	0.959	0.763
rs2874907	3.7599E-09	-0.036945	0.00627	-0.037658	0.009776	6.50608E-09	0.42288	0.852618	0.007107	1.32E-05	0.840381	0.0014	0.00234	0.683106	0.816	0.696	0.975	1	0.508	0.995	0.98	0.766
rs60163287	3.7675E-09	0.0312587	0.0053	0.0308512	0.006935	6.97541E-09	0.53261	0.709371	0.00838	4.03E-05	0.012489	0.00038	0.42405	0.766042	0.632	0.67	0.973	1	0.972	0.999	0.8	0.664
rs180974190	3.7713E-09	0.0665807	0.0113	0.0616661	0.016217	4.09993E-09	0.3702	0.208384	8.36E-05	0.949132	0.908168	1.6E-06	0.07179	0.333063	0.722	0.776	1	0.091	0.311	1	0.876	0.733
rs35069907	3.7719E-09	-0.03784	0.00642	-0.03784	0.00642	6.98338E-09	0.91463	0.225596	0.000744	0.00321	0.12482	0.01446	0.0617	0.00473	0.834	0.914	0.999	0.997	0.945	0.972	0.959	0.974
rs12153857	3.7748E-09	0.0414669	0.00704	0.0414669	0.007036	6.98863E-09	0.80057	0.057862	0.002114	0.053308	0.374597	1.9E-05	0.05068	0.594044	0.798	0.923	0.996	0.948	0.838	1	0.947	0.69
rs11291018	3.7749E-09	0.0365442	0.0062	0.0365442	0.0062	6.98878E-09	0.22772	0.044799	0.003412	0.03171	0.020874	0.00045	0.30028	0.618086	0.913	0.948	0.996	0.979	0.98	0.999	0.905	0.864
rs72694213	3.7767E-09	-0.035357	0.006	-0.035475	0.006185	6.99193E-09	0.67098	0.28273	4.88E-05	0.00248	0.451842	0.02089	0.06967	0.016636	0.732	0.882	1	0.996	0.821	0.931	0.945	0.955
rs218985	3.7767E-09	0.0316576	0.00537	0.0380448	0.008575	4.81161E-09	0.19394	0.430979	0.000228	0.006005	0.084742	0.12317	0.00096	0.006588	0.893	0.845	0.999	0.992	0.939	0.472	0.991	0.97
rs12191191	3.7769E-09	0.0414667	0.00704	0.0414667	0.007036	6.99233E-09	0.80056	0.057838	0.002117	0.053214	0.374949	1.9E-05	0.05064	0.593446	0.798	0.923	0.996	0.948	0.837	1	0.947	0.69
rs2895225	3.7769E-09	0.0305117	0.00518	0.029916	0.005762	5.09032E-09	0.69659	0.165782	0.002609	0.636296	0.339096	2E-07	0.10345	0.473998	0.716	0.84	0.984	0.314	0.751	1	0.885	0.759
rs11737891	3.7776E-09	-0.029798	0.00506	-0.029798	0.005056	6.99357E-09	0.55789	0.081795	9.19E-05	0.019859	0.124128	0.00572	0.1355	0.529358	0.868	0.935	1	0.985	0.942	0.991	0.936	0.87
rs34557659	3.7815E-09	0.0313403	0.00532	0.0305921	0.008365	4.78047E-09	0.526	0.615187	3.28E-07	0.115424	0.176887	0.02091	0.00127	0.974262	0.605	0.76	1	0.807	0.852	0.846	0.983	0.678
rs72929707	3.7819E-09	0.0364589	0.00619	0.0388846	0.008435	7.00148E-09	0.00321	0.767051	0.000758	0.003261	0.003186	0.01462	0.97208	0.308365	0.971	0.829	0.999	0.996	0.99	0.964	0.743	0.889
rs5857372	3.7838E-09	0.0359443	0.0061	0.036587	0.007805	7.00489E-09	0.70671	0.205975	0.017027	0.005177	0.481005	7.4E-05	0.00049	0.754345	0.726	0.888	0.956	0.993	0.803	1	0.991	0.8
rs2873615	3.789E-09	0.0305882	0.00519	0.0305882	0.00519	7.01433E-09	0.83785	0.528619	0.001131	0.008996	0.005762	0.00257	0.12298	0.566586	0.829	0.866	0.999	0.992	0.988	0.996	0.936	0.859
rs9467736	3.79E-09	-0.032487	0.00551	-0.032487	0.005513	7.016E-09	0.61071	0.489587	0.000294	0.011373	0.455299	0.00157	0.11391	0.069705	0.851	0.866	1	0.99	0.841	0.998	0.937	0.937
rs2217013	3.7976E-09	0.0359386	0.0061	0.0365715	0.007816	7.02985E-09	0.70439	0.206553	0.017296	0.005319	0.481932	7E-05	0.0005	0.756314	0.725	0.887	0.955	0.993	0.802	1	0.991	0.799
rs4951542	3.8028E-09	0.0297923	0.00506	0.0309524	0.006382	7.03922E-09	0.38534	0.008688	0.021121	0.0027	0.440061	0.00018	0.55846	0.010405	0.882	0.962	0.956	0.997	0.846	1	0.841	0.965
rs1425518	3.8069E-09	0.037224	0.00632	0.0337585	0.008821	7.04663E-09	0.2382	0.606092	3.19E-06	0.212933	0.880152	0.00013	0.02551	0.683625	0.775	0.517	1	0.598	0.384	0.999	0.924	0.513
rs11156398	3.8112E-09	0.0414568	0.00704	0.0414568	0.007036	7.05437E-09	0.79998	0.05799	0.002123	0.053205	0.375872	1.9E-05	0.0506	0.592601	0.798	0.923	0.996	0.948	0.837	1	0.947	0.69
rs735765	3.8167E-09	-0.054071	0.00918	-0.057298	0.014448	7.06423E-09	0.72773	0.99027	0.003304	0.02277	0.305129	0.00037	0.02139	0.00021	0.757	0.795	0.995	0.981	0.878	0.999	0.969	0.982
rs4539273	3.8211E-09	-0.030882	0.00524	-0.030882	0.005241	7.0722E-09	0.60783	0.201502	0.000307	8.1E-05	0.966233	0.00755	0.04306	0.949351	0.803	0.874	0.999	0.999	0.588	0.974	0.945	0.742
rs633442	3.8215E-09	0.0414477	0.00703	0.0414477	0.007035	7.07302E-09	0.24195	0.06195	0.000631	0.060634	0.121461	0.00043	0.37225	0.365396	0.907	0.94	0.999	0.958	0.942	0.999	0.886	0.891
rs2271800	3.8219E-09	0.038176	0.00648	0.0377079	0.009241	7.07369E-09	0.09002	0.144989	0.00238	8.68E-05	0.435379	0.00084	0.71368	0.060735	0.901	0.538	0.995	0.999	0.789	0.998	0.741	0.917
rs7696018	3.8232E-09	-0.036939	0.00627	-0.037624	0.009794	6.50033E-09	0.41065	0.849383	0.007836	1.21E-05	0.839371	0.00128	0.00256	0.697172	0.818	0.694	0.972	1	0.507	0.995	0.98	0.763
rs6595598	3.8253E-09	0.0321099	0.00545	0.0325664	0.005889	7.07991E-09	0.29054	0.484579	0.036613	0.013473	0.000415	0.00015	0.0739	0.887824	0.888	0.86	0.904	0.987	0.995	1	0.946	0.768
rs11717797	3.8254E-09	0.0313483	0.00532	0.0313483	0.005321	7.08E-09	0.67244	0.338356	0.004305	0.059606	0.91538	1.2E-06	0.02341	0.679327	0.662	0.83	0.986	0.921	0.602	1	0.952	0.766
rs76834425	3.8295E-09	-0.071363	0.01211	-0.070921	0.014364	7.08747E-09	0.48022	0.069965	0.002051	0.002345	0.014621	0.00036	0.28306	0.458579	0.828	0.486	0.996	0.996	0.975	0.999	0.863	0.83
rs56365411	3.8418E-09	0.0300781	0.00511	0.032111	0.007614	3.52997E-09	0.26958	0.078868	2.05E-06	0.00178	0.540691	0.14737	0.39192	0.014942	0.81	0.883	1	0.995	0.596	0.252	0.735	0.941
rs9556962	3.8453E-09	0.0308195	0.00523	0.0304611	0.006403	5.99979E-09	0.74884	0.720092	4.77E-07	0.11962	0.106748	0.01549	0.00955	0.911965	0.696	0.781	1	0.851	0.914	0.922	0.97	0.743
rs11269751	3.8453E-09	0.0307414	0.00522	0.0315335	0.006097	7.11601E-09	0.19542	0.022877	0.005558	0.038441	0.031616	0.00036	0.94966	0.010099	0.914	0.955	0.992	0.973	0.974	1	0.745	0.967
rs8082568	3.8456E-09	0.0333374	0.00566	0.0337118	0.006331	7.11649E-09	0.00997	0.022772	0.006257	0.02816	0.070638	0.00016	0.4247	0.726119	0.963	0.953	0.991	0.979	0.957	1	0.871	0.759
rs687051	3.847E-09	0.0297509	0.00505	0.0297509	0.005051	7.11909E-09	0.42904	0.829564	0.000364	0.005303	0.086009	0.00177	0.2676	0.32367	0.869	0.775	0.999	0.994	0.947	0.997	0.895	0.885
rs13148401	3.8474E-09	-0.034825	0.00591	-0.035532	0.007331	7.11974E-09	0.9887	0.87218	0.004341	0.072322	0.31683	0.00012	0.0006	0.036465	0.796	0.813	0.993	0.941	0.873	1	0.99	0.947
rs13067173	3.8499E-09	0.031118	0.00528	0.0309022	0.005476	7.03819E-09	0.78931	0.402023	0.004247	0.101902	0.813547	6.2E-07	0.02116	0.807196	0.676	0.812	0.984	0.862	0.628	1	0.952	0.736
rs10043391	3.8523E-09	0.0304708	0.00517	0.0304708	0.005173	6.40178E-09	0.60789	0.230716	0.001957	0.549526	0.303835	6.1E-07	0.0888	0.498564	0.754	0.834	0.991	0.403	0.79	1	0.902	0.772
rs10871332	3.8564E-09	0.0335356	0.00569	0.0318111	0.007412	6.07086E-09	0.39379	0.562164	1.95E-07	0.021613	0.540791	0.00929	0.78119	0.074023	0.582	0.776	1	0.963	0.715	0.949	0.685	0.894
rs141378988	3.858E-09	0.0663966	0.01127	0.0617758	0.016101	4.52885E-09	0.26901	0.201224	0.000124	0.859964	0.828775	1.4E-06	0.06787	0.380652	0.758	0.781	0.999	0.116	0.292	1	0.881	0.72

Table S3

rs11718769	3.8606E-09	0.0313402	0.00532	0.0313402	0.005321	7.14361E-09	0.67217	0.338357	0.004313	0.059792	0.915334	1.2E-06	0.02341	0.679313	0.662	0.83	0.986	0.92	0.602	1	0.952	0.766
rs2869024	3.8618E-09	-0.030872	0.00524	-0.030872	0.005241	7.14587E-09	0.60389	0.2013	0.000295	8.27E-05	0.967805	0.00785	0.04274	0.947963	0.804	0.874	0.999	0.999	0.589	0.973	0.945	0.743
rs9865272	3.862E-09	0.0313399	0.00532	0.0313399	0.005321	7.14613E-09	0.67217	0.338363	0.004313	0.059792	0.915345	1.2E-06	0.02341	0.679315	0.662	0.83	0.986	0.92	0.602	1	0.952	0.766
rs1608006	3.8624E-09	0.0313398	0.00532	0.0313398	0.005321	7.14697E-09	0.67212	0.338358	0.004313	0.059811	0.915336	1.2E-06	0.02341	0.679313	0.662	0.83	0.986	0.92	0.602	1	0.952	0.766
rs11295760	3.8631E-09	0.0336322	0.00571	0.0320844	0.007328	6.11439E-09	0.40614	0.535913	2.21E-07	0.017517	0.541123	0.01081	0.76358	0.075882	0.587	0.782	1	0.97	0.716	0.941	0.691	0.894
rs6850278	3.868E-09	-0.036922	0.00627	-0.037624	0.00981	6.57964E-09	0.41277	0.848876	0.007658	1.24E-05	0.836461	0.00133	0.00246	0.691048	0.817	0.694	0.972	1	0.506	0.995	0.98	0.764
rs72691909	3.8724E-09	0.0441078	0.00749	0.0441078	0.007489	7.165E-09	0.34799	0.043196	0.036245	0.001324	0.054271	0.00198	0.04113	0.045213	0.905	0.953	0.934	0.998	0.969	0.997	0.969	0.956
rs12202811	3.877E-09	0.041443	0.00704	0.041443	0.007037	7.17326E-09	0.79826	0.057503	0.002143	0.052926	0.380225	1.9E-05	0.05057	0.587988	0.798	0.923	0.996	0.948	0.835	1	0.947	0.689
rs877032	3.8792E-09	-0.036921	0.00627	-0.037618	0.009806	6.59387E-09	0.41221	0.849447	0.007728	1.23E-05	0.836786	0.00132	0.00249	0.693001	0.818	0.694	0.972	1	0.506	0.995	0.98	0.763
rs1880949	3.8841E-09	0.0328573	0.00558	0.031729	0.009113	7.1861E-09	0.03098	0.081971	0.000118	0.278069	0.005085	0.00022	0.13306	0.983004	0.916	0.432	1	0.638	0.982	0.999	0.886	0.678
rs6849626	3.8844E-09	-0.036918	0.00627	-0.037618	0.009805	6.61438E-09	0.41358	0.849312	0.007668	1.24E-05	0.836789	0.00133	0.00247	0.691506	0.817	0.694	0.972	1	0.506	0.995	0.98	0.764
rs11941320	3.8878E-09	-0.036915	0.00627	-0.037623	0.009814	6.60909E-09	0.41313	0.848919	0.007635	1.24E-05	0.836026	0.00135	0.00244	0.689624	0.817	0.694	0.972	1	0.506	0.995	0.98	0.764
rs9556963	3.8893E-09	0.0308096	0.00523	0.0304523	0.0064	6.07184E-09	0.74877	0.720404	4.82E-07	0.119536	0.106892	0.01553	0.00955	0.912544	0.696	0.781	1	0.851	0.914	0.922	0.97	0.742
rs11071356	3.8978E-09	0.0296743	0.00504	0.0321308	0.008577	3.72292E-09	0.41242	0.378353	2.66E-06	0.026464	0.027132	0.1062	0.00053	0.496824	0.497	0.784	1	0.925	0.954	0.38	0.99	0.749
rs28841990	3.8982E-09	-0.036913	0.00627	-0.037617	0.009808	6.63486E-09	0.4135	0.84945	0.007647	1.24E-05	0.835956	0.00134	0.00246	0.690394	0.817	0.695	0.972	1	0.506	0.995	0.98	0.764
rs35523137	3.8994E-09	-0.031689	0.00538	-0.031689	0.005382	7.21379E-09	0.31291	0.623374	0.002254	0.170514	0.265109	2.6E-05	0.02032	0.048181	0.874	0.72	0.996	0.843	0.877	1	0.966	0.936
rs9527595	3.9025E-09	0.0299686	0.00509	0.0299686	0.00509	7.21942E-09	0.03144	0.19788	0.000619	0.033615	0.08848	0.00481	0.11675	0.137328	0.958	0.925	0.999	0.98	0.96	0.994	0.949	0.937
rs9401712	3.9049E-09	0.0309375	0.00525	0.0309375	0.005254	7.22369E-09	0.91506	0.761345	0.003126	0.027289	0.00217	0.00033	0.09741	0.689079	0.782	0.825	0.995	0.977	0.991	0.999	0.938	0.83
rs10938507	3.9078E-09	-0.034809	0.00591	-0.03552	0.007338	7.22897E-09	0.98241	0.871437	0.004323	0.074484	0.31648	0.00012	0.0006	0.036458	0.797	0.813	0.993	0.939	0.873	1	0.99	0.947
rs12064249	3.9105E-09	0.0381465	0.00648	0.037664	0.009252	7.23387E-09	0.08951	0.144039	0.002402	8.72E-05	0.440615	0.00084	0.71246	0.061302	0.901	0.537	0.995	0.999	0.787	0.998	0.741	0.916
rs6061301	3.9107E-09	0.0296444	0.00503	0.02589	0.01063	5.51138E-09	0.31857	0.113435	0.004909	0.000107	0.45452	0.00045	6.3E-05	0.82366	0.495	0.41	0.976	0.999	0.701	0.998	0.992	0.603
rs35991721	3.9121E-09	0.0328519	0.00558	0.0317183	0.009068	7.23672E-09	0.03122	0.082007	0.000121	0.271907	0.005425	0.00022	0.13293	0.983323	0.916	0.435	1	0.647	0.981	0.999	0.887	0.68
rs2280275	3.9127E-09	0.038146	0.00648	0.0376651	0.009253	7.23774E-09	0.08959	0.144055	0.002395	8.69E-05	0.440452	0.00084	0.71212	0.061301	0.901	0.537	0.995	0.999	0.787	0.998	0.741	0.916
rs9854297	3.9183E-09	-0.038	0.00645	-0.038003	0.007963	6.56465E-09	0.54227	0.110014	0.058037	8.38E-05	0.103857	2.1E-05	0.46066	0.993181	0.608	0.875	0.717	0.999	0.899	1	0.765	0.682
rs7562330	3.9189E-09	0.0299013	0.00508	0.0306888	0.005852	7.249E-09	0.36669	0.019303	0.008491	0.005304	0.112898	0.00073	0.86369	0.00559	0.892	0.957	0.988	0.995	0.946	0.999	0.789	0.973
rs6824743	3.9212E-09	-0.036909	0.00627	-0.037621	0.009824	6.6571E-09	0.41862	0.849701	0.00758	1.24E-05	0.835342	0.00136	0.00241	0.687509	0.816	0.694	0.973	1	0.506	0.995	0.98	0.765
rs12194884	3.925E-09	0.0414252	0.00704	0.0414252	0.007036	7.25997E-09	0.80173	0.057444	0.002135	0.053531	0.375723	2E-05	0.04986	0.598154	0.798	0.923	0.996	0.948	0.838	1	0.947	0.692
rs10889159	3.9287E-09	0.0381418	0.00648	0.0376602	0.009248	7.26659E-09	0.08969	0.144046	0.002399	8.77E-05	0.440539	0.00084	0.71219	0.061302	0.901	0.537	0.995	0.999	0.787	0.998	0.741	0.916
rs117566322	3.9326E-09	-0.073003	0.0124	-0.073003	0.012401	7.27371E-09	0.41512	0.925576	2.89E-06	0.079998	0.453757	0.0011	0.78741	0.097096	0.827	0.726	1	0.902	0.778	0.997	0.72	0.902
rs2147397	3.933E-09	0.0381406	0.00648	0.0376594	0.009248	7.27447E-09	0.08969	0.144048	0.002398	8.77E-05	0.440517	0.00084	0.71217	0.061301	0.901	0.537	0.995	0.999	0.787	0.998	0.741	0.916
rs113439968	3.9336E-09	0.0334392	0.00568	0.0337039	0.006581	7.27551E-09	0.01146	0.082243	0.011618	0.274683	0.284054	5.3E-06	0.0824	0.376246	0.956	0.925	0.97	0.761	0.876	1	0.941	0.871
rs10889160	3.935E-09	0.03814	0.00648	0.0376592	0.009248	7.27802E-09	0.08969	0.144053	0.002396	8.77E-05	0.440472	0.00084	0.71213	0.061301	0.901	0.537	0.995	0.999	0.787	0.998	0.741	0.916
rs117399779	3.9372E-09	-0.076302	0.01296	-0.076302	0.012962	7.28103E-09	0.086	0.136507	0.043193	0.002468	0.386136	2.2E-05	0.06447	0.992526	0.921	0.908	0.858	0.996	0.835	1	0.946	0.766
rs6721370	3.9395E-09	0.0298966	0.00508	0.0306838	0.005852	7.28617E-09	0.36662	0.019301	0.008494	0.005332	0.11283	0.00073	0.86411	0.00559	0.892	0.957	0.988	0.995	0.946	0.999	0.789	0.973
rs3012031	3.9398E-09	0.0313024	0.00532	0.0313024	0.005317	7.28654E-09	0.34393	0.632521	3.97E-06	0.083841	0.412321	0.01274	0.03234	0.083144	0.88	0.843	1	0.93	0.845	0.967	0.963	0.931
rs113512179	3.9399E-09	-0.036897	0.00627	-0.037613	0.009824	6.69897E-09	0.41604	0.847905	0.007535	1.26E-05	0.83335	0.00138	0.00238	0.684392	0.817	0.694	0.973	1	0.505	0.995	0.98	0.765
rs1441425	3.9413E-09	-0.036896	0.00627	-0.037614	0.00983	6.6901E-09	0.41672	0.848089	0.007524	1.25E-05	0.832771	0.00139	0.00237	0.683747	0.817	0.694	0.973	1	0.505	0.995	0.98	0.765
rs71537699	3.9425E-09	-0.034509	0.00586	-0.044189	0.011558	7.19199E-10	0.79697	0.043065	0.019791	5.31E-06	3.92E-05	0.07721	0.31548	0.250651	0.517	0.886	0.379	1	0.999	0.256	0.587	0.72
rs111391726	3.9464E-09	-0.033324	0.00566	-0.036552	0.008709	7.29872E-09	0.00488	0.374206	0.008402	0.003787	0.850481	0.00093	0.00088	0.721449	0.965	0.875	0.984	0.995	0.711	0.998	0.99	0.825
rs73077107	3.9516E-09	-0.035762	0.00608	-0.035762	0.006075	7.30806E-09	0.62378	0.101486	0.003899	0.095486	0.036349	4.6E-06	0.72432	0.448768	0.697	0.905	0.991	0.901	0.96	1	0.759	0.838
rs6718998	3.9539E-09	0.0371461	0.00631	0.0385923	0.007544	7.31211E-09	0.00914	0.664137	0.000418	0.005035	0.003232	0.02072	0.85946	0.20907	0.963	0.845	0.999	0.995	0.991	0.946	0.774	0.908
rs1441428	3.9549E-09	-0.036889	0.00627	-0.037614	0.00986	6.65503E-09	0.4196	0.846924	0.00751	1.21E-05	0.830154	0.00142	0.00233	0.680328	0.816	0.694	0.973	1	0.503	0.994	0.98	0.766
rs9295421	3.9599E-09	0.0318335	0.00541	0.0337777	0.008051	4.66608E-09	0.13993	0.945278	0.014979	7.99E-07	0.371292	0.00527	0.60363	0.037125	0.905	0.786	0.957	1	0.841	0.979	0.804	0.941
rs4690731	3.965E-09	-0.03689	0.00627	-0.037607	0.009829	6.73488E-09	0.41688	0.847469	0.007527	1.26E-05	0.832588	0.00139	0.00237	0.683383	0.817	0.694	0.973	1	0.505	0.995	0.98	0.765
rs1621023	3.9678E-09	-0.0297	0.00505	-0.0297	0.005046	7.33728E-09	0.02979	0.220706	0.00026	0.094212	0.143441	0.0019	0.01928	0.991001	0.951	0.909	1	0.933	0.935	0.997	0.973	0.807
rs6711601	3.9746E-09	0.0298888	0.00508	0.0306735	0.00585	7.34958E-09	0.3676	0.019302	0.0085	0.005377	0.112784	0.00073	0.86414	0.00559	0.892	0.957	0.988	0.995	0.946	0.999	0.789	0.973
rs593994	3.9747E-09	0.029736	0.00505	0.029736	0.005053	7.3497E-09	0.41906	0.837184	0.000344	0.005613	0.082534	0.00199	0.24578	0.339308	0.871	0.778	0.999	0.994	0.949	0.997	0.901	0.883
rs28525561	3.9773E-09	0.0298882	0.00508	0.0306738	0.005852	7.35438E-09	0.36756	0.019303	0.008505	0.005378	0.112771	0.00073	0.8648	0.005591	0.892	0.957	0.988	0.995	0.946	0.999	0.789	0.972
rs9807005	3.9773E-09	-0.032354	0.0055	-0.040242	0.010287	4.36682E-09	0.72421	0.030747	0.001704	0.000121	0.334764	0.07149	0.00655	0.001599	0.696	0.94	0.985	0.999	0.821	0.654	0.98	0.976
rs11505847	3.9778E-09	0.0328376	0.00558	0.0316978	0.009081	7.35539E-09	0.03102	0.081839	0.000121	0.274706	0.005439	0.00022	0.13256	0.981326	0.916	0.434	1	0.644	0.981	0.999	0.887	0.679
rs3130018	3.9788E-09	0.0296236	0.00503	0.028878	0.005715	7.35718E-09	0.31439	0.77239	0.000464	0.000191	0.806865	0.00019	0.90626	0.281408	0.498	0.696	0.998	0.999	0.56	0.999	0.596	0.799
rs17016873	3.983E-09	-0.036883	0.00627	-0.037603	0.009836	6.75921E-09	0.41881	0.847317	0.007499	1.26E-05	0.831551	0.0014	0.00234	0.681704	0.816	0.694	0.973	1	0.504	0.995	0.98	0.766
rs7191463	3.9859E-09	0.0364842	0.0062	0.0364842	0.0062	7.36995E-09	0.2255	0.043933	0.00346	0.032613	0.020847	0.00046	0.3033	0.615416	0.914	0.948	0.996	0.978	0.98	0.999	0.904	0.865
rs331951	3.9879E-09	-0.033314	0.00566	-0.036534	0.008703	7.37361E-09	0.0049	0.374891	0.008419	0.003804	0.850325	0.00093	0.00088	0.721002	0.965	0.875	0.984	0.995	0.711	0.998	0.99	0.825
rs13091395	3.9884E-09	-0.070518	0.01198	-0.069877	0.014867	7.37441E-09	0.03339	0.096407	0.000435	0.75133	0.053854	1.8E-05	0.23232	0.984958	0.917	0.885	0.999	0.258	0.937	1	0.843	0.662

Table S3

rs113691886	3.9899E-09	0.0565885	0.00962	0.0623087	0.013849	7.37717E-09	0.74917	0.013048	0.002104	0.002194	0.000517	0.02165	0.10597	0.743269	0.768	0.957	0.997	0.997	0.996	0.946	0.94	0.832
rs760587	3.99E-09	-0.03777	0.00642	-0.03777	0.006419	7.3774E-09	0.90506	0.227254	0.000783	0.003478	0.130024	0.0135	0.06457	0.004506	0.835	0.914	0.999	0.996	0.943	0.975	0.958	0.974
rs150979916	3.9935E-09	-0.0372	0.00632	-0.044037	0.010435	7.38367E-09	0.10261	0.544402	0.007883	0.001729	0.014232	0.01131	0.06583	0.00056	0.935	0.758	0.988	0.998	0.984	0.978	0.958	0.984
rs62399870	3.9973E-09	-0.042868	0.00729	-0.042868	0.007285	7.39058E-09	0.91359	0.929607	0.003244	0.001522	0.03801	0.00041	0.23881	0.50496	0.77	0.773	0.995	0.997	0.964	0.999	0.894	0.847
rs7115678	4.0011E-09	0.0345923	0.00588	0.0353969	0.009646	4.35571E-09	0.02141	0.215602	0.000404	0.792406	0.380453	4.8E-06	0.18823	0.030821	0.927	0.837	0.998	0.071	0.726	1	0.852	0.924
rs2036825	4.0128E-09	-0.031527	0.00536	-0.031527	0.005358	7.41849E-09	0.19585	0.060394	0.000962	0.084552	0.107401	0.00038	0.31534	0.222036	0.916	0.942	0.999	0.944	0.948	1	0.9	0.915
rs10959536	4.0138E-09	-0.037689	0.00641	-0.037689	0.006406	7.42024E-09	0.12133	0.451963	0.002609	0.015052	0.020149	0.00753	0.06816	0.014006	0.938	0.898	0.997	0.99	0.983	0.99	0.962	0.97
rs10959538	4.0147E-09	-0.037688	0.00641	-0.037688	0.006406	7.42197E-09	0.13156	0.45169	0.002609	0.014633	0.020171	0.0075	0.06798	0.013967	0.937	0.897	0.997	0.991	0.983	0.99	0.962	0.97
rs146850210	4.0155E-09	0.0571424	0.00971	0.0571424	0.009712	7.42346E-09	0.46935	0.524548	0.00053	0.021324	0.129993	0.0013	0.09498	0.218678	0.879	0.873	0.999	0.984	0.94	0.998	0.946	0.913
rs1530293	4.0162E-09	0.0297225	0.00505	0.0315493	0.007443	5.02859E-09	0.68514	0.456127	4.73E-06	0.021479	0.01564	0.08933	0.00196	0.652059	0.619	0.792	1	0.953	0.971	0.504	0.984	0.745
rs12715403	4.0167E-09	0.0313061	0.00532	0.0313061	0.005321	7.42561E-09	0.67506	0.34364	0.00434	0.062749	0.898296	1.2E-06	0.02454	0.683165	0.663	0.829	0.986	0.917	0.608	1	0.951	0.766
rs76028698	4.0201E-09	-0.048074	0.00817	-0.048911	0.008674	6.63003E-09	0.0708	0.150667	0.00359	1.59E-05	0.227035	0.02654	0.13388	0.339717	0.939	0.922	0.993	1	0.911	0.93	0.937	0.895
rs174578	4.0241E-09	0.0300023	0.0051	0.0321017	0.008101	7.43897E-09	0.1033	0.496988	0.012642	0.160064	2.93E-05	6.9E-05	0.25245	0.337558	0.911	0.688	0.964	0.844	0.998	1	0.883	0.866
rs2209517	4.0342E-09	0.0530781	0.00902	0.0530781	0.009023	7.4571E-09	0.43973	0.86239	0.004309	0.000149	0.056846	0.00322	0.10033	0.753043	0.872	0.82	0.994	0.999	0.96	0.995	0.941	0.829
rs73072380	4.0369E-09	-0.042289	0.00719	-0.042289	0.007189	7.46205E-09	0.6717	0.378855	0.000134	0.29845	0.138402	3.1E-05	0.3458	0.163775	0.657	0.822	1	0.651	0.892	1	0.821	0.873
rs138923574	4.0401E-09	0.0412993	0.00702	0.040216	0.008895	7.46788E-09	0.70924	0.701317	0.018261	0.000565	0.238954	1.1E-05	0.95914	0.026214	0.656	0.659	0.923	0.998	0.84	1	0.624	0.926
rs10010791	4.0404E-09	0.0358784	0.0061	0.0365675	0.007878	7.46836E-09	0.69324	0.179256	0.018256	0.005069	0.486883	7.4E-05	0.00053	0.756604	0.723	0.893	0.952	0.993	0.801	1	0.99	0.799
rs7191441	4.0414E-09	0.0364682	0.0062	0.0364682	0.006199	7.47011E-09	0.22537	0.043715	0.003481	0.032705	0.020913	0.00046	0.30455	0.615221	0.914	0.948	0.996	0.978	0.979	0.999	0.904	0.865
rs10786829	4.0421E-09	-0.031028	0.00527	-0.03185	0.006066	7.47148E-09	0.24719	0.033739	0.008992	0.325371	0.011471	0.0001	0.00917	0.438862	0.897	0.946	0.98	0.73	0.983	1	0.979	0.869
rs117458287	4.0469E-09	-0.070477	0.01198	-0.069876	0.015275	7.47213E-09	0.03015	0.090056	0.000495	0.75677	0.053075	1.6E-05	0.23662	0.960525	0.92	0.887	0.998	0.254	0.937	1	0.841	0.655
rs1767672	4.0488E-09	-0.030912	0.00526	-0.031628	0.006234	5.90882E-09	0.29126	0.805436	0.115177	0.000419	0.005695	3E-05	0.83365	0.205101	0.82	0.71	0.467	0.999	0.982	1	0.62	0.846
rs9633830	4.0519E-09	0.0307223	0.00522	0.0307223	0.005223	7.4891E-09	0.75946	0.220954	0.000685	9.89E-05	0.811768	0.00552	0.0279	0.939306	0.796	0.879	0.999	0.999	0.686	0.985	0.958	0.762
rs35129870	4.0569E-09	0.0307221	0.00522	0.0307221	0.005223	7.49817E-09	0.76138	0.220982	0.000687	9.85E-05	0.811522	0.00552	0.02789	0.93928	0.795	0.879	0.999	0.999	0.686	0.985	0.958	0.762
rs4886001	4.0631E-09	-0.029934	0.00509	-0.029934	0.005089	7.50936E-09	0.03071	0.200227	0.00066	0.032575	0.088078	0.00485	0.1169	0.139061	0.958	0.925	0.999	0.98	0.96	0.994	0.949	0.936
rs9537582	4.0656E-09	-0.029936	0.00509	-0.029936	0.00509	7.5138E-09	0.0317	0.200663	0.000656	0.033588	0.087307	0.00472	0.1175	0.138936	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs2046377	4.066E-09	0.0311576	0.0053	0.0311576	0.005298	7.51445E-09	0.64336	0.40144	0.000676	0.000164	0.571476	0.00454	0.02787	0.827766	0.818	0.852	0.999	0.999	0.772	0.99	0.959	0.731
rs1942484	4.0704E-09	0.0304992	0.00519	0.0345215	0.010321	3.37768E-09	0.93659	0.248764	0.000954	0.009804	1.02E-06	0.02607	0.03973	0.319223	0.766	0.602	0.995	0.986	0.999	0.89	0.951	0.861
rs4646627	4.073E-09	0.0296556	0.00504	0.0324723	0.008834	3.34239E-09	0.38435	0.349997	2.39E-06	0.030033	0.017956	0.12327	0.00056	0.459936	0.461	0.78	1	0.903	0.963	0.303	0.99	0.745
rs35619282	4.0741E-09	-0.03011	0.00512	-0.03011	0.00512	7.52923E-09	0.88131	0.180159	0.050199	0.003996	0.123735	5E-05	0.02266	0.171234	0.775	0.906	0.859	0.995	0.933	1	0.969	0.911
rs174581	4.0796E-09	0.0300186	0.0051	0.0320353	0.008251	7.53911E-09	0.13418	0.427605	0.011265	0.132486	1.87E-05	9.3E-05	0.25716	0.396499	0.903	0.673	0.97	0.871	0.998	1	0.882	0.856
rs11718980	4.0812E-09	0.0313202	0.00533	0.0313202	0.005326	7.54202E-09	0.30376	0.6761	0.002835	0.22763	0.284135	1.5E-05	0.02229	0.027226	0.869	0.717	0.994	0.78	0.863	1	0.964	0.944
rs148000660	4.0816E-09	-0.042276	0.00719	-0.042276	0.007189	7.54264E-09	0.67074	0.378855	0.000133	0.300454	0.138391	3.1E-05	0.34579	0.163775	0.656	0.821	1	0.649	0.892	1	0.821	0.872
rs199625944	4.0832E-09	0.0345959	0.00588	0.0359174	0.00786	5.56355E-09	0.46739	0.777743	0.089604	0.083474	0.005288	2.1E-06	0.05767	0.05516	0.808	0.674	0.603	0.849	0.985	1	0.935	0.92
rs2352496	4.0881E-09	0.0530461	0.00902	0.0530461	0.009021	7.55437E-09	0.44136	0.865844	0.004321	0.000152	0.056634	0.00322	0.09968	0.752948	0.872	0.82	0.994	0.999	0.96	0.995	0.941	0.829
rs7932703	4.0928E-09	0.0307226	0.00522	0.0307226	0.005225	7.56289E-09	0.74625	0.222393	0.000675	0.000103	0.792996	0.00577	0.02634	0.959022	0.798	0.879	0.999	0.999	0.694	0.985	0.959	0.76
rs12918721	4.0935E-09	-0.037148	0.00632	-0.042977	0.009861	7.56424E-09	0.13399	0.619449	0.006792	0.002419	0.011667	0.01028	0.07756	0.000756	0.929	0.773	0.991	0.997	0.985	0.981	0.955	0.983
rs3113593	4.0939E-09	-0.033289	0.00566	-0.036504	0.008703	7.56482E-09	0.00488	0.375725	0.008417	0.003925	0.851038	0.00093	0.00088	0.72126	0.965	0.875	0.984	0.995	0.711	0.998	0.99	0.825
rs75603022	4.0949E-09	0.0624935	0.01063	0.0642528	0.014254	7.56673E-09	0.75668	0.932212	0.000159	0.321469	0.253689	0.00101	0.00193	0.008159	0.798	0.774	1	0.699	0.871	0.998	0.986	0.961
rs9537575	4.0971E-09	-0.029932	0.00509	-0.029932	0.00509	7.57065E-09	0.03138	0.199799	0.000658	0.032822	0.088751	0.00482	0.11693	0.139177	0.958	0.925	0.999	0.98	0.959	0.994	0.949	0.936
rs11393042	4.0979E-09	-0.029927	0.00509	-0.029927	0.005089	7.57218E-09	0.03199	0.200164	0.000659	0.032481	0.088079	0.00485	0.11702	0.138955	0.957	0.925	0.999	0.98	0.96	0.994	0.949	0.936
rs6795322	4.1001E-09	0.0312972	0.00532	0.0312972	0.005323	7.57606E-09	0.63836	0.42475	0.004713	0.059167	0.744462	1.6E-06	0.02349	0.632521	0.671	0.823	0.986	0.927	0.677	1	0.954	0.786
rs174554	4.1003E-09	0.0300037	0.0051	0.0322154	0.008749	7.57649E-09	0.10439	0.337971	0.011843	0.156898	1.42E-05	7.3E-05	0.26971	0.369982	0.906	0.636	0.964	0.837	0.998	1	0.872	0.853
rs79895410	4.1016E-09	0.0656523	0.01117	0.0628123	0.013603	6.40912E-09	0.22944	0.212711	9.81E-05	0.738796	0.941827	3.3E-06	0.09145	0.642027	0.781	0.786	0.999	0.19	0.414	1	0.866	0.661
rs1881915	4.1022E-09	0.0309728	0.00527	0.0300539	0.006104	7.43666E-09	0.64863	0.350456	0.004876	0.078278	0.826815	5.6E-07	0.02041	0.994378	0.641	0.816	0.981	0.888	0.615	1	0.951	0.695
rs6441850	4.1034E-09	0.0309726	0.00527	0.0300537	0.006104	7.43887E-09	0.64863	0.350461	0.004877	0.078275	0.826827	5.6E-07	0.02041	0.994395	0.641	0.816	0.981	0.888	0.615	1	0.951	0.695
rs79021989	4.1034E-09	-0.073354	0.01248	-0.073354	0.012475	7.58207E-09	0.21772	0.011283	0.000999	0.007687	0.028923	0.00626	0.19079	0.974415	0.915	0.963	0.999	0.993	0.976	0.991	0.927	0.819
rs1968876	4.1056E-09	0.0298625	0.00508	0.0306585	0.005858	7.58601E-09	0.36636	0.019351	0.008812	0.005462	0.109762	0.00072	0.86679	0.005643	0.892	0.957	0.987	0.995	0.947	0.999	0.789	0.972
rs7739915	4.1086E-09	-0.053163	0.00904	-0.0569	0.014335	7.59138E-09	0.02893	0.814213	0.00062	0.003328	0.795703	0.00382	0.04018	0.002823	0.939	0.737	0.999	0.995	0.551	0.991	0.955	0.968
rs2237234	4.1114E-09	-0.032449	0.00552	-0.032449	0.005519	7.59645E-09	0.54939	0.654518	0.000297	0.010134	0.514013	0.00169	0.08934	0.065395	0.856	0.844	1	0.99	0.821	0.998	0.942	0.937
rs10838774	4.1127E-09	0.0307093	0.00522	0.0307093	0.005223	7.59877E-09	0.75955	0.220982	0.000692	9.88E-05	0.812204	0.00554	0.02793	0.93928	0.795	0.879	0.999	0.999	0.686	0.985	0.958	0.762
rs13144360	4.113E-09	-0.030105	0.00512	-0.030105	0.00512	7.59926E-09	0.88112	0.180873	0.050642	0.003993	0.126457	4.9E-05	0.0228	0.169999	0.775	0.905	0.857	0.995	0.932	1	0.968	0.911
rs76965115	4.115E-09	0.0655768	0.01115	0.0627602	0.013496	6.41973E-09	0.24727	0.196262	0.000106	0.727808	0.932931	2.8E-06	0.10354	0.666411	0.774	0.79	0.999	0.195	0.417	1	0.856	0.654
rs35682749	4.116E-09	0.0307112	0.00522	0.0307112	0.005223	7.60467E-09	0.75946	0.213772	0.000687	9.89E-05	0.815567	0.00559	0.02785	0.947362	0.795	0.88	0.999	0.999	0.685	0.985	0.958	0.76
rs4850364	4.1194E-09	0.0419659	0.00714	0.0419659	0.007138	7.61081E-09	0.29287	0.245804	0.00051	0.016843	0.006971	0.01419	0.01307	0.925271	0.903	0.909	0.999	0.987	0.988	0.973	0.978	0.823
rs2869534	4.1199E-09	0.030705	0.00522	0.030705	0.005223	7.61172E-09	0.78289	0.219104	0.000706	9.26E-05	0.803856	0.00565	0.0281	0.931854	0.792	0.879	0.999	0.999	0.689	0.985	0.958	0.763

Table S3

rs6724210	4.121E-09	-0.030877	0.00525	-0.031375	0.005827	7.61381E-09	0.66086	0.038505	0.010996	0.02472	0.052996	0.00028	0.00259	0.650923	0.761	0.946	0.982	0.981	0.964	1	0.987	0.848
rs61824833	4.122E-09	0.0305226	0.00519	0.0306435	0.005398	7.61555E-09	0.94647	0.03988	0.001726	0.016143	0.01603	0.0012	0.02651	0.387346	0.799	0.94	0.998	0.985	0.979	0.998	0.966	0.664
rs11039415	4.1233E-09	0.0307239	0.00523	0.0307239	0.005226	7.61798E-09	0.75945	0.223647	0.000672	9.88E-05	0.799278	0.00581	0.02747	0.943515	0.796	0.878	0.999	0.999	0.691	0.985	0.958	0.762
rs2170815	4.1239E-09	0.0307044	0.00522	0.0307044	0.005223	7.61905E-09	0.80631	0.251014	0.000778	0.000105	0.762545	0.00455	0.03032	0.969315	0.789	0.873	0.999	0.999	0.703	0.989	0.956	0.757
rs990211	4.1242E-09	-0.038427	0.00654	-0.038427	0.006536	7.61953E-09	0.8248	0.099462	0.010119	0.003232	0.025977	0.00024	0.49249	0.464435	0.827	0.926	0.984	0.996	0.974	1	0.853	0.87
rs8053623	4.1254E-09	0.0333931	0.00568	0.0336645	0.006604	7.62171E-09	0.01154	0.082306	0.011657	0.280981	0.284926	5.3E-06	0.0823	0.375991	0.956	0.924	0.969	0.755	0.875	1	0.941	0.87
rs10959537	4.1259E-09	-0.037658	0.00641	-0.037658	0.006406	7.62265E-09	0.1307	0.451985	0.002597	0.01512	0.02017	0.00752	0.06815	0.01402	0.937	0.897	0.998	0.99	0.983	0.99	0.962	0.97
rs76561045	4.126E-09	0.0596486	0.01015	0.0632401	0.014549	7.62277E-09	0.12691	0.165127	0.007789	0.020705	0.003137	0.00055	0.07022	0.037072	0.593	0.909	0.987	0.982	0.99	0.999	0.948	0.947
rs77989957	4.1265E-09	0.0327468	0.00557	0.0327468	0.00557	7.62375E-09	0.27578	0.283122	0.017947	0.004849	0.003567	0.00013	0.25015	0.366997	0.882	0.881	0.958	0.994	0.989	1	0.891	0.646
rs1402753	4.1281E-09	0.0312835	0.00532	0.0312835	0.005321	7.62661E-09	0.66009	0.338703	0.004266	0.061769	0.911125	1.3E-06	0.02351	0.680348	0.66	0.829	0.986	0.918	0.603	1	0.951	0.766
rs13334169	4.1302E-09	0.0655676	0.01115	0.0627511	0.013495	6.44661E-09	0.2474	0.196065	0.000107	0.726913	0.933954	2.8E-06	0.10348	0.667823	0.774	0.791	0.999	0.195	0.417	1	0.856	0.653
rs1952992	4.1311E-09	0.0299194	0.00509	0.0299194	0.005089	7.63207E-09	0.03134	0.200305	0.000663	0.03295	0.087864	0.00484	0.11663	0.139354	0.958	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs1443187	4.1338E-09	0.0332875	0.00566	0.036351	0.008566	7.63682E-09	0.00515	0.386684	0.008713	0.003693	0.826476	0.00093	0.00101	0.714556	0.964	0.874	0.984	0.995	0.72	0.998	0.989	0.827
rs1999801	4.1365E-09	-0.029918	0.00509	-0.029918	0.005089	7.64175E-09	0.03199	0.200314	0.000659	0.032777	0.08806	0.00485	0.11701	0.138949	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs6907236	4.1379E-09	0.0308869	0.00525	0.0308869	0.005254	7.6443E-09	0.91901	0.762694	0.003194	0.028154	0.002167	0.00033	0.09783	0.688407	0.783	0.825	0.995	0.976	0.991	0.999	0.938	0.83
rs67762330	4.1382E-09	0.0419607	0.00714	0.0419607	0.007138	7.64473E-09	0.29248	0.245767	0.000511	0.016868	0.006965	0.0142	0.01308	0.925219	0.903	0.909	0.999	0.987	0.988	0.973	0.978	0.823
rs2777625	4.1389E-09	0.0299284	0.00509	0.0299284	0.005091	7.64608E-09	0.03176	0.199473	0.000641	0.033589	0.088771	0.00487	0.11685	0.137904	0.957	0.925	0.999	0.98	0.959	0.994	0.949	0.937
rs13074938	4.1395E-09	0.0313984	0.00534	0.030837	0.00587	7.64723E-09	0.67001	0.409545	0.003382	0.088378	0.842693	1.1E-06	0.0147	0.837822	0.648	0.808	0.988	0.875	0.615	1	0.958	0.728
rs9527589	4.1438E-09	-0.029931	0.00509	-0.029931	0.005092	7.65497E-09	0.0317	0.201185	0.000663	0.032836	0.087202	0.00484	0.11737	0.139427	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs9537576	4.1445E-09	-0.029917	0.00509	-0.029917	0.005089	7.65608E-09	0.03121	0.200227	0.00066	0.033071	0.088078	0.00485	0.1169	0.139061	0.958	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs6765468	4.1478E-09	0.0310087	0.00528	0.0300632	0.006135	7.58452E-09	0.50652	0.338053	0.005525	0.053958	0.809805	6.3E-07	0.02648	0.962803	0.614	0.821	0.979	0.922	0.624	1	0.946	0.703
rs11039402	4.151E-09	0.0307072	0.00522	0.0307072	0.005224	7.66783E-09	0.75091	0.209625	0.000699	0.000102	0.801381	0.00565	0.02837	0.941948	0.798	0.882	0.999	0.999	0.691	0.985	0.958	0.763
rs34815312	4.1517E-09	-0.045119	0.00768	-0.045119	0.007676	7.66907E-09	0.68463	0.146417	0.004988	0.000754	0.069285	0.00794	0.04487	0.092673	0.866	0.929	0.994	0.999	0.964	0.988	0.966	0.943
rs6456236	4.1527E-09	0.0318016	0.00541	0.0337529	0.008049	4.91523E-09	0.13908	0.948815	0.015211	8.37E-07	0.368546	0.00534	0.60555	0.036622	0.905	0.786	0.956	1	0.842	0.979	0.804	0.941
rs6485778	4.1536E-09	0.0306979	0.00522	0.0306979	0.005223	7.67265E-09	0.74657	0.217854	0.000698	0.000103	0.811335	0.00558	0.02785	0.930366	0.798	0.88	0.999	0.999	0.687	0.985	0.958	0.764
rs7929014	4.155E-09	0.0306975	0.00522	0.0306975	0.005223	7.67514E-09	0.74616	0.217854	0.000698	0.000103	0.811333	0.00558	0.02785	0.930364	0.798	0.88	0.999	0.999	0.688	0.985	0.958	0.764
rs7102205	4.1551E-09	0.0306975	0.00522	0.0306975	0.005223	7.67527E-09	0.78303	0.219104	0.000708	9.27E-05	0.80412	0.00567	0.02813	0.931853	0.792	0.879	0.999	0.999	0.689	0.985	0.958	0.763
rs10838751	4.1555E-09	0.0306974	0.00522	0.0306974	0.005223	7.67591E-09	0.783	0.219104	0.000708	9.27E-05	0.804124	0.00567	0.02813	0.931853	0.792	0.879	0.999	0.999	0.689	0.985	0.958	0.763
rs17324276	4.1565E-09	-0.07152	0.01217	-0.07152	0.012168	7.67786E-09	0.25165	0.45259	0.001922	0.037359	0.242267	0.00023	0.13496	0.101024	0.907	0.882	0.998	0.974	0.909	1	0.937	0.936
rs141227745	4.1567E-09	0.0596077	0.01014	0.0633159	0.014763	7.67817E-09	0.12424	0.15419	0.007669	0.025801	0.002615	0.00049	0.07494	0.037062	0.591	0.911	0.987	0.978	0.991	0.999	0.946	0.947
rs7108479	4.1567E-09	0.0306971	0.00522	0.0306971	0.005223	7.67822E-09	0.74617	0.217854	0.000698	0.000103	0.811334	0.00558	0.02785	0.930366	0.798	0.88	0.999	0.999	0.688	0.985	0.958	0.764
rs754434	4.1584E-09	0.0307025	0.00522	0.0307025	0.005224	7.68124E-09	0.74641	0.213772	0.000687	0.000103	0.815567	0.00559	0.02785	0.947362	0.798	0.88	0.999	0.999	0.685	0.985	0.958	0.761
rs10865313	4.1591E-09	0.032072	0.00546	0.0326471	0.005835	7.68242E-09	0.12709	0.0341	0.014393	0.038124	0.001892	0.00094	0.04009	0.840146	0.933	0.954	0.979	0.976	0.993	0.999	0.968	0.843
rs143896067	4.1593E-09	-0.029693	0.00505	-0.031523	0.007445	5.19818E-09	0.68455	0.456177	4.8E-06	0.021563	0.015703	0.09017	0.00197	0.652467	0.618	0.792	1	0.953	0.971	0.501	0.984	0.744
rs12225854	4.1615E-09	0.0307028	0.00522	0.0307028	0.005224	7.68679E-09	0.74925	0.213665	0.000689	0.000101	0.815523	0.0056	0.02785	0.947303	0.797	0.88	0.999	0.999	0.685	0.985	0.958	0.76
rs75850040	4.1648E-09	0.0412064	0.00701	0.0407595	0.008055	7.69269E-09	0.72506	0.838489	0.018582	0.000428	0.254911	1.7E-05	0.9364	0.031992	0.673	0.698	0.929	0.998	0.842	1	0.668	0.926
rs4916431	4.1666E-09	0.0313066	0.00533	0.0313066	0.005327	7.69603E-09	0.30445	0.673879	0.002819	0.227692	0.286755	1.5E-05	0.02245	0.027586	0.869	0.716	0.994	0.78	0.862	1	0.963	0.944
rs17599080	4.1676E-09	0.030516	0.00519	0.0307193	0.005556	7.69788E-09	0.91694	0.038885	0.001767	0.016957	0.016229	0.0011	0.02671	0.351995	0.802	0.94	0.997	0.985	0.978	0.998	0.965	0.652
rs11039401	4.1687E-09	0.0307005	0.00522	0.0307005	0.005224	7.69989E-09	0.75091	0.213772	0.000687	0.000102	0.815567	0.00559	0.02785	0.947362	0.797	0.88	0.999	0.999	0.685	0.985	0.958	0.76
rs2904127	4.1687E-09	0.0307005	0.00522	0.0307005	0.005224	7.69989E-09	0.75091	0.213772	0.000687	0.000102	0.815567	0.00559	0.02785	0.947362	0.797	0.88	0.999	0.999	0.685	0.985	0.958	0.76
rs7112248	4.1687E-09	0.0307005	0.00522	0.0307005	0.005224	7.69989E-09	0.75091	0.213772	0.000687	0.000102	0.815567	0.00559	0.02785	0.947362	0.797	0.88	0.999	0.999	0.685	0.985	0.958	0.76
rs174580	4.1695E-09	0.0299394	0.00509	0.0322279	0.008455	7.70123E-09	0.13477	0.431301	0.012221	0.159733	1.43E-05	8.4E-05	0.22853	0.360662	0.901	0.668	0.964	0.841	0.998	1	0.887	0.859
rs67391420	4.172E-09	-0.037143	0.00632	-0.043191	0.009951	7.7057E-09	0.12876	0.640511	0.006984	0.002366	0.013164	0.01069	0.07311	0.000645	0.93	0.777	0.99	0.997	0.984	0.981	0.956	0.983
rs11712337	4.1721E-09	0.031275	0.00532	0.031275	0.005321	7.70592E-09	0.65991	0.342475	0.004127	0.062515	0.906521	1.4E-06	0.0242	0.654085	0.661	0.829	0.987	0.918	0.606	1	0.951	0.772
rs13089400	4.1739E-09	0.0312747	0.00532	0.0312747	0.005321	7.7092E-09	0.65991	0.342471	0.004127	0.062543	0.906509	1.4E-06	0.0242	0.654075	0.661	0.829	0.987	0.918	0.606	1	0.951	0.772
rs7649387	4.1743E-09	0.0312745	0.00532	0.0312745	0.005321	7.70999E-09	0.66017	0.342463	0.004132	0.062521	0.906581	1.4E-06	0.02419	0.654057	0.661	0.829	0.987	0.918	0.606	1	0.951	0.772
rs16840084	4.1754E-09	0.0419502	0.00714	0.0419502	0.007138	7.71185E-09	0.29204	0.245971	0.000513	0.016903	0.00697	0.01423	0.01309	0.925908	0.903	0.909	0.999	0.987	0.988	0.973	0.978	0.823
rs790331	4.1757E-09	0.0299107	0.00509	0.0299107	0.005089	7.71247E-09	0.0315	0.200225	0.000661	0.033204	0.088061	0.00485	0.11693	0.139069	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs28689569	4.1764E-09	-0.036843	0.00627	-0.037562	0.009807	7.08812E-09	0.41748	0.867793	0.008152	1.3E-05	0.836529	0.00131	0.00238	0.705675	0.816	0.698	0.97	1	0.507	0.995	0.98	0.761
rs4520719	4.1775E-09	-0.02991	0.00509	-0.02991	0.005089	7.71571E-09	0.03175	0.199485	0.000672	0.033579	0.086395	0.00478	0.11732	0.139201	0.957	0.925	0.999	0.98	0.96	0.994	0.949	0.936
rs72787018	4.1827E-09	0.0364254	0.0062	0.0364254	0.006198	7.72509E-09	0.21684	0.043176	0.003526	0.031754	0.02106	0.00051	0.30029	0.592667	0.915	0.948	0.996	0.979	0.98	0.999	0.905	0.868
rs10511563	4.1842E-09	-0.035147	0.00598	-0.035554	0.006587	7.72779E-09	0.59842	0.212842	8.23E-05	0.002397	0.462781	0.019	0.05666	0.014944	0.723	0.896	1	0.996	0.821	0.941	0.951	0.957
rs2356742	4.1882E-09	0.0538734	0.00917	0.0538734	0.009167	7.73505E-09	0.03243	0.383388	0.004065	0.009598	0.096492	0.00068	0.77672	0.030682	0.951	0.89	0.995	0.992	0.951	0.999	0.811	0.955
rs62086897	4.1893E-09	0.0347539	0.00591	0.0350059	0.009379	7.73687E-09	0.41572	0.018208	0.000365	0.170369	0.783047	0.00011	0.15505	0.003032	0.627	0.937	0.999	0.805	0.669	1	0.897	0.966
rs68156774	4.1903E-09	0.0299071	0.00509	0.0299071	0.005089	7.73878E-09	0.03139	0.200155	0.000662	0.033515	0.087846	0.00483	0.11672	0.13926	0.958	0.924	0.999	0.98	0.96	0.994	0.949	0.936

Table S3

rs174574	4.1938E-09	-0.029973	0.0051	-0.031937	0.007992	7.74512E-09	0.09922	0.486226	0.011229	0.15785	3.54E-05	7.8E-05	0.25937	0.347026	0.913	0.687	0.97	0.848	0.998	1	0.882	0.865
rs6561913	4.202E-09	-0.029905	0.00509	-0.029905	0.005089	7.75986E-09	0.03164	0.200317	0.00066	0.033363	0.088043	0.00485	0.11703	0.139036	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs281244	4.2028E-09	-0.032957	0.00561	-0.032957	0.005609	7.76129E-09	0.86619	0.617911	0.000464	0.000207	0.483376	0.00115	0.34224	0.447767	0.76	0.677	0.999	0.999	0.774	0.997	0.837	0.822
rs11222295	4.2054E-09	0.0344975	0.00587	0.0353748	0.00972	4.379E-09	0.02019	0.210654	0.000422	0.776166	0.379454	4.5E-06	0.19266	0.031551	0.928	0.838	0.998	0.067	0.725	1	0.849	0.924
rs174577	4.2067E-09	0.0299632	0.0051	0.0320974	0.008119	7.76836E-09	0.1033	0.49607	0.012748	0.158964	2.79E-05	7.4E-05	0.25256	0.338147	0.911	0.688	0.964	0.845	0.998	1	0.883	0.866
rs9527585	4.2086E-09	-0.029904	0.00509	-0.029904	0.005089	7.77182E-09	0.03172	0.200326	0.000657	0.033614	0.087935	0.00485	0.1169	0.138957	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs112149509	4.2097E-09	0.0948898	0.01615	0.0977664	0.022727	7.35113E-09	0.06454	0.28387	4.23E-05	0.91558	0.072307	0.00074	0.00342	0.726478	0.902	0.835	1	0.203	0.928	0.997	0.982	0.74
rs9537570	4.2113E-09	-0.029903	0.00509	-0.029903	0.005089	7.77655E-09	0.03173	0.200164	0.000659	0.033461	0.088095	0.00485	0.11703	0.138956	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs66935095	4.2113E-09	0.0299051	0.00509	0.0299051	0.00509	7.7767E-09	0.03148	0.200659	0.000658	0.03387	0.0864	0.00485	0.11731	0.139552	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs9471244	4.2149E-09	0.0304362	0.00518	0.0312526	0.00616	6.53375E-09	0.12081	0.976549	0.105465	0.000383	0.005659	5.4E-05	0.68186	0.322072	0.881	0.7	0.534	0.999	0.983	1	0.694	0.826
rs6772216	4.2153E-09	0.0312718	0.00532	0.0312718	0.005322	7.78379E-09	0.65548	0.423528	0.004705	0.06015	0.745354	1.6E-06	0.02405	0.639495	0.675	0.824	0.987	0.926	0.677	1	0.953	0.785
rs8052739	4.2161E-09	0.033547	0.00571	0.0319853	0.007327	6.71518E-09	0.40263	0.537701	2.47E-07	0.01637	0.558552	0.01083	0.77545	0.077419	0.584	0.779	1	0.971	0.708	0.941	0.686	0.893
rs6706010	4.2177E-09	0.0385505	0.00656	0.0423986	0.00966	6.58233E-09	0.44303	0.90556	0.082754	0.071104	0.001134	2.3E-05	0.03051	0.021448	0.839	0.735	0.678	0.899	0.993	1	0.959	0.95
rs790327	4.2226E-09	0.0299008	0.00509	0.0299008	0.005089	7.797E-09	0.03167	0.200226	0.00066	0.033575	0.088036	0.00485	0.11691	0.139051	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs10461013	4.2263E-09	-0.030202	0.00514	-0.029509	0.007949	3.02445E-09	0.96456	0.059363	0.010473	0.878875	0.044966	7.9E-08	0.09442	0.516871	0.619	0.883	0.881	0.162	0.93	1	0.885	0.729
rs9527599	4.2269E-09	0.0298997	0.00509	0.0298997	0.005089	7.80471E-09	0.03126	0.200153	0.000662	0.033833	0.087796	0.00484	0.11663	0.139353	0.958	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs138134554	4.2273E-09	-0.0299	0.00509	-0.0299	0.005089	7.80541E-09	0.03175	0.200162	0.000659	0.0336	0.088078	0.00485	0.11702	0.138953	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs4267192	4.2273E-09	-0.0299	0.00509	-0.0299	0.005089	7.80541E-09	0.03175	0.200162	0.000659	0.0336	0.088078	0.00485	0.11702	0.138953	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs7326228	4.2278E-09	-0.0299	0.00509	-0.0299	0.005089	7.80644E-09	0.03175	0.200164	0.000659	0.033607	0.088079	0.00485	0.11702	0.138955	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs1929623	4.2281E-09	0.0298994	0.00509	0.0298994	0.005089	7.80685E-09	0.03126	0.200148	0.000662	0.033843	0.087816	0.00484	0.11662	0.139347	0.958	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs7334354	4.2287E-09	-0.0299	0.00509	-0.0299	0.005089	7.80803E-09	0.0317	0.200227	0.00066	0.033586	0.088078	0.00485	0.1169	0.139061	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs7334683	4.2287E-09	-0.0299	0.00509	-0.0299	0.005089	7.80803E-09	0.0317	0.200227	0.00066	0.033586	0.088078	0.00485	0.1169	0.139061	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs9527590	4.2288E-09	-0.0299	0.00509	-0.0299	0.005089	7.80812E-09	0.0317	0.200227	0.00066	0.033588	0.088078	0.00485	0.1169	0.13906	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs7338630	4.229E-09	-0.0299	0.00509	-0.0299	0.005089	7.80851E-09	0.0317	0.200227	0.00066	0.033588	0.088078	0.00485	0.1169	0.139061	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs9316900	4.229E-09	-0.0299	0.00509	-0.0299	0.005089	7.80852E-09	0.0317	0.200227	0.00066	0.033588	0.088078	0.00485	0.1169	0.139061	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs9563446	4.229E-09	-0.0299	0.00509	-0.0299	0.005089	7.80852E-09	0.0317	0.200227	0.00066	0.033588	0.088078	0.00485	0.1169	0.139061	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs790330	4.2291E-09	0.0298995	0.00509	0.0298995	0.005089	7.80873E-09	0.03166	0.200225	0.000661	0.033578	0.088061	0.00485	0.11693	0.13907	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs9537586	4.2293E-09	-0.029899	0.00509	-0.029899	0.005089	7.80914E-09	0.0317	0.200227	0.00066	0.033589	0.088078	0.00485	0.1169	0.139061	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs4283103	4.2294E-09	-0.029899	0.00509	-0.029899	0.005089	7.80921E-09	0.03175	0.200315	0.000659	0.033611	0.08806	0.00485	0.11702	0.13895	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs9527581	4.2294E-09	-0.029899	0.00509	-0.029899	0.005089	7.80922E-09	0.03175	0.200164	0.000659	0.0336	0.088095	0.00485	0.11703	0.138956	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs9316899	4.2301E-09	-0.029899	0.00509	-0.029899	0.005089	7.81052E-09	0.03175	0.200313	0.000659	0.033609	0.08806	0.00485	0.11701	0.138949	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs9527584	4.2302E-09	-0.029899	0.00509	-0.029899	0.005089	7.81073E-09	0.03176	0.200315	0.000659	0.033612	0.08806	0.00485	0.11702	0.13895	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs2785837	4.2302E-09	0.0298992	0.00509	0.0298992	0.005089	7.81074E-09	0.03166	0.20022	0.000661	0.033572	0.088031	0.00485	0.11702	0.13907	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs4885999	4.2304E-09	-0.029899	0.00509	-0.029899	0.005089	7.81099E-09	0.03175	0.200314	0.000659	0.03361	0.08806	0.00485	0.11701	0.138949	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs4886000	4.2307E-09	-0.029899	0.00509	-0.029899	0.005089	7.81166E-09	0.03175	0.200314	0.000659	0.03361	0.088061	0.00485	0.11701	0.138949	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs2777626	4.2308E-09	0.0298991	0.00509	0.0298991	0.005089	7.81178E-09	0.03166	0.200221	0.000661	0.033577	0.088032	0.00485	0.11702	0.13907	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs9537573	4.2313E-09	-0.029899	0.00509	-0.029899	0.005089	7.81273E-09	0.03175	0.200312	0.00066	0.033611	0.088038	0.00485	0.11701	0.138947	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs8001557	4.2314E-09	-0.029899	0.00509	-0.029899	0.005089	7.81289E-09	0.03174	0.200327	0.000659	0.033603	0.08808	0.00485	0.11702	0.138954	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs174537	4.2322E-09	0.0299745	0.0051	0.0320675	0.008549	7.81426E-09	0.10877	0.366135	0.012488	0.150998	1.87E-05	6.8E-05	0.28328	0.357404	0.906	0.647	0.962	0.845	0.998	1	0.87	0.857
rs2785836	4.2323E-09	0.0298988	0.00509	0.0298988	0.005089	7.81449E-09	0.03166	0.200224	0.000661	0.033576	0.08804	0.00485	0.11702	0.139071	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs9316897	4.2325E-09	-0.029899	0.00509	-0.029899	0.005089	7.81481E-09	0.03175	0.200327	0.000659	0.033608	0.08808	0.00485	0.11702	0.138954	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs9316898	4.2325E-09	-0.029899	0.00509	-0.029899	0.005089	7.81481E-09	0.03175	0.200327	0.000659	0.033608	0.08808	0.00485	0.11702	0.138954	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs6561912	4.2326E-09	-0.029899	0.00509	-0.029899	0.005089	7.81497E-09	0.03175	0.200327	0.000659	0.033609	0.08808	0.00485	0.11702	0.138954	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs11598058	4.2332E-09	-0.03505	0.00597	-0.042767	0.010515	7.81617E-09	3.2E-05	0.237309	0.040542	0.046003	0.061163	0.0002	0.04797	0.31325	0.988	0.915	0.914	0.968	0.965	1	0.965	0.906
rs796902	4.2335E-09	0.0298986	0.00509	0.0298986	0.005089	7.8167E-09	0.03166	0.200224	0.000661	0.033578	0.088062	0.00485	0.11702	0.13907	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs479779	4.234E-09	0.0312104	0.00531	0.0312104	0.005313	7.81753E-09	0.34125	0.636525	4.09E-06	0.084449	0.408097	0.01283	0.03401	0.08725	0.88	0.842	1	0.929	0.846	0.967	0.962	0.929
rs1336935	4.2343E-09	-0.029899	0.00509	-0.029899	0.005089	7.81809E-09	0.03173	0.200101	0.00066	0.033561	0.088048	0.00485	0.11723	0.139031	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs1331726	4.235E-09	0.0298983	0.00509	0.0298983	0.005089	7.8194E-09	0.03123	0.200317	0.000663	0.033898	0.08783	0.00483	0.11664	0.139337	0.958	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs9316894	4.2351E-09	-0.029898	0.00509	-0.029898	0.005089	7.81945E-09	0.03162	0.200326	0.000659	0.033674	0.088079	0.00485	0.11702	0.138954	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs6457711	4.2352E-09	-0.032303	0.0055	-0.032303	0.005499	7.81963E-09	0.51352	0.611892	0.002094	0.027043	0.166932	6.1E-06	0.59323	0.462986	0.66	0.803	0.996	0.968	0.893	1	0.778	0.825
rs9316903	4.2352E-09	0.029898	0.00509	0.029898	0.005089	7.81969E-09	0.03122	0.200305	0.000663	0.033834	0.087864	0.00484	0.11663	0.139353	0.958	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs1336934	4.2368E-09	-0.029898	0.00509	-0.029898	0.005089	7.82269E-09	0.03175	0.200101	0.00066	0.033574	0.088048	0.00485	0.11723	0.139031	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs57967063	4.2375E-09	-0.029898	0.00509	-0.029898	0.005089	7.82382E-09	0.03168	0.200315	0.000659	0.033695	0.08806	0.00485	0.11702	0.13895	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs7336021	4.2425E-09	0.0298974	0.00509	0.0298974	0.005089	7.83281E-09	0.03116	0.200242	0.000663	0.033931	0.087921	0.00483	0.11652	0.139286	0.958	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs1331727	4.2434E-09	0.0298969	0.00509	0.0298969	0.005089	7.83456E-09	0.03132	0.200354	0.000663	0.033911	0.087801	0.00483	0.11666	0.139346	0.958	0.924	0.999	0.98	0.96	0.994	0.949	0.936

Table S3

rs9537590	4.2435E-09	0.0298977	0.00509	0.0298977	0.005089	7.83465E-09	0.03114	0.200437	0.000664	0.03398	0.08788	0.00482	0.11652	0.139161	0.958	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs35874668	4.2439E-09	-0.035047	0.00597	-0.042758	0.010514	7.83547E-09	3.2E-05	0.237476	0.040515	0.04607	0.061227	0.0002	0.048	0.313883	0.988	0.915	0.914	0.968	0.965	1	0.965	0.906
rs7334973	4.2462E-09	0.0298967	0.00509	0.0298967	0.005089	7.83948E-09	0.03114	0.200195	0.000665	0.033932	0.087883	0.00483	0.11645	0.139249	0.958	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs556684652	4.2463E-09	-0.098957	0.01685	-0.098957	0.016846	7.83973E-09	0.86558	0.642263	0.007494	0.000101	0.015377	0.00112	0.44748	0.691295	0.757	0.826	0.986	0.999	0.977	0.998	0.84	0.815
rs7114813	4.2493E-09	0.0306825	0.00522	0.0306825	0.005223	7.84505E-09	0.74619	0.214996	0.000694	0.000103	0.815501	0.00564	0.02762	0.948428	0.798	0.88	0.999	0.999	0.685	0.985	0.958	0.76
rs4527691	4.2493E-09	0.0317937	0.00541	0.033693	0.008061	5.04209E-09	0.13868	0.95972	0.015279	8.34E-07	0.379057	0.00514	0.61489	0.037656	0.904	0.783	0.956	1	0.838	0.979	0.801	0.94
rs200501	4.2494E-09	-0.061482	0.01047	-0.065803	0.015008	7.84524E-09	0.72886	0.708075	0.014665	0.003414	0.195461	0.00038	0.16424	0.0002	0.845	0.847	0.973	0.996	0.919	0.999	0.928	0.983
rs9527598	4.2512E-09	0.029895	0.00509	0.029895	0.005089	7.84858E-09	0.03153	0.200228	0.000661	0.03385	0.087964	0.00484	0.11696	0.13911	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs6800701	4.2521E-09	0.0312628	0.00532	0.0312628	0.005322	7.85016E-09	0.67511	0.325003	0.004134	0.059048	0.915769	1.5E-06	0.02442	0.676266	0.665	0.833	0.987	0.923	0.605	1	0.951	0.769
rs9527597	4.2528E-09	0.0298947	0.00509	0.0298947	0.005089	7.85135E-09	0.03153	0.200227	0.000661	0.033855	0.088007	0.00484	0.11696	0.139108	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs141927623	4.2529E-09	0.0595692	0.01014	0.0632716	0.014758	7.85162E-09	0.12424	0.154686	0.007701	0.025965	0.002625	0.0005	0.07502	0.037125	0.591	0.911	0.987	0.978	0.991	0.999	0.946	0.947
rs9652209	4.2548E-09	0.0298943	0.00509	0.0298943	0.005089	7.85498E-09	0.03153	0.200231	0.000661	0.033849	0.087988	0.00484	0.11696	0.139112	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs201377405	4.2548E-09	0.0595685	0.01014	0.063271	0.014758	7.85502E-09	0.12424	0.154686	0.007702	0.025965	0.002625	0.0005	0.07502	0.037125	0.591	0.911	0.987	0.978	0.991	0.999	0.946	0.947
rs1991873	4.2553E-09	0.0365959	0.00623	0.0365959	0.00623	7.85601E-09	0.44246	0.89938	0.014267	0.008168	0.077892	7.2E-06	0.83881	0.316219	0.848	0.786	0.965	0.99	0.942	1	0.744	0.869
rs7201692	4.2555E-09	-0.036844	0.00627	-0.041166	0.008971	7.8563E-09	0.14684	0.486289	0.004002	0.002671	0.011069	0.01387	0.03285	0.004866	0.925	0.744	0.995	0.997	0.985	0.972	0.969	0.973
rs78822921	4.2564E-09	-0.035044	0.00597	-0.042757	0.010514	7.85785E-09	3.2E-05	0.237478	0.04056	0.046052	0.061179	0.0002	0.04804	0.313831	0.988	0.915	0.914	0.968	0.965	1	0.965	0.906
rs78187521	4.2576E-09	0.0306824	0.00522	0.0306824	0.005224	7.8601E-09	0.74542	0.214294	0.000687	0.000105	0.814794	0.00563	0.02781	0.949875	0.798	0.88	0.999	0.999	0.686	0.985	0.958	0.76
rs75716035	4.2579E-09	-0.076074	0.01295	-0.076074	0.012951	7.8606E-09	0.1047	0.131372	0.042028	0.002516	0.394196	2.3E-05	0.06445	0.988505	0.916	0.909	0.865	0.996	0.833	1	0.946	0.766
rs76592243	4.26E-09	0.0595664	0.01014	0.0632693	0.014758	7.86433E-09	0.12422	0.154654	0.007713	0.025928	0.002624	0.0005	0.07503	0.037175	0.591	0.911	0.987	0.978	0.991	0.999	0.946	0.947
rs1115673	4.2617E-09	-0.029779	0.00507	-0.030981	0.006271	7.86743E-09	0.41754	0.028854	0.010497	0.009018	0.077978	0.00048	0.91545	0.002733	0.884	0.952	0.984	0.992	0.956	0.999	0.776	0.977
rs1439596	4.2694E-09	0.0302298	0.00515	0.0306792	0.006506	7.88134E-09	0.94072	0.041542	0.010643	0.008992	0.000979	0.00015	0.6512	0.566675	0.777	0.93	0.975	0.989	0.993	1	0.786	0.679
rs11039379	4.27E-09	0.030689	0.00523	0.030689	0.005225	7.8824E-09	0.74296	0.211485	0.000698	0.000103	0.81904	0.00572	0.02714	0.943458	0.798	0.881	0.999	0.999	0.684	0.985	0.958	0.761
rs7868584	4.2701E-09	-0.038142	0.00649	-0.038142	0.006494	7.88262E-09	0.12874	0.443699	0.000693	0.015676	0.023601	0.02232	0.05179	0.013268	0.935	0.895	0.999	0.989	0.981	0.956	0.965	0.969
rs10838758	4.2717E-09	0.0306738	0.00522	0.0306738	0.005223	7.88556E-09	0.74616	0.218317	0.000706	0.000103	0.810676	0.00567	0.02777	0.930024	0.798	0.88	0.999	0.999	0.688	0.985	0.958	0.764
rs7853406	4.276E-09	-0.038142	0.00649	-0.038142	0.006494	7.8932E-09	0.12677	0.47101	0.000651	0.015127	0.023345	0.02295	0.05503	0.013227	0.935	0.892	0.999	0.99	0.981	0.954	0.964	0.969
rs4430622	4.2766E-09	-0.029893	0.00509	-0.029893	0.00509	7.89429E-09	0.03175	0.203105	0.000671	0.033602	0.087273	0.00482	0.1153	0.142124	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs1004867	4.2781E-09	-0.032275	0.0055	-0.040232	0.010332	4.58665E-09	0.7059	0.030512	0.001712	0.000121	0.330665	0.07436	0.00657	0.001564	0.688	0.939	0.985	0.999	0.819	0.639	0.98	0.976
rs61895760	4.2802E-09	0.0306762	0.00522	0.0306762	0.005223	7.90079E-09	0.74618	0.214681	0.000697	0.000103	0.815889	0.00564	0.02777	0.948293	0.798	0.88	0.999	0.999	0.685	0.985	0.958	0.76
rs11039376	4.2806E-09	0.0306761	0.00522	0.0306761	0.005223	7.90146E-09	0.74618	0.214682	0.000697	0.000103	0.815887	0.00564	0.02777	0.948294	0.798	0.88	0.999	0.999	0.685	0.985	0.958	0.76
rs67450550	4.2806E-09	0.0306761	0.00522	0.0306761	0.005223	7.90146E-09	0.74618	0.214682	0.000697	0.000103	0.815887	0.00564	0.02777	0.948294	0.798	0.88	0.999	0.999	0.685	0.985	0.958	0.76
rs10838760	4.2812E-09	0.030676	0.00522	0.030676	0.005223	7.90255E-09	0.74618	0.214681	0.000697	0.000103	0.81588	0.00564	0.02777	0.948293	0.798	0.88	0.999	0.999	0.685	0.985	0.958	0.76
rs10838763	4.2831E-09	0.0306756	0.00522	0.0306756	0.005223	7.90601E-09	0.74626	0.214681	0.000697	0.000103	0.815889	0.00564	0.02777	0.948293	0.798	0.88	0.999	0.999	0.685	0.985	0.958	0.76
rs59014274	4.2845E-09	0.0962291	0.01639	0.0962291	0.016386	7.90859E-09	0.7246	0.041269	0.000376	0.015508	0.780701	0.00283	0.01303	0.136706	0.837	0.941	0.999	0.987	0.751	0.996	0.974	0.92
rs35392358	4.2866E-09	0.0306766	0.00522	0.0306766	0.005224	7.91244E-09	0.76247	0.220954	0.000685	0.000108	0.811768	0.00552	0.0279	0.939306	0.795	0.879	0.999	0.999	0.687	0.985	0.958	0.762
rs4636797	4.2885E-09	0.0298912	0.00509	0.0298912	0.00509	7.91576E-09	0.03155	0.201176	0.000659	0.033861	0.088032	0.00487	0.11735	0.139082	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs1372241	4.2896E-09	-0.036804	0.00627	-0.037516	0.009828	7.29111E-09	0.43112	0.846638	0.007433	1.29E-05	0.83154	0.00148	0.00233	0.680581	0.814	0.694	0.974	1	0.505	0.994	0.98	0.766
rs2777629	4.2911E-09	0.0298878	0.00509	0.0298878	0.005089	7.92055E-09	0.03297	0.200224	0.000661	0.033606	0.088039	0.00485	0.11702	0.139071	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs13104990	4.2931E-09	-0.029857	0.00508	-0.029857	0.005084	7.92403E-09	0.78773	0.560569	2.42E-05	0.066697	0.265805	0.0013	0.24984	0.191946	0.815	0.844	1	0.943	0.883	0.998	0.893	0.901
rs11018484	4.2999E-09	0.0304542	0.00519	0.0343755	0.010343	3.5637E-09	0.98983	0.248761	0.000955	0.009806	1.03E-06	0.02601	0.03984	0.319268	0.756	0.6	0.995	0.985	0.999	0.89	0.951	0.86
rs78482596	4.3034E-09	0.0654792	0.01115	0.0626691	0.013484	6.71866E-09	0.24719	0.1974	0.000108	0.727101	0.937284	2.9E-06	0.10373	0.669325	0.774	0.79	0.999	0.196	0.416	1	0.856	0.653
rs11162812	4.3035E-09	-0.030281	0.00516	-0.030281	0.005157	7.94289E-09	0.57968	0.084956	0.016717	0.000842	0.058369	0.00109	0.03373	0.874867	0.865	0.934	0.972	0.998	0.963	0.999	0.967	0.825
rs7982295	4.3048E-09	-0.029886	0.00509	-0.029886	0.00509	7.94509E-09	0.03152	0.202213	0.00066	0.033915	0.088025	0.00486	0.11678	0.140077	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs35473591	4.3062E-09	0.0299648	0.0051	0.0322228	0.008684	7.94764E-09	0.10087	0.361103	0.012068	0.159986	1.51E-05	7.7E-05	0.2634	0.372072	0.908	0.645	0.963	0.836	0.998	1	0.875	0.854
rs4772105	4.3106E-09	0.0312199	0.00532	0.0305099	0.008301	5.49139E-09	0.51243	0.626826	3.62E-07	0.111457	0.178732	0.02225	0.00138	0.987028	0.604	0.759	1	0.814	0.852	0.842	0.983	0.687
rs7208466	4.3117E-09	-0.031994	0.00545	-0.036078	0.007877	7.9576E-09	0.74614	0.133234	0.00055	0.023432	0.007056	0.03213	0.01785	0.004322	0.781	0.926	0.999	0.982	0.988	0.914	0.975	0.975
rs790329	4.3135E-09	0.0298826	0.00509	0.0298826	0.005089	7.96089E-09	0.03167	0.199766	0.000666	0.033573	0.087754	0.00493	0.11639	0.13858	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs201673002	4.3157E-09	-0.037084	0.00632	-0.038447	0.01072	5.69797E-09	0.34428	0.850514	0.004934	7.77E-06	0.732627	0.00376	0.00121	0.586302	0.829	0.692	0.98	1	0.464	0.982	0.984	0.781
rs2165820	4.3184E-09	0.0326413	0.00556	0.0355473	0.007355	7.96966E-09	0.10643	0.03299	0.009689	0.039159	0.133569	0.00141	0.00034	0.513259	0.939	0.956	0.988	0.976	0.947	0.998	0.994	0.886
rs11039434	4.3196E-09	0.0306623	0.00522	0.0306623	0.005222	7.97176E-09	0.80058	0.242116	0.000768	0.000103	0.774604	0.00501	0.03061	0.93119	0.791	0.875	0.999	0.999	0.7	0.987	0.956	0.764
rs12366244	4.3237E-09	0.0306613	0.00522	0.0306613	0.005222	7.97919E-09	0.80038	0.242275	0.000766	0.000104	0.774124	0.00498	0.03069	0.932384	0.791	0.875	0.999	0.999	0.701	0.987	0.956	0.764
rs9537584	4.3249E-09	-0.029892	0.00509	-0.029892	0.005091	7.98135E-09	0.0317	0.202819	0.00067	0.033588	0.087885	0.00483	0.11726	0.140975	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs6561911	4.327E-09	-0.029881	0.00509	-0.029881	0.005089	7.98518E-09	0.03145	0.200164	0.000659	0.034489	0.088095	0.00485	0.11703	0.138956	0.957	0.924	0.999	0.979	0.96	0.994	0.949	0.936
rs9316895	4.3275E-09	-0.02988	0.00509	-0.02988	0.005089	7.98604E-09	0.03147	0.200326	0.000659	0.03447	0.088079	0.00485	0.11702	0.138954	0.957	0.924	0.999	0.979	0.96	0.994	0.949	0.936
rs7191148	4.3303E-09	0.036383	0.0062	0.036383	0.006197	7.99109E-09	0.21593	0.042383	0.003572	0.031794	0.021203	0.00052	0.30385	0.589714	0.915	0.948	0.996	0.979	0.979	0.999	0.905	0.869
rs12894657	4.3363E-09	0.0302963	0.00516	0.0310821	0.006038	8.00194E-09	0.95814	0.078226	0.000402	0.00079	0.630671	0.0173	0.00239	0.459043	0.79	0.924	0.999	0.998	0.769	0.949	0.985	0.856

Table S3

rs61969456	4.354E-09	0.0307156	0.00523	0.0303259	0.006554	6.63741E-09	0.75501	0.707875	4.81E-07	0.140488	0.104152	0.01556	0.00844	0.910568	0.691	0.777	1	0.823	0.913	0.917	0.97	0.737
rs10959540	4.3551E-09	-0.038119	0.00649	-0.038119	0.006494	8.03569E-09	0.13872	0.473502	0.000649	0.014795	0.023237	0.02299	0.0552	0.01326	0.933	0.891	0.999	0.99	0.981	0.954	0.964	0.969
rs7178497	4.3559E-09	0.0295782	0.00504	0.0322123	0.008687	3.91638E-09	0.39899	0.353519	2.56E-06	0.032831	0.021813	0.11178	0.00055	0.472531	0.484	0.786	1	0.901	0.959	0.356	0.99	0.75
rs10268748	4.3597E-09	0.0303959	0.00518	0.0303959	0.005178	8.04405E-09	0.0215	0.70304	0.001688	0.018564	0.0703	0.00162	0.03223	0.875039	0.956	0.854	0.998	0.986	0.96	0.998	0.968	0.828
rs3886262	4.3598E-09	0.0306707	0.00523	0.0306707	0.005225	8.04425E-09	0.75097	0.212134	0.000727	0.000104	0.812198	0.00567	0.0269	0.940936	0.797	0.881	0.999	0.999	0.687	0.985	0.958	0.762
rs10239605	4.3617E-09	0.0303954	0.00518	0.0303954	0.005178	8.04764E-09	0.0215	0.703373	0.001688	0.018554	0.070307	0.00162	0.03222	0.874965	0.956	0.854	0.998	0.986	0.96	0.998	0.968	0.828
rs10239613	4.3629E-09	0.0303953	0.00518	0.0303953	0.005178	8.04987E-09	0.0215	0.703027	0.001688	0.018563	0.070297	0.00162	0.03223	0.875038	0.956	0.854	0.998	0.986	0.96	0.998	0.968	0.828
rs174576	4.3662E-09	0.0299336	0.0051	0.0320428	0.008139	8.05572E-09	0.10686	0.49593	0.01277	0.16808	2.79E-05	7E-05	0.25274	0.33827	0.909	0.685	0.963	0.835	0.998	1	0.882	0.864
rs58429864	4.3803E-09	-0.038114	0.00649	-0.038114	0.006494	8.08115E-09	0.13878	0.471447	0.000652	0.014809	0.023325	0.02302	0.05515	0.013242	0.933	0.891	0.999	0.99	0.981	0.954	0.964	0.969
rs58507340	4.3804E-09	-0.038114	0.00649	-0.038114	0.006494	8.08136E-09	0.13878	0.471453	0.000652	0.014809	0.023327	0.02302	0.05516	0.013243	0.933	0.891	0.999	0.99	0.981	0.954	0.964	0.969
rs7853113	4.3817E-09	-0.038114	0.00649	-0.038114	0.006494	8.0837E-09	0.13879	0.47126	0.000652	0.014815	0.023348	0.02302	0.05514	0.013232	0.933	0.891	0.999	0.99	0.981	0.954	0.964	0.969
rs10959541	4.3827E-09	-0.038113	0.00649	-0.038113	0.006494	8.08555E-09	0.13868	0.472564	0.000652	0.014809	0.023254	0.02304	0.05515	0.013243	0.933	0.891	0.999	0.99	0.981	0.954	0.964	0.969
rs56201508	4.3866E-09	0.0304486	0.00519	0.034266	0.010358	3.69287E-09	0.95825	0.227097	0.000907	0.010086	1.07E-06	0.02574	0.04256	0.323073	0.76	0.592	0.996	0.985	0.999	0.891	0.949	0.859
rs112018552	4.3887E-09	-0.038112	0.00649	-0.038112	0.006494	8.09623E-09	0.1387	0.472211	0.000652	0.014823	0.023291	0.02302	0.05518	0.013242	0.933	0.891	0.999	0.99	0.981	0.954	0.964	0.969
rs7111606	4.4036E-09	0.0306517	0.00522	0.0306517	0.005223	8.12323E-09	0.74537	0.214681	0.000697	0.000108	0.81588	0.00564	0.02777	0.948293	0.798	0.88	0.999	0.999	0.686	0.985	0.958	0.761
rs11516134	4.4055E-09	0.0334565	0.0057	0.0349178	0.007361	8.0231E-09	0.28882	0.819571	2.86E-05	0.007593	0.284014	0.04591	0.04078	0.003807	0.881	0.755	1	0.991	0.871	0.83	0.957	0.971
rs7941399	4.4058E-09	0.0306455	0.00522	0.0306455	0.005222	8.12718E-09	0.80003	0.241953	0.000776	0.000103	0.775509	0.00503	0.03075	0.931514	0.791	0.875	0.999	0.999	0.7	0.987	0.956	0.764
rs9537583	4.4074E-09	-0.029866	0.00509	-0.029866	0.00509	8.13002E-09	0.03268	0.200227	0.00066	0.034677	0.088078	0.00485	0.1169	0.139061	0.957	0.924	0.999	0.979	0.96	0.994	0.949	0.936
rs6485786	4.4103E-09	0.0306504	0.00522	0.0306504	0.005223	8.13517E-09	0.76156	0.214996	0.000693	0.000107	0.815696	0.00563	0.02762	0.948436	0.795	0.88	0.999	0.999	0.685	0.985	0.958	0.76
rs9537262	4.4181E-09	-0.044129	0.00752	-0.043543	0.007939	8.14923E-09	0.56856	0.702524	3.8E-06	0.150117	0.045287	0.00037	0.31339	0.693425	0.594	0.624	1	0.776	0.931	0.999	0.8	0.604
rs9868821	4.4208E-09	0.0309082	0.00527	0.0299773	0.006114	8.03655E-09	0.64594	0.352699	0.004931	0.078824	0.833763	5.9E-07	0.02039	0.995916	0.64	0.815	0.981	0.887	0.612	1	0.951	0.694
rs3858776	4.4219E-09	0.030695	0.00523	0.0302818	0.006541	6.76825E-09	0.73919	0.734678	4.74E-07	0.125458	0.106369	0.01618	0.0091	0.935947	0.689	0.774	1	0.841	0.912	0.916	0.969	0.734
rs79909795	4.4237E-09	0.030696	0.00523	0.0303083	0.00651	6.84233E-09	0.74143	0.729167	5.11E-07	0.123898	0.107763	0.01606	0.0087	0.928716	0.692	0.776	1	0.844	0.912	0.918	0.97	0.737
rs34644184	4.4288E-09	-0.034035	0.0058	-0.042668	0.010761	4.54462E-09	0.94022	0.091353	0.002347	0.000126	0.310882	0.07246	0.00342	0.000993	0.742	0.917	0.98	0.999	0.835	0.667	0.985	0.979
rs944578	4.4333E-09	0.0298617	0.00509	0.0298617	0.00509	8.17664E-09	0.03224	0.200369	0.000665	0.035147	0.087848	0.00482	0.11659	0.139131	0.957	0.924	0.999	0.979	0.96	0.994	0.949	0.936
rs6905370	4.4344E-09	0.0314054	0.00535	0.0319429	0.006736	8.17863E-09	0.82555	0.756319	0.019303	0.161802	0.002682	9.2E-06	0.42807	0.012003	0.796	0.807	0.941	0.84	0.99	1	0.84	0.956
rs76214060	4.4425E-09	-0.071402	0.01217	-0.071402	0.012171	8.19312E-09	0.17276	0.946249	1.63E-05	0.048542	0.369578	0.00101	0.86734	0.11217	0.889	0.754	1	0.948	0.829	0.998	0.726	0.908
rs77546008	4.4429E-09	0.0323248	0.00551	0.0324909	0.009893	4.64939E-09	0.52101	0.011	9.15E-05	7.1E-06	0.94615	0.03522	0.66216	0.111463	0.526	0.924	0.999	1	0.434	0.677	0.636	0.854
rs10002209	4.4433E-09	0.0357831	0.0061	0.0364105	0.00802	8.19462E-09	0.60853	0.20639	0.017097	0.005667	0.481443	7.2E-05	0.00049	0.75517	0.704	0.885	0.955	0.992	0.8	1	0.99	0.797
rs11512331	4.4448E-09	-0.06274	0.01069	-0.063379	0.012283	7.27015E-09	0.10174	0.05333	0.079446	0.006411	0.15127	3.7E-06	0.18239	0.675764	0.903	0.921	0.671	0.99	0.896	1	0.888	0.658
rs7500325	4.4494E-09	0.0654118	0.01115	0.0626759	0.013406	6.99099E-09	0.25348	0.198102	0.000109	0.721576	0.939263	3E-06	0.10339	0.671045	0.772	0.79	0.999	0.2	0.417	1	0.856	0.653
rs142217494	4.4522E-09	-0.042167	0.00719	-0.042167	0.007188	8.21057E-09	0.59388	0.376662	0.000147	0.277025	0.139864	3.3E-05	0.34115	0.162246	0.645	0.824	1	0.677	0.893	1	0.825	0.874
rs7201449	4.4572E-09	-0.032892	0.00561	-0.033829	0.00649	7.04485E-09	0.62459	0.349224	0.031987	8E-06	0.012215	0.00204	0.32568	0.997069	0.829	0.868	0.908	1	0.98	0.993	0.869	0.769
rs9554477	4.4713E-09	0.0306849	0.00523	0.030241	0.006607	6.71742E-09	0.73884	0.733454	4.29E-07	0.128641	0.109254	0.01657	0.00903	0.934797	0.686	0.772	1	0.834	0.909	0.911	0.969	0.731
rs77683334	4.4723E-09	-0.078895	0.01345	-0.082393	0.020115	5.31996E-09	0.24165	0.010276	6.99E-07	0.476505	0.386897	0.01119	0.09426	0.112022	0.856	0.947	1	0.485	0.775	0.905	0.915	0.896
rs6441852	4.4731E-09	0.0308984	0.00527	0.0299424	0.006135	8.1265E-09	0.64353	0.354718	0.004931	0.078813	0.838209	5.9E-07	0.0203	0.997269	0.639	0.814	0.981	0.887	0.61	1	0.951	0.693
rs6441851	4.4748E-09	0.030898	0.00527	0.0299415	0.006136	8.12941E-09	0.64353	0.354716	0.004931	0.078813	0.83821	5.9E-07	0.0203	0.997613	0.639	0.814	0.981	0.887	0.61	1	0.951	0.693
rs62084692	4.477E-09	0.0346896	0.00591	0.0347592	0.009115	8.25522E-09	0.40039	0.020746	0.000375	0.160137	0.751319	0.00011	0.16315	0.003814	0.628	0.935	0.999	0.82	0.685	1	0.896	0.964
rs28820052	4.4774E-09	-0.03672	0.00626	-0.037253	0.009761	7.47678E-09	0.34759	0.757899	0.009528	1.07E-05	0.857761	0.00109	0.00386	0.7356	0.828	0.675	0.964	1	0.512	0.996	0.976	0.753
rs4342712	4.478E-09	0.0351669	0.006	0.0352666	0.00615	8.25708E-09	0.67299	0.279913	5.5E-05	0.002388	0.454236	0.02201	0.07243	0.017149	0.733	0.882	1	0.996	0.82	0.928	0.943	0.955
rs6441853	4.4812E-09	0.0308968	0.00527	0.0299405	0.006136	8.14063E-09	0.64355	0.354955	0.004933	0.078805	0.838497	5.9E-07	0.02031	0.997249	0.639	0.814	0.981	0.887	0.61	1	0.951	0.693
rs215011	4.4872E-09	-0.083106	0.01417	-0.083106	0.014169	8.27358E-09	0.81693	0.631889	0.003178	0.000103	0.094041	0.00842	0.08186	0.07003	0.784	0.852	0.996	0.999	0.948	0.984	0.948	0.939
rs58308766	4.4882E-09	0.0306842	0.00523	0.0302959	0.006511	6.93027E-09	0.74528	0.729167	5.11E-07	0.12579	0.107763	0.01606	0.0087	0.928716	0.692	0.776	1	0.842	0.912	0.918	0.97	0.736
rs9826207	4.4979E-09	-0.036363	0.0062	-0.037304	0.007038	8.07523E-09	0.40524	0.306524	2.95E-05	0.271976	0.006479	0.01905	0.01116	0.114809	0.867	0.882	1	0.755	0.986	0.923	0.976	0.922
rs10838767	4.4997E-09	0.030641	0.00522	0.030641	0.005225	8.29624E-09	0.74697	0.220738	0.000694	0.000103	0.818048	0.00582	0.02786	0.951088	0.797	0.878	0.999	0.999	0.684	0.985	0.958	0.76
rs7195072	4.5E-09	0.0363289	0.00619	0.0363289	0.006195	8.2967E-09	0.22603	0.040759	0.003734	0.03137	0.021137	0.00049	0.31999	0.606021	0.913	0.949	0.996	0.979	0.979	0.999	0.901	0.866
rs60833271	4.5095E-09	0.0323109	0.00551	0.032472	0.009889	4.73986E-09	0.51899	0.011	9.16E-05	7.26E-06	0.946143	0.03523	0.66217	0.111464	0.526	0.924	0.999	1	0.434	0.677	0.637	0.854
rs73072377	4.5121E-09	-0.042151	0.00719	-0.042151	0.007188	8.31843E-09	0.59363	0.376662	0.000147	0.277265	0.139925	3.4E-05	0.34124	0.162246	0.645	0.824	1	0.677	0.893	1	0.825	0.874
rs8022097	4.5167E-09	0.0506695	0.00864	0.0550152	0.011334	7.04418E-09	0.61968	0.052598	5.92E-05	0.029321	0.010092	0.09253	0.00363	0.359622	0.823	0.933	1	0.964	0.984	0.624	0.986	0.864
rs11172254	4.518E-09	0.029695	0.00506	0.029695	0.005064	8.32913E-09	0.93295	0.201986	0.000528	0.035679	0.144221	0.00089	0.04312	0.334695	0.801	0.909	0.999	0.973	0.933	0.999	0.961	0.891
rs2382263	4.5237E-09	0.0351568	0.006	0.0352568	0.006152	8.33929E-09	0.66976	0.279751	5.44E-05	0.002469	0.454352	0.02191	0.07212	0.017113	0.732	0.882	1	0.996	0.82	0.928	0.944	0.955
rs12576933	4.5253E-09	0.030624	0.00522	0.030624	0.005223	8.34224E-09	0.79806	0.248769	0.00081	0.000107	0.776332	0.00469	0.03048	0.965591	0.79	0.873	0.998	0.999	0.699	0.988	0.956	0.758
rs172328	4.5313E-09	-0.053027	0.00904	-0.056665	0.014289	8.35303E-09	0.02832	0.815442	0.000624	0.003486	0.796678	0.00384	0.04511	0.00281	0.939	0.737	0.999	0.995	0.553	0.991	0.953	0.968
rs12226431	4.5331E-09	0.0306306	0.00522	0.0306306	0.005224	8.35627E-09	0.75185	0.216982	0.000731	0.000103	0.830432	0.00558	0.02723	0.944543	0.796	0.879	0.999	0.999	0.68	0.985	0.958	0.76
rs2382264	4.5332E-09	0.0351582	0.006	0.035259	0.006154	8.35652E-09	0.66924	0.281445	5.46E-05	0.002462	0.454904	0.02188	0.07198	0.017096	0.732	0.882	1	0.996	0.82	0.928	0.944	0.955

Table S3

rs2100302	4.54E-09	-0.030738	0.00524	-0.030738	0.005243	8.36866E-09	0.09153	0.713093	0.003111	0.029775	0.705417	3.2E-05	0.06695	0.531705	0.918	0.821	0.995	0.972	0.747	1	0.944	0.843
rs13079703	4.5415E-09	-0.029672	0.00506	-0.029672	0.005061	8.36711E-09	0.07126	0.355067	0.054234	0.000303	0.014461	0.0004	0.23458	0.980839	0.928	0.873	0.839	0.999	0.979	0.999	0.897	0.772
rs4861358	4.5445E-09	0.0358617	0.00612	0.0352436	0.008143	8.37672E-09	0.51267	0.77428	2.08E-05	0.195104	0.616987	0.00087	0.00636	0.030037	0.631	0.76	1	0.763	0.705	0.997	0.972	0.929
rs7103013	4.5454E-09	0.0307352	0.00524	0.0307494	0.005286	8.37842E-09	0.5979	0.200606	0.000327	8.15E-05	0.956711	0.0083	0.043	0.946289	0.805	0.873	0.999	0.999	0.586	0.971	0.945	0.743
rs11855259	4.5508E-09	0.0295687	0.00504	0.0322523	0.008769	3.50449E-09	0.43539	0.345873	1.71E-06	0.03717	0.01795	0.12851	0.00068	0.507775	0.468	0.775	1	0.873	0.962	0.285	0.989	0.724
rs7929725	4.5554E-09	0.0306188	0.00522	0.0306188	0.005223	8.39649E-09	0.79824	0.248743	0.00081	0.000108	0.77619	0.00469	0.03048	0.965574	0.79	0.873	0.998	0.999	0.699	0.988	0.956	0.758
rs2178389	4.5573E-09	0.0308822	0.00527	0.0299223	0.006138	8.27689E-09	0.64276	0.356726	0.004953	0.078638	0.840795	5.9E-07	0.0203	0.997348	0.639	0.814	0.981	0.887	0.609	1	0.95	0.693
rs138830009	4.5606E-09	0.0386123	0.00659	0.0372702	0.007898	8.40585E-09	0.81715	0.018747	0.002225	0.045098	0.84262	3E-06	0.19868	0.664786	0.684	0.926	0.994	0.938	0.625	1	0.867	0.641
rs7625504	4.5629E-09	0.030881	0.00527	0.029919	0.00614	8.28611E-09	0.6425	0.356624	0.004946	0.07888	0.84072	5.9E-07	0.0203	0.997288	0.639	0.814	0.981	0.886	0.609	1	0.95	0.693
rs11717830	4.5645E-09	0.0308807	0.00527	0.0299189	0.00614	8.28891E-09	0.6425	0.356602	0.004947	0.078879	0.840693	5.9E-07	0.0203	0.997265	0.639	0.814	0.981	0.886	0.609	1	0.95	0.693
rs1078817	4.565E-09	0.0308806	0.00527	0.0299184	0.00614	8.28971E-09	0.6425	0.356624	0.004946	0.078903	0.840723	5.9E-07	0.0203	0.997289	0.639	0.814	0.981	0.886	0.609	1	0.95	0.693
rs1881917	4.565E-09	0.0308806	0.00527	0.0299184	0.00614	8.28971E-09	0.6425	0.356624	0.004946	0.078903	0.840723	5.9E-07	0.0203	0.997289	0.639	0.814	0.981	0.886	0.609	1	0.95	0.693
rs10802331	4.5657E-09	-0.040705	0.00694	-0.044712	0.008844	8.41486E-09	0.01701	0.088831	0.007585	0.000588	0.018447	0.02681	0.02453	0.635275	0.963	0.941	0.986	0.999	0.982	0.936	0.974	0.867
rs1078816	4.5676E-09	0.0308801	0.00527	0.0299175	0.00614	8.29424E-09	0.6425	0.356613	0.004947	0.078903	0.840904	5.9E-07	0.0203	0.99728	0.639	0.814	0.981	0.886	0.609	1	0.95	0.693
rs62527042	4.5698E-09	-0.035148	0.006	-0.035171	0.006032	8.42239E-09	0.69857	0.279936	5.44E-05	0.002607	0.45425	0.02192	0.07214	0.017119	0.738	0.883	1	0.996	0.821	0.929	0.944	0.955
rs34604118	4.573E-09	0.0295603	0.00504	0.0298983	0.005467	8.42814E-09	0.51011	0.192792	0.000111	0.272242	0.157709	0.0041	0.00187	0.055142	0.861	0.906	1	0.781	0.924	0.992	0.988	0.942
rs7105791	4.5739E-09	0.0307297	0.00524	0.0307421	0.00528	8.4297E-09	0.5989	0.200606	0.000327	8.22E-05	0.956711	0.0083	0.043	0.946289	0.804	0.873	0.999	0.999	0.586	0.971	0.945	0.743
rs7638643	4.5744E-09	-0.03521	0.00601	-0.03521	0.006007	8.43068E-09	0.64514	0.120969	0.002677	0.128159	0.052346	4E-06	0.64587	0.565819	0.691	0.894	0.994	0.862	0.948	1	0.769	0.811
rs3080641	4.5745E-09	0.0308788	0.00527	0.0299166	0.00614	8.30634E-09	0.6425	0.356726	0.004953	0.078879	0.840795	5.9E-07	0.0203	0.997348	0.639	0.814	0.981	0.886	0.609	1	0.95	0.693
rs6441855	4.5745E-09	0.0308788	0.00527	0.0299166	0.00614	8.30634E-09	0.6425	0.356726	0.004953	0.078879	0.840795	5.9E-07	0.0203	0.997348	0.639	0.814	0.981	0.886	0.609	1	0.95	0.693
rs11130029	4.5755E-09	0.0308786	0.00527	0.0299164	0.00614	8.3082E-09	0.6425	0.356727	0.004954	0.078879	0.840801	5.9E-07	0.0203	0.997354	0.639	0.814	0.981	0.886	0.609	1	0.95	0.693
rs181952542	4.5759E-09	0.0661379	0.01128	0.061173	0.015858	5.10946E-09	0.3727	0.229397	8.67E-05	0.930815	0.903921	1.7E-06	0.08646	0.356526	0.718	0.765	0.999	0.099	0.311	1	0.861	0.722
rs6801887	4.5759E-09	0.0308786	0.00527	0.0299164	0.00614	8.30887E-09	0.6425	0.356727	0.004954	0.078879	0.840803	5.9E-07	0.0203	0.997354	0.639	0.814	0.981	0.886	0.609	1	0.95	0.693
rs12362318	4.5759E-09	0.0307298	0.00524	0.0307416	0.005278	8.43335E-09	0.5978	0.200606	0.000327	8.24E-05	0.956711	0.0083	0.043	0.946289	0.805	0.873	0.999	0.999	0.586	0.971	0.945	0.743
rs6809619	4.5771E-09	0.0308783	0.00527	0.0299163	0.00614	8.31111E-09	0.6425	0.356731	0.004953	0.078879	0.840823	5.9E-07	0.0203	0.997372	0.639	0.814	0.981	0.886	0.609	1	0.95	0.693
rs9301872	4.5773E-09	0.034424	0.00587	0.034424	0.005873	8.4359E-09	0.81625	0.022224	0.002027	0.067605	0.045185	0.0025	0.00764	0.147217	0.852	0.959	0.998	0.959	0.971	0.997	0.983	0.932
rs17500053	4.5776E-09	-0.068361	0.01166	-0.068361	0.011662	8.43632E-09	0.44398	0.150109	0.001266	0.033893	0.409014	7E-05	0.58003	0.173267	0.863	0.908	0.998	0.971	0.843	1	0.823	0.907
rs74985463	4.5788E-09	0.0594451	0.01014	0.0631222	0.01474	8.43847E-09	0.12401	0.156672	0.007806	0.02641	0.00266	0.00051	0.07533	0.037416	0.592	0.91	0.987	0.978	0.991	0.999	0.946	0.946
rs4543938	4.5806E-09	-0.030728	0.00524	-0.03074	0.005278	8.44172E-09	0.59873	0.200615	0.000327	8.24E-05	0.956661	0.0083	0.043	0.946302	0.804	0.873	0.999	0.999	0.586	0.971	0.945	0.743
rs4752858	4.5806E-09	-0.030728	0.00524	-0.03074	0.005278	8.44172E-09	0.59873	0.200615	0.000327	8.24E-05	0.956661	0.0083	0.043	0.946302	0.804	0.873	0.999	0.999	0.586	0.971	0.945	0.743
rs74608150	4.5823E-09	0.030728	0.00524	0.0307397	0.005278	8.44481E-09	0.59901	0.200606	0.000327	8.25E-05	0.956711	0.0083	0.043	0.946289	0.804	0.873	0.999	0.999	0.586	0.971	0.945	0.743
rs11039432	4.5877E-09	0.03061	0.00522	0.03061	0.005222	8.45449E-09	0.80095	0.239674	0.000828	0.000107	0.77404	0.00475	0.0309	0.952303	0.791	0.875	0.998	0.999	0.701	0.988	0.956	0.761
rs11642105	4.5903E-09	0.0341159	0.00582	0.0341159	0.00582	8.45923E-09	0.73157	0.509107	0.000587	0.005643	0.351196	0.00158	0.16013	0.076163	0.838	0.865	0.999	0.994	0.871	0.998	0.925	0.935
rs11039431	4.5955E-09	0.0306083	0.00522	0.0306083	0.005222	8.46861E-09	0.80313	0.239674	0.000828	0.000107	0.774038	0.00475	0.0309	0.952303	0.79	0.875	0.998	0.999	0.701	0.988	0.956	0.761
rs4953250	4.6006E-09	-0.030776	0.00525	-0.030874	0.005365	8.4778E-09	0.75007	0.04086	0.010179	0.026032	0.053986	0.00033	0.00299	0.657741	0.778	0.945	0.984	0.98	0.964	1	0.986	0.849
rs61042099	4.6021E-09	0.045052	0.00769	0.0456718	0.00896	8.48041E-09	0.88296	0.302994	4.72E-05	0.193854	0.302565	0.0043	0.00064	0.137531	0.802	0.88	1	0.833	0.871	0.99	0.99	0.913
rs1920014	4.6054E-09	0.030873	0.00527	0.029907	0.006143	8.35907E-09	0.64229	0.356727	0.004954	0.079333	0.840801	5.9E-07	0.0203	0.99735	0.638	0.814	0.98	0.886	0.609	1	0.95	0.693
rs1920015	4.6054E-09	0.030873	0.00527	0.029907	0.006143	8.35907E-09	0.64229	0.356727	0.004954	0.079333	0.840801	5.9E-07	0.0203	0.99735	0.638	0.814	0.98	0.886	0.609	1	0.95	0.693
rs28882430	4.6058E-09	-0.029844	0.00509	-0.029844	0.005092	8.48713E-09	0.39789	0.221989	0.01088	0.010545	0.126582	8.1E-05	0.75725	0.025976	0.881	0.905	0.982	0.991	0.938	1	0.802	0.954
rs7847266	4.6063E-09	-0.035137	0.006	-0.035237	0.00615	8.48796E-09	0.66925	0.279931	5.51E-05	0.002462	0.454523	0.02201	0.07246	0.01715	0.732	0.882	1	0.996	0.82	0.928	0.943	0.954
rs10959637	4.6063E-09	-0.039572	0.00675	-0.041764	0.008572	8.48805E-09	0.15895	0.81068	0.000573	0.078806	0.034255	0.00568	0.03186	0.002065	0.924	0.8	0.999	0.948	0.974	0.992	0.969	0.978
rs8021554	4.6075E-09	0.0506668	0.00865	0.0550177	0.011343	7.17677E-09	0.62881	0.052587	5.95E-05	0.029442	0.010105	0.09271	0.00364	0.359129	0.821	0.933	1	0.964	0.984	0.622	0.986	0.863
rs12092576	4.6102E-09	0.0380116	0.00649	0.0376013	0.009143	8.49508E-09	0.09447	0.143851	0.00261	9.95E-05	0.443327	0.00087	0.67647	0.061065	0.9	0.542	0.994	0.999	0.789	0.998	0.753	0.917
rs62043048	4.6107E-09	0.0334516	0.00571	0.031667	0.007484	7.17443E-09	0.39751	0.535409	2.22E-07	0.017403	0.590887	0.01077	0.8015	0.076948	0.577	0.775	1	0.968	0.69	0.939	0.674	0.89
rs138861071	4.6159E-09	-0.030618	0.00522	-0.030711	0.005418	8.50533E-09	0.81857	0.201244	0.000612	6.9E-05	0.859498	0.00834	0.02142	0.913405	0.782	0.88	0.999	0.999	0.665	0.974	0.961	0.761
rs34289067	4.6165E-09	0.0458624	0.00783	0.0448359	0.008746	8.50626E-09	0.72006	0.144564	0.000353	0.001419	0.149252	0.00016	0.81325	0.511523	0.73	0.469	0.999	0.996	0.869	1	0.55	0.766
rs6441856	4.6171E-09	0.0308715	0.00527	0.0299086	0.006142	8.37155E-09	0.64229	0.353669	0.005022	0.079451	0.83677	5.8E-07	0.02052	0.999262	0.639	0.814	0.98	0.886	0.611	1	0.95	0.693
rs6790388	4.619E-09	-0.030556	0.00521	-0.030556	0.005214	8.51075E-09	0.97096	0.507082	0.000946	0.003986	0.170245	0.00103	0.06468	0.720258	0.799	0.857	0.999	0.995	0.918	0.999	0.949	0.827
rs6441857	4.6203E-09	0.0308702	0.00527	0.0299026	0.006144	8.38518E-09	0.64229	0.35645	0.004954	0.079451	0.84123	5.9E-07	0.02031	0.997523	0.638	0.814	0.98	0.886	0.609	1	0.95	0.693
rs1010031	4.6209E-09	0.03087	0.00527	0.0299025	0.006144	8.38634E-09	0.64229	0.35645	0.004955	0.079451	0.841228	5.9E-07	0.02031	0.997521	0.638	0.814	0.98	0.886	0.609	1	0.95	0.693
rs6441854	4.6242E-09	0.0308714	0.00527	0.0299072	0.006142	8.39461E-09	0.64173	0.356571	0.004969	0.079063	0.841307	5.9E-07	0.0203	0.997438	0.638	0.814	0.98	0.886	0.609	1	0.95	0.693
rs35810826	4.6309E-09	0.0313688	0.00535	0.0319293	0.006805	8.53229E-09	0.82166	0.751547	0.019289	0.170996	0.002681	8.9E-06	0.43566	0.01165	0.795	0.806	0.939	0.83	0.989	1	0.836	0.956
rs36146202	4.631E-09	-0.037018	0.00632	-0.038302	0.0108	5.97832E-09	0.37343	0.842733	0.004831	7.69E-06	0.718612	0.00395	0.00111	0.588805	0.821	0.688	0.98	1	0.456	0.981	0.984	0.778
rs10756185	4.631E-09	0.0351314	0.006	0.0352317	0.006152	8.53241E-09	0.66829	0.279772	5.5E-05	0.002484	0.454438	0.02202	0.07239	0.017133	0.732	0.882	1	0.996	0.82	0.928	0.943	0.954
rs283987	4.6342E-09	0.0303732	0.00518	0.0303732	0.005183	8.5381E-09	0.38818	0.622721	0.000924	0.008498	0.434821	0.00051	0.04353	0.044652	0.667	0.829	0.999	0.99	0.823	0.999	0.953	0.937

Table S3

rs201881038	4.6381E-09	-0.037049	0.00632	-0.043754	0.010334	8.54519E-09	0.10238	0.57162	0.00844	0.001801	0.014792	0.01144	0.0692	0.00059	0.935	0.764	0.987	0.998	0.983	0.978	0.957	0.983
rs1074952	4.6404E-09	-0.036332	0.0062	-0.037304	0.007067	8.31313E-09	0.40448	0.306522	2.95E-05	0.277652	0.006479	0.01906	0.01116	0.114887	0.867	0.882	1	0.749	0.986	0.923	0.976	0.921
rs1079887	4.6421E-09	-0.036331	0.0062	-0.037307	0.007069	8.31487E-09	0.40372	0.306522	2.95E-05	0.277957	0.006479	0.01906	0.01116	0.114808	0.867	0.882	1	0.749	0.986	0.923	0.976	0.921
rs1514340	4.6422E-09	-0.029811	0.00509	-0.029811	0.005088	8.55251E-09	0.15195	0.436083	0.000912	0.072728	0.213258	0.00107	0.0079	0.247168	0.924	0.886	0.999	0.952	0.919	0.999	0.982	0.911
rs1449851	4.6438E-09	-0.036331	0.0062	-0.037306	0.007069	8.31776E-09	0.40371	0.306519	2.95E-05	0.277951	0.006478	0.01906	0.01116	0.114885	0.867	0.882	1	0.749	0.986	0.923	0.976	0.921
rs4666010	4.6445E-09	-0.034314	0.00586	-0.034314	0.005856	8.55669E-09	0.25085	0.019498	0.000156	0.121285	0.13959	0.00289	0.15066	0.172529	0.91	0.958	1	0.919	0.94	0.996	0.935	0.924
rs9841577	4.6461E-09	-0.03633	0.0062	-0.037306	0.00707	8.3217E-09	0.40371	0.306571	2.95E-05	0.277945	0.00648	0.01907	0.01116	0.114807	0.867	0.882	1	0.749	0.986	0.923	0.976	0.921
rs2183792	4.6521E-09	0.0298216	0.00509	0.0298216	0.00509	8.57045E-09	0.03182	0.200214	0.000661	0.036935	0.087954	0.00484	0.11704	0.139097	0.957	0.924	0.999	0.978	0.959	0.994	0.949	0.936
rs7858303	4.656E-09	0.0351238	0.00599	0.0352493	0.006189	8.57739E-09	0.66657	0.281675	5.7E-05	0.002393	0.456776	0.02229	0.06863	0.017395	0.731	0.882	1	0.996	0.819	0.927	0.945	0.954
rs6852412	4.6601E-09	-0.036803	0.00628	-0.037512	0.009704	7.88411E-09	0.43239	0.874804	0.008637	1.25E-05	0.827957	0.00132	0.003	0.655968	0.814	0.7	0.969	1	0.506	0.995	0.978	0.771
rs117092217	4.6642E-09	-0.062742	0.01071	-0.063036	0.011412	7.94801E-09	0.09017	0.060229	0.073217	0.006781	0.149483	4.7E-06	0.19876	0.755918	0.911	0.921	0.716	0.99	0.903	1	0.888	0.691
rs1449865	4.6662E-09	-0.036326	0.0062	-0.037301	0.007069	8.35728E-09	0.40372	0.306807	2.95E-05	0.278024	0.006484	0.01909	0.01116	0.114835	0.867	0.881	1	0.749	0.986	0.922	0.976	0.921
rs9357324	4.669E-09	0.036506	0.00623	0.036506	0.006231	8.60077E-09	0.41864	0.901306	0.014175	0.008571	0.081273	7.6E-06	0.84674	0.318641	0.852	0.786	0.966	0.99	0.94	1	0.743	0.868
rs9369199	4.6769E-09	0.0365043	0.00623	0.0365043	0.006231	8.6149E-09	0.41884	0.901355	0.014177	0.008574	0.081275	7.6E-06	0.8469	0.318492	0.852	0.786	0.966	0.99	0.94	1	0.743	0.868
rs7119517	4.6805E-09	0.0307054	0.00524	0.0307054	0.005241	8.62146E-09	0.5979	0.20003	0.000322	8.15E-05	0.986026	0.00887	0.0438	0.952054	0.806	0.874	0.999	0.999	0.599	0.969	0.945	0.744
rs144639701	4.6915E-09	-0.035119	0.006	-0.03521	0.006137	8.64115E-09	0.67021	0.280625	5.59E-05	0.002463	0.455319	0.02202	0.07268	0.017202	0.732	0.882	1	0.996	0.82	0.928	0.943	0.954
rs73072389	4.6928E-09	-0.042092	0.00719	-0.042092	0.007186	8.6435E-09	0.61602	0.427269	0.000127	0.330834	0.140799	3.1E-05	0.32085	0.14963	0.633	0.805	1	0.609	0.885	1	0.821	0.871
rs12747808	4.6955E-09	0.0379351	0.00648	0.037399	0.009133	8.64841E-09	0.10043	0.150266	0.002645	9.9E-05	0.442902	0.00077	0.75488	0.061207	0.896	0.54	0.994	0.999	0.785	0.998	0.729	0.915
rs2034476	4.698E-09	0.0308572	0.00527	0.0298575	0.006153	8.48615E-09	0.64168	0.359734	0.004779	0.083574	0.847757	5.5E-07	0.02182	0.994795	0.636	0.811	0.981	0.879	0.604	1	0.948	0.691
rs2089358	4.6998E-09	-0.031644	0.0054	-0.037651	0.008461	7.20957E-09	0.07388	0.611168	0.000237	0.010034	0.081431	0.10309	0.00268	0.004769	0.93	0.829	0.999	0.988	0.945	0.584	0.988	0.973
rs10838741	4.7034E-09	0.0307066	0.00524	0.0307092	0.00525	8.66258E-09	0.59161	0.201303	0.000326	8.52E-05	0.957179	0.00837	0.04337	0.947999	0.806	0.873	0.999	0.999	0.587	0.971	0.945	0.743
rs1510140	4.704E-09	-0.036982	0.00631	-0.03824	0.010722	6.16623E-09	0.37412	0.846153	0.004955	7.58E-06	0.726052	0.00385	0.00124	0.589247	0.822	0.689	0.98	1	0.46	0.982	0.984	0.779
rs3130101	4.708E-09	0.0294971	0.00504	0.0286185	0.005843	8.67094E-09	0.34125	0.820038	0.000574	0.000124	0.789111	0.00021	0.95073	0.318364	0.505	0.685	0.998	0.999	0.565	0.999	0.581	0.786
rs2082557	4.7095E-09	-0.036497	0.00623	-0.036497	0.006231	8.67355E-09	0.41939	0.901242	0.014171	0.008656	0.081183	7.6E-06	0.84681	0.318344	0.852	0.786	0.966	0.989	0.94	1	0.743	0.868
rs2382262	4.7142E-09	0.035114	0.006	0.0352057	0.006139	8.68204E-09	0.66983	0.28064	5.6E-05	0.002465	0.455388	0.02206	0.07277	0.017204	0.732	0.882	1	0.996	0.82	0.928	0.943	0.954
rs2382265	4.7155E-09	0.0350977	0.00599	0.0352192	0.006187	8.68431E-09	0.64736	0.254265	5.24E-05	0.002322	0.450229	0.02269	0.08397	0.017988	0.727	0.885	1	0.996	0.82	0.924	0.939	0.954
rs116418977	4.7177E-09	-0.08343	0.01424	-0.08343	0.014245	8.68841E-09	0.73018	0.689641	0.003702	6.9E-05	0.097711	0.00833	0.0826	0.05985	0.768	0.842	0.995	1	0.946	0.984	0.947	0.94
rs6846999	4.7202E-09	0.0363172	0.0062	0.0364138	0.006403	8.69282E-09	0.91191	0.251521	0.02217	0.010496	0.277893	5.9E-05	0.00089	0.885015	0.8	0.889	0.949	0.989	0.88	1	0.989	0.796
rs2801194	4.7273E-09	-0.029471	0.00503	-0.029471	0.005032	8.7056E-09	0.38829	0.174687	0.000518	0.067404	0.391942	0.00087	0.00417	0.589612	0.881	0.911	0.999	0.95	0.861	0.999	0.984	0.854
rs10015459	4.7344E-09	0.0358205	0.00612	0.0351857	0.008183	8.71829E-09	0.51124	0.774805	2.03E-05	0.201947	0.617196	0.00087	0.00636	0.030012	0.629	0.758	1	0.754	0.703	0.997	0.971	0.929
rs117999167	4.741E-09	-0.079271	0.01354	-0.079271	0.013537	8.73025E-09	0.72485	0.998001	2.58E-05	0.067164	0.350734	0.00383	0.00168	0.43033	0.816	0.781	1	0.937	0.851	0.992	0.984	0.856
rs181741261	4.7456E-09	0.0659359	0.01126	0.0608587	0.016277	5.04602E-09	0.31477	0.220123	0.000125	0.921586	0.844974	1.2E-06	0.0751	0.379748	0.737	0.769	0.999	0.098	0.289	1	0.871	0.714
rs10924497	4.7488E-09	-0.040658	0.00694	-0.044734	0.008873	8.74422E-09	0.01698	0.088623	0.007764	0.000586	0.018378	0.0272	0.02445	0.634643	0.963	0.941	0.986	0.999	0.982	0.935	0.974	0.867
rs11077214	4.7517E-09	-0.032677	0.00558	-0.033838	0.010002	8.7494E-09	0.1224	0.236648	0.000113	0.126503	0.594002	0.00122	0.00049	0.019571	0.514	0.864	1	0.853	0.73	0.997	0.989	0.942
rs416525	4.7522E-09	-0.030817	0.00526	-0.031774	0.008598	8.7503E-09	0.04801	0.591165	0.008884	0.032251	0.030665	9.2E-05	0.01381	0.019731	0.489	0.829	0.981	0.969	0.967	1	0.971	0.951
rs13066574	4.7555E-09	0.0311637	0.00532	0.0311637	0.005322	8.75633E-09	0.62975	0.433037	0.004284	0.056903	0.751707	2.1E-06	0.02626	0.636045	0.67	0.822	0.988	0.93	0.675	1	0.951	0.785
rs174583	4.7573E-09	0.0298775	0.0051	0.0319175	0.008075	8.75952E-09	0.10615	0.494527	0.012508	0.173328	3.24E-05	7.2E-05	0.2455	0.345472	0.909	0.685	0.964	0.83	0.998	1	0.883	0.863
rs575860630	4.7714E-09	0.0661051	0.01129	0.0611728	0.01608	5.26014E-09	0.34054	0.221992	8.06E-05	0.949553	0.887847	2E-06	0.08041	0.348345	0.729	0.769	1	0.094	0.305	1	0.867	0.726
rs10872271	4.7836E-09	0.0303837	0.00519	0.0303837	0.00519	8.80686E-09	0.84158	0.567167	0.001358	0.009595	0.005854	0.00255	0.11539	0.55533	0.829	0.861	0.998	0.991	0.988	0.997	0.938	0.861
rs28437494	4.7847E-09	0.0299952	0.00512	0.0337594	0.010055	4.82294E-09	0.67891	0.249137	0.000785	0.069603	9.49E-07	0.01008	0.02929	0.402677	0.814	0.621	0.995	0.929	0.999	0.968	0.958	0.853
rs147621919	4.787E-09	0.0724275	0.01237	0.0720357	0.020724	8.81292E-09	0.19048	0.144801	0.000976	0.636795	0.024111	1.3E-05	0.21136	0.008666	0.84	0.43	0.996	0.314	0.957	1	0.84	0.947
rs11585920	4.7996E-09	-0.032388	0.00553	-0.033676	0.006204	8.83552E-09	0.01195	0.183544	0.008926	0.000197	0.144201	0.01662	0.04464	0.248702	0.966	0.925	0.987	0.999	0.943	0.969	0.967	0.918
rs151111900	4.8049E-09	0.0319478	0.00546	0.0319478	0.005458	8.84511E-09	0.72184	0.368513	0.00022	0.007692	0.02366	0.00062	0.55456	0.388181	0.691	0.836	1	0.989	0.964	0.999	0.781	0.599
rs12162419	4.8121E-09	0.0298823	0.00511	0.0304847	0.005474	8.85793E-09	0.57121	0.622173	0.034021	0.000544	0.111152	0.002	0.00333	0.046437	0.867	0.861	0.929	0.999	0.946	0.997	0.986	0.95
rs9380954	4.8319E-09	0.0364704	0.00623	0.0364704	0.006231	8.89365E-09	0.41811	0.901356	0.014183	0.008921	0.081286	7.6E-06	0.84692	0.318653	0.852	0.786	0.966	0.989	0.94	1	0.743	0.868
rs33979623	4.8408E-09	-0.031575	0.0054	-0.031575	0.005395	8.9096E-09	0.36187	0.536244	0.002172	0.039968	0.409229	3.9E-05	0.03857	0.958871	0.869	0.845	0.997	0.964	0.837	1	0.956	0.782
rs4772090	4.8448E-09	0.03061	0.00523	0.0302418	0.006431	7.53056E-09	0.75451	0.746914	5.42E-07	0.115545	0.112956	0.01691	0.0092	0.937775	0.695	0.775	1	0.855	0.91	0.916	0.969	0.736
rs142007125	4.8463E-09	0.0660687	0.01129	0.0611123	0.015999	5.38828E-09	0.37334	0.221979	8.03E-05	0.939099	0.887452	2E-06	0.0804	0.348329	0.718	0.768	1	0.096	0.305	1	0.866	0.725
rs8182219	4.8508E-09	-0.02964	0.00506	-0.02964	0.005065	8.92764E-09	0.62961	0.987397	5.11E-06	0.069431	0.898948	0.001	0.02148	0.701795	0.768	0.71	1	0.902	0.522	0.997	0.95	0.75
rs10959631	4.8529E-09	-0.039535	0.00676	-0.042307	0.008924	8.93128E-09	0.16118	0.823669	0.000724	0.07976	0.029456	0.00572	0.02973	0.001601	0.924	0.802	0.999	0.947	0.976	0.992	0.97	0.979
rs10959632	4.8529E-09	-0.039535	0.00676	-0.042307	0.008924	8.93128E-09	0.16118	0.823669	0.000724	0.07976	0.029456	0.00572	0.02973	0.001601	0.924	0.802	0.999	0.947	0.976	0.992	0.97	0.979
rs1148532	4.8693E-09	-0.031655	0.00541	-0.038801	0.008895	8.96087E-09	0.00175	0.731149	0.064199	0.010048	0.053156	0.00102	0.00784	0.017849	0.978	0.851	0.841	0.992	0.967	0.998	0.983	0.965
rs3003917	4.8709E-09	-0.034063	0.00582	-0.033876	0.006266	8.9637E-09	0.40758	0.109263	0.004772	0.076447	0.149684	8.5E-06	0.65011	0.022112	0.665	0.908	0.99	0.927	0.913	1	0.788	0.946
rs17428815	4.8743E-09	-0.029564	0.00505	-0.029564	0.005052	8.96981E-09	0.63837	0.114698	0.000134	0.020158	0.09638	0.00402	0.25946	0.42618	0.856	0.926	1	0.984	0.949	0.994	0.907	0.881
rs6485773	4.8826E-09	0.0305591	0.00522	0.0305591	0.005223	8.98473E-09	0.78234	0.234337	0.000738	9.9E-05	0.80351	0.00579	0.02993	0.930921	0.792	0.876	0.999	0.999	0.69	0.985	0.956	0.763

Table S3

rs10830216	4.8859E-09	0.0299604	0.00512	0.0336946	0.010138	4.55294E-09	0.79043	0.266642	0.000779	0.072538	8.19E-07	0.01013	0.02531	0.405541	0.796	0.624	0.995	0.925	0.999	0.966	0.96	0.85
rs114235860	4.8875E-09	0.0419599	0.00717	0.0419599	0.007171	8.99344E-09	0.18632	0.405792	0.008699	0.237106	0.000827	9.9E-05	0.23307	0.13503	0.907	0.875	0.983	0.811	0.994	1	0.905	0.92
rs7773310	4.8924E-09	0.0302835	0.00518	0.0302835	0.005176	9.00233E-09	0.70514	0.056352	0.001935	0.27918	0.261929	4.7E-06	0.18507	0.200585	0.696	0.915	0.995	0.71	0.855	1	0.888	0.877
rs283038	4.8933E-09	-0.029724	0.00508	-0.029724	0.00508	9.00392E-09	0.82612	0.551983	1.69E-05	0.076087	0.264188	0.00165	0.26397	0.173233	0.808	0.844	1	0.934	0.882	0.997	0.888	0.903
rs7298474	4.9043E-09	-0.029937	0.00512	-0.029937	0.005117	9.02364E-09	0.66325	0.354938	0.000215	0.007656	0.29459	0.00515	0.00802	0.865964	0.841	0.88	1	0.992	0.883	0.991	0.978	0.81
rs11076282	4.9069E-09	-0.036983	0.00632	-0.04371	0.010393	9.02833E-09	0.10542	0.54115	0.008118	0.001954	0.014799	0.01161	0.06768	0.000564	0.934	0.758	0.988	0.998	0.983	0.978	0.957	0.983
rs767563	4.9121E-09	0.0322416	0.00551	0.0321837	0.009843	5.52192E-09	0.48741	0.011764	9.21E-05	8.79E-06	0.929578	0.03175	0.68273	0.113675	0.526	0.923	0.999	1	0.438	0.713	0.638	0.855
rs12918956	4.9175E-09	0.0295248	0.00505	0.0284479	0.00572	8.95005E-09	0.68527	0.404024	0.005557	0.00852	0.593372	4.5E-07	0.49853	0.533335	0.61	0.55	0.975	0.981	0.661	1	0.734	0.749
rs3135407	4.918E-09	0.0294882	0.00504	0.0291427	0.005398	9.04832E-09	0.29048	0.692471	0.000614	0.000243	0.818015	0.0002	0.75313	0.272077	0.51	0.725	0.998	0.999	0.576	0.999	0.658	0.811
rs6503428	4.9182E-09	-0.031898	0.00545	-0.035755	0.007735	9.04871E-09	0.75673	0.128544	0.000632	0.023409	0.007023	0.03164	0.01716	0.005488	0.785	0.927	0.999	0.982	0.988	0.918	0.976	0.974
rs12699336	4.9196E-09	0.0338998	0.00579	0.0338998	0.005795	9.05114E-09	0.0469	0.50976	0.000118	0.001176	0.799465	0.00563	0.86607	0.094116	0.926	0.833	1	0.997	0.694	0.985	0.729	0.913
rs79561713	4.9203E-09	-0.036981	0.00632	-0.043705	0.010382	9.05238E-09	0.10392	0.543357	0.00821	0.002068	0.014449	0.01134	0.06718	0.000571	0.934	0.758	0.988	0.997	0.983	0.978	0.957	0.983
rs62302691	4.921E-09	0.0390206	0.00667	0.0390206	0.00667	9.05363E-09	0.11747	0.747831	0.014981	0.004781	0.001718	0.00115	0.42572	0.167686	0.929	0.848	0.977	0.995	0.993	0.999	0.877	0.922
rs79048677	4.922E-09	-0.058817	0.01005	-0.060629	0.013124	9.0555E-09	0.877	0.000775	0.000891	0.048856	0.014407	0.00131	0.36596	0.861285	0.82	0.974	0.999	0.963	0.981	0.998	0.879	0.816
rs4573	4.9339E-09	0.0299144	0.00511	0.0299144	0.005114	9.07674E-09	0.48385	0.401069	0.000787	0.002192	0.239852	0.00855	0.01857	0.250223	0.878	0.887	0.999	0.997	0.911	0.986	0.974	0.909
rs7505453	4.9379E-09	0.0295513	0.00505	0.0295513	0.005052	9.08398E-09	0.08727	0.561477	0.001608	0.002818	0.151571	0.00042	0.85367	0.060105	0.912	0.693	0.997	0.996	0.911	0.999	0.659	0.926
rs143297171	4.9435E-09	0.0857923	0.01467	0.0857923	0.014668	9.094E-09	0.32711	0.242683	0.002947	0.001545	0.056012	0.01143	0.00973	0.611933	0.902	0.912	0.997	0.998	0.966	0.983	0.981	0.868
rs3731507	4.9462E-09	-0.042022	0.00718	-0.042022	0.007185	9.09888E-09	0.68323	0.364184	0.000178	0.262103	0.147578	3.6E-05	0.34758	0.175042	0.673	0.832	1	0.705	0.893	1	0.829	0.875
rs1966821	4.9501E-09	0.0308108	0.00527	0.0298312	0.006137	8.93542E-09	0.64598	0.361559	0.00487	0.083782	0.852649	5.8E-07	0.02173	0.990747	0.637	0.811	0.981	0.879	0.603	1	0.948	0.692
rs59295157	4.9503E-09	0.0305611	0.00523	0.0321755	0.009205	9.10636E-09	0.21796	0.030201	0.000598	0.000227	0.01337	0.0228	0.22162	0.035879	0.878	0.441	0.999	0.999	0.977	0.903	0.884	0.937
rs7933981	4.9522E-09	-0.033412	0.00571	-0.033412	0.005713	8.88537E-09	0.38084	0.721765	9.64E-06	0.000277	0.462604	0.02061	0.54169	0.975052	0.82	0.764	1	0.999	0.758	0.893	0.765	0.714
rs7111509	4.954E-09	0.0305459	0.00522	0.0305459	0.005223	9.11284E-09	0.78077	0.234353	0.000732	0.000103	0.803298	0.00579	0.02991	0.930943	0.793	0.876	0.999	0.999	0.69	0.985	0.956	0.763
rs1977626	4.9621E-09	-0.032037	0.00548	-0.032037	0.005478	9.12741E-09	0.17185	0.769939	0.000117	0.027761	0.305697	0.00619	0.0499	0.06449	0.918	0.844	1	0.98	0.892	0.991	0.96	0.943
rs2413876	4.9726E-09	-0.0328	0.00561	-0.0328	0.005609	9.1464E-09	0.88962	0.61842	0.000466	0.000259	0.483171	0.00115	0.34251	0.447642	0.756	0.677	0.999	0.999	0.775	0.997	0.837	0.822
rs117711182	4.9745E-09	-0.072477	0.01239	-0.072477	0.012393	9.1497E-09	0.36305	0.866671	3.26E-06	0.093409	0.485253	0.00102	0.81625	0.081965	0.831	0.71	1	0.882	0.761	0.997	0.706	0.904
rs191762	4.975E-09	-0.03209	0.00549	-0.035666	0.008618	9.15063E-09	0.0075	0.180279	0.014533	0.006587	0.902615	0.00052	0.00065	0.683707	0.961	0.906	0.969	0.993	0.695	0.999	0.991	0.831
rs7925346	4.98E-09	0.0299419	0.00512	0.0338251	0.010142	4.56713E-09	0.71702	0.256271	0.000776	0.070525	8.43E-07	0.01108	0.02511	0.401517	0.807	0.622	0.995	0.927	0.999	0.963	0.96	0.852
rs11740543	4.9939E-09	0.030036	0.00514	0.0318364	0.00725	9.18452E-09	0.79275	0.686014	0.000199	0.004399	0.004331	0.02829	0.22777	0.00523	0.747	0.731	1	0.994	0.988	0.902	0.895	0.967
rs99780	4.9944E-09	0.0298266	0.0051	0.0316795	0.007898	9.18542E-09	0.10784	0.489942	0.010634	0.158738	3.79E-05	9.2E-05	0.27733	0.343418	0.91	0.689	0.973	0.849	0.998	1	0.877	0.865
rs78610798	4.9983E-09	-0.070146	0.012	-0.069743	0.013017	9.1924E-09	0.04288	0.115261	0.00054	0.647498	0.061862	2.1E-05	0.23729	0.990868	0.913	0.882	0.998	0.349	0.934	1	0.849	0.681
rs12785949	5.0047E-09	0.0305371	0.00522	0.0305371	0.005223	9.20386E-09	0.78073	0.235264	0.000736	0.000103	0.804726	0.0058	0.02991	0.930934	0.793	0.875	0.999	0.999	0.69	0.985	0.956	0.763
rs174568	5.0064E-09	0.0298485	0.0051	0.0321312	0.008309	9.20708E-09	0.08429	0.46149	0.013262	0.181323	2.93E-05	7.4E-05	0.24908	0.326573	0.915	0.675	0.96	0.82	0.998	1	0.881	0.864
rs6903823	5.0103E-09	-0.045967	0.00786	-0.045967	0.007862	9.21405E-09	0.04613	0.486462	0.000441	0.046622	0.498302	0.00187	0.04739	0.061616	0.946	0.877	0.999	0.968	0.842	0.998	0.962	0.945
rs12145554	5.0109E-09	-0.030047	0.00514	-0.030047	0.005139	9.21503E-09	0.32221	0.027533	0.02118	0.070928	0.021892	2.1E-05	0.14353	0.982184	0.89	0.949	0.957	0.946	0.977	1	0.93	0.802
rs4279348	5.0128E-09	0.0300333	0.00514	0.0318388	0.007258	9.21846E-09	0.78996	0.68532	0.0002	0.004373	0.004317	0.02834	0.22794	0.005226	0.746	0.731	1	0.994	0.988	0.902	0.895	0.967
rs1588408	5.0134E-09	-0.036902	0.00631	-0.038014	0.010716	6.60573E-09	0.37457	0.810607	0.004983	7.64E-06	0.699884	0.00364	0.00144	0.569378	0.82	0.68	0.98	1	0.447	0.983	0.983	0.781
rs12082752	5.016E-09	0.0305602	0.00523	0.032158	0.009202	9.22414E-09	0.20723	0.030407	0.000549	0.000238	0.013953	0.02357	0.22908	0.035817	0.88	0.44	0.999	0.999	0.977	0.899	0.881	0.937
rs6662366	5.0173E-09	0.029551	0.00505	0.03124	0.007302	4.72297E-09	0.31879	0.072693	1.74E-06	0.002545	0.53734	0.14647	0.37033	0.022062	0.797	0.887	1	0.993	0.606	0.27	0.749	0.932
rs1328503	5.0205E-09	0.0322279	0.00551	0.0323602	0.009796	5.64919E-09	0.51743	0.011229	8.95E-05	9.75E-06	0.943335	0.03442	0.66223	0.109153	0.533	0.924	0.999	1	0.442	0.694	0.643	0.858
rs12145410	5.0235E-09	-0.030542	0.00522	-0.032175	0.009221	9.23765E-09	0.21444	0.029721	0.000607	0.000236	0.013	0.02275	0.22219	0.035462	0.879	0.44	0.999	0.999	0.977	0.904	0.884	0.937
rs320474	5.0322E-09	0.0372644	0.00637	0.0366115	0.007508	9.25337E-09	0.00776	0.450706	0.000151	0.005402	0.929006	0.00056	0.72496	0.464488	0.942	0.807	1	0.991	0.587	0.999	0.556	0.803
rs13012903	5.033E-09	-0.029637	0.00507	-0.030785	0.006229	9.25476E-09	0.42313	0.027713	0.011197	0.009094	0.08669	0.00048	0.90417	0.002916	0.883	0.952	0.983	0.992	0.953	0.999	0.779	0.976
rs7695234	5.0358E-09	-0.036914	0.00631	-0.038164	0.0107	6.61808E-09	0.3742	0.847241	0.004999	7.6E-06	0.7346	0.00401	0.00128	0.605157	0.822	0.69	0.98	1	0.465	0.981	0.983	0.776
rs7349190	5.0401E-09	0.0298513	0.00511	0.0308371	0.005712	9.26756E-09	0.58898	0.61896	0.03549	0.000513	0.118521	0.00206	0.00264	0.048097	0.864	0.86	0.925	0.999	0.943	0.996	0.987	0.949
rs113226079	5.0456E-09	-0.056398	0.00965	-0.056398	0.009648	9.27729E-09	0.7946	0.017253	0.006504	0.023623	0.102659	0.00012	0.18964	0.577656	0.838	0.956	0.991	0.982	0.947	1	0.922	0.861
rs9835485	5.0528E-09	0.0307921	0.00527	0.0297918	0.006154	9.10965E-09	0.64194	0.361609	0.004866	0.085095	0.852463	5.7E-07	0.02173	0.990781	0.635	0.81	0.98	0.877	0.602	1	0.948	0.691
rs118152225	5.0529E-09	-0.070451	0.01205	-0.070584	0.012522	8.77133E-09	0.09753	0.070702	0.056541	0.021518	0.173337	3E-06	0.10155	0.736857	0.914	0.922	0.807	0.975	0.903	1	0.929	0.71
rs209181	5.059E-09	-0.052851	0.00904	-0.056704	0.014345	9.30136E-09	0.02951	0.809617	0.000652	0.003717	0.803116	0.00427	0.03636	0.002864	0.939	0.738	0.999	0.995	0.558	0.99	0.957	0.968
rs1743969	5.0599E-09	-0.030694	0.00525	-0.031659	0.006673	6.85196E-09	0.36587	0.91291	0.130743	0.000418	0.004796	2.8E-05	0.84781	0.160493	0.787	0.668	0.401	0.998	0.982	1	0.59	0.851
rs80285220	5.0616E-09	0.0305271	0.00522	0.0305271	0.005223	9.30606E-09	0.78195	0.237267	0.000745	0.000101	0.808374	0.00582	0.0299	0.930896	0.792	0.875	0.999	0.999	0.688	0.985	0.956	0.763
rs17598581	5.0653E-09	0.0334851	0.00573	0.0355299	0.007744	9.31263E-09	0.03382	0.502824	0.0023	0.009537	0.000195	0.00478	0.79117	0.342555	0.943	0.857	0.997	0.991	0.996	0.991	0.681	0.88
rs4888601	5.0666E-09	0.0333472	0.00571	0.0315831	0.007505	7.80373E-09	0.37607	0.537553	2.22E-07	0.018782	0.541914	0.01179	0.79059	0.077046	0.574	0.777	1	0.966	0.711	0.934	0.679	0.891
rs72902951	5.0731E-09	0.029845	0.00511	0.0308262	0.005708	9.32679E-09	0.58288	0.619082	0.035429	0.000517	0.118739	0.00208	0.00264	0.048083	0.864	0.861	0.925	0.999	0.943	0.996	0.987	0.949
rs6428602	5.0749E-09	0.0295596	0.00506	0.0312269	0.007291	4.81142E-09	0.31315	0.074699	1.71E-06	0.002687	0.539508	0.14505	0.37098	0.021757	0.799	0.886	1	0.993	0.607	0.275	0.75	0.932
rs7646565	5.0762E-09	0.055239	0.00945	0.055239	0.009451	9.33223E-09	0.26205	0.125312	0.007823	0.012972	0.025685	0.00026	0.52666	0.369382	0.905	0.926	0.989	0.99	0.976	1	0.858	0.891

Table S3

rs58001278	5.0812E-09	0.0491466	0.00841	0.0532564	0.011216	9.34124E-09	0.58236	0.034619	0.000102	0.065406	0.018331	0.04173	0.00132	0.578028	0.856	0.947	1	0.945	0.979	0.873	0.99	0.855
rs6793877	5.0837E-09	-0.030051	0.00514	-0.029779	0.008765	3.18748E-09	0.67836	0.014975	0.026867	0.645752	0.072267	4.6E-08	0.06941	0.580039	0.5	0.913	0.641	0.226	0.879	1	0.884	0.667
rs4387754	5.0841E-09	0.0298431	0.00511	0.0308223	0.005707	9.34644E-09	0.58275	0.619055	0.035439	0.000517	0.118779	0.00209	0.00264	0.04816	0.864	0.861	0.925	0.999	0.943	0.996	0.987	0.949
rs12997647	5.0842E-09	0.0298431	0.00511	0.0308222	0.005707	9.34673E-09	0.58276	0.619055	0.035439	0.000517	0.118779	0.00209	0.00264	0.04816	0.864	0.861	0.925	0.999	0.943	0.996	0.987	0.949
rs72860788	5.0856E-09	0.0307868	0.00527	0.0297856	0.006155	9.16555E-09	0.64247	0.361557	0.00487	0.085485	0.852648	5.8E-07	0.02173	0.990742	0.636	0.81	0.98	0.876	0.602	1	0.948	0.691
rs11688731	5.0863E-09	0.0298428	0.00511	0.0308215	0.005707	9.35034E-09	0.58276	0.619055	0.03544	0.000518	0.118781	0.00209	0.00264	0.04816	0.864	0.861	0.925	0.999	0.943	0.996	0.987	0.949
rs11694767	5.0864E-09	0.0298427	0.00511	0.0308215	0.005707	9.35051E-09	0.58276	0.619055	0.03544	0.000518	0.118781	0.00209	0.00264	0.04816	0.864	0.861	0.925	0.999	0.943	0.996	0.987	0.949
rs4597485	5.089E-09	0.0298425	0.00511	0.0308208	0.005707	9.35517E-09	0.58274	0.619055	0.035439	0.000518	0.118779	0.00209	0.00264	0.04816	0.864	0.861	0.925	0.999	0.943	0.996	0.987	0.949
rs6777333	5.0896E-09	0.0307861	0.00527	0.0297844	0.006155	9.17233E-09	0.64241	0.361557	0.00487	0.085534	0.85265	5.8E-07	0.02173	0.990745	0.636	0.81	0.98	0.876	0.602	1	0.948	0.691
rs6785876	5.0896E-09	0.0307861	0.00527	0.0297844	0.006155	9.17233E-09	0.64241	0.361557	0.00487	0.085534	0.85265	5.8E-07	0.02173	0.990745	0.636	0.81	0.98	0.876	0.602	1	0.948	0.691
rs7653558	5.0896E-09	0.0307861	0.00527	0.0297844	0.006155	9.17233E-09	0.64241	0.361557	0.00487	0.085534	0.85265	5.8E-07	0.02173	0.990745	0.636	0.81	0.98	0.876	0.602	1	0.948	0.691
rs146766682	5.0906E-09	-0.080745	0.01382	-0.080754	0.013952	9.35811E-09	0.2491	0.056793	1.37E-05	0.176713	0.143639	0.00458	0.02436	0.605246	0.885	0.929	1	0.835	0.919	0.989	0.964	0.698
rs6770567	5.1019E-09	0.0307843	0.00527	0.0297756	0.006161	9.19418E-09	0.63995	0.361557	0.00487	0.085523	0.85265	5.8E-07	0.02173	0.990745	0.635	0.81	0.98	0.876	0.602	1	0.948	0.691
rs67042826	5.103E-09	0.0298407	0.00511	0.0308081	0.005699	9.38046E-09	0.57784	0.619055	0.035439	0.000525	0.118779	0.00209	0.00264	0.04816	0.865	0.861	0.925	0.999	0.943	0.996	0.987	0.949
rs2024970	5.1056E-09	0.0297483	0.00509	0.0297483	0.005091	9.38509E-09	0.47472	0.367592	0.000501	0.002848	0.163655	0.00504	0.14333	0.365766	0.876	0.888	0.999	0.997	0.929	0.993	0.933	0.889
rs35039217	5.1214E-09	-0.031716	0.00543	-0.031716	0.005428	9.41336E-09	0.44172	0.666731	0.005848	0.012994	0.496906	2E-05	0.02616	0.765344	0.845	0.813	0.988	0.985	0.794	1	0.959	0.718
rs139682949	5.1265E-09	-0.042008	0.00719	-0.042008	0.007189	9.42255E-09	0.59388	0.38014	0.000153	0.276734	0.139754	3.6E-05	0.35645	0.163444	0.645	0.823	1	0.68	0.893	1	0.82	0.874
rs11222026	5.1347E-09	0.0342929	0.00587	0.0350383	0.009152	6.95498E-09	0.02071	0.249122	0.000859	0.939804	0.356975	5.2E-06	0.17909	0.029282	0.928	0.832	0.997	0.121	0.753	1	0.861	0.927
rs9318840	5.1354E-09	0.0322999	0.00553	0.0322999	0.005528	9.43857E-09	0.03153	0.619297	0.013825	0.022718	0.003203	0.00049	0.32243	0.237958	0.953	0.867	0.98	0.984	0.991	0.999	0.901	0.914
rs529528456	5.1363E-09	0.0974254	0.01667	0.0974254	0.016675	9.44005E-09	0.16373	0.223937	0.021142	0.010124	0.172958	5.7E-05	0.04362	0.972075	0.915	0.905	0.964	0.991	0.924	1	0.96	0.801
rs6779941	5.1399E-09	0.0307787	0.00527	0.0297668	0.006164	9.25832E-09	0.63995	0.361557	0.00487	0.086113	0.852649	5.8E-07	0.02173	0.990743	0.635	0.81	0.98	0.875	0.602	1	0.948	0.691
rs9965625	5.1416E-09	0.0295265	0.00505	0.0316223	0.007233	9.44964E-09	0.04021	0.076576	0.010772	0.367865	0.332079	2E-05	0.07452	0.006014	0.94	0.926	0.97	0.679	0.859	1	0.944	0.968
rs10842289	5.1493E-09	-0.029896	0.00512	-0.029896	0.005117	9.46351E-09	0.64208	0.354938	0.000215	0.008308	0.294884	0.00515	0.00802	0.866015	0.844	0.88	1	0.992	0.883	0.991	0.978	0.81
rs2787995	5.1533E-09	-0.032311	0.00553	-0.035815	0.007305	7.77059E-09	0.03027	0.493143	0.000179	0.009894	0.016527	0.11217	0.01154	0.086114	0.947	0.844	1	0.988	0.979	0.536	0.978	0.929
rs529509	5.154E-09	-0.029519	0.00505	-0.029519	0.005053	9.47183E-09	0.63848	0.115223	0.000138	0.020522	0.09564	0.00416	0.25137	0.428359	0.856	0.926	1	0.984	0.949	0.994	0.908	0.88
rs62078771	5.1578E-09	0.0490316	0.00839	0.0520779	0.013994	4.72679E-09	0.04622	0.713837	0.047002	0.431384	0.000464	1.2E-06	0.13401	0.413168	0.889	0.552	0.582	0.377	0.994	1	0.848	0.743
rs11076281	5.1622E-09	-0.036929	0.00632	-0.043612	0.010376	9.48651E-09	0.10892	0.540768	0.008147	0.002036	0.014806	0.01165	0.0678	0.000562	0.933	0.758	0.988	0.997	0.983	0.978	0.957	0.983
rs7503810	5.1682E-09	0.0334952	0.00573	0.0329457	0.008087	9.4973E-09	0.28695	0.051356	0.000163	0.170517	0.588205	0.00018	0.17953	0.00762	0.594	0.915	1	0.809	0.738	1	0.888	0.955
rs325502	5.1846E-09	-0.030207	0.00517	-0.030207	0.005171	9.52681E-09	0.90455	0.008377	0.008024	0.067328	0.009601	7.5E-05	0.35147	0.589971	0.789	0.961	0.987	0.948	0.984	1	0.88	0.85
rs72673173	5.1944E-09	0.042263	0.00724	0.042263	0.007236	9.54436E-09	0.49119	0.638817	0.000921	0.019831	0.082689	0.00087	0.09439	0.440255	0.872	0.855	0.999	0.985	0.953	0.999	0.945	0.878
rs34040031	5.1971E-09	-0.032336	0.00554	-0.032336	0.005536	9.54913E-09	0.40751	0.022786	0.001934	0.212952	0.01415	0.0001	0.37834	0.601664	0.868	0.947	0.997	0.823	0.979	1	0.867	0.84
rs174584	5.1982E-09	0.0298126	0.0051	0.0318162	0.008047	9.55118E-09	0.10603	0.510581	0.01256	0.177199	3.32E-05	7.4E-05	0.26045	0.346862	0.909	0.688	0.964	0.827	0.998	1	0.879	0.862
rs11287663	5.1989E-09	0.0466813	0.00799	0.0466813	0.007992	9.55245E-09	0.08585	0.483202	0.001037	0.08336	0.006447	0.00131	0.59225	0.062293	0.935	0.876	0.999	0.941	0.987	0.998	0.844	0.944
rs1031051	5.1991E-09	0.0322102	0.00551	0.0322102	0.005515	9.55274E-09	0.42422	0.019642	0.001092	0.169417	0.020442	0.00021	0.38566	0.652757	0.87	0.951	0.998	0.864	0.976	1	0.869	0.838
rs2082559	5.2005E-09	-0.036398	0.00623	-0.036398	0.006232	9.55527E-09	0.41989	0.901238	0.014375	0.008711	0.081475	8.1E-06	0.85965	0.32045	0.851	0.785	0.965	0.989	0.94	1	0.74	0.867
rs1847162	5.2027E-09	-0.03113	0.00533	-0.034129	0.00731	9.55916E-09	0.03921	0.049176	0.007053	0.156006	0.058416	0.00057	0.22874	0.001952	0.954	0.95	0.991	0.902	0.967	0.999	0.924	0.981
rs12190473	5.2028E-09	-0.033555	0.00575	-0.033555	0.005745	9.55949E-09	0.37914	0.924007	0.000178	0.002482	0.40931	0.00532	0.22642	0.064716	0.873	0.784	1	0.996	0.844	0.99	0.902	0.934
rs1778508	5.2114E-09	0.0540683	0.00926	0.0560785	0.013217	9.57478E-09	0.86784	0.963575	0.001133	0.023274	0.396849	0.00093	0.08573	0.00018	0.817	0.804	0.998	0.981	0.855	0.999	0.944	0.982
rs200229163	5.2427E-09	-0.072354	0.01239	-0.072354	0.012391	9.63091E-09	0.39104	0.923874	3.09E-06	0.09395	0.455381	0.00117	0.79072	0.098455	0.829	0.724	1	0.885	0.776	0.997	0.717	0.899
rs12636896	5.2519E-09	-0.069703	0.01194	-0.069703	0.011938	9.64742E-09	0.06273	0.095848	0.000577	0.581361	0.06373	2.4E-05	0.24795	0.966308	0.904	0.891	0.998	0.408	0.934	1	0.849	0.686
rs4498546	5.252E-09	0.0379424	0.0065	0.0379424	0.006498	9.64765E-09	0.04401	0.439539	0.001905	0.062311	0.023575	0.00111	0.12479	0.313946	0.95	0.89	0.998	0.961	0.979	0.999	0.943	0.906
rs67660249	5.2534E-09	0.0319428	0.00547	0.0319428	0.005471	9.65014E-09	0.60867	0.069244	0.010917	0.000967	0.231802	0.00066	0.45233	0.05453	0.86	0.937	0.983	0.998	0.91	0.999	0.868	0.945
rs6901575	5.2616E-09	-0.054112	0.00927	-0.056007	0.013454	9.66488E-09	0.93049	0.963628	0.000883	0.030978	0.386566	0.00088	0.07362	0.000189	0.806	0.791	0.999	0.974	0.855	0.999	0.946	0.982
rs1390801	5.2686E-09	-0.029499	0.00505	-0.029499	0.005052	9.67735E-09	0.63721	0.114669	0.00014	0.020797	0.096742	0.00407	0.25946	0.426723	0.856	0.926	1	0.984	0.949	0.994	0.907	0.88
rs35406800	5.2708E-09	0.0295484	0.00506	0.0295484	0.005061	9.68134E-09	0.79159	0.928249	0.000476	0.086816	0.354078	0.00023	0.04957	0.011675	0.75	0.792	0.999	0.923	0.851	1	0.95	0.957
rs77752969	5.2712E-09	-0.106237	0.0182	-0.106237	0.018196	9.68207E-09	0.83096	0.549963	0.024734	0.044259	0.043143	5.9E-05	0.01415	0.057453	0.835	0.867	0.952	0.967	0.969	1	0.976	0.945
rs270853	5.2739E-09	0.0302248	0.00518	0.0302248	0.005177	9.68689E-09	0.67634	0.250171	0.003245	0.000733	0.098439	9.4E-05	0.96264	0.260293	0.772	0.847	0.992	0.998	0.914	1	0.655	0.532
rs58185311	5.274E-09	0.0325534	0.00558	0.031565	0.009321	9.68714E-09	0.03347	0.077881	0.000137	0.313179	0.003424	0.00027	0.12661	0.998516	0.912	0.422	1	0.599	0.984	0.999	0.886	0.676
rs12600266	5.2751E-09	-0.029481	0.00505	-0.029481	0.00505	9.68905E-09	0.16723	0.640639	0.005311	0.098349	0.11007	3.7E-05	0.25356	0.070606	0.916	0.855	0.993	0.93	0.944	1	0.907	0.939
rs847753	5.2777E-09	-0.03065	0.00525	-0.031658	0.006677	7.24405E-09	0.29006	0.924409	0.129747	0.000455	0.004722	3.1E-05	0.86056	0.167721	0.81	0.67	0.41	0.998	0.983	1	0.591	0.851
rs1567788	5.279E-09	-0.047474	0.00813	-0.057042	0.014769	6.93852E-09	0.45243	0.097673	0.079113	0.12467	0.003228	3.4E-05	0.00449	0.009126	0.606	0.903	0.634	0.789	0.989	1	0.98	0.957
rs7205340	5.2804E-09	0.033161	0.00568	0.03337	0.006536	9.69849E-09	0.01441	0.082908	0.011695	0.313763	0.286356	5.3E-06	0.08193	0.37599	0.952	0.921	0.968	0.723	0.871	1	0.939	0.866
rs7935344	5.2816E-09	0.0304909	0.00522	0.0304909	0.005223	9.70072E-09	0.79069	0.237484	0.000743	0.000113	0.800933	0.00582	0.02865	0.931183	0.791	0.875	0.999	0.999	0.692	0.985	0.957	0.764
rs7935528	5.2821E-09	0.0304909	0.00522	0.0304909	0.005223	9.70154E-09	0.79069	0.237485	0.000743	0.000113	0.800936	0.00582	0.02865	0.931185	0.791	0.875	0.999	0.999	0.692	0.985	0.957	0.764
rs2658507	5.2824E-09	-0.029497	0.00505	-0.029497	0.005052	9.70209E-09	0.63668	0.114642	0.00014	0.020783	0.096764	0.00408	0.25964	0.426752	0.856	0.926	1	0.984	0.949	0.994	0.907	0.88

Table S3

rs3834458	5.2865E-09	0.0298021	0.0051	0.0320382	0.008284	9.70947E-09	0.09048	0.463121	0.013233	0.185135	2.96E-05	7.4E-05	0.24836	0.326687	0.912	0.674	0.96	0.817	0.998	1	0.881	0.864
rs11771139	5.2956E-09	0.0325475	0.00558	0.0315644	0.009321	9.72589E-09	0.03351	0.077813	0.000137	0.31305	0.003401	0.00027	0.12678	0.996706	0.912	0.422	1	0.599	0.984	0.999	0.886	0.676
rs7105539	5.2959E-09	0.0336658	0.00577	0.0340498	0.00823	9.47361E-09	0.03156	0.119649	0.000649	0.845954	0.478087	1.4E-05	0.19234	0.031419	0.919	0.876	0.998	0.222	0.71	1	0.861	0.926
rs13004696	5.3027E-09	0.0298112	0.00511	0.030755	0.005688	9.73858E-09	0.59069	0.617666	0.035573	0.000536	0.119157	0.00209	0.00267	0.048167	0.863	0.861	0.925	0.999	0.943	0.996	0.987	0.949
rs145933528	5.3037E-09	0.03757	0.00644	0.0375254	0.008062	8.30624E-09	0.55045	0.1302	0.073548	9.03E-05	0.114105	1.7E-05	0.43329	0.981983	0.584	0.858	0.633	0.999	0.883	1	0.754	0.656
rs62045660	5.3151E-09	0.0314034	0.00538	0.0314034	0.00538	9.76083E-09	0.76123	0.489219	0.00056	0.00665	0.221062	0.00027	0.14429	0.75333	0.722	0.833	0.999	0.991	0.881	0.999	0.908	0.707
rs13005309	5.3167E-09	0.0298094	0.00511	0.0307532	0.005688	9.76371E-09	0.59018	0.617725	0.035648	0.000535	0.11916	0.00209	0.00268	0.048154	0.863	0.861	0.925	0.999	0.943	0.996	0.987	0.949
rs428064	5.3189E-09	-0.030706	0.00526	-0.031921	0.008927	9.76758E-09	0.04383	0.485557	0.02468	0.029777	0.013807	3.3E-05	0.02189	0.027551	0.47	0.837	0.921	0.968	0.977	1	0.964	0.944
rs12080926	5.3198E-09	0.0295015	0.00505	0.0311805	0.007289	5.03817E-09	0.31289	0.072678	1.74E-06	0.002781	0.537373	0.14658	0.37027	0.022058	0.799	0.887	1	0.993	0.609	0.274	0.75	0.932
rs56353619	5.3274E-09	0.0294991	0.00505	0.031174	0.007288	5.04397E-09	0.31557	0.072641	1.74E-06	0.00277	0.537608	0.14662	0.3702	0.022082	0.798	0.887	1	0.993	0.608	0.274	0.75	0.932
rs102275	5.3327E-09	0.0297508	0.0051	0.031722	0.008662	9.7923E-09	0.12929	0.355109	0.010624	0.153334	1.21E-05	9.6E-05	0.29328	0.449006	0.898	0.642	0.969	0.843	0.998	1	0.865	0.838
rs7935521	5.3366E-09	0.0304818	0.00522	0.0304818	0.005223	9.79927E-09	0.79109	0.237485	0.000743	0.000115	0.800936	0.00582	0.02865	0.931185	0.791	0.875	0.999	0.999	0.692	0.985	0.957	0.764
rs1828855	5.3395E-09	-0.029489	0.00505	-0.029489	0.005053	9.80452E-09	0.63633	0.114676	0.00014	0.021066	0.096787	0.00408	0.25969	0.426792	0.856	0.926	1	0.984	0.949	0.994	0.907	0.88
rs10756181	5.3407E-09	0.0349881	0.006	0.0350411	0.006074	9.80671E-09	0.69895	0.280354	6.15E-05	0.002445	0.463143	0.02335	0.07037	0.017684	0.737	0.882	1	0.996	0.818	0.924	0.944	0.954
rs1962759	5.3412E-09	0.0304881	0.00522	0.0320913	0.009198	9.80762E-09	0.22307	0.029724	0.00061	0.000253	0.012986	0.02271	0.22217	0.035414	0.877	0.441	0.999	0.999	0.977	0.905	0.884	0.937
rs4953251	5.3449E-09	-0.030642	0.00525	-0.030687	0.005302	9.8141E-09	0.75564	0.041608	0.010728	0.027597	0.052403	0.00034	0.00319	0.652684	0.779	0.945	0.984	0.979	0.964	1	0.986	0.85
rs7711675	5.3512E-09	0.0302607	0.00519	0.0302016	0.005239	8.3514E-09	0.78794	0.226289	0.00165	0.637995	0.354121	6.8E-07	0.06831	0.442345	0.699	0.821	0.992	0.322	0.747	1	0.907	0.767
rs8074621	5.3527E-09	0.0295376	0.00506	0.0295376	0.005061	9.82816E-09	0.79052	0.925866	0.000484	0.085948	0.353333	0.00024	0.0496	0.011781	0.751	0.792	0.999	0.924	0.852	1	0.95	0.957
rs17171515	5.3623E-09	0.0927558	0.0159	0.0943333	0.020784	9.60584E-09	0.07298	0.31754	2.07E-05	0.801154	0.135246	0.00162	0.0039	0.558411	0.9	0.833	1	0.29	0.895	0.994	0.981	0.784
rs2658508	5.3656E-09	-0.029485	0.00505	-0.029485	0.005053	9.85125E-09	0.63668	0.115545	0.000139	0.020791	0.09606	0.00416	0.26014	0.424789	0.856	0.926	1	0.984	0.949	0.994	0.906	0.881
rs4353614	5.3738E-09	0.0297964	0.00511	0.0307374	0.005686	9.86601E-09	0.5956	0.619055	0.035439	0.00055	0.118779	0.00209	0.00264	0.04816	0.863	0.86	0.926	0.999	0.943	0.996	0.987	0.949
rs35530521	5.3757E-09	0.0296205	0.00508	0.0300888	0.008481	9.86936E-09	0.68668	0.013099	0.000175	0.000549	0.014371	0.02045	0.22248	0.144467	0.679	0.941	1	0.998	0.974	0.905	0.872	0.491
rs4121729	5.378E-09	0.0298788	0.00512	0.0337706	0.010148	4.8842E-09	0.71723	0.255821	0.00078	0.071127	8.51E-07	0.01157	0.02526	0.402688	0.806	0.621	0.994	0.926	0.999	0.961	0.96	0.851
rs3785199	5.3863E-09	-0.032751	0.00561	-0.03431	0.010601	9.88843E-09	0.08315	0.234159	0.000149	0.115195	0.524084	0.00149	0.00017	0.029219	0.488	0.866	1	0.867	0.757	0.996	0.992	0.936
rs4951765	5.3881E-09	0.0294776	0.00505	0.0305765	0.00629	9.89155E-09	0.45868	0.02055	0.031157	0.002061	0.342096	0.00017	0.62576	0.006641	0.868	0.951	0.927	0.997	0.87	1	0.822	0.968
rs283035	5.3921E-09	-0.029479	0.00505	-0.029479	0.005052	9.89872E-09	0.64145	0.114651	0.000139	0.021091	0.098489	0.00404	0.25876	0.430999	0.855	0.926	1	0.984	0.948	0.994	0.907	0.88
rs283034	5.4009E-09	-0.029477	0.00505	-0.029477	0.005052	9.91455E-09	0.64075	0.114636	0.000139	0.021016	0.099306	0.00404	0.25862	0.432178	0.855	0.926	1	0.984	0.948	0.994	0.907	0.88
rs12563928	5.4014E-09	0.0294858	0.00505	0.0311658	0.007289	5.11594E-09	0.31513	0.072283	1.76E-06	0.002794	0.536874	0.147	0.37044	0.022033	0.798	0.887	1	0.992	0.609	0.274	0.75	0.932
rs174564	5.4023E-09	0.0297516	0.0051	0.0319777	0.00866	9.91697E-09	0.11282	0.369249	0.012436	0.165553	1.44E-05	8.7E-05	0.27273	0.372295	0.904	0.647	0.962	0.831	0.998	1	0.871	0.852
rs9316889	5.4108E-09	-0.029698	0.00509	-0.029698	0.00509	9.93222E-09	0.03183	0.21476	0.00073	0.033376	0.094455	0.00531	0.1176	0.128702	0.957	0.922	0.999	0.98	0.958	0.994	0.948	0.938
rs6691718	5.4186E-09	0.0294789	0.00505	0.0311593	0.007287	5.13522E-09	0.31492	0.071825	1.76E-06	0.002809	0.535787	0.14702	0.37134	0.022097	0.798	0.887	1	0.992	0.61	0.274	0.75	0.932
rs6704223	5.4241E-09	0.0294781	0.00505	0.0311576	0.007287	5.13967E-09	0.31492	0.071917	1.76E-06	0.002812	0.535828	0.14704	0.37138	0.0221	0.798	0.887	1	0.992	0.61	0.274	0.75	0.932
rs9316888	5.4256E-09	-0.029697	0.00509	-0.029697	0.005091	9.95874E-09	0.03202	0.215165	0.00073	0.03313	0.094872	0.00533	0.11802	0.128468	0.957	0.922	0.999	0.98	0.957	0.994	0.948	0.938
rs1514794	5.4277E-09	0.0353468	0.00606	0.0359983	0.00651	9.63885E-09	0.787	0.96534	0.035245	4.39E-05	0.049825	0.00297	0.02395	0.114389	0.827	0.806	0.917	1	0.963	0.993	0.968	0.925
rs10922918	5.432E-09	0.0294766	0.00505	0.0311566	0.007286	5.15053E-09	0.31484	0.071872	1.77E-06	0.002807	0.53553	0.14703	0.37172	0.02209	0.799	0.887	1	0.992	0.61	0.274	0.75	0.932
rs9569580	5.4355E-09	-0.0297	0.00509	-0.0297	0.005091	9.97644E-09	0.03229	0.21453	0.000729	0.033157	0.09499	0.00531	0.11863	0.129109	0.957	0.922	0.999	0.98	0.957	0.994	0.948	0.937
rs3018458	5.4412E-09	0.040542	0.00695	0.0403943	0.007386	9.9868E-09	0.98588	0.646545	0.017093	0.000523	0.183367	2.8E-05	0.99727	0.041152	0.728	0.674	0.943	0.998	0.878	1	0.661	0.922
rs115046204	5.4453E-09	0.0944796	0.0162	0.0944796	0.016198	9.99415E-09	0.40982	0.592827	0.002845	0.006364	0.080015	0.00048	0.18323	0.140448	0.874	0.747	0.996	0.993	0.95	0.999	0.917	0.917
rs59676064	5.4458E-09	-0.029699	0.00509	-0.029699	0.005092	9.99503E-09	0.03185	0.214211	0.000727	0.033428	0.094819	0.00532	0.11867	0.129179	0.957	0.922	0.999	0.98	0.957	0.994	0.948	0.937
rs56077961	5.4515E-09	-0.03496	0.00599	-0.03496	0.005994	1.00051E-08	0.67254	0.28615	6.21E-05	0.002456	0.473529	0.02166	0.07012	0.020687	0.733	0.88	1	0.996	0.814	0.931	0.944	0.951
rs35531210	5.4564E-09	-0.03109	0.00533	-0.03109	0.00533	1.00139E-08	0.21277	0.826703	0.007571	0.026838	0.224861	0.00014	0.0071	0.420398	0.908	0.833	0.989	0.98	0.91	1	0.981	0.88
rs102274	5.4591E-09	0.0297678	0.0051	0.0318956	0.00915	9.01899E-09	0.13689	0.279025	0.012731	0.157258	7.02E-06	8E-05	0.30293	0.400841	0.892	0.609	0.958	0.83	0.998	0.999	0.856	0.84
rs139349652	5.4664E-09	0.049077	0.00841	0.0530092	0.01108	1.00318E-08	0.56315	0.043576	0.000113	0.064453	0.018703	0.04207	0.00115	0.562497	0.859	0.944	1	0.946	0.979	0.874	0.991	0.857
rs10780426	5.4685E-09	0.032136	0.00551	0.0322752	0.009811	6.08154E-09	0.51309	0.011007	9.24E-05	9.76E-06	0.944551	0.03559	0.66372	0.1117	0.529	0.924	0.999	1	0.44	0.685	0.64	0.855
rs17131164	5.4744E-09	0.0294636	0.00505	0.0311488	0.007291	5.18617E-09	0.31423	0.071608	1.77E-06	0.002817	0.537995	0.1472	0.37109	0.022016	0.799	0.887	1	0.992	0.609	0.274	0.75	0.932
rs2671920	5.4755E-09	-0.02947	0.00505	-0.02947	0.005053	1.00482E-08	0.63429	0.114974	0.000139	0.020571	0.097725	0.00422	0.26111	0.427037	0.856	0.926	1	0.984	0.948	0.994	0.906	0.88
rs72787028	5.4802E-09	0.0366959	0.00629	0.0366959	0.006292	1.00565E-08	0.12977	0.069525	0.001885	0.02861	0.021873	0.00151	0.22132	0.770205	0.929	0.941	0.998	0.981	0.979	0.998	0.921	0.847
rs9537566	5.4821E-09	-0.029686	0.00509	-0.029686	0.00509	1.006E-08	0.03149	0.213122	0.000735	0.033289	0.095731	0.0053	0.11872	0.130053	0.957	0.922	0.999	0.98	0.957	0.994	0.948	0.937
rs149870856	5.489E-09	-0.029686	0.00509	-0.029686	0.00509	1.00723E-08	0.03213	0.213115	0.000735	0.033119	0.095731	0.0053	0.11871	0.130049	0.957	0.922	0.999	0.98	0.957	0.994	0.948	0.937
rs3130271	5.4901E-09	0.0293887	0.00504	0.0290439	0.005397	1.00743E-08	0.29	0.693679	0.000637	0.000246	0.818104	0.00021	0.75915	0.274962	0.51	0.725	0.998	0.999	0.577	0.999	0.657	0.811
rs58836297	5.5039E-09	0.0307936	0.00528	0.030793	0.005481	1.0099E-08	0.58579	0.833626	0.006535	0.00012	0.015746	0.00045	0.4601	0.906884	0.663	0.71	0.983	0.999	0.97	0.999	0.803	0.71
rs10922916	5.5039E-09	0.0294592	0.00505	0.0311393	0.007289	5.21845E-09	0.31541	0.071727	1.77E-06	0.00283	0.538494	0.14708	0.37134	0.022007	0.798	0.887	1	0.992	0.608	0.274	0.75	0.932
rs7019400	5.5045E-09	0.0324571	0.00557	0.0324571	0.005566	1.01001E-08	0.31542	0.061115	0.004694	0.004503	0.563104	0.00051	0.33355	0.044243	0.893	0.938	0.994	0.995	0.817	0.999	0.89	0.948
rs56348498	5.5046E-09	-0.034958	0.00599	-0.035053	0.006143	1.01002E-08	0.66995	0.278778	6.04E-05	0.00246	0.459849	0.02323	0.07434	0.017504	0.732	0.881	1	0.996	0.818	0.924	0.942	0.954
rs9939774	5.5072E-09	-0.03047	0.00523	-0.030758	0.007221	1.0105E-08	0.91893	0.797926	0.012485	0.000281	0.00274	0.00055	0.16974	0.208206	0.755	0.773	0.963	0.999	0.987	0.999	0.893	0.537

Table S3

rs10045097	5.5092E-09	0.03021	0.00518	0.0290904	0.006398	6.60467E-09	0.87913	0.166846	0.002481	0.750108	0.333287	2.3E-07	0.07821	0.454451	0.662	0.83	0.983	0.237	0.738	1	0.894	0.749
rs12061544	5.5129E-09	0.0294577	0.00505	0.0311373	0.007289	5.22737E-09	0.31544	0.071762	1.77E-06	0.002833	0.538618	0.14709	0.37132	0.022008	0.798	0.887	1	0.992	0.608	0.274	0.75	0.932
rs9324960	5.5135E-09	0.0302093	0.00518	0.0290895	0.006398	6.60961E-09	0.87915	0.166873	0.002481	0.75015	0.333424	2.3E-07	0.07818	0.454494	0.661	0.83	0.983	0.237	0.738	1	0.894	0.749
rs56323675	5.5154E-09	-0.034971	0.006	-0.035093	0.006187	1.01196E-08	0.66487	0.276315	6.1E-05	0.00252	0.450923	0.02325	0.07634	0.016497	0.731	0.882	1	0.996	0.821	0.924	0.942	0.955
rs10838784	5.5185E-09	0.0304833	0.00523	0.0304833	0.005228	1.01252E-08	0.78267	0.249466	0.000873	0.000101	0.78925	0.0053	0.03267	0.943366	0.793	0.873	0.998	0.999	0.697	0.987	0.954	0.762
rs7331328	5.5187E-09	-0.029689	0.00509	-0.029689	0.005092	1.01256E-08	0.03211	0.213218	0.000727	0.033425	0.094779	0.00537	0.1191	0.129179	0.957	0.922	0.999	0.98	0.957	0.994	0.948	0.937
rs7946265	5.5218E-09	-0.038816	0.00666	-0.038816	0.006657	1.0131E-08	0.25771	0.614733	0.012317	0.061283	0.057624	6.6E-05	0.00721	0.67968	0.902	0.858	0.98	0.956	0.962	1	0.98	0.847
rs9563443	5.5285E-09	-0.029678	0.00509	-0.029678	0.00509	1.01431E-08	0.03181	0.213115	0.000735	0.033471	0.095731	0.0053	0.11871	0.130049	0.957	0.922	0.999	0.98	0.957	0.994	0.948	0.937
rs34224012	5.5338E-09	-0.029678	0.00509	-0.029678	0.00509	1.01527E-08	0.03178	0.213122	0.000735	0.033512	0.095731	0.0053	0.11872	0.130053	0.957	0.922	0.999	0.98	0.957	0.994	0.948	0.937
rs10879304	5.5343E-09	0.0445314	0.00764	0.0445314	0.007638	1.01535E-08	0.45234	0.794152	0.00025	0.002566	0.125412	0.03191	0.05774	0.0159	0.876	0.837	1	0.997	0.939	0.919	0.956	0.961
rs9316892	5.5394E-09	-0.029677	0.00509	-0.029677	0.00509	1.01625E-08	0.03178	0.213086	0.000735	0.033515	0.095752	0.0053	0.11876	0.13002	0.957	0.922	0.999	0.98	0.957	0.994	0.948	0.937
rs9316891	5.5395E-09	-0.029677	0.00509	-0.029677	0.00509	1.01628E-08	0.03178	0.213086	0.000735	0.033515	0.095752	0.0053	0.11876	0.13002	0.957	0.922	0.999	0.98	0.957	0.994	0.948	0.937
rs4581598	5.5409E-09	-0.029693	0.00509	-0.029693	0.005093	1.01653E-08	0.03304	0.192077	0.000923	0.034418	0.086219	0.0043	0.13715	0.134988	0.956	0.925	0.999	0.979	0.96	0.995	0.944	0.936
rs7324069	5.542E-09	-0.029676	0.00509	-0.029676	0.00509	1.01673E-08	0.03178	0.213085	0.000735	0.033515	0.09575	0.0053	0.11876	0.130019	0.957	0.922	0.999	0.98	0.957	0.994	0.948	0.937
rs7332532	5.5444E-09	-0.029676	0.00509	-0.029676	0.00509	1.01715E-08	0.03178	0.213122	0.000735	0.033584	0.095705	0.0053	0.11872	0.130052	0.957	0.922	0.999	0.98	0.957	0.994	0.948	0.937
rs7332678	5.5444E-09	-0.029676	0.00509	-0.029676	0.00509	1.01715E-08	0.03178	0.213122	0.000735	0.033584	0.095705	0.0053	0.11872	0.130052	0.957	0.922	0.999	0.98	0.957	0.994	0.948	0.937
rs4713121	5.5451E-09	-0.037241	0.00639	-0.037241	0.006388	1.01728E-08	0.76763	0.245838	0.000523	0.004122	0.170442	0.01824	0.08123	0.003734	0.849	0.91	0.999	0.996	0.931	0.963	0.952	0.974
rs4713697	5.5594E-09	0.034105	0.00585	0.0315453	0.010828	8.42168E-09	0.02948	0.115107	0.002142	0.544388	0.151259	8.8E-07	0.04005	0.11208	0.28	0.851	0.987	0.32	0.846	1	0.925	0.859
rs72951890	5.5681E-09	0.0440222	0.00755	0.0487913	0.011791	1.02139E-08	0.09736	0.416357	0.00208	0.171614	0.830366	0.00057	0.00077	0.004917	0.922	0.867	0.997	0.854	0.718	0.999	0.99	0.97
rs36051751	5.5734E-09	-0.045736	0.00785	-0.045736	0.007846	1.02236E-08	0.43001	0.068262	0.002535	0.017026	0.343458	0.00028	0.08319	0.70113	0.877	0.935	0.997	0.986	0.876	1	0.947	0.841
rs701717	5.5804E-09	0.0584285	0.01002	0.0584285	0.010024	9.2838E-09	0.7587	0.107841	0.117254	0.000666	0.300315	2.5E-05	0.21005	0.051792	0.768	0.897	0.576	0.998	0.826	1	0.874	0.925
rs4411931	5.5832E-09	-0.03648	0.00626	-0.037589	0.009366	1.0241E-08	0.49038	0.941774	0.004128	2.32E-05	0.904872	0.00368	0.00185	0.567969	0.815	0.728	0.988	1	0.556	0.988	0.982	0.8
rs10872275	5.5848E-09	0.0305997	0.00525	0.0305997	0.00525	1.0244E-08	0.9475	0.752114	0.003734	0.026229	0.003076	0.00036	0.11584	0.61995	0.79	0.829	0.995	0.978	0.99	0.999	0.933	0.842
rs10872274	5.6019E-09	0.0305971	0.00525	0.0305971	0.00525	1.02745E-08	0.94725	0.752146	0.003744	0.026254	0.003077	0.00036	0.11584	0.619686	0.79	0.829	0.995	0.978	0.99	0.999	0.933	0.842
rs192431017	5.6255E-09	-0.101332	0.01739	-0.101332	0.017389	1.03168E-08	0.0166	0.640594	9.8E-05	0.064748	0.732351	0.00078	0.04873	0.938286	0.945	0.82	1	0.937	0.723	0.999	0.948	0.769
rs1886686	5.6266E-09	0.0307234	0.00527	0.0307234	0.005272	1.03188E-08	0.81334	0.692766	0.005899	0.16306	0.072093	2.7E-06	0.22301	0.171133	0.738	0.809	0.986	0.842	0.942	1	0.887	0.894
rs280443	5.6282E-09	-0.046317	0.00795	-0.042541	0.010653	1.03216E-08	0.31919	0.665695	2.12E-06	0.297786	0.110561	0.00034	0.07016	0.894002	0.478	0.566	1	0.559	0.865	0.998	0.888	0.596
rs9569439	5.6296E-09	-0.046317	0.00795	-0.042543	0.010651	1.03241E-08	0.31919	0.666018	2.13E-06	0.29777	0.110514	0.00034	0.07016	0.893966	0.478	0.566	1	0.559	0.865	0.998	0.888	0.596
rs66954418	5.6337E-09	-0.029673	0.00509	-0.029673	0.005092	1.03315E-08	0.03236	0.213166	0.000728	0.034129	0.094826	0.00536	0.11869	0.129306	0.957	0.922	0.999	0.98	0.957	0.994	0.948	0.937
rs7318213	5.6352E-09	-0.029667	0.00509	-0.029667	0.005091	1.03342E-08	0.03043	0.210378	0.000758	0.032033	0.094702	0.00558	0.11887	0.129624	0.957	0.923	0.999	0.981	0.957	0.993	0.948	0.937
rs6501426	5.6413E-09	0.0294915	0.00506	0.0294915	0.005061	1.03451E-08	0.8142	0.912182	0.000472	0.090686	0.334592	0.00027	0.05148	0.010948	0.756	0.796	0.999	0.921	0.859	1	0.95	0.958
rs2083781	5.6425E-09	0.0323526	0.00555	0.0351798	0.007314	1.03471E-08	0.07915	0.037896	0.011544	0.042688	0.122865	0.00131	0.00044	0.58547	0.943	0.954	0.985	0.974	0.949	0.999	0.993	0.877
rs6442644	5.6668E-09	-0.031774	0.00545	-0.031774	0.005454	1.03907E-08	0.15773	0.741874	0.000349	0.023773	0.787244	6.7E-05	0.73071	0.37329	0.88	0.78	0.999	0.97	0.674	1	0.74	0.837
rs13207365	5.6686E-09	-0.033466	0.00574	-0.033466	0.005744	1.0394E-08	0.35735	0.960984	0.000184	0.002862	0.401428	0.00533	0.23963	0.064774	0.877	0.791	1	0.996	0.848	0.99	0.9	0.935
rs1336936	5.6699E-09	-0.029668	0.00509	-0.029668	0.005092	1.03962E-08	0.0324	0.212991	0.000728	0.033339	0.095269	0.00548	0.11963	0.128367	0.957	0.922	0.999	0.98	0.957	0.993	0.948	0.938
rs12203454	5.6706E-09	-0.033466	0.00574	-0.033466	0.005744	1.03974E-08	0.35737	0.960984	0.000184	0.002863	0.401428	0.00533	0.23963	0.064774	0.877	0.791	1	0.996	0.848	0.99	0.9	0.935
rs12204280	5.6706E-09	-0.033466	0.00574	-0.033466	0.005744	1.03974E-08	0.35737	0.960984	0.000184	0.002863	0.401428	0.00533	0.23963	0.064774	0.877	0.791	1	0.996	0.848	0.99	0.9	0.935
rs36048693	5.6706E-09	-0.033466	0.00574	-0.033466	0.005744	1.03974E-08	0.35737	0.960984	0.000184	0.002863	0.401428	0.00533	0.23963	0.064774	0.877	0.791	1	0.996	0.848	0.99	0.9	0.935
rs35403550	5.6727E-09	0.030184	0.00518	0.0290488	0.006413	6.7769E-09	0.88279	0.16691	0.002478	0.752377	0.338456	2.3E-07	0.07801	0.454051	0.66	0.829	0.983	0.235	0.735	1	0.894	0.748
rs11178871	5.676E-09	0.0445153	0.00764	0.0445153	0.007641	1.04071E-08	0.44879	0.795431	0.000259	0.002539	0.120713	0.03156	0.06431	0.01563	0.877	0.837	1	0.997	0.941	0.921	0.954	0.961
rs10118338	5.6819E-09	-0.039183	0.00673	-0.041524	0.008585	1.04177E-08	0.14886	0.844208	0.00055	0.074798	0.03584	0.00771	0.03017	0.002132	0.926	0.806	0.999	0.951	0.973	0.988	0.97	0.977
rs10194181	5.6857E-09	-0.030064	0.00516	-0.031756	0.007449	1.04245E-08	0.46707	0.009234	0.001485	0.019561	0.316208	0.00121	0.98239	0.001449	0.868	0.96	0.998	0.984	0.879	0.998	0.739	0.978
rs1418134	5.6908E-09	0.0294144	0.00505	0.0294144	0.005049	1.04336E-08	0.64638	0.166074	0.014358	0.00684	0.012376	0.00056	0.01762	0.719196	0.849	0.914	0.975	0.993	0.982	0.999	0.973	0.755
rs847759	5.6911E-09	-0.030606	0.00525	-0.031461	0.00649	8.09121E-09	0.2855	0.91452	0.123859	0.00047	0.005545	3.2E-05	0.86678	0.182397	0.815	0.679	0.439	0.998	0.981	1	0.599	0.848
rs80209284	5.6935E-09	0.0590738	0.01014	0.0626731	0.01467	1.04385E-08	0.12403	0.163564	0.008125	0.027495	0.002785	0.00056	0.0764	0.037976	0.593	0.908	0.986	0.977	0.991	0.999	0.945	0.946
rs9325199	5.6938E-09	0.0445116	0.00764	0.0445116	0.007641	1.04389E-08	0.44896	0.795661	0.000259	0.002545	0.120526	0.03155	0.06433	0.015644	0.877	0.837	1	0.997	0.941	0.921	0.954	0.961
rs12530276	5.6984E-09	0.030593	0.00525	0.030593	0.005252	1.04472E-08	0.94813	0.757886	0.003723	0.026163	0.003171	0.00037	0.11256	0.6152	0.79	0.828	0.995	0.978	0.989	0.999	0.934	0.843
rs35872351	5.7019E-09	0.0455935	0.00783	0.0433596	0.009538	1.04535E-08	0.9426	0.130051	0.00014	0.002115	0.141972	0.00025	0.74512	0.494721	0.677	0.445	1	0.994	0.866	0.999	0.513	0.758
rs62391099	5.7078E-09	-0.044787	0.00769	-0.048153	0.010167	1.0464E-08	0.39732	0.035838	0.012487	0.013002	0.004764	0.00161	0.07594	0.030605	0.723	0.95	0.981	0.99	0.989	0.998	0.953	0.956
rs5847004	5.7113E-09	0.0294526	0.00506	0.0294526	0.005056	1.04703E-08	0.36472	0.122304	3.91E-05	0.023029	0.426718	0.00728	0.02888	0.09054	0.673	0.912	1	0.979	0.834	0.984	0.962	0.924
rs1721412	5.7128E-09	-0.030583	0.00525	-0.03158	0.006708	7.62413E-09	0.28879	0.895739	0.135926	0.000409	0.005297	3E-05	0.88924	0.181362	0.806	0.669	0.387	0.998	0.981	1	0.573	0.842
rs4590514	5.7128E-09	0.0320954	0.00551	0.0322224	0.00979	6.46098E-09	0.51095	0.011011	9.32E-05	1.05E-05	0.943914	0.03538	0.66518	0.11183	0.531	0.924	0.999	1	0.442	0.69	0.642	0.855
rs1512645	5.7176E-09	-0.046297	0.00795	-0.042487	0.01066	1.04815E-08	0.31637	0.664944	2.09E-06	0.29525	0.115183	0.00034	0.07034	0.893689	0.477	0.565	1	0.561	0.862	0.998	0.888	0.596
rs1483988	5.7237E-09	0.0304483	0.00523	0.0304483	0.005228	1.04924E-08	0.78361	0.253277	0.000916	9.37E-05	0.803756	0.00539	0.03145	0.939935	0.792	0.872	0.998	0.999	0.691	0.986	0.955	0.762
rs139021105	5.7247E-09	-0.030112	0.00517	-0.030411	0.00627	1.04942E-08	0.33772	0.593175	0.005184	0.010033	0.000471	0.00038	0.39931	0.287406	0.861	0.824	0.99	0.988	0.994	0.999	0.843	0.601

Table S3

rs11791453	5.7301E-09	-0.039342	0.00675	-0.041848	0.008772	1.0504E-08	0.15811	0.789823	0.00073	0.086883	0.027937	0.00567	0.03072	0.002069	0.924	0.797	0.999	0.942	0.976	0.992	0.969	0.977
rs2055976	5.7334E-09	-0.046293	0.00795	-0.042482	0.010661	1.05099E-08	0.31655	0.66496	2.1E-06	0.295713	0.11508	0.00034	0.07033	0.893713	0.477	0.565	1	0.561	0.862	0.998	0.888	0.596
rs4788204	5.737E-09	-0.029917	0.00514	-0.030067	0.007922	1.05162E-08	0.51955	0.511407	0.008153	0.003696	0.000323	0.00033	0.35987	0.103558	0.816	0.818	0.979	0.994	0.994	0.999	0.837	0.475
rs5875697	5.7391E-09	-0.030573	0.00525	-0.031541	0.006673	7.87009E-09	0.28383	0.924169	0.130198	0.000434	0.005503	3.1E-05	0.89428	0.168211	0.81	0.668	0.409	0.998	0.981	1	0.578	0.849
rs9569576	5.7392E-09	-0.02966	0.00509	-0.02966	0.005093	1.05203E-08	0.03272	0.213165	0.000733	0.032908	0.095434	0.00552	0.12023	0.128698	0.956	0.922	0.999	0.98	0.957	0.993	0.948	0.937
rs55776706	5.7461E-09	0.0332199	0.0057	0.0313639	0.007615	8.59516E-09	0.36457	0.518896	2.08E-07	0.019728	0.561832	0.01303	0.76595	0.076452	0.569	0.778	1	0.964	0.701	0.925	0.684	0.89
rs3998107	5.7541E-09	0.0336769	0.00578	0.032437	0.010441	1.05468E-08	0.02813	0.118857	0.005835	0.252556	0.176161	2E-06	0.03244	0.044721	0.376	0.879	0.975	0.677	0.87	1	0.946	0.917
rs200365556	5.7557E-09	-0.072158	0.01239	-0.072158	0.01239	1.05498E-08	0.40266	0.928717	3.3E-06	0.095087	0.444692	0.00122	0.78912	0.098561	0.827	0.726	1	0.885	0.781	0.997	0.719	0.899
rs188825708	5.7614E-09	0.0857029	0.01472	0.0857029	0.014717	1.05599E-08	0.10132	0.863993	0.002186	0.024444	0.521395	0.00172	0.01107	0.009765	0.931	0.836	0.997	0.982	0.84	0.998	0.979	0.969
rs28548463	5.7618E-09	0.0365595	0.00628	0.0365595	0.006278	1.05606E-08	0.48788	0.276203	0.000817	0.000335	0.015888	0.00893	0.62623	0.848824	0.851	0.882	0.999	0.999	0.976	0.98	0.807	0.753
rs10959634	5.767E-09	-0.03935	0.00676	-0.041957	0.00884	1.05699E-08	0.16117	0.80068	0.000727	0.079701	0.03052	0.00604	0.03266	0.001727	0.923	0.799	0.999	0.948	0.975	0.991	0.969	0.978
rs60572054	5.7752E-09	-0.029887	0.00513	-0.029887	0.005132	1.05846E-08	0.47309	0.43202	0.000281	0.008261	0.259571	0.00711	0.00263	0.996726	0.866	0.871	1	0.992	0.894	0.987	0.985	0.793
rs17131162	5.7763E-09	0.0294216	0.00505	0.0310879	0.007266	5.49553E-09	0.31526	0.073268	1.83E-06	0.002877	0.537762	0.14815	0.36707	0.022284	0.799	0.887	1	0.992	0.61	0.275	0.752	0.931
rs847755	5.7811E-09	-0.030568	0.00525	-0.031534	0.006672	7.92988E-09	0.2845	0.925163	0.130293	0.000439	0.0055	3.1E-05	0.89487	0.168006	0.81	0.668	0.409	0.998	0.981	1	0.578	0.849
rs7983071	5.784E-09	0.0342168	0.00588	0.0342168	0.005876	1.06004E-08	0.88292	0.021695	0.001986	0.064861	0.049812	0.00287	0.00661	0.177621	0.843	0.958	0.998	0.96	0.969	0.997	0.984	0.926
rs7985067	5.7857E-09	0.0342166	0.00588	0.0342166	0.005876	1.06034E-08	0.88244	0.021699	0.001986	0.064813	0.049834	0.00287	0.00661	0.177635	0.843	0.958	0.998	0.96	0.969	0.997	0.984	0.926
rs1721411	5.7863E-09	-0.030571	0.00525	-0.031561	0.006701	7.73316E-09	0.29065	0.895737	0.135939	0.000415	0.0053	3E-05	0.88957	0.181375	0.806	0.669	0.388	0.998	0.981	1	0.573	0.842
rs7990402	5.7889E-09	0.034216	0.00588	0.034216	0.005876	1.06091E-08	0.88249	0.021699	0.001986	0.064837	0.049835	0.00287	0.00661	0.177636	0.843	0.958	0.998	0.96	0.969	0.997	0.984	0.926
rs72803761	5.7933E-09	0.0361011	0.0062	0.0361011	0.0062	1.0617E-08	0.20154	0.038278	0.003795	0.03382	0.0216	0.00064	0.31444	0.589335	0.917	0.949	0.996	0.978	0.979	0.999	0.903	0.869
rs521547	5.8054E-09	0.0549496	0.00944	0.0549496	0.009438	1.06386E-08	0.27091	0.114325	0.007185	0.014842	0.02564	0.00028	0.54354	0.386013	0.903	0.927	0.991	0.988	0.976	1	0.854	0.889
rs358664	5.8087E-09	0.0294209	0.00505	0.0294209	0.005053	1.06117E-08	0.2232	0.499139	0.001044	0.714871	0.208029	1E-05	0.01908	0.274071	0.849	0.789	0.997	0.313	0.85	1	0.957	0.838
rs325501	5.8174E-09	-0.030406	0.00522	-0.030406	0.005223	1.06601E-08	0.89694	0.012985	0.008181	0.03951	0.007802	0.00013	0.51169	0.580152	0.817	0.956	0.987	0.97	0.985	1	0.849	0.853
rs149589760	5.819E-09	0.0488526	0.00839	0.0518913	0.013999	5.27822E-09	0.04606	0.711692	0.049135	0.434577	0.000488	1.3E-06	0.13496	0.415697	0.887	0.547	0.568	0.37	0.994	1	0.845	0.739
rs11122524	5.825E-09	0.0293868	0.00505	0.0293868	0.005048	1.06737E-08	0.64548	0.165418	0.014645	0.006918	0.012296	0.00056	0.01763	0.720004	0.849	0.914	0.975	0.993	0.982	0.999	0.973	0.755
rs72803757	5.8415E-09	0.0360941	0.0062	0.0360941	0.0062	1.07032E-08	0.20222	0.038274	0.003813	0.033971	0.021353	0.00064	0.31576	0.58949	0.917	0.949	0.996	0.977	0.979	0.999	0.902	0.869
rs34437313	5.8448E-09	-0.060091	0.01032	-0.064224	0.014997	1.07092E-08	0.98706	0.664407	0.027409	0.001556	0.118556	0.00028	0.28046	0.000395	0.798	0.84	0.934	0.997	0.936	1	0.893	0.979
rs9939911	5.853E-09	0.0360781	0.0062	0.0360781	0.006198	1.07238E-08	0.20935	0.039113	0.003854	0.034285	0.020788	0.0006	0.31951	0.604217	0.916	0.949	0.996	0.977	0.979	0.999	0.901	0.866
rs75540627	5.8631E-09	0.0503161	0.00864	0.0513308	0.011515	1.07418E-08	0.52077	0.077714	0.019991	0.06192	0.502713	1.5E-05	0.00303	0.089069	0.703	0.921	0.951	0.942	0.806	1	0.984	0.923
rs9508150	5.872E-09	0.0331462	0.00569	0.0331462	0.005695	1.07577E-08	0.17976	0.63923	0.004484	0.004358	0.88923	8E-05	0.25394	0.069503	0.889	0.815	0.991	0.994	0.594	1	0.879	0.922
rs62078786	5.8745E-09	0.0488427	0.00839	0.0519054	0.013947	5.41147E-09	0.04535	0.718965	0.051017	0.417722	0.00049	1.3E-06	0.13705	0.415876	0.889	0.552	0.565	0.384	0.994	1	0.845	0.74
rs61969451	5.8747E-09	0.030445	0.00523	0.0300762	0.006488	8.927E-09	0.74677	0.773445	5.54E-07	0.11828	0.113674	0.01893	0.00918	0.901265	0.69	0.768	1	0.848	0.907	0.904	0.969	0.739
rs7318564	5.8753E-09	-0.029641	0.00509	-0.029641	0.005093	1.07637E-08	0.03358	0.213023	0.000732	0.033261	0.095497	0.00554	0.12062	0.12855	0.956	0.922	0.999	0.98	0.957	0.993	0.948	0.937
rs4502111	5.9024E-09	-0.046264	0.00795	-0.042532	0.010588	1.08121E-08	0.31824	0.667063	2.16E-06	0.292434	0.117954	0.00034	0.07339	0.894604	0.479	0.567	1	0.566	0.86	0.998	0.886	0.597
rs7313790	5.9047E-09	-0.029791	0.00512	-0.029791	0.005119	1.08161E-08	0.44837	0.268594	0.000157	0.020264	0.251273	0.00747	0.00314	0.938142	0.872	0.896	1	0.983	0.899	0.987	0.985	0.806
rs9471247	5.9075E-09	0.0301943	0.00519	0.0313892	0.006722	7.85087E-09	0.14726	0.988679	0.143258	0.00047	0.003164	3.9E-05	0.66675	0.406301	0.855	0.657	0.383	0.998	0.986	1	0.655	0.778
rs190999720	5.9109E-09	0.0652766	0.01122	0.0612943	0.015588	7.39565E-09	0.30165	0.150223	0.000207	0.875486	0.910453	1.7E-06	0.07876	0.34867	0.755	0.808	0.999	0.13	0.341	1	0.875	0.74
rs4690741	5.9115E-09	-0.036749	0.00632	-0.038064	0.010795	7.88008E-09	0.3314	0.821301	0.004822	1.02E-05	0.700286	0.00427	0.00108	0.603241	0.829	0.684	0.981	1	0.452	0.98	0.984	0.776
rs1503584	5.9126E-09	-0.02938	0.00505	-0.036115	0.009587	8.18984E-09	0.1104	0.18181	0.013452	0.188197	0.005285	0.00072	1.3E-05	0.609949	0.919	0.903	0.966	0.837	0.987	0.996	0.997	0.714
rs13071218	5.9225E-09	0.0306528	0.00527	0.029686	0.006128	1.06533E-08	0.6382	0.36471	0.005307	0.081611	0.858516	6.3E-07	0.02246	0.997649	0.636	0.81	0.979	0.882	0.602	1	0.947	0.691
rs226008	5.9235E-09	0.0301531	0.00518	0.0301531	0.005182	1.08498E-08	0.48471	0.267264	5.74E-05	0.333854	0.268731	9.7E-05	0.24837	0.617505	0.809	0.848	1	0.645	0.84	1	0.857	0.783
rs12199218	5.9262E-09	-0.033425	0.00574	-0.033425	0.005744	1.08547E-08	0.35844	0.963187	0.000192	0.002701	0.410658	0.00548	0.23793	0.064654	0.876	0.791	1	0.996	0.845	0.99	0.9	0.934
rs6808641	5.9294E-09	0.0306517	0.00527	0.0296841	0.006128	1.06649E-08	0.63809	0.364753	0.005303	0.081763	0.858508	6.3E-07	0.02246	0.997441	0.636	0.81	0.979	0.882	0.602	1	0.947	0.691
rs9867336	5.9295E-09	0.0306517	0.00527	0.0296841	0.006128	1.06651E-08	0.63809	0.364753	0.005303	0.081765	0.858508	6.3E-07	0.02246	0.997441	0.636	0.81	0.979	0.882	0.602	1	0.947	0.691
rs10581333	5.9322E-09	-0.030412	0.00523	-0.030701	0.007195	1.08653E-08	0.91245	0.802373	0.012741	0.000304	0.00281	0.00055	0.1673	0.207101	0.756	0.773	0.963	0.999	0.987	0.999	0.894	0.537
rs360752	5.9336E-09	0.0549206	0.00944	0.0549206	0.009439	1.08678E-08	0.27013	0.116168	0.00728	0.014913	0.025698	0.00028	0.5439	0.382918	0.903	0.927	0.99	0.988	0.976	1	0.854	0.889
rs2275294	5.934E-09	0.0336867	0.00579	0.0336867	0.005789	1.08687E-08	0.53986	0.623851	0.001123	0.021046	0.022335	0.0008	0.30193	0.421425	0.862	0.853	0.999	0.983	0.976	0.999	0.894	0.877
rs466360	5.9362E-09	0.0299276	0.00514	0.0286276	0.006651	6.09325E-09	0.45863	0.29358	0.001303	0.966021	0.43606	3E-07	0.12211	0.196429	0.743	0.786	0.992	0.132	0.67	1	0.864	0.82
rs7982050	5.939E-09	0.0341951	0.00588	0.0341951	0.005877	1.08776E-08	0.88413	0.021667	0.001992	0.065701	0.050016	0.00289	0.00659	0.177779	0.843	0.958	0.998	0.96	0.969	0.997	0.984	0.926
rs1490360	5.9421E-09	0.0305461	0.00525	0.0305461	0.00525	1.08831E-08	0.94955	0.755346	0.003729	0.026245	0.003268	0.00037	0.11491	0.618016	0.79	0.829	0.995	0.978	0.989	0.999	0.933	0.842
rs55860223	5.9515E-09	-0.039797	0.00684	-0.039797	0.00684	1.09E-08	0.24902	0.995908	0.000617	0.057228	0.017912	0.0082	0.048	0.005696	0.912	0.827	0.999	0.963	0.981	0.988	0.964	0.972
rs8002965	5.9602E-09	0.0341913	0.00588	0.0341913	0.005877	1.09155E-08	0.88418	0.021672	0.001996	0.065708	0.050049	0.00289	0.0066	0.177816	0.843	0.958	0.998	0.96	0.969	0.997	0.984	0.926
rs1159636	5.9606E-09	-0.046279	0.00795	-0.042848	0.01035	1.09162E-08	0.35064	0.668486	1.95E-06	0.307829	0.127004	0.00034	0.08164	0.942555	0.487	0.565	1	0.55	0.853	0.998	0.879	0.606
rs12530238	5.9631E-09	0.0305434	0.00525	0.0305434	0.00525	1.09206E-08	0.94729	0.75533	0.003788	0.026215	0.003291	0.00037	0.11509	0.617379	0.79	0.828	0.995	0.978	0.989	0.999	0.933	0.842
rs360750	5.9702E-09	0.0549126	0.00944	0.0549126	0.009439	1.09334E-08	0.2695	0.116758	0.007349	0.014842	0.025668	0.00028	0.54338	0.381749	0.903	0.927	0.99	0.988	0.976	1	0.854	0.889
rs7987095	5.9715E-09	0.0341888	0.00588	0.0341888	0.005877	1.09357E-08	0.88477	0.021679	0.001997	0.065635	0.050096	0.00289	0.0066	0.177817	0.843	0.958	0.998	0.96	0.969	0.997	0.984	0.926

Table S3

rs3130266	5.9726E-09	0.0293156	0.00504	0.0289672	0.005399	1.09375E-08	0.29003	0.693379	0.000671	0.000243	0.820028	0.00022	0.76212	0.286072	0.51	0.725	0.998	0.999	0.577	0.999	0.656	0.807
rs144526530	5.984E-09	-0.069471	0.01194	-0.069471	0.011942	1.09579E-08	0.06624	0.099421	0.000578	0.600357	0.063501	2.4E-05	0.25685	0.96164	0.901	0.888	0.998	0.393	0.933	1	0.844	0.681
rs1267072	5.9934E-09	-0.032054	0.00551	-0.032054	0.00551	1.09748E-08	0.83216	0.477501	0.001814	0.028998	0.018853	0.00074	0.38094	0.059463	0.832	0.874	0.998	0.978	0.979	0.999	0.881	0.943
rs165568	5.9936E-09	0.054907	0.00944	0.054907	0.009439	1.09751E-08	0.27038	0.117604	0.007366	0.014885	0.025557	0.00029	0.54257	0.3798	0.903	0.927	0.99	0.988	0.976	1	0.855	0.889
rs17080528	6.0095E-09	-0.029655	0.0051	-0.029655	0.005098	1.10009E-08	0.59867	0.092998	0.016772	0.101016	0.014489	2.9E-06	0.37163	0.678634	0.823	0.91	0.953	0.899	0.976	1	0.85	0.702
rs35208438	6.0105E-09	0.0299159	0.00514	0.0286058	0.006641	6.1722E-09	0.45802	0.2997	0.001304	0.962313	0.442775	2.9E-07	0.12225	0.199335	0.742	0.783	0.992	0.134	0.665	1	0.863	0.818
rs433751	6.0126E-09	-0.040888	0.00703	-0.040888	0.00703	1.10091E-08	0.1316	0.756913	0.003314	0.024928	0.137849	0.00093	0.07869	0.030875	0.93	0.856	0.996	0.983	0.942	0.999	0.954	0.958
rs1535	6.013E-09	0.0296742	0.0051	0.0316461	0.008149	1.10098E-08	0.10331	0.418222	0.01236	0.163745	3.53E-05	8.7E-05	0.25708	0.354175	0.909	0.668	0.966	0.841	0.998	1	0.88	0.86
rs1397293	6.0146E-09	-0.032068	0.00551	-0.032068	0.005513	1.10126E-08	0.39585	0.017711	0.001234	0.16054	0.02112	0.00023	0.41275	0.663854	0.874	0.952	0.998	0.874	0.976	1	0.865	0.837
rs7191717	6.0233E-09	0.0360869	0.0062	0.0360869	0.006205	1.10282E-08	0.23311	0.044207	0.003743	0.031638	0.025595	0.00054	0.28467	0.72031	0.911	0.946	0.996	0.978	0.977	0.999	0.907	0.85
rs847784	6.0356E-09	-0.030514	0.00525	-0.031469	0.006605	8.20859E-09	0.2935	0.892571	0.134815	0.000439	0.005462	3.2E-05	0.86664	0.176233	0.808	0.675	0.399	0.998	0.981	1	0.587	0.846
rs10771067	6.0389E-09	-0.029745	0.00511	-0.029745	0.005115	1.10561E-08	0.61291	0.360295	0.000248	0.006158	0.318094	0.00652	0.00734	0.859975	0.847	0.879	1	0.993	0.876	0.988	0.979	0.811
rs281276	6.0394E-09	0.0367926	0.00633	0.0367926	0.006326	1.1057E-08	0.49145	0.695863	0.001402	0.001001	0.478219	5.7E-05	0.32604	0.879943	0.602	0.646	0.996	0.997	0.737	1	0.811	0.709
rs281272	6.04E-09	0.0367925	0.00633	0.0367925	0.006326	1.10579E-08	0.49145	0.695863	0.001402	0.001001	0.478226	5.7E-05	0.32604	0.879943	0.602	0.646	0.996	0.997	0.737	1	0.811	0.709
rs165569	6.0419E-09	0.0548944	0.00944	0.0548944	0.009439	1.10615E-08	0.27031	0.117585	0.007381	0.014913	0.025599	0.00029	0.54296	0.380071	0.903	0.927	0.99	0.988	0.976	1	0.855	0.889
rs10192503	6.0439E-09	0.0292816	0.00504	0.0292816	0.005035	1.1065E-08	0.72529	0.258072	0.01498	0.001698	0.043658	0.00123	0.02758	0.472543	0.851	0.906	0.977	0.998	0.969	0.998	0.97	0.879
rs847750	6.0461E-09	-0.030511	0.00525	-0.031472	0.006615	8.18904E-09	0.29632	0.892098	0.135409	0.000427	0.005456	3.2E-05	0.86617	0.177531	0.806	0.674	0.397	0.998	0.981	1	0.586	0.845
rs4283241	6.0706E-09	-0.029884	0.00514	-0.029961	0.007838	1.11127E-08	0.54924	0.559542	0.006968	0.003766	0.000354	0.00038	0.34867	0.105168	0.811	0.81	0.983	0.994	0.994	0.999	0.839	0.476
rs847743	6.0783E-09	-0.030518	0.00525	-0.031485	0.006628	8.20469E-09	0.29616	0.893877	0.136035	0.00042	0.005439	3.2E-05	0.86652	0.179989	0.806	0.673	0.394	0.998	0.981	1	0.585	0.844
rs184229944	6.0791E-09	0.0487979	0.00839	0.0512609	0.013656	6.37928E-09	0.05274	0.581626	0.050486	0.349118	0.000659	1.3E-06	0.18493	0.316848	0.887	0.547	0.614	0.469	0.993	1	0.827	0.783
rs12920434	6.0795E-09	-0.029339	0.00505	-0.029339	0.005046	1.11287E-08	0.50775	0.06015	0.002549	0.011511	0.624929	0.00041	0.48785	0.009075	0.861	0.934	0.997	0.989	0.791	0.999	0.85	0.964
rs560869200	6.0817E-09	0.0609331	0.01048	0.060544	0.010934	1.11325E-08	0.67787	0.730513	0.010681	0.000486	0.779928	1.2E-05	0.162	0.344286	0.747	0.739	0.958	0.998	0.626	1	0.867	0.535
rs4690744	6.0849E-09	-0.036712	0.00631	-0.037926	0.010615	8.4894E-09	0.37349	0.841174	0.005029	1.05E-05	0.7171	0.00397	0.00126	0.592649	0.822	0.689	0.981	1	0.461	0.982	0.983	0.779
rs1743973	6.0868E-09	-0.030524	0.00525	-0.031498	0.006679	8.18274E-09	0.29196	0.895095	0.135939	0.000438	0.005312	3E-05	0.89181	0.180958	0.806	0.67	0.391	0.998	0.981	1	0.574	0.843
rs11208985	6.0934E-09	-0.031048	0.00534	-0.031048	0.00534	1.11535E-08	0.6413	0.568121	0.002769	0.178728	0.050494	1.1E-05	0.22947	0.139026	0.709	0.826	0.994	0.829	0.953	1	0.886	0.902
rs1678542	6.0962E-09	-0.029438	0.00506	-0.029438	0.005063	1.11584E-08	0.92397	0.201215	0.000613	0.036214	0.14961	0.00103	0.04082	0.333878	0.8	0.908	0.999	0.973	0.931	0.999	0.961	0.891
rs4597702	6.0983E-09	0.0299388	0.00515	0.0299388	0.005149	1.11621E-08	0.14688	0.293932	0.000405	0.019846	0.707117	0.00103	0.15822	0.174641	0.914	0.889	0.999	0.983	0.768	0.999	0.923	0.911
rs13066939	6.1012E-09	0.0306266	0.00527	0.0296524	0.006135	1.09615E-08	0.63674	0.364043	0.00538	0.082026	0.859346	6.4E-07	0.02248	0.997824	0.636	0.81	0.979	0.882	0.602	1	0.947	0.691
rs9853203	6.1012E-09	0.0306266	0.00527	0.0296524	0.006135	1.09615E-08	0.63674	0.364043	0.00538	0.082026	0.859346	6.4E-07	0.02248	0.997824	0.636	0.81	0.979	0.882	0.602	1	0.947	0.691
rs9810216	6.1045E-09	0.0306263	0.00527	0.0296494	0.006137	1.09673E-08	0.63575	0.364043	0.00538	0.081996	0.859345	6.4E-07	0.02248	0.997833	0.635	0.81	0.979	0.882	0.602	1	0.947	0.691
rs60268187	6.1122E-09	0.0548963	0.00944	0.0548963	0.009443	1.11871E-08	0.26641	0.124704	0.007547	0.015401	0.025181	0.00028	0.53719	0.368043	0.903	0.925	0.99	0.988	0.976	1	0.856	0.891
rs814419	6.1135E-09	-0.035341	0.00608	-0.035326	0.006092	1.11893E-08	0.78336	0.151118	0.000117	0.11388	0.359938	7.2E-05	0.11602	0.132141	0.756	0.523	1	0.861	0.802	1	0.901	0.881
rs1503583	6.1144E-09	-0.029351	0.00505	-0.036097	0.009592	8.4147E-09	0.11124	0.182354	0.013716	0.188702	0.0053	0.00072	1.3E-05	0.610648	0.918	0.903	0.965	0.836	0.987	0.996	0.997	0.714
rs113790169	6.1144E-09	-0.032756	0.00563	-0.032756	0.005634	1.1191E-08	0.09934	0.239247	0.003062	0.030927	0.15325	0.00155	0.00224	0.827572	0.934	0.911	0.997	0.979	0.936	0.998	0.988	0.839
rs17678540	6.1166E-09	-0.036706	0.00631	-0.037917	0.010634	8.44977E-09	0.3733	0.840195	0.00504	1.02E-05	0.714906	0.00401	0.00127	0.594658	0.822	0.689	0.98	1	0.459	0.982	0.983	0.778
rs62081255	6.1178E-09	0.0487625	0.00839	0.0515184	0.013803	5.7106E-09	0.04622	0.713041	0.050327	0.422922	0.000643	1.1E-06	0.14738	0.400752	0.888	0.551	0.57	0.382	0.993	1	0.838	0.745
rs62081256	6.1178E-09	0.0487625	0.00839	0.0515184	0.013803	5.7106E-09	0.04622	0.713041	0.050327	0.422922	0.000643	1.1E-06	0.14738	0.400752	0.888	0.551	0.57	0.382	0.993	1	0.838	0.745
rs1489185	6.1202E-09	-0.039278	0.00676	-0.041895	0.008883	1.12012E-08	0.14353	0.756201	0.000738	0.085889	0.029544	0.0057	0.03443	0.001912	0.926	0.792	0.999	0.943	0.976	0.992	0.968	0.977
rs1933530	6.1282E-09	-0.033725	0.0058	-0.034864	0.006567	8.21073E-09	0.11629	0.793249	5.14E-05	0.001001	0.093961	0.1426	0.04901	0.08201	0.896	0.748	1	0.998	0.92	0.372	0.944	0.914
rs2787970	6.1362E-09	-0.033723	0.0058	-0.034866	0.00657	8.22539E-09	0.11498	0.793263	5.14E-05	0.00101	0.093961	0.14258	0.04902	0.082012	0.897	0.748	1	0.998	0.92	0.373	0.944	0.914
rs11208978	6.1371E-09	-0.031043	0.00534	-0.031043	0.00534	1.12315E-08	0.6413	0.57447	0.002767	0.178728	0.049299	1.1E-05	0.22999	0.140556	0.709	0.825	0.994	0.829	0.954	1	0.886	0.901
rs9347116	6.1407E-09	0.041953	0.00722	0.0412975	0.011667	1.12379E-08	0.16817	0.73397	0.000535	0.055733	0.000495	0.00064	0.64979	0.030091	0.538	0.689	0.999	0.934	0.993	0.999	0.752	0.932
rs7770443	6.1436E-09	-0.041939	0.00721	-0.041939	0.007215	1.12432E-08	0.99115	0.812232	0.004055	0.001171	0.020254	0.0004	0.51448	0.5774	0.766	0.741	0.993	0.997	0.971	0.999	0.817	0.823
rs72689893	6.1458E-09	0.0429164	0.00738	0.0429164	0.007383	1.1247E-08	0.48015	0.043546	0.028439	0.001979	0.064105	0.00247	0.05962	0.024451	0.891	0.952	0.956	0.998	0.966	0.997	0.962	0.963
rs7950696	6.1481E-09	0.0303423	0.00522	0.0303423	0.00522	1.12511E-08	0.81164	0.202698	0.000114	0.000228	0.898547	0.00605	0.13048	0.96287	0.755	0.861	1	0.999	0.546	0.979	0.898	0.722
rs3106195	6.1496E-09	0.0292846	0.00504	0.0289514	0.005384	1.12538E-08	0.29035	0.690879	0.00066	0.000259	0.826302	0.00022	0.76187	0.27496	0.511	0.725	0.998	0.998	0.575	0.999	0.657	0.81
rs847777	6.1581E-09	-0.030493	0.00525	-0.031462	0.006665	8.33568E-09	0.29399	0.890253	0.134359	0.000438	0.005438	3.1E-05	0.90151	0.174719	0.806	0.673	0.397	0.998	0.981	1	0.572	0.846
rs4690711	6.1617E-09	-0.036698	0.00631	-0.03791	0.01062	8.58331E-09	0.37073	0.840211	0.005028	1.05E-05	0.715087	0.00399	0.00127	0.594648	0.822	0.689	0.981	1	0.46	0.982	0.983	0.778
rs79586487	6.1672E-09	0.0503192	0.00866	0.0544609	0.011211	9.58048E-09	0.60523	0.065331	6.51E-05	0.032333	0.010798	0.09611	0.00367	0.326975	0.825	0.928	1	0.96	0.982	0.621	0.985	0.869
rs184733242	6.1699E-09	-0.101035	0.01738	-0.101035	0.017384	1.129E-08	0.01639	0.592582	8.61E-05	0.07375	0.745726	0.0008	0.04808	0.99511	0.944	0.824	1	0.928	0.716	0.999	0.948	0.757
rs1002656	6.1725E-09	-0.031426	0.00541	-0.037753	0.008624	9.04197E-09	0.07759	0.605454	0.000231	0.011471	0.087625	0.11381	0.00268	0.003893	0.927	0.825	0.999	0.986	0.94	0.546	0.987	0.974
rs174566	6.1745E-09	0.0296489	0.0051	0.0318022	0.008218	1.12982E-08	0.09462	0.478728	0.012723	0.186786	2.95E-05	8.5E-05	0.27505	0.328637	0.911	0.679	0.963	0.817	0.998	1	0.873	0.863
rs17017081	6.1823E-09	-0.036694	0.00631	-0.0379	0.010619	8.61284E-09	0.3734	0.840214	0.005027	1.05E-05	0.715105	0.00399	0.00127	0.594637	0.822	0.689	0.981	1	0.46	0.982	0.983	0.778
rs35411008	6.1833E-09	-0.0697	0.01199	-0.069154	0.013601	1.1314E-08	0.04293	0.113913	0.00063	0.703958	0.058821	2E-05	0.23092	0.997531	0.911	0.88	0.998	0.311	0.934	1	0.848	0.676
rs36120127	6.1889E-09	0.0306298	0.00527	0.0303246	0.007572	1.1324E-08	0.56765	0.020871	0.00443	0.024554	0.963387	3.9E-05	0.00371	0.836649	0.659	0.932	0.989	0.97	0.582	1	0.978	0.755

Table S3

rs11642430	6.1896E-09	-0.030351	0.00522	-0.030614	0.007176	1.13253E-08	0.95753	0.835372	0.010843	0.000351	0.002641	0.00064	0.15686	0.210545	0.749	0.769	0.97	0.999	0.987	0.999	0.897	0.539
rs66682110	6.19E-09	-0.036693	0.00631	-0.037899	0.010618	8.62748E-09	0.37343	0.840213	0.005027	1.05E-05	0.7151	0.00399	0.00127	0.594639	0.822	0.689	0.981	1	0.46	0.982	0.983	0.778
rs1912393	6.1916E-09	-0.036693	0.00631	-0.037899	0.010618	8.62993E-09	0.37343	0.840216	0.005028	1.06E-05	0.715097	0.00399	0.00127	0.594642	0.822	0.689	0.981	1	0.46	0.982	0.983	0.778
rs6822997	6.1977E-09	-0.036692	0.00631	-0.037898	0.010618	8.63698E-09	0.37343	0.840191	0.005031	1.05E-05	0.715081	0.00399	0.00127	0.594666	0.822	0.689	0.981	1	0.46	0.982	0.983	0.778
rs9823063	6.1983E-09	0.0299348	0.00515	0.0299348	0.005151	1.13407E-08	0.14681	0.292962	0.000405	0.019758	0.703972	0.00116	0.14107	0.167828	0.914	0.89	0.999	0.983	0.771	0.998	0.928	0.913
rs151242101	6.2013E-09	0.0320116	0.00551	0.0322999	0.009521	7.84692E-09	0.51086	0.011919	0.000105	1.46E-05	0.986551	0.03453	0.60202	0.111906	0.553	0.925	0.999	1	0.481	0.726	0.682	0.863
rs142490303	6.2021E-09	-0.062748	0.0108	-0.062748	0.010798	1.13476E-08	0.60656	0.465596	0.000214	0.009189	0.042297	0.0015	0.93232	0.146732	0.7	0.842	1	0.989	0.958	0.997	0.719	0.901
rs2242081	6.2053E-09	0.0303316	0.00522	0.0303316	0.00522	1.13532E-08	0.81252	0.203276	0.000117	0.000224	0.905174	0.00612	0.12941	0.963317	0.756	0.861	1	0.999	0.549	0.978	0.898	0.723
rs11814118	6.2095E-09	0.0597124	0.01028	0.0597124	0.010276	1.13609E-08	0.53764	0.474558	0.001866	0.018296	0.007018	0.00077	0.78267	0.21612	0.858	0.865	0.998	0.984	0.986	0.999	0.792	0.903
rs7748703	6.2149E-09	-0.032312	0.00556	-0.032312	0.005561	1.13704E-08	0.99883	0.137844	0.000105	0.045789	0.187757	0.00154	0.33739	0.182851	0.801	0.914	1	0.964	0.915	0.998	0.882	0.909
rs1530092	6.2181E-09	-0.029347	0.00505	-0.030379	0.007083	1.11717E-08	0.01372	0.362362	0.056875	0.000354	0.021242	9.7E-05	0.7967	0.996799	0.94	0.83	0.752	0.999	0.966	1	0.584	0.71
rs1598535	6.2216E-09	0.0299219	0.00515	0.0299219	0.005149	1.13825E-08	0.14642	0.293909	0.000404	0.01971	0.707121	0.00106	0.15827	0.174615	0.914	0.889	0.999	0.983	0.768	0.999	0.923	0.911
rs2993076	6.2218E-09	0.0309167	0.00532	0.0309167	0.005321	1.09207E-08	0.38309	0.821937	1.58E-06	0.149162	0.426139	0.01323	0.03783	0.082314	0.858	0.799	1	0.857	0.821	0.955	0.954	0.921
rs3814877	6.2224E-09	-0.03034	0.00522	-0.030625	0.007131	1.13839E-08	0.95022	0.83767	0.01123	0.000334	0.002733	0.00064	0.15812	0.218188	0.751	0.769	0.969	0.999	0.987	0.999	0.897	0.544
rs13090388	6.2234E-09	-0.029624	0.0051	-0.029624	0.005098	1.13828E-08	0.60345	0.092258	0.017422	0.097306	0.014925	3E-06	0.37086	0.676102	0.822	0.91	0.951	0.902	0.975	1	0.85	0.702
rs11711536	6.2295E-09	-0.029621	0.0051	-0.029621	0.005098	1.13957E-08	0.60404	0.093977	0.016305	0.102328	0.015453	3E-06	0.36992	0.672363	0.822	0.91	0.955	0.898	0.975	1	0.85	0.701
rs2203712	6.2347E-09	0.0303293	0.00522	0.0303293	0.00522	1.14058E-08	0.80714	0.202464	0.000122	0.000239	0.908601	0.00582	0.13014	0.961377	0.758	0.862	1	0.999	0.552	0.98	0.899	0.724
rs2104362	6.2442E-09	0.033608	0.00578	0.0321295	0.010324	1.14228E-08	0.02833	0.129089	0.005373	0.252624	0.18932	2E-06	0.03196	0.056261	0.376	0.875	0.977	0.677	0.863	1	0.945	0.91
rs1002655	6.2459E-09	-0.031417	0.00541	-0.037741	0.008625	9.1705E-09	0.07742	0.605244	0.000228	0.011892	0.087596	0.11343	0.00267	0.003886	0.927	0.825	0.999	0.985	0.941	0.548	0.987	0.974
rs72970603	6.2517E-09	0.0352936	0.00607	0.0358681	0.006936	1.14361E-08	0.03911	0.488956	0.035225	0.001155	0.114378	0.00013	0.81191	0.029801	0.936	0.849	0.901	0.998	0.931	1	0.666	0.945
rs114909746	6.2571E-09	0.0713096	0.01227	0.0703283	0.017618	1.14458E-08	0.62675	0.649401	0.000211	0.329955	7.38E-05	0.00039	0.38424	0.983597	0.755	0.632	0.999	0.611	0.996	0.999	0.789	0.685
rs139350162	6.2708E-09	0.0653133	0.01124	0.0596317	0.017421	5.0122E-09	0.30839	0.202555	0.000165	0.942093	0.834093	7.7E-07	0.06888	0.397144	0.735	0.772	0.999	0.065	0.273	1	0.875	0.704
rs62302699	6.2712E-09	0.0387734	0.00667	0.0387734	0.006674	1.1471E-08	0.11585	0.738737	0.018385	0.004941	0.001805	0.00108	0.42776	0.172786	0.928	0.849	0.971	0.995	0.993	0.999	0.876	0.92
rs6601417	6.2798E-09	0.0332649	0.00573	0.0332649	0.005726	1.14864E-08	0.0797	0.400718	0.005009	0.017244	0.010246	0.00044	0.24154	0.262375	0.929	0.706	0.993	0.985	0.983	0.999	0.904	0.897
rs1456186	6.2826E-09	0.0299132	0.00515	0.0299132	0.005149	1.14913E-08	0.14624	0.293909	0.000404	0.019966	0.707117	0.00106	0.15818	0.174617	0.914	0.889	0.999	0.983	0.768	0.999	0.923	0.911
rs4787489	6.2827E-09	-0.029858	0.00514	-0.029952	0.007846	1.14915E-08	0.54425	0.561546	0.006815	0.004146	0.000319	0.0004	0.35438	0.107945	0.812	0.81	0.983	0.993	0.994	0.999	0.838	0.479
rs115690621	6.2856E-09	-0.031132	0.00536	-0.031132	0.005359	1.14967E-08	0.61415	0.202782	0.008286	4.85E-05	0.017698	0.00393	0.47482	0.86692	0.839	0.897	0.985	1	0.976	0.993	0.844	0.761
rs13094045	6.2892E-09	0.0299131	0.00515	0.0299131	0.00515	1.1503E-08	0.14684	0.293567	0.000407	0.019696	0.707283	0.00107	0.15852	0.174731	0.914	0.889	0.999	0.983	0.768	0.998	0.923	0.911
rs13073833	6.291E-09	0.0299129	0.00515	0.0299129	0.00515	1.15062E-08	0.14684	0.293566	0.000407	0.019697	0.707277	0.00107	0.15851	0.174729	0.914	0.889	0.999	0.983	0.768	0.998	0.923	0.911
rs16948663	6.2918E-09	0.0341631	0.00588	0.0341631	0.005881	1.15077E-08	0.8496	0.023218	0.001861	0.062867	0.045698	0.00343	0.00753	0.178982	0.848	0.957	0.998	0.962	0.971	0.996	0.983	0.926
rs4854688	6.2971E-09	-0.056057	0.00965	-0.056057	0.009651	1.15171E-08	0.81385	0.017368	0.006541	0.028837	0.102571	0.00012	0.19118	0.57342	0.835	0.955	0.991	0.979	0.947	1	0.921	0.861
rs12326258	6.2971E-09	-0.036132	0.00622	-0.036132	0.00622	1.15172E-08	0.0338	0.739569	0.00197	0.010569	0.678427	0.00011	0.33262	0.247748	0.934	0.733	0.997	0.988	0.742	1	0.863	0.881
rs1317909	6.2979E-09	0.029694	0.00511	0.029694	0.005112	1.15185E-08	0.32492	0.433003	0.00018	0.004053	0.039209	0.02233	0.07106	0.085505	0.884	0.708	1	0.995	0.967	0.942	0.948	0.931
rs174567	6.3027E-09	0.0296173	0.0051	0.0318587	0.008594	1.15271E-08	0.11596	0.389041	0.013112	0.172945	1.55E-05	9.2E-05	0.26134	0.376983	0.902	0.652	0.96	0.825	0.998	1	0.874	0.851
rs4752865	6.306E-09	-0.030332	0.00522	-0.030332	0.005222	1.1533E-08	0.81429	0.2462	0.000712	9.52E-05	0.883627	0.00698	0.02382	0.92758	0.782	0.869	0.999	0.999	0.657	0.98	0.958	0.757
rs62078770	6.3084E-09	0.0487339	0.00839	0.0517597	0.013985	5.73834E-09	0.04617	0.709449	0.050595	0.430921	0.000489	1.3E-06	0.13825	0.418054	0.887	0.546	0.563	0.373	0.994	1	0.843	0.737
rs6902033	6.3119E-09	-0.03229	0.00556	-0.03229	0.005559	1.15436E-08	0.97396	0.137923	9.8E-05	0.047441	0.191571	0.00154	0.34107	0.195354	0.803	0.914	1	0.963	0.913	0.998	0.88	0.907
rs7742038	6.3153E-09	0.0304904	0.00525	0.0304904	0.00525	1.15497E-08	0.94417	0.752616	0.003781	0.028866	0.003093	0.00036	0.11604	0.621181	0.789	0.828	0.995	0.976	0.989	0.999	0.932	0.841
rs10867576	6.3161E-09	0.0319994	0.00551	0.0323688	0.00938	8.42306E-09	0.53026	0.011764	9.99E-05	1.91E-05	0.999666	0.03465	0.57927	0.111608	0.565	0.927	0.999	1	0.494	0.735	0.697	0.866
rs12380191	6.3165E-09	-0.039281	0.00676	-0.041344	0.008401	1.15517E-08	0.23576	0.885982	0.000731	0.080444	0.027765	0.00671	0.0225	0.002568	0.912	0.811	0.999	0.947	0.977	0.99	0.973	0.976
rs200503	6.317E-09	-0.036666	0.00631	-0.036666	0.006313	1.15526E-08	0.88322	0.406771	0.000603	0.008072	0.145187	0.01203	0.02893	0.004741	0.804	0.887	0.999	0.993	0.936	0.978	0.969	0.972
rs9807088	6.3225E-09	0.0487306	0.00839	0.0517559	0.013985	5.74787E-09	0.04622	0.709449	0.050595	0.43137	0.000489	1.3E-06	0.13825	0.418054	0.887	0.546	0.563	0.372	0.994	1	0.843	0.737
rs2799079	6.3256E-09	-0.053768	0.00926	-0.055701	0.013409	1.1568E-08	0.92433	0.981433	0.001115	0.02619	0.395945	0.00092	0.08516	0.000179	0.807	0.794	0.998	0.978	0.853	0.999	0.943	0.982
rs2059513	6.3329E-09	0.0369633	0.00636	0.0329101	0.009217	1.15811E-08	0.31242	0.433986	4.38E-06	0.150311	0.965801	0.0002	0.02257	0.494562	0.762	0.494	1	0.711	0.437	0.999	0.929	0.485
rs62078773	6.3356E-09	0.0487287	0.00839	0.0517623	0.01399	5.74102E-09	0.04606	0.712728	0.050554	0.433822	0.00049	1.3E-06	0.13796	0.418401	0.887	0.546	0.562	0.37	0.994	1	0.843	0.737
rs2071889	6.3382E-09	0.0292745	0.00504	0.0286239	0.005643	1.15906E-08	0.30432	0.717108	0.000508	0.000206	0.89813	0.00025	0.79827	0.344729	0.498	0.707	0.998	0.999	0.532	0.999	0.63	0.782
rs11646662	6.3614E-09	0.0416314	0.00717	0.0416314	0.007169	1.16319E-08	0.10906	0.210846	0.002851	0.217674	0.019514	0.00032	0.01004	0.997984	0.923	0.903	0.996	0.831	0.977	1	0.978	0.794
rs4583255	6.3627E-09	-0.029842	0.00514	-0.029909	0.007847	1.16343E-08	0.54683	0.558937	0.007147	0.00374	0.000351	0.00039	0.36099	0.105546	0.811	0.809	0.982	0.994	0.994	0.999	0.836	0.476
rs10157311	6.3633E-09	0.030323	0.00522	0.0316173	0.008037	1.16354E-08	0.26317	0.058504	0.000499	0.000385	0.042471	0.01959	0.132	0.047369	0.876	0.507	0.999	0.999	0.96	0.933	0.918	0.934
rs2031495	6.3657E-09	0.0310082	0.00534	0.0310082	0.00534	1.16395E-08	0.63997	0.570875	0.002803	0.179945	0.050911	1.1E-05	0.23064	0.139628	0.708	0.826	0.994	0.828	0.953	1	0.885	0.901
rs58773947	6.3657E-09	0.0310082	0.00534	0.0310082	0.00534	1.16395E-08	0.63997	0.570875	0.002803	0.179945	0.050911	1.1E-05	0.23064	0.139628	0.708	0.826	0.994	0.828	0.953	1	0.885	0.901
rs10547271	6.3659E-09	0.0303428	0.00523	0.0303428	0.005225	1.164E-08	0.75236	0.235325	0.000796	0.000101	0.847887	0.00666	0.02897	0.912293	0.795	0.874	0.998	0.999	0.676	0.982	0.956	0.765
rs72696226	6.3703E-09	-0.039234	0.00676	-0.041709	0.00873	1.16478E-08	0.16124	0.805024	0.000727	0.07982	0.029819	0.00652	0.03205	0.001994	0.923	0.8	0.999	0.948	0.976	0.99	0.969	0.977
rs1664234	6.3772E-09	-0.029265	0.00504	-0.029265	0.00504	1.16601E-08	0.45299	0.119853	0.000174	0.148741	0.530881	0.00114	0.00191	0.644078	0.856	0.911	1	0.87	0.8	0.998	0.985	0.827
rs189297943	6.385E-09	0.0968601	0.01668	0.0968601	0.016682	1.16741E-08	0.80611	0.150837	0.006308	0.005183	0.089307	0.00013	0.67459	0.429594	0.82	0.907	0.991	0.994	0.944	1	0.811	0.866

Table S3

rs3935873	6.3853E-09	-0.029841	0.00514	-0.03	0.00776	1.16745E-08	0.5697	0.562346	0.006466	0.003893	0.000324	0.00046	0.34163	0.115935	0.81	0.811	0.984	0.994	0.994	0.999	0.843	0.487
rs281279	6.3918E-09	-0.036733	0.00633	-0.036733	0.006326	1.16861E-08	0.49251	0.695651	0.001435	0.001024	0.477819	5.9E-05	0.32548	0.879765	0.603	0.646	0.996	0.997	0.738	1	0.812	0.71
rs73225032	6.392E-09	-0.045247	0.00779	-0.045247	0.007793	1.16866E-08	0.00868	0.584534	0.000442	0.141781	0.066061	0.00104	0.09578	0.161399	0.96	0.743	0.999	0.888	0.956	0.999	0.941	0.915
rs3814884	6.3944E-09	-0.029838	0.00514	-0.029909	0.007849	1.16909E-08	0.54641	0.558779	0.007186	0.00373	0.000351	0.00039	0.3607	0.105586	0.811	0.81	0.982	0.994	0.994	0.999	0.836	0.476
rs7868965	6.3999E-09	-0.037704	0.00649	-0.037704	0.006494	1.17006E-08	0.14834	0.45471	0.0008	0.015925	0.026164	0.02623	0.04675	0.011463	0.931	0.893	0.999	0.989	0.979	0.947	0.966	0.97
rs79608350	6.4013E-09	-0.033434	0.00576	-0.040054	0.01004	1.17032E-08	2.4E-05	0.560779	0.027348	0.050001	0.044945	0.00034	0.08146	0.260013	0.989	0.876	0.953	0.967	0.97	0.999	0.954	0.913
rs12231916	6.405E-09	-0.029448	0.00507	-0.029448	0.005072	1.17098E-08	0.92435	0.210716	0.000619	0.035606	0.159116	0.00105	0.03791	0.335326	0.8	0.907	0.999	0.973	0.928	0.999	0.962	0.89
rs73225031	6.4056E-09	-0.045244	0.00779	-0.045244	0.007793	1.17108E-08	0.00868	0.584557	0.000443	0.141712	0.066152	0.00104	0.09577	0.161396	0.96	0.743	0.999	0.888	0.956	0.999	0.941	0.915
rs9925915	6.4068E-09	-0.029837	0.00514	-0.029908	0.007849	1.17129E-08	0.54643	0.558786	0.007188	0.003732	0.000351	0.00039	0.36071	0.105583	0.811	0.81	0.982	0.994	0.994	0.999	0.836	0.476
rs72884606	6.4092E-09	0.0467308	0.00805	0.0495511	0.011562	1.17171E-08	0.43294	0.001625	0.006768	0.000298	0.198999	0.00333	0.30032	0.173057	0.708	0.973	0.99	0.999	0.912	0.995	0.89	0.911
rs11642046	6.4105E-09	-0.029836	0.00514	-0.029907	0.007849	1.17196E-08	0.54645	0.558796	0.007187	0.003733	0.000351	0.00039	0.36072	0.105578	0.811	0.81	0.982	0.994	0.994	0.999	0.836	0.476
rs2744236	6.4139E-09	-0.030817	0.00531	-0.030817	0.005308	1.17255E-08	0.22979	0.950384	0.000162	0.002655	0.581571	0.00015	0.61556	0.70731	0.816	0.652	0.999	0.993	0.349	0.999	0.69	0.708
rs11901	6.416E-09	-0.029835	0.00514	-0.029907	0.007849	1.17294E-08	0.5463	0.558835	0.007188	0.003721	0.000351	0.00039	0.3608	0.10556	0.811	0.81	0.982	0.994	0.994	0.999	0.836	0.476
rs12530266	6.43E-09	0.0304769	0.00525	0.0304769	0.00525	1.17543E-08	0.95041	0.755348	0.003805	0.026234	0.003489	0.00039	0.11491	0.618027	0.79	0.829	0.995	0.978	0.989	0.999	0.933	0.842
rs2278557	6.4391E-09	-0.030317	0.00522	-0.03056	0.007056	1.17706E-08	0.89835	0.921248	0.013862	0.000231	0.004322	0.00052	0.15372	0.229684	0.757	0.754	0.958	0.999	0.984	0.999	0.897	0.546
rs11648622	6.4473E-09	0.0322504	0.00556	0.0322504	0.005556	1.17852E-08	0.43173	0.25906	0.007375	0.006586	0.145055	8.7E-05	0.39266	0.685933	0.87	0.893	0.989	0.993	0.928	1	0.87	0.836
rs3816605	6.4485E-09	0.0302988	0.00522	0.0302988	0.00522	1.17872E-08	0.8143	0.220209	0.00074	0.000101	0.87831	0.0066	0.02627	0.959067	0.782	0.874	0.999	0.999	0.66	0.981	0.957	0.753
rs9301873	6.4529E-09	0.0340975	0.00587	0.0340975	0.005874	1.17952E-08	0.7736	0.021996	0.002103	0.067768	0.049823	0.00321	0.00647	0.175884	0.857	0.958	0.998	0.959	0.969	0.996	0.984	0.927
rs72927801	6.4558E-09	0.035853	0.00618	0.0381131	0.008268	1.18002E-08	0.00331	0.681089	0.000833	0.005501	0.00331	0.01521	0.99475	0.31655	0.97	0.841	0.999	0.994	0.99	0.965	0.742	0.888
rs59703071	6.4627E-09	-0.042727	0.00736	-0.044869	0.011617	1.18127E-08	0.91711	0.085932	3.6E-05	0.103383	0.883456	0.00509	0.00088	0.041407	0.739	0.909	1	0.886	0.569	0.983	0.987	0.932
rs4975306	6.4665E-09	0.0369434	0.00636	0.0329595	0.0092	1.18194E-08	0.3115	0.424922	4.63E-06	0.148484	0.995105	0.00021	0.0219	0.485425	0.764	0.496	1	0.718	0.452	0.999	0.93	0.487
rs117211930	6.4698E-09	0.0585733	0.01009	0.0585733	0.010092	1.09587E-08	0.69604	0.113406	0.111529	0.000484	0.352188	4.7E-05	0.17356	0.045227	0.786	0.898	0.611	0.999	0.812	1	0.891	0.93
rs3129683	6.4725E-09	-0.053185	0.00916	-0.054742	0.011701	1.18301E-08	0.03579	0.959786	0.000717	0.006581	0.954155	0.00307	0.06292	0.007505	0.939	0.789	0.999	0.993	0.638	0.994	0.948	0.961
rs9925102	6.4727E-09	-0.029828	0.00514	-0.029895	0.007849	1.18305E-08	0.54934	0.558835	0.007187	0.003748	0.000351	0.00039	0.36079	0.10556	0.811	0.809	0.982	0.994	0.994	0.999	0.836	0.476
rs56091449	6.4746E-09	-0.045232	0.00779	-0.045232	0.007793	1.18339E-08	0.00868	0.582821	0.000442	0.142259	0.066688	0.00105	0.09561	0.160933	0.96	0.742	0.999	0.888	0.956	0.999	0.941	0.915
rs10786387	6.4869E-09	0.0317043	0.00546	0.0337072	0.00792	1.18557E-08	0.63406	0.666055	0.016571	0.027424	0.000509	0.00042	0.00311	0.913979	0.831	0.734	0.963	0.974	0.995	0.999	0.983	0.76
rs8295	6.4892E-09	-0.045227	0.00779	-0.045227	0.007793	1.18598E-08	0.0087	0.584492	0.000447	0.142254	0.066037	0.00104	0.09568	0.162348	0.96	0.743	0.999	0.888	0.956	0.999	0.941	0.915
rs62043044	6.4904E-09	0.0330027	0.00569	0.0316545	0.007011	1.07776E-08	0.43865	0.656023	3.71E-07	0.023729	0.509503	0.00876	0.85118	0.076148	0.599	0.762	1	0.961	0.731	0.957	0.671	0.893
rs10842288	6.4941E-09	-0.029744	0.00513	-0.029744	0.005125	1.18686E-08	0.62663	0.45774	0.000297	0.013837	0.273767	0.00503	0.00199	0.881629	0.845	0.866	1	0.987	0.889	0.992	0.986	0.808
rs117868582	6.4961E-09	0.0768445	0.01324	0.0768445	0.013241	1.18722E-08	0.65168	0.307762	4.21E-05	0.024773	0.201247	0.00309	0.03078	0.445148	0.82	0.653	1	0.975	0.896	0.994	0.956	0.848
rs10871451	6.4972E-09	-0.029825	0.00514	-0.029891	0.007848	1.18741E-08	0.54958	0.558835	0.007188	0.003764	0.000351	0.00039	0.3608	0.10556	0.811	0.809	0.982	0.994	0.994	0.999	0.836	0.476
rs11150577	6.4972E-09	-0.029825	0.00514	-0.029891	0.007848	1.18741E-08	0.54958	0.558835	0.007188	0.003764	0.000351	0.00039	0.3608	0.10556	0.811	0.809	0.982	0.994	0.994	0.999	0.836	0.476
rs1323974	6.4976E-09	0.0340898	0.00587	0.0340898	0.005874	1.18749E-08	0.74841	0.021916	0.002121	0.068626	0.049875	0.00323	0.00652	0.175676	0.86	0.958	0.998	0.959	0.969	0.996	0.984	0.927
rs74707951	6.498E-09	-0.029743	0.00513	-0.029743	0.005125	1.18756E-08	0.6267	0.457739	0.000297	0.013841	0.27375	0.00502	0.00199	0.881603	0.845	0.866	1	0.987	0.889	0.992	0.986	0.808
rs113391780	6.4985E-09	-0.048405	0.00834	-0.048405	0.008341	1.18765E-08	0.73163	0.652961	0.000838	0.005476	0.045481	0.00342	0.02735	0.949758	0.833	0.843	0.999	0.994	0.964	0.995	0.966	0.783
rs9932196	6.4991E-09	-0.029824	0.00514	-0.029891	0.007848	1.18775E-08	0.54962	0.558835	0.007187	0.003767	0.000351	0.00039	0.36079	0.10556	0.811	0.809	0.982	0.994	0.994	0.999	0.836	0.476
rs9873227	6.5047E-09	-0.035547	0.00613	-0.035547	0.006125	1.18716E-08	0.75675	0.067607	0.055676	0.002084	0.036405	1.9E-05	0.37388	0.842111	0.712	0.914	0.805	0.996	0.958	1	0.836	0.767
rs9301871	6.5091E-09	0.0340887	0.00587	0.0340887	0.005874	1.18953E-08	0.80805	0.021956	0.002101	0.066081	0.049726	0.00322	0.00648	0.175815	0.853	0.958	0.998	0.96	0.969	0.996	0.984	0.927
rs9556285	6.5167E-09	0.0340877	0.00587	0.0340877	0.005874	1.19089E-08	0.80809	0.021985	0.002104	0.066071	0.049766	0.00322	0.00647	0.175938	0.853	0.958	0.998	0.96	0.969	0.996	0.984	0.927
rs1328502	6.5182E-09	0.0327309	0.00564	0.0327309	0.00564	1.19117E-08	0.30398	0.085312	0.002043	0.016317	0.147183	0.00081	0.68021	0.053102	0.898	0.934	0.998	0.987	0.935	0.999	0.827	0.947
rs61340731	6.5209E-09	-0.046271	0.00797	-0.046271	0.007974	1.19164E-08	0.4073	0.294066	0.002179	0.014134	0.170284	0.00074	0.05339	0.574917	0.885	0.899	0.998	0.989	0.928	0.999	0.959	0.864
rs76228091	6.5253E-09	0.0708639	0.01221	0.0701708	0.016968	1.19243E-08	0.6694	0.568733	0.000314	0.275978	8.01E-05	0.00036	0.5398	0.604784	0.761	0.634	0.999	0.68	0.996	0.999	0.757	0.768
rs35105141	6.5406E-09	-0.030297	0.00522	-0.030574	0.007091	1.19516E-08	0.94799	0.835777	0.011455	0.000333	0.002953	0.00063	0.15921	0.218475	0.752	0.769	0.968	0.999	0.987	0.999	0.897	0.544
rs56323139	6.5415E-09	0.03584	0.00618	0.0381097	0.008283	1.19531E-08	0.0033	0.68581	0.000834	0.005543	0.003293	0.01521	0.99813	0.316307	0.97	0.84	0.999	0.994	0.99	0.965	0.741	0.888
rs1328501	6.5473E-09	0.0327268	0.00564	0.0327268	0.00564	1.19635E-08	0.30423	0.085325	0.002043	0.016372	0.147224	0.00081	0.68029	0.05311	0.898	0.934	0.998	0.987	0.935	0.999	0.827	0.947
rs17717651	6.5509E-09	0.0369316	0.00637	0.0329655	0.009187	1.19699E-08	0.31414	0.425867	4.68E-06	0.149895	0.998959	0.00021	0.02191	0.48628	0.763	0.496	1	0.716	0.454	0.999	0.93	0.487
rs73225027	6.5617E-09	-0.045216	0.00779	-0.045216	0.007793	1.19891E-08	0.00866	0.583196	0.000442	0.142512	0.067085	0.00106	0.09548	0.160615	0.96	0.742	0.999	0.888	0.956	0.998	0.941	0.915
rs6805998	6.5619E-09	-0.035538	0.00613	-0.035538	0.006125	1.19768E-08	0.75755	0.067493	0.055286	0.002154	0.036357	1.9E-05	0.37313	0.8429	0.712	0.914	0.807	0.996	0.958	1	0.837	0.767
rs2059510	6.5628E-09	0.0369206	0.00636	0.0328489	0.009222	1.19912E-08	0.31854	0.433817	4.39E-06	0.152601	0.966965	0.0002	0.02259	0.493374	0.759	0.493	1	0.707	0.437	0.999	0.928	0.484
rs62078765	6.5667E-09	0.0486784	0.00839	0.0513795	0.013768	6.09727E-09	0.04601	0.735728	0.051178	0.427671	0.000666	1.1E-06	0.15097	0.417111	0.887	0.554	0.564	0.378	0.993	1	0.835	0.738
rs13101590	6.5668E-09	-0.036628	0.00631	-0.037826	0.010643	9.04286E-09	0.37202	0.837494	0.005099	1.04E-05	0.706975	0.00409	0.00128	0.595839	0.822	0.688	0.98	1	0.456	0.981	0.983	0.777
rs9932702	6.5762E-09	-0.029814	0.00514	-0.02988	0.007846	1.20151E-08	0.54973	0.558835	0.007188	0.003824	0.000351	0.00039	0.3608	0.10556	0.811	0.809	0.982	0.994	0.994	0.999	0.836	0.477
rs995810	6.5785E-09	0.0340776	0.00587	0.0340776	0.005874	1.20192E-08	0.77407	0.021903	0.002111	0.068576	0.049801	0.00321	0.00651	0.175672	0.857	0.958	0.998	0.959	0.969	0.996	0.984	0.927
rs4885958	6.5791E-09	-0.046118	0.00795	-0.042671	0.010342	1.20202E-08	0.32374	0.673051	2.41E-06	0.281376	0.126839	0.00033	0.08331	0.899222	0.486	0.572	1	0.584	0.855	0.998	0.88	0.603
rs17820823	6.5857E-09	0.0292395	0.00504	0.0318131	0.008797	5.1486E-09	0.41596	0.422067	2.17E-06	0.033507	0.024482	0.13592	0.00054	0.488256	0.462	0.752	1	0.888	0.953	0.28	0.989	0.729

Table S3

rs73225026	6.587E-09	-0.045212	0.00779	-0.045212	0.007794	1.20343E-08	0.00866	0.582566	0.00044	0.142998	0.067311	0.00106	0.0954	0.160209	0.96	0.742	0.999	0.887	0.956	0.998	0.941	0.915
rs11936467	6.5887E-09	-0.036625	0.00631	-0.037819	0.010642	9.08026E-09	0.37322	0.837451	0.005099	1.05E-05	0.706978	0.00409	0.00128	0.595842	0.821	0.688	0.98	1	0.456	0.981	0.983	0.777
rs112802981	6.5901E-09	-0.048387	0.00834	-0.048387	0.008341	1.20399E-08	0.78831	0.652497	0.000837	0.005197	0.045511	0.00342	0.02732	0.949837	0.824	0.842	0.999	0.994	0.963	0.995	0.965	0.781
rs144345457	6.5915E-09	-0.076335	0.01316	-0.076335	0.013159	1.19696E-08	0.11169	0.046113	0.0659	0.005493	0.192779	2.8E-05	0.06329	0.951326	0.915	0.935	0.788	0.993	0.901	1	0.947	0.759
rs2147838	6.5975E-09	0.030978	0.00534	0.030978	0.00534	1.20529E-08	0.63266	0.570614	0.0028	0.183951	0.050939	1.1E-05	0.23072	0.139762	0.706	0.825	0.994	0.823	0.952	1	0.885	0.901
rs10742814	6.6029E-09	0.0302784	0.00522	0.0302784	0.00522	1.20627E-08	0.8086	0.202568	0.000126	0.000231	0.895099	0.00592	0.13054	0.961714	0.756	0.861	1	0.999	0.546	0.979	0.898	0.723
rs3130263	6.6031E-09	0.0292244	0.00504	0.0290275	0.005245	1.20629E-08	0.30004	0.690871	0.00066	0.000298	0.8264	0.00022	0.76187	0.274972	0.516	0.727	0.998	0.998	0.577	0.999	0.659	0.811
rs1490359	6.61E-09	0.0304512	0.00525	0.0304512	0.00525	1.20754E-08	0.95007	0.754476	0.003862	0.027628	0.003199	0.00038	0.11651	0.617799	0.79	0.829	0.995	0.977	0.989	0.999	0.932	0.842
rs72884607	6.6124E-09	0.0466883	0.00805	0.0495155	0.011578	1.20795E-08	0.43071	0.001609	0.006911	0.000301	0.199907	0.00332	0.29969	0.174246	0.708	0.973	0.989	0.999	0.911	0.995	0.89	0.911
rs34999548	6.6124E-09	-0.069282	0.01194	-0.069282	0.011944	1.20796E-08	0.06893	0.102183	0.00058	0.61402	0.063642	2.4E-05	0.26465	0.957824	0.899	0.886	0.998	0.382	0.932	1	0.839	0.678
rs1679732	6.6208E-09	0.0537308	0.00926	0.0559326	0.013696	1.20945E-08	0.87791	0.962379	0.001137	0.028559	0.391854	0.00095	0.08456	0.000142	0.814	0.793	0.998	0.976	0.855	0.999	0.943	0.982
rs1408210	6.6249E-09	0.0340707	0.00587	0.0340707	0.005874	1.21019E-08	0.80848	0.021897	0.002111	0.066842	0.049822	0.00321	0.00652	0.175653	0.853	0.958	0.998	0.96	0.969	0.996	0.984	0.927
rs11791731	6.6283E-09	-0.039672	0.00684	-0.039672	0.00684	1.21079E-08	0.25259	0.996452	0.000638	0.060094	0.017851	0.00827	0.04877	0.005707	0.911	0.827	0.999	0.961	0.981	0.988	0.963	0.972
rs73083799	6.6318E-09	-0.094215	0.01624	-0.094215	0.016244	1.21141E-08	0.25922	0.105443	0.001474	0.032842	0.119155	0.00093	0.21788	0.263888	0.909	0.933	0.998	0.978	0.946	0.999	0.922	0.91
rs11222166	6.6319E-09	0.034068	0.00587	0.0350732	0.009637	7.74282E-09	0.01536	0.207954	0.00061	0.824788	0.396841	6.4E-06	0.20565	0.033065	0.932	0.839	0.998	0.086	0.723	1	0.844	0.921
rs11754346	6.6383E-09	-0.032256	0.00556	-0.032256	0.005562	1.21258E-08	0.99643	0.136027	0.000107	0.045686	0.193166	0.00159	0.33984	0.180542	0.801	0.914	1	0.964	0.913	0.998	0.881	0.909
rs6971558	6.6394E-09	-0.032247	0.00556	-0.032235	0.005596	1.21277E-08	0.56681	0.314002	7.12E-05	0.309903	0.024123	0.00061	0.03241	0.287948	0.8	0.593	1	0.669	0.964	0.998	0.949	0.85
rs1530057	6.641E-09	-0.069301	0.01195	-0.069301	0.011949	1.21305E-08	0.07076	0.104492	0.000518	0.576895	0.069377	2.8E-05	0.27409	0.94638	0.899	0.886	0.999	0.415	0.929	1	0.838	0.681
rs11464297	6.6418E-09	0.0537258	0.00926	0.0559282	0.013696	1.21319E-08	0.87796	0.962379	0.00114	0.028586	0.391806	0.00095	0.08456	0.000142	0.814	0.793	0.998	0.976	0.855	0.999	0.943	0.982
rs11646364	6.6418E-09	0.0415787	0.00717	0.0415787	0.007169	1.21319E-08	0.11053	0.210856	0.002848	0.223587	0.019541	0.00032	0.01004	0.99794	0.922	0.903	0.996	0.826	0.977	1	0.977	0.793
rs12334515	6.6489E-09	0.0301863	0.0052	0.0301863	0.005205	1.21446E-08	0.3795	0.15401	0.000117	0.744772	0.03949	0.00028	0.03115	0.614011	0.819	0.872	1	0.306	0.951	0.999	0.949	0.77
rs4775005	6.6514E-09	-0.029294	0.00505	-0.031008	0.00746	7.86014E-09	0.69613	0.475244	4.33E-06	0.02453	0.018817	0.10233	0.00222	0.699628	0.607	0.778	1	0.943	0.965	0.46	0.983	0.723
rs57105322	6.6595E-09	0.0330055	0.00569	0.0330055	0.005691	1.21635E-08	0.16445	0.88257	0.007228	0.005172	0.030026	0.00057	0.14318	0.515728	0.915	0.797	0.99	0.995	0.973	0.999	0.931	0.866
rs10801654	6.6693E-09	0.0302887	0.00522	0.0315502	0.007934	1.21811E-08	0.22683	0.056984	0.000509	0.000494	0.041835	0.01817	0.12554	0.057129	0.884	0.509	0.999	0.999	0.96	0.941	0.921	0.931
rs10194569	6.6709E-09	-0.029901	0.00516	-0.031485	0.007358	1.21838E-08	0.48772	0.009757	0.001739	0.022431	0.311848	0.00106	0.99842	0.001513	0.865	0.96	0.998	0.982	0.88	0.999	0.744	0.977
rs1021052	6.6804E-09	-0.030143	0.0052	-0.030143	0.005198	1.22008E-08	0.76787	0.186121	6.92E-06	0.002929	0.38686	0.01337	0.81788	0.290177	0.71	0.875	1	0.994	0.812	0.952	0.723	0.856
rs11785047	6.6881E-09	0.0419393	0.00723	0.0419393	0.007233	1.22145E-08	0.49476	0.644109	0.001014	0.020379	0.08644	0.00091	0.09582	0.468765	0.871	0.854	0.999	0.984	0.951	0.999	0.943	0.873
rs2787993	6.6913E-09	-0.033677	0.00581	-0.034884	0.006617	8.75662E-09	0.11535	0.761665	4.78E-05	0.001121	0.09284	0.15108	0.04957	0.081836	0.896	0.751	1	0.998	0.92	0.349	0.944	0.913
rs1968514	6.6925E-09	-0.069286	0.01195	-0.069286	0.011949	1.22223E-08	0.07096	0.104388	0.000518	0.577362	0.069406	2.8E-05	0.27424	0.946201	0.899	0.886	0.999	0.415	0.929	1	0.838	0.681
rs4858800	6.7043E-09	-0.034853	0.00601	-0.034853	0.006011	1.21964E-08	0.80512	0.045268	0.055788	0.001361	0.045407	2.1E-05	0.48252	0.936572	0.71	0.92	0.795	0.997	0.951	1	0.8	0.742
rs2059511	6.7289E-09	0.0368937	0.00636	0.0328335	0.009218	1.22871E-08	0.32017	0.43456	4.38E-06	0.152884	0.96685	0.00021	0.02251	0.494393	0.759	0.494	1	0.707	0.437	0.999	0.928	0.485
rs7859480	6.7362E-09	-0.03921	0.00676	-0.041222	0.008382	1.23002E-08	0.25807	0.886369	0.000727	0.082649	0.027719	0.00671	0.02238	0.00257	0.909	0.81	0.999	0.946	0.976	0.99	0.973	0.976
rs202231020	6.7383E-09	0.0340643	0.00588	0.0340643	0.005876	1.23039E-08	0.77098	0.02216	0.00215	0.068475	0.049339	0.00326	0.00645	0.175381	0.857	0.958	0.998	0.959	0.97	0.996	0.984	0.927
rs76975994	6.7393E-09	-0.086752	0.01496	-0.086149	0.015521	1.23058E-08	0.3558	0.866039	0.00041	0.324091	0.227982	1E-05	0.10126	0.089555	0.551	0.715	0.999	0.596	0.832	1	0.896	0.885
rs12149380	6.7438E-09	-0.033874	0.00584	-0.033874	0.005843	1.23137E-08	0.11025	0.23855	0.003443	0.180325	0.021413	0.00124	0.00192	0.42403	0.932	0.91	0.996	0.877	0.979	0.998	0.989	0.887
rs1822235	6.7498E-09	-0.030285	0.00522	-0.030285	0.005224	1.23244E-08	0.06607	0.753	0.001607	0.043739	0.754351	0.00013	0.0307	0.451341	0.926	0.818	0.998	0.962	0.737	1	0.96	0.857
rs72694301	6.7554E-09	-0.039306	0.00678	-0.041452	0.008542	1.23344E-08	0.23795	0.807703	0.000811	0.076043	0.02927	0.00607	0.02643	0.002205	0.911	0.799	0.999	0.95	0.976	0.991	0.971	0.977
rs12924875	6.7561E-09	-0.031763	0.00548	-0.03477	0.010469	1.23358E-08	0.14181	0.105194	0.00082	0.110003	0.463889	0.00099	2.7E-05	0.081912	0.557	0.905	0.998	0.888	0.798	0.998	0.995	0.917
rs201000	6.7575E-09	-0.042983	0.00741	-0.042983	0.007415	1.23382E-08	0.67532	0.984112	0.000415	0.093668	0.154117	0.00092	0.10732	0.003781	0.843	0.802	0.999	0.929	0.926	0.999	0.938	0.969
rs1056668	6.758E-09	0.0296379	0.00511	0.0296379	0.005113	1.23391E-08	0.49889	0.396939	0.00102	0.002042	0.238424	0.00888	0.02009	0.264843	0.875	0.887	0.999	0.997	0.911	0.986	0.973	0.906
rs12892189	6.7612E-09	0.0299474	0.00517	0.0299474	0.005166	1.23447E-08	0.79201	0.140271	0.000215	0.007029	0.274698	0.01756	0.005	0.193803	0.778	0.918	1	0.993	0.893	0.961	0.983	0.911
rs201001	6.7613E-09	-0.042982	0.00741	-0.042982	0.007415	1.2345E-08	0.67532	0.983995	0.000415	0.093662	0.154059	0.00092	0.10736	0.003782	0.843	0.802	0.999	0.929	0.926	0.999	0.938	0.969
rs74493799	6.7622E-09	-0.041759	0.0072	-0.041759	0.007204	1.23465E-08	0.85488	0.201369	0.002795	0.204356	0.012198	0.0001	0.14048	0.244118	0.813	0.901	0.996	0.834	0.981	1	0.926	0.896
rs199511027	6.7706E-09	0.0340716	0.00588	0.0340716	0.005878	1.23614E-08	0.77179	0.02752	0.002038	0.068823	0.043917	0.00314	0.00756	0.190882	0.856	0.956	0.998	0.958	0.971	0.996	0.983	0.924
rs72696211	6.771E-09	-0.039185	0.00676	-0.04175	0.008774	1.23622E-08	0.16113	0.815486	0.000867	0.076772	0.02973	0.00628	0.03357	0.001779	0.924	0.802	0.999	0.95	0.976	0.991	0.968	0.978
rs10959585	6.7714E-09	-0.039203	0.00676	-0.041259	0.008406	1.2363E-08	0.24171	0.885424	0.000736	0.083793	0.027829	0.00672	0.02261	0.00257	0.911	0.81	0.999	0.945	0.976	0.99	0.973	0.976
rs10801827	6.7803E-09	0.029289	0.00505	0.031041	0.007253	6.51584E-09	0.2999	0.070634	2.41E-06	0.002682	0.518254	0.15509	0.3738	0.022459	0.804	0.889	1	0.993	0.622	0.268	0.751	0.931
rs34508544	6.789E-09	0.0415933	0.00718	0.041743	0.011022	1.23942E-08	0.26047	0.848505	0.001169	0.053604	0.000331	0.00053	0.65534	0.033838	0.595	0.724	0.998	0.942	0.994	0.999	0.764	0.933
rs141292606	6.8028E-09	-0.071043	0.01226	-0.071043	0.012258	1.24189E-08	0.26377	0.558465	0.001579	0.037865	0.319347	0.0003	0.1265	0.115736	0.901	0.864	0.998	0.972	0.885	1	0.936	0.929
rs1050450	6.804E-09	-0.029542	0.0051	-0.029542	0.005097	1.2415E-08	0.60396	0.092361	0.017674	0.101337	0.015329	3E-06	0.37005	0.673126	0.821	0.91	0.95	0.898	0.975	1	0.85	0.701
rs3833842	6.8107E-09	-0.030269	0.00522	-0.030501	0.007033	1.2433E-08	0.90918	0.921242	0.013828	0.000251	0.004321	0.00052	0.15352	0.229694	0.755	0.754	0.959	0.999	0.984	0.999	0.897	0.547
rs58359140	6.8197E-09	-0.035019	0.00604	-0.034857	0.007394	1.24489E-08	0.02244	0.144986	0.000483	0.094262	0.152842	0.00033	0.042	0.412436	0.942	0.58	0.999	0.913	0.913	0.999	0.952	0.854
rs10519675	6.8203E-09	-0.036585	0.00631	-0.037739	0.010651	9.40229E-09	0.375	0.830476	0.004988	1.07E-05	0.699194	0.00415	0.0013	0.598148	0.82	0.686	0.981	1	0.453	0.981	0.983	0.776
rs463245	6.8217E-09	0.0298069	0.00514	0.0284996	0.006664	6.96617E-09	0.46806	0.293737	0.001359	0.974281	0.442602	3.2E-07	0.12035	0.197155	0.74	0.785	0.992	0.131	0.666	1	0.864	0.818
rs2513689	6.8225E-09	-0.032416	0.00559	-0.032978	0.008876	1.10328E-08	0.52296	0.031768	0.001588	0.870937	0.011838	1E-05	0.28713	0.050647	0.549	0.911	0.993	0.192	0.972	1	0.809	0.906

Table S3

rs12634441	6.8245E-09	-0.069244	0.01195	-0.069244	0.011949	1.24575E-08	0.07105	0.10062	0.000585	0.608488	0.064863	2.4E-05	0.27068	0.960717	0.898	0.886	0.998	0.388	0.931	1	0.837	0.679
rs10771064	6.8373E-09	-0.029743	0.00513	-0.029743	0.005133	1.24804E-08	0.48898	0.453086	0.000297	0.008985	0.271723	0.00647	0.00281	0.958751	0.862	0.866	1	0.991	0.889	0.988	0.984	0.784
rs1323984	6.8473E-09	0.0340631	0.00588	0.0340631	0.005878	1.24981E-08	0.90179	0.02137	0.002147	0.062421	0.05267	0.00305	0.00694	0.175484	0.841	0.958	0.998	0.962	0.968	0.996	0.983	0.926
rs1475422	6.86E-09	0.0302514	0.00522	0.0315947	0.008088	1.25208E-08	0.24719	0.056952	0.000521	0.000379	0.043231	0.02054	0.12908	0.048294	0.879	0.505	0.999	0.999	0.959	0.93	0.919	0.934
rs10184811	6.8683E-09	-0.034282	0.00592	-0.034282	0.005917	1.25356E-08	0.71889	0.431164	0.000655	0.030292	0.014885	0.00124	0.64718	0.146781	0.837	0.872	0.999	0.976	0.98	0.998	0.819	0.917
rs182254333	6.8738E-09	0.0899957	0.01553	0.0899957	0.015533	1.25454E-08	0.50664	0.039761	0.000838	0.05191	0.188713	0.00021	0.39147	0.740338	0.859	0.937	0.999	0.96	0.914	1	0.87	0.828
rs3934406	6.8751E-09	0.0292707	0.00505	0.0310305	0.007263	6.57594E-09	0.29843	0.070017	2.41E-06	0.002661	0.515636	0.15624	0.38085	0.022546	0.804	0.889	1	0.993	0.623	0.265	0.747	0.931
rs3934407	6.8769E-09	0.0292698	0.00505	0.0310354	0.007268	6.55895E-09	0.29816	0.069978	2.4E-06	0.002657	0.514399	0.15683	0.38118	0.022544	0.804	0.889	1	0.993	0.623	0.263	0.747	0.931
rs77088973	6.8771E-09	0.0579812	0.01001	0.0524033	0.016281	6.79191E-09	0.21823	0.954821	4.69E-05	0.881003	0.314202	6.2E-06	0.01187	0.598139	0.768	0.549	1	0.063	0.68	1	0.944	0.429
rs4530676	6.8805E-09	0.0386327	0.00667	0.0386327	0.006668	1.25573E-08	0.11081	0.748165	0.018206	0.004591	0.00194	0.00121	0.43243	0.178297	0.929	0.847	0.971	0.995	0.992	0.998	0.875	0.919
rs1873625	6.8825E-09	-0.029629	0.00511	-0.029629	0.005114	1.25557E-08	0.93136	0.064218	0.022633	0.09384	0.015096	3.9E-06	0.2602	0.986761	0.785	0.922	0.938	0.909	0.976	1	0.883	0.764
rs4975316	6.8866E-09	0.036872	0.00636	0.0327955	0.009227	1.25682E-08	0.319	0.433466	4.48E-06	0.155565	0.972101	0.0002	0.02266	0.489414	0.758	0.493	1	0.702	0.439	0.999	0.928	0.483
rs1800668	6.8877E-09	-0.029531	0.0051	-0.029531	0.005097	1.2563E-08	0.60439	0.092442	0.017824	0.101267	0.0154	3E-06	0.37042	0.672801	0.821	0.91	0.95	0.898	0.974	1	0.849	0.701
rs59181734	6.8889E-09	0.0386313	0.00667	0.0386313	0.006668	1.25722E-08	0.11081	0.748154	0.018215	0.00459	0.00194	0.00121	0.43265	0.178294	0.929	0.847	0.971	0.995	0.992	0.998	0.875	0.919
rs1475424	6.8911E-09	0.0302474	0.00522	0.031591	0.008088	1.25761E-08	0.24719	0.056938	0.000523	0.000379	0.043249	0.02056	0.12914	0.048311	0.879	0.505	0.999	0.999	0.959	0.93	0.918	0.934
rs7068511	6.8913E-09	-0.034865	0.00602	-0.04076	0.009822	1.25764E-08	0.0001	0.319834	0.029387	0.083835	0.065526	0.0002	0.03818	0.303015	0.985	0.903	0.947	0.945	0.963	1	0.967	0.907
rs114212226	6.8914E-09	0.0332176	0.00573	0.0353504	0.007829	1.25766E-08	0.03132	0.506942	0.002546	0.01058	0.000203	0.00516	0.77859	0.348558	0.944	0.856	0.996	0.99	0.996	0.991	0.679	0.878
rs7988183	6.8916E-09	0.0340527	0.00588	0.0340527	0.005878	1.25771E-08	0.9033	0.021364	0.002139	0.063388	0.052606	0.00304	0.00693	0.175648	0.841	0.958	0.998	0.961	0.968	0.996	0.983	0.926
rs28577925	6.8986E-09	-0.036573	0.00631	-0.037729	0.010654	9.49194E-09	0.37506	0.830336	0.005024	1.07E-05	0.699149	0.00417	0.0013	0.598557	0.82	0.686	0.98	1	0.453	0.981	0.983	0.776
rs3213423	6.8991E-09	-0.033865	0.00585	-0.033865	0.005845	1.25904E-08	0.10313	0.223355	0.003341	0.191166	0.01973	0.00141	0.00182	0.404392	0.933	0.912	0.996	0.869	0.98	0.998	0.989	0.889
rs11039280	6.9137E-09	0.030245	0.00522	0.030245	0.005221	1.26164E-08	0.8114	0.199718	0.000121	0.000231	0.877254	0.00613	0.13457	0.956294	0.754	0.861	1	0.999	0.538	0.978	0.895	0.722
rs7539136	6.915E-09	0.030256	0.00522	0.0314852	0.007889	1.26188E-08	0.23023	0.057957	0.000565	0.000445	0.043132	0.01754	0.12826	0.06063	0.884	0.511	0.999	0.999	0.96	0.945	0.92	0.929
rs34742917	6.9272E-09	-0.069235	0.01195	-0.069235	0.011952	1.26405E-08	0.07214	0.099515	0.000594	0.611021	0.065435	2.3E-05	0.27378	0.96351	0.897	0.886	0.998	0.385	0.931	1	0.836	0.679
rs2102341	6.9393E-09	-0.031327	0.00541	-0.037607	0.008602	1.01703E-08	0.07908	0.605025	0.000246	0.011413	0.088373	0.11628	0.00277	0.003989	0.926	0.824	0.999	0.986	0.94	0.542	0.987	0.974
rs12666107	6.9395E-09	0.0336218	0.0058	0.0330182	0.008258	1.26624E-08	0.16538	0.065527	0.000293	0.186212	0.004937	0.00031	0.13114	0.484033	0.877	0.474	0.999	0.79	0.983	0.999	0.903	0.814
rs117756554	6.9399E-09	0.0584618	0.01009	0.058477	0.010111	1.17198E-08	0.69948	0.112823	0.113281	0.000489	0.35639	4.8E-05	0.173	0.045604	0.784	0.897	0.607	0.999	0.81	1	0.891	0.93
rs200502	6.9414E-09	-0.036591	0.00632	-0.036591	0.006317	1.26657E-08	0.87498	0.386467	0.000577	0.00798	0.146953	0.01329	0.02908	0.005232	0.802	0.889	0.999	0.993	0.936	0.975	0.969	0.971
rs12064799	6.9437E-09	0.0292676	0.00505	0.0311904	0.007448	6.24433E-09	0.29591	0.073371	2.22E-06	0.00252	0.513079	0.16599	0.40244	0.018604	0.8	0.885	1	0.993	0.612	0.235	0.73	0.934
rs10922917	6.9476E-09	0.0292626	0.00505	0.0314802	0.007722	5.65784E-09	0.38035	0.06053	2.37E-06	0.001825	0.52787	0.18415	0.3705	0.016193	0.768	0.889	1	0.995	0.585	0.188	0.733	0.936
rs1323986	6.9497E-09	0.0340475	0.00588	0.0340475	0.005878	1.26805E-08	0.90349	0.02139	0.00214	0.063448	0.052668	0.00305	0.00693	0.175316	0.841	0.958	0.998	0.961	0.968	0.996	0.983	0.926
rs28850637	6.9536E-09	-0.036565	0.00631	-0.037739	0.01065	9.5584E-09	0.37367	0.832378	0.005113	1.06E-05	0.702344	0.00417	0.0013	0.598888	0.821	0.686	0.98	1	0.455	0.981	0.983	0.776
rs12059603	6.9539E-09	0.0302393	0.00522	0.0315823	0.008087	1.2688E-08	0.24776	0.056944	0.000524	0.00038	0.043246	0.0206	0.12914	0.048308	0.879	0.505	0.999	0.999	0.959	0.93	0.918	0.934
rs1563439	6.9617E-09	0.0298337	0.00515	0.0298337	0.005151	1.27018E-08	0.14649	0.345533	0.000424	0.019804	0.724829	0.00104	0.15397	0.16879	0.913	0.881	0.999	0.983	0.762	0.999	0.923	0.911
rs5847574	6.962E-09	-0.06922	0.01195	-0.06922	0.011951	1.27024E-08	0.07178	0.099954	0.000593	0.609855	0.06553	2.4E-05	0.27315	0.962925	0.897	0.886	0.998	0.387	0.931	1	0.836	0.679
rs12060129	6.9709E-09	0.0292593	0.00505	0.0310241	0.007271	6.63466E-09	0.29717	0.070253	2.4E-06	0.00265	0.516522	0.15733	0.38245	0.022627	0.804	0.888	1	0.993	0.621	0.262	0.746	0.931
rs17678304	6.9792E-09	-0.036574	0.00632	-0.037831	0.01062	1.00537E-08	0.31873	0.825907	0.004607	1.37E-05	0.69625	0.00439	0.00123	0.607484	0.833	0.687	0.983	1	0.454	0.981	0.983	0.776
rs4525719	6.9802E-09	-0.092748	0.01601	-0.092748	0.016015	1.27348E-08	0.05728	0.830642	0.012574	0.01165	0.23384	0.00052	0.04741	0.010889	0.944	0.805	0.983	0.991	0.914	0.999	0.961	0.967
rs17527216	6.9831E-09	-0.036903	0.00637	-0.038213	0.007826	1.27399E-08	0.99341	0.266276	0.003623	0.067917	0.332957	0.0007	0.00054	0.030845	0.813	0.9	0.995	0.952	0.881	0.999	0.991	0.953
rs34496206	6.9852E-09	0.0302513	0.00522	0.031592	0.007952	1.27437E-08	0.22683	0.059249	0.000527	0.000494	0.040398	0.0193	0.12421	0.053547	0.884	0.512	0.999	0.999	0.961	0.937	0.921	0.932
rs12076564	6.9868E-09	0.0302514	0.00522	0.0315905	0.007952	1.27466E-08	0.22784	0.05925	0.000527	0.000492	0.040398	0.01931	0.12421	0.053601	0.884	0.512	0.999	0.999	0.961	0.937	0.921	0.932
rs34483143	6.9881E-09	-0.036559	0.00631	-0.037734	0.010652	9.59535E-09	0.37395	0.83246	0.005116	1.06E-05	0.70181	0.00418	0.0013	0.598799	0.821	0.686	0.98	1	0.454	0.981	0.983	0.776
rs35668471	6.9979E-09	-0.036558	0.00631	-0.037732	0.010651	9.61161E-09	0.37394	0.83249	0.005116	1.06E-05	0.701831	0.00418	0.0013	0.598789	0.821	0.686	0.98	1	0.454	0.981	0.983	0.776
rs4658172	7.0021E-09	0.029257	0.00505	0.0310117	0.007281	6.63747E-09	0.30023	0.070975	2.37E-06	0.002608	0.526823	0.15719	0.3806	0.022657	0.802	0.887	1	0.993	0.614	0.261	0.745	0.93
rs117432945	7.0056E-09	0.0485818	0.00839	0.0511358	0.013755	7.15995E-09	0.04887	0.580489	0.052223	0.363769	0.000671	1.4E-06	0.18784	0.317417	0.888	0.538	0.596	0.448	0.993	1	0.821	0.778
rs2298703	7.0116E-09	-0.041464	0.00716	-0.041464	0.007161	1.27906E-08	0.81027	0.088495	0.00106	0.070946	0.170491	0.00012	0.08427	0.790598	0.811	0.919	0.998	0.939	0.913	1	0.938	0.745
rs174530	7.0129E-09	0.029485	0.00509	0.0313858	0.008359	1.27929E-08	0.1142	0.355672	0.018447	0.086453	2.31E-05	9.6E-05	0.34294	0.455321	0.906	0.654	0.949	0.914	0.998	1	0.858	0.843
rs10026166	7.0226E-09	-0.036554	0.00631	-0.037723	0.010653	9.63562E-09	0.37425	0.832088	0.005113	1.06E-05	0.700876	0.00419	0.0013	0.599218	0.82	0.686	0.98	1	0.454	0.981	0.983	0.776
rs1822236	7.0274E-09	-0.030241	0.00522	-0.030241	0.005223	1.28188E-08	0.06649	0.79007	0.001604	0.044083	0.755586	0.00012	0.0315	0.467345	0.925	0.812	0.998	0.961	0.735	1	0.959	0.853
rs79158807	7.0309E-09	-0.041714	0.0072	-0.041714	0.007204	1.28251E-08	0.86941	0.201139	0.002814	0.206083	0.012207	0.0001	0.1408	0.243715	0.811	0.901	0.996	0.832	0.981	1	0.925	0.896
rs62302696	7.0396E-09	0.0386084	0.00667	0.0386084	0.006668	1.28405E-08	0.12469	0.748218	0.018179	0.004456	0.001941	0.00121	0.43212	0.178324	0.926	0.847	0.971	0.995	0.992	0.998	0.875	0.919
rs145313871	7.0441E-09	-0.068853	0.01189	-0.068853	0.011892	1.28485E-08	0.19876	0.478296	6.94E-06	0.012972	0.586905	0.00411	0.73539	0.207755	0.871	0.818	1	0.982	0.737	0.989	0.596	0.871
rs12411523	7.0455E-09	0.0316241	0.00546	0.0336353	0.007911	1.28511E-08	0.62642	0.670605	0.017236	0.027149	0.000519	0.00044	0.00316	0.90595	0.832	0.735	0.962	0.975	0.994	0.999	0.983	0.759
rs1555685	7.0528E-09	0.0334892	0.00578	0.0323542	0.010332	1.28641E-08	0.03186	0.111695	0.007134	0.245695	0.178551	2E-06	0.03747	0.04402	0.391	0.883	0.969	0.693	0.871	1	0.942	0.918
rs10959625	7.0742E-09	-0.039132	0.00676	-0.041806	0.008865	1.29021E-08	0.14985	0.810787	0.000831	0.084472	0.030254	0.00625	0.03344	0.001765	0.925	0.801	0.999	0.945	0.975	0.991	0.968	0.978
rs2743555	7.0886E-09	-0.053603	0.00926	-0.055745	0.013724	1.29277E-08	0.9275	0.967811	0.001107	0.028886	0.400587	0.00098	0.08132	0.000149	0.806	0.792	0.998	0.976	0.851	0.999	0.943	0.982

Table S3

rs10783833	7.0897E-09	-0.029347	0.00507	-0.029347	0.00507	1.29297E-08	0.92424	0.20689	0.000641	0.035468	0.158326	0.0011	0.04067	0.33575	0.8	0.907	0.999	0.974	0.928	0.999	0.961	0.89
rs9561330	7.0917E-09	0.0340231	0.00588	0.0340231	0.005877	1.29332E-08	0.85537	0.022359	0.002182	0.065318	0.048954	0.00329	0.00641	0.174839	0.847	0.958	0.998	0.96	0.969	0.996	0.984	0.926
rs10780428	7.108E-09	0.0318658	0.00551	0.0321828	0.009553	8.83729E-09	0.49285	0.011629	0.000121	1.33E-05	0.982861	0.03616	0.61924	0.115476	0.548	0.925	0.999	1	0.491	0.718	0.676	0.861
rs12360643	7.115E-09	0.0302143	0.00522	0.0302143	0.00522	1.29747E-08	0.80356	0.221607	0.000736	0.000114	0.89718	0.00725	0.02558	0.867289	0.786	0.875	0.999	0.999	0.657	0.98	0.958	0.77
rs10769299	7.1177E-09	0.0302184	0.00522	0.0302184	0.005221	1.29794E-08	0.81089	0.218505	0.00076	9.6E-05	0.878765	0.0073	0.02601	0.953844	0.783	0.875	0.998	0.999	0.66	0.979	0.957	0.754
rs174547	7.1192E-09	0.0295247	0.0051	0.0317025	0.008927	1.27564E-08	0.12108	0.287156	0.014211	0.165321	1.28E-05	8.6E-05	0.27745	0.369405	0.898	0.616	0.954	0.826	0.998	0.999	0.865	0.848
rs5850569	7.1227E-09	-0.042985	0.00743	-0.043728	0.008621	1.29884E-08	0.068	0.630713	7.68E-05	0.413	0.01638	0.00385	0.00636	0.759639	0.92	0.815	1	0.621	0.975	0.988	0.977	0.79
rs17640672	7.1292E-09	0.0385935	0.00667	0.0385935	0.006668	0.000000013	0.11711	0.748024	0.017991	0.0048	0.001934	0.00121	0.43236	0.178192	0.927	0.847	0.972	0.995	0.992	0.998	0.875	0.919
rs7945312	7.1317E-09	0.0302197	0.00522	0.0302197	0.005221	1.30044E-08	0.83907	0.1707	0.000119	0.000309	0.870925	0.00559	0.13151	0.965107	0.751	0.868	1	0.999	0.537	0.981	0.897	0.721
rs72673174	7.143E-09	0.0418549	0.00723	0.0418549	0.007232	1.30246E-08	0.49343	0.645909	0.001047	0.020296	0.087496	0.00093	0.09618	0.474334	0.871	0.853	0.999	0.984	0.951	0.999	0.943	0.872
rs9368503	7.1668E-09	-0.030265	0.00523	-0.030265	0.00523	1.30668E-08	0.43601	0.197343	0.003634	0.00073	0.026015	0.00751	0.32551	0.290471	0.885	0.915	0.996	0.999	0.976	0.989	0.899	0.904
rs1934618	7.1684E-09	0.0293784	0.00508	0.0310307	0.006801	1.30696E-08	0.32049	0.008105	0.035421	0.002555	0.456173	0.00018	0.57863	0.010169	0.886	0.961	0.916	0.997	0.836	1	0.83	0.964
rs12504378	7.1775E-09	0.0368295	0.00636	0.0327344	0.009235	1.30859E-08	0.32054	0.433637	4.5E-06	0.157509	0.971354	0.00021	0.02284	0.486994	0.757	0.492	1	0.699	0.438	0.999	0.927	0.481
rs4318227	7.1832E-09	-0.029745	0.00514	-0.029851	0.00778	1.3096E-08	0.54241	0.552904	0.007294	0.003811	0.000385	0.00042	0.35738	0.107524	0.813	0.811	0.982	0.994	0.994	0.999	0.838	0.481
rs28496790	7.1956E-09	-0.034112	0.0059	-0.034112	0.005895	1.31181E-08	0.891	0.463742	0.000464	0.022761	0.01754	0.00219	0.5284	0.131229	0.817	0.869	0.999	0.981	0.978	0.997	0.845	0.921
rs141124089	7.1973E-09	-0.030896	0.00534	-0.030896	0.005339	1.3121E-08	0.61415	0.183644	0.008292	4.85E-05	0.019104	0.00465	0.43479	0.859207	0.841	0.902	0.986	1	0.976	0.991	0.855	0.762
rs62432600	7.2198E-09	-0.032181	0.00556	-0.032181	0.005562	1.31612E-08	0.98346	0.133112	0.000107	0.046036	0.201891	0.0017	0.34695	0.172212	0.803	0.915	1	0.964	0.91	0.998	0.879	0.911
rs143311886	7.2332E-09	-0.034719	0.006	-0.034719	0.006001	1.3185E-08	0.6091	0.10798	0.00288	0.15986	0.049209	5.9E-06	0.6093	0.498671	0.683	0.897	0.993	0.831	0.949	1	0.777	0.821
rs72673175	7.2342E-09	0.0418392	0.00723	0.0418392	0.007232	1.31868E-08	0.49334	0.646293	0.001053	0.020317	0.087598	0.00093	0.09642	0.474954	0.871	0.853	0.999	0.984	0.951	0.999	0.943	0.872
rs12445982	7.2406E-09	-0.029733	0.00514	-0.029833	0.007784	1.31981E-08	0.54792	0.560827	0.007048	0.003749	0.000363	0.00044	0.3687	0.110156	0.812	0.81	0.983	0.994	0.994	0.999	0.834	0.482
rs1535937	7.2441E-09	0.0334594	0.00578	0.0322584	0.01033	1.32043E-08	0.03042	0.113848	0.006564	0.249494	0.179749	2.2E-06	0.03623	0.046888	0.387	0.881	0.972	0.688	0.87	1	0.943	0.916
rs10959633	7.2611E-09	-0.03908	0.00676	-0.041856	0.008909	1.32346E-08	0.1554	0.81071	0.000841	0.079003	0.0291	0.00683	0.03388	0.001674	0.924	0.801	0.999	0.949	0.976	0.99	0.968	0.978
rs34268709	7.266E-09	0.029981	0.00518	0.0285691	0.007203	1.32433E-08	0.46245	0.143921	0.0003	0.00274	0.021297	0.00105	0.58307	0.123642	0.603	0.868	0.999	0.994	0.962	0.997	0.747	0.45
rs1555687	7.2672E-09	0.0334553	0.00578	0.0323106	0.010202	1.32454E-08	0.03453	0.123401	0.006705	0.252305	0.173341	2.2E-06	0.03623	0.046928	0.396	0.879	0.972	0.687	0.873	1	0.943	0.916
rs9394174	7.2723E-09	0.033455	0.00578	0.0322373	0.010439	1.32545E-08	0.02817	0.113419	0.006794	0.253285	0.175921	2.1E-06	0.03614	0.045136	0.38	0.881	0.97	0.681	0.87	1	0.942	0.916
rs174533	7.2771E-09	0.0295008	0.0051	0.0315259	0.008951	1.29329E-08	0.13573	0.292368	0.013053	0.166216	1.05E-05	8.8E-05	0.29662	0.41315	0.892	0.615	0.958	0.824	0.998	0.999	0.858	0.838
rs3008861	7.2821E-09	0.0308919	0.00534	0.0308919	0.005341	1.3272E-08	0.63993	0.565904	0.002846	0.17894	0.054007	1.2E-05	0.23099	0.145071	0.709	0.827	0.994	0.83	0.951	1	0.885	0.9
rs174546	7.2848E-09	0.0295045	0.0051	0.0316558	0.008932	1.30447E-08	0.12093	0.286916	0.014154	0.165681	1.27E-05	8.5E-05	0.28834	0.368754	0.897	0.615	0.954	0.826	0.998	0.999	0.862	0.847
rs6873352	7.2867E-09	0.0293226	0.00507	0.0293226	0.005069	1.32801E-08	0.12184	0.293062	0.004024	0.00489	0.087053	0.00031	0.79832	0.324735	0.913	0.882	0.994	0.994	0.944	1	0.677	0.878
rs6485763	7.2931E-09	0.0301878	0.00522	0.0301878	0.005219	1.32915E-08	0.84934	0.190219	0.000121	0.000253	0.888616	0.00615	0.13234	0.960071	0.749	0.863	1	0.999	0.543	0.978	0.896	0.722
rs78531070	7.2993E-09	0.0612672	0.01059	0.0612672	0.010593	1.33026E-08	0.10302	0.856969	1.98E-05	0.398306	0.097297	0.00156	0.04932	0.372748	0.9	0.727	1	0.622	0.925	0.996	0.942	0.844
rs1921115	7.3049E-09	0.029681	0.00513	0.0314666	0.007381	1.33125E-08	0.6913	0.626027	0.000243	0.004631	0.004416	0.02854	0.20821	0.005936	0.728	0.718	0.999	0.994	0.987	0.904	0.898	0.965
rs34513909	7.3151E-09	-0.029329	0.00507	-0.029329	0.005071	1.33306E-08	0.98903	0.189941	0.000653	0.028976	0.166115	0.0014	0.03272	0.425265	0.809	0.91	0.999	0.978	0.926	0.998	0.965	0.878
rs55796551	7.3157E-09	0.0335717	0.0058	0.0329802	0.008255	1.33318E-08	0.16555	0.065647	0.000292	0.18637	0.00493	0.00033	0.13072	0.485458	0.877	0.475	0.999	0.791	0.983	0.999	0.903	0.814
rs75314634	7.3175E-09	0.0586389	0.01014	0.06213	0.014531	1.3335E-08	0.12724	0.171728	0.008525	0.028918	0.002925	0.00062	0.0775	0.038837	0.598	0.907	0.986	0.976	0.99	0.999	0.944	0.945
rs34479500	7.3185E-09	-0.031399	0.00543	-0.031399	0.005429	1.33368E-08	0.42508	0.646506	0.006798	0.012952	0.50215	2.5E-05	0.02803	0.741276	0.847	0.816	0.986	0.985	0.794	1	0.957	0.715
rs11172250	7.3341E-09	-0.029326	0.00507	-0.029326	0.005071	1.33645E-08	0.99133	0.190522	0.000652	0.029125	0.165865	0.0014	0.03276	0.425283	0.809	0.91	0.999	0.978	0.926	0.998	0.965	0.878
rs111959130	7.3356E-09	-0.053004	0.00917	-0.053004	0.009165	1.33671E-08	0.46754	0.12398	0.00088	0.007851	0.139894	0.00517	0.07057	0.397618	0.884	0.929	0.999	0.993	0.94	0.993	0.956	0.892
rs78738128	7.3369E-09	0.0514237	0.00889	0.0514237	0.008892	1.33694E-08	0.02841	0.020144	0.00069	0.053586	0.032858	0.00229	0.97344	0.316587	0.949	0.953	0.999	0.962	0.971	0.997	0.751	0.894
rs62302698	7.3382E-09	0.038565	0.00667	0.038565	0.006669	1.33716E-08	0.11588	0.748199	0.018192	0.004868	0.001941	0.00121	0.43232	0.178314	0.928	0.847	0.972	0.995	0.992	0.998	0.875	0.919
rs34673526	7.3395E-09	-0.029214	0.00505	-0.030077	0.006602	1.25635E-08	0.0275	0.369092	0.076617	0.000507	0.016984	6.2E-05	0.9267	0.96424	0.925	0.821	0.665	0.998	0.969	1	0.603	0.703
rs7638707	7.3395E-09	-0.029212	0.00505	-0.029817	0.005875	1.24135E-08	0.06733	0.694996	0.080654	0.000212	0.012254	0.00013	0.64366	0.989262	0.906	0.772	0.676	0.999	0.975	1	0.736	0.711
rs10519649	7.3405E-09	0.0368129	0.00637	0.0327744	0.009198	1.33757E-08	0.32737	0.433466	4.7E-06	0.158335	0.978996	0.00021	0.02275	0.490927	0.756	0.493	1	0.699	0.442	0.999	0.927	0.484
rs139210191	7.3405E-09	-0.036851	0.00637	-0.038172	0.007849	1.33758E-08	0.99975	0.267555	0.003633	0.070411	0.334059	0.0007	0.00054	0.030738	0.812	0.9	0.995	0.95	0.88	0.999	0.991	0.953
rs35229997	7.3449E-09	0.0340787	0.00589	0.0345674	0.009108	1.33837E-08	0.38654	0.012994	0.000328	0.138347	0.737299	0.00033	0.14211	0.004869	0.643	0.944	0.999	0.858	0.708	0.999	0.908	0.962
rs1781021	7.3521E-09	-0.029076	0.00503	-0.029076	0.005028	1.33963E-08	0.54812	0.175277	0.000263	0.150162	0.400672	0.00095	0.00183	0.656943	0.846	0.901	1	0.874	0.843	0.998	0.986	0.829
rs283992	7.3598E-09	-0.033249	0.00575	-0.033249	0.00575	1.34101E-08	0.81471	0.667014	0.000765	0.002709	0.313298	0.00197	0.24341	0.104992	0.821	0.839	0.999	0.996	0.876	0.997	0.9	0.923
rs1987628	7.3657E-09	-0.029478	0.0051	-0.029478	0.005098	1.34115E-08	0.61802	0.095284	0.018115	0.101932	0.016087	3E-06	0.36184	0.668105	0.819	0.908	0.949	0.897	0.974	1	0.851	0.699
rs76687611	7.3694E-09	0.058411	0.0101	0.058411	0.010102	1.25739E-08	0.72526	0.128807	0.122189	0.001252	0.24354	3.1E-05	0.15898	0.043464	0.784	0.895	0.591	0.997	0.859	1	0.899	0.933
rs13142663	7.3754E-09	-0.03424	0.00592	-0.034741	0.007135	1.34378E-08	0.95961	0.944791	0.004358	0.085948	0.350606	0.00015	0.00084	0.038465	0.797	0.8	0.993	0.929	0.861	1	0.989	0.943
rs12479064	7.3814E-09	0.0385883	0.00667	0.033006	0.011732	3.06786E-09	0.99691	0.036787	0.00045	0.805088	0.191453	6.7E-08	0.93203	0.577924	0.518	0.855	0.995	0.041	0.741	1	0.376	0.619
rs61104737	7.3883E-09	0.0368026	0.00637	0.0327315	0.009219	1.34608E-08	0.32507	0.433075	4.64E-06	0.159107	0.975428	0.00021	0.02275	0.489181	0.756	0.492	1	0.697	0.439	0.999	0.927	0.482
rs2702548	7.391E-09	-0.029713	0.00514	-0.029713	0.005139	1.34655E-08	0.03768	0.165235	0.001977	0.007492	0.583151	0.00063	0.38353	0.352966	0.943	0.911	0.997	0.992	0.807	0.999	0.874	0.883
rs17640666	7.4069E-09	0.0385507	0.00667	0.0385507	0.006668	1.34938E-08	0.12121	0.748138	0.018221	0.004816	0.00194	0.00121	0.43278	0.178286	0.927	0.847	0.972	0.995	0.992	0.998	0.875	0.919
rs4404585	7.4072E-09	0.038551	0.00667	0.038551	0.006668	1.34944E-08	0.12123	0.748202	0.018193	0.004821	0.001941	0.00121	0.43233	0.178315	0.927	0.847	0.972	0.995	0.992	0.998	0.875	0.919

Table S3

rs201832519	7.408E-09	0.0385505	0.00667	0.0385505	0.006668	1.34958E-08	0.12121	0.748138	0.018221	0.004816	0.00194	0.00121	0.43278	0.178286	0.927	0.847	0.972	0.995	0.992	0.998	0.875	0.919
rs572062425	7.408E-09	0.0385505	0.00667	0.0385505	0.006668	1.34958E-08	0.12121	0.748138	0.018221	0.004816	0.00194	0.00121	0.43278	0.178286	0.927	0.847	0.972	0.995	0.992	0.998	0.875	0.919
rs11788082	7.4167E-09	-0.039056	0.00676	-0.041478	0.008742	1.35112E-08	0.1573	0.76238	0.000754	0.089598	0.028749	0.00612	0.03371	0.002199	0.923	0.792	0.999	0.941	0.976	0.991	0.968	0.976
rs79667446	7.4226E-09	0.0586007	0.01014	0.0620676	0.014532	1.35217E-08	0.12356	0.174559	0.008396	0.027399	0.003003	0.00065	0.0775	0.039542	0.595	0.906	0.986	0.977	0.99	0.999	0.944	0.944
rs10838753	7.4291E-09	0.0301859	0.00522	0.0301859	0.005222	1.35332E-08	0.80406	0.263279	0.000736	0.000103	0.884049	0.00718	0.02553	0.925354	0.783	0.866	0.999	0.999	0.658	0.98	0.957	0.758
rs10838754	7.4291E-09	0.0301859	0.00522	0.0301859	0.005222	1.35332E-08	0.80406	0.263279	0.000736	0.000103	0.884049	0.00718	0.02553	0.925354	0.783	0.866	0.999	0.999	0.658	0.98	0.957	0.758
rs7190158	7.4322E-09	0.0312129	0.0054	0.0312129	0.005399	1.35387E-08	0.3199	0.461841	0.042011	0.049903	0.012785	4.1E-05	0.1237	0.092818	0.894	0.876	0.91	0.962	0.983	1	0.937	0.935
rs7116320	7.4324E-09	-0.030186	0.00522	-0.030186	0.005222	1.35391E-08	0.80408	0.26329	0.000737	0.000103	0.884099	0.00718	0.02553	0.925369	0.783	0.866	0.999	0.999	0.658	0.98	0.957	0.758
rs11076279	7.4335E-09	-0.031617	0.00547	-0.031617	0.005469	1.35411E-08	0.28369	0.712759	0.00095	0.004103	0.245535	0.01103	0.02325	0.043075	0.904	0.856	0.999	0.996	0.911	0.982	0.972	0.951
rs10838732	7.4338E-09	0.0301707	0.00522	0.0301707	0.005219	1.35417E-08	0.82361	0.190286	0.000121	0.00027	0.885654	0.00616	0.13246	0.959794	0.754	0.864	1	0.999	0.543	0.978	0.897	0.723
rs10959622	7.4349E-09	-0.03908	0.00676	-0.041626	0.008782	1.35436E-08	0.1688	0.815054	0.000861	0.082668	0.029736	0.00626	0.03353	0.001781	0.922	0.801	0.999	0.946	0.975	0.991	0.968	0.978
rs115871595	7.4368E-09	0.0397964	0.00688	0.0397964	0.006884	1.3547E-08	0.59555	0.379604	0.000878	0.228124	0.001456	0.00073	0.15978	0.356259	0.843	0.871	0.999	0.812	0.992	0.999	0.918	0.875
rs12489520	7.4483E-09	-0.055779	0.00965	-0.055779	0.00965	1.35673E-08	0.77716	0.023159	0.009791	0.017849	0.1197	0.00012	0.19756	0.562146	0.839	0.952	0.986	0.986	0.941	1	0.919	0.862
rs72694296	7.4507E-09	-0.039146	0.00677	-0.04122	0.008435	1.35716E-08	0.26118	0.86512	0.000832	0.077915	0.027007	0.00673	0.0248	0.002362	0.908	0.808	0.999	0.949	0.977	0.99	0.972	0.976
rs12498671	7.4534E-09	0.0385464	0.00667	0.0385464	0.006669	1.35764E-08	0.12082	0.747004	0.017837	0.004965	0.001918	0.00125	0.42744	0.176779	0.927	0.848	0.972	0.995	0.992	0.998	0.876	0.919
rs12510295	7.4534E-09	0.0385445	0.00667	0.0385445	0.006668	1.35765E-08	0.12123	0.748176	0.018198	0.004862	0.00194	0.00121	0.43245	0.178303	0.927	0.847	0.972	0.995	0.992	0.998	0.875	0.919
rs935151026	7.4561E-09	0.0703438	0.01217	0.0675428	0.016539	8.28716E-09	0.04907	0.367175	9.34E-05	0.826066	0.568756	5.1E-06	0.16589	0.782976	0.884	0.745	1	0.096	0.579	1	0.823	0.633
rs72787060	7.4615E-09	0.041431	0.00717	0.041431	0.007168	1.35908E-08	0.12207	0.207823	0.002817	0.230719	0.019471	0.00033	0.01023	0.998792	0.919	0.902	0.996	0.819	0.977	0.999	0.977	0.792
rs4658171	7.4837E-09	0.0292015	0.00505	0.0309993	0.007316	7.00411E-09	0.29884	0.069331	2.42E-06	0.002653	0.514831	0.16167	0.39446	0.022264	0.802	0.888	1	0.993	0.619	0.253	0.738	0.931
rs184449764	7.4912E-09	-0.100613	0.01741	-0.100613	0.017409	1.36436E-08	0.02584	0.835514	4.01E-05	0.078617	0.822019	0.00137	0.02497	0.968685	0.933	0.78	1	0.918	0.677	0.997	0.958	0.749
rs3814881	7.4989E-09	-0.029701	0.00514	-0.029871	0.007732	1.36573E-08	0.53787	0.56238	0.00669	0.004745	0.000333	0.00046	0.34178	0.114327	0.815	0.812	0.984	0.993	0.994	0.999	0.844	0.489
rs34855001	7.499E-09	-0.030183	0.00522	-0.030516	0.007059	1.36575E-08	0.85227	0.859926	0.01464	0.000359	0.002859	0.00054	0.16782	0.223799	0.766	0.766	0.957	0.999	0.987	0.999	0.894	0.549
rs77245699	7.501E-09	0.0705863	0.01221	0.0695464	0.016983	1.3661E-08	0.75582	0.581762	0.000288	0.285761	9.18E-05	0.00034	0.54783	0.652507	0.74	0.628	0.999	0.664	0.996	0.999	0.748	0.753
rs59357103	7.5035E-09	0.049467	0.00856	0.049467	0.008559	1.36654E-08	0.15811	0.497633	0.018735	0.043259	0.008637	6.7E-06	0.69436	0.5425	0.889	0.83	0.947	0.954	0.98	1	0.609	0.822
rs2099835	7.506E-09	0.0385391	0.00667	0.0385391	0.006669	1.36699E-08	0.12093	0.74707	0.017815	0.004994	0.001919	0.00125	0.42716	0.176812	0.927	0.848	0.972	0.995	0.992	0.998	0.876	0.919
rs11932202	7.5151E-09	-0.036835	0.00637	-0.038164	0.007863	1.36861E-08	0.99331	0.270458	0.003634	0.070831	0.333	0.00071	0.00054	0.030583	0.811	0.899	0.995	0.949	0.881	0.999	0.991	0.953
rs12127544	7.5257E-09	0.0291609	0.00505	0.0291609	0.005046	1.20585E-08	0.14838	0.542538	6.46E-07	0.026126	0.391144	0.03557	0.26824	0.589045	0.891	0.823	1	0.966	0.817	0.86	0.868	0.813
rs775322	7.5369E-09	-0.029305	0.00507	-0.029305	0.005071	1.37249E-08	0.98801	0.189049	0.000661	0.029122	0.166163	0.00141	0.03289	0.42593	0.809	0.91	0.999	0.978	0.926	0.998	0.965	0.878
rs145245126	7.539E-09	-0.100347	0.01737	-0.100347	0.017366	1.37285E-08	0.01522	0.591873	7.32E-05	0.081817	0.717973	0.00104	0.05371	0.968078	0.945	0.826	1	0.921	0.728	0.998	0.945	0.763
rs6581328	7.54E-09	-0.029314	0.00507	-0.03574	0.009319	1.14341E-08	0.06221	0.169238	0.023098	0.172902	0.000924	0.00053	0.00026	0.511106	0.93	0.903	0.932	0.841	0.994	0.995	0.993	0.686
rs4788209	7.5472E-09	-0.029695	0.00514	-0.029876	0.007726	1.37431E-08	0.53466	0.562311	0.006674	0.004759	0.000331	0.00047	0.3415	0.114929	0.816	0.812	0.984	0.993	0.994	0.999	0.844	0.49
rs11150579	7.5515E-09	-0.029695	0.00514	-0.02986	0.007733	1.37508E-08	0.54023	0.561717	0.006686	0.004803	0.000332	0.00046	0.34184	0.114072	0.815	0.812	0.984	0.993	0.994	0.999	0.844	0.489
rs12124156	7.5584E-09	0.029157	0.00505	0.029157	0.005046	1.21104E-08	0.14849	0.542737	6.47E-07	0.026128	0.391457	0.03558	0.26884	0.588721	0.891	0.823	1	0.966	0.816	0.86	0.868	0.813
rs7641050	7.5588E-09	-0.034865	0.00603	-0.034886	0.006193	1.37638E-08	0.71868	0.039186	0.045636	0.00209	0.044288	2E-05	0.50062	0.990039	0.702	0.924	0.841	0.996	0.952	1	0.801	0.736
rs4457429	7.5659E-09	-0.039059	0.00676	-0.041613	0.008784	1.37763E-08	0.16959	0.816497	0.000871	0.082406	0.029674	0.00633	0.03346	0.001776	0.922	0.802	0.999	0.946	0.975	0.991	0.968	0.978
rs599197	7.5823E-09	-0.030186	0.00522	-0.02972	0.006038	1.0779E-08	0.95714	0.33186	0.008254	0.564069	0.14705	4.4E-07	0.18165	0.053943	0.701	0.817	0.954	0.42	0.876	1	0.864	0.907
rs9508156	7.5901E-09	-0.02931	0.00507	-0.02931	0.005073	1.38194E-08	0.48281	0.534206	0.000658	0.024014	0.853366	0.0002	0.15118	0.179634	0.844	0.837	0.999	0.976	0.695	1	0.912	0.896
rs7522204	7.5962E-09	0.030169	0.00522	0.0314813	0.007923	1.38302E-08	0.23528	0.059714	0.000599	0.00045	0.042238	0.0188	0.1267	0.054667	0.883	0.514	0.999	0.999	0.96	0.94	0.92	0.932
rs2893929	7.6042E-09	-0.037063	0.00642	-0.037063	0.006416	1.38443E-08	0.87836	0.23577	0.000929	0.004021	0.139604	0.01693	0.06775	0.004638	0.838	0.911	0.999	0.996	0.94	0.968	0.956	0.973
rs905559	7.608E-09	-0.029141	0.00504	-0.03608	0.009615	1.03284E-08	0.08288	0.152221	0.017921	0.18308	0.005132	0.00068	2.1E-05	0.560627	0.925	0.908	0.952	0.84	0.987	0.995	0.996	0.703
rs3814880	7.6274E-09	-0.029686	0.00514	-0.02986	0.007727	1.38855E-08	0.54135	0.562295	0.00667	0.004799	0.00033	0.00046	0.34152	0.115091	0.815	0.812	0.984	0.993	0.994	0.999	0.844	0.49
rs17497947	7.6354E-09	-0.030849	0.00534	-0.030849	0.005341	1.38998E-08	0.63577	0.52674	0.002934	0.183772	0.053128	1.3E-05	0.22433	0.143416	0.709	0.833	0.994	0.827	0.952	1	0.887	0.9
rs4788210	7.6362E-09	-0.029684	0.00514	-0.029858	0.007726	1.39013E-08	0.54025	0.562311	0.006673	0.004794	0.000331	0.00047	0.34151	0.114929	0.815	0.812	0.984	0.993	0.994	0.999	0.844	0.49
rs9924686	7.6384E-09	-0.029684	0.00514	-0.029854	0.00773	1.39052E-08	0.54016	0.562689	0.006687	0.004793	0.000332	0.00046	0.3417	0.114461	0.815	0.812	0.984	0.993	0.994	0.999	0.844	0.49
rs292993	7.6394E-09	0.0402177	0.00696	0.0402177	0.006963	1.39069E-08	0.1479	0.6867	0.00207	0.030727	0.249958	0.00101	0.08182	0.027994	0.925	0.86	0.998	0.979	0.911	0.999	0.952	0.957
rs11150580	7.6436E-09	-0.029683	0.00514	-0.029857	0.007726	1.39143E-08	0.54029	0.562309	0.006674	0.004797	0.000331	0.00047	0.34151	0.11493	0.815	0.812	0.984	0.993	0.994	0.999	0.844	0.49
rs6732347	7.6442E-09	0.0585654	0.01014	0.0620565	0.014544	1.39155E-08	0.12332	0.175373	0.008796	0.026778	0.003	0.00064	0.07793	0.039695	0.596	0.906	0.985	0.978	0.99	0.999	0.944	0.944
rs5824984	7.6455E-09	0.0291823	0.00505	0.0291823	0.005052	1.39178E-08	0.08558	0.498517	0.001782	0.002214	0.197074	0.00049	0.80333	0.059685	0.909	0.673	0.997	0.996	0.889	0.999	0.638	0.923
rs55976793	7.6509E-09	0.0292684	0.00507	0.0292684	0.005067	1.39273E-08	0.18353	0.284542	0.001849	0.052244	0.346271	0.00121	0.00209	0.375558	0.917	0.902	0.998	0.965	0.884	0.999	0.987	0.891
rs76762651	7.6523E-09	0.0585602	0.01014	0.0620379	0.014518	1.39299E-08	0.12725	0.173202	0.008603	0.029174	0.00295	0.00063	0.07761	0.038963	0.598	0.906	0.986	0.976	0.99	0.999	0.944	0.945
rs7116346	7.6595E-09	-0.03015	0.00522	-0.03015	0.00522	1.39426E-08	0.85012	0.236256	0.000869	9.51E-05	0.847321	0.00663	0.02936	0.947156	0.778	0.872	0.998	0.999	0.673	0.982	0.955	0.756
rs4732125	7.6697E-09	-0.033723	0.00584	-0.043156	0.011326	1.68095E-09	0.85648	0.049249	0.018791	1.13E-05	4.13E-05	0.09334	0.27797	0.250751	0.535	0.884	0.446	1	0.999	0.278	0.652	0.741
rs16971436	7.6714E-09	0.0637448	0.01104	0.0603394	0.017433	6.02047E-09	0.05358	0.631018	5.01E-05	0.602301	0.19969	8.7E-06	0.07339	0.833221	0.883	0.698	1	0.034	0.804	1	0.896	0.636
rs16926680	7.675E-09	-0.056773	0.00983	-0.056773	0.00983	1.39702E-08	0.35591	0.024889	0.015964	0.003916	0.025234	0.00323	0.24477	0.048736	0.905	0.958	0.979	0.996	0.98	0.996	0.923	0.955
rs12921996	7.6855E-09	-0.029678	0.00514	-0.029851	0.007725	1.39887E-08	0.541	0.562311	0.006674	0.004825	0.000331	0.00047	0.34151	0.114929	0.815	0.812	0.984	0.993	0.994	0.999	0.844	0.49

Table S3

rs71480061	7.6864E-09	-0.057115	0.00989	-0.057115	0.00989	1.39904E-08	0.3245	0.01547	0.01301	0.002969	0.020804	0.00544	0.25479	0.071064	0.909	0.963	0.984	0.997	0.981	0.994	0.922	0.949
rs320465	7.6915E-09	0.0365313	0.00633	0.0358827	0.007945	1.39994E-08	0.00518	0.361683	0.000161	0.00545	0.886703	0.0011	0.68318	0.41605	0.948	0.829	1	0.991	0.617	0.997	0.558	0.819
rs138990730	7.6983E-09	-0.100618	0.01742	-0.100618	0.017423	1.40115E-08	0.02687	0.878154	6.58E-05	0.074523	0.620866	0.00128	0.02985	0.997485	0.936	0.786	1	0.929	0.758	0.998	0.957	0.758
rs72694290	7.7035E-09	-0.039107	0.00677	-0.041213	0.008455	1.40207E-08	0.2529	0.867066	0.00084	0.080097	0.02705	0.00677	0.02494	0.002358	0.909	0.808	0.999	0.948	0.977	0.99	0.972	0.976
rs140330350	7.7039E-09	0.0762396	0.0132	0.0762396	0.013202	1.40215E-08	0.65397	0.297826	5E-05	0.025542	0.196203	0.00317	0.03314	0.407228	0.82	0.652	1	0.975	0.898	0.994	0.955	0.854
rs12065365	7.713E-09	-0.029671	0.00514	-0.029671	0.005138	1.40377E-08	0.32222	0.029228	0.024228	0.07093	0.022428	2.5E-05	0.15988	0.983077	0.888	0.947	0.951	0.945	0.976	1	0.924	0.795
rs11753738	7.7181E-09	-0.03212	0.00556	-0.03212	0.005562	1.40466E-08	0.99703	0.132193	0.000111	0.04515	0.203514	0.00175	0.3472	0.173729	0.801	0.915	1	0.964	0.91	0.997	0.879	0.91
rs187359443	7.7214E-09	0.0652154	0.01129	0.0609481	0.015748	9.37472E-09	0.29012	0.191054	0.000183	0.890936	0.901631	2.1E-06	0.06363	0.468318	0.752	0.786	0.999	0.122	0.332	1	0.884	0.696
rs28538552	7.7277E-09	-0.033188	0.00575	-0.033188	0.005748	1.40637E-08	0.94257	0.176831	0.000208	0.098578	0.043773	0.00071	0.59652	0.155864	0.783	0.901	1	0.92	0.961	0.999	0.819	0.909
rs7756968	7.7336E-09	-0.037043	0.00642	-0.037043	0.006415	1.40741E-08	0.87874	0.235747	0.00093	0.004116	0.139576	0.01691	0.06774	0.004638	0.838	0.911	0.999	0.996	0.94	0.968	0.956	0.973
rs10865953	7.7336E-09	-0.034709	0.00601	-0.034709	0.006011	1.40341E-08	0.84774	0.044381	0.056093	0.00163	0.047679	2E-05	0.49283	0.971326	0.718	0.92	0.798	0.996	0.949	1	0.798	0.737
rs2893930	7.7453E-09	-0.037042	0.00642	-0.037042	0.006415	1.40949E-08	0.8788	0.23577	0.000929	0.004118	0.139604	0.01693	0.06775	0.004638	0.838	0.911	0.999	0.996	0.94	0.968	0.956	0.973
rs4140646	7.7453E-09	-0.037042	0.00642	-0.037042	0.006415	1.40949E-08	0.8788	0.23577	0.000929	0.004118	0.139604	0.01693	0.06775	0.004638	0.838	0.911	0.999	0.996	0.94	0.968	0.956	0.973
rs12564979	7.763E-09	0.0301513	0.00522	0.0314671	0.007915	1.41264E-08	0.23103	0.059716	0.000599	0.000471	0.042238	0.0188	0.12671	0.054665	0.884	0.514	0.999	0.999	0.96	0.94	0.92	0.932
rs7619073	7.7684E-09	-0.035434	0.00614	-0.035434	0.006137	1.4086E-08	0.85842	0.064289	0.064376	0.001506	0.033919	3E-05	0.3701	0.845288	0.726	0.914	0.775	0.997	0.96	1	0.835	0.764
rs6435671	7.7716E-09	0.0339645	0.00588	0.0351747	0.00785	1.00764E-08	0.53665	0.823972	0.103871	0.094023	0.005444	2.2E-06	0.07978	0.054255	0.782	0.667	0.558	0.821	0.983	1	0.916	0.915
rs11154195	7.772E-09	0.0299703	0.00519	0.0299703	0.005191	1.41423E-08	0.87995	0.568543	0.00143	0.011685	0.00672	0.00287	0.11361	0.589541	0.823	0.86	0.998	0.99	0.986	0.996	0.937	0.855
rs158956	7.7745E-09	0.0401861	0.00696	0.0401861	0.006961	1.41469E-08	0.13017	0.693207	0.00206	0.029739	0.250006	0.00111	0.08306	0.027858	0.928	0.859	0.998	0.98	0.912	0.999	0.952	0.957
rs60059960	7.7747E-09	0.0585272	0.01014	0.06199	0.014501	1.41471E-08	0.12615	0.174961	0.00876	0.027816	0.002994	0.00064	0.07782	0.039641	0.598	0.906	0.986	0.977	0.99	0.999	0.944	0.944
rs2290851	7.7995E-09	-0.030134	0.00522	-0.030134	0.00522	1.41912E-08	0.80527	0.21727	0.000813	9.52E-05	0.878079	0.00751	0.02684	0.947378	0.784	0.875	0.998	0.999	0.662	0.979	0.956	0.756
rs7123952	7.8042E-09	0.0301365	0.00522	0.0301365	0.005221	1.41996E-08	0.81112	0.218841	0.000782	0.0001	0.88597	0.00737	0.02676	0.954702	0.782	0.874	0.998	0.999	0.658	0.979	0.956	0.753
rs10838775	7.8056E-09	0.0301364	0.00522	0.0301364	0.005221	1.4202E-08	0.81112	0.218841	0.000782	0.0001	0.885978	0.00737	0.02676	0.954702	0.782	0.874	0.998	0.999	0.658	0.979	0.956	0.753
rs599610	7.8085E-09	-0.030161	0.00522	-0.029683	0.006067	1.10001E-08	0.9438	0.33186	0.008254	0.576195	0.14705	4.4E-07	0.18165	0.053943	0.702	0.816	0.953	0.41	0.876	1	0.863	0.906
rs11778400	7.815E-09	0.0417365	0.00723	0.0417365	0.00723	1.42187E-08	0.48971	0.648888	0.001109	0.019701	0.089514	0.00096	0.09724	0.484629	0.871	0.853	0.999	0.984	0.95	0.999	0.943	0.871
rs1488627	7.8197E-09	0.0303972	0.00527	0.0300931	0.00755	1.4227E-08	0.52888	0.020114	0.004919	0.02325	0.996446	4.4E-05	0.00424	0.863719	0.654	0.933	0.988	0.971	0.597	1	0.977	0.752
rs292973	7.8244E-09	0.0401881	0.00696	0.0401881	0.006962	1.42354E-08	0.12974	0.68839	0.002109	0.030348	0.246946	0.0011	0.08223	0.027609	0.928	0.86	0.998	0.98	0.912	0.999	0.952	0.957
rs916288	7.8265E-09	0.029978	0.00519	0.0272904	0.009589	5.4312E-09	0.35109	0.014037	0.000666	0.859903	0.049514	6.2E-07	0.15511	0.878364	0.388	0.91	0.995	0.057	0.912	1	0.821	0.516
rs62055611	7.8292E-09	-0.030105	0.00522	-0.030105	0.005216	1.42439E-08	0.88082	0.651806	0.000604	0.239191	0.086288	0.0001	0.03016	0.145771	0.775	0.703	0.999	0.767	0.933	1	0.955	0.896
rs11154197	7.8293E-09	0.030306	0.00525	0.030306	0.00525	1.42441E-08	0.94546	0.736515	0.00438	0.028708	0.003551	0.00036	0.11542	0.630139	0.79	0.831	0.994	0.976	0.989	0.999	0.932	0.84
rs159005	7.8294E-09	0.040178	0.00696	0.040178	0.006961	1.42444E-08	0.13009	0.693228	0.002071	0.029722	0.249721	0.00112	0.08283	0.027813	0.928	0.859	0.998	0.98	0.912	0.999	0.952	0.957
rs4975318	7.8433E-09	0.0367448	0.00637	0.0326687	0.009201	1.42689E-08	0.34646	0.432872	4.71E-06	0.162926	0.979635	0.00021	0.02276	0.492456	0.749	0.491	1	0.691	0.44	0.999	0.927	0.482
rs9465280	7.8606E-09	0.0304797	0.00528	0.0325072	0.008625	6.30895E-09	0.16816	0.977173	0.008877	3.13E-07	0.297143	0.01645	0.90211	0.037755	0.88	0.751	0.945	1	0.835	0.915	0.705	0.93
rs72780259	7.8657E-09	0.0681135	0.0118	0.0681135	0.011802	1.43088E-08	0.49856	0.354706	0.000119	0.036124	0.043197	0.00536	0.77053	0.037398	0.866	0.884	1	0.973	0.965	0.992	0.801	0.947
rs78443056	7.8735E-09	0.0585042	0.01014	0.0619651	0.014499	1.43226E-08	0.12617	0.175542	0.008771	0.027898	0.003001	0.00064	0.07798	0.039509	0.598	0.906	0.986	0.977	0.99	0.999	0.944	0.944
rs4752798	7.8826E-09	-0.030126	0.00522	-0.030126	0.00522	1.43387E-08	0.84724	0.235961	0.000871	1E-04	0.847036	0.00663	0.02938	0.946882	0.779	0.872	0.998	0.999	0.674	0.982	0.955	0.757
rs685341	7.884E-09	0.0298582	0.00517	0.0298582	0.005174	1.43411E-08	0.48443	0.616542	0.000573	0.016046	0.275754	0.00123	0.0379	0.17297	0.86	0.741	0.999	0.985	0.886	0.998	0.959	0.908
rs158971	7.8851E-09	0.0401767	0.00696	0.0401767	0.006962	1.43432E-08	0.14753	0.686914	0.002112	0.030503	0.248628	0.00103	0.08249	0.02811	0.925	0.86	0.998	0.98	0.912	0.999	0.952	0.957
rs61102363	7.8858E-09	-0.02967	0.00514	-0.02907	0.007889	5.76649E-09	0.92315	0.056261	0.017217	0.805923	0.049022	9.7E-08	0.09649	0.529695	0.6	0.878	0.804	0.199	0.92	1	0.877	0.716
rs149603375	7.8948E-09	0.0862941	0.01495	0.0901377	0.018077	1.15429E-08	0.99367	0.135241	0.176142	0.000323	0.027823	0.00015	0.21391	0.049511	0.714	0.885	0.428	0.999	0.963	0.999	0.869	0.924
rs58483157	7.9037E-09	0.0410381	0.00711	0.0410381	0.007112	1.43761E-08	0.33881	0.217114	0.000376	0.026413	0.007917	0.01814	0.01338	0.972666	0.893	0.909	0.999	0.98	0.986	0.964	0.976	0.805
rs7833876	7.9083E-09	0.0294609	0.00511	0.0294609	0.005106	1.43842E-08	0.25133	0.304629	0.001797	0.064726	0.290578	0.00093	0.00285	0.361935	0.906	0.899	0.998	0.956	0.897	0.999	0.986	0.892
rs174551	7.9135E-09	0.0294828	0.00511	0.031637	0.008576	1.43936E-08	0.09879	0.364819	0.015728	0.180227	2.55E-05	7.3E-05	0.29506	0.327277	0.905	0.642	0.949	0.815	0.998	1	0.862	0.857
rs139297614	7.916E-09	0.100989	0.0175	0.100989	0.017502	1.4398E-08	0.39648	0.470181	0.036576	0.000334	0.106993	8.5E-05	0.1533	0.359168	0.845	0.834	0.897	0.999	0.923	1	0.903	0.624
rs28617307	7.9216E-09	-0.030126	0.00522	-0.030126	0.005221	1.4408E-08	0.81114	0.211692	0.000782	0.0001	0.890114	0.00746	0.02673	0.962806	0.782	0.875	0.998	0.999	0.657	0.979	0.956	0.752
rs4752796	7.9216E-09	-0.030126	0.00522	-0.030126	0.005221	1.4408E-08	0.81114	0.211692	0.000782	0.0001	0.890114	0.00746	0.02673	0.962806	0.782	0.875	0.998	0.999	0.657	0.979	0.956	0.752
rs379849	7.9219E-09	0.0401714	0.00696	0.0401714	0.006962	1.44084E-08	0.1482	0.687086	0.002094	0.030454	0.250395	0.00104	0.08272	0.028048	0.924	0.859	0.998	0.98	0.911	0.999	0.951	0.957
rs4831630	7.9396E-09	-0.031505	0.00546	-0.031505	0.00546	1.44399E-08	0.38169	0.014831	0.00147	0.150615	0.01128	0.00051	0.31734	0.734486	0.88	0.955	0.998	0.888	0.982	0.999	0.889	0.834
rs4710894	7.9418E-09	0.0480195	0.00832	0.0562225	0.018584	7.84441E-10	0.00395	0.411778	0.062545	5.76E-07	0.000276	0.01787	0.59203	0.676339	0.952	0.489	0.099	1	0.997	0.133	0.082	0.161
rs2125838	7.9427E-09	0.0301238	0.00522	0.0301238	0.005221	1.44454E-08	0.79716	0.211687	0.000782	0.000103	0.890091	0.00746	0.02673	0.962793	0.785	0.876	0.998	0.999	0.657	0.979	0.956	0.752
rs57117956	7.9475E-09	0.0584851	0.01014	0.0619656	0.014553	1.44539E-08	0.1231	0.175373	0.008796	0.027791	0.003	0.00064	0.07793	0.039695	0.595	0.906	0.985	0.977	0.99	0.999	0.944	0.944
rs79397987	7.9475E-09	0.0584851	0.01014	0.0619656	0.014553	1.44539E-08	0.1231	0.175373	0.008796	0.027791	0.003	0.00064	0.07793	0.039695	0.595	0.906	0.985	0.977	0.99	0.999	0.944	0.944
rs6485775	7.9498E-09	-0.030117	0.00522	-0.030117	0.00522	1.4458E-08	0.79759	0.216057	0.000792	0.000105	0.885392	0.00745	0.02657	0.945923	0.785	0.875	0.998	0.999	0.66	0.979	0.956	0.756
rs7122217	7.9513E-09	-0.030117	0.00522	-0.030117	0.00522	1.44606E-08	0.7976	0.216057	0.000792	0.000105	0.88539	0.00745	0.02657	0.945923	0.785	0.875	0.998	0.999	0.66	0.979	0.956	0.756
rs12421563	7.9516E-09	-0.030117	0.00522	-0.030117	0.00522	1.44611E-08	0.7976	0.216058	0.000792	0.000105	0.885393	0.00745	0.02657	0.945925	0.785	0.875	0.998	0.999	0.66	0.979	0.956	0.756
rs17131160	7.9535E-09	0.0291476	0.00505	0.0308871	0.007223	7.6993E-09	0.29323	0.07121	2.64E-06	0.002888	0.52001	0.15838	0.37324	0.023027	0.806	0.888	1	0.992	0.624	0.268	0.752	0.93

Table S3

rs62086906	7.9545E-09	0.0338866	0.00587	0.0343603	0.009725	1.44662E-08	0.43209	0.011214	0.00026	0.14901	0.98543	0.00028	0.16234	0.003079	0.626	0.941	0.999	0.828	0.598	0.999	0.891	0.964
rs174553	7.9591E-09	0.0294276	0.0051	0.0317382	0.008963	1.40693E-08	0.10942	0.299622	0.01487	0.161627	1.15E-05	1E-04	0.30062	0.361685	0.901	0.623	0.953	0.832	0.998	0.999	0.86	0.85
rs7122182	7.9593E-09	-0.030123	0.00522	-0.030123	0.005221	1.44748E-08	0.80798	0.211745	0.000781	0.000102	0.889514	0.00745	0.02676	0.962404	0.783	0.875	0.998	0.999	0.657	0.979	0.956	0.752
rs7944084	7.9609E-09	0.0301147	0.00522	0.0301147	0.00522	1.44776E-08	0.85362	0.23594	0.000871	0.000101	0.84713	0.00664	0.02939	0.946853	0.778	0.872	0.998	0.999	0.674	0.982	0.955	0.756
rs3117433	7.9666E-09	-0.052875	0.00917	-0.054327	0.011766	1.44877E-08	0.03654	0.959953	0.000574	0.008578	0.911286	0.00333	0.06525	0.0077	0.937	0.786	0.999	0.991	0.621	0.994	0.946	0.96
rs4390145	7.9672E-09	-0.029643	0.00514	-0.029643	0.005138	1.44889E-08	0.32604	0.029154	0.024989	0.068348	0.022576	2.6E-05	0.15916	0.984815	0.888	0.947	0.949	0.947	0.975	1	0.925	0.795
rs12542905	7.9689E-09	0.0382583	0.00663	0.0382583	0.006632	1.44919E-08	0.39804	0.299463	0.001287	0.117183	0.101151	0.00071	0.01749	0.266535	0.887	0.899	0.999	0.922	0.949	0.999	0.974	0.905
rs34617930	7.9694E-09	-0.036982	0.00641	-0.036982	0.00641	1.44927E-08	0.86358	0.245896	0.001048	0.004069	0.130887	0.0173	0.06084	0.00456	0.84	0.91	0.999	0.996	0.943	0.968	0.959	0.973
rs10955125	7.9708E-09	0.0294538	0.00511	0.0294538	0.005105	1.44951E-08	0.25134	0.304847	0.001803	0.065014	0.290335	0.00093	0.00285	0.361746	0.906	0.899	0.998	0.956	0.897	0.999	0.986	0.892
rs10955124	7.9742E-09	0.0294535	0.00511	0.0294535	0.005105	1.45012E-08	0.25134	0.304847	0.001803	0.065006	0.290377	0.00093	0.00285	0.361753	0.906	0.899	0.998	0.956	0.897	0.999	0.986	0.892
rs9524020	7.9748E-09	0.0339173	0.00588	0.0339173	0.005879	1.45023E-08	0.79643	0.022797	0.00229	0.071324	0.048222	0.00341	0.00639	0.173711	0.854	0.957	0.998	0.957	0.97	0.996	0.984	0.927
rs1328500	7.9757E-09	0.0325327	0.00564	0.0325327	0.005639	1.4504E-08	0.31526	0.08077	0.001993	0.018345	0.149287	0.00089	0.7101	0.050017	0.896	0.934	0.998	0.986	0.934	0.999	0.821	0.947
rs7948468	7.9788E-09	-0.030119	0.00522	-0.030119	0.005221	1.45094E-08	0.81013	0.212906	0.000789	9.88E-05	0.890239	0.00751	0.0265	0.963879	0.782	0.875	0.998	0.999	0.657	0.979	0.956	0.752
rs437788	7.982E-09	0.0401614	0.00696	0.0401614	0.006962	1.45151E-08	0.14422	0.687349	0.002107	0.030551	0.248877	0.00105	0.08259	0.028048	0.925	0.86	0.998	0.98	0.912	0.999	0.952	0.957
rs9350111	7.9836E-09	0.0304663	0.00528	0.0325511	0.008633	6.34317E-09	0.16835	0.974485	0.008875	3.14E-07	0.290256	0.01723	0.89403	0.036722	0.88	0.751	0.943	1	0.836	0.911	0.706	0.931
rs79951662	7.9855E-09	0.0584845	0.01014	0.0619426	0.014502	1.45212E-08	0.12724	0.174783	0.008668	0.029416	0.00298	0.00064	0.07791	0.039078	0.599	0.906	0.986	0.976	0.99	0.999	0.944	0.944
rs55646428	7.9931E-09	-0.03154	0.00547	-0.03154	0.005468	1.45348E-08	0.28178	0.716478	0.000963	0.004206	0.249095	0.01138	0.02322	0.041708	0.905	0.855	0.999	0.996	0.91	0.982	0.972	0.952
rs6746063	7.9985E-09	0.0376569	0.00653	0.0422625	0.010098	9.98736E-09	0.56252	0.939244	0.139012	0.058999	0.000941	2.1E-05	0.04908	0.014449	0.788	0.72	0.469	0.889	0.993	1	0.941	0.95
rs10838766	7.9995E-09	-0.030117	0.00522	-0.030117	0.005221	1.45462E-08	0.79781	0.211692	0.000782	0.000104	0.890105	0.00746	0.02673	0.962806	0.784	0.876	0.998	0.999	0.657	0.979	0.956	0.752
rs148668568	7.9999E-09	0.0926845	0.01607	0.0926873	0.016393	1.45469E-08	0.45234	0.635055	0.000343	0.038621	0.005877	0.00129	0.99296	0.032916	0.678	0.816	0.999	0.963	0.984	0.998	0.705	0.936
rs4616929	8E-09	-0.031994	0.00555	-0.031241	0.006644	1.4547E-08	0.92347	0.22941	0.000165	0.000475	0.850997	0.00202	0.04601	0.678709	0.706	0.521	1	0.998	0.594	0.993	0.928	0.743
rs9366279	8.0047E-09	0.0304654	0.00528	0.0325155	0.008608	6.46756E-09	0.16832	0.972534	0.008932	3.25E-07	0.294568	0.01668	0.89679	0.037352	0.881	0.752	0.945	1	0.836	0.914	0.707	0.931
rs7532447	8.007E-09	-0.029639	0.00514	-0.029639	0.005138	1.45594E-08	0.31826	0.029154	0.024989	0.069454	0.022576	2.6E-05	0.15916	0.984816	0.889	0.947	0.949	0.946	0.975	1	0.925	0.795
rs158959	8.0191E-09	0.0401492	0.00696	0.0401492	0.006961	1.45809E-08	0.13046	0.693145	0.002061	0.030732	0.249791	0.00111	0.08299	0.027833	0.928	0.859	0.998	0.979	0.912	0.999	0.952	0.957
rs10838769	8.0211E-09	-0.030115	0.00522	-0.030115	0.005221	1.45845E-08	0.80244	0.211692	0.000782	0.000104	0.890114	0.00746	0.02673	0.962806	0.784	0.876	0.998	0.999	0.657	0.979	0.956	0.752
rs7115228	8.0211E-09	-0.030115	0.00522	-0.030115	0.005221	1.45845E-08	0.80244	0.211692	0.000782	0.000104	0.890114	0.00746	0.02673	0.962806	0.784	0.876	0.998	0.999	0.657	0.979	0.956	0.752
rs7532934	8.0235E-09	-0.029639	0.00514	-0.029639	0.005139	1.45888E-08	0.32234	0.029341	0.024965	0.070853	0.021932	2.6E-05	0.15695	0.993051	0.888	0.947	0.949	0.945	0.976	1	0.925	0.796
rs1476679	8.0237E-09	-0.032482	0.00563	-0.031914	0.007086	1.45891E-08	0.49667	0.207849	4.77E-05	0.413801	0.007511	0.00056	0.08973	0.351525	0.782	0.505	1	0.529	0.977	0.998	0.905	0.811
rs111937633	8.0318E-09	-0.029638	0.00514	-0.029638	0.005139	1.46034E-08	0.32222	0.029341	0.024965	0.070931	0.021932	2.6E-05	0.15695	0.993051	0.888	0.947	0.949	0.945	0.976	1	0.925	0.796
rs35775568	8.0458E-09	-0.036971	0.00641	-0.036971	0.00641	1.46282E-08	0.86245	0.245896	0.001048	0.004127	0.130887	0.0173	0.06084	0.00456	0.84	0.91	0.999	0.996	0.943	0.968	0.959	0.973
rs600627	8.046E-09	-0.030137	0.00523	-0.029692	0.00601	1.14591E-08	0.93912	0.33134	0.008515	0.566233	0.146907	4.7E-07	0.18135	0.053888	0.705	0.817	0.952	0.421	0.877	1	0.864	0.907
rs1001880	8.0463E-09	0.0308284	0.00535	0.0384626	0.009427	7.0847E-09	0.81489	0.039717	0.000215	0.002303	0.198417	0.1946	0.0014	0.007667	0.728	0.928	0.999	0.996	0.851	0.249	0.989	0.963
rs1105023	8.0581E-09	-0.029175	0.00506	-0.027832	0.00738	1.46501E-08	0.18743	0.037025	0.000912	0.061215	0.695073	5.1E-05	0.00913	0.931198	0.53	0.914	0.998	0.921	0.679	1	0.966	0.696
rs11039414	8.0624E-09	0.0301089	0.00522	0.0301089	0.005221	1.46576E-08	0.81122	0.2129	0.000789	0.0001	0.890216	0.00751	0.0265	0.963866	0.782	0.875	0.998	0.999	0.657	0.979	0.956	0.752
rs6279	8.0676E-09	-0.031222	0.00541	-0.031222	0.005414	1.4667E-08	0.64391	0.034374	0.002467	0.001851	0.821887	0.00149	0.06229	0.10467	0.826	0.937	0.996	0.997	0.587	0.997	0.945	0.918
rs79095603	8.0704E-09	0.0584629	0.01014	0.0619433	0.014558	1.46718E-08	0.12418	0.174808	0.008671	0.029364	0.002978	0.00064	0.07793	0.039081	0.596	0.906	0.986	0.976	0.99	0.999	0.944	0.944
rs9882443	8.0744E-09	-0.03467	0.00601	-0.034676	0.006043	1.46642E-08	0.77084	0.044299	0.053346	0.001649	0.044983	2.2E-05	0.49291	0.972438	0.706	0.92	0.809	0.996	0.951	1	0.799	0.738
rs11251825	8.0748E-09	0.0331405	0.00575	0.0331405	0.005747	1.46796E-08	0.57218	0.008011	0.023703	0.048626	0.091478	0.00023	0.06431	0.049503	0.878	0.968	0.964	0.97	0.956	1	0.96	0.953
rs10790872	8.0766E-09	0.0301321	0.00523	0.0296288	0.006118	1.12572E-08	0.94687	0.331172	0.008205	0.588787	0.146772	4.4E-07	0.18104	0.054012	0.699	0.815	0.953	0.4	0.875	1	0.862	0.906
rs59630497	8.0842E-09	0.0382574	0.00663	0.0382574	0.006634	1.46963E-08	0.40943	0.286233	0.001301	0.115901	0.103483	0.0007	0.01549	0.306834	0.885	0.9	0.998	0.923	0.948	0.999	0.975	0.899
rs35930604	8.0879E-09	0.0552567	0.00958	0.0562788	0.010404	1.47028E-08	0.68804	0.047146	0.018868	0.010105	0.006973	0.00119	0.01035	0.676448	0.771	0.942	0.969	0.991	0.987	0.998	0.979	0.848
rs9468217	8.0909E-09	-0.03699	0.00641	-0.03699	0.006415	1.47083E-08	0.88334	0.235492	0.000946	0.004139	0.13917	0.01725	0.06749	0.004627	0.837	0.911	0.999	0.996	0.94	0.968	0.956	0.973
rs62097939	8.0947E-09	0.0291338	0.00505	0.0291338	0.005052	1.4715E-08	0.08459	0.498631	0.001792	0.002382	0.196994	0.00049	0.80383	0.059573	0.909	0.673	0.997	0.996	0.889	0.999	0.639	0.923
rs12531813	8.1164E-09	-0.033707	0.00585	-0.042875	0.011415	1.81286E-09	0.83984	0.032282	0.021226	8.85E-06	5E-05	0.08203	0.33958	0.350228	0.514	0.897	0.407	1	0.998	0.278	0.583	0.669
rs9524022	8.1183E-09	0.0339007	0.00588	0.0339007	0.005879	1.47569E-08	0.79454	0.022879	0.002307	0.071929	0.048053	0.00342	0.00637	0.173612	0.854	0.957	0.998	0.957	0.97	0.996	0.984	0.927
rs113148293	8.1204E-09	0.0382525	0.00663	0.0382525	0.006634	1.47606E-08	0.40936	0.286653	0.001303	0.115771	0.103574	0.0007	0.01551	0.307294	0.885	0.9	0.998	0.923	0.948	0.999	0.975	0.899
rs10742820	8.1209E-09	-0.030099	0.00522	-0.030099	0.00522	1.47615E-08	0.79445	0.216058	0.000793	0.000109	0.885391	0.00745	0.02657	0.945925	0.786	0.875	0.998	0.999	0.66	0.979	0.956	0.756
rs1563820	8.1219E-09	-0.030103	0.00522	-0.030103	0.005221	1.47632E-08	0.8018	0.212906	0.000789	0.000103	0.890239	0.00751	0.0265	0.963879	0.784	0.875	0.998	0.999	0.657	0.979	0.956	0.752
rs7681616	8.1251E-09	-0.036609	0.00635	-0.037691	0.010354	1.27639E-08	0.45062	0.812828	0.008524	1.49E-05	0.862466	0.0026	0.00123	0.700197	0.811	0.692	0.969	1	0.527	0.989	0.983	0.764
rs141984222	8.1275E-09	0.0290714	0.00504	0.0290714	0.005042	1.47732E-08	0.36128	0.771938	0.001532	0.001466	0.088344	0.00163	0.27756	0.624714	0.872	0.76	0.998	0.997	0.943	0.998	0.888	0.835
rs6818484	8.1294E-09	-0.036604	0.00635	-0.037616	0.01026	1.29127E-08	0.43197	0.787349	0.008801	1.39E-05	0.888331	0.00248	0.00151	0.72393	0.815	0.688	0.969	1	0.538	0.989	0.982	0.761
rs7747471	8.1329E-09	0.0480007	0.00833	0.0561591	0.018478	9.00955E-10	0.00402	0.411688	0.060889	7.22E-07	0.000272	0.01724	0.59468	0.678151	0.951	0.499	0.117	1	0.997	0.156	0.095	0.176
rs112527584	8.1379E-09	-0.029624	0.00514	-0.029624	0.005138	1.47915E-08	0.32211	0.029155	0.024992	0.070064	0.022577	2.6E-05	0.15917	0.984805	0.888	0.947	0.949	0.946	0.975	1	0.924	0.795
rs113460334	8.1379E-09	-0.029624	0.00514	-0.029624	0.005138	1.47915E-08	0.32211	0.029155	0.024992	0.070064	0.022577	2.6E-05	0.15917	0.984805	0.888	0.947	0.949	0.946	0.975	1	0.924	0.795
rs10924462	8.139E-09	-0.029627	0.00514	-0.029627	0.005139	1.47936E-08	0.32221	0.029987	0.025123	0.068477	0.023008	2.5E-05	0.15973	0.985668	0.888	0.946	0.949	0.947	0.975	1	0.924	0.795

Table S3

rs2815354	8.1424E-09	0.0307907	0.00534	0.0307907	0.005341	1.47995E-08	0.63369	0.57523	0.003091	0.175003	0.052854	1.3E-05	0.23666	0.142313	0.709	0.826	0.994	0.835	0.952	1	0.884	0.9
rs7683962	8.1435E-09	-0.036603	0.00635	-0.037611	0.010259	1.29284E-08	0.4312	0.787367	0.008844	1.39E-05	0.887802	0.00247	0.00153	0.725234	0.815	0.688	0.968	1	0.537	0.989	0.982	0.76
rs1468447	8.1463E-09	0.0328777	0.0057	0.032667	0.006313	1.48065E-08	0.33231	0.184602	0.00023	0.044586	0.245459	0.00054	0.68911	0.007679	0.64	0.887	1	0.956	0.876	0.999	0.775	0.957
rs610132	8.1464E-09	0.0381929	0.00662	0.0381929	0.006625	1.48067E-08	0.22269	0.645448	0.012304	0.04682	0.10692	9.3E-05	0.00702	0.687254	0.906	0.854	0.981	0.966	0.945	1	0.98	0.846
rs10484401	8.1515E-09	-0.037021	0.00642	-0.037021	0.006421	1.48158E-08	0.90977	0.234528	0.00095	0.003533	0.131667	0.01781	0.07786	0.005008	0.833	0.911	0.999	0.996	0.942	0.966	0.953	0.972
rs114702133	8.1541E-09	0.070795	0.01228	0.0700579	0.016956	1.48202E-08	0.64531	0.698054	0.000236	0.33148	9.85E-05	0.00046	0.36448	0.963159	0.757	0.649	0.999	0.623	0.996	0.998	0.8	0.696
rs7683364	8.1563E-09	-0.036602	0.00635	-0.037609	0.010257	1.29534E-08	0.4306	0.78748	0.008865	1.39E-05	0.888089	0.00246	0.00153	0.725754	0.815	0.688	0.968	1	0.537	0.989	0.982	0.76
rs7819401	8.1568E-09	0.0382475	0.00663	0.0382475	0.006634	1.48251E-08	0.40932	0.286048	0.001315	0.115481	0.103638	0.0007	0.01553	0.308439	0.885	0.9	0.998	0.923	0.948	0.999	0.975	0.899
rs6844759	8.1576E-09	-0.036599	0.00635	-0.037639	0.010242	1.30608E-08	0.43056	0.790467	0.008569	1.45E-05	0.892366	0.00257	0.00148	0.720835	0.816	0.69	0.97	1	0.54	0.989	0.982	0.762
rs4752792	8.158E-09	-0.030099	0.00522	-0.030099	0.005221	1.48273E-08	0.80244	0.212906	0.000789	0.000104	0.890239	0.00751	0.0265	0.963879	0.784	0.875	0.998	0.999	0.657	0.979	0.956	0.752
rs7819427	8.1617E-09	0.0382468	0.00663	0.0382468	0.006634	1.48338E-08	0.4093	0.286043	0.001313	0.115446	0.10364	0.0007	0.01555	0.308264	0.885	0.9	0.998	0.923	0.948	0.999	0.975	0.899
rs7925211	8.1628E-09	-0.030098	0.00522	-0.030098	0.005221	1.48358E-08	0.79768	0.212915	0.00079	0.000104	0.89016	0.00752	0.02651	0.963891	0.784	0.875	0.998	0.999	0.657	0.979	0.956	0.752
rs11039392	8.1686E-09	0.0300977	0.00522	0.0300977	0.005221	1.48459E-08	0.79756	0.212901	0.000791	0.000104	0.89001	0.00752	0.0265	0.963856	0.785	0.875	0.998	0.999	0.658	0.979	0.956	0.752
rs7101597	8.1686E-09	0.0300977	0.00522	0.0300977	0.005221	1.48459E-08	0.79756	0.212901	0.000791	0.000104	0.89001	0.00752	0.0265	0.963856	0.785	0.875	0.998	0.999	0.658	0.979	0.956	0.752
rs4423749	8.1711E-09	-0.032532	0.00564	-0.032532	0.005643	1.48504E-08	0.47045	0.176349	0.034319	0.041237	0.004018	0.00044	0.0048	0.450824	0.881	0.919	0.935	0.971	0.99	0.999	0.984	0.883
rs12127520	8.1717E-09	0.0290819	0.00504	0.0290819	0.005045	1.29811E-08	0.14737	0.539917	6.51E-07	0.026571	0.389173	0.03724	0.26912	0.591987	0.891	0.822	1	0.965	0.816	0.853	0.867	0.811
rs56066549	8.1737E-09	0.0382455	0.00663	0.0382455	0.006634	1.48551E-08	0.40542	0.288471	0.001325	0.114391	0.10385	0.00071	0.01552	0.304503	0.886	0.9	0.998	0.924	0.948	0.999	0.975	0.9
rs75972606	8.1837E-09	0.054693	0.00949	0.054693	0.009488	1.48728E-08	0.0604	0.415545	0.00019	0.086186	0.208345	0.0006	0.74091	0.256993	0.93	0.867	1	0.931	0.904	0.999	0.794	0.891
rs10838759	8.1861E-09	0.0300958	0.00522	0.0300958	0.005221	1.4877E-08	0.79759	0.212903	0.000791	0.000105	0.890007	0.00753	0.0265	0.963861	0.785	0.875	0.998	0.999	0.658	0.979	0.956	0.752
rs11039373	8.1861E-09	0.0300958	0.00522	0.0300958	0.005221	1.4877E-08	0.79759	0.212903	0.000791	0.000105	0.890007	0.00753	0.0265	0.963861	0.785	0.875	0.998	0.999	0.658	0.979	0.956	0.752
rs2869541	8.1869E-09	-0.030096	0.00522	-0.030096	0.005221	1.48785E-08	0.79762	0.212908	0.000791	0.000105	0.890038	0.00753	0.0265	0.963875	0.785	0.875	0.998	0.999	0.658	0.979	0.956	0.752
rs4732127	8.192E-09	-0.033669	0.00584	-0.043029	0.011275	1.95691E-09	0.91311	0.049808	0.018866	1.44E-05	4.12E-05	0.09098	0.25586	0.241615	0.537	0.886	0.475	1	0.999	0.304	0.684	0.756
rs6495247	8.1953E-09	0.030123	0.00523	0.0295483	0.006058	1.48934E-08	0.02624	0.588887	3.44E-05	0.299293	0.351928	0.00031	0.0737	0.410389	0.919	0.777	1	0.65	0.792	0.999	0.916	0.568
rs1284464	8.2055E-09	-0.029216	0.00507	-0.029216	0.005069	1.49115E-08	0.93106	0.220124	0.000625	0.038763	0.1595	0.00117	0.04054	0.335204	0.801	0.905	0.999	0.971	0.927	0.998	0.961	0.889
rs2683791	8.2067E-09	-0.029301	0.00508	-0.029301	0.005083	1.49137E-08	0.93844	0.981273	0.002866	0.055678	0.004502	0.00066	0.01159	0.616335	0.786	0.793	0.996	0.955	0.987	0.999	0.974	0.84
rs6426267	8.208E-09	-0.029616	0.00514	-0.029616	0.005138	1.49158E-08	0.32198	0.029155	0.024961	0.070911	0.022563	2.6E-05	0.1591	0.984813	0.888	0.947	0.949	0.945	0.975	1	0.924	0.795
rs2722007	8.2089E-09	-0.0293	0.00508	-0.0293	0.005083	1.49176E-08	0.93844	0.981275	0.002867	0.055679	0.004502	0.00066	0.01159	0.616334	0.786	0.793	0.996	0.955	0.987	0.999	0.974	0.84
rs682120	8.217E-09	-0.030119	0.00523	-0.029665	0.006022	1.17081E-08	0.9565	0.331274	0.008522	0.564427	0.147014	4.7E-07	0.18191	0.053964	0.702	0.817	0.952	0.422	0.877	1	0.864	0.907
rs218990	8.2259E-09	0.0307668	0.00534	0.0387092	0.009376	8.05588E-09	0.73692	0.022873	0.000357	0.002523	0.185298	0.17193	0.00139	0.009263	0.761	0.942	0.998	0.996	0.87	0.321	0.989	0.963
rs60495341	8.2278E-09	0.0328516	0.0057	0.0314238	0.007107	1.36046E-08	0.40871	0.638056	4.43E-07	0.021357	0.488558	0.0101	0.89412	0.079276	0.589	0.762	1	0.964	0.736	0.95	0.658	0.89
rs4642489	8.236E-09	-0.03145	0.00546	-0.031298	0.006319	1.49656E-08	0.88102	0.742315	3.3E-05	0.409616	0.005994	0.00131	0.18114	0.060892	0.69	0.668	1	0.554	0.98	0.996	0.873	0.908
rs6426265	8.2453E-09	-0.029612	0.00514	-0.029612	0.005138	1.4982E-08	0.32222	0.029155	0.024993	0.070921	0.022574	2.6E-05	0.15916	0.984811	0.888	0.947	0.949	0.945	0.975	1	0.924	0.795
rs75714073	8.2492E-09	-0.029612	0.00514	-0.029612	0.005138	1.4989E-08	0.32222	0.029155	0.024991	0.07093	0.022577	2.6E-05	0.15917	0.984805	0.888	0.947	0.949	0.945	0.975	1	0.924	0.795
rs12065362	8.2499E-09	-0.029612	0.00514	-0.029612	0.005138	1.49901E-08	0.32222	0.029155	0.024992	0.07093	0.022577	2.6E-05	0.15917	0.984805	0.888	0.947	0.949	0.945	0.975	1	0.924	0.795
rs120069754	8.2521E-09	-0.062694	0.01088	-0.063776	0.013938	1.49941E-08	0.37811	0.77158	0.005741	0.070868	0.01003	0.00017	0.02864	0.025722	0.663	0.747	0.99	0.934	0.981	1	0.961	0.947
rs7520201	8.2544E-09	-0.029611	0.00514	-0.029611	0.005138	1.49982E-08	0.32222	0.029187	0.024998	0.070921	0.022574	2.6E-05	0.15925	0.984809	0.888	0.947	0.949	0.945	0.975	1	0.924	0.795
rs7533411	8.2548E-09	-0.029611	0.00514	-0.029611	0.005138	1.49988E-08	0.32222	0.029187	0.024998	0.070921	0.022574	2.6E-05	0.15925	0.984809	0.888	0.947	0.949	0.945	0.975	1	0.924	0.795
rs7536171	8.2548E-09	-0.029611	0.00514	-0.029611	0.005138	1.49988E-08	0.32222	0.029187	0.024998	0.070921	0.022574	2.6E-05	0.15925	0.984809	0.888	0.947	0.949	0.945	0.975	1	0.924	0.795
rs7118747	8.2559E-09	-0.030083	0.00522	-0.030083	0.00522	1.50009E-08	0.85256	0.235998	0.000879	0.000104	0.847798	0.00668	0.02946	0.94718	0.778	0.872	0.998	0.999	0.674	0.982	0.954	0.757
rs6595606	8.2573E-09	0.038154	0.00662	0.0394117	0.010741	1.50032E-08	0.56204	0.001128	0.009833	0.307263	0.017462	9.2E-06	0.18883	0.673844	0.663	0.964	0.964	0.68	0.971	1	0.886	0.787
rs111581295	8.2662E-09	0.0404706	0.00702	0.0395868	0.008655	1.50191E-08	0.7091	0.747407	0.022367	0.000528	0.266648	1.7E-05	0.9538	0.031951	0.656	0.668	0.909	0.998	0.827	1	0.625	0.92
rs174550	8.2694E-09	0.029394	0.0051	0.0315702	0.008949	1.46187E-08	0.12167	0.285859	0.015396	0.161978	1.24E-05	8.9E-05	0.29369	0.371554	0.897	0.616	0.95	0.83	0.998	0.999	0.86	0.847
rs12068913	8.2702E-09	-0.02961	0.00514	-0.02961	0.005138	1.50261E-08	0.3223	0.029305	0.025012	0.070842	0.02256	2.6E-05	0.15982	0.984646	0.888	0.947	0.949	0.945	0.975	1	0.924	0.795
rs73074830	8.2708E-09	-0.034577	0.006	-0.034577	0.006	1.50272E-08	0.62045	0.119038	0.002829	0.153218	0.056209	6.4E-06	0.60494	0.539662	0.686	0.893	0.994	0.839	0.945	1	0.779	0.814
rs17732791	8.2783E-09	-0.032553	0.00565	-0.036125	0.008769	1.50406E-08	0.00511	0.288841	0.011775	0.004146	0.889871	0.00128	0.00098	0.680951	0.963	0.888	0.978	0.995	0.706	0.998	0.989	0.832
rs2153023	8.2794E-09	-0.029609	0.00514	-0.029609	0.005138	1.50424E-08	0.32429	0.029155	0.024991	0.070944	0.022577	2.6E-05	0.15917	0.984806	0.888	0.947	0.949	0.945	0.975	1	0.924	0.795
rs34187306	8.2907E-09	-0.030111	0.00523	-0.029646	0.006047	1.17237E-08	0.94572	0.331754	0.008492	0.573629	0.146827	4.6E-07	0.18167	0.053907	0.702	0.816	0.952	0.414	0.876	1	0.863	0.906
rs56049603	8.3038E-09	0.0371196	0.00644	0.0369918	0.008207	1.25779E-08	0.55264	0.130223	0.08195	8.98E-05	0.128502	1.9E-05	0.48036	0.96746	0.571	0.85	0.599	0.999	0.866	1	0.727	0.641
rs5792235	8.3069E-09	0.0294258	0.00511	0.0317651	0.008394	1.50912E-08	0.10848	0.456426	0.015251	0.212545	2.62E-05	8.4E-05	0.24871	0.294399	0.903	0.667	0.951	0.788	0.998	1	0.876	0.865
rs2584133	8.3074E-09	-0.030101	0.00522	-0.030101	0.005224	1.50921E-08	0.08049	0.754706	0.001734	0.047489	0.766621	0.00012	0.03037	0.473502	0.92	0.816	0.997	0.958	0.732	1	0.96	0.851
rs10030770	8.3189E-09	-0.036575	0.00635	-0.037598	0.010265	1.3228E-08	0.43439	0.787406	0.008727	1.43E-05	0.886403	0.00254	0.00148	0.720211	0.814	0.688	0.969	1	0.537	0.989	0.982	0.761
rs6426268	8.3246E-09	-0.029604	0.00514	-0.029604	0.005138	1.51225E-08	0.32209	0.029154	0.02499	0.07155	0.022577	2.6E-05	0.15916	0.984813	0.888	0.947	0.949	0.945	0.975	1	0.924	0.795
rs72787056	8.3271E-09	0.0412871	0.00717	0.0412871	0.007166	1.51269E-08	0.1236	0.203501	0.002783	0.235357	0.020855	0.00035	0.01046	0.99828	0.918	0.902	0.996	0.816	0.976	0.999	0.977	0.791
rs184474340	8.3366E-09	0.0644548	0.01119	0.0604263	0.015833	8.7409E-09	0.11653	0.494466	0.000786	0.995992	0.443569	5.6E-07	0.06029	0.996636	0.833	0.715	0.995	0.115	0.648	1	0.895	0.584
rs2584145	8.337E-09	-0.030085	0.00522	-0.030085	0.005222	1.51445E-08	0.09009	0.80172	0.001576	0.048493	0.728085	0.00013	0.03112	0.456621	0.918	0.811	0.998	0.957	0.745	1	0.959	0.854

Table S3

rs34451111	8.3458E-09	0.0339161	0.00589	0.0339161	0.005887	1.51601E-08	0.82352	0.021505	0.002518	0.062334	0.049796	0.0035	0.00688	0.178383	0.852	0.958	0.997	0.963	0.969	0.996	0.983	0.926
rs2922308	8.3465E-09	-0.041587	0.00722	-0.041587	0.007218	1.51614E-08	0.78231	0.21525	0.002494	0.194177	0.012584	0.00016	0.14664	0.252563	0.825	0.9	0.996	0.846	0.981	1	0.925	0.896
rs182451512	8.3535E-09	0.0382068	0.00663	0.0382068	0.006632	1.51737E-08	0.39286	0.302413	0.001337	0.115763	0.102294	0.00072	0.01757	0.266155	0.888	0.899	0.998	0.923	0.948	0.999	0.974	0.906
rs34983219	8.3619E-09	-0.058866	0.01022	-0.058866	0.010218	1.51887E-08	0.30803	0.132773	0.000673	0.003041	0.094238	0.00286	0.38967	0.166431	0.66	0.909	0.999	0.996	0.941	0.995	0.861	0.906
rs679179	8.3679E-09	-0.030103	0.00523	-0.029637	0.006051	1.18147E-08	0.94292	0.331841	0.0085	0.576044	0.146859	4.7E-07	0.18176	0.053929	0.703	0.816	0.952	0.413	0.876	1	0.863	0.906
rs678818	8.3703E-09	-0.030103	0.00523	-0.029637	0.006051	1.18176E-08	0.94294	0.331841	0.008504	0.575987	0.146857	4.7E-07	0.18176	0.053929	0.703	0.816	0.952	0.413	0.876	1	0.863	0.906
rs9830950	8.3715E-09	0.0293056	0.00509	0.0293056	0.005087	1.52056E-08	0.04749	0.360547	0.0398	0.000302	0.067723	0.00045	0.32721	0.950948	0.937	0.876	0.905	0.999	0.953	0.999	0.88	0.794
rs684888	8.3771E-09	-0.030102	0.00523	-0.029636	0.006052	1.18264E-08	0.94294	0.331852	0.008506	0.576079	0.146863	4.7E-07	0.18177	0.053931	0.703	0.816	0.952	0.413	0.876	1	0.863	0.906
rs55967339	8.379E-09	-0.032468	0.00564	-0.034462	0.006687	1.51899E-08	0.01358	0.399502	0.012839	0.000148	0.156367	0.01873	0.02904	0.192882	0.963	0.895	0.979	0.999	0.937	0.963	0.971	0.923
rs55967019	8.3803E-09	-0.030101	0.00523	-0.029635	0.006057	1.18058E-08	0.93544	0.331084	0.00851	0.579515	0.146827	4.7E-07	0.18124	0.053831	0.704	0.816	0.952	0.41	0.876	1	0.863	0.906
rs174562	8.388E-09	0.0293881	0.0051	0.0316141	0.008905	1.48012E-08	0.12076	0.306047	0.015063	0.172677	1.27E-05	9.1E-05	0.28256	0.37056	0.897	0.622	0.951	0.82	0.998	0.999	0.863	0.847
rs12596337	8.3927E-09	-0.031632	0.00549	-0.031632	0.005491	1.52432E-08	0.29274	0.66501	0.001107	0.003628	0.202251	0.0125	0.02864	0.045492	0.904	0.862	0.999	0.996	0.923	0.98	0.97	0.951
rs12924654	8.3974E-09	-0.031566	0.00548	-0.03457	0.010496	1.52516E-08	0.13801	0.10723	0.00086	0.115108	0.46767	0.00107	2.7E-05	0.083033	0.555	0.904	0.998	0.884	0.796	0.998	0.995	0.916
rs10842287	8.4004E-09	-0.029548	0.00513	-0.029548	0.00513	1.5257E-08	0.56501	0.413256	0.000286	0.013058	0.255887	0.00703	0.00286	0.890173	0.855	0.874	1	0.988	0.896	0.988	0.984	0.81
rs34995835	8.4006E-09	-0.032439	0.00563	-0.031854	0.007118	1.52573E-08	0.50107	0.207817	4.79E-05	0.422784	0.007519	0.00056	0.08957	0.35163	0.779	0.503	1	0.519	0.977	0.998	0.904	0.81
rs10891797	8.403E-09	-0.030098	0.00523	-0.035137	0.009307	1.52615E-08	0.28202	0.005813	0.032399	0.134931	0.006262	0.0001	0.06087	0.011615	0.649	0.962	0.906	0.875	0.986	1	0.949	0.961
rs1334032	8.408E-09	-0.034005	0.0059	-0.034005	0.005904	1.52703E-08	0.64085	0.299526	7.39E-05	0.003452	0.525142	0.01843	0.0631	0.031878	0.728	0.877	1	0.995	0.801	0.947	0.945	0.944
rs75209341	8.4131E-09	0.0585381	0.01016	0.0620149	0.0145	1.52794E-08	0.1231	0.176941	0.008277	0.027791	0.00379	0.00073	0.06246	0.039342	0.596	0.906	0.987	0.977	0.989	0.999	0.95	0.944
rs628694	8.419E-09	-0.030096	0.00523	-0.029623	0.006065	1.18729E-08	0.95008	0.331084	0.00851	0.576417	0.146827	4.7E-07	0.18124	0.053831	0.701	0.816	0.952	0.412	0.876	1	0.863	0.906
rs629219	8.419E-09	-0.030096	0.00523	-0.029623	0.006065	1.18729E-08	0.95008	0.331084	0.00851	0.576417	0.146827	4.7E-07	0.18124	0.053831	0.701	0.816	0.952	0.412	0.876	1	0.863	0.906
rs140992383	8.4261E-09	-0.089515	0.01554	-0.111425	0.030202	1.22083E-08	0.16833	0.023247	0.048808	0.000418	0.092267	0.00346	0.00155	0.015916	0.597	0.948	0.834	0.999	0.939	0.983	0.986	0.957
rs9468350	8.4294E-09	-0.044787	0.00778	-0.044787	0.007776	1.53082E-08	0.09247	0.374115	0.000395	0.064848	0.396351	0.00284	0.02584	0.122962	0.933	0.891	0.999	0.957	0.872	0.996	0.97	0.93
rs61708995	8.4461E-09	-0.039	0.00677	-0.041085	0.008454	1.53379E-08	0.26712	0.868521	0.000847	0.082432	0.027861	0.00685	0.0249	0.002322	0.907	0.808	0.999	0.946	0.976	0.99	0.971	0.976
rs1992418	8.4465E-09	-0.032527	0.00565	-0.036096	0.008697	1.53386E-08	0.00502	0.280642	0.01131	0.004527	0.856709	0.0014	0.001	0.666514	0.964	0.89	0.98	0.995	0.72	0.998	0.989	0.837
rs3130805	8.4538E-09	-0.052803	0.00917	-0.054265	0.011739	1.53514E-08	0.03747	0.975114	0.000703	0.006683	0.90634	0.00333	0.06813	0.008145	0.936	0.784	0.999	0.992	0.619	0.994	0.945	0.959
rs4858830	8.4605E-09	-0.034626	0.00601	-0.034635	0.006051	1.53325E-08	0.79728	0.04404	0.05615	0.001493	0.045248	2.4E-05	0.49253	0.970749	0.709	0.92	0.798	0.997	0.95	1	0.797	0.736
rs113594988	8.4608E-09	-0.055585	0.00965	-0.055585	0.009652	1.53638E-08	0.78654	0.022745	0.009834	0.018003	0.121984	0.00013	0.20155	0.56747	0.837	0.952	0.986	0.986	0.94	1	0.918	0.861
rs72673176	8.462E-09	0.0416299	0.00723	0.0416299	0.007229	1.53659E-08	0.48744	0.651512	0.001146	0.019498	0.091467	0.00098	0.09768	0.492755	0.871	0.852	0.999	0.985	0.949	0.999	0.942	0.869
rs10924463	8.466E-09	-0.029593	0.00514	-0.029593	0.005139	1.53731E-08	0.32411	0.03019	0.025183	0.070167	0.023165	2.5E-05	0.16008	0.985463	0.888	0.946	0.949	0.946	0.975	1	0.924	0.795
rs112662521	8.467E-09	-0.055586	0.00965	-0.055586	0.009652	1.53748E-08	0.78721	0.022716	0.009819	0.018091	0.121812	0.00013	0.2014	0.567825	0.837	0.952	0.986	0.986	0.94	1	0.918	0.861
rs10959602	8.469E-09	-0.038997	0.00677	-0.041083	0.008454	1.53785E-08	0.26711	0.868665	0.00085	0.082443	0.027831	0.00686	0.02487	0.002324	0.907	0.808	0.999	0.946	0.976	0.99	0.971	0.976
rs34531032	8.4723E-09	0.0333064	0.00578	0.0334037	0.008143	1.0121E-08	0.05143	0.065182	0.010285	0.779158	0.283741	5.7E-07	0.16892	0.235441	0.905	0.897	0.932	0.279	0.804	1	0.87	0.843
rs10802322	8.4754E-09	-0.029594	0.00514	-0.029594	0.005139	1.53897E-08	0.31993	0.030257	0.025237	0.070422	0.023193	2.5E-05	0.16013	0.985605	0.888	0.946	0.949	0.946	0.975	1	0.924	0.795
rs6801211	8.4767E-09	-0.035268	0.00612	-0.035268	0.006124	1.53727E-08	0.7415	0.070359	0.058258	0.002315	0.038552	2E-05	0.36998	0.860598	0.707	0.911	0.799	0.996	0.956	1	0.836	0.762
rs117315995	8.4777E-09	0.0645381	0.01121	0.0606067	0.014638	1.15544E-08	0.34248	0.181102	9.68E-05	0.849282	0.950535	4.1E-06	0.09463	0.556357	0.732	0.786	0.999	0.142	0.355	1	0.855	0.668
rs76331187	8.4851E-09	0.0404377	0.00702	0.0395569	0.008638	1.5407E-08	0.70517	0.747131	0.022261	0.000559	0.265833	1.7E-05	0.95412	0.031776	0.656	0.668	0.91	0.998	0.828	1	0.626	0.92
rs7982302	8.4907E-09	-0.032764	0.00569	-0.032764	0.00569	1.54169E-08	0.18145	0.650592	0.004221	0.006296	0.845649	8.8E-05	0.23783	0.071973	0.887	0.812	0.992	0.992	0.58	1	0.882	0.92
rs11583361	8.4982E-09	0.0298532	0.00518	0.0284932	0.007168	1.54301E-08	0.45432	0.128684	0.000378	0.003438	0.020644	0.0009	0.58646	0.128648	0.604	0.874	0.999	0.993	0.963	0.998	0.748	0.457
rs34606033	8.4992E-09	-0.036546	0.00635	-0.037576	0.010284	1.34688E-08	0.44026	0.786192	0.00864	1.44E-05	0.882502	0.00262	0.00143	0.713701	0.813	0.688	0.969	1	0.536	0.989	0.982	0.762
rs62475248	8.5072E-09	-0.048198	0.00837	-0.048198	0.00837	1.5446E-08	0.11533	0.821615	0.000919	0.18262	0.007836	0.00057	0.61477	0.041168	0.917	0.817	0.999	0.849	0.984	0.999	0.817	0.943
rs2815369	8.5081E-09	0.0307531	0.00534	0.0307531	0.005341	1.54477E-08	0.61445	0.573719	0.003216	0.172501	0.053145	1.3E-05	0.23078	0.14243	0.706	0.826	0.994	0.838	0.951	1	0.886	0.9
rs694478	8.5096E-09	-0.030093	0.00523	-0.029627	0.006052	1.19918E-08	0.93511	0.331059	0.008487	0.580606	0.146585	4.7E-07	0.18323	0.054103	0.704	0.816	0.952	0.409	0.876	1	0.862	0.906
rs10915971	8.5102E-09	-0.030363	0.00527	-0.030363	0.005273	1.54515E-08	0.98948	0.116138	0.002521	0.213825	0.003158	0.00013	0.48888	0.197115	0.781	0.91	0.996	0.813	0.988	1	0.833	0.896
rs6806356	8.5132E-09	-0.034614	0.00601	-0.034614	0.006011	1.54304E-08	0.81291	0.044322	0.05612	0.00152	0.045207	2.4E-05	0.4929	0.973034	0.712	0.92	0.799	0.997	0.95	1	0.798	0.737
rs17151147	8.5223E-09	0.0327326	0.00568	0.0327326	0.005685	1.54729E-08	0.144	0.878658	0.006674	0.005817	0.030937	0.00077	0.14587	0.503953	0.919	0.797	0.991	0.994	0.972	0.999	0.93	0.868
rs1043020	8.5254E-09	0.0707027	0.01228	0.0699683	0.017029	1.54783E-08	0.64665	0.705886	0.000248	0.327528	9.31E-05	0.00047	0.36778	0.985439	0.758	0.652	0.999	0.628	0.996	0.998	0.8	0.693
rs28452679	8.5256E-09	-0.03725	0.00647	-0.03725	0.00647	1.39396E-08	0.52943	0.103115	0.000307	0.000261	0.023259	0.07694	0.53197	0.189188	0.827	0.909	0.999	0.999	0.971	0.683	0.799	0.891
rs2341040	8.5277E-09	-0.036629	0.00636	-0.036629	0.006362	1.54824E-08	0.37919	0.532896	3.6E-05	0.057111	0.01722	0.01039	0.21513	0.102088	0.874	0.725	1	0.954	0.977	0.978	0.906	0.924
rs9848268	8.5331E-09	-0.034744	0.00603	-0.034771	0.006286	1.5492E-08	0.67534	0.039186	0.045654	0.00232	0.044286	2E-05	0.50061	0.990045	0.694	0.923	0.842	0.995	0.952	1	0.8	0.735
rs7745768	8.5347E-09	-0.052788	0.00917	-0.054242	0.011729	1.54948E-08	0.03774	0.975362	0.000706	0.006698	0.906357	0.00334	0.06814	0.008154	0.936	0.784	0.999	0.992	0.619	0.994	0.945	0.959
rs35590258	8.5376E-09	-0.036628	0.00636	-0.036628	0.006362	1.54999E-08	0.37857	0.533137	3.61E-05	0.057083	0.01723	0.01039	0.21518	0.102056	0.874	0.725	1	0.954	0.977	0.978	0.906	0.924
rs58855494	8.541E-09	0.0384137	0.00667	0.0384137	0.006672	1.5506E-08	0.14169	0.771124	0.017688	0.004009	0.00248	0.00144	0.4068	0.179182	0.922	0.845	0.973	0.996	0.992	0.998	0.88	0.919
rs6442129	8.5446E-09	-0.034616	0.00601	-0.034624	0.006048	1.54825E-08	0.796	0.04404	0.05615	0.001512	0.045248	2.4E-05	0.49253	0.970749	0.709	0.92	0.798	0.997	0.95	1	0.797	0.737
rs2722006	8.5518E-09	-0.029271	0.00508	-0.029271	0.005084	1.55251E-08	0.93409	0.981182	0.002923	0.055096	0.004498	0.00067	0.01207	0.622125	0.786	0.793	0.996	0.956	0.987	0.999	0.974	0.839
rs11100760	8.5532E-09	-0.031389	0.00545	-0.033929	0.007878	1.55276E-08	0.00768	0.241293	0.022685	0.006077	0.752246	0.00039	0.00183	0.786943	0.96	0.895	0.95	0.993	0.746	0.999	0.987	0.817

Table S3

rs201768680	8.5577E-09	-0.069796	0.01212	-0.069434	0.013826	1.55355E-08	0.51071	0.074166	0.002547	0.003978	0.015627	0.0004	0.30848	0.444338	0.823	0.5	0.995	0.994	0.973	0.999	0.856	0.833
rs315413	8.5622E-09	0.0290263	0.00504	0.0290263	0.005042	1.55435E-08	0.36817	0.775905	0.00154	0.00154	0.087831	0.00165	0.27833	0.623006	0.871	0.761	0.998	0.997	0.943	0.998	0.888	0.836
rs320483	8.5625E-09	0.0364186	0.00633	0.0357432	0.008029	1.5544E-08	0.00468	0.36496	0.000166	0.006049	0.888262	0.00112	0.68119	0.414186	0.949	0.829	1	0.99	0.617	0.997	0.559	0.82
rs635067	8.5722E-09	-0.030092	0.00523	-0.029625	0.006045	1.20983E-08	0.93903	0.330342	0.008399	0.58042	0.147311	4.7E-07	0.18481	0.054527	0.703	0.816	0.953	0.409	0.875	1	0.861	0.906
rs10938444	8.5735E-09	0.0383715	0.00667	0.0383715	0.006665	1.55634E-08	0.11306	0.766548	0.020228	0.004944	0.002052	0.00123	0.43161	0.163509	0.928	0.845	0.968	0.995	0.992	0.998	0.875	0.921
rs1617992	8.5983E-09	-0.03009	0.00523	-0.029622	0.006051	1.2126E-08	0.93914	0.329905	0.008398	0.581821	0.146772	4.7E-07	0.18478	0.054491	0.703	0.816	0.953	0.408	0.876	1	0.861	0.906
rs146877949	8.5998E-09	0.0845583	0.01469	0.0869979	0.016415	1.56101E-08	0.00574	0.327953	0.029097	0.00058	0.44268	0.00212	0.11106	0.077999	0.971	0.898	0.953	0.999	0.861	0.997	0.943	0.941
rs13259744	8.6037E-09	0.0293875	0.00511	0.0293875	0.005105	1.56169E-08	0.25146	0.302597	0.001868	0.065212	0.288248	0.00095	0.00307	0.359874	0.906	0.899	0.998	0.956	0.898	0.999	0.986	0.892
rs150254595	8.6057E-09	-0.05279	0.00917	-0.054107	0.01153	1.56205E-08	0.03956	0.974845	0.000724	0.007619	0.92821	0.00309	0.06712	0.008179	0.936	0.785	0.999	0.991	0.629	0.994	0.945	0.96
rs11783526	8.6077E-09	0.0293869	0.00511	0.0293869	0.005105	1.56241E-08	0.25109	0.302682	0.001874	0.064999	0.287933	0.00096	0.00307	0.359693	0.906	0.899	0.998	0.956	0.898	0.999	0.986	0.892
rs56964	8.6101E-09	0.0364111	0.00633	0.0357725	0.007872	1.56283E-08	0.00542	0.361739	0.000161	0.006125	0.886968	0.00111	0.68346	0.415775	0.947	0.83	1	0.99	0.618	0.997	0.56	0.819
rs7822655	8.6306E-09	0.0293858	0.00511	0.0293858	0.005106	1.56645E-08	0.25181	0.301835	0.0019	0.064784	0.288344	0.00095	0.00303	0.358884	0.906	0.899	0.998	0.957	0.898	0.999	0.986	0.893
rs678693	8.6535E-09	-0.030085	0.00523	-0.029614	0.006054	1.22081E-08	0.94613	0.330532	0.008402	0.580889	0.146558	4.8E-07	0.1849	0.054584	0.701	0.816	0.953	0.409	0.876	1	0.861	0.905
rs2722005	8.6588E-09	-0.029255	0.00508	-0.029255	0.005083	1.57145E-08	0.92874	0.981441	0.002871	0.057868	0.004503	0.00066	0.01162	0.616299	0.785	0.792	0.996	0.953	0.987	0.999	0.974	0.84
rs7518613	8.6725E-09	0.0368961	0.00641	0.0362018	0.009128	1.57388E-08	0.08564	0.144574	0.002853	0.000166	0.656379	0.00078	0.62613	0.060297	0.897	0.533	0.993	0.999	0.707	0.998	0.757	0.912
rs7680006	8.6775E-09	-0.03652	0.00635	-0.037553	0.010292	1.37299E-08	0.44368	0.785165	0.008645	1.45E-05	0.880833	0.00265	0.00141	0.710672	0.812	0.688	0.969	1	0.535	0.988	0.982	0.763
rs73792935	8.6777E-09	0.09145	0.01589	0.0965988	0.024543	1.16698E-08	0.05659	0.171544	1.38E-05	0.980265	0.253318	0.00263	0.00228	0.398103	0.903	0.862	1	0.188	0.826	0.986	0.984	0.806
rs7504478	8.6794E-09	0.0290759	0.00505	0.0290759	0.005053	1.57509E-08	0.08558	0.490763	0.001844	0.002214	0.200397	0.00052	0.79234	0.060564	0.908	0.67	0.997	0.996	0.887	0.999	0.635	0.922
rs9813263	8.6834E-09	-0.029081	0.00505	-0.029081	0.005053	1.57581E-08	0.04733	0.875022	0.007203	0.056203	0.111923	0.00038	0.08718	0.02487	0.948	0.842	0.992	0.965	0.949	1	0.951	0.959
rs1348258	8.6865E-09	-0.030044	0.00522	-0.030044	0.005221	1.57635E-08	0.09789	0.820126	0.001464	0.048548	0.789198	0.00012	0.02604	0.499598	0.913	0.803	0.998	0.956	0.72	1	0.961	0.844
rs116103488	8.6882E-09	0.0290143	0.00504	0.0290143	0.005042	1.57666E-08	0.36562	0.771949	0.001533	0.001595	0.088385	0.00163	0.27756	0.624704	0.872	0.76	0.998	0.997	0.943	0.998	0.888	0.835
rs13058822	8.6983E-09	0.0305922	0.00532	0.0305922	0.005316	1.57844E-08	0.64044	0.373163	0.005629	0.0605	0.882489	2.6E-06	0.02203	0.63141	0.666	0.827	0.983	0.924	0.628	1	0.953	0.78
rs2348369	8.7019E-09	-0.030007	0.00521	-0.030007	0.005215	1.57908E-08	0.11795	0.758949	0.002006	0.0461	0.942089	4.8E-05	0.03552	0.588359	0.902	0.799	0.996	0.954	0.654	1	0.952	0.819
rs9368043	8.706E-09	0.0303908	0.00528	0.0324095	0.008606	7.00951E-09	0.17121	0.982319	0.009534	3.23E-07	0.304041	0.01626	0.88913	0.038226	0.879	0.75	0.941	1	0.831	0.914	0.707	0.929
rs12065447	8.7076E-09	-0.029565	0.00514	-0.029565	0.005138	1.58009E-08	0.32221	0.028689	0.025444	0.070928	0.022513	2.6E-05	0.15582	0.962509	0.888	0.947	0.948	0.945	0.975	1	0.925	0.791
rs34816482	8.7107E-09	-0.036605	0.00636	-0.036605	0.006362	1.58063E-08	0.37817	0.53395	3.6E-05	0.058361	0.017271	0.01041	0.21475	0.101907	0.874	0.725	1	0.953	0.977	0.978	0.906	0.924
rs13097653	8.7118E-09	0.0306048	0.00532	0.0306048	0.005319	1.58084E-08	0.62503	0.377429	0.005814	0.062964	0.869672	2.4E-06	0.02179	0.624269	0.663	0.825	0.983	0.921	0.631	1	0.953	0.781
rs200943290	8.7124E-09	-0.036605	0.00636	-0.036605	0.006362	1.58093E-08	0.37817	0.533941	3.6E-05	0.058362	0.017268	0.0104	0.2148	0.101909	0.874	0.725	1	0.953	0.977	0.978	0.906	0.924
rs112396704	8.72E-09	-0.038575	0.0067	-0.038575	0.006704	1.58229E-08	0.07644	0.350283	0.01666	0.010196	0.165719	2.1E-05	0.49031	0.913943	0.923	0.872	0.966	0.989	0.915	1	0.839	0.766
rs1014779	8.7236E-09	0.028993	0.00504	0.0278444	0.006026	1.58292E-08	0.33797	0.847112	0.000484	0.000127	0.856278	0.00036	0.9786	0.376911	0.496	0.672	0.998	0.999	0.534	0.999	0.565	0.764
rs3773065	8.7285E-09	-0.068614	0.01193	-0.068614	0.011925	1.58379E-08	0.06965	0.103064	0.000695	0.592328	0.068256	3E-05	0.24883	0.977136	0.9	0.888	0.998	0.416	0.931	1	0.85	0.691
rs7919534	8.7464E-09	0.0307024	0.00534	0.0307024	0.005336	1.58697E-08	0.17107	0.342911	0.001557	0.166834	0.009956	0.00248	0.02409	0.152638	0.922	0.898	0.998	0.89	0.985	0.997	0.972	0.927
rs9257761	8.7509E-09	-0.052749	0.00917	-0.054182	0.011702	1.58775E-08	0.03856	0.975266	0.000711	0.006737	0.905905	0.00335	0.06819	0.008171	0.936	0.784	0.999	0.992	0.62	0.994	0.944	0.959
rs7560060	8.7525E-09	-0.032717	0.00569	-0.032717	0.005687	1.58804E-08	0.57947	0.052247	1.22E-05	0.269556	0.066962	0.0079	0.06031	0.591901	0.839	0.93	1	0.769	0.95	0.979	0.947	0.834
rs12463914	8.7528E-09	-0.032717	0.00569	-0.032717	0.005687	1.58809E-08	0.57946	0.052247	1.22E-05	0.269553	0.066962	0.0079	0.06032	0.591902	0.839	0.93	1	0.769	0.95	0.979	0.947	0.834
rs77320730	8.7565E-09	0.061551	0.0107	0.0635638	0.012417	1.58875E-08	0.50577	0.046555	0.007322	0.047709	0.001438	0.00144	0.06109	0.183005	0.745	0.943	0.99	0.967	0.993	0.998	0.955	0.917
rs36089043	8.7615E-09	0.0293726	0.00511	0.0293726	0.005106	1.58963E-08	0.25162	0.302622	0.001885	0.065057	0.289088	0.00096	0.00305	0.359744	0.906	0.899	0.998	0.956	0.898	0.999	0.986	0.892
rs149289131	8.7615E-09	-0.087625	0.01523	-0.087625	0.015231	1.58963E-08	0.60218	0.487888	0.000494	0.433415	0.221009	1.3E-05	0.10036	0.121332	0.617	0.785	0.999	0.511	0.839	1	0.899	0.875
rs7553303	8.7648E-09	-0.029925	0.0052	-0.029925	0.005202	1.59022E-08	0.58739	0.045096	0.024132	0.000819	0.051799	0.00127	0.07038	0.888225	0.862	0.943	0.958	0.998	0.964	0.998	0.952	0.822
rs9456814	8.7683E-09	-0.029717	0.00517	-0.029717	0.005166	1.59083E-08	0.08318	0.553941	0.00249	0.120808	0.103198	0.00074	0.01697	0.144265	0.937	0.874	0.997	0.922	0.95	0.999	0.975	0.928
rs113703017	8.7738E-09	-0.030071	0.00523	-0.029593	0.006067	1.23361E-08	0.94501	0.33008	0.008425	0.584051	0.147298	4.7E-07	0.18472	0.054478	0.701	0.815	0.952	0.406	0.875	1	0.861	0.905
rs11709024	8.7808E-09	0.0305827	0.00532	0.0305827	0.005316	1.59304E-08	0.63994	0.373661	0.005634	0.061537	0.882573	2.6E-06	0.02188	0.629624	0.666	0.826	0.983	0.923	0.627	1	0.953	0.78
rs67485053	8.7879E-09	-0.029327	0.0051	-0.029327	0.005098	1.59297E-08	0.64799	0.102774	0.018897	0.103616	0.017839	3.1E-06	0.34187	0.657636	0.814	0.905	0.947	0.896	0.972	1	0.855	0.696
rs608806	8.7902E-09	-0.029686	0.00516	-0.028729	0.007257	9.28651E-09	0.9152	0.152773	0.007415	0.688342	0.533223	2.1E-07	0.0606	0.083928	0.66	0.837	0.935	0.284	0.646	1	0.908	0.873
rs7950674	8.7996E-09	0.0300262	0.00522	0.0300262	0.00522	1.59638E-08	0.85546	0.237311	0.00094	0.000109	0.847668	0.00637	0.02964	0.967581	0.777	0.871	0.998	0.999	0.674	0.983	0.954	0.753
rs284974	8.8013E-09	0.0314457	0.00547	0.0314457	0.005467	1.59668E-08	0.32063	0.282717	0.031223	0.069529	0.022065	5.4E-05	0.19753	0.038089	0.898	0.902	0.943	0.952	0.978	1	0.923	0.952
rs10838782	8.8042E-09	0.0300277	0.00522	0.0300277	0.00522	1.59719E-08	0.85047	0.24642	0.000927	0.000108	0.850723	0.00631	0.02929	0.981022	0.777	0.869	0.998	0.999	0.672	0.983	0.954	0.75
rs728711	8.8164E-09	0.0298227	0.00518	0.0284547	0.007141	1.59934E-08	0.46261	0.144332	0.000342	0.003334	0.022818	0.00098	0.55106	0.119546	0.607	0.869	0.999	0.993	0.961	0.997	0.758	0.451
rs12530210	8.8204E-09	0.0302011	0.00525	0.0302011	0.005251	1.60006E-08	0.88034	0.74576	0.00387	0.033786	0.003479	0.00037	0.11656	0.634784	0.779	0.827	0.994	0.972	0.989	0.999	0.931	0.838
rs2304270	8.833E-09	0.0449343	0.00781	0.0449343	0.007812	1.60228E-08	0.4295	0.707341	0.000343	0.003648	0.072775	0.02045	0.28589	0.018958	0.881	0.849	1	0.996	0.957	0.96	0.902	0.959
rs2744239	8.833E-09	-0.08233	0.01431	-0.08233	0.014314	1.60228E-08	0.67513	0.602272	0.005337	8.4E-05	0.125408	0.00764	0.08648	0.068822	0.76	0.851	0.992	0.999	0.936	0.987	0.944	0.936
rs7986338	8.8348E-09	-0.032744	0.00569	-0.032744	0.005693	1.6026E-08	0.18353	0.658784	0.004402	0.005215	0.837569	9E-05	0.26875	0.074135	0.885	0.809	0.991	0.993	0.574	1	0.872	0.918
rs11587142	8.8355E-09	0.0301012	0.00523	0.0301012	0.005233	1.60272E-08	0.13193	0.627556	0.000718	0.001289	0.019304	0.0189	0.16537	0.996493	0.919	0.85	0.999	0.998	0.977	0.959	0.923	0.797
rs9506049	8.8417E-09	-0.029162	0.00507	-0.029162	0.00507	1.60383E-08	0.36981	0.724651	0.000911	0.027153	0.702859	0.00013	0.2457	0.168039	0.862	0.814	0.999	0.974	0.746	1	0.888	0.899
rs7165939	8.843E-09	-0.072876	0.01267	-0.070493	0.01801	1.36806E-08	0.74485	0.911881	0.001631	0.786831	0.031048	4.4E-06	0.00616	0.939763	0.681	0.617	0.991	0.218	0.941	1	0.967	0.604

Table S3

rs79250542	8.8455E-09	-0.051279	0.00892	-0.053316	0.010514	1.6045E-08	0.42512	0.003689	0.000138	0.049182	0.111292	0.02554	0.11964	0.050314	0.891	0.97	1	0.967	0.95	0.948	0.944	0.952
rs11585662	8.8463E-09	0.029819	0.00518	0.0283909	0.00718	1.60464E-08	0.45502	0.144129	0.000351	0.003381	0.023181	0.00092	0.55244	0.116786	0.604	0.868	0.999	0.993	0.96	0.998	0.757	0.448
rs13058913	8.8704E-09	0.0305744	0.00532	0.0305744	0.005316	1.6089E-08	0.6388	0.373446	0.005625	0.061612	0.882515	2.6E-06	0.02197	0.631599	0.665	0.826	0.983	0.923	0.627	1	0.953	0.78
rs6936741	8.8724E-09	0.0305886	0.00532	0.0305886	0.005319	1.60926E-08	0.68764	0.613201	0.001052	0.000522	0.098423	0.00124	0.95076	0.335053	0.699	0.806	0.998	0.998	0.924	0.997	0.672	0.85
rs219012	8.8798E-09	0.0306984	0.00534	0.03853	0.009336	8.74206E-09	0.73102	0.022833	0.000366	0.00241	0.192008	0.17414	0.00147	0.009975	0.762	0.942	0.998	0.996	0.866	0.318	0.989	0.961
rs9839520	8.9084E-09	0.0305716	0.00532	0.0305716	0.005317	1.61563E-08	0.63822	0.37309	0.005631	0.061443	0.882332	2.6E-06	0.02214	0.633107	0.665	0.826	0.983	0.923	0.628	1	0.952	0.78
rs147269275	8.9117E-09	0.038371	0.00667	0.038371	0.006673	1.61622E-08	0.14086	0.773023	0.017989	0.004026	0.002416	0.00151	0.40242	0.177562	0.923	0.845	0.973	0.996	0.992	0.998	0.881	0.919
rs57404010	8.9123E-09	-0.036569	0.00636	-0.036569	0.00636	1.61631E-08	0.37914	0.561674	3.58E-05	0.061074	0.017289	0.01094	0.2078	0.094876	0.874	0.731	1	0.951	0.977	0.977	0.908	0.926
rs501200	8.9181E-09	0.028992	0.00504	0.028992	0.005042	1.61735E-08	0.36949	0.77205	0.001534	0.001643	0.088279	0.00163	0.27758	0.624417	0.871	0.76	0.998	0.997	0.943	0.998	0.888	0.835
rs28851549	8.9291E-09	0.0305691	0.00532	0.0305691	0.005316	1.61929E-08	0.63859	0.373081	0.005632	0.061533	0.882828	2.6E-06	0.02213	0.632731	0.665	0.826	0.983	0.923	0.627	1	0.952	0.78
rs12144675	8.9355E-09	-0.033036	0.00575	-0.037846	0.008144	1.51686E-08	0.06676	0.063001	0.00021	0.108721	0.009216	0.06179	0.00428	0.186295	0.938	0.939	0.999	0.897	0.986	0.791	0.985	0.914
rs1404456	8.9422E-09	0.0293632	0.00511	0.0293632	0.005107	1.6216E-08	0.24874	0.298255	0.001969	0.063594	0.275234	0.00097	0.00334	0.372504	0.907	0.9	0.998	0.958	0.902	0.999	0.985	0.891
rs9257779	8.9433E-09	-0.052715	0.00917	-0.054122	0.011671	1.6218E-08	0.03962	0.97581	0.000714	0.006756	0.90524	0.00337	0.06819	0.008189	0.935	0.784	0.999	0.992	0.619	0.994	0.944	0.959
rs587925	8.9484E-09	-0.030043	0.00523	-0.029526	0.006141	1.25216E-08	0.99403	0.331087	0.008511	0.581894	0.146828	4.7E-07	0.18124	0.053831	0.691	0.814	0.951	0.407	0.874	1	0.862	0.905
rs61821362	8.9517E-09	-0.049554	0.00862	-0.057612	0.013488	4.71048E-09	0.69	0.145697	0.00019	5.4E-05	0.058689	0.29206	0.08186	0.02922	0.723	0.873	0.999	1	0.934	0.089	0.917	0.938
rs622828	8.9541E-09	0.0289885	0.00504	0.0289885	0.005042	1.6237E-08	0.36955	0.772887	0.001539	0.001646	0.088164	0.00163	0.27777	0.624069	0.871	0.761	0.998	0.997	0.943	0.998	0.888	0.835
rs79052819	8.9755E-09	-0.046826	0.00814	-0.051623	0.012074	1.62749E-08	0.87807	0.738679	0.026677	0.125054	0.014103	0.00013	0.01449	0.001555	0.82	0.837	0.94	0.902	0.981	1	0.974	0.976
rs111366684	8.9816E-09	0.0764558	0.0133	0.0736449	0.016321	1.55948E-08	0.04408	0.463008	0.001244	0.533516	0.550905	1.7E-06	0.09618	0.730448	0.887	0.758	0.994	0.407	0.662	1	0.883	0.587
rs1683405	8.9954E-09	0.0314876	0.00548	0.0314876	0.005477	1.63101E-08	0.30468	0.337215	0.031991	0.059059	0.026378	4.6E-05	0.25431	0.034377	0.898	0.894	0.94	0.958	0.975	1	0.91	0.953
rs4346585	9.0074E-09	0.0305614	0.00532	0.0305614	0.005316	1.63313E-08	0.63785	0.37337	0.005639	0.061701	0.882504	2.7E-06	0.0222	0.633558	0.665	0.826	0.983	0.923	0.627	1	0.952	0.78
rs13265084	9.0105E-09	0.031715	0.00552	0.031715	0.005517	1.63369E-08	0.42402	0.0184	0.001197	0.172083	0.023714	0.00027	0.44511	0.672975	0.868	0.95	0.998	0.864	0.973	1	0.855	0.833
rs761716	9.0134E-09	0.0306849	0.00534	0.0385129	0.009336	8.90189E-09	0.73339	0.022806	0.000365	0.002467	0.191797	0.1741	0.00146	0.009955	0.761	0.942	0.998	0.996	0.866	0.319	0.989	0.961
rs10489700	9.015E-09	0.029803	0.00518	0.0283962	0.007182	1.63448E-08	0.45869	0.144831	0.000367	0.003316	0.022118	0.00094	0.55615	0.117429	0.605	0.868	0.999	0.993	0.961	0.998	0.756	0.449
rs11157330	9.0199E-09	0.0478442	0.00832	0.0536441	0.011842	1.46264E-08	0.67242	0.050244	0.000125	0.044504	0.01384	0.08369	0.001	0.397296	0.822	0.934	1	0.95	0.98	0.696	0.99	0.862
rs11088193	9.022E-09	0.0300903	0.00523	0.0314273	0.007067	1.63572E-08	0.58754	0.404889	0.000603	0.000981	0.948455	0.01235	0.08524	0.001759	0.833	0.859	0.999	0.998	0.634	0.967	0.936	0.973
rs12617171	9.0234E-09	-0.03268	0.00569	-0.03268	0.005685	1.63596E-08	0.59094	0.058155	1.36E-05	0.258017	0.074184	0.00767	0.05548	0.574673	0.839	0.929	1	0.782	0.948	0.98	0.949	0.839
rs1615146	9.0341E-09	-0.028959	0.00504	-0.028959	0.005038	1.63786E-08	0.07073	0.24617	0.000942	0.102988	0.102925	0.00106	0.02595	0.909385	0.936	0.904	0.999	0.93	0.947	0.999	0.969	0.82
rs4666021	9.0346E-09	-0.032687	0.00569	-0.032687	0.005687	1.63795E-08	0.57958	0.052185	1.25E-05	0.269836	0.066952	0.00799	0.06019	0.591492	0.839	0.93	1	0.769	0.95	0.979	0.947	0.835
rs634583	9.0348E-09	-0.030046	0.00523	-0.029592	0.006018	1.28066E-08	0.93608	0.328426	0.008412	0.582409	0.149614	5E-07	0.18388	0.055186	0.704	0.816	0.953	0.41	0.874	1	0.862	0.905
rs145520076	9.0449E-09	0.0338346	0.00589	0.0342659	0.009763	1.63977E-08	0.43429	0.009983	0.000273	0.157062	0.980109	0.00028	0.19102	0.003083	0.625	0.943	0.999	0.817	0.598	0.999	0.88	0.963
rs544211667	9.0449E-09	0.0301898	0.00525	0.0301898	0.005252	1.63977E-08	0.50404	0.450043	0.000856	0.001986	0.454226	0.00879	0.01791	0.215146	0.867	0.874	0.999	0.997	0.848	0.985	0.971	0.907
rs315419	9.0521E-09	0.0289788	0.00504	0.0289788	0.005042	1.64104E-08	0.37199	0.777145	0.001542	0.001649	0.087568	0.00165	0.27907	0.622327	0.871	0.761	0.998	0.997	0.943	0.998	0.888	0.836
rs6426269	9.0552E-09	-0.029532	0.00514	-0.029532	0.005138	1.64159E-08	0.32172	0.028595	0.026003	0.071106	0.023163	2.6E-05	0.16184	0.986548	0.888	0.947	0.947	0.945	0.975	1	0.923	0.795
rs6064124	9.056E-09	-0.032402	0.00564	-0.032402	0.005637	1.64172E-08	0.10062	0.216227	0.003716	0.0353	0.182658	0.00135	0.00296	0.833968	0.932	0.913	0.996	0.976	0.928	0.998	0.986	0.837
rs2348368	9.0585E-09	-0.029971	0.00521	-0.029971	0.005215	1.64217E-08	0.11793	0.761428	0.002057	0.045953	0.927414	5E-05	0.03594	0.590563	0.902	0.799	0.996	0.954	0.661	1	0.952	0.82
rs4653743	9.0609E-09	-0.030721	0.00535	-0.033349	0.008984	1.55396E-08	0.0018	0.285577	0.085855	0.013053	0.00422	2.2E-05	0.70144	0.719718	0.964	0.837	0.624	0.976	0.985	1	0.528	0.746
rs7269132	9.0648E-09	-0.032422	0.00564	-0.032422	0.005641	1.64329E-08	0.10129	0.232332	0.003753	0.036477	0.18455	0.00136	0.0027	0.780657	0.933	0.911	0.996	0.976	0.928	0.998	0.987	0.844
rs11416838	9.0664E-09	0.0380803	0.00663	0.0380803	0.006626	1.64357E-08	0.22269	0.657618	0.013747	0.046896	0.08933	0.0001	0.00747	0.671052	0.907	0.853	0.979	0.966	0.95	1	0.979	0.848
rs174545	9.0778E-09	0.0293166	0.0051	0.0315182	0.00894	1.61414E-08	0.1215	0.286391	0.015152	0.167282	1.27E-05	9.8E-05	0.28979	0.36798	0.897	0.616	0.952	0.826	0.998	0.999	0.861	0.847
rs7610519	9.0847E-09	-0.034548	0.00601	-0.034548	0.006011	1.64475E-08	0.80618	0.04433	0.056107	0.001653	0.045233	2.4E-05	0.49362	0.972991	0.712	0.92	0.801	0.996	0.95	1	0.798	0.737
rs11933545	9.0991E-09	-0.036473	0.00635	-0.036473	0.006347	1.64935E-08	0.36484	0.541459	3.27E-05	0.065984	0.019446	0.01048	0.20941	0.092311	0.875	0.726	1	0.947	0.976	0.978	0.907	0.926
rs6848835	9.0991E-09	-0.036473	0.00635	-0.036473	0.006347	1.64935E-08	0.36484	0.541459	3.27E-05	0.065984	0.019446	0.01048	0.20941	0.092311	0.875	0.726	1	0.947	0.976	0.978	0.907	0.926
rs10959620	9.1015E-09	-0.038843	0.00676	-0.041393	0.008761	1.64977E-08	0.17546	0.827172	0.000964	0.082607	0.029423	0.00677	0.03405	0.001779	0.921	0.804	0.999	0.947	0.975	0.99	0.968	0.977
rs1119211	9.1024E-09	-0.044745	0.00779	-0.044745	0.007786	1.64993E-08	0.09092	0.390042	0.000551	0.049199	0.430381	0.00225	0.0359	0.140946	0.933	0.889	0.999	0.967	0.862	0.997	0.965	0.926
rs76693511	9.1067E-09	-0.041334	0.00719	-0.041334	0.007193	1.6507E-08	0.84835	0.211295	0.003564	0.172246	0.011784	0.00014	0.1398	0.250158	0.82	0.902	0.995	0.868	0.982	1	0.928	0.898
rs7349512	9.1094E-09	0.0338957	0.0059	0.0350568	0.007758	1.65118E-08	0.56251	0.989789	0.018236	0.000826	0.013862	0.00104	0.00652	0.321106	0.83	0.769	0.956	0.998	0.977	0.998	0.977	0.621
rs3749570	9.115E-09	-0.029402	0.00512	-0.029402	0.005117	1.65216E-08	0.87935	0.172752	0.06526	0.004377	0.14436	5.8E-05	0.02602	0.189874	0.766	0.901	0.816	0.994	0.921	1	0.964	0.901
rs6936624	9.1155E-09	0.0307897	0.00536	0.0339962	0.009803	6.43489E-09	0.11741	0.967693	0.014071	6.22E-07	0.283803	0.01477	0.87599	0.004064	0.882	0.722	0.886	1	0.806	0.876	0.617	0.963
rs6550631	9.1183E-09	0.0290693	0.00506	0.0291337	0.00547	1.65275E-08	0.33732	0.105856	3.07E-05	0.030063	0.457338	0.00967	0.03199	0.081236	0.664	0.913	1	0.972	0.822	0.977	0.959	0.925
rs62302678	9.1234E-09	0.0383554	0.00667	0.0383554	0.006675	1.65364E-08	0.14086	0.762417	0.017202	0.004026	0.002473	0.00163	0.40854	0.172643	0.923	0.846	0.974	0.996	0.991	0.998	0.88	0.92
rs11039345	9.1355E-09	0.0299921	0.00522	0.0299921	0.00522	1.65579E-08	0.84393	0.237238	0.000837	0.000107	0.872446	0.00728	0.02854	0.948599	0.778	0.87	0.998	0.999	0.664	0.98	0.955	0.755
rs17151140	9.1367E-09	0.0326783	0.00569	0.0326783	0.005687	1.656E-08	0.12025	0.819524	0.006824	0.007218	0.026147	0.00068	0.17604	0.48819	0.923	0.789	0.991	0.993	0.974	0.999	0.923	0.87
rs72694288	9.1385E-09	-0.038894	0.00677	-0.041072	0.008481	1.65632E-08	0.23271	0.860022	0.000896	0.080733	0.026898	0.00746	0.02567	0.002448	0.912	0.807	0.999	0.948	0.976	0.989	0.971	0.976
rs958026	9.1399E-09	-0.032377	0.00563	-0.032377	0.005635	1.65657E-08	0.10362	0.217147	0.003569	0.041649	0.177775	0.0013	0.00259	0.820574	0.932	0.913	0.996	0.973	0.929	0.998	0.987	0.839
rs320481	9.144E-09	0.0363517	0.00633	0.0356695	0.008055	1.65728E-08	0.00461	0.368744	0.000173	0.006055	0.891287	0.00114	0.67875	0.414498	0.949	0.828	1	0.99	0.617	0.997	0.559	0.819

Table S3

rs5814290	9.1491E-09	-0.030017	0.00522	-0.030017	0.005224	1.6582E-08	0.07692	0.761949	0.001716	0.04907	0.738008	0.00013	0.03547	0.452591	0.922	0.817	0.997	0.957	0.744	1	0.957	0.856
rs3922717	9.1516E-09	-0.03301	0.00575	-0.03301	0.005745	1.65863E-08	0.36315	0.858894	0.000279	0.00308	0.392002	0.00536	0.24463	0.058053	0.874	0.776	1	0.996	0.851	0.991	0.898	0.935
rs12720495	9.1548E-09	-0.030656	0.00534	-0.032172	0.007232	1.6592E-08	0.73143	0.332618	0.00093	0.145482	0.248381	0.00153	0.00049	0.025459	0.76	0.882	0.999	0.886	0.895	0.998	0.991	0.952
rs75919753	9.1586E-09	-0.041327	0.00719	-0.041327	0.007193	1.65986E-08	0.8505	0.210952	0.003568	0.171745	0.011752	0.00014	0.13989	0.24996	0.82	0.902	0.995	0.868	0.982	1	0.928	0.898
rs16873813	9.1837E-09	0.0413368	0.0072	0.0413368	0.007195	1.66431E-08	0.45239	0.524224	0.001042	0.023509	0.100329	0.0013	0.09716	0.388917	0.879	0.87	0.999	0.983	0.948	0.998	0.944	0.886
rs62055612	9.1958E-09	-0.029949	0.00521	-0.029949	0.005213	1.66645E-08	0.88082	0.663268	0.000597	0.239191	0.087317	0.00012	0.03282	0.149088	0.776	0.707	0.999	0.771	0.933	1	0.953	0.895
rs320485	9.1984E-09	0.0363598	0.00633	0.0356797	0.008019	1.6669E-08	0.00433	0.367716	0.000173	0.007174	0.822213	0.00106	0.6491	0.440337	0.95	0.83	1	0.989	0.644	0.997	0.553	0.816
rs12961146	9.2041E-09	-0.045938	0.008	-0.045938	0.007996	1.63477E-08	0.12409	0.162975	0.088729	0.027775	0.003368	4.9E-05	0.19794	0.398135	0.915	0.906	0.738	0.971	0.989	1	0.907	0.867
rs17000338	9.2138E-09	-0.032369	0.00563	-0.032369	0.005635	1.66963E-08	0.1036	0.217136	0.003572	0.041893	0.177899	0.0013	0.00259	0.820612	0.932	0.913	0.996	0.972	0.929	0.998	0.987	0.839
rs12380100	9.2142E-09	-0.038883	0.00677	-0.04106	0.008482	1.6697E-08	0.23352	0.859978	0.000895	0.081377	0.026893	0.00745	0.0257	0.002448	0.912	0.807	0.999	0.947	0.976	0.989	0.971	0.976
rs10015057	9.2143E-09	-0.036168	0.0063	-0.037313	0.010718	1.11447E-08	0.41598	0.909407	0.006071	6.7E-06	0.716617	0.00501	0.0015	0.697802	0.81	0.697	0.973	1	0.461	0.974	0.982	0.755
rs189628481	9.2184E-09	0.0338177	0.00589	0.0342486	0.009769	1.67051E-08	0.4345	0.009983	0.000273	0.159566	0.980109	0.00028	0.19102	0.003083	0.624	0.943	0.999	0.814	0.598	0.999	0.88	0.963
rs192988621	9.2184E-09	0.0338177	0.00589	0.0342486	0.009769	1.67051E-08	0.4345	0.009983	0.000273	0.159566	0.980109	0.00028	0.19102	0.003083	0.624	0.943	0.999	0.814	0.598	0.999	0.88	0.963
rs183763906	9.2184E-09	0.0338177	0.00589	0.0342486	0.009769	1.67052E-08	0.4345	0.009983	0.000273	0.159566	0.980109	0.00028	0.19102	0.003083	0.624	0.943	0.999	0.814	0.598	0.999	0.88	0.963
rs200026262	9.2184E-09	0.0338177	0.00589	0.0342486	0.009769	1.67052E-08	0.4345	0.009983	0.000273	0.159566	0.980109	0.00028	0.19102	0.003083	0.624	0.943	0.999	0.814	0.598	0.999	0.88	0.963
rs7977936	9.2324E-09	0.032877	0.00572	0.032877	0.005723	1.67339E-08	0.37926	0.522804	0.002238	0.012112	0.040446	0.01385	0.02147	0.012556	0.901	0.885	0.998	0.991	0.973	0.98	0.975	0.968
rs190669592	9.2472E-09	0.0992219	0.01727	0.0992219	0.017274	1.67642E-08	0.87461	0.894784	0.001727	0.020328	0.010367	0.00027	0.33621	0.870788	0.794	0.765	0.997	0.98	0.978	1	0.865	0.791
rs72694287	9.2475E-09	-0.038883	0.00677	-0.041062	0.008485	1.67648E-08	0.23344	0.860025	0.000895	0.081544	0.026897	0.00746	0.02567	0.002448	0.912	0.807	0.999	0.947	0.976	0.989	0.971	0.976
rs14018	9.2479E-09	-0.035041	0.0061	-0.035041	0.0061	1.65892E-08	0.83951	0.078716	0.071148	0.001587	0.039517	2.5E-05	0.36484	0.824745	0.715	0.906	0.747	0.997	0.954	1	0.831	0.76
rs4714290	9.2705E-09	-0.030569	0.00532	-0.030983	0.005909	1.49215E-08	0.40931	0.736561	0.079895	8.26E-05	0.023227	0.00016	0.9863	0.167929	0.814	0.757	0.67	0.999	0.963	0.999	0.625	0.871
rs6537131	9.273E-09	-0.036495	0.00635	-0.03746	0.010231	1.50714E-08	0.45581	0.750387	0.009459	1.55E-05	0.937764	0.00247	0.00146	0.755837	0.811	0.683	0.967	1	0.558	0.989	0.982	0.756
rs6442131	9.2749E-09	-0.035048	0.0061	-0.035048	0.006102	1.66077E-08	0.83343	0.077037	0.071635	0.001646	0.040895	2.2E-05	0.37519	0.821846	0.712	0.906	0.743	0.996	0.953	1	0.827	0.759
rs178364	9.2778E-09	0.0289583	0.00504	0.0289583	0.005042	1.68269E-08	0.37046	0.778998	0.001544	0.001702	0.087677	0.00165	0.2797	0.622633	0.871	0.762	0.998	0.997	0.943	0.998	0.888	0.836
rs4714291	9.278E-09	-0.030569	0.00532	-0.030982	0.005909	1.4935E-08	0.4093	0.736583	0.0799	8.27E-05	0.023237	0.00016	0.9863	0.167816	0.814	0.757	0.67	0.999	0.963	0.999	0.625	0.871
rs62534170	9.2805E-09	0.0665684	0.01159	0.0665684	0.011591	1.68325E-08	0.05481	0.65853	0.000692	0.040509	0.032025	0.01356	0.00965	0.304938	0.945	0.868	0.999	0.975	0.975	0.98	0.982	0.907
rs284976	9.3053E-09	0.0313964	0.00547	0.0313964	0.005467	1.68834E-08	0.3072	0.281991	0.031562	0.074425	0.021915	5.4E-05	0.19791	0.038093	0.899	0.902	0.942	0.949	0.978	1	0.922	0.952
rs7136263	9.3056E-09	0.0340276	0.00593	0.0340276	0.005925	1.68839E-08	0.07986	0.46396	0.002708	0.001842	0.493219	0.00241	0.36141	0.047143	0.932	0.873	0.997	0.997	0.839	0.997	0.884	0.945
rs78562826	9.3116E-09	0.0436457	0.0076	0.0436457	0.0076	1.68963E-08	0.06781	0.744158	0.004351	0.012067	0.038318	0.00326	0.42575	0.006765	0.942	0.857	0.995	0.991	0.972	0.996	0.885	0.972
rs11039377	9.3208E-09	0.029977	0.00522	0.029977	0.00522	1.69152E-08	0.80923	0.21579	0.000828	0.000102	0.901512	0.00765	0.02852	0.973117	0.781	0.874	0.998	0.999	0.653	0.978	0.954	0.749
rs936749	9.3216E-09	0.0326718	0.00569	0.0326718	0.005689	1.69168E-08	0.16596	0.856399	0.005953	0.008678	0.037347	0.00056	0.13658	0.54315	0.914	0.792	0.992	0.992	0.969	0.999	0.932	0.862
rs1942490	9.3302E-09	0.0293501	0.00511	0.0330578	0.010031	9.51579E-09	0.67168	0.259312	0.001675	0.035318	1.15E-06	0.01351	0.02299	0.673028	0.813	0.627	0.991	0.96	0.999	0.957	0.961	0.809
rs7138805	9.3605E-09	-0.028973	0.00505	-0.035718	0.00953	1.35372E-08	0.08909	0.15652	0.019672	0.17133	0.005559	0.00072	2.3E-05	0.549396	0.923	0.907	0.949	0.852	0.986	0.995	0.996	0.703
rs4988606	9.3681E-09	-0.035848	0.00624	-0.035848	0.006243	1.70123E-08	0.50368	0.289185	0.00034	0.436822	0.003601	0.00096	0.07288	0.426109	0.833	0.867	0.999	0.611	0.987	0.998	0.936	0.845
rs10259095	9.3793E-09	0.0389085	0.00678	0.0389085	0.006777	1.70353E-08	0.40664	0.538356	0.010663	0.008575	0.002913	0.00064	0.64372	0.248879	0.878	0.862	0.984	0.992	0.99	0.999	0.826	0.901
rs137978402	9.3824E-09	0.0299839	0.00522	0.0299839	0.005222	1.70416E-08	0.80241	0.198601	0.000902	0.000104	0.888719	0.00789	0.02722	0.941997	0.785	0.879	0.998	0.999	0.661	0.978	0.956	0.758
rs74478726	9.389E-09	-0.036149	0.0063	-0.037312	0.010716	1.13363E-08	0.4159	0.908832	0.006167	6.7E-06	0.719796	0.00506	0.0015	0.696018	0.81	0.697	0.973	1	0.463	0.973	0.982	0.755
rs12423855	9.3918E-09	-0.02897	0.00505	-0.035717	0.00953	1.35727E-08	0.08926	0.156399	0.019724	0.171222	0.005554	0.00072	2.3E-05	0.549502	0.923	0.907	0.949	0.852	0.986	0.995	0.996	0.703
rs11189503	9.394E-09	0.0313564	0.00546	0.0338192	0.008298	1.70654E-08	0.56116	0.701414	0.019389	0.01951	0.000788	0.00072	0.00145	0.742097	0.839	0.738	0.956	0.981	0.993	0.999	0.987	0.73
rs7437066	9.3945E-09	-0.036148	0.0063	-0.03731	0.010717	1.13413E-08	0.41583	0.908443	0.006154	6.7E-06	0.71934	0.00507	0.0015	0.695733	0.81	0.697	0.973	1	0.463	0.973	0.982	0.755
rs165815	9.3968E-09	0.0367567	0.0064	0.0367567	0.006402	1.70712E-08	0.44415	0.688755	0.002188	0.000111	0.007786	0.0107	0.95874	0.429932	0.851	0.818	0.996	0.999	0.982	0.973	0.703	0.853
rs11131349	9.4076E-09	-0.036441	0.00635	-0.036441	0.006347	1.70934E-08	0.36734	0.54144	3.29E-05	0.067144	0.019423	0.01051	0.21006	0.092392	0.875	0.726	1	0.946	0.975	0.978	0.907	0.926
rs62084669	9.4092E-09	0.0337095	0.00587	0.0341824	0.009714	1.70966E-08	0.43486	0.01189	0.000273	0.149657	0.991888	0.00031	0.16893	0.00291	0.628	0.94	0.999	0.829	0.598	0.999	0.889	0.964
rs8076753	9.4092E-09	0.0337095	0.00587	0.0341824	0.009714	1.70966E-08	0.43486	0.01189	0.000273	0.149657	0.991888	0.00031	0.16893	0.00291	0.628	0.94	0.999	0.829	0.598	0.999	0.889	0.964
rs987399	9.4098E-09	-0.029365	0.00511	-0.029365	0.005115	1.70979E-08	0.8746	0.175117	0.065601	0.004443	0.144218	6E-05	0.02519	0.18852	0.765	0.901	0.816	0.994	0.921	1	0.965	0.901
rs1349999	9.4105E-09	-0.029365	0.00511	-0.029365	0.005115	1.70995E-08	0.8746	0.175117	0.065602	0.004443	0.144218	6E-05	0.02519	0.18852	0.765	0.901	0.816	0.994	0.921	1	0.965	0.901
rs7405987	9.4215E-09	0.0337083	0.00587	0.0341966	0.009742	1.7122E-08	0.43486	0.01174	0.00026	0.149657	0.996787	0.00033	0.16961	0.002848	0.628	0.94	0.999	0.828	0.595	0.999	0.888	0.964
rs531106	9.444E-09	-0.029088	0.00507	-0.029088	0.005067	1.71682E-08	0.32719	0.106004	0.000556	0.002431	0.094612	0.05505	0.07285	0.042902	0.895	0.93	0.999	0.997	0.95	0.847	0.953	0.951
rs12376660	9.4486E-09	-0.038857	0.00677	-0.040923	0.008415	1.71776E-08	0.2619	0.859691	0.000902	0.078293	0.026925	0.00748	0.02582	0.002451	0.908	0.807	0.999	0.949	0.976	0.989	0.971	0.976
rs59207179	9.4519E-09	-0.036472	0.00635	-0.036472	0.006354	1.71845E-08	0.39784	0.538337	3.44E-05	0.059169	0.019955	0.01057	0.20893	0.102233	0.87	0.725	1	0.952	0.975	0.978	0.907	0.923
rs10959614	9.4544E-09	-0.038797	0.00676	-0.041379	0.008778	1.71896E-08	0.17968	0.836466	0.001035	0.085325	0.028784	0.00653	0.03371	0.001729	0.92	0.805	0.999	0.945	0.976	0.991	0.968	0.978
rs4788199	9.46E-09	-0.029057	0.00506	-0.030332	0.006971	1.7201E-08	0.20915	0.407555	0.020887	0.003315	0.000325	0.00061	0.35839	0.304311	0.887	0.855	0.948	0.995	0.995	0.999	0.858	0.618
rs56324858	9.4639E-09	0.0370307	0.00645	0.0369149	0.008323	1.39725E-08	0.55206	0.132236	0.088673	8.36E-05	0.12453	2.1E-05	0.47382	0.95676	0.563	0.846	0.571	0.999	0.865	1	0.723	0.631
rs3020399	9.4655E-09	-0.033393	0.00582	-0.033061	0.007391	1.72124E-08	0.47935	0.038718	0.00322	0.401433	0.047909	9.6E-06	0.44942	0.058132	0.627	0.917	0.99	0.586	0.946	1	0.798	0.914
rs78640478	9.4682E-09	0.061469	0.01071	0.063381	0.012345	1.7218E-08	0.52247	0.049712	0.007078	0.052195	0.001313	0.0015	0.06256	0.18511	0.748	0.942	0.991	0.964	0.993	0.998	0.954	0.916
rs12127455	9.4771E-09	-0.049611	0.00864	-0.058075	0.013746	4.3169E-09	0.65775	0.159417	0.000227	3.42E-05	0.050601	0.31151	0.09043	0.033409	0.729	0.867	0.998	1	0.941	0.075	0.911	0.934

Table S3

rs35828961	9.4964E-09	0.030276	0.00528	0.030276	0.005275	1.7276E-08	0.16819	0.113789	0.000639	0.051344	0.095851	0.00138	0.11246	0.905254	0.915	0.925	0.999	0.964	0.948	0.998	0.939	0.792
rs9556979	9.4982E-09	0.0303661	0.00529	0.0298965	0.008709	8.38719E-09	0.64847	0.640767	2.22E-07	0.20543	0.215644	0.03437	0.00092	0.83436	0.537	0.677	1	0.59	0.755	0.652	0.982	0.626
rs4758869	9.4982E-09	-0.02896	0.00505	-0.035704	0.009531	1.37109E-08	0.08964	0.156499	0.019711	0.17254	0.005556	0.00072	2.3E-05	0.549523	0.923	0.907	0.949	0.851	0.986	0.995	0.996	0.702
rs7263291	9.507E-09	-0.032352	0.00564	-0.032352	0.005637	1.72978E-08	0.10107	0.21548	0.003738	0.035148	0.182051	0.00137	0.00318	0.835399	0.932	0.913	0.996	0.977	0.928	0.998	0.986	0.837
rs72631011	9.5261E-09	-0.036516	0.00636	-0.036516	0.006363	1.73371E-08	0.38214	0.546408	3.62E-05	0.061821	0.019361	0.01009	0.21603	0.102721	0.873	0.727	1	0.95	0.975	0.979	0.905	0.923
rs11173529	9.5333E-09	-0.02895	0.00504	-0.035737	0.009523	1.40135E-08	0.08127	0.146975	0.019593	0.170742	0.006257	0.00074	2.4E-05	0.549735	0.926	0.91	0.95	0.854	0.986	0.995	0.996	0.704
rs9468220	9.535E-09	-0.036828	0.00642	-0.036828	0.006417	1.73555E-08	0.88082	0.240299	0.000889	0.004423	0.142195	0.01854	0.07195	0.005014	0.837	0.91	0.999	0.995	0.939	0.965	0.954	0.972
rs72631013	9.5421E-09	-0.036516	0.00636	-0.036516	0.006363	1.73699E-08	0.38179	0.545672	3.65E-05	0.061451	0.019323	0.0101	0.21634	0.103086	0.873	0.727	1	0.95	0.976	0.979	0.905	0.923
rs16874026	9.5438E-09	0.0412913	0.0072	0.0412913	0.007195	1.73734E-08	0.42506	0.54321	0.001014	0.021892	0.0984	0.00143	0.10102	0.410746	0.882	0.868	0.999	0.984	0.948	0.998	0.943	0.883
rs1606263	9.5446E-09	-0.032353	0.00564	-0.032353	0.005638	1.73752E-08	0.09997	0.215987	0.003728	0.035692	0.18276	0.00136	0.00322	0.834128	0.933	0.913	0.996	0.976	0.928	0.998	0.986	0.837
rs7267461	9.5447E-09	-0.032347	0.00564	-0.032347	0.005637	1.73754E-08	0.10129	0.2158	0.003733	0.035174	0.182145	0.00138	0.00316	0.835524	0.932	0.913	0.996	0.977	0.928	0.998	0.986	0.837
rs6796790	9.5453E-09	-0.035008	0.0061	-0.035008	0.0061	1.7186E-08	0.83343	0.078716	0.071148	0.001646	0.039517	2.5E-05	0.36484	0.824745	0.714	0.906	0.748	0.996	0.954	1	0.831	0.76
rs11965538	9.5511E-09	-0.053121	0.00926	-0.055064	0.013595	1.73885E-08	0.91564	0.950531	0.001255	0.027045	0.466302	0.00104	0.07768	0.000184	0.805	0.787	0.998	0.977	0.831	0.998	0.943	0.981
rs376078132	9.5568E-09	-0.036132	0.0063	-0.037293	0.010718	1.15123E-08	0.41588	0.910412	0.006216	6.68E-06	0.718582	0.00508	0.00151	0.697911	0.81	0.697	0.972	1	0.463	0.973	0.982	0.755
rs371833608	9.5573E-09	-0.036132	0.0063	-0.037293	0.010718	1.15122E-08	0.41588	0.910413	0.006216	6.68E-06	0.718585	0.00508	0.00151	0.69791	0.81	0.697	0.972	1	0.463	0.973	0.982	0.755
rs2679090	9.5725E-09	-0.029943	0.00522	-0.029943	0.005218	1.74325E-08	0.088	0.912603	0.001491	0.051025	0.790507	0.00011	0.02952	0.528259	0.914	0.788	0.998	0.953	0.716	1	0.958	0.837
rs61824821	9.577E-09	0.029744	0.00518	0.0281789	0.007269	1.74417E-08	0.42703	0.144904	0.000393	0.00328	0.024964	0.00084	0.55325	0.11248	0.594	0.867	0.999	0.993	0.958	0.998	0.755	0.443
rs10959619	9.5849E-09	-0.038783	0.00676	-0.04133	0.008756	1.74581E-08	0.17704	0.829067	0.000992	0.082935	0.029432	0.00686	0.03419	0.00178	0.92	0.804	0.999	0.946	0.975	0.99	0.968	0.977
rs9878943	9.5998E-09	-0.029243	0.0051	-0.029243	0.005097	1.74775E-08	0.65961	0.092567	0.019489	0.105667	0.01557	3.5E-06	0.35663	0.664933	0.812	0.908	0.945	0.894	0.974	1	0.851	0.698
rs2317914	9.6005E-09	0.0357501	0.00623	0.0357501	0.006231	1.74901E-08	0.8452	0.425214	0.000561	0.01318	0.052441	0.00402	0.14488	0.285294	0.833	0.88	0.999	0.989	0.963	0.995	0.931	0.899
rs12331654	9.6051E-09	-0.036124	0.0063	-0.037283	0.010722	1.15574E-08	0.4155	0.907894	0.006174	6.7E-06	0.71734	0.00512	0.00151	0.696982	0.81	0.697	0.972	1	0.462	0.973	0.982	0.755
rs992981	9.6078E-09	-0.032329	0.00563	-0.032329	0.005635	1.75052E-08	0.10351	0.216792	0.003583	0.041936	0.177718	0.00131	0.00281	0.820511	0.932	0.912	0.996	0.972	0.929	0.998	0.987	0.839
rs61909174	9.6125E-09	0.0352032	0.00614	0.0353514	0.009761	1.16752E-08	0.0148	0.509344	0.000293	0.812419	0.484879	1.2E-05	0.09791	0.070845	0.927	0.75	0.999	0.082	0.663	1	0.891	0.889
rs58143939	9.656E-09	-0.029302	0.00511	-0.030607	0.006764	1.76045E-08	0.02559	0.056888	0.004903	0.110862	0.989813	0.00018	0.05673	0.018244	0.948	0.935	0.992	0.912	0.682	1	0.953	0.957
rs16843093	9.6589E-09	0.0598653	0.01044	0.0635731	0.018282	1.76104E-08	0.70986	0.128692	0.001051	0.019646	0.000197	0.00913	0.00785	0.307824	0.716	0.564	0.998	0.979	0.996	0.976	0.975	0.865
rs4814820	9.6936E-09	-0.042244	0.00736	-0.042244	0.007365	1.76821E-08	0.4149	0.019945	0.002216	0.256608	0.503114	4.6E-05	0.11996	0.116654	0.859	0.944	0.996	0.777	0.805	1	0.925	0.914
rs1800838	9.7067E-09	0.0289014	0.00504	0.0278183	0.005989	1.77061E-08	0.33967	0.844573	0.000518	0.000126	0.8506	0.00039	0.97377	0.375166	0.5	0.675	0.998	0.999	0.54	0.998	0.57	0.766
rs6711924	9.7325E-09	-0.028971	0.00505	-0.028971	0.005051	1.77416E-08	0.84858	0.747776	0.003088	0.004489	0.177689	0.00359	0.00299	0.12746	0.789	0.839	0.996	0.995	0.922	0.995	0.985	0.924
rs111456762	9.7351E-09	0.064365	0.01122	0.0780301	0.017065	1.77451E-08	0.01798	0.139476	0.01437	0.04737	0.053224	0.0083	0.00509	0.004508	0.965	0.937	0.984	0.974	0.972	0.989	0.987	0.979
rs11947589	9.7423E-09	-0.036403	0.00635	-0.036403	0.006347	1.77551E-08	0.37004	0.547207	3.15E-05	0.065109	0.020324	0.01115	0.2108	0.093477	0.874	0.727	1	0.947	0.975	0.976	0.906	0.926
rs72673163	9.7482E-09	0.0412703	0.0072	0.0412703	0.007196	1.77632E-08	0.45485	0.542923	0.000967	0.023616	0.097031	0.00142	0.09926	0.401216	0.878	0.868	0.999	0.982	0.949	0.998	0.943	0.884
rs4500754	9.7662E-09	-0.057804	0.01008	-0.057804	0.01008	1.7788E-08	0.83695	0.553935	0.004022	0.029277	0.158555	0.00014	0.12702	0.180411	0.827	0.86	0.995	0.977	0.926	1	0.933	0.912
rs6734125	9.7814E-09	0.0581423	0.01014	0.06157	0.014692	1.78089E-08	0.1099	0.172813	0.008769	0.028393	0.003289	0.00069	0.08511	0.039543	0.587	0.905	0.986	0.976	0.989	0.999	0.941	0.943
rs3020397	9.7851E-09	-0.033349	0.00582	-0.033009	0.007399	1.78138E-08	0.47204	0.037239	0.003202	0.400503	0.048253	9.8E-06	0.45227	0.060937	0.625	0.918	0.99	0.588	0.945	1	0.797	0.912
rs3885019	9.7941E-09	0.0412681	0.0072	0.0412681	0.007197	1.78263E-08	0.45599	0.543981	0.000962	0.02376	0.097176	0.00144	0.09855	0.397732	0.878	0.868	0.999	0.982	0.949	0.998	0.944	0.885
rs78294873	9.7964E-09	0.047732	0.00832	0.0532556	0.011685	1.61076E-08	0.6712	0.050184	0.000132	0.044493	0.013853	0.08308	0.00116	0.396897	0.824	0.934	1	0.951	0.98	0.704	0.99	0.863
rs41279716	9.81E-09	-0.039008	0.0068	-0.039148	0.012687	1.78481E-08	0.31833	0.074061	0.00175	0.000156	0.068215	0.00921	0.03732	0.011277	0.596	0.483	0.996	0.999	0.939	0.969	0.948	0.95
rs12959805	9.8278E-09	-0.045834	0.00799	-0.045834	0.007994	1.75264E-08	0.12409	0.161005	0.091131	0.027456	0.003354	5.2E-05	0.19735	0.394305	0.915	0.906	0.731	0.972	0.989	1	0.906	0.867
rs67679715	9.8395E-09	0.0412578	0.0072	0.0412578	0.007196	1.78886E-08	0.45574	0.542201	0.000968	0.023662	0.096954	0.00143	0.09939	0.402444	0.878	0.868	0.999	0.982	0.949	0.998	0.943	0.884
rs10489699	9.8406E-09	0.0297295	0.00519	0.0281928	0.007296	1.78901E-08	0.45433	0.142233	0.000371	0.003377	0.022923	0.00095	0.55375	0.107151	0.602	0.868	0.999	0.993	0.96	0.998	0.756	0.441
rs9458641	9.8446E-09	0.0321643	0.00561	0.0321643	0.00561	1.78955E-08	0.23265	0.34316	0.001242	0.011458	0.804173	0.00154	0.05743	0.008622	0.89	0.872	0.998	0.988	0.592	0.998	0.949	0.962
rs9322313	9.8555E-09	-0.030506	0.00532	-0.033225	0.007167	7.683E-09	0.38484	0.2771	6.57E-06	0.011603	0.03665	0.26728	0.01784	0.106504	0.809	0.838	1	0.976	0.955	0.131	0.966	0.897
rs74163407	9.8565E-09	0.0296155	0.00517	0.0296155	0.005166	1.74851E-08	0.40487	0.128719	0.081117	0.000763	0.064684	3.6E-05	0.32978	0.801135	0.831	0.889	0.705	0.998	0.939	1	0.839	0.689
rs9516222	9.8597E-09	0.0336888	0.00588	0.0336888	0.005876	1.79162E-08	0.82096	0.023138	0.001281	0.0693	0.043777	0.00574	0.0107	0.187032	0.85	0.957	0.999	0.958	0.971	0.993	0.98	0.924
rs143737680	9.8648E-09	0.0414466	0.00723	0.0414466	0.007229	1.79233E-08	0.47297	0.603321	0.001604	0.017836	0.083897	0.001	0.09404	0.520848	0.874	0.859	0.998	0.986	0.952	0.999	0.944	0.867
rs10986629	9.8696E-09	0.0301218	0.00525	0.0301218	0.005254	1.79299E-08	0.53496	0.70111	0.007905	0.005832	0.331334	0.00025	0.13367	0.014517	0.854	0.756	0.988	0.993	0.871	1	0.927	0.957
rs12115063	9.8831E-09	0.0333439	0.00582	0.0333439	0.005816	1.79483E-08	0.17255	0.618844	0.002631	0.006278	0.034903	0.00173	0.16088	0.368478	0.911	0.756	0.997	0.994	0.969	0.998	0.925	0.883
rs4729600	9.8892E-09	-0.035828	0.00625	-0.035828	0.00625	1.79568E-08	0.49934	0.289477	0.000488	0.422218	0.003745	0.00073	0.08196	0.411864	0.836	0.869	0.999	0.629	0.987	0.999	0.933	0.849
rs7212192	9.9072E-09	-0.031399	0.00548	-0.034061	0.007144	1.79814E-08	0.75407	0.124663	0.000597	0.029457	0.010015	0.03382	0.01583	0.013596	0.784	0.926	0.999	0.978	0.985	0.918	0.975	0.964
rs5781431	9.9073E-09	-0.030646	0.00535	-0.033173	0.008897	1.72217E-08	0.00204	0.286236	0.083608	0.01504	0.004182	2.2E-05	0.7003	0.703988	0.963	0.839	0.642	0.974	0.985	1	0.535	0.753
rs8031133	9.9107E-09	0.0289153	0.00504	0.0318502	0.008799	9.55787E-09	0.51964	0.595783	5E-06	0.111289	0.015023	0.08344	0.00027	0.338048	0.536	0.726	1	0.723	0.965	0.488	0.991	0.785
rs58293956	9.9116E-09	-0.045819	0.00799	-0.045819	0.007993	1.77116E-08	0.12414	0.163184	0.090647	0.02753	0.003352	5.3E-05	0.19617	0.395093	0.915	0.906	0.734	0.972	0.989	1	0.907	0.867
rs12961390	9.9125E-09	-0.045819	0.00799	-0.045819	0.007993	1.77124E-08	0.12414	0.163183	0.090661	0.027538	0.003352	5.3E-05	0.19618	0.395096	0.915	0.906	0.734	0.972	0.989	1	0.907	0.867
rs226007	9.9228E-09	0.0297011	0.00518	0.0297011	0.005182	1.80028E-08	0.5276	0.271003	6.75E-05	0.28637	0.315339	0.00016	0.26191	0.589033	0.809	0.852	1	0.708	0.83	1	0.858	0.796
rs6722351	9.9256E-09	0.0289377	0.00505	0.0289377	0.005048	1.80066E-08	0.92387	0.946458	0.003119	0.00473	0.124863	0.0045	0.00676	0.040891	0.803	0.819	0.996	0.995	0.939	0.994	0.981	0.948

Table S3

rs34536601	9.9264E-09	0.0337925	0.0059	0.0348632	0.007416	1.80076E-08	0.51481	0.989878	0.018719	0.000853	0.014329	0.00115	0.00735	0.370716	0.84	0.773	0.957	0.998	0.977	0.998	0.976	0.642
rs1373752	9.9292E-09	-0.045839	0.008	-0.045839	0.007997	1.77312E-08	0.1251	0.16189	0.090934	0.027342	0.00335	5.3E-05	0.19842	0.393048	0.915	0.906	0.733	0.972	0.989	1	0.906	0.867
rs11616510	9.9449E-09	0.0358055	0.00625	0.0358055	0.006247	1.80329E-08	0.81342	0.424953	0.000568	0.014315	0.049937	0.00405	0.13835	0.305093	0.837	0.881	0.999	0.988	0.964	0.995	0.933	0.897
rs12215241	9.9532E-09	-0.033032	0.00576	-0.033032	0.005763	1.80443E-08	0.39006	0.834061	0.000149	0.003911	0.526582	0.00516	0.27665	0.059687	0.863	0.761	1	0.994	0.802	0.99	0.883	0.93
rs7142958	9.9537E-09	0.0477757	0.00834	0.0532883	0.011676	1.62552E-08	0.65949	0.055187	0.000135	0.043132	0.01372	0.08492	0.00112	0.39307	0.824	0.932	1	0.952	0.98	0.697	0.99	0.863
rs9365484	9.9649E-09	0.0321451	0.00561	0.0321451	0.005609	1.80603E-08	0.23246	0.344724	0.001275	0.011148	0.802442	0.00155	0.05727	0.008563	0.89	0.872	0.998	0.989	0.592	0.997	0.949	0.962
rs7610118	9.9673E-09	-0.031269	0.00546	-0.031269	0.005456	1.80635E-08	0.14992	0.774209	0.000434	0.020911	0.832508	9.5E-05	0.76474	0.397562	0.878	0.772	0.999	0.973	0.658	1	0.729	0.829
rs11933769	9.9939E-09	-0.036395	0.00635	-0.036395	0.006351	1.80999E-08	0.37136	0.540052	3.38E-05	0.065536	0.020012	0.0106	0.20817	0.101535	0.874	0.726	1	0.947	0.975	0.978	0.907	0.923
rs80225139	9.9997E-09	-0.036389	0.00635	-0.036389	0.00635	1.81079E-08	0.37163	0.537482	3.49E-05	0.06414	0.019889	0.01066	0.20936	0.098769	0.874	0.726	1	0.948	0.975	0.977	0.907	0.924
rs6550635	1.0002E-08	0.0289909	0.00506	0.0290553	0.005462	1.81103E-08	0.3368	0.105923	3.28E-05	0.031216	0.456205	0.00976	0.0318	0.081082	0.664	0.913	1	0.971	0.823	0.977	0.959	0.924
rs117592684	1.001E-08	0.0414292	0.00723	0.0414292	0.00723	1.81224E-08	0.47128	0.609955	0.001618	0.018206	0.083363	0.00102	0.08968	0.520124	0.874	0.858	0.998	0.986	0.952	0.999	0.945	0.867
rs150494216	1.0011E-08	-0.079264	0.01383	-0.079264	0.013832	1.81233E-08	0.2466	0.071595	1.82E-05	0.180341	0.153213	0.00526	0.0338	0.605604	0.884	0.922	1	0.837	0.915	0.988	0.958	0.701
rs56040103	1.0015E-08	0.0414274	0.00723	0.0414274	0.007229	1.8129E-08	0.47162	0.603308	0.001603	0.018219	0.083886	0.001	0.09403	0.520823	0.874	0.859	0.998	0.986	0.952	0.999	0.944	0.867
rs2606151	1.0017E-08	-0.029932	0.00522	-0.029932	0.005223	1.81307E-08	0.083	0.814407	0.001534	0.0498	0.772157	0.00013	0.0396	0.436177	0.918	0.807	0.998	0.956	0.73	1	0.954	0.855
rs7939420	1.0029E-08	-0.029914	0.00522	-0.029914	0.00522	1.81478E-08	0.84288	0.235262	0.000841	0.000114	0.874331	0.00776	0.02735	0.946753	0.778	0.871	0.998	0.999	0.665	0.978	0.955	0.755
rs56269308	1.0032E-08	-0.036535	0.00638	-0.036535	0.006376	1.81511E-08	0.42498	0.585146	5.02E-05	0.054039	0.017097	0.00951	0.22289	0.116786	0.868	0.736	1	0.957	0.977	0.981	0.904	0.921
rs35375543	1.0035E-08	-0.045827	0.008	-0.045827	0.007998	1.78795E-08	0.12502	0.162738	0.090902	0.027293	0.003376	5.3E-05	0.19979	0.392579	0.915	0.906	0.733	0.972	0.989	1	0.906	0.867
rs113969904	1.0043E-08	0.0414207	0.00723	0.0414207	0.007229	1.81666E-08	0.47163	0.60555	0.001609	0.01822	0.083752	0.00102	0.08971	0.522802	0.874	0.859	0.998	0.986	0.952	0.999	0.945	0.867
rs6854562	1.0046E-08	-0.036075	0.0063	-0.037215	0.010729	1.20352E-08	0.41565	0.903393	0.006203	6.69E-06	0.713244	0.0052	0.00154	0.698728	0.809	0.695	0.972	1	0.46	0.972	0.981	0.754
rs4690745	1.005E-08	0.0360745	0.0063	0.0372183	0.010726	1.20526E-08	0.41575	0.903862	0.00622	6.71E-06	0.714304	0.0052	0.00154	0.698569	0.809	0.696	0.972	1	0.461	0.972	0.981	0.754
rs6766238	1.0052E-08	-0.034954	0.0061	-0.034954	0.0061	1.80521E-08	0.8329	0.078713	0.071444	0.001653	0.041901	2.5E-05	0.36475	0.824558	0.714	0.905	0.748	0.996	0.953	1	0.831	0.76
rs55855024	1.0058E-08	-0.03126	0.00546	-0.03126	0.005456	1.81869E-08	0.14983	0.775267	0.00044	0.020947	0.829756	9.5E-05	0.76763	0.395493	0.878	0.772	0.999	0.973	0.659	1	0.729	0.829
rs12648517	1.0059E-08	-0.036387	0.00635	-0.036387	0.006351	1.81888E-08	0.36948	0.542533	3.48E-05	0.066458	0.019563	0.01072	0.20889	0.094358	0.874	0.727	1	0.947	0.975	0.977	0.907	0.925
rs7100	1.0064E-08	-0.034998	0.00611	-0.034998	0.006108	1.80441E-08	0.75796	0.081071	0.071716	0.001698	0.047351	2.2E-05	0.33472	0.804889	0.7	0.904	0.745	0.996	0.949	1	0.838	0.762
rs112497356	1.0078E-08	0.0414165	0.00723	0.0414165	0.007229	1.82143E-08	0.47163	0.605572	0.001611	0.018229	0.083826	0.00102	0.08972	0.522834	0.874	0.859	0.998	0.986	0.952	0.999	0.945	0.867
rs625274	1.0081E-08	-0.029003	0.00506	-0.029854	0.006987	1.82187E-08	0.31972	0.046357	0.006616	0.158834	0.819252	3.3E-05	0.01889	0.018121	0.864	0.927	0.984	0.844	0.571	1	0.965	0.949
rs9827708	1.0091E-08	-0.029283	0.00511	-0.029283	0.005111	1.81799E-08	0.94888	0.061214	0.028374	0.088876	0.016445	4.1E-06	0.28395	0.97226	0.778	0.921	0.92	0.911	0.974	1	0.873	0.757
rs7694538	1.0094E-08	-0.036391	0.00635	-0.036391	0.006352	1.82365E-08	0.37297	0.538691	3.42E-05	0.065644	0.019898	0.01057	0.20881	0.101592	0.874	0.726	1	0.947	0.975	0.978	0.907	0.923
rs3003923	1.0111E-08	-0.033312	0.00581	-0.032966	0.007447	1.82594E-08	0.467	0.035246	0.003348	0.397173	0.047485	9.6E-06	0.46439	0.063592	0.624	0.919	0.99	0.591	0.946	1	0.793	0.911
rs2397678	1.0117E-08	0.0316867	0.00553	0.0316867	0.005531	1.82679E-08	0.7557	0.202219	0.000264	0.027597	0.186048	0.00134	0.50737	0.215346	0.83	0.901	1	0.977	0.915	0.998	0.846	0.902
rs9971534	1.0119E-08	-0.032058	0.0056	-0.032621	0.00879	1.6404E-08	0.53163	0.030629	0.002056	0.868801	0.012013	1.2E-05	0.28662	0.059333	0.557	0.912	0.991	0.204	0.971	1	0.811	0.9
rs36192672	1.0121E-08	0.0360667	0.0063	0.0372058	0.010729	1.21186E-08	0.41531	0.90285	0.006205	6.7E-06	0.712832	0.00522	0.00154	0.698971	0.809	0.695	0.972	1	0.46	0.972	0.981	0.754
rs61824822	1.0132E-08	0.029693	0.00518	0.0280461	0.007326	1.82877E-08	0.41246	0.145445	0.000416	0.003344	0.02521	0.0008	0.55368	0.109711	0.589	0.866	0.999	0.993	0.958	0.998	0.754	0.44
rs1372420	1.0133E-08	-0.033997	0.00593	-0.034068	0.006249	1.82893E-08	0.55456	0.014895	0.000185	0.192098	0.072091	0.00179	0.02875	0.531671	0.715	0.949	1	0.837	0.948	0.997	0.961	0.844
rs226006	1.0134E-08	0.0296839	0.00518	0.0296839	0.005182	1.82905E-08	0.50637	0.270362	6.77E-05	0.295525	0.317269	0.00016	0.26125	0.588167	0.811	0.851	1	0.699	0.828	1	0.857	0.795
rs6760344	1.0142E-08	0.0306116	0.00534	0.0342226	0.007995	1.83017E-08	0.11395	0.033806	0.053427	0.007936	0.000685	0.00067	0.11141	0.477897	0.918	0.942	0.854	0.991	0.994	0.999	0.933	0.684
rs219009	1.0152E-08	0.0305831	0.00534	0.0384774	0.009357	9.73569E-09	0.71788	0.021644	0.000388	0.002303	0.197226	0.18249	0.00157	0.010262	0.762	0.942	0.998	0.996	0.862	0.303	0.989	0.961
rs42752	1.0155E-08	0.0296793	0.00518	0.0296793	0.005181	1.83196E-08	0.52663	0.27039	6.77E-05	0.289598	0.316023	0.00016	0.26244	0.58902	0.808	0.851	1	0.705	0.829	1	0.857	0.796
rs6434774	1.0166E-08	-0.040781	0.00712	-0.040781	0.00712	1.83336E-08	0.33326	0.197007	0.000486	0.028919	0.007551	0.01789	0.01318	0.94163	0.894	0.912	0.999	0.979	0.986	0.966	0.976	0.801
rs1372611	1.0177E-08	-0.029871	0.00522	-0.029871	0.005215	1.83485E-08	0.06113	0.65141	0.003114	0.032181	0.730693	0.00018	0.02059	0.52804	0.929	0.836	0.995	0.972	0.754	1	0.967	0.85
rs7629352	1.0179E-08	0.0312485	0.00546	0.0312485	0.005456	1.8352E-08	0.15026	0.774252	0.000434	0.021043	0.836155	9.6E-05	0.76349	0.398579	0.878	0.772	0.999	0.973	0.657	1	0.729	0.829
rs72631007	1.0183E-08	-0.036369	0.00635	-0.036369	0.00635	1.83568E-08	0.36937	0.537889	3.48E-05	0.065677	0.019891	0.01065	0.20912	0.098917	0.874	0.726	1	0.947	0.975	0.978	0.907	0.924
rs11610160	1.0197E-08	-0.039372	0.00687	-0.039372	0.006874	1.83762E-08	0.90051	0.15568	0.001378	0.007073	0.017823	0.01158	0.07214	0.166405	0.81	0.922	0.998	0.994	0.98	0.981	0.954	0.923
rs9346929	1.0202E-08	0.0321191	0.00561	0.0321191	0.005608	1.83829E-08	0.23286	0.345679	0.001281	0.011301	0.800424	0.00156	0.05722	0.008533	0.89	0.871	0.998	0.988	0.591	0.997	0.949	0.962
rs1938380	1.0216E-08	0.029898	0.00522	0.0310111	0.007832	1.84055E-08	0.23205	0.055291	0.000632	0.000513	0.046983	0.018	0.14245	0.065138	0.882	0.511	0.999	0.999	0.957	0.945	0.914	0.926
rs682725	1.0221E-08	0.0305779	0.00534	0.0362562	0.008086	1.456E-08	0.23077	0.246158	0.000279	0.021274	0.044677	0.12507	0.00199	0.00861	0.89	0.887	0.999	0.974	0.962	0.539	0.988	0.967
rs6778410	1.0229E-08	-0.029031	0.00507	-0.029031	0.005069	1.84004E-08	0.527	0.659107	0.022063	0.007838	0.521578	2.3E-06	0.09098	0.681808	0.646	0.782	0.923	0.987	0.75	1	0.913	0.773
rs11189513	1.0232E-08	0.0312612	0.00546	0.0340158	0.008413	1.8456E-08	0.65564	0.832953	0.023604	0.021957	0.00056	0.00071	0.00128	0.779206	0.827	0.759	0.945	0.978	0.994	0.998	0.987	0.737
rs2878912	1.0239E-08	0.041207	0.0072	0.041207	0.007196	1.84766E-08	0.45561	0.541155	0.000985	0.023464	0.097649	0.00145	0.10029	0.409587	0.877	0.868	0.999	0.982	0.948	0.998	0.943	0.883
rs12428483	1.0247E-08	0.0301861	0.00527	0.0301861	0.005271	1.85024E-08	0.42902	0.967751	0.007379	0.000343	0.020622	0.00033	0.46701	0.982782	0.633	0.734	0.982	0.999	0.965	0.999	0.803	0.725
rs62404520	1.0247E-08	0.0306821	0.00536	0.0338271	0.009845	6.95051E-09	0.12169	0.972658	0.014479	5.72E-07	0.299161	0.01515	0.86554	0.00417	0.877	0.713	0.875	1	0.791	0.864	0.606	0.962
rs74049857	1.0248E-08	0.0477489	0.00834	0.0531865	0.011631	1.67522E-08	0.65566	0.056811	0.000137	0.042813	0.013649	0.08551	0.00115	0.391018	0.825	0.932	1	0.952	0.98	0.696	0.99	0.863
rs114941240	1.0254E-08	-0.079207	0.01383	-0.079207	0.013832	1.85231E-08	0.23883	0.071687	1.74E-05	0.19219	0.152852	0.00518	0.03395	0.604538	0.884	0.921	1	0.824	0.914	0.988	0.957	0.698
rs113087200	1.0262E-08	0.0298939	0.00522	0.0310054	0.00783	1.85483E-08	0.23253	0.055288	0.000632	0.000515	0.047014	0.018	0.14248	0.065109	0.882	0.511	0.999	0.999	0.957	0.945	0.914	0.926
rs12925413	1.0267E-08	0.0590612	0.01031	0.0623349	0.014783	1.85646E-08	0.02396	0.540092	0.009459	0.000296	0.195726	0.0026	0.82148	0.007686	0.944	0.725	0.983	0.999	0.907	0.996	0.774	0.965

Table S3

rs62302683	1.027E-08	0.0382087	0.00667	0.0382087	0.006673	1.85744E-08	0.13355	0.771124	0.017688	0.005243	0.00248	0.00144	0.4068	0.179182	0.924	0.845	0.974	0.995	0.991	0.998	0.88	0.918
rs35639725	1.0279E-08	-0.045831	0.008	-0.045831	0.008004	1.78565E-08	0.12331	0.172583	0.096408	0.03313	0.0028	4.3E-05	0.1852	0.410506	0.913	0.901	0.708	0.964	0.99	1	0.907	0.86
rs17598763	1.0286E-08	0.0296803	0.00518	0.0281109	0.007288	1.86247E-08	0.42195	0.142998	0.000406	0.003254	0.025039	0.00088	0.55166	0.112243	0.593	0.867	0.999	0.993	0.958	0.998	0.756	0.443
rs6455843	1.0291E-08	0.032364	0.00565	0.032364	0.005652	1.86396E-08	0.30368	0.499043	0.001286	0.017033	0.991048	0.00147	0.02315	0.013254	0.883	0.856	0.998	0.984	0.668	0.998	0.966	0.958
rs7630010	1.0294E-08	-0.030132	0.00526	-0.03193	0.008873	9.91451E-09	0.53408	0.018545	0.059762	0.412555	0.006496	9.8E-07	0.03796	0.48782	0.485	0.914	0.508	0.367	0.977	1	0.923	0.709
rs67007465	1.0316E-08	0.0312797	0.00546	0.0338017	0.008253	1.87186E-08	0.63532	0.787369	0.021697	0.020329	0.000735	0.00072	0.00141	0.774421	0.83	0.753	0.951	0.98	0.993	0.998	0.987	0.737
rs2683792	1.0317E-08	-0.029096	0.00508	-0.029096	0.005082	1.87214E-08	0.95607	0.98401	0.00315	0.061627	0.004619	0.00069	0.01197	0.628555	0.789	0.798	0.996	0.951	0.987	0.999	0.974	0.839
rs59738671	1.0318E-08	-0.036339	0.00635	-0.036339	0.006347	1.87233E-08	0.3648	0.537634	3.34E-05	0.065912	0.020624	0.0109	0.20701	0.100248	0.875	0.725	1	0.947	0.975	0.977	0.907	0.924
rs140508781	1.0319E-08	0.0299887	0.00524	0.0299887	0.005238	1.87259E-08	0.7942	0.204991	0.000925	0.000113	0.809089	0.00971	0.02573	0.895914	0.793	0.881	0.998	0.999	0.696	0.974	0.958	0.772
rs887199	1.0325E-08	0.036674	0.00641	0.036674	0.006406	1.87461E-08	0.45143	0.654529	0.002269	0.000114	0.007951	0.01058	0.91987	0.440874	0.849	0.821	0.996	0.999	0.982	0.973	0.692	0.85
rs17827682	1.0327E-08	-0.036338	0.00635	-0.036338	0.006347	1.87503E-08	0.36483	0.537778	3.34E-05	0.065983	0.020617	0.01089	0.20694	0.100502	0.875	0.725	1	0.947	0.975	0.977	0.907	0.924
rs60278718	1.0328E-08	-0.036338	0.00635	-0.036338	0.006347	1.87533E-08	0.36483	0.537778	3.34E-05	0.065984	0.020617	0.01089	0.20694	0.100502	0.875	0.725	1	0.947	0.975	0.977	0.907	0.924
rs60325274	1.0328E-08	-0.036338	0.00635	-0.036338	0.006347	1.87533E-08	0.36483	0.537778	3.34E-05	0.065984	0.020617	0.01089	0.20694	0.100502	0.875	0.725	1	0.947	0.975	0.977	0.907	0.924
rs6833550	1.0328E-08	-0.036338	0.00635	-0.036338	0.006347	1.87533E-08	0.36483	0.537778	3.34E-05	0.065984	0.020617	0.01089	0.20694	0.100502	0.875	0.725	1	0.947	0.975	0.977	0.907	0.924
rs72629575	1.0328E-08	-0.036338	0.00635	-0.036338	0.006347	1.87533E-08	0.36483	0.537778	3.34E-05	0.065984	0.020617	0.01089	0.20694	0.100502	0.875	0.725	1	0.947	0.975	0.977	0.907	0.924
rs72629579	1.0328E-08	-0.036338	0.00635	-0.036338	0.006347	1.87533E-08	0.36483	0.537778	3.34E-05	0.065984	0.020617	0.01089	0.20694	0.100502	0.875	0.725	1	0.947	0.975	0.977	0.907	0.924
rs7668854	1.0328E-08	-0.036338	0.00635	-0.036338	0.006347	1.87533E-08	0.36483	0.537778	3.34E-05	0.065984	0.020617	0.01089	0.20694	0.100502	0.875	0.725	1	0.947	0.975	0.977	0.907	0.924
rs7684595	1.0328E-08	-0.036338	0.00635	-0.036338	0.006347	1.87533E-08	0.36483	0.537778	3.34E-05	0.065984	0.020617	0.01089	0.20694	0.100502	0.875	0.725	1	0.947	0.975	0.977	0.907	0.924
rs11936199	1.033E-08	-0.036337	0.00635	-0.036337	0.006347	1.87614E-08	0.36483	0.537778	3.34E-05	0.065984	0.020618	0.01089	0.20695	0.100502	0.875	0.725	1	0.947	0.975	0.977	0.907	0.924
rs76961086	1.033E-08	-0.036337	0.00635	-0.036337	0.006347	1.87614E-08	0.36483	0.537778	3.34E-05	0.065984	0.020618	0.01089	0.20695	0.100502	0.875	0.725	1	0.947	0.975	0.977	0.907	0.924
rs11947894	1.033E-08	-0.036338	0.00635	-0.036338	0.006347	1.87625E-08	0.3576	0.537778	3.34E-05	0.066646	0.020618	0.01089	0.20695	0.100502	0.876	0.726	1	0.946	0.975	0.977	0.907	0.924
rs79312220	1.0335E-08	0.0786544	0.01374	0.0786544	0.013738	1.77176E-08	0.35535	0.389003	0.044009	0.002061	0.913364	1.9E-06	0.21098	0.745637	0.802	0.795	0.803	0.994	0.573	1	0.843	0.63
rs62302679	1.034E-08	0.0382056	0.00667	0.0382056	0.006673	1.87917E-08	0.13355	0.773409	0.017686	0.005243	0.002428	0.00148	0.4035	0.178075	0.924	0.845	0.974	0.995	0.991	0.998	0.881	0.919
rs34115597	1.0341E-08	-0.031345	0.00548	-0.031633	0.007431	1.87947E-08	0.99443	0.008549	0.004873	0.273792	0.003565	3.1E-05	0.84161	0.481517	0.745	0.946	0.986	0.721	0.985	1	0.714	0.821
rs72629595	1.0342E-08	-0.036336	0.00635	-0.036336	0.006347	1.87987E-08	0.36481	0.537562	3.34E-05	0.065919	0.020628	0.01091	0.20704	0.100266	0.875	0.725	1	0.947	0.975	0.977	0.907	0.924
rs9847828	1.0342E-08	0.0371964	0.0065	0.0377953	0.007242	1.83864E-08	0.02409	0.56189	0.087819	0.010006	0.011974	3.7E-05	0.14525	0.839913	0.94	0.824	0.717	0.987	0.979	1	0.91	0.721
rs10567541	1.0343E-08	-0.029955	0.00523	-0.029461	0.006134	1.43272E-08	0.94591	0.332674	0.008407	0.62322	0.128856	5.4E-07	0.19054	0.056817	0.697	0.812	0.952	0.378	0.884	1	0.857	0.903
rs2296462	1.0347E-08	-0.031748	0.00555	-0.034715	0.007249	1.88156E-08	0.15825	0.015924	0.002528	0.16599	0.095675	0.00518	0.00335	0.047293	0.929	0.962	0.997	0.9	0.956	0.993	0.987	0.954
rs7440771	1.035E-08	-0.036042	0.0063	-0.037178	0.010734	1.23598E-08	0.41559	0.902079	0.00623	6.72E-06	0.71095	0.00527	0.00154	0.700145	0.809	0.695	0.972	1	0.459	0.972	0.981	0.754
rs12508420	1.0361E-08	0.0380992	0.00666	0.0380992	0.006655	1.88594E-08	0.11828	0.73717	0.015623	0.006617	0.002251	0.00163	0.43657	0.149702	0.927	0.85	0.978	0.994	0.992	0.998	0.876	0.924
rs6504572	1.0362E-08	-0.030813	0.00538	-0.029259	0.007816	1.88625E-08	0.41631	0.072492	0.000316	0.120826	0.755335	5E-05	0.29061	0.011155	0.577	0.886	0.999	0.83	0.46	1	0.824	0.938
rs8119241	1.0364E-08	-0.032256	0.00563	-0.032256	0.005635	1.88685E-08	0.09962	0.231531	0.004007	0.039987	0.170915	0.00135	0.00268	0.828372	0.932	0.91	0.996	0.974	0.931	0.998	0.987	0.838
rs28828737	1.037E-08	-0.03604	0.0063	-0.037176	0.010735	1.23765E-08	0.41582	0.902027	0.006232	6.71E-06	0.710703	0.00528	0.00154	0.699699	0.809	0.695	0.972	1	0.459	0.972	0.981	0.754
rs283037	1.0379E-08	-0.029096	0.00508	-0.029096	0.005083	1.89149E-08	0.84018	0.5749	2.25E-05	0.10236	0.277358	0.00181	0.27933	0.163649	0.802	0.836	1	0.911	0.874	0.997	0.88	0.901
rs1503578	1.038E-08	-0.028881	0.00505	-0.0357	0.009538	1.50177E-08	0.08279	0.147075	0.020539	0.171607	0.006296	0.00075	2.3E-05	0.550401	0.925	0.909	0.947	0.853	0.985	0.995	0.996	0.704
rs200360580	1.0382E-08	0.032093	0.00561	0.032093	0.005606	1.89239E-08	0.05881	0.620542	0.003467	0.000682	0.643764	0.00142	0.04124	0.678729	0.924	0.827	0.994	0.998	0.761	0.998	0.952	0.713
rs34978485	1.0383E-08	-0.036039	0.0063	-0.037175	0.010735	1.23927E-08	0.41582	0.902052	0.006234	6.71E-06	0.710697	0.00528	0.00154	0.69969	0.809	0.695	0.972	1	0.459	0.972	0.981	0.754
rs72780254	1.0389E-08	0.0674707	0.01179	0.0674707	0.011787	1.89449E-08	0.5241	0.31514	0.000148	0.044127	0.040354	0.00582	0.79358	0.022675	0.863	0.889	1	0.967	0.966	0.991	0.797	0.954
rs7027175	1.0401E-08	-0.039173	0.00684	-0.039173	0.006844	1.89841E-08	0.13776	0.764595	0.000593	0.125013	0.048097	0.00434	0.02088	0.017426	0.923	0.787	0.999	0.914	0.966	0.994	0.972	0.961
rs188411918	1.0401E-08	0.0642224	0.01122	0.0596222	0.016426	1.0536E-08	0.3194	0.207545	0.000166	0.960889	0.887317	2.2E-06	0.08064	0.271391	0.741	0.779	0.999	0.084	0.317	1	0.869	0.758
rs174528	1.0402E-08	0.0291646	0.0051	0.0308981	0.008186	1.89882E-08	0.11144	0.381465	0.015114	0.116437	3.02E-05	0.00012	0.30604	0.539572	0.905	0.661	0.961	0.888	0.997	0.999	0.866	0.829
rs72629596	1.0403E-08	-0.03633	0.00635	-0.03633	0.006347	1.89911E-08	0.36546	0.537494	3.34E-05	0.066178	0.020633	0.01092	0.20708	0.100284	0.875	0.725	1	0.947	0.975	0.977	0.907	0.924
rs182329420	1.0404E-08	0.064222	0.01122	0.0596187	0.016431	1.05324E-08	0.3194	0.207575	0.000166	0.960825	0.886332	2.2E-06	0.08052	0.271304	0.741	0.778	0.999	0.083	0.317	1	0.869	0.758
rs117985010	1.0412E-08	-0.068403	0.01195	-0.068403	0.011951	1.90179E-08	0.22623	0.5621	1.12E-05	0.011008	0.626191	0.00413	0.77813	0.211323	0.862	0.803	1	0.984	0.723	0.989	0.608	0.868
rs10086442	1.0418E-08	0.0451047	0.00788	0.0445869	0.008364	1.90372E-08	0.67136	0.175341	0.000527	0.001439	0.162614	0.00022	0.77502	0.633835	0.74	0.491	0.998	0.996	0.862	0.999	0.546	0.743
rs73070918	1.0419E-08	0.0488553	0.00854	0.0488553	0.008536	1.90401E-08	0.37056	0.139774	0.000275	0.013037	0.041635	0.03385	0.02611	0.405271	0.893	0.924	1	0.99	0.97	0.927	0.97	0.889
rs3757859	1.0443E-08	0.0368104	0.00643	0.0368104	0.006432	1.91159E-08	0.50397	0.265556	0.000272	0.448991	0.003699	0.0011	0.0899	0.448904	0.831	0.869	0.999	0.599	0.987	0.998	0.928	0.838
rs23023	1.0451E-08	0.0288637	0.00504	0.0288637	0.005043	1.91401E-08	0.37548	0.79242	0.001625	0.001735	0.090479	0.00168	0.28911	0.624235	0.87	0.764	0.998	0.997	0.942	0.997	0.885	0.835
rs13123702	1.0458E-08	-0.030056	0.00525	-0.030056	0.005252	1.91643E-08	0.92229	0.191291	0.006051	0.000881	0.24963	0.00288	0.10909	0.084068	0.825	0.913	0.993	0.998	0.906	0.996	0.941	0.936
rs56340449	1.046E-08	-0.036338	0.00635	-0.036338	0.006349	1.91701E-08	0.42806	0.550095	4.8E-05	0.067851	0.018279	0.00879	0.21812	0.083782	0.867	0.728	1	0.946	0.976	0.983	0.905	0.928
rs34813479	1.0461E-08	-0.030809	0.00538	-0.029271	0.007817	1.91725E-08	0.41938	0.071266	0.000326	0.115619	0.747042	5.2E-05	0.29227	0.011049	0.579	0.888	0.999	0.838	0.458	1	0.824	0.938
rs62086901	1.0461E-08	-0.030809	0.00538	-0.029271	0.007817	1.91725E-08	0.41938	0.071266	0.000326	0.115619	0.747042	5.2E-05	0.29227	0.011049	0.579	0.888	0.999	0.838	0.458	1	0.824	0.938
rs7457868	1.0463E-08	-0.035731	0.00624	-0.035731	0.006243	1.91793E-08	0.5025	0.298708	0.000353	0.436026	0.003949	0.00096	0.07817	0.414567	0.834	0.866	0.999	0.615	0.987	0.998	0.934	0.847
rs684987	1.0484E-08	-0.029935	0.00523	-0.029471	0.006055	1.47271E-08	0.93167	0.332982	0.008419	0.611121	0.138363	5.6E-07	0.18939	0.056301	0.701	0.813	0.953	0.39	0.879	1	0.858	0.903
rs28873525	1.0488E-08	-0.036028	0.0063	-0.03716	0.010736	1.24976E-08	0.41531	0.902524	0.006242	6.7E-06	0.708933	0.0053	0.00156	0.700498	0.809	0.695	0.972	1	0.459	0.972	0.981	0.753

Table S3

rs62086904	1.0498E-08	0.0336026	0.00587	0.0340794	0.009715	1.92895E-08	0.45589	0.010064	0.000401	0.166161	0.98154	0.00022	0.19028	0.002998	0.631	0.943	0.999	0.81	0.599	0.999	0.88	0.963
rs13292417	1.0499E-08	-0.050454	0.00882	-0.050454	0.008817	1.92912E-08	0.21395	0.275246	0.030248	0.058735	0.00092	0.00039	0.18355	0.097708	0.915	0.906	0.948	0.961	0.994	0.999	0.928	0.938
rs284000	1.0517E-08	0.0295687	0.00517	0.0295687	0.005167	1.93487E-08	0.42835	0.440571	0.001046	0.013896	0.472696	0.00071	0.05067	0.055906	0.687	0.856	0.998	0.986	0.818	0.999	0.95	0.932
rs36170055	1.0519E-08	0.0360243	0.0063	0.0371546	0.010736	1.25278E-08	0.41574	0.902163	0.006243	6.69E-06	0.708928	0.00531	0.00156	0.700525	0.809	0.695	0.972	1	0.459	0.972	0.981	0.753
rs79246924	1.052E-08	0.0377613	0.0066	0.0362982	0.008174	1.93577E-08	0.78134	0.01523	0.003398	0.052213	0.790225	4.8E-06	0.18333	0.609432	0.685	0.928	0.991	0.932	0.654	1	0.874	0.638
rs157619	1.052E-08	-0.02891	0.00505	-0.02891	0.005052	1.93582E-08	0.66108	0.123263	0.000173	0.030925	0.105527	0.00414	0.26435	0.419084	0.852	0.922	1	0.977	0.945	0.994	0.904	0.88
rs13109952	1.0521E-08	-0.036026	0.0063	-0.03716	0.010707	1.27571E-08	0.41783	0.903322	0.006206	7.09E-06	0.712194	0.00525	0.00154	0.698306	0.809	0.696	0.972	1	0.461	0.972	0.981	0.754
rs4671357	1.0529E-08	0.0296204	0.00518	0.0322708	0.006837	1.9268E-08	0.06544	0.072494	0.074353	0.000914	0.003257	0.00144	0.12312	0.789089	0.931	0.928	0.788	0.998	0.99	0.996	0.929	0.742
rs2303378	1.0535E-08	-0.03602	0.0063	-0.03602	0.006295	1.94059E-08	0.3614	0.404825	0.019402	0.007493	0.003749	0.00016	0.34904	0.648676	0.87	0.863	0.958	0.991	0.987	1	0.869	0.72
rs1604693	1.0544E-08	0.0377708	0.0066	0.0362838	0.008211	1.94334E-08	0.77734	0.014863	0.00341	0.052509	0.790256	4.8E-06	0.18185	0.61048	0.684	0.929	0.991	0.932	0.654	1	0.874	0.638
rs4915269	1.0547E-08	0.0298859	0.00522	0.0310992	0.007743	1.94431E-08	0.22059	0.061548	0.000684	0.000553	0.041724	0.01864	0.13903	0.066982	0.885	0.521	0.999	0.998	0.96	0.944	0.916	0.927
rs10830206	1.0553E-08	0.0292484	0.00511	0.0328399	0.010031	1.09752E-08	0.69352	0.251946	0.001677	0.039227	1.21E-06	0.01306	0.0234	0.674115	0.809	0.623	0.991	0.956	0.999	0.958	0.96	0.807
rs4348755	1.0555E-08	0.0298641	0.00522	0.0310465	0.007978	1.94678E-08	0.25562	0.0548	0.000576	0.00047	0.046616	0.02087	0.14376	0.054079	0.876	0.506	0.999	0.999	0.957	0.932	0.913	0.93
rs115578938	1.0557E-08	-0.088864	0.01553	-0.088864	0.015532	1.94751E-08	0.99653	0.415326	0.0297	0.000111	0.077371	0.00207	0.12983	0.063772	0.809	0.878	0.939	0.999	0.953	0.997	0.933	0.939
rs9391198	1.0558E-08	0.0377647	0.0066	0.0362938	0.008189	1.94796E-08	0.77958	0.015095	0.003408	0.052427	0.790589	4.8E-06	0.18203	0.610536	0.684	0.929	0.991	0.932	0.654	1	0.874	0.638
rs72949822	1.0563E-08	0.0435328	0.00761	0.0488627	0.011748	1.94939E-08	0.09375	0.360456	0.002956	0.187351	0.669667	0.00101	0.00098	0.003855	0.926	0.881	0.995	0.857	0.782	0.998	0.99	0.972
rs9461406	1.0565E-08	-0.036687	0.00641	-0.036687	0.006412	1.94999E-08	0.87406	0.235859	0.001039	0.005042	0.150279	0.01729	0.06647	0.004318	0.838	0.911	0.999	0.995	0.937	0.969	0.956	0.973
rs72838268	1.0566E-08	-0.032976	0.00576	-0.032976	0.005764	1.95045E-08	0.38849	0.845097	0.000157	0.00404	0.524799	0.00523	0.27626	0.059116	0.863	0.763	1	0.994	0.803	0.99	0.884	0.931
rs10815832	1.0569E-08	-0.031238	0.00546	-0.033021	0.008593	1.95145E-08	0.12017	0.072615	7.5E-05	0.014901	0.005713	0.03681	0.02042	0.718498	0.538	0.914	1	0.981	0.984	0.85	0.963	0.79
rs61824802	1.058E-08	0.0291809	0.0051	0.0263701	0.008169	1.95491E-08	0.27057	0.201164	0.000286	0.001057	0.011826	0.00174	0.91444	0.138056	0.509	0.833	0.999	0.997	0.967	0.994	0.619	0.42
rs4530757	1.0583E-08	-0.271342	0.04743	-0.276688	0.05684	1.95574E-08	0.83122	0.597713	0.00241	0.304518	0.007048	0.00017	0.04005	0.02717	0.742	0.827	0.996	0.697	0.982	1	0.946	0.935
rs12212526	1.0583E-08	0.0377574	0.0066	0.0362944	0.008175	1.95575E-08	0.78076	0.015255	0.003403	0.052233	0.790891	4.8E-06	0.18309	0.609648	0.684	0.928	0.991	0.932	0.654	1	0.874	0.638
rs12199819	1.0583E-08	0.0377202	0.00659	0.0362584	0.008164	1.95581E-08	0.75147	0.015068	0.003513	0.044434	0.827451	5.1E-06	0.19328	0.643738	0.678	0.928	0.99	0.941	0.64	1	0.87	0.644
rs9391196	1.059E-08	0.0377616	0.0066	0.0362903	0.008189	1.95794E-08	0.78	0.015102	0.003413	0.052435	0.79088	4.8E-06	0.18227	0.610355	0.684	0.928	0.991	0.932	0.654	1	0.874	0.638
rs13072696	1.0592E-08	0.0301541	0.00527	0.0301541	0.005271	1.9545E-08	0.88098	0.740926	0.010483	0.1007	0.393149	1.2E-06	0.051	0.562367	0.733	0.788	0.971	0.893	0.814	1	0.938	0.81
rs7697188	1.0593E-08	-0.036311	0.00635	-0.036311	0.006347	1.95908E-08	0.3685	0.537778	3.34E-05	0.067243	0.020617	0.01089	0.20694	0.100502	0.874	0.725	1	0.946	0.975	0.977	0.907	0.924
rs57856685	1.0596E-08	0.0344693	0.00603	0.0353587	0.006714	1.96002E-08	0.00891	0.383457	0.001721	0.021156	0.001566	0.01014	0.68213	0.339538	0.965	0.889	0.998	0.984	0.993	0.984	0.83	0.896
rs2341038	1.06E-08	-0.036389	0.00636	-0.036389	0.006361	1.96106E-08	0.38164	0.568028	4.06E-05	0.061289	0.017946	0.01095	0.22549	0.094419	0.873	0.733	1	0.951	0.976	0.977	0.903	0.926
rs7127487	1.0614E-08	0.0292477	0.00511	0.0328772	0.010027	1.10072E-08	0.69585	0.255473	0.001722	0.037929	1.22E-06	0.01333	0.02308	0.671393	0.809	0.625	0.991	0.957	0.999	0.957	0.96	0.808
rs6809116	1.0623E-08	-0.02906	0.00508	-0.028572	0.005534	1.7697E-08	0.44614	0.432165	0.022363	0.014112	0.728475	5E-07	0.12501	0.799875	0.594	0.794	0.9	0.974	0.646	1	0.884	0.724
rs9864243	1.0639E-08	-0.034907	0.0061	-0.034907	0.006102	1.95502E-08	0.79699	0.077541	0.070169	0.001823	0.040451	2.8E-05	0.33765	0.809558	0.712	0.907	0.758	0.996	0.954	1	0.841	0.766
rs226010	1.0639E-08	0.0296419	0.00518	0.0296419	0.005182	1.97351E-08	0.52767	0.274921	7.24E-05	0.285469	0.323205	0.00015	0.26064	0.591613	0.808	0.851	1	0.709	0.827	1	0.858	0.796
rs12537757	1.0641E-08	-0.033399	0.00584	-0.042871	0.011374	2.25813E-09	0.86018	0.047798	0.019674	1.27E-05	4.12E-05	0.10215	0.30783	0.244942	0.518	0.881	0.419	1	0.999	0.249	0.616	0.734
rs138517103	1.0641E-08	0.038175	0.00667	0.038175	0.006674	1.97416E-08	0.13335	0.773023	0.017989	0.005205	0.002416	0.00151	0.40242	0.177562	0.924	0.845	0.973	0.995	0.991	0.998	0.881	0.919
rs325485	1.0647E-08	-0.030233	0.00529	-0.030233	0.005285	1.97593E-08	0.8979	0.076508	0.007399	0.014063	0.02143	0.00026	0.39542	0.767576	0.816	0.928	0.989	0.987	0.975	1	0.871	0.827
rs35230316	1.0651E-08	-0.031031	0.00542	-0.029422	0.008115	1.97722E-08	0.34052	0.303337	0.000258	0.367879	0.837658	2.7E-05	0.11913	0.005956	0.506	0.794	0.999	0.517	0.548	1	0.871	0.942
rs10959658	1.0655E-08	-0.039128	0.00684	-0.039128	0.006841	1.97863E-08	0.14915	0.734227	0.000592	0.097068	0.059566	0.00537	0.02092	0.012169	0.922	0.785	0.999	0.935	0.962	0.992	0.972	0.965
rs12212909	1.0662E-08	0.0377445	0.0066	0.0362951	0.008156	1.98097E-08	0.78217	0.015448	0.003412	0.052019	0.790941	4.8E-06	0.18431	0.60937	0.685	0.928	0.991	0.932	0.654	1	0.873	0.638
rs73581580	1.0664E-08	0.0371259	0.00649	0.0397205	0.007837	1.92701E-08	0.03142	0.415163	0.003417	0.000453	0.173456	0.05779	0.01683	0.052347	0.952	0.884	0.993	0.999	0.926	0.846	0.975	0.948
rs2237353	1.0665E-08	0.0326111	0.0057	0.0323702	0.006378	1.9817E-08	0.32375	0.180299	0.00025	0.051925	0.247427	0.00056	0.68739	0.007871	0.638	0.886	0.999	0.949	0.875	0.999	0.775	0.956
rs147044092	1.0672E-08	0.0320438	0.0056	0.0320438	0.005602	1.98393E-08	0.06297	0.650918	0.003554	0.00086	0.648505	0.00136	0.03352	0.74855	0.923	0.825	0.994	0.998	0.762	0.998	0.956	0.729
rs148149244	1.0673E-08	-0.088841	0.01553	-0.088841	0.015533	1.98443E-08	0.99422	0.414802	0.029665	0.00011	0.076244	0.00211	0.13031	0.064042	0.809	0.878	0.939	0.999	0.953	0.997	0.933	0.939
rs67662140	1.0675E-08	0.043494	0.0076	0.0486344	0.011664	1.9849E-08	0.09446	0.363054	0.002922	0.18572	0.679893	0.00098	0.00103	0.004105	0.926	0.88	0.996	0.857	0.779	0.998	0.989	0.972
rs320480	1.0676E-08	0.0361781	0.00633	0.0355052	0.007992	1.98516E-08	0.00518	0.367052	0.000191	0.005892	0.899504	0.00118	0.66469	0.413146	0.947	0.827	1	0.99	0.614	0.997	0.554	0.819
rs1124493	1.0683E-08	-0.030961	0.00541	-0.030961	0.005413	1.98746E-08	0.66709	0.032337	0.002701	0.002051	0.805355	0.00161	0.06345	0.101118	0.822	0.937	0.996	0.997	0.584	0.997	0.944	0.918
rs59406090	1.07E-08	0.0435111	0.00761	0.0488229	0.011738	1.99278E-08	0.09386	0.36161	0.002984	0.186447	0.671493	0.00101	0.00098	0.003893	0.926	0.881	0.995	0.857	0.781	0.998	0.99	0.972
rs1317908	1.0706E-08	0.0292366	0.00511	0.0292366	0.005112	1.9948E-08	0.32934	0.418276	0.000222	0.004374	0.046235	0.02465	0.0722	0.090598	0.882	0.705	1	0.995	0.963	0.938	0.946	0.928
rs138707592	1.0707E-08	0.0596906	0.01044	0.0633752	0.018227	1.99498E-08	0.71182	0.129545	0.001097	0.019451	0.000203	0.00941	0.00814	0.315137	0.716	0.566	0.998	0.979	0.996	0.975	0.974	0.864
rs552005579	1.0711E-08	-0.093415	0.01633	-0.093415	0.016334	1.99627E-08	0.41757	0.105874	0.007324	0.187357	0.086734	1.6E-05	0.07482	0.990721	0.862	0.915	0.987	0.842	0.943	1	0.941	0.779
rs6069030	1.0722E-08	-0.032227	0.00564	-0.032227	0.005635	1.99982E-08	0.10234	0.231509	0.004005	0.04089	0.170822	0.00135	0.00268	0.828621	0.932	0.91	0.996	0.973	0.931	0.998	0.987	0.838
rs6064132	1.0724E-08	-0.032227	0.00564	-0.032227	0.005635	2.00056E-08	0.10235	0.231509	0.004005	0.040898	0.170822	0.00135	0.00268	0.828621	0.932	0.91	0.996	0.973	0.931	0.998	0.987	0.838
rs1938378	1.0724E-08	0.0292353	0.00511	0.0292353	0.005112	2.00057E-08	0.32934	0.418567	0.000223	0.004374	0.046187	0.02465	0.07224	0.090526	0.882	0.705	1	0.995	0.963	0.938	0.946	0.928
rs6069026	1.0724E-08	-0.032229	0.00564	-0.032229	0.005636	2.00057E-08	0.10032	0.231057	0.004021	0.039379	0.170529	0.00137	0.0029	0.828867	0.932	0.91	0.995	0.974	0.931	0.998	0.986	0.838
rs200486	1.0728E-08	-0.042385	0.00741	-0.042385	0.007411	2.0017E-08	0.67781	0.912569	0.000609	0.094436	0.141167	0.00084	0.14473	0.004051	0.84	0.791	0.999	0.929	0.929	0.999	0.926	0.968
rs7944714	1.0735E-08	0.0292325	0.00511	0.0328223	0.01003	1.11574E-08	0.69268	0.252069	0.001689	0.039428	1.21E-06	0.01308	0.02358	0.675349	0.809	0.624	0.991	0.956	0.999	0.958	0.96	0.807

Table S3

rs56258977	1.0739E-08	0.0475851	0.00832	0.0531642	0.01174	1.76801E-08	0.67053	0.04893	0.000127	0.047855	0.014964	0.08456	0.00111	0.401218	0.822	0.934	1	0.946	0.979	0.699	0.99	0.861
rs4291686	1.0741E-08	-0.028951	0.00506	-0.029638	0.006843	2.00607E-08	0.31171	0.056716	0.00633	0.161191	0.818366	3.3E-05	0.02127	0.017668	0.865	0.923	0.985	0.842	0.57	1	0.963	0.949
rs35438254	1.0743E-08	0.0548478	0.00959	0.0563569	0.010813	2.00664E-08	0.64746	0.04249	0.019191	0.010105	0.007134	0.00136	0.01144	0.682909	0.764	0.943	0.969	0.991	0.986	0.998	0.977	0.846
rs34889542	1.0751E-08	0.0296994	0.00519	0.0296994	0.005194	2.00928E-08	0.55895	0.262296	6.08E-05	0.296133	0.360152	0.00015	0.26157	0.58866	0.798	0.848	1	0.691	0.807	1	0.853	0.79
rs62537228	1.0753E-08	0.0631418	0.01104	0.0645383	0.012174	2.00969E-08	0.03717	0.644167	0.000715	0.17493	0.014465	0.00698	0.00312	0.491408	0.946	0.858	0.999	0.884	0.981	0.989	0.986	0.874
rs111586162	1.0762E-08	-0.034365	0.00601	-0.034365	0.00601	2.01174E-08	0.79308	0.04519	0.055303	0.00148	0.046987	3.1E-05	0.47979	0.991525	0.712	0.919	0.809	0.997	0.949	1	0.803	0.733
rs4334678	1.0764E-08	0.0301436	0.00527	0.0301436	0.005271	2.00963E-08	0.88062	0.745551	0.0103	0.105757	0.378937	1.3E-06	0.05006	0.565339	0.733	0.788	0.972	0.888	0.818	1	0.939	0.81
rs1561809	1.0775E-08	-0.029779	0.00521	-0.029779	0.005208	2.01529E-08	0.11045	0.743531	0.00182	0.0326	0.887081	0.00011	0.03411	0.716977	0.905	0.805	0.997	0.968	0.679	1	0.954	0.804
rs62404478	1.0776E-08	0.0975576	0.01706	0.0975576	0.017061	2.01554E-08	0.28961	0.041351	0.005266	0.033042	0.031436	8.9E-05	0.96935	0.983047	0.878	0.933	0.991	0.971	0.966	1	0.723	0.779
rs12643112	1.0787E-08	-0.036288	0.00635	-0.036288	0.006346	2.01807E-08	0.36483	0.545481	3.19E-05	0.065984	0.020951	0.01162	0.20526	0.101622	0.875	0.727	1	0.947	0.974	0.975	0.908	0.923
rs201004	1.0795E-08	-0.042359	0.00741	-0.042359	0.007408	2.02E-08	0.67317	0.966703	0.000543	0.092003	0.177303	0.00089	0.13849	0.003896	0.841	0.798	0.999	0.93	0.918	0.999	0.927	0.968
rs11934917	1.0809E-08	-0.036305	0.00635	-0.036305	0.00635	2.02346E-08	0.39227	0.51539	3.66E-05	0.063293	0.018961	0.01004	0.21551	0.119259	0.87	0.719	1	0.948	0.975	0.979	0.904	0.918
rs72951850	1.0809E-08	0.043476	0.0076	0.0486341	0.011658	2.02357E-08	0.09443	0.363921	0.002941	0.182783	0.677052	0.00102	0.00102	0.004099	0.926	0.881	0.996	0.86	0.78	0.998	0.989	0.972
rs925479	1.081E-08	0.0296419	0.00518	0.0298719	0.005629	2.02368E-08	0.19133	0.879644	0.000563	0.007806	0.001552	0.00681	0.68651	0.157425	0.889	0.755	0.999	0.991	0.991	0.985	0.625	0.9
rs6069034	1.0815E-08	-0.032218	0.00564	-0.032218	0.005635	2.02492E-08	0.10417	0.231557	0.004007	0.041066	0.170953	0.00135	0.00268	0.828253	0.931	0.91	0.996	0.973	0.931	0.998	0.987	0.838
rs12593019	1.0833E-08	-0.029883	0.00523	-0.029883	0.005227	2.02946E-08	0.07178	0.82306	0.001846	0.043828	0.804676	0.00014	0.02699	0.558377	0.921	0.803	0.997	0.96	0.717	1	0.96	0.835
rs1479552	1.084E-08	-0.028919	0.00506	-0.028863	0.005097	1.83537E-08	0.9524	0.803855	8.47E-06	0.703042	0.226287	9.2E-05	0.08974	0.841335	0.59	0.642	1	0.242	0.771	1	0.866	0.622
rs12194263	1.0841E-08	0.0377219	0.0066	0.036273	0.008149	2.03137E-08	0.78262	0.015616	0.003414	0.052261	0.792673	4.8E-06	0.18503	0.608566	0.685	0.928	0.991	0.932	0.653	1	0.873	0.637
rs4368839	1.0841E-08	0.0435439	0.00762	0.0489448	0.011809	2.03144E-08	0.09383	0.350932	0.002816	0.183704	0.694922	0.00108	0.00098	0.003793	0.926	0.882	0.996	0.858	0.774	0.998	0.99	0.972
rs80172774	1.0844E-08	-0.036326	0.00635	-0.036326	0.006354	2.03223E-08	0.3594	0.555584	3.53E-05	0.061634	0.021191	0.0113	0.22197	0.100475	0.876	0.73	1	0.95	0.974	0.976	0.904	0.924
rs1679709	1.0851E-08	0.0529047	0.00925	0.0551757	0.013784	2.0339E-08	0.92004	0.988741	0.001683	0.028311	0.408892	0.00097	0.0927	0.000134	0.808	0.796	0.998	0.976	0.85	0.999	0.939	0.982
rs10765184	1.0854E-08	0.029223	0.00511	0.0328118	0.010029	1.1282E-08	0.69279	0.252423	0.001689	0.039832	1.21E-06	0.01309	0.0236	0.675443	0.809	0.624	0.991	0.955	0.999	0.958	0.959	0.807
rs4345518	1.0861E-08	-0.029237	0.00511	-0.029237	0.005114	2.03636E-08	0.21689	0.935891	0.00792	0.002995	0.138173	0.00242	0.1546	0.006694	0.912	0.815	0.99	0.996	0.939	0.997	0.933	0.97
rs71644491	1.0862E-08	0.0377127	0.0066	0.0362701	0.008134	2.03656E-08	0.7847	0.015878	0.003421	0.051955	0.794162	4.8E-06	0.18642	0.607191	0.685	0.927	0.991	0.932	0.653	1	0.872	0.637
rs79117915	1.0866E-08	0.0377124	0.0066	0.0362699	0.008134	2.03754E-08	0.7847	0.015878	0.003421	0.051957	0.794167	4.8E-06	0.18642	0.607188	0.685	0.927	0.991	0.932	0.653	1	0.872	0.637
rs9930651	1.0876E-08	-0.035153	0.00615	-0.041644	0.009989	2.03989E-08	0.074	0.739387	0.005034	0.008666	0.019184	0.01524	0.09812	0.000287	0.941	0.797	0.994	0.993	0.981	0.974	0.949	0.985
rs9804879	1.0876E-08	-0.028971	0.00507	-0.030455	0.007014	2.03993E-08	0.96391	0.946928	0.000284	0.075952	0.07612	0.00823	8.2E-05	0.428698	0.801	0.803	0.999	0.94	0.949	0.984	0.994	0.867
rs35992988	1.0879E-08	-0.0377	0.00659	-0.0377	0.006595	2.04064E-08	0.26289	0.667081	0.001177	0.072784	0.033933	1.3E-05	0.53191	0.491323	0.551	0.655	0.997	0.903	0.949	1	0.762	0.791
rs7851132	1.0881E-08	0.0300325	0.00525	0.0300325	0.005254	2.04112E-08	0.56114	0.703202	0.008171	0.005795	0.331712	0.00025	0.13487	0.015126	0.85	0.756	0.987	0.993	0.87	1	0.926	0.956
rs1990361	1.0881E-08	-0.035861	0.00627	-0.035861	0.006273	2.04121E-08	0.68963	0.21664	0.002732	0.043741	0.408012	0.00015	0.00973	0.993764	0.829	0.893	0.996	0.963	0.844	1	0.975	0.781
rs75481458	1.0895E-08	0.0377126	0.0066	0.0362731	0.008134	2.0446E-08	0.78332	0.015824	0.003421	0.052115	0.793721	4.8E-06	0.18544	0.608717	0.685	0.928	0.991	0.932	0.653	1	0.873	0.637
rs189766383	1.0897E-08	-0.08013	0.01402	-0.080799	0.015335	2.02691E-08	0.33418	0.040144	2.05E-05	0.515216	0.073481	0.00604	0.12491	0.063429	0.861	0.931	1	0.521	0.943	0.979	0.918	0.927
rs17456916	1.0898E-08	-0.042104	0.00737	-0.043245	0.008961	2.04538E-08	0.00189	0.398223	0.01223	0.1559	0.245634	6.7E-05	0.03818	0.336155	0.971	0.883	0.98	0.889	0.904	1	0.963	0.891
rs72631004	1.0899E-08	-0.036292	0.00635	-0.036292	0.006349	2.04565E-08	0.36389	0.53138	3.69E-05	0.065331	0.020062	0.01086	0.21323	0.095275	0.875	0.725	1	0.947	0.975	0.977	0.906	0.925
rs200775148	1.09E-08	0.0434836	0.00761	0.0488195	0.011748	2.04594E-08	0.0925	0.361647	0.003008	0.187154	0.672184	0.00101	0.00099	0.003897	0.927	0.881	0.995	0.857	0.781	0.998	0.99	0.972
rs12199929	1.0904E-08	0.0377076	0.0066	0.0362668	0.00813	2.04677E-08	0.78461	0.015953	0.003434	0.051935	0.793817	4.8E-06	0.187	0.607073	0.685	0.927	0.991	0.932	0.653	1	0.872	0.637
rs2359371	1.0905E-08	0.0298425	0.00522	0.0310251	0.00784	2.04713E-08	0.23387	0.057486	0.000659	0.00052	0.045549	0.01908	0.14107	0.061054	0.882	0.514	0.999	0.999	0.958	0.942	0.915	0.928
rs693930	1.0907E-08	0.0288513	0.00505	0.0288513	0.005047	2.04759E-08	0.37613	0.810363	0.001676	0.001744	0.090523	0.00168	0.29874	0.623803	0.87	0.766	0.998	0.997	0.942	0.997	0.883	0.836
rs80264471	1.0909E-08	0.0377098	0.0066	0.036268	0.008136	2.04812E-08	0.78416	0.015801	0.003421	0.052015	0.79409	4.8E-06	0.18604	0.607769	0.685	0.928	0.991	0.932	0.653	1	0.872	0.637
rs4403652	1.0909E-08	0.0298421	0.00522	0.0310243	0.00784	2.04814E-08	0.23405	0.057486	0.000659	0.000521	0.045549	0.01908	0.14107	0.061054	0.882	0.514	0.999	0.999	0.958	0.942	0.915	0.928
rs12664090	1.0909E-08	0.0434854	0.00761	0.0488001	0.011738	2.04816E-08	0.09386	0.361656	0.00301	0.186511	0.672033	0.00101	0.00099	0.003898	0.926	0.881	0.995	0.857	0.781	0.998	0.99	0.972
rs67575180	1.0909E-08	0.0434854	0.00761	0.0488001	0.011738	2.04816E-08	0.09386	0.361656	0.00301	0.186511	0.672033	0.00101	0.00099	0.003898	0.926	0.881	0.995	0.857	0.781	0.998	0.99	0.972
rs68186215	1.0909E-08	0.0434854	0.00761	0.0488001	0.011738	2.04816E-08	0.09386	0.361656	0.00301	0.186511	0.672033	0.00101	0.00099	0.003898	0.926	0.881	0.995	0.857	0.781	0.998	0.99	0.972
rs61360902	1.0913E-08	-0.036318	0.00635	-0.036318	0.006354	2.04919E-08	0.37046	0.543339	3.72E-05	0.066544	0.019853	0.01083	0.20944	0.095783	0.874	0.727	1	0.947	0.975	0.977	0.907	0.925
rs10758963	1.0921E-08	-0.031276	0.00547	-0.032223	0.009056	2.05118E-08	0.04939	0.090307	4.02E-05	0.028849	0.0127	0.02274	0.01703	0.608041	0.479	0.908	1	0.967	0.977	0.915	0.965	0.809
rs62389618	1.0922E-08	-0.066035	0.01155	-0.074446	0.016931	2.05143E-08	0.92766	0.002676	0.008978	0.062563	0.008245	0.00221	0.10267	0.023905	0.822	0.971	0.99	0.961	0.987	0.997	0.949	0.961
rs191897901	1.0936E-08	-0.079201	0.01386	-0.079201	0.013857	2.05488E-08	0.23236	0.075811	1.68E-05	0.174539	0.168615	0.00594	0.03262	0.595358	0.886	0.92	1	0.845	0.909	0.986	0.958	0.699
rs34354535	1.0939E-08	-0.032242	0.00564	-0.032242	0.005641	2.0555E-08	0.10351	0.212699	0.003879	0.041921	0.178271	0.0013	0.00325	0.82933	0.931	0.913	0.996	0.972	0.929	0.998	0.986	0.838
rs10758964	1.0946E-08	-0.031273	0.00547	-0.03219	0.009127	2.05724E-08	0.0453	0.088483	4.21E-05	0.029189	0.013014	0.02169	0.01647	0.606446	0.473	0.908	1	0.967	0.976	0.92	0.965	0.81
rs72673177	1.0956E-08	0.0412918	0.00722	0.0412918	0.007225	2.05958E-08	0.4831	0.614929	0.00152	0.016972	0.087179	0.00106	0.10376	0.551835	0.871	0.856	0.998	0.986	0.95	0.999	0.94	0.862
rs6064133	1.0972E-08	-0.032206	0.00564	-0.032206	0.005635	2.06373E-08	0.09864	0.231119	0.004024	0.040664	0.170677	0.00136	0.00291	0.82858	0.933	0.91	0.995	0.973	0.931	0.998	0.986	0.838
rs7429596	1.0974E-08	-0.034864	0.0061	-0.034864	0.006101	2.03861E-08	0.80947	0.078462	0.072875	0.001697	0.039837	2.6E-05	0.3651	0.825011	0.709	0.905	0.744	0.996	0.953	1	0.83	0.759
rs13038124	1.0979E-08	-0.032204	0.00564	-0.032204	0.005635	2.06543E-08	0.10329	0.231516	0.004007	0.041772	0.170846	0.00135	0.00268	0.82856	0.931	0.91	0.996	0.973	0.931	0.998	0.987	0.838
rs144618812	1.098E-08	0.0859763	0.01504	0.0859763	0.015044	2.06558E-08	0.69335	0.354481	0.019126	0.000872	0.156356	2.6E-05	0.54243	0.505019	0.778	0.832	0.943	0.997	0.89	1	0.541	0.806
rs144372278	1.0984E-08	0.0298398	0.00522	0.0310325	0.007821	2.06663E-08	0.2341	0.059006	0.000658	0.000521	0.045424	0.01937	0.14131	0.060718	0.882	0.516	0.999	0.999	0.958	0.941	0.915	0.928

Table S3

rs143939057	1.0992E-08	0.0596922	0.01045	0.0627242	0.017858	2.06851E-08	0.7123	0.130792	0.000764	0.026108	0.000286	0.00787	0.01032	0.326442	0.715	0.565	0.999	0.973	0.995	0.98	0.97	0.861
rs1355258	1.1001E-08	-0.035975	0.0063	-0.037091	0.010754	1.29716E-08	0.41497	0.898123	0.006284	6.6E-06	0.703209	0.00541	0.00159	0.701946	0.808	0.693	0.971	1	0.456	0.971	0.981	0.752
rs75684474	1.1002E-08	0.0377012	0.0066	0.0362604	0.008135	2.07112E-08	0.78334	0.015825	0.003431	0.052198	0.793994	4.8E-06	0.18581	0.608302	0.685	0.927	0.991	0.932	0.653	1	0.872	0.637
rs60068035	1.1005E-08	-0.032201	0.00564	-0.032201	0.005635	2.07185E-08	0.10347	0.231556	0.004009	0.041908	0.171066	0.00135	0.00268	0.828365	0.931	0.91	0.996	0.972	0.931	0.998	0.987	0.838
rs10456362	1.1015E-08	0.0528985	0.00926	0.0551262	0.013731	2.07425E-08	0.86952	0.9794	0.00145	0.030323	0.418785	0.00107	0.09507	0.000135	0.814	0.795	0.998	0.975	0.848	0.998	0.939	0.982
rs17451127	1.1015E-08	-0.029261	0.00512	-0.029261	0.005121	2.07426E-08	0.8531	0.166524	0.067097	0.004435	0.145478	6.3E-05	0.02868	0.194518	0.761	0.902	0.813	0.994	0.92	1	0.962	0.899
rs2870372	1.1016E-08	-0.0322	0.00564	-0.0322	0.005635	2.07437E-08	0.10351	0.231587	0.004009	0.041936	0.171115	0.00134	0.00269	0.828127	0.931	0.91	0.996	0.972	0.931	0.998	0.987	0.838
rs455332	1.1016E-08	-0.028811	0.00504	-0.028811	0.005042	2.07458E-08	0.25389	0.5108	1.9E-05	0.143235	0.879172	0.00092	0.06749	0.330004	0.854	0.809	1	0.838	0.557	0.998	0.927	0.841
rs11935431	1.1018E-08	-0.035973	0.0063	-0.037089	0.010753	1.29941E-08	0.41498	0.89846	0.006284	6.61E-06	0.703177	0.00542	0.00159	0.702026	0.808	0.693	0.971	1	0.456	0.971	0.981	0.752
rs6504573	1.1022E-08	-0.030757	0.00538	-0.029211	0.007812	2.07603E-08	0.41616	0.072492	0.000326	0.120896	0.753968	5.2E-05	0.29168	0.011155	0.577	0.886	0.999	0.83	0.46	1	0.824	0.938
rs6577067	1.1023E-08	0.035605	0.00623	0.035605	0.006231	2.07622E-08	0.84278	0.422938	0.000597	0.013117	0.053643	0.00424	0.14886	0.285377	0.833	0.88	0.999	0.989	0.963	0.994	0.93	0.899
rs6940638	1.1028E-08	-0.032931	0.00576	-0.032931	0.005763	2.07751E-08	0.36249	0.882939	0.000203	0.004875	0.534468	0.00447	0.24993	0.056451	0.869	0.772	1	0.994	0.804	0.992	0.892	0.933
rs71615429	1.1028E-08	0.0301175	0.00527	0.0301175	0.005271	2.0742E-08	0.87751	0.743882	0.010579	0.103996	0.377409	1.3E-06	0.05192	0.566659	0.733	0.788	0.971	0.89	0.819	1	0.938	0.81
rs1398118	1.104E-08	-0.032198	0.00564	-0.032198	0.005635	2.08042E-08	0.10024	0.231587	0.004009	0.042541	0.171115	0.00134	0.00269	0.828127	0.932	0.91	0.996	0.972	0.931	0.998	0.987	0.838
rs67077747	1.1044E-08	0.0434497	0.0076	0.0486882	0.011702	2.08134E-08	0.09051	0.363736	0.002936	0.186929	0.678014	0.00103	0.00101	0.004092	0.927	0.88	0.996	0.857	0.779	0.998	0.989	0.972
rs9404546	1.1046E-08	0.0377166	0.0066	0.0362245	0.008206	2.08193E-08	0.77682	0.015095	0.003409	0.054632	0.790602	4.8E-06	0.18203	0.610527	0.683	0.928	0.991	0.929	0.654	1	0.874	0.638
rs142338029	1.1048E-08	0.0911137	0.01595	0.0911137	0.015946	2.08242E-08	0.62731	0.237159	0.030877	0.001004	0.130963	2.7E-05	0.85963	0.667735	0.802	0.864	0.913	0.997	0.908	1	0.655	0.793
rs17684830	1.106E-08	0.0351257	0.00615	0.0351257	0.006148	2.08526E-08	0.22487	0.613057	0.002654	0.040687	0.381275	0.00043	0.02859	0.171122	0.906	0.859	0.997	0.971	0.871	0.999	0.966	0.917
rs76784355	1.1064E-08	0.0320236	0.0056	0.0320236	0.005605	2.08621E-08	0.05714	0.61989	0.003434	0.000785	0.64443	0.00142	0.04081	0.681128	0.925	0.827	0.994	0.998	0.762	0.998	0.952	0.715
rs11870697	1.1084E-08	-0.031334	0.00548	-0.033411	0.006812	2.0913E-08	0.78796	0.096342	0.000553	0.027382	0.013877	0.03469	0.02258	0.014834	0.79	0.932	0.999	0.98	0.983	0.918	0.972	0.964
rs1588407	1.1086E-08	-0.035966	0.0063	-0.037079	0.010755	1.30607E-08	0.41497	0.897895	0.006297	6.59E-06	0.702687	0.00542	0.00159	0.703109	0.808	0.693	0.971	1	0.456	0.971	0.981	0.752
rs72629570	1.1091E-08	-0.036303	0.00635	-0.036303	0.006354	2.09293E-08	0.37125	0.54414	3.77E-05	0.066419	0.019924	0.01088	0.20939	0.095978	0.874	0.727	1	0.947	0.975	0.977	0.907	0.925
rs35577344	1.1099E-08	-0.030133	0.00527	-0.030091	0.005331	1.77199E-08	0.93266	0.384147	0.008184	0.486386	0.123872	7.9E-07	0.2004	0.079869	0.695	0.813	0.962	0.5	0.894	1	0.862	0.896
rs123170401	1.11E-08	-0.07083	0.0124	-0.07083	0.012398	2.09506E-08	0.51173	0.606467	2.96E-05	0.02416	0.477975	0.00146	0.69975	0.060946	0.812	0.798	1	0.97	0.776	0.997	0.589	0.915
rs2722008	1.1115E-08	-0.029346	0.00514	-0.029683	0.006193	2.09884E-08	0.99758	0.946247	0.004979	0.251165	0.017556	9.1E-05	0.00131	0.478378	0.762	0.755	0.989	0.764	0.972	1	0.985	0.834
rs9921724	1.1122E-08	-0.029604	0.00518	-0.029604	0.005182	2.10071E-08	0.52407	0.281903	8.12E-05	0.280309	0.326151	0.00015	0.2579	0.594579	0.81	0.85	1	0.716	0.827	1	0.86	0.796
rs4690712	1.1136E-08	-0.035961	0.0063	-0.037074	0.010755	1.31165E-08	0.4152	0.897753	0.006308	6.6E-06	0.702508	0.00543	0.00159	0.703173	0.808	0.693	0.971	1	0.456	0.971	0.981	0.752
rs745485	1.1141E-08	-0.039103	0.00685	-0.039103	0.006845	2.1054E-08	0.16091	0.836064	0.000594	0.089028	0.06601	0.00612	0.0207	0.012168	0.921	0.802	0.999	0.942	0.961	0.991	0.973	0.965
rs10212852	1.1144E-08	-0.03596	0.0063	-0.03707	0.010756	1.31234E-08	0.41494	0.897067	0.006284	6.6E-06	0.702259	0.00544	0.0016	0.703588	0.808	0.693	0.971	1	0.456	0.971	0.981	0.752
rs10213025	1.1144E-08	-0.03596	0.0063	-0.037069	0.010755	1.31252E-08	0.41495	0.897054	0.006283	6.6E-06	0.702201	0.00544	0.0016	0.7036	0.808	0.693	0.971	1	0.456	0.971	0.981	0.752
rs9311431	1.1146E-08	-0.034848	0.0061	-0.034848	0.0061	2.08257E-08	0.81092	0.078259	0.072654	0.001702	0.040273	2.7E-05	0.36473	0.82404	0.71	0.905	0.746	0.996	0.953	1	0.831	0.76
rs140470996	1.1149E-08	0.0376585	0.00659	0.036452	0.00785	2.10727E-08	0.81342	0.017207	0.003245	0.056917	0.765871	4.9E-06	0.20159	0.624911	0.692	0.926	0.991	0.927	0.665	1	0.868	0.644
rs41289598	1.115E-08	0.0820148	0.01436	0.0820148	0.014358	2.10761E-08	0.40835	0.381223	0.003519	0.001071	0.045186	0.01931	0.0108	0.588401	0.888	0.891	0.996	0.998	0.968	0.968	0.979	0.866
rs112366207	1.1151E-08	-0.039103	0.00685	-0.039103	0.006846	2.10776E-08	0.15947	0.845664	0.000578	0.091095	0.06778	0.00611	0.02073	0.011993	0.921	0.803	0.999	0.94	0.96	0.991	0.973	0.965
rs9859473	1.1152E-08	-0.034847	0.0061	-0.034847	0.0061	2.08384E-08	0.80918	0.078259	0.072656	0.001699	0.040274	2.7E-05	0.36474	0.82404	0.71	0.905	0.746	0.996	0.953	1	0.831	0.76
rs7611628	1.1153E-08	-0.034847	0.0061	-0.034847	0.0061	2.084E-08	0.80917	0.078259	0.072654	0.001699	0.040273	2.7E-05	0.36473	0.82404	0.71	0.905	0.746	0.996	0.953	1	0.831	0.76
rs6069029	1.1157E-08	-0.03219	0.00564	-0.03219	0.005635	2.10922E-08	0.1022	0.231074	0.004021	0.040776	0.170482	0.00137	0.0029	0.828759	0.932	0.91	0.995	0.973	0.931	0.998	0.986	0.838
rs167573	1.1161E-08	-0.02884	0.00505	-0.02884	0.005049	2.1102E-08	0.37457	0.809085	0.001686	0.001743	0.090594	0.0017	0.30026	0.624693	0.87	0.766	0.998	0.997	0.942	0.997	0.883	0.835
rs315425	1.1164E-08	0.028822	0.00505	0.028822	0.005046	2.11107E-08	0.38076	0.808647	0.001695	0.001734	0.091044	0.00167	0.30063	0.625405	0.869	0.766	0.998	0.997	0.942	0.997	0.883	0.835
rs10959647	1.117E-08	-0.039099	0.00685	-0.039099	0.006845	2.11241E-08	0.15957	0.84517	0.000577	0.090717	0.067874	0.00614	0.02076	0.011955	0.921	0.803	0.999	0.941	0.96	0.991	0.973	0.965
rs12661361	1.1171E-08	0.0434358	0.0076	0.0486746	0.011706	2.11269E-08	0.09061	0.363898	0.002942	0.188927	0.677394	0.00102	0.00102	0.004098	0.927	0.88	0.995	0.855	0.779	0.998	0.989	0.972
rs79228128	1.1173E-08	-0.061538	0.01077	-0.061538	0.010774	2.11328E-08	0.39735	0.324409	0.000975	0.004588	0.37889	0.00078	0.25774	0.124384	0.669	0.867	0.998	0.994	0.84	0.999	0.883	0.909
rs7046663	1.1182E-08	-0.039097	0.00684	-0.039097	0.006845	2.11547E-08	0.15956	0.845057	0.000578	0.090685	0.067882	0.00614	0.02076	0.011962	0.921	0.803	0.999	0.941	0.96	0.991	0.973	0.965
rs9467776	1.1189E-08	0.0291846	0.00511	0.0291846	0.00511	2.11723E-08	0.50699	0.563502	0.000928	0.002116	0.330213	0.00901	0.026	0.228097	0.869	0.862	0.999	0.997	0.882	0.985	0.967	0.906
rs6069031	1.1195E-08	-0.032186	0.00564	-0.032186	0.005635	2.11863E-08	0.10234	0.231125	0.004022	0.04089	0.17067	0.00137	0.00291	0.828692	0.932	0.91	0.995	0.973	0.931	0.998	0.986	0.838
rs315423	1.1198E-08	0.0288134	0.00504	0.0288134	0.005045	2.11944E-08	0.3817	0.809537	0.00169	0.001773	0.091147	0.00166	0.29973	0.625644	0.869	0.766	0.998	0.997	0.942	0.998	0.883	0.835
rs2203127	1.1205E-08	-0.032184	0.00564	-0.032184	0.005635	2.1211E-08	0.10539	0.231536	0.004008	0.042344	0.17092	0.00135	0.00268	0.828397	0.931	0.91	0.996	0.972	0.931	0.998	0.987	0.838
rs6731782	1.1227E-08	0.0305191	0.00534	0.0340472	0.007939	2.1267E-08	0.1143	0.036312	0.054714	0.007962	0.000701	0.00069	0.11433	0.483154	0.917	0.941	0.851	0.991	0.994	0.998	0.932	0.685
rs11696214	1.124E-08	-0.032181	0.00563	-0.032181	0.005635	2.1297E-08	0.10711	0.231489	0.004004	0.04217	0.170771	0.00135	0.00268	0.828542	0.931	0.91	0.996	0.972	0.931	0.998	0.987	0.838
rs4791907	1.1248E-08	0.0779138	0.01364	0.0780115	0.01373	2.13188E-08	0.98905	0.092273	0.00435	0.142025	0.010622	0.00132	0.03626	0.021423	0.82	0.933	0.995	0.908	0.984	0.998	0.965	0.959
rs1538278	1.1252E-08	0.0356043	0.00623	0.0356043	0.006235	2.13279E-08	0.84893	0.452426	0.000718	0.015317	0.041736	0.00373	0.13421	0.302954	0.832	0.877	0.999	0.988	0.967	0.995	0.934	0.897
rs7505465	1.1253E-08	0.0287707	0.00504	0.0287707	0.005038	2.13313E-08	0.15713	0.630034	0.003304	0.004154	0.134084	0.00058	0.79765	0.050669	0.903	0.734	0.995	0.994	0.925	0.999	0.773	0.935
rs360004	1.1254E-08	-0.030003	0.00525	-0.030003	0.005254	2.1333E-08	0.55194	0.703629	0.00814	0.006195	0.331528	0.00025	0.1347	0.015119	0.852	0.756	0.987	0.993	0.87	1	0.926	0.956
rs9868960	1.1255E-08	0.0301016	0.00527	0.0301016	0.005271	2.13049E-08	0.87882	0.744242	0.010604	0.101088	0.387212	1.3E-06	0.05477	0.565756	0.733	0.788	0.971	0.893	0.816	1	0.936	0.81
rs1442313	1.1259E-08	-0.029781	0.00522	-0.029781	0.005215	2.13454E-08	0.0656	0.647712	0.003107	0.034579	0.734557	0.00018	0.02184	0.527925	0.927	0.836	0.995	0.97	0.752	1	0.966	0.849

Table S3

rs6834625	1.1272E-08	-0.036343	0.00636	-0.037433	0.010082	1.85396E-08	0.37964	0.798192	0.008764	1.74E-05	0.879219	0.003	0.00191	0.715621	0.826	0.695	0.97	1	0.542	0.988	0.98	0.765
rs6456814	1.129E-08	-0.044464	0.00779	-0.044464	0.007787	2.14213E-08	0.09872	0.399024	0.00055	0.055198	0.434914	0.00232	0.03701	0.141042	0.93	0.886	0.999	0.963	0.861	0.997	0.964	0.925
rs3921492	1.1293E-08	-0.032176	0.00563	-0.032176	0.005635	2.14291E-08	0.10733	0.231537	0.004007	0.042377	0.170943	0.00135	0.00268	0.828399	0.931	0.91	0.996	0.972	0.931	0.998	0.987	0.838
rs57470978	1.1306E-08	-0.036287	0.00636	-0.036287	0.006355	2.14614E-08	0.38347	0.544866	3.77E-05	0.064992	0.019929	0.01114	0.20848	0.095849	0.872	0.727	1	0.948	0.975	0.977	0.907	0.925
rs76059378	1.1325E-08	-0.03246	0.00569	-0.03246	0.005685	2.15069E-08	0.58387	0.057687	1.4E-05	0.266118	0.071629	0.00841	0.06199	0.596925	0.838	0.928	1	0.776	0.948	0.978	0.946	0.834
rs112942303	1.1328E-08	0.0320011	0.0056	0.0320011	0.005605	2.15126E-08	0.05701	0.622612	0.003506	0.000775	0.644443	0.00141	0.04146	0.678281	0.925	0.827	0.994	0.998	0.762	0.998	0.952	0.714
rs148426120	1.1328E-08	0.0320011	0.0056	0.0320011	0.005605	2.15126E-08	0.05701	0.622612	0.003506	0.000775	0.644443	0.00141	0.04146	0.678281	0.925	0.827	0.994	0.998	0.762	0.998	0.952	0.714
rs2584142	1.1333E-08	-0.02982	0.00522	-0.02982	0.005223	2.15202E-08	0.08795	0.823941	0.001655	0.051264	0.765691	0.00013	0.04007	0.446411	0.917	0.805	0.997	0.954	0.732	1	0.953	0.853
rs72843798	1.1334E-08	0.079082	0.01385	0.08158	0.015909	2.15234E-08	0.01884	0.341119	0.025283	0.000337	0.617966	0.00213	0.18816	0.027814	0.954	0.89	0.957	0.999	0.808	0.997	0.92	0.954
rs150687831	1.1337E-08	0.0895075	0.01568	0.0924322	0.022405	2.15284E-08	0.45593	0.344527	5.86E-05	0.568888	0.019682	0.00251	0.0464	0.010991	0.619	0.834	1	0.475	0.967	0.991	0.939	0.953
rs55979263	1.1337E-08	0.0383694	0.00672	0.0383694	0.00672	2.15293E-08	0.26107	0.284	0.001901	0.154893	0.113315	0.00034	0.04334	0.29868	0.901	0.898	0.998	0.894	0.943	1	0.96	0.897
rs11643902	1.1348E-08	-0.031267	0.00548	-0.031267	0.005477	2.15481E-08	0.30145	0.657573	0.001063	0.004441	0.244406	0.01389	0.02434	0.040586	0.902	0.862	0.999	0.995	0.912	0.977	0.971	0.952
rs1500322	1.1353E-08	-0.031226	0.00547	-0.032191	0.009007	2.15588E-08	0.05057	0.092577	3.75E-05	0.030467	0.01434	0.0235	0.01643	0.565854	0.482	0.907	1	0.966	0.975	0.913	0.965	0.817
rs72631005	1.1379E-08	-0.036246	0.00635	-0.036246	0.006349	2.16067E-08	0.36471	0.532034	3.66E-05	0.068735	0.020024	0.01084	0.21232	0.095838	0.874	0.724	1	0.945	0.975	0.977	0.906	0.925
rs9284885	1.1381E-08	-0.034825	0.0061	-0.034825	0.0061	2.14096E-08	0.80703	0.078259	0.072656	0.001744	0.040274	2.7E-05	0.36474	0.82404	0.71	0.905	0.746	0.996	0.953	1	0.831	0.76
rs111839082	1.1392E-08	-0.0549	0.00962	-0.0549	0.009617	2.16303E-08	0.77689	0.02401	0.010752	0.018726	0.126823	0.00013	0.20821	0.647376	0.837	0.949	0.984	0.985	0.937	1	0.915	0.848
rs529784633	1.1421E-08	0.0826825	0.01449	0.0841372	0.018534	2.0713E-08	0.16649	0.797114	0.00393	0.850539	0.03227	1.9E-05	0.0297	0.057891	0.871	0.748	0.986	0.271	0.957	1	0.95	0.914
rs36033340	1.1421E-08	-0.032166	0.00564	-0.032166	0.005635	2.16833E-08	0.10769	0.231075	0.004023	0.040887	0.170567	0.00137	0.0029	0.82884	0.93	0.91	0.995	0.973	0.931	0.998	0.986	0.838
rs58276423	1.1441E-08	0.0655952	0.01149	0.0726313	0.015378	2.17197E-08	0.94041	0.058353	0.000474	0.038979	0.003439	0.06712	0.00865	0.073243	0.811	0.938	0.999	0.967	0.991	0.805	0.981	0.938
rs1884264	1.1446E-08	0.0297755	0.00522	0.0360559	0.008531	1.95724E-08	0.50264	0.061195	0.000939	0.004622	0.351757	0.07772	0.00054	0.010701	0.854	0.934	0.997	0.994	0.852	0.733	0.992	0.964
rs10883053	1.1451E-08	0.0311745	0.00546	0.0336978	0.008249	2.17392E-08	0.63807	0.783116	0.022752	0.020306	0.000753	0.00074	0.00143	0.777058	0.829	0.752	0.948	0.98	0.993	0.998	0.987	0.737
rs35368389	1.1452E-08	-0.029845	0.00523	-0.029845	0.005229	2.17405E-08	0.0713	0.822123	0.001892	0.043033	0.816332	0.00014	0.02757	0.564209	0.92	0.802	0.997	0.961	0.713	1	0.959	0.834
rs11018471	1.1456E-08	0.029521	0.00517	0.033272	0.010288	9.07226E-09	0.88701	0.234942	0.002161	0.004496	1.66E-06	0.03447	0.03814	0.569399	0.761	0.587	0.989	0.99	0.999	0.854	0.947	0.806
rs3003922	1.1461E-08	-0.033072	0.00579	-0.032737	0.008122	2.17571E-08	0.4266	0.025129	0.004013	0.474628	0.042645	6.6E-06	0.44852	0.071687	0.592	0.922	0.985	0.506	0.945	1	0.784	0.901
rs187005169	1.1467E-08	-0.097768	0.01713	-0.097768	0.01713	2.17681E-08	0.04986	0.93363	0.000255	0.119735	0.229467	0.00093	0.02532	0.921534	0.931	0.798	1	0.902	0.895	0.999	0.963	0.791
rs11347436	1.1472E-08	-0.036229	0.00635	-0.036229	0.006348	2.17771E-08	0.36484	0.525172	3.89E-05	0.065956	0.020059	0.01088	0.2166	0.090653	0.875	0.723	1	0.947	0.975	0.977	0.905	0.926
rs55732649	1.1474E-08	-0.031413	0.0055	-0.032812	0.009662	1.52737E-08	0.73521	0.001161	0.00565	0.719667	0.606709	1.8E-06	0.13593	0.066851	0.714	0.958	0.96	0.282	0.634	1	0.873	0.892
rs316290	1.1479E-08	-0.028817	0.00505	-0.028817	0.005049	2.17896E-08	0.37601	0.815142	0.001672	0.001721	0.09336	0.00176	0.29842	0.620724	0.87	0.767	0.998	0.997	0.941	0.997	0.883	0.836
rs316288	1.1479E-08	-0.028814	0.00505	-0.028814	0.005049	2.17901E-08	0.37522	0.8103	0.001727	0.001777	0.090738	0.00167	0.30184	0.626501	0.87	0.766	0.998	0.997	0.942	0.997	0.882	0.835
rs1123710	1.149E-08	0.0509572	0.00893	0.0677942	0.017408	4.19833E-09	0.00305	0.092498	0.094706	2.66E-06	0.124942	0.01829	0.39221	0.024637	0.966	0.885	0.466	1	0.809	0.61	0.696	0.939
rs78174786	1.1491E-08	0.0376276	0.00659	0.036298	0.007996	2.18123E-08	0.79029	0.017462	0.003521	0.046969	0.805791	5.2E-06	0.19206	0.6035	0.686	0.926	0.99	0.938	0.649	1	0.87	0.636
rs7695842	1.1494E-08	-0.036258	0.00635	-0.036258	0.006353	2.18175E-08	0.36046	0.556024	3.5E-05	0.063723	0.021551	0.0115	0.22056	0.100696	0.875	0.73	1	0.949	0.974	0.976	0.904	0.924
rs117794753	1.1498E-08	-0.07309	0.01281	-0.075295	0.016766	2.18257E-08	0.89752	0.811954	0.000259	0.015252	0.043941	0.01151	0.00054	0.822841	0.766	0.757	1	0.985	0.96	0.973	0.988	0.8
rs9879978	1.1501E-08	-0.034814	0.0061	-0.034814	0.0061	2.16561E-08	0.8049	0.078259	0.072656	0.001765	0.040274	2.7E-05	0.36474	0.82404	0.709	0.905	0.747	0.996	0.953	1	0.831	0.76
rs76452362	1.1507E-08	0.0297984	0.00522	0.0309627	0.007861	2.18422E-08	0.23394	0.054886	0.000705	0.000539	0.045607	0.01832	0.14184	0.061253	0.882	0.512	0.999	0.998	0.958	0.945	0.915	0.928
rs2174177	1.1512E-08	-0.028798	0.00505	-0.035652	0.009578	1.6089E-08	0.08218	0.148589	0.020141	0.190764	0.006322	0.00075	2.3E-05	0.554204	0.924	0.907	0.946	0.835	0.985	0.994	0.996	0.701
rs610990	1.1515E-08	0.0296567	0.0052	0.0296567	0.005197	2.18555E-08	0.37006	0.391939	0.00015	0.111877	0.251024	0.00211	0.07691	0.155497	0.883	0.881	1	0.92	0.901	0.997	0.947	0.918
rs7538180	1.1527E-08	0.0297895	0.00522	0.0309653	0.007943	2.18778E-08	0.25007	0.054796	0.000574	0.000549	0.046598	0.02087	0.14371	0.054114	0.878	0.508	0.999	0.998	0.957	0.934	0.913	0.93
rs73134628	1.1528E-08	-0.093285	0.01635	-0.093285	0.016347	2.18802E-08	0.03801	0.05058	0.014502	0.00104	0.108891	0.01096	0.02671	0.405689	0.953	0.951	0.981	0.998	0.953	0.984	0.973	0.9
rs1442312	1.1533E-08	-0.02976	0.00522	-0.02976	0.005215	2.18894E-08	0.06568	0.647749	0.003129	0.034719	0.735447	0.00018	0.0219	0.528077	0.927	0.836	0.995	0.97	0.752	1	0.966	0.849
rs11018467	1.1537E-08	0.0291701	0.00511	0.0328154	0.010025	1.19206E-08	0.66398	0.255473	0.001803	0.040421	1.19E-06	0.01312	0.02392	0.68763	0.813	0.626	0.99	0.955	0.999	0.958	0.959	0.806
rs6698514	1.1558E-08	0.0297669	0.00522	0.0360448	0.008529	1.99633E-08	0.50064	0.061195	0.000939	0.004696	0.351757	0.07772	0.00054	0.010701	0.855	0.934	0.997	0.994	0.852	0.734	0.992	0.964
rs573283120	1.1568E-08	-0.029788	0.00522	-0.029788	0.00522	2.1953E-08	0.79518	0.243797	0.001027	9.91E-05	0.884155	0.0086	0.02515	0.915942	0.787	0.87	0.998	0.999	0.665	0.976	0.957	0.762
rs11076280	1.1583E-08	-0.031273	0.00548	-0.031273	0.005481	2.19822E-08	0.29675	0.668404	0.001125	0.003904	0.226232	0.01464	0.02719	0.04194	0.902	0.861	0.999	0.996	0.916	0.976	0.97	0.951
rs7542416	1.1587E-08	0.0297816	0.00522	0.0309486	0.007952	2.19878E-08	0.25652	0.054595	0.000582	0.000521	0.046832	0.02103	0.14407	0.054257	0.876	0.507	0.999	0.998	0.956	0.933	0.913	0.93
rs847747	1.16E-08	-0.029943	0.00525	-0.030854	0.006517	1.58026E-08	0.29221	0.874685	0.1501	0.000613	0.005491	4.1E-05	0.87441	0.190544	0.806	0.678	0.387	0.998	0.98	1	0.586	0.839
rs6832453	1.16E-08	0.0389891	0.00683	0.0391822	0.008573	2.20135E-08	0.85747	0.075891	4.86E-05	0.23222	0.786567	0.00212	0.01228	0.035676	0.729	0.909	1	0.765	0.684	0.994	0.968	0.933
rs117781084	1.1612E-08	0.059638	0.01045	0.059638	0.010453	2.20346E-08	0.27354	0.62063	0.000143	0.029669	0.017621	0.0262	0.16189	0.081707	0.904	0.863	1	0.979	0.98	0.949	0.93	0.939
rs2983117	1.1613E-08	0.0297627	0.00522	0.0360302	0.008522	2.0245E-08	0.49585	0.061195	0.000938	0.004819	0.35184	0.0773	0.00054	0.010703	0.856	0.934	0.997	0.994	0.853	0.736	0.992	0.964
rs142561415	1.1618E-08	0.0291636	0.00511	0.0327732	0.010024	1.20513E-08	0.67814	0.251933	0.001738	0.040213	1.2E-06	0.01337	0.02465	0.674912	0.811	0.624	0.991	0.955	0.999	0.957	0.959	0.807
rs1567232	1.1622E-08	0.0389883	0.00683	0.0391848	0.008584	2.20528E-08	0.85813	0.075921	4.84E-05	0.232534	0.787993	0.00213	0.01221	0.035603	0.729	0.909	1	0.764	0.683	0.994	0.968	0.933
rs9467778	1.1623E-08	0.0291562	0.00511	0.0291562	0.005111	2.20556E-08	0.50131	0.561944	0.000918	0.002007	0.351394	0.00934	0.02563	0.226405	0.869	0.862	0.999	0.997	0.876	0.985	0.967	0.906
rs75192494	1.1656E-08	0.0319533	0.0056	0.0319533	0.005601	2.21162E-08	0.05099	0.595758	0.003935	0.000817	0.645641	0.00149	0.03741	0.740212	0.928	0.833	0.994	0.998	0.766	0.998	0.955	0.73
rs4974088	1.1666E-08	-0.0348	0.0061	-0.0348	0.0061	2.19393E-08	0.81065	0.078053	0.073545	0.001659	0.042341	2.8E-05	0.36315	0.823484	0.709	0.905	0.743	0.996	0.952	1	0.831	0.759
rs77482156	1.1668E-08	-0.088394	0.0155	-0.088394	0.015495	2.21379E-08	0.98205	0.41458	0.034377	8.99E-05	0.084338	0.00201	0.13785	0.058734	0.809	0.876	0.926	0.999	0.95	0.996	0.93	0.94

Table S3

rs72629600	1.1672E-08	-0.036211	0.00635	-0.036211	0.006348	2.21455E-08	0.3696	0.525099	3.89E-05	0.066378	0.020062	0.01089	0.21663	0.090771	0.874	0.723	1	0.947	0.975	0.977	0.905	0.926
rs1604694	1.1683E-08	0.0376644	0.0066	0.0361607	0.008242	2.21656E-08	0.78619	0.014567	0.003653	0.04859	0.800974	5.2E-06	0.18859	0.594177	0.685	0.929	0.99	0.936	0.651	1	0.872	0.634
rs12196855	1.1688E-08	0.0376066	0.00659	0.0362607	0.00801	2.2174E-08	0.7872	0.0174	0.003519	0.047795	0.805202	5.2E-06	0.19193	0.603435	0.685	0.926	0.99	0.937	0.649	1	0.87	0.636
rs10852511	1.1689E-08	0.0289072	0.00507	0.0289072	0.005068	2.21762E-08	0.4814	0.926031	0.005259	0.006898	0.338245	1.4E-05	0.76209	0.711835	0.818	0.733	0.988	0.989	0.827	1	0.735	0.78
rs9393729	1.169E-08	0.0291442	0.00511	0.0291442	0.005109	2.21791E-08	0.50697	0.559313	0.000905	0.002111	0.346682	0.00947	0.0241	0.229008	0.868	0.862	0.999	0.997	0.877	0.984	0.968	0.906
rs6446204	1.169E-08	-0.034819	0.0061	-0.034819	0.006104	2.19229E-08	0.82635	0.079399	0.077423	0.001716	0.040534	2.8E-05	0.33218	0.821539	0.711	0.904	0.73	0.996	0.953	1	0.839	0.759
rs6928376	1.1696E-08	0.0296729	0.0052	0.0296729	0.005202	2.21893E-08	0.86198	0.385316	0.002078	0.020331	0.005026	0.00309	0.10692	0.504867	0.831	0.885	0.998	0.984	0.988	0.996	0.941	0.87
rs7190339	1.1705E-08	-0.029577	0.00519	-0.029577	0.005185	2.22067E-08	0.53187	0.238239	0.000171	0.288754	0.355689	0.0001	0.18497	0.537814	0.813	0.862	1	0.715	0.821	1	0.885	0.81
rs10883050	1.1738E-08	0.0311565	0.00546	0.0336682	0.008308	2.22674E-08	0.63474	0.753713	0.022962	0.019507	0.000726	0.00074	0.00151	0.756299	0.828	0.746	0.947	0.98	0.993	0.998	0.986	0.732
rs157618	1.1739E-08	-0.028816	0.00505	-0.028816	0.005052	2.22692E-08	0.65869	0.122582	0.00018	0.030651	0.108177	0.00433	0.27388	0.418648	0.852	0.922	1	0.977	0.944	0.994	0.902	0.879
rs35146414	1.1739E-08	-0.03214	0.00564	-0.03214	0.005635	2.22692E-08	0.10705	0.231091	0.004022	0.04214	0.170566	0.00137	0.0029	0.828821	0.931	0.91	0.995	0.972	0.931	0.998	0.986	0.838
rs116986998	1.174E-08	-0.070004	0.01227	-0.070004	0.012274	2.22694E-08	0.57118	0.566173	2.7E-05	0.032618	0.502268	0.00114	0.73545	0.070515	0.8	0.802	1	0.959	0.765	0.997	0.597	0.91
rs6446200	1.1746E-08	-0.034791	0.0061	-0.034791	0.0061	2.21722E-08	0.80036	0.079594	0.070459	0.00175	0.043012	2.9E-05	0.35127	0.82528	0.712	0.905	0.759	0.996	0.952	1	0.837	0.763
rs113872520	1.1748E-08	0.0319775	0.00561	0.0319775	0.005607	2.2285E-08	0.05663	0.612794	0.003645	0.000758	0.638096	0.00147	0.04197	0.684815	0.925	0.829	0.994	0.998	0.765	0.997	0.952	0.716
rs3861922	1.1749E-08	-0.029768	0.00522	-0.030923	0.00793	2.22864E-08	0.25926	0.054792	0.000574	0.000552	0.046601	0.02087	0.14371	0.054115	0.876	0.508	0.999	0.998	0.956	0.934	0.913	0.93
rs9467775	1.1752E-08	0.0291398	0.00511	0.0291398	0.005109	2.22927E-08	0.50652	0.559306	0.000907	0.002126	0.34664	0.00947	0.02408	0.229024	0.868	0.862	0.999	0.997	0.877	0.984	0.968	0.906
rs10883049	1.1753E-08	0.0311553	0.00546	0.0336677	0.008308	2.22935E-08	0.63457	0.753713	0.022981	0.019491	0.000726	0.00074	0.00151	0.756299	0.828	0.746	0.947	0.98	0.993	0.998	0.986	0.732
rs9295694	1.1759E-08	0.0291393	0.00511	0.0291393	0.005109	2.2305E-08	0.5067	0.559304	0.000907	0.002124	0.346586	0.00947	0.02411	0.229024	0.868	0.862	0.999	0.997	0.877	0.984	0.968	0.906
rs10675648	1.1762E-08	-0.03479	0.0061	-0.03479	0.0061	2.22004E-08	0.80037	0.079592	0.070475	0.001752	0.043008	2.9E-05	0.35138	0.825253	0.712	0.905	0.759	0.996	0.952	1	0.837	0.763
rs4974083	1.1779E-08	-0.034788	0.0061	-0.034788	0.0061	2.22319E-08	0.80036	0.079589	0.070502	0.001753	0.043006	2.9E-05	0.35137	0.82524	0.712	0.905	0.759	0.996	0.952	1	0.837	0.763
rs9467783	1.1783E-08	0.0291388	0.00511	0.0291388	0.00511	2.23485E-08	0.50701	0.562143	0.000914	0.001974	0.351145	0.00954	0.02559	0.2262	0.868	0.862	0.999	0.997	0.876	0.984	0.967	0.906
rs35355150	1.1783E-08	0.0291432	0.00511	0.0291432	0.00511	2.23502E-08	0.46365	0.51218	0.000865	0.002949	0.336272	0.00905	0.02596	0.213577	0.875	0.87	0.999	0.996	0.882	0.986	0.968	0.91
rs200966	1.1788E-08	-0.043588	0.00764	-0.049169	0.011154	2.23587E-08	0.94268	0.166594	0.006119	0.000288	0.253254	0.02403	0.0178	0.003385	0.808	0.917	0.989	0.999	0.903	0.944	0.974	0.972
rs1851392	1.1802E-08	0.038163	0.00669	0.038163	0.006692	2.23836E-08	0.09093	0.188469	0.013121	0.00702	0.377188	0.00084	0.3976	0.003767	0.934	0.917	0.983	0.994	0.879	0.999	0.886	0.975
rs746359507	1.1805E-08	-0.02977	0.00522	-0.02977	0.005221	2.23894E-08	0.80084	0.243797	0.001027	0.000102	0.884155	0.0086	0.02515	0.915942	0.786	0.87	0.998	0.999	0.665	0.976	0.957	0.762
rs6843867	1.1809E-08	-0.036198	0.00635	-0.036198	0.006348	2.23977E-08	0.36459	0.525168	4.06E-05	0.065951	0.020014	0.01085	0.2166	0.090755	0.875	0.724	1	0.947	0.975	0.977	0.905	0.926
rs11018479	1.1816E-08	0.0291423	0.00511	0.0327263	0.010033	1.21937E-08	0.68424	0.249349	0.001725	0.040657	1.19E-06	0.01338	0.02483	0.675591	0.809	0.623	0.991	0.954	0.999	0.957	0.958	0.807
rs10736123	1.1822E-08	0.0311628	0.00546	0.0337188	0.008459	2.24209E-08	0.6286	0.770855	0.022936	0.018169	0.000665	0.00076	0.00152	0.667177	0.827	0.746	0.946	0.981	0.994	0.998	0.986	0.713
rs7973385	1.1832E-08	-0.028886	0.00507	-0.029075	0.005327	2.24388E-08	0.94236	0.842083	0.000277	0.040654	0.097494	0.00962	0.00045	0.444902	0.809	0.822	1	0.968	0.944	0.982	0.991	0.868
rs174536	1.1833E-08	0.0290887	0.0051	0.0310625	0.008456	2.24409E-08	0.09766	0.345594	0.011685	0.176942	2.62E-05	0.00015	0.30445	0.407185	0.906	0.643	0.968	0.827	0.998	0.999	0.862	0.845
rs1851393	1.1848E-08	0.0381525	0.00669	0.0381525	0.006691	2.24689E-08	0.09161	0.188746	0.013154	0.007014	0.377233	0.00084	0.39677	0.003773	0.934	0.917	0.983	0.994	0.879	0.999	0.886	0.975
rs11047301	1.1854E-08	-0.029223	0.00513	-0.029223	0.005125	2.24796E-08	0.61609	0.452013	0.000359	0.013021	0.290573	0.00626	0.00366	0.863083	0.847	0.867	0.999	0.988	0.884	0.99	0.982	0.811
rs2584123	1.1858E-08	-0.029759	0.00522	-0.029759	0.005219	2.24878E-08	0.08902	0.901052	0.0017	0.041007	0.840292	0.00014	0.02848	0.530173	0.913	0.789	0.997	0.961	0.701	1	0.958	0.836
rs2679082	1.1858E-08	-0.029759	0.00522	-0.029759	0.005219	2.24878E-08	0.08902	0.901052	0.0017	0.041007	0.840292	0.00014	0.02848	0.530173	0.913	0.789	0.997	0.961	0.701	1	0.958	0.836
rs4121738	1.1868E-08	0.0291472	0.00511	0.0327702	0.01001	1.24759E-08	0.66486	0.253972	0.001867	0.040111	1.24E-06	0.01291	0.02414	0.689844	0.813	0.626	0.99	0.955	0.999	0.959	0.959	0.806
rs3814883	1.1871E-08	-0.029169	0.00512	-0.029479	0.007537	2.2511E-08	0.3988	0.405671	0.007557	0.005708	0.000415	0.00055	0.50671	0.12655	0.84	0.838	0.983	0.992	0.994	0.999	0.804	0.508
rs74374362	1.1879E-08	0.0324131	0.00569	0.0324131	0.005685	2.25255E-08	0.1531	0.858467	0.0075	0.005518	0.032503	0.00085	0.1609	0.507013	0.916	0.794	0.99	0.994	0.971	0.999	0.926	0.867
rs6913398	1.1884E-08	0.0291377	0.00511	0.0291377	0.005111	2.25348E-08	0.50259	0.565976	0.00086	0.002124	0.353069	0.00972	0.02627	0.215297	0.869	0.861	0.999	0.997	0.876	0.984	0.967	0.908
rs113619661	1.1884E-08	-0.039042	0.00685	-0.039042	0.006848	2.25352E-08	0.15273	0.837289	0.000613	0.09414	0.066041	0.00607	0.02068	0.012312	0.922	0.802	0.999	0.938	0.961	0.992	0.972	0.965
rs10765187	1.1889E-08	0.0294862	0.00517	0.0332428	0.010292	9.34143E-09	0.87836	0.233579	0.002201	0.004482	1.62E-06	0.03483	0.03989	0.567502	0.762	0.586	0.988	0.99	0.999	0.853	0.946	0.806
rs3740699	1.1889E-08	0.0297664	0.00522	0.0297664	0.005221	2.25451E-08	0.99129	0.24376	0.000205	0.000381	0.845392	0.00455	0.1133	0.863059	0.725	0.849	0.999	0.998	0.531	0.986	0.903	0.738
rs3087866	1.1894E-08	-0.034827	0.00611	-0.034827	0.006109	2.23995E-08	0.75996	0.098049	0.072946	0.001842	0.043582	2.7E-05	0.28686	0.836539	0.703	0.899	0.749	0.996	0.951	1	0.854	0.759
rs112805079	1.1905E-08	-0.061407	0.01077	-0.061407	0.010771	2.25737E-08	0.39955	0.324727	0.000966	0.00479	0.388928	0.00075	0.27397	0.123883	0.668	0.866	0.998	0.993	0.835	0.999	0.878	0.908
rs200976	1.1908E-08	-0.043572	0.00764	-0.049185	0.011169	2.25799E-08	0.94427	0.166487	0.006164	0.000289	0.252731	0.02418	0.01773	0.003346	0.808	0.917	0.989	0.999	0.904	0.943	0.974	0.973
rs2587550	1.1921E-08	-0.030862	0.00541	-0.030862	0.005413	2.26018E-08	0.63622	0.033402	0.002964	0.002091	0.823081	0.00168	0.06542	0.101519	0.828	0.937	0.995	0.997	0.594	0.997	0.944	0.918
rs169287	1.1921E-08	-0.043571	0.00764	-0.049186	0.01117	2.26018E-08	0.94429	0.166478	0.006173	0.000288	0.252713	0.02418	0.01773	0.003346	0.808	0.917	0.989	0.999	0.904	0.943	0.974	0.973
rs77247429	1.1925E-08	0.0319324	0.0056	0.0319324	0.005601	2.26068E-08	0.04915	0.621136	0.004084	0.000682	0.620473	0.00166	0.03871	0.727863	0.929	0.83	0.993	0.998	0.774	0.997	0.954	0.728
rs200973	1.1929E-08	-0.04357	0.00764	-0.049183	0.011168	2.26126E-08	0.94435	0.166491	0.006162	0.000289	0.252747	0.0242	0.01772	0.003345	0.808	0.917	0.989	0.999	0.904	0.943	0.974	0.973
rs13075954	1.1932E-08	0.0381402	0.00669	0.0381402	0.00669	2.2616E-08	0.09149	0.188914	0.013239	0.00699	0.376686	0.00084	0.3967	0.003807	0.934	0.916	0.983	0.994	0.879	0.999	0.886	0.975
rs200974	1.1932E-08	-0.04357	0.00764	-0.049185	0.01117	2.26161E-08	0.94428	0.166468	0.006171	0.000289	0.252703	0.0242	0.01772	0.003345	0.808	0.917	0.989	0.999	0.904	0.943	0.974	0.973
rs4289330	1.1932E-08	-0.032174	0.00564	-0.032174	0.005644	2.26169E-08	0.40835	0.178545	0.028746	0.042854	0.00647	0.00064	0.00574	0.46341	0.89	0.92	0.953	0.971	0.988	0.999	0.983	0.884
rs62026673	1.1935E-08	0.0884564	0.01552	0.0884564	0.015517	2.26197E-08	0.98148	0.454276	0.001676	0.003542	0.044449	0.00618	0.43471	0.017503	0.815	0.875	0.998	0.996	0.965	0.991	0.871	0.957
rs140851477	1.1936E-08	0.071383	0.01252	0.071383	0.012522	2.26215E-08	0.36748	0.928704	0.000266	0.000894	0.466366	0.01259	0.13716	0.218163	0.871	0.802	1	0.998	0.828	0.974	0.922	0.896
rs16843078	1.1937E-08	0.0444633	0.0078	0.0501015	0.014323	1.31669E-08	0.73988	0.112606	0.000674	0.000332	0.001916	0.11077	0.01242	0.096747	0.713	0.399	0.994	0.999	0.99	0.424	0.963	0.884
rs12205194	1.1944E-08	0.0375691	0.00659	0.0362417	0.007982	2.26323E-08	0.78641	0.017926	0.003566	0.046041	0.81097	5.3E-06	0.19448	0.601323	0.685	0.925	0.99	0.939	0.647	1	0.869	0.635

Table S3

rs76666362	1.195E-08	-0.069637	0.01222	-0.069637	0.012216	2.26391E-08	0.52022	0.559431	3.13E-05	0.032034	0.49441	0.00107	0.74155	0.08645	0.81	0.804	1	0.96	0.77	0.998	0.602	0.904
rs3785198	1.1959E-08	-0.031287	0.00549	-0.034622	0.010637	2.26508E-08	0.1474	0.116375	0.0012	0.09661	0.549853	0.00132	2.2E-05	0.063639	0.565	0.901	0.997	0.904	0.773	0.997	0.995	0.923
rs494887	1.1964E-08	-0.043565	0.00764	-0.049182	0.01117	2.26571E-08	0.94477	0.166479	0.006196	0.000288	0.252727	0.02419	0.01773	0.003347	0.808	0.917	0.989	0.999	0.904	0.943	0.974	0.973
rs2164183	1.1965E-08	0.0289716	0.00508	0.0289716	0.005083	2.26584E-08	0.54271	0.332834	0.000117	0.017804	0.608186	0.00449	0.35702	0.021099	0.851	0.878	1	0.984	0.791	0.993	0.873	0.951
rs147474949	1.1967E-08	0.0311385	0.00546	0.0336472	0.008309	2.26607E-08	0.63682	0.753758	0.022954	0.019836	0.000725	0.00074	0.00151	0.756266	0.828	0.746	0.947	0.98	0.993	0.998	0.986	0.732
rs4416416	1.1977E-08	0.0300412	0.00527	0.0300412	0.00527	2.2657E-08	0.86871	0.735212	0.010689	0.107692	0.38638	1.3E-06	0.04864	0.559173	0.731	0.788	0.97	0.886	0.815	1	0.939	0.81
rs2870371	1.1986E-08	-0.032121	0.00564	-0.032121	0.005635	2.26852E-08	0.10219	0.231465	0.004104	0.040775	0.173542	0.00141	0.00293	0.828447	0.932	0.91	0.995	0.973	0.93	0.998	0.986	0.838
rs9998897	1.199E-08	-0.039008	0.00684	-0.039186	0.008483	2.26909E-08	0.86853	0.077078	5.11E-05	0.234841	0.769863	0.00212	0.0129	0.035193	0.732	0.909	1	0.764	0.691	0.994	0.967	0.933
rs742047	1.1994E-08	-0.036576	0.00642	-0.036576	0.006417	2.26958E-08	0.87801	0.237708	0.000964	0.004248	0.151401	0.02001	0.07861	0.004933	0.836	0.909	0.999	0.996	0.936	0.962	0.952	0.971
rs7623659	1.1996E-08	-0.029055	0.0051	-0.029055	0.005098	2.26947E-08	0.64954	0.101476	0.020501	0.104655	0.018381	3.8E-06	0.35695	0.665773	0.813	0.905	0.944	0.895	0.971	1	0.851	0.699
rs41341649	1.1997E-08	0.0296049	0.00519	0.0296049	0.005194	2.26995E-08	0.35967	0.41858	0.000152	0.117639	0.24576	0.00206	0.07647	0.154847	0.884	0.877	1	0.916	0.902	0.997	0.947	0.917
rs524716	1.1997E-08	0.0287408	0.00504	0.0287408	0.005042	2.27004E-08	0.35504	0.784597	0.001682	0.001735	0.092868	0.0019	0.27427	0.636925	0.873	0.764	0.998	0.997	0.941	0.997	0.889	0.834
rs9467779	1.1999E-08	0.0291231	0.00511	0.0291231	0.00511	2.2702E-08	0.50547	0.561948	0.000913	0.00212	0.351085	0.00931	0.02562	0.226411	0.868	0.862	0.999	0.997	0.876	0.985	0.967	0.906
rs4666020	1.2003E-08	-0.032401	0.00568	-0.032401	0.005685	2.27077E-08	0.576	0.057372	1.45E-05	0.264594	0.072932	0.00866	0.0623	0.596887	0.84	0.928	1	0.778	0.947	0.978	0.946	0.834
rs4736157	1.2007E-08	0.0297189	0.00521	0.0297189	0.005214	2.27128E-08	0.33445	0.165683	0.000174	0.696711	0.044565	0.00036	0.03881	0.655311	0.833	0.871	1	0.363	0.948	0.999	0.944	0.77
rs12446900	1.2011E-08	-0.069599	0.01221	-0.069599	0.012211	2.27181E-08	0.5427	0.55465	3.14E-05	0.032451	0.488055	0.00105	0.74291	0.088039	0.806	0.805	1	0.96	0.771	0.998	0.602	0.903
rs2122355	1.2011E-08	-0.042454	0.00745	-0.043207	0.008668	2.27182E-08	0.06881	0.654913	7.98E-05	0.445615	0.01838	0.00488	0.00705	0.719692	0.917	0.809	1	0.599	0.973	0.985	0.975	0.794
rs10946837	1.2013E-08	0.0291267	0.00511	0.0291267	0.00511	2.27202E-08	0.46457	0.509577	0.000868	0.002985	0.334316	0.00907	0.02681	0.212641	0.875	0.87	0.999	0.996	0.883	0.986	0.967	0.91
rs61947079	1.2015E-08	0.0344496	0.00604	0.0344496	0.006044	2.27052E-08	0.88934	0.999459	0.034498	7.23E-05	0.070869	0.00321	0.02496	0.135993	0.812	0.8	0.926	1	0.952	0.993	0.966	0.917
rs2584128	1.2018E-08	-0.029749	0.00522	-0.029749	0.00522	2.27268E-08	0.09762	0.836804	0.00172	0.051168	0.789092	0.00013	0.02738	0.51438	0.912	0.801	0.997	0.954	0.722	1	0.959	0.841
rs9825823	1.2026E-08	-0.028784	0.00505	-0.029603	0.007442	2.20119E-08	0.01359	0.409553	0.062119	0.000269	0.031558	0.00011	0.65039	0.922597	0.934	0.806	0.72	0.999	0.953	1	0.519	0.675
rs77125704	1.203E-08	-0.069601	0.01221	-0.069601	0.012212	2.27427E-08	0.54258	0.555491	3.15E-05	0.032247	0.488828	0.00105	0.74212	0.087722	0.806	0.805	1	0.96	0.771	0.998	0.602	0.904
rs78097337	1.2033E-08	-0.069598	0.01221	-0.069598	0.012212	2.27453E-08	0.54265	0.554904	3.15E-05	0.0323	0.488564	0.00105	0.74231	0.087843	0.806	0.805	1	0.96	0.771	0.998	0.602	0.904
rs1056347	1.2034E-08	0.0291204	0.00511	0.0291204	0.00511	2.27469E-08	0.50552	0.561389	0.000917	0.002106	0.351384	0.00934	0.0256	0.226543	0.868	0.862	0.999	0.997	0.876	0.985	0.967	0.906
rs7757003	1.204E-08	-0.044385	0.00779	-0.044385	0.007788	2.27549E-08	0.08129	0.402461	0.000602	0.051832	0.44272	0.0025	0.03757	0.142332	0.934	0.886	0.999	0.965	0.859	0.997	0.964	0.925
rs7434187	1.2049E-08	-0.034788	0.0061	-0.034788	0.006104	2.25604E-08	0.82537	0.079485	0.0785	0.001713	0.039806	2.8E-05	0.33147	0.82288	0.71	0.904	0.726	0.996	0.953	1	0.839	0.758
rs79575294	1.2049E-08	-0.069619	0.01222	-0.069619	0.012216	2.27665E-08	0.52033	0.558976	3.15E-05	0.032031	0.494487	0.00107	0.74144	0.086645	0.81	0.804	1	0.96	0.77	0.998	0.602	0.904
rs117734491	1.205E-08	-0.069611	0.01221	-0.069611	0.012215	2.27676E-08	0.54369	0.558792	3.15E-05	0.031895	0.490522	0.00105	0.74216	0.087401	0.805	0.804	1	0.96	0.77	0.998	0.601	0.904
rs11754138	1.2054E-08	0.0291189	0.00511	0.0291189	0.00511	2.27731E-08	0.50552	0.561365	0.000918	0.002106	0.351364	0.00934	0.02562	0.22654	0.868	0.862	0.999	0.997	0.876	0.985	0.967	0.906
rs12447154	1.2054E-08	-0.069641	0.01222	-0.069641	0.01222	2.27731E-08	0.53988	0.563138	3.12E-05	0.030977	0.497428	0.00108	0.73899	0.085655	0.806	0.803	1	0.961	0.768	0.998	0.6	0.904
rs11756120	1.2056E-08	0.0291279	0.00511	0.0291279	0.005111	2.27758E-08	0.50605	0.560421	0.000922	0.002097	0.350759	0.00931	0.02583	0.22752	0.868	0.862	0.999	0.997	0.876	0.985	0.967	0.906
rs28558133	1.2061E-08	0.0291184	0.00511	0.0291184	0.00511	2.27814E-08	0.50554	0.561944	0.000918	0.002105	0.351399	0.00934	0.02563	0.226406	0.868	0.862	0.999	0.997	0.876	0.985	0.967	0.906
rs10237302	1.2063E-08	0.0456055	0.008	0.0456055	0.008003	2.27838E-08	0.28965	0.022574	0.008368	0.234123	0.455533	2.8E-06	0.542	0.211617	0.863	0.934	0.977	0.783	0.803	1	0.805	0.88
rs201992989	1.2068E-08	0.0595592	0.01045	0.0628798	0.017495	2.27902E-08	0.73529	0.135328	0.001098	0.022272	0.000388	0.00791	0.00881	0.292541	0.724	0.574	0.998	0.977	0.995	0.981	0.974	0.869
rs6809216	1.2071E-08	-0.02905	0.0051	-0.02905	0.005098	2.27937E-08	0.66754	0.103276	0.020232	0.102069	0.017915	4E-06	0.35954	0.65735	0.81	0.904	0.945	0.898	0.971	1	0.85	0.697
rs749640	1.2075E-08	0.0375706	0.00659	0.0362062	0.007995	2.27993E-08	0.75249	0.017239	0.003245	0.057904	0.7664	4.9E-06	0.20129	0.624704	0.679	0.925	0.991	0.925	0.662	1	0.867	0.641
rs149145972	1.2076E-08	-0.029752	0.00522	-0.029752	0.005221	2.28008E-08	0.80131	0.243797	0.001027	0.000105	0.884155	0.0086	0.02515	0.915942	0.786	0.87	0.998	0.999	0.665	0.976	0.957	0.762
rs1041634	1.2076E-08	-0.028987	0.00509	-0.028987	0.005087	2.28013E-08	0.15881	0.452969	0.001108	0.112285	0.182696	0.00132	0.01047	0.263336	0.919	0.881	0.999	0.926	0.925	0.998	0.978	0.906
rs77953603	1.208E-08	0.0595573	0.01045	0.0628781	0.017495	2.28062E-08	0.73529	0.135318	0.001098	0.022272	0.000388	0.00792	0.00881	0.29255	0.724	0.574	0.998	0.977	0.995	0.981	0.974	0.869
rs145747805	1.2081E-08	-0.06963	0.01222	-0.06963	0.012219	2.2807E-08	0.54053	0.561295	3.13E-05	0.031184	0.496232	0.00108	0.74063	0.08597	0.806	0.803	1	0.961	0.768	0.998	0.601	0.904
rs6446264	1.2083E-08	-0.029051	0.0051	-0.029051	0.005098	2.28051E-08	0.64909	0.101476	0.020501	0.105396	0.018381	3.8E-06	0.35695	0.665773	0.813	0.905	0.943	0.895	0.971	1	0.851	0.699
rs12404460	1.209E-08	0.0444463	0.0078	0.0500865	0.014325	1.33154E-08	0.73989	0.112544	0.000677	0.000332	0.00192	0.1112	0.01243	0.096809	0.713	0.399	0.994	0.999	0.99	0.423	0.963	0.884
rs77054372	1.2093E-08	-0.035981	0.00631	-0.037215	0.010571	1.51756E-08	0.47422	0.869775	0.005641	7.57E-06	0.747499	0.00665	0.00176	0.583999	0.801	0.695	0.975	1	0.482	0.967	0.98	0.779
rs139565444	1.2101E-08	-0.069586	0.01221	-0.069586	0.012212	2.28328E-08	0.54281	0.557266	3.12E-05	0.032533	0.488392	0.00105	0.74193	0.087772	0.806	0.804	1	0.96	0.771	0.998	0.601	0.903
rs607472	1.2103E-08	-0.029095	0.00511	-0.030323	0.00675	2.2835E-08	0.02381	0.047461	0.005176	0.119694	0.990534	0.00018	0.06353	0.025314	0.948	0.937	0.992	0.905	0.674	1	0.95	0.951
rs1321480	1.2108E-08	0.029115	0.00511	0.029115	0.00511	2.28422E-08	0.5061	0.561946	0.000918	0.002113	0.351404	0.00934	0.02563	0.226408	0.868	0.862	0.999	0.997	0.876	0.985	0.967	0.906
rs11086476	1.211E-08	-0.032104	0.00563	-0.032104	0.005634	2.28443E-08	0.10661	0.210149	0.003465	0.047067	0.187399	0.00146	0.00267	0.838171	0.93	0.912	0.996	0.969	0.926	0.998	0.987	0.836
rs74670026	1.211E-08	-0.069586	0.01221	-0.069586	0.012212	2.28447E-08	0.54281	0.557915	3.12E-05	0.032561	0.488526	0.00105	0.74178	0.087672	0.806	0.804	1	0.96	0.771	0.998	0.601	0.904
rs76719139	1.211E-08	-0.069643	0.01222	-0.069643	0.012222	2.28449E-08	0.53974	0.565622	3.12E-05	0.030546	0.500053	0.00109	0.73937	0.08473	0.806	0.803	1	0.962	0.767	0.998	0.6	0.904
rs13081128	1.2114E-08	0.0300342	0.00527	0.0300342	0.005271	2.28372E-08	0.87286	0.738911	0.010817	0.104369	0.389393	1.4E-06	0.04847	0.561393	0.732	0.788	0.97	0.89	0.815	1	0.939	0.81
rs76445617	1.2114E-08	-0.069606	0.01222	-0.069606	0.012216	2.285E-08	0.54396	0.558074	3.15E-05	0.031851	0.492626	0.00106	0.74293	0.087187	0.805	0.804	1	0.961	0.77	0.998	0.602	0.904
rs2436729	1.2119E-08	-0.035393	0.00621	-0.035393	0.006211	2.28553E-08	0.46756	0.935164	0.020908	0.010129	0.092074	1E-05	0.71873	0.398897	0.842	0.781	0.95	0.988	0.934	1	0.774	0.853
rs752220	1.2121E-08	0.0365488	0.00641	0.0360396	0.009216	2.28584E-08	0.08296	0.153207	0.003674	0.000145	0.646951	0.00101	0.62308	0.05337	0.899	0.545	0.992	0.999	0.717	0.998	0.762	0.916
rs12879529	1.2123E-08	0.0294401	0.00517	0.0294401	0.005167	2.28615E-08	0.90451	0.12632	0.000237	0.009562	0.316069	0.02131	0.00416	0.232221	0.793	0.919	1	0.991	0.881	0.953	0.983	0.903
rs13100967	1.2125E-08	0.0300333	0.00527	0.0300333	0.005271	2.28512E-08	0.87286	0.738918	0.010822	0.104349	0.389411	1.4E-06	0.04848	0.561408	0.732	0.788	0.97	0.89	0.815	1	0.939	0.81

Table S3

rs13058792	1.2128E-08	0.0300331	0.00527	0.0300331	0.005271	2.28555E-08	0.87286	0.73892	0.010822	0.104369	0.389413	1.4E-06	0.04848	0.561412	0.732	0.788	0.97	0.89	0.815	1	0.939	0.81
rs10946834	1.2136E-08	0.029113	0.00511	0.029113	0.00511	2.28775E-08	0.50613	0.561946	0.000918	0.00212	0.351399	0.00934	0.02563	0.226406	0.868	0.862	0.999	0.997	0.876	0.985	0.967	0.906
rs42750	1.2136E-08	0.0295175	0.00518	0.0295175	0.005181	2.28779E-08	0.49664	0.300573	6.35E-05	0.295385	0.333173	0.00017	0.26954	0.612571	0.81	0.843	1	0.698	0.82	1	0.852	0.789
rs10946835	1.2138E-08	0.0291128	0.00511	0.0291128	0.00511	2.28798E-08	0.50603	0.561946	0.000919	0.002119	0.351406	0.00934	0.02564	0.2264	0.868	0.862	0.999	0.997	0.876	0.985	0.967	0.906
rs190001837	1.2138E-08	0.0933504	0.01638	0.0957885	0.019394	2.28799E-08	0.40279	0.278794	5.62E-05	0.467226	0.001211	0.01131	0.19596	0.062757	0.849	0.869	1	0.595	0.992	0.96	0.894	0.924
rs118135923	1.2141E-08	-0.069581	0.01221	-0.069581	0.012212	2.28835E-08	0.54282	0.558775	3.11E-05	0.032599	0.488633	0.00105	0.74168	0.087508	0.805	0.804	1	0.96	0.771	0.998	0.601	0.904
rs2393670	1.2142E-08	0.0291125	0.00511	0.0291125	0.00511	2.28855E-08	0.50604	0.561948	0.000919	0.002119	0.351411	0.00934	0.02564	0.226405	0.868	0.862	0.999	0.997	0.876	0.985	0.967	0.906
rs77350882	1.2145E-08	0.0577928	0.01014	0.0577928	0.010143	2.28885E-08	0.63369	0.52776	0.000178	0.007212	0.01485	0.05565	0.08533	0.107133	0.845	0.859	1	0.992	0.98	0.847	0.943	0.926
rs146078573	1.2147E-08	-0.078942	0.01386	-0.07897	0.014486	2.28915E-08	0.23261	0.058369	1.94E-05	0.198449	0.150671	0.00566	0.03006	0.529788	0.883	0.924	1	0.817	0.913	0.986	0.958	0.679
rs7372883	1.216E-08	-0.034755	0.0061	-0.034755	0.0061	2.28353E-08	0.79478	0.079591	0.070512	0.00182	0.043002	2.9E-05	0.35135	0.825212	0.711	0.905	0.76	0.996	0.952	1	0.837	0.763
rs2734842	1.217E-08	-0.030843	0.00541	-0.030843	0.005414	2.29212E-08	0.66792	0.032494	0.002884	0.002097	0.816873	0.00165	0.06413	0.11018	0.823	0.936	0.995	0.997	0.59	0.997	0.944	0.915
rs34588335	1.2172E-08	-0.029042	0.0051	-0.029042	0.005097	2.29222E-08	0.65655	0.103276	0.020232	0.103794	0.017915	4E-06	0.35954	0.65735	0.812	0.904	0.944	0.896	0.971	1	0.85	0.697
rs72830539	1.2175E-08	0.0971966	0.01706	0.0971966	0.01706	2.29273E-08	0.28624	0.044347	0.005556	0.033636	0.030692	9.1E-05	0.95276	0.983268	0.878	0.931	0.991	0.971	0.966	1	0.718	0.779
rs9461270	1.2178E-08	0.0291102	0.00511	0.0291102	0.00511	2.29316E-08	0.50679	0.562143	0.000914	0.00207	0.35114	0.00954	0.02559	0.2262	0.868	0.862	0.999	0.997	0.876	0.984	0.967	0.906
rs1154899	1.2179E-08	0.0319125	0.0056	0.0319125	0.005601	2.29323E-08	0.0508	0.599124	0.003993	0.000817	0.645213	0.00152	0.03758	0.737718	0.928	0.833	0.994	0.998	0.766	0.997	0.954	0.729
rs78022288	1.2181E-08	0.0375698	0.00659	0.0362546	0.007958	2.29353E-08	0.75655	0.016875	0.003313	0.055442	0.754982	5.1E-06	0.20812	0.620845	0.681	0.926	0.991	0.928	0.668	1	0.865	0.641
rs13087851	1.2186E-08	-0.029041	0.0051	-0.029041	0.005098	2.29404E-08	0.65602	0.103276	0.020232	0.103964	0.017915	4E-06	0.35954	0.65735	0.812	0.904	0.944	0.896	0.971	1	0.85	0.697
rs10786400	1.2188E-08	0.0311342	0.00546	0.0336868	0.008458	2.29443E-08	0.62641	0.770853	0.022936	0.018858	0.000665	0.00076	0.00152	0.667175	0.828	0.746	0.946	0.981	0.994	0.998	0.986	0.713
rs17391213	1.2189E-08	0.0715218	0.01255	0.0715218	0.012554	2.29446E-08	0.87793	0.96103	0.003331	0.000747	0.111904	0.00261	0.08239	0.549153	0.812	0.804	0.995	0.998	0.936	0.996	0.941	0.851
rs4870062	1.2194E-08	-0.03034	0.00533	-0.029725	0.007613	1.51123E-08	0.55838	0.520292	0.080492	0.017626	0.004402	1.1E-06	0.41628	0.344265	0.724	0.733	0.555	0.952	0.98	1	0.357	0.774
rs9461267	1.2194E-08	0.0291086	0.00511	0.0291086	0.005109	2.29518E-08	0.50575	0.564757	0.000912	0.002102	0.353185	0.00953	0.02476	0.227137	0.868	0.861	0.999	0.997	0.875	0.984	0.968	0.906
rs7937640	1.2199E-08	0.0297147	0.00522	0.0292854	0.005727	2.22226E-08	0.11516	0.272429	0.000715	0.657524	0.842013	5.8E-06	0.06872	0.367322	0.854	0.803	0.997	0.306	0.529	1	0.903	0.779
rs11707968	1.2202E-08	-0.034751	0.0061	-0.034751	0.0061	2.28888E-08	0.79479	0.079584	0.070522	0.001831	0.042989	2.9E-05	0.3511	0.825139	0.711	0.905	0.76	0.996	0.952	1	0.837	0.763
rs1784300	1.2205E-08	-0.029086	0.00511	-0.030301	0.006737	2.29661E-08	0.02424	0.04741	0.005183	0.119793	0.99123	0.00018	0.06356	0.025304	0.948	0.937	0.992	0.905	0.675	1	0.95	0.951
rs143389895	1.222E-08	0.0639348	0.01122	0.0591304	0.016903	1.10844E-08	0.30272	0.207973	0.000165	0.887461	0.887138	2.2E-06	0.08054	0.270407	0.745	0.777	0.999	0.069	0.312	1	0.869	0.757
rs649597	1.2221E-08	0.0505959	0.00888	0.0692185	0.018344	2.90269E-09	0.00092	0.089858	0.102903	1.31E-06	0.150139	0.02126	0.3829	0.043525	0.975	0.862	0.322	1	0.694	0.438	0.6	0.907
rs940404	1.223E-08	-0.08156	0.01432	-0.08156	0.014318	2.29973E-08	0.66995	0.611087	0.005891	0.000104	0.127787	0.00808	0.08746	0.068069	0.759	0.85	0.992	0.999	0.934	0.986	0.943	0.935
rs73228261	1.2234E-08	-0.033749	0.00592	-0.039786	0.010465	1.58333E-08	0.07935	0.071125	0.043117	6.43E-05	0.038274	0.00854	0.00466	0.222379	0.92	0.922	0.847	1	0.961	0.944	0.981	0.578
rs3811699	1.2255E-08	-0.029044	0.0051	-0.029044	0.005099	2.3026E-08	0.58947	0.095922	0.021179	0.10387	0.018065	4.1E-06	0.38901	0.690883	0.822	0.907	0.942	0.897	0.971	1	0.844	0.705
rs2866430	1.2258E-08	-0.033253	0.00584	-0.033253	0.005838	2.30325E-08	0.49448	0.493246	0.001499	0.012128	0.004874	0.00317	0.67947	0.278112	0.865	0.865	0.998	0.989	0.987	0.996	0.816	0.895
rs67700133	1.2259E-08	0.0355263	0.00624	0.0355263	0.006237	2.30342E-08	0.71084	0.377108	0.004636	0.152245	0.094725	6.2E-05	0.16967	0.05825	0.839	0.879	0.993	0.888	0.945	1	0.92	0.938
rs6576007	1.2273E-08	-0.029432	0.00517	-0.029432	0.005167	2.30522E-08	0.85865	0.118622	0.000232	0.009451	0.310663	0.02109	0.00414	0.257254	0.786	0.92	1	0.991	0.881	0.953	0.983	0.898
rs11018466	1.2277E-08	0.0294628	0.00517	0.0332768	0.010274	9.72016E-09	0.85529	0.238226	0.002306	0.00463	1.63E-06	0.03455	0.03864	0.580757	0.767	0.59	0.988	0.989	0.999	0.856	0.947	0.805
rs964282	1.2293E-08	0.0312939	0.00549	0.0312939	0.005494	2.30773E-08	0.17276	0.092292	0.022009	0.131016	0.049737	7.1E-05	0.20248	0.05012	0.92	0.934	0.965	0.914	0.967	1	0.923	0.949
rs2847566	1.2293E-08	-0.035104	0.00616	-0.035104	0.006163	2.30779E-08	0.35788	0.00429	0.003422	0.010386	0.208015	0.00335	0.1814	0.246997	0.899	0.971	0.996	0.992	0.925	0.996	0.931	0.914
rs315415	1.2319E-08	0.0287178	0.00504	0.0287178	0.005042	2.31101E-08	0.35856	0.791321	0.001698	0.001752	0.091757	0.00194	0.27622	0.634727	0.873	0.765	0.998	0.997	0.942	0.997	0.889	0.835
rs145365961	1.2332E-08	-0.089092	0.01564	-0.089092	0.015644	2.3127E-08	0.36218	0.215726	0.010921	0.120686	0.11068	1.5E-05	0.0584	0.989174	0.875	0.896	0.98	0.904	0.936	1	0.949	0.789
rs315418	1.2332E-08	0.0287168	0.00504	0.0287168	0.005042	2.31271E-08	0.35886	0.791518	0.001699	0.001752	0.091645	0.00194	0.27641	0.634384	0.873	0.765	0.998	0.997	0.942	0.997	0.889	0.835
rs75285154	1.2334E-08	0.0375562	0.00659	0.0362374	0.007962	2.31296E-08	0.75762	0.01685	0.003341	0.055298	0.756321	5.2E-06	0.20825	0.619581	0.681	0.926	0.991	0.929	0.667	1	0.865	0.641
rs187181866	1.2347E-08	-0.086356	0.01516	-0.086356	0.015164	2.31453E-08	0.31812	0.139334	0.001831	0.11214	0.707778	0.00024	0.00652	0.299808	0.88	0.91	0.997	0.909	0.758	1	0.977	0.885
rs7941957	1.2347E-08	0.02911	0.00511	0.0326498	0.010046	1.26967E-08	0.71177	0.252263	0.001693	0.045445	1.2E-06	0.01287	0.02351	0.675114	0.805	0.623	0.99	0.949	0.999	0.958	0.959	0.806
rs747926828	1.2356E-08	0.060329	0.01059	0.0625168	0.013044	2.08198E-08	0.9352	0.042701	6.6E-05	0.000974	0.463192	0.09187	0.01839	0.285517	0.71	0.919	1	0.998	0.756	0.615	0.961	0.849
rs12190859	1.236E-08	-0.032817	0.00576	-0.032817	0.005763	2.31624E-08	0.39009	0.83526	0.000171	0.004172	0.526869	0.00535	0.28142	0.059861	0.862	0.762	1	0.994	0.803	0.99	0.882	0.93
rs1884946	1.2375E-08	0.029096	0.00511	0.029096	0.00511	2.31815E-08	0.50597	0.562145	0.000914	0.00212	0.351145	0.00954	0.02559	0.226201	0.868	0.862	0.999	0.997	0.876	0.984	0.967	0.906
rs59837830	1.2384E-08	-0.069551	0.01221	-0.069551	0.012214	2.31919E-08	0.5431	0.570825	3.02E-05	0.033162	0.490395	0.00107	0.73938	0.085777	0.805	0.802	1	0.959	0.77	0.998	0.6	0.904
rs6932865	1.2384E-08	0.0290954	0.00511	0.0290954	0.00511	2.31925E-08	0.50616	0.56214	0.000914	0.00212	0.351135	0.00955	0.02559	0.226198	0.868	0.862	0.999	0.997	0.876	0.984	0.967	0.906
rs6933176	1.2384E-08	0.0290954	0.00511	0.0290954	0.00511	2.31925E-08	0.50616	0.56214	0.000914	0.00212	0.351135	0.00955	0.02559	0.226198	0.868	0.862	0.999	0.997	0.876	0.984	0.967	0.906
rs201548601	1.2393E-08	0.0319277	0.00561	0.0319277	0.005607	2.32038E-08	0.05782	0.616813	0.00385	0.00071	0.637206	0.00144	0.04456	0.671701	0.924	0.827	0.994	0.998	0.765	0.998	0.95	0.713
rs1321481	1.2395E-08	0.0290946	0.00511	0.0290946	0.00511	2.32059E-08	0.50616	0.562138	0.000915	0.00212	0.351258	0.00955	0.02559	0.226198	0.868	0.862	0.999	0.997	0.876	0.984	0.967	0.906
rs4713008	1.2395E-08	0.0290946	0.00511	0.0290946	0.00511	2.32059E-08	0.50616	0.562138	0.000915	0.00212	0.351258	0.00955	0.02559	0.226198	0.868	0.862	0.999	0.997	0.876	0.984	0.967	0.906
rs78644736	1.242E-08	-0.089124	0.01565	-0.089124	0.015653	2.32375E-08	0.36467	0.222848	0.011423	0.121593	0.105111	1.3E-05	0.06293	0.989788	0.874	0.895	0.979	0.903	0.938	1	0.947	0.788
rs174529	1.2427E-08	0.0290199	0.0051	0.0309331	0.008426	2.32466E-08	0.10991	0.354116	0.018051	0.119569	2.36E-05	0.00013	0.29691	0.534593	0.904	0.651	0.951	0.882	0.998	0.999	0.866	0.827
rs77509279	1.2429E-08	-0.03794	0.00666	-0.03794	0.006663	2.32495E-08	0.06704	0.322598	0.024014	0.007118	0.150602	2.4E-05	0.718	0.951018	0.923	0.871	0.944	0.991	0.916	1	0.784	0.779
rs7611358	1.2434E-08	-0.034736	0.0061	-0.034736	0.006101	2.31581E-08	0.80704	0.077767	0.072595	0.001743	0.041892	3E-05	0.3612	0.819383	0.711	0.906	0.751	0.996	0.952	1	0.833	0.762
rs7621226	1.2434E-08	-0.034736	0.0061	-0.034736	0.006101	2.31581E-08	0.80704	0.077767	0.072595	0.001743	0.041892	3E-05	0.3612	0.819383	0.711	0.906	0.751	0.996	0.952	1	0.833	0.762

Table S3

rs60376668	1.2448E-08	-0.047656	0.00837	-0.047656	0.00837	2.32727E-08	0.10324	0.812801	0.001001	0.176742	0.010706	0.00074	0.62093	0.041957	0.92	0.82	0.999	0.859	0.981	0.999	0.819	0.942
rs9810318	1.2458E-08	-0.034789	0.00611	-0.034789	0.00611	2.32854E-08	0.82948	0.065011	0.063901	0.002098	0.041083	3.7E-05	0.3458	0.838597	0.728	0.914	0.795	0.996	0.955	1	0.846	0.771
rs9665831	1.246E-08	0.0291029	0.00511	0.0327593	0.010019	1.28363E-08	0.6582	0.256435	0.001858	0.040726	1.18E-06	0.01345	0.025	0.687019	0.813	0.626	0.99	0.954	0.999	0.957	0.958	0.806
rs12446309	1.2486E-08	-0.069536	0.01221	-0.069536	0.012214	2.33212E-08	0.54313	0.574121	2.99E-05	0.033354	0.491046	0.00107	0.73867	0.08524	0.805	0.801	1	0.959	0.769	0.998	0.599	0.904
rs12446342	1.2509E-08	-0.069532	0.01221	-0.069532	0.012214	2.33502E-08	0.54313	0.574927	2.99E-05	0.033389	0.491104	0.00107	0.73863	0.085132	0.805	0.801	1	0.959	0.769	0.998	0.599	0.904
rs12641663	1.2535E-08	-0.029229	0.00513	-0.029229	0.005135	2.33832E-08	0.1761	0.269978	0.001242	0.00719	0.975201	0.00042	0.07243	0.917993	0.885	0.867	0.998	0.99	0.621	0.999	0.933	0.737
rs6931694	1.2545E-08	0.0375385	0.00659	0.0361662	0.008018	2.33952E-08	0.76091	0.01672	0.003391	0.053761	0.769813	5.2E-06	0.20777	0.610591	0.681	0.926	0.991	0.93	0.662	1	0.865	0.638
rs58467411	1.2561E-08	-0.069525	0.01221	-0.069525	0.012215	2.3418E-08	0.54318	0.576597	2.98E-05	0.033462	0.491208	0.00108	0.73775	0.084898	0.805	0.8	1	0.958	0.769	0.998	0.599	0.904
rs7648841	1.2577E-08	-0.029012	0.0051	-0.029012	0.005097	2.3443E-08	0.65074	0.095645	0.019732	0.105168	0.020172	4.1E-06	0.37186	0.686459	0.814	0.907	0.947	0.896	0.97	1	0.848	0.704
rs12522729	1.2577E-08	-0.088804	0.0156	-0.088804	0.015602	2.34436E-08	0.85401	0.068625	0.005491	0.139908	0.102872	1.7E-05	0.16627	0.877275	0.802	0.923	0.991	0.88	0.935	1	0.911	0.793
rs184663	1.2579E-08	0.0295768	0.0052	0.0295768	0.005196	2.34462E-08	0.38058	0.389927	0.000156	0.117115	0.251822	0.00211	0.07566	0.153867	0.882	0.88	1	0.917	0.9	0.997	0.948	0.918
rs9890900	1.2598E-08	0.0478525	0.00841	0.0506826	0.013866	1.15413E-08	0.04723	0.681697	0.062167	0.428136	0.000678	1.7E-06	0.16928	0.380617	0.881	0.53	0.519	0.367	0.992	1	0.816	0.74
rs556168223	1.2598E-08	0.031873	0.0056	0.031873	0.0056	2.34755E-08	0.04239	0.61241	0.004507	0.000654	0.647696	0.00163	0.03765	0.720331	0.931	0.831	0.993	0.998	0.765	0.997	0.954	0.726
rs7331020	1.2601E-08	0.0354283	0.00622	0.0354283	0.006225	2.34791E-08	0.83673	0.427552	0.000516	0.014373	0.054797	0.00501	0.13806	0.305724	0.833	0.879	0.999	0.988	0.962	0.993	0.933	0.896
rs34873994	1.2602E-08	0.029634	0.00521	0.029634	0.005207	2.34815E-08	0.97079	0.46951	0.002435	0.020329	0.005349	0.00221	0.11694	0.48474	0.814	0.872	0.997	0.984	0.987	0.997	0.937	0.87
rs3743700	1.261E-08	-0.069533	0.01222	-0.069533	0.012218	2.34934E-08	0.54686	0.585247	2.82E-05	0.032804	0.49579	0.00112	0.73668	0.084061	0.803	0.799	1	0.959	0.767	0.997	0.598	0.904
rs6557171	1.2611E-08	-0.030309	0.00533	-0.029703	0.007586	1.56803E-08	0.55264	0.520391	0.081377	0.017155	0.004656	1.1E-06	0.41607	0.344399	0.726	0.733	0.552	0.954	0.979	1	0.357	0.774
rs7969854	1.262E-08	-0.028832	0.00507	-0.028929	0.005206	2.35085E-08	0.93912	0.841964	0.000261	0.041753	0.105388	0.00965	0.0005	0.444905	0.809	0.821	1	0.967	0.941	0.982	0.99	0.868
rs28691226	1.2627E-08	-0.069781	0.01226	-0.069781	0.012262	2.35194E-08	0.57565	0.345956	3.55E-05	0.111832	0.610522	0.00042	0.77618	0.128869	0.803	0.84	1	0.873	0.735	0.999	0.73	0.89
rs149990	1.2628E-08	-0.059426	0.01044	-0.063043	0.014485	2.35203E-08	0.76154	0.622951	0.025807	0.001601	0.199363	0.0005	0.33591	0.000446	0.832	0.848	0.947	0.997	0.912	0.999	0.883	0.978
rs9393731	1.2633E-08	0.0290795	0.00511	0.0290795	0.00511	2.35282E-08	0.51302	0.561941	0.000918	0.002217	0.351396	0.00934	0.02563	0.226406	0.867	0.862	0.999	0.997	0.876	0.985	0.967	0.906
rs55776777	1.2635E-08	0.0311318	0.00547	0.0311318	0.00547	2.35316E-08	0.05054	0.983696	0.002544	0.002245	0.507698	0.00119	0.04744	0.874723	0.929	0.786	0.996	0.996	0.809	0.998	0.95	0.755
rs1187417	1.264E-08	0.0294017	0.00517	0.0294017	0.005166	2.35392E-08	0.89421	0.132039	0.000239	0.009758	0.311745	0.02035	0.00451	0.247657	0.792	0.918	1	0.991	0.882	0.956	0.982	0.9
rs13161723	1.2642E-08	-0.041509	0.00729	-0.041509	0.007294	2.35416E-08	0.87816	0.04051	0.000291	0.162999	0.325795	0.0013	0.01313	0.265447	0.777	0.937	1	0.87	0.869	0.998	0.972	0.89
rs74648182	1.2666E-08	0.0319347	0.00561	0.0319347	0.005612	2.35778E-08	0.04381	0.614768	0.003988	0.0008	0.615844	0.0017	0.03417	0.666097	0.931	0.83	0.994	0.998	0.774	0.997	0.956	0.716
rs6925703	1.2674E-08	0.0290727	0.00511	0.0290727	0.005109	2.35899E-08	0.50692	0.561325	0.000906	0.002133	0.356293	0.00976	0.0244	0.229995	0.868	0.862	0.999	0.997	0.875	0.984	0.968	0.905
rs1796518	1.2697E-08	-0.030625	0.00538	-0.030625	0.005382	2.36254E-08	0.09089	0.073295	0.004523	0.000853	0.15059	0.00698	0.64358	0.14018	0.934	0.937	0.995	0.998	0.936	0.99	0.84	0.927
rs9462616	1.2698E-08	0.0353163	0.00621	0.0353163	0.006207	2.36268E-08	0.47018	0.942816	0.020963	0.010023	0.09282	1.1E-05	0.72606	0.393108	0.842	0.779	0.95	0.988	0.933	1	0.772	0.853
rs34923793	1.27E-08	-0.04976	0.00875	-0.051177	0.010218	2.36288E-08	0.08927	0.522839	0.000162	0.268264	0.013437	0.00803	0.26819	0.006728	0.927	0.861	1	0.795	0.981	0.983	0.898	0.965
rs11515171	1.27E-08	-0.039039	0.00686	-0.039039	0.006861	2.36292E-08	0.14086	0.78821	0.000613	0.126416	0.051068	0.00459	0.02295	0.019181	0.922	0.791	0.999	0.914	0.965	0.994	0.97	0.959
rs2272026	1.2704E-08	-0.029481	0.00518	-0.032997	0.007027	2.36349E-08	0.83836	0.003665	0.003751	0.005516	0.019436	0.03389	0.01514	0.208308	0.845	0.972	0.995	0.995	0.981	0.929	0.977	0.92
rs34081956	1.2707E-08	0.03807	0.00669	0.03807	0.006691	2.36393E-08	0.08801	0.187924	0.012904	0.007171	0.388675	0.0009	0.3936	0.003764	0.935	0.916	0.983	0.994	0.876	0.999	0.886	0.975
rs1908066	1.2709E-08	0.0594722	0.01045	0.0627695	0.017455	2.36435E-08	0.73722	0.135616	0.001118	0.022064	0.000397	0.00805	0.00902	0.296925	0.725	0.575	0.998	0.977	0.994	0.981	0.973	0.869
rs1433719	1.2716E-08	0.0353149	0.00621	0.0353149	0.006207	2.36537E-08	0.47133	0.942301	0.020906	0.010171	0.092512	1.1E-05	0.72588	0.39283	0.842	0.779	0.95	0.987	0.933	1	0.772	0.853
rs3805122	1.2723E-08	-0.049765	0.00875	-0.05116	0.010199	2.36634E-08	0.08859	0.524604	0.000164	0.267084	0.013605	0.00797	0.26793	0.006755	0.928	0.861	1	0.796	0.981	0.984	0.898	0.965
rs11130181	1.2728E-08	-0.034748	0.00611	-0.034748	0.006107	2.3672E-08	0.85179	0.061601	0.064602	0.001781	0.041609	4.2E-05	0.37257	0.838933	0.731	0.915	0.792	0.996	0.955	1	0.838	0.77
rs2897875	1.2733E-08	-0.028921	0.00508	-0.028921	0.005083	2.36789E-08	0.91266	0.012513	0.000114	0.050042	0.129486	0.00361	0.48051	0.348985	0.788	0.953	1	0.961	0.932	0.994	0.851	0.88
rs3921012	1.2758E-08	0.0290835	0.00511	0.0327164	0.010034	1.31217E-08	0.6672	0.252177	0.001836	0.041708	1.24E-06	0.01348	0.02336	0.694411	0.811	0.624	0.99	0.953	0.999	0.957	0.959	0.804
rs6024402	1.276E-08	-0.042058	0.00739	-0.042058	0.007393	2.37197E-08	0.1227	0.765453	0.002095	0.024065	0.007161	0.00675	0.006	0.801026	0.923	0.84	0.997	0.982	0.986	0.99	0.981	0.775
rs10200252	1.2763E-08	0.052107	0.00916	0.052107	0.009159	2.37244E-08	0.48426	0.433946	0.004497	0.00304	0.062011	0.00055	0.99611	0.282274	0.854	0.861	0.993	0.996	0.952	0.999	0.734	0.884
rs55707162	1.2773E-08	-0.091155	0.01602	-0.091155	0.016023	2.37393E-08	0.24654	0.158808	0.001598	0.034686	0.187003	0.00072	0.29762	0.295563	0.905	0.918	0.998	0.976	0.924	0.999	0.901	0.9
rs117525955	1.2781E-08	-0.069491	0.01222	-0.069491	0.012215	2.37519E-08	0.54337	0.58568	2.91E-05	0.033885	0.492907	0.00109	0.73597	0.083569	0.804	0.799	1	0.958	0.768	0.998	0.598	0.904
rs140072675	1.2781E-08	-0.069491	0.01222	-0.069491	0.012215	2.37519E-08	0.54337	0.58568	2.91E-05	0.033885	0.492907	0.00109	0.73597	0.083569	0.804	0.799	1	0.958	0.768	0.998	0.598	0.904
rs147495587	1.2781E-08	-0.069491	0.01222	-0.069491	0.012215	2.37519E-08	0.54337	0.58568	2.91E-05	0.033885	0.492907	0.00109	0.73597	0.083569	0.804	0.799	1	0.958	0.768	0.998	0.598	0.904
rs72266993	1.2781E-08	-0.069491	0.01222	-0.069491	0.012215	2.37519E-08	0.54337	0.58568	2.91E-05	0.033885	0.492907	0.00109	0.73597	0.083569	0.804	0.799	1	0.958	0.768	0.998	0.598	0.904
rs76843505	1.2781E-08	-0.069491	0.01222	-0.069491	0.012215	2.37519E-08	0.54337	0.58568	2.91E-05	0.033885	0.492907	0.00109	0.73597	0.083569	0.804	0.799	1	0.958	0.768	0.998	0.598	0.904
rs28539407	1.2797E-08	-0.038914	0.00684	-0.039098	0.008459	2.37759E-08	0.86565	0.077988	5.37E-05	0.229716	0.774714	0.00221	0.01287	0.034999	0.733	0.909	1	0.771	0.692	0.994	0.967	0.934
rs56168412	1.2811E-08	-0.038925	0.00684	-0.038925	0.006843	2.37975E-08	0.14714	0.707102	0.000618	0.09234	0.061585	0.00583	0.02322	0.012897	0.922	0.782	0.999	0.939	0.962	0.992	0.971	0.964
rs72493511	1.2813E-08	-0.0337	0.00592	-0.039708	0.010457	1.66844E-08	0.08013	0.071459	0.04356	6.63E-05	0.038652	0.00852	0.0047	0.220451	0.92	0.922	0.847	1	0.961	0.945	0.981	0.577
rs6414614	1.2816E-08	-0.034756	0.00611	-0.034756	0.00611	2.38049E-08	0.82969	0.064484	0.064585	0.002067	0.040896	3.8E-05	0.34638	0.846295	0.728	0.914	0.792	0.996	0.955	1	0.845	0.769
rs79011498	1.2825E-08	0.059472	0.01046	0.059472	0.010455	2.38177E-08	0.29609	0.619902	0.000149	0.028526	0.019777	0.0263	0.16272	0.080417	0.9	0.863	1	0.979	0.979	0.95	0.93	0.939
rs4974081	1.2826E-08	-0.034754	0.00611	-0.034754	0.00611	2.38147E-08	0.82436	0.064412	0.065915	0.002008	0.040519	3.7E-05	0.34852	0.849104	0.725	0.914	0.786	0.996	0.955	1	0.843	0.767
rs6918717	1.2826E-08	0.0375132	0.00659	0.0361278	0.008029	2.38195E-08	0.76028	0.016754	0.003407	0.054489	0.771377	5.2E-06	0.20776	0.610001	0.68	0.926	0.991	0.929	0.661	1	0.864	0.638
rs71466243	1.2829E-08	-0.049753	0.00875	-0.051154	0.010204	2.3824E-08	0.08862	0.524815	0.000164	0.267333	0.01364	0.008	0.26777	0.006735	0.928	0.861	1	0.796	0.981	0.983	0.898	0.965
rs7621347	1.2836E-08	-0.034754	0.00611	-0.034754	0.00611	2.38346E-08	0.82957	0.064484	0.064588	0.002069	0.040897	3.8E-05	0.34638	0.846295	0.728	0.914	0.792	0.996	0.955	1	0.845	0.769

Table S3

rs34425560	1.2841E-08	-0.049747	0.00875	-0.051154	0.010209	2.3843E-08	0.08847	0.525177	0.000165	0.267956	0.013593	0.00798	0.26808	0.006739	0.928	0.861	1	0.795	0.981	0.983	0.898	0.965
rs66825608	1.2842E-08	-0.029027	0.0051	-0.030211	0.006686	2.38435E-08	0.02471	0.048888	0.005319	0.117062	0.996675	0.00019	0.06627	0.023955	0.948	0.937	0.992	0.908	0.681	1	0.949	0.952
rs78712602	1.2854E-08	-0.088164	0.0155	-0.088164	0.0155	2.38621E-08	0.98961	0.416611	0.033291	0.000109	0.085119	0.00203	0.13873	0.059182	0.809	0.876	0.93	0.999	0.95	0.997	0.93	0.94
rs3805120	1.2856E-08	-0.04975	0.00875	-0.051073	0.010132	2.3865E-08	0.08842	0.523777	0.00017	0.265962	0.014042	0.00781	0.26539	0.006785	0.928	0.862	1	0.797	0.98	0.984	0.899	0.965
rs617357	1.2857E-08	0.0343961	0.00605	0.0343961	0.006047	2.38666E-08	0.04505	0.138369	0.000233	0.377693	0.10744	0.00015	0.66256	0.807049	0.916	0.883	0.999	0.63	0.915	1	0.753	0.761
rs34596177	1.2871E-08	0.0293931	0.00517	0.0293931	0.005168	2.38873E-08	0.88953	0.128822	0.000232	0.009281	0.327128	0.02114	0.00436	0.251523	0.79	0.918	1	0.991	0.877	0.953	0.982	0.899
rs74131299	1.2877E-08	0.035445	0.00623	0.035445	0.006232	2.38966E-08	0.84704	0.424638	0.000619	0.013671	0.054591	0.00442	0.15622	0.283371	0.832	0.88	0.999	0.989	0.962	0.994	0.928	0.899
rs4145199	1.2894E-08	0.0353098	0.00621	0.0353098	0.006208	2.39222E-08	0.47113	0.940421	0.021094	0.01012	0.092583	1.1E-05	0.72472	0.394958	0.842	0.78	0.95	0.988	0.933	1	0.772	0.853
rs113364586	1.291E-08	-0.086492	0.01521	-0.086492	0.015208	2.39464E-08	0.55342	0.925474	0.001726	0.003608	0.059566	0.00459	0.08997	0.266492	0.862	0.802	0.998	0.996	0.96	0.994	0.944	0.9
rs12918159	1.2912E-08	-0.03109	0.00547	-0.033709	0.009982	2.39499E-08	0.17153	0.096116	0.000771	0.207932	0.464457	0.00081	0.00015	0.039854	0.561	0.901	0.998	0.787	0.788	0.998	0.992	0.93
rs722207	1.2912E-08	0.0304577	0.00536	0.0307633	0.006161	2.39504E-08	0.74891	0.689932	0.024764	0.179018	0.003752	1.7E-05	0.43395	0.01684	0.808	0.817	0.931	0.834	0.987	1	0.84	0.95
rs6576008	1.2913E-08	-0.029382	0.00517	-0.029382	0.005166	2.39506E-08	0.85914	0.119945	0.000232	0.009381	0.314392	0.02165	0.0042	0.258013	0.786	0.919	1	0.991	0.88	0.952	0.983	0.898
rs1275509	1.2918E-08	0.0302798	0.00532	0.0302798	0.005324	2.39587E-08	0.60923	0.054184	0.006993	0.000393	0.062678	0.00625	0.88637	0.051715	0.856	0.938	0.99	0.999	0.959	0.99	0.779	0.943
rs77042011	1.293E-08	-0.08815	0.0155	-0.08815	0.0155	2.39769E-08	0.98914	0.416554	0.033338	0.000109	0.085236	0.00203	0.13875	0.059189	0.809	0.876	0.93	0.999	0.949	0.997	0.93	0.94
rs76152345	1.2934E-08	-0.088148	0.0155	-0.088148	0.0155	2.39824E-08	0.9891	0.416621	0.033295	0.00011	0.085115	0.00203	0.13872	0.059182	0.809	0.876	0.93	0.999	0.95	0.997	0.93	0.94
rs6888945	1.2938E-08	0.0288587	0.00507	0.0288587	0.005075	2.39883E-08	0.10801	0.186035	0.004147	0.031571	0.05801	0.00027	0.93839	0.215068	0.921	0.906	0.994	0.975	0.958	1	0.733	0.904
rs11646892	1.2939E-08	-0.031135	0.00547	-0.031135	0.005475	2.39911E-08	0.30424	0.660195	0.001156	0.00413	0.246848	0.0148	0.02497	0.040512	0.901	0.861	0.999	0.996	0.911	0.976	0.97	0.951
rs6820975	1.294E-08	-0.03581	0.0063	-0.036875	0.010597	1.67357E-08	0.41392	0.874105	0.006269	9.08E-06	0.727478	0.0054	0.00162	0.721759	0.81	0.692	0.973	1	0.47	0.973	0.981	0.751
rs80331120	1.2941E-08	-0.088148	0.0155	-0.088148	0.0155	2.39936E-08	0.98928	0.416554	0.033338	0.00011	0.085236	0.00203	0.13875	0.059189	0.809	0.876	0.93	0.999	0.949	0.997	0.93	0.94
rs149580548	1.2949E-08	-0.062503	0.01099	-0.062503	0.010991	2.40055E-08	0.37535	0.317512	0.000811	0.006472	0.230565	0.00136	0.31894	0.073783	0.676	0.874	0.999	0.992	0.892	0.998	0.874	0.926
rs2587543	1.2952E-08	-0.030792	0.00541	-0.030792	0.005415	2.40106E-08	0.66531	0.032427	0.002784	0.002132	0.809878	0.00182	0.06349	0.106422	0.823	0.936	0.996	0.996	0.589	0.997	0.944	0.916
rs2377313	1.296E-08	-0.029396	0.00517	-0.028733	0.007004	2.40217E-08	0.06134	0.161842	0.019171	0.01969	0.057236	6.6E-06	0.22745	0.647757	0.908	0.875	0.934	0.974	0.941	1	0.391	0.781
rs116877134	1.2964E-08	-0.06434	0.01131	-0.06434	0.011314	2.40278E-08	0.934	0.476029	0.000746	0.030803	0.135008	0.00145	0.01384	0.734185	0.789	0.862	0.999	0.975	0.93	0.998	0.972	0.827
rs75352463	1.297E-08	-0.0758	0.01333	-0.0758	0.01333	2.40277E-08	0.11912	0.072907	0.065846	0.003304	0.321047	4.9E-05	0.07856	0.916125	0.91	0.922	0.803	0.995	0.856	1	0.938	0.78
rs9365753	1.2974E-08	0.0318488	0.0056	0.0318488	0.005601	2.40438E-08	0.04993	0.619147	0.004059	0.000767	0.626481	0.00168	0.0383	0.735909	0.929	0.831	0.993	0.998	0.773	0.997	0.954	0.73
rs9277935	1.2975E-08	0.033108	0.00582	0.0330236	0.00752	2.4044E-08	0.58818	0.386327	0.001671	0.687234	0.012519	3.4E-05	0.01202	0.458662	0.593	0.797	0.994	0.325	0.97	1	0.96	0.78
rs1275511	1.2998E-08	0.030272	0.00532	0.030272	0.005324	2.40798E-08	0.60915	0.054408	0.00698	0.000397	0.062502	0.00626	0.88635	0.051755	0.856	0.938	0.99	0.999	0.959	0.99	0.779	0.943
rs3828473	1.3001E-08	-0.049735	0.00875	-0.051115	0.010182	2.40839E-08	0.08841	0.523949	0.000166	0.266163	0.013621	0.00805	0.26831	0.006811	0.928	0.862	1	0.797	0.981	0.983	0.898	0.965
rs174535	1.3014E-08	0.028993	0.0051	0.0309501	0.008761	2.41029E-08	0.11852	0.290974	0.011596	0.163496	1.48E-05	0.00017	0.30737	0.466518	0.898	0.624	0.968	0.837	0.998	0.999	0.859	0.832
rs4788203	1.3014E-08	-0.029167	0.00513	-0.029713	0.006447	2.41029E-08	0.37482	0.453995	0.00704	0.01488	0.000389	0.00065	0.29814	0.261429	0.859	0.848	0.987	0.984	0.994	0.999	0.873	0.606
rs898834	1.3022E-08	-0.030431	0.00535	-0.033369	0.00917	2.15512E-08	0.00205	0.346305	0.103607	0.01666	0.001809	2.6E-05	0.83848	0.876039	0.961	0.815	0.564	0.967	0.989	1	0.553	0.702
rs35277443	1.3025E-08	-0.037022	0.00651	-0.042913	0.010758	2.41196E-08	0.18099	0.575803	0.001465	0.085417	0.000336	0.0111	0.20156	0.00241	0.912	0.753	0.997	0.938	0.995	0.979	0.917	0.974
rs892369	1.3048E-08	-0.035306	0.00621	-0.035306	0.00621	2.41547E-08	0.46993	0.938715	0.021226	0.010281	0.092581	1.1E-05	0.72242	0.39602	0.842	0.78	0.949	0.987	0.933	1	0.773	0.853
rs10865977	1.3063E-08	0.0296983	0.00522	0.0296983	0.005224	2.41769E-08	0.71695	0.502011	0.000425	0.141179	0.327645	0.00017	0.00858	0.658557	0.793	0.823	0.999	0.858	0.838	1	0.97	0.683
rs4955416	1.307E-08	-0.034739	0.00611	-0.034739	0.006111	2.41874E-08	0.80667	0.064485	0.06464	0.002046	0.040915	3.8E-05	0.34646	0.846323	0.723	0.914	0.791	0.996	0.955	1	0.845	0.768
rs4906379	1.3085E-08	-0.029385	0.00517	-0.029385	0.005169	2.42104E-08	0.88938	0.132141	0.000239	0.010067	0.312124	0.02042	0.00447	0.246955	0.791	0.917	1	0.99	0.882	0.956	0.982	0.9
rs59715676	1.3091E-08	-0.069706	0.01226	-0.069706	0.012262	2.42185E-08	0.58026	0.345818	3.51E-05	0.116771	0.60988	0.00042	0.77541	0.128651	0.801	0.839	1	0.867	0.734	0.999	0.729	0.89
rs111521816	1.3095E-08	-0.069705	0.01226	-0.069705	0.012262	2.42255E-08	0.58022	0.345804	3.51E-05	0.116709	0.609786	0.00042	0.77533	0.128631	0.801	0.839	1	0.867	0.734	0.999	0.729	0.89
rs199712377	1.3095E-08	-0.069705	0.01226	-0.069705	0.012262	2.42255E-08	0.58022	0.345804	3.51E-05	0.116709	0.609786	0.00042	0.77533	0.128631	0.801	0.839	1	0.867	0.734	0.999	0.729	0.89
rs13333149	1.3107E-08	-0.069709	0.01226	-0.069709	0.012263	2.42433E-08	0.58156	0.345804	3.51E-05	0.116775	0.609798	0.00042	0.77534	0.128635	0.801	0.839	1	0.867	0.734	0.999	0.729	0.89
rs9355497	1.3113E-08	0.0319046	0.00561	0.0319046	0.005612	2.42524E-08	0.04535	0.616569	0.003876	0.000919	0.611952	0.00165	0.03385	0.667068	0.93	0.83	0.994	0.998	0.776	0.997	0.956	0.717
rs34962617	1.3126E-08	-0.069451	0.01222	-0.069451	0.012218	2.42721E-08	0.54701	0.585425	2.85E-05	0.03286	0.494834	0.00115	0.73416	0.084402	0.803	0.799	1	0.959	0.768	0.997	0.598	0.904
rs12123239	1.3128E-08	-0.029319	0.00516	-0.030849	0.008152	2.42751E-08	0.39439	0.051182	0.001537	0.000534	0.02823	0.01518	0.11453	0.030887	0.857	0.512	0.997	0.998	0.968	0.959	0.925	0.942
rs11214602	1.313E-08	-0.030779	0.00541	-0.030779	0.005415	2.42784E-08	0.66483	0.032593	0.002805	0.002135	0.809976	0.00183	0.06357	0.106147	0.823	0.936	0.996	0.996	0.589	0.997	0.944	0.916
rs7539539	1.3141E-08	0.0364808	0.00642	0.0360087	0.009183	2.42941E-08	0.08099	0.155591	0.003892	0.000154	0.638241	0.00102	0.62824	0.053613	0.9	0.549	0.991	0.999	0.721	0.998	0.762	0.916
rs144597176	1.3142E-08	-0.036099	0.00635	-0.036099	0.006351	2.42951E-08	0.41158	0.537776	3.34E-05	0.078075	0.020616	0.01089	0.20694	0.10032	0.866	0.723	1	0.937	0.974	0.977	0.906	0.922
rs9358954	1.3149E-08	0.029044	0.00511	0.029044	0.00511	2.43068E-08	0.54367	0.561943	0.000918	0.00223	0.351399	0.00934	0.02563	0.226408	0.863	0.861	0.999	0.997	0.876	0.985	0.967	0.906
rs2916256	1.3153E-08	-0.035291	0.00621	-0.035291	0.006209	2.43118E-08	0.46976	0.940014	0.021112	0.010435	0.09248	1.1E-05	0.72363	0.394357	0.842	0.78	0.95	0.987	0.933	1	0.773	0.853
rs60824528	1.3153E-08	0.0300049	0.00528	0.0305737	0.007742	2.43121E-08	0.24691	0.202495	0.001952	0.122578	0.362885	0.00025	0.00042	0.220938	0.616	0.883	0.996	0.884	0.837	0.999	0.989	0.883
rs2202985	1.3154E-08	-0.031118	0.00547	-0.031118	0.005475	2.43137E-08	0.38967	0.018263	0.001855	0.187213	0.012426	0.00053	0.2761	0.680176	0.877	0.951	0.998	0.862	0.981	0.999	0.896	0.839
rs16972397	1.3159E-08	-0.069691	0.01226	-0.069691	0.012261	2.43209E-08	0.57846	0.34581	3.5E-05	0.117959	0.609395	0.00042	0.77535	0.128634	0.801	0.838	1	0.866	0.734	0.999	0.729	0.89
rs2305967	1.3159E-08	-0.069691	0.01226	-0.069691	0.012261	2.43209E-08	0.57846	0.34581	3.5E-05	0.117959	0.609395	0.00042	0.77535	0.128634	0.801	0.838	1	0.866	0.734	0.999	0.729	0.89
rs1841649	1.3167E-08	-0.030438	0.00536	-0.033309	0.009178	2.19927E-08	0.00199	0.314448	0.101352	0.018107	0.002083	2.4E-05	0.83504	0.91353	0.962	0.822	0.572	0.965	0.989	1	0.554	0.696
rs66676135	1.3169E-08	0.0293567	0.00516	0.0293567	0.005165	2.43363E-08	0.88634	0.131235	0.000236	0.008997	0.328123	0.02067	0.0049	0.254152	0.79	0.917	1	0.991	0.877	0.955	0.982	0.898
rs550687738	1.3177E-08	-0.029504	0.00519	-0.027471	0.009	4.23938E-09	0.71823	0.057238	0.018823	0.988732	0.088584	1.2E-08	0.23774	0.527396	0.466	0.843	0.684	0.096	0.837	1	0.731	0.643

Table S3

rs12648423	1.3213E-08	-0.033186	0.00584	-0.033186	0.005839	2.44018E-08	0.48356	0.552477	0.001503	0.011482	0.003825	0.00332	0.74943	0.28404	0.864	0.856	0.998	0.989	0.988	0.995	0.798	0.892
rs6787808	1.3217E-08	-0.034724	0.00611	-0.034724	0.00611	2.44065E-08	0.82374	0.064484	0.064588	0.002141	0.040897	3.8E-05	0.34638	0.846295	0.727	0.914	0.793	0.996	0.955	1	0.845	0.769
rs4583204	1.3218E-08	-0.028752	0.00506	-0.02904	0.005419	2.4408E-08	0.28287	0.509623	0.00038	0.002018	0.002892	0.02635	0.23243	0.391654	0.873	0.839	0.999	0.996	0.988	0.918	0.889	0.645
rs10758967	1.3222E-08	-0.031077	0.00547	-0.031943	0.009103	2.44128E-08	0.04351	0.096802	4.54E-05	0.026236	0.013945	0.0238	0.01731	0.61098	0.47	0.905	1	0.97	0.975	0.912	0.964	0.807
rs6798112	1.3235E-08	-0.034722	0.00611	-0.034722	0.00611	2.44277E-08	0.8236	0.064484	0.064586	0.002143	0.040897	3.8E-05	0.34638	0.846295	0.727	0.914	0.793	0.996	0.955	1	0.845	0.769
rs17086323	1.3245E-08	0.0302259	0.00532	0.0302259	0.005319	2.44392E-08	0.86585	0.545855	0.001593	0.040276	0.017702	0.00069	0.11762	0.594659	0.781	0.854	0.998	0.968	0.976	0.999	0.931	0.846
rs6446247	1.3272E-08	-0.034719	0.00611	-0.034719	0.00611	2.44699E-08	0.82338	0.064484	0.064586	0.002151	0.040897	3.8E-05	0.34638	0.846295	0.727	0.914	0.793	0.996	0.955	1	0.845	0.769
rs4906376	1.3274E-08	0.0293503	0.00517	0.0293503	0.005165	2.44723E-08	0.88971	0.131246	0.000235	0.009184	0.328001	0.02064	0.0049	0.254181	0.79	0.917	1	0.991	0.877	0.955	0.982	0.898
rs7701280	1.3287E-08	-0.041446	0.00729	-0.041446	0.007294	2.44875E-08	0.87907	0.040766	0.000295	0.160924	0.333428	0.00133	0.01329	0.270622	0.777	0.936	0.999	0.871	0.866	0.998	0.972	0.889
rs10010043	1.3293E-08	0.0378779	0.00667	0.0378779	0.006666	2.44945E-08	0.09894	0.729687	0.013443	0.006179	0.004038	0.00223	0.44405	0.135721	0.932	0.853	0.982	0.994	0.99	0.997	0.876	0.927
rs1942497	1.3314E-08	0.029386	0.00517	0.0330492	0.010286	1.06988E-08	0.89155	0.228697	0.002176	0.004896	1.71E-06	0.03492	0.03982	0.581507	0.759	0.584	0.988	0.989	0.999	0.854	0.945	0.803
rs138607377	1.3316E-08	0.0394309	0.00694	0.0394309	0.00694	2.45216E-08	0.6352	0.230256	0.022463	0.000384	0.027765	0.00065	0.53747	0.882477	0.835	0.89	0.955	0.999	0.969	0.999	0.831	0.798
rs72743364	1.3317E-08	-0.047259	0.00832	-0.050473	0.013718	1.73079E-08	0.42304	0.526848	0.013634	0.666832	0.002623	1.1E-05	0.0056	0.163071	0.784	0.57	0.893	0.321	0.986	1	0.97	0.855
rs13270648	1.3321E-08	0.0285841	0.00503	0.0300852	0.006711	2.45269E-08	0.89103	0.442036	0.019485	0.000213	0.000267	0.00413	0.54734	0.783313	0.76	0.85	0.953	0.999	0.995	0.989	0.816	0.799
rs59034682	1.3332E-08	0.0310815	0.00547	0.0310815	0.00547	2.45403E-08	0.0539	0.983705	0.002545	0.00235	0.507715	0.00119	0.04744	0.874716	0.928	0.786	0.996	0.996	0.809	0.998	0.95	0.755
rs7570	1.3348E-08	-0.03205	0.00564	-0.037294	0.00889	2.37688E-08	0.27008	0.024936	0.000523	0.09851	5.55E-05	0.03541	0.11055	0.772312	0.895	0.949	0.998	0.919	0.997	0.901	0.937	0.827
rs7633840	1.3356E-08	-0.030193	0.00531	-0.030193	0.005314	2.45674E-08	0.27261	0.04663	0.002262	0.023169	0.064495	0.00013	0.62704	0.601785	0.625	0.923	0.996	0.976	0.945	1	0.789	0.817
rs11964869	1.3356E-08	0.0374644	0.00659	0.0360928	0.008004	2.45681E-08	0.74793	0.016866	0.003318	0.059965	0.755071	5.1E-06	0.20809	0.620886	0.678	0.925	0.991	0.923	0.667	1	0.864	0.641
rs7359702	1.3362E-08	0.047752	0.00841	0.0506227	0.013883	1.22033E-08	0.04608	0.678351	0.063496	0.429234	0.000687	1.7E-06	0.16851	0.380349	0.881	0.527	0.513	0.365	0.992	1	0.816	0.739
rs114528092	1.3375E-08	0.049339	0.00868	0.0502894	0.011916	2.45897E-08	0.48921	0.077319	0.019858	0.105323	0.50441	1.8E-05	0.00224	0.134874	0.688	0.916	0.95	0.9	0.799	1	0.984	0.904
rs76657905	1.3379E-08	-0.073077	0.01286	-0.073077	0.012863	2.45938E-08	0.74525	0.942664	2.54E-05	0.069224	0.273151	0.01127	0.00193	0.406001	0.818	0.795	1	0.94	0.879	0.973	0.983	0.862
rs2242592	1.3379E-08	-0.030762	0.00541	-0.030762	0.005415	2.4594E-08	0.66498	0.032415	0.002842	0.002122	0.810336	0.00185	0.06345	0.1055	0.823	0.936	0.995	0.996	0.589	0.997	0.944	0.916
rs2136644	1.339E-08	-0.035766	0.0063	-0.036861	0.010626	1.70982E-08	0.41137	0.895893	0.006303	9.24E-06	0.699984	0.00547	0.0016	0.703813	0.81	0.695	0.973	1	0.459	0.972	0.981	0.754
rs13259984	1.3396E-08	-0.031413	0.00553	-0.031413	0.00553	2.46139E-08	0.47834	0.030422	0.001808	0.282257	0.017736	0.00015	0.37747	0.603484	0.849	0.937	0.997	0.763	0.974	1	0.858	0.829
rs12919033	1.3406E-08	-0.035589	0.00626	-0.042157	0.010294	2.46253E-08	0.20255	0.586985	0.010113	0.003074	0.014	0.01446	0.07194	0.000386	0.915	0.767	0.985	0.996	0.982	0.974	0.954	0.983
rs73367497	1.3408E-08	-0.032471	0.00572	-0.034458	0.010088	2.46274E-08	0.02774	0.257982	0.00286	0.390312	0.405033	5.9E-05	0.00023	0.382256	0.921	0.841	0.99	0.568	0.771	1	0.99	0.558
rs12770769	1.3415E-08	0.0295903	0.00521	0.0295903	0.005209	2.46354E-08	0.03374	0.624007	0.004708	0.068803	0.067656	0.00023	0.20311	0.532692	0.947	0.858	0.994	0.953	0.958	1	0.918	0.867
rs76593946	1.3421E-08	-0.0694	0.01222	-0.0694	0.012217	2.4643E-08	0.54448	0.585356	2.8E-05	0.034015	0.495021	0.00116	0.7347	0.084499	0.804	0.798	1	0.958	0.768	0.997	0.598	0.904
rs9508158	1.3431E-08	-0.028836	0.00508	-0.028836	0.005076	2.4654E-08	0.42513	0.511821	0.0008	0.030364	0.728509	0.00032	0.16912	0.178692	0.859	0.847	0.999	0.972	0.749	0.999	0.911	0.9
rs73467288	1.3433E-08	-0.062833	0.01106	-0.062833	0.011061	2.46562E-08	0.85555	0.088928	0.001113	0.024822	0.077232	0.01325	0.03596	0.01766	0.848	0.938	0.999	0.984	0.96	0.98	0.968	0.964
rs33910621	1.3434E-08	-0.035763	0.0063	-0.036852	0.010637	1.70614E-08	0.4137	0.894741	0.006304	9.11E-06	0.698731	0.00548	0.0016	0.704005	0.809	0.695	0.973	1	0.458	0.972	0.981	0.753
rs9871960	1.3458E-08	-0.032083	0.00565	-0.032083	0.005648	2.4686E-08	0.4258	0.197852	0.030134	0.041583	0.006636	0.00061	0.00612	0.488939	0.887	0.916	0.95	0.972	0.987	0.999	0.982	0.879
rs73539819	1.346E-08	-0.069653	0.01226	-0.069653	0.012263	2.46878E-08	0.57271	0.347432	3.44E-05	0.113875	0.613565	0.00045	0.77924	0.130067	0.802	0.839	1	0.871	0.733	0.999	0.729	0.89
rs66953418	1.346E-08	0.0293373	0.00516	0.0293373	0.005165	2.46878E-08	0.8893	0.131235	0.000236	0.009274	0.328125	0.02067	0.0049	0.254152	0.79	0.917	1	0.991	0.877	0.955	0.982	0.898
rs12379731	1.3466E-08	0.0288802	0.00508	0.0288802	0.005085	2.46951E-08	0.56968	0.332029	0.000124	0.017825	0.622865	0.00451	0.35672	0.02154	0.846	0.877	1	0.983	0.786	0.992	0.872	0.95
rs9355493	1.3468E-08	0.0318758	0.00561	0.0318758	0.005612	2.46964E-08	0.04792	0.616551	0.003871	0.000938	0.611867	0.00165	0.03384	0.667121	0.929	0.83	0.994	0.998	0.776	0.997	0.956	0.717
rs2397673	1.3473E-08	0.0314538	0.00554	0.0314538	0.005538	2.47021E-08	0.99409	0.139288	0.00013	0.0568	0.148893	0.00199	0.39145	0.253208	0.798	0.911	1	0.956	0.925	0.997	0.868	0.894
rs12447139	1.3477E-08	-0.069391	0.01222	-0.069391	0.012217	2.47079E-08	0.5445	0.585369	2.82E-05	0.034018	0.49511	0.00116	0.73427	0.084376	0.804	0.798	1	0.958	0.768	0.997	0.598	0.904
rs10003726	1.348E-08	-0.035757	0.0063	-0.036834	0.010642	1.70502E-08	0.41645	0.894822	0.006314	8.96E-06	0.698015	0.0055	0.00161	0.705376	0.808	0.694	0.973	1	0.458	0.972	0.981	0.753
rs12215773	1.3481E-08	-0.032731	0.00576	-0.032731	0.005763	2.4712E-08	0.39096	0.833721	0.000179	0.004014	0.525654	0.00575	0.27824	0.060179	0.862	0.762	1	0.994	0.803	0.989	0.883	0.93
rs11642740	1.3484E-08	-0.029781	0.00524	-0.030094	0.006872	2.47156E-08	0.88304	0.779787	0.011529	0.000322	0.005059	0.00108	0.17026	0.200157	0.766	0.781	0.971	0.999	0.983	0.998	0.894	0.548
rs17151145	1.349E-08	0.032288	0.00568	0.032288	0.005685	2.47226E-08	0.15414	0.85844	0.007734	0.005513	0.032481	0.00094	0.16092	0.506944	0.916	0.794	0.99	0.994	0.971	0.999	0.926	0.867
rs62338516	1.3494E-08	0.07964	0.01402	0.07964	0.014022	2.47267E-08	0.3503	0.224038	0.008285	0.00713	0.048046	0.00279	0.13983	0.084451	0.902	0.917	0.991	0.994	0.969	0.997	0.941	0.942
rs4900597	1.3502E-08	0.0293344	0.00516	0.0293344	0.005165	2.47357E-08	0.88936	0.1312	0.000236	0.009268	0.328626	0.02071	0.0049	0.254235	0.79	0.917	1	0.991	0.877	0.955	0.982	0.898
rs4906377	1.3507E-08	0.0293344	0.00516	0.0293344	0.005165	2.47414E-08	0.8895	0.131232	0.000236	0.009285	0.328499	0.02072	0.00489	0.253759	0.79	0.917	1	0.991	0.877	0.955	0.982	0.898
rs62086899	1.3509E-08	0.0333474	0.00587	0.0338026	0.009686	2.47436E-08	0.45945	0.010316	0.000367	0.1626	0.983971	0.00029	0.1788	0.003463	0.633	0.94	0.999	0.816	0.59	0.999	0.884	0.961
rs35085624	1.3511E-08	0.0293341	0.00516	0.0293341	0.005165	2.47466E-08	0.88953	0.13125	0.000236	0.009281	0.328546	0.02073	0.00489	0.253793	0.79	0.917	1	0.991	0.877	0.955	0.982	0.898
rs143422639	1.3516E-08	0.0981751	0.01729	0.0981751	0.017286	2.47521E-08	0.36975	0.085549	0.002712	0.28351	0.025115	0.00102	0.04637	0.029938	0.888	0.931	0.997	0.803	0.975	0.999	0.959	0.953
rs12885509	1.3516E-08	0.0293337	0.00516	0.0293337	0.005165	2.47522E-08	0.88951	0.131264	0.000236	0.009278	0.32875	0.02071	0.0049	0.253842	0.79	0.917	1	0.991	0.877	0.955	0.982	0.898
rs75226174	1.3519E-08	0.0502825	0.00885	0.0502825	0.008854	2.47554E-08	0.02755	0.020665	0.000843	0.064101	0.036585	0.00249	0.94633	0.344071	0.948	0.951	0.999	0.955	0.969	0.997	0.745	0.888
rs12883337	1.3528E-08	0.0293327	0.00516	0.0293327	0.005165	2.47655E-08	0.88934	0.131202	0.000236	0.009278	0.328713	0.02073	0.00489	0.254239	0.79	0.917	1	0.991	0.877	0.955	0.982	0.898
rs35878673	1.3531E-08	-0.036259	0.00638	-0.037308	0.00763	2.4769E-08	0.95535	0.303921	0.003351	0.083378	0.36764	0.00098	0.00069	0.030538	0.815	0.893	0.996	0.941	0.871	0.999	0.99	0.951
rs13154298	1.3536E-08	-0.041417	0.00729	-0.041417	0.007293	2.47749E-08	0.87916	0.038232	0.000309	0.157764	0.322249	0.00138	0.01432	0.261192	0.778	0.938	0.999	0.875	0.871	0.998	0.971	0.891
rs4900599	1.3537E-08	0.0293325	0.00516	0.0293325	0.005165	2.47763E-08	0.88971	0.131193	0.000237	0.00928	0.328376	0.02073	0.00489	0.253732	0.79	0.917	1	0.991	0.877	0.955	0.982	0.898
rs4906378	1.3537E-08	0.0293325	0.00516	0.0293325	0.005165	2.47766E-08	0.88971	0.131193	0.000237	0.00928	0.328376	0.02073	0.00489	0.253734	0.79	0.917	1	0.991	0.877	0.955	0.982	0.898

Table S3

rs1500323	1.354E-08	-0.031062	0.00547	-0.032015	0.009098	2.47795E-08	0.04569	0.099537	4.11E-05	0.030286	0.01358	0.02492	0.01647	0.565562	0.474	0.904	1	0.965	0.976	0.907	0.965	0.815
rs2859543	1.355E-08	-0.03075	0.00541	-0.03075	0.005415	2.47908E-08	0.66417	0.032979	0.002854	0.00214	0.810188	0.00184	0.06379	0.105725	0.823	0.936	0.995	0.996	0.589	0.997	0.944	0.916
rs6703459	1.3552E-08	0.0295452	0.0052	0.0300961	0.008842	2.47932E-08	0.25251	0.030839	0.000405	0.000265	0.028986	0.02653	0.397	0.053158	0.861	0.438	0.999	0.999	0.962	0.89	0.824	0.921
rs116956155	1.3555E-08	-0.070354	0.01239	-0.070354	0.012389	2.4797E-08	0.43572	0.922918	5.54E-06	0.095221	0.466823	0.00172	0.82365	0.097534	0.82	0.726	1	0.888	0.775	0.995	0.713	0.897
rs9999108	1.3563E-08	-0.035751	0.0063	-0.036835	0.010636	1.72489E-08	0.41378	0.894821	0.006314	9.12E-06	0.698014	0.0055	0.00161	0.705378	0.809	0.695	0.973	1	0.458	0.972	0.981	0.753
rs1859266	1.3563E-08	0.0454577	0.008	0.0454577	0.008005	2.48063E-08	0.28291	0.022984	0.009025	0.23699	0.446523	2.9E-06	0.55001	0.213199	0.864	0.934	0.976	0.781	0.806	1	0.803	0.88
rs62086898	1.3566E-08	0.0333446	0.00587	0.0338015	0.009683	2.48093E-08	0.46171	0.010316	0.000367	0.163596	0.983971	0.00029	0.1788	0.003463	0.634	0.94	0.999	0.815	0.59	0.999	0.884	0.961
rs28493626	1.3566E-08	-0.035751	0.0063	-0.036835	0.010636	1.72527E-08	0.41379	0.894819	0.006313	9.12E-06	0.698019	0.0055	0.00161	0.705372	0.809	0.695	0.973	1	0.458	0.972	0.981	0.753
rs113307456	1.3566E-08	-0.035751	0.0063	-0.036835	0.010636	1.72531E-08	0.41379	0.89482	0.006313	9.12E-06	0.698021	0.0055	0.00161	0.705372	0.809	0.695	0.973	1	0.458	0.972	0.981	0.753
rs28497592	1.3566E-08	-0.035751	0.0063	-0.036835	0.010636	1.72532E-08	0.41379	0.894819	0.006313	9.12E-06	0.698019	0.0055	0.00161	0.705372	0.809	0.695	0.973	1	0.458	0.972	0.981	0.753
rs17017056	1.3567E-08	-0.035751	0.0063	-0.036835	0.010636	1.72492E-08	0.41379	0.894801	0.006315	9.11E-06	0.698004	0.0055	0.00161	0.705393	0.809	0.695	0.973	1	0.458	0.972	0.981	0.753
rs7673332	1.3567E-08	-0.035751	0.0063	-0.036835	0.010636	1.72493E-08	0.41379	0.894817	0.006314	9.11E-06	0.698008	0.0055	0.00161	0.705383	0.809	0.695	0.973	1	0.458	0.972	0.981	0.753
rs10032057	1.3569E-08	-0.035751	0.0063	-0.036834	0.010636	1.72559E-08	0.41378	0.894815	0.006315	9.12E-06	0.698003	0.0055	0.00161	0.705383	0.809	0.695	0.973	1	0.458	0.972	0.981	0.753
rs6678108	1.3576E-08	0.0293878	0.00518	0.0352335	0.008336	2.48214E-08	0.42093	0.058027	0.000916	0.013316	0.422691	0.05085	0.00091	0.004861	0.88	0.94	0.998	0.988	0.853	0.86	0.991	0.972
rs34821714	1.3577E-08	-0.03575	0.0063	-0.036834	0.010636	1.72617E-08	0.41379	0.894797	0.006318	9.11E-06	0.698001	0.0055	0.00161	0.7054	0.809	0.695	0.973	1	0.458	0.972	0.981	0.753
rs77952688	1.3578E-08	0.048934	0.00862	0.0500492	0.011714	2.48229E-08	0.50118	0.067231	0.020419	0.072073	0.586025	2.8E-05	0.00299	0.092534	0.697	0.921	0.952	0.933	0.78	1	0.983	0.918
rs2799077	1.3589E-08	-0.052531	0.00925	-0.054087	0.013034	2.48363E-08	0.91156	0.948966	0.001416	0.033249	0.437293	0.00102	0.0871	0.00026	0.807	0.788	0.998	0.972	0.841	0.998	0.94	0.979
rs9308158	1.3594E-08	-0.035749	0.0063	-0.036831	0.010652	1.71088E-08	0.41335	0.893072	0.006323	8.85E-06	0.696579	0.00554	0.00162	0.705615	0.809	0.694	0.972	1	0.457	0.972	0.981	0.753
rs112518238	1.3596E-08	-0.035749	0.0063	-0.036832	0.010635	1.73067E-08	0.41433	0.894819	0.006313	9.14E-06	0.698019	0.0055	0.00161	0.705372	0.809	0.695	0.973	1	0.458	0.972	0.981	0.753
rs2859544	1.3602E-08	-0.030747	0.00541	-0.030747	0.005415	2.48502E-08	0.66418	0.033018	0.00286	0.002141	0.810191	0.00184	0.06379	0.105721	0.823	0.936	0.995	0.996	0.589	0.997	0.944	0.916
rs9938382	1.3605E-08	0.0287819	0.00507	0.0287819	0.005069	2.48542E-08	0.46222	0.860694	0.002846	0.012706	0.264824	2.6E-05	0.5855	0.985648	0.825	0.729	0.994	0.983	0.857	1	0.783	0.741
rs1927246	1.3613E-08	0.02954	0.0052	0.0301116	0.008834	2.48629E-08	0.25224	0.031497	0.000413	0.000256	0.028834	0.02685	0.39701	0.05357	0.861	0.439	0.999	0.999	0.962	0.888	0.824	0.921
rs12656	1.3615E-08	-0.033501	0.0059	-0.034938	0.006931	2.4866E-08	0.01765	0.329346	0.009357	0.029079	0.090021	0.00259	0.00134	0.856106	0.96	0.901	0.989	0.981	0.955	0.997	0.989	0.839
rs200965	1.362E-08	-0.043464	0.00765	-0.048944	0.011123	2.48711E-08	0.92578	0.171112	0.006691	0.000261	0.255231	0.02459	0.01814	0.003884	0.805	0.916	0.987	0.999	0.902	0.942	0.973	0.971
rs6910899	1.3632E-08	0.0290237	0.00511	0.0290237	0.005112	2.48847E-08	0.50716	0.566164	0.000952	0.002077	0.360491	0.01012	0.02404	0.226988	0.867	0.861	0.999	0.997	0.873	0.983	0.968	0.906
rs12174848	1.3635E-08	0.0318651	0.00561	0.0318651	0.005612	2.48889E-08	0.04659	0.615725	0.004022	0.000871	0.614548	0.00168	0.03415	0.666146	0.93	0.83	0.993	0.998	0.775	0.997	0.956	0.716
rs73009656	1.3639E-08	-0.031551	0.00556	-0.031551	0.005557	2.48926E-08	0.93018	0.454509	0.029492	0.002187	0.056032	0.0003	0.44662	0.01981	0.789	0.865	0.94	0.997	0.958	1	0.857	0.954
rs6910930	1.364E-08	0.0290231	0.00511	0.0290231	0.005112	2.48941E-08	0.50717	0.566182	0.000953	0.002077	0.360514	0.01012	0.02405	0.226998	0.867	0.861	0.999	0.997	0.873	0.983	0.968	0.906
rs8017200	1.3647E-08	0.0293483	0.00517	0.0293483	0.005169	2.49025E-08	0.89293	0.126376	0.000239	0.010731	0.316184	0.02129	0.00417	0.233278	0.792	0.919	1	0.99	0.881	0.954	0.983	0.903
rs2118999	1.365E-08	0.0373159	0.00657	0.0384948	0.010498	2.49061E-08	0.59354	0.001362	0.012569	0.316797	0.018661	9.8E-06	0.22395	0.637801	0.671	0.962	0.953	0.68	0.969	1	0.873	0.792
rs2308095	1.3657E-08	-0.030983	0.00546	-0.030983	0.005457	2.4914E-08	0.67049	0.399687	0.044201	0.000709	0.021927	0.00032	0.56039	0.225269	0.83	0.865	0.891	0.998	0.973	0.999	0.823	0.894
rs17791722	1.3668E-08	0.0293288	0.00517	0.0293288	0.005166	2.49261E-08	0.89988	0.132738	0.000227	0.0094	0.341563	0.02145	0.00452	0.247271	0.791	0.916	1	0.991	0.872	0.953	0.982	0.899
rs11901133	1.3674E-08	-0.030736	0.00541	-0.030736	0.005414	2.49326E-08	0.33039	0.109422	1.48E-05	0.265827	0.103973	0.01355	0.07089	0.189827	0.88	0.918	1	0.79	0.939	0.965	0.946	0.905
rs871816	1.3688E-08	0.0325366	0.00573	0.0325366	0.005731	2.49489E-08	0.60752	0.009343	0.032216	0.050435	0.086872	0.00023	0.06894	0.051477	0.871	0.966	0.949	0.968	0.956	1	0.957	0.95
rs10908311	1.3709E-08	0.0293788	0.00518	0.0352217	0.008335	2.49731E-08	0.42016	0.058027	0.000915	0.013513	0.422656	0.05082	0.00091	0.004861	0.88	0.94	0.998	0.988	0.853	0.86	0.991	0.972
rs5795145	1.3721E-08	-0.028961	0.0051	-0.030139	0.00665	2.49868E-08	0.02408	0.047546	0.005647	0.112642	0.973113	0.0002	0.07489	0.022732	0.948	0.938	0.991	0.913	0.691	1	0.946	0.953
rs7105462	1.3724E-08	-0.029877	0.00526	-0.032931	0.007275	2.499E-08	0.02031	0.89443	0.047563	0.008125	0.000897	0.0012	0.36326	0.063621	0.953	0.795	0.895	0.992	0.994	0.998	0.881	0.94
rs150360496	1.3731E-08	0.0317964	0.0056	0.0317964	0.005601	2.49977E-08	0.05042	0.620243	0.004132	0.000796	0.621408	0.00169	0.03877	0.727309	0.928	0.831	0.993	0.998	0.774	0.997	0.954	0.729
rs10032156	1.3732E-08	-0.035741	0.0063	-0.036826	0.010632	1.75622E-08	0.41437	0.894815	0.006315	9.28E-06	0.698003	0.0055	0.00161	0.705383	0.809	0.695	0.973	1	0.458	0.972	0.981	0.753
rs72631017	1.3734E-08	-0.036183	0.00637	-0.036183	0.006374	2.50013E-08	0.43087	0.557587	5.17E-05	0.057854	0.020011	0.00993	0.23954	0.114912	0.865	0.73	1	0.953	0.975	0.981	0.899	0.919
rs3858778	1.3749E-08	0.0297401	0.00524	0.0293489	0.006489	2.17811E-08	0.69843	0.625324	8.74E-07	0.169576	0.113094	0.01958	0.01134	0.957255	0.672	0.78	1	0.791	0.902	0.898	0.962	0.72
rs13122590	1.3753E-08	-0.03611	0.00636	-0.037331	0.010215	2.2617E-08	0.3706	0.877459	0.009227	1.76E-05	0.799605	0.00341	0.00174	0.690908	0.826	0.706	0.968	1	0.513	0.985	0.981	0.767
rs6591222	1.3755E-08	-0.032012	0.00564	-0.037095	0.008804	2.50258E-08	0.27105	0.024223	0.000604	0.098016	6.04E-05	0.0321	0.1121	0.785055	0.897	0.95	0.998	0.923	0.997	0.915	0.937	0.829
rs10938445	1.3759E-08	0.0377718	0.00665	0.0377718	0.006654	2.50299E-08	0.11702	0.736145	0.016263	0.006913	0.002595	0.00188	0.43056	0.153561	0.927	0.851	0.977	0.994	0.991	0.998	0.877	0.923
rs199504856	1.3776E-08	0.0318288	0.00561	0.0318288	0.005607	2.50494E-08	0.06136	0.616813	0.00385	0.000807	0.637206	0.00144	0.04456	0.671701	0.923	0.827	0.994	0.998	0.765	0.998	0.95	0.714
rs6275	1.3781E-08	-0.030736	0.00541	-0.030736	0.005415	2.50543E-08	0.67082	0.033621	0.002876	0.002197	0.821443	0.00181	0.06279	0.111653	0.823	0.936	0.995	0.996	0.594	0.997	0.944	0.915
rs200504	1.3801E-08	-0.042053	0.00741	-0.042053	0.007409	2.50778E-08	0.67517	0.969441	0.000619	0.09386	0.170656	0.00098	0.14844	0.003922	0.841	0.798	0.999	0.93	0.92	0.999	0.925	0.967
rs2073525	1.3802E-08	0.0286008	0.00504	0.0284955	0.00514	2.50782E-08	0.29942	0.76966	0.00151	0.000776	0.837203	9.7E-05	0.80459	0.220737	0.522	0.714	0.995	0.997	0.581	1	0.65	0.825
rs12037681	1.3809E-08	0.0293725	0.00518	0.0352136	0.008335	2.50871E-08	0.42106	0.058027	0.000916	0.013584	0.422691	0.05085	0.00091	0.004861	0.88	0.94	0.998	0.988	0.853	0.86	0.99	0.972
rs112710801	1.3816E-08	-0.064218	0.01131	-0.064218	0.011315	2.50948E-08	0.93388	0.471785	0.000759	0.030694	0.134157	0.00153	0.01407	0.730529	0.79	0.863	0.999	0.975	0.93	0.998	0.972	0.827
rs112628017	1.3829E-08	-0.029436	0.00519	-0.029349	0.005834	2.51095E-08	0.39663	0.050255	9.34E-05	0.000311	0.906274	0.01256	0.41307	0.619242	0.822	0.907	1	0.999	0.621	0.951	0.808	0.645
rs76197220	1.3839E-08	-0.06943	0.01223	-0.06943	0.012234	2.51209E-08	0.53537	0.588196	3.28E-05	0.027544	0.527564	0.0012	0.71029	0.080138	0.804	0.796	1	0.965	0.755	0.997	0.588	0.905
rs11644659	1.3846E-08	-0.031053	0.00547	-0.033372	0.009746	2.51282E-08	0.16422	0.094792	0.000812	0.173306	0.471169	0.00088	0.00021	0.045906	0.567	0.904	0.998	0.827	0.792	0.998	0.991	0.928
rs28545716	1.3851E-08	0.0904014	0.01593	0.104344	0.024584	2.51348E-08	0.55632	0.627917	0.02508	0.02991	0.000587	0.004	0.00468	0.018499	0.866	0.766	0.959	0.977	0.995	0.993	0.985	0.959
rs2272559	1.3853E-08	-0.069339	0.01222	-0.069339	0.012218	2.51365E-08	0.54277	0.592193	2.75E-05	0.034581	0.496518	0.00119	0.73302	0.083607	0.804	0.797	1	0.957	0.767	0.997	0.597	0.904

Table S3

rs1003641	1.3862E-08	-0.030729	0.00541	-0.030729	0.005415	2.51465E-08	0.66272	0.033273	0.002864	0.002132	0.811427	0.00189	0.06384	0.105205	0.824	0.936	0.995	0.996	0.59	0.997	0.944	0.916
rs12890822	1.3879E-08	0.0293395	0.00517	0.0293395	0.00517	2.51662E-08	0.90167	0.131939	0.00024	0.010549	0.310402	0.021	0.00447	0.246769	0.793	0.917	1	0.99	0.882	0.955	0.982	0.9
rs141656434	1.3892E-08	0.0470843	0.0083	0.0502759	0.012848	2.51811E-08	0.51606	0.32919	0.013286	0.152303	6.14E-05	0.00025	0.08068	0.176942	0.839	0.658	0.97	0.861	0.997	0.999	0.934	0.896
rs77814269	1.3893E-08	0.0674436	0.01189	0.0674436	0.011885	2.51822E-08	0.01874	0.408655	0.002608	0.017767	0.037642	0.00105	0.15808	0.739579	0.949	0.712	0.997	0.984	0.966	0.999	0.921	0.827
rs9308160	1.3928E-08	-0.035725	0.0063	-0.036808	0.010638	1.77178E-08	0.4137	0.89567	0.006378	9.1E-06	0.697096	0.00555	0.00162	0.707524	0.809	0.695	0.972	1	0.458	0.972	0.981	0.753
rs9365747	1.3936E-08	0.0318457	0.00561	0.0318457	0.005612	2.52547E-08	0.04757	0.616551	0.003871	0.000988	0.611867	0.00165	0.03384	0.667121	0.929	0.83	0.994	0.998	0.776	0.997	0.956	0.717
rs71501060	1.3937E-08	-0.050012	0.00881	-0.050012	0.008814	2.5257E-08	0.20525	0.263385	0.03894	0.061587	0.00109	0.00034	0.18505	0.092389	0.915	0.906	0.928	0.958	0.993	0.999	0.926	0.938
rs149273785	1.3947E-08	-0.069326	0.01222	-0.069326	0.012218	2.52766E-08	0.54171	0.594432	2.73E-05	0.034833	0.496721	0.00119	0.73244	0.083213	0.804	0.797	1	0.957	0.767	0.997	0.597	0.904
rs9308159	1.3982E-08	-0.03572	0.0063	-0.036802	0.01064	1.77612E-08	0.41369	0.895229	0.006386	9.1E-06	0.69659	0.00555	0.00162	0.70757	0.809	0.694	0.972	1	0.458	0.972	0.981	0.752
rs1864638	1.3986E-08	-0.028702	0.00506	-0.028986	0.005417	2.53558E-08	0.28239	0.522133	0.000383	0.002022	0.003062	0.02664	0.22694	0.385121	0.873	0.837	0.999	0.996	0.988	0.917	0.89	0.643
rs13110491	1.3992E-08	-0.035716	0.0063	-0.036792	0.010644	1.77564E-08	0.41388	0.892482	0.006353	9.09E-06	0.695167	0.00556	0.00162	0.706253	0.809	0.694	0.972	1	0.457	0.972	0.98	0.753
rs4482806	1.4005E-08	0.0387695	0.00683	0.0389177	0.008421	2.53962E-08	0.86132	0.082571	5.31E-05	0.230182	0.788739	0.00227	0.01322	0.035575	0.731	0.907	1	0.77	0.686	0.994	0.967	0.933
rs2584137	1.4013E-08	-0.029631	0.00522	-0.029631	0.005223	2.54115E-08	0.08312	0.836619	0.001345	0.0603	0.777146	0.00017	0.03832	0.454494	0.917	0.802	0.998	0.947	0.728	1	0.953	0.851
rs10505938	1.4026E-08	0.0336258	0.00593	0.0336258	0.005927	2.54388E-08	0.09065	0.495677	0.002937	0.002016	0.48191	0.00279	0.37847	0.048739	0.928	0.869	0.996	0.997	0.842	0.996	0.88	0.943
rs62412092	1.4031E-08	-0.038766	0.00683	-0.03891	0.008413	2.5448E-08	0.86071	0.082882	5.29E-05	0.229494	0.789622	0.00228	0.01326	0.035722	0.731	0.907	1	0.771	0.686	0.994	0.966	0.933
rs145901025	1.4042E-08	0.0477102	0.00841	0.0507386	0.014107	1.215E-08	0.04017	0.681683	0.062175	0.469362	0.000678	1.7E-06	0.16929	0.380625	0.884	0.517	0.498	0.329	0.992	1	0.811	0.732
rs4555299	1.4055E-08	-0.030712	0.00541	-0.030712	0.005414	2.54981E-08	0.33196	0.109577	1.51E-05	0.265258	0.102786	0.01374	0.07128	0.190194	0.88	0.918	1	0.791	0.939	0.964	0.946	0.905
rs6576006	1.4058E-08	-0.029311	0.00517	-0.029311	0.005167	2.55031E-08	0.8651	0.113004	0.000231	0.009467	0.317676	0.02269	0.00456	0.261224	0.786	0.92	1	0.991	0.879	0.949	0.982	0.897
rs17755617	1.408E-08	-0.03315	0.00584	-0.03315	0.005844	2.55474E-08	0.76784	0.232796	0.000796	0.029341	0.015796	0.00273	0.65633	0.136723	0.836	0.901	0.999	0.977	0.979	0.996	0.824	0.92
rs4666024	1.4091E-08	-0.03071	0.00541	-0.03071	0.005414	2.5571E-08	0.3293	0.109577	1.5E-05	0.267165	0.102722	0.01372	0.07126	0.190192	0.88	0.918	1	0.789	0.939	0.964	0.946	0.905
rs140373060	1.4115E-08	0.0585775	0.01033	0.0585775	0.010328	2.56195E-08	0.02691	0.699958	0.003403	0.276396	0.469228	9.6E-06	0.05225	0.935483	0.927	0.791	0.992	0.733	0.786	1	0.936	0.748
rs112258494	1.4123E-08	0.0985939	0.01738	0.107324	0.027219	2.56367E-08	0.01725	0.371906	0.000227	0.819372	0.090328	0.00176	0.00084	0.694729	0.933	0.829	0.999	0.328	0.923	0.994	0.989	0.77
rs1535276	1.4124E-08	0.0289904	0.00511	0.0289904	0.005111	2.56375E-08	0.50812	0.562922	0.000945	0.002105	0.363663	0.01035	0.0237	0.229828	0.867	0.861	0.999	0.997	0.872	0.983	0.968	0.905
rs11938835	1.4128E-08	-0.035707	0.0063	-0.036782	0.010678	1.76274E-08	0.41491	0.892051	0.006397	8.69E-06	0.690403	0.00562	0.00163	0.706397	0.808	0.693	0.972	1	0.454	0.971	0.98	0.752
rs13147901	1.4129E-08	-0.035707	0.0063	-0.036785	0.010645	1.78847E-08	0.41293	0.892091	0.006357	9.13E-06	0.694658	0.00559	0.00163	0.70647	0.809	0.694	0.972	1	0.457	0.971	0.98	0.752
rs9379887	1.4131E-08	0.0289901	0.00511	0.0289901	0.005111	2.5653E-08	0.50794	0.562897	0.000945	0.002102	0.363648	0.01037	0.02369	0.229781	0.867	0.861	0.999	0.997	0.872	0.983	0.968	0.905
rs9884946	1.4135E-08	-0.035705	0.0063	-0.036779	0.010644	1.78921E-08	0.41415	0.892055	0.006361	9.12E-06	0.694614	0.00559	0.00163	0.706499	0.809	0.694	0.972	1	0.457	0.971	0.98	0.752
rs28686840	1.4136E-08	-0.035705	0.0063	-0.036779	0.010644	1.78929E-08	0.41415	0.892055	0.006361	9.12E-06	0.694614	0.00559	0.00163	0.706501	0.809	0.694	0.972	1	0.457	0.971	0.98	0.752
rs4690742	1.4138E-08	-0.035705	0.0063	-0.036779	0.010644	1.78945E-08	0.41415	0.892053	0.006359	9.12E-06	0.694548	0.00559	0.00163	0.706506	0.809	0.694	0.972	1	0.457	0.971	0.98	0.752
rs4690743	1.4138E-08	-0.035705	0.0063	-0.036779	0.010644	1.78945E-08	0.41415	0.892053	0.006359	9.12E-06	0.694548	0.00559	0.00163	0.706506	0.809	0.694	0.972	1	0.457	0.971	0.98	0.752
rs4713006	1.4139E-08	0.0289896	0.00511	0.0289896	0.005111	2.56684E-08	0.50795	0.562778	0.000946	0.002102	0.363698	0.01037	0.0237	0.229743	0.867	0.861	0.999	0.997	0.872	0.983	0.968	0.905
rs609264	1.4142E-08	0.0285191	0.00503	0.0285191	0.005028	2.56744E-08	0.392	0.93634	0.001374	0.144625	0.051685	0.00011	0.38435	0.219036	0.864	0.796	0.998	0.882	0.956	1	0.861	0.893
rs4419196	1.4155E-08	-0.030705	0.00541	-0.030705	0.005414	2.57015E-08	0.32948	0.109577	1.51E-05	0.267214	0.102786	0.01374	0.07128	0.190194	0.88	0.918	1	0.789	0.939	0.964	0.946	0.905
rs4564736	1.4155E-08	-0.030705	0.00541	-0.030705	0.005414	2.57015E-08	0.32948	0.109577	1.51E-05	0.267214	0.102786	0.01374	0.07128	0.190194	0.88	0.918	1	0.789	0.939	0.964	0.946	0.905
rs4583413	1.4155E-08	-0.030705	0.00541	-0.030705	0.005414	2.57015E-08	0.32948	0.109577	1.51E-05	0.267214	0.102786	0.01374	0.07128	0.190194	0.88	0.918	1	0.789	0.939	0.964	0.946	0.905
rs1971559	1.4172E-08	0.0311166	0.00549	0.0311166	0.005487	2.57348E-08	0.40635	0.703396	0.000194	0.129156	0.063241	0.00028	0.97538	0.078242	0.836	0.705	1	0.868	0.94	0.999	0.679	0.91
rs13280296	1.4174E-08	-0.031233	0.00551	-0.031233	0.005507	2.57393E-08	0.49244	0.030006	0.000925	0.247475	0.028362	0.00031	0.36591	0.611946	0.851	0.939	0.999	0.798	0.968	0.999	0.864	0.833
rs12487379	1.4189E-08	-0.029626	0.00522	-0.029626	0.005224	2.57714E-08	0.7233	0.503371	0.000436	0.146744	0.330818	0.00017	0.00865	0.657772	0.79	0.822	0.999	0.852	0.835	1	0.969	0.681
rs62410359	1.4198E-08	-0.050277	0.00887	-0.056108	0.01321	2.57894E-08	0.27098	0.01169	0.000108	0.056405	0.705718	0.03205	0.00332	0.056139	0.894	0.958	1	0.952	0.765	0.909	0.984	0.941
rs1022017	1.4206E-08	0.0387508	0.00683	0.0388958	0.008425	2.58045E-08	0.85851	0.082894	5.29E-05	0.231023	0.789649	0.00228	0.01326	0.035679	0.73	0.907	1	0.769	0.686	0.994	0.966	0.932
rs113790488	1.4235E-08	0.029544	0.00521	0.029544	0.00521	2.35957E-08	0.61044	0.208369	0.003773	0.547035	0.363666	9.1E-07	0.1231	0.498849	0.751	0.835	0.983	0.429	0.765	1	0.881	0.77
rs72696245	1.4258E-08	-0.038827	0.00685	-0.038827	0.006848	2.59109E-08	0.15955	0.816588	0.000603	0.090821	0.070048	0.00665	0.02304	0.012651	0.92	0.799	0.999	0.941	0.959	0.991	0.971	0.964
rs4736162	1.4262E-08	0.029018	0.00512	0.029018	0.005118	2.59191E-08	0.06521	0.261842	0.002098	0.527693	0.016661	8.7E-05	0.0913	0.930173	0.913	0.862	0.995	0.52	0.972	1	0.923	0.746
rs34265575	1.4266E-08	0.0387471	0.00683	0.038898	0.008449	2.59282E-08	0.85939	0.082239	5.27E-05	0.230735	0.794485	0.0023	0.01318	0.035643	0.73	0.907	1	0.769	0.684	0.994	0.966	0.932
rs4713139	1.4282E-08	-0.052498	0.00926	-0.056914	0.015627	2.59602E-08	0.47711	0.928606	0.008204	0.016555	0.24286	0.00066	0.03002	0.000127	0.716	0.805	0.987	0.985	0.896	0.999	0.963	0.982
rs7528244	1.4285E-08	0.0296156	0.00522	0.0308305	0.007774	2.59657E-08	0.25908	0.064804	0.000681	0.000576	0.048192	0.02177	0.14856	0.050348	0.877	0.525	0.999	0.998	0.956	0.934	0.912	0.932
rs79770303	1.4294E-08	0.0317618	0.0056	0.0317618	0.005602	2.59852E-08	0.05013	0.60789	0.004229	0.00082	0.642797	0.00165	0.03838	0.730809	0.928	0.832	0.993	0.998	0.767	0.997	0.954	0.729
rs10889165	1.4307E-08	0.0363224	0.00641	0.0355536	0.009287	2.60113E-08	0.08418	0.133355	0.00359	0.000176	0.654927	0.00089	0.66754	0.061547	0.895	0.528	0.992	0.999	0.708	0.998	0.746	0.909
rs73226757	1.4308E-08	-0.031652	0.00558	-0.031652	0.005583	2.60132E-08	0.46017	0.910868	0.042088	0.002601	0.1784	7.1E-05	0.01964	0.743384	0.847	0.764	0.888	0.996	0.903	1	0.964	0.805
rs9355494	1.4314E-08	0.0318173	0.00561	0.0318173	0.005612	2.60261E-08	0.04672	0.616569	0.003876	0.001035	0.611952	0.00165	0.03385	0.667068	0.93	0.831	0.994	0.998	0.776	0.997	0.956	0.717
rs9355495	1.4314E-08	0.0318173	0.00561	0.0318173	0.005612	2.60261E-08	0.04672	0.616569	0.003876	0.001035	0.611952	0.00165	0.03385	0.667068	0.93	0.831	0.994	0.998	0.776	0.997	0.956	0.717
rs7433963	1.435E-08	-0.03272	0.00577	-0.03272	0.005772	2.60983E-08	0.29901	0.192578	0.005485	0.030914	0.032309	0.0001	0.33301	0.324305	0.656	0.894	0.991	0.972	0.965	1	0.87	0.873
rs3812288	1.435E-08	-0.033137	0.00585	-0.042598	0.01152	2.7854E-09	0.85154	0.035231	0.026633	9.3E-06	5.03E-05	0.09534	0.34931	0.31223	0.465	0.886	0.307	1	0.999	0.2	0.53	0.658
rs13128465	1.4351E-08	-0.035688	0.0063	-0.036762	0.010659	1.80123E-08	0.41264	0.892052	0.006397	9.05E-06	0.690403	0.00562	0.00163	0.706397	0.809	0.693	0.972	1	0.455	0.971	0.98	0.752
rs62175144	1.4361E-08	-0.028666	0.00506	-0.028666	0.005057	2.61211E-08	0.85525	0.728603	0.003579	0.005204	0.179949	0.00362	0.00409	0.130996	0.791	0.842	0.996	0.994	0.921	0.995	0.983	0.922

Table S3

rs201640100	1.4365E-08	0.0619948	0.01094	0.0578593	0.016576	1.77514E-08	0.01993	0.535654	0.000327	0.982668	0.657529	2.9E-06	0.10636	0.987814	0.896	0.693	0.998	0.12	0.532	1	0.853	0.568
rs138864823	1.4378E-08	0.0318129	0.00561	0.0318129	0.005612	2.61561E-08	0.04454	0.615879	0.00406	0.000944	0.613905	0.00169	0.03422	0.666141	0.93	0.831	0.993	0.998	0.776	0.997	0.956	0.717
rs6671879	1.4386E-08	0.0289705	0.00511	0.0289705	0.005111	2.61735E-08	0.32962	0.406336	0.000223	0.004635	0.05033	0.02558	0.08449	0.10146	0.88	0.701	1	0.994	0.96	0.936	0.941	0.924
rs13139834	1.4393E-08	-0.035685	0.0063	-0.036756	0.010657	1.80658E-08	0.41391	0.892063	0.006395	9.08E-06	0.690417	0.00562	0.00163	0.706388	0.808	0.693	0.972	1	0.455	0.971	0.98	0.752
rs11936427	1.4394E-08	-0.035685	0.0063	-0.036758	0.010658	1.80605E-08	0.4132	0.89199	0.006399	9.07E-06	0.690371	0.00562	0.00163	0.706418	0.808	0.693	0.972	1	0.455	0.971	0.98	0.752
rs56846012	1.4396E-08	-0.030696	0.00542	-0.030696	0.005415	2.61939E-08	0.66008	0.034242	0.002907	0.002118	0.808048	0.00191	0.0637	0.105648	0.824	0.935	0.995	0.996	0.589	0.997	0.944	0.916
rs13101986	1.4398E-08	-0.035685	0.0063	-0.036756	0.010657	1.80702E-08	0.41391	0.892061	0.006396	9.08E-06	0.690408	0.00562	0.00163	0.706392	0.808	0.693	0.972	1	0.455	0.971	0.98	0.752
rs12619989	1.4398E-08	0.0335893	0.00593	0.0335893	0.005926	2.61977E-08	0.23395	0.126966	0.008844	0.260689	0.05188	1.8E-05	0.5146	0.145194	0.89	0.91	0.983	0.79	0.957	1	0.834	0.91
rs200964	1.4399E-08	-0.043403	0.00766	-0.048821	0.011097	2.62001E-08	0.91866	0.173388	0.006897	0.000253	0.255742	0.02471	0.01833	0.004102	0.804	0.915	0.987	0.999	0.902	0.942	0.973	0.971
rs11943509	1.44E-08	-0.035685	0.0063	-0.036756	0.010657	1.8072E-08	0.41391	0.892052	0.006396	9.08E-06	0.690403	0.00562	0.00163	0.706397	0.808	0.693	0.972	1	0.455	0.971	0.98	0.752
rs16972395	1.4402E-08	-0.0695	0.01226	-0.0695	0.012261	2.62056E-08	0.55868	0.34595	3.53E-05	0.12723	0.610052	0.00042	0.77614	0.128861	0.803	0.837	1	0.855	0.732	0.999	0.728	0.889
rs1052897	1.4404E-08	-0.038102	0.00672	-0.038102	0.006722	2.62093E-08	0.68054	0.446249	0.001345	0.55488	0.001036	0.00014	0.20224	0.438744	0.771	0.811	0.996	0.473	0.991	1	0.87	0.811
rs6837806	1.441E-08	-0.035684	0.0063	-0.036755	0.010657	1.80805E-08	0.41392	0.892033	0.006399	9.08E-06	0.690379	0.00562	0.00163	0.706412	0.808	0.693	0.972	1	0.455	0.971	0.98	0.752
rs28460827	1.4412E-08	-0.035684	0.0063	-0.036755	0.010657	1.80816E-08	0.41391	0.89199	0.006399	9.08E-06	0.690374	0.00562	0.00163	0.706416	0.808	0.693	0.972	1	0.455	0.971	0.98	0.752
rs6815888	1.4412E-08	-0.035684	0.0063	-0.036755	0.010657	1.80821E-08	0.41392	0.892032	0.006399	9.08E-06	0.690374	0.00562	0.00163	0.706414	0.808	0.693	0.972	1	0.455	0.971	0.98	0.752
rs28625957	1.4413E-08	-0.035684	0.0063	-0.036755	0.010657	1.80828E-08	0.41391	0.89199	0.006399	9.08E-06	0.690371	0.00562	0.00163	0.706418	0.808	0.693	0.972	1	0.455	0.971	0.98	0.752
rs13221067	1.4414E-08	-0.062737	0.01107	-0.062737	0.011068	2.62291E-08	0.85784	0.090249	0.001053	0.025771	0.080818	0.01388	0.03517	0.017892	0.848	0.937	0.999	0.983	0.959	0.979	0.968	0.963
rs13139051	1.4414E-08	-0.035684	0.0063	-0.036755	0.010657	1.8083E-08	0.41391	0.89199	0.006399	9.08E-06	0.690371	0.00562	0.00163	0.706419	0.808	0.693	0.972	1	0.455	0.971	0.98	0.752
rs1605952	1.4414E-08	-0.035684	0.0063	-0.036755	0.010657	1.80836E-08	0.41392	0.89199	0.006399	9.08E-06	0.690371	0.00562	0.00163	0.706418	0.808	0.693	0.972	1	0.455	0.971	0.98	0.752
rs1605953	1.4415E-08	-0.035684	0.0063	-0.036755	0.010657	1.80839E-08	0.41392	0.89199	0.006399	9.08E-06	0.690371	0.00562	0.00163	0.706418	0.808	0.693	0.972	1	0.455	0.971	0.98	0.752
rs12444750	1.4416E-08	-0.069261	0.01222	-0.069261	0.012219	2.62336E-08	0.53721	0.603941	2.66E-05	0.03565	0.497874	0.00122	0.73035	0.081871	0.804	0.795	1	0.956	0.766	0.997	0.596	0.904
rs7656332	1.442E-08	-0.035683	0.0063	-0.036754	0.010657	1.80885E-08	0.41392	0.891991	0.006399	9.08E-06	0.690371	0.00562	0.00163	0.706416	0.808	0.693	0.972	1	0.455	0.971	0.98	0.752
rs9365745	1.4425E-08	0.0318105	0.00561	0.0318105	0.005612	2.62519E-08	0.04658	0.616569	0.003876	0.001048	0.611952	0.00165	0.03385	0.667068	0.93	0.831	0.994	0.998	0.776	0.997	0.956	0.717
rs7668605	1.4427E-08	-0.035683	0.0063	-0.036754	0.010657	1.80943E-08	0.41392	0.89199	0.0064	9.08E-06	0.690356	0.00562	0.00163	0.70643	0.808	0.693	0.972	1	0.455	0.971	0.98	0.752
rs7668378	1.4431E-08	-0.035682	0.0063	-0.036754	0.010657	1.80982E-08	0.41392	0.891991	0.0064	9.08E-06	0.690359	0.00563	0.00163	0.706428	0.808	0.693	0.972	1	0.455	0.971	0.98	0.752
rs13140271	1.4437E-08	-0.035682	0.0063	-0.036753	0.010656	1.81197E-08	0.41415	0.892064	0.006398	9.12E-06	0.690417	0.00562	0.00163	0.706388	0.808	0.693	0.972	1	0.455	0.971	0.98	0.752
rs6845018	1.4437E-08	-0.035682	0.0063	-0.036753	0.010656	1.81203E-08	0.41415	0.892064	0.006398	9.12E-06	0.690417	0.00562	0.00163	0.706388	0.808	0.693	0.972	1	0.455	0.971	0.98	0.752
rs7692119	1.4445E-08	-0.035681	0.0063	-0.036752	0.010658	1.81102E-08	0.41392	0.891996	0.006402	9.08E-06	0.690362	0.00563	0.00163	0.706801	0.808	0.693	0.972	1	0.455	0.971	0.98	0.752
rs13099075	1.445E-08	-0.03463	0.00611	-0.03463	0.00611	2.63033E-08	0.82361	0.064972	0.066191	0.002143	0.042186	3.9E-05	0.34972	0.849785	0.725	0.913	0.789	0.996	0.954	1	0.843	0.767
rs8182213	1.4463E-08	0.0287223	0.00507	0.0287223	0.005068	2.63299E-08	0.46809	0.857367	0.002914	0.013353	0.268553	2.6E-05	0.58123	0.98055	0.824	0.728	0.994	0.982	0.855	1	0.784	0.742
rs4283704	1.4463E-08	0.0377253	0.00666	0.0377253	0.006656	2.63301E-08	0.13216	0.736916	0.016209	0.006922	0.002602	0.00188	0.43113	0.153264	0.924	0.85	0.978	0.994	0.991	0.998	0.877	0.923
rs6887078	1.4467E-08	-0.268757	0.04742	-0.28133	0.065917	2.63376E-08	0.88905	0.928245	0.003688	0.383299	0.003486	0.00015	0.02802	0.02381	0.734	0.772	0.993	0.616	0.986	1	0.949	0.932
rs1392446	1.4469E-08	0.0285598	0.00504	0.0285598	0.005039	2.63426E-08	0.52651	0.46467	0.00214	0.000657	0.092987	0.00925	0.20061	0.022703	0.857	0.719	0.997	0.998	0.944	0.983	0.911	0.952
rs13072537	1.4473E-08	-0.029607	0.00522	-0.029607	0.005224	2.63501E-08	0.73372	0.503372	0.000435	0.147866	0.330792	0.00017	0.00865	0.65778	0.788	0.822	0.999	0.85	0.835	1	0.969	0.681
rs181141525	1.4474E-08	0.0639178	0.01128	0.0593426	0.015205	1.77694E-08	0.34426	0.26156	0.00015	0.884133	0.830543	3.1E-06	0.09911	0.442734	0.723	0.749	0.999	0.128	0.305	1	0.846	0.692
rs190467087	1.4485E-08	0.0902993	0.01593	0.0902993	0.015933	2.63755E-08	0.68629	0.255061	0.022523	0.001244	0.166446	4.4E-05	0.99715	0.707143	0.802	0.865	0.947	0.997	0.899	1	0.702	0.796
rs9866935	1.4496E-08	-0.031665	0.00559	-0.034955	0.009196	2.63977E-08	0.01944	0.222221	0.013334	0.031134	0.31416	0.00054	0.00071	0.088974	0.95	0.651	0.977	0.974	0.876	0.999	0.99	0.928
rs4930390	1.4498E-08	-0.031961	0.00564	-0.037055	0.00881	2.64008E-08	0.27064	0.02419	0.000614	0.09943	6.09E-05	0.0325	0.11223	0.786923	0.896	0.95	0.998	0.922	0.997	0.914	0.937	0.828
rs9308162	1.4513E-08	-0.035677	0.0063	-0.036671	0.010621	1.84744E-08	0.45585	0.89482	0.006313	9.37E-06	0.698021	0.0055	0.00161	0.705372	0.8	0.693	0.973	1	0.458	0.972	0.98	0.752
rs6822869	1.4522E-08	-0.035675	0.0063	-0.036738	0.010659	1.81846E-08	0.41417	0.890614	0.006375	9.1E-06	0.689299	0.00564	0.00163	0.707573	0.808	0.693	0.972	1	0.454	0.971	0.98	0.752
rs4701920	1.4522E-08	-0.268721	0.04742	-0.281311	0.065941	2.64505E-08	0.88878	0.928245	0.003688	0.383962	0.003486	0.00015	0.02802	0.02381	0.734	0.772	0.993	0.616	0.986	1	0.949	0.932
rs2449215	1.4524E-08	-0.038352	0.00677	-0.040522	0.008577	2.64542E-08	0.3688	0.290276	0.008454	0.007398	0.000587	0.00527	0.03619	0.32951	0.699	0.891	0.988	0.992	0.994	0.992	0.962	0.887
rs76438729	1.4537E-08	0.0799195	0.0141	0.0799195	0.014103	2.64822E-08	0.93572	0.003722	0.002212	0.011326	0.151424	0.00208	0.49415	0.252242	0.819	0.969	0.997	0.99	0.931	0.997	0.86	0.902
rs9467784	1.4541E-08	0.0289667	0.00511	0.0289667	0.005112	2.649E-08	0.50425	0.576378	0.000978	0.002138	0.344347	0.01043	0.02664	0.215143	0.868	0.86	0.999	0.997	0.878	0.983	0.967	0.908
rs10746549	1.4545E-08	-0.268702	0.04742	-0.2813	0.065952	2.64971E-08	0.88841	0.928245	0.003688	0.384089	0.003486	0.00015	0.02802	0.02381	0.734	0.772	0.993	0.615	0.986	1	0.949	0.932
rs6927110	1.457E-08	0.0373808	0.0066	0.0361673	0.007847	2.65481E-08	0.75111	0.018527	0.003446	0.055587	0.760576	5.9E-06	0.20531	0.618585	0.681	0.924	0.991	0.929	0.667	1	0.866	0.642
rs10896135	1.4576E-08	-0.031956	0.00564	-0.037043	0.0088	2.65609E-08	0.27025	0.02431	0.000623	0.096845	6.13E-05	0.03289	0.11267	0.787364	0.897	0.95	0.998	0.924	0.997	0.913	0.937	0.828
rs870615	1.4577E-08	-0.031182	0.0055	-0.031182	0.005503	2.65643E-08	0.53493	0.015273	0.001427	0.313608	0.039827	0.00013	0.43765	0.468171	0.836	0.945	0.997	0.732	0.96	1	0.839	0.844
rs71276077	1.4584E-08	-0.04603	0.00812	-0.046601	0.008614	2.65776E-08	0.58074	0.460552	0.00323	0.061226	0.160679	0.00294	0.005	0.005406	0.873	0.886	0.997	0.962	0.935	0.997	0.983	0.97
rs9357010	1.4585E-08	0.0289429	0.00511	0.0289429	0.005108	2.65793E-08	0.51927	0.545888	0.001081	0.00191	0.353913	0.00943	0.03056	0.229995	0.866	0.863	0.999	0.997	0.875	0.985	0.965	0.905
rs12618482	1.4587E-08	0.0416814	0.00736	0.0416814	0.007356	2.65843E-08	0.48929	0.391839	0.000808	0.015431	0.010063	0.01867	0.00769	0.974579	0.871	0.882	0.999	0.987	0.983	0.965	0.98	0.801
rs10791892	1.4593E-08	-0.031955	0.00564	-0.03704	0.0088	2.65957E-08	0.2704	0.024342	0.000623	0.096877	6.13E-05	0.0329	0.11266	0.787343	0.897	0.95	0.998	0.924	0.997	0.913	0.937	0.828
rs2587552	1.4594E-08	-0.030685	0.00542	-0.030685	0.005415	2.65985E-08	0.65768	0.034373	0.002893	0.002162	0.805092	0.00191	0.06366	0.10647	0.824	0.935	0.995	0.996	0.588	0.997	0.944	0.916
rs4939725	1.4597E-08	0.0373732	0.0066	0.0373637	0.006606	2.66034E-08	0.1322	0.667358	0.002746	0.22497	0.730001	4.5E-06	0.2294	0.056979	0.876	0.669	0.992	0.744	0.673	1	0.859	0.909
rs365552	1.46E-08	0.0298089	0.00526	0.0298089	0.005261	2.66099E-08	0.58072	0.604732	0.007735	0.007557	0.366146	0.00027	0.11301	0.014686	0.845	0.736	0.988	0.992	0.858	1	0.931	0.955

Table S3

rs184781612	1.4617E-08	-0.098614	0.0174	-0.098614	0.017405	2.66444E-08	0.02709	0.867577	7.38E-05	0.074349	0.769994	0.00169	0.02848	0.995246	0.932	0.781	1	0.927	0.705	0.997	0.955	0.75
rs10750790	1.4629E-08	-0.031953	0.00564	-0.037052	0.008808	2.66701E-08	0.26986	0.024117	0.00062	0.097705	6.13E-05	0.0329	0.11259	0.787403	0.897	0.95	0.998	0.923	0.997	0.913	0.937	0.828
rs6508212	1.4629E-08	0.0373215	0.00659	0.0369654	0.006991	2.66702E-08	0.12347	0.638395	0.003032	0.254986	0.703881	3.4E-06	0.21134	0.061519	0.876	0.656	0.99	0.707	0.674	1	0.861	0.904
rs1426081	1.463E-08	0.0363215	0.00641	0.0356665	0.00924	2.66709E-08	0.07562	0.144051	0.003387	0.000202	0.667273	0.00098	0.65717	0.056208	0.899	0.537	0.992	0.999	0.707	0.998	0.751	0.913
rs7692881	1.4636E-08	-0.035667	0.0063	-0.03674	0.010659	1.82699E-08	0.41389	0.891934	0.006435	9.08E-06	0.689949	0.00566	0.00163	0.706704	0.808	0.693	0.972	1	0.455	0.971	0.98	0.752
rs3083817	1.464E-08	-0.035664	0.00629	-0.036697	0.010666	1.83051E-08	0.41491	0.885143	0.006243	9.18E-06	0.684279	0.00568	0.00164	0.709184	0.807	0.691	0.973	1	0.452	0.971	0.98	0.751
rs112946719	1.4643E-08	-0.035666	0.0063	-0.036728	0.010658	1.82985E-08	0.41445	0.890617	0.006396	9.11E-06	0.689232	0.00565	0.00164	0.708338	0.808	0.693	0.972	1	0.455	0.971	0.98	0.752
rs633777	1.4649E-08	-0.033956	0.00599	-0.033956	0.005993	2.67081E-08	0.41146	0.796708	0.01426	0.012407	0.000578	0.00131	0.44486	0.173285	0.879	0.835	0.979	0.989	0.994	0.998	0.867	0.915
rs62064964	1.465E-08	-0.031009	0.00547	-0.031009	0.005473	2.67084E-08	0.30342	0.667421	0.001221	0.004173	0.251409	0.01544	0.02496	0.039241	0.901	0.86	0.999	0.996	0.909	0.974	0.97	0.951
rs62067794	1.4654E-08	-0.031009	0.00547	-0.031009	0.005473	2.67144E-08	0.30343	0.667445	0.00122	0.004174	0.251547	0.01544	0.02496	0.039212	0.901	0.86	0.999	0.996	0.909	0.974	0.97	0.951
rs4810739	1.4657E-08	-0.031382	0.00554	-0.031382	0.005539	2.67187E-08	0.84991	0.186514	0.014047	0.098919	0.028431	0.00012	0.13402	0.023117	0.794	0.911	0.978	0.931	0.973	1	0.933	0.955
rs56070655	1.468E-08	-0.038368	0.00677	-0.040028	0.008141	2.67518E-08	0.24874	0.85519	0.001064	0.090716	0.029707	0.00747	0.027	0.003161	0.908	0.806	0.999	0.942	0.974	0.989	0.97	0.974
rs151029544	1.4683E-08	0.0761345	0.01344	0.0761345	0.013439	2.4825E-08	0.91964	0.445276	0.047908	0.000636	0.632489	2.7E-06	0.5971	0.9317	0.674	0.759	0.766	0.997	0.639	1	0.696	0.637
rs12785137	1.4714E-08	0.0295076	0.00521	0.0295076	0.005209	2.68003E-08	0.02313	0.622379	0.004838	0.078054	0.066822	0.00024	0.2029	0.542362	0.952	0.858	0.994	0.947	0.958	1	0.918	0.866
rs7999616	1.4718E-08	0.0331773	0.00586	0.0344489	0.006788	2.68056E-08	0.9081	0.020582	0.002329	0.086167	0.074822	0.00554	0.0021	0.139853	0.839	0.957	0.997	0.948	0.96	0.993	0.988	0.93
rs192506357	1.4718E-08	-0.089138	0.01574	-0.093561	0.021799	2.44943E-08	0.9593	0.013555	7.56E-06	0.068771	0.511086	0.04145	0.04334	0.046258	0.776	0.95	1	0.921	0.79	0.851	0.952	0.936
rs9284886	1.4732E-08	-0.034564	0.0061	-0.034564	0.006102	2.6681E-08	0.79481	0.090907	0.075055	0.00183	0.044371	3E-05	0.35924	0.809572	0.708	0.9	0.746	0.996	0.95	1	0.832	0.762
rs4316822	1.4735E-08	0.0373615	0.0066	0.0373291	0.006631	2.68306E-08	0.13088	0.671243	0.002813	0.225794	0.729053	4.4E-06	0.231	0.056194	0.876	0.67	0.992	0.744	0.674	1	0.858	0.909
rs1664228	1.4736E-08	-0.028481	0.00503	-0.028481	0.005028	2.68322E-08	0.45118	0.170104	0.000273	0.150588	0.454059	0.00166	0.00209	0.702626	0.858	0.9	1	0.878	0.829	0.997	0.984	0.822
rs7373072	1.4744E-08	-0.034563	0.0061	-0.034563	0.006102	2.67024E-08	0.79479	0.090899	0.075112	0.001831	0.044347	3E-05	0.35916	0.809529	0.707	0.9	0.745	0.996	0.95	1	0.832	0.762
rs7653408	1.4753E-08	-0.034556	0.0061	-0.034556	0.006101	2.67371E-08	0.79454	0.086566	0.073975	0.00183	0.048338	3E-05	0.36012	0.800608	0.709	0.902	0.751	0.996	0.948	1	0.833	0.765
rs7701113	1.4753E-08	-0.029277	0.00517	-0.029277	0.005169	2.68569E-08	0.80042	0.994283	0.002856	0.026683	0.473152	0.00022	0.04546	0.076509	0.817	0.793	0.996	0.977	0.827	1	0.953	0.927
rs10752590	1.4758E-08	0.0293176	0.00518	0.0351564	0.008315	2.68639E-08	0.40784	0.054419	0.000902	0.013297	0.417014	0.0544	0.00104	0.004993	0.88	0.94	0.998	0.988	0.853	0.848	0.99	0.972
rs10791891	1.4766E-08	-0.031944	0.00564	-0.037022	0.008804	2.6875E-08	0.27119	0.024437	0.000615	0.100034	6.13E-05	0.03258	0.11225	0.787079	0.896	0.95	0.998	0.921	0.997	0.914	0.937	0.828
rs56145866	1.478E-08	-0.062711	0.01107	-0.062711	0.011072	2.68943E-08	0.86115	0.090706	0.001042	0.025764	0.081731	0.01411	0.03504	0.01812	0.847	0.937	0.999	0.983	0.958	0.979	0.968	0.963
rs113590514	1.4806E-08	0.0363109	0.00641	0.035662	0.009221	2.69324E-08	0.0762	0.144647	0.003405	0.000205	0.665678	0.00098	0.65738	0.056307	0.899	0.538	0.992	0.999	0.708	0.998	0.751	0.913
rs113399544	1.481E-08	0.0316283	0.00558	0.0325116	0.007669	2.61455E-08	0.61165	0.295352	0.000164	0.000379	0.170586	0.04961	0.0053	0.659121	0.786	0.583	0.999	0.999	0.879	0.775	0.974	0.774
rs9888591	1.4823E-08	0.0292082	0.00516	0.0292082	0.005157	2.69561E-08	0.88893	0.131276	0.000214	0.009046	0.366627	0.02113	0.0054	0.267624	0.788	0.916	1	0.991	0.864	0.953	0.981	0.895
rs6830308	1.4825E-08	-0.038822	0.00685	-0.038822	0.006855	2.69593E-08	0.244	0.067264	0.040517	0.001769	0.199436	0.00038	0.11197	0.555718	0.903	0.935	0.924	0.997	0.917	0.999	0.939	0.862
rs714766	1.4831E-08	-0.03194	0.00564	-0.037023	0.008802	2.69673E-08	0.27023	0.024414	0.000623	0.098508	6.14E-05	0.03282	0.11254	0.787255	0.896	0.95	0.998	0.922	0.997	0.914	0.937	0.828
rs10758965	1.4831E-08	-0.030969	0.00547	-0.031804	0.009136	2.69677E-08	0.04216	0.096797	4.53E-05	0.029405	0.013942	0.02378	0.01731	0.610965	0.469	0.904	1	0.966	0.975	0.913	0.964	0.807
rs325481	1.4844E-08	-0.029638	0.00523	-0.029638	0.005233	2.69867E-08	0.83801	0.013287	0.013105	0.040034	0.011024	0.00018	0.48229	0.597513	0.826	0.955	0.98	0.97	0.982	1	0.856	0.852
rs11921590	1.4847E-08	-0.028962	0.00511	-0.028962	0.005114	2.6935E-08	0.99142	0.065118	0.032109	0.081891	0.016478	5.2E-06	0.30871	0.963884	0.769	0.917	0.911	0.917	0.973	1	0.865	0.754
rs11207547	1.4867E-08	0.0362753	0.00641	0.0355023	0.009267	2.70186E-08	0.08331	0.132936	0.003569	0.000189	0.657195	0.00089	0.66847	0.061498	0.895	0.528	0.992	0.999	0.708	0.998	0.746	0.909
rs13064576	1.487E-08	-0.02896	0.00511	-0.02896	0.005114	2.69674E-08	0.99142	0.065179	0.032123	0.08189	0.016475	5.2E-06	0.30881	0.963941	0.769	0.917	0.911	0.917	0.973	1	0.865	0.754
rs6817822	1.4893E-08	-0.035828	0.00633	-0.035828	0.006327	2.70566E-08	0.27851	0.502802	2.44E-05	0.073868	0.028487	0.01704	0.16707	0.095431	0.886	0.717	1	0.939	0.969	0.959	0.916	0.924
rs75348631	1.49E-08	-0.075458	0.01333	-0.075458	0.013325	2.69556E-08	0.11803	0.069761	0.074213	0.003394	0.355994	4.9E-05	0.06013	0.920854	0.907	0.921	0.769	0.995	0.838	1	0.944	0.771
rs1632609	1.4902E-08	-0.028471	0.00503	-0.028471	0.005028	2.70683E-08	0.44253	0.169668	0.000271	0.155083	0.453197	0.00166	0.00208	0.701188	0.859	0.9	1	0.874	0.829	0.997	0.984	0.822
rs35872725	1.4904E-08	0.0289441	0.00511	0.0289441	0.005111	2.70721E-08	0.32748	0.410298	0.000241	0.004887	0.049573	0.02517	0.08076	0.099581	0.881	0.704	1	0.994	0.961	0.939	0.943	0.925
rs7519843	1.4904E-08	0.0289441	0.00511	0.0289441	0.005111	2.70721E-08	0.32748	0.410298	0.000241	0.004887	0.049573	0.02517	0.08076	0.099581	0.881	0.704	1	0.994	0.961	0.939	0.943	0.925
rs12886637	1.4905E-08	0.0292044	0.00516	0.0292044	0.005157	2.70728E-08	0.80404	0.131131	0.000215	0.008196	0.367011	0.02109	0.00538	0.268708	0.773	0.914	1	0.991	0.862	0.952	0.98	0.893
rs45542442	1.4922E-08	-0.030661	0.00541	-0.030661	0.005415	2.70976E-08	0.65981	0.034249	0.002959	0.002092	0.802756	0.00193	0.06434	0.106097	0.824	0.935	0.995	0.996	0.587	0.997	0.943	0.916
rs7201518	1.4925E-08	-0.028968	0.00512	-0.029689	0.005957	2.7102E-08	0.45335	0.640813	0.042003	0.000184	0.003956	0.00104	0.19021	0.51245	0.84	0.814	0.877	0.999	0.986	0.997	0.895	0.664
rs7834767	1.4927E-08	0.0345108	0.00609	0.0370048	0.010928	4.02719E-09	0.91255	0.51667	0.56569	7.24E-05	0.038838	7.6E-06	0.03878	0.154052	0.577	0.416	0.016	1	0.93	1	0.925	0.825
rs113891660	1.493E-08	-0.054509	0.00963	-0.054509	0.009627	2.71092E-08	0.77196	0.025148	0.012497	0.019317	0.128589	0.00014	0.18968	0.6468	0.838	0.948	0.982	0.984	0.937	1	0.919	0.849
rs2859545	1.4931E-08	-0.030668	0.00542	-0.030668	0.005416	2.71103E-08	0.65231	0.035847	0.002895	0.002029	0.792105	0.00194	0.06378	0.110891	0.824	0.934	0.995	0.997	0.582	0.997	0.943	0.914
rs7653985	1.4932E-08	0.0386939	0.00683	0.0388401	0.008471	2.71117E-08	0.85326	0.082948	5.31E-05	0.238402	0.789681	0.00228	0.01324	0.035668	0.728	0.906	1	0.761	0.684	0.994	0.966	0.932
rs1026186	1.4938E-08	-0.030511	0.00539	-0.030511	0.005389	2.71195E-08	0.09956	0.083506	0.021044	0.022089	0.115391	0.00011	0.11991	0.880557	0.927	0.931	0.966	0.983	0.942	1	0.937	0.789
rs12890354	1.4938E-08	0.0292027	0.00516	0.0292027	0.005157	2.712E-08	0.80392	0.131253	0.000214	0.008229	0.366986	0.02112	0.00541	0.26757	0.773	0.914	1	0.991	0.862	0.952	0.98	0.893
rs2187041	1.4944E-08	-0.031933	0.00564	-0.037016	0.008808	2.71281E-08	0.27109	0.024405	0.000615	0.100997	6.13E-05	0.0326	0.11226	0.787111	0.896	0.95	0.998	0.92	0.997	0.914	0.937	0.828
rs4491576	1.4956E-08	-0.042831	0.00756	-0.040028	0.01348	8.45077E-09	0.40141	0.29196	3.37E-07	0.985569	0.22361	0.00217	0.0044	0.694174	0.418	0.753	1	0.095	0.756	0.971	0.964	0.634
rs61924980	1.4959E-08	-0.032342	0.00571	-0.034339	0.010065	2.71498E-08	0.02684	0.28626	0.002638	0.428987	0.392484	6.5E-05	0.00023	0.413971	0.92	0.831	0.991	0.532	0.771	1	0.989	0.56
rs21126	1.4968E-08	-0.029285	0.00517	-0.029285	0.005172	2.71631E-08	0.77966	0.010829	0.011508	0.061853	0.018088	8.6E-05	0.3043	0.753581	0.767	0.954	0.981	0.951	0.976	1	0.886	0.823
rs4930184	1.4968E-08	-0.031931	0.00564	-0.037004	0.008804	2.71634E-08	0.27225	0.024522	0.000615	0.101047	6.13E-05	0.03256	0.11231	0.787008	0.896	0.95	0.998	0.92	0.997	0.914	0.937	0.828
rs149254026	1.4984E-08	0.0637375	0.01126	0.0600043	0.015707	1.80804E-08	0.2819	0.177007	0.000253	0.975629	0.940763	3.6E-06	0.06905	0.346723	0.762	0.797	0.999	0.114	0.362	1	0.882	0.741

Table S3

rs9932605	1.5E-08	-0.028963	0.00512	-0.029682	0.005958	2.7209E-08	0.46201	0.640213	0.041937	0.000183	0.003959	0.00104	0.19025	0.512394	0.839	0.814	0.878	0.999	0.986	0.997	0.895	0.664
rs35471678	1.5002E-08	0.0289465	0.00511	0.0289465	0.005113	2.72114E-08	0.42716	0.505035	0.000902	0.003129	0.350914	0.00926	0.03235	0.23454	0.879	0.87	0.999	0.996	0.878	0.986	0.964	0.906
rs4080	1.5009E-08	-0.028658	0.00506	-0.030092	0.007247	2.01775E-08	0.76643	0.361702	5.81E-06	0.051984	0.022848	0.08871	0.00256	0.86532	0.649	0.813	1	0.896	0.961	0.571	0.981	0.707
rs7930203	1.501E-08	-0.031932	0.00564	-0.037024	0.008815	2.72229E-08	0.27016	0.024291	0.000615	0.099461	6.09E-05	0.03297	0.11394	0.79077	0.896	0.95	0.998	0.921	0.997	0.913	0.936	0.827
rs12588797	1.5018E-08	0.0292721	0.00517	0.0292721	0.005171	2.72346E-08	0.90326	0.119642	0.000232	0.011384	0.311812	0.02247	0.00457	0.237216	0.793	0.92	1	0.989	0.882	0.951	0.982	0.902
rs62412063	1.5031E-08	-0.050178	0.00886	-0.055943	0.013186	2.72525E-08	0.27215	0.011769	0.000109	0.056638	0.713517	0.03234	0.00344	0.05656	0.893	0.957	1	0.951	0.763	0.908	0.983	0.941
rs10247962	1.504E-08	-0.035343	0.00624	-0.035343	0.006243	2.72647E-08	0.5103	0.284658	0.000487	0.418761	0.003501	0.00118	0.07857	0.418809	0.836	0.871	0.999	0.642	0.987	0.998	0.935	0.849
rs6793308	1.5051E-08	-0.028855	0.0051	-0.028855	0.005097	2.72802E-08	0.65662	0.099992	0.021329	0.106077	0.018497	4.8E-06	0.37001	0.70121	0.813	0.905	0.943	0.896	0.971	1	0.848	0.707
rs112417871	1.5066E-08	0.0317292	0.00561	0.0317292	0.005605	2.73024E-08	0.05713	0.630328	0.003789	0.000784	0.658552	0.00166	0.04227	0.687811	0.924	0.825	0.994	0.998	0.759	0.997	0.951	0.717
rs4713118	1.507E-08	-0.035419	0.00626	-0.035419	0.006257	2.73081E-08	0.47453	0.269992	0.003461	0.002949	0.129411	0.01733	0.06701	0.004885	0.887	0.911	0.996	0.997	0.945	0.972	0.958	0.973
rs606803	1.5076E-08	-0.029381	0.00519	-0.029153	0.007167	2.12032E-08	0.88244	0.12226	0.011997	0.652157	0.207388	9.4E-07	0.10318	0.029951	0.664	0.868	0.926	0.364	0.84	1	0.896	0.921
rs1336189	1.5077E-08	-0.028654	0.00506	-0.028654	0.005062	2.73184E-08	0.23272	0.045829	3.48E-05	0.105675	0.758984	0.00134	0.3513	0.717933	0.874	0.922	1	0.898	0.714	0.997	0.852	0.798
rs28699350	1.5078E-08	0.0302842	0.00535	0.0302842	0.00535	2.73187E-08	0.77911	0.476294	0.008217	0.088307	0.69479	2.3E-06	0.03072	0.663694	0.703	0.815	0.976	0.899	0.704	1	0.946	0.782
rs6432020	1.5081E-08	-0.028561	0.00505	-0.029015	0.005784	2.67703E-08	0.57647	0.91534	0.086466	0.001052	0.040494	9E-05	0.01176	0.765969	0.789	0.707	0.676	0.997	0.95	1	0.966	0.664
rs6761985	1.5082E-08	0.0297539	0.00526	0.0297539	0.005256	2.72192E-08	0.72211	0.690232	0.013137	0.081653	0.398438	1.2E-06	0.05302	0.73814	0.7	0.788	0.961	0.908	0.805	1	0.934	0.775
rs188327963	1.5093E-08	-0.069166	0.01222	-0.069166	0.012219	2.73404E-08	0.53128	0.617337	2.58E-05	0.03682	0.500399	0.00126	0.72735	0.079959	0.805	0.792	1	0.954	0.765	0.997	0.595	0.904
rs12888002	1.5109E-08	0.0291928	0.00516	0.0291928	0.005157	2.73633E-08	0.80203	0.131332	0.000214	0.008327	0.366958	0.02112	0.00541	0.267557	0.773	0.914	1	0.991	0.862	0.952	0.98	0.893
rs6827913	1.5109E-08	-0.03563	0.00629	-0.03668	0.010665	1.9127E-08	0.41437	0.887436	0.006395	9.19E-06	0.685699	0.00573	0.00164	0.709471	0.808	0.692	0.972	1	0.453	0.971	0.98	0.751
rs3003920	1.512E-08	-0.032849	0.0058	-0.032447	0.008139	2.72155E-08	0.48105	0.030518	0.004139	0.552582	0.04754	6E-06	0.45674	0.065198	0.591	0.914	0.983	0.439	0.939	1	0.771	0.9
rs3792252	1.5138E-08	0.0307305	0.00543	0.0307305	0.005429	2.74045E-08	0.25367	0.022317	3.96E-05	0.31281	0.23252	0.00366	0.23677	0.167119	0.886	0.944	1	0.747	0.892	0.993	0.895	0.904
rs1807019	1.5143E-08	-0.034772	0.00614	-0.034772	0.006143	2.74112E-08	0.36383	0.004712	0.003396	0.010146	0.216209	0.00379	0.19034	0.252118	0.898	0.97	0.997	0.992	0.922	0.996	0.928	0.913
rs2397670	1.5169E-08	0.0313437	0.00554	0.0313437	0.005538	2.74492E-08	0.98596	0.136466	0.000133	0.057744	0.155965	0.00214	0.39779	0.246314	0.8	0.911	1	0.955	0.922	0.997	0.867	0.895
rs9347681	1.517E-08	0.0320284	0.00566	0.0320284	0.005659	2.74496E-08	0.27902	0.485926	0.001736	0.014376	0.92786	0.00161	0.02696	0.014392	0.884	0.855	0.998	0.986	0.648	0.998	0.963	0.956
rs292974	1.5171E-08	0.0394638	0.00697	0.0394638	0.006973	2.74507E-08	0.12273	0.680232	0.002773	0.033428	0.324834	0.00116	0.0831	0.028913	0.927	0.858	0.997	0.977	0.891	0.999	0.95	0.955
rs116871689	1.5177E-08	-0.07012	0.01239	-0.07012	0.01239	2.74595E-08	0.42967	0.918755	6.21E-06	0.094782	0.468558	0.00179	0.81914	0.098593	0.822	0.726	1	0.889	0.776	0.995	0.715	0.897
rs34743594	1.5181E-08	0.0294643	0.00521	0.0294643	0.005206	2.74656E-08	0.94261	0.483782	0.002761	0.020654	0.005283	0.0024	0.11014	0.490781	0.819	0.871	0.997	0.984	0.987	0.997	0.939	0.87
rs55662358	1.519E-08	0.0317039	0.0056	0.0317039	0.005602	2.74777E-08	0.04948	0.60929	0.004269	0.000869	0.642414	0.00167	0.03854	0.729831	0.928	0.831	0.993	0.998	0.768	0.997	0.954	0.729
rs10791889	1.5191E-08	-0.03192	0.00564	-0.037028	0.008819	2.74793E-08	0.26232	0.024498	0.000617	0.103708	6.13E-05	0.03251	0.11262	0.78785	0.897	0.95	0.998	0.918	0.997	0.914	0.937	0.827
rs118057621	1.5196E-08	-0.070133	0.01239	-0.070133	0.012392	2.74871E-08	0.45645	0.953544	5.19E-06	0.102281	0.491569	0.00194	0.76486	0.094584	0.817	0.731	1	0.881	0.768	0.995	0.728	0.898
rs9467782	1.5216E-08	0.0289308	0.00511	0.0289308	0.005112	2.75155E-08	0.50686	0.570734	0.001053	0.00182	0.378052	0.00937	0.03146	0.238254	0.866	0.859	0.999	0.997	0.868	0.985	0.964	0.903
rs1940734	1.522E-08	0.0297173	0.00525	0.0317626	0.006638	2.75203E-08	0.0327	0.984017	0.048529	0.00762	0.001591	0.00101	0.40046	0.05142	0.947	0.806	0.894	0.992	0.992	0.998	0.873	0.944
rs7223967	1.522E-08	0.0475493	0.0084	0.0503136	0.013938	1.33718E-08	0.04943	0.663121	0.065422	0.445102	0.000704	1.6E-06	0.18346	0.362479	0.875	0.513	0.492	0.343	0.992	1	0.801	0.737
rs10750022	1.5223E-08	0.0297172	0.00525	0.0317624	0.006638	2.75245E-08	0.0327	0.984017	0.048528	0.00762	0.001591	0.00101	0.40046	0.05142	0.947	0.806	0.894	0.992	0.992	0.998	0.873	0.944
rs4884120	1.5227E-08	-0.044438	0.00785	-0.044438	0.007853	2.75307E-08	0.45798	0.827835	6.75E-06	0.105124	0.230086	0.00125	0.28928	0.409269	0.629	0.7	1	0.876	0.854	0.997	0.84	0.816
rs7516502	1.5233E-08	0.0362455	0.00641	0.0354503	0.009286	2.75391E-08	0.08349	0.131292	0.003579	0.00019	0.660935	0.00089	0.67015	0.061897	0.895	0.527	0.992	0.999	0.706	0.998	0.745	0.909
rs1938379	1.5233E-08	0.0289252	0.00511	0.0289252	0.005111	2.75396E-08	0.32898	0.410298	0.000241	0.005013	0.049573	0.02517	0.08076	0.099581	0.881	0.704	1	0.994	0.961	0.939	0.943	0.925
rs62302700	1.5261E-08	0.0376968	0.00666	0.0376968	0.006662	2.75786E-08	0.13013	0.708954	0.016086	0.006217	0.002937	0.00216	0.42843	0.149681	0.925	0.854	0.978	0.994	0.991	0.997	0.878	0.924
rs943576	1.5264E-08	0.0294477	0.0052	0.0302286	0.008756	2.75825E-08	0.24916	0.03701	0.000503	0.000245	0.025927	0.02861	0.39784	0.052495	0.863	0.452	0.999	0.999	0.964	0.883	0.825	0.922
rs35559280	1.527E-08	0.0386464	0.00683	0.0386464	0.00683	2.75917E-08	0.36561	0.542502	0.010459	0.011263	0.003526	0.00089	0.63946	0.221977	0.884	0.863	0.986	0.99	0.989	0.999	0.829	0.906
rs543866446	1.5271E-08	-0.028841	0.0051	-0.028841	0.005097	2.75928E-08	0.68308	0.10177	0.021051	0.10338	0.018029	5E-06	0.37265	0.692618	0.809	0.904	0.944	0.898	0.971	1	0.848	0.705
rs9467774	1.5282E-08	0.028916	0.00511	0.028916	0.00511	2.7609E-08	0.49646	0.557355	0.00119	0.0017	0.350047	0.01021	0.02721	0.24043	0.869	0.862	0.998	0.997	0.876	0.983	0.966	0.903
rs201456385	1.5293E-08	-0.088642	0.01567	-0.088642	0.015666	2.7624E-08	0.31532	0.27017	0.011567	0.116549	0.113025	1.7E-05	0.05703	0.983218	0.881	0.887	0.979	0.908	0.935	1	0.949	0.785
rs7239818	1.5297E-08	0.0373308	0.0066	0.0372326	0.006709	2.76293E-08	0.11924	0.668944	0.002839	0.2231	0.749595	4.8E-06	0.22215	0.057641	0.88	0.67	0.992	0.747	0.668	1	0.861	0.908
rs2155290	1.53E-08	0.0296978	0.00525	0.031371	0.006411	2.76347E-08	0.03202	0.997966	0.050481	0.007242	0.002221	0.00086	0.40466	0.0548	0.947	0.807	0.888	0.993	0.991	0.999	0.871	0.942
rs192870213	1.5321E-08	-0.069921	0.01236	-0.070897	0.014254	2.50613E-08	0.11108	0.036609	0.092138	0.030493	0.136305	5.8E-06	0.09914	0.804575	0.903	0.931	0.696	0.96	0.91	1	0.923	0.706
rs11706370	1.533E-08	-0.028835	0.0051	-0.028835	0.005096	2.76762E-08	0.68099	0.092122	0.02117	0.100294	0.017773	5.4E-06	0.39151	0.701345	0.81	0.907	0.944	0.902	0.971	1	0.844	0.708
rs4906364	1.5336E-08	0.0291801	0.00516	0.0291801	0.005158	2.76849E-08	0.81582	0.131132	0.000213	0.008719	0.367107	0.02108	0.00538	0.267487	0.776	0.915	1	0.991	0.863	0.953	0.98	0.893
rs147070584	1.5341E-08	0.0945127	0.01671	0.0945127	0.016705	2.76918E-08	0.67168	0.24147	0.005151	0.011036	0.157564	0.00028	0.262	0.528631	0.845	0.897	0.993	0.99	0.926	1	0.9	0.86
rs6733526	1.5347E-08	0.0397358	0.00702	0.0397358	0.007023	2.77011E-08	0.66922	0.095314	0.000501	0.028225	0.026044	0.0188	0.00822	0.841909	0.855	0.93	0.999	0.979	0.975	0.966	0.98	0.831
rs2135986	1.5348E-08	0.0386651	0.00683	0.0388116	0.008499	2.77014E-08	0.84401	0.08281	5.29E-05	0.241817	0.787381	0.00229	0.01327	0.035697	0.726	0.906	1	0.758	0.684	0.994	0.966	0.932
rs4436844	1.5352E-08	0.0373118	0.00659	0.0373118	0.006595	2.7707E-08	0.13219	0.679708	0.002769	0.224952	0.709845	4.6E-06	0.24403	0.062416	0.876	0.673	0.992	0.746	0.682	1	0.854	0.906
rs113967514	1.5356E-08	-0.054464	0.00963	-0.054464	0.009627	2.77135E-08	0.77187	0.02561	0.012646	0.019312	0.129283	0.00014	0.18903	0.645854	0.838	0.948	0.982	0.984	0.936	1	0.919	0.849
rs11047297	1.5362E-08	-0.029008	0.00513	-0.029008	0.005127	2.77213E-08	0.69269	0.397689	0.000374	0.013391	0.286015	0.00707	0.0039	0.89965	0.837	0.872	0.999	0.987	0.885	0.988	0.982	0.806
rs11693766	1.5366E-08	0.0403923	0.00714	0.0403923	0.00714	2.77271E-08	0.98437	0.286525	0.001837	0.250873	0.008856	0.00017	0.21498	0.279322	0.775	0.875	0.997	0.785	0.981	1	0.896	0.878
rs12902298	1.5375E-08	0.0288725	0.0051	0.0289678	0.005558	2.77407E-08	0.01056	0.47466	0.000132	0.188124	0.103663	0.00277	0.03957	0.580147	0.953	0.852	1	0.843	0.935	0.995	0.955	0.704

Table S3

rs11922013	1.5377E-08	-0.028833	0.0051	-0.028833	0.005097	2.77431E-08	0.63812	0.101448	0.021497	0.103086	0.018233	5.3E-06	0.3685	0.695938	0.816	0.905	0.943	0.9	0.971	1	0.85	0.708
rs1664241	1.5378E-08	-0.028444	0.00503	-0.028444	0.005028	2.7745E-08	0.44422	0.169888	0.000272	0.157467	0.453318	0.00167	0.00209	0.701585	0.858	0.9	0.999	0.872	0.828	0.997	0.984	0.822
rs3020328	1.5383E-08	-0.032164	0.00569	-0.032164	0.005686	2.77516E-08	0.51478	0.854065	0.00959	0.055778	0.234293	1.2E-05	0.28836	0.108925	0.847	0.767	0.983	0.952	0.891	1	0.881	0.915
rs1416067	1.5392E-08	0.0290779	0.00514	0.0290779	0.00514	2.77648E-08	0.3301	0.035776	0.035379	0.062865	0.026633	2.7E-05	0.17618	0.966726	0.883	0.941	0.924	0.949	0.972	1	0.917	0.787
rs28845848	1.5411E-08	-0.028591	0.00505	-0.0292	0.006146	2.55661E-08	0.06739	0.745942	0.087647	0.000167	0.020572	0.00014	0.77958	0.921844	0.897	0.748	0.651	0.999	0.963	0.999	0.683	0.677
rs11838404	1.5423E-08	0.0352468	0.00623	0.0352468	0.006231	2.78103E-08	0.82027	0.432388	0.000722	0.012053	0.055798	0.00488	0.16638	0.282479	0.835	0.879	0.999	0.99	0.961	0.993	0.926	0.899
rs703434	1.5424E-08	0.0554379	0.0098	0.0587089	0.014134	2.78116E-08	0.37155	0.000702	0.016823	0.018352	0.2262	0.00027	0.04688	0.639433	0.881	0.973	0.971	0.985	0.906	1	0.957	0.744
rs3020407	1.5425E-08	-0.030676	0.00542	-0.030676	0.005423	2.78131E-08	0.46523	0.5497	0.007503	0.056681	0.035407	7.6E-05	0.44851	0.026652	0.858	0.726	0.988	0.953	0.965	1	0.851	0.947
rs2310	1.5443E-08	-0.030947	0.00547	-0.031831	0.009154	2.7844E-08	0.04327	0.093615	4.66E-05	0.028259	0.013891	0.02509	0.01697	0.623542	0.47	0.905	1	0.967	0.975	0.907	0.964	0.804
rs9971479	1.5447E-08	-0.031608	0.00559	-0.03213	0.008765	2.46069E-08	0.54823	0.035228	0.002272	0.922911	0.012771	1.3E-05	0.28881	0.059757	0.56	0.906	0.99	0.188	0.969	1	0.808	0.898
rs141592068	1.5462E-08	0.0924593	0.01635	0.0924593	0.016346	2.78763E-08	0.38586	0.709829	0.004993	0.007596	0.088445	0.0007	0.20786	0.123513	0.879	0.772	0.994	0.992	0.947	0.999	0.912	0.92
rs4008953	1.5462E-08	-0.031511	0.00557	-0.038874	0.009341	2.14494E-08	0.1268	0.03135	0.001994	0.051806	1.74E-05	0.04553	0.13929	0.525084	0.924	0.949	0.992	0.957	0.998	0.88	0.932	0.866
rs1100103	1.5464E-08	-0.030811	0.00545	-0.030811	0.005447	2.78799E-08	0.67431	0.446626	0.034355	0.000526	0.026521	0.00051	0.59914	0.225107	0.832	0.861	0.924	0.998	0.97	0.999	0.819	0.896
rs4504431	1.5464E-08	-0.036066	0.00638	-0.036066	0.006376	2.78801E-08	0.55557	0.595442	0.000714	0.01496	0.030972	0.00407	0.52279	0.124027	0.861	0.857	0.999	0.987	0.971	0.994	0.851	0.924
rs12445971	1.5465E-08	-0.069113	0.01222	-0.069113	0.012219	2.78825E-08	0.52928	0.624043	2.53E-05	0.03742	0.501261	0.00128	0.72579	0.078902	0.805	0.791	1	0.953	0.764	0.997	0.594	0.905
rs9393732	1.5466E-08	0.028915	0.00511	0.028915	0.005112	2.7883E-08	0.46673	0.557401	0.00095	0.002226	0.368262	0.00975	0.03092	0.249073	0.872	0.862	0.999	0.997	0.871	0.984	0.964	0.902
rs10631977	1.547E-08	0.0290728	0.00514	0.0282686	0.007475	2.78899E-08	0.05928	0.090628	0.016372	0.021796	0.058461	9E-06	0.18118	0.754901	0.908	0.895	0.945	0.971	0.94	1	0.36	0.76
rs8180562	1.5471E-08	-0.052374	0.00926	-0.056682	0.01557	2.78921E-08	0.52167	0.986582	0.008546	0.017492	0.251111	0.00062	0.03039	0.000128	0.724	0.797	0.986	0.984	0.893	0.999	0.962	0.982
rs7769890	1.5476E-08	0.0313247	0.00554	0.0313247	0.005538	2.79005E-08	0.98561	0.136514	0.000135	0.057828	0.156012	0.00215	0.39781	0.246533	0.8	0.911	1	0.955	0.922	0.997	0.867	0.895
rs72087025	1.5485E-08	-0.052372	0.00926	-0.056681	0.01557	2.79171E-08	0.52164	0.986592	0.008557	0.017473	0.251124	0.00062	0.03039	0.000128	0.724	0.797	0.986	0.984	0.893	0.999	0.962	0.982
rs4713140	1.5487E-08	-0.052367	0.00926	-0.056792	0.015531	2.79205E-08	0.5215	0.92597	0.008745	0.017666	0.256523	0.00063	0.03008	0.000126	0.726	0.806	0.986	0.984	0.893	0.999	0.963	0.982
rs11110580	1.5495E-08	0.0340241	0.00602	0.03479	0.006623	2.75536E-08	0.97993	0.917805	0.044363	6.74E-05	0.045466	0.00293	0.02944	0.1501	0.785	0.779	0.894	1	0.96	0.992	0.961	0.909
rs2130749	1.5518E-08	-0.03606	0.00638	-0.03606	0.006376	2.79737E-08	0.5576	0.595035	0.000714	0.014987	0.031066	0.00405	0.52401	0.124206	0.861	0.857	0.999	0.987	0.971	0.994	0.851	0.924
rs8045107	1.5529E-08	-0.029313	0.00518	-0.029313	0.005183	2.79926E-08	0.54677	0.275185	0.000108	0.263157	0.321279	0.00018	0.27144	0.586255	0.811	0.854	1	0.743	0.834	1	0.859	0.802
rs13322572	1.5529E-08	-0.039077	0.00691	-0.039077	0.006909	2.79931E-08	0.69571	0.14258	0.013397	0.033399	0.017406	0.00048	0.04483	0.580052	0.855	0.922	0.982	0.977	0.98	0.999	0.961	0.866
rs13195186	1.5535E-08	-0.029431	0.0052	-0.029431	0.005204	2.8002E-08	0.05552	0.414578	0.001331	0.133459	0.750365	0.0007	0.01223	0.064921	0.934	0.871	0.998	0.898	0.756	0.999	0.974	0.935
rs11371617	1.5547E-08	-0.036001	0.00637	-0.03708	0.010193	2.49844E-08	0.38528	0.786871	0.009926	1.72E-05	0.862386	0.00334	0.00191	0.73648	0.823	0.69	0.965	1	0.536	0.985	0.98	0.759
rs12673102	1.555E-08	-0.035318	0.00624	-0.035318	0.006245	2.8029E-08	0.50903	0.27861	0.000495	0.416187	0.003711	0.00115	0.08645	0.412267	0.837	0.872	0.999	0.646	0.987	0.998	0.932	0.851
rs2298526	1.5558E-08	0.0296864	0.00525	0.031739	0.006645	2.80419E-08	0.03283	0.985076	0.048945	0.007486	0.001737	0.00101	0.41118	0.047164	0.946	0.806	0.893	0.992	0.992	0.998	0.871	0.945
rs9295695	1.5558E-08	0.0288892	0.00511	0.0288892	0.005108	2.80425E-08	0.54057	0.564757	0.001129	0.001876	0.365204	0.00889	0.03309	0.226585	0.863	0.86	0.999	0.997	0.872	0.986	0.963	0.905
rs1510134	1.559E-08	-0.035605	0.0063	-0.036691	0.010643	2.03344E-08	0.41283	0.892616	0.0067	9.37E-06	0.692496	0.00568	0.00165	0.708275	0.809	0.694	0.971	1	0.457	0.971	0.98	0.752
rs847752	1.5594E-08	-0.030804	0.00545	-0.030804	0.005447	2.81035E-08	0.67382	0.446782	0.03463	0.000528	0.026409	0.00051	0.59868	0.22542	0.832	0.861	0.923	0.998	0.97	0.999	0.819	0.895
rs847751	1.56E-08	-0.030815	0.00545	-0.030815	0.005449	2.81137E-08	0.67406	0.444488	0.034976	0.000526	0.027093	0.00051	0.59074	0.224306	0.832	0.861	0.922	0.998	0.97	0.999	0.821	0.896
rs12824765	1.561E-08	0.0392568	0.00694	0.0392568	0.006942	2.8131E-08	0.73948	0.628543	0.000372	0.001437	0.692715	0.00231	0.1153	0.424207	0.788	0.694	0.999	0.997	0.722	0.995	0.911	0.833
rs78579943	1.5625E-08	-0.055679	0.00985	-0.055679	0.009847	2.81581E-08	0.29615	0.011584	0.017613	0.003383	0.023706	0.00786	0.19698	0.07867	0.912	0.965	0.978	0.997	0.98	0.99	0.932	0.947
rs117449410	1.5626E-08	-0.070075	0.01239	-0.070075	0.012393	2.8159E-08	0.46083	0.956022	5.19E-06	0.104776	0.491887	0.00193	0.76655	0.093803	0.816	0.731	1	0.878	0.767	0.995	0.727	0.898
rs3960	1.5634E-08	0.0297211	0.00526	0.0297211	0.005256	2.80496E-08	0.72156	0.688864	0.013224	0.082457	0.39853	1.2E-06	0.05212	0.738467	0.7	0.788	0.961	0.907	0.805	1	0.934	0.775
rs73367467	1.5643E-08	-0.032309	0.00571	-0.034412	0.010093	2.81891E-08	0.02684	0.277442	0.002643	0.428575	0.384463	7.3E-05	0.00021	0.411102	0.92	0.834	0.991	0.535	0.776	1	0.99	0.562
rs7925102	1.5644E-08	0.0289532	0.00512	0.0323506	0.010204	1.54868E-08	0.68029	0.18926	0.001933	0.039125	1.3E-06	0.01397	0.02515	0.679531	0.806	0.596	0.989	0.954	0.999	0.954	0.956	0.802
rs12116808	1.5646E-08	-0.032474	0.00574	-0.037077	0.008062	2.67476E-08	0.07786	0.092457	0.000266	0.118262	0.009656	0.06788	0.00343	0.179381	0.933	0.928	0.999	0.887	0.984	0.779	0.985	0.913
rs7163336	1.565E-08	0.0288666	0.00511	0.0289663	0.005548	2.82005E-08	0.01014	0.470892	0.000145	0.166551	0.116702	0.0029	0.0371	0.565165	0.954	0.855	1	0.863	0.931	0.995	0.956	0.705
rs2298527	1.5669E-08	-0.029745	0.00526	-0.032793	0.007268	2.82327E-08	0.01879	0.859184	0.04526	0.007768	0.000945	0.00146	0.35214	0.070119	0.954	0.792	0.904	0.992	0.994	0.997	0.884	0.938
rs12890430	1.5674E-08	0.029221	0.00517	0.029221	0.005168	2.82421E-08	0.89388	0.123766	0.000235	0.010167	0.331132	0.02174	0.00527	0.25608	0.791	0.918	1	0.99	0.876	0.953	0.981	0.898
rs12891399	1.5674E-08	0.029221	0.00517	0.029221	0.005168	2.82421E-08	0.89388	0.123766	0.000235	0.010167	0.331132	0.02174	0.00527	0.25608	0.791	0.918	1	0.99	0.876	0.953	0.981	0.898
rs7106434	1.5676E-08	-0.029745	0.00526	-0.032792	0.007267	2.82443E-08	0.0188	0.859221	0.045251	0.007768	0.000946	0.00146	0.35211	0.070112	0.954	0.792	0.904	0.992	0.994	0.997	0.884	0.938
rs61924983	1.5698E-08	-0.032306	0.00571	-0.034422	0.010096	2.82834E-08	0.02684	0.276407	0.002646	0.428575	0.383254	7.3E-05	0.00021	0.41075	0.92	0.835	0.991	0.536	0.777	1	0.99	0.562
rs12585563	1.5725E-08	0.0287597	0.00509	0.0287597	0.005087	2.83285E-08	0.18846	0.425838	0.002806	0.003669	0.239585	0.00355	0.4853	0.021699	0.913	0.882	0.997	0.996	0.91	0.996	0.865	0.957
rs11072774	1.5729E-08	-0.035321	0.00625	-0.035321	0.006248	2.83358E-08	0.1004	0.066896	0.001681	0.100545	0.281342	0.00108	0.07833	0.210816	0.933	0.939	0.998	0.937	0.903	0.999	0.952	0.916
rs9506050	1.573E-08	-0.028687	0.00507	-0.028687	0.005074	2.83376E-08	0.37731	0.580243	0.000996	0.025802	0.796372	0.00028	0.17471	0.208564	0.862	0.834	0.998	0.975	0.724	0.999	0.907	0.891
rs10750021	1.5731E-08	0.0296895	0.00525	0.0317216	0.006632	2.83402E-08	0.03278	0.984017	0.048528	0.007927	0.001591	0.00101	0.40046	0.05142	0.947	0.807	0.895	0.992	0.992	0.998	0.873	0.944
rs4483629	1.5752E-08	-0.028721	0.00508	-0.035182	0.009479	2.2773E-08	0.06375	0.209012	0.02236	0.237048	0.000941	0.0007	0.00022	0.489134	0.924	0.887	0.928	0.78	0.993	0.991	0.992	0.668
rs2202989	1.5757E-08	-0.031126	0.00551	-0.031126	0.005506	2.8384E-08	0.50293	0.030506	0.00133	0.150339	0.026059	0.00043	0.40865	0.66872	0.859	0.942	0.998	0.887	0.971	0.999	0.865	0.836
rs9458647	1.5757E-08	-0.028769	0.00509	-0.028769	0.005089	2.83846E-08	0.17411	0.468407	0.001256	0.110355	0.204097	0.00147	0.0109	0.213541	0.916	0.879	0.999	0.928	0.92	0.998	0.977	0.913
rs11302043	1.5763E-08	0.0397048	0.00702	0.0397048	0.007024	2.83952E-08	0.66625	0.095358	0.000506	0.028368	0.026077	0.01894	0.00826	0.843947	0.855	0.93	0.999	0.979	0.975	0.966	0.98	0.831
rs10922418	1.5765E-08	0.030158	0.00533	0.0328171	0.010563	2.43761E-08	0.28655	0.022621	0.001478	0.000101	0.007222	0.05193	0.23976	0.01253	0.843	0.385	0.992	0.999	0.981	0.732	0.856	0.947

Table S3

rs4888594	1.5766E-08	0.0307126	0.00543	0.0312397	0.005969	2.83992E-08	0.03282	0.064249	0.029497	0.222141	0.044353	6.6E-05	0.2068	0.052102	0.948	0.937	0.94	0.84	0.967	1	0.917	0.945
rs6446272	1.5773E-08	-0.028811	0.0051	-0.028811	0.005097	2.8411E-08	0.64326	0.101448	0.021497	0.10488	0.018233	5.3E-06	0.3685	0.695938	0.815	0.905	0.943	0.898	0.971	1	0.849	0.707
rs9651448	1.5777E-08	0.0308799	0.00546	0.0333472	0.008258	2.84185E-08	0.64142	0.737813	0.024427	0.020187	0.000758	0.00083	0.00169	0.764944	0.827	0.744	0.944	0.98	0.993	0.998	0.985	0.734
rs11156777	1.5778E-08	-0.037898	0.0067	-0.041472	0.009424	2.84197E-08	0.0624	0.008344	0.079513	0.035984	0.004362	0.00012	0.2784	0.893998	0.931	0.958	0.784	0.965	0.988	1	0.887	0.795
rs9376528	1.5798E-08	0.031338	0.00554	0.031338	0.005544	2.84545E-08	0.91981	0.136375	0.000131	0.056114	0.140741	0.00242	0.37496	0.241791	0.788	0.911	1	0.956	0.927	0.996	0.871	0.896
rs7218751	1.58E-08	0.0416864	0.00737	0.0431839	0.009871	2.84584E-08	0.38791	0.687413	0.039544	0.001847	0.007444	0.00033	0.552	0.012736	0.66	0.81	0.892	0.996	0.982	0.999	0.807	0.952
rs1816360	1.5807E-08	0.0372968	0.0066	0.0371959	0.006713	2.84704E-08	0.11429	0.666203	0.002861	0.221976	0.751342	5.1E-06	0.22238	0.058505	0.882	0.67	0.992	0.749	0.668	1	0.862	0.908
rs72824741	1.5845E-08	0.0475231	0.00841	0.0503389	0.013831	1.43878E-08	0.04707	0.680403	0.06829	0.42657	0.000773	1.8E-06	0.16964	0.381332	0.879	0.523	0.494	0.361	0.992	1	0.813	0.735
rs11629421	1.5847E-08	-0.037894	0.0067	-0.041468	0.009424	2.85385E-08	0.0625	0.008341	0.079626	0.035996	0.004365	0.00012	0.27799	0.893999	0.931	0.958	0.783	0.965	0.988	1	0.887	0.795
rs13235698	1.5851E-08	-0.062604	0.01108	-0.062604	0.011076	2.85458E-08	0.87334	0.090784	0.001024	0.02689	0.082468	0.0144	0.03487	0.018496	0.845	0.937	0.999	0.982	0.958	0.979	0.968	0.963
rs114457874	1.5853E-08	-0.051357	0.00909	-0.051357	0.009086	2.85493E-08	0.16187	0.197799	0.005554	0.000793	0.309826	0.00401	0.28204	0.203972	0.919	0.913	0.994	0.998	0.893	0.995	0.904	0.915
rs12810479	1.5856E-08	0.039229	0.00694	0.039229	0.006941	2.85553E-08	0.74051	0.633454	0.00037	0.001443	0.691193	0.00235	0.11577	0.425877	0.788	0.695	0.999	0.997	0.723	0.995	0.911	0.833
rs4751240	1.5872E-08	0.0429288	0.0076	0.0429288	0.007596	2.85816E-08	0.45679	0.677658	0.012615	0.000858	0.138735	0.00129	0.16223	0.265091	0.874	0.849	0.983	0.998	0.934	0.998	0.925	0.9
rs61096451	1.5884E-08	0.0315326	0.00558	0.0321111	0.007065	2.86033E-08	0.67771	0.312082	0.000119	0.000838	0.153415	0.04159	0.00709	0.665076	0.787	0.606	1	0.998	0.894	0.828	0.972	0.784
rs7947502	1.5893E-08	-0.029739	0.00526	-0.032737	0.007247	2.86179E-08	0.02132	0.894771	0.048429	0.009128	0.000876	0.00121	0.36599	0.064489	0.952	0.795	0.895	0.991	0.994	0.998	0.88	0.939
rs1227990	1.5895E-08	0.0290792	0.00515	0.0301529	0.006354	2.74234E-08	0.02005	0.767894	0.1032	0.000427	0.035314	0.00021	0.18522	0.796215	0.937	0.698	0.65	0.999	0.957	0.999	0.885	0.76
rs78646692	1.5903E-08	-0.051812	0.00917	-0.051812	0.009168	2.8636E-08	0.47676	0.137382	0.001174	0.007665	0.153439	0.00677	0.07734	0.424418	0.88	0.924	0.999	0.993	0.935	0.991	0.952	0.886
rs10934419	1.5917E-08	0.0290307	0.00514	0.0290307	0.005137	2.86594E-08	0.17065	0.198579	0.001144	0.015237	0.666563	0.00166	0.18492	0.12485	0.911	0.906	0.999	0.987	0.792	0.998	0.919	0.923
rs138785764	1.5921E-08	0.0724856	0.01283	0.0741884	0.022082	2.86669E-08	0.0766	0.076876	0.000522	0.536867	0.045239	0.00019	0.08444	0.013068	0.891	0.438	0.999	0.45	0.943	0.999	0.911	0.938
rs9468195	1.5932E-08	-0.035357	0.00626	-0.035357	0.006257	2.86856E-08	0.47564	0.269907	0.003581	0.002929	0.12865	0.01775	0.06665	0.004874	0.887	0.91	0.996	0.997	0.945	0.972	0.958	0.973
rs10640	1.5934E-08	-0.028803	0.0051	-0.028803	0.005097	2.86889E-08	0.66337	0.102056	0.021379	0.1045	0.018538	5.2E-06	0.3714	0.693506	0.812	0.904	0.943	0.898	0.971	1	0.848	0.706
rs7207765	1.5939E-08	-0.029465	0.00521	-0.029465	0.005214	2.86969E-08	0.95697	0.695942	0.000682	0.288522	0.092365	0.00013	0.03225	0.156092	0.755	0.702	0.999	0.723	0.926	1	0.95	0.887
rs1931224	1.5963E-08	-0.028742	0.00509	-0.028742	0.005086	2.87375E-08	0.17066	0.425361	0.001207	0.116038	0.18868	0.00149	0.01236	0.237955	0.917	0.884	0.999	0.925	0.924	0.998	0.976	0.909
rs2217951	1.599E-08	-0.034974	0.00619	-0.040863	0.009873	2.87848E-08	0.14952	0.580184	0.010591	0.00238	0.020271	0.01451	0.09534	0.000561	0.923	0.766	0.984	0.997	0.979	0.974	0.947	0.982
rs550424408	1.5992E-08	-0.031131	0.00551	-0.031131	0.005509	2.87877E-08	0.49505	0.030087	0.000974	0.243262	0.028568	0.00033	0.36896	0.630749	0.851	0.939	0.998	0.803	0.968	0.999	0.864	0.83
rs10891490	1.5997E-08	-0.029727	0.00526	-0.032761	0.00726	2.87976E-08	0.01896	0.859278	0.045397	0.007851	0.000949	0.00146	0.35228	0.070171	0.954	0.792	0.904	0.992	0.994	0.997	0.884	0.938
rs34135167	1.6014E-08	-0.029352	0.00519	-0.029136	0.006994	2.26876E-08	0.96148	0.145063	0.012846	0.651689	0.188202	9.9E-07	0.10915	0.029812	0.682	0.862	0.922	0.369	0.852	1	0.894	0.922
rs10815839	1.6025E-08	-0.03091	0.00547	-0.031768	0.009065	2.88444E-08	0.04735	0.085652	4.32E-05	0.031375	0.014939	0.02477	0.01832	0.629183	0.478	0.908	1	0.964	0.974	0.91	0.963	0.804
rs10815840	1.6025E-08	-0.03091	0.00547	-0.031768	0.009065	2.88446E-08	0.04735	0.085652	4.32E-05	0.031375	0.014939	0.02477	0.01832	0.629185	0.478	0.908	1	0.964	0.974	0.91	0.963	0.804
rs12038642	1.6038E-08	0.0418344	0.0074	0.0418344	0.007404	2.88665E-08	0.05299	0.346547	2.09E-05	0.120768	0.041425	0.02169	0.73555	0.057066	0.934	0.88	1	0.906	0.964	0.947	0.799	0.937
rs6997	1.6049E-08	-0.028796	0.0051	-0.028796	0.005097	2.88853E-08	0.66337	0.102056	0.021437	0.1045	0.018563	5.2E-06	0.37152	0.693506	0.812	0.904	0.943	0.898	0.971	1	0.848	0.706
rs11917431	1.606E-08	-0.0289	0.00512	-0.0289	0.005115	2.8803E-08	0.99306	0.065367	0.033219	0.082358	0.017324	5.1E-06	0.3122	0.960606	0.768	0.917	0.907	0.916	0.972	1	0.863	0.752
rs586533	1.6062E-08	-0.02935	0.00519	-0.029133	0.006997	2.27225E-08	0.96149	0.145063	0.012846	0.6527	0.188202	9.9E-07	0.10915	0.029812	0.682	0.862	0.922	0.368	0.852	1	0.894	0.922
rs11716974	1.6068E-08	-0.028798	0.0051	-0.028798	0.005097	2.89179E-08	0.65089	0.099955	0.022226	0.106213	0.018466	5E-06	0.36992	0.701302	0.813	0.905	0.94	0.896	0.971	1	0.848	0.707
rs1856965	1.6072E-08	-0.028668	0.00507	-0.028668	0.005074	2.8925E-08	0.39801	0.580243	0.000996	0.025602	0.796372	0.00028	0.17471	0.208564	0.858	0.834	0.998	0.975	0.723	0.999	0.906	0.891
rs77562083	1.6076E-08	-0.069026	0.01222	-0.069026	0.012218	2.89329E-08	0.52482	0.633673	2.49E-05	0.038274	0.503119	0.00131	0.72357	0.077578	0.805	0.789	1	0.952	0.763	0.997	0.593	0.905
rs11715915	1.6079E-08	-0.028795	0.0051	-0.028795	0.005097	2.89369E-08	0.66371	0.102056	0.021413	0.104554	0.018554	5.2E-06	0.37155	0.693466	0.812	0.904	0.943	0.898	0.971	1	0.848	0.706
rs6779524	1.6079E-08	-0.028795	0.0051	-0.028795	0.005097	2.89369E-08	0.66371	0.102056	0.021413	0.104554	0.018554	5.2E-06	0.37155	0.693466	0.812	0.904	0.943	0.898	0.971	1	0.848	0.706
rs9814873	1.6079E-08	-0.028795	0.0051	-0.028795	0.005097	2.89369E-08	0.66371	0.102056	0.021413	0.104554	0.018554	5.2E-06	0.37155	0.693466	0.812	0.904	0.943	0.898	0.971	1	0.848	0.706
rs75535393	1.608E-08	0.0573353	0.01015	0.0603671	0.01373	2.89393E-08	0.1659	0.17545	0.01126	0.034789	0.003826	0.00084	0.07185	0.041743	0.628	0.906	0.983	0.972	0.989	0.999	0.946	0.943
rs72694269	1.6105E-08	-0.048421	0.00857	-0.048421	0.008571	2.89819E-08	0.45344	0.629505	0.005667	0.022066	0.049297	0.00517	0.04086	0.002302	0.891	0.873	0.994	0.986	0.969	0.994	0.966	0.976
rs35467921	1.6111E-08	-0.029618	0.00524	-0.02993	0.006813	2.89927E-08	0.87451	0.776238	0.011734	0.000362	0.00517	0.00116	0.1753	0.199275	0.768	0.783	0.971	0.999	0.983	0.997	0.892	0.55
rs9302725	1.6111E-08	-0.028468	0.00504	-0.028468	0.005039	2.89929E-08	0.70023	0.066982	0.003696	0.01173	0.583245	0.00057	0.54836	0.008972	0.834	0.928	0.995	0.989	0.803	0.999	0.836	0.961
rs2075522	1.6111E-08	-0.069021	0.01222	-0.069021	0.012218	2.89929E-08	0.52482	0.633675	2.49E-05	0.038361	0.503116	0.00131	0.72358	0.077576	0.805	0.789	1	0.952	0.763	0.997	0.593	0.905
rs75164345	1.6116E-08	-0.05179	0.00917	-0.05179	0.009168	2.90014E-08	0.47784	0.137853	0.001183	0.007664	0.153062	0.00679	0.07736	0.42595	0.88	0.924	0.999	0.993	0.935	0.991	0.952	0.886
rs6024397	1.6123E-08	-0.041807	0.0074	-0.041807	0.007401	2.90125E-08	0.14765	0.808267	0.00209	0.024605	0.011245	0.00683	0.00505	0.843784	0.918	0.835	0.997	0.981	0.982	0.99	0.981	0.781
rs722637	1.6137E-08	0.0291768	0.00516	0.0291768	0.005165	2.90377E-08	0.89485	0.131361	0.000236	0.01054	0.316254	0.02245	0.00578	0.226409	0.792	0.917	1	0.99	0.881	0.952	0.981	0.903
rs34768045	1.6161E-08	0.0316252	0.0056	0.0325402	0.007559	1.61835E-08	0.9055	0.591764	0.000219	7.46E-06	0.037452	0.1056	0.54059	0.709059	0.616	0.719	0.998	1	0.933	0.453	0.684	0.685
rs13215072	1.6163E-08	-0.035342	0.00626	-0.035342	0.006257	2.90817E-08	0.47692	0.269864	0.003577	0.002998	0.128473	0.01773	0.06667	0.004874	0.887	0.91	0.996	0.997	0.946	0.972	0.958	0.973
rs9506051	1.6163E-08	-0.028663	0.00507	-0.028663	0.005074	2.9082E-08	0.39891	0.580219	0.000996	0.02569	0.796517	0.00028	0.17485	0.208536	0.858	0.834	0.998	0.975	0.723	0.999	0.906	0.891
rs35200461	1.617E-08	-0.028792	0.0051	-0.028792	0.005097	2.90942E-08	0.66027	0.101908	0.020684	0.106507	0.019582	5.5E-06	0.37128	0.730245	0.814	0.905	0.947	0.897	0.97	1	0.85	0.715
rs12766869	1.6176E-08	0.029422	0.00521	0.029422	0.005209	2.91037E-08	0.02331	0.61908	0.004927	0.079872	0.066448	0.00025	0.2047	0.54751	0.951	0.858	0.994	0.946	0.958	1	0.918	0.865
rs113142991	1.6178E-08	0.070505	0.01248	0.070505	0.012482	2.91085E-08	0.08748	0.693392	0.01002	0.007331	0.5516	0.00022	0.24444	0.020139	0.921	0.754	0.984	0.992	0.81	1	0.897	0.95
rs2427653	1.6184E-08	-0.031554	0.00559	-0.032081	0.008799	2.50756E-08	0.55074	0.035415	0.002239	0.942218	0.012864	1.4E-05	0.28819	0.059729	0.559	0.906	0.99	0.179	0.969	1	0.807	0.897
rs215891	1.6191E-08	0.0527013	0.00933	0.0527013	0.00933	2.91292E-08	0.03557	0.337154	5E-05	0.151195	0.120555	0.00208	0.79639	0.188627	0.933	0.862	1	0.859	0.923	0.996	0.659	0.892

Table S3

rs78843055	1.6194E-08	-0.051782	0.00917	-0.051782	0.009168	2.9136E-08	0.47774	0.137837	0.001186	0.00765	0.15323	0.00681	0.07736	0.425938	0.88	0.924	0.999	0.993	0.935	0.991	0.952	0.886
rs9368561	1.6198E-08	-0.052405	0.00928	-0.056566	0.015696	2.9142E-08	0.48465	0.948823	0.008787	0.01498	0.279254	0.00064	0.02258	0.000172	0.713	0.785	0.986	0.986	0.883	0.999	0.966	0.98
rs12222165	1.62E-08	0.0291582	0.00516	0.0326824	0.010369	1.24651E-08	0.84518	0.175926	0.002552	0.003518	2.15E-06	0.03773	0.04394	0.573748	0.76	0.555	0.986	0.991	0.999	0.837	0.941	0.799
rs78217336	1.6202E-08	0.101741	0.01801	0.101741	0.018013	2.91482E-08	0.55961	0.622908	0.023618	0.048861	0.05817	3.3E-06	0.48838	0.854475	0.829	0.822	0.948	0.952	0.946	1	0.827	0.785
rs9871380	1.6214E-08	-0.028788	0.0051	-0.028788	0.005097	2.91701E-08	0.66422	0.102058	0.021444	0.104724	0.018565	5.2E-06	0.37171	0.693331	0.812	0.904	0.943	0.897	0.971	1	0.848	0.706
rs59327154	1.6223E-08	-0.039598	0.00701	-0.04017	0.008149	2.91849E-08	0.34441	0.040857	0.001034	0.284935	0.126865	0.00075	0.00241	0.839445	0.869	0.933	0.998	0.76	0.925	0.999	0.983	0.746
rs10210705	1.6239E-08	0.0391601	0.00693	0.0391601	0.006934	2.92135E-08	0.6319	0.247937	0.024927	0.000391	0.026651	0.00071	0.51524	0.882063	0.835	0.887	0.95	0.999	0.969	0.999	0.836	0.798
rs187945353	1.6242E-08	0.0617704	0.01094	0.057658	0.016382	2.14778E-08	0.02173	0.537742	0.000348	0.973252	0.662179	3.2E-06	0.10715	0.985182	0.893	0.694	0.998	0.126	0.532	1	0.853	0.569
rs72668841	1.6277E-08	-0.062547	0.01108	-0.062547	0.011075	2.9284E-08	0.05501	0.993038	0.001782	0.077786	0.27899	0.00014	0.12525	0.690763	0.929	0.793	0.997	0.938	0.882	1	0.926	0.826
rs4412625	1.6288E-08	0.0301004	0.00533	0.0329392	0.010652	2.28899E-08	0.25579	0.023141	0.001563	8.36E-05	0.006165	0.05799	0.25286	0.013514	0.846	0.374	0.989	0.999	0.982	0.69	0.846	0.945
rs12504770	1.6292E-08	0.0359784	0.00637	0.0316008	0.009444	2.93115E-08	0.35872	0.361274	7.89E-06	0.175819	0.918537	0.00024	0.01966	0.522362	0.74	0.467	1	0.674	0.418	0.999	0.928	0.485
rs1139226	1.6295E-08	-0.035333	0.00626	-0.035333	0.006257	2.93176E-08	0.47653	0.269968	0.003589	0.002999	0.128729	0.01776	0.06671	0.004877	0.887	0.91	0.996	0.997	0.945	0.972	0.958	0.973
rs75992606	1.6297E-08	-0.058773	0.01041	-0.058773	0.010407	2.93221E-08	0.06264	0.226546	0.001421	0.106037	0.20208	0.0003	0.04302	0.497157	0.928	0.891	0.998	0.913	0.904	0.999	0.954	0.692
rs138878154	1.6309E-08	0.0284975	0.00505	0.0293172	0.007201	2.93442E-08	0.61641	0.114011	5.01E-05	0.035959	0.995303	0.01207	0.01525	0.011022	0.704	0.903	1	0.963	0.636	0.965	0.966	0.953
rs9508174	1.6313E-08	-0.028655	0.00507	-0.028655	0.005074	2.93507E-08	0.39871	0.580219	0.000996	0.025958	0.796517	0.00028	0.17485	0.208536	0.858	0.834	0.998	0.975	0.723	0.999	0.906	0.891
rs4508299	1.6317E-08	-0.028655	0.00507	-0.028655	0.005074	2.93581E-08	0.40223	0.580243	0.000996	0.025867	0.796372	0.00028	0.17471	0.208564	0.857	0.834	0.998	0.975	0.723	0.999	0.906	0.89
rs6725600	1.6324E-08	0.0285724	0.00506	0.0285724	0.00506	2.9372E-08	0.89647	0.392955	0.008657	0.004593	0.080355	0.00151	0.03107	0.391788	0.828	0.885	0.989	0.995	0.954	0.998	0.966	0.885
rs62007851	1.6324E-08	0.0288243	0.0051	0.0288983	0.005487	2.93725E-08	0.01054	0.473162	0.000143	0.18897	0.107058	0.00264	0.04161	0.585017	0.952	0.852	1	0.842	0.934	0.995	0.954	0.705
rs35169793	1.6326E-08	-0.028785	0.0051	-0.028785	0.005097	2.93749E-08	0.66021	0.099955	0.022226	0.106824	0.018466	5E-06	0.36992	0.701302	0.812	0.905	0.94	0.895	0.971	1	0.848	0.707
rs4871	1.6329E-08	0.0288439	0.00511	0.0288439	0.005108	2.93819E-08	0.51757	0.534375	0.001136	0.001917	0.367471	0.00968	0.03144	0.228462	0.866	0.864	0.999	0.997	0.872	0.984	0.964	0.905
rs584310	1.6333E-08	-0.029335	0.00519	-0.029123	0.007008	2.28884E-08	0.97184	0.145063	0.012846	0.660913	0.188202	9.9E-07	0.10915	0.029812	0.683	0.861	0.922	0.363	0.851	1	0.894	0.921
rs594808	1.6337E-08	0.0371645	0.00658	0.0371645	0.006581	2.93959E-08	0.24364	0.613074	0.012351	0.041935	0.144121	0.00018	0.00964	0.60892	0.903	0.858	0.983	0.97	0.933	1	0.977	0.856
rs75975573	1.6359E-08	0.0704513	0.01248	0.0704513	0.012477	2.94376E-08	0.08526	0.691765	0.009887	0.007223	0.54864	0.00023	0.25061	0.019807	0.922	0.754	0.984	0.992	0.811	1	0.896	0.95
rs4788218	1.6361E-08	-0.029604	0.00524	-0.029918	0.006842	2.94405E-08	0.87471	0.778578	0.011939	0.000361	0.004992	0.00116	0.17714	0.198611	0.768	0.782	0.971	0.999	0.983	0.997	0.892	0.549
rs149553470	1.6361E-08	0.0972917	0.01723	0.101334	0.023266	2.94417E-08	0.0026	0.794231	0.034739	0.126787	0.371875	2.1E-05	0.14625	0.033934	0.972	0.825	0.927	0.901	0.861	1	0.923	0.945
rs3804580	1.637E-08	-0.028449	0.00504	-0.028449	0.005038	2.94568E-08	0.48555	0.493568	0.001537	0.240104	0.49076	8.4E-06	0.02246	0.540366	0.615	0.79	0.995	0.721	0.741	1	0.947	0.78
rs7337334	1.6379E-08	-0.028652	0.00507	-0.028652	0.005074	2.94748E-08	0.39635	0.580797	0.001002	0.025773	0.797039	0.00028	0.17501	0.208911	0.858	0.834	0.998	0.975	0.723	0.999	0.906	0.89
rs28437694	1.6383E-08	0.0309349	0.00548	0.033372	0.009581	2.94824E-08	0.17896	0.097468	0.000877	0.139821	0.45795	0.00133	0.00021	0.048513	0.589	0.907	0.998	0.868	0.807	0.997	0.991	0.93
rs4323529	1.6388E-08	-0.039085	0.00692	-0.047199	0.011178	2.94914E-08	0.09063	0.455053	0.000428	0.044657	0.017588	0.07382	0.11516	0.000269	0.931	0.873	0.999	0.961	0.98	0.787	0.938	0.986
rs4526415	1.6391E-08	-0.039085	0.00692	-0.047201	0.011178	2.94964E-08	0.09069	0.455044	0.00043	0.044764	0.017593	0.07364	0.11493	0.000269	0.931	0.873	0.999	0.961	0.98	0.788	0.938	0.986
rs7592427	1.6394E-08	-0.032993	0.00584	-0.032993	0.005843	2.95031E-08	0.7524	0.226188	0.001	0.029077	0.015148	0.00272	0.64324	0.144271	0.838	0.902	0.999	0.978	0.979	0.996	0.827	0.919
rs9365750	1.64E-08	0.0316307	0.0056	0.0316307	0.005602	2.95129E-08	0.04999	0.610501	0.004326	0.000913	0.642069	0.0017	0.03875	0.728221	0.928	0.831	0.993	0.998	0.768	0.997	0.953	0.729
rs17151108	1.6421E-08	0.0327923	0.00581	0.0327923	0.005808	2.95536E-08	0.16977	0.594769	0.002832	0.004984	0.0375	0.0025	0.19387	0.399772	0.91	0.751	0.996	0.994	0.967	0.997	0.915	0.877
rs146131456	1.6426E-08	0.0316844	0.00561	0.0316844	0.005612	2.95618E-08	0.044	0.627533	0.004107	0.000988	0.622794	0.00179	0.03466	0.667127	0.93	0.829	0.993	0.998	0.773	0.997	0.955	0.717
rs78759155	1.6432E-08	-0.031116	0.00551	-0.031116	0.005511	2.95737E-08	0.48545	0.023869	0.001293	0.208746	0.031009	0.00032	0.40035	0.59269	0.857	0.944	0.998	0.837	0.968	0.999	0.862	0.841
rs12632223	1.6452E-08	-0.029086	0.00515	-0.028844	0.005553	2.76001E-08	0.60437	0.22263	0.012757	0.338069	0.118148	1.4E-06	0.03487	0.639157	0.65	0.851	0.946	0.641	0.9	1	0.941	0.772
rs11947590	1.6458E-08	-0.035573	0.0063	-0.036476	0.010842	2.06005E-08	0.41393	0.854183	0.006119	9.07E-06	0.667574	0.00603	0.00147	0.762831	0.804	0.681	0.971	1	0.441	0.968	0.981	0.736
rs36186043	1.6466E-08	-0.031114	0.00551	-0.031114	0.005511	2.96371E-08	0.48545	0.023859	0.001295	0.208754	0.031011	0.00032	0.40027	0.592626	0.857	0.944	0.998	0.837	0.968	0.999	0.862	0.841
rs6446277	1.6479E-08	-0.028773	0.0051	-0.028773	0.005097	2.96616E-08	0.65893	0.101448	0.021497	0.107362	0.018233	5.3E-06	0.3685	0.695938	0.812	0.904	0.943	0.895	0.971	1	0.849	0.707
rs7646366	1.6479E-08	-0.028773	0.0051	-0.028773	0.005097	2.96616E-08	0.65893	0.101448	0.021497	0.107362	0.018233	5.3E-06	0.3685	0.695938	0.812	0.904	0.943	0.895	0.971	1	0.849	0.707
rs680022	1.6483E-08	-0.029327	0.00519	-0.02907	0.006989	2.29229E-08	0.96631	0.148133	0.012759	0.660715	0.190636	9.3E-07	0.1132	0.031214	0.68	0.86	0.922	0.362	0.849	1	0.891	0.92
rs7265061	1.6485E-08	-0.041953	0.00743	-0.041953	0.007431	2.96722E-08	0.17369	0.703972	0.00308	0.025906	0.005689	0.0057	0.0075	0.858631	0.914	0.848	0.996	0.981	0.987	0.992	0.979	0.786
rs148160203	1.6492E-08	0.0972694	0.01723	0.101317	0.023271	2.96846E-08	0.0026	0.796939	0.035108	0.125682	0.371649	2.1E-05	0.14675	0.033986	0.972	0.824	0.926	0.902	0.861	1	0.923	0.945
rs61818898	1.6495E-08	-0.089383	0.01583	-0.089383	0.015833	2.96901E-08	0.57769	0.259604	0.000281	0.264927	0.401262	0.00015	0.05503	0.138658	0.671	0.857	0.999	0.73	0.802	1	0.935	0.888
rs13079643	1.6496E-08	-0.028782	0.0051	-0.028782	0.005098	2.9693E-08	0.63322	0.098147	0.020365	0.106552	0.019213	5.7E-06	0.38467	0.698552	0.817	0.906	0.947	0.897	0.97	1	0.846	0.709
rs17450892	1.6504E-08	-0.028897	0.00512	-0.028897	0.005119	2.97085E-08	0.93952	0.180926	0.072108	0.005616	0.152809	6.6E-05	0.03524	0.192887	0.774	0.898	0.809	0.993	0.917	1	0.958	0.899
rs3008892	1.6511E-08	0.0301461	0.00534	0.0301461	0.00534	2.97202E-08	0.68833	0.568573	0.004205	0.171266	0.070313	1.6E-05	0.28899	0.132339	0.723	0.827	0.992	0.845	0.942	1	0.871	0.902
rs56169455	1.6579E-08	-0.029428	0.00521	-0.029428	0.005214	2.98475E-08	0.97446	0.635494	0.000633	0.292713	0.080046	0.00014	0.03456	0.143176	0.741	0.687	0.999	0.714	0.931	1	0.948	0.889
rs6973981	1.6584E-08	0.0398492	0.00706	0.0399212	0.007494	2.98569E-08	0.51521	0.722763	0.000101	0.215941	0.001158	0.00397	0.08417	0.668671	0.826	0.797	1	0.793	0.99	0.99	0.927	0.69
rs940343	1.66E-08	0.042076	0.00745	0.042076	0.007455	2.98863E-08	0.46064	0.236671	0.000882	0.023597	0.010105	0.01732	0.00702	0.900881	0.876	0.904	0.999	0.982	0.984	0.969	0.981	0.794
rs4906363	1.6627E-08	0.0291102	0.00516	0.0291102	0.005158	2.99368E-08	0.81099	0.133214	0.000218	0.00794	0.376462	0.02305	0.00537	0.259857	0.773	0.913	1	0.992	0.859	0.947	0.98	0.894
rs4659823	1.6635E-08	0.0298036	0.00528	0.0298036	0.005281	2.99524E-08	0.69933	0.441432	0.009577	0.022694	0.200414	0.00026	0.05727	0.117045	0.851	0.879	0.988	0.983	0.919	1	0.955	0.928
rs7639370	1.6662E-08	-0.034458	0.00611	-0.034458	0.006106	2.95308E-08	0.8152	0.073855	0.084466	0.001638	0.040736	3.4E-05	0.37411	0.839606	0.702	0.903	0.708	0.996	0.951	1	0.822	0.749
rs6670631	1.6664E-08	0.0300794	0.00533	0.0328603	0.010648	2.32119E-08	0.27292	0.023138	0.001561	8.2E-05	0.006167	0.05815	0.25289	0.013514	0.841	0.373	0.989	0.999	0.982	0.689	0.846	0.945
rs72803753	1.6664E-08	0.0349314	0.00619	0.0349314	0.00619	3.00067E-08	0.21438	0.039309	0.003695	0.043994	0.032191	0.001	0.33828	0.651858	0.912	0.946	0.996	0.971	0.973	0.999	0.896	0.858

Table S3

rs56324456	1.667E-08	-0.029423	0.00521	-0.029423	0.005214	3.00171E-08	0.97535	0.636059	0.000637	0.292978	0.080429	0.00014	0.03423	0.143988	0.741	0.687	0.999	0.714	0.931	1	0.948	0.888
rs150892361	1.6676E-08	0.0972371	0.01723	0.101288	0.02328	3.00287E-08	0.0026	0.800697	0.035715	0.123284	0.373235	2.1E-05	0.14813	0.034	0.972	0.824	0.925	0.903	0.86	1	0.922	0.945
rs191820258	1.6679E-08	0.0617225	0.01094	0.0575851	0.016461	2.17671E-08	0.02137	0.537742	0.000348	0.984161	0.662179	3.2E-06	0.10715	0.985182	0.894	0.693	0.998	0.122	0.532	1	0.853	0.568
rs74590737	1.6679E-08	0.0617225	0.01094	0.0575851	0.016461	2.17671E-08	0.02137	0.537742	0.000348	0.984161	0.662179	3.2E-06	0.10715	0.985182	0.894	0.693	0.998	0.122	0.532	1	0.853	0.568
rs7199261	1.6684E-08	0.0286005	0.00507	0.0286005	0.005068	3.00443E-08	0.49001	0.837786	0.003259	0.012301	0.281355	2.4E-05	0.59855	0.984063	0.817	0.721	0.993	0.983	0.847	1	0.776	0.732
rs6499557	1.6685E-08	0.0286004	0.00507	0.0286004	0.005068	3.00461E-08	0.49001	0.837786	0.003259	0.012301	0.281355	2.4E-05	0.59855	0.984064	0.817	0.721	0.993	0.983	0.847	1	0.776	0.732
rs62399101	1.669E-08	-0.043182	0.00765	-0.049124	0.011706	3.00555E-08	0.45531	0.022172	0.022938	0.037219	0.001754	0.00152	0.12537	0.015707	0.737	0.954	0.962	0.974	0.992	0.998	0.938	0.961
rs78348930	1.6698E-08	-0.029559	0.00524	-0.029559	0.005238	3.00689E-08	0.05397	0.479785	0.00086	0.11479	0.597409	0.00227	0.01001	0.037938	0.939	0.871	0.999	0.92	0.811	0.997	0.977	0.948
rs144965203	1.6714E-08	-0.073482	0.01302	-0.073482	0.013022	3.01003E-08	0.34731	0.393043	0.000498	0.082915	0.675608	3.3E-05	0.43561	0.995419	0.834	0.826	0.999	0.902	0.707	1	0.807	0.725
rs157615	1.6715E-08	-0.028482	0.00505	-0.028482	0.005047	3.01004E-08	0.63553	0.187694	0.000165	0.016482	0.101383	0.01021	0.29168	0.325585	0.855	0.91	1	0.986	0.946	0.984	0.898	0.892
rs6867416	1.6727E-08	-0.251303	0.04453	-0.253489	0.048905	3.01237E-08	0.98913	0.841029	0.001067	0.32189	0.04551	0.00069	0.00748	0.024765	0.781	0.805	0.998	0.729	0.954	0.999	0.977	0.937
rs9837341	1.6738E-08	-0.028852	0.00511	-0.028852	0.005113	3.00755E-08	0.98874	0.067274	0.032524	0.085039	0.016586	5.5E-06	0.32424	0.996476	0.77	0.916	0.91	0.914	0.973	1	0.861	0.759
rs3858205	1.6744E-08	0.0288005	0.0051	0.0288005	0.005104	3.01552E-08	0.18752	0.743172	0.043806	0.001943	0.084894	0.00025	0.84542	0.009177	0.899	0.822	0.895	0.997	0.944	1	0.764	0.961
rs905679	1.6754E-08	0.0702015	0.01244	0.0702015	0.012441	3.01734E-08	0.04483	0.717568	0.009783	0.010816	0.486036	0.00027	0.22897	0.019241	0.937	0.766	0.985	0.989	0.834	1	0.904	0.953
rs2864143	1.6757E-08	-0.060703	0.01076	-0.061681	0.011939	3.01788E-08	0.04187	0.474234	0.002209	0.121787	0.004821	0.00185	0.14082	0.069645	0.942	0.729	0.997	0.911	0.987	0.998	0.93	0.937
rs12218614	1.6758E-08	0.0308757	0.00547	0.033209	0.008054	3.01814E-08	0.58664	0.797565	0.026956	0.01883	0.00111	0.00076	0.00172	0.732305	0.835	0.754	0.938	0.981	0.992	0.998	0.985	0.73
rs4281426	1.6761E-08	0.0308244	0.00546	0.0335421	0.008253	3.0187E-08	0.52413	0.755487	0.030737	0.024215	0.000398	0.00075	0.00283	0.839955	0.844	0.748	0.928	0.976	0.995	0.998	0.983	0.748
rs72803749	1.6763E-08	0.034926	0.00619	0.034926	0.00619	3.01908E-08	0.21425	0.039422	0.003704	0.044103	0.032043	0.001	0.33968	0.653124	0.912	0.946	0.996	0.971	0.973	0.999	0.895	0.858
rs3742366	1.6807E-08	0.0289667	0.00513	0.0290016	0.005171	3.0273E-08	0.9571	0.079443	0.000382	0.002484	0.591356	0.02652	0.0047	0.364166	0.795	0.922	0.999	0.996	0.789	0.929	0.98	0.872
rs37634	1.6812E-08	0.0306616	0.00543	0.0306616	0.005435	3.0282E-08	0.69849	0.78909	0.004913	0.011676	0.912657	1.6E-05	0.09927	0.382127	0.771	0.692	0.987	0.982	0.559	1	0.907	0.822
rs114924505	1.6814E-08	-0.058775	0.01042	-0.058775	0.010418	3.02856E-08	0.04484	0.209009	0.00131	0.101846	0.243332	0.00031	0.05087	0.475709	0.933	0.894	0.998	0.916	0.89	0.999	0.95	0.686
rs4729596	1.6822E-08	-0.035233	0.00624	-0.035233	0.006245	3.03009E-08	0.50961	0.280497	0.000502	0.424616	0.003742	0.00117	0.08642	0.415653	0.836	0.871	0.999	0.639	0.987	0.998	0.931	0.849
rs2604541	1.6827E-08	-0.028883	0.00512	-0.028883	0.005119	3.03106E-08	0.93878	0.17974	0.072148	0.005704	0.153159	6.6E-05	0.03559	0.193171	0.774	0.898	0.809	0.993	0.917	1	0.958	0.899
rs1397638	1.6828E-08	-0.029269	0.00519	-0.030814	0.008221	3.03119E-08	0.00225	0.375483	0.005812	0.002945	0.580149	0.00159	0.00768	0.837001	0.964	0.668	0.99	0.995	0.78	0.997	0.975	0.791
rs12355087	1.6849E-08	-0.055289	0.0098	-0.058568	0.014153	3.0352E-08	0.37032	0.000699	0.017255	0.018976	0.229493	0.00027	0.04714	0.638648	0.881	0.973	0.971	0.984	0.905	1	0.957	0.744
rs76164696	1.6853E-08	-0.051714	0.00917	-0.051714	0.009167	3.03585E-08	0.47862	0.139476	0.001212	0.007761	0.151349	0.00686	0.07711	0.428692	0.88	0.924	0.999	0.993	0.936	0.991	0.952	0.886
rs11305825	1.6854E-08	0.0377514	0.00669	0.0377514	0.006692	3.03598E-08	0.61645	0.352876	0.023656	0.147095	0.01987	1.8E-05	0.09199	0.398317	0.843	0.876	0.95	0.883	0.974	1	0.938	0.87
rs34222696	1.6867E-08	-0.036026	0.00639	-0.036948	0.007508	3.03842E-08	0.95282	0.31045	0.003638	0.087453	0.368095	0.001	0.00077	0.031988	0.815	0.891	0.995	0.938	0.87	0.999	0.989	0.95
rs112169999	1.6868E-08	-0.067167	0.01191	-0.067167	0.011906	3.03874E-08	0.28517	0.564757	1.35E-05	0.015814	0.526047	0.00522	0.82574	0.189041	0.856	0.811	1	0.98	0.769	0.987	0.639	0.878
rs2380760	1.6871E-08	-0.031358	0.00556	-0.040574	0.010148	1.46608E-08	0.1137	0.017823	0.002465	0.048841	6.98E-06	0.05623	0.15485	0.559231	0.92	0.954	0.981	0.946	0.999	0.83	0.918	0.849
rs2380759	1.6872E-08	-0.031357	0.00556	-0.040574	0.010148	1.46614E-08	0.1137	0.017823	0.002465	0.04884	6.98E-06	0.05623	0.15485	0.559231	0.92	0.954	0.981	0.946	0.999	0.83	0.918	0.849
rs75845894	1.6874E-08	0.0391506	0.00694	0.0391506	0.00694	3.03971E-08	0.64386	0.242669	0.025931	0.000348	0.028003	0.00074	0.51088	0.882782	0.833	0.887	0.947	0.999	0.968	0.999	0.836	0.798
rs150584	1.6874E-08	0.0526393	0.00933	0.0526393	0.009331	3.03981E-08	0.03585	0.337522	5.08E-05	0.153236	0.119988	0.0021	0.79653	0.18873	0.932	0.862	1	0.857	0.923	0.996	0.659	0.891
rs55787825	1.6877E-08	-0.062512	0.01108	-0.062512	0.011081	3.04044E-08	0.87667	0.092608	0.001015	0.026737	0.084269	0.0149	0.03508	0.0188	0.845	0.936	0.999	0.982	0.957	0.978	0.968	0.962
rs2380345	1.6887E-08	-0.028741	0.00509	-0.028855	0.007866	2.63659E-08	0.48855	0.12507	3.42E-06	0.017702	0.095755	0.04662	0.79029	0.009888	0.609	0.875	1	0.968	0.909	0.758	0.571	0.946
rs1502443	1.6899E-08	-0.030113	0.00534	-0.032556	0.006996	3.04447E-08	0.0464	0.0567	0.010471	0.154528	0.062351	0.0009	0.25446	0.002586	0.949	0.946	0.988	0.908	0.965	0.999	0.918	0.978
rs12641086	1.6902E-08	-0.035828	0.00635	-0.035828	0.006351	3.0451E-08	0.49378	0.579399	1.83E-05	0.079904	0.029318	0.01583	0.15639	0.135939	0.852	0.727	1	0.932	0.968	0.962	0.916	0.911
rs35348936	1.6904E-08	0.0285889	0.00507	0.0285889	0.005068	3.04542E-08	0.49184	0.837786	0.003259	0.012461	0.281359	2.4E-05	0.59856	0.984389	0.816	0.721	0.993	0.983	0.847	1	0.776	0.732
rs28786777	1.6914E-08	-0.039051	0.00692	-0.047189	0.011188	3.04726E-08	0.08911	0.455456	0.000431	0.045933	0.017655	0.07399	0.11446	0.000271	0.932	0.873	0.999	0.96	0.979	0.788	0.938	0.986
rs4498080	1.6937E-08	0.0296486	0.00526	0.0296486	0.005256	3.03674E-08	0.70913	0.682844	0.013339	0.085397	0.402678	1.3E-06	0.05124	0.732697	0.697	0.788	0.961	0.904	0.803	1	0.934	0.775
rs220335	1.6939E-08	0.0306827	0.00544	0.0306827	0.00544	3.05189E-08	0.51044	0.036253	0.000934	0.009574	0.30343	0.0006	0.61958	0.698664	0.838	0.929	0.998	0.988	0.862	0.999	0.799	0.717
rs10786397	1.6963E-08	0.0308333	0.00547	0.033608	0.008589	3.05635E-08	0.59855	0.7996	0.028044	0.019715	0.00056	0.00086	0.00158	0.644486	0.83	0.749	0.932	0.979	0.994	0.998	0.986	0.708
rs35115732	1.6963E-08	-0.028748	0.0051	-0.028748	0.005097	3.05648E-08	0.6588	0.101557	0.020915	0.107347	0.01938	5.5E-06	0.37362	0.697124	0.813	0.904	0.945	0.896	0.97	1	0.848	0.707
rs62247856	1.6964E-08	0.035251	0.00625	0.035251	0.00625	3.05663E-08	0.78421	0.083663	0.000265	0.582852	0.020941	7E-05	0.58335	0.480741	0.634	0.874	0.999	0.401	0.956	1	0.714	0.768
rs1812167	1.6966E-08	0.030279	0.00537	0.0338622	0.007584	3.0569E-08	0.0278	0.035507	0.015425	0.162194	0.056005	0.00071	0.25774	0.003463	0.956	0.952	0.98	0.902	0.967	0.999	0.917	0.976
rs1871400	1.6971E-08	0.0297743	0.00528	0.0297743	0.005279	3.05788E-08	0.40294	0.8603	0.000343	0.5349	0.164657	9.1E-05	0.02095	0.572792	0.809	0.732	0.999	0.476	0.875	1	0.951	0.776
rs117737549	1.6984E-08	-0.068904	0.01222	-0.068904	0.012217	3.06034E-08	0.52809	0.629101	2.48E-05	0.037731	0.500901	0.00143	0.72749	0.076619	0.805	0.791	1	0.953	0.765	0.997	0.596	0.906
rs2347419	1.7001E-08	-0.030855	0.00547	-0.033126	0.009739	3.06346E-08	0.16172	0.09778	0.000891	0.178674	0.480186	0.0009	0.00022	0.047135	0.566	0.902	0.998	0.823	0.789	0.998	0.991	0.927
rs367888499	1.7002E-08	0.0843581	0.01496	0.0843581	0.014957	3.05166E-08	0.06904	0.058088	2.11E-05	0.058225	0.098375	0.05315	0.12799	0.545993	0.933	0.934	1	0.952	0.944	0.862	0.931	0.857
rs9380064	1.701E-08	-0.052224	0.00926	-0.056533	0.015679	3.06517E-08	0.47514	0.988757	0.008716	0.017253	0.239538	0.00066	0.03099	0.00013	0.714	0.796	0.986	0.984	0.896	0.999	0.962	0.981
rs215889	1.7017E-08	0.0526236	0.00933	0.0526236	0.009331	3.06644E-08	0.03604	0.337242	5.02E-05	0.155432	0.120642	0.00209	0.79598	0.188706	0.932	0.861	1	0.855	0.922	0.996	0.658	0.891
rs1925059	1.702E-08	-0.044241	0.00784	-0.044241	0.007844	3.06713E-08	0.45288	0.79662	5.4E-06	0.109697	0.234612	0.00143	0.29619	0.424949	0.624	0.691	1	0.869	0.849	0.996	0.835	0.809
rs13435685	1.7048E-08	-0.035845	0.00636	-0.036904	0.010224	2.71152E-08	0.38368	0.782617	0.01002	1.75E-05	0.84213	0.00337	0.00195	0.741757	0.822	0.688	0.964	1	0.529	0.985	0.979	0.757
rs147871305	1.7054E-08	0.0971746	0.01723	0.10124	0.023291	3.07334E-08	0.00259	0.802278	0.036192	0.121732	0.375542	2.1E-05	0.14862	0.034092	0.972	0.824	0.924	0.904	0.859	1	0.922	0.945
rs74887156	1.7076E-08	0.0315928	0.0056	0.0315928	0.005602	3.07743E-08	0.04913	0.616115	0.004454	0.00087	0.643846	0.00174	0.0396	0.721312	0.928	0.83	0.993	0.998	0.768	0.997	0.953	0.727

Table S3

rs79027483	1.7081E-08	-0.06889	0.01222	-0.06889	0.012216	3.07841E-08	0.52811	0.630978	2.49E-05	0.03783	0.499894	0.00144	0.72751	0.076637	0.805	0.791	1	0.953	0.766	0.997	0.596	0.906
rs141353770	1.7087E-08	-0.078076	0.01385	-0.078076	0.013845	3.0796E-08	0.24145	0.073631	2.51E-05	0.184876	0.161977	0.00595	0.03738	0.579874	0.883	0.919	1	0.836	0.911	0.987	0.954	0.697
rs10799350	1.7091E-08	-0.031298	0.00555	-0.033334	0.009274	2.83145E-08	0.00104	0.416705	0.063911	0.091138	0.013046	6E-06	0.74373	0.428972	0.967	0.815	0.737	0.859	0.972	1	0.573	0.812
rs6803222	1.7096E-08	-0.028833	0.00511	-0.028833	0.005113	3.07378E-08	0.99319	0.067274	0.032517	0.086352	0.016586	5.5E-06	0.32424	0.996475	0.769	0.916	0.91	0.913	0.973	1	0.86	0.759
rs140731282	1.7115E-08	0.0971645	0.01723	0.101234	0.023294	3.08593E-08	0.00259	0.802173	0.036244	0.121688	0.375877	2.1E-05	0.14857	0.034082	0.972	0.824	0.924	0.904	0.859	1	0.922	0.945
rs9468300	1.7165E-08	-0.052226	0.00926	-0.056552	0.015438	3.0974E-08	0.56667	0.983788	0.008607	0.020903	0.248065	0.00062	0.03048	0.000128	0.735	0.8	0.987	0.982	0.895	0.999	0.962	0.982
rs9841110	1.7178E-08	-0.028742	0.0051	-0.028742	0.005098	3.10061E-08	0.65486	0.101592	0.02152	0.105192	0.020445	5.4E-06	0.37913	0.722918	0.814	0.905	0.944	0.898	0.969	1	0.847	0.713
rs905680	1.718E-08	0.0701539	0.01244	0.0701539	0.012443	3.10105E-08	0.04482	0.718689	0.009693	0.010802	0.491004	0.00027	0.23053	0.019067	0.937	0.766	0.985	0.989	0.832	1	0.904	0.953
rs9824092	1.7197E-08	-0.028827	0.00511	-0.028827	0.005113	3.09678E-08	0.96008	0.06731	0.032799	0.086247	0.016908	5.6E-06	0.32504	0.996148	0.774	0.916	0.91	0.913	0.972	1	0.861	0.76
rs11710037	1.7199E-08	-0.028827	0.00511	-0.028827	0.005113	3.09723E-08	0.96008	0.067311	0.032801	0.086247	0.016909	5.6E-06	0.32504	0.996146	0.774	0.916	0.91	0.913	0.972	1	0.861	0.76
rs9862080	1.7205E-08	-0.028827	0.00511	-0.028827	0.005113	3.09974E-08	0.96008	0.067262	0.032621	0.086247	0.016874	5.7E-06	0.32429	0.996142	0.775	0.916	0.911	0.914	0.972	1	0.861	0.76
rs2095365	1.7208E-08	0.03082	0.00547	0.0335907	0.008589	3.10738E-08	0.6006	0.799597	0.028042	0.01997	0.00056	0.00086	0.00158	0.644476	0.83	0.749	0.932	0.979	0.994	0.998	0.985	0.708
rs10786390	1.7213E-08	0.0307956	0.00546	0.0335029	0.008254	3.10874E-08	0.52964	0.754188	0.030563	0.024093	0.000389	0.00076	0.00291	0.834323	0.843	0.748	0.928	0.976	0.995	0.998	0.983	0.747
rs6589354	1.7215E-08	0.0296025	0.00525	0.0315889	0.006702	3.10911E-08	0.03736	0.966896	0.043393	0.008157	0.001454	0.00098	0.54464	0.047658	0.943	0.802	0.907	0.992	0.992	0.998	0.842	0.944
rs13249798	1.7232E-08	-0.047236	0.00838	-0.047236	0.008379	3.11292E-08	0.09732	0.82053	0.014246	0.113643	0.007022	2.9E-05	0.22422	0.82075	0.914	0.806	0.97	0.901	0.982	1	0.895	0.747
rs73070928	1.7237E-08	0.0487386	0.00865	0.0487386	0.008645	3.11428E-08	0.39439	0.07603	0.000357	0.01584	0.053825	0.0415	0.02498	0.322274	0.89	0.936	0.999	0.988	0.965	0.911	0.97	0.899
rs12463568	1.7257E-08	0.040007	0.0071	0.040007	0.007097	3.11893E-08	0.26974	0.172274	0.001182	0.083074	0.345497	0.00042	0.08256	0.569564	0.894	0.909	0.998	0.941	0.874	0.999	0.944	0.855
rs4678803	1.7261E-08	0.0331303	0.00588	0.0339106	0.007175	3.11985E-08	0.4988	0.797083	0.01889	0.001283	0.011205	0.00107	0.01468	0.381526	0.839	0.742	0.957	0.997	0.978	0.998	0.967	0.643
rs9393908	1.7268E-08	-0.052665	0.00934	-0.05627	0.014068	3.12126E-08	0.98101	0.997643	0.005883	0.017727	0.37698	0.0011	0.02404	0.000277	0.801	0.803	0.992	0.985	0.864	0.998	0.967	0.979
rs3861678	1.727E-08	-0.029128	0.00517	-0.029128	0.005167	3.1219E-08	0.84019	0.111834	0.000256	0.009727	0.297676	0.02441	0.00481	0.270509	0.783	0.92	1	0.99	0.884	0.946	0.981	0.895
rs142938328	1.7292E-08	-0.028451	0.00505	-0.028451	0.005047	3.12695E-08	0.63507	0.16859	0.000177	0.015717	0.095852	0.01107	0.29648	0.318223	0.855	0.913	1	0.987	0.948	0.983	0.898	0.893
rs7231742	1.7296E-08	0.0352009	0.00624	0.0349673	0.00645	3.12777E-08	0.07954	0.453367	0.002357	0.186834	0.661892	3.4E-06	0.39587	0.171744	0.886	0.614	0.993	0.773	0.685	1	0.799	0.861
rs67216675	1.7309E-08	-0.028735	0.0051	-0.028735	0.005098	3.13084E-08	0.6568	0.101592	0.02152	0.105678	0.020445	5.4E-06	0.37913	0.722918	0.813	0.905	0.944	0.898	0.969	1	0.847	0.713
rs10124577	1.7312E-08	-0.039029	0.00692	-0.047207	0.011206	3.13169E-08	0.08876	0.458958	0.000436	0.046486	0.017541	0.07438	0.11365	0.000269	0.932	0.873	0.999	0.96	0.98	0.787	0.938	0.986
rs11629621	1.7323E-08	0.028753	0.0051	0.0288853	0.005611	3.13404E-08	0.00833	0.463324	0.000191	0.188137	0.112451	0.00252	0.03753	0.613287	0.956	0.855	1	0.846	0.933	0.996	0.956	0.714
rs763692240	1.7332E-08	0.0372973	0.00662	0.0372973	0.006617	3.13631E-08	0.52415	0.413343	0.005443	0.111298	0.002894	0.00135	0.12394	0.058051	0.875	0.887	0.994	0.928	0.991	0.998	0.939	0.945
rs4353126	1.7339E-08	0.0300445	0.00533	0.0327671	0.010626	2.44234E-08	0.28275	0.022974	0.001587	8.61E-05	0.006209	0.05687	0.25473	0.01361	0.84	0.376	0.99	0.999	0.982	0.7	0.846	0.945
rs200144227	1.7343E-08	-0.029139	0.00517	-0.029139	0.00517	3.13886E-08	0.81103	0.996808	0.003034	0.026541	0.484197	0.00023	0.04716	0.080587	0.814	0.792	0.996	0.976	0.823	1	0.952	0.925
rs10119826	1.7349E-08	-0.039026	0.00692	-0.047187	0.011198	3.14014E-08	0.08899	0.457675	0.000436	0.046148	0.01761	0.07454	0.1141	0.000271	0.931	0.873	0.999	0.96	0.979	0.786	0.938	0.986
rs78317246	1.7365E-08	-0.079157	0.01404	-0.079157	0.014044	3.14393E-08	0.59306	0.940266	1.86E-05	0.070069	0.387966	0.00425	0.00773	0.739526	0.812	0.765	1	0.927	0.82	0.99	0.969	0.702
rs3215789	1.7371E-08	0.0295176	0.00524	0.0295176	0.005237	3.14516E-08	0.41327	0.149199	0.00104	0.100898	0.739432	0.00046	0.05925	0.068186	0.869	0.909	0.999	0.922	0.759	0.999	0.949	0.932
rs7949294	1.7388E-08	-0.02924	0.00519	-0.029055	0.007052	2.41676E-08	0.9235	0.130124	0.013505	0.644175	0.207132	1.1E-06	0.09375	0.031934	0.674	0.866	0.918	0.375	0.841	1	0.901	0.92
rs7614725	1.74E-08	-0.028817	0.00511	-0.028817	0.005113	3.1467E-08	0.99191	0.066582	0.032798	0.085631	0.016629	6E-06	0.30354	0.993063	0.77	0.917	0.911	0.914	0.973	1	0.867	0.76
rs11933029	1.7426E-08	-0.035994	0.00639	-0.036915	0.007509	3.15802E-08	0.95315	0.311209	0.003667	0.088597	0.36784	0.00101	0.00077	0.032027	0.815	0.891	0.995	0.937	0.87	0.999	0.989	0.95
rs78621769	1.7434E-08	-0.073184	0.01299	-0.073184	0.012986	3.16E-08	0.38865	0.368003	0.000705	0.075295	0.609173	3.1E-05	0.37495	0.901297	0.832	0.835	0.998	0.914	0.736	1	0.828	0.715
rs687326	1.7449E-08	-0.028556	0.00507	-0.028556	0.005067	3.16344E-08	0.34539	0.126179	0.000639	0.002254	0.118	0.06162	0.0924	0.041747	0.889	0.923	0.999	0.997	0.941	0.834	0.945	0.949
rs4333568	1.745E-08	0.0342698	0.00608	0.0365344	0.010729	4.87162E-09	0.99649	0.605634	0.561162	6.13E-05	0.041119	8.5E-06	0.0463	0.186927	0.553	0.444	0.018	1	0.926	1	0.915	0.806
rs150121191	1.7479E-08	0.0482182	0.00856	0.0482182	0.008557	3.01161E-08	0.21922	0.584688	0.127474	0.011573	0.071251	2.9E-05	0.00972	0.726504	0.874	0.81	0.613	0.984	0.939	1	0.973	0.781
rs138510622	1.7481E-08	0.0494876	0.00878	0.0494876	0.008782	3.17089E-08	0.63358	0.889121	0.002485	0.239586	0.026004	6.4E-06	0.31379	0.721103	0.77	0.7	0.993	0.727	0.954	1	0.826	0.655
rs733093	1.749E-08	-0.03179	0.00564	-0.03179	0.005641	3.17297E-08	0.11756	0.252277	0.00391	0.037804	0.224213	0.00165	0.00405	0.760545	0.927	0.906	0.996	0.975	0.916	0.998	0.984	0.845
rs2141575	1.7496E-08	0.0296212	0.00526	0.0296212	0.005257	3.15792E-08	0.71514	0.689086	0.013515	0.083842	0.405408	1.3E-06	0.05071	0.737356	0.698	0.787	0.96	0.905	0.803	1	0.934	0.775
rs2141576	1.7498E-08	0.0296211	0.00526	0.0296211	0.005257	3.15833E-08	0.71515	0.689091	0.013516	0.083867	0.405408	1.3E-06	0.05072	0.737367	0.698	0.787	0.96	0.905	0.803	1	0.934	0.775
rs55821510	1.75E-08	-0.029382	0.00521	-0.029382	0.005214	3.17529E-08	0.96322	0.697273	0.000663	0.305431	0.09237	0.00013	0.03129	0.157167	0.751	0.699	0.999	0.706	0.925	1	0.95	0.885
rs77827241	1.7512E-08	0.0572134	0.01015	0.0572134	0.010153	3.17795E-08	0.20038	0.313476	0.001395	0.032813	0.393046	0.0002	0.87988	0.188039	0.892	0.874	0.998	0.971	0.846	1	0.758	0.897
rs12655042	1.7523E-08	-0.02913	0.00517	-0.02913	0.00517	3.18053E-08	0.80592	0.997884	0.003044	0.026611	0.484961	0.00023	0.04744	0.08102	0.815	0.792	0.996	0.976	0.823	1	0.951	0.925
rs76452321	1.7533E-08	0.0315588	0.0056	0.0315588	0.005601	3.18301E-08	0.05479	0.623675	0.00405	0.001153	0.633344	0.00164	0.04077	0.757684	0.926	0.83	0.994	0.997	0.772	0.997	0.952	0.735
rs6785272	1.7537E-08	0.0296191	0.00526	0.0296191	0.005257	3.16752E-08	0.71513	0.689081	0.01352	0.083852	0.405547	1.4E-06	0.05075	0.737354	0.698	0.787	0.96	0.905	0.803	1	0.934	0.775
rs2156123	1.7543E-08	0.0287734	0.00511	0.0322871	0.009988	1.86489E-08	0.68966	0.235092	0.001788	0.044226	1.41E-06	0.0153	0.02862	0.645741	0.807	0.618	0.99	0.95	0.999	0.951	0.954	0.809
rs17598931	1.7546E-08	0.0293218	0.0052	0.0293218	0.005204	3.18592E-08	0.79326	0.046084	0.00167	0.017896	0.064108	0.00079	0.07679	0.283205	0.745	0.927	0.997	0.982	0.948	0.999	0.936	0.617
rs1372604	1.7552E-08	-0.029378	0.00521	-0.029378	0.005214	3.18733E-08	0.07262	0.705892	0.003025	0.041956	0.772972	0.00019	0.02484	0.520717	0.923	0.825	0.995	0.964	0.739	1	0.962	0.846
rs7005708	1.7566E-08	0.0313948	0.00557	0.0291697	0.009072	8.61855E-09	0.21654	0.750832	1.35E-08	0.137063	0.931204	0.04015	0.27306	0.085978	0.718	0.46	1	0.541	0.325	0.495	0.667	0.799
rs35106887	1.7567E-08	-0.052203	0.00927	-0.056628	0.015555	3.19071E-08	0.53148	0.989911	0.008753	0.017288	0.247613	0.00072	0.02982	0.000129	0.728	0.798	0.986	0.984	0.895	0.999	0.962	0.981
rs13104770	1.7589E-08	-0.035982	0.00639	-0.036919	0.007532	3.19593E-08	0.95807	0.310676	0.003637	0.090664	0.367574	0.001	0.00077	0.031984	0.814	0.891	0.995	0.936	0.87	0.999	0.989	0.95
rs16898345	1.7596E-08	-0.033401	0.00593	-0.039585	0.010697	2.08012E-08	0.07881	0.073641	0.052889	4.74E-05	0.04199	0.00929	0.00506	0.202141	0.915	0.916	0.796	1	0.955	0.921	0.979	0.549
rs13124448	1.7601E-08	-0.035984	0.00639	-0.03693	0.007545	3.1987E-08	0.9546	0.311717	0.003614	0.091939	0.367967	0.001	0.00076	0.031804	0.815	0.891	0.995	0.935	0.87	0.999	0.989	0.95

Table S3

rs10033548	1.7603E-08	-0.035828	0.00636	-0.037101	0.009974	2.77499E-08	0.43301	0.946373	0.010531	1.71E-05	0.833009	0.0037	0.00219	0.672474	0.817	0.721	0.964	1	0.534	0.984	0.979	0.774
rs9461432	1.7604E-08	-0.052201	0.00927	-0.05663	0.015528	3.19935E-08	0.54104	0.989918	0.008749	0.017562	0.247615	0.00072	0.02982	0.000129	0.73	0.798	0.986	0.984	0.895	0.999	0.963	0.981
rs4327886	1.7619E-08	0.0313923	0.00557	0.0291577	0.009066	8.64998E-09	0.22123	0.750839	1.35E-08	0.136632	0.931203	0.04013	0.27292	0.085978	0.716	0.46	1	0.542	0.325	0.496	0.667	0.799
rs142542574	1.7621E-08	-0.061487	0.01091	-0.061487	0.010914	3.2034E-08	0.90211	0.012717	0.000583	0.074319	0.537912	0.00098	0.42075	0.019903	0.806	0.952	0.999	0.94	0.811	0.999	0.859	0.952
rs12715430	1.7637E-08	-0.034365	0.0061	-0.034365	0.0061	3.14454E-08	0.76574	0.080954	0.084131	0.001597	0.042537	3.3E-05	0.35934	0.852338	0.692	0.899	0.708	0.996	0.949	1	0.825	0.746
rs13202664	1.764E-08	-0.051168	0.00908	-0.053405	0.012709	3.20775E-08	0.03768	0.807531	0.00075	0.003067	0.888044	0.00789	0.07661	0.007803	0.933	0.745	0.999	0.995	0.611	0.982	0.938	0.957
rs3130016	1.7641E-08	0.0284043	0.00504	0.0280104	0.005412	3.20806E-08	0.3025	0.79631	0.001637	0.000513	0.871137	0.00013	0.83879	0.24821	0.516	0.703	0.995	0.997	0.563	1	0.634	0.812
rs114484676	1.7643E-08	-0.065778	0.01168	-0.070269	0.015003	2.31485E-08	0.5163	0.475095	0.096716	2.27E-05	0.183135	0.00148	0.00912	0.528148	0.823	0.829	0.681	1	0.887	0.992	0.971	0.818
rs28679790	1.7664E-08	0.0313894	0.00557	0.0291627	0.009072	8.66067E-09	0.21682	0.750865	1.35E-08	0.137613	0.931273	0.04015	0.2731	0.085974	0.718	0.459	1	0.54	0.325	0.495	0.666	0.799
rs17727076	1.7676E-08	-0.082165	0.01459	-0.089821	0.021528	3.21628E-08	0.85999	0.107571	0.021005	0.062455	0.01239	0.00049	0.00035	0.956477	0.784	0.921	0.96	0.952	0.981	0.999	0.99	0.799
rs6697670	1.7699E-08	-0.032356	0.00574	-0.037314	0.008198	2.97234E-08	0.06445	0.070548	0.000289	0.115792	0.011227	0.07336	0.00377	0.186208	0.936	0.934	0.999	0.888	0.983	0.762	0.985	0.911
rs71557353	1.7706E-08	-0.046167	0.0082	-0.046638	0.008606	3.22321E-08	0.61572	0.549165	0.002159	0.059306	0.15158	0.00481	0.00379	0.007921	0.868	0.875	0.998	0.963	0.937	0.994	0.984	0.967
rs13145390	1.7708E-08	-0.035977	0.00639	-0.036915	0.007532	3.22371E-08	0.95563	0.3122	0.003643	0.090465	0.368536	0.00101	0.00077	0.031871	0.815	0.891	0.995	0.936	0.87	0.999	0.989	0.95
rs100743963	1.7713E-08	-0.074276	0.01319	-0.074387	0.013624	3.22487E-08	0.14019	0.75217	0.001722	0.001031	0.866972	0.00268	0.40103	0.012058	0.898	0.734	0.997	0.997	0.679	0.995	0.843	0.952
rs3802848	1.7726E-08	0.0295875	0.00525	0.0317405	0.006719	3.22776E-08	0.03522	0.990586	0.055425	0.008116	0.001617	0.00091	0.41302	0.046719	0.944	0.803	0.874	0.992	0.992	0.998	0.868	0.944
rs6910361	1.7735E-08	-0.051159	0.00908	-0.053403	0.012714	3.23002E-08	0.03768	0.807865	0.000747	0.00307	0.887684	0.00795	0.07648	0.007796	0.933	0.745	0.999	0.995	0.611	0.982	0.938	0.957
rs12915693	1.7739E-08	0.0285047	0.00506	0.0304817	0.008214	2.21597E-08	0.82	0.88414	5.69E-06	0.26116	0.018075	0.04532	0.00053	0.357855	0.628	0.684	1	0.6	0.96	0.669	0.987	0.788
rs4486067	1.774E-08	-0.051158	0.00908	-0.053403	0.012717	3.23121E-08	0.03761	0.807765	0.000748	0.003069	0.887178	0.00794	0.07651	0.0078	0.933	0.745	0.999	0.995	0.61	0.982	0.938	0.957
rs75772577	1.7754E-08	-0.037827	0.00672	-0.040326	0.009021	3.23446E-08	0.63904	0.003638	0.016735	0.051176	0.00883	0.00056	0.2527	0.084816	0.768	0.967	0.975	0.964	0.984	0.999	0.908	0.935
rs10225027	1.7755E-08	0.0287775	0.00511	0.0304942	0.008055	3.23449E-08	0.07462	0.011501	0.000353	0.061076	0.572667	0.00247	0.66945	0.004014	0.92	0.95	0.999	0.946	0.785	0.996	0.633	0.966
rs521833	1.7756E-08	-0.030064	0.00534	-0.030064	0.005338	3.23486E-08	0.48168	0.476881	3.26E-05	0.074602	0.057399	0.0351	0.00614	0.590716	0.86	0.861	1	0.937	0.956	0.906	0.979	0.845
rs28507996	1.7757E-08	-0.035972	0.00639	-0.036908	0.00753	3.235E-08	0.95218	0.311715	0.003635	0.091464	0.368106	0.00101	0.00077	0.031903	0.815	0.891	0.995	0.935	0.87	0.999	0.989	0.95
rs17276523	1.7763E-08	-0.068919	0.01224	-0.068919	0.012236	3.23648E-08	0.01999	0.097647	0.000913	0.029936	0.056637	0.01882	0.15017	0.199886	0.96	0.938	0.999	0.982	0.967	0.972	0.94	0.925
rs4415603	1.777E-08	0.0294899	0.00524	0.0309262	0.008058	3.23809E-08	0.18462	0.058424	0.000548	0.00066	0.051606	0.03033	0.13107	0.055248	0.888	0.512	0.999	0.998	0.953	0.897	0.915	0.928
rs1012012	1.7813E-08	-0.035803	0.00636	-0.036793	0.010273	2.76499E-08	0.42098	0.781974	0.010096	1.62E-05	0.836742	0.00338	0.00197	0.744708	0.813	0.686	0.963	1	0.524	0.985	0.979	0.754
rs921231	1.7819E-08	0.0455277	0.00808	0.0455277	0.008084	3.24957E-08	0.943	0.775763	0.027177	0.015198	0.054884	0.00018	0.02201	0.071223	0.809	0.773	0.949	0.986	0.959	1	0.967	0.933
rs200776829	1.7822E-08	-0.066559	0.01182	-0.066559	0.011818	3.2503E-08	0.26182	0.411804	9.78E-06	0.028899	0.527357	0.00421	0.73723	0.211768	0.858	0.831	1	0.965	0.765	0.989	0.611	0.871
rs150216329	1.7827E-08	-0.032554	0.00578	-0.032554	0.00578	3.25148E-08	0.84923	0.810931	0.000249	0.000207	0.966076	0.00182	0.3969	0.951539	0.708	0.652	0.999	0.999	0.554	0.994	0.777	0.664
rs13395259	1.7842E-08	0.0290497	0.00516	0.0290497	0.005158	3.25493E-08	0.0105	0.140698	0.011291	0.020863	0.379173	0.00018	0.46437	0.378107	0.959	0.917	0.984	0.983	0.87	1	0.864	0.884
rs62413772	1.7845E-08	-0.035967	0.00639	-0.036903	0.007531	3.25552E-08	0.95224	0.311791	0.003644	0.091525	0.368631	0.00101	0.00077	0.031952	0.815	0.891	0.995	0.935	0.87	0.999	0.989	0.95
rs75286119	1.7855E-08	-0.068678	0.0122	-0.068678	0.012195	3.25794E-08	0.18325	0.912776	2.88E-05	0.042178	0.451177	0.00217	0.89363	0.120823	0.882	0.748	1	0.955	0.803	0.996	0.722	0.901
rs3802847	1.7861E-08	0.029579	0.00525	0.031725	0.006715	3.25924E-08	0.03528	0.990593	0.055404	0.008203	0.001617	0.00091	0.41299	0.046718	0.944	0.803	0.875	0.992	0.992	0.998	0.868	0.944
rs4144892	1.7862E-08	0.0295746	0.00525	0.0317462	0.006698	3.25967E-08	0.03571	0.970868	0.049746	0.007489	0.001488	0.00121	0.38837	0.047934	0.945	0.805	0.894	0.992	0.992	0.998	0.876	0.945
rs847771	1.7878E-08	-0.030665	0.00545	-0.030665	0.005445	3.2632E-08	0.68732	0.440742	0.03596	0.000563	0.026927	0.00051	0.61188	0.228431	0.83	0.861	0.92	0.998	0.97	0.999	0.815	0.894
rs202207709	1.7909E-08	-0.069784	0.01239	-0.069784	0.012393	3.27059E-08	0.47136	0.965605	5.51E-06	0.104937	0.495397	0.00208	0.77663	0.092254	0.814	0.732	1	0.879	0.766	0.994	0.725	0.898
rs7942723	1.7932E-08	0.0295753	0.00525	0.0317206	0.006715	3.2759E-08	0.03531	0.990668	0.055485	0.008202	0.001618	0.00091	0.41299	0.046764	0.944	0.803	0.875	0.992	0.992	0.998	0.868	0.944
rs10121388	1.7933E-08	-0.028381	0.00504	-0.028381	0.00504	3.27613E-08	0.08216	0.180129	0.001654	0.000168	0.953793	0.00623	0.13798	0.801614	0.91	0.886	0.997	0.999	0.654	0.986	0.911	0.723
rs74653173	1.7935E-08	-0.035152	0.00624	-0.035152	0.006243	3.27655E-08	0.50864	0.283299	0.00051	0.429483	0.003831	0.0012	0.08591	0.41531	0.835	0.87	0.999	0.636	0.987	0.998	0.931	0.849
rs12796102	1.7937E-08	-0.028731	0.0051	-0.02991	0.006652	3.27711E-08	0.02402	0.045608	0.00614	0.112561	0.991526	0.00023	0.0772	0.024736	0.948	0.937	0.991	0.914	0.687	1	0.945	0.951
rs1012011	1.7939E-08	-0.035785	0.00636	-0.036821	0.010234	2.82722E-08	0.38348	0.781652	0.010121	1.77E-05	0.833014	0.00339	0.00198	0.745672	0.821	0.687	0.964	1	0.525	0.985	0.979	0.755
rs4737196	1.7945E-08	0.0313737	0.00557	0.0291441	0.009079	8.76092E-09	0.21586	0.750866	1.35E-08	0.139688	0.931289	0.04014	0.27309	0.085973	0.717	0.457	1	0.535	0.323	0.492	0.665	0.798
rs12915095	1.7946E-08	0.028736	0.0051	0.028736	0.005103	3.27912E-08	0.7252	0.895201	0.000598	3.11E-05	0.690423	0.01465	0.28159	0.216056	0.787	0.734	0.999	1	0.718	0.953	0.858	0.87
rs847769	1.7946E-08	-0.030663	0.00545	-0.030663	0.005446	3.27926E-08	0.69387	0.442102	0.036442	0.00056	0.027032	0.00052	0.58238	0.230855	0.829	0.861	0.919	0.998	0.97	0.999	0.822	0.894
rs4831619	1.797E-08	-0.030998	0.00551	-0.030998	0.005505	3.28476E-08	0.52642	0.028979	0.001388	0.175862	0.025105	0.00041	0.38983	0.659806	0.854	0.942	0.998	0.866	0.971	0.999	0.867	0.835
rs4888561	1.7978E-08	0.0323951	0.00575	0.0309004	0.00717	2.91922E-08	0.39356	0.536964	6.2E-07	0.023838	0.540853	0.01208	0.96911	0.104765	0.579	0.771	1	0.958	0.712	0.94	0.633	0.873
rs12736950	1.7993E-08	-0.032599	0.00579	-0.032599	0.00579	3.29009E-08	0.90765	0.221971	0.00122	0.032548	0.036008	0.00015	0.50421	0.472621	0.758	0.866	0.998	0.963	0.955	1	0.536	0.821
rs9508163	1.7997E-08	-0.028572	0.00507	-0.028572	0.005075	3.29081E-08	0.4184	0.565343	0.001023	0.027413	0.774683	0.00028	0.18802	0.200466	0.856	0.836	0.998	0.974	0.731	0.999	0.903	0.892
rs4887311	1.8005E-08	0.035816	0.00636	0.0399892	0.011001	1.33436E-08	0.02999	0.839015	0.041715	8.97E-07	0.647695	0.00677	0.26673	0.045863	0.926	0.7	0.812	1	0.696	0.912	0.837	0.921
rs7022556	1.8021E-08	-0.028377	0.00504	-0.028377	0.00504	3.29507E-08	0.08255	0.180138	0.001654	0.000168	0.953697	0.00623	0.13799	0.801586	0.91	0.886	0.997	0.999	0.654	0.986	0.911	0.723
rs11599236	1.8028E-08	-0.028458	0.00505	-0.028488	0.005222	3.29636E-08	0.65202	0.050904	0.016761	0.013233	0.006325	0.00011	0.92824	0.434062	0.715	0.923	0.962	0.985	0.983	1	0.69	0.846
rs12444079	1.8062E-08	-0.030172	0.00536	-0.030172	0.00536	3.30248E-08	0.46208	0.600668	0.001518	0.002114	0.14818	0.02125	0.02485	0.103334	0.88	0.865	0.998	0.997	0.935	0.962	0.97	0.933
rs7938812	1.8069E-08	0.0295621	0.00525	0.0317339	0.006733	3.30368E-08	0.03527	0.990899	0.056301	0.008199	0.001578	0.0009	0.41601	0.047444	0.944	0.803	0.872	0.992	0.992	0.998	0.867	0.944
rs6441859	1.8088E-08	0.0299942	0.00533	0.0275995	0.007478	2.77368E-08	0.36591	0.343996	0.004698	0.263839	0.814698	5.2E-07	0.019	0.755441	0.509	0.77	0.968	0.617	0.553	1	0.936	0.68
rs4236934	1.8106E-08	0.0313665	0.00557	0.0291393	0.009089	8.76827E-09	0.21548	0.753396	1.34E-08	0.139136	0.929302	0.04068	0.27326	0.085923	0.716	0.456	1	0.532	0.32	0.487	0.663	0.798
rs2155292	1.8106E-08	0.0295602	0.00525	0.0317246	0.006727	3.31032E-08	0.03527	0.991028	0.055814	0.008211	0.001576	0.00091	0.41608	0.047443	0.944	0.803	0.873	0.992	0.992	0.998	0.867	0.944

Table S3

rs7948327	1.8115E-08	0.0295598	0.00525	0.031724	0.006727	3.31194E-08	0.03527	0.99102	0.055817	0.008216	0.001576	0.00091	0.41608	0.047445	0.944	0.803	0.873	0.992	0.992	0.998	0.867	0.944
rs10891492	1.8115E-08	0.0295597	0.00525	0.0317238	0.006727	3.31205E-08	0.03527	0.991012	0.055827	0.008216	0.001577	0.00091	0.4161	0.047448	0.944	0.803	0.873	0.992	0.992	0.998	0.867	0.944
rs7004685	1.8147E-08	0.0313634	0.00557	0.0291364	0.009088	8.80318E-09	0.21586	0.752359	1.35E-08	0.139719	0.929663	0.04056	0.27269	0.085657	0.716	0.456	1	0.532	0.321	0.488	0.664	0.798
rs7837784	1.815E-08	0.0313632	0.00557	0.0291363	0.009088	8.80453E-09	0.21586	0.752358	1.35E-08	0.139721	0.929657	0.04056	0.27269	0.085658	0.716	0.456	1	0.532	0.321	0.488	0.664	0.798
rs1321505	1.8168E-08	-0.052258	0.00928	-0.056478	0.015696	3.32143E-08	0.48853	0.946785	0.008351	0.0157	0.280743	0.00075	0.02193	0.000172	0.715	0.786	0.987	0.985	0.883	0.999	0.966	0.98
rs34712084	1.8168E-08	-0.052258	0.00928	-0.056478	0.015696	3.32143E-08	0.48853	0.946785	0.008351	0.0157	0.280743	0.00075	0.02193	0.000172	0.715	0.786	0.987	0.985	0.883	0.999	0.966	0.98
rs5794952	1.8178E-08	-0.032164	0.00571	-0.032179	0.009046	2.69283E-08	0.58126	0.021514	0.002993	0.883595	0.021178	6.1E-06	0.4772	0.078928	0.559	0.914	0.984	0.201	0.957	1	0.729	0.882
rs201534634	1.8181E-08	-0.032163	0.00571	-0.032178	0.009044	2.6944E-08	0.58125	0.021533	0.002992	0.883216	0.021186	6.1E-06	0.47704	0.078923	0.56	0.914	0.984	0.201	0.957	1	0.729	0.882
rs11198356	1.8196E-08	-0.055158	0.0098	-0.058422	0.014151	3.32637E-08	0.36649	0.0007	0.017305	0.020755	0.229855	0.00027	0.04715	0.639417	0.881	0.973	0.971	0.983	0.905	1	0.957	0.744
rs957906	1.8197E-08	0.0325544	0.00578	0.0325544	0.005784	3.32669E-08	0.13412	0.719969	0.006029	0.003242	0.626208	0.0025	0.03798	0.043387	0.92	0.845	0.992	0.996	0.806	0.997	0.961	0.946
rs59132471	1.8207E-08	-0.032162	0.00571	-0.032177	0.009046	2.69647E-08	0.58126	0.02153	0.002994	0.8836	0.021175	6.1E-06	0.47715	0.078918	0.56	0.914	0.984	0.201	0.957	1	0.729	0.882
rs11757229	1.8208E-08	-0.029194	0.00519	-0.030682	0.008333	3.32864E-08	0.00212	0.363765	0.006162	0.00329	0.60959	0.00138	0.00737	0.866987	0.964	0.662	0.989	0.995	0.768	0.998	0.974	0.784
rs2208331	1.8214E-08	0.0287623	0.00511	0.0287623	0.00511	3.32959E-08	0.52713	0.557355	0.00119	0.002073	0.350035	0.01021	0.02723	0.24044	0.865	0.862	0.998	0.997	0.876	0.984	0.966	0.903
rs141925396	1.8224E-08	-0.069706	0.01239	-0.069706	0.012385	3.33153E-08	0.46525	0.977657	5.69E-06	0.101204	0.496755	0.00218	0.7797	0.091695	0.816	0.736	1	0.884	0.768	0.994	0.726	0.899
rs11198357	1.8232E-08	-0.055154	0.0098	-0.058418	0.014152	3.33292E-08	0.36717	0.0007	0.017307	0.020745	0.229814	0.00027	0.04714	0.638874	0.881	0.973	0.971	0.983	0.905	1	0.957	0.744
rs2545787	1.8235E-08	0.0398467	0.00708	0.0398467	0.00708	3.33339E-08	0.21343	0.8541	0.002235	0.016182	0.333565	0.00173	0.08894	0.051047	0.908	0.834	0.997	0.987	0.885	0.998	0.946	0.944
rs6759058	1.8253E-08	-0.029522	0.00525	-0.029522	0.005246	3.3367E-08	0.50848	0.547337	0.002036	0.078813	0.176527	0.00019	0.01292	0.434479	0.706	0.84	0.997	0.933	0.908	1	0.969	0.855
rs4727457	1.8261E-08	-0.035157	0.00625	-0.035157	0.006247	3.3381E-08	0.50598	0.269836	0.00062	0.428366	0.003298	0.001	0.08994	0.486366	0.834	0.871	0.999	0.636	0.987	0.998	0.929	0.836
rs3736782	1.8263E-08	0.0287594	0.00511	0.0287594	0.00511	3.33846E-08	0.52449	0.557355	0.001193	0.002072	0.350163	0.01024	0.02724	0.24043	0.865	0.862	0.998	0.997	0.876	0.984	0.966	0.903
rs7243601	1.8266E-08	0.0370665	0.00659	0.0366963	0.007004	3.33901E-08	0.12537	0.642422	0.003207	0.26457	0.719608	3.7E-06	0.21291	0.0625	0.873	0.654	0.989	0.698	0.667	1	0.858	0.902
rs325500	1.8276E-08	-0.02945	0.00523	-0.02945	0.005233	3.34077E-08	0.84196	0.012198	0.013403	0.038331	0.012831	0.0002	0.5039	0.639296	0.824	0.955	0.979	0.971	0.98	1	0.851	0.845
rs117299500	1.8285E-08	-0.069719	0.01239	-0.069719	0.012389	3.34239E-08	0.47568	0.976667	5.6E-06	0.103082	0.495439	0.00215	0.77913	0.091355	0.813	0.735	1	0.881	0.767	0.994	0.725	0.899
rs4743154	1.8285E-08	-0.02839	0.00504	-0.02839	0.005045	3.34239E-08	0.09255	0.181139	0.001636	0.000198	0.958995	0.00571	0.13631	0.816033	0.907	0.886	0.997	0.999	0.652	0.987	0.911	0.725
rs3757151	1.829E-08	0.0287586	0.00511	0.0287586	0.00511	3.34321E-08	0.52357	0.558983	0.001181	0.002084	0.350921	0.0103	0.02713	0.24014	0.865	0.861	0.999	0.997	0.876	0.983	0.966	0.903
rs3736781	1.8294E-08	0.0287449	0.00511	0.0287449	0.005108	3.3439E-08	0.52953	0.559491	0.001431	0.001982	0.365614	0.0087	0.0288	0.228261	0.865	0.861	0.998	0.997	0.872	0.987	0.965	0.905
rs6675587	1.8299E-08	-0.029996	0.00533	-0.03284	0.01058	2.48769E-08	0.26859	0.02526	0.001633	8.35E-05	0.006197	0.06013	0.25312	0.014356	0.842	0.379	0.989	0.999	0.981	0.684	0.845	0.943
rs1921086	1.8301E-08	0.0283761	0.00504	0.0283761	0.005043	3.34529E-08	0.51401	0.462698	0.002448	0.000627	0.094185	0.00997	0.20722	0.024521	0.858	0.719	0.997	0.998	0.944	0.982	0.909	0.95
rs3130102	1.8316E-08	0.0283613	0.00504	0.0279523	0.005419	3.34798E-08	0.29999	0.808384	0.001576	0.000555	0.896285	0.00013	0.81533	0.245648	0.514	0.7	0.995	0.997	0.553	1	0.64	0.813
rs5794951	1.8323E-08	-0.032155	0.00571	-0.032164	0.009059	2.70932E-08	0.57259	0.021514	0.002993	0.882641	0.021179	6.1E-06	0.4772	0.078928	0.557	0.914	0.984	0.201	0.957	1	0.729	0.882
rs139892200	1.8332E-08	-0.085232	0.01515	-0.085232	0.015147	3.35079E-08	0.60284	0.887239	0.00143	0.005599	0.044123	0.00534	0.10997	0.269344	0.854	0.795	0.998	0.994	0.965	0.993	0.937	0.898
rs146107714	1.8332E-08	-0.085232	0.01515	-0.085232	0.015147	3.35079E-08	0.60284	0.887239	0.00143	0.005599	0.044123	0.00534	0.10997	0.269344	0.854	0.795	0.998	0.994	0.965	0.993	0.937	0.898
rs147649493	1.8363E-08	-0.08523	0.01515	-0.08523	0.015147	3.35626E-08	0.60279	0.887604	0.001441	0.005592	0.044187	0.00532	0.11003	0.268363	0.854	0.795	0.998	0.994	0.965	0.993	0.937	0.898
rs2747657	1.837E-08	0.0442834	0.00787	0.0442834	0.00787	3.35753E-08	0.81458	0.231567	0.012814	0.211697	0.012792	3.6E-05	0.05284	0.370162	0.757	0.887	0.972	0.822	0.978	1	0.948	0.866
rs6428449	1.8387E-08	0.0292511	0.0052	0.0298189	0.007578	3.36059E-08	0.29987	0.066983	0.000355	0.000392	0.080457	0.02549	0.25548	0.072003	0.86	0.511	0.999	0.999	0.935	0.913	0.873	0.917
rs2679065	1.8398E-08	-0.029369	0.00522	-0.029369	0.00522	3.36257E-08	0.09017	0.863629	0.001814	0.04563	0.807984	0.0002	0.04187	0.440835	0.914	0.799	0.997	0.959	0.721	1	0.951	0.853
rs2236765	1.8402E-08	0.0285793	0.00508	0.0285793	0.00508	3.36333E-08	0.61039	0.745344	0.005423	0.018945	0.442785	7.5E-06	0.45799	0.682483	0.796	0.703	0.987	0.975	0.79	1	0.807	0.782
rs12917999	1.8416E-08	0.0285788	0.00508	0.0285788	0.00508	3.36587E-08	0.61179	0.74535	0.005425	0.018925	0.442765	7.5E-06	0.45797	0.682777	0.796	0.703	0.987	0.975	0.79	1	0.807	0.782
rs9833611	1.842E-08	-0.028773	0.00511	-0.028773	0.005114	3.36109E-08	0.99192	0.066433	0.033595	0.085633	0.016455	6.1E-06	0.31183	0.995005	0.77	0.916	0.908	0.914	0.973	1	0.864	0.759
rs9346928	1.842E-08	0.0318171	0.00566	0.0318171	0.005655	3.36652E-08	0.27574	0.498125	0.001838	0.016976	0.96732	0.00169	0.02727	0.014608	0.886	0.855	0.997	0.984	0.666	0.997	0.963	0.956
rs4671360	1.843E-08	0.0396831	0.00705	0.0396831	0.007053	3.36825E-08	0.40592	0.161274	0.001811	0.069098	0.270857	0.00027	0.0632	0.966722	0.872	0.907	0.998	0.948	0.89	1	0.948	0.799
rs34953859	1.8432E-08	-0.051902	0.00923	-0.05266	0.010364	3.3686E-08	0.07035	0.994512	0.000773	0.00543	0.85645	0.00728	0.09838	0.007578	0.927	0.794	0.999	0.993	0.72	0.987	0.936	0.96
rs28858103	1.8434E-08	0.0286581	0.00509	0.0286581	0.005094	3.36901E-08	0.10074	0.087097	0.001116	0.001258	0.192191	0.04081	0.16239	0.159087	0.931	0.934	0.999	0.998	0.923	0.91	0.93	0.923
rs1877016	1.8441E-08	-0.031001	0.00551	-0.031001	0.00551	3.37026E-08	0.47527	0.03056	0.001185	0.215119	0.035461	0.00033	0.38143	0.630146	0.857	0.94	0.998	0.832	0.965	0.999	0.865	0.834
rs7949313	1.8453E-08	-0.029199	0.00519	-0.029031	0.007	2.53246E-08	0.93095	0.147393	0.014096	0.642517	0.189203	1.1E-06	0.09598	0.030097	0.677	0.861	0.916	0.379	0.851	1	0.901	0.921
rs1514335	1.846E-08	-0.028625	0.00509	-0.028625	0.005088	3.37371E-08	0.17411	0.474539	0.001346	0.110346	0.203559	0.00147	0.01297	0.218545	0.916	0.878	0.998	0.929	0.92	0.998	0.976	0.911
rs4554301	1.8475E-08	0.0318147	0.00566	0.0318147	0.005655	3.37638E-08	0.27576	0.498329	0.001839	0.01696	0.967506	0.00169	0.0273	0.014625	0.886	0.855	0.997	0.984	0.666	0.997	0.963	0.955
rs9365483	1.8499E-08	0.0318137	0.00566	0.0318137	0.005655	3.38067E-08	0.2757	0.498599	0.001842	0.016937	0.96741	0.00169	0.02733	0.014622	0.886	0.855	0.997	0.984	0.666	0.997	0.963	0.955
rs117740578	1.8506E-08	-0.088136	0.01567	-0.088136	0.015668	3.3818E-08	0.29773	0.278813	0.012405	0.116893	0.112859	2E-05	0.0563	0.976867	0.883	0.886	0.978	0.909	0.935	1	0.949	0.784
rs10025259	1.8513E-08	-0.035748	0.00635	-0.036777	0.010246	2.90841E-08	0.37781	0.781162	0.010168	1.79E-05	0.82477	0.00341	0.002	0.748016	0.822	0.687	0.963	1	0.522	0.985	0.979	0.755
rs11647069	1.8518E-08	0.0303845	0.0054	0.0303845	0.005401	3.38398E-08	0.51191	0.066971	0.004007	0.009859	0.195267	0.00057	0.31574	0.775618	0.863	0.931	0.995	0.99	0.915	0.999	0.889	0.829
rs10945859	1.8524E-08	0.0318153	0.00566	0.0318153	0.005656	3.38517E-08	0.26709	0.498438	0.001846	0.016972	0.966854	0.0017	0.02762	0.014678	0.887	0.856	0.997	0.984	0.666	0.997	0.963	0.955
rs2606177	1.8525E-08	-0.029376	0.00522	-0.029376	0.005222	3.38525E-08	0.08243	0.806003	0.001833	0.060186	0.775844	0.00017	0.04304	0.451988	0.917	0.807	0.997	0.948	0.731	1	0.951	0.852
rs1690812	1.8527E-08	-0.0292	0.00519	-0.028978	0.006956	2.51107E-08	0.95157	0.146452	0.013409	0.662836	0.193686	1.1E-06	0.09434	0.03525	0.678	0.86	0.919	0.364	0.848	1	0.901	0.917
rs2793382	1.8528E-08	0.0289082	0.00514	0.0280427	0.007423	3.38576E-08	0.0606	0.09679	0.01691	0.021626	0.067785	9.1E-06	0.17993	0.759779	0.906	0.891	0.944	0.971	0.934	1	0.36	0.758
rs2922309	1.8538E-08	-0.040169	0.00714	-0.040169	0.007141	3.38755E-08	0.98515	0.289652	0.00201	0.250444	0.009189	0.00018	0.22591	0.287323	0.775	0.874	0.997	0.787	0.98	1	0.892	0.876

Table S3

rs12914590	1.8545E-08	0.0284652	0.00506	0.0304561	0.008202	2.31791E-08	0.82324	0.897398	6.1E-06	0.254397	0.018729	0.04617	0.00052	0.349869	0.632	0.684	1	0.61	0.959	0.672	0.987	0.792
rs55736627	1.8549E-08	0.0968885	0.01722	0.10095	0.023239	3.38958E-08	0.00265	0.779957	0.035422	0.133944	0.373258	2.2E-05	0.14267	0.034494	0.972	0.826	0.926	0.896	0.86	1	0.923	0.944
rs13273892	1.8557E-08	0.0289712	0.00515	0.0298834	0.00909	2.40144E-08	0.89549	0.860254	0.020656	0.000143	2.7E-05	0.00346	0.829	0.651819	0.697	0.692	0.916	0.999	0.997	0.977	0.599	0.764
rs35885541	1.8565E-08	0.0286905	0.0051	0.028819	0.005597	3.39247E-08	0.00835	0.462734	0.000195	0.187879	0.112933	0.00261	0.03848	0.611429	0.955	0.855	1	0.847	0.932	0.995	0.955	0.714
rs79478603	1.8618E-08	0.030755	0.00547	0.030755	0.005468	3.40183E-08	0.0464	0.977035	0.003211	0.002555	0.50575	0.0014	0.04574	0.920787	0.931	0.791	0.995	0.996	0.814	0.998	0.951	0.767
rs11130660	1.8633E-08	0.0289943	0.00516	0.0289943	0.005155	3.40462E-08	0.82588	0.807672	0.000644	0.120714	0.173518	0.00026	0.0633	0.245149	0.757	0.806	0.999	0.898	0.908	0.999	0.941	0.884
rs10893640	1.8642E-08	-0.029192	0.00519	-0.029011	0.007025	2.5345E-08	0.93315	0.15148	0.014121	0.646118	0.194891	1.1E-06	0.09624	0.029439	0.676	0.859	0.914	0.376	0.848	1	0.9	0.921
rs9847116	1.8656E-08	-0.041661	0.00741	-0.042525	0.008722	3.4087E-08	0.09212	0.630804	0.000113	0.466292	0.01708	0.00547	0.00537	0.736787	0.907	0.811	1	0.592	0.973	0.983	0.977	0.79
rs12591307	1.866E-08	0.0286858	0.0051	0.028815	0.005599	3.40933E-08	0.00833	0.462432	0.000195	0.18785	0.113116	0.00262	0.03851	0.611271	0.955	0.855	1	0.847	0.932	0.995	0.955	0.714
rs71648946	1.8672E-08	-0.035921	0.00639	-0.036872	0.007557	3.41153E-08	0.95828	0.312868	0.00364	0.094693	0.367908	0.00101	0.00077	0.031905	0.814	0.89	0.995	0.933	0.87	0.999	0.989	0.95
rs1370257	1.8672E-08	0.0316522	0.00563	0.0389843	0.009057	3.41164E-08	0.35053	0.161908	0.008867	0.033373	0.001555	0.01965	0.12023	0.00053	0.905	0.928	0.988	0.978	0.993	0.968	0.947	0.984
rs71548310	1.8673E-08	-0.05256	0.00935	-0.056329	0.014532	3.41178E-08	0.96934	0.923172	0.006599	0.022394	0.38021	0.00082	0.02264	0.000224	0.797	0.791	0.991	0.981	0.861	0.999	0.967	0.98
rs10575041	1.8681E-08	-0.041658	0.00741	-0.042533	0.008733	3.4132E-08	0.0908	0.630782	0.000114	0.466723	0.017152	0.00547	0.00537	0.736498	0.908	0.811	1	0.591	0.973	0.983	0.977	0.79
rs9277767	1.8681E-08	0.0300886	0.00535	0.030022	0.005536	3.41322E-08	0.74888	0.081275	0.001118	0.672549	0.117437	4.1E-05	0.05136	0.176528	0.659	0.891	0.997	0.38	0.9	1	0.931	0.865
rs556437	1.8683E-08	-0.028481	0.00506	-0.029387	0.007062	3.41353E-08	0.32446	0.040223	0.007031	0.179612	0.794725	4.8E-05	0.02334	0.017206	0.861	0.928	0.983	0.826	0.565	1	0.96	0.948
rs112734594	1.8686E-08	-0.029194	0.00519	-0.029016	0.007027	2.51991E-08	0.94667	0.147948	0.014357	0.649144	0.193799	1.1E-06	0.09856	0.029936	0.678	0.86	0.912	0.373	0.848	1	0.898	0.921
rs2793380	1.8702E-08	0.0289001	0.00514	0.0280337	0.007422	3.417E-08	0.06056	0.096992	0.016932	0.021727	0.067792	9.2E-06	0.17986	0.760257	0.906	0.891	0.944	0.971	0.934	1	0.361	0.758
rs28711200	1.8723E-08	-0.028379	0.00505	-0.028379	0.005047	3.42066E-08	0.74188	0.068929	0.00337	0.014221	0.591772	0.00059	0.50793	0.010609	0.829	0.927	0.995	0.987	0.801	0.999	0.844	0.959
rs1370256	1.8727E-08	0.0316494	0.00563	0.0389827	0.009057	3.42148E-08	0.35058	0.161908	0.008874	0.033377	0.001555	0.01968	0.12026	0.00053	0.905	0.928	0.988	0.978	0.993	0.968	0.947	0.984
rs11072674	1.8741E-08	0.0286815	0.0051	0.028811	0.0056	3.42394E-08	0.00833	0.461992	0.000195	0.187939	0.113352	0.00263	0.03855	0.610966	0.955	0.855	1	0.847	0.932	0.995	0.955	0.714
rs9456813	1.8743E-08	-0.028611	0.00509	-0.028611	0.005088	3.4242E-08	0.17411	0.474035	0.001348	0.110346	0.202602	0.00151	0.01289	0.217344	0.916	0.878	0.998	0.929	0.92	0.998	0.976	0.912
rs11697282	1.8743E-08	-0.031732	0.00564	-0.031732	0.005643	3.42428E-08	0.10513	0.231359	0.003657	0.041575	0.223229	0.00193	0.00303	0.833415	0.929	0.908	0.996	0.972	0.916	0.998	0.985	0.836
rs28379349	1.8744E-08	-0.028439	0.00506	-0.029963	0.007499	2.22317E-08	0.72776	0.435045	4.47E-06	0.041061	0.025796	0.11706	0.00248	0.848084	0.603	0.775	1	0.9	0.954	0.441	0.98	0.679
rs11697295	1.8745E-08	-0.031732	0.00564	-0.031732	0.005643	3.42457E-08	0.10513	0.231359	0.003657	0.041575	0.22323	0.00193	0.00303	0.833417	0.929	0.908	0.996	0.972	0.916	0.998	0.985	0.836
rs1790266	1.8746E-08	-0.029188	0.00519	-0.029008	0.007029	2.54506E-08	0.93637	0.15148	0.014121	0.648936	0.194891	1.1E-06	0.09624	0.029439	0.676	0.859	0.914	0.374	0.847	1	0.9	0.921
rs7703110	1.875E-08	-0.036159	0.00643	-0.036159	0.00643	3.42551E-08	0.66073	0.66194	0.000575	0.012951	0.04785	0.00382	0.56827	0.142486	0.843	0.843	0.999	0.988	0.962	0.995	0.836	0.916
rs13002562	1.8756E-08	-0.029494	0.00525	-0.029494	0.005245	3.42663E-08	0.50335	0.544966	0.001943	0.077528	0.182141	0.0002	0.01321	0.429483	0.705	0.841	0.997	0.934	0.906	1	0.969	0.856
rs9282487	1.8758E-08	0.0283379	0.00504	0.0270321	0.006217	3.42695E-08	0.30655	0.861575	0.001086	9.17E-05	0.807763	0.00043	0.98876	0.40548	0.498	0.676	0.996	0.999	0.566	0.998	0.574	0.76
rs75516423	1.8766E-08	-0.045529	0.0081	-0.054466	0.015916	2.13342E-08	0.86867	0.483306	0.000538	0.520498	0.136594	0.00302	1.3E-06	0.131858	0.754	0.816	0.996	0.513	0.901	0.987	0.997	0.89
rs1940713	1.8797E-08	0.0295207	0.00525	0.031649	0.006694	3.43394E-08	0.03242	0.954937	0.052304	0.007287	0.001698	0.0011	0.40097	0.051784	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs7037663	1.8815E-08	-0.028339	0.00504	-0.028339	0.00504	3.43716E-08	0.08895	0.180129	0.001654	0.000173	0.953794	0.00623	0.13798	0.801614	0.908	0.886	0.997	0.999	0.654	0.986	0.911	0.723
rs608626	1.8819E-08	-0.029184	0.00519	-0.029004	0.007062	2.54182E-08	0.92535	0.151058	0.013963	0.654513	0.193961	1.1E-06	0.09572	0.02932	0.673	0.858	0.915	0.369	0.847	1	0.9	0.921
rs593913	1.8824E-08	-0.029627	0.00527	-0.029627	0.005269	3.03117E-08	0.99595	0.352157	0.010794	0.506919	0.127037	1.3E-06	0.16303	0.087346	0.713	0.822	0.952	0.505	0.894	1	0.878	0.894
rs609318	1.8828E-08	-0.029627	0.00527	-0.029627	0.005269	3.03216E-08	0.99732	0.35213	0.010795	0.50647	0.127031	1.3E-06	0.16307	0.08736	0.713	0.822	0.952	0.505	0.894	1	0.878	0.894
rs158966	1.8832E-08	0.0398067	0.00708	0.0398067	0.00708	3.44013E-08	0.22472	0.824909	0.002124	0.017784	0.345232	0.00168	0.0865	0.054088	0.906	0.837	0.998	0.986	0.882	0.998	0.946	0.943
rs7665881	1.8844E-08	-0.028846	0.00513	-0.032222	0.007259	3.44235E-08	0.0112	0.489329	0.014933	0.052473	0.000309	0.00281	0.55995	0.085378	0.962	0.88	0.979	0.966	0.996	0.996	0.857	0.939
rs7121508	1.8845E-08	-0.029182	0.00519	-0.028999	0.007036	2.56058E-08	0.92865	0.15148	0.014121	0.647869	0.194891	1.1E-06	0.09624	0.029439	0.675	0.859	0.914	0.374	0.847	1	0.9	0.921
rs112134588	1.8855E-08	0.0968604	0.01723	0.100947	0.023281	3.44418E-08	0.00257	0.806965	0.038444	0.112971	0.39011	2.2E-05	0.15023	0.034589	0.972	0.823	0.919	0.911	0.855	1	0.921	0.944
rs62413768	1.8856E-08	-0.035907	0.00639	-0.03672	0.007397	3.4445E-08	0.95637	0.31091	0.003785	0.089556	0.367719	0.00101	0.00087	0.032027	0.815	0.891	0.995	0.937	0.87	0.999	0.989	0.95
rs111814256	1.8857E-08	0.0968568	0.01723	0.100952	0.023281	3.44464E-08	0.00257	0.806939	0.038714	0.112115	0.390079	2.2E-05	0.15025	0.034605	0.972	0.823	0.919	0.911	0.855	1	0.921	0.944
rs2787999	1.8861E-08	-0.030981	0.00551	-0.034122	0.007111	2.75024E-08	0.0291	0.495297	0.000313	0.008471	0.019243	0.15098	0.01771	0.125928	0.943	0.833	0.999	0.989	0.975	0.46	0.97	0.91
rs112520043	1.8865E-08	0.0968583	0.01723	0.100947	0.023281	3.44602E-08	0.00257	0.806965	0.038485	0.112858	0.39012	2.2E-05	0.15023	0.034591	0.972	0.823	0.919	0.911	0.855	1	0.921	0.944
rs138626088	1.8866E-08	0.0968585	0.01723	0.100946	0.023281	3.44615E-08	0.00257	0.806969	0.03845	0.112971	0.390123	2.2E-05	0.15023	0.034591	0.972	0.823	0.919	0.911	0.855	1	0.921	0.944
rs77685291	1.8867E-08	-0.041571	0.00739	-0.041571	0.007394	3.41055E-08	0.10712	0.193718	0.002965	4.91E-05	0.107913	0.03046	0.23814	0.938917	0.92	0.902	0.995	1	0.938	0.923	0.901	0.781
rs145383803	1.8871E-08	-0.028715	0.00511	-0.02983	0.00672	3.44717E-08	0.02619	0.054685	0.005247	0.129546	0.932934	0.00021	0.06559	0.025755	0.944	0.932	0.992	0.896	0.654	1	0.947	0.949
rs4551650	1.8873E-08	0.0297446	0.00529	0.0297446	0.005291	3.44745E-08	0.64681	0.428855	0.010778	0.024287	0.197925	0.00029	0.05493	0.097475	0.858	0.882	0.986	0.982	0.921	1	0.957	0.933
rs113524619	1.8873E-08	0.0968534	0.01723	0.100951	0.023282	3.44746E-08	0.00257	0.806935	0.038775	0.112	0.390071	2.2E-05	0.15025	0.034611	0.972	0.823	0.919	0.911	0.855	1	0.921	0.944
rs113915894	1.8875E-08	0.0968538	0.01723	0.100949	0.023281	3.44778E-08	0.00257	0.806944	0.038724	0.112119	0.390101	2.2E-05	0.15025	0.03461	0.972	0.823	0.919	0.911	0.855	1	0.921	0.944
rs55741258	1.8875E-08	0.0371968	0.00662	0.0383479	0.007589	3.44781E-08	0.13423	0.039612	0.003136	0.186644	0.034407	0.00234	0.00294	0.947663	0.923	0.945	0.996	0.875	0.971	0.997	0.986	0.817
rs7107609	1.8875E-08	-0.029181	0.00519	-0.028998	0.007037	2.56404E-08	0.92856	0.15148	0.01412	0.648354	0.194891	1.1E-06	0.09624	0.029439	0.675	0.859	0.914	0.374	0.847	1	0.9	0.921
rs7121613	1.8875E-08	-0.029181	0.00519	-0.028998	0.007037	2.56406E-08	0.92856	0.15148	0.01412	0.648357	0.194891	1.1E-06	0.09624	0.029439	0.675	0.859	0.914	0.374	0.847	1	0.9	0.921
rs76351660	1.8875E-08	-0.029181	0.00519	-0.028998	0.007037	2.56406E-08	0.92856	0.15148	0.01412	0.648357	0.194891	1.1E-06	0.09624	0.029439	0.675	0.859	0.914	0.374	0.847	1	0.9	0.921
rs76640763	1.8875E-08	-0.029181	0.00519	-0.028998	0.007037	2.56406E-08	0.92856	0.15148	0.01412	0.648357	0.194891	1.1E-06	0.09624	0.029439	0.675	0.859	0.914	0.374	0.847	1	0.9	0.921
rs34593817	1.8877E-08	-0.029181	0.00519	-0.028998	0.007037	2.56426E-08	0.92856	0.15148	0.014121	0.648352	0.194891	1.1E-06	0.09624	0.029439	0.675	0.859	0.914	0.374	0.847	1	0.9	0.921
rs35661685	1.8877E-08	-0.029181	0.00519	-0.028998	0.007037	2.56426E-08	0.92856	0.15148	0.014121	0.648352	0.194891	1.1E-06	0.09624	0.029439	0.675	0.859	0.914	0.374	0.847	1	0.9	0.921

Table S3

rs72983607	1.8877E-08	-0.029181	0.00519	-0.028998	0.007037	2.56428E-08	0.92856	0.15148	0.014121	0.648354	0.194891	1.1E-06	0.09624	0.029439	0.675	0.859	0.914	0.374	0.847	1	0.9	0.921
rs111235659	1.8877E-08	0.0968524	0.01723	0.100951	0.023283	3.44821E-08	0.00257	0.80693	0.038807	0.111925	0.390066	2.2E-05	0.15025	0.034614	0.972	0.823	0.918	0.912	0.855	1	0.921	0.944
rs112024601	1.8877E-08	0.0968524	0.01723	0.100951	0.023283	3.44821E-08	0.00257	0.80693	0.038807	0.111925	0.390066	2.2E-05	0.15025	0.034614	0.972	0.823	0.918	0.912	0.855	1	0.921	0.944
rs112368234	1.8877E-08	0.0968524	0.01723	0.100951	0.023283	3.44821E-08	0.00257	0.80693	0.038807	0.111925	0.390066	2.2E-05	0.15025	0.034614	0.972	0.823	0.918	0.912	0.855	1	0.921	0.944
rs114030321	1.8877E-08	0.0968524	0.01723	0.100951	0.023283	3.44821E-08	0.00257	0.80693	0.038807	0.111925	0.390066	2.2E-05	0.15025	0.034614	0.972	0.823	0.918	0.912	0.855	1	0.921	0.944
rs142030502	1.8877E-08	0.0968524	0.01723	0.100951	0.023283	3.44821E-08	0.00257	0.80693	0.038807	0.111925	0.390066	2.2E-05	0.15025	0.034614	0.972	0.823	0.918	0.912	0.855	1	0.921	0.944
rs200130390	1.8877E-08	0.0968524	0.01723	0.100951	0.023283	3.44821E-08	0.00257	0.80693	0.038807	0.111925	0.390066	2.2E-05	0.15025	0.034614	0.972	0.823	0.918	0.912	0.855	1	0.921	0.944
rs200762791	1.8877E-08	0.0968524	0.01723	0.100951	0.023283	3.44821E-08	0.00257	0.80693	0.038807	0.111925	0.390066	2.2E-05	0.15025	0.034614	0.972	0.823	0.918	0.912	0.855	1	0.921	0.944
rs201617165	1.8878E-08	0.0968528	0.01723	0.100949	0.023281	3.44843E-08	0.00257	0.80694	0.038762	0.112008	0.390103	2.2E-05	0.15026	0.034611	0.972	0.823	0.919	0.911	0.855	1	0.921	0.944
rs201582852	1.888E-08	0.0968538	0.01723	0.100948	0.023283	3.44869E-08	0.00257	0.806946	0.038656	0.112416	0.390088	2.2E-05	0.15024	0.034604	0.972	0.823	0.919	0.911	0.855	1	0.921	0.944
rs653601	1.8884E-08	-0.02918	0.00519	-0.028996	0.007039	2.56623E-08	0.92547	0.15148	0.014121	0.647641	0.194891	1.1E-06	0.09624	0.029439	0.674	0.859	0.914	0.374	0.847	1	0.9	0.921
rs142723643	1.8887E-08	0.0968527	0.01723	0.100947	0.023283	3.45002E-08	0.00257	0.806949	0.038661	0.112411	0.390098	2.2E-05	0.15025	0.034604	0.972	0.823	0.919	0.911	0.855	1	0.921	0.944
rs10758966	1.8888E-08	-0.030818	0.00548	-0.031682	0.009016	3.45026E-08	0.04675	0.105318	4.9E-05	0.037001	0.009362	0.02483	0.02502	0.578157	0.48	0.901	1	0.959	0.979	0.912	0.958	0.813
rs7142769	1.8935E-08	0.0289953	0.00516	0.0289953	0.005158	3.4586E-08	0.80093	0.132533	0.000234	0.00861	0.390082	0.02257	0.00506	0.266001	0.772	0.913	1	0.991	0.855	0.949	0.98	0.892
rs10945860	1.8947E-08	0.0317935	0.00566	0.0317935	0.005656	3.4607E-08	0.27585	0.49811	0.001847	0.017129	0.967201	0.0017	0.02766	0.014655	0.886	0.855	0.997	0.984	0.666	0.997	0.962	0.955
rs12583988	1.8948E-08	0.0285965	0.00509	0.0285965	0.005087	3.46074E-08	0.1791	0.421837	0.002971	0.004101	0.238441	0.0038	0.49145	0.02107	0.915	0.883	0.997	0.995	0.91	0.995	0.865	0.957
rs1940724	1.8949E-08	0.0295146	0.00525	0.0317138	0.006731	3.46104E-08	0.03228	0.953329	0.05261	0.007689	0.001686	0.00111	0.38914	0.048555	0.946	0.801	0.885	0.992	0.992	0.998	0.874	0.944
rs7622748	1.8956E-08	0.0418796	0.00745	0.0434371	0.009609	3.46204E-08	0.10081	0.597038	0.000128	0.476917	0.013161	0.00531	0.00342	0.923735	0.902	0.81	1	0.571	0.975	0.982	0.979	0.752
rs4754635	1.8983E-08	0.0291762	0.00519	0.0289939	0.007056	2.56752E-08	0.92648	0.151107	0.014039	0.653801	0.194498	1.1E-06	0.09584	0.029474	0.673	0.858	0.914	0.369	0.847	1	0.9	0.921
rs1484678	1.8984E-08	0.02845	0.00506	0.0285651	0.006312	3.46653E-08	0.64267	0.012502	0.000505	0.110947	0.868449	0.00062	0.46146	0.008622	0.822	0.946	0.999	0.901	0.694	0.999	0.835	0.957
rs2453260	1.8986E-08	-0.029177	0.00519	-0.028994	0.007042	2.57685E-08	0.92933	0.15148	0.014121	0.650686	0.194891	1.1E-06	0.09624	0.029439	0.675	0.858	0.914	0.372	0.847	1	0.9	0.921
rs13004784	1.8988E-08	-0.040635	0.00723	-0.040635	0.007229	3.4672E-08	0.45187	0.755163	0.002272	0.00656	0.008908	0.00406	0.21973	0.390439	0.869	0.772	0.997	0.993	0.983	0.994	0.908	0.877
rs6738528	1.8997E-08	-0.029526	0.00525	-0.029526	0.005253	3.46858E-08	0.40653	0.011321	0.021924	0.002008	0.414989	0.00033	0.49805	0.285138	0.873	0.954	0.96	0.997	0.851	0.999	0.849	0.891
rs5814288	1.9002E-08	-0.028452	0.00506	-0.028452	0.005062	3.46949E-08	0.09943	0.679436	0.005088	0.058569	0.609628	1.2E-05	0.1132	0.737358	0.9	0.711	0.99	0.94	0.755	1	0.915	0.79
rs2048424	1.901E-08	0.0288859	0.00514	0.0280152	0.007415	3.47071E-08	0.06156	0.096793	0.016907	0.022137	0.067774	9.1E-06	0.17995	0.759779	0.905	0.891	0.944	0.971	0.934	1	0.361	0.758
rs9456812	1.9017E-08	-0.028599	0.00509	-0.028599	0.005088	3.47193E-08	0.17616	0.474036	0.001348	0.111252	0.202609	0.00151	0.01289	0.217351	0.916	0.878	0.998	0.928	0.92	0.998	0.976	0.912
rs2453259	1.903E-08	-0.029174	0.00519	-0.02899	0.007045	2.58299E-08	0.9266	0.15148	0.014121	0.65031	0.194891	1.1E-06	0.09624	0.029439	0.674	0.858	0.914	0.372	0.847	1	0.899	0.921
rs1801143	1.9036E-08	-0.028647	0.0051	-0.028647	0.005097	3.47102E-08	0.68554	0.103116	0.023759	0.113107	0.024111	4.1E-06	0.34129	0.685301	0.805	0.902	0.934	0.887	0.966	1	0.852	0.701
rs10520578	1.9038E-08	0.0285929	0.00509	0.0285929	0.005087	3.47524E-08	0.16736	0.784195	0.000808	0.039269	0.322528	0.00023	0.24795	0.921518	0.894	0.807	0.999	0.964	0.86	1	0.886	0.759
rs10790869	1.9058E-08	0.0291726	0.00519	0.0289906	0.007059	2.57646E-08	0.92676	0.151107	0.014039	0.654989	0.194498	1.1E-06	0.09584	0.029473	0.673	0.858	0.914	0.369	0.847	1	0.9	0.921
rs9309888	1.9067E-08	-0.04185	0.00745	-0.043277	0.009456	3.47995E-08	0.09893	0.592472	0.000125	0.4592	0.015722	0.00548	0.00331	0.915114	0.904	0.813	1	0.59	0.973	0.982	0.98	0.757
rs2141574	1.907E-08	0.0295436	0.00526	0.0295436	0.005257	3.46936E-08	0.7154	0.68926	0.013856	0.084612	0.405314	1.4E-06	0.05073	0.737669	0.698	0.787	0.96	0.905	0.803	1	0.934	0.775
rs112496788	1.9079E-08	0.0346184	0.00616	0.0354013	0.007477	3.48185E-08	0.9975	0.646644	0.038826	0.000542	0.367002	0.00041	0.03487	0.016015	0.771	0.72	0.9	0.998	0.839	0.999	0.954	0.949
rs6753161	1.9082E-08	0.0485673	0.00864	0.0485673	0.008642	3.48221E-08	0.39576	0.07838	0.000366	0.017001	0.053554	0.04164	0.02475	0.327718	0.889	0.936	0.999	0.987	0.965	0.912	0.97	0.898
rs7943198	1.9084E-08	0.0295106	0.00525	0.0315399	0.006631	3.48267E-08	0.03584	0.954799	0.052466	0.00709	0.001701	0.0011	0.40129	0.051856	0.944	0.8	0.885	0.993	0.992	0.998	0.871	0.942
rs2132082	1.9106E-08	-0.028953	0.00515	-0.028953	0.005152	3.48611E-08	0.10328	0.333176	0.000717	0.014181	0.929421	0.00059	0.13698	0.819446	0.903	0.857	0.999	0.983	0.614	0.999	0.91	0.782
rs10011128	1.9112E-08	-0.03571	0.00635	-0.036715	0.010256	2.99706E-08	0.38298	0.780181	0.010216	1.79E-05	0.819211	0.00342	0.00202	0.750694	0.82	0.686	0.963	1	0.519	0.985	0.979	0.753
rs10893641	1.9113E-08	-0.029171	0.00519	-0.028986	0.007049	2.59264E-08	0.92621	0.15148	0.014121	0.651899	0.194891	1.1E-06	0.09624	0.029439	0.674	0.858	0.914	0.371	0.847	1	0.899	0.921
rs2655462	1.9117E-08	0.0314141	0.00559	0.0314141	0.00559	3.48796E-08	0.52906	0.8857	0.005723	0.2205	0.004594	5.3E-05	0.29313	0.357481	0.837	0.791	0.989	0.812	0.985	1	0.873	0.861
rs7122777	1.9126E-08	0.0291698	0.00519	0.0289877	0.007062	2.58439E-08	0.92666	0.151107	0.014039	0.656155	0.194498	1.1E-06	0.09584	0.029473	0.673	0.858	0.914	0.368	0.847	1	0.899	0.921
rs146972908	1.9141E-08	0.0297516	0.00529	0.0297516	0.005294	3.49179E-08	0.66891	0.430587	0.011644	0.022228	0.186425	0.00029	0.0621	0.093268	0.855	0.882	0.985	0.983	0.924	1	0.954	0.934
rs2655463	1.9154E-08	0.0314125	0.00559	0.0314125	0.00559	3.49377E-08	0.52902	0.885643	0.005727	0.220703	0.004594	5.3E-05	0.29329	0.357613	0.837	0.791	0.989	0.812	0.985	1	0.873	0.861
rs1690809	1.9164E-08	-0.029168	0.00519	-0.028985	0.00705	2.59705E-08	0.92865	0.15148	0.014121	0.65335	0.194891	1.1E-06	0.09624	0.029439	0.674	0.858	0.914	0.37	0.847	1	0.899	0.921
rs957388	1.9178E-08	0.0292251	0.0052	0.0300231	0.008726	3.49773E-08	0.26864	0.036373	0.000486	0.000311	0.026749	0.0313	0.3735	0.049973	0.858	0.452	0.999	0.999	0.963	0.873	0.831	0.922
rs2458169	1.9202E-08	-0.029166	0.00519	-0.028984	0.007051	2.60132E-08	0.92956	0.15148	0.01412	0.654141	0.194891	1.1E-06	0.09624	0.029439	0.674	0.858	0.914	0.37	0.847	1	0.899	0.921
rs61910885	1.9224E-08	-0.029165	0.00519	-0.028981	0.007053	2.605E-08	0.92709	0.15148	0.01412	0.653623	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.37	0.847	1	0.899	0.921
rs608165	1.9226E-08	-0.029165	0.00519	-0.028981	0.007053	2.60596E-08	0.92604	0.15148	0.014121	0.653419	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.37	0.847	1	0.899	0.921
rs12707228	1.9231E-08	-0.034671	0.00617	-0.045279	0.013154	8.91287E-10	0.6397	0.096101	0.050445	4.21E-07	5.28E-05	0.12159	0.51694	0.299964	0.365	0.757	0.035	1	0.999	0.02	0.222	0.534
rs681294	1.9231E-08	-0.029165	0.00519	-0.028975	0.007051	2.60418E-08	0.92614	0.151058	0.014037	0.654959	0.194451	1.1E-06	0.09704	0.029724	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs284943	1.9247E-08	0.030151	0.00537	0.0343576	0.00784	3.50877E-08	0.02264	0.034506	0.01575	0.180971	0.052513	0.00084	0.23139	0.003259	0.958	0.952	0.979	0.89	0.968	0.999	0.922	0.977
rs76700778	1.9251E-08	0.101052	0.01799	0.101052	0.017985	3.50939E-08	0.48807	0.635841	0.028169	0.03469	0.063818	4.6E-06	0.50552	0.86931	0.839	0.821	0.938	0.965	0.944	1	0.824	0.784
rs651391	1.9252E-08	-0.029163	0.00519	-0.028979	0.007055	2.60803E-08	0.92646	0.15148	0.014121	0.653849	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.37	0.847	1	0.899	0.921
rs598046	1.9254E-08	-0.029164	0.00519	-0.028979	0.007055	2.6102E-08	0.92418	0.15148	0.01412	0.65341	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.37	0.847	1	0.899	0.921
rs670477	1.9258E-08	-0.029164	0.00519	-0.02898	0.007055	2.60844E-08	0.92762	0.15148	0.014121	0.654551	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs2458171	1.9274E-08	-0.029162	0.00519	-0.028979	0.007056	2.61034E-08	0.92693	0.15148	0.014121	0.654324	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921

Table S3

rs2510973	1.9274E-08	-0.029162	0.00519	-0.028979	0.007056	2.61034E-08	0.92693	0.15148	0.014121	0.654324	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs2510974	1.9274E-08	-0.029162	0.00519	-0.028979	0.007056	2.61034E-08	0.92693	0.15148	0.014121	0.654324	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs4754638	1.9274E-08	-0.029162	0.00519	-0.028979	0.007056	2.61034E-08	0.92693	0.15148	0.014121	0.654324	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs4754639	1.9274E-08	-0.029162	0.00519	-0.028979	0.007056	2.61034E-08	0.92693	0.15148	0.014121	0.654324	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs5000318	1.9274E-08	-0.029162	0.00519	-0.028979	0.007056	2.61034E-08	0.92693	0.15148	0.014121	0.654324	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs604534	1.9274E-08	-0.029162	0.00519	-0.028979	0.007056	2.61034E-08	0.92693	0.15148	0.014121	0.654324	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs616533	1.9274E-08	-0.029162	0.00519	-0.028979	0.007056	2.61034E-08	0.92693	0.15148	0.014121	0.654324	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs668189	1.9274E-08	-0.029162	0.00519	-0.028979	0.007056	2.61034E-08	0.92693	0.15148	0.014121	0.654324	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs688426	1.9274E-08	-0.029162	0.00519	-0.028979	0.007056	2.61034E-08	0.92693	0.15148	0.014121	0.654324	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs7618530	1.9275E-08	-0.04186	0.00745	-0.04324	0.009285	3.51312E-08	0.09512	0.590722	0.000124	0.477702	0.014835	0.00595	0.00387	0.77087	0.906	0.815	1	0.579	0.975	0.98	0.979	0.782
rs617428	1.9287E-08	-0.029161	0.00519	-0.028978	0.007056	2.61171E-08	0.92711	0.15148	0.014121	0.654587	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs687917	1.9287E-08	-0.029161	0.00519	-0.028978	0.007056	2.61171E-08	0.92711	0.15148	0.014121	0.654587	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs2059251	1.9289E-08	-0.028337	0.00504	-0.028337	0.005044	3.51543E-08	0.73861	0.070179	0.00346	0.014596	0.593232	0.00057	0.50977	0.010582	0.829	0.927	0.995	0.986	0.801	0.999	0.844	0.959
rs34718230	1.9291E-08	-0.029161	0.00519	-0.028978	0.007056	2.61222E-08	0.92691	0.15148	0.014121	0.654585	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs578096100	1.9291E-08	-0.083252	0.01482	-0.083252	0.014818	3.51573E-08	0.51183	0.148927	0.027207	0.000425	0.078255	0.00383	0.03747	0.51586	0.874	0.921	0.956	0.999	0.956	0.995	0.964	0.873
rs1628747	1.9293E-08	-0.029161	0.00519	-0.028977	0.007057	2.61327E-08	0.92553	0.15148	0.014121	0.654254	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs35128564	1.9296E-08	-0.051053	0.00909	-0.053406	0.012896	3.51652E-08	0.03652	0.775415	0.000841	0.003215	0.871806	0.00759	0.0699	0.007692	0.933	0.74	0.999	0.995	0.605	0.983	0.94	0.957
rs4626350	1.9296E-08	0.0283264	0.00504	0.0283264	0.005042	3.51656E-08	0.51338	0.459976	0.002493	0.000635	0.095064	0.01012	0.2067	0.024662	0.858	0.718	0.997	0.998	0.943	0.982	0.909	0.95
rs34247791	1.9296E-08	-0.029161	0.00519	-0.028978	0.007056	2.61336E-08	0.92683	0.15148	0.014121	0.65455	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs609996	1.9296E-08	-0.029161	0.00519	-0.028978	0.007056	2.61336E-08	0.92683	0.15148	0.014121	0.65455	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs7614064	1.9297E-08	0.0418404	0.00745	0.0433503	0.009539	3.51678E-08	0.1003	0.594669	0.000126	0.465539	0.014297	0.00557	0.00334	0.918241	0.903	0.812	1	0.583	0.975	0.982	0.98	0.755
rs9863626	1.93E-08	-0.041627	0.00741	-0.042381	0.008586	3.51712E-08	0.09884	0.609311	0.000106	0.474484	0.017402	0.00566	0.00584	0.714504	0.905	0.813	1	0.586	0.973	0.982	0.976	0.793
rs10893643	1.9307E-08	-0.02916	0.00519	-0.028977	0.007057	2.61409E-08	0.92684	0.15148	0.014121	0.654811	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs150460197	1.9307E-08	-0.02916	0.00519	-0.028977	0.007057	2.61409E-08	0.92684	0.15148	0.014121	0.654811	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs1690806	1.9307E-08	-0.02916	0.00519	-0.028977	0.007057	2.61409E-08	0.92684	0.15148	0.014121	0.654811	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs1690810	1.9307E-08	-0.02916	0.00519	-0.028977	0.007057	2.61409E-08	0.92684	0.15148	0.014121	0.654811	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs1690811	1.9307E-08	-0.02916	0.00519	-0.028977	0.007057	2.61409E-08	0.92684	0.15148	0.014121	0.654811	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs1790264	1.9307E-08	-0.02916	0.00519	-0.028977	0.007057	2.61409E-08	0.92684	0.15148	0.014121	0.654811	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs2510975	1.9307E-08	-0.02916	0.00519	-0.028977	0.007057	2.61409E-08	0.92684	0.15148	0.014121	0.654811	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs4754637	1.9307E-08	-0.02916	0.00519	-0.028977	0.007057	2.61409E-08	0.92684	0.15148	0.014121	0.654811	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs5000317	1.9307E-08	-0.02916	0.00519	-0.028977	0.007057	2.61409E-08	0.92684	0.15148	0.014121	0.654811	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs5794010	1.9307E-08	-0.02916	0.00519	-0.028977	0.007057	2.61409E-08	0.92684	0.15148	0.014121	0.654811	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs586877	1.9307E-08	-0.02916	0.00519	-0.028977	0.007057	2.61409E-08	0.92684	0.15148	0.014121	0.654811	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs587855	1.9307E-08	-0.02916	0.00519	-0.028977	0.007057	2.61409E-08	0.92684	0.15148	0.014121	0.654811	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs589612	1.9307E-08	-0.02916	0.00519	-0.028977	0.007057	2.61409E-08	0.92684	0.15148	0.014121	0.654811	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs656763	1.9307E-08	-0.02916	0.00519	-0.028977	0.007057	2.61409E-08	0.92684	0.15148	0.014121	0.654811	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs669186	1.9307E-08	-0.02916	0.00519	-0.028977	0.007057	2.61409E-08	0.92684	0.15148	0.014121	0.654811	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs671295	1.9307E-08	-0.02916	0.00519	-0.028977	0.007057	2.61409E-08	0.92684	0.15148	0.014121	0.654811	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs687007	1.9307E-08	-0.02916	0.00519	-0.028977	0.007057	2.61409E-08	0.92684	0.15148	0.014121	0.654811	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs688000	1.9307E-08	-0.02916	0.00519	-0.028977	0.007057	2.61409E-08	0.92684	0.15148	0.014121	0.654811	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs689323	1.9307E-08	-0.02916	0.00519	-0.028977	0.007057	2.61409E-08	0.92684	0.15148	0.014121	0.654811	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs9508164	1.9315E-08	-0.028515	0.00508	-0.028515	0.005076	3.51955E-08	0.40905	0.562498	0.001019	0.027967	0.769162	0.00031	0.18969	0.202047	0.857	0.837	0.998	0.974	0.734	0.999	0.903	0.892
rs2122356	1.9317E-08	-0.04184	0.00745	-0.04341	0.009602	3.51986E-08	0.09901	0.593565	0.000126	0.472136	0.014033	0.00555	0.00329	0.917018	0.903	0.811	1	0.577	0.975	0.981	0.98	0.754
rs1921087	1.9319E-08	0.0283264	0.00504	0.0283264	0.005042	3.52029E-08	0.51235	0.460722	0.002499	0.000632	0.095197	0.01013	0.20738	0.024617	0.858	0.719	0.997	0.998	0.943	0.982	0.909	0.95
rs35687320	1.9327E-08	-0.029159	0.00519	-0.028976	0.007058	2.61691E-08	0.92674	0.15148	0.01412	0.655041	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs595719	1.9327E-08	-0.029159	0.00519	-0.028976	0.007058	2.61691E-08	0.92674	0.15148	0.01412	0.655041	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs595724	1.9327E-08	-0.029159	0.00519	-0.028976	0.007058	2.61691E-08	0.92674	0.15148	0.01412	0.655041	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs597084	1.9327E-08	-0.029159	0.00519	-0.028976	0.007058	2.61691E-08	0.92674	0.15148	0.01412	0.655041	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs597187	1.9327E-08	-0.029159	0.00519	-0.028976	0.007058	2.61691E-08	0.92674	0.15148	0.01412	0.655041	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs665801	1.9327E-08	-0.029159	0.00519	-0.028976	0.007058	2.61691E-08	0.92674	0.15148	0.01412	0.655041	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs11716664	1.9329E-08	0.0418385	0.00745	0.0433575	0.009554	3.52176E-08	0.10024	0.594669	0.000125	0.468508	0.01428	0.00554	0.00333	0.918211	0.903	0.811	1	0.58	0.974	0.982	0.98	0.755
rs4283593	1.9329E-08	0.0418385	0.00745	0.0433575	0.009554	3.52176E-08	0.10024	0.594669	0.000125	0.468508	0.01428	0.00554	0.00333	0.918211	0.903	0.811	1	0.58	0.974	0.982	0.98	0.755
rs4364188	1.9329E-08	0.0418385	0.00745	0.0433575	0.009554	3.52176E-08	0.10024	0.594669	0.000125	0.468508	0.01428	0.00554	0.00333	0.918211	0.903	0.811	1	0.58	0.974	0.982	0.98	0.755
rs5016049	1.9329E-08	0.0418385	0.00745	0.0433575	0.009554	3.52176E-08	0.10024	0.594669	0.000125	0.468508	0.01428	0.00554	0.00333	0.918211	0.903	0.811	1	0.58	0.974	0.982	0.98	0.755
rs6790985	1.9329E-08	0.0418385	0.00745	0.0433575	0.009554	3.52176E-08	0.10024	0.594669	0.000125	0.468508	0.01428	0.00554	0.00333	0.918211	0.903	0.811	1	0.58	0.974	0.982	0.98	0.755

Table S3

rs35540308	1.9329E-08	-0.029159	0.00519	-0.028976	0.007058	2.6171E-08	0.92674	0.15148	0.014121	0.655036	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.914	0.369	0.847	1	0.899	0.921
rs2296335	1.933E-08	0.0294203	0.00524	0.0294203	0.005237	3.52195E-08	0.4134	0.153079	0.001083	0.105518	0.748441	0.00046	0.05797	0.069598	0.868	0.907	0.998	0.919	0.755	0.999	0.949	0.931
rs609049	1.9335E-08	-0.029159	0.00519	-0.028974	0.007059	2.61993E-08	0.92298	0.15148	0.014121	0.654129	0.194891	1.1E-06	0.09624	0.029439	0.672	0.858	0.914	0.369	0.847	1	0.899	0.921
rs2654676	1.9343E-08	-0.028518	0.00508	-0.034846	0.009458	2.62973E-08	0.10724	0.242933	0.021688	0.243082	0.00105	0.00082	0.00012	0.534242	0.909	0.879	0.931	0.777	0.992	0.99	0.993	0.678
rs1562730	1.9345E-08	0.0418363	0.00745	0.0433672	0.009568	3.52443E-08	0.09948	0.593095	0.000123	0.471622	0.014189	0.00557	0.00338	0.916774	0.903	0.811	1	0.577	0.975	0.981	0.979	0.754
rs4141842	1.935E-08	0.0300426	0.00535	0.0333332	0.00769	3.52513E-08	0.13388	0.044045	0.050925	0.008909	0.000575	0.00122	0.12329	0.543879	0.914	0.938	0.88	0.991	0.994	0.998	0.931	0.711
rs879275	1.9354E-08	-0.028311	0.00504	-0.028311	0.00504	3.52577E-08	0.08714	0.181156	0.001661	0.000179	0.957579	0.00625	0.13828	0.802793	0.909	0.885	0.997	0.999	0.653	0.986	0.91	0.723
rs2105839	1.9362E-08	-0.028985	0.00516	-0.029157	0.005303	3.52704E-08	0.55079	0.329541	0.015892	0.000153	0.008111	0.00663	0.10117	0.65866	0.727	0.878	0.971	0.999	0.983	0.987	0.934	0.833
rs13110259	1.9389E-08	-0.028771	0.00512	-0.028771	0.005122	3.53145E-08	0.11561	0.252781	0.000762	0.014829	0.99519	0.00063	0.12017	0.961278	0.901	0.872	0.999	0.983	0.641	0.999	0.917	0.764
rs750823887	1.9391E-08	-0.030936	0.00551	-0.030936	0.005507	3.53181E-08	0.51589	0.033812	0.001277	0.163562	0.028292	0.00046	0.4072	0.666614	0.856	0.94	0.998	0.877	0.97	0.999	0.864	0.835
rs12714529	1.9403E-08	-0.041832	0.00745	-0.043377	0.009581	3.53358E-08	0.09835	0.594674	0.000125	0.471147	0.014281	0.00554	0.00333	0.918214	0.903	0.811	1	0.578	0.974	0.981	0.98	0.754
rs142582438	1.9406E-08	-0.087568	0.01559	-0.087568	0.015589	3.53411E-08	0.55365	0.204029	0.010256	0.175656	0.124111	1.1E-05	0.05761	0.992843	0.838	0.889	0.979	0.85	0.925	1	0.944	0.773
rs659277	1.9411E-08	-0.029155	0.00519	-0.028972	0.007057	2.63023E-08	0.92654	0.15148	0.01414	0.655077	0.194945	1.1E-06	0.09627	0.029441	0.673	0.858	0.914	0.369	0.846	1	0.899	0.921
rs1341330	1.9415E-08	-0.028502	0.00507	-0.028502	0.005074	3.53561E-08	0.40873	0.584572	0.001016	0.027419	0.818566	0.00028	0.18006	0.213058	0.855	0.831	0.998	0.973	0.715	0.999	0.903	0.888
rs1449854	1.9418E-08	-0.041853	0.00745	-0.043228	0.009283	3.53601E-08	0.09547	0.590652	0.000124	0.478766	0.014874	0.00595	0.00387	0.771194	0.906	0.815	1	0.578	0.974	0.98	0.979	0.782
rs9838438	1.9427E-08	-0.041617	0.00741	-0.042367	0.00858	3.53749E-08	0.09873	0.609855	0.000106	0.474407	0.017469	0.00567	0.00587	0.714527	0.905	0.813	1	0.586	0.972	0.982	0.976	0.793
rs1940718	1.9439E-08	0.0294909	0.00525	0.0316793	0.006735	3.53942E-08	0.03005	0.954746	0.052343	0.007834	0.001699	0.0011	0.40129	0.051862	0.947	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs115899870	1.9441E-08	0.0784238	0.01396	0.0787427	0.0177	3.5398E-08	0.92322	0.035296	0.013154	9.26E-05	0.295712	0.00088	0.50252	0.163921	0.76	0.92	0.969	0.999	0.847	0.998	0.552	0.884
rs7630869	1.9444E-08	-0.028634	0.0051	-0.028634	0.005098	3.54022E-08	0.6491	0.104799	0.022292	0.114665	0.020572	5.4E-06	0.3571	0.706338	0.813	0.903	0.941	0.888	0.969	1	0.851	0.708
rs7232783	1.9445E-08	0.0369999	0.00659	0.0366781	0.006947	3.54038E-08	0.12717	0.662473	0.002987	0.285572	0.703047	4.1E-06	0.21579	0.061643	0.871	0.655	0.99	0.677	0.669	1	0.856	0.901
rs7204169	1.9453E-08	-0.029104	0.00518	-0.029104	0.005182	3.54163E-08	0.48902	0.277646	0.000117	0.291753	0.328633	0.00016	0.32987	0.605127	0.812	0.848	1	0.711	0.824	1	0.837	0.792
rs4708972	1.9454E-08	0.0317539	0.00565	0.0317539	0.005653	3.54183E-08	0.26432	0.500847	0.001829	0.017377	0.961632	0.00178	0.02739	0.014263	0.888	0.855	0.997	0.984	0.665	0.997	0.963	0.956
rs9931205	1.9455E-08	-0.028329	0.00504	-0.028329	0.005044	3.54196E-08	0.7342	0.070077	0.003458	0.014929	0.592508	0.00057	0.5093	0.010573	0.83	0.927	0.995	0.986	0.801	0.999	0.844	0.959
rs2584124	1.9456E-08	-0.029279	0.00521	-0.029279	0.005213	3.54211E-08	0.07918	0.784165	0.002799	0.04178	0.831526	0.00017	0.02719	0.557798	0.917	0.809	0.996	0.962	0.714	1	0.959	0.835
rs9811089	1.9458E-08	-0.041846	0.00745	-0.043249	0.009313	3.54247E-08	0.09398	0.590979	0.000123	0.482156	0.014857	0.00595	0.00387	0.770253	0.906	0.814	1	0.575	0.974	0.98	0.979	0.782
rs9880194	1.9459E-08	-0.041846	0.00745	-0.043248	0.009311	3.54264E-08	0.0939	0.591005	0.000124	0.481639	0.014868	0.00595	0.00387	0.770282	0.906	0.814	1	0.575	0.974	0.98	0.979	0.782
rs7128314	1.9463E-08	0.0294893	0.00525	0.0315947	0.006681	3.54319E-08	0.0327	0.954937	0.052304	0.007592	0.001698	0.0011	0.40097	0.051784	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs1041632	1.9463E-08	-0.028574	0.00509	-0.028574	0.005087	3.54322E-08	0.1852	0.443464	0.001356	0.105613	0.212489	0.00157	0.01503	0.195595	0.915	0.882	0.998	0.932	0.918	0.998	0.974	0.916
rs7128648	1.9463E-08	0.0294892	0.00525	0.0315947	0.006681	3.54325E-08	0.0327	0.954937	0.052304	0.007592	0.001698	0.0011	0.40097	0.051784	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs1940714	1.9467E-08	0.0294891	0.00525	0.0315944	0.006681	3.54389E-08	0.0327	0.954937	0.052304	0.007594	0.001698	0.0011	0.40097	0.051784	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs1940712	1.9467E-08	0.029489	0.00525	0.0315944	0.006681	3.54395E-08	0.0327	0.954937	0.052304	0.007594	0.001698	0.0011	0.40097	0.051784	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs4480572	1.9467E-08	0.029489	0.00525	0.0315944	0.006681	3.54395E-08	0.0327	0.954937	0.052304	0.007594	0.001698	0.0011	0.40097	0.051784	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs4479020	1.9474E-08	0.0294887	0.00525	0.0315978	0.006684	3.54505E-08	0.03251	0.954749	0.052354	0.007617	0.001699	0.0011	0.40129	0.051862	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs6796707	1.9474E-08	-0.041845	0.00745	-0.043249	0.009313	3.54506E-08	0.09372	0.590986	0.000124	0.481752	0.014868	0.00595	0.00387	0.770271	0.906	0.814	1	0.575	0.974	0.98	0.979	0.782
rs199594048	1.9482E-08	-0.030932	0.00551	-0.030932	0.005507	3.54633E-08	0.51498	0.03381	0.001277	0.164379	0.028283	0.00046	0.40719	0.666575	0.856	0.94	0.998	0.876	0.97	0.999	0.864	0.835
rs11924750	1.9483E-08	-0.041845	0.00745	-0.043247	0.009313	3.54637E-08	0.09399	0.590974	0.000123	0.482257	0.014871	0.00595	0.00387	0.770247	0.906	0.814	1	0.575	0.974	0.98	0.979	0.782
rs7935745	1.9484E-08	0.0294883	0.00525	0.0315947	0.006681	3.54654E-08	0.0327	0.954976	0.052338	0.007594	0.001697	0.0011	0.40092	0.051779	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs6799557	1.9495E-08	-0.041844	0.00745	-0.043247	0.009313	3.54828E-08	0.09399	0.590958	0.000124	0.4822	0.014856	0.00595	0.00387	0.770243	0.906	0.814	1	0.575	0.974	0.98	0.979	0.782
rs1892983	1.9505E-08	0.0294874	0.00525	0.0315913	0.00668	3.54993E-08	0.0327	0.954898	0.052304	0.007617	0.001698	0.0011	0.40103	0.051803	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs11214469	1.9505E-08	0.0294874	0.00525	0.0315912	0.00668	3.54993E-08	0.0327	0.954898	0.052304	0.007617	0.001698	0.0011	0.40103	0.051803	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs7127528	1.9506E-08	0.0294873	0.00525	0.0315924	0.006681	3.55005E-08	0.0327	0.954919	0.052335	0.007604	0.001698	0.0011	0.40101	0.051792	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs56127569	1.9509E-08	-0.030925	0.00551	-0.031132	0.006616	3.52433E-08	0.54872	0.974523	8.79E-06	0.066639	0.172235	0.0264	0.01742	0.04723	0.697	0.765	1	0.932	0.901	0.914	0.964	0.93
rs7926312	1.951E-08	0.0294871	0.00525	0.0315909	0.00668	3.55071E-08	0.0327	0.954896	0.052311	0.00762	0.001698	0.0011	0.40103	0.051804	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs6796850	1.9516E-08	-0.041843	0.00745	-0.043246	0.009313	3.55175E-08	0.0939	0.59099	0.000124	0.482119	0.014868	0.00595	0.00387	0.770271	0.906	0.814	1	0.575	0.974	0.98	0.979	0.782
rs10893644	1.9519E-08	-0.029151	0.00519	-0.028968	0.007066	2.6385E-08	0.92678	0.15148	0.014121	0.658303	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.913	0.367	0.846	1	0.899	0.921
rs12806028	1.9519E-08	-0.029151	0.00519	-0.028968	0.007066	2.6385E-08	0.92678	0.15148	0.014121	0.658303	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.913	0.367	0.846	1	0.899	0.921
rs145542883	1.9522E-08	-0.070914	0.01263	-0.070914	0.012627	3.55272E-08	0.09776	0.425	0.002625	0.054638	0.534456	0.0001	0.30768	0.33421	0.919	0.865	0.996	0.955	0.812	1	0.882	0.878
rs10893639	1.9523E-08	-0.02915	0.00519	-0.028967	0.007067	2.639E-08	0.92636	0.15148	0.014121	0.658093	0.194891	1.1E-06	0.09624	0.029439	0.673	0.858	0.913	0.367	0.846	1	0.899	0.921
rs191068023	1.9524E-08	0.077471	0.01379	0.0763112	0.026733	3.55304E-08	0.05932	0.000337	0.01107	0.000251	0.20561	0.0011	0.43127	0.974886	0.477	0.975	0.973	0.999	0.873	0.997	0.813	0.722
rs35017949	1.9527E-08	0.0294863	0.00525	0.031591	0.006681	3.55352E-08	0.03269	0.954898	0.052341	0.007611	0.001699	0.0011	0.40105	0.051803	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs7113099	1.953E-08	0.0294862	0.00525	0.0315907	0.006681	3.55402E-08	0.0327	0.954905	0.052345	0.007615	0.001699	0.0011	0.40104	0.0518	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs662511	1.9535E-08	-0.029152	0.00519	-0.028956	0.007085	2.64784E-08	0.90094	0.151244	0.014075	0.653235	0.195369	1.1E-06	0.0964	0.029363	0.668	0.858	0.914	0.37	0.846	1	0.899	0.921
rs719504	1.9538E-08	0.0287773	0.00512	0.0287773	0.005124	3.55517E-08	0.22761	0.020005	0.005645	0.033342	0.152759	0.00048	0.93269	0.061124	0.904	0.951	0.993	0.976	0.93	0.999	0.774	0.94
rs142861910	1.954E-08	0.0294857	0.00525	0.03159	0.00668	3.5556E-08	0.0327	0.954898	0.052341	0.007617	0.001699	0.0011	0.40105	0.051803	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs1892981	1.954E-08	0.0294857	0.00525	0.03159	0.00668	3.5556E-08	0.0327	0.954898	0.052341	0.007617	0.001699	0.0011	0.40105	0.051803	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943

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rs7945073	1.9541E-08	0.0294857	0.00525	0.0315899	0.00668	3.55565E-08	0.0327	0.954899	0.052341	0.007617	0.001699	0.0011	0.40105	0.051803	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs1940699	1.9543E-08	0.0294856	0.00525	0.0315897	0.00668	3.55605E-08	0.0327	0.954898	0.052341	0.00762	0.001699	0.0011	0.40105	0.051803	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs1320670	1.9543E-08	0.0294856	0.00525	0.0315899	0.00668	3.55605E-08	0.0327	0.954898	0.052343	0.007617	0.001699	0.0011	0.40105	0.051803	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs9919620	1.9547E-08	0.0294854	0.00525	0.0315895	0.00668	3.55667E-08	0.0327	0.954894	0.052348	0.00762	0.001699	0.0011	0.40106	0.051804	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs1940733	1.9548E-08	0.0294853	0.00525	0.0315895	0.00668	3.55689E-08	0.0327	0.954894	0.052349	0.00762	0.001699	0.0011	0.40106	0.051804	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs578101397	1.9553E-08	-0.091331	0.01626	-0.091331	0.016263	3.55768E-08	0.30557	0.142279	0.010256	0.182329	0.089888	2.4E-05	0.06863	0.957595	0.881	0.908	0.981	0.856	0.942	1	0.944	0.791
rs3131344	1.9561E-08	-0.049394	0.0088	-0.053932	0.01433	3.55892E-08	0.01334	0.91378	0.001435	0.003513	0.709884	0.0067	0.05434	0.004104	0.948	0.757	0.998	0.995	0.541	0.984	0.946	0.963
rs6773417	1.9569E-08	0.0302927	0.00539	0.0335557	0.008979	1.03065E-08	0.74704	0.425442	0.077674	7.43E-07	0.0064	0.00963	0.14274	0.755855	0.701	0.767	0.614	1	0.976	0.811	0.848	0.594
rs35905694	1.957E-08	0.0418234	0.00745	0.0433506	0.009568	3.56035E-08	0.10031	0.594669	0.000125	0.471768	0.01428	0.00554	0.00333	0.918211	0.902	0.811	1	0.577	0.974	0.981	0.98	0.754
rs1893537	1.9572E-08	0.0317486	0.00565	0.0317486	0.005654	3.56068E-08	0.27532	0.500812	0.00183	0.017049	0.961768	0.00178	0.02742	0.014259	0.886	0.855	0.997	0.984	0.664	0.997	0.962	0.956
rs656058	1.9573E-08	-0.029149	0.00519	-0.028965	0.007071	2.64281E-08	0.92664	0.151626	0.014107	0.659298	0.19543	1.1E-06	0.09619	0.02942	0.672	0.858	0.913	0.366	0.846	1	0.899	0.921
rs4524298	1.9581E-08	0.04182	0.00745	0.0433703	0.00959	3.56207E-08	0.09847	0.594669	0.000125	0.473405	0.01428	0.00554	0.00333	0.918211	0.903	0.811	1	0.576	0.974	0.981	0.98	0.754
rs1954908	1.9581E-08	0.0317482	0.00565	0.0317482	0.005654	3.56208E-08	0.27527	0.500824	0.001831	0.017039	0.961698	0.00178	0.02743	0.01426	0.886	0.855	0.997	0.984	0.664	0.997	0.962	0.956
rs7188399	1.9582E-08	-0.028322	0.00504	-0.028322	0.005043	3.56226E-08	0.73518	0.069465	0.003512	0.015023	0.591477	0.00056	0.51102	0.010501	0.83	0.927	0.995	0.986	0.801	0.999	0.844	0.959
rs1416090	1.9597E-08	-0.030936	0.00551	-0.034031	0.007094	2.8626E-08	0.02763	0.509506	0.000319	0.007981	0.021423	0.15131	0.01883	0.120498	0.943	0.831	0.999	0.989	0.974	0.461	0.969	0.912
rs4638990	1.9599E-08	-0.041821	0.00745	-0.043365	0.009585	3.56493E-08	0.09899	0.594674	0.000125	0.473329	0.014281	0.00554	0.00333	0.918214	0.903	0.811	1	0.576	0.974	0.981	0.98	0.754
rs6548805	1.9599E-08	-0.041821	0.00745	-0.043365	0.009585	3.56493E-08	0.09899	0.594674	0.000125	0.473329	0.014281	0.00554	0.00333	0.918214	0.903	0.811	1	0.576	0.974	0.981	0.98	0.754
rs6801380	1.9599E-08	-0.041821	0.00745	-0.043365	0.009585	3.56493E-08	0.09899	0.594674	0.000125	0.473329	0.014281	0.00554	0.00333	0.918214	0.903	0.811	1	0.576	0.974	0.981	0.98	0.754
rs13120249	1.961E-08	0.052256	0.00931	0.0542366	0.011116	3.56671E-08	0.6079	0.109828	0.023333	0.014133	0.00472	0.0012	0.00673	0.963126	0.746	0.919	0.959	0.987	0.987	0.998	0.98	0.799
rs12905867	1.9622E-08	0.0283879	0.00506	0.0287666	0.005539	3.56861E-08	0.28236	0.493276	0.000444	0.002525	0.002816	0.02827	0.22856	0.360757	0.872	0.841	0.999	0.996	0.988	0.915	0.889	0.638
rs7558946	1.9622E-08	0.0289686	0.00516	0.0289686	0.005159	3.56871E-08	0.01043	0.141709	0.011097	0.021181	0.375941	0.0002	0.46956	0.3784	0.958	0.917	0.985	0.983	0.87	1	0.863	0.884
rs648646	1.9625E-08	-0.029146	0.00519	-0.028963	0.007056	2.66395E-08	0.92631	0.1515	0.014189	0.655233	0.195108	1.1E-06	0.09635	0.029453	0.673	0.858	0.913	0.369	0.846	1	0.899	0.921
rs1100100	1.9629E-08	-0.030569	0.00544	-0.030569	0.005444	3.56978E-08	0.69263	0.438686	0.037614	0.000584	0.027121	0.00053	0.58806	0.23199	0.829	0.861	0.917	0.998	0.969	0.999	0.821	0.893
rs2866486	1.9644E-08	-0.028973	0.00516	-0.029149	0.005307	3.57216E-08	0.55072	0.329608	0.015975	0.000153	0.008124	0.00667	0.10116	0.659176	0.727	0.878	0.97	0.999	0.983	0.987	0.934	0.833
rs4294596	1.9652E-08	0.0294805	0.00525	0.0315834	0.00668	3.57341E-08	0.03271	0.954799	0.052466	0.007638	0.001701	0.0011	0.40129	0.051856	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs7113596	1.9652E-08	0.0294805	0.00525	0.0315834	0.00668	3.57341E-08	0.03271	0.954799	0.052466	0.007638	0.001701	0.0011	0.40129	0.051856	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs7108081	1.9653E-08	0.0294804	0.00525	0.0315641	0.006669	3.57354E-08	0.03275	0.954761	0.051901	0.007795	0.001699	0.0011	0.40129	0.051861	0.946	0.801	0.888	0.992	0.992	0.998	0.872	0.943
rs10732853	1.9653E-08	0.0294804	0.00525	0.0315833	0.00668	3.57356E-08	0.03271	0.954799	0.052466	0.007638	0.001701	0.0011	0.4013	0.051856	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs1781032	1.9657E-08	-0.028318	0.00504	-0.028318	0.005043	3.57422E-08	0.55889	0.258322	0.001648	0.14252	0.170094	0.00098	0.00367	0.39895	0.86	0.897	0.998	0.901	0.924	0.999	0.983	0.88
rs75716805	1.9659E-08	-0.041815	0.00745	-0.04336	0.009586	3.5746E-08	0.09914	0.594674	0.000125	0.473799	0.014281	0.00554	0.00333	0.918214	0.903	0.811	1	0.575	0.974	0.981	0.98	0.754
rs1100098	1.9664E-08	-0.030609	0.00545	-0.030609	0.005451	3.57533E-08	0.67298	0.438688	0.03504	0.000545	0.026564	0.00062	0.59461	0.24272	0.833	0.862	0.925	0.998	0.97	0.999	0.821	0.892
rs555649	1.9671E-08	-0.028621	0.0051	-0.029679	0.006553	3.57643E-08	0.02585	0.058253	0.006198	0.111555	0.997158	0.00023	0.08102	0.020693	0.946	0.933	0.991	0.915	0.686	1	0.943	0.953
rs3015417	1.9674E-08	0.050569	0.00901	0.0501429	0.009295	3.57697E-08	0.61382	0.381999	3.51E-06	0.104623	0.200465	0.00116	0.24734	0.941192	0.621	0.57	1	0.853	0.842	0.996	0.827	0.669
rs74885736	1.9683E-08	-0.041814	0.00745	-0.043354	0.009582	3.57844E-08	0.09961	0.594674	0.000125	0.473761	0.014281	0.00554	0.00333	0.918214	0.903	0.811	1	0.575	0.974	0.981	0.98	0.754
rs4708971	1.9685E-08	0.0317434	0.00565	0.0317434	0.005654	3.5787E-08	0.27811	0.50085	0.001829	0.01714	0.961614	0.00178	0.0274	0.014264	0.885	0.855	0.997	0.984	0.664	0.997	0.962	0.956
rs9465338	1.9692E-08	0.0384449	0.00685	0.0401876	0.009668	3.57978E-08	0.04729	0.156869	0.058064	0.000407	0.016868	0.00034	0.40488	0.505806	0.916	0.878	0.784	0.999	0.97	0.999	0.478	0.808
rs7280197	1.9704E-08	-0.029437	0.00524	-0.030284	0.005649	3.58168E-08	0.03837	0.068401	0.012994	0.022221	0.003377	0.01231	0.06097	0.205301	0.955	0.947	0.986	0.986	0.991	0.984	0.963	0.928
rs2316638	1.9719E-08	-0.044082	0.00785	-0.044082	0.007852	3.5842E-08	0.46363	0.797164	6.7E-06	0.102815	0.251383	0.00147	0.2891	0.437971	0.629	0.693	1	0.878	0.844	0.996	0.838	0.808
rs12491913	1.9723E-08	-0.041811	0.00745	-0.043357	0.009589	3.58473E-08	0.09923	0.594674	0.000125	0.474558	0.014281	0.00554	0.00333	0.918214	0.903	0.811	1	0.575	0.974	0.981	0.98	0.754
rs28416064	1.9723E-08	-0.041811	0.00745	-0.043357	0.009589	3.58473E-08	0.09923	0.594674	0.000125	0.474558	0.014281	0.00554	0.00333	0.918214	0.903	0.811	1	0.575	0.974	0.981	0.98	0.754
rs3785194	1.9725E-08	-0.030739	0.00547	-0.032976	0.009565	3.58506E-08	0.17231	0.092461	0.000929	0.168138	0.475894	0.00108	0.00028	0.047146	0.579	0.906	0.998	0.838	0.795	0.998	0.99	0.928
rs2666428	1.9732E-08	0.0288524	0.00514	0.0279782	0.007432	3.58625E-08	0.06103	0.097875	0.017414	0.021845	0.068088	9.2E-06	0.1787	0.761768	0.905	0.89	0.942	0.971	0.933	1	0.36	0.757
rs11367878	1.9734E-08	-0.029141	0.00519	-0.028958	0.007075	2.66332E-08	0.92676	0.15148	0.01412	0.661557	0.194891	1.1E-06	0.09624	0.029439	0.672	0.858	0.913	0.364	0.846	1	0.899	0.921
rs1588603	1.9734E-08	-0.031684	0.00564	-0.031684	0.005643	3.58649E-08	0.09993	0.22373	0.003714	0.042397	0.225968	0.002	0.003	0.841933	0.93	0.909	0.996	0.972	0.915	0.998	0.985	0.835
rs597155	1.9736E-08	-0.029141	0.00519	-0.028957	0.007076	2.66497E-08	0.92408	0.15148	0.01412	0.660746	0.194891	1.1E-06	0.09624	0.029439	0.672	0.858	0.913	0.365	0.846	1	0.899	0.92
rs9459195	1.9742E-08	0.0292304	0.00521	0.0292304	0.005206	3.58782E-08	0.24593	0.667478	0.002733	0.00423	0.296573	0.00186	0.04467	0.867797	0.895	0.843	0.997	0.995	0.885	0.997	0.956	0.814
rs2059250	1.9748E-08	-0.028316	0.00504	-0.028316	0.005044	3.58876E-08	0.73527	0.070179	0.003458	0.015067	0.593229	0.00057	0.50977	0.010582	0.83	0.927	0.995	0.986	0.801	0.999	0.844	0.959
rs999851	1.9752E-08	0.0294759	0.00525	0.031577	0.006679	3.58934E-08	0.0327	0.954799	0.052466	0.007687	0.001701	0.0011	0.4013	0.051856	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs889941779	1.9753E-08	0.0294763	0.00525	0.0315797	0.006681	3.58952E-08	0.03264	0.954799	0.052466	0.007691	0.001701	0.0011	0.40129	0.051856	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs2212449	1.9753E-08	0.0294763	0.00525	0.0316285	0.006709	3.58953E-08	0.03228	0.953234	0.052834	0.007689	0.001669	0.00111	0.3989	0.051534	0.946	0.801	0.885	0.992	0.992	0.998	0.872	0.943
rs141320484	1.9756E-08	-0.084947	0.01513	-0.084947	0.015131	3.58999E-08	0.5522	0.903572	0.00225	0.003504	0.059767	0.00485	0.10971	0.258141	0.861	0.798	0.997	0.995	0.959	0.993	0.938	0.9
rs9919670	1.9761E-08	0.0294756	0.00525	0.0315741	0.006677	3.59075E-08	0.03276	0.954705	0.052455	0.0077	0.001701	0.0011	0.39999	0.051883	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs9832657	1.9762E-08	-0.041595	0.00741	-0.042347	0.008588	3.59097E-08	0.09869	0.60906	0.000107	0.475027	0.017492	0.00565	0.00587	0.722657	0.905	0.813	1	0.585	0.972	0.982	0.976	0.791
rs62411779	1.9765E-08	-0.028347	0.00505	-0.028347	0.005049	3.59139E-08	0.04056	0.068933	0.006653	0.022712	0.72936	0.00021	0.09869	0.906557	0.937	0.927	0.99	0.98	0.762	1	0.936	0.802
rs11854838	1.9767E-08	-0.029321	0.00522	-0.029321	0.005223	3.59173E-08	0.09902	0.723109	0.00442	0.047747	0.824843	6.6E-05	0.04487	0.510868	0.911	0.815	0.993	0.957	0.714	1	0.949	0.841

Table S3

rs4631770	1.977E-08	0.0500928	0.00892	0.0665175	0.01733	7.62998E-09	0.00275	0.097523	0.104252	3.34E-06	0.140209	0.01915	0.41458	0.030859	0.964	0.878	0.452	1	0.789	0.604	0.68	0.93
rs2075523	1.9776E-08	-0.068536	0.01221	-0.068536	0.012208	3.59315E-08	0.51574	0.62248	2.8E-05	0.046317	0.481411	0.00128	0.69817	0.074542	0.806	0.791	1	0.943	0.771	0.997	0.588	0.906
rs112973964	1.9777E-08	-0.029139	0.00519	-0.028954	0.007079	2.67066E-08	0.92164	0.15148	0.01412	0.660652	0.194891	1.1E-06	0.09624	0.029439	0.671	0.858	0.913	0.365	0.846	1	0.899	0.92
rs3924038	1.9785E-08	0.0296806	0.00529	0.0296806	0.005287	3.59464E-08	0.70337	0.417077	0.011387	0.022047	0.192374	0.00029	0.05881	0.101507	0.851	0.883	0.985	0.983	0.922	1	0.955	0.931
rs9309898	1.9787E-08	-0.041594	0.00741	-0.042344	0.008585	3.59502E-08	0.09882	0.608998	0.000107	0.474776	0.01748	0.00566	0.00588	0.722591	0.905	0.813	1	0.585	0.972	0.982	0.976	0.791
rs2186707	1.9787E-08	0.0294747	0.00525	0.0316272	0.006709	3.59505E-08	0.03228	0.953234	0.05287	0.007689	0.00167	0.00111	0.39893	0.051534	0.946	0.801	0.885	0.992	0.992	0.998	0.872	0.943
rs2155284	1.9788E-08	0.0294747	0.00525	0.0316272	0.006709	3.59511E-08	0.03228	0.953234	0.05287	0.007689	0.00167	0.00111	0.39893	0.051534	0.946	0.801	0.885	0.992	0.992	0.998	0.872	0.943
rs10750019	1.9788E-08	0.0294742	0.00525	0.0315727	0.006678	3.59511E-08	0.03276	0.954799	0.052466	0.0077	0.001701	0.0011	0.40129	0.051856	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs1940697	1.9788E-08	0.0294742	0.00525	0.0315727	0.006678	3.59511E-08	0.03276	0.954799	0.052466	0.0077	0.001701	0.0011	0.40129	0.051856	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs4589334	1.9788E-08	0.0294742	0.00525	0.0315727	0.006678	3.59511E-08	0.03276	0.954799	0.052466	0.0077	0.001701	0.0011	0.40129	0.051856	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs7118907	1.9788E-08	0.0294742	0.00525	0.0315727	0.006678	3.59511E-08	0.03276	0.954799	0.052466	0.0077	0.001701	0.0011	0.40129	0.051856	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs9919557	1.9788E-08	0.0294742	0.00525	0.0315727	0.006678	3.59511E-08	0.03276	0.954799	0.052466	0.0077	0.001701	0.0011	0.40129	0.051856	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs9919558	1.9788E-08	0.0294742	0.00525	0.0315727	0.006678	3.59511E-08	0.03276	0.954799	0.052466	0.0077	0.001701	0.0011	0.40129	0.051856	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs10736463	1.9789E-08	0.0294746	0.00525	0.0316272	0.006709	3.59526E-08	0.03228	0.953234	0.05287	0.007689	0.00167	0.00111	0.39893	0.051534	0.946	0.801	0.885	0.992	0.992	0.998	0.872	0.943
rs1940726	1.9789E-08	0.0294746	0.00525	0.0316272	0.006709	3.59526E-08	0.03228	0.953234	0.05287	0.007689	0.00167	0.00111	0.39893	0.051534	0.946	0.801	0.885	0.992	0.992	0.998	0.872	0.943
rs1954826	1.9789E-08	0.0294746	0.00525	0.0316272	0.006709	3.59526E-08	0.03228	0.953234	0.05287	0.007689	0.00167	0.00111	0.39893	0.051534	0.946	0.801	0.885	0.992	0.992	0.998	0.872	0.943
rs9837922	1.9789E-08	-0.041594	0.00741	-0.042344	0.008586	3.59529E-08	0.09869	0.609065	0.000107	0.475027	0.017492	0.00565	0.00588	0.722661	0.905	0.813	1	0.585	0.972	0.982	0.976	0.791
rs7127712	1.9792E-08	0.0294741	0.00525	0.0315725	0.006678	3.59573E-08	0.03276	0.954799	0.052466	0.007702	0.001701	0.0011	0.40129	0.051856	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs7127930	1.9792E-08	0.0294741	0.00525	0.0315725	0.006678	3.59573E-08	0.03276	0.954799	0.052466	0.007702	0.001701	0.0011	0.40129	0.051856	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs723599	1.9792E-08	0.029474	0.00525	0.0315724	0.006677	3.59577E-08	0.03276	0.954799	0.052466	0.007702	0.001701	0.0011	0.4013	0.051856	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs6783087	1.9794E-08	-0.041593	0.00741	-0.042344	0.008586	3.59607E-08	0.09869	0.609095	0.000107	0.474946	0.017493	0.00565	0.00588	0.722695	0.905	0.813	1	0.585	0.972	0.982	0.976	0.791
rs6773283	1.9797E-08	-0.041593	0.00741	-0.042344	0.008587	3.59659E-08	0.09869	0.60906	0.000107	0.474983	0.017504	0.00566	0.00587	0.722663	0.905	0.813	1	0.585	0.972	0.982	0.976	0.791
rs6548812	1.98E-08	-0.041593	0.00741	-0.042344	0.008587	3.59712E-08	0.09869	0.60906	0.000107	0.475027	0.017504	0.00566	0.00587	0.722663	0.905	0.813	1	0.585	0.972	0.982	0.976	0.791
rs10891487	1.9801E-08	0.0294737	0.00525	0.0315664	0.006675	3.59723E-08	0.03274	0.954822	0.052303	0.007778	0.0017	0.0011	0.40123	0.051857	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs1940725	1.9802E-08	0.029474	0.00525	0.0316267	0.00671	3.59731E-08	0.03228	0.953234	0.05288	0.007689	0.00167	0.00111	0.39895	0.051534	0.946	0.801	0.885	0.992	0.992	0.998	0.872	0.943
rs9309897	1.9803E-08	-0.041593	0.00741	-0.042342	0.008585	3.59752E-08	0.09878	0.60908	0.000107	0.474936	0.017494	0.00566	0.00588	0.722702	0.905	0.813	1	0.585	0.972	0.982	0.976	0.791
rs5779918	1.9808E-08	0.0291841	0.0052	0.0297355	0.007542	3.59828E-08	0.30572	0.066992	0.000355	0.000434	0.08049	0.02548	0.25568	0.071946	0.859	0.512	0.999	0.998	0.935	0.914	0.873	0.917
rs9309896	1.9809E-08	-0.041593	0.00741	-0.042345	0.008588	3.59849E-08	0.09868	0.608756	0.000107	0.474976	0.017461	0.00566	0.00588	0.723598	0.905	0.813	1	0.585	0.972	0.982	0.976	0.791
rs7989692	1.9809E-08	-0.028484	0.00507	-0.028484	0.005074	3.5985E-08	0.40508	0.584572	0.001016	0.028173	0.818566	0.00028	0.18006	0.213058	0.855	0.831	0.998	0.973	0.715	0.999	0.903	0.888
rs7195797	1.9811E-08	-0.028313	0.00504	-0.028313	0.005044	3.59883E-08	0.73382	0.069368	0.003428	0.015446	0.591894	0.00057	0.51109	0.010512	0.83	0.927	0.995	0.986	0.801	0.999	0.844	0.959
rs2793657	1.9811E-08	0.0288491	0.00514	0.0279741	0.00743	3.59886E-08	0.06109	0.09802	0.017417	0.021886	0.068118	9.2E-06	0.17871	0.762031	0.905	0.89	0.942	0.971	0.933	1	0.36	0.757
rs71324962	1.9812E-08	-0.028619	0.0051	-0.028619	0.005098	3.59891E-08	0.6569	0.101112	0.023071	0.105649	0.020225	5.5E-06	0.37818	0.687449	0.811	0.903	0.939	0.896	0.969	1	0.845	0.704
rs6564809	1.9812E-08	0.0284765	0.00507	0.0275234	0.00631	3.59901E-08	0.61937	0.623026	0.000406	0.668001	0.01992	2.4E-05	0.75436	0.057303	0.708	0.555	0.998	0.295	0.952	1	0.616	0.88
rs2027439	1.9814E-08	0.0288327	0.00514	0.0282598	0.006952	3.59932E-08	0.05176	0.101447	0.017085	0.020326	0.081645	1.3E-05	0.23644	0.70823	0.913	0.893	0.948	0.974	0.929	1	0.409	0.776
rs10507124	1.9822E-08	0.0336973	0.006	0.0336973	0.006003	3.60062E-08	0.94202	0.917651	0.032202	9.75E-05	0.071526	0.00348	0.02913	0.141836	0.787	0.786	0.934	0.999	0.95	0.993	0.962	0.913
rs4439550	1.9824E-08	0.0294731	0.00525	0.0316237	0.006708	3.60085E-08	0.03233	0.953234	0.05287	0.007702	0.00167	0.00111	0.39893	0.051534	0.946	0.801	0.885	0.992	0.992	0.998	0.872	0.943
rs7950836	1.983E-08	0.0294724	0.00525	0.0315676	0.006676	3.60175E-08	0.03274	0.954729	0.052346	0.007786	0.001697	0.0011	0.40129	0.051859	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs1940720	1.9831E-08	0.0294724	0.00525	0.0315675	0.006676	3.60193E-08	0.03274	0.954734	0.052342	0.007786	0.001697	0.0011	0.40129	0.051859	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs4466874	1.9831E-08	0.0294729	0.00525	0.031518	0.006644	3.60204E-08	0.03445	0.954749	0.052354	0.007621	0.001699	0.0011	0.40129	0.051862	0.945	0.801	0.886	0.992	0.992	0.998	0.872	0.942
rs1449862	1.9833E-08	-0.041805	0.00745	-0.043358	0.009599	3.60225E-08	0.09901	0.594674	0.000125	0.476447	0.014281	0.00554	0.00333	0.918222	0.903	0.81	1	0.573	0.974	0.981	0.979	0.753
rs1494958	1.9835E-08	-0.02877	0.00513	-0.02877	0.005125	3.60256E-08	0.11643	0.249705	0.000793	0.014399	0.997369	0.00066	0.11724	0.954882	0.902	0.874	0.999	0.984	0.645	0.999	0.918	0.766
rs1940702	1.9836E-08	0.029472	0.00525	0.0315652	0.006675	3.60284E-08	0.03274	0.954822	0.052339	0.007778	0.001701	0.0011	0.40126	0.051857	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs1940701	1.9836E-08	0.029472	0.00525	0.0315652	0.006675	3.60285E-08	0.03274	0.954822	0.052339	0.007778	0.001701	0.0011	0.40126	0.051857	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs11294071	1.984E-08	-0.041806	0.00745	-0.043348	0.009588	3.60343E-08	0.09989	0.594674	0.000125	0.475763	0.014281	0.00554	0.00333	0.918214	0.902	0.81	1	0.574	0.974	0.981	0.979	0.754
rs10893642	1.9844E-08	-0.029137	0.00519	-0.028946	0.007028	2.70877E-08	0.92621	0.151811	0.01406	0.651899	0.196535	1.1E-06	0.09695	0.029591	0.674	0.858	0.915	0.373	0.846	1	0.899	0.921
rs1953329	1.9846E-08	-0.028296	0.00504	-0.028296	0.005041	3.60431E-08	0.5461	0.27222	0.001578	0.140511	0.177484	0.001	0.00373	0.400088	0.862	0.895	0.998	0.902	0.921	0.999	0.983	0.879
rs1940716	1.9846E-08	0.0294717	0.00525	0.0315657	0.006675	3.60432E-08	0.03274	0.954746	0.052343	0.007787	0.001699	0.0011	0.40129	0.051862	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs2155282	1.9846E-08	0.0294717	0.00525	0.0315657	0.006675	3.60432E-08	0.03274	0.954746	0.052343	0.007787	0.001699	0.0011	0.40129	0.051862	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs9827304	1.9851E-08	-0.041589	0.00741	-0.042339	0.008584	3.60523E-08	0.09894	0.60912	0.000107	0.475462	0.017485	0.00566	0.00588	0.721208	0.905	0.813	1	0.585	0.972	0.982	0.976	0.791
rs7121047	1.9858E-08	0.0294711	0.00525	0.0315654	0.006676	3.60622E-08	0.03274	0.954749	0.052354	0.007787	0.001699	0.0011	0.40129	0.051862	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs4381397	1.9865E-08	0.0294708	0.00525	0.0315653	0.006676	3.60733E-08	0.03274	0.954749	0.052363	0.007787	0.001699	0.0011	0.40129	0.051862	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs1940727	1.987E-08	0.0294715	0.00525	0.0316317	0.006715	3.60814E-08	0.032	0.953234	0.05287	0.007753	0.00167	0.00111	0.39893	0.051534	0.946	0.801	0.885	0.992	0.992	0.998	0.872	0.943
rs1762470	1.9871E-08	-0.028311	0.00504	-0.028311	0.005044	3.60842E-08	0.56056	0.256163	0.001665	0.143317	0.168772	0.00098	0.00367	0.402706	0.86	0.898	0.998	0.901	0.924	0.999	0.983	0.879
rs11606353	1.9874E-08	0.0326087	0.00581	0.0316089	0.007983	3.17949E-08	0.73137	0.027438	0.004969	0.605824	0.029678	2.3E-06	0.73411	0.323274	0.611	0.904	0.973	0.374	0.946	1	0.657	0.797
rs144124893	1.9892E-08	0.0957763	0.01706	0.0957763	0.017064	3.61176E-08	0.95564	0.259144	0.000562	0.006675	0.359033	0.00061	0.95318	0.353004	0.751	0.862	0.999	0.99	0.835	0.999	0.692	0.848

Table S3

rs4953248	1.9914E-08	-0.029663	0.00528	-0.029663	0.005285	3.61516E-08	0.9914	0.096133	0.011505	0.01916	0.085268	0.00076	0.00891	0.691587	0.814	0.928	0.985	0.985	0.952	0.999	0.978	0.847
rs3741194	1.992E-08	-0.031521	0.00562	-0.039032	0.009909	2.5745E-08	0.26281	0.011715	0.001285	0.0844	1.88E-05	0.04262	0.09968	0.872359	0.893	0.957	0.991	0.925	0.998	0.878	0.936	0.809
rs1805414	1.992E-08	0.0288279	0.00514	0.0282558	0.006951	3.61617E-08	0.05177	0.101463	0.017096	0.020333	0.081648	1.3E-05	0.23639	0.708279	0.913	0.893	0.948	0.974	0.929	1	0.409	0.776
rs592799	1.9924E-08	0.030003	0.00535	0.0356913	0.008186	2.56947E-08	0.24884	0.331142	0.000241	0.020649	0.049206	0.1667	0.00245	0.008315	0.875	0.858	0.999	0.971	0.956	0.419	0.986	0.964
rs10121358	1.9933E-08	0.0304564	0.00543	0.0313916	0.007994	3.61827E-08	0.40419	0.171399	0.000136	0.002988	0.971098	0.01984	0.03801	0.009748	0.637	0.88	1	0.995	0.603	0.926	0.948	0.951
rs1341329	1.9938E-08	-0.028478	0.00507	-0.028478	0.005074	3.61901E-08	0.40453	0.584572	0.001016	0.028395	0.818566	0.00028	0.18006	0.213058	0.855	0.831	0.998	0.973	0.716	0.999	0.903	0.888
rs7322214	1.9938E-08	-0.028478	0.00507	-0.028478	0.005074	3.61901E-08	0.40453	0.584572	0.001016	0.028395	0.818566	0.00028	0.18006	0.213058	0.855	0.831	0.998	0.973	0.716	0.999	0.903	0.888
rs7328618	1.9938E-08	-0.028478	0.00507	-0.028478	0.005074	3.61901E-08	0.40453	0.584572	0.001016	0.028395	0.818566	0.00028	0.18006	0.213058	0.855	0.831	0.998	0.973	0.716	0.999	0.903	0.888
rs9508173	1.9938E-08	-0.028478	0.00507	-0.028478	0.005074	3.61901E-08	0.40453	0.584572	0.001016	0.028395	0.818566	0.00028	0.18006	0.213058	0.855	0.831	0.998	0.973	0.716	0.999	0.903	0.888
rs9467773	1.9941E-08	0.0286828	0.00511	0.0286828	0.005111	3.61949E-08	0.51467	0.583734	0.001261	0.002077	0.349607	0.01022	0.02856	0.239778	0.866	0.858	0.998	0.997	0.876	0.984	0.965	0.903
rs7115165	1.9954E-08	0.0294667	0.00525	0.0315587	0.006674	3.62181E-08	0.03275	0.954749	0.052354	0.007833	0.001699	0.0011	0.40129	0.051862	0.946	0.801	0.886	0.992	0.992	0.998	0.872	0.943
rs11717925	1.9957E-08	0.0417956	0.00745	0.0433511	0.009603	3.62237E-08	0.09924	0.594669	0.000125	0.477676	0.01428	0.00554	0.00333	0.918211	0.902	0.81	1	0.572	0.974	0.981	0.979	0.753
rs35741310	1.9957E-08	0.0417956	0.00745	0.0433511	0.009603	3.62237E-08	0.09924	0.594669	0.000125	0.477676	0.01428	0.00554	0.00333	0.918211	0.902	0.81	1	0.572	0.974	0.981	0.979	0.753
rs4339124	1.9957E-08	0.0417956	0.00745	0.0433511	0.009603	3.62237E-08	0.09924	0.594669	0.000125	0.477676	0.01428	0.00554	0.00333	0.918211	0.902	0.81	1	0.572	0.974	0.981	0.979	0.753
rs5850559	1.9957E-08	0.0417956	0.00745	0.0433511	0.009603	3.62237E-08	0.09924	0.594669	0.000125	0.477676	0.01428	0.00554	0.00333	0.918211	0.902	0.81	1	0.572	0.974	0.981	0.979	0.753
rs36099690	1.9963E-08	-0.028477	0.00507	-0.028477	0.005074	3.62366E-08	0.40453	0.584548	0.001016	0.028395	0.818712	0.00028	0.1802	0.213029	0.855	0.831	0.998	0.973	0.715	0.999	0.903	0.888
rs11383304	1.9966E-08	-0.028479	0.00507	-0.028479	0.005074	3.62422E-08	0.40453	0.591462	0.001007	0.028395	0.827221	0.00028	0.17878	0.216015	0.855	0.83	0.998	0.972	0.712	0.999	0.903	0.887
rs12643576	1.997E-08	-0.028822	0.00514	-0.028822	0.005135	3.62492E-08	0.18688	0.284806	0.001387	0.007587	0.943824	0.00047	0.07499	0.844541	0.879	0.86	0.997	0.989	0.609	0.999	0.93	0.72
rs623402	1.9981E-08	-0.02913	0.00519	-0.028946	0.007087	2.686E-08	0.92405	0.15148	0.014121	0.664529	0.194891	1.1E-06	0.09624	0.029439	0.671	0.857	0.913	0.362	0.846	1	0.899	0.92
rs10925552	1.9999E-08	0.0297036	0.00529	0.0297036	0.005293	3.63045E-08	0.66525	0.4465	0.010944	0.022788	0.189654	0.00031	0.06057	0.096119	0.856	0.88	0.986	0.983	0.923	1	0.955	0.933
rs113732309	2.0014E-08	0.0967207	0.01724	0.100986	0.023394	3.63325E-08	0.00235	0.805005	0.039226	0.112768	0.380795	2.4E-05	0.15545	0.035273	0.972	0.823	0.918	0.911	0.858	1	0.92	0.944
rs2586755	2.0032E-08	-0.03452	0.00615	-0.03452	0.006151	3.63668E-08	0.36335	0.004753	0.003572	0.010731	0.227637	0.00427	0.19217	0.25072	0.897	0.969	0.996	0.991	0.919	0.995	0.927	0.912
rs2105300	2.0033E-08	-0.028474	0.00507	-0.028474	0.005074	3.63694E-08	0.40466	0.584572	0.001017	0.028449	0.818693	0.00028	0.18008	0.213063	0.855	0.831	0.998	0.973	0.716	0.999	0.903	0.888
rs6490332	2.0033E-08	-0.028474	0.00507	-0.028474	0.005074	3.63694E-08	0.40466	0.584572	0.001017	0.028449	0.818693	0.00028	0.18008	0.213063	0.855	0.831	0.998	0.973	0.716	0.999	0.903	0.888
rs7645576	2.0045E-08	0.0417899	0.00745	0.0433454	0.009602	3.6392E-08	0.09925	0.594669	0.000125	0.477788	0.014288	0.00555	0.00333	0.918211	0.902	0.81	1	0.572	0.974	0.981	0.979	0.753
rs270799	2.0046E-08	-0.034744	0.00619	-0.036353	0.011951	3.09503E-09	0.98624	0.352219	0.683461	6.54E-05	0.033865	3.4E-06	0.03674	0.24542	0.529	0.329	0.007	1	0.931	1	0.921	0.766
rs112882590	2.0046E-08	-0.085064	0.01516	-0.085064	0.015159	3.63939E-08	0.61215	0.879577	0.001521	0.005309	0.042679	0.00554	0.1138	0.274981	0.853	0.794	0.998	0.994	0.965	0.992	0.936	0.896
rs12631263	2.006E-08	0.0417902	0.00745	0.0432752	0.009525	3.64201E-08	0.10017	0.594635	0.000124	0.46772	0.015051	0.00564	0.00333	0.918069	0.903	0.811	1	0.582	0.974	0.981	0.98	0.755
rs76663857	2.0068E-08	0.067511	0.01203	0.067511	0.012031	3.64348E-08	0.68489	0.551843	0.000183	0.040148	0.035506	0.00376	0.97479	0.058785	0.827	0.845	1	0.966	0.964	0.994	0.73	0.931
rs12795625	2.0077E-08	-0.055233	0.00984	-0.055233	0.009843	3.64529E-08	0.39726	0.020712	0.019528	0.002117	0.020573	0.00892	0.17411	0.115513	0.898	0.958	0.975	0.997	0.98	0.988	0.935	0.938
rs71486288	2.0085E-08	0.0325976	0.00581	0.0315928	0.007993	3.21742E-08	0.72971	0.027364	0.004969	0.607829	0.029731	2.3E-06	0.73453	0.323642	0.61	0.904	0.973	0.372	0.946	1	0.656	0.797
rs1417765	2.0086E-08	0.0288368	0.00514	0.0279599	0.007426	3.64691E-08	0.06142	0.098119	0.017423	0.022174	0.068117	9.2E-06	0.17884	0.762013	0.905	0.89	0.942	0.97	0.933	1	0.36	0.757
rs150562173	2.0105E-08	0.0369908	0.00659	0.0396879	0.00831	3.65048E-08	0.0158	0.033733	0.023263	0.193293	0.007741	0.00061	0.06895	0.327748	0.959	0.951	0.964	0.877	0.987	0.999	0.956	0.901
rs4785001	2.0111E-08	0.0314758	0.00561	0.0386144	0.008938	3.65165E-08	0.42454	0.194069	0.012744	0.027364	0.001223	0.01723	0.09187	0.000748	0.896	0.923	0.982	0.981	0.994	0.972	0.953	0.983
rs4325162	2.0131E-08	0.0299084	0.00533	0.0327805	0.010598	2.68624E-08	0.25739	0.025247	0.001708	8.16E-05	0.006398	0.06199	0.26197	0.014266	0.843	0.377	0.988	0.999	0.981	0.676	0.841	0.943
rs60889597	2.0133E-08	0.0412936	0.00736	0.0412936	0.00736	3.65574E-08	0.50051	0.394414	0.000855	0.015665	0.010112	0.0205	0.00826	0.889587	0.867	0.88	0.999	0.987	0.983	0.961	0.979	0.787
rs2787998	2.0163E-08	-0.030916	0.00551	-0.0341	0.007128	2.9193E-08	0.0291	0.49461	0.000329	0.008478	0.019356	0.15327	0.01756	0.125374	0.942	0.833	0.999	0.989	0.975	0.456	0.97	0.91
rs4439551	2.0176E-08	0.0294572	0.00525	0.031557	0.00668	3.66405E-08	0.03238	0.954749	0.052363	0.007973	0.001699	0.0011	0.40129	0.051862	0.946	0.801	0.887	0.992	0.992	0.998	0.872	0.943
rs9367434	2.0177E-08	-0.047784	0.00852	-0.047997	0.009654	3.66422E-08	0.98861	0.806847	0.00935	0.341011	0.000877	3.8E-05	0.1281	0.269276	0.74	0.773	0.972	0.665	0.991	1	0.905	0.859
rs71586302	2.0178E-08	-0.029446	0.00525	-0.030994	0.007064	3.66429E-08	0.02255	0.433681	0.04267	0.006827	0.652942	0.0002	0.00177	0.911692	0.943	0.855	0.889	0.991	0.76	1	0.985	0.784
rs2787997	2.0178E-08	-0.030915	0.00551	-0.034097	0.007127	2.92229E-08	0.02907	0.494649	0.000329	0.008487	0.019362	0.15323	0.01758	0.125491	0.942	0.833	0.999	0.989	0.975	0.456	0.97	0.91
rs2083264	2.0185E-08	-0.029312	0.00522	-0.032468	0.008191	2.52164E-08	0.09308	0.290951	0.176922	0.000811	0.001098	0.00029	0.16044	0.411429	0.883	0.819	0.366	0.998	0.992	0.998	0.868	0.503
rs107822	2.0186E-08	0.0323735	0.00577	0.0322105	0.007157	3.66585E-08	0.59941	0.593824	0.001962	0.671089	0.010055	4.1E-05	0.0183	0.377183	0.601	0.757	0.993	0.351	0.972	1	0.952	0.799
rs6023698	2.0204E-08	-0.031655	0.00564	-0.031655	0.005642	3.66932E-08	0.10661	0.235098	0.003822	0.038444	0.23951	0.00202	0.00273	0.861254	0.928	0.907	0.996	0.974	0.911	0.998	0.986	0.831
rs6981349	2.0204E-08	-0.038294	0.00683	-0.038294	0.006826	3.66933E-08	0.95168	0.859714	1.5E-05	0.276609	0.354787	0.00069	0.07985	0.543823	0.706	0.736	1	0.695	0.795	0.998	0.91	0.782
rs6014210	2.0208E-08	-0.031654	0.00564	-0.031654	0.005642	3.67005E-08	0.10652	0.235082	0.003822	0.038457	0.239572	0.00202	0.00273	0.860883	0.928	0.907	0.996	0.974	0.911	0.998	0.986	0.831
rs8001888	2.0209E-08	-0.028466	0.00507	-0.028466	0.005074	3.67026E-08	0.40524	0.584572	0.001016	0.028784	0.818566	0.00028	0.18006	0.213058	0.855	0.831	0.998	0.972	0.716	0.999	0.903	0.888
rs998456	2.0209E-08	-0.028466	0.00507	-0.028466	0.005074	3.67026E-08	0.40524	0.584572	0.001016	0.028784	0.818566	0.00028	0.18006	0.213058	0.855	0.831	0.998	0.972	0.716	0.999	0.903	0.888
rs190144610	2.0216E-08	-0.096106	0.01713	-0.096106	0.017131	3.67159E-08	0.05197	0.929842	0.000499	0.087859	0.248941	0.00114	0.03108	0.89535	0.932	0.805	0.999	0.932	0.893	0.998	0.96	0.801
rs1354257	2.0238E-08	-0.035648	0.00635	-0.035648	0.006354	3.67566E-08	0.37988	0.439782	4.6E-05	0.064443	0.02358	0.01332	0.22018	0.088852	0.869	0.704	1	0.947	0.971	0.971	0.901	0.924
rs57477959	2.0242E-08	-0.029099	0.00519	-0.030564	0.008291	3.67641E-08	0.00224	0.364198	0.006337	0.003074	0.611862	0.00149	0.00795	0.867086	0.963	0.662	0.989	0.995	0.768	0.997	0.974	0.784
rs331966	2.0245E-08	-0.029443	0.00525	-0.03099	0.007064	3.67711E-08	0.02258	0.434228	0.042687	0.006825	0.652874	0.0002	0.00177	0.911273	0.943	0.855	0.889	0.991	0.76	1	0.985	0.784
rs2747655	2.0246E-08	0.0374996	0.00668	0.0374996	0.006685	3.67717E-08	0.59892	0.312623	0.022357	0.207421	0.018065	1.6E-05	0.09078	0.418915	0.838	0.876	0.948	0.83	0.974	1	0.935	0.861
rs16930329	2.0247E-08	0.0366451	0.00653	0.0358859	0.008032	3.67741E-08	0.70598	0.19842	0.030763	0.010434	0.089692	7.5E-06	0.11765	0.207753	0.682	0.863	0.898	0.984	0.921	1	0.903	0.534
rs34860831	2.025E-08	-0.028745	0.00512	-0.028745	0.005124	3.67805E-08	0.11645	0.249424	0.000807	0.014473	0.995431	0.00066	0.11794	0.953009	0.902	0.874	0.999	0.984	0.646	0.999	0.918	0.766

Table S3

rs636521	2.0275E-08	0.0299857	0.00535	0.0356891	0.008194	2.60559E-08	0.25128	0.329976	0.00024	0.020688	0.048975	0.1683	0.00246	0.008293	0.874	0.858	0.999	0.971	0.956	0.414	0.986	0.964
rs3927739	2.0291E-08	-0.029197	0.0052	-0.029197	0.005205	3.68577E-08	0.64568	0.044594	0.021925	0.000993	0.080515	0.00199	0.07509	0.891769	0.854	0.941	0.966	0.998	0.953	0.997	0.949	0.821
rs114841437	2.0312E-08	-0.084899	0.01514	-0.084899	0.015135	3.68982E-08	0.55919	0.903504	0.002257	0.003544	0.059812	0.00487	0.10978	0.258239	0.86	0.798	0.997	0.995	0.959	0.993	0.938	0.9
rs10924507	2.0314E-08	-0.032435	0.00578	-0.033382	0.006393	2.68999E-08	0.13491	0.739608	0.000132	0.000682	0.081085	0.1765	0.10256	0.079396	0.885	0.753	1	0.998	0.925	0.339	0.912	0.91
rs140925373	2.0332E-08	-0.066979	0.01194	-0.066979	0.011941	3.69347E-08	0.28443	0.577348	1.32E-05	0.015684	0.576215	0.00529	0.77128	0.187122	0.851	0.803	1	0.979	0.747	0.986	0.617	0.874
rs139737667	2.0332E-08	-0.066979	0.01194	-0.066979	0.011941	3.69348E-08	0.28444	0.577345	1.32E-05	0.015685	0.576214	0.00529	0.77128	0.187122	0.851	0.803	1	0.979	0.747	0.986	0.617	0.874
rs200817567	2.0335E-08	-0.066979	0.01194	-0.066979	0.011941	3.69407E-08	0.28444	0.577349	1.32E-05	0.015685	0.576219	0.00529	0.77127	0.187122	0.851	0.803	1	0.979	0.747	0.986	0.617	0.874
rs60720443	2.0335E-08	-0.066979	0.01194	-0.066979	0.011941	3.69407E-08	0.28444	0.577349	1.32E-05	0.015685	0.576219	0.00529	0.77127	0.187122	0.851	0.803	1	0.979	0.747	0.986	0.617	0.874
rs150206070	2.0335E-08	-0.066979	0.01194	-0.066979	0.011941	3.69409E-08	0.28443	0.577352	1.32E-05	0.015684	0.576219	0.00529	0.77127	0.187126	0.851	0.803	1	0.979	0.747	0.986	0.617	0.874
rs150565382	2.0352E-08	-0.066977	0.01194	-0.066977	0.011941	3.69727E-08	0.28444	0.577359	1.32E-05	0.015685	0.576244	0.00529	0.77124	0.18713	0.851	0.803	1	0.979	0.747	0.986	0.617	0.874
rs1899670	2.0356E-08	-0.03449	0.00615	-0.03449	0.006149	3.69815E-08	0.37408	0.004815	0.003358	0.010509	0.237546	0.00442	0.19626	0.245872	0.895	0.969	0.997	0.992	0.916	0.995	0.926	0.913
rs1899669	2.0368E-08	-0.034489	0.00615	-0.034489	0.006149	3.70044E-08	0.3737	0.004813	0.003343	0.01051	0.238374	0.00444	0.19631	0.245406	0.895	0.969	0.997	0.992	0.916	0.995	0.926	0.913
rs9356057	2.0371E-08	0.0317244	0.00566	0.0317244	0.005656	3.70103E-08	0.27947	0.498141	0.00186	0.018146	0.967436	0.00171	0.02808	0.01472	0.885	0.855	0.997	0.983	0.667	0.997	0.962	0.955
rs6428437	2.0379E-08	0.0287133	0.00512	0.0287133	0.005119	3.70243E-08	0.44485	0.481809	0.000306	0.006214	0.052043	0.02565	0.07372	0.066629	0.867	0.723	0.999	0.993	0.96	0.941	0.945	0.934
rs6045173	2.0394E-08	-0.028677	0.00511	-0.028677	0.005113	3.69376E-08	0.29347	0.804149	3.74E-06	0.088772	0.116637	0.01912	0.46316	0.217092	0.875	0.808	1	0.922	0.927	0.95	0.84	0.89
rs682330	2.0394E-08	0.0299833	0.00535	0.0356793	0.008185	2.66995E-08	0.24738	0.334374	0.000255	0.02093	0.048875	0.16458	0.0024	0.008252	0.876	0.858	0.999	0.971	0.956	0.428	0.987	0.965
rs10806763	2.0402E-08	0.0317278	0.00566	0.0317278	0.005657	3.70685E-08	0.28204	0.495876	0.001964	0.016222	0.97414	0.00179	0.0288	0.014538	0.885	0.856	0.997	0.985	0.67	0.997	0.962	0.955
rs62084740	2.0403E-08	0.0378852	0.00675	0.0379996	0.008175	3.70699E-08	0.30982	0.010824	0.001016	0.023206	0.707634	0.0011	0.03215	0.3213	0.648	0.95	0.998	0.977	0.744	0.998	0.955	0.867
rs6589353	2.0428E-08	0.0294462	0.00525	0.0315157	0.006661	3.71183E-08	0.03322	0.954729	0.052347	0.008036	0.001697	0.0011	0.40129	0.051859	0.945	0.801	0.887	0.992	0.992	0.998	0.872	0.942
rs6815956	2.0438E-08	-0.028783	0.00513	-0.032202	0.007282	3.71371E-08	0.01105	0.492061	0.015179	0.051366	0.000309	0.00301	0.56711	0.085929	0.962	0.88	0.979	0.966	0.996	0.996	0.856	0.939
rs1552922	2.0443E-08	0.0285435	0.00509	0.0285435	0.00509	3.71471E-08	0.17938	0.783778	0.000818	0.036158	0.332793	0.00025	0.25264	0.916074	0.891	0.806	0.999	0.966	0.856	1	0.884	0.757
rs150110545	2.0451E-08	-0.066967	0.01194	-0.066967	0.011941	3.71611E-08	0.28445	0.577754	1.33E-05	0.015685	0.5761	0.0053	0.77159	0.186961	0.851	0.803	1	0.979	0.747	0.986	0.617	0.874
rs11220769	2.0461E-08	-0.029111	0.00519	-0.02893	0.007101	2.72673E-08	0.92691	0.15157	0.014176	0.670801	0.195102	1.1E-06	0.09643	0.029364	0.671	0.857	0.912	0.358	0.845	1	0.898	0.92
rs1510443	2.0472E-08	0.0306693	0.00547	0.0306693	0.005469	3.72005E-08	0.42633	0.024084	0.001624	0.211947	0.015781	0.00068	0.25726	0.65035	0.87	0.946	0.998	0.844	0.978	0.999	0.898	0.84
rs11214441	2.0476E-08	0.0294459	0.00525	0.0315668	0.006693	3.72086E-08	0.03259	0.953966	0.052727	0.007831	0.001681	0.00112	0.403	0.051863	0.946	0.801	0.886	0.992	0.992	0.998	0.871	0.942
rs5805962	2.0502E-08	0.0285286	0.00509	0.0285286	0.005087	3.72576E-08	0.18015	0.428264	0.003059	0.004153	0.240439	0.00386	0.4942	0.021132	0.914	0.882	0.997	0.995	0.909	0.995	0.864	0.957
rs209681	2.0516E-08	0.0398766	0.00711	0.0398766	0.007111	3.72843E-08	0.23533	0.480539	0.003798	0.028288	0.128231	0.00247	0.09224	0.030689	0.914	0.886	0.996	0.982	0.945	0.997	0.95	0.956
rs6718978	2.0516E-08	0.0294499	0.00525	0.0294499	0.005252	3.72853E-08	0.33441	0.01162	0.029201	0.001866	0.410375	0.00034	0.46137	0.239014	0.883	0.955	0.945	0.997	0.853	0.999	0.857	0.899
rs6069048	2.0534E-08	-0.031637	0.00564	-0.031637	0.005642	3.73193E-08	0.10673	0.23421	0.003798	0.038497	0.238125	0.00202	0.00292	0.861682	0.928	0.907	0.996	0.974	0.911	0.998	0.985	0.831
rs11718666	2.0543E-08	0.0376906	0.00672	0.0376906	0.006722	3.73359E-08	0.0742	0.155568	0.012812	0.005978	0.447047	0.00126	0.46065	0.006699	0.936	0.919	0.983	0.994	0.86	0.998	0.872	0.97
rs2787964	2.0549E-08	-0.030898	0.00551	-0.034076	0.007125	2.977E-08	0.02925	0.495243	0.00033	0.008501	0.019466	0.15387	0.01757	0.125352	0.942	0.832	0.999	0.989	0.975	0.455	0.97	0.91
rs150296031	2.0551E-08	-0.02898	0.00517	-0.02898	0.005168	3.73516E-08	0.791	0.951432	0.003569	0.026062	0.44536	0.00023	0.04862	0.08939	0.818	0.787	0.995	0.977	0.835	1	0.951	0.923
rs746157	2.0561E-08	0.0375366	0.00669	0.0375366	0.006694	3.73704E-08	0.67535	0.515396	1.68E-05	0.037541	0.308861	0.00593	0.50642	0.082588	0.724	0.835	1	0.963	0.858	0.988	0.822	0.915
rs74976757	2.0575E-08	0.0378753	0.00675	0.0379886	0.008181	3.73957E-08	0.3089	0.010824	0.001016	0.023386	0.707634	0.0011	0.03215	0.3213	0.648	0.95	0.998	0.977	0.744	0.998	0.955	0.867
rs34627357	2.059E-08	-0.028704	0.00512	-0.02908	0.005551	3.74243E-08	0.42347	0.652046	0.042386	0.000228	0.005152	0.00105	0.22587	0.543402	0.846	0.814	0.883	0.999	0.984	0.997	0.885	0.675
rs35985675	2.0607E-08	-0.036636	0.00653	-0.0396	0.008784	3.00775E-08	0.17442	0.023707	0.179813	0.009693	0.003177	7.3E-05	0.33345	0.698488	0.876	0.935	0.423	0.984	0.988	1	0.826	0.762
rs17710381	2.0617E-08	0.0290153	0.00518	0.0264934	0.007419	3.74768E-08	0.31719	0.155329	0.001807	0.001787	0.224942	0.00018	0.05447	0.746962	0.542	0.484	0.995	0.995	0.834	0.999	0.917	0.626
rs2849246	2.062E-08	-0.034476	0.00615	-0.034476	0.006149	3.74814E-08	0.37372	0.004815	0.00336	0.010684	0.237386	0.00442	0.19621	0.246192	0.895	0.969	0.997	0.991	0.916	0.995	0.926	0.913
rs6817258	2.062E-08	-0.028719	0.00512	-0.028719	0.005122	3.74821E-08	0.11639	0.236585	0.000841	0.01512	0.996077	0.00064	0.12172	0.942085	0.902	0.876	0.999	0.983	0.646	0.999	0.917	0.769
rs6064143	2.064E-08	-0.031635	0.00564	-0.031635	0.005643	3.75203E-08	0.10972	0.239158	0.003996	0.034181	0.23879	0.00207	0.00306	0.864038	0.928	0.906	0.996	0.977	0.911	0.998	0.985	0.831
rs11698210	2.065E-08	-0.031637	0.00564	-0.031637	0.005643	3.7539E-08	0.11822	0.236873	0.003873	0.036447	0.235773	0.00207	0.00272	0.865849	0.926	0.907	0.996	0.975	0.912	0.998	0.986	0.831
rs7985665	2.0652E-08	-0.02845	0.00507	-0.02845	0.005074	3.75428E-08	0.40214	0.57326	0.001051	0.027869	0.799807	0.00029	0.1974	0.207068	0.856	0.834	0.998	0.973	0.723	0.999	0.899	0.89
rs62537234	2.0659E-08	0.062018	0.01106	0.062018	0.011062	3.75559E-08	0.05252	0.657886	0.00076	0.144624	0.011092	0.00997	0.00678	0.600801	0.939	0.857	0.999	0.908	0.982	0.984	0.981	0.861
rs12561959	2.0669E-08	0.0308982	0.00551	0.0339322	0.008169	3.42436E-08	0.20454	0.255552	0.00075	0.000445	0.01388	0.08766	0.11455	0.037816	0.873	0.574	0.997	0.999	0.975	0.639	0.913	0.932
rs4290824	2.0681E-08	0.041753	0.00745	0.043306	0.009615	3.75976E-08	0.10167	0.594669	0.000125	0.485143	0.01428	0.00554	0.00333	0.918211	0.901	0.809	1	0.566	0.974	0.981	0.979	0.752
rs7846691	2.0691E-08	0.0340926	0.00608	0.036356	0.010698	5.87319E-09	0.99195	0.601845	0.568384	6.68E-05	0.04166	9.3E-06	0.04738	0.188145	0.555	0.444	0.018	1	0.925	1	0.914	0.806
rs7074610	2.0703E-08	0.0501085	0.00894	0.066755	0.017412	7.97218E-09	0.00216	0.10389	0.102414	3.43E-06	0.155303	0.02069	0.36475	0.033912	0.967	0.874	0.451	1	0.772	0.592	0.699	0.927
rs6473962	2.071E-08	0.0340918	0.00608	0.0363545	0.010694	5.89118E-09	0.99114	0.602315	0.567952	6.68E-05	0.041767	9.3E-06	0.04748	0.188113	0.555	0.444	0.018	1	0.925	1	0.913	0.806
rs6473961	2.0717E-08	0.0340913	0.00608	0.0363548	0.010698	5.88093E-09	0.99164	0.601839	0.568494	6.68E-05	0.04169	9.3E-06	0.04738	0.188147	0.555	0.444	0.018	1	0.925	1	0.914	0.806
rs2294479	2.0719E-08	0.0299866	0.00535	0.0299866	0.005349	3.76695E-08	0.77555	0.082947	0.00119	0.627857	0.115492	5.3E-05	0.05263	0.179115	0.676	0.893	0.997	0.425	0.905	1	0.932	0.868
rs6428460	2.072E-08	0.0298876	0.00533	0.0326031	0.010587	2.93406E-08	0.28885	0.023176	0.001597	9.87E-05	0.006893	0.05927	0.24902	0.013215	0.838	0.378	0.99	0.999	0.98	0.694	0.848	0.945
rs4998086	2.0742E-08	-0.265599	0.04738	-0.270859	0.056313	3.77145E-08	0.82837	0.598452	0.003413	0.311189	0.007524	0.00023	0.04216	0.027316	0.745	0.828	0.995	0.706	0.981	1	0.944	0.934
rs147391387	2.0745E-08	0.0340895	0.00608	0.0363114	0.010755	5.61272E-09	0.99331	0.596814	0.578922	6.41E-05	0.042468	8.6E-06	0.0485	0.189667	0.553	0.441	0.017	1	0.924	1	0.912	0.804
rs4698304	2.0746E-08	-0.028305	0.00505	-0.028305	0.005049	3.77207E-08	0.05257	0.058816	0.00684	0.018664	0.788576	0.00019	0.11341	0.954738	0.931	0.928	0.989	0.983	0.739	1	0.929	0.79
rs2105782	2.0771E-08	-0.028588	0.0051	-0.029504	0.006429	3.77682E-08	0.03016	0.057146	0.006389	0.107234	0.995233	0.00023	0.08328	0.021657	0.944	0.933	0.99	0.918	0.684	1	0.942	0.953

Table S3

rs7815146	2.0796E-08	0.0290709	0.00519	0.0290709	0.005186	3.78156E-08	0.9367	0.356884	0.008779	0.004294	0.005107	0.00746	0.01907	0.614756	0.824	0.89	0.989	0.995	0.988	0.989	0.971	0.858
rs28690158	2.0809E-08	-0.038225	0.00682	-0.038225	0.00682	3.784E-08	0.91276	0.861977	1.37E-05	0.284381	0.358443	0.00069	0.08255	0.540625	0.696	0.732	1	0.684	0.79	0.998	0.907	0.779
rs4771935	2.081E-08	0.0285159	0.00509	0.0285159	0.005087	3.78427E-08	0.18033	0.429674	0.003076	0.00416	0.240266	0.00388	0.49387	0.021245	0.914	0.882	0.997	0.995	0.909	0.995	0.864	0.957
rs34919829	2.0813E-08	0.0366062	0.00653	0.0356463	0.008307	3.78485E-08	0.68306	0.194262	0.03269	0.009577	0.096777	6.7E-06	0.1172	0.192595	0.672	0.861	0.888	0.985	0.915	1	0.901	0.522
rs669176	2.0824E-08	-0.029093	0.00519	-0.028925	0.007044	2.81814E-08	0.92739	0.151154	0.014411	0.654966	0.195502	1.2E-06	0.09546	0.029166	0.674	0.858	0.913	0.372	0.847	1	0.9	0.921
rs4784062	2.0829E-08	-0.034412	0.00614	-0.041195	0.010152	3.78793E-08	0.11261	0.655925	0.005306	0.008824	0.019165	0.02301	0.0687	0.000289	0.93	0.781	0.993	0.992	0.979	0.957	0.955	0.984
rs13143639	2.0841E-08	0.0310463	0.00554	0.033508	0.007015	3.79019E-08	0.09032	0.048681	0.023931	0.024131	0.103198	0.00243	0.00077	0.704198	0.938	0.947	0.967	0.984	0.952	0.997	0.991	0.861
rs9458637	2.0848E-08	0.0315498	0.00563	0.0315498	0.005629	3.7915E-08	0.17845	0.38982	0.001743	0.012435	0.991093	0.00321	0.03191	0.018768	0.905	0.874	0.998	0.988	0.683	0.995	0.962	0.954
rs515523	2.0849E-08	-0.028582	0.0051	-0.029631	0.006557	3.79162E-08	0.02558	0.05734	0.006407	0.111278	0.995266	0.00023	0.08361	0.02154	0.946	0.933	0.99	0.915	0.683	1	0.942	0.953
rs13215347	2.0855E-08	-0.029369	0.00524	-0.029226	0.005388	3.79276E-08	0.25424	0.451986	0.000243	0.000582	0.795775	0.00098	0.50396	0.881013	0.808	0.559	0.999	0.997	0.448	0.997	0.731	0.678
rs4275195	2.0891E-08	0.0290654	0.00519	0.0290654	0.005186	3.79974E-08	0.93657	0.355637	0.008757	0.004319	0.005112	0.00749	0.01902	0.6158	0.824	0.89	0.989	0.995	0.988	0.989	0.971	0.858
rs55731338	2.0893E-08	-0.058304	0.0104	-0.058304	0.010403	3.80012E-08	0.04357	0.20542	0.001224	0.117699	0.239901	0.00037	0.05028	0.496234	0.933	0.893	0.998	0.903	0.891	0.999	0.95	0.691
rs115009859	2.0903E-08	-0.084473	0.01507	-0.084473	0.015073	3.80197E-08	0.53778	0.991652	0.00336	0.003106	0.073558	0.00417	0.10068	0.216488	0.865	0.812	0.996	0.996	0.955	0.995	0.941	0.908
rs12488263	2.0923E-08	0.0417434	0.00745	0.0432949	0.009601	3.80565E-08	0.09895	0.595387	0.000126	0.481365	0.014324	0.00564	0.00341	0.916627	0.902	0.81	1	0.569	0.974	0.981	0.979	0.753
rs10215187	2.0956E-08	-0.031449	0.00561	-0.031449	0.005612	3.812E-08	0.39737	0.122832	0.01484	0.000487	0.267453	0.00059	0.2187	0.302517	0.683	0.906	0.972	0.998	0.879	0.999	0.896	0.876
rs72696252	2.0966E-08	-0.038327	0.00684	-0.038327	0.006839	3.81396E-08	0.14124	0.703865	0.000593	0.120755	0.05853	0.00653	0.02441	0.01871	0.92	0.778	0.999	0.919	0.961	0.991	0.969	0.958
rs11336236	2.0983E-08	0.0300052	0.00535	0.0302741	0.007097	2.24794E-08	0.56335	0.329621	6.23E-07	0.365574	0.014071	0.04415	0.05342	0.954882	0.722	0.777	1	0.485	0.962	0.632	0.909	0.611
rs9461259	2.0994E-08	0.0286416	0.00511	0.0286416	0.005111	3.81925E-08	0.52401	0.556601	0.001236	0.002082	0.350169	0.01097	0.02696	0.254136	0.865	0.861	0.998	0.997	0.876	0.982	0.966	0.9
rs4659822	2.1028E-08	0.0296192	0.00529	0.0296192	0.005286	3.82245E-08	0.69933	0.430417	0.010656	0.02268	0.198333	0.00032	0.05795	0.103523	0.851	0.881	0.987	0.983	0.92	1	0.955	0.931
rs7935457	2.1043E-08	-0.029069	0.00519	-0.028942	0.007117	2.85443E-08	0.90939	0.132083	0.015427	0.631243	0.210918	1.2E-06	0.09763	0.027146	0.672	0.865	0.907	0.388	0.839	1	0.899	0.923
rs7227727	2.1047E-08	0.0344053	0.00614	0.0344053	0.00614	3.82411E-08	0.38887	0.0041	0.003587	0.010029	0.242563	0.00452	0.19838	0.233582	0.894	0.97	0.996	0.992	0.915	0.995	0.926	0.914
rs9357697	2.1053E-08	-0.047726	0.00852	-0.047922	0.009598	3.82461E-08	0.99025	0.806518	0.009316	0.340801	0.00089	3.9E-05	0.12942	0.274202	0.74	0.774	0.972	0.666	0.991	1	0.905	0.858
rs4515818	2.1055E-08	0.0298697	0.00533	0.0327646	0.010625	2.69092E-08	0.28887	0.026446	0.001754	7.58E-05	0.006134	0.06484	0.26029	0.013178	0.834	0.375	0.987	0.999	0.981	0.659	0.839	0.944
rs9513470	2.1067E-08	0.0291499	0.0052	0.0313224	0.00664	3.82575E-08	0.79303	0.283981	0.003452	0.069477	0.001714	0.01043	0.00288	0.15905	0.794	0.9	0.996	0.954	0.992	0.984	0.985	0.922
rs7985688	2.1077E-08	-0.028431	0.00507	-0.028431	0.005074	3.82661E-08	0.40453	0.57326	0.001051	0.028395	0.799807	0.00029	0.1974	0.207068	0.856	0.834	0.998	0.973	0.723	0.999	0.899	0.89
rs9508167	2.1077E-08	-0.028431	0.00507	-0.028431	0.005074	3.82661E-08	0.40453	0.57326	0.001051	0.028395	0.799807	0.00029	0.1974	0.207068	0.856	0.834	0.998	0.973	0.723	0.999	0.899	0.89
rs77777714	2.108E-08	-0.087729	0.01566	-0.087729	0.015658	3.82679E-08	0.26115	0.32707	0.012884	0.110869	0.121336	2.1E-05	0.06555	0.97344	0.888	0.878	0.977	0.913	0.932	1	0.945	0.784
rs8028506	2.1082E-08	0.0375266	0.0067	0.0375266	0.006698	3.827E-08	0.67805	0.985298	0.003799	0.002585	0.306882	0.00013	0.94104	0.397453	0.794	0.748	0.992	0.995	0.843	1	0.703	0.835
rs12682218	2.1103E-08	0.0290492	0.00518	0.0290492	0.005185	3.82877E-08	0.94541	0.355783	0.008705	0.004145	0.005257	0.00763	0.01911	0.617772	0.823	0.889	0.989	0.995	0.987	0.989	0.971	0.858
rs9579248	2.1113E-08	-0.028426	0.00507	-0.028426	0.005074	3.82954E-08	0.3986	0.587496	0.000926	0.02999	0.847131	0.00031	0.17479	0.208018	0.855	0.83	0.998	0.971	0.706	0.999	0.904	0.888
rs182802532	2.1116E-08	-0.056466	0.01008	-0.057037	0.011214	3.82979E-08	0.36575	0.002099	0.021173	0.007328	0.145764	0.0002	0.56093	0.897001	0.877	0.965	0.962	0.992	0.926	1	0.835	0.806
rs4904254	2.1116E-08	0.0290109	0.00518	0.0263377	0.007467	3.82979E-08	0.32251	0.155735	0.002077	0.0014	0.258698	0.00015	0.06273	0.737769	0.538	0.479	0.994	0.996	0.815	1	0.91	0.62
rs9554345	2.1118E-08	0.0285029	0.00509	0.0285029	0.005087	3.82997E-08	0.18044	0.430342	0.00309	0.004175	0.241092	0.00389	0.49525	0.021219	0.914	0.881	0.997	0.995	0.909	0.995	0.864	0.957
rs56800035	2.1131E-08	0.0376668	0.00672	0.0376982	0.006756	3.83108E-08	0.06957	0.139211	0.013955	0.007061	0.46938	0.00115	0.46269	0.004664	0.937	0.922	0.982	0.993	0.854	0.999	0.871	0.972
rs12893623	2.1132E-08	0.0289674	0.00517	0.0289674	0.00517	3.83112E-08	0.8884	0.11621	0.000278	0.010594	0.330073	0.02326	0.00572	0.269091	0.79	0.919	1	0.99	0.876	0.951	0.98	0.895
rs1104600	2.1154E-08	-0.028426	0.00507	-0.028426	0.005074	3.83297E-08	0.42613	0.584283	0.001004	0.029212	0.833768	0.00028	0.1798	0.212921	0.851	0.83	0.998	0.972	0.71	0.999	0.903	0.887
rs2645251	2.1155E-08	-0.028275	0.00505	-0.028275	0.005047	3.83305E-08	0.62143	0.165773	0.000201	0.01611	0.095402	0.01157	0.31555	0.318828	0.856	0.913	1	0.987	0.947	0.982	0.894	0.893
rs2071391	2.1169E-08	-0.033037	0.0059	-0.034709	0.007084	3.83423E-08	0.01541	0.345876	0.011646	0.02954	0.101291	0.00284	0.00139	0.849553	0.96	0.898	0.986	0.98	0.951	0.997	0.988	0.84
rs7668116	2.1171E-08	-0.035276	0.0063	-0.035847	0.01108	2.69365E-08	0.46511	0.656867	0.005536	1.85E-05	0.496082	0.00494	0.0014	0.440906	0.788	0.634	0.977	1	0.361	0.976	0.98	0.792
rs4129968	2.1184E-08	0.0288552	0.00515	0.0285968	0.006589	3.71055E-08	0.31441	0.997842	4.95E-06	0.040863	0.034999	0.02988	0.02424	0.828356	0.6	0.735	1	0.945	0.953	0.878	0.952	0.753
rs8060511	2.1185E-08	-0.028667	0.00512	-0.029228	0.005777	3.83557E-08	0.48429	0.669717	0.042281	0.000251	0.00408	0.00113	0.1921	0.518898	0.836	0.81	0.882	0.999	0.985	0.997	0.894	0.668
rs935725	2.1192E-08	-0.041508	0.00741	-0.042318	0.008681	3.83613E-08	0.09855	0.609078	0.000107	0.49348	0.017494	0.00566	0.00588	0.7227	0.904	0.811	1	0.569	0.972	0.982	0.975	0.789
rs11860299	2.122E-08	-0.068648	0.01225	-0.068648	0.012255	3.83839E-08	0.58042	0.386971	3.95E-05	0.152595	0.605321	0.00043	0.76817	0.125813	0.793	0.825	1	0.826	0.728	0.999	0.724	0.885
rs4672328	2.1223E-08	0.032717	0.00584	0.032717	0.005841	3.8387E-08	0.33636	0.016048	0.0156	0.008627	0.021626	0.00319	0.02987	0.808039	0.896	0.957	0.979	0.992	0.978	0.996	0.968	0.79
rs12231334	2.1229E-08	0.0459699	0.00821	0.0459699	0.008206	3.8392E-08	0.33471	0.482456	0.000397	0.007995	0.282811	0.0129	0.05092	0.021282	0.882	0.727	0.999	0.992	0.888	0.977	0.953	0.951
rs17312661	2.1236E-08	-0.04943	0.00882	-0.049627	0.009142	3.83977E-08	0.02679	0.932496	0.001026	0.005019	0.982103	0.00595	0.06426	0.044739	0.941	0.797	0.998	0.994	0.665	0.989	0.946	0.938
rs7330189	2.1257E-08	-0.028424	0.00507	-0.028424	0.005074	3.84146E-08	0.40922	0.569611	0.001045	0.029437	0.796873	0.00029	0.19382	0.204812	0.856	0.834	0.998	0.972	0.724	0.999	0.9	0.89
rs2191133	2.1257E-08	-0.029701	0.0053	-0.030206	0.007489	3.8415E-08	0.23563	0.322935	0.001719	0.132397	0.306969	0.00043	0.00069	0.141907	0.618	0.863	0.997	0.879	0.858	0.999	0.987	0.9
rs3219090	2.1288E-08	-0.028792	0.00514	-0.027893	0.00739	3.84404E-08	0.05986	0.102046	0.016746	0.023384	0.071223	9.5E-06	0.18013	0.767883	0.906	0.889	0.945	0.969	0.931	1	0.362	0.756
rs11757815	2.1302E-08	-0.029053	0.00519	-0.030532	0.008308	3.8452E-08	0.00208	0.364826	0.006311	0.003386	0.611377	0.0015	0.00801	0.865337	0.964	0.663	0.989	0.995	0.768	0.997	0.973	0.785
rs6014205	2.1313E-08	-0.031597	0.00564	-0.031597	0.005641	3.84605E-08	0.11485	0.233717	0.003766	0.040962	0.238316	0.002	0.00267	0.862226	0.926	0.907	0.996	0.972	0.911	0.998	0.986	0.831
rs10908313	2.1334E-08	0.028978	0.00517	0.0346662	0.008239	3.84778E-08	0.41407	0.060758	0.001095	0.013592	0.418372	0.05761	0.00113	0.005079	0.879	0.937	0.997	0.987	0.853	0.845	0.989	0.971
rs2155646	2.1337E-08	0.0294281	0.00525	0.0315854	0.006715	3.84805E-08	0.03543	0.977678	0.058769	0.007888	0.001786	0.001	0.40392	0.046277	0.944	0.801	0.868	0.992	0.992	0.998	0.869	0.944
rs9937340	2.1338E-08	-0.035131	0.00627	-0.040403	0.009486	3.84813E-08	0.12211	0.592097	0.009406	0.004176	0.01823	0.01625	0.07305	0.001222	0.928	0.771	0.987	0.995	0.98	0.972	0.954	0.978
rs10908312	2.134E-08	0.0289778	0.00517	0.034666	0.008239	3.84829E-08	0.41408	0.060758	0.001096	0.013592	0.418386	0.05762	0.00113	0.005079	0.879	0.937	0.997	0.987	0.853	0.845	0.989	0.971

Table S3

rs11748404	2.1352E-08	-0.045511	0.00813	-0.054728	0.016154	2.27071E-08	0.90414	0.557561	0.000537	0.496778	0.121915	0.00376	1.1E-06	0.125242	0.75	0.804	0.995	0.534	0.907	0.983	0.997	0.892
rs2308096	2.1352E-08	-0.030496	0.00544	-0.030496	0.005445	3.84928E-08	0.69087	0.436192	0.037644	0.000592	0.027768	0.00054	0.62308	0.231444	0.828	0.86	0.917	0.998	0.969	0.999	0.812	0.892
rs138837355	2.1359E-08	0.029511	0.00527	0.029511	0.005269	3.84985E-08	0.98912	0.744745	0.010964	0.142712	0.37669	2.6E-06	0.05024	0.455026	0.753	0.79	0.972	0.859	0.822	1	0.938	0.829
rs10633883	2.1374E-08	0.0381738	0.00682	0.037177	0.009084	3.85105E-08	0.43343	0.365258	9.95E-05	0.337191	0.16458	0.00049	0.00603	0.193497	0.797	0.81	1	0.615	0.87	0.998	0.967	0.481
rs4486246	2.1379E-08	0.0312067	0.00557	0.0288821	0.009232	9.43688E-09	0.21169	0.709607	1.17E-08	0.144627	0.948572	0.04522	0.29131	0.084896	0.699	0.418	1	0.486	0.296	0.43	0.627	0.785
rs4134074	2.1403E-08	-0.031593	0.00564	-0.031593	0.005641	3.85345E-08	0.11484	0.233724	0.003771	0.040969	0.238249	0.00201	0.00268	0.862251	0.926	0.907	0.996	0.972	0.911	0.998	0.986	0.831
rs2186709	2.1404E-08	-0.029407	0.00525	-0.031553	0.006708	3.85351E-08	0.0326	0.952849	0.053282	0.008161	0.001654	0.00113	0.40042	0.051527	0.945	0.801	0.885	0.992	0.992	0.998	0.872	0.942
rs12773978	2.1454E-08	-0.054881	0.0098	-0.058111	0.014182	3.85763E-08	0.36778	0.00071	0.017855	0.021093	0.23946	0.00028	0.04824	0.624794	0.88	0.972	0.97	0.982	0.902	1	0.956	0.741
rs743655	2.1454E-08	-0.028901	0.00516	-0.029156	0.005379	3.85764E-08	0.53306	0.329917	0.016473	0.000144	0.00871	0.00664	0.10384	0.678733	0.722	0.877	0.969	0.999	0.982	0.987	0.933	0.829
rs12231611	2.1457E-08	0.0459551	0.00821	0.0459551	0.008207	3.85788E-08	0.33442	0.481861	0.0004	0.007995	0.282954	0.01293	0.05103	0.021359	0.882	0.727	0.999	0.992	0.888	0.977	0.953	0.951
rs4781852	2.1471E-08	0.0324161	0.00579	0.0324161	0.005789	3.85898E-08	0.8778	0.654758	0.001143	0.005287	0.550695	0.00073	0.50518	0.095659	0.789	0.819	0.998	0.992	0.789	0.999	0.824	0.912
rs157606	2.1479E-08	-0.028262	0.00505	-0.028262	0.005047	3.85967E-08	0.63008	0.165776	0.000195	0.016721	0.095371	0.01155	0.31545	0.318798	0.855	0.913	1	0.986	0.947	0.982	0.894	0.893
rs35943063	2.1485E-08	-0.028745	0.00513	-0.028745	0.005133	3.86012E-08	0.1846	0.285879	0.001517	0.007262	0.94203	0.00048	0.07666	0.844486	0.88	0.86	0.997	0.99	0.609	0.999	0.929	0.721
rs284983	2.1503E-08	0.0306277	0.00547	0.0306277	0.00547	3.8616E-08	0.29594	0.245449	0.026751	0.106126	0.037792	9.6E-05	0.16591	0.045893	0.9	0.906	0.958	0.931	0.97	1	0.929	0.948
rs1937371	2.1512E-08	-0.029316	0.00524	-0.029316	0.005236	3.86236E-08	0.13716	0.831559	0.010049	0.036783	0.009441	0.00062	0.0538	0.997285	0.918	0.831	0.987	0.973	0.983	0.999	0.955	0.805
rs6069053	2.1523E-08	-0.031591	0.00564	-0.031591	0.005642	3.86319E-08	0.11813	0.239469	0.00397	0.036451	0.238922	0.00205	0.00281	0.865135	0.926	0.906	0.996	0.975	0.911	0.998	0.985	0.831
rs34409850	2.153E-08	0.0285967	0.00511	0.0302482	0.007994	3.86381E-08	0.07443	0.01224	0.000393	0.060988	0.59249	0.00257	0.67748	0.004227	0.92	0.949	0.999	0.946	0.779	0.995	0.637	0.965
rs847744	2.1533E-08	-0.030487	0.00544	-0.030487	0.005445	3.86403E-08	0.69137	0.436689	0.037693	0.000593	0.027821	0.00054	0.62369	0.231567	0.828	0.86	0.916	0.998	0.969	0.999	0.812	0.892
rs10010316	2.1538E-08	-0.035258	0.0063	-0.035783	0.01107	2.74003E-08	0.4651	0.651229	0.005495	1.85E-05	0.494218	0.00492	0.00145	0.445145	0.788	0.632	0.977	1	0.36	0.976	0.98	0.791
rs34029647	2.1546E-08	-0.035257	0.0063	-0.035782	0.01107	2.74092E-08	0.46511	0.651225	0.005496	1.85E-05	0.494213	0.00492	0.00145	0.445159	0.788	0.632	0.977	1	0.36	0.976	0.98	0.791
rs9508166	2.1562E-08	-0.028413	0.00507	-0.028413	0.005075	3.86635E-08	0.42511	0.570608	0.001055	0.030374	0.783549	0.00028	0.19432	0.205246	0.853	0.834	0.998	0.971	0.728	0.999	0.9	0.89
rs35272044	2.1564E-08	-0.028249	0.00505	-0.028249	0.005045	3.86655E-08	0.73768	0.066549	0.003569	0.015592	0.603739	0.00058	0.51058	0.010407	0.829	0.927	0.995	0.986	0.798	0.999	0.843	0.959
rs10024265	2.1571E-08	-0.035256	0.0063	-0.035781	0.011069	2.74478E-08	0.46515	0.651229	0.005496	1.86E-05	0.494218	0.00492	0.00145	0.445152	0.788	0.632	0.977	1	0.36	0.976	0.98	0.791
rs28758917	2.1578E-08	-0.035162	0.00628	-0.035162	0.00628	3.86769E-08	0.50416	0.387578	0.003778	0.103362	0.229136	0.00016	0.01218	0.061252	0.848	0.687	0.994	0.915	0.893	1	0.971	0.929
rs7672210	2.1586E-08	-0.036941	0.0066	-0.037144	0.008747	3.86835E-08	0.87622	0.641018	0.00019	0.091802	0.984675	0.00216	0.00098	0.064024	0.734	0.804	1	0.905	0.628	0.995	0.984	0.917
rs1474425	2.1589E-08	-0.028589	0.00511	-0.028614	0.005283	3.86855E-08	0.88778	0.823527	0.004154	0.130971	0.011327	0.00024	0.00459	0.865269	0.755	0.747	0.993	0.883	0.977	1	0.977	0.783
rs2280615	2.1591E-08	-0.049008	0.00875	-0.050204	0.009993	3.86877E-08	0.08865	0.497118	0.000222	0.267985	0.014866	0.00931	0.28684	0.00737	0.927	0.865	1	0.802	0.979	0.982	0.894	0.964
rs4788211	2.1609E-08	-0.028518	0.00509	-0.02946	0.007774	3.87021E-08	0.29975	0.517816	0.012231	0.002062	0.000272	0.00165	0.51085	0.1646	0.859	0.824	0.972	0.996	0.994	0.996	0.808	0.542
rs10236673	2.161E-08	0.0382782	0.00684	0.0382782	0.006837	3.8703E-08	0.37944	0.512478	0.016251	0.010823	0.004272	0.00056	0.70495	0.285342	0.878	0.862	0.975	0.99	0.988	0.999	0.812	0.892
rs4646615	2.1615E-08	0.0291642	0.00521	0.0307059	0.007465	2.92584E-08	0.46342	0.759378	1.42E-05	0.012392	0.054855	0.11765	0.00355	0.237048	0.562	0.726	1	0.974	0.932	0.467	0.978	0.838
rs77283404	2.1617E-08	-0.051532	0.0092	-0.051532	0.009205	3.87085E-08	0.48978	0.138399	0.001433	0.008548	0.131355	0.00754	0.08278	0.401941	0.879	0.924	0.998	0.992	0.941	0.99	0.95	0.889
rs62493794	2.1625E-08	0.0316233	0.00565	0.0406892	0.010237	2.16778E-08	0.19647	0.000304	0.000942	0.001273	0.045791	0.21387	0.02698	0.590757	0.875	0.981	0.995	0.997	0.953	0.282	0.96	0.784
rs6778862	2.1625E-08	0.0294959	0.00527	0.0294959	0.005269	3.87152E-08	0.98683	0.741352	0.010824	0.143369	0.378577	2.7E-06	0.04993	0.452495	0.753	0.791	0.972	0.858	0.822	1	0.938	0.83
rs10842245	2.1639E-08	0.0654035	0.01168	0.0654035	0.011683	3.8726E-08	0.17127	0.39701	0.006203	0.28657	0.108351	2.5E-05	0.02075	0.239975	0.886	0.662	0.986	0.745	0.923	1	0.959	0.874
rs9308155	2.1663E-08	-0.035251	0.0063	-0.035777	0.011068	2.75518E-08	0.46532	0.65145	0.0055	1.86E-05	0.494295	0.00493	0.00145	0.445346	0.788	0.632	0.977	1	0.36	0.976	0.98	0.79
rs7227870	2.168E-08	0.0343737	0.00614	0.0343737	0.00614	3.87593E-08	0.38887	0.004104	0.003623	0.010029	0.243858	0.00457	0.19888	0.23392	0.894	0.97	0.996	0.992	0.915	0.995	0.925	0.914
rs1821950	2.1685E-08	0.0313069	0.00559	0.0320136	0.007432	3.85942E-08	0.64172	0.272481	0.000149	0.000655	0.153973	0.04951	0.00712	0.665746	0.784	0.582	1	0.998	0.888	0.789	0.971	0.776
rs476003	2.1695E-08	0.0355926	0.00636	0.04778	0.011193	2.99034E-08	0.00481	0.060337	0.05386	0.00527	0.058926	0.01585	0.00063	0.181234	0.971	0.945	0.883	0.992	0.964	0.95	0.992	0.924
rs6766131	2.1705E-08	-0.028534	0.0051	-0.028534	0.005097	3.87794E-08	0.6517	0.10724	0.023332	0.115121	0.020921	5.5E-06	0.36439	0.703718	0.811	0.901	0.938	0.887	0.968	1	0.848	0.707
rs17109475	2.1724E-08	-0.032968	0.00589	-0.035107	0.007399	3.87945E-08	0.01383	0.383102	0.015551	0.029382	0.090958	0.00219	0.00125	0.888621	0.96	0.893	0.98	0.98	0.954	0.997	0.989	0.833
rs569410125	2.1724E-08	-0.075925	0.01356	-0.075925	0.013564	3.87947E-08	0.29501	0.050411	4.14E-05	0.20085	0.139272	0.00703	0.03047	0.739129	0.878	0.929	1	0.833	0.922	0.985	0.959	0.735
rs1511082	2.1764E-08	-0.029033	0.00519	-0.030464	0.008256	3.88268E-08	0.00231	0.363925	0.0063	0.00341	0.612255	0.00149	0.00793	0.867241	0.963	0.663	0.989	0.995	0.768	0.997	0.974	0.784
rs7516474	2.1778E-08	0.0289597	0.00517	0.0346487	0.008238	3.88377E-08	0.40976	0.060758	0.001095	0.014022	0.41838	0.05761	0.00113	0.005079	0.879	0.937	0.997	0.987	0.853	0.846	0.989	0.971
rs7524329	2.1781E-08	0.0286594	0.00512	0.0286594	0.00512	3.88405E-08	0.44436	0.481777	0.00035	0.006512	0.049923	0.02412	0.07583	0.067769	0.868	0.725	0.999	0.993	0.961	0.947	0.945	0.934
rs12162087	2.1794E-08	0.0284225	0.00508	0.0284225	0.005078	3.88509E-08	0.59504	0.766432	0.006718	0.017614	0.435324	6.5E-06	0.59306	0.614989	0.796	0.703	0.984	0.976	0.79	1	0.771	0.79
rs78901286	2.18E-08	0.083733	0.01496	0.083733	0.01496	3.88219E-08	0.0703	0.059635	2.42E-05	0.061148	0.104086	0.05375	0.13471	0.543387	0.932	0.933	1	0.95	0.941	0.865	0.928	0.857
rs9314921	2.1802E-08	-0.028403	0.00507	-0.028403	0.005075	3.88569E-08	0.42117	0.569679	0.001046	0.029747	0.796328	0.00029	0.19352	0.204851	0.854	0.834	0.998	0.972	0.724	0.999	0.9	0.89
rs12330269	2.1804E-08	-0.028529	0.0051	-0.028529	0.005097	3.8859E-08	0.65158	0.107235	0.023286	0.116173	0.020897	5.4E-06	0.36418	0.703822	0.811	0.901	0.938	0.886	0.968	1	0.848	0.706
rs9827021	2.1804E-08	-0.028529	0.0051	-0.028529	0.005097	3.8859E-08	0.65158	0.107235	0.023286	0.116173	0.020897	5.4E-06	0.36418	0.703822	0.811	0.901	0.938	0.886	0.968	1	0.848	0.706
rs7331179	2.1822E-08	-0.028402	0.00507	-0.028402	0.005075	3.88731E-08	0.42511	0.570568	0.001038	0.030374	0.795111	0.00028	0.1932	0.204917	0.853	0.834	0.998	0.971	0.724	0.999	0.9	0.89
rs11764362	2.1822E-08	-0.031401	0.00561	-0.031401	0.00561	3.88734E-08	0.41435	0.120551	0.014607	0.000512	0.266586	0.00063	0.22658	0.283534	0.689	0.908	0.973	0.998	0.88	0.999	0.895	0.88
rs1912888	2.1827E-08	-0.031578	0.00564	-0.031578	0.005642	3.88775E-08	0.10884	0.239624	0.003987	0.037695	0.23943	0.00206	0.00282	0.864511	0.928	0.906	0.996	0.974	0.911	0.998	0.985	0.831
rs1056667	2.1828E-08	0.0285846	0.00511	0.0285846	0.005107	3.88779E-08	0.54034	0.554584	0.001359	0.002216	0.356556	0.00951	0.0307	0.243474	0.863	0.862	0.998	0.997	0.875	0.985	0.964	0.902
rs3117022	2.1838E-08	0.0293068	0.00524	0.0292222	0.005421	3.88858E-08	0.77537	0.383204	0.000307	0.635268	0.266509	0.00014	0.01651	0.088604	0.653	0.805	0.999	0.395	0.819	1	0.955	0.887
rs1372605	2.1838E-08	-0.029232	0.00522	-0.029232	0.005223	3.8886E-08	0.07527	0.898658	0.001797	0.06383	0.842551	0.00015	0.0368	0.520643	0.915	0.788	0.997	0.942	0.703	1	0.952	0.835

Table S3

rs2870373	2.185E-08	-0.031581	0.00564	-0.031581	0.005643	3.88958E-08	0.10796	0.223766	0.003717	0.04576	0.225544	0.002	0.00299	0.842787	0.928	0.909	0.996	0.97	0.915	0.998	0.985	0.834
rs2186874	2.1851E-08	0.0294024	0.00525	0.0315685	0.006722	3.88965E-08	0.03542	0.977843	0.059131	0.007919	0.001762	0.00101	0.40747	0.046808	0.944	0.801	0.867	0.992	0.992	0.998	0.868	0.943
rs2076310	2.1854E-08	0.0323034	0.00577	0.0322022	0.007232	3.88986E-08	0.61369	0.582466	0.002	0.694372	0.01109	4.5E-05	0.01658	0.329534	0.605	0.759	0.993	0.338	0.971	1	0.954	0.811
rs34363169	2.1868E-08	-0.028527	0.0051	-0.028527	0.005097	3.89099E-08	0.65317	0.10724	0.023279	0.116304	0.020898	5.4E-06	0.36418	0.703797	0.811	0.901	0.938	0.886	0.968	1	0.848	0.706
rs35261698	2.1868E-08	-0.028527	0.0051	-0.028527	0.005097	3.89099E-08	0.65317	0.10724	0.023279	0.116304	0.020898	5.4E-06	0.36418	0.703797	0.811	0.901	0.938	0.886	0.968	1	0.848	0.706
rs6766581	2.1868E-08	-0.028527	0.0051	-0.028527	0.005097	3.89099E-08	0.65317	0.10724	0.023279	0.116304	0.020898	5.4E-06	0.36418	0.703797	0.811	0.901	0.938	0.886	0.968	1	0.848	0.706
rs11712569	2.1878E-08	-0.028532	0.0051	-0.028532	0.005098	3.89176E-08	0.65563	0.106476	0.023364	0.116148	0.020982	5.4E-06	0.36367	0.704535	0.811	0.901	0.938	0.886	0.968	1	0.848	0.707
rs2734841	2.1899E-08	-0.030284	0.00541	-0.030393	0.005651	3.89348E-08	0.61761	0.034508	0.003366	0.001773	0.663458	0.00207	0.07826	0.100008	0.822	0.932	0.994	0.997	0.527	0.996	0.935	0.913
rs10801667	2.1903E-08	0.0298295	0.00533	0.0325656	0.010593	3.05646E-08	0.29034	0.023343	0.001631	9.77E-05	0.006777	0.06101	0.24945	0.013376	0.836	0.376	0.989	0.999	0.98	0.685	0.846	0.944
rs2124528	2.1904E-08	-0.032966	0.00589	-0.035087	0.007397	3.89382E-08	0.01368	0.370814	0.014552	0.031152	0.093658	0.00225	0.00124	0.894685	0.961	0.895	0.982	0.979	0.953	0.997	0.989	0.833
rs145582459	2.191E-08	0.076401	0.01365	0.076401	0.013652	3.89436E-08	0.12902	0.693634	0.03706	0.02039	0.011308	0.00014	0.39192	0.266112	0.918	0.845	0.935	0.983	0.981	1	0.876	0.898
rs182979107	2.1914E-08	0.0901905	0.01612	0.0901905	0.016117	3.89464E-08	0.07064	0.933285	0.009363	0.014155	0.417896	0.00103	0.05406	0.019261	0.936	0.83	0.989	0.989	0.868	0.999	0.956	0.958
rs9850072	2.1914E-08	-0.028525	0.0051	-0.028525	0.005097	3.89466E-08	0.65323	0.10724	0.023279	0.116507	0.020898	5.4E-06	0.36418	0.703797	0.811	0.901	0.938	0.886	0.968	1	0.848	0.706
rs530459385	2.1915E-08	-0.067403	0.01204	-0.067403	0.012045	3.89469E-08	0.92338	0.191807	0.001485	0.099792	0.311002	0.00042	0.00711	0.478125	0.779	0.897	0.998	0.915	0.873	0.999	0.975	0.856
rs11719996	2.1915E-08	-0.028525	0.0051	-0.028525	0.005097	3.89475E-08	0.65323	0.107235	0.023286	0.116507	0.020897	5.4E-06	0.36418	0.703822	0.811	0.901	0.938	0.886	0.968	1	0.848	0.706
rs2412130	2.1918E-08	-0.028679	0.00512	-0.028679	0.005125	3.895E-08	0.30857	0.966995	0.000197	0.007601	0.392416	0.00372	0.31515	0.451572	0.874	0.79	1	0.991	0.844	0.994	0.874	0.853
rs6069045	2.1921E-08	-0.03158	0.00564	-0.03158	0.005643	3.89518E-08	0.10898	0.224012	0.00369	0.046285	0.226155	0.00204	0.00276	0.841719	0.928	0.909	0.996	0.969	0.915	0.998	0.986	0.834
rs9804542	2.1929E-08	0.0465018	0.00831	0.0512201	0.012383	3.89583E-08	0.29609	0.557743	0.000185	0.443006	0.196766	0.00872	0.00112	0.007229	0.873	0.835	0.999	0.64	0.897	0.974	0.988	0.963
rs2527898	2.1934E-08	0.029663	0.0053	0.0300555	0.007828	3.89626E-08	0.08775	0.470634	0.000891	0.117548	0.000274	0.00144	0.23778	0.492251	0.903	0.667	0.998	0.884	0.994	0.997	0.875	0.651
rs3754376	2.1939E-08	-0.028769	0.00514	-0.027861	0.007365	3.89661E-08	0.05929	0.10769	0.016735	0.022289	0.072867	9.9E-06	0.17979	0.775842	0.906	0.887	0.945	0.97	0.93	1	0.362	0.755
rs76427635	2.1945E-08	-0.030336	0.00542	-0.02984	0.006034	3.89709E-08	0.04899	0.465941	0.000177	0.250179	0.061162	0.0002	0.22931	0.523452	0.902	0.615	0.999	0.715	0.93	0.999	0.852	0.606
rs75379065	2.1947E-08	-0.030336	0.00542	-0.02984	0.006034	3.89725E-08	0.04899	0.46594	0.000177	0.250167	0.061163	0.0002	0.22931	0.523447	0.902	0.615	0.999	0.715	0.93	0.999	0.852	0.606
rs115926496	2.1959E-08	-0.084665	0.01513	-0.084665	0.01513	3.89822E-08	0.58555	0.914784	0.002198	0.00384	0.061693	0.00494	0.11096	0.252116	0.857	0.8	0.997	0.995	0.958	0.993	0.937	0.901
rs11725270	2.1977E-08	-0.028724	0.00513	-0.028724	0.005133	3.89967E-08	0.18527	0.28659	0.001571	0.007267	0.939926	0.00047	0.07702	0.84214	0.879	0.86	0.997	0.99	0.608	0.999	0.929	0.72
rs6069051	2.1981E-08	-0.031578	0.00564	-0.031578	0.005643	3.89999E-08	0.11485	0.233189	0.003775	0.042472	0.238838	0.00197	0.00272	0.863894	0.926	0.907	0.996	0.971	0.911	0.998	0.986	0.831
rs283030	2.1992E-08	-0.028241	0.00505	-0.028241	0.005047	3.90081E-08	0.63062	0.165773	0.000201	0.016666	0.095402	0.01157	0.31555	0.318828	0.855	0.913	1	0.986	0.947	0.982	0.894	0.893
rs16920973	2.1992E-08	0.034022	0.00608	0.0363153	0.01073	6.04605E-09	0.99963	0.609141	0.582211	7.14E-05	0.040908	9E-06	0.04575	0.191054	0.553	0.446	0.017	1	0.926	1	0.915	0.804
rs11653507	2.1997E-08	-0.031481	0.00563	-0.030291	0.008151	3.90125E-08	0.70139	0.154012	0.00036	0.081028	0.655775	0.00019	0.41996	0.002485	0.66	0.864	0.999	0.895	0.454	0.999	0.795	0.959
rs78071762	2.2006E-08	0.0518149	0.00926	0.0518149	0.00926	3.90195E-08	0.64536	0.949057	8.25E-05	0.014485	0.031279	0.02839	0.07157	0.149921	0.735	0.796	1	0.985	0.967	0.93	0.941	0.908
rs2137220	2.201E-08	-0.031568	0.00564	-0.031568	0.005642	3.90229E-08	0.11823	0.238217	0.003964	0.036458	0.237894	0.00205	0.00303	0.86438	0.926	0.906	0.996	0.975	0.911	0.998	0.985	0.831
rs11150003	2.2023E-08	-0.029832	0.00533	-0.027666	0.007743	3.89831E-08	0.24729	0.389886	2.12E-06	0.013466	0.286868	0.01301	0.61482	0.054607	0.527	0.797	1	0.975	0.807	0.936	0.508	0.897
rs10876549	2.2029E-08	-0.028657	0.00512	-0.028657	0.005122	3.90375E-08	0.01783	0.869869	0.000186	0.07347	0.634511	0.00104	0.18105	0.452385	0.942	0.76	1	0.934	0.766	0.998	0.902	0.847
rs12562201	2.2034E-08	0.0395272	0.00706	0.0395272	0.007064	3.90415E-08	0.53996	0.694232	0.001096	0.001083	0.063088	0.00658	0.91006	0.057978	0.839	0.738	0.998	0.997	0.948	0.987	0.744	0.928
rs7691325	2.2034E-08	-0.035233	0.0063	-0.035831	0.011057	2.77535E-08	0.46339	0.651613	0.005833	1.75E-05	0.508936	0.00502	0.00147	0.44372	0.789	0.634	0.975	1	0.368	0.975	0.98	0.792
rs34004743	2.2042E-08	0.0365139	0.00653	0.0356603	0.008156	3.90481E-08	0.71279	0.189338	0.033931	0.009512	0.096818	7E-06	0.12653	0.200203	0.679	0.862	0.885	0.985	0.915	1	0.897	0.527
rs7972094	2.2044E-08	0.0637844	0.0114	0.063505	0.013646	3.90492E-08	0.17908	0.2637	0.00729	0.264426	0.155856	1.9E-05	0.01692	0.150236	0.881	0.62	0.982	0.756	0.902	1	0.961	0.891
rs157608	2.2047E-08	-0.028239	0.00505	-0.028239	0.005047	3.9052E-08	0.62981	0.165773	0.000201	0.016731	0.095402	0.01157	0.31555	0.318828	0.855	0.913	1	0.986	0.947	0.982	0.894	0.893
rs6457879	2.2065E-08	0.0381299	0.00682	0.0371361	0.009087	3.90661E-08	0.43591	0.366486	0.000101	0.337999	0.164903	0.0005	0.00595	0.193914	0.796	0.81	1	0.615	0.87	0.998	0.967	0.481
rs157626	2.2066E-08	-0.028238	0.00505	-0.028238	0.005047	3.90669E-08	0.62981	0.165773	0.000201	0.016732	0.095407	0.01157	0.31556	0.318828	0.855	0.913	1	0.986	0.947	0.982	0.894	0.893
rs75704987	2.2091E-08	0.0558017	0.00997	0.0585464	0.013148	3.90865E-08	0.2577	0.252451	0.012585	0.082899	0.001681	0.00063	0.04936	0.067202	0.664	0.892	0.98	0.937	0.991	0.999	0.953	0.933
rs10227271	2.2095E-08	0.0344364	0.00616	0.0351455	0.007454	3.909E-08	0.96807	0.643532	0.038586	0.000634	0.392485	0.00038	0.03495	0.016666	0.765	0.717	0.9	0.998	0.83	0.999	0.953	0.948
rs35332534	2.2123E-08	-0.030619	0.00547	-0.030619	0.005473	3.91331E-08	0.4438	0.025216	0.001675	0.235452	0.015702	0.00059	0.26559	0.629821	0.865	0.944	0.998	0.823	0.977	0.999	0.894	0.84
rs7625233	2.2126E-08	-0.029263	0.00523	-0.029263	0.005231	3.91391E-08	0.17803	0.740145	0.002404	0.084761	0.599308	1.6E-06	0.59754	0.691205	0.833	0.722	0.991	0.869	0.673	1	0.492	0.725
rs1511081	2.2136E-08	-0.029018	0.00519	-0.030494	0.008315	3.91629E-08	0.00205	0.363912	0.006301	0.003621	0.612166	0.00149	0.00794	0.867244	0.964	0.663	0.989	0.994	0.768	0.997	0.973	0.784
rs6442647	2.2137E-08	-0.030711	0.00549	-0.030711	0.00549	3.91632E-08	0.28822	0.87574	0.000475	0.068885	0.647502	8.2E-05	0.62424	0.316814	0.851	0.766	0.999	0.926	0.732	1	0.773	0.848
rs7194442	2.2152E-08	0.0301936	0.0054	0.0301936	0.005397	3.91972E-08	0.2758	0.413868	0.033542	0.081101	0.027099	8.4E-05	0.11701	0.106285	0.901	0.883	0.943	0.945	0.974	1	0.939	0.931
rs12149928	2.2155E-08	0.0563777	0.01008	0.0509897	0.016394	2.00417E-08	0.18522	0.998052	5.9E-05	0.734201	0.289305	1.3E-05	0.0199	0.612457	0.784	0.569	1	0.051	0.707	1	0.93	0.446
rs7548936	2.2156E-08	0.0286583	0.00512	0.0302884	0.006577	3.26848E-08	0.66854	0.186688	1.76E-05	0.019159	0.250033	0.12343	0.05595	0.00776	0.789	0.879	1	0.971	0.851	0.534	0.941	0.959
rs76115445	2.216E-08	-0.031559	0.00564	-0.031559	0.005641	3.92149E-08	0.11485	0.233351	0.003781	0.040963	0.238007	0.00202	0.00289	0.861495	0.926	0.907	0.996	0.972	0.911	0.998	0.985	0.831
rs12149946	2.2162E-08	0.0563772	0.01008	0.0509892	0.016394	2.00505E-08	0.18522	0.998052	5.9E-05	0.734182	0.289309	1.3E-05	0.0199	0.612457	0.784	0.569	1	0.051	0.707	1	0.93	0.446
rs77768117	2.2189E-08	-0.068202	0.01219	-0.068202	0.012192	3.92801E-08	0.17727	0.898543	3.17E-05	0.044834	0.460077	0.00224	0.91095	0.122333	0.882	0.744	1	0.952	0.799	0.995	0.717	0.899
rs182337552	2.2195E-08	0.0911284	0.01629	0.0911284	0.016291	3.92925E-08	0.0706	0.857193	0.010528	0.017015	0.329719	0.00119	0.05664	0.013103	0.939	0.843	0.988	0.987	0.892	0.999	0.957	0.963
rs1437175	2.2208E-08	0.0314826	0.00563	0.038687	0.008996	3.93211E-08	0.35165	0.168946	0.009706	0.033826	0.001614	0.02001	0.11631	0.000581	0.904	0.927	0.987	0.978	0.993	0.968	0.947	0.983
rs11287277	2.2208E-08	-0.031556	0.00564	-0.031556	0.005641	3.93213E-08	0.69899	0.121291	0.021853	0.000279	0.245778	0.0007	0.22862	0.397164	0.747	0.91	0.957	0.999	0.889	0.999	0.897	0.865
rs7985195	2.2209E-08	-0.028386	0.00507	-0.028386	0.005074	3.93238E-08	0.42491	0.569633	0.001045	0.030228	0.796727	0.00029	0.19367	0.204841	0.853	0.834	0.998	0.971	0.724	0.999	0.9	0.89

Table S3

rs7203426	2.2226E-08	0.0284074	0.00508	0.0284074	0.005078	3.93617E-08	0.59555	0.762491	0.006746	0.017535	0.437226	6.6E-06	0.59561	0.612746	0.795	0.702	0.984	0.976	0.789	1	0.77	0.79
rs34583201	2.2236E-08	0.0365017	0.00653	0.0356536	0.008149	3.93835E-08	0.71449	0.189185	0.034109	0.009359	0.097306	7.1E-06	0.12764	0.200296	0.679	0.862	0.884	0.985	0.915	1	0.897	0.527
rs7641833	2.2237E-08	-0.041669	0.00745	-0.043086	0.009354	3.93868E-08	0.09379	0.586281	0.00014	0.481964	0.015026	0.00584	0.0038	0.825267	0.905	0.814	1	0.577	0.974	0.981	0.979	0.772
rs17075727	2.224E-08	-0.030798	0.00551	-0.031982	0.009322	3.41345E-08	0.73165	0.001367	0.007529	0.652097	0.619746	3.2E-06	0.15152	0.073532	0.727	0.956	0.954	0.356	0.651	1	0.869	0.89
rs1981549	2.2241E-08	0.0296539	0.0053	0.0300433	0.007829	3.93938E-08	0.08918	0.464704	0.000904	0.115348	0.000276	0.00146	0.23605	0.490655	0.903	0.666	0.998	0.886	0.994	0.997	0.876	0.651
rs10088090	2.225E-08	0.0311734	0.00557	0.0311734	0.005573	3.94136E-08	0.58382	0.989186	0.000153	0.139948	0.479125	0.00074	0.12092	0.064273	0.828	0.777	1	0.878	0.81	0.999	0.918	0.922
rs7871118	2.2258E-08	-0.038097	0.00681	-0.038277	0.006998	3.94314E-08	0.16551	0.784246	0.000454	0.106691	0.079241	0.0101	0.01833	0.01219	0.917	0.792	0.999	0.929	0.954	0.984	0.972	0.963
rs60270599	2.2263E-08	-0.029013	0.00519	-0.030479	0.0083	3.94443E-08	0.0021	0.36405	0.006316	0.003603	0.61206	0.00149	0.00796	0.866941	0.964	0.663	0.989	0.994	0.768	0.997	0.973	0.784
rs59362927	2.2274E-08	-0.029012	0.00519	-0.030487	0.008312	3.94687E-08	0.00205	0.364042	0.006317	0.003628	0.611894	0.00149	0.00796	0.867317	0.964	0.663	0.989	0.994	0.768	0.997	0.973	0.784
rs78569773	2.2296E-08	0.0413928	0.0074	0.0448601	0.011255	3.95168E-08	0.01099	0.2859	0.00089	0.264416	0.999767	0.00108	0.03044	0.006524	0.951	0.873	0.998	0.769	0.649	0.998	0.957	0.962
rs74131223	2.2308E-08	0.0368295	0.00658	0.0368295	0.006585	3.95434E-08	0.79465	0.634484	0.001536	0.006351	0.104073	0.00141	0.32243	0.296484	0.766	0.838	0.998	0.992	0.937	0.998	0.878	0.882
rs11075949	2.2309E-08	0.0563752	0.01008	0.0510158	0.016395	2.0247E-08	0.18491	0.989925	5.97E-05	0.733022	0.290082	1.3E-05	0.0197	0.612656	0.784	0.571	1	0.051	0.707	1	0.93	0.446
rs1784543	2.2312E-08	-0.028505	0.0051	-0.02962	0.006602	3.95525E-08	0.02563	0.05624	0.006792	0.110139	0.992196	0.00024	0.08275	0.020746	0.946	0.933	0.99	0.916	0.683	1	0.943	0.953
rs4326900	2.2314E-08	-0.028381	0.00507	-0.028381	0.005074	3.95572E-08	0.42511	0.569633	0.001045	0.030374	0.796727	0.00029	0.19367	0.204841	0.853	0.834	0.998	0.971	0.724	0.999	0.9	0.89
rs7337461	2.2314E-08	-0.028381	0.00507	-0.028381	0.005074	3.95572E-08	0.42511	0.569633	0.001045	0.030374	0.796727	0.00029	0.19367	0.204841	0.853	0.834	0.998	0.971	0.724	0.999	0.9	0.89
rs62231722	2.232E-08	-0.031552	0.00564	-0.031552	0.005641	3.95701E-08	0.11467	0.23353	0.003771	0.041587	0.237648	0.00201	0.00289	0.861345	0.926	0.907	0.996	0.972	0.911	0.998	0.985	0.831
rs117094271	2.2333E-08	-0.083293	0.01489	-0.083293	0.014893	3.95992E-08	0.81741	0.923429	0.001596	0.009168	0.064532	0.00316	0.08678	0.26292	0.826	0.797	0.998	0.991	0.956	0.996	0.942	0.896
rs507890	2.2343E-08	-0.028505	0.0051	-0.029615	0.006595	3.96205E-08	0.02559	0.056626	0.006812	0.10998	0.994771	0.00024	0.08303	0.020664	0.946	0.933	0.99	0.916	0.684	1	0.942	0.953
rs7337401	2.2343E-08	-0.02838	0.00507	-0.02838	0.005074	3.96211E-08	0.42511	0.569611	0.001045	0.030374	0.796873	0.00029	0.19382	0.204812	0.853	0.834	0.998	0.971	0.724	0.999	0.9	0.89
rs9506047	2.2343E-08	-0.02838	0.00507	-0.02838	0.005074	3.96211E-08	0.42511	0.569611	0.001045	0.030374	0.796873	0.00029	0.19382	0.204812	0.853	0.834	0.998	0.971	0.724	0.999	0.9	0.89
rs9506048	2.2343E-08	-0.02838	0.00507	-0.02838	0.005074	3.96211E-08	0.42511	0.569611	0.001045	0.030374	0.796873	0.00029	0.19382	0.204812	0.853	0.834	0.998	0.971	0.724	0.999	0.9	0.89
rs336616	2.2347E-08	0.0284503	0.00509	0.0284503	0.005087	3.96306E-08	0.45852	0.196728	0.036511	0.003016	0.478393	0.00034	0.01998	0.261351	0.868	0.904	0.928	0.996	0.836	0.999	0.969	0.896
rs7985894	2.2352E-08	-0.02838	0.00507	-0.02838	0.005074	3.96408E-08	0.42514	0.569356	0.001047	0.030355	0.796166	0.00029	0.19362	0.204838	0.853	0.834	0.998	0.971	0.724	0.999	0.9	0.89
rs11185538	2.2353E-08	0.0341271	0.0061	0.0341271	0.006102	3.96426E-08	0.63915	0.926855	0.001427	0.026756	0.078077	0.00182	0.0503	0.400371	0.85	0.818	0.998	0.979	0.951	0.998	0.955	0.878
rs9508157	2.2353E-08	-0.02838	0.00507	-0.02838	0.005074	3.96427E-08	0.42513	0.569701	0.001047	0.030375	0.796335	0.00029	0.19352	0.204857	0.853	0.834	0.998	0.971	0.724	0.999	0.9	0.89
rs35603568	2.2355E-08	0.0310534	0.00555	0.0310534	0.005552	3.96474E-08	0.01045	0.621986	3.1E-05	0.131551	0.184137	0.01652	0.04803	0.757134	0.956	0.845	1	0.9	0.914	0.964	0.954	0.825
rs4702830	2.2367E-08	-0.265061	0.04739	-0.277914	0.065895	3.96747E-08	0.8861	0.928911	0.004765	0.390886	0.003652	0.00016	0.02865	0.023903	0.736	0.773	0.991	0.62	0.985	1	0.948	0.931
rs35032992	2.237E-08	0.0297108	0.00531	0.0297108	0.005313	3.96797E-08	0.67409	0.497705	0.001262	0.000531	0.082449	0.00264	0.84855	0.36806	0.7	0.822	0.998	0.998	0.931	0.994	0.651	0.843
rs199520795	2.2377E-08	0.0565755	0.01012	0.0586331	0.013158	3.96962E-08	0.73193	0.819814	0.000645	0.171499	0.161751	0.00318	0.00316	0.00666	0.759	0.817	0.999	0.87	0.919	0.995	0.983	0.964
rs2070937	2.2382E-08	0.028409	0.00508	0.028409	0.00508	3.9708E-08	0.61471	0.751855	0.005777	0.019445	0.444814	8.4E-06	0.46463	0.691622	0.795	0.704	0.987	0.974	0.79	1	0.805	0.78
rs35444516	2.2384E-08	-0.031552	0.00564	-0.031552	0.005642	3.97107E-08	0.11567	0.2351	0.003831	0.04132	0.239448	0.00202	0.00273	0.860907	0.926	0.906	0.996	0.972	0.911	0.998	0.986	0.831
rs7983818	2.2384E-08	-0.028379	0.00507	-0.028379	0.005074	3.97111E-08	0.42577	0.569633	0.001045	0.030448	0.796727	0.00029	0.19367	0.204841	0.853	0.834	0.998	0.971	0.724	0.999	0.9	0.89
rs456261	2.2385E-08	0.0281711	0.00504	0.0266588	0.006319	3.97148E-08	0.24609	0.733402	0.001554	0.000139	0.88113	0.00025	0.93369	0.436917	0.474	0.695	0.994	0.999	0.536	0.999	0.586	0.75
rs9853683	2.2391E-08	-0.028507	0.0051	-0.028507	0.005097	3.97267E-08	0.65158	0.107284	0.023103	0.116173	0.021192	5.6E-06	0.36592	0.703351	0.811	0.901	0.939	0.887	0.968	1	0.848	0.707
rs614025	2.2395E-08	0.0355501	0.00636	0.0475277	0.011097	3.13807E-08	0.00506	0.060951	0.055761	0.00502	0.055304	0.0159	0.00077	0.172208	0.97	0.945	0.878	0.993	0.965	0.949	0.991	0.925
rs145761294	2.2405E-08	0.0556199	0.00995	0.0556199	0.009946	3.97585E-08	0.53902	0.516946	0.000381	0.005313	0.016488	0.05454	0.10827	0.156755	0.859	0.862	0.999	0.994	0.978	0.866	0.937	0.915
rs12582448	2.2423E-08	0.0364923	0.00653	0.0356435	0.008149	3.97992E-08	0.71398	0.189188	0.034154	0.009388	0.097488	7.1E-06	0.12765	0.200281	0.679	0.862	0.884	0.985	0.915	1	0.897	0.527
rs9458639	2.2435E-08	0.0316171	0.00565	0.0316171	0.005654	3.98257E-08	0.27433	0.486029	0.001834	0.018227	0.953157	0.00189	0.02887	0.014047	0.886	0.857	0.997	0.983	0.663	0.997	0.961	0.955
rs6926629	2.2435E-08	0.0285636	0.00511	0.0285636	0.005108	3.98258E-08	0.54055	0.562106	0.00146	0.002026	0.349511	0.00987	0.03148	0.232091	0.863	0.861	0.998	0.997	0.877	0.985	0.963	0.904
rs2153666	2.2438E-08	-0.028373	0.00507	-0.028373	0.005074	3.98313E-08	0.44583	0.585145	0.001032	0.028966	0.839059	0.00028	0.1778	0.213507	0.848	0.829	0.998	0.972	0.708	0.999	0.903	0.886
rs1822237	2.244E-08	-0.029138	0.00521	-0.029138	0.005211	3.98363E-08	0.09127	0.759493	0.002888	0.044027	0.803431	0.00019	0.02786	0.531444	0.915	0.814	0.996	0.961	0.726	1	0.959	0.841
rs78666263	2.2445E-08	0.0351863	0.00629	0.0351863	0.006292	3.98469E-08	0.25106	0.564108	0.071934	0.00417	0.083935	0.00018	0.01686	0.769944	0.887	0.843	0.824	0.994	0.944	1	0.969	0.812
rs9508159	2.2479E-08	-0.028375	0.00507	-0.028375	0.005074	3.99218E-08	0.4294	0.569346	0.001046	0.030399	0.796477	0.00029	0.19378	0.204823	0.852	0.834	0.998	0.971	0.724	0.999	0.9	0.89
rs9458634	2.2481E-08	0.0314741	0.00563	0.0314741	0.005629	3.99266E-08	0.18497	0.389882	0.001742	0.01338	0.991058	0.00321	0.0319	0.018767	0.904	0.874	0.998	0.988	0.684	0.995	0.961	0.954
rs2654674	2.2481E-08	-0.028361	0.00507	-0.03486	0.009496	2.9791E-08	0.08054	0.208608	0.026137	0.238699	0.00104	0.00078	0.00017	0.491313	0.916	0.884	0.915	0.777	0.992	0.989	0.992	0.666
rs9858418	2.2485E-08	-0.028523	0.0051	-0.028523	0.005101	3.98182E-08	0.64771	0.096927	0.026253	0.114386	0.023932	4.5E-06	0.35538	0.684069	0.81	0.903	0.927	0.885	0.965	1	0.848	0.7
rs400128	2.2488E-08	-0.02819	0.00504	-0.02819	0.005041	3.99432E-08	0.27211	0.500479	2.35E-05	0.182581	0.863263	0.00128	0.05071	0.338687	0.845	0.805	1	0.797	0.55	0.996	0.932	0.834
rs555639	2.2495E-08	-0.028498	0.0051	-0.029605	0.006593	3.99591E-08	0.02584	0.056299	0.006827	0.109537	0.991632	0.00024	0.08291	0.020786	0.946	0.933	0.989	0.917	0.683	1	0.942	0.953
rs6957632	2.2501E-08	-0.03138	0.00561	-0.03138	0.005612	3.99709E-08	0.41215	0.122882	0.014987	0.000545	0.268196	0.00059	0.21874	0.302646	0.688	0.907	0.972	0.998	0.88	0.999	0.897	0.876
rs1572025	2.2508E-08	-0.028174	0.00504	-0.028174	0.005039	3.99862E-08	0.08684	0.165664	0.002292	0.000213	0.91182	0.00587	0.12017	0.797093	0.911	0.891	0.996	0.999	0.676	0.988	0.919	0.729
rs10848580	2.252E-08	-0.035706	0.00639	-0.035706	0.006386	4.00139E-08	0.91139	0.269686	2.63E-05	0.190523	0.111466	0.00968	0.00407	0.925371	0.76	0.872	1	0.833	0.925	0.974	0.979	0.775
rs11170861	2.2532E-08	-0.028637	0.00512	-0.028637	0.005122	4.00411E-08	0.01759	0.867201	0.000189	0.07412	0.635266	0.00104	0.18013	0.453783	0.942	0.759	1	0.933	0.766	0.998	0.902	0.846
rs9314920	2.254E-08	-0.028373	0.00507	-0.028373	0.005075	4.00591E-08	0.42468	0.568863	0.001048	0.030623	0.796218	0.00029	0.19347	0.204735	0.853	0.834	0.998	0.971	0.724	0.999	0.9	0.89
rs12583996	2.2547E-08	0.0284397	0.00509	0.0284397	0.005086	4.00747E-08	0.18269	0.403388	0.003455	0.00383	0.234516	0.00378	0.52289	0.024664	0.913	0.884	0.996	0.995	0.911	0.995	0.858	0.955
rs74570090	2.2555E-08	0.0836351	0.01496	0.0836351	0.014958	3.99876E-08	0.07038	0.059752	2.43E-05	0.061659	0.104522	0.05431	0.13505	0.543587	0.932	0.933	1	0.949	0.941	0.863	0.928	0.857

Table S3

rs113207282	2.2571E-08	-0.028372	0.00507	-0.028372	0.005075	4.01274E-08	0.42522	0.570491	0.001041	0.030395	0.797125	0.00029	0.19393	0.205035	0.853	0.834	0.998	0.971	0.724	0.999	0.9	0.89
rs3802850	2.2581E-08	0.0293695	0.00525	0.0314509	0.00667	4.01484E-08	0.03899	0.977361	0.05944	0.007872	0.001734	0.00101	0.4097	0.047004	0.942	0.8	0.866	0.992	0.992	0.998	0.867	0.943
rs10954388	2.2593E-08	0.0382268	0.00684	0.0382268	0.006837	4.01762E-08	0.38192	0.511633	0.016555	0.010189	0.004301	0.00057	0.73006	0.284816	0.877	0.861	0.974	0.99	0.987	0.999	0.806	0.892
rs10517312	2.2593E-08	0.0416169	0.00744	0.0416169	0.007444	4.01769E-08	0.53982	0.077153	0.039431	0.032794	0.206046	0.00037	0.00271	0.156891	0.872	0.935	0.934	0.977	0.92	0.999	0.986	0.923
rs4781851	2.2595E-08	0.0323657	0.00579	0.0323657	0.005789	4.01796E-08	0.87731	0.654689	0.001178	0.005337	0.550299	0.00075	0.50428	0.095738	0.79	0.819	0.998	0.992	0.789	0.999	0.824	0.912
rs9456805	2.2639E-08	0.0314673	0.00563	0.0314673	0.005629	4.02782E-08	0.18562	0.389637	0.001746	0.013511	0.991122	0.00319	0.03194	0.018769	0.904	0.874	0.998	0.987	0.684	0.995	0.961	0.954
rs1690807	2.2642E-08	-0.029034	0.00519	-0.028827	0.006969	3.11398E-08	0.92684	0.156144	0.014133	0.654811	0.201999	1.3E-06	0.09329	0.031583	0.674	0.856	0.916	0.374	0.844	1	0.901	0.919
rs4292665	2.2645E-08	0.0339926	0.00608	0.03631	0.010766	6.02651E-09	0.99563	0.607376	0.592161	7.02E-05	0.038393	9.1E-06	0.0474	0.194503	0.554	0.445	0.016	1	0.929	1	0.914	0.803
rs4425570	2.2668E-08	0.031466	0.00563	0.031466	0.005629	4.03426E-08	0.18542	0.389819	0.001744	0.013512	0.99102	0.0032	0.03191	0.018768	0.904	0.874	0.998	0.987	0.684	0.995	0.961	0.954
rs9458638	2.2674E-08	0.031607	0.00565	0.031607	0.005654	4.0355E-08	0.27468	0.484509	0.001827	0.018604	0.951194	0.00189	0.02886	0.013956	0.886	0.857	0.997	0.983	0.662	0.997	0.961	0.956
rs1317992	2.2677E-08	0.0286205	0.00512	0.0286205	0.00512	4.03621E-08	0.44436	0.485035	0.000342	0.006512	0.051373	0.02546	0.07371	0.065817	0.867	0.725	0.999	0.993	0.96	0.943	0.945	0.934
rs7552616	2.2677E-08	0.0286205	0.00512	0.0286205	0.00512	4.03621E-08	0.44436	0.485035	0.000342	0.006512	0.051373	0.02546	0.07371	0.065817	0.867	0.725	0.999	0.993	0.96	0.943	0.945	0.934
rs2525535	2.2688E-08	0.0296405	0.0053	0.030031	0.007844	4.03866E-08	0.08862	0.458384	0.000919	0.114415	0.000277	0.00147	0.23528	0.489782	0.903	0.665	0.998	0.887	0.994	0.997	0.876	0.651
rs2137225	2.2699E-08	-0.031546	0.00564	-0.031546	0.005643	4.04113E-08	0.11148	0.234112	0.00377	0.041667	0.238757	0.00206	0.00285	0.864406	0.927	0.907	0.996	0.972	0.911	0.998	0.985	0.831
rs2329212	2.2719E-08	-0.029266	0.00524	-0.029266	0.005236	4.04559E-08	0.13946	0.831559	0.010049	0.03868	0.009441	0.00062	0.0538	0.997284	0.917	0.831	0.987	0.972	0.983	0.999	0.955	0.805
rs7980317	2.2721E-08	-0.030297	0.00542	-0.030297	0.00542	4.04601E-08	0.96707	0.271551	0.000197	0.02658	0.644152	0.00158	0.25526	0.18148	0.785	0.876	1	0.974	0.77	0.997	0.885	0.895
rs1006826	2.2724E-08	-0.038591	0.0069	-0.038591	0.006904	4.04668E-08	0.89843	0.245046	0.001583	0.061594	0.32032	0.00012	0.14856	0.803239	0.796	0.882	0.998	0.947	0.863	1	0.914	0.803
rs6903973	2.2761E-08	0.0285639	0.00511	0.0285639	0.00511	4.05489E-08	0.55414	0.571871	0.001514	0.001847	0.359419	0.0107	0.02572	0.227052	0.861	0.859	0.998	0.997	0.874	0.983	0.966	0.904
rs6069047	2.2766E-08	-0.031533	0.00564	-0.031533	0.005641	4.05598E-08	0.11583	0.234332	0.003771	0.043722	0.238118	0.002	0.00269	0.861648	0.926	0.906	0.996	0.971	0.911	0.998	0.986	0.831
rs2847575	2.2768E-08	-0.034281	0.00613	-0.034281	0.006133	4.05653E-08	0.37347	0.004155	0.00399	0.009875	0.248313	0.00451	0.19361	0.234912	0.895	0.97	0.996	0.992	0.914	0.995	0.927	0.914
rs9508168	2.2775E-08	-0.028363	0.00507	-0.028363	0.005074	4.05819E-08	0.42584	0.573225	0.001047	0.029234	0.815524	0.00029	0.19735	0.207049	0.852	0.832	0.998	0.972	0.717	0.999	0.898	0.889
rs34058981	2.2778E-08	0.0298503	0.00534	0.0298503	0.00534	4.05868E-08	0.68537	0.032405	0.011922	0.001493	0.07582	0.00055	0.84129	0.586332	0.821	0.934	0.978	0.997	0.944	0.999	0.685	0.831
rs66508170	2.2783E-08	0.0285461	0.00511	0.0303932	0.008105	4.05976E-08	0.07503	0.011627	0.000507	0.056002	0.552446	0.00253	0.63322	0.003656	0.92	0.95	0.999	0.951	0.793	0.996	0.626	0.966
rs1781030	2.2784E-08	-0.028188	0.00504	-0.028188	0.005043	4.06012E-08	0.56894	0.258459	0.001712	0.145512	0.172043	0.00105	0.00366	0.397385	0.859	0.897	0.998	0.899	0.923	0.999	0.983	0.879
rs7616113	2.2786E-08	0.0294103	0.00526	0.0294103	0.005262	4.06052E-08	0.87401	0.760458	0.012891	0.113332	0.331676	4E-06	0.05137	0.502219	0.784	0.799	0.97	0.894	0.847	1	0.941	0.832
rs3835704	2.2787E-08	-0.028735	0.00514	-0.027818	0.007354	4.06079E-08	0.05911	0.109797	0.01672	0.022465	0.074055	1E-05	0.17983	0.779942	0.906	0.886	0.946	0.97	0.93	1	0.363	0.754
rs78069248	2.2858E-08	0.0563481	0.01008	0.0510172	0.01639	2.09516E-08	0.1864	0.979313	6.11E-05	0.732309	0.293358	1.3E-05	0.01936	0.612933	0.784	0.574	1	0.051	0.705	1	0.931	0.447
rs2207630	2.2883E-08	0.0289192	0.00517	0.0346056	0.008221	4.08206E-08	0.40213	0.057013	0.001079	0.013326	0.412763	0.06159	0.00129	0.005217	0.879	0.938	0.997	0.987	0.853	0.832	0.989	0.971
rs6064139	2.2886E-08	-0.031529	0.00564	-0.031529	0.005642	4.08272E-08	0.11482	0.234412	0.003823	0.041053	0.23885	0.00204	0.00294	0.861623	0.926	0.907	0.996	0.972	0.911	0.998	0.985	0.831
rs6797664	2.2887E-08	-0.028488	0.0051	-0.028488	0.005098	4.08296E-08	0.65537	0.107062	0.023444	0.117607	0.020906	5.6E-06	0.36614	0.705312	0.81	0.901	0.937	0.885	0.968	1	0.847	0.707
rs187482937	2.2901E-08	-0.091169	0.01631	-0.091169	0.016314	4.08616E-08	0.55197	0.084203	0.008124	0.260948	0.087286	2.2E-05	0.08163	0.777091	0.838	0.916	0.984	0.779	0.939	1	0.935	0.803
rs2372688	2.2902E-08	-0.02942	0.00526	-0.02942	0.005264	4.08638E-08	0.95031	0.689172	0.011929	0.118724	0.394768	3.8E-06	0.04808	0.46903	0.769	0.805	0.972	0.887	0.824	1	0.941	0.833
rs1940728	2.2902E-08	0.0293424	0.00525	0.0314014	0.00666	4.08648E-08	0.03403	0.950741	0.053569	0.008888	0.001673	0.0011	0.40063	0.05171	0.945	0.8	0.885	0.991	0.992	0.998	0.872	0.942
rs1940729	2.2902E-08	0.0293424	0.00525	0.0314014	0.00666	4.08648E-08	0.03403	0.950741	0.053569	0.008888	0.001673	0.0011	0.40063	0.05171	0.945	0.8	0.885	0.991	0.992	0.998	0.872	0.942
rs11603966	2.2912E-08	0.0324376	0.0058	0.0313603	0.008427	3.665E-08	0.65616	0.02015	0.004917	0.607149	0.024562	2.7E-06	0.81719	0.331972	0.587	0.909	0.972	0.365	0.95	1	0.625	0.79
rs4462382	2.2912E-08	0.0324376	0.0058	0.0313603	0.008427	3.665E-08	0.65616	0.02015	0.004917	0.607149	0.024562	2.7E-06	0.81719	0.331972	0.587	0.909	0.972	0.365	0.95	1	0.625	0.79
rs56391055	2.2912E-08	0.0324376	0.0058	0.0313603	0.008427	3.665E-08	0.65616	0.02015	0.004917	0.607149	0.024562	2.7E-06	0.81719	0.331972	0.587	0.909	0.972	0.365	0.95	1	0.625	0.79
rs6956345	2.2914E-08	-0.031526	0.00564	-0.031526	0.005641	4.08902E-08	0.65391	0.120576	0.021962	0.000275	0.243315	0.00072	0.22132	0.397732	0.739	0.909	0.957	0.999	0.89	0.999	0.898	0.864
rs2431108	2.2921E-08	0.030954	0.00554	0.030954	0.005539	4.09053E-08	0.41905	0.002821	0.005742	0.155059	0.043336	0.00016	0.624	0.49695	0.87	0.966	0.992	0.886	0.963	1	0.823	0.859
rs1790265	2.2928E-08	-0.029013	0.00519	-0.028795	0.006926	3.18091E-08	0.92441	0.152122	0.01463	0.644053	0.197284	1.3E-06	0.10029	0.03235	0.675	0.858	0.914	0.383	0.846	1	0.897	0.918
rs11215347	2.2941E-08	0.0324183	0.0058	0.03143	0.007818	3.752E-08	0.74421	0.027096	0.004569	0.622894	0.0352	2.7E-06	0.69892	0.339372	0.616	0.904	0.976	0.369	0.941	1	0.669	0.794
rs147102595	2.296E-08	0.0693917	0.01242	0.0693917	0.012418	4.09934E-08	0.6908	0.328037	0.009174	0.000899	0.474697	0.00098	0.29105	0.141972	0.835	0.879	0.987	0.998	0.836	0.999	0.888	0.912
rs7132541	2.2982E-08	-0.028663	0.00513	-0.028663	0.00513	4.10422E-08	0.61094	0.433573	0.000477	0.019783	0.296142	0.00625	0.00445	0.856389	0.847	0.869	0.999	0.983	0.884	0.99	0.981	0.813
rs34209273	2.3022E-08	-0.028191	0.00505	-0.028191	0.005045	4.11316E-08	0.8084	0.089341	0.002671	0.014092	0.632315	0.0007	0.6179	0.00652	0.814	0.918	0.996	0.986	0.782	0.999	0.815	0.962
rs2903306	2.303E-08	-0.028818	0.00516	-0.028829	0.005167	4.11488E-08	0.55423	0.325468	0.016731	0.000156	0.009891	0.00681	0.09953	0.652877	0.729	0.879	0.969	0.999	0.981	0.987	0.935	0.834
rs6816412	2.3054E-08	-0.02861	0.00512	-0.02861	0.005121	4.12022E-08	0.11643	0.249616	0.00087	0.015202	0.993668	0.00067	0.12211	0.950643	0.901	0.874	0.998	0.983	0.648	0.999	0.917	0.767
rs12373027	2.3055E-08	0.0563139	0.01008	0.050926	0.016421	2.1033E-08	0.18418	0.995322	5.99E-05	0.731105	0.29161	1.3E-05	0.01968	0.608776	0.784	0.57	1	0.051	0.706	1	0.93	0.445
rs76696160	2.3055E-08	0.0563139	0.01008	0.0509267	0.016423	2.10076E-08	0.18421	0.994578	5.99E-05	0.730565	0.291411	1.3E-05	0.01968	0.608759	0.784	0.57	1	0.051	0.706	1	0.93	0.445
rs7967600	2.3063E-08	-0.030291	0.00542	-0.030291	0.005421	4.12222E-08	0.96626	0.266639	0.000197	0.028109	0.640242	0.00158	0.24753	0.183496	0.785	0.877	1	0.973	0.772	0.997	0.888	0.895
rs2586761	2.3064E-08	-0.034264	0.00613	-0.034264	0.006133	4.12261E-08	0.37375	0.004187	0.003919	0.00986	0.248954	0.00456	0.19731	0.236085	0.895	0.97	0.996	0.992	0.914	0.995	0.926	0.914
rs28868638	2.3068E-08	0.0315879	0.00565	0.0315879	0.005654	4.12349E-08	0.27244	0.500225	0.001844	0.018708	0.962169	0.00188	0.02918	0.014224	0.886	0.855	0.997	0.983	0.666	0.997	0.961	0.955
rs11884880	2.308E-08	0.0334208	0.00598	0.0358001	0.007625	4.12613E-08	0.01419	0.441479	0.003593	0.023067	0.000397	0.01381	0.6582	0.298926	0.958	0.881	0.995	0.983	0.995	0.978	0.835	0.9
rs546393	2.3085E-08	-0.028476	0.0051	-0.029591	0.006607	4.12712E-08	0.02586	0.056242	0.006792	0.113158	0.992143	0.00024	0.08276	0.020733	0.946	0.933	0.989	0.914	0.683	1	0.942	0.953
rs192384444	2.3093E-08	0.0857506	0.01535	0.0857506	0.015348	4.12467E-08	0.67171	0.209445	0.117282	0.019654	0.04264	0.0001	0.02726	0.051809	0.829	0.896	0.715	0.98	0.962	1	0.963	0.937
rs7334814	2.3108E-08	-0.028351	0.00507	-0.028351	0.005075	4.13242E-08	0.42307	0.569051	0.001048	0.031484	0.796106	0.00029	0.19364	0.204854	0.853	0.834	0.998	0.97	0.724	0.999	0.9	0.89

Table S3

rs17251320	2.3136E-08	-0.030773	0.00551	-0.030773	0.005508	4.1385E-08	0.46877	0.028959	0.001372	0.242783	0.034785	0.00031	0.37471	0.649536	0.854	0.939	0.998	0.809	0.964	0.999	0.863	0.828
rs7119426	2.315E-08	-0.03137	0.00562	-0.038428	0.009574	3.3543E-08	0.23022	0.014385	0.00139	0.074826	2.72E-05	0.04571	0.11677	0.783989	0.9	0.955	0.993	0.935	0.998	0.876	0.933	0.825
rs17149760	2.3152E-08	0.0309396	0.00554	0.039939	0.010188	2.81896E-08	0.07658	0.000382	0.001006	0.003338	0.030048	0.16549	0.02212	0.978684	0.916	0.979	0.995	0.995	0.965	0.409	0.964	0.711
rs28444852	2.3161E-08	0.0339677	0.00608	0.0362991	0.010779	6.1078E-09	0.99565	0.605416	0.595759	7.11E-05	0.037873	9.1E-06	0.04714	0.19518	0.554	0.444	0.016	1	0.93	1	0.914	0.802
rs36006839	2.3174E-08	-0.028602	0.00512	-0.028602	0.00512	4.14695E-08	0.11635	0.249936	0.000874	0.015249	0.993507	0.00067	0.1219	0.948129	0.902	0.874	0.998	0.983	0.648	0.999	0.917	0.768
rs5798394	2.318E-08	-0.030288	0.00542	-0.030288	0.005422	4.14843E-08	0.96665	0.264632	0.000198	0.028718	0.640276	0.00157	0.24341	0.184735	0.785	0.878	1	0.973	0.772	0.997	0.889	0.895
rs9508169	2.3183E-08	-0.028346	0.00507	-0.028346	0.005074	4.14911E-08	0.40503	0.581879	0.001032	0.028306	0.82433	0.00031	0.19543	0.21184	0.855	0.831	0.998	0.973	0.714	0.999	0.899	0.888
rs2363478	2.3184E-08	-0.028335	0.00507	-0.03484	0.009499	3.06636E-08	0.0811	0.208572	0.026642	0.238412	0.001041	0.00078	0.00017	0.491096	0.916	0.884	0.913	0.777	0.992	0.988	0.992	0.665
rs898611	2.3192E-08	-0.030287	0.00542	-0.030287	0.005422	4.15117E-08	0.96678	0.265293	0.000197	0.028654	0.640292	0.00157	0.24428	0.184243	0.785	0.878	1	0.973	0.772	0.997	0.888	0.895
rs1999896	2.3216E-08	-0.029307	0.00525	-0.029307	0.005246	4.15646E-08	0.71894	0.068106	0.018364	0.01678	0.122185	3.8E-05	0.40366	0.947072	0.823	0.922	0.966	0.983	0.928	1	0.857	0.773
rs77641763	2.3246E-08	0.0364059	0.00652	0.0406309	0.009049	4.0975E-08	0.013	0.525345	0.00246	0.000508	0.444214	0.07178	0.01112	0.079638	0.956	0.853	0.993	0.999	0.831	0.788	0.975	0.93
rs1393988	2.3261E-08	-0.028333	0.00507	-0.034846	0.009504	3.06072E-08	0.08167	0.208261	0.026879	0.238514	0.001037	0.00078	0.00017	0.491263	0.915	0.884	0.912	0.776	0.992	0.988	0.992	0.665
rs9876888	2.3263E-08	-0.030574	0.00547	-0.030574	0.005473	4.16694E-08	0.32015	0.942882	0.000659	0.048217	0.62302	8.1E-05	0.6037	0.314475	0.846	0.741	0.999	0.947	0.741	1	0.779	0.849
rs74424394	2.3269E-08	-0.028973	0.00519	-0.030432	0.008291	4.1682E-08	0.0021	0.364231	0.006328	0.003808	0.611881	0.00149	0.00795	0.866958	0.964	0.664	0.989	0.994	0.769	0.997	0.973	0.785
rs66958241	2.3272E-08	0.0375587	0.00672	0.0375587	0.006724	4.16904E-08	0.06718	0.137304	0.013556	0.006113	0.446474	0.00147	0.45417	0.006445	0.938	0.923	0.983	0.994	0.861	0.998	0.874	0.97
rs2049777	2.3283E-08	0.0293674	0.00526	0.0293674	0.005258	4.13069E-08	0.71007	0.67504	0.015645	0.084655	0.42666	1.4E-06	0.05209	0.752615	0.694	0.786	0.953	0.903	0.793	1	0.932	0.769
rs7274080	2.3294E-08	-0.031512	0.00564	-0.031512	0.005642	4.1735E-08	0.11506	0.234381	0.003835	0.041575	0.238989	0.00204	0.00295	0.861197	0.926	0.906	0.996	0.972	0.911	0.998	0.985	0.831
rs7612199	2.3295E-08	-0.041035	0.00735	-0.042486	0.009099	4.1737E-08	0.2067	0.491253	0.000131	0.50725	0.009663	0.00739	0.00343	0.624206	0.878	0.828	1	0.559	0.979	0.974	0.98	0.804
rs56267645	2.3313E-08	-0.028595	0.00512	-0.028595	0.00512	4.17734E-08	0.11594	0.250047	0.000894	0.01474	0.993705	0.00068	0.12271	0.949095	0.902	0.874	0.998	0.983	0.648	0.999	0.917	0.768
rs6428455	2.3323E-08	0.0297539	0.00533	0.0324263	0.01066	3.33059E-08	0.28937	0.021938	0.00232	8.98E-05	0.005118	0.05161	0.29638	0.013695	0.841	0.388	0.985	0.999	0.983	0.744	0.836	0.944
rs10922411	2.3325E-08	0.0297538	0.00533	0.0324262	0.01066	3.33083E-08	0.28938	0.021938	0.00232	8.98E-05	0.005118	0.05161	0.29638	0.013696	0.841	0.388	0.985	0.999	0.983	0.744	0.836	0.944
rs4326656	2.3328E-08	0.0297541	0.00533	0.0324263	0.01066	3.33064E-08	0.28958	0.021938	0.002319	8.98E-05	0.005118	0.05161	0.29638	0.013695	0.841	0.388	0.985	0.999	0.983	0.744	0.836	0.944
rs11207521	2.3337E-08	0.0339364	0.00608	0.0339364	0.006076	4.18228E-08	0.2643	0.651858	0.002419	0.004195	0.75698	9.2E-05	0.55125	0.598029	0.845	0.676	0.995	0.992	0.679	1	0.775	0.787
rs111236666	2.3339E-08	0.0375545	0.00672	0.0375545	0.006724	4.18263E-08	0.06735	0.137114	0.013596	0.006097	0.446431	0.00147	0.45433	0.006465	0.938	0.923	0.983	0.994	0.861	0.998	0.874	0.97
rs3117004	2.3343E-08	0.0298735	0.00535	0.029805	0.005533	4.18334E-08	0.71173	0.084081	0.001168	0.672453	0.120502	4.7E-05	0.05276	0.179394	0.652	0.888	0.997	0.385	0.898	1	0.93	0.863
rs143596217	2.3369E-08	-0.066235	0.01186	-0.066235	0.011859	4.18869E-08	0.29272	0.457511	1.31E-05	0.020645	0.516769	0.00544	0.67444	0.17369	0.85	0.822	1	0.974	0.767	0.986	0.591	0.878
rs7159810	2.3371E-08	0.0283541	0.00508	0.0283541	0.005077	4.18915E-08	0.70758	0.240197	0.000931	0.008719	0.35668	0.0137	0.00499	0.059028	0.769	0.899	0.999	0.991	0.872	0.976	0.981	0.939
rs60360194	2.3376E-08	-0.028465	0.0051	-0.029494	0.006523	4.19012E-08	0.0256	0.061006	0.006783	0.110607	0.998113	0.00024	0.08594	0.020662	0.946	0.931	0.99	0.916	0.687	1	0.941	0.953
rs2782504	2.3382E-08	0.0890857	0.01595	0.0912087	0.01871	3.86398E-08	0.2706	0.287375	3.71E-05	0.002859	0.584075	0.09898	0.34939	0.00751	0.854	0.851	1	0.994	0.731	0.646	0.832	0.958
rs3129272	2.3382E-08	0.0298739	0.00535	0.0298133	0.005515	4.19139E-08	0.71495	0.083269	0.001176	0.669314	0.119667	4.8E-05	0.05223	0.179381	0.654	0.889	0.997	0.388	0.899	1	0.93	0.863
rs35995364	2.3397E-08	-0.034249	0.00613	-0.034249	0.006133	4.19442E-08	0.37371	0.004204	0.00393	0.009858	0.24877	0.0046	0.19801	0.236136	0.895	0.97	0.996	0.992	0.914	0.995	0.926	0.914
rs2586762	2.3398E-08	-0.034249	0.00613	-0.034249	0.006133	4.19464E-08	0.37371	0.004204	0.00393	0.009857	0.248773	0.0046	0.198	0.236134	0.895	0.97	0.996	0.992	0.914	0.995	0.926	0.914
rs503460	2.3402E-08	0.0295049	0.00528	0.0295049	0.005283	4.19535E-08	0.1782	0.140142	0.001096	0.060032	0.078028	0.00183	0.12187	0.960098	0.912	0.918	0.999	0.959	0.953	0.998	0.936	0.802
rs142354466	2.3402E-08	-0.038203	0.00684	-0.038203	0.00684	4.1954E-08	0.94674	0.867372	1.36E-05	0.330422	0.393816	0.00056	0.08974	0.598302	0.704	0.718	1	0.628	0.764	0.998	0.898	0.757
rs11182081	2.3408E-08	-0.029665	0.00531	-0.029665	0.005312	4.19655E-08	0.19508	0.306091	0.001504	0.03897	0.133789	0.00326	0.02418	0.656977	0.914	0.899	0.998	0.974	0.94	0.996	0.969	0.858
rs743015	2.3413E-08	0.0288506	0.00517	0.0338778	0.008272	4.19772E-08	0.537	0.116669	0.000314	0.021166	0.47215	0.06979	0.00238	0.002175	0.848	0.915	0.999	0.978	0.817	0.782	0.986	0.974
rs6601374	2.3445E-08	0.0333256	0.00597	0.0333256	0.005968	4.20418E-08	0.44088	0.683003	0.00089	0.17765	0.124113	8.9E-05	0.25208	0.288437	0.841	0.721	0.998	0.842	0.918	1	0.877	0.866
rs4360108	2.3489E-08	0.0315699	0.00565	0.0315699	0.005654	4.21301E-08	0.27487	0.500972	0.001853	0.018483	0.962102	0.00192	0.0291	0.014221	0.886	0.855	0.997	0.983	0.666	0.997	0.961	0.955
rs1042949	2.3491E-08	0.0294611	0.00528	0.0294611	0.005276	4.21346E-08	0.07042	0.378898	1.4E-05	0.050768	0.933603	0.00436	0.81367	0.106622	0.905	0.836	1	0.943	0.595	0.989	0.725	0.897
rs35639002	2.3502E-08	0.0291078	0.00521	0.0291078	0.005213	4.21564E-08	0.40588	0.451557	0.000195	0.089035	0.313994	0.00304	0.0773	0.172184	0.877	0.871	1	0.937	0.883	0.996	0.945	0.912
rs16864405	2.3528E-08	0.0375431	0.00672	0.0375431	0.006724	4.22101E-08	0.0674	0.137368	0.013635	0.006093	0.44627	0.00147	0.45541	0.006465	0.938	0.923	0.983	0.994	0.861	0.998	0.873	0.97
rs116861998	2.3538E-08	0.0561664	0.01006	0.0492446	0.017635	1.34996E-08	0.12825	0.950074	5.38E-05	0.636646	0.471164	5.5E-06	0.02387	0.547479	0.796	0.552	1	0.031	0.567	1	0.918	0.396
rs10739157	2.3581E-08	-0.030521	0.00547	-0.032254	0.008724	4.23163E-08	0.10646	0.066518	0.000105	0.017703	0.006586	0.04232	0.02208	0.780405	0.53	0.913	1	0.978	0.982	0.837	0.959	0.777
rs679169	2.3589E-08	0.0304932	0.00546	0.0304932	0.005461	4.23337E-08	0.30964	0.233653	0.025322	0.119298	0.033668	9.2E-05	0.18926	0.052245	0.897	0.907	0.96	0.921	0.971	1	0.923	0.945
rs4244138	2.3596E-08	0.029747	0.00533	0.0323942	0.010628	3.45008E-08	0.29572	0.022308	0.002293	9.61E-05	0.005066	0.05097	0.29693	0.013774	0.84	0.391	0.986	0.999	0.983	0.749	0.836	0.944
rs35598010	2.3597E-08	0.0308033	0.00552	0.0308033	0.005517	4.23494E-08	0.33239	0.31669	0.033298	0.012193	0.002113	0.00014	0.36904	0.427948	0.864	0.866	0.92	0.986	0.989	1	0.855	0.66
rs192193	2.3598E-08	-0.02958	0.0053	-0.0309	0.008829	4.23523E-08	0.04941	0.431981	0.055978	0.018865	0.008968	5.8E-05	0.07368	0.032767	0.467	0.831	0.806	0.975	0.979	1	0.93	0.933
rs11160758	2.3608E-08	0.0283054	0.00507	0.0283054	0.00507	4.23712E-08	0.58278	0.194424	0.000947	0.008394	0.357785	0.01097	0.00753	0.07671	0.747	0.905	0.999	0.992	0.87	0.981	0.978	0.933
rs1535097	2.3609E-08	0.0283054	0.00507	0.0283054	0.00507	4.2373E-08	0.58278	0.194422	0.000947	0.008394	0.357785	0.01097	0.00753	0.07671	0.747	0.905	0.999	0.992	0.87	0.981	0.978	0.933
rs1535098	2.3609E-08	0.0283054	0.00507	0.0283054	0.00507	4.2373E-08	0.58278	0.194422	0.000947	0.008394	0.357785	0.01097	0.00753	0.07671	0.747	0.905	0.999	0.992	0.87	0.981	0.978	0.933
rs3818085	2.3609E-08	0.0283054	0.00507	0.0283054	0.00507	4.2373E-08	0.58278	0.194422	0.000947	0.008394	0.357785	0.01097	0.00753	0.07671	0.747	0.905	0.999	0.992	0.87	0.981	0.978	0.933
rs5811117	2.3609E-08	0.0283054	0.00507	0.0283054	0.00507	4.2373E-08	0.58278	0.194422	0.000947	0.008394	0.357785	0.01097	0.00753	0.07671	0.747	0.905	0.999	0.992	0.87	0.981	0.978	0.933
rs17065049	2.3624E-08	0.0429271	0.00769	0.0424703	0.008407	4.24036E-08	0.35867	0.269806	0.001435	0.000209	0.185696	0.00099	0.76651	0.798396	0.809	0.555	0.996	0.999	0.861	0.997	0.572	0.73
rs6998340	2.3642E-08	-0.038059	0.00682	-0.038059	0.006817	4.24418E-08	0.96125	0.855671	1.55E-05	0.294505	0.371105	0.00072	0.08698	0.541565	0.718	0.735	1	0.68	0.788	0.998	0.906	0.781
rs9652592	2.3645E-08	-0.068375	0.01225	-0.068375	0.012247	4.24465E-08	0.58831	0.396318	5.41E-05	0.116845	0.563806	0.0005	0.79962	0.155212	0.801	0.831	1	0.873	0.753	0.999	0.728	0.882

Table S3

rs1494725	2.3657E-08	-0.028893	0.00518	-0.028893	0.005175	4.24712E-08	0.85984	0.978838	0.003429	0.028383	0.481996	0.00023	0.0502	0.084389	0.807	0.787	0.995	0.975	0.823	1	0.949	0.923
rs55918137	2.367E-08	0.095978	0.01719	0.0988597	0.022166	4.24973E-08	0.00476	0.782035	0.034244	0.154105	0.373008	2.1E-05	0.14302	0.031216	0.967	0.823	0.929	0.878	0.858	1	0.921	0.944
rs1548884	2.3682E-08	0.0294547	0.00528	0.0294547	0.005276	4.25224E-08	0.07051	0.379701	1.4E-05	0.050511	0.933506	0.0044	0.81564	0.106182	0.904	0.836	1	0.943	0.595	0.988	0.725	0.897
rs114301223	2.3695E-08	0.0770004	0.01379	0.0759485	0.026374	4.25491E-08	0.07123	0.00034	0.01146	0.000281	0.216487	0.00115	0.46337	0.975122	0.492	0.974	0.972	0.999	0.87	0.997	0.805	0.723
rs1397339	2.3697E-08	-0.02965	0.00531	-0.02965	0.005311	4.25526E-08	0.19508	0.310362	0.00153	0.038927	0.134072	0.00323	0.02414	0.654864	0.914	0.898	0.998	0.974	0.94	0.996	0.969	0.858
rs10945856	2.3707E-08	0.0315608	0.00565	0.0315608	0.005654	4.25725E-08	0.27524	0.500966	0.001854	0.018647	0.962126	0.00192	0.02912	0.01422	0.886	0.855	0.997	0.983	0.667	0.997	0.961	0.955
rs3117006	2.3715E-08	0.0298594	0.00535	0.0298061	0.005493	4.2589E-08	0.71383	0.083217	0.001183	0.665701	0.120291	4.9E-05	0.05262	0.179306	0.654	0.889	0.997	0.391	0.899	1	0.93	0.863
rs199861628	2.3736E-08	0.0322844	0.00578	0.0322844	0.005783	4.26326E-08	0.86009	0.700124	0.001119	0.005811	0.561721	0.00083	0.48746	0.075581	0.793	0.814	0.998	0.992	0.787	0.999	0.829	0.919
rs11650220	2.3749E-08	-0.030104	0.00539	-0.030104	0.005393	4.26581E-08	0.88462	0.431642	0.0018	0.022698	0.917787	0.00011	0.49342	0.010378	0.721	0.824	0.996	0.972	0.583	1	0.798	0.946
rs55649128	2.3755E-08	0.0295817	0.0053	0.0295817	0.005299	4.26712E-08	0.73412	0.426155	0.01045	0.063616	0.009108	1.1E-05	0.93994	0.821119	0.702	0.826	0.973	0.929	0.976	1	0.694	0.762
rs12973678	2.3781E-08	-0.030562	0.00548	-0.0338	0.007787	3.01064E-08	0.05727	0.041075	1.43E-05	0.188696	0.023316	0.10291	0.02605	0.548523	0.916	0.924	1	0.701	0.966	0.538	0.957	0.789
rs142954253	2.3795E-08	-0.068065	0.01219	-0.068065	0.012194	4.27517E-08	0.18498	0.904795	3.22E-05	0.045227	0.455912	0.00236	0.90468	0.123302	0.88	0.746	1	0.952	0.802	0.995	0.72	0.899
rs9804835	2.3805E-08	-0.029646	0.00531	-0.029646	0.005311	4.27726E-08	0.196	0.309935	0.001534	0.039193	0.133788	0.00322	0.0241	0.654903	0.914	0.898	0.998	0.974	0.94	0.996	0.969	0.858
rs10806762	2.3823E-08	0.0315556	0.00565	0.0315556	0.005653	4.28086E-08	0.27515	0.500982	0.001855	0.01875	0.962162	0.00192	0.02913	0.014222	0.886	0.855	0.997	0.983	0.667	0.997	0.961	0.955
rs10281425	2.3834E-08	0.0294502	0.00528	0.0294502	0.005276	4.28308E-08	0.0705	0.380932	1.4E-05	0.050447	0.932752	0.00441	0.81645	0.106148	0.904	0.836	1	0.943	0.595	0.988	0.724	0.897
rs7805300	2.384E-08	-0.03132	0.00561	-0.03132	0.005611	4.28433E-08	0.41284	0.123661	0.015309	0.000511	0.270041	0.00062	0.22907	0.294231	0.688	0.906	0.971	0.998	0.879	0.999	0.894	0.877
rs34269894	2.3872E-08	0.0298532	0.00535	0.0298004	0.005492	4.29082E-08	0.71383	0.083202	0.001184	0.665919	0.120468	4.9E-05	0.05273	0.179282	0.654	0.889	0.997	0.391	0.899	1	0.93	0.863
rs4764767	2.3888E-08	0.03351	0.006	0.0338267	0.006274	4.29396E-08	0.91209	0.915512	0.041235	9.4E-05	0.079588	0.00286	0.02497	0.160443	0.777	0.779	0.908	0.999	0.945	0.993	0.963	0.906
rs7166783	2.3895E-08	0.0283918	0.00509	0.0283918	0.005087	4.29553E-08	0.1845	0.770137	0.000868	0.04034	0.332072	0.00026	0.23821	0.91351	0.89	0.808	0.999	0.963	0.857	0.999	0.888	0.758
rs7784952	2.3907E-08	-0.031317	0.00561	-0.031317	0.005611	4.2978E-08	0.41268	0.123793	0.015305	0.000513	0.269813	0.00062	0.22931	0.294291	0.688	0.906	0.971	0.998	0.879	0.999	0.894	0.877
rs7105494	2.3929E-08	0.0323943	0.0058	0.0313108	0.008437	3.82412E-08	0.65468	0.02005	0.004966	0.61026	0.024876	2.7E-06	0.81933	0.332674	0.586	0.909	0.971	0.364	0.949	1	0.623	0.789
rs624936	2.3941E-08	-0.028424	0.00509	-0.028424	0.005093	3.83638E-08	0.37672	0.399338	0.002899	0.686159	0.466131	1.9E-06	0.09399	0.320288	0.786	0.781	0.987	0.336	0.708	1	0.89	0.8
rs665597	2.395E-08	0.0342209	0.00613	0.0342209	0.006132	4.30661E-08	0.06068	0.206817	0.000328	0.213825	0.121184	0.00037	0.66518	0.850763	0.918	0.882	0.999	0.814	0.921	0.999	0.787	0.785
rs60297128	2.3951E-08	-0.084413	0.01513	-0.084413	0.015126	4.30688E-08	0.61308	0.923383	0.002152	0.004163	0.063082	0.00499	0.11224	0.24838	0.853	0.8	0.997	0.995	0.957	0.993	0.936	0.901
rs8037169	2.3964E-08	0.0283411	0.00508	0.0283411	0.005078	4.30947E-08	0.33103	0.976876	0.000589	0.031871	0.317136	0.00025	0.37795	0.882929	0.858	0.765	0.999	0.967	0.853	0.999	0.847	0.777
rs4785323	2.3991E-08	0.0373465	0.00669	0.0373465	0.006692	4.31494E-08	0.6643	0.493035	1.94E-05	0.039717	0.312982	0.00573	0.51949	0.084933	0.722	0.837	1	0.961	0.857	0.988	0.819	0.913
rs76500931	2.3994E-08	-0.082116	0.01472	-0.082116	0.014715	4.31547E-08	0.65158	0.51991	0.001931	0.037026	0.419416	0.0002	0.2879	0.158007	0.834	0.851	0.997	0.968	0.843	1	0.885	0.907
rs10236831	2.3999E-08	0.0381552	0.00684	0.0381552	0.006837	4.31663E-08	0.38057	0.511672	0.016636	0.010931	0.004315	0.00057	0.73156	0.285035	0.877	0.861	0.974	0.989	0.987	0.999	0.806	0.891
rs12595659	2.401E-08	0.0284784	0.0051	0.0286424	0.005637	4.31892E-08	0.00802	0.420368	0.000204	0.185212	0.095896	0.00341	0.04816	0.588345	0.956	0.862	1	0.852	0.939	0.994	0.951	0.713
rs9931719	2.4013E-08	-0.034969	0.00627	-0.04015	0.009405	4.31937E-08	0.12303	0.617068	0.010113	0.003948	0.019242	0.0166	0.07725	0.001268	0.928	0.776	0.986	0.996	0.979	0.972	0.952	0.978
rs3219112	2.4016E-08	-0.028689	0.00514	-0.027758	0.007338	4.32011E-08	0.05914	0.112887	0.016681	0.022851	0.075574	1E-05	0.17969	0.783542	0.905	0.885	0.946	0.97	0.928	1	0.363	0.753
rs11781218	2.4038E-08	0.0305173	0.00547	0.0305173	0.005469	4.32456E-08	0.43934	0.025416	0.001607	0.233492	0.015807	0.00066	0.26604	0.65809	0.866	0.944	0.998	0.826	0.977	0.999	0.894	0.836
rs1983866	2.4041E-08	0.0300264	0.00538	0.0321538	0.007993	4.32515E-08	0.47529	0.709644	0.034686	0.023466	0.001914	0.00049	0.00164	0.664376	0.844	0.733	0.914	0.976	0.99	0.999	0.985	0.709
rs10447118	2.406E-08	0.0285442	0.00512	0.0279345	0.007034	2.8312E-08	0.13006	0.631426	5.29E-05	0.668106	0.068393	0.00011	0.29004	0.109909	0.857	0.727	1	0.062	0.917	1	0.8	0.87
rs4337578	2.4063E-08	-0.02874	0.00515	-0.028915	0.006334	3.6235E-08	0.95757	0.367132	0.050319	7.74E-06	0.180855	0.00038	0.87618	0.43641	0.714	0.812	0.801	1	0.862	0.998	0.604	0.798
rs726283	2.4067E-08	-0.031687	0.00568	-0.031687	0.005679	4.33036E-08	0.54684	0.856382	0.009814	0.059785	0.240164	1.7E-05	0.2876	0.118816	0.841	0.767	0.983	0.949	0.888	1	0.88	0.911
rs77260975	2.4079E-08	0.0759766	0.01362	0.0759766	0.013616	4.27633E-08	0.41308	0.454315	0.043744	0.004683	0.747106	3.6E-06	0.18517	0.732886	0.808	0.801	0.848	0.99	0.666	1	0.867	0.66
rs74655564	2.4121E-08	0.0284002	0.00509	0.0286646	0.009841	1.53785E-08	0.10391	0.766897	8.37E-07	0.059414	0.035212	0.12728	0.001	0.550791	0.276	0.602	1	0.752	0.919	0.261	0.983	0.648
rs7237361	2.4122E-08	0.0367965	0.00659	0.0367965	0.006595	4.34161E-08	0.14229	0.702682	0.003041	0.268973	0.721488	5.3E-06	0.24359	0.058266	0.868	0.668	0.99	0.7	0.669	1	0.848	0.904
rs157610	2.4126E-08	-0.02815	0.00505	-0.02815	0.005045	4.34249E-08	0.60093	0.169885	0.000202	0.019805	0.071339	0.01365	0.32412	0.281194	0.86	0.913	1	0.984	0.956	0.978	0.893	0.899
rs283031	2.4126E-08	-0.02815	0.00505	-0.02815	0.005045	4.34249E-08	0.60093	0.169885	0.000202	0.019805	0.071339	0.01365	0.32412	0.281194	0.86	0.913	1	0.984	0.956	0.978	0.893	0.899
rs6573504	2.4131E-08	-0.028807	0.00516	-0.029029	0.005392	4.34351E-08	0.0538	0.343295	0.001791	0.007516	0.960561	0.00813	0.00815	0.090645	0.935	0.881	0.998	0.992	0.676	0.986	0.977	0.928
rs4396095	2.4139E-08	-0.031372	0.00562	-0.033291	0.006731	3.99036E-08	0.14051	0.582396	0.000172	0.040271	0.016591	0.10249	0.02051	0.027699	0.91	0.839	1	0.957	0.978	0.664	0.969	0.95
rs187720367	2.4164E-08	-0.090161	0.01616	-0.090161	0.01616	4.3501E-08	0.71602	0.071958	0.012884	0.251991	0.07392	1E-05	0.07218	0.931811	0.808	0.915	0.968	0.778	0.941	1	0.935	0.772
rs1024346	2.4168E-08	0.0323969	0.00581	0.0314145	0.00775	3.9303E-08	0.7087	0.029901	0.004756	0.586904	0.032324	3E-06	0.72648	0.342279	0.612	0.902	0.976	0.396	0.944	1	0.665	0.795
rs72666517	2.4171E-08	-0.036822	0.0066	-0.036822	0.0066	4.35163E-08	0.24667	0.282453	0.008491	0.005994	0.041399	0.0049	0.30148	0.045094	0.913	0.908	0.991	0.994	0.971	0.995	0.909	0.952
rs138193937	2.4181E-08	-0.084406	0.01513	-0.084406	0.015129	4.35351E-08	0.62224	0.924738	0.002151	0.004151	0.06324	0.005	0.11217	0.247759	0.852	0.8	0.997	0.995	0.957	0.993	0.936	0.901
rs174544	2.4183E-08	0.0287721	0.00516	0.0289462	0.005424	4.35408E-08	0.13186	0.656144	0.013209	0.120279	0.000626	0.00029	0.1942	0.349194	0.912	0.75	0.978	0.908	0.994	0.999	0.91	0.877
rs4700015	2.4186E-08	-0.028881	0.00518	-0.028881	0.005177	4.35453E-08	0.86997	0.980595	0.003514	0.028332	0.479018	0.00023	0.04935	0.083943	0.805	0.787	0.995	0.975	0.824	1	0.95	0.923
rs117282925	2.4197E-08	-0.063312	0.01135	-0.063312	0.011348	4.35693E-08	0.95637	0.631099	0.001264	0.022058	0.118909	0.00247	0.01012	0.783062	0.806	0.844	0.998	0.981	0.935	0.997	0.974	0.822
rs73072687	2.4206E-08	-0.088714	0.0159	-0.088714	0.015902	4.35876E-08	0.30902	0.101659	0.001983	0.047196	0.093276	0.00133	0.32778	0.318896	0.898	0.929	0.998	0.969	0.951	0.998	0.896	0.898
rs1373036	2.4215E-08	0.0391218	0.00701	0.040663	0.008066	4.36051E-08	0.27501	0.0825	0.004639	0.001801	0.68444	0.016	0.00241	0.16516	0.899	0.931	0.994	0.997	0.793	0.971	0.985	0.918
rs113317925	2.4221E-08	0.0367924	0.0066	0.0389776	0.008708	4.36182E-08	0.67568	0.879239	0.000889	0.00617	0.003337	0.03259	0.16722	0.010129	0.744	0.776	0.998	0.993	0.988	0.917	0.914	0.959
rs3219119	2.4232E-08	-0.02868	0.00514	-0.027744	0.007332	4.36407E-08	0.05855	0.114773	0.016638	0.022703	0.076487	1E-05	0.17979	0.785894	0.905	0.884	0.946	0.97	0.928	1	0.363	0.752
rs3130267	2.427E-08	0.0281058	0.00504	0.027852	0.005279	4.37171E-08	0.29383	0.829024	0.001402	0.000739	0.877263	0.00017	0.82287	0.22172	0.519	0.701	0.996	0.997	0.567	0.999	0.644	0.821

Table S3

rs80095837	2.4272E-08	-0.084373	0.01512	-0.084373	0.015125	4.37217E-08	0.61608	0.924744	0.002155	0.004206	0.063252	0.005	0.11235	0.24772	0.853	0.801	0.997	0.995	0.957	0.993	0.936	0.901
rs112665860	2.4286E-08	-0.041013	0.00735	-0.040671	0.010025	4.37504E-08	0.01181	0.119337	0.011264	0.002495	0.526489	9E-05	0.40324	0.786653	0.938	0.883	0.965	0.995	0.409	1	0.811	0.752
rs10747770	2.4287E-08	-0.030244	0.00542	-0.030244	0.005422	4.37512E-08	0.96491	0.272589	0.000199	0.026394	0.64898	0.0016	0.26534	0.18833	0.784	0.875	1	0.974	0.768	0.997	0.882	0.893
rs35562417	2.4303E-08	0.0294897	0.00529	0.0294897	0.005287	4.37852E-08	0.081	0.422357	1.48E-05	0.034816	0.879927	0.0041	0.93519	0.120739	0.896	0.821	1	0.957	0.562	0.989	0.683	0.888
rs8000737	2.4309E-08	-0.029228	0.00524	-0.029228	0.00524	4.37968E-08	0.14271	0.800238	0.010833	0.039389	0.00944	0.00065	0.0479	0.994849	0.917	0.835	0.985	0.972	0.983	0.999	0.957	0.806
rs174556	2.4335E-08	0.0287589	0.00516	0.0289326	0.005421	4.385E-08	0.13084	0.655405	0.013453	0.119058	0.000633	0.00029	0.19321	0.350469	0.912	0.75	0.977	0.909	0.994	0.999	0.91	0.877
rs1024345	2.434E-08	0.0323891	0.00581	0.0314066	0.007748	3.96713E-08	0.70867	0.029868	0.004763	0.586822	0.032494	3E-06	0.72675	0.342281	0.612	0.902	0.976	0.396	0.943	1	0.665	0.795
rs6803161	2.4348E-08	0.0292691	0.00525	0.0290065	0.005962	4.38762E-08	0.80969	0.723466	0.005569	0.369032	0.284245	1E-05	0.01973	0.039558	0.758	0.684	0.982	0.634	0.835	1	0.955	0.92
rs142227790	2.4367E-08	-0.035488	0.00636	-0.047335	0.011063	3.52352E-08	0.00538	0.061084	0.055896	0.00548	0.055612	0.01585	0.00075	0.175001	0.97	0.945	0.881	0.992	0.965	0.95	0.991	0.925
rs9888712	2.4378E-08	0.0283772	0.00509	0.0283772	0.005088	4.39372E-08	0.10941	0.823522	0.0015	0.023575	0.453996	0.00014	0.37619	0.901425	0.901	0.791	0.997	0.975	0.812	1	0.848	0.744
rs35289191	2.4387E-08	0.0335717	0.00602	0.0337351	0.006159	4.39558E-08	0.92877	0.877504	0.038565	9.93E-05	0.076535	0.00299	0.02775	0.159101	0.78	0.775	0.916	0.999	0.946	0.993	0.961	0.906
rs6504536	2.44E-08	0.0547532	0.00982	0.0547532	0.009817	4.39813E-08	0.59137	0.644717	0.002107	0.002535	0.210597	0.00035	0.83501	0.167448	0.675	0.793	0.996	0.995	0.873	0.999	0.642	0.877
rs117448760	2.4415E-08	-0.068012	0.01219	-0.068012	0.012194	4.40131E-08	0.17679	0.905532	3.23E-05	0.046991	0.456002	0.00237	0.90427	0.123279	0.882	0.746	1	0.95	0.802	0.995	0.72	0.899
rs11600943	2.442E-08	0.0323818	0.00581	0.0313979	0.007751	3.97707E-08	0.71191	0.029542	0.004759	0.58923	0.032937	3E-06	0.72539	0.342686	0.613	0.902	0.976	0.395	0.943	1	0.665	0.794
rs6862788	2.4422E-08	0.0285317	0.00512	0.027921	0.007029	2.87532E-08	0.13006	0.63191	5.29E-05	0.668152	0.068948	0.00011	0.28889	0.110484	0.857	0.727	1	0.062	0.917	1	0.8	0.87
rs6862792	2.4422E-08	0.0285317	0.00512	0.027921	0.007029	2.87532E-08	0.13006	0.63191	5.29E-05	0.668152	0.068948	0.00011	0.28889	0.110484	0.857	0.727	1	0.062	0.917	1	0.8	0.87
rs775672129	2.4424E-08	0.0323853	0.00581	0.0314059	0.007746	3.98551E-08	0.70906	0.029844	0.00475	0.588184	0.032541	3E-06	0.7248	0.341468	0.612	0.902	0.976	0.396	0.943	1	0.665	0.795
rs879303990	2.4426E-08	0.0323853	0.00581	0.0314058	0.007746	3.9859E-08	0.70906	0.029844	0.00475	0.58819	0.032542	3E-06	0.7248	0.34147	0.612	0.902	0.976	0.396	0.943	1	0.665	0.795
rs2071025	2.4436E-08	0.0321985	0.00577	0.0319946	0.007361	4.40551E-08	0.54205	0.632602	0.001889	0.68529	0.010971	4.5E-05	0.01763	0.360139	0.583	0.745	0.993	0.34	0.97	1	0.951	0.799
rs2586765	2.4474E-08	-0.034217	0.00614	-0.034217	0.006135	4.41333E-08	0.37752	0.004575	0.003936	0.010028	0.247819	0.00465	0.19547	0.237838	0.895	0.969	0.996	0.992	0.914	0.995	0.926	0.913
rs13100355	2.4497E-08	0.0374893	0.00672	0.0374893	0.006722	4.41786E-08	0.06745	0.138176	0.013584	0.006607	0.443192	0.00145	0.45494	0.006478	0.937	0.922	0.983	0.994	0.862	0.998	0.874	0.97
rs3826709	2.4513E-08	0.0281234	0.00504	0.0281234	0.005043	4.42119E-08	0.0783	0.169803	0.006333	0.045416	0.09866	0.00186	0.06837	0.213122	0.941	0.925	0.994	0.973	0.954	0.998	0.958	0.921
rs281248	2.4515E-08	-0.031581	0.00566	-0.031581	0.005663	4.42162E-08	0.8134	0.750983	0.000482	0.000238	0.792909	0.00175	0.48937	0.860866	0.733	0.664	0.999	0.998	0.639	0.995	0.767	0.718
rs72917055	2.4527E-08	-0.032743	0.00587	-0.032743	0.005872	4.42391E-08	0.45673	0.536382	0.00238	0.006632	0.004832	0.00503	0.84235	0.262484	0.866	0.856	0.997	0.993	0.986	0.992	0.78	0.893
rs676789	2.4537E-08	-0.028302	0.00508	-0.028042	0.005641	3.78268E-08	0.05349	0.394609	0.00939	0.639112	0.349193	1.6E-06	0.12834	0.283404	0.9	0.807	0.955	0.406	0.786	1	0.888	0.831
rs2705498	2.4538E-08	0.0380059	0.00682	0.0380059	0.006815	4.42611E-08	0.95748	0.877494	1.55E-05	0.26203	0.380861	0.0008	0.08659	0.5342	0.71	0.736	1	0.714	0.788	0.998	0.907	0.786
rs2226250	2.4549E-08	-0.029218	0.00524	-0.029218	0.00524	4.42838E-08	0.13753	0.800238	0.010842	0.040271	0.009443	0.00065	0.04792	0.994842	0.918	0.835	0.985	0.971	0.983	0.999	0.957	0.806
rs12149167	2.4575E-08	0.0562135	0.01008	0.0508059	0.016486	2.22231E-08	0.18225	0.989045	6.12E-05	0.723784	0.297747	1.3E-05	0.01925	0.602555	0.785	0.571	1	0.05	0.701	1	0.93	0.443
rs11441442	2.459E-08	-0.028115	0.00504	-0.028115	0.005042	4.43653E-08	0.66702	0.065792	0.003865	0.014736	0.585643	0.00077	0.49759	0.009657	0.841	0.929	0.995	0.986	0.807	0.999	0.849	0.961
rs11964818	2.4598E-08	0.0296882	0.00532	0.0296882	0.005324	4.43828E-08	0.73581	0.498219	0.001271	0.000523	0.082859	0.00297	0.85497	0.395791	0.713	0.824	0.998	0.998	0.931	0.994	0.656	0.839
rs78658100	2.4601E-08	0.0555136	0.00996	0.0555136	0.009956	4.4387E-08	0.55776	0.494412	0.000467	0.004199	0.016342	0.05549	0.11823	0.167463	0.856	0.864	0.999	0.995	0.978	0.865	0.933	0.913
rs75145751	2.4603E-08	-0.068006	0.0122	-0.068006	0.012196	4.43927E-08	0.18593	0.906994	3.31E-05	0.045035	0.456315	0.0024	0.90445	0.123148	0.88	0.746	1	0.952	0.802	0.995	0.72	0.899
rs10828184	2.4623E-08	0.0477813	0.00857	0.068145	0.019977	8.98434E-10	0.00048	0.204162	0.163898	6.69E-08	0.099838	0.03556	0.73581	0.039361	0.982	0.657	0.022	1	0.511	0.042	0.143	0.87
rs4525073	2.4625E-08	0.0291366	0.00523	0.0286443	0.007916	4.44355E-08	0.33493	0.054194	0.000136	0.000667	0.087437	0.02163	0.66457	0.071601	0.837	0.47	1	0.998	0.923	0.917	0.748	0.906
rs16956398	2.4642E-08	-0.036721	0.00659	-0.036619	0.006693	4.44698E-08	0.13498	0.680911	0.003283	0.297374	0.678398	4.2E-06	0.23635	0.069637	0.867	0.658	0.989	0.669	0.678	1	0.847	0.896
rs78034016	2.4646E-08	0.0291357	0.00523	0.0286506	0.007921	4.44783E-08	0.33511	0.054216	0.000141	0.000642	0.087334	0.02156	0.66454	0.071625	0.837	0.47	1	0.998	0.923	0.918	0.748	0.906
rs550615664	2.4647E-08	-0.090209	0.01618	-0.090209	0.016179	4.44803E-08	0.62428	0.076829	0.012287	0.267484	0.080171	1E-05	0.0736	0.913247	0.821	0.914	0.97	0.766	0.938	1	0.935	0.775
rs7110863	2.4669E-08	0.0292826	0.00525	0.0315226	0.006758	4.45235E-08	0.03298	0.954345	0.055166	0.008108	0.001594	0.00127	0.40274	0.051016	0.945	0.8	0.882	0.992	0.992	0.998	0.871	0.942
rs79877315	2.4677E-08	0.0561759	0.01008	0.0512048	0.015917	2.53995E-08	0.18729	0.986007	7.14E-05	0.792302	0.261312	1.6E-05	0.0211	0.602865	0.786	0.573	1	0.064	0.732	1	0.928	0.452
rs747657	2.4693E-08	-0.028662	0.00514	-0.027769	0.007289	4.45722E-08	0.0572	0.11424	0.016715	0.021706	0.078613	1.1E-05	0.18394	0.782231	0.906	0.885	0.947	0.971	0.927	1	0.367	0.754
rs12617403	2.4696E-08	-0.034882	0.00626	-0.034897	0.006268	4.45773E-08	0.58442	0.713894	0.060523	0.009575	0.033822	0.00056	0.05717	0.006482	0.858	0.844	0.872	0.991	0.97	0.999	0.955	0.967
rs76794192	2.4696E-08	0.0562322	0.01009	0.050854	0.016401	2.27241E-08	0.18523	0.985818	5.89E-05	0.73439	0.302594	1.4E-05	0.0193	0.62486	0.783	0.565	1	0.051	0.698	1	0.93	0.449
rs3130227	2.4697E-08	0.0291956	0.00524	0.0291209	0.005397	4.45792E-08	0.77557	0.38214	0.000323	0.639417	0.272121	0.00014	0.01719	0.088259	0.653	0.804	0.999	0.395	0.817	1	0.953	0.887
rs7184989	2.4713E-08	-0.028107	0.00504	-0.028107	0.005041	4.46114E-08	0.28296	0.46413	2.79E-05	0.184339	0.85654	0.00117	0.05248	0.363111	0.842	0.81	1	0.796	0.548	0.997	0.931	0.828
rs17129071	2.4716E-08	0.0961635	0.01725	0.100906	0.02378	4.46178E-08	0.00185	0.808042	0.04074	0.119341	0.360188	2.9E-05	0.17007	0.03708	0.974	0.822	0.916	0.906	0.863	1	0.916	0.943
rs9556570	2.472E-08	0.0283199	0.00508	0.0283199	0.00508	4.4626E-08	0.15921	0.467429	0.003243	0.004792	0.357397	0.0021	0.57623	0.034964	0.912	0.87	0.996	0.994	0.873	0.997	0.841	0.947
rs16920958	2.4736E-08	0.0338928	0.00608	0.0362287	0.010795	6.42223E-09	0.99875	0.604466	0.603221	7.07E-05	0.037031	9.5E-06	0.04792	0.198248	0.553	0.444	0.016	1	0.931	1	0.913	0.801
rs7788791	2.4749E-08	-0.031283	0.00561	-0.031283	0.005611	4.46852E-08	0.41192	0.122766	0.015467	0.000526	0.272002	0.00063	0.22867	0.2936	0.688	0.906	0.971	0.998	0.878	0.999	0.894	0.877
rs7785000	2.4751E-08	-0.031283	0.00561	-0.031283	0.005611	4.46877E-08	0.41194	0.122768	0.015465	0.000526	0.272023	0.00063	0.22869	0.293613	0.688	0.906	0.971	0.998	0.878	0.999	0.894	0.877
rs7570834	2.4755E-08	-0.03485	0.00625	-0.03485	0.006251	4.46967E-08	0.54316	0.718908	0.05785	0.010085	0.034886	0.00059	0.05824	0.006576	0.865	0.845	0.882	0.991	0.97	0.999	0.955	0.967
rs6063186	2.4757E-08	0.0308668	0.00554	0.0308668	0.005537	4.47011E-08	0.85603	0.185353	0.01776	0.104223	0.029854	0.00014	0.13645	0.023185	0.795	0.91	0.972	0.928	0.971	1	0.932	0.954
rs34793230	2.4761E-08	-0.030597	0.00549	-0.030597	0.005488	4.47079E-08	0.28822	0.910969	0.000526	0.068867	0.638075	8E-05	0.63206	0.326685	0.851	0.76	0.999	0.926	0.735	1	0.771	0.845
rs2496016	2.4765E-08	-0.035759	0.00641	-0.035759	0.006414	4.47167E-08	0.49545	0.103617	0.00675	0.387727	0.009001	0.0002	0.04029	0.432922	0.85	0.914	0.987	0.697	0.982	1	0.954	0.858
rs11295208	2.4773E-08	-0.028295	0.00508	-0.028295	0.005076	4.47319E-08	0.42511	0.540965	0.001096	0.030374	0.789924	0.0003	0.20591	0.215233	0.853	0.838	0.998	0.971	0.727	0.999	0.897	0.888
rs11601486	2.4783E-08	0.0323589	0.0058	0.0313825	0.007737	4.05744E-08	0.71568	0.028993	0.004808	0.588516	0.033777	3E-06	0.72187	0.34383	0.614	0.903	0.976	0.397	0.942	1	0.667	0.794

Table S3

rs41442345	2.4796E-08	-0.032734	0.00587	-0.032734	0.005872	4.47783E-08	0.45971	0.536547	0.002368	0.006789	0.00482	0.00501	0.84246	0.262098	0.865	0.856	0.997	0.992	0.986	0.993	0.78	0.894
rs3130228	2.4796E-08	0.029192	0.00524	0.0291176	0.005396	4.47794E-08	0.77562	0.382062	0.000323	0.639525	0.272419	0.00014	0.01722	0.088237	0.653	0.804	0.999	0.395	0.816	1	0.953	0.887
rs12935266	2.4815E-08	0.0283719	0.00509	0.0283719	0.00509	4.48175E-08	0.93448	0.756839	0.002714	0.00942	0.524585	2.8E-05	0.40903	0.892837	0.732	0.686	0.994	0.984	0.747	1	0.805	0.731
rs7784706	2.4816E-08	-0.03128	0.00561	-0.03128	0.005611	4.4819E-08	0.4119	0.122763	0.015478	0.000527	0.27217	0.00063	0.22876	0.29358	0.688	0.906	0.971	0.998	0.878	0.999	0.894	0.877
rs62248679	2.4819E-08	0.0330385	0.00593	0.0330385	0.005927	4.48253E-08	0.90986	0.02899	0.001466	0.102085	0.08188	0.00016	0.60416	0.911545	0.79	0.934	0.998	0.913	0.939	1	0.807	0.783
rs77209626	2.4843E-08	0.0561145	0.01007	0.0489277	0.017709	1.34844E-08	0.13698	0.969361	5.01E-05	0.624648	0.492754	5.3E-06	0.02474	0.560052	0.789	0.544	1	0.029	0.55	1	0.916	0.395
rs8047688	2.4857E-08	-0.067986	0.0122	-0.067986	0.012196	4.49011E-08	0.18597	0.907509	3.33E-05	0.04511	0.456625	0.00241	0.90444	0.123306	0.88	0.746	1	0.952	0.802	0.995	0.72	0.899
rs11679899	2.4907E-08	-0.028165	0.00505	-0.028165	0.005053	4.50006E-08	0.52682	0.347162	0.000687	0.071696	0.740221	0.00018	0.52898	0.071745	0.831	0.856	0.999	0.933	0.728	1	0.814	0.917
rs2654673	2.4919E-08	-0.028271	0.00507	-0.034735	0.009494	3.35057E-08	0.08056	0.223196	0.027279	0.239354	0.001054	0.00079	0.00017	0.491525	0.915	0.881	0.911	0.776	0.992	0.988	0.992	0.665
rs2623023	2.4939E-08	0.0379747	0.00681	0.0379747	0.006813	4.50657E-08	0.96391	0.878051	1.57E-05	0.268504	0.378773	0.00079	0.08659	0.533254	0.71	0.735	1	0.707	0.788	0.998	0.907	0.785
rs13145336	2.494E-08	-0.028701	0.00515	-0.028701	0.005149	4.50674E-08	0.25788	0.358426	0.001411	0.004903	0.885634	0.00054	0.08811	0.869879	0.859	0.841	0.997	0.992	0.58	0.999	0.921	0.715
rs35209318	2.494E-08	0.0288995	0.00518	0.0288995	0.005185	4.5068E-08	0.41111	0.875307	0.000994	0.053543	0.733861	0.00096	0.00166	0.300451	0.854	0.76	0.998	0.952	0.738	0.998	0.984	0.872
rs2153029	2.4952E-08	-0.032171	0.00577	-0.033335	0.006556	3.12818E-08	0.10834	0.792658	0.000104	0.000805	0.106163	0.19428	0.07024	0.122254	0.89	0.733	1	0.998	0.906	0.298	0.926	0.889
rs4610267	2.4952E-08	-0.02934	0.00526	-0.02934	0.005264	4.50919E-08	0.94723	0.68708	0.012344	0.124566	0.379301	3.8E-06	0.04906	0.475199	0.77	0.805	0.971	0.882	0.828	1	0.941	0.832
rs9381974	2.4973E-08	-0.047478	0.00852	-0.047631	0.009447	4.51324E-08	0.99877	0.80776	0.009266	0.344018	0.000916	4.5E-05	0.13396	0.29087	0.742	0.773	0.973	0.667	0.99	1	0.903	0.854
rs562348019	2.4992E-08	-0.090167	0.01618	-0.090167	0.016178	4.51715E-08	0.62493	0.076552	0.012356	0.267502	0.080097	1.1E-05	0.07377	0.916538	0.82	0.914	0.97	0.766	0.938	1	0.935	0.774
rs1494946	2.5001E-08	-0.028141	0.00505	-0.028141	0.005049	4.51888E-08	0.0472	0.067391	0.007216	0.019483	0.765681	0.00021	0.12222	0.963574	0.932	0.925	0.989	0.982	0.747	1	0.927	0.79
rs7685660	2.5014E-08	-0.032723	0.00587	-0.032723	0.005872	4.52159E-08	0.45944	0.536921	0.002384	0.006773	0.004831	0.00502	0.84297	0.262563	0.865	0.856	0.997	0.992	0.986	0.993	0.78	0.893
rs12149170	2.5018E-08	0.0561861	0.01008	0.0507666	0.016504	2.25386E-08	0.18178	0.98771	6.18E-05	0.722403	0.300714	1.3E-05	0.01912	0.600907	0.784	0.571	1	0.05	0.699	1	0.931	0.442
rs2040787	2.5019E-08	0.0295563	0.0053	0.0299289	0.007859	4.52249E-08	0.09088	0.446899	0.000943	0.116019	0.000283	0.00151	0.23437	0.487751	0.902	0.662	0.998	0.886	0.994	0.997	0.876	0.65
rs117020686	2.502E-08	0.0599146	0.01075	0.0615681	0.01231	3.82077E-08	0.18281	0.444549	0.156999	0.000253	0.475358	0.00024	0.01075	0.399216	0.865	0.808	0.508	0.999	0.741	0.999	0.967	0.815
rs4788458	2.5022E-08	0.028303	0.00508	0.028303	0.005078	4.52323E-08	0.59825	0.774406	0.007232	0.017363	0.438976	6.9E-06	0.60464	0.62307	0.794	0.704	0.982	0.976	0.788	1	0.768	0.788
rs7103627	2.5026E-08	-0.031259	0.00561	-0.039273	0.009963	2.83365E-08	0.24344	0.011354	0.001496	0.073171	1.54E-05	0.05519	0.13258	0.689186	0.893	0.956	0.988	0.929	0.998	0.837	0.924	0.829
rs2705497	2.5029E-08	0.0379483	0.00681	0.0379483	0.006809	4.52455E-08	0.97095	0.852782	1.31E-05	0.305762	0.358076	0.00073	0.08854	0.603219	0.7	0.728	1	0.662	0.786	0.998	0.902	0.763
rs573350903	2.5034E-08	-0.090162	0.01618	-0.090162	0.016178	4.5255E-08	0.62508	0.076557	0.012379	0.266979	0.080109	1.1E-05	0.07378	0.917225	0.82	0.914	0.97	0.767	0.938	1	0.935	0.774
rs34914127	2.5053E-08	-0.028263	0.00507	-0.028214	0.005272	4.52936E-08	0.7145	0.95012	0.000452	0.108332	0.423515	0.00064	0.09704	0.004191	0.729	0.765	0.999	0.903	0.824	0.999	0.925	0.962
rs4555547	2.5066E-08	0.0414865	0.00744	0.0430015	0.009641	4.53199E-08	0.10111	0.659995	0.000121	0.496304	0.015832	0.00592	0.00333	0.899619	0.9	0.797	1	0.557	0.972	0.979	0.979	0.753
rs6810315	2.5066E-08	0.0414865	0.00744	0.0430015	0.009641	4.53199E-08	0.10111	0.659995	0.000121	0.496304	0.015832	0.00592	0.00333	0.899619	0.9	0.797	1	0.557	0.972	0.979	0.979	0.753
rs3117012	2.5072E-08	0.0291804	0.00524	0.0291386	0.005322	4.53323E-08	0.77517	0.391072	0.00032	0.645979	0.25841	0.00014	0.01851	0.091089	0.652	0.802	0.999	0.391	0.823	1	0.952	0.886
rs35997685	2.5079E-08	-0.090247	0.01619	-0.090247	0.016195	4.53459E-08	0.28684	0.542904	0.008591	0.104389	0.461794	1.8E-05	0.41722	0.026577	0.878	0.843	0.985	0.912	0.823	1	0.852	0.944
rs4699254	2.5102E-08	-0.033424	0.006	-0.033424	0.005998	4.53923E-08	0.39342	0.699597	0.003591	0.008214	0.001723	0.00422	0.96212	0.172928	0.871	0.834	0.995	0.991	0.99	0.994	0.75	0.907
rs1867873	2.5109E-08	0.031259	0.00561	0.030375	0.007573	4.54058E-08	0.97968	0.308425	0.003911	0.001548	0.248679	0.00037	0.90526	0.007125	0.725	0.597	0.991	0.996	0.85	0.999	0.637	0.949
rs2654664	2.5136E-08	-0.028271	0.00507	-0.034845	0.009548	3.22689E-08	0.08021	0.209965	0.026838	0.255183	0.001038	0.00078	0.00016	0.494742	0.914	0.882	0.909	0.759	0.992	0.987	0.992	0.662
rs7178722	2.5145E-08	0.0282605	0.00507	0.0278348	0.007106	4.5478E-08	0.47495	0.050543	0.007962	8.05E-05	0.236261	0.00108	0.71704	0.156899	0.815	0.909	0.981	0.999	0.86	0.997	0.74	0.516
rs11047285	2.5152E-08	-0.028621	0.00514	-0.028621	0.005136	4.54929E-08	0.38068	0.513158	0.000478	0.011854	0.272823	0.01404	0.00315	0.804943	0.878	0.862	0.999	0.989	0.893	0.975	0.983	0.824
rs1510138	2.5176E-08	-0.035373	0.00635	-0.036685	0.010311	3.82479E-08	0.39618	0.903419	0.011041	1.97E-05	0.781397	0.00437	0.0016	0.72877	0.818	0.708	0.959	1	0.511	0.979	0.98	0.758
rs1510139	2.5202E-08	-0.035372	0.00635	-0.036684	0.010311	3.82657E-08	0.39619	0.903319	0.011045	1.97E-05	0.781336	0.00437	0.0016	0.728839	0.818	0.708	0.959	1	0.511	0.979	0.98	0.758
rs9868739	2.5227E-08	-0.034664	0.00622	-0.035128	0.006737	4.56434E-08	0.78659	0.714818	0.011378	0.111989	0.001424	0.00068	0.00612	0.678627	0.826	0.835	0.982	0.916	0.991	0.999	0.978	0.836
rs11678856	2.523E-08	-0.032726	0.00587	-0.032726	0.005874	4.56486E-08	0.89208	0.509052	0.000757	0.022666	0.02306	0.0034	0.56289	0.15928	0.816	0.86	0.999	0.981	0.973	0.995	0.837	0.912
rs903480	2.5231E-08	-0.02814	0.00505	-0.02814	0.005051	4.56515E-08	0.04023	0.070938	0.006752	0.021592	0.771743	0.00025	0.09206	0.981477	0.936	0.925	0.99	0.981	0.747	1	0.936	0.789
rs138727503	2.5246E-08	0.0939818	0.01687	0.0939818	0.016868	4.5681E-08	0.93278	0.785206	0.001361	0.012234	0.024187	0.00081	0.37458	0.859809	0.784	0.746	0.998	0.986	0.966	0.999	0.853	0.788
rs1925107	2.525E-08	0.0281801	0.00506	0.0281801	0.005058	4.569E-08	0.39777	0.784185	0.002265	0.00306	0.667504	0.00101	0.61405	0.027248	0.855	0.805	0.996	0.995	0.757	0.998	0.803	0.94
rs4595785	2.5253E-08	-0.028735	0.00516	-0.028735	0.005157	4.56943E-08	0.55596	0.326019	0.016922	0.000171	0.010049	0.00689	0.09996	0.654656	0.729	0.878	0.969	0.999	0.981	0.987	0.934	0.834
rs13195977	2.5297E-08	-0.045454	0.00816	-0.047084	0.009483	4.57826E-08	0.73763	0.463733	0.00571	0.054512	0.178359	0.003	0.00183	0.009388	0.854	0.883	0.994	0.966	0.929	0.996	0.987	0.965
rs333908	2.5309E-08	-0.028153	0.00505	-0.032187	0.007635	4.58084E-08	0.18046	0.128552	0.000386	0.108959	0.230342	0.02561	0.05442	0.000326	0.919	0.927	0.999	0.93	0.916	0.952	0.959	0.984
rs75533672	2.5311E-08	-0.028254	0.00507	-0.028202	0.00528	4.58124E-08	0.713	0.95012	0.000452	0.109154	0.423515	0.00064	0.09704	0.004191	0.729	0.765	0.999	0.902	0.823	0.999	0.925	0.962
rs12818737	2.5342E-08	-0.037882	0.0068	-0.040141	0.009504	4.58735E-08	0.75276	0.875201	0.015505	0.489143	0.001602	7.5E-05	0.03201	0.036128	0.778	0.761	0.94	0.55	0.989	1	0.951	0.93
rs17016967	2.5349E-08	-0.035383	0.00635	-0.036649	0.010338	3.72745E-08	0.38967	0.901194	0.011303	1.66E-05	0.759368	0.00436	0.00189	0.714343	0.818	0.706	0.957	1	0.501	0.979	0.979	0.759
rs12739051	2.5373E-08	0.0288341	0.00518	0.0288341	0.005176	4.59357E-08	0.90968	0.832296	0.006124	0.007687	0.244316	0.00272	0.04264	0.004711	0.825	0.834	0.993	0.992	0.906	0.997	0.96	0.969
rs9887789	2.5376E-08	0.0285279	0.00512	0.0285279	0.005121	4.59416E-08	0.43066	0.475073	0.000363	0.006391	0.057589	0.02655	0.07109	0.061598	0.869	0.723	0.999	0.993	0.957	0.941	0.946	0.935
rs1526480	2.5387E-08	0.0285445	0.00512	0.0299491	0.006374	3.86142E-08	0.66087	0.185765	2.14E-05	0.022651	0.236153	0.11555	0.05486	0.008507	0.799	0.883	1	0.968	0.864	0.58	0.943	0.959
rs200530511	2.5395E-08	0.03221	0.00578	0.03221	0.005782	4.59797E-08	0.88744	0.703105	0.001159	0.005735	0.563332	0.00084	0.48954	0.076146	0.788	0.812	0.998	0.992	0.786	0.999	0.827	0.918
rs2973163	2.5397E-08	0.0290659	0.00522	0.0290659	0.005218	4.59837E-08	0.58842	0.86791	0.001337	0.005174	0.101432	0.00134	0.81211	0.2916	0.835	0.8	0.998	0.993	0.934	0.998	0.768	0.876
rs11768022	2.5413E-08	-0.031255	0.00561	-0.031255	0.005611	4.60171E-08	0.41688	0.121785	0.015649	0.000509	0.272823	0.00066	0.23144	0.286777	0.689	0.906	0.971	0.998	0.878	0.999	0.893	0.878
rs1076562	2.5466E-08	-0.031186	0.0056	-0.031186	0.005599	4.61227E-08	0.53127	0.127095	0.018048	0.000266	0.568256	0.00197	0.31167	0.057994	0.857	0.914	0.97	0.999	0.812	0.997	0.887	0.936

Table S3

rs140286740	2.5485E-08	-0.090452	0.01624	-0.090452	0.016239	4.61602E-08	0.69026	0.071686	0.011363	0.248879	0.091633	1.1E-05	0.0786	0.910119	0.813	0.915	0.974	0.781	0.934	1	0.933	0.777
rs12731779	2.5488E-08	0.0288272	0.00518	0.0288272	0.005176	4.61679E-08	0.86442	0.803329	0.00586	0.008894	0.241302	0.00274	0.04314	0.004786	0.831	0.839	0.993	0.992	0.908	0.997	0.96	0.97
rs113823870	2.5497E-08	-0.056359	0.01012	-0.052538	0.015235	4.55413E-08	0.04611	0.120733	0.011939	0.102875	0.562824	1.5E-06	0.07183	0.67473	0.904	0.506	0.955	0.862	0.721	1	0.914	0.759
rs62059718	2.5517E-08	0.0461612	0.00829	0.0461612	0.008288	4.62252E-08	0.46845	0.39163	0.007723	0.064406	0.29022	7.8E-06	0.37457	0.939122	0.838	0.849	0.985	0.939	0.862	1	0.849	0.753
rs5795139	2.5518E-08	-0.028391	0.0051	-0.029479	0.006564	4.6227E-08	0.02594	0.057654	0.007068	0.114333	0.991941	0.00025	0.08487	0.02046	0.946	0.932	0.989	0.914	0.69	1	0.942	0.953
rs12818904	2.552E-08	-0.037873	0.0068	-0.040128	0.009498	4.62307E-08	0.75211	0.87446	0.015589	0.488629	0.001604	7.5E-05	0.03209	0.036229	0.778	0.761	0.94	0.55	0.989	1	0.951	0.93
rs10817200	2.5527E-08	0.0290323	0.00521	0.0290323	0.005213	4.6246E-08	0.08275	0.798362	0.015275	0.000147	0.053224	0.01231	0.18697	0.281565	0.933	0.842	0.978	0.999	0.963	0.98	0.923	0.902
rs6034949	2.5528E-08	-0.028461	0.00511	-0.028461	0.00511	4.55195E-08	0.34151	0.772013	3.22E-06	0.118423	0.089209	0.02021	0.55736	0.174026	0.862	0.804	1	0.892	0.934	0.942	0.812	0.893
rs921234	2.5529E-08	0.0492973	0.00885	0.0492973	0.008851	4.62498E-08	0.67608	0.724646	0.005203	0.068582	0.074503	0.00038	0.01143	0.048684	0.75	0.759	0.992	0.947	0.948	0.999	0.972	0.936
rs9318841	2.5532E-08	-0.029162	0.00524	-0.029162	0.005236	4.62548E-08	0.14101	0.812552	0.010966	0.038574	0.009276	0.00066	0.05353	0.98553	0.917	0.834	0.985	0.972	0.983	0.999	0.955	0.807
rs7202268	2.5546E-08	0.0282846	0.00508	0.0282846	0.005078	4.6283E-08	0.59993	0.772968	0.007245	0.01763	0.438362	6.9E-06	0.60251	0.623594	0.794	0.704	0.982	0.976	0.789	1	0.769	0.788
rs6790563	2.5553E-08	-0.029319	0.00526	-0.029319	0.005264	4.62981E-08	0.94819	0.68917	0.012593	0.125346	0.380009	3.8E-06	0.04934	0.47604	0.769	0.804	0.97	0.881	0.828	1	0.94	0.832
rs100043	2.5568E-08	-0.028144	0.00505	-0.032185	0.007635	4.63282E-08	0.18008	0.128409	0.000391	0.108031	0.230331	0.02579	0.05443	0.000326	0.919	0.927	0.999	0.931	0.916	0.952	0.959	0.984
rs10802326	2.557E-08	-0.031319	0.00562	-0.033058	0.006617	4.3187E-08	0.12634	0.53422	0.000191	0.04213	0.017497	0.10095	0.01752	0.035833	0.915	0.847	1	0.956	0.977	0.676	0.971	0.947
rs4915266	2.5571E-08	0.0285215	0.00512	0.0285215	0.005121	4.63339E-08	0.43134	0.475109	0.000363	0.006448	0.057544	0.02657	0.07106	0.06153	0.869	0.723	0.999	0.993	0.957	0.941	0.946	0.935
rs79518967	2.5575E-08	-0.036777	0.0066	-0.036777	0.006604	4.63413E-08	0.25021	0.37553	0.00924	0.00421	0.034994	0.00479	0.34718	0.059384	0.91	0.895	0.99	0.996	0.972	0.995	0.898	0.946
rs16864394	2.5579E-08	0.0374261	0.00672	0.0374261	0.00672	4.63492E-08	0.0709	0.140554	0.014223	0.00604	0.454763	0.00142	0.46618	0.006632	0.936	0.921	0.982	0.994	0.858	0.998	0.871	0.969
rs325521	2.5581E-08	-0.028844	0.00518	-0.028844	0.005179	4.63542E-08	0.9623	0.010414	0.009404	0.13051	0.010452	0.00016	0.34268	0.6579	0.803	0.954	0.985	0.902	0.981	1	0.878	0.836
rs333906	2.5589E-08	-0.028144	0.00505	-0.032196	0.007645	4.637E-08	0.1776	0.128559	0.000386	0.110648	0.230344	0.02561	0.05442	0.000326	0.919	0.927	0.999	0.929	0.916	0.952	0.959	0.984
rs28651501	2.5612E-08	0.0372998	0.0067	0.0372998	0.006698	4.6417E-08	0.67505	0.912932	0.00431	0.002473	0.307986	0.00013	0.96438	0.399192	0.791	0.735	0.991	0.995	0.84	1	0.694	0.832
rs149529723	2.5624E-08	-0.034852	0.00626	-0.034852	0.006258	4.6441E-08	0.77498	0.623976	0.006493	0.140054	0.050087	3.4E-05	0.19748	0.092227	0.807	0.725	0.989	0.88	0.954	1	0.899	0.916
rs410915	2.5627E-08	-0.028802	0.00517	-0.028802	0.005172	4.64457E-08	0.91707	0.010245	0.013693	0.088062	0.011747	9.5E-05	0.37262	0.825286	0.783	0.953	0.976	0.931	0.979	1	0.868	0.81
rs4349367	2.5638E-08	0.0554409	0.00996	0.0554409	0.009955	4.64693E-08	0.5627	0.492656	0.000474	0.004195	0.016699	0.05607	0.11849	0.166367	0.855	0.864	0.999	0.995	0.978	0.864	0.933	0.913
rs28637309	2.5641E-08	0.0372986	0.0067	0.0372986	0.006698	4.64737E-08	0.67506	0.912932	0.004312	0.002473	0.308005	0.00013	0.96442	0.399192	0.791	0.735	0.991	0.995	0.84	1	0.694	0.832
rs3785193	2.5649E-08	-0.030261	0.00543	-0.031127	0.008121	4.64906E-08	0.19333	0.326333	0.001651	0.092526	0.428857	0.00078	0.00107	0.042979	0.607	0.864	0.997	0.917	0.823	0.999	0.985	0.933
rs35471508	2.5675E-08	-0.028632	0.00514	-0.02824	0.005713	3.98702E-08	0.64502	0.20545	0.014792	0.379553	0.135353	1E-06	0.04786	0.735753	0.641	0.844	0.929	0.594	0.882	1	0.926	0.74
rs12925456	2.5706E-08	0.037265	0.00669	0.037265	0.006692	4.66054E-08	0.66396	0.495323	2E-05	0.040787	0.311066	0.00587	0.51871	0.085163	0.722	0.837	1	0.96	0.857	0.988	0.819	0.913
rs78736310	2.5708E-08	-0.028244	0.00507	-0.028192	0.005289	4.66089E-08	0.70891	0.975602	0.000458	0.118866	0.416366	0.00062	0.08902	0.004336	0.728	0.769	0.999	0.894	0.825	0.999	0.928	0.961
rs12820049	2.5713E-08	-0.029563	0.00531	-0.029563	0.005309	4.6619E-08	0.19308	0.315989	0.001611	0.038581	0.131295	0.00344	0.024	0.646162	0.914	0.898	0.998	0.974	0.94	0.996	0.969	0.859
rs7659763	2.5728E-08	-0.033398	0.006	-0.033398	0.005998	4.66495E-08	0.396	0.699597	0.003591	0.008436	0.001723	0.00422	0.96213	0.172928	0.871	0.834	0.995	0.991	0.99	0.994	0.75	0.907
rs200979	2.5736E-08	-0.042558	0.00764	-0.047535	0.010818	4.66651E-08	0.94073	0.167924	0.008196	0.000302	0.261143	0.02691	0.02807	0.004036	0.807	0.915	0.985	0.999	0.9	0.94	0.967	0.97
rs12576867	2.5736E-08	0.0323211	0.0058	0.0312171	0.008491	3.97176E-08	0.64562	0.020128	0.005071	0.623396	0.024776	2.7E-06	0.82008	0.332795	0.582	0.908	0.97	0.354	0.949	1	0.621	0.787
rs72917046	2.5741E-08	-0.032694	0.00587	-0.032694	0.005872	4.66758E-08	0.48302	0.536921	0.002384	0.006771	0.004831	0.00502	0.84297	0.262563	0.862	0.855	0.997	0.992	0.986	0.993	0.779	0.893
rs9468287	2.5756E-08	-0.051641	0.00927	-0.055186	0.015533	4.67049E-08	0.40394	0.98458	0.009561	0.017001	0.306807	0.00062	0.02952	0.000214	0.693	0.791	0.984	0.984	0.873	0.999	0.96	0.978
rs12370400	2.5765E-08	0.0335123	0.00602	0.0336312	0.006121	4.67243E-08	0.91833	0.877306	0.038622	0.000107	0.076623	0.00298	0.02767	0.158839	0.779	0.775	0.917	0.999	0.946	0.994	0.961	0.906
rs180721206	2.5771E-08	-0.089908	0.01615	-0.089908	0.016147	4.6735E-08	0.72059	0.089303	0.011636	0.227313	0.089156	1.2E-05	0.06854	0.998273	0.81	0.91	0.973	0.802	0.935	1	0.937	0.764
rs8061126	2.5772E-08	-0.028068	0.00504	-0.028068	0.005041	4.67378E-08	0.2707	0.463854	2.81E-05	0.192501	0.856914	0.00117	0.05254	0.36366	0.844	0.809	1	0.787	0.547	0.997	0.93	0.827
rs12892186	2.5785E-08	0.0282733	0.00508	0.0282733	0.005078	4.67639E-08	0.70639	0.25001	0.001058	0.007492	0.372696	0.01385	0.00433	0.07272	0.768	0.897	0.999	0.992	0.867	0.976	0.982	0.934
rs10748358	2.5795E-08	-0.02956	0.00531	-0.02956	0.005309	4.67838E-08	0.19269	0.316726	0.001618	0.038577	0.130662	0.00344	0.02405	0.645056	0.914	0.898	0.998	0.974	0.941	0.996	0.969	0.859
rs10506228	2.5801E-08	-0.02956	0.00531	-0.02956	0.005309	4.67968E-08	0.19268	0.316723	0.001619	0.038564	0.130568	0.00345	0.02406	0.645104	0.914	0.898	0.998	0.974	0.941	0.996	0.969	0.859
rs10748359	2.5813E-08	-0.02956	0.00531	-0.02956	0.005309	4.68153E-08	0.19269	0.316718	0.001619	0.038569	0.130635	0.00345	0.02405	0.645091	0.914	0.898	0.998	0.974	0.941	0.996	0.969	0.859
rs72917042	2.5814E-08	-0.033395	0.006	-0.033395	0.005998	4.6817E-08	0.39601	0.699597	0.003591	0.008472	0.001723	0.00422	0.96212	0.172928	0.871	0.834	0.995	0.991	0.99	0.994	0.75	0.907
rs1826859	2.5816E-08	-0.028094	0.00505	-0.028094	0.005046	4.68197E-08	0.61508	0.164589	0.000156	0.022528	0.088382	0.01472	0.28867	0.288825	0.857	0.914	1	0.982	0.95	0.976	0.899	0.897
rs12083719	2.5831E-08	0.0306829	0.00551	0.033717	0.008151	4.23763E-08	0.21675	0.258521	0.000827	0.000517	0.012336	0.09056	0.1207	0.037381	0.87	0.576	0.997	0.998	0.976	0.637	0.91	0.932
rs7174559	2.5851E-08	0.0372886	0.0067	0.0372886	0.006698	4.68703E-08	0.67506	0.943787	0.004285	0.002473	0.309322	0.00013	0.96666	0.400723	0.792	0.74	0.991	0.995	0.841	1	0.695	0.832
rs117251519	2.5855E-08	0.043232	0.00777	0.0494463	0.014235	2.89848E-08	0.01465	0.679336	0.1189	6.33E-05	0.051706	0.00227	0.0063	0.207231	0.936	0.757	0.56	1	0.939	0.975	0.974	0.479
rs11650332	2.5863E-08	-0.030121	0.00541	-0.029733	0.005791	4.68882E-08	0.71715	0.202137	0.000384	0.212378	0.977822	4.4E-05	0.40433	0.023673	0.646	0.839	0.999	0.734	0.549	1	0.784	0.918
rs1397291	2.5871E-08	-0.030444	0.00547	-0.030444	0.005468	4.69005E-08	0.43875	0.026446	0.001567	0.242888	0.016164	0.00069	0.26069	0.660963	0.865	0.943	0.998	0.818	0.976	0.999	0.894	0.834
rs75906516	2.5872E-08	-0.068705	0.01234	-0.069926	0.014359	4.23115E-08	0.10537	0.032485	0.107034	0.028333	0.145799	1E-05	0.09485	0.826717	0.903	0.931	0.664	0.962	0.904	1	0.923	0.706
rs12406798	2.5876E-08	0.0395373	0.0071	0.0395373	0.007102	4.69079E-08	0.06271	0.261841	0.000426	0.627357	0.817905	3.9E-05	0.08138	0.430069	0.884	0.816	0.999	0.377	0.577	1	0.9	0.778
rs12785741	2.5901E-08	-0.033839	0.00608	-0.033839	0.006078	4.69445E-08	0.36141	0.760451	0.031471	0.00696	0.01585	6.7E-05	0.49715	0.933953	0.859	0.806	0.925	0.991	0.973	1	0.825	0.755
rs8054407	2.5915E-08	-0.028055	0.00504	-0.028055	0.005039	4.69648E-08	0.26182	0.455169	2.69E-05	0.20987	0.864434	0.00119	0.0494	0.35047	0.845	0.809	1	0.767	0.546	0.997	0.932	0.828
rs10801825	2.5982E-08	0.0285002	0.00512	0.0297995	0.006163	4.02497E-08	0.58532	0.180469	3.66E-05	0.016333	0.200127	0.12076	0.06091	0.008772	0.815	0.887	1	0.978	0.882	0.572	0.941	0.959
rs6045171	2.5984E-08	-0.028438	0.00511	-0.028438	0.005109	4.64999E-08	0.34214	0.76716	3.32E-06	0.117988	0.091192	0.02008	0.55695	0.174013	0.862	0.805	1	0.893	0.933	0.943	0.813	0.894
rs28823709	2.602E-08	-0.034828	0.00626	-0.034838	0.006264	4.71197E-08	0.59593	0.715404	0.061249	0.009847	0.034005	0.00056	0.05763	0.00654	0.857	0.843	0.871	0.991	0.97	0.999	0.954	0.967

Table S3

rs2866485	2.6024E-08	-0.028713	0.00516	-0.028713	0.005158	4.71262E-08	0.55288	0.329306	0.017164	0.000174	0.009953	0.00688	0.10006	0.65539	0.729	0.878	0.969	0.999	0.981	0.987	0.934	0.834
rs4593803	2.6034E-08	0.0282476	0.00507	0.0302321	0.008094	1.41145E-08	0.20488	0.1217	2.39E-05	3.92E-05	0.642232	0.2437	0.75254	0.092557	0.779	0.819	1	1	0.448	0.103	0.495	0.844
rs2301633	2.6054E-08	0.0342319	0.00615	0.034962	0.007555	4.71697E-08	0.9888	0.626041	0.042253	0.000612	0.43169	0.00037	0.03302	0.018435	0.762	0.709	0.887	0.998	0.813	0.999	0.952	0.945
rs12584191	2.6071E-08	-0.036646	0.00658	-0.036646	0.006584	4.71955E-08	0.67644	0.083493	8.47E-06	0.280422	0.357984	0.0036	0.11346	0.317766	0.692	0.898	1	0.728	0.82	0.989	0.908	0.847
rs11642983	2.6074E-08	0.0372391	0.00669	0.0372391	0.006691	4.71999E-08	0.6603	0.495473	1.97E-05	0.042215	0.312222	0.00572	0.523	0.085686	0.721	0.836	1	0.959	0.857	0.988	0.817	0.913
rs150919654	2.6082E-08	0.0580829	0.01044	0.0609985	0.01707	4.72106E-08	0.78616	0.121802	0.000967	0.018848	0.000701	0.01415	0.0105	0.336844	0.732	0.569	0.998	0.979	0.993	0.965	0.971	0.859
rs73583505	2.6093E-08	0.0362752	0.00652	0.0407615	0.009054	4.70061E-08	0.01013	0.458181	0.002908	0.000674	0.385812	0.07574	0.01132	0.080138	0.961	0.864	0.992	0.998	0.851	0.785	0.975	0.932
rs9257190	2.6106E-08	-0.04897	0.0088	-0.053495	0.014382	4.7247E-08	0.01334	0.921511	0.001481	0.003512	0.673946	0.00772	0.05567	0.004516	0.947	0.757	0.997	0.995	0.528	0.982	0.945	0.961
rs2005313	2.6111E-08	-0.031162	0.0056	-0.031162	0.005599	4.72537E-08	0.53187	0.130797	0.018697	0.000261	0.567234	0.00195	0.31118	0.057349	0.857	0.913	0.969	0.999	0.812	0.997	0.887	0.936
rs3839692	2.6133E-08	0.0324888	0.00584	0.0324888	0.005837	4.7286E-08	0.05961	0.58888	0.000105	0.003815	0.792211	0.0091	0.95586	0.114534	0.914	0.816	1	0.994	0.701	0.977	0.709	0.901
rs1397289	2.6139E-08	-0.030436	0.00547	-0.030436	0.005469	4.72951E-08	0.44045	0.026805	0.001581	0.239047	0.01605	0.00072	0.2527	0.664217	0.865	0.943	0.998	0.822	0.977	0.999	0.897	0.835
rs6997323	2.6149E-08	-0.037915	0.00681	-0.037915	0.006813	4.731E-08	0.96301	0.878547	1.62E-05	0.272801	0.377681	0.00079	0.08664	0.534582	0.709	0.734	1	0.703	0.787	0.998	0.906	0.784
rs7007670	2.616E-08	-0.037917	0.00681	-0.037917	0.006813	4.73253E-08	0.9638	0.878998	1.65E-05	0.273057	0.376858	0.00078	0.08703	0.535352	0.709	0.734	1	0.703	0.788	0.998	0.906	0.784
rs281251	2.6164E-08	-0.031517	0.00566	-0.031517	0.005663	4.7331E-08	0.81411	0.745623	0.000503	0.000239	0.794252	0.0018	0.48247	0.859522	0.733	0.664	0.999	0.998	0.639	0.995	0.769	0.719
rs447135	2.6183E-08	0.0281156	0.00505	0.0281156	0.005052	4.73591E-08	0.52642	0.616601	0.000634	0.001854	0.37452	0.01845	0.04174	0.225306	0.86	0.849	0.999	0.997	0.865	0.965	0.957	0.901
rs6987319	2.6194E-08	-0.037916	0.00681	-0.037916	0.006813	4.73764E-08	0.96379	0.878999	1.65E-05	0.273096	0.376868	0.00078	0.08703	0.535357	0.709	0.734	1	0.703	0.788	0.998	0.906	0.784
rs11722368	2.6198E-08	-0.028567	0.00513	-0.028567	0.005133	4.73821E-08	0.18522	0.2902	0.001648	0.00779	0.934204	0.00049	0.07773	0.836571	0.879	0.858	0.997	0.989	0.608	0.999	0.928	0.719
rs7819846	2.6257E-08	-0.037953	0.00682	-0.037953	0.00682	4.74678E-08	0.96126	0.88777	1.43E-05	0.29964	0.417132	0.00065	0.0954	0.575745	0.708	0.721	1	0.665	0.761	0.998	0.897	0.766
rs72750712	2.6258E-08	0.0413194	0.00743	0.04132	0.007546	4.74697E-08	0.71108	0.39109	0.000301	0.000681	0.138855	0.00992	0.98482	0.053252	0.789	0.644	0.999	0.998	0.904	0.973	0.683	0.917
rs6778938	2.6258E-08	-0.029291	0.00526	-0.029291	0.005264	4.74702E-08	0.95285	0.690732	0.012335	0.120621	0.379966	4.3E-06	0.04886	0.476091	0.77	0.805	0.971	0.886	0.829	1	0.941	0.833
rs488219	2.6282E-08	-0.02836	0.0051	-0.029376	0.006501	4.7505E-08	0.02579	0.058724	0.00731	0.106163	0.991546	0.00025	0.08669	0.022309	0.946	0.932	0.989	0.92	0.685	1	0.941	0.952
rs6987322	2.6283E-08	-0.037911	0.00681	-0.037911	0.006813	4.75062E-08	0.96378	0.879029	1.65E-05	0.273191	0.376933	0.00078	0.08704	0.535392	0.709	0.734	1	0.703	0.788	0.998	0.906	0.784
rs8055493	2.6298E-08	-0.028086	0.00505	-0.028086	0.005047	4.75286E-08	0.21078	0.704823	2.19E-05	0.223509	0.882186	0.00133	0.06694	0.410091	0.859	0.777	1	0.766	0.641	0.996	0.924	0.822
rs12409359	2.6343E-08	0.0395152	0.0071	0.0395152	0.007102	4.75946E-08	0.06283	0.262728	0.000427	0.630116	0.817978	4E-05	0.08154	0.430457	0.883	0.816	0.999	0.375	0.577	1	0.9	0.777
rs4700505	2.6346E-08	-0.028783	0.00517	-0.028783	0.005173	4.75989E-08	0.83628	0.983436	0.003542	0.027324	0.485837	0.00026	0.05322	0.084806	0.81	0.788	0.995	0.976	0.823	1	0.948	0.923
rs522467	2.6353E-08	0.0307753	0.00553	0.0307753	0.005531	4.69322E-08	0.45066	0.360553	0.09313	0.045296	0.060416	1.3E-05	0.05836	0.325548	0.85	0.863	0.753	0.952	0.95	1	0.945	0.869
rs111940307	2.636E-08	-0.028216	0.00507	-0.028213	0.005086	4.76196E-08	0.71324	0.996094	0.000493	0.106567	0.432701	0.00062	0.09936	0.004556	0.73	0.773	0.999	0.905	0.822	0.999	0.925	0.961
rs281250	2.6361E-08	-0.03151	0.00566	-0.03151	0.005663	4.76204E-08	0.81451	0.745623	0.000505	0.000239	0.79458	0.0018	0.48268	0.859495	0.733	0.664	0.999	0.998	0.639	0.995	0.769	0.719
rs417919	2.6369E-08	-0.048955	0.0088	-0.053482	0.014388	4.76333E-08	0.01334	0.921378	0.001485	0.003515	0.672335	0.00774	0.05568	0.004518	0.946	0.757	0.997	0.995	0.528	0.982	0.945	0.961
rs28396265	2.6371E-08	0.0289122	0.0052	0.0291886	0.005639	4.76358E-08	0.18853	0.994418	0.000747	0.008773	0.001225	0.01196	0.70108	0.208461	0.89	0.777	0.999	0.989	0.991	0.973	0.64	0.888
rs28653100	2.6378E-08	0.0315417	0.00567	0.0315417	0.005669	4.76459E-08	0.24011	0.786839	0.009518	0.004903	0.037301	0.00137	0.16766	0.359977	0.9	0.785	0.988	0.994	0.967	0.998	0.923	0.885
rs2071888	2.6379E-08	0.0280384	0.00504	0.0278684	0.005199	4.76476E-08	0.30647	0.845416	0.001195	0.000649	0.89418	0.00022	0.81488	0.270089	0.52	0.695	0.996	0.997	0.558	0.999	0.643	0.806
rs62489494	2.6397E-08	0.0388093	0.00698	0.0388093	0.006975	4.76738E-08	0.35913	0.932899	0.004336	0.173865	0.003234	0.00016	0.24336	0.736841	0.864	0.791	0.993	0.857	0.987	1	0.889	0.81
rs281249	2.6404E-08	-0.031508	0.00566	-0.031508	0.005663	4.76843E-08	0.81382	0.745663	0.000505	0.000239	0.79486	0.00181	0.48291	0.859489	0.733	0.664	0.999	0.998	0.639	0.995	0.769	0.719
rs12818201	2.6407E-08	0.0363747	0.00654	0.0355356	0.008146	4.76885E-08	0.71595	0.18835	0.034938	0.010389	0.10008	7.5E-06	0.12676	0.200535	0.679	0.862	0.882	0.983	0.913	1	0.897	0.528
rs11507683	2.6409E-08	0.0362652	0.00652	0.0407958	0.009075	4.74375E-08	0.01001	0.463699	0.003059	0.000651	0.383448	0.07509	0.01126	0.080249	0.961	0.864	0.992	0.999	0.853	0.788	0.975	0.932
rs62253032	2.6411E-08	-0.028604	0.00514	-0.028186	0.005762	4.08331E-08	0.65236	0.198889	0.015278	0.384538	0.135558	9.9E-07	0.04785	0.742087	0.641	0.845	0.926	0.588	0.881	1	0.926	0.737
rs4465006	2.6421E-08	0.0312311	0.00561	0.0293082	0.009686	9.5726E-09	0.17329	0.747292	1.1E-08	0.159713	0.907027	0.06006	0.24465	0.060699	0.697	0.373	1	0.387	0.228	0.302	0.619	0.797
rs11127766	2.6471E-08	0.0414153	0.00744	0.0428918	0.0096	4.77823E-08	0.10114	0.659972	0.000122	0.493523	0.016728	0.00609	0.00333	0.899689	0.9	0.798	1	0.561	0.971	0.979	0.979	0.753
rs1474426	2.6484E-08	-0.028385	0.0051	-0.028478	0.005527	4.78017E-08	0.87313	0.781452	0.004592	0.121694	0.00967	0.00032	0.00409	0.856864	0.755	0.742	0.992	0.893	0.979	0.999	0.978	0.786
rs172329	2.649E-08	-0.048921	0.00879	-0.053034	0.013821	4.78103E-08	0.0156	0.928515	0.001663	0.003462	0.72416	0.0076	0.04546	0.00657	0.945	0.762	0.997	0.995	0.553	0.983	0.95	0.958
rs4906365	2.6508E-08	0.0281912	0.00507	0.0281912	0.005068	4.78358E-08	0.68125	0.267579	0.000845	0.007151	0.328047	0.01526	0.00713	0.07922	0.764	0.894	0.999	0.992	0.879	0.973	0.978	0.932
rs607125	2.6508E-08	-0.028353	0.0051	-0.029367	0.006501	4.78362E-08	0.02587	0.058724	0.00731	0.106882	0.991546	0.00025	0.08669	0.022309	0.945	0.932	0.989	0.919	0.685	1	0.941	0.952
rs146009883	2.6518E-08	-0.037905	0.00681	-0.037905	0.006814	4.78514E-08	0.96412	0.878406	1.64E-05	0.275915	0.376582	0.00078	0.08718	0.535814	0.708	0.733	1	0.7	0.787	0.998	0.906	0.783
rs113727800	2.653E-08	0.0362575	0.00652	0.0406443	0.008967	4.78687E-08	0.01071	0.46971	0.003193	0.000741	0.356648	0.07288	0.01065	0.078132	0.961	0.866	0.992	0.998	0.863	0.8	0.976	0.933
rs13327361	2.6532E-08	-0.030586	0.0055	-0.030586	0.005498	4.78719E-08	0.4122	0.920383	0.000716	0.051326	0.452585	8.9E-05	0.62282	0.372166	0.835	0.744	0.999	0.946	0.799	1	0.78	0.842
rs9556576	2.6552E-08	0.0284042	0.00511	0.0284042	0.005106	4.79008E-08	0.14522	0.173012	0.00146	0.007373	0.509375	0.00606	0.4447	0.01689	0.918	0.913	0.998	0.993	0.84	0.992	0.87	0.958
rs12525548	2.6595E-08	0.0296071	0.00532	0.0296071	0.005323	4.79637E-08	0.69402	0.495907	0.00138	0.000473	0.0758	0.00312	0.81841	0.382461	0.703	0.822	0.997	0.998	0.933	0.993	0.644	0.84
rs35722594	2.6618E-08	0.0363786	0.00654	0.0355499	0.008123	4.7997E-08	0.7249	0.190524	0.034613	0.010738	0.098816	7.5E-06	0.128	0.199309	0.682	0.862	0.884	0.983	0.914	1	0.896	0.528
rs34981324	2.6623E-08	-0.029035	0.00522	-0.029035	0.00522	4.80054E-08	0.07603	0.922708	0.001897	0.057525	0.884926	0.00017	0.03918	0.526761	0.913	0.782	0.997	0.947	0.689	1	0.95	0.832
rs6537137	2.6632E-08	-0.035332	0.00635	-0.036588	0.010275	3.92239E-08	0.39583	0.901976	0.011292	1.86E-05	0.765722	0.00436	0.00188	0.712964	0.818	0.707	0.958	1	0.505	0.979	0.979	0.76
rs79672283	2.6645E-08	-0.029278	0.00526	-0.029278	0.005264	4.80378E-08	0.95883	0.692045	0.012699	0.120595	0.382527	4.1E-06	0.04972	0.476644	0.768	0.804	0.97	0.885	0.828	1	0.94	0.832
rs10029071	2.667E-08	-0.03533	0.00635	-0.036586	0.010274	3.93276E-08	0.3959	0.901982	0.011292	1.87E-05	0.765728	0.00436	0.00188	0.712962	0.818	0.707	0.958	1	0.505	0.98	0.979	0.76
rs4886915	2.6671E-08	0.0284425	0.00511	0.0287507	0.006375	4.80759E-08	0.0072	0.566925	0.000119	0.155899	0.135155	0.00471	0.035	0.445814	0.955	0.837	1	0.87	0.922	0.991	0.955	0.674
rs1983524	2.6721E-08	-0.029418	0.00529	-0.029418	0.005289	4.81491E-08	0.85263	0.22072	0.000267	0.23635	0.5219	0.00027	0.0695	0.368017	0.776	0.87	0.999	0.781	0.779	0.999	0.93	0.846

Table S3

rs3112329	2.6726E-08	-0.031664	0.00569	-0.036873	0.009683	1.49158E-08	0.56607	0.115066	0.00249	1.85E-05	0.002904	0.18235	0.06879	0.544808	0.537	0.866	0.956	1	0.987	0.263	0.911	0.734
rs1937375	2.6755E-08	-0.02912	0.00524	-0.02912	0.005236	4.81985E-08	0.1397	0.807733	0.01141	0.038188	0.009086	0.00069	0.0527	0.981819	0.917	0.835	0.985	0.972	0.983	0.999	0.955	0.808
rs7200854	2.6758E-08	0.0281812	0.00507	0.0281812	0.005067	4.82029E-08	0.49497	0.846046	0.003711	0.012251	0.311194	3E-05	0.60038	0.902623	0.812	0.718	0.992	0.982	0.834	1	0.772	0.715
rs7622843	2.6775E-08	-0.029176	0.00525	-0.028396	0.006048	4.82276E-08	0.76161	0.401133	0.003064	0.199723	0.840234	4.8E-06	0.01396	0.411785	0.642	0.788	0.988	0.735	0.487	1	0.951	0.786
rs601742	2.6775E-08	-0.028321	0.00509	-0.028321	0.005093	4.30771E-08	0.34622	0.326828	0.00287	0.708391	0.485948	2.4E-06	0.09852	0.295433	0.795	0.799	0.987	0.327	0.702	1	0.889	0.808
rs12044618	2.6778E-08	0.0380529	0.00684	0.0390317	0.010424	4.82313E-08	0.08685	0.006096	0.000608	0.096701	0.050563	0.00192	0.24396	0.109472	0.561	0.957	0.999	0.919	0.955	0.997	0.89	0.913
rs80255575	2.6786E-08	-0.034763	0.00625	-0.034763	0.006251	4.82438E-08	0.60155	0.715404	0.061249	0.010188	0.034005	0.00056	0.05763	0.00654	0.856	0.843	0.872	0.99	0.97	0.999	0.954	0.967
rs6034951	2.6792E-08	-0.028404	0.00511	-0.028404	0.005107	4.78101E-08	0.34267	0.763711	3.45E-06	0.117859	0.092793	0.01999	0.55733	0.174965	0.862	0.806	1	0.893	0.933	0.944	0.813	0.893
rs10019136	2.6794E-08	-0.035325	0.00635	-0.036572	0.010278	3.94439E-08	0.40181	0.901921	0.011301	1.85E-05	0.765705	0.00436	0.00188	0.712722	0.817	0.707	0.958	1	0.505	0.979	0.979	0.76
rs6441843	2.6806E-08	-0.029272	0.00526	-0.029272	0.005264	4.82732E-08	0.95399	0.690322	0.012709	0.121161	0.384338	4.1E-06	0.04969	0.476344	0.769	0.804	0.97	0.885	0.827	1	0.94	0.832
rs13322437	2.6807E-08	-0.029272	0.00526	-0.029272	0.005264	4.82743E-08	0.954	0.690322	0.012711	0.121163	0.384213	4.1E-06	0.04969	0.476344	0.769	0.804	0.97	0.885	0.827	1	0.94	0.832
rs5885276	2.681E-08	0.029334	0.00527	0.026795	0.006841	3.58298E-08	0.33616	0.321767	0.001744	0.466809	0.430831	3.1E-07	0.49168	0.471514	0.441	0.734	0.986	0.391	0.646	1	0.66	0.694
rs4489281	2.6812E-08	-0.037888	0.00681	-0.037888	0.006813	4.82809E-08	0.99173	0.879256	1.63E-05	0.283537	0.376525	0.00078	0.08668	0.535019	0.712	0.732	1	0.692	0.787	0.998	0.906	0.783
rs79122754	2.6813E-08	0.0579534	0.01042	0.0544234	0.015298	2.40175E-08	0.14307	0.232736	0.000591	0.790578	0.79449	1.6E-06	0.14503	0.314779	0.819	0.783	0.997	0.071	0.477	1	0.834	0.759
rs9311357	2.6813E-08	-0.029272	0.00526	-0.029272	0.005264	4.82834E-08	0.95444	0.69032	0.012715	0.121185	0.383794	4.1E-06	0.04969	0.476351	0.769	0.804	0.97	0.885	0.827	1	0.94	0.832
rs9813018	2.6819E-08	-0.029271	0.00526	-0.029271	0.005264	4.82916E-08	0.95446	0.69032	0.012718	0.121196	0.383588	4.1E-06	0.0497	0.476352	0.769	0.804	0.97	0.885	0.827	1	0.94	0.832
rs2022999	2.6838E-08	0.0321709	0.00579	0.0321709	0.005785	4.8319E-08	0.16577	0.753575	0.006271	0.005487	0.565134	0.0022	0.04297	0.047719	0.913	0.842	0.992	0.994	0.825	0.997	0.959	0.944
rs7294707	2.6841E-08	-0.028613	0.00515	-0.028613	0.005145	4.83239E-08	0.39692	0.534253	0.000529	0.011555	0.288328	0.01259	0.00292	0.862809	0.875	0.858	0.999	0.989	0.887	0.978	0.983	0.815
rs281246	2.6856E-08	-0.031492	0.00566	-0.031492	0.005663	4.83464E-08	0.816	0.746876	0.000511	0.000235	0.795858	0.00181	0.48728	0.858451	0.733	0.664	0.999	0.998	0.639	0.995	0.768	0.719
rs1106499	2.6862E-08	-0.02927	0.00526	-0.02927	0.005264	4.83541E-08	0.95457	0.69032	0.012718	0.121352	0.383586	4.1E-06	0.0497	0.476352	0.769	0.804	0.97	0.885	0.827	1	0.94	0.832
rs73738111	2.6864E-08	-0.047368	0.00852	-0.047524	0.009462	4.83571E-08	0.99838	0.809062	0.009373	0.349232	0.000921	4.6E-05	0.13456	0.293276	0.742	0.772	0.972	0.663	0.99	1	0.902	0.853
rs952685	2.6875E-08	0.0279766	0.00503	0.0296403	0.007211	4.79796E-08	0.83931	0.593797	0.017556	0.000174	0.000197	0.00766	0.60993	0.82143	0.742	0.82	0.954	0.999	0.995	0.976	0.793	0.784
rs2803489	2.6876E-08	0.0365985	0.00658	0.0365985	0.006582	4.83754E-08	0.68954	0.084527	9.82E-06	0.281934	0.391005	0.00298	0.12068	0.324096	0.691	0.897	1	0.724	0.806	0.991	0.904	0.844
rs2886	2.6898E-08	-0.029275	0.00526	-0.029275	0.005265	4.84071E-08	0.96617	0.679202	0.012832	0.120859	0.380968	4.1E-06	0.04816	0.482068	0.767	0.806	0.97	0.885	0.828	1	0.941	0.831
rs2511521	2.6899E-08	-0.031138	0.0056	-0.031138	0.0056	4.84092E-08	0.53244	0.128301	0.019402	0.000259	0.570214	0.00194	0.30659	0.058043	0.857	0.914	0.968	0.999	0.811	0.997	0.887	0.936
rs4553178	2.6919E-08	0.0287859	0.00518	0.0287859	0.005177	4.84375E-08	0.90811	0.833435	0.006113	0.008206	0.239393	0.00283	0.0407	0.004854	0.825	0.834	0.993	0.992	0.908	0.996	0.96	0.969
rs3112328	2.692E-08	-0.031656	0.00569	-0.036862	0.00968	1.50555E-08	0.56596	0.115092	0.002519	1.84E-05	0.002914	0.18181	0.06899	0.545101	0.537	0.866	0.956	1	0.987	0.265	0.911	0.734
rs28536747	2.6921E-08	-0.034732	0.00625	-0.034732	0.006246	4.84406E-08	0.60225	0.764359	0.061363	0.010109	0.035818	0.00044	0.06944	0.008018	0.854	0.835	0.87	0.99	0.969	0.999	0.95	0.965
rs4425088	2.6923E-08	-0.034757	0.00625	-0.034757	0.006251	4.84433E-08	0.60448	0.715404	0.061249	0.010213	0.034005	0.00056	0.05763	0.00654	0.856	0.843	0.872	0.99	0.97	0.999	0.954	0.967
rs281247	2.6927E-08	-0.031489	0.00566	-0.031489	0.005663	4.84502E-08	0.81385	0.746861	0.00051	0.000239	0.795681	0.00181	0.48711	0.858502	0.733	0.664	0.999	0.998	0.639	0.995	0.768	0.719
rs140475751	2.695E-08	-0.068507	0.01232	-0.068507	0.012321	4.84835E-08	0.37335	0.187987	0.002004	0.013294	0.01038	0.00091	0.31104	0.781321	0.852	0.598	0.997	0.985	0.977	0.998	0.863	0.789
rs4399792	2.6951E-08	0.0281601	0.00506	0.0247437	0.010393	3.72257E-08	0.32451	0.115916	0.016566	5.84E-05	0.477986	0.0007	0.0003	0.852283	0.509	0.429	0.913	0.999	0.695	0.995	0.985	0.615
rs281245	2.6952E-08	-0.031488	0.00566	-0.031488	0.005663	4.84861E-08	0.81165	0.746878	0.000511	0.000239	0.795854	0.00181	0.48728	0.858447	0.733	0.664	0.999	0.998	0.639	0.995	0.768	0.719
rs1441415	2.697E-08	-0.035315	0.00635	-0.036559	0.010279	3.98487E-08	0.39555	0.902281	0.011271	1.88E-05	0.760492	0.00436	0.00189	0.713757	0.818	0.707	0.958	1	0.503	0.98	0.979	0.76
rs10808892	2.697E-08	0.0340472	0.00612	0.0357533	0.011254	6.59916E-09	0.94972	0.365332	0.597999	7.95E-05	0.032694	6.9E-06	0.05587	0.213084	0.551	0.35	0.014	1	0.933	1	0.9	0.785
rs11638248	2.6973E-08	0.0281077	0.00506	0.0283067	0.005294	4.85169E-08	0.27486	0.488862	0.000501	0.003654	0.003031	0.02927	0.20003	0.379394	0.876	0.844	0.999	0.994	0.988	0.918	0.898	0.65
rs8192906	2.6979E-08	0.0312154	0.00561	0.0293609	0.009714	9.6377E-09	0.15727	0.759643	1.12E-08	0.163342	0.894258	0.06104	0.23425	0.063671	0.707	0.372	1	0.377	0.221	0.293	0.626	0.794
rs1496924	2.6984E-08	-0.031487	0.00566	-0.031487	0.005663	4.85332E-08	0.81045	0.746883	0.000513	0.000238	0.795852	0.00182	0.48727	0.858435	0.734	0.664	0.999	0.998	0.639	0.995	0.768	0.719
rs1542673	2.6984E-08	-0.031487	0.00566	-0.031487	0.005663	4.85332E-08	0.81045	0.746883	0.000513	0.000238	0.795852	0.00182	0.48727	0.858435	0.734	0.664	0.999	0.998	0.639	0.995	0.768	0.719
rs281267	2.6984E-08	-0.031487	0.00566	-0.031487	0.005663	4.85332E-08	0.81045	0.746883	0.000513	0.000238	0.795852	0.00182	0.48727	0.858435	0.734	0.664	0.999	0.998	0.639	0.995	0.768	0.719
rs281268	2.6984E-08	-0.031487	0.00566	-0.031487	0.005663	4.85332E-08	0.81045	0.746883	0.000513	0.000238	0.795852	0.00182	0.48727	0.858435	0.734	0.664	0.999	0.998	0.639	0.995	0.768	0.719
rs281270	2.6984E-08	-0.031487	0.00566	-0.031487	0.005663	4.85332E-08	0.81045	0.746883	0.000513	0.000238	0.795852	0.00182	0.48727	0.858435	0.734	0.664	0.999	0.998	0.639	0.995	0.768	0.719
rs6791565	2.6985E-08	0.0292664	0.00526	0.0292664	0.005264	4.85343E-08	0.95648	0.690783	0.012329	0.122948	0.380075	4.3E-06	0.04884	0.476044	0.769	0.805	0.971	0.884	0.829	1	0.941	0.832
rs10429	2.6986E-08	-0.029169	0.00525	-0.028387	0.00605	4.85354E-08	0.76359	0.401171	0.003064	0.201266	0.840436	4.8E-06	0.01396	0.411794	0.642	0.788	0.988	0.733	0.487	1	0.951	0.785
rs1542674	2.7E-08	-0.031487	0.00566	-0.031487	0.005663	4.85559E-08	0.80954	0.746883	0.000513	0.000239	0.795852	0.00182	0.48727	0.858435	0.734	0.664	0.999	0.998	0.639	0.995	0.768	0.719
rs12147741	2.7027E-08	0.0282366	0.00508	0.0284889	0.005371	4.85955E-08	0.80727	0.096958	0.000108	0.032005	0.458225	0.03325	0.0021	0.254702	0.821	0.92	1	0.972	0.835	0.918	0.985	0.893
rs7324569	2.7034E-08	0.0282115	0.00507	0.0282115	0.005074	4.86055E-08	0.36222	0.343669	0.001052	0.004412	0.833557	0.00268	0.60151	0.015319	0.864	0.866	0.998	0.994	0.714	0.996	0.81	0.95
rs11956049	2.7036E-08	-0.032826	0.0059	-0.032826	0.005904	4.8608E-08	0.02714	0.105661	0.000916	0.099106	0.342699	0.0024	0.59923	0.013743	0.949	0.925	0.999	0.934	0.882	0.997	0.842	0.96
rs28450368	2.7039E-08	-0.037907	0.00682	-0.037907	0.006818	4.86131E-08	0.9653	0.879969	1.69E-05	0.275313	0.377272	0.00077	0.08785	0.544175	0.708	0.733	1	0.7	0.787	0.998	0.905	0.781
rs11735590	2.7041E-08	0.0288906	0.0052	0.0291642	0.005636	4.86157E-08	0.18755	0.994418	0.000747	0.009074	0.001225	0.01196	0.70108	0.208462	0.89	0.777	0.999	0.989	0.991	0.973	0.641	0.888
rs2117508	2.7052E-08	0.0282123	0.00507	0.0282123	0.005075	4.86313E-08	0.57345	0.900648	5.19E-05	0.16169	0.32587	0.00038	0.2612	0.276146	0.658	0.745	1	0.823	0.82	0.999	0.85	0.843
rs28780988	2.7055E-08	0.0362364	0.00652	0.0407224	0.009051	4.8521E-08	0.01013	0.463699	0.003059	0.000674	0.383448	0.07509	0.01126	0.080249	0.961	0.864	0.992	0.998	0.853	0.789	0.975	0.932
rs11123577	2.7059E-08	-0.034752	0.00625	-0.034752	0.006251	4.86426E-08	0.60133	0.715456	0.06137	0.010247	0.034028	0.00056	0.05764	0.006542	0.856	0.843	0.872	0.99	0.97	0.999	0.954	0.967
rs34496898	2.7061E-08	-0.030605	0.0055	-0.030605	0.005505	4.86449E-08	0.54279	0.022617	0.001543	0.250491	0.058145	0.00022	0.42453	0.546103	0.842	0.941	0.998	0.801	0.952	1	0.85	0.84
rs1807237	2.7068E-08	-0.031484	0.00566	-0.031484	0.005663	4.86555E-08	0.81069	0.747345	0.000514	0.000238	0.796002	0.00182	0.48742	0.858397	0.734	0.664	0.999	0.998	0.639	0.995	0.768	0.719

Table S3

rs4547674	2.7069E-08	-0.028849	0.00519	-0.026722	0.009188	7.78648E-09	0.63727	0.059031	0.022238	0.938403	0.074694	1.7E-08	0.25411	0.568878	0.428	0.832	0.635	0.079	0.845	1	0.707	0.614
rs737520	2.7075E-08	-0.031484	0.00566	-0.031484	0.005663	4.86654E-08	0.8107	0.747345	0.000514	0.000238	0.796	0.00182	0.48742	0.858394	0.734	0.664	0.999	0.998	0.639	0.995	0.768	0.719
rs200252393	2.7077E-08	-0.034751	0.00625	-0.034751	0.006251	4.86682E-08	0.60448	0.715456	0.06137	0.010213	0.034028	0.00056	0.05764	0.006542	0.856	0.843	0.872	0.99	0.97	0.999	0.954	0.967
rs34185642	2.7077E-08	-0.034751	0.00625	-0.034751	0.006251	4.86682E-08	0.60448	0.715456	0.06137	0.010213	0.034028	0.00056	0.05764	0.006542	0.856	0.843	0.872	0.99	0.97	0.999	0.954	0.967
rs62086903	2.7115E-08	0.0312768	0.00563	0.0319236	0.009172	4.87242E-08	0.58375	0.010502	0.000497	0.26042	0.971556	0.00031	0.17395	0.003427	0.653	0.938	0.999	0.719	0.599	0.999	0.88	0.958
rs12810386	2.7119E-08	0.0363489	0.00654	0.035511	0.008135	4.87296E-08	0.7175	0.189027	0.034753	0.010817	0.099503	7.5E-06	0.1272	0.200041	0.68	0.862	0.884	0.983	0.913	1	0.897	0.528
rs143012622	2.7123E-08	-0.070367	0.01266	-0.070367	0.012658	4.87353E-08	0.72998	0.517161	8.74E-06	0.060008	0.632694	0.00245	0.95419	0.111037	0.768	0.801	1	0.925	0.717	0.993	0.653	0.888
rs11930840	2.7135E-08	-0.028401	0.00511	-0.028401	0.005109	4.87533E-08	0.88851	0.120821	0.100463	0.004669	0.111825	0.00016	0.04094	0.140087	0.796	0.91	0.739	0.994	0.931	1	0.955	0.91
rs17303520	2.7146E-08	-0.028519	0.00513	-0.031929	0.007279	4.87688E-08	0.01157	0.494902	0.016471	0.055476	0.000316	0.00321	0.57241	0.086914	0.961	0.879	0.977	0.964	0.995	0.995	0.855	0.938
rs118005014	2.7147E-08	0.0790059	0.01421	0.0790059	0.014213	4.87708E-08	0.09497	0.845664	0.020236	0.0011	0.025483	0.00088	0.72144	0.715349	0.916	0.813	0.966	0.998	0.969	0.999	0.797	0.824
rs2427192	2.7154E-08	-0.028666	0.00516	-0.028666	0.005157	4.87806E-08	0.70468	0.902964	0.012353	0.001337	0.082072	0.00038	0.06754	0.411659	0.803	0.751	0.975	0.997	0.935	0.999	0.934	0.643
rs34218011	2.7156E-08	0.036345	0.00654	0.0355078	0.008135	4.87838E-08	0.71673	0.188542	0.03484	0.010799	0.099924	7.5E-06	0.12699	0.200602	0.68	0.862	0.883	0.983	0.913	1	0.897	0.528
rs6441845	2.7168E-08	-0.02926	0.00526	-0.02926	0.005264	4.88014E-08	0.95399	0.690324	0.012708	0.119228	0.385074	4.3E-06	0.04958	0.475905	0.769	0.805	0.97	0.887	0.827	1	0.94	0.832
rs10737782	2.718E-08	-0.031257	0.00562	-0.033044	0.006638	4.62175E-08	0.12508	0.53348	0.000202	0.041879	0.017623	0.10275	0.01739	0.03564	0.915	0.847	1	0.956	0.977	0.672	0.971	0.947
rs10084818	2.7181E-08	-0.035306	0.00635	-0.036548	0.010279	4.02596E-08	0.39542	0.901511	0.011288	1.89E-05	0.759621	0.00436	0.00189	0.713699	0.818	0.707	0.958	1	0.503	0.979	0.979	0.76
rs28769345	2.7182E-08	-0.035306	0.00635	-0.036547	0.010281	4.02357E-08	0.39541	0.901211	0.011298	1.88E-05	0.759674	0.00436	0.00189	0.714313	0.818	0.706	0.958	1	0.503	0.979	0.979	0.76
rs6555992	2.7187E-08	-0.03834	0.0069	-0.03834	0.006897	4.88353E-08	0.8774	0.058068	0.000125	0.156962	0.035851	0.00642	0.14448	0.33838	0.786	0.932	1	0.885	0.966	0.989	0.924	0.882
rs11892464	2.7194E-08	0.0556287	0.01001	0.0577383	0.012526	4.8848E-08	0.26242	0.270088	0.011358	0.070871	0.001614	0.00086	0.05413	0.099354	0.668	0.889	0.983	0.947	0.991	0.999	0.951	0.924
rs13145393	2.7221E-08	-0.035304	0.00635	-0.036545	0.010281	4.03112E-08	0.39542	0.901142	0.011293	1.88E-05	0.759334	0.00436	0.00189	0.71401	0.818	0.706	0.958	1	0.502	0.979	0.979	0.76
rs28624220	2.723E-08	-0.035304	0.00635	-0.036544	0.010281	4.03333E-08	0.39542	0.901159	0.011296	1.89E-05	0.759398	0.00436	0.00189	0.714338	0.818	0.706	0.958	1	0.502	0.979	0.979	0.76
rs9364666	2.7232E-08	0.032139	0.00578	0.032139	0.005782	4.89168E-08	0.15652	0.684386	0.006362	0.003314	0.633302	0.00311	0.04477	0.041186	0.915	0.848	0.992	0.996	0.806	0.996	0.958	0.946
rs4465996	2.7236E-08	-0.035304	0.00635	-0.036545	0.010282	4.03118E-08	0.39538	0.901271	0.011307	1.88E-05	0.759381	0.00436	0.00189	0.714335	0.818	0.706	0.958	1	0.502	0.979	0.979	0.76
rs6426277	2.7242E-08	-0.032163	0.00579	-0.032416	0.005952	3.90494E-08	0.15518	0.785903	0.000146	0.000969	0.078185	0.1625	0.11954	0.074814	0.88	0.753	1	0.998	0.929	0.401	0.906	0.913
rs71610403	2.7244E-08	-0.035303	0.00635	-0.036545	0.010282	4.03214E-08	0.39538	0.901669	0.011311	1.88E-05	0.75951	0.00436	0.00189	0.714491	0.818	0.707	0.958	1	0.502	0.979	0.979	0.76
rs34195155	2.7247E-08	-0.035303	0.00635	-0.036545	0.010281	4.03381E-08	0.39538	0.901671	0.011314	1.88E-05	0.759668	0.00436	0.00189	0.714491	0.818	0.707	0.958	1	0.503	0.979	0.979	0.76
rs2372689	2.7249E-08	-0.029257	0.00526	-0.029257	0.005264	4.89483E-08	0.95526	0.690292	0.012723	0.121346	0.384635	4.1E-06	0.04967	0.476291	0.769	0.804	0.97	0.885	0.827	1	0.94	0.832
rs34922059	2.7255E-08	-0.035303	0.00635	-0.036545	0.010281	4.03509E-08	0.39538	0.901674	0.011316	1.88E-05	0.759672	0.00436	0.00189	0.714491	0.818	0.707	0.958	1	0.503	0.979	0.979	0.76
rs4414905	2.7262E-08	-0.035302	0.00635	-0.036544	0.010282	4.03563E-08	0.39538	0.901249	0.011312	1.88E-05	0.759333	0.00436	0.00189	0.71436	0.818	0.706	0.958	1	0.502	0.979	0.979	0.76
rs9754736	2.7264E-08	-0.029257	0.00526	-0.029257	0.005264	4.89753E-08	0.95453	0.689288	0.012834	0.121231	0.382695	4.1E-06	0.04941	0.475584	0.769	0.805	0.97	0.885	0.828	1	0.94	0.832
rs72670411	2.7267E-08	-0.061883	0.01113	-0.061883	0.011134	4.8981E-08	0.09553	0.769987	0.002698	0.069474	0.365105	0.00017	0.14975	0.467754	0.919	0.825	0.996	0.947	0.862	1	0.921	0.861
rs61914719	2.7275E-08	-0.037374	0.00672	-0.037374	0.006724	4.89951E-08	0.15007	0.318348	0.050468	0.003852	0.060334	5.7E-05	0.82811	0.700691	0.896	0.865	0.867	0.994	0.948	1	0.75	0.807
rs13270965	2.7275E-08	0.0279638	0.00503	0.0296223	0.007203	4.86673E-08	0.83828	0.593797	0.017556	0.000178	0.000197	0.00766	0.60993	0.82143	0.742	0.82	0.955	0.999	0.995	0.976	0.793	0.784
rs1910435	2.7289E-08	-0.028217	0.00508	-0.034416	0.009363	3.9035E-08	0.10583	0.232937	0.025349	0.230777	0.001318	0.0009	0.00014	0.519274	0.909	0.881	0.924	0.791	0.991	0.989	0.993	0.678
rs3371	2.7294E-08	-0.031476	0.00566	-0.031476	0.005663	4.90288E-08	0.81087	0.747315	0.000515	0.000238	0.796191	0.00183	0.48757	0.85846	0.734	0.664	0.999	0.998	0.639	0.995	0.768	0.719
rs16883928	2.7297E-08	-0.032706	0.00588	-0.034539	0.007455	4.90349E-08	0.10694	0.393768	0.017213	7.53E-05	0.193243	0.01016	0.01121	0.565693	0.918	0.871	0.967	0.999	0.91	0.978	0.973	0.719
rs670907	2.7298E-08	-0.028847	0.00519	-0.028626	0.007037	3.65453E-08	0.90346	0.132073	0.01497	0.688535	0.189833	1.3E-06	0.10372	0.037812	0.664	0.861	0.909	0.351	0.846	1	0.893	0.912
rs12035097	2.731E-08	-0.03353	0.00603	-0.03353	0.006033	4.90584E-08	0.94208	0.866525	0.000473	0.002783	0.040846	0.00546	0.48189	0.663005	0.78	0.755	0.999	0.995	0.957	0.99	0.828	0.813
rs12022431	2.732E-08	-0.031253	0.00562	-0.032919	0.00657	4.69262E-08	0.12634	0.527376	0.000212	0.04213	0.017591	0.09977	0.01792	0.035374	0.915	0.85	1	0.957	0.977	0.686	0.971	0.947
rs9458581	2.7326E-08	0.0321563	0.00579	0.0321563	0.005786	4.90867E-08	0.13071	0.693866	0.006593	0.003653	0.619378	0.00303	0.04504	0.041871	0.92	0.848	0.992	0.995	0.811	0.996	0.958	0.946
rs79684510	2.7338E-08	-0.06935	0.01248	-0.06935	0.012478	4.91086E-08	0.5961	0.691189	0.001158	0.078993	0.256621	8.6E-05	0.3573	0.137004	0.701	0.807	0.998	0.925	0.87	1	0.85	0.897
rs200218021	2.7352E-08	-0.034742	0.00625	-0.034742	0.006251	4.91339E-08	0.61381	0.715404	0.061249	0.010285	0.034005	0.00056	0.05763	0.00654	0.854	0.843	0.872	0.99	0.97	0.999	0.954	0.967
rs113115953	2.7358E-08	0.0373407	0.00672	0.0373407	0.006719	4.91459E-08	0.07469	0.142149	0.01449	0.005842	0.460998	0.00145	0.47352	0.006727	0.935	0.921	0.981	0.994	0.856	0.998	0.869	0.969
rs7985691	2.7376E-08	0.0280966	0.00506	0.0280966	0.005056	4.91783E-08	0.38667	0.810491	0.002405	0.00282	0.665687	0.00102	0.65288	0.027262	0.855	0.8	0.996	0.995	0.756	0.998	0.793	0.939
rs11628787	2.7378E-08	-0.028019	0.00504	-0.028021	0.005044	4.91811E-08	0.95476	0.200473	0.000423	0.016631	0.473758	0.02229	0.00259	0.07038	0.812	0.904	0.999	0.985	0.84	0.955	0.984	0.935
rs4764788	2.7388E-08	-0.040594	0.0073	-0.041118	0.008468	4.66276E-08	0.56128	0.97845	0.047572	0.230264	0.005823	1.1E-05	0.13753	0.046007	0.811	0.745	0.829	0.755	0.982	1	0.903	0.925
rs117094553	2.7417E-08	-0.082882	0.01491	-0.082882	0.014914	4.92528E-08	0.82435	0.942756	0.001967	0.008028	0.070571	0.00342	0.0817	0.269044	0.826	0.8	0.998	0.992	0.953	0.995	0.944	0.895
rs7662288	2.7437E-08	-0.035418	0.00637	-0.03992	0.009945	4.92878E-08	0.09824	0.183283	0.036019	0.00099	0.070297	0.00423	0.00122	0.303338	0.92	0.902	0.919	0.998	0.951	0.99	0.987	0.647
rs6692457	2.7438E-08	-0.031248	0.00562	-0.033023	0.006632	4.6721E-08	0.12634	0.533478	0.000202	0.042129	0.017622	0.10275	0.01739	0.03564	0.914	0.847	1	0.956	0.977	0.672	0.971	0.947
rs10017804	2.7443E-08	-0.035295	0.00635	-0.036534	0.010284	4.06622E-08	0.39539	0.901508	0.011319	1.88E-05	0.758068	0.00437	0.0019	0.714694	0.817	0.706	0.958	1	0.502	0.979	0.979	0.76
rs614554	2.7443E-08	-0.028324	0.0051	-0.029438	0.006604	4.92995E-08	0.02475	0.06043	0.007174	0.112584	0.984554	0.00026	0.08541	0.020536	0.946	0.931	0.989	0.915	0.682	1	0.941	0.953
rs2185074	2.7444E-08	-0.031247	0.00562	-0.033023	0.006633	4.67322E-08	0.12634	0.533478	0.000202	0.04213	0.017623	0.10275	0.01739	0.03564	0.914	0.847	1	0.956	0.977	0.672	0.971	0.947
rs10802324	2.7444E-08	-0.031247	0.00562	-0.033023	0.006633	4.67322E-08	0.12634	0.533478	0.000202	0.04213	0.017623	0.10275	0.01739	0.03564	0.914	0.847	1	0.956	0.977	0.672	0.971	0.947
rs10802325	2.7444E-08	-0.031247	0.00562	-0.033023	0.006633	4.67322E-08	0.12634	0.533478	0.000202	0.04213	0.017623	0.10275	0.01739	0.03564	0.914	0.847	1	0.956	0.977	0.672	0.971	0.947
rs4953252	2.7451E-08	-0.029184	0.00525	-0.029184	0.005252	4.93141E-08	0.77937	0.079556	0.015663	0.035806	0.064968	0.0007	0.00253	0.66766	0.784	0.93	0.977	0.974	0.957	0.999	0.985	0.847
rs6826496	2.7456E-08	-0.035294	0.00635	-0.036532	0.010287	4.06252E-08	0.39552	0.901592	0.011326	1.87E-05	0.757289	0.00437	0.0019	0.714895	0.817	0.706	0.958	1	0.501	0.979	0.979	0.759

Table S3

rs201519979	2.7497E-08	-0.070426	0.01267	-0.070426	0.012674	4.93964E-08	0.67835	0.620991	9.31E-06	0.070207	0.579526	0.00215	0.91064	0.091406	0.774	0.785	1	0.913	0.733	0.994	0.641	0.894
rs41295190	2.7512E-08	-0.069324	0.01248	-0.069324	0.012476	4.94242E-08	0.17019	0.991405	0.004652	0.023591	0.014149	0.00029	0.94822	0.531679	0.895	0.779	0.993	0.977	0.975	0.999	0.709	0.836
rs4407383	2.7525E-08	-0.028837	0.00519	-0.026772	0.009187	7.75345E-09	0.64401	0.062706	0.023109	0.930767	0.073119	1.7E-08	0.24642	0.546908	0.427	0.829	0.623	0.077	0.846	1	0.711	0.619
rs9365475	2.7554E-08	0.0321284	0.00578	0.0321284	0.005782	4.95005E-08	0.15286	0.684896	0.006385	0.003366	0.634393	0.00312	0.04473	0.041267	0.915	0.848	0.992	0.996	0.806	0.996	0.958	0.946
rs2245805	2.7568E-08	-0.031109	0.0056	-0.031109	0.005599	4.95246E-08	0.53278	0.130523	0.019067	0.000261	0.567335	0.00201	0.31123	0.057421	0.857	0.913	0.969	0.999	0.812	0.997	0.887	0.936
rs7126748	2.7568E-08	0.0291895	0.00525	0.0315651	0.00684	4.95253E-08	0.03243	0.950453	0.057013	0.008306	0.001508	0.00135	0.40585	0.050441	0.945	0.799	0.878	0.991	0.992	0.997	0.87	0.942
rs146025934	2.7589E-08	-0.082866	0.01491	-0.082866	0.014914	4.95634E-08	0.82649	0.943866	0.001979	0.007989	0.070689	0.00343	0.08141	0.269323	0.826	0.8	0.998	0.992	0.953	0.995	0.944	0.895
rs5006849	2.7594E-08	-0.02837	0.00511	-0.02837	0.005106	4.90622E-08	0.34361	0.762667	3.56E-06	0.11745	0.094183	0.01998	0.5585	0.175024	0.862	0.806	1	0.894	0.932	0.944	0.813	0.893
rs6537132	2.7601E-08	-0.035298	0.00635	-0.036493	0.010275	4.10825E-08	0.38858	0.902128	0.011486	1.87E-05	0.751485	0.0042	0.00201	0.726383	0.818	0.706	0.957	1	0.499	0.98	0.978	0.757
rs8020234	2.7605E-08	0.0281968	0.00508	0.0281968	0.005075	4.95919E-08	0.70558	0.249889	0.001036	0.007173	0.390665	0.0141	0.0048	0.075887	0.767	0.896	0.999	0.992	0.862	0.975	0.981	0.933
rs1372239	2.7633E-08	-0.035285	0.00635	-0.03652	0.01029	4.09422E-08	0.39545	0.900597	0.011333	1.88E-05	0.755906	0.00437	0.0019	0.715045	0.817	0.706	0.958	1	0.501	0.979	0.979	0.759
rs76234940	2.764E-08	-0.035289	0.00635	-0.036526	0.010272	4.13254E-08	0.39772	0.901209	0.011298	1.93E-05	0.759672	0.00436	0.00189	0.714316	0.817	0.707	0.958	1	0.503	0.98	0.979	0.76
rs75240627	2.7654E-08	-0.047325	0.00852	-0.047478	0.009457	4.9681E-08	0.99872	0.810305	0.009425	0.349539	0.00092	4.7E-05	0.13511	0.295475	0.742	0.772	0.972	0.663	0.99	1	0.902	0.853
rs7626688	2.7668E-08	-0.028042	0.00505	-0.02914	0.006088	4.97067E-08	0.01126	0.168489	0.043733	0.000377	0.044379	0.00155	0.71538	0.993507	0.953	0.902	0.903	0.999	0.961	0.997	0.795	0.785
rs35437465	2.7671E-08	0.0333339	0.006	0.0333339	0.006	4.97118E-08	0.82015	0.843353	0.000178	0.012959	0.270244	0.00078	0.93266	0.671803	0.767	0.764	1	0.982	0.85	0.998	0.694	0.784
rs4708970	2.7684E-08	0.0321217	0.00578	0.0321217	0.005782	4.97346E-08	0.15655	0.6862	0.006429	0.003298	0.635118	0.00312	0.04461	0.04127	0.914	0.848	0.992	0.996	0.805	0.996	0.958	0.946
rs9365473	2.7684E-08	0.0321217	0.00578	0.0321217	0.005782	4.97346E-08	0.15655	0.6862	0.006429	0.003298	0.635118	0.00312	0.04461	0.04127	0.914	0.848	0.992	0.996	0.805	0.996	0.958	0.946
rs369620923	2.7691E-08	-0.066292	0.01193	-0.066292	0.011933	4.97485E-08	0.28404	0.544423	1.99E-05	0.015542	0.558518	0.00589	0.78027	0.183004	0.853	0.811	1	0.98	0.758	0.985	0.627	0.877
rs10867598	2.7705E-08	0.0352233	0.00634	0.0352233	0.00634	4.97737E-08	0.7061	0.141235	0.019025	0.000189	0.158253	0.00249	0.52735	0.179486	0.839	0.913	0.969	0.999	0.924	0.996	0.846	0.91
rs528890030	2.7716E-08	-0.067728	0.01219	-0.067728	0.012192	4.97932E-08	0.54336	0.686354	3.46E-05	0.033835	0.51213	0.00166	0.70353	0.089817	0.8	0.78	1	0.957	0.76	0.996	0.59	0.898
rs71382160	2.7723E-08	-0.028172	0.00507	-0.02816	0.005117	4.98057E-08	0.71065	0.996094	0.000493	0.111124	0.432701	0.00062	0.09936	0.004556	0.729	0.772	0.999	0.901	0.821	0.999	0.924	0.961
rs66950944	2.7769E-08	-0.028362	0.00511	-0.028362	0.005106	4.93862E-08	0.33076	0.762165	3.6E-06	0.120029	0.09493	0.0198	0.55778	0.175381	0.864	0.806	1	0.892	0.932	0.944	0.813	0.893
rs946027	2.7772E-08	0.0287504	0.00518	0.0287504	0.005176	4.98943E-08	0.8926	0.826294	0.00618	0.008652	0.242085	0.00274	0.04351	0.004668	0.827	0.835	0.993	0.992	0.907	0.997	0.959	0.969
rs1321479	2.7774E-08	0.0283961	0.00511	0.0283961	0.005112	4.98976E-08	0.54695	0.575354	0.001322	0.002342	0.384661	0.01053	0.03149	0.240981	0.86	0.857	0.998	0.996	0.866	0.983	0.962	0.901
rs7384878	2.7778E-08	-0.030213	0.00544	-0.029069	0.008323	4.99062E-08	0.27465	0.097371	8.15E-05	0.5828	0.004643	0.00057	0.15232	0.422882	0.802	0.399	1	0.371	0.978	0.998	0.855	0.766
rs6826881	2.7824E-08	-0.035098	0.00632	-0.040653	0.010094	4.40142E-08	0.10044	0.165749	0.060758	0.000227	0.084625	0.00625	0.00116	0.510838	0.916	0.9	0.834	0.999	0.941	0.972	0.987	0.685
rs7626576	2.7825E-08	-0.028037	0.00505	-0.029138	0.00609	4.99895E-08	0.01125	0.168762	0.043837	0.000377	0.04436	0.00155	0.7158	0.99335	0.953	0.902	0.902	0.999	0.961	0.997	0.795	0.785
rs7683161	2.7843E-08	-0.03529	0.00635	-0.036485	0.010262	4.18222E-08	0.38593	0.902586	0.011503	1.92E-05	0.751803	0.00419	0.00201	0.727316	0.819	0.706	0.958	1	0.499	0.98	0.978	0.757
rs6555991	2.7855E-08	-0.038315	0.0069	-0.038315	0.006898	5.00455E-08	0.87409	0.052857	0.000131	0.158222	0.036191	0.00641	0.14452	0.339239	0.785	0.933	1	0.884	0.966	0.989	0.924	0.882
rs7679474	2.7871E-08	-0.035287	0.00635	-0.036482	0.010267	4.18152E-08	0.38727	0.901481	0.011467	1.92E-05	0.7513	0.00421	0.002	0.72605	0.819	0.706	0.958	1	0.499	0.98	0.978	0.757
rs270793	2.7886E-08	-0.034064	0.00613	-0.035849	0.011665	4.93549E-09	0.97256	0.358024	0.680633	8.61E-05	0.026019	4.8E-06	0.04654	0.236804	0.539	0.339	0.008	1	0.943	1	0.91	0.773
rs118087529	2.7904E-08	-0.065258	0.01175	-0.065258	0.01175	5.01332E-08	0.29604	0.155832	0.003004	0.062221	0.354525	0.00014	0.564	0.212353	0.884	0.907	0.996	0.952	0.865	1	0.834	0.899
rs28548961	2.7909E-08	-0.035287	0.00635	-0.036482	0.010265	4.18885E-08	0.38629	0.901779	0.011498	1.92E-05	0.751662	0.0042	0.00201	0.727067	0.819	0.706	0.958	1	0.499	0.98	0.978	0.757
rs77628269	2.791E-08	-0.047351	0.00853	-0.047351	0.008525	5.01447E-08	0.44879	0.415742	0.000351	0.440098	0.129947	0.00013	0.02338	0.509563	0.596	0.802	0.999	0.545	0.889	1	0.947	0.782
rs687790	2.7911E-08	0.0294477	0.0053	0.0294477	0.005302	5.01454E-08	0.11873	0.075314	0.000868	0.053366	0.194298	0.00241	0.09927	0.88287	0.922	0.931	0.999	0.963	0.918	0.997	0.941	0.79
rs140119814	2.7915E-08	-0.082336	0.01482	-0.082336	0.014825	5.01535E-08	0.81484	0.946696	0.001742	0.01029	0.072817	0.00326	0.08443	0.259627	0.827	0.801	0.998	0.99	0.953	0.996	0.943	0.897
rs1441414	2.7918E-08	-0.035277	0.00635	-0.036528	0.010289	4.13483E-08	0.39468	0.901465	0.011609	1.87E-05	0.759386	0.00435	0.00189	0.71378	0.817	0.706	0.957	1	0.503	0.979	0.979	0.76
rs10934269	2.7921E-08	-0.028414	0.00512	-0.028414	0.005116	5.01648E-08	0.85099	0.952234	0.006907	0.108495	0.012897	0.00022	0.00497	0.857783	0.758	0.772	0.988	0.907	0.976	1	0.977	0.791
rs10399630	2.7923E-08	-0.031231	0.00562	-0.033008	0.006635	4.74295E-08	0.12636	0.533783	0.000202	0.042859	0.017619	0.10275	0.0174	0.035637	0.914	0.847	1	0.955	0.977	0.673	0.971	0.947
rs4690705	2.796E-08	-0.035283	0.00635	-0.036477	0.010266	4.19979E-08	0.38776	0.901493	0.011478	1.93E-05	0.751274	0.00421	0.002	0.725979	0.818	0.706	0.958	1	0.499	0.98	0.978	0.757
rs4690704	2.7961E-08	-0.035283	0.00635	-0.036477	0.010266	0.000000042	0.38776	0.901491	0.011479	1.93E-05	0.75127	0.00421	0.002	0.725982	0.818	0.706	0.958	1	0.499	0.98	0.978	0.757
rs3173615	2.7968E-08	0.0293531	0.00529	0.0293531	0.005285	5.02494E-08	0.07402	0.442494	1.37E-05	0.043127	0.869771	0.00395	0.95148	0.119576	0.897	0.815	1	0.947	0.556	0.989	0.676	0.886
rs10806760	2.7972E-08	0.0321116	0.00578	0.0321116	0.005782	5.0256E-08	0.15613	0.685248	0.006396	0.003395	0.635032	0.00311	0.04466	0.041338	0.915	0.848	0.992	0.996	0.806	0.996	0.958	0.946
rs59177693	2.7985E-08	-0.047307	0.00852	-0.04746	0.009454	5.02802E-08	0.99915	0.809646	0.009425	0.350011	0.00092	4.8E-05	0.1354	0.296132	0.741	0.772	0.972	0.662	0.99	1	0.902	0.852
rs281261	2.7997E-08	-0.031453	0.00566	-0.031453	0.005664	5.03008E-08	0.84539	0.723842	0.000529	0.000209	0.780384	0.00186	0.49431	0.879722	0.726	0.657	0.999	0.999	0.642	0.994	0.764	0.713
rs12594864	2.8001E-08	-0.028988	0.00522	-0.028988	0.00522	5.03081E-08	0.06563	0.72423	0.003421	0.042075	0.821042	0.00021	0.02695	0.624742	0.922	0.818	0.995	0.963	0.722	1	0.959	0.828
rs35742360	2.8003E-08	-0.035283	0.00635	-0.036476	0.010262	4.21181E-08	0.3867	0.901777	0.011487	1.93E-05	0.751406	0.0042	0.00201	0.727082	0.819	0.706	0.958	1	0.499	0.98	0.978	0.757
rs7525240	2.8004E-08	-0.0335	0.00603	-0.0335	0.006032	5.03142E-08	0.94622	0.862031	0.00052	0.002787	0.040823	0.00515	0.48001	0.662397	0.78	0.755	0.999	0.995	0.957	0.99	0.829	0.813
rs8085649	2.8017E-08	0.0365748	0.00659	0.0362802	0.006908	5.03375E-08	0.13604	0.671772	0.003426	0.302439	0.7132	4.5E-06	0.22395	0.06441	0.865	0.654	0.988	0.662	0.663	1	0.85	0.897
rs56412463	2.8029E-08	0.0284289	0.00512	0.0284289	0.005119	5.03602E-08	0.92636	0.11373	0.006733	0.094993	0.012659	0.00118	0.00667	0.710712	0.802	0.922	0.991	0.935	0.981	0.998	0.979	0.841
rs11779321	2.8031E-08	0.0279385	0.00503	0.0294758	0.00671	5.03629E-08	0.72123	0.290408	0.02095	0.000252	0.000446	0.00621	0.51543	0.800272	0.737	0.871	0.952	0.999	0.993	0.983	0.824	0.797
rs7660839	2.8031E-08	-0.035277	0.00635	-0.03649	0.010252	4.26408E-08	0.38543	0.908353	0.0113	2.06E-05	0.747451	0.00423	0.00193	0.721255	0.819	0.708	0.959	1	0.498	0.98	0.979	0.759
rs6825182	2.805E-08	-0.035278	0.00635	-0.036472	0.010266	4.21455E-08	0.38776	0.902072	0.011477	1.93E-05	0.750489	0.00422	0.002	0.726167	0.818	0.706	0.958	1	0.499	0.98	0.978	0.757
rs6880851	2.8079E-08	-0.038294	0.0069	-0.038294	0.006896	5.045E-08	0.88184	0.051377	0.00013	0.155647	0.036892	0.00673	0.14221	0.33783	0.787	0.934	1	0.887	0.966	0.989	0.925	0.882
rs643614	2.808E-08	0.0303766	0.00547	0.0303766	0.00547	5.04512E-08	0.29002	0.285468	0.027868	0.106757	0.038878	0.00011	0.16861	0.04538	0.9	0.9	0.956	0.93	0.969	1	0.927	0.947

Table S3

rs10004223	2.8085E-08	-0.035276	0.00635	-0.03647	0.010266	4.22263E-08	0.38849	0.901635	0.011459	1.93E-05	0.750145	0.00422	0.00199	0.725281	0.818	0.706	0.958	1	0.498	0.98	0.978	0.757
rs17542155	2.8092E-08	-0.076807	0.01383	-0.076807	0.014409	5.04741E-08	0.88311	0.719526	0.000551	0.353077	0.057733	0.00055	0.24277	0.004113	0.776	0.801	0.999	0.685	0.947	0.999	0.878	0.958
rs4645250	2.8097E-08	0.0371901	0.0067	0.0371901	0.006697	5.04822E-08	0.09902	0.602811	0.018014	0.007157	0.004894	0.00265	0.43602	0.193798	0.93	0.866	0.977	0.993	0.988	0.997	0.878	0.916
rs7635441	2.8107E-08	-0.04133	0.00744	-0.042749	0.009408	5.05E-08	0.09369	0.581873	0.000171	0.470426	0.015445	0.00579	0.00372	0.940453	0.905	0.815	1	0.59	0.973	0.982	0.978	0.754
rs10006846	2.8111E-08	-0.035275	0.00635	-0.036472	0.010272	4.21636E-08	0.38821	0.901416	0.011469	1.92E-05	0.749854	0.00423	0.00199	0.725136	0.818	0.706	0.958	1	0.498	0.98	0.979	0.757
rs139943762	2.8149E-08	-0.041328	0.00744	-0.042744	0.009406	5.05774E-08	0.09378	0.581852	0.000171	0.469917	0.015443	0.00579	0.00372	0.941878	0.905	0.815	1	0.591	0.973	0.982	0.978	0.754
rs9926787	2.8154E-08	-0.034802	0.00627	-0.040484	0.009693	5.05851E-08	0.11984	0.573099	0.010446	0.003628	0.018609	0.01966	0.07281	0.001164	0.927	0.767	0.985	0.996	0.979	0.965	0.953	0.978
rs3909542	2.8158E-08	0.0281475	0.00507	0.0281475	0.005069	5.05938E-08	0.52272	0.838072	0.006339	0.00657	0.36342	2.1E-05	0.82546	0.812302	0.802	0.709	0.985	0.988	0.81	1	0.711	0.753
rs28612442	2.8164E-08	-0.028189	0.00508	-0.028189	0.005077	5.06031E-08	0.71173	0.250325	0.001069	0.008576	0.349538	0.01444	0.00501	0.060976	0.771	0.898	0.999	0.991	0.875	0.975	0.981	0.938
rs59259347	2.8165E-08	0.0554191	0.00998	0.0577701	0.012738	5.06057E-08	0.26002	0.246067	0.013432	0.071512	0.00149	0.00076	0.05664	0.098879	0.667	0.893	0.979	0.946	0.992	0.999	0.95	0.924
rs9637990	2.8165E-08	-0.035203	0.00634	-0.045234	0.010477	5.06066E-08	0.00538	0.061211	0.061601	0.00966	0.052597	0.00923	0.00135	0.208063	0.97	0.945	0.884	0.99	0.967	0.978	0.99	0.921
rs57975992	2.8169E-08	0.0554189	0.00998	0.05777	0.012738	5.06131E-08	0.26002	0.246068	0.013433	0.071509	0.00149	0.00076	0.05664	0.098879	0.667	0.893	0.979	0.946	0.992	0.999	0.95	0.924
rs1833292	2.817E-08	0.0327565	0.0059	0.0327565	0.005899	5.06151E-08	0.73937	0.756984	0.000914	0.000495	0.807279	0.00048	0.54585	0.180472	0.627	0.632	0.997	0.997	0.462	0.998	0.725	0.836
rs67140840	2.8188E-08	-0.036726	0.00661	-0.039102	0.010302	5.06477E-08	0.5663	0.172035	0.00786	0.000271	0.000282	0.01311	0.43185	0.685737	0.692	0.885	0.98	0.999	0.994	0.961	0.831	0.7
rs6548807	2.8198E-08	-0.041325	0.00744	-0.042743	0.009408	5.06663E-08	0.09378	0.581824	0.000171	0.469924	0.01544	0.00579	0.00372	0.942828	0.905	0.815	1	0.591	0.973	0.982	0.978	0.753
rs10124468	2.8208E-08	-0.037833	0.00681	-0.037923	0.00691	5.06836E-08	0.16553	0.758377	0.000473	0.106616	0.081683	0.01092	0.0204	0.012928	0.916	0.788	0.999	0.93	0.953	0.983	0.97	0.961
rs74951231	2.8212E-08	0.0554161	0.00998	0.0577669	0.012739	5.06913E-08	0.25999	0.246078	0.013432	0.071587	0.00149	0.00076	0.05664	0.098884	0.667	0.893	0.979	0.946	0.992	0.999	0.95	0.924
rs924799	2.8212E-08	0.0554161	0.00998	0.0577669	0.012739	5.06913E-08	0.25999	0.246078	0.013432	0.071587	0.00149	0.00076	0.05664	0.098884	0.667	0.893	0.979	0.946	0.992	0.999	0.95	0.924
rs10908314	2.8212E-08	0.0287291	0.00517	0.0344523	0.008218	5.06914E-08	0.39747	0.057323	0.001175	0.013774	0.404844	0.06613	0.00135	0.005316	0.879	0.937	0.997	0.987	0.854	0.821	0.989	0.97
rs148801303	2.822E-08	0.0321026	0.00578	0.0321026	0.005782	5.07051E-08	0.15583	0.6862	0.006429	0.003395	0.635118	0.00312	0.04461	0.04127	0.915	0.848	0.992	0.996	0.806	0.996	0.958	0.946
rs10945852	2.8234E-08	0.0321023	0.00578	0.0321023	0.005782	5.07303E-08	0.15664	0.684966	0.006398	0.003438	0.634348	0.00311	0.04471	0.041212	0.914	0.848	0.992	0.996	0.806	0.996	0.958	0.946
rs6914371	2.8247E-08	0.029518	0.00532	0.029518	0.005317	5.07537E-08	0.68138	0.565889	0.001597	0.000621	0.079296	0.00232	0.84144	0.359944	0.701	0.812	0.997	0.998	0.932	0.995	0.65	0.843
rs6919694	2.8247E-08	0.029518	0.00532	0.029518	0.005317	5.07537E-08	0.68138	0.565889	0.001597	0.000621	0.079296	0.00232	0.84144	0.359944	0.701	0.812	0.997	0.998	0.932	0.995	0.65	0.843
rs6458553	2.8252E-08	0.029521	0.00532	0.029521	0.005317	5.07624E-08	0.68352	0.550595	0.001561	0.000633	0.082788	0.00233	0.84673	0.365408	0.702	0.814	0.997	0.998	0.93	0.995	0.652	0.843
rs6882578	2.8255E-08	0.0280223	0.00505	0.0280223	0.005047	5.07682E-08	0.45998	0.396117	0.013253	0.048786	0.018933	2.9E-05	0.1522	0.852555	0.677	0.847	0.972	0.952	0.969	1	0.905	0.734
rs28549831	2.8261E-08	0.0293589	0.00529	0.0293589	0.005288	5.07787E-08	0.08235	0.419269	1.29E-05	0.046061	0.846183	0.0038	0.93112	0.122429	0.893	0.818	1	0.943	0.547	0.989	0.679	0.884
rs2295262	2.8265E-08	0.0295172	0.00532	0.0295172	0.005317	5.07859E-08	0.67942	0.566123	0.001596	0.000621	0.079306	0.00232	0.84153	0.359911	0.701	0.812	0.997	0.998	0.932	0.995	0.65	0.843
rs8005536	2.8282E-08	0.0281834	0.00508	0.0281834	0.005076	5.08175E-08	0.71506	0.241247	0.001054	0.008741	0.353902	0.01522	0.00467	0.056247	0.771	0.899	0.999	0.991	0.873	0.973	0.981	0.94
rs12470245	2.8303E-08	-0.048036	0.00865	-0.048741	0.009903	5.08547E-08	0.86692	0.355644	0.001513	0.357396	0.000224	0.00105	0.17147	0.398572	0.78	0.853	0.997	0.683	0.994	0.998	0.899	0.847
rs183815463	2.8312E-08	-0.03471	0.00625	-0.03471	0.006252	5.08713E-08	0.61184	0.725743	0.060016	0.010119	0.034713	0.00058	0.05746	0.006991	0.855	0.842	0.877	0.99	0.97	0.999	0.954	0.966
rs34845931	2.8313E-08	-0.035266	0.00635	-0.036461	0.010269	4.25634E-08	0.38913	0.901691	0.011465	1.93E-05	0.749486	0.00425	0.00199	0.72477	0.818	0.706	0.958	1	0.498	0.98	0.978	0.757
rs2084533	2.8329E-08	-0.030383	0.00547	-0.030383	0.005473	5.09028E-08	0.33824	0.943652	0.000685	0.056857	0.619468	7.7E-05	0.60717	0.32276	0.841	0.739	0.999	0.938	0.741	1	0.776	0.845
rs4909360	2.8331E-08	0.0284214	0.00512	0.0284214	0.00512	5.09063E-08	0.92564	0.114324	0.006707	0.095132	0.012735	0.00119	0.00667	0.71003	0.802	0.921	0.991	0.935	0.981	0.998	0.979	0.841
rs3779870	2.8336E-08	0.0311675	0.00561	0.029355	0.009744	1.00153E-08	0.14643	0.762192	1.15E-08	0.170216	0.893025	0.06153	0.23351	0.063848	0.712	0.369	1	0.363	0.216	0.286	0.623	0.792
rs9364664	2.8368E-08	0.0320971	0.00578	0.0320971	0.005782	5.09723E-08	0.15632	0.6862	0.00643	0.003413	0.635118	0.00312	0.04461	0.04127	0.914	0.848	0.992	0.996	0.806	0.996	0.958	0.946
rs7438213	2.8375E-08	-0.035263	0.00635	-0.036458	0.01027	4.26727E-08	0.38951	0.901599	0.011467	1.94E-05	0.749443	0.00425	0.00199	0.724835	0.818	0.706	0.958	1	0.498	0.98	0.978	0.757
rs61836127	2.8384E-08	0.0287368	0.00518	0.0287368	0.005177	5.10021E-08	0.90749	0.833231	0.006159	0.008541	0.240021	0.00284	0.04121	0.004858	0.825	0.834	0.993	0.992	0.907	0.996	0.96	0.969
rs10927125	2.8391E-08	0.0394202	0.0071	0.0393479	0.007193	5.10153E-08	0.06473	0.262772	0.000426	0.65019	0.818041	4E-05	0.08142	0.430477	0.881	0.814	0.999	0.36	0.573	1	0.899	0.775
rs111502842	2.8392E-08	0.0466583	0.00841	0.0466583	0.008405	5.10162E-08	0.2777	0.565288	0.000598	0.008147	0.174941	0.00769	0.28651	0.027793	0.89	0.744	0.999	0.991	0.918	0.988	0.892	0.947
rs2165501	2.8407E-08	-0.035262	0.00635	-0.036457	0.010269	4.27433E-08	0.38951	0.901605	0.011464	1.94E-05	0.74933	0.00425	0.00199	0.724841	0.818	0.706	0.958	1	0.498	0.98	0.978	0.757
rs7431379	2.8413E-08	0.0286135	0.00515	0.0286135	0.005155	5.10548E-08	0.14766	0.345862	0.000845	0.015808	0.869883	0.00227	0.22902	0.074285	0.908	0.876	0.999	0.985	0.723	0.997	0.901	0.929
rs2322907	2.8422E-08	-0.035261	0.00635	-0.036456	0.01027	4.27517E-08	0.38984	0.901265	0.011462	1.94E-05	0.749186	0.00425	0.00198	0.724455	0.818	0.706	0.958	1	0.498	0.98	0.979	0.757
rs1155751	2.8424E-08	0.028171	0.00508	0.028171	0.005075	5.10752E-08	0.70757	0.249986	0.001035	0.007516	0.390078	0.0141	0.00478	0.07564	0.767	0.896	0.999	0.992	0.862	0.975	0.981	0.933
rs4690735	2.8426E-08	-0.035248	0.00635	-0.036458	0.01031	4.20107E-08	0.39331	0.899321	0.011418	1.85E-05	0.74625	0.00437	0.00194	0.72012	0.817	0.705	0.957	1	0.496	0.979	0.979	0.757
rs35837712	2.8449E-08	0.0281702	0.00508	0.0281702	0.005075	5.112E-08	0.70757	0.249992	0.001036	0.007517	0.390083	0.0141	0.00478	0.075641	0.767	0.896	0.999	0.992	0.862	0.975	0.981	0.933
rs4690739	2.8451E-08	-0.034958	0.0063	-0.035487	0.01116	3.39462E-08	0.45917	0.640223	0.006483	1.56E-05	0.485528	0.00547	0.00161	0.4565	0.787	0.628	0.971	1	0.359	0.971	0.979	0.786
rs79661760	2.8456E-08	-0.046414	0.00836	-0.046414	0.008362	5.11329E-08	0.12272	0.856264	0.001554	0.204146	0.010431	0.00091	0.62313	0.033223	0.913	0.812	0.998	0.841	0.98	0.999	0.817	0.943
rs4690732	2.8461E-08	-0.035258	0.00635	-0.036452	0.010272	4.28128E-08	0.39039	0.901106	0.011442	1.94E-05	0.748599	0.00426	0.00198	0.724145	0.818	0.706	0.958	1	0.498	0.98	0.979	0.757
rs127384	2.8487E-08	0.0294277	0.0053	0.0294277	0.005302	5.11885E-08	0.11886	0.075382	0.000879	0.053181	0.194005	0.00244	0.09912	0.882758	0.922	0.931	0.999	0.963	0.918	0.997	0.941	0.79
rs4433382	2.8488E-08	0.0287339	0.00518	0.0287339	0.005177	5.11904E-08	0.9098	0.834983	0.006112	0.008757	0.239653	0.00284	0.0403	0.004903	0.825	0.834	0.993	0.992	0.907	0.996	0.96	0.969
rs2368560	2.8494E-08	0.0281686	0.00508	0.0281686	0.005075	5.12006E-08	0.70709	0.249883	0.001036	0.007513	0.390504	0.01408	0.0048	0.07572	0.767	0.896	0.999	0.992	0.862	0.975	0.981	0.933
rs12934072	2.8497E-08	-0.027982	0.00504	-0.027982	0.005041	5.12073E-08	0.28115	0.468975	2.79E-05	0.187483	0.826394	0.0012	0.05666	0.364958	0.84	0.807	1	0.79	0.535	0.997	0.927	0.825
rs114983649	2.8502E-08	0.05871	0.01058	0.05871	0.010578	5.1215E-08	0.48633	0.283348	0.000606	0.144994	0.222476	0.00029	0.4202	0.29115	0.851	0.878	0.999	0.886	0.895	0.999	0.854	0.879
rs3800552	2.8518E-08	0.0294941	0.00531	0.0294941	0.005314	5.12447E-08	0.68676	0.49049	0.001268	0.000598	0.086943	0.00316	0.86691	0.359783	0.706	0.825	0.998	0.998	0.929	0.993	0.661	0.846
rs9356244	2.8521E-08	0.0311016	0.0056	0.0311016	0.005604	5.12505E-08	0.0512	0.584457	0.005217	0.000854	0.608605	0.00214	0.05434	0.64661	0.926	0.834	0.992	0.998	0.78	0.996	0.945	0.715

Table S3

rs2010205	2.8531E-08	-0.031437	0.00566	-0.031437	0.005664	5.12676E-08	0.81069	0.721193	0.000516	0.000238	0.816636	0.00179	0.49295	0.852831	0.731	0.656	0.999	0.998	0.629	0.995	0.764	0.717
rs10876921	2.8539E-08	0.0283037	0.0051	0.0283037	0.0051	5.12823E-08	0.45303	0.269692	0.00154	0.03709	0.320193	0.00142	0.0597	0.020053	0.717	0.889	0.998	0.971	0.876	0.998	0.949	0.951
rs12886840	2.8542E-08	0.0281749	0.00508	0.0281749	0.005076	5.12879E-08	0.71553	0.241356	0.001062	0.008726	0.354033	0.01522	0.00469	0.05659	0.771	0.899	0.999	0.991	0.873	0.973	0.981	0.939
rs4690733	2.8545E-08	-0.035254	0.00635	-0.036449	0.010276	4.29025E-08	0.39085	0.900721	0.011434	1.94E-05	0.74833	0.00428	0.00197	0.723848	0.818	0.705	0.958	1	0.498	0.98	0.979	0.757
rs6882097	2.8546E-08	-0.038276	0.0069	-0.038276	0.006896	5.12953E-08	0.87746	0.053589	0.000132	0.159408	0.035692	0.0065	0.1453	0.339293	0.786	0.933	1	0.883	0.966	0.989	0.924	0.881
rs12886363	2.8547E-08	0.0281669	0.00508	0.0281669	0.005075	5.12977E-08	0.70705	0.249888	0.001037	0.007525	0.390504	0.01409	0.0048	0.075718	0.767	0.896	0.999	0.992	0.862	0.975	0.981	0.933
rs58338888	2.855E-08	-0.047279	0.00852	-0.047444	0.00949	5.13024E-08	0.99879	0.805219	0.009145	0.35873	0.000915	5E-05	0.13346	0.291237	0.74	0.772	0.973	0.654	0.99	1	0.902	0.853
rs12880368	2.856E-08	0.0281664	0.00507	0.0281664	0.005075	5.13204E-08	0.70629	0.249874	0.001036	0.007518	0.390596	0.01409	0.0048	0.075877	0.767	0.896	0.999	0.992	0.862	0.975	0.981	0.933
rs12880821	2.8561E-08	0.0281666	0.00508	0.0281666	0.005075	5.13216E-08	0.70706	0.249871	0.001037	0.007524	0.390304	0.0141	0.00479	0.07571	0.767	0.896	0.999	0.992	0.862	0.975	0.981	0.933
rs583095	2.8565E-08	0.0345599	0.00623	0.0345599	0.006227	5.13292E-08	0.24119	0.390624	0.001226	0.000684	0.59994	0.00169	0.64667	0.804856	0.863	0.837	0.998	0.998	0.753	0.997	0.773	0.711
rs12035188	2.8571E-08	0.0287262	0.00518	0.0287262	0.005176	5.13409E-08	0.87917	0.827733	0.006252	0.008413	0.243096	0.00286	0.04387	0.004677	0.829	0.835	0.993	0.992	0.907	0.996	0.959	0.969
rs34355893	2.8577E-08	-0.069046	0.01244	-0.069046	0.012441	5.13511E-08	0.3997	0.046309	0.002569	0.0015	0.251798	0.00442	0.33449	0.11361	0.697	0.933	0.996	0.997	0.891	0.993	0.876	0.918
rs8016014	2.8589E-08	0.0281661	0.00508	0.0281661	0.005075	5.13728E-08	0.70784	0.249994	0.001038	0.007539	0.38987	0.01411	0.00478	0.075676	0.767	0.896	0.999	0.992	0.862	0.975	0.981	0.933
rs6490331	2.8593E-08	-0.028163	0.00507	-0.028163	0.005075	5.13803E-08	0.42814	0.576294	0.001127	0.032421	0.789968	0.00032	0.19809	0.208003	0.852	0.833	0.998	0.969	0.727	0.999	0.898	0.889
rs16952611	2.8596E-08	0.0342892	0.00618	0.0342892	0.006178	5.13854E-08	0.4214	0.004252	0.004576	0.013641	0.206556	0.00448	0.17285	0.223207	0.891	0.969	0.995	0.99	0.925	0.995	0.931	0.916
rs12749859	2.8607E-08	0.0287241	0.00518	0.0287241	0.005176	5.14044E-08	0.88756	0.827736	0.006251	0.00834	0.243104	0.00286	0.0439	0.004677	0.828	0.835	0.993	0.992	0.907	0.996	0.959	0.969
rs6997536	2.8616E-08	0.0284083	0.00512	0.0284083	0.005119	5.14167E-08	0.92673	0.114302	0.006829	0.095388	0.012633	0.00118	0.00673	0.714072	0.802	0.921	0.991	0.935	0.981	0.998	0.979	0.841
rs55908905	2.8623E-08	-0.031269	0.00563	-0.036157	0.008732	4.89615E-08	0.32509	0.02747	0.000514	0.101215	8.74E-05	0.04928	0.10587	0.801032	0.88	0.944	0.998	0.91	0.997	0.857	0.933	0.814
rs11160767	2.8625E-08	-0.028173	0.00508	-0.028173	0.005077	5.14285E-08	0.71313	0.250329	0.001069	0.008758	0.349702	0.01444	0.00501	0.060978	0.771	0.898	0.999	0.991	0.875	0.975	0.981	0.938
rs615171	2.8626E-08	-0.033343	0.00601	-0.033343	0.006008	5.14292E-08	0.46492	0.747773	0.013317	0.015829	0.000759	0.00178	0.42168	0.241528	0.872	0.84	0.982	0.987	0.993	0.998	0.872	0.902
rs4764773	2.8646E-08	0.0334106	0.00602	0.0335574	0.006147	5.14559E-08	0.93019	0.876227	0.041206	0.0001	0.079804	0.00302	0.02944	0.159518	0.779	0.774	0.91	0.999	0.944	0.993	0.96	0.905
rs28698555	2.8651E-08	-0.028172	0.00508	-0.028172	0.005076	5.14635E-08	0.71311	0.250327	0.001068	0.008762	0.349637	0.01446	0.00501	0.061076	0.771	0.898	0.999	0.991	0.875	0.975	0.981	0.938
rs9791370	2.8655E-08	0.0295049	0.00532	0.0295049	0.005317	5.14683E-08	0.68305	0.565889	0.001597	0.000637	0.079296	0.00232	0.84144	0.359944	0.701	0.812	0.997	0.998	0.932	0.995	0.65	0.844
rs10802438	2.8659E-08	0.0287287	0.00518	0.0287287	0.005177	5.14734E-08	0.89227	0.83087	0.006144	0.008869	0.240246	0.00283	0.04179	0.004786	0.827	0.835	0.993	0.992	0.907	0.996	0.96	0.969
rs7683234	2.8667E-08	-0.035248	0.00635	-0.036444	0.010274	4.31539E-08	0.39223	0.900872	0.011433	1.95E-05	0.748687	0.00429	0.00196	0.723072	0.817	0.706	0.958	1	0.498	0.98	0.979	0.757
rs58395270	2.8667E-08	-0.069036	0.01244	-0.069036	0.01244	5.14842E-08	0.40032	0.046171	0.002586	0.001495	0.252033	0.00442	0.33475	0.113312	0.697	0.933	0.996	0.997	0.891	0.993	0.876	0.918
rs28533661	2.8667E-08	0.0281711	0.00508	0.0281711	0.005076	5.14844E-08	0.71554	0.241328	0.001064	0.008733	0.354301	0.01524	0.00469	0.0566	0.771	0.899	0.999	0.991	0.873	0.973	0.981	0.939
rs4408531	2.8667E-08	-0.027978	0.00504	-0.027978	0.005042	5.14846E-08	0.2687	0.469738	2.79E-05	0.192024	0.826234	0.0012	0.05633	0.364588	0.842	0.806	1	0.785	0.534	0.997	0.927	0.825
rs112323509	2.8668E-08	-0.084012	0.01514	-0.084012	0.015139	5.14857E-08	0.53599	0.903264	0.002293	0.005512	0.060027	0.00498	0.11008	0.258602	0.863	0.799	0.997	0.994	0.959	0.993	0.937	0.9
rs4690703	2.8669E-08	-0.035257	0.00635	-0.036447	0.010247	4.36707E-08	0.38892	0.901548	0.011468	2.02E-05	0.75139	0.00421	0.002	0.725998	0.818	0.706	0.958	1	0.5	0.98	0.978	0.757
rs7688031	2.8669E-08	-0.035248	0.00635	-0.036446	0.010274	4.3144E-08	0.39192	0.900824	0.011443	1.95E-05	0.74897	0.00429	0.00196	0.723115	0.817	0.706	0.958	1	0.498	0.98	0.979	0.757
rs281255	2.8675E-08	-0.031425	0.00566	-0.031425	0.005663	5.14945E-08	0.81953	0.725747	0.000534	0.000233	0.777398	0.00181	0.50251	0.875545	0.731	0.659	0.999	0.998	0.644	0.995	0.763	0.715
rs12434686	2.8677E-08	-0.028171	0.00508	-0.028171	0.005076	5.14972E-08	0.71308	0.250468	0.001069	0.008759	0.349665	0.01446	0.00501	0.06105	0.771	0.897	0.999	0.991	0.875	0.975	0.981	0.938
rs281257	2.8681E-08	-0.031425	0.00566	-0.031425	0.005663	5.15035E-08	0.8201	0.72572	0.000533	0.000233	0.777455	0.00181	0.50253	0.875544	0.731	0.659	0.999	0.998	0.644	0.995	0.763	0.715
rs79120728	2.8685E-08	0.0559675	0.01009	0.0504563	0.016649	2.44124E-08	0.1763	0.974985	6.44E-05	0.709503	0.325706	1.4E-05	0.01833	0.589331	0.785	0.571	1	0.048	0.681	1	0.931	0.437
rs12405933	2.8692E-08	0.0394069	0.0071	0.0393216	0.00721	5.15181E-08	0.06502	0.262762	0.000425	0.653551	0.817975	4E-05	0.08136	0.430468	0.881	0.814	0.999	0.358	0.572	1	0.899	0.775
rs2888583	2.8716E-08	0.0310535	0.0056	0.0317597	0.007067	5.14802E-08	0.6433	0.309486	0.000189	0.000776	0.144772	0.05223	0.00821	0.6215	0.789	0.603	0.999	0.998	0.896	0.793	0.97	0.789
rs12737933	2.8721E-08	0.0287262	0.00518	0.0287262	0.005177	5.15561E-08	0.90614	0.833948	0.006145	0.008756	0.240086	0.00284	0.04093	0.004864	0.825	0.834	0.993	0.992	0.907	0.996	0.96	0.969
rs921236	2.8729E-08	0.049128	0.00885	0.049128	0.008853	5.15669E-08	0.68578	0.724952	0.005734	0.068645	0.0765	0.00038	0.01185	0.048332	0.752	0.759	0.992	0.947	0.947	0.999	0.972	0.936
rs1547800	2.8732E-08	-0.036541	0.00659	-0.036541	0.006585	5.15704E-08	0.65204	0.086551	7.6E-06	0.300776	0.378589	0.0038	0.0925	0.339043	0.68	0.894	1	0.703	0.807	0.988	0.914	0.838
rs61966957	2.8735E-08	0.0283339	0.00511	0.0283339	0.005106	5.15751E-08	0.14544	0.171857	0.001457	0.007502	0.518986	0.00635	0.44225	0.01697	0.918	0.913	0.998	0.993	0.837	0.991	0.87	0.958
rs10083367	2.8737E-08	-0.028168	0.00508	-0.028168	0.005076	5.15776E-08	0.7137	0.250612	0.001068	0.008747	0.349596	0.01449	0.00502	0.061127	0.771	0.897	0.999	0.991	0.875	0.975	0.981	0.938
rs1548885	2.8739E-08	0.0323789	0.00584	0.0323789	0.005835	5.15806E-08	0.05132	0.60257	0.000118	0.003685	0.815297	0.00997	0.93846	0.097351	0.918	0.815	1	0.994	0.695	0.975	0.714	0.906
rs10083370	2.8742E-08	-0.028168	0.00508	-0.028168	0.005076	5.15846E-08	0.71371	0.250612	0.001068	0.008749	0.349596	0.01449	0.00502	0.061127	0.771	0.897	0.999	0.991	0.875	0.975	0.981	0.938
rs9356046	2.8743E-08	0.0320779	0.00578	0.0320779	0.005781	5.15853E-08	0.15683	0.690064	0.006133	0.003424	0.636111	0.00331	0.04491	0.039996	0.914	0.848	0.992	0.996	0.805	0.996	0.958	0.946
rs8013637	2.8749E-08	0.0281612	0.00508	0.0281612	0.005075	5.15928E-08	0.70382	0.249871	0.001037	0.007551	0.390283	0.0141	0.00479	0.075703	0.766	0.896	0.999	0.992	0.862	0.975	0.981	0.933
rs281254	2.8752E-08	-0.031422	0.00566	-0.031422	0.005663	5.15969E-08	0.81943	0.725755	0.000535	0.000233	0.777347	0.00181	0.50319	0.875276	0.731	0.659	0.999	0.998	0.644	0.995	0.763	0.715
rs10848579	2.8752E-08	-0.03548	0.00639	-0.03548	0.006394	5.15969E-08	0.93806	0.276521	3.13E-05	0.202406	0.10448	0.01075	0.0037	0.938645	0.763	0.87	1	0.824	0.927	0.972	0.979	0.772
rs615583	2.8753E-08	0.0294202	0.0053	0.0294202	0.005302	5.15985E-08	0.1189	0.074416	0.000909	0.053165	0.188123	0.0025	0.09702	0.888077	0.922	0.931	0.999	0.963	0.92	0.997	0.942	0.791
rs59074142	2.8763E-08	0.0303214	0.00546	0.0303214	0.005464	5.16114E-08	0.32163	0.234241	0.025087	0.128314	0.039195	8.8E-05	0.19485	0.057373	0.894	0.905	0.96	0.915	0.968	1	0.92	0.942
rs10802441	2.8766E-08	0.0287235	0.00518	0.0287235	0.005177	5.16159E-08	0.89872	0.83114	0.006165	0.008696	0.240572	0.00284	0.04208	0.004792	0.826	0.835	0.993	0.992	0.907	0.996	0.96	0.969
rs281253	2.8768E-08	-0.031421	0.00566	-0.031421	0.005663	5.16187E-08	0.8194	0.725818	0.000534	0.000233	0.777416	0.00181	0.50327	0.875221	0.731	0.659	0.999	0.998	0.644	0.995	0.763	0.715
rs7809700	2.8768E-08	0.0293655	0.00529	0.0293655	0.005292	5.16187E-08	0.08224	0.42089	1.39E-05	0.044988	0.901058	0.00401	0.94829	0.122607	0.895	0.821	1	0.946	0.571	0.989	0.68	0.886
rs8093534	2.8785E-08	0.0340592	0.00614	0.0340592	0.006138	5.16412E-08	0.41966	0.004641	0.002879	0.012162	0.257497	0.00529	0.2151	0.249794	0.888	0.968	0.997	0.99	0.91	0.994	0.921	0.91
rs12749180	2.8789E-08	0.0287241	0.00518	0.0287241	0.005177	5.1647E-08	0.90633	0.833519	0.006143	0.008778	0.239825	0.00284	0.04115	0.004859	0.825	0.834	0.993	0.992	0.907	0.996	0.96	0.969

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rs1393986	2.8811E-08	-0.02798	0.00504	-0.034431	0.00924	5.062E-08	0.08262	0.214859	0.013038	0.203904	0.008603	0.00241	2.4E-05	0.653425	0.924	0.896	0.971	0.842	0.982	0.99	0.995	0.733
rs17084318	2.8816E-08	-0.035167	0.00634	-0.045685	0.010637	4.96911E-08	0.00536	0.057475	0.06727	0.009601	0.048005	0.00919	0.0012	0.215845	0.969	0.945	0.868	0.99	0.968	0.976	0.99	0.919
rs35180803	2.8817E-08	0.0287218	0.00518	0.0287218	0.005177	5.1684E-08	0.90028	0.831303	0.006167	0.00873	0.240109	0.00284	0.0421	0.004787	0.826	0.835	0.993	0.992	0.907	0.996	0.96	0.969
rs1900808	2.885E-08	0.0491223	0.00885	0.0491223	0.008854	5.17279E-08	0.68607	0.725915	0.005738	0.068454	0.076711	0.00038	0.01188	0.048575	0.752	0.759	0.992	0.947	0.947	0.999	0.972	0.936
rs2166187	2.8861E-08	-0.035233	0.00635	-0.036442	0.010305	4.31999E-08	0.3939	0.905503	0.011241	1.96E-05	0.741167	0.0044	0.00188	0.721484	0.817	0.706	0.958	1	0.495	0.979	0.979	0.757
rs1723898	2.8862E-08	0.031129	0.00561	0.031129	0.005611	5.17441E-08	0.43528	0.125502	0.0162	0.000511	0.276549	0.00072	0.21775	0.307632	0.695	0.906	0.97	0.998	0.877	0.999	0.897	0.875
rs77234957	2.8873E-08	-0.057508	0.01037	-0.057508	0.010365	5.17582E-08	0.77788	0.06745	0.002366	0.083262	0.174527	0.00093	0.05148	0.123508	0.783	0.933	0.997	0.942	0.923	0.999	0.956	0.924
rs12698704	2.888E-08	-0.032943	0.00594	-0.032943	0.005938	5.17675E-08	0.80936	0.064706	0.000863	0.287571	0.018042	0.0006	0.20639	0.634741	0.803	0.921	0.999	0.765	0.973	0.999	0.897	0.823
rs7156697	2.8896E-08	0.0281168	0.00507	0.0281168	0.005068	5.17887E-08	0.65896	0.259055	0.000822	0.007299	0.404139	0.01566	0.00489	0.078202	0.756	0.893	0.999	0.992	0.855	0.971	0.98	0.931
rs72787021	2.8906E-08	0.0342964	0.00618	0.0342964	0.006182	5.18016E-08	0.27043	0.036413	0.007008	0.034787	0.018129	0.00097	0.3763	0.902142	0.9	0.944	0.992	0.975	0.978	0.999	0.884	0.823
rs7141473	2.8917E-08	-0.028165	0.00508	-0.028165	0.005077	5.18166E-08	0.71352	0.250467	0.001069	0.008856	0.349662	0.01446	0.00501	0.061048	0.771	0.897	0.999	0.991	0.875	0.975	0.981	0.938
rs6982544	2.8925E-08	0.0283984	0.00512	0.0283984	0.005119	5.18271E-08	0.92567	0.114518	0.006801	0.096856	0.012624	0.00117	0.00673	0.714783	0.802	0.921	0.991	0.934	0.981	0.998	0.979	0.84
rs10099092	2.8929E-08	0.0491196	0.00885	0.0491196	0.008854	5.18331E-08	0.68573	0.726867	0.005736	0.068545	0.077015	0.00038	0.01194	0.048582	0.752	0.76	0.992	0.947	0.947	0.999	0.972	0.936
rs61018047	2.8935E-08	0.0279913	0.00505	0.0304309	0.008569	5.18404E-08	0.83785	0.102404	0.000127	0.053398	0.084735	0.03041	0.00013	0.317094	0.788	0.905	1	0.944	0.936	0.902	0.992	0.619
rs616021	2.8957E-08	-0.033334	0.00601	-0.033334	0.006009	5.18703E-08	0.46427	0.748169	0.013687	0.015152	0.000757	0.00181	0.42347	0.24139	0.872	0.84	0.981	0.987	0.993	0.998	0.871	0.902
rs281252	2.8958E-08	-0.031415	0.00566	-0.031415	0.005663	5.18708E-08	0.81777	0.726086	0.000534	0.000238	0.776792	0.0018	0.50378	0.874851	0.732	0.659	0.999	0.998	0.645	0.995	0.763	0.715
rs2083619	2.8967E-08	-0.035226	0.00635	-0.036432	0.010307	4.30308E-08	0.39727	0.899664	0.011425	1.88E-05	0.745764	0.00439	0.00193	0.719672	0.816	0.705	0.957	1	0.496	0.979	0.979	0.757
rs1605955	2.8972E-08	-0.035231	0.00635	-0.036433	0.010304	4.31019E-08	0.39802	0.899296	0.011416	1.89E-05	0.746282	0.00437	0.00194	0.720125	0.816	0.705	0.957	1	0.497	0.979	0.979	0.757
rs12699335	2.8981E-08	0.0323673	0.00583	0.0323673	0.005835	5.19016E-08	0.05137	0.602833	0.000117	0.0037	0.817351	0.01001	0.93769	0.097971	0.918	0.815	1	0.994	0.695	0.974	0.714	0.906
rs1372238	2.8999E-08	-0.035228	0.00635	-0.036443	0.010281	4.36056E-08	0.39689	0.901349	0.011378	1.96E-05	0.749911	0.00439	0.00191	0.717751	0.817	0.706	0.958	1	0.499	0.979	0.979	0.759
rs6775754	2.9017E-08	-0.028324	0.00511	-0.028389	0.005443	5.19496E-08	0.89708	0.803155	0.004787	0.132022	0.010334	0.00029	0.00432	0.878154	0.757	0.744	0.991	0.883	0.978	0.999	0.977	0.781
rs9308153	2.9023E-08	-0.035226	0.00635	-0.036432	0.010279	4.37253E-08	0.39523	0.901733	0.011319	1.97E-05	0.746874	0.00438	0.00193	0.719094	0.817	0.706	0.958	1	0.498	0.979	0.979	0.758
rs1876939	2.9037E-08	-0.035227	0.00635	-0.036441	0.010281	4.36927E-08	0.39705	0.901222	0.011383	1.96E-05	0.74987	0.00439	0.00191	0.717892	0.817	0.706	0.958	1	0.499	0.979	0.979	0.758
rs1876938	2.9048E-08	-0.035226	0.00635	-0.036441	0.010279	4.37399E-08	0.39698	0.901296	0.011384	1.97E-05	0.75029	0.00439	0.00191	0.71777	0.817	0.706	0.958	1	0.499	0.979	0.979	0.759
rs7805419	2.9061E-08	0.0294156	0.0053	0.0294156	0.005303	5.20083E-08	0.04161	0.429705	5.21E-05	0.049253	0.89846	0.00257	0.94522	0.115168	0.92	0.834	1	0.948	0.663	0.994	0.705	0.898
rs57902160	2.9082E-08	-0.035224	0.00635	-0.036424	0.010284	4.37469E-08	0.39518	0.89983	0.011385	1.96E-05	0.746414	0.00435	0.00193	0.720169	0.817	0.705	0.958	1	0.497	0.979	0.979	0.758
rs12927881	2.9087E-08	-0.027974	0.00504	-0.027974	0.005043	5.2043E-08	0.70293	0.073359	0.004057	0.0163	0.605524	0.00064	0.53003	0.010557	0.833	0.925	0.994	0.985	0.799	0.999	0.84	0.958
rs62302704	2.9092E-08	0.0371477	0.0067	0.0371477	0.006697	5.2049E-08	0.10426	0.606477	0.018405	0.006986	0.004649	0.00269	0.43792	0.197728	0.929	0.865	0.976	0.993	0.988	0.997	0.877	0.915
rs2053451	2.9099E-08	-0.030434	0.00549	-0.030434	0.005487	5.20582E-08	0.27101	0.875441	0.000521	0.069006	0.67359	9.9E-05	0.62388	0.322196	0.854	0.766	0.999	0.926	0.725	1	0.774	0.846
rs28850132	2.9101E-08	-0.035224	0.00635	-0.036423	0.01028	4.3828E-08	0.39469	0.899938	0.011397	1.96E-05	0.746972	0.00435	0.00194	0.720438	0.817	0.705	0.958	1	0.497	0.98	0.979	0.758
rs166837	2.9101E-08	-0.03141	0.00566	-0.03141	0.005663	5.20605E-08	0.81906	0.72564	0.000534	0.000239	0.776717	0.00181	0.50355	0.875915	0.731	0.659	0.999	0.998	0.645	0.995	0.763	0.715
rs6823663	2.9103E-08	-0.035223	0.00635	-0.036423	0.010284	4.37815E-08	0.39516	0.899836	0.011387	1.96E-05	0.746322	0.00435	0.00193	0.720183	0.817	0.705	0.958	1	0.497	0.979	0.979	0.758
rs16859452	2.9109E-08	0.037147	0.0067	0.037147	0.006697	5.20723E-08	0.10427	0.606153	0.018398	0.006989	0.004655	0.0027	0.43801	0.197679	0.929	0.865	0.976	0.993	0.988	0.997	0.877	0.915
rs815934	2.9129E-08	0.0311203	0.00561	0.0311203	0.005611	5.20989E-08	0.42421	0.125193	0.015956	0.00054	0.27516	0.00071	0.21739	0.307195	0.692	0.906	0.97	0.998	0.878	0.999	0.897	0.875
rs6537135	2.9135E-08	-0.035222	0.00635	-0.036422	0.010284	4.38245E-08	0.39517	0.899839	0.011396	1.96E-05	0.746279	0.00436	0.00193	0.720146	0.817	0.705	0.958	1	0.497	0.979	0.979	0.758
rs12435618	2.9137E-08	0.0849897	0.01532	0.0849897	0.015323	5.2109E-08	0.12107	0.300425	0.000633	0.441147	0.487463	4.5E-05	0.06763	0.830638	0.871	0.827	0.998	0.575	0.747	1	0.915	0.67
rs13114894	2.9145E-08	-0.03522	0.00635	-0.036421	0.010289	4.37371E-08	0.39541	0.899739	0.011394	1.94E-05	0.745647	0.00437	0.00193	0.719838	0.817	0.705	0.958	1	0.497	0.979	0.979	0.758
rs10838773	2.9157E-08	0.029423	0.0053	0.029423	0.005305	5.21357E-08	0.93295	0.212667	0.000374	0.00057	0.930126	0.01579	0.02531	0.591619	0.76	0.87	0.999	0.998	0.601	0.951	0.954	0.806
rs6840593	2.917E-08	-0.035221	0.00635	-0.03642	0.010282	4.39411E-08	0.39525	0.899836	0.011387	1.97E-05	0.746322	0.00435	0.00193	0.720183	0.817	0.705	0.958	1	0.497	0.979	0.979	0.758
rs3087968	2.9172E-08	-0.038244	0.0069	-0.038244	0.006895	5.2155E-08	0.88048	0.054224	0.000132	0.159867	0.035687	0.00656	0.14539	0.339412	0.786	0.933	1	0.883	0.966	0.989	0.924	0.881
rs10014390	2.9172E-08	-0.035221	0.00635	-0.036419	0.010282	4.39472E-08	0.39527	0.899858	0.011389	1.97E-05	0.74636	0.00435	0.00193	0.720155	0.817	0.705	0.958	1	0.497	0.98	0.979	0.758
rs10028292	2.9177E-08	-0.03522	0.00635	-0.036419	0.010282	4.39527E-08	0.39526	0.899853	0.01139	1.97E-05	0.746349	0.00435	0.00193	0.72016	0.817	0.705	0.958	1	0.497	0.98	0.979	0.758
rs139494031	2.9193E-08	0.0455249	0.00821	0.0455249	0.008208	5.21829E-08	0.31493	0.508564	0.000477	0.008589	0.290193	0.01358	0.05687	0.022974	0.885	0.734	0.999	0.991	0.886	0.977	0.95	0.95
rs3765792	2.9201E-08	0.0287095	0.00518	0.0287095	0.005176	5.21931E-08	0.90026	0.831549	0.006201	0.008767	0.240373	0.00284	0.04232	0.004776	0.826	0.835	0.993	0.992	0.907	0.996	0.96	0.969
rs10113087	2.9205E-08	0.0491046	0.00885	0.0491046	0.008854	5.21991E-08	0.68534	0.726253	0.005753	0.068608	0.077	0.00038	0.01194	0.048585	0.752	0.759	0.992	0.947	0.947	0.999	0.971	0.936
rs35582432	2.9208E-08	-0.035219	0.00635	-0.036418	0.010282	4.39939E-08	0.39526	0.899844	0.0114	1.97E-05	0.746292	0.00435	0.00193	0.720141	0.817	0.705	0.958	1	0.497	0.979	0.979	0.758
rs3914496	2.921E-08	-0.040512	0.0073	-0.041039	0.008485	4.91857E-08	0.56149	0.98119	0.047573	0.238655	0.005833	1.1E-05	0.13721	0.046715	0.81	0.744	0.827	0.746	0.982	1	0.902	0.924
rs62302703	2.9228E-08	0.0371428	0.0067	0.0371428	0.006697	5.22298E-08	0.10395	0.606424	0.018409	0.007026	0.004652	0.0027	0.43792	0.197726	0.929	0.865	0.976	0.993	0.988	0.997	0.877	0.915
rs10073822	2.9233E-08	-0.038241	0.0069	-0.038241	0.006895	5.22357E-08	0.88092	0.054264	0.000133	0.15987	0.035691	0.00657	0.14552	0.339527	0.786	0.933	1	0.883	0.966	0.989	0.924	0.881
rs2002453	2.9239E-08	-0.031049	0.0056	-0.031049	0.005599	5.22436E-08	0.53091	0.125009	0.019609	0.000265	0.567313	0.00206	0.31493	0.057308	0.857	0.914	0.968	0.999	0.812	0.997	0.886	0.936
rs7696326	2.9242E-08	-0.034905	0.00629	-0.035601	0.011048	3.49656E-08	0.47952	0.669563	0.006763	1.35E-05	0.546706	0.00627	0.00158	0.492636	0.785	0.639	0.969	1	0.39	0.966	0.979	0.781
rs4690706	2.9246E-08	-0.035217	0.00635	-0.036416	0.010282	4.40802E-08	0.39531	0.899876	0.011393	1.97E-05	0.74604	0.00436	0.00193	0.720137	0.817	0.705	0.958	1	0.497	0.979	0.979	0.758
rs62064970	2.9253E-08	-0.034759	0.00627	-0.040431	0.009688	5.22629E-08	0.11872	0.573151	0.010428	0.003754	0.01881	0.01984	0.07317	0.001162	0.927	0.767	0.985	0.996	0.979	0.964	0.953	0.978
rs9931544	2.9259E-08	-0.034759	0.00627	-0.040431	0.009688	5.22708E-08	0.11872	0.573163	0.010427	0.003754	0.01881	0.01985	0.07317	0.001162	0.927	0.767	0.985	0.996	0.979	0.964	0.953	0.978
rs6833501	2.9259E-08	-0.035234	0.00635	-0.036422	0.010205	4.55133E-08	0.38162	0.902529	0.011514	2.16E-05	0.752753	0.00418	0.00202	0.727476	0.82	0.707	0.958	1	0.501	0.981	0.978	0.758

Table S3

rs1372237	2.9262E-08	-0.035217	0.00635	-0.036427	0.010281	4.40901E-08	0.39678	0.900896	0.011393	1.97E-05	0.748645	0.00439	0.00192	0.718453	0.817	0.706	0.958	1	0.498	0.979	0.979	0.758
rs13433789	2.9266E-08	-0.028451	0.00513	-0.027471	0.008077	2.27125E-08	0.79289	0.044249	0.014774	0.933802	0.072937	2.4E-07	0.10191	0.700117	0.566	0.878	0.851	0.166	0.893	1	0.867	0.667
rs77135201	2.9268E-08	0.0553585	0.00998	0.0576974	0.01273	5.22826E-08	0.26259	0.246068	0.013422	0.074609	0.00149	0.00076	0.05664	0.098872	0.668	0.893	0.979	0.944	0.992	0.999	0.95	0.924
rs372038833	2.927E-08	-0.045035	0.00812	-0.053627	0.015785	3.60842E-08	0.89542	0.508269	0.000726	0.509626	0.14392	0.00316	1.7E-06	0.137973	0.752	0.812	0.995	0.533	0.897	0.987	0.996	0.888
rs6548086	2.9279E-08	0.0279476	0.00504	0.0279476	0.00504	5.22963E-08	0.89135	0.327109	0.016807	0.003693	0.057279	0.00197	0.03307	0.384438	0.831	0.893	0.977	0.996	0.961	0.998	0.964	0.887
rs2120844	2.928E-08	-0.035216	0.00635	-0.036416	0.010284	4.40576E-08	0.39523	0.899693	0.011406	1.96E-05	0.746059	0.00437	0.00194	0.720068	0.817	0.705	0.958	1	0.497	0.979	0.979	0.758
rs10019031	2.928E-08	-0.035216	0.00635	-0.036416	0.010284	4.4058E-08	0.39523	0.899693	0.011406	1.96E-05	0.746059	0.00437	0.00194	0.720068	0.817	0.705	0.958	1	0.497	0.979	0.979	0.758
rs7550700	2.9282E-08	0.0287062	0.00518	0.0287062	0.005176	5.23014E-08	0.89824	0.829939	0.006182	0.00879	0.24107	0.00285	0.04283	0.004739	0.827	0.835	0.993	0.992	0.907	0.996	0.959	0.969
rs112171203	2.9288E-08	0.0308683	0.00557	0.0308683	0.005566	5.23094E-08	0.06945	0.736476	0.003627	0.000969	0.636729	0.00234	0.02838	0.461136	0.914	0.804	0.994	0.997	0.758	0.996	0.955	0.661
rs281281	2.929E-08	-0.031406	0.00566	-0.031406	0.005663	5.23114E-08	0.81545	0.745734	0.000503	0.000274	0.796814	0.00183	0.48755	0.858316	0.733	0.664	0.999	0.998	0.64	0.995	0.768	0.719
rs4606645	2.9299E-08	-0.028156	0.00508	-0.028156	0.005077	5.23231E-08	0.71241	0.249731	0.001085	0.008579	0.348124	0.01485	0.00498	0.060771	0.771	0.898	0.999	0.991	0.875	0.974	0.981	0.938
rs28789215	2.9305E-08	-0.035214	0.00635	-0.036413	0.010285	4.41091E-08	0.39606	0.89932	0.011403	1.96E-05	0.74597	0.00437	0.00193	0.719774	0.816	0.705	0.958	1	0.497	0.979	0.979	0.758
rs3117016	2.9321E-08	0.0290399	0.00524	0.029013	0.005293	5.23525E-08	0.76932	0.379514	0.000346	0.62938	0.282291	0.00016	0.01836	0.087446	0.655	0.806	0.999	0.409	0.814	1	0.952	0.887
rs10236369	2.9325E-08	0.0323604	0.00584	0.0323604	0.005836	5.23576E-08	0.05034	0.602576	0.000119	0.003722	0.817261	0.01002	0.94066	0.097199	0.918	0.815	1	0.994	0.695	0.974	0.713	0.906
rs281278	2.9325E-08	-0.031422	0.00567	-0.031422	0.005666	5.23582E-08	0.81755	0.756443	0.000512	0.000246	0.800608	0.00191	0.49321	0.857345	0.733	0.666	0.999	0.998	0.638	0.994	0.766	0.719
rs11801168	2.9329E-08	-0.027934	0.00504	-0.026894	0.007659	4.66769E-08	0.06172	0.229734	0.043303	0.028894	0.034216	2.4E-06	0.20678	0.826614	0.891	0.834	0.796	0.949	0.947	1	0.341	0.711
rs6548087	2.9336E-08	0.0279483	0.00504	0.0279483	0.00504	5.23719E-08	0.89709	0.326665	0.016754	0.003687	0.057425	0.00197	0.03317	0.384664	0.83	0.893	0.977	0.996	0.961	0.998	0.964	0.887
rs36123465	2.9338E-08	-0.062093	0.0112	-0.062093	0.011197	5.23749E-08	0.86754	0.109858	0.000764	0.253094	0.16226	0.00144	0.0064	0.266123	0.81	0.915	0.999	0.807	0.918	0.998	0.976	0.889
rs1503582	2.9343E-08	-0.027963	0.00504	-0.034418	0.009234	5.16493E-08	0.08151	0.213153	0.013269	0.202639	0.008498	0.00242	2.5E-05	0.651357	0.924	0.897	0.97	0.843	0.982	0.99	0.995	0.733
rs281262	2.9359E-08	-0.031407	0.00566	-0.031407	0.005664	5.24026E-08	0.85681	0.723555	0.000528	0.000222	0.781475	0.00186	0.49265	0.879677	0.724	0.657	0.999	0.998	0.641	0.994	0.764	0.713
rs13147030	2.9362E-08	-0.035213	0.00635	-0.036412	0.010283	4.42376E-08	0.39531	0.899694	0.011406	1.97E-05	0.745963	0.00437	0.00194	0.720065	0.817	0.705	0.958	1	0.497	0.979	0.979	0.758
rs2120843	2.9363E-08	-0.035213	0.00635	-0.036411	0.010282	4.42495E-08	0.39553	0.899693	0.011406	1.97E-05	0.746057	0.00437	0.00194	0.72007	0.817	0.705	0.958	1	0.497	0.979	0.979	0.758
rs200291040	2.9375E-08	-0.035212	0.00635	-0.036409	0.010283	4.42733E-08	0.39614	0.89931	0.011401	1.97E-05	0.745953	0.00437	0.00193	0.719779	0.816	0.705	0.958	1	0.497	0.979	0.979	0.758
rs12878678	2.9384E-08	0.0281538	0.00508	0.0281538	0.005077	5.24358E-08	0.71326	0.249659	0.001084	0.008632	0.348085	0.01484	0.00498	0.060784	0.771	0.898	0.999	0.991	0.875	0.974	0.981	0.938
rs2322908	2.9391E-08	-0.035212	0.00635	-0.036411	0.010283	4.42959E-08	0.39529	0.899686	0.011408	1.97E-05	0.745964	0.00437	0.00194	0.720068	0.817	0.705	0.958	1	0.497	0.979	0.979	0.758
rs9365471	2.9397E-08	0.0320617	0.00578	0.0320617	0.005782	5.24532E-08	0.15762	0.692251	0.006274	0.003542	0.636062	0.00321	0.04488	0.04029	0.914	0.847	0.992	0.995	0.805	0.996	0.958	0.946
rs13122950	2.9414E-08	-0.035211	0.00635	-0.036409	0.010282	4.43301E-08	0.39586	0.89962	0.011416	1.97E-05	0.746172	0.00437	0.00194	0.720124	0.817	0.705	0.958	1	0.497	0.979	0.979	0.758
rs28749775	2.9421E-08	-0.03521	0.00635	-0.036408	0.010283	4.43291E-08	0.39585	0.899316	0.011418	1.96E-05	0.746194	0.00437	0.00194	0.720128	0.817	0.705	0.958	1	0.497	0.979	0.979	0.758
rs28854016	2.9424E-08	-0.03521	0.00635	-0.036408	0.010283	4.43427E-08	0.39586	0.899625	0.011418	1.97E-05	0.746028	0.00437	0.00194	0.720121	0.817	0.705	0.958	1	0.497	0.979	0.979	0.758
rs9683718	2.9424E-08	-0.03521	0.00635	-0.036408	0.010283	4.43354E-08	0.39585	0.899316	0.011419	1.96E-05	0.74619	0.00437	0.00194	0.72013	0.817	0.705	0.958	1	0.497	0.979	0.979	0.758
rs62330374	2.9427E-08	-0.03521	0.00635	-0.036407	0.010283	4.4359E-08	0.39616	0.899255	0.011403	1.97E-05	0.745951	0.00437	0.00194	0.719823	0.816	0.705	0.958	1	0.497	0.979	0.979	0.758
rs1532290	2.9432E-08	0.0339735	0.00613	0.0359156	0.01147	6.01173E-09	0.9362	0.372546	0.6563	9.98E-05	0.026648	6E-06	0.04022	0.254803	0.554	0.351	0.01	0.999	0.943	1	0.918	0.767
rs9308154	2.9433E-08	-0.035208	0.00635	-0.03641	0.010286	4.43146E-08	0.39606	0.899613	0.011405	1.97E-05	0.745911	0.00438	0.00193	0.719641	0.816	0.705	0.958	1	0.497	0.979	0.979	0.758
rs4690708	2.9433E-08	-0.03521	0.00635	-0.036408	0.010283	4.43597E-08	0.39585	0.899626	0.011417	1.97E-05	0.745995	0.00437	0.00194	0.720121	0.817	0.705	0.958	1	0.497	0.979	0.979	0.758
rs4690734	2.9433E-08	-0.03521	0.00635	-0.036408	0.010283	4.43597E-08	0.39585	0.899626	0.011417	1.97E-05	0.745995	0.00437	0.00194	0.720121	0.817	0.705	0.958	1	0.497	0.979	0.979	0.758
rs28404663	2.9438E-08	-0.035209	0.00635	-0.036407	0.010281	4.43906E-08	0.39583	0.89929	0.011413	1.97E-05	0.746276	0.00437	0.00194	0.720105	0.817	0.705	0.958	1	0.497	0.979	0.979	0.758
rs13126927	2.9439E-08	-0.03521	0.00635	-0.036408	0.010282	4.43836E-08	0.39583	0.899324	0.011417	1.97E-05	0.746257	0.00437	0.00194	0.720117	0.817	0.705	0.958	1	0.497	0.979	0.979	0.758
rs28814581	2.9446E-08	-0.035209	0.00635	-0.036407	0.010283	4.438E-08	0.39586	0.899629	0.011418	1.97E-05	0.745954	0.00437	0.00194	0.720122	0.817	0.705	0.958	1	0.497	0.979	0.979	0.758
rs4690709	2.9452E-08	-0.035209	0.00635	-0.036407	0.010283	4.43894E-08	0.39585	0.899625	0.011417	1.97E-05	0.745893	0.00437	0.00194	0.720126	0.817	0.705	0.958	1	0.497	0.979	0.979	0.758
rs35841093	2.9455E-08	-0.035209	0.00635	-0.036406	0.010282	4.44117E-08	0.39616	0.899301	0.011413	1.97E-05	0.74599	0.00437	0.00194	0.720084	0.816	0.705	0.958	1	0.497	0.979	0.979	0.758
rs2847567	2.9468E-08	-0.034245	0.00618	-0.034245	0.006176	5.25474E-08	0.40359	0.004346	0.004509	0.013023	0.216766	0.00475	0.17178	0.224664	0.893	0.969	0.995	0.99	0.922	0.995	0.931	0.916
rs6847097	2.9469E-08	-0.035207	0.00635	-0.036406	0.010284	4.44187E-08	0.39612	0.899586	0.011402	1.97E-05	0.745727	0.00438	0.00193	0.719635	0.816	0.705	0.958	1	0.497	0.979	0.979	0.758
rs113215917	2.9489E-08	0.0308622	0.00557	0.0308622	0.005566	5.2574E-08	0.07298	0.736476	0.003627	0.000954	0.636729	0.00234	0.02838	0.461136	0.913	0.804	0.994	0.997	0.758	0.996	0.955	0.661
rs28693771	2.9499E-08	-0.035206	0.00635	-0.036407	0.010284	4.44694E-08	0.39614	0.899611	0.011407	1.97E-05	0.745918	0.00438	0.00193	0.719648	0.816	0.705	0.958	1	0.497	0.979	0.979	0.758
rs4690736	2.95E-08	-0.035206	0.00635	-0.036407	0.010284	4.4471E-08	0.39614	0.899613	0.011405	1.97E-05	0.745911	0.00438	0.00193	0.719641	0.816	0.705	0.958	1	0.497	0.979	0.979	0.758
rs28560068	2.9509E-08	-0.035205	0.00635	-0.036406	0.010284	4.44849E-08	0.39614	0.89961	0.011409	1.97E-05	0.745907	0.00438	0.00193	0.719654	0.816	0.705	0.958	1	0.497	0.979	0.979	0.758
rs1475007	2.951E-08	0.0281415	0.00508	0.0281415	0.005076	5.26022E-08	0.71534	0.250546	0.001066	0.008695	0.350819	0.01471	0.00512	0.062198	0.771	0.897	0.999	0.991	0.874	0.974	0.981	0.937
rs732600	2.9515E-08	-0.035205	0.00635	-0.036406	0.010284	4.44964E-08	0.39615	0.899618	0.011409	1.97E-05	0.745915	0.00438	0.00193	0.719648	0.816	0.705	0.958	1	0.497	0.979	0.979	0.758
rs7156834	2.9518E-08	0.028098	0.00507	0.028098	0.005068	5.26126E-08	0.65891	0.259028	0.000823	0.007438	0.404142	0.01574	0.00489	0.07819	0.756	0.893	0.999	0.992	0.855	0.97	0.98	0.931
rs34066675	2.9525E-08	0.0320568	0.00578	0.0320568	0.005782	5.26214E-08	0.15709	0.690461	0.006414	0.003512	0.638417	0.0032	0.04401	0.040057	0.914	0.848	0.992	0.996	0.805	0.996	0.958	0.946
rs4131755	2.9527E-08	-0.028472	0.00514	-0.028472	0.005135	5.26245E-08	0.46963	0.47753	0.000535	0.018684	0.283032	0.01134	0.00225	0.755182	0.868	0.867	0.999	0.984	0.89	0.981	0.984	0.831
rs6092174	2.9535E-08	-0.040924	0.00738	-0.040924	0.007381	5.26353E-08	0.1508	0.755041	0.003025	0.023615	0.007523	0.0091	0.00707	0.813772	0.916	0.841	0.996	0.982	0.984	0.987	0.979	0.779
rs6548085	2.954E-08	0.0279393	0.00504	0.0279393	0.005039	5.26419E-08	0.89584	0.327372	0.016825	0.003702	0.057261	0.00198	0.03307	0.384862	0.83	0.893	0.977	0.996	0.961	0.998	0.964	0.887
rs78403836	2.9577E-08	0.0446674	0.00806	0.0460423	0.011011	5.26911E-08	0.27594	0.443987	0.020981	0.282744	0.001168	4.4E-05	0.2308	0.059558	0.861	0.662	0.936	0.735	0.991	1	0.876	0.919
rs9931546	2.9579E-08	-0.034747	0.00627	-0.040411	0.009684	5.26926E-08	0.119	0.573174	0.010429	0.003806	0.018812	0.01985	0.07317	0.001162	0.927	0.767	0.985	0.996	0.979	0.965	0.953	0.978

Table S3

rs10017013	2.9583E-08	-0.035203	0.00635	-0.036409	0.010285	4.45838E-08	0.39654	0.899828	0.011419	1.97E-05	0.746695	0.0044	0.00192	0.718783	0.816	0.705	0.958	1	0.498	0.979	0.979	0.758
rs6537136	2.9593E-08	-0.035202	0.00635	-0.036408	0.010284	4.46074E-08	0.39685	0.899838	0.01142	1.97E-05	0.74676	0.0044	0.00192	0.71879	0.816	0.705	0.958	1	0.498	0.979	0.979	0.758
rs2003851	2.9599E-08	-0.035202	0.00635	-0.036402	0.010284	4.46413E-08	0.39668	0.899633	0.011414	1.98E-05	0.745777	0.00439	0.00193	0.719649	0.816	0.705	0.958	1	0.497	0.979	0.979	0.758
rs7323705	2.9608E-08	0.0281289	0.00507	0.0281289	0.005074	5.27313E-08	0.36242	0.345849	0.001104	0.004416	0.842656	0.00274	0.59898	0.015653	0.863	0.866	0.998	0.994	0.712	0.995	0.81	0.949
rs7567004	2.9615E-08	0.0279394	0.00504	0.0279394	0.00504	5.27402E-08	0.89461	0.326969	0.016798	0.003729	0.057311	0.00198	0.03315	0.384548	0.83	0.893	0.977	0.995	0.961	0.998	0.964	0.887
rs116951297	2.9623E-08	-0.08215	0.01482	-0.08215	0.014819	5.27514E-08	0.81329	0.973852	0.00174	0.011331	0.076764	0.00328	0.07943	0.257944	0.828	0.805	0.998	0.989	0.951	0.996	0.944	0.897
rs6276	2.9642E-08	-0.029951	0.0054	-0.029986	0.005455	5.27767E-08	0.65509	0.023112	0.004578	0.001644	0.854175	0.00322	0.07761	0.103588	0.829	0.941	0.993	0.997	0.621	0.995	0.939	0.917
rs72929453	2.9649E-08	-0.03812	0.00688	-0.03812	0.006876	5.27853E-08	0.20717	0.608368	0.002812	0.161427	0.72819	8.2E-06	0.27075	0.136042	0.858	0.669	0.993	0.822	0.688	1	0.849	0.879
rs59318367	2.9653E-08	-0.0352	0.00635	-0.036404	0.010286	4.46806E-08	0.39658	0.899877	0.011426	1.97E-05	0.745928	0.0044	0.00192	0.719164	0.816	0.705	0.958	1	0.497	0.979	0.979	0.758
rs10139183	2.9659E-08	0.0391155	0.00706	0.0391155	0.007056	5.27983E-08	0.31159	0.267863	0.001641	0.09398	0.119014	0.00039	0.07965	0.694493	0.88	0.886	0.998	0.929	0.932	0.999	0.94	0.743
rs13151684	2.9662E-08	-0.0352	0.00635	-0.036402	0.010285	4.4727E-08	0.39634	0.899687	0.011429	1.98E-05	0.745883	0.00439	0.00193	0.719643	0.816	0.705	0.958	1	0.497	0.979	0.979	0.758
rs2723740	2.9665E-08	-0.027954	0.00504	-0.03441	0.009244	5.17957E-08	0.08233	0.214762	0.013083	0.207261	0.008571	0.00242	2.4E-05	0.65363	0.924	0.896	0.97	0.839	0.982	0.99	0.995	0.733
rs1899319	2.967E-08	-0.035199	0.00635	-0.036401	0.010285	4.47474E-08	0.39635	0.899689	0.011426	1.98E-05	0.745675	0.00439	0.00193	0.719674	0.816	0.705	0.958	1	0.497	0.979	0.979	0.758
rs2723739	2.9673E-08	-0.027953	0.00504	-0.03441	0.009244	5.17949E-08	0.08234	0.21472	0.0131	0.207245	0.008552	0.00241	2.4E-05	0.653699	0.924	0.896	0.97	0.839	0.982	0.99	0.995	0.733
rs9458593	2.9674E-08	0.0320449	0.00578	0.0320449	0.005781	5.28183E-08	0.13745	0.6885	0.00669	0.003077	0.654353	0.00335	0.04443	0.043087	0.918	0.847	0.992	0.996	0.8	0.996	0.958	0.945
rs10004713	2.9677E-08	-0.035199	0.00635	-0.036403	0.010287	4.47102E-08	0.39656	0.899389	0.011428	1.97E-05	0.745842	0.0044	0.00192	0.718817	0.816	0.705	0.958	1	0.497	0.979	0.979	0.758
rs7972124	2.9687E-08	-0.040491	0.0073	-0.041079	0.008598	4.96379E-08	0.55121	0.980538	0.047315	0.250993	0.005734	1.1E-05	0.13616	0.04568	0.809	0.741	0.823	0.732	0.982	1	0.901	0.924
rs59955684	2.9693E-08	0.0310265	0.0056	0.0317346	0.007127	5.27781E-08	0.63666	0.306638	0.000194	0.000754	0.150649	0.0518	0.00781	0.649486	0.789	0.601	0.999	0.998	0.893	0.795	0.97	0.783
rs1925100	2.9711E-08	0.0281226	0.00507	0.0281226	0.005073	5.28672E-08	0.33596	0.345569	0.001046	0.004848	0.859615	0.00279	0.59646	0.014454	0.867	0.866	0.998	0.993	0.707	0.995	0.811	0.951
rs7995352	2.9721E-08	0.0281223	0.00507	0.0281223	0.005073	5.28803E-08	0.33593	0.345665	0.001044	0.004851	0.860331	0.00279	0.59663	0.014434	0.867	0.866	0.998	0.993	0.706	0.995	0.811	0.951
rs716878	2.9721E-08	-0.035198	0.00635	-0.036397	0.010283	4.48512E-08	0.39631	0.898924	0.011413	1.97E-05	0.745932	0.0044	0.00194	0.719823	0.816	0.705	0.958	1	0.497	0.979	0.979	0.758
rs28488824	2.973E-08	0.0391133	0.00706	0.0391133	0.007056	5.28916E-08	0.30897	0.269306	0.001663	0.091918	0.119328	0.0004	0.07948	0.694404	0.88	0.886	0.998	0.931	0.932	0.999	0.94	0.743
rs9554349	2.9732E-08	0.0281219	0.00507	0.0281219	0.005073	5.28953E-08	0.33593	0.345666	0.001044	0.004853	0.860334	0.00279	0.59663	0.014434	0.867	0.866	0.998	0.993	0.706	0.995	0.811	0.951
rs1925099	2.9775E-08	0.0281207	0.00507	0.0281207	0.005073	5.2952E-08	0.33598	0.345591	0.001046	0.004847	0.859817	0.0028	0.59699	0.014471	0.867	0.866	0.998	0.993	0.706	0.995	0.811	0.95
rs8011137	2.9804E-08	0.0281348	0.00508	0.0281348	0.005076	5.299E-08	0.71557	0.250012	0.001069	0.008827	0.348733	0.01486	0.00505	0.06132	0.771	0.897	0.999	0.991	0.875	0.974	0.981	0.938
rs3078545	2.981E-08	-0.031857	0.00575	-0.033845	0.007911	5.25016E-08	0.99168	0.968308	0.005679	0.000276	0.00027	0.02773	0.21027	0.893634	0.77	0.766	0.984	0.999	0.995	0.919	0.89	0.777
rs4758872	2.9822E-08	-0.027965	0.00505	-0.033498	0.008919	5.30136E-08	0.11753	0.195557	0.015589	0.245142	0.004975	0.00125	8.2E-05	0.600649	0.911	0.895	0.963	0.801	0.986	0.994	0.994	0.711
rs12486599	2.9837E-08	-0.030513	0.00551	-0.030513	0.005505	5.30334E-08	0.39463	0.91645	0.000577	0.080444	0.368512	9.5E-05	0.66232	0.345875	0.837	0.743	0.999	0.918	0.825	1	0.771	0.846
rs147691396	2.9842E-08	0.0760886	0.01373	0.0766798	0.025653	5.30398E-08	0.06523	0.000437	0.011019	0.000387	0.18562	0.0018	0.37558	0.865305	0.505	0.974	0.976	0.998	0.889	0.996	0.837	0.763
rs657741	2.9844E-08	0.0303038	0.00547	0.0310139	0.006096	5.30424E-08	0.01872	0.084318	0.018097	0.174473	0.123811	0.00035	0.1677	0.019734	0.957	0.936	0.975	0.894	0.944	0.999	0.932	0.96
rs7754089	2.9852E-08	-0.042328	0.00764	-0.045229	0.009882	5.30529E-08	0.37108	0.02934	0.026323	0.015148	0.005906	0.0018	0.09445	0.069634	0.717	0.948	0.956	0.987	0.986	0.998	0.944	0.938
rs7973618	2.9854E-08	0.0301391	0.00544	0.0301391	0.005438	5.30548E-08	0.74231	0.294627	7.27E-05	0.091802	0.841447	0.0007	0.22709	0.165563	0.775	0.845	1	0.899	0.561	0.998	0.867	0.876
rs2148962	2.9858E-08	0.0287306	0.00518	0.0287805	0.009289	5.30609E-08	0.20886	0.017484	0.000284	0.000319	0.051354	0.03912	0.41151	0.055393	0.858	0.389	0.999	0.999	0.942	0.821	0.804	0.912
rs9824990	2.9859E-08	-0.028761	0.00519	-0.02662	0.009162	8.69741E-09	0.63989	0.060143	0.022084	0.93034	0.080353	1.8E-08	0.24819	0.568976	0.431	0.831	0.643	0.08	0.838	1	0.712	0.615
rs74685254	2.9878E-08	-0.082127	0.01482	-0.082127	0.014819	5.30864E-08	0.81387	0.970007	0.001744	0.011252	0.07699	0.00329	0.08019	0.257952	0.828	0.804	0.998	0.989	0.951	0.996	0.944	0.897
rs7683834	2.9912E-08	-0.035194	0.00635	-0.036392	0.010285	4.50771E-08	0.39607	0.90093	0.011494	1.96E-05	0.745199	0.00439	0.00195	0.721903	0.816	0.705	0.957	1	0.497	0.979	0.979	0.757
rs2765220	2.9913E-08	-0.04876	0.0088	-0.053079	0.014221	5.31331E-08	0.01604	0.917361	0.001592	0.003447	0.676484	0.00789	0.05606	0.004578	0.944	0.756	0.997	0.995	0.532	0.982	0.944	0.961
rs9790524	2.9926E-08	-0.033296	0.00601	-0.033296	0.006008	5.31495E-08	0.3825	0.629591	0.005334	0.002583	0.00175	0.00796	0.97123	0.166619	0.873	0.843	0.992	0.996	0.99	0.987	0.749	0.909
rs10873539	2.9935E-08	-0.028136	0.00508	-0.028136	0.005077	5.31611E-08	0.7131	0.249995	0.001081	0.008769	0.348324	0.0149	0.005	0.061034	0.771	0.897	0.999	0.991	0.875	0.974	0.981	0.938
rs4561805	2.994E-08	-0.02876	0.00519	-0.026618	0.009159	8.78146E-09	0.63737	0.059799	0.022108	0.9332	0.079622	1.9E-08	0.24989	0.570635	0.43	0.832	0.643	0.08	0.839	1	0.711	0.615
rs76665123	2.9943E-08	-0.08213	0.01482	-0.08213	0.01482	5.31722E-08	0.81449	0.979222	0.001727	0.011634	0.076307	0.00334	0.07751	0.257407	0.828	0.806	0.998	0.989	0.951	0.996	0.945	0.897
rs3215604	2.9947E-08	0.0295521	0.00533	0.0295521	0.005333	5.3178E-08	0.61845	0.670196	0.001937	0.000632	0.086371	0.00227	0.98125	0.303037	0.697	0.803	0.997	0.998	0.93	0.996	0.702	0.858
rs72798379	2.9951E-08	-0.046782	0.00844	-0.042857	0.013908	5.31823E-08	0.69304	0.01013	0.000707	0.135137	0.073053	0.00014	0.05642	0.172671	0.767	0.36	0.998	0.838	0.927	1	0.928	0.868
rs2347923	2.9951E-08	-0.029684	0.00536	-0.029037	0.007698	3.32475E-08	0.61065	0.442773	0.111698	0.026278	0.005653	1E-06	0.45019	0.385427	0.69	0.73	0.451	0.92	0.974	1	0.343	0.742
rs4801025	2.9954E-08	0.0314048	0.00567	0.0300791	0.007015	5.31861E-08	0.96212	0.484211	0.000565	0.000247	0.544907	0.00096	0.35569	0.238798	0.662	0.553	0.998	0.998	0.344	0.997	0.771	0.81
rs61503294	2.9963E-08	-0.035192	0.00635	-0.036389	0.010283	4.52024E-08	0.39616	0.90094	0.011494	1.97E-05	0.745244	0.00439	0.00195	0.721882	0.816	0.705	0.957	1	0.497	0.979	0.979	0.757
rs10466546	2.9968E-08	0.0308995	0.00558	0.0335305	0.010359	1.44817E-08	0.02731	0.46672	0.002334	0.452291	0.125636	4.5E-06	0.20702	0.01048	0.922	0.779	0.988	0.032	0.886	1	0.849	0.947
rs76811174	2.997E-08	-0.082136	0.01482	-0.082136	0.014822	5.32076E-08	0.81432	0.988619	0.001734	0.011862	0.075859	0.0034	0.074	0.256518	0.829	0.807	0.998	0.989	0.952	0.996	0.946	0.898
rs2723746	2.9971E-08	-0.027937	0.00504	-0.034391	0.009212	5.32089E-08	0.07665	0.202685	0.014627	0.190139	0.008219	0.00237	3E-05	0.627288	0.926	0.899	0.968	0.853	0.982	0.99	0.995	0.73
rs9845142	2.9972E-08	-0.028759	0.00519	-0.026617	0.009159	8.78909E-09	0.63735	0.0598	0.022118	0.93313	0.079625	1.9E-08	0.2499	0.570648	0.43	0.832	0.643	0.08	0.839	1	0.711	0.615
rs10976987	2.9973E-08	-0.030103	0.00543	-0.032374	0.009096	5.32114E-08	0.06806	0.063686	0.000113	0.03299	0.008814	0.04261	0.01309	0.403824	0.508	0.916	1	0.962	0.98	0.844	0.968	0.844
rs7699632	2.9982E-08	-0.035191	0.00635	-0.036388	0.010283	4.5243E-08	0.39616	0.90093	0.011494	1.97E-05	0.745199	0.00439	0.00195	0.721903	0.816	0.705	0.957	1	0.497	0.979	0.979	0.757
rs79225518	2.999E-08	0.0320453	0.00578	0.0320453	0.005783	5.32333E-08	0.20971	0.684002	0.006355	0.003207	0.633424	0.0031	0.04479	0.041156	0.905	0.847	0.992	0.996	0.805	0.996	0.957	0.945
rs35080396	3.0006E-08	-0.028287	0.0051	-0.028287	0.005105	5.28614E-08	0.33059	0.751106	3.75E-06	0.119845	0.099153	0.02052	0.55236	0.173996	0.864	0.808	1	0.892	0.93	0.943	0.814	0.894
rs9347903	3.0026E-08	0.031052	0.0056	0.031052	0.005604	5.32812E-08	0.05155	0.581407	0.005229	0.000855	0.624154	0.0022	0.05392	0.648779	0.925	0.834	0.992	0.998	0.775	0.996	0.945	0.715

Table S3

rs10487554	3.0029E-08	0.0310161	0.0056	0.0317203	0.007144	5.31995E-08	0.65073	0.305603	0.000194	0.000744	0.150766	0.05188	0.00785	0.649753	0.786	0.6	0.999	0.998	0.892	0.794	0.97	0.783
rs3130229	3.0058E-08	0.0290161	0.00524	0.0289649	0.005344	5.33229E-08	0.77748	0.380088	0.000345	0.644425	0.281781	0.00015	0.01841	0.087595	0.654	0.804	0.999	0.397	0.812	1	0.952	0.887
rs9298085	3.0064E-08	0.0311085	0.00561	0.0291354	0.009924	9.53222E-09	0.14609	0.707912	9.24E-09	0.177519	0.889546	0.06358	0.24627	0.060976	0.699	0.333	1	0.324	0.193	0.25	0.593	0.787
rs9308157	3.0073E-08	-0.034897	0.0063	-0.035377	0.011087	3.76356E-08	0.47344	0.640489	0.006361	1.85E-05	0.48654	0.00534	0.00161	0.457144	0.785	0.629	0.973	1	0.36	0.973	0.979	0.786
rs10034074	3.0074E-08	-0.034897	0.0063	-0.035377	0.011087	3.76375E-08	0.47344	0.640489	0.006361	1.85E-05	0.48654	0.00534	0.00161	0.457144	0.785	0.629	0.973	1	0.36	0.973	0.979	0.786
rs113954770	3.0078E-08	0.0308426	0.00557	0.0308426	0.005566	5.33496E-08	0.0699	0.739365	0.003703	0.000957	0.636894	0.00233	0.02886	0.458789	0.914	0.803	0.994	0.997	0.758	0.996	0.955	0.66
rs9346921	3.0081E-08	0.0320523	0.00578	0.0320523	0.005785	5.3354E-08	0.1478	0.713522	0.006165	0.004499	0.601112	0.00296	0.04499	0.043305	0.916	0.846	0.992	0.995	0.816	0.996	0.958	0.945
rs111772336	3.0083E-08	-0.082122	0.01482	-0.082122	0.014821	5.33555E-08	0.81376	0.983975	0.001724	0.011806	0.07623	0.00339	0.07555	0.25683	0.829	0.806	0.998	0.989	0.952	0.996	0.946	0.898
rs2525539	3.0085E-08	0.0293854	0.0053	0.0297261	0.007839	5.33586E-08	0.09155	0.444193	0.000977	0.1249	0.000312	0.00154	0.23346	0.484655	0.901	0.66	0.998	0.877	0.994	0.997	0.875	0.648
rs1129133	3.0087E-08	0.02918	0.00527	0.02918	0.005266	5.33611E-08	0.93296	0.677049	0.014791	0.104121	0.380631	4.3E-06	0.052	0.542999	0.773	0.807	0.966	0.901	0.83	1	0.939	0.823
rs439205	3.0087E-08	0.0319714	0.00577	0.0318575	0.007169	5.33617E-08	0.5933	0.569951	0.002174	0.697053	0.009835	5.6E-05	0.01925	0.363691	0.602	0.761	0.992	0.346	0.972	1	0.95	0.802
rs28458909	3.0102E-08	0.036117	0.00652	0.0406684	0.009077	5.308E-08	0.01015	0.463699	0.003241	0.000675	0.381172	0.07757	0.01131	0.080252	0.961	0.863	0.991	0.998	0.853	0.783	0.975	0.931
rs117553471	3.0117E-08	-0.067562	0.01219	-0.067562	0.012194	5.34001E-08	0.19556	0.919786	3.5E-05	0.048726	0.456738	0.00256	0.90367	0.123806	0.877	0.748	1	0.949	0.802	0.995	0.721	0.898
rs76439118	3.0122E-08	-0.08212	0.01482	-0.08212	0.014821	5.3409E-08	0.81367	0.985181	0.001727	0.011825	0.076133	0.0034	0.07528	0.256769	0.829	0.807	0.998	0.989	0.952	0.996	0.946	0.898
rs6501362	3.0123E-08	0.0280965	0.00507	0.0280965	0.005071	5.34107E-08	0.72978	0.964656	0.000454	0.121232	0.42234	0.00074	0.0936	0.004623	0.734	0.779	0.999	0.894	0.825	0.999	0.927	0.961
rs6969722	3.0133E-08	0.032331	0.00584	0.032331	0.005835	5.34267E-08	0.0608	0.602677	0.000117	0.003659	0.815326	0.00998	0.93725	0.097615	0.914	0.814	1	0.994	0.695	0.975	0.714	0.906
rs7252986	3.0149E-08	-0.03025	0.00546	-0.03025	0.00546	5.34523E-08	0.11317	0.809438	0.052038	0.087564	0.016699	5.6E-05	0.27641	0.036687	0.919	0.825	0.89	0.931	0.977	1	0.894	0.945
rs10268138	3.0159E-08	0.0377418	0.00681	0.0377418	0.006812	5.347E-08	0.34963	0.533956	0.025467	0.007591	0.005668	0.00055	0.65924	0.308298	0.88	0.858	0.958	0.992	0.986	0.999	0.82	0.887
rs281256	3.0166E-08	-0.031403	0.00567	-0.031403	0.005668	5.34813E-08	0.81085	0.726894	0.000513	0.000242	0.781554	0.00188	0.50123	0.903855	0.732	0.658	0.999	0.998	0.642	0.994	0.763	0.709
rs2173695	3.0169E-08	-0.042858	0.00774	-0.042858	0.007735	5.34856E-08	0.35188	0.38939	0.001273	0.013263	0.28962	0.00346	0.04046	0.722494	0.884	0.88	0.998	0.988	0.891	0.996	0.959	0.838
rs2185073	3.0171E-08	-0.031156	0.00562	-0.03303	0.006677	5.09509E-08	0.12573	0.511948	0.000221	0.043839	0.017285	0.10454	0.0171	0.03504	0.914	0.85	0.999	0.954	0.977	0.671	0.971	0.947
rs3117013	3.0183E-08	0.0290121	0.00524	0.0289634	0.005338	5.35079E-08	0.77775	0.380035	0.000344	0.643127	0.282668	0.00016	0.01838	0.087522	0.654	0.805	0.999	0.398	0.812	1	0.952	0.887
rs3117014	3.0183E-08	0.0290121	0.00524	0.0289634	0.005338	5.35079E-08	0.77775	0.380035	0.000344	0.643127	0.282668	0.00016	0.01838	0.087522	0.654	0.805	0.999	0.398	0.812	1	0.952	0.887
rs9277762	3.0183E-08	0.0290121	0.00524	0.0289634	0.005338	5.35079E-08	0.77775	0.380035	0.000344	0.643127	0.282668	0.00016	0.01838	0.087522	0.654	0.805	0.999	0.398	0.812	1	0.952	0.887
rs9277763	3.0183E-08	0.0290121	0.00524	0.0289634	0.005338	5.35079E-08	0.77775	0.380035	0.000344	0.643127	0.282668	0.00016	0.01838	0.087522	0.654	0.805	0.999	0.398	0.812	1	0.952	0.887
rs1605954	3.0202E-08	-0.035189	0.00635	-0.036364	0.010311	4.54982E-08	0.39471	0.893991	0.011359	1.98E-05	0.739058	0.00441	0.00192	0.725934	0.816	0.703	0.958	1	0.494	0.979	0.979	0.756
rs6769576	3.0205E-08	-0.028753	0.00519	-0.02661	0.009166	8.81437E-09	0.6375	0.05964	0.022106	0.930396	0.079135	1.9E-08	0.25087	0.571811	0.43	0.832	0.643	0.08	0.84	1	0.71	0.614
rs281277	3.0206E-08	-0.031396	0.00567	-0.031396	0.005667	5.35457E-08	0.81616	0.740806	0.000527	0.000245	0.800635	0.00186	0.50906	0.852577	0.731	0.662	0.999	0.998	0.637	0.995	0.761	0.719
rs1866861	3.021E-08	-0.030397	0.00549	-0.030397	0.005487	5.35527E-08	0.2747	0.875419	0.000521	0.071124	0.673444	9.9E-05	0.62387	0.322186	0.853	0.765	0.999	0.924	0.725	1	0.773	0.846
rs9308156	3.0214E-08	-0.034892	0.0063	-0.035372	0.011087	3.7844E-08	0.47335	0.640657	0.006366	1.86E-05	0.486448	0.00535	0.00161	0.457368	0.785	0.629	0.973	1	0.361	0.973	0.979	0.786
rs4801024	3.0216E-08	0.0314004	0.00567	0.0300615	0.007021	5.35626E-08	0.96406	0.484465	0.000532	0.000248	0.54388	0.00101	0.35833	0.242525	0.662	0.552	0.998	0.998	0.343	0.996	0.769	0.808
rs61427153	3.0222E-08	0.0552948	0.00998	0.0576825	0.012812	5.35727E-08	0.2557	0.246077	0.01342	0.075934	0.00149	0.00076	0.05664	0.098878	0.665	0.892	0.979	0.942	0.992	0.999	0.95	0.923
rs7808634	3.0249E-08	-0.028142	0.00508	-0.029157	0.005941	5.36169E-08	0.92536	0.007695	0.001761	0.033285	0.003953	0.01324	0.08835	0.947732	0.824	0.961	0.998	0.976	0.988	0.979	0.945	0.816
rs9366858	3.0253E-08	0.054584	0.00985	0.054584	0.009853	5.36239E-08	0.74526	0.48455	0.001848	0.004845	0.32319	0.00045	0.05506	0.343781	0.701	0.818	0.996	0.992	0.833	0.999	0.934	0.592
rs117948450	3.026E-08	-0.079617	0.01437	-0.079617	0.014372	5.3634E-08	0.39367	0.185001	0.006585	0.061004	0.000373	0.00348	0.1772	0.554336	0.888	0.915	0.993	0.96	0.994	0.996	0.926	0.869
rs12044579	3.0263E-08	0.037904	0.00684	0.038868	0.010509	5.36399E-08	0.08345	0.00611	0.000607	0.106312	0.050616	0.00193	0.24328	0.109433	0.557	0.957	0.999	0.91	0.955	0.997	0.889	0.912
rs9347896	3.0263E-08	0.0308385	0.00557	0.0308385	0.005567	5.364E-08	0.07	0.736476	0.003627	0.001012	0.636729	0.00234	0.02838	0.461136	0.914	0.804	0.994	0.997	0.759	0.996	0.955	0.661
rs34959108	3.0267E-08	-0.035179	0.00635	-0.036372	0.010257	4.63739E-08	0.39534	0.899634	0.011419	2.08E-05	0.746011	0.00437	0.00194	0.720105	0.817	0.706	0.958	1	0.498	0.98	0.979	0.758
rs12547840	3.0275E-08	0.0283366	0.00512	0.0283366	0.005115	5.36598E-08	0.93259	0.120648	0.007142	0.097493	0.012603	0.00108	0.00725	0.739546	0.802	0.919	0.991	0.933	0.98	0.999	0.978	0.837
rs285010	3.028E-08	0.0302854	0.00547	0.0308346	0.005958	5.3667E-08	0.01964	0.090352	0.01925	0.15785	0.125164	0.00036	0.1715	0.019309	0.957	0.935	0.974	0.905	0.945	0.999	0.931	0.961
rs2453255	3.0307E-08	-0.029176	0.00527	-0.029174	0.00527	4.76731E-08	0.9356	0.370934	0.013133	0.515325	0.143707	1.3E-06	0.17204	0.090698	0.694	0.811	0.939	0.499	0.88	1	0.869	0.887
rs2023016	3.0307E-08	0.0320236	0.00578	0.0320236	0.005781	5.37122E-08	0.13709	0.688504	0.00669	0.003173	0.654353	0.00335	0.04443	0.043087	0.918	0.847	0.992	0.996	0.8	0.996	0.958	0.945
rs570806	3.0323E-08	-0.028268	0.0051	-0.029313	0.006542	5.37378E-08	0.02752	0.055615	0.008115	0.105232	0.974757	0.00025	0.08786	0.022435	0.944	0.932	0.987	0.92	0.68	1	0.94	0.951
rs67367819	3.0328E-08	-0.028898	0.00522	-0.029564	0.007571	5.3745E-08	0.00426	0.41549	0.000344	0.278517	0.460765	0.00108	0.02449	0.138266	0.955	0.658	0.999	0.743	0.798	0.998	0.956	0.895
rs5011437	3.0328E-08	0.0292833	0.00529	0.0292833	0.005286	5.37452E-08	0.08165	0.422357	1.48E-05	0.043761	0.879922	0.0041	0.9352	0.120739	0.894	0.82	1	0.947	0.564	0.989	0.683	0.886
rs141379891	3.0334E-08	0.061992	0.01119	0.061992	0.011191	5.37563E-08	0.68935	0.116022	0.00124	0.001662	0.009134	0.04521	0.06414	0.667435	0.828	0.911	0.998	0.997	0.982	0.886	0.945	0.73
rs4690738	3.0342E-08	-0.034889	0.0063	-0.035372	0.011082	3.81586E-08	0.47166	0.64047	0.006364	1.88E-05	0.486486	0.00534	0.00161	0.45716	0.785	0.629	0.973	1	0.361	0.973	0.979	0.786
rs3117011	3.0354E-08	0.0290068	0.00524	0.0289579	0.005339	5.37889E-08	0.7777	0.380054	0.000345	0.643536	0.282739	0.00016	0.01839	0.087529	0.654	0.805	0.999	0.398	0.812	1	0.952	0.887
rs2950387	3.0356E-08	0.0301229	0.00544	0.0301229	0.005438	5.37909E-08	0.75266	0.294616	7.26E-05	0.092638	0.841578	0.0007	0.22705	0.165541	0.774	0.845	1	0.898	0.561	0.998	0.867	0.875
rs7969572	3.036E-08	0.0316049	0.00571	0.0331242	0.007123	5.3798E-08	0.87676	0.60114	0.008098	0.000153	0.089962	0.01769	0.01393	0.074515	0.777	0.738	0.985	0.999	0.942	0.961	0.97	0.928
rs9364755	3.0367E-08	0.0310403	0.0056	0.0310403	0.005604	5.38102E-08	0.05129	0.584116	0.005214	0.000857	0.623833	0.00221	0.05431	0.646585	0.925	0.833	0.992	0.998	0.775	0.996	0.945	0.715
rs114193956	3.0374E-08	-0.044193	0.00798	-0.044193	0.007978	5.38216E-08	0.5121	0.73679	9.55E-05	0.197507	0.508331	0.00179	0.12808	0.018908	0.838	0.809	1	0.831	0.8	0.997	0.916	0.945
rs139985165	3.0384E-08	-0.032893	0.00594	-0.032893	0.005938	5.38373E-08	0.81572	0.06504	0.000882	0.291395	0.017965	0.0006	0.2053	0.636727	0.802	0.92	0.999	0.762	0.973	0.999	0.897	0.822
rs3130265	3.0387E-08	0.0279184	0.00504	0.0277124	0.00524	5.38424E-08	0.29801	0.809464	0.001724	0.000652	0.869242	0.00019	0.83544	0.251525	0.523	0.705	0.995	0.997	0.573	0.999	0.642	0.813
rs7309733	3.0417E-08	-0.027924	0.00504	-0.034715	0.009258	5.38905E-08	0.05421	0.135081	0.017755	0.179417	0.009382	0.00224	4.4E-05	0.599067	0.934	0.913	0.961	0.862	0.982	0.989	0.995	0.727

Table S3

rs2733656	3.0423E-08	-0.027931	0.00504	-0.03438	0.009242	5.27563E-08	0.08316	0.214173	0.013153	0.209247	0.00851	0.00242	2.5E-05	0.653237	0.923	0.896	0.97	0.837	0.982	0.99	0.995	0.732
rs6934289	3.0436E-08	-0.035179	0.00635	-0.035179	0.006351	5.39215E-08	0.55931	0.64416	0.000588	0.019697	0.25	0.00018	0.69966	0.690668	0.662	0.788	0.999	0.974	0.853	1	0.746	0.777
rs12933575	3.0442E-08	-0.028479	0.00514	-0.02939	0.007208	5.39326E-08	0.70054	0.774463	0.022879	0.000239	0.001325	0.00238	0.27371	0.288111	0.795	0.785	0.939	0.999	0.989	0.993	0.864	0.593
rs5011438	3.0444E-08	0.0292797	0.00529	0.0292797	0.005286	5.39358E-08	0.08171	0.422357	1.48E-05	0.043922	0.879922	0.0041	0.9352	0.120739	0.894	0.82	1	0.947	0.564	0.989	0.683	0.886
rs5011439	3.0444E-08	0.0292797	0.00529	0.0292797	0.005286	5.39358E-08	0.08171	0.422357	1.48E-05	0.043922	0.879922	0.0041	0.9352	0.120739	0.894	0.82	1	0.947	0.564	0.989	0.683	0.886
rs7696916	3.0458E-08	-0.029721	0.00537	-0.029721	0.005366	5.39585E-08	0.26766	0.205452	0.005298	0.000402	0.20046	0.00457	0.60703	0.502364	0.891	0.9	0.993	0.999	0.911	0.993	0.83	0.861
rs141556633	3.0462E-08	-0.08385	0.01514	-0.08385	0.015139	5.3965E-08	0.53593	0.902816	0.002334	0.005572	0.060231	0.00511	0.11055	0.259284	0.863	0.799	0.997	0.994	0.958	0.993	0.937	0.899
rs7804736	3.0464E-08	0.0292799	0.00529	0.0292799	0.005286	5.39685E-08	0.08194	0.421743	1.46E-05	0.044727	0.883683	0.00409	0.93458	0.120926	0.894	0.82	1	0.946	0.565	0.989	0.683	0.886
rs42089	3.0472E-08	0.0284211	0.00513	0.0284211	0.005131	5.39815E-08	0.48494	0.031837	9.28E-05	0.134762	0.09985	0.02749	0.02568	0.243336	0.873	0.946	1	0.907	0.946	0.943	0.967	0.905
rs7689462	3.0496E-08	-0.034881	0.0063	-0.035352	0.011087	3.8214E-08	0.47284	0.639573	0.006352	1.87E-05	0.48481	0.00536	0.00161	0.458055	0.785	0.629	0.973	1	0.36	0.973	0.979	0.786
rs4626957	3.0504E-08	0.0295358	0.00533	0.0295358	0.005333	5.40338E-08	0.00966	0.511108	0.01455	0.004757	0.329777	0.00141	0.3365	0.096168	0.961	0.874	0.981	0.995	0.888	0.998	0.894	0.933
rs534779	3.0513E-08	-0.028199	0.00509	-0.028199	0.005091	5.40473E-08	0.83369	0.717487	2.78E-05	0.083555	0.271961	0.00515	0.31668	0.107057	0.805	0.82	1	0.931	0.878	0.991	0.873	0.913
rs7428847	3.052E-08	0.0285501	0.00515	0.0285501	0.005155	5.406E-08	0.14676	0.322895	0.000828	0.020634	0.941883	0.00194	0.21911	0.067133	0.906	0.877	0.999	0.981	0.698	0.997	0.902	0.93
rs111536226	3.054E-08	0.0309882	0.0056	0.0316926	0.007135	5.39795E-08	0.6347	0.303167	0.000196	0.000742	0.151238	0.05225	0.00803	0.652813	0.789	0.599	0.999	0.998	0.892	0.793	0.97	0.782
rs10948343	3.0569E-08	0.0294461	0.00532	0.0294461	0.005317	5.41402E-08	0.69007	0.562636	0.001705	0.000635	0.078714	0.00238	0.84372	0.358867	0.704	0.813	0.997	0.998	0.932	0.995	0.652	0.844
rs2295263	3.0571E-08	0.0294458	0.00532	0.0294458	0.005317	5.41425E-08	0.68158	0.563239	0.00171	0.000623	0.078818	0.00238	0.84386	0.35879	0.702	0.813	0.997	0.998	0.932	0.995	0.652	0.844
rs72929710	3.0575E-08	0.0340104	0.00614	0.0340104	0.006141	5.41488E-08	0.40745	0.006273	0.004132	0.011924	0.238237	0.00404	0.21716	0.249276	0.89	0.966	0.996	0.99	0.915	0.995	0.921	0.911
rs10860655	3.0585E-08	0.0316789	0.00572	0.0334373	0.007197	5.41664E-08	0.95444	0.639665	0.011728	0.000129	0.067228	0.0176	0.01515	0.067791	0.79	0.748	0.978	0.999	0.952	0.961	0.97	0.932
rs117702129	3.0587E-08	-0.089505	0.01616	-0.089505	0.016162	5.41689E-08	0.62821	0.09568	0.010706	0.266523	0.095241	1.3E-05	0.06912	0.996831	0.818	0.906	0.975	0.768	0.931	1	0.935	0.76
rs174548	3.0603E-08	0.028509	0.00515	0.0289776	0.005881	5.41951E-08	0.17686	0.567185	0.013435	0.112195	0.000368	0.00035	0.20505	0.405782	0.9	0.731	0.977	0.912	0.994	0.999	0.904	0.865
rs13230513	3.0611E-08	0.0292744	0.00529	0.0292744	0.005286	5.42084E-08	0.08166	0.422357	1.48E-05	0.044179	0.879922	0.0041	0.9352	0.120739	0.894	0.82	1	0.946	0.564	0.989	0.683	0.886
rs10143433	3.0624E-08	0.0390615	0.00705	0.0390615	0.007054	5.42297E-08	0.309	0.245392	0.001325	0.097984	0.128706	0.00049	0.08182	0.742949	0.881	0.89	0.998	0.927	0.929	0.999	0.939	0.752
rs72929734	3.0635E-08	0.0342138	0.00618	0.0342138	0.006178	5.42472E-08	0.42098	0.004158	0.004299	0.013393	0.218419	0.00506	0.17082	0.216986	0.891	0.969	0.996	0.99	0.922	0.994	0.931	0.917
rs7689077	3.0643E-08	-0.034875	0.0063	-0.035346	0.011088	3.82928E-08	0.47285	0.639662	0.006371	1.87E-05	0.484348	0.00536	0.00162	0.457967	0.785	0.629	0.973	1	0.36	0.973	0.979	0.786
rs3914497	3.0653E-08	-0.040457	0.00731	-0.040936	0.008381	5.19183E-08	0.56127	0.975768	0.048133	0.229193	0.00602	1.2E-05	0.13927	0.046686	0.812	0.746	0.831	0.758	0.982	1	0.902	0.925
rs17096587	3.0655E-08	0.0390729	0.00706	0.0390729	0.007056	5.42801E-08	0.31194	0.268672	0.001661	0.094467	0.119529	0.00039	0.07942	0.694838	0.879	0.885	0.998	0.929	0.932	0.999	0.94	0.743
rs6966602	3.0661E-08	0.0323541	0.00584	0.0323541	0.005843	5.42897E-08	0.05961	0.600633	0.000118	0.003815	0.820923	0.01001	0.92754	0.098056	0.914	0.815	1	0.994	0.694	0.975	0.716	0.906
rs2665566	3.068E-08	-0.034215	0.00618	-0.034215	0.006179	5.4321E-08	0.40363	0.004266	0.004738	0.013084	0.21583	0.00476	0.16977	0.2244	0.893	0.969	0.995	0.99	0.922	0.995	0.932	0.916
rs76491728	3.0721E-08	-0.084021	0.01517	-0.084021	0.015174	5.43878E-08	0.4561	0.469733	0.000705	0.417572	0.283853	2.5E-05	0.1295	0.124307	0.589	0.785	0.998	0.552	0.81	1	0.881	0.869
rs4758870	3.0738E-08	-0.028089	0.00507	-0.034458	0.009389	4.45155E-08	0.07989	0.200084	0.031358	0.21611	0.001379	0.00085	0.00019	0.482555	0.917	0.887	0.905	0.8	0.991	0.989	0.992	0.669
rs5891635	3.0742E-08	0.0278752	0.00503	0.0295368	0.007084	5.44217E-08	0.72141	0.371154	0.023764	0.000207	0.000302	0.00583	0.59577	0.81107	0.727	0.853	0.94	0.999	0.994	0.982	0.798	0.787
rs9791233	3.0755E-08	0.02944	0.00532	0.02944	0.005317	5.44427E-08	0.68292	0.562636	0.001705	0.000633	0.078714	0.00238	0.84372	0.358867	0.702	0.813	0.997	0.998	0.932	0.995	0.652	0.844
rs58199976	3.0766E-08	-0.030446	0.0055	-0.030446	0.005499	5.44614E-08	0.17068	0.006322	0.000625	0.14369	0.096776	0.00556	0.26622	0.213548	0.918	0.964	0.999	0.911	0.951	0.993	0.91	0.914
rs9791234	3.0772E-08	0.0294395	0.00532	0.0294395	0.005317	5.44708E-08	0.68281	0.562636	0.001705	0.000634	0.078714	0.00238	0.84372	0.358867	0.702	0.813	0.997	0.998	0.932	0.995	0.652	0.844
rs9791275	3.0772E-08	0.0294395	0.00532	0.0294395	0.005317	5.44708E-08	0.68281	0.562636	0.001705	0.000634	0.078714	0.00238	0.84372	0.358867	0.702	0.813	0.997	0.998	0.932	0.995	0.652	0.844
rs9365755	3.0779E-08	0.0310262	0.0056	0.0310262	0.005603	5.44833E-08	0.05106	0.588792	0.005182	0.000857	0.623971	0.00223	0.0549	0.644533	0.925	0.832	0.992	0.998	0.775	0.996	0.944	0.714
rs2692609	3.0832E-08	0.0312295	0.00564	0.0312295	0.005641	5.45684E-08	0.70036	0.122309	0.023495	0.000302	0.250125	0.00086	0.22038	0.402813	0.748	0.909	0.955	0.999	0.888	0.999	0.899	0.864
rs903980	3.0834E-08	-0.03134	0.00566	-0.03134	0.005661	5.45724E-08	0.87748	0.816542	0.000515	0.000304	0.792245	0.0019	0.46766	0.842443	0.727	0.68	0.999	0.998	0.646	0.995	0.777	0.725
rs28837154	3.0841E-08	-0.057376	0.01036	-0.057376	0.010363	5.45838E-08	0.77204	0.067838	0.002403	0.083163	0.175476	0.00097	0.05125	0.123368	0.783	0.932	0.997	0.943	0.923	0.999	0.956	0.923
rs28691243	3.0853E-08	0.0390655	0.00706	0.0390655	0.007056	5.46039E-08	0.31178	0.26907	0.001662	0.0946	0.119308	0.0004	0.0795	0.69437	0.879	0.885	0.998	0.929	0.932	0.999	0.94	0.743
rs12699332	3.0865E-08	0.0292669	0.00529	0.0292669	0.005286	5.46237E-08	0.08766	0.422357	1.48E-05	0.043441	0.879928	0.0041	0.93519	0.120739	0.892	0.82	1	0.947	0.564	0.989	0.683	0.886
rs1040813	3.0869E-08	0.0281089	0.00508	0.0281089	0.005077	5.46303E-08	0.7177	0.229571	0.001048	0.008933	0.357144	0.01597	0.00504	0.056965	0.772	0.9	0.999	0.991	0.873	0.972	0.981	0.939
rs112333572	3.0872E-08	-0.083814	0.01514	-0.083814	0.015139	5.4635E-08	0.53591	0.902755	0.00234	0.005599	0.060264	0.00514	0.11061	0.259385	0.863	0.799	0.997	0.994	0.958	0.993	0.937	0.899
rs116764123	3.0872E-08	-0.083814	0.01514	-0.083814	0.015139	5.4635E-08	0.53591	0.902755	0.00234	0.005599	0.060264	0.00514	0.11061	0.259385	0.863	0.799	0.997	0.994	0.958	0.993	0.937	0.899
rs7210798	3.0888E-08	0.028076	0.00507	0.0280589	0.005143	5.46612E-08	0.72371	0.9994	0.000439	0.117207	0.43112	0.00077	0.09329	0.004568	0.732	0.773	0.999	0.896	0.822	0.999	0.927	0.961
rs7238284	3.0917E-08	0.0339994	0.00614	0.0339994	0.006141	5.47079E-08	0.40992	0.006239	0.004374	0.01162	0.232604	0.00401	0.21486	0.252481	0.89	0.966	0.995	0.991	0.917	0.995	0.921	0.91
rs34037390	3.0932E-08	0.0292524	0.00528	0.0292524	0.005284	5.47324E-08	0.69922	0.446812	0.011104	0.028072	0.204112	0.00033	0.05712	0.125676	0.85	0.877	0.986	0.979	0.917	1	0.954	0.925
rs13113139	3.0935E-08	-0.035172	0.00635	-0.036377	0.010283	4.65869E-08	0.38773	0.899033	0.01189	1.92E-05	0.74838	0.0044	0.00202	0.728283	0.818	0.705	0.956	1	0.498	0.979	0.978	0.756
rs72478863	3.0967E-08	0.0390603	0.00706	0.0390603	0.007056	5.47897E-08	0.31212	0.269431	0.001667	0.094465	0.119629	0.0004	0.07946	0.695069	0.879	0.885	0.998	0.929	0.932	0.999	0.94	0.743
rs735999	3.0968E-08	-0.031336	0.00566	-0.031336	0.00566	5.47917E-08	0.87865	0.815381	0.000504	0.000293	0.795163	0.00196	0.46912	0.844072	0.726	0.679	0.999	0.998	0.644	0.994	0.776	0.725
rs7747927	3.0972E-08	0.0294337	0.00532	0.0294337	0.005317	5.4798E-08	0.67936	0.562636	0.001705	0.000637	0.078714	0.00238	0.84372	0.358867	0.702	0.813	0.997	0.998	0.932	0.995	0.652	0.844
rs1187416	3.0997E-08	0.0281115	0.00508	0.0281115	0.005078	5.48384E-08	0.73145	0.23025	0.001088	0.008808	0.363752	0.01473	0.00544	0.064787	0.774	0.9	0.999	0.991	0.871	0.975	0.98	0.937
rs7401843	3.1011E-08	0.0280509	0.00507	0.0280509	0.005067	5.48616E-08	0.67575	0.253246	0.000953	0.007265	0.410647	0.01419	0.00558	0.083165	0.76	0.894	0.999	0.992	0.855	0.975	0.979	0.929
rs199535527	3.1017E-08	-0.033159	0.00599	-0.042315	0.011012	5.48714E-08	2.9E-05	0.070078	0.073499	0.053567	0.075153	0.0005	0.11841	0.322096	0.986	0.937	0.85	0.96	0.956	0.998	0.939	0.896
rs7855088	3.1026E-08	-0.027894	0.00504	-0.027894	0.005039	5.48863E-08	0.09269	0.171911	0.002057	0.000212	0.964293	0.00695	0.14388	0.795207	0.906	0.886	0.996	0.999	0.655	0.985	0.908	0.723

Table S3

rs13081204	3.1037E-08	0.0285369	0.00516	0.0285369	0.005155	5.49038E-08	0.1474	0.345068	0.000885	0.015991	0.878081	0.00226	0.24092	0.073459	0.907	0.875	0.999	0.985	0.72	0.997	0.898	0.928
rs10009395	3.104E-08	-0.034866	0.0063	-0.035426	0.011116	3.83119E-08	0.47413	0.638036	0.006619	1.84E-05	0.498028	0.00554	0.00148	0.457656	0.785	0.63	0.971	1	0.367	0.971	0.979	0.786
rs12597371	3.1091E-08	-0.070078	0.01266	-0.070078	0.01266	5.49913E-08	0.73783	0.550906	1.05E-05	0.05013	0.64595	0.00265	0.92144	0.110927	0.765	0.795	1	0.937	0.712	0.993	0.644	0.887
rs732601	3.1115E-08	-0.035146	0.00635	-0.03635	0.010258	4.75138E-08	0.39585	0.90036	0.011671	2.11E-05	0.746679	0.00437	0.00192	0.719045	0.817	0.706	0.957	1	0.499	0.98	0.979	0.758
rs76580355	3.1118E-08	-0.067494	0.01219	-0.067494	0.012194	5.50366E-08	0.19758	0.920604	3.52E-05	0.050326	0.455648	0.00256	0.90262	0.123633	0.877	0.748	1	0.947	0.802	0.995	0.721	0.898
rs143300930	3.1126E-08	-0.067494	0.01219	-0.067494	0.012194	5.50486E-08	0.19728	0.920795	3.53E-05	0.05029	0.455122	0.00256	0.90197	0.123494	0.877	0.748	1	0.947	0.802	0.995	0.721	0.898
rs111762460	3.1129E-08	-0.083792	0.01514	-0.083792	0.015139	5.50541E-08	0.53589	0.902734	0.002341	0.005622	0.06029	0.00516	0.11065	0.259414	0.863	0.799	0.997	0.994	0.958	0.993	0.937	0.899
rs2302632	3.1131E-08	0.0323355	0.00584	0.0323355	0.005842	5.50567E-08	0.06004	0.600832	0.000113	0.00387	0.821571	0.01014	0.94121	0.098417	0.914	0.814	1	0.993	0.692	0.974	0.712	0.905
rs60319372	3.1132E-08	0.095933	0.01733	0.095933	0.017332	5.50584E-08	0.86874	0.933659	0.012499	0.115131	0.007383	0.00029	0.00898	0.669371	0.811	0.804	0.981	0.914	0.984	0.999	0.976	0.832
rs77499437	3.1137E-08	-0.067492	0.01219	-0.067492	0.012194	5.50676E-08	0.19758	0.920611	3.52E-05	0.050365	0.455548	0.00256	0.90262	0.123633	0.877	0.748	1	0.947	0.802	0.995	0.721	0.898
rs873839	3.1138E-08	0.0329383	0.00595	0.0333108	0.007124	5.50691E-08	0.0204	0.020915	0.014004	0.095981	0.102003	8E-05	0.35266	0.575266	0.946	0.945	0.977	0.927	0.939	1	0.875	0.722
rs113755321	3.1141E-08	-0.083791	0.01514	-0.083791	0.015139	5.50735E-08	0.53589	0.902731	0.002341	0.005622	0.060293	0.00516	0.11065	0.259418	0.863	0.799	0.997	0.994	0.958	0.993	0.937	0.899
rs8014294	3.1146E-08	-0.027903	0.00504	-0.027903	0.005041	5.50821E-08	0.95109	0.200426	0.000424	0.019218	0.473459	0.02242	0.0026	0.070529	0.813	0.904	0.999	0.984	0.841	0.955	0.984	0.935
rs11295713	3.1153E-08	0.0280473	0.00507	0.0280473	0.005067	5.50934E-08	0.68907	0.253239	0.000952	0.007442	0.410785	0.01419	0.00558	0.083169	0.762	0.894	0.999	0.992	0.855	0.975	0.979	0.93
rs4325902	3.1173E-08	-0.029228	0.00528	-0.030723	0.008676	3.60623E-08	0.43796	0.017029	0.073424	0.352263	0.013122	2.2E-06	0.04162	0.510606	0.495	0.915	0.543	0.463	0.964	1	0.92	0.721
rs6736566	3.1202E-08	0.0295392	0.00534	0.0354187	0.009326	5.17256E-08	0.02401	0.017044	0.086881	0.001529	0.00105	0.00283	0.31482	0.449782	0.941	0.945	0.743	0.997	0.992	0.985	0.862	0.648
rs1900993	3.1211E-08	-0.041188	0.00744	-0.042206	0.008772	5.51883E-08	0.11747	0.609752	0.00021	0.443527	0.014789	0.00662	0.00394	0.727318	0.902	0.819	1	0.627	0.975	0.981	0.979	0.798
rs1371121	3.1227E-08	0.0309597	0.00559	0.0316686	0.007145	5.50443E-08	0.63082	0.300533	0.000198	0.00072	0.150871	0.05296	0.00829	0.653678	0.789	0.598	0.999	0.998	0.892	0.79	0.969	0.781
rs10950397	3.1232E-08	0.0292557	0.00529	0.0292557	0.005286	5.52223E-08	0.08224	0.422357	1.48E-05	0.044988	0.879922	0.0041	0.9352	0.120739	0.894	0.82	1	0.946	0.564	0.989	0.683	0.886
rs12667950	3.1232E-08	0.0292557	0.00529	0.0292557	0.005286	5.52223E-08	0.08224	0.422357	1.48E-05	0.044988	0.879922	0.0041	0.9352	0.120739	0.894	0.82	1	0.946	0.564	0.989	0.683	0.886
rs13229988	3.1232E-08	0.0292557	0.00529	0.0292557	0.005286	5.52223E-08	0.08224	0.422357	1.48E-05	0.044988	0.879922	0.0041	0.9352	0.120739	0.894	0.82	1	0.946	0.564	0.989	0.683	0.886
rs7792410	3.1232E-08	0.0292557	0.00529	0.0292557	0.005286	5.52223E-08	0.08224	0.422357	1.48E-05	0.044988	0.879922	0.0041	0.9352	0.120739	0.894	0.82	1	0.946	0.564	0.989	0.683	0.886
rs11915851	3.124E-08	0.0296758	0.00536	0.0293345	0.005896	5.52342E-08	0.31751	0.309238	0.000798	0.504135	0.35791	4.5E-05	0.00963	0.568001	0.809	0.81	0.997	0.476	0.77	1	0.959	0.582
rs1123502	3.1244E-08	-0.083782	0.01514	-0.083782	0.015139	5.52413E-08	0.53589	0.902726	0.002342	0.00563	0.060297	0.00517	0.11066	0.259422	0.863	0.799	0.997	0.994	0.958	0.993	0.937	0.899
rs1496923	3.1255E-08	-0.031372	0.00567	-0.031372	0.005669	5.52601E-08	0.80612	0.85833	0.000466	0.000355	0.901035	0.00192	0.46976	0.750643	0.737	0.685	0.999	0.998	0.609	0.995	0.775	0.74
rs57594302	3.1277E-08	0.0367842	0.00665	0.0421841	0.010708	2.28911E-08	0.01997	0.637363	0.382324	0.046317	0.018839	7.6E-06	0.01009	0.457933	0.933	0.734	0.116	0.885	0.967	1	0.969	0.77
rs12190823	3.131E-08	0.0312824	0.00565	0.0312824	0.005653	5.53483E-08	0.2771	0.556641	0.00209	0.017823	0.970794	0.00217	0.03175	0.013636	0.885	0.847	0.997	0.984	0.672	0.997	0.959	0.955
rs12044028	3.1312E-08	0.0288785	0.00522	0.0289007	0.005249	5.53519E-08	0.75947	0.851658	0.00424	0.018418	0.292358	0.00244	0.02479	0.003627	0.837	0.792	0.995	0.985	0.891	0.997	0.966	0.97
rs9934006	3.1342E-08	-0.034681	0.00627	-0.040287	0.009656	5.54014E-08	0.12158	0.572891	0.010469	0.004142	0.018628	0.0197	0.07281	0.001166	0.927	0.767	0.985	0.995	0.979	0.965	0.953	0.978
rs28609754	3.1343E-08	-0.034852	0.0063	-0.035395	0.011061	3.87188E-08	0.47424	0.640485	0.006746	1.81E-05	0.501168	0.00544	0.00162	0.455696	0.785	0.631	0.971	1	0.369	0.972	0.979	0.787
rs7200145	3.1349E-08	-0.028237	0.0051	-0.028237	0.005103	5.54131E-08	0.01113	0.232536	0.002849	0.026624	0.069062	0.00265	0.94683	0.123748	0.958	0.903	0.997	0.98	0.956	0.997	0.751	0.924
rs1583709	3.1355E-08	0.0309667	0.0056	0.0316588	0.007143	5.52671E-08	0.63306	0.292991	0.000192	0.000736	0.150373	0.05282	0.00868	0.644056	0.788	0.595	0.999	0.998	0.892	0.79	0.969	0.783
rs10809398	3.1378E-08	-0.037735	0.00682	-0.037735	0.006819	5.54602E-08	0.18041	0.860248	0.000476	0.102841	0.08991	0.01234	0.02022	0.012906	0.914	0.803	0.999	0.933	0.951	0.981	0.971	0.962
rs73070923	3.138E-08	0.0476408	0.00861	0.0476408	0.008609	5.54631E-08	0.39316	0.090329	0.000428	0.023162	0.051674	0.04254	0.0245	0.353824	0.888	0.932	0.999	0.983	0.965	0.916	0.969	0.894
rs3129273	3.1387E-08	0.0289793	0.00524	0.0289403	0.005318	5.54749E-08	0.77798	0.37583	0.000352	0.643696	0.283246	0.00016	0.01846	0.089177	0.655	0.806	0.999	0.399	0.812	0.999	0.952	0.886
rs7160439	3.1392E-08	0.0390395	0.00706	0.0390395	0.007055	5.54822E-08	0.30918	0.271653	0.001693	0.093783	0.120092	0.0004	0.07884	0.695759	0.88	0.885	0.998	0.929	0.932	0.999	0.94	0.743
rs7155953	3.14E-08	0.0390407	0.00706	0.0390407	0.007055	5.5495E-08	0.30627	0.270833	0.001683	0.095289	0.120082	0.0004	0.07911	0.695995	0.88	0.885	0.998	0.928	0.932	0.999	0.94	0.743
rs2586748	3.1406E-08	-0.033978	0.00614	-0.033978	0.00614	5.55049E-08	0.39112	0.006391	0.004411	0.011553	0.242784	0.004	0.21506	0.251664	0.892	0.966	0.995	0.991	0.914	0.995	0.921	0.91
rs2586749	3.1406E-08	-0.033978	0.00614	-0.033978	0.00614	5.55049E-08	0.39112	0.006391	0.004411	0.011553	0.242784	0.004	0.21506	0.251664	0.892	0.966	0.995	0.991	0.914	0.995	0.921	0.91
rs34046032	3.1425E-08	0.0292558	0.00529	0.0292558	0.005287	5.55371E-08	0.08224	0.415413	1.53E-05	0.044988	0.865419	0.00403	0.92111	0.121477	0.894	0.821	1	0.946	0.559	0.989	0.686	0.886
rs55731755	3.1457E-08	0.0620954	0.01122	0.0620954	0.011223	5.55894E-08	0.98637	0.100971	0.00787	0.010299	0.021813	0.00142	0.21646	0.686975	0.811	0.923	0.99	0.99	0.974	0.998	0.912	0.845
rs12805200	3.1458E-08	-0.05397	0.00975	-0.05397	0.009754	5.5591E-08	0.38142	0.025788	0.025582	0.004028	0.023285	0.00636	0.23266	0.059738	0.899	0.955	0.967	0.996	0.979	0.992	0.923	0.949
rs10948345	3.1474E-08	0.0294975	0.00533	0.0294975	0.005331	5.56169E-08	0.73609	0.514735	0.001634	0.000545	0.071875	0.00281	0.77662	0.395557	0.709	0.819	0.997	0.998	0.935	0.994	0.633	0.837
rs7781691	3.1491E-08	-0.028081	0.00508	-0.029287	0.005998	5.56433E-08	0.03584	0.093098	0.009831	0.002898	0.077015	0.00696	0.90904	0.017915	0.946	0.93	0.988	0.996	0.955	0.99	0.749	0.959
rs7648887	3.1507E-08	0.0312534	0.00565	0.0312534	0.005649	5.56695E-08	0.21268	0.840528	0.000638	0.121456	0.5729	0.00034	0.02976	0.6634	0.882	0.794	0.999	0.894	0.782	0.999	0.954	0.813
rs3935182	3.1525E-08	0.0282339	0.0051	0.0284681	0.005934	5.56998E-08	0.00654	0.400073	0.0002	0.217746	0.103402	0.00337	0.05729	0.565926	0.956	0.86	1	0.823	0.934	0.994	0.945	0.702
rs1021820	3.1526E-08	-0.03531	0.00638	-0.03531	0.006382	5.57013E-08	0.32331	0.595071	6.26E-05	0.064076	0.025382	0.01754	0.23134	0.102865	0.88	0.741	1	0.95	0.971	0.964	0.901	0.921
rs572516948	3.1532E-08	-0.083824	0.01515	-0.083824	0.015151	5.57106E-08	0.54297	0.895303	0.002454	0.005137	0.058253	0.00521	0.11416	0.264637	0.862	0.798	0.997	0.994	0.959	0.993	0.936	0.898
rs2018501	3.1534E-08	0.0279782	0.00506	0.027968	0.005287	5.57135E-08	0.13374	0.042775	0.002034	0.251834	0.157941	0.00019	0.04274	0.399945	0.899	0.926	0.996	0.783	0.908	1	0.948	0.648
rs9458630	3.1535E-08	0.0311424	0.00563	0.0311424	0.005629	5.57153E-08	0.18491	0.388326	0.002084	0.013377	0.981801	0.00344	0.03531	0.020733	0.903	0.873	0.997	0.987	0.684	0.995	0.959	0.952
rs9458631	3.1535E-08	0.0311424	0.00563	0.0311424	0.005629	5.57153E-08	0.18491	0.388326	0.002084	0.013377	0.981801	0.00344	0.03531	0.020733	0.903	0.873	0.997	0.987	0.684	0.995	0.959	0.952
rs173823	3.1541E-08	0.0306749	0.00554	0.0309678	0.006229	5.57261E-08	0.36063	0.002219	0.006371	0.17552	0.03299	0.00022	0.7202	0.434834	0.876	0.967	0.99	0.871	0.967	1	0.803	0.866
rs13237715	3.1542E-08	0.0292465	0.00529	0.0292465	0.005286	5.5727E-08	0.08813	0.422357	1.48E-05	0.044335	0.879925	0.0041	0.93519	0.120739	0.892	0.82	1	0.946	0.564	0.989	0.682	0.886
rs7797705	3.1544E-08	0.0292485	0.00529	0.0292485	0.005287	5.57306E-08	0.08826	0.42309	1.47E-05	0.044483	0.880516	0.00411	0.93478	0.120382	0.892	0.82	1	0.946	0.564	0.989	0.683	0.886
rs66713719	3.1561E-08	0.0311419	0.00563	0.0311419	0.005629	5.57575E-08	0.18469	0.388311	0.002085	0.013348	0.981738	0.00345	0.0353	0.020732	0.903	0.873	0.997	0.987	0.684	0.995	0.959	0.952

Table S3

rs7154993	3.1565E-08	0.0390341	0.00706	0.0390341	0.007055	5.57647E-08	0.31307	0.270474	0.001689	0.094377	0.120114	0.0004	0.07911	0.695951	0.879	0.885	0.998	0.929	0.932	0.999	0.94	0.743
rs3742369	3.1565E-08	0.0280341	0.00507	0.0280341	0.005067	5.57651E-08	0.68585	0.253244	0.000953	0.007532	0.410647	0.01419	0.00558	0.083165	0.762	0.894	0.999	0.992	0.855	0.975	0.979	0.93
rs56283150	3.1581E-08	-0.034844	0.0063	-0.035386	0.011056	3.89171E-08	0.47506	0.640869	0.006745	1.84E-05	0.50116	0.00544	0.00162	0.455696	0.785	0.631	0.971	1	0.369	0.972	0.979	0.787
rs59316545	3.1583E-08	-0.034844	0.0063	-0.035386	0.011056	3.89181E-08	0.47506	0.640867	0.006745	1.84E-05	0.50116	0.00544	0.00162	0.455696	0.785	0.631	0.971	1	0.369	0.972	0.979	0.787
rs56027920	3.1587E-08	-0.034844	0.0063	-0.035386	0.011056	3.89199E-08	0.47506	0.640859	0.006745	1.84E-05	0.501155	0.00544	0.00162	0.455699	0.785	0.631	0.971	1	0.369	0.972	0.979	0.787
rs2356065	3.1592E-08	0.0292451	0.00529	0.0292451	0.005286	5.58082E-08	0.08823	0.422622	1.48E-05	0.044422	0.880005	0.0041	0.9349	0.120847	0.892	0.82	1	0.946	0.564	0.989	0.683	0.886
rs8032781	3.1617E-08	0.0344587	0.00623	0.0344587	0.006229	5.58492E-08	0.23946	0.390576	0.001361	0.00061	0.587982	0.00188	0.64074	0.797231	0.864	0.838	0.997	0.998	0.758	0.996	0.775	0.712
rs3839691	3.1621E-08	0.0292446	0.00529	0.0292446	0.005286	5.58558E-08	0.08845	0.422357	1.48E-05	0.044387	0.879922	0.0041	0.9352	0.120739	0.892	0.82	1	0.946	0.564	0.989	0.682	0.886
rs4721060	3.1622E-08	0.0292444	0.00529	0.0292444	0.005286	5.58581E-08	0.08224	0.422649	1.48E-05	0.044988	0.879131	0.00413	0.93588	0.120936	0.894	0.82	1	0.946	0.564	0.989	0.682	0.886
rs4721061	3.1622E-08	0.0292444	0.00529	0.0292444	0.005286	5.58581E-08	0.08224	0.422649	1.48E-05	0.044988	0.879131	0.00413	0.93588	0.120936	0.894	0.82	1	0.946	0.564	0.989	0.682	0.886
rs9556574	3.1626E-08	0.028132	0.00509	0.028132	0.005085	5.58648E-08	0.18988	0.463811	0.003096	0.005149	0.386841	0.00291	0.45062	0.03293	0.908	0.872	0.996	0.994	0.868	0.996	0.867	0.948
rs34011238	3.1633E-08	-0.034842	0.0063	-0.035384	0.011056	3.89476E-08	0.47507	0.640871	0.006747	1.84E-05	0.501153	0.00544	0.00162	0.455696	0.785	0.631	0.971	1	0.369	0.972	0.979	0.787
rs9884401	3.1643E-08	-0.034842	0.0063	-0.035384	0.011056	3.89526E-08	0.47506	0.640848	0.006749	1.84E-05	0.501135	0.00544	0.00162	0.455708	0.785	0.631	0.971	1	0.369	0.972	0.979	0.787
rs10011348	3.1644E-08	-0.034842	0.0063	-0.035383	0.011054	3.89667E-08	0.47507	0.640875	0.006748	1.84E-05	0.501171	0.00544	0.00162	0.455693	0.785	0.631	0.971	1	0.369	0.972	0.979	0.787
rs13124363	3.1644E-08	-0.034842	0.0063	-0.035382	0.011055	3.89664E-08	0.47507	0.640485	0.006746	1.84E-05	0.501171	0.00544	0.00162	0.455696	0.785	0.631	0.971	1	0.369	0.972	0.979	0.787
rs7655380	3.1644E-08	-0.034842	0.0063	-0.035384	0.011055	3.89637E-08	0.47507	0.640874	0.006746	1.84E-05	0.501166	0.00544	0.00162	0.455692	0.785	0.631	0.971	1	0.369	0.972	0.979	0.787
rs7660391	3.1644E-08	-0.034842	0.0063	-0.035384	0.011055	3.89637E-08	0.47507	0.640874	0.006746	1.84E-05	0.501166	0.00544	0.00162	0.455692	0.785	0.631	0.971	1	0.369	0.972	0.979	0.787
rs7690592	3.1649E-08	-0.034841	0.0063	-0.035384	0.011055	3.89616E-08	0.47507	0.640872	0.006746	1.84E-05	0.501156	0.00544	0.00162	0.455695	0.785	0.631	0.971	1	0.369	0.972	0.979	0.787
rs7660803	3.165E-08	-0.034841	0.0063	-0.035384	0.011055	3.89668E-08	0.47507	0.640867	0.006746	1.84E-05	0.501161	0.00544	0.00162	0.455693	0.785	0.631	0.971	1	0.369	0.972	0.979	0.787
rs2302633	3.1653E-08	0.0292432	0.00529	0.0292432	0.005286	5.59076E-08	0.08823	0.422357	1.48E-05	0.044497	0.879949	0.0041	0.93517	0.120739	0.892	0.82	1	0.946	0.564	0.989	0.682	0.886
rs2302635	3.1654E-08	0.0292432	0.00529	0.0292432	0.005286	5.59101E-08	0.08823	0.422357	1.48E-05	0.044497	0.879945	0.0041	0.93517	0.120739	0.892	0.82	1	0.946	0.564	0.989	0.682	0.886
rs3214372	3.1655E-08	0.0292431	0.00529	0.0292431	0.005286	5.59118E-08	0.08823	0.422357	1.48E-05	0.044497	0.879943	0.0041	0.93518	0.120739	0.892	0.82	1	0.946	0.564	0.989	0.682	0.886
rs3815535	3.1655E-08	0.0292431	0.00529	0.0292431	0.005286	5.59118E-08	0.08823	0.422357	1.48E-05	0.044497	0.879943	0.0041	0.93518	0.120739	0.892	0.82	1	0.946	0.564	0.989	0.682	0.886
rs12699333	3.1663E-08	0.0292429	0.00529	0.0292429	0.005286	5.59237E-08	0.08823	0.422357	1.48E-05	0.044495	0.879929	0.0041	0.93519	0.120739	0.892	0.82	1	0.946	0.564	0.989	0.682	0.886
rs12668625	3.1664E-08	0.0292429	0.00529	0.0292429	0.005286	5.59256E-08	0.08823	0.422357	1.48E-05	0.044497	0.879929	0.0041	0.93519	0.120739	0.892	0.82	1	0.946	0.564	0.989	0.682	0.886
rs12669919	3.1664E-08	0.0292429	0.00529	0.0292429	0.005286	5.59261E-08	0.08823	0.422357	1.48E-05	0.044497	0.879936	0.0041	0.93518	0.12074	0.892	0.82	1	0.946	0.564	0.989	0.682	0.886
rs7670901	3.1666E-08	-0.034841	0.0063	-0.035383	0.011054	3.89788E-08	0.47507	0.640877	0.006748	1.84E-05	0.501171	0.00544	0.00162	0.455691	0.785	0.631	0.971	1	0.369	0.972	0.979	0.787
rs34596213	3.1671E-08	-0.034841	0.0063	-0.035382	0.011055	3.89796E-08	0.47507	0.640484	0.006748	1.84E-05	0.501166	0.00544	0.00162	0.455696	0.785	0.631	0.971	1	0.369	0.972	0.979	0.787
rs4906373	3.1671E-08	0.0280716	0.00507	0.0280716	0.005074	5.59378E-08	0.71148	0.249716	0.001041	0.008705	0.365792	0.01485	0.00553	0.063963	0.77	0.897	0.999	0.991	0.87	0.974	0.98	0.936
rs13141166	3.1674E-08	-0.034841	0.0063	-0.035382	0.011055	3.89814E-08	0.47507	0.640478	0.006749	1.84E-05	0.501161	0.00544	0.00162	0.455706	0.785	0.631	0.971	1	0.369	0.972	0.979	0.787
rs13141176	3.1674E-08	-0.034841	0.0063	-0.035382	0.011055	3.89814E-08	0.47507	0.640478	0.006749	1.84E-05	0.501161	0.00544	0.00162	0.455706	0.785	0.631	0.971	1	0.369	0.972	0.979	0.787
rs1441423	3.1675E-08	-0.03484	0.0063	-0.035381	0.011055	3.89817E-08	0.47507	0.640476	0.006749	1.84E-05	0.501161	0.00544	0.00162	0.455707	0.785	0.631	0.971	1	0.369	0.972	0.979	0.787
rs7681654	3.1677E-08	-0.03484	0.0063	-0.035381	0.011055	3.89831E-08	0.47508	0.640475	0.006749	1.84E-05	0.501158	0.00544	0.00162	0.455709	0.785	0.631	0.971	1	0.369	0.972	0.979	0.787
rs7159904	3.1707E-08	0.0390278	0.00706	0.0390278	0.007055	5.59963E-08	0.31359	0.270771	0.001691	0.09457	0.119989	0.0004	0.07898	0.695485	0.879	0.885	0.998	0.929	0.932	0.999	0.94	0.743
rs2013891	3.1708E-08	0.027901	0.00504	0.0274918	0.005402	5.59982E-08	0.31956	0.832759	0.001309	0.000579	0.946312	0.00021	0.87943	0.311988	0.513	0.688	0.996	0.997	0.53	0.999	0.615	0.788
rs13116365	3.1713E-08	-0.034838	0.0063	-0.035334	0.011097	3.87622E-08	0.47345	0.640429	0.006514	1.85E-05	0.485793	0.00547	0.0016	0.456761	0.784	0.629	0.972	1	0.361	0.972	0.979	0.786
rs716815	3.1721E-08	-0.029377	0.00531	-0.027085	0.008082	5.60258E-08	0.91109	0.13936	0.000416	6.43E-05	0.916935	0.00505	0.06939	0.655473	0.683	0.455	0.999	0.999	0.49	0.977	0.9	0.723
rs889975	3.1732E-08	0.0278405	0.00503	0.0295215	0.007119	5.60531E-08	0.7051	0.371366	0.023912	0.000192	0.000312	0.00609	0.58896	0.812402	0.723	0.852	0.939	0.999	0.994	0.98	0.799	0.786
rs12050064	3.1738E-08	0.0281288	0.00509	0.0281288	0.005085	5.60669E-08	0.19001	0.464103	0.0031	0.005147	0.386677	0.00291	0.45157	0.032877	0.908	0.872	0.996	0.994	0.868	0.996	0.866	0.948
rs12880167	3.1747E-08	0.0280834	0.00508	0.0280834	0.005077	5.60865E-08	0.71805	0.229372	0.001061	0.008816	0.356737	0.0163	0.00506	0.057313	0.772	0.9	0.999	0.991	0.873	0.971	0.981	0.939
rs10033342	3.1757E-08	-0.034838	0.0063	-0.035379	0.011055	3.9023E-08	0.47508	0.64034	0.006755	1.84E-05	0.501146	0.00544	0.00162	0.455828	0.785	0.631	0.971	1	0.369	0.972	0.979	0.787
rs28516045	3.1769E-08	-0.034837	0.0063	-0.035378	0.011055	3.90286E-08	0.47508	0.64038	0.006755	1.84E-05	0.500987	0.00544	0.00162	0.455815	0.785	0.631	0.971	1	0.369	0.972	0.979	0.787
rs77567414	3.1784E-08	0.0553476	0.01001	0.0573488	0.0124	5.61733E-08	0.26164	0.290652	0.010983	0.069723	0.001703	0.00101	0.05397	0.099423	0.668	0.886	0.984	0.948	0.991	0.999	0.951	0.924
rs9998562	3.1789E-08	-0.034837	0.0063	-0.035378	0.011056	3.90389E-08	0.47509	0.640328	0.006757	1.84E-05	0.501123	0.00545	0.00162	0.455843	0.785	0.631	0.971	1	0.369	0.972	0.979	0.787
rs6797229	3.1805E-08	-0.027939	0.00505	-0.028919	0.007059	5.50368E-08	0.01663	0.355131	0.077344	0.000324	0.035816	0.00024	0.82263	0.846818	0.93	0.823	0.711	0.999	0.95	0.999	0.59	0.674
rs2322943	3.1808E-08	-0.034836	0.0063	-0.035376	0.011057	3.90474E-08	0.4751	0.639903	0.006755	1.84E-05	0.500929	0.00545	0.00162	0.455853	0.785	0.631	0.971	1	0.369	0.972	0.979	0.787
rs2322944	3.1811E-08	-0.034836	0.0063	-0.035377	0.011056	3.9046E-08	0.47507	0.640318	0.006758	1.84E-05	0.500924	0.00545	0.00162	0.455856	0.785	0.631	0.971	1	0.369	0.972	0.979	0.787
rs11774756	3.1814E-08	0.0282864	0.00511	0.0282864	0.005114	5.62422E-08	0.92777	0.123235	0.007149	0.102851	0.012618	0.00103	0.00754	0.737824	0.8	0.918	0.991	0.929	0.98	0.999	0.978	0.836
rs2322945	3.1822E-08	-0.034835	0.0063	-0.035376	0.011056	3.90548E-08	0.4751	0.640318	0.006758	1.84E-05	0.500924	0.00545	0.00162	0.455856	0.785	0.631	0.971	1	0.369	0.972	0.979	0.787
rs7160630	3.1826E-08	0.0390223	0.00706	0.0390223	0.007055	5.6269E-08	0.31359	0.271816	0.001695	0.094389	0.120061	0.0004	0.07875	0.695471	0.879	0.885	0.998	0.929	0.932	0.999	0.94	0.743
rs10783794	3.1842E-08	0.0294239	0.00532	0.0294239	0.00532	5.63063E-08	0.25355	0.347406	0.000356	0.119256	0.751343	0.0002	0.49314	0.273143	0.865	0.849	0.999	0.886	0.716	1	0.814	0.863
rs5011434	3.1854E-08	0.0292383	0.00529	0.0292383	0.005286	5.63348E-08	0.08213	0.42242	1.5E-05	0.044158	0.876158	0.00415	0.9376	0.121365	0.894	0.82	1	0.946	0.562	0.988	0.682	0.886
rs6941209	3.186E-08	0.0311322	0.00563	0.0311322	0.005629	5.63478E-08	0.18521	0.388321	0.002085	0.013511	0.981731	0.00344	0.03531	0.020733	0.903	0.873	0.997	0.987	0.684	0.995	0.959	0.952
rs7937343	3.1879E-08	-0.062887	0.01137	-0.062887	0.01137	5.6393E-08	0.97639	0.615802	0.001217	0.029231	0.130323	0.00245	0.01097	0.745452	0.803	0.846	0.998	0.976	0.931	0.997	0.973	0.826
rs8179392	3.1917E-08	0.0283118	0.00512	0.0283118	0.005119	5.648E-08	0.44367	0.476186	0.000371	0.007371	0.055158	0.02601	0.08246	0.072847	0.867	0.724	0.999	0.992	0.958	0.944	0.942	0.931

Table S3

rs10924451	3.1943E-08	-0.041379	0.00748	-0.041379	0.007482	5.65399E-08	0.06243	0.05283	0.010997	0.015322	0.026801	0.01884	0.0141	0.23421	0.948	0.95	0.988	0.99	0.978	0.975	0.979	0.923
rs7105098	3.1968E-08	-0.082003	0.01483	-0.082003	0.014828	5.65991E-08	0.81754	0.993523	0.001781	0.012618	0.074775	0.00357	0.06906	0.254712	0.829	0.81	0.998	0.989	0.952	0.995	0.948	0.898
rs12527715	3.1973E-08	0.0340955	0.00617	0.0344537	0.006444	5.661E-08	0.30323	0.016134	0.018503	0.18368	0.012217	0.00077	0.02126	0.375546	0.9	0.957	0.974	0.885	0.983	0.999	0.971	0.892
rs113513496	3.1977E-08	0.0476048	0.00861	0.0476048	0.008608	5.66182E-08	0.39321	0.090864	0.00043	0.023337	0.051593	0.04266	0.02456	0.354478	0.888	0.931	0.999	0.983	0.965	0.916	0.969	0.894
rs281273	3.1996E-08	-0.03132	0.00566	-0.03132	0.005664	5.66627E-08	0.84412	0.746883	0.000513	0.0003	0.795852	0.00182	0.48727	0.858435	0.728	0.664	0.999	0.998	0.64	0.995	0.768	0.719
rs41282890	3.1998E-08	0.0421385	0.00762	0.0421385	0.00762	5.66667E-08	0.50392	0.748867	0.016234	0.000951	0.15413	0.0015	0.16887	0.246735	0.865	0.838	0.977	0.998	0.927	0.998	0.921	0.9
rs9458629	3.2008E-08	0.0311277	0.00563	0.0311277	0.005629	5.66908E-08	0.18537	0.388326	0.002085	0.013586	0.981792	0.00344	0.03531	0.020733	0.903	0.873	0.997	0.987	0.684	0.995	0.959	0.952
rs10879303	3.2022E-08	0.0453303	0.0082	0.0453303	0.008197	5.67225E-08	0.31937	0.503594	0.000461	0.009125	0.309039	0.01452	0.04771	0.023633	0.883	0.732	0.999	0.991	0.881	0.974	0.954	0.949
rs150051446	3.2035E-08	0.073131	0.01322	0.073131	0.013225	5.67535E-08	0.0532	0.81793	0.028716	0.000764	0.039847	0.0032	0.10786	0.463466	0.937	0.792	0.956	0.998	0.966	0.995	0.938	0.872
rs1461583	3.2037E-08	0.0390133	0.00705	0.0390133	0.007055	5.67591E-08	0.31379	0.272183	0.001705	0.094409	0.120315	0.0004	0.0787	0.696612	0.879	0.885	0.998	0.929	0.931	0.999	0.94	0.743
rs1461584	3.2038E-08	0.0390133	0.00705	0.0390133	0.007055	5.67602E-08	0.31379	0.272183	0.001705	0.09441	0.120315	0.0004	0.0787	0.696612	0.879	0.885	0.998	0.929	0.931	0.999	0.94	0.743
rs8064704	3.2043E-08	0.0280423	0.00507	0.02803	0.005123	5.67726E-08	0.71574	0.99479	0.000461	0.114705	0.434462	0.00077	0.0938	0.004616	0.731	0.774	0.999	0.899	0.821	0.999	0.926	0.96
rs6802489	3.2048E-08	0.029111	0.00526	0.029111	0.005264	5.67845E-08	0.96781	0.700972	0.01293	0.117952	0.38725	4.6E-06	0.05194	0.513854	0.766	0.802	0.97	0.888	0.826	1	0.938	0.825
rs2887282	3.2054E-08	0.0280614	0.00507	0.0280614	0.005075	5.6797E-08	0.71031	0.249468	0.00106	0.008393	0.365703	0.01516	0.00552	0.063696	0.77	0.897	0.999	0.992	0.87	0.973	0.98	0.936
rs2328887	3.206E-08	0.0612965	0.01108	0.0612965	0.011085	5.68113E-08	0.84063	0.826528	0.002915	0.002728	0.015518	0.01076	0.15451	0.10505	0.827	0.785	0.996	0.996	0.978	0.982	0.925	0.925
rs147712987	3.2063E-08	-0.067431	0.01219	-0.067431	0.012194	5.68177E-08	0.19482	0.906189	3.59E-05	0.048599	0.455038	0.0027	0.89851	0.122658	0.877	0.747	1	0.949	0.803	0.995	0.723	0.898
rs2723738	3.2087E-08	-0.027885	0.00504	-0.034409	0.009327	5.3693E-08	0.08207	0.212729	0.014019	0.20568	0.008217	0.00238	2.4E-05	0.607356	0.923	0.895	0.967	0.838	0.982	0.989	0.995	0.722
rs2586750	3.211E-08	-0.033953	0.00614	-0.033953	0.00614	5.69277E-08	0.39167	0.006387	0.00447	0.01155	0.242594	0.00402	0.21546	0.252577	0.892	0.966	0.995	0.991	0.914	0.995	0.921	0.91
rs7145698	3.2127E-08	0.0390097	0.00705	0.0390097	0.007055	5.69675E-08	0.31384	0.272178	0.001706	0.094413	0.12028	0.0004	0.0787	0.696568	0.879	0.885	0.998	0.929	0.931	0.999	0.94	0.743
rs8003653	3.2132E-08	0.0280731	0.00508	0.0280731	0.005077	5.69775E-08	0.71434	0.229521	0.001063	0.008786	0.357416	0.01636	0.00508	0.057427	0.771	0.9	0.999	0.991	0.872	0.971	0.981	0.939
rs56230133	3.2133E-08	0.0319833	0.00578	0.0319833	0.005784	5.69806E-08	0.14852	0.723087	0.00616	0.00477	0.584479	0.00301	0.04658	0.044543	0.916	0.846	0.993	0.995	0.821	0.996	0.957	0.945
rs498851	3.2139E-08	0.0350885	0.00635	0.0350885	0.006346	5.69953E-08	0.20437	0.785487	0.021189	0.004667	0.094105	0.00019	0.2115	0.708191	0.894	0.765	0.962	0.994	0.94	1	0.902	0.824
rs2455855	3.2172E-08	-0.028051	0.00507	-0.034436	0.009408	4.60607E-08	0.08178	0.201247	0.031329	0.221644	0.001309	0.00086	0.00019	0.480459	0.915	0.886	0.903	0.794	0.991	0.988	0.992	0.667
rs11138416	3.2193E-08	-0.030108	0.00545	-0.030108	0.005445	5.71201E-08	0.83643	0.060588	0.000725	0.020343	0.011406	0.01471	0.06018	0.660986	0.824	0.932	0.999	0.983	0.981	0.974	0.95	0.746
rs180797383	3.22E-08	0.0741401	0.01341	0.0757735	0.016572	5.71362E-08	0.47163	0.15364	0.006584	0.212194	0.00014	0.00036	0.91685	0.522467	0.84	0.891	0.987	0.819	0.996	0.999	0.736	0.832
rs3056108	3.2221E-08	0.028037	0.00507	0.0280017	0.00522	5.71845E-08	0.69914	0.985821	0.000494	0.115842	0.438433	0.00071	0.09457	0.004362	0.727	0.774	0.999	0.897	0.82	0.999	0.926	0.961
rs4646214	3.2225E-08	0.0286647	0.00518	0.0311294	0.006837	5.71945E-08	0.78168	0.347994	0.003911	0.078281	0.00069	0.01196	0.00508	0.179216	0.789	0.889	0.994	0.947	0.994	0.981	0.982	0.915
rs12730441	3.2226E-08	0.0288538	0.00522	0.0288538	0.005219	5.71958E-08	0.74031	0.851464	0.004409	0.018814	0.284029	0.00244	0.02538	0.003653	0.84	0.793	0.995	0.985	0.893	0.997	0.966	0.97
rs138855665	3.2232E-08	-0.088209	0.01595	-0.088209	0.015954	5.72093E-08	0.71442	0.089906	0.014695	0.247872	0.060651	1.1E-05	0.10192	0.873308	0.81	0.909	0.965	0.786	0.947	1	0.924	0.782
rs7356412	3.2238E-08	-0.083403	0.01509	-0.085123	0.017435	5.72234E-08	0.33865	0.127982	0.000823	0.021423	0.001089	0.01183	0.29637	0.387787	0.68	0.91	0.999	0.981	0.991	0.977	0.884	0.869
rs4968876	3.224E-08	0.0280366	0.00507	0.0280349	0.005078	5.72288E-08	0.7259	0.955704	0.000496	0.121885	0.426303	0.00071	0.09962	0.004403	0.733	0.779	0.999	0.893	0.824	0.999	0.924	0.961
rs17096600	3.2245E-08	0.0390047	0.00705	0.0390047	0.007055	5.72416E-08	0.31431	0.272657	0.001707	0.094366	0.120333	0.0004	0.07877	0.696367	0.879	0.885	0.998	0.929	0.931	0.999	0.94	0.743
rs72743931	3.2267E-08	-0.042799	0.00774	-0.042799	0.007741	5.72911E-08	0.35373	0.38459	0.001281	0.013049	0.293075	0.00365	0.04057	0.731058	0.884	0.88	0.998	0.988	0.89	0.995	0.959	0.837
rs11440004	3.227E-08	0.0390037	0.00705	0.0390037	0.007055	5.72984E-08	0.3143	0.27302	0.001709	0.094325	0.120337	0.0004	0.07862	0.696261	0.879	0.885	0.998	0.929	0.931	0.999	0.94	0.743
rs2108618	3.2278E-08	0.0280353	0.00507	0.0280236	0.00512	5.73172E-08	0.72228	0.99479	0.000451	0.116773	0.434082	0.00078	0.0937	0.004617	0.732	0.774	0.999	0.897	0.821	0.999	0.926	0.96
rs158996	3.2298E-08	0.0391911	0.00709	0.0391911	0.007089	5.73626E-08	0.475	0.625128	0.002159	0.028741	0.071429	0.00594	0.04073	0.08537	0.882	0.867	0.998	0.981	0.959	0.993	0.963	0.938
rs4655329	3.2329E-08	0.043536	0.00788	0.0462952	0.009477	4.1214E-08	0.43704	0.228123	0.001761	6.41E-05	0.174043	0.12399	0.10181	0.040655	0.837	0.875	0.993	1	0.892	0.562	0.923	0.935
rs190767201	3.233E-08	0.0915535	0.01656	0.0915535	0.016561	5.74372E-08	0.17126	0.899223	0.01076	0.004107	0.57772	0.00077	0.10486	0.062783	0.906	0.793	0.985	0.995	0.812	0.999	0.933	0.933
rs623281	3.2337E-08	-0.02912	0.00527	-0.02912	0.005268	5.0852E-08	0.91961	0.37038	0.013507	0.511299	0.143941	1.4E-06	0.17175	0.090372	0.692	0.811	0.938	0.505	0.88	1	0.869	0.887
rs12567614	3.2348E-08	-0.027846	0.00504	-0.026806	0.007635	5.11387E-08	0.06073	0.230427	0.043183	0.031558	0.035686	2.5E-06	0.20822	0.816829	0.892	0.834	0.8	0.945	0.945	1	0.344	0.714
rs6833521	3.2358E-08	-0.034817	0.0063	-0.035352	0.011059	3.97493E-08	0.47347	0.640161	0.006775	1.85E-05	0.499166	0.00547	0.00163	0.458345	0.785	0.631	0.971	1	0.368	0.972	0.978	0.787
rs10049511	3.236E-08	-0.034817	0.0063	-0.035352	0.011059	3.97523E-08	0.47347	0.640161	0.006775	1.85E-05	0.499164	0.00547	0.00163	0.458346	0.785	0.631	0.971	1	0.368	0.972	0.978	0.787
rs10050319	3.2364E-08	-0.034817	0.0063	-0.035352	0.011059	3.97539E-08	0.47345	0.640176	0.006776	1.85E-05	0.499164	0.00547	0.00163	0.458345	0.785	0.631	0.971	1	0.368	0.972	0.978	0.787
rs281269	3.2368E-08	-0.031302	0.00566	-0.031302	0.005662	5.75261E-08	0.80741	0.735432	0.000595	0.00025	0.807071	0.0018	0.48069	0.870924	0.734	0.662	0.998	0.998	0.636	0.995	0.77	0.717
rs17017012	3.237E-08	-0.034816	0.0063	-0.035352	0.011059	3.97622E-08	0.47345	0.640176	0.006776	1.85E-05	0.499161	0.00547	0.00163	0.458348	0.785	0.631	0.971	1	0.368	0.972	0.978	0.787
rs4721059	3.2396E-08	0.0292284	0.00529	0.0292284	0.005287	5.7591E-08	0.08244	0.420862	1.44E-05	0.045321	0.885059	0.00434	0.93021	0.121668	0.894	0.821	1	0.945	0.567	0.988	0.685	0.886
rs7855077	3.2397E-08	-0.027856	0.00504	-0.027856	0.005039	5.75931E-08	0.0927	0.172065	0.002075	0.000221	0.964873	0.00701	0.14413	0.794953	0.906	0.886	0.996	0.999	0.656	0.984	0.908	0.724
rs7188871	3.24E-08	-0.034645	0.00627	-0.040241	0.009652	5.76003E-08	0.12061	0.573345	0.010494	0.004256	0.018751	0.01982	0.07332	0.001165	0.927	0.768	0.985	0.995	0.979	0.965	0.952	0.978
rs10008798	3.2401E-08	-0.034815	0.0063	-0.035351	0.011058	3.98228E-08	0.47343	0.640163	0.006778	1.85E-05	0.499161	0.00548	0.00163	0.458348	0.785	0.631	0.971	1	0.368	0.972	0.978	0.787
rs12853934	3.2404E-08	-0.036408	0.00659	-0.036408	0.006586	5.76104E-08	0.65659	0.086732	8.04E-06	0.30346	0.36506	0.00402	0.10704	0.318782	0.682	0.894	1	0.705	0.813	0.987	0.908	0.843
rs3130262	3.2405E-08	0.0278612	0.00504	0.0277661	0.005133	5.76129E-08	0.30767	0.810366	0.001692	0.000746	0.87466	0.00019	0.83731	0.242367	0.528	0.706	0.995	0.997	0.573	0.999	0.643	0.816
rs1444949	3.241E-08	-0.031429	0.00569	-0.032734	0.006667	5.76244E-08	0.01332	0.221902	0.010639	0.004715	0.714977	0.00529	0.006	0.301305	0.957	0.907	0.986	0.995	0.791	0.993	0.98	0.898
rs60432762	3.2419E-08	-0.042771	0.00774	-0.042771	0.007737	5.7644E-08	0.35465	0.392257	0.001321	0.012316	0.294114	0.00366	0.04155	0.72792	0.884	0.879	0.998	0.989	0.889	0.995	0.958	0.837
rs8005225	3.2427E-08	0.0280653	0.00508	0.0280653	0.005077	5.76624E-08	0.71373	0.22936	0.001061	0.009004	0.35673	0.0163	0.00506	0.057309	0.771	0.9	0.999	0.991	0.873	0.971	0.981	0.939
rs2596473	3.2429E-08	0.0286313	0.00518	0.0286313	0.00518	5.76685E-08	0.35084	0.143233	0.002046	0.061562	0.042752	0.00205	0.07396	0.956907	0.889	0.918	0.998	0.959	0.966	0.998	0.949	0.816

Table S3

rs13092951	3.2437E-08	0.0290994	0.00526	0.0290994	0.005264	5.76859E-08	0.97093	0.700973	0.012926	0.118944	0.387263	4.6E-06	0.05195	0.513862	0.765	0.802	0.97	0.887	0.825	1	0.938	0.825
rs13080308	3.2447E-08	0.0280232	0.00507	0.0288132	0.006071	5.77095E-08	0.84142	0.054528	0.041416	0.142671	0.02786	5.6E-05	0.36422	0.008626	0.817	0.932	0.91	0.887	0.97	1	0.873	0.962
rs9924695	3.245E-08	-0.034649	0.00627	-0.040191	0.009591	5.77177E-08	0.12032	0.599957	0.011217	0.003717	0.019377	0.01989	0.07633	0.001217	0.927	0.772	0.984	0.996	0.979	0.965	0.952	0.978
rs12994386	3.2458E-08	0.0377628	0.00683	0.0377628	0.006832	5.77359E-08	0.38332	0.192042	0.000979	0.019036	0.014352	0.02514	0.02522	0.83602	0.888	0.912	0.999	0.985	0.981	0.956	0.968	0.834
rs889974	3.2482E-08	0.0278199	0.00503	0.0294874	0.007096	5.77905E-08	0.70754	0.371477	0.023869	0.000203	0.000311	0.00607	0.58881	0.813034	0.724	0.852	0.94	0.999	0.994	0.981	0.799	0.786
rs72792080	3.2489E-08	0.0443281	0.00802	0.0459652	0.00926	5.78073E-08	0.11849	0.009073	0.018784	0.094118	0.004703	0.00111	0.57934	0.153388	0.928	0.964	0.976	0.943	0.989	0.999	0.856	0.925
rs13084236	3.2492E-08	0.0290979	0.00526	0.0290979	0.005264	5.78141E-08	0.9712	0.700954	0.012923	0.119239	0.387081	4.6E-06	0.05194	0.513833	0.765	0.801	0.97	0.886	0.825	1	0.938	0.825
rs2919980	3.2519E-08	0.0278721	0.00504	0.0278721	0.005043	5.78772E-08	0.54626	0.424836	0.015508	0.052537	0.020672	3.1E-05	0.12025	0.868839	0.699	0.846	0.968	0.95	0.969	1	0.917	0.741
rs12309140	3.2554E-08	-0.028045	0.00507	-0.034337	0.009445	4.57964E-08	0.08751	0.221039	0.032076	0.218666	0.001198	0.00081	0.00019	0.454862	0.912	0.88	0.899	0.794	0.991	0.988	0.992	0.657
rs73592761	3.2563E-08	-0.031278	0.00566	-0.031329	0.007674	5.17919E-08	0.17146	0.721396	0.0006	0.895288	0.266961	6.3E-05	0.01312	0.082305	0.848	0.724	0.998	0.138	0.803	1	0.959	0.888
rs188699810	3.2585E-08	-0.069531	0.01258	-0.069531	0.01258	5.80313E-08	0.40644	0.551773	7.64E-06	0.049834	0.74716	0.00405	0.89994	0.106233	0.82	0.797	1	0.938	0.683	0.989	0.641	0.89
rs113597328	3.2595E-08	-0.070014	0.01267	-0.070014	0.012668	5.80541E-08	0.72858	0.554698	1.07E-05	0.053525	0.613458	0.00272	0.92063	0.111785	0.769	0.796	1	0.934	0.725	0.993	0.647	0.888
rs6799799	3.2596E-08	0.0290949	0.00526	0.0290949	0.005264	5.80554E-08	0.9712	0.70097	0.012935	0.119279	0.38725	4.6E-06	0.05194	0.51385	0.765	0.801	0.97	0.886	0.825	1	0.938	0.825
rs12859440	3.2602E-08	-0.036398	0.00659	-0.036398	0.006586	5.80703E-08	0.65844	0.08688	8.14E-06	0.30301	0.365057	0.00403	0.10643	0.318927	0.683	0.894	1	0.705	0.813	0.987	0.908	0.843
rs17096602	3.2621E-08	0.0389887	0.00705	0.0389887	0.007055	5.81137E-08	0.31435	0.273901	0.001719	0.094228	0.120468	0.0004	0.07871	0.695655	0.879	0.885	0.998	0.929	0.931	0.999	0.94	0.743
rs13359522	3.2656E-08	-0.02844	0.00515	-0.02844	0.005146	5.81945E-08	0.3149	0.34995	0.020841	0.008646	0.021176	0.00016	0.56168	0.181811	0.867	0.861	0.955	0.989	0.97	1	0.599	0.893
rs4781850	3.2673E-08	0.0319449	0.00578	0.0319449	0.00578	5.82344E-08	0.8161	0.711859	0.001301	0.006352	0.583519	0.00092	0.50103	0.070532	0.798	0.812	0.998	0.991	0.782	0.998	0.826	0.92
rs62302707	3.2682E-08	0.0372378	0.00674	0.0372378	0.006738	5.82563E-08	0.06216	0.666851	0.022653	0.00597	0.004573	0.00217	0.62112	0.205274	0.936	0.853	0.967	0.994	0.988	0.997	0.839	0.91
rs28818253	3.2684E-08	0.0281434	0.00509	0.0281434	0.005093	5.82607E-08	0.0951	0.080499	0.001473	0.001181	0.196204	0.04891	0.17662	0.187025	0.93	0.933	0.998	0.998	0.92	0.892	0.925	0.916
rs2302634	3.272E-08	0.0292132	0.00529	0.0292132	0.005286	5.83436E-08	0.08793	0.422649	1.48E-05	0.045511	0.879156	0.00413	0.93585	0.120936	0.892	0.819	1	0.945	0.564	0.989	0.682	0.886
rs7840655	3.2721E-08	-0.033914	0.00614	-0.035784	0.011742	5.2975E-09	0.97816	0.370073	0.713067	8.01E-05	0.026895	5.3E-06	0.04469	0.241738	0.538	0.344	0.007	1	0.942	1	0.912	0.77
rs3848023	3.2722E-08	-0.028135	0.00509	-0.029181	0.006799	5.83485E-08	0.30809	0.334569	0.000143	0.011725	0.017033	0.0449	0.00618	0.950316	0.625	0.853	1	0.985	0.971	0.844	0.975	0.755
rs898453	3.2727E-08	0.0328914	0.00595	0.0332565	0.00713	5.83617E-08	0.0207	0.020864	0.013931	0.099634	0.10265	8.1E-05	0.35396	0.574272	0.946	0.945	0.977	0.924	0.939	1	0.874	0.722
rs10894861	3.2737E-08	0.0349518	0.00632	0.032231	0.00827	5.83836E-08	0.09346	0.811006	0.001976	0.066654	0.806686	6.3E-06	0.12649	0.282263	0.445	0.714	0.994	0.899	0.605	1	0.874	0.813
rs41355450	3.2754E-08	0.0384185	0.00695	0.0435027	0.010762	5.2416E-08	0.36137	0.064394	0.011695	8.39E-05	0.145476	0.03954	0.00758	0.09918	0.678	0.926	0.963	0.999	0.918	0.883	0.977	0.921
rs12879612	3.2763E-08	0.0280023	0.00507	0.0280023	0.005067	5.84437E-08	0.63907	0.253042	0.000953	0.007422	0.411033	0.01418	0.00559	0.083144	0.753	0.893	0.999	0.992	0.854	0.974	0.979	0.929
rs2723720	3.2763E-08	-0.028034	0.00507	-0.03441	0.009408	4.69639E-08	0.08115	0.201426	0.030905	0.226499	0.001314	0.00087	0.0002	0.480252	0.915	0.885	0.904	0.79	0.991	0.988	0.992	0.666
rs2723719	3.2765E-08	-0.028034	0.00507	-0.03441	0.009408	4.69661E-08	0.08115	0.201426	0.030904	0.226512	0.001314	0.00087	0.0002	0.480252	0.915	0.885	0.904	0.79	0.991	0.988	0.992	0.666
rs1355937	3.2773E-08	-0.037536	0.00679	-0.039587	0.009332	5.84683E-08	0.74514	0.871296	0.016668	0.495166	0.001653	8E-05	0.03597	0.041434	0.778	0.761	0.937	0.551	0.989	1	0.948	0.926
rs11466816	3.2773E-08	-0.041678	0.00754	-0.041678	0.007542	5.84685E-08	0.56111	0.084687	0.000486	0.18366	0.116943	0.00347	0.01999	0.46982	0.859	0.927	0.999	0.874	0.939	0.995	0.969	0.869
rs11625740	3.2775E-08	0.0280013	0.00507	0.0280013	0.005067	5.84727E-08	0.6391	0.254194	0.000928	0.007403	0.404668	0.01453	0.00569	0.083958	0.753	0.893	0.999	0.992	0.856	0.974	0.979	0.929
rs7149024	3.2777E-08	0.0280013	0.00507	0.0280013	0.005067	5.84767E-08	0.6391	0.254195	0.000928	0.007403	0.40467	0.01453	0.00569	0.083959	0.753	0.893	0.999	0.992	0.856	0.974	0.979	0.929
rs12880413	3.2801E-08	0.0280399	0.00507	0.0280399	0.005074	5.85337E-08	0.71253	0.249528	0.001059	0.008653	0.366072	0.01514	0.00553	0.063869	0.77	0.897	0.999	0.991	0.87	0.974	0.98	0.936
rs139259106	3.2808E-08	-0.0674	0.0122	-0.0674	0.012197	5.85504E-08	0.18868	0.919805	3.7E-05	0.058275	0.423003	0.00265	0.8824	0.111204	0.88	0.751	1	0.941	0.815	0.995	0.73	0.903
rs34340428	3.2816E-08	0.0514738	0.00932	0.053341	0.011007	5.85679E-08	0.58308	0.120386	0.0292	0.013695	0.00518	0.00138	0.00767	0.927055	0.742	0.915	0.948	0.987	0.986	0.998	0.978	0.803
rs75840637	3.283E-08	0.0553602	0.01002	0.0560845	0.010632	5.86011E-08	0.36791	0.222651	0.060042	0.151366	0.012528	0.00016	0.00325	0.35206	0.876	0.897	0.867	0.88	0.98	1	0.984	0.879
rs55824307	3.2833E-08	0.0280389	0.00507	0.0280389	0.005074	5.86088E-08	0.7118	0.249465	0.001058	0.0087	0.36565	0.01513	0.00553	0.063811	0.77	0.897	0.999	0.991	0.87	0.974	0.98	0.936
rs28456	3.2835E-08	0.0284542	0.00515	0.0288702	0.00578	5.86133E-08	0.17991	0.624159	0.01395	0.120533	0.000367	0.00036	0.19554	0.410076	0.899	0.741	0.976	0.906	0.994	0.999	0.907	0.865
rs34813623	3.2837E-08	0.0280387	0.00507	0.0280387	0.005074	5.86158E-08	0.71113	0.249902	0.001057	0.008644	0.36592	0.01516	0.00553	0.063983	0.77	0.897	0.999	0.991	0.87	0.974	0.98	0.936
rs2223937	3.284E-08	0.0280391	0.00507	0.0280391	0.005074	5.86233E-08	0.71247	0.249631	0.001059	0.008702	0.365554	0.01516	0.00551	0.063657	0.77	0.897	0.999	0.991	0.87	0.974	0.98	0.936
rs34213597	3.2848E-08	0.029508	0.00534	0.029508	0.00534	5.86427E-08	0.3186	0.263832	0.000451	0.063919	0.006153	0.00254	0.19157	0.728675	0.866	0.644	0.999	0.943	0.982	0.996	0.899	0.806
rs12757645	3.2863E-08	0.0288356	0.00522	0.0288356	0.005219	5.86779E-08	0.74199	0.85151	0.004408	0.019153	0.284113	0.00245	0.02537	0.003652	0.84	0.793	0.995	0.984	0.893	0.997	0.966	0.97
rs1128397	3.2881E-08	0.0290766	0.00526	0.0290766	0.005262	5.87199E-08	0.72387	0.943439	0.001423	0.024407	0.050968	0.00098	0.07802	0.673228	0.817	0.791	0.998	0.977	0.954	0.998	0.936	0.723
rs117564330	3.2905E-08	-0.069948	0.01266	-0.069948	0.01266	5.87759E-08	0.7415	0.549985	1.05E-05	0.053163	0.646256	0.00262	0.9203	0.110919	0.764	0.795	1	0.933	0.712	0.993	0.643	0.887
rs140016933	3.2905E-08	-0.069948	0.01266	-0.069948	0.01266	5.87759E-08	0.7415	0.549985	1.05E-05	0.053163	0.646256	0.00262	0.9203	0.110919	0.764	0.795	1	0.933	0.712	0.993	0.643	0.887
rs2581789	3.2906E-08	0.029627	0.00536	0.0292559	0.005944	5.87784E-08	0.31836	0.309396	0.000799	0.51727	0.357812	4.5E-05	0.00966	0.568112	0.807	0.809	0.997	0.465	0.769	1	0.959	0.58
rs10915986	3.2907E-08	-0.027833	0.00504	-0.026779	0.007658	5.17755E-08	0.06144	0.230395	0.043889	0.030376	0.035445	2.5E-06	0.2054	0.828398	0.891	0.834	0.796	0.946	0.945	1	0.341	0.71
rs6677172	3.2907E-08	-0.027833	0.00504	-0.026779	0.007658	5.17755E-08	0.06144	0.230395	0.043889	0.030376	0.035445	2.5E-06	0.2054	0.828398	0.891	0.834	0.796	0.946	0.945	1	0.341	0.71
rs200766885	3.2911E-08	-0.069977	0.01267	-0.069977	0.012665	5.879E-08	0.74167	0.554698	1.07E-05	0.053258	0.613458	0.00272	0.92063	0.111785	0.766	0.796	1	0.934	0.725	0.993	0.646	0.888
rs141242087	3.2921E-08	0.0890411	0.01612	0.0890411	0.016116	5.88139E-08	0.86764	0.034161	0.01674	0.006946	0.073162	0.00083	0.58012	0.059578	0.794	0.941	0.978	0.993	0.953	0.999	0.842	0.937
rs1472263	3.2925E-08	-0.028602	0.00518	-0.028602	0.005177	5.88219E-08	0.90749	0.980225	0.004357	0.026065	0.514378	0.00023	0.05403	0.082493	0.799	0.785	0.994	0.976	0.812	1	0.946	0.921
rs8011109	3.2935E-08	0.0280364	0.00507	0.0280364	0.005074	5.88448E-08	0.71194	0.249482	0.00106	0.008703	0.365718	0.01516	0.00552	0.0637	0.77	0.897	0.999	0.991	0.87	0.974	0.98	0.936
rs8005594	3.2935E-08	0.0280364	0.00507	0.0280364	0.005074	5.88464E-08	0.71194	0.249482	0.00106	0.008703	0.365718	0.01516	0.00552	0.0637	0.77	0.897	0.999	0.991	0.87	0.974	0.98	0.936
rs12598535	3.2948E-08	-0.069956	0.01266	-0.069956	0.012662	5.88746E-08	0.74063	0.546823	1.05E-05	0.049353	0.669225	0.00272	0.92115	0.111772	0.764	0.795	1	0.937	0.704	0.993	0.642	0.886
rs8018062	3.2948E-08	0.0280361	0.00507	0.0280361	0.005074	5.88749E-08	0.712	0.249453	0.001061	0.0087	0.365713	0.01516	0.00552	0.063696	0.77	0.897	0.999	0.991	0.87	0.974	0.98	0.936

Table S3

rs1496922	3.2949E-08	-0.031313	0.00567	-0.031313	0.005667	5.88771E-08	0.97637	0.806012	0.000519	0.000315	0.758688	0.00175	0.49685	0.867339	0.708	0.674	0.999	0.998	0.652	0.995	0.765	0.717
rs4900598	3.2957E-08	0.0280359	0.00507	0.0280359	0.005074	5.88959E-08	0.71199	0.249459	0.001061	0.0087	0.365708	0.01516	0.00552	0.063695	0.77	0.897	0.999	0.991	0.87	0.974	0.98	0.936
rs9365472	3.2958E-08	0.0319457	0.00578	0.0319457	0.005782	5.88984E-08	0.16111	0.6862	0.006429	0.004123	0.635118	0.00312	0.04461	0.04127	0.913	0.848	0.992	0.995	0.806	0.996	0.958	0.945
rs12889993	3.2958E-08	0.0280357	0.00507	0.0280357	0.005074	5.88988E-08	0.71194	0.249527	0.00106	0.008713	0.365954	0.01515	0.00552	0.063723	0.77	0.897	0.999	0.991	0.87	0.974	0.98	0.936
rs10092618	3.2962E-08	0.0309319	0.0056	0.0289126	0.009564	1.21117E-08	0.22502	0.791184	1.23E-08	0.150184	0.903029	0.06375	0.28485	0.054689	0.663	0.381	1	0.402	0.228	0.299	0.588	0.801
rs12891175	3.2972E-08	0.0280353	0.00507	0.0280353	0.005074	5.89322E-08	0.71194	0.249534	0.00106	0.008713	0.365964	0.01515	0.00552	0.063724	0.77	0.897	0.999	0.991	0.87	0.974	0.98	0.936
rs12885018	3.2976E-08	0.0280352	0.00507	0.0280352	0.005074	5.89415E-08	0.71194	0.249536	0.00106	0.008713	0.365972	0.01515	0.00552	0.063725	0.77	0.897	0.999	0.991	0.87	0.974	0.98	0.936
rs11623546	3.298E-08	0.0280349	0.00507	0.0280349	0.005074	5.895E-08	0.71152	0.249492	0.001059	0.0087	0.365913	0.01515	0.00553	0.063863	0.77	0.897	0.999	0.991	0.87	0.974	0.98	0.936
rs1484679	3.2987E-08	-0.027938	0.00506	-0.028455	0.005855	5.89657E-08	0.48329	0.017975	0.00473	0.023409	0.470028	0.00128	0.65735	0.004144	0.868	0.95	0.994	0.981	0.845	0.998	0.826	0.969
rs12880233	3.2998E-08	0.0280344	0.00507	0.0280344	0.005074	5.89931E-08	0.71119	0.249528	0.001059	0.008703	0.366077	0.01515	0.00553	0.06387	0.77	0.897	0.999	0.991	0.87	0.974	0.98	0.936
rs28813072	3.3024E-08	0.0283887	0.00514	0.0283887	0.005139	5.89581E-08	0.14339	0.469616	0.001041	0.000812	0.102132	0.07449	0.09459	0.143987	0.913	0.863	0.998	0.998	0.94	0.795	0.939	0.916
rs9867012	3.3031E-08	-0.040952	0.00741	-0.041624	0.008476	5.90699E-08	0.09886	0.637275	0.000152	0.47886	0.016708	0.00629	0.00678	0.756449	0.904	0.809	1	0.594	0.972	0.981	0.974	0.786
rs509820	3.3034E-08	-0.033223	0.00601	-0.033223	0.006014	5.90754E-08	0.43281	0.696552	0.01747	0.016026	0.000663	0.00128	0.48859	0.32645	0.872	0.842	0.974	0.986	0.993	0.998	0.856	0.887
rs12102824	3.3057E-08	-0.027862	0.00504	-0.027862	0.005043	5.91303E-08	0.72671	0.072384	0.004793	0.015097	0.63516	0.00063	0.52089	0.010115	0.829	0.924	0.993	0.986	0.79	0.999	0.84	0.958
rs10771061	3.306E-08	-0.028403	0.00514	-0.028403	0.005141	5.91362E-08	0.47018	0.457419	0.000481	0.014715	0.271901	0.01642	0.00272	0.711581	0.868	0.869	0.999	0.987	0.893	0.971	0.983	0.837
rs28603287	3.307E-08	-0.034795	0.0063	-0.035343	0.011021	4.21227E-08	0.47133	0.640485	0.006746	2.02E-05	0.501168	0.00544	0.00162	0.455696	0.786	0.632	0.971	1	0.371	0.973	0.979	0.788
rs4906372	3.3079E-08	0.0280322	0.00507	0.0280322	0.005074	5.91808E-08	0.7112	0.249548	0.001059	0.008708	0.366144	0.01516	0.00553	0.063879	0.77	0.897	0.999	0.991	0.87	0.974	0.98	0.936
rs157625	3.3082E-08	-0.027876	0.00505	-0.027876	0.005046	5.91893E-08	0.60953	0.163088	0.000176	0.023701	0.087256	0.01567	0.30803	0.287677	0.857	0.913	1	0.982	0.949	0.975	0.895	0.897
rs8009147	3.3084E-08	0.0280321	0.00507	0.0280321	0.005074	5.91928E-08	0.71096	0.24951	0.001059	0.008713	0.366139	0.01517	0.00553	0.063874	0.77	0.897	0.999	0.991	0.87	0.974	0.98	0.936
rs13112261	3.3102E-08	0.0514598	0.00932	0.0533243	0.011007	5.92343E-08	0.58324	0.120392	0.029203	0.013892	0.005169	0.00138	0.00767	0.9271	0.742	0.915	0.948	0.987	0.986	0.998	0.978	0.803
rs112102810	3.3102E-08	-0.04248	0.00769	-0.04591	0.010044	5.9235E-08	0.40182	0.037836	0.021181	0.008687	0.020584	0.0044	0.04395	0.025899	0.732	0.946	0.969	0.992	0.978	0.994	0.961	0.955
rs7252656	3.3102E-08	-0.03016	0.00546	-0.03016	0.00546	5.92355E-08	0.12006	0.808885	0.051892	0.094638	0.016611	5.6E-05	0.27601	0.036532	0.917	0.824	0.89	0.925	0.977	1	0.893	0.945
rs10244815	3.3104E-08	0.0377559	0.00683	0.0377559	0.006835	5.92398E-08	0.38093	0.523363	0.020722	0.010973	0.004226	0.00058	0.73574	0.300681	0.875	0.858	0.967	0.989	0.987	0.999	0.804	0.887
rs9347897	3.3123E-08	0.0300298	0.00544	0.0300298	0.005436	5.92845E-08	0.0604	0.921945	0.003045	0.002685	0.502542	0.00201	0.03054	0.688344	0.921	0.769	0.995	0.995	0.808	0.997	0.955	0.72
rs7206083	3.3135E-08	-0.034622	0.00627	-0.040215	0.009649	5.93127E-08	0.11982	0.573403	0.010483	0.004405	0.018738	0.01983	0.07335	0.001165	0.927	0.768	0.985	0.995	0.979	0.965	0.952	0.978
rs632124	3.3141E-08	-0.028143	0.00509	-0.029022	0.006416	5.9326E-08	0.02611	0.079747	0.007568	0.120053	0.996819	0.00024	0.09687	0.019032	0.944	0.924	0.988	0.909	0.688	1	0.937	0.953
rs117289730	3.3154E-08	-0.069928	0.01266	-0.069928	0.012659	5.93572E-08	0.74146	0.550906	1.05E-05	0.053169	0.645955	0.00265	0.92144	0.11093	0.764	0.795	1	0.933	0.712	0.993	0.644	0.887
rs118106967	3.3154E-08	-0.069928	0.01266	-0.069928	0.012659	5.93572E-08	0.74146	0.550906	1.05E-05	0.053169	0.645955	0.00265	0.92144	0.11093	0.764	0.795	1	0.933	0.712	0.993	0.644	0.887
rs34243328	3.3163E-08	-0.036375	0.00659	-0.036375	0.006585	5.93763E-08	0.64878	0.087188	8.14E-06	0.304472	0.365707	0.00402	0.10639	0.318614	0.681	0.894	1	0.704	0.812	0.987	0.908	0.842
rs11923572	3.3164E-08	0.0296205	0.00536	0.0292402	0.005961	5.93792E-08	0.31525	0.30939	0.0008	0.520917	0.35781	4.5E-05	0.00966	0.568117	0.807	0.808	0.997	0.462	0.768	1	0.959	0.579
rs72799204	3.317E-08	-0.041314	0.00748	-0.041314	0.007479	5.93933E-08	0.30142	0.475797	0.000288	0.019616	0.080733	0.0057	0.35324	0.161112	0.88	0.716	0.999	0.982	0.945	0.991	0.872	0.907
rs77676026	3.318E-08	0.0300449	0.00544	0.0300449	0.005439	5.94173E-08	0.065	0.895158	0.002666	0.002795	0.501469	0.00193	0.03333	0.632618	0.918	0.762	0.996	0.995	0.805	0.997	0.953	0.706
rs4709641	3.3181E-08	0.0319334	0.00578	0.0319334	0.005781	5.94202E-08	0.15711	0.688652	0.00664	0.003274	0.656519	0.00339	0.04492	0.043063	0.913	0.847	0.992	0.996	0.8	0.996	0.957	0.944
rs9364752	3.3182E-08	0.0300448	0.00544	0.0300448	0.005439	5.94208E-08	0.06501	0.895168	0.002665	0.002794	0.501451	0.00193	0.03333	0.632625	0.918	0.762	0.996	0.995	0.805	0.997	0.953	0.706
rs74439586	3.3199E-08	-0.08343	0.0151	-0.08343	0.015104	5.94619E-08	0.69168	0.946287	0.002124	0.005101	0.068017	0.00535	0.11661	0.23792	0.843	0.802	0.997	0.994	0.955	0.993	0.934	0.901
rs9364753	3.3219E-08	0.0300437	0.00544	0.0300437	0.005439	5.95076E-08	0.06503	0.895169	0.002665	0.002797	0.501454	0.00193	0.03333	0.63262	0.918	0.762	0.996	0.995	0.805	0.997	0.953	0.706
rs75590468	3.3244E-08	-0.069891	0.01265	-0.069891	0.012654	5.95657E-08	0.72513	0.551691	1.02E-05	0.054761	0.643626	0.00269	0.91888	0.108917	0.767	0.795	1	0.931	0.713	0.993	0.643	0.887
rs71195271	3.3257E-08	-0.036371	0.00659	-0.036371	0.006585	5.9598E-08	0.64954	0.08719	8.14E-06	0.305325	0.365674	0.00402	0.1064	0.318616	0.681	0.894	1	0.703	0.812	0.987	0.908	0.842
rs673406	3.3291E-08	0.0343933	0.00623	0.0343933	0.006227	5.96759E-08	0.23826	0.389218	0.001377	0.000627	0.587434	0.00193	0.64404	0.799506	0.864	0.838	0.997	0.998	0.759	0.996	0.775	0.713
rs9597408	3.3295E-08	-0.03637	0.00659	-0.03637	0.006585	5.96866E-08	0.64922	0.087189	8.14E-06	0.305468	0.365685	0.00402	0.10639	0.318615	0.68	0.894	1	0.703	0.812	0.987	0.908	0.842
rs73405679	3.3296E-08	-0.054271	0.00983	-0.054271	0.009826	5.96877E-08	0.87944	0.349228	0.001068	0.012789	0.32078	0.00078	0.05788	0.596804	0.749	0.855	0.998	0.985	0.851	0.999	0.939	0.686
rs62456278	3.3312E-08	-0.032799	0.00594	-0.032799	0.005938	5.97258E-08	0.81619	0.066497	0.000955	0.292258	0.017581	0.00061	0.20321	0.641419	0.802	0.92	0.998	0.763	0.973	0.999	0.898	0.822
rs7145913	3.3317E-08	0.0389602	0.00705	0.0389602	0.007054	5.97359E-08	0.31485	0.27501	0.001733	0.094212	0.121088	0.00041	0.07851	0.696783	0.879	0.884	0.998	0.929	0.931	0.999	0.94	0.744
rs12727192	3.3318E-08	0.0394664	0.00715	0.0394664	0.007146	5.9739E-08	0.0689	0.23418	0.000565	0.593249	0.708404	5.2E-05	0.09916	0.440926	0.886	0.834	0.998	0.433	0.644	1	0.896	0.789
rs62375332	3.3322E-08	-0.041306	0.00748	-0.041306	0.007479	5.97479E-08	0.30204	0.47617	0.000287	0.019734	0.080875	0.00569	0.3535	0.161302	0.88	0.716	0.999	0.982	0.945	0.991	0.872	0.906
rs12723037	3.3329E-08	0.0394662	0.00715	0.0394662	0.007146	5.97645E-08	0.0689	0.23418	0.000566	0.593093	0.708389	5.2E-05	0.09925	0.440934	0.886	0.834	0.998	0.433	0.644	1	0.896	0.789
rs370649731	3.3331E-08	-0.070657	0.01279	-0.070657	0.012793	5.977E-08	0.55892	0.552013	4.39E-06	0.062609	0.63294	0.0042	0.90392	0.151	0.792	0.794	1	0.921	0.716	0.988	0.639	0.874
rs9597409	3.3346E-08	-0.036368	0.00659	-0.036368	0.006585	5.98045E-08	0.64916	0.087189	8.14E-06	0.305611	0.365693	0.00402	0.10639	0.318617	0.68	0.894	1	0.702	0.812	0.987	0.908	0.842
rs17185508	3.3347E-08	0.027787	0.00503	0.0293956	0.006976	5.98074E-08	0.71748	0.364011	0.02301	0.000216	0.000349	0.0062	0.59198	0.798347	0.728	0.855	0.943	0.999	0.994	0.981	0.8	0.79
rs1390862	3.3348E-08	0.0279678	0.00506	0.0281398	0.005289	5.98084E-08	0.26014	0.490236	0.00055	0.00433	0.002947	0.02622	0.2529	0.357669	0.877	0.843	0.999	0.994	0.987	0.93	0.884	0.645
rs7146746	3.3354E-08	0.0389575	0.00705	0.0389575	0.007054	5.98241E-08	0.31485	0.274782	0.001734	0.09427	0.121379	0.00041	0.07838	0.696248	0.879	0.884	0.998	0.929	0.931	0.999	0.94	0.743
rs9591762	3.3361E-08	-0.036368	0.00659	-0.036368	0.006585	5.98389E-08	0.64911	0.087189	8.14E-06	0.305757	0.365705	0.00402	0.10639	0.318619	0.68	0.894	1	0.702	0.812	0.987	0.908	0.842
rs116470208	3.3364E-08	-0.059611	0.01079	-0.071457	0.019423	4.75627E-08	0.02518	0.023133	0.001641	0.978813	0.035511	0.00085	0.00158	0.860906	0.929	0.933	0.995	0.203	0.957	0.997	0.984	0.728
rs59873297	3.3383E-08	0.0576837	0.01044	0.0576837	0.010445	5.98916E-08	0.32583	0.647736	0.000173	0.035795	0.023643	0.03515	0.16693	0.088878	0.892	0.855	1	0.974	0.975	0.932	0.925	0.933
rs10956507	3.3406E-08	0.0298411	0.0054	0.0298411	0.005403	5.99417E-08	0.46051	0.718352	5.56E-05	0.173922	0.388895	0.00241	0.08787	0.252768	0.847	0.815	1	0.857	0.84	0.996	0.93	0.88

Table S3

rs186847465	3.3413E-08	-0.081875	0.01483	-0.081875	0.014826	5.99562E-08	0.80894	0.985856	0.001812	0.013363	0.074202	0.00366	0.06589	0.253762	0.83	0.812	0.998	0.988	0.953	0.995	0.949	0.899
rs7006223	3.3444E-08	0.0282359	0.00511	0.0282359	0.005113	6.00227E-08	0.96098	0.12936	0.008251	0.098156	0.013456	0.00098	0.008	0.69567	0.806	0.918	0.989	0.933	0.98	0.999	0.978	0.843
rs7334074	3.3449E-08	-0.043602	0.0079	-0.044754	0.014111	5.09331E-08	0.52418	0.927121	0.000473	0.779574	0.001746	0.00075	0.00065	0.869644	0.532	0.621	0.998	0.252	0.986	0.996	0.984	0.65
rs6426280	3.345E-08	0.0287345	0.0052	0.0287345	0.005203	5.93405E-08	0.26813	0.131776	0.098353	0.00105	0.060044	0.00011	0.4166	0.899509	0.858	0.888	0.698	0.997	0.941	1	0.819	0.716
rs9597405	3.3461E-08	-0.036364	0.00658	-0.036364	0.006585	6.00598E-08	0.64892	0.087191	8.14E-06	0.30615	0.365725	0.00402	0.1064	0.318633	0.68	0.894	1	0.702	0.812	0.987	0.908	0.842
rs35146998	3.3463E-08	-0.028748	0.00521	-0.030207	0.008644	6.00634E-08	0.00304	0.303968	0.005794	0.002941	0.595306	0.00243	0.00505	0.955031	0.959	0.641	0.989	0.995	0.768	0.995	0.976	0.751
rs9597406	3.3464E-08	-0.036364	0.00658	-0.036364	0.006585	6.00649E-08	0.64892	0.087191	8.14E-06	0.30615	0.365727	0.00402	0.1064	0.318634	0.68	0.894	1	0.702	0.812	0.987	0.908	0.842
rs71428219	3.3467E-08	-0.036364	0.00659	-0.036364	0.006585	6.00719E-08	0.64897	0.087186	8.15E-06	0.306191	0.365711	0.00402	0.10638	0.318616	0.68	0.894	1	0.702	0.812	0.987	0.908	0.842
rs9597411	3.3469E-08	-0.036364	0.00659	-0.036364	0.006585	6.00758E-08	0.64897	0.087187	8.15E-06	0.306188	0.365713	0.00402	0.10638	0.318617	0.68	0.894	1	0.702	0.812	0.987	0.908	0.842
rs10594577	3.3479E-08	0.0378832	0.00686	0.038303	0.00986	6.00987E-08	0.09184	0.010798	0.000733	0.108449	0.055568	0.0013	0.27467	0.119274	0.562	0.95	0.999	0.908	0.951	0.998	0.879	0.908
rs9597412	3.3484E-08	-0.036364	0.00659	-0.036364	0.006585	6.01086E-08	0.64897	0.087187	8.15E-06	0.306179	0.365727	0.00402	0.10638	0.318617	0.68	0.894	1	0.702	0.812	0.987	0.908	0.842
rs117171369	3.3485E-08	-0.083377	0.0151	-0.083377	0.015099	6.01109E-08	0.81866	0.956121	0.002164	0.006849	0.078725	0.00383	0.1075	0.220374	0.827	0.801	0.997	0.992	0.95	0.995	0.936	0.903
rs56064284	3.3503E-08	-0.028744	0.00521	-0.030227	0.008685	6.01499E-08	0.00279	0.304289	0.005803	0.003015	0.596585	0.00241	0.00507	0.950998	0.959	0.641	0.989	0.995	0.768	0.995	0.976	0.75
rs4547421	3.3513E-08	0.0312887	0.00567	0.0301474	0.006819	6.01699E-08	0.92631	0.498014	0.000566	0.000311	0.530578	0.00093	0.34027	0.273056	0.67	0.558	0.998	0.998	0.341	0.997	0.777	0.801
rs9597410	3.3518E-08	-0.036362	0.00659	-0.036362	0.006585	6.0182E-08	0.64889	0.087187	8.15E-06	0.306249	0.365743	0.00403	0.10639	0.318629	0.68	0.894	1	0.702	0.812	0.987	0.908	0.842
rs12715564	3.352E-08	0.0280146	0.00507	0.0280146	0.005073	6.01854E-08	0.06034	0.558652	0.035299	0.000416	0.162667	0.00073	0.43863	0.696774	0.928	0.848	0.931	0.999	0.917	0.999	0.855	0.828
rs7188372	3.3522E-08	-0.06987	0.01265	-0.06987	0.012653	6.01904E-08	0.72423	0.550224	1.05E-05	0.054281	0.647813	0.00266	0.92095	0.110662	0.767	0.795	1	0.932	0.712	0.993	0.644	0.887
rs11864229	3.3542E-08	-0.069871	0.01265	-0.069871	0.012653	6.02334E-08	0.72497	0.551005	1.05E-05	0.054314	0.647411	0.00266	0.92192	0.110932	0.767	0.795	1	0.932	0.712	0.993	0.644	0.887
rs1054168	3.3546E-08	0.0291898	0.00529	0.0291898	0.005286	6.0241E-08	0.08894	0.422618	1.46E-05	0.046051	0.872672	0.00415	0.93729	0.121129	0.891	0.819	1	0.944	0.561	0.988	0.681	0.885
rs55784848	3.3577E-08	0.0300336	0.00544	0.0300336	0.005439	6.03074E-08	0.06662	0.895162	0.002665	0.00281	0.50146	0.00193	0.03333	0.63262	0.917	0.762	0.996	0.995	0.805	0.997	0.953	0.706
rs6428434	3.3581E-08	0.0282729	0.00512	0.0282729	0.00512	6.03172E-08	0.42133	0.466269	0.000394	0.006731	0.06176	0.02718	0.0797	0.068449	0.869	0.721	0.999	0.992	0.955	0.941	0.942	0.932
rs6862302	3.3592E-08	-0.041703	0.00755	-0.041703	0.007553	6.03397E-08	0.58581	0.061801	0.000768	0.133872	0.129445	0.00396	0.01415	0.491303	0.862	0.936	0.999	0.912	0.938	0.995	0.974	0.872
rs12035375	3.3592E-08	0.0394591	0.00715	0.0394591	0.007146	6.03408E-08	0.06902	0.234056	0.000568	0.593203	0.709978	5.2E-05	0.09945	0.440577	0.886	0.834	0.998	0.433	0.643	1	0.896	0.789
rs4467968	3.3617E-08	0.0309981	0.00561	0.0290383	0.009892	1.06975E-08	0.15584	0.70956	9.93E-09	0.173784	0.894868	0.06702	0.24786	0.06086	0.691	0.333	1	0.327	0.193	0.244	0.591	0.786
rs117299951	3.3639E-08	0.0565868	0.01025	0.0482909	0.016387	3.81339E-08	0.30537	0.942199	0.000184	0.947047	0.008577	5.9E-06	0.8132	0.627656	0.343	0.534	0.999	0.105	0.956	1	0.476	0.599
rs1473092	3.3641E-08	0.0287003	0.0052	0.0287837	0.005337	6.04449E-08	0.19729	0.886986	0.000922	0.007351	0.001741	0.01138	0.73942	0.225167	0.887	0.76	0.998	0.991	0.989	0.975	0.652	0.884
rs62682460	3.3644E-08	-0.040927	0.00741	-0.041587	0.008437	6.04516E-08	0.09369	0.636885	0.000151	0.463455	0.017758	0.00672	0.00669	0.754876	0.906	0.812	1	0.61	0.972	0.98	0.974	0.789
rs4777995	3.3644E-08	0.0281424	0.0051	0.0267525	0.007313	6.04521E-08	0.79155	0.013693	0.001712	0.00322	0.349815	0.0005	0.53847	0.087916	0.757	0.93	0.996	0.993	0.81	0.999	0.774	0.456
rs137966238	3.3675E-08	0.083046	0.01504	0.083046	0.015041	6.05174E-08	0.37986	0.021275	0.000419	0.069837	0.532036	0.00084	0.29016	0.977186	0.862	0.937	0.999	0.942	0.808	0.999	0.879	0.782
rs183666281	3.3679E-08	-0.085353	0.01546	-0.085353	0.015459	6.05258E-08	0.02625	0.12967	0.001143	0.066328	0.162155	0.00953	0.16673	0.062302	0.956	0.93	0.999	0.961	0.938	0.989	0.935	0.947
rs8192899	3.368E-08	0.0309952	0.00561	0.0290185	0.009862	1.08557E-08	0.16487	0.707235	1.01E-08	0.167213	0.896134	0.06776	0.24813	0.060751	0.686	0.336	1	0.339	0.197	0.248	0.593	0.787
rs7514524	3.3681E-08	-0.031773	0.00575	-0.03282	0.006472	4.25394E-08	0.12033	0.774771	0.000123	0.000697	0.116555	0.19792	0.11095	0.09149	0.884	0.736	1	0.998	0.899	0.305	0.903	0.9
rs791158	3.3684E-08	0.0363567	0.00659	0.0363567	0.006585	6.0538E-08	0.65986	0.085063	8.93E-06	0.305418	0.381815	0.00365	0.11502	0.311474	0.682	0.894	1	0.703	0.806	0.989	0.904	0.843
rs4885970	3.3695E-08	-0.036358	0.00659	-0.036358	0.006585	6.05604E-08	0.64904	0.087189	8.11E-06	0.308934	0.365476	0.00402	0.10634	0.318617	0.68	0.893	1	0.699	0.811	0.987	0.908	0.842
rs117530864	3.3696E-08	0.0556865	0.01009	0.0500863	0.01679	2.72924E-08	0.17178	0.959225	6.81E-05	0.696264	0.354441	1.4E-05	0.0175	0.57658	0.785	0.572	1	0.047	0.661	1	0.931	0.431
rs171697	3.3719E-08	0.0306299	0.00555	0.0308596	0.006083	6.06127E-08	0.35501	0.002411	0.006491	0.169387	0.032868	0.00025	0.70823	0.440263	0.877	0.967	0.99	0.877	0.967	1	0.807	0.866
rs34080972	3.3767E-08	-0.041685	0.00755	-0.041685	0.007551	6.07154E-08	0.57807	0.063206	0.000763	0.134983	0.128523	0.00398	0.0141	0.49279	0.863	0.936	0.999	0.912	0.938	0.995	0.974	0.871
rs34415945	3.3768E-08	0.0313781	0.00568	0.0313781	0.005684	6.0717E-08	0.94218	0.743816	0.001399	0.001511	0.364987	0.00351	0.37857	0.098695	0.778	0.817	0.998	0.997	0.852	0.994	0.86	0.915
rs7626945	3.3771E-08	-0.040922	0.00741	-0.041544	0.008412	6.07246E-08	0.09895	0.637059	0.00015	0.474473	0.017823	0.00637	0.00676	0.75656	0.904	0.81	1	0.598	0.971	0.981	0.974	0.787
rs1524033	3.3819E-08	0.0474759	0.0086	0.0474759	0.0086	6.08283E-08	0.39851	0.093715	0.000423	0.023779	0.050739	0.04267	0.02631	0.364792	0.887	0.93	0.999	0.982	0.965	0.916	0.968	0.892
rs9747029	3.3827E-08	0.0392886	0.00712	0.0392886	0.007117	6.08452E-08	0.59488	0.835322	0.019954	0.002139	0.007517	0.0081	0.0205	0.270702	0.863	0.838	0.971	0.997	0.985	0.988	0.97	0.903
rs106459	3.3936E-08	0.0489042	0.00886	0.0658143	0.017603	1.29274E-08	0.00213	0.056621	0.117579	4.8E-06	0.158709	0.01973	0.55379	0.033928	0.965	0.895	0.397	1	0.741	0.555	0.588	0.921
rs79556132	3.3936E-08	-0.067321	0.0122	-0.067321	0.012196	6.1079E-08	0.19002	0.921583	3.56E-05	0.055044	0.451257	0.00262	0.90009	0.12173	0.878	0.749	1	0.943	0.804	0.995	0.722	0.898
rs6966915	3.3937E-08	0.0291763	0.00529	0.0291763	0.005286	6.10813E-08	0.06928	0.419012	1.46E-05	0.049107	0.864024	0.00424	0.93749	0.12129	0.898	0.82	1	0.941	0.558	0.988	0.681	0.885
rs13319147	3.3943E-08	-0.028322	0.00513	-0.027398	0.008218	2.38913E-08	0.80605	0.042408	0.01483	0.998029	0.070168	2.5E-07	0.10098	0.684506	0.565	0.879	0.847	0.143	0.894	1	0.867	0.667
rs144961405	3.3944E-08	-0.029083	0.00527	-0.029083	0.005269	5.38306E-08	0.95618	0.373753	0.014358	0.486334	0.138958	1.6E-06	0.17662	0.091975	0.705	0.815	0.938	0.532	0.886	1	0.87	0.889
rs2885258	3.3953E-08	-0.031785	0.00576	-0.031893	0.005833	4.91807E-08	0.14681	0.798028	0.000124	0.000913	0.108118	0.1681	0.13299	0.088368	0.879	0.745	1	0.998	0.908	0.392	0.897	0.904
rs56070621	3.3971E-08	0.0279006	0.00505	0.0279006	0.005055	6.11546E-08	0.32924	0.587917	0.002757	0.002778	0.069173	0.00919	0.30026	0.019322	0.886	0.753	0.997	0.996	0.954	0.986	0.893	0.954
rs927710	3.3973E-08	0.0280408	0.00508	0.0280408	0.00508	6.1158E-08	0.18522	0.479083	0.003292	0.00423	0.36632	0.00327	0.49417	0.032861	0.908	0.87	0.996	0.995	0.873	0.996	0.858	0.948
rs34510180	3.399E-08	-0.036351	0.00659	-0.036351	0.006586	6.11953E-08	0.66802	0.089929	8.58E-06	0.305368	0.383008	0.00379	0.10715	0.323236	0.683	0.892	1	0.702	0.805	0.988	0.907	0.841
rs12655260	3.3996E-08	-0.042759	0.00775	-0.042759	0.007747	6.12072E-08	0.37316	0.365919	0.00124	0.01508	0.268962	0.00325	0.0611	0.694406	0.882	0.883	0.998	0.987	0.896	0.996	0.951	0.842
rs9597419	3.4003E-08	-0.036351	0.00659	-0.036351	0.006586	6.12235E-08	0.66802	0.089931	8.57E-06	0.305421	0.383016	0.00379	0.10715	0.323241	0.683	0.892	1	0.702	0.805	0.988	0.907	0.841
rs192960403	3.4005E-08	0.0828966	0.01502	0.091522	0.028746	3.8846E-08	0.00316	0.960155	0.000274	0.951672	0.140912	0.00091	0.00043	0.785073	0.953	0.665	0.999	0.163	0.867	0.996	0.989	0.599
rs3901859	3.4031E-08	-0.027822	0.00504	-0.027822	0.005041	6.12836E-08	0.86628	0.714633	0.002272	0.004997	0.74735	0.00046	0.16702	0.122888	0.777	0.718	0.996	0.992	0.715	0.999	0.896	0.897
rs80334136	3.4038E-08	0.055668	0.01009	0.050063	0.016791	2.74987E-08	0.17178	0.9595	6.85E-05	0.695829	0.355336	1.4E-05	0.01752	0.57622	0.785	0.572	1	0.047	0.66	1	0.931	0.43

Table S3

rs59666259	3.4054E-08	0.0474594	0.0086	0.0474594	0.008599	6.13323E-08	0.39384	0.094	0.000424	0.024032	0.050853	0.04269	0.0262	0.364751	0.888	0.93	0.999	0.982	0.965	0.916	0.968	0.892
rs61188304	3.4059E-08	0.0474592	0.0086	0.0474592	0.008599	6.13432E-08	0.39384	0.094	0.000424	0.024032	0.050854	0.0427	0.0262	0.364753	0.888	0.93	0.999	0.982	0.965	0.916	0.968	0.892
rs9830712	3.407E-08	-0.040911	0.00741	-0.041541	0.008427	6.13656E-08	0.09887	0.637075	0.00015	0.477164	0.017824	0.00637	0.00676	0.756262	0.904	0.809	1	0.596	0.971	0.981	0.974	0.787
rs9597416	3.407E-08	-0.036345	0.00659	-0.036345	0.006585	6.13674E-08	0.67009	0.090084	8.67E-06	0.304616	0.382842	0.0038	0.10648	0.323371	0.684	0.892	1	0.703	0.806	0.988	0.908	0.841
rs9869128	3.4074E-08	-0.040911	0.00741	-0.041541	0.008426	6.13756E-08	0.09887	0.637054	0.00015	0.476953	0.017822	0.00638	0.00676	0.756551	0.904	0.809	1	0.596	0.971	0.981	0.974	0.787
rs6967164	3.4079E-08	0.0454165	0.00823	0.0454165	0.008229	6.13856E-08	0.9138	0.055972	0.000566	0.074778	0.393958	0.00652	0.09332	0.006516	0.826	0.937	0.999	0.951	0.87	0.991	0.943	0.968
rs59977751	3.4105E-08	-0.036274	0.00657	-0.035469	0.007155	6.14421E-08	0.22808	0.718194	0.001407	0.124081	0.053856	1.2E-05	0.7253	0.376845	0.521	0.645	0.996	0.831	0.926	1	0.692	0.796
rs9591763	3.4113E-08	-0.036344	0.00659	-0.036344	0.006585	6.14591E-08	0.66987	0.090084	8.67E-06	0.304853	0.38284	0.0038	0.10648	0.323371	0.684	0.892	1	0.703	0.806	0.988	0.908	0.841
rs149301502	3.4126E-08	-0.094608	0.01714	-0.094608	0.017143	6.14873E-08	0.05155	0.943638	0.000504	0.095305	0.296546	0.00142	0.03365	0.899922	0.929	0.8	0.999	0.926	0.877	0.998	0.957	0.797
rs28578538	3.4129E-08	0.0319055	0.00578	0.0319055	0.005781	6.1494E-08	0.15645	0.688142	0.006692	0.003474	0.653949	0.00336	0.04442	0.043082	0.914	0.847	0.992	0.995	0.801	0.996	0.958	0.944
rs791160	3.4138E-08	0.0363365	0.00658	0.0363365	0.006584	6.15118E-08	0.64929	0.085062	8.93E-06	0.305398	0.381813	0.00365	0.11502	0.311474	0.679	0.894	1	0.702	0.806	0.989	0.904	0.843
rs583484	3.4139E-08	-0.033188	0.00601	-0.033188	0.006014	6.15149E-08	0.43468	0.695785	0.01749	0.016615	0.00066	0.00129	0.48867	0.325988	0.872	0.842	0.974	0.985	0.993	0.998	0.856	0.887
rs13378787	3.4142E-08	0.0346595	0.00628	0.0346595	0.00628	6.15213E-08	0.88428	0.332296	0.000745	0.008022	0.200626	0.00278	0.36844	0.353984	0.78	0.875	0.999	0.991	0.906	0.996	0.869	0.873
rs7700672	3.4167E-08	0.0403671	0.00731	0.0408632	0.008567	6.15754E-08	0.02767	0.440757	0.039444	0.000451	0.745768	0.00027	0.1209	0.380576	0.927	0.828	0.877	0.998	0.529	0.999	0.908	0.838
rs6819498	3.4174E-08	-0.029999	0.00544	-0.031985	0.008081	6.15902E-08	0.01582	0.253824	0.013705	0.014258	0.791532	0.00059	0.00133	0.785177	0.944	0.877	0.972	0.984	0.584	0.999	0.985	0.797
rs6786551	3.4195E-08	-0.040906	0.00741	-0.041537	0.008427	6.16348E-08	0.09887	0.637179	0.00015	0.477313	0.017839	0.00638	0.00676	0.756311	0.904	0.809	1	0.596	0.971	0.981	0.974	0.787
rs791163	3.42E-08	0.0363344	0.00658	0.0363344	0.006584	6.16465E-08	0.64921	0.085062	8.93E-06	0.305535	0.381827	0.00365	0.11502	0.311476	0.679	0.894	1	0.702	0.806	0.989	0.904	0.843
rs791165	3.4202E-08	0.0363343	0.00658	0.0363343	0.006584	6.16503E-08	0.64921	0.085062	8.93E-06	0.305547	0.381825	0.00365	0.11502	0.311476	0.679	0.894	1	0.702	0.806	0.989	0.904	0.843
rs56297802	3.4232E-08	-0.028724	0.00521	-0.030177	0.008648	6.1716E-08	0.00304	0.304437	0.005873	0.002917	0.597461	0.00243	0.00509	0.949999	0.959	0.641	0.989	0.995	0.767	0.995	0.976	0.75
rs4328653	3.4253E-08	0.0474727	0.0086	0.0474727	0.008603	6.17601E-08	0.39323	0.09333	0.000426	0.023639	0.050908	0.04329	0.02638	0.36333	0.888	0.93	0.999	0.982	0.965	0.914	0.968	0.892
rs4473400	3.4276E-08	0.0474716	0.0086	0.0474716	0.008603	6.18095E-08	0.39332	0.093336	0.000426	0.023621	0.05088	0.04332	0.0264	0.363224	0.888	0.93	0.999	0.982	0.965	0.914	0.968	0.892
rs732528	3.4277E-08	0.0340334	0.00617	0.0340334	0.006168	6.18111E-08	0.43161	0.004562	0.004366	0.012586	0.218282	0.00549	0.17685	0.216953	0.889	0.969	0.996	0.99	0.921	0.994	0.93	0.917
rs2375063	3.4312E-08	0.04747	0.0086	0.04747	0.008603	6.18869E-08	0.39331	0.093336	0.000426	0.023649	0.05088	0.04332	0.0264	0.363224	0.888	0.93	0.999	0.982	0.965	0.914	0.968	0.892
rs72973959	3.4323E-08	0.0805467	0.0146	0.0805467	0.014598	6.19115E-08	0.50808	0.384653	0.031602	0.000683	0.239442	3.1E-05	0.48216	0.738609	0.786	0.807	0.893	0.997	0.839	1	0.503	0.745
rs111479670	3.4326E-08	-0.033166	0.00601	-0.033166	0.006011	6.1918E-08	0.45468	0.770326	0.015938	0.014091	0.000872	0.00173	0.42728	0.252894	0.872	0.837	0.978	0.988	0.993	0.998	0.87	0.899
rs7147171	3.4373E-08	0.0279992	0.00507	0.0279992	0.005075	6.20176E-08	0.70534	0.250963	0.00108	0.008502	0.367887	0.01545	0.00551	0.064828	0.769	0.896	0.999	0.991	0.869	0.973	0.98	0.936
rs56242242	3.4416E-08	-0.033034	0.00599	-0.042129	0.01097	6.21118E-08	2.9E-05	0.074956	0.07486	0.048124	0.078597	0.00058	0.11701	0.323261	0.986	0.935	0.849	0.964	0.954	0.998	0.939	0.896
rs115955782	3.4424E-08	0.0377518	0.00684	0.0387594	0.010337	6.21287E-08	0.08986	0.006292	0.000932	0.09631	0.039786	0.00172	0.26805	0.124944	0.566	0.956	0.999	0.92	0.96	0.997	0.884	0.909
rs13404751	3.4452E-08	0.0290574	0.00527	0.0290574	0.005267	6.21885E-08	0.68832	0.062146	0.015655	0.046113	0.064226	0.00068	0.00372	0.565419	0.771	0.934	0.978	0.967	0.957	0.999	0.983	0.859
rs34159555	3.4453E-08	-0.035204	0.00638	-0.035204	0.006381	6.21907E-08	0.50009	0.905898	0.000444	0.018899	0.288055	0.00016	0.72451	0.71223	0.63	0.733	0.999	0.972	0.826	1	0.721	0.757
rs13274155	3.4455E-08	0.0277706	0.00503	0.0294416	0.007105	6.21945E-08	0.71084	0.371385	0.024224	0.000206	0.00031	0.00619	0.59764	0.813467	0.724	0.852	0.939	0.999	0.994	0.98	0.797	0.786
rs115653994	3.4465E-08	0.07879	0.01428	0.07879	0.014281	6.22156E-08	0.05321	0.646894	0.017357	0.027539	0.822473	9.4E-05	0.03625	0.074413	0.926	0.825	0.967	0.974	0.61	1	0.953	0.922
rs62517962	3.449E-08	-0.072637	0.01317	-0.073547	0.013837	6.22713E-08	0.06091	0.573695	0.002275	0.043838	0.053214	0.01264	0.00127	0.664752	0.941	0.872	0.998	0.972	0.965	0.982	0.987	0.859
rs75027170	3.4501E-08	-0.068383	0.0124	-0.068383	0.012395	6.22934E-08	0.57564	0.644139	2.35E-05	0.036196	0.604789	0.0025	0.84345	0.099849	0.796	0.787	1	0.955	0.734	0.994	0.633	0.894
rs12736645	3.4513E-08	0.0282467	0.00512	0.0282467	0.00512	6.23197E-08	0.42901	0.47506	0.000394	0.007191	0.062214	0.02676	0.07802	0.069095	0.868	0.724	0.999	0.992	0.955	0.943	0.943	0.932
rs1808460	3.452E-08	0.027772	0.00503	0.0294401	0.007097	6.23342E-08	0.7116	0.371243	0.024063	0.000205	0.000313	0.00626	0.59709	0.812234	0.725	0.852	0.939	0.999	0.994	0.98	0.797	0.786
rs6717335	3.4534E-08	0.0474428	0.0086	0.0474428	0.0086	6.23653E-08	0.39295	0.093925	0.000427	0.023944	0.050905	0.04295	0.02641	0.365152	0.888	0.93	0.999	0.982	0.965	0.916	0.968	0.892
rs1987218	3.4558E-08	0.0294099	0.00533	0.0294099	0.005331	6.24158E-08	0.437	0.056728	0.008987	0.00117	0.19446	0.01027	0.04676	0.421396	0.886	0.941	0.99	0.998	0.925	0.987	0.961	0.888
rs6577752	3.4558E-08	0.0294099	0.00533	0.0294099	0.005331	6.24158E-08	0.437	0.056728	0.008987	0.00117	0.19446	0.01027	0.04676	0.421396	0.886	0.941	0.99	0.998	0.925	0.987	0.961	0.888
rs16970821	3.456E-08	-0.037308	0.00676	-0.037308	0.006763	6.24209E-08	0.18244	0.094696	0.001127	0.008387	0.311806	0.01137	0.01304	0.707326	0.908	0.924	0.999	0.991	0.884	0.982	0.973	0.758
rs7191849	3.456E-08	-0.028363	0.00514	-0.02921	0.007284	6.24218E-08	0.69117	0.771529	0.023006	0.000236	0.001443	0.00241	0.28971	0.260205	0.794	0.783	0.939	0.999	0.989	0.993	0.858	0.581
rs62389594	3.4563E-08	-0.042389	0.00768	-0.045794	0.01001	6.24266E-08	0.40104	0.045048	0.021609	0.008682	0.020134	0.00451	0.04109	0.024365	0.732	0.944	0.968	0.992	0.978	0.994	0.962	0.956
rs889978	3.4568E-08	0.0277721	0.00503	0.0294437	0.00711	6.24378E-08	0.71367	0.372407	0.024386	0.000205	0.000308	0.00617	0.60065	0.814411	0.724	0.851	0.938	0.999	0.994	0.98	0.796	0.786
rs12550744	3.4569E-08	0.0282195	0.00512	0.0282195	0.005115	6.24395E-08	0.93964	0.128361	0.007969	0.101471	0.011463	0.00108	0.00661	0.768635	0.802	0.917	0.989	0.93	0.981	0.999	0.979	0.832
rs2015063	3.4569E-08	0.0277705	0.00503	0.0294413	0.007108	6.24411E-08	0.71277	0.37218	0.024337	0.000205	0.000309	0.00618	0.59964	0.81411	0.724	0.851	0.938	0.999	0.994	0.98	0.796	0.786
rs112084281	3.4576E-08	-0.081786	0.01483	-0.081786	0.014826	6.24556E-08	0.80784	0.9797	0.001836	0.013803	0.074286	0.00372	0.06363	0.253367	0.831	0.813	0.998	0.988	0.953	0.995	0.95	0.899
rs4483630	3.4591E-08	-0.027792	0.00504	-0.034433	0.009264	6.13248E-08	0.0578	0.176152	0.017147	0.19662	0.008107	0.00224	4.1E-05	0.592181	0.931	0.903	0.961	0.846	0.982	0.989	0.995	0.722
rs11714213	3.4594E-08	0.0290434	0.00526	0.0290434	0.005265	6.24952E-08	0.96889	0.701013	0.012934	0.125824	0.387585	4.6E-06	0.05194	0.513723	0.764	0.8	0.969	0.88	0.824	1	0.938	0.824
rs55872267	3.4596E-08	0.0318911	0.00578	0.0318911	0.005781	6.24992E-08	0.15662	0.688656	0.006645	0.003469	0.656508	0.0034	0.04492	0.043062	0.913	0.847	0.992	0.995	0.8	0.996	0.957	0.944
rs116218948	3.4604E-08	-0.037112	0.00673	-0.037112	0.006728	6.25155E-08	0.03302	0.109839	0.00106	0.354633	0.322101	0.00067	0.05629	0.332614	0.938	0.913	0.998	0.725	0.866	0.999	0.948	0.875
rs28803590	3.4615E-08	-0.035036	0.00635	-0.036268	0.010302	5.08401E-08	0.3954	0.903502	0.011981	1.88E-05	0.736903	0.00481	0.00207	0.711617	0.816	0.705	0.955	1	0.495	0.977	0.978	0.758
rs9355498	3.462E-08	0.0299886	0.00544	0.0299886	0.005436	6.255E-08	0.05832	0.921938	0.00305	0.002891	0.50265	0.00201	0.03055	0.688338	0.922	0.769	0.995	0.995	0.808	0.997	0.955	0.721
rs76712264	3.4623E-08	-0.068321	0.01239	-0.068321	0.012385	6.25562E-08	0.45281	0.182133	0.002373	0.010906	0.00708	0.00111	0.3249	0.821358	0.837	0.592	0.996	0.986	0.979	0.998	0.857	0.78
rs113650580	3.4627E-08	0.0299884	0.00544	0.0299884	0.005436	6.25649E-08	0.05831	0.921943	0.003049	0.00289	0.502645	0.00201	0.03055	0.688342	0.922	0.769	0.995	0.995	0.808	0.997	0.955	0.721
rs9364754	3.4631E-08	0.0299882	0.00544	0.0299882	0.005436	6.25735E-08	0.05831	0.921945	0.003049	0.00289	0.502645	0.00201	0.03055	0.688344	0.922	0.769	0.995	0.995	0.808	0.997	0.955	0.721

Table S3

rs75315131	3.4632E-08	0.0299882	0.00544	0.0299882	0.005436	6.2577E-08	0.05831	0.921944	0.003049	0.00289	0.502645	0.00201	0.03055	0.688342	0.922	0.769	0.995	0.995	0.808	0.997	0.955	0.721
rs77732361	3.4632E-08	0.0299882	0.00544	0.0299882	0.005436	6.2577E-08	0.05831	0.921944	0.003049	0.00289	0.502645	0.00201	0.03055	0.688342	0.922	0.769	0.995	0.995	0.808	0.997	0.955	0.721
rs78562461	3.4632E-08	0.0299882	0.00544	0.0299882	0.005436	6.2577E-08	0.05831	0.921944	0.003049	0.00289	0.502645	0.00201	0.03055	0.688342	0.922	0.769	0.995	0.995	0.808	0.997	0.955	0.721
rs28885506	3.4646E-08	-0.035054	0.00635	-0.036221	0.010322	5.12265E-08	0.38798	0.889353	0.012085	1.93E-05	0.73139	0.00457	0.00208	0.729312	0.816	0.702	0.954	1	0.491	0.978	0.978	0.754
rs4567997	3.4652E-08	-0.028918	0.00524	-0.028917	0.00542	6.26195E-08	0.25482	0.238432	0.004049	0.072688	0.145699	0.00028	0.00481	0.691031	0.639	0.88	0.994	0.937	0.916	0.999	0.977	0.814
rs396755	3.4658E-08	-0.028629	0.00519	-0.028629	0.00519	6.26315E-08	0.95095	0.007528	0.014815	0.059953	0.018436	0.00024	0.41618	0.527444	0.799	0.958	0.978	0.956	0.976	1	0.868	0.859
rs117634579	3.4692E-08	0.029231	0.0053	0.029231	0.005299	6.2706E-08	0.30067	0.452995	0.003946	0.002226	0.298705	0.00348	0.07558	0.753079	0.889	0.87	0.995	0.996	0.888	0.995	0.945	0.833
rs2496038	3.4699E-08	-0.034275	0.00621	-0.034275	0.006214	6.27215E-08	0.56839	0.561961	0.00508	0.344393	0.103197	6.1E-05	0.09925	0.058628	0.834	0.835	0.991	0.726	0.931	1	0.928	0.927
rs4974084	3.472E-08	-0.030081	0.00545	-0.028968	0.006337	6.2767E-08	0.21223	0.117922	0.001198	0.026485	0.129104	4.6E-05	0.8373	0.799779	0.522	0.861	0.997	0.959	0.884	1	0.581	0.648
rs11417832	3.4733E-08	-0.029593	0.00537	-0.029593	0.005365	6.27932E-08	0.29684	0.204113	0.005323	0.000495	0.197	0.00445	0.60555	0.50218	0.887	0.9	0.993	0.998	0.912	0.994	0.83	0.86
rs28475169	3.4744E-08	-0.029594	0.00537	-0.029594	0.005365	6.28185E-08	0.29847	0.204113	0.005323	0.000492	0.197	0.00445	0.60555	0.50218	0.887	0.9	0.993	0.998	0.912	0.994	0.83	0.86
rs2015032	3.4772E-08	0.0277656	0.00503	0.0294366	0.007109	6.28786E-08	0.71277	0.372499	0.024408	0.000205	0.000309	0.00618	0.59994	0.814527	0.724	0.851	0.938	0.999	0.994	0.98	0.796	0.786
rs2256332	3.4784E-08	-0.02885	0.00523	-0.02885	0.005231	6.29038E-08	0.50093	0.571775	0.000425	0.182796	0.353041	0.00031	0.00578	0.390123	0.81	0.799	0.999	0.811	0.817	0.999	0.97	0.606
rs11774515	3.4787E-08	0.0277489	0.00503	0.0293397	0.006957	6.29106E-08	0.713	0.364011	0.02301	0.00023	0.000349	0.0062	0.59198	0.798347	0.727	0.855	0.944	0.999	0.994	0.981	0.8	0.791
rs2317794	3.4787E-08	0.0277489	0.00503	0.0293397	0.006957	6.29106E-08	0.713	0.364011	0.02301	0.00023	0.000349	0.0062	0.59198	0.798347	0.727	0.855	0.944	0.999	0.994	0.981	0.8	0.791
rs61859614	3.4792E-08	-0.033023	0.00599	-0.042158	0.010989	6.29206E-08	2.8E-05	0.073936	0.075679	0.047554	0.078741	0.00058	0.11749	0.327083	0.986	0.935	0.847	0.964	0.954	0.998	0.939	0.895
rs4134493	3.4813E-08	0.0277482	0.00503	0.0293393	0.006958	6.29673E-08	0.713	0.363994	0.023006	0.00023	0.000349	0.00621	0.59204	0.798329	0.727	0.855	0.944	0.999	0.994	0.981	0.8	0.791
rs12144716	3.4813E-08	-0.03176	0.00576	-0.031766	0.005763	5.11887E-08	0.14755	0.799604	0.000125	0.000966	0.108327	0.16596	0.1334	0.088532	0.879	0.746	1	0.998	0.909	0.4	0.897	0.904
rs4900595	3.4836E-08	0.0279598	0.00507	0.0279598	0.00507	6.30157E-08	0.69731	0.251705	0.000994	0.008705	0.378766	0.01519	0.00612	0.067673	0.766	0.896	0.999	0.991	0.865	0.973	0.979	0.935
rs7622302	3.4842E-08	-0.028113	0.0051	-0.028113	0.005097	6.30006E-08	0.65317	0.105407	0.028501	0.116304	0.02448	6.2E-06	0.37686	0.698622	0.808	0.899	0.924	0.885	0.964	1	0.842	0.703
rs112333256	3.4845E-08	0.027896	0.00506	0.027896	0.005058	6.30361E-08	0.31258	0.600286	0.002632	0.003458	0.081462	0.00776	0.32507	0.018463	0.888	0.755	0.997	0.995	0.95	0.989	0.888	0.954
rs9458619	3.4847E-08	0.0310447	0.00563	0.0310447	0.005629	6.30405E-08	0.17885	0.388588	0.002085	0.015178	0.98197	0.00347	0.03527	0.020727	0.904	0.873	0.997	0.986	0.685	0.995	0.959	0.952
rs531901511	3.4858E-08	-0.069254	0.01256	-0.069254	0.012557	6.30639E-08	0.35469	0.658065	6.65E-06	0.046056	0.75352	0.00395	0.79182	0.121768	0.822	0.773	1	0.938	0.67	0.988	0.601	0.88
rs7451965	3.4865E-08	0.0310442	0.00563	0.0310442	0.005629	6.3079E-08	0.17884	0.388584	0.002085	0.015178	0.981877	0.00347	0.03527	0.020727	0.904	0.873	0.997	0.986	0.685	0.995	0.959	0.952
rs12596007	3.4868E-08	-0.069788	0.01265	-0.069788	0.012654	6.30842E-08	0.72931	0.549054	1.02E-05	0.057233	0.650489	0.00265	0.92213	0.110388	0.765	0.794	1	0.928	0.71	0.993	0.643	0.886
rs9456802	3.4877E-08	0.0310438	0.00563	0.0310438	0.005629	6.31052E-08	0.17905	0.388588	0.002085	0.015182	0.981975	0.00347	0.03527	0.020727	0.904	0.873	0.997	0.986	0.685	0.995	0.959	0.952
rs10246824	3.4886E-08	0.0677999	0.01229	0.0677999	0.012294	6.3125E-08	0.31528	0.677781	0.000206	0.014312	0.115085	0.01175	0.02803	0.450415	0.874	0.826	1	0.985	0.93	0.977	0.96	0.681
rs34612871	3.4887E-08	0.0310436	0.00563	0.0310436	0.005629	6.31252E-08	0.17905	0.388588	0.002085	0.015187	0.981975	0.00347	0.03527	0.020727	0.904	0.873	0.997	0.986	0.685	0.995	0.959	0.952
rs4308726	3.4912E-08	0.027757	0.00503	0.029425	0.0071	6.31795E-08	0.70954	0.371717	0.024243	0.000207	0.000312	0.00623	0.5971	0.813152	0.724	0.852	0.939	0.999	0.994	0.98	0.797	0.786
rs147467052	3.4912E-08	-0.036313	0.00658	-0.036313	0.006585	6.31798E-08	0.66066	0.090406	8.68E-06	0.307298	0.383639	0.00379	0.10644	0.32307	0.681	0.892	1	0.7	0.805	0.988	0.907	0.84
rs59069439	3.4912E-08	0.0277547	0.00503	0.0294198	0.007099	6.31809E-08	0.70878	0.371509	0.024214	0.000208	0.000312	0.00621	0.59777	0.813439	0.724	0.852	0.939	0.999	0.994	0.98	0.797	0.786
rs2317780	3.4925E-08	0.0277544	0.00503	0.0294196	0.007099	6.32077E-08	0.70878	0.371505	0.024219	0.000208	0.000312	0.00621	0.59776	0.813432	0.724	0.852	0.939	0.999	0.994	0.98	0.797	0.786
rs199584547	3.4933E-08	0.055287	0.01003	0.0573711	0.012502	6.32257E-08	0.26064	0.281666	0.011664	0.071304	0.001604	0.00102	0.05766	0.0994	0.669	0.887	0.983	0.947	0.991	0.998	0.949	0.923
rs3128965	3.4946E-08	0.0375312	0.00681	0.0374937	0.006894	6.32531E-08	0.85086	0.361144	7.36E-05	0.860216	0.032186	0.00067	0.033	0.696656	0.702	0.797	1	0.256	0.947	0.998	0.936	0.724
rs4481587	3.4953E-08	0.0277561	0.00503	0.0294236	0.0071	6.3268E-08	0.70986	0.37149	0.024242	0.000207	0.000312	0.00623	0.59729	0.813505	0.724	0.852	0.939	0.999	0.994	0.98	0.797	0.786
rs62375330	3.4956E-08	-0.041225	0.00748	-0.041225	0.007476	6.32755E-08	0.30866	0.476625	0.00029	0.019641	0.081573	0.00579	0.3551	0.162959	0.879	0.716	0.999	0.982	0.945	0.991	0.871	0.906
rs148038397	3.4962E-08	-0.037097	0.00673	-0.037097	0.006727	6.32889E-08	0.0326	0.108597	0.001111	0.372901	0.310415	0.00063	0.05475	0.328333	0.938	0.912	0.998	0.709	0.868	0.999	0.948	0.874
rs4272370	3.4965E-08	0.0277548	0.00503	0.0294209	0.007099	6.32939E-08	0.70854	0.37144	0.024218	0.000208	0.000312	0.00622	0.59743	0.812855	0.724	0.852	0.939	0.999	0.994	0.98	0.797	0.786
rs851023	3.4973E-08	0.0375275	0.00681	0.0365978	0.009034	6.33113E-08	0.43334	0.334905	0.000143	0.357876	0.176512	0.00055	0.00619	0.194864	0.796	0.815	1	0.608	0.864	0.998	0.966	0.486
rs112052450	3.4973E-08	0.0299793	0.00544	0.0299793	0.005436	6.33115E-08	0.05844	0.921949	0.003049	0.002926	0.502636	0.00201	0.03055	0.688345	0.922	0.769	0.995	0.995	0.808	0.997	0.955	0.721
rs11160766	3.4995E-08	0.0278001	0.00504	0.0279582	0.005199	6.33601E-08	0.94558	0.18175	0.00042	0.019356	0.479936	0.02538	0.00264	0.06711	0.813	0.907	0.999	0.983	0.838	0.948	0.984	0.935
rs112437837	3.5008E-08	-0.068276	0.01238	-0.068276	0.012382	6.33875E-08	0.60683	0.64691	2.49E-05	0.037486	0.586346	0.00247	0.85446	0.09254	0.792	0.788	1	0.954	0.741	0.994	0.637	0.897
rs10922911	3.5009E-08	0.0282377	0.00512	0.0295698	0.006219	5.39617E-08	0.5874	0.185888	3.8E-05	0.017993	0.224864	0.12584	0.06373	0.008312	0.811	0.883	1	0.975	0.87	0.566	0.939	0.959
rs12595936	3.502E-08	-0.069778	0.01265	-0.069778	0.012654	6.34126E-08	0.7293	0.54903	1.02E-05	0.05727	0.650536	0.00265	0.92151	0.110618	0.765	0.794	1	0.928	0.71	0.993	0.643	0.886
rs182917328	3.5026E-08	0.0622413	0.01129	0.0577651	0.01616	3.7862E-08	0.07784	0.515071	0.001059	0.979248	0.642011	1.3E-06	0.09321	0.980717	0.841	0.696	0.993	0.124	0.547	1	0.859	0.568
rs4906371	3.507E-08	0.0279478	0.00507	0.0279478	0.005068	6.35217E-08	0.69444	0.252284	0.000981	0.008724	0.381014	0.01515	0.00625	0.068235	0.766	0.895	0.999	0.991	0.865	0.973	0.979	0.934
rs12323602	3.5076E-08	0.0389267	0.00706	0.0389267	0.00706	6.35346E-08	0.3046	0.256732	0.001587	0.094233	0.1226	0.00046	0.08207	0.667979	0.88	0.887	0.998	0.929	0.93	0.999	0.938	0.738
rs79400561	3.5079E-08	0.0787499	0.01428	0.0787499	0.014282	6.354E-08	0.05303	0.646515	0.017378	0.027675	0.820316	9.4E-05	0.03648	0.074627	0.925	0.825	0.967	0.973	0.609	1	0.953	0.922
rs1899565	3.508E-08	0.031163	0.00565	0.0382922	0.009103	6.35425E-08	0.01836	0.011378	0.04429	0.011344	0.213601	0.00569	0.00105	0.463576	0.959	0.963	0.928	0.99	0.922	0.99	0.99	0.887
rs141259350	3.5084E-08	-0.081748	0.01483	-0.081748	0.014826	6.35509E-08	0.80728	0.97805	0.001843	0.013968	0.074245	0.00375	0.06304	0.25332	0.831	0.813	0.998	0.988	0.953	0.995	0.95	0.899
rs1986957	3.5085E-08	0.0378387	0.00686	0.0382255	0.00998	6.35526E-08	0.09184	0.010009	0.000738	0.108449	0.059375	0.00124	0.28498	0.11779	0.561	0.948	0.999	0.907	0.949	0.998	0.876	0.908
rs11400582	3.5101E-08	-0.032444	0.00588	-0.034204	0.00739	6.35871E-08	0.10421	0.389195	0.017361	8.34E-05	0.209049	0.01125	0.01196	0.573833	0.918	0.871	0.967	0.999	0.904	0.975	0.972	0.721
rs7328493	3.5101E-08	0.028011	0.00508	0.028011	0.00508	6.35885E-08	0.19342	0.472904	0.003519	0.004492	0.36206	0.00305	0.48936	0.033101	0.907	0.871	0.996	0.995	0.874	0.996	0.859	0.948
rs2165502	3.5104E-08	-0.035025	0.00635	-0.036205	0.010262	5.24697E-08	0.41653	0.901687	0.011826	2.05E-05	0.748248	0.00471	0.00199	0.724934	0.812	0.705	0.956	1	0.5	0.978	0.978	0.757
rs75436575	3.5109E-08	-0.069772	0.01265	-0.069772	0.012654	6.36048E-08	0.72929	0.549002	1.03E-05	0.057225	0.650721	0.00265	0.92112	0.110773	0.765	0.794	1	0.928	0.71	0.993	0.643	0.886

Table S3

rs79556490	3.5125E-08	-0.035875	0.00651	-0.033295	0.008317	6.36395E-08	0.19976	0.486245	0.000923	0.204622	0.038807	1E-05	0.41475	0.591905	0.475	0.565	0.997	0.71	0.93	1	0.753	0.728
rs56379949	3.514E-08	0.0698985	0.01268	0.0771193	0.021936	9.9425E-09	0.67555	0.109511	6.77E-06	0.000159	0.827717	0.47734	0.0268	0.185215	0.632	0.835	1	0.999	0.343	0.023	0.934	0.8
rs1352675	3.5142E-08	0.0287208	0.00521	0.0287208	0.005209	6.36774E-08	0.82741	0.448382	0.00378	0.014826	0.010409	0.00425	0.0956	0.572093	0.834	0.876	0.996	0.988	0.982	0.995	0.942	0.861
rs10945854	3.515E-08	0.0310361	0.00563	0.0310361	0.005629	6.3693E-08	0.17876	0.388575	0.002085	0.015273	0.981942	0.00348	0.03526	0.020725	0.904	0.873	0.997	0.986	0.685	0.995	0.959	0.952
rs4800947	3.5153E-08	0.0302156	0.00548	0.0289926	0.006722	6.37017E-08	0.97483	0.570528	0.000362	0.000666	0.499569	0.00108	0.43472	0.110216	0.665	0.577	0.999	0.997	0.333	0.996	0.748	0.856
rs5881485	3.5173E-08	0.0310354	0.00563	0.0310354	0.005629	6.37548E-08	0.17876	0.388576	0.002086	0.015272	0.982	0.00348	0.03526	0.020725	0.904	0.873	0.997	0.986	0.685	0.995	0.959	0.952
rs13281432	3.5177E-08	-0.03314	0.00601	-0.03314	0.006011	6.3768E-08	0.45764	0.770326	0.015938	0.01445	0.000872	0.00173	0.42728	0.252894	0.871	0.837	0.978	0.987	0.993	0.998	0.87	0.899
rs73040681	3.5187E-08	-0.037089	0.00673	-0.037089	0.006727	6.37956E-08	0.03259	0.108591	0.001115	0.373152	0.31066	0.00063	0.05478	0.328852	0.938	0.912	0.998	0.709	0.868	0.999	0.948	0.874
rs116240038	3.5193E-08	-0.03314	0.00601	-0.03314	0.006011	6.381E-08	0.45763	0.770327	0.01594	0.014453	0.000872	0.00173	0.42728	0.252894	0.871	0.837	0.978	0.987	0.993	0.998	0.87	0.899
rs7451729	3.5199E-08	0.0310346	0.00563	0.0310346	0.005629	6.38272E-08	0.17858	0.388575	0.002086	0.015267	0.981963	0.00348	0.03526	0.020724	0.904	0.873	0.997	0.986	0.685	0.995	0.959	0.952
rs61859613	3.5201E-08	-0.03301	0.00599	-0.042171	0.011002	6.38333E-08	2.7E-05	0.07387	0.07578	0.048044	0.078756	0.00058	0.1176	0.327753	0.986	0.935	0.847	0.964	0.954	0.998	0.939	0.895
rs73040679	3.5202E-08	-0.037088	0.00673	-0.037088	0.006727	6.38371E-08	0.03259	0.108595	0.001115	0.373155	0.310501	0.00063	0.05479	0.32871	0.938	0.912	0.998	0.709	0.868	0.999	0.948	0.874
rs1954805	3.5206E-08	0.0310344	0.00563	0.0310344	0.005629	6.38477E-08	0.17858	0.388576	0.002086	0.015269	0.981958	0.00348	0.03526	0.020724	0.904	0.873	0.997	0.986	0.685	0.995	0.959	0.952
rs1954804	3.5212E-08	0.0310343	0.00563	0.0310343	0.005629	6.38632E-08	0.17858	0.388576	0.002086	0.015269	0.981953	0.00348	0.03526	0.020724	0.904	0.873	0.997	0.986	0.685	0.995	0.959	0.952
rs13133181	3.5215E-08	0.0314121	0.0057	0.0386423	0.00928	6.38717E-08	0.03599	0.00966	0.036233	0.014076	0.239256	0.00597	0.00049	0.479878	0.951	0.963	0.944	0.988	0.916	0.99	0.991	0.885
rs10876920	3.5217E-08	0.0281238	0.0051	0.0281238	0.005101	6.38782E-08	0.50603	0.255402	0.001589	0.034346	0.349825	0.00175	0.06457	0.020762	0.729	0.891	0.998	0.973	0.869	0.998	0.947	0.951
rs11943397	3.522E-08	0.0311582	0.00565	0.0382826	0.009096	6.38858E-08	0.01885	0.011461	0.044719	0.010845	0.213073	0.0058	0.00105	0.462318	0.958	0.963	0.927	0.99	0.922	0.99	0.99	0.887
rs11643833	3.5227E-08	-0.027845	0.00505	-0.027845	0.005051	6.3906E-08	0.82257	0.099679	0.005007	0.012293	0.467479	0.00039	0.74926	0.037545	0.812	0.913	0.993	0.987	0.829	0.999	0.789	0.938
rs889973	3.523E-08	0.0277472	0.00503	0.0294134	0.00712	6.39133E-08	0.69692	0.371514	0.024238	0.000206	0.000312	0.00621	0.59768	0.813631	0.722	0.851	0.938	0.999	0.994	0.98	0.796	0.785
rs2023014	3.5252E-08	0.0310332	0.00563	0.0310332	0.005629	6.39759E-08	0.17879	0.388588	0.002085	0.015342	0.981724	0.00347	0.03527	0.020727	0.904	0.873	0.997	0.986	0.685	0.995	0.959	0.952
rs76247422	3.5256E-08	0.0389224	0.00706	0.0389224	0.00706	6.39874E-08	0.30246	0.25706	0.001605	0.093341	0.123036	0.00047	0.08208	0.667525	0.88	0.887	0.998	0.93	0.93	0.999	0.938	0.739
rs10976968	3.5261E-08	-0.030082	0.00546	-0.032317	0.009304	6.40001E-08	0.08819	0.065766	0.000131	0.021826	0.003405	0.05451	0.01768	0.783033	0.499	0.908	1	0.97	0.986	0.777	0.961	0.763
rs11756579	3.5267E-08	0.0310327	0.00563	0.0310327	0.005629	6.40156E-08	0.17856	0.388587	0.002085	0.015271	0.982194	0.00349	0.03525	0.020724	0.904	0.873	0.997	0.986	0.685	0.995	0.959	0.952
rs58292605	3.527E-08	0.0310326	0.00563	0.0310326	0.005629	6.40255E-08	0.17855	0.388583	0.002085	0.015272	0.982131	0.00349	0.03525	0.020723	0.904	0.873	0.997	0.986	0.685	0.995	0.959	0.952
rs34446162	3.5296E-08	-0.048726	0.00884	-0.049453	0.009968	6.40961E-08	0.02633	0.931196	0.001195	0.005428	0.922451	0.00758	0.06928	0.032539	0.94	0.795	0.998	0.993	0.647	0.986	0.943	0.942
rs5011431	3.5306E-08	0.0291492	0.00529	0.0291492	0.005288	6.41252E-08	0.08517	0.41765	1.58E-05	0.045824	0.865067	0.00417	0.94525	0.118521	0.892	0.82	1	0.944	0.558	0.988	0.679	0.886
rs13169047	3.5308E-08	-0.030041	0.00545	-0.030041	0.005449	6.41312E-08	0.08015	0.318453	0.002253	0.030717	0.154165	0.00035	0.52268	0.195708	0.915	0.665	0.997	0.971	0.914	0.999	0.826	0.892
rs17701424	3.531E-08	0.0389185	0.00706	0.0389185	0.00706	6.41352E-08	0.30495	0.257005	0.001594	0.094293	0.122395	0.00047	0.08191	0.667646	0.88	0.887	0.998	0.929	0.931	0.999	0.938	0.738
rs2079702	3.5325E-08	0.0437551	0.00794	0.0439953	0.008906	6.41773E-08	0.77395	0.624871	0.004455	0.000783	0.004981	0.00314	0.6925	0.194656	0.779	0.689	0.991	0.997	0.981	0.993	0.603	0.876
rs7138537	3.5326E-08	0.0281212	0.0051	0.0281212	0.005101	6.41799E-08	0.50528	0.254935	0.001582	0.034677	0.34877	0.00175	0.06463	0.020802	0.729	0.892	0.998	0.973	0.87	0.998	0.947	0.951
rs7227223	3.5331E-08	0.0403038	0.00731	0.0403038	0.007311	6.41944E-08	0.2185	0.334698	0.003482	0.014118	0.442924	0.00019	0.76033	0.517945	0.884	0.865	0.995	0.984	0.825	1	0.776	0.839
rs138012771	3.5332E-08	-0.06974	0.01265	-0.06974	0.012651	6.41983E-08	0.72533	0.546645	1.04E-05	0.054148	0.669069	0.0027	0.92192	0.111585	0.765	0.794	1	0.931	0.704	0.993	0.643	0.886
rs9743799	3.5335E-08	0.0279296	0.00507	0.0279296	0.005066	6.42065E-08	0.69155	0.25319	0.000965	0.00848	0.385903	0.01526	0.00642	0.069864	0.765	0.895	0.999	0.991	0.863	0.973	0.979	0.934
rs4297336	3.5344E-08	0.0280749	0.00509	0.0280749	0.005093	6.42302E-08	0.0954	0.080828	0.001494	0.001233	0.198412	0.04957	0.17722	0.188665	0.93	0.933	0.998	0.998	0.919	0.891	0.924	0.915
rs7136081	3.5345E-08	0.0281203	0.0051	0.0281203	0.005101	6.42331E-08	0.50513	0.254851	0.001581	0.03466	0.349232	0.00175	0.06472	0.020837	0.729	0.892	0.998	0.973	0.869	0.998	0.947	0.951
rs9855152	3.5347E-08	-0.029044	0.00527	-0.029044	0.005269	6.42384E-08	0.90307	0.628962	0.013992	0.137755	0.369467	4.6E-06	0.05063	0.522926	0.775	0.812	0.967	0.871	0.831	1	0.939	0.824
rs34383378	3.5352E-08	0.0281201	0.0051	0.0281201	0.005101	6.42533E-08	0.50513	0.25485	0.001582	0.03466	0.34923	0.00175	0.06472	0.020837	0.729	0.892	0.998	0.973	0.869	0.998	0.947	0.951
rs10494376	3.5364E-08	0.0378293	0.00686	0.0382169	0.009972	6.4285E-08	0.09236	0.010009	0.000741	0.108698	0.059459	0.00124	0.28514	0.11779	0.561	0.948	0.999	0.907	0.949	0.998	0.876	0.908
rs34879082	3.5364E-08	-0.028695	0.00521	-0.030178	0.00868	6.42861E-08	0.0028	0.304114	0.005859	0.003106	0.597267	0.00246	0.00508	0.950984	0.959	0.641	0.989	0.995	0.768	0.995	0.976	0.75
rs12595896	3.5394E-08	-0.069785	0.01266	-0.069785	0.01266	6.43698E-08	0.7306	0.556452	1.06E-05	0.057189	0.614531	0.00276	0.92188	0.111673	0.768	0.795	1	0.929	0.725	0.993	0.647	0.887
rs145063894	3.5394E-08	-0.069785	0.01266	-0.069785	0.01266	6.43698E-08	0.7306	0.556452	1.06E-05	0.057189	0.614531	0.00276	0.92188	0.111673	0.768	0.795	1	0.929	0.725	0.993	0.647	0.887
rs117203517	3.5397E-08	-0.069737	0.01265	-0.069737	0.012651	6.43763E-08	0.71886	0.546828	1.05E-05	0.053595	0.669697	0.00273	0.92111	0.111778	0.767	0.794	1	0.932	0.704	0.993	0.643	0.886
rs142223219	3.5398E-08	-0.069784	0.01266	-0.069784	0.012659	6.43793E-08	0.73061	0.555455	1.07E-05	0.057175	0.614325	0.00276	0.92153	0.111529	0.768	0.796	1	0.929	0.725	0.993	0.647	0.887
rs11866334	3.5407E-08	-0.069757	0.01265	-0.069757	0.012655	6.44059E-08	0.73198	0.550888	1.05E-05	0.05726	0.645835	0.00265	0.92145	0.110915	0.765	0.794	1	0.928	0.712	0.993	0.644	0.886
rs145500058	3.5448E-08	-0.069751	0.01265	-0.069751	0.012654	6.45184E-08	0.7305	0.550263	1.04E-05	0.057132	0.647401	0.00266	0.92149	0.110668	0.765	0.794	1	0.928	0.712	0.993	0.644	0.886
rs61168574	3.5448E-08	-0.06978	0.01266	-0.06978	0.012659	6.45204E-08	0.73064	0.555461	1.07E-05	0.057191	0.614456	0.00276	0.92149	0.111537	0.768	0.796	1	0.929	0.725	0.993	0.647	0.887
rs118027680	3.5455E-08	-0.069751	0.01265	-0.069751	0.012654	6.45378E-08	0.73049	0.550745	1.04E-05	0.057136	0.647502	0.00266	0.92157	0.110661	0.765	0.794	1	0.928	0.712	0.993	0.644	0.886
rs76658038	3.5458E-08	-0.06975	0.01265	-0.06975	0.012654	6.45468E-08	0.72957	0.550242	1.04E-05	0.057143	0.647862	0.00266	0.92104	0.110668	0.765	0.794	1	0.928	0.711	0.993	0.643	0.886
rs74596190	3.546E-08	-0.069751	0.01265	-0.069751	0.012654	6.4553E-08	0.73049	0.550268	1.04E-05	0.05713	0.647529	0.00266	0.92146	0.110676	0.765	0.794	1	0.928	0.712	0.993	0.644	0.886
rs77016145	3.5464E-08	-0.069749	0.01265	-0.069749	0.012654	6.45648E-08	0.72957	0.550245	1.04E-05	0.05714	0.647855	0.00266	0.92102	0.110671	0.765	0.794	1	0.928	0.711	0.993	0.643	0.886
rs2003259	3.5468E-08	0.0293841	0.00533	0.0293841	0.005331	6.45762E-08	0.437	0.057235	0.008891	0.00117	0.196098	0.01048	0.04707	0.422059	0.886	0.94	0.99	0.998	0.925	0.986	0.96	0.888
rs11860920	3.5499E-08	-0.069747	0.01265	-0.069747	0.012654	6.46605E-08	0.72959	0.550252	1.04E-05	0.057151	0.647843	0.00266	0.92098	0.110676	0.765	0.794	1	0.928	0.711	0.993	0.643	0.886
rs10660981	3.5504E-08	-0.069748	0.01265	-0.069748	0.012654	6.46748E-08	0.73046	0.551213	1.04E-05	0.057128	0.64765	0.00266	0.92156	0.110802	0.765	0.794	1	0.928	0.711	0.993	0.644	0.886
rs76985742	3.5509E-08	-0.069747	0.01265	-0.069747	0.012654	6.46902E-08	0.7296	0.550254	1.04E-05	0.057157	0.647835	0.00266	0.92097	0.110676	0.765	0.794	1	0.928	0.711	0.993	0.643	0.886
rs80177724	3.5513E-08	-0.069746	0.01265	-0.069746	0.012654	6.47001E-08	0.72901	0.549649	1.03E-05	0.057393	0.65226	0.00266	0.92089	0.110734	0.765	0.794	1	0.928	0.71	0.993	0.643	0.886

Table S3

rs117328839	3.5516E-08	-0.069747	0.01265	-0.069747	0.012654	6.47091E-08	0.73046	0.551122	1.05E-05	0.057128	0.647673	0.00266	0.92178	0.110963	0.765	0.794	1	0.928	0.711	0.993	0.644	0.886
rs3924010	3.5518E-08	-0.069778	0.01266	-0.069778	0.01266	6.47133E-08	0.73134	0.556251	1.06E-05	0.057241	0.614426	0.00277	0.92221	0.111807	0.767	0.795	1	0.929	0.725	0.993	0.647	0.887
rs4380045	3.5521E-08	-0.034545	0.00627	-0.040104	0.009643	6.47222E-08	0.12327	0.56953	0.010725	0.004186	0.019482	0.02036	0.07515	0.001168	0.926	0.767	0.985	0.995	0.978	0.964	0.952	0.978
rs1508089	3.5523E-08	0.0277302	0.00503	0.0292226	0.006806	6.47288E-08	0.70367	0.374527	0.021608	0.000242	0.000411	0.00641	0.56755	0.787055	0.728	0.855	0.949	0.999	0.993	0.982	0.808	0.794
rs58926605	3.5528E-08	-0.069747	0.01265	-0.069747	0.012654	6.47408E-08	0.73034	0.551005	1.04E-05	0.057191	0.647482	0.00266	0.92192	0.110935	0.765	0.794	1	0.928	0.712	0.993	0.644	0.886
rs12760893	3.5539E-08	0.0282197	0.00512	0.0282197	0.00512	6.47733E-08	0.43051	0.466807	0.000386	0.00718	0.061839	0.02742	0.07965	0.06873	0.868	0.721	0.999	0.992	0.955	0.941	0.942	0.932
rs79808122	3.5545E-08	-0.069746	0.01265	-0.069746	0.012654	6.47904E-08	0.73046	0.551074	1.05E-05	0.057128	0.647676	0.00266	0.92184	0.110943	0.765	0.794	1	0.928	0.712	0.993	0.644	0.886
rs59301694	3.5546E-08	-0.069746	0.01265	-0.069746	0.012654	6.47906E-08	0.73034	0.551002	1.05E-05	0.057191	0.647481	0.00266	0.92192	0.110935	0.765	0.794	1	0.928	0.712	0.993	0.644	0.886
rs35505672	3.555E-08	0.027925	0.00507	0.027925	0.005067	6.48043E-08	0.69609	0.253213	0.000966	0.008587	0.385791	0.01527	0.00642	0.069866	0.766	0.895	0.999	0.991	0.863	0.973	0.979	0.934
rs1925104	3.5553E-08	0.0281444	0.00511	0.0281444	0.005106	6.48112E-08	0.15128	0.160697	0.001427	0.008008	0.538645	0.00726	0.43843	0.017365	0.916	0.914	0.998	0.992	0.832	0.99	0.871	0.957
rs77088231	3.5557E-08	-0.069745	0.01265	-0.069745	0.012654	6.48233E-08	0.73037	0.551074	1.05E-05	0.057158	0.647673	0.00266	0.92184	0.110943	0.765	0.794	1	0.928	0.712	0.993	0.644	0.886
rs76940952	3.5562E-08	-0.069743	0.01265	-0.069743	0.012654	6.48356E-08	0.72963	0.550228	1.05E-05	0.05717	0.647822	0.00266	0.92093	0.110665	0.765	0.794	1	0.928	0.711	0.993	0.643	0.886
rs150085172	3.5563E-08	-0.069743	0.01265	-0.069743	0.012654	6.48383E-08	0.72964	0.550228	1.05E-05	0.057171	0.647822	0.00266	0.92093	0.110665	0.765	0.794	1	0.928	0.711	0.993	0.643	0.886
rs57949020	3.5568E-08	-0.069744	0.01265	-0.069744	0.012654	6.48537E-08	0.7304	0.551074	1.05E-05	0.057173	0.647673	0.00266	0.92184	0.110943	0.765	0.794	1	0.928	0.712	0.993	0.644	0.886
rs56148806	3.5581E-08	-0.028691	0.00521	-0.030144	0.008658	6.48891E-08	0.00305	0.301073	0.005956	0.002958	0.596758	0.00246	0.00507	0.948165	0.959	0.64	0.989	0.995	0.768	0.995	0.976	0.75
rs56285679	3.5589E-08	-0.032998	0.00599	-0.042128	0.010989	6.49103E-08	2.8E-05	0.074862	0.075038	0.049677	0.078607	0.00058	0.11721	0.323911	0.986	0.935	0.849	0.963	0.954	0.998	0.939	0.896
rs2586759	3.5606E-08	-0.033998	0.00617	-0.033998	0.006169	6.49591E-08	0.40831	0.004628	0.004812	0.012816	0.219332	0.00518	0.17168	0.228799	0.892	0.968	0.995	0.99	0.921	0.994	0.931	0.915
rs112720317	3.5612E-08	-0.069742	0.01265	-0.069742	0.012654	6.49767E-08	0.73265	0.550253	1.05E-05	0.057203	0.646884	0.00266	0.92187	0.110938	0.765	0.794	1	0.928	0.712	0.993	0.644	0.886
rs3803648	3.5625E-08	-0.069772	0.01266	-0.069772	0.01266	6.50132E-08	0.73209	0.555441	1.07E-05	0.057312	0.613852	0.00276	0.92167	0.111804	0.767	0.796	1	0.929	0.725	0.993	0.647	0.887
rs2120158	3.5638E-08	0.0311473	0.00565	0.0382772	0.009105	6.50487E-08	0.01826	0.01137	0.044253	0.011575	0.214322	0.00569	0.00105	0.463413	0.959	0.963	0.929	0.99	0.922	0.99	0.99	0.887
rs7218526	3.5639E-08	0.0468961	0.00851	0.0468961	0.008509	6.50515E-08	0.90553	0.542494	0.001857	0.052542	0.019452	0.0012	0.88274	0.024062	0.806	0.849	0.997	0.959	0.973	0.998	0.766	0.946
rs935116	3.5641E-08	-0.028722	0.00521	-0.028722	0.005212	6.50551E-08	0.08398	0.798486	0.002736	0.051768	0.866352	0.00021	0.0369	0.546928	0.913	0.804	0.996	0.954	0.704	1	0.952	0.834
rs62419303	3.5642E-08	0.0306658	0.00556	0.0296139	0.007518	3.8707E-08	0.70024	0.285676	8.31E-06	0.755682	0.026137	0.00065	0.15083	0.788169	0.69	0.789	1	0.08	0.947	0.997	0.849	0.662
rs147774910	3.5642E-08	0.0864196	0.01568	0.0864196	0.015681	6.50597E-08	0.84475	0.499474	0.000154	0.847766	0.047101	0.00039	0.14726	0.057965	0.72	0.782	1	0.285	0.938	0.999	0.878	0.9
rs884810	3.5643E-08	0.0297591	0.0054	0.031319	0.008681	6.50612E-08	0.60622	0.618788	0.01451	0.057075	0.000932	0.00063	0.00224	0.388313	0.817	0.706	0.968	0.944	0.991	0.998	0.981	0.636
rs77209033	3.5643E-08	-0.069741	0.01265	-0.069741	0.012655	6.50622E-08	0.73268	0.550255	1.05E-05	0.057218	0.646714	0.00266	0.92131	0.110932	0.765	0.794	1	0.928	0.712	0.993	0.644	0.886
rs8021682	3.5656E-08	0.0279693	0.00508	0.0279693	0.005075	6.50978E-08	0.71612	0.237847	0.001052	0.008857	0.368864	0.01589	0.00593	0.064457	0.771	0.898	0.999	0.991	0.869	0.972	0.979	0.936
rs1348229	3.5666E-08	-0.028684	0.0052	-0.028684	0.005205	6.51251E-08	0.83402	0.560254	0.005874	0.019108	0.118982	0.00034	0.11922	0.436157	0.778	0.85	0.992	0.983	0.933	0.999	0.929	0.865
rs1508090	3.5672E-08	0.0277268	0.00503	0.0292187	0.006807	6.51427E-08	0.70186	0.374527	0.021608	0.000243	0.000411	0.00641	0.56755	0.787055	0.728	0.855	0.949	0.999	0.993	0.982	0.808	0.794
rs1997913	3.5677E-08	0.0279257	0.00507	0.0279257	0.005067	6.5157E-08	0.6645	0.257349	0.000905	0.008967	0.373931	0.01543	0.00645	0.070839	0.76	0.894	0.999	0.991	0.866	0.973	0.978	0.933
rs2463506	3.5701E-08	-0.038567	0.007	-0.038567	0.006998	6.52237E-08	0.67348	0.255436	0.003438	0.020338	0.01735	0.00072	0.23387	0.84764	0.738	0.881	0.995	0.98	0.973	0.999	0.893	0.754
rs3008204	3.5727E-08	0.028463	0.00516	0.028463	0.005165	6.52949E-08	0.4376	0.499161	0.00118	0.000901	0.232127	0.0078	0.19942	0.923675	0.859	0.852	0.998	0.998	0.895	0.987	0.904	0.773
rs8009868	3.5731E-08	0.0277811	0.00504	0.0279357	0.005196	6.5306E-08	0.94735	0.181812	0.00042	0.019664	0.480534	0.02541	0.00266	0.067246	0.812	0.907	0.999	0.983	0.838	0.948	0.984	0.935
rs851004	3.5743E-08	0.0375169	0.00681	0.0365507	0.009034	6.53406E-08	0.43149	0.342742	0.000142	0.350968	0.176933	0.00055	0.00662	0.186132	0.797	0.814	1	0.614	0.864	0.998	0.965	0.483
rs34153056	3.575E-08	-0.032778	0.00595	-0.032778	0.005948	6.53603E-08	0.97085	0.511818	0.001339	0.050975	0.005574	0.00542	0.18371	0.178906	0.817	0.868	0.998	0.965	0.986	0.993	0.92	0.913
rs4692472	3.5766E-08	-0.035032	0.00636	-0.040062	0.010164	6.50273E-08	0.07463	0.227909	0.061134	0.000397	0.081865	0.00441	0.00151	0.368412	0.921	0.886	0.836	0.999	0.941	0.983	0.985	0.646
rs6789603	3.5768E-08	-0.040845	0.00741	-0.041503	0.00845	6.541E-08	0.09859	0.6368	0.000152	0.474675	0.017735	0.00671	0.00668	0.755913	0.904	0.81	1	0.6	0.971	0.98	0.974	0.787
rs140316360	3.5781E-08	-0.067214	0.0122	-0.067214	0.012197	6.54461E-08	0.18987	0.921486	3.67E-05	0.055254	0.451059	0.00269	0.90198	0.121104	0.878	0.749	1	0.943	0.804	0.995	0.722	0.898
rs2496037	3.5801E-08	-0.034236	0.00621	-0.034236	0.006213	6.5502E-08	0.56977	0.528498	0.004976	0.354305	0.100644	7.1E-05	0.09052	0.057791	0.834	0.839	0.991	0.72	0.933	1	0.931	0.927
rs9291977	3.5806E-08	0.0281826	0.00511	0.0274987	0.006979	4.22549E-08	0.13878	0.659253	6.55E-05	0.653668	0.083514	0.00011	0.28469	0.111341	0.851	0.719	1	0.063	0.904	1	0.8	0.867
rs10151485	3.5809E-08	0.0389025	0.00706	0.0389025	0.00706	6.55252E-08	0.30196	0.256741	0.001588	0.096339	0.122565	0.00046	0.08213	0.667973	0.88	0.887	0.998	0.927	0.93	0.999	0.938	0.738
rs7161307	3.582E-08	0.0388845	0.00706	0.0388845	0.007057	6.55566E-08	0.30368	0.264515	0.001461	0.095646	0.120891	0.00048	0.09111	0.679158	0.88	0.885	0.998	0.928	0.931	0.999	0.935	0.74
rs7647861	3.5825E-08	-0.040843	0.00741	-0.041502	0.008451	6.55689E-08	0.09859	0.636885	0.000151	0.475169	0.017759	0.00672	0.00668	0.754932	0.904	0.81	1	0.599	0.971	0.98	0.974	0.788
rs9860293	3.5827E-08	-0.040843	0.00741	-0.041502	0.008451	6.55751E-08	0.09859	0.636883	0.000151	0.475169	0.01776	0.00672	0.00668	0.754933	0.904	0.81	1	0.599	0.971	0.98	0.974	0.788
rs9821311	3.5834E-08	-0.028099	0.0051	-0.028099	0.005099	6.55834E-08	0.65172	0.105676	0.027897	0.119479	0.023337	6.6E-06	0.38274	0.703609	0.808	0.899	0.926	0.882	0.965	1	0.841	0.704
rs1910436	3.5838E-08	-0.027787	0.00504	-0.034295	0.009259	6.25273E-08	0.07687	0.208993	0.015232	0.207499	0.007658	0.00243	3.1E-05	0.623468	0.924	0.896	0.965	0.838	0.982	0.988	0.995	0.726
rs12031695	3.5844E-08	0.0376661	0.00684	0.0384965	0.010281	6.5622E-08	0.08146	0.007895	0.000785	0.086103	0.043772	0.00198	0.29743	0.11313	0.558	0.954	0.999	0.928	0.958	0.997	0.876	0.911
rs9356053	3.5848E-08	0.0310158	0.00563	0.0310158	0.005629	6.56331E-08	0.17847	0.388768	0.0021	0.015932	0.983939	0.00342	0.03513	0.020679	0.904	0.873	0.997	0.986	0.686	0.995	0.959	0.952
rs10069918	3.5851E-08	0.0281815	0.00511	0.0274978	0.006979	4.23348E-08	0.13871	0.659253	6.56E-05	0.653796	0.083509	0.00011	0.2848	0.11134	0.851	0.719	1	0.063	0.904	1	0.8	0.867
rs12202922	3.5852E-08	0.0318643	0.00578	0.0320047	0.005928	5.17961E-08	0.32221	0.567541	1.85E-05	0.008936	0.121318	0.1408	0.01148	0.800533	0.827	0.778	1	0.983	0.895	0.458	0.966	0.727
rs11682182	3.5852E-08	-0.027847	0.00505	-0.027847	0.005054	6.56453E-08	0.54001	0.37903	0.0008	0.070904	0.712882	0.00022	0.55734	0.073296	0.829	0.851	0.999	0.934	0.739	1	0.808	0.916
rs1587740	3.5872E-08	-0.027796	0.00504	-0.034028	0.009011	6.56992E-08	0.08932	0.201614	0.020235	0.16798	0.007209	0.00216	4.4E-05	0.668506	0.923	0.9	0.957	0.872	0.984	0.99	0.995	0.741
rs2723741	3.5883E-08	-0.02779	0.00504	-0.034079	0.009123	6.57302E-08	0.08422	0.207658	0.015203	0.176251	0.010312	0.00264	2.8E-05	0.641258	0.925	0.899	0.968	0.867	0.981	0.99	0.995	0.736
rs10063046	3.5887E-08	0.0281806	0.00511	0.027497	0.006979	4.2383E-08	0.13873	0.659253	6.56E-05	0.653743	0.083515	0.00011	0.28482	0.11134	0.851	0.719	1	0.063	0.904	1	0.8	0.867
rs112139176	3.5889E-08	-0.070107	0.01272	-0.070107	0.012724	6.57476E-08	0.72659	0.549372	1.17E-05	0.051499	0.633163	0.00271	0.93379	0.127394	0.768	0.797	1	0.935	0.72	0.993	0.65	0.882

Table S3

rs1054169	3.5889E-08	0.0291286	0.00529	0.0291286	0.005287	6.57484E-08	0.09288	0.422357	1.48E-05	0.049632	0.879925	0.0041	0.93518	0.120741	0.889	0.819	1	0.94	0.564	0.989	0.682	0.885
rs6693764	3.5904E-08	0.0376638	0.00684	0.0384943	0.010281	6.57889E-08	0.08145	0.007895	0.000786	0.086162	0.043772	0.00198	0.29743	0.113125	0.558	0.954	0.999	0.928	0.958	0.997	0.876	0.911
rs1475296	3.5906E-08	0.0279902	0.00508	0.0279902	0.00508	6.57949E-08	0.18296	0.475291	0.003553	0.004516	0.365656	0.00312	0.48943	0.032737	0.909	0.871	0.996	0.995	0.873	0.996	0.859	0.948
rs9597421	3.5908E-08	-0.036299	0.00659	-0.036299	0.006588	6.58021E-08	0.6605	0.090642	8.71E-06	0.303059	0.385993	0.00394	0.10509	0.327213	0.682	0.892	1	0.705	0.805	0.988	0.908	0.84
rs150547593	3.5911E-08	0.0617722	0.01121	0.0617722	0.011211	6.58102E-08	0.65714	0.114294	0.001609	0.002014	0.008936	0.03939	0.06482	0.64699	0.836	0.913	0.997	0.997	0.982	0.909	0.946	0.733
rs9848744	3.5916E-08	-0.04084	0.00741	-0.041499	0.008452	6.58219E-08	0.09861	0.636908	0.000151	0.475629	0.017761	0.00672	0.00669	0.754951	0.904	0.81	1	0.599	0.971	0.98	0.974	0.787
rs9848200	3.5917E-08	-0.04084	0.00741	-0.041499	0.008452	6.58272E-08	0.09861	0.636908	0.000151	0.475629	0.017761	0.00672	0.00669	0.754951	0.904	0.81	1	0.599	0.971	0.98	0.974	0.787
rs10801826	3.5933E-08	0.0282144	0.00512	0.0295541	0.006223	5.5245E-08	0.58733	0.185829	3.86E-05	0.017956	0.225578	0.1268	0.06373	0.008312	0.811	0.883	1	0.975	0.869	0.563	0.938	0.959
rs6693792	3.5941E-08	0.0376625	0.00684	0.0384933	0.010281	6.58936E-08	0.08145	0.007895	0.000786	0.086171	0.043773	0.00198	0.29743	0.113126	0.558	0.954	0.999	0.928	0.958	0.997	0.876	0.911
rs77009305	3.5985E-08	-0.044889	0.00815	-0.044889	0.008148	6.6016E-08	0.60472	0.630905	0.002016	0.0164	0.000918	0.00609	0.63227	0.112782	0.839	0.74	0.997	0.984	0.992	0.99	0.813	0.916
rs4856386	3.6003E-08	-0.040837	0.00741	-0.041495	0.008451	6.60656E-08	0.09875	0.636923	0.000151	0.475781	0.017762	0.00672	0.00669	0.75496	0.904	0.81	1	0.599	0.971	0.98	0.974	0.787
rs6809919	3.6003E-08	-0.040837	0.00741	-0.041495	0.008451	6.60656E-08	0.09875	0.636923	0.000151	0.475781	0.017762	0.00672	0.00669	0.75496	0.904	0.81	1	0.599	0.971	0.98	0.974	0.787
rs8015603	3.6005E-08	0.0279606	0.00508	0.0279606	0.005075	6.60716E-08	0.71538	0.237678	0.001055	0.008926	0.368517	0.01591	0.00594	0.064483	0.771	0.898	0.999	0.991	0.869	0.972	0.979	0.936
rs8022783	3.6033E-08	0.0279126	0.00507	0.0279126	0.005066	6.61501E-08	0.69093	0.253197	0.000965	0.008684	0.385918	0.01527	0.00642	0.069867	0.765	0.895	0.999	0.991	0.863	0.973	0.979	0.934
rs9927214	3.6035E-08	-0.03453	0.00627	-0.039964	0.009541	6.61553E-08	0.1242	0.599375	0.011217	0.004272	0.019393	0.01978	0.07617	0.001219	0.926	0.772	0.984	0.995	0.978	0.966	0.952	0.977
rs73228266	3.6042E-08	-0.03483	0.00632	-0.040233	0.009959	5.74435E-08	0.09949	0.173414	0.060919	0.000247	0.089147	0.0072	0.00128	0.535259	0.916	0.899	0.84	0.999	0.939	0.969	0.986	0.694
rs79926455	3.6049E-08	-0.067196	0.0122	-0.067196	0.012197	6.61962E-08	0.18985	0.921843	3.7E-05	0.055263	0.450628	0.0027	0.90138	0.12119	0.878	0.749	1	0.943	0.804	0.995	0.723	0.898
rs2815806	3.6054E-08	0.0375064	0.00681	0.0365429	0.009034	6.62091E-08	0.43161	0.342431	0.000143	0.350365	0.176972	0.00055	0.00661	0.185828	0.797	0.814	1	0.615	0.864	0.998	0.965	0.483
rs34330483	3.6058E-08	-0.027945	0.00507	-0.02789	0.005302	6.62195E-08	0.74265	0.919838	0.000564	0.111431	0.491562	0.00068	0.07682	0.004869	0.732	0.759	0.999	0.9	0.802	0.999	0.931	0.959
rs56317050	3.6058E-08	0.036195	0.00657	0.0386058	0.00879	6.62206E-08	0.68945	0.871328	0.001042	0.00599	0.003232	0.04178	0.16632	0.010097	0.742	0.771	0.998	0.992	0.988	0.889	0.912	0.959
rs78648240	3.6075E-08	-0.094193	0.0171	-0.094193	0.017098	6.62672E-08	0.63705	0.179277	0.013536	0.0206	0.010623	0.00201	0.03961	0.754943	0.861	0.915	0.983	0.985	0.983	0.998	0.962	0.844
rs33986262	3.6077E-08	-0.033113	0.00601	-0.033113	0.006011	6.62737E-08	0.4621	0.770326	0.015943	0.014784	0.000872	0.00173	0.42728	0.252895	0.871	0.837	0.978	0.987	0.993	0.998	0.869	0.899
rs11160760	3.6082E-08	0.0279111	0.00507	0.0279111	0.005066	6.62884E-08	0.6911	0.253208	0.000965	0.0087	0.385791	0.01526	0.00642	0.069865	0.765	0.895	0.999	0.991	0.863	0.973	0.979	0.934
rs143384357	3.6091E-08	0.0279109	0.00507	0.0279109	0.005066	6.63115E-08	0.6911	0.253206	0.000966	0.0087	0.385791	0.01526	0.00642	0.069865	0.765	0.895	0.999	0.991	0.863	0.973	0.979	0.934
rs17559249	3.6094E-08	0.078698	0.01429	0.078698	0.014285	6.63203E-08	0.05323	0.646781	0.017428	0.028013	0.815623	9.4E-05	0.03725	0.073502	0.925	0.825	0.967	0.973	0.607	1	0.952	0.922
rs11160761	3.6096E-08	0.0279108	0.00507	0.0279108	0.005066	6.63253E-08	0.6911	0.25319	0.000966	0.008701	0.385788	0.01526	0.00642	0.06986	0.765	0.895	0.999	0.991	0.863	0.973	0.979	0.934
rs78267129	3.6097E-08	-0.069743	0.01266	-0.069743	0.01266	6.63282E-08	0.73064	0.555678	1.08E-05	0.057191	0.615161	0.00279	0.92059	0.111741	0.768	0.795	1	0.929	0.725	0.993	0.647	0.887
rs77855383	3.6098E-08	-0.067194	0.0122	-0.067194	0.012197	6.63321E-08	0.18983	0.921887	3.7E-05	0.055225	0.450962	0.0027	0.9008	0.121415	0.878	0.749	1	0.943	0.804	0.995	0.723	0.898
rs189811962	3.6101E-08	-0.069726	0.01266	-0.069726	0.012657	6.63401E-08	0.73138	0.551459	1.08E-05	0.057977	0.612013	0.00281	0.92855	0.110927	0.768	0.797	1	0.929	0.727	0.993	0.65	0.888
rs144216790	3.611E-08	-0.06822	0.01238	-0.06822	0.012384	6.63651E-08	0.60578	0.646801	2.52E-05	0.037652	0.590445	0.00249	0.85488	0.092822	0.792	0.788	1	0.954	0.74	0.994	0.637	0.897
rs6854665	3.6115E-08	-0.034821	0.00632	-0.040183	0.009951	5.75115E-08	0.10456	0.173675	0.061645	0.000244	0.08857	0.00698	0.00129	0.529563	0.914	0.898	0.837	0.999	0.939	0.97	0.986	0.691
rs79222572	3.6118E-08	0.0299451	0.00544	0.0299451	0.005436	6.63884E-08	0.05672	0.894512	0.003065	0.002659	0.48889	0.00222	0.03111	0.68659	0.922	0.766	0.995	0.995	0.812	0.996	0.955	0.721
rs3001932	3.6121E-08	-0.03424	0.00622	-0.03424	0.006215	6.63968E-08	0.5567	0.52159	0.004987	0.366465	0.09797	7.3E-05	0.08543	0.057445	0.835	0.84	0.991	0.711	0.933	1	0.932	0.927
rs74968674	3.6122E-08	-0.067247	0.01221	-0.067247	0.012207	6.6399E-08	0.18974	0.890499	2.68E-05	0.055633	0.475096	0.003	0.91679	0.125279	0.876	0.74	1	0.94	0.793	0.994	0.714	0.895
rs11160762	3.6139E-08	0.0279097	0.00507	0.0279097	0.005066	6.64467E-08	0.69114	0.253248	0.000961	0.008709	0.385969	0.01532	0.00642	0.069888	0.765	0.895	0.999	0.991	0.863	0.973	0.978	0.934
rs76315901	3.6144E-08	-0.069739	0.01266	-0.069739	0.01266	6.64603E-08	0.72978	0.555673	1.08E-05	0.057235	0.615493	0.00279	0.92062	0.111733	0.768	0.795	1	0.929	0.725	0.993	0.647	0.887
rs2451461	3.6152E-08	-0.034223	0.00621	-0.034223	0.006213	6.64829E-08	0.57581	0.531619	0.005003	0.353565	0.1016	6.9E-05	0.09215	0.057831	0.833	0.839	0.991	0.72	0.932	1	0.93	0.927
rs1820248	3.6154E-08	-0.030784	0.00559	-0.030784	0.005588	6.64872E-08	0.04894	0.176308	0.00636	0.041315	0.011786	0.01031	0.0104	0.812308	0.947	0.922	0.993	0.975	0.984	0.987	0.979	0.849
rs1059288	3.617E-08	0.0277612	0.00504	0.0277308	0.00507	6.65334E-08	0.31198	0.868192	0.001234	0.000686	0.884991	0.00032	0.79751	0.25015	0.53	0.697	0.996	0.997	0.571	0.999	0.655	0.814
rs10789931	3.6189E-08	0.03146	0.00571	0.03146	0.005711	6.65874E-08	0.30568	0.715323	0.014324	0.001132	0.10797	0.00019	0.49867	0.134164	0.845	0.696	0.964	0.997	0.914	1	0.535	0.886
rs3800841	3.6198E-08	0.0291325	0.00529	0.0291325	0.005289	6.66108E-08	0.08823	0.440633	1.77E-05	0.044497	0.875268	0.00365	0.96647	0.137367	0.89	0.814	1	0.945	0.56	0.99	0.672	0.879
rs148442332	3.62E-08	0.0314067	0.0057	0.0385478	0.009262	6.66174E-08	0.04186	0.006987	0.036798	0.013174	0.249024	0.00588	0.00064	0.476556	0.949	0.966	0.943	0.988	0.914	0.99	0.991	0.885
rs188605371	3.6201E-08	0.0786789	0.01428	0.0786789	0.014283	6.662E-08	0.05303	0.64651	0.017517	0.027894	0.817224	9.5E-05	0.037	0.07363	0.925	0.825	0.966	0.973	0.608	1	0.952	0.922
rs76112692	3.6223E-08	-0.069706	0.01265	-0.069706	0.012655	6.66825E-08	0.72973	0.550514	1.05E-05	0.057211	0.648567	0.00269	0.92008	0.110882	0.765	0.794	1	0.928	0.711	0.993	0.643	0.886
rs6136270	3.6223E-08	-0.028108	0.0051	-0.028108	0.005103	6.63701E-08	0.28266	0.746017	4.74E-06	0.107539	0.117338	0.02083	0.52591	0.238251	0.872	0.811	1	0.905	0.924	0.945	0.822	0.882
rs77611959	3.6226E-08	-0.069705	0.01265	-0.069705	0.012655	6.66908E-08	0.72974	0.550514	1.05E-05	0.057214	0.648567	0.00269	0.92008	0.110882	0.765	0.794	1	0.928	0.711	0.993	0.643	0.886
rs141464151	3.6233E-08	0.0278446	0.00506	0.0278446	0.005055	6.67086E-08	0.31664	0.567216	0.002684	0.00321	0.076362	0.00823	0.32383	0.018947	0.887	0.749	0.997	0.996	0.951	0.988	0.887	0.954
rs8095056	3.6234E-08	0.0316953	0.00575	0.0292456	0.00816	6.67136E-08	0.26954	0.267978	0.000416	0.451618	0.745564	1.3E-05	0.33673	0.024128	0.776	0.454	0.998	0.431	0.549	1	0.749	0.897
rs7167646	3.6242E-08	0.0284721	0.00517	0.0284721	0.005169	6.67265E-08	0.35958	0.854499	0.000161	0.018422	0.032802	0.0735	0.02133	0.156233	0.873	0.809	1	0.981	0.967	0.79	0.966	0.909
rs150751467	3.6261E-08	-0.069701	0.01265	-0.069701	0.012654	6.67873E-08	0.72532	0.551	1.05E-05	0.05859	0.647273	0.00266	0.92195	0.110931	0.766	0.794	1	0.926	0.712	0.993	0.644	0.886
rs116907757	3.627E-08	-0.069703	0.01265	-0.069703	0.012655	6.68119E-08	0.72977	0.550484	1.06E-05	0.05723	0.648544	0.00268	0.92005	0.110871	0.765	0.794	1	0.928	0.711	0.993	0.643	0.886
rs77288428	3.6272E-08	-0.069705	0.01266	-0.069705	0.012655	6.68184E-08	0.73189	0.551005	1.05E-05	0.058241	0.647411	0.00266	0.92192	0.110932	0.765	0.794	1	0.927	0.711	0.993	0.644	0.886
rs2361364	3.6272E-08	-0.031697	0.00575	-0.032675	0.006424	4.69987E-08	0.11832	0.776397	0.000126	0.000773	0.117075	0.19758	0.11074	0.090757	0.885	0.737	1	0.998	0.899	0.312	0.903	0.9
rs1057141	3.6281E-08	0.033968	0.00617	0.0344412	0.006523	6.68431E-08	0.29942	0.016128	0.019741	0.177427	0.012751	0.00089	0.01902	0.371019	0.901	0.957	0.972	0.89	0.982	0.999	0.972	0.893
rs1496007	3.6286E-08	0.029942	0.00544	0.029942	0.005436	6.68577E-08	0.05682	0.900998	0.003158	0.002747	0.474864	0.00224	0.0301	0.689099	0.923	0.768	0.995	0.995	0.817	0.996	0.956	0.723

Table S3

rs17149894	3.6291E-08	0.0321595	0.00584	0.0321595	0.005839	6.6872E-08	0.06479	0.550985	0.000175	0.003262	0.819023	0.00843	0.98403	0.113532	0.911	0.819	1	0.994	0.693	0.979	0.694	0.9
rs4850610	3.632E-08	0.0388687	0.00706	0.0388687	0.007057	6.69534E-08	0.72219	0.065054	0.000693	0.042354	0.031898	0.02291	0.0075	0.777624	0.848	0.935	0.999	0.971	0.971	0.961	0.979	0.839
rs73986793	3.6321E-08	0.0465624	0.00845	0.0465624	0.008454	6.6955E-08	0.36628	0.248979	0.000493	0.009268	0.0285	0.04869	0.03737	0.66888	0.883	0.898	0.999	0.991	0.972	0.893	0.961	0.845
rs1880219	3.6357E-08	0.0388682	0.00706	0.0388682	0.007057	6.70557E-08	0.71934	0.064921	0.000694	0.042358	0.032052	0.02295	0.00749	0.777311	0.849	0.935	0.999	0.971	0.971	0.961	0.979	0.839
rs6852985	3.6389E-08	-0.029552	0.00537	-0.029552	0.005366	6.71458E-08	0.29682	0.205854	0.005314	0.000495	0.19916	0.00459	0.60595	0.504406	0.887	0.9	0.993	0.998	0.911	0.993	0.83	0.86
rs2205935	3.6407E-08	0.0388175	0.00705	0.0396353	0.00752	6.71968E-08	0.02474	0.015037	0.014187	0.045967	0.031269	0.0055	0.06076	0.340322	0.958	0.962	0.986	0.975	0.976	0.994	0.961	0.909
rs3935210	3.642E-08	-0.028933	0.00525	-0.028933	0.005254	6.7234E-08	0.93445	0.58279	0.015212	0.113562	0.375943	3.5E-06	0.05289	0.70025	0.746	0.812	0.962	0.887	0.824	1	0.935	0.792
rs13378888	3.6425E-08	0.0345801	0.00628	0.0345801	0.006279	6.72466E-08	0.88486	0.332174	0.000756	0.008431	0.201877	0.00281	0.36846	0.352068	0.78	0.875	0.999	0.99	0.905	0.996	0.869	0.873
rs62390943	3.6431E-08	-0.062528	0.01135	-0.063573	0.012052	6.7265E-08	0.77225	0.008529	0.010958	0.043565	0.033639	0.0045	0.06068	0.044447	0.861	0.963	0.989	0.974	0.974	0.995	0.96	0.952
rs1020004	3.6449E-08	0.0321547	0.00584	0.0321547	0.005839	6.73144E-08	0.06489	0.550974	0.000175	0.003279	0.820034	0.00842	0.98409	0.113518	0.911	0.819	1	0.994	0.692	0.979	0.694	0.9
rs9838823	3.6489E-08	-0.051153	0.00929	-0.051153	0.009289	6.74265E-08	0.04064	0.325189	0.002159	0.394932	0.060487	0.00038	0.30458	0.097592	0.934	0.873	0.997	0.691	0.952	0.999	0.878	0.92
rs59223558	3.6489E-08	-0.0682	0.01238	-0.0682	0.012384	6.74272E-08	0.60623	0.647058	2.54E-05	0.037748	0.590303	0.00249	0.85407	0.092828	0.792	0.788	1	0.953	0.74	0.994	0.637	0.897
rs6791542	3.6489E-08	-0.029436	0.00535	-0.029436	0.005345	6.74276E-08	0.30896	0.060131	0.001788	0.069989	0.087372	6.1E-05	0.81794	0.869242	0.61	0.903	0.996	0.924	0.923	1	0.721	0.752
rs76893236	3.6492E-08	-0.069666	0.01265	-0.069666	0.01265	6.7435E-08	0.73122	0.546632	1.04E-05	0.055448	0.668668	0.00271	0.92131	0.111581	0.764	0.794	1	0.93	0.704	0.993	0.642	0.885
rs11786587	3.6532E-08	0.0277054	0.00503	0.0292033	0.006773	6.75466E-08	0.7294	0.374528	0.022018	0.000245	0.000411	0.00656	0.56758	0.787055	0.733	0.855	0.948	0.999	0.993	0.982	0.809	0.795
rs4738554	3.6532E-08	0.0277054	0.00503	0.0292033	0.006773	6.75466E-08	0.7294	0.374528	0.022018	0.000245	0.000411	0.00656	0.56758	0.787055	0.733	0.855	0.948	0.999	0.993	0.982	0.809	0.795
rs17123871	3.6532E-08	-0.031815	0.00578	-0.034655	0.010352	6.75469E-08	0.00455	0.320317	0.005484	0.265472	0.376925	0.00018	0.00066	0.315413	0.952	0.849	0.986	0.742	0.817	0.999	0.986	0.595
rs1372504	3.6535E-08	0.0291605	0.0053	0.0291605	0.005295	6.75553E-08	0.68925	0.438762	0.009872	0.066545	0.013065	1.3E-05	0.98359	0.81355	0.689	0.819	0.975	0.924	0.969	1	0.67	0.758
rs35653171	3.6538E-08	-0.037857	0.00687	-0.037943	0.009944	4.99488E-08	0.04987	0.172647	0.001229	0.814733	0.112537	2.2E-05	0.04005	0.964745	0.898	0.846	0.996	0.108	0.89	1	0.934	0.655
rs61859612	3.655E-08	-0.032976	0.00599	-0.042067	0.011001	6.75986E-08	2.7E-05	0.075904	0.07644	0.048996	0.083106	0.00056	0.11872	0.326988	0.986	0.934	0.846	0.963	0.952	0.998	0.938	0.895
rs74684725	3.6589E-08	-0.067167	0.0122	-0.067167	0.012198	6.7708E-08	0.18938	0.922011	3.72E-05	0.055631	0.449263	0.00274	0.90044	0.120193	0.878	0.749	1	0.942	0.805	0.994	0.723	0.899
rs59306698	3.6593E-08	-0.068194	0.01238	-0.068194	0.012384	6.77195E-08	0.60623	0.647212	2.55E-05	0.037765	0.590015	0.00249	0.85448	0.092847	0.792	0.788	1	0.953	0.74	0.994	0.637	0.897
rs9368560	3.6611E-08	-0.039254	0.00713	-0.045089	0.011927	6.777E-08	0.41372	0.306088	0.005529	0.000998	0.326356	0.0224	0.01024	0.001151	0.708	0.884	0.99	0.998	0.873	0.949	0.975	0.974
rs530723151	3.6618E-08	-0.060826	0.01105	-0.060826	0.011046	6.77892E-08	0.20082	0.262846	0.00102	0.005952	0.206473	0.00265	0.47343	0.039144	0.614	0.875	0.998	0.992	0.894	0.996	0.832	0.934
rs2295140	3.6623E-08	0.0277051	0.00503	0.0277051	0.005031	6.78048E-08	0.86527	0.151686	0.000541	0.012119	0.478912	0.01998	0.00516	0.108902	0.787	0.911	0.999	0.988	0.837	0.961	0.98	0.923
rs12596543	3.6626E-08	-0.02831	0.00514	-0.029142	0.007285	6.78111E-08	0.69929	0.800493	0.022872	0.000231	0.001473	0.00252	0.2884	0.26441	0.793	0.779	0.939	0.999	0.989	0.993	0.858	0.583
rs10090426	3.6626E-08	0.0279999	0.00508	0.0279999	0.005085	6.78128E-08	0.44557	0.037581	0.000978	0.016887	0.19105	0.00156	0.23162	0.772343	0.698	0.931	0.998	0.983	0.904	0.998	0.893	0.809
rs34694345	3.6632E-08	0.0342063	0.00621	0.0342063	0.006212	6.78297E-08	0.5105	0.663968	0.00536	0.306938	0.091116	5.6E-05	0.15197	0.066298	0.843	0.824	0.991	0.758	0.937	1	0.912	0.924
rs191954621	3.6663E-08	-0.065681	0.01193	-0.065681	0.011929	6.79167E-08	0.78537	0.553119	0.00037	0.080696	0.686538	4.5E-05	0.22942	0.853985	0.667	0.773	0.999	0.889	0.669	1	0.843	0.666
rs4694835	3.6667E-08	-0.029546	0.00537	-0.029546	0.005366	6.7927E-08	0.29645	0.206212	0.005363	0.000484	0.199684	0.00462	0.60671	0.504362	0.887	0.9	0.993	0.998	0.911	0.993	0.83	0.86
rs6575999	3.6678E-08	0.0278966	0.00507	0.0278966	0.005066	6.79566E-08	0.68721	0.253208	0.000966	0.008835	0.385794	0.01526	0.00642	0.069866	0.764	0.895	0.999	0.991	0.863	0.973	0.978	0.934
rs7766356	3.6684E-08	-0.048634	0.00883	-0.049378	0.009925	6.79749E-08	0.02459	0.909951	0.001294	0.005319	0.942083	0.00798	0.06678	0.034082	0.942	0.8	0.998	0.993	0.657	0.985	0.944	0.942
rs28816799	3.6703E-08	-0.034508	0.00627	-0.040045	0.009633	6.80277E-08	0.12335	0.569575	0.010755	0.004384	0.019423	0.02031	0.0752	0.001169	0.926	0.767	0.985	0.995	0.978	0.965	0.952	0.978
rs73098915	3.6716E-08	-0.065777	0.01195	-0.065777	0.011947	6.80639E-08	0.63786	0.609201	0.002214	0.035262	0.089647	0.00017	0.55742	0.354014	0.718	0.824	0.996	0.966	0.934	1	0.812	0.859
rs1877405	3.6725E-08	-0.035004	0.00636	-0.040031	0.010162	6.76623E-08	0.07436	0.228275	0.061526	0.000397	0.082404	0.00445	0.00152	0.368598	0.921	0.886	0.836	0.999	0.941	0.983	0.985	0.646
rs12598883	3.6727E-08	-0.0697	0.01266	-0.0697	0.012659	6.80963E-08	0.79504	0.556455	1.06E-05	0.055613	0.614366	0.00276	0.9219	0.111668	0.756	0.794	1	0.93	0.723	0.993	0.645	0.886
rs4692099	3.674E-08	-0.035004	0.00636	-0.040033	0.010163	6.77092E-08	0.07424	0.228165	0.061494	0.000398	0.082415	0.00446	0.00152	0.368528	0.921	0.886	0.836	0.999	0.941	0.983	0.985	0.646
rs10206338	3.6781E-08	0.0301916	0.00548	0.0355307	0.009871	6.82485E-08	0.08266	0.013154	0.05879	0.009866	0.00155	0.00145	0.05648	0.130976	0.918	0.949	0.838	0.988	0.991	0.996	0.946	0.546
rs78563552	3.6795E-08	0.0463955	0.00843	0.0463955	0.008427	6.82881E-08	0.32425	0.539843	0.000572	0.010363	0.17783	0.00764	0.28873	0.026401	0.881	0.738	0.999	0.989	0.916	0.988	0.89	0.947
rs2317779	3.68E-08	0.0277157	0.00503	0.0293589	0.006985	6.82997E-08	0.76835	0.387975	0.024891	0.000218	0.000321	0.00629	0.63032	0.764607	0.735	0.85	0.938	0.999	0.994	0.98	0.791	0.794
rs12597096	3.6802E-08	-0.069725	0.01266	-0.069725	0.012665	6.83072E-08	0.74324	0.554698	1.07E-05	0.059257	0.613458	0.00272	0.92063	0.111785	0.765	0.795	1	0.927	0.724	0.993	0.646	0.887
rs35466472	3.6817E-08	0.0342003	0.00621	0.0342003	0.006212	6.83483E-08	0.51215	0.663968	0.00536	0.307534	0.091116	5.6E-05	0.15197	0.066298	0.843	0.824	0.99	0.758	0.936	1	0.912	0.924
rs1372491	3.6819E-08	-0.029541	0.00537	-0.029541	0.005366	6.83534E-08	0.29702	0.205842	0.005347	0.000494	0.199301	0.00461	0.60614	0.504386	0.887	0.9	0.993	0.998	0.911	0.993	0.83	0.86
rs79136172	3.6848E-08	0.0463934	0.00843	0.0463934	0.008427	6.84358E-08	0.32424	0.539666	0.000573	0.010364	0.177736	0.00764	0.28864	0.026437	0.881	0.738	0.999	0.989	0.916	0.988	0.89	0.947
rs10517178	3.6855E-08	-0.029537	0.00537	-0.029537	0.005365	6.84555E-08	0.29753	0.204271	0.005488	0.000508	0.196761	0.00449	0.60614	0.502463	0.887	0.9	0.993	0.998	0.912	0.994	0.83	0.86
rs77227789	3.6862E-08	-0.040224	0.00731	-0.040576	0.008176	6.41153E-08	0.55786	0.960787	0.0474	0.231018	0.006486	1.3E-05	0.14911	0.049803	0.813	0.746	0.839	0.762	0.981	1	0.899	0.923
rs6846798	3.6864E-08	-0.034802	0.00632	-0.040171	0.00995	5.9035E-08	0.10316	0.17393	0.061853	0.000245	0.08917	0.00708	0.0013	0.532239	0.915	0.898	0.837	0.999	0.939	0.969	0.986	0.692
rs6426279	3.6872E-08	0.028648	0.0052	0.028648	0.005204	6.74495E-08	0.26476	0.122847	0.100844	0.001205	0.059833	9.8E-05	0.42963	0.857466	0.857	0.889	0.69	0.997	0.94	1	0.813	0.705
rs34631102	3.6913E-08	0.0293936	0.00534	0.0293936	0.005339	6.86187E-08	0.69855	0.03518	0.012353	0.001933	0.079887	0.00067	0.83064	0.582314	0.819	0.931	0.978	0.996	0.941	0.999	0.685	0.831
rs10025590	3.6932E-08	-0.029539	0.00537	-0.029539	0.005366	6.86726E-08	0.29684	0.206217	0.005339	0.000495	0.199686	0.00461	0.60668	0.504337	0.887	0.9	0.993	0.998	0.911	0.993	0.83	0.86
rs114955707	3.6956E-08	-0.067148	0.0122	-0.067148	0.012198	6.87415E-08	0.18957	0.921038	3.74E-05	0.05579	0.447988	0.00276	0.89984	0.119805	0.878	0.749	1	0.942	0.806	0.994	0.723	0.899
rs9356054	3.698E-08	0.0309851	0.00563	0.0309851	0.005629	6.88067E-08	0.17983	0.388553	0.002084	0.016035	0.982428	0.00351	0.03521	0.020714	0.904	0.873	0.997	0.985	0.686	0.995	0.959	0.951
rs117887267	3.6991E-08	-0.067146	0.0122	-0.067146	0.012198	6.88386E-08	0.18954	0.921253	3.74E-05	0.055887	0.447415	0.00276	0.90007	0.119525	0.878	0.749	1	0.942	0.806	0.994	0.723	0.899
rs10455913	3.6992E-08	0.0309847	0.00563	0.0309847	0.005629	6.88412E-08	0.17986	0.388566	0.002085	0.01602	0.982359	0.00351	0.03522	0.020717	0.904	0.873	0.997	0.985	0.686	0.995	0.959	0.951
rs6800583	3.6992E-08	-0.028799	0.00523	-0.028799	0.005232	6.88408E-08	0.17784	0.780724	0.002843	0.085554	0.630066	1.9E-06	0.56378	0.729285	0.828	0.71	0.989	0.866	0.658	1	0.479	0.712

Table S3

rs6491287	3.6995E-08	0.0281084	0.00511	0.0281084	0.005106	6.88501E-08	0.15261	0.160233	0.001432	0.007966	0.53701	0.00742	0.44018	0.018183	0.915	0.914	0.998	0.992	0.832	0.99	0.87	0.956
rs9393728	3.7013E-08	0.0281268	0.00511	0.0281268	0.00511	6.89014E-08	0.52668	0.559356	0.001536	0.002158	0.438945	0.01128	0.03321	0.243209	0.861	0.857	0.998	0.996	0.851	0.982	0.961	0.899
rs34155397	3.7017E-08	0.0279362	0.00508	0.0279362	0.005075	6.8908E-08	0.71388	0.237848	0.001053	0.009243	0.368748	0.0159	0.00593	0.064524	0.77	0.898	0.999	0.991	0.869	0.972	0.979	0.936
rs3803647	3.7019E-08	-0.069636	0.01265	-0.069636	0.012651	6.89116E-08	0.72631	0.546629	1.04E-05	0.056819	0.668566	0.0027	0.92198	0.111572	0.765	0.794	1	0.928	0.704	0.993	0.642	0.885
rs4609835	3.7027E-08	-0.034505	0.00627	-0.039998	0.009578	6.89255E-08	0.12106	0.596796	0.011133	0.004102	0.019989	0.02056	0.07788	0.001194	0.927	0.772	0.984	0.995	0.978	0.964	0.951	0.977
rs9597407	3.7052E-08	-0.036254	0.00659	-0.036254	0.006586	6.89678E-08	0.65103	0.087259	8.59E-06	0.303711	0.373964	0.00419	0.10769	0.321958	0.681	0.893	1	0.706	0.809	0.987	0.907	0.841
rs17614926	3.7076E-08	-0.031799	0.00578	-0.034637	0.010295	6.90107E-08	0.00455	0.320519	0.005605	0.266313	0.377336	0.00018	0.00068	0.331883	0.952	0.85	0.986	0.743	0.818	0.999	0.986	0.602
rs12123726	3.7077E-08	0.0312338	0.00567	0.0312338	0.005675	6.90116E-08	0.01828	0.588122	0.041153	0.007834	0.687473	0.00023	0.10739	0.060456	0.949	0.849	0.918	0.991	0.777	1	0.934	0.935
rs4682538	3.7086E-08	0.0280115	0.00509	0.0280115	0.005089	6.90278E-08	0.89281	0.452628	0.008929	0.118685	0.047273	0.00042	0.00609	0.361283	0.821	0.871	0.988	0.918	0.962	0.999	0.979	0.883
rs11541286	3.7094E-08	0.046372	0.00842	0.046372	0.008425	6.90409E-08	0.319	0.535647	0.000613	0.010826	0.177393	0.00702	0.29203	0.026727	0.882	0.737	0.999	0.989	0.916	0.989	0.89	0.946
rs62389599	3.7117E-08	-0.042303	0.00769	-0.045839	0.010087	6.90823E-08	0.40141	0.039962	0.022934	0.008415	0.019911	0.00462	0.04278	0.026052	0.732	0.945	0.966	0.992	0.978	0.994	0.962	0.955
rs557909333	3.7121E-08	-0.069125	0.01256	-0.069125	0.012559	6.90888E-08	0.3829	0.430259	0.003946	0.060331	0.040079	0.00074	0.24185	0.354435	0.885	0.879	0.996	0.959	0.967	0.999	0.909	0.889
rs4909625	3.7141E-08	0.0293311	0.00533	0.0293311	0.005329	6.91236E-08	0.43653	0.063613	0.009298	0.001099	0.192426	0.01064	0.04478	0.441406	0.885	0.938	0.989	0.998	0.925	0.986	0.961	0.885
rs5811119	3.7146E-08	0.0279317	0.00507	0.0279317	0.005075	6.91324E-08	0.71109	0.245481	0.00111	0.008687	0.35482	0.01578	0.00586	0.0717	0.77	0.897	0.999	0.991	0.873	0.973	0.979	0.934
rs11160759	3.7162E-08	0.0278854	0.00507	0.0278854	0.005067	6.91598E-08	0.65154	0.252993	0.000966	0.008564	0.386227	0.01526	0.00643	0.06984	0.758	0.894	0.999	0.991	0.862	0.973	0.978	0.933
rs16840328	3.7164E-08	0.0473377	0.0086	0.0473377	0.008601	6.91632E-08	0.39306	0.093745	0.000454	0.02359	0.052224	0.04321	0.02694	0.366262	0.888	0.93	0.999	0.982	0.964	0.916	0.968	0.892
rs219004	3.7177E-08	0.0286501	0.00521	0.0360576	0.008677	5.38452E-08	0.49788	0.095064	0.001808	0.008115	0.130346	0.12954	0.00161	0.002647	0.847	0.92	0.994	0.99	0.924	0.599	0.988	0.974
rs8018363	3.7197E-08	0.0277293	0.00504	0.0277293	0.005038	6.922E-08	0.9523	0.195199	0.000438	0.018815	0.481641	0.02401	0.00297	0.075151	0.812	0.904	0.999	0.984	0.838	0.952	0.983	0.933
rs10958507	3.7219E-08	0.0276898	0.00503	0.0292041	0.0068	6.92597E-08	0.72976	0.375043	0.022386	0.000244	0.000401	0.00656	0.57131	0.789718	0.733	0.854	0.947	0.999	0.993	0.981	0.807	0.794
rs10151901	3.722E-08	0.0388511	0.00706	0.0388511	0.007059	6.92608E-08	0.3067	0.259925	0.001631	0.094392	0.123986	0.00047	0.08135	0.668792	0.88	0.886	0.998	0.929	0.93	0.999	0.938	0.739
rs12676747	3.7229E-08	0.0276895	0.00503	0.0292038	0.0068	6.9277E-08	0.72973	0.375043	0.022386	0.000244	0.000401	0.00656	0.57131	0.789718	0.733	0.854	0.947	0.999	0.993	0.981	0.807	0.794
rs516032	3.7243E-08	0.0349385	0.00635	0.0472472	0.011229	4.91276E-08	0.00518	0.076016	0.058369	0.005268	0.069051	0.02044	0.00054	0.162783	0.969	0.938	0.868	0.991	0.957	0.931	0.992	0.924
rs1547604	3.7245E-08	0.0277278	0.00504	0.0277278	0.005038	6.9304E-08	0.95313	0.195248	0.000438	0.01881	0.481901	0.02398	0.00297	0.075276	0.812	0.904	0.999	0.984	0.838	0.952	0.983	0.933
rs4695191	3.725E-08	-0.029531	0.00537	-0.029531	0.005366	6.93126E-08	0.2976	0.206212	0.005363	0.000495	0.199684	0.00462	0.60671	0.504362	0.886	0.9	0.993	0.998	0.911	0.993	0.83	0.86
rs6447532	3.7257E-08	-0.029531	0.00537	-0.029531	0.005366	6.93252E-08	0.2976	0.206213	0.005364	0.000495	0.199685	0.00462	0.60671	0.504363	0.886	0.9	0.993	0.998	0.911	0.993	0.83	0.86
rs12894254	3.7268E-08	0.0279301	0.00508	0.0279301	0.005075	6.93435E-08	0.71415	0.237843	0.001053	0.009329	0.368856	0.0159	0.00593	0.064519	0.77	0.898	0.999	0.991	0.869	0.972	0.979	0.936
rs75302324	3.7282E-08	0.0463777	0.00843	0.0463777	0.008427	6.9369E-08	0.31657	0.539793	0.000572	0.010679	0.177843	0.00765	0.28875	0.026402	0.882	0.738	0.999	0.989	0.916	0.988	0.89	0.947
rs34303534	3.7339E-08	-0.061595	0.01119	-0.061595	0.011193	6.94667E-08	0.87191	0.114059	0.000961	0.258219	0.165217	0.00142	0.00595	0.270096	0.81	0.914	0.999	0.806	0.917	0.998	0.976	0.888
rs12596086	3.734E-08	-0.069617	0.01265	-0.069617	0.012651	6.94685E-08	0.72786	0.545645	1.04E-05	0.057168	0.667901	0.00272	0.92162	0.11162	0.765	0.794	1	0.928	0.704	0.993	0.642	0.885
rs1880528	3.7352E-08	0.0305746	0.00556	0.0305746	0.005556	6.94899E-08	0.40551	0.173245	0.023048	0.000455	0.231448	0.00079	0.1633	0.300602	0.689	0.895	0.955	0.998	0.891	0.999	0.911	0.876
rs12819149	3.736E-08	0.0314517	0.00572	0.0328675	0.00708	6.95039E-08	0.87397	0.565385	0.008532	0.000169	0.093181	0.01734	0.01491	0.079702	0.776	0.732	0.985	0.999	0.94	0.963	0.969	0.926
rs76817317	3.7396E-08	0.0463729	0.00843	0.0463729	0.008427	6.95671E-08	0.31661	0.539504	0.000574	0.010666	0.177761	0.00766	0.28856	0.026418	0.882	0.738	0.999	0.989	0.916	0.988	0.89	0.947
rs1396186	3.7416E-08	0.0318321	0.00578	0.0318321	0.005785	6.96006E-08	0.59716	0.583443	0.00168	0.038714	0.015958	0.00179	0.77151	0.124767	0.848	0.85	0.998	0.97	0.976	0.998	0.796	0.917
rs1946320	3.7418E-08	0.0281428	0.00511	0.0274763	0.006971	4.46883E-08	0.13877	0.656527	6.61E-05	0.653694	0.082812	0.00012	0.2835	0.110701	0.851	0.72	1	0.064	0.905	1	0.801	0.868
rs76938034	3.743E-08	-0.069616	0.01265	-0.069616	0.012652	6.96256E-08	0.73069	0.546635	1.04E-05	0.05701	0.669014	0.00271	0.92197	0.111575	0.764	0.794	1	0.928	0.703	0.993	0.642	0.885
rs9316860	3.7438E-08	-0.03625	0.00659	-0.03625	0.006588	6.96394E-08	0.66436	0.090642	8.71E-06	0.31242	0.385989	0.00394	0.10509	0.327211	0.681	0.891	1	0.696	0.803	0.988	0.907	0.839
rs4885974	3.7452E-08	-0.036249	0.00659	-0.036249	0.006588	6.96647E-08	0.66438	0.090642	8.71E-06	0.312403	0.385991	0.00394	0.10509	0.327212	0.681	0.891	1	0.696	0.803	0.987	0.907	0.839
rs10780430	3.7459E-08	0.0280276	0.00509	0.0280276	0.005094	6.96762E-08	0.66084	0.297301	0.000238	0.023749	0.55771	0.00601	0.32795	0.026712	0.838	0.883	1	0.979	0.812	0.991	0.88	0.946
rs4900600	3.7463E-08	0.0279252	0.00508	0.0279252	0.005075	6.96826E-08	0.71103	0.23786	0.001054	0.009317	0.368902	0.01592	0.00594	0.064531	0.77	0.898	0.999	0.991	0.869	0.972	0.979	0.936
rs748832	3.7463E-08	-0.028787	0.00523	-0.028787	0.005232	6.96828E-08	0.17806	0.781308	0.002851	0.08562	0.631731	1.9E-06	0.56405	0.730619	0.828	0.709	0.989	0.866	0.657	1	0.479	0.711
rs74982939	3.7465E-08	-0.069609	0.01265	-0.069609	0.012651	6.96858E-08	0.72776	0.546628	1.04E-05	0.057558	0.66852	0.0027	0.92201	0.111569	0.764	0.794	1	0.927	0.704	0.993	0.642	0.885
rs34091898	3.7477E-08	0.0276845	0.00503	0.029192	0.006781	6.97077E-08	0.73685	0.375043	0.022386	0.000249	0.000401	0.00656	0.57131	0.789718	0.734	0.855	0.947	0.999	0.993	0.981	0.808	0.794
rs6830613	3.7483E-08	-0.034779	0.00632	-0.040094	0.009916	6.14648E-08	0.10364	0.173557	0.061398	0.000265	0.088867	0.00697	0.00129	0.530807	0.915	0.899	0.84	0.999	0.939	0.971	0.986	0.693
rs61859616	3.7488E-08	-0.032943	0.00599	-0.041803	0.010849	6.97262E-08	3.5E-05	0.07539	0.075517	0.048479	0.078634	0.00061	0.1155	0.318587	0.986	0.935	0.85	0.964	0.954	0.998	0.94	0.897
rs464865	3.7503E-08	0.0277501	0.00504	0.0269612	0.005735	6.97529E-08	0.28168	0.836522	0.002325	0.000401	0.893861	0.00017	0.89021	0.341014	0.502	0.687	0.992	0.998	0.55	0.999	0.613	0.78
rs544515	3.7504E-08	-0.033067	0.00601	-0.033067	0.00601	6.97538E-08	0.45893	0.743109	0.015516	0.015455	0.000894	0.00185	0.43467	0.239423	0.872	0.84	0.979	0.987	0.993	0.998	0.869	0.902
rs7152148	3.7506E-08	0.0278781	0.00507	0.0278781	0.005067	6.97573E-08	0.66618	0.253171	0.000966	0.008826	0.38624	0.01526	0.00643	0.069845	0.76	0.894	0.999	0.991	0.862	0.973	0.978	0.933
rs1565420	3.7516E-08	-0.034183	0.00621	-0.034183	0.006213	6.9775E-08	0.51214	0.661664	0.005263	0.322429	0.090383	5.5E-05	0.15139	0.065635	0.841	0.822	0.99	0.744	0.936	1	0.911	0.924
rs56171903	3.7518E-08	0.037073	0.00674	0.037073	0.006738	6.97788E-08	0.05941	0.66715	0.022697	0.00723	0.004572	0.00217	0.62171	0.205174	0.937	0.853	0.968	0.993	0.988	0.997	0.839	0.91
rs9347026	3.7526E-08	0.0306624	0.00557	0.0306907	0.005653	6.97926E-08	0.05842	0.735289	0.004135	0.001221	0.605455	0.0027	0.02347	0.448976	0.919	0.807	0.993	0.997	0.772	0.995	0.958	0.664
rs8013699	3.7527E-08	0.0388253	0.00706	0.0388253	0.007056	6.97947E-08	0.30583	0.26455	0.001469	0.097934	0.121349	0.00049	0.09112	0.68096	0.879	0.885	0.998	0.926	0.93	0.999	0.935	0.74
rs7160371	3.753E-08	0.0388291	0.00706	0.0388291	0.007057	6.97987E-08	0.31296	0.270363	0.001632	0.093108	0.120918	0.00048	0.0812	0.667168	0.879	0.884	0.998	0.93	0.931	0.999	0.938	0.738
rs8007838	3.7538E-08	0.03884	0.00706	0.03884	0.007059	6.98137E-08	0.30672	0.260389	0.00164	0.09448	0.12418	0.00048	0.08117	0.668715	0.88	0.886	0.998	0.929	0.93	0.999	0.938	0.739
rs10789930	3.7553E-08	0.0314232	0.00571	0.0314232	0.005711	6.98398E-08	0.30524	0.715824	0.014639	0.001129	0.107742	0.0002	0.49868	0.134004	0.845	0.697	0.963	0.997	0.915	0.999	0.535	0.886
rs626913	3.7555E-08	0.0276661	0.00503	0.0276661	0.005028	6.9842E-08	0.4032	0.904503	0.002579	0.132965	0.052068	0.00018	0.35019	0.20652	0.863	0.778	0.996	0.897	0.955	1	0.869	0.894

Table S3

rs61324392	3.7565E-08	-0.069617	0.01265	-0.069617	0.012653	6.98607E-08	0.72998	0.549483	1.06E-05	0.05743	0.659823	0.00269	0.92003	0.111644	0.765	0.794	1	0.928	0.707	0.993	0.642	0.885
rs76779070	3.7607E-08	-0.069601	0.01265	-0.069601	0.012651	6.99328E-08	0.72864	0.546628	1.04E-05	0.057719	0.66852	0.0027	0.92201	0.111569	0.764	0.793	1	0.927	0.703	0.993	0.642	0.885
rs117510172	3.7609E-08	-0.069601	0.01265	-0.069601	0.012651	6.9937E-08	0.72864	0.546628	1.04E-05	0.057723	0.66852	0.0027	0.92201	0.111569	0.764	0.793	1	0.927	0.703	0.993	0.642	0.885
rs12597260	3.7609E-08	-0.069601	0.01265	-0.069601	0.012651	6.9937E-08	0.72864	0.546628	1.04E-05	0.057723	0.66852	0.0027	0.92201	0.111569	0.764	0.793	1	0.927	0.703	0.993	0.642	0.885
rs59017003	3.7609E-08	-0.069601	0.01265	-0.069601	0.012651	6.9937E-08	0.72864	0.546628	1.04E-05	0.057723	0.66852	0.0027	0.92201	0.111569	0.764	0.793	1	0.927	0.703	0.993	0.642	0.885
rs61672348	3.7609E-08	-0.069601	0.01265	-0.069601	0.012651	6.9937E-08	0.72864	0.546628	1.04E-05	0.057723	0.66852	0.0027	0.92201	0.111569	0.764	0.793	1	0.927	0.703	0.993	0.642	0.885
rs77847928	3.7609E-08	-0.069601	0.01265	-0.069601	0.012651	6.9937E-08	0.72864	0.546628	1.04E-05	0.057723	0.66852	0.0027	0.92201	0.111569	0.764	0.793	1	0.927	0.703	0.993	0.642	0.885
rs76116699	3.761E-08	-0.069601	0.01265	-0.069601	0.012651	6.99392E-08	0.72863	0.546628	1.04E-05	0.057716	0.66853	0.0027	0.92201	0.111569	0.764	0.793	1	0.927	0.703	0.993	0.642	0.885
rs2926355	3.7611E-08	0.0696004	0.01265	0.0696004	0.012651	6.994E-08	0.72862	0.546602	1.04E-05	0.057706	0.66845	0.0027	0.92188	0.111555	0.764	0.793	1	0.927	0.703	0.993	0.642	0.885
rs10607302	3.7611E-08	0.0278092	0.00505	0.0278092	0.005055	6.99404E-08	0.31151	0.567229	0.002673	0.003446	0.076356	0.00823	0.32367	0.018926	0.888	0.749	0.997	0.995	0.951	0.988	0.888	0.954
rs111903490	3.7611E-08	0.0279699	0.00508	0.0279699	0.005084	6.99405E-08	0.72005	0.280127	0.001082	0.008341	0.387585	0.01542	0.00521	0.07268	0.769	0.891	0.999	0.991	0.863	0.973	0.98	0.933
rs12598327	3.7613E-08	-0.0696	0.01265	-0.0696	0.012651	6.9944E-08	0.72864	0.546628	1.04E-05	0.057719	0.66853	0.0027	0.92201	0.111569	0.764	0.793	1	0.927	0.703	0.993	0.642	0.885
rs75258522	3.7613E-08	-0.0696	0.01265	-0.0696	0.012651	6.9944E-08	0.72864	0.546628	1.04E-05	0.057719	0.66853	0.0027	0.92201	0.111569	0.764	0.793	1	0.927	0.703	0.993	0.642	0.885
rs116944985	3.7616E-08	-0.068176	0.01239	-0.068176	0.012392	6.99487E-08	0.60691	0.648948	2.55E-05	0.037857	0.595726	0.00249	0.84988	0.093858	0.792	0.787	1	0.953	0.737	0.994	0.635	0.896
rs35627219	3.7656E-08	0.0277869	0.00505	0.0278723	0.006083	7.00181E-08	0.73248	0.015138	0.001092	0.155477	0.727079	0.00046	0.44959	0.008405	0.812	0.943	0.998	0.869	0.742	0.999	0.839	0.956
rs10497758	3.7662E-08	0.047321	0.0086	0.047321	0.008602	7.00284E-08	0.39416	0.093937	0.000457	0.023733	0.052316	0.04323	0.02685	0.365768	0.888	0.93	0.999	0.982	0.964	0.916	0.968	0.892
rs6868642	3.7678E-08	0.0278075	0.00505	0.0278075	0.005055	7.00568E-08	0.31165	0.567337	0.002671	0.003449	0.076361	0.00824	0.32362	0.018944	0.888	0.749	0.997	0.995	0.951	0.988	0.888	0.954
rs11847468	3.7684E-08	0.0278727	0.00507	0.0278727	0.005067	7.00673E-08	0.66524	0.254144	0.000941	0.008845	0.380227	0.01564	0.00654	0.070548	0.76	0.894	0.999	0.991	0.864	0.972	0.978	0.933
rs76718064	3.7687E-08	-0.035795	0.00651	-0.033299	0.008257	7.00718E-08	0.19661	0.512665	0.000967	0.206253	0.039695	1.1E-05	0.42224	0.597841	0.475	0.571	0.996	0.709	0.929	1	0.751	0.727
rs141718572	3.7713E-08	-0.035795	0.00651	-0.033306	0.008253	7.01182E-08	0.19787	0.51264	0.000966	0.207359	0.039609	1.1E-05	0.42225	0.597864	0.475	0.571	0.996	0.708	0.929	1	0.75	0.727
rs10922912	3.7754E-08	0.0281701	0.00512	0.029504	0.006224	5.87624E-08	0.59497	0.185784	3.89E-05	0.018706	0.225874	0.12685	0.0637	0.0083	0.81	0.883	1	0.974	0.869	0.566	0.938	0.958
rs157617	3.7756E-08	-0.027754	0.00505	-0.027754	0.005045	7.01919E-08	0.6254	0.184369	0.000229	0.027524	0.075646	0.01378	0.31162	0.26492	0.856	0.91	1	0.979	0.953	0.979	0.895	0.9
rs8009025	3.7774E-08	0.0388322	0.00706	0.0388322	0.007059	7.0223E-08	0.30724	0.260242	0.001642	0.094452	0.124157	0.00048	0.0813	0.668699	0.879	0.886	0.998	0.929	0.93	0.999	0.938	0.739
rs56954792	3.7774E-08	-0.032937	0.00599	-0.041931	0.010932	7.02239E-08	3.1E-05	0.075421	0.074398	0.05323	0.078625	0.00058	0.11642	0.32065	0.986	0.935	0.852	0.96	0.954	0.998	0.939	0.896
rs12323200	3.7778E-08	0.034452	0.00626	0.034452	0.006263	7.0231E-08	0.97406	0.285747	0.000986	0.005998	0.23451	0.00306	0.33971	0.429517	0.8	0.883	0.999	0.993	0.897	0.996	0.876	0.864
rs79258387	3.7791E-08	-0.06959	0.01265	-0.06959	0.012651	7.0253E-08	0.72856	0.546629	1.04E-05	0.057693	0.668596	0.0027	0.92137	0.111575	0.764	0.793	1	0.927	0.703	0.993	0.642	0.885
rs10607303	3.7792E-08	0.0278146	0.00506	0.0278146	0.005056	7.02538E-08	0.3098	0.557828	0.002739	0.00333	0.076063	0.00832	0.32086	0.018588	0.888	0.747	0.997	0.995	0.951	0.988	0.888	0.954
rs118138543	3.7793E-08	-0.06959	0.01265	-0.06959	0.012651	7.02569E-08	0.72856	0.546629	1.04E-05	0.057696	0.668596	0.0027	0.92137	0.111575	0.764	0.793	1	0.927	0.703	0.993	0.642	0.885
rs117111739	3.78E-08	-0.06959	0.01265	-0.06959	0.012651	7.02684E-08	0.72855	0.54663	1.04E-05	0.057692	0.668606	0.0027	0.92136	0.111575	0.764	0.793	1	0.927	0.703	0.993	0.642	0.885
rs16883749	3.7809E-08	-0.034767	0.00632	-0.040078	0.009916	6.21144E-08	0.10388	0.174022	0.06168	0.000267	0.088584	0.00695	0.00129	0.529249	0.915	0.899	0.839	0.999	0.939	0.971	0.986	0.692
rs75854270	3.7812E-08	-0.069589	0.01265	-0.069589	0.012651	7.02887E-08	0.72855	0.54663	1.04E-05	0.057691	0.668616	0.00271	0.92135	0.111575	0.764	0.793	1	0.927	0.703	0.993	0.642	0.885
rs145234012	3.7819E-08	-0.069589	0.01265	-0.069589	0.012651	7.03008E-08	0.72854	0.546631	1.04E-05	0.057688	0.668624	0.00271	0.92134	0.111578	0.764	0.793	1	0.927	0.703	0.993	0.642	0.885
rs17701568	3.782E-08	0.0388301	0.00706	0.0388301	0.007059	7.03031E-08	0.30724	0.261163	0.001646	0.094425	0.124433	0.00048	0.08105	0.669242	0.879	0.886	0.998	0.929	0.93	0.999	0.939	0.739
rs12599277	3.7823E-08	-0.069588	0.01265	-0.069588	0.012651	7.03085E-08	0.72853	0.546631	1.04E-05	0.057686	0.668629	0.00271	0.92134	0.111578	0.764	0.793	1	0.927	0.703	0.993	0.642	0.885
rs28384387	3.7831E-08	-0.069588	0.01265	-0.069588	0.012651	7.03215E-08	0.7286	0.546635	1.04E-05	0.057733	0.669001	0.00271	0.92197	0.111575	0.764	0.793	1	0.927	0.703	0.993	0.642	0.885
rs117115694	3.7833E-08	-0.069588	0.01265	-0.069588	0.012651	7.03264E-08	0.72853	0.546631	1.04E-05	0.057686	0.668639	0.00271	0.92133	0.111578	0.764	0.793	1	0.927	0.703	0.993	0.642	0.885
rs56787125	3.7849E-08	-0.036735	0.00668	-0.036735	0.006678	7.03529E-08	0.10221	0.616729	0.002133	0.014192	0.207483	0.00485	0.14115	0.024957	0.925	0.765	0.998	0.988	0.915	0.994	0.931	0.952
rs117878677	3.7876E-08	-0.069593	0.01265	-0.069593	0.012652	7.04005E-08	0.73011	0.54731	1.06E-05	0.057491	0.662636	0.00271	0.92035	0.111298	0.764	0.794	1	0.927	0.706	0.993	0.642	0.885
rs59618849	3.7879E-08	-0.069585	0.01265	-0.069585	0.012651	7.0405E-08	0.72847	0.546632	1.04E-05	0.057662	0.668671	0.00271	0.92131	0.111581	0.764	0.793	1	0.927	0.703	0.993	0.642	0.885
rs2024667	3.7879E-08	0.0278683	0.00507	0.0278683	0.005067	7.04057E-08	0.66601	0.254145	0.00094	0.008914	0.380227	0.01564	0.00654	0.070548	0.761	0.894	0.999	0.991	0.864	0.972	0.978	0.933
rs11367794	3.7883E-08	0.0281304	0.00511	0.0284884	0.006558	7.04119E-08	0.00656	0.607244	0.000121	0.16548	0.134284	0.00569	0.03666	0.429888	0.954	0.83	1	0.862	0.92	0.989	0.953	0.668
rs77587545	3.7897E-08	-0.069584	0.01265	-0.069584	0.012651	7.04365E-08	0.72851	0.546632	1.04E-05	0.057682	0.668671	0.00271	0.9213	0.111581	0.764	0.793	1	0.927	0.703	0.993	0.642	0.885
rs11866996	3.7904E-08	-0.069584	0.01265	-0.069584	0.012651	7.04487E-08	0.72851	0.546633	1.04E-05	0.057682	0.668677	0.00271	0.9213	0.111581	0.764	0.793	1	0.927	0.703	0.993	0.642	0.885
rs146179459	3.791E-08	-0.069583	0.01265	-0.069583	0.012651	7.0459E-08	0.72852	0.546633	1.04E-05	0.05769	0.668677	0.00271	0.9213	0.111581	0.764	0.793	1	0.927	0.703	0.993	0.642	0.885
rs1555689	3.7912E-08	0.0324911	0.00591	0.0305489	0.010796	7.04624E-08	0.02238	0.154742	0.00702	0.243914	0.429254	5.9E-06	0.04042	0.030774	0.372	0.855	0.972	0.7	0.753	1	0.931	0.916
rs28740811	3.7938E-08	0.0622809	0.01132	0.061832	0.013202	7.05076E-08	0.19243	0.225692	0.007034	0.256434	0.185734	2.6E-05	0.02288	0.165864	0.876	0.608	0.984	0.767	0.889	1	0.955	0.884
rs7948789	3.7941E-08	0.0289198	0.00526	0.0315826	0.007015	7.05126E-08	0.03309	0.932198	0.059922	0.008533	0.001294	0.00174	0.42089	0.048877	0.943	0.796	0.874	0.991	0.992	0.997	0.866	0.942
rs76939095	3.7961E-08	-0.069583	0.01265	-0.069583	0.012651	7.05473E-08	0.73021	0.546675	1.06E-05	0.057628	0.667347	0.00269	0.92086	0.111223	0.764	0.794	1	0.927	0.704	0.993	0.642	0.885
rs78821331	3.7963E-08	-0.06441	0.01171	-0.06441	0.011711	7.05506E-08	0.14288	0.907048	8.9E-05	0.014667	0.42067	0.0041	0.94537	0.241307	0.891	0.776	1	0.982	0.817	0.992	0.691	0.873
rs11628481	3.7964E-08	0.027867	0.00507	0.027867	0.005067	7.05528E-08	0.66417	0.253204	0.000965	0.008957	0.385934	0.01527	0.00642	0.069869	0.76	0.894	0.999	0.991	0.862	0.973	0.978	0.933
rs117557319	3.7967E-08	-0.067093	0.0122	-0.067093	0.012199	7.05587E-08	0.18949	0.922465	3.78E-05	0.056334	0.444558	0.00282	0.89884	0.118309	0.879	0.75	1	0.942	0.807	0.994	0.724	0.899
rs142052924	3.7972E-08	0.0783299	0.01424	0.0783299	0.014242	6.55025E-08	0.8178	0.358207	0.071331	0.00226	0.447481	3.8E-06	0.36498	0.628612	0.711	0.792	0.73	0.993	0.73	1	0.783	0.603
rs145086505	3.7981E-08	-0.032931	0.00599	-0.041927	0.010933	7.05826E-08	3.1E-05	0.075435	0.07445	0.053297	0.078589	0.00058	0.11653	0.320676	0.986	0.935	0.852	0.96	0.954	0.998	0.939	0.896
rs2166172	3.8029E-08	0.0281641	0.00512	0.0294976	0.006223	5.93596E-08	0.59899	0.185729	3.95E-05	0.018339	0.226535	0.12716	0.06372	0.008319	0.809	0.883	1	0.975	0.869	0.565	0.938	0.958
rs10884058	3.8045E-08	-0.029125	0.0053	-0.030055	0.00629	7.06931E-08	0.21014	0.067477	0.013477	0.511014	0.015193	0.00019	0.00872	0.574111	0.886	0.92	0.965	0.592	0.975	1	0.974	0.827

Table S3

rs567934755	3.8091E-08	0.0534738	0.00972	0.0534738	0.009723	7.07744E-08	0.85483	0.694658	0.003192	0.002732	0.237195	0.00045	0.92299	0.159126	0.735	0.798	0.994	0.995	0.872	0.999	0.684	0.885
rs12709063	3.8104E-08	-0.027733	0.00504	-0.027733	0.005043	7.07969E-08	0.75401	0.089079	0.004373	0.0165	0.637563	0.00068	0.51363	0.009857	0.825	0.919	0.994	0.984	0.789	0.999	0.841	0.958
rs12599010	3.8106E-08	-0.069572	0.01265	-0.069572	0.012651	7.07994E-08	0.73072	0.546624	1.04E-05	0.057722	0.668707	0.00272	0.92089	0.111581	0.764	0.793	1	0.927	0.703	0.993	0.642	0.885
rs12596884	3.811E-08	-0.069572	0.01265	-0.069572	0.012651	7.08073E-08	0.73072	0.546624	1.04E-05	0.057723	0.668711	0.00272	0.92088	0.111581	0.764	0.793	1	0.927	0.703	0.993	0.642	0.885
rs79203205	3.8111E-08	-0.069572	0.01265	-0.069572	0.012651	7.08083E-08	0.72913	0.546632	1.04E-05	0.057976	0.668668	0.00271	0.92131	0.111581	0.764	0.793	1	0.927	0.703	0.993	0.642	0.885
rs56772932	3.8114E-08	-0.069572	0.01265	-0.069572	0.012651	7.08136E-08	0.73069	0.546628	1.04E-05	0.057769	0.668736	0.00271	0.92087	0.111584	0.764	0.793	1	0.927	0.703	0.993	0.642	0.885
rs876002	3.8118E-08	0.0278631	0.00507	0.0278631	0.005067	7.08203E-08	0.66449	0.253236	0.000966	0.009003	0.386126	0.01526	0.00642	0.069822	0.76	0.894	0.999	0.991	0.862	0.973	0.978	0.933
rs11628240	3.8121E-08	0.0278623	0.00507	0.0278623	0.005066	7.08263E-08	0.6645	0.254144	0.000941	0.008967	0.380227	0.01564	0.00654	0.070548	0.76	0.894	0.999	0.991	0.864	0.972	0.978	0.933
rs17109948	3.8121E-08	0.0463425	0.00843	0.0463425	0.008427	7.08265E-08	0.31673	0.537402	0.000584	0.010635	0.177212	0.00766	0.2901	0.026536	0.882	0.738	0.999	0.989	0.917	0.988	0.89	0.947
rs12878682	3.8125E-08	0.0278628	0.00507	0.0278628	0.005067	7.08326E-08	0.66448	0.252993	0.000966	0.008998	0.386224	0.01526	0.00643	0.06984	0.76	0.894	0.999	0.991	0.862	0.973	0.978	0.933
rs12588489	3.8125E-08	0.0278628	0.00507	0.0278628	0.005067	7.08329E-08	0.66448	0.252993	0.000966	0.008998	0.386224	0.01526	0.00643	0.06984	0.76	0.894	0.999	0.991	0.862	0.973	0.978	0.933
rs141516441	3.8132E-08	0.0278621	0.00507	0.0278621	0.005066	7.08443E-08	0.66451	0.254143	0.000941	0.008968	0.380224	0.01564	0.00654	0.070547	0.76	0.894	0.999	0.991	0.864	0.972	0.978	0.933
rs2166171	3.8135E-08	0.0281613	0.00512	0.0294932	0.006222	5.95965E-08	0.59474	0.185734	3.93E-05	0.018683	0.226335	0.12697	0.06366	0.008307	0.81	0.883	1	0.975	0.869	0.566	0.938	0.958
rs7204355	3.814E-08	-0.034334	0.00624	-0.039992	0.009694	7.08586E-08	0.16927	0.571631	0.010428	0.005757	0.018003	0.01969	0.05993	0.000903	0.918	0.767	0.986	0.994	0.979	0.966	0.956	0.979
rs74622827	3.8144E-08	-0.065803	0.01197	-0.065803	0.011966	7.08662E-08	0.83515	0.290586	2.7E-05	0.027164	0.446859	0.00356	0.73992	0.180704	0.763	0.847	1	0.966	0.791	0.992	0.613	0.874
rs145026901	3.8147E-08	-0.069576	0.01265	-0.069576	0.012652	7.08704E-08	0.7308	0.546817	1.05E-05	0.057043	0.669645	0.00273	0.92116	0.111772	0.764	0.793	1	0.928	0.703	0.993	0.642	0.885
rs12891589	3.8147E-08	0.0278617	0.00507	0.0278617	0.005066	7.08713E-08	0.66452	0.254144	0.000941	0.008972	0.380227	0.01564	0.00654	0.070548	0.76	0.894	0.999	0.991	0.864	0.972	0.978	0.933
rs138904832	3.8151E-08	-0.069569	0.01265	-0.069569	0.012651	7.08785E-08	0.73069	0.546625	1.04E-05	0.057767	0.66872	0.00272	0.92088	0.111584	0.764	0.793	1	0.927	0.703	0.993	0.642	0.885
rs7299922	3.8154E-08	-0.028157	0.00512	-0.028157	0.00512	7.08834E-08	0.02228	0.845846	0.000225	0.06567	0.635466	0.00132	0.23307	0.470835	0.936	0.755	0.999	0.941	0.766	0.998	0.887	0.842
rs11624184	3.8172E-08	0.027862	0.00507	0.027862	0.005067	7.09137E-08	0.66449	0.253205	0.000965	0.009004	0.386157	0.01527	0.00643	0.06987	0.76	0.894	0.999	0.991	0.862	0.973	0.978	0.933
rs11626377	3.8179E-08	0.0278616	0.00507	0.0278616	0.005067	7.09266E-08	0.66447	0.25317	0.000966	0.009006	0.386243	0.01527	0.00643	0.069844	0.76	0.894	0.999	0.991	0.862	0.973	0.978	0.933
rs16840306	3.8189E-08	0.0472908	0.0086	0.0472908	0.0086	7.09432E-08	0.39188	0.09422	0.00046	0.023736	0.052398	0.04337	0.02688	0.368129	0.888	0.93	0.999	0.982	0.964	0.916	0.968	0.891
rs139699602	3.8204E-08	0.0462459	0.00841	0.0462459	0.00841	7.09697E-08	0.31027	0.536137	0.000606	0.010138	0.176809	0.00781	0.29231	0.026627	0.883	0.738	0.999	0.99	0.917	0.988	0.89	0.946
rs2348370	3.8218E-08	-0.028556	0.00519	-0.028556	0.005193	7.09938E-08	0.07042	0.969853	0.003932	0.067349	0.735358	4.2E-05	0.14331	0.649484	0.911	0.762	0.993	0.936	0.728	1	0.906	0.808
rs118071679	3.8219E-08	-0.069594	0.01266	-0.069594	0.012656	7.09953E-08	0.73985	0.550246	1.05E-05	0.060879	0.646871	0.00266	0.92188	0.110935	0.763	0.793	1	0.924	0.711	0.993	0.643	0.886
rs112630369	3.8219E-08	-0.068151	0.01239	-0.068151	0.012394	7.09961E-08	0.60357	0.648008	2.54E-05	0.038262	0.597862	0.00251	0.84801	0.093851	0.792	0.787	1	0.953	0.736	0.994	0.635	0.896
rs12054231	3.8223E-08	-0.02889	0.00525	-0.02889	0.005254	7.10025E-08	0.89568	0.568693	0.015453	0.116469	0.374854	3.7E-06	0.04966	0.689642	0.74	0.813	0.961	0.884	0.823	1	0.937	0.793
rs10144091	3.8231E-08	0.0387866	0.00705	0.0387866	0.007054	7.10163E-08	0.31735	0.277132	0.001791	0.098692	0.122944	0.00044	0.07344	0.69295	0.878	0.884	0.997	0.926	0.93	0.999	0.941	0.743
rs6575997	3.8248E-08	0.0278594	0.00507	0.0278594	0.005066	7.10458E-08	0.66438	0.254144	0.000941	0.009002	0.380224	0.01564	0.00654	0.070547	0.76	0.894	0.999	0.991	0.864	0.972	0.978	0.933
rs9365456	3.8263E-08	0.0318018	0.00578	0.0318018	0.005784	7.10722E-08	0.16075	0.735226	0.007599	0.005686	0.558814	0.00241	0.04753	0.050516	0.914	0.844	0.991	0.994	0.828	0.997	0.957	0.942
rs200975	3.8264E-08	-0.041944	0.00763	-0.047489	0.011266	7.10731E-08	0.95584	0.20092	0.010119	0.00023	0.329071	0.02892	0.02828	0.003142	0.803	0.905	0.979	0.999	0.878	0.933	0.965	0.97
rs10927126	3.8286E-08	0.0393142	0.00715	0.0393142	0.00715	7.11122E-08	0.04732	0.254634	0.00073	0.564549	0.695797	4.5E-05	0.13768	0.469911	0.898	0.83	0.998	0.463	0.656	1	0.88	0.786
rs11729583	3.8289E-08	-0.034717	0.00631	-0.04013	0.009955	6.35233E-08	0.08805	0.137511	0.063817	0.000275	0.084759	0.00678	0.00181	0.493357	0.919	0.906	0.832	0.999	0.941	0.971	0.985	0.683
rs61616314	3.8298E-08	-0.069586	0.01266	-0.069586	0.012655	7.11334E-08	0.73841	0.551074	1.05E-05	0.060951	0.647676	0.00266	0.92184	0.110943	0.763	0.793	1	0.924	0.711	0.993	0.643	0.885
rs73098922	3.8321E-08	-0.06852	0.01246	-0.06852	0.012462	7.11732E-08	0.60005	0.759937	0.001343	0.078722	0.255121	0.0001	0.36106	0.138678	0.702	0.797	0.998	0.925	0.87	1	0.849	0.895
rs9355496	3.8358E-08	0.0306435	0.00557	0.0306677	0.005642	7.12373E-08	0.05659	0.73309	0.004085	0.001318	0.604714	0.0027	0.02332	0.449369	0.92	0.807	0.993	0.997	0.773	0.995	0.959	0.664
rs17110090	3.8378E-08	0.0463317	0.00843	0.0463317	0.008427	7.1271E-08	0.3159	0.535334	0.000596	0.010349	0.176429	0.00772	0.29186	0.026548	0.882	0.737	0.999	0.989	0.917	0.988	0.89	0.947
rs34134431	3.8387E-08	0.0278568	0.00507	0.0278568	0.005067	7.12875E-08	0.66518	0.254144	0.000941	0.009051	0.380227	0.01564	0.00654	0.070548	0.76	0.894	0.999	0.991	0.864	0.972	0.978	0.933
rs78468743	3.8411E-08	-0.069557	0.01265	-0.069557	0.012651	7.13292E-08	0.72878	0.546823	1.05E-05	0.057783	0.669225	0.00272	0.92115	0.111772	0.764	0.793	1	0.927	0.703	0.993	0.642	0.885
rs78692422	3.8415E-08	-0.069556	0.01265	-0.069556	0.012651	7.13368E-08	0.72878	0.546823	1.05E-05	0.05778	0.669235	0.00272	0.92115	0.111772	0.764	0.793	1	0.927	0.703	0.993	0.642	0.885
rs2348371	3.8449E-08	-0.028551	0.00519	-0.028551	0.005193	7.13954E-08	0.07046	0.969885	0.003936	0.067517	0.735447	4.2E-05	0.14332	0.64949	0.911	0.762	0.993	0.936	0.728	1	0.906	0.808
rs150820796	3.8467E-08	0.0463278	0.00843	0.0463278	0.008427	7.14262E-08	0.31632	0.53515	0.000596	0.01035	0.176655	0.00773	0.29171	0.026553	0.882	0.737	0.999	0.989	0.917	0.988	0.89	0.946
rs61377142	3.8509E-08	0.0430136	0.00782	0.0456306	0.00955	5.73131E-08	0.03752	0.566821	0.000517	0.001662	0.00354	0.14726	0.25933	0.633455	0.925	0.8	0.998	0.996	0.987	0.497	0.857	0.783
rs2030734	3.8514E-08	0.0305534	0.00556	0.0305534	0.005558	7.1508E-08	0.41233	0.175967	0.024361	0.000386	0.23198	0.00083	0.16664	0.304431	0.689	0.894	0.951	0.998	0.89	0.999	0.909	0.875
rs62057756	3.8515E-08	-0.028943	0.00526	-0.029105	0.006828	7.15088E-08	0.88089	0.9577	0.015049	0.000525	0.005457	0.0012	0.21356	0.205019	0.762	0.752	0.963	0.998	0.98	0.997	0.876	0.552
rs11192210	3.8533E-08	-0.029113	0.0053	-0.030039	0.006288	7.15413E-08	0.21062	0.067399	0.013533	0.51136	0.015326	0.00019	0.00871	0.575071	0.886	0.92	0.965	0.592	0.975	1	0.974	0.827
rs149214504	3.854E-08	0.046325	0.00843	0.046325	0.008427	7.15523E-08	0.3168	0.536004	0.000589	0.010582	0.176917	0.0077	0.29048	0.026555	0.882	0.738	0.999	0.989	0.917	0.988	0.89	0.946
rs115720873	3.8544E-08	-0.069555	0.01265	-0.069555	0.012652	7.15592E-08	0.72211	0.548817	1.02E-05	0.055341	0.672938	0.00288	0.91786	0.11287	0.765	0.793	1	0.93	0.702	0.992	0.641	0.885
rs9347658	3.8554E-08	0.0317925	0.00578	0.0317925	0.005783	7.15766E-08	0.1607	0.731876	0.007635	0.005604	0.562824	0.00244	0.04794	0.049156	0.914	0.845	0.991	0.994	0.827	0.997	0.957	0.943
rs77065014	3.8555E-08	-0.065414	0.0119	-0.066581	0.012546	7.15794E-08	0.57563	0.198274	0.006646	0.044077	0.002041	0.01545	0.00918	0.159109	0.876	0.918	0.993	0.972	0.991	0.978	0.978	0.928
rs55886424	3.8567E-08	-0.032915	0.00599	-0.041954	0.010955	7.15992E-08	3E-05	0.07488	0.075006	0.05331	0.078616	0.00058	0.11719	0.323758	0.986	0.935	0.851	0.96	0.954	0.998	0.939	0.895
rs75791745	3.8568E-08	0.0388047	0.00706	0.0388047	0.007059	7.16011E-08	0.30809	0.262468	0.00166	0.094516	0.124481	0.00048	0.08088	0.669393	0.879	0.886	0.998	0.929	0.93	0.999	0.939	0.739
rs111869404	3.8569E-08	0.0499763	0.00909	0.0511023	0.010811	7.16022E-08	0.02197	0.016215	0.000577	0.117589	0.029762	0.00498	0.92194	0.486014	0.946	0.949	0.999	0.916	0.969	0.992	0.734	0.862
rs150448582	3.8585E-08	0.0463233	0.00843	0.0463233	0.008427	7.16302E-08	0.3168	0.535999	0.000589	0.010583	0.176916	0.0077	0.29048	0.026556	0.882	0.738	0.999	0.989	0.917	0.988	0.89	0.946
rs147358991	3.8608E-08	-0.069545	0.01265	-0.069545	0.012651	7.16709E-08	0.72871	0.546825	1.05E-05	0.057761	0.669305	0.00273	0.9205	0.111778	0.764	0.793	1	0.927	0.703	0.993	0.642	0.885

Table S3

rs9458574	3.8609E-08	0.0317911	0.00578	0.0317911	0.005783	7.16732E-08	0.16184	0.732622	0.007608	0.005728	0.560571	0.00242	0.04756	0.049833	0.914	0.845	0.991	0.994	0.827	0.997	0.957	0.942
rs11860639	3.861E-08	-0.069545	0.01265	-0.069545	0.012651	7.16748E-08	0.72871	0.546825	1.05E-05	0.057761	0.669309	0.00273	0.92049	0.111778	0.764	0.793	1	0.927	0.703	0.993	0.642	0.885
rs10133228	3.8619E-08	0.0387877	0.00706	0.0387877	0.007056	7.16896E-08	0.30799	0.26537	0.001473	0.097591	0.122753	0.0005	0.09131	0.685218	0.879	0.885	0.998	0.926	0.93	0.999	0.935	0.741
rs12596547	3.8641E-08	-0.069544	0.01265	-0.069544	0.012651	7.17282E-08	0.72865	0.546827	1.05E-05	0.057736	0.669354	0.00273	0.92046	0.111784	0.764	0.793	1	0.927	0.703	0.993	0.642	0.885
rs851012	3.8642E-08	0.0374115	0.00681	0.0364786	0.009032	7.1729E-08	0.4338	0.338177	0.00015	0.359768	0.175519	0.00057	0.00638	0.191354	0.796	0.814	1	0.608	0.865	0.998	0.966	0.485
rs851011	3.8648E-08	0.0374113	0.00681	0.0364783	0.009033	7.174E-08	0.43383	0.338177	0.00015	0.359806	0.175519	0.00057	0.00638	0.191354	0.796	0.814	1	0.608	0.865	0.998	0.966	0.485
rs116200552	3.8667E-08	0.0664288	0.01208	0.0664288	0.012085	7.17728E-08	0.81799	0.499334	0.000262	0.044552	0.024163	0.00504	0.83748	0.042248	0.806	0.846	0.999	0.961	0.968	0.991	0.694	0.934
rs7215646	3.8671E-08	-0.027877	0.00507	-0.027868	0.005105	7.17801E-08	0.74584	0.981418	0.000625	0.113664	0.483011	0.00063	0.09481	0.004709	0.734	0.769	0.999	0.899	0.806	0.999	0.925	0.959
rs76905624	3.8681E-08	0.0388011	0.00706	0.0388011	0.007059	7.17979E-08	0.30808	0.262481	0.001663	0.094543	0.124562	0.00048	0.0809	0.669342	0.879	0.886	0.998	0.929	0.93	0.999	0.939	0.739
rs146798013	3.8691E-08	-0.064421	0.01172	-0.064421	0.01172	7.18146E-08	0.14291	0.938201	6.6E-05	0.015293	0.445413	0.00443	0.92764	0.250061	0.888	0.768	1	0.981	0.806	0.991	0.682	0.868
rs143448309	3.8717E-08	0.0389893	0.00709	0.0401228	0.007934	7.1859E-08	0.00289	0.11641	0.005137	0.043067	0.386176	0.00552	0.03448	0.186085	0.973	0.931	0.995	0.974	0.887	0.994	0.967	0.923
rs6450799	3.873E-08	0.0277876	0.00506	0.0277876	0.005055	7.18821E-08	0.31166	0.567105	0.002703	0.003532	0.076531	0.00821	0.32353	0.019036	0.888	0.749	0.997	0.995	0.951	0.988	0.888	0.954
rs13378568	3.8762E-08	0.0345169	0.00628	0.0345169	0.00628	7.19378E-08	0.86815	0.332372	0.000749	0.0091	0.20163	0.00279	0.36809	0.354076	0.777	0.875	0.999	0.99	0.905	0.996	0.868	0.873
rs17640404	3.8766E-08	-0.05375	0.00978	-0.05375	0.009779	7.19445E-08	0.28549	0.14114	0.001654	0.07618	0.069995	0.00106	0.88511	0.116333	0.89	0.913	0.998	0.946	0.953	0.999	0.778	0.922
rs146921035	3.8777E-08	-0.068129	0.0124	-0.068129	0.012395	7.19635E-08	0.60512	0.649919	2.57E-05	0.037802	0.600163	0.00252	0.84596	0.093887	0.791	0.786	1	0.953	0.736	0.994	0.634	0.896
rs61859617	3.8779E-08	-0.032906	0.00599	-0.041558	0.010776	7.19665E-08	4E-05	0.075822	0.074092	0.053092	0.078422	0.00058	0.11617	0.319163	0.985	0.935	0.854	0.961	0.954	0.998	0.939	0.897
rs76766243	3.8781E-08	-0.065381	0.0119	-0.064406	0.015265	7.19712E-08	0.03231	0.097692	0.001148	0.824074	0.061884	3.2E-05	0.46678	0.920027	0.906	0.871	0.996	0.264	0.923	1	0.748	0.641
rs76941299	3.8798E-08	-0.069535	0.01265	-0.069535	0.012651	7.20004E-08	0.72861	0.546827	1.05E-05	0.057703	0.669409	0.00274	0.92002	0.111787	0.764	0.793	1	0.927	0.703	0.993	0.642	0.885
rs141214751	3.8801E-08	0.0463143	0.00843	0.0463143	0.008427	7.20052E-08	0.31685	0.535566	0.000592	0.010582	0.176935	0.0077	0.29114	0.026622	0.882	0.738	0.999	0.989	0.917	0.988	0.89	0.946
rs17110073	3.8803E-08	0.0463134	0.00843	0.0463134	0.008426	7.20085E-08	0.31685	0.53494	0.000594	0.010504	0.17671	0.00771	0.29173	0.026519	0.882	0.737	0.999	0.989	0.917	0.988	0.89	0.946
rs75495527	3.8833E-08	0.0463143	0.00843	0.0463143	0.008427	7.20601E-08	0.31589	0.535537	0.000597	0.010477	0.176538	0.00772	0.2919	0.026572	0.882	0.738	0.999	0.989	0.917	0.988	0.89	0.946
rs34484611	3.8835E-08	-0.033034	0.00601	-0.033034	0.006011	7.20639E-08	0.45639	0.740717	0.015295	0.016004	0.000935	0.00178	0.45877	0.241536	0.871	0.84	0.979	0.986	0.993	0.998	0.864	0.901
rs17110070	3.8845E-08	0.0463118	0.00843	0.0463118	0.008426	7.20824E-08	0.31686	0.534905	0.000595	0.01051	0.176538	0.00771	0.29195	0.02652	0.882	0.737	0.999	0.989	0.917	0.988	0.89	0.946
rs455567	3.8849E-08	0.0277012	0.00504	0.0267229	0.005868	7.20884E-08	0.27337	0.765385	0.002803	0.000415	0.884449	0.00013	0.9632	0.356498	0.496	0.696	0.99	0.997	0.549	0.999	0.589	0.774
rs12413206	3.8853E-08	0.0341566	0.00621	0.0341566	0.006215	7.20947E-08	0.5007	0.647952	0.005518	0.310926	0.088035	6.6E-05	0.14078	0.062358	0.845	0.827	0.99	0.758	0.938	1	0.916	0.926
rs139957293	3.8856E-08	0.0463114	0.00843	0.0463114	0.008426	7.21011E-08	0.31687	0.534906	0.000595	0.010511	0.176629	0.00771	0.29193	0.02652	0.882	0.737	0.999	0.989	0.917	0.988	0.89	0.946
rs2295141	3.886E-08	0.0278451	0.00507	0.0278451	0.005066	7.21071E-08	0.66308	0.254145	0.000941	0.009171	0.380227	0.01564	0.00654	0.070548	0.76	0.894	0.999	0.991	0.864	0.972	0.978	0.933
rs11644740	3.8886E-08	0.0342546	0.00623	0.0342546	0.006233	7.21528E-08	0.16438	0.039956	0.006075	0.052287	0.026308	0.00154	0.34107	0.597707	0.919	0.945	0.993	0.967	0.974	0.998	0.896	0.866
rs113471201	3.8888E-08	0.0463102	0.00843	0.0463102	0.008426	7.21554E-08	0.31687	0.534906	0.000595	0.01051	0.176624	0.00771	0.29195	0.02652	0.882	0.737	0.999	0.989	0.917	0.988	0.89	0.946
rs1065626	3.8889E-08	0.028379	0.00516	0.030284	0.006096	7.04662E-08	0.08442	0.649854	0.080818	0.001886	0.002202	0.00656	0.03962	0.223642	0.93	0.849	0.827	0.997	0.991	0.981	0.961	0.905
rs143377824	3.8891E-08	-0.094207	0.01714	-0.094207	0.017142	7.21618E-08	0.05119	0.946505	0.000474	0.103588	0.309387	0.00149	0.03359	0.90517	0.928	0.798	0.999	0.919	0.872	0.998	0.956	0.795
rs79100540	3.8904E-08	0.0463095	0.00843	0.0463095	0.008426	7.21835E-08	0.31688	0.534885	0.000595	0.010516	0.176621	0.00771	0.29197	0.02652	0.882	0.737	0.999	0.989	0.917	0.988	0.89	0.946
rs11348015	3.8904E-08	0.0387783	0.00706	0.0387783	0.007056	7.21843E-08	0.30864	0.265608	0.001473	0.097696	0.122854	0.0005	0.09131	0.68525	0.879	0.885	0.998	0.926	0.93	0.999	0.935	0.741
rs1928304	3.8925E-08	-0.028385	0.00516	-0.028385	0.005165	7.22203E-08	0.67489	0.371611	0.000472	0.020259	0.41616	0.00262	0.15012	0.129609	0.745	0.867	0.999	0.981	0.843	0.996	0.916	0.91
rs76226884	3.8943E-08	0.0384275	0.00699	0.0432657	0.010698	6.56735E-08	0.33377	0.068057	0.013767	7.49E-05	0.129904	0.03546	0.0153	0.078218	0.675	0.925	0.96	0.999	0.925	0.899	0.97	0.927
rs6841521	3.896E-08	-0.035018	0.00637	-0.040928	0.010686	6.66527E-08	0.05557	0.208419	0.073825	0.000472	0.069192	0.00434	0.00116	0.340029	0.925	0.886	0.789	0.998	0.944	0.979	0.986	0.625
rs73023426	3.8968E-08	0.0500066	0.0091	0.0500066	0.0091	7.19823E-08	0.08929	0.133287	0.115579	0.001872	0.173025	8.6E-05	0.31797	0.799984	0.906	0.893	0.688	0.996	0.894	1	0.854	0.779
rs62409230	3.8988E-08	0.0310573	0.00565	0.0310573	0.005652	7.23239E-08	0.20186	0.829432	0.000721	0.135662	0.590332	0.00039	0.02316	0.645117	0.883	0.795	0.999	0.882	0.776	0.999	0.958	0.815
rs4093833	3.9006E-08	-0.032683	0.00595	-0.032683	0.005947	7.23498E-08	0.24508	0.637719	0.00082	0.059658	0.368568	0.00271	0.00314	0.372848	0.889	0.746	0.999	0.953	0.859	0.996	0.981	0.871
rs143790929	3.9016E-08	-0.067036	0.0122	-0.067036	0.012199	7.23637E-08	0.18872	0.923449	3.85E-05	0.056821	0.433606	0.00301	0.89168	0.112706	0.88	0.752	1	0.942	0.812	0.994	0.728	0.902
rs60881269	3.9024E-08	0.0466628	0.00849	0.0528256	0.012647	7.23747E-08	0.01033	0.188458	0.054126	0.000127	0.603418	0.00482	0.29197	0.022575	0.956	0.902	0.877	0.999	0.794	0.984	0.887	0.951
rs11829754	3.9054E-08	0.0462145	0.00841	0.0462145	0.00841	7.2417E-08	0.32145	0.538606	0.00061	0.009822	0.182267	0.00781	0.29292	0.026808	0.881	0.738	0.999	0.99	0.915	0.988	0.889	0.946
rs4792948	3.9059E-08	0.0395543	0.0072	0.0395543	0.007198	7.24253E-08	0.39016	0.209042	0.027932	0.109062	0.002143	0.00038	0.22138	0.166896	0.885	0.908	0.957	0.928	0.991	0.999	0.914	0.918
rs17109999	3.9063E-08	0.0463037	0.00843	0.0463037	0.008426	7.24303E-08	0.31691	0.535033	0.000593	0.010573	0.176847	0.00773	0.29149	0.026555	0.882	0.737	0.999	0.989	0.917	0.988	0.89	0.946
rs77548727	3.9115E-08	0.0784014	0.01427	0.08056	0.019373	5.94012E-08	0.72018	0.269585	4.17E-05	0.001556	0.095582	0.12099	0.01717	0.361745	0.726	0.514	1	0.996	0.898	0.501	0.952	0.797
rs78030383	3.9128E-08	-0.037111	0.00675	-0.037111	0.006754	7.25228E-08	0.1534	0.094627	0.001115	0.011107	0.311164	0.0113	0.01295	0.708165	0.913	0.924	0.999	0.99	0.885	0.982	0.973	0.76
rs138813184	3.9143E-08	0.0917338	0.0167	0.0917338	0.016695	7.25439E-08	0.8948	0.027189	0.003939	0.054113	0.005557	0.00145	0.35272	0.936833	0.817	0.942	0.995	0.96	0.985	0.998	0.879	0.79
rs3020406	3.9157E-08	-0.03122	0.00568	-0.03122	0.005682	7.25631E-08	0.53924	0.863414	0.010226	0.07956	0.249162	2E-05	0.26965	0.133836	0.84	0.766	0.982	0.933	0.884	1	0.882	0.905
rs11100761	3.9162E-08	-0.030282	0.00551	-0.033818	0.008392	7.25711E-08	0.00543	0.223706	0.031451	0.004994	0.968217	0.00133	0.00291	0.40343	0.96	0.893	0.932	0.993	0.667	0.997	0.982	0.866
rs67768834	3.9165E-08	0.027844	0.00507	0.027844	0.005068	7.25752E-08	0.66451	0.251114	0.000936	0.008968	0.387842	0.01596	0.00651	0.069493	0.76	0.894	0.999	0.991	0.862	0.972	0.978	0.933
rs7964939	3.9167E-08	0.0463034	0.00843	0.0463034	0.008427	7.25782E-08	0.31575	0.535906	0.000599	0.010465	0.176727	0.00776	0.29164	0.026561	0.882	0.738	0.999	0.989	0.917	0.988	0.89	0.946
rs183954943	3.921E-08	-0.069357	0.01262	-0.069357	0.012623	7.26378E-08	0.42382	0.62595	7.47E-06	0.057576	0.803019	0.00359	0.98378	0.132492	0.813	0.781	1	0.927	0.66	0.99	0.657	0.878
rs13383422	3.9225E-08	0.0354912	0.00646	0.0354912	0.00646	7.26589E-08	0.36964	0.085346	0.000303	0.012357	0.015943	0.08073	0.04375	0.788696	0.871	0.922	0.999	0.987	0.977	0.772	0.955	0.811
rs4850362	3.9226E-08	0.0387797	0.00706	0.0387797	0.007058	7.26614E-08	0.708	0.064815	0.000721	0.042987	0.032395	0.02334	0.0076	0.782551	0.85	0.935	0.999	0.97	0.971	0.96	0.979	0.838
rs28415454	3.9233E-08	0.0387674	0.00706	0.0387674	0.007056	7.26705E-08	0.3089	0.265716	0.001475	0.097675	0.122949	0.00051	0.09147	0.68626	0.879	0.885	0.998	0.926	0.93	0.999	0.935	0.741

Table S3

rs35443079	3.9262E-08	-0.069509	0.01265	-0.069509	0.012651	7.27115E-08	0.73255	0.546631	1.04E-05	0.059606	0.668619	0.00271	0.92135	0.111575	0.763	0.793	1	0.925	0.703	0.993	0.642	0.885
rs17109995	3.9263E-08	0.0462962	0.00843	0.0462962	0.008426	7.27129E-08	0.31792	0.532947	0.000599	0.010746	0.173537	0.00766	0.29285	0.02661	0.882	0.737	0.999	0.989	0.918	0.988	0.889	0.946
rs12147808	3.9272E-08	0.0387659	0.00706	0.0387659	0.007056	7.27261E-08	0.30979	0.265675	0.001478	0.097453	0.123082	0.00051	0.09153	0.685823	0.879	0.885	0.998	0.927	0.93	0.999	0.935	0.741
rs12594550	3.9273E-08	-0.035039	0.00638	-0.035039	0.006378	7.27278E-08	0.06174	0.060785	0.006604	0.049673	0.211678	0.00107	0.21394	0.27278	0.941	0.94	0.993	0.969	0.922	0.999	0.922	0.908
rs10147461	3.9274E-08	0.0387659	0.00706	0.0387659	0.007056	7.27293E-08	0.30979	0.265682	0.001478	0.097455	0.123087	0.00051	0.09154	0.685812	0.879	0.885	0.998	0.927	0.93	0.999	0.935	0.741
rs78771853	3.9275E-08	0.0935882	0.01703	0.0935882	0.017034	7.27304E-08	0.79256	0.454363	0.000295	0.190473	0.257335	0.00105	0.04904	0.33058	0.812	0.853	0.999	0.856	0.884	0.998	0.946	0.871
rs74895520	3.9277E-08	-0.067024	0.0122	-0.067024	0.012199	7.27332E-08	0.18933	0.921964	3.82E-05	0.057401	0.437364	0.00295	0.89374	0.114392	0.879	0.751	1	0.941	0.81	0.994	0.727	0.901
rs6959814	3.9289E-08	-0.028367	0.00516	-0.028367	0.005163	7.27505E-08	0.92656	0.013809	0.015772	0.00126	0.024234	0.01057	0.14793	0.337493	0.813	0.957	0.979	0.998	0.975	0.985	0.932	0.895
rs144137071	3.9291E-08	0.0462945	0.00843	0.0462945	0.008426	7.27528E-08	0.31695	0.534775	0.000596	0.010582	0.176738	0.00772	0.29196	0.026578	0.882	0.737	0.999	0.989	0.917	0.988	0.89	0.946
rs112415871	3.9308E-08	0.0462932	0.00843	0.0462932	0.008426	7.27769E-08	0.31701	0.534302	0.000597	0.010556	0.176646	0.00773	0.29227	0.026574	0.882	0.737	0.999	0.989	0.917	0.988	0.889	0.946
rs113885552	3.9308E-08	0.0462932	0.00843	0.0462932	0.008426	7.27769E-08	0.31701	0.534302	0.000597	0.010556	0.176646	0.00773	0.29227	0.026574	0.882	0.737	0.999	0.989	0.917	0.988	0.889	0.946
rs17110038	3.9308E-08	0.0462932	0.00843	0.0462932	0.008426	7.27769E-08	0.31701	0.534302	0.000597	0.010556	0.176646	0.00773	0.29227	0.026574	0.882	0.737	0.999	0.989	0.917	0.988	0.889	0.946
rs76822244	3.9308E-08	0.0462932	0.00843	0.0462932	0.008426	7.27769E-08	0.31701	0.534302	0.000597	0.010556	0.176646	0.00773	0.29227	0.026574	0.882	0.737	0.999	0.989	0.917	0.988	0.889	0.946
rs78179549	3.9308E-08	0.0462932	0.00843	0.0462932	0.008426	7.27769E-08	0.31701	0.534302	0.000597	0.010556	0.176646	0.00773	0.29227	0.026574	0.882	0.737	0.999	0.989	0.917	0.988	0.889	0.946
rs142889446	3.9313E-08	0.0462937	0.00843	0.0462937	0.008426	7.27834E-08	0.31695	0.534628	0.000597	0.01057	0.176701	0.00773	0.29202	0.026616	0.882	0.737	0.999	0.989	0.917	0.988	0.89	0.946
rs75918612	3.9324E-08	-0.064298	0.0117	-0.064298	0.011704	7.27997E-08	0.14234	0.965756	8.9E-05	0.01701	0.403802	0.0037	0.97253	0.263919	0.891	0.768	1	0.98	0.822	0.993	0.698	0.868
rs116318036	3.9327E-08	-0.068128	0.0124	-0.068128	0.012401	7.28035E-08	0.60565	0.650853	2.56E-05	0.038355	0.604514	0.0025	0.84746	0.094388	0.791	0.786	1	0.952	0.734	0.994	0.634	0.896
rs14978	3.9349E-08	0.0317832	0.00579	0.0317832	0.005785	7.28345E-08	0.10362	0.543493	4.44E-05	0.005184	0.991191	0.0159	0.79554	0.089254	0.894	0.812	1	0.991	0.622	0.951	0.733	0.903
rs4764630	3.9353E-08	0.0314018	0.00572	0.0327571	0.007019	7.2841E-08	0.88091	0.565809	0.008603	0.000177	0.094865	0.01732	0.01547	0.079402	0.777	0.732	0.985	0.999	0.94	0.963	0.968	0.926
rs462093	3.936E-08	0.0277065	0.00504	0.0269126	0.005735	7.28509E-08	0.2815	0.838598	0.002355	0.000414	0.89745	0.00017	0.89367	0.342221	0.502	0.687	0.992	0.997	0.549	0.999	0.612	0.78
rs17110014	3.9366E-08	0.0462915	0.00843	0.0462915	0.008426	7.28586E-08	0.31697	0.534559	0.000597	0.010566	0.176757	0.00773	0.2921	0.026621	0.882	0.737	0.999	0.989	0.917	0.988	0.889	0.946
rs851025	3.9371E-08	0.0373863	0.00681	0.0364663	0.009009	7.28663E-08	0.43351	0.339421	0.000153	0.356371	0.176913	0.00058	0.00634	0.192077	0.797	0.815	1	0.613	0.864	0.998	0.966	0.487
rs194551	3.9428E-08	-0.067096	0.01221	-0.067096	0.012214	7.29467E-08	0.19046	0.907907	4.19E-05	0.058792	0.434171	0.00287	0.85128	0.111766	0.88	0.751	1	0.941	0.813	0.994	0.738	0.903
rs8006659	3.9449E-08	0.0387605	0.00706	0.0387605	0.007056	7.29767E-08	0.30976	0.265837	0.001481	0.097571	0.12289	0.00051	0.09127	0.68594	0.879	0.885	0.998	0.927	0.93	0.999	0.935	0.741
rs12323201	3.946E-08	0.0343903	0.00626	0.0343903	0.00626	7.29911E-08	0.93402	0.357335	0.001118	0.00708	0.19415	0.00316	0.31621	0.362792	0.809	0.876	0.998	0.992	0.911	0.996	0.884	0.876
rs9356035	3.9471E-08	0.0317544	0.00578	0.0317544	0.005781	7.30079E-08	0.1616	0.729814	0.006998	0.005535	0.574741	0.00275	0.04867	0.045904	0.914	0.845	0.992	0.994	0.824	0.997	0.956	0.944
rs76535267	3.9474E-08	0.0534816	0.00974	0.0486648	0.015258	3.77692E-08	0.36186	0.425968	0.00044	0.759804	0.058767	4.4E-06	0.07014	0.664335	0.418	0.719	0.998	0.065	0.9	1	0.881	0.652
rs851016	3.9529E-08	0.0373799	0.00681	0.0364664	0.009024	7.30888E-08	0.42305	0.337214	0.000153	0.361283	0.175222	0.00058	0.00642	0.191877	0.798	0.815	1	0.608	0.865	0.998	0.965	0.486
rs78102821	3.9544E-08	0.0589618	0.01073	0.0589618	0.010734	7.31097E-08	0.38982	0.64557	0.010325	0.044286	0.154263	0.00013	0.76935	0.015524	0.871	0.84	0.985	0.965	0.922	1	0.794	0.953
rs150024158	3.9555E-08	-0.044574	0.00811	-0.05262	0.015389	5.93231E-08	0.88024	0.574493	0.000786	0.457073	0.140933	0.00414	2.4E-06	0.146259	0.764	0.809	0.994	0.595	0.903	0.984	0.996	0.889
rs17172109	3.957E-08	-0.068444	0.01246	-0.068444	0.012461	7.31474E-08	0.60657	0.761667	0.00136	0.078754	0.256016	0.0001	0.36343	0.139645	0.704	0.797	0.998	0.925	0.87	1	0.848	0.895
rs2028549	3.9581E-08	-0.028678	0.00522	-0.028678	0.005221	7.31626E-08	0.05886	0.798503	0.003772	0.052964	0.813138	0.00021	0.03081	0.596768	0.922	0.808	0.994	0.954	0.724	1	0.956	0.83
rs80276174	3.9589E-08	-0.069503	0.01265	-0.069503	0.012654	7.31732E-08	0.73299	0.548326	1.02E-05	0.056631	0.673024	0.00287	0.91957	0.112829	0.763	0.793	1	0.928	0.702	0.992	0.641	0.884
rs79468223	3.96E-08	-0.069502	0.01265	-0.069502	0.012654	7.31892E-08	0.73291	0.548711	1.02E-05	0.056602	0.672731	0.00287	0.91868	0.112814	0.763	0.793	1	0.928	0.702	0.992	0.641	0.884
rs7204939	3.9603E-08	-0.03443	0.00627	-0.03986	0.009535	7.31936E-08	0.11875	0.600685	0.011495	0.004505	0.019836	0.02008	0.07789	0.001234	0.927	0.773	0.984	0.995	0.978	0.966	0.951	0.977
rs10141336	3.9626E-08	0.038769	0.00706	0.038769	0.007059	7.32259E-08	0.30944	0.264121	0.001676	0.094815	0.125267	0.00049	0.08059	0.670519	0.879	0.885	0.998	0.929	0.929	0.999	0.939	0.739
rs851015	3.9648E-08	0.0373763	0.00681	0.0364631	0.009022	7.32568E-08	0.42304	0.337256	0.000153	0.361331	0.175213	0.00058	0.00643	0.19187	0.798	0.815	1	0.608	0.865	0.998	0.965	0.486
rs139367260	3.9673E-08	0.0634074	0.01154	0.0634074	0.011545	7.32916E-08	0.78501	0.744143	0.010657	0.010689	0.606723	2.3E-05	0.0887	0.601325	0.771	0.778	0.975	0.984	0.743	1	0.914	0.664
rs2071042	3.9682E-08	-0.028681	0.00522	-0.028681	0.005222	7.33053E-08	0.64891	0.605665	0.000539	0.220789	0.271395	0.00022	0.00692	0.42623	0.783	0.789	0.999	0.772	0.842	0.999	0.967	0.609
rs11122221	3.969E-08	0.0277149	0.00505	0.0277149	0.005046	6.47133E-08	0.13616	0.65308	2.04E-06	0.023527	0.471718	0.05458	0.3346	0.537701	0.88	0.788	1	0.964	0.773	0.796	0.834	0.803
rs851022	3.9696E-08	0.0373761	0.00681	0.0364569	0.009004	7.33252E-08	0.43424	0.337414	0.000153	0.358724	0.175616	0.00058	0.00644	0.192274	0.796	0.815	1	0.61	0.865	0.998	0.965	0.487
rs2290828	3.9705E-08	-0.069497	0.01265	-0.069497	0.012654	7.33371E-08	0.73296	0.547548	1.02E-05	0.056659	0.673237	0.00287	0.91881	0.1128	0.763	0.793	1	0.928	0.702	0.992	0.641	0.884
rs9314922	3.9706E-08	-0.027805	0.00506	-0.027805	0.005063	7.33386E-08	0.09483	0.692498	0.001351	0.026179	0.631283	0.001	0.24445	0.210641	0.918	0.833	0.998	0.977	0.792	0.999	0.897	0.898
rs2273741	3.9713E-08	0.0290799	0.00529	0.0290799	0.005295	7.33486E-08	0.82441	0.40694	0.01548	0.024892	0.243695	0.00024	0.06338	0.125761	0.832	0.878	0.979	0.981	0.904	1	0.95	0.922
rs6687018	3.9719E-08	0.0285682	0.0052	0.0285682	0.005202	7.29506E-08	0.28203	0.128158	0.099658	0.001195	0.061605	0.00011	0.41618	0.869754	0.855	0.888	0.699	0.997	0.94	1	0.818	0.71
rs35375326	3.9739E-08	-0.034692	0.00632	-0.034692	0.006317	7.33856E-08	0.51402	0.941879	0.000534	0.024724	0.267907	0.00011	0.73426	0.805252	0.629	0.724	0.999	0.964	0.831	1	0.715	0.738
rs6699397	3.9751E-08	0.0281226	0.00512	0.0294319	0.0062	6.28836E-08	0.59121	0.184573	4.09E-05	0.018608	0.22457	0.12762	0.06602	0.008309	0.811	0.883	1	0.975	0.87	0.567	0.937	0.958
rs34823653	3.9758E-08	-0.034691	0.00632	-0.034691	0.006317	7.34123E-08	0.51401	0.941882	0.000533	0.02474	0.26791	0.00011	0.73426	0.80525	0.629	0.724	0.999	0.964	0.831	1	0.715	0.738
rs76744069	3.98E-08	0.0462816	0.00843	0.0462816	0.008428	7.34708E-08	0.31525	0.535962	0.000604	0.01048	0.17692	0.0078	0.29207	0.026615	0.882	0.738	0.999	0.989	0.917	0.988	0.89	0.946
rs6826998	3.9802E-08	-0.034705	0.00632	-0.040121	0.010031	6.57122E-08	0.09953	0.171785	0.063287	0.000263	0.091614	0.00691	0.00126	0.501409	0.915	0.898	0.833	0.999	0.937	0.97	0.986	0.683
rs75344862	3.9826E-08	-0.064312	0.01171	-0.064312	0.011711	7.35077E-08	0.14456	0.906275	8.9E-05	0.015465	0.420639	0.0041	0.94525	0.241346	0.89	0.776	1	0.982	0.817	0.992	0.691	0.873
rs79014199	3.9848E-08	0.0354594	0.00646	0.0354594	0.006457	7.35381E-08	0.49879	0.026877	0.00565	0.128316	0.050508	7.6E-05	0.36116	0.583482	0.702	0.934	0.991	0.894	0.953	1	0.86	0.829
rs3066778	3.9854E-08	-0.027678	0.00504	-0.034395	0.009321	7.01316E-08	0.05731	0.178205	0.017318	0.217468	0.008236	0.00226	3.9E-05	0.597634	0.93	0.9	0.958	0.829	0.982	0.987	0.995	0.719
rs7571716	3.9857E-08	0.028971	0.00528	0.0306524	0.008229	7.35511E-08	0.28643	0.054226	0.007466	0.02975	0.286047	0.00071	0.31055	0.00064	0.673	0.929	0.989	0.975	0.882	0.999	0.882	0.977
rs1955660	3.9864E-08	0.02762	0.00503	0.02762	0.00503	7.35618E-08	0.9581	0.215735	0.000465	0.011066	0.528197	0.02435	0.00336	0.116059	0.795	0.897	0.999	0.989	0.82	0.948	0.982	0.919

Table S3

rs13378874	3.9871E-08	0.034491	0.00628	0.034491	0.006281	7.35717E-08	0.86554	0.310946	0.0008	0.007852	0.207061	0.00298	0.37679	0.359255	0.777	0.877	0.999	0.991	0.903	0.996	0.867	0.872
rs67057298	3.9883E-08	-0.035245	0.00642	-0.035245	0.006418	7.35885E-08	0.11749	0.289809	0.000499	0.551347	0.156567	0.00066	0.03753	0.352371	0.898	0.861	0.999	0.539	0.902	0.999	0.949	0.851
rs1441421	3.9887E-08	-0.034597	0.0063	-0.035094	0.011119	4.82496E-08	0.47615	0.628265	0.007168	1.83E-05	0.484135	0.00593	0.0017	0.458961	0.783	0.627	0.968	1	0.363	0.969	0.978	0.785
rs10252647	3.989E-08	0.0374839	0.00683	0.0374839	0.006826	7.35974E-08	0.43687	0.558397	0.022428	0.013728	0.003111	0.00058	0.69539	0.296731	0.867	0.853	0.964	0.987	0.988	0.999	0.811	0.887
rs12597956	3.9903E-08	-0.068112	0.0124	-0.068112	0.012404	7.36162E-08	0.60511	0.652518	2.57E-05	0.038171	0.606545	0.00252	0.84632	0.095711	0.791	0.785	1	0.952	0.733	0.994	0.634	0.895
rs117783012	3.9903E-08	-0.066989	0.0122	-0.066989	0.012199	7.36166E-08	0.18928	0.923479	3.84E-05	0.058127	0.433593	0.003	0.89164	0.112687	0.879	0.752	1	0.941	0.812	0.994	0.728	0.902
rs7801194	3.9914E-08	0.0374832	0.00683	0.0374832	0.006826	7.36316E-08	0.43681	0.558416	0.022426	0.013754	0.003115	0.00058	0.6957	0.296707	0.867	0.853	0.964	0.987	0.988	0.999	0.811	0.887
rs2873555	3.9925E-08	0.0276264	0.00503	0.029179	0.006965	7.36467E-08	0.68657	0.366137	0.023893	0.00023	0.000384	0.00624	0.60015	0.804856	0.722	0.853	0.941	0.999	0.993	0.981	0.797	0.788
rs78746729	3.9935E-08	-0.066987	0.0122	-0.066987	0.012199	7.36613E-08	0.18927	0.923471	3.84E-05	0.058118	0.43359	0.003	0.89164	0.11269	0.879	0.752	1	0.941	0.812	0.994	0.728	0.902
rs80171474	3.9945E-08	0.0462695	0.00843	0.0462695	0.008426	7.36746E-08	0.32143	0.534302	0.000597	0.01068	0.176646	0.00773	0.29227	0.026574	0.882	0.737	0.999	0.989	0.917	0.988	0.889	0.946
rs117727304	3.9949E-08	-0.066986	0.0122	-0.066986	0.012199	7.36812E-08	0.18925	0.923457	3.84E-05	0.058111	0.433602	0.003	0.89166	0.112698	0.879	0.752	1	0.941	0.812	0.994	0.728	0.902
rs74333329	3.9955E-08	-0.064305	0.01171	-0.064305	0.011711	7.36899E-08	0.14455	0.907098	8.9E-05	0.015482	0.420699	0.00411	0.9453	0.241325	0.89	0.776	1	0.981	0.817	0.992	0.691	0.873
rs3759991	3.9957E-08	-0.066986	0.0122	-0.066986	0.012199	7.36917E-08	0.18924	0.923457	3.85E-05	0.058099	0.433606	0.003	0.89167	0.112701	0.879	0.752	1	0.941	0.812	0.994	0.728	0.902
rs188957838	3.9962E-08	0.0630339	0.01148	0.0664528	0.01543	7.36992E-08	0.46037	0.008562	0.024938	0.000114	0.112152	0.00555	0.43924	0.219424	0.712	0.956	0.956	0.999	0.934	0.989	0.855	0.895
rs7652667	3.9963E-08	0.0286747	0.00522	0.0286747	0.005222	7.37009E-08	0.64837	0.604933	0.000532	0.225251	0.271225	0.00022	0.00687	0.426882	0.782	0.789	0.999	0.767	0.841	0.999	0.967	0.607
rs139235809	3.9967E-08	-0.066986	0.0122	-0.066986	0.012199	7.37064E-08	0.18924	0.923453	3.85E-05	0.0581	0.433612	0.003	0.89168	0.112706	0.879	0.752	1	0.941	0.812	0.994	0.728	0.902
rs117687814	3.9969E-08	-0.066985	0.0122	-0.066985	0.012199	7.37085E-08	0.18924	0.923454	3.85E-05	0.058105	0.433609	0.003	0.89167	0.112704	0.879	0.752	1	0.941	0.812	0.994	0.728	0.902
rs4413540	3.9988E-08	0.0277569	0.00506	0.0277569	0.005055	7.37354E-08	0.31583	0.567196	0.002686	0.003685	0.076386	0.00823	0.32386	0.01895	0.887	0.749	0.997	0.995	0.951	0.988	0.888	0.954
rs7669427	4.0012E-08	-0.032631	0.00594	-0.032631	0.005943	7.37693E-08	0.23627	0.646443	0.000801	0.064725	0.371133	0.00276	0.00303	0.356681	0.89	0.747	0.999	0.95	0.859	0.996	0.982	0.873
rs13108870	4.0022E-08	-0.030717	0.00559	-0.030717	0.005594	7.37835E-08	0.38998	0.380429	0.000389	0.012771	0.390464	0.00392	0.49246	0.261818	0.869	0.87	0.999	0.987	0.855	0.994	0.846	0.889
rs10497756	4.006E-08	0.0387539	0.00706	0.0387539	0.007058	7.38365E-08	0.70816	0.065027	0.000725	0.043327	0.032364	0.02344	0.00762	0.783441	0.85	0.935	0.999	0.97	0.971	0.96	0.979	0.838
rs720023	4.0063E-08	0.0288709	0.00526	0.0316183	0.007065	7.38414E-08	0.03262	0.929766	0.060687	0.008579	0.001247	0.00182	0.42377	0.048572	0.943	0.796	0.873	0.991	0.992	0.996	0.865	0.941
rs116843121	4.0066E-08	-0.065441	0.01192	-0.065441	0.011919	7.38449E-08	0.32851	0.424648	1.49E-05	0.036406	0.558145	0.00537	0.80694	0.186679	0.845	0.829	1	0.958	0.76	0.987	0.638	0.876
rs194550	4.0077E-08	-0.06707	0.01222	-0.06707	0.012216	7.38611E-08	0.19392	0.907285	4.19E-05	0.05932	0.434199	0.00287	0.85152	0.111554	0.879	0.751	1	0.94	0.813	0.994	0.738	0.902
rs4622862	4.0078E-08	-0.035246	0.00642	-0.035246	0.006419	7.38616E-08	0.11751	0.293209	0.000509	0.551494	0.149143	0.00069	0.03469	0.357697	0.898	0.86	0.999	0.54	0.906	0.999	0.951	0.85
rs10808908	4.0099E-08	0.027624	0.00503	0.0291959	0.006943	7.38919E-08	0.7145	0.366871	0.024318	0.000227	0.00038	0.00637	0.59962	0.804907	0.727	0.853	0.94	0.999	0.993	0.981	0.798	0.789
rs78599970	4.0109E-08	0.0580827	0.01058	0.0580827	0.010579	7.39058E-08	0.72434	0.330685	0.000229	0.28042	0.914291	0.00011	0.016	0.931342	0.725	0.797	0.999	0.658	0.513	1	0.946	0.683
rs13115045	4.012E-08	-0.034664	0.00631	-0.035019	0.011202	4.83278E-08	0.52081	0.636213	0.007196	1.94E-05	0.48307	0.00556	0.00142	0.501738	0.772	0.625	0.968	1	0.36	0.97	0.979	0.774
rs78543395	4.014E-08	-0.037067	0.00675	-0.037067	0.006751	7.395E-08	0.15467	0.095602	0.001114	0.011418	0.308734	0.01135	0.01294	0.708197	0.913	0.924	0.999	0.989	0.886	0.982	0.973	0.76
rs74542667	4.0164E-08	-0.066975	0.0122	-0.066975	0.012199	7.3983E-08	0.18923	0.923417	3.85E-05	0.05808	0.433656	0.00302	0.89174	0.112727	0.879	0.752	1	0.941	0.812	0.994	0.728	0.902
rs143375720	4.0169E-08	-0.066975	0.0122	-0.066975	0.012199	7.39906E-08	0.18923	0.923416	3.85E-05	0.058084	0.433656	0.00302	0.89174	0.112727	0.879	0.752	1	0.941	0.812	0.994	0.728	0.902
rs75889169	4.0171E-08	-0.066975	0.0122	-0.066975	0.012199	7.39933E-08	0.18923	0.923416	3.85E-05	0.058087	0.433656	0.00302	0.89174	0.112727	0.879	0.752	1	0.941	0.812	0.994	0.728	0.902
rs141804055	4.0172E-08	-0.066975	0.0122	-0.066975	0.012199	7.3995E-08	0.18923	0.923415	3.85E-05	0.05808	0.433661	0.00302	0.89175	0.112727	0.879	0.752	1	0.941	0.812	0.994	0.728	0.902
rs8009116	4.0189E-08	0.0278157	0.00507	0.0278157	0.005067	7.40187E-08	0.65135	0.254144	0.000941	0.009426	0.380227	0.01564	0.00654	0.070548	0.758	0.894	0.999	0.99	0.864	0.972	0.978	0.933
rs10958503	4.0194E-08	0.0276237	0.00503	0.0291749	0.006918	7.40246E-08	0.71634	0.366819	0.024159	0.000233	0.000387	0.00631	0.60066	0.805055	0.727	0.853	0.941	0.999	0.993	0.981	0.798	0.789
rs2155494	4.0221E-08	0.0317571	0.00578	0.0317571	0.005785	7.40632E-08	0.16229	0.736629	0.007592	0.006121	0.559782	0.0024	0.04718	0.050269	0.914	0.844	0.991	0.993	0.828	0.997	0.957	0.942
rs2024669	4.0236E-08	0.0276593	0.00504	0.0276593	0.005038	7.40837E-08	0.91551	0.218784	0.000462	0.016969	0.484279	0.02458	0.0031	0.087218	0.816	0.9	0.999	0.985	0.837	0.951	0.983	0.929
rs2317783	4.0246E-08	0.0276257	0.00503	0.0291946	0.006945	7.40987E-08	0.71647	0.367162	0.024323	0.000229	0.000378	0.00635	0.60253	0.806222	0.727	0.853	0.94	0.999	0.993	0.981	0.797	0.788
rs149376690	4.025E-08	-0.066971	0.0122	-0.066971	0.012199	7.41042E-08	0.18866	0.923289	3.87E-05	0.058247	0.432862	0.00301	0.89137	0.113177	0.879	0.752	1	0.941	0.812	0.994	0.728	0.901
rs11110585	4.0258E-08	0.0313732	0.00571	0.0328373	0.007124	7.41149E-08	0.87915	0.55666	0.008927	0.000169	0.092285	0.01775	0.01447	0.081544	0.776	0.73	0.984	0.999	0.94	0.962	0.969	0.925
rs1842807	4.027E-08	-0.028153	0.00513	-0.027604	0.007831	3.1904E-08	0.75666	0.052904	0.027739	0.815077	0.064212	2.9E-07	0.10903	0.470642	0.552	0.869	0.732	0.214	0.896	1	0.857	0.717
rs534343173	4.0272E-08	-0.069233	0.01261	-0.069233	0.012612	7.4134E-08	0.22521	0.713555	8.11E-06	0.168186	0.383807	0.00567	0.52289	0.044701	0.867	0.712	1	0.836	0.819	0.985	0.801	0.923
rs11160765	4.0285E-08	0.0278776	0.00508	0.0278776	0.005078	7.41536E-08	0.71868	0.218444	0.001267	0.009422	0.335144	0.01542	0.00584	0.078833	0.773	0.902	0.998	0.991	0.879	0.974	0.979	0.932
rs4709633	4.0295E-08	0.0317695	0.00579	0.0317695	0.005787	7.41672E-08	0.1623	0.723925	0.007541	0.006777	0.554537	0.00217	0.05021	0.053805	0.914	0.845	0.991	0.993	0.829	0.997	0.956	0.941
rs6014491	4.0315E-08	-0.040832	0.00744	-0.040832	0.007438	7.41945E-08	0.18008	0.824973	0.002897	0.031709	0.015024	0.00671	0.00595	0.76822	0.908	0.83	0.996	0.976	0.979	0.991	0.979	0.768
rs4273846	4.0336E-08	0.027621	0.00503	0.0291913	0.006943	7.42249E-08	0.71498	0.36671	0.024331	0.000229	0.000378	0.00636	0.60069	0.805115	0.727	0.853	0.94	0.999	0.993	0.981	0.798	0.789
rs582491	4.0357E-08	-0.032981	0.00601	-0.032981	0.006008	7.42535E-08	0.43954	0.727401	0.016759	0.015496	0.00087	0.00181	0.45288	0.247356	0.874	0.842	0.977	0.987	0.993	0.998	0.865	0.9
rs17110144	4.0364E-08	0.0463091	0.00844	0.0463091	0.008436	7.42632E-08	0.30407	0.553296	0.000602	0.010549	0.178751	0.00822	0.28314	0.026926	0.885	0.742	0.999	0.989	0.916	0.987	0.892	0.947
rs4571729	4.0377E-08	0.0276187	0.00503	0.0291844	0.006936	7.4282E-08	0.71499	0.36664	0.024302	0.00023	0.000382	0.00636	0.60036	0.805103	0.727	0.853	0.941	0.999	0.993	0.981	0.798	0.789
rs9514682	4.0391E-08	0.0433132	0.00789	0.0446955	0.014411	5.0909E-08	0.55513	0.806498	0.000167	0.839535	0.003488	0.00189	0.00032	0.925968	0.533	0.669	0.999	0.222	0.98	0.988	0.987	0.6
rs4636201	4.0392E-08	0.0276196	0.00503	0.0291894	0.006941	7.4303E-08	0.71474	0.366633	0.024329	0.00023	0.000379	0.00637	0.60061	0.804671	0.727	0.853	0.94	0.999	0.993	0.981	0.798	0.789
rs12580075	4.0397E-08	-0.03192	0.00582	-0.034572	0.010225	7.43094E-08	0.00841	0.272676	0.005866	0.391086	0.237869	0.00012	0.00092	0.305363	0.943	0.849	0.982	0.617	0.856	0.999	0.984	0.568
rs11628332	4.0401E-08	0.0278112	0.00507	0.0278112	0.005067	7.43162E-08	0.66485	0.253193	0.000996	0.009019	0.386083	0.01559	0.00643	0.070307	0.76	0.894	0.999	0.991	0.862	0.973	0.978	0.933
rs851021	4.0411E-08	0.0373548	0.00681	0.0364396	0.009002	7.43292E-08	0.43412	0.337366	0.000155	0.358459	0.175859	0.00058	0.00644	0.192149	0.797	0.815	0.999	0.611	0.865	0.998	0.965	0.487
rs10838786	4.0437E-08	0.0283989	0.00517	0.0283989	0.005174	7.43656E-08	0.95723	0.340592	0.002369	0.000779	0.722477	0.00334	0.0665	0.699731	0.779	0.86	0.996	0.998	0.74	0.994	0.936	0.808

Table S3

rs9356032	4.0449E-08	0.0317447	0.00578	0.0317447	0.005783	7.43835E-08	0.16275	0.735814	0.007603	0.00603	0.559621	0.00242	0.04745	0.050532	0.913	0.844	0.991	0.993	0.828	0.997	0.957	0.942
rs73176067	4.046E-08	0.0331045	0.00603	0.0331045	0.006031	7.43982E-08	0.74761	0.027613	0.001801	0.003385	0.007524	0.03228	0.18283	0.622786	0.77	0.943	0.997	0.995	0.984	0.932	0.916	0.845
rs111402301	4.0475E-08	0.0463004	0.00844	0.0463004	0.008435	7.44191E-08	0.30653	0.551065	0.000602	0.010587	0.178273	0.00816	0.28432	0.026958	0.884	0.741	0.999	0.989	0.917	0.987	0.892	0.946
rs10606766	4.0479E-08	-0.03496	0.00637	-0.040757	0.010633	7.08486E-08	0.05973	0.208829	0.074138	0.000495	0.069163	0.00426	0.00117	0.337377	0.924	0.885	0.789	0.998	0.944	0.98	0.986	0.625
rs707994	4.0482E-08	0.0373527	0.00681	0.0364367	0.009008	7.44293E-08	0.43378	0.337371	0.000155	0.358797	0.175666	0.00058	0.00643	0.191839	0.797	0.815	0.999	0.611	0.865	0.998	0.965	0.487
rs13186977	4.0487E-08	-0.02991	0.00545	-0.02991	0.005449	7.44361E-08	0.0811	0.297704	0.002367	0.031175	0.155634	0.00036	0.52061	0.19619	0.914	0.658	0.996	0.971	0.913	0.999	0.826	0.891
rs79837139	4.0489E-08	-0.036467	0.00664	-0.036467	0.006644	7.44389E-08	0.14142	0.22626	0.031749	0.010636	0.096468	5.5E-05	0.89825	0.755315	0.901	0.885	0.933	0.988	0.935	1	0.749	0.809
rs10958504	4.0498E-08	0.0276153	0.00503	0.0291817	0.006936	7.44515E-08	0.71435	0.367333	0.024302	0.000229	0.000382	0.00638	0.59957	0.804883	0.727	0.853	0.941	0.999	0.993	0.981	0.798	0.789
rs10808906	4.0502E-08	0.0276151	0.00503	0.0291826	0.006937	7.44574E-08	0.71436	0.367108	0.024303	0.00023	0.000381	0.00638	0.5996	0.804915	0.727	0.853	0.941	0.999	0.993	0.981	0.798	0.789
rs2654670	4.0512E-08	-0.027654	0.00504	-0.034336	0.009262	7.34192E-08	0.0583	0.172794	0.01751	0.201517	0.00815	0.00248	4.2E-05	0.597995	0.931	0.903	0.959	0.843	0.982	0.987	0.995	0.723
rs10958505	4.0531E-08	0.0276146	0.00503	0.0291815	0.006937	7.44985E-08	0.71436	0.367331	0.024308	0.000229	0.000382	0.00638	0.59977	0.804883	0.727	0.853	0.94	0.999	0.993	0.981	0.798	0.789
rs77653640	4.0544E-08	0.0400369	0.00729	0.0400369	0.007295	7.45167E-08	0.50928	0.147447	0.006219	0.057431	0.099977	0.00045	0.05608	0.953972	0.866	0.914	0.992	0.96	0.944	0.999	0.952	0.811
rs62305289	4.0547E-08	-0.030704	0.00559	-0.030704	0.005594	7.45208E-08	0.39056	0.38008	0.000389	0.012799	0.391412	0.00394	0.49358	0.262126	0.869	0.87	0.999	0.987	0.854	0.994	0.845	0.889
rs7074584	4.0553E-08	-0.039139	0.00713	-0.040963	0.009376	7.45288E-08	0.00102	0.374876	0.012711	0.143776	0.448978	0.00023	0.0438	0.263905	0.971	0.882	0.981	0.902	0.851	1	0.958	0.898
rs4708966	4.0557E-08	0.031763	0.00579	0.031763	0.005787	7.45347E-08	0.16274	0.724313	0.007533	0.006838	0.554521	0.00217	0.05021	0.053803	0.913	0.845	0.991	0.993	0.829	0.997	0.956	0.941
rs75680782	4.0567E-08	-0.045952	0.00837	-0.052141	0.015396	6.05517E-08	0.53207	0.551955	0.000442	0.648547	0.207698	0.00214	5.1E-06	0.378552	0.788	0.785	0.998	0.413	0.856	0.991	0.995	0.816
rs17110139	4.0571E-08	0.0462969	0.00844	0.0462969	0.008435	7.45541E-08	0.30651	0.551092	0.000602	0.0106	0.178339	0.00817	0.28415	0.026933	0.884	0.741	0.999	0.989	0.917	0.987	0.892	0.946
rs73228276	4.0574E-08	-0.03468	0.00632	-0.040256	0.010168	6.1923E-08	0.10141	0.174554	0.065062	0.000192	0.09526	0.00756	0.00129	0.49289	0.913	0.895	0.821	0.999	0.933	0.963	0.986	0.675
rs17640325	4.0577E-08	-0.053664	0.00978	-0.053664	0.009778	7.45627E-08	0.29098	0.141945	0.001722	0.074946	0.069167	0.00108	0.88376	0.117874	0.89	0.913	0.998	0.947	0.953	0.999	0.778	0.921
rs10808907	4.0586E-08	0.0276132	0.00503	0.0291812	0.006939	7.45746E-08	0.71371	0.366869	0.024332	0.00023	0.000381	0.00638	0.59982	0.804905	0.727	0.853	0.94	0.999	0.993	0.981	0.798	0.789
rs73228278	4.0592E-08	-0.034679	0.00632	-0.040254	0.010167	6.19601E-08	0.10142	0.174542	0.065072	0.000192	0.095337	0.00756	0.0013	0.492812	0.913	0.895	0.821	0.999	0.933	0.963	0.986	0.675
rs9356031	4.0604E-08	0.0317536	0.00579	0.0317536	0.005786	7.45999E-08	0.16429	0.719155	0.007538	0.006677	0.557895	0.0022	0.05077	0.053308	0.913	0.846	0.991	0.993	0.828	0.997	0.955	0.941
rs12582353	4.0604E-08	-0.031914	0.00582	-0.034567	0.010225	7.46003E-08	0.00841	0.272696	0.005875	0.391191	0.238025	0.00012	0.00092	0.305351	0.943	0.849	0.982	0.617	0.856	0.999	0.984	0.568
rs1508094	4.0605E-08	0.0276114	0.00503	0.0291765	0.006936	7.46009E-08	0.71282	0.366113	0.024273	0.00023	0.000383	0.00638	0.60016	0.804821	0.727	0.853	0.941	0.999	0.993	0.981	0.798	0.789
rs17110121	4.0613E-08	0.0462731	0.00843	0.0462731	0.008431	7.46133E-08	0.31293	0.544039	0.000605	0.010576	0.177264	0.008	0.28868	0.02685	0.883	0.74	0.999	0.989	0.917	0.988	0.89	0.946
rs12448388	4.0614E-08	-0.068087	0.01241	-0.068087	0.012406	7.46138E-08	0.60803	0.652563	2.58E-05	0.038332	0.608824	0.00251	0.84502	0.096143	0.79	0.785	1	0.952	0.732	0.994	0.633	0.895
rs199690632	4.0619E-08	-0.065415	0.01192	-0.065415	0.011919	7.46209E-08	0.32898	0.428218	1.53E-05	0.035514	0.560219	0.00535	0.80399	0.188706	0.845	0.828	1	0.958	0.759	0.987	0.637	0.875
rs72660666	4.0623E-08	-0.033168	0.00604	-0.033168	0.006044	7.46265E-08	0.33322	0.243786	0.011235	0.004437	0.412849	0.00157	0.05155	0.333664	0.891	0.902	0.986	0.995	0.865	0.998	0.956	0.892
rs1508093	4.0625E-08	0.027611	0.00503	0.0291758	0.006935	7.46297E-08	0.713	0.366113	0.024273	0.00023	0.000383	0.00638	0.60016	0.804821	0.727	0.853	0.941	0.999	0.993	0.981	0.798	0.789
rs34046680	4.0645E-08	0.0276105	0.00503	0.0291755	0.006935	7.46581E-08	0.71301	0.366115	0.024281	0.00023	0.000383	0.00638	0.60017	0.804829	0.727	0.853	0.941	0.999	0.993	0.981	0.798	0.789
rs1508091	4.0646E-08	0.0276106	0.00503	0.0291755	0.006935	7.46586E-08	0.71301	0.366112	0.024278	0.00023	0.000383	0.00638	0.60016	0.80482	0.727	0.853	0.941	0.999	0.993	0.981	0.798	0.789
rs1508092	4.0646E-08	0.0276106	0.00503	0.0291755	0.006935	7.46586E-08	0.71301	0.366112	0.024278	0.00023	0.000383	0.00638	0.60016	0.80482	0.727	0.853	0.941	0.999	0.993	0.981	0.798	0.789
rs9356052	4.0647E-08	0.0317194	0.00578	0.0317194	0.00578	7.46597E-08	0.16213	0.730929	0.007896	0.003383	0.622589	0.00306	0.05376	0.046192	0.912	0.842	0.99	0.995	0.809	0.996	0.954	0.943
rs10958506	4.0652E-08	0.0276104	0.00503	0.0291753	0.006935	7.46672E-08	0.713	0.366117	0.024281	0.00023	0.000383	0.00638	0.60018	0.804832	0.727	0.853	0.941	0.999	0.993	0.981	0.798	0.789
rs12576798	4.066E-08	-0.047206	0.0086	-0.047206	0.008602	7.46784E-08	0.63665	0.315982	0.00169	0.139819	0.096297	9.1E-05	0.20252	0.786595	0.712	0.858	0.997	0.874	0.928	1	0.889	0.789
rs9925672	4.0674E-08	-0.034398	0.00627	-0.040134	0.009676	7.46986E-08	0.10698	0.597248	0.012025	0.003955	0.020081	0.0218	0.07777	0.001202	0.929	0.772	0.982	0.995	0.978	0.961	0.951	0.977
rs7217406	4.0682E-08	-0.027832	0.00507	-0.027818	0.005125	7.47099E-08	0.74927	0.981418	0.000625	0.119147	0.483011	0.00063	0.09481	0.004709	0.734	0.768	0.999	0.894	0.805	0.999	0.924	0.959
rs474843	4.0693E-08	-0.06701	0.01221	-0.06701	0.012211	7.47244E-08	0.18985	0.909899	4.21E-05	0.058509	0.433632	0.00293	0.86277	0.112204	0.88	0.751	1	0.941	0.813	0.994	0.735	0.902
rs74767061	4.0711E-08	-0.053657	0.00978	-0.053657	0.009778	7.47498E-08	0.28981	0.141953	0.00172	0.075229	0.069189	0.00108	0.88385	0.117885	0.89	0.913	0.998	0.946	0.953	0.999	0.778	0.921
rs76786112	4.0711E-08	-0.053657	0.00978	-0.053657	0.009778	7.47498E-08	0.28981	0.141953	0.00172	0.075229	0.069189	0.00108	0.88385	0.117885	0.89	0.913	0.998	0.946	0.953	0.999	0.778	0.921
rs7937151	4.0733E-08	0.0288644	0.00526	0.0316953	0.007117	7.47804E-08	0.03266	0.932314	0.062189	0.008741	0.001172	0.00181	0.42619	0.048226	0.943	0.795	0.869	0.991	0.992	0.996	0.864	0.941
rs17110130	4.0737E-08	0.0462888	0.00844	0.0462888	0.008435	7.47868E-08	0.30806	0.550766	0.000603	0.010549	0.177592	0.0082	0.28523	0.027006	0.884	0.741	0.999	0.989	0.917	0.987	0.891	0.946
rs1402671	4.0738E-08	-0.029002	0.00528	-0.029002	0.005285	7.47882E-08	0.82306	0.064678	0.001292	0.039054	0.98492	0.00038	0.18084	0.110306	0.739	0.913	0.998	0.961	0.641	0.999	0.896	0.904
rs1026829	4.074E-08	0.0374717	0.00683	0.0374717	0.006828	7.47905E-08	0.95842	0.795131	1.99E-05	0.296557	0.382837	0.00094	0.09533	0.546359	0.707	0.745	1	0.687	0.785	0.997	0.901	0.78
rs12358825	4.0745E-08	0.0341044	0.00621	0.0341044	0.006215	7.47979E-08	0.50167	0.649133	0.005367	0.320587	0.092725	6.3E-05	0.14759	0.061706	0.843	0.825	0.99	0.749	0.936	1	0.913	0.925
rs1559578	4.0746E-08	0.0280657	0.00511	0.0273814	0.006961	4.86166E-08	0.13883	0.659204	6.85E-05	0.652979	0.083572	0.00012	0.29609	0.111455	0.85	0.719	1	0.065	0.904	1	0.795	0.867
rs3821572	4.0765E-08	-0.065266	0.01189	-0.064284	0.015058	7.48259E-08	0.0347	0.097318	0.00106	0.820552	0.063852	3.7E-05	0.45958	0.913273	0.904	0.871	0.997	0.268	0.922	1	0.751	0.641
rs151136858	4.0771E-08	0.0462875	0.00844	0.0462875	0.008435	7.48345E-08	0.30829	0.550762	0.000603	0.01056	0.17771	0.00819	0.28517	0.027002	0.884	0.741	0.999	0.989	0.917	0.987	0.891	0.946
rs2112494	4.0822E-08	-0.037059	0.00675	-0.037059	0.006754	7.4905E-08	0.16666	0.094432	0.001106	0.011408	0.311711	0.01127	0.01291	0.70892	0.91	0.924	0.999	0.989	0.885	0.982	0.973	0.759
rs7349100	4.0822E-08	0.0311362	0.00567	0.0311362	0.005674	7.49057E-08	0.01879	0.588247	0.04257	0.007933	0.695817	0.00023	0.1111	0.060038	0.948	0.848	0.915	0.991	0.774	1	0.932	0.934
rs117861592	4.0858E-08	-0.069429	0.01265	-0.069429	0.012653	7.49556E-08	0.72751	0.548817	1.02E-05	0.058279	0.672938	0.00288	0.91786	0.11287	0.764	0.793	1	0.926	0.702	0.992	0.641	0.884
rs142440466	4.086E-08	-0.069429	0.01265	-0.069429	0.012653	7.49583E-08	0.7275	0.548819	1.02E-05	0.058277	0.67294	0.00288	0.91786	0.11287	0.764	0.793	1	0.926	0.702	0.992	0.641	0.884
rs79043843	4.0863E-08	-0.062105	0.01132	-0.065191	0.013048	7.4963E-08	0.56156	0.23718	0.001941	0.060827	0.012721	0.03196	0.0021	0.086425	0.874	0.911	0.997	0.961	0.983	0.942	0.986	0.939
rs74867403	4.0885E-08	0.0349433	0.00637	0.0349433	0.006368	7.49925E-08	0.60044	0.016086	0.006519	0.163015	0.064763	3.5E-05	0.35165	0.883242	0.707	0.938	0.987	0.857	0.943	1	0.853	0.776
rs72787023	4.0907E-08	0.0341254	0.00622	0.0341254	0.006219	7.50236E-08	0.24846	0.04687	0.004369	0.033973	0.024916	0.00217	0.36861	0.795893	0.904	0.94	0.995	0.976	0.974	0.997	0.888	0.839

Table S3

rs4368973	4.0919E-08	0.0276085	0.00503	0.0291722	0.006931	7.504E-08	0.71649	0.366705	0.024333	0.000235	0.000378	0.00636	0.60089	0.805112	0.727	0.853	0.941	0.999	0.993	0.981	0.798	0.789
rs780041	4.093E-08	0.0276734	0.00504	0.0324732	0.00834	3.1906E-08	0.53006	0.037407	0.002202	3.71E-05	0.496613	0.15784	0.00256	0.484517	0.767	0.913	0.97	1	0.685	0.386	0.981	0.773
rs9928770	4.0968E-08	-0.034388	0.00627	-0.039824	0.009585	7.51093E-08	0.12823	0.57095	0.010717	0.005053	0.019382	0.02028	0.07508	0.001167	0.925	0.768	0.985	0.994	0.978	0.965	0.951	0.977
rs117023858	4.0972E-08	-0.066933	0.0122	-0.066933	0.012199	7.51142E-08	0.18861	0.922443	3.93E-05	0.05822	0.433106	0.00302	0.89159	0.113152	0.879	0.752	1	0.941	0.812	0.994	0.728	0.901
rs149648802	4.0977E-08	0.0540188	0.00985	0.0540188	0.009846	7.51217E-08	0.06848	0.736301	0.000816	0.02533	0.31218	0.00263	0.18566	0.242632	0.927	0.772	0.999	0.979	0.881	0.996	0.913	0.896
rs6808411	4.1034E-08	0.0358628	0.00654	0.0375399	0.008131	7.52025E-08	0.03398	0.139986	0.018084	0.017133	0.635027	0.001	0.3464	0.00289	0.946	0.919	0.975	0.986	0.812	0.999	0.89	0.974
rs2034796	4.1036E-08	-0.02832	0.00516	-0.02832	0.005162	7.52059E-08	0.01868	0.315864	0.003756	0.003894	0.695764	0.00289	0.33159	0.271091	0.948	0.884	0.995	0.995	0.782	0.996	0.883	0.893
rs7621681	4.1054E-08	-0.028946	0.00528	-0.029953	0.008729	3.30651E-08	0.54127	0.053413	0.061071	0.63895	0.005933	1E-06	0.0694	0.452326	0.444	0.861	0.463	0.225	0.974	1	0.876	0.687
rs3830645	4.1056E-08	-0.028958	0.00528	-0.030687	0.008465	7.5247E-08	0.23268	0.056378	0.007067	0.022153	0.299446	0.00087	0.32528	0.000588	0.651	0.927	0.99	0.98	0.876	0.999	0.877	0.977
rs986540	4.1056E-08	0.0429243	0.00782	0.0455296	0.009542	6.22986E-08	0.03752	0.568265	0.000541	0.001663	0.003588	0.14804	0.26139	0.635918	0.925	0.8	0.998	0.996	0.987	0.498	0.856	0.783
rs9458612	4.108E-08	0.0317083	0.00578	0.0317083	0.00578	7.52942E-08	0.16319	0.732043	0.007882	0.003444	0.620779	0.00307	0.05374	0.045729	0.912	0.842	0.99	0.995	0.809	0.996	0.954	0.943
rs143360534	4.109E-08	-0.030987	0.00565	-0.030987	0.005648	7.53149E-08	0.10415	0.264728	0.005672	0.036838	0.242391	0.00262	0.00277	0.869119	0.927	0.902	0.994	0.975	0.91	0.997	0.985	0.831
rs9368	4.1095E-08	0.0292483	0.00533	0.0292483	0.005331	7.53249E-08	0.37476	0.397535	0.000275	0.090716	0.886492	0.00021	0.45955	0.465938	0.833	0.829	0.999	0.904	0.659	0.999	0.808	0.818
rs2403304	4.1098E-08	0.0290627	0.0053	0.0290627	0.005298	7.53308E-08	0.81317	0.444742	0.014133	0.070346	0.010399	1.3E-05	0.90585	0.834119	0.718	0.824	0.964	0.923	0.973	1	0.706	0.763
rs11217004	4.1132E-08	-0.027957	0.0051	-0.029012	0.006532	7.53997E-08	0.02278	0.061865	0.008403	0.107764	0.971815	0.00032	0.09387	0.023899	0.946	0.93	0.987	0.92	0.682	0.999	0.938	0.95
rs4783413	4.1133E-08	-0.027643	0.00504	-0.027643	0.005039	7.54025E-08	0.26602	0.485064	3.34E-05	0.229489	0.852977	0.00118	0.06029	0.365592	0.839	0.799	1	0.748	0.54	0.997	0.922	0.82
rs16969938	4.1147E-08	-0.035394	0.00645	-0.035394	0.006452	7.543E-08	0.19362	0.322003	0.00486	0.002566	0.092919	0.01207	0.32376	0.078144	0.916	0.899	0.995	0.997	0.952	0.984	0.901	0.94
rs72666520	4.1151E-08	-0.035394	0.00645	-0.035394	0.006452	7.54379E-08	0.19363	0.322108	0.004863	0.002564	0.092891	0.01207	0.32377	0.078197	0.916	0.899	0.995	0.997	0.952	0.984	0.901	0.94
rs16969937	4.1156E-08	-0.035393	0.00645	-0.035393	0.006452	7.54487E-08	0.19365	0.322109	0.004863	0.002564	0.092891	0.01207	0.32377	0.078197	0.916	0.899	0.995	0.997	0.952	0.984	0.901	0.94
rs11606895	4.118E-08	0.0958895	0.01748	0.0958895	0.01748	7.54966E-08	0.09966	0.145564	0.024039	0.024338	0.007716	0.00271	0.47593	0.048405	0.935	0.925	0.973	0.984	0.987	0.997	0.88	0.95
rs7164665	4.1193E-08	-0.034858	0.00635	-0.034858	0.006354	7.55234E-08	0.09371	0.053457	0.007298	0.059414	0.223221	0.00063	0.25308	0.2698	0.932	0.941	0.992	0.963	0.917	0.999	0.912	0.906
rs7183003	4.12E-08	-0.066576	0.01214	-0.066576	0.012137	7.55375E-08	0.5267	0.489209	0.000359	0.018827	0.580939	0.00137	0.03052	0.82911	0.818	0.668	0.999	0.977	0.758	0.997	0.949	0.771
rs2348372	4.121E-08	-0.028688	0.00523	-0.028688	0.00523	7.5557E-08	0.06323	0.714701	0.003922	0.042557	0.885137	0.00023	0.03058	0.660142	0.92	0.816	0.994	0.961	0.7	1	0.955	0.819
rs3774364	4.1219E-08	-0.028646	0.00522	-0.028646	0.005222	7.55765E-08	0.6483	0.606158	0.000547	0.225382	0.27234	0.00022	0.00691	0.426168	0.782	0.788	0.999	0.767	0.841	0.999	0.967	0.607
rs11160880	4.1227E-08	0.0576433	0.01051	0.0553463	0.014804	6.88192E-08	0.33014	0.540812	0.006238	0.589594	0.071456	3.5E-06	0.0122	0.76176	0.785	0.565	0.966	0.383	0.904	1	0.95	0.594
rs2247583	4.1256E-08	-0.028657	0.00522	-0.030067	0.00681	7.56505E-08	0.81041	0.033189	0.000149	0.188316	0.0016	0.02325	0.06976	0.70451	0.757	0.935	1	0.842	0.99	0.935	0.94	0.816
rs75609499	4.1256E-08	0.0290643	0.0053	0.0290643	0.005298	7.56508E-08	0.23374	0.389623	0.00344	0.002503	0.286544	0.00563	0.03429	0.9217	0.898	0.876	0.996	0.996	0.89	0.992	0.96	0.789
rs12475154	4.1258E-08	0.0276513	0.00504	0.0276513	0.005041	7.56541E-08	0.8705	0.333762	0.016482	0.004751	0.06539	0.00227	0.03028	0.389869	0.833	0.892	0.979	0.995	0.958	0.997	0.965	0.886
rs140636871	4.1272E-08	-0.066917	0.0122	-0.066917	0.012199	7.56836E-08	0.18892	0.922149	3.97E-05	0.058267	0.432573	0.00303	0.89192	0.113094	0.879	0.752	1	0.941	0.812	0.994	0.728	0.901
rs200927730	4.1272E-08	-0.066917	0.0122	-0.066917	0.012199	7.56836E-08	0.18892	0.922149	3.97E-05	0.058267	0.432573	0.00303	0.89192	0.113094	0.879	0.752	1	0.941	0.812	0.994	0.728	0.901
rs145976497	4.1286E-08	-0.066916	0.0122	-0.066916	0.012199	7.57103E-08	0.18892	0.92219	3.96E-05	0.058263	0.432581	0.00303	0.89194	0.113097	0.879	0.752	1	0.941	0.812	0.994	0.728	0.901
rs7182996	4.1327E-08	-0.066571	0.01214	-0.066571	0.012137	7.5794E-08	0.52666	0.488596	0.000359	0.018934	0.580196	0.00137	0.03039	0.829122	0.818	0.668	0.999	0.977	0.758	0.997	0.949	0.771
rs4258814	4.1332E-08	0.038717	0.00706	0.038717	0.007059	7.58041E-08	0.70191	0.065323	0.000737	0.043662	0.032311	0.02361	0.00767	0.786391	0.851	0.935	0.999	0.97	0.971	0.96	0.979	0.838
rs9508626	4.1354E-08	-0.027926	0.00509	-0.027822	0.005468	7.58491E-08	0.19468	0.022702	0.005179	0.052574	0.065539	0.00013	0.43232	0.539013	0.61	0.935	0.991	0.951	0.944	1	0.838	0.83
rs201389274	4.1379E-08	-0.06699	0.01221	-0.06699	0.012214	7.59001E-08	0.18624	0.930936	4.11E-05	0.055551	0.46306	0.00268	0.92043	0.127822	0.878	0.749	1	0.942	0.8	0.995	0.717	0.896
rs7633271	4.1392E-08	-0.027958	0.0051	-0.027958	0.005097	7.58998E-08	0.68532	0.104284	0.029922	0.111617	0.026801	6.6E-06	0.3827	0.67533	0.802	0.898	0.92	0.889	0.962	1	0.839	0.698
rs9365748	4.1401E-08	0.0305791	0.00558	0.0305791	0.005575	7.59431E-08	0.05889	0.717754	0.004503	0.001129	0.624086	0.00258	0.02986	0.464992	0.918	0.809	0.992	0.997	0.767	0.995	0.954	0.668
rs140262264	4.1403E-08	-0.06691	0.0122	-0.06691	0.012199	7.5948E-08	0.18887	0.921898	3.99E-05	0.058288	0.432344	0.00303	0.89179	0.112751	0.879	0.752	1	0.941	0.812	0.994	0.728	0.902
rs17579636	4.1403E-08	-0.039998	0.00729	-0.039998	0.007293	7.59481E-08	0.11273	0.967	0.001371	0.323323	0.065847	0.00118	0.09388	0.018746	0.914	0.79	0.998	0.76	0.952	0.998	0.936	0.951
rs219007	4.1405E-08	0.028548	0.0052	0.0358836	0.008663	6.28548E-08	0.49284	0.102329	0.001798	0.0093	0.136181	0.12782	0.00155	0.00254	0.849	0.918	0.994	0.988	0.922	0.612	0.988	0.974
rs142423453	4.1407E-08	-0.06691	0.0122	-0.06691	0.012199	7.59562E-08	0.18892	0.922237	3.97E-05	0.058256	0.432891	0.00303	0.8919	0.113318	0.879	0.752	1	0.941	0.812	0.994	0.728	0.901
rs481016	4.1414E-08	-0.066968	0.01221	-0.066968	0.01221	7.597E-08	0.19001	0.909593	4.25E-05	0.058735	0.433591	0.00294	0.86493	0.111934	0.88	0.751	1	0.941	0.813	0.994	0.735	0.902
rs117853959	4.1414E-08	-0.06691	0.0122	-0.06691	0.012199	7.59708E-08	0.18888	0.922752	3.99E-05	0.058271	0.431925	0.00303	0.89184	0.113102	0.879	0.752	1	0.941	0.813	0.994	0.728	0.901
rs149691335	4.1428E-08	0.0923436	0.01684	0.0923436	0.016837	7.59983E-08	0.99496	0.269324	0.02076	0.012185	0.126006	0.00055	0.01276	0.597695	0.81	0.894	0.971	0.989	0.935	0.999	0.972	0.853
rs12633736	4.145E-08	-0.065236	0.01189	-0.064254	0.014972	7.60425E-08	0.0359	0.097913	0.001033	0.820566	0.064305	3.9E-05	0.45442	0.911598	0.903	0.871	0.997	0.269	0.922	1	0.753	0.641
rs12121954	4.1469E-08	0.0311194	0.00567	0.0311194	0.005674	7.60818E-08	0.01893	0.590645	0.042841	0.008023	0.696682	0.00023	0.11141	0.060303	0.948	0.847	0.914	0.991	0.774	1	0.932	0.934
rs4388951	4.1479E-08	0.0330773	0.00603	0.0330773	0.006031	7.61012E-08	0.74885	0.027528	0.001812	0.003354	0.007787	0.03246	0.18338	0.624477	0.77	0.943	0.997	0.995	0.984	0.931	0.915	0.845
rs74378140	4.1485E-08	-0.031892	0.00581	-0.034516	0.010224	7.61148E-08	0.00842	0.27585	0.005898	0.390721	0.241099	0.00012	0.00093	0.30331	0.942	0.848	0.982	0.617	0.854	0.999	0.984	0.567
rs7984433	4.1488E-08	-0.035385	0.00645	-0.035385	0.006452	7.61201E-08	0.19379	0.321808	0.004875	0.002563	0.093199	0.01209	0.32462	0.078224	0.916	0.899	0.995	0.997	0.952	0.984	0.901	0.94
rs79889230	4.1545E-08	-0.053618	0.00978	-0.053618	0.009777	7.62351E-08	0.28817	0.144983	0.0017	0.075767	0.07089	0.00109	0.87756	0.118848	0.89	0.912	0.998	0.946	0.953	0.999	0.78	0.921
rs2144080	4.1599E-08	0.027603	0.00503	0.027603	0.005033	7.6345E-08	0.96862	0.194003	0.000445	0.017511	0.490722	0.02495	0.00341	0.08123	0.809	0.903	0.999	0.984	0.835	0.95	0.982	0.93
rs12930285	4.1616E-08	0.0280891	0.00512	0.0280891	0.005122	7.63798E-08	0.74905	0.169663	0.024696	0.003861	0.529593	9.1E-06	0.97536	0.973112	0.754	0.856	0.916	0.991	0.738	1	0.658	0.712
rs17168250	4.1617E-08	-0.063442	0.01157	-0.063442	0.011569	7.63807E-08	0.46106	0.040165	0.00112	0.010764	0.923761	0.00028	0.9573	0.559256	0.809	0.909	0.998	0.983	0.568	0.999	0.671	0.79
rs191847854	4.163E-08	-0.069155	0.01261	-0.069155	0.012611	7.64067E-08	0.4183	0.604236	8.04E-06	0.062101	0.764004	0.00355	0.9391	0.126737	0.814	0.785	1	0.922	0.674	0.99	0.647	0.881
rs1837537	4.1642E-08	0.0465844	0.00849	0.0536272	0.013449	7.32555E-08	0.005	0.220405	0.055404	8.7E-05	0.660262	0.00488	0.31773	0.031479	0.959	0.892	0.864	0.999	0.769	0.981	0.876	0.945

Table S3

rs117047654	4.1644E-08	-0.069389	0.01265	-0.069389	0.012654	7.6435E-08	0.7276	0.549006	1.03E-05	0.058317	0.673601	0.0029	0.91703	0.113072	0.764	0.792	1	0.926	0.702	0.992	0.641	0.884
rs150370711	4.1644E-08	-0.040736	0.00743	-0.041332	0.008452	7.64356E-08	0.09711	0.645928	0.000155	0.504485	0.019318	0.0062	0.00744	0.772252	0.902	0.804	1	0.572	0.969	0.981	0.972	0.78
rs2604578	4.1649E-08	-0.028332	0.00517	-0.028332	0.005167	7.6445E-08	0.56728	0.193515	0.033741	0.03575	0.233302	8.7E-05	0.01224	0.163903	0.734	0.898	0.935	0.97	0.897	1	0.971	0.907
rs116934815	4.1674E-08	-0.066896	0.0122	-0.066896	0.012199	7.64968E-08	0.18885	0.919256	4.01E-05	0.05828	0.431937	0.00303	0.8918	0.112942	0.879	0.751	1	0.941	0.812	0.994	0.728	0.901
rs61924991	4.1718E-08	-0.031884	0.00581	-0.034507	0.010246	7.65856E-08	0.00813	0.279696	0.005897	0.391016	0.243997	0.00012	0.00094	0.300964	0.943	0.847	0.982	0.616	0.853	0.999	0.984	0.565
rs117199959	4.1718E-08	-0.066894	0.0122	-0.066894	0.012199	7.65856E-08	0.18886	0.919999	4.01E-05	0.058302	0.432631	0.00303	0.89142	0.112974	0.879	0.751	1	0.941	0.812	0.994	0.728	0.901
rs117450694	4.1719E-08	-0.066894	0.0122	-0.066894	0.012199	7.65885E-08	0.18884	0.919258	4.01E-05	0.058272	0.431932	0.00303	0.89217	0.11294	0.879	0.751	1	0.941	0.812	0.994	0.728	0.901
rs72665433	4.1747E-08	0.034383	0.00627	0.034383	0.006271	7.66434E-08	0.94789	0.349822	0.000958	0.007818	0.20239	0.00286	0.35662	0.363403	0.79	0.874	0.999	0.991	0.906	0.996	0.872	0.873
rs113729193	4.1749E-08	-0.06805	0.01241	-0.06805	0.01241	7.66473E-08	0.60506	0.653882	2.6E-05	0.038724	0.612209	0.00252	0.84459	0.096872	0.79	0.785	1	0.952	0.731	0.994	0.633	0.894
rs558545406	4.175E-08	0.0330701	0.00603	0.0330701	0.006031	7.66507E-08	0.74868	0.027494	0.001816	0.003346	0.007855	0.03251	0.18352	0.624719	0.77	0.943	0.997	0.995	0.984	0.931	0.915	0.845
rs4940263	4.1751E-08	0.0367635	0.0067	0.0367635	0.006705	7.66528E-08	0.4822	0.819295	9.28E-05	0.397371	0.304746	0.0003	0.08682	0.777062	0.792	0.739	1	0.603	0.813	0.999	0.905	0.739
rs7160112	4.1756E-08	0.0386981	0.00706	0.0386981	0.007058	7.66628E-08	0.31175	0.26692	0.001724	0.094809	0.126329	0.0005	0.07974	0.671431	0.879	0.885	0.998	0.929	0.929	0.999	0.939	0.739
rs58507364	4.1769E-08	-0.031592	0.00576	-0.032666	0.007522	7.66894E-08	0.0373	0.832868	0.021083	0.016786	0.019034	0.00042	0.74133	0.016251	0.934	0.763	0.959	0.983	0.973	0.999	0.664	0.951
rs2077491	4.1774E-08	0.0283403	0.00517	0.0283403	0.005169	7.66987E-08	0.49457	0.334471	0.00074	0.000311	0.756751	0.00104	0.9557	0.557813	0.764	0.548	0.998	0.998	0.624	0.997	0.62	0.75
rs2077492	4.1774E-08	0.0283403	0.00517	0.0283403	0.005169	7.66987E-08	0.49457	0.334471	0.00074	0.000311	0.756751	0.00104	0.9557	0.557813	0.764	0.548	0.998	0.998	0.624	0.997	0.62	0.75
rs1026831	4.1787E-08	0.0374497	0.00683	0.0374497	0.00683	7.67255E-08	0.9583	0.796531	2.01E-05	0.299041	0.384521	0.00094	0.09545	0.547915	0.706	0.744	1	0.684	0.784	0.997	0.9	0.779
rs199729368	4.179E-08	0.0311141	0.00567	0.0311141	0.005675	7.67318E-08	0.01872	0.582736	0.043362	0.007805	0.693489	0.00024	0.11271	0.059795	0.948	0.848	0.913	0.991	0.775	1	0.931	0.934
rs12419170	4.1791E-08	0.0301371	0.0055	0.0301371	0.005496	7.6734E-08	0.12141	0.799591	0.024631	0.021555	0.346665	7.5E-05	0.04861	0.709273	0.912	0.821	0.957	0.98	0.866	1	0.951	0.828
rs4358357	4.1796E-08	-0.034644	0.00632	-0.040197	0.010152	6.52312E-08	0.10076	0.174578	0.065183	0.000202	0.095314	0.00755	0.0013	0.491558	0.913	0.895	0.822	0.999	0.933	0.963	0.986	0.676
rs73228268	4.1817E-08	-0.034919	0.00637	-0.040787	0.01075	7.18175E-08	0.05935	0.205897	0.07584	0.000465	0.071787	0.00423	0.00114	0.31599	0.923	0.884	0.781	0.998	0.942	0.979	0.986	0.614
rs4940019	4.1844E-08	0.0277871	0.00507	0.0277871	0.005068	7.68402E-08	0.92602	0.849358	0.030032	0.01367	0.01084	8E-05	0.68179	0.156415	0.781	0.752	0.932	0.984	0.977	1	0.784	0.895
rs7159827	4.1873E-08	0.0386953	0.00706	0.0386953	0.007058	7.68984E-08	0.31179	0.266949	0.00172	0.09528	0.126215	0.0005	0.07981	0.671344	0.879	0.885	0.998	0.928	0.929	0.999	0.939	0.739
rs78790489	4.1903E-08	-0.031882	0.00582	-0.034505	0.010222	7.696E-08	0.00842	0.276292	0.005919	0.390791	0.240862	0.00012	0.00094	0.303369	0.942	0.848	0.982	0.618	0.855	0.999	0.984	0.567
rs8088468	4.1905E-08	0.0367281	0.0067	0.0367281	0.006699	7.69649E-08	0.45447	0.852677	7.39E-05	0.392728	0.326363	0.0004	0.0788	0.719185	0.799	0.737	1	0.61	0.806	0.999	0.91	0.751
rs17109890	4.1948E-08	0.0461819	0.00842	0.0461819	0.008424	7.70505E-08	0.28621	0.584762	0.000627	0.01235	0.188111	0.00685	0.30661	0.031223	0.887	0.747	0.999	0.988	0.914	0.99	0.887	0.944
rs1961963	4.1976E-08	-0.031878	0.00581	-0.034475	0.010226	7.71071E-08	0.00843	0.279312	0.005901	0.390385	0.243668	0.00012	0.00094	0.301192	0.942	0.847	0.982	0.617	0.853	0.999	0.984	0.566
rs9852219	4.198E-08	-0.040624	0.00741	-0.041552	0.008774	7.71153E-08	0.09392	0.608673	0.000183	0.489667	0.0193	0.00673	0.00517	0.796083	0.904	0.813	1	0.59	0.97	0.98	0.976	0.78
rs61924992	4.198E-08	-0.031878	0.00581	-0.034471	0.010225	7.71164E-08	0.00843	0.279558	0.005901	0.390284	0.243849	0.00012	0.00094	0.30117	0.942	0.847	0.982	0.617	0.853	0.999	0.984	0.566
rs12116836	4.1999E-08	0.0311087	0.00567	0.0311087	0.005674	7.71554E-08	0.01856	0.583431	0.043154	0.007971	0.695112	0.00023	0.11225	0.06016	0.948	0.848	0.914	0.991	0.774	1	0.931	0.934
rs2155281	4.2004E-08	0.0288273	0.00526	0.0316033	0.007082	7.71638E-08	0.0326	0.927652	0.061125	0.008674	0.001229	0.00187	0.42579	0.0485	0.943	0.795	0.873	0.991	0.992	0.996	0.864	0.941
rs57474356	4.2038E-08	0.0386966	0.00706	0.0386966	0.007059	7.72336E-08	0.69995	0.065546	0.000743	0.043922	0.032275	0.02368	0.00769	0.787148	0.851	0.935	0.999	0.97	0.971	0.96	0.979	0.838
rs12190251	4.2047E-08	-0.031618	0.00577	-0.031618	0.005768	7.72527E-08	0.7657	0.42363	0.001038	0.025214	0.086616	0.00444	0.05341	0.344067	0.778	0.873	0.999	0.98	0.947	0.994	0.953	0.884
rs4732435	4.2068E-08	0.0289918	0.00529	0.026815	0.00667	5.80789E-08	0.36364	0.299941	0.001533	0.550609	0.394578	6.5E-07	0.50418	0.422715	0.449	0.741	0.989	0.344	0.665	1	0.657	0.707
rs676086	4.208E-08	-0.028497	0.0052	-0.028672	0.007568	5.14494E-08	0.98681	0.086118	0.015891	0.824688	0.204796	1.8E-06	0.09375	0.030014	0.669	0.875	0.897	0.273	0.833	1	0.895	0.916
rs9379777	4.2101E-08	0.0386316	0.00705	0.0391494	0.007352	7.73614E-08	0.02833	0.014854	0.014281	0.049894	0.032886	0.00552	0.06008	0.337738	0.956	0.962	0.986	0.973	0.975	0.994	0.961	0.909
rs7727762	4.2103E-08	-0.045853	0.00836	-0.051603	0.014963	7.36475E-08	0.5198	0.532993	0.000447	0.621761	0.215185	0.00223	7.9E-06	0.367104	0.795	0.793	0.998	0.44	0.857	0.992	0.995	0.823
rs4384407	4.2104E-08	-0.031874	0.00581	-0.034467	0.010225	7.73675E-08	0.00843	0.279717	0.005904	0.390137	0.243952	0.00012	0.00094	0.300937	0.942	0.847	0.982	0.618	0.853	0.999	0.984	0.566
rs155031	4.2117E-08	-0.066973	0.01222	-0.066973	0.012217	7.73936E-08	0.19013	0.8815	3.11E-05	0.05846	0.457903	0.00329	0.89094	0.115986	0.877	0.742	1	0.939	0.801	0.993	0.724	0.899
rs879607563	4.2125E-08	-0.028614	0.00522	-0.028539	0.007136	5.60204E-08	0.98224	0.172651	0.019126	0.651667	0.233339	1.7E-06	0.10115	0.021565	0.68	0.847	0.887	0.381	0.824	1	0.893	0.924
rs11738734	4.2148E-08	-0.045852	0.00836	-0.051605	0.014964	7.36631E-08	0.5195	0.532349	0.000447	0.622331	0.215181	0.00223	7.9E-06	0.366993	0.795	0.793	0.998	0.439	0.857	0.992	0.995	0.823
rs851009	4.2161E-08	0.0373091	0.00681	0.0363966	0.008967	7.74833E-08	0.4343	0.340071	0.000158	0.359368	0.175083	0.00059	0.0067	0.19208	0.797	0.814	0.999	0.611	0.865	0.998	0.965	0.488
rs4948031	4.2162E-08	0.0304391	0.00555	0.0304391	0.005553	7.7485E-08	0.3945	0.175645	0.022967	0.000515	0.234777	0.0008	0.16527	0.297397	0.687	0.894	0.955	0.998	0.89	0.999	0.91	0.876
rs61924990	4.2178E-08	-0.031873	0.00581	-0.034466	0.010225	7.75172E-08	0.00842	0.279756	0.005909	0.390269	0.243935	0.00012	0.00094	0.300902	0.942	0.847	0.982	0.617	0.853	0.999	0.984	0.566
rs28986425	4.219E-08	-0.0348	0.00635	-0.0348	0.006349	7.75414E-08	0.58245	0.640818	0.000649	0.019754	0.280852	0.00021	0.72783	0.663717	0.668	0.788	0.999	0.973	0.842	0.999	0.739	0.781
rs55705924	4.2192E-08	-0.029481	0.00538	-0.029481	0.005378	7.75462E-08	0.23653	0.802148	0.001897	0.004176	0.193623	0.02583	0.02288	0.071585	0.907	0.843	0.998	0.995	0.922	0.956	0.969	0.939
rs10506638	4.2198E-08	0.0461898	0.00843	0.0461898	0.008427	7.75571E-08	0.31657	0.53776	0.000612	0.010709	0.182079	0.00782	0.29322	0.026857	0.882	0.738	0.999	0.989	0.915	0.988	0.889	0.946
rs155030	4.2198E-08	-0.066916	0.01221	-0.066916	0.012208	7.7558E-08	0.19016	0.913634	4.25E-05	0.058512	0.432837	0.00299	0.87351	0.111305	0.88	0.751	1	0.941	0.813	0.994	0.733	0.902
rs7570682	4.2202E-08	0.0322481	0.00588	0.0330575	0.006657	7.60554E-08	0.363	0.008404	9.81E-05	0.007107	0.450124	0.08731	0.05815	0.443459	0.857	0.954	1	0.99	0.806	0.724	0.943	0.844
rs726281	4.2214E-08	-0.031139	0.00568	-0.031139	0.005681	7.75905E-08	0.58302	0.853846	0.011291	0.066839	0.242966	2.2E-05	0.28883	0.132022	0.834	0.765	0.981	0.943	0.886	1	0.878	0.905
rs79022679	4.2215E-08	-0.032587	0.00595	-0.032587	0.005945	7.75921E-08	0.23328	0.642474	0.000806	0.066944	0.371353	0.00275	0.0031	0.363499	0.89	0.746	0.999	0.948	0.858	0.996	0.981	0.872
rs116898131	4.2219E-08	-0.066868	0.0122	-0.066868	0.012199	7.76005E-08	0.18906	0.919505	4.04E-05	0.05825	0.431627	0.00305	0.89195	0.112852	0.879	0.751	1	0.941	0.813	0.994	0.728	0.901
rs17835109	4.2221E-08	0.0544675	0.00994	0.0544675	0.009937	7.76035E-08	0.64258	0.514825	0.000288	0.004806	0.023735	0.07616	0.12648	0.17991	0.833	0.85	0.999	0.994	0.971	0.798	0.924	0.902
rs148244125	4.2235E-08	-0.04077	0.00744	-0.041355	0.008463	7.76329E-08	0.09612	0.636469	0.000163	0.500903	0.020638	0.00587	0.00715	0.805867	0.902	0.805	1	0.574	0.968	0.983	0.972	0.775
rs4551810	4.2235E-08	-0.031871	0.00581	-0.034464	0.010224	7.76329E-08	0.00842	0.279765	0.005914	0.39025	0.243729	0.00012	0.00094	0.300871	0.942	0.847	0.982	0.618	0.853	0.999	0.984	0.566
rs155032	4.2236E-08	-0.066919	0.01221	-0.066919	0.012209	7.76344E-08	0.18995	0.910434	4.26E-05	0.058501	0.432866	0.00298	0.87117	0.111882	0.88	0.751	1	0.941	0.813	0.994	0.733	0.902

Table S3

rs10925128	4.2246E-08	0.0283089	0.00516	0.0283751	0.005246	7.7655E-08	0.99208	0.989697	0.006236	0.010785	0.273828	0.00305	0.02668	0.00405	0.808	0.809	0.992	0.99	0.895	0.996	0.964	0.969
rs58591767	4.2247E-08	0.0276126	0.00504	0.0299064	0.008535	7.76569E-08	0.89628	0.100917	0.000172	0.054419	0.089097	0.02941	0.00015	0.294876	0.781	0.905	0.999	0.944	0.933	0.911	0.991	0.615
rs59270107	4.2247E-08	0.0276126	0.00504	0.0299064	0.008535	7.76569E-08	0.89628	0.100917	0.000172	0.054419	0.089097	0.02941	0.00015	0.294876	0.781	0.905	0.999	0.944	0.933	0.911	0.991	0.615
rs62078369	4.2247E-08	0.0276126	0.00504	0.0299064	0.008535	7.76569E-08	0.89628	0.100917	0.000172	0.054419	0.089097	0.02941	0.00015	0.294876	0.781	0.905	0.999	0.944	0.933	0.911	0.991	0.615
rs62078370	4.2247E-08	0.0276126	0.00504	0.0299064	0.008535	7.76569E-08	0.89628	0.100917	0.000172	0.054419	0.089097	0.02941	0.00015	0.294876	0.781	0.905	0.999	0.944	0.933	0.911	0.991	0.615
rs6576003	4.2253E-08	0.0276187	0.00504	0.0276187	0.005039	7.76689E-08	0.95331	0.185487	0.000435	0.020035	0.485501	0.0251	0.00321	0.076123	0.811	0.905	0.999	0.983	0.837	0.95	0.983	0.932
rs12579868	4.2259E-08	0.0278158	0.00507	0.0278158	0.005075	7.76818E-08	0.85537	0.762844	0.0272	0.0006	0.113949	0.00043	0.25524	0.719212	0.799	0.811	0.946	0.998	0.927	0.999	0.884	0.812
rs10750016	4.2259E-08	0.0288217	0.00526	0.0316077	0.007089	7.76821E-08	0.03258	0.926159	0.061197	0.00867	0.001225	0.00188	0.42636	0.048426	0.943	0.795	0.872	0.991	0.992	0.996	0.864	0.941
rs7520116	4.2262E-08	-0.028748	0.00524	-0.028748	0.005245	7.76878E-08	0.75552	0.070579	0.020022	0.016556	0.123638	5.1E-05	0.516	0.938073	0.813	0.917	0.962	0.983	0.925	1	0.829	0.766
rs1461582	4.2277E-08	0.0386812	0.00706	0.0386812	0.007057	7.77175E-08	0.31165	0.267917	0.001737	0.094662	0.126652	0.0005	0.07968	0.671565	0.879	0.885	0.998	0.929	0.929	0.999	0.939	0.739
rs61924988	4.2307E-08	-0.031869	0.00581	-0.034462	0.010224	7.77787E-08	0.00843	0.279768	0.005915	0.390169	0.24395	0.00012	0.00094	0.300872	0.942	0.847	0.982	0.618	0.853	0.999	0.984	0.566
rs4947512	4.2346E-08	0.0304349	0.00555	0.0304349	0.005553	7.78575E-08	0.39421	0.17565	0.022968	0.000518	0.234832	0.0008	0.16527	0.297399	0.686	0.894	0.956	0.998	0.889	0.999	0.91	0.876
rs75384172	4.2356E-08	0.0565942	0.01033	0.0542492	0.013539	7.53858E-08	0.38952	0.62495	3.37E-06	0.044356	0.525676	0.01124	0.03654	0.232884	0.8	0.633	1	0.934	0.399	0.951	0.931	0.836
rs139852150	4.2393E-08	0.0477942	0.00872	0.0477942	0.008721	7.79536E-08	0.91887	0.017407	0.053973	0.00292	0.463362	0.00022	0.17703	0.164941	0.8	0.945	0.886	0.995	0.829	1	0.91	0.904
rs3926569	4.2406E-08	-0.027939	0.0051	-0.027939	0.005098	7.79462E-08	0.68205	0.10427	0.029944	0.114183	0.026815	6.6E-06	0.38279	0.67517	0.802	0.897	0.92	0.886	0.962	1	0.839	0.697
rs34989031	4.2411E-08	0.0315135	0.00575	0.0329295	0.006739	7.79497E-08	0.0094	0.170519	0.142898	0.02242	0.034232	0.00017	0.26429	0.130738	0.958	0.901	0.646	0.977	0.966	1	0.887	0.914
rs74838542	4.2411E-08	0.0278597	0.00508	0.0278597	0.005083	7.79902E-08	0.21437	0.904303	0.00143	0.073904	0.077873	0.00385	0.15844	0.013681	0.908	0.809	0.998	0.952	0.954	0.995	0.928	0.96
rs531639	4.2427E-08	0.0285213	0.0052	0.0360037	0.008691	6.23504E-08	0.45585	0.098681	0.001787	0.009053	0.132709	0.1353	0.0018	0.00234	0.852	0.918	0.994	0.989	0.922	0.587	0.987	0.975
rs2144079	4.2441E-08	0.0275859	0.00503	0.0275859	0.005034	7.80502E-08	0.96289	0.193716	0.000443	0.01838	0.490177	0.0248	0.00339	0.081106	0.81	0.904	0.999	0.984	0.835	0.95	0.982	0.93
rs1608747	4.2448E-08	0.0304326	0.00555	0.0304326	0.005553	7.80649E-08	0.39433	0.175719	0.023002	0.000518	0.234995	0.0008	0.16532	0.297424	0.686	0.894	0.955	0.998	0.889	0.999	0.91	0.876
rs1608748	4.245E-08	0.0304325	0.00555	0.0304325	0.005553	7.8068E-08	0.39431	0.175722	0.023006	0.000518	0.234967	0.0008	0.16533	0.297432	0.686	0.894	0.955	0.998	0.889	0.999	0.91	0.876
rs549975878	4.2478E-08	-0.068318	0.01247	-0.068318	0.012466	7.81248E-08	0.66989	0.776443	0.001413	0.08069	0.256899	0.00011	0.36724	0.140907	0.717	0.797	0.997	0.925	0.871	1	0.849	0.896
rs4581486	4.2484E-08	-0.031865	0.00581	-0.034463	0.010225	7.81375E-08	0.00844	0.279275	0.005933	0.390602	0.243892	0.00012	0.00094	0.301198	0.942	0.847	0.982	0.617	0.853	0.999	0.984	0.566
rs4858819	4.2497E-08	0.0307307	0.00561	0.0307307	0.005608	7.81638E-08	0.515	0.053443	0.0673	0.004721	0.225243	2.8E-05	0.2924	0.399725	0.672	0.913	0.807	0.992	0.871	1	0.857	0.837
rs199638164	4.252E-08	-0.0669	0.01221	-0.0669	0.012208	7.82109E-08	0.20103	0.911743	4.28E-05	0.054688	0.433681	0.00307	0.88492	0.111524	0.877	0.751	1	0.944	0.812	0.994	0.73	0.902
rs155029	4.253E-08	-0.066896	0.01221	-0.066896	0.012207	7.82303E-08	0.18965	0.912383	4.26E-05	0.058714	0.432678	0.003	0.87458	0.1112	0.88	0.751	1	0.941	0.813	0.994	0.733	0.902
rs4732436	4.2552E-08	0.0289803	0.00529	0.0267971	0.006674	5.88876E-08	0.36315	0.300123	0.001538	0.551363	0.395153	6.6E-07	0.50475	0.422847	0.448	0.74	0.989	0.344	0.664	1	0.656	0.707
rs12737877	4.2609E-08	-0.032258	0.00589	-0.030247	0.00965	7.83909E-08	0.01392	0.034453	0.000109	0.030542	0.10036	0.0036	0.27304	0.576947	0.406	0.919	1	0.965	0.92	0.992	0.859	0.802
rs13156271	4.267E-08	0.0277031	0.00506	0.0277031	0.005056	7.85149E-08	0.32847	0.580563	0.002699	0.004	0.078076	0.00817	0.32795	0.017702	0.885	0.752	0.997	0.995	0.951	0.988	0.887	0.954
rs78555509	4.2713E-08	0.0870618	0.01589	0.0910323	0.025232	7.23324E-08	0.80904	0.022264	0.063312	4.38E-05	0.029554	0.00145	0.49193	0.235507	0.689	0.921	0.79	1	0.954	0.993	0.511	0.852
rs72302444	4.2722E-08	-0.047573	0.00868	-0.047573	0.008682	7.86195E-08	0.51211	0.178573	0.001195	0.006452	0.303406	0.00668	0.25096	0.248732	0.867	0.909	0.998	0.993	0.89	0.991	0.905	0.902
rs17768330	4.2759E-08	-0.035393	0.00646	-0.035393	0.00646	7.86957E-08	0.9383	0.491647	0.027441	0.016526	0.237083	3.4E-05	0.32113	0.127385	0.778	0.849	0.947	0.983	0.89	1	0.873	0.909
rs139908727	4.2776E-08	-0.066839	0.0122	-0.066839	0.012199	7.87296E-08	0.18898	0.918789	4.12E-05	0.058141	0.430837	0.00306	0.89325	0.112448	0.879	0.751	1	0.941	0.813	0.994	0.728	0.902
rs55767234	4.2797E-08	-0.065921	0.01203	-0.065921	0.012032	7.87725E-08	0.51937	0.240113	0.007707	0.042049	0.526797	3.4E-05	0.13769	0.930389	0.836	0.876	0.987	0.96	0.796	1	0.912	0.756
rs9636612	4.2823E-08	-0.028611	0.00522	-0.028611	0.005222	7.88248E-08	0.03856	0.148274	0.015038	0.051651	0.004466	0.00806	0.05173	0.203079	0.953	0.93	0.984	0.971	0.989	0.991	0.963	0.925
rs11645203	4.2829E-08	-0.035398	0.00646	-0.035398	0.006461	7.88368E-08	0.92208	0.48642	0.027074	0.016667	0.237498	3.5E-05	0.31374	0.127328	0.776	0.85	0.948	0.983	0.89	1	0.875	0.909
rs77446793	4.2844E-08	0.0494797	0.00903	0.0513498	0.011844	7.88672E-08	0.02271	0.010902	0.000327	0.128718	0.030188	0.00732	0.84679	0.525607	0.943	0.952	0.999	0.904	0.967	0.987	0.709	0.852
rs1651127	4.2865E-08	0.027576	0.00503	0.0281269	0.00553	7.57191E-08	0.23864	0.076234	5.37E-05	0.336651	0.012458	0.04192	0.045	0.230353	0.881	0.918	1	0.703	0.978	0.844	0.95	0.885
rs141820144	4.2865E-08	-0.066835	0.0122	-0.066835	0.012199	7.8911E-08	0.18896	0.918662	4.12E-05	0.058171	0.430866	0.00306	0.89332	0.112462	0.879	0.751	1	0.941	0.813	0.994	0.728	0.902
rs56270766	4.2871E-08	0.0280697	0.00512	0.0295533	0.006308	6.74483E-08	0.67166	0.181758	4.98E-05	0.012869	0.211754	0.14316	0.0644	0.008916	0.789	0.879	1	0.981	0.869	0.51	0.936	0.956
rs139225891	4.2877E-08	-0.066834	0.0122	-0.066834	0.012199	7.89339E-08	0.18896	0.918633	4.12E-05	0.058171	0.430874	0.00306	0.89334	0.112465	0.879	0.751	1	0.941	0.813	0.994	0.728	0.902
rs34485227	4.2892E-08	0.0290106	0.0053	0.0290106	0.005295	7.89651E-08	0.84571	0.410124	0.015978	0.027352	0.242604	0.00022	0.06293	0.119343	0.829	0.878	0.978	0.979	0.904	1	0.95	0.923
rs1807792	4.2898E-08	0.0278503	0.00508	0.0278503	0.005084	7.89773E-08	0.66627	0.326563	0.001041	0.001337	0.033057	0.00893	0.46995	0.302499	0.816	0.659	0.998	0.997	0.961	0.982	0.831	0.868
rs13163181	4.2898E-08	-0.042197	0.0077	-0.042197	0.007702	7.89778E-08	0.3602	0.483128	0.000972	0.027293	0.104977	0.00467	0.08162	0.696045	0.886	0.871	0.999	0.979	0.944	0.994	0.945	0.845
rs149425797	4.2914E-08	-0.034776	0.00635	-0.034776	0.006348	7.90089E-08	0.58791	0.640818	0.000649	0.020268	0.280852	0.00021	0.72783	0.663717	0.669	0.788	0.999	0.973	0.842	0.999	0.739	0.781
rs566733	4.2916E-08	-0.027919	0.0051	-0.028927	0.006495	7.90133E-08	0.0243	0.061877	0.008411	0.109832	0.971167	0.00032	0.09397	0.023898	0.945	0.929	0.987	0.918	0.682	0.999	0.938	0.95
rs117781460	4.2922E-08	-0.066832	0.0122	-0.066832	0.012199	7.90254E-08	0.18895	0.918584	4.13E-05	0.058153	0.430853	0.00306	0.89334	0.112468	0.879	0.751	1	0.941	0.813	0.994	0.728	0.902
rs71513441	4.2945E-08	0.0276258	0.00504	0.0290625	0.006698	7.90726E-08	0.71316	0.312032	0.019465	0.00023	0.000568	0.0083	0.57275	0.820778	0.732	0.865	0.956	0.999	0.992	0.978	0.809	0.791
rs567680	4.2948E-08	-0.027918	0.0051	-0.028927	0.006495	7.90793E-08	0.0243	0.061877	0.008411	0.109887	0.971171	0.00032	0.09397	0.023897	0.945	0.929	0.987	0.918	0.682	0.999	0.938	0.95
rs143853626	4.2977E-08	0.0838098	0.0153	0.0861788	0.024039	7.91375E-08	0.2329	0.229652	4.78E-05	0.671284	0.028884	0.00382	0.08929	0.011811	0.524	0.84	1	0.4	0.953	0.984	0.906	0.944
rs435897	4.3018E-08	-0.066785	0.01219	-0.066785	0.012191	7.92217E-08	0.17754	0.933879	4.03E-05	0.061041	0.414872	0.00316	0.91855	0.107572	0.882	0.754	1	0.939	0.818	0.994	0.723	0.903
rs143118012	4.3026E-08	0.054244	0.0099	0.054244	0.009902	7.92374E-08	0.07504	0.711588	0.001035	0.023088	0.284841	0.00255	0.17455	0.247736	0.926	0.77	0.999	0.981	0.889	0.997	0.916	0.896
rs67736021	4.3027E-08	0.0290078	0.0053	0.0290078	0.005295	7.924E-08	0.84539	0.410187	0.016012	0.027305	0.242766	0.00022	0.06301	0.119709	0.829	0.877	0.978	0.979	0.904	1	0.95	0.923
rs12529313	4.3039E-08	0.0337687	0.00616	0.0340403	0.006371	7.9263E-08	0.3045	0.019227	0.019316	0.184474	0.011506	0.00101	0.01958	0.373921	0.9	0.954	0.973	0.886	0.983	0.999	0.972	0.892
rs866500	4.3052E-08	-0.03178	0.0058	-0.031183	0.008302	7.92901E-08	0.13972	0.057102	0.00043	0.230955	0.009201	0.00081	0.1203	0.551901	0.878	0.48	0.999	0.765	0.975	0.998	0.902	0.799

Table S3

rs16900218	4.3107E-08	-0.042361	0.00773	-0.042361	0.007733	7.94024E-08	0.36438	0.399627	0.00119	0.018308	0.271226	0.00341	0.06263	0.702458	0.882	0.877	0.998	0.985	0.895	0.996	0.95	0.84
rs12915515	4.3108E-08	0.0280065	0.00511	0.0283111	0.006287	7.94033E-08	0.0079	0.556355	0.000153	0.160101	0.135637	0.00567	0.03679	0.440482	0.953	0.838	1	0.87	0.921	0.989	0.953	0.676
rs13433902	4.3135E-08	0.0348852	0.00637	0.0348852	0.006369	7.94578E-08	0.60226	0.01633	0.006446	0.168503	0.064532	3.7E-05	0.35039	0.881658	0.706	0.937	0.987	0.853	0.942	1	0.853	0.776
rs1391783	4.3141E-08	0.0619307	0.01131	0.0615134	0.013114	7.94708E-08	0.18682	0.226391	0.007732	0.248998	0.193091	2.7E-05	0.02382	0.162334	0.877	0.611	0.982	0.776	0.887	1	0.954	0.886
rs140999803	4.3147E-08	0.0310827	0.00567	0.0310827	0.005675	7.94822E-08	0.01831	0.577624	0.04386	0.007901	0.692175	0.00024	0.11416	0.059762	0.948	0.849	0.912	0.991	0.775	1	0.931	0.934
rs17701821	4.315E-08	0.0386523	0.00706	0.0386523	0.007057	7.94897E-08	0.31276	0.26957	0.001759	0.094512	0.126806	0.0005	0.0795	0.671901	0.878	0.884	0.998	0.929	0.929	0.999	0.939	0.739
rs12148319	4.3161E-08	-0.034802	0.00635	-0.034802	0.006354	7.95121E-08	0.09337	0.053544	0.00734	0.056963	0.220541	0.00069	0.25708	0.271535	0.932	0.941	0.992	0.964	0.918	0.999	0.912	0.906
rs139944588	4.3162E-08	0.0290036	0.0053	0.0290036	0.005295	7.95142E-08	0.83543	0.418514	0.016156	0.024929	0.252932	0.00023	0.06289	0.124024	0.83	0.876	0.978	0.98	0.901	1	0.95	0.922
rs73228272	4.3168E-08	-0.03461	0.00632	-0.04014	0.010078	7.01535E-08	0.10426	0.164957	0.066767	0.000243	0.092559	0.00727	0.00125	0.51138	0.912	0.898	0.821	0.999	0.935	0.966	0.986	0.682
rs2317784	4.3171E-08	0.0275653	0.00503	0.0291563	0.006974	7.95316E-08	0.71671	0.371021	0.025444	0.000229	0.000371	0.00643	0.59963	0.812843	0.726	0.852	0.937	0.999	0.993	0.98	0.797	0.787
rs2420580	4.318E-08	0.0276249	0.00504	0.0323648	0.0083	3.49348E-08	0.53631	0.037356	0.002193	4.15E-05	0.496627	0.15721	0.00256	0.483163	0.768	0.913	0.971	1	0.688	0.392	0.981	0.775
rs567783438	4.3222E-08	0.061419	0.01121	0.061419	0.011214	7.96303E-08	0.11499	0.604623	0.000976	0.122158	0.01378	0.01415	0.00528	0.686542	0.923	0.861	0.999	0.922	0.98	0.979	0.982	0.85
rs2306213	4.323E-08	-0.033661	0.00615	-0.035874	0.008556	7.96431E-08	0.2241	0.909701	0.001135	0.284237	0.000224	0.00566	0.01903	0.970636	0.881	0.786	0.998	0.763	0.995	0.987	0.963	0.76
rs145252989	4.3246E-08	-0.066815	0.0122	-0.066815	0.012199	7.96699E-08	0.18894	0.918099	4.15E-05	0.058192	0.431076	0.00307	0.89324	0.112295	0.879	0.751	1	0.941	0.813	0.994	0.728	0.902
rs11192168	4.3251E-08	0.0340381	0.00621	0.0340381	0.006215	7.96786E-08	0.50441	0.647364	0.00556	0.317813	0.092092	6.6E-05	0.14791	0.061989	0.844	0.826	0.99	0.752	0.936	1	0.913	0.925
rs62067774	4.3265E-08	-0.029458	0.00538	-0.029458	0.005378	7.97029E-08	0.23767	0.802535	0.001897	0.004264	0.193968	0.02592	0.02295	0.071598	0.906	0.843	0.998	0.995	0.922	0.956	0.969	0.939
rs113662499	4.327E-08	0.0310798	0.00567	0.0310798	0.005675	7.97124E-08	0.01835	0.578487	0.043837	0.007901	0.69291	0.00024	0.11416	0.059733	0.948	0.849	0.912	0.991	0.775	1	0.931	0.934
rs11641111	4.3288E-08	-0.035379	0.00646	-0.035379	0.00646	7.97423E-08	0.93899	0.493094	0.027544	0.016699	0.236808	3.4E-05	0.32215	0.127824	0.778	0.849	0.947	0.983	0.89	1	0.873	0.909
rs12129019	4.3291E-08	0.0310791	0.00567	0.0310791	0.005675	7.97483E-08	0.01842	0.578788	0.043838	0.007913	0.693148	0.00024	0.11388	0.05986	0.948	0.849	0.912	0.991	0.775	1	0.931	0.934
rs11973762	4.3291E-08	-0.068228	0.01246	-0.068228	0.012458	7.97483E-08	0.63536	0.777402	0.001414	0.07877	0.256991	0.00011	0.36709	0.14094	0.71	0.796	0.997	0.926	0.87	1	0.848	0.895
rs6656775	4.332E-08	0.0277643	0.00507	0.0300015	0.007372	4.87818E-08	0.52182	0.042213	7.12E-06	0.018406	0.482523	0.17736	0.16924	0.012954	0.772	0.91	1	0.961	0.695	0.346	0.866	0.943
rs4948029	4.3323E-08	0.0304142	0.00555	0.0304142	0.005553	7.98019E-08	0.37751	0.176631	0.022582	0.000585	0.233212	0.00076	0.16297	0.303987	0.682	0.894	0.956	0.998	0.89	0.999	0.91	0.874
rs13094241	4.3337E-08	0.0300803	0.00549	0.0300803	0.005492	7.98266E-08	0.15626	0.604547	0.002562	0.438778	0.189459	3.5E-05	0.07729	0.194658	0.873	0.668	0.994	0.597	0.876	1	0.92	0.868
rs5834052	4.3341E-08	0.0276215	0.00504	0.0323565	0.008302	3.50399E-08	0.54136	0.037356	0.002193	4.13E-05	0.49663	0.15721	0.00256	0.483163	0.766	0.913	0.971	1	0.688	0.392	0.981	0.775
rs10927129	4.3357E-08	0.0391541	0.00715	0.0391541	0.007149	7.98611E-08	0.05516	0.297206	0.000819	0.580768	0.724692	3.7E-05	0.13422	0.446815	0.891	0.816	0.997	0.447	0.639	1	0.878	0.785
rs35701899	4.3392E-08	-0.03494	0.00638	-0.03494	0.00638	7.99205E-08	0.49795	0.901044	0.000505	0.018644	0.294667	0.00018	0.73919	0.707858	0.63	0.734	0.999	0.972	0.824	0.999	0.719	0.758
rs11047185	4.3392E-08	0.061901	0.0113	0.0614989	0.012992	7.99206E-08	0.18905	0.226856	0.007828	0.242548	0.194719	2.7E-05	0.02468	0.161598	0.877	0.613	0.982	0.783	0.887	1	0.954	0.886
rs9365786	4.3402E-08	0.0303372	0.00554	0.0303372	0.00554	7.99373E-08	0.77325	0.824519	0.001498	0.00151	0.567523	0.00392	0.02849	0.943534	0.8	0.795	0.997	0.996	0.783	0.993	0.954	0.772
rs145618402	4.3434E-08	-0.039066	0.00713	-0.044903	0.01196	7.99913E-08	0.41321	0.334651	0.006072	0.00102	0.329487	0.02214	0.0098	0.001194	0.708	0.88	0.989	0.998	0.872	0.95	0.974	0.973
rs76394659	4.3462E-08	-0.066837	0.01221	-0.066837	0.012205	8.00399E-08	0.19013	0.91207	4.28E-05	0.057885	0.433944	0.00306	0.8798	0.11137	0.879	0.751	1	0.941	0.812	0.994	0.731	0.902
rs12193969	4.3495E-08	0.0308254	0.00563	0.0308254	0.005629	8.00961E-08	0.1781	0.388411	0.002271	0.016422	0.964847	0.00356	0.03474	0.022417	0.904	0.872	0.997	0.985	0.681	0.995	0.959	0.95
rs9841576	4.3503E-08	0.0353459	0.00645	0.0353459	0.006455	8.01098E-08	0.5043	0.026511	0.005792	0.130142	0.051972	7.9E-05	0.36621	0.581796	0.703	0.934	0.99	0.893	0.952	1	0.858	0.83
rs12504586	4.3504E-08	0.036051	0.00658	0.036051	0.006583	8.01111E-08	0.07703	0.669368	0.027016	0.004796	0.003484	0.00433	0.47206	0.131769	0.934	0.857	0.962	0.995	0.989	0.994	0.87	0.925
rs12207841	4.3524E-08	0.0308247	0.00563	0.0308247	0.005629	8.01463E-08	0.1781	0.388411	0.002272	0.016423	0.964836	0.00356	0.03474	0.022417	0.904	0.872	0.997	0.985	0.681	0.995	0.959	0.95
rs4692096	4.3574E-08	-0.034868	0.00637	-0.040855	0.01086	7.09917E-08	0.05829	0.209951	0.078225	0.000361	0.07466	0.00464	0.00117	0.309205	0.922	0.881	0.769	0.999	0.939	0.975	0.986	0.607
rs7215624	4.3599E-08	-0.027773	0.00507	-0.027773	0.005072	8.0273E-08	0.74599	0.958475	0.000672	0.114859	0.49514	0.00059	0.10156	0.005077	0.732	0.764	0.999	0.897	0.801	0.999	0.921	0.958
rs117152208	4.3614E-08	-0.066798	0.0122	-0.066798	0.012199	8.02996E-08	0.18869	0.916887	4.19E-05	0.058199	0.431187	0.00307	0.89399	0.112069	0.879	0.751	1	0.941	0.813	0.994	0.728	0.902
rs174560	4.3649E-08	0.0282122	0.00515	0.0282142	0.005156	8.03593E-08	0.14211	0.685298	0.01489	0.124443	0.000719	0.00039	0.21278	0.37163	0.908	0.755	0.975	0.907	0.993	0.999	0.904	0.873
rs2176090	4.3656E-08	0.0330295	0.00603	0.0330295	0.006032	8.0371E-08	0.74822	0.027288	0.001905	0.003552	0.007219	0.03241	0.18076	0.634277	0.77	0.943	0.997	0.995	0.984	0.932	0.916	0.844
rs11238367	4.3754E-08	0.0304085	0.00555	0.0304085	0.005554	8.05379E-08	0.37556	0.180907	0.023294	0.000548	0.233541	0.00074	0.16435	0.311348	0.68	0.892	0.954	0.998	0.889	0.999	0.909	0.873
rs12761138	4.3765E-08	0.0340251	0.00621	0.0340251	0.006215	8.05578E-08	0.50201	0.647364	0.00556	0.320912	0.092092	6.6E-05	0.14791	0.061989	0.844	0.825	0.99	0.75	0.936	1	0.913	0.925
rs34578708	4.3765E-08	0.0340251	0.00621	0.0340251	0.006215	8.05578E-08	0.50201	0.647364	0.00556	0.320912	0.092092	6.6E-05	0.14791	0.061989	0.844	0.825	0.99	0.75	0.936	1	0.913	0.925
rs145922952	4.3768E-08	0.0708517	0.01294	0.0752243	0.018541	6.07953E-08	0.13694	0.620325	0.137005	4.92E-05	0.193701	0.00089	0.01098	0.924376	0.869	0.639	0.569	1	0.857	0.995	0.962	0.708
rs11646347	4.3771E-08	-0.02945	0.00538	-0.02945	0.005379	8.05676E-08	0.23607	0.801958	0.001891	0.004299	0.194256	0.02604	0.02323	0.071521	0.906	0.843	0.998	0.995	0.922	0.955	0.969	0.939
rs75389851	4.3804E-08	-0.082603	0.01509	-0.082603	0.015088	8.06239E-08	0.77059	0.957095	0.002016	0.007686	0.076485	0.00511	0.10513	0.229961	0.833	0.803	0.998	0.992	0.951	0.993	0.936	0.901
rs2887631	4.3806E-08	-0.035155	0.00642	-0.035249	0.006924	8.06273E-08	0.98592	0.21629	2.81E-05	0.185088	0.127164	0.01682	0.00343	0.937031	0.767	0.878	1	0.837	0.917	0.953	0.979	0.752
rs73228270	4.3827E-08	-0.034602	0.00632	-0.040018	0.010048	7.24937E-08	0.10609	0.17236	0.065352	0.000257	0.0925	0.0071	0.00125	0.497868	0.912	0.897	0.827	0.999	0.936	0.968	0.986	0.681
rs8017594	4.3836E-08	0.0864588	0.01579	0.0954188	0.023393	8.06775E-08	0.67576	0.892804	0.000415	0.403262	0.023289	0.0136	0.01097	0.001646	0.823	0.796	0.999	0.696	0.969	0.966	0.973	0.975
rs4721058	4.3855E-08	0.0314885	0.00575	0.0314885	0.005752	8.07101E-08	0.09567	0.507586	3.96E-05	0.003886	0.808498	0.01639	0.81845	0.109781	0.888	0.804	1	0.992	0.539	0.941	0.709	0.888
rs7111153	4.3894E-08	0.0287888	0.00526	0.0315224	0.007067	8.07771E-08	0.032	0.922843	0.060009	0.00907	0.001257	0.00189	0.43318	0.049045	0.943	0.795	0.876	0.991	0.992	0.996	0.863	0.941
rs2175556	4.3908E-08	-0.03458	0.00632	-0.040036	0.010113	6.99265E-08	0.11212	0.175106	0.065411	0.000199	0.09518	0.00758	0.00131	0.488461	0.909	0.894	0.822	0.999	0.933	0.963	0.986	0.675
rs12700814	4.392E-08	-0.027924	0.0051	-0.027924	0.005101	8.08213E-08	0.45432	0.174961	3.41E-05	0.282733	0.705536	0.00209	0.34635	0.048396	0.825	0.875	1	0.739	0.716	0.995	0.84	0.919
rs10235395	4.3937E-08	0.0320457	0.00585	0.0320457	0.005854	8.08503E-08	0.05191	0.594744	0.000154	0.003899	0.874805	0.01047	0.9995	0.081075	0.915	0.812	1	0.993	0.674	0.973	0.695	0.909
rs10251825	4.3938E-08	0.030398	0.00555	0.030398	0.005553	8.08532E-08	0.39231	0.175665	0.023273	0.000518	0.234839	0.00081	0.16781	0.297221	0.686	0.894	0.955	0.998	0.889	0.999	0.909	0.876
rs72973945	4.3965E-08	0.0791649	0.01446	0.0786769	0.015176	8.08977E-08	0.46926	0.270162	0.033072	0.000736	0.32906	2.5E-05	0.38044	0.800297	0.78	0.818	0.877	0.997	0.791	1	0.449	0.72

Table S3

rs6445190	4.3965E-08	-0.028531	0.00521	-0.031691	0.008286	4.64884E-08	0.15845	0.294881	0.252749	0.001218	0.000996	0.00022	0.13821	0.419421	0.845	0.801	0.234	0.997	0.991	0.999	0.866	0.466
rs149263861	4.3978E-08	-0.066778	0.0122	-0.066778	0.012199	8.09213E-08	0.18864	0.917253	4.23E-05	0.058218	0.430559	0.00308	0.89313	0.112148	0.879	0.751	1	0.941	0.813	0.994	0.728	0.902
rs10957996	4.4024E-08	-0.037438	0.00684	-0.037438	0.006839	8.09999E-08	0.97836	0.886452	2.59E-05	0.289826	0.427222	0.0007	0.09105	0.589341	0.704	0.725	1	0.686	0.763	0.998	0.899	0.767
rs112797180	4.4027E-08	-0.067962	0.01242	-0.067962	0.012416	8.10035E-08	0.60244	0.653738	2.59E-05	0.03997	0.625795	0.00251	0.84096	0.096863	0.79	0.784	1	0.95	0.725	0.994	0.631	0.893
rs9835776	4.4037E-08	0.0353345	0.00646	0.0353345	0.006455	8.1022E-08	0.50629	0.026557	0.005776	0.132196	0.051753	7.9E-05	0.36573	0.582632	0.703	0.934	0.99	0.891	0.952	1	0.858	0.829
rs2175555	4.404E-08	-0.034576	0.00632	-0.040033	0.010114	7.01079E-08	0.11213	0.175117	0.065454	0.000199	0.095216	0.00759	0.00131	0.488414	0.909	0.894	0.822	0.999	0.933	0.963	0.986	0.675
rs117061539	4.4046E-08	-0.066775	0.0122	-0.066775	0.012199	8.10368E-08	0.18861	0.917168	4.24E-05	0.058217	0.42995	0.00309	0.89365	0.112142	0.879	0.751	1	0.941	0.813	0.994	0.728	0.902
rs12374418	4.4051E-08	-0.034583	0.00632	-0.040044	0.010113	7.01548E-08	0.1118	0.174685	0.065465	0.0002	0.095559	0.0076	0.0013	0.490478	0.909	0.895	0.822	0.999	0.933	0.963	0.986	0.675
rs149115905	4.4055E-08	-0.068163	0.01245	-0.068163	0.012453	8.10522E-08	0.64761	0.771491	0.00147	0.077648	0.25236	0.00012	0.35916	0.133699	0.714	0.799	0.997	0.928	0.873	1	0.851	0.898
rs4638190	4.4059E-08	0.0310619	0.00567	0.0310619	0.005675	8.10592E-08	0.01812	0.575136	0.044358	0.007892	0.690071	0.00024	0.11533	0.059471	0.948	0.849	0.911	0.991	0.776	1	0.931	0.934
rs188393692	4.4064E-08	0.0617405	0.01128	0.0574262	0.016057	4.94251E-08	0.07398	0.555297	0.001124	0.981398	0.640699	1.7E-06	0.0855	0.974542	0.843	0.688	0.993	0.131	0.552	1	0.865	0.57
rs6779394	4.4088E-08	-0.029915	0.00547	-0.029117	0.006157	8.11081E-08	0.23869	0.085718	0.001161	0.016884	0.176632	9.7E-05	0.86337	0.774062	0.54	0.875	0.997	0.973	0.863	1	0.596	0.649
rs2902673	4.4088E-08	-0.058624	0.01071	-0.059621	0.011811	8.11082E-08	0.04927	0.486726	0.003008	0.133671	0.005768	0.0032	0.12192	0.062113	0.938	0.737	0.996	0.908	0.985	0.996	0.934	0.938
rs10495361	4.4092E-08	0.0282757	0.00517	0.0282757	0.005166	8.11155E-08	0.9923	0.982697	0.005676	0.010816	0.27565	0.00339	0.02953	0.0041	0.809	0.812	0.993	0.99	0.895	0.996	0.963	0.968
rs11842177	4.4115E-08	0.0342697	0.00626	0.0342697	0.006261	8.11543E-08	0.9726	0.355812	0.001139	0.007699	0.191196	0.00322	0.31299	0.360217	0.804	0.876	0.998	0.991	0.912	0.996	0.884	0.876
rs2813550	4.4167E-08	0.037395	0.00683	0.037395	0.006832	8.12427E-08	0.741	0.34458	0.02074	0.278877	0.011821	1.3E-05	0.23338	0.450342	0.798	0.853	0.944	0.756	0.975	1	0.879	0.837
rs17598303	4.4172E-08	-0.038727	0.00708	-0.038727	0.007076	8.12514E-08	0.92285	0.112224	0.00494	0.068308	0.190225	0.00014	0.14861	0.829359	0.804	0.912	0.993	0.947	0.909	1	0.918	0.81
rs74725095	4.4172E-08	0.0386395	0.00706	0.0386395	0.00706	8.12516E-08	0.69249	0.065675	0.000754	0.045218	0.03227	0.02388	0.00773	0.789879	0.852	0.934	0.999	0.969	0.971	0.96	0.979	0.837
rs246486	4.4201E-08	0.0277325	0.00507	0.0277325	0.005067	8.13019E-08	0.4711	0.41394	0.013434	0.001799	0.047816	0.00258	0.18006	0.099257	0.726	0.872	0.981	0.997	0.961	0.996	0.916	0.924
rs7454819	4.4254E-08	0.0308095	0.00563	0.0308095	0.005629	8.13922E-08	0.17744	0.388676	0.002288	0.016333	0.961696	0.0036	0.03451	0.022628	0.904	0.872	0.997	0.985	0.68	0.995	0.959	0.95
rs139339252	4.4315E-08	-0.066761	0.0122	-0.066761	0.012199	8.1495E-08	0.18857	0.917131	4.26E-05	0.058257	0.430283	0.00309	0.89367	0.11215	0.879	0.751	1	0.941	0.813	0.994	0.728	0.902
rs143364437	4.4315E-08	-0.066761	0.0122	-0.066761	0.012199	8.1495E-08	0.18857	0.917131	4.26E-05	0.058257	0.430283	0.00309	0.89367	0.11215	0.879	0.751	1	0.941	0.813	0.994	0.728	0.902
rs11185540	4.4339E-08	0.0309143	0.00565	0.0309143	0.005649	8.15361E-08	0.20229	0.826078	0.00076	0.134873	0.587587	0.00043	0.02332	0.648224	0.883	0.796	0.999	0.884	0.779	0.999	0.958	0.815
rs76787767	4.4351E-08	-0.066777	0.0122	-0.066777	0.012202	8.15573E-08	0.18899	0.912475	4.28E-05	0.058103	0.432836	0.00308	0.88884	0.1114	0.879	0.751	1	0.941	0.813	0.994	0.729	0.902
rs9937778	4.4353E-08	-0.034358	0.00628	-0.040265	0.009747	8.15598E-08	0.13463	0.631456	0.011606	0.003983	0.01823	0.02499	0.07513	0.001018	0.923	0.776	0.983	0.995	0.979	0.954	0.951	0.978
rs34212316	4.439E-08	0.0277526	0.00507	0.0277304	0.005167	8.1623E-08	0.72964	0.996715	0.000642	0.113175	0.481515	0.00075	0.09069	0.004537	0.733	0.772	0.999	0.901	0.808	0.999	0.926	0.96
rs149205	4.4413E-08	-0.066774	0.0122	-0.066774	0.012202	8.16621E-08	0.18902	0.912446	4.29E-05	0.058031	0.432514	0.00309	0.88979	0.111414	0.879	0.751	1	0.941	0.813	0.994	0.729	0.902
rs6939153	4.4416E-08	0.0385736	0.00705	0.0390618	0.007337	8.16673E-08	0.02753	0.015657	0.014103	0.051952	0.032086	0.00566	0.06069	0.339973	0.956	0.961	0.986	0.972	0.976	0.994	0.961	0.908
rs11716353	4.4425E-08	0.0357898	0.00654	0.0375835	0.008211	8.16838E-08	0.03234	0.138336	0.018008	0.017855	0.634664	0.0011	0.3408	0.002799	0.946	0.92	0.976	0.986	0.813	0.999	0.892	0.974
rs155028	4.4467E-08	-0.066766	0.0122	-0.066766	0.012201	8.17555E-08	0.1889	0.913936	4.3E-05	0.058205	0.432312	0.00308	0.88949	0.111588	0.879	0.751	1	0.941	0.813	0.994	0.729	0.902
rs139740329	4.447E-08	-0.02911	0.00532	-0.027088	0.008035	8.176E-08	0.86441	0.149328	0.000364	0.000145	0.866868	0.00644	0.03753	0.66415	0.695	0.467	0.999	0.999	0.481	0.971	0.924	0.725
rs11846838	4.4475E-08	0.0280069	0.00512	0.0282513	0.005627	8.17686E-08	0.59663	0.248535	0.001419	0.000291	0.916674	0.01464	0.01735	0.319363	0.695	0.867	0.997	0.999	0.663	0.961	0.96	0.856
rs7626635	4.4492E-08	-0.028075	0.00513	-0.028168	0.005717	8.1798E-08	0.65443	0.832914	0.004898	0.166963	0.010019	0.00032	0.00525	0.678223	0.714	0.743	0.991	0.852	0.977	0.999	0.975	0.805
rs6802616	4.4494E-08	0.0309181	0.00565	0.0309181	0.00565	8.1801E-08	0.20782	0.8248	0.000792	0.140316	0.577126	0.00042	0.0218	0.62138	0.882	0.797	0.999	0.88	0.782	0.999	0.959	0.82
rs352701	4.4495E-08	0.0276715	0.00506	0.0276715	0.005057	8.1802E-08	0.44921	0.407127	0.015356	0.001438	0.048331	0.00254	0.17038	0.106316	0.72	0.872	0.977	0.997	0.96	0.996	0.918	0.922
rs6837550	4.4528E-08	0.0509489	0.00931	0.0509489	0.009311	8.18583E-08	0.50435	0.491523	0.00775	0.007299	0.344767	7.9E-05	0.23368	0.806599	0.682	0.827	0.985	0.989	0.839	1	0.876	0.78
rs13066902	4.4546E-08	-0.028386	0.00519	-0.026438	0.008935	1.57115E-08	0.62369	0.059799	0.02773	0.995087	0.081502	3.1E-08	0.25287	0.560003	0.425	0.827	0.601	0.1	0.833	1	0.705	0.614
rs182453635	4.4577E-08	0.0782642	0.0143	0.0782642	0.014304	8.19431E-08	0.05813	0.74255	0.019911	0.027835	0.824259	7.5E-05	0.05784	0.062463	0.921	0.809	0.96	0.972	0.608	1	0.941	0.924
rs4328122	4.4587E-08	0.03105	0.00567	0.03105	0.005675	8.19597E-08	0.018	0.571381	0.044571	0.007902	0.690241	0.00025	0.11591	0.05951	0.948	0.849	0.911	0.991	0.776	1	0.93	0.934
rs59711664	4.4595E-08	-0.054403	0.00994	-0.052717	0.011203	8.19739E-08	0.67871	0.802453	3.41E-05	0.09086	0.022931	0.00074	0.88883	0.345621	0.728	0.641	1	0.861	0.949	0.997	0.569	0.516
rs149950928	4.4598E-08	0.0316226	0.00578	0.0316226	0.005779	8.19786E-08	0.16311	0.736551	0.008317	0.003632	0.628082	0.00292	0.05513	0.046793	0.911	0.841	0.989	0.995	0.807	0.996	0.953	0.942
rs117553292	4.4622E-08	-0.066746	0.0122	-0.066746	0.012199	8.20194E-08	0.18852	0.91699	4.27E-05	0.058278	0.430505	0.0031	0.89405	0.111745	0.879	0.751	1	0.941	0.813	0.994	0.728	0.902
rs57296294	4.4674E-08	0.0295364	0.0054	0.0315181	0.009564	8.21081E-08	0.15295	0.099403	0.000872	0.140229	0.707009	0.00186	0.00053	0.028005	0.565	0.898	0.998	0.863	0.719	0.996	0.987	0.934
rs73253360	4.4682E-08	0.0370935	0.00678	0.0433544	0.011953	2.03588E-08	0.02014	0.701211	0.508999	0.039475	0.016114	4.7E-06	0.00601	0.813132	0.928	0.694	0.052	0.885	0.967	1	0.975	0.649
rs79686566	4.4683E-08	-0.066743	0.0122	-0.066743	0.012199	8.21235E-08	0.18852	0.916997	4.28E-05	0.058279	0.430483	0.0031	0.89404	0.111745	0.879	0.751	1	0.941	0.813	0.994	0.728	0.902
rs930457	4.4712E-08	-0.030239	0.00553	-0.030239	0.005527	8.21726E-08	0.09705	0.547524	0.019959	0.00158	0.465447	0.00412	0.00374	0.465616	0.925	0.863	0.97	0.997	0.849	0.994	0.982	0.872
rs4796097	4.473E-08	0.0314983	0.00576	0.0314983	0.005757	8.2203E-08	0.50335	0.615585	0.009429	0.04196	0.010508	0.00014	0.52627	0.407572	0.843	0.726	0.984	0.962	0.978	1	0.825	0.856
rs77023402	4.4736E-08	-0.035613	0.00651	-0.033214	0.008193	8.22131E-08	0.19063	0.541569	0.001011	0.212602	0.040946	1.2E-05	0.42835	0.602597	0.474	0.578	0.996	0.705	0.927	1	0.749	0.726
rs76381532	4.474E-08	0.0386038	0.00706	0.0386038	0.007056	8.22203E-08	0.31385	0.271286	0.001788	0.094312	0.127909	0.00051	0.07944	0.67246	0.878	0.884	0.997	0.929	0.928	0.999	0.939	0.74
rs10876929	4.4761E-08	0.0279242	0.0051	0.0279242	0.005104	8.22559E-08	0.47895	0.269183	0.001554	0.039339	0.361615	0.00182	0.06549	0.021003	0.722	0.888	0.998	0.969	0.865	0.997	0.946	0.949
rs117070523	4.478E-08	-0.047528	0.00869	-0.047528	0.008687	8.22884E-08	0.52464	0.166709	0.001062	0.00736	0.319888	0.00674	0.26484	0.234799	0.865	0.911	0.999	0.992	0.885	0.991	0.902	0.903
rs11208797	4.4797E-08	0.028486	0.00521	0.0324387	0.007016	5.1506E-08	0.16126	0.367079	0.002836	0.000691	0.010303	0.18847	0.06092	0.034511	0.892	0.847	0.984	0.998	0.981	0.396	0.942	0.94
rs4909631	4.4801E-08	0.0292561	0.00535	0.0292561	0.005348	8.23249E-08	0.39918	0.050537	0.010692	0.001437	0.186173	0.01019	0.0538	0.41725	0.89	0.942	0.988	0.998	0.928	0.987	0.958	0.889
rs241408	4.4875E-08	0.0276565	0.00506	0.027642	0.005302	8.24509E-08	0.13407	0.041918	0.002169	0.240947	0.173523	0.00024	0.04805	0.367732	0.898	0.925	0.996	0.796	0.903	0.999	0.945	0.642
rs9517299	4.4878E-08	-0.028326	0.00518	-0.02957	0.008538	8.24562E-08	0.55554	0.117785	0.000147	0.221964	0.003092	0.0103	0.00473	0.340615	0.661	0.886	0.999	0.77	0.985	0.962	0.974	0.589

Table S3

rs1367728	4.4906E-08	-0.034719	0.00635	-0.034719	0.006347	8.25023E-08	0.60259	0.632169	0.000704	0.022388	0.273496	0.0002	0.726	0.645868	0.674	0.791	0.998	0.971	0.846	0.999	0.742	0.786
rs17110053	4.4918E-08	0.0460908	0.00843	0.0460908	0.008426	8.25235E-08	0.31697	0.532094	0.000645	0.010539	0.180992	0.00791	0.29733	0.027087	0.882	0.737	0.999	0.989	0.915	0.988	0.888	0.946
rs3742365	4.4959E-08	0.0277016	0.00506	0.0277016	0.005064	8.25927E-08	0.97716	0.120953	0.00143	0.003742	0.581417	0.01773	0.00552	0.230136	0.798	0.914	0.998	0.995	0.808	0.967	0.979	0.898
rs12901558	4.4977E-08	0.0279669	0.00511	0.0282712	0.006288	8.26247E-08	0.00793	0.555048	0.000155	0.160363	0.136821	0.00577	0.03698	0.438528	0.952	0.839	1	0.87	0.921	0.989	0.953	0.675
rs58191891	4.4982E-08	-0.049405	0.00903	-0.049366	0.01037	8.26326E-08	0.69317	0.258168	0.001528	0.631401	0.002352	0.00017	0.15095	0.415645	0.641	0.833	0.996	0.406	0.984	0.999	0.877	0.8
rs155026	4.4983E-08	-0.066732	0.0122	-0.066732	0.012199	8.26345E-08	0.18841	0.914806	4.33E-05	0.058195	0.429777	0.00311	0.89263	0.111444	0.88	0.751	1	0.941	0.814	0.994	0.728	0.902
rs1154612	4.4985E-08	-0.034787	0.00636	-0.039798	0.010153	8.20109E-08	0.07191	0.233961	0.064669	0.000399	0.08676	0.00479	0.00163	0.371005	0.921	0.884	0.829	0.999	0.938	0.981	0.985	0.646
rs117042156	4.4986E-08	-0.082573	0.0151	-0.082573	0.015095	8.26391E-08	0.74029	0.946651	0.00213	0.006895	0.069463	0.00542	0.11665	0.238054	0.837	0.802	0.997	0.992	0.954	0.993	0.933	0.9
rs117733706	4.4986E-08	-0.082573	0.0151	-0.082573	0.015095	8.26391E-08	0.74029	0.946651	0.00213	0.006895	0.069463	0.00542	0.11665	0.238054	0.837	0.802	0.997	0.992	0.954	0.993	0.933	0.9
rs878366	4.5047E-08	-0.027645	0.00505	-0.026666	0.007799	7.01417E-08	0.06927	0.210748	0.052406	0.035061	0.034053	2.6E-06	0.18475	0.712981	0.884	0.834	0.755	0.935	0.944	1	0.324	0.725
rs80145248	4.5089E-08	0.0545881	0.00998	0.0526225	0.014346	8.28143E-08	0.99884	0.209176	6.55E-05	0.380434	0.217069	0.00117	0.00271	0.313924	0.688	0.52	1	0.586	0.837	0.996	0.974	0.81
rs12455401	4.5119E-08	-0.052508	0.0096	-0.063449	0.015379	7.15507E-08	0.29796	0.005041	0.116867	0.002883	0.000808	0.00361	0.1483	0.687123	0.878	0.959	0.694	0.995	0.993	0.985	0.917	0.817
rs155027	4.5124E-08	-0.066727	0.0122	-0.066727	0.0122	8.28748E-08	0.18899	0.914806	4.33E-05	0.058261	0.429784	0.00311	0.89264	0.111446	0.879	0.751	1	0.941	0.814	0.994	0.728	0.902
rs75482761	4.5125E-08	-0.066725	0.0122	-0.066725	0.012199	8.28769E-08	0.1884	0.914814	4.34E-05	0.058162	0.430015	0.00312	0.89264	0.111455	0.88	0.751	1	0.941	0.814	0.994	0.728	0.902
rs1154611	4.5132E-08	-0.034783	0.00636	-0.039794	0.010152	8.2258E-08	0.07182	0.234222	0.064691	0.000399	0.08682	0.0048	0.00163	0.371212	0.921	0.883	0.829	0.999	0.938	0.981	0.985	0.646
rs62444021	4.5152E-08	0.0370781	0.00678	0.0433158	0.011967	2.01179E-08	0.02047	0.702071	0.513884	0.039753	0.016265	4.5E-06	0.0061	0.816122	0.927	0.693	0.05	0.883	0.967	1	0.975	0.647
rs6799185	4.5161E-08	-0.029325	0.00536	-0.028857	0.006129	8.29371E-08	0.33058	0.275213	0.001217	0.558802	0.387567	3.5E-05	0.00961	0.602101	0.8	0.813	0.996	0.437	0.752	1	0.958	0.582
rs55704305	4.5162E-08	-0.028733	0.00525	-0.028733	0.005253	8.29394E-08	0.94396	0.577326	0.016998	0.112196	0.374754	4.2E-06	0.0518	0.698043	0.749	0.813	0.958	0.89	0.825	1	0.936	0.793
rs149429614	4.519E-08	-0.066726	0.0122	-0.066726	0.0122	8.29875E-08	0.1845	0.912881	4.32E-05	0.058295	0.425751	0.00317	0.89487	0.111656	0.881	0.751	1	0.941	0.815	0.994	0.728	0.902
rs200968	4.5242E-08	-0.041709	0.00763	-0.046929	0.010939	8.30758E-08	0.94971	0.181075	0.011266	0.000301	0.278262	0.02922	0.02924	0.003893	0.806	0.91	0.978	0.999	0.894	0.936	0.965	0.969
rs5018306	4.5277E-08	-0.082556	0.0151	-0.082556	0.015096	8.31346E-08	0.73954	0.946693	0.002136	0.006889	0.069616	0.00543	0.11706	0.238063	0.837	0.802	0.997	0.992	0.953	0.993	0.933	0.9
rs9862508	4.5286E-08	-0.028731	0.00525	-0.028731	0.005254	8.31508E-08	0.94339	0.576978	0.017031	0.112244	0.374275	4.3E-06	0.05179	0.697471	0.749	0.813	0.958	0.89	0.825	1	0.936	0.793
rs2223377	4.5294E-08	0.0370737	0.00678	0.0433247	0.011972	2.01414E-08	0.02036	0.702633	0.514752	0.03971	0.016246	4.5E-06	0.00609	0.815278	0.927	0.692	0.05	0.884	0.967	1	0.975	0.647
rs80273305	4.5294E-08	-0.06672	0.0122	-0.06672	0.0122	8.31641E-08	0.1845	0.91288	4.32E-05	0.058347	0.425745	0.00317	0.89545	0.111656	0.88	0.751	1	0.941	0.815	0.994	0.728	0.902
rs74357675	4.5299E-08	-0.06672	0.0122	-0.06672	0.0122	8.31734E-08	0.1845	0.912881	4.32E-05	0.058347	0.425745	0.00317	0.89545	0.111656	0.88	0.751	1	0.941	0.815	0.994	0.728	0.902
rs13250309	4.531E-08	0.0275193	0.00503	0.0290989	0.006893	8.31919E-08	0.71734	0.355319	0.024433	0.000253	0.000391	0.00692	0.5677	0.824943	0.729	0.856	0.941	0.999	0.993	0.979	0.806	0.787
rs10012348	4.5311E-08	-0.034779	0.00636	-0.039791	0.010155	8.2503E-08	0.0718	0.234517	0.064794	0.000397	0.086994	0.00481	0.00163	0.370754	0.921	0.883	0.828	0.999	0.938	0.981	0.985	0.646
rs12595350	4.5316E-08	-0.034761	0.00636	-0.034761	0.006356	8.32008E-08	0.10085	0.054021	0.007126	0.06388	0.224112	0.00064	0.25539	0.27057	0.93	0.94	0.992	0.96	0.917	0.999	0.911	0.905
rs147332474	4.5335E-08	-0.066717	0.0122	-0.066717	0.0122	8.32332E-08	0.18455	0.913578	4.32E-05	0.058365	0.425628	0.00316	0.89741	0.111631	0.88	0.751	1	0.941	0.815	0.994	0.728	0.902
rs1912528	4.5359E-08	-0.028912	0.00529	-0.028912	0.005287	8.32752E-08	0.80659	0.064488	0.001377	0.041496	0.978852	0.00037	0.17837	0.111378	0.736	0.913	0.998	0.959	0.639	0.999	0.896	0.903
rs12641780	4.5363E-08	-0.08795	0.01608	-0.084589	0.023178	8.32815E-08	0.02928	0.301329	0.007647	0.012114	0.115721	0.00017	0.03234	0.852765	0.449	0.85	0.984	0.984	0.915	1	0.948	0.759
rs35802963	4.5366E-08	0.0461851	0.00845	0.0461851	0.008446	8.32864E-08	0.97864	0.612798	0.002496	0.048994	0.025902	0.00085	0.82809	0.037252	0.796	0.839	0.997	0.961	0.968	0.999	0.776	0.938
rs12900865	4.5367E-08	0.0279601	0.00511	0.0282593	0.006284	8.32889E-08	0.00804	0.555398	0.000154	0.16308	0.1362	0.00572	0.03695	0.439134	0.952	0.838	1	0.867	0.921	0.989	0.953	0.675
rs79951617	4.5384E-08	-0.066715	0.0122	-0.066715	0.0122	8.33175E-08	0.18459	0.912843	4.32E-05	0.0583	0.425524	0.00317	0.89633	0.1117	0.88	0.751	1	0.941	0.815	0.994	0.728	0.902
rs76363175	4.5396E-08	-0.066713	0.0122	-0.066713	0.0122	8.33382E-08	0.18455	0.913856	4.33E-05	0.058413	0.425119	0.00316	0.89682	0.111714	0.88	0.751	1	0.941	0.815	0.994	0.728	0.902
rs2371561	4.5413E-08	0.0279024	0.0051	0.0279024	0.005102	8.33663E-08	0.48286	0.26809	0.001547	0.039699	0.362391	0.00183	0.0651	0.021725	0.723	0.888	0.998	0.969	0.864	0.997	0.946	0.949
rs13037451	4.5418E-08	-0.055551	0.01016	-0.067368	0.016188	8.33758E-08	0.02275	0.025604	0.011674	0.214599	0.275458	0.00294	0.0051	0.012632	0.956	0.954	0.984	0.87	0.907	0.995	0.982	0.965
rs116852501	4.5448E-08	-0.066713	0.0122	-0.066713	0.0122	8.34267E-08	0.18449	0.912896	4.33E-05	0.058334	0.425715	0.00317	0.89598	0.111649	0.88	0.751	1	0.941	0.815	0.994	0.728	0.902
rs78201358	4.545E-08	-0.066711	0.0122	-0.066711	0.0122	8.34289E-08	0.18457	0.912828	4.32E-05	0.058287	0.425498	0.00317	0.89628	0.111695	0.88	0.751	1	0.941	0.815	0.994	0.728	0.902
rs117314255	4.545E-08	-0.066712	0.0122	-0.066712	0.0122	8.34302E-08	0.1845	0.912899	4.33E-05	0.058304	0.425711	0.00317	0.89598	0.111651	0.88	0.751	1	0.941	0.815	0.994	0.728	0.902
rs72794864	4.5468E-08	-0.042613	0.00779	-0.042613	0.007793	8.34606E-08	0.3856	0.54869	0.000121	0.038522	0.044236	0.01333	0.2151	0.200358	0.87	0.733	1	0.968	0.96	0.976	0.904	0.9
rs80325581	4.5472E-08	-0.066709	0.0122	-0.066709	0.0122	8.34674E-08	0.1845	0.912902	4.32E-05	0.058303	0.425611	0.00317	0.89671	0.11168	0.88	0.751	1	0.941	0.815	0.994	0.728	0.902
rs79396949	4.5484E-08	-0.060912	0.01114	-0.060912	0.011139	8.3488E-08	0.81991	0.75706	0.000561	0.034034	0.175485	0.0008	0.26576	0.256077	0.747	0.739	0.999	0.967	0.902	0.999	0.877	0.875
rs75137910	4.549E-08	-0.066711	0.0122	-0.066711	0.0122	8.34972E-08	0.1845	0.912892	4.33E-05	0.058343	0.425742	0.00317	0.89602	0.111655	0.88	0.751	1	0.941	0.815	0.994	0.728	0.902
rs817571	4.5497E-08	0.0276303	0.00505	0.03142	0.00755	8.35104E-08	0.18253	0.13559	0.000446	0.12041	0.251017	0.02863	0.06326	0.00037	0.916	0.923	0.999	0.923	0.909	0.947	0.955	0.982
rs80143869	4.5507E-08	-0.066708	0.0122	-0.066708	0.0122	8.35287E-08	0.18457	0.912872	4.33E-05	0.058211	0.425727	0.00318	0.89684	0.11169	0.88	0.751	1	0.941	0.815	0.994	0.728	0.902
rs4128530	4.5543E-08	-0.02838	0.00519	-0.026753	0.008831	1.82817E-08	0.65136	0.045276	0.02912	0.959155	0.09962	4.2E-08	0.25736	0.449389	0.445	0.846	0.608	0.116	0.817	1	0.711	0.658
rs117595215	4.5556E-08	-0.066706	0.0122	-0.066706	0.0122	8.36214E-08	0.18457	0.912867	4.33E-05	0.058212	0.425738	0.00318	0.89686	0.111693	0.88	0.751	1	0.941	0.815	0.994	0.728	0.902
rs72760086	4.5632E-08	-0.047733	0.00873	-0.047733	0.00873	8.37631E-08	0.1301	0.309339	0.000477	0.290997	0.017943	0.0068	0.14827	0.109423	0.917	0.889	0.999	0.803	0.977	0.989	0.927	0.925
rs140949059	4.5655E-08	-0.066703	0.0122	-0.066703	0.0122	8.38063E-08	0.18415	0.912885	4.31E-05	0.058958	0.425727	0.00317	0.89484	0.111651	0.881	0.751	1	0.941	0.815	0.994	0.728	0.902
rs5011432	4.5662E-08	0.0289795	0.0053	0.0289795	0.0053	8.38197E-08	0.08044	0.508673	1.67E-05	0.051855	0.971168	0.00492	0.98153	0.108887	0.894	0.808	1	0.939	0.602	0.987	0.677	0.89
rs3743703	4.5675E-08	-0.0667	0.0122	-0.0667	0.0122	8.38438E-08	0.18575	0.913856	4.33E-05	0.058607	0.425119	0.00316	0.89682	0.111714	0.88	0.751	1	0.941	0.815	0.994	0.728	0.902
rs6790261	4.5687E-08	-0.028723	0.00525	-0.028723	0.005254	8.3865E-08	0.94241	0.577802	0.017047	0.112299	0.37441	4.3E-06	0.05188	0.698275	0.748	0.813	0.958	0.89	0.825	1	0.936	0.793
rs7433433	4.5695E-08	0.0309814	0.00567	0.0309814	0.005667	8.38801E-08	0.28965	0.776794	0.000934	0.063823	0.399236	0.0008	0.02219	0.944549	0.875	0.812	0.998	0.946	0.842	0.999	0.961	0.768
rs6790566	4.5698E-08	-0.028723	0.00525	-0.028723	0.005254	8.38855E-08	0.94368	0.577421	0.017016	0.112923	0.374495	4.3E-06	0.05178	0.697771	0.749	0.813	0.958	0.889	0.825	1	0.936	0.793

Table S3

rs7028304	4.5806E-08	-0.029819	0.00545	-0.032054	0.009356	8.40873E-08	0.08357	0.065872	0.000146	0.024144	0.003435	0.05672	0.01748	0.793064	0.496	0.907	1	0.967	0.986	0.773	0.96	0.76
rs4690740	4.5809E-08	-0.034326	0.00628	-0.034837	0.010997	5.35222E-08	0.51227	0.708328	0.007286	1.61E-05	0.50082	0.0068	0.00177	0.532217	0.776	0.643	0.966	1	0.373	0.963	0.977	0.769
rs9358866	4.5866E-08	0.0385143	0.00705	0.0390175	0.007341	8.42007E-08	0.02839	0.014938	0.014518	0.04976	0.033634	0.00576	0.06041	0.34022	0.956	0.962	0.985	0.973	0.975	0.994	0.961	0.908
rs34434613	4.5878E-08	-0.034766	0.00636	-0.039775	0.010152	8.35034E-08	0.07172	0.234522	0.064967	0.0004	0.087136	0.00482	0.00164	0.370871	0.921	0.883	0.828	0.999	0.938	0.981	0.985	0.646
rs7923552	4.5884E-08	0.0278744	0.0051	0.0281716	0.005332	8.42341E-08	0.35573	0.455612	0.015693	0.000396	0.09049	0.0093	0.73726	0.005823	0.885	0.873	0.977	0.999	0.947	0.985	0.813	0.966
rs141420419	4.5889E-08	-0.066698	0.0122	-0.066698	0.012201	8.42424E-08	0.188	0.913869	4.33E-05	0.058712	0.42508	0.00316	0.89676	0.111685	0.88	0.751	1	0.941	0.815	0.994	0.728	0.902
rs7682384	4.5902E-08	-0.034766	0.00636	-0.039777	0.010155	8.34147E-08	0.07132	0.235139	0.065718	0.000401	0.087402	0.00474	0.00164	0.371711	0.921	0.883	0.826	0.999	0.938	0.981	0.985	0.646
rs1110478	4.5911E-08	0.0381839	0.00699	0.0397509	0.010107	8.42832E-08	0.34283	0.711074	0.003914	0.000302	0.001975	0.01476	0.50709	0.150892	0.844	0.703	0.99	0.999	0.987	0.953	0.544	0.886
rs74768812	4.5926E-08	-0.067888	0.01242	-0.067888	0.012419	8.43112E-08	0.60235	0.656872	2.63E-05	0.040159	0.631967	0.00253	0.8407	0.097526	0.789	0.783	1	0.95	0.723	0.994	0.63	0.893
rs12513045	4.5972E-08	-0.028906	0.00529	-0.028906	0.005288	8.43987E-08	0.78992	0.072941	0.001378	0.040777	0.984933	0.00036	0.17665	0.117485	0.733	0.909	0.998	0.959	0.64	0.999	0.897	0.901
rs73228286	4.5975E-08	-0.034765	0.00636	-0.039779	0.010159	8.33046E-08	0.07253	0.234868	0.065161	0.000388	0.087433	0.00486	0.00164	0.370846	0.92	0.883	0.827	0.999	0.938	0.981	0.985	0.645
rs7575160	4.6036E-08	0.0336146	0.00615	0.0365811	0.008953	8.45179E-08	0.0061	0.794891	0.002531	0.011541	0.000868	0.01898	0.83988	0.360724	0.96	0.819	0.996	0.988	0.992	0.96	0.703	0.873
rs4146669	4.6044E-08	0.0285167	0.00522	0.0295424	0.006033	5.97553E-08	0.49944	0.239956	0.00015	0.000376	0.315634	0.1762	0.19148	0.034647	0.784	0.841	0.999	0.999	0.786	0.369	0.861	0.924
rs4623282	4.607E-08	0.0360183	0.00659	0.0390136	0.008475	8.45805E-08	0.01567	0.03523	0.029452	0.220812	0.007674	0.00082	0.07407	0.348847	0.957	0.947	0.953	0.86	0.986	0.999	0.951	0.894
rs76103659	4.6123E-08	-0.034785	0.00636	-0.040635	0.010799	7.52447E-08	0.06542	0.210762	0.077931	0.000374	0.074598	0.00461	0.00118	0.305013	0.919	0.881	0.771	0.999	0.94	0.975	0.986	0.606
rs9876127	4.6161E-08	-0.028714	0.00525	-0.028714	0.005254	8.47517E-08	0.93974	0.578909	0.017071	0.112615	0.374153	4.3E-06	0.05205	0.697405	0.748	0.813	0.958	0.889	0.825	1	0.936	0.793
rs4406147	4.6165E-08	0.0276413	0.00506	0.0276413	0.005057	8.47591E-08	0.32124	0.586563	0.003156	0.00303	0.072506	0.00978	0.30188	0.020448	0.887	0.754	0.996	0.996	0.953	0.985	0.893	0.953
rs62543305	4.6171E-08	0.0466987	0.00854	0.0469212	0.009745	8.47696E-08	0.88809	0.688408	0.000941	0.001231	0.973507	0.00877	0.00367	0.349155	0.763	0.701	0.998	0.997	0.635	0.977	0.976	0.842
rs142931863	4.6174E-08	0.0627279	0.01148	0.0627279	0.011477	8.47763E-08	0.39073	0.035018	0.016394	0.339621	0.320387	1.3E-05	0.04029	0.619916	0.847	0.925	0.959	0.711	0.848	1	0.946	0.811
rs138928428	4.6176E-08	-0.034783	0.00636	-0.040634	0.010799	7.53416E-08	0.06542	0.210757	0.077953	0.000374	0.074649	0.00461	0.00118	0.30501	0.919	0.881	0.771	0.999	0.939	0.975	0.986	0.606
rs1995471	4.6199E-08	-0.027539	0.00504	-0.034036	0.00919	8.48222E-08	0.05817	0.170452	0.019585	0.189553	0.00955	0.00237	4.8E-05	0.578773	0.931	0.903	0.957	0.854	0.981	0.988	0.994	0.721
rs72787025	4.6199E-08	0.0339898	0.00622	0.0339898	0.006219	8.48226E-08	0.2486	0.047004	0.004573	0.031787	0.026148	0.00223	0.40091	0.811823	0.903	0.94	0.995	0.978	0.973	0.997	0.881	0.836
rs12022877	4.6207E-08	0.0373443	0.00683	0.0381144	0.010027	8.48367E-08	0.09083	0.008366	0.000798	0.083776	0.045561	0.00242	0.31057	0.123988	0.57	0.953	0.999	0.931	0.957	0.996	0.873	0.909
rs143427057	4.6229E-08	0.0677857	0.0124	0.0677857	0.012403	8.48787E-08	0.75474	0.354513	0.010962	0.000827	0.551583	0.00129	0.28625	0.156608	0.822	0.87	0.984	0.998	0.811	0.998	0.885	0.905
rs1100859	4.6253E-08	0.0371744	0.0068	0.0363002	0.008819	8.49236E-08	0.52392	0.305946	0.000182	0.333564	0.179627	0.0006	0.00678	0.195429	0.784	0.824	0.999	0.641	0.866	0.998	0.965	0.497
rs246482	4.6255E-08	0.0276433	0.00506	0.0276433	0.005058	8.49267E-08	0.45182	0.408024	0.015443	0.001448	0.047878	0.00262	0.17165	0.106426	0.721	0.871	0.977	0.997	0.96	0.996	0.917	0.922
rs2291473	4.6289E-08	0.0358744	0.00656	0.0342509	0.008675	6.03173E-08	0.86716	0.948188	0.002866	0.912485	0.011793	2.8E-06	0.65334	0.182155	0.64	0.626	0.982	0.184	0.96	1	0.632	0.809
rs2399038	4.63E-08	0.0431101	0.00789	0.0431101	0.007888	8.50113E-08	0.299	0.224831	0.037439	0.030138	0.00112	0.00077	0.37126	0.337901	0.894	0.904	0.938	0.977	0.992	0.999	0.883	0.891
rs12480881	4.6311E-08	-0.030421	0.00557	-0.030614	0.005788	8.50323E-08	0.29379	0.68417	0.002595	0.037277	0.075971	0.0051	0.49314	0.000935	0.898	0.855	0.997	0.974	0.955	0.994	0.865	0.977
rs139450820	4.6317E-08	0.050533	0.00925	0.050533	0.009247	8.50422E-08	0.8317	0.987663	0.003137	0.011268	0.498829	6.8E-05	0.69226	0.284531	0.714	0.739	0.993	0.983	0.775	1	0.752	0.846
rs55993802	4.6319E-08	0.0297125	0.00544	0.0297125	0.005437	8.50459E-08	0.05623	0.901706	0.003343	0.003035	0.49933	0.00229	0.03206	0.67387	0.922	0.767	0.995	0.995	0.81	0.996	0.954	0.719
rs152087	4.6329E-08	0.0276356	0.00506	0.0276356	0.005057	8.50648E-08	0.44964	0.40706	0.015404	0.001476	0.048099	0.00259	0.17147	0.106258	0.72	0.872	0.977	0.997	0.96	0.996	0.917	0.922
rs941475	4.6331E-08	0.0274839	0.00503	0.0274839	0.005029	8.50695E-08	0.9865	0.216025	0.000471	0.013305	0.499765	0.02611	0.00388	0.098846	0.8	0.898	0.999	0.987	0.83	0.946	0.981	0.924
rs12105978	4.6337E-08	0.038578	0.00706	0.038578	0.007059	8.50809E-08	0.69272	0.064972	0.000776	0.043855	0.033568	0.02448	0.00772	0.790507	0.851	0.935	0.999	0.97	0.97	0.959	0.979	0.837
rs716784	4.6342E-08	0.0359036	0.00657	0.0382651	0.008766	8.50897E-08	0.68482	0.867499	0.001096	0.005646	0.003589	0.04608	0.17931	0.010514	0.738	0.767	0.998	0.993	0.987	0.877	0.907	0.957
rs7163204	4.6356E-08	-0.034735	0.00636	-0.034735	0.006356	8.51164E-08	0.10165	0.053457	0.007301	0.064831	0.223226	0.00063	0.25309	0.269804	0.93	0.94	0.992	0.96	0.917	0.999	0.912	0.905
rs16842692	4.638E-08	0.0359027	0.00657	0.0382644	0.008766	8.51598E-08	0.68462	0.867445	0.001096	0.005644	0.00359	0.04609	0.17934	0.010516	0.738	0.767	0.998	0.993	0.987	0.877	0.907	0.957
rs12447238	4.6382E-08	0.0295628	0.00541	0.0298453	0.005729	8.51643E-08	0.07048	0.078593	0.042598	0.259298	0.050582	7.4E-05	0.20932	0.037173	0.93	0.927	0.908	0.809	0.96	1	0.909	0.945
rs74880322	4.6386E-08	-0.030336	0.00555	-0.030336	0.005551	8.51718E-08	0.21456	0.989492	0.001965	0.011164	0.231205	0.01224	0.02101	0.072987	0.909	0.823	0.998	0.99	0.913	0.983	0.97	0.938
rs4906368	4.6387E-08	0.0274827	0.00503	0.0274827	0.005029	8.51738E-08	0.98652	0.216022	0.000474	0.013298	0.499443	0.02608	0.00387	0.098846	0.8	0.898	0.999	0.987	0.83	0.946	0.981	0.924
rs36090777	4.6391E-08	-0.045094	0.00825	-0.042885	0.014367	2.90856E-08	0.45886	0.827722	0.025136	0.579018	0.000241	6.8E-07	0.90744	0.767039	0.63	0.466	0.619	0.237	0.991	1	0.423	0.538
rs1617856	4.64E-08	-0.030439	0.00557	-0.030439	0.00557	8.51979E-08	0.75293	0.023249	0.001236	0.150962	0.108516	0.00027	0.62315	0.097063	0.795	0.931	0.998	0.862	0.922	0.999	0.606	0.906
rs10494771	4.6419E-08	0.0359022	0.00657	0.0382601	0.008763	8.52341E-08	0.68463	0.867406	0.001095	0.005659	0.003594	0.04607	0.17924	0.010534	0.738	0.767	0.998	0.993	0.987	0.877	0.907	0.957
rs140276651	4.6476E-08	0.0339596	0.00621	0.0339596	0.006215	8.53397E-08	0.50632	0.647364	0.00556	0.332869	0.092092	6.6E-05	0.14791	0.061989	0.841	0.824	0.99	0.74	0.935	1	0.912	0.924
rs28809189	4.6476E-08	0.0339596	0.00621	0.0339596	0.006215	8.53397E-08	0.50632	0.647364	0.00556	0.332869	0.092092	6.6E-05	0.14791	0.061989	0.841	0.824	0.99	0.74	0.935	1	0.912	0.924
rs12359989	4.6476E-08	0.0339596	0.00621	0.0339596	0.006215	8.534E-08	0.50633	0.647364	0.00556	0.332869	0.092092	6.6E-05	0.14791	0.061989	0.841	0.824	0.99	0.74	0.935	1	0.912	0.924
rs181472550	4.6488E-08	0.0616597	0.01128	0.0571229	0.016236	4.95345E-08	0.07821	0.560095	0.001058	0.955688	0.675873	1.6E-06	0.0864	0.996721	0.838	0.683	0.993	0.12	0.53	1	0.862	0.571
rs16842663	4.6491E-08	0.0358999	0.00657	0.0382618	0.008766	8.5367E-08	0.68458	0.867496	0.001097	0.00565	0.003591	0.04611	0.17932	0.010514	0.738	0.767	0.998	0.993	0.987	0.877	0.907	0.957
rs189839317	4.6497E-08	-0.093653	0.01714	-0.093653	0.017139	8.53798E-08	0.05116	0.945147	0.000527	0.103939	0.309632	0.00163	0.03344	0.90542	0.928	0.798	0.999	0.92	0.872	0.998	0.956	0.795
rs145635865	4.6506E-08	-0.045697	0.00836	-0.051452	0.014951	8.17408E-08	0.52299	0.533703	0.000476	0.621303	0.212572	0.00232	7.9E-06	0.37557	0.795	0.793	0.998	0.443	0.858	0.991	0.995	0.821
rs6662804	4.6512E-08	0.0358993	0.00657	0.0382616	0.008767	8.54075E-08	0.68459	0.867497	0.001097	0.00565	0.003591	0.04613	0.17932	0.010514	0.738	0.767	0.998	0.993	0.987	0.877	0.907	0.957
rs16829976	4.6513E-08	0.0358993	0.00657	0.0382611	0.008766	8.54095E-08	0.6846	0.867493	0.001097	0.005651	0.003591	0.04612	0.17933	0.010515	0.738	0.767	0.998	0.993	0.987	0.877	0.907	0.957
rs6665857	4.6521E-08	0.0358991	0.00657	0.0382614	0.008767	8.5424E-08	0.68458	0.867497	0.001097	0.005651	0.003591	0.04614	0.17932	0.010514	0.738	0.767	0.998	0.993	0.987	0.877	0.907	0.957
rs6668469	4.6521E-08	0.0358991	0.00657	0.0382614	0.008767	8.5424E-08	0.68458	0.867497	0.001097	0.005651	0.003591	0.04614	0.17932	0.010514	0.738	0.767	0.998	0.993	0.987	0.877	0.907	0.957
rs1100856	4.6531E-08	0.037169	0.0068	0.036263	0.008811	8.54434E-08	0.52122	0.316894	0.000184	0.326192	0.185994	0.00058	0.00691	0.190595	0.785	0.822	0.999	0.648	0.863	0.998	0.965	0.495

Table S3

rs151245571	4.6548E-08	0.0908905	0.01663	0.0908905	0.016634	8.54737E-08	0.79519	0.255731	0.006124	0.001212	0.24602	0.00687	0.33906	0.029287	0.838	0.898	0.993	0.998	0.905	0.991	0.889	0.948
rs4542627	4.6561E-08	0.0279409	0.00511	0.0282306	0.006299	8.5498E-08	0.00787	0.592785	0.000148	0.158968	0.134462	0.00597	0.03856	0.438113	0.952	0.833	1	0.871	0.921	0.989	0.952	0.674
rs566917810	4.6566E-08	0.0616564	0.01128	0.0571196	0.016235	4.96212E-08	0.07808	0.560078	0.001062	0.956063	0.675719	1.6E-06	0.08669	0.996889	0.838	0.683	0.993	0.12	0.53	1	0.862	0.571
rs143471946	4.6598E-08	-0.058674	0.01074	-0.059392	0.011513	8.55684E-08	0.04787	0.556493	0.003134	0.14736	0.005914	0.00324	0.10936	0.065638	0.939	0.751	0.996	0.899	0.985	0.996	0.937	0.937
rs7630742	4.6604E-08	-0.029196	0.00534	-0.029196	0.005344	8.55785E-08	0.29909	0.054465	0.001918	0.076936	0.079051	6.7E-05	0.85361	0.899423	0.605	0.904	0.996	0.916	0.926	1	0.71	0.744
rs1565421	4.661E-08	-0.033956	0.00621	-0.033956	0.006215	8.55905E-08	0.50628	0.647583	0.005564	0.332905	0.09213	6.6E-05	0.14797	0.062019	0.841	0.824	0.99	0.74	0.935	1	0.912	0.924
rs149332	4.6632E-08	-0.066656	0.0122	-0.066656	0.0122	8.56313E-08	0.18449	0.912917	4.3E-05	0.05827	0.425742	0.00327	0.8948	0.11165	0.88	0.751	1	0.941	0.815	0.994	0.728	0.902
rs113617732	4.6652E-08	-0.036306	0.00665	-0.036306	0.006645	8.56683E-08	0.16124	0.228882	0.033196	0.010243	0.097225	5.5E-05	0.92472	0.766464	0.895	0.882	0.929	0.988	0.933	1	0.741	0.805
rs6092172	4.6661E-08	-0.040598	0.00743	-0.040598	0.007431	8.56854E-08	0.1544	0.869248	0.003176	0.028174	0.019333	0.00645	0.00651	0.708844	0.912	0.823	0.996	0.978	0.975	0.991	0.978	0.757
rs284009	4.6662E-08	0.0352988	0.00646	0.0352988	0.006461	8.56874E-08	0.94878	0.493523	0.028985	0.016759	0.237418	3.5E-05	0.31826	0.128938	0.779	0.849	0.944	0.983	0.89	1	0.874	0.908
rs2089892	4.6706E-08	-0.034746	0.00636	-0.039751	0.01015	8.50643E-08	0.07153	0.235173	0.06514	0.000401	0.087642	0.00486	0.00165	0.371088	0.921	0.883	0.828	0.999	0.938	0.981	0.985	0.646
rs6445191	4.6708E-08	-0.028473	0.00521	-0.03159	0.008259	4.95715E-08	0.16438	0.294983	0.252896	0.001299	0.000999	0.00022	0.1383	0.418757	0.843	0.801	0.237	0.996	0.991	0.999	0.866	0.467
rs9933811	4.6711E-08	-0.03413	0.00625	-0.040295	0.009992	8.57787E-08	0.16594	0.522093	0.010938	0.005554	0.017239	0.02327	0.05492	0.000831	0.917	0.757	0.984	0.994	0.979	0.958	0.957	0.978
rs7546420	4.672E-08	0.0358951	0.00657	0.0382515	0.008762	8.57964E-08	0.68467	0.867376	0.001099	0.005673	0.003592	0.04608	0.17934	0.010552	0.738	0.767	0.998	0.993	0.987	0.877	0.907	0.957
rs2874918	4.6738E-08	-0.034304	0.00628	-0.034769	0.010987	5.47683E-08	0.51229	0.702074	0.007241	1.61E-05	0.499004	0.00678	0.00185	0.537015	0.775	0.641	0.966	1	0.372	0.964	0.977	0.768
rs5848698	4.6749E-08	-0.028703	0.00525	-0.028703	0.005254	8.58493E-08	0.93754	0.580871	0.017141	0.112807	0.373726	4.3E-06	0.05222	0.697129	0.747	0.812	0.958	0.889	0.825	1	0.935	0.793
rs11363251	4.6751E-08	0.0281903	0.00516	0.0281903	0.00516	8.58538E-08	0.01191	0.171332	0.009803	0.010393	0.524111	0.00052	0.64043	0.384456	0.952	0.904	0.986	0.989	0.824	0.999	0.822	0.874
rs964280	4.6767E-08	0.0295548	0.00541	0.0298326	0.005721	8.58828E-08	0.06439	0.07859	0.043105	0.255472	0.050482	7.5E-05	0.20903	0.040264	0.932	0.927	0.907	0.812	0.96	1	0.909	0.944
rs246483	4.6796E-08	0.0276368	0.00506	0.0276368	0.005059	8.59383E-08	0.45755	0.409716	0.01542	0.001499	0.048041	0.00262	0.17073	0.105863	0.722	0.871	0.977	0.997	0.96	0.996	0.918	0.922
rs1441420	4.6802E-08	-0.034303	0.00628	-0.034767	0.010987	5.48345E-08	0.51229	0.702074	0.007242	1.61E-05	0.498815	0.00679	0.00185	0.537015	0.775	0.641	0.966	1	0.372	0.964	0.977	0.768
rs55726435	4.682E-08	0.0279357	0.00511	0.0282246	0.006296	8.59818E-08	0.00788	0.592676	0.000148	0.159026	0.13458	0.00599	0.03865	0.438349	0.952	0.833	1	0.871	0.921	0.989	0.952	0.674
rs11047192	4.6839E-08	0.0617335	0.0113	0.0613446	0.012752	8.60177E-08	0.19219	0.237976	0.007865	0.256213	0.183209	2.7E-05	0.02394	0.195519	0.875	0.614	0.982	0.771	0.89	1	0.954	0.877
rs12770567	4.6843E-08	0.033951	0.00621	0.033951	0.006215	8.6026E-08	0.50823	0.647364	0.00556	0.334118	0.092092	6.6E-05	0.14791	0.061989	0.841	0.823	0.99	0.738	0.935	1	0.912	0.924
rs541708	4.6852E-08	-0.03283	0.00601	-0.03283	0.00601	8.60424E-08	0.46709	0.72627	0.016862	0.017421	0.000866	0.00185	0.45207	0.245077	0.87	0.841	0.977	0.985	0.993	0.998	0.865	0.9
rs13433894	4.6868E-08	0.0347882	0.00637	0.0347882	0.006368	8.60733E-08	0.60567	0.016229	0.006508	0.176703	0.064923	3.7E-05	0.35157	0.882795	0.706	0.937	0.987	0.845	0.942	1	0.851	0.774
rs8058713	4.6915E-08	-0.035282	0.00646	-0.035282	0.006459	8.61601E-08	0.95663	0.479499	0.026413	0.016342	0.235973	3.7E-05	0.35065	0.146782	0.78	0.85	0.95	0.983	0.89	1	0.867	0.904
rs1100857	4.6969E-08	0.0371554	0.0068	0.0362405	0.008808	8.62613E-08	0.53502	0.316898	0.000184	0.324629	0.185994	0.00058	0.00691	0.190595	0.782	0.822	0.999	0.649	0.863	0.998	0.965	0.495
rs9276913	4.6985E-08	0.0276214	0.00506	0.0276121	0.005262	8.62909E-08	0.13471	0.040812	0.002187	0.23857	0.179864	0.00026	0.04583	0.380877	0.898	0.926	0.996	0.8	0.901	0.999	0.946	0.648
rs9348106	4.6986E-08	0.038796	0.0071	0.0385095	0.00886	8.6293E-08	0.37792	0.659617	0.001337	0.091793	0.002281	0.00076	0.61519	0.060462	0.641	0.698	0.997	0.908	0.986	0.998	0.778	0.915
rs116025241	4.7019E-08	-0.057103	0.01045	-0.057103	0.010454	8.63542E-08	0.04453	0.204122	0.001893	0.103747	0.293259	0.00052	0.05889	0.499861	0.931	0.892	0.997	0.917	0.876	0.999	0.945	0.697
rs62444023	4.7022E-08	0.0370265	0.00678	0.0433126	0.011972	2.13162E-08	0.02007	0.70437	0.516901	0.039391	0.016225	4.8E-06	0.00606	0.812036	0.928	0.693	0.05	0.885	0.967	1	0.975	0.649
rs12879501	4.7033E-08	0.0277278	0.00508	0.0277278	0.005076	8.6381E-08	0.69554	0.261895	0.001091	0.008463	0.388573	0.01889	0.00538	0.062329	0.765	0.893	0.998	0.991	0.862	0.966	0.979	0.935
rs11076489	4.7036E-08	0.0446524	0.00817	0.0495875	0.015538	8.22178E-08	0.20248	0.496193	9.04E-05	0.008692	0.670805	0.08265	0.00173	0.002146	0.494	0.774	0.999	0.981	0.637	0.608	0.982	0.963
rs1987170	4.7069E-08	-0.052592	0.00963	-0.05302	0.014223	4.68027E-08	0.72642	0.521103	0.027012	5.45E-07	0.144206	0.00446	0.95704	0.919215	0.76	0.792	0.901	1	0.88	0.969	0.648	0.723
rs6501323	4.7083E-08	0.0275995	0.00505	0.0313994	0.007555	8.64748E-08	0.18132	0.134931	0.000447	0.121321	0.252142	0.02906	0.06356	0.000373	0.916	0.923	0.999	0.922	0.908	0.946	0.955	0.982
rs9865920	4.7183E-08	-0.028695	0.00525	-0.028695	0.005254	8.66611E-08	0.93652	0.581573	0.017169	0.11288	0.373898	4.3E-06	0.05227	0.697644	0.747	0.812	0.957	0.889	0.825	1	0.935	0.793
rs16842650	4.719E-08	0.0358827	0.00657	0.0382495	0.008771	8.66747E-08	0.68417	0.866481	0.001107	0.005622	0.00359	0.04631	0.18013	0.010521	0.738	0.767	0.998	0.993	0.987	0.876	0.907	0.957
rs3935211	4.7205E-08	-0.028694	0.00525	-0.028694	0.005254	8.67026E-08	0.93653	0.58118	0.017172	0.112864	0.374249	4.3E-06	0.05228	0.697618	0.747	0.812	0.957	0.889	0.825	1	0.935	0.793
rs73530179	4.7256E-08	-0.02799	0.00513	-0.028557	0.005946	8.67966E-08	0.53068	0.760649	0.045969	0.000517	0.003485	0.0011	0.21826	0.432466	0.822	0.79	0.875	0.998	0.985	0.997	0.881	0.642
rs4659549	4.7264E-08	0.0289186	0.0053	0.0289186	0.005295	8.68119E-08	0.84416	0.410577	0.016143	0.027274	0.245077	0.00024	0.06313	0.121874	0.829	0.877	0.978	0.979	0.903	1	0.95	0.922
rs202065063	4.7267E-08	0.0616186	0.01128	0.0570228	0.01625	5.01276E-08	0.07822	0.561528	0.001064	0.955836	0.680677	1.6E-06	0.08878	0.998501	0.837	0.682	0.993	0.119	0.527	1	0.86	0.569
rs9846407	4.7268E-08	-0.028693	0.00525	-0.028693	0.005254	8.68202E-08	0.93599	0.58118	0.017169	0.112972	0.374281	4.3E-06	0.05228	0.697249	0.747	0.812	0.957	0.889	0.825	1	0.935	0.793
rs9845909	4.7269E-08	-0.028693	0.00525	-0.028693	0.005254	8.68216E-08	0.93607	0.581455	0.017198	0.112827	0.373675	4.3E-06	0.05232	0.69752	0.747	0.812	0.957	0.889	0.825	1	0.935	0.793
rs174561	4.7296E-08	0.0281469	0.00515	0.0285243	0.005735	8.6872E-08	0.15597	0.594677	0.017156	0.13128	0.000547	0.00034	0.20755	0.351129	0.903	0.736	0.97	0.898	0.993	0.999	0.903	0.873
rs1349258	4.73E-08	-0.040479	0.00741	-0.041216	0.008563	8.68806E-08	0.09486	0.635677	0.000172	0.500452	0.01986	0.00705	0.00638	0.75634	0.903	0.808	1	0.583	0.969	0.979	0.973	0.785
rs9833904	4.7315E-08	0.0382021	0.007	0.0427165	0.010467	8.25943E-08	0.35528	0.067186	0.014317	8.53E-05	0.144775	0.03502	0.01657	0.083424	0.683	0.926	0.961	0.999	0.92	0.905	0.968	0.925
rs12517438	4.7323E-08	0.027539	0.00504	0.0282806	0.005979	8.69229E-08	0.69633	0.314525	0.002542	0.001247	0.052732	0.01679	0.21804	0.011767	0.829	0.679	0.996	0.997	0.956	0.967	0.901	0.955
rs1606277	4.7334E-08	-0.034731	0.00636	-0.03974	0.010153	8.61548E-08	0.07151	0.235054	0.06543	0.000401	0.087724	0.00488	0.00165	0.370709	0.921	0.883	0.827	0.999	0.938	0.981	0.984	0.646
rs34504950	4.7335E-08	0.0289172	0.0053	0.0289172	0.005295	8.69458E-08	0.84503	0.410825	0.016135	0.027314	0.245094	0.00024	0.06312	0.121583	0.829	0.877	0.978	0.979	0.903	1	0.95	0.922
rs7649643	4.7384E-08	-0.028746	0.00526	-0.028746	0.005264	8.70365E-08	0.05112	0.605214	0.006639	0.108038	0.248	0.00017	0.02598	0.447882	0.93	0.741	0.99	0.918	0.892	1	0.961	0.86
rs4504214	4.7387E-08	-0.027486	0.00503	-0.030397	0.007656	8.70422E-08	0.39802	0.348981	0.004338	0.000434	0.1471	0.04245	0.00043	0.493906	0.856	0.863	0.988	0.998	0.914	0.877	0.989	0.68
rs12643886	4.74E-08	-0.032936	0.00603	-0.032936	0.006031	8.70661E-08	0.37061	0.681803	0.005529	0.004753	0.002215	0.00637	0.93736	0.156496	0.872	0.834	0.992	0.994	0.989	0.99	0.728	0.908
rs12649895	4.74E-08	-0.032936	0.00603	-0.032936	0.006031	8.70661E-08	0.37061	0.681803	0.005529	0.004753	0.002215	0.00637	0.93736	0.156496	0.872	0.834	0.992	0.994	0.989	0.99	0.728	0.908
rs16842603	4.7416E-08	0.0358671	0.00657	0.0383065	0.008826	8.70963E-08	0.68102	0.856024	0.001157	0.005169	0.003617	0.04719	0.17546	0.010526	0.737	0.765	0.998	0.993	0.987	0.873	0.908	0.957
rs3774628	4.7419E-08	-0.02918	0.00534	-0.02918	0.005344	8.71022E-08	0.29903	0.05501	0.00191	0.076894	0.078229	7E-05	0.85064	0.895347	0.606	0.904	0.996	0.916	0.926	1	0.711	0.746

Table S3

rs7618690	4.742E-08	-0.032475	0.00595	-0.032475	0.005947	8.7104E-08	0.29136	0.89729	0.002874	0.034052	0.100371	0.00081	0.11851	0.806023	0.886	0.815	0.996	0.973	0.941	0.999	0.93	0.821
rs11645550	4.7433E-08	-0.027589	0.00505	-0.027589	0.005052	8.71281E-08	0.82945	0.121025	0.005156	0.012641	0.464443	0.00045	0.78829	0.035358	0.809	0.907	0.992	0.987	0.828	0.999	0.78	0.938
rs6842478	4.7436E-08	0.0341581	0.00626	0.0341581	0.006255	8.71335E-08	0.81245	0.604996	0.000209	0.223407	0.704066	0.0011	0.00935	0.064612	0.717	0.802	0.999	0.784	0.713	0.997	0.965	0.911
rs62375328	4.7436E-08	-0.040652	0.00744	-0.040652	0.007444	8.71345E-08	0.27535	0.413278	0.000152	0.030574	0.113445	0.0065	0.41276	0.144666	0.879	0.696	1	0.972	0.93	0.989	0.854	0.905
rs9934414	4.7469E-08	-0.03423	0.00627	-0.039441	0.009444	8.71949E-08	0.12981	0.593074	0.012037	0.005053	0.020088	0.01968	0.08001	0.001283	0.924	0.772	0.983	0.994	0.978	0.967	0.95	0.977
rs7159336	4.7481E-08	0.0385274	0.00706	0.0385274	0.007056	8.72181E-08	0.3104	0.272053	0.001859	0.093885	0.12908	0.00052	0.07988	0.674162	0.879	0.884	0.997	0.93	0.928	0.999	0.938	0.74
rs11639899	4.7498E-08	-0.027588	0.00505	-0.027588	0.005052	8.72491E-08	0.83001	0.12102	0.005157	0.01265	0.464429	0.00045	0.78827	0.035357	0.809	0.907	0.992	0.987	0.828	0.999	0.78	0.938
rs10022517	4.7502E-08	-0.034732	0.00636	-0.039773	0.010183	8.50054E-08	0.07152	0.23746	0.066374	0.000362	0.089137	0.00498	0.00169	0.371256	0.92	0.882	0.823	0.999	0.936	0.98	0.984	0.644
rs6014910	4.7525E-08	-0.05843	0.0107	-0.05939	0.011798	8.72999E-08	0.05034	0.487558	0.003079	0.14566	0.005567	0.00294	0.12863	0.064714	0.937	0.735	0.996	0.899	0.985	0.996	0.931	0.936
rs17604550	4.7543E-08	0.0306319	0.00561	0.0310475	0.006215	6.81246E-08	0.87061	0.517967	0.000285	4.09E-05	0.055722	0.10258	0.51735	0.594698	0.655	0.765	0.999	0.999	0.925	0.563	0.733	0.745
rs10402106	4.7553E-08	-0.08583	0.01572	-0.08583	0.015719	8.73535E-08	0.14282	0.035094	0.002239	0.095131	0.087992	0.00089	0.76448	0.418165	0.913	0.941	0.997	0.933	0.947	0.999	0.803	0.874
rs9460337	4.7557E-08	0.037526	0.00687	0.0393541	0.010218	8.73608E-08	0.0439	0.156925	0.068087	0.000419	0.01657	0.0005	0.33901	0.651444	0.911	0.87	0.752	0.998	0.967	0.998	0.442	0.77
rs11919572	4.7602E-08	-0.040469	0.00741	-0.041207	0.008565	8.74447E-08	0.09497	0.635791	0.000172	0.501286	0.019853	0.00706	0.00639	0.755296	0.903	0.808	1	0.582	0.969	0.979	0.973	0.785
rs13213003	4.7609E-08	0.0375252	0.00687	0.0393589	0.010224	8.74566E-08	0.04389	0.156426	0.068222	0.000415	0.016584	0.00051	0.33908	0.652089	0.911	0.87	0.751	0.998	0.967	0.998	0.442	0.77
rs34305128	4.7612E-08	0.0289101	0.00529	0.0289101	0.005295	8.74633E-08	0.83605	0.418576	0.01626	0.024979	0.255529	0.00025	0.06313	0.125798	0.83	0.876	0.978	0.98	0.9	1	0.95	0.921
rs2155503	4.7621E-08	0.030744	0.00563	0.030744	0.005631	8.74794E-08	0.16927	0.388439	0.002393	0.015041	0.936976	0.00388	0.0325	0.024358	0.904	0.872	0.997	0.986	0.672	0.994	0.959	0.948
rs2155504	4.7621E-08	0.030744	0.00563	0.030744	0.005631	8.74794E-08	0.16927	0.388439	0.002393	0.015041	0.936976	0.00388	0.0325	0.024358	0.904	0.872	0.997	0.986	0.672	0.994	0.959	0.948
rs62375326	4.7622E-08	-0.040638	0.00744	-0.040638	0.007443	8.74814E-08	0.27903	0.41342	0.000151	0.030458	0.113656	0.00652	0.41275	0.145097	0.878	0.696	1	0.973	0.93	0.989	0.854	0.905
rs4546248	4.7637E-08	-0.032931	0.00603	-0.032931	0.006031	8.75095E-08	0.37001	0.681292	0.005546	0.004741	0.002211	0.0064	0.9374	0.157004	0.872	0.834	0.992	0.994	0.989	0.99	0.728	0.908
rs12649307	4.7654E-08	-0.034724	0.00636	-0.039732	0.010152	8.67612E-08	0.0714	0.235548	0.065466	0.000401	0.087968	0.0049	0.00165	0.371095	0.921	0.883	0.827	0.999	0.937	0.981	0.984	0.646
rs34216394	4.7664E-08	-0.034282	0.00628	-0.034742	0.010991	5.57082E-08	0.51002	0.701872	0.007263	1.62E-05	0.49674	0.00682	0.00186	0.539401	0.775	0.641	0.966	1	0.371	0.963	0.977	0.767
rs35399959	4.7664E-08	-0.034282	0.00628	-0.034742	0.010991	5.57082E-08	0.51002	0.701872	0.007263	1.62E-05	0.49674	0.00682	0.00186	0.539401	0.775	0.641	0.966	1	0.371	0.963	0.977	0.767
rs4888595	4.7671E-08	0.0295368	0.00541	0.0297602	0.005665	8.75731E-08	0.06845	0.078516	0.04309	0.255211	0.050493	7.6E-05	0.20893	0.040251	0.93	0.927	0.908	0.812	0.96	1	0.909	0.944
rs9922041	4.7689E-08	-0.027997	0.00513	-0.028538	0.005908	8.76078E-08	0.53248	0.776957	0.044235	0.000509	0.003536	0.00117	0.21898	0.43911	0.823	0.789	0.882	0.998	0.985	0.997	0.882	0.645
rs10494768	4.7698E-08	0.0358706	0.00657	0.0382358	0.008763	8.76246E-08	0.68544	0.867505	0.001136	0.005646	0.003579	0.04599	0.17931	0.010519	0.739	0.768	0.998	0.993	0.987	0.878	0.907	0.957
rs117800165	4.7707E-08	-0.068894	0.01262	-0.068894	0.012619	8.764E-08	0.72634	0.590905	1.37E-05	0.056161	0.60047	0.00286	0.95863	0.159998	0.769	0.791	1	0.932	0.732	0.993	0.659	0.872
rs7318390	4.7716E-08	-0.043204	0.00791	-0.044497	0.013655	8.28222E-08	0.53508	0.915026	0.00036	0.758087	0.001996	0.0014	0.00101	0.742051	0.551	0.633	0.999	0.285	0.985	0.993	0.982	0.69
rs2295146	4.7813E-08	0.0277552	0.00508	0.0277552	0.005084	8.78387E-08	0.65823	0.13892	0.001035	0.010645	0.392256	0.01362	0.00745	0.162822	0.76	0.912	0.999	0.989	0.861	0.977	0.977	0.912
rs140023153	4.7826E-08	-0.040634	0.00744	-0.040634	0.007443	8.78638E-08	0.2792	0.413774	0.000152	0.030518	0.113485	0.00652	0.41283	0.145184	0.878	0.696	1	0.972	0.93	0.989	0.854	0.905
rs1862743	4.783E-08	-0.027585	0.00505	-0.027585	0.005053	8.78704E-08	0.96363	0.164286	0.004177	0.016035	0.608952	0.00043	0.62408	0.013964	0.777	0.895	0.994	0.983	0.783	0.999	0.807	0.95
rs4640677	4.7837E-08	-0.032926	0.00603	-0.032926	0.006031	8.78842E-08	0.37187	0.681916	0.005539	0.004794	0.00221	0.00636	0.93708	0.156938	0.872	0.834	0.992	0.994	0.989	0.99	0.727	0.908
rs1019467	4.7847E-08	0.0276066	0.00506	0.0276066	0.005057	8.7903E-08	0.446	0.40705	0.015388	0.001542	0.048099	0.00259	0.17146	0.106256	0.72	0.871	0.977	0.997	0.96	0.996	0.917	0.922
rs8037968	4.7852E-08	0.0279086	0.00511	0.0282137	0.006292	8.79113E-08	0.00794	0.553109	0.000158	0.160545	0.138445	0.00591	0.03735	0.435104	0.952	0.839	1	0.87	0.92	0.989	0.953	0.675
rs142459538	4.7902E-08	-0.040626	0.00744	-0.040626	0.007442	8.8004E-08	0.28106	0.413775	0.000151	0.030214	0.113722	0.00656	0.41306	0.145651	0.878	0.696	1	0.973	0.93	0.989	0.854	0.905
rs12878868	4.7908E-08	0.0276663	0.00507	0.0276663	0.005068	8.80132E-08	0.69415	0.236194	0.00099	0.011278	0.401602	0.01556	0.00614	0.077924	0.766	0.897	0.999	0.989	0.859	0.973	0.978	0.931
rs10497750	4.7935E-08	0.0427236	0.00783	0.0453706	0.009574	7.49625E-08	0.03413	0.575236	0.000523	0.002285	0.003419	0.15044	0.25677	0.628054	0.927	0.8	0.998	0.996	0.987	0.501	0.859	0.785
rs35041609	4.794E-08	0.0508916	0.00932	0.0524227	0.010782	8.80576E-08	0.58729	0.179115	0.03624	0.014791	0.004808	0.0012	0.00852	0.945774	0.738	0.9	0.932	0.986	0.986	0.998	0.976	0.796
rs62191571	4.7955E-08	0.0288158	0.00528	0.0306492	0.008364	8.80797E-08	0.22878	0.060279	0.008056	0.022897	0.249652	0.00101	0.30157	0.000668	0.655	0.927	0.988	0.98	0.893	0.998	0.884	0.977
rs228758	4.797E-08	0.0278947	0.00511	0.0278947	0.00511	8.8101E-08	0.76142	0.887217	0.019442	0.016574	0.050665	0.00199	0.01044	0.064231	0.847	0.834	0.975	0.987	0.964	0.998	0.976	0.94
rs13333217	4.8053E-08	0.0446229	0.00818	0.0495441	0.015535	8.41039E-08	0.20276	0.496151	8.86E-05	0.009149	0.670753	0.08255	0.00172	0.002145	0.495	0.774	0.999	0.98	0.637	0.61	0.981	0.963
rs2187143	4.8085E-08	0.0336599	0.00617	0.0336599	0.006167	8.82651E-08	0.43494	0.00467	0.004393	0.013818	0.240581	0.00625	0.18208	0.219532	0.887	0.968	0.996	0.989	0.915	0.993	0.928	0.915
rs17168246	4.8124E-08	-0.063151	0.01157	-0.063151	0.01157	8.83216E-08	0.46095	0.040414	0.001124	0.01079	0.89412	0.00031	0.96591	0.561452	0.807	0.908	0.997	0.983	0.556	0.999	0.666	0.788
rs174555	4.8144E-08	0.0281292	0.00515	0.0285064	0.00574	8.83492E-08	0.15604	0.584607	0.017143	0.130601	0.000558	0.00034	0.20908	0.351308	0.902	0.734	0.97	0.899	0.993	0.999	0.902	0.872
rs2137259	4.816E-08	-0.034448	0.00631	-0.039014	0.009479	8.32423E-08	0.12138	0.196633	0.055472	0.000215	0.11191	0.00821	0.00186	0.571147	0.911	0.895	0.864	0.999	0.93	0.97	0.984	0.707
rs3942587	4.8162E-08	0.0303175	0.00555	0.0303175	0.005555	8.83761E-08	0.37576	0.180038	0.025003	0.000508	0.241289	0.00077	0.16069	0.317672	0.679	0.892	0.95	0.998	0.886	0.999	0.909	0.871
rs79799664	4.8178E-08	-0.037516	0.00687	-0.037539	0.009985	6.61103E-08	0.0514	0.180086	0.001241	0.788115	0.121867	2.5E-05	0.04039	0.979505	0.895	0.842	0.996	0.103	0.882	1	0.932	0.65
rs3117244	4.8198E-08	-0.034533	0.00633	-0.034533	0.006327	8.84266E-08	0.49352	0.587347	0.000588	0.016696	0.330459	0.00018	0.702	0.977933	0.63	0.781	0.998	0.975	0.811	0.999	0.728	0.714
rs9872863	4.8266E-08	-0.040451	0.00741	-0.041181	0.00855	8.85245E-08	0.09497	0.636277	0.000173	0.501067	0.01976	0.00713	0.00648	0.751745	0.903	0.808	1	0.583	0.969	0.978	0.973	0.786
rs151117199	4.8289E-08	-0.09463	0.01734	-0.09463	0.01734	8.85572E-08	0.35539	0.383188	0.008993	0.108708	0.00285	8.5E-05	0.9099	0.673811	0.854	0.849	0.983	0.898	0.984	1	0.685	0.805
rs72765804	4.8346E-08	0.0390433	0.00715	0.0390433	0.007154	8.8638E-08	0.05569	0.283703	0.001021	0.564618	0.735642	3.8E-05	0.12511	0.437784	0.892	0.822	0.997	0.466	0.642	1	0.884	0.791
rs113442486	4.8347E-08	-0.032915	0.00603	-0.032915	0.006031	8.86393E-08	0.37203	0.681927	0.005552	0.004812	0.002213	0.00638	0.93672	0.15699	0.872	0.834	0.992	0.994	0.989	0.99	0.727	0.908
rs79156194	4.8347E-08	-0.032915	0.00603	-0.032915	0.006031	8.86393E-08	0.37203	0.681927	0.005552	0.004812	0.002213	0.00638	0.93672	0.15699	0.872	0.834	0.992	0.994	0.989	0.99	0.727	0.908
rs144349275	4.8356E-08	-0.058588	0.01074	-0.058588	0.010736	8.86522E-08	0.36531	0.853164	0.000118	0.035693	0.53753	0.00047	0.38788	0.294482	0.596	0.695	1	0.951	0.737	0.999	0.805	0.83
rs806471	4.8368E-08	0.035913	0.00658	0.035913	0.006581	8.86692E-08	0.64278	0.085656	1.26E-05	0.319202	0.35749	0.00402	0.10665	0.331859	0.68	0.893	1	0.697	0.815	0.988	0.907	0.839
rs1566788	4.8388E-08	-0.027572	0.00505	-0.033927	0.009197	8.86977E-08	0.03275	0.121441	0.010409	0.182546	0.018622	0.00407	7.5E-05	0.476611	0.942	0.915	0.979	0.865	0.974	0.988	0.994	0.706

Table S3

rs2137258	4.8388E-08	-0.034708	0.00636	-0.039711	0.01015	8.80858E-08	0.07132	0.236046	0.065683	0.000401	0.088173	0.00492	0.00167	0.370607	0.921	0.883	0.827	0.999	0.937	0.981	0.984	0.646
rs174549	4.8401E-08	0.0281078	0.00515	0.0287715	0.006193	8.8717E-08	0.18722	0.503042	0.01669	0.117721	0.00034	0.00038	0.20935	0.404641	0.895	0.716	0.97	0.906	0.994	0.999	0.9	0.862
rs9277369	4.8404E-08	0.0372136	0.00682	0.0370821	0.007146	8.83986E-08	0.90493	0.370164	6.85E-05	0.912363	0.03211	0.00083	0.03677	0.618582	0.689	0.792	1	0.235	0.946	0.997	0.931	0.738
rs16842626	4.843E-08	0.0358426	0.00657	0.0382638	0.00881	8.87575E-08	0.68269	0.856389	0.001153	0.005397	0.00361	0.04704	0.17531	0.010526	0.737	0.765	0.998	0.993	0.987	0.874	0.908	0.957
rs6688481	4.843E-08	0.0358426	0.00657	0.0382638	0.00881	8.87575E-08	0.68269	0.856389	0.001153	0.005397	0.00361	0.04704	0.17531	0.010526	0.737	0.765	0.998	0.993	0.987	0.874	0.908	0.957
rs1510136	4.8529E-08	-0.034261	0.00628	-0.034694	0.011052	5.51472E-08	0.51012	0.701892	0.007137	1.57E-05	0.481575	0.00699	0.00183	0.536627	0.774	0.639	0.966	1	0.363	0.962	0.977	0.766
rs2179918	4.8533E-08	-0.0348	0.00638	-0.0348	0.006378	8.89039E-08	0.51975	0.890806	0.000496	0.020146	0.295466	0.00018	0.75805	0.738614	0.635	0.735	0.999	0.97	0.823	0.999	0.714	0.752
rs10567965	4.8535E-08	0.0287308	0.00527	0.0340217	0.008002	2.80195E-08	0.43501	0.333564	0.046746	7.71E-06	0.005967	0.07296	0.06342	0.234434	0.759	0.789	0.562	1	0.981	0.496	0.91	0.819
rs887200	4.8548E-08	0.0381157	0.00699	0.039686	0.010125	8.89256E-08	0.34217	0.715052	0.004	0.0003	0.002005	0.01505	0.50052	0.151744	0.844	0.703	0.99	0.999	0.987	0.952	0.542	0.886
rs10876930	4.8574E-08	0.0278572	0.00511	0.0278572	0.005105	8.8963E-08	0.4715	0.267943	0.001585	0.041722	0.360251	0.00184	0.06532	0.020708	0.721	0.887	0.998	0.967	0.865	0.997	0.945	0.949
rs10647749	4.8596E-08	-0.02892	0.0053	-0.029244	0.005456	8.89943E-08	0.06666	0.038876	0.026764	0.016209	0.007764	0.01127	0.09949	0.121373	0.946	0.952	0.968	0.989	0.987	0.986	0.952	0.938
rs17031574	4.861E-08	-0.032909	0.00603	-0.032909	0.006031	8.90144E-08	0.37242	0.681927	0.005552	0.004845	0.002213	0.00638	0.93672	0.15699	0.871	0.834	0.992	0.994	0.989	0.99	0.727	0.908
rs7159716	4.8616E-08	0.0384954	0.00706	0.0384954	0.007055	8.9023E-08	0.30932	0.272182	0.001893	0.093631	0.129274	0.00053	0.08011	0.674942	0.879	0.884	0.997	0.93	0.928	0.999	0.938	0.741
rs12457398	4.8622E-08	0.0536211	0.00983	0.0600099	0.014208	7.03846E-08	0.94835	0.936534	0.001038	0.000825	0.037545	0.15967	0.00523	0.038489	0.704	0.724	0.995	0.998	0.953	0.456	0.977	0.926
rs75594993	4.8771E-08	-0.030287	0.00555	-0.030287	0.005551	8.92434E-08	0.21373	0.989509	0.001967	0.011821	0.231376	0.01227	0.02104	0.073081	0.909	0.823	0.998	0.99	0.913	0.983	0.97	0.938
rs2301225	4.8779E-08	-0.034621	0.00635	-0.034621	0.006346	8.92544E-08	0.5748	0.632335	0.00068	0.021099	0.28163	0.00023	0.71598	0.65362	0.668	0.79	0.998	0.972	0.843	0.999	0.744	0.783
rs1656368	4.8788E-08	-0.028724	0.00527	-0.028724	0.005265	8.92682E-08	0.04889	0.592717	0.006831	0.092437	0.247955	0.00019	0.02673	0.523753	0.93	0.74	0.99	0.929	0.892	1	0.96	0.85
rs6780570	4.8817E-08	0.0430388	0.00789	0.0430388	0.007889	8.93083E-08	0.31677	0.223706	0.042277	0.025468	0.001063	0.00078	0.36393	0.364989	0.891	0.903	0.927	0.98	0.992	0.999	0.883	0.885
rs4659941	4.8861E-08	0.0288876	0.0053	0.0288876	0.005295	8.93715E-08	0.85996	0.410088	0.01655	0.027276	0.242978	0.00024	0.06403	0.12092	0.827	0.877	0.977	0.979	0.904	1	0.949	0.922
rs114398824	4.8864E-08	0.0500313	0.00917	0.0500313	0.009171	8.93756E-08	0.63361	0.272014	0.036291	0.062476	0.38381	2.9E-05	0.01012	0.1448	0.728	0.876	0.923	0.943	0.843	1	0.97	0.903
rs10959465	4.8874E-08	0.0300248	0.0055	0.0300889	0.005905	8.93813E-08	0.51896	0.981815	1.61E-05	0.071643	0.158801	0.02973	0.02847	0.064424	0.695	0.773	1	0.93	0.905	0.914	0.955	0.92
rs8548	4.8883E-08	0.028128	0.00516	0.0281779	0.005216	8.94025E-08	0.75765	0.067986	0.000252	0.01208	0.449505	0.03495	0.00646	0.2604	0.759	0.924	0.999	0.987	0.833	0.916	0.977	0.888
rs111468020	4.8892E-08	-0.067781	0.01242	-0.067781	0.012425	8.94151E-08	0.59963	0.659358	2.7E-05	0.040372	0.642856	0.00255	0.83752	0.09876	0.789	0.781	1	0.949	0.719	0.994	0.629	0.892
rs1436350	4.8896E-08	0.0430408	0.00789	0.0430408	0.00789	8.94216E-08	0.29799	0.222781	0.040621	0.029648	0.001059	0.00074	0.36316	0.363077	0.894	0.904	0.931	0.977	0.992	0.999	0.884	0.886
rs12445454	4.892E-08	-0.067784	0.01243	-0.067784	0.012426	8.94558E-08	0.59902	0.659783	2.72E-05	0.040082	0.642543	0.00256	0.83777	0.09873	0.789	0.781	1	0.95	0.719	0.994	0.629	0.892
rs118000330	4.8931E-08	-0.065029	0.01192	-0.065029	0.011921	8.9471E-08	0.30942	0.400973	1.98E-05	0.053119	0.58205	0.00381	0.76332	0.163557	0.845	0.829	1	0.939	0.75	0.991	0.623	0.879
rs3117245	4.8957E-08	-0.034792	0.00638	-0.034792	0.006378	8.95082E-08	0.51781	0.886717	0.000507	0.020032	0.294052	0.00018	0.75879	0.737726	0.635	0.736	0.999	0.97	0.824	0.999	0.714	0.752
rs8039011	4.8964E-08	0.0278869	0.00511	0.0281943	0.006299	8.95173E-08	0.00789	0.551622	0.00016	0.160874	0.139118	0.00595	0.03755	0.433794	0.952	0.839	1	0.87	0.92	0.989	0.953	0.674
rs113383307	4.8968E-08	0.0334911	0.00614	0.0363316	0.008687	8.95235E-08	0.00658	0.693408	0.002544	0.01255	0.001014	0.02017	0.873	0.343708	0.96	0.834	0.996	0.987	0.992	0.959	0.716	0.878
rs2295261	4.9001E-08	0.0289839	0.00531	0.0289839	0.005313	8.95704E-08	0.60742	0.568411	0.002003	0.00065	0.080677	0.00284	0.82399	0.350693	0.687	0.809	0.996	0.998	0.929	0.994	0.647	0.843
rs1030320	4.901E-08	0.0354197	0.00649	0.0354197	0.006493	8.95826E-08	0.33129	0.00881	0.00118	0.044621	0.022379	0.00793	0.278	0.810105	0.889	0.957	0.999	0.969	0.975	0.989	0.9	0.781
rs144210466	4.9019E-08	0.0526089	0.00964	0.0545687	0.013107	8.9052E-08	0.96632	0.036139	0.093462	0.003735	0.911385	6.9E-05	0.02432	0.088793	0.721	0.915	0.677	0.992	0.544	1	0.951	0.896
rs2150132	4.9025E-08	0.0319461	0.00586	0.0319461	0.005857	8.96048E-08	0.20087	0.954413	0.003022	0.128424	0.031391	0.00175	0.07097	0.121787	0.909	0.823	0.997	0.918	0.97	0.998	0.949	0.925
rs59882354	4.9026E-08	0.0358257	0.00657	0.0382428	0.008811	8.96054E-08	0.68053	0.856339	0.001154	0.005486	0.003601	0.04699	0.17531	0.010525	0.737	0.765	0.998	0.993	0.987	0.874	0.908	0.957
rs588760	4.9048E-08	-0.032773	0.00601	-0.032773	0.006008	8.96371E-08	0.45238	0.726514	0.017018	0.018591	0.000856	0.00185	0.45163	0.24597	0.872	0.841	0.976	0.984	0.993	0.998	0.865	0.9
rs112895793	4.9073E-08	0.076055	0.01394	0.076055	0.013943	8.96727E-08	0.94872	0.06988	0.010265	0.006129	0.264058	0.00033	0.24281	0.982818	0.783	0.919	0.985	0.992	0.884	0.999	0.892	0.78
rs7652261	4.9118E-08	-0.040432	0.00741	-0.041182	0.008589	8.97366E-08	0.09505	0.634262	0.000179	0.500017	0.019757	0.007	0.00631	0.777231	0.903	0.808	1	0.584	0.969	0.979	0.973	0.781
rs117002164	4.9122E-08	0.0819856	0.01503	0.0833444	0.022976	8.97425E-08	0.32111	0.017329	0.003175	0.019218	0.082555	0.001	0.63778	0.012362	0.643	0.936	0.995	0.979	0.935	0.998	0.616	0.947
rs80006580	4.9129E-08	0.0412763	0.00757	0.0412763	0.007567	8.97519E-08	0.24383	0.813143	0.010786	0.000106	0.230134	0.00778	0.0404	0.697929	0.885	0.813	0.983	0.999	0.894	0.986	0.952	0.738
rs141167003	4.917E-08	-0.080611	0.01478	-0.080611	0.014779	8.98098E-08	0.63881	0.879472	0.001548	0.012909	0.141074	0.00393	0.11711	0.160299	0.847	0.793	0.998	0.988	0.93	0.995	0.932	0.912
rs35153382	4.9183E-08	0.0344529	0.00632	0.0344529	0.006317	8.98292E-08	0.23622	0.122176	0.004417	0.007025	0.077188	0.01208	0.3801	0.05284	0.912	0.928	0.996	0.994	0.958	0.985	0.894	0.947
rs548492444	4.9195E-08	-0.080792	0.01481	-0.080792	0.014813	8.98462E-08	0.02589	0.259595	0.002434	0.005227	0.104497	0.02423	0.5097	0.052793	0.953	0.906	0.997	0.994	0.949	0.961	0.868	0.947
rs142264107	4.9201E-08	-0.034689	0.00636	-0.039689	0.010148	8.92192E-08	0.07114	0.236533	0.06593	0.000401	0.08857	0.00495	0.00168	0.37096	0.921	0.883	0.826	0.999	0.937	0.98	0.984	0.646
rs33984374	4.9207E-08	0.0311431	0.00571	0.0313974	0.00605	6.93094E-08	0.89652	0.561386	0.000124	0.000123	0.042909	0.12898	0.70328	0.396067	0.675	0.74	0.999	0.999	0.932	0.455	0.653	0.774
rs17178460	4.9222E-08	0.0334958	0.00614	0.0363366	0.0087	8.98849E-08	0.00665	0.703257	0.002547	0.01265	0.000991	0.02004	0.87086	0.343706	0.959	0.833	0.996	0.987	0.992	0.959	0.715	0.877
rs284999	4.9227E-08	-0.029573	0.00542	-0.029573	0.005422	8.98913E-08	0.04136	0.100109	0.027569	0.147006	0.126323	0.00023	0.1988	0.033874	0.945	0.93	0.96	0.91	0.942	1	0.923	0.952
rs174594	4.9263E-08	-0.027806	0.0051	-0.029233	0.007412	8.99425E-08	0.18569	0.509848	0.01984	0.166591	7.68E-05	0.00024	0.39622	0.308153	0.885	0.696	0.954	0.853	0.996	0.999	0.844	0.865
rs245491	4.9283E-08	0.0274458	0.00503	0.0278896	0.005443	8.79491E-08	0.2549	0.081457	6.03E-05	0.348733	0.011646	0.04036	0.04644	0.237854	0.878	0.916	1	0.698	0.978	0.852	0.949	0.883
rs40465	4.9289E-08	0.0301345	0.00553	0.0304702	0.006356	8.99787E-08	0.38699	0.002517	0.012335	0.144217	0.033004	0.00016	0.83246	0.463171	0.87	0.965	0.98	0.893	0.966	1	0.778	0.86
rs62375325	4.9294E-08	-0.040596	0.00744	-0.040596	0.007444	8.99868E-08	0.2794	0.414276	0.000151	0.031665	0.113471	0.00652	0.41281	0.14526	0.878	0.696	1	0.972	0.93	0.989	0.854	0.905
rs12201124	4.9335E-08	-0.0835	0.01531	-0.0835	0.015311	9.0045E-08	0.82287	0.413398	0.088478	0.006857	0.04572	0.00028	0.04274	0.062022	0.756	0.859	0.775	0.991	0.959	0.999	0.953	0.93
rs72917027	4.939E-08	0.0301795	0.00553	0.0301795	0.005534	8.92297E-08	0.57719	0.7623	3.33E-05	0.012835	0.018117	0.07403	0.25195	0.566721	0.815	0.79	1	0.983	0.97	0.761	0.871	0.814
rs1164598	4.9394E-08	0.027425	0.00503	0.027425	0.005029	9.01282E-08	0.78754	0.862148	0.002674	0.005287	0.793799	0.00045	0.14899	0.120609	0.72	0.733	0.995	0.991	0.695	0.999	0.898	0.893
rs112814047	4.9461E-08	-0.042061	0.00771	-0.042067	0.009208	9.02236E-08	0.19073	0.750734	0.000368	0.120787	0.102833	0.00255	0.00498	0.228578	0.882	0.799	0.999	0.891	0.927	0.995	0.974	0.589
rs1475425	4.9479E-08	0.0358235	0.00657	0.038216	0.008791	9.0249E-08	0.68384	0.855259	0.00115	0.005436	0.003682	0.04704	0.17805	0.01055	0.738	0.765	0.998	0.993	0.987	0.874	0.907	0.957

Table S3

rs111908883	4.9483E-08	-0.067763	0.01243	-0.067763	0.012427	9.02546E-08	0.59757	0.659109	2.73E-05	0.040223	0.645088	0.00256	0.83658	0.098786	0.789	0.781	1	0.949	0.718	0.994	0.628	0.892
rs62300160	4.9486E-08	0.0869501	0.01594	0.0869501	0.015945	9.02591E-08	0.61635	0.917613	7.42E-05	0.158527	0.715408	0.0005	0.70112	0.048664	0.782	0.739	1	0.835	0.696	0.999	0.735	0.904
rs1556015	4.9492E-08	0.0358184	0.00657	0.0383414	0.008875	9.02676E-08	0.68087	0.858213	0.001181	0.005422	0.003483	0.04863	0.16599	0.01046	0.736	0.765	0.998	0.993	0.987	0.869	0.91	0.957
rs61924982	4.9571E-08	-0.031702	0.00581	-0.034196	0.010143	9.03791E-08	0.00886	0.301786	0.005263	0.393587	0.260445	0.00015	0.00089	0.314853	0.941	0.842	0.985	0.619	0.847	0.999	0.984	0.572
rs2399039	4.9664E-08	0.0430224	0.00789	0.0430224	0.00789	9.05108E-08	0.29899	0.225359	0.039877	0.030115	0.001083	0.00074	0.36497	0.365154	0.893	0.903	0.932	0.977	0.992	0.999	0.884	0.886
rs10638209	4.9715E-08	0.0302789	0.00555	0.0302789	0.005553	9.0583E-08	0.39431	0.177295	0.024646	0.000519	0.239792	0.00083	0.16912	0.300478	0.686	0.893	0.952	0.998	0.887	0.999	0.908	0.874
rs7798107	4.9725E-08	0.0302787	0.00555	0.0302787	0.005553	9.05966E-08	0.39431	0.177298	0.024653	0.000519	0.239794	0.00083	0.16913	0.300484	0.686	0.893	0.952	0.998	0.887	0.999	0.908	0.874
rs67475806	4.9728E-08	0.035819	0.00657	0.0383221	0.008853	9.06018E-08	0.6827	0.857526	0.001202	0.005398	0.003745	0.04808	0.16269	0.010088	0.738	0.766	0.998	0.993	0.987	0.871	0.911	0.958
rs1510137	4.975E-08	-0.034201	0.00627	-0.034774	0.011016	5.42401E-08	0.52464	0.726883	0.007397	1.2E-05	0.53213	0.00821	0.00187	0.577465	0.771	0.645	0.961	1	0.387	0.952	0.977	0.758
rs6817783	4.9782E-08	-0.043502	0.00798	-0.043502	0.007979	9.06776E-08	0.7335	0.412024	0.000249	0.268947	0.031822	0.00045	0.44079	0.562394	0.698	0.825	0.999	0.742	0.954	0.999	0.809	0.8
rs236194	4.9797E-08	-0.053243	0.00977	-0.055894	0.013574	9.06996E-08	0.36554	0.000917	0.015724	0.038986	0.228812	0.00044	0.05337	0.626923	0.88	0.969	0.977	0.97	0.905	0.999	0.953	0.746
rs34419965	4.9802E-08	0.0328901	0.00603	0.0328901	0.006033	9.07068E-08	0.74516	0.030104	0.001925	0.003444	0.008951	0.03264	0.17752	0.64626	0.77	0.942	0.997	0.995	0.982	0.932	0.916	0.842
rs2723742	4.9823E-08	-0.027474	0.00504	-0.034003	0.009193	9.07366E-08	0.05853	0.170484	0.02047	0.18495	0.009932	0.00247	4.7E-05	0.581192	0.93	0.903	0.955	0.858	0.98	0.988	0.994	0.722
rs56342917	4.9841E-08	-0.032623	0.00598	-0.041722	0.010994	9.0761E-08	2.7E-05	0.083688	0.083409	0.04848	0.07813	0.00066	0.12685	0.332795	0.986	0.931	0.833	0.962	0.953	0.998	0.935	0.892
rs17598295	4.9863E-08	0.0356261	0.00653	0.0356261	0.006535	9.07925E-08	0.25423	0.697304	0.020456	0.013615	0.001364	0.00159	0.66819	0.238734	0.895	0.842	0.97	0.987	0.991	0.998	0.823	0.899
rs1056387	4.9876E-08	0.0283968	0.00521	0.0283968	0.005209	9.08111E-08	0.50935	0.13064	0.001079	0.000327	0.816903	0.01308	0.08758	0.581522	0.826	0.891	0.998	0.998	0.58	0.966	0.924	0.814
rs59017643	4.9886E-08	0.0334704	0.00614	0.0363092	0.008686	9.08246E-08	0.00654	0.692719	0.002547	0.012845	0.001016	0.02018	0.87361	0.34409	0.96	0.834	0.996	0.987	0.992	0.959	0.716	0.878
rs60350258	4.9901E-08	0.0274667	0.00504	0.0299052	0.008521	9.08465E-08	0.84852	0.111735	0.000194	0.053631	0.081145	0.03341	0.00014	0.299606	0.787	0.901	0.999	0.944	0.936	0.898	0.991	0.616
rs114986280	4.9936E-08	-0.047367	0.00869	-0.047367	0.008689	9.08964E-08	0.52532	0.171029	0.001096	0.007209	0.324022	0.00717	0.26788	0.233499	0.864	0.91	0.999	0.992	0.884	0.99	0.901	0.903
rs147611388	4.9942E-08	0.0459175	0.00842	0.0459175	0.008423	9.09042E-08	0.28894	0.578913	0.000701	0.01195	0.191047	0.00741	0.30193	0.031577	0.886	0.747	0.999	0.988	0.913	0.989	0.888	0.944
rs4521268	4.9981E-08	-0.029808	0.00547	-0.028682	0.006422	9.09588E-08	0.20357	0.073514	0.001106	0.019728	0.194481	9.8E-05	0.88917	0.801019	0.526	0.879	0.997	0.969	0.854	1	0.602	0.654
rs4794003	4.9985E-08	0.0274638	0.00504	0.0299041	0.00852	9.09646E-08	0.84935	0.111611	0.000194	0.053934	0.081027	0.03339	0.00014	0.300573	0.786	0.901	0.999	0.944	0.936	0.898	0.991	0.617
rs12602933	4.9985E-08	0.0274638	0.00504	0.0299041	0.00852	9.09649E-08	0.84935	0.111611	0.000194	0.053934	0.081027	0.03339	0.00014	0.300573	0.786	0.901	0.999	0.944	0.936	0.898	0.991	0.617
rs72927766	4.9988E-08	0.033467	0.00614	0.0363206	0.008698	9.0969E-08	0.00644	0.691552	0.002551	0.012896	0.001016	0.02019	0.87295	0.344436	0.96	0.834	0.996	0.987	0.992	0.959	0.716	0.877
rs113811135	4.9993E-08	0.0334667	0.00614	0.0363156	0.008693	9.09764E-08	0.00648	0.691552	0.002552	0.012857	0.001016	0.0202	0.87294	0.344442	0.96	0.834	0.996	0.987	0.992	0.959	0.716	0.877
rs113360328	4.9995E-08	-0.067746	0.01243	-0.067746	0.012427	9.09787E-08	0.59849	0.661382	2.77E-05	0.0399	0.64793	0.00256	0.8365	0.099259	0.789	0.781	1	0.95	0.717	0.994	0.628	0.891

Table S4

Significant Potential pleiotropic SNPS from our GWAS meta-analysis Results with m-value >= 0.9

RSID	genes	chrom	pos	P_FE	BETA_FE	STD_FE	BETA_RE	STD_RE	P_RE2	P_SUIC	P_ADHD	P_ANX	P_AUD	P_BIP	P_DEP	P_GAD	P_PTSD	M_SUIC	M_ADHD	M_ANX	M_AUD	M_BIP	M_DEP	M_GAD	M_PTSD
rs12517895	PRR16	5	120759853	1.7E-19	-0.04567	0.00506	-0.04567	0.00506	4.6E-19	0.1349	0.37026	5.2E-06	6.9E-05	0.014	6.9E-09	0.1498	0.25869	0.946	0.902	1	1	0.991	1	0.941	0.921
rs9467714	BTN3A2	6	26340557	7E-16	-0.0854	0.01058	-0.0854	0.01058	1.7E-15	0.3989	0.20203	3.2E-05	0.0005	0.025	8.7E-06	0.0697	0.00097	0.907	0.937	1	1	0.986	1	0.97	0.991
rs12174489	POM121L2	6	27320021	4.5E-14	0.044547	0.0059	0.044547	0.0059	1E-13	0.3752	0.04137	6E-06	0.06152	0.007	4.2E-05	0.0032	0.35485	0.903	0.963	1	0.933	0.993	1	0.993	0.905
rs71557344	ZNF322	6	26637496	7.8E-14	-0.09276	0.01241	-0.09276	0.01241	1.8E-13	0.3292	0.31453	0.00015	0.00018	0.16	6.6E-05	0.0478	0.00195	0.912	0.914	1	1	0.938	1	0.974	0.987
rs34573979	ZNF184	6	27512747	1.3E-13	-0.08931	0.01206	-0.08931	0.01206	2.9E-13	0.116	0.42207	0.00031	0.00039	0.076	7.1E-05	0.0618	0.00138	0.949	0.904	1	1	0.968	1	0.971	0.988
rs58616630	ZNF184	6	27506936	1.3E-13	-0.0893	0.01206	-0.0893	0.01206	2.9E-13	0.1162	0.42226	0.00031	0.00039	0.076	7.1E-05	0.0619	0.00138	0.949	0.904	1	1	0.968	1	0.971	0.988
rs71557378	HIST1H2BJ	6	26935806	1.5E-13	-0.08859	0.01199	-0.08859	0.01199	3.4E-13	0.4276	0.33511	0.00039	0.00039	0.068	3.9E-05	0.0724	0.00097	0.9	0.912	0.999	1	0.969	1	0.967	0.989
rs35869525	HIST1H2BJ	6	26978908	2E-13	-0.08807	0.01198	-0.08807	0.01198	4.4E-13	0.4266	0.34504	0.00039	0.00042	0.07	4.4E-05	0.0758	0.00104	0.9	0.911	0.999	1	0.968	1	0.965	0.988
rs34816374	HIST1H2BJ	6	26981893	2E-13	-0.08807	0.01198	-0.08807	0.01198	4.4E-13	0.4268	0.34504	0.00039	0.00042	0.07	4.4E-05	0.0758	0.00105	0.9	0.911	0.999	1	0.968	1	0.965	0.988
rs66488313	ZNF322	6	26631340	2E-13	-0.08923	0.01214	-0.08923	0.01214	4.4E-13	0.3363	0.35597	0.00036	0.00013	0.131	6.5E-05	0.0801	0.00172	0.911	0.908	0.999	1	0.947	1	0.964	0.986
rs35173303	HIST1H2BJ	6	26967600	2E-13	-0.08806	0.01198	-0.08806	0.01198	4.4E-13	0.4255	0.34505	0.00039	0.00042	0.07	4.4E-05	0.0756	0.00104	0.9	0.911	0.999	1	0.968	1	0.965	0.988
rs80264589	HIST1H2BJ	6	26959823	2E-13	-0.08806	0.01198	-0.08806	0.01198	4.4E-13	0.4255	0.34506	0.00039	0.00043	0.07	4.4E-05	0.0756	0.00104	0.9	0.911	0.999	1	0.968	1	0.965	0.988
rs71557395	HIST1H2BJ	6	26956578	2E-13	-0.08806	0.01198	-0.08806	0.01198	4.4E-13	0.4255	0.34505	0.00039	0.00043	0.07	4.4E-05	0.0756	0.00104	0.9	0.911	0.999	1	0.968	1	0.965	0.988
rs34969311	ABT1	6	26610485	2E-13	-0.08917	0.01214	-0.08917	0.01214	4.6E-13	0.3362	0.35597	0.00036	0.00014	0.131	6.5E-05	0.08	0.00172	0.911	0.908	0.999	1	0.947	1	0.964	0.986
rs67777156	ZNF322	6	26633483	2.1E-13	-0.08914	0.01214	-0.08914	0.01214	4.7E-13	0.3365	0.35597	0.00036	0.00014	0.131	6.5E-05	0.0801	0.00172	0.911	0.908	0.999	1	0.947	1	0.964	0.986
rs57440165	ZNF322	6	26875738	2.1E-13	-0.08911	0.01214	-0.08911	0.01214	4.7E-13	0.3852	0.38437	0.00042	0.00018	0.087	5.6E-05	0.08	0.00188	0.904	0.904	0.999	1	0.962	1	0.964	0.986
rs67859638	ZNF391	6	27390199	2.2E-13	-0.08823	0.01203	-0.08823	0.01203	4.9E-13	0.0844	0.38059	0.00029	0.00044	0.093	0.00014	0.038	0.00253	0.955	0.91	1	1	0.963	1	0.978	0.986
rs35400317	ABT1	6	26593047	2.3E-13	-0.089	0.01214	-0.089	0.01214	5.1E-13	0.336	0.34926	0.00038	0.00013	0.137	6.7E-05	0.0812	0.00174	0.91	0.909	0.999	1	0.945	1	0.963	0.986
rs13201782	ZNF322	6	26650825	2.3E-13	-0.08903	0.01215	-0.08903	0.01215	5.1E-13	0.3363	0.35155	0.0004	0.00014	0.126	6.4E-05	0.0803	0.00179	0.911	0.909	0.999	1	0.949	1	0.964	0.986
rs13198716	ABT1	6	26581807	2.5E-13	-0.08875	0.01213	-0.08875	0.01213	5.6E-13	0.3775	0.38597	0.00024	0.00014	0.12	0.0001	0.0714	0.00292	0.904	0.903	1	1	0.951	1	0.966	0.984
rs10484399	ZNF184	6	27566749	2.9E-13	-0.08743	0.01198	-0.08743	0.01198	6.4E-13	0.1527	0.43458	0.00036	0.00042	0.1	6.7E-05	0.073	0.00217	0.94	0.9	1	1	0.959	1	0.967	0.986
rs144022448	ZNF184	6	27488273	3.2E-13	-0.08602	0.01181	-0.08602	0.01181	7.2E-13	0.1045	0.28636	0.00085	0.00044	0.032	8.5E-05	0.1011	0.00206	0.951	0.924	0.999	1	0.983	1	0.961	0.987
rs34864796	ZNF184	6	27492144	3.2E-13	-0.08602	0.01181	-0.08602	0.01181	7.2E-13	0.1045	0.28636	0.00085	0.00044	0.032	8.5E-05	0.1011	0.00206	0.951	0.924	0.999	1	0.983	1	0.961	0.987
rs67240003	ZNF184	6	27475423	3.2E-13	-0.08602	0.01181	-0.08602	0.01181	7.2E-13	0.1045	0.28636	0.00085	0.00044	0.032	8.5E-05	0.1011	0.00206	0.951	0.924	0.999	1	0.983	1	0.961	0.987
rs66785117	ZNF184	6	27555519	3.4E-13	-0.08717	0.01198	-0.08717	0.01198	7.5E-13	0.1558	0.43508	0.00039	0.00043	0.103	6.5E-05	0.0779	0.00216	0.94	0.9	0.999	1	0.958	1	0.965	0.986
rs35491132	ZNF184	6	27559448	3.4E-13	-0.08715	0.01198	-0.08715	0.01198	7.6E-13	0.1557	0.43376	0.00039	0.00043	0.103	6.6E-05	0.0777	0.00216	0.94	0.9	0.999	1	0.958	1	0.965	0.986
rs35337219	ZNF184	6	27574503	3.5E-13	-0.08711	0.01198	-0.08711	0.01198	7.7E-13	0.1526	0.43232	0.00039	0.00044	0.105	6.7E-05	0.0777	0.00216	0.94	0.9	0.999	1	0.958	1	0.965	0.986
rs3734537	BTN3A1	6	26422399	3.5E-13	-0.07133	0.00981	-0.07208	0.01053	7.8E-13	0.4093	0.19414	0.00013	0.01166	0.038	5.4E-05	0.0254	0.00074	0.905	0.935	1	0.99	0.98	1	0.982	0.989
rs2362250	SMYD3	1	246115211	3.6E-13	-0.05828	0.00801	-0.05828	0.00801	7.5E-13	0.1669	0.14706	0.0002	1.1E-06	0.108	0.00172	0.0659	0.21671	0.937	0.94	1	1	0.955	0.995	0.968	0.93
rs7749305	ZNF184	6	27478787	3.7E-13	-0.08531	0.01174	-0.08531	0.01174	8.2E-13	0.1488	0.29145	0.00075	0.00033	0.023	0.00012	0.1236	0.00211	0.943	0.922	0.999	1	0.986	1	0.955	0.986
rs12065115	SMYD3	1	246133388	4.3E-13	-0.04446	0.00614	-0.04446	0.00614	9.5E-13	0.1112	0.15052	7.9E-06	0.00065	0.017	0.00651	0.0259	0.06836	0.951	0.943	1	0.999	0.989	0.969	0.982	0.962
rs12060229	SMYD3	1	246133364	4.3E-13	-0.04446	0.00614	-0.04446	0.00614	9.5E-13	0.1112	0.15052	7.9E-06	0.00065	0.017	0.00652	0.0259	0.06835	0.951	0.943	1	0.999	0.989	0.969	0.982	0.962
rs71206067	HIST1H2BJ	6	26935600	4.3E-13	-0.08765	0.0121	-0.08765	0.0121	9.5E-13	0.3354	0.39667	0.00044	0.00021	0.101	7.9E-05	0.0934	0.00199	0.911	0.902	0.999	1	0.957	1	0.96	0.985
rs11192193	SORCS3	10	104809495	4.6E-13	-0.0395	0.00546	-0.0395	0.00546	1E-12	0.3549	0.06217	0.00066	0.04652	0.013	4.2E-06	0.0064	0.11356	0.912	0.959	0.999	0.962	0.99	1	0.991	0.95
rs72843784	BTN1A1	6	26498530	4.6E-13	-0.08775	0.01213	-0.08775	0.01213	1E-12	0.4036	0.39658	0.00029	0.00012	0.121	0.00013	0.0913	0.00306	0.9	0.9	1	1	0.95	1	0.959	0.983
rs35872411	PITRM1	10	3260893	5.7E-13	0.040472	0.00562	0.046417	0.00877	1.3E-12	0.2005	0.00111	0.00158	0.05131	0.035	1.8E-05	0.0045	0.00865	0.938	0.989	0.997	0.96	0.983	1	0.993	0.983
rs66975207	HIST1H2BJ	6	26974367	5.9E-13	-0.08707	0.01209	-0.08707	0.01209	1.3E-12	0.3346	0.40879	0.00044	0.00023	0.104	9E-05	0.0979	0.00214	0.91	0.9	0.999	1	0.956	1	0.958	0.985
rs6904596	ZNF184	6	27523520	6E-13	-0.08446	0.01173	-0.08446	0.01173	1.3E-12	0.1401	0.303	0.00091	0.00053	0.04	8.1E-05	0.0997	0.00301	0.944	0.921	0.999	0.999	0.98	1	0.961	0.985
rs34546498	HIST1H2BJ	6	26993501	6E-13	-0.08704	0.01209	-0.08704	0.01209	1.3E-12	0.3361	0.40875	0.00044	0.00023	0.104	9E-05	0.098	0.00215	0.91	0.9	0.999	1	0.956	1	0.958	0.985
rs374577630	HIST1H2BJ	6	26947660	6.4E-13	-0.08695	0.01209	-0.08695	0.01209	1.4E-12	0.3288	0.4038	0.00044	0.00029	0.103	8.5E-05	0.0961	0.00208	0.911	0.901	0.999	1	0.957	1	0.959	0.985
rs9295778	ZBED9	6	28716406	6.6E-13	0.078095	0.01087	0.078095	0.01087	1.5E-12	0.1571	0.29569	4.8E-05	0.00239	0.243	7.3E-05	0.1198	0.01303	0.935	0.914	1	0.998	0.909	1	0.951	0.977
rs6426278	SMYD3	1	246120861	6.8E-13	-0.04391	0.00611	-0.04391	0.00611	1.5E-12	0.1231	0.15378	1.1E-05	0.00122	0.012	0.00508	0.0412	0.05254	0.949	0.943	1	0.999	0.991	0.981	0.977	0.966
rs6456834	ZBED9	6	28732575	7.6E-13	0.077825	0.01086	0.077825	0.01086	1.7E-12	0.1564	0.2968	5.3E-05	0.00262	0.267	6.8E-05	0.1072	0.01311	0.935	0.913	1	0.998	0.901	1	0.954	0.976
rs75782365	BTN3A1	6	26408323	7.7E-13	-0.08622	0.01203	-0.08622	0.01203	1.7E-12	0.3979	0.26658	0.00083	0.00011	0.106	0.00011	0.0949	0.00176	0.903	0.921	0.999	1	0.956	1	0.959	0.986
rs34661691	HIST1H2BE	6	26173250	8E-13	-0.08198	0.01145	-0.0852	0.0138	1.7E-12	0.2407	0.34445	0.00036	0.00063	0.052	0.00023	0.117	0.00028	0.927	0.913	1	0.999	0.975	1	0.955	0.991
rs41266839	BTN3A1	6	26409662	8E-13	-0.08616	0.01203	-0.08616	0.01203	1.7E-12	0.3982	0.26666	0.00084	0.00012	0.106	0.00012	0.0952	0.00176	0.903	0.921	0.999	1	0.956	1	0.959	0.986
rs2072803	BTN2A2	6	26392287	8E-13	-0.06308	0.00881	-0.06308	0.00881	1.7E-12	0.4286	0.21306	7.8E-05	0.00384	0.024	0.00042	0.0369	0.00479	0.904	0.932	1	0.997	0.986	0.999	0.978	0.983
rs9468413	ZBED9	6	28721895	8.1E-13	0.077723	0.01085	0.077723	0.01085	1.8E-12	0.154	0.2923	5.1E-05	0.00237	0.267	7.7E-05	0.1203	0.01278	0.935	0.914	1	0.998	0.901	1	0.95	0.976
rs2072806	BTN2A2	6	26384865	8.2E-13	-0.0632	0.00883	-0.0632	0.00883	1.8E-12	0.381	0.19525	6.8E-05	0.00584	0.022	0.00034	0.0398	0.00719	0.91	0.935	1	0.996	0.986	1	0.977	0.981
rs199771699	AP1G1	16	71731534	8.3E-13	0.048382	0.00676	0.048382	0.00676	1.8E-12	0.1889	0.01915	0.00122	0.06803	0.013	8.5E-07	0.0575	0.21264	0.933	0.971	0.998	0.939	0.99	1	0.97	0.931
rs9379875	BTN3A3	6	26444504	8.3E-13	-0.06336	0.00885	-0.06336	0.00885	1.8E-12	0.4172	0.24654	0.0001	0.01152	0.016	0.00017	0.0308	0.00498	0.905	0.927	1	0.992	0.989	1	0.98	0.983
rs35942482	BTN3A3	6	26444710	8.3E-13	-0.06336	0.00885	-0.06336	0.00885	1.8E-12	0.4172	0.24654	0.0001	0.01152	0.016	0.00017	0.0308	0.00498	0.905	0.927	1	0.992	0.989	1	0.98	0.983

Table S4

rs35706035	PHLPP2	16	71724911	8.4E-13	0.048372	0.00676	0.048372	0.00676	1.8E-12	0.1891	0.01913	0.00121	0.06864	0.013	8.6E-07	0.0572	0.21282	0.933	0.971	0.998	0.939	0.99	1	0.97	0.931
rs13214169	SLC17A3	6	25890428	8.5E-13	-0.07944	0.0111	-0.08598	0.0148	1.8E-12	0.3448	0.37476	0.00014	4.3E-05	0.012	0.00431	0.0841	0.00138	0.911	0.907	1	1	0.99	0.984	0.963	0.987
rs9379873	BTN3A1	6	26402489	8.6E-13	-0.06319	0.00884	-0.06319	0.00884	1.9E-12	0.3727	0.23153	6.8E-05	0.00747	0.028	0.00028	0.027	0.00757	0.911	0.93	1	0.995	0.984	1	0.981	0.981
rs9393718	BTN3A1	6	26407254	8.8E-13	-0.06327	0.00885	-0.06327	0.00885	1.9E-12	0.4092	0.24107	9.8E-05	0.01165	0.018	0.00018	0.0291	0.00476	0.906	0.928	1	0.992	0.988	1	0.98	0.983
rs9358939	BTN3A1	6	26416559	8.9E-13	-0.06326	0.00885	-0.06326	0.00885	1.9E-12	0.4093	0.24106	9.8E-05	0.01166	0.018	0.00018	0.0291	0.00476	0.906	0.928	1	0.992	0.987	1	0.98	0.983
rs1796520	BTN3A1	6	26410572	9.2E-13	-0.03616	0.00506	-0.03616	0.00506	2E-12	0.1876	0.11957	3.6E-05	0.00051	0.268	0.00024	0.1323	0.09595	0.929	0.941	1	0.999	0.9	1	0.947	0.949
rs742090	BTN3A1	6	26415409	9.5E-13	-0.03614	0.00506	-0.03614	0.00506	2.1E-12	0.1809	0.1061	3.5E-05	0.0007	0.27	0.00022	0.1302	0.09196	0.931	0.944	1	0.999	0.9	1	0.948	0.95
rs9358938	BTN2A2	6	26387318	9.6E-13	-0.06292	0.00882	-0.06292	0.00882	2.1E-12	0.3804	0.19152	6.8E-05	0.00583	0.024	0.00034	0.0445	0.00781	0.91	0.936	1	0.996	0.985	1	0.975	0.981
rs11642529	AP1G1	16	71765856	1E-12	0.04848	0.0068	0.04848	0.0068	2.2E-12	0.2259	0.01915	0.0011	0.04908	0.016	1.2E-06	0.0792	0.20631	0.928	0.971	0.998	0.96	0.988	1	0.964	0.932
rs9366656	BTN3A3	6	26434402	1E-12	-0.06309	0.00885	-0.06309	0.00885	2.2E-12	0.3872	0.24654	0.0001	0.01463	0.016	0.00017	0.0308	0.00498	0.909	0.927	1	0.99	0.988	1	0.98	0.983
rs11642526	AP1G1	16	71738424	1E-12	0.048442	0.0068	0.048442	0.0068	2.3E-12	0.212	0.01903	0.00113	0.05209	0.016	1.2E-06	0.0805	0.19125	0.93	0.971	0.998	0.957	0.988	1	0.963	0.935
rs11305764	PITRM1	10	3247877	1E-12	0.036658	0.00515	0.036658	0.00515	2.3E-12	0.0719	0.12908	0.00078	0.02412	0.009	4.3E-05	0.0468	0.00743	0.96	0.949	0.999	0.984	0.993	1	0.976	0.983
rs111481406	AP1G1	16	71755707	1E-12	0.048442	0.0068	0.048442	0.0068	2.3E-12	0.2276	0.01905	0.00112	0.04956	0.016	1.3E-06	0.0802	0.18976	0.928	0.971	0.998	0.96	0.988	1	0.963	0.935
rs4880603	PITRM1	10	3263952	1.1E-12	0.03996	0.00561	0.04618	0.00886	2.3E-12	0.1922	0.00093	0.00221	0.05285	0.036	2.1E-05	0.005	0.0099	0.939	0.989	0.996	0.96	0.982	1	0.992	0.982
rs2393667	BTN3A1	6	26421117	1.1E-12	-0.063	0.00885	-0.063	0.00885	2.4E-12	0.3794	0.24106	9.8E-05	0.01478	0.018	0.00018	0.0291	0.00476	0.91	0.928	1	0.99	0.987	1	0.98	0.983
rs34273322	BTN3A1	6	26415181	1.1E-12	-0.063	0.00885	-0.063	0.00885	2.4E-12	0.3795	0.24106	9.8E-05	0.01479	0.018	0.00018	0.0291	0.00476	0.91	0.928	1	0.99	0.987	1	0.98	0.983
rs35343279	SMYD3	1	246131914	1.2E-12	-0.04358	0.00613	-0.04358	0.00613	2.5E-12	0.1055	0.12613	1.3E-05	0.00092	0.018	0.00839	0.0218	0.07379	0.951	0.947	1	0.999	0.988	0.962	0.983	0.96
rs10209020	MRPL33	2	27758077	1.3E-12	0.039946	0.00563	0.039946	0.00563	2.8E-12	0.0886	0.01285	4.5E-06	0.03258	0.051	0.00029	0.2444	0.17916	0.951	0.974	1	0.975	0.975	1	0.924	0.936
rs7749823	HIST1H2BD	6	26157851	1.3E-12	-0.08148	0.01148	-0.08399	0.01331	2.8E-12	0.2398	0.37906	0.0003	0.00092	0.041	0.00035	0.1195	0.00037	0.927	0.908	1	0.999	0.979	1	0.954	0.99
rs77154381	MRPL33	2	27759252	1.3E-12	-0.03994	0.00563	-0.03994	0.00563	2.8E-12	0.0883	0.01285	4.4E-06	0.03322	0.051	0.00029	0.2443	0.17815	0.951	0.974	1	0.975	0.975	1	0.924	0.937
rs2235251	BTN3A3	6	26431754	1.3E-12	-0.06283	0.00886	-0.06283	0.00886	2.8E-12	0.4173	0.22695	0.00012	0.01153	0.018	0.0002	0.0325	0.00519	0.905	0.93	1	0.992	0.988	1	0.979	0.983
rs56146709	SMYD3	1	246096286	1.3E-12	-0.05685	0.00802	-0.05745	0.00838	2.4E-12	0.1346	0.10995	0.00018	1.3E-06	0.102	0.0055	0.0443	0.36544	0.941	0.945	1	1	0.956	0.978	0.973	0.904
rs7766531	SLC17A3	6	25886349	1.4E-12	-0.07867	0.0111	-0.08532	0.01486	2.9E-12	0.3886	0.35929	0.00016	4.7E-05	0.012	0.00499	0.0849	0.00143	0.905	0.909	1	1	0.99	0.981	0.962	0.987
rs7750960	SLC17A3	6	25886989	1.4E-12	-0.0786	0.0111	-0.0853	0.01489	3.1E-12	0.3829	0.36358	0.00016	4.6E-05	0.012	0.00523	0.0857	0.00144	0.906	0.908	1	1	0.99	0.98	0.962	0.987
rs1416087	SMYD3	1	246074112	1.5E-12	-0.04057	0.00574	-0.04413	0.00741	3.3E-12	0.0199	0.08431	4E-05	0.01076	0.003	0.00635	0.0045	0.1003	0.974	0.957	1	0.993	0.996	0.978	0.992	0.956
rs1416086	SMYD3	1	246074258	1.5E-12	-0.04056	0.00574	-0.04412	0.00742	3.3E-12	0.0195	0.08474	3.8E-05	0.01188	0.003	0.0062	0.0046	0.1003	0.974	0.957	1	0.992	0.996	0.979	0.992	0.956
rs2788006	SMYD3	1	246073492	1.6E-12	-0.04056	0.00574	-0.0443	0.0075	3.4E-12	0.0209	0.08101	3.7E-05	0.01271	0.002	0.00628	0.0043	0.10561	0.974	0.957	1	0.992	0.996	0.978	0.992	0.955
rs13195402	BTN2A1	6	26463347	1.6E-12	-0.08489	0.01202	-0.08489	0.01202	3.5E-12	0.3197	0.28419	0.00136	0.00015	0.104	0.00014	0.0699	0.00244	0.915	0.92	0.998	1	0.958	1	0.967	0.984
rs2787969	SMYD3	1	246070477	1.6E-12	-0.04052	0.00574	-0.04433	0.00752	3.5E-12	0.0207	0.08058	3.9E-05	0.01254	0.002	0.0064	0.0042	0.10507	0.974	0.957	1	0.992	0.996	0.978	0.992	0.955
rs1796521	BTN3A1	6	26421164	1.7E-12	-0.03579	0.00507	-0.03579	0.00507	3.6E-12	0.1924	0.11796	4.2E-05	0.00066	0.265	0.00028	0.1434	0.09841	0.928	0.941	1	0.999	0.902	1	0.944	0.948
rs76520479	PHLPP2	16	71691610	1.7E-12	0.047519	0.00673	0.047519	0.00673	3.6E-12	0.1572	0.02828	0.0015	0.06056	0.024	1.2E-06	0.0629	0.16649	0.939	0.967	0.998	0.95	0.985	1	0.968	0.939
rs35806784	SMYD3	1	246072806	1.7E-12	-0.04049	0.00574	-0.04429	0.00752	3.7E-12	0.0209	0.08077	3.9E-05	0.0127	0.002	0.00643	0.0042	0.1051	0.974	0.957	1	0.992	0.996	0.978	0.992	0.955
rs2788009	SMYD3	1	246075296	1.7E-12	-0.04048	0.00574	-0.04408	0.00743	3.7E-12	0.0197	0.08439	4E-05	0.012	0.003	0.00636	0.0045	0.1003	0.974	0.957	1	0.992	0.996	0.978	0.992	0.956
rs2788008	SMYD3	1	246073545	1.7E-12	-0.04048	0.00574	-0.04428	0.00752	3.7E-12	0.0209	0.08082	4E-05	0.01271	0.002	0.00644	0.0042	0.10512	0.974	0.957	1	0.992	0.996	0.978	0.992	0.955
rs1233578	ZBED9	6	28744470	1.8E-12	-0.0765	0.01086	-0.0765	0.01086	3.9E-12	0.1375	0.28554	7.6E-05	0.0037	0.221	0.00011	0.0949	0.01599	0.94	0.917	1	0.997	0.919	1	0.958	0.975
rs1417998	HIST1H2BD	6	26161791	1.8E-12	-0.08094	0.01149	-0.08431	0.01399	3.9E-12	0.2411	0.37454	0.0003	0.00094	0.05	0.0004	0.1343	0.00027	0.926	0.908	1	0.999	0.975	0.999	0.95	0.991
rs2076030	BTN3A1	6	26426628	1.9E-12	-0.06232	0.00885	-0.06232	0.00885	4.1E-12	0.3795	0.22179	0.00013	0.01479	0.021	0.00021	0.0342	0.00497	0.91	0.931	1	0.99	0.986	1	0.978	0.983
rs13195401	BTN2A1	6	26463346	2.1E-12	-0.08443	0.01202	-0.08443	0.01202	4.5E-12	0.3254	0.29459	0.00105	0.00012	0.119	0.00021	0.0816	0.00258	0.913	0.917	0.998	1	0.952	1	0.963	0.984
rs76473767	MARVELD3	16	71610103	2.2E-12	0.047788	0.00681	0.047788	0.00681	4.7E-12	0.2234	0.01713	0.00188	0.05854	0.011	1.3E-06	0.093	0.21287	0.927	0.971	0.997	0.952	0.99	1	0.959	0.93
rs7526153	SMYD3	1	246133421	2.2E-12	-0.04275	0.00609	-0.04275	0.00609	4.7E-12	0.1084	0.14191	1.6E-05	0.00056	0.018	0.0105	0.0378	0.09927	0.948	0.942	1	0.999	0.987	0.949	0.977	0.953
rs61733127	PHLPP2	16	71649815	2.3E-12	0.047503	0.00677	0.047503	0.00677	5E-12	0.1643	0.02107	0.00212	0.06087	0.013	1.3E-06	0.0918	0.17906	0.937	0.97	0.996	0.95	0.989	1	0.96	0.936
rs6940007	SLC17A2	6	25931729	2.3E-12	-0.07824	0.01116	-0.08519	0.0149	5E-12	0.3301	0.40459	0.00027	0.0001	0.009	0.00438	0.0671	0.00137	0.914	0.904	1	1	0.991	0.986	0.968	0.987
rs6903228	SLC17A2	6	25902819	2.5E-12	-0.07802	0.01114	-0.08479	0.01484	5.4E-12	0.3252	0.39915	0.00028	8.6E-05	0.015	0.00452	0.0582	0.00119	0.915	0.905	1	1	0.989	0.986	0.97	0.987
rs111815923	SMYD3	1	246088554	2.6E-12	-0.05627	0.00804	-0.05627	0.00804	4.9E-12	0.0662	0.1293	0.00024	4E-06	0.075	0.00622	0.0444	0.35962	0.956	0.942	1	1	0.966	0.977	0.973	0.907
rs9467635	SLC17A2	6	25908938	2.6E-12	-0.07794	0.01114	-0.08462	0.01481	5.7E-12	0.3358	0.39917	0.00028	9E-05	0.015	0.00452	0.0582	0.00119	0.913	0.905	1	1	0.989	0.986	0.97	0.987
rs13207673	SLC17A2	6	25900905	2.8E-12	-0.07855	0.01124	-0.08532	0.01504	5.7E-12	0.3897	0.38935	0.00034	2.3E-05	0.022	0.00522	0.0622	0.00205	0.905	0.904	1	1	0.985	0.982	0.968	0.985
rs3734523	SLC17A2	6	25925759	2.9E-12	-0.07779	0.01114	-0.08414	0.01459	6.2E-12	0.324	0.3995	0.00027	8.9E-05	0.015	0.00489	0.0543	0.00146	0.915	0.905	1	1	0.989	0.984	0.971	0.986
rs75687318	SMYD3	1	246134063	3.1E-12	-0.05649	0.0081	-0.05649	0.0081	5.7E-12	0.1198	0.15985	0.00032	1.2E-06	0.094	0.00467	0.0896	0.35537	0.942	0.935	1	1	0.959	0.985	0.959	0.905
rs9461223	SLC17A2	6	25918107	3.1E-12	-0.07765	0.01114	-0.08402	0.01462	6.7E-12	0.3248	0.39731	0.00029	9.8E-05	0.014	0.00472	0.0608	0.00132	0.914	0.905	1	1	0.989	0.985	0.969	0.987
rs6931120	SLC17A2	6	25925406	3.2E-12	-0.07761	0.01114	-0.08402	0.01464	6.9E-12	0.3248	0.39758	0.00029	9.8E-05	0.014	0.00483	0.0639	0.00134	0.914	0.905	1	1	0.989	0.985	0.968	0.987
rs34354280	SMYD3	1	246105859	3.3E-12	-0.05636	0.00809	-0.05636	0.00809	6E-12	0.1196	0.19135	0.0003	1.3E-06	0.087	0.0052	0.0797	0.36415	0.942	0.929	1	1	0.96	0.982	0.961	0.903
rs3857546	HIST1H1E	6	26157534	3.4E-12	-0.07984	0.01147	-0.08152	0.01273	7.2E-12	0.2324	0.36016	0.00041	0.00125	0.05	0.00038	0.1367	0.00046	0.927	0.91	1	0.999	0.975	0.999	0.95	0.989
rs13195279	SLC17A2	6	25919203	3.6E-12	-0.07816	0.01124	-0.08517	0.01517	7.2E-12	0.3885	0.38168	0.00035	2.3E-05	0.022	0.00586	0.0679	0.00195	0.904	0.905	1	1	0.985	0.979	0.966	0.985
rs35169013	SLC17A2	6	25917799	3.6E-12	-0.07816	0.01124	-0.08517	0.01517	7.2E-12	0.3885	0.38168	0.00035	2.3E-05	0.022	0.00586	0.0679	0.00195	0.904	0.905	1	1	0.985	0.979	0.966	0.985
rs17586784	SLC17A2	6	25934999	3.6E-12	-0.07812	0.01124	-0.08518	0.01519	7.3E-12	0.3871	0.38091	0.00033	2.4E-05	0.021	0.00629	0.0702	0.002	0.904	0.905	1	1	0.985	0.977	0.966	0.985

Table S4

rs34116162	SLC17A2	6	25937424	3.6E-12	-0.07811	0.01124	-0.08514	0.01518	7.3E-12	0.3873	0.38085	0.00033	2.4E-05	0.021	0.00628	0.0702	0.00201	0.904	0.905	1	1	0.986	0.977	0.966	0.985
rs34233736	SLC17A2	6	25933871	3.6E-12	-0.07812	0.01124	-0.08517	0.01519	7.3E-12	0.3874	0.38105	0.00033	2.4E-05	0.021	0.00623	0.0705	0.002	0.904	0.905	1	1	0.985	0.977	0.966	0.985
rs34804024	SLC17A2	6	25925268	3.7E-12	-0.07811	0.01124	-0.08515	0.01519	7.4E-12	0.3885	0.38195	0.00035	2.3E-05	0.021	0.006	0.0713	0.00199	0.904	0.905	1	1	0.985	0.979	0.965	0.985
rs17586553	SLC17A2	6	25928547	3.7E-12	-0.07811	0.01124	-0.08515	0.01519	7.4E-12	0.3885	0.38195	0.00035	2.3E-05	0.021	0.006	0.0713	0.00199	0.904	0.905	1	1	0.985	0.979	0.965	0.985
rs67844427	SLC17A2	6	25930792	3.7E-12	-0.07811	0.01124	-0.08515	0.01519	7.4E-12	0.3885	0.38195	0.00035	2.3E-05	0.021	0.006	0.0713	0.00199	0.904	0.905	1	1	0.985	0.979	0.965	0.985
rs13191776	TRIM38	6	25955513	3.9E-12	-0.07802	0.01124	-0.085	0.01515	7.8E-12	0.3878	0.38113	0.00033	2.5E-05	0.021	0.00628	0.0704	0.00201	0.904	0.905	1	1	0.985	0.977	0.966	0.985
rs34191997	SMYD3	1	246107065	3.9E-12	-0.05617	0.00809	-0.05617	0.00809	7.4E-12	0.127	0.17298	0.0003	1.6E-06	0.1	0.00501	0.0762	0.36611	0.94	0.932	1	1	0.956	0.984	0.962	0.903
rs28461583	SMYD3	1	246105292	4E-12	-0.05615	0.0081	-0.05615	0.0081	7.5E-12	0.1225	0.17662	0.00032	1.4E-06	0.093	0.00528	0.0786	0.3754	0.941	0.931	1	1	0.959	0.983	0.961	0.901
rs74381227	SMYD3	1	246117045	4.2E-12	-0.05616	0.0081	-0.05616	0.0081	7.8E-12	0.1205	0.18053	0.00034	1.4E-06	0.092	0.00528	0.0786	0.37674	0.942	0.93	1	1	0.959	0.983	0.961	0.901
rs12714223	MRPL33	2	27740463	4.3E-12	0.038911	0.00562	0.038911	0.00562	9.1E-12	0.1751	0.01611	8E-06	0.03421	0.051	0.00032	0.2747	0.18955	0.933	0.971	1	0.974	0.973	1	0.915	0.932
rs9678824	MRPL33	2	27741461	4.3E-12	-0.0389	0.00562	-0.0389	0.00562	9.2E-12	0.1742	0.01608	8.1E-06	0.03409	0.052	0.00032	0.2759	0.18828	0.933	0.971	1	0.974	0.973	1	0.915	0.932
rs72540422	MRPL33	2	27740807	4.4E-12	-0.03889	0.00562	-0.03889	0.00562	9.3E-12	0.167	0.01607	8.1E-06	0.03525	0.051	0.00032	0.2753	0.18875	0.934	0.971	1	0.973	0.973	1	0.915	0.932
rs13202371	SLC17A2	6	25935261	4.4E-12	-0.0778	0.01124	-0.08441	0.01494	9.1E-12	0.3853	0.38084	0.00033	3.3E-05	0.021	0.0063	0.0702	0.002	0.905	0.905	1	1	0.985	0.978	0.966	0.985
rs13192713	SLC17A2	6	25943006	4.5E-12	-0.07775	0.01124	-0.08428	0.01489	9.4E-12	0.3861	0.38108	0.00033	3.4E-05	0.021	0.00622	0.0704	0.00201	0.905	0.905	1	1	0.985	0.978	0.966	0.985
rs13193424	SLC17A2	6	25943418	4.6E-12	-0.07774	0.01124	-0.08428	0.01489	9.5E-12	0.3861	0.38108	0.00033	3.4E-05	0.021	0.00622	0.0704	0.00201	0.905	0.905	1	1	0.985	0.978	0.966	0.985
rs2051539	TRIM38	6	25947031	4.6E-12	-0.07774	0.01124	-0.08427	0.01489	9.5E-12	0.3861	0.38108	0.00033	3.4E-05	0.021	0.00622	0.0704	0.00201	0.905	0.905	1	1	0.985	0.978	0.966	0.985
rs34796805	SLC17A2	6	25946405	4.6E-12	-0.07774	0.01124	-0.08427	0.01489	9.5E-12	0.3861	0.38108	0.00033	3.4E-05	0.021	0.00622	0.0704	0.00201	0.905	0.905	1	1	0.985	0.978	0.966	0.985
rs35778245	SLC17A2	6	25944575	4.6E-12	-0.07774	0.01124	-0.08427	0.01489	9.5E-12	0.3861	0.38108	0.00033	3.4E-05	0.021	0.00622	0.0704	0.00201	0.905	0.905	1	1	0.985	0.978	0.966	0.985
rs6547796	MRPL33	2	27752527	4.6E-12	0.038833	0.00561	0.038833	0.00561	9.7E-12	0.1692	0.01568	8.6E-06	0.03036	0.056	0.00036	0.2759	0.17708	0.934	0.971	1	0.978	0.972	1	0.915	0.934
rs9677663	MRPL33	2	27749578	4.6E-12	0.038834	0.00561	0.038834	0.00561	9.7E-12	0.1698	0.01577	8.5E-06	0.03045	0.056	0.00036	0.2756	0.17731	0.934	0.971	1	0.977	0.972	1	0.915	0.934
rs12063895	SMYD3	1	246110090	4.6E-12	-0.05599	0.00809	-0.05599	0.00809	8.4E-12	0.1207	0.17578	0.00037	1.3E-06	0.095	0.00538	0.078	0.37351	0.941	0.931	1	1	0.958	0.983	0.962	0.902
rs10201247	MRPL33	2	27752104	4.6E-12	0.03883	0.00561	0.03883	0.00561	9.8E-12	0.1692	0.01569	8.6E-06	0.03031	0.056	0.00036	0.2761	0.17727	0.934	0.971	1	0.978	0.972	1	0.915	0.934
rs34718543	SMYD3	1	246060783	4.7E-12	-0.04318	0.00624	-0.04318	0.00624	9.9E-12	0.2554	0.14381	8.7E-06	0.00611	0.022	0.00632	0.0333	0.03187	0.926	0.942	1	0.996	0.986	0.98	0.978	0.97
rs57238885	MRPL33	2	27751393	4.7E-12	-0.03881	0.00561	-0.03881	0.00561	1E-11	0.1696	0.01575	8.6E-06	0.03048	0.056	0.00036	0.2764	0.1771	0.934	0.971	1	0.977	0.972	1	0.915	0.934
rs35069699	TRIM38	6	25957054	4.7E-12	-0.07798	0.01128	-0.08471	0.01501	9.4E-12	0.3877	0.304	0.00033	2.5E-05	0.023	0.00727	0.0786	0.00231	0.904	0.915	1	1	0.985	0.973	0.963	0.984
rs34294155	SMYD3	1	246114193	4.8E-12	-0.05595	0.00809	-0.05595	0.00809	8.7E-12	0.1205	0.17576	0.00037	1.4E-06	0.096	0.00543	0.078	0.37339	0.941	0.931	1	1	0.957	0.982	0.961	0.902
rs35631096	SMYD3	1	246114132	4.8E-12	-0.05595	0.00809	-0.05595	0.00809	8.7E-12	0.1206	0.17576	0.00037	1.4E-06	0.096	0.00543	0.078	0.37339	0.941	0.931	1	1	0.957	0.982	0.961	0.902
rs72447896	SMYD3	1	246107507	4.8E-12	-0.05595	0.0081	-0.05595	0.0081	8.9E-12	0.1207	0.17604	0.00034	1.6E-06	0.094	0.00534	0.0782	0.37419	0.941	0.931	1	1	0.958	0.983	0.961	0.902
rs35847416	SMYD3	1	246114348	4.8E-12	-0.05595	0.00809	-0.05595	0.00809	8.7E-12	0.1206	0.17576	0.00037	1.4E-06	0.096	0.00543	0.078	0.37339	0.941	0.931	1	1	0.957	0.982	0.961	0.902
rs3052860	SMYD3	1	246115155	4.8E-12	-0.05594	0.00809	-0.05594	0.00809	8.8E-12	0.1206	0.17579	0.00037	1.4E-06	0.096	0.00544	0.078	0.37337	0.941	0.931	1	1	0.957	0.982	0.961	0.902
rs6699465	SMYD3	1	246115415	4.8E-12	-0.05594	0.00809	-0.05594	0.00809	8.8E-12	0.1206	0.17578	0.00037	1.4E-06	0.097	0.00544	0.078	0.37336	0.941	0.931	1	1	0.957	0.982	0.961	0.902
rs10924473	SMYD3	1	246059021	4.9E-12	-0.04326	0.00626	-0.04326	0.00626	1E-11	0.3004	0.17795	5.4E-06	0.00729	0.027	0.00649	0.0273	0.03233	0.919	0.936	1	0.995	0.983	0.979	0.98	0.969
rs34539883	SMYD3	1	246117474	5E-12	-0.05589	0.00809	-0.05589	0.00809	9.2E-12	0.1204	0.17579	0.00037	1.4E-06	0.099	0.00551	0.0782	0.37311	0.941	0.931	1	1	0.956	0.982	0.961	0.902
rs12059622	SMYD3	1	246101396	5.2E-12	-0.05606	0.00813	-0.05606	0.00813	1E-11	0.1285	0.19032	0.00031	3E-06	0.088	0.0049	0.0734	0.37512	0.94	0.929	1	1	0.96	0.985	0.963	0.902
rs9461222	SLC17A2	6	25904883	5.2E-12	-0.07681	0.01113	-0.08306	0.01449	1.1E-11	0.3187	0.3921	0.00044	7.7E-05	0.019	0.00508	0.05	0.00171	0.915	0.906	0.999	1	0.986	0.985	0.972	0.985
rs72832596	TRIM38	6	25962723	6.1E-12	-0.07729	0.01124	-0.08376	0.01489	1.3E-11	0.4153	0.37959	0.00037	3.7E-05	0.021	0.00644	0.0725	0.00198	0.9	0.905	1	1	0.985	0.978	0.965	0.984
rs6693295	SMYD3	1	246059818	6.1E-12	-0.04306	0.00626	-0.04306	0.00626	1.3E-11	0.3005	0.1722	5.7E-06	0.00728	0.026	0.0073	0.0287	0.03602	0.918	0.936	1	0.995	0.984	0.976	0.979	0.968
rs10924474	SMYD3	1	246059031	6.4E-12	-0.04302	0.00626	-0.04302	0.00626	1.3E-11	0.3001	0.17219	6E-06	0.00728	0.026	0.00729	0.0287	0.03601	0.918	0.936	1	0.995	0.984	0.976	0.979	0.968
rs12132524	SMYD3	1	246061136	6.4E-12	-0.04302	0.00626	-0.04302	0.00626	1.4E-11	0.3004	0.17219	6E-06	0.00729	0.026	0.00729	0.0287	0.03601	0.918	0.936	1	0.995	0.984	0.976	0.979	0.968
rs34784543	SMYD3	1	246060853	6.4E-12	-0.04302	0.00626	-0.04302	0.00626	1.4E-11	0.3004	0.17219	6E-06	0.00729	0.026	0.00729	0.0287	0.03601	0.918	0.936	1	0.995	0.984	0.976	0.979	0.968
rs6693092	SMYD3	1	246059641	6.4E-12	-0.04302	0.00626	-0.04302	0.00626	1.4E-11	0.3004	0.17219	6E-06	0.00729	0.026	0.00729	0.0287	0.03601	0.918	0.936	1	0.995	0.984	0.976	0.979	0.968
rs10924478	SMYD3	1	246059270	6.4E-12	-0.04302	0.00626	-0.04302	0.00626	1.4E-11	0.3004	0.17219	6E-06	0.00729	0.026	0.00729	0.0287	0.03601	0.918	0.936	1	0.995	0.984	0.976	0.979	0.968
rs10924472	SMYD3	1	246058858	6.4E-12	-0.04302	0.00626	-0.04302	0.00626	1.4E-11	0.3004	0.17219	6E-06	0.00729	0.026	0.00729	0.0287	0.03601	0.918	0.936	1	0.995	0.984	0.976	0.979	0.968
rs35757106	SMYD3	1	246056171	6.4E-12	-0.04302	0.00626	-0.04302	0.00626	1.4E-11	0.3004	0.17219	6E-06	0.00729	0.026	0.00729	0.0287	0.03601	0.918	0.936	1	0.995	0.984	0.976	0.979	0.968
rs9967838	MRPL33	2	27745587	6.5E-12	0.0386	0.00562	0.0386	0.00562	1.4E-11	0.1407	0.01643	7.9E-06	0.0311	0.065	0.00052	0.2832	0.15358	0.939	0.97	1	0.977	0.969	0.999	0.914	0.939
rs10924477	SMYD3	1	246059232	6.5E-12	-0.043	0.00626	-0.043	0.00626	1.4E-11	0.2998	0.17219	6E-06	0.00748	0.026	0.00729	0.0287	0.03601	0.918	0.936	1	0.995	0.984	0.976	0.979	0.968
rs7748167	SLC17A2	6	25904424	6.7E-12	-0.0762	0.0111	-0.08053	0.01343	1.4E-11	0.3759	0.34672	0.00036	0.00014	0.015	0.0052	0.0588	0.0024	0.908	0.911	1	1	0.988	0.985	0.969	0.984
rs10924475	SMYD3	1	246059083	7E-12	-0.04294	0.00626	-0.04294	0.00626	1.5E-11	0.304	0.17219	6E-06	0.0079	0.026	0.00729	0.0287	0.03601	0.918	0.936	1	0.995	0.984	0.977	0.979	0.968
rs336610	SATB1	3	18608523	7.2E-12	0.035135	0.00513	0.035135	0.00513	1.5E-11	0.3752	0.36834	0.00542	0.0003	0.163	2.7E-05	0.0106	0.13185	0.9	0.901	0.988	1	0.935	1	0.985	0.94
rs6697845	SMYD3	1	246059632	7.2E-12	-0.04291	0.00626	-0.04291	0.00626	1.5E-11	0.2999	0.17193	6.2E-06	0.00758	0.027	0.00742	0.0287	0.03601	0.918	0.936	1	0.995	0.983	0.976	0.979	0.968
rs4975311	INPP4B	4	142579070	7.9E-12	0.039784	0.00582	0.043706	0.00808	1.7E-11	0.1727	0.0277	0.00203	0.04209	0.015	0.00011	0.0001	0.33157	0.937	0.967	0.997	0.97	0.989	1	0.997	0.915
rs60724671	ANKS1B	12	98888258	8.9E-12	0.061086	0.00895	0.061086	0.00895	1.9E-11	0.263	0.24328	0.00015	0.01918	0.052	6.9E-05	0.0945	0.10007	0.919	0.922	1	0.987	0.973	1	0.958	0.948
rs2788021	SMYD3	1	246085402	9.2E-12	-0.03892	0.00571	-0.04216	0.00722	1.9E-11	0.019	0.08515	8.2E-05	0.0098	0.003	0.01051	0.0073	0.1377	0.973	0.954	1	0.994	0.995	0.963	0.989	0.947
rs2787953	SMYD3	1	246085357	9.4E-12	-0.03887	0.0057	-0.04214	0.00724	2E-11	0.0187	0.08518	8.2E-05	0.01009	0.003	0.01051	0.0073	0.13772	0.973	0.954	1	0.993	0.995	0.963	0.989	0.947
rs1416089	SMYD3	1	246076168	9.9E-12	-0.03882	0.0057	-0.04196	0.00719	2.1E-11	0.0189	0.08556	8E-05	0.01032	0.003	0.01055	0.0074	0.1465	0.973	0.954	1	0.993	0.995	0.963	0.989	0.946

Table S4

rs9849654	LSAMP	3	117912352	1E-11	-0.03548	0.00521	-0.03548	0.00521	2.1E-11	0.1097	0.31207	7.3E-05	0.00734	0.276	0.00013	0.1033	0.09788	0.941	0.908	1	0.994	0.9	1	0.953	0.946
rs2787962	SMYD3	1	246076965	1E-11	-0.0388	0.0057	-0.04192	0.00718	2.1E-11	0.0189	0.08593	8.1E-05	0.01016	0.003	0.01065	0.0075	0.14636	0.973	0.954	1	0.993	0.995	0.963	0.989	0.946
rs2788010	SMYD3	1	246077021	1E-11	-0.03879	0.0057	-0.04192	0.00718	2.1E-11	0.0189	0.08598	8.1E-05	0.01017	0.003	0.01065	0.0075	0.14636	0.973	0.954	1	0.993	0.995	0.963	0.989	0.946
rs2788011	SMYD3	1	246077037	1E-11	-0.03879	0.0057	-0.04192	0.00718	2.1E-11	0.0189	0.08598	8.1E-05	0.01017	0.003	0.01065	0.0075	0.14636	0.973	0.954	1	0.993	0.995	0.963	0.989	0.946
rs2788012	SMYD3	1	246078187	1E-11	-0.03879	0.0057	-0.04192	0.00718	2.1E-11	0.0189	0.08596	8.2E-05	0.01015	0.003	0.01066	0.0075	0.14636	0.973	0.954	1	0.993	0.995	0.963	0.989	0.946
rs2787960	SMYD3	1	246078938	1E-11	-0.03879	0.0057	-0.04191	0.00718	2.2E-11	0.0189	0.08605	8.2E-05	0.01013	0.003	0.01067	0.0075	0.14639	0.973	0.954	1	0.993	0.995	0.963	0.989	0.946
rs2788016	SMYD3	1	246081320	1E-11	-0.03879	0.0057	-0.04193	0.00719	2.2E-11	0.0189	0.08582	8.3E-05	0.01012	0.003	0.01067	0.0074	0.14573	0.973	0.954	1	0.993	0.995	0.963	0.989	0.946
rs2788014	SMYD3	1	246079553	1E-11	-0.03878	0.0057	-0.04191	0.00718	2.2E-11	0.0189	0.08606	8.2E-05	0.01013	0.003	0.01068	0.0075	0.14641	0.973	0.954	1	0.993	0.995	0.963	0.989	0.946
rs2885262	SMYD3	1	246083593	1.1E-11	-0.03878	0.0057	-0.04203	0.00724	2.2E-11	0.0184	0.08547	8.2E-05	0.01086	0.003	0.0106	0.0073	0.14133	0.973	0.954	1	0.993	0.995	0.963	0.989	0.947
rs10802329	SMYD3	1	246077453	1.1E-11	-0.03877	0.0057	-0.04187	0.00717	2.2E-11	0.0192	0.08598	8.2E-05	0.01042	0.003	0.01065	0.0075	0.14635	0.972	0.954	1	0.993	0.995	0.963	0.989	0.946
rs2788017	SMYD3	1	246081461	1.1E-11	-0.03877	0.0057	-0.04189	0.00718	2.2E-11	0.0193	0.08579	8.3E-05	0.01038	0.003	0.01066	0.0074	0.1453	0.972	0.954	1	0.993	0.995	0.963	0.989	0.946
rs2787961	SMYD3	1	246078742	1.1E-11	-0.03878	0.00571	-0.04195	0.0072	2.2E-11	0.0182	0.08947	9E-05	0.00994	0.003	0.01041	0.0075	0.16314	0.973	0.953	1	0.994	0.995	0.964	0.989	0.943
rs2787959	SMYD3	1	246081423	1.1E-11	-0.03877	0.0057	-0.04188	0.00718	2.2E-11	0.0193	0.08581	8.3E-05	0.01039	0.003	0.01066	0.0074	0.14571	0.972	0.954	1	0.993	0.995	0.963	0.989	0.946
rs10492269	ANKS1B	12	98890087	1.1E-11	0.060737	0.00894	0.060737	0.00894	2.2E-11	0.2776	0.26479	0.00022	0.02089	0.04	5.4E-05	0.0936	0.11625	0.917	0.919	1	0.986	0.977	1	0.957	0.945
rs17768587	MON1B	16	77048273	1.1E-11	-0.0494	0.00728	-0.0494	0.00728	2.4E-11	0.2279	0.1579	0.00147	0.00135	0.023	0.00032	0.1314	0.02264	0.929	0.939	0.998	0.999	0.985	1	0.952	0.972
rs4762524	ANKS1B	12	98903228	1.2E-11	0.060903	0.00898	0.060903	0.00898	2.4E-11	0.2823	0.21272	0.00016	0.01903	0.049	9.5E-05	0.0855	0.10684	0.917	0.927	1	0.987	0.974	1	0.96	0.947
rs17700957	MON1B	16	77047312	1.2E-11	-0.04935	0.00728	-0.04935	0.00728	2.5E-11	0.2474	0.15781	0.00148	0.00131	0.023	0.00033	0.1319	0.02257	0.926	0.939	0.998	0.999	0.985	1	0.951	0.972
rs11647889	DHODH	16	72018135	1.2E-11	0.046059	0.00679	0.046059	0.00679	2.5E-11	0.2104	0.05901	0.00029	0.09681	0.032	1.8E-05	0.0447	0.2906	0.924	0.953	1	0.916	0.979	1	0.97	0.913
rs1585084	LSAMP	3	117897197	1.3E-11	-0.03532	0.00521	-0.03532	0.00521	2.6E-11	0.1084	0.31695	8.4E-05	0.00699	0.273	0.00014	0.1065	0.09971	0.941	0.907	1	0.995	0.901	1	0.952	0.946
rs1585083	LSAMP	3	117897206	1.3E-11	-0.03532	0.00521	-0.03532	0.00521	2.6E-11	0.1084	0.31693	8.4E-05	0.00699	0.273	0.00014	0.1065	0.09971	0.941	0.907	1	0.995	0.901	1	0.952	0.946
rs34821024	MON1B	16	77043285	1.3E-11	-0.04928	0.00728	-0.04928	0.00728	2.7E-11	0.2281	0.15743	0.00152	0.0014	0.023	0.00033	0.1323	0.02235	0.929	0.939	0.998	0.999	0.985	1	0.951	0.972
rs34522419	SMYD3	1	246032012	1.4E-11	-0.04246	0.00628	-0.04246	0.00628	2.9E-11	0.357	0.19213	1.1E-05	0.0091	0.032	0.0058	0.0277	0.04854	0.91	0.932	1	0.994	0.981	0.985	0.979	0.963
rs6753736	MRPL33	2	27735988	1.5E-11	0.038055	0.00564	0.038055	0.00564	3.1E-11	0.1776	0.02611	9.6E-06	0.033	0.071	0.00071	0.2048	0.21694	0.931	0.965	1	0.976	0.966	0.999	0.931	0.927
rs12994085	SLC4A1AP	2	27729539	1.6E-11	0.037983	0.00564	0.037983	0.00564	3.4E-11	0.1769	0.02368	9.5E-06	0.03386	0.072	0.00077	0.2073	0.21363	0.931	0.966	1	0.976	0.966	0.999	0.93	0.927
rs6698425	SMYD3	1	246060181	1.6E-11	-0.03946	0.00586	-0.04206	0.00724	3.4E-11	0.0968	0.08134	3.8E-05	0.05767	0.003	0.00664	0.0062	0.04304	0.951	0.954	1	0.959	0.995	0.982	0.99	0.966
rs7416945	SMYD3	1	246062555	1.7E-11	-0.03946	0.00586	-0.04206	0.00725	3.4E-11	0.0966	0.08134	3.8E-05	0.0578	0.003	0.00664	0.0062	0.04304	0.951	0.954	1	0.959	0.995	0.982	0.99	0.966
rs12993377	SLC4A1AP	2	27729900	1.7E-11	0.037974	0.00564	0.037974	0.00564	3.4E-11	0.1769	0.02364	9.5E-06	0.03385	0.072	0.00077	0.2076	0.21364	0.931	0.966	1	0.976	0.966	0.999	0.93	0.927
rs2296461	PITRM1	10	3265033	1.7E-11	-0.03674	0.00546	-0.04096	0.00767	3.4E-11	0.1123	0.00294	0.00071	0.03772	0.081	0.00068	0.0043	0.018	0.95	0.984	0.999	0.977	0.968	0.999	0.992	0.976
rs113365769	DHODH	16	72024768	1.7E-11	0.045686	0.00679	0.045686	0.00679	3.5E-11	0.2178	0.06403	0.00032	0.10902	0.036	1.8E-05	0.0404	0.27931	0.922	0.95	1	0.904	0.977	1	0.971	0.913
rs11641424	DHODH	16	72032980	1.7E-11	0.04566	0.00679	0.04566	0.00679	3.6E-11	0.2174	0.06363	0.00035	0.10761	0.036	1.8E-05	0.0399	0.2791	0.922	0.95	1	0.906	0.977	1	0.971	0.913
rs72787042	DHODH	16	72033623	1.8E-11	0.045639	0.00679	0.045639	0.00679	3.7E-11	0.2189	0.06363	0.00035	0.1089	0.036	1.8E-05	0.0399	0.2791	0.921	0.95	1	0.905	0.977	1	0.971	0.913
rs12471347	MRPL33	2	27758788	1.8E-11	-0.03832	0.0057	-0.03832	0.0057	3.7E-11	0.1729	0.00882	1.3E-05	0.06236	0.046	0.00057	0.2753	0.16663	0.931	0.973	1	0.951	0.975	0.999	0.914	0.934
rs4666011	MRPL33	2	27758045	1.8E-11	-0.03831	0.0057	-0.03831	0.0057	3.7E-11	0.1728	0.00882	1.3E-05	0.06231	0.045	0.00057	0.2752	0.16742	0.931	0.973	1	0.952	0.975	0.999	0.914	0.934
rs2384655	SLC4A1AP	2	27729368	1.9E-11	0.037851	0.00564	0.037851	0.00564	3.8E-11	0.1844	0.0228	1.5E-05	0.03528	0.06	0.00061	0.2269	0.23194	0.93	0.966	1	0.975	0.97	0.999	0.926	0.924
rs7896058	ANKRD1	10	90931185	1.9E-11	-0.03819	0.00569	-0.04676	0.01016	4E-11	2E-05	0.23616	0.0048	0.037	0.009	0.00013	0.0356	0.14961	0.994	0.93	0.992	0.976	0.992	1	0.977	0.944
rs4881131	PITRM1	10	3253481	2.3E-11	0.036904	0.00552	0.036904	0.00552	4.6E-11	0.0758	0.12929	0.00063	0.06479	0.04	0.00025	0.0123	0.00867	0.955	0.945	0.999	0.956	0.979	1	0.986	0.98
rs11593966	PITRM1	10	3255090	2.3E-11	0.036882	0.00552	0.036882	0.00552	4.7E-11	0.0786	0.13676	0.00038	0.07232	0.037	0.00037	0.0133	0.0082	0.954	0.943	1	0.949	0.98	1	0.985	0.98
rs3759213	ANKS1B	12	98879812	2.3E-11	0.05897	0.00882	0.05897	0.00882	4.8E-11	0.2536	0.37812	0.00043	0.00695	0.075	0.00011	0.0865	0.09677	0.919	0.903	1	0.995	0.965	1	0.958	0.947
rs57383363	ANKRD1	10	90933846	2.7E-11	-0.03782	0.00568	-0.04664	0.01028	5.5E-11	2E-05	0.26599	0.00531	0.03552	0.007	0.00016	0.0367	0.1784	0.994	0.925	0.991	0.977	0.992	1	0.976	0.939
rs78602238	MON1B	16	77046092	2.8E-11	-0.05008	0.00752	-0.05008	0.00752	5.7E-11	0.3369	0.25759	0.00138	0.00025	0.052	0.00046	0.2209	0.06019	0.907	0.918	0.998	1	0.972	0.999	0.926	0.956
rs7433886	LSAMP	3	117897290	2.9E-11	-0.0347	0.00521	-0.0347	0.00521	5.9E-11	0.0994	0.32101	0.00012	0.00817	0.279	0.00019	0.1145	0.10276	0.942	0.906	1	0.994	0.9	1	0.949	0.944
rs9295675	SLC17A2	6	25918245	3E-11	-0.0733	0.01103	-0.07965	0.0143	6E-11	0.265	0.37396	0.00062	0.00011	0.017	0.0102	0.0738	0.00269	0.92	0.906	0.999	1	0.986	0.965	0.964	0.982
rs10871329	MON1B	16	77033390	3.3E-11	-0.04878	0.00736	-0.04878	0.00736	6.8E-11	0.29	0.15172	0.00155	0.00091	0.034	0.00083	0.1101	0.02461	0.92	0.939	0.998	0.999	0.98	0.999	0.956	0.97
rs11109655	ANKS1B	12	98892839	3.7E-11	0.058983	0.00891	0.058983	0.00891	7.5E-11	0.257	0.24763	0.00037	0.02055	0.054	9.8E-05	0.0919	0.11975	0.919	0.92	1	0.986	0.972	1	0.957	0.943
rs111938697	MRPL33	2	27740266	5.1E-11	-0.03738	0.00569	-0.03738	0.00569	1E-10	0.2662	0.01043	1.9E-05	0.06443	0.053	0.00075	0.3043	0.14628	0.914	0.971	1	0.951	0.971	0.999	0.906	0.935
rs12124268	SMYD3	1	246135712	5.6E-11	-0.04012	0.00612	-0.04012	0.00612	1.1E-10	0.1806	0.17408	3.5E-05	0.00297	0.035	0.01671	0.0238	0.09495	0.931	0.932	1	0.998	0.979	0.94	0.979	0.949
rs12923326	MON1B	16	77024760	5.6E-11	-0.03359	0.00513	-0.03366	0.00518	1.1E-10	0.0256	0.05025	0.00037	0.07939	0.035	0.00044	0.1496	0.01024	0.967	0.959	1	0.946	0.98	1	0.947	0.978
rs149661230	TSHZ2	20	53005569	6.6E-11	-0.1033	0.01582	-0.11935	0.02237	1.1E-10	0.0289	0.06969	0.00941	0.00026	0.006	0.0055	0.0047	0.21925	0.967	0.956	0.981	1	0.992	0.987	0.989	0.933
rs72800614	MTHFSD	16	86543957	7.5E-11	-0.08044	0.01235	-0.08044	0.01235	1.5E-10	0.091	0.26155	7.4E-05	0.00874	0.04	0.00357	0.0281	0.35285	0.948	0.92	1	0.994	0.977	0.994	0.977	0.908
rs4417032	SMYD3	1	246063126	9.1E-11	-0.03773	0.00582	-0.03927	0.00665	1.8E-10	0.093	0.08254	7.8E-05	0.05074	0.004	0.0111	0.0102	0.06794	0.95	0.951	1	0.966	0.993	0.971	0.986	0.958
rs1866560	CGREF1	2	27105685	1E-10	0.033514	0.00519	0.034181	0.00572	2.1E-10	0.0617	0.00591	0.00596	0.00346	0.214	0.00014	0.2742	0.02542	0.954	0.976	0.991	0.997	0.927	1	0.919	0.968
rs1872510	MON1B	16	77025465	1E-10	-0.03312	0.00513	-0.03312	0.00513	2.1E-10	0.0272	0.06523	0.00047	0.08279	0.035	0.00055	0.1535	0.00966	0.966	0.954	1	0.944	0.98	0.999	0.946	0.977
rs61859608	ANKRD1	10	90987211	1.1E-10	-0.04796	0.00743	-0.04964	0.00948	2.1E-10	0.0016	0.28926	0.00453	0.10928	0.146	7.2E-06	0.0185	0.29264	0.98	0.909	0.992	0.911	0.94	1	0.979	0.909
rs76254124	MON1B	16	77034146	1.1E-10	-0.0496	0.00768	-0.0496	0.00768	2.2E-10	0.3909	0.17427	0.00174	0.00016	0.085	0.00143	0.2083	0.05723	0.9	0.929	0.998	1	0.961	0.998	0.929	0.956
rs16945226	MON1B	16	77091981	1.1E-10	-0.0492	0.00763	-0.0492	0.00763	2.2E-10	0.2581	0.09213	0.00395	0.00073	0.007	0.00296	0.087	0.03725	0.925	0.949	0.995	0.999	0.991	0.996	0.962	0.966

Table S4

rs60020658	ANKRD1	10	91029521	1.2E-10	-0.03889	0.00603	-0.04378	0.0087	2.3E-10	0.0005	0.06905	0.00647	0.03043	0.044	0.00026	0.0425	0.07989	0.987	0.956	0.991	0.982	0.978	1	0.975	0.957
rs11639885	MON1B	16	77085646	1.2E-10	-0.05039	0.00783	-0.05039	0.00783	2.5E-10	0.4183	0.10534	0.00371	0.00017	0.046	0.00165	0.1761	0.03349	0.9	0.943	0.995	1	0.975	0.998	0.938	0.964
rs56393513	ANKRD1	10	91027356	1.3E-10	-0.03877	0.00603	-0.04438	0.00897	2.5E-10	0.0004	0.07187	0.00673	0.03401	0.037	0.00029	0.0375	0.07644	0.988	0.955	0.991	0.98	0.98	1	0.976	0.958
rs61240383	MON1B	16	77080792	1.3E-10	-0.04746	0.00739	-0.04746	0.00739	2.7E-10	0.308	0.18156	0.0021	0.00083	0.042	0.00192	0.0735	0.03655	0.916	0.932	0.998	0.999	0.977	0.998	0.964	0.965
rs7575465	AGBL5	2	27068793	1.5E-10	0.033203	0.00518	0.033843	0.00568	3E-10	0.0534	0.0089	0.00675	0.00289	0.182	0.0002	0.34	0.02129	0.956	0.973	0.99	0.998	0.936	1	0.906	0.969
rs72794561	MON1B	16	77059358	1.6E-10	-0.04704	0.00736	-0.04704	0.00736	3.2E-10	0.4225	0.20553	0.00305	0.00095	0.042	0.00159	0.0492	0.02552	0.901	0.928	0.996	0.999	0.976	0.998	0.97	0.968
rs10459865	MON1B	16	77083529	1.6E-10	-0.04724	0.00739	-0.04724	0.00739	3.2E-10	0.3152	0.18241	0.00217	0.00091	0.042	0.00203	0.0758	0.03676	0.915	0.932	0.998	0.999	0.976	0.997	0.963	0.964
rs2891550	CGREF1	2	27111756	1.7E-10	0.033071	0.00518	0.033998	0.00594	3.5E-10	0.0529	0.00576	0.00651	0.0044	0.235	0.00016	0.3159	0.02488	0.955	0.975	0.99	0.997	0.921	1	0.91	0.967
rs4881129	PITRM1	10	3251527	1.8E-10	0.035298	0.00553	0.035298	0.00553	3.5E-10	0.1063	0.15115	0.00055	0.06414	0.038	0.00134	0.0121	0.01723	0.946	0.939	0.999	0.96	0.979	0.998	0.984	0.972
rs867282	SLC4A1AP	2	27728791	1.8E-10	0.036401	0.00571	0.036401	0.00571	3.6E-10	0.3165	0.01533	2.6E-05	0.06249	0.066	0.00143	0.2339	0.20286	0.906	0.966	1	0.955	0.966	0.998	0.921	0.924
rs11639600	MON1B	16	77088652	1.8E-10	-0.04866	0.00763	-0.04866	0.00763	3.6E-10	0.2406	0.09216	0.00428	0.00074	0.008	0.00364	0.0936	0.04227	0.927	0.949	0.995	0.999	0.99	0.995	0.96	0.964
rs12624148	MRPL33	2	27733614	2E-10	-0.03633	0.00571	-0.03633	0.00571	4E-10	0.3146	0.01565	2.7E-05	0.0622	0.068	0.00146	0.2382	0.1979	0.907	0.966	1	0.956	0.965	0.998	0.92	0.925
rs1393430	MON1B	16	77088898	2.2E-10	-0.04844	0.00763	-0.04844	0.00763	4.3E-10	0.2479	0.09689	0.00399	0.0008	0.01	0.00388	0.0928	0.04436	0.925	0.947	0.995	0.999	0.989	0.994	0.959	0.963
rs11644671	MON1B	16	77083734	2.2E-10	-0.0469	0.00739	-0.0469	0.00739	4.4E-10	0.3207	0.1872	0.00225	0.00095	0.046	0.00236	0.075	0.03638	0.914	0.931	0.998	0.999	0.975	0.997	0.963	0.964
rs34905263	SMYD3	1	246035351	2.8E-10	-0.05462	0.00866	-0.05462	0.00866	5.5E-10	0.3543	0.15217	0.00048	7.8E-05	0.119	0.01219	0.0593	0.25758	0.9	0.929	0.999	1	0.948	0.968	0.963	0.915
rs2296465	PITRM1	10	3267455	3.5E-10	0.03416	0.00544	0.036019	0.00661	6.9E-10	0.213	0.00474	0.00765	0.07201	0.045	0.00018	0.0144	0.04961	0.929	0.978	0.989	0.955	0.976	1	0.983	0.961
rs4607842	SMYD3	1	246150421	3.7E-10	-0.03895	0.00622	-0.03895	0.00622	7.3E-10	0.1305	0.12499	3E-05	0.01322	0.035	0.02601	0.0374	0.122	0.937	0.937	1	0.99	0.977	0.915	0.972	0.941
rs896436	SYT12	11	67013792	4E-10	-0.03264	0.00522	-0.03374	0.00608	7.8E-10	0.3312	0.04324	0.00031	0.08945	1E-04	0.00262	0.2767	0.22407	0.902	0.952	1	0.935	0.998	0.996	0.911	0.919
rs10924530	SMYD3	1	246174417	4.2E-10	-0.03907	0.00625	-0.03907	0.00625	8.1E-10	0.1805	0.13024	2.5E-05	0.01797	0.035	0.02216	0.0333	0.14931	0.928	0.936	1	0.987	0.977	0.934	0.973	0.935
rs36122414	SYT12	11	67022722	4.3E-10	-0.03252	0.00521	-0.03252	0.00521	8.3E-10	0.2664	0.13935	0.00025	0.05541	3E-04	0.00346	0.2673	0.18799	0.913	0.932	1	0.962	0.997	0.995	0.915	0.926
rs1253435	SYT12	11	67005606	4.5E-10	-0.03258	0.00523	-0.0337	0.00609	8.7E-10	0.2133	0.03608	0.00032	0.10188	2E-04	0.00254	0.3212	0.20163	0.919	0.955	1	0.925	0.997	0.996	0.902	0.923
rs4888596	MON1B	16	77089136	4.5E-10	-0.04991	0.008	-0.04991	0.008	8.8E-10	0.3147	0.10828	0.00447	0.00011	0.025	0.00591	0.1785	0.08009	0.912	0.941	0.994	1	0.981	0.99	0.937	0.95
rs6742571	SLC4A1AP	2	27719021	4.5E-10	0.036301	0.00582	0.036301	0.00582	8.8E-10	0.3155	0.03089	5.3E-05	0.09776	0.087	0.00087	0.2334	0.15759	0.903	0.956	1	0.927	0.957	0.999	0.918	0.928
rs4582035	GALNT15	3	16103802	4.6E-10	-0.04184	0.00671	-0.04184	0.00671	8.8E-10	0.2011	0.03557	0.006	0.06273	0.032	5.3E-05	0.0426	0.34666	0.926	0.958	0.992	0.958	0.978	1	0.97	0.907
rs1253439	SYT12	11	67017244	5.3E-10	-0.03241	0.00522	-0.03318	0.00583	1E-09	0.3362	0.0454	0.00034	0.08017	2E-04	0.00311	0.2777	0.23792	0.902	0.952	1	0.943	0.998	0.995	0.911	0.917
rs10924523	SMYD3	1	246156598	5.6E-10	-0.03859	0.00622	-0.03859	0.00622	1.1E-09	0.1417	0.14387	3.4E-05	0.01347	0.034	0.02687	0.045	0.14092	0.933	0.932	1	0.99	0.977	0.916	0.968	0.936
rs1253440	SYT12	11	67015123	5.7E-10	-0.03247	0.00524	-0.03247	0.00524	1.1E-09	0.362	0.06657	0.00048	0.06029	3E-04	0.00311	0.2087	0.19844	0.902	0.947	0.999	0.96	0.997	0.996	0.928	0.925
rs12404559	SMYD3	1	246150019	6.9E-10	-0.03844	0.00623	-0.03844	0.00623	1.3E-09	0.1835	0.12095	4.8E-05	0.0113	0.041	0.02483	0.0459	0.14421	0.927	0.937	1	0.992	0.974	0.928	0.968	0.935
rs12714923	GALNT15	3	16104736	6.9E-10	-0.0413	0.0067	-0.0413	0.0067	1.3E-09	0.1838	0.0317	0.00833	0.06984	0.029	5.1E-05	0.0524	0.33095	0.927	0.959	0.988	0.954	0.979	1	0.966	0.908
rs56346470	MON1B	16	77096698	7.1E-10	-0.04725	0.00766	-0.04725	0.00766	1.4E-09	0.2581	0.06911	0.00585	0.00129	0.011	0.00469	0.1242	0.0446	0.923	0.951	0.993	0.999	0.988	0.994	0.951	0.961
rs12125969	SMYD3	1	246177865	7.5E-10	-0.03832	0.00623	-0.03832	0.00623	1.4E-09	0.1579	0.15949	3.9E-05	0.01646	0.032	0.02684	0.0416	0.13382	0.93	0.929	1	0.988	0.978	0.92	0.969	0.937
rs1892928	SYT12	11	67026637	8.2E-10	-0.03204	0.00522	-0.03264	0.00571	1.6E-09	0.3294	0.06077	0.00038	0.09132	2E-04	0.00324	0.2793	0.24	0.901	0.946	1	0.935	0.997	0.995	0.909	0.915
rs2200442	MON1B	16	77019881	8.7E-10	-0.03156	0.00515	-0.03156	0.00515	1.7E-09	0.0166	0.0581	0.00104	0.10477	0.043	0.00102	0.1697	0.02574	0.967	0.952	0.999	0.934	0.975	0.999	0.94	0.966
rs2200443	MON1B	16	77020003	9.2E-10	-0.04453	0.00727	-0.04453	0.00727	1.8E-09	0.1778	0.09678	0.00922	0.00071	0.031	0.00226	0.2171	0.05193	0.931	0.944	0.988	0.999	0.979	0.997	0.93	0.957
rs11597992	ANKRD1	10	90970475	9.2E-10	-0.03669	0.00599	-0.04463	0.01062	1.8E-09	3E-05	0.20782	0.0324	0.04399	0.046	8.5E-05	0.0362	0.30801	0.99	0.922	0.922	0.969	0.972	1	0.971	0.909
rs6499558	HPR,TXNL4	16	72068914	1.2E-09	0.038951	0.00641	0.038951	0.00641	2.3E-09	0.2309	0.01841	0.00119	0.1421	0.018	0.00067	0.0415	0.26193	0.918	0.962	0.999	0.902	0.983	0.999	0.968	0.915
rs1424241	TXNL4B	16	72045008	1.3E-09	0.039036	0.00643	0.039036	0.00643	2.4E-09	0.1885	0.01499	0.00131	0.13164	0.023	0.00068	0.0433	0.25864	0.925	0.965	0.999	0.911	0.981	0.999	0.968	0.917
rs72794549	MON1B	16	77031324	1.3E-09	-0.04419	0.00728	-0.04419	0.00728	2.4E-09	0.1974	0.10589	0.01123	0.00121	0.032	0.00166	0.2155	0.04395	0.927	0.941	0.984	0.999	0.978	0.998	0.93	0.959
rs6534898	PCDH10	4	132626974	1.4E-09	-0.04093	0.00675	-0.04093	0.00675	2.6E-09	0.2008	0.17255	0.01075	0.00071	0.227	0.00091	0.0193	0.30994	0.921	0.925	0.984	0.999	0.919	0.999	0.976	0.907
rs1577120	PTPRD	9	11108586	1.4E-09	-0.03884	0.00641	-0.03884	0.00641	2.6E-09	0.1237	0.41861	0.00175	0.01241	0.022	0.00711	0.0384	0.00871	0.94	0.903	0.998	0.992	0.983	0.99	0.972	0.974
rs9393777	HIST1H2BJ	6	26974248	1.4E-09	-0.04976	0.00822	-0.05022	0.00856	2.6E-09	0.3191	0.07533	0.00177	0.12194	0.038	0.00115	0.0241	0.0058	0.911	0.947	0.998	0.921	0.976	0.999	0.977	0.975
rs3799378	BTN3A1	6	26404146	1.4E-09	-0.03869	0.00639	-0.03869	0.00639	2.7E-09	0.0664	0.10073	0.00424	0.00397	0.157	0.00196	0.1411	0.02619	0.95	0.943	0.995	0.997	0.944	0.998	0.946	0.965
rs10959525	PTPRD	9	11107496	1.4E-09	-0.03881	0.00641	-0.03881	0.00641	2.7E-09	0.1355	0.41841	0.00175	0.01217	0.022	0.00714	0.0386	0.00877	0.938	0.903	0.998	0.992	0.983	0.99	0.972	0.974
rs1577119	PTPRD	9	11108671	1.4E-09	-0.03881	0.00641	-0.03881	0.00641	2.7E-09	0.1242	0.41947	0.00177	0.01252	0.022	0.00712	0.0386	0.00873	0.94	0.903	0.998	0.992	0.983	0.99	0.972	0.974
rs1121462	PTPRD	9	11108118	1.4E-09	-0.03881	0.00641	-0.03881	0.00641	2.7E-09	0.1239	0.42021	0.00178	0.01242	0.022	0.00713	0.0388	0.0088	0.94	0.903	0.998	0.992	0.983	0.99	0.972	0.974
rs7865595	PTPRD	9	11110336	1.4E-09	-0.03882	0.00641	-0.03882	0.00641	2.7E-09	0.1242	0.41621	0.00178	0.01254	0.022	0.00712	0.0383	0.00861	0.94	0.903	0.998	0.992	0.983	0.99	0.972	0.974
rs7865211	PTPRD	9	11110022	1.4E-09	-0.03881	0.00641	-0.03881	0.00641	2.7E-09	0.1238	0.41717	0.00178	0.01261	0.022	0.00711	0.0384	0.00862	0.94	0.903	0.998	0.992	0.983	0.99	0.972	0.974
rs7875185	PTPRD	9	11109553	1.4E-09	-0.03881	0.00641	-0.03881	0.00641	2.7E-09	0.135	0.41832	0.00178	0.0122	0.022	0.0071	0.0385	0.00867	0.938	0.903	0.998	0.992	0.983	0.99	0.972	0.974
rs7875597	PTPRD	9	11109813	1.4E-09	-0.03881	0.00641	-0.03881	0.00641	2.7E-09	0.1345	0.41765	0.00178	0.01219	0.022	0.00711	0.0386	0.00864	0.938	0.903	0.998	0.992	0.983	0.99	0.972	0.974
rs7861637	PTPRD	9	11109904	1.4E-09	-0.0388	0.00641	-0.0388	0.00641	2.7E-09	0.1346	0.41717	0.00178	0.01219	0.022	0.00712	0.0385	0.00863	0.938	0.903	0.998	0.992	0.983	0.99	0.972	0.974
rs7875707	PTPRD	9	11109905	1.4E-09	-0.0388	0.00641	-0.0388	0.00641	2.7E-09	0.1346	0.41717	0.00178	0.01219	0.022	0.00713	0.0385	0.00863	0.938	0.903	0.998	0.992	0.983	0.99	0.972	0.974
rs11642912	MON1B	16	77029529	1.5E-09	-0.04403	0.00728	-0.04403	0.00728	2.8E-09	0.1885	0.10336	0.01136	0.00117	0.032	0.00173	0.238	0.05385	0.928	0.941	0.984	0.999	0.978	0.998	0.925	0.956
rs13146157	PCDH10	4	132615994	1.5E-09	-0.04078	0.00674	-0.04078	0.00674	2.8E-09	0.2011	0.16052	0.00999	0.00072	0.231	0.00097	0.0232	0.32295	0.921	0.926	0.986	0.999	0.918	0.999	0.974	0.905
rs4864126	PCDH10	4	132636925	1.5E-09	-0.04075	0.00674	-0.04075	0.00674	2.8E-09	0.2016	0.16262	0.00999	0.00066	0.231	0.00102	0.0239	0.325	0.92	0.926	0.986	0.999	0.918	0.999	0.974	0.905
rs72787038	DHODH	16	72032203	1.5E-09	0.038769	0.00642	0.038769	0.00642	2.9E-09	0.2352	0.01415	0.00119	0.12165	0.035	0.00068	0.0529	0.23558	0.918	0.965	0.999	0.919	0.976	0.999	0.965	0.92

Table S4

rs2419226	PCDH10	4	132619234	1.5E-09	-0.04072	0.00674	-0.04072	0.00674	2.9E-09	0.2008	0.16292	0.01009	0.00071	0.233	0.00099	0.0231	0.32156	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs7437439	PCDH10	4	132619496	1.5E-09	-0.04071	0.00674	-0.04071	0.00674	2.9E-09	0.2008	0.16416	0.01009	0.00071	0.232	0.00099	0.0234	0.32347	0.921	0.926	0.985	0.999	0.918	0.999	0.974	0.905
rs1836568	PCDH10	4	132639552	1.5E-09	-0.04074	0.00675	-0.04074	0.00675	2.9E-09	0.2267	0.15305	0.0101	0.0007	0.246	0.00096	0.0215	0.32026	0.916	0.927	0.985	0.999	0.913	0.999	0.975	0.905
rs1836567	PCDH10	4	132639581	1.6E-09	-0.04074	0.00675	-0.04074	0.00675	2.9E-09	0.2267	0.15294	0.01011	0.0007	0.246	0.00096	0.0215	0.32013	0.916	0.927	0.985	0.999	0.913	0.999	0.975	0.905
rs1836569	PCDH10	4	132639512	1.6E-09	-0.04074	0.00675	-0.04074	0.00675	2.9E-09	0.2267	0.15305	0.01011	0.0007	0.246	0.00096	0.0215	0.32026	0.916	0.927	0.985	0.999	0.913	0.999	0.975	0.905
rs11099197	PCDH10	4	132619650	1.6E-09	-0.04076	0.00675	-0.04076	0.00675	2.9E-09	0.2072	0.1689	0.01041	0.00073	0.227	0.001	0.0228	0.30154	0.92	0.925	0.985	0.999	0.919	0.999	0.975	0.908
rs13127661	PCDH10	4	132617550	1.6E-09	-0.04077	0.00675	-0.04077	0.00675	2.9E-09	0.1999	0.16342	0.01025	0.00068	0.234	0.00102	0.0234	0.3229	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs6827819	PCDH10	4	132640214	1.6E-09	-0.04073	0.00675	-0.04073	0.00675	3E-09	0.2267	0.15288	0.0101	0.0007	0.246	0.00097	0.0216	0.32027	0.916	0.927	0.985	0.999	0.913	0.999	0.975	0.905
rs1435314	PCDH10	4	132640886	1.6E-09	-0.04073	0.00675	-0.04073	0.00675	3E-09	0.2267	0.1527	0.01011	0.0007	0.247	0.00097	0.0216	0.32	0.916	0.927	0.985	0.999	0.913	0.999	0.975	0.905
rs58194884	PCDH10	4	132621041	1.6E-09	-0.04075	0.00675	-0.04075	0.00675	3E-09	0.1951	0.16342	0.01025	0.00071	0.234	0.00102	0.0234	0.3229	0.922	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs13102994	PCDH10	4	132620716	1.6E-09	-0.04075	0.00675	-0.04075	0.00675	3E-09	0.1998	0.16342	0.01025	0.0007	0.234	0.00102	0.0234	0.3229	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs13119821	PCDH10	4	132616186	1.6E-09	-0.04076	0.00675	-0.04076	0.00675	3E-09	0.2009	0.15614	0.01039	0.00072	0.224	0.00109	0.0217	0.31551	0.921	0.927	0.985	0.999	0.92	0.999	0.975	0.906
rs13119679	PCDH10	4	132616309	1.6E-09	-0.04075	0.00675	-0.04075	0.00675	3E-09	0.2009	0.1647	0.0102	0.00072	0.235	0.00099	0.0237	0.32383	0.921	0.926	0.986	0.999	0.917	0.999	0.974	0.905
rs10018735	PCDH10	4	132631339	1.6E-09	-0.04069	0.00674	-0.04069	0.00674	3E-09	0.1976	0.16452	0.0101	0.00071	0.231	0.001	0.024	0.32646	0.921	0.926	0.985	0.999	0.918	0.999	0.974	0.904
rs2419224	PCDH10	4	132623329	1.6E-09	-0.04074	0.00675	-0.04074	0.00675	3E-09	0.2009	0.16394	0.0103	0.00069	0.234	0.00102	0.0235	0.32327	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs11933449	PCDH10	4	132625148	1.6E-09	-0.04074	0.00675	-0.04074	0.00675	3E-09	0.2018	0.16397	0.0103	0.00069	0.235	0.00102	0.0235	0.32347	0.92	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs1435295	PCDH10	4	132627731	1.6E-09	-0.04074	0.00675	-0.04074	0.00675	3E-09	0.2016	0.16387	0.01005	0.00071	0.235	0.00103	0.0237	0.32464	0.92	0.926	0.986	0.999	0.917	0.999	0.974	0.905
rs11099196	PCDH10	4	132619565	1.6E-09	-0.04073	0.00675	-0.04073	0.00675	3.1E-09	0.2008	0.16342	0.01025	0.00071	0.234	0.00102	0.0234	0.3229	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs11099199	PCDH10	4	132619769	1.6E-09	-0.04073	0.00675	-0.04073	0.00675	3.1E-09	0.2008	0.16342	0.01025	0.00071	0.234	0.00102	0.0234	0.3229	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs11099200	PCDH10	4	132619886	1.6E-09	-0.04073	0.00675	-0.04073	0.00675	3.1E-09	0.2008	0.16342	0.01025	0.00071	0.234	0.00102	0.0234	0.3229	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs13148998	PCDH10	4	132620495	1.6E-09	-0.04073	0.00675	-0.04073	0.00675	3.1E-09	0.2008	0.16342	0.01025	0.00071	0.234	0.00102	0.0234	0.3229	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs13149064	PCDH10	4	132620253	1.6E-09	-0.04073	0.00675	-0.04073	0.00675	3.1E-09	0.2008	0.16342	0.01025	0.00071	0.234	0.00102	0.0234	0.3229	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs13149120	PCDH10	4	132620418	1.6E-09	-0.04073	0.00675	-0.04073	0.00675	3.1E-09	0.2008	0.16342	0.01025	0.00071	0.234	0.00102	0.0234	0.3229	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs13149398	PCDH10	4	132620642	1.6E-09	-0.04073	0.00675	-0.04073	0.00675	3.1E-09	0.2008	0.16342	0.01025	0.00071	0.234	0.00102	0.0234	0.3229	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs13149534	PCDH10	4	132620492	1.6E-09	-0.04073	0.00675	-0.04073	0.00675	3.1E-09	0.2008	0.16342	0.01025	0.00071	0.234	0.00102	0.0234	0.3229	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs1347411	PCDH10	4	132621720	1.6E-09	-0.04073	0.00675	-0.04073	0.00675	3.1E-09	0.2008	0.16342	0.01025	0.00071	0.234	0.00102	0.0234	0.3229	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs2419227	PCDH10	4	132619171	1.6E-09	-0.04073	0.00675	-0.04073	0.00675	3.1E-09	0.2008	0.16342	0.01025	0.00071	0.234	0.00102	0.0234	0.3229	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs2900845	PCDH10	4	132619061	1.6E-09	-0.04073	0.00675	-0.04073	0.00675	3.1E-09	0.2008	0.16342	0.01025	0.00071	0.234	0.00102	0.0234	0.3229	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs371783417	PCDH10	4	132621050	1.6E-09	-0.04073	0.00675	-0.04073	0.00675	3.1E-09	0.2008	0.16342	0.01025	0.00071	0.234	0.00102	0.0234	0.3229	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs376067157	PCDH10	4	132621055	1.6E-09	-0.04073	0.00675	-0.04073	0.00675	3.1E-09	0.2008	0.16342	0.01025	0.00071	0.234	0.00102	0.0234	0.3229	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs376597483	PCDH10	4	132621047	1.6E-09	-0.04073	0.00675	-0.04073	0.00675	3.1E-09	0.2008	0.16342	0.01025	0.00071	0.234	0.00102	0.0234	0.3229	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs6840977	PCDH10	4	132621113	1.6E-09	-0.04073	0.00675	-0.04073	0.00675	3.1E-09	0.2008	0.16342	0.01025	0.00071	0.234	0.00102	0.0234	0.3229	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs6841517	PCDH10	4	132621271	1.6E-09	-0.04073	0.00675	-0.04073	0.00675	3.1E-09	0.2008	0.16342	0.01025	0.00071	0.234	0.00102	0.0234	0.3229	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs1435287	PCDH10	4	132622946	1.6E-09	-0.04073	0.00675	-0.04073	0.00675	3.1E-09	0.2008	0.1636	0.01027	0.00071	0.234	0.00102	0.0234	0.32295	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs2419225	PCDH10	4	132622454	1.6E-09	-0.04073	0.00675	-0.04073	0.00675	3.1E-09	0.2045	0.16346	0.01025	0.0007	0.234	0.00102	0.0234	0.32293	0.92	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs10776510	PCDH10	4	132618864	1.6E-09	-0.04073	0.00675	-0.04073	0.00675	3.1E-09	0.2008	0.16342	0.01025	0.00071	0.234	0.00102	0.0234	0.3229	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs6827287	PCDH10	4	132618865	1.6E-09	-0.04073	0.00675	-0.04073	0.00675	3.1E-09	0.2008	0.16342	0.01025	0.00071	0.234	0.00102	0.0234	0.3229	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs13125902	PCDH10	4	132616838	1.6E-09	-0.04073	0.00675	-0.04073	0.00675	3.1E-09	0.2009	0.16342	0.01025	0.00072	0.234	0.00102	0.0234	0.3229	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs13147694	PCDH10	4	132616636	1.6E-09	-0.04073	0.00675	-0.04073	0.00675	3.1E-09	0.2009	0.16342	0.01025	0.00072	0.234	0.00102	0.0234	0.3229	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs1579587	PCDH10	4	132618285	1.6E-09	-0.04073	0.00675	-0.04073	0.00675	3.1E-09	0.2009	0.16342	0.01025	0.00072	0.234	0.00102	0.0234	0.3229	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs1579588	PCDH10	4	132618058	1.6E-09	-0.04073	0.00675	-0.04073	0.00675	3.1E-09	0.2009	0.16342	0.01025	0.00072	0.234	0.00102	0.0234	0.3229	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs5022835	PCDH10	4	132617286	1.6E-09	-0.04073	0.00675	-0.04073	0.00675	3.1E-09	0.2009	0.16342	0.01025	0.00072	0.234	0.00102	0.0234	0.3229	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs13146391	PCDH10	4	132616103	1.6E-09	-0.04073	0.00675	-0.04073	0.00675	3.1E-09	0.2009	0.16342	0.01025	0.00072	0.234	0.00102	0.0234	0.3229	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs5022834	PCDH10	4	132617264	1.6E-09	-0.04073	0.00675	-0.04073	0.00675	3.1E-09	0.2009	0.16342	0.01025	0.00072	0.234	0.00102	0.0234	0.3229	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs1369372	PCDH10	4	132615878	1.6E-09	-0.04072	0.00675	-0.04072	0.00675	3.1E-09	0.206	0.16341	0.01025	0.0007	0.234	0.00102	0.0234	0.32292	0.92	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs13123392	PCDH10	4	132625710	1.6E-09	-0.04072	0.00675	-0.04072	0.00675	3.1E-09	0.2009	0.16397	0.0103	0.00071	0.234	0.00102	0.0235	0.3235	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs3050746	PCDH10	4	132623258	1.6E-09	-0.04072	0.00675	-0.04072	0.00675	3.1E-09	0.2007	0.16392	0.0103	0.00071	0.234	0.00102	0.0235	0.32328	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs2419223	PCDH10	4	132623456	1.6E-09	-0.04072	0.00675	-0.04072	0.00675	3.1E-09	0.2007	0.16394	0.0103	0.00071	0.234	0.00102	0.0235	0.32327	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs1369374	PCDH10	4	132615524	1.6E-09	-0.04072	0.00675	-0.04072	0.00675	3.1E-09	0.2036	0.16339	0.01025	0.0007	0.236	0.00103	0.0234	0.32301	0.92	0.926	0.985	0.999	0.916	0.999	0.974	0.905
rs6822958	PCDH10	4	132627008	1.6E-09	-0.04072	0.00675	-0.04072	0.00675	3.1E-09	0.2008	0.16406	0.0103	0.00071	0.234	0.00102	0.0235	0.32347	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs66632842	PCDH10	4	132624684	1.6E-09	-0.04072	0.00675	-0.04072	0.00675	3.1E-09	0.2008	0.16397	0.0103	0.00071	0.235	0.00102	0.0235	0.32345	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs7681944	PCDH10	4	132626326	1.6E-09	-0.04072	0.00675	-0.04072	0.00675	3.1E-09	0.2008	0.16407	0.0103	0.00071	0.234	0.00102	0.0235	0.32348	0.921	0.926	0.985	0.999	0.917	0.999	0.974	0.905
rs2419222	PCDH10	4	132628888	1.6E-09	-0.04072	0.00675	-0.04072	0.00675	3.1E-09	0.2017	0.16354	0.01026	0.00071	0.234	0.00102	0.0238	0.32524	0.92	0.926	0.985	0.999	0.917	0.999	0.974	0.904
rs6844375	PCDH10	4	132609466	1.6E-09	-0.04073	0.00675	-0.04073	0.00675	3.1E-09	0.2228	0.16246	0.01046	0.00068	0.24	0.00101	0.0226	0.31875	0.917	0.926	0.985	0.999	0.915	0.999	0.974	0.905
rs6534896	PCDH10	4	132611419	1.6E-09	-0.04072	0.00675	-0.04072	0.00675	3.1E-09	0.2198	0.16281	0.01039	0.00066	0.241	0.00102	0.0228	0.32046	0.917	0.926	0.985	0.999	0.915	0.999	0.974	0.905

Table S4

rs13103352	PCDH10	4	132617630	1.6E-09	-0.04071	0.00675	-0.04071	0.00675	3.1E-09	0.2017	0.16342	0.01025	0.00073	0.234	0.00102	0.0234	0.3229	0.92	0.926	0.986	0.999	0.917	0.999	0.974	0.905
rs13128272	PCDH10	4	132617631	1.6E-09	-0.04071	0.00675	-0.04071	0.00675	3.1E-09	0.2017	0.16342	0.01025	0.00073	0.234	0.00102	0.0234	0.3229	0.92	0.926	0.986	0.999	0.917	0.999	0.974	0.905
rs1390897	MON1B	16	77020459	1.7E-09	-0.03105	0.00515	-0.03151	0.0055	3.1E-09	0.0126	0.07247	0.00122	0.12736	0.036	0.00145	0.17	0.02396	0.968	0.948	0.999	0.919	0.977	0.998	0.939	0.966
rs35647652	PCDH10	4	132630467	1.7E-09	-0.04071	0.00675	-0.04071	0.00675	3.1E-09	0.2021	0.16392	0.01028	0.00071	0.234	0.00103	0.0238	0.3258	0.92	0.926	0.985	0.999	0.917	0.999	0.974	0.904
rs7436943	PCDH10	4	132631232	1.7E-09	-0.04071	0.00675	-0.04071	0.00675	3.1E-09	0.2015	0.16765	0.01033	0.0007	0.234	0.00102	0.0238	0.32547	0.92	0.925	0.985	0.999	0.917	0.999	0.974	0.904
rs4607225	PCDH10	4	132631145	1.7E-09	-0.04071	0.00675	-0.04071	0.00675	3.1E-09	0.2021	0.16378	0.01028	0.0007	0.234	0.00104	0.0239	0.32589	0.92	0.926	0.985	0.999	0.917	0.999	0.974	0.904
rs76200347	SMYD3	1	246023362	1.7E-09	-0.05363	0.0089	-0.05363	0.0089	3.1E-09	0.262	0.12042	0.00167	0.00014	0.231	0.0125	0.0537	0.20703	0.912	0.933	0.998	1	0.917	0.975	0.963	0.922
rs9995147	PCDH10	4	132643409	1.7E-09	-0.04074	0.00676	-0.04074	0.00676	3.2E-09	0.2254	0.15135	0.01008	0.00074	0.242	0.00101	0.023	0.32833	0.917	0.927	0.986	0.999	0.915	0.999	0.974	0.904
rs6848844	PCDH10	4	132615102	1.7E-09	-0.04067	0.00675	-0.04067	0.00675	3.2E-09	0.2096	0.16335	0.01024	0.00071	0.239	0.00104	0.0234	0.32313	0.919	0.926	0.986	0.999	0.915	0.999	0.974	0.905
rs1347414	PCDH10	4	132614865	1.7E-09	-0.04065	0.00675	-0.04065	0.00675	3.3E-09	0.212	0.16333	0.01024	0.00071	0.241	0.00104	0.0234	0.32321	0.919	0.925	0.986	0.999	0.915	0.999	0.974	0.904
rs1347415	PCDH10	4	132614743	1.7E-09	-0.04065	0.00675	-0.04065	0.00675	3.3E-09	0.213	0.16332	0.01024	0.00071	0.241	0.00104	0.0234	0.32321	0.918	0.925	0.986	0.999	0.915	0.999	0.974	0.904
rs11099194	PCDH10	4	132614557	1.8E-09	-0.04064	0.00675	-0.04064	0.00675	3.3E-09	0.2145	0.16332	0.01025	0.00071	0.242	0.00105	0.0234	0.32328	0.918	0.925	0.986	0.999	0.915	0.999	0.974	0.904
rs2043514	PCDH10	4	132613084	1.8E-09	-0.04062	0.00675	-0.04062	0.00675	3.4E-09	0.2197	0.16302	0.01025	0.00071	0.244	0.00105	0.0233	0.32268	0.917	0.925	0.986	0.999	0.914	0.999	0.974	0.904
rs13105063	PCDH10	4	132614125	1.8E-09	-0.04062	0.00675	-0.04062	0.00675	3.4E-09	0.2179	0.16329	0.01023	0.00071	0.244	0.00105	0.0234	0.32334	0.918	0.925	0.986	0.999	0.914	0.999	0.974	0.904
rs11251830	PITRM1	10	3282964	1.8E-09	0.03439	0.00572	0.03967	0.00857	3.4E-09	0.2674	0.00067	0.01195	0.08856	0.046	0.00054	0.0152	0.06082	0.92	0.984	0.984	0.946	0.974	0.999	0.981	0.955
rs1946688	PCDH10	4	132613302	1.8E-09	-0.04061	0.00675	-0.04061	0.00675	3.4E-09	0.2196	0.16328	0.01024	0.00071	0.245	0.00105	0.0234	0.3234	0.917	0.925	0.986	0.999	0.914	0.999	0.974	0.904
rs2043513	PCDH10	4	132613306	1.8E-09	-0.04061	0.00675	-0.04061	0.00675	3.4E-09	0.2196	0.16328	0.01024	0.00071	0.245	0.00105	0.0234	0.3234	0.917	0.925	0.986	0.999	0.914	0.999	0.974	0.904
rs2900844	PCDH10	4	132619410	1.8E-09	-0.0406	0.00675	-0.0406	0.00675	3.4E-09	0.2016	0.16075	0.01067	0.00071	0.234	0.00108	0.024	0.32634	0.92	0.926	0.985	0.999	0.917	0.999	0.974	0.904
rs77475786	SMYD3	1	246012367	1.9E-09	-0.05351	0.00891	-0.05351	0.00891	3.6E-09	0.2667	0.11858	0.0017	0.00013	0.226	0.01417	0.055	0.20231	0.911	0.933	0.998	1	0.918	0.97	0.963	0.922
rs78149910	SMYD3	1	246013515	1.9E-09	-0.05345	0.0089	-0.05345	0.0089	3.6E-09	0.2655	0.12004	0.00175	0.00013	0.225	0.01422	0.0553	0.2058	0.911	0.933	0.998	1	0.918	0.97	0.962	0.921
rs141944942	SMYD3	1	246013027	1.9E-09	-0.05346	0.00891	-0.05346	0.00891	3.6E-09	0.2659	0.11942	0.00173	0.00013	0.226	0.01425	0.0553	0.20422	0.911	0.933	0.998	1	0.918	0.97	0.962	0.921
rs10603146	HS3ST5	6	114751515	2E-09	0.043059	0.00718	0.049699	0.01065	3.8E-09	0.0264	0.07586	0.0066	0.09614	0.202	0.00114	0.003	0.00551	0.962	0.948	0.992	0.943	0.933	0.999	0.99	0.978
rs10007431	PCDH10	4	132648974	2.1E-09	-0.0406	0.00677	-0.0406	0.00677	3.9E-09	0.2364	0.1438	0.01052	0.00064	0.224	0.00121	0.03	0.32885	0.915	0.928	0.985	0.999	0.919	0.999	0.971	0.904
rs73132359	SMYD3	1	246021642	2.1E-09	-0.05331	0.0089	-0.05331	0.0089	3.9E-09	0.2648	0.1225	0.0018	0.00013	0.223	0.01443	0.0558	0.21058	0.911	0.932	0.998	1	0.919	0.97	0.962	0.92
rs74781276	SMYD3	1	246019485	2.1E-09	-0.05331	0.0089	-0.05331	0.0089	3.9E-09	0.2648	0.12251	0.0018	0.00013	0.223	0.01442	0.0557	0.21059	0.911	0.932	0.998	1	0.919	0.97	0.962	0.92
rs145732766	SMYD3	1	246018695	2.1E-09	-0.05331	0.0089	-0.05331	0.0089	3.9E-09	0.2648	0.12253	0.0018	0.00013	0.223	0.01443	0.0558	0.21063	0.911	0.932	0.998	1	0.919	0.97	0.962	0.92
rs80247159	SMYD3	1	246018571	2.1E-09	-0.05331	0.0089	-0.05331	0.0089	3.9E-09	0.2648	0.12253	0.00181	0.00013	0.223	0.01443	0.0558	0.21064	0.911	0.932	0.998	1	0.919	0.97	0.962	0.92
rs112950587	SMYD3	1	246015620	2.1E-09	-0.0533	0.0089	-0.0533	0.0089	3.9E-09	0.2657	0.12254	0.0018	0.00013	0.223	0.01443	0.0558	0.21065	0.91	0.932	0.998	1	0.919	0.97	0.962	0.92
rs78783427	SMYD3	1	246015630	2.1E-09	-0.0533	0.0089	-0.0533	0.0089	3.9E-09	0.2657	0.12254	0.0018	0.00013	0.223	0.01443	0.0558	0.21065	0.91	0.932	0.998	1	0.919	0.97	0.962	0.92
rs112732168	SMYD3	1	246016308	2.1E-09	-0.0533	0.0089	-0.0533	0.0089	3.9E-09	0.2654	0.12253	0.00181	0.00013	0.223	0.01443	0.0558	0.21065	0.911	0.932	0.998	1	0.919	0.97	0.962	0.92
rs111795916	SMYD3	1	246014179	2.1E-09	-0.05332	0.0089	-0.05332	0.0089	4E-09	0.2658	0.1216	0.00183	0.00013	0.227	0.01416	0.0563	0.20884	0.91	0.932	0.998	1	0.918	0.971	0.962	0.921
rs6913782	HS3ST5	6	114764161	2.1E-09	0.042979	0.00718	0.049474	0.0106	4E-09	0.0268	0.07642	0.00652	0.09736	0.207	0.00114	0.003	0.00582	0.962	0.948	0.992	0.942	0.932	0.999	0.99	0.978
rs4562171	HS3ST5	6	114754950	2.1E-09	0.04297	0.00718	0.049455	0.01059	4E-09	0.0268	0.07644	0.00651	0.09754	0.207	0.00115	0.003	0.00583	0.962	0.948	0.992	0.942	0.932	0.999	0.99	0.978
rs7847271	TNC	9	115068533	2.2E-09	-0.04763	0.00796	-0.04763	0.00796	4.1E-09	0.1589	0.07708	0.00289	0.01939	0.031	0.00124	0.174	0.17502	0.932	0.946	0.997	0.988	0.978	0.999	0.938	0.932
rs1946687	PCDH10	4	132613428	2.3E-09	-0.0403	0.00675	-0.0403	0.00675	4.4E-09	0.2269	0.16533	0.01015	0.00083	0.267	0.00108	0.0248	0.32764	0.915	0.924	0.986	0.999	0.907	0.999	0.973	0.903
rs12474585	GPN1	2	27648726	2.5E-09	-0.03493	0.00586	-0.03493	0.00586	4.6E-09	0.2495	0.01804	0.00013	0.10076	0.126	0.00239	0.1624	0.16927	0.912	0.96	1	0.933	0.945	0.997	0.935	0.926
rs77350364	GPN1	2	27643272	2.9E-09	-0.03479	0.00586	-0.03479	0.00586	5.4E-09	0.248	0.01976	0.00012	0.11483	0.123	0.0027	0.1475	0.16057	0.912	0.959	1	0.922	0.946	0.996	0.937	0.927
rs2785834	PRR20A	13	57051555	2.9E-09	-0.03024	0.00509	-0.03024	0.00509	5.4E-09	0.028	0.22202	0.00068	0.0324	0.077	0.00416	0.0951	0.14075	0.96	0.923	0.999	0.981	0.963	0.995	0.955	0.937
rs73162283	PCLO	7	82613706	2.9E-09	-0.06086	0.01026	-0.06086	0.01026	5.5E-09	0.2729	0.32266	0.00026	0.09556	0.062	0.00266	0.0242	0.15447	0.909	0.903	1	0.935	0.965	0.997	0.973	0.929
rs8731	GPN1	2	27650459	3E-09	-0.03474	0.00586	-0.03474	0.00586	5.5E-09	0.252	0.01869	0.00013	0.11815	0.126	0.00252	0.1448	0.16969	0.911	0.959	1	0.92	0.945	0.997	0.938	0.925
rs35985209	PRR20A	13	57023293	3E-09	-0.03024	0.0051	-0.03024	0.0051	5.6E-09	0.0331	0.18876	0.00068	0.0338	0.085	0.00361	0.1099	0.14878	0.958	0.927	0.999	0.98	0.961	0.996	0.951	0.935
rs10569707	SMYD3	1	246055990	3.1E-09	-0.04365	0.00736	-0.04365	0.00736	5.7E-09	0.1108	0.07508	0.00305	0.00655	0.018	0.01349	0.0167	0.24642	0.942	0.948	0.997	0.995	0.984	0.978	0.98	0.924
rs140412108	TNC	9	115067346	3.1E-09	-0.04718	0.00796	-0.04718	0.00796	5.7E-09	0.1593	0.07805	0.00311	0.01949	0.034	0.0015	0.1748	0.17481	0.931	0.945	0.997	0.988	0.977	0.998	0.937	0.931
rs7870385	PTPRD	9	11111846	3.2E-09	-0.0379	0.0064	-0.0379	0.0064	5.9E-09	0.1155	0.43377	0.0026	0.01356	0.019	0.00778	0.0616	0.01278	0.94	0.9	0.997	0.991	0.984	0.99	0.964	0.971
rs4435128	PRR20A	13	57028678	3.2E-09	-0.03018	0.0051	-0.03018	0.0051	6E-09	0.0332	0.17642	0.0007	0.03408	0.063	0.0039	0.1609	0.12905	0.957	0.928	0.999	0.98	0.967	0.995	0.94	0.939
rs12145214	SMYD3	1	246049875	3.4E-09	-0.04352	0.00736	-0.04352	0.00736	6.3E-09	0.1107	0.07487	0.00323	0.00658	0.018	0.01393	0.0165	0.24525	0.942	0.948	0.997	0.995	0.984	0.977	0.98	0.924
rs13376689	SMYD3	1	246064779	3.4E-09	-0.0435	0.00736	-0.0435	0.00736	6.4E-09	0.11	0.07487	0.00323	0.00671	0.018	0.01393	0.0165	0.24525	0.942	0.948	0.997	0.995	0.984	0.978	0.98	0.924
rs12124651	SMYD3	1	246065840	3.5E-09	-0.04349	0.00736	-0.04349	0.00736	6.4E-09	0.1107	0.07511	0.00327	0.00655	0.018	0.01399	0.0167	0.24526	0.942	0.948	0.997	0.995	0.984	0.977	0.98	0.924
rs882928	PRR20A	13	57076688	3.6E-09	0.03004	0.00509	0.03004	0.00509	6.6E-09	0.0316	0.16125	0.00062	0.0359	0.09	0.00457	0.1131	0.14018	0.958	0.931	0.999	0.979	0.959	0.995	0.95	0.937
rs72691909	POGK	1	166578901	3.9E-09	0.044108	0.00749	0.044108	0.00749	7.2E-09	0.348	0.0432	0.03625	0.00132	0.054	0.00198	0.0411	0.04521	0.905	0.953	0.934	0.998	0.969	0.997	0.969	0.956
rs9527595	PRR20A	13	57063259	3.9E-09	0.029969	0.00509	0.029969	0.00509	7.2E-09	0.0314	0.19788	0.00062	0.03362	0.088	0.00481	0.1168	0.13733	0.958	0.925	0.999	0.98	0.96	0.994	0.949	0.937
rs2036825	SGCZ	8	14592162	4E-09	-0.03153	0.00536	-0.03153	0.00536	7.4E-09	0.1958	0.06039	0.00096	0.08455	0.107	0.00038	0.3153	0.22204	0.916	0.942	0.999	0.944	0.948	1	0.9	0.915
rs4886001	PRR20A	13	57041170	4.1E-09	-0.02993	0.00509	-0.02993	0.00509	7.5E-09	0.0307	0.20023	0.00066	0.03257	0.088	0.00485	0.1169	0.13906	0.958	0.925	0.999	0.98	0.96	0.994	0.949	0.936
rs9537582	PRR20A	13	57043373	4.1E-09	-0.02994	0.00509	-0.02994	0.00509	7.5E-09	0.0317	0.20066	0.00066	0.03359	0.087	0.00472	0.1175	0.13894	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs9537575	PRR20A	13	57039401	4.1E-09	-0.02993	0.00509	-0.02993	0.00509	7.6E-09	0.0314	0.1998	0.00066	0.03282	0.089	0.00482	0.1169	0.13918	0.958	0.925	0.999	0.98	0.959	0.994	0.949	0.936

Table S4

rs11393042	PRR20A	13	57029119	4.1E-09	-0.02993	0.00509	-0.02993	0.00509	7.6E-09	0.032	0.20016	0.00066	0.03248	0.088	0.00485	0.117	0.13896	0.957	0.925	0.999	0.98	0.96	0.994	0.949	0.936
rs1952992	PRR20A	13	57071653	4.1E-09	0.029919	0.00509	0.029919	0.00509	7.6E-09	0.0313	0.20031	0.00066	0.03295	0.088	0.00484	0.1166	0.13935	0.958	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs1999801	PRR20A	13	57032482	4.1E-09	-0.02992	0.00509	-0.02992	0.00509	7.6E-09	0.032	0.20031	0.00066	0.03278	0.088	0.00485	0.117	0.13895	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs2777625	PRR20A	13	57061923	4.1E-09	0.029928	0.00509	0.029928	0.00509	7.6E-09	0.0318	0.19947	0.00064	0.03359	0.089	0.00487	0.1169	0.1379	0.957	0.925	0.999	0.98	0.959	0.994	0.949	0.937
rs9527589	PRR20A	13	57043356	4.1E-09	-0.02993	0.00509	-0.02993	0.00509	7.7E-09	0.0317	0.20119	0.00066	0.03284	0.087	0.00484	0.1174	0.13943	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs9537576	PRR20A	13	57042558	4.1E-09	-0.02992	0.00509	-0.02992	0.00509	7.7E-09	0.0312	0.20023	0.00066	0.03307	0.088	0.00485	0.1169	0.13906	0.958	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs790331	PRR20A	13	57059504	4.2E-09	0.029911	0.00509	0.029911	0.00509	7.7E-09	0.0315	0.20023	0.00066	0.0332	0.088	0.00485	0.1169	0.13907	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs4520719	PRR20A	13	57023911	4.2E-09	-0.02991	0.00509	-0.02991	0.00509	7.7E-09	0.0318	0.19949	0.00067	0.03358	0.086	0.00478	0.1173	0.1392	0.957	0.925	0.999	0.98	0.96	0.994	0.949	0.936
rs68156774	PRR20A	13	57067973	4.2E-09	0.029907	0.00509	0.029907	0.00509	7.7E-09	0.0314	0.20016	0.00066	0.03351	0.088	0.00483	0.1167	0.13926	0.958	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs6561913	PRR20A	13	57037666	4.2E-09	-0.02991	0.00509	-0.02991	0.00509	7.8E-09	0.0316	0.20032	0.00066	0.03336	0.088	0.00485	0.117	0.13904	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs9527585	PRR20A	13	57036675	4.2E-09	-0.0299	0.00509	-0.0299	0.00509	7.8E-09	0.0317	0.20033	0.00066	0.03361	0.088	0.00485	0.1169	0.13896	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs9537570	PRR20A	13	57026022	4.2E-09	-0.0299	0.00509	-0.0299	0.00509	7.8E-09	0.0317	0.20016	0.00066	0.03346	0.088	0.00485	0.117	0.13896	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs66935095	PRR20A	13	57065477	4.2E-09	0.029905	0.00509	0.029905	0.00509	7.8E-09	0.0315	0.20066	0.00066	0.03387	0.086	0.00485	0.1173	0.13955	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs790327	PRR20A	13	57056071	4.2E-09	0.029901	0.00509	0.029901	0.00509	7.8E-09	0.0317	0.20023	0.00066	0.03358	0.088	0.00485	0.1169	0.13905	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs9527599	PRR20A	13	57068146	4.2E-09	0.0299	0.00509	0.0299	0.00509	7.8E-09	0.0313	0.20015	0.00066	0.03383	0.088	0.00484	0.1166	0.13935	0.958	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs138134554	PRR20A	13	57027996	4.2E-09	-0.0299	0.00509	-0.0299	0.00509	7.8E-09	0.0318	0.20016	0.00066	0.0336	0.088	0.00485	0.117	0.13895	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs4267192	PRR20A	13	57028016	4.2E-09	-0.0299	0.00509	-0.0299	0.00509	7.8E-09	0.0318	0.20016	0.00066	0.0336	0.088	0.00485	0.117	0.13895	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs7326228	PRR20A	13	57029159	4.2E-09	-0.0299	0.00509	-0.0299	0.00509	7.8E-09	0.0318	0.20016	0.00066	0.03361	0.088	0.00485	0.117	0.13896	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs1929623	PRR20A	13	57069030	4.2E-09	0.029899	0.00509	0.029899	0.00509	7.8E-09	0.0313	0.20015	0.00066	0.03384	0.088	0.00484	0.1166	0.13935	0.958	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs7334354	PRR20A	13	57039305	4.2E-09	-0.0299	0.00509	-0.0299	0.00509	7.8E-09	0.0317	0.20023	0.00066	0.03359	0.088	0.00485	0.1169	0.13906	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs7334683	PRR20A	13	57039302	4.2E-09	-0.0299	0.00509	-0.0299	0.00509	7.8E-09	0.0317	0.20023	0.00066	0.03359	0.088	0.00485	0.1169	0.13906	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs9527590	PRR20A	13	57047012	4.2E-09	-0.0299	0.00509	-0.0299	0.00509	7.8E-09	0.0317	0.20023	0.00066	0.03359	0.088	0.00485	0.1169	0.13906	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs7338630	PRR20A	13	57045101	4.2E-09	-0.0299	0.00509	-0.0299	0.00509	7.8E-09	0.0317	0.20023	0.00066	0.03359	0.088	0.00485	0.1169	0.13906	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs9316900	PRR20A	13	57042448	4.2E-09	-0.0299	0.00509	-0.0299	0.00509	7.8E-09	0.0317	0.20023	0.00066	0.03359	0.088	0.00485	0.1169	0.13906	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs9563446	PRR20A	13	57040632	4.2E-09	-0.0299	0.00509	-0.0299	0.00509	7.8E-09	0.0317	0.20023	0.00066	0.03359	0.088	0.00485	0.1169	0.13906	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs790330	PRR20A	13	57059337	4.2E-09	0.0299	0.00509	0.0299	0.00509	7.8E-09	0.0317	0.20023	0.00066	0.03358	0.088	0.00485	0.1169	0.13907	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs9537586	PRR20A	13	57048830	4.2E-09	-0.0299	0.00509	-0.0299	0.00509	7.8E-09	0.0317	0.20023	0.00066	0.03359	0.088	0.00485	0.1169	0.13906	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs4283103	PRR20A	13	57035684	4.2E-09	-0.0299	0.00509	-0.0299	0.00509	7.8E-09	0.0318	0.20032	0.00066	0.03361	0.088	0.00485	0.117	0.13895	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs9527581	PRR20A	13	57025959	4.2E-09	-0.0299	0.00509	-0.0299	0.00509	7.8E-09	0.0318	0.20016	0.00066	0.0336	0.088	0.00485	0.117	0.13896	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs9316899	PRR20A	13	57031710	4.2E-09	-0.0299	0.00509	-0.0299	0.00509	7.8E-09	0.0318	0.20031	0.00066	0.03361	0.088	0.00485	0.117	0.13895	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs9527584	PRR20A	13	57034787	4.2E-09	-0.0299	0.00509	-0.0299	0.00509	7.8E-09	0.0318	0.20032	0.00066	0.03361	0.088	0.00485	0.117	0.13895	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs2785837	PRR20A	13	57062303	4.2E-09	0.029899	0.00509	0.029899	0.00509	7.8E-09	0.0317	0.20022	0.00066	0.03357	0.088	0.00485	0.117	0.13907	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs4885999	PRR20A	13	57033197	4.2E-09	-0.0299	0.00509	-0.0299	0.00509	7.8E-09	0.0318	0.20031	0.00066	0.03361	0.088	0.00485	0.117	0.13895	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs4886000	PRR20A	13	57033259	4.2E-09	-0.0299	0.00509	-0.0299	0.00509	7.8E-09	0.0318	0.20031	0.00066	0.03361	0.088	0.00485	0.117	0.13895	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs2777626	PRR20A	13	57062006	4.2E-09	0.029899	0.00509	0.029899	0.00509	7.8E-09	0.0317	0.20022	0.00066	0.03358	0.088	0.00485	0.117	0.13907	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs9537573	PRR20A	13	57036251	4.2E-09	-0.0299	0.00509	-0.0299	0.00509	7.8E-09	0.0318	0.20031	0.00066	0.03361	0.088	0.00485	0.117	0.13895	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs8001557	PRR20A	13	57030525	4.2E-09	-0.0299	0.00509	-0.0299	0.00509	7.8E-09	0.0317	0.20033	0.00066	0.0336	0.088	0.00485	0.117	0.13895	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs2785836	PRR20A	13	57061613	4.2E-09	0.029899	0.00509	0.029899	0.00509	7.8E-09	0.0317	0.20022	0.00066	0.03358	0.088	0.00485	0.117	0.13907	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs9316897	PRR20A	13	57030003	4.2E-09	-0.0299	0.00509	-0.0299	0.00509	7.8E-09	0.0318	0.20033	0.00066	0.03361	0.088	0.00485	0.117	0.13895	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs9316898	PRR20A	13	57030094	4.2E-09	-0.0299	0.00509	-0.0299	0.00509	7.8E-09	0.0318	0.20033	0.00066	0.03361	0.088	0.00485	0.117	0.13895	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs6561912	PRR20A	13	57030855	4.2E-09	-0.0299	0.00509	-0.0299	0.00509	7.8E-09	0.0318	0.20033	0.00066	0.03361	0.088	0.00485	0.117	0.13895	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs11598058	ANKRD1	10	90961562	4.2E-09	-0.03505	0.00597	-0.04277	0.01052	7.8E-09	3E-05	0.23731	0.04054	0.046	0.061	0.0002	0.048	0.31325	0.988	0.915	0.914	0.968	0.965	1	0.965	0.906
rs796902	PRR20A	13	57060360	4.2E-09	0.029899	0.00509	0.029899	0.00509	7.8E-09	0.0317	0.20022	0.00066	0.03358	0.088	0.00485	0.117	0.13907	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs1336935	PRR20A	13	57025056	4.2E-09	-0.0299	0.00509	-0.0299	0.00509	7.8E-09	0.0317	0.2001	0.00066	0.03356	0.088	0.00485	0.1172	0.13903	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs1331726	PRR20A	13	57074363	4.2E-09	0.029898	0.00509	0.029898	0.00509	7.8E-09	0.0312	0.20032	0.00066	0.0339	0.088	0.00483	0.1166	0.13934	0.958	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs9316894	PRR20A	13	57029647	4.2E-09	-0.0299	0.00509	-0.0299	0.00509	7.8E-09	0.0316	0.20033	0.00066	0.03367	0.088	0.00485	0.117	0.13895	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs9316903	PRR20A	13	57071328	4.2E-09	0.029898	0.00509	0.029898	0.00509	7.8E-09	0.0312	0.20031	0.00066	0.03383	0.088	0.00484	0.1166	0.13935	0.958	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs1336934	PRR20A	13	57024945	4.2E-09	-0.0299	0.00509	-0.0299	0.00509	7.8E-09	0.0318	0.2001	0.00066	0.03357	0.088	0.00485	0.1172	0.13903	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs57967063	PRR20A	13	57034510	4.2E-09	-0.0299	0.00509	-0.0299	0.00509	7.8E-09	0.0317	0.20032	0.00066	0.03369	0.088	0.00485	0.117	0.13895	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs7336021	PRR20A	13	57075483	4.2E-09	0.029897	0.00509	0.029897	0.00509	7.8E-09	0.0312	0.20024	0.00066	0.03393	0.088	0.00483	0.1165	0.13929	0.958	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs1331727	PRR20A	13	57074842	4.2E-09	0.029897	0.00509	0.029897	0.00509	7.8E-09	0.0313	0.20035	0.00066	0.03391	0.088	0.00483	0.1167	0.13935	0.958	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs9537590	PRR20A	13	57076130	4.2E-09	0.029898	0.00509	0.029898	0.00509	7.8E-09	0.0311	0.20044	0.00066	0.03398	0.088	0.00482	0.1165	0.13916	0.958	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs35874668	ANKRD1	10	90963705	4.2E-09	-0.03505	0.00597	-0.04276	0.01051	7.8E-09	3E-05	0.23748	0.04051	0.04607	0.061	0.0002	0.048	0.31388	0.988	0.915	0.914	0.968	0.965	1	0.965	0.906
rs7334973	PRR20A	13	57075675	4.2E-09	0.029897	0.00509	0.029897	0.00509	7.8E-09	0.0311	0.2002	0.00066	0.03393	0.088	0.00483	0.1164	0.13925	0.958	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs9527598	PRR20A	13	57065386	4.3E-09	0.029895	0.00509	0.029895	0.00509	7.8E-09	0.0315	0.20023	0.00066	0.03385	0.088	0.00484	0.117	0.13911	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936

Table S4

rs9527597	PRR20A	13	57064768	4.3E-09	0.029895	0.00509	0.029895	0.00509	7.9E-09	0.0315	0.20023	0.00066	0.03386	0.088	0.00484	0.117	0.13911	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs9652209	PRR20A	13	57065852	4.3E-09	0.029894	0.00509	0.029894	0.00509	7.9E-09	0.0315	0.20023	0.00066	0.03385	0.088	0.00484	0.117	0.13911	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs78822921	ANKRD1	10	90962725	4.3E-09	-0.03504	0.00597	-0.04276	0.01051	7.9E-09	3E-05	0.23748	0.04056	0.04605	0.061	0.0002	0.048	0.31383	0.988	0.915	0.914	0.968	0.965	1	0.965	0.906
rs4430622	PRR20A	13	57026687	4.3E-09	-0.02989	0.00509	-0.02989	0.00509	7.9E-09	0.0318	0.20311	0.00067	0.0336	0.087	0.00482	0.1153	0.14212	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs4636797	PRR20A	13	57064070	4.3E-09	0.029891	0.00509	0.029891	0.00509	7.9E-09	0.0316	0.20118	0.00066	0.03386	0.088	0.00487	0.1173	0.13908	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs2777629	PRR20A	13	57061320	4.3E-09	0.029888	0.00509	0.029888	0.00509	7.9E-09	0.033	0.20022	0.00066	0.03361	0.088	0.00485	0.117	0.13907	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs7982295	PRR20A	13	57049006	4.3E-09	-0.02989	0.00509	-0.02989	0.00509	7.9E-09	0.0315	0.20221	0.00066	0.03391	0.088	0.00486	0.1168	0.14008	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs790329	PRR20A	13	57058487	4.3E-09	0.029883	0.00509	0.029883	0.00509	8E-09	0.0317	0.19977	0.00067	0.03357	0.088	0.00493	0.1164	0.13858	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs9537584	PRR20A	13	57044016	4.3E-09	-0.02989	0.00509	-0.02989	0.00509	8E-09	0.0317	0.20282	0.00067	0.03359	0.088	0.00483	0.1173	0.14098	0.957	0.924	0.999	0.98	0.96	0.994	0.949	0.936
rs6561911	PRR20A	13	57027253	4.3E-09	-0.02988	0.00509	-0.02988	0.00509	8E-09	0.0314	0.20016	0.00066	0.03449	0.088	0.00485	0.117	0.13896	0.957	0.924	0.999	0.979	0.96	0.994	0.949	0.936
rs9316895	PRR20A	13	57029719	4.3E-09	-0.02988	0.00509	-0.02988	0.00509	8E-09	0.0315	0.20033	0.00066	0.03447	0.088	0.00485	0.117	0.13895	0.957	0.924	0.999	0.979	0.96	0.994	0.949	0.936
rs9537583	PRR20A	13	57043857	4.4E-09	-0.02987	0.00509	-0.02987	0.00509	8.1E-09	0.0327	0.20023	0.00066	0.03468	0.088	0.00485	0.1169	0.13906	0.957	0.924	0.999	0.979	0.96	0.994	0.949	0.936
rs944578	PRR20A	13	57076270	4.4E-09	0.029862	0.00509	0.029862	0.00509	8.2E-09	0.0322	0.20037	0.00067	0.03515	0.088	0.00482	0.1166	0.13913	0.957	0.924	0.999	0.979	0.96	0.994	0.949	0.936
rs4666010	SUPT7L	2	27655819	4.6E-09	-0.03431	0.00586	-0.03431	0.00586	8.6E-09	0.2508	0.0195	0.00016	0.12129	0.14	0.00289	0.1507	0.17253	0.91	0.958	1	0.919	0.94	0.996	0.935	0.924
rs2183792	PRR20A	13	57067038	4.7E-09	0.029822	0.00509	0.029822	0.00509	8.6E-09	0.0318	0.20021	0.00066	0.03694	0.088	0.00484	0.117	0.1391	0.957	0.924	0.999	0.978	0.959	0.994	0.949	0.936
rs11585920	RSPO1	1	37635248	4.8E-09	-0.03239	0.00553	-0.03368	0.0062	8.8E-09	0.0119	0.18354	0.00893	0.0002	0.144	0.01662	0.0446	0.2487	0.966	0.925	0.987	0.999	0.943	0.969	0.967	0.918
rs1847162	MON1B	16	77028012	5.2E-09	-0.03113	0.00533	-0.03413	0.00731	9.6E-09	0.0392	0.04918	0.00705	0.15601	0.058	0.00057	0.2287	0.00195	0.954	0.95	0.991	0.902	0.967	0.999	0.924	0.981
rs9316889	PRR20A	13	57015867	5.4E-09	-0.0297	0.00509	-0.0297	0.00509	9.9E-09	0.0318	0.21476	0.00073	0.03338	0.094	0.00531	0.1176	0.1287	0.957	0.922	0.999	0.98	0.958	0.994	0.948	0.938
rs9316888	PRR20A	13	57015570	5.4E-09	-0.0297	0.00509	-0.0297	0.00509	1E-08	0.032	0.21517	0.00073	0.03313	0.095	0.00533	0.118	0.12847	0.957	0.922	0.999	0.98	0.957	0.994	0.948	0.938
rs9569580	PRR20A	13	57014753	5.4E-09	-0.0297	0.00509	-0.0297	0.00509	1E-08	0.0323	0.21453	0.00073	0.03316	0.095	0.00531	0.1186	0.12911	0.957	0.922	0.999	0.98	0.957	0.994	0.948	0.937
rs59676064	PRR20A	13	57014501	5.4E-09	-0.0297	0.00509	-0.0297	0.00509	1E-08	0.0319	0.21421	0.00073	0.03343	0.095	0.00532	0.1187	0.12918	0.957	0.922	0.999	0.98	0.957	0.994	0.948	0.937
rs9537566	PRR20A	13	57021431	5.5E-09	-0.02969	0.00509	-0.02969	0.00509	1E-08	0.0315	0.21312	0.00074	0.03329	0.096	0.0053	0.1187	0.13005	0.957	0.922	0.999	0.98	0.957	0.994	0.948	0.937
rs149870856	PRR20A	13	57020898	5.5E-09	-0.02969	0.00509	-0.02969	0.00509	1E-08	0.0321	0.21312	0.00074	0.03312	0.096	0.0053	0.1187	0.13005	0.957	0.922	0.999	0.98	0.957	0.994	0.948	0.937
rs7331328	PRR20A	13	57013748	5.5E-09	-0.02969	0.00509	-0.02969	0.00509	1E-08	0.0321	0.21322	0.00073	0.03343	0.095	0.00537	0.1191	0.12918	0.957	0.922	0.999	0.98	0.957	0.994	0.948	0.937
rs9563443	PRR20A	13	57020809	5.5E-09	-0.02968	0.00509	-0.02968	0.00509	1E-08	0.0318	0.21312	0.00074	0.03347	0.096	0.0053	0.1187	0.13005	0.957	0.922	0.999	0.98	0.957	0.994	0.948	0.937
rs34224012	PRR20A	13	57021488	5.5E-09	-0.02968	0.00509	-0.02968	0.00509	1E-08	0.0318	0.21312	0.00074	0.03351	0.096	0.0053	0.1187	0.13005	0.957	0.922	0.999	0.98	0.957	0.994	0.948	0.937
rs9316892	PRR20A	13	57020006	5.5E-09	-0.02968	0.00509	-0.02968	0.00509	1E-08	0.0318	0.21309	0.00074	0.03351	0.096	0.0053	0.1188	0.13002	0.957	0.922	0.999	0.98	0.957	0.994	0.948	0.937
rs9316891	PRR20A	13	57019811	5.5E-09	-0.02968	0.00509	-0.02968	0.00509	1E-08	0.0318	0.21309	0.00074	0.03352	0.096	0.0053	0.1188	0.13002	0.957	0.922	0.999	0.98	0.957	0.994	0.948	0.937
rs4581598	PRR20A	13	57041708	5.5E-09	-0.02969	0.00509	-0.02969	0.00509	1E-08	0.033	0.19208	0.00092	0.03442	0.086	0.0043	0.1371	0.13499	0.956	0.925	0.999	0.979	0.96	0.995	0.944	0.936
rs7324069	PRR20A	13	57019585	5.5E-09	-0.02968	0.00509	-0.02968	0.00509	1E-08	0.0318	0.21309	0.00074	0.03352	0.096	0.0053	0.1188	0.13002	0.957	0.922	0.999	0.98	0.957	0.994	0.948	0.937
rs7332532	PRR20A	13	57022792	5.5E-09	-0.02968	0.00509	-0.02968	0.00509	1E-08	0.0318	0.21312	0.00074	0.03358	0.096	0.0053	0.1187	0.13005	0.957	0.922	0.999	0.98	0.957	0.994	0.948	0.937
rs7332678	PRR20A	13	57022783	5.5E-09	-0.02968	0.00509	-0.02968	0.00509	1E-08	0.0318	0.21312	0.00074	0.03358	0.096	0.0053	0.1187	0.13005	0.957	0.922	0.999	0.98	0.957	0.994	0.948	0.937
rs66954418	PRR20A	13	57014190	5.6E-09	-0.02967	0.00509	-0.02967	0.00509	1E-08	0.0324	0.21317	0.00073	0.03413	0.095	0.00536	0.1187	0.12931	0.957	0.922	0.999	0.98	0.957	0.994	0.948	0.937
rs7318213	PRR20A	13	57018741	5.6E-09	-0.02967	0.00509	-0.02967	0.00509	1E-08	0.0304	0.21038	0.00076	0.03203	0.095	0.00558	0.1189	0.12962	0.957	0.923	0.999	0.981	0.957	0.993	0.948	0.937
rs1336936	PRR20A	13	57011675	5.7E-09	-0.02967	0.00509	-0.02967	0.00509	1E-08	0.0324	0.21299	0.00073	0.03334	0.095	0.00548	0.1196	0.12837	0.957	0.922	0.999	0.98	0.957	0.993	0.948	0.938
rs9569576	PRR20A	13	57010812	5.7E-09	-0.02966	0.00509	-0.02966	0.00509	1.1E-08	0.0327	0.21317	0.00073	0.03291	0.095	0.00552	0.1202	0.1287	0.956	0.922	0.999	0.98	0.957	0.993	0.948	0.937
rs7318564	PRR20A	13	57009958	5.9E-09	-0.02964	0.00509	-0.02964	0.00509	1.1E-08	0.0336	0.21302	0.00073	0.03326	0.095	0.00554	0.1206	0.12855	0.956	0.922	0.999	0.98	0.957	0.993	0.948	0.937
rs73083799	SOX5	12	23301528	6.6E-09	-0.09421	0.01624	-0.09421	0.01624	1.2E-08	0.2592	0.10544	0.00147	0.03284	0.119	0.00093	0.2179	0.26389	0.909	0.933	0.998	0.978	0.946	0.999	0.922	0.91
rs7068511	ANKRD1	10	90939648	6.9E-09	-0.03487	0.00602	-0.04076	0.00982	1.3E-08	0.0001	0.31983	0.02939	0.08383	0.066	0.0002	0.0382	0.30302	0.985	0.903	0.947	0.945	0.963	1	0.967	0.907
rs16926680	PDHX	11	35002695	7.7E-09	-0.05677	0.00983	-0.05677	0.00983	1.4E-08	0.3559	0.02489	0.01596	0.00392	0.025	0.00323	0.2448	0.04874	0.905	0.958	0.979	0.996	0.98	0.996	0.923	0.955
rs71480061	PDHX	11	34969242	7.7E-09	-0.05712	0.00989	-0.05712	0.00989	1.4E-08	0.3245	0.01547	0.01301	0.00297	0.021	0.00544	0.2548	0.07106	0.909	0.963	0.984	0.997	0.981	0.994	0.922	0.949
rs111456762	KCNH8	3	19496467	9.7E-09	0.064365	0.01122	0.07803	0.01707	1.8E-08	0.018	0.13948	0.01437	0.04737	0.053	0.0083	0.0051	0.00451	0.965	0.937	0.984	0.974	0.972	0.989	0.987	0.979
rs2296462	PITRM1	10	3267136	1E-08	-0.03175	0.00555	-0.03471	0.00725	1.9E-08	0.1582	0.01592	0.00253	0.16599	0.096	0.00518	0.0033	0.04729	0.929	0.962	0.997	0.9	0.956	0.993	0.987	0.954
rs13292417	PTPRD	9	10180371	1E-08	-0.05045	0.00882	-0.05045	0.00882	1.9E-08	0.2139	0.27525	0.03025	0.05873	9E-04	0.00039	0.1835	0.09771	0.915	0.906	0.948	0.961	0.994	0.999	0.928	0.938
rs73134628	TSHZ2	20	52962479	1.2E-08	-0.09329	0.01635	-0.09329	0.01635	2.2E-08	0.038	0.05058	0.0145	0.00104	0.109	0.01096	0.0267	0.40569	0.953	0.951	0.981	0.998	0.953	0.984	0.973	0.9
rs964282	MON1B	16	77089320	1.2E-08	0.031294	0.00549	0.031294	0.00549	2.3E-08	0.1728	0.09229	0.02201	0.13102	0.05	7.1E-05	0.2025	0.05012	0.92	0.934	0.965	0.914	0.967	1	0.923	0.949
rs55707162	SOX5	12	23138248	1.3E-08	-0.09116	0.01602	-0.09116	0.01602	2.4E-08	0.2465	0.15881	0.0016	0.03469	0.187	0.00072	0.2976	0.29556	0.905	0.918	0.998	0.976	0.924	0.999	0.901	0.9
rs62338516	IRX1	5	3277265	1.3E-08	0.07964	0.01402	0.07964	0.01402	2.5E-08	0.3503	0.22404	0.00829	0.00713	0.048	0.00279	0.1398	0.08445	0.902	0.917	0.991	0.994	0.969	0.997	0.941	0.942
rs71501060	PTPRD	9	10184340	1.4E-08	-0.05001	0.00881	-0.05001	0.00881	2.5E-08	0.2052	0.26339	0.03894	0.06159	0.001	0.00034	0.185	0.09239	0.915	0.906	0.928	0.958	0.993	0.999	0.926	0.938
rs78579943	PDHX	11	34976208	1.6E-08	-0.05568	0.00985	-0.05568	0.00985	2.8E-08	0.2961	0.01158	0.01761	0.00338	0.024	0.00786	0.197	0.07867	0.912	0.965	0.978	0.997	0.98	0.99	0.932	0.947
rs11072774	CHRNB4	15	78660355	1.6E-08	-0.03532	0.00625	-0.03532	0.00625	2.8E-08	0.1004	0.0669	0.00168	0.10055	0.281	0.00108	0.0783	0.21082	0.933	0.939	0.998	0.937	0.903	0.999	0.952	0.916
rs1502443	MON1B	16	77026169	1.7E-08	-0.03011	0.00534	-0.03256	0.007	3E-08	0.0464	0.0567	0.01047	0.15453	0.062	0.0009	0.2545	0.00259	0.949	0.946	0.988	0.908	0.965	0.999	0.918	0.978
rs1812167	MON1B	16	77021667	1.7E-08	0.030279	0.00537	0.033862	0.00758	3.1E-08	0.0278	0.03551	0.01542	0.16219	0.056	0.00071	0.2577	0.00346	0.956	0.952	0.98	0.902	0.967	0.999	0.917	0.976
rs17276523	FOXF1	16	86519859	1.8E-08	-0.06892	0.01224	-0.06892	0.01224	3.2E-08	0.02	0.09765	0.00091	0.02994	0.057	0.01882	0.1502	0.19989	0.96	0.938	0.999	0.982	0.967	0.972	0.94	0.925
rs28858103	OR14C36	1	248338353	1.8E-08	0.028658	0.00509	0.028658	0.00509	3.4E-08	0.1007	0.0871	0.00112	0.00126	0.192	0.04081	0.1624	0.15909	0.931	0.934	0.999	0.998	0.923	0.91	0.93	0.923

Table S4

rs1370257	GOT2	16	58931795	1.9E-08	0.031652	0.00563	0.038984	0.00906	3.4E-08	0.3505	0.16191	0.00887	0.03337	0.002	0.01965	0.1202	0.00053	0.905	0.928	0.988	0.978	0.993	0.968	0.947	0.984
rs1370256	GOT2	16	58931796	1.9E-08	0.031649	0.00563	0.038983	0.00906	3.4E-08	0.3506	0.16191	0.00887	0.03338	0.002	0.01968	0.1203	0.00053	0.905	0.928	0.988	0.978	0.993	0.968	0.947	0.984
rs7280197	NRIP1	21	15043411	2E-08	-0.02944	0.00524	-0.03028	0.00565	3.6E-08	0.0384	0.0684	0.01299	0.02222	0.003	0.01231	0.061	0.2053	0.955	0.947	0.986	0.986	0.991	0.984	0.963	0.928
rs284983	MON1B	16	77101109	2.2E-08	0.030628	0.00547	0.030628	0.00547	3.9E-08	0.2959	0.24545	0.02675	0.10613	0.038	9.6E-05	0.1659	0.04589	0.9	0.906	0.958	0.931	0.97	1	0.929	0.948
rs1437175	GOT2	16	58931484	2.2E-08	0.031483	0.00563	0.038687	0.009	3.9E-08	0.3517	0.16895	0.00971	0.03383	0.002	0.02001	0.1163	0.00058	0.904	0.927	0.987	0.978	0.993	0.968	0.947	0.983
rs72666517	FAM155A	13	107249457	2.4E-08	-0.03682	0.0066	-0.03682	0.0066	4.4E-08	0.2467	0.28245	0.00849	0.00599	0.041	0.0049	0.3015	0.04509	0.913	0.908	0.991	0.994	0.971	0.995	0.909	0.952
rs3826709	KRI1	19	10559508	2.5E-08	0.028123	0.00504	0.028123	0.00504	4.4E-08	0.0783	0.1698	0.00633	0.04542	0.099	0.00186	0.0684	0.21312	0.941	0.925	0.994	0.973	0.954	0.998	0.958	0.921
rs333908	MAP2K6	17	69397179	2.5E-08	-0.02815	0.00505	-0.03219	0.00764	4.6E-08	0.1805	0.12855	0.00039	0.10896	0.23	0.02561	0.0544	0.00033	0.919	0.927	0.999	0.93	0.916	0.952	0.959	0.984
rs100043	MAP2K6	17	69395900	2.6E-08	-0.02814	0.00505	-0.03218	0.00764	4.6E-08	0.1801	0.12841	0.00039	0.10803	0.23	0.02579	0.0544	0.00033	0.919	0.927	0.999	0.931	0.916	0.952	0.959	0.984
rs333906	MAP2K6	17	69396127	2.6E-08	-0.02814	0.00505	-0.0322	0.00764	4.6E-08	0.1776	0.12856	0.00039	0.11065	0.23	0.02561	0.0544	0.00033	0.919	0.927	0.999	0.929	0.916	0.952	0.959	0.984
rs643614	MON1B	16	77103299	2.8E-08	0.030377	0.00547	0.030377	0.00547	5E-08	0.29	0.28547	0.02787	0.10676	0.039	0.00011	0.1686	0.04538	0.9	0.9	0.956	0.93	0.969	1	0.927	0.947
rs285010	MON1B	16	77050510	3E-08	0.030285	0.00547	0.030835	0.00596	5.4E-08	0.0196	0.09035	0.01925	0.15785	0.125	0.00036	0.1715	0.01931	0.957	0.935	0.974	0.905	0.945	0.999	0.931	0.961
rs58199976	SLC4A1AP	2	27711657	3.1E-08	-0.03045	0.0055	-0.03045	0.0055	5.4E-08	0.1707	0.00632	0.00063	0.14369	0.097	0.00556	0.2662	0.21355	0.918	0.964	0.999	0.911	0.951	0.993	0.91	0.914
rs10924451	SMYD3	1	246021901	3.2E-08	-0.04138	0.00748	-0.04138	0.00748	5.7E-08	0.0624	0.05283	0.011	0.01532	0.027	0.01884	0.0141	0.23421	0.948	0.95	0.988	0.99	0.978	0.975	0.979	0.923
rs183666281	FAM204A	10	118411768	3.4E-08	-0.08535	0.01546	-0.08535	0.01546	6.1E-08	0.0263	0.12967	0.00114	0.06633	0.162	0.00953	0.1667	0.0623	0.956	0.93	0.999	0.961	0.938	0.989	0.935	0.947
rs2205935	SCGN	6	25679732	3.6E-08	0.038818	0.00705	0.039635	0.00752	6.7E-08	0.0247	0.01504	0.01419	0.04597	0.031	0.0055	0.0608	0.34032	0.958	0.962	0.986	0.975	0.976	0.994	0.961	0.909
rs12594550	CHRNB4	15	78666695	3.9E-08	-0.03504	0.00638	-0.03504	0.00638	7.3E-08	0.0617	0.06078	0.0066	0.04967	0.212	0.00107	0.2139	0.27278	0.941	0.94	0.993	0.969	0.922	0.999	0.922	0.908
rs7164665	CHRNB4	15	78661577	4.1E-08	-0.03486	0.00635	-0.03486	0.00635	7.6E-08	0.0937	0.05346	0.0073	0.05941	0.223	0.00063	0.2531	0.2698	0.932	0.941	0.992	0.963	0.917	0.999	0.912	0.906
rs9379777	SCGN	6	25677705	4.2E-08	0.038632	0.00705	0.039149	0.00735	7.7E-08	0.0283	0.01485	0.01428	0.04989	0.033	0.00552	0.0601	0.33774	0.956	0.962	0.986	0.973	0.975	0.994	0.961	0.909
rs9636612	NRIP1	21	15024670	4.3E-08	-0.02861	0.00522	-0.02861	0.00522	7.9E-08	0.0386	0.14827	0.01504	0.05165	0.004	0.00806	0.0517	0.20308	0.953	0.93	0.984	0.971	0.989	0.991	0.963	0.925
rs12148319	CHRNB4	15	78663850	4.3E-08	-0.0348	0.00635	-0.0348	0.00635	8E-08	0.0934	0.05354	0.00734	0.05696	0.221	0.00069	0.2571	0.27154	0.932	0.941	0.992	0.964	0.918	0.999	0.912	0.906
rs6939153	SCGN	6	25678450	4.4E-08	0.038574	0.00705	0.039062	0.00734	8.2E-08	0.0275	0.01566	0.0141	0.05195	0.032	0.00566	0.0607	0.33997	0.956	0.961	0.986	0.972	0.976	0.994	0.961	0.908
rs12595350	CHRNB4	15	78661122	4.5E-08	-0.03476	0.00636	-0.03476	0.00636	8.3E-08	0.1008	0.05402	0.00713	0.06388	0.224	0.00064	0.2554	0.27057	0.93	0.94	0.992	0.96	0.917	0.999	0.911	0.905
rs817571	MAP2K6	17	69408809	4.5E-08	0.02763	0.00505	0.03142	0.00755	8.4E-08	0.1825	0.13559	0.00045	0.12041	0.251	0.02863	0.0633	0.00037	0.916	0.923	0.999	0.923	0.909	0.947	0.955	0.982
rs9358866	SCGN	6	25675626	4.6E-08	0.038514	0.00705	0.039018	0.00734	8.4E-08	0.0284	0.01494	0.01452	0.04976	0.034	0.00576	0.0604	0.34022	0.956	0.962	0.985	0.973	0.975	0.994	0.961	0.908
rs7163204	CHRNB4	15	78661398	4.6E-08	-0.03474	0.00636	-0.03474	0.00636	8.5E-08	0.1017	0.05346	0.0073	0.06483	0.223	0.00063	0.2531	0.2698	0.93	0.94	0.992	0.96	0.917	0.999	0.912	0.905
rs6501323	MAP2K6	17	69409867	4.7E-08	0.0276	0.00505	0.031399	0.00756	8.6E-08	0.1813	0.13493	0.00045	0.12132	0.252	0.02906	0.0636	0.00037	0.916	0.923	0.999	0.922	0.908	0.946	0.955	0.982
rs10647749	NRIP1	21	15054411	4.9E-08	-0.02892	0.0053	-0.02924	0.00546	8.9E-08	0.0667	0.03888	0.02676	0.01621	0.008	0.01127	0.0995	0.12137	0.946	0.952	0.968	0.989	0.987	0.986	0.952	0.938
rs284999	MON1B	16	77080799	4.9E-08	-0.02957	0.00542	-0.02957	0.00542	9E-08	0.0414	0.10011	0.02757	0.14701	0.126	0.00023	0.1988	0.03387	0.945	0.93	0.96	0.91	0.942	1	0.923	0.952

Table S5

SIGNIFICANT GENES FROM OUR GENE LEVEL META-ANALYSIS USING ancMETA

Gene	#Study	Overall P	Q	TAU^2	P_SUIC	P_BIPO	P_ADHD	P_DEP	P_ANX	P_PTSD	P_GAD	P_AUD
PPM1G	8	2.173E-05	6.938589	0	0.002112	0.00040913	0.0020559	0.00091	0.00032282	0.0018458	0.00081177	0.00017348
LRBA	8	2.299E-05	5.953629	0	0.003207	0.0100468	0.0012842	0.0003443	0.00041239	0.0018401	0.00097986	0.00019587
BSN	8	4.797E-05	7.497389	0.000387	0.001193	0.00032891	0.000903	0.0001745	0.00031078	0.0015202	0.00151258	0.00026835
ZNF513	8	4.929E-05	6.885998	0	0.002205	0.00044513	0.0020087	0.000955	0.00034567	0.00223	0.00086434	0.00019791
NRBP1	8	5.012E-05	6.779973	0	0.002854	0.00044588	0.0022169	0.0009889	0.0003759	0.0018917	0.00108736	0.0001785
SNX17	8	6.639E-05	6.86228	0	0.002279	0.00045743	0.0021302	0.0010372	0.00035837	0.0021846	0.00088568	0.00020204
GPHN	8	6.719E-05	6.14252	0	0.000831	0.00351717	0.0008773	0.0006028	0.00019573	0.0042351	0.0006173	0.0011633
KRTCAP3	8	7.585E-05	6.945906	0	0.00349	0.00046295	0.002354	0.0010038	0.00039711	0.0018685	0.00117131	0.00018756
RPGRIP1L	8	8.182E-05	6.771272	0	0.003079	0.0004675	0.0005735	0.0002235	0.00024679	0.0124174	0.0003849	0.00028493
EIF2B4	8	8.763E-05	6.788013	0	0.002396	0.00047435	0.0025161	0.0011156	0.00036747	0.0023249	0.00087858	0.00020819
CPEB2	8	8.951E-05	7.141888	9.61E-06	0.001189	0.00074064	0.0007885	0.0002561	0.00061498	0.0044995	0.00049081	0.00030499
MEOX1	8	0.0001283	6.88502	0	0.001824	0.00139972	0.001609	0.0003407	0.0004629	0.0014277	0.00065089	0.00045452
BET1	8	0.0001516	6.51467	0	0.001533	0.00057962	0.0092104	0.0003708	0.00030033	0.0015236	0.00078711	0.00309871
GTF3C2	8	0.0002049	6.803747	0	0.003077	0.00054667	0.0273759	0.002228	0.00038954	0.0019899	0.00090195	0.00020874
FAM117A	8	0.0003166	6.12754	0	0.001138	0.00185255	0.0028659	0.0005012	0.00034415	0.0017002	0.00136519	0.0005783
THNSL1	8	0.0004106	6.196236	0	0.001127	0.00320719	0.0157148	0.0002669	0.03123713	0.0032138	0.00114561	0.00024739
MAPT	8	0.0004323	5.741837	0	0.003534	0.00057482	0.0097729	0.0029818	0.00044177	0.0009591	0.00191676	0.00018657
RNF123	8	0.0004345	6.964506	0	0.001976	0.00082608	0.0020428	0.0004255	0.00054456	0.0023576	0.00775762	0.00043766
FGD3	8	0.0004628	6.458936	0	0.016517	0.00127805	0.001753	0.0003725	0.00035246	0.0022332	0.00081469	0.00621204
FRMPD1	8	0.0004669	5.89915	0	0.002728	0.00224132	0.0036853	0.0003075	0.00052418	0.0010371	0.0031804	0.00094659
VIP	8	0.0004757	5.174453	0	0.001128	0.00180275	0.0041863	0.0005041	0.000308	0.0020052	0.00172644	0.00124028
IFT172	8	0.0004954	5.97577	0	0.002809	0.00064583	0.0021163	0.0013855	0.00055423	0.0030591	0.0011148	0.00023509
RHOA	8	0.0005063	7.365055	0.000605	0.008457	0.00053652	0.0007451	0.0002486	0.0006811	0.0038108	0.00128858	0.00026479
PAXIP1	8	0.0005782	6.044731	0	0.006496	0.05334584	0.001047	0.0002937	0.00026557	0.002918	0.00590866	0.00085519
APOB	8	0.0006774	6.231638	0	0.000934	0.00061745	0.0013566	0.0003466	0.0009141	0.0014471	0.00104742	0.00110462
IP6K2	8	0.0006793	5.218656	0	0.00128	0.00057744	0.0008809	0.0003426	0.00524151	0.0070828	0.00196589	0.00033623
AMIGO3	8	0.0006825	6.807125	0	0.001972	0.00086571	0.0023536	0.000451	0.00059756	0.0023917	0.00808187	0.0004726

Table S5

TAF9	8	0.0007443	5.704836	0	0.006723	0.00058835	0.0007649	0.0002283	0.01557853	0.0017266	0.00106769	0.00233179
GMPPB	8	0.0008565	6.500556	0	0.002265	0.00092688	0.0019271	0.0004749	0.00064195	0.0030854	0.00583112	0.00046217
TYW5	8	0.0008775	6.961374	0	0.003612	0.00228658	0.0041569	0.0007161	0.00033749	0.0119688	0.0011707	0.00062029
DHDH	8	0.000921	7.073174	6.69E-06	0.001259	0.00076753	0.0018258	0.0006011	0.00049232	0.0009877	0.00168925	0.00068949
PSMD11	8	0.0009436	6.800443	0	0.011803	0.00146747	0.0084928	0.0005298	0.00880533	0.0006538	0.00165966	0.00023366
MST1	8	0.0010068	8.241876	0.000721	0.001162	0.00044952	0.001935	0.0002593	0.00039656	0.0019747	0.00265552	0.00049417
BAX	8	0.0010372	4.763949	0	0.001379	0.00106668	0.002276	0.0006449	0.00047387	0.0012115	0.00131372	0.00067716
AKAP10	8	0.0010956	7.742746	0.000625	0.001514	0.00100637	0.002229	0.0004652	0.00024109	0.0006306	0.00361026	0.00027807
SLC35B1	8	0.0011122	6.455414	0	0.002839	0.00242093	0.0017804	0.0006722	0.00042794	0.0017686	0.00100108	0.00065733
SPZ1	8	0.0012106	5.07408	0	0.001063	0.00063965	0.0008762	0.0002679	0.00362436	0.0018694	0.00061839	0.00224555
TRAF3	8	0.0012145	3.756679	0	0.002098	0.00109916	0.0024623	0.0005098	0.00063113	0.0015147	0.00257217	0.00057534
MAP4K3	8	0.0013055	5.126717	0	0.010944	0.00078404	0.0015528	0.0003221	0.00142966	0.0016216	0.00247006	0.00090367
MINPP1	8	0.0013673	5.803429	0	0.00148	0.0008263	0.0026335	0.0131998	0.00024074	0.0035317	0.00051518	0.00386647
NICN1	8	0.0013929	6.200262	0	0.041119	0.00098215	0.0013164	0.0004301	0.00122231	0.0065421	0.00241041	0.00044669
C3orf62	8	0.0013931	8.031719	0.002605	0.001697	0.00037784	0.0005847	0.0002024	0.0005366	0.0205491	0.0008572	0.00021601
DSC3	8	0.0014516	5.820074	0	0.007238	0.00231862	0.0015086	0.0005584	0.00035161	0.0030426	0.02301917	0.00166575
APEH	8	0.0015071	8.549923	0.000808	0.001151	0.0004658	0.0023457	0.0002699	0.00040206	0.0018178	0.00320693	0.00049804
TNKS2	8	0.0016032	6.759879	0	0.001134	0.00276229	0.0019333	0.0008061	0.00056447	0.0034459	0.00479565	0.00039757
SLC46A3	8	0.0016274	4.156246	0	0.003035	0.00178258	0.0032758	0.0004663	0.00070649	0.0015779	0.00207878	0.00064721
MIER1	8	0.001702	7.515232	0.000311	0.004937	0.0006636	0.0080396	0.000232	0.00040992	0.0012039	0.00085404	0.00129547
HSD3B1	8	0.0017204	6.922093	0	0.053965	0.0110563	0.0007886	0.0080702	0.00041452	0.0016492	0.00371379	0.00026025
G3BP1	8	0.0018084	7.302216	7.01E-05	0.002137	0.00270394	0.0019092	0.0007266	0.00040001	0.0037288	0.00066412	0.00057268
MPV17	8	0.0018478	6.796128	0	0.005073	0.00081313	0.0039898	0.2464628	0.0005136	0.0023749	0.0010856	0.0002686
AMT	8	0.0020077	7.519857	0.000672	0.010971	0.00071945	0.0009479	0.0003122	0.00082575	0.0039515	0.00186243	0.00033213
ENKUR	8	0.002046	6.585415	0	0.001569	0.00498009	0.0037682	0.000327	0.00555894	0.0270977	0.00094658	0.00030756
SPICE1	8	0.002261	6.666322	0	0.036301	0.00106247	0.0040163	0.0003766	0.00067813	0.0020176	0.00410791	0.00219628
BRMS1L	8	0.0022698	7.832413	4.66E-05	0.003403	0.00083629	0.0013373	0.0004999	0.00053643	0.0014376	0.00072383	0.00100559
TRIM54	8	0.0022813	6.280201	0	0.003066	0.00077844	0.004159	0.0020776	0.00054464	0.004189	0.00109161	0.00038724
IFT140	8	0.0022992	6.132138	0	0.001567	0.00053284	0.0014034	0.0011577	0.0007497	0.0024357	0.00117318	0.00052105
PRR7	8	0.0024405	6.83711	0	0.001642	0.0010199	0.022159	0.0004854	0.00115059	0.0009727	0.00143086	0.00073523

Table S5

DNAJC5G	8	0.0025664	6.078882	0	0.003301	0.00079772	0.0033076	0.0021061	0.00055963	0.0044614	0.00118033	0.00039529
CRHR1	8	0.0025847	4.523358	0	0.011267	0.00204384	0.0026853	0.0007159	0.00098622	0.0566321	0.00155916	0.00013166
CCDC141	8	0.0026174	7.211805	3.4E-05	0.001514	0.00148359	0.0014608	0.0010693	0.00049439	0.0008257	0.00349827	0.00044107
DAG1	8	0.0027029	8.024813	0.001116	0.009541	0.00059534	0.0008819	0.0002702	0.00062951	0.0077384	0.00177358	0.00034939
USP4	8	0.002781	8.577302	0.002973	0.001612	0.00037462	0.000563	0.0001903	0.00051201	0.0413452	0.00081712	0.00022446
BRCA1	8	0.0028041	6.630873	0	0.002096	0.00089103	0.003054	0.0016314	0.00031802	0.0022626	0.00072186	0.05720501
TBXAS1	8	0.0028058	9.389989	0.000452	0.003166	0.00061459	0.0008183	0.0002909	0.00042386	0.0019075	0.00040238	0.00027587
CDK5R1	8	0.0028245	6.718069	0	0.015847	0.00465319	0.0286408	0.0006188	0.01901361	0.0007699	0.00256321	0.00025908
ATP6V1E1	8	0.0028521	5.259401	0	0.006826	0.00103935	0.001865	0.000339	0.00120413	0.0155895	0.01840312	0.0015452
CHMP4B	8	0.0028591	5.748254	0	0.001865	0.00364558	0.0073595	0.0004922	0.00164743	0.0016134	0.00153036	0.00022123
NR2F1	8	0.0028616	7.121865	4.48E-06	0.002757	0.0022337	0.0010053	0.0005391	0.00046848	0.0027267	0.00165205	0.00237564
RBM34	8	0.0028957	5.426851	0	0.016113	0.00164962	0.0013513	0.0005755	0.00143374	0.0021917	0.00131118	0.00045834
BCL2L13	8	0.0029212	6.60126	0	0.005123	0.00091868	0.0047958	0.0003972	0.00077257	0.0020098	0.00893858	0.00221727
UGGT2	8	0.0029306	8.51772	0.000161	0.001546	0.0004362	0.001144	0.0005009	0.00050709	0.0008332	0.00083589	0.00063418
MAPK8IP3	8	0.002975	7.961758	0.000215	0.001092	0.00057014	0.010959	0.0005901	0.00051747	0.0021489	0.00181782	0.00044924
AICDA	8	0.0031907	5.853411	0	0.001047	0.00070629	0.0023587	0.0009923	0.00113176	0.0014844	0.00122195	0.00048305
TCTA	8	0.0033342	7.787499	0.001034	0.009805	0.00071445	0.0009143	0.0003106	0.00080346	0.0038505	0.0018628	0.00033132
OR6N2	8	0.0033581	7.029204	3.51E-06	0.017164	0.00110476	0.0014728	0.0009643	0.00049896	0.0014028	0.00100277	0.00111379
DGCR6	8	0.0034569	4.128435	0	0.007288	0.0014298	0.0156455	0.0007596	0.00053832	0.0020718	0.00121652	0.00099191
ERLIN1	8	0.003689	9.402719	0.000528	0.001008	0.00107209	0.0013384	0.0003787	0.00031775	0.0047701	0.0117806	0.00043034
FNDC4	8	0.0036919	5.107708	0	0.003745	0.0010597	0.0025038	0.0021197	0.00090067	0.0065874	0.00155143	0.00031108
KIAA1211L	8	0.0037268	5.807743	0	0.000914	0.0023651	0.0046762	0.0002581	0.00097787	0.0025348	0.00192903	0.00085822
ZBP1	8	0.0037313	7.013307	2.09E-06	0.002063	0.00129066	0.0012933	0.0008839	0.00106297	0.000965	0.00435226	0.00044965
KCNK2	8	0.0037541	6.749421	0	0.001851	0.00716623	0.0026782	0.0003911	0.00056886	0.0008734	0.00137602	0.00116619
IP6K1	8	0.0040293	5.725068	0	0.069513	0.007749	0.0024619	0.000911	0.00082469	0.002884	0.0024847	0.0003916
PC	8	0.0043029	9.608675	0.004397	0.000666	0.00025221	0.0007683	0.0003831	0.00032556	0.0012482	0.00056674	0.00062124
GCNT3	8	0.0043687	3.546151	0	0.007879	0.00390108	0.0027077	0.00062	0.00059966	0.0017898	0.00166858	0.00129956
ZNF516	8	0.0043838	5.586896	0	0.001307	0.00208721	0.001318	0.000677	0.00065212	0.0020165	0.0015726	0.00144203
HNRNPA1	8	0.0043844	11.15936	8.48E-05	0.002328	0.00038945	0.0022395	0.0003477	0.00033384	0.0005322	0.00079305	0.00032495
CLEC4E	8	0.0044578	5.114861	0	0.001193	0.00146727	0.0026382	0.0012559	0.00116917	0.001352	0.00170287	0.0003947

Table S5

ANO10	8	0.0044783	8.830427	0.00114	0.007655	0.00054594	0.0006105	0.0002212	0.00044977	0.0010951	0.00075859	0.00092327
OR8D1	8	0.0045765	5.814402	0	0.001833	0.00126978	0.0020085	0.0009513	0.00119792	0.0011666	0.00094604	0.00053252
CWC22	8	0.0047022	5.112702	0	0.004554	0.00084661	0.0053513	0.0439232	0.00077022	0.0016914	0.00189962	0.00031355
IKZF1	8	0.0047333	7.237066	3.67E-05	0.002874	0.00053406	0.0017314	0.0012538	0.00061224	0.0011872	0.00115834	0.00084372
IGFALS	8	0.0048112	7.589926	0.000107	0.001502	0.00074823	0.0177073	0.0007646	0.00071051	0.0011996	0.00188407	0.00054661
OR6K3	8	0.0048125	6.614381	0	0.001329	0.00101204	0.0186587	0.0008624	0.00061604	0.00226	0.00157304	0.00114462
PIP5K1C	8	0.0049904	5.807477	0	0.004057	0.00146025	0.0014629	0.0007094	0.00073966	0.0272129	0.01639202	0.0007276
NFIB	8	0.0051412	9.94195	0.000127	0.000696	0.00058541	0.0012058	0.0004554	0.00055342	0.0010543	0.00061813	0.00066729
OTUD7B	8	0.0052696	10.6779	0.001672	0.001411	0.00090176	0.000767	0.0003615	0.00036005	0.0007911	0.00284569	0.00073257
NAA35	8	0.0052739	8.979731	0.000615	0.001364	0.00084127	0.0007957	0.0006345	0.00051313	0.0011339	0.00190853	0.00065378
TMEM204	8	0.0053098	6.309434	0	0.002003	0.00069534	0.0011592	0.0013794	0.00096302	0.0017706	0.00180032	0.00058352
OR6K2	8	0.0053275	4.873883	0	0.001644	0.00105096	0.0084144	0.0007287	0.00068107	0.0025607	0.0016269	0.00132138
FBXO5	8	0.0056009	8.255633	0.000181	0.001458	0.00133512	0.0020578	0.0005814	0.00028966	0.0026299	0.00090839	0.00052824
ADRA2B	8	0.005609	5.330403	0	0.002852	0.00390794	0.0016994	0.0005502	0.00084536	0.0016125	0.00353608	0.00125666
PPIL4	8	0.0056131	6.871451	0	0.039189	0.00081901	0.0027832	0.0003084	0.00166095	0.0088205	0.00097435	0.00196516
GSE1	8	0.0056436	4.724024	0	0.001862	0.00162074	0.0285251	0.0009017	0.00058028	0.0053322	0.00455851	0.00087539
CNOT4	8	0.0056747	5.118569	0	0.00234	0.00053622	0.0022741	0.0010759	0.00502556	0.0016597	0.00203685	0.0004126
SERPINB11	8	0.0056852	6.670614	0	0.010262	0.002339	0.0022102	0.0005782	0.00053944	0.0012801	0.04769848	0.01862914
H3F3A	8	0.0056916	7.741002	6.82E-05	0.001842	0.00105309	0.0025067	0.0007395	0.00055577	0.0025937	0.00189029	0.00070685
NUCB1	8	0.0057234	8.85432	0.000339	0.000957	0.00070594	0.0021084	0.0006674	0.00051465	0.0008725	0.00157611	0.0007462
METTL13	8	0.0057358	7.465157	0.001054	0.001455	0.00018563	0.0005504	0.0003327	0.00041201	0.0012479	0.00034568	0.00342981
MYL1	8	0.0057548	11.77652	0.001324	0.001265	0.0007972	0.0006577	0.0004054	0.00041789	0.0007275	0.00061713	0.00064839
LRRC58	8	0.0057612	6.107679	0	0.001129	0.00067561	0.0011047	0.0026043	0.0074713	0.0015497	0.00051156	0.00040053
DNAJC17	8	0.0057711	12.15097	0.000359	0.000545	0.00054877	0.0021494	0.0003926	0.00029668	0.0023336	0.00083709	0.00046598
RIPK1	8	0.0058292	6.554187	0	0.00409	0.00310715	0.0093731	0.000627	0.00298265	0.0020747	0.00087482	0.00041236
POLR3E	8	0.0059736	9.292141	0.002813	0.001224	0.00125997	0.0241519	0.0004111	0.00026035	0.0008559	0.00051881	0.00079073
MYO7A	8	0.0059864	7.318727	0.000123	0.006231	0.00047353	0.0018816	0.0005339	0.00518853	0.0015407	0.00098028	0.00051183
NUBP2	8	0.0059946	5.310367	0	0.001919	0.00099116	0.0048068	0.0008361	0.00083394	0.0021496	0.00551634	0.00076636
SOST	8	0.0060639	10.71265	0.001618	0.000803	0.01740483	0.0007422	0.0002883	0.0003295	0.0007104	0.00046799	0.00026512
CYP51A1	8	0.0060847	9.134493	8.2E-05	0.000788	0.00096178	0.0025905	0.000324	0.00052863	0.0009959	0.01268538	0.00033347

Table S5

STOX2	8	0.0061216	6.544893	0	0.001357	0.00073083	0.0018332	0.0004816	0.00170732	0.0013229	0.00172436	0.0060894
FTL	8	0.0062325	6.129275	0	0.000973	0.00192906	0.0024014	0.0007953	0.000838	0.0026523	0.00182297	0.00091955
EP300	8	0.00624	5.855573	0	0.002184	0.00095361	0.0015493	0.00049	0.00086428	0.0020246	0.00132404	0.00277769
TOMM20	8	0.006314	6.918493	0	0.002153	0.00269003	0.0008789	0.0007016	0.00575283	0.0010454	0.01085089	0.0003556
ADAM7	8	0.0064898	10.18169	0.000405	0.001891	0.00091272	0.0006733	0.0003411	0.00025225	0.0006105	0.00058609	0.00125128
NDRG1	8	0.0065066	8.770384	0.000125	0.001482	0.00137514	0.0010289	0.0005602	0.00076174	0.0009952	0.00073705	0.00065846
SPSB3	8	0.006558	6.057744	0	0.002129	0.00096587	0.0100896	0.000897	0.00085942	0.0024859	0.00366197	0.00073465
TMEM106A	8	0.0066439	7.181429	0.00027	0.001352	0.00082958	0.0038752	0.0024475	0.00031177	0.0012332	0.00061752	0.01375397
PRB1	8	0.0066691	7.839493	0.00021	0.0019	0.00103444	0.0017566	0.0008074	0.00075548	0.0026169	0.00067446	0.00073983
ZNF791	8	0.0066707	5.823965	0	0.001248	0.00120428	0.0025337	0.000476	0.00265776	0.0014141	0.00289951	0.00045728
MDFIC	8	0.006706	6.537964	0	0.001071	0.00093045	0.0572107	0.0005501	0.00526584	0.0018439	0.00118602	0.00083239
NCKIPSD	8	0.0068249	4.701259	0	0.00095	0.00072009	0.0015445	0.0005075	0.00097969	0.0033977	0.00296584	0.00038991
AP4M1	8	0.0069038	8.728774	0.000789	0.002664	0.00071815	0.0013506	0.0006154	0.0004074	0.0011077	0.00055022	0.00136005
RCE1	8	0.0069393	10.06621	0.01067	0.000668	0.00023981	0.0007635	0.0004101	0.00034492	0.001813	0.00054509	0.00057594
ASTL	8	0.0069708	4.609665	0	0.00285	0.00685554	0.001849	0.0005989	0.00089631	0.0017231	0.00198522	0.00126341
CCDC92	8	0.0070258	10.78231	0.002404	0.000906	0.00032817	0.0380855	0.0003886	0.00025374	0.0017784	0.00088848	0.00034207
FAM81A	8	0.0071135	7.034911	1.78E-06	0.11158	0.00336354	0.0277278	0.0005549	0.00078531	0.0034578	0.00934154	0.00098721
LRRC70	8	0.0071229	5.855576	0	0.003153	0.00417006	0.0015471	0.0006517	0.00459558	0.002342	0.31449671	0.00036558
UBE2V2	8	0.0071585	7.412686	3.61E-05	0.044736	0.00151524	0.0025155	0.0005726	0.00045033	0.0048723	0.00334531	0.00134491
TXNL4A	8	0.0072583	6.128086	0	0.0018	0.00103152	0.0015882	0.0012638	0.00108257	0.0012765	0.00133714	0.00066195
MYO1D	8	0.0074495	6.405295	0	0.014077	0.00216758	0.0024862	0.0008196	0.01010945	0.004876	0.00117394	0.00033857
NFRKB	8	0.0075088	7.482674	0.000174	0.001163	0.00106967	0.0010184	0.0004139	0.0008185	0.0018031	0.0010084	0.01249084
MBLAC1	8	0.0075655	8.899196	0.000513	0.002609	0.0008245	0.0009386	0.0007063	0.00050025	0.0013962	0.00068782	0.00101758
YWHAQ	8	0.0076699	7.527703	0.000313	0.00099	0.00069522	0.0078233	0.0003711	0.00125449	0.0006931	0.0004752	0.00047542
CAV1	8	0.0076702	5.56933	0	0.001742	0.00733151	0.0038847	0.000436	0.00320732	0.0013625	0.0015521	0.0010556
SCN10A	8	0.007705	6.071835	0	0.002063	0.00615422	0.0075514	0.0004815	0.00095258	0.0037167	0.00139892	0.0023289
ARRDC3	8	0.0077166	8.182862	2.98E-05	0.004025	0.0012636	0.0008611	0.0005764	0.0005512	0.0023396	0.001524	0.0016553
LRFN4	8	0.0079284	10.05602	0.00857	0.000726	0.00025608	0.0007931	0.000452	0.00037039	0.00217	0.00056294	0.00061756
IRX2	8	0.0079576	6.776759	0	0.001137	0.00122691	0.000819	0.0023423	0.00047002	0.0041144	0.00100505	0.00074894
ZNF226	8	0.0079796	7.649593	0.000116	0.003438	0.00833513	0.0016588	0.0005573	0.0008832	0.0018243	0.00086201	0.00097837

Table S5

SLC5A2	8	0.0080311	6.380168	0	0.007206	0.00099751	0.0014279	0.0020785	0.00115901	0.0014165	0.00140264	0.0004688
SORL1	8	0.0080611	8.354892	0.000337	0.002684	0.04300338	0.0006265	0.0010053	0.00040582	0.000696	0.00047224	0.00023324
SORCS3	8	0.0080736	13.98138	0.000996	0.001323	0.00034485	0.0004153	0.000182	0.00025013	0.0003748	0.00049467	0.00070207
EPGN	8	0.0081685	5.542224	0	0.003094	0.0014026	0.0031878	0.0024533	0.00045353	0.0018391	0.00295552	0.00108539
HGFAC	8	0.008185	6.160429	0	0.002868	0.00265282	0.0125282	0.0004558	0.00248129	0.1375285	0.00149149	0.0008627
CACNG2	8	0.0082326	12.64738	0.000759	0.001179	0.00057917	0.0015849	0.000352	0.00041098	0.0004971	0.00067271	0.00071405
TGFB1I1	8	0.0082683	6.625392	0	0.005457	0.00111461	0.0021638	0.0018675	0.00097331	0.0012481	0.00189303	0.00050213
TRIM3	8	0.0083031	8.283317	0.000486	0.000793	0.00088567	0.0009203	0.0014752	0.0004125	0.0022088	0.00076166	0.00078755
HN1L	8	0.0083127	9.918111	0.002361	0.000785	0.00039837	0.0075777	0.0005247	0.00039204	0.0015287	0.00085425	0.00032478
ZNF529	8	0.0083717	3.62264	0	0.003193	0.00120584	0.0032487	0.0007108	0.00118785	0.0017379	0.00181295	0.00104046
NME3	8	0.008476	5.871427	0	0.002069	0.00100896	0.014083	0.0009974	0.00088574	0.0031488	0.00379609	0.00077889
OR8G5	8	0.0084961	8.434742	0.000457	0.002747	0.00084149	0.0027285	0.0007697	0.00079457	0.0009954	0.0006357	0.00064019
CELA3B	8	0.0085293	4.861316	0	0.001634	0.01026507	0.0024935	0.0021319	0.00040014	0.0086161	0.00114968	0.00345765
BBS5	8	0.0086128	7.196748	8.17E-05	0.001147	0.00206696	0.0048392	0.0011833	0.0003661	0.0065146	0.00518381	0.00072491
TFR2	8	0.0086303	10.68394	0.005467	0.00068	0.00032892	0.0036629	0.0002551	0.00024248	0.0026479	0.00050117	0.00116365
WDR7	8	0.0086504	10.52281	0.000275	0.00065	0.00072068	0.0115254	0.0003618	0.00050998	0.0013136	0.00097715	0.00032101
WDR83	8	0.0086759	7.252161	0.000595	0.000997	0.00124577	0.0020955	0.0004143	0.00566445	0.0008644	0.00443265	0.00045265
WDR83OS	8	0.0086759	7.252161	0.000595	0.000997	0.00124577	0.0020955	0.0004143	0.00566445	0.0008644	0.00443265	0.00045265
PINX1	8	0.008721	7.774547	0.001755	0.000414	0.00021136	0.000732	0.0014573	0.00101678	0.0005396	0.00334158	0.00020001
C20orf85	8	0.0087447	8.583218	5.94E-05	0.00126	0.00272416	0.0014842	0.0004496	0.00063101	0.0051237	0.00106051	0.00091449
NFAT5	8	0.0087653	7.070038	4.52E-06	0.001817	0.00255375	0.00434	0.0005946	0.00094486	0.0015042	0.00165657	0.0017174
GAL	8	0.0087766	7.13115	7.37E-05	0.002937	0.00288114	0.0034494	0.0004551	0.00199144	0.001997	0.00151361	0.00072417
FAM204A	8	0.0088323	5.720535	0	0.003066	0.00257629	0.0020972	0.0009298	0.00088451	0.0010683	0.00162919	0.00098428
FIGNL1	8	0.0088391	6.761589	0	0.003037	0.00083244	0.0009665	0.0043588	0.00059686	0.002107	0.00202261	0.00096633
RBM12B	8	0.008858	5.922615	0	0.088214	0.0010414	0.0191617	0.0005921	0.00367649	0.0013828	0.0048646	0.00067068
HIST1H2BJ	8	0.008864	11.58554	0.001812	0.000857	0.00061487	0.0066339	0.0004246	0.00028483	0.0005736	0.00114128	0.00069053
HIST1H2BK	8	0.0089561	11.49512	0.002642	0.000782	0.00049113	0.0051963	0.0003983	0.00027869	0.0005824	0.0010623	0.00081124
CCDC50	8	0.0090518	6.635308	0	0.001201	0.00278975	0.0056923	0.0003809	0.00219834	0.0016203	0.01278335	0.00556536
DNAH10	8	0.0090639	11.6932	0.001562	0.00083	0.00034524	0.0051353	0.0003733	0.00025493	0.0011233	0.00105414	0.0003151
HPX	8	0.0090822	8.196842	0.00046	0.000872	0.00081717	0.000981	0.0014395	0.00041326	0.0041638	0.00076804	0.00090549

MRPS34	8	0.0091088	5.645142	0	0.002117	0.0010597	0.0170109	0.0010023	0.00091401	0.0029392	0.00417996	0.0007808
UTP15	8	0.0091602	6.867443	0	0.007864	0.00076321	0.0034891	0.0015273	0.00049429	0.0026701	0.1011128	0.00210894
EME2	8	0.0091699	5.313981	0	0.00215	0.00105474	0.0113209	0.0009865	0.00091588	0.0029659	0.00459216	0.00079803
TPSD1	8	0.0092338	6.90815	0	0.057961	0.00241108	0.0393451	0.0011586	0.00080606	0.0025327	0.00103507	0.00073881
ARID4B	8	0.0092408	10.32907	0.001923	0.023178	0.00126196	0.0010013	0.000382	0.00052638	0.0006127	0.00058217	0.00030382
FAM162A	8	0.0092544	5.713728	0	0.001591	0.00096247	0.0097169	0.0008141	0.00413815	0.0012755	0.00173568	0.00059468
DBN1	8	0.0093995	8.353763	0.00043	0.001572	0.00129642	0.0072521	0.0005123	0.00108876	0.000852	0.00087061	0.00074753
SSR3	8	0.0094389	9.343356	0.00023	0.000887	0.00080644	0.0012163	0.0005577	0.00052162	0.0049413	0.00106724	0.00136863
TRPM7	8	0.0095576	14.59529	0.012233	0.000548	0.0005081	0.0003447	0.0003232	0.00029303	0.0002895	0.00036359	0.00022591
DNHD1	8	0.0095612	7.164504	3.56E-05	0.000987	0.00125528	0.0070417	0.0156896	0.00056745	0.0019469	0.0007189	0.00074869
ZNF131	8	0.0095689	5.896277	0	0.001796	0.00052039	0.0025584	0.0676104	0.00117807	0.0011705	0.00106952	0.00056951
PPP1R15A	8	0.0095732	9.696688	0.000873	0.001502	0.00055198	0.0024531	0.0006743	0.00059607	0.0006853	0.00115268	0.00065681
MCM7	8	0.0096862	9.256943	0.000952	0.004216	0.00077483	0.0011366	0.0006773	0.00044019	0.0011464	0.00057902	0.00121284
STIM2	8	0.0097075	8.729443	3.86E-05	0.000689	0.00048913	0.0011913	0.0008991	0.00093522	0.0014446	0.00125166	0.00049658
XRN2	8	0.0097801	6.449008	0	0.00425	0.00359458	0.0007473	0.0015099	0.00039711	0.001813	0.00130192	0.00074598
C17orf105	8	0.0097808	9.08557	0.000581	0.00186	0.02266555	0.0010762	0.0005524	0.00063827	0.0012101	0.00091497	0.00055504
TTLL1	8	0.009784	6.632328	0	0.007954	0.00100866	0.0034538	0.000805	0.01273263	0.0009486	0.00821895	0.00048228
SPPL2A	8	0.0098031	12.43431	0.007177	0.000496	0.00053658	0.0006914	0.0003535	0.0006084	0.0004898	0.00109268	0.00032522
RALGPS2	8	0.00987	4.987563	0	0.005253	0.00255757	0.0049471	0.0008127	0.00081697	0.0050605	0.00719213	0.00079882
OR8G1	8	0.0098929	10.07984	0.000823	0.001849	0.000626	0.0026151	0.0005971	0.00061445	0.0007861	0.00047547	0.00057772
MCF2L2	8	0.0099193	8.56729	7.56E-05	0.00221	0.00324513	0.0013272	0.0006344	0.00063316	0.0009236	0.00537515	0.00078498
SRSF6	8	0.0099431	9.031024	0.000433	0.004447	0.00214843	0.0008224	0.0003877	0.00049104	0.0065703	0.00197377	0.00098976
C16orf52	8	0.0099607	7.882557	0.00062	0.001116	0.00185086	0.0046535	0.0008144	0.0004827	0.0017996	0.00136977	0.00126159
PAG1	8	0.0100315	8.307964	0.000125	0.137383	0.00060313	0.0015078	0.001125	0.0005174	0.0109627	0.00074991	0.00056453
NR3C1	8	0.0100782	6.434741	0	0.001231	0.00152386	0.0024899	0.0012442	0.00119662	0.0018734	0.00137468	0.00069542
LRP8	8	0.01017	8.158034	6.66E-05	0.0009	0.00089334	0.0028391	0.0009232	0.00064068	0.002371	0.00137732	0.0011104
LTN1	8	0.0101703	6.81846	0	0.011347	0.00694983	0.0025975	0.0011894	0.00071576	0.0019855	0.00553718	0.00063348
DYNLT1	8	0.0102679	11.59966	0.002254	0.001153	0.00027241	0.0003927	0.0001471	0.00022713	0.000627	0.00017885	0.00110888
FAM49B	8	0.0102892	7.164989	4E-05	0.004094	0.00076955	0.0027771	0.0016185	0.000452	0.001575	0.00787787	0.00171037
FAM110B	8	0.0103196	5.154851	0	0.001471	0.00260916	0.0012587	0.0003724	0.02050854	0.0016608	0.00660762	0.0041201

Table S5

HIST1H2AH	8	0.0103207	12.10441	0.003304	0.00072	0.00046117	0.0046095	0.0003792	0.00026776	0.0005491	0.00105431	0.00081478
RUNDC1	8	0.010387	4.843576	0	0.005635	0.00171193	0.0159589	0.0014584	0.00048825	0.0027577	0.0011804	0.00460795
XKR6	8	0.01049	9.689529	0.003457	0.000444	0.00019658	0.0002243	0.0009242	0.00037655	0.0003809	0.00058652	0.00018147
HLA-DRB1	8	0.0104975	11.3081	0.001675	0.000608	0.00087029	0.0012213	0.0003108	0.00057015	0.0260042	0.00094762	0.00043849
CNDP1	8	0.0105429	5.288977	0	0.00507	0.00130473	0.0042204	0.0010585	0.00072852	0.004465	0.00535783	0.00091272
SPOP	8	0.0106035	7.07034	1.34E-05	0.002782	0.00381842	0.0017978	0.0013846	0.00078224	0.0026736	0.00089323	0.00086984
APBB1	8	0.0107051	9.240244	0.000673	0.000722	0.00077674	0.0009699	0.001081	0.000429	0.0023848	0.00091364	0.00077583
C11orf86	8	0.0107192	9.232569	0.002876	0.001403	0.00041467	0.0009569	0.0006367	0.00055175	0.001569	0.00115713	0.00114136
OPTN	8	0.0107306	7.004486	6.6E-07	0.001456	0.00448064	0.0052702	0.0014964	0.00116328	0.0167051	0.00332107	0.00040998
CPEB4	8	0.0108144	4.415548	0	0.001797	0.00068819	0.0043298	0.0278032	0.00037498	0.0019221	0.00172238	0.00355173
PLCL2	8	0.0108159	8.305313	0.000121	0.001218	0.0670113	0.0013775	0.0005367	0.00089643	0.0029897	0.00075254	0.00046169
FAM25A	8	0.0108831	6.472946	0	0.00147	0.00092356	0.0013182	0.0006	0.00061817	0.0022687	0.00091516	0.0006645
PCK1	8	0.0108899	8.476924	0.000177	0.001046	0.00099393	0.0009705	0.0006983	0.0008431	0.0030687	0.00437055	0.00047243
RND2	8	0.0109161	6.456533	0	0.003162	0.00162619	0.0029215	0.0016718	0.00042981	0.0056052	0.00100149	0.01672656
CLEC4D	8	0.0109897	5.542627	0	0.001608	0.00181246	0.0124754	0.0014966	0.00129155	0.0015868	0.00233504	0.00051507
IGFBPL1	8	0.0110717	7.08229	7.49E-06	0.002077	0.02660562	0.0067818	0.0006571	0.00064229	0.0013536	0.00431582	0.00451555
PTHLH	8	0.0111196	3.860869	0	0.007673	0.00199429	0.0051753	0.0004822	0.00156582	0.0018005	0.00097561	0.00057107
MR1	8	0.0111829	6.487331	0	0.003211	0.08050666	0.0053449	0.0060837	0.00037974	0.0011976	0.00089914	0.0072958
BUB3	8	0.0112117	6.285074	0	0.001518	0.0216609	0.0010085	0.0008308	0.00026335	0.0082055	0.00134641	0.00084414
HIST1H4I	8	0.0112428	12.7687	0.0039	0.000721	0.00049931	0.0041143	0.000391	0.00027051	0.0005207	0.00109984	0.00072606
SLC30A3	8	0.0112556	4.676838	0	0.002678	0.00125808	0.0046949	0.0029506	0.00075685	0.0119098	0.00147253	0.00063311
DEFB130	8	0.011294	6.680708	0	0.003679	0.00115835	0.0012107	0.002944	0.00074707	0.0016942	0.00100402	0.00098567
HIST1H2AG	8	0.0113456	11.76332	0.00268	0.000795	0.0005448	0.0047662	0.0004341	0.00029381	0.0005782	0.00124635	0.00085615
OR6N1	8	0.0113995	3.920281	0	0.006547	0.00224083	0.0021322	0.0011956	0.00069898	0.0026611	0.0013657	0.00132932
STMN3	8	0.0114856	6.190276	0	0.005028	0.00214217	0.0009512	0.0009876	0.00164917	0.0010318	0.00076837	0.00037611
COPS6	8	0.0114965	9.418152	0.000979	0.005325	0.00086903	0.0011428	0.0007262	0.0004756	0.0013054	0.00059164	0.00112881
ULK2	8	0.0115012	8.861626	0.000481	0.000886	0.00856642	0.0026108	0.0006477	0.00053975	0.0014159	0.00197401	0.00046134
OR6K6	8	0.01151	3.396426	0	0.002119	0.00201991	0.0046354	0.0011781	0.00073672	0.0083932	0.00140765	0.00114523
KCNV1	8	0.0115376	8.603431	0.000366	0.000559	0.00073919	0.0032139	0.0009991	0.00042833	0.0029241	0.00185237	0.00026037
SPPL2C	8	0.0115915	7.844885	0.000915	0.008416	0.00046262	0.0049997	0.0017949	0.00059481	0.0041663	0.00106836	0.00043303

Table S5

DPP10	8	0.0116592	7.013697	4.68E-07	0.019138	0.00155941	0.0068992	0.0004812	0.00380323	0.0022502	0.00851405	0.00042818
SMG1	8	0.0116603	6.928883	0	0.001622	0.00139002	0.0153006	0.0029659	0.00104409	0.0012205	0.00086759	0.00063585
EIF3D	8	0.011712	12.14152	0.002664	0.001393	0.00051695	0.0012898	0.0003435	0.00038899	0.0006164	0.00031937	0.00082035
MNDA	8	0.0117471	8.053223	8.84E-05	0.007959	0.00149916	0.0010374	0.0010247	0.00051975	0.0011873	0.00108448	0.00132398
NFIL3	8	0.0117905	8.566759	0.000843	0.001633	0.00040283	0.0013292	0.000389	0.00131667	0.0011528	0.00041069	0.00544416
FOSB	8	0.0118687	8.159282	0.002182	0.000917	0.00030557	0.0110703	0.0032774	0.00042706	0.0009367	0.00060702	0.00066992
FAM71D	8	0.0120743	8.331003	0.000963	0.001061	0.00086918	0.0021109	0.0008167	0.0006204	0.001219	0.00126955	0.00203494
RAB39A	8	0.0120996	5.775585	0	0.00301	0.00125181	0.0028344	0.0007762	0.00103939	0.002177	0.0019105	0.00136177
FOCAD	8	0.0121172	5.91489	0	0.00424	0.00079004	0.0039224	0.0025386	0.00049054	0.0065194	0.00169507	0.00384187
MOSPD3	8	0.0121522	11.47752	0.006231	0.000711	0.00035582	0.0081803	0.0002692	0.00025718	0.0033509	0.0005312	0.00107807
DSC2	8	0.0122157	6.980242	0	0.001398	0.00171269	0.0047793	0.0008903	0.00066144	0.0170407	0.00160269	0.00680187
CAV2	8	0.012274	10.72108	0.000497	0.003406	0.00158631	0.0035602	0.0004934	0.00052303	0.0006479	0.00116246	0.00077633
HIPK2	8	0.0122865	13.38139	0.001277	0.010101	0.00063624	0.0015585	0.0002601	0.00037705	0.0007903	0.00040188	0.00051588
NUDC	8	0.0123107	6.962816	0	0.002778	0.00087835	0.0016442	0.0010492	0.00323234	0.0009924	0.00164931	0.00072921
USP40	8	0.0123145	6.526089	0	0.020066	0.00079073	0.0017705	0.0014723	0.00047823	0.0013986	0.00196937	0.00191586
GPN2	8	0.0123724	8.697776	0.004074	0.000982	0.00064683	0.0010624	0.0006828	0.00566549	0.0005751	0.00126658	0.00045563
TIPARP	8	0.0124226	7.42675	3.17E-05	0.02056	0.00086389	0.001841	0.0010942	0.00084465	0.002013	0.00845885	0.00083508
MED27	8	0.0124349	8.256969	0.000194	0.001742	0.00065056	0.0010356	0.0008254	0.00200801	0.0013471	0.00058172	0.00080004
MFSD1	8	0.0124483	6.490874	0	0.003707	0.00337478	0.0011599	0.0028777	0.00076903	0.0607066	0.00270457	0.00056794
CHD9	8	0.0124942	5.976525	0	0.006779	0.00097026	0.0011417	0.0028351	0.00104634	0.0012317	0.00194908	0.00038415
DUSP2	8	0.0125096	3.712815	0	0.002764	0.01223705	0.0019407	0.0007158	0.00111538	0.0026829	0.00197977	0.00123733
HIC2	8	0.0126123	6.396094	0	0.017852	0.00112705	0.0042401	0.0006141	0.00110543	0.0262344	0.00194453	0.003719
C16orf74	8	0.0126596	8.074122	9.17E-05	0.001447	0.00128933	0.0012182	0.000845	0.00080566	0.0049813	0.00259843	0.00077585
DUSP3	8	0.0127531	9.825325	0.001004	0.001432	0.02517348	0.0008956	0.0005631	0.00060842	0.0011249	0.00082501	0.00046909
GPATCH3	8	0.0127768	8.358303	0.002491	0.001138	0.00073594	0.0010936	0.00076	0.00449749	0.0006489	0.00130769	0.00050337
POTEH	8	0.0127889	7.955979	0.000246	0.001166	0.00116805	0.1412126	0.0005201	0.00112087	0.0018837	0.00087513	0.00156416
PPM1K	8	0.012844	3.611056	0	0.003886	0.00109824	0.0049154	0.0007404	0.00112385	0.0028728	0.00231274	0.00189692
CNPY4	8	0.012921	9.370617	0.000683	0.003823	0.00092439	0.0009109	0.0008288	0.00055443	0.0014514	0.00072543	0.00111397
ATAD2B	8	0.0129787	8.008239	6.4E-05	0.00083	0.00259933	0.00077	0.0002553	0.001159	0.003367	0.003174	0.00082322
HLA-DQA1	8	0.0130063	9.285177	0.000795	0.001763	0.0003112	0.0008042	0.0008737	0.0006166	0.0074058	0.00071443	0.00044618

Table S5

TMEM19	8	0.0130494	7.699446	0.000201	0.001156	0.00594487	0.0063953	0.0007934	0.00053702	0.0038438	0.00321084	0.00121927
ZNF385A	8	0.0130834	8.531458	0.000487	0.001846	0.00243745	0.0095819	0.0005491	0.0007962	0.0021742	0.00070132	0.0011909
FRAT1	8	0.0131391	6.765375	0	0.002732	0.00137909	0.0568203	0.0010028	0.00091797	0.0022449	0.00145937	0.0010589
PRB4	8	0.0131633	8.775399	0.000675	0.004517	0.00266245	0.0014803	0.0007757	0.00071223	0.0016301	0.00070403	0.00083597
AMFR	8	0.0132779	7.050969	2.93E-06	0.001855	0.00423328	0.006354	0.0009715	0.00097564	0.0012294	0.00170724	0.00100694
COPZ1	8	0.0133385	8.110998	0.000337	0.001336	0.0103908	0.0730582	0.0005464	0.00067491	0.0028959	0.0009771	0.00155698
ACTL6B	8	0.013365	11.42862	0.006377	0.000697	0.00033418	0.0069684	0.0002583	0.0002512	0.0038415	0.00051267	0.00120459
FBXO11	8	0.0133932	13.07888	0.002621	0.000339	0.00039582	0.0015057	0.0001724	0.00017858	0.0011211	0.00055848	0.00121867
AGBL5	8	0.0137591	7.62187	9.64E-05	0.004901	0.00181987	0.0009585	0.0006678	0.00110941	0.0020025	0.00529444	0.00117014
ELMO2	8	0.0137638	8.096726	0.000219	0.004479	0.00156868	0.0019073	0.000665	0.00061059	0.0011794	0.0008538	0.00386774
CDK14	8	0.0137813	7.329637	9.59E-06	0.002621	0.00130848	0.0015331	0.0007447	0.00097222	0.0020733	0.00371573	0.00135997
PGGT1B	8	0.0137994	5.564479	0	0.006822	0.00088945	0.002978	0.0007067	0.00046009	0.0013661	0.00093113	0.00048611
DOK7	8	0.0138492	5.544676	0	0.003779	0.0018922	0.3626408	0.0004746	0.01499557	0.0027574	0.00149938	0.00110347
TULP2	8	0.0138494	9.966258	0.000911	0.001398	0.00056267	0.0096592	0.0007238	0.00064088	0.000778	0.00135311	0.0006953
GPR84	8	0.0139049	8.639052	0.000589	0.001975	0.00246403	0.0061675	0.0005611	0.00069308	0.0028748	0.00069137	0.00141166
ZNF69	8	0.0139968	2.809042	0	0.132065	0.00526562	0.0037522	0.0008313	0.00077249	0.1114893	0.00217591	0.00151655
SFN	8	0.0140899	9.063729	0.004971	0.001044	0.00063885	0.0010784	0.0006894	0.00448033	0.0005533	0.00121708	0.00046778
ZNF236	8	0.0140939	2.006505	0	0.001805	0.00233667	0.0028118	0.0009003	0.00090354	0.0020373	0.00264591	0.00175867
TP53I13	8	0.0142145	6.005033	0	0.004951	0.00171019	0.0014588	0.0009539	0.00099197	0.0011879	0.00249311	0.0017629
ANKRD13B	8	0.0142762	6.319437	0	0.005246	0.00164919	0.0016672	0.0008685	0.00097163	0.0011682	0.00280708	0.00240684
C11orf80	8	0.0143305	11.10108	0.006851	0.000753	0.00030558	0.0007331	0.0005667	0.00040632	0.005023	0.00072032	0.00068171
FBXO24	8	0.0143808	11.72671	0.006837	0.000763	0.00037077	0.0781503	0.0002724	0.00026065	0.0039202	0.00054598	0.00107888
CST7	8	0.0144711	9.222115	0.000234	0.001637	0.00065149	0.0020421	0.0012669	0.00040901	0.0006216	0.00418973	0.00055064
TSGA10	8	0.0145225	4.283357	0	0.002414	0.004338	0.4844199	0.0004538	0.00084621	0.0188393	0.0107773	0.00164097
PRDM10	8	0.0145378	9.320099	0.001522	0.000874	0.00049451	0.0009488	0.0004351	0.00053853	0.0025616	0.00064228	0.00891299
ZNF227	8	0.0145522	12.10669	0.002187	0.009309	0.00049334	0.0010431	0.00042	0.00045642	0.008297	0.00061106	0.00043131
ARMC5	8	0.0145979	5.964188	0	0.01126	0.00125186	0.0025548	0.00219	0.0012495	0.0014372	0.00304944	0.00054573
WISP1	8	0.0146099	7.671268	3.15E-05	0.004822	0.00082122	0.0018399	0.0006801	0.00077151	0.0139903	0.00335076	0.00249998
CALCOCO1	8	0.0146341	7.755559	0.000108	0.001557	0.00103524	0.0078039	0.0031553	0.00046227	0.0064485	0.00075352	0.00055328
ZHX3	8	0.0146757	13.0245	0.005616	0.00109	0.00045552	0.0005042	0.000582	0.00027436	0.0004539	0.00091188	0.00078573

Table S5

ZIC4	8	0.0147335	6.253041	0	0.003152	0.00103508	0.0074804	0.0006412	0.00070888	0.0429123	0.0016355	0.00161381
ARSJ	8	0.014797	9.387364	0.000168	0.001012	0.0090119	0.0009334	0.0008128	0.00048452	0.0016926	0.00151374	0.00056059
THAP2	8	0.0147974	5.359591	0	0.001694	0.00227896	0.0096445	0.0008682	0.00075063	0.0022805	0.00585937	0.00269686
MAPRE3	8	0.0148102	2.925408	0	0.003129	0.00239767	0.0013935	0.0008804	0.00115221	0.0028384	0.00275094	0.00121353
POMP	8	0.0148715	5.676408	0	0.051096	0.00148694	0.0017548	0.0008335	0.00121607	0.0031188	0.01344304	0.00098462
ZNF800	8	0.0148855	8.632775	0.000529	0.001638	0.0003347	0.0018998	0.0008094	0.00103138	0.007673	0.00095509	0.00051442
SLC40A1	8	0.0149153	5.092922	0	0.004577	0.00226404	0.0025009	0.0010912	0.00099689	0.0031345	0.00097294	0.00133369
RPS23	8	0.0149742	6.552657	0	0.003884	0.02191206	0.032204	0.0015182	0.0005843	0.0037342	0.00884693	0.00085447
COMMD5	8	0.0150333	7.21092	0.000132	0.003396	0.00107073	0.0012482	0.0018889	0.00114367	0.0123829	0.00666164	0.00041701
ARFIP2	8	0.015115	9.198165	0.001062	0.000694	0.00105517	0.001101	0.0019277	0.00043815	0.0023081	0.00068753	0.00076814
WTH3DI	8	0.015175	9.65707	0.002393	0.001378	0.00087109	0.0040655	0.0004346	0.00071679	0.0012931	0.0005199	0.00166404
TXN2	8	0.0152805	10.27495	0.000883	0.009855	0.00078158	0.0019282	0.0004787	0.00066021	0.0009794	0.00058111	0.00125192
BSND	8	0.0153221	7.211845	1.02E-05	0.005154	0.00144681	0.0036349	0.0009535	0.00100417	0.00229	0.00280645	0.00083364
BRPF3	8	0.0153323	8.637661	0.00019	0.003196	0.00107749	0.0040228	0.0005097	0.00067663	0.0023105	0.00114911	0.00131653
TAF6	8	0.01534	9.077001	0.000619	0.004669	0.0010374	0.0011033	0.0008745	0.00054566	0.0013847	0.00068954	0.00153576
TMEM60	8	0.015421	6.923798	0	0.006883	0.00082747	0.0602564	0.0005668	0.00136495	0.0013553	0.00231257	0.00306191
PCOLCE	8	0.0154453	11.80837	0.007046	0.000749	0.00037416	0.0195307	0.0002783	0.00026629	0.0052681	0.00055263	0.00112604
VGLL3	8	0.015492	9.138237	0.000354	0.001326	0.00044505	0.0120122	0.0008772	0.0008527	0.0009416	0.00114101	0.00051786
MIA2	8	0.0154941	6.471641	0	0.001482	0.01213625	0.0062359	0.0006487	0.00065117	0.0023652	0.02131447	0.00358887
C17orf78	8	0.0155081	9.333259	0.000753	0.000842	0.00302405	0.0018644	0.0005914	0.00058797	0.00536	0.00573298	0.00082937
CLIC5	8	0.015577	6.785841	0	0.003276	0.00221747	0.0062821	0.0016381	0.00154718	0.0010861	0.02705795	0.00051107
SMC1B	8	0.0156266	7.855292	9.13E-05	0.150295	0.02534398	0.0230631	0.000923	0.00075333	0.0020488	0.00099199	0.00059084
C2orf47	8	0.0156486	7.93487	0.000667	0.001816	0.00493396	0.0022942	0.0008799	0.00035657	0.0132255	0.00146109	0.00065757
PDHA2	8	0.0157375	6.166631	0	0.023442	0.00191373	0.0026304	0.0005222	0.00303179	0.2165247	0.0025794	0.00099012
GCKR	8	0.0157376	4.532224	0	0.003442	0.00176979	0.002821	0.0051659	0.00198649	0.0193144	0.00160148	0.00037318
PRICKLE1	8	0.0157591	6.016675	0	0.001874	0.00447537	0.0116975	0.0028231	0.00048656	0.0014636	0.00125013	0.00552755
FGFRL1	8	0.0158102	6.760723	0	0.009088	0.00054148	0.0102793	0.0004795	0.00296356	0.0132465	0.00124935	0.00248445
PIGN	8	0.0158341	10.06681	0.001589	0.001014	0.00039229	0.0005043	0.0043744	0.000411	0.0010161	0.00034314	0.00133492
ALG10	8	0.0158365	8.899523	0.001073	0.001312	0.000564	0.0004832	0.0002237	0.00188918	0.0010329	0.00285946	0.00108469
CORO6	8	0.015885	6.924987	0	0.005194	0.00171825	0.0018622	0.0008169	0.00104509	0.001142	0.00494338	0.00271769

Table S5

RNF168	8	0.0159404	6.973173	0	0.005688	0.00103524	0.0019403	0.0008696	0.00086275	0.0019286	0.00235225	0.06174508
LRRFIP1	8	0.0161527	9.752951	0.002361	0.000685	0.00030417	0.0010956	0.0014401	0.00049528	0.0003347	0.00070682	0.00041446
FCN2	8	0.0162115	6.242211	0	0.004437	0.00489045	0.0020334	0.0008812	0.00056992	0.0020411	0.00386091	0.00585416
UGT2B15	8	0.0162285	10.16306	0.002134	0.001104	0.00109756	0.0009612	0.0006822	0.00080577	0.0009531	0.00411902	0.00065313
ZDHHC18	8	0.0162583	9.20932	0.005103	0.000973	0.00070163	0.001202	0.0006532	0.00780557	0.0005149	0.00146918	0.00040336
DKK2	8	0.0162728	8.424131	4.19E-05	0.003218	0.00088311	0.0014028	0.0013012	0.00064106	0.0008864	0.00124136	0.00130951
PAX8	8	0.0163621	6.732503	0	0.005501	0.00265256	0.0123278	0.0006179	0.00324056	0.0071344	0.00265872	0.00061511
RGS3	8	0.0163738	5.644926	0	0.004192	0.00128186	0.0030753	0.0005134	0.00103876	0.0012699	0.00187039	0.00106766
SP140	8	0.0164343	6.135721	0	0.003176	0.0028371	0.0060039	0.0011004	0.00066669	0.0088043	0.00498149	0.0014209
ITPRIP	8	0.0165265	7.172387	0.000193	0.00144	0.0005439	0.000949	0.0015843	0.00165001	0.0055867	0.00094053	0.00044189
CXXC4	8	0.0165465	8.221881	2.43E-05	0.001691	0.00205656	0.0095582	0.000601	0.00073146	0.0010407	0.00110017	0.00322666
TTC24	8	0.016553	7.263709	3.09E-05	0.012741	0.00149286	0.0021562	0.0014379	0.00082877	0.0019466	0.00091633	0.00151976
SOX18	8	0.0165616	9.98949	0.002442	0.06159	0.00040847	0.0008161	0.0005505	0.00086573	0.0020425	0.00102574	0.00049579
DHRS4	8	0.0165801	7.42446	0.000168	0.001512	0.00145551	0.0012508	0.0006656	0.00165648	0.0014621	0.00320896	0.00164955
EDN2	8	0.0166455	7.545835	2.08E-05	0.064476	0.00129691	0.0020882	0.0009304	0.00075808	0.0012806	0.00125286	0.00365844
C1QTNF7	8	0.0167306	16.04863	0.003984	0.000902	0.00038821	0.0003078	0.0002349	0.00047966	0.0009902	0.00041901	0.00031802
CSTA	8	0.0167849	6.197758	0	0.003002	0.00114319	0.0085865	0.000969	0.00180546	0.0037736	0.0018868	0.00090283
ZNF860	8	0.0167864	6.397695	0	0.003625	0.00223438	0.001392	0.0004959	0.00835295	0.0071971	0.00092282	0.0017408
TPSAB1	8	0.0167913	5.661185	0	0.003916	0.02345994	0.0227002	0.0013065	0.00077377	0.0032458	0.00127206	0.00115639
CREB1	8	0.0168402	6.66234	0	0.004756	0.00098171	0.001609	0.0016896	0.00146897	0.0014111	0.00311057	0.00076466
ZBTB10	8	0.016907	6.440772	0	0.001362	0.00751901	0.0011062	0.0004759	0.00094352	0.0008742	0.00545205	0.00057379
RPS9	8	0.0169267	8.057814	0.00011	0.001086	0.00331089	0.0053245	0.0005751	0.000979	0.00265	0.00495272	0.00090321
POLD2	8	0.0169334	10.96929	0.004168	0.000838	0.0008379	0.0005853	0.000291	0.00066147	0.0005985	0.0006319	0.0206258
FZD1	8	0.0169378	9.564941	0.00022	0.000993	0.00081656	0.0009968	0.000804	0.0014189	0.0010555	0.00070699	0.00096949
SFMBT2	8	0.017002	6.448413	0	0.001701	0.00829819	0.0036856	0.0005637	0.00187485	0.0024962	0.00752746	0.001476
HOXA1	8	0.0170602	4.7299	0	0.005269	0.0018147	0.0132265	0.0007182	0.06756023	0.0030141	0.00140258	0.00066186
VAT1	8	0.0170688	6.049335	0	0.00386	0.00191405	0.0033752	0.0018909	0.00048551	0.005901	0.00114095	0.01417101
POLN	8	0.0171151	6.059857	0	0.001444	0.00100254	0.0025636	0.0044614	0.00067663	0.0059586	0.01613097	0.00105629
PRSS16	8	0.0171253	14.30643	0.005512	0.000802	0.00023973	0.0023589	0.0002579	0.00017982	0.0007215	0.0005215	0.00038994
ZNF700	8	0.0171527	4.830224	0	0.02166	0.01552128	0.0037586	0.0009074	0.00080039	0.0965869	0.00186414	0.00138495

Table S5

ELOVL3	8	0.0171818	6.336249	0	0.001486	0.00058981	0.0018724	0.0004568	0.00315892	0.0162527	0.01256676	0.0059984
LINGO3	8	0.0171909	9.034967	0.000554	0.001943	0.00090167	0.0010271	0.0010558	0.00074511	0.0010754	0.00100986	0.00137779
KIAA1024	8	0.0171917	11.51419	0.001697	0.000459	0.00062317	0.0006347	0.0008226	0.00088466	0.0016342	0.00037682	0.0003553
EMILIN3	8	0.0172176	13.77654	0.00748	0.000945	0.00070884	0.000523	0.0008023	0.00041928	0.0004865	0.0006145	0.00057686
LDB1	8	0.017327	6.708118	0	0.001919	0.00069486	0.0019582	0.0006281	0.0040487	0.0021362	0.00320562	0.00530666
TMEM59	8	0.0173492	7.04541	6.57E-06	0.00634	0.00108654	0.0149215	0.0008286	0.0015819	0.0023902	0.00550589	0.00095623
CCDC36	8	0.0173865	12.16698	0.011515	0.004193	0.0003253	0.0004349	0.0001638	0.00035067	0.0308142	0.00090086	0.0001854
NR0B2	8	0.0174014	7.884442	0.00092	0.001782	0.00101615	0.0011652	0.000998	0.00397474	0.0008127	0.00142191	0.00061083
AQR	8	0.0174354	7.266805	1.47E-05	0.003929	0.00101855	0.003358	0.0011391	0.00079095	0.0013889	0.00135494	0.00468537
SOX30	8	0.0174357	10.66118	0.00465	0.002564	0.00050184	0.0005249	0.0008343	0.00021757	0.0015897	0.00027497	0.00071962
CWF19L1	8	0.0174765	8.520983	0.000266	0.001763	0.00103953	0.0014601	0.0005378	0.000631	0.0641147	0.00547726	0.0015464
BCL2L11	8	0.0174857	4.000154	0	0.003192	0.00164869	0.0060408	0.0010314	0.00334831	0.011017	0.00215801	0.00038583
LPIN3	8	0.0175131	13.77591	0.006657	0.000969	0.00068582	0.000533	0.0007865	0.00038514	0.0004957	0.00069609	0.00066355
IRAK4	8	0.017565	9.583408	0.001465	0.001358	0.00064983	0.0035677	0.0005207	0.00055763	0.0046661	0.00401124	0.00042032
ACBD3	8	0.0175719	8.730751	0.000219	0.005157	0.00086035	0.0029352	0.0006813	0.00055723	0.0014714	0.00391541	0.00131568
CAT	8	0.0176029	7.152648	6.43E-05	0.007605	0.00128441	0.0759604	0.0156216	0.00221486	0.0026219	0.00063612	0.00032411
SGK1	8	0.0176959	7.928062	7.22E-05	0.002316	0.00084546	0.0026053	0.0022237	0.00070961	0.0019405	0.0009468	0.00046117
TRA2A	8	0.0177718	7.904083	0.000183	0.027636	0.00141853	0.0011969	0.0012043	0.00108734	0.0013245	0.00128142	0.0007625
SCARB1	8	0.0178798	11.05969	0.001552	0.001101	0.00040361	0.0004059	0.0168705	0.00050646	0.0005149	0.00061165	0.00045028
CNDP2	8	0.0179346	8.213986	6.63E-05	0.004092	0.00134281	0.0012767	0.0011691	0.00066737	0.0014058	0.00135044	0.00112582
FSCN1	8	0.0179369	8.756893	0.000688	0.001305	0.0005662	0.0031416	0.0006566	0.0012661	0.0067427	0.00081785	0.00107153
RGS21	8	0.0179925	6.427061	0	0.007033	0.00454987	0.0012067	0.0032489	0.00048556	0.0141047	0.00223248	0.00181199
SH3D19	8	0.0180554	11.83406	0.006969	0.000383	0.00380051	0.0006991	0.0003341	0.00036177	0.0003717	0.00064099	0.00017149
AKNA	8	0.0181234	12.07117	0.000883	0.000744	0.00640128	0.000842	0.000382	0.00027374	0.0008202	0.00298822	0.00066202
UGT8	8	0.0181311	10.94417	0.000217	0.001141	0.00141226	0.0011174	0.0007022	0.00060921	0.0063945	0.00055576	0.00068465
MAP6	8	0.0181424	10.47854	0.001224	0.001231	0.00062009	0.0539894	0.0010497	0.00039093	0.000747	0.00047208	0.00083211
MEGF9	8	0.0181942	7.646699	0.000532	0.000887	0.00067243	0.0015986	0.0204418	0.00108191	0.0334389	0.00094302	0.00056497
SP140L	8	0.0182756	7.665844	0.000119	0.002359	0.00344557	0.0052129	0.0008077	0.00037266	0.0016104	0.00105522	0.00272891
GNE	8	0.0183593	7.115492	5.96E-05	0.002559	0.00449676	0.001554	0.0004986	0.00326402	0.0076404	0.00217489	0.00042911
KCNJ12	8	0.0184024	5.632631	0	0.005451	0.00526005	0.0036342	0.0014153	0.00054836	0.0009343	0.00142735	0.00049821

Table S5

STEAP2	8	0.0184816	14.00773	0.003734	0.002404	0.00037907	0.0005491	0.0004091	0.00041641	0.0009137	0.00221766	0.00054144
FADS3	8	0.0185195	8.446572	0.000305	0.002318	0.00072535	0.0030608	0.0004999	0.00103881	0.0016868	0.0020283	0.00125883
PIWIL4	8	0.0186345	13.85373	0.001129	0.001789	0.00297774	0.0056795	0.0004077	0.000323	0.0005413	0.00065294	0.00042919
LONRF1	8	0.0186382	6.845243	0	0.001522	0.00143616	0.0045838	0.0009399	0.00063432	0.0076409	0.00147972	0.00206282
LARP1	8	0.0187266	8.471513	0.000173	0.001354	0.00070937	0.001953	0.0007063	0.00105718	0.007321	0.00862549	0.00102296
SSX2IP	8	0.0187775	8.178191	0.000217	0.004891	0.00073916	0.0017962	0.0033175	0.00103757	0.0017529	0.00052355	0.00066205
ATP6V1D	8	0.0187864	12.83788	0.011681	0.000496	0.00048005	0.0011533	0.0006936	0.00048489	0.0008722	0.00068485	0.00110124
MYC	8	0.0189973	9.73471	9.67E-05	0.009119	0.00048123	0.0809527	0.0004444	0.00092214	0.0009927	0.0016341	0.00067924
PPP1R2	8	0.0190069	11.75472	0.001272	0.001365	0.00098977	0.0009544	0.0003747	0.00033049	0.0189328	0.00640052	0.00052267
ADAMTS20	8	0.0190802	10.4984	0.000265	0.001038	0.00158897	0.0011441	0.0007524	0.00038185	0.0170939	0.00058133	0.00079389
KLHDC8B	8	0.0191282	12.2052	0.013804	0.002889	0.00034708	0.0004611	0.0001799	0.00039199	0.005655	0.0009552	0.00020203
SLC25A18	8	0.0191494	5.474544	0	0.003547	0.00223518	0.006965	0.0005203	0.00169396	0.0033245	0.02601515	0.00313907
EHD4	8	0.0192065	7.30033	1.92E-05	0.001223	0.00115368	0.0036367	0.0018224	0.00080866	0.002016	0.36996803	0.00105173
HIF1A	8	0.0192095	7.151699	1.64E-05	0.002013	0.00288387	0.0025541	0.0010456	0.00085744	0.0014067	0.00254041	0.00158596
PLCG1	8	0.0192284	11.10103	0.004663	0.001209	0.00069808	0.0007591	0.000792	0.00040186	0.0006491	0.00125366	0.00208704
OR5T3	8	0.0192869	7.11088	0.000102	0.001769	0.07519754	0.0025965	0.0007332	0.00537631	0.0017312	0.00112945	0.00045554
USP19	8	0.0193517	11.99992	0.013203	0.00629	0.00039028	0.0005033	0.000195	0.00042924	0.0109075	0.0009914	0.00022331
ORM2	8	0.0193582	9.693656	0.000409	0.001055	0.0403108	0.0013044	0.0005348	0.00036627	0.0009048	0.00193163	0.00119844
KIAA2026	8	0.0193919	4.486436	0	0.00741	0.00243681	0.0020131	0.0012929	0.00108406	0.0013332	0.00219349	0.00116376
UNC50	8	0.0194098	9.204525	0.006383	0.000595	0.0002855	0.00361	0.0001898	0.00044596	0.0014163	0.04799335	0.00281453
LINC00176	8	0.0194191	10.11664	0.002736	0.011531	0.00040338	0.0009169	0.0005431	0.00089537	0.0023745	0.00098456	0.00050178
NHLRC3	8	0.0194299	7.073653	1.33E-06	0.404919	0.00717029	0.0053726	0.000762	0.00105679	0.00656	0.00412609	0.00098014
PLEKHJ1	8	0.0194648	15.44766	0.008489	0.000764	0.00069229	0.0006586	0.0004898	0.00043445	0.0004312	0.00063665	0.00094909
HNRNPK	8	0.0195291	9.557391	4.78E-05	0.002135	0.03712945	0.0009118	0.0005053	0.00057142	0.0013506	0.00154456	0.00137599
ABTB2	8	0.0195329	6.149834	0	0.001918	0.00342171	0.001607	0.00798	0.00132643	0.0022614	0.00085705	0.00041293
OPA3	8	0.0195801	7.344395	0.000194	0.016084	0.00052414	0.0142671	0.0066309	0.0006132	0.0011513	0.00176549	0.00096729
LRRC49	8	0.0196002	6.294404	0	0.00291	0.0051276	0.0028641	0.0887004	0.00041697	0.0013529	0.00115997	0.0699506
HLA-DQB1	8	0.0196387	9.404121	0.001033	0.002514	0.00027865	0.00067	0.0015956	0.00086852	0.0047971	0.00060134	0.00044836
RAB3IL1	8	0.0196534	7.559735	6.86E-05	0.019127	0.00087782	0.0044893	0.0006468	0.00132516	0.0026654	0.00267458	0.0014631
ABHD15	8	0.0196662	6.823291	0	0.006229	0.00197381	0.0014761	0.0010257	0.00115256	0.0011308	0.00377991	0.00182936

Table S5

RPL39L	8	0.0196765	7.232121	2.98E-05	0.001622	0.00273373	0.0195828	0.0005871	0.00148356	0.0029945	0.00514644	0.00089837
IFI35	8	0.0197062	5.484288	0	0.004081	0.0020384	0.0047674	0.0020018	0.00050973	0.006761	0.00124853	0.02294793
WDR5B	8	0.0197692	5.631035	0	0.001594	0.00098034	0.219841	0.0010499	0.0510722	0.0017997	0.00305474	0.00060193
SF3A2	8	0.0198504	14.46246	0.00673	0.000692	0.00068911	0.0007451	0.0005019	0.00051029	0.0004939	0.00069553	0.00132576
SCN4A	8	0.0199109	5.818787	0	0.003036	0.00136667	0.0069573	0.0005336	0.00223399	0.0028685	0.0025848	0.0062629
SMG7	8	0.0199608	6.179789	0	0.005214	0.00302589	0.0357531	0.0017908	0.00074758	0.0016966	0.00779944	0.00105851
ETNK2	8	0.0200474	7.581812	0.000216	0.001445	0.00097401	0.0822602	0.0758341	0.00049835	0.0288158	0.00066105	0.00094989
ZNF490	8	0.0201404	5.181514	0	0.001493	0.00098924	0.0015568	0.0006324	0.00109217	0.0028678	0.00355852	0.00046699
CORO1A	8	0.0201546	6.444155	0	0.001611	0.00123622	0.0013572	0.0073509	0.00105566	0.0023726	0.04861241	0.00064103
COA5	8	0.0202405	9.177238	0.005765	0.000625	0.00033853	0.0030101	0.0002222	0.00050541	0.001487	0.02819213	0.00560453
GYS1	8	0.0202514	11.10277	0.000808	0.000812	0.0033216	0.1921586	0.0006199	0.00055399	0.0010327	0.0013826	0.00064459
SIX4	8	0.0202845	7.003352	1.18E-06	0.001855	0.00182221	0.0058438	0.0018535	0.00083798	0.0058351	0.00115985	0.0012883
KCNK13	8	0.0203137	5.924038	0	0.001622	0.00314186	0.0025127	0.0011335	0.01054601	0.0016304	0.00107811	0.0006429
TMEM108	8	0.0203859	6.683397	0	0.011476	0.00142661	0.0057332	0.0003745	0.00402858	0.0026736	0.00086599	0.00188404
AMH	8	0.0203906	14.55585	0.006844	0.0007	0.00071235	0.0007185	0.000521	0.00052915	0.0005173	0.00075517	0.00126423
POU4F3	8	0.0204177	6.609151	0	0.001385	0.00993127	0.0020222	0.0008519	0.00103477	0.0120448	0.0020687	0.00237998
ZBED2	8	0.0206478	4.624323	0	0.002158	0.00146996	0.0016122	0.0009992	0.00156197	0.0097548	0.00400856	0.00116127
KIAA1468	8	0.0207049	8.925029	0.001052	0.002448	0.00042625	0.0026382	0.0033999	0.00101987	0.0013227	0.00042912	0.00075331
OAZ1	8	0.0208119	14.05575	0.005449	0.000683	0.00073619	0.0007551	0.0005714	0.0006037	0.0005682	0.0007449	0.00127202
RASA1	8	0.0209027	12.4778	0.002375	0.000644	0.00052153	0.0024191	0.0004744	0.00054599	0.0006644	0.000362	0.00165117
DOT1L	8	0.0210993	14.95717	0.006563	0.000637	0.00063572	0.000744	0.0005473	0.00046979	0.0004518	0.00068725	0.00119497
ORM1	8	0.0211432	10.16265	0.000399	0.000939	0.01061347	0.0011494	0.0005234	0.00039274	0.0011184	0.00322082	0.00117248
JSRP1	8	0.0211894	15.43781	0.006821	0.000611	0.00083247	0.0007594	0.0005043	0.00047114	0.0005099	0.00073479	0.0011229
MYL7	8	0.0212309	11.36675	0.004254	0.001128	0.00094248	0.0005778	0.0003152	0.0007388	0.0006365	0.00063135	0.01156402
YKT6	8	0.0212736	12.70108	0.007478	0.001282	0.00056828	0.0005071	0.0003643	0.00047635	0.0007301	0.00031802	0.00419502
SULT1E1	8	0.0212814	11.55093	0.001329	0.001188	0.00069244	0.0036302	0.0005541	0.00068928	0.0015351	0.00053997	0.00052999
GYPC	8	0.021314	9.503614	0.000797	0.000801	0.00041803	0.0007098	0.0006086	0.00089316	0.002186	0.00256679	0.00027275
TCF4	8	0.021337	8.859645	0.000218	0.000854	0.00150742	0.0008045	0.0002604	0.00053489	0.0072513	0.00047127	0.00191989
KCNJ2	8	0.0214591	6.691698	0	0.080262	0.01765184	0.0010978	0.0019751	0.00039609	0.0010111	0.00358812	0.00189825
ACOXL	8	0.0214847	8.689742	0.000165	0.006658	0.00214358	0.0010621	0.0005227	0.0014578	0.0069802	0.00084467	0.00050173

Table S5

SYNM	8	0.0215331	12.77115	0.00248	0.003692	0.0003373	0.0005453	0.0007145	0.00028616	0.0006487	0.00042735	0.00050731
LINC00238	8	0.0215444	5.434766	0	0.001565	0.00154153	0.0078035	0.0016807	0.00081763	0.0105983	0.00737826	0.00132741
BLVRA	8	0.0215643	13.6969	0.004342	0.000619	0.00125078	0.0019386	0.0006717	0.00050977	0.0006823	0.00049255	0.00066926
HFE2	8	0.0215774	6.642133	0	0.006288	0.00366826	0.007597	0.0010031	0.00065546	0.004443	0.00805871	0.0026304
TSACC	8	0.0216398	10.81806	0.003487	0.004111	0.00035224	0.0006476	0.0009133	0.00053327	0.0012159	0.00065099	0.00112207
IRGC	8	0.021747	8.153475	0.000114	0.001001	0.00177928	0.001576	0.00066	0.00127009	0.0018442	0.00435165	0.00159119
TM9SF1	8	0.0217826	6.547842	0	0.004956	0.00139116	0.0069839	0.0015225	0.00056334	0.0333303	0.0010472	0.00308746
CFTR	8	0.021788	16.81774	0.009773	0.000419	0.00022682	0.0014084	0.0002581	0.00028727	0.0002535	0.00108139	0.00023772
RSBN1L	8	0.0217983	7.698036	0.00096	0.002723	0.00047349	0.0128504	0.00028	0.00111705	0.0006731	0.00162885	0.00120204
NR5A2	8	0.0218481	7.082718	4.83E-06	0.001457	0.02099393	0.0336612	0.0007162	0.00557975	0.0043037	0.00912666	0.00052949
C19orf35	8	0.0218714	12.93958	0.003535	0.000889	0.00078127	0.0007728	0.0006526	0.00070133	0.0006567	0.00087294	0.00145525
SLC51A	8	0.0219358	13.30258	0.003323	0.000557	0.001262	0.0017483	0.0003943	0.00073686	0.0010049	0.00062625	0.00088721
INSR	8	0.0219437	6.686109	0	0.002868	0.00363118	0.0018808	0.0019292	0.00052454	0.008685	0.00179283	0.00632452
RBM38	8	0.0219928	7.390313	1.37E-05	0.001185	0.0020462	0.2865515	0.0009103	0.0009624	0.0040277	0.00186381	0.00179605
MRPL42	8	0.0222377	9.492918	0.001442	0.000713	0.00035771	0.0008231	0.0013538	0.00040474	0.0014347	0.00141183	0.01537785
TCAIM	8	0.0222531	10.40809	0.002049	0.002189	0.0013617	0.00131	0.0003653	0.00067379	0.0065294	0.00089103	0.00057795
ATL1	8	0.022261	10.15464	0.001973	0.000613	0.00085759	0.0066154	0.0005946	0.00159858	0.0019772	0.00085207	0.00044499
NUDT3	8	0.0222932	9.896093	0.000918	0.003605	0.000861	0.0329454	0.0004978	0.00059619	0.0020701	0.02519171	0.00051881
GRK6	8	0.0223159	9.964797	0.001269	0.001239	0.00073866	0.0060562	0.0004379	0.0010031	0.0009138	0.00750281	0.00058821
TMEM45A	8	0.0223423	6.137946	0	0.004305	0.00150973	0.001738	0.0037766	0.00164175	0.0012717	0.01762142	0.00035617
GCK	8	0.0223468	13.19086	0.006507	0.000934	0.00070355	0.0004614	0.0003162	0.00058667	0.000559	0.00043559	0.00953462
VASP	8	0.0223807	8.297792	0.00119	0.002046	0.00046928	0.0039724	0.0068301	0.00054531	0.0009088	0.00098141	0.00067911
RPS6KA5	8	0.0224305	10.62549	0.000403	0.002365	0.00210668	0.0008717	0.0007188	0.00080289	0.0008915	0.00171543	0.00088371
ITPKB	8	0.0224962	10.50162	0.000474	0.000815	0.00052137	0.001352	0.0005794	0.00092266	0.0077495	0.00375157	0.00056472
VPS45	8	0.0225427	13.39301	0.009992	0.004905	0.00138394	0.0015973	0.000253	0.00028836	0.0004624	0.00055336	0.00114082
GPATCH4	8	0.0226286	7.012338	1.13E-06	0.009067	0.00161792	0.0025508	0.0018064	0.00093228	0.0015579	0.00113509	0.0019462
SLCO2B1	8	0.0227328	10.47522	0.004019	0.002571	0.00057185	0.0006789	0.001002	0.00022989	0.0004498	0.00026113	0.00656993
NBR1	8	0.0227562	8.135645	0.001455	0.001116	0.0007566	0.0021624	0.0021911	0.00026455	0.0010369	0.00053589	0.18090213
LAMB2	8	0.0228518	12.52278	0.013783	0.008184	0.00040805	0.0005173	0.000202	0.00042359	0.0077922	0.00111839	0.0002312
MBIP	8	0.022897	11.08463	0.00022	0.27606	0.00102097	0.0009143	0.000582	0.00092677	0.0009383	0.00079938	0.00103041

RUNDC3A	8	0.0229211	13.61887	0.002307	0.003523	0.0016796	0.000748	0.0004975	0.00051775	0.0006946	0.00252822	0.00060468
NHLH1	8	0.0229557	5.241355	0	0.001348	0.00464519	0.00199	0.001041	0.00118652	0.0052129	0.0403277	0.00125271
CYP26A1	8	0.0230101	6.931717	0	0.005247	0.00257404	0.0076682	0.0011592	0.0007312	0.0014547	0.00585288	0.003219
DEFB112	8	0.0230118	6.393013	0	0.00267	0.10677005	0.0064517	0.0010606	0.00193066	0.003531	0.00417239	0.00062355
BACH1	8	0.0230172	9.01013	0.000965	0.016414	0.00731395	0.0079102	0.0005839	0.00054003	0.0016263	0.00075918	0.00032838
FOXRED2	8	0.0230365	11.94886	0.00153	0.004654	0.00129035	0.0017216	0.0005086	0.00057774	0.0009804	0.0004721	0.00105366
GPR1	8	0.0231863	5.879598	0	0.003108	0.01663705	0.0062944	0.0004756	0.02523695	0.0017108	0.41692525	0.00113642
HAND1	8	0.0232667	5.695631	0	0.007781	0.00157808	0.0041522	0.0009246	0.00295321	0.0069933	0.0213247	0.00074169
IQGAP3	8	0.0233085	9.753473	0.00066	0.006526	0.0010658	0.0014229	0.0010582	0.00060254	0.001684	0.00056573	0.00126426
LIMD1	8	0.0234259	5.585068	0	0.004481	0.01078485	0.0085668	0.001192	0.00091639	0.0037935	0.00306251	0.00099375
MAGI1	8	0.0234272	13.46714	0.000314	0.005952	0.00051179	0.0016037	0.0006737	0.00044338	0.0004753	0.00097229	0.0005072
SSBP2	8	0.023452	10.99412	0.000842	0.00131	0.00112918	0.0014477	0.0018061	0.00050811	0.00061	0.00043133	0.00083676
USP50	8	0.0234651	16.08697	0.012742	0.001632	0.00083474	0.000456	0.0006011	0.00037377	0.0003888	0.00049228	0.00037954
PPIAL4C	8	0.0235134	8.551499	0.000314	0.009271	0.00097243	0.0010372	0.002094	0.00029317	0.0005876	0.00060415	0.00392263
PCYT1A	8	0.0235571	18.1382	0.00862	0.000344	0.00064649	0.0015239	0.0002451	0.00043286	0.000738	0.00049236	0.00054497
TMEM132B	8	0.0235931	9.6006	1.96E-05	0.000977	0.00081243	0.0066617	0.0007681	0.00074557	0.0021441	0.0023312	0.00124803
CELSR3	8	0.0235943	6.883469	0	0.000672	0.00063071	0.0066291	0.0005896	0.00064427	0.0019035	0.00389441	0.00053351
RYBP	8	0.0235981	7.537548	1.29E-05	0.001064	0.00208728	0.0110001	0.0006571	0.00109062	0.0620028	0.00273255	0.00341168
RGS12	8	0.023605	6.438981	0	0.002569	0.02650283	0.0037876	0.0005562	0.00338053	0.1658025	0.00159281	0.0014938
C8orf74	8	0.0236071	7.443292	0.00034	0.001055	0.00039414	0.0014597	0.0112565	0.00249606	0.0011135	0.01176279	0.00051146
MPP5	8	0.0236777	13.22165	0.011367	0.000513	0.00066025	0.0010492	0.0006683	0.00050226	0.0007862	0.00049599	0.00260615
CPN1	8	0.0236904	8.750658	0.00107	0.000912	0.00333638	0.0053845	0.0005526	0.0005326	0.0035369	0.00212926	0.00032523
TFEC	8	0.0236917	9.809556	0.000173	0.001645	0.00178264	0.0009101	0.0005705	0.00194483	0.0008628	0.00092865	0.00095442
TFB1M	8	0.0237341	11.10439	0.000558	0.000974	0.00166611	0.0032419	0.0004389	0.0006909	0.0031976	0.00070501	0.00044754
ICAM2	8	0.0239197	5.641344	0	0.004622	0.0020311	0.0025638	0.0006053	0.00230194	0.0036536	0.0021382	0.00341426
HELZ	8	0.023965	5.959582	0	0.003439	0.00081106	0.0032205	0.0023853	0.00055871	0.0029769	0.00102331	0.00137721
THAP10	8	0.0239947	8.013299	0.001606	0.001216	0.04055177	0.0317862	0.0070956	0.00026276	0.0007212	0.00047094	0.00259317
SGMS1	8	0.0241242	11.07275	0.000683	0.001213	0.00035515	0.0705442	0.000251	0.00039535	0.022131	0.00119556	0.00087119
ZSCAN21	8	0.0241405	9.797164	0.000835	0.296251	0.00117077	0.0014091	0.0008827	0.00058958	0.0020558	0.00063387	0.00145549
LURAP1L	8	0.024161	7.275371	7.83E-05	0.001378	0.00083759	0.0080464	0.0019223	0.00054929	0.0012349	0.00269462	0.00582555

Table S5

GIT1	8	0.024223	8.297736	0.000239	0.004568	0.00159577	0.0013385	0.0008741	0.00097392	0.0009872	0.00322858	0.00192659
ARPP21	8	0.0242292	13.0139	0.007232	0.000492	0.00040886	0.0099545	0.0003824	0.00050475	0.0016935	0.0002931	0.00025838
NXPH3	8	0.0242317	6.791362	0	0.00755	0.00134701	0.0025508	0.0019093	0.00140312	0.0040104	0.00105261	0.00101183
ZKSCAN2	8	0.0242557	12.36997	0.001751	0.002839	0.00041928	0.0007111	0.0002442	0.00068398	0.001101	0.00035629	0.00055649
HMX2	8	0.0242854	6.692681	0	0.002975	0.0014531	0.0095887	0.0006969	0.00132105	0.0102803	0.01139449	0.00386852
TOLLIP	8	0.0243313	8.241177	0.000133	0.001456	0.00816789	0.002638	0.0008519	0.00091989	0.0088013	0.00104466	0.00103638
SLC29A2	8	0.0243404	10.17834	0.001658	0.007009	0.0005424	0.0010557	0.0007558	0.0006828	0.0073172	0.00100659	0.00123882
IRX1	8	0.0243483	14.2311	0.000285	0.004829	0.00058982	0.0005638	0.0004484	0.00079982	0.0006371	0.00085326	0.00067842
FIGLA	8	0.0243914	11.74177	0.003048	0.000792	0.00079766	0.001018	0.0005097	0.00105833	0.0007179	0.00034737	0.00218563
KAT7	8	0.0244681	4.425305	0	0.001521	0.01933687	0.0033874	0.0013554	0.00091798	0.0069989	0.00434285	0.00125154
MARCH3	8	0.0244837	8.227863	0.000126	0.002307	0.00069506	0.0013596	0.0012331	0.00128828	0.0014454	0.00174968	0.00139336
RBBP4	8	0.0245434	7.067444	4.61E-06	0.002674	0.00147122	0.0012225	0.0006577	0.00124484	0.0023618	0.00350864	0.00287042
RIBC2	8	0.0245953	8.684037	0.000381	0.003869	0.00437862	0.002687	0.0008305	0.00066551	0.0014065	0.00104443	0.00039877
MAN2B1	8	0.0246778	8.270661	0.003082	0.000791	0.00119053	0.0025145	0.0003831	0.00547855	0.000794	0.00362182	0.00041554
CCDC71	8	0.0246921	13.87251	0.01841	0.004821	0.00032183	0.0004232	0.0001651	0.00032715	0.0068813	0.00095668	0.00019193
AEBP1	8	0.0247409	10.12679	0.002884	0.001038	0.00121141	0.000711	0.0003503	0.00098936	0.000732	0.00084946	0.00822522
AAED1	8	0.024754	5.297681	0	0.015673	0.00321279	0.0033213	0.0040218	0.00056071	0.0037675	0.0191428	0.00119438
RWDD2B	8	0.0247595	7.639516	0.00027	0.007622	0.00305587	0.0026331	0.0012604	0.00060845	0.001723	0.00266185	0.00071577
RGS17	8	0.0247684	6.810155	0	0.040536	0.00071638	0.0029151	0.0004842	0.02955548	0.0028205	0.02365081	0.014317
ABHD6	8	0.0248029	10.88079	0.001351	0.001641	0.00085145	0.0191573	0.0009047	0.00050899	0.000563	0.00208146	0.00038783
GABRA4	8	0.0248675	10.42947	0.002916	0.000775	0.00089752	0.0006188	0.000562	0.00042068	0.0017758	0.00241451	0.00023964
P2RX3	8	0.0248881	7.181848	3.33E-05	0.003004	0.00156715	0.0035608	0.001003	0.00310344	0.0027388	0.00110698	0.00082798
CLEC4F	8	0.0249326	12.09251	0.00299	0.000658	0.00069198	0.0016525	0.0004762	0.00083826	0.0006925	0.00039401	0.00337256
VWA3B	8	0.0249532	10.79912	0.000617	0.00113	0.00059628	0.0033681	0.0005658	0.00087616	0.0007523	0.00194687	0.00155153
STK38L	8	0.0249712	7.348238	1.3E-05	0.002484	0.00102548	0.0104907	0.0008439	0.00098349	0.0092059	0.02764168	0.00263353
RIMS2	8	0.0249839	14.19681	0.001879	0.000366	0.00029693	0.0008209	0.0002258	0.00058461	0.000837	0.00480676	0.000499
PPP4R2	8	0.0249935	7.027264	6.01E-06	0.001571	0.01078274	0.0030442	0.0003861	0.01328047	0.0066267	0.00150091	0.00086501
LANCL1	8	0.0250593	15.59234	0.00189	0.004908	0.00077424	0.001772	0.0003981	0.00042263	0.0004763	0.00055177	0.00085429
FUBP3	8	0.0251078	6.220519	0	0.002905	0.00062077	0.0022905	0.0016083	0.00326776	0.0037303	0.00079229	0.00068008
TEX15	8	0.0251121	6.741696	0	0.001485	0.00679984	0.0006196	0.0007601	0.00220592	0.0015336	0.00071279	0.00027711

Table S5

ITGA5	8	0.0251367	7.684781	0.000235	0.001502	0.00137404	0.0035236	0.00075	0.00278435	0.0094396	0.00082453	0.00131955
HMGN4	8	0.0251891	15.08709	0.003621	0.000576	0.00094342	0.0026134	0.0004916	0.00027232	0.0006105	0.0005346	0.00032909
NCOA5	8	0.0252062	9.149686	0.000238	0.000978	0.00125856	0.0086956	0.0008023	0.0007997	0.0076649	0.01171035	0.00075095
HPCAL4	8	0.025326	6.960893	0	0.007808	0.00203132	0.0121121	0.0008037	0.00104158	0.0017823	0.00285155	0.01038292
C7orf43	8	0.0254214	10.40485	0.001178	0.004738	0.00110991	0.0008087	0.0010498	0.00065089	0.001424	0.00084787	0.00135288
LAMTOR4	8	0.0254214	10.40485	0.001178	0.004738	0.00110991	0.0008087	0.0010498	0.00065089	0.001424	0.00084787	0.00135288
TIFAB	8	0.0255027	5.12883	0	0.072226	0.00482705	0.0030717	0.0006006	0.00115572	0.0026361	0.00180021	0.00233825
GYS2	8	0.0255183	3.896695	0	0.003211	0.00143828	0.0356351	0.0009197	0.00159115	0.0088538	0.00253831	0.00139444
MMRN2	8	0.0255398	7.442566	0.000725	0.028025	0.00051607	0.0013819	0.000447	0.00064289	0.009962	0.0007545	0.00073379
FBXW9	8	0.0255688	7.630888	0.001592	0.000926	0.00157235	0.0022055	0.0005199	0.00400333	0.0011525	0.00446926	0.00053237
NCS1	8	0.0255986	7.336804	7.68E-05	0.001789	0.00074376	0.0021659	0.0050969	0.00083266	0.0038864	0.00089618	0.00220172
SPATA13	8	0.0256639	9.327741	9.17E-05	0.001082	0.00120174	0.0030172	0.0008386	0.0008622	0.0012584	0.0009074	0.00293065
IGSF11	8	0.0256781	15.1393	0.000345	0.000615	0.00386055	0.0005526	0.0002856	0.0002159	0.0019234	0.00568342	0.00034264
RTEL1	8	0.0257049	7.731503	0.000496	0.014481	0.00149419	0.0009062	0.0010819	0.00282798	0.0009554	0.00104378	0.00043693
TDRD5	8	0.025754	8.730388	0.000275	0.001687	0.00120091	0.0123041	0.0006078	0.00057317	0.0018868	0.00064411	0.01293822
RBM44	8	0.0257638	8.337494	0.000935	0.001075	0.00218771	0.0040517	0.0031997	0.00053744	0.0006077	0.00157016	0.00044472
ISPD	8	0.0258938	7.129073	3.63E-06	0.004905	0.00333569	0.0026042	0.0009258	0.0017281	0.0014652	0.00133572	0.00146057
NECAB1	8	0.0259205	13.53672	0.004112	0.000924	0.0259611	0.0005516	0.0003562	0.00027875	0.0006173	0.00071038	0.00174534
RNF8	8	0.0259402	7.537558	8.56E-05	0.005059	0.00085285	0.0015441	0.0010011	0.00142952	0.0029444	0.00201228	0.0023215
SMYD3	8	0.0259541	8.449355	0.000255	0.000774	0.0009743	0.0019639	0.0033962	0.00028521	0.0005006	0.00093216	0.00395498
TXLNB	8	0.026024	4.897276	0	0.003878	0.00154248	0.0039089	0.0151608	0.0004978	0.0023645	0.01087368	0.0016763
TUFM	8	0.0260487	7.664356	0.000387	0.002197	0.00500158	0.0006613	0.0016102	0.00034808	0.002323	0.0007809	0.00067618
DLGAP1	8	0.0260617	9.447498	3.96E-05	0.043618	0.00119417	0.0009146	0.0007446	0.0005461	0.0029458	0.00095267	0.00321347
SNCG	8	0.0260624	7.400878	0.000572	0.016299	0.00057873	0.0012939	0.0004837	0.00067779	0.0075878	0.0008174	0.00080295
ZMYND15	8	0.0261396	7.385061	3.26E-05	0.005478	0.00111541	0.0036201	0.0014904	0.00088376	0.0030958	0.00205354	0.00123271
CHUK	8	0.026266	10.23038	0.000826	0.001308	0.00107929	0.0016271	0.0004563	0.00047563	0.0256264	0.00260553	0.00091523
POLD3	8	0.0262862	6.626545	0	0.002559	0.00133746	0.0113477	0.0058085	0.00136263	0.001872	0.00091597	0.00038309
CACNA1A	8	0.0264353	9.121491	0.000389	0.000811	0.00175205	0.0008775	0.0004685	0.0003863	0.0010373	0.00120807	0.00159576
DCTN2	8	0.0264534	7.279844	3.26E-05	0.009486	0.00777445	0.0014984	0.0011724	0.00079918	0.046873	0.00202777	0.00141378
ZKSCAN1	8	0.0265721	8.011266	0.000159	0.011423	0.00158082	0.0313401	0.0009586	0.0006997	0.0115782	0.00091383	0.0024427

Table S5

ANXA11	8	0.0265849	7.451373	9.79E-05	0.001399	0.0026808	0.0140401	0.0010914	0.02372928	0.0012683	0.00084901	0.00064104
INPP4A	8	0.0266827	10.54144	0.010145	0.00035	0.00021569	0.0025851	0.0001407	0.00029717	0.0009521	0.00412807	0.0108402
ZBED4	8	0.0266988	8.068477	0.000528	0.002693	0.00267531	0.0018488	0.0009502	0.0005087	0.0134644	0.00107902	0.0011379
ZNF644	8	0.0268047	9.334413	0.000336	0.003133	0.00056309	0.0173467	0.0007143	0.00072615	0.0018725	0.0056732	0.00135245
WDR1	8	0.0269014	9.992409	0.000867	0.000943	0.00061944	0.0016519	0.0003506	0.00086336	0.0014787	0.0003275	0.00260118
CLDN20	8	0.0269653	6.032435	0	0.001959	0.00531582	0.0032753	0.0010125	0.00151515	0.0028731	0.00156234	0.00126251
KRTAP20-1	8	0.026966	10.69425	0.001161	0.002635	0.01361797	0.0010329	0.0005309	0.00050852	0.0010305	0.0069107	0.00072989
GSDMC	8	0.0269982	8.602898	6.46E-05	0.001394	0.00118205	0.0094362	0.0007419	0.0106847	0.0008465	0.00082859	0.00081083
GNG11	8	0.0270819	8.445111	0.001032	0.002441	0.00138507	0.0066326	0.0005851	0.00039799	0.0009166	0.00056737	0.00173146
CYP2C19	8	0.0271432	8.274305	0.000896	0.024522	0.00049168	0.0017228	0.0010606	0.00084785	0.0020751	0.00189701	0.00027723
SAMD13	8	0.0271779	7.660412	7.96E-05	0.002391	0.00195861	0.0020036	0.0008818	0.00261573	0.0015889	0.00085914	0.00141215
FOXN2	8	0.0272367	18.0584	0.004486	0.000384	0.00126194	0.0020845	0.000245	0.00025336	0.0005523	0.00065373	0.00086907
RTEL1-TNFF	8	0.0272808	7.86508	0.000622	0.008223	0.00132342	0.0009509	0.0011121	0.00266493	0.0008955	0.00099979	0.00043729
ROS1	8	0.0273605	11.98892	0.000809	0.001124	0.00197279	0.00118	0.0004509	0.0004934	0.001017	0.00073531	0.00056839
IL18BP	8	0.0274606	6.12516	0	0.189316	0.00100657	0.0998562	0.0090995	0.00185885	0.0074341	0.00149859	0.00050961
MBD6	8	0.0275084	4.400556	0	0.012687	0.01364283	0.0021412	0.0011547	0.00092006	0.0114095	0.00225093	0.00158493
FAM171A2	8	0.0275123	13.52503	0.002609	0.005859	0.00110985	0.0007082	0.0005565	0.00052618	0.0008246	0.00404441	0.00082417
ZDHHC19	8	0.0275313	12.71206	0.001904	0.000714	0.00128442	0.0014773	0.0005634	0.00102509	0.0007432	0.00089635	0.00125486
GRINA	8	0.0275788	6.016975	0	0.001812	0.00096778	0.0019448	0.0042077	0.00209618	0.0027011	0.17140132	0.00023291
XPO1	8	0.0276185	7.932285	0.002005	0.001688	0.00039219	0.0199051	0.0023863	0.00178527	0.0006388	0.00104015	0.00020727
TFF3	8	0.0276338	9.094894	0.001414	0.001082	0.0004683	0.000511	0.0996438	0.00034683	0.0007722	0.00057907	0.00071037
LOXL4	8	0.0276793	4.228364	0	0.014449	0.00141825	0.0024402	0.0010194	0.00132378	0.0019899	0.00219578	0.00367048
DRG1	8	0.0277321	8.790757	0.001347	0.00164	0.00054788	0.0011948	0.0008191	0.00218636	0.0179131	0.00221086	0.00071781
RPS29	8	0.0277719	8.915094	0.000143	0.002045	0.00060693	0.0006153	0.0003612	0.00039109	0.0007925	0.00161335	0.00076455
ATP6AP1L	8	0.0277802	6.274888	0	0.005283	0.00678161	0.0145455	0.0022431	0.00063155	0.0292031	0.01384281	0.00092889
ORC5	8	0.0277863	11.03332	0.000702	0.000947	0.00142066	0.0008835	0.0006989	0.00079803	0.0016549	0.00135598	0.0019858
CNGB3	8	0.0278087	10.53922	0.000416	0.002126	0.00053185	0.0021144	0.0008431	0.00050428	0.0024604	0.00110117	0.00066175
HPS6	8	0.0278143	9.260157	0.003896	0.00099	0.00057946	0.0014276	0.0005846	0.00150384	0.0037928	0.00273392	0.00159865
IPO4	8	0.0278248	6.207667	0	0.003961	0.00176281	0.013213	0.001667	0.00059031	0.0098695	0.00117679	0.00329718
L3MBTL1	8	0.0278459	8.670908	0.000446	0.004487	0.00075336	0.0032768	0.0005198	0.00061194	0.012277	0.0016784	0.00353595

Table S5

PRKAR2A	8	0.0278954	12.7137	0.012701	0.042166	0.00043339	0.0005012	0.0002181	0.0005626	0.0090882	0.0013611	0.00030145
EXOC3L2	8	0.0279116	6.684103	0	0.00999	0.00166206	0.0014981	0.0009125	0.00208135	0.0058545	0.01755406	0.00120945
HTN3	8	0.027976	6.881225	0	0.007599	0.0009317	0.0122964	0.0020176	0.00134295	0.0072323	0.00236614	0.0009609
GRN	8	0.0281485	13.03188	0.002281	0.003756	0.00116639	0.0007117	0.0005569	0.00058275	0.0008831	0.00426904	0.00096538
GABRA2	8	0.0282435	15.8783	0.00544	0.00042	0.0003569	0.0134162	0.0003895	0.00038543	0.0004552	0.00193758	0.00026439
LDHD	8	0.0282793	7.117682	3.19E-05	0.001543	0.00131262	0.0069775	0.0010187	0.00072779	0.0112469	0.00600513	0.00643372
LSG1	8	0.0282979	9.078231	0.001185	0.000635	0.00060641	0.0009526	0.0004437	0.00179672	0.0010909	0.00297741	0.00096802
EEF2K	8	0.0283512	12.40003	0.008264	0.000862	0.00135224	0.0022095	0.0004044	0.00022348	0.0009573	0.00043792	0.00070822
STARD3NL	8	0.0283932	12.84985	0.000918	0.001427	0.00073714	0.0008204	0.00053	0.00054179	0.2161484	0.00048947	0.00140783
C16orf58	8	0.028394	6.81749	0	0.003652	0.00169275	0.0015463	0.0038506	0.00148047	0.0024112	0.0024645	0.00063944
ZFAT	8	0.0284262	9.243606	4.73E-05	0.002465	0.00210385	0.0072105	0.0010631	0.00056235	0.001378	0.00091717	0.00049173
RTN4RL1	8	0.0284892	7.553404	3.46E-05	0.002072	0.00209733	0.0032149	0.0013846	0.00079282	0.0102527	0.0083174	0.00087491
CCL16	8	0.0285867	6.53122	0	0.020119	0.00231473	0.0032117	0.0048849	0.00095963	0.0079443	0.00233344	0.00056922
DMRT2	8	0.0285956	9.994781	0.000395	0.01699	0.00030591	0.0005176	0.0010272	0.00082254	0.0004846	0.00058179	0.00044388
MFSD8	8	0.0287329	9.494166	0.002567	0.000959	0.00093156	0.0010761	0.0017903	0.00071653	0.001841	0.00103289	0.0022012
NSUN3	8	0.0287611	7.848589	4.37E-05	0.00199	0.00212042	0.0037788	0.0010113	0.00046098	0.0012184	0.00218647	0.00139742
SPECC1	8	0.0288169	9.457139	0.000979	0.005589	0.00356957	0.1684716	0.0005056	0.00040074	0.00112	0.00380233	0.00046925
BIN1	8	0.0288471	8.565989	0.000119	0.002808	0.00055531	0.012372	0.0012547	0.00105719	0.0020447	0.00302144	0.00075832
SLC25A39	8	0.0288735	15.96609	0.003601	0.002181	0.00135804	0.0005853	0.0005023	0.00050212	0.000708	0.00212449	0.00070287
ENTPD1	8	0.028877	12.21417	0.001472	0.001136	0.00064226	0.0029	0.0009745	0.00044302	0.0007139	0.00073577	0.00070204
NEU3	8	0.0288954	6.293512	0	0.001257	0.00281516	0.0133674	0.0016663	0.00088508	0.0056047	0.00192703	0.00244065
BTRC	8	0.0289172	7.404881	6.41E-05	0.002233	0.00089475	0.0052139	0.0023171	0.00108186	0.0263944	0.0033111	0.00059871
GTF2A2	8	0.0289568	1.173428	0	0.01139	0.00647466	0.008592	0.0011518	0.00099979	0.0027208	0.00274641	0.00184205
PGAM2	8	0.0289586	10.49668	0.003811	0.000914	0.00150869	0.0007854	0.0003626	0.00091304	0.0007478	0.00110031	0.01190345
GUCY2D	8	0.028966	10.70605	0.001032	0.001135	0.00082949	0.0014606	0.0007722	0.0013498	0.0086426	0.00048003	0.00080126
HMHB1	8	0.0289691	7.672956	6.34E-05	0.006042	0.00203762	0.000847	0.0386187	0.00067985	0.0019886	0.00233161	0.00069491
SCYL3	8	0.0289945	7.287115	0.000443	0.009452	0.00031283	0.0021212	0.0006745	0.00053899	0.0016191	0.00184378	0.00046579
MTRF1L	8	0.0290017	10.72221	4.11E-05	0.001368	0.00076172	0.0022994	0.0007462	0.00056121	0.0014777	0.00522788	0.00066596
BCL3	8	0.0290921	7.507994	0.000202	0.001437	0.00177327	0.0191367	0.0015849	0.00272447	0.0091128	0.00087034	0.00061244
TCTEX1D2	8	0.0291155	16.5821	0.006152	0.000462	0.00100994	0.002989	0.0003367	0.00049949	0.0014139	0.00057841	0.00079787

Table S5

OR5T2	8	0.0291505	7.423059	0.000368	0.002278	0.01744676	0.0025175	0.0006938	0.00683929	0.0015174	0.00100155	0.000483
PARP9	8	0.0291586	7.472406	0.000421	0.001408	0.00062365	0.0043122	0.0018962	0.00212707	0.0009304	0.00269014	0.00044706
MATN4	8	0.029203	6.00338	0	0.001913	0.00112318	0.0017365	0.0003826	0.00071798	0.0031715	0.00166045	0.00059786
SLC25A17	8	0.0292316	7.159248	5.71E-05	0.001755	0.00271566	0.0129698	0.0005437	0.00167805	0.0169757	0.00084438	0.00295221
SPRR2E	8	0.0292322	12.08794	0.006353	0.003469	0.00058823	0.0017053	0.0009391	0.00026532	0.0005786	0.00029663	0.00034454
CPT2	8	0.0294183	12.98376	0.001164	0.000586	0.00072291	0.0017236	0.0007157	0.00083373	0.0038517	0.00102391	0.00072089
ANKRD30BL	8	0.0294357	10.22992	0.00308	0.001401	0.00138809	0.0010214	0.0008186	0.00122691	0.0009397	0.0023332	0.00117228
EXD2	8	0.0294391	9.485928	0.001581	0.001436	0.00125345	0.0013771	0.0007786	0.00034909	0.0018388	0.00099606	0.00027436
NUDT16	8	0.0295331	6.233464	0	0.002374	0.00139914	0.0032039	0.0034044	0.00101553	0.0096689	0.01214352	0.00043461
FOXP2	8	0.0295623	6.919441	0	0.004851	0.00181332	0.0043402	0.0010747	0.00140244	0.0091043	0.01143823	0.00095273
ANGPTL5	8	0.0296201	8.186456	0.000746	0.012559	0.0057006	0.0006526	0.0014858	0.0002868	0.0018625	0.0004761	0.00074761
NT5C1A	8	0.0296456	6.702812	0	0.02034	0.00175525	0.0031334	0.0007571	0.00122906	0.0035559	0.00281898	0.02069747
AMY2A	8	0.0296985	15.16531	0.012133	0.00243	0.00077268	0.0020101	0.0004704	0.00042796	0.0005995	0.00112286	0.00049172
POP7	8	0.0298117	12.53191	0.00717	0.000725	0.00032739	0.0147678	0.000282	0.00027947	0.0111394	0.0005141	0.00186489
MKRN3	8	0.0298947	9.346113	0.000725	0.001435	0.0006271	0.0017527	0.0534797	0.00102224	0.0007296	0.00070028	0.00174484
RPL3	8	0.0299936	9.57642	0.000367	0.003147	0.00075235	0.000662	0.0004735	0.00403781	0.0008919	0.00072447	0.00172087
C15orf53	8	0.0300033	12.62374	0.000486	0.002287	0.00117224	0.0006642	0.0009937	0.00077642	0.0010957	0.00058595	0.00093442
PSMA5	8	0.0300354	14.47314	0.004389	0.001884	0.000739	0.0005122	0.0007471	0.00067866	0.001457	0.00098672	0.00070463
HMG20B	8	0.0300635	6.568757	0	0.002288	0.01987707	0.0014911	0.0008746	0.02570005	0.0060591	0.00139887	0.00084681
FBXW4	8	0.0301754	7.833125	0.000152	0.00391	0.00095485	0.0136695	0.0010396	0.00111305	0.0080629	0.00702349	0.00094808
FILIP1	8	0.0302148	8.558314	0.000573	0.001018	0.00055017	0.1097424	0.000409	0.00363005	0.0015436	0.0076309	0.00090186
TTC12	8	0.0302361	22.00056	0.005549	0.012612	0.00153112	0.0005182	0.0002254	0.00024872	0.0003721	0.00070475	0.00029703
ZNF230	8	0.0302408	7.286519	2.76E-05	0.002099	0.00440447	0.0015005	0.0013196	0.00171365	0.0016813	0.01897444	0.0008553
OTUD7A	8	0.0302721	11.02386	0.000967	0.001622	0.0104035	0.0177766	0.000429	0.00026099	0.00063	0.00078484	0.00084561
MYNN	8	0.0302989	13.51313	0.027291	0.000298	0.00037453	0.0007171	0.0007162	0.00524325	0.000507	0.00045071	0.00047605
PLEKHA4	8	0.0303172	11.6586	0.001386	0.002217	0.00060676	0.0035773	0.0009004	0.00083807	0.0006232	0.00097659	0.00110134
LRCH4	8	0.0303578	14.58057	0.010363	0.000895	0.00038133	0.0021042	0.0002587	0.00026624	0.0027296	0.00051399	0.00085681
TCEA2	8	0.0303916	10.53353	0.002212	0.008456	0.00047109	0.0009205	0.0006252	0.00112318	0.0027459	0.00149806	0.00064944
FAM150A	8	0.0304501	9.295052	0.000251	0.000898	0.00131967	0.0020647	0.0015422	0.00104387	0.0021109	0.00097895	0.0011865
DLEC1	8	0.0304929	6.350063	0	0.019753	0.00640692	0.0014937	0.0014988	0.01249835	0.0015272	0.00165154	0.00047695

Table S5

GNAS	8	0.0304958	9.250586	0.000746	0.002147	0.00833246	0.0015352	0.0004551	0.00109967	0.0006201	0.00518265	0.00030867
NOLC1	8	0.0305295	7.908543	0.002581	0.000906	0.00044787	0.0009799	0.0003402	0.0024144	0.0089566	0.02569523	0.00283424
SSRP1	8	0.0305522	6.884889	0	0.003092	0.00166542	0.0059344	0.0010462	0.0030903	0.0021876	0.0012452	0.00125353
CTCFL	8	0.0305683	9.003604	0.000215	0.002469	0.00096073	0.0035962	0.0006152	0.00108269	0.0019105	0.00240295	0.00049885
FAM182B	8	0.0306091	6.833925	0	0.016982	0.00165681	0.0016054	0.0008083	0.00261366	0.0052151	0.00134323	0.00342929
CD96	8	0.0307027	8.934614	0.00037	0.002983	0.00081706	0.0011059	0.0006005	0.0014942	0.0019189	0.00165528	0.00036448
NBPF14	8	0.0307365	8.692953	0.000442	0.003236	0.00103002	0.0013515	0.0041172	0.00033744	0.0005927	0.00053318	0.00177796
PPP1CB	8	0.0307558	7.913737	0.000442	0.007048	0.00078467	0.0039363	0.0005904	0.00791537	0.0143233	0.00078599	0.00047436
MFSD12	8	0.0309112	6.433364	0	0.002131	0.08091324	0.00228	0.0008621	0.00406497	0.0155172	0.00140824	0.00112207
RPL24	8	0.0309116	11.5034	0.001786	0.000855	0.26561024	0.0029179	0.0007661	0.00027039	0.0005701	0.00040818	0.00109185
DCAF5	8	0.0309403	9.123958	0.001229	0.001454	0.00147959	0.001249	0.0032927	0.00029867	0.0012631	0.00056352	0.00037277
TAGAP	8	0.0309519	4.953033	0	0.002855	0.00158371	0.044227	0.0007851	0.01262866	0.0034917	0.00134905	0.00111252
HSPA4L	8	0.0310331	8.890448	0.001586	0.000991	0.00128475	0.0012098	0.0025166	0.00061367	0.0013294	0.00098061	0.00377825
EIF4ENIF1	8	0.0311196	7.843278	0.000835	0.001768	0.00053326	0.0015394	0.0010668	0.00923475	0.0037255	0.00230183	0.00055431
AHSG	8	0.0311385	9.12299	0.001635	0.000977	0.00040836	0.0020625	0.0006821	0.00321503	0.0008836	0.00098317	0.00394753
FAM184B	8	0.0312086	6.799415	0	0.004094	0.00172722	0.0021819	0.0006692	0.00062766	0.0018432	0.00593835	0.00087017
DNASE1L3	8	0.0313232	14.89663	0.006801	0.000505	0.00063718	0.0112795	0.0004199	0.00033871	0.0003978	0.00293846	0.00022645
CECR1	8	0.0313294	6.878144	0	0.001691	0.00353626	0.0019645	0.0027761	0.00093604	0.0026469	0.00161764	0.00168577
F12	8	0.0313312	11.74776	0.002903	0.001375	0.00065213	0.0040099	0.0003665	0.00091121	0.0006551	0.0039558	0.00047434
WWC2	8	0.0313645	6.423479	0	0.017626	0.00137895	0.2706059	0.0007977	0.00685958	0.0039272	0.00112354	0.00166885
CSN1S1	8	0.0313877	9.232661	0.000423	0.003176	0.00077875	0.0033068	0.0010134	0.00110105	0.0022517	0.00095733	0.00094256
AGAP9	8	0.0314273	10.25541	0.003151	0.006153	0.0004453	0.0027838	0.0004934	0.00154955	0.0006907	0.00105092	0.00176187
CSF3R	8	0.0314672	10.26636	0.000574	0.001403	0.00257579	0.000927	0.0029577	0.00051179	0.0020079	0.00045062	0.00085695
TCTN1	8	0.0314924	9.249151	0.001252	0.002634	0.00369027	0.0018016	0.0006149	0.00055553	0.0011834	0.0015638	0.00206483
TRPS1	8	0.0315244	10.84634	0.000432	0.00076	0.00061885	0.0005198	0.0004268	0.00163822	0.0030633	0.00800319	0.00027271
ASZ1	8	0.0316903	17.57286	0.005403	0.000754	0.00052217	0.005204	0.0003584	0.00049144	0.000403	0.00216047	0.00041454
PABPC1	8	0.0317411	11.05057	0.000784	0.003537	0.00114527	0.0010274	0.0005862	0.00048331	0.0006662	0.00083162	0.01012987
GBE1	8	0.0317907	9.159136	8.67E-05	0.003677	0.00051603	0.0018485	0.0017081	0.00151903	0.0007769	0.00628368	0.00058563
GAS2	8	0.031798	6.694759	0	0.005754	0.00366725	0.0015422	0.0009925	0.00104264	0.013468	0.00185163	0.04550258
HAPLN2	8	0.0318526	8.514988	0.000399	0.004734	0.00120763	0.0021347	0.0015494	0.00074556	0.0012185	0.00079748	0.00361674

Table S5

ICA1	8	0.0320381	8.50306	0.000164	0.001154	0.00269605	0.0009086	0.0006295	0.00577764	0.0010439	0.00197373	0.00067119
MANF	8	0.0320625	9.648008	0.002617	0.0044	0.00065455	0.0078618	0.0008462	0.00055388	0.0034478	0.00115179	0.00135234
TADA2A	8	0.0320647	10.49684	0.001407	0.001024	0.00126347	0.0011184	0.0004737	0.00046538	0.0085594	0.00555766	0.00158704
GTPBP10	8	0.0320923	9.425536	0.000321	0.005028	0.00140502	0.0008811	0.0007607	0.00079177	0.0019848	0.32339073	0.00165892
TAC4	8	0.0321153	7.124967	1.06E-05	0.001876	0.01033254	0.0027008	0.001405	0.00086669	0.062766	0.0017998	0.00169525
TNFAIP2	8	0.0321211	14.1473	0.001614	0.000597	0.00116479	0.0039043	0.0005094	0.00061641	0.0040026	0.00077444	0.00099287
IL15RA	8	0.0321276	7.133089	4.19E-05	0.001734	0.00328304	0.00321	0.0031433	0.00123816	0.0066467	0.00111883	0.00036119
ARL4C	8	0.0321692	13.90491	0.000793	0.001283	0.00061463	0.0004462	0.0007533	0.00104398	0.0009351	0.00035128	0.00082857
CCT3	8	0.0322037	11.10929	0.002995	0.014589	0.00031631	0.0009406	0.000726	0.000462	0.0023065	0.00066807	0.00125548
SAP30L	8	0.0322823	6.62037	0	0.003778	0.00248773	0.0026759	0.0010372	0.00264513	0.0136169	0.00410649	0.00084744
PRSS12	8	0.0322927	7.021988	8.56E-06	0.011235	0.00090138	0.004804	0.0013189	0.00759545	0.0049884	0.01268031	0.00062108
SRP54	8	0.0322971	6.477892	0	0.003204	0.00369048	0.0216497	0.0012065	0.01400739	0.0172772	0.00095009	0.00070541
ALG12	8	0.0323272	7.91868	0.000469	0.003226	0.0023715	0.0019389	0.0011335	0.00066016	0.0060251	0.00137306	0.00113381
LIMK2	8	0.0323417	11.32915	0.004296	0.001062	0.00037769	0.000651	0.000814	0.00133705	0.0040654	0.00144616	0.00075483
COX7B2	8	0.032363	14.15883	0.010476	0.000324	0.00034452	0.0009282	0.0003321	0.00025719	0.0004208	0.00102807	0.00016242
SLC25A51	8	0.0323804	8.616483	0.000358	0.00688	0.01649266	0.0029924	0.0008916	0.00063	0.0010941	0.00111275	0.0021581
EIF4E1B	8	0.0324279	4.435772	0	0.018756	0.00805453	0.0075952	0.0009113	0.00130478	0.005082	0.00155305	0.00211408
CGRRF1	8	0.0324403	7.24261	6.7E-05	0.003989	0.00166174	0.0012992	0.0006715	0.0041182	0.0080297	0.00125917	0.00290797
POTEB	8	0.0324415	11.74134	0.002636	0.001004	0.00089898	0.0028627	0.0004568	0.00074435	0.0015779	0.0006972	0.0014167
POTEG	8	0.0324415	11.74134	0.002636	0.001004	0.00089898	0.0028627	0.0004568	0.00074435	0.0015779	0.0006972	0.0014167
PRB2	8	0.0324422	9.136059	0.000321	0.006485	0.00096471	0.002009	0.0009312	0.00127864	0.0035876	0.00069485	0.00160722
WDR53	8	0.0324691	10.23351	0.001127	0.001889	0.00063622	0.0010131	0.0006093	0.00075334	0.0008259	0.00206553	0.00972299
TPSG1	8	0.0324911	6.913513	0	0.00704	0.00568524	0.0050691	0.0017432	0.00084581	0.0038962	0.00189177	0.00124534
GIMAP6	8	0.0325521	13.70262	0.005662	0.000694	0.00096852	0.0007537	0.0002411	0.00048107	0.0003236	0.00050847	0.00281094
NPR2	8	0.0325806	6.155634	0	0.003437	0.00125936	0.0262332	0.0011872	0.00155275	0.0031363	0.00408247	0.00122707
LILRA5	8	0.032619	7.156797	3.18E-05	0.00274	0.00074223	0.0018948	0.0032722	0.00157518	0.0022944	0.00529196	0.00104298
RGS6	8	0.032636	10.7945	0.00022	0.001583	0.00075845	0.0007124	0.0006808	0.00308466	0.0103931	0.00054677	0.00053404
PRAMEF20	8	0.0326406	8.760929	0.002099	0.002388	0.000495	0.0014189	0.0005518	0.0089582	0.0016562	0.00096305	0.00067668
COMP	8	0.0326457	7.129635	0.000111	0.013847	0.00452024	0.0017553	0.0014299	0.00047668	0.0011993	0.00285055	0.0030341
C3orf38	8	0.032754	11.3394	0.000702	0.002123	0.00043288	0.0006488	0.0003295	0.00084855	0.0043176	0.0046463	0.00032287

IL2RA	8	0.0328427	6.009464	0	0.006849	0.01918048	0.001503	0.0244947	0.00164774	0.006926	0.00236691	0.00046347
SCNN1B	8	0.0328435	11.1712	0.00193	0.005427	0.00047117	0.0058017	0.0007075	0.00081895	0.0011267	0.00074039	0.00081317
HAVCR1	8	0.032882	10.96289	0.00407	0.000745	0.00031605	0.0229	0.0016025	0.00060633	0.0007645	0.00078671	0.00126934
EXTL3	8	0.0328828	16.25435	0.005826	0.000589	0.00071836	0.0004171	0.0003556	0.00074097	0.0010296	0.00060809	0.00190753
NPFFR2	8	0.0329094	17.28463	0.00306	0.00096	0.00056623	0.0015207	0.0002865	0.00029527	0.0007184	0.00047113	0.00074099
TFEB	8	0.032962	9.25027	0.000943	0.002212	0.00048322	0.0010166	0.0010051	0.0006566	0.0040864	0.00080094	0.00462807
CCDC168	8	0.0329766	7.361021	3.27E-05	0.002037	0.00241018	0.0050736	0.0018944	0.00164411	0.0011756	0.00139574	0.00104372
GSR	8	0.0330659	6.771514	0	0.002327	0.01166999	0.0014741	0.0015206	0.00113193	0.010801	0.00144645	0.0016831
NFU1	8	0.0330703	7.325521	2.53E-05	0.003421	0.00304609	0.0020273	0.0017111	0.00188227	0.0059253	0.00091383	0.00092387
CLCA4	8	0.0330955	8.414003	0.000135	0.04252	0.002625	0.0026207	0.0008018	0.00123538	0.0030404	0.00102925	0.00095042
BTN3A1	8	0.0331364	12.40184	0.003657	0.001047	0.00464301	0.0004379	0.0003604	0.00037515	0.0007794	0.00371734	0.00021043
GIPC3	8	0.0331854	6.673027	0	0.00213	0.01804998	0.0013637	0.0008375	0.01286453	0.009465	0.00153355	0.00085878
PET117	8	0.0332565	7.120633	1.35E-05	0.003503	0.00129556	0.0093961	0.0021864	0.00112027	0.0012938	0.00470467	0.00134064
KPNA1	8	0.0332715	7.985621	0.000698	0.000977	0.00062304	0.0050301	0.0009586	0.00223653	0.0010394	0.01163724	0.00042184
PRPF6	8	0.0332943	11.71318	0.003401	0.002303	0.0004089	0.0010564	0.0005442	0.00086884	0.0019666	0.00067324	0.00047335
NPS	8	0.0333659	2.738203	0	0.004483	0.00295394	0.0140993	0.0009811	0.00115088	0.0148788	0.00187594	0.00494996
CLCA1	8	0.0334327	11.00949	0.000763	0.005177	0.00357032	0.0096979	0.0004138	0.00056243	0.0017165	0.0005264	0.00129236
PDLIM3	8	0.0334506	7.099111	5.37E-06	0.002919	0.0234337	0.0102342	0.0012563	0.00080254	0.0027479	0.00288013	0.00165504
ACTRT3	8	0.0335268	12.70004	0.023481	0.000389	0.00046703	0.0009451	0.0009923	0.00291173	0.0006166	0.00053298	0.00073694
CISD1	8	0.0335656	11.57718	0.001983	0.009888	0.00248162	0.0034298	0.0005125	0.00055345	0.002463	0.00063286	0.00048343
ZNF3	8	0.0335804	11.28147	0.001556	0.006432	0.0012556	0.0011067	0.0009002	0.00055523	0.0015022	0.00061129	0.00133453
DAZL	8	0.033663	10.85254	0.001233	0.000793	0.00035583	0.001973	0.0005216	0.00178457	0.0053891	0.0006498	0.00075171
PITX3	8	0.0337202	7.568284	0.001111	0.001086	0.00051563	0.0014082	0.0004069	0.00311123	0.0318588	0.04609716	0.00386319
PANK3	8	0.0337497	6.276397	0	0.100303	0.01629057	0.0169332	0.0030823	0.00104009	0.0016398	0.00488668	0.00077683
MRPL19	8	0.033824	13.21457	0.004812	0.000832	0.07600452	0.0009114	0.0007425	0.00021493	0.0003442	0.00073752	0.00062016
SLC9A8	8	0.0339001	5.517389	0	0.001454	0.01078883	0.0209227	0.0461598	0.00060973	0.005307	0.00187193	0.00145005
MERTK	8	0.0339469	6.100115	0	0.001994	0.0023846	0.002262	0.0154153	0.00033619	0.0047728	0.00110428	0.00188804
KIAA1429	8	0.0339642	13.47304	0.003691	0.007553	0.00063043	0.0007657	0.0005513	0.0003811	0.0007683	0.00039047	0.00224603
WIPI1	8	0.0339663	7.63382	0.00011	0.003677	0.00091121	0.00932	0.0008151	0.00358632	0.0019113	0.00104167	0.00192945
TBX15	8	0.0340576	10.42824	0.002707	0.000565	0.00050898	0.0008096	0.000965	0.00287159	0.0006802	0.00043859	0.0024546

Table S5

MC4R	8	0.0340594	9.115054	0.001119	0.000498	0.00039983	0.0003147	0.0007365	0.00057609	0.0019035	0.00118511	0.00020234
KRTAP12-4	8	0.0340617	4.392572	0	0.007887	0.00728387	0.0074747	0.0009951	0.0017048	0.0035238	0.00217368	0.00117383
ANO5	8	0.0341071	8.687335	0.000141	0.003068	0.0009093	0.0010544	0.0010373	0.00258866	0.0012293	0.01238374	0.00076917
QARS	8	0.0341285	15.10778	0.021582	0.009502	0.00037178	0.0004432	0.0001815	0.00036022	0.0134919	0.00102921	0.00022079
TRNP1	8	0.034131	6.49437	0	0.029309	0.0015381	0.0033251	0.0012792	0.00289108	0.0018116	0.00177691	0.00114512
REXO2	8	0.0341392	16.86243	0.009617	0.000521	0.00138957	0.0003363	0.0003282	0.00083394	0.0010106	0.00069658	0.00029549
SCAMP4	8	0.0341815	8.999591	0.000912	0.006455	0.000762	0.0013166	0.0013957	0.00500948	0.0007595	0.0019644	0.00064925
FBXL18	8	0.0342488	8.72669	0.000216	0.001216	0.00128449	0.0024761	0.0009674	0.00151272	0.0311025	0.00093007	0.00165385
BLOC1S2	8	0.0342673	8.329812	0.000242	0.004665	0.00111363	0.0010936	0.0007303	0.00101967	0.0077322	0.13113482	0.00305273
POLM	8	0.0343457	9.725697	0.002668	0.000958	0.00180918	0.0008123	0.0003597	0.00129261	0.0007985	0.00133178	0.00454628
HLA-DPB1	8	0.0343485	9.394218	0.003183	0.001958	0.00033563	0.000302	0.0003076	0.00021619	0.0006045	0.00026525	0.00022777
FBP2	8	0.0344119	11.87209	0.001216	0.001202	0.0011295	0.0023657	0.0015557	0.00061212	0.0005886	0.00154557	0.00088423
CWF19L2	8	0.0344811	10.69611	0.000607	0.000638	0.00118046	0.0062707	0.0023197	0.00040012	0.0007981	0.00580831	0.00047411
C6orf223	8	0.0345022	10.20373	0.000743	0.000698	0.00132118	0.0070573	0.0004765	0.00191236	0.0118525	0.00117303	0.00067556
CLDN12	8	0.0345163	9.867598	0.000237	0.003805	0.00106148	0.000805	0.000733	0.00135361	0.0035803	0.00873307	0.00072238
SLC4A1	8	0.0345364	16.60089	0.00715	0.004027	0.04727089	0.000598	0.0003651	0.00033863	0.0004653	0.00112237	0.00031059
ADAT3	8	0.0345506	7.366272	0.000188	0.003661	0.00087804	0.0013604	0.0020667	0.00811773	0.0009602	0.00228854	0.00069321
CDR2	8	0.0347074	6.116429	0	0.009659	0.00817587	0.0042756	0.0009736	0.00075848	0.0021732	0.00623206	0.00841632
EYA1	8	0.0347697	9.810532	0.000389	0.000738	0.00083321	0.0011705	0.001718	0.00027224	0.0021264	0.00054893	0.00153455
NBPF11	8	0.0348039	9.252989	0.000823	0.008182	0.00076169	0.000653	0.0043457	0.00026711	0.0006033	0.0005806	0.00171174
CDC40	8	0.034885	13.17469	0.004602	0.002932	0.0010837	0.0006282	0.0004292	0.00078512	0.0007214	0.0007761	0.00432508
SAP25	8	0.0349086	15.31559	0.011026	0.001091	0.00042925	0.0016322	0.0002849	0.00029511	0.0020622	0.00055349	0.00080179
INHBE	8	0.0349208	8.179772	0.000347	0.010204	0.0201696	0.0011655	0.0009262	0.00061657	0.0113744	0.00183654	0.00197329
KCNK1	8	0.0349698	6.438548	0	0.013941	0.00194043	0.0013097	0.0012912	0.00210423	0.0056388	0.0067026	0.00108218
PKIB	8	0.0349881	9.836422	0.000347	0.00148	0.00087824	0.0007918	0.0006754	0.00255989	0.0022019	0.0014009	0.00177374
PRKCQ	8	0.0350241	8.775902	4.77E-05	0.003897	0.00596315	0.0040205	0.0011979	0.00103859	0.0062398	0.00069841	0.00072487
KLF7	8	0.0350285	7.048538	3.27E-06	0.046218	0.00271534	0.1051712	0.0054222	0.00136996	0.0011142	0.00432283	0.00064917
PRSS48	8	0.0350298	10.25165	0.003977	0.000811	0.00353542	0.0019069	0.0007558	0.00078974	0.0007985	0.00183558	0.00036274
METTL21C	8	0.035067	6.507244	0	0.002983	0.0027255	0.022064	0.0017962	0.00221801	0.0016241	0.00194403	0.00083157
RAB8B	8	0.0350844	7.370242	3.27E-05	0.002776	0.00922393	0.0053632	0.0012525	0.00102743	0.0011324	0.0087761	0.00151466

Table S5

SNX27	8	0.0350942	7.300188	2.28E-05	0.003893	0.0022691	0.0016247	0.0014165	0.00170735	0.0040046	0.00133332	0.001108
KRTAP19-7	8	0.0352144	11.76246	0.001977	0.003795	0.00361211	0.0009431	0.0005091	0.00035712	0.0007871	0.00207578	0.00071587
CLEC6A	8	0.0352422	6.15051	0	0.003749	0.00229886	0.0052004	0.0037238	0.00256568	0.0016453	0.01371165	0.00041295
MTMR11	8	0.0352575	10.53107	0.002473	0.009355	0.00238547	0.0013101	0.0005442	0.00058881	0.0011264	0.0027982	0.00082943
SLC39A10	8	0.0352759	8.598028	0.000118	0.001181	0.00070937	0.0013636	0.004766	0.00134634	0.0015987	0.0009941	0.00204607
TTC23	8	0.0353048	13.1405	0.006238	0.002201	0.00031076	0.0006229	0.0012837	0.00027122	0.0004221	0.0002854	0.00062266
AKAP5	8	0.0353665	10.46573	0.001891	0.000933	0.00167109	0.001266	0.0021483	0.00077156	0.001184	0.0007574	0.00182782
FGFR3	8	0.035411	6.88724	0	0.005214	0.00148235	0.0020291	0.0006292	0.00397832	0.0035946	0.003629	0.00286046
CYP2C9	8	0.035438	9.163711	0.000352	0.005644	0.00072114	0.0014111	0.0018089	0.00057244	0.0025532	0.00125851	0.00089363
TXNDC8	8	0.0355052	14.31442	0.001841	0.000536	0.00057628	0.0179721	0.0004979	0.0004561	0.0012313	0.00075032	0.0026763
RBM7	8	0.0355151	12.83344	0.002159	0.001074	0.00150947	0.000569	0.0008931	0.00162703	0.0013369	0.000923	0.00059855
ADAMDEC1	8	0.0355192	16.26354	0.006925	0.000677	0.01035276	0.000822	0.0005474	0.00036326	0.0004631	0.00063994	0.00120999
PLSCR5	8	0.0355856	7.681796	8.15E-05	0.001074	0.00292933	0.0013087	0.0007087	0.00045992	0.0029647	0.01115019	0.00206192
NAA16	8	0.0356009	8.613647	0.000588	0.001922	0.00101416	0.0385454	0.0016501	0.00084872	0.0079796	0.00079752	0.00174574
PPRC1	8	0.0356319	7.904737	0.002442	0.001082	0.00047673	0.0009972	0.000366	0.00262838	0.1904386	0.04773379	0.00295217
TPSB2	8	0.0357053	6.922031	0	0.010554	0.00542409	0.0058074	0.001849	0.00087819	0.0043953	0.00187441	0.00123768
SLC25A38	8	0.035716	8.003761	0.000113	0.001253	0.00113793	0.0031793	0.0023401	0.00061249	0.0010813	0.00502265	0.00386701
SPOCK1	8	0.0357261	10.38888	0.000225	0.00088	0.00114964	0.0050651	0.0058288	0.0004741	0.0007811	0.00076151	0.00079245
DTX3L	8	0.0357652	6.573995	0	0.001872	0.00077039	0.015693	0.0027254	0.00179601	0.0009165	0.00299027	0.00045967
CCT8	8	0.0357955	6.748868	0	0.017237	0.00477777	0.0057193	0.0021615	0.00108848	0.0025195	0.0020052	0.00090555
BMP8B	8	0.0358161	8.348521	0.000188	0.002758	0.00176794	0.0036268	0.0005819	0.00084735	0.0023434	0.00156724	0.00254973
DEFB134	8	0.0358875	11.13843	0.002497	0.004293	0.00086324	0.0006655	0.001252	0.00048949	0.0024242	0.00088336	0.00207878
ITGA2	8	0.0359042	5.654216	0	0.002309	0.00134849	0.0700232	0.0011808	0.0028663	0.0011954	0.00266745	0.000629
GAL3ST4	8	0.036047	9.816463	0.000887	0.006223	0.00140493	0.0009138	0.0013811	0.00080149	0.0014899	0.00100169	0.00191281
BCAN	8	0.0361197	7.191643	1.69E-05	0.008346	0.00165154	0.0026928	0.001733	0.00114556	0.0016225	0.00117972	0.00378701
OR8K5	8	0.0361873	5.128587	0	0.004131	0.00822575	0.011666	0.0009581	0.00856746	0.0027273	0.00154076	0.00068346
APMAP	8	0.0362351	7.613119	0.000278	0.002153	0.00119153	0.0030596	0.0017321	0.00059131	0.0363502	0.00075803	0.00485218
SASH1	8	0.0362353	6.767531	0	0.003827	0.00968798	0.0013847	0.0012623	0.00064739	0.0022982	0.00250385	0.00183958
ZNF439	8	0.0362488	6.920877	0	0.04409	0.00484213	0.0031289	0.0010091	0.00083107	0.2183306	0.00846518	0.00592545
HDHD2	8	0.0362883	5.289448	0	0.003728	0.01297717	0.004319	0.009851	0.00091309	0.0055091	0.00142583	0.00092275

ZC3H13	8	0.0363248	9.350725	0.001492	0.003742	0.00093581	0.0009085	0.0002261	0.00035906	0.0007822	0.00072769	0.0017586
THRB	8	0.0363765	17.14258	0.000788	0.00094	0.00080393	0.0008765	0.000233	0.00031021	0.0003871	0.00565686	0.00076747
OSBPL10	8	0.0364017	8.010198	8.69E-05	0.002661	0.13433273	0.0138746	0.0007162	0.00303432	0.0087221	0.00075405	0.00070585
GNG4	8	0.0364247	11.50874	0.003061	0.003817	0.00120269	0.0007587	0.0003961	0.00042501	0.0007091	0.00037432	0.00167753
COL11A2	8	0.0364323	9.824067	0.005915	0.029802	0.00027545	0.0002528	0.0002346	0.00015113	0.0003862	0.0002346	0.00020761
MCM9	8	0.0364723	7.135138	2.21E-05	0.00303	0.00088625	0.0117344	0.0009145	0.00097208	0.0027673	0.0015558	0.0018364
C1orf123	8	0.0364833	14.88408	0.002121	0.000547	0.00070215	0.0013364	0.0006851	0.00069842	0.0063402	0.00128813	0.00076971
NEUROG1	8	0.0365305	9.146547	0.000624	0.008437	0.00061031	0.0075873	0.0004043	0.00073769	0.0040067	0.00089935	0.00568711
RHBG	8	0.0365599	12.44947	0.003013	0.003415	0.00040919	0.0010529	0.0006717	0.00052125	0.0016582	0.00053696	0.00108763
SYNE2	8	0.0365771	12.31502	0.001252	0.002089	0.00095402	0.0009335	0.000499	0.00150801	0.0005605	0.00069521	0.00407615
HMX3	8	0.0366193	7.052829	5.96E-06	0.001941	0.00145589	0.007108	0.0007357	0.00143067	0.0544625	0.0055679	0.02603373
BRMS1	8	0.0366304	7.984162	0.000217	0.002904	0.00104609	0.0014511	0.0012625	0.00144455	0.0120045	0.00117856	0.00243643
GPR32	8	0.0366692	6.031345	0	0.003795	0.00132243	0.1868031	0.0053561	0.00157732	0.006704	0.00162939	0.00070519
CLTC	8	0.036684	8.049348	0.001956	0.009357	0.00034593	0.0067477	0.0004331	0.48422482	0.0028001	0.00085519	0.00393131
PPP1R36	8	0.0367412	12.39515	0.005804	0.000799	0.0018553	0.000644	0.0022544	0.00044974	0.0008116	0.00073853	0.00298179
FCHO2	8	0.0367598	6.769493	0	0.005311	0.00107241	0.0032045	0.003282	0.00128421	0.0138247	0.00919659	0.00087045
GCFC2	8	0.0367652	14.70916	0.00691	0.000715	0.00241496	0.0013997	0.0006838	0.00022398	0.0003209	0.00055962	0.00073157
KRTAP20-4	8	0.0368196	10.87329	0.001278	0.002941	0.00700371	0.0009646	0.0005782	0.00056429	0.0011558	0.00684277	0.00087107
GRB7	8	0.0368568	9.677194	0.005087	0.001024	0.00114444	0.0015921	0.0020415	0.00044239	0.0021681	0.00055523	0.00030275
RBM15B	8	0.0368816	10.34381	0.003661	0.003897	0.00063366	0.0041204	0.0007509	0.00055195	0.0026722	0.00109437	0.00140462
ATP2A2	8	0.0369482	10.26928	0.002797	0.004686	0.00407451	0.0059648	0.0006017	0.00067213	0.0010195	0.00091092	0.00155887
GLE1	8	0.0369623	4.615186	0	0.020106	0.00132927	0.0115257	0.0009904	0.00127512	0.005953	0.00509601	0.00457343
SLC25A19	8	0.0369907	5.243444	0	0.013619	0.00925767	0.0044207	0.0010014	0.0010558	0.0018493	0.00348862	0.00452527
NKAIN2	8	0.0369931	11.20074	0.00014	0.010521	0.00065162	0.0018474	0.0004512	0.00052808	0.0067507	0.01912296	0.0004282
EPO	8	0.0370641	11.1201	0.003023	0.001256	0.0004789	0.0065976	0.0004658	0.00046305	0.0040814	0.0007704	0.00332715
RFTN2	8	0.0371686	10.46031	0.004119	0.002331	0.00055938	0.0248086	0.0013324	0.00027757	0.0004823	0.0005456	0.0681094
PDE4B	8	0.0371958	7.642181	3.78E-05	0.004387	0.08536234	0.002516	0.0009895	0.00092207	0.016533	0.00208021	0.00042501
PDE4D	8	0.0371996	6.599505	0	0.002228	0.00048071	0.0020879	0.0124964	0.0015049	0.0028362	0.00660526	0.00033898
ZNF570	8	0.0372123	8.019593	0.003729	0.000759	0.00046953	0.0013025	0.0005308	0.00086804	0.0021971	0.00052412	0.00041255
SMAD9	8	0.0372434	8.274182	0.00011	0.004051	0.00118904	0.0056283	0.000771	0.00089969	0.0111932	0.001239	0.00314523

C19orf25	8	0.037258	10.52887	0.001578	0.017523	0.00075002	0.004308	0.0006345	0.00078783	0.0008276	0.00450001	0.00044336
FZD8	8	0.0372708	7.974002	0.000254	0.006325	0.00156333	0.0039469	0.0008494	0.00283877	0.004758	0.00083569	0.00113391
SPATC1	8	0.0373084	5.783503	0	0.00308	0.00133177	0.0018508	0.0054164	0.00249082	0.0023788	0.00566046	0.00026823
ENHO	8	0.0373315	7.056083	4.73E-05	0.003345	0.00126252	0.0907871	0.0008689	0.00053193	0.0013841	0.00339615	0.00097521
SHQ1	8	0.0373431	9.989937	0.000306	0.001198	0.00090888	0.0008926	0.0025477	0.00059879	0.0078021	0.00115137	0.00115056
SNX10	8	0.0374037	12.68939	0.001357	0.000574	0.00061835	0.0019204	0.0010738	0.00697727	0.0005962	0.00072028	0.00099713
TRMT44	8	0.0374643	6.96211	0	0.013621	0.00234961	0.1755405	0.0020127	0.00158688	0.0236427	0.0012536	0.00089192
CHRD	8	0.0374903	7.056975	2.52E-05	0.017788	0.00192689	0.0011498	0.0053463	0.00114777	0.0045213	0.00638669	0.000383
PCSK9	8	0.0375057	8.832123	0.000155	0.00224	0.00107261	0.007331	0.0007719	0.00100004	0.0197403	0.00262149	0.00090922
LRRC3B	8	0.0375077	13.32894	0.00102	0.001363	0.00054667	0.0004723	0.0055084	0.00095849	0.0006103	0.00053855	0.00146545
SAMD10	8	0.0375823	12.4927	0.005167	0.001777	0.00046238	0.0009144	0.0006331	0.00064701	0.0020019	0.0006811	0.00039477
MTRF1	8	0.0375918	8.93101	0.001278	0.001665	0.00064896	0.0016264	0.0031126	0.00094636	0.032157	0.00076483	0.00186111
TTC29	8	0.0376223	11.01417	0.001664	0.000758	0.00098999	0.0014634	0.000901	0.00046749	0.0006858	0.0007626	0.00024363
ACOT12	8	0.0377293	6.292462	0	0.003675	0.0014477	0.0112395	0.0004009	0.00434514	0.0015792	0.00183797	0.00224381
ANKS1B	8	0.0377602	18.32117	0.001788	0.000403	0.0007774	0.0006036	0.0003905	0.00060187	0.0003833	0.00927906	0.00030808
COPB1	8	0.0377748	7.207487	0.000275	0.001673	0.00083471	0.0087007	0.0126154	0.00042565	0.0028755	0.0018691	0.00080662
TNKS1BP1	8	0.0377877	7.907246	0.000103	0.001818	0.00143999	0.0046479	0.0009203	0.00190717	0.0082295	0.00104545	0.00173077
KRTAP10-10	8	0.0378757	7.016039	7.35E-07	0.002939	0.00339871	0.0052267	0.0010054	0.00193718	0.0048136	0.00632132	0.00099575
MTF1	8	0.0378904	7.109855	1.17E-05	0.004967	0.00403393	0.0076118	0.0016526	0.00127402	0.0014498	0.01224625	0.00096667
SDE2	8	0.0379017	6.732182	0	0.007907	0.00251506	0.0021559	0.0031587	0.00085311	0.0104323	0.00232622	0.00119191
CCDC68	8	0.0379241	10.10349	0.000282	0.000957	0.00141908	0.0018687	0.0013869	0.00110643	0.0013561	0.00092355	0.00206862
FAU	8	0.0379405	7.10255	1.27E-05	0.001951	0.0018663	0.0137157	0.0043335	0.00073731	0.0034836	0.00249211	0.00084224
FUT4	8	0.0380114	10.24098	0.000861	0.001917	0.00330743	0.0017422	0.0003632	0.00063366	0.0014103	0.00386317	0.0003993
CHAF1B	8	0.0380688	10.82482	0.000283	0.005051	0.00106536	0.0009045	0.0014682	0.00082651	0.0011227	0.00118904	0.00087161
MORC2	8	0.0380878	9.675509	0.000424	0.002921	0.01593016	0.0076839	0.0006779	0.00091639	0.0010322	0.00093469	0.0014184
SERPINH1	8	0.0380955	11.91039	0.001914	0.00198	0.00068828	0.0413433	0.0009348	0.00051873	0.0054467	0.00042722	0.00072211
C10orf107	8	0.0381175	10.15459	0.000551	0.00093	0.00061047	0.0010986	0.0025296	0.00185146	0.0023167	0.0006299	0.00300993
C21orf58	8	0.0381283	6.896032	0	0.010672	0.00156637	0.0034028	0.0014221	0.00227943	0.0037261	0.00278466	0.00092033
LCP1	8	0.0382119	8.76155	0.000948	0.001	0.01720356	0.0028241	0.0003036	0.00033225	0.0005297	0.00095904	0.00076264
TMEM67	8	0.0382448	15.78145	0.008973	0.000537	0.05536594	0.0010076	0.0003711	0.00060464	0.0006017	0.00051884	0.00140281

Table S5

DTYMK	8	0.0383323	6.882766	0	0.003153	0.00181771	0.0046855	0.0009946	0.00417417	0.0025391	0.00179514	0.00114606
MIEN1	8	0.0384263	9.857419	0.005921	0.000807	0.00097982	0.0015457	0.0026921	0.00042776	0.0021627	0.00057263	0.00029035
ARRB1	8	0.0384603	5.164666	0	0.002198	0.00125091	0.0046238	0.0004186	0.00330266	0.0961403	0.02635204	0.02874907
MARS2	8	0.0385757	9.792758	0.001778	0.001837	0.00090067	0.011899	0.0016439	0.00042309	0.0006807	0.00114867	0.0029864
PARP10	8	0.0385912	5.586186	0	0.001845	0.00106597	0.0044719	0.0029768	0.00188846	0.0036282	0.02885972	0.00023845
PLK4	8	0.0386106	8.309271	0.001518	0.001117	0.00146834	0.0016068	0.0029667	0.00072314	0.0015287	0.00108518	0.0057974
C5orf63	8	0.0387084	11.80776	0.003101	0.001556	0.0009004	0.0013107	0.0006733	0.00077556	0.0019462	0.00092014	0.00101866
RASEF	8	0.0387468	10.09325	0.000219	0.002832	0.00070866	0.0035047	0.0013699	0.00065203	0.0012234	0.00083543	0.0015362
PRR5L	8	0.0387814	7.098092	2.93E-06	0.002904	0.00287328	0.0029666	0.0011665	0.00176261	0.00306	0.00250491	0.00103774
SKIV2L	8	0.0388091	18.82534	0.006417	0.01072	0.00104958	0.0007501	0.0003337	0.00024611	0.0003905	0.00190762	0.00057394
BTN3A3	8	0.0388558	13.53944	0.002693	0.000987	0.00315177	0.0005876	0.0004366	0.00055251	0.0008198	0.00415919	0.0003133
TMEM191C	8	0.038877	5.875424	0	0.027263	0.00139596	0.0050694	0.0008549	0.00185553	0.0161543	0.00289296	0.00495246
RPL34	8	0.0389706	11.69987	0.000427	0.002445	0.00090986	0.0009614	0.001051	0.00043289	0.0005361	0.0007082	0.00416749
CDKN1C	8	0.039	6.257646	0	0.008446	0.00151876	0.0015212	0.0040862	0.00469679	0.0017387	0.00358234	0.00057799
MFSD2A	8	0.0390465	7.619649	0.000109	0.041444	0.00456264	0.0020951	0.0007881	0.00150688	0.0146067	0.0018099	0.00114372
ZNF30	8	0.0390531	14.48567	0.002402	0.000765	0.01692197	0.000674	0.0004422	0.00056554	0.0007851	0.00067546	0.00439295
LHFP	8	0.0391284	7.538778	3.3E-05	0.001269	0.00252011	0.0187927	0.0005165	0.00132048	0.0035948	0.00712259	0.00197634
AGPS	8	0.0391464	24.85897	0.020972	0.000342	0.00055398	0.0002936	0.0003148	0.00023351	0.0004816	0.00476189	0.00035687
SLC16A12	8	0.0393006	11.31657	0.000547	0.004905	0.00117594	0.0016167	0.0006032	0.00069875	0.0048442	0.00061815	0.0015219
HSBP1L1	8	0.0393145	4.152762	0	0.003568	0.00221637	0.0022814	0.002165	0.00148723	0.0022435	0.00173606	0.00138662
MPP4	8	0.0393689	4.650783	0	0.003049	0.00777715	0.0026319	0.001351	0.00162808	0.0013224	0.00327909	0.00162437
COL6A2	8	0.0394446	7.027281	1.41E-06	0.008862	0.00196019	0.0016853	0.0022812	0.00113479	0.0030169	0.00218417	0.00129944
RCN3	8	0.0394744	11.00007	0.005099	0.002051	0.00034839	0.0030264	0.0004517	0.00124178	0.0010605	0.00100489	0.0007697
CEP85L	8	0.0394835	6.690987	0	0.00178	0.00313525	0.0147878	0.0006783	0.00094378	0.0172476	0.00146128	0.0014434
APBB2	8	0.0395062	17.83739	0.002305	0.00068	0.00102613	0.000939	0.0006601	0.00055923	0.0003656	0.00155905	0.00043718
ETV6	8	0.0395887	4.487391	0	0.004892	0.00205866	0.0491243	0.0009732	0.00110074	0.008868	0.02738873	0.00499342
USP49	8	0.0396183	11.48721	0.001939	0.000773	0.00118285	0.0008911	0.0006759	0.0006093	0.0021138	0.00080496	0.00362143
TPBGL	8	0.0396222	8.802064	0.000979	0.005601	0.00125826	0.0011973	0.0041059	0.0004708	0.0008286	0.00068984	0.0046565
FASTKD1	8	0.0396414	8.127295	0.000388	0.001034	0.01389717	0.0053184	0.0014805	0.00042907	0.0263436	0.01138704	0.00069809
GTF3C4	8	0.0396648	8.038692	0.000978	0.001028	0.00064808	0.0010985	0.0005496	0.00262713	0.0012139	0.0006723	0.00066228

Table S5

ITPR2	8	0.0398043	13.83349	0.000356	0.007802	0.00068924	0.0017829	0.0004444	0.00061273	0.0006315	0.00543895	0.00089949
POTED	8	0.0398086	10.66766	0.000905	0.001422	0.00103473	0.0325069	0.0011386	0.00087282	0.0009546	0.00075185	0.00265566
UBQLN3	8	0.0398167	6.862969	0	0.001591	0.00351317	0.0015678	0.0353802	0.00106542	0.0157626	0.00156698	0.00096558
KRTAP6-2	8	0.0398405	11.17655	0.001752	0.003889	0.00302569	0.0009828	0.0005789	0.00046259	0.0010077	0.00194961	0.00092948
COPA	8	0.0398476	7.05776	4.81E-06	0.001177	0.02912745	0.0021901	0.0012764	0.00116866	0.0182081	0.01721664	0.00216109
FAM25G	8	0.0399602	8.293551	8.35E-05	0.231418	0.00207579	0.0029111	0.000902	0.00166518	0.0012961	0.00095715	0.00239954
CRMP1	8	0.0399885	7.50297	4.23E-05	0.001566	0.03318979	0.0021331	0.0006059	0.01127795	0.0023574	0.00298205	0.00071677
SP100	8	0.0400519	12.19388	0.000464	0.002285	0.00162486	0.0029904	0.0005853	0.0004455	0.0008138	0.00097731	0.00120708
STK19	8	0.0402062	17.04383	0.005236	0.09262	0.00088688	0.0005726	0.0004269	0.00025009	0.000469	0.00266887	0.00066673
TMEM40	8	0.0402101	11.68388	0.001936	0.000623	0.00482463	0.0027975	0.0011237	0.00065087	0.0018507	0.00139331	0.00049775
CD101	8	0.0402199	9.458283	0.00039	0.017667	0.00094482	0.0012917	0.0010495	0.00179861	0.000972	0.00644643	0.00086318
NSL1	8	0.0402712	6.781842	0	0.002848	0.00995244	0.0060731	0.0050445	0.00262179	0.0054093	0.0014921	0.00046849
EMP1	8	0.0403146	12.35458	0.000362	0.001203	0.00231272	0.0011345	0.0005259	0.00087812	0.0009283	0.0006559	0.00073211
OR8B8	8	0.0403497	12.47118	0.001425	0.000925	0.00099979	0.0037751	0.0006152	0.00083408	0.0009257	0.00455708	0.00082025
UBE3A	8	0.0403799	7.470086	0.000117	0.004192	0.00071042	0.000891	0.0010564	0.00119821	0.0026586	0.00074026	0.00097487
PPP1R13B	8	0.040474	16.69219	0.005233	0.002313	0.00085274	0.0008813	0.0004359	0.00032465	0.0009873	0.00033652	0.000507
MYO1E	8	0.0405226	7.374292	1.07E-05	0.001445	0.00472359	0.0056377	0.0007256	0.00170563	0.00299	0.00527828	0.00194023
USP16	8	0.0405742	8.281737	0.000595	0.004745	0.00259391	0.0030376	0.0011406	0.00056221	0.0015304	0.00268418	0.0007135
NEURL3	8	0.0406192	9.440128	0.001737	0.002294	0.00495065	0.0018898	0.0017013	0.00138702	0.0009529	0.00084338	0.00085575
WDFY1	8	0.0406739	4.888711	0	0.002511	0.00181777	0.0026348	0.0004495	0.00092899	0.0429425	0.01509708	0.00054699
FAM25C	8	0.0407151	8.362859	8.79E-05	0.032753	0.0020276	0.003006	0.0009018	0.00163095	0.0012826	0.00096273	0.00241265
TAPT1	8	0.0407375	9.864638	0.002342	0.002012	0.0008114	0.0004548	0.0007018	0.00035586	0.0005316	0.00790171	0.00040811
PDS5B	8	0.0408059	7.472322	0.000223	0.001835	0.01156549	0.0011775	0.0005445	0.00180766	0.0021158	0.00150774	0.0004188
ZCCHC7	8	0.0408332	6.743428	0	0.007455	0.00189145	0.2102797	0.0006869	0.00141664	0.0019387	0.00117154	0.0013064
RSL24D1	8	0.0408359	13.28792	0.000321	0.003538	0.00124722	0.0023845	0.0002623	0.00041979	0.0010723	0.0008846	0.00041429
GIMAP4	8	0.0408488	14.17156	0.00608	0.00082	0.00064863	0.0021363	0.0002505	0.00034965	0.0003196	0.00058527	0.00193426
ZNF7	8	0.0408512	8.417209	0.001245	0.001919	0.00097011	0.0010735	0.0016031	0.00096885	0.018541	0.00203251	0.00037798
PTH1R	8	0.0408881	5.499142	0	0.005821	0.00315793	0.0019016	0.0026671	0.00054144	0.001512	0.00623333	0.00156434
SETD3	8	0.0409354	11.89963	0.000497	0.003272	0.00140469	0.0057576	0.0004833	0.00058925	0.0026696	0.00076578	0.00049962
MOB4	8	0.0409926	10.17863	0.006121	0.004405	0.00058235	0.0743081	0.0015129	0.00029765	0.0005335	0.00053121	0.00581069

Table S5

CD207	8	0.0410934	12.31686	0.002411	0.000774	0.00068485	0.0048675	0.0004021	0.00082429	0.0011776	0.00048342	0.00471479
FRMD8	8	0.0410954	9.023422	0.000962	0.019952	0.00079224	0.0070651	0.001725	0.00089715	0.0010186	0.01836119	0.00090457
ADAM19	8	0.0411083	9.553573	0.003776	0.001099	0.00052704	0.0003916	0.0014385	0.0001979	0.0025988	0.00055342	0.00237467
GPR150	8	0.0411117	7.124249	1.29E-05	0.00841	0.01334692	0.0024328	0.0011615	0.00151228	0.0028971	0.00389159	0.00099627
GJC1	8	0.0411233	9.171215	0.000387	0.00126	0.00090091	0.0012893	0.0011028	0.00107016	0.0095427	0.00411863	0.0023148
SLITRK5	8	0.0411361	13.76121	0.000138	0.002405	0.00334079	0.002809	0.0004085	0.00054152	0.0007153	0.00093104	0.00047368
PRAMEF17	8	0.0411496	8.892469	0.005303	0.001619	0.00040745	0.0014324	0.0004087	0.00227277	0.0013378	0.0011618	0.000604
UBA6	8	0.0411518	12.38073	0.003459	0.001245	0.00121596	0.0005384	0.0013965	0.0005613	0.000984	0.01613283	0.00036912
KRTAP6-3	8	0.0412018	11.60574	0.001925	0.003612	0.00324904	0.0009197	0.0005631	0.00043594	0.00095	0.00208791	0.00092143
LRRC66	8	0.0412801	7.276604	4.27E-05	0.011246	0.0018384	0.0028252	0.0015508	0.00177033	0.0023962	0.00213062	0.00090235
LAMP5	8	0.0412864	6.013397	0	0.001767	0.0010425	0.0021766	0.0017197	0.00203067	0.0034294	0.0021359	0.00043775
NEBL	8	0.0413119	10.18251	0.000204	0.000848	0.00044019	0.0012159	0.0022675	0.00161637	0.0016656	0.00191914	0.00200023
ACADSB	8	0.0413134	8.298711	0.000233	0.001161	0.0014797	0.0027396	0.0005289	0.00146436	0.0013382	0.00654696	0.00424649
SAV1	8	0.0413544	12.28196	0.002512	0.000618	0.00084264	0.0049304	0.000616	0.00218773	0.0013136	0.00079929	0.00054606
ARHGAP9	8	0.0413692	7.303707	6.17E-05	0.014377	0.00861172	0.001461	0.0012559	0.00078445	0.0072162	0.00242028	0.00373847
CDH2	8	0.0414046	8.242586	3.74E-05	0.005523	0.00225336	0.0009799	0.0005172	0.00028555	0.0017499	0.00147678	0.00467548
GIGYF1	8	0.0414798	14.44295	0.010545	0.000647	0.00034633	0.0052296	0.0002783	0.00026531	0.008208	0.00054115	0.00136597
CDH6	8	0.0415541	12.66051	0.000177	0.001231	0.00067106	0.0022945	0.0005064	0.0004946	0.0021632	0.01458204	0.00061994
SOX7	8	0.041569	9.442119	0.00435	0.000451	0.00028032	0.0021412	0.0018089	0.00122019	0.0006563	0.00885348	0.00031758
SLC6A15	8	0.0415825	11.25865	0.000695	0.000391	0.00519975	0.0008832	0.0003532	0.00263098	0.001314	0.0006949	0.00029245
OR2M5	8	0.0416402	11.04193	0.002602	0.005244	0.00096871	0.0277253	0.0005365	0.00035418	0.0017142	0.00206169	0.00056345
PRG3	8	0.0416636	7.602473	0.00014	0.00659	0.00216768	0.0025195	0.0010482	0.00338249	0.0018945	0.00137357	0.00085805
FLNB	8	0.0417328	11.99054	0.00549	0.000721	0.00045394	0.0066042	0.0005085	0.00031583	0.0003573	0.0013334	0.00017466
VASH2	8	0.0418008	9.137253	0.000253	0.002098	0.00709216	0.0010342	0.0006747	0.00111137	0.0019254	0.0056138	0.00113693
HIST1H1E	8	0.04186	8.981091	0.000242	0.001003	0.03463606	0.0031462	0.0008452	0.00183351	0.0014257	0.00183614	0.00099927
SPRR2D	8	0.0419052	14.40846	0.009231	0.003033	0.00070464	0.0019992	0.0006887	0.00023583	0.0004336	0.00027555	0.00032357
CUL4A	8	0.0419886	7.20362	3.99E-05	0.001152	0.00199861	0.0225922	0.0031981	0.00072109	0.0036424	0.01978339	0.00272269
KAZN	8	0.0419958	6.993547	0	0.00935	0.00211684	0.0237494	0.001002	0.00375248	0.0056419	0.00163965	0.00121891
TRAPPC1	8	0.042014	11.55326	0.0039	0.002791	0.00090014	0.0011701	0.0009595	0.00159465	0.0014388	0.00039129	0.00128782
HSPE1-MOB	8	0.0420444	10.01475	0.005298	0.006193	0.00058955	0.0563587	0.0016223	0.00030562	0.0005556	0.00052153	0.00385399

Table S5

RNF121	8	0.0420872	7.71001	0.002282	0.006207	0.0007348	0.0032526	0.0036291	0.00195371	0.0078756	0.00147831	0.00039745
PRR16	8	0.0420998	17.04528	0.000424	0.000506	0.00053124	0.0047106	0.0003685	0.00056487	0.0009951	0.00125695	0.00084812
STX10	8	0.0421025	5.961729	0	0.002617	0.01924362	0.0023466	0.0014615	0.0014083	0.0035489	0.00731004	0.0010709
SYTL3	8	0.0421074	16.08295	0.00548	0.000666	0.00059984	0.0004065	0.0009913	0.00043519	0.0015062	0.00060741	0.00319286
ATF7IP	8	0.0421454	10.44208	0.000336	0.005388	0.00084266	0.0009407	0.0010048	0.00056141	0.0096097	0.00669697	0.00096657
ANGPT1	8	0.0422014	16.66321	0.000546	0.001036	0.00059816	0.0005001	0.0004285	0.00055702	0.0195832	0.00115793	0.00138921
PFN3	8	0.0422354	12.96159	0.005203	0.001677	0.00057424	0.006798	0.0003378	0.0008885	0.0005433	0.01796486	0.00042779
AMY1B	8	0.0422945	13.01633	0.006048	0.012498	0.00069247	0.0072828	0.0006488	0.00069081	0.0006426	0.00216669	0.00051077
AMY1C	8	0.0422945	13.01633	0.006048	0.012498	0.00069247	0.0072828	0.0006488	0.00069081	0.0006426	0.00216669	0.00051077
BPIFC	8	0.0423124	10.79804	0.001757	0.003198	0.00036279	0.0008904	0.0004428	0.00088452	0.003977	0.04406229	0.00033034
C8orf76	8	0.0423216	6.108371	0	0.001414	0.00493731	0.0021592	0.0015389	0.00141074	0.004409	0.00383768	0.00144322
ZNF510	8	0.0425404	16.19885	0.012161	0.12899	0.00163365	0.000486	0.0007985	0.00041865	0.0010195	0.00073909	0.00049083
KHDRBS3	8	0.0425728	5.5973	0	0.023017	0.00139013	0.0027378	0.0012716	0.06634979	0.0190359	0.0057568	0.00071097
LRRC34	8	0.0425941	14.99197	0.025786	0.000288	0.00039883	0.0009902	0.0008688	0.0055799	0.000521	0.0005011	0.00050451
SLC25A26	8	0.0427133	10.9808	0.002604	0.005418	0.0008554	0.0006047	0.0013102	0.0005553	0.0006373	0.00047236	0.0012693
ZNF445	8	0.0427209	6.974851	0	0.007827	0.00393037	0.020713	0.000809	0.00132228	0.0068849	0.00143555	0.0116143
ZNF221	8	0.042733	12.37012	0.001427	0.001209	0.04624726	0.0008754	0.0006118	0.00113253	0.0008566	0.00257248	0.00066896
IGSF9B	8	0.0427697	18.57099	0.003328	0.001812	0.00076448	0.002991	0.0004825	0.00044793	0.000391	0.00082844	0.00083833
CRTAC1	8	0.0427711	11.8251	0.000998	0.000892	0.00052348	0.0025343	0.0005812	0.00129916	0.0027564	0.00092886	0.00066876
BIVM-ERCC	8	0.0428803	8.056316	6.62E-05	0.001964	0.00287126	0.0071525	0.0008207	0.00140691	0.0037779	0.00152028	0.00117077
ZNF566	8	0.0429043	8.910298	0.000281	0.004006	0.00523612	0.0020249	0.0007584	0.00092142	0.0010165	0.00413989	0.00148243
GRIK5	8	0.0429163	6.733369	0	0.002359	0.00709782	0.0014932	0.0010202	0.00166127	0.0045048	0.00185832	0.00890124
TMTC3	8	0.0429686	19.58471	0.007709	0.002897	0.00074628	0.0004157	0.0002884	0.0004819	0.0327064	0.00079615	0.0004861
MLLT10	8	0.0429899	8.008048	0.000745	0.00239	0.00100413	0.0068893	0.0007602	0.00254264	0.0018819	0.00171432	0.0004157
POLL	8	0.0430146	7.911988	0.000199	0.067256	0.00109145	0.0047457	0.0011181	0.00139893	0.0036332	0.01052164	0.00088337
GMEB2	8	0.0430397	8.15637	0.001146	0.016749	0.00261427	0.0007063	0.0012009	0.00133313	0.0012033	0.00105391	0.00039219
WDR34	8	0.0430631	5.696383	0	0.002304	0.00186444	0.0057365	0.0010875	0.0012852	0.0190688	0.01411947	0.0019982
IL18RAP	8	0.0430979	13.12986	0.006281	0.00042	0.00049201	0.0005629	0.000506	0.00033909	0.0008468	0.00127372	0.00083746
TRMT10B	8	0.0431029	13.08115	0.002147	0.009374	0.00388923	0.0022324	0.0003539	0.00043952	0.0005969	0.00113068	0.00126284
IQCF6	8	0.0431303	6.711858	0	0.003208	0.00235675	0.005442	0.0019235	0.00078352	0.0059995	0.003725	0.00316397

PDLIM7	8	0.0431366	10.78325	0.00146	0.002168	0.0018939	0.1593323	0.0008394	0.0014027	0.0008366	0.00083502	0.00123427
RAD54B	8	0.0431603	13.23461	0.002454	0.008667	0.00112478	0.0013792	0.0006065	0.00048407	0.0025978	0.00038766	0.00120967
SPRR2B	8	0.0432182	13.90283	0.008426	0.001858	0.00060438	0.0017879	0.0007672	0.00024085	0.000515	0.00028359	0.00032597
RIN1	8	0.0432297	8.718734	0.000499	0.004394	0.00090806	0.0012566	0.0012096	0.00137361	0.0249276	0.00122821	0.00251792
CA8	8	0.0432576	11.74731	0.001624	0.004912	0.00039589	0.0029178	0.0003109	0.00043746	0.0016755	0.00028893	0.0061724
MEF2D	8	0.0432659	8.552079	0.000159	0.003705	0.0023488	0.0028383	0.0010876	0.0013031	0.074801	0.00090906	0.00109723
PAH	8	0.0432704	6.88937	0	0.001263	0.01688903	0.0017308	0.0006865	0.00275266	0.0016426	0.00758824	0.00126744
COLEC11	8	0.0432841	7.142978	1.74E-05	0.002504	0.00183137	0.0017727	0.000641	0.00183229	0.003553	0.00732966	0.02020913
CHRM1	8	0.0433177	9.395044	0.001269	0.001007	0.07220327	0.0011824	0.0004415	0.0011712	0.0011293	0.00133526	0.01788302
SNURF	8	0.0433694	8.312582	0.000696	0.006111	0.00113673	0.004261	0.0049038	0.00057754	0.0023814	0.00061891	0.00055711
WASF1	8	0.0433935	16.99937	0.014086	0.007157	0.0005126	0.0005133	0.0003035	0.00061549	0.0004816	0.00091127	0.00119159
CEACAM19	8	0.0433939	7.027865	1.29E-05	0.018173	0.00175113	0.0045853	0.0099622	0.0021667	0.0049276	0.00127874	0.00054883
ERBB2	8	0.0434089	10.45276	0.007438	0.000665	0.00095334	0.0015181	0.0025452	0.00039518	0.0022089	0.00052757	0.00026842
C7orf31	8	0.0434257	8.907711	0.000434	0.002047	0.00928594	0.0020038	0.0005155	0.00075636	0.0014501	0.00061758	0.00322097
INHBA	8	0.0434607	10.3433	0.00039	0.003558	0.00048737	0.0007062	0.0003802	0.00075558	0.0680614	0.00110301	0.003571
SPRR2F	8	0.0435446	13.56535	0.005441	0.00278	0.00070651	0.0026788	0.0010245	0.00034864	0.0005678	0.00036734	0.00041169
CILP2	8	0.0435611	5.586099	0	0.01594	0.00219186	0.0030911	0.0012296	0.00153563	0.0029987	0.00142689	0.00232828
GYPA	8	0.043678	10.52616	0.001167	0.002255	0.00048589	0.0027631	0.0004688	0.00039728	0.0023823	0.00093328	0.00826769
CDKL4	8	0.0437161	4.412616	0	0.450687	0.01029985	0.0080638	0.0008357	0.00216689	0.0194057	0.00180879	0.00059072
ZNF804A	8	0.0437546	9.396119	0.000185	0.023856	0.00049459	0.0018917	0.0027976	0.0014542	0.000651	0.00118296	0.00066904
CCDC112	8	0.043839	9.883834	0.001367	0.001543	0.00065581	0.0007419	0.0010898	0.00057078	0.0007572	0.00089309	0.00083207
OR5J2	8	0.0438545	6.071035	0	0.002514	0.09647141	0.0046362	0.0010403	0.00446565	0.0025027	0.00138482	0.00066925
OR2C3	8	0.0438761	8.556863	0.000256	0.002685	0.00084452	0.0012479	0.0009767	0.00274933	0.0015849	0.00108947	0.00846782
ZFYVE21	8	0.04392	16.18364	0.007768	0.001782	0.00095048	0.0010154	0.0004528	0.00029678	0.0010704	0.00038045	0.00056754
CCDC117	8	0.0439622	13.10036	0.012291	0.000717	0.00156386	0.0008703	0.0003471	0.00032843	0.0008603	0.00032722	0.00448101
C5orf52	8	0.0440052	13.11332	0.007176	0.091206	0.00077582	0.0011148	0.0008248	0.00030392	0.0010334	0.00025831	0.00075501
MSI2	8	0.0440525	7.451106	9.31E-05	0.001087	0.00122598	0.0010801	0.0029772	0.0013487	0.0017475	0.00277272	0.00031653
GBX1	8	0.0440837	7.922437	0.00025	0.001203	0.00101163	0.0154029	0.0050785	0.00249196	0.0023174	0.00095835	0.00098616
CRYGN	8	0.044156	10.92376	0.000553	0.000747	0.003751	0.0038175	0.0009677	0.0007267	0.0025733	0.00143214	0.00150673
LILRB5	8	0.0441932	7.107424	1.25E-05	0.00204	0.00198472	0.2552727	0.0021846	0.00139331	0.0114978	0.00353674	0.00084393

Table S5

TMEM109	8	0.0442148	8.855518	0.000367	0.003868	0.00072619	0.0077869	0.0010984	0.0009933	0.2367197	0.00452034	0.00074319
OR2AT4	8	0.0442277	11.67222	0.004899	0.006987	0.00069125	0.0008755	0.0013732	0.00032298	0.0005664	0.00036617	0.00588507
SLC34A1	8	0.0442975	12.88864	0.004197	0.002855	0.00066376	0.0052717	0.0003621	0.00091715	0.0005495	0.00405285	0.00041372
COTL1	8	0.0443495	8.033191	3.89E-05	0.00101	0.00201866	0.0020986	0.0014404	0.00223189	0.0044676	0.00409521	0.00096468
PPM1N	8	0.0443507	9.700117	0.003091	0.00169	0.00045398	0.0021871	0.0033085	0.0005317	0.0007929	0.00090408	0.00074265
PIK3IP1	8	0.0443579	8.211574	0.00106	0.004301	0.00053903	0.0018299	0.0012931	0.00410432	0.0042975	0.00247549	0.00128976
PYROXD2	8	0.0443878	8.362898	8.41E-05	0.002681	0.00211629	0.0016128	0.0009761	0.00119139	0.0012016	0.00131842	0.04647386
ZNF660	8	0.0444345	10.9787	0.00445	0.013105	0.00380427	0.0011222	0.0002831	0.0004514	0.0036561	0.00051805	0.00102712
SLC36A2	8	0.0444499	17.28807	0.005382	0.002987	0.0003558	0.0015965	0.0004126	0.00032736	0.000326	0.00077165	0.00024684
POU5F1	8	0.0444818	14.88481	0.000517	0.001927	0.00032239	0.0007602	0.0004464	0.00040515	0.000605	0.00053074	0.00154185
FADS2	8	0.0444839	12.56047	0.002107	0.001596	0.00045738	0.0019438	0.0004235	0.00070065	0.0011673	0.00132276	0.00105902
ANKAR	8	0.044492	6.204751	0	0.191718	0.01094111	0.0021984	0.0015373	0.00191518	0.0026568	0.00121176	0.00143184
ABCA5	8	0.0445089	16.21165	0.007214	0.000883	0.04247544	0.0004315	0.00072	0.00037703	0.0006428	0.00033399	0.0011609
RGS9BP	8	0.0445187	7.203766	4.7E-05	0.018674	0.00179773	0.0035375	0.0010036	0.00075352	0.005223	0.00176413	0.00979112
AP3D1	8	0.0445283	10.78374	0.002341	0.000739	0.00080161	0.0013069	0.0009516	0.00084775	0.0011284	0.00080317	0.00160591
DCLK3	8	0.0445313	14.01588	0.002025	0.000954	0.00055989	0.0023917	0.0003149	0.00056288	0.0012173	0.00079158	0.00033674
ANXA8	8	0.0445792	12.07619	0.003732	0.006693	0.00046373	0.0023223	0.00049	0.00106571	0.0006612	0.00097068	0.00190337
ANXA8L1	8	0.0445792	12.07619	0.003732	0.006693	0.00046373	0.0023223	0.00049	0.00106571	0.0006612	0.00097068	0.00190337
PTGES3L	8	0.0445932	5.523809	0	0.008092	0.00445158	0.0048608	0.0021564	0.00078509	0.0100337	0.00244705	0.00588952
ZKSCAN3	8	0.0445956	23.82233	0.018186	0.001143	0.00068121	0.000862	0.0003225	0.00024897	0.0002411	0.00060206	0.00044651
TM4SF19-TC	8	0.0446126	17.25114	0.009868	0.000477	0.00179186	0.0032589	0.0003475	0.00054115	0.0027408	0.00052424	0.00083048
EPHA1	8	0.0446329	7.861281	6.54E-05	0.050382	0.00141431	0.0132919	0.0011935	0.00105527	0.0023015	0.00130985	0.0021624
CNTROB	8	0.0446444	12.54622	0.004629	0.003681	0.0007699	0.0008032	0.000944	0.00138869	0.0012713	0.00034568	0.00121225
TMEM98	8	0.0446707	11.57068	0.002428	0.02394	0.00047966	0.0007537	0.0008321	0.00219778	0.0009045	0.0008791	0.00297219
FRRS1L	8	0.0446971	11.83197	0.002364	0.000848	0.00084387	0.0010732	0.0010772	0.00116521	0.0008114	0.00093358	0.00374983
ARGFX	8	0.0447244	7.059882	1.72E-05	0.038259	0.00087674	0.0135606	0.003235	0.0033469	0.0014379	0.00266266	0.00088782
DBNL	8	0.0447376	8.167472	0.000794	0.001388	0.00180529	0.0012496	0.0004496	0.00163044	0.0009592	0.00437546	0.00308498
HLA-DPA1	8	0.0447472	9.988471	0.003273	0.001607	0.00044082	0.0003094	0.0003364	0.0002661	0.0005585	0.00027866	0.00023441
FOXJ2	8	0.0447733	6.469302	0	0.012725	0.00266893	0.002934	0.0012382	0.00226426	0.0083222	0.00214384	0.00105579
GTF2H1	8	0.0448135	14.46045	0.006299	0.002068	0.00476035	0.0007321	0.0008139	0.00031669	0.0004286	0.00034237	0.00157256

Table S5

STAP1	8	0.0448147	9.7246	0.001459	0.001442	0.00332781	0.001102	0.0133925	0.00115497	0.0007408	0.0020745	0.00057897
SAA1	8	0.0448729	11.02262	0.002336	0.001078	0.0055924	0.0017763	0.0098348	0.00061333	0.0007399	0.00059101	0.00131382
KRTAP6-1	8	0.0448874	12.57418	0.003166	0.003426	0.00252804	0.0008079	0.0005401	0.00041794	0.0009433	0.00153982	0.00085534
PIGV	8	0.0449013	9.10606	0.005425	0.001054	0.00091689	0.0079376	0.0008943	0.00286734	0.000675	0.01013079	0.00047176
IL17B	8	0.0449052	6.927339	0	0.001394	0.00106413	0.0052082	0.0022211	0.00111988	0.001463	0.00321469	0.00064
CEP57	8	0.0449446	8.935674	0.001128	0.000872	0.06362524	0.0010764	0.000392	0.00317802	0.0039267	0.00095617	0.00260397
CD79B	8	0.0449557	5.491293	0	0.00436	0.00190478	0.0052822	0.0006942	0.00341426	0.0245335	0.0026656	0.00852412
CHD6	8	0.0450025	19.62677	0.007061	0.000742	0.00142277	0.0002943	0.0009358	0.00031977	0.0003145	0.00048855	0.00043182
B4GALNT4	8	0.0450296	8.382735	0.000165	0.001551	0.001151	0.0020644	0.0008159	0.00150626	0.001389	0.01577407	0.0041462
WDR6	8	0.0450399	15.42702	0.023933	0.002706	0.0004637	0.0005044	0.0002184	0.00046664	0.03347	0.00118927	0.00028717
TAS2R14	8	0.0450555	6.213756	0	0.052127	0.00900621	0.0023135	0.0005944	0.00177204	0.0023452	0.00441198	0.00567973
EPHB2	8	0.0450781	9.310291	0.000173	0.001405	0.0056724	0.0036766	0.0014312	0.00079395	0.0010382	0.00173174	0.00093992
DRAM2	8	0.045093	9.033968	0.000223	0.004354	0.00107285	0.0059803	0.0012321	0.00103899	0.0025405	0.0010157	0.00125603
PLA2G4E	8	0.0450998	6.836976	0	0.010311	0.00778318	0.0056318	0.015454	0.0008303	0.0020022	0.00127549	0.00116915
FOXO1	8	0.0451163	16.97381	0.001201	0.000456	0.00075206	0.0008452	0.0008507	0.00051267	0.0015361	0.00116636	0.00164599
INHBC	8	0.0451744	6.555933	0	0.137405	0.01646348	0.0017367	0.0011649	0.00100901	0.0952697	0.00235395	0.03458098
PDZRN4	8	0.045245	7.672326	0.000171	0.068782	0.00055488	0.0013391	0.001385	0.00787705	0.0012005	0.00069336	0.00021994
PAQR7	8	0.0452519	7.861728	0.000179	0.001664	0.00113798	0.0012771	0.000828	0.00252118	0.0029071	0.00161998	0.03970381
XRCC3	8	0.0452573	15.46443	0.006614	0.001779	0.00104127	0.0011636	0.0005031	0.00033159	0.0012996	0.00042985	0.00062034
ZBTB25	8	0.0453139	12.42915	0.004452	0.000904	0.00219236	0.0007624	0.0022513	0.00063762	0.0010637	0.00082201	0.00344339
CPB2	8	0.0453951	8.967141	0.001706	0.00314	0.00074731	0.0020677	0.0002092	0.00031804	0.0006214	0.00092371	0.00196594
C9orf85	8	0.0454254	13.85544	0.003761	0.002175	0.00075904	0.0006864	0.0011759	0.00068321	0.000682	0.0016947	0.00272007
HPS5	8	0.0454265	12.49362	0.002671	0.001143	0.06136735	0.0014503	0.0018198	0.00052047	0.0006246	0.00064822	0.00127802
CCL4	8	0.0454595	6.103284	0	0.006958	0.00131706	0.0125921	0.0007085	0.00484753	0.0071192	0.09157813	0.00251984
NPY2R	8	0.0454602	8.931495	0.001184	0.000682	0.00157299	0.0006001	0.0030687	0.00114387	0.001931	0.00041503	0.00024119
GPR156	8	0.0454605	10.90593	0.000496	0.005752	0.00130893	0.0019338	0.0009409	0.00083399	0.0018253	0.00062985	0.00173709
TTC22	8	0.0455073	7.699639	0.000288	0.001208	0.00122687	0.0014129	0.0006956	0.00084781	0.0030548	0.00107322	0.00110976
USP8	8	0.0455251	15.20137	0.007743	0.005373	0.00193439	0.0006676	0.0014099	0.00048339	0.0004793	0.00045752	0.0007053
PHAX	8	0.0455768	6.293604	0	0.006708	0.00157043	0.0024733	0.0022364	0.00175892	0.0040175	0.02147126	0.00099032
TRIM43	8	0.0455966	14.18872	0.016267	0.001605	0.00610596	0.0014542	0.0002935	0.00035102	0.0005287	0.00776083	0.00077756

Table S5

ASNSD1	8	0.0456938	9.372582	0.000322	0.003192	0.25248388	0.0011472	0.0009002	0.00133714	0.0056425	0.00092312	0.00119647
NCAPH	8	0.0457053	5.514987	0	0.002255	0.00420832	0.0075883	0.0105437	0.00256527	0.0081267	0.00125176	0.00050008
PTGES3L-AA	8	0.0457392	5.653016	0	0.007367	0.00411596	0.0039627	0.0022397	0.00079859	0.0211978	0.00228446	0.0059969
P4HTM	8	0.0457566	15.97054	0.022867	0.002489	0.0004678	0.0005149	0.0002282	0.00046946	0.0098879	0.0012207	0.00032127
COG6	8	0.0457739	7.172948	1.81E-06	0.005297	0.00630112	0.0076905	0.0008137	0.00135234	0.0103213	0.00374349	0.00141266
AMIGO1	8	0.0457936	9.608643	0.003568	0.002657	0.00029264	0.0007603	0.0006211	0.00188624	0.0010603	0.00127956	0.00110837
ABCD3	8	0.0458738	7.83145	8.25E-05	0.003412	0.0011611	0.0011814	0.0010408	0.0035628	0.0135205	0.06575821	0.00104489
COPG2	8	0.0459425	7.318815	9.93E-05	0.004485	0.0075516	0.0013991	0.0006201	0.00107192	0.0024948	0.00180016	0.00239277
ZNF197	8	0.0459701	10.76756	0.002623	0.006018	0.00326668	0.001136	0.000338	0.00055961	0.0087758	0.00058056	0.00112037
MPST	8	0.0460116	8.35434	0.000144	0.014725	0.02218475	0.0010759	0.0019171	0.0007985	0.0017535	0.00309138	0.00104779
SMPD1	8	0.0460364	9.958098	0.000685	0.000901	0.00132354	0.0010746	0.002112	0.00058301	0.0037117	0.00893181	0.00138218
EPHA6	8	0.0460423	5.966716	0	0.001583	0.00576829	0.013761	0.0009141	0.00127281	0.0024193	0.00268293	0.00044192
TM4SF19	8	0.0460618	17.69233	0.010864	0.000475	0.00168569	0.0060756	0.0003426	0.00051327	0.0024102	0.00051686	0.00080386
TMEM44	8	0.0461021	8.876188	0.000364	0.000967	0.00090028	0.0075106	0.0007089	0.01411718	0.0011077	0.02206377	0.00086209
MRPS24	8	0.0461615	15.83874	0.012393	0.000596	0.01281941	0.0008947	0.0008189	0.00057498	0.0005796	0.00042014	0.00133552
ZNF260	8	0.0461616	11.78509	0.001764	0.003847	0.00180542	0.0010545	0.0006284	0.00087251	0.0007414	0.00181151	0.00373952
TARSL2	8	0.0461646	8.711474	0.000275	0.001712	0.00114106	0.0017001	0.0027287	0.00126794	0.0410566	0.00085326	0.00146609
TWF1	8	0.0461823	9.946905	0.001205	0.001764	0.00104203	0.0288549	0.0007069	0.00066804	0.0164414	0.00260837	0.00059893
KRTAP22-1	8	0.0461854	12.48464	0.003218	0.003426	0.00261488	0.0008022	0.000555	0.00041954	0.0009615	0.00156274	0.00092347
HIST1H2AI	8	0.0462152	19.52033	0.068239	0.002398	0.00087697	0.002652	0.0004989	0.00045915	0.0003969	0.00108182	0.00059204
REC8	8	0.0462451	6.494332	0	0.005511	0.00216228	0.0208363	0.0026032	0.00066594	0.0057767	0.0011387	0.00335913
NAAA	8	0.0462504	9.583103	0.00146	0.007975	0.00218607	0.0117812	0.0010721	0.00241593	0.0007941	0.00071965	0.00043771
C9orf57	8	0.046265	18.89414	0.009855	0.001609	0.00057605	0.0003796	0.000861	0.00052148	0.0004869	0.00086226	0.00089786
SLC26A6	8	0.0463532	7.612218	0.002272	0.000647	0.00064047	0.140655	0.0006591	0.00059106	0.0017232	0.00360818	0.00060527
ZNF684	8	0.0463713	14.87926	0.004034	0.011765	0.0005026	0.0004884	0.0010828	0.0004931	0.0025132	0.00079216	0.0005157
MPP3	8	0.0463763	7.899506	0.000129	0.006029	0.00333492	0.0018994	0.0014251	0.00124405	0.0015847	0.00187736	0.00100353
SNCB	8	0.0464189	7.027364	1.72E-06	0.006748	0.01113498	0.0062096	0.0008981	0.00137891	0.0027873	0.0024876	0.00242794
PURG	8	0.0464352	10.26385	0.0033	0.001097	0.00421303	0.0006457	0.0012241	0.00080944	0.0006482	0.00076709	0.00045278
TNIP2	8	0.0464812	5.307949	0	0.073701	0.00265034	0.0029827	0.0017012	0.0004426	0.0034534	0.00141447	0.00093111
DOCK4	8	0.0465802	11.29717	0.000176	0.016116	0.04127022	0.0025524	0.0004989	0.00053017	0.0013746	0.00099541	0.00075553

Table S5

CYP4X1	8	0.0465931	10.2616	0.005479	0.000923	0.00118173	0.0012398	0.0011887	0.0009288	0.0022969	0.00028511	0.00060686
CTAGE5	8	0.0465964	6.404402	0	0.00245	0.0039102	0.0280038	0.0009749	0.00089606	0.0029687	0.01173126	0.0072848
HVCN1	8	0.0466893	14.43515	0.008349	0.002157	0.0017266	0.0011934	0.0004225	0.00044708	0.0007369	0.00075216	0.00143311
HIST1H3J	8	0.0467078	24.53586	0.050431	0.005693	0.00055585	0.0007526	0.0003103	0.00027518	0.0002469	0.00054676	0.000306
CCDC157	8	0.0467572	7.541827	5.26E-05	0.060758	0.03655702	0.0048697	0.000829	0.00113349	0.0016377	0.00273615	0.00205408
LILRA4	8	0.046784	7.345956	7.04E-05	0.002082	0.00092081	0.0016416	0.0055281	0.00181041	0.0036387	0.00781212	0.00083936
DDX31	8	0.0468026	9.252074	0.001054	0.000768	0.00059103	0.0085714	0.0004925	0.0014353	0.0013774	0.00100487	0.00129461
SPRR1B	8	0.0468426	14.97051	0.010489	0.002872	0.00097172	0.0019856	0.0006629	0.00024644	0.0004324	0.00029364	0.00032586
SLC1A2	8	0.0468601	7.240004	9.6E-05	0.00328	0.00048673	0.005573	0.0003882	0.00145149	0.0008216	0.00096597	0.00042636
ACADL	8	0.0469658	11.4051	0.001894	0.000895	0.00274974	0.0009028	0.0016758	0.0010966	0.0033816	0.00129131	0.0008565
ITPA	8	0.0469742	6.479742	0	0.004816	0.00235626	0.0027844	0.0154459	0.00069622	0.0030607	0.00126799	0.00449947
C2orf83	8	0.0470051	4.974364	0	0.005914	0.00117506	0.0268305	0.0013608	0.0013718	0.0448142	0.00310642	0.00320422
ATP8B2	8	0.0470207	7.762427	3.54E-05	0.001396	0.00280548	0.0152106	0.0010889	0.00091153	0.0065536	0.0028117	0.00179755
CECR5	8	0.0471095	7.648983	5.85E-05	0.00149	0.01108728	0.0023763	0.002965	0.0009036	0.001366	0.00170536	0.00220599
SERINC1	8	0.0471761	8.402601	0.000452	0.001219	0.00269655	0.0025925	0.0007222	0.00867249	0.0032609	0.00077199	0.00198551
DDIT3	8	0.0472162	8.184082	0.000242	0.011136	0.00458047	0.0012712	0.0011042	0.0007063	0.01882	0.00180157	0.00188218
LRFN3	8	0.047258	5.519266	0	0.010676	0.001893	0.0149583	0.0005994	0.00132278	0.005153	0.01089845	0.02469798
PYHIN1	8	0.0472907	6.812558	0	0.002028	0.0050988	0.0041326	0.0074591	0.0010365	0.0015851	0.00254848	0.00104726
TFAM	8	0.0473586	11.49962	0.000599	0.001833	0.00107925	0.0013943	0.0007025	0.00073563	0.0028836	0.00118433	0.00089704
TTLL3	8	0.0474361	5.781701	0	0.008428	0.00140178	0.0018044	0.00296	0.00055616	0.0088427	0.00596408	0.00194769
ATP6V1H	8	0.0474483	12.22452	0.002578	0.003014	0.03121346	0.0013122	0.0005014	0.00090276	0.0008781	0.00086581	0.00059123
GATAD2A	8	0.0474705	5.057701	0	0.002661	0.00222532	0.0087641	0.001284	0.00121989	0.0188757	0.00186102	0.00322325
CYP2A7	8	0.0475178	6.291232	0	0.002723	0.00196209	0.0141921	0.000687	0.00853688	0.0018197	0.01541905	0.00325462
QRICH1	8	0.0475209	18.13389	0.027836	0.002932	0.00033496	0.0003828	0.0001637	0.0003098	0.0335774	0.0009824	0.00021548
ZNF517	8	0.0475472	10.32113	0.004166	0.001514	0.00081796	0.0007604	0.00123	0.00077379	0.0017421	0.00164872	0.00036439
GP2	8	0.0475539	6.375969	0	0.006376	0.00485559	0.0043867	0.0024298	0.00093885	0.0035274	0.0021687	0.0015171
ZCCHC9	8	0.0476141	9.37562	0.000771	0.002406	0.00111292	0.0014466	0.0004505	0.00080854	0.0023204	0.00083037	0.01216102
CYP4Z1	8	0.0476517	10.55833	0.005065	0.001056	0.0013245	0.0012823	0.0013904	0.00088848	0.0014554	0.00025792	0.00055219
TCEANC2	8	0.0476654	8.178144	0.000137	0.004629	0.00150642	0.0018697	0.0010359	0.00109565	0.0047372	0.00415525	0.00114516
KCNJ1	8	0.0477358	7.871228	0.000149	0.006712	0.00101758	0.0040223	0.0015207	0.0018919	0.0018483	0.01370216	0.00049821

Table S5

ABCG1	8	0.0478315	9.413923	0.00113	0.001422	0.0006211	0.000703	0.0032326	0.00049065	0.0015719	0.00038638	0.00057887
ADCK3	8	0.0478376	15.29164	0.00313	0.000679	0.00651133	0.0023737	0.0004683	0.00066112	0.0006988	0.00073544	0.00123347
ZBTB1	8	0.0478404	14.34534	0.007628	0.000666	0.0023941	0.0006582	0.0021683	0.00054421	0.0010451	0.00087613	0.0021324
FOXI2	8	0.047926	12.69315	0.000776	0.000655	0.00081915	0.0019456	0.0004668	0.0006478	0.0139217	0.00070364	0.47558381
B3GNT5	8	0.0480227	5.775241	0	0.002964	0.00196068	0.002792	0.0011186	0.00169382	0.0030938	0.00264241	0.00235256
GNB2	8	0.0480409	14.89867	0.010188	0.000658	0.00037595	0.0035917	0.0002982	0.00028426	0.0074036	0.00059371	0.00142284
PTRH2	8	0.0480679	8.21304	0.002841	0.061256	0.00038854	0.0027177	0.0005548	0.02607448	0.0031517	0.00110099	0.00414909
TIGD5	8	0.0480907	6.866701	0	0.00275	0.00139965	0.0044063	0.0075018	0.0013812	0.0104162	0.00113138	0.00127174
ASB10	8	0.0481091	7.993134	0.000403	0.0011	0.00111204	0.0043611	0.0112425	0.00554975	0.0022278	0.0010216	0.00061666
CTDSPL2	8	0.0481278	7.606553	0.000393	0.002052	0.0018994	0.0012	0.0011698	0.00399071	0.0227823	0.00160826	0.00153915
C1orf61	8	0.0481329	12.43492	0.001542	0.001983	0.00071845	0.0019529	0.000728	0.00078754	0.0027355	0.00068161	0.00084523
TRIM29	8	0.048143	8.620174	9.76E-05	0.003042	0.00953741	0.0015539	0.0008298	0.00371713	0.0016739	0.00081568	0.00143981
FAM24B	8	0.0481588	8.897704	0.000789	0.001489	0.04733923	0.0012902	0.0003664	0.00081938	0.0011876	0.00300924	0.00192382
PHTF2	8	0.0482699	9.094943	0.000342	0.00688	0.00122308	0.0015774	0.0011164	0.00087639	0.0012712	0.00083813	0.00584339
CLCNKB	8	0.0482826	6.436451	0	0.002184	0.00141804	0.0040182	0.0032404	0.0007824	0.0013889	0.00747985	0.00117339
HEPHL1	8	0.048316	9.260968	0.00017	0.002722	0.00077555	0.0025033	0.000733	0.00123682	0.0181532	0.00157253	0.00190409
C16orf78	8	0.0483197	6.248981	0	0.001617	0.03992164	0.0067465	0.000553	0.00164565	0.0052397	0.00110353	0.00140021
CREG1	8	0.0483294	6.781072	0	0.021624	0.00114533	0.0023268	0.0007316	0.00400712	0.004334	0.00664513	0.00104618
OCM2	8	0.0483646	6.751395	0	0.002366	0.00202028	0.0994294	0.0022928	0.00091009	0.0138142	0.00154854	0.01843304
LMCD1	8	0.0483696	11.53082	0.00055	0.00093	0.00050212	0.016216	0.0010807	0.00422979	0.0008895	0.00042572	0.00225514
TNPO2	8	0.0483717	8.453066	0.003107	0.000916	0.00218428	0.0029355	0.0005844	0.01587451	0.0013906	0.003499	0.00057367
CMTM4	8	0.0483883	11.97497	0.00435	0.000821	0.00121342	0.002185	0.0010596	0.00136673	0.0029294	0.00059087	0.00199648
C1QTNF1	8	0.0484639	6.835837	0	0.021861	0.00134663	0.0019502	0.0005479	0.00741624	0.0167258	0.00157486	0.00826775
MMP9	8	0.0484668	6.238739	0	0.003303	0.0777652	0.002812	0.0025689	0.00131751	0.0041524	0.03118474	0.00095036
HSD17B2	8	0.0484896	7.992654	9.26E-05	0.001931	0.00104779	0.0022815	0.0024372	0.00584177	0.0010182	0.00165563	0.00115757
NUP210L	8	0.0485075	15.43721	0.019284	0.000528	0.00053683	0.0007882	0.0045465	0.00033507	0.000264	0.00068018	0.0013178
FXYD6	8	0.0485302	6.212399	0	0.004182	0.00211194	0.0140811	0.00124	0.00231216	0.0043454	0.0037776	0.00107772
GSPT1	8	0.0485805	4.410217	0	0.001723	0.00352023	0.0079432	0.0012055	0.00255229	0.0252817	0.02074276	0.00124063
DHPS	8	0.0486066	9.361759	0.005305	0.000797	0.00145762	0.0020004	0.0004707	0.00503215	0.0009112	0.00279196	0.00052379
MAPRE2	8	0.0486069	17.58279	0.00476	0.00535	0.00106	0.0003572	0.0008699	0.0005723	0.0005936	0.00056548	0.00034597

Table S5

SPRR2A	8	0.0486144	14.57111	0.009926	0.001836	0.00077487	0.0016712	0.0007074	0.00023785	0.0004918	0.00027542	0.00032393
ZIC1	8	0.0486424	11.89583	0.00045	0.012918	0.00285657	0.0008861	0.0007503	0.0005118	0.0010974	0.00486129	0.00073192
VWA3A	8	0.0486482	14.71012	0.009686	0.00061	0.00139992	0.001416	0.0003831	0.000212	0.0011079	0.00052448	0.00067914
CCSAP	8	0.0486722	12.90196	0.002868	0.017875	0.00078518	0.0007125	0.0009753	0.00066699	0.0009373	0.00134298	0.00457435
PTS	8	0.0487422	11.4558	0.00031	0.001228	0.00258582	0.0023592	0.0011112	0.00077276	0.0008823	0.00099728	0.00050014
BCL11A	8	0.0488393	9.826033	0.000298	0.005737	0.00039338	0.0008428	0.0009604	0.00368895	0.0017299	0.00087834	0.00033078
CFB	8	0.0488503	19.65943	0.008566	0.007351	0.00103419	0.0006224	0.0003937	0.00026382	0.0003697	0.00161161	0.00078007
COL22A1	8	0.0488642	9.662309	0.000518	0.000764	0.00045009	0.0009018	0.0007186	0.00066891	0.0005822	0.00123477	0.00223057
BOLL	8	0.0488684	14.20267	0.004368	0.001088	0.000821	0.0150396	0.000737	0.00027271	0.0003939	0.00059575	0.00243682
CYP4A22	8	0.0489119	10.88024	0.0048	0.000745	0.00255196	0.0009674	0.0012798	0.00111511	0.0013794	0.00032497	0.00072488
SMR3A	8	0.0489404	7.763525	0.000109	0.001561	0.00568267	0.0085849	0.0010471	0.0010981	0.0013536	0.00186548	0.34025615
BAG1	8	0.0489554	7.008876	3.6E-06	0.004589	0.00158937	0.002111	0.0012797	0.00075058	0.0108899	0.0024038	0.00187805
BFAR	8	0.0490193	8.516239	0.001943	0.001096	0.00150398	0.004883	0.0020059	0.00071736	0.001421	0.00114927	0.01515873
SLC22A24	8	0.0490605	6.303526	0	0.001749	0.00449644	0.0017908	0.0005722	0.00134862	0.0416658	0.00177783	0.00089588
OSTM1	8	0.0491105	12.0372	0.004564	0.001205	0.00047897	0.0005307	0.0004952	0.01166533	0.0022925	0.0012414	0.00536503
INSIG2	8	0.0492548	8.817925	0.000111	0.001461	0.00517505	0.0010991	0.0014412	0.00155359	0.0021036	0.03504107	0.00069417
MEST	8	0.0493358	8.72097	0.001048	0.042921	0.00361519	0.000908	0.0004373	0.00069522	0.0020173	0.0009089	0.00205625
RASSF7	8	0.0493458	8.016041	0.000148	0.002591	0.00121325	0.0024045	0.0013498	0.00114868	0.004083	0.00370797	0.00127803
RPL19	8	0.0493974	11.65237	0.000137	0.003176	0.00135388	0.0012593	0.0004893	0.00073747	0.0010631	0.00171946	0.00076394
TAF1L	8	0.0494377	7.100792	1.21E-05	0.003197	0.00134658	0.0032623	0.0007948	0.00189445	0.0090995	0.03891146	0.00733241
KCNAB3	8	0.0495167	11.18625	0.00343	0.001836	0.00082219	0.0019865	0.0010673	0.00275251	0.0014309	0.0003859	0.00224208
MAGOH	8	0.0495179	17.97108	0.003657	0.000489	0.00062606	0.0011238	0.000569	0.0005602	0.0311005	0.00205087	0.00080081
FAM24A	8	0.0495728	11.13032	0.003036	0.001205	0.00273997	0.0007775	0.0003514	0.00103947	0.001087	0.0040733	0.00120623
CEACAM4	8	0.0495747	7.513435	0.000267	0.001455	0.00943804	0.0203467	0.0004666	0.00125899	0.0010121	0.00265872	0.00190599
URGCP-MRP	8	0.0496583	16.24238	0.016531	0.000562	0.00891822	0.0008126	0.0007713	0.00055206	0.0005301	0.00040403	0.00214696
GAS7	8	0.0496784	6.143362	0	0.003079	0.00706763	0.0020701	0.0032808	0.00052582	0.0040658	0.00985202	0.00889439
HIST1H2AL	8	0.049688	24.88296	0.053293	0.004279	0.00056924	0.0008058	0.0003122	0.00025852	0.0002349	0.00052926	0.00029536
MSRA	8	0.04981	10.75732	0.000106	0.001021	0.00073072	0.0021866	0.0013182	0.00116831	0.0012515	0.00615531	0.0010386
SHOX2	8	0.0498144	15.56465	0.001874	0.000525	0.00091134	0.0036636	0.0006814	0.00094522	0.0008166	0.0062567	0.00050713
HIST1H2BO	8	0.0498811	25.34847	0.053015	0.010596	0.0005406	0.0007636	0.0003004	0.00026753	0.0002418	0.00053397	0.00031064

Table S5

STARD13	8	0.0498959	13.50174	0.000251	0.001743	0.03886771	0.0006996	0.0010801	0.00071717	0.0014276	0.00076005	0.00104211
SGIP1	8	0.0499467	18.73455	0.001568	0.000454	0.00150481	0.0036743	0.0002918	0.00034624	0.0008101	0.00056268	0.00113418
GPC2	8	0.0499477	10.96736	0.001546	0.016847	0.00154684	0.0008369	0.0016355	0.0008499	0.001502	0.00098806	0.00197158
HSPA2	8	0.049958	16.89647	0.012966	0.000825	0.00113951	0.0003616	0.0010987	0.00032727	0.0007132	0.00076375	0.00308666

Table S6

Sub Network Specific Hub Genes identified by ancMETA: the ones written in blue represents the significant Hub genes

Hub	#Study	Overlall P	Q	TAU^2	P_SUIC	P_BIPO	P_ADHD	P_DEP	P_ANX	P_PTSD	P_GAD	P_AUD
GPHN	8	6.719E-05	6.14252	0	0.08128	0.26586	0.08560355	0.05958	0.01955	0.29485	0.060973	0.11153
MAPT	8	0.00043226	5.74184	0	0.2666	0.05687	0.39980287	0.23962	0.0439	0.093154	0.172529	0.018635
RHOA	8	0.00050632	7.36505	0.00060515	0.38544	0.05315	0.07319666	0.02481	0.0671	0.2785	0.12244	0.026418
APOB	8	0.00067743	6.23164	0	0.09088	0.06099	0.12823747	0.03452	0.08901	0.135824	0.10119	0.106323
HNRNPA1	8	0.00068895	8.94312	1.6892E-05	0.14408	0.04803	0.17717233	0.03472	0.03405	0.060598	0.072802	0.037593
DAG1	8	0.00270292	8.02481	0.0011164	0.39753	0.05885	0.08602806	0.02696	0.06215	0.375804	0.161812	0.0348
ATP6V1E1	8	0.00285214	5.2594	0	0.36112	0.10046	0.16870283	0.03377	0.11512	0.435938	0.445542	0.143855
TAF9	8	0.0034955	5.09513	0	0.22135	0.15638	0.09451593	0.03032	0.24739	0.305498	0.099072	0.482037
H3F3A	8	0.00569158	7.741	6.8172E-05	0.16699	0.1017	0.21234128	0.07266	0.05502	0.21764	0.17058	0.069556
NUCB1	8	0.0057234	8.85432	0.00033884	0.09293	0.06947	0.18621935	0.06579	0.05102	0.085159	0.146347	0.073297
RIPK1	8	0.00582916	6.55419	0	0.28949	0.24616	0.39581945	0.06191	0.23966	0.183869	0.085375	0.041008
TOMM20	8	0.00631402	6.91849	0	0.18932	0.22334	0.08575202	0.06906	0.33915	0.101008	0.409205	0.035413
NDRG1	8	0.00650662	8.77038	0.000125	0.13868	0.12981	0.09951574	0.05545	0.07477	0.096454	0.072428	0.06493
PINX1	8	0.00872098	7.77455	0.00175547	0.04113	0.02111	0.07194666	0.13667	0.09842	0.053455	0.257736	0.019975
PPP1R15A	8	0.00957323	9.69669	0.00087255	0.14037	0.05465	0.20900334	0.06645	0.05892	0.067497	0.110593	0.064773
DYNLT1	8	0.01026792	11.5997	0.00225389	0.11061	0.02717	0.039076	0.0147	0.02267	0.061908	0.017866	0.106704
APBB1	8	0.01070507	9.24024	0.00067312	0.07097	0.07619	0.09414615	0.10421	0.04264	0.204674	0.088973	0.0761
OPTN	8	0.01073063	7.00449	6.5959E-07	0.13655	0.3034	0.32706236	0.13988	0.11153	0.440119	0.256757	0.040774
BUB3	8	0.01121167	6.28507	0	0.14168	0.45363	0.09766583	0.08127	0.02628	0.382233	0.127377	0.082515
SFN	8	0.0140899	9.06373	0.00497061	0.10085	0.06305	0.10397356	0.06789	0.30339	0.054784	0.116249	0.046446
POMP	8	0.01487151	5.67641	0	0.48037	0.13911	0.16037251	0.08152	0.11616	0.246758	0.426035	0.09549
CREB1	8	0.01684018	6.66234	0	0.31227	0.09523	0.14897923	0.15533	0.13763	0.132828	0.246337	0.075044
BCL2L11	8	0.01748571	4.00015	0	0.25043	0.15212	0.3456482	0.09974	0.25806	0.410504	0.189645	0.038395
SGK1	8	0.01769586	7.92806	7.2245E-05	0.20022	0.08264	0.21833188	0.1941	0.06982	0.174269	0.092028	0.045798
HIF1A	8	0.01920947	7.1517	1.6381E-05	0.1795	0.23432	0.21524669	0.10103	0.08376	0.132459	0.21441	0.147137
SF3A2	8	0.01985039	14.4625	0.00672952	0.06816	0.06786	0.07318804	0.04978	0.0506	0.048997	0.068477	0.125622

Table S6

INSR	8	0.02194365	6.68611	0	0.23346	0.27091	0.16987952	0.17344	0.05199	0.388203	0.163277	0.351595
VASP	8	0.02238072	8.29779	0.0011902	0.18181	0.04659	0.28497875	0.3612	0.05401	0.088529	0.095198	0.066908
NBR1	8	0.02275623	8.13564	0.00145521	0.1073	0.07428	0.18994257	0.1919	0.02639	0.100241	0.053091	0.495016
TOLLIP	8	0.02433128	8.24118	0.00013323	0.13656	0.38174	0.22028289	0.08324	0.08955	0.389563	0.100941	0.100193
SNCG	8	0.02606235	7.40088	0.0005722	0.43866	0.05725	0.12289369	0.048	0.06678	0.373588	0.080011	0.078655
BTRC	8	0.02891724	7.40488	6.4133E-05	0.19473	0.08722	0.32554413	0.2003	0.10429	0.461884	0.256279	0.05918
GNAS	8	0.03049583	9.25059	0.00074643	0.18887	0.38387	0.14304528	0.0452	0.10588	0.061239	0.324693	0.030771
TADA2A	8	0.03206469	10.4968	0.00140705	0.0991	0.12028	0.10755115	0.04702	0.04621	0.386696	0.33445	0.147223
CSF3R	8	0.03426326	6.37217	0	0.48065	0.12518	0.16585365	0.30684	0.10065	0.183123	0.086293	0.090952
SLC4A1	8	0.03453644	16.6009	0.00714954	0.28711	0.47876	0.05910972	0.03635	0.03374	0.046207	0.107905	0.030961
FGFR3	8	0.03541099	6.88724	0	0.32554	0.13873	0.18064459	0.06212	0.28521	0.269308	0.270813	0.233027
DTX3L	8	0.0357652	6.57399	0	0.16925	0.07559	0.43635003	0.2254	0.16352	0.089238	0.240065	0.045652
THRB	8	0.03637648	17.1426	0.00078779	0.09141	0.07875	0.08553213	0.02326	0.03092	0.038525	0.336868	0.07531
GRB7	8	0.03685675	9.67719	0.00508721	0.09905	0.10986	0.14762548	0.18153	0.04396	0.190335	0.05497	0.030185
YWHAQ	8	0.0381114	8.90999	0.00016017	0.0891	0.25884	0.38538246	0.04812	0.41785	0.13791	0.060754	0.105024
ARRB1	8	0.03846034	5.16467	0	0.19235	0.11919	0.30809748	0.04162	0.25587	0.489787	0.461823	0.464994
COL6A2	8	0.03944458	7.02728	1.4101E-06	0.39026	0.1757	0.15499576	0.19794	0.10901	0.241472	0.19143	0.123372
UBE3A	8	0.04037987	7.47009	0.00011703	0.29329	0.0699	0.08687681	0.102	0.1146	0.221498	0.072733	0.094601
MOB4	8	0.0409926	10.1786	0.00612073	0.30082	0.0576	0.4866212	0.14123	0.02968	0.052857	0.052636	0.340493
ATF7IP	8	0.04214541	10.4421	0.00033562	0.33015	0.08238	0.09146917	0.09733	0.05557	0.398213	0.358785	0.09384
YWHAB	8	0.04287958	6.34115	0	0.47352	0.34545	0.4310334	0.08634	0.08106	0.263161	0.114982	0.149039
ERBB2	8	0.04340889	10.4528	0.00743819	0.06552	0.09263	0.14165079	0.2147	0.03932	0.193103	0.052282	0.026778
INHBA	8	0.04346067	10.3433	0.00038968	0.26771	0.04836	0.06949517	0.03784	0.07419	0.485351	0.10618	0.268268
MPP3	8	0.04637633	7.89951	0.00012897	0.3454	0.25742	0.17125421	0.134	0.1186	0.147038	0.169622	0.097213
TRIM29	8	0.04814299	8.62017	9.7599E-05	0.24281	0.39749	0.14455773	0.08117	0.27459	0.154104	0.07985	0.135216
MAPK14	8	0.04854836	6.21657	0	0.23355	0.1196	0.3799055	0.13699	0.1471	0.386711	0.277258	0.148893
PABPC1	8	0.04899707	8.95464	0.00011135	0.1403	0.47936	0.12330643	0.06592	0.06137	0.129523	0.088128	0.224255
RUVBL2	8	0.05003513	10.1464	0.000646	0.08971	0.30131	0.40467897	0.07719	0.07817	0.240263	0.22363	0.075712
MPDZ	8	0.05042455	7.73246	3.1145E-05	0.27934	0.19316	0.21829581	0.04332	0.0509	0.423665	0.336159	0.183179
BMP4	8	0.05092081	9.43859	0.0001124	0.14122	0.07731	0.37439891	0.25739	0.23488	0.087081	0.116504	0.128969

Table S6

PPP2CB	8	0.05157506	7.70782	0.00093853	0.25488	0.49412	0.08196916	0.18841	0.16944	0.466816	0.093817	0.042022
H2AFZ	8	0.05158739	8.84174	0.00614173	0.33898	0.13172	0.10292336	0.23725	0.06893	0.152646	0.027407	0.020348
ZNF512B	8	0.05172863	14.0312	0.00744131	0.12671	0.04529	0.08346311	0.06069	0.05198	0.202638	0.067424	0.035206
UBQLN4	8	0.05401376	6.8181	0	0.38544	0.21672	0.46877197	0.2374	0.09095	0.238919	0.232286	0.129077
PROX1	8	0.05470385	16.5641	0.00062571	0.12665	0.05862	0.08656527	0.04579	0.051	0.100953	0.12181	0.078575
LYST	8	0.0550781	9.55601	0.00042364	0.1118	0.47622	0.2941489	0.06807	0.08916	0.13541	0.096936	0.446514
UBE2I	8	0.05630906	7.91654	0.00022507	0.49194	0.10962	0.4052722	0.28909	0.13093	0.241879	0.113373	0.077858
GABARAPL1	8	0.05632202	7.836	6.7761E-05	0.31664	0.2054	0.30074761	0.1308	0.11944	0.366809	0.092457	0.272716
SREBF1	8	0.05693578	6.49977	0	0.24821	0.23701	0.17408216	0.0877	0.14179	0.184472	0.21978	0.048922
FAS	8	0.05734395	10.3977	0.00035333	0.40724	0.19178	0.40974042	0.05044	0.11894	0.078408	0.321192	0.085804
RXRB	8	0.05869869	10.1707	0.00641854	0.22331	0.0398	0.03467686	0.02734	0.02348	0.040449	0.035745	0.023477
MAPK8IP2	8	0.06021433	4.81632	0	0.26438	0.29795	0.20441115	0.10072	0.19042	0.245225	0.282066	0.257139
PICK1	8	0.06027084	12.9912	0.00230514	0.06634	0.07535	0.11210738	0.06371	0.20592	0.444762	0.311806	0.080056
ORC3	8	0.06079551	9.20778	0.00379465	0.33386	0.04508	0.16628441	0.08664	0.06574	0.067435	0.062126	0.455511
PFDN1	8	0.06172432	8.22442	0.00019685	0.40092	0.11088	0.1424699	0.16388	0.11096	0.146938	0.382371	0.23857
LPL	8	0.06282927	14.182	0.00061695	0.08389	0.11371	0.07686967	0.22164	0.06314	0.066823	0.230971	0.455385
ESR1	8	0.06298182	10.3084	0.00075336	0.40053	0.03292	0.09445621	0.42446	0.19727	0.166237	0.063808	0.358539
NXF1	8	0.06429367	7.68994	0.00016476	0.32693	0.33697	0.43201244	0.11251	0.13439	0.252078	0.094895	0.424479
ACTC1	8	0.06549458	6.52127	0	0.27135	0.30392	0.16508274	0.18687	0.09105	0.203961	0.203179	0.24428
SLC3A2	8	0.06552892	9.47139	0.00107506	0.09987	0.45141	0.25189652	0.06166	0.12426	0.126941	0.130993	0.480297
SMAD9	8	0.06576674	7.49463	1.5651E-05	0.20776	0.35287	0.38707144	0.08348	0.09993	0.375215	0.115641	0.338979
ARIH2	8	0.06659485	20.1943	0.03681328	0.13719	0.04114	0.04362424	0.01987	0.03582	0.356623	0.119582	0.030906
PTGES3	8	0.06695166	2.65438	0	0.42641	0.18981	0.32457248	0.11577	0.15226	0.365921	0.311839	0.435738
HTT	8	0.06706268	7.16318	9.9366E-05	0.22256	0.05562	0.42063651	0.42359	0.20429	0.365136	0.16474	0.042146
MDFI	8	0.06770936	14.9817	0.00951	0.26711	0.03047	0.04495944	0.0536	0.0376	0.250751	0.041985	0.395285
RAB4A	8	0.06837092	17.9328	0.0016044	0.04822	0.06748	0.05467873	0.05877	0.06569	0.110927	0.290928	0.244163
NID1	8	0.06866913	13.4149	0.00029947	0.17223	0.1804	0.34242129	0.05455	0.04891	0.172894	0.058351	0.110926
B2M	8	0.06957805	6.39648	0	0.27311	0.18304	0.45248972	0.15994	0.1183	0.429556	0.146031	0.432797
EHMT2	8	0.06989193	19.007	0.0098637	0.26377	0.09567	0.04821463	0.07169	0.03404	0.037431	0.128318	0.344442
CAND1	8	0.06992219	14.9572	0.00029533	0.13485	0.09899	0.26873586	0.04918	0.05729	0.211426	0.042257	0.122243

Table S6

BCL6	8	0.07134067	5.46218	0	0.4706	0.36121	0.21164942	0.13377	0.22683	0.241926	0.212126	0.132527
CALCOCO2	8	0.07222994	13.434	0.00233385	0.44253	0.09284	0.11760348	0.09343	0.06283	0.281455	0.053404	0.132046
TFF1	8	0.07237152	14.219	0.00323423	0.10227	0.0649	0.05446255	0.3482	0.05556	0.055901	0.301789	0.209925
LCK	8	0.07340819	10.3045	0.00767103	0.10163	0.078	0.25697363	0.33256	0.12198	0.101528	0.15573	0.101549
SF3B4	8	0.07355732	11.5299	0.00448028	0.44178	0.26645	0.13114833	0.0592	0.06565	0.116355	0.155143	0.078979
ISG15	8	0.07379347	6.99498	0	0.25399	0.16449	0.3567447	0.35677	0.1037	0.295798	0.102875	0.418266
TUBA1A	8	0.075477	10.6857	0.0039663	0.35826	0.0579	0.1209281	0.09658	0.05051	0.47648	0.124138	0.040063
BRD4	8	0.07584673	8.19359	0.00040458	0.37249	0.12117	0.1292323	0.15875	0.1092	0.229048	0.289091	0.311466
PTPN1	8	0.07685706	8.17349	2.541E-05	0.16446	0.25262	0.3549395	0.09295	0.23717	0.159062	0.128222	0.17612
BCL2	8	0.07756425	9.79951	0.00018524	0.25285	0.3011	0.3475299	0.21113	0.14001	0.086118	0.151432	0.092292
LMO2	8	0.07935547	10.5499	0.00034503	0.09914	0.48977	0.14803796	0.10014	0.17188	0.439432	0.11409	0.146236
CALM1	8	0.08063639	9.05575	0.00018775	0.10547	0.42771	0.27592481	0.12419	0.16617	0.25149	0.196481	0.10469
XRCC6	8	0.08288593	0.53483	0	0.39498	0.23449	0.4803455	0.18387	0.14502	0.3492	0.335452	0.239762
EVPL	8	0.08453438	6.91011	0	0.27954	0.18036	0.15401359	0.44274	0.20313	0.34377	0.157695	0.093372
APP	8	0.08484597	8.74593	2.163E-05	0.11961	0.46057	0.32306951	0.12638	0.19371	0.453579	0.142	0.099432
PLK1	8	0.08498157	13.0127	0.00429489	0.10535	0.05177	0.15046388	0.06205	0.13678	0.242401	0.171422	0.094276
HLA-C	8	0.08588244	26.5371	0.00910171	0.21112	0.08698	0.01911705	0.02469	0.03232	0.038136	0.03803	0.222397
TYROBP	8	0.08669043	6.84254	0	0.41038	0.22298	0.29032281	0.08346	0.12891	0.255731	0.235348	0.429602
HSPH1	8	0.08684825	11.6492	0.0005721	0.10453	0.21876	0.40823077	0.07187	0.1551	0.087982	0.098357	0.309718
NCAM1	8	0.0871811	17.2606	0.00079269	0.08572	0.07022	0.11090223	0.05948	0.09678	0.046898	0.108577	0.034421
RAP1B	8	0.08755475	11.2897	0.00097206	0.0819	0.45578	0.34647194	0.108	0.11107	0.321582	0.168863	0.100044
LGALS3	8	0.08917718	17.2878	0.01924451	0.06054	0.49669	0.06189016	0.04468	0.04336	0.030503	0.103493	0.067699
CHD3	8	0.08948272	10.6457	0.00179481	0.1866	0.10723	0.36696527	0.18242	0.44103	0.252086	0.053328	0.303099
SOX9	8	0.09063619	10.3899	0.00020357	0.23496	0.13602	0.12851126	0.39686	0.03727	0.076267	0.081373	0.065706
STAU1	8	0.0912941	17.1587	0.00729417	0.11338	0.20821	0.22862859	0.05396	0.05102	0.052532	0.145181	0.241342
USP13	8	0.09297297	10.0148	0.00209873	0.06358	0.05903	0.39527491	0.34853	0.38108	0.214271	0.233626	0.037415
MBD3	8	0.09302572	11.9341	0.00187678	0.19606	0.10932	0.17120219	0.07763	0.11011	0.101472	0.302393	0.058402
EEF1A1	8	0.09489442	17.9139	0.00086888	0.07784	0.06777	0.05294582	0.18279	0.16231	0.130712	0.285646	0.205481
GSTK1	8	0.09568571	9.40766	0.00067492	0.25344	0.13012	0.10965912	0.13154	0.07966	0.400466	0.426023	0.290865
EXOSC4	8	0.09580568	5.97476	0	0.31928	0.16678	0.19442519	0.43959	0.19063	0.203645	0.268918	0.04003

Table S6

NAA38	8	0.096024	2.94514	0	0.29782	0.25675	0.49942207	0.21154	0.23962	0.164735	0.261538	0.181285
CEP55	8	0.09690346	7.33382	3.8631E-05	0.29622	0.17893	0.11774176	0.10632	0.42832	0.348263	0.164204	0.404762
TLR4	8	0.09814974	18.1145	0.00197115	0.04212	0.03526	0.42798211	0.04107	0.09067	0.313609	0.327911	0.052138
ZBTB9	8	0.09829559	13.2413	0.00650874	0.13011	0.08379	0.07730888	0.04379	0.05039	0.099061	0.055579	0.107959
CDK6	8	0.09997086	8.7815	0.00093708	0.36542	0.0745	0.07454469	0.03203	0.15474	0.339457	0.146956	0.058863
SUN2	8	0.10003185	8.21836	0.0007898	0.2971	0.23767	0.37560725	0.1667	0.05884	0.452661	0.057605	0.236182
PHYH	8	0.10179818	8.51763	0.00019827	0.28158	0.08831	0.23889892	0.09862	0.37193	0.369304	0.303275	0.091845
WWP1	8	0.10351359	11.0052	0.00048319	0.17985	0.49796	0.33991511	0.17593	0.09994	0.117113	0.095356	0.079124
CNOT8	8	0.10369208	12.3547	0.00725775	0.28769	0.04994	0.24803665	0.07245	0.13314	0.087425	0.398472	0.291357
STK39	8	0.10375608	22.0371	0.00338528	0.04582	0.18488	0.04682602	0.18043	0.08533	0.066747	0.13163	0.0593
TMBIM4	8	0.10404494	15.9182	0.00913974	0.23877	0.20005	0.09961964	0.24143	0.04762	0.044802	0.085917	0.323617
CD28	8	0.10432769	8.95627	0.00054972	0.31367	0.25761	0.18935187	0.35746	0.11868	0.107892	0.114592	0.164401
PSME3	8	0.10559633	3.85799	0	0.46121	0.3245	0.21987076	0.14904	0.20794	0.366401	0.183848	0.27943
RELA	8	0.10606653	9.341	0.00078989	0.25285	0.08517	0.13744804	0.08403	0.34222	0.114878	0.37485	0.271916
IFNAR1	8	0.106516	7.73556	4.3885E-05	0.39685	0.25355	0.22565498	0.11715	0.12066	0.314611	0.153472	0.302096
SRGAP2	8	0.10725692	12.4849	0.00321555	0.07341	0.08655	0.31099498	0.20502	0.25661	0.345213	0.071632	0.183987
SMAD2	8	0.10737893	15.8315	0.00198991	0.04539	0.3666	0.10601391	0.37874	0.30318	0.389857	0.090435	0.057228
LNX2	8	0.10798634	5.30938	0	0.38722	0.46874	0.37028559	0.0945	0.14907	0.275495	0.343881	0.167061
HIST1H1C	8	0.10855446	20.1816	0.00608772	0.05515	0.23402	0.07768221	0.04406	0.06838	0.160335	0.063754	0.085292
SMAD1	8	0.11027064	13.6162	0.00530444	0.06463	0.06651	0.28199031	0.2907	0.32133	0.100016	0.097953	0.222923
PPP1R16A	8	0.11053144	7.91518	0.00026355	0.38535	0.48289	0.16564323	0.39266	0.12391	0.18496	0.106991	0.165366
ARF1	8	0.11062995	13.9211	0.00883037	0.18755	0.05073	0.10501699	0.116	0.07741	0.068046	0.182594	0.193349
TINF2	8	0.11202652	7.29521	5.1904E-05	0.18923	0.21706	0.32944039	0.29804	0.09367	0.301476	0.142388	0.335216
TNF	8	0.11311328	19.8941	0.0035614	0.08116	0.36602	0.04120742	0.06845	0.07043	0.148033	0.165554	0.146738
MED31	8	0.11331595	10.2682	0.00108386	0.12355	0.13647	0.36957636	0.04521	0.11309	0.13401	0.115483	0.240616
MLH1	8	0.11384004	9.38017	0.00010939	0.23865	0.26399	0.27255463	0.15314	0.17583	0.17782	0.077569	0.267037
TTN	8	0.11476007	11.7657	0.00063918	0.166	0.22833	0.20848772	0.07257	0.04836	0.121714	0.143922	0.153982
MAPK6	8	0.11518169	16.9558	0.00087698	0.22989	0.1199	0.05946442	0.29518	0.14333	0.080851	0.186345	0.085968
HSPB3	8	0.11667569	14.9211	0.00365723	0.2219	0.11992	0.07459662	0.49071	0.06955	0.067685	0.054444	0.467767
EZR	8	0.11759565	11.2895	0.00122083	0.1387	0.19542	0.08143198	0.14129	0.20392	0.17373	0.107816	0.497926

Table S6

HNRNPC	8	0.11832124	14.4413	0.00406997	0.24701	0.22315	0.19926535	0.19442	0.10166	0.048031	0.082124	0.07998
HRAS	8	0.11927708	10.1182	0.00077175	0.33236	0.09733	0.21156342	0.12601	0.12021	0.158217	0.377342	0.13235
POLR2G	8	0.12119398	8.91943	0.00062805	0.3222	0.20456	0.22203321	0.11747	0.23069	0.127558	0.147548	0.282884
TSC22D1	8	0.12278992	11.5371	0.00102469	0.22137	0.10624	0.09342311	0.22587	0.18677	0.091021	0.144342	0.170337
SGSM2	8	0.12279062	23.7751	0.02424204	0.03451	0.45683	0.05720783	0.06581	0.17322	0.213467	0.048206	0.127504
KCTD13	8	0.12333233	21.5939	0.05189883	0.07527	0.01979	0.1052018	0.01846	0.02391	0.041476	0.061942	0.019342
CD2BP2	8	0.12378724	5.38679	0	0.23261	0.32292	0.49922959	0.16092	0.1329	0.390841	0.268432	0.402324
GOLGA2	8	0.12412606	8.4613	0.00035493	0.1874	0.10936	0.48310736	0.29246	0.12171	0.304053	0.330515	0.124831
PACSIN1	8	0.12419454	9.07614	0.00029843	0.1465	0.37037	0.18272098	0.11355	0.11865	0.165278	0.261049	0.342153
CIB1	8	0.1243815	7.95085	0.00044492	0.36962	0.08686	0.20235977	0.0565	0.1722	0.141153	0.47153	0.104519
POLA2	8	0.12581607	12.0226	0.00206189	0.41373	0.12891	0.08898381	0.24944	0.08868	0.168433	0.194334	0.1322
CFL1	8	0.12594108	5.93846	0	0.2992	0.24325	0.46326694	0.14607	0.11712	0.361184	0.209708	0.142428
ALB	8	0.12738116	9.2577	0.00063873	0.47834	0.20872	0.23055465	0.069	0.15494	0.120024	0.25981	0.11061
NFIC	8	0.12831485	7.40451	6.7895E-05	0.23838	0.23169	0.23433565	0.22128	0.12469	0.16241	0.208838	0.091732
ANKRD28	8	0.13021489	22.6568	0.02192218	0.01999	0.021	0.20143234	0.02297	0.11541	0.135636	0.133763	0.05239
E2F4	8	0.13119014	16.0357	0.02615439	0.04546	0.12953	0.28682622	0.13193	0.47025	0.201215	0.235914	0.046266
DSP	8	0.13428762	11.4484	0.00023253	0.23732	0.297	0.40897926	0.10538	0.14156	0.168421	0.060945	0.391319
MAP3K1	8	0.13429638	8.05562	0.00019299	0.27439	0.21031	0.23819898	0.11505	0.12034	0.089622	0.191146	0.048493
EEF1D	8	0.13460098	8.17561	0.00015031	0.20866	0.13827	0.49904597	0.48879	0.26622	0.394132	0.100586	0.200723
RNPS1	8	0.13466277	8.7693	3.2875E-05	0.13025	0.23559	0.30348476	0.1015	0.11532	0.315527	0.16607	0.478538
PIK3R3	8	0.13569676	19.5465	0.02589411	0.04247	0.09678	0.11627711	0.4959	0.27853	0.055827	0.051394	0.079826
RAB6A	8	0.13743249	9.12154	0.00035301	0.10027	0.19006	0.23408487	0.36424	0.22439	0.210134	0.250884	0.415125
GNAO1	8	0.13860732	13.0696	0.00051576	0.22372	0.13193	0.31825047	0.12532	0.06143	0.07342	0.162161	0.433039
RECQL5	8	0.1392571	11.3516	0.00078795	0.20379	0.17006	0.20603595	0.22206	0.3726	0.088207	0.133671	0.134713
PSMA1	8	0.13947127	10.9689	0.00378662	0.1979	0.07219	0.1384235	0.04978	0.02983	0.155271	0.096664	0.055135
FOS	8	0.14068261	7.37942	7.4173E-06	0.14468	0.36201	0.2279628	0.10156	0.20913	0.451187	0.356113	0.30656
RNF4	8	0.14117707	17.7682	0.01064799	0.17194	0.40843	0.09918915	0.17345	0.18271	0.044143	0.498154	0.107185
EIF4E	8	0.14137438	17.1468	0.0067209	0.08371	0.07267	0.03843026	0.09188	0.11212	0.412137	0.100859	0.054205
RPA2	8	0.1415086	7.70228	7.43E-05	0.1538	0.23291	0.15302075	0.18801	0.22478	0.430025	0.30831	0.234759
CEP72	8	0.1424557	6.68135	0	0.3675	0.4181	0.30270202	0.08865	0.2777	0.25086	0.149118	0.138444

Table S6

SNAPIN	8	0.14256305	18.6403	0.02583687	0.04296	0.22395	0.07031016	0.09373	0.18699	0.095258	0.167701	0.104432
CAV1	8	0.14297466	9.32286	0.00013511	0.1186	0.14057	0.24460958	0.06502	0.16263	0.376614	0.131937	0.447836
TRIP13	8	0.14307216	7.452	7.9582E-05	0.21204	0.14015	0.45653002	0.29496	0.18333	0.26	0.144027	0.309873
ACD	8	0.14875405	13.9507	0.02008536	0.12234	0.08091	0.08937504	0.13698	0.32705	0.130324	0.186295	0.120299
NCOA6	8	0.14990526	6.63048	0	0.26433	0.06571	0.43679575	0.12217	0.11567	0.181712	0.394666	0.21618
YAE1D1	8	0.15006364	4.89517	0	0.22662	0.46211	0.46757779	0.13912	0.18997	0.42908	0.277135	0.338202
VPS28	8	0.15024745	6.85562	0	0.39969	0.47242	0.20490041	0.33434	0.20364	0.225091	0.124166	0.157121
SMARCA2	8	0.1511175	11.5997	0.00026131	0.47283	0.06175	0.09904422	0.0951	0.24812	0.074799	0.14905	0.086643
HLA-B	8	0.15128037	19.6959	0.00255364	0.15071	0.04957	0.03423712	0.08402	0.14814	0.05768	0.086656	0.064131
PDZK1	8	0.151321	11.7409	0.00525912	0.22412	0.27562	0.19322601	0.08132	0.39932	0.202148	0.061648	0.38319
CEBPA	8	0.15311351	9.79873	0.00058192	0.23593	0.09911	0.1417995	0.47208	0.21865	0.334266	0.163861	0.119639
PARD6A	8	0.1544109	14.7331	0.02412761	0.10909	0.07608	0.08367688	0.12989	0.27321	0.1227	0.193502	0.1175
LIMS1	8	0.15481098	15.2484	0.00913724	0.16798	0.18593	0.26395322	0.04898	0.15252	0.041742	0.263748	0.106437
DAXX	8	0.15552008	19.9071	0.00708331	0.08074	0.27491	0.08337097	0.03858	0.03439	0.092322	0.110367	0.057037
CCDC85B	8	0.15629912	3.7265	0	0.37982	0.46021	0.3704037	0.24201	0.18643	0.473801	0.147365	0.473078
S100A1	8	0.15643243	18.9132	0.02333851	0.05037	0.31739	0.06991965	0.14016	0.24479	0.133824	0.20539	0.114845
TSC22D4	8	0.15691887	22.6206	0.01318995	0.03415	0.07403	0.03476299	0.04579	0.04371	0.070588	0.052192	0.028938
LEPR	8	0.15702183	13.3474	0.00098946	0.09282	0.10662	0.28932202	0.11611	0.0789	0.347591	0.076066	0.068351
CSF1R	8	0.15897104	12.0842	0.0008542	0.22086	0.09745	0.1453298	0.30146	0.10801	0.15307	0.11828	0.096473
SRSF1	8	0.15931653	6.75089	0	0.40747	0.33414	0.16916645	0.09392	0.34625	0.268839	0.318077	0.401628
PRKCB	8	0.16076646	12.1378	0.0003814	0.11589	0.08127	0.27596325	0.33645	0.07088	0.081858	0.119819	0.106357
SHBG	8	0.16200911	15.8109	0.00294924	0.10729	0.14864	0.12423584	0.20631	0.09468	0.099014	0.121858	0.112232
HSF1	8	0.16230395	8.22757	0.00040291	0.3004	0.32211	0.20475662	0.24277	0.30586	0.137931	0.115807	0.270949
HLA-A	8	0.16277594	17.8068	0.0180563	0.06193	0.35316	0.0169967	0.01554	0.01902	0.105121	0.045885	0.028895
TNFRSF14	8	0.16591412	13.3752	0.00262	0.44092	0.37954	0.09714302	0.16487	0.0774	0.084249	0.379477	0.417623
CBFA2T3	8	0.16604598	17.0435	0.00412742	0.06383	0.07198	0.12440291	0.05483	0.09901	0.23412	0.277768	0.487006
TGM2	8	0.1662506	12.63	0.00120074	0.11861	0.3285	0.14075166	0.30006	0.09899	0.138821	0.138225	0.12155
RAD23A	8	0.1673497	11.9431	0.00240577	0.12907	0.33194	0.16200675	0.13832	0.24694	0.195445	0.096629	0.345703
SOX10	8	0.16762859	13.0234	0.00677727	0.08368	0.03817	0.18366047	0.03939	0.49398	0.136435	0.126708	0.204786
PEX19	8	0.16800248	9.70866	0.00049366	0.10062	0.46672	0.17031919	0.12541	0.15777	0.475969	0.474056	0.439099

Table S6

TBPL1	8	0.16892503	11.8289	0.00227703	0.14133	0.11608	0.42239893	0.08957	0.38919	0.413995	0.077461	0.077306
NOS1	8	0.16896908	19.3636	0.0023279	0.08139	0.1419	0.12068635	0.22926	0.10935	0.063895	0.38673	0.090717
ATN1	8	0.169275	11.8394	0.00521236	0.45533	0.05594	0.06842442	0.08237	0.13417	0.271916	0.333616	0.225811
HSPG2	8	0.17009295	6.98392	0	0.37548	0.14964	0.41605904	0.46109	0.29703	0.173686	0.290554	0.137933
EEF1G	8	0.1722911	9.1547	0.00095268	0.37489	0.15409	0.42607085	0.12248	0.16478	0.163513	0.119468	0.336254
ITGA4	8	0.17379765	19.5087	0.00220714	0.08475	0.07912	0.08349781	0.07924	0.07564	0.249882	0.110584	0.12831
MYZAP	8	0.17393343	9.03806	0.00017233	0.4592	0.41492	0.12669164	0.13167	0.35857	0.196043	0.390308	0.087431
PPP1CA	8	0.17531288	19.0089	0.03165313	0.11967	0.11898	0.04341547	0.10712	0.22075	0.234921	0.164332	0.174888
GOPC	8	0.17545894	10.7554	0.00128379	0.11246	0.17771	0.41390591	0.05989	0.17664	0.323406	0.394889	0.061916
AMPH	8	0.17651486	10.475	0.00029225	0.22275	0.15166	0.07105305	0.05353	0.06454	0.358502	0.190298	0.095918
KAT5	8	0.17948989	8.94154	0.0004192	0.46103	0.13089	0.1211826	0.16	0.25077	0.154279	0.368876	0.297131
RARG	8	0.17969886	10.8036	0.00198117	0.10214	0.32603	0.31319044	0.11112	0.36435	0.208854	0.088221	0.199556
PDCD10	8	0.17981502	18.6328	0.0186797	0.04341	0.05102	0.16017804	0.46322	0.14358	0.091712	0.497879	0.128678
SH3RF1	8	0.17995902	8.34206	0.00033728	0.49667	0.0889	0.40794027	0.10513	0.16731	0.476828	0.199017	0.062442
NRXN1	8	0.18006278	8.357	0.00010449	0.10515	0.36229	0.20206063	0.03228	0.1427	0.058667	0.299231	0.055189
MEP1A	8	0.18011145	13.5401	0.00143554	0.15204	0.06438	0.31663095	0.40063	0.16859	0.086533	0.120484	0.418538
PAX6	8	0.18017205	9.79001	0.00026576	0.13205	0.11113	0.17368827	0.15275	0.47383	0.407596	0.403899	0.20719
ENO2	8	0.18075049	11.4508	0.0038003	0.46261	0.06188	0.07202921	0.08595	0.1232	0.288764	0.318672	0.253623
FYN	8	0.18176299	20.3198	0.00890903	0.04659	0.42477	0.19689712	0.14872	0.03535	0.065635	0.031608	0.050001
CRK	8	0.18389174	8.93433	0.00106966	0.16443	0.07833	0.43534161	0.07046	0.06148	0.194299	0.277902	0.135725
CYCS	8	0.18392318	10.8163	0.00078585	0.49795	0.17067	0.08488355	0.10177	0.49624	0.463257	0.128637	0.148241
UGGT1	8	0.18477416	5.0058	0	0.13787	0.2422	0.46405153	0.23687	0.34592	0.442221	0.280128	0.388423
ABL1	8	0.18522736	17.6621	0.00569017	0.11211	0.09599	0.14414574	0.14257	0.10926	0.045424	0.494493	0.086017
STRN4	8	0.1861762	19.9999	0.00690344	0.33011	0.13823	0.09395586	0.07441	0.08597	0.065592	0.074679	0.201801
PPP4C	8	0.18646582	19.0759	0.02369599	0.22443	0.0332	0.39836624	0.0322	0.05095	0.061453	0.102207	0.037905
SH3BP4	8	0.18658436	16.9701	0.00084206	0.06577	0.10906	0.27589278	0.34499	0.25073	0.095292	0.128133	0.23623
DAZAP2	8	0.18772329	12.6118	0.0012887	0.30676	0.18276	0.4907844	0.24814	0.40257	0.086475	0.076717	0.414055
RNF40	8	0.18818368	6.00952	0	0.2693	0.3179	0.3336148	0.14649	0.30624	0.247757	0.256562	0.252154
MMP9	8	0.18821966	9.30685	7.4072E-05	0.13616	0.1542	0.22425462	0.13274	0.12521	0.42413	0.193499	0.39031
TRIM32	8	0.18828259	13.1331	0.00149785	0.16871	0.17536	0.12003431	0.19778	0.17772	0.138904	0.115397	0.198351

Table S6

CENPA	8	0.19000375	22.1798	0.01350805	0.32502	0.49092	0.04176651	0.06621	0.25305	0.48417	0.436059	0.08657
ACAN	8	0.19154839	20.3899	0.00446229	0.11668	0.0449	0.06365899	0.03073	0.05965	0.151561	0.311079	0.048075
PNMA1	8	0.19160598	18.1606	0.00658036	0.11453	0.11923	0.12936915	0.06306	0.11041	0.079026	0.075232	0.274484
FURIN	8	0.19164706	11.7697	0.00254152	0.14223	0.48455	0.32908251	0.11307	0.28834	0.101594	0.071442	0.366336
NUMBL	8	0.1918335	8.15084	2.7379E-05	0.29194	0.30414	0.41063205	0.12225	0.23998	0.14838	0.155453	0.41908
COIL	8	0.19267441	11.168	0.00163027	0.41968	0.19249	0.19571907	0.28277	0.09067	0.186673	0.070728	0.266409
TOB1	8	0.19345555	18.4775	0.0081357	0.0999	0.05774	0.16048106	0.37339	0.11418	0.045634	0.077273	0.191833
MAP4K1	8	0.19654743	16.9382	0.01175627	0.07342	0.14806	0.10336824	0.06413	0.11951	0.078079	0.101595	0.106771
RPLP1	8	0.19698969	7.68024	2.801E-05	0.22973	0.13084	0.17987652	0.13579	0.07124	0.421658	0.256958	0.320572
ATXN1	8	0.19719459	18.2715	0.001168	0.05363	0.12462	0.08271721	0.11793	0.34646	0.146705	0.22583	0.099396
MEN1	8	0.19752735	5.13605	0	0.28673	0.15042	0.2013817	0.2563	0.30478	0.40595	0.455651	0.431919
PRRC2A	8	0.19793387	22.1831	0.01028217	0.1612	0.14505	0.03081826	0.21386	0.27214	0.093091	0.153206	0.053327
CBX7	8	0.19863385	21.4498	0.01089965	0.07658	0.07465	0.05564966	0.22406	0.04647	0.104309	0.045703	0.052777
NCF1	8	0.19884254	12.891	0.02101999	0.39545	0.11986	0.45512992	0.121	0.10186	0.138951	0.076676	0.354524
TRIP12	8	0.199814	11.5921	0.00168396	0.27774	0.1474	0.09920615	0.28661	0.16618	0.119483	0.222824	0.218869
GLUD1	8	0.20002329	9.65319	0.00022437	0.09706	0.24785	0.22204364	0.09653	0.08564	0.408213	0.134249	0.110582
SUMO3	8	0.20062118	18.0149	0.00565886	0.27278	0.12772	0.04632193	0.04371	0.0418	0.230893	0.466897	0.21311
CUL4A	8	0.2007512	9.65916	0.00011482	0.10507	0.20772	0.29514462	0.13873	0.09756	0.426241	0.202779	0.31596
CBX5	8	0.20194541	25.1087	0.02452552	0.02329	0.04202	0.02535455	0.0459	0.03643	0.093993	0.037912	0.026285
RPSA	8	0.20213392	10.6563	0.00019797	0.25999	0.30802	0.35456176	0.46466	0.07263	0.071244	0.131447	0.093057
SNCA	8	0.20225913	9.92099	7.6639E-05	0.13503	0.15834	0.30193537	0.13552	0.22447	0.289173	0.477685	0.082722
MAP1B	8	0.20412639	24.9531	0.00711154	0.07158	0.06915	0.04659848	0.1588	0.08427	0.066902	0.105502	0.492121
RPL35	8	0.20414783	5.53036	0	0.20244	0.32827	0.36852424	0.2215	0.47134	0.272904	0.480158	0.155304
POLR3D	8	0.20440054	10.5766	0.00130774	0.0986	0.11741	0.24285859	0.10202	0.35857	0.398578	0.261054	0.289019
UBE2Z	8	0.20512976	14.7085	0.00270898	0.12061	0.1371	0.14065699	0.10906	0.08655	0.254341	0.087618	0.259773
KRT20	8	0.20520307	17.0017	0.00496661	0.08542	0.14909	0.38144301	0.13825	0.14385	0.058973	0.169899	0.222828
RBFOX1	8	0.20543879	17.8109	0.00021191	0.13844	0.08995	0.12409291	0.07641	0.08428	0.104623	0.107506	0.091445
SUPT5H	8	0.20684651	14.9009	0.00604494	0.17137	0.12409	0.12895865	0.4423	0.04379	0.059438	0.089036	0.122511
EEF1A2	8	0.20741933	5.59628	0	0.45779	0.14	0.49884365	0.23036	0.08807	0.321084	0.396403	0.236916
NR5A1	8	0.20756287	7.41722	0.00013396	0.15866	0.40993	0.30120463	0.06778	0.17749	0.195291	0.236064	0.177957

Table S6

SUMO1	8	0.20795702	4.63402	0	0.34853	0.22318	0.37294771	0.2362	0.43046	0.354459	0.194586	0.204525
BMPR2	8	0.20914991	12.7447	0.01423794	0.26749	0.02176	0.15557948	0.06314	0.32014	0.084378	0.474635	0.247196
GNAQ	8	0.20987541	17.316	0.00814855	0.0831	0.25486	0.13209248	0.04811	0.09362	0.034583	0.085145	0.08317
IPO5	8	0.21045577	13.5164	0.00078764	0.34049	0.10133	0.26101952	0.12789	0.08155	0.073622	0.278583	0.218635
ZBTB16	8	0.21073887	13.3693	0.0011164	0.1813	0.08409	0.07105965	0.10557	0.42061	0.352196	0.095419	0.083613
CPNE4	8	0.21087389	17.6073	0.00127504	0.05004	0.05626	0.47949886	0.34813	0.17651	0.196075	0.167002	0.438673
TERF2IP	8	0.21233721	9.70752	0.00018997	0.3838	0.39024	0.16182872	0.06752	0.1027	0.111355	0.110472	0.105031
EIF4A3	8	0.21253204	22.4685	0.01437614	0.09211	0.04298	0.11567852	0.04706	0.08984	0.051969	0.051503	0.101315
DPP4	8	0.21279481	10.1571	0.00054064	0.36786	0.148	0.09450888	0.36548	0.24563	0.419796	0.206123	0.332665
MYOC	8	0.21478487	11.5938	0.0004012	0.19935	0.06866	0.12229962	0.16235	0.16181	0.222331	0.112838	0.31515
CDC45	8	0.21479122	18.9859	0.00971225	0.4684	0.3195	0.0522348	0.29186	0.08899	0.077355	0.492713	0.108913
KBTBD7	8	0.21507767	8.92322	0.00082763	0.32137	0.08641	0.14138758	0.37586	0.32201	0.485964	0.288881	0.295289
GOLGA3	8	0.21601082	17.4264	0.00421304	0.10217	0.22986	0.10323057	0.1126	0.08749	0.088488	0.204686	0.474652
EGLN3	8	0.21609341	11.0583	0.00033025	0.13578	0.2556	0.20597489	0.23411	0.42271	0.158516	0.099255	0.495708
ZNF24	8	0.21628026	13.4289	0.00044142	0.13767	0.11391	0.11669742	0.49813	0.46704	0.108413	0.491892	0.120876
PAFAH1B1	8	0.21660998	6.14533	0	0.25724	0.16693	0.16144483	0.30326	0.14028	0.163352	0.099386	0.083403
USP22	8	0.21669393	20.8311	0.01062025	0.09932	0.1215	0.23395709	0.16323	0.07115	0.055199	0.037234	0.154753
HIRA	8	0.2167197	10.5431	0.00205199	0.40497	0.12752	0.08060326	0.13832	0.15716	0.282536	0.348253	0.078993
CDK5	8	0.21718572	20.0854	0.00075632	0.04878	0.42969	0.18604536	0.16905	0.40639	0.212838	0.481324	0.185718
ABCA1	8	0.21735343	19.3367	0.00174264	0.09278	0.30873	0.06630918	0.15588	0.16166	0.088883	0.116149	0.38433
FTL	8	0.2175783	9.70682	0.000101	0.41595	0.08804	0.36686346	0.47683	0.36683	0.162185	0.152786	0.152754
PLSCR1	8	0.21862428	8.67182	0.00026722	0.28416	0.41288	0.09083803	0.04639	0.06666	0.262533	0.42606	0.10117
SHFM1	8	0.2192769	15.6463	0.00084345	0.12136	0.0966	0.44037338	0.06823	0.09804	0.091802	0.484705	0.085118
MAP3K7	8	0.21934871	10.9776	6.9545E-05	0.20179	0.38131	0.32003124	0.08033	0.09503	0.169984	0.151225	0.097454
GNA15	8	0.21965489	13.8437	0.00185205	0.09567	0.13685	0.17929054	0.07448	0.16805	0.416129	0.149709	0.116462
BAIAP2	8	0.22023836	15.291	0.00265174	0.36877	0.21801	0.08218948	0.30474	0.15603	0.079795	0.255518	0.116508
TFAP4	8	0.22098002	8.55694	0.00044247	0.24571	0.09276	0.35302859	0.18292	0.18223	0.41118	0.105724	0.337392
IRF7	8	0.22154113	8.54026	0.00022148	0.14622	0.15697	0.29735146	0.27353	0.20184	0.343924	0.19501	0.325799
SIRT7	8	0.22174131	7.73183	1.9801E-05	0.18165	0.18069	0.26139741	0.15177	0.21961	0.358123	0.195619	0.324273
PVR	8	0.22238904	15.5744	0.00041709	0.07214	0.45105	0.33944064	0.14106	0.14799	0.194673	0.152902	0.216972

Table S6

SIRT1	8	0.22292905	11.1893	0.00518473	0.17909	0.1103	0.20141339	0.10955	0.07892	0.110411	0.060742	0.14642
TNIK	8	0.22472778	10.2161	0.0006401	0.10875	0.11879	0.33749775	0.11167	0.06674	0.090759	0.091665	0.08382
LMNA	8	0.22549437	17.367	0.00664588	0.09574	0.41791	0.19875427	0.26621	0.13731	0.07474	0.086083	0.10606
FGFR1	8	0.22585589	15.7189	0.00494461	0.19521	0.13873	0.11910585	0.08086	0.11889	0.094263	0.100227	0.09552
WRAP73	8	0.22670688	11.9158	0.0009327	0.40815	0.21793	0.32102164	0.32841	0.28427	0.082602	0.205437	0.218768
IGFBP3	8	0.22769803	10.3066	0.0003078	0.1449	0.13468	0.24703549	0.12684	0.0925	0.45535	0.07201	0.117454
APEX1	8	0.2279694	17.8183	0.00468219	0.09302	0.14744	0.13752265	0.3062	0.10327	0.148041	0.043933	0.08332
EP300	8	0.23111829	8.91481	5.8564E-05	0.22535	0.09242	0.44111569	0.24579	0.43761	0.214798	0.383817	0.321373
IGF2	8	0.23208679	10.5596	0.00010117	0.10057	0.32059	0.23788244	0.29244	0.13478	0.232811	0.272655	0.246986
TAF10	8	0.2324116	5.89416	0	0.27236	0.4117	0.25780861	0.14496	0.21409	0.360802	0.394966	0.129157
EIF4A2	8	0.23278674	5.78651	0	0.35353	0.46926	0.22809142	0.09746	0.40161	0.34938	0.171339	0.154832
DCUN1D1	8	0.23385319	9.00112	0.00011097	0.21434	0.14223	0.33185725	0.11344	0.14491	0.292805	0.104236	0.212974
CIC	8	0.23400172	9.22402	0.00399273	0.26286	0.11067	0.23064411	0.09273	0.18168	0.344373	0.122798	0.18074
DICER1	8	0.23585819	21.986	0.00415733	0.13699	0.37622	0.05119606	0.07051	0.14724	0.060294	0.384404	0.139537
PRKAR1A	8	0.23687682	9.39039	0.00048581	0.18781	0.33539	0.23033428	0.23591	0.2114	0.126628	0.150337	0.191202
SMAD4	8	0.23892458	15.3042	0.01055584	0.44915	0.06878	0.24725295	0.04859	0.09312	0.04016	0.095294	0.058902
SYT1	8	0.2410544	9.22565	0.0001232	0.39883	0.18666	0.15520902	0.24722	0.15819	0.123138	0.151996	0.344522
CBX3	8	0.24160023	9.79263	0.00234344	0.11923	0.22981	0.23407677	0.3639	0.05794	0.356377	0.088442	0.255448
GLI3	8	0.24177968	9.14141	7.2887E-05	0.47099	0.15366	0.20846901	0.06493	0.1665	0.414291	0.104861	0.31008
GNAI2	8	0.24208602	9.45598	0.00101002	0.22816	0.13016	0.45790406	0.15208	0.11693	0.196484	0.154135	0.477766
IGF1	8	0.24249419	11.2017	0.00109877	0.07482	0.03939	0.17992932	0.05642	0.12094	0.342501	0.479834	0.099669
TRAF4	8	0.24261609	12.7021	0.0044836	0.11138	0.10155	0.34460133	0.33066	0.21946	0.129404	0.418172	0.215453
BMP2	8	0.24309444	13.2329	0.0002546	0.17832	0.09648	0.13094868	0.24647	0.37272	0.098807	0.305054	0.143553
ABI2	8	0.2432273	24.7087	0.04911988	0.24535	0.06442	0.13821903	0.04382	0.19506	0.028987	0.288924	0.386019
CCNA1	8	0.2432884	7.62414	1.0459E-05	0.1857	0.18155	0.35573785	0.1594	0.18075	0.288201	0.219188	0.288896
RNF115	8	0.24433071	15.7046	0.00639214	0.18218	0.2415	0.0955949	0.07345	0.49929	0.124633	0.060792	0.458403
REL	8	0.24488285	29.2179	0.02441209	0.03917	0.10406	0.02032404	0.0995	0.07713	0.078041	0.031097	0.056872
IL1R1	8	0.24508612	13.2356	0.00182856	0.13736	0.28752	0.34483709	0.29395	0.08454	0.498049	0.045691	0.045273
HSPA9	8	0.24531357	7.26075	2.7907E-06	0.28175	0.41297	0.16979105	0.15983	0.33095	0.230427	0.427757	0.231472
MLLT3	8	0.24564355	17.3795	0.00213765	0.13963	0.08317	0.04973695	0.1731	0.07475	0.263892	0.066126	0.070586

Table S6

COPS6	8	0.24661284	10.8206	0.00020095	0.22201	0.07492	0.29727648	0.3523	0.28799	0.139938	0.228837	0.217239
PAK1	8	0.24711008	8.25497	0.00021564	0.20283	0.22507	0.14763283	0.34119	0.41039	0.354306	0.381231	0.071742
CHEK2	8	0.24772207	14.7978	0.00360481	0.08845	0.09296	0.33847462	0.23219	0.07272	0.372984	0.055576	0.263724
TUBA4A	8	0.24785441	10.2436	0.00026287	0.14553	0.12801	0.3136828	0.09339	0.102	0.335644	0.089231	0.18753
HSP90AB1	8	0.24937286	6.90071	0	0.14006	0.26995	0.37420757	0.08346	0.16337	0.452142	0.163281	0.117515
EXOSC5	8	0.24956405	18.8719	0.01253018	0.09487	0.08704	0.06590185	0.31601	0.06899	0.135445	0.082658	0.09825
BACE1	8	0.24980287	9.99769	0.00014886	0.10965	0.1643	0.4156675	0.10468	0.23988	0.271473	0.153159	0.235392
MGMT	8	0.24982101	13.2299	9.2245E-05	0.13033	0.17708	0.09227485	0.39364	0.45513	0.235371	0.406851	0.210569
RYR2	8	0.25211538	9.80664	7.0825E-05	0.43847	0.25852	0.34388537	0.15984	0.14318	0.143453	0.170009	0.079206
IRF5	8	0.25323729	13.007	0.00357981	0.20654	0.15557	0.43527205	0.08817	0.32558	0.097411	0.08642	0.348089
DDX56	8	0.25327364	18.0352	0.01599639	0.04835	0.05304	0.24499868	0.16223	0.19925	0.341616	0.277743	0.38876
ITSN2	8	0.25340156	11.617	0.00027249	0.11219	0.13331	0.30645951	0.14313	0.14449	0.484706	0.093648	0.213595
ITGB1	8	0.25538752	9.44917	0.00066497	0.09746	0.38127	0.33075847	0.27998	0.10998	0.18484	0.365533	0.101825
S100A10	8	0.25630197	9.59372	0.00014241	0.21195	0.15538	0.13321581	0.08683	0.26687	0.339593	0.134121	0.261403
PCBD1	8	0.2568268	7.41866	9.1885E-06	0.37717	0.09806	0.32421367	0.42359	0.33618	0.359975	0.413779	0.182515
THRA	8	0.2594001	9.57793	0.00059193	0.1611	0.30705	0.13951169	0.31275	0.15048	0.486773	0.142825	0.287894
SETDB1	8	0.25953556	21.3472	0.01584837	0.03489	0.04467	0.02908214	0.17731	0.21795	0.151751	0.043186	0.027444
TBC1D4	8	0.25958531	12.0909	0.00020918	0.26661	0.22545	0.08810543	0.19252	0.09164	0.451602	0.140477	0.26558
MAPK3	8	0.26007591	15.4066	0.00858561	0.49568	0.06937	0.28938694	0.05654	0.12175	0.089159	0.142925	0.07551
PTBP1	8	0.26050941	6.84052	0	0.19167	0.20136	0.33285642	0.22619	0.31015	0.346236	0.194955	0.45771
MMP14	8	0.26393374	7.16049	1.6359E-05	0.24154	0.35323	0.38830794	0.3331	0.35153	0.317476	0.273505	0.097552
MYOD1	8	0.26420058	5.10342	0	0.45944	0.17852	0.3305174	0.25349	0.29139	0.30515	0.490975	0.06778
PML	8	0.26448291	15.0118	0.00395116	0.12864	0.22958	0.0970922	0.46211	0.14802	0.109629	0.115034	0.068343
ACTN2	8	0.26474705	14.0631	0.00036099	0.09436	0.09726	0.47291151	0.40867	0.15723	0.144957	0.17497	0.116916
TDP2	8	0.26506095	18.9534	0.00901426	0.20918	0.09687	0.05850068	0.27106	0.10844	0.09414	0.123367	0.407234
CDC7	8	0.26546379	14.2036	0.00114024	0.08357	0.48747	0.12495009	0.26312	0.1913	0.184836	0.21116	0.096344
E2F1	8	0.26575799	26.6804	0.03892006	0.48571	0.09223	0.06600315	0.07029	0.06786	0.04374	0.088363	0.146385
SIRT2	8	0.26591875	13.2461	0.00486671	0.13443	0.05828	0.11346375	0.27088	0.10549	0.150809	0.09061	0.398528
SRI	8	0.26607895	9.84821	0.00093573	0.13057	0.31816	0.48676215	0.46201	0.3298	0.128363	0.232016	0.15198
DEDD	8	0.26643853	12.8228	0.00541533	0.08377	0.06628	0.19845437	0.07972	0.03902	0.129634	0.340888	0.091716

Table S6

EGFR	8	0.267416	18.9007	0.00232749	0.06699	0.44723	0.06187357	0.10283	0.0634	0.352588	0.209474	0.097805
NOTCH1	8	0.26787033	12.8665	0.00139846	0.12873	0.49739	0.11363842	0.36685	0.28806	0.157296	0.146624	0.169531
ITGA6	8	0.26927263	12.7138	0.00098025	0.45896	0.10917	0.15008477	0.12351	0.05708	0.153927	0.077505	0.148078
IFNAR2	8	0.26943535	11.0993	0.00043773	0.23647	0.35629	0.14796423	0.16162	0.2081	0.122469	0.16537	0.448983
POT1	8	0.26953186	15.7056	0.00057049	0.09088	0.15665	0.37873004	0.24433	0.26261	0.091436	0.127469	0.324165
RAD51	8	0.27010405	18.6876	0.01097761	0.06077	0.077	0.15408139	0.09198	0.05682	0.248518	0.190979	0.327176
TRIP6	8	0.27023091	25.1321	0.02821614	0.05101	0.06858	0.0486911	0.03178	0.03548	0.215947	0.096018	0.369417
BBS1	8	0.271294	16.7143	0.00796724	0.06365	0.11283	0.11595436	0.08001	0.27656	0.287169	0.225039	0.275209
HDAC5	8	0.27205631	9.4298	0.000581	0.41573	0.14901	0.15296985	0.15648	0.45553	0.415806	0.124471	0.335881
RANBP2	8	0.27444252	4.19867	0	0.35649	0.17379	0.488112	0.21308	0.34462	0.347321	0.402083	0.315256
CHD4	8	0.27523067	16.7824	0.00566255	0.24022	0.14867	0.12755854	0.09973	0.16265	0.104278	0.066699	0.30265
BAG6	8	0.27619704	23.7299	0.01317739	0.15348	0.32637	0.03028073	0.07699	0.0886	0.108546	0.306715	0.04472
NMI	8	0.27623455	19.6912	0.0092399	0.13227	0.06282	0.0725678	0.37276	0.3444	0.062441	0.273521	0.098753
WDR48	8	0.27720516	27.1784	0.03541718	0.04359	0.08285	0.07316525	0.08504	0.0367	0.094292	0.071718	0.061317
UNC119	8	0.27810749	8.44801	0.00066467	0.16224	0.45586	0.31219991	0.27736	0.33397	0.153685	0.330741	0.117227
MCC	8	0.2782716	13.5175	0.00020522	0.08934	0.29444	0.27998501	0.14812	0.11554	0.129627	0.247813	0.266504
WDR82	8	0.27876168	13.0721	0.00767444	0.3436	0.07837	0.08707307	0.28073	0.06105	0.251695	0.096206	0.08739
VCAN	8	0.27924262	10.2339	0.00111954	0.33519	0.12064	0.05961065	0.03752	0.21692	0.430154	0.256913	0.090475
GABARAPL2	8	0.27952295	19.964	0.03892197	0.0513	0.04004	0.06221602	0.23992	0.05425	0.054779	0.055553	0.079215
EPS8	8	0.28032173	15.1335	0.00355372	0.14404	0.32527	0.40930299	0.25952	0.33524	0.073433	0.107791	0.186778
TCF3	8	0.28188482	6.17393	0	0.42289	0.46077	0.31113661	0.37314	0.22086	0.290683	0.346378	0.140351
FXR2	8	0.28201319	12.6751	0.00157449	0.14425	0.40235	0.13216766	0.35398	0.14258	0.111942	0.262196	0.138584
CUL1	8	0.28208147	12.8543	0.00036172	0.11182	0.13795	0.19459034	0.0674	0.07699	0.123733	0.203302	0.365553
RALGDS	8	0.28280748	10.4105	0.0008456	0.21331	0.05911	0.42726489	0.30352	0.13515	0.27882	0.388736	0.146751
HSP90AA1	8	0.28475908	14.5243	0.00028093	0.11916	0.08343	0.11336931	0.3001	0.42029	0.172823	0.396591	0.250205
ZSCAN1	8	0.28549759	9.33009	0.00105191	0.18989	0.0647	0.19468073	0.1388	0.2425	0.20617	0.459841	0.1319
CRKL	8	0.28707527	9.04688	0.00031197	0.28685	0.16144	0.2218292	0.25707	0.43091	0.182955	0.155896	0.165256
TSG101	8	0.28884999	10.8518	0.00016694	0.12766	0.13567	0.15854688	0.17336	0.17011	0.417737	0.202477	0.417988
PFKM	8	0.28962454	12.1874	0.00116533	0.12373	0.29175	0.48345207	0.23158	0.17554	0.112524	0.331428	0.089092
S100A9	8	0.28990113	15.4148	0.00438122	0.13913	0.45833	0.07232333	0.08493	0.23851	0.172527	0.264709	0.162243

Table S6

NINL	8	0.29180378	7.02464	1.463E-06	0.12995	0.41935	0.23324711	0.38265	0.2453	0.345179	0.412249	0.419079
RAD21	8	0.29252471	15.2701	0.00429473	0.28807	0.05731	0.29265707	0.10393	0.1757	0.082828	0.16833	0.065138
NFKB2	8	0.29265434	9.63261	0.00076613	0.10637	0.18945	0.37964362	0.20103	0.28625	0.383339	0.219305	0.219112
SYNCRIP	8	0.29271476	10.2126	0.00016482	0.16623	0.14414	0.15383258	0.10481	0.13388	0.233964	0.159496	0.242926
SNX4	8	0.29311826	17.2902	0.00134067	0.06098	0.08561	0.2622117	0.13135	0.07303	0.176124	0.108554	0.453128
XRN1	8	0.29494545	19.4355	0.0351032	0.07048	0.02247	0.12078984	0.05693	0.0339	0.171984	0.034785	0.085627
YWHAG	8	0.29552108	5.78035	0	0.31025	0.11903	0.48882747	0.09864	0.18825	0.301184	0.449027	0.122519
TERF2	8	0.296634	14.3236	0.0089005	0.45384	0.05769	0.19109413	0.05976	0.22672	0.074207	0.082121	0.215924
NEDD8	8	0.29759249	8.99551	0.00013189	0.1372	0.19158	0.37544991	0.12147	0.08938	0.232344	0.121571	0.122838
NSFL1C	8	0.29778012	22.7823	0.01082	0.03868	0.04874	0.03235966	0.2195	0.25785	0.08495	0.033662	0.038405
CUL3	8	0.29787706	18.2132	0.01382721	0.07414	0.02799	0.03947203	0.08922	0.46459	0.468655	0.059471	0.031597
AKT1	8	0.29930389	11.1091	0.00189604	0.34921	0.19781	0.1433722	0.47878	0.18323	0.16535	0.099184	0.157262
RGS2	8	0.29946141	21.3775	0.01593707	0.04842	0.05191	0.07339145	0.17637	0.0744	0.052797	0.129213	0.160239
EXOC1	8	0.30049676	15.0269	0.0041876	0.07938	0.07584	0.16934952	0.34123	0.18927	0.238294	0.227656	0.172294
NEB	8	0.30240994	7.70695	0.00035718	0.40941	0.11949	0.4068381	0.08192	0.11373	0.102954	0.23738	0.059625
OTUD4	8	0.30399971	19.0825	0.00248077	0.0689	0.09754	0.37750703	0.16645	0.1423	0.112152	0.113174	0.079209
GABARAP	8	0.30423032	10.0272	0.00151602	0.12569	0.07776	0.31095536	0.43944	0.09365	0.307674	0.254284	0.152253
CDH5	8	0.30549005	12.2492	0.00058975	0.08208	0.06101	0.2279372	0.03587	0.12977	0.489128	0.085737	0.027114
FASLG	8	0.3056038	16.594	0.00182697	0.06096	0.17522	0.38261654	0.30273	0.07404	0.411238	0.153539	0.195855
MEIS1	8	0.30729019	15.364	0.00083627	0.05388	0.11325	0.19903511	0.41133	0.18249	0.133769	0.088482	0.041024
BRF2	8	0.30777327	10.3454	0.00131605	0.195	0.22131	0.40788571	0.34752	0.42282	0.328567	0.085778	0.320943
SUFU	8	0.3080516	11.7589	0.00114073	0.1003	0.31171	0.17177438	0.10521	0.2584	0.365484	0.124027	0.350653
SCN9A	8	0.31248091	18.6015	0.0069877	0.05685	0.27494	0.0782782	0.04982	0.21199	0.068264	0.043342	0.12738
GRIN2B	8	0.31386709	14.3892	0.00039265	0.33908	0.06729	0.41797946	0.20658	0.14249	0.088797	0.076263	0.167692
PRKCA	8	0.31563672	13.3132	0.00174786	0.48229	0.29539	0.04952022	0.14942	0.14622	0.274568	0.065379	0.032481
CD63	8	0.31598145	16.5944	0.00745558	0.10757	0.35979	0.30648178	0.16892	0.46864	0.070987	0.148955	0.213532
EWSR1	8	0.31608062	9.31667	6.7949E-05	0.14298	0.18227	0.42132783	0.19261	0.18022	0.356779	0.140853	0.366363
LSM7	8	0.31756665	11.5919	0.00130644	0.37085	0.10493	0.19941441	0.38697	0.3177	0.111438	0.315986	0.251905
MAPK1	8	0.32256	18.7799	0.00913451	0.38391	0.17788	0.07053549	0.12909	0.16741	0.052117	0.15279	0.051408
NEDD9	8	0.32281182	19.6471	0.00144517	0.06663	0.07154	0.08301393	0.07048	0.42603	0.347165	0.459632	0.095848

Table S6

NR2C2	8	0.32385105	10.855	0.00088371	0.42427	0.08838	0.15467556	0.13712	0.45298	0.239628	0.1565	0.283434
EXOSC10	8	0.32427248	10.6167	0.00336924	0.13114	0.27006	0.35923592	0.11449	0.07853	0.084685	0.322889	0.374487
DMWD	8	0.3249161	6.83786	0	0.49896	0.37911	0.4051703	0.40943	0.31726	0.289504	0.270059	0.126888
NFYC	8	0.32610851	13.475	0.00146618	0.14052	0.13566	0.13829297	0.24388	0.26159	0.174714	0.083675	0.12601
STAT5A	8	0.32630033	17.8846	0.0128564	0.06028	0.11491	0.42162726	0.11765	0.28958	0.216575	0.322393	0.128791
UBE2G2	8	0.32675681	15.3191	0.00220571	0.22094	0.22158	0.06729002	0.06253	0.05781	0.150739	0.327829	0.220919
RPAP3	8	0.32765858	18.3091	0.00205887	0.06298	0.05137	0.21746267	0.3474	0.27141	0.093584	0.276508	0.235521
SDCBP2	8	0.32817005	10.3222	0.00095703	0.16073	0.19924	0.16392374	0.06917	0.13889	0.462792	0.083898	0.129884
FKBP4	8	0.32823214	13.1674	0.00268174	0.40145	0.17213	0.16454093	0.37426	0.07786	0.075216	0.281813	0.200684
PSMB9	8	0.32894072	26.2594	0.00625985	0.16172	0.04743	0.03782984	0.38121	0.0608	0.054325	0.125468	0.087705
ACTA1	8	0.32953808	12.1232	0.00155881	0.3366	0.4662	0.08939728	0.19316	0.19254	0.14758	0.323053	0.174309
DYNLL1	8	0.33119756	9.30678	0.0005782	0.20748	0.2811	0.18208106	0.4089	0.26415	0.216526	0.158703	0.090534
ERBB4	8	0.33183807	12.5963	0.00033433	0.24983	0.09415	0.10271938	0.07617	0.31733	0.144051	0.066391	0.082045
APC	8	0.33200445	9.51967	6.8102E-05	0.42239	0.12339	0.44092743	0.16665	0.09981	0.11784	0.496351	0.458354
CCR10	8	0.33247792	16.0304	0.00821357	0.10356	0.45403	0.0840569	0.35347	0.16278	0.362396	0.105257	0.13646
ARHGEF11	8	0.33275158	14.7235	0.00328398	0.33124	0.16532	0.09196243	0.09397	0.19966	0.121023	0.061934	0.09302
LRP6	8	0.33521545	12.9591	0.00094996	0.10275	0.08556	0.13568377	0.21121	0.3127	0.316359	0.378766	0.177604
ZBTB17	8	0.33675231	6.90818	0	0.38189	0.19984	0.20517009	0.25646	0.1136	0.210285	0.279477	0.36194
SKIL	8	0.33809452	6.02969	0	0.21373	0.10156	0.2607076	0.31484	0.0795	0.296475	0.445779	0.057043
SOD2	8	0.33857622	21.6947	0.00355879	0.04613	0.0942	0.34419689	0.12737	0.31039	0.260504	0.24412	0.304461
FLNC	8	0.33954298	11.6792	0.0045816	0.16468	0.05838	0.3113756	0.42076	0.41215	0.144437	0.081907	0.05205
GNA13	8	0.33996906	7.89782	0.00011053	0.24121	0.27231	0.16927902	0.47309	0.36748	0.482432	0.172645	0.186275
FAM46A	8	0.34157307	14.2359	0.00057126	0.1092	0.04843	0.19508457	0.45653	0.10647	0.093086	0.12853	0.185625
GHR	8	0.34506273	17.3684	0.00176888	0.13248	0.19476	0.15870961	0.14343	0.15846	0.080563	0.096635	0.317301
IRAK2	8	0.35073373	6.71398	0	0.31796	0.42461	0.15632577	0.07074	0.268	0.410013	0.076899	0.036653
COL2A1	8	0.35226143	15.2419	0.00060907	0.07358	0.20254	0.26726849	0.13194	0.13192	0.147883	0.171536	0.149083
GRB2	8	0.35461683	8.0208	3.2965E-05	0.16266	0.22035	0.18817794	0.47552	0.14786	0.369922	0.226095	0.227697
TRAF2	8	0.35503545	13.6701	0.00839674	0.06856	0.31591	0.15210193	0.08469	0.11079	0.274874	0.051745	0.048388
STAMBP	8	0.35532637	13.9038	0.00336632	0.40233	0.08014	0.15457208	0.41382	0.3315	0.087749	0.242521	0.095859
MAP1LC3B	8	0.35576058	4.45378	0	0.3214	0.19759	0.40396865	0.40797	0.35257	0.371443	0.237212	0.247006

Table S6

NEK6	8	0.3575614	12.624	0.00232754	0.17334	0.37564	0.07091228	0.26918	0.1044	0.075049	0.393063	0.037587
CCR3	8	0.35769401	14.9131	0.00226451	0.16703	0.13167	0.21351785	0.12565	0.11191	0.091958	0.167747	0.201988
APPBP2	8	0.35880618	9.68653	0.00014143	0.13939	0.13841	0.29221333	0.15233	0.18959	0.39002	0.150841	0.226109
TJP1	8	0.3588843	18.6938	0.00317736	0.1153	0.07939	0.07612382	0.08897	0.19148	0.24673	0.211769	0.088319
TXNRD1	8	0.35974407	13.3496	0.00123209	0.45809	0.08259	0.12073139	0.13446	0.07896	0.094415	0.230838	0.49728
CREBBP	8	0.36146488	7.64255	7.5734E-05	0.24157	0.177	0.18545817	0.24521	0.27343	0.240903	0.271475	0.217112
LYAR	8	0.36218253	13.8713	0.00155943	0.0926	0.3326	0.40944012	0.06307	0.18689	0.166525	0.089043	0.462926
DFFA	8	0.36232729	8.95957	0.00039608	0.15587	0.19524	0.15313449	0.14244	0.20883	0.267313	0.439618	0.204316
GEM	8	0.3639079	10.3492	0.00041966	0.20181	0.08259	0.11337462	0.09099	0.19049	0.145263	0.147164	0.070915
CAPN2	8	0.3639976	13.9559	0.00031961	0.09704	0.12337	0.36510584	0.12458	0.15277	0.191863	0.110013	0.439155
PPP1CC	8	0.36418297	8.63841	0.00013464	0.34058	0.11452	0.2083231	0.07018	0.45065	0.255216	0.10289	0.217699
ECT2	8	0.36433502	11.4215	0.00060283	0.15	0.16023	0.41419994	0.32077	0.16964	0.139565	0.171989	0.16286
PDCD6	8	0.36570902	26.0144	0.01986167	0.11407	0.21494	0.0350856	0.08114	0.04717	0.163581	0.078109	0.306148
MEPCE	8	0.36604891	29.4698	0.09805614	0.23434	0.0422	0.03112512	0.02166	0.02989	0.130272	0.04483	0.062111
SMAD3	8	0.36651428	13.3786	0.00031035	0.07842	0.20791	0.19529326	0.13627	0.25559	0.282206	0.341392	0.123311
SRSF3	8	0.36684093	10.925	0.00309158	0.16209	0.21729	0.13815895	0.34573	0.11613	0.242685	0.084226	0.087531
ANXA2	8	0.36803766	12.8775	0.00016177	0.1302	0.36449	0.20978246	0.46499	0.18606	0.106818	0.130509	0.104281
RCHY1	8	0.37013806	15.6766	0.00229394	0.47873	0.19314	0.07704623	0.08025	0.03548	0.288313	0.043175	0.458212
PLEKHA5	8	0.3704305	11.1981	0.00140572	0.18323	0.49116	0.27504977	0.14954	0.10388	0.150476	0.069681	0.170286
CTBP1	8	0.37346578	22.7137	0.01653359	0.06495	0.12085	0.06363461	0.1862	0.19967	0.098632	0.236743	0.113594
PSMB8	8	0.37388007	24.1754	0.00568762	0.15368	0.04597	0.0420565	0.23646	0.0714	0.053502	0.169682	0.090036
ACTB	8	0.37417555	8.0198	2.4654E-05	0.20248	0.30989	0.16279514	0.41502	0.11505	0.212894	0.281905	0.254706
P4HB	8	0.37466357	13.3035	0.01896242	0.14981	0.19809	0.19499813	0.17054	0.14474	0.082512	0.490319	0.173669
GMNN	8	0.37489054	4.3661	0	0.34704	0.44867	0.38780826	0.39925	0.2069	0.207111	0.271354	0.358933
TCEB3B	8	0.37603746	4.25119	0	0.3433	0.30826	0.40616029	0.41371	0.19691	0.445442	0.207198	0.363757
HMGB1	8	0.37658499	16.274	0.00070434	0.06803	0.08114	0.18371878	0.207	0.15166	0.498733	0.080735	0.125817
ISL1	8	0.37658709	18.7826	0.00456326	0.11804	0.02007	0.04216478	0.0831	0.25227	0.073206	0.045976	0.031868
UBE2H	8	0.37692475	8.97242	0.00030071	0.4126	0.37597	0.12977605	0.12341	0.39137	0.297877	0.199159	0.132829
MME	8	0.37791467	13.7229	0.00116799	0.11846	0.10101	0.44298728	0.07653	0.05253	0.097078	0.23228	0.074369
TFAP2C	8	0.37918105	11.7794	0.00061225	0.29206	0.06102	0.38679056	0.24028	0.13609	0.106234	0.15071	0.140599

Table S6

EPHB1	8	0.38024211	17.924	0.00147709	0.09572	0.07932	0.08489955	0.32209	0.16217	0.05855	0.167649	0.057575
BANF1	8	0.38028283	16.1245	0.00692004	0.09497	0.07014	0.48246343	0.09769	0.07368	0.096721	0.166604	0.381664
STAT1	8	0.3808763	8.28389	0.00016937	0.13311	0.4402	0.18994849	0.46675	0.42747	0.419251	0.193194	0.443055
PHLDA3	8	0.38115812	13.9586	0.0019118	0.22776	0.12788	0.1179209	0.2784	0.08592	0.104484	0.12847	0.108591
ITGB4	8	0.38242941	7.71133	0.00010983	0.16137	0.43002	0.20779251	0.44808	0.25016	0.31339	0.205852	0.252822
SKP1	8	0.38312303	7.16984	4.4867E-06	0.21106	0.21616	0.19013858	0.14819	0.35683	0.430438	0.245319	0.262618
CD14	8	0.3853323	11.4346	0.00044828	0.13267	0.08365	0.15945198	0.11026	0.13563	0.303808	0.114205	0.133148
AGT	8	0.38535754	10.2078	0.00019752	0.25446	0.08332	0.18679721	0.09498	0.30333	0.491379	0.102096	0.116175
EIF3H	8	0.3856013	14.8159	0.00121355	0.13868	0.25843	0.11778619	0.26246	0.2821	0.499922	0.065863	0.08871
RAB5A	8	0.38723381	15.2549	0.00293993	0.22535	0.08222	0.15190516	0.05118	0.05244	0.104646	0.111227	0.329362
MCL1	8	0.38740671	7.24636	6.1385E-05	0.16882	0.20687	0.35500046	0.39538	0.15849	0.261929	0.320616	0.281487
WBP4	8	0.38799567	11.4226	0.00308379	0.35141	0.08713	0.33528416	0.42851	0.2003	0.113505	0.153157	0.220073
BCL10	8	0.38883178	6.31918	0	0.19089	0.26506	0.27626062	0.1095	0.28188	0.305438	0.250916	0.103295
SNAP23	8	0.38941188	6.20679	0	0.39594	0.25825	0.41911067	0.25013	0.23505	0.186523	0.263933	0.32853
NR4A2	8	0.39111385	20.9081	0.00132561	0.11237	0.31015	0.05309498	0.18594	0.25611	0.195221	0.208289	0.096903
SH3GL2	8	0.39184838	10.6418	0.00017848	0.49833	0.07494	0.10752877	0.10815	0.37685	0.323281	0.488471	0.06223
RASSF1	8	0.39283344	14.914	0.01799769	0.07085	0.09294	0.36526753	0.09769	0.04164	0.158271	0.441402	0.463403
ARHGDIA	8	0.39293382	15.4753	0.03023083	0.13021	0.13202	0.24630029	0.2576	0.11308	0.067327	0.244428	0.145068
CSNK2B	8	0.39611528	23.7714	0.01384707	0.14059	0.37779	0.03295208	0.05212	0.05892	0.171288	0.303372	0.037162
CSNK1E	8	0.40073935	8.31373	0.00024366	0.48024	0.49906	0.387726	0.41864	0.44385	0.135008	0.213648	0.110288
HOXD4	8	0.40189289	10.9335	0.00081725	0.30373	0.13313	0.3853253	0.35195	0.17615	0.109243	0.19393	0.204376
TBC1D17	8	0.40395503	11.7395	0.00172781	0.21942	0.25456	0.20809274	0.09364	0.36144	0.119043	0.117869	0.115063
HOXA13	8	0.40441458	18.9231	0.00690953	0.35137	0.21719	0.34332737	0.17367	0.2427	0.051955	0.40608	0.43466
CDC42	8	0.40488484	5.47403	0	0.34557	0.13825	0.24703893	0.13064	0.29763	0.262486	0.388206	0.142166
PTP4A3	8	0.40636191	12.8322	0.00095289	0.11702	0.16574	0.14785489	0.11227	0.15335	0.226522	0.341917	0.208688
NEDD4L	8	0.40641932	16.7582	0.00065962	0.15409	0.07607	0.07704972	0.08237	0.22383	0.327657	0.466556	0.307048
PRNP	8	0.40793748	8.50955	2.8144E-05	0.11574	0.28296	0.23082224	0.31698	0.39611	0.367459	0.458251	0.2839
DDX20	8	0.40944678	13.0885	0.00207432	0.15418	0.07527	0.16147443	0.34999	0.11305	0.102557	0.446467	0.325909
RICTOR	8	0.41065549	15.4062	0.00436763	0.12984	0.10688	0.09558332	0.06127	0.04019	0.101642	0.438961	0.466182
MAP4K4	8	0.41088301	10.7242	0.00090638	0.22254	0.46714	0.08576959	0.13019	0.04468	0.254741	0.283342	0.222733

Table S6

TLR3	8	0.41164199	11.7884	0.00047435	0.15397	0.47614	0.09966915	0.34551	0.25848	0.256775	0.479252	0.30723
FGF2	8	0.41256599	12.3122	0.00032367	0.08971	0.16157	0.47413173	0.17652	0.20916	0.323271	0.167681	0.17009
PTN	8	0.41744459	8.75182	6.1047E-05	0.49377	0.092	0.21507317	0.10975	0.22724	0.270718	0.435381	0.365143
NCK2	8	0.41840898	15.0991	0.00155875	0.17068	0.0693	0.10873427	0.06315	0.2513	0.075431	0.054899	0.087978
ATXN3	8	0.41871203	25.2823	0.03121746	0.0598	0.16457	0.04854434	0.08602	0.03644	0.047383	0.088855	0.084638
PPP2R2B	8	0.41977581	10.0588	0.0004802	0.36063	0.0856	0.49574556	0.11422	0.05799	0.312808	0.062791	0.146746
CRX	8	0.41992559	15.9603	0.00362807	0.40964	0.15055	0.06311021	0.28105	0.14837	0.3653	0.370042	0.114036
GOLGB1	8	0.42258948	7.61418	0.0002076	0.48618	0.12841	0.39768578	0.23269	0.11577	0.130462	0.194725	0.087191
ABHD16A	8	0.42354202	23.1436	0.01694425	0.12824	0.37579	0.03153822	0.0414	0.04805	0.150587	0.29193	0.030779
UIMC1	8	0.42423831	24.1633	0.02172846	0.04156	0.12826	0.45009847	0.38021	0.44276	0.183556	0.11113	0.101806
STAT3	8	0.42526132	13.0416	0.00045559	0.09031	0.10327	0.44397454	0.1247	0.18751	0.261386	0.160207	0.249658
HOMER1	8	0.42711957	18.1296	0.00460513	0.13169	0.44656	0.11460819	0.461	0.21009	0.064406	0.151213	0.081178
TULP3	8	0.42980766	13.234	0.00331754	0.10519	0.1301	0.1456822	0.10797	0.29598	0.142623	0.11957	0.101378
DDIT3	8	0.4305541	7.65457	1.6388E-05	0.1673	0.1674	0.4296264	0.30482	0.41535	0.34358	0.288605	0.163707
SRRM2	8	0.43072939	9.56941	8.433E-05	0.13379	0.12796	0.4537394	0.41106	0.32876	0.272176	0.222079	0.360056
ADRB2	8	0.43146288	16.0881	0.00129564	0.30196	0.41426	0.11859001	0.28045	0.32876	0.094899	0.086019	0.251917
POR	8	0.4326827	11.0042	0.00164058	0.11419	0.28704	0.14703973	0.15326	0.1847	0.212347	0.264732	0.233592
WDR5	8	0.43272793	14.2742	0.00262266	0.23508	0.474	0.08828438	0.33599	0.0976	0.154479	0.072993	0.113296
LAMTOR5	8	0.43378133	23.0275	0.01177731	0.12651	0.35012	0.04401727	0.23165	0.10473	0.177893	0.188119	0.107649
ATG12	8	0.43523723	12.6177	0.00265154	0.09645	0.15175	0.24267307	0.10325	0.31553	0.192409	0.272441	0.075437
RRN3	8	0.43634988	20.1636	0.03099001	0.06804	0.07951	0.1524076	0.11371	0.37541	0.063266	0.210488	0.144517
CDC20	8	0.43964636	7.42581	2.7485E-05	0.32278	0.13089	0.41413867	0.40661	0.21447	0.320942	0.236952	0.268614
TRAF6	8	0.44047817	8.65908	7.0799E-05	0.15838	0.15816	0.37925727	0.14443	0.23177	0.35595	0.152723	0.159956
STK3	8	0.44078375	17.651	0.00610561	0.41091	0.07948	0.06259566	0.28972	0.06371	0.143836	0.056239	0.11787
PRKCG	8	0.44179822	11.4336	0.0002453	0.14886	0.14895	0.21386677	0.1228	0.25034	0.147671	0.151318	0.281536
SH3GL1	8	0.44570421	13.3907	0.00266035	0.12659	0.41115	0.11786578	0.25076	0.26638	0.129345	0.17226	0.093276
SEC13	8	0.44887214	15.3813	0.00547137	0.30168	0.12884	0.05634981	0.2242	0.21397	0.199568	0.090293	0.032098
TMED2	8	0.45056938	17.4129	0.00917597	0.09726	0.18207	0.22522885	0.1627	0.32324	0.09815	0.064726	0.462047
HP	8	0.45111263	12.8946	0.00034552	0.13073	0.12033	0.29640055	0.12585	0.24948	0.16903	0.132859	0.107789
CD36	8	0.4539723	15.914	0.00060426	0.17272	0.36098	0.17307079	0.18894	0.45601	0.07406	0.116818	0.132094

Table S6

EIF2B1	8	0.45431699	18.2883	0.01322331	0.08888	0.12795	0.21371477	0.11531	0.29541	0.083352	0.052632	0.409337
UTRN	8	0.45516561	13.7461	0.00085971	0.17203	0.09703	0.06823565	0.49548	0.0484	0.35451	0.20711	0.037264
CDC6	8	0.4571524	13.6904	0.03717242	0.07681	0.27464	0.10244837	0.35405	0.09791	0.180548	0.150138	0.055526
APPL1	8	0.46090136	12.9695	0.00386233	0.14356	0.08301	0.24773099	0.10532	0.11106	0.117459	0.205355	0.308045
ASCC2	8	0.46210747	14.6951	0.00735958	0.07262	0.11234	0.13869947	0.06811	0.29918	0.073535	0.362975	0.055297
BECN1	8	0.46378429	4.0997	0	0.45518	0.22473	0.20321908	0.23967	0.48574	0.497686	0.444037	0.479859
RAC3	8	0.46418256	18.1348	0.02504539	0.31367	0.05554	0.24358388	0.41384	0.0737	0.044838	0.061481	0.198278
FN1	8	0.4661371	10.8766	0.00044782	0.2686	0.20817	0.09632	0.10592	0.12326	0.163898	0.449068	0.143024
KIAA0101	8	0.46880605	8.9572	9.3053E-05	0.16823	0.13478	0.39944571	0.15646	0.21973	0.312854	0.160724	0.216932
C3	8	0.46896553	12.2651	0.00020523	0.12164	0.20728	0.13959686	0.17622	0.47622	0.162304	0.427296	0.403838
EXOSC6	8	0.47131453	10.8137	0.01428111	0.2047	0.06071	0.26403086	0.05811	0.4235	0.222299	0.124612	0.158326
RPS6KB1	8	0.47210885	16.8172	0.00677913	0.11547	0.15383	0.26851017	0.17724	0.38218	0.077328	0.311543	0.441495
HNRNPD	8	0.47590353	9.27047	0.00141882	0.23708	0.2479	0.2732001	0.31482	0.16547	0.151895	0.128776	0.064249
PIK3R1	8	0.47602929	24.3331	0.00212535	0.05122	0.3823	0.07285164	0.23439	0.07426	0.136967	0.069265	0.411863
FBLN1	8	0.47842165	10.0537	0.00025642	0.20242	0.22465	0.13780152	0.40922	0.38882	0.154221	0.160592	0.050818
COPS4	8	0.48178538	8.62315	6.4386E-05	0.17811	0.11887	0.39799754	0.1889	0.18093	0.387292	0.210786	0.26833
STUB1	8	0.48588621	21.4652	0.01329526	0.18565	0.11821	0.05121621	0.19135	0.07027	0.101008	0.098457	0.23494
APTX	8	0.49109989	18.8398	0.00686298	0.10472	0.07155	0.16194276	0.39781	0.4406	0.068845	0.052764	0.129025
SORBS1	8	0.49330924	10.7628	0.00029508	0.09825	0.20141	0.25629802	0.21656	0.11668	0.462237	0.162064	0.18143
STK24	8	0.49406601	20.4374	0.00335111	0.18724	0.05866	0.05719324	0.05293	0.05679	0.120191	0.1405	0.320034
SRC	8	0.49618949	25.1628	0.02096598	0.10714	0.40303	0.07402696	0.0811	0.27895	0.0478	0.181591	0.476252
DTX1	8	0.49768586	12.3221	0.00152793	0.12921	0.16254	0.27517716	0.1655	0.21283	0.109037	0.24303	0.340578
ITGB3BP	8	0.49776837	17.2806	0.00466781	0.11484	0.30169	0.11713294	0.44809	0.19603	0.098239	0.132432	0.383886
GGA3	8	0.49895015	12.0392	0.00296373	0.22056	0.25551	0.10282332	0.10909	0.20634	0.294088	0.260654	0.150602
RPL30	8	0.49987824	10.4203	0.00041487	0.12615	0.24701	0.17282752	0.16062	0.3815	0.440346	0.175044	0.463972
COPS5	8	0.50372614	10.3896	0.00015069	0.12796	0.17628	0.43966199	0.20451	0.33858	0.212191	0.157597	0.269905
TCF12	8	0.50577726	9.84793	0.00021135	0.19488	0.18814	0.115305	0.21192	0.14278	0.480284	0.36924	0.343392
PARK7	8	0.50588763	8.60388	0.00038032	0.25379	0.40151	0.14118909	0.46482	0.16279	0.430451	0.146117	0.367187
UHRF1	8	0.50597863	3.93116	0	0.2618	0.23637	0.24267247	0.39507	0.42207	0.292422	0.368605	0.448305
KHDRBS1	8	0.50681491	23.8795	0.07567282	0.07271	0.35204	0.06268613	0.13856	0.17696	0.08387	0.310984	0.340027

Table S6

DTNB	8	0.50681709	14.6092	0.00511267	0.07674	0.03926	0.27497987	0.10789	0.15566	0.237802	0.075741	0.149083
DLG1	8	0.50881652	20.5928	0.00424014	0.18547	0.29672	0.06432464	0.04873	0.05844	0.183214	0.063831	0.113472
MAST1	8	0.5096231	10.238	0.00015847	0.1242	0.22571	0.37462134	0.39968	0.20857	0.247574	0.141801	0.1482
CCNB2	8	0.5106564	18.1368	0.00519853	0.06315	0.25954	0.37468674	0.23772	0.37429	0.185346	0.34356	0.458314
POLR2J	8	0.51389072	9.48313	0.00294296	0.11823	0.3937	0.45785666	0.25753	0.3667	0.212729	0.205374	0.087063
SUMO2	8	0.51450191	11.1294	0.00018775	0.13186	0.11752	0.2436718	0.34063	0.23001	0.334041	0.136697	0.172923
YWHAH	8	0.51793803	21.598	0.01675261	0.04396	0.19835	0.23815017	0.19403	0.06987	0.165504	0.212155	0.178623
DISC1	8	0.51947938	12.0909	0.00035567	0.31843	0.21279	0.10197244	0.40023	0.24568	0.456107	0.083426	0.070408
ERH	8	0.52261384	10.0031	0.00012647	0.3184	0.26805	0.11866347	0.21783	0.19598	0.167489	0.418185	0.127783
UBA52	8	0.52354345	14.7231	0.00936034	0.09147	0.09475	0.0662587	0.41982	0.0635	0.219425	0.463756	0.067376
RANBP9	8	0.52630281	10.3016	0.00014324	0.11568	0.35949	0.18518597	0.32661	0.20694	0.444865	0.195456	0.11127
RAPGEF2	8	0.52725189	22.5539	0.0013681	0.07826	0.09721	0.04519639	0.03344	0.05145	0.420673	0.471948	0.459215
TOM1L1	8	0.52911534	28.3346	0.00512609	0.0786	0.29168	0.03430106	0.05695	0.41851	0.070184	0.064816	0.353672
PTPN6	8	0.52926184	13.1668	0.00779124	0.19283	0.1011	0.09743007	0.09434	0.13142	0.212154	0.083472	0.276328
SNAP25	8	0.52935488	16.3872	0.00102397	0.08032	0.11204	0.1336818	0.24156	0.44279	0.285184	0.198809	0.452634
SUMO4	8	0.53345174	8.68431	0.00055996	0.10745	0.15539	0.425163	0.04513	0.34538	0.1857	0.19083	0.126007
GRIN1	8	0.53726578	8.94383	0.00048591	0.37116	0.12651	0.19551116	0.31701	0.26793	0.176839	0.277142	0.264204
FANCG	8	0.53867119	11.8481	0.00341038	0.12309	0.08082	0.49092374	0.16113	0.10566	0.1193	0.209608	0.3587
APOA1	8	0.53899709	7.44169	8.8141E-06	0.24436	0.30536	0.38687602	0.30268	0.34537	0.457498	0.141175	0.189668
DDX24	8	0.54012214	13.6775	0.00534964	0.23574	0.04323	0.10277665	0.06112	0.06314	0.096707	0.096999	0.046409
QKI	8	0.54079721	7.52749	1.571E-05	0.17166	0.119	0.37906431	0.16103	0.10399	0.210797	0.415123	0.382373
JUNB	8	0.54125215	12.2611	0.01513295	0.10287	0.06666	0.21466012	0.07264	0.39256	0.158122	0.204417	0.138219
PRPF40A	8	0.54423987	12.264	0.00334234	0.16315	0.24836	0.23384279	0.13099	0.09984	0.076702	0.196532	0.073957
GORAB	8	0.55192517	12.5839	0.00038704	0.102	0.29945	0.31638756	0.44876	0.14853	0.135244	0.36916	0.1684
MYD88	8	0.55221073	7.67973	3.4373E-05	0.28098	0.19037	0.19743501	0.18295	0.2869	0.186396	0.366171	0.106319
PTPN11	8	0.55348339	12.05	0.00071645	0.40732	0.1116	0.44168447	0.47458	0.09361	0.088407	0.152145	0.154988
RBBP6	8	0.55687804	14.3241	0.00091621	0.16544	0.1132	0.10110503	0.28594	0.12038	0.082279	0.22681	0.049288
CDK5RAP3	8	0.5574081	10.0201	0.00118888	0.32595	0.34217	0.14351243	0.14624	0.27137	0.44891	0.088697	0.086766
UBQLN1	8	0.55749105	15.9642	0.00701379	0.09769	0.08122	0.45396724	0.05174	0.08516	0.092794	0.061435	0.145307
PLCB3	8	0.56123124	9.36981	0.00051166	0.48333	0.23013	0.10986279	0.34518	0.32093	0.345067	0.481902	0.171107

Table S6

RELB	8	0.56292047	9.54156	9.9727E-05	0.13479	0.13836	0.22971859	0.33851	0.35111	0.338756	0.488971	0.147225
BAD	8	0.56511979	7.30612	3.9328E-05	0.49549	0.4581	0.13503986	0.42261	0.26697	0.491331	0.371782	0.181296
TGFBR1	8	0.56595023	8.50046	6.1492E-05	0.118	0.17503	0.48125071	0.12705	0.29131	0.386234	0.364447	0.234926
HSPA8	8	0.573119	18.8783	0.00027179	0.07084	0.31632	0.09117659	0.08398	0.11748	0.373208	0.203472	0.258995
USF2	8	0.57570075	20.0876	0.0062996	0.05844	0.11447	0.17298439	0.08849	0.10669	0.43006	0.08811	0.220408
TRIP10	8	0.57679244	9.79676	0.00050356	0.27212	0.21923	0.21909193	0.46693	0.22309	0.153273	0.141594	0.311013
STX1A	8	0.57827588	12.8393	0.00259796	0.10683	0.16563	0.14601474	0.3077	0.45859	0.219135	0.22855	0.116989
VTN	8	0.5817503	13.5519	0.00265854	0.18864	0.08323	0.19638524	0.28358	0.42796	0.229269	0.069302	0.129064
TSNAX	8	0.58745708	5.26198	0	0.31905	0.29914	0.2884387	0.23868	0.18389	0.363916	0.215105	0.084348
BTG2	8	0.58786608	10.7397	0.00060736	0.11359	0.15621	0.39529004	0.14935	0.32211	0.229171	0.41367	0.137461
PLOD3	8	0.58955877	6.85532	0	0.18028	0.30475	0.20969829	0.26121	0.12197	0.280739	0.444966	0.182591
RPS27A	8	0.59148074	8.63525	9.0199E-05	0.19746	0.18079	0.17953933	0.14972	0.25137	0.245951	0.192872	0.116095
COMMD1	8	0.59198982	24.8086	0.01509896	0.06107	0.47568	0.37332334	0.20258	0.09087	0.050944	0.153379	0.099123
CUL5	8	0.59217612	8.24288	2.7682E-05	0.34796	0.14055	0.24713207	0.40478	0.43023	0.238888	0.179165	0.356174
RAF1	8	0.59878483	18.9095	0.00781749	0.08033	0.11698	0.13044425	0.21231	0.3561	0.136601	0.065641	0.225007
SRPK1	8	0.5990857	10.9948	0.00402331	0.0707	0.17528	0.2373596	0.14762	0.09612	0.109509	0.138481	0.033587
NR2F6	8	0.5991125	7.36076	0.0001623	0.2781	0.08619	0.26220134	0.08519	0.22803	0.491373	0.167398	0.165957
DLG4	8	0.60012187	9.82873	0.00011093	0.36314	0.09417	0.19516985	0.31073	0.34878	0.348277	0.184315	0.392797
YWHAZ	8	0.60077032	14.734	0.00028669	0.19824	0.33188	0.30026601	0.05558	0.05612	0.072524	0.075146	0.274372
RPL14	8	0.6026048	9.74483	0.00045648	0.39197	0.37382	0.39060612	0.30535	0.28065	0.101656	0.269455	0.243164
PLA2G4A	8	0.60466752	16.0591	0.00119931	0.03766	0.22534	0.16703992	0.07718	0.03142	0.231758	0.162366	0.018423
HSPA6	8	0.60611216	13.5947	0.00802385	0.16079	0.30333	0.34020569	0.15244	0.15081	0.129424	0.075962	0.317993
MYB	8	0.60671249	14.8338	0.00192316	0.19102	0.08518	0.1074268	0.25425	0.28564	0.131316	0.215745	0.205233
CDC27	8	0.60875292	18.7299	0.01079101	0.05805	0.37475	0.45897278	0.28928	0.26797	0.065374	0.318012	0.045611
VCPIP1	8	0.61102581	10.911	0.01959262	0.40023	0.04859	0.11948123	0.12757	0.04772	0.096712	0.195701	0.124026
YWHAE	8	0.61204153	14.2091	0.00155712	0.07729	0.0657	0.15321513	0.12249	0.09569	0.229767	0.39756	0.092156
BCL2L1	8	0.61334459	13.9172	0.00046245	0.20803	0.28517	0.18415187	0.23432	0.28838	0.095361	0.11541	0.168726
MYBPC2	8	0.61470133	14.923	0.00264822	0.10677	0.1921	0.36225667	0.38715	0.49247	0.117463	0.118002	0.488845
ARRB2	8	0.62043813	11.6777	0.00023192	0.11625	0.12729	0.19720338	0.23924	0.3331	0.228621	0.241682	0.177183
CTNNB1	8	0.62644641	9.86376	0.0007804	0.27348	0.04612	0.1109835	0.1117	0.07896	0.496868	0.44858	0.073016

Table S6

DAB1	8	0.62660893	13.1758	0.00055686	0.09507	0.06097	0.13540059	0.05592	0.05958	0.06114	0.07191	0.054989
STXBP1	8	0.62752927	14.6272	0.00337987	0.41652	0.21366	0.4882263	0.35654	0.14287	0.077219	0.086728	0.159495
ATF7	8	0.63344229	9.41843	0.00057073	0.24747	0.2164	0.14978112	0.10189	0.1617	0.37563	0.105213	0.322791
RIC8A	8	0.63425456	12.9307	0.00172751	0.13684	0.35071	0.10234023	0.15781	0.19582	0.234574	0.258534	0.299747
RYK	8	0.63643601	13.392	0.00333068	0.34323	0.04961	0.07961369	0.02995	0.09231	0.147022	0.107421	0.236955
MAPK8	8	0.63797287	14.339	0.00162775	0.15053	0.11709	0.12634497	0.28414	0.2279	0.120147	0.178674	0.218967
GSK3B	8	0.63930555	8.67818	4.1823E-05	0.16482	0.11552	0.41454714	0.23264	0.43282	0.27934	0.419087	0.463349
MAP3K3	8	0.64079751	18.1961	0.01304492	0.16133	0.0469	0.07042614	0.25561	0.14956	0.104974	0.081965	0.369766
CDK2	8	0.64349615	4.87857	0	0.23312	0.32972	0.40208392	0.36852	0.48202	0.23993	0.200158	0.461453
ANXA5	8	0.64478498	14.6343	0.00109743	0.1513	0.47282	0.28824423	0.28609	0.12516	0.072021	0.434613	0.148564
VDR	8	0.6457272	14.9239	0.00117711	0.08755	0.16264	0.2727848	0.34082	0.17772	0.12168	0.434336	0.302656
TXNDC11	8	0.64632889	19.0625	0.01076697	0.07955	0.30033	0.05698501	0.19025	0.20784	0.184791	0.155515	0.048213
SMAD5	8	0.64779298	25.5823	0.0223947	0.0881	0.39452	0.03560233	0.28554	0.04873	0.073107	0.068043	0.094987
TFCP2	8	0.64846616	10.6068	0.00076245	0.19659	0.44211	0.16731618	0.15757	0.19581	0.25592	0.115765	0.445533
ATM	8	0.64930813	21.8748	0.04720573	0.08466	0.04209	0.03787537	0.02263	0.03439	0.150424	0.085425	0.490386
DNAJB5	8	0.65134794	14.4655	0.00442725	0.11559	0.09005	0.35451995	0.18015	0.10222	0.080487	0.244775	0.238181
BLNK	8	0.65610846	8.71371	0.00018623	0.15733	0.12624	0.27664088	0.44342	0.21553	0.301605	0.495056	0.333877
DAPK3	8	0.6576486	7.97619	0.00023461	0.1763	0.47608	0.28271908	0.23124	0.33755	0.46507	0.142124	0.244755
HAP1	8	0.66337071	15.1447	0.00311592	0.07049	0.18268	0.3290643	0.09234	0.44396	0.398651	0.383857	0.184081
CBL	8	0.66632835	16.1819	0.00378518	0.1314	0.09931	0.35245998	0.34694	0.2724	0.073426	0.223703	0.109877
IGF1R	8	0.66679656	15.6419	0.0006422	0.13748	0.06399	0.08634437	0.17902	0.33417	0.37237	0.298909	0.234857
ARPC2	8	0.66703702	3.95103	0	0.19363	0.32172	0.40467577	0.42458	0.43318	0.405624	0.301705	0.275857
APLP1	8	0.66723984	8.23642	3.8251E-05	0.24397	0.11843	0.35635145	0.25484	0.49564	0.371501	0.201283	0.261478
KNG1	8	0.67326476	12.4583	0.00036807	0.27046	0.07688	0.25487421	0.12657	0.2485	0.149473	0.08815	0.32689
NCOA3	8	0.67525182	9.10878	0.0002294	0.44902	0.09787	0.4987676	0.23647	0.36392	0.308169	0.165048	0.234102
SCRIB	8	0.67730512	7.12157	2.8237E-05	0.38701	0.24992	0.43055358	0.41224	0.21333	0.156401	0.32162	0.10962
F2	8	0.6805275	11.3994	0.00027463	0.2158	0.08441	0.45681581	0.19837	0.19488	0.233575	0.10182	0.378381
ELF3	8	0.68315128	11.4042	0.00073604	0.11479	0.18043	0.3486726	0.31997	0.17709	0.28021	0.112644	0.117045
SOD1	8	0.68692944	17.2903	0.0152414	0.08713	0.04628	0.09812138	0.15137	0.43283	0.169374	0.087119	0.452935
ABI1	8	0.68953331	18.6133	0.00598047	0.05814	0.14056	0.11981873	0.08524	0.2404	0.346283	0.175958	0.219334

Table S6

MYC	8	0.69297392	21.7199	0.00202746	0.07459	0.03413	0.05021521	0.05824	0.20189	0.24479	0.052213	0.362636
ETS1	8	0.69567782	8.83227	0.00021918	0.10212	0.05387	0.431133	0.06767	0.16624	0.216888	0.084577	0.037265
CCNA2	8	0.69605103	12.0607	0.00023379	0.12261	0.16664	0.19790187	0.22041	0.29256	0.196937	0.154324	0.342928
TSC1	8	0.69995826	16.2977	0.00326752	0.0995	0.0776	0.43741878	0.18884	0.42154	0.106133	0.090792	0.366673
LNX1	8	0.70092649	9.88576	0.00034857	0.36134	0.1249	0.25307589	0.17263	0.13688	0.204481	0.087185	0.107928
CDKN2A	8	0.70157921	11.7543	0.00193701	0.10381	0.40561	0.19695722	0.4237	0.07761	0.182781	0.155476	0.28881
MAPK7	8	0.7038893	8.6882	0.00221263	0.37146	0.09632	0.14164247	0.0932	0.15179	0.241528	0.316437	0.146955
PTEN	8	0.704857	15.427	0.00094034	0.0829	0.29225	0.08476209	0.48169	0.12682	0.280375	0.121119	0.061305
KXD1	8	0.70606197	10.1291	0.00333353	0.18094	0.12384	0.08909056	0.37347	0.07425	0.407264	0.27611	0.064486
MDM2	8	0.71202023	8.17853	4.9473E-05	0.30858	0.11239	0.3843044	0.21865	0.18685	0.214197	0.207879	0.181626
UCHL5	8	0.7163492	9.69961	0.00012034	0.3326	0.18726	0.24337728	0.33919	0.3343	0.120522	0.259128	0.115057
ITGB2	8	0.71945936	15.9371	0.00059358	0.16864	0.10649	0.09324036	0.40449	0.3198	0.212859	0.090429	0.139256
VIM	8	0.72090558	10.1078	0.00011468	0.17443	0.15938	0.32532858	0.42793	0.21685	0.201817	0.125985	0.152323
HIST3H3	8	0.72232271	10.4818	0.00099558	0.20669	0.36155	0.47735335	0.14752	0.48437	0.097923	0.394523	0.398192
TK1	8	0.72443771	14.3371	0.00275404	0.1249	0.14206	0.13561127	0.16484	0.13872	0.10081	0.266967	0.149523
NAP1L1	8	0.73633968	14.8246	0.00260719	0.20771	0.37159	0.06415527	0.09548	0.08558	0.244532	0.221408	0.03743
UBE2U	8	0.74063603	14.4355	0.00085131	0.16656	0.14046	0.10353105	0.23881	0.08566	0.176259	0.146092	0.104527
GRIK2	8	0.74614897	18.4591	0.00097622	0.09374	0.05799	0.05786846	0.02383	0.01927	0.089672	0.252546	0.038287
ARF6	8	0.75009139	8.87574	8.3511E-05	0.14432	0.24164	0.34885153	0.21237	0.2157	0.220312	0.189182	0.128885
BAZ1B	8	0.75257037	13.4392	0.01855569	0.10069	0.04783	0.09110545	0.32859	0.1871	0.480927	0.148319	0.05353
PARD6G	8	0.75427532	10.092	0.00116914	0.22923	0.14075	0.20411031	0.1155	0.17212	0.173436	0.112927	0.208091
ELAVL1	8	0.75432702	9.34662	0.00016395	0.1623	0.09223	0.18805118	0.13148	0.25611	0.332783	0.213963	0.093276
FBXW7	8	0.76729279	7.12609	8.3823E-06	0.28003	0.15285	0.49530139	0.23877	0.1403	0.484572	0.147898	0.171036
BMP7	8	0.77405814	18.4381	0.00114774	0.05917	0.05071	0.4184089	0.16926	0.2575	0.266843	0.16477	0.137524
TNK2	8	0.77681324	14.771	0.00609135	0.18551	0.13763	0.10139592	0.07943	0.05713	0.154949	0.096638	0.102348
CCR1	8	0.77877569	21.0563	0.01828078	0.28453	0.0681	0.08692846	0.12459	0.06636	0.048744	0.038857	0.27856
BIRC6	8	0.77917892	12.4504	0.0010542	0.30441	0.30326	0.09412159	0.16399	0.22083	0.338493	0.183094	0.193327
SMURF1	8	0.78191895	10.2274	0.00109166	0.18486	0.47658	0.18958407	0.18635	0.13225	0.144237	0.178186	0.380146
WHSC1L1	8	0.78443375	26.4839	0.08458395	0.15961	0.05488	0.03772163	0.05055	0.04275	0.038317	0.104448	0.071241
F2RL1	8	0.78700631	12.4459	0.00034762	0.11194	0.09374	0.29980638	0.11875	0.21087	0.141998	0.284573	0.247902

Table S6

TEK	8	0.79172529	22.5548	0.00331282	0.0556	0.09502	0.08450356	0.26912	0.13994	0.226126	0.099371	0.316313
DNMT3A	8	0.79399432	12.7535	0.00338946	0.11523	0.08503	0.30542597	0.05781	0.05732	0.13103	0.074582	0.387789
ITSN1	8	0.7989854	9.98311	9.1109E-05	0.18335	0.25877	0.20612065	0.24077	0.36285	0.140352	0.220918	0.169657
SNX2	8	0.80408604	20.1497	0.00545847	0.11115	0.12754	0.09598921	0.26854	0.07604	0.060842	0.085667	0.300913
RAP2A	8	0.80892468	17.209	0.0006104	0.30456	0.25802	0.46749444	0.42598	0.31241	0.062849	0.130232	0.108096
NDEL1	8	0.80928468	8.13457	3.6787E-05	0.18495	0.11968	0.3361553	0.35142	0.17304	0.33993	0.363169	0.243222
CHGB	8	0.81287139	10.8653	0.00068774	0.46464	0.06618	0.0883134	0.07398	0.12819	0.420485	0.265613	0.073694
RGS20	8	0.81712406	19.0032	0.01808528	0.06443	0.12515	0.14867673	0.09282	0.39825	0.140564	0.27087	0.076485
NFATC2	8	0.81967259	8.63488	9.7475E-05	0.292	0.0998	0.4102556	0.25999	0.07027	0.134966	0.210345	0.191082
HOXB9	8	0.82158258	11.4314	0.00218276	0.46209	0.30701	0.12282069	0.17779	0.21138	0.151401	0.102703	0.081905
ANAPC4	8	0.82905866	14.2962	0.00212162	0.10615	0.32953	0.36371028	0.28971	0.47468	0.149333	0.067851	0.075848
GNAI3	8	0.84008652	11.3154	0.00125404	0.38591	0.16116	0.26874639	0.19182	0.186	0.237827	0.083922	0.494164
VHL	8	0.84115701	11.8788	0.00572908	0.20805	0.13028	0.10331188	0.04311	0.09655	0.15076	0.062432	0.127849
CREB3	8	0.84335208	6.48194	0	0.33285	0.32746	0.4155326	0.14304	0.25723	0.230069	0.148225	0.35247
PSTPIP1	8	0.84582809	6.28104	0	0.24373	0.34944	0.30422625	0.14661	0.45821	0.403752	0.172808	0.15265
BMPR1B	8	0.84876594	13.2925	0.00225829	0.10615	0.11889	0.07016622	0.05224	0.14919	0.105849	0.16262	0.040434
HIVEP1	8	0.85019866	14.1065	0.00084498	0.22605	0.40408	0.08273306	0.15221	0.07485	0.086718	0.284705	0.103168
ATP1A1	8	0.8534814	28.385	0.02386676	0.11582	0.13012	0.05108821	0.08197	0.0673	0.025153	0.110281	0.366808
SCAND1	8	0.8558267	30.7166	0.10064356	0.07626	0.11098	0.03256671	0.06248	0.30045	0.086866	0.128069	0.129734
GFI1B	8	0.85863891	14.1041	0.00185771	0.08871	0.08914	0.40848972	0.20652	0.11246	0.16267	0.154928	0.485148
ATXN2	8	0.86027321	19.1022	0.01388018	0.08676	0.25012	0.34744048	0.07135	0.08073	0.084063	0.124893	0.092331
EIF6	8	0.87297472	11.1374	0.00242763	0.12871	0.09728	0.25704568	0.122	0.27782	0.1591	0.452164	0.196383
LZTR1	8	0.87396008	7.79572	8.9112E-05	0.49724	0.23301	0.25674544	0.23278	0.27085	0.491472	0.122936	0.480675
KDM5B	8	0.89207785	23.4963	0.01802246	0.06044	0.05117	0.05250013	0.188	0.09952	0.058052	0.087672	0.090604
USP15	8	0.89523669	14.2693	0.00251344	0.19095	0.15965	0.15034816	0.21559	0.19088	0.063277	0.372705	0.051328
GNB5	8	0.90017068	7.22496	5.0182E-05	0.31681	0.18713	0.21367684	0.19234	0.36051	0.254803	0.278367	0.142679
PBX2	8	0.90744319	14.5832	0.00093816	0.16584	0.04214	0.23730573	0.24778	0.10513	0.099911	0.097954	0.063414
UBC	8	0.90885559	9.19829	9.2091E-05	0.19562	0.17022	0.23376346	0.21667	0.184	0.154158	0.26249	0.155386
PIK3CA	8	0.91040283	18.2384	0.00186504	0.0773	0.09656	0.18391833	0.2286	0.27681	0.069941	0.114764	0.071788
CUL2	8	0.91264929	11.239	0.00019336	0.13056	0.11183	0.43127567	0.20213	0.27486	0.497242	0.126742	0.170031

Table S6

NEDD4	8	0.91764587	18.9053	0.00218745	0.06434	0.06631	0.2659729	0.15237	0.19212	0.129237	0.473755	0.224248
SMURF2	8	0.92648688	10.9405	0.01068817	0.30368	0.07127	0.23935528	0.08462	0.10968	0.290795	0.055383	0.124217
MARK3	8	0.93169535	14.4436	0.00202004	0.08244	0.29793	0.42998889	0.24573	0.11678	0.150287	0.142955	0.49075
CSNK2A1	8	0.93623672	10.5333	0.00012088	0.20532	0.1268	0.24230613	0.19173	0.30561	0.130924	0.401495	0.351289
NFASC	8	0.99125738	21.4896	0.00396757	0.19348	0.16541	0.15375696	0.14961	0.44514	0.050646	0.058047	0.426141

Table S7 Pathway Enrichment per KEGG 2021 on the significant Hubs Genes derived from Enrichr

Term	Overlap	P-value	Adjusted P-value	Odds Ratio	Combined Score	Genes
PI3K-Akt signaling pathway	10/354	2.6367E-08	4.7988E-06	13.252434	231.2702386	CSF3R;CREB1;BCL2L11;YWHAQ;YWHAB;COL6A2;INSR;ERBB2;SGK1;FGFR3
Rap1 signaling pathway	6/210	1.8983E-05	0.001727473	12.354819	134.3210354	VASP;INSR;GNAS;MAPK14;FGFR3;RHOA
MAPK signaling pathway	6/294	0.00012319	0.005785218	8.7140957	78.44219872	INSR;ERBB2;ARRB1;MAPT;MAPK14;FGFR3
Aldosterone-regulated sodium reabsorption	3/37	0.0001281	0.005785218	35.140588	314.9543398	INSR;SFN;SGK1
Parathyroid hormone synthesis, secretion and action	4/106	0.00017874	0.005785218	15.882353	137.0578923	CREB1;GNAS;ARRB1;RHOA
Viral carcinogenesis	5/203	0.00019811	0.005785218	10.389836	88.59110868	CREB1;YWHAQ;YWHAB;UBE3A;RHOA
Human cytomegalovirus infection	5/225	0.00031871	0.005785218	9.3404356	75.20207497	CREB1;GNAS;RIPK1;MAPK14;RHOA
Cell cycle	4/124	0.00032589	0.005785218	13.487755	108.2926769	YWHAQ;YWHAB;SFN;BUB3
Platelet activation	4/124	0.00032589	0.005785218	13.487755	108.2926769	VASP;GNAS;MAPK14;RHOA
Oocyte meiosis	4/129	0.00037873	0.005785218	12.94498	101.9894407	YWHAQ;YWHAB;BTRC;MAPK14
Relaxin signaling pathway	4/129	0.00037873	0.005785218	12.94498	101.9894407	CREB1;GNAS;ARRB1;MAPK14
FoxO signaling pathway	4/131	0.00040149	0.005785218	12.739836	99.62968368	BCL2L11;INSR;SGK1;MAPK14
Dopaminergic synapse	4/132	0.00041323	0.005785218	12.639668	98.48205961	CREB1;GNAS;ARRB1;MAPK14
Pathways in cancer	7/531	0.00047842	0.006219471	5.6405991	43.12249107	CSF3R;BCL2L11;ERBB2;GNAS;HIF1A;FGFR3;RHOA
mTOR signaling pathway	4/154	0.00073826	0.008542484	10.773878	77.69266976	INSR;ATP6V1E1;SGK1;RHOA
Mitophagy	3/68	0.00077974	0.008542484	18.352615	131.34141	NBR1;HIF1A;OPTN
Central carbon metabolism in cancer	3/70	0.00084851	0.008542484	17.802985	125.9032015	ERBB2;HIF1A;FGFR3
Adherens junction	3/71	0.00088429	0.008542484	17.540294	123.3209167	INSR;ERBB2;RHOA
Hepatitis B	4/162	0.0008918	0.008542484	10.224231	71.79732584	CREB1;YWHAQ;YWHAB;MAPK14
cGMP-PKG signaling pathway	4/167	0.00099846	0.009085973	9.9081007	68.45801885	VASP;CREB1;INSR;RHOA
Human papillomavirus infection	5/331	0.00180372	0.015632253	6.2694913	39.61003938	CREB1;COL6A2;GNAS;UBE3A;ATP6V1E1
Focal adhesion	4/201	0.00197324	0.016324107	8.1839843	50.97048057	VASP;COL6A2;ERBB2;RHOA
Proteoglycans in cancer	4/205	0.00211977	0.016773868	8.0194944	49.37158017	ERBB2;MAPK14;HIF1A;RHOA
Collecting duct acid secretion	2/27	0.00231795	0.01757779	31.250196	189.5971879	SLC4A1;ATP6V1E1
Toll-like receptor signaling pathway	3/104	0.0026495	0.019288338	11.789703	69.95285223	TOLLIP;RIPK1;MAPK14
HIF-1 signaling pathway	3/109	0.00302614	0.020559668	11.230755	65.14363917	INSR;ERBB2;HIF1A

Circadian rhythm	2/31	0.00305006	0.020559668	26.934415	156.0201268	CREB1;BTRC
TNF signaling pathway	3/112	0.00326713	0.021236333	10.92	62.50437569	CREB1;RIPK1;MAPK14
Leukocyte transendothelial migration	3/114	0.00343415	0.021552263	10.722162	60.83739045	VASP;MAPK14;RHOA
Growth hormone synthesis, secretion and action	3/119	0.00387435	0.023504375	10.257414	56.96329614	CREB1;GNAS;MAPK14
Shigellosis	4/246	0.00407915	0.023948542	6.6469894	36.57085372	RIPK1;BTRC;MAPK14;RHOA
Salmonella infection	4/249	0.00425821	0.024218586	6.5645981	35.83552184	DYNLT1;RIPK1;MAPK14;RHOA
Bladder cancer	2/41	0.0052884	0.029166337	20.0181	104.9396663	ERBB2;FGFR3
Vasopressin-regulated water reabsorption	2/44	0.00607017	0.032493255	18.585434	94.86691228	CREB1;GNAS
Signaling pathways regulating pluripotency of stem cells	3/143	0.00645786	0.033580867	8.4887143	42.80398054	INHBA;MAPK14;FGFR3
Phospholipase D signaling pathway	3/148	0.00709829	0.03583761	8.193931	40.54276377	INSR;GNAS;RHOA
Adrenergic signaling in cardiomyocytes	3/150	0.00736465	0.03583761	8.0816327	39.68941078	CREB1;GNAS;MAPK14
Cocaine addiction	2/49	0.00748258	0.03583761	16.604088	81.27996672	CREB1;GNAS
Vibrio cholerae infection	2/50	0.00778121	0.035890234	16.257353	78.94640668	GNAS;ATP6V1E1
Non-alcoholic fatty liver disease	3/155	0.00805631	0.035890234	7.8138158	37.67274513	BCL2L11;INSR;MAPK14
Ovarian steroidogenesis	2/51	0.00808516	0.035890234	15.92477	76.72115694	INSR;GNAS
Hepatitis C	3/157	0.00834335	0.036154538	7.7115584	36.90975418	YWHAQ;YWHAB;RIPK1
MicroRNAs in Cancer	4/310	0.00913365	0.037829863	5.2396959	24.60451146	BCL2L11;ERBB2;FGFR3;RHOA
Hippo signaling pathway	3/163	0.00924043	0.037829863	7.420125	34.75710454	YWHAQ;YWHAB;BTRC
Regulation of lipolysis in adipocytes	2/55	0.00935354	0.037829863	14.719941	68.77157327	INSR;GNAS
Hedgehog signaling pathway	2/56	0.00968363	0.038313494	14.446623	66.99359123	ARRB1;BTRC
Tight junction	3/169	0.01019196	0.039466747	7.149759	32.78990954	VASP;ERBB2;RHOA
Tuberculosis	3/180	0.01207994	0.045540395	6.7016949	29.59608541	CREB1;MAPK14;RHOA
NOD-like receptor signaling pathway	3/181	0.01226088	0.045540395	6.6637079	29.32925692	RIPK1;MAPK14;RHOA
Cortisol synthesis and secretion	2/65	0.01288247	0.046892197	12.377218	53.86426045	CREB1;GNAS
Amphetamine addiction	2/69	0.01443252	0.049080605	11.635938	49.31626158	CREB1;GNAS
Renin secretion	2/69	0.01443252	0.049080605	11.635938	49.31626158	CREB1;GNAS
Kaposi sarcoma-associated herpesvirus infection	3/193	0.01455435	0.049080605	6.2390526	26.39035194	CREB1;MAPK14;HIF1A
Epithelial cell signaling in Helicobacter pylori infection	2/70	0.01483205	0.049080605	11.464245	48.2755305	ATP6V1E1;MAPK14
RIG-I-like receptor signaling pathway	2/70	0.01483205	0.049080605	11.464245	48.2755305	RIPK1;MAPK14

Pathogenic Escherichia coli infection	3/197	0.01536933	0.049950328	6.1091753	25.50813555	RIPK1;MAPK14;RHOA	

Table S8 Pathway Enrichment per Reactome 2022 on the significant Hubs Genes derived from Enrichr

Term		Overlap	P-value	Adjusted P-value	Odds Ratio	Combined score	Genes
Signaling By Receptor Tyrosine Kinases	R-HSA-9006934	13/496	3.90768E-10	1.96947E-07	13.09689441	283.7167985	GRB7; YWHAB;INSR;MAPK14;HIF1A;RHOA;CREB1; COL6A2; ERBB2;ATP6V1E1;SGK1;HNRNPA1;FGFR3
Signal Transduction	R-HSA-162582	23/2465	1.68039E-08	4.23458E-06	5.495700246	98.38213025	PPP1R15A; GRB7; MPP3;YWHAB;INSR;ARRB1;INHBA; MAPK14;HIF1A;RHOA;CREB1;BCL2L11;YWHAQ; COL6A2; ERBB2;GNAS;RIPK1;BUB3;ATP6V1E1; BTRC;SGK1;HNRNPA1;FGFR3
Axon Guidance	R-HSA-422475	10/519	9.09025E-07	0.000152716	8.881070955	123.5436346	VASP; GRB7; MPP3;CREB1;COL6A2;ERBB2;DAG1; PABPC1;MAPK14;RHOA
Nervous System Development	R-HSA-9675108	10/545	1.41338E-06	0.000178086	8.438165616	113.6580829	VASP; GRB7; MPP3; CREB1;COL6A2;ERBB2; DAG1;PABPC1;MAPK14;RHOA
Immune System	R-HSA-168256	17/1943	6.08621E-06	0.00061349	4.418440637	53.06319926	VASP; CSF3R;DYNLT1;DTX3L;YWHAB;UBE3A; MAPK14;HIF1A;RHOA;CREB1;BCL2L11; TRIM29;TOLLIP;RIPK1;ATP6V1E1;BTRC;APOB
Signaling By NTRK1 (TRKA)	R-HSA-187037	5/114	1.2708E-05	0.00106747	18.95833333	213.7226208	CREB1;YWHAB;SGK1;MAPK14;RHOA
Signaling By NTRKs	R-HSA-166520	5/132	2.58301E-05	0.001859769	16.25656168	171.7338136	CREB1;YWHAB;SGK1;MAPK14;RHOA
Activation Of BH3-only Proteins	R-HSA-114452	3/30	6.78181E-05	0.003463056	44.26666667	424.901634	BCL2L11;YWHAQ;YWHAB
GRB7 Events In ERBB2 Signaling	R-HSA-1306955	2/5	6.85496E-05	0.003463056	260.7058824	2499.635584	GRB7;ERBB2
Toll-like Receptor Cascades	R-HSA-168898	5/162	6.87114E-05	0.003463056	13.13030786	125.8618134	CREB1;RIPK1;BTRC;APOB;MAPK14

Developmental Biology	R-HSA-1266738	11/1073	9.59735E-05	0.004397329	4.657317729	43.0868906	VASP;GRB7;MPP3;CSF3R;CREB1;COL6A2; ERBB2;DAG1;PABPC1;MAPK14;RHOA
Apoptosis	R-HSA-109581	5/178	0.000107185	0.004501762	11.90631021	108.8350576	BCL2L11;YWHAQ;YWHAB;RIPK1;MAPT
Disease	R-HSA-1643685	14/1736	0.000123183	0.004775707	3.799249531	34.20023704	YWHAB;TAF9;SLC4A1;ARRB1;MAPK14;CREB1; BCL2L11;YWHAQ;ERBB2;DAG1;GNAS; RIPK1;BTRC;FGFR3
Toll Like Receptor 3(TLR3) Cascade	R-HSA-168164	4/103	0.000160016	0.005760575	16.36611008	143.043679	CREB1;RIPK1;BTRC;MAPK14
MyD88-independent TLR4 Cascade	R-HSA-166166	4/107	0.00018532	0.006226764	15.72736279	135.1519067	CREB1;RIPK1;BTRC;MAPK14
Programmed Cell Death	R-HSA-5357801	5/208	0.00022178	0.006986082	10.13136289	85.24349404	BCL2L11;YWHAQ;YWHAB;RIPK1;MAPT
Signaling By ERBB2	R-HSA-1227986	3/49	0.000297008	0.008805421	25.95782609	210.8229899	GRB7;ERBB2;RHOA
Transcriptional Regulation By TP53	R-HSA-3700989	6/354	0.000335583	0.009396333	7.189655172	57.51465544	YWHAQ;YWHAB;TAF9;SGK1;MAPK14; NDRG1
Signaling By Non-Receptor Tyrosine Kinases	R-HSA-9006927	3/52	0.000354276	0.00939764	24.36489796	193.5896871	ERBB2;HIF1A;RHOA
Intrinsic Pathway For Apoptosis	R-HSA-109606	3/55	0.000418212	0.009996966	22.95576923	178.5849236	BCL2L11;YWHAQ;YWHAB
Regulation Of Localization Of FOXO Transcription Factors	R-HSA-9614399	2/12	0.000447083	0.009996966	78.18431373	603.0173367	YWHAQ;YWHAB
Cytokine Signaling In Immune System	R-HSA-1280215	8/702	0.000485276	0.009996966	4.931924432	37.63449665	CSF3R;CREB1;BCL2L11;TRIM29; TOLLIP;BTRC;MAPK14;HIF1A
Toll Like Receptor 4 (TLR4) Cascade	R-HSA-166016	4/140	0.000516152	0.009996966	11.89135654	90.00697347	CREB1;RIPK1;BTRC;MAPK14
Chk1/Chk2(Cds1) Mediated Inactivation Of Cyclin B:Cdk1 Complex	R-HSA-75035	2/13	0.000527475	0.009996966	71.07308378	536.417676	YWHAQ;YWHAB
SARS-CoV-2 Targets Host Intracellular Signaling And Regulatory Pathways	R-HSA-9755779	2/13	0.000527475	0.009996966	71.07308378	536.417676	YWHAQ;YWHAB
Post NMDA Receptor Activation Events	R-HSA-438064	3/61	0.000567323	0.009996966	20.57482759	153.7882416	MPP3;CREB1;MAPT

Nuclear Events (Kinase And Transcription Factor Activation)	R-HSA-198725	3/61	0.000567323	0.009996966	20.57482759	153.7882416	CREB1;SGK1;MAPK14
RHO GTPases Activate PKNs	R-HSA-5625740	3/62	0.000595057	0.009996966	20.22508475	150.2087217	YWHAQ;YWHAB;RHOA
Signaling By BRAF And RAF1 Fusions	R-HSA-6802952	3/62	0.000595057	0.009996966	20.22508475	150.2087217	BCL2L11;YWHAB;ARRB1
MAP Kinase Activation	R-HSA-450294	3/62	0.000595057	0.009996966	20.22508475	150.2087217	CREB1;BTRC;MAPK14
FOXO-mediated Transcription	R-HSA-9614085	3/65	0.00068342	0.010648687	19.24354839	140.2546946	BCL2L11;YWHAQ;YWHAB
Activation Of BAD And Translocation To Mitochondria	R-HSA-111447	2/15	0.000707656	0.010648687	60.13273002	436.1759087	YWHAQ;YWHAB
ERBB2 Regulates Cell Motility	R-HSA-6785631	2/15	0.000707656	0.010648687	60.13273002	436.1759087	ERBB2;RHOA
RHO GTPase Effectors	R-HSA-195258	5/269	0.000718364	0.010648687	7.766335227	56.21688495	YWHAQ;YWHAB;BUB3;MAPK14;RHOA
RAF/MAP Kisase Cascade	R-HSA-5673001	5/271	0.00074271	0.010695028	7.707158521	55.53165368	MPP3;YWHAB;ERBB2;ARRB1;FGFR3
Circadian Clock	R-HSA-400253	3/69	0.000813663	0.010868723	18.07363636	128.5752041	CREB1;BTRC;HIF1A
Interleukin-17 Signaling	R-HSA-448424	3/69	0.000813663	0.010868723	18.07363636	128.5752041	CREB1;BTRC;MAPK14
MAPK1/MAPK3 Signaling	R-HSA-5684996	5/277	0.000819467	0.010868723	7.534849877	53.54909432	MPP3;YWHAB;ERBB2;ARRB1;FGFR3
Deubiquitination	R-HSA-5688426	5/279	0.000846325	0.010918601	7.479090633	52.91162838	ARRB1;RIPK1;TOMM20;HIF1A;RHOA
Diseases Of Signal Transduction By Growth Factor Receptors And Second Messengers	R-HSA-5663202	6/424	0.000866556	0.010918601	5.964267535	42.05395623	CREB1;BCL2L11;YWHAB; ERBB2;ARRB1;FGFR3
Platelet Sensitization By LDL	R-HSA-432142	2/17	0.000913478	0.011229095	52.10980392	364.6775042	MAPK14;APOB
Activation Of NMDA Receptors And Postsynaptic Events	R-HSA-442755	3/74	0.00099735	0.011732086	16.79661972	116.0715006	MPP3;CREB1;MAPT

Generic Transcription Pathway	R-HSA-212436	10/1190	0.001000952	0.011732086	3.698659834	25.54591842	THRB;CREB1;BCL2L11;YWHAQ; YWHAB;TAF9;ERBB2;SGK1;MAPK14;NDRG1
Signaling By Insulin Receptor	R-HSA-74752	3/77	0.001119171	0.012819598	16.11324324	109.4921757	INSR;ATP6V1E1;FGFR3
Oncogenic MAPK Signaling	R-HSA-6802957	3/78	0.00116177	0.013011823	15.8976	107.432971	BCL2L11;YWHAB;ARRB1
Signaling By Interleukins	R-HSA-449147	6/453	0.001218481	0.013350319	5.569041839	37.36910558	CSF3R;CREB1;TOLLIP;BTRC; MAPK14;HIF1A
Sema4D Induced Cell Migration And Growth-Cone Collapse	R-HSA-416572	2/20	0.001269705	0.013615563	43.41830065	289.5553661	ERBB2;RHOA
Platelet Homeostasis	R-HSA-418346	3/83	0.001390114	0.014596195	14.90025	98.01935208	GNAS;APOB;MAPK14
Innate Immune System	R-HSA-168249	9/1035	0.001457509	0.014991517	3.772129187	24.63587665	CREB1;DYNLT1;TOLLIP;RIPK1; ATP6V1E1;BTRC;APOB;MAPK14;RHOA
MAPK Family Signaling Cascades	R-HSA-5683057	5/318	0.001513064	0.015251688	6.534211928	42.43067841	MPP3;YWHAB;ERBB2;ARRB1;FGFR3
Regulation Of mRNA Stability By Proteins That Bind AU-rich Elements	R-HSA-450531	3/88	0.001644856	0.016255045	14.02023529	89.87114672	YWHAB;PABPC1;MAPK14
Sema4D In Semaphorin Signaling	R-HSA-400685	2/24	0.00183195	0.017755819	35.51693405	223.841021	ERBB2;RHOA
Ub-specific Processing Proteases	R-HSA-5689880	4/201	0.001973244	0.01876443	8.183984254	50.97048057	ARRB1;RIPK1;TOMM20;HIF1A
RNA Polymerase II Transcription	R-HSA-73857	10/1312	0.002083592	0.019335181	3.33029686	20.56012702	THRB;CREB1;BCL2L11;YWHAQ; YWHAB;TAF9;ERBB2;SGK1;MAPK14;NDRG1
MyD88 Cascade Initiated On Plasma Membrane	R-HSA-975871	3/96	0.00210999	0.019335181	12.80903226	78.9173711	CREB1;BTRC;MAPK14
Insulin Receptor Recycling	R-HSA-77387	2/26	0.002149889	0.019349002	32.55392157	199.9572225	INSR;ATP6V1E1
Signaling By ROBO Receptors	R-HSA-376176	4/209	0.002273673	0.020104054	7.861423594	47.84744453	VASP;DAG1;PABPC1;RHOA
CREB1 Phosphorylation Thru NMDA Receptor-Mediated Activation Of RAS Signaling	R-HSA-442742	2/27	0.00231795	0.020142189	31.25019608	189.5971879	MPP3;CREB1
TRAF6 Mediated Induction Of NFkB And	R-HSA-975138	3/101	0.002438221	0.020828194	12.15244898	73.11504604	CREB1;BTRC;MAPK14

MAP Kinases Upon TLR7/8 Or 9 Activation							
MyD88 Dependent Cascade Initiated On Endosome	R-HSA-975155	3/102	0.002507437	0.021062472	12.02909091	72.03614022	CREB1;BTRC;MAPK14
Toll Like Receptor 7/8 (TLR7/8) Cascade	R-HSA-168181	3/103	0.00257786	0.02129904	11.9082	70.982347	CREB1;BTRC;MAPK14
PI3K/AKT Signaling in Cancer	R-HSA-2219528	3/105	0.002722355	0.021825619	11.67352941	68.94687568	CREB1;ERBB2;FGFR3
PI5P, PP2A And IER3 Regulate PI3K/AKT Signaling	R-HSA-6811558	3/106	0.002796441	0.021825619	11.55961165	67.96366926	INSR;ERBB2;FGFR3
Toll Like Receptor 9 (TLR9) Cascade	R-HSA-168138	3/106	0.002796441	0.021825619	11.55961165	67.96366926	CREB1;BTRC;MAPK14
Cellular Responses to Stress	R-HSA-2262752	7/722	0.00282221	0.021825619	4.093159015	24.02780584	PPP1R15A;CREB1;ATP6V1E1; BTRC;APOB;MAPK14;HIF1A
MAPK Targets/ Nuclear Events Mediated By MAP Kinases	R-HSA-450282	2/30	0.002858117	0.021825619	27.8977591	163.4137007	CREB1;MAPK14
Post-translational Protein Modification	R-HSA-597592	10/1383	0.003062507	0.023037367	3.146055997	18.21101243	THRB;DAG1;NUCB1;ARRB1; RIPK1;BTRC;APOB;TOMM20;HIF1A;RHOA
Cellular Responses To Stimuli	R-HSA-8953897	7/736	0.003139846	0.023271799	4.011629987	23.12135655	PPP1R15A;CREB1;ATP6V1E1; BTRC;APOB;MAPK14;HIF1A
MyD88:MAL(TIRAP) Cascade Initiated On Plasma Membrane	R-HSA-166058	3/112	0.003267128	0.023780278	10.92	62.50437569	CREB1;BTRC;MAPK14
Metabolism Of Proteins	R-HSA-392499	12/1890	0.003334772	0.023780278	2.816021195	16.06075755	THRB;DAG1;NUCB1;ARRB1; RIPK1;PABPC1;INHBA;BTRC;APOB; TOMM20;HIF1A;RHOA
Negative Regulation Of PI3K/AKT Network	R-HSA-199418	3/113	0.003349999	0.023780278	10.82018182	61.66199908	INSR;ERBB2;FGFR3
Signaling By High-Kinase Activity BRAF Mutants	R-HSA-6802948	2/33	0.003451592	0.023830168	25.1941809	142.8237897	YWHAB;ARRB1
Signaling To ERKs	R-HSA-187687	2/33	0.003451592	0.023830168	25.1941809	142.8237897	YWHAB;MAPK14
Infectious Disease	R-HSA-5663205	8/961	0.00357892	0.024375347	3.543243558	19.95800748	CREB1;YWHAQ;YWHAB;TAF9; GNAS;RIPK1;BTRC;MAPK14

Signaling By TGFB Family Members	R-HSA-9006936	3/119	0.003874348	0.026035616	10.25741379	56.96329614	PPP1R15A;INHBA;RHOA
Hemostasis	R-HSA-109582	6/576	0.004049166	0.026852363	4.339753639	23.90876342	GRB7;GNAS;ARRB1;APOB;MAPK14; RHOA
Gene Expression(Transcription)	R-HSA-74160	10/1449	0.004276815	0.027941981	2.991095237	16.31506894	THRB;CREB1;BCL2L11;YWHAQ; YWHAB;TAF9;ERBB2;SGK1;MAPK14;NDRG1
MAP2K And MAPK Activation	R-HSA-5674135	2/37	0.004324354	0.027941981	22.31036415	121.4462994	YWHAB;ARRB1
Signaling By RAF1 Mutants	R-HSA-9656223	2/38	0.004556885	0.029071771	21.68954248	116.9308406	YWHAB;ARRB1
Ovarian Tumor Domain Proteases	R-HSA-5689896	2/39	0.00479509	0.029836115	21.10227875	112.6896043	RIPK1;RHOA
NGF-stimulated Transcription	R-HSA-9031628	2/39	0.00479509	0.029836115	21.10227875	112.6896043	CREB1;SGK1
Paradoxical Activation Of RAF Signaling By Kinase Inactive BRAF	R-HSA-6802955	2/41	0.005288402	0.032504323	20.01809955	104.9396663	YWHAB;ARRB1
Signaling By Hedgehog	R-HSA-5358351	3/135	0.00550778	0.033103138	9.006818182	46.84980838	GNAS;ARRB1;BTRC
PIP3 Activates AKT Signaling	R-HSA-1257604	4/268	0.00551719	0.033103138	6.086270872	31.64791868	CREB1;INSR;ERBB2;FGFR3
Death Receptor Signaling	R-HSA-73887	3/139	0.005971447	0.035407165	8.740147059	44.75624858	BCL2L11;RIPK1;RHOA
Heme Signaling	R-HSA-9707616	2/45	0.006341783	0.037165801	18.15230278	91.86145708	CREB1;APOB
Signaling By Rho GTPases	R-HSA-194315	6/644	0.006918177	0.040077713	3.863603015	19.21602772	GRB7;YWHAQ;YWHAB;BUB3; MAPK14;RHOA
Signaling By Rho GTPases, Miro GTPases And RHOBTB3	R-HSA-9716542	6/660	0.00776657	0.044481262	3.765957447	18.29474529	GRB7;YWHAQ;YWHAB;BUB3; MAPK14;RHOA
Translocation Of SLC2A4 (GLUT4) To Plasma Membrane	R-HSA-1445148	2/51	0.008085163	0.04578564	15.92476991	76.72115694	YWHAQ;YWHAB
Regulation Of TP53 Activity	R-HSA-5633007	3/157	0.008343355	0.046492057	7.711558442	36.90975418	TAF9;SGK1;MAPK14
Signaling By PDGF	R-HSA-186797	2/52	0.008394399	0.046492057	15.6054902	74.59721698	GRB7;COL6A2

Insulin Receptor Signaling Cascade	R-HSA-74751	2/53	0.008708893	0.047345569	15.29873126	72.56816373	INSR;FGFR3
Intracellular Signaling By Second Messengers	R-HSA-9006925	4/306	0.008736385	0.047345569	5.310177051	25.17161359	CREB1;INSR;ERBB2;FGFR3

Table S9 Pathway Enrichment per WikiPathway 2023 on the significant Hubs Genes derived from Enrichr

Term		Overlap	P-value	Adjusted P-value	Odds Ratio	Combined score	Genes
Orexin Receptor Pathway	WP5094	7/88	3.27533E-09	9.66222E-07	37.32206119	729.1554245	CREB1;DYNLT1;GNAS;ARRB1;SGK1;MAPK14;HIF1A
Leukocyte Intrinsic Hippo Pathway Functions	WP4542	4/34	1.92103E-06	0.000283352	54.19591837	713.3617444	YWHAQ;MAPK14;NDRG1;RHOA
Myometrial Relaxation And Contraction Pathways	WP289	6/156	3.46839E-06	0.000341059	16.84851064	211.8164234	CREB1;YWHAQ;YWHAB;GNAS;ARRB1;SFN
Corticotropin Releasing Hormone Signaling Pathway	WP2355	5/93	4.69174E-06	0.000346016	23.50733902	288.4281776	CREB1;GNAS;ARRB1;MAPK14;RHOA
Pleural Mesothelioma	WP5087	8/437	1.82465E-05	0.001076544	8.088267288	88.25542512	CREB1;YWHAB;INSR;BTRC;MAPK14;NDRG1;HIF1A;FGFR3
AGE RAGE Pathway	WP2324	4/66	2.80415E-05	0.001104362	26.18169849	274.4319718	INSR;MAPK14;HIF1A;RHOA
PI3K Akt Signaling Pathway	WP4172	7/338	2.9255E-05	0.001104362	9.018258242	94.14575204	CSF3R;CREB1;BCL2L11;COL6A2;INSR;SGK1;FGFR3
Estrogen Signaling Pathway	WP712	3/23	2.9973E-05	0.001104362	59.781	622.6319384	CREB1;GNAS;MAPK14

Follicle Stimulating Hormone FSH Signaling Pathway	WP2035	3/24	3.41907E-05	0.001104362	56.93142857	585.4575138	CREB1;MAPK14;SGK1
Leptin Signaling Pathway	WP2034	4/71	3.7436E-05	0.001104362	24.2217484	246.8893184	CREB1;ERBB2;MAPK14;RHOA
Calcium Regulation In Cardiac Cells	WP536	5/151	4.91913E-05	0.001319221	14.1274258	140.1411569	YWHAQ;YWHAB;GNAS;ARRB1;SFN
Smith Magenis And Potocki Lupski Syndrome Copy Number Variation	WP5381	5/155	5.57121E-05	0.001343684	13.74791667	134.6651535	CREB1;BCL2L11;TOLLIP;APBB1;RHOA
Sudden Infant Death Syndrome SIDS Susceptibility Pathways	WP706	5/157	5.92132E-05	0.001343684	13.56565241	132.0530295	THRB;CREB1;YWHAQ;YWHAB;HIF1A
GPR143 In Melanocytes And Retinal Pigment Epithelium Cells	WP4941	3/30	6.78181E-05	0.001429024	44.26666667	424.901634	CREB1;GNAS;ARRB1
P38 MAPK Signaling Pathway	WP400	3/35	0.000108309	0.00213008	37.340625	340.9393483	CREB1;RIPK1;MAPK14
Serotonin HTR1 Group And FOS Pathway	WP722	3/37	0.000128101	0.002290938	35.14058824	314.9543398	CREB1;MAPK14;RHOA
Hippo Signaling Regulation Pathway	WP4540	4/98	0.00013202	0.002290938	17.24099001	154.0061079	INSR;GNAS;FGFR3;RHOA
Focal Adhesion PI3K Akt mTOR Signaling Pathway	WP3932	6/302	0.000142605	0.002337132	8.475129385	75.05095282	CSF3R;CREB1;COL6A2;INSR;HIF1A;FGFR3

DNA Damage Response Only ATM Dependent	WP710	4/110	0.000206107	0.003200081	15.27993839	129.6826007	BCL2L11;INSR;ERBB2;RHOA
Gastrin Signaling Pathway	WP4659	4/115	0.000244413	0.003605091	14.58797573	121.3231071	CREB1;ARRB1;MAPK14;RHOA
Cell Cycle	WP179	4/120	0.000287595	0.004040025	13.95566502	113.7938985	YWHAQ;YWHAB;SFN;BUB3
IL 24 Signaling Pathway	WP5413	5/232	0.000366814	0.004807623	9.049192364	71.58503446	PPP1R15A;BCL2L11;COL6A2;MAPK14;NDRG1
Kit Receptor Signaling Pathway	WP304	3/53	0.000374832	0.004807623	23.8764	188.3617228	GRB7;MAPT;MAPK14
Oncostatin M Signaling Pathway	WP2374	3/56	0.000441059	0.005421356	22.52150943	174.0086339	CREB1;MAPK14;HIF1A
Thyroid Stimulating Hormone TSH Signaling Pathway	WP2032	3/58	0.000489126	0.005771691	21.70036364	165.4194774	CREB1;GNAS;MAPK14
Hepatitis B Infection	WP4666	4/150	0.000668995	0.007590517	11.07128879	80.92818049	CREB1;YWHAQ;YWHAB;MAPK14
RAC1 PAK1 P38 MMP2 Pathway	WP3303	3/68	0.00077974	0.00850631	18.35261538	131.34141	GRB7;ERBB2;MAPK14
Galanin Receptor Pathway	WP4970	2/16	0.000807379	0.00850631	55.83473389	397.6392214	BCL2L11;CREB1
VEGFA VEGFR2 Signaling	WP3888	6/430	0.000931923	0.009427255	5.87806102	41.01863866	CREB1;PABPC1;ATP6V1E1;MAPK14;NDRG1;RHOA
MECP2 And Associated Rett Syndrome	WP3584	3/73	0.000958704	0.009427255	17.03742857	118.4089069	CREB1;UBE3A;SGK1
Perturbations To Host Cell Autophagy Induced By SARS CoV 2 Proteins	WP4936	2/18	0.001025921	0.009762795	48.8504902	336.1971171	NBR1;APOB
Serotonin Receptor 4 6 7	WP734	2/19	0.001144674	0.010552466	45.97462514	311.369362	CREB1;GNAS

And NR3C Signaling							
Host Pathogen Interaction Of Human Coronaviruses Apoptosis	WP4864	2/21	0.001400981	0.011791113	41.13106295	270.2550486	BCL2L11;MAPK14
17P13 3 YWHAE Copy Number Variation	WP5376	2/21	0.001400981	0.011791113	41.13106295	270.2550486	YWHAQ;YWHAB
Acute Viral Myocarditis	WP4298	3/84	0.001438916	0.011791113	14.71555556	96.2966172	CREB1;DAG1;PABPC1
EGFR Tyrosine Kinase Inhibitor Resistance	WP4806	3/84	0.001438916	0.011791113	14.71555556	96.2966172	BCL2L11;ERBB2;FGFR3
Transcription Factor Regulation In Adipogenesis	WP3599	2/22	0.001538469	0.012266168	39.07254902	253.0716424	CREB1;INSR
Androgen Receptor Signaling Pathway	WP138	3/87	0.001591744	0.012282389	14.18785714	91.41130313	CREB1;UBE3A;RHOA
Apoptosis Modulation And Signaling	WP1772	3/89	0.001699067	0.012282389	13.85651163	88.37234526	BCL2L11;TOLLIP;RIPK1
Physiological And Pathological Hypertrophy Of The Heart	WP1528	2/24	0.00183195	0.012282389	35.51693405	223.841021	MAPK14;RHOA
Angiogenesis	WP1539	2/24	0.00183195	0.012282389	35.51693405	223.841021	MAPK14;HIF1A
Unfolded Protein Response	WP4925	2/24	0.00183195	0.012282389	35.51693405	223.841021	PPP1R15A;BCL2L11
Hippocampal Synaptogenesis And Neurogenesis	WP5231	2/24	0.00183195	0.012282389	35.51693405	223.841021	CREB1;MAPK14

LDL Influence On CD14 And TLR4	WP5272	2/24	0.00183195	0.012282389	35.51693405	223.841021	CREB1;MAPK14
Focal Adhesion	WP306	4/199	0.001902682	0.01247314	8.268759812	51.79956839	VASP;COL6A2;ERBB2;RHOA
Photodynamic Therapy Induced Unfolded Protein Response	WP3613	2/27	0.00231795	0.014548837	31.25019608	189.5971879	PPP1R15A;BCL2L11
FGFR3 Signaling In Chondrocyte Proliferation And Terminal Differentiation	WP4767	2/27	0.00231795	0.014548837	31.25019608	189.5971879	MAPK14;FGFR3
17Q12 Copy Number Variation Syndrome	WP5287	3/100	0.002370205	0.014566884	12.27835052	74.21991429	GRB7;TADA2A;ERBB2
Toll Like Receptor Signaling Pathway	WP75	3/102	0.002507437	0.015095795	12.02909091	72.03614022	TOLLIP;RIPK1;MAPK14
Thermogenesis	WP4321	3/108	0.002948325	0.017395119	11.33828571	66.06272572	CREB1;GNAS;MAPK14
Host Pathogen Interaction Of Human Coronaviruses Interferon Induction	WP4880	2/32	0.003247896	0.018077912	26.03529412	149.1756705	RIPK1;MAPK14
2Q11 2 Copy Number Variation Syndrome	WP5221	2/32	0.003247896	0.018077912	26.03529412	149.1756705	ERBB2;RHOA
13Q12 12 Copy Number Variation	WP5406	2/32	0.003247896	0.018077912	26.03529412	149.1756705	DAG1;RHOA
Alpha 6 Beta 4 Signaling Pathway	WP244	2/33	0.003451592	0.018513083	25.1941809	142.8237897	MAPK14;RHOA
Signal Transduction Through IL1R	WP4496	2/33	0.003451592	0.018513083	25.1941809	142.8237897	TOLLIP;MAPK14

MAPK Signaling Pathway	WP382	4/246	0.004079147	0.021488365	6.646989374	36.57085372	ARRB1;MAPT;MAPK14;FGFR3
Fragile X Syndrome	WP4549	3/122	0.004154229	0.021499958	9.997310924	54.82153812	CREB1;DAG1;GPHN
mBDNF And proBDNF Regulation Of GABA Neurotransmissio n	WP4829	2/38	0.004556885	0.022784424	21.68954248	116.9308406	CREB1;RHOA
TNF Related Weak Inducer Of Apoptosis TWEAK Signaling Pathway	WP2036	2/38	0.004556885	0.022784424	21.68954248	116.9308406	RIPK1;MAPK14
ATM Signaling Pathway	WP2516	2/40	0.005038939	0.024231103	20.54592363	108.699436	CREB1;RIPK1
Bladder Cancer	WP2828	2/40	0.005038939	0.024231103	20.54592363	108.699436	ERBB2;FGFR3
TGF Beta Signaling Pathway	WP366	3/132	0.005174778	0.024231103	9.217674419	48.52145901	BTRC;MAPK14;RHOA
Angiopoietin Like Protein 8 Regulatory Pathway	WP3915	3/132	0.005174778	0.024231103	9.217674419	48.52145901	THRB;INSR;MAPK14
Common Pathways Underlying Drug Addiction	WP2636	2/41	0.005288402	0.024376227	20.01809955	104.9396663	CREB1;GNAS
Brain Derived Neurotrophic Factor BDNF Signaling Pathway	WP2380	3/137	0.005736788	0.026036193	8.871492537	45.78449338	CREB1;MAPT;MAPK14
Vasopressin Regulated Water Reabsorption	WP5085	2/44	0.006070169	0.027131814	18.58543417	94.86691228	CREB1;GNAS

Interleukin 1IL1 Structural Pathway	WP2637	2/47	0.006901373	0.030386643	17.34379085	86.30330836	TOLLIP;MAPK14
Energy Metabolism	WP1541	2/48	0.007189288	0.031188825	16.9658994	83.72948041	CREB1;MAPK14
IL3 Signaling Pathway	WP286	2/49	0.007482578	0.031444626	16.60408844	81.27996672	YWHAQ;YWHAB
Hepatitis C And Hepatocellular Carcinoma	WP3646	2/49	0.007482578	0.031444626	16.60408844	81.27996672	MAPK14;HIF1A
Vitamin B12 Metabolism	WP1533	2/50	0.007781212	0.031444626	16.25735294	78.94640668	INSR;APOB
Photodynamic Therapy Induced AP 1 Survival Signaling	WP3611	2/50	0.007781212	0.031444626	16.25735294	78.94640668	BCL2L11;MAPK14
Role Of Hypoxia Angiogenesis And FGF Pathway In OA Chondrocyte Hypertrophy	WP5373	2/50	0.007781212	0.031444626	16.25735294	78.94640668	HIF1A;FGFR3
Netrin UNC5B Signaling Pathway	WP4747	2/52	0.008394399	0.03329302	15.6054902	74.59721698	MAPK14;RHOA
EGF EGFR Signaling Pathway	WP437	3/159	0.008636371	0.03329302	7.611923077	36.17012947	CREB1;ERBB2;MAPK14
Cardiac Progenitor Differentiation	WP2406	2/53	0.008708893	0.03329302	15.29873126	72.56816373	INHBA;MAPK14
Insulin Signaling	WP481	3/160	0.008785127	0.03329302	7.563057325	35.80877059	INSR;SGK1;MAPK14
IL1 Signaling Pathway	WP195	2/54	0.009028615	0.03329302	15.00377074	70.62809393	TOLLIP;MAPK14
Hematopoietic Stem Cell Differentiation	WP2849	2/54	0.009028615	0.03329302	15.00377074	70.62809393	THRB;TRIM29

Interferon Type I Signaling Pathways	WP585	2/54	0.009028615	0.03329302	15.00377074	70.62809393	CREB1;MAPK14
Pathogenic Escherichia Coli Infection	WP2272	2/55	0.009353537	0.034065353	14.71994081	68.77157327	YWHAQ;RHOA
Novel Intracellular Components Of RIG I Like Receptor Pathway	WP3865	2/60	0.01105514	0.039771541	13.44759973	60.57955112	RIPK1;MAPK14
DYRK1A Involvement Regarding Cell Proliferation In Brain Development	WP5180	2/62	0.011771182	0.041837333	12.99803922	57.73860234	CREB1;MAPT
3Q29 Copy Number Variation Syndrome	WP4906	2/63	0.012136676	0.042121405	12.78431373	56.39829832	DYNLT1;HIF1A
Endometrial Cancer	WP4155	2/63	0.012136676	0.042121405	12.78431373	56.39829832	ERBB2;FGFR3
Ras Signaling	WP4223	3/184	0.012813049	0.043951737	6.552265193	28.55012742	INSR;FGFR3;RHOA
Physico Chemical Features And Toxicity Associated Pathways	WP3680	2/66	0.013262718	0.044971285	12.18321078	52.66556332	ERBB2;RHOA
Folate Metabolism	WP176	2/68	0.01403777	0.04627819	11.81283422	50.39359516	INSR;APOB
miRNA Regulation Of DNA Damage Response	WP1530	2/69	0.01443252	0.04627819	11.63593796	49.31626158	CREB1;SFN
Th17 Cell Differentiation Pathway	WP5130	2/69	0.01443252	0.04627819	11.63593796	49.31626158	MAPK14;HIF1A

Urotensin II Mediated Signaling Pathway	WP5158	2/69	0.01443252	0.04627819	11.63593796	49.31626158	MAPK14;RHOA
DNA Damage Response	WP707	2/69	0.01443252	0.04627819	11.63593796	49.31626158	CREB1;SFN
Primary Focal Segmental Glomerulosclerosis FSGS	WP2572	2/72	0.015645345	0.048608437	11.13557423	46.29706126	YWHAQ;DAG1
lncRNA Mediated Mechanisms Of Therapeutic Resistance	WP3672	1/6	0.015796862	0.048608437	76.7	318.1473008	HIF1A
Chromosomal And Microsatellite In Colorectal Cancer	WP4216	2/73	0.016059054	0.048608437	10.97818282	45.35616966	BCL2L11;RHOA
Head And Neck Squamous Cell Carcinoma	WP4674	2/73	0.016059054	0.048608437	10.97818282	45.35616966	ERBB2;FGFR3
Circadian Rhythm Genes	WP3594	3/201	0.016209724	0.048608437	5.984545455	24.66915793	CREB1;UBE3A;BTRC
Prolactin Signaling Pathway	WP2037	2/74	0.016477436	0.048608437	10.8251634	44.44555897	ERBB2;MAPK14
Burn Wound Healing	WP5055	2/74	0.016477436	0.048608437	10.8251634	44.44555897	INHBA;FGFR3
Disturbed Pathways In Duchenne Muscular Dystrophy	WP5356	2/74	0.016477436	0.048608437	10.8251634	44.44555897	DAG1;TOMM20
T Cell Receptor Signaling Pathway	WP69	2/75	0.016900464	0.049362741	10.67633629	43.56387431	CREB1;MAPK14

Table S10 GO Biological Process Enrichment 2023 on the significant Hubs Genes derived from Enrichr

GO Term		Overlap	P-value	Adjusted P-value	Odds Ratio	Combined Score
Negative Regulation Of Transferase Activity	(GO:0051348)	4/37	2.71976E-06	0.002613686	49.26159555	631.2857716
DNA Damage Response	(GO:0006974)	8/384	7.15342E-06	0.00343722	9.253427896	109.6338688
Negative Regulation Of Protein Ubiquitination	(GO:0031397)	4/54	1.2597E-05	0.004035231	32.48489796	366.4963667
Response To Metal Ion	(GO:0010038)	4/64	2.48179E-05	0.005962504	27.05714286	286.9124507
Amyloid Fibril Formation	(GO:1990000)	3/24	3.41907E-05	0.0065317	56.93142857	585.4575138
Positive Regulation Of Erythrocyte Differentiation	(GO:0045648)	3/26	4.37567E-05	0.0065317	51.97565217	521.6725906
Protein Phosphorylation	(GO:0006468)	8/500	4.75774E-05	0.0065317	7.029810298	69.96877289
Regulation Of Kinase Activity	(GO:0043549)	4/85	7.59056E-05	0.008309465	20.02116402	189.9211662
Positive Regulation of DNA-templated Transcription	(GO:0045893)	12/1243	7.78202E-05	0.008309465	4.449921737	42.10119845
Positive Regulation Of Nucleic Acid-Templated Transcription	(GO:1903508)	8/557	0.000101153	0.009444595	6.281481481	57.78254042
Regulation Of Erythrocyte Differentiation	(GO:0045646)	3/36	0.000117935	0.009444595	36.20727273	327.5085556
Positive Regulation of Myeloid Cell Differentiation	(GO:0045639)	3/36	0.000117935	0.009444595	36.20727273	327.5085556
mRNA Transcription By RNA Polymerase II	(GO:0042789)	3/38	0.000138821	0.010178125	34.13485714	303.1969552
Regulation Of Gene Expression	(GO:0010468)	11/1127	0.000148277	0.010178125	4.419290835	38.96237522
mRNA Transcription	(GO:0009299)	3/43	0.00020119	0.012173381	29.8605	254.1504815
Regulation Of MAPK Cascade	(GO:0043408)	5/204	0.000202679	0.012173381	10.33710218	87.90557255
Positive Regulation of Lipase Activity	(GO:0060193)	2/9	0.000245109	0.013855849	111.7086835	928.7246465
Positive Regulation of Reactive Oxygen Species Metabolic Process	(GO:2000379)	3/48	0.000279346	0.014913959	26.536	217.1456877
Negative Regulation Of Dephosphorylation	(GO:0035305)	2/10	0.000305866	0.015470385	97.74019608	790.9491627

Positive Regulation Of Dephosphorylation	(GO:0042327)	5/231	0.000359625	0.017279998	9.089693953	72.08534302
Peptidyl-Tyrosine Modification	(GO:0018212)	3/54	0.00039614	0.018128106	23.40705882	183.3648992
Axonal Transport Of Mitochondrion	(GO:0019896)	2/12	0.000447083	0.019416123	78.18431373	603.0173367
Signal Transduction IN Response To DNA Damage	(GO:0042770)	3/57	0.000464694	0.019416123	22.10333333	169.6238899
Memory	(GO:0007613)	3/58	0.000489126	0.019585436	21.70036364	165.4194774
Regulation Of Embryonic Development	(GO:0045995)	3/62	0.000595057	0.020358075	20.22508475	150.2087217
Cell Junction Organization	(GO:0034330)	3/62	0.000595057	0.020358075	20.22508475	150.2087217
Positive Regulation of Cellular Catabolic Process	(GO:0031331)	4/146	0.000604467	0.020358075	11.38545559	84.37947046
Regulation Of Macrophage Differentiation	(GO:0045649)	2/14	0.000614344	0.020358075	65.14705882	481.7596464
Mitochondrion Transport Along Microtube	(GO:0047497)	2/14	0.000614344	0.020358075	65.14705882	481.7596464
Peptidyl-Tyrosine Phosphorylation	(GO:0018108)	3/67	0.000746732	0.023148691	18.6403125	134.2066009
Extrinsic Apoptotic Signaling Pathway	(GO:0097191)	3/67	0.000746732	0.023148691	18.6403125	134.2066009
Protein Autophosphorylation	(GO:0046777)	4/162	0.000891798	0.024579504	10.22423146	71.79732584
Negative Regulation Of Ubiquitin-Protein Transferase Activity	(GO:0051444)	2/17	0.000913478	0.024579504	52.10980392	364.6775042
Regulation Of Tubulin Deacetylation	(GO:0090043)	2/17	0.000913478	0.024579504	52.10980392	364.6775042
Transmembrane Receptor Protein Tyrosine Kinase Signaling Pathway	(GO:0007169)	5/284	0.000916346	0.024579504	7.343189964	51.36646778
Phosphorylation	(GO:0016310)	6/429	0.000920772	0.024579504	5.892258941	41.18864494
Positive Regulation Of Glycolytic Process	(GO:0045821)	2/18	0.001025921	0.026646215	48.8504902	336.1971171
Negative Regulation Of Protein Dephosphorylation	(GO:0035308)	2/19	0.001144674	0.027911521	45.97462514	311.369362
Negative Regulation Of Telomere Maintenance Via Telomerase	(GO:0032211)	2/19	0.001144674	0.027911521	45.97462514	311.369362
Negative Regulation Of Protein Modification Process	(GO:0031400)	3/78	0.00116177	0.027911521	15.8976	107.432971
Regulation Of Nucleic Acid-Templated Transcription	(GO:1903506)	6/452	0.001204766	0.028066106	5.581814712	37.51799926
Regulation Of DNA-templated Transcription	(GO:0006355)	13/1922	0.001226614	0.028066106	3.070900995	20.58577689

Positive Regulation of Receptor Internalization	(GO:0002092)	2/22	0.001538469	0.034382983	39.07254902	253.0716424
Modification-Dependent Protein Catabolic Process	(GO:0019941)	4/192	0.001669513	0.036463673	8.57967868	54.86896313
Stress Granule Assembly	(GO:0034063)	2/24	0.00183195	0.039122301	35.51693405	223.841021
Negative Regulation Of Telomere Maintenance Via Telomere Lengthening	(GO:1904357)	2/25	0.001987878	0.041529367	33.97101449	211.3230641

Table S11 GO Cellular Component Enrichment 2023 on the significant Hubs Genes derived from Enrichr

GO Term		Overlap	P-value	Adjusted P-value	Odds Ratio	Combined Score	Genes
Focal Adhesion	(GO:0005925)	8/387	7.57136E-06	0.000527295	9.178774553	108.2281975	VASP;GRB7;YWHAQ;YWHAB;DAG1;PABPC1;FGFR3;RHOA
Cell-Substrate Junction	(GO:0030055)	8/395	8.78825E-06	0.000527295	8.98535745	104.6083878	VASP;GRB7;YWHAQ;YWHAB;DAG1;PABPC1;FGFR3;RHOA
Cytoplasmic Vesicule Membrane	(GO:0030659)	7/389	7.11585E-05	0.002846338	7.793933531	74.43675247	CSF3R;INSR;ERBB2;ARRB1;RIPK1;APOB;RHOA
Endosome Membrane	(GO:0010008)	6/361	0.000372442	0.011173255	7.045370093	55.62622408	INSR;ERBB2;RIPK1;APOB;NDRG1;OPTN
Bounding Membrane Of Organelle	(GO:0098588)	8/819	0.001321633	0.0317192	4.194766406	27.80663221	CSF3R;INSR;ERBB2;ARRB1;RIPK1;APOB;RHOA;OPTN
SAGA Complex	(GO:0000124)	2/23	0.001682136	0.033642712	37.21008403	237.6865231	TADA2A;TAF9

Table S12 GO Molecular Function Enrichment 2023 on the significant Hubs Genes derived from Enrichr

GO Term		Overlap	P-value	Adjusted P-value	Odds Ratio	Combined score	Genes
Transmembrane Receptor Protein Tyrosine Kinase Activity	(GO:0004714)	3/50	0.000315376	0.028350316	25.40425532	204.8026101	INSR;ERBB2;FGFR3
Insulin-Like Growth Factor Receptor Binding	(GO:0005159)	2/13	0.000527475	0.028350316	71.07308378	536.417676	INSR;GNAS
Ubiquitin-Like Protein Ligase Binding	(GO:0044389)	5/289	0.000990603	0.028350316	7.212074531	49.88733617	DTX3L;ARRB1;RIPK1;APBB1;HIF1A
Ubiquitin Binding	(GO:0043130)	3/80	0.00125001	0.028350316	15.48311688	103.4984989	TOLLIP;NBR1;BUB3
Kinase Binding	(GO:0019900)	6/460	0.001317881	0.028350316	5.481207236	36.34988856	PPP1R15A;GRB7;TOLLIP;SFN;MAPT;HIF1A
Cadherin Binding	(GO:0045296)	5/319	0.001534102	0.028350316	6.513070594	42.20346163	VASP;YWHAB;TRIM29;SFN;NDRG1
Low-Density Lipoprotein Particle Receptor Binding	(GO:0050750)	2/22	0.001538469	0.028350316	39.07254902	253.0716424	APBB1;APOB
Mitogen-Activated Protein Kinase Binding	(GO:0051019)	2/23	0.001682136	0.028350316	37.21008403	237.6865231	NBR1;MAPK14
Protein Serine/Threonine/Tyrosine Kinase Activity	(GO:0004712)	2/26	0.002149889	0.028350316	32.55392157	199.9572225	MAPK14;SGK1
Protein Kinase Binding	(GO:0019901)	6/511	0.002242302	0.028350316	4.914767221	29.98131946	PPP1R15A;GRB7;NBR1;SFN;MAPT;HIF1A
Protein Tyrosine Kinase Activity	(GO:0004713)	3/99	0.002303381	0.028350316	12.406875	75.35163247	INSR;ERBB2;FGFR3
Histone Acetyltransferase Activity	(GO:0004402)	2/27	0.00231795	0.028350316	31.25019608	189.5971879	TADA2A;TAF9
Lipoprotein Particle Receptor Binding	(GO:0070325)	2/27	0.00231795	0.028350316	31.25019608	189.5971879	APBB1;APOB
RNA Polymerase II-specific DNA-binding Transcription Factor Binding	(GO:0061629)	4/228	0.003110992	0.035331979	7.187682216	41.49315013	CREB1;DTX3L;MAPK14;HIF1A
Protein Phosphatase Binding	(GO:0019903)	3/115	0.003519592	0.036256108	10.62589286	60.03002868	PPP1R15A;MAPT;MAPK14
Transcription Coactivator Binding	(GO:0001223)	2/34	0.003661117	0.036256108	24.40563725	136.9153101	THRB;HIF1A
Hsp90 Protein Binding	(GO:0051879)	2/35	0.003876439	0.036256108	23.66488414	131.4072743	MAPT;HIF1A

Table S13 DRUG Hub-GENE INTERACTION

gene	drug	regulatory approval	indication	interaction score
MAPT	CISPLATIN	Approved		0.000899635
MAPT	DOXORUBICIN HYDROCHLORIDE	Approved	antineoplastic agent	0.000930872
MAPT	CARBOPLATIN	Approved		0.00167557
MAPT	QUERCETIN	Approved		0.001696779
MAPT	DAUNORUBICIN	Approved	antineoplastic agent	0.00194269
MAPT	CURCUMIN	Approved		0.002030994
MAPT	GEFITINIB	Approved	antineoplastic agent	0.002197468
MAPT	NIFEDIPINE	Approved	Antianginal Agents; Vasodilator Agents	0.002680912
MAPT	RALOXIFENE HYDROCHLORIDE	Approved	Hormone Replacement Agents	0.002852034
MAPT	MASOPROCOL	Approved		0.002914034
MAPT	RESVERATROL	Approved	antineoplastic agent,antidiabetic,for treatment of herpes simplex virus 1	0.002914034
MAPT	IDARUBICIN	Approved	Antineoplastic Agents	0.00304649
MAPT	HEXACHLOROPHENE	Approved		0.003351139
MAPT	METHYLENE BLUE ANHYDROUS	Approved		0.003622853
MAPT	OMEPRAZOLE	Approved	Proton pump inhibitor,antiulcer agent	0.003829874
ERBB2	PACLITAXEL	Approved	for treatment of peripheral arterial disease (PAD),DMARD,antiinflammatory agent,antineoplastic agent	0.003922068
MAPT	DAUNORUBICIN HYDROCHLORIDE	Approved		0.004061987
MAPT	MITOXANTRONE HYDROCHLORIDE	Approved		0.004188924

MAPT	EPIGALLOCATECHIN GALLATE	Approved		0.004324051
MAPT	EPINEPHRINE	Approved	anestethic	0.004468186
MAPT	VITAMIN K3	Approved	for reducing EGFR-inhibitor-induced dermatological side effects	0.004622261
ERBB2	DOCETAXEL ANHYDROUS	Approved	antineoplastic agent	0.004752623
MAPT	LANSOPRAZOLE	Approved	antiulcer agent,Proton pump inhibitor	0.004787342
HIF1A	TRETINOIN	Approved	for treatment of acne	0.004875997
MAPT	NICLOSAMIDE	Approved		0.005155599
MAPT	RABEPRAZOLE	Approved	Proton pump inhibitor	0.005155599
MAPT	FENRETINIDE	Approved	antineoplastic agent	0.005155599
HIF1A	QUERCETIN	Approved		0.005184604
MAPT	RESERPINE	Approved	Antihypertensive Agents; Antipsychotic Agents	0.005585232
ERBB2	DASATINIB ANHYDROUS	Approved	antineoplastic agent	0.00568976
MAPT	NOREPINEPHRINE	Approved	Antihypotensive Agents; Vasoconstrictor Agents	0.005828069
MAPT	BITHIONOL	Approved		0.005828069
MAPT	SULFASALAZINE	Approved	DMARD,antiinflammatory agent	0.005828069
MAPT	OXYTETRACYCLINE ANHYDROUS	Approved		0.006702279
FGFR3	GEMCITABINE	Approved	antineoplastic agent	0.007044918
MAPT	GENTIAN VIOLET CATION	Approved		0.00705503
MAPT	LINOLENIC ACID	Approved		0.00705503
ERBB2	SIROLIMUS	Approved	for treatment of wet age-related macular degeneration,immunosuppressant	0.007087245
ERBB2	VANDETANIB	Approved	antineoplastic agent	0.007480981
FGFR3	DOCETAXEL ANHYDROUS	Approved	antineoplastic agent	0.007542206
MAPT	INAMRINONE	Approved	Cardiotonic Agents; Phosphodiesterase Inhibitors	0.007885034
MAPT	EPINEPHRINE BITARTRATE	Approved		0.007885034
INSR	FLUOROURACIL	Approved		0.008063994
HIF1A	NIFEDIPINE	Approved	Antianginal Agents; Vasodilator Agents	0.008191674

MAPT	PHENAZOPYRIDINE HYDROCHLORIDE	Approved		0.008377849
MAPT	ACITRETIN	Approved	Keratolytic Agents	0.008377849
MAPT	FELODIPINE	Approved	antihypertensive agent	0.008377849
HIF1A	SORAFENIB	Approved	antineoplastic agent	0.008532994
ERBB2	MASOPROCOL	Approved		0.008782021
ERBB2	GEMCITABINE	Approved	antineoplastic agent	0.008878527
HIF1A	RESVERATROL	Approved	antineoplastic agent,antidiabetic,for treatment of herpes simplex virus 1	0.008903994
FGFR3	DASATINIB ANHYDROUS	Approved	antineoplastic agent	0.009029402
MAPK14	DASATINIB ANHYDROUS	Approved	antineoplastic agent	0.009548333
MAPT	CEFACLOR ANHYDROUS	Approved		0.009574684
MAPT	APOMORPHINE	Approved	antiparkinson agent,for treatment of erectile dysfunction,for treatment of sexual dysfunction in women	0.009574684
MAPT	CATECHIN	Approved		0.010311198
MAPT	OXYPHENBUTAZONE	Approved		0.010311198
HIF1A	SUNITINIB	Approved	antineoplastic agent	0.010778519
HIF1A	HYDROCORTISONE BUTYRATE	Approved		0.01106983
MAPK14	GEFITINIB	Approved	antineoplastic agent	0.011113634
MAPT	CHOLECALCIFEROL	Approved		0.011170465
MAPT	NITAZOXANIDE	Approved		0.011170465
FGFR3	ENTRECTINIB	Approved		0.01124715
GNAS	CISPLATIN	Approved		0.011309694
HIF1A	CAMPTOTHECIN	Approved	antineoplastic agent	0.011702392
INSR	CYCLOPHOSPHAMIDE ANHYDROUS	Approved		0.011871992
ERBB2	CETUXIMAB	Approved	antineoplastic agent	0.011881558
ERBB2	CAPECITABINE	Approved		0.011881558
ERBB2	CURCUMIN	Approved		0.012241605

MAPK14	VANDETANIB	Approved	antineoplastic agent	0.01255429
FGFR3	ERLOTINIB	Approved	antineoplastic agent	0.012821751
FGFR3	CISPLATIN	Approved		0.012907803
HIF1A	CLOTRIMAZOLE	Approved		0.013212378
MAPT	PANTOPRAZOLE SODIUM	Approved	Proton pump inhibitor	0.013404558
MAPT	HYDROXYZINE PAMOATE	Approved		0.013404558
HIF1A	EPINEPHRINE	Approved	anestethic	0.01365279
HIF1A	ISOPROTERENOL	Approved	Bronchodilator Agents; Cardiotonic Agents	0.014123576
ERBB2	PEMBROLIZUMAB	Approved		0.014427606
MAPT	TRIMETREXATE	Approved	Antineoplastic Agents	0.014893953
MAPT	CARBIDOPA ANHYDROUS	Approved	antiparkinson agent	0.014893953
ERBB2	CARBOPLATIN	Approved		0.015148986
HIF1A	PIMOZIDE	Approved	Antidyskinetics; Antipsychotic Agents	0.01575322
HIF1A	DICLOFENAC SODIUM	Approved	for treatment of glaucoma,analgesic,NSAID	0.01575322
HIF1A	NICLOSAMIDE	Approved		0.01575322
GNAS	FLUOROURACIL	Approved		0.015897589
ERBB2	ERLOTINIB	Approved	antineoplastic agent	0.016158919
HIF1A	TOPOTECAN HYDROCHLORIDE	Approved	antineoplastic agent	0.016383348
MAPT	BITHIONOLATE SODIUM	Approved		0.016755697
MAPT	DANTROLENE	Approved	Muscle Relaxants	0.016755697
MAPT	TRICETIN	Approved		0.016755697
HIF1A	DOPAMINE	Approved		0.017065988
ERBB2	VORINOSTAT	Approved	antineoplastic agent	0.017564042
HIF1A	SULFASALAZINE	Approved	DMARD,antiinflammatory agent	0.017807987
ERBB2	CRIZOTINIB	Approved	antineoplastic agent	0.018362408
ERBB2	NIVOLUMAB	Approved	antineoplastic agent	0.018362408
MAPK14	DOXORUBICIN HYDROCHLORIDE	Approved	antineoplastic agent	0.018831435
MAPT	ETHOPROPAZINE HYDROCHLORIDE	Approved		0.019149368

FGFR3	SORAFENIB	Approved	antineoplastic agent	0.020033986
FGFR3	MIDOSTAURIN	Approved	antineoplastic agent	0.020033986
HIF1A	OXYTETRACYCLINE ANHYDROUS	Approved		0.020479185
ERBB2	OLAPARIB	Approved		0.020716563
MAPK14	SORAFENIB	Approved	antineoplastic agent	0.021185364
ERBB2	LETROZOLE	Approved	antineoplastic agent	0.021261735
F2	QUERCETIN	Approved		0.021330942
HIF1A	VINCRISTINE SULFATE	Approved		0.021557037
FGFR3	IRINOTECAN HYDROCHLORIDE	Approved	antineoplastic agent	0.021731781
ERBB2	HYDROCORTISONE BUTYRATE	Approved		0.021836377
MAPK14	HALOPERIDOL DECANOATE	Approved	Antipsychotic Agents	0.021868763
MAPT	TRICLABENDAZOLE	Approved		0.02234093
MAPT	DOCONEXENT	Approved		0.02234093
MAPT	METHYSERGIDE MALEATE	Approved		0.02234093
HIF1A	BECLOMETHASONE	Approved	glucocorticoid,antiinflammatory agent	0.02275465
HIF1A	TRIAMTERENE	Approved	Antihypertensive Agents; Diuretics	0.02275465
ERBB2	IBRUTINIB	Approved	antineoplastic agent	0.023763116
HIF1A	INAMRINONE	Approved	Cardiotonic Agents; Phosphodiesterase Inhibitors	0.024093159
HIF1A	EPINEPHRINE BITARTRATE	Approved		0.024093159
HIF1A	HYDROQUINONE	Approved		0.024093159
HIF1A	PROMAZINE	Approved	Antiemetics; Antipsychotic Agents	0.024093159
ERBB2	PALBOCICLIB	Approved		0.024733039
ERBB2	ALPELISIB	Approved		0.025248311
ERBB2	EXEMESTANE	Approved	antineoplastic agent	0.025248311
HIF1A	LORATADINE	Approved	antiasthmatic agent	0.025598982
HIF1A	BENZBROMARONE	Approved		0.025598982
ERBB2	EPIGALLOCATECHIN GALLATE	Approved		0.026062772

ERBB2	EPIRUBICIN	Approved	Antineoplastic Agents	0.026062772
MAPT	INDIGO	Approved		0.026809115
MAPT	DIHYDROERGOTAMINE MESYLATE	Approved	antimigraine agent	0.026809115
MAPT	CYSTEAMINE HYDROCHLORIDE	Approved	for treatment of corneal cystine accumulation	0.026809115
INSR	EPIRUBICIN	Approved	Antineoplastic Agents	0.027573658
ERBB2	DIETHYLSTILBESTROL	Approved	Hormone Replacement Agents	0.027860205
ERBB2	ANASTROZOLE	Approved	antineoplastic agent	0.028855212
HIF1A	CHRYSIN	Approved		0.029255979
MAPK14	RESVERATROL	Approved	antineoplastic agent,antidiabetic,for treatment of herpes simplex virus 1	0.029475289
HIF1A	NITROGLYCERIN	Approved	for treatment of Raynaud's disease	0.031506439
MAPK14	LITHIUM	Approved		0.033069837
ERBB2	TAMOXIFEN	Approved	Hormonal,Antineoplastic Agents	0.033112539
MAPT	PYRANTEL PAMOATE	Approved		0.033511394
MAPT	DEXKETOPROFEN	Approved		0.033511394
MAPT	TRIBROMSALAN	Approved		0.033511394
MAPT	DIHYDROERGOCRISTINE	Approved		0.033511394
MAPT	5-HYDROXYTRYPTOPHAN	Approved		0.033511394
ERBB2	ZOLEDRONIC ACID ANHYDROUS	Approved	antiosteoporotic agent	0.033664414
HIF1A	DEQUALINIUM	Approved		0.034131976
ERBB2	ERIBULIN MESYLATE	Approved		0.035128085
MAPK14	PAREGORIC	Approved	analgesic	0.036644954
ERBB2	OSIMERTINIB	Approved		0.036724816
HIF1A	LEVONORDEFRIN	Approved		0.037234883
ERBB2	TALAZOPARIB	Approved		0.038473616
ERBB2	IXABEPILONE	Approved	antineoplastic agent	0.038473616
F2	BORTEZOMIB	Approved	antineoplastic agent	0.039650456
FGFR3	ALPELISIB	Approved		0.040067971

FGFR3	SELUMETINIB	Approved		0.040067971
ERBB2	ROMIDEPSIN	Approved	antineoplastic agent	0.040397297
INSR	TOPIRAMATE	Approved	Anticonvulsants; anti-migraine agents, antimigraine agent,anticonvulsant	0.040703971
HIF1A	PHENOXYBENZAMINE HYDROCHLORIDE	Approved		0.040958371
HIF1A	MEFENAMIC ACID	Approved	NSAID	0.040958371
MAPK14	EPOETIN ALFA	Approved	Antianemic Agents,for treatment of anemia,for treatment of stroke,erythropoietic agent	0.041086767
FGFR3	REGORAFENIB	Approved	antineoplastic agent	0.041360487
MAPT	RACEPINEPHRINE	Approved		0.044681859
ERBB2	RIBOCICLIB	Approved	antineoplastic agent	0.044885886
HIF1A	HESPERETIN	Approved		0.045509301
HIF1A	AXITINIB	Approved	antineoplastic agent	0.045509301
HIF1A	IODOQUINOL	Approved		0.045509301
ERBB2	GEFITINIB	Approved	antineoplastic agent	0.046357554
HIF1A	DEFEROXAMINE	Approved		0.048186319
FGFR3	RABEPRAZOLE	Approved	Proton pump inhibitor	0.049314426
INSR	INSULIN, REGULAR, HUMAN	Approved	for treatment of diabetic foot ulcers,antidiabetic	0.049314426
GNAS	AMITRIPTYLINE HYDROCHLORIDE	Approved	analgesic	0.049563071
HIF1A	EPOETIN ALFA	Approved	Antianemic Agents,for treatment of anemia,for treatment of stroke,erythropoietic agent	0.04964651
ERBB2	ALITRETINOIN	Approved		0.050496621
ERBB2	VITAMIN E	Approved		0.050496621
FGFR3	PAZOPANIB	Approved	antineoplastic agent	0.053423962
ERBB2	FULVESTRANT	Approved	antineoplastic agent	0.055087223
F2	TAMOXIFEN	Approved	Hormonal,Antineoplastic Agents	0.055250636
ERBB2	FLOXURIDINE	Approved	antineoplastic agent	0.057710425
F2	VITAMIN K3	Approved	for reducing EGFR-inhibitor-induced dermatological side effects	0.058108427

FGFR3	NIVOLUMAB	Approved	antineoplastic agent	0.058280686
FGFR3	PAZOPANIB HYDROCHLORIDE	Approved		0.058280686
HIF1A	AMCINONIDE	Approved	topical,Anti-Inflammatory Agents; Anti-pruritics; Corticosteroids	0.058511958
HIF1A	MECLOFENAMATE SODIUM	Approved		0.058511958
ERBB2	EVEROLIMUS	Approved	immunosuppressant	0.05940779
MAPK14	DOXYCYCLINE ANHYDROUS	Approved		0.06163015
GNAS	NICLOSAMIDE	Approved		0.064813246
MAPT	PROPYLENE GLYCOL MONOSTEARATE	Approved		0.067022789
GNAS	MIFEPRISTONE	Approved	antidepressant,antipsychotic,for lowering intraocular pressure,opthalmological agent	0.067405776
CSF3R	IMATINIB	Approved	antineoplastic agent	0.067405776
FGFR3	BORTEZOMIB	Approved	antineoplastic agent	0.067879857
HIF1A	OXATOMIDE	Approved		0.068263951
ERBB2	MECHLORETHAMINE	Approved		0.073449631
ERBB2	CHLORAMBUCIL	Approved		0.073449631
ERBB2	ABEMACICLIB	Approved		0.075744932
APOB	DEXAMETHASONE	Approved	for treatment of Meniere's disease,glucocorticoid, anti-inflammatory agent	0.078015944
APOB	DENATURED ETHANOL	Approved		0.078955895
HIF1A	DESOXIMETASONE	Approved	Anti-Inflammatory Agents; Glucocorticoids	0.081916742
APOB	QUERCETIN	Approved		0.082953662
FGFR3	ATEZOLIZUMAB	Approved		0.085478339
MAPK14	ARGIPRESSIN	Approved	analgesic,Antidiuretic Agents	0.092445226
MAPK14	PIRFENIDONE	Approved	for treatment of fibrotic conditions	0.096847379
F2	TINZAPARIN SODIUM	Approved	for treatment of cystic fibrosis,for treatment of pelvic pain of bladder origin and interstitital cystitis, antithrombotic,anticoagulant,Anticoagulants	0.099126141

ERBB2	GANCICLOVIR	Approved		0.100993243
HIF1A	ISOETHARINE MESYLATE	Approved		0.102395927
HIF1A	CYCLOSERINE	Approved		0.102395927
F2	CATECHIN	Approved		0.129626492
CSF3R	DASATINIB ANHYDROUS	Approved	antineoplastic agent	0.132912798
MAPT	P-AMINOHIPPURATE	Approved		0.134045577
MAPT	2-MERCAPTOETHANESULFONIC ACID	Approved		0.134045577
ERBB2	TRIFLURIDINE	Approved		0.134657657
ERBB2	AFATINIB DIMALEATE	Approved		0.134657657
HIF1A	ETHAMSYLATE	Approved		0.136527903
FGFR3	MASITINIB	Approved	antineoplastic agent,DMARD,antiinflammatory agent	0.137375902
INSR	CERITINIB	Approved		0.142463898
FGFR3	INFIGRATINIB PHOSPHATE	Approved		0.160271886
CSF3R	TRAMETINIB DIMETHYL SULFOXIDE	Approved	antineoplastic agent	0.160854692
MAPK14	METHOXSALEN	Approved		0.169482913
APOB	HYDROCORTISONE BUTYRATE	Approved		0.177117279
FGFR3	PALIFERMIN	Approved	for treatment of antineoplasty-induced oral mucositis	0.183167869
APOB	PRAVASTATIN SODIUM	Approved	anticholesterolaemic agent,antihypecholesterolemic agent	0.211398043
APOB	EPIGALLOCATECHIN GALLATE	Approved		0.211398043
ERBB2	ADO-TRASTUZUMAB EMTANSINE	Approved	antineoplastic agent	0.213868044
FGFR3	PONATINIB	Approved	antineoplastic agent	0.236190147
APOB	NEVIRAPINE	Approved		0.252051512
CSF3R	LENOGRASTIM	Approved		0.262133573
APOB	TRIFLUOPERAZINE	Approved	Antiemetics; Antipsychotic Agents	0.262133573
ERBB2	NERATINIB MALEATE	Approved		0.269315315

CSF3R	IBRUTINIB	Approved	antineoplastic agent	0.277553195
APOB	TINZAPARIN SODIUM	Approved	for treatment of cystic fibrosis,for treatment of pelvic pain of bladder origin and interstitital cystitis,antithrombotic, anticoagulant,Anticoagulants	0.289117911
RHOA	SIMVASTATIN	Approved	antidyslipidaemic agent,anticholesterolaemic agent,antihypertensive agent	0.294900269
APOB	LOVASTATIN	Approved	anticholesterolaemic agent	0.30480648
F2	ANISINDIONE	Approved	Anticoagulants	0.337028879
CREB1	DENATURED ETHANOL	Approved		0.355301529
FGFR3	NINTEDANIB ESYLATE	Approved	antineoplastic agent	0.366335738
F2	ANTITHROMBIN ALFA	Approved	antithrombotic	0.374476533
CSF3R	PEXIDARTINIB	Approved		0.393200359
ERBB2	MARGETUXIMAB-CMKB	Approved	antineoplastic agent	0.403972972
ERBB2	TIPIRACIL	Approved		0.403972972
ERBB2	TBO-FILGRASTIM	Approved	for treatment of neutropenia	0.403972972
APOB	FENOFIBRATE	Approved	anticholesterolaemic agent,antidyslipidaemic agent	0.409583708
INSR	INSULIN ZINC SUSP RECOMBINANT HUMAN	Approved		0.427391695
INSR	INSULIN SUSP ISOPHANE RECOMBINANT HUMAN	Approved		0.427391695
INSR	INSULIN SUSP PROTAMINE ZINC BEEF/PORK	Approved		0.427391695
INSR	INSULIN DEGLUDEC	Approved		0.427391695
ERBB2	AFATINIB	Approved	antineoplastic agent	0.437637386
CSF3R	TOFACITINIB	Approved		0.471840431
RHOA	PRAVASTATIN SODIUM	Approved	anticholesterolaemic agent,antihypecholesterolemic agent	0.475645596
F2	AVATROMBOPAG	Approved		0.481469828
ERBB2	LAPATINIB	Approved	antineoplastic agent	0.512734926
FGFR3	INFIGRATINIB	Approved		0.524526171
FGFR3	FUTIBATINIB	Approved		0.534239619

APOB	ATORVASTATIN CALCIUM TRIHYDRATE	Approved	anticholesterolaemic agent,antihypecholesterolemic agent	0.537158961
F2	LUSUTROMBOPAG	Approved		0.561714799
F2	ENOXAPARIN SODIUM	Approved	anticoagulant	0.561714799
SGK1	ALPELISIB	Approved		0.614375561
ERBB2	PERTUZUMAB	Approved	antineoplastic agent	0.63481467
BTRC	GEMCITABINE	Approved	antineoplastic agent	0.64813246
APOB	LOMITAPIDE MESYLATE	Approved	anticholesterolaemic agent	0.655333932
ERBB2	TRASTUZUMAB-DKST	Approved	antineoplastic agent	0.662515674
CREB1	NICOTINE POLACRILEX	Approved	Central Nervous System Stimulants	0.702143499
CREB1	LITHIUM	Approved		0.71926895
COL6A2	OCRIPLASMIN	Approved		0.776053341
ERBB2	FAM-TRASTUZUMAB DERUXTECAN-NXKI	Approved		0.807945944
ERBB2	DACOMITINIB ANHYDROUS	Approved	antineoplastic agent	0.807945944
ERBB2	NERATINIB	Approved	antineoplastic agent	0.841610358
BCL2L11	IMATINIB	Approved	antineoplastic agent	0.842572199
F2	DABIGATRAN	Approved	anticoagulant	0.842572199
INSR	INSULIN SUSP PROTAMINE ZINC PURIFIED BEEF	Approved		0.85478339
INSR	INSULIN, ISOPHANE	Approved		0.85478339
INSR	INSULIN LISPRO-AABC	Approved		0.85478339
INSR	INSULIN ZINC SUSP PURIFIED BEEF	Approved		0.85478339
INSR	INSULIN PURIFIED PORK	Approved		0.85478339
INSR	INSULIN ZINC, EXTENDED	Approved		0.85478339
INSR	INSULIN SUSP ISOPHANE BEEF	Approved		0.85478339
INSR	INSULIN ZINC SUSP PROMPT BEEF	Approved		0.85478339

INSR	INSULIN ASPART PROTAMINE RECOMBINANT	Approved		0.85478339
INSR	INSULIN [INJECTION], BIPHASIC	Approved		0.85478339
INSR	INSULIN ZINC SUSP PURIFIED BEEF/PORK	Approved		0.85478339
INSR	INSULIN PURIFIED BEEF	Approved		0.85478339
INSR	INSULIN SUSP ISOPHANE BEEF/PORK	Approved		0.85478339
INSR	INSULIN SUSP ISOPHANE PURIFIED PORK	Approved		0.85478339
INSR	INSULIN ZINC, PROMPT	Approved		0.85478339
INSR	INSULIN SUSP PROTAMINE ZINC PURIFIED PORK	Approved		0.85478339
INSR	INSULIN SUSP ISOPHANE PURIFIED BEEF	Approved		0.85478339
INSR	INSULIN ZINC SUSP EXTENDED PURIFIED BEEF	Approved		0.85478339
INSR	INSULIN ZINC SUSP EXTENDED BEEF	Approved		0.85478339
INSR	INSULIN ZINC SUSP PURIFIED PORK	Approved		0.85478339
INSR	INSULIN ZINC SUSP SEMISYNTHETIC PURIFIED HUMAN	Approved		0.85478339
INSR	INSULIN LISPRO PROTAMINE RECOMBINANT	Approved		0.85478339
INSR	INSULIN ZINC SUSP EXTENDED RECOMBINANT HUMAN	Approved		0.85478339
INSR	INSULIN ZINC SUSP PROMPT PURIFIED PORK	Approved		0.85478339

INSR	INSULIN ZINC SUSP BEEF	Approved		0.85478339
INSR	INSULIN SUSP ISOPHANE SEMISYNTHETIC PURIFIED HUMAN	Approved		0.85478339
INSR	INSULIN, PROTAMINE ZINC	Approved		0.85478339
NT5C3A	CYTARABINE	Approved	antineoplastic agent	0.867353734
SLC4A1	ATENOLOL	Approved	Anti-Arrhythmia Agents; Antihypertensive Agents	0.921563342
COL6A2	COLLAGENASE CLOSTRIDIUM HISTOLYTICUM-AAES	Approved	for treatment of Dupuytren's contracture	1.053215248
FGFR3	PEMIGATINIB	Approved		1.068479237
APOB	IRBESARTAN	Approved	antihypertensive agent	1.09222322
APBB1	CLOFARABINE	Approved	antineoplastic agent	1.156471645
CSF3R	EFLAPEGRASTIM	Approved		1.179601078
RIPK1	RESVERATROL	Approved	antineoplastic agent,antidiabetic,for treatment of herpes simplex virus 1	1.282175085
NT5C3A	IDARUBICIN	Approved	Antineoplastic Agents	1.34045577
CREB1	CITALOPRAM	Approved	antidepressant,Second-Generation,Antidepressive Agents	1.382345013
SGK1	SODIUM CHLORIDE	Approved		1.404286998
FGFR3	ERDAFITINIB	Approved		1.410392593
VASP	HYDROCHLOROTHIAZIDE	Approved	antihypertensive agent	1.474501347
ERBB2	TUCATINIB	Approved	antineoplastic agent	1.615891888
APOB	MIPOMERSEN	Approved	anticholesterolaemic agent	1.63833483
GNAS	TRIACETIN	Approved		1.685144397
F2	DABIGATRAN ETEXILATE MESYLATE	Approved		1.685144397
SFN	IMATINIB	Approved	antineoplastic agent	1.685144397
INSR	INSULIN GLARGINE-YFGN	Approved	antidiabetic	1.70956678
INSR	INSULIN GLULISINE, HUMAN	Approved	antidiabetic	1.70956678
INSR	INSULIN DETEMIR	Approved	antidiabetic	1.70956678

INSR	INSULIN ASPART PROTAMINE, HUMAN	Approved	antidiabetic	1.70956678
INSR	INSULIN, REGULAR, PORK	Approved		1.70956678
CSF3R	RUXOLITINIB	Approved	antiinflammatory agent,antineoplastic agent	1.814770889
APOB	CHOLESTYRAMINE RESIN	Approved		2.184446441
F2	DESIRUDIN	Approved	antithrombotic	2.246859196
CSF3R	LIPEGFILGRASTIM	Approved		2.359202156
F2	ARGATROBAN	Approved	anticoagulant	2.527716596
SLC4A1	METOPROLOL	Approved	Anti-Arrhythmia Agents; Antihypertensive Agents,antihypertensive agent	2.680911541
HNRNPA1	CAMPTOTHECIN	Approved	antineoplastic agent	3.370288794
CSF3R	TBO-FILGRASTIM	Approved	for treatment of neutropenia	4.718404312
F2	XIMELAGATRAN	Approved	Anticoagulants	5.055433191
F2	BIVALIRUDIN	Approved	antiplatelet agent	6.740577588
CSF3R	PEGFILGRASTIM-JMDB	Approved	Antineutropenic Agents,for treatment of neutropenia	9.436808623
NUCB1	REMDESIVIR	Approved		58.9800539

Table S14 HUB GENES DRUGGABILITY

search_term	match_term	match_type	category	sources
GPHN	GPHN	Definite	ENZYME	HumanProteinAtlas|Pharos
GPHN	GPHN	Definite	CLINICALLY ACTIONABLE	FoundationOneGenes|CarisMolecularIntelligence
MAPT	MAPT	Definite	DRUGGABLE GENOME	HingoraniCasas
RHOA	RHOA	Definite	CLINICALLY ACTIONABLE	MskImpact|FoundationOneGenes|Oncomine|Tempus
RHOA	RHOA	Definite	KINASE	Pharos
APOB	APOB	Definite	DRUGGABLE GENOME	RussLampel|HopkinsGroom|HingoraniCasas
APOB	APOB	Definite	CLINICALLY ACTIONABLE	Tempus
HNRNPA1	HNRNPA1	Definite	DRUGGABLE GENOME	HingoraniCasas
DAG1	DAG1	Definite	DRUGGABLE GENOME	HingoraniCasas
DAG1	DAG1	Definite	TRANSPORTER	HumanProteinAtlas

DAG1	DAG1	Definite	EXTERNAL SIDE OF PLASMA MEMBRANE	GO
ATP6V1E1	ATP6V1E1	Definite	TRANSPORTER	HumanProteinAtlas
ATP6V1E1	ATP6V1E1	Definite	ENZYME	Pharos
TAF9	TAF9	Definite	TRANSCRIPTION FACTOR	Pharos
H3F3A	H3-3A	Definite	DRUGGABLE GENOME	HingoraniCasas
H3F3A	H3-3A	Definite	CLINICALLY ACTIONABLE	FoundationOneGenes|CarisMolecularIntelligence| Oncomine|Tempus
NUCB1	NUCB1	Definite	DRUGGABLE GENOME	HingoraniCasas
RIPK1	RIPK1	Definite	DRUGGABLE GENOME	RussLampel|HopkinsGroom|HingoraniCasas
RIPK1	RIPK1	Definite	KINASE	HopkinsGroom|dGene|Pharos
RIPK1	RIPK1	Definite	SERINE THREONINE KINASE	GO|dGene
NDRG1	NDRG1	Definite	CLINICALLY ACTIONABLE	FoundationOneGenes|CarisMolecularIntelligence
PPP1R15A	PPP1R15A	Definite	TUMOR SUPPRESSOR	GO
PPP1R15A	PPP1R15A	Definite	CLINICALLY ACTIONABLE	Tempus
PPP1R15A	PPP1R15A	Definite	KINASE	Pharos
APBB1	APBB1	Definite	TRANSCRIPTION FACTOR BINDING	GO
APBB1	APBB1	Definite	ENZYME	Pharos
APBB1	APBB1	Definite	TRANSCRIPTION FACTOR	Pharos
OPTN	OPTN	Definite	TRANSCRIPTION FACTOR	Pharos
SFN	SFN	Definite	DRUGGABLE GENOME	HingoraniCasas
CREB1	CREB1	Definite	CLINICALLY ACTIONABLE	CarisMolecularIntelligence
CREB1	CREB1	Definite	TRANSCRIPTION FACTOR COMPLEX	GO
CREB1	CREB1	Definite	KINASE	Pharos
CREB1	CREB1	Definite	TRANSCRIPTION FACTOR	Pharos
BCL2L11	BCL2L11	Definite	CLINICALLY ACTIONABLE	MskImpact|CarisMolecularIntelligence|Tempus
BCL2L11	BCL2L11	Definite	DRUG RESISTANCE	CIViC
BCL2L11	BCL2L11	Definite	TRANSCRIPTION FACTOR	Pharos
SGK1	SGK1	Definite	DRUGGABLE GENOME	RussLampel|HingoraniCasas|HopkinsGroom
SGK1	SGK1	Definite	KINASE	HopkinsGroom|dGene|Pharos
SGK1	SGK1	Definite	CLINICALLY ACTIONABLE	FoundationOneGenes|Tempus
SGK1	SGK1	Definite	SERINE THREONINE KINASE	GO|dGene
SGK1	SGK1	Definite	DRUG RESISTANCE	CIViC
SGK1	SGK1	Definite	ENZYME	Pharos
SGK1	SGK1	Definite	TRANSCRIPTION FACTOR	Pharos

SGK1	SGK1	Definite	TRANSPORTER	Pharos
SGK1	SGK1	Definite	ION CHANNEL	Pharos
HIF1A	HIF1A	Definite	DRUGGABLE GENOME	HingoraniCasas
HIF1A	HIF1A	Definite	TRANSCRIPTION FACTOR COMPLEX	GO
HIF1A	HIF1A	Definite	CLINICALLY ACTIONABLE	Tempus
HIF1A	HIF1A	Definite	ENZYME	Pharos
HIF1A	HIF1A	Definite	TRANSCRIPTION FACTOR	Pharos
HIF1A	HIF1A	Definite	TRANSPORTER	Pharos
INSR	INSR	Definite	DRUGGABLE GENOME	RussLampel|HingoraniCasas|HopkinsGroom
INSR	INSR	Definite	CLINICALLY ACTIONABLE	MskImpact|CarisMolecularIntelligence
INSR	INSR	Definite	KINASE	HopkinsGroom|dGene|Pharos
INSR	INSR	Definite	TYROSINE KINASE	GO|dGene
INSR	INSR	Definite	EXTERNAL SIDE OF PLASMA MEMBRANE	GO
INSR	INSR	Definite	ENZYME	Pharos
INSR	INSR	Definite	TRANSCRIPTION FACTOR	Pharos
INSR	INSR	Definite	TRANSPORTER	Pharos
VASP	VASP	Definite	KINASE	Pharos
TOLLIP	TOLLIP	Definite	KINASE	Pharos
BTRC	BTRC	Definite	TUMOR SUPPRESSOR	GO
GNAS	GNAS	Definite	DRUGGABLE GENOME	HingoraniCasas
GNAS	GNAS	Definite	CLINICALLY ACTIONABLE	MskImpact|FoundationOneGenes|CarisMolecularIntelligence| Oncomine|Tempus
GNAS	GNAS	Definite	TRANSPORTER	HumanProteinAtlas
GNAS	GNAS	Definite	DRUG RESISTANCE	CIViC
GNAS	GNAS	Definite	G PROTEIN COUPLED RECEPTOR	Pharos
TADA2A	TADA2A	Definite	TUMOR SUPPRESSOR	GO
CSF3R	CSF3R	Definite	DRUGGABLE GENOME	HingoraniCasas
CSF3R	CSF3R	Definite	EXTERNAL SIDE OF PLASMA MEMBRANE	GO
CSF3R	CSF3R	Definite	CLINICALLY ACTIONABLE	FoundationOneGenes|CarisMolecularIntelligence|Tempus
SLC4A1	SLC4A1	Definite	DRUGGABLE GENOME	RussLampel|HingoraniCasas
SLC4A1	SLC4A1	Definite	CELL SURFACE	HumanProteinAtlas|GO
SLC4A1	SLC4A1	Definite	TRANSPORTER	HumanProteinAtlas|Pharos
SLC4A1	SLC4A1	Definite	ENZYME	Pharos
FGFR3	FGFR3	Definite	DRUGGABLE GENOME	RussLampel|HopkinsGroom|HingoraniCasas

FGFR3	FGFR3	Definite	KINASE	HopkinsGroom|dGene|Pharos
FGFR3	FGFR3	Definite	CLINICALLY ACTIONABLE	MskImpact|FoundationOneGenes|CarisMolecularIntelligence| Oncomine|Tempus|CIViC
FGFR3	FGFR3	Definite	CELL SURFACE	GO
FGFR3	FGFR3	Definite	TYROSINE KINASE	GO|dGene
FGFR3	FGFR3	Definite	DRUG RESISTANCE	CIViC
THRB	THRB	Definite	DRUGGABLE GENOME	RussLampel|HingoraniCasas|HopkinsGroom
THRB	THRB	Definite	NUCLEAR HORMONE RECEPTOR	HopkinsGroom|GO|dGene
GRB7	GRB7	Definite	KINASE	Pharos
YWHAQ	YWHAQ	Definite	KINASE	Pharos
ARRB1	ARRB1	Definite	TRANSCRIPTION FACTOR BINDING	GO
ARRB1	ARRB1	Definite	KINASE	Pharos
ARRB1	ARRB1	Definite	G PROTEIN COUPLED RECEPTOR	Pharos
ARRB1	ARRB1	Definite	ION CHANNEL	Pharos
COL6A2	COL6A2	Definite	DRUGGABLE GENOME	HingoraniCasas|RussLampel
UBE3A	UBE3A	Definite	ENZYME	HumanProteinAtlas|Pharos
ATF7IP	ATF7IP	Definite	TRANSCRIPTION FACTOR COMPLEX	GO
ATF7IP	ATF7IP	Definite	TRANSCRIPTION FACTOR	Pharos
YWHAB	YWHAB	Definite	KINASE	Pharos
ERBB2	ERBB2	Definite	KINASE	HopkinsGroom|BaderLabGenes|dGene|Pharos
ERBB2	ERBB2	Definite	DRUGGABLE GENOME	HopkinsGroom|RussLampel|HingoraniCasas
ERBB2	ERBB2	Definite	CLINICALLY ACTIONABLE	MskImpact|FoundationOneGenes|CarisMolecularIntelligence| Oncomine|Tempus|CIViC
ERBB2	ERBB2	Definite	TYROSINE KINASE	GO|dGene
ERBB2	ERBB2	Definite	DRUG RESISTANCE	CIViC
INHBA	INHBA	Definite	DRUGGABLE GENOME	HingoraniCasas
INHBA	INHBA	Definite	HORMONE ACTIVITY	GO
INHBA	INHBA	Definite	GROWTH FACTOR	GO
INHBA	INHBA	Definite	CLINICALLY ACTIONABLE	FoundationOneGenes|CarisMolecularIntelligence
MPP3	MPP3	Definite	KINASE	Pharos
MAPK14	MAPK14	Definite	DRUGGABLE GENOME	HingoraniCasas|HopkinsGroom|RussLampel
MAPK14	MAPK14	Definite	KINASE	HopkinsGroom|dGene|Pharos
MAPK14	MAPK14	Definite	SERINE THREONINE KINASE	GO|dGene
MAPK14	MAPK14	Definite	TRANSCRIPTION FACTOR	Pharos

Table S15 Significant SNPs from our GWAS meta-analysis using RE2C/METASOFT encompassing ESH, SA, and TLNWL

rsID	A1	A2	BETA	SE	P_RE2C	I2	Q	Qp	GENE_SYMBOL	BIOTYPE	Consequence	PVALUE_RE2	PVALUE_BE	P_ESH	P_SA	P_TLNWL	M_ESH	M_SA	M_TLNWL
rs17408393	A	G	0.00447	0.0008	1.5E-09	88	16.96	0.00021	DCC	protein_coding	intron_variant	7.46986E-10	3.613E-09	3E-05	0.4906	9.42E-08	0.427	0.647	0.999
rs62099230	G	A	0.00443	0.0008	2.1E-09	88	16.85	0.00022	DCC	protein_coding	intron_variant	1.04073E-09	3.258E-09	3E-05	0.4906	1.09E-07	0.394	0.64	0.999
rs17487277	C	G	0.00442	0.0008	2.2E-09	88	16.89	0.00021	DCC	protein_coding	intron_variant	1.09406E-09	2.518E-09	4E-05	0.4906	1.08E-07	0.375	0.636	0.999
rs62100771	A	G	0.00431	0.0008	2.8E-09	88	18.17	0.00011	DCC	protein_coding	intron_variant	1.34949E-09	4.924E-11	8E-05	0.4832	5.89E-08	0.133	0.587	1
rs150002680	A	G	0.02442	0.0041	2.9E-09	0	0.02	0.98976	SH3GL3	protein_coding	intron_variant	4.14541E-09	8.238E-09	8E-09	0.7715	0.165924	1	0.717	0.835
rs8095327	T	A	-0.0043	0.0008	2.9E-09	89	18.54	9.4E-05	DCC	protein_coding	intron_variant	1.45727E-09	2.556E-10	6E-05	0.1202	1.3E-07	0.254	0.701	1
rs17487256	C	T	0.00428	0.0008	3.1E-09	89	18.37	0.0001	DCC	protein_coding	intron_variant	1.51621E-09	5.324E-11	1E-04	0.4906	5.45E-08	0.104	0.579	1
rs62099232	C	T	0.00427	0.0008	3.1E-09	89	18.4	0.0001	DCC	protein_coding	intron_variant	1.5169E-09	5.54E-11	1E-04	0.4906	5.36E-08	0.101	0.579	1
rs3794923	C	T	0.00426	0.0008	3.2E-09	89	18.53	9.5E-05	DCC	protein_coding	intron_variant	1.55565E-09	6.276E-11	0.0001	0.4761	5.13E-08	0.091	0.58	1
rs11663824	C	A	0.00428	0.0008	3.7E-09	88	17.97	0.00013	DCC	protein_coding	intron_variant	1.79177E-09	6.29E-11	9E-05	0.4688	7.19E-08	0.133	0.59	1
rs62100767	A	C	0.00423	0.0008	3.8E-09	89	18.6	9.1E-05	DCC	protein_coding	intron_variant	1.81746E-09	1.12E-10	0.0001	0.4856	5.12E-08	0.076	0.574	1
rs12959446	T	A	0.00426	0.0008	4E-09	88	18.13	0.00012	DCC	protein_coding	intron_variant	1.93599E-09	6.417E-11	0.0001	0.4761	6.69E-08	0.11	0.584	1
rs62100766	G	T	0.00425	0.0008	4E-09	88	18.16	0.00011	DCC	protein_coding	intron_variant	1.9521E-09	6.903E-11	0.0001	0.4856	6.53E-08	0.106	0.581	1
rs17488727	A	C	0.00406	0.0008	4.1E-09	90	20.44	3.6E-05	DCC, MIR4528	protein_coding, miRNA	intron_variant, upstream_gene_variant	1.96597E-09	7.107E-09	0.0003	0.4808	2.12E-08	0.014	0.563	1
rs7229097	G	A	-0.00426	0.0008	4.1E-09	88	17.07	0.0002	DCC	protein_coding	intron_variant	2.04097E-09	5.223E-10	6E-05	0.7698	9.99E-08	0.232	0.565	1
rs17486305	C	T	0.00425	0.0008	4.2E-09	89	19.65	5.4E-05	DCC	protein_coding	intron_variant	2.06307E-09	1.135E-10	1E-04	0.3392	4.31E-08	0.11	0.366	1
rs4291980	T	G	0.00424	0.0008	4.5E-09	89	18.34	0.0001	DCC	protein_coding	intron_variant	2.15197E-09	4.376E-10	7E-05	0.4021	7.47E-08	0.19	0.477	1
rs4321259	G	A	0.00426	0.0008	4.8E-09	88	17.2	0.00018	DCC	protein_coding	intron_variant	2.31058E-09	4.523E-10	7E-05	0.3223	1.43E-07	0.244	0.646	0.999
rs4372758	C	T	-0.00434	0.0008	4.8E-09	87	16.62	0.00025	DCC	protein_coding	intron_variant	2.28842E-09	4.206E-08	3E-05	0.3603	2.04E-07	0.564	0.599	0.999
rs11659803	G	A	0.00418	0.0008	5.3E-09	89	19.08	7.2E-05	DCC	protein_coding	intron_variant	2.56624E-09	6.076E-10	0.0002	0.2872	6.05E-08	0.052	0.626	1
rs8098809	G	A	-0.00421	0.0008	5.4E-09	89	18.81	8.2E-05	DCC	protein_coding	intron_variant	2.7197E-09	1.414E-10	9E-05	0.0841	1.78E-07	0.185	0.721	1
rs62100775	A	G	0.00412	0.0008	5.5E-09	89	18.99	7.5E-05	DCC	protein_coding	intron_variant	2.66947E-09	8.882E-10	0.0002	0.4711	4.77E-08	0.042	0.571	1
rs4456576	C	G	0.00403	0.0008	5.9E-09	89	19.98	4.6E-05	DCC, MIR4528	protein_coding, miRNA	intron_variant, upstream_gene_variant	2.82233E-09	7.842E-09	0.0003	0.493	2.92E-08	0.016	0.56	1
rs4296324	C	G	0.00415	0.0008	7.2E-09	88	17.53	0.00016	DCC	protein_coding	intron_variant	3.53239E-09	1.206E-10	0.0001	0.608	9.81E-08	0.119	0.559	1
rs4343352	T	C	0.00424	0.0008	7.6E-09	87	16.07	0.00032	DCC	protein_coding	intron_variant	3.69765E-09	6.521E-09	6E-05	0.3873	2.65E-07	0.376	0.655	0.999
rs10502966	A	G	0.00396	0.0008	1.1E-08	89	19.61	5.5E-05	DCC	protein_coding	intron_variant	5.24862E-09	1.374E-08	0.0004	0.4808	4.26E-08	0.015	0.563	1
rs62100765	C	G	0.00415	0.0008	1.1E-08	88	17.33	0.00017	DCC	protein_coding	intron_variant	5.28011E-09	1.881E-10	0.0002	0.443	1.39E-07	0.116	0.593	1
rs28592695	A	G	-0.00497	0.0009	1.2E-08	83	12.14	0.00231	STIM2	-	intergenic_variant	7.06088E-09	1.335E-07	1E-05	0.6417	2.4E-06	0.957	0.724	0.997
rs72917329	G	A	0.00413	0.0008	1.7E-08	88	16.67	0.00024	DCC	protein_coding	intron_variant	8.23061E-09	5.085E-10	0.0001	0.7367	1.85E-07	0.153	0.527	0.999
rs4939722	T	A	-0.00385	0.0008	2.1E-08	90	20.4	3.7E-05	DCC	protein_coding	intron_variant	1.04406E-08	2.756E-08	0.0005	0.09	1.12E-07	0.018	0.703	1
rs6682470	C	T	0.02387	0.0043	2.2E-08	76	8.59	0.01367	MEAF6	-	intergenic_variant	1.07095E-08	6.064E-08	3E-06	0.969	2.06E-05	0.998	0.744	0.996
rs115632986	C	T	0.02453	0.0045	2.2E-08	79	9.65	0.00803	RSPO1	protein_coding	intron_variant	1.10866E-08	9.835E-08	6E-06	0.8549	1.02E-05	0.992	0.75	0.996
rs12959099	A	C	0.00421	0.0008	3.6E-08	84	12.5	0.00193	DCC	protein_coding	intron_variant	2.1489E-08	3.611E-07	4E-05	0.4711	2.64E-06	0.824	0.731	0.997
rs66563806	G	A	-0.00386	0.0008	4.1E-08	88	17.99	0.00012	DCC	protein_coding	intron_variant	2.061E-08	1.504E-09	0.0004	0.5971	1.34E-07	0.048	0.387	1
rs7232543	A	G	0.00391	0.0008	4.2E-08	88	16.99	0.0002	DCC	protein_coding	intron_variant	2.0709E-08	1.996E-09	0.0004	0.4906	2.28E-07	0.062	0.57	1
rs4368222	G	C	0.00378	0.0008	4.4E-08	89	18.33	0.0001	DCC	protein_coding	intron_variant	2.25153E-08	2.703E-08	0.0007	0.6205	1.12E-07	0.019	0.515	1
rs7241743	T	C	0.00403	0.0008	4.7E-08	86	14.58	0.00068	DCC	protein_coding	intron_variant	2.39467E-08	3.562E-08	0.0001	0.4749	8.52E-07	0.372	0.636	0.998

Table S16

Significant SNPs from our GWAS meta-analysis using RE2C/METASOFT encompassing SUIC, ICV, Accumbens, Caudate, Hippocampus, Pallidum, Thalamus, and Putamen.

RSID	RE2Cp*	#chrom	pos	ref	alt	nearest_genes	PVALUE_FE	BETA_FE	STD_FE	BETA_RE	STD_RE	PVALUE_RE2	I2	Q	P_Q	P_SUIC	P_Acc	P_Cau	P_Hipp	P_ICV	P_Pal	P_Put	P_Tha
rs6567261	5.6874E-30	18	62184009	T	C	PIGN	6.00641E-16	-0.000555	6.9E-05	-0.001174	0.0004	3.46191E-30	92.769	96.8	4.9E-18	0.53756	6.2E-05	0.0003	0.066	0.177	5E-07	5.7E-24	0.5541
rs11754988	5.174E-27	6	74253222	C	T	CD109	2.62205E-14	-0.000523	6.9E-05	-0.00108	0.00039	3.13968E-27	92.2943	90.84	8.3E-17	0.60938	0.00027	0.0002	0.167	0.102	4E-07	2.6E-21	0.3318
rs56161836	6.6985E-27	1	245197588	G	A	KIF26B	4.21159E-14	-0.000503	6.7E-05	-0.001052	0.00038	4.06426E-27	92.3198	91.14	7.2E-17	0.94429	0.0002	0.0002	0.1257	0.101	9E-07	2.2E-21	0.2547
rs13022308	7.9489E-27	2	166492125	G	A	SCN7A	3.21321E-14	-0.000505	6.7E-05	-0.001055	0.00038	4.82252E-27	92.2449	90.26	1.1E-16	0.69279	0.00017	0.0003	0.1085	0.111	7E-07	2.8E-21	0.2674
rs2302862	8.9054E-27	3	10216809	T	C	IRAK2	3.40795E-14	-0.000516	6.8E-05	-0.001059	0.00038	5.40252E-27	92.2127	89.89	1.3E-16	0.71091	0.00018	0.0003	0.0908	0.129	1E-06	1.9E-21	0.2266
rs112321855	8.9093E-27	6	92291159	A	C	EPHA7	3.55222E-14	-0.000515	6.8E-05	-0.001058	0.00038	5.40484E-27	92.2145	89.91	1.3E-16	0.79292	0.00019	0.0003	0.0923	0.129	1E-06	2.1E-21	0.2235
rs73990455	8.9208E-27	2	221793974	G	A	EPHA4	3.3966E-14	-0.000516	6.8E-05	-0.001058	0.00038	5.41186E-27	92.2016	89.76	1.4E-16	0.94523	0.00018	0.0003	0.0907	0.129	1E-06	1.9E-21	0.2268
rs76251217	9.2775E-27	8	65758252	C	T	MTFR1,PDE7A	3.45808E-14	-0.000505	6.7E-05	-0.001053	0.00038	5.62813E-27	92.1964	89.7	1.4E-16	0.90068	0.00017	0.0003	0.1226	0.127	7E-07	3E-21	0.2655
rs12987321	9.7928E-27	2	238622777	G	A	ASB1	3.48102E-14	-0.000505	6.7E-05	-0.001049	0.00039	5.94054E-27	92.5836	94.39	1.6E-17	0.02907	0.00017	0.0003	0.1235	0.13	6E-07	3.3E-21	0.2614
rs1925688	1.074E-26	6	87149638	T	C	ZNF292	3.06959E-14	-0.000508	6.7E-05	-0.001057	0.00038	6.51504E-27	92.2218	90	1.2E-16	0.61498	0.00017	0.0003	0.1167	0.085	6E-07	4.5E-21	0.2626
rs7017598	1.1177E-26	8	18917707	T	C	PSD3	4.20817E-14	-0.000503	6.7E-05	-0.001047	0.00038	6.77973E-27	92.3459	91.45	6.2E-17	0.18687	0.00019	0.0003	0.1272	0.13	6E-07	3.3E-21	0.2598
rs435758	3.8539E-26	9	23636675	A	G	ELAVL2	6.27683E-14	-0.00051	6.8E-05	-0.001038	0.00038	2.33626E-26	92.048	88.03	3.1E-16	0.96424	0.00022	0.0005	0.1317	0.12	1E-06	4.8E-21	0.2431
rs116812052	3.9462E-26	4	58441565	C	T	IGFBP7	6.33546E-14	-0.00051	6.8E-05	-0.001037	0.00038	2.39218E-26	92.2577	90.41	1E-16	0.12205	0.00022	0.0005	0.1312	0.121	1E-06	4.8E-21	0.2434
rs6874869	5.1428E-26	5	166883792	T	C	TENM2	7.65947E-14	-0.000509	6.8E-05	-0.001042	0.00038	3.11712E-26	92.0721	88.3	2.8E-16	0.45005	0.00024	0.0005	0.1262	0.128	1E-06	5.5E-21	0.2483
rs2829352	9.8957E-26	21	24771483	A	G	MRPL39	8.16086E-14	-0.000584	7.8E-05	-0.001192	0.00043	5.9959E-26	91.9379	86.83	5.5E-16	0.79261	0.00028	0.0011	0.0993	0.102	5E-07	1.2E-20	0.2628
rs74939585	1.045E-24	2	179470471	G	T	ZNF385B	1.72858E-13	-0.000536	7.3E-05	-0.001174	0.00039	6.32366E-25	91.4585	81.95	5.5E-15	0.91669	0.00072	0.0043	0.0471	0.182	1E-06	1.1E-20	0.9709
rs7032795	1.3001E-23	9	114372665	T	C	AKNA	1.91883E-12	-0.000502	7.1E-05	-0.001108	0.00038	7.85615E-24	91.4943	82.3	4.7E-15	0.48939	0.00197	0.0022	0.0809	0.164	1E-06	4.4E-20	0.7972
rs142210334	1.6742E-23	3	29545196	A	G	RBMS3,RP11-9J18.1	7.90132E-14	-0.000519	6.9E-05	-0.001084	0.00036	1.01151E-23	91.0964	78.62	2.6E-14	0.20571	0.00013	0.0002	0.0837	0.036	1E-05	1.3E-18	0.6773
rs72926685	1.8736E-23	2	80196460	A	G	CTNNA2	2.19729E-12	-0.000501	7.1E-05	-0.001108	0.00038	1.13191E-23	91.4761	82.12	5.1E-15	0.33184	0.00184	0.0028	0.0774	0.172	2E-06	5.1E-20	0.7624
rs9397977	2.4408E-23	6	156867753	G	T	ARID1B	4.85526E-12	-0.000495	7.2E-05	-0.001102	0.00039	1.47431E-23	91.7689	85.04	1.3E-15	0.10135	0.00283	0.003	0.0923	0.172	2E-06	4E-20	0.7436
rs79574843	2.6917E-23	5	81622386	A	G	SSBP2	3.87301E-12	-0.000494	7.1E-05	-0.001109	0.00038	1.62579E-23	91.6533	83.87	2.2E-15	0.13824	0.00318	0.0023	0.0878	0.147	1E-06	6.9E-20	0.8734
rs10989660	4.1806E-23	9	101858708	A	C	GRIN3A	1.07981E-12	-0.000507	7.1E-05	-0.001103	0.00038	2.52437E-23	91.5611	82.95	3.4E-15	0.02616	0.00079	0.0028	0.0464	0.195	6E-06	1.2E-19	0.7592
rs7641466	3.3588E-22	3	46296984	A	G	CCR3	4.33999E-13	-0.0005	6.9E-05	-0.001036	0.00036	2.02551E-22	90.8478	76.48	7.2E-14	0.10338	0.00016	0.0006	0.0464	0.049	4E-05	4.2E-18	0.5494
rs75044743	2.705E-21	14	73818832	C	T	ELMSAN1	4.45086E-12	-0.000474	6.8E-05	-0.001013	0.00035	1.62892E-21	90.3812	72.77	4.1E-13	0.7104	0.00111	0.0035	0.079	0.109	3E-06	1E-17	0.6416
rs7326763	5.8147E-14	13	60731197	A	C	TDRD3	6.04232E-10	-0.00042	6.8E-05	-0.000846	0.00028	3.44714E-14	84.6932	45.73	9.9E-08	0.2935	0.00367	0.0031	0.1944	0.096	1E-05	8.7E-11	0.8339
rs419212	8.0292E-14	1	166535642	T	C	POGK	8.04807E-10	-0.000471	7.7E-05	-0.000989	0.00032	4.75801E-14	85.9092	49.68	1.7E-08	0.45278	0.00482	0.0143	0.0741	0.007	5E-05	1.8E-11	0.4346
rs12269802	9.1483E-14	11	87131060	G	A	TMEM135	8.60369E-10	-0.000469	7.6E-05	-0.000984	0.00032	5.42024E-14	86.0713	50.26	1.3E-08	0.30558	0.00486	0.0147	0.0746	0.006	5E-05	1.9E-11	0.4424
rs9815296	1.0588E-13	3	178434563	G	T	KCNMB2,RP11-385J1	8.92872E-10	-0.000476	7.8E-05	-0.001002	0.00032	6.27193E-14	85.5003	48.28	3.1E-08	0.78754	0.00491	0.012	0.0668	0.008	6E-05	2.6E-11	0.4332
rs1102315	1.1524E-13	1	168460509	A	G	XCL2	1.03099E-09	-0.000467	7.6E-05	-0.000984	0.00032	6.82569E-14	86.0882	50.32	1.3E-08	0.25625	0.005	0.0133	0.0689	0.006	6E-05	2.3E-11	0.4936
rs116281073	1.1909E-13	10	80612368	T	C	SH2D4B	8.96818E-10	-0.000468	7.6E-05	-0.000977	0.00032	7.05341E-14	85.6332	48.72	2.6E-08	0.8801	0.00465	0.0135	0.0648	0.006	5E-05	2.8E-11	0.5093
rs12467006	1.3337E-13	2	185837921	C	T	FSIP2	1.13759E-09	-0.00047	7.7E-05	-0.000994	0.00033	7.89804E-14	86.2771	51.01	9.1E-09	0.12417	0.00528	0.0142	0.0795	0.007	6E-05	2.3E-11	0.4425
rs13005094	1.4576E-13	2	201227838	T	C	CASP10	1.17784E-09	-0.00047	7.7E-05	-0.000989	0.00032	8.63094E-14	85.79	49.26	2E-08	0.38645	0.00521	0.0138	0.0818	0.007	6E-05	2.4E-11	0.4543
rs56308182	1.5509E-13	5	23221523	C	T	PRDM9	9.50796E-09	-0.000391	6.8E-05	-0.000826	0.0003	9.18227E-14	86.6738	52.53	4.6E-09	0.04269	0.01862	0.013	0.2071	0.106	5E-06	2.5E-11	0.9639
rs7791463	1.5737E-13	7	98189735	G	A	LMTK2	1.12578E-09	-0.000473	7.8E-05	-0.001005	0.00033	9.31756E-14	86.3133	51.14	8.6E-09	0.06452	0.00503	0.0123	0.0731	0.008	7E-05	3.1E-11	0.4348
rs146225373	1.6539E-13	20	55226415	G	A	DOK5	1.26135E-09	-0.000464	7.6E-05	-0.000974	0.00033	9.79129E-14	86.6487	52.43	4.8E-09	0.05427	0.0053	0.0146	0.0698	0.006	5E-05	2.8E-11	0.5282
rs76295381	1.6588E-13	4	95127353	G	A	BMPR1B	5.09278E-09	-0.000466	8E-05	-0.000906	0.00033	9.82043E-14	84.6165	45.5	1.1E-07	0.91956	0.00719	0.1653	0.0154	0.544	2E-05	1.8E-11	0.5152
rs12062901	2.2724E-13	1	65963105	A	C	PDE4B	7.00731E-10	-0.000472	7.7E-05	-0.000966	0.00031	1.34473E-13	84.8713	46.27	7.7E-08	0.95205	0.00361	0.0152	0.0517	0.007	6E-05	8.1E-11	0.5269
rs16967009	2.6715E-13	18	35690283	A	G	GALNT1	7.55732E-09	-0.0004	6.9E-05	-0.000836	0.00029	1.58058E-13	85.6198	48.68	2.6E-08	0.18714	0.02108	0.0045	0.2324	0.064	2E-06	2.9E-10	0.9118
rs4995783	3.279E-13	2	49242303	T	C	FSHR	1.78383E-09	-0.000409	6.8E-05	-0.000816	0.00027	1.9395E-13	83.922	43.54	2.6E-07	0.68537	0.00479	0.0048	0.2481	0.084	2E-05	1.7E-10	0.8489
rs76515473	3.5618E-13	5	93004586	C	T	NR2F1	9.04173E-09	-0.000449	7.8E-05	-0.000905	0.00031	2.10653E-13	84.1596	44.19	2E-07	0.99253	0.01281	0.0888	0.0098	0.952	2E-05	5.3E-11	0.619
rs6707203	3.6109E-13	2	5163408	A	C	SOX11	1.10638E-08	-0.000383	6.7E-05	-0.00081	0.00027	2.1355E-13	84.681	45.69	1E-07	0.89007	0.01532	0.0028	0.2001	0.23	2E-05	7.9E-11	0.9904
rs7859893	5.3434E-13	9	6568116	A	G	GLDC	1.01527E-08	-0.000458	8E-05	-0.000892	0.00032	3.15837E-13	84.1363	44.13	2E-07	0.78918	0.00956	0.174	0.0315	0.623	1E-05	3E-11	0.619
rs981284	6.3066E-13	2	176500600	G	A	MTX2	2.16929E-08	-0.000438	7.8E-05	-0.000899	0.00032	3.72684E-13	84.5443	45.29	1.2E-07	0.47487	0.01992	0.088	0.0163	0.934	2E-05	4.2E-11	0.6375
rs4464190	6.311E-13	19	47319466	G	A	C5AR1	1.43959E-08	-0.000445	7.9E-05	-0.000897	0.00032	3.72947E-13	85.116	47.03	5.5E-08	0.08459	0.014	0.1011	0.0184	0.988	2E-05	4.4E-11	0.607
rs2000687	9.4431E-13	11	98324243	T	C	CNTN5	1.82646E-08	-0.000388	6.9E-05	-0.000798	0.00028	5.57717E-13	84.8389	46.17	8.1E-08	0.33071	0.02044	0.0052	0.2543	0.142	7E-06	2.5E-10	0.8844
rs10201740	9.9243E-13	2	209416368	G	A	MAP2	1.88196E-08	-0.000377	6.7E-05	-0.000792	0.00027	5.86093E-13	84.3179	44.64	1.6E-07	0.79422	0.01644	0.0042	0.2106	0.24	3E-05	1.1E-10	0.9696
rs7188404	1.084E-12	16	71375214	C	T	CALB2	2.25459E-08	-0.00044	7.9E-05	-0.000887	0.00032	6.40106E-13	84.4277	44.95	1.4E-07	0.26799	0.01682	0.1135	0.0164	0.973	2E-05	6.2E-11	0.5853
rs4833839	1.356E-12	4	122637672	A	G	IL21	2.42653E-08	-0.000384	6.9E-05	-0.000795	0.00028	8.00429E-13	84.4642	45.06	1.3E-07	0.8579	0.02222	0.005	0.2586	0.138	9E-06	2.8E-10	0.902

Table S16

rs676314	1.5788E-12	19	50362278	A	G	NAPSA,NR1H2	2.80392E-08	-0.000438	7.9E-05	-0.000883	0.00032	9.31754E-13	84.505	45.18	1.3E-07	0.17855	0.01701	0.1195	0.0175	0.971	3E-05	6.7E-11	0.5794
rs9316462	2.0381E-12	13	49602185	A	G	RCBTB1	6.11962E-08	-0.000372	6.9E-05	-0.0008	0.00029	1.20235E-12	85.4041	47.96	3.6E-08	0.24095	0.04283	0.01	0.2899	0.083	5E-06	2.5E-10	0.8835
rs62445145	2.2839E-12	7	17045095	T	C	AGR3	8.90284E-08	-0.000366	6.9E-05	-0.000803	0.00028	1.34712E-12	85.0662	46.87	5.9E-08	0.85932	0.05075	0.0086	0.2018	0.105	8E-06	2E-10	0.9404
rs6115181	2.5117E-12	20	2613608	A	G	TMC2	7.01948E-08	-0.00037	6.9E-05	-0.00079	0.00028	1.48129E-12	84.9829	46.61	6.6E-08	0.7751	0.04269	0.0111	0.2584	0.085	6E-06	2.3E-10	0.9636
rs10167571	2.5765E-12	2	213861692	C	A	SPAG16	1.68404E-07	-0.000359	6.9E-05	-0.000783	0.00029	1.51942E-12	85.5131	48.32	3.1E-08	0.83355	0.07566	0.0109	0.3895	0.079	2E-06	3E-10	0.9023
rs113800061	2.6298E-12	4	185876398	A	G	SORBS2	1.91517E-09	-0.000418	7E-05	-0.000795	0.00026	1.55085E-12	81.8348	38.54	2.4E-06	0.54638	0.00482	0.0019	0.3332	0.081	2E-05	4.5E-09	0.7381
rs3814205	2.7377E-12	10	84371303	A	G	CCSER2	2.49341E-08	-0.000373	6.7E-05	-0.000775	0.00027	1.61435E-12	83.6599	42.84	3.6E-07	0.90522	0.01354	0.0066	0.1256	0.285	7E-05	1.5E-10	0.8139
rs10105712	2.7799E-12	8	5525128	T	C	CSMD1	5.40284E-08	-0.000373	6.9E-05	-0.000796	0.00028	1.63921E-12	84.7376	45.86	9.3E-08	0.5178	0.03508	0.0096	0.1827	0.103	1E-05	2.7E-10	0.9892
rs35534477	2.7862E-12	18	50292411	G	A	CXXC1	1.85634E-08	-0.000379	6.7E-05	-0.000773	0.00027	1.64291E-12	84.0462	43.88	2.3E-07	0.39336	0.01207	0.0063	0.2987	0.126	3E-05	2.4E-10	0.9758
rs4908346	2.7956E-12	1	28364347	C	T	PHACTR4	1.8792E-08	-0.000379	6.7E-05	-0.000774	0.00027	1.64842E-12	84.0725	43.95	2.2E-07	0.37591	0.01225	0.0066	0.2978	0.125	3E-05	2.4E-10	0.9835
rs58197248	3.1086E-12	4	66583494	A	G	CENPC	5.93427E-08	-0.000372	6.9E-05	-0.000793	0.00028	1.83274E-12	84.6158	45.5	1.1E-07	0.95715	0.03622	0.0101	0.1852	0.096	9E-06	2.9E-10	0.9822
rs2298545	3.4869E-12	18	9399823	G	A	TWSG1	5.97284E-08	-0.000371	6.9E-05	-0.000787	0.00028	2.05536E-12	84.506	45.18	1.3E-07	0.94138	0.03899	0.0113	0.2065	0.094	6E-06	4.3E-10	0.9927
rs1403967	4.4293E-12	2	13589086	A	G	TRIB2	1.00452E-07	-0.000366	6.9E-05	-0.000783	0.00028	2.60991E-12	84.8619	46.24	7.8E-08	0.89884	0.04762	0.0118	0.2778	0.073	6E-06	3.3E-10	0.9487
rs7350078	4.8031E-12	8	142121774	T	C	TSNARE1	1.55543E-08	-0.000417	7.4E-05	-0.000844	0.00028	2.82983E-12	83.0366	41.27	7.2E-07	0.67574	0.01489	0.0049	0.2699	0.129	3E-05	6.1E-10	0.8065
rs7572066	4.9528E-12	2	74138905	A	C	BOLA3	1.03862E-07	-0.000367	6.9E-05	-0.000787	0.00028	2.9179E-12	84.7265	45.83	9.4E-08	0.78443	0.05566	0.0165	0.2374	0.075	3E-06	5.4E-10	0.8891
rs41281870	5.1276E-12	20	3250013	G	A	C20orf194	1.0583E-07	-0.000365	6.9E-05	-0.000782	0.00028	3.0207E-12	85.0011	46.67	6.5E-08	0.40584	0.04795	0.0125	0.3036	0.073	6E-06	3.7E-10	0.9195
rs6711895	5.9042E-12	2	16672408	A	G	FAM49A	7.33081E-08	-0.000384	7.1E-05	-0.000795	0.00028	3.47743E-12	84.2048	44.32	1.9E-07	0.59217	0.04252	0.009	0.3229	0.125	9E-06	4.2E-10	0.9367
rs2204134	6.0625E-12	7	54551571	G	A	VSTM2A	7.73117E-08	-0.000369	6.9E-05	-0.000774	0.00028	3.5705E-12	84.343	44.71	1.6E-07	0.57367	0.0358	0.0081	0.311	0.106	9E-06	5.7E-10	0.9715
rs609235	6.6635E-12	11	105973437	C	T	GRIA4	1.04772E-07	-0.000365	6.9E-05	-0.000777	0.00029	3.92387E-12	85.5177	48.33	3.1E-08	0.07251	0.04482	0.0123	0.2734	0.091	7E-06	4.5E-10	0.9595
rs2944737	6.7465E-12	17	37886906	A	G	TBC1D3K	1.07913E-07	-0.000364	6.9E-05	-0.000783	0.00029	3.97267E-12	85.3784	47.87	3.8E-08	0.10414	0.04533	0.0122	0.2443	0.079	8E-06	4.5E-10	0.9912
rs7569179	7.0745E-12	2	33867525	C	T	FAM98A	1.97932E-07	-0.000359	6.9E-05	-0.000787	0.00029	4.16549E-12	85.5512	48.45	2.9E-08	0.1841	0.06923	0.0098	0.2891	0.065	6E-06	4.9E-10	0.8933
rs4592105	7.422E-12	9	69139389	T	G	TJP2	2.45094E-07	-0.000354	6.9E-05	-0.000772	0.00028	4.36978E-12	84.9123	46.4	7.3E-08	0.85307	0.06909	0.0123	0.3018	0.111	7E-06	3.3E-10	0.9995
rs12869507	7.7634E-12	13	104316964	C	T	DAOA	2.6702E-07	-0.000353	6.9E-05	-0.000773	0.00029	4.57042E-12	85.2504	47.46	4.5E-08	0.30628	0.07196	0.0128	0.3007	0.111	7E-06	3.3E-10	0.9924
rs17506824	7.8349E-12	7	137024766	T	C	CHRM2	1.34613E-07	-0.000362	6.9E-05	-0.000777	0.00028	4.61247E-12	84.7013	45.76	9.8E-08	0.61909	0.04945	0.0115	0.2372	0.078	9E-06	4.4E-10	0.9991
rs73700613	7.9481E-12	7	68301169	A	G	TYW1	2.4458E-09	-0.000403	6.8E-05	-0.000758	0.00025	4.67903E-12	80.7182	36.3	6.4E-06	0.59289	0.00269	0.0049	0.1406	0.113	6E-05	5.6E-09	0.9412
rs2061889	8.2628E-12	4	92700642	A	G	GRID2	1.84296E-08	-0.000546	9.7E-05	-0.001096	0.00039	4.86398E-12	83.8853	43.44	2.7E-07	0.05533	0.01475	0.2298	0.0255	0.187	2E-05	3.9E-10	0.674
rs17106006	9.1454E-12	10	123768553	G	A	CPXM2	2.0978E-09	-0.000407	6.8E-05	-0.000755	0.00025	5.38264E-12	80.6492	36.17	6.7E-06	0.45571	0.00201	0.0054	0.1791	0.103	8E-05	5.3E-09	0.9533
rs697221	1.0426E-11	12	57517377	G	A	DDIT3,MARS	2.73543E-07	-0.000353	6.9E-05	-0.000758	0.00029	6.13482E-12	85.1182	47.04	5.5E-08	0.49702	0.0696	0.0159	0.3498	0.07	5E-06	4.4E-10	0.983
rs1546924	1.2555E-11	1	111730863	T	C	FAM212B	3.00751E-07	-0.000352	6.9E-05	-0.000756	0.00029	7.3855E-12	85.3029	47.63	4.2E-08	0.26224	0.07136	0.0176	0.3512	0.07	5E-06	4.8E-10	0.9983
rs117568989	1.319E-11	13	22127746	A	C	FGF9	2.89198E-07	-0.000354	6.9E-05	-0.000783	0.00028	7.75868E-12	84.7731	45.97	8.9E-08	0.48519	0.07687	0.0134	0.2491	0.089	7E-06	6.2E-10	0.8928
rs9908279	1.5577E-11	17	59202739	G	A	CTD-2510F5.6,PRR11	5.19362E-07	-0.000345	6.9E-05	-0.000756	0.0003	9.15985E-12	86.2247	50.82	1E-08	0.04746	0.08991	0.0139	0.3724	0.081	6E-06	4.6E-10	0.9747
rs7236617	1.5797E-11	18	40608228	A	C	PIK3C3	5.33632E-07	-0.000344	6.9E-05	-0.000754	0.00029	9.28904E-12	85.2893	47.58	4.3E-08	0.37434	0.09473	0.0147	0.3636	0.081	5E-06	5.3E-10	0.977
rs7278765	1.5879E-11	21	42859738	A	G	WDR4	5.786E-09	-0.000491	8.4E-05	-0.000996	0.00034	9.33715E-12	84.6315	45.55	1.1E-07	0.01558	0.00265	0.0635	0.0102	0.017	0.0009	8.1E-10	0.7216
rs9834903	1.7766E-11	3	39451312	T	C	MOBP	3.3363E-09	-0.000399	6.7E-05	-0.000742	0.00025	1.04449E-11	80.3986	35.71	8.2E-06	0.35823	0.00256	0.0055	0.1482	0.113	8E-05	9.7E-09	0.8933
rs1407465	1.9782E-11	9	7926322	A	C	TMEM261	4.78452E-09	-0.000396	6.8E-05	-0.000747	0.00027	1.1628E-11	83.3154	41.95	5.3E-07	0.01406	0.00308	0.0055	0.1767	0.093	8E-05	7E-09	0.8902
rs9556509	2.2057E-11	13	95931806	G	A	UGGT2	3.39857E-09	-0.000397	6.7E-05	-0.000735	0.00025	1.29629E-11	80.9686	36.78	5.2E-06	0.10518	0.00274	0.0077	0.1549	0.127	6E-05	1.2E-08	0.9461
rs71521868	2.5956E-11	8	3497710	G	T	CSMD1	3.78882E-07	-0.000349	6.9E-05	-0.000755	0.00028	1.52501E-11	84.7783	45.99	8.8E-08	0.23046	0.07254	0.0163	0.2886	0.101	9E-06	7.6E-10	0.9997
rs79515276	2.7981E-11	5	18563006	C	A	CDH18	6.52596E-07	-0.000342	6.9E-05	-0.000745	0.00028	1.6438E-11	84.7683	45.96	8.9E-08	0.58312	0.0956	0.0175	0.3623	0.093	6E-06	7.4E-10	0.9728
rs6811173	3.3163E-11	4	6422977	A	C	PPP2R2C	2.77015E-07	-0.000346	6.7E-05	-0.000728	0.00028	1.94762E-11	84.7079	45.78	9.7E-08	0.15336	0.04052	0.0174	0.4984	0.099	2E-05	4.1E-10	0.9859
rs72796531	3.5478E-11	10	54771728	T	C	PCDH15	1.84318E-11	-0.00083	0.00012	-0.001385	0.00045	1.34945E-11	80.4433	35.79	7.9E-06	0.77664	1.9E-07	0.0484	0.0007	4E-06	0.1689	0.00543	0.0065
rs132573	3.66E-11	22	39583506	G	A	CACNA1I	1.59996E-11	-0.000827	0.00012	-0.001381	0.00044	1.36839E-11	80.1555	35.27	9.9E-06	0.68529	2.3E-07	0.0439	0.001	4E-06	0.1393	0.00565	0.0049
rs58293215	3.694E-11	10	11935582	C	A	UPF2	1.13852E-09	-0.000635	0.0001	-0.001286	0.00031	2.18288E-11	70.8525	24.02	0.00113	0.98049	0.00106	0.0005	0.0006	0.444	0.0094	0.00476	0.001
rs3753094	3.8493E-11	6	16503183	T	C	ATXN1	2.03385E-11	-0.00083	0.00012	-0.00139	0.00045	1.45139E-11	80.6593	36.19	6.7E-06	0.5128	2E-07	0.0494	0.0006	4E-06	0.1746	0.00565	0.0067
rs8023270	4.126E-11	15	26002744	T	C	ATP10A	5.37917E-07	-0.000344	6.9E-05	-0.000747	0.00028	2.42226E-11	84.2257	44.38	1.8E-07	0.8631	0.07624	0.0161	0.3156	0.1	1E-05	7.7E-10	0.9932
rs659383	4.2808E-11	11	102960362	G	A	MMP13	9.51254E-07	-0.000337	6.9E-05	-0.000732	0.00028	2.51297E-11	84.9571	46.53	6.9E-08	0.33144	0.10547	0.0164	0.4094	0.093	7E-06	9.5E-10	0.9279
rs57995357	4.401E-11	2	54144030	C	A	ACYP2	1.25061E-09	-0.000633	0.0001	-0.00128	0.00031	2.59957E-11	70.6655	23.86	0.0012	0.81995	0.00107	0.0005	0.0006	0.443	0.0096	0.00475	0.001
rs118030089	4.5879E-11	16	12540719	A	G	SNX29	1.33316E-06	-0.000332	6.9E-05	-0.000734	0.0003	2.6929E-11	86.3354	51.23	8.3E-09	0.0237	0.1237	0.0186	0.4963	0.092	5E-06	9E-10	0.972
rs9317320	5.3441E-11	13	63442072	G	T	RP11-310K10.1	1.87291E-11	-0.000818	0.00012	-0.001343	0.00043	1.97597E-11	79.1773	33.62	2E-05	0.90561	2.4E-07	0.0517	0.0011	7E-06	0.1321	0.00534	0.007
rs55702327	6.0762E-11	19	5884852	C	T	AC024592.12	1.52037E-09	-0.000632	0.0001	-0.001279	0.00031	3.57972E-11	70.996	24.13	0.00108	0.38704	0.00115	0.0005	0.0006	0.471	0.0095	0.00514	0.0011
rs8348	6.1814E-11	6	84090773	G	A	MRAP2	1.7509E-11	-0.000819	0.00012	-0.00135	0.00043	1.75993E-11	79.2507	33.74	1.9E-05	0.86036	2.3E-07	0.0493	0.0011	7E-06	0.1326	0.00522	0.0067
rs6534629	6.2809E-11	4	79889102	T	C	ANTXR2	1.50474E-09	-0.000637	0.00011	-0.00128	0.00031	3.70006E-11	70.2445	23.53	0.00138	0.44869	0.00121	0.0014	0.0003	0.619	0.0083	0.0046	0.0012

Table S16

rs2546794	6.7746E-11	5	129042053	T	C	SLC27A6	1.38142E-10	-0.000793	0.00012	-0.001428	0.00045	3.97368E-11	80.8757	36.6	5.6E-06	0.93384	3.8E-06	0.0825	8E-05	1E-05	0.1195	0.00645	0.0027
rs16961319	6.7996E-11	15	35615454	G	A	DPH6	4.88913E-09	0.001375	0.00024	0.0029813	0.00082	3.98898E-11	78.9015	33.18	2.5E-05	0.23919	0.00527	0.0011	3E-05	0.008	0.0028	0.01602	0.0038
rs141170725	6.8524E-11	16	84591373	T	C	COTL1	1.75829E-09	-0.000631	0.0001	-0.001317	0.00034	4.01924E-11	75.0996	28.11	0.00021	0.02886	0.00112	0.0007	0.0004	0.47	0.0117	0.00568	0.0012
rs76726466	7.2029E-11	1	114131450	C	T	SYT6	5.88102E-09	-0.000423	7.3E-05	-0.00077	0.00025	4.22441E-11	78.4926	32.55	3.2E-05	0.77431	0.00305	0.0054	0.1862	0.132	0.0002	2E-08	0.979
rs79013928	7.5084E-11	17	5215128	C	T	SCIMP	7.09791E-10	-0.000674	0.00011	-0.0013	0.00032	4.41393E-11	69.8247	23.2	0.00157	0.14694	0.00025	0.0014	0.0003	0.465	0.0231	0.00387	0.0036
rs72622522	8.1893E-11	3	167425481	T	C	SERPINI2	1.94196E-09	-0.000629	0.0001	-0.001287	0.00032	4.8064E-11	72.7944	25.73	0.00056	0.11906	0.00121	0.0006	0.0006	0.471	0.0107	0.0056	0.0012
rs141452833	8.4514E-11	2	12646391	C	A	TRIB2	3.08167E-07	0.0008209	0.00016	0.0019392	0.00056	4.95531E-11	79.0616	33.43	2.2E-05	0.82838	0.19533	8E-05	0.0037	0.496	1E-05	0.0004	0.1815
rs9984661	9.1282E-11	21	18510151	A	G	TMPRSS15	2.06571E-09	-0.000625	0.0001	-0.001302	0.00034	5.35125E-11	75.5641	28.65	0.00017	0.02331	0.0011	0.0007	0.0008	0.429	0.0128	0.00442	0.0009
rs2735986	9.2257E-11	8	126432938	C	A	FAM84B	4.05188E-11	-0.000802	0.00012	-0.001325	0.00042	3.99139E-11	78.6497	32.79	2.9E-05	0.70667	3.5E-07	0.0609	0.0008	1E-05	0.1615	0.00636	0.007
rs3120043	9.2708E-11	6	74215526	G	A	CD109	4.00327E-11	-0.000803	0.00012	-0.001332	0.00043	3.59758E-11	79.1542	33.58	2.1E-05	0.32681	3.5E-07	0.0609	0.0008	1E-05	0.1613	0.00636	0.007
rs12588329	9.4991E-11	14	101897544	G	A	PPP2R5C	2.15167E-09	-0.000624	0.0001	-0.001286	0.00033	5.57205E-11	73.3874	26.3	0.00044	0.08884	0.00113	0.0007	0.0008	0.426	0.0129	0.00442	0.0009
rs10788195	9.8873E-11	10	121652802	G	A	FGFR2	1.97143E-09	-0.00063	0.0001	-0.001259	0.00031	5.83024E-11	69.6809	23.09	0.00165	0.5307	0.00114	0.0006	0.0006	0.484	0.011	0.00635	0.0013
rs74844213	1.044E-10	9	23607573	A	G	ELAVL2	1.50185E-07	-0.000357	6.8E-05	-0.000743	0.00027	6.11886E-11	83.3742	42.1	5E-07	0.22417	0.01935	0.014	0.3646	0.06	0.0001	8.6E-10	0.8149
rs72743941	1.0667E-10	9	96061073	T	C	ERCC6L2	3.05023E-11	-0.000908	0.00014	-0.001544	0.00049	2.01631E-11	79.5978	34.31	1.5E-05	0.71232	5.5E-07	0.0439	0.0008	1E-05	0.139	0.0031	0.0058
rs147863370	1.0724E-10	19	52190500	C	T	PPP2R1A	4.62671E-11	-0.000799	0.00012	-0.00132	0.00042	4.6304E-11	78.6051	32.72	3E-05	0.65544	3.9E-07	0.0622	0.0008	1E-05	0.1605	0.00655	0.0069
rs11820697	1.0984E-10	11	7543190	G	T	PPFIBP2	4.49853E-11	-0.0008	0.00012	-0.001318	0.00043	4.6393E-11	78.9672	33.28	2.3E-05	0.37511	3.7E-07	0.0647	0.0009	1E-05	0.1588	0.00683	0.0064
rs7216683	1.1176E-10	17	5070816	T	C	ZFP3	2.85961E-07	-0.000415	8.1E-05	-0.000836	0.00031	6.54916E-11	82.9158	40.97	8.2E-07	0.91563	0.05503	0.0323	0.1728	0.078	1E-05	4.3E-09	0.794
rs116013836	1.2202E-10	4	112729117	T	G	LARP7	5.06087E-11	-0.000798	0.00012	-0.00132	0.00043	4.70567E-11	79.0618	33.43	2.2E-05	0.32085	4.1E-07	0.0626	0.0008	1E-05	0.161	0.00666	0.007
rs6582934	1.2415E-10	1	105532186	C	T	PRMT6	1.9495E-09	-0.000626	0.0001	-0.001244	0.00031	7.27394E-11	69.9366	23.28	0.00152	0.35803	0.001	0.0008	0.001	0.427	0.0115	0.00575	0.001
rs73143937	1.3253E-10	3	99091173	G	A	DCBLD2	2.55042E-09	-0.000631	0.00011	-0.001288	0.00033	7.76949E-11	72.1914	25.17	0.00071	0.09455	0.00118	0.0007	0.0007	0.541	0.0131	0.00489	0.0017
rs4513310	1.5092E-10	2	84628242	C	T	DNAH6	2.71079E-09	-0.00063	0.00011	-0.00126	0.00031	8.87807E-11	69.6185	23.04	0.00168	0.40337	0.00119	0.0007	0.0007	0.546	0.0131	0.00484	0.0017
rs703401	1.5502E-10	10	117637625	C	A	EMX2	4.46209E-11	-0.0008	0.00012	-0.001318	0.00042	4.51566E-11	78.4506	32.48	3.3E-05	0.84759	3.7E-07	0.0657	0.0008	1E-05	0.1598	0.00698	0.0063
rs112296971	1.6034E-10	1	233680211	A	G	KCNK1	1.23833E-08	-0.00038	6.7E-05	-0.000733	0.0002	9.4718E-11	71.2234	24.33	0.001	0.81341	0.02743	0.0223	0.0775	0.506	1E-06	0.01302	0.0002
rs76926002	1.6066E-10	2	194463065	A	C	SLC39A10	4.62725E-11	-0.0008	0.00012	-0.001319	0.00042	4.61871E-11	78.4857	32.54	3.2E-05	0.86999	3.9E-07	0.0626	0.0008	1E-05	0.1609	0.00658	0.0069
rs2148617	1.6854E-10	10	19682028	A	G	MALRD1	4.8026E-11	-0.000829	0.00013	-0.001347	0.00045	6.48115E-11	79.7837	34.63	1.3E-05	0.18925	2.4E-07	0.0812	0.0022	8E-06	0.1711	0.00439	0.0071
rs7241614	1.7261E-10	18	45379042	A	G	SLC14A2	6.68917E-07	0.0007836	0.00016	0.0018792	0.00056	1.01072E-10	79.2414	33.72	1.9E-05	0.6285	0.2324	7E-05	0.0035	0.516	2E-05	0.00059	0.2324
rs62199201	1.7818E-10	20	61538249	G	A	CDH4	4.41291E-10	-0.002091	0.00034	-0.003473	0.00094	1.04322E-10	66.895	21.14	0.00356	0.55119	0.00013	0.743	0.0047	0.623	0.0018	0.00595	1E-05
rs66462952	1.8274E-10	13	71274620	G	A	DACH1	3.21103E-09	-0.000628	0.00011	-0.00127	0.00032	1.07203E-10	70.8309	24	0.00114	0.17534	0.00128	0.0007	0.0007	0.528	0.0136	0.0051	0.0019
rs28384382	1.9368E-10	3	161221353	C	T	NMD3	7.83306E-11	-0.000796	0.00012	-0.001322	0.00043	7.33844E-11	79.2697	33.77	1.9E-05	0.65147	5.6E-07	0.0673	0.0008	8E-06	0.1653	0.00799	0.0069
rs118184940	1.9578E-10	9	33948965	G	A	UBAP2	7.59043E-11	-0.000798	0.00012	-0.00135	0.00046	6.59318E-11	81.3661	37.57	3.7E-06	0.06498	5.6E-07	0.0629	0.0007	6E-06	0.1712	0.00954	0.0066
rs10135721	2.0482E-10	14	55034970	T	C	SOCS4	8.56956E-11	-0.000796	0.00012	-0.00133	0.00044	7.65146E-11	79.6755	34.44	1.4E-05	0.57436	5.9E-07	0.065	0.0007	6E-06	0.1735	0.00944	0.0066
rs112135816	2.0782E-10	9	79870412	G	T	TLE4	8.68885E-11	-0.000795	0.00012	-0.001328	0.00044	7.73894E-11	79.757	34.58	1.3E-05	0.52596	6.1E-07	0.0643	0.0007	6E-06	0.171	0.00931	0.0065
rs28489015	2.0942E-10	4	110856646	T	C	PITX2	4.05325E-05	-0.000305	7.4E-05	-0.000775	0.00032	1.22577E-10	86.1605	50.58	1.1E-08	0.58745	0.25247	0.0002	0.1359	0.086	0.0003	2E-08	0.1158
rs9368072	2.0962E-10	6	19433926	G	T	ID4	6.06614E-11	-0.002795	0.00043	-0.004464	0.00122	5.79615E-11	68.184	22	0.00254	0.88573	4.5E-05	5E-05	0.0393	0.002	0.0018	0.045	0.0388
rs17680085	2.1075E-10	14	103486817	T	C	MARK3	4.08081E-05	-0.000305	7.4E-05	-0.000781	0.00032	1.23354E-10	86.6843	52.57	4.5E-09	0.12644	0.25316	0.0002	0.136	0.086	0.0003	2E-08	0.116
rs4865136	2.2065E-10	4	56659220	T	C	HOPX	6.07956E-08	-0.000464	8.6E-05	-0.000897	0.0003	1.2914E-10	79.4944	34.14	1.6E-05	0.9101	0.00915	0.4746	0.006	0.323	0.0002	5.5E-09	0.7834
rs7920141	2.2137E-10	10	5104731	C	T	AKR1C3	2.02273E-05	-0.000368	8.6E-05	-0.000889	0.00036	1.29558E-10	85.3977	47.94	3.7E-08	0.71439	0.10286	0.0009	0.1143	0.237	0.0014	2.4E-09	0.1077
rs1775422	2.2247E-10	1	5580995	G	A	NPHP4	1.98058E-05	-0.000369	8.6E-05	-0.000889	0.00036	1.30199E-10	85.7896	49.26	2E-08	0.22746	0.10168	0.0009	0.1149	0.236	0.0014	2.4E-09	0.1078
rs9845724	2.2288E-10	3	130823445	T	C	ATP2C1	1.95487E-05	-0.000369	8.6E-05	-0.000902	0.00037	1.30439E-10	86.3117	51.14	8.6E-09	0.06006	0.10195	0.0009	0.1176	0.241	0.0014	2.6E-09	0.1069
rs6054913	2.2392E-10	20	7318266	G	T	BMP2	7.16033E-11	-0.000823	0.00013	-0.001343	0.00045	8.99071E-11	79.2113	33.67	2E-05	0.43833	2.6E-07	0.0808	0.0025	8E-06	0.202	0.00496	0.0068
rs75959148	2.275E-10	4	145410224	C	T	SMAD1	4.14939E-05	-0.000305	7.4E-05	-0.000773	0.00032	1.33141E-10	86.0899	50.32	1.2E-08	0.69676	0.25262	0.0003	0.135	0.085	0.0003	2E-08	0.1163
rs73200644	2.3108E-10	3	108958348	T	C	MORC1	1.35289E-06	0.0007029	0.00015	0.0019543	0.00053	1.35304E-10	80.7093	36.29	6.4E-06	0.79502	0.15328	0.0056	0.0003	0.384	0.0029	0.00013	0.0004
rs11721871	2.3236E-10	4	102124266	C	T	BANK1	9.13152E-11	-0.000795	0.00012	-0.001327	0.00045	8.22472E-11	80.4731	35.85	7.7E-06	0.20275	6.1E-07	0.0652	0.0007	6E-06	0.1731	0.00929	0.0066
rs55862620	2.3431E-10	3	28875404	A	G	RBMS3,RP11-9J18.1	1.3059E-06	0.0007039	0.00015	0.0019528	0.00053	1.37196E-10	80.6122	36.11	6.9E-06	0.88872	0.15063	0.0055	0.0003	0.381	0.0028	0.00014	0.0004
rs4779861	2.352E-10	15	31338149	C	T	KLF13	8.17986E-11	-0.000796	0.00012	-0.001336	0.00047	7.35931E-11	82.1398	39.19	1.8E-06	0.02709	5.6E-07	0.063	0.0007	6E-06	0.1712	0.00956	0.0066
rs2046339	2.4223E-10	8	78724283	T	C	IL7	1.36174E-06	0.0007027	0.00015	0.0019551	0.00054	1.41764E-10	81.2538	37.34	4E-06	0.29003	0.15244	0.0056	0.0003	0.384	0.0029	0.00013	0.0004
rs77148856	2.4525E-10	18	12462937	C	T	SPIRE1	1.01478E-10	-0.000911	0.00014	-0.001555	0.00051	9.16722E-11	79.9482	34.91	1.2E-05	0.28283	1.3E-06	0.0574	0.0011	8E-06	0.1345	0.00366	0.0073
rs10460007	2.4957E-10	18	2740046	C	T	SMCHD1	4.46373E-05	-0.000303	7.4E-05	-0.00077	0.00031	1.46029E-10	85.9976	49.99	1.5E-08	0.95461	0.25977	0.0003	0.1373	0.092	0.0003	2E-08	0.1168
rs160055	2.5005E-10	4	123156283	A	G	SPATA5	4.06449E-09	-0.000625	0.00011	-0.001244	0.00031	1.46308E-10	68.2453	22.04	0.0025	0.93116	0.00135	0.0009	0.0007	0.529	0.0143	0.00511	0.0019
rs10802100	2.508E-10	1	119474903	C	A	HSD3B1	4.47422E-05	-0.000303	7.4E-05	-0.000772	0.00032	1.46745E-10	86.0806	50.29	1.3E-08	0.63144	0.25698	0.0002	0.1378	0.088	0.0003	2E-08	0.1206
rs6900525	2.5524E-10	6	109918467	C	T	GPR6	4.42499E-05	-0.000303	7.4E-05	-0.000773	0.00033	1.4934E-10	87.0512	54.06	2.3E-09	0.04638	0.25633	0.0003	0.1369	0.086	0.0003	2.1E-08	0.1179

Table S16

rs17111255	2.5675E-10	11	110466349	G	A	FDX1	1.48901E-06	0.0007002	0.00015	0.0019512	0.00054	1.50283E-10	80.8902	36.63	5.5E-06	0.54	0.15732	0.0058	0.0003	0.382	0.0029	0.00013	0.0004
rs17116907	2.5783E-10	15	26382353	C	T	GABRB3	1.4759E-06	0.0007004	0.00015	0.0019617	0.00055	1.50849E-10	81.9758	38.84	2.1E-06	0.11098	0.15641	0.0058	0.0003	0.384	0.0029	0.00013	0.0004
rs2721290	2.6762E-10	8	2945338	T	C	CSMD1	4.59911E-05	-0.000303	7.4E-05	-0.000768	0.00032	1.5657E-10	86.1653	50.6	1.1E-08	0.46008	0.25652	0.0002	0.1354	0.086	0.0003	2.1E-08	0.1221
rs9520170	2.7059E-10	13	88308455	A	G	SLITRK5	4.56784E-05	-0.000303	7.4E-05	-0.000768	0.00032	1.58304E-10	86.2667	50.97	9.3E-09	0.29959	0.25827	0.0003	0.1355	0.093	0.0003	2.1E-08	0.1179
rs17642817	2.7315E-10	5	133590221	T	G	FSTL4	8.97579E-11	-0.000795	0.00012	-0.001358	0.00047	8.17264E-11	82.7021	40.47	1E-06	0.00984	6.2E-07	0.0686	0.0007	7E-06	0.1703	0.00858	0.0071
rs2034773	2.7794E-10	4	181209953	A	C	TENM3	5.17303E-05	-0.000301	7.4E-05	-0.000766	0.00032	1.62592E-10	86.0896	50.32	1.2E-08	0.6522	0.26035	0.0002	0.118	0.091	0.0003	2.4E-08	0.1154
rs114702174	2.7882E-10	6	22045106	G	T	PRL	8.81979E-11	-0.000795	0.00012	-0.001342	0.00047	8.26692E-11	82.6115	40.26	1.1E-06	0.01512	6.1E-07	0.0655	0.0007	5E-06	0.1668	0.01005	0.0069
rs12925035	2.8368E-10	16	52685708	A	G	TOX3	4.68282E-05	-0.000302	7.4E-05	-0.000769	0.00032	1.65943E-10	86.1136	50.41	1.2E-08	0.426	0.26024	0.0003	0.1342	0.093	0.0003	2.2E-08	0.1174
rs62295665	2.9299E-10	3	192997687	C	T	MB21D2	5.20559E-09	-0.000625	0.00011	-0.001258	0.00031	1.72504E-10	69.0474	22.62	0.00199	0.52752	0.00145	0.0009	0.0007	0.557	0.0177	0.00497	0.0018
rs4731579	3.3114E-10	7	129462224	T	G	STRIP2	8.67563E-09	-0.000616	0.00011	-0.001288	0.00033	1.94165E-10	71.7275	24.76	0.00084	0.20399	0.00227	0.0007	0.0007	0.541	0.0174	0.00481	0.0015
rs58605422	3.4519E-10	3	98194163	T	C	OR5H15	7.65275E-07	0.0003586	7.3E-05	0.0008471	0.00027	2.01851E-10	81.7888	38.44	2.5E-06	0.85033	0.11707	3E-05	0.4513	0.052	7E-05	6.7E-06	0.1152
rs7529368	3.5564E-10	1	14022772	A	G	KAZN	5.20368E-05	-0.000301	7.4E-05	-0.00076	0.00031	2.07947E-10	85.8979	49.64	1.7E-08	0.78423	0.26544	0.0003	0.1311	0.091	0.0003	2.3E-08	0.1254
rs55633874	3.6118E-10	16	26459907	C	T	HS3ST4	2.02985E-06	0.0006916	0.00015	0.0019387	0.00053	2.11309E-10	80.5857	36.06	7.1E-06	0.89264	0.17358	0.0069	0.0003	0.395	0.0031	0.00013	0.0005
rs149186439	3.8868E-10	3	147228782	G	A	ZIC4	7.51393E-09	-0.000619	0.00011	-0.001255	0.00031	2.28942E-10	68.8228	22.45	0.00212	0.91188	0.00189	0.0009	0.0008	0.56	0.0171	0.00412	0.0018
rs2729430	3.9289E-10	18	30510329	A	G	DSC3	1.53293E-07	-0.000382	7.3E-05	-0.000804	0.00023	2.29789E-10	74.1464	27.08	0.00032	0.95621	0.13233	0.001	0.0346	0.486	2E-06	0.04659	0.0016
rs6861952	4.7915E-10	5	110182804	T	C	TMEM232	2.4179E-08	-0.000371	6.7E-05	-0.000716	0.0002	2.83164E-10	71.9046	24.92	0.00079	0.24304	0.02858	0.0341	0.1052	0.483	2E-06	0.01038	0.0002
rs61914321	4.8383E-10	12	13936079	C	T	GRIN2B	7.48162E-07	0.000836	0.00017	0.0019441	0.00058	2.82728E-10	77.862	31.62	4.8E-05	0.61425	0.20558	0.0001	0.0072	0.505	2E-05	0.00048	0.2558
rs1323692	5.142E-10	13	75640322	A	G	LMO7	1.45019E-06	0.0007	0.00015	0.0019064	0.00053	3.00489E-10	80.1293	35.23	1E-05	0.42955	0.14183	0.0057	0.0004	0.35	0.0029	0.00021	0.0005
rs10196798	5.5258E-10	2	76376667	C	T	LRRTM4	7.48128E-09	-0.000612	0.00011	-0.001241	0.00032	3.22961E-10	71.2902	24.38	0.00098	0.10611	0.00164	0.0016	0.0006	0.476	0.0173	0.00519	0.0021
rs143951534	5.6417E-10	18	70798859	A	G	SOCS6	2.7505E-06	0.0006838	0.00015	0.0019327	0.00054	3.29651E-10	80.9367	36.72	5.3E-06	0.30358	0.18465	0.0084	0.0003	0.396	0.0034	0.00014	0.0005
rs1352883	6.3772E-10	3	62245645	A	G	PTPRG	1.29792E-06	0.0007021	0.00015	0.0018869	0.00051	3.72601E-10	79.2889	33.8	1.9E-05	0.96658	0.12894	0.0051	0.0005	0.332	0.003	0.00027	0.0005
rs9538381	6.7494E-10	13	59312000	G	A	DIAPH3	0.000128635	-0.000285	7.4E-05	-0.000741	0.00032	3.94133E-10	86.0624	50.22	1.3E-08	0.73905	0.3524	0.0003	0.1104	0.088	0.0004	2.9E-08	0.1587
rs6531152	7.0634E-10	2	19102400	C	T	OSR1	5.80263E-05	-0.000302	7.5E-05	-0.000748	0.00031	4.12427E-10	85.3372	47.74	4E-08	0.9844	0.27777	0.0002	0.1338	0.112	0.0002	8.1E-08	0.1665
rs79182905	7.0687E-10	2	231789037	A	G	COPS7B	1.68307E-05	0.0005105	0.00012	0.0015672	0.00047	4.12735E-10	83.3759	42.11	5E-07	0.1619	0.33194	0.0233	0.0013	0.802	0.0046	0.00644	2E-07
rs1004442	7.4464E-10	2	46675871	A	G	SOCS5	6.83367E-10	0.0005113	8.3E-05	0.0007729	0.00019	4.36802E-10	49.9435	13.98	0.05146	0.27986	0.00051	0.0019	0.0275	0.521	0.0004	0.00299	0.1255
rs62076597	7.529E-10	17	79915138	C	T	TBC1D16	3.25893E-05	-0.000319	7.7E-05	-0.000749	0.00031	4.39557E-10	84.3937	44.85	1.5E-07	0.98115	0.24341	0.0003	0.1282	0.273	0.0001	1.8E-07	0.1532
rs4321020	7.7323E-10	12	39665044	T	C	C12orf40	5.44851E-05	-0.000302	7.5E-05	-0.00073	0.00031	4.514E-10	85.1355	47.09	5.4E-08	0.57347	0.30152	0.0004	0.1135	0.148	8E-05	1.6E-07	0.1475
rs55926987	7.7951E-10	1	200252843	G	A	NR5A2	0.000135464	-0.000283	7.4E-05	-0.000744	0.00033	4.55056E-10	87.3567	55.37	1.3E-09	0.01709	0.34929	0.0003	0.1018	0.099	0.0004	3.4E-08	0.1629
rs1111258	7.8694E-10	12	92566674	G	A	CLLU1	0.000135303	-0.000283	7.4E-05	-0.000737	0.00032	4.5939E-10	86.2325	50.84	9.9E-09	0.27555	0.34881	0.0003	0.1017	0.099	0.0004	3.4E-08	0.1631
rs1908349	8.0284E-10	10	55963687	T	C	PCDH15	0.000136901	-0.000283	7.4E-05	-0.000733	0.00031	4.68651E-10	85.9112	49.68	1.7E-08	0.96729	0.34912	0.0003	0.1013	0.099	0.0004	3.4E-08	0.163
rs2358520	8.1018E-10	1	33837588	C	A	CSMD2	7.58616E-09	-0.000612	0.00011	-0.001181	0.00029	4.72925E-10	65.781	20.46	0.00466	0.54143	0.00164	0.0008	0.0007	0.692	0.0137	0.01603	0.0032
rs1400159	8.5684E-10	3	6784366	C	T	GRM7	0.000150065	-0.000281	7.4E-05	-0.00073	0.00031	5.00103E-10	86.0124	50.04	1.4E-08	0.64042	0.35488	0.0003	0.097	0.095	0.0004	3.6E-08	0.1705
rs1325771	8.9879E-10	13	101000609	C	A	NALCN	2.67213E-10	-0.00115	0.00018	-0.001651	0.00041	5.24534E-10	49.8935	13.97	0.05171	0.04008	6.6E-05	0.0098	0.0187	0.214	0.0019	0.01194	0.0444
rs13149344	9.0862E-10	4	101765021	A	G	BANK1	1.84143E-07	-0.000425	8.2E-05	-0.000844	0.00029	5.3026E-10	79.1942	33.64	2E-05	0.41379	0.01144	0.2569	0.0073	0.473	0.0009	6.4E-09	0.9817
rs7068684	9.121E-10	10	104643357	T	C	SORCS3	2.71247E-10	-0.000774	0.00012	-0.001273	0.00043	2.81497E-10	78.958	33.27	2.4E-05	0.99661	8.8E-07	0.0827	0.0007	7E-06	0.2093	0.0146	0.0092
rs10254785	9.8222E-10	7	155176716	G	A	HTR5A	2.8384E-10	-0.000774	0.00012	-0.00131	0.00047	2.82392E-10	82.3701	39.71	1.4E-06	0.01067	9.9E-07	0.0795	0.0007	7E-06	0.2092	0.01389	0.009
rs17512821	9.8832E-10	8	102330467	A	C	UBR5	3.02616E-07	-0.000427	8.3E-05	-0.0009	0.00034	5.7667E-10	84.794	46.03	8.6E-08	0.00053	0.01986	0.1626	0.0053	0.371	0.0008	9.5E-09	0.9911
rs12744386	1.017E-09	1	23841529	C	T	HMGCL	9.00586E-10	0.0017245	0.00028	0.0026138	0.00072	5.33389E-10	60.8577	17.88	0.01251	0.06161	0.00077	0.2746	0.0702	0.482	3E-05	0.00036	0.0184
rs2075386	1.0592E-09	12	113844873	G	A	RBM19	1.82738E-06	0.0006941	0.00015	0.0018784	0.00051	6.18311E-10	79.1071	33.5	2.1E-05	0.7456	0.13101	0.0049	0.0005	0.331	0.0045	0.00033	0.0006
rs10491381	1.0619E-09	5	54591699	T	C	SNX18	5.91488E-05	-0.000298	7.4E-05	-0.000723	0.00031	6.19521E-10	85.2496	47.46	4.5E-08	0.37371	0.30277	0.0006	0.1165	0.112	9E-05	1.8E-07	0.1284
rs6965431	1.065E-09	7	156326826	C	A	RNF32	1.86162E-06	0.0006935	0.00015	0.0018856	0.00052	6.21413E-10	79.611	34.33	1.5E-05	0.33565	0.13243	0.0049	0.0005	0.331	0.0045	0.00033	0.0006
rs7923663	1.1124E-09	10	30376507	A	C	MTPAP	0.000150987	-0.000281	7.4E-05	-0.000728	0.00031	6.4891E-10	85.8337	49.41	1.9E-08	0.85145	0.35341	0.0003	0.1087	0.086	0.0004	3.8E-08	0.1742
rs526853	1.1152E-09	18	8148624	G	A	PTPRM	0.000150773	-0.000281	7.4E-05	-0.000728	0.00031	6.50508E-10	85.8736	49.55	1.8E-08	0.6806	0.35315	0.0003	0.1087	0.086	0.0004	3.8E-08	0.174
rs17467349	1.1166E-09	8	77635559	G	T	PEX2	0.000151143	-0.000281	7.4E-05	-0.000728	0.00031	6.51364E-10	85.8291	49.4	1.9E-08	0.86947	0.35328	0.0003	0.1086	0.086	0.0004	3.8E-08	0.1744
rs111342079	1.123E-09	6	17874595	C	A	KIF13A	5.91662E-05	-0.000298	7.4E-05	-0.00072	0.0003	6.55091E-10	85.083	46.93	5.8E-08	0.50787	0.30438	0.0006	0.1171	0.113	9E-05	1.9E-07	0.1334
rs10157891	1.1292E-09	1	180461473	T	C	ACBD6	3.37182E-10	-0.000771	0.00012	-0.001269	0.00043	3.58715E-10	79.0322	33.38	2.2E-05	0.52116	1E-06	0.0801	0.0008	8E-06	0.2124	0.01424	0.0094
rs13259218	1.1548E-09	8	83266432	T	C	RALYL	0.000153024	-0.000281	7.4E-05	-0.00073	0.00032	6.73588E-10	86.1726	50.62	1.1E-08	0.2446	0.3529	0.0003	0.1075	0.088	0.0004	3.9E-08	0.1772
rs4511910	1.1746E-09	3	58604557	A	C	FAM107A	0.000152109	-0.000281	7.4E-05	-0.000727	0.00031	6.85135E-10	85.8327	49.41	1.9E-08	0.74427	0.35289	0.0004	0.1088	0.085	0.0004	3.8E-08	0.1736
rs9513654	1.2039E-09	13	99733711	A	G	CLYBL	5.83266E-08	-0.000361	6.7E-05	-0.00069	0.0002	7.09874E-10	69.5144	22.96	0.00173	0.84587	0.0402	0.0368	0.1088	0.481	2E-06	0.01419	0.0004
rs452081	1.2152E-09	21	36550572	A	G	CLDN14	0.000147558	-0.000281	7.4E-05	-0.000728	0.00031	7.08761E-10	85.7817	49.23	2E-08	0.82074	0.34968	0.0004	0.111	0.083	0.0004	3.9E-08	0.1721
rs72726565	1.2207E-09	8	128772467	A	G	AC026248.1	0.000147829	-0.000281	7.4E-05	-0.000727	0.00031	7.11919E-10	85.779	49.22	2.1E-08	0.82448	0.34934	0.0004	0.1101	0.083	0.0004	4E-08	0.172

Table S16

rs9866706	1.2224E-09	3	116234421	G	A	LSAMP	2.71923E-09	0.0004194	7.1E-05	0.0007095	0.00018	7.13334E-10	59.4026	17.24	0.0159	0.93753	0.00166	0.0464	0.021	0.293	0.0003	0.00018	0.0217
rs2735537	1.2239E-09	16	3141355	G	A	ZNF213	0.000147813	-0.000281	7.4E-05	-0.000727	0.00031	7.13825E-10	85.7784	49.22	2.1E-08	0.85056	0.34959	0.0004	0.1111	0.083	0.0004	3.9E-08	0.172
rs61975906	1.2422E-09	14	27441619	C	A	NOVA1	1.80502E-09	0.0004255	7.1E-05	0.000712	0.00019	7.29153E-10	61.6287	18.24	0.01092	0.61389	0.00086	0.1223	0.0092	0.096	0.0004	0.00021	0.0273
rs62366910	1.3107E-09	5	50648268	G	A	PARP8	6.15043E-05	-0.000297	7.4E-05	-0.000717	0.00031	7.6431E-10	85.7662	49.18	2.1E-08	0.08798	0.30201	0.0006	0.1166	0.113	9E-05	2.1E-07	0.1428
rs116049941	1.3172E-09	4	92589126	C	A	GRID2	3.03331E-07	0.0005968	0.00012	0.0013899	0.00037	7.68082E-10	74.4847	27.43	0.00028	0.84542	0.07746	0.0012	0.0021	0.429	0.0007	0.00127	0.0047
rs111899709	1.3516E-09	18	48378466	G	A	ZBTB7C	4.35064E-10	-0.000771	0.00012	-0.001264	0.00043	5.48229E-10	78.259	32.2	3.7E-05	0.71046	1.2E-06	0.0879	0.0009	1E-05	0.2128	0.01524	0.009
rs12727600	1.3583E-09	1	36538845	C	T	CSF3R	4.07049E-10	-0.000769	0.00012	-0.001263	0.00043	4.54923E-10	78.6191	32.74	3E-05	0.69375	1.2E-06	0.086	0.0009	9E-06	0.2078	0.01462	0.0095
rs12492591	1.3687E-09	3	122266284	A	G	CASR	1.23856E-09	0.0005029	8.3E-05	0.0007424	0.00017	7.98538E-10	45.4277	12.83	0.07644	0.63186	0.0007	0.0024	0.0397	0.531	0.0003	0.0028	0.131
rs55758108	1.4307E-09	5	107295107	C	T	EFNA5	7.72785E-10	0.0004169	6.8E-05	0.0005483	0.00013	8.34146E-10	35.8301	10.91	0.14266	0.23722	0.00034	0.1822	0.0491	0.346	4E-05	0.02165	0.018
rs61233390	1.4321E-09	16	88966611	G	T	CBFA2T3	6.60313E-05	-0.000295	7.4E-05	-0.000716	0.00031	8.34961E-10	85.7873	49.25	2E-08	0.08245	0.30739	0.0006	0.1168	0.113	1E-04	2E-07	0.1398
rs72698680	1.5193E-09	4	175169150	T	G	ADAM29	0.000152095	-0.000281	7.4E-05	-0.000729	0.00031	8.85647E-10	85.8421	49.44	1.9E-08	0.41539	0.34088	0.0004	0.118	0.082	0.0005	3.6E-08	0.1714
rs79526815	1.5301E-09	6	168079965	G	A	FRMD1	5.60558E-09	0.0003935	6.8E-05	0.0007239	0.00021	8.92501E-10	71.6621	24.7	0.00086	0.69917	0.0006	0.1343	9E-06	0.013	0.0103	0.00504	0.0415
rs3954167	1.5408E-09	3	186935592	T	C	ST6GAL1	2.36092E-08	-0.000375	6.7E-05	-0.000714	0.00019	8.98172E-10	66.7837	21.07	0.00366	0.26778	0.01339	0.0002	0.0288	0.793	0.0001	0.06046	0.005
rs9403951	1.5892E-09	6	148363600	C	A	SASH1	0.000153138	-0.000281	7.4E-05	-0.00073	0.00031	9.26309E-10	85.823	49.38	1.9E-08	0.40012	0.34159	0.0005	0.1181	0.082	0.0005	3.6E-08	0.1699
rs4722498	1.6402E-09	7	25691702	T	C	NFE2L3	0.000165908	-0.000279	7.4E-05	-0.000726	0.00032	9.55981E-10	86.6551	52.45	4.8E-09	0.05876	0.34778	0.0004	0.1133	0.082	0.0005	3.8E-08	0.171
rs11592199	1.7457E-09	10	22691729	A	G	PIP4K2A	0.000156705	-0.000281	7.4E-05	-0.000725	0.00031	1.01735E-09	85.5888	48.57	2.8E-08	0.84863	0.34143	0.0004	0.1178	0.082	0.0005	3.9E-08	0.1717
rs13023254	1.7645E-09	2	7692305	T	C	RNF144A	0.000175617	-0.000279	7.4E-05	-0.000723	0.00031	1.02828E-09	85.7271	49.04	2.2E-08	0.58441	0.35546	0.0004	0.1094	0.082	0.0005	4.3E-08	0.1759
rs4426203	1.8561E-09	12	30321950	G	A	IPO8	2.48577E-08	-0.000375	6.7E-05	-0.000703	0.00018	1.08155E-09	64.1893	19.55	0.00664	0.946	0.01267	0.0002	0.0261	0.752	0.0002	0.06271	0.0061
rs6778228	1.9133E-09	3	5622953	G	A	EDEM1	4.9041E-10	-0.000765	0.00012	-0.001225	0.00041	7.97306E-10	76.0516	29.23	0.00013	0.67901	1.3E-06	0.098	0.0014	3E-05	0.1875	0.01449	0.0099
rs2682919	1.9203E-09	15	77578029	A	G	LINGO1	0.000182176	-0.00028	7.5E-05	-0.000722	0.00032	1.11886E-09	86.1784	50.65	1.1E-08	0.14356	0.36441	0.0004	0.1002	0.089	0.0005	6.6E-08	0.1657
rs6808830	1.9287E-09	3	22461159	C	T	ZNF385D	4.7213E-06	0.0006702	0.00015	0.0018685	0.00052	1.12454E-09	79.4756	34.11	1.6E-05	0.85308	0.19626	0.0135	0.0004	0.395	0.0038	0.00019	0.0007
rs77567957	1.9421E-09	3	5799262	T	C	EDEM1	2.04631E-07	-0.000652	0.00013	-0.001453	0.00039	1.1315E-09	72.1709	25.15	0.00071	0.71472	0.04724	0.0007	0.0005	0.537	0.0011	0.00942	0.0103
rs9854019	1.9764E-09	3	20607505	C	T	SGO1	7.68361E-05	-0.000293	7.4E-05	-0.000712	0.0003	1.15145E-09	84.6614	45.64	1E-07	0.96911	0.31707	0.0007	0.1154	0.121	0.0001	2.5E-07	0.1247
rs1033341	2.0752E-09	21	39998465	A	G	DSCAM	2.90021E-06	0.0008092	0.00017	0.0019808	0.00059	1.20888E-09	77.8321	31.58	4.9E-05	0.51806	0.24585	2E-05	0.023	0.95	0.0001	0.00071	0.1537
rs56191117	2.144E-09	3	185520995	G	A	LIPH	8.20696E-10	-0.000474	7.7E-05	-0.000708	0.00018	1.29304E-09	51.5557	14.45	0.04374	0.46429	0.00012	0.0034	0.021	0.05	0.0046	0.00991	0.034
rs10949314	2.187E-09	6	15768770	C	T	DTNBP1	2.63036E-09	0.0004334	7.3E-05	0.0007002	0.00019	1.286E-09	61.5653	18.21	0.01105	0.35195	0.00108	0.2954	0.0017	0.099	0.0004	0.00074	0.038
rs79470487	2.1929E-09	12	86608747	A	G	MGAT4C	2.52351E-06	0.0006845	0.00015	0.0018416	0.00051	1.27832E-09	78.3925	32.4	3.4E-05	0.95376	0.13332	0.0046	0.0008	0.354	0.0054	0.00034	0.0007
rs66539146	2.2373E-09	5	63296666	C	T	HTR1A	2.48975E-06	0.0006848	0.00015	0.0018486	0.00051	1.30345E-09	78.9413	33.24	2.4E-05	0.32221	0.13388	0.0046	0.0008	0.352	0.0051	0.00035	0.0007
rs11681903	2.2397E-09	2	118116060	C	T	INSIG2	1.21605E-07	-0.000487	9.2E-05	-0.000895	0.00031	1.3045E-09	77.6987	31.39	5.3E-05	0.28626	0.01768	0.3571	0.0111	0.15	6E-05	2E-07	0.875
rs11826943	2.2998E-09	11	76735751	A	G	TSKU	2.73978E-09	0.0004327	7.3E-05	0.0006929	0.00018	1.3471E-09	59.5996	17.33	0.01541	0.88686	0.00109	0.289	0.0017	0.097	0.0004	0.00074	0.0379
rs79413323	2.3201E-09	12	29676977	G	A	TMTC1	2.66987E-09	0.000434	7.3E-05	0.0007019	0.00019	1.36392E-09	61.5111	18.19	0.01115	0.3203	0.00101	0.2819	0.0016	0.101	0.0004	0.00075	0.0383
rs35177186	2.3599E-09	7	16432577	C	A	ISPD	2.40209E-07	-0.000649	0.00013	-0.001447	0.00038	1.37435E-09	71.8891	24.9	0.00079	0.9186	0.04953	0.0007	0.0005	0.541	0.0011	0.01016	0.0108
rs12475002	2.3611E-09	2	175963230	A	G	KIAA1715	8.97132E-10	-0.000472	7.7E-05	-0.000725	0.00019	1.43364E-09	56.9067	16.24	0.02298	0.18111	8.7E-05	0.0016	0.0189	0.042	0.009	0.01221	0.0492
rs819414	2.5003E-09	1	236530932	G	A	LGALS8	9.71279E-10	-0.000472	7.7E-05	-0.0007	0.00017	1.49666E-09	50.0912	14.03	0.05073	0.648	0.00014	0.0036	0.0209	0.054	0.0046	0.00975	0.0353
rs1394070	2.521E-09	1	161844230	T	G	ATF6	5.7246E-08	0.0003983	7.3E-05	0.000675	0.00022	1.46797E-09	71.2159	24.32	0.001	0.41943	0.01414	3E-06	0.2534	0.845	3E-05	0.00892	0.9419
rs6489905	2.5365E-09	12	113625571	C	A	LHX5	1.28964E-08	-0.000587	0.0001	-0.001113	0.00028	1.47696E-09	64.3514	19.64	0.00641	0.57238	0.00163	0.0028	0.0014	0.355	0.0159	0.00858	0.0027
rs11164830	2.5933E-09	1	92891266	C	A	FAM69A	3.23455E-09	0.0004305	7.3E-05	0.0007088	0.00019	1.5381E-09	64.2043	19.56	0.00661	0.12504	0.00127	0.2849	0.0017	0.1	0.0004	0.00084	0.0383
rs9799996	2.6168E-09	5	8286276	T	C	MTRR	2.63414E-06	0.000683	0.00015	0.0018309	0.0005	1.5248E-09	78.1722	32.07	3.9E-05	0.89548	0.13339	0.0046	0.0009	0.35	0.0053	0.00036	0.0007
rs9902314	2.633E-09	17	10410055	A	G	MYH8	3.23911E-09	0.0004305	7.3E-05	0.0006921	0.00018	1.5439E-09	59.87	17.44	0.01475	0.62449	0.00125	0.2849	0.0017	0.1	0.0004	0.00083	0.0387
rs4235768	2.7986E-09	5	115056711	C	A	TRIM36	2.65692E-07	-0.000646	0.00013	-0.001438	0.00038	1.62921E-09	71.6696	24.71	0.00085	0.98146	0.05049	0.0007	0.0005	0.535	0.0011	0.01047	0.0115
rs61972992	2.8237E-09	13	95371680	T	C	CLDN10	2.64662E-07	-0.000647	0.00013	-0.001464	0.0004	1.64401E-09	74.7719	27.75	0.00024	0.08389	0.04998	0.0007	0.0005	0.536	0.0011	0.01033	0.0115
rs1410258	2.8254E-09	1	238559572	C	A	MTRNR2L11	2.65494E-07	-0.000647	0.00013	-0.001438	0.00038	1.64477E-09	71.7262	24.76	0.00084	0.8127	0.0502	0.0007	0.0005	0.537	0.0011	0.01042	0.0116
rs40117	2.8389E-09	16	64972430	G	A	CDH11	0.000227224	-0.000273	7.4E-05	-0.000693	0.00031	1.6526E-09	85.4029	47.95	3.6E-08	0.31354	0.4276	0.0004	0.0676	0.144	0.0002	3.7E-07	0.1339
rs2299809	2.8821E-09	21	43754658	C	T	PDXK	2.67932E-06	0.0006824	0.00015	0.0018259	0.0005	1.67872E-09	78.2177	32.14	3.8E-05	0.63592	0.13179	0.0046	0.0009	0.349	0.0054	0.00036	0.0008
rs2817240	2.941E-09	6	24541225	G	A	KIAA0319	2.77974E-07	-0.000645	0.00013	-0.00144	0.00039	1.7119E-09	72.1214	25.11	0.00073	0.54775	0.05097	0.0007	0.0005	0.536	0.0012	0.01039	0.0116
rs1400176	3.0248E-09	3	54290	C	T	CHL1	3.04713E-08	-0.000374	6.7E-05	-0.000695	0.00018	1.76059E-09	63.3682	19.11	0.00785	0.50125	0.01212	0.0002	0.0256	0.75	0.0002	0.05058	0.0089
rs113262309	3.0463E-09	17	38740646	C	A	PCGF2	9.53545E-09	0.0003866	6.7E-05	0.0007039	0.00021	1.77378E-09	71.4733	24.54	0.00092	0.78414	0.00064	0.1877	9E-06	0.012	0.0122	0.0044	0.0596
rs10850126	3.0806E-09	12	113055173	T	G	DTX1	0.000181891	-0.000278	7.4E-05	-0.00069	0.0003	1.79298E-09	85.0321	46.77	6.2E-08	0.60697	0.39195	0.0006	0.0832	0.132	0.0002	2.3E-07	0.1717
rs1908198	3.0918E-09	15	57586908	C	T	GCOM1	3.79487E-09	0.0004285	7.3E-05	0.0006913	0.00019	1.81791E-09	60.742	17.83	0.01276	0.46791	0.00137	0.2933	0.0017	0.091	0.0003	0.00098	0.0381
rs112453672	3.1233E-09	15	53563539	G	A	WDR72	4.02004E-09	0.0004279	7.3E-05	0.0006982	0.00019	1.84516E-09	62.934	18.89	0.00855	0.23889	0.00147	0.3188	0.0016	0.088	0.0003	0.00106	0.0348
rs12545776	3.2354E-09	8	94690920	A	G	ESRP1	4.17638E-09	0.0004274	7.3E-05	0.0006926	0.00019	1.89895E-09	60.8545	17.88	0.01251	0.58776	0.00147	0.3038	0.0018	0.087	0.0004	0.00094	0.0333

Table S16

rs55959638	3.4578E-09	8	140194651	C	T	TRAPPC9	3.17778E-08	-0.000371	6.7E-05	-0.000686	0.00018	2.012E-09	64.2417	19.58	0.00656	0.27534	0.01232	0.0003	0.0373	0.757	0.0002	0.0582	0.0084
rs6574217	3.6306E-09	14	75237434	T	C	FOS	2.6241E-07	-0.000647	0.00013	-0.001423	0.00038	2.11227E-09	71.167	24.28	0.00102	0.5726	0.04569	0.0009	0.0005	0.55	0.0013	0.01267	0.0134
rs7503732	3.7744E-09	17	74456329	G	A	GPRC5C	2.09708E-09	0.0004138	6.9E-05	0.0005457	0.00013	2.19575E-09	36.9077	11.09	0.13454	0.20246	0.00074	0.1926	0.0499	0.345	4E-05	0.02253	0.0193
rs112666969	3.9511E-09	19	37556743	G	A	ZNF540,ZNF571	3.15943E-06	0.0006769	0.00015	0.0018691	0.00054	2.29834E-09	81.3376	37.51	3.8E-06	0.01288	0.13248	0.0042	0.0012	0.347	0.0063	0.00037	0.0009
rs10231548	4.1587E-09	7	17519351	G	T	RP11-507K12.1	4.47353E-08	-0.000661	0.00012	-0.001267	0.00036	2.4188E-09	70.8436	24.01	0.00114	0.48106	0.00573	0.0093	0.3762	0.527	0.0014	3E-06	0.0153
rs527376	4.1606E-09	20	24221375	C	T	GGTLC1	3.09454E-07	-0.000644	0.00013	-0.001414	0.00038	2.41991E-09	70.8436	24.01	0.00114	0.6749	0.05261	0.0009	0.0006	0.583	0.001	0.0111	0.0167
rs7845875	4.2206E-09	8	34127282	T	C	DUSP26	5.38052E-07	-0.000346	6.9E-05	-0.000801	0.00022	2.45469E-09	75.477	28.54	0.00018	0.83962	0.01755	0.0519	5E-05	0.36	0.0426	4.2E-05	0.0151
rs8005185	4.2573E-09	14	86110459	C	T	FLRT2	0.000202315	-0.000279	7.5E-05	-0.000734	0.00031	2.47601E-09	85.3006	47.62	4.2E-08	0.3762	0.39173	0.0003	0.1783	0.083	0.0006	8.6E-08	0.1756
rs12128939	4.2608E-09	1	179058217	A	G	FAM20B	3.77763E-09	-0.000655	0.00011	-0.001054	0.00027	2.47802E-09	56.2461	16	0.02513	0.75172	0.00052	0.0119	0.1393	0.496	0.0028	0.02022	9E-05
rs117700242	4.3848E-09	11	113278935	C	T	NCAM1	0.000235929	-0.000273	7.4E-05	-0.000681	0.0003	2.54999E-09	84.9692	46.57	6.8E-08	0.78378	0.40443	0.0006	0.0825	0.119	0.0002	2.1E-07	0.2051
rs72844243	4.5079E-09	10	128509335	G	A	MKI67	1.38366E-09	-0.00053	8.8E-05	-0.00053	8.8E-05	2.62136E-09	0	6.398	0.49413	0.78134	1.6E-05	0.0334	0.0037	0.991	0.0078	0.81942	0.039
rs115409670	4.5159E-09	1	196421243	C	T	KCNT2	0.000156163	-0.000283	7.5E-05	-0.000703	0.00031	2.62601E-09	85.2255	47.38	4.7E-08	0.19094	0.37162	0.0008	0.1117	0.104	0.0002	2.1E-07	0.1612
rs1241097	4.5296E-09	14	25320158	A	G	STXBP6	6.39832E-07	-0.000451	9.1E-05	-0.000909	0.00031	2.63398E-09	78.9167	33.2	2.4E-05	0.66065	0.03636	0.5149	0.0115	0.114	0.0002	4E-08	0.474
rs13075436	4.6426E-09	3	127242305	C	T	PLXNA1	0.000000396	-0.000643	0.00013	-0.00142	0.00038	2.69956E-09	71.1323	24.25	0.00103	0.80489	0.06269	0.0007	0.0008	0.545	0.0008	0.01339	0.0167
rs10743660	4.6956E-09	12	9319419	C	T	PZP	6.43504E-07	-0.000451	9.1E-05	-0.000908	0.00032	2.73029E-09	78.9885	33.32	2.3E-05	0.54763	0.03627	0.5038	0.0118	0.116	0.0002	4.1E-08	0.4796
rs11738194	4.7355E-09	5	176520856	C	T	RNF44	6.45056E-07	-0.000451	9.1E-05	-0.000906	0.00031	2.7534E-09	78.9029	33.18	2.5E-05	0.6448	0.03593	0.5177	0.0117	0.114	0.0002	4E-08	0.4751
rs4992458	4.8215E-09	2	865892	C	T	SNTG2	8.11127E-09	0.0003942	6.8E-05	0.0006438	0.00017	2.80675E-09	56.8429	16.22	0.02318	0.97187	0.00208	0.2126	0.0031	0.303	0.0003	0.00047	0.0655
rs6483970	4.8634E-09	11	10079644	T	G	SBF2	6.46819E-07	-0.000452	9.1E-05	-0.000915	0.00032	2.82759E-09	79.7013	34.49	1.4E-05	0.25972	0.03637	0.4632	0.012	0.094	0.0003	4.1E-08	0.489
rs117337947	4.944E-09	15	56513774	A	G	MNS1	1.71293E-08	0.0009358	0.00017	0.0016182	0.00041	2.87436E-09	58.6094	16.91	0.01797	0.98493	0.00294	4E-05	0.0073	0.924	0.0027	0.03586	0.1198
rs953563	4.9547E-09	7	123073947	T	G	SLC13A1	1.11694E-07	0.00039	7.3E-05	0.0006461	0.00023	2.88055E-09	73.0039	25.93	0.00052	0.19004	0.01548	4E-06	0.3871	0.892	3E-05	0.00808	0.7323
rs72664723	4.9832E-09	4	82885703	C	T	SEC31A	6.70882E-07	-0.000452	9.1E-05	-0.000915	0.00032	2.89711E-09	79.0279	33.38	2.3E-05	0.62678	0.03717	0.46	0.012	0.095	0.0003	4.1E-08	0.4911
rs277012	5.0155E-09	8	131630710	T	C	EFR3A	2.71921E-07	-0.00065	0.00013	-0.001393	0.00037	2.91593E-09	69.9343	23.28	0.00152	0.48182	0.05075	0.0011	0.0008	0.656	0.0006	0.0136	0.0194
rs17050074	5.1194E-09	2	59282668	A	G	FANCL	2.80539E-07	-0.000649	0.00013	-0.001388	0.00037	2.9761E-09	69.2994	22.8	0.00185	0.8738	0.0512	0.0012	0.0008	0.655	0.0006	0.01361	0.019
rs9830749	5.1722E-09	3	116252595	C	T	LSAMP	1.88639E-09	-0.000464	7.7E-05	-0.000676	0.00017	3.09499E-09	46.8299	13.17	0.06818	0.95583	0.00019	0.0059	0.0247	0.064	0.0049	0.00811	0.0382
rs67116004	5.2432E-09	5	932507	A	G	TRIP13	7.09696E-09	0.0004212	7.3E-05	0.0006967	0.00019	3.08342E-09	63.7702	19.32	0.00724	0.27296	0.00183	0.368	0.0016	0.074	0.0004	0.00098	0.0313
rs7532863	5.2972E-09	1	79350724	C	A	ADGRL4	3.47495E-06	0.0006736	0.00015	0.0017946	0.00049	3.08216E-09	77.4786	31.08	6E-05	0.99167	0.1307	0.0044	0.0013	0.344	0.0066	0.00038	0.0009
rs9903738	5.4167E-09	17	78207519	T	C	AFMID	0.000180281	-0.000278	7.4E-05	-0.000688	0.0003	3.1485E-09	84.5921	45.43	1.1E-07	0.52328	0.37516	0.0006	0.0947	0.141	0.0002	3.6E-07	0.1641
rs2964708	5.5042E-09	5	104984638	T	C	NUDT12	1.69646E-09	-0.000743	0.00012	-0.001176	0.0004	3.19926E-09	75.1041	28.12	0.00021	0.50267	2.7E-06	0.1361	0.0016	5E-05	0.2011	0.01739	0.0136
rs12296568	5.6636E-09	12	41715588	A	G	PDZRN4	1.41159E-06	0.0003382	7E-05	0.0007096	0.00023	3.29168E-09	75.2788	28.32	0.00019	0.70731	0.10708	5E-07	0.3583	0.843	0.0001	0.02632	0.1003
rs9877234	5.671E-09	3	176349686	G	A	NAALADL2	0.000296369	-0.000272	7.5E-05	-0.00071	0.00031	3.29594E-09	85.3747	47.86	3.8E-08	0.7147	0.40395	0.0005	0.1258	0.059	0.0006	6.8E-08	0.2194
rs1048701	5.8295E-09	17	37550633	T	C	SYNRG	5.4431E-07	-0.000455	9.1E-05	-0.00091	0.00032	3.38781E-09	79.8625	34.76	1.2E-05	0.11056	0.03161	0.4838	0.01	0.1	0.0003	6.8E-08	0.4827
rs79524582	5.8927E-09	10	2533217	T	C	PFKP	9.78279E-09	-0.000428	7.5E-05	-0.000671	0.00019	3.42625E-09	59.1049	17.12	0.01666	0.50305	0.0024	0.6172	0.0218	0.65	8E-05	0.00011	0.0403
rs4807397	5.895E-09	19	1002896	A	G	GRIN3B	3.72914E-06	0.0006713	0.00015	0.0017909	0.00049	3.42895E-09	77.4772	31.08	6E-05	0.72055	0.13288	0.0046	0.0014	0.348	0.0068	0.00038	0.0009
rs12335232	6.1661E-09	8	130971311	G	T	ADCY8	4.86967E-06	-0.000324	7.1E-05	-0.000815	0.00024	3.58295E-09	77.5123	31.13	5.9E-05	0.69921	0.24235	0.0033	0.0859	0.96	0.0003	1.3E-05	0.0095
rs4724131	6.2898E-09	7	4876805	A	G	RADIL	1.94395E-09	-0.000462	7.7E-05	-0.00069	0.00018	3.62009E-09	52.2307	14.65	0.0407	0.15022	0.00018	0.007	0.0258	0.067	0.0046	0.0082	0.047
rs12459350	6.8162E-09	19	2176587	A	G	DOT1L	3.77559E-06	0.0006702	0.00014	0.0018081	0.00051	3.95975E-09	79.0045	33.34	2.3E-05	0.08843	0.13101	0.0046	0.0014	0.351	0.007	0.00046	0.0009
rs35625243	7.2143E-09	14	71478220	A	G	SIPA1L1	3.83764E-09	0.0004068	6.9E-05	0.0005018	0.00011	4.192E-09	24.1652	9.231	0.23652	0.83531	0.0009	0.2195	0.0485	0.348	5E-05	0.025	0.0237
rs10860064	7.3089E-09	12	96678941	G	A	CFAP54	3.40151E-07	-0.000472	9.3E-05	-0.000873	0.00031	4.24525E-09	76.4254	29.69	0.00011	0.68629	0.02947	0.3849	0.0111	0.136	5E-05	5.6E-07	0.8884
rs11181407	7.3167E-09	12	42297388	A	G	PPHLN1	8.24146E-09	-0.000642	0.00011	-0.001065	0.00027	4.24982E-09	57.8325	16.6	0.02016	0.55805	0.00107	0.0115	0.12	0.479	0.0025	0.02132	0.0001
rs2944507	7.321E-09	10	131258590	A	G	TCERG1L	3.07391E-09	0.00043	7.3E-05	0.000567	0.00013	4.34127E-09	34.198	10.64	0.15521	0.16356	0.00049	0.0105	0.0076	0.791	0.0006	0.02021	0.4031
rs7302687	7.476E-09	12	42217132	G	A	YAF2	8.26464E-08	-0.000395	7.4E-05	-0.000681	0.00021	4.34355E-09	67.6613	21.65	0.00292	0.27749	0.01763	0.0006	0.9502	0.953	2E-05	0.00321	0.0375
rs62527340	7.5952E-09	8	87153030	C	T	CNBD1	7.31086E-08	0.0004333	8E-05	0.0008422	0.00023	4.41117E-09	68.8138	22.45	0.00213	0.8812	0.01239	0.0306	0.194	0.326	0.0004	0.00106	0.0001
rs117031972	7.8222E-09	17	5415330	G	T	NUP88	6.27616E-08	-0.000363	6.7E-05	-0.00067	0.00018	4.54266E-09	61.7761	18.31	0.01063	0.59722	0.01464	0.0003	0.0303	0.694	0.0003	0.06037	0.01
rs9427662	8.0848E-09	1	196977645	T	C	CFHR5	3.79522E-09	0.0004278	7.3E-05	0.0005494	0.00012	4.69552E-09	28.2116	9.751	0.20314	0.48481	0.00064	0.0123	0.0062	0.856	0.0005	0.01563	0.4212
rs76628236	8.4524E-09	5	113440949	C	T	MCC	1.49378E-07	-0.001048	0.0002	-0.002156	0.00061	4.90775E-09	72.2418	25.22	0.00069	0.68415	0.01896	0.0432	0.0316	0.152	0.0012	7.2E-06	0.0159
rs1364715	8.5003E-09	8	119245946	C	T	MAL2	1.42599E-08	0.0004864	8.6E-05	0.0008934	0.0003	4.95099E-09	78.6918	32.85	2.8E-05	0.97338	0.0001	0.4357	0.0004	2E-04	0.0741	0.06157	6E-05
rs34938245	8.6139E-09	1	25026132	C	A	RUNX3	3.91207E-09	0.0004263	7.2E-05	0.0005345	0.00012	5.00126E-09	24.9503	9.327	0.23001	0.56348	0.00063	0.0148	0.0062	0.857	0.0005	0.01741	0.4398
rs61767314	8.6238E-09	1	22594763	G	A	EPHA8	3.74589E-09	0.0004262	7.2E-05	0.0005423	0.00012	5.02519E-09	27.9268	9.712	0.20547	0.3361	0.00057	0.0154	0.0075	0.802	0.0005	0.01703	0.443
rs10010454	8.7061E-09	4	39903877	C	T	PDS5A	3.72288E-09	0.0004262	7.2E-05	0.0005357	0.00012	5.06607E-09	26.1905	9.484	0.21976	0.37865	0.00056	0.016	0.0082	0.801	0.0004	0.01642	0.4598
rs12737114	8.7092E-09	1	248887348	T	C	PGBD2	3.72351E-09	0.0004263	7.2E-05	0.0005231	0.00011	5.05646E-09	22.2609	9.004	0.25234	0.56064	0.00056	0.016	0.0082	0.801	0.0004	0.0168	0.4571
rs2394615	8.7376E-09	10	69954168	T	C	COL13A1	0.000292226	-0.000268	7.4E-05	-0.000669	0.0003	5.07291E-09	84.7979	46.05	8.6E-08	0.52839	0.41127	0.0008	0.079	0.098	0.0003	3.3E-07	0.1997

Table S16

rs1368882	8.7772E-09	1	54641346	G	A	MROH7	6.60571E-08	-0.000643	0.00012	-0.001203	0.00034	5.09582E-09	69.3356	22.83	0.00183	0.71777	0.00628	0.0068	0.4824	0.417	0.0013	7.3E-06	0.0195
rs11903221	8.8779E-09	2	62503371	C	T	TMEM17	4.05858E-09	0.0004261	7.2E-05	0.0005457	0.00012	5.15916E-09	28.1744	9.746	0.20344	0.40245	0.00064	0.0134	0.0064	0.859	0.0005	0.01722	0.4313
rs6441617	8.8922E-09	3	101615077	T	G	PCNP	7.84882E-08	-0.002584	0.00048	-0.004942	0.00143	5.16292E-09	70.9933	24.13	0.00108	0.40158	0.00812	9E-06	0.0345	0.076	0.0038	0.00557	0.1775
rs28455003	8.9261E-09	8	20766518	G	T	LZTS1	0.000328567	-0.000267	7.4E-05	-0.000659	0.0003	5.18206E-09	84.8418	46.18	8.1E-08	0.485	0.42043	0.0008	0.0666	0.111	0.0002	3.7E-07	0.2277
rs1892186	9.1335E-09	10	127699946	G	A	FOXI2	2.62709E-06	-0.00044	9.4E-05	-0.001122	0.00032	5.30218E-09	77.4057	30.98	6.3E-05	0.29649	0.07692	0.01	0.0052	0.492	0.0115	5.3E-06	0.0091
rs1056180	9.2476E-09	13	102292478	T	C	FGF14	2.76946E-06	-0.000439	9.4E-05	-0.001138	0.00034	5.36823E-09	80.0263	35.05	1.1E-05	0.02836	0.07845	0.0097	0.0054	0.475	0.0115	4.7E-06	0.0089
rs11258947	9.3429E-09	10	14218501	A	G	FRMD4A	1.09079E-07	-0.000358	6.7E-05	-0.000683	0.00018	5.42345E-09	64.2907	19.6	0.00649	0.54026	0.02072	0.0003	0.0159	0.638	0.0003	0.10729	0.0071
rs147148162	9.5125E-09	11	68500679	T	C	PPP6R3	2.18778E-06	-0.000349	7.4E-05	-0.000844	0.00024	5.52167E-09	75.7194	28.83	0.00016	0.67704	0.06183	0.1309	2E-05	0.89	0.0136	0.00019	0.0079
rs4962262	9.5432E-09	6	122851538	T	C	SMPDL3A	1.1569E-07	-0.000356	6.7E-05	-0.000679	0.00018	5.53942E-09	64.5027	19.72	0.00621	0.45891	0.02243	0.0003	0.0219	0.672	0.0003	0.10311	0.0068
rs117031429	9.5439E-09	13	92889999	C	T	GPC5	7.37983E-09	-0.000415	7.2E-05	-0.000565	0.00014	5.59162E-09	41.7382	12.01	0.10008	0.92421	0.00151	0.0011	0.3896	0.293	5E-05	0.17316	0.0351
rs7841311	9.6521E-09	8	4197551	T	C	CSMD1	4.51224E-09	0.0004242	7.2E-05	0.0005386	0.00012	5.60576E-09	27.1283	9.606	0.21203	0.48218	0.0007	0.0153	0.0079	0.804	0.0004	0.01522	0.498
rs9955731	9.7624E-09	18	48940114	G	A	SMAD7	1.96828E-06	-0.000446	9.4E-05	-0.001111	0.00032	5.66634E-09	77.2946	30.83	6.7E-05	0.22641	0.06823	0.0083	0.0103	0.4	0.0083	3.8E-06	0.0137
rs16931370	9.8465E-09	12	26813667	C	T	ITPR2	4.12202E-09	0.0004368	7.4E-05	0.0005268	0.00011	5.71502E-09	20.8282	8.842	0.26423	0.7013	0.00056	0.0087	0.0152	0.654	0.0003	0.02474	0.6256
rs12762731	9.9574E-09	10	87819889	A	G	ATAD1	4.48954E-09	0.0004253	7.3E-05	0.0005532	0.00013	5.81107E-09	30.7695	10.11	0.18236	0.28088	0.00066	0.0135	0.007	0.841	0.0005	0.01711	0.4214
rs3843766	1.0013E-08	20	13000913	C	T	SPTLC3	1.2615E-06	-0.000447	9.2E-05	-0.000917	0.00032	5.81154E-09	78.7951	33.01	2.6E-05	0.59932	0.06987	0.4129	0.0057	0.06	0.0001	4.3E-07	0.5305
rs2173088	1.0124E-08	15	85978982	G	T	AGBL1	2.11666E-06	-0.00035	7.4E-05	-0.00084	0.00024	5.87593E-09	75.3952	28.45	0.00018	0.84014	0.05943	0.1328	2E-05	0.871	0.0137	0.00024	0.0083
rs12536576	1.0135E-08	7	10526158	G	T	NDUFA4	4.68631E-09	0.0004255	7.3E-05	0.0005271	0.00012	5.88181E-09	23.0102	9.092	0.24611	0.94097	0.00071	0.0175	0.0068	0.839	0.0004	0.01466	0.4762
rs13101421	1.0138E-08	4	135588098	C	T	PABPC4L	1.25186E-06	-0.000448	9.2E-05	-0.000917	0.00032	5.88386E-09	78.6268	32.75	2.9E-05	0.74254	0.07023	0.4091	0.0057	0.06	1E-04	4.6E-07	0.5291
rs12585229	1.014E-08	13	42597530	C	T	TNFSF11	4.5363E-09	0.0004252	7.3E-05	0.0005456	0.00012	5.89789E-09	28.5365	9.795	0.20048	0.35238	0.00065	0.0138	0.0071	0.839	0.0005	0.017	0.4191
rs13203024	1.0163E-08	6	117736238	A	G	NUS1	1.28909E-06	-0.000447	9.2E-05	-0.000919	0.00032	5.8982E-09	79.0127	33.35	2.3E-05	0.40802	0.0714	0.4114	0.0057	0.06	1E-04	4.5E-07	0.5333
rs12676610	1.0406E-08	8	89181686	G	A	RIPK2	4.72284E-09	0.0004247	7.3E-05	0.0006106	0.00016	6.82494E-09	51.0306	14.29	0.04618	0.02276	0.00067	0.0125	0.0069	0.845	0.0005	0.01703	0.4322
rs10519173	1.0431E-08	15	62764093	G	A	TLN2	4.61286E-09	0.000425	7.3E-05	0.0005496	0.00013	6.08775E-09	30.0469	10.01	0.18819	0.29158	0.00065	0.0144	0.0071	0.837	0.0005	0.01722	0.4147
rs17852625	1.0448E-08	20	10412981	G	A	MKKS	3.81293E-09	0.0004266	7.2E-05	0.0006102	0.00016	5.40401E-09	50.4063	14.11	0.04918	0.0257	0.00062	0.0147	0.0058	0.858	0.0005	0.01688	0.438
rs1823265	1.0544E-08	3	119367759	A	C	ARHGAP31	9.41448E-09	-0.000617	0.00011	-0.001002	0.00027	6.32456E-09	58.0767	16.7	0.01946	0.06656	0.00173	0.0585	0.0883	0.507	0.0004	0.00261	0.0045
rs11058644	1.0639E-08	12	126437202	T	C	RP4-809F18.1	2.84414E-06	-0.000579	0.00012	-0.001145	0.00044	6.17371E-09	79.8434	34.73	1.3E-05	0.37139	0.0616	0.7131	0.0619	0.225	8E-05	1.8E-08	0.7488
rs7859033	1.0725E-08	9	111900980	G	A	UGCG	3.9174E-08	0.0007724	0.00014	0.0013862	0.00036	6.22376E-09	61.4546	18.16	0.01127	0.34107	0.00421	6E-05	0.0193	0.872	0.0043	0.009	0.1052
rs12204764	1.0743E-08	6	112766696	A	G	RFPL4B	1.13875E-08	0.0005052	8.9E-05	0.0008447	0.00023	6.23405E-09	60.3764	17.67	0.01357	0.93986	0.00022	0.034	0.026	0.521	0.0328	0.0915	1E-05
rs17735265	1.0811E-08	7	93579894	C	A	CALCR	5.01681E-09	0.0004228	7.2E-05	0.000522	0.00011	6.2732E-09	22.6098	9.045	0.24944	0.94886	0.00073	0.0162	0.008	0.803	0.0004	0.0154	0.4969
rs3856345	1.0866E-08	2	210471193	T	C	LANCL1	2.41748E-06	-0.000441	9.3E-05	-0.001109	0.00032	6.30494E-09	77.2449	30.76	6.9E-05	0.25941	0.06843	0.0117	0.0055	0.489	0.0121	5.2E-06	0.0091
rs78555230	1.1617E-08	12	4041728	T	C	PARP11	8.80873E-08	-0.000563	0.00011	-0.001121	0.0003	6.73995E-09	66.7693	21.06	0.00368	0.2608	0.00315	0.0009	0.0009	0.539	0.0434	0.02593	0.0041
rs7089433	1.1835E-08	10	66851920	A	G	CTNNA3	5.53706E-09	0.0004221	7.2E-05	0.0005269	0.00012	6.86598E-09	24.0075	9.211	0.23783	0.69873	0.00078	0.0154	0.0074	0.812	0.0004	0.01635	0.4707
rs77384665	1.1901E-08	7	131611577	G	A	PODXL	5.08545E-09	0.0004168	7.1E-05	0.0005376	0.00012	6.91513E-09	28.3327	9.767	0.20215	0.72662	0.00061	0.0072	0.0429	0.508	0.0008	0.00534	0.239
rs146499527	1.1948E-08	15	54753509	C	T	UNC13C	5.58626E-09	0.000422	7.2E-05	0.0005276	0.00012	6.93164E-09	24.2637	9.243	0.23571	0.67331	0.00078	0.0155	0.0074	0.811	0.0004	0.01635	0.4695
rs10896422	1.1971E-08	11	69095856	G	A	TPCN2	5.58847E-09	0.000422	7.2E-05	0.0005362	0.00012	6.94778E-09	26.9723	9.585	0.21331	0.48257	0.00078	0.0154	0.0074	0.812	0.0004	0.01624	0.4724
rs17469853	1.21E-08	18	28234529	C	T	CDH2	3.96628E-08	0.0003719	6.8E-05	0.0006719	0.00018	7.0193E-09	61.877	18.36	0.01044	0.70179	0.00494	0.1291	0.0007	0.265	0.0014	0.00107	0.0299
rs78439487	1.2249E-08	13	86172445	C	T	SLITRK6	2.09906E-09	-0.00076	0.00013	-0.001207	0.0004	3.93936E-09	74.114	27.04	0.00033	0.43659	4.2E-06	0.1255	0.0021	6E-05	0.1602	0.01718	0.0168
rs9380052	1.2399E-08	6	28096845	T	C	ZNF165	5.72144E-09	0.0004217	7.2E-05	0.0005468	0.00013	7.23043E-09	30.4608	10.07	0.18485	0.30299	0.00077	0.0156	0.0073	0.817	0.0005	0.01661	0.4756
rs60137715	1.252E-08	20	24273819	T	C	SYNDIG1	4.62155E-09	0.0006634	0.00011	0.0010089	0.00026	7.40811E-09	52.3791	14.7	0.04005	0.2501	0.00016	0.1201	0.0027	0.114	0.0119	0.01882	0.0053
rs1439931	1.2559E-08	2	223501305	G	A	SCG2	2.18969E-07	-0.001034	0.0002	-0.002148	0.00061	7.28505E-09	72.5282	25.48	0.00062	0.49264	0.0212	0.0474	0.033	0.156	0.0015	7.4E-06	0.0149
rs12187667	1.2859E-08	5	4841927	T	C	ADAMTS16	0.000304142	-0.000267	7.4E-05	-0.000664	0.0003	7.45855E-09	84.4633	45.05	1.3E-07	0.56808	0.40137	0.0009	0.0856	0.107	0.0003	3.9E-07	0.1941
rs11102336	1.2989E-08	1	111801616	G	A	KCND3	1.38769E-08	-0.000379	6.7E-05	-0.000606	0.00018	7.53363E-09	62.3237	18.58	0.00961	0.52381	0.00016	7E-05	0.8695	0.268	0.0232	0.01319	0.0052
rs1858597	1.3026E-08	20	167044	A	C	DEFB127	5.99411E-09	0.0004208	7.2E-05	0.0005251	0.00012	7.55516E-09	24.3451	9.253	0.23503	0.57197	0.00079	0.0172	0.0083	0.811	0.0004	0.01616	0.5121
rs11681725	1.3475E-08	2	227226616	C	T	COL4A3	2.02755E-08	0.0003835	6.8E-05	0.0006231	0.00017	7.84143E-09	55.535	15.74	0.02757	0.76012	0.00312	0.2239	0.0054	0.289	0.0003	0.0006	0.0657
rs2644480	1.3497E-08	1	232737095	T	C	MAP10	6.27707E-09	0.0004202	7.2E-05	0.0005583	0.00014	8.0044E-09	35.5389	10.86	0.14488	0.17772	0.00081	0.0172	0.008	0.81	0.0004	0.01628	0.5159
rs56054002	1.3716E-08	3	179519825	C	T	ACTL6A	1.34066E-08	-0.003251	0.00057	-0.005349	0.00152	7.95432E-09	64.8369	19.91	0.00577	0.23397	0.00068	0.4516	0.0623	0.302	0.0047	0.01058	1E-05
rs13088964	1.3797E-08	3	99511692	A	G	COL8A1	0.000247517	-0.000271	7.4E-05	-0.000666	0.0003	8.00114E-09	84.3345	44.68	1.6E-07	0.50622	0.37927	0.0011	0.0973	0.097	0.0003	3.6E-07	0.1951
rs77659354	1.3827E-08	4	11143307	A	G	HS3ST1	6.40787E-09	0.0004198	7.2E-05	0.0005176	0.00011	8.01875E-09	22.39	9.019	0.25126	0.83243	0.00082	0.0177	0.008	0.802	0.0004	0.01664	0.516
rs11082449	1.4007E-08	18	45432532	T	G	SLC14A2	6.00506E-09	0.000422	7.3E-05	0.0005309	0.00012	8.13038E-09	25.5162	9.398	0.22533	0.40427	0.0007	0.0142	0.0083	0.797	0.0006	0.01787	0.4315
rs62252050	1.421E-08	3	57314166	A	G	DNAH12	6.15424E-09	0.0004144	7.1E-05	0.0005442	0.00013	8.29147E-09	31.0764	10.16	0.1799	0.44043	0.00069	0.0082	0.038	0.529	0.0008	0.00577	0.2454
rs13176240	1.4279E-08	5	169155321	C	T	SLIT3	6.09216E-09	0.0004218	7.3E-05	0.0005134	0.00011	8.28008E-09	20.489	8.804	0.26705	0.76352	0.0007	0.0141	0.0084	0.793	0.0006	0.01776	0.4314
rs694806	1.4279E-08	1	238211562	G	T	MTRNR2L11	4.51034E-08	0.0003702	6.8E-05	0.0006889	0.00019	8.32035E-09	66.743	21.05	0.0037	0.0857	0.00505	0.117	0.0008	0.275	0.0016	0.00111	0.0311

Table S16

rs6110716	1.4474E-08	20	15664483	C	T	MACROD2	4.55333E-09	-0.000454	7.7E-05	-0.000639	0.00016	8.39271E-09	43.7475	12.44	0.08687	0.50047	0.00017	0.011	0.0306	0.062	0.0083	0.00816	0.0553
rs10901253	1.4507E-08	9	133253385	T	C	ABO	1.09855E-08	-0.000408	7.1E-05	-0.000557	0.00015	8.53886E-09	43.6241	12.42	0.08766	0.48153	0.00172	0.0011	0.4316	0.298	5E-05	0.18182	0.0386
rs2012246	1.4522E-08	13	66691333	C	T	PCDH9	4.56892E-09	0.0023611	0.0004	0.003609	0.00101	7.73421E-09	59.4368	17.26	0.01581	0.22847	0.0005	0.012	0.0743	0.017	0.0014	0.0019	0.0876
rs9680883	1.4536E-08	3	172545171	G	A	TNFSF10	2.26697E-07	0.0003799	7.3E-05	0.0006312	0.00021	8.42871E-09	69.8807	23.24	0.00155	0.50859	0.02046	7E-06	0.3661	0.772	4E-05	0.01079	0.8237
rs111473946	1.4563E-08	14	35468315	G	A	NFKBIA	6.73062E-09	0.0004209	7.3E-05	0.0005204	0.00011	8.44416E-09	22.8618	9.075	0.24734	0.67856	0.00085	0.0177	0.008	0.801	0.0004	0.01761	0.5073
rs11904603	1.4568E-08	2	82937890	T	C	SUCLG1	6.20613E-09	0.0004152	7.1E-05	0.0005305	0.00012	8.46526E-09	27.0706	9.598	0.2125	0.5998	0.00069	0.0095	0.0413	0.519	0.0007	0.00601	0.2591
rs9507893	1.4673E-08	13	27428587	C	T	GTF3A	4.71757E-08	-0.001053	0.00019	-0.001905	0.00049	8.50777E-09	59.5623	17.31	0.0155	0.67636	0.0059	0.0024	0.0657	0.589	0.0016	0.0058	0.0028
rs115242923	1.4745E-08	3	124839457	C	T	ITGB5	4.64058E-09	-0.000451	7.7E-05	-0.000648	0.00016	8.54967E-09	46.3836	13.06	0.07076	0.34997	0.0002	0.009	0.0319	0.063	0.0072	0.00856	0.054
rs11777899	1.4865E-08	8	128405462	G	A	AC026248.1	4.67892E-09	-0.000451	7.7E-05	-0.000666	0.00017	8.61861E-09	51.0736	14.31	0.04598	0.16299	0.00022	0.0087	0.0325	0.061	0.0069	0.00844	0.0521
rs78365502	1.5018E-08	21	44905211	G	T	ITGB2	6.50068E-09	0.0004202	7.2E-05	0.000518	0.00011	8.70709E-09	22.509	9.033	0.25027	0.64375	0.00073	0.0168	0.0072	0.817	0.0006	0.01705	0.489
rs646837	1.5112E-08	6	144276224	A	G	UTRN	0.000272353	-0.000271	7.4E-05	-0.000674	0.00031	8.76148E-09	84.9651	46.56	6.8E-08	0.12949	0.38732	0.0012	0.0966	0.094	0.0003	3.4E-07	0.1961
rs4847074	1.5133E-08	1	104958690	C	T	AMY1C	4.76524E-09	-0.000451	7.7E-05	-0.000641	0.00016	8.77381E-09	44.7608	12.67	0.08051	0.81311	0.00019	0.009	0.0267	0.052	0.0089	0.00818	0.0587
rs2248369	1.5227E-08	17	82675401	G	A	RAB40B	7.02279E-09	0.000419	7.2E-05	0.000528	0.00012	8.82914E-09	25.5247	9.399	0.22526	0.50354	0.00085	0.0175	0.0073	0.836	0.0005	0.01704	0.4655
rs112312639	1.533E-08	15	29659228	T	C	TJP1	1.99539E-07	0.0003494	6.7E-05	0.0006889	0.00019	8.88828E-09	68.3255	22.1	0.00244	0.1001	0.03055	0.0042	0.0046	0.541	0.0002	0.16496	0.0022
rs62108268	1.5347E-08	19	52333565	T	C	ZNF610	6.50868E-09	0.0004141	7.1E-05	0.0005247	0.00012	8.9031E-09	25.6481	9.415	0.22424	0.84807	0.00069	0.0092	0.0393	0.511	0.0008	0.00606	0.2568
rs1037038	1.5467E-08	1	59232390	C	A	FGGY	4.34902E-07	-0.000374	7.4E-05	-0.000729	0.00026	8.96709E-09	79.4611	34.08	1.7E-05	0.61219	0.00719	0.0381	0.0579	0.013	0.0067	2.9E-08	0.9789
rs1464294	1.5555E-08	3	20349713	A	G	SGO1	6.58912E-09	0.0004139	7.1E-05	0.0005542	0.00013	9.22494E-09	34.8983	10.75	0.14979	0.24644	0.0007	0.0092	0.039	0.513	0.0008	0.00603	0.2567
rs2347615	1.5591E-08	2	47104581	G	A	C2orf61,RP11-761B3.	7.21181E-09	0.0004186	7.2E-05	0.0005218	0.00012	9.03887E-09	23.7407	9.179	0.24005	0.61578	0.00087	0.0179	0.0072	0.841	0.0005	0.01741	0.4604
rs62563582	1.5638E-08	9	73072930	T	C	ALDH1A1	3.0014E-08	0.0003796	6.9E-05	0.0006747	0.00018	9.06589E-09	61.5989	18.23	0.01098	0.37997	0.00244	0.1142	0.0013	0.218	0.0038	0.00076	0.0274
rs35429322	1.5713E-08	15	29542370	C	T	FAM189A1	6.09982E-09	0.0004224	7.3E-05	0.0004956	0.0001	9.10954E-09	16.323	8.366	0.30147	0.55783	0.0006	0.0137	0.0113	0.685	0.0006	0.02637	0.4458
rs3925523	1.5818E-08	12	13238357	G	A	EMP1	9.3852E-09	-0.000456	7.9E-05	-0.000595	0.00015	9.18315E-09	33.9781	10.6	0.15692	0.48774	0.00134	0.23	0.0249	0.125	4E-05	0.07261	0.046
rs613878	1.5886E-08	4	129469880	A	G	C4orf33	0.000245655	-0.000272	7.4E-05	-0.000658	0.00029	9.20926E-09	84.0341	43.84	2.3E-07	0.89565	0.36714	0.0014	0.0888	0.104	0.0003	3.9E-07	0.1925
rs10903438	1.6006E-08	10	1392056	G	A	ADARB2	2.61478E-07	0.0003775	7.3E-05	0.0006284	0.00022	9.27858E-09	70.8409	24.01	0.00114	0.30209	0.02224	7E-06	0.3593	0.8	4E-05	0.01128	0.8061
rs7560745	1.6047E-08	2	145220423	C	T	ZEB2	5.73673E-09	-0.000396	6.8E-05	-0.000438	8.9E-05	9.30244E-09	10.2959	7.803	0.35025	0.3732	0.00032	0.3324	0.1404	0.557	0.0001	0.01408	0.0541
rs4241800	1.6095E-08	4	185480069	G	T	CCDC110	5.15884E-08	0.0003682	6.8E-05	0.0006758	0.00018	9.33026E-09	63.3035	19.08	0.00795	0.48203	0.00429	0.1338	0.0007	0.273	0.0031	0.00061	0.0335
rs12713456	1.6146E-08	2	62266825	G	A	B3GNT2	3.25297E-08	0.0003771	6.8E-05	0.0006668	0.00018	9.35975E-09	60.236	17.6	0.01389	0.59421	0.00289	0.0947	0.0012	0.217	0.0031	0.00112	0.0281
rs4309274	1.615E-08	13	67780803	G	A	PCDH9	5.09258E-09	0.0004226	7.2E-05	0.000594	0.00016	6.9714E-09	47.0548	13.22	0.0669	0.04041	0.00074	0.0162	0.0081	0.803	0.0004	0.01546	0.4991
rs1952299	1.6213E-08	14	97256934	C	A	VRK1	7.44417E-09	0.0004182	7.2E-05	0.0005355	0.00012	9.42079E-09	28.1329	9.74	0.20378	0.36072	0.00087	0.0179	0.0072	0.842	0.0005	0.0175	0.4594
rs112756125	1.6277E-08	14	55115248	G	A	LGALS3	7.46784E-09	0.0004182	7.2E-05	0.0005594	0.00014	9.67428E-09	36.0807	10.95	0.14076	0.15354	0.00087	0.0179	0.0072	0.841	0.0005	0.01756	0.4586
rs11725777	1.639E-08	4	832226	T	C	CPLX1	2.65893E-07	0.0003772	7.3E-05	0.0006257	0.00021	9.50076E-09	69.4555	22.92	0.00176	0.88742	0.02227	7E-06	0.36	0.799	4E-05	0.01163	0.8035
rs6560952	1.6392E-08	13	114018453	T	C	RASA3	6.37095E-08	0.000466	8.6E-05	0.0009033	0.00027	9.52274E-09	72.829	25.76	0.00056	0.95467	0.00568	0.0093	0.144	0.01	0.0017	2.4E-05	0.0425
rs34276957	1.6435E-08	11	60073373	C	T	MS4A3	4.78047E-08	-0.000446	8.2E-05	-0.000792	0.00021	9.52695E-09	60.6702	17.8	0.01291	0.53608	0.00356	0.0003	0.0049	0.415	0.006	0.00341	0.2732
rs62318087	1.6548E-08	4	106272312	C	T	TBCK	7.21125E-09	0.0004136	7.1E-05	0.0005248	0.00012	9.59443E-09	25.6632	9.417	0.22411	0.97819	0.00077	0.0094	0.0415	0.52	0.0007	0.006	0.2524
rs494104	1.6774E-08	9	33221480	G	A	SPINK4	7.42324E-08	0.0003657	6.8E-05	0.0007069	0.0002	9.76014E-09	69.5199	22.97	0.00173	0.06089	0.00677	0.1339	0.0006	0.231	0.0021	0.00064	0.0342
rs1612653	1.7295E-08	11	123561144	C	T	GRAMD1B	2.79212E-07	0.0003776	7.4E-05	0.0006288	0.00022	1.00239E-08	69.9114	23.26	0.00153	0.48937	0.02328	8E-06	0.3396	0.835	4E-05	0.01179	0.8015
rs8029682	1.7473E-08	15	64336335	C	T	CSNK1G1,CTD-2116N	1.08835E-06	-0.000336	6.9E-05	-0.000674	0.00023	1.01271E-08	76.4786	29.76	0.00011	0.55528	0.01978	0.0009	0.986	0.36	0.002	5.4E-07	0.2568
rs4819057	1.753E-08	21	45299242	T	C	POFUT2	1.90695E-06	-0.000329	6.9E-05	-0.000806	0.00023	1.01599E-08	76.8676	30.26	8.5E-05	0.25738	0.05284	0.0168	0.0005	0.129	0.02	0.00639	0.0001
rs113874551	1.7622E-08	16	35752682	G	A	RP11-812E19.9	9.10503E-09	0.0004229	7.4E-05	0.0005379	0.00012	1.02162E-08	26.9463	9.582	0.21352	0.46645	0.00119	0.0151	0.0113	0.696	0.0002	0.02201	0.5207
rs4290110	1.766E-08	1	76290770	G	T	ST6GALNAC3	7.81974E-09	0.0004175	7.2E-05	0.0005376	0.00013	1.03334E-08	30.0304	10	0.18833	0.26927	0.00083	0.017	0.0082	0.802	0.0004	0.0194	0.526
rs8063894	1.778E-08	16	5689203	G	A	RBFOX1	2.52097E-06	-0.000347	7.4E-05	-0.00082	0.00024	1.03045E-08	74.8994	27.89	0.00023	0.59063	0.05333	0.1559	2E-05	0.852	0.0167	0.00025	0.0136
rs76706374	1.8393E-08	20	7235440	C	T	BMP2	7.44295E-09	0.0003902	6.8E-05	0.0004459	9.3E-05	1.06583E-08	13.3188	8.076	0.32598	0.52344	0.00058	0.2439	0.0611	0.334	0.0001	0.04001	0.0375
rs565457	1.8469E-08	11	128212500	T	C	ETS1	5.47535E-09	-0.000745	0.00013	-0.001191	0.00041	8.05814E-09	74.3366	27.28	0.0003	0.4145	4.6E-06	0.1442	0.0013	1E-04	0.2877	0.01909	0.0149
rs6785699	1.8655E-08	3	127343558	G	A	TPRA1	1.63817E-06	-0.000443	9.2E-05	-0.000903	0.00032	1.08102E-08	78.4823	32.53	3.2E-05	0.66175	0.06462	0.4253	0.0092	0.05	0.0002	3.3E-07	0.5402
rs1588426	1.8759E-08	3	162095080	T	C	OTOL1	5.93479E-09	-0.000452	7.8E-05	-0.000646	0.00017	1.087E-08	45.8672	12.93	0.0738	0.28766	0.00018	0.0116	0.0328	0.063	0.0096	0.0086	0.0563
rs6785262	1.8777E-08	3	89717909	G	A	EPHA3	0.000280802	-0.000269	7.4E-05	-0.000653	0.0003	1.08806E-08	84.5977	45.45	1.1E-07	0.18188	0.38117	0.0014	0.0838	0.106	0.0003	4.9E-07	0.2079
rs35238140	1.8814E-08	5	8026410	T	C	MTRR	5.95271E-09	0.0004221	7.3E-05	0.0006178	0.00017	1.00467E-08	55.2616	15.65	0.02855	0.0082	0.0007	0.0141	0.0084	0.792	0.0006	0.01776	0.4315
rs56114096	1.9113E-08	3	181812648	A	G	SOX2	9.93503E-09	0.0004219	7.4E-05	0.0005394	0.00012	1.10746E-08	26.1237	9.475	0.22031	0.94788	0.00114	0.0095	0.0067	0.88	0.0005	0.02391	0.4617
rs62458597	1.9128E-08	7	83057968	A	G	PCLO	7.63902E-09	0.0003899	6.8E-05	0.0004335	8.7E-05	1.10835E-08	9.84816	7.765	0.3538	0.67439	0.00057	0.252	0.0605	0.334	0.0001	0.04037	0.0384
rs7811867	1.9197E-08	7	111272406	C	T	IMMP2L	7.24526E-09	0.0004192	7.2E-05	0.0005278	0.00012	1.14577E-08	28.123	9.739	0.20386	0.20319	0.00061	0.0132	0.0164	0.495	0.0005	0.02517	0.5055
rs289198	1.9272E-08	7	114823333	A	G	MDFIC	2.39672E-08	0.0004061	7.3E-05	0.000665	0.00019	1.13568E-08	61.7133	18.28	0.01076	0.39117	0.00331	0.4124	0.0029	0.072	0.0004	0.00143	0.033
rs74148750	1.9479E-08	10	85742196	T	C	GRID1	5.87354E-08	0.000367	6.8E-05	0.0006781	0.00019	1.13219E-08	64.8099	19.89	0.00581	0.14862	0.00577	0.1044	0.001	0.263	0.0017	0.00119	0.0348

Table S16

rs9822559	1.9546E-08	3	96120886	C	T	MTRNR2L12	7.91492E-09	0.0003977	6.9E-05	0.0004384	8.7E-05	1.13249E-08	9.22644	7.712	0.35872	0.82316	0.00076	0.2384	0.0544	0.315	0.0001	0.0442	0.0365
rs382970	1.9739E-08	9	132819229	A	C	AK8	9.42119E-09	0.0003957	6.9E-05	0.0004997	0.00012	1.14365E-08	29.1893	9.886	0.19516	0.23078	0.00113	0.2365	0.0544	0.347	8E-05	0.03385	0.0292
rs7096728	1.9787E-08	10	120009693	G	A	SEC23IP	7.48742E-09	0.0004188	7.2E-05	0.0004911	0.0001	1.14644E-08	16.5933	8.393	0.29925	0.65864	0.00062	0.0132	0.0166	0.482	0.0005	0.025	0.5029
rs6507666	1.9805E-08	18	23452832	C	A	RIOK3	9.35607E-09	0.0004125	7.2E-05	0.0005447	0.00013	1.15223E-08	31.1331	10.16	0.17944	0.56071	0.00101	0.0096	0.0433	0.44	0.0007	0.00589	0.2309
rs35029919	1.9854E-08	16	13001882	A	C	SHISA9	3.83975E-08	0.0009002	0.00016	0.0015091	0.00042	1.16721E-08	61.1909	18.04	0.0118	0.92525	0.00502	0.0009	0.0013	0.048	0.0007	0.22527	0.1364
rs6738247	1.9912E-08	2	11879856	G	A	LPIN1	6.30791E-09	-0.001085	0.00019	-0.001682	0.00049	6.00577E-09	62.3106	18.57	0.00964	0.01711	0.001	0.4198	0.0688	0.736	0.0002	0.00399	0.0024
rs11659577	2.0134E-08	18	53414792	G	A	DCC	3.0824E-06	0.0008958	0.00019	0.0020724	0.00062	1.16649E-08	75.0244	28.03	0.00022	0.66296	0.03984	2E-07	0.022	0.604	0.0304	0.02643	0.0944
rs41337746	2.0185E-08	5	31053677	C	T	CDH6	1.30793E-06	-0.000334	6.9E-05	-0.000673	0.00023	1.16944E-08	76.4015	29.66	0.00011	0.72892	0.02184	0.001	0.9932	0.347	0.0021	5.1E-07	0.2652
rs75143534	2.0208E-08	13	50736398	G	A	DLEU7	9.92267E-09	0.0004004	7E-05	0.00055	0.00013	1.18241E-08	35.5873	10.87	0.14451	0.32991	0.00083	0.0079	0.0425	0.537	0.0008	0.0061	0.2536
rs75732571	2.021E-08	15	32738464	A	G	GREM1	9.52142E-09	0.0004123	7.2E-05	0.0005584	0.00013	1.18981E-08	35.5373	10.86	0.14489	0.31475	0.00102	0.0096	0.0434	0.44	0.0007	0.00588	0.231
rs155105	2.0406E-08	2	181486585	C	A	ITGA4	0.000259691	-0.000271	7.4E-05	-0.000658	0.0003	1.18219E-08	84.0605	43.92	2.2E-07	0.41185	0.37723	0.0015	0.0916	0.106	0.0002	5.4E-07	0.1857
rs72723251	2.09E-08	1	188124962	T	C	PLA2G4A	0.000302697	-0.000267	7.4E-05	-0.000652	0.0003	1.21073E-08	85.1391	47.1	5.3E-08	0.06284	0.3886	0.0013	0.0874	0.106	0.0003	5.1E-07	0.2083
rs7501585	2.1023E-08	17	41091006	T	C	KRTAP4-7	0.000285877	-0.000268	7.4E-05	-0.000657	0.0003	1.21783E-08	84.5654	45.35	1.2E-07	0.16568	0.37322	0.0013	0.0857	0.107	0.0003	4.8E-07	0.1968
rs9371382	2.1101E-08	6	155653262	T	G	NOX3	4.31304E-08	0.0003738	6.8E-05	0.0006628	0.00018	1.22236E-08	60.0209	17.51	0.01439	0.71618	0.00328	0.097	0.0012	0.217	0.0034	0.00106	0.0296
rs663256	2.1243E-08	3	153763908	G	A	ARHGEF26	5.908E-08	0.0003671	6.8E-05	0.0006588	0.00018	1.23053E-08	60.5316	17.74	0.01322	0.89625	0.00531	0.1156	0.001	0.261	0.0019	0.00115	0.0345
rs117897285	2.1247E-08	7	16255888	G	A	ISPD	2.20343E-08	-0.000453	8.1E-05	-0.000752	0.00019	1.23092E-08	55.303	15.66	0.0284	0.86658	0.00172	0.003	0.0709	0.181	0.0043	0.00198	0.0187
rs142334325	2.1646E-08	6	18232750	T	C	DEK	0.000264938	-0.000272	7.4E-05	-0.000661	0.0003	1.25385E-08	84.8567	46.22	7.9E-08	0.09951	0.39402	0.0017	0.0911	0.08	0.0002	7E-07	0.1799
rs2052455	2.173E-08	5	141646014	A	G	FCHSD1	1.61632E-07	-0.000622	0.00012	-0.001222	0.00038	1.25869E-08	74.3622	27.3	0.00029	0.02517	0.01098	0.0088	0.4356	0.39	0.0011	9.4E-06	0.0277
rs12718754	2.1905E-08	7	53217393	G	A	POM121L12	7.02078E-08	0.0004437	8.2E-05	0.0007276	0.0002	1.27357E-08	56.4681	16.08	0.02439	0.97193	0.01317	0.1044	0.0037	0.501	8E-05	0.00103	0.3008
rs75663295	2.2049E-08	2	238162148	A	C	ERFE	1.01833E-08	0.0004119	7.2E-05	0.0005386	0.00012	1.27984E-08	29.6092	9.944	0.19174	0.76459	0.00099	0.0086	0.0474	0.453	0.0007	0.00551	0.2462
rs12646260	2.2545E-08	4	161095448	A	G	FSTL5	2.27369E-06	-0.002326	0.00049	-0.005543	0.00159	1.30798E-08	75.8915	29.04	0.00014	0.06632	0.13324	0.0673	0.0027	0.373	0.0009	0.00141	0.0007
rs4275056	2.2667E-08	6	40661114	C	T	LRFN2	1.49912E-06	-0.00033	6.9E-05	-0.000669	0.00023	1.31279E-08	76.2781	29.51	0.00012	0.97627	0.02199	0.0009	0.9587	0.372	0.0025	5.5E-07	0.2479
rs73844941	2.3034E-08	3	87347800	A	G	POU1F1	4.78622E-09	-0.000451	7.7E-05	-0.000698	0.00019	8.81152E-09	59.7046	17.37	0.01515	0.02225	0.00021	0.009	0.0315	0.063	0.0073	0.00859	0.0553
rs35116983	2.3099E-08	9	86530574	C	T	ZCCHC6	9.04103E-09	0.0004099	7.1E-05	0.0005302	0.00012	1.36966E-08	30.3528	10.05	0.18572	0.2875	0.00071	0.0113	0.0575	0.515	0.0008	0.00592	0.2744
rs17111282	2.3499E-08	14	26489305	A	C	NOVA1	7.47153E-09	0.0004191	7.3E-05	0.0005596	0.00014	1.01708E-08	37.1991	11.15	0.13236	0.11438	0.00083	0.0209	0.009	0.786	0.0004	0.01717	0.5252
rs11712762	2.3897E-08	3	21383493	A	G	ZNF385D	9.75611E-05	0.0002692	6.9E-05	0.0008344	0.00027	1.38387E-08	82.8596	40.84	8.7E-07	0.88519	0.37558	0.2544	0.0043	0.038	0.0132	8.7E-05	8E-06
rs10179001	2.3951E-08	2	44990924	G	A	SIX2	0.000315468	-0.000266	7.4E-05	-0.000651	0.00029	1.387E-08	84.032	43.84	2.3E-07	0.51859	0.38838	0.0013	0.0938	0.103	0.0003	4.7E-07	0.2165
rs7506165	2.3976E-08	18	40566387	C	T	PIK3C3	1.10728E-06	-0.00034	7E-05	-0.00067	0.00021	1.38842E-08	71.0063	24.14	0.00108	0.7895	0.05281	2E-06	0.3775	0.855	0.0002	0.02596	0.1864
rs1125307	2.4066E-08	4	8115944	G	A	ABLIM2	1.80842E-06	-0.000441	9.2E-05	-0.000909	0.00036	1.39362E-08	82.9088	40.96	8.3E-07	0.00327	0.06266	0.4326	0.0105	0.047	0.0002	3.2E-07	0.5458
rs7303848	2.4414E-08	12	31408406	C	T	DENND5B	0.000318406	-0.000266	7.4E-05	-0.00065	0.00029	1.41373E-08	83.8766	43.42	2.8E-07	0.94548	0.38903	0.0013	0.0941	0.103	0.0003	4.7E-07	0.2167
rs1263812	2.4476E-08	14	21534470	G	A	SALL2	1.00285E-08	0.0004167	7.3E-05	0.0004953	0.00011	1.41732E-08	17.6746	8.503	0.29035	0.8524	0.00083	0.0123	0.0117	0.543	0.0005	0.0303	0.502
rs74385245	2.4507E-08	6	127620476	G	A	C6orf58	7.79947E-09	-0.000448	7.8E-05	-0.000641	0.00016	1.40011E-08	43.4046	12.37	0.08907	0.85562	0.00035	0.0073	0.0396	0.072	0.0061	0.01016	0.0428
rs1781414	2.4658E-08	1	151598571	T	C	SNX27	2.68169E-07	-0.001018	0.0002	-0.002049	0.00059	1.42779E-08	70.6031	23.81	0.00123	0.80222	0.01752	0.0856	0.0399	0.193	0.0019	6.3E-06	0.0176
rs1443116	2.4747E-08	11	19775780	G	A	NAV2	1.55607E-08	-0.000403	7.1E-05	-0.000531	0.00013	1.44446E-08	36.2625	10.98	0.13938	0.69439	0.00166	0.0014	0.3947	0.356	8E-05	0.19026	0.0468
rs34268168	2.4921E-08	10	45493078	G	A	MARCH8	2.25039E-06	0.0008658	0.00018	0.002039	0.00057	1.44301E-08	73.2424	26.16	0.00047	0.80314	0.11159	0.0043	0.0103	0.234	0.0014	0.00046	0.0072
rs72719875	2.5097E-08	4	149017919	C	T	RP11-526A4.1	9.79311E-09	0.0004338	7.6E-05	0.0005601	0.00013	1.50228E-08	29.0195	9.862	0.19654	0.56551	0.00079	0.0261	0.0261	0.139	0.0008	0.02491	0.1008
rs338744	2.5161E-08	13	88344715	A	G	SLITRK5	9.92241E-09	0.0004336	7.6E-05	0.0005573	0.00013	1.49494E-08	28.158	9.744	0.20357	0.72447	0.00081	0.0247	0.0254	0.137	0.0007	0.02496	0.1052
rs806702	2.5302E-08	19	5624279	G	T	SAFB	1.25444E-08	-0.000631	0.00011	-0.000969	0.00025	1.46498E-08	51.8607	14.54	0.04235	0.72621	0.00043	0.0273	0.111	0.505	0.0085	0.04862	7E-05
rs1420070	2.5717E-08	16	6597877	G	T	RBFOX1	1.04065E-08	0.0006586	0.00012	0.0010225	0.00027	1.51616E-08	53.9817	15.21	0.03338	0.18621	0.00029	0.1248	0.0021	0.128	0.0123	0.03423	0.004
rs12764946	2.5958E-08	10	9699252	G	A	CELF2	1.04768E-08	0.0004161	7.3E-05	0.0005523	0.00014	1.60235E-08	36.915	11.1	0.13448	0.10132	0.00082	0.0124	0.0123	0.544	0.0005	0.03054	0.4998
rs1011878	2.6419E-08	1	228553355	A	G	RNF187	2.02538E-08	0.0005542	9.9E-05	0.0008391	0.00021	1.53589E-08	45.6607	12.88	0.07504	0.77338	0.00232	0.0148	0.0338	0.267	0.001	0.00254	0.0677
rs10898648	2.6464E-08	11	87273183	A	C	TMEM135	8.43666E-09	0.0004176	7.3E-05	0.0005402	0.00013	1.37444E-08	33.2139	10.48	0.1629	0.12112	0.00066	0.0147	0.0157	0.499	0.0005	0.02543	0.5196
rs472027	2.6501E-08	15	39965414	A	G	EIF2AK4	1.14674E-08	0.0004188	7.3E-05	0.0005054	0.00011	1.53426E-08	19.2328	8.667	0.27747	0.81538	0.00095	0.0157	0.0088	0.81	0.0006	0.02239	0.5142
rs559910	2.7172E-08	18	37387214	T	C	CELF4	1.16982E-08	0.0004094	7.2E-05	0.0005577	0.00014	1.62953E-08	37.3376	11.17	0.13133	0.18581	0.00095	0.0099	0.0438	0.486	0.0009	0.0064	0.2504
rs17116087	2.7266E-08	14	81882907	T	G	SEL1L	1.24141E-08	0.0004123	7.2E-05	0.0005061	0.00011	1.57842E-08	21.1788	8.881	0.26132	0.91388	0.00107	0.019	0.0083	0.843	0.0006	0.0167	0.4966
rs7820058	2.7341E-08	8	114866501	A	G	TRPS1	1.17404E-08	0.0004091	7.2E-05	0.0005183	0.00012	1.58352E-08	25.1476	9.352	0.22838	0.94399	0.00094	0.01	0.0452	0.492	0.0009	0.00642	0.2488
rs332340	2.7674E-08	3	66268033	A	C	SLC25A26	1.09028E-08	0.000412	7.2E-05	0.0005148	0.00012	1.61541E-08	25.796	9.433	0.22302	0.41972	0.00075	0.0137	0.0116	0.565	0.0007	0.01829	0.631
rs6764454	2.769E-08	3	190386514	A	G	CLDN16	1.02947E-08	0.0004154	7.3E-05	0.0004708	9.7E-05	1.60286E-08	12.1972	7.972	0.33503	0.96423	0.00069	0.0154	0.0166	0.494	0.0006	0.0274	0.53
rs4863740	3.0581E-08	4	140157150	A	G	MAML3	9.78058E-09	-0.000485	8.5E-05	-0.000485	8.5E-05	1.78077E-08	0	5.152	0.64144	0.86862	2.5E-05	0.176	0.0762	0.33	0.0168	0.14171	0.011
rs2072819	3.2622E-08	6	15374731	T	C	JARID2	1.16172E-08	0.0004085	7.2E-05	0.0004782	0.0001	1.92226E-08	16.6146	8.395	0.29907	0.73745	0.00063	0.0102	0.0855	0.496	0.0007	0.00815	0.4027
rs62388403	3.3804E-08	5	174875576	C	T	MSX2	1.2714E-08	0.0004056	7.1E-05	0.0004948	0.00011	2.03831E-08	21.076	8.869	0.26218	0.65266	0.00076	0.0125	0.0591	0.528	0.001	0.00616	0.2829

Table S16

rs6851190	3.4036E-08	4	109652693	T	C	CCDC109B	1.6459E-08	0.0003949	7E-05	0.0005477	0.00014	2.11187E-08	37.3688	11.18	0.1311	0.21957	0.00106	0.0101	0.0489	0.528	0.0008	0.0063	0.2668
rs4272075	3.4062E-08	4	69404218	G	A	UGT2B4	2.23794E-08	-0.000398	7.1E-05	-0.000535	0.00014	2.10854E-08	41.7337	12.01	0.10011	0.32143	0.00198	0.0017	0.4887	0.334	7E-05	0.20675	0.046
rs1689571	3.4327E-08	3	14870229	A	G	FGD5	1.65718E-08	0.0003949	7E-05	0.0005238	0.00012	2.07871E-08	29.9538	9.993	0.18895	0.45465	0.00106	0.0101	0.0489	0.697	0.0008	0.0063	0.2669
rs147411604	3.452E-08	6	61535406	T	C	AL356135.1	1.43878E-08	0.0004131	7.3E-05	0.0004997	0.00011	2.088E-08	20.0543	8.756	0.27066	0.97829	0.00101	0.0102	0.0146	0.427	0.0005	0.03355	0.5263
rs2413562	3.4569E-08	22	39010706	G	A	APOBEC3C	2.28753E-08	-0.000598	0.00011	-0.00088	0.00022	2.10241E-08	42.6021	12.2	0.09431	0.78431	0.00193	0.0474	0.1356	0.544	0.0007	0.00262	0.01
rs2030413	3.4802E-08	3	120363935	G	A	LRRC58	1.43626E-08	0.0004039	7.1E-05	0.0005056	0.00011	2.11435E-08	23.8118	9.188	0.23945	0.66598	0.00097	0.0112	0.0546	0.536	0.0009	0.00637	0.2656
rs2827167	3.4842E-08	21	21974955	T	C	NCAM2	1.68273E-08	0.0003947	7E-05	0.0005317	0.00013	2.1339E-08	32.4658	10.37	0.16881	0.4185	0.00107	0.0101	0.0483	0.527	0.0008	0.00636	0.2648
rs7079666	3.4929E-08	10	132673246	A	G	INPP5A	1.44446E-08	0.0004038	7.1E-05	0.0005011	0.00011	2.12177E-08	22.5022	9.033	0.25033	0.98754	0.00098	0.0113	0.0538	0.533	0.0009	0.00633	0.2663
rs75747979	3.504E-08	14	93178752	G	A	MOAP1	1.43396E-08	0.000404	7.1E-05	0.0005217	0.00012	2.16179E-08	28.8584	9.84	0.19785	0.35466	0.00095	0.0111	0.0556	0.537	0.0009	0.00643	0.2627
rs17791195	3.5376E-08	20	60096466	C	T	CDH26	0.000000017	0.0003945	7E-05	0.0005473	0.00014	2.20656E-08	37.4299	11.19	0.13065	0.21722	0.00105	0.0102	0.0494	0.53	0.0008	0.00623	0.2668
rs72932436	3.6209E-08	18	61943302	T	C	RNF152	1.36797E-08	0.0004048	7.1E-05	0.0005214	0.00012	2.27005E-08	29.7914	9.97	0.19026	0.25616	0.0008	0.0126	0.0605	0.531	0.001	0.00618	0.2876
rs17107590	3.7456E-08	14	38159264	T	C	SSTR1	2.23996E-08	-0.000597	0.00011	-0.00092	0.00024	2.33099E-08	51.3302	14.38	0.04478	0.12578	0.00167	0.0421	0.133	0.492	0.0009	0.00316	0.0088
rs115894968	3.7567E-08	6	24440109	C	T	GPLD1	1.66138E-08	0.0004058	7.2E-05	0.0005155	0.00012	2.28059E-08	25.6058	9.409	0.22459	0.82585	0.00116	0.0126	0.0504	0.605	0.0008	0.00471	0.3146
rs427794	3.782E-08	11	6176497	A	G	OR52B2	1.54813E-08	0.0004032	7.1E-05	0.0005059	0.00011	2.29225E-08	24.037	9.215	0.23759	0.70992	0.00097	0.011	0.0501	0.529	0.001	0.0062	0.2741
rs7646801	3.7876E-08	3	31364632	G	A	STT3B	1.21727E-08	0.0004094	7.2E-05	0.000573	0.00014	1.62305E-08	41.3015	11.93	0.10304	0.14708	0.00105	0.0096	0.0432	0.455	0.0009	0.00554	0.2369
rs35257503	3.8427E-08	12	77867610	C	T	NAV3	1.58907E-08	0.0004162	7.4E-05	0.0005433	0.00013	2.38162E-08	32.2668	10.33	0.17039	0.23514	0.00106	0.0132	0.0675	0.402	0.0005	0.00806	0.3447
rs74690369	3.8613E-08	4	132985436	G	A	PCDH10	1.51419E-08	0.0004042	7.1E-05	0.0005099	0.00012	2.33619E-08	25.655	9.416	0.22418	0.46233	0.00089	0.0112	0.0523	0.529	0.001	0.00642	0.3174
rs28697112	3.9271E-08	3	152485656	C	T	MBNL1	1.26313E-08	0.0010497	0.00018	0.0010497	0.00018	2.35253E-08	0	3.108	0.8748	0.53926	2.7E-05	0.5051	0.0615	0.841	0.0062	0.04269	0.1622
rs3912544	3.9298E-08	2	114082762	G	T	ACTR3	2.47924E-08	-0.000596	0.00011	-0.00088	0.00022	2.36005E-08	42.8193	12.24	0.09288	0.83488	0.00182	0.0387	0.135	0.5	0.001	0.00311	0.0082
rs116265110	4.3723E-08	8	393392	G	A	FBXO25	2.02225E-08	0.0003923	7E-05	0.0005352	0.00013	2.61624E-08	34.8117	10.74	0.15046	0.26053	0.00109	0.0116	0.0552	0.522	0.0009	0.00621	0.2546
rs34452236	4.472E-08	4	60216488	A	G	ADGRL3	1.44269E-08	0.0004039	7.1E-05	0.00055	0.00014	2.26375E-08	38.1759	11.32	0.12516	0.12819	0.00096	0.0111	0.0552	0.536	0.0009	0.0064	0.264
rs2147399	4.4874E-08	13	49215967	G	A	MLNR	2.14063E-08	0.0003913	7E-05	0.0005182	0.00012	2.64324E-08	29.5291	9.933	0.19239	0.59471	0.00116	0.0108	0.0501	0.524	0.0009	0.00617	0.2766
rs9559105	4.5078E-08	13	86471676	T	G	SLITRK6	2.16329E-08	0.0003913	7E-05	0.0005166	0.00012	2.65561E-08	29.0648	9.868	0.19617	0.62129	0.00118	0.0111	0.0513	0.522	0.0009	0.00631	0.2746
rs6985660	4.5291E-08	8	120446649	G	T	MTBP	2.16101E-08	0.0003913	7E-05	0.0005498	0.00014	2.74375E-08	39.6697	11.6	0.1144	0.1665	0.00116	0.0107	0.05	0.524	0.0009	0.00616	0.2766
rs11949860	4.567E-08	5	73780632	G	A	ARHGEF28	1.47404E-08	0.0010523	0.00019	0.0010523	0.00019	2.68382E-08	0	4.19	0.75771	0.26036	3.2E-05	0.4892	0.0617	0.844	0.0065	0.03863	0.1533
rs12675113	4.5671E-08	8	58731813	C	T	NSMAF	1.50006E-08	-0.000482	8.5E-05	-0.000652	0.00017	2.59075E-08	40.2135	11.71	0.11057	0.67596	0.00052	0.4625	0.0932	0.853	0.001	0.03462	0.0003
rs76826906	4.6016E-08	5	123455291	C	A	CEP120	1.51725E-08	0.0004036	7.1E-05	0.0005745	0.00015	2.46039E-08	47.0638	13.22	0.06685	0.04154	0.001	0.0111	0.0537	0.53	0.0008	0.00641	0.2882
rs12223442	4.6417E-08	11	12479286	A	G	PARVA	2.17075E-08	0.0003907	7E-05	0.0005076	0.00012	2.71967E-08	26.7627	9.558	0.21504	0.92501	0.00113	0.0107	0.0539	0.55	0.0009	0.0061	0.2713

Table S17 Significant genes from our gene and subnetwork GWAS meta-analysis using ancMETA encompassing ESH, SA, and TLNWL

Gene	#Study	Overall P	I2	Q	P_Q	P_ESH	P_SA	P_TLNWL
RANBP17	3	3.25E-05	0	1.55249359	0.46012974	0.00022267	0.22495251	0.00023624
C6orf89	3	0.00018436	0	1.5506233	0.46056023	0.00029493	0.0318687	0.00022929
GPHN	3	0.00021769	0	1.08067825	0.58255066	0.00022009	0.00942326	0.00262721
FAM120A	3	0.00029139	0	1.12798699	0.56893249	0.00028418	0.00859676	0.00035603
PLEKHH2	3	0.00030359	0	1.90198763	0.38635687	0.00033104	0.00669712	0.0002163
TPP2	3	0.00039435	0	1.50330343	0.47158698	0.00030699	0.03198474	0.00032077
PEF1	3	0.00057444	0	1.72103594	0.42294295	0.00026878	0.0042069	0.00207692
C18orf54	3	0.00066983	0	1.08986554	0.57988077	0.00032368	0.00780595	0.00039662
SMPD3	3	0.00071125	0	1.53307853	0.46461821	0.0003034	0.00289217	0.00063253
ZNF184	3	0.0007875	0	1.37432489	0.50300134	0.00042935	0.0015105	0.00020189
HCRTR1	3	0.00081422	0	1.74214277	0.41850293	0.00028374	0.00653587	0.00229343
EFNA3	3	0.00084165	0	1.40360501	0.49569101	0.00041342	0.17121176	0.00022005
NBAS	3	0.00086958	0	1.2701346	0.52989982	0.00028169	0.00772381	0.00518873
DENND1A	3	0.00087153	0.23294301	2.00466974	0.36702149	0.0003076	0.00537883	0.00018537
C5orf42	3	0.000894	0	1.76437819	0.41387591	0.00030954	0.08109067	0.00074069
OR2T12	3	0.00093285	0	1.02738773	0.59828152	0.00037776	0.00376931	0.00029264
IFNG	3	0.00100775	0	1.20083079	0.54858371	0.00035078	0.00296101	0.00040536
TMEM156	3	0.00111789	0	1.57894091	0.45408519	0.00041171	0.00163924	0.00026395
PROKR2	3	0.00127466	0	0.87958341	0.64417059	0.00032328	0.00311863	0.00097735
OR2T33	3	0.00132597	0	1.09533756	0.57829638	0.00040854	0.00757583	0.00029518
RTN1	3	0.00155312	0	1.72818055	0.42143477	0.00035297	0.00248686	0.0006462
PPA2	3	0.00165828	0	1.15196041	0.56215357	0.00045947	0.00228445	0.00025848
CEP57	3	0.00170653	0	1.5640674	0.4574747	0.00080939	0.00798904	0.00013485
IL31RA	3	0.00194729	0	1.55571629	0.4593889	0.00035303	0.00274705	0.00095763
BTBD11	3	0.00195124	0	1.4332581	0.48839584	0.00042613	0.00216377	0.00034989
NMNAT2	3	0.00207038	0	1.59657739	0.45009856	0.00036709	0.01288604	0.00073094
SYT14	3	0.00207591	0	1.85938894	0.39467428	0.00041852	0.00672731	0.00038
ADC	3	0.00218352	0	1.06423992	0.58735847	0.00043657	0.00704975	0.0003502
FGF14	3	0.00235928	0	1.955015	0.37624773	0.00056707	0.00471078	0.00021234
FAM84A	3	0.00241051	0	1.68114318	0.43146383	0.00034203	0.0154456	0.00365963
KCNU1	3	0.00242315	0	1.47279445	0.47883595	0.00038206	0.02150485	0.00070763
EFNA1	3	0.00244339	0	1.81430517	0.40367201	0.00055654	0.00132069	0.0002278
DPYSL3	3	0.00256415	0	1.21537051	0.54461004	0.00040147	0.00391288	0.00057898
SLC9A5	3	0.00265501	0	1.86353568	0.39385682	0.00036403	0.00296347	0.00132126
LRRC36	3	0.00267172	0	1.12383352	0.57011524	0.0003656	0.00411165	0.00129239
TMOD3	3	0.00270539	0	1.14414746	0.56435391	0.00030391	0.00616147	0.0007379
LOC441089	3	0.0027637	0	1.46289307	0.4812124	0.00038855	0.01108879	0.00078928
SLC24A3	3	0.00288323	0	1.58368431	0.45300951	0.00057937	0.0014859	0.00023281
CSTF3	3	0.0029981	0	1.07734023	0.58352376	0.00045309	0.00885157	0.00040603
DNAH10	3	0.00300304	0	0.13476197	0.93483898	0.00037146	0.0929406	0.00154508

KBTBD8	3	0.00300862	0	1.21329259	0.54517617	0.0004165	0.03490892	0.0005764
SPINK7	3	0.00311505	0	1.57331393	0.45536455	0.00040615	0.01100513	0.00069377
CD55	3	0.00313446	0	1.48491881	0.47594194	0.00031888	0.00427311	0.00086958
ZNF391	3	0.00329547	0	1.2047218	0.54751748	0.00064679	0.01377111	0.0002107
SEC16B	3	0.00339544	0	1.38709365	0.49980022	0.00041033	0.00448879	0.00076599
RAB27B	3	0.00343074	0	1.50641731	0.47085332	0.00046689	0.00231422	0.00042206
PAMR1	3	0.00346407	0	0.20194265	0.90395895	0.00039025	0.00585715	0.00125818
NTS	3	0.00350546	0	1.3593503	0.50678159	0.0003134	0.00535091	0.00062475
THRAP3	3	0.00356178	0	1.16462574	0.55860489	0.00039257	0.00242959	0.00131465
UNC84A	3	0.00358941	0	1.47022375	0.47945182	0.00037473	0.01589859	0.00290788
CDC73	3	0.0036142	0	1.85019641	0.39649248	0.000408	0.0122099	0.00088432
OR2M7	3	0.00361682	0	1.1515921	0.56225711	0.00050699	0.00287233	0.0003449
NDST3	3	0.00368942	0	1.67508582	0.43277258	0.00043815	0.00247356	0.00059477
WHAMM	3	0.00369544	0	1.16302257	0.55905284	0.00043494	0.01545693	0.00060411
LRRC27	3	0.0038537	0	1.39068909	0.49890253	0.00032933	0.00400151	0.00084922
NAV3	3	0.00390147	0	1.9870553	0.37026821	0.00041058	0.00675576	0.00095608
EFNA4	3	0.00394891	0	1.52711657	0.46600529	0.0005658	0.01300935	0.00028345
RGS2	3	0.00395721	0	1.55138983	0.46038374	0.00037449	0.00899474	0.00792957
PPIL1	3	0.00396993	0	1.25758576	0.53323509	0.00054281	0.05229823	0.00031036
ASZ1	3	0.00418169	0	1.169651	0.55720309	0.0004694	0.02409024	0.0004953
SPINK9	3	0.00419937	0	1.81322762	0.40388956	0.00043109	0.0062818	0.00075701
ADRBK2	3	0.00434566	0	1.11842634	0.57165869	0.00046182	0.00495095	0.00056103
ATP1A1	3	0.00451926	0	1.55733402	0.45901747	0.00049213	0.00236842	0.00046047
ARFGEF2	3	0.00461651	0	1.0420957	0.59389791	0.00051714	0.00481441	0.00039686
ST8SIA1	3	0.00462349	0	1.18624168	0.55260001	0.00059117	0.01787841	0.00029009
ARHGAP25	3	0.00470762	0	1.88001107	0.39062567	0.0005479	0.00588853	0.00034122
AFTPH	3	0.00479158	0	1.11306454	0.5731933	0.00048952	0.01389522	0.00048954
C11orf41	3	0.00480271	0	1.09170951	0.57934637	0.00048192	0.01023581	0.00052267
OR1N2	3	0.00504234	0	1.92023439	0.38284802	0.00043956	0.00267564	0.00098136
DOCK4	3	0.00508867	0	1.10296827	0.57609417	0.000525	0.01224704	0.00041178
HORMAD1	3	0.00510091	0	0.51342397	0.77359099	0.00042537	0.00355425	0.00139156
RPP14	3	0.0051603	0	1.11314856	0.57316922	0.00048132	0.01134372	0.00057294
PDHA2	3	0.00521655	0	1.79908508	0.40675569	0.00062654	0.00625666	0.00028048
GRID2	3	0.00523234	1	2.0218247	0.36388684	0.00047507	0.0041885	0.00018153
BMP5	3	0.00561311	0	1.15452417	0.56143342	0.00044537	0.00459201	0.00109631
PLEKHG4B	3	0.00569865	0	1.37624608	0.50251839	0.00050547	0.01879588	0.00052176
DOK5	3	0.00570923	0	1.28940586	0.52481843	0.00044667	0.00349897	0.00112217
ALDH1A3	3	0.00588804	0	1.50079373	0.47217913	0.00046307	0.06858543	0.00086644
FSD2	3	0.00597344	0	1.14053564	0.565374	0.00049765	0.00485765	0.00060082
MAFB	3	0.00598083	0	1.67533912	0.43271777	0.00053946	0.00783746	0.00043699
TRAPPC12	3	0.0060578	0	1.20258211	0.54810355	0.00040187	0.02484953	0.00664408
DENND5A	3	0.0062629	0	1.35862614	0.50696512	0.0003836	0.00532852	0.00155494
DYNC2LI1	3	0.00639675	0	1.16929617	0.55730195	0.00070055	0.0023282	0.00027183
SLC6A17	3	0.00639827	0	1.22461784	0.54209776	0.0004025	0.01460874	0.00410954
SMC2	3	0.00644447	0	0.82011106	0.6636134	0.00044605	0.00280543	0.00165757

KIAA1012	3	0.00659674	0	1.17810744	0.55485208	0.00056845	0.0032023	0.00042098
KIF20B	3	0.0066116	0	1.34061766	0.51155057	0.00055041	0.02776708	0.00045547
IL26	3	0.00673601	0	1.85599825	0.39534395	0.0004299	0.00443501	0.00488608
GLT8D3	3	0.00674769	0	1.94398413	0.37832863	0.00047371	0.00691818	0.00097954
COL9A1	3	0.00683539	0	1.78739516	0.40914012	0.00054984	0.00651144	0.00046956
TINAG	3	0.00688611	0	1.09582139	0.5781565	0.00060682	0.01104933	0.0003667
TTC32	3	0.00696189	0	1.71727064	0.42373996	0.00048179	0.00322795	0.00093864
C5orf28	3	0.00697495	0	1.11078244	0.57384772	0.00039039	0.01420868	0.0013507
MAPK10	3	0.00699854	0	1.51562889	0.46868966	0.0004606	0.00367893	0.00130927
MAST3	3	0.00704462	0	1.11889116	0.57152584	0.00069988	0.00268343	0.00028831
STT3B	3	0.00709119	0	1.62381214	0.44401094	0.00049004	0.00316686	0.00086546
MTOR	3	0.00732268	0	1.36585772	0.50513535	0.00073944	0.03126223	0.00026884
ADAMTSL1	3	0.00737151	0	1.40910986	0.49432854	0.00042906	0.0223131	0.09069551
PTPRZ1	3	0.00737388	0	1.31937506	0.51701286	0.0006522	0.05404114	0.00033099
CBY1	3	0.007384	0	1.35509042	0.50786216	0.0015396	0.00125373	0.00016
FUCA2	3	0.00740525	0	1.60329195	0.44858999	0.00059885	0.00216977	0.00040976
ADI1	3	0.0074291	0	1.67723281	0.43230825	0.00043338	0.00777296	0.00982446
OR4C12	3	0.00743414	0	1.60619688	0.4479389	0.00056318	0.00237101	0.00049074
TCP11L1	3	0.00744329	0	1.06304596	0.58770922	0.00058214	0.00463655	0.00043906
AK2	3	0.00752921	0	1.93488099	0.38005455	0.00068218	0.00157526	0.00031747
SLC36A1	3	0.00768007	0	1.27830333	0.52773994	0.00034007	0.00306174	0.0004288
DCLK2	3	0.00774509	0	1.17102928	0.55681923	0.00045483	0.00418253	0.00230733
GABRP	3	0.0077634	0	1.37335148	0.50324621	0.00059448	0.0026249	0.00043487
YAP1	3	0.00781068	0	1.0350066	0.59600674	0.00064177	0.0061457	0.00035978
UBR2	3	0.00787822	0	1.33433044	0.51316122	0.00050706	0.04015395	0.00082124
PTPRE	3	0.00788947	0	0.98403904	0.61139043	0.00048478	0.00651734	0.00116595
CLEC3A	3	0.00792832	0	1.21727381	0.54409201	0.00042679	0.04549305	0.00532127
SLC4A7	3	0.00798214	0	1.22096472	0.54308884	0.00052528	0.00474905	0.00070211
FHOD1	3	0.00804155	0.43378045	2.00871341	0.36628019	0.00046574	0.00323244	0.00123905
TTC7A	3	0.00806711	0	0.3036079	0.8591567	0.00047752	0.05554292	0.00140589
TMTC2	3	0.00812988	0	1.13686937	0.56641136	0.00038439	0.00677451	0.00083205
SNORD100	3	0.00813077	0	0.46835859	0.79121994	0.00046493	0.00749129	0.00202266
GOLPH3L	3	0.00820758	0	0.67482173	0.71361558	0.00048365	0.00406935	0.00134822
MAP3K9	3	0.00830355	0	1.62284957	0.44422469	0.00052922	0.00281735	0.00072788
FAM190A	3	0.00830977	0	1.13744975	0.56624702	0.0005359	0.00678766	0.00067303
FHL2	3	0.00839897	0	1.22945012	0.54078956	0.00055075	0.48102135	0.00059894
ZNF627	3	0.00841302	0	1.42679608	0.48997641	0.0004663	0.00253313	0.00263491
NFKBIA	3	0.00859325	0	1.09795575	0.57753983	0.00057197	0.01261021	0.00053657
TMEM232	3	0.00860727	0	1.10781994	0.57469836	0.00059522	0.01453943	0.00047209
PIK3R2	3	0.00864648	0	1.34858975	0.50951557	0.00080771	0.03931732	0.0002642
MCTP2	3	0.00872637	0	1.85529564	0.39548286	0.00052506	0.00541518	0.00078537
FAIM3	3	0.00875982	0	0.59113183	0.74411037	0.00049007	0.0124333	0.00135109
FGFRL1	3	0.00877135	0	1.12615885	0.56945278	0.0005521	0.00586913	0.00063652
OTUD1	3	0.00878308	0	1.11572775	0.57243054	0.00057699	0.01613834	0.00053315
PIGN	3	0.00893387	0	0.72853283	0.69470609	0.0004935	0.00359689	0.00141315

MAP3K7IP1	3	0.00894082	0	1.65079716	0.43806035	0.00051991	0.00842415	0.00087592
NUSAP1	3	0.0089695	0	1.14573337	0.56390658	0.00040595	0.01095106	0.00108089
NUMB	3	0.00900402	0	1.10594096	0.57523854	0.00057316	0.01346653	0.00056306
PCDH1	3	0.00913664	0	1.61187885	0.44666812	0.00057898	0.00803859	0.00054545
PSG8	3	0.00914291	0	1.14292501	0.56469896	0.00050338	0.00378782	0.00123728
PLA2G7	3	0.00918148	0	1.69318214	0.42887445	0.00050188	0.00462677	0.00119793
IGFN1	3	0.00918721	0	1.86546787	0.3934765	0.00051457	0.00567873	0.00098688
MIR4439	3	0.00934847	0	1.9044604	0.38587947	0.00052367	0.00260826	0.0009652
ACTN2	3	0.00938311	0	1.50773941	0.47054217	0.00053555	0.01118225	0.00080428
OR1N1	3	0.00959083	0	0.24633678	0.88411477	0.00050085	0.01771517	0.00144698
AMBRA1	3	0.00965191	0	1.74309095	0.41830457	0.00064704	0.00668384	0.0004164
RAVER2	3	0.00981365	0	1.56597318	0.45703898	0.00075643	0.00190551	0.00031986
SUN1	3	0.0098213	0	1.88773637	0.38911973	0.00047004	0.00581007	0.00755085
OIP5	3	0.00987407	0	1.13628755	0.56657616	0.00040423	0.01233692	0.0008522
TMEM72	3	0.00987658	0	1.80528736	0.40549624	0.00044251	0.00331443	0.00253717
EFCAB13	3	0.01013784	0	1.81540521	0.40345004	0.00047001	0.14542457	0.01210386
LINC00470	3	0.01015334	0	1.40283161	0.49588273	0.00053999	0.00789754	0.00090637
SNX25	3	0.0102081	0	1.88816436	0.38903647	0.00052773	0.01019578	0.00104545
PTPRO	3	0.01021471	0	1.0485205	0.59199313	0.00073183	0.00390489	0.00034441
C14orf145	3	0.01024308	0	1.2331632	0.53978649	0.00069088	0.16498391	0.00038134
KRTAP24-1	3	0.01027055	0	1.92350386	0.38222267	0.00053063	0.04906885	0.00103303
KCNMB3	3	0.01028505	0	0.25410757	0.8806863	0.00051076	0.01576774	0.00146284
DOCK10	3	0.01031073	0	1.49937766	0.47251356	0.000477	0.24104202	0.00611736
MTHFD1	3	0.01031802	0	0.7956552	0.67177783	0.00048742	0.00453057	0.00328221
KCNMB1	3	0.01039107	0	1.49454904	0.47365573	0.00071317	0.01175929	0.00036069
SMU1	3	0.01042352	0	1.38506561	0.50030728	0.00061123	0.00296572	0.00054526
ADAMTS1	3	0.01043574	0	1.21474958	0.54477915	0.00086534	0.03104731	0.00027191
SNORD101	3	0.01045062	0	0.31412327	0.85465138	0.00049352	0.01742705	0.00246476
ASL	3	0.01046076	0	1.10645941	0.57508944	0.00060163	0.00524114	0.00057289
PLUNC	3	0.0105697	0	1.79609644	0.40736397	0.00049006	0.00314104	0.00278905
GAA	3	0.01072508	0	1.15003634	0.56269464	0.00057346	0.00876275	0.00071807
KIAA1239	3	0.01074987	0	1.20544441	0.54731969	0.00076916	0.00261121	0.0003304
TRAM1L1	3	0.01101517	0	1.74442531	0.41802558	0.00053633	0.00354613	0.00116361
EFHA2	3	0.01103669	0	1.81722922	0.40308226	0.00045687	0.00330255	0.00271249
HK2	3	0.0110495	0	1.43078047	0.48900125	0.00058112	0.01278964	0.00069575
LRRC6	3	0.01118191	0	1.66490827	0.43498047	0.00054783	0.01386273	0.00098342
DLD	3	0.01119826	0	0.42731216	0.8076261	0.00052356	0.02434219	0.0014472
NDUFAF4	3	0.01121217	0	1.30996314	0.51945164	0.00057536	0.00421649	0.00076765
CTXN3	3	0.01123666	0	1.1994725	0.54895641	0.00063821	0.0035977	0.00051607
IFNA6	3	0.01130782	0	0.17159847	0.91777847	0.0005175	0.00542695	0.00178982
ETV7	3	0.01132375	0	1.45130666	0.48400825	0.00057042	0.00360613	0.00081985
FER1L5	3	0.01142444	0	1.81084312	0.40437138	0.00065791	0.0021586	0.00048601
CHN1	3	0.01161931	0	1.37837587	0.50198355	0.00056287	0.01400669	0.00090919
LOC100128164	3	0.0116501	0	1.84979033	0.39657299	0.00054991	0.01602436	0.00104981
HSPC159	3	0.01169193	0	1.29992762	0.52206467	0.00070602	0.03580941	0.00040732

MYO5B	3	0.01180398	0	1.68476184	0.43068388	0.00075072	0.00716834	0.00036161
NMNAT3	3	0.01181759	0	1.50252104	0.4717715	0.00065253	0.01030444	0.00049928
TM4SF19	3	0.01186327	0	1.89808036	0.3871124	0.00049266	0.0047977	0.01183584
DMC1	3	0.01190329	0	1.54209672	0.46252792	0.00108338	0.00155805	0.00023839
TMEM165	3	0.0120855	0	1.98667023	0.3703395	0.00055316	0.00342405	0.00114878
MIR9-2	3	0.01211461	0	1.76419069	0.41391471	0.00066279	0.00626322	0.0004888
GPC5	3	0.0121241	0	1.16107172	0.55959842	0.00059342	0.00865064	0.00074253
SOSTDC1	3	0.01213572	0	1.54433092	0.46201152	0.00052036	0.00227245	0.00241407
CCDC146	3	0.01224869	0	0.15853412	0.92379318	0.0005258	0.01613727	0.00188885
FAM91A1	3	0.01231351	0	1.53634492	0.46386002	0.00057717	0.01041369	0.0008623
BOK	3	0.01232645	0	1.17952894	0.55445786	0.00069163	0.0034581	0.00045623
SLC6A1	3	0.01247704	0	1.34695832	0.50993135	0.00058905	0.00428353	0.00081749
MIR4515	3	0.0125492	0	1.67936171	0.43184832	0.00052573	0.00289315	0.00195803
ITPRIP	3	0.01257826	0	1.25880772	0.53290939	0.00096829	0.09017254	0.0002676
HOOK3	3	0.01264366	0	1.53166074	0.46494769	0.00050422	0.01057701	0.00629512
COL28A1	3	0.01267039	0	1.87880271	0.39086175	0.00048283	0.00366987	0.0063925
TDRD12	3	0.01268136	0	1.6227733	0.44424163	0.00046024	0.00394239	0.0016549
TRPA1	3	0.01271675	0	1.18513162	0.55290681	0.00067503	0.00363138	0.00050213
NDUFAF1	3	0.01279522	0	1.10016484	0.57690226	0.00044185	0.01894223	0.0010634
OR1L8	3	0.01279582	0	1.82330079	0.40186045	0.00056041	0.00330126	0.00119997
RDX	3	0.01284004	0	1.19703066	0.54962704	0.00059923	0.0070941	0.00078079
LOC100270804	3	0.01284361	0	1.62836956	0.44300032	0.00058092	0.00812677	0.00089785
WDYHV1	3	0.01284645	0	1.37920897	0.50177449	0.0006414	0.01510277	0.00058216
OR1J1	3	0.01286522	0	1.7596508	0.41485534	0.00056468	0.01576097	0.00110959
PRR4	3	0.01288219	0	1.04867323	0.59194792	0.00053725	0.00404891	0.00168129
SNORA33	3	0.0129402	0	0.15822174	0.92393748	0.00052463	0.06216081	0.00259705
PICALM	3	0.01295442	0	1.0487816	0.59191585	0.00075462	0.00781681	0.00039101
DUSP10	3	0.01305407	0	1.52193835	0.4672134	0.00058897	0.01068588	0.00085945
THNSL2	3	0.0131255	0	0.54161247	0.76276428	0.00052611	0.00685679	0.00254137
TCTEX1D2	3	0.01317251	0	1.54828725	0.46109848	0.00049952	0.02726847	0.05833143
PCYT1A	3	0.01321633	0	1.89584511	0.38754529	0.00050534	0.00917267	0.01847896
CRADD	3	0.01324099	0	1.4728794	0.47881561	0.00061237	0.01064079	0.00072617
TMOD2	3	0.01325456	0	1.15744423	0.56061431	0.00047867	0.21786006	0.00281718
IFI30	3	0.01338292	0	1.66064429	0.43590884	0.00094818	0.00715845	0.00028263
TDRD1	3	0.01338806	0	1.06165049	0.58811943	0.00067973	0.00854451	0.00051614
GALNT2	3	0.01345633	0	1.64961348	0.43831969	0.00046429	0.00376336	0.00166915
SEC62	3	0.01356672	0	1.92298256	0.38232231	0.00066216	0.002185	0.00058122
HLA-DQA2	3	0.01376568	0	1.0584718	0.58905489	0.00039804	0.15723528	0.00049263
IL36B	3	0.01378769	0	1.83831557	0.39885482	0.00061303	0.00534433	0.00076486
STAM	3	0.0138111	0	1.0895191	0.57998122	0.00066013	0.0060598	0.00058822
GNB2L1	3	0.0138551	0	1.45083414	0.48412261	0.00063885	0.01091165	0.00065216
SPON2	3	0.01406372	0	1.18043148	0.55420771	0.00063892	0.00493096	0.00068168
KCNT2	3	0.0140997	0	0.73969336	0.69084024	0.0005481	0.0048139	0.00187454
CRYBB2P1	3	0.01420804	0	0.38869655	0.8233711	0.00053649	0.00611657	0.00308993
CTCF	3	0.01424494	1	2.02138429	0.36396697	0.00049244	0.00295087	0.00297295

FAM111A	3	0.01427662	0	0.46585386	0.79221146	0.00054973	0.00366783	0.00213214
GNLY	3	0.01448172	0	1.10686362	0.57497322	0.00077258	0.01543344	0.00040984
FAM129A	3	0.0145829	0	0.45534913	0.79638339	0.00055918	0.00806133	0.00170372
KIAA1468	3	0.01464588	0	1.9811905	0.37135558	0.00058847	0.00424324	0.00114974
PARD3B	3	0.01476073	1	2.0505117	0.35870468	0.0004779	0.00402039	0.00104979
MIR548F2	3	0.01478165	0	1.1804266	0.55420906	0.00066741	0.06320841	0.00061224
LOC440040	3	0.01484101	0	1.44378628	0.48583164	0.00073845	0.00259587	0.00047099
MBNL2	3	0.01489164	0	1.24680727	0.53611658	0.00063389	0.40148778	0.00075724
RNFT1	3	0.0149474	0	1.73189747	0.42065228	0.00067664	0.00243388	0.00061058
TDRD3	3	0.01502858	0	1.14589925	0.56385981	0.00049163	0.05588897	0.00240146
TPPP3	3	0.01505146	0	0.74587269	0.68870907	0.00055824	0.00470807	0.00193396
C20orf79	3	0.01511377	0	1.81669551	0.40318984	0.00060819	0.00546736	0.00094397
GSTO2	3	0.01512992	0	1.07304857	0.58477724	0.00107754	0.00761215	0.00026902
FLJ42627	3	0.015166	0	1.72064855	0.42302488	0.00051964	0.00540979	0.20840559
C18orf34	3	0.01516911	0	1.06700551	0.58654684	0.00069521	0.00829722	0.00055843
L3MBTL3	3	0.01530969	0	1.59868695	0.44962406	0.00064693	0.00290301	0.00074652
C18orf8	3	0.01575244	0	1.54648306	0.46151463	0.00063101	0.00334884	0.00087992
MUT	3	0.01591159	0	1.25764369	0.53321965	0.0004878	0.00735077	0.00161744
TMEM107	3	0.01596479	0	1.4448889	0.48556387	0.00056374	0.00310561	0.00213084
HSD11B2	3	0.01598882	0	1.98604511	0.37045528	0.00058262	0.00303345	0.00146462
COL16A1	3	0.01613933	0	0.32912278	0.84826568	0.00056016	0.01022682	0.00265393
ITM2B	3	0.01632207	0	1.2992957	0.52222965	0.00069871	0.02380093	0.00059553
SLC22A3	3	0.01638111	0	0.86855078	0.64773385	0.00058093	0.00294597	0.00187803
FERMT1	3	0.01641728	0	1.17415763	0.55594894	0.00065837	0.00660152	0.00076143
PHF2	3	0.01660795	0	1.97671725	0.37218709	0.00063723	0.00247404	0.00093572
LOC100132891	3	0.01661298	0	1.1008923	0.57669246	0.00069116	0.00678248	0.00064116
CSTF2T	3	0.01662021	0	1.54703428	0.46138745	0.00065994	0.00833631	0.00075031
PODN	3	0.01662266	0	1.19514117	0.55014655	0.00065246	0.00800145	0.00080794
ADAMTS3	3	0.0166531	0	1.89337445	0.38802433	0.0005414	0.00336186	0.03425768
CHP1	3	0.0167247	0	1.10299627	0.57608611	0.00048716	0.02484097	0.00138065
TBC1D10A	3	0.01677828	0	1.06295741	0.58773524	0.00057077	0.00275262	0.00275306
TAS2R13	3	0.0168591	0	1.60378847	0.44847863	0.00059066	0.00343795	0.00153142
PMCH	3	0.016875	0	1.78023134	0.41060825	0.00062043	0.0067447	0.00106384
ZSCAN20	3	0.01689202	0	1.38244122	0.50096421	0.00071393	0.01410814	0.0005801
ATOH1	3	0.0169516	0	1.49165346	0.47434199	0.00046972	0.00475689	0.00094271
IFNA5	3	0.01702113	1	2.06503853	0.3561087	0.0003843	0.00213401	0.00067107
DEPDC7	3	0.01712247	0	1.07397399	0.58450673	0.00072612	0.0098053	0.00056736
PKHD1L1	3	0.01714327	0	1.28844105	0.52507166	0.00068827	0.00387695	0.00068669
B4GALT1	3	0.01716485	0	1.62977243	0.4426897	0.00076139	0.00734876	0.00049363
MTRNR2L5	3	0.01720525	0	1.21947818	0.54349265	0.00068634	0.20975227	0.00068295
PROX1	3	0.01724219	0	1.96215442	0.37490703	0.00086459	0.00479849	0.00038232
OR14C36	3	0.0172927	1	2.03491894	0.36151221	0.00050351	0.00161617	0.00034172
PDCD10	3	0.01734092	0	1.17537862	0.55560965	0.00049365	0.01051885	0.00141446
NXT1	3	0.01747733	0.00491306	2.00009827	0.36786137	0.0005739	0.00258973	0.00248015
FYB	3	0.01751505	0	1.16223874	0.55927198	0.00067475	0.00724961	0.00076068

FAM227A	3	0.01753553	0	1.52889661	0.46559072	0.0023583	0.0013126	0.00019145
SNX19	3	0.01758741	0	1.01024609	0.60343132	0.00056275	0.0063202	0.00434613
TMEM216	3	0.01764737	0	1.97360466	0.37276677	0.00092438	0.00463634	0.00035128
KCNJ4	3	0.01766498	0	1.16666773	0.55803485	0.00067604	0.01663266	0.00075968
ZNF285A	3	0.01768043	0	1.08303022	0.58186599	0.00049208	0.08368803	0.00131052
RPS24	3	0.01772456	0	0.16974047	0.91863148	0.00059586	0.00740965	0.00181736
TDH	3	0.01772712	0	1.41725613	0.49231916	0.0007897	0.00288098	0.00048061
PANK1	3	0.01780911	0	1.07131552	0.58528419	0.00078202	0.00503895	0.00049082
POU4F3	3	0.01785683	0	1.61402708	0.4461886	0.00063662	0.01139194	0.00105845
USP42	3	0.01793474	0	1.07072209	0.58545788	0.00075735	0.01022971	0.00053264
PCAT1	3	0.01794143	0	1.94966319	0.37725588	0.00062319	0.00494255	0.00118818
TOMM22	3	0.01800533	0	1.26022038	0.53253312	0.00204577	0.00167808	0.00020234
RANBP10	3	0.01804395	0	0.64164865	0.7255507	0.00057675	0.00590833	0.00295428
MIR4324	3	0.0180453	1	2.07055768	0.35512734	0.00047573	0.00259087	0.00173529
NPC1	3	0.01806333	0	1.18956152	0.5516835	0.00067257	0.00855596	0.0008111
OR1J4	3	0.01809036	0	0.61476775	0.73536826	0.00060685	0.00423698	0.00164241
C16orf86	3	0.01812562	0	1.37263127	0.50342747	0.00058111	0.00324891	0.00252477
APOA1	3	0.01815643	0	0.28839221	0.86571796	0.00060204	0.02358714	0.00171035
FLJ32810	3	0.01816536	0	1.9105989	0.38469693	0.00063435	0.00280257	0.00117044
FGD2	3	0.01818136	0	1.6457915	0.43915812	0.00060324	0.00326134	0.00159734
GDF10	3	0.01820553	0	1.55630198	0.45925439	0.00064485	0.01521911	0.00100292
CXXC5	3	0.01830822	0	0.88696937	0.64179606	0.00058465	0.00307018	0.0029621
NPS	3	0.01830988	0	1.8804677	0.3905365	0.00057793	0.00276153	0.00290566
FAM120AOS	3	0.0183126	0	1.59008176	0.45156277	0.0006277	0.02673892	0.001217
RNF19B	3	0.01842296	0	1.41817739	0.49209244	0.00089575	0.00234988	0.00039245
PPP6C	3	0.01853607	0	1.58989324	0.45160534	0.00065375	0.00366362	0.00100248
GET4	3	0.01855162	0	1.19436784	0.55035931	0.00056534	0.01100334	0.00858141
DYRK3	3	0.01855421	0	1.14102504	0.56523567	0.00059327	0.00259624	0.00253544
LOC284837	3	0.01856434	0	1.82531833	0.40145527	0.00066545	0.00268178	0.00092337
AP3M2	3	0.01868731	0	0.06418011	0.96841937	0.00058918	0.01285274	0.002688
DSG1	3	0.01874217	0	1.62641297	0.44343392	0.00066209	0.00326027	0.0009596
DCC	3	0.01876008	0	1.27186681	0.52944107	0.00067804	0.27038139	0.00082565
FAM135A	3	0.01880979	0	1.34948712	0.50928701	0.00060905	0.00245333	0.00189807
OR1J2	3	0.01885968	0	0.63823711	0.72678938	0.0006186	0.00509599	0.00155695
EIF2AK1	3	0.01890418	0	1.34299284	0.51094342	0.00066275	0.02325094	0.00094232
ZDHHC1	3	0.01890901	0	0.54789763	0.76037099	0.00059921	0.0056325	0.00206828
APOBEC3A	3	0.0190273	0	1.10345231	0.57595477	0.0005701	0.03100437	0.00800513
CCND1	3	0.0190971	0	1.57607904	0.45473542	0.00083674	0.00825207	0.00044622
COMMD10	3	0.01913831	0	1.75387163	0.41605583	0.00055936	0.00418606	0.02551931
APOC3	3	0.01915923	0	0.11034422	0.94632226	0.00060794	0.00774331	0.00196151
ZCCHC2	3	0.01917251	0	1.14374062	0.56446872	0.00075259	0.00460418	0.00059223
CCDC7	3	0.01943344	0	1.12688886	0.56924496	0.00072839	0.00591418	0.00066694
LRP5L	3	0.01945009	0	1.35979335	0.50666934	0.00061466	0.00243667	0.00195405
NOM1	3	0.019477	0	1.39555547	0.49769007	0.00113713	0.01681834	0.00029579
FRAS1	3	0.01960388	0	1.32934267	0.51444258	0.00072517	0.00364581	0.00069198

TIMM44	3	0.01962999	0	1.94602293	0.37794316	0.00064968	0.01098559	0.00116231
KLHL32	3	0.01966252	0	1.74607173	0.4176816	0.00074879	0.00595532	0.0006041
DHX35	3	0.01972295	0	1.12218527	0.57058528	0.00071753	0.00927786	0.00071604
LOC100128770	3	0.01984278	0	0.88034221	0.64392623	0.00058176	0.01381667	0.00555826
BAG2	3	0.01995706	0	1.23267448	0.53991841	0.00070166	0.00531354	0.00080476
LOC100506472	3	0.01998192	0	1.90654948	0.38547662	0.00065553	0.00486834	0.00109826
GLI3	3	0.02004403	0	1.60801331	0.44753226	0.00053808	0.00411501	0.00246962
LEO1	3	0.02005461	0	1.45004942	0.4843126	0.00049767	0.00405053	0.00109198
HGF	3	0.0203484	0	1.47266703	0.47886646	0.00064236	0.00656979	0.00133959
KIAA1772	3	0.02035992	0	1.13164129	0.56789392	0.00064579	0.00682527	0.00134845
MIR3145	3	0.02045248	1	2.06174306	0.35669595	0.00052525	0.00345939	0.00120797
CCDC40	3	0.0204583	0	1.2623534	0.53196547	0.00071349	0.00462198	0.00078405
RAB23	3	0.02048183	0	1.40564419	0.49518587	0.00074232	0.01228211	0.00066047
FAT3	3	0.02057671	1	2.03551417	0.36140463	0.00058152	0.00480522	0.00031598
SYNE2	3	0.02058271	0	0.60859957	0.7376397	0.0005953	0.00932541	0.0039482
LOC100130264	3	0.02062037	0	1.28489166	0.52600433	0.00078977	0.00340701	0.00056835
PARD6A	3	0.0206662	0	1.48338892	0.47630615	0.00060484	0.00309044	0.00269068
MIR4434	3	0.02070613	0	1.66104274	0.435822	0.00074207	0.00657606	0.00066795
INSM2	3	0.02074158	0	1.10401356	0.57579316	0.00077026	0.01585972	0.00060471
APOA4	3	0.02080068	0	0.09258888	0.9547608	0.00062434	0.0086712	0.00200642
PRPF40A	3	0.02104338	0	1.05148661	0.59111582	0.00062233	0.0026783	0.00236331
KCTD7	3	0.02105545	0	1.48623856	0.47562798	0.00067897	0.01222446	0.00103966
PDE7B	3	0.02107367	0	1.24549551	0.53646833	0.00093867	0.00289225	0.00040594
CYB5RL	3	0.02112452	0	0.29698727	0.86200549	0.00061754	0.00837621	0.002341
PRPH2	3	0.02113561	0	0.53064205	0.7669597	0.00060639	0.0068808	0.00315575
TMEM38B	3	0.02128378	0	1.24692078	0.53608616	0.00070356	0.01933632	0.00088009
PSMA6	3	0.02137016	0	1.28441447	0.52612985	0.00071486	0.00486563	0.00083765
C15orf53	3	0.02145646	0	1.79297822	0.40799959	0.00093165	0.00200547	0.0004208
GFOD2	3	0.02149426	0	1.71910066	0.42335241	0.00061569	0.00278531	0.00249375
OR4C13	3	0.02152144	0	1.29187466	0.52417099	0.00073881	0.00407368	0.00074358
CARD14	3	0.02155478	0	1.08810661	0.58039098	0.00082441	0.00505072	0.00053291
CALM1	3	0.02155602	0	0.23702664	0.88823999	0.00062003	0.00998701	0.00246198
LYRM4	3	0.02164789	0	1.22734615	0.54135876	0.00075706	0.07141267	0.00067276
SCP2	3	0.02166322	1	2.033898	0.3616968	0.00046269	0.00504416	0.00055043
MIR4319	3	0.02184447	0	1.5012715	0.47206634	0.00053481	0.00468746	0.00159284
PRR11	3	0.02185825	0	1.07475205	0.58427938	0.00079174	0.00834797	0.00059973
MED4	3	0.02186983	0	1.28315496	0.52646129	0.00077467	0.00372021	0.00064771
COL15A1	3	0.02187798	0	1.89531704	0.38764763	0.00049553	0.00268347	0.00089309
CNR2	3	0.02188541	0	1.6114923	0.44675446	0.00069769	0.00341235	0.00099712
DCLK1	3	0.02193867	0	1.81114957	0.40430943	0.00063621	0.00212071	0.00219907
JOSD1	3	0.02206021	0	1.22289563	0.54256477	0.0022712	0.00182672	0.00021293
ST3GAL4	3	0.02209773	0	1.5565478	0.45919795	0.00065717	0.00270822	0.00156212
HIP1R	3	0.02215242	0	1.20523367	0.54737736	0.00080195	0.2528929	0.00058297
TXNDC17	3	0.02229751	0	1.636489	0.44120551	0.00071791	0.00307085	0.00089992
CHCHD6	3	0.02245819	0	0.30733508	0.85755708	0.00065036	0.03716064	0.00170413

FANCI	3	0.02246274	0	1.31089426	0.51920986	0.00079833	0.01936728	0.00059908
ANGPT2	3	0.02246545	0	1.36318609	0.50581057	0.00092089	0.00270877	0.00044515
UBR5	3	0.0225516	0	0.95459182	0.6204589	0.00061043	0.00441015	0.00570748
HAPLN1	3	0.02255881	0	1.04539884	0.59291785	0.00094019	0.00803593	0.00042533
C9orf156	3	0.02287335	0	1.09051099	0.57969366	0.00079562	0.01182382	0.00062563
CLN6	3	0.02288026	0	1.48598125	0.47568918	0.00069971	0.02228632	0.0010486
PAPLN	3	0.0229008	0	1.23099202	0.5403728	0.00075888	0.08039071	0.00072554
SNRPB	3	0.02294594	0	1.59036817	0.45149811	0.00077474	0.00738331	0.00067084
SLC35F3	3	0.02300501	0	1.04697006	0.59245223	0.00066073	0.00319735	0.00168774
SF3A1	3	0.0230801	0	0.34827959	0.84017944	0.00062144	0.00857471	0.00402571
IKZF2	3	0.02309875	0	1.93108673	0.38077624	0.0005914	0.00372103	0.06489922
MND1	3	0.0231544	0	1.10208361	0.57634906	0.00079058	0.00664271	0.00065179
GRIP2	3	0.023181	0	1.13628037	0.56657819	0.00076226	0.00727332	0.00073721
PRH1	3	0.02318864	0	0.47492454	0.78862664	0.00066289	0.01127563	0.00161092
ZNF653	3	0.02325853	0	0.61701178	0.73454363	0.00064142	0.00518378	0.00218303
MIR3126	3	0.02335719	0	1.69710016	0.4280351	0.00068556	0.0689771	0.00124142
CYP2S1	3	0.02337383	0	0.4813213	0.78610835	0.0006187	0.0248654	0.00490777
GABBR2	3	0.02343321	0	1.10365533	0.5758963	0.00088617	0.00443986	0.00049653
LOC100240726	3	0.02346445	0	1.59220947	0.45108263	0.00070231	0.00771206	0.0010989
C22orf41	3	0.02362423	0	0.84404076	0.65572068	0.00066051	0.0056226	0.00169305
RNF212	3	0.02367443	0	1.6275108	0.44319058	0.00071238	0.00782557	0.00100268
ARHGEF25	3	0.02375701	0	1.5233688	0.46687935	0.00071661	0.00413212	0.00102378
C12orf69	3	0.02390057	0	0.83984812	0.65709672	0.00065646	0.00478987	0.00186418
RASSF9	3	0.02395904	0	1.55826811	0.45880314	0.00057879	0.00455267	0.00344679
ASNS	3	0.0242267	0	1.99557905	0.36869353	0.00073252	0.00431028	0.00090376
LIMS1	3	0.02428869	0	1.77502961	0.41167758	0.00092109	0.0021521	0.00048324
SLC35F5	3	0.02429422	1	2.09560198	0.35070811	0.00045489	0.00416943	0.00089945
TGFBR3	3	0.0243115	0	0.29938008	0.8609748	0.00063237	0.03876559	0.00385022
LOC100616530	3	0.02433576	0	1.99909851	0.3680453	0.00069131	0.00409501	0.00126303
FBXL4	3	0.0243741	0	1.92849805	0.38126942	0.00058115	0.00340501	0.0041897
SNORA70F	3	0.02441369	0	0.49388685	0.78118489	0.00064074	0.00622269	0.0028976
CALML4	3	0.02446773	0	1.3509205	0.50892214	0.00072739	0.02216026	0.00098439
EXD1	3	0.02449348	0	1.21864819	0.54371825	0.00056135	0.00988237	0.00190441
NDST4	3	0.02449694	1	2.07120784	0.35501192	0.00050875	0.00406464	0.00100251
FRY	3	0.02452708	0	1.96112758	0.37509956	0.00064374	0.00212095	0.00349053
PPP2R2A	3	0.02459384	0	1.78657548	0.40930784	0.00052184	0.00296201	0.00101118
LOC400655	3	0.0246532	0	1.25915718	0.53281629	0.00080723	0.02609977	0.00065727
MIR30B	3	0.02484048	0	1.37414957	0.50304543	0.00073107	0.07645227	0.00098656
CD36	3	0.02487406	0	1.77338974	0.41201527	0.000731	0.00553306	0.00096744
LINC00489	3	0.02487779	0	1.71499632	0.42422209	0.00067382	0.00326939	0.00163803
CTSK	3	0.02490307	0	1.33783398	0.51226306	0.00065679	0.00243495	0.00264529
SIK3	3	0.02499328	1	2.05520351	0.35786418	0.00053214	0.00237772	0.00100772
CRHR1	3	0.02519107	0	1.58139247	0.45352892	0.00028849	0.0034557	0.00014384
LANCL2	3	0.02519605	0	1.06645341	0.58670878	0.00091816	0.00529859	0.00049691
CCDC92	3	0.02527805	0	1.7644451	0.41386206	0.00064035	0.00244017	0.0050278

ADORA1	3	0.02531862	0	1.58342717	0.45306776	0.00056464	0.0042904	0.00174903
PIGR	3	0.02547975	1	2.26609777	0.32204986	0.00038103	0.00283166	0.00110349
POLR2A	3	0.02557386	0	1.76581316	0.41357906	0.00071808	0.03936074	0.00115823
NBEAL1	3	0.02568379	0	1.1588045	0.56023315	0.00089518	0.06119314	0.00052986
EXT2	3	0.02577294	0	1.59935878	0.44947305	0.00077775	0.00709591	0.00079175
COPZ1	3	0.02590459	0	0.12619496	0.93885195	0.0006546	0.02789654	0.00304412
HERC3	3	0.02600812	0	1.73731414	0.41951455	0.00075238	0.0029306	0.00097795
FBXO38	3	0.02602689	0	0.88562196	0.64222859	0.00065648	0.00409884	0.00277366
SYT14L	3	0.02605636	0	1.15508754	0.5612753	0.00091082	0.00401786	0.00052609
ESM1	3	0.02611654	0	1.80212544	0.40613782	0.00066114	0.00267602	0.00244639
PCTK2	3	0.02617801	0	1.42423898	0.49060327	0.00074019	0.01227662	0.00104411
ZNF425	3	0.02626891	0	1.96225791	0.37488763	0.00061945	0.02508739	0.03703765
AKR1C1	3	0.02634327	0	1.69857986	0.42771854	0.00060817	0.00401128	0.00554324
ELAVL3	3	0.02644017	0	1.42596372	0.49018037	0.00069922	0.00503461	0.00148774
MDH1	3	0.02644708	0	1.0244692	0.59915521	0.00173488	0.00486771	0.00026046
HLA-DQB1	3	0.02656354	0	1.71331812	0.42457821	0.00061837	0.01106041	0.0130256
MYCBP	3	0.02668767	0	1.99211004	0.36933359	0.00071646	0.00611759	0.00128606
C17orf68	3	0.02678019	0	1.92110951	0.38268053	0.00069788	0.00330296	0.0015445
CENPT	3	0.02678825	0	0.43050276	0.80633872	0.00066555	0.00635079	0.00273068
MAP2K7	3	0.02683319	0	1.6453249	0.43926059	0.00073629	0.01341042	0.00111445
LYAR	3	0.02706234	0	1.13687532	0.56640967	0.00091727	0.03524533	0.00053297
CCDC58	3	0.02711429	0	1.25453517	0.53404905	0.0011113	0.05317254	0.00038539
RYR3	3	0.02713371	0	1.06997299	0.5856772	0.00053604	0.1611001	0.00095485
MMP21	3	0.02716353	0	0.11742485	0.94297791	0.00068574	0.00855487	0.00212189
OR2A2	3	0.0272309	0	1.61418977	0.44615231	0.00053798	0.00333585	0.00100768
AGRP	3	0.02725984	0.95631053	2.01931088	0.3643445	0.0006547	0.0029346	0.00157558
DCST2	3	0.02732518	0	1.65029312	0.43817077	0.00105052	0.00688471	0.00041709
MIR4751	3	0.02737092	0	1.52507072	0.46648223	0.00058427	0.00457044	0.00217929
HEATR2	3	0.0274281	0	1.48827719	0.47514341	0.00063872	0.00589299	0.0249357
C10orf68	3	0.02751861	0	1.1196996	0.57129486	0.00095105	0.02643327	0.00050356
OSBPL2	3	0.0275462	0	1.72042334	0.42307252	0.00081174	0.00580768	0.00075263
KIAA0430	3	0.02754719	0	1.15382277	0.56163035	0.00081736	0.00645027	0.00075662
CCDC81	3	0.02771647	0	1.79473254	0.40764187	0.00063754	0.00540496	0.17834269
CACHD1	3	0.02776991	0	1.6615883	0.43570314	0.00084903	0.00270004	0.00068926
ATP6V0D1	3	0.02782194	1	2.04593216	0.35952697	0.00061384	0.00354498	0.00129384
FER1L6-AS1	3	0.0278938	0	1.99147883	0.36945017	0.00064	0.0039973	0.01503306
PRKCE	3	0.02793193	0	0.536293	0.76479573	0.00067611	0.00378243	0.00316067
RRP1	3	0.02802626	1	2.12725035	0.34520212	0.00050226	0.00217591	0.00120158
RAD21	3	0.02807676	0	1.13493054	0.56696071	0.00103992	0.00369769	0.00044371
CYP2B6	3	0.02815914	0	1.1389383	0.56582573	0.00099825	0.00386412	0.00047671
UVRAG	3	0.02821692	0	1.21636817	0.54433845	0.00060146	0.0301799	0.00277185
GPX5	3	0.02826519	0	1.43238213	0.4886098	0.0005778	0.00481344	0.00166367
RHBDL2	3	0.02830347	0	1.63259638	0.44206507	0.00062294	0.0045358	0.00549739
DYNLRB2	3	0.02835281	0	1.20318804	0.54793752	0.0012631	0.09474678	0.00034433
MRPL33	3	0.02836618	0	1.76322471	0.41411467	0.00081704	0.00551776	0.00077019

AASDH	3	0.02842751	0	1.62902972	0.44285412	0.00090548	0.00258897	0.00059671
SRM	3	0.02849828	0	1.78298742	0.41004281	0.00102164	0.00562999	0.00045223
PTPLB	3	0.02859228	0	1.22842166	0.54106772	0.0007993	0.00670195	0.0008776
OR1Q1	3	0.02869342	0	0.21089477	0.89992182	0.00070406	0.00753558	0.0020142
CHRM4	3	0.02882629	0	1.11342494	0.57309002	0.00087626	0.00587455	0.00065202
SNAPC2	3	0.02886333	0	1.57976443	0.45389826	0.00076025	0.01672976	0.00112587
OSGEP	3	0.02888634	0	1.13584676	0.56670104	0.00125629	0.00312779	0.00035563
APBA2	3	0.02889471	0	1.08549404	0.58114963	0.00091047	0.01473686	0.00058738
KCNJ2-AS1	3	0.02895601	0	1.67576476	0.43262569	0.0006521	0.00414538	0.02643799
MDK	3	0.02895726	0	1.57135852	0.45580998	0.00088052	0.00279712	0.00065693
SLC34A1	3	0.02904379	0	1.54840477	0.46107139	0.00065688	0.0041186	0.00760216
SNAPIN	3	0.02914302	0	1.15995953	0.5599097	0.00082215	0.00858518	0.00081024
CEP164	3	0.02918254	0	1.98686584	0.37030328	0.00075829	0.0026142	0.00122884
MRPL37	3	0.0292262	0	0.29721922	0.86190553	0.00071403	0.00881577	0.00187028
LINC00333	3	0.02933568	0	1.19841774	0.54924599	0.0005529	0.00615425	0.00102286
NARS2	3	0.02942148	0	0.08401177	0.95886414	0.00070279	0.08023915	0.00221637
DOLK	3	0.02942572	0	1.30729867	0.52014413	0.00081057	0.0048035	0.000879
RAET1G	3	0.0294262	0	1.86417924	0.3937301	0.00063834	0.00339235	0.00784097
PSME4	3	0.02947505	0	1.16332789	0.5589675	0.00143103	0.02510034	0.00031557
USP1	3	0.02948075	0	1.39276847	0.49838409	0.00071672	0.0025445	0.00198755
LRRC72	3	0.02955171	0	0.72850476	0.69471584	0.00073097	0.0175766	0.00156152
CACNA2D1	3	0.02959604	0	1.61875176	0.4451358	0.00074395	0.01079204	0.00134242
PLEKHA5	3	0.02961174	0	1.70582543	0.4261718	0.00082056	0.00284854	0.00085937
HOXA13	3	0.02961328	0	1.92463237	0.38200706	0.00078568	0.0026138	0.00104736
ZNF239	3	0.02969093	1	2.02800751	0.36276365	0.00063031	0.00477093	0.00044308
DGKB	3	0.0297413	0	1.61389558	0.44621794	0.00058377	0.00381104	0.00157587
ZNF786	3	0.02975693	0	1.09477148	0.57846008	0.00065986	0.01319539	0.01154677
TCF7	3	0.02978525	0	1.74866003	0.4171414	0.00070858	0.00286605	0.00196298
METTL7B	3	0.02999455	0	0.75770867	0.68464533	0.00073529	0.03955455	0.00155484
THAP4	3	0.03009321	0	1.14023931	0.56545777	0.00101656	0.00401309	0.00049328
CYP2D7P1	3	0.03010345	0	1.08756932	0.58054692	0.00071325	0.00394351	0.00195853
AGPAT9	3	0.03017872	0	1.21205029	0.54551491	0.00121528	0.00290273	0.00038237
KCNS2	3	0.03019709	0	0.44096907	0.80213004	0.000679	0.00790148	0.00520822
THAP11	3	0.03024283	0	0.44863997	0.79905941	0.00069495	0.00609991	0.00285332
PSG3	3	0.03032829	0	0.78151257	0.67654502	0.0007398	0.01173351	0.0015538
FMO1	3	0.03046101	1	2.17159754	0.33763199	0.00030734	0.00173344	0.00042192
HIST4H4	3	0.03062416	0	1.55820905	0.45881669	0.00060465	0.00434212	0.002096
MIR4700	3	0.03065608	0	0.69021893	0.70814283	0.00073641	0.00528028	0.00170827
CCDC73	3	0.03068663	0	1.43944122	0.48688827	0.00078919	0.00738891	0.00107315
KIAA0895L	3	0.0307496	1	2.1145595	0.34739954	0.00050629	0.00381179	0.0010463
FAM65A	3	0.03086501	0	1.81854222	0.40281773	0.00070147	0.00264042	0.00260399
RABAC1	3	0.03087004	0	0.80584809	0.66836286	0.00074318	0.0059837	0.00161277
OR13J1	3	0.03087512	0	1.23298819	0.53983373	0.00061939	0.0183128	0.0027256
NR3C2	3	0.03087672	0	1.64310977	0.43974737	0.00066252	0.0062877	0.02403092
IFNW1	3	0.03092302	0	1.19704775	0.54962235	0.00084921	0.07742849	0.00078879

SKA2	3	0.03093197	0	1.83554283	0.39940816	0.00091267	0.00239549	0.00065503
CYFIP2	3	0.03104513	0	1.47628362	0.47800131	0.00061213	0.0050036	0.00231104
ASTN1	3	0.03110403	0	1.45296325	0.48360751	0.00097399	0.00285741	0.00056073
VAMP2	3	0.0311253	0	1.94974593	0.37724027	0.00068689	0.00267249	0.00397118
ZMIZ1	3	0.03123261	0	0.46945578	0.790786	0.00069026	0.00834553	0.00414601
ALDH1L1-AS1	3	0.03125733	0	1.6725574	0.43332004	0.00095657	0.0063587	0.00056705
ERVK13-1	3	0.03134155	0	1.72006402	0.42314854	0.00066422	0.00670942	0.04349759
PCDH15	3	0.03136847	0	1.03787007	0.59515403	0.00117279	0.00532669	0.00040974
SLC22A6	3	0.03156232	0	1.41617694	0.49258489	0.00060861	0.00524814	0.00198141
SLC35G6	3	0.03158234	0	0.88265425	0.64318227	0.00075378	0.02095148	0.00152077
SNIP	3	0.03165456	0	1.20381353	0.54776618	0.0009451	0.08451903	0.00059817
MIOS	3	0.03165459	1	2.03606311	0.36130545	0.00121465	0.00162498	0.00034454
ARHGAP42	3	0.03173626	0	1.69799421	0.4278438	0.00068882	0.00300372	0.00451181
CYP2A13	3	0.03174144	0	1.0673403	0.58644866	0.00110669	0.004685	0.0004503
ACD	3	0.03174591	0	1.10063412	0.57676691	0.00070712	0.00352722	0.00279713
RLTPR	3	0.03174591	0	1.10063412	0.57676691	0.00070712	0.00352722	0.00279713
DHX40	3	0.03175039	0.78069926	2.01573684	0.36499617	0.00107748	0.00175163	0.00038947
OR1B1	3	0.0317911	0	0.88501383	0.6424239	0.0007554	0.00784831	0.00155057
C8orf84	3	0.03180002	0	1.14296139	0.56468869	0.00086562	0.0079437	0.0007817
RBP2	3	0.03180882	0	1.23197488	0.54010731	0.00082755	0.01369301	0.00092147
PPAT	3	0.03182252	0	1.06220341	0.58795686	0.00101502	0.01064389	0.00052017
SLC27A3	3	0.03183759	0	1.88795442	0.38907731	0.00092814	0.00486202	0.00062122
DDX17	3	0.03185064	0	1.09177356	0.57932782	0.00111581	0.00422357	0.00044667
MIR711	3	0.03199868	0	1.79974908	0.40662067	0.00079788	0.00534187	0.00106986
CLOCK	3	0.03205089	0	1.82863199	0.40079068	0.00082765	0.00273244	0.00096665
TMEM100	3	0.03206767	0	1.28757074	0.5253002	0.00114475	0.0028837	0.00043543
KIF15	3	0.03210685	0	1.03030752	0.59740873	0.00139069	0.0046884	0.00034577
CH25H	3	0.03212138	0	1.17261766	0.55637718	0.00073064	0.00263599	0.00235877
LOC100500938	3	0.03215169	0	0.20838343	0.90105254	0.00070105	0.0108513	0.00418637
SLC51A	3	0.03220864	0	1.76372751	0.41401058	0.00066111	0.0084964	0.01079739
APOBEC3B	3	0.03222211	0	0.18952022	0.90959111	0.00070075	0.02126006	0.00421289
VSTM2B	3	0.03222958	0	1.9764185	0.37224269	0.00076853	0.00431774	0.00134306
PHYHD1	3	0.03250711	0	1.49969284	0.47243911	0.0008537	0.00343511	0.00086708
SMARCA2	3	0.03256006	0	1.02248383	0.59975028	0.00069242	0.00411216	0.00785077
MIR3185	3	0.03259106	0	1.34243072	0.51108704	0.00084545	0.00447906	0.00089905
AKR1CL1	3	0.03263595	0	1.20778518	0.54667949	0.00120953	0.00305923	0.00041021
DDHD1	3	0.03267051	0	0.85999846	0.65050959	0.00070071	0.00466612	0.00418105
SLC29A2	3	0.03271226	0	0.71578398	0.69914859	0.00069652	0.0051125	0.00644642
C8orf71	3	0.03275068	0	1.68308323	0.43104551	0.00086215	0.00288842	0.00085189
GPX6	3	0.03275626	0	1.37669169	0.50240644	0.00061361	0.00599111	0.00174125
GPAT2	3	0.0327931	0	1.25080463	0.53504613	0.00094462	0.00387966	0.00063976
TFAP2B	3	0.03282599	0	1.42821643	0.48962856	0.0009305	0.01036624	0.00064816
ZNF451	3	0.03293515	0	1.3376275	0.51231595	0.00082973	0.07111224	0.00096654
UBD	3	0.03298518	1	2.04366227	0.35993525	0.00065572	0.00370367	0.00127763
ITGA4	3	0.03299408	0	1.49837995	0.47274934	0.00091992	0.0084883	0.00067196

PLOD2	3	0.03303749	0	1.95731758	0.37581481	0.00068807	0.00313274	0.00771006
LOC400684	3	0.03304139	0	1.65370053	0.43742489	0.00077099	0.00593749	0.00142838
LRRC3B	3	0.0330599	0	1.64759376	0.43876256	0.0007513	0.0034307	0.00170812
MCFD2	3	0.03309438	0	1.19945465	0.5489613	0.00085257	0.00926192	0.00088397
RTF1	3	0.03318867	0	1.39596179	0.49758897	0.00058288	0.00575245	0.00107872
UGGT2	3	0.03324122	0	1.31212445	0.51889059	0.0008599	0.00459525	0.00087211
PPFIBP1	3	0.03335271	0	1.39050552	0.49894832	0.00083185	0.00504345	0.00100596
GNAL	3	0.03337003	0	1.09165785	0.57936134	0.00092861	0.00942683	0.00067755
ZSCAN5B	3	0.03343804	0	1.81077031	0.4043861	0.00072567	0.00265018	0.00252654
C8orf42	3	0.03345443	0	1.20677135	0.54695668	0.00086148	0.00701741	0.00086939
SPAG1	3	0.03346992	0	1.119748	0.57128104	0.0010167	0.02829326	0.00054658
C3orf80	3	0.03348705	0	1.07772843	0.58341051	0.00103257	0.0135722	0.00053166
LOC100507362	3	0.03348804	0	1.09943857	0.57711179	0.00098259	0.01976793	0.0005889
OR10S1	3	0.03350642	0	1.21408443	0.54496036	0.00073084	0.00335648	0.00239021
LOC646813	3	0.03352329	0	1.27460956	0.52871551	0.00106438	0.00323308	0.00051034
RCVRN	3	0.03354093	0	1.65746707	0.43660188	0.00064255	0.00407848	0.00279758
OR51F1	3	0.03372525	0	1.83964272	0.39859024	0.00087509	0.00490291	0.00080527
PSG5	3	0.03373873	0	0.62484724	0.73167151	0.00076437	0.05204716	0.0016775
VDAC1	3	0.03376758	0	1.67377645	0.433056	0.00066756	0.00837213	0.00925147
KRTAP25-1	3	0.03377848	0	1.43705266	0.4874701	0.00076629	0.00465011	0.00158824
ZNF663	3	0.03378545	0	0.68384832	0.71040208	0.00076878	0.02278403	0.00162843
TPBGL	3	0.03391343	0	1.64545312	0.43923243	0.00062359	0.00390457	0.00200507
FAHD2CP	3	0.03396107	0	1.63867127	0.44072436	0.00083062	0.00336614	0.00106761
FNIP1	3	0.03396408	0	1.22403074	0.54225692	0.0008811	0.00533806	0.00082648
OVOL3	3	0.03400675	0	1.21763647	0.54399336	0.00069125	0.00717238	0.02531939
POLR2I	3	0.03400675	0	1.21763647	0.54399336	0.00069125	0.00717238	0.02531939
OR4D1	3	0.03405449	0	1.2987071	0.52238336	0.00086676	0.02856841	0.00086144
PEX5	3	0.03407899	0	1.1897876	0.55162115	0.0009123	0.00512156	0.00074138
ZC3H6	3	0.03422496	0	1.26732265	0.53064538	0.00078741	0.00800119	0.00144257
SAMD7	3	0.03425232	0	1.72800601	0.42147155	0.00088226	0.00565886	0.00080501
CROT	3	0.03435875	0	1.61972268	0.44491975	0.00067157	0.01023294	0.00730203
KLHL25	3	0.0344284	0	1.88166533	0.39030271	0.00065143	0.00348422	0.00372412
MKRN7P	3	0.03446815	0	1.849333	0.39666369	0.00080772	0.02501804	0.00123625
PART1	3	0.03455468	0	1.75321224	0.41619303	0.00063759	0.00368198	0.00247879
TEP1	3	0.0345966	0	1.29346751	0.52375369	0.0012653	0.02542685	0.00040045
UBE2E1	3	0.03464507	0	1.95841908	0.37560788	0.00094125	0.00232844	0.00070767
MIR4696	3	0.03467286	0	1.9439801	0.37832939	0.0008078	0.01813438	0.00125767
RAB3A	3	0.0347162	0	1.098095	0.57749962	0.00138587	0.01483204	0.00036545
MPV17L2	3	0.0347162	0	1.098095	0.57749962	0.00138587	0.01483204	0.00036545
TGFBR3L	3	0.03473354	0	1.76231473	0.41430313	0.00081008	0.01278501	0.0012184
MRE11A	3	0.03476681	0	1.53102548	0.4650954	0.0006146	0.0046768	0.00143744
RBP1	3	0.03476852	0	1.14846696	0.56313636	0.00089488	0.01371279	0.0008057
SPAG9	3	0.03477886	0	1.52750294	0.46591528	0.00087962	0.00333044	0.00087729
C8orf37	3	0.03483074	0	1.35369221	0.50821733	0.00087779	0.00424261	0.00088041
PTPRK	3	0.03486104	0	0.92122664	0.63089659	0.00076034	0.00482527	0.00190897

PROS1	3	0.03494358	0	1.11550071	0.57249553	0.00094629	0.02018489	0.00068402
PSD4	3	0.03501343	0	0.08603319	0.95789549	0.00073781	0.02087318	0.00290119
TXNDC16	3	0.0352646	0	1.64558948	0.43920248	0.00087711	0.00304832	0.00091308
RNF144B	3	0.03528848	1	2.0896202	0.35175861	0.00048616	0.00180774	0.00043263
TGM2	3	0.03538628	0	1.23018432	0.54059107	0.0008689	0.0179979	0.00092558
BCCIP	3	0.03538837	0	1.95596887	0.37606833	0.00068205	0.00352592	0.01487526
LMAN2	3	0.03543019	0	1.8540701	0.39572528	0.00068165	0.00349407	0.00710431
COBLL1	3	0.03544523	1	2.03319736	0.36182353	0.00062746	0.00299005	0.00592417
OR51L1	3	0.03545873	0	1.91908853	0.38306742	0.00052319	0.00336793	0.00055018
LOC728819	3	0.03548655	0	1.90684261	0.38542012	0.00095339	0.00238466	0.00070667
ZCCHC24	3	0.03550328	0	1.94477366	0.37817931	0.0006948	0.00331496	0.02371999
FAM3C	3	0.03559574	0	1.12758783	0.56904605	0.00103115	0.00469205	0.00057763
POLR2K	3	0.03560502	0	1.48586007	0.475718	0.00110701	0.00919536	0.00049509
C6orf222	3	0.03561307	0	1.70623649	0.42608422	0.0008319	0.00350917	0.00118121
GC	3	0.0356154	0	1.53145216	0.46499618	0.00079834	0.00368661	0.00152009
ZNF485	3	0.03562356	0	1.32923625	0.51446995	0.00093517	0.00381862	0.00074117
CNFN	3	0.03563821	1	2.02230015	0.36380034	0.00073731	0.0024589	0.00154748
TSNAXIP1	3	0.03566409	0	1.24343481	0.53702136	0.00072627	0.00343519	0.0039439
RAD54L	3	0.03574703	0	1.27359664	0.52898335	0.00090681	0.00455779	0.00081939
ACAN	3	0.03576753	0	1.43773867	0.48730292	0.00084696	0.0226835	0.0010442
C1QB	3	0.03577856	0	1.75431263	0.4159641	0.00070361	0.00392767	0.01311641
CEP128	3	0.03582612	0	1.67022255	0.43382621	0.00092481	0.00611195	0.0007446
ZNF25	3	0.0360026	0	1.41483826	0.49291471	0.00111241	0.01124815	0.00049734
SREBF1	3	0.036023	0	1.21250205	0.5453917	0.00063829	0.01058394	0.00197886
QSER1	3	0.0360249	0.48641144	2.00977578	0.36608567	0.00077669	0.00257932	0.00126615
TAS2R10	3	0.03603281	0	0.7215911	0.69712151	0.00071614	0.00782207	0.00915927
OSBPL1A	3	0.03605556	0	1.44599224	0.48529607	0.00067418	0.01041146	0.00463355
LINC00636	3	0.03615496	0	1.79590355	0.40740326	0.00119312	0.00542872	0.00044596
KRTAP5-3	3	0.03622367	0.73901377	2.01489032	0.36515069	0.00199526	0.00411447	0.00034427
ZNF3	3	0.0362883	0	1.57920455	0.45402534	0.00088551	0.00326588	0.00092671
ADCYAP1R1	3	0.03630262	0	1.04006128	0.59450233	0.00076203	0.00383974	0.00218927
GTPBP5	3	0.03632436	0	1.44561749	0.48538701	0.00097573	0.00316749	0.00068065
KRTAP5-11	3	0.03632904	0	1.03502433	0.59600146	0.00195714	0.00366403	0.00029332
BEND5	3	0.03638297	0	0.89857341	0.63808313	0.0007815	0.00613351	0.00177506
PPARA	3	0.03649204	0	1.37859836	0.50192771	0.00065188	0.00638173	0.00227556
OR52J3	3	0.03650648	0	1.17006887	0.55708668	0.00053831	0.01385401	0.00060636
C6orf208	3	0.03659307	0	1.50084119	0.47216792	0.00090016	0.00344753	0.00088266
MIR1283-1	3	0.03660773	0	0.98985082	0.60961638	0.00071115	0.03947637	0.01740199
KCNK16	3	0.03672526	0.43126437	2.00866265	0.36628948	0.00078231	0.00432606	0.00078207
BLM	3	0.03674833	0	0.46970264	0.7906884	0.00077756	0.01023776	0.00195819
FAM19A4	3	0.03676315	1	2.24404951	0.32561983	0.000251	0.00110174	0.00021118
LOC284757	3	0.03685235	0	1.52397819	0.46673712	0.00075748	0.00233938	0.00318404
ST6GAL1	3	0.03686904	0	1.13319916	0.56745174	0.00101492	0.03823439	0.00061652
PSEN1	3	0.03688023	0	1.12103537	0.57091343	0.00094566	0.01456454	0.00074375
LOC100505876	3	0.03689089	0	1.27866642	0.52764413	0.00080171	0.00767134	0.00153281

AMOTL2	3	0.0369464	0	1.97380318	0.37272977	0.00112482	0.00451583	0.00049754
SNORD46	3	0.03701786	0	1.65029267	0.43817087	0.0009469	0.00283152	0.00076463
ACP5	3	0.03703941	0	1.73721957	0.41953439	0.00070108	0.03374426	0.02015791
ZNF767	3	0.03708056	0	1.16984379	0.55714938	0.0006445	0.01771065	0.00194753
KRCC1	3	0.03708663	0	1.37179457	0.50363812	0.00059989	0.0060942	0.00102616
DPP4	3	0.03729207	0	1.53278355	0.46468674	0.00086966	0.00386465	0.00105222
LINC00521	3	0.03729216	0	0.41850977	0.81118845	0.00078336	0.0140609	0.00194941
MIR4491	3	0.03734449	0	1.78207834	0.41022923	0.00083842	0.01010047	0.00124225
SLC29A3	3	0.03743048	0.24427332	2.00489743	0.36697971	0.00075491	0.00255625	0.00221367
ZNF398	3	0.03746255	0	1.75712489	0.41537961	0.00065294	0.00371026	0.00200539
ZBTB4	3	0.03752115	0	1.94132831	0.37883135	0.00082946	0.01128	0.00129956
TOP1P1	3	0.03764321	0	1.33513877	0.51295386	0.00100778	0.01467593	0.0006395
CTXN1	3	0.03770374	0	1.76294113	0.41417339	0.00084221	0.01620653	0.00123483
UBR4	3	0.0377177	0	1.04498967	0.59303917	0.00116314	0.00704284	0.00049173
PRKCZ	3	0.03772766	0	0.35307318	0.83816811	0.00073621	0.02696317	0.00596876
GDF6	3	0.03776053	0	1.41292047	0.49338759	0.00094982	0.00351981	0.00077709
RG9MTD2	3	0.03777436	0	1.1852158	0.55288354	0.00100115	0.15644977	0.00065612
LOC100506274	3	0.03781414	0	1.50643762	0.47084854	0.00087091	0.00421846	0.00107532
C1orf128	3	0.03785826	0	0.98039272	0.61250611	0.00079526	0.00575101	0.00176792
ARHGAP15	3	0.03786025	0	0.01124063	0.99439545	0.00076929	0.02322546	0.00263502
HSPG2	3	0.0378659	0	1.11465104	0.5727388	0.00079089	0.00452922	0.00183542
PLAT	3	0.03787072	0	0.51460368	0.77313482	0.00079579	0.00598139	0.0018971
DPY19L1P1	3	0.0378941	0	1.49583864	0.47335042	0.00059513	0.00366516	0.00098333
AGBL1	3	0.03793993	0	1.03259544	0.59672571	0.00080527	0.00380351	0.00176192
ARID5B	3	0.03798739	0	1.72374842	0.42236973	0.00084382	0.01108032	0.00121811
RGPD3	3	0.03812815	0	0.84134705	0.65660443	0.00080663	0.00478354	0.00174949
TBCB	3	0.03815401	0	1.67656985	0.43245157	0.00072014	0.00406466	0.18071057
SLC2A9	3	0.03816332	0	1.3403713	0.51161359	0.00097761	0.01409049	0.00070424
CPSF6	3	0.03826882	0	1.64204177	0.43998225	0.00074078	0.00297632	0.00466989
FAM82A1	3	0.03829256	0	1.84832761	0.39686314	0.00068323	0.00365708	0.00448541
TAB2	3	0.03830822	0	1.35532086	0.50780365	0.00067335	0.0087356	0.00309182
CFHR5	3	0.03838968	0	1.78030843	0.41059243	0.00079544	0.00314056	0.00180092
IRF8	3	0.03842254	0	1.35202297	0.50864168	0.00089642	0.00499813	0.00097607
GABRA5	3	0.03851157	0	1.19705786	0.54961957	0.00077246	0.00260194	0.00309457
RAET1E	3	0.03852549	0	1.35157727	0.50875504	0.00075801	0.00311237	0.00317613
PSMD8	3	0.03861476	0	1.35493094	0.50790266	0.00066287	0.00665571	0.00235354
MIR520A	3	0.03862686	0	1.98245335	0.37112117	0.00070833	0.01175349	0.01458479
S100A1	3	0.03880338	0	1.16305139	0.55904478	0.00094149	0.0074898	0.00082442
ACSL3	3	0.03883612	0	0.50522802	0.77676765	0.00079699	0.00460033	0.00210271
C19orf69	3	0.03884312	0	1.70366578	0.42663224	0.00070478	0.00572862	0.00725202
EXO1	3	0.03890406	0	1.584984	0.45271522	0.00069995	0.12107293	0.00640421
SLC47A2	3	0.0389474	0	1.25150243	0.53485948	0.00090147	0.01056083	0.0009687
SLCO3A1	3	0.03897449	0	1.33491218	0.51301198	0.00058387	0.00414874	0.00083201
KCNH7	3	0.03900182	0	1.40970924	0.49418041	0.00125023	0.01157494	0.00045116
ELAVL1	3	0.0390248	0	1.75258039	0.41632453	0.00085561	0.01181146	0.00124166

TMEM102	3	0.03903528	0	0.51444372	0.77319665	0.00080405	0.00539608	0.00196051
NUP188	3	0.03905455	0	1.33694284	0.51249136	0.00089937	0.0055575	0.00099315
S100A13	3	0.03907908	0	1.17996238	0.55433771	0.00094412	0.0360918	0.0008182
CACNG4	3	0.03908196	0	0.17780641	0.91493413	0.00076222	0.00718517	0.00389867
MIR520F	3	0.03909363	0	0.81331445	0.66587239	0.00074049	0.00648949	0.00686349
SIGLEC17P	3	0.03913327	0	1.98897543	0.3699129	0.00082444	0.00407306	0.0014878
ATAD3A	3	0.03917209	0	0.91835582	0.63180283	0.00080266	0.00330262	0.00207453
MRPL17	3	0.0391752	0	1.2399511	0.53795759	0.00113947	0.03356041	0.00052415
PON1	3	0.03934363	0	1.54436421	0.46200383	0.0011341	0.00784491	0.00052764
DTX3	3	0.03935484	0	1.5996377	0.44941037	0.00087439	0.00410279	0.00115839
LRRC49	3	0.03936964	0	1.6532084	0.43753254	0.00122475	0.00230325	0.0004827
TRAF1	3	0.03938849	0	1.94269713	0.37857217	0.00115842	0.00463698	0.00050675
PLIN1	3	0.03940068	0	1.1039564	0.57580962	0.00113168	0.00478746	0.00054223
GPSM3	3	0.03943314	0	1.0361567	0.59566411	0.00140308	0.00814799	0.00040038
NSMCE4A	3	0.03945627	0	1.59208154	0.45111149	0.00090371	0.00339851	0.00100819
PCDH9	3	0.03946908	0	1.18390097	0.55324713	0.0006568	0.01297904	0.00188156
AATF	3	0.03947393	0	1.48066641	0.47695497	0.00087608	0.0074295	0.00113826
DKFZP434I0714	3	0.03948141	0	0.97327754	0.61468904	0.0008275	0.00721768	0.0015995
FAM18B2	3	0.03949506	0	1.47387004	0.4785785	0.0008414	0.01906619	0.0014085
MTUS1	3	0.03951179	0	1.94241349	0.37862586	0.00084676	0.01458683	0.00132969
MLKL	3	0.03952511	0	1.97877129	0.37180504	0.00071802	0.00351198	0.04891033
TAS2R9	3	0.03956642	0	1.11502929	0.57263049	0.00073097	0.0104405	0.04027496
C20orf71	3	0.03972441	0	0.88903305	0.64113417	0.00078263	0.00400536	0.00251219
NET1	3	0.03983655	0	1.2664534	0.53087606	0.00090873	0.02431092	0.00097542
ADAP1	3	0.03993301	0	1.79699219	0.40718156	0.00070254	0.0036615	0.00446255
TEX21P	3	0.04003838	0	1.71960795	0.42324504	0.00072306	0.0109166	0.0179194
UQCRH	3	0.04007728	0	1.21220627	0.54547237	0.00092547	0.010519	0.00092496
FYCO1	3	0.04011056	0	1.75355192	0.41612235	0.00055796	0.00387773	0.00061678
LOC100190940	3	0.04011514	0	1.95959432	0.37538723	0.00077317	0.0021399	0.00430198
PKIA	3	0.04012412	0	1.14294449	0.56469346	0.00096583	0.00832391	0.0008027
C7orf29	3	0.04013312	0	0.06227763	0.969341	0.00079183	0.01020336	0.00255795
PAICS	3	0.04019531	0	1.84798892	0.39693035	0.00096887	0.0048762	0.00077319
ALG12	3	0.04033945	0	1.31583455	0.51792891	0.00095262	0.018378	0.00083238
LOC285456	3	0.04038731	0	1.90102752	0.38654238	0.00079107	0.00211165	0.0030473
VTA1	3	0.04045773	0	0.72513162	0.69588852	0.00082857	0.00772032	0.00172001
IL1RN	3	0.04046966	0	1.81675163	0.40317853	0.00106273	0.00515574	0.00061678
DEFB116	3	0.04047576	0	1.66988707	0.43389898	0.0008713	0.01419766	0.00120869
SLC35G1	3	0.0404912	0	1.06135566	0.58820613	0.00081911	0.00320011	0.00197891
NUTF2	3	0.0404927	0	0.90312624	0.63663224	0.00075652	0.00469928	0.00532859
MYLK-AS1	3	0.0405682	0	1.28353276	0.52636185	0.000838	0.00990622	0.00152767
MAGOHB	3	0.04062485	0	1.19574289	0.54998106	0.00066985	0.01526655	0.00207832
DLGAP5	3	0.04080826	0	1.54240081	0.4624576	0.00070883	0.00699333	0.00484588
LBR	3	0.04082324	0	1.48610802	0.47565903	0.00068353	0.00532258	0.00275049
RNU6-72	3	0.0410163	0	1.06421794	0.58736493	0.00114901	0.01139492	0.0005477
KIAA0087	3	0.04104962	1	2.05585926	0.35774686	0.00059408	0.00226505	0.00078846

HRCT1	3	0.0410577	0	1.38640057	0.49997345	0.00070327	0.14631326	0.00411703
TM4SF4	3	0.04107144	0	1.06834012	0.58615556	0.00115622	0.00591447	0.0005454
SCN11A	3	0.04108507	0	1.52168165	0.46727337	0.00088878	0.00731102	0.00116765
MRPS23	3	0.04137732	0	1.6691453	0.43405994	0.0008532	0.00354467	0.0015433
ULBP2	3	0.04145744	0	0.77724741	0.67798935	0.00078088	0.00336251	0.00430077
ABCC11	3	0.04150585	0	1.07492909	0.58422766	0.00150406	0.01231507	0.00038823
MAGI1-AS1	3	0.04157829	0	0.57468315	0.75025541	0.00083422	0.01423777	0.0017774
MIR4782	3	0.04162872	0	1.30054809	0.52190273	0.00074364	0.00706223	0.36284533
LINC00439	3	0.04163583	0	1.57056282	0.45599136	0.00083846	0.00276466	0.0018212
SRP72	3	0.04164411	0	1.73140807	0.42075522	0.0010782	0.0056606	0.0006209
CHRNB1	3	0.04167759	0	0.30262166	0.85958047	0.00082349	0.01482928	0.00200372
MAP2K6	3	0.04193016	0	1.12842972	0.56880656	0.00099793	0.01418083	0.00077766
HS3ST1	3	0.04196333	0	0.93978287	0.62507013	0.000802	0.00290588	0.00303543
CRB1	3	0.0419648	0	0.50968567	0.7750383	0.00083504	0.0160222	0.00182224
RASSF2	3	0.04197106	0	1.82365126	0.40179003	0.00087126	0.00601025	0.00138195
PRMT7	3	0.04201462	1	2.95126517	0.22863405	0.00026351	0.0015201	0.00082875
FGF11	3	0.04205005	0	0.67425301	0.71381853	0.00083681	0.00543088	0.0018549
POLE2	3	0.04213754	0	0.04357196	0.97844962	0.00078735	0.04632245	0.00367836
APOBEC3D	3	0.04214175	0	0.84228557	0.65629639	0.00084599	0.00643923	0.00170292
ANKRD29	3	0.04218753	0	1.11586954	0.57238996	0.00108468	0.00553343	0.0006403
GVIN1	3	0.04221627	0	1.14201857	0.56495495	0.00101912	0.0062609	0.00074656
MIR548T	3	0.04227115	0	1.71622153	0.42396229	0.00085342	0.00290123	0.00167507
CEP250	3	0.04231503	0	1.46983685	0.47954458	0.00091482	0.01419323	0.00106264
GAPDH	3	0.04233067	0	0.43351391	0.80512563	0.00076688	0.0233198	0.0075645
RPS8	3	0.04236183	0	1.92183084	0.38254254	0.00087399	0.00886611	0.00133109
RIN1	3	0.04246577	0	0.214024	0.89851489	0.0007776	0.12024157	0.00501578
LCP2	3	0.04255955	1	2.02294451	0.36368315	0.00072478	0.00445529	0.00065491
S100A16	3	0.04269432	0	1.15864168	0.56027876	0.00098004	0.01184212	0.00084905
RPS6KA2-IT1	3	0.04272	0	0.1820489	0.91299539	0.00079809	0.00597758	0.00344406
CYP7B1	3	0.04272593	0	1.15237004	0.56203845	0.00098558	0.01365824	0.00083388
ARC	3	0.04275097	0	1.8643548	0.39369554	0.00109834	0.00488961	0.00061582
LOC492303	3	0.04282309	0	1.5421378	0.46251842	0.00090345	0.00895041	0.00118672
MIR515-2	3	0.04288522	0	1.59218563	0.45108801	0.00074595	0.00726892	0.08663976
MIR4453	3	0.04289685	0	0.64079392	0.72586084	0.00084699	0.00830988	0.00178604
HPD	3	0.04290174	0	0.80350164	0.66914746	0.00083917	0.00387868	0.00199479
RNF5	3	0.04302788	0	1.95751608	0.37577751	0.00124227	0.00211683	0.00051842
TTLL7	3	0.04312238	0	1.82359199	0.40180194	0.00127048	0.00216629	0.00050235
EVL	3	0.04313475	0.37978501	2.00762466	0.36647963	0.00075444	0.00261833	0.00484447
WSCD2	3	0.04318094	0	1.6301214	0.44261246	0.00072762	0.00555546	0.00525021
TMEM20	3	0.04319478	0	0.72371565	0.69638137	0.00085112	0.00667663	0.00177394
LOC285205	3	0.04321265	0.99491715	2.0200983	0.36420108	0.0010742	0.00439446	0.00043592
NVL	3	0.04322501	0	0.17841465	0.91465592	0.00080805	0.00579751	0.00309198
SPDYE4	3	0.04323862	0	1.99924847	0.3680177	0.00094917	0.00413904	0.00093832
GTPBP1	3	0.04325444	0	1.15172465	0.56221984	0.00282542	0.00250622	0.00027595
RGS14	3	0.04330854	0	1.18777101	0.55217762	0.00075335	0.03451392	0.17170185

FAT4	3	0.04338005	0.04440928	2.00088858	0.36771603	0.00075455	0.00327491	0.01645444
GATSL3	3	0.04342776	0	1.05583665	0.58983153	0.00083946	0.00307292	0.00212649
CDC42	3	0.0434616	0	1.89103222	0.38847902	0.00088819	0.01165598	0.00134535
SCAI	3	0.04347365	0	1.79055205	0.40849483	0.0008457	0.00235871	0.00204452
SETDB1	3	0.04347661	0	1.16119156	0.55956489	0.00075868	0.00757278	0.0755208
S100A14	3	0.04350214	0	1.17021576	0.55704576	0.00098246	0.01074037	0.00087153
PAFAH1B2	3	0.04350271	0	1.9146782	0.38391308	0.00088829	0.00393361	0.00138546
DEFB118	3	0.0435711	0	1.64722426	0.43884363	0.00088216	0.05984178	0.00139389
AP2S1	3	0.04359425	0	1.81175211	0.40418764	0.00075482	0.00410511	0.03181559
ADIPOQ	3	0.0439945	0	1.36886425	0.50437657	0.00117165	0.00315224	0.0005826
NOP2	3	0.04404669	0	1.41846883	0.49202074	0.00096294	0.01180537	0.0009387
FHIT	3	0.04421519	0	1.85263501	0.39600933	0.00074689	0.05675119	0.01156519
LOC339568	3	0.04423327	0	1.0353946	0.59589113	0.00149156	0.00570627	0.00041459
B3GNT1	3	0.04424124	0	0.24567535	0.88440721	0.00078897	0.01727681	0.00566545
DLL1	3	0.04427184	0	1.07486661	0.58424591	0.00111611	0.00980328	0.00063724
RABL2A	3	0.04428603	0	1.35353299	0.50825779	0.00078944	0.00283652	0.00705342
C2orf71	3	0.04429819	0	1.86178997	0.39420075	0.00067764	0.00347665	0.00156705
KIF7	3	0.04458554	0	1.41980754	0.49169151	0.00108598	0.01017611	0.00067335
C18orf26	3	0.0445915	0	1.87524637	0.39155739	0.00100711	0.00257334	0.00086639
PPP1R21	3	0.04461049	0	1.56722541	0.45675291	0.00108981	0.00288435	0.00069316
LINC00652	3	0.04461169	0	0.80532167	0.66853881	0.00085981	0.01155886	0.00175457
AXL	3	0.04463375	0	1.89727639	0.38726805	0.00070544	0.00332501	0.0027441
DHX9	3	0.04467313	0	1.99122851	0.36949641	0.00097273	0.00415419	0.0009143
LOC100289230	3	0.04468067	0	0.45239853	0.79755916	0.00081195	0.00579225	0.00313954
C16orf48	3	0.04472745	0	0.42003127	0.81057157	0.00079668	0.00743513	0.0044786
CMIP	3	0.04474035	0	0.76909287	0.68075933	0.00077817	0.0070285	0.01298014
SLC6A4	3	0.04480366	0	1.31028956	0.51936686	0.00100294	0.00448614	0.00087004
TRAM2	3	0.04489407	0	1.74347395	0.41822447	0.00104899	0.00545633	0.00073596
OR2A42	3	0.04491839	0	1.63831958	0.44080187	0.00075504	0.34791292	0.01604026
MAP3K14	3	0.04496516	0	1.94407852	0.37831078	0.0008968	0.00326046	0.00145534
LRP2BP	3	0.04500544	0	1.84340743	0.39784066	0.00090888	0.00605456	0.00131905
LOXL2	3	0.04501122	0	1.97593182	0.37233328	0.00075329	0.00348848	0.02258335
CHD4	3	0.04502353	0	1.23719408	0.53869968	0.00106902	0.0315068	0.00071343
NCRNA00203	3	0.04505612	0	1.90734629	0.38532307	0.00074821	0.02091702	0.00919349
CDR2	3	0.0451045	0	1.4305756	0.48905134	0.0008917	0.01147153	0.00146374
OR52E2	3	0.04526318	0	1.26379988	0.53158087	0.00057948	0.00400846	0.00064104
C10orf113	3	0.04529501	0	1.43230893	0.48862768	0.00099371	0.01020755	0.00088477
SCAND3	3	0.04530686	0	0.65996135	0.71893763	0.00083663	0.00515929	0.00233301
NFE2L2	3	0.04545376	0	1.41065978	0.4939456	0.00100264	0.01102633	0.00086499
KCTD19	3	0.04549796	1	2.58278241	0.27488809	0.00033716	0.00258923	0.00102595
PRMT6	3	0.04552577	0	1.69407464	0.4286831	0.00102172	0.00286932	0.00085457
SELENBP1	3	0.04558136	0	1.80473351	0.40560855	0.00095475	0.00500751	0.00102576
LCOR	3	0.04567243	0	1.98358647	0.37091096	0.00067571	0.00291662	0.00155607
C4orf43	3	0.04568624	0.67155663	2.01352194	0.36540061	0.00071864	0.00332247	0.04251669
KHDC1	3	0.04569899	0	1.11055438	0.57391316	0.00123125	0.02671087	0.00054732

C14orf39	3	0.04570992	0	1.61518001	0.44593146	0.00078141	0.00345144	0.0096366
G3BP2	3	0.04573731	0	1.99219151	0.36931854	0.00075778	0.00305618	0.00828161
ZBBX	3	0.04576112	0	1.61209914	0.44661892	0.00158257	0.00696544	0.00039599
MAP3K7	3	0.04580127	0	1.28781024	0.5252373	0.00088635	0.00428605	0.00164363
ATP1A3	3	0.04585424	0	0.68102241	0.71140656	0.00086308	0.00440903	0.00203196
KIF26B	3	0.04586397	0	1.3078005	0.52001363	0.00097041	0.0066118	0.00101667
SMG8	3	0.04588402	0	1.6624589	0.43551352	0.00108988	0.00610098	0.00069155
AIMP2	3	0.04606306	0	1.88183152	0.39027028	0.00090805	0.0251665	0.00136817
C17orf74	3	0.04606538	0	0.16540407	0.92062542	0.00083844	0.00628592	0.00275985
GNPNAT1	3	0.04607587	0	1.79533716	0.40751865	0.00100572	0.00505667	0.00086781
PRRT1	3	0.0460938	0	1.57277015	0.45548838	0.00119601	0.00697733	0.00057482
KHDC1L	3	0.04611138	0	1.37765382	0.50216481	0.00129805	0.00292991	0.00051828
LRRC8E	3	0.04613451	0	1.91511297	0.38382963	0.00090416	0.00516073	0.00137254
COMMD2	3	0.04617225	0	1.00898424	0.60381216	0.00081176	0.00307824	0.00525677
C7orf4	3	0.04618971	0	1.46821734	0.47993305	0.00073993	0.01333524	0.00432796
HOXA10	3	0.04634139	0	1.1108611	0.57382515	0.00084761	0.00273868	0.0026792
HOXA9	3	0.04637384	0	1.43554387	0.48783798	0.00086605	0.00260975	0.00215381
ZCCHC6	3	0.04641043	0	1.12458053	0.56990234	0.00107478	0.00708761	0.00074781
LOC441455	3	0.04651437	0	1.32711419	0.51501611	0.00098893	0.00514587	0.00097875
LEKR1	3	0.04657071	0	0.09599066	0.95313824	0.00084812	0.09732515	0.00244318
BMP4	3	0.04661882	0	0.33193817	0.84707242	0.00084117	0.00775601	0.00258309
ZSCAN21	3	0.04663339	0	1.89697637	0.38732615	0.00091726	0.00358373	0.00141033
KDELR3	3	0.04668986	0	1.17708082	0.55513697	0.00118622	0.0043312	0.00060839
C5orf58	3	0.04669071	0	0.91409381	0.63315064	0.00085224	0.0043784	0.00220208
LINC00488	3	0.04671674	0	1.21252415	0.54538568	0.00088246	0.0033918	0.00184779
GALP	3	0.04678002	0	1.7567247	0.41546274	0.00081175	0.00269951	0.00404726
EGFLAM-AS4	3	0.04678409	0	1.76295393	0.41417074	0.00105711	0.00269092	0.00081015
PDE6B	3	0.04685634	0	1.6887449	0.42982701	0.00110027	0.0027128	0.00072916
MXD3	3	0.04686502	0	1.81944072	0.4026368	0.00076064	0.00703729	0.00766938
LRIT1	3	0.04692413	0	1.33868908	0.51204409	0.00107482	0.01367197	0.00074609
TLE3	3	0.04698275	0	1.56285579	0.45775192	0.00098778	0.00350441	0.00101386
ATXN8OS	3	0.04699531	0	1.83797301	0.39892314	0.00072266	0.00350235	0.00289747
MIR519C	3	0.0470146	0	1.45061946	0.48417458	0.0007722	0.157628	0.02210926
CDK17	3	0.04701749	0	0.93971451	0.62509149	0.00088134	0.00844893	0.00174825
TBC1D15	3	0.04704606	0	1.913521	0.38413528	0.00074808	0.00329712	0.00416102
OBFC2A	3	0.04718013	0	1.58806993	0.45201724	0.0007022	0.00412105	0.00196137
LOC254559	3	0.0471906	0	1.60070282	0.44917109	0.00094247	0.00705562	0.00123329
TLN2	3	0.04719626	0	1.3119414	0.51893808	0.00128527	0.01648509	0.00052609
ZFP28	3	0.04729341	0	1.88297797	0.39004663	0.00124096	0.00224041	0.00057765
MIR1272	3	0.04738281	0	1.07776685	0.5833993	0.00117218	0.01086477	0.00062813
PMVK	3	0.04738578	1	2.02253052	0.36375844	0.00081595	0.00444552	0.00058178
CAMSAP1	3	0.0474475	0	1.6383225	0.44080122	0.00096768	0.00666208	0.00106511
IGSF11-AS1	3	0.04749379	0	1.5126264	0.4693938	0.00067123	0.00492166	0.00121228
ZNRF3-AS1	3	0.04754599	0	1.47290349	0.47880985	0.0009069	0.00414248	0.00159619
IL36RN	3	0.04761888	1	2.05620794	0.3576845	0.00062389	0.00434498	0.0007385

C10orf54	3	0.04761956	0	1.80629994	0.40529099	0.00093673	0.00343296	0.00133381
ZNF639	3	0.0477048	0	1.8024944	0.4060629	0.00093491	0.09386331	0.00129536
NT5C3	3	0.04775068	0	1.37216046	0.50354599	0.00090478	0.01061036	0.00154188
MIR4482-1	3	0.04775897	0	1.12404396	0.57005526	0.00139789	0.03120203	0.0004759
SPRED3	3	0.04778398	0	1.92632645	0.38168362	0.00076761	0.00773617	0.01073889
APOBEC1	3	0.04778672	0	0.52452143	0.76931043	0.00083928	0.00381259	0.00358147
FLJ37543	3	0.04784401	0	1.21104748	0.5457885	0.00078471	0.0108869	0.0653373
FAM174B	3	0.04798856	1	2.05119653	0.35858187	0.00075478	0.00357706	0.00138429
MIR3131	3	0.04803369	0	1.22768212	0.54126783	0.00091116	0.04428012	0.00153553
URG4	3	0.04807246	0	0.35577292	0.83703746	0.00081355	0.00980511	0.00694257
PHOX2A	3	0.04809148	0	1.87551479	0.39150484	0.0012426	0.00484525	0.00056195
CCDC151	3	0.04816775	0	1.50413482	0.47139099	0.00090561	0.00667128	0.00155977
WDR96	3	0.04827172	0	1.05820296	0.58913408	0.00171791	0.00430512	0.00039101
UCN3	3	0.04831653	0	1.52629086	0.46619772	0.00095785	0.01025967	0.00120225
PAX8	3	0.0483405	0	1.4419368	0.48628111	0.00096605	0.01111554	0.00115604
OR4D11	3	0.04843262	0	1.89013083	0.38865415	0.0009467	0.00292748	0.00133073
UBE2U	3	0.04844565	0	1.94451551	0.37822813	0.00096475	0.00269871	0.00121712
OR4D10	3	0.04849188	0	1.88392008	0.38986294	0.00093608	0.00388752	0.00140085
NARG1L	3	0.04856649	0	0.80717974	0.667918	0.00086225	0.00448494	0.00236618
GGN	3	0.04866477	0	1.50994234	0.47002417	0.00075714	0.03266823	0.00475505
ERLEC1	3	0.04867788	0	1.05922887	0.58883196	0.00215029	0.00368914	0.00033601
SPEM1	3	0.04874895	0	0.2471122	0.88377206	0.0008681	0.00601704	0.00251044
ACTL9	3	0.04874951	0	1.45989254	0.48193488	0.00099263	0.00436247	0.00106894
ABO	3	0.04878336	0	0.46723554	0.79166435	0.0008454	0.0056524	0.00310677
LAMB1	3	0.04883371	0	0.64096102	0.7258002	0.00087968	0.00402274	0.00225968
AGER	3	0.0488503	0	1.06620885	0.58678052	0.00145478	0.01415518	0.00046383
MLEC	3	0.04886677	0	1.47965477	0.47719628	0.00098978	0.00431387	0.00108787
PSG6	3	0.04889151	0	1.35264647	0.50848313	0.00082356	0.00281884	0.00737738
MCEE	3	0.04892411	0	1.14650748	0.56368836	0.00070657	0.02804673	0.0017343
SLC35C1	3	0.04897184	0	1.18448422	0.55308581	0.00115139	0.00469517	0.00068918
SLC26A10	3	0.04901426	0	1.68859443	0.42985935	0.00097299	0.00343132	0.00119034
CP	3	0.04902464	0	1.82860107	0.40079687	0.00096347	0.00302428	0.00125452
ADRA1A	3	0.04909531	1	2.05054375	0.35869893	0.00065248	0.00433427	0.00073288
VPS37B	3	0.04917973	1	2.04179598	0.36027127	0.00068653	0.00441851	0.00069092
BANK1	3	0.04921691	0	1.75621449	0.41556874	0.00088117	0.00227341	0.00243576
EIF4A3	3	0.04933357	0	1.44050647	0.48662901	0.00112228	0.00933085	0.00071954
NOP10	3	0.04935266	0	1.33871557	0.51203731	0.00104351	0.00445428	0.00091254
MED31	3	0.04936654	0	1.88200971	0.39023551	0.00094677	0.00498101	0.0013715
CETN1	3	0.04941028	0	0.15348725	0.92612726	0.00086953	0.00735618	0.00262016
ORC3L	3	0.04942338	0	1.44997874	0.48432972	0.00075572	0.01284821	0.00407327
CHTOP	3	0.04978454	0	1.18661593	0.55249662	0.00104358	0.01154614	0.00091354
CLEC1B	3	0.04979058	0	1.89036366	0.3886089	0.0010266	0.00266107	0.00100013
METTL21C	3	0.04995215	0	1.88594698	0.38946803	0.00094889	0.00370977	0.00141703

Table S18 Significant hub genes from our gene and subnetwork GWAS meta-analysis using ancMETA encompassing ESH, SA, and TLNWL

Hub	#Study	overall P	I2	Q	P_Q	P_ESH	P_SA	P_TLNWL
GPHN	3	0.0002177	0	1.0806783	0.5825507	0.0219736	0.3963363	0.2196421
RGS2	3	0.0039572	0	1.5513898	0.4603837	0.0372781	0.3917595	0.378514
ATP1A1	3	0.0045193	0	1.557334	0.4590175	0.0488264	0.2036226	0.0457301
NID1	3	0.0057418	0	1.2062681	0.5470943	0.048661	0.2909649	0.0603756
ACTN2	3	0.0091583	0	1.8686933	0.3928424	0.0547135	0.330818	0.0646795
UCHL5	3	0.010487	0	1.9237983	0.3821664	0.0580728	0.1972179	0.0633873
PROX1	3	0.0172422	0	1.9621544	0.374907	0.0844221	0.313575	0.0380493
PDCD10	3	0.0173409	0	1.1753786	0.5556096	0.0489746	0.4064972	0.133105
ITSN2	3	0.0192496	0	1.1747105	0.5557953	0.0721636	0.3068202	0.0634606
GLI3	3	0.020044	0	1.6080133	0.4475323	0.0533042	0.2904353	0.2100377
APOA1	3	0.0202445	0	1.7242714	0.4222593	0.0675352	0.3445992	0.0863397
PARD6A	3	0.0206662	0	1.4833889	0.4763062	0.0597713	0.2453041	0.2233809
PRPF40A	3	0.0210434	0	1.0514866	0.5911158	0.0614575	0.2226573	0.2032932
CALM1	3	0.021556	0	0.2370266	0.88824	0.0612361	0.4018173	0.2095605
COPS6	3	0.0242286	0	1.2071366	0.5468568	0.0762845	0.3168661	0.0726132
GNB2L1	3	0.02424	0	1.7814655	0.410355	0.0760297	0.3323584	0.0711724
LIMS1	3	0.0242887	0	1.7750296	0.4116776	0.0896606	0.1892398	0.0479575
HNRNPA1	3	0.0247177	0	1.8060398	0.4053437	0.075895	0.2178501	0.077586
ELAVL1	3	0.0263866	0	1.5027449	0.4717187	0.0765148	0.3901811	0.0798892
CDC42	3	0.0266109	0	1.4894977	0.4748536	0.0765079	0.3945014	0.081089
LYAR	3	0.0270623	0	1.1368753	0.5664097	0.0893079	0.471447	0.0528076
RAD21	3	0.0280768	0	1.1349305	0.5669607	0.1005131	0.2737682	0.0440871
SNAPIN	3	0.029143	0	1.1599595	0.5599097	0.0804565	0.3870079	0.0793395
PLEKHA5	3	0.0296117	0	1.7058254	0.4261718	0.080308	0.2323667	0.0839365
HOXA13	3	0.0296133	0	1.9246324	0.3820071	0.0770282	0.2188432	0.1011845
ACD	3	0.0317459	0	1.1006341	0.5767669	0.0695821	0.2663158	0.2294886
TUBA4A	3	0.0317793	0	1.3099858	0.5194458	0.0795783	0.4410931	0.0963505
PABPC1	3	0.0321529	0	1.5449157	0.4618764	0.0720826	0.2015259	0.1988941
SMARCA2	3	0.0325601	0	1.0224838	0.5997503	0.0681804	0.2903288	0.3774107
ITGA4	3	0.0329941	0	1.4983799	0.4727493	0.0895526	0.385825	0.0662235
TGM2	3	0.0353863	0	1.2301843	0.5405911	0.0848238	0.4443383	0.0900745
ACAN	3	0.0357675	0	1.4377387	0.4873029	0.0827784	0.4556966	0.1008992
SREBF1	3	0.036023	0	1.212502	0.5453917	0.0629933	0.4070404	0.1770481
DPP4	3	0.0372921	0	1.5327836	0.4646867	0.084894	0.2806943	0.1016225
APP	3	0.0385073	0	1.4031282	0.4958092	0.0853284	0.3707764	0.1045897
S100A1	3	0.0388034	0	1.1630514	0.5590448	0.0915397	0.3721041	0.0806697
VIM	3	0.0397279	0	1.2037166	0.5477927	0.0818191	0.3851637	0.1405378

ITGB2	3	0.0403677	0	1.3999682	0.4965932	0.091547	0.4159993	0.0843759
CHD4	3	0.0450235	0	1.2371941	0.5386997	0.1031347	0.4680543	0.0701831
DDIT3	3	0.0452312	0	1.6970014	0.4280562	0.0915596	0.3445479	0.1034814
MAP3K7	3	0.0458013	0	1.2878102	0.5252373	0.086445	0.2966759	0.1517239
BMP4	3	0.0466188	0	0.3319382	0.8470724	0.0822374	0.3760585	0.2170003
MYD88	3	0.0466469	0	1.2518708	0.534761	0.0978099	0.4860438	0.0869812
FTL	3	0.047254	0	1.5639821	0.4574942	0.0993729	0.3654919	0.0833619
KIAA0101	3	0.0475253	0	1.7914237	0.4083168	0.1006621	0.3219249	0.0804049
APPBP2	3	0.0476759	0	1.2556568	0.5337496	0.097079	0.4877898	0.0931313
UBE2U	3	0.0484457	0	1.9445155	0.3782281	0.0936741	0.2238486	0.1162526
EIF4A3	3	0.0493336	0	1.4405065	0.486629	0.1078969	0.3953811	0.070765
MED31	3	0.0493665	0	1.8820097	0.3902355	0.0920249	0.3190092	0.1294989
ITSN1	3	0.0495528	0	1.92181	0.3825465	0.1020823	0.3022911	0.0822585

Table S19 Significant genes from our gene and subnetwork GWAS meta-analysis using ancMETA encompassing SUIC, ICV, Accumbens, Caudate, Hippocampus, Pallidum, Thalamus, and Putamen.

Gene	#Study	Overall P	I2	Q	P_Q	TAU^2	P_SUIC	P_Caudate	P_ICV	P_Accumbens	P_Thalamus	P_Pallidum	P_Putamen	P_Hippocampus
RPL11	8	0.000183431	0	6.676148	0.463359587	0	0.0126312	0.00149208	0.002456867	0.00046056	0.000595164	0.000283279	0.001066915	0.000413052
DDX4	8	0.000403646	0	5.338258	0.618757719	0	0.01013775	0.00032004	0.014586425	0.000870383	0.000640312	0.000327266	0.000386138	0.000521487
WDR55	8	0.001067884	0	6.606515	0.470964954	0	0.00363539	0.00046105	0.011928686	0.000616371	0.00932195	0.00035386	0.001232413	0.001030059
TEKT4	8	0.001238917	0	4.960271	0.664811642	0	0.0035046	0.00069298	0.022895206	0.000749053	0.000749767	0.000288722	0.001999581	0.006183796
TMEM201	8	0.002147023	0	5.335492	0.619093452	0	0.00530812	0.00045317	0.006063559	0.000905253	0.000926898	0.000428085	0.001410703	0.000651101
CDH3	8	0.002767462	0	6.614081	0.470135388	0	0.00342562	0.00043625	0.002112738	0.00218561	0.000814635	0.000352184	0.000627882	0.000695904
VDAC3	8	0.003045961	0	6.45198	0.488072057	0	0.0031646	0.00087982	0.005900934	0.001177957	0.000758276	0.000291231	0.000953041	0.001974559
NDUFA2	8	0.003066898	0	5.670862	0.578662557	0	0.00661271	0.00057243	0.029564202	0.000757261	0.010786186	0.000430097	0.001698492	0.001134677
ZNF562	8	0.003201953	1	7.122534	0.416234275	2.67733E-07	0.00225948	0.00126718	0.003302494	0.001554013	0.000479789	0.00027224	0.00041221	0.000595976
GP1BA	8	0.003489263	0	6.716244	0.459010143	0	0.00187541	0.00058638	0.019863712	0.001388099	0.005911017	0.000331391	0.000773243	0.001358326
NXPH4	8	0.004139535	0	6.605611	0.471064166	0	0.00197991	0.00082277	0.005329062	0.003644342	0.000907791	0.00033832	0.00051749	0.000630141
SEC22A	8	0.004228373	0	4.683981	0.69846443	0	0.01212752	0.00082873	0.03939106	0.000974875	0.001061402	0.000516718	0.001454431	0.000518002
TACC1	8	0.004804117	0	5.912605	0.549990389	0	0.00495832	0.0009651	0.004060142	0.000895176	0.000771427	0.000586947	0.001056287	0.000701023
CDC73	8	0.004836581	1	7.237363	0.404591362	3.80681E-09	0.0027876	0.00094379	0.002509937	0.000629139	0.001190228	0.000478664	0.000707035	0.000816815
SLC25A11	8	0.004837437	0	6.465242	0.486591872	0	0.00207097	0.00059256	0.190435857	0.001608052	0.007030033	0.000348442	0.000787479	0.001663146
ATPAF1	8	0.004984758	1	7.858682	0.345220101	3.23525E-07	0.00413334	0.00069982	0.035605403	0.000515796	0.001045273	0.000417764	0.000387067	0.000424135
MOB3C	8	0.00540226	1	7.813911	0.349288838	1.86251E-07	0.0099118	0.00071214	0.014015215	0.000460616	0.000868998	0.000547621	0.00046669	0.000645546
CD14	8	0.005449178	0	6.019987	0.537417532	0	0.00404642	0.00069075	0.007308435	0.000791676	0.010897275	0.000495391	0.002539164	0.001685308
MKNK1	8	0.005630245	1	8.26209	0.31005149	3.63266E-07	0.00628237	0.00056337	0.010627832	0.000408523	0.000685729	0.000517841	0.000394494	0.000563442
RNF167	8	0.005918506	0	6.980171	0.430947411	0	0.00208627	0.00056918	0.196430146	0.001746551	0.009149423	0.000361384	0.000787478	0.002362198
GLYATL2	8	0.006024446	0	5.522576	0.596462252	0	0.00642588	0.00083742	0.004338425	0.00790677	0.00048855	0.000387915	0.000617606	0.000367884
BACH2	8	0.006100812	0	6.683469	0.462563824	0	0.00422184	0.00096619	0.02622583	0.000690194	0.001830262	0.00071456	0.000902491	0.002161757
GTF2F2	8	0.006166144	1	8.738267	0.271997626	5.60606E-07	0.02212446	0.00034155	0.003340862	0.000301748	0.000461293	0.0004313	0.00116544	0.000394441
DND1	8	0.006470375	1	7.239349	0.404391749	7.85264E-08	0.00273952	0.00051339	0.007859697	0.000697777	0.022895854	0.000399611	0.001436673	0.001012664
TSHZ2	8	0.006556598	0	4.727971	0.693119983	0	0.01504339	0.01681187	0.002907387	0.000362915	0.003304309	0.013448523	0.001876285	0.003229473
TMC5	8	0.006692604	0	6.692373	0.46159697	0	0.00707918	0.003731	0.003140987	0.00105663	0.001101789	0.000407702	0.000903891	0.001355454
KCNH7	8	0.006801524	1	8.361782	0.301775484	4.2299E-07	0.05430026	0.00032762	0.010880452	0.000412239	0.001492983	0.000230796	0.000213948	0.00026681
SHMT2	8	0.007212962	0	5.809751	0.562131261	0	0.00249908	0.00091299	0.004380347	0.005871675	0.000947125	0.000370047	0.00056272	0.000781007

GGH	8	0.0073291	1	7.290938	0.399229085	3.29915E-08	0.00622562	0.00092617	0.002014055	0.000769888	0.001329702	0.000555112	0.000814705	0.000591604
TRIM41	8	0.007857224	1	7.072561	0.42136419	2.70927E-08	0.01821248	0.00051195	0.014877132	0.000796411	0.001332011	0.001125785	0.00070118	0.000706033
CLEC4A	8	0.007870619	1	7.616466	0.367624283	1.73696E-07	0.01805064	0.00081449	0.003850395	0.00066723	0.00054477	0.000463846	0.002312857	0.00057537
LRP1	8	0.007907824	0	5.904137	0.550986406	0	0.00241875	0.00083216	0.0175841	0.002534658	0.001280408	0.000401681	0.000597488	0.001330157
CFHR2	8	0.008048956	0	6.050722	0.533839445	0	0.23708129	0.00053951	0.004747398	0.001934477	0.001009642	0.000457502	0.000667313	0.003263055
ZMPSTE24	8	0.008085925	0	6.478404	0.485125161	0	0.00510255	0.00222594	0.001736458	0.000751267	0.004872146	0.000550744	0.001490876	0.003461878
WDR24	8	0.008172203	1	7.078678	0.420734254	6.79575E-08	0.01347389	0.00098525	0.012547836	0.001036948	0.000611709	0.000587455	0.000810742	0.0014411
TTC21A	8	0.008295122	1	8.738462	0.27198281	8.28584E-07	0.00583565	0.0003905	0.002163859	0.000497163	0.000412513	0.0003953	0.000544143	0.000552164
CHCHD5	8	0.008407192	1	7.358239	0.392556596	1.81596E-07	0.00254032	0.0014983	0.002512785	0.002106123	0.001034224	0.000385695	0.000750069	0.000419504
GNPDA2	8	0.008624472	1	7.610325	0.368204768	1.17524E-08	0.0633197	0.00114082	0.003037838	0.000436906	0.001120186	0.001000582	0.001113456	0.000776837
TLL1	8	0.008644435	1	7.215066	0.406836254	7.04059E-09	0.00235927	0.000723	0.009741402	0.000828492	0.001817742	0.000617389	0.000732789	0.000882947
EPHA8	8	0.008696851	0	2.492026	0.927696348	0	0.00779822	0.00131851	0.004658281	0.001528461	0.001803998	0.000369486	0.002881717	0.002086405
UMODL1	8	0.008795439	1	8.545477	0.286955544	8.25902E-08	0.01896429	0.00059172	0.003139842	0.000435327	0.000892782	0.000538296	0.000490134	0.000782955
RIMBP2	8	0.009196774	0	6.407012	0.493107254	0	0.00362823	0.00082922	0.001731686	0.003681153	0.001089793	0.000378437	0.000946521	0.001215116
PCDHA1	8	0.009254355	1	7.957999	0.336312125	3.90431E-07	0.00536838	0.00030995	0.003939298	0.00059945	0.009462171	0.000282098	0.000593083	0.000447512
WDR60	8	0.009354323	1	8.905161	0.259537043	6.76208E-08	0.00221592	0.00099016	0.002048179	0.000342697	0.000866127	0.000459558	0.003414382	0.001375051
SRRM2	8	0.009425055	0.25	7.017811	0.427027716	4.00901E-09	0.00345245	0.00094082	0.035764814	0.001035814	0.000874158	0.000814626	0.000717346	0.00088819
ZNF561	8	0.009523948	0	6.731313	0.457381358	0	0.00331839	0.00159553	0.002911991	0.001652648	0.000485767	0.000290286	0.000449709	0.000795353
LETM2	8	0.00975934	1	7.575478	0.371510188	5.39068E-07	0.00404452	0.00052423	0.002327766	0.002037665	0.000975155	0.000374115	0.000484256	0.001282533
KNCN	8	0.00992031	1	9.290619	0.232458778	4.70633E-07	0.04947064	0.00057802	0.003026415	0.000360143	0.000548796	0.000589711	0.000488768	0.000701399
PABPC1	8	0.009938645	0	6.049353	0.533998683	0	0.02500256	0.00054475	0.066229596	0.001157012	0.001637492	0.000784329	0.001484685	0.000740568
OR6C75	8	0.009990576	0	6.787062	0.451382654	0	0.00866875	0.00116527	0.003327009	0.000754839	0.001240605	0.001015024	0.001310302	0.001223262
CFHR5	8	0.010274895	0	6.027089	0.536589867	0	0.00492442	0.00063662	0.005842122	0.00279341	0.000852262	0.000436476	0.000687267	0.005178513
GFM2	8	0.010343582	1	7.796991	0.350835084	1.53518E-07	0.03119783	0.00045019	0.003550199	0.000604467	0.000844308	0.000550897	0.001194716	0.001326942
RDH11	8	0.010572766	0	5.849465	0.557432569	0	0.04160641	0.00099567	0.002590826	0.000329921	0.00469444	0.000454755	0.001304175	0.000566708
NDUFA4L2	8	0.010853868	0	4.377926	0.735362767	0	0.00642616	0.00103789	0.004899863	0.006360853	0.00100335	0.000405957	0.000619819	0.000973074
ZNF155	8	0.011204413	0.05	7.003377	0.428528375	6.00191E-10	0.01192805	0.00081678	0.015478255	0.000570568	0.001476987	0.004110195	0.000755559	0.000927789
SPESP1	8	0.011933926	0	6.911978	0.438101924	0	0.00420968	0.01204127	0.012368175	0.000579	0.001723368	0.001903043	0.002553727	0.00111368
YY1AP1	8	0.012096028	1	8.504378	0.290223046	3.88485E-06	0.07282571	0.00040423	0.002228909	0.000711268	0.001037927	0.000605273	0.000486479	0.000525803
TSTA3	8	0.012163298	0	6.875868	0.441918046	0	0.00487845	0.00058604	0.005480149	0.000335775	0.001501027	0.042543816	0.003672285	0.002763956
DMBX1	8	0.012260115	1	9.4439	0.222336551	6.14135E-07	0.07323587	0.00054033	0.003494328	0.000394777	0.000458939	0.000629701	0.000531028	0.000742995
NEB	8	0.012302913	1	7.281387	0.400181726	8.41235E-08	0.01624691	0.0008251	0.001802475	0.002289994	0.000615105	0.00052389	0.000885256	0.000564737
IL31RA	8	0.012362892	1	7.141239	0.414323932	3.48537E-08	0.018185	0.00050524	0.006277819	0.001847931	0.002757059	0.000576512	0.000644231	0.001595106
PPIL4	8	0.012618362	1	8.073974	0.326116234	6.32833E-07	0.01317069	0.0008045	0.005396267	0.001985928	0.000445603	0.000733593	0.000503548	0.000609874
TBL2	8	0.012814453	0	6.613651	0.470182614	0	0.00577083	0.00173196	0.014850488	0.000519783	0.004919521	0.004357935	0.001094633	0.05742345
KISS1	8	0.012943839	0	6.125196	0.52520941	0	0.00215466	0.00608857	0.025537358	0.000615258	0.001700242	0.00154619	0.001393499	0.002207107
HARS2	8	0.012952792	1	7.826725	0.348120949	3.31105E-07	0.00260489	0.00044521	0.006009238	0.000648663	0.02900859	0.000364333	0.001115917	0.000855276
ST18	8	0.013076594	1	8.021452	0.330706112	5.97807E-08	0.00335157	0.00047139	0.007515712	0.00072613	0.00079289	0.001110686	0.000693429	0.000803748
MAD2L1	8	0.013570029	0	5.339997	0.618546693	0	0.00526908	0.00468164	0.008759535	0.000667549	0.00189922	0.001398216	0.001198502	0.001648955
TRIM7	8	0.013797342	1	8.234158	0.312399823	4.02614E-07	0.02450599	0.00048933	0.002795337	0.000772857	0.001435089	0.000743645	0.000552411	0.000644375
EEF1D	8	0.013837851	0	6.125197	0.525209242	0	0.00300958	0.00066627	0.014969553	0.000327921	0.001491587	0.00753134	0.0118953	0.001204221
OR7D4	8	0.01395344	1	7.389437	0.389487832	8.648E-08	0.00560232	0.00101131	0.0082306	0.000990226	0.001487208	0.000984759	0.000872703	0.000448334
ADAMTS1	8	0.01424385	0	6.700856	0.460676819	0	0.00247478	0.00136864	0.004537313	0.000571528	0.007224595	0.002902273	0.001877366	0.003010765
PTTG1	8	0.014329104	1	7.419482	0.38654699	4.85749E-08	0.00218898	0.00086529	0.003877825	0.001729456	0.000732371	0.0006131	0.001163245	0.000710023
POLG	8	0.014520939	0	6.909605	0.438352087	0	0.00292771	0.01090981	0.029080957	0.000695901	0.001769376	0.000773995	0.028543857	0.006612073
HARS	8	0.014590261	1	8.010021	0.331711077	4.13051E-07	0.00241208	0.00043514	0.006464678	0.000612024	0.0249298	0.000350007	0.001079508	0.000840171
PFN1	8	0.014816112	1	7.3868	0.389746648	1.69149E-07	0.00196406	0.00054827	0.02354988	0.001508058	0.013838565	0.000358915	0.000817324	0.002067015
NGLY1	8	0.015044117	0	5.931756	0.547740162	0	0.01513855	0.01088047	0.005705085	0.000514236	0.001403484	0.014164909	0.009892875	0.001438867
NHLRC2	8	0.01505535	0	6.069704	0.531634355	0	0.00263463	0.00464157	0.014768888	0.003185975	0.001306112	0.000411916	0.001789793	0.00063969
IMPA2	8	0.015432821	0	6.850903	0.444567326	0	0.00300014	0.03108858	0.00398497	0.000412004	0.03808085	0.001481095	0.003012676	0.000792578
CD300LB	8	0.015446788	0	6.296025	0.505640309	0	0.00274722	0.00070022	0.016712933	0.001404778	0.001298138	0.000628557	0.002848922	0.002063486
GPR31	8	0.015810242	0	5.471679	0.602602059	0	0.00552349	0.00070833	0.003055791	0.002218303	0.000959243	0.000566545	0.002070663	0.001205386

JMJD8	8	0.015820727	1	8.140649	0.320355272	1.34899E-06	0.01687001	0.00082591	0.007516137	0.001017844	0.00048983	0.000548601	0.000719627	0.001315062
SHB	8	0.015882051	0	5.752259	0.568956307	0	0.00592154	0.00106328	0.003732234	0.001456945	0.002279416	0.00057293	0.000889616	0.004032158
ARGLU1	8	0.015995639	1	7.7505	0.355107986	3.14504E-08	0.01076707	0.00053753	0.002621448	0.001322986	0.00079926	0.000879908	0.00080087	0.0009667
SLC2A5	8	0.016229678	0	6.855215	0.444109036	0	0.34567659	0.00152532	0.001854347	0.001044347	0.001316159	0.000688436	0.001590664	0.006305576
SEC14L5	8	0.0162739	0	6.789164	0.451157356	0	0.00908181	0.00106547	0.007205022	0.001371081	0.005059812	0.000815371	0.001480967	0.000560165
COMT	8	0.016299348	0	6.014998	0.537999156	0	0.01913093	0.00103796	0.002623135	0.001058965	0.002046829	0.000869164	0.001321267	0.001351627
UBE2R2	8	0.016339302	1	7.329481	0.395399079	1.08764E-08	0.00164754	0.00136438	0.003753896	0.000626663	0.002673018	0.001087822	0.001459678	0.003853555
STAT6	8	0.016410762	0	6.454006	0.487845806	0	0.00260815	0.00074577	0.003528126	0.002457296	0.003479413	0.000519599	0.000904642	0.001610854
C17orf107	8	0.016669592	1	7.228925	0.405439971	8.94029E-08	0.00188204	0.0006374	0.010276548	0.002653308	0.043701771	0.000413718	0.000983116	0.001488482
MPST	8	0.016747714	0	6.699943	0.460775753	0	0.02185313	0.00109388	0.004511865	0.001237397	0.002430299	0.000982617	0.000915702	0.000705866
RNF220	8	0.016946291	0	5.070061	0.651413615	0	0.01000278	0.00240907	0.020376388	0.000672878	0.008046667	0.00156583	0.001299566	0.001824304
AP2S1	8	0.017019497	0	6.732569	0.45724567	0	0.00304128	0.00592983	0.002263001	0.000826468	0.106444905	0.000737506	0.006780856	0.001661856
LMX1A	8	0.017022926	1	8.709416	0.274197477	4.15772E-08	0.00185318	0.00103511	0.00899026	0.00050404	0.00127952	0.000562986	0.001749496	0.000526561
TAC1	8	0.017482296	1	7.973863	0.33490433	8.86363E-08	0.00424591	0.00033236	0.011262006	0.001448441	0.000830242	0.000583698	0.00113484	0.001381906
C3AR1	8	0.017585334	1	7.363766	0.392011847	8.65225E-08	0.06134416	0.00075775	0.002876964	0.001328401	0.000703583	0.000790111	0.001634948	0.000940623
AGFG1	8	0.017716376	1	8.799451	0.267377229	4.61595E-07	0.01051494	0.00037478	0.005506727	0.000695635	0.000433084	0.001073078	0.001456891	0.000488578
ATP10B	8	0.017795913	1	9.816496	0.199213152	2.81663E-07	0.00483324	0.00034664	0.001792848	0.000545437	0.000414892	0.000407763	0.000606746	0.000570533
NPM2	8	0.017941716	0	4.115151	0.766422934	0	0.02376421	0.00316897	0.087620501	0.000712812	0.007054691	0.001600816	0.001357551	0.001442153
WDR90	8	0.018323151	1	8.155091	0.319117128	1.22099E-06	0.00339944	0.0007895	0.00309011	0.001433778	0.000615446	0.000561773	0.000658692	0.001198183
ZYG11A	8	0.018655301	1	7.603849	0.368817533	7.09511E-07	0.01090657	0.00062526	0.007028331	0.005140346	0.00045482	0.000393924	0.003065093	0.000565773
TANC2	8	0.019026777	1	8.001651	0.332448357	1.97852E-07	0.00389496	0.00050194	0.015517398	0.001052723	0.001514595	0.001047861	0.001715125	0.000404227
B2M	8	0.019059473	0	6.532273	0.479144971	0	0.00608971	0.0008914	0.002910322	0.011608606	0.000829632	0.000630169	0.000784529	0.000396727
CSRNP1	8	0.019163869	1	9.74367	0.20357079	7.20579E-07	0.0027428	0.00078917	0.002154396	0.000557623	0.000513176	0.000439464	0.000700212	0.000730923
GTSF1	8	0.019515825	0.7	7.049513	0.423742882	4.16994E-09	0.00324083	0.00117953	0.002152218	0.001070083	0.001963087	0.000900024	0.001339277	0.00133334
TCEB2	8	0.019533381	1	8.203911	0.314957272	3.12031E-07	0.00331612	0.00091901	0.004059263	0.000998914	0.000806514	0.000839344	0.000638769	0.000884622
EFCAB3	8	0.019706455	0	6.472566	0.485775472	0	0.00213005	0.00090969	0.005941163	0.001469606	0.002609605	0.000566668	0.130852603	0.002877458
RCOR2	8	0.019775662	1	7.679181	0.36173144	4.39151E-08	0.00310128	0.00098403	0.003061086	0.0006118	0.001412322	0.000646906	0.006262217	0.008724179
ATG3	8	0.019817605	1	7.903484	0.341181592	4.12257E-08	0.00545683	0.0032199	0.005344584	0.000428861	0.002561483	0.000734068	0.001315123	0.002829432
KRT3	8	0.019852637	1	8.84655	0.263861751	3.13558E-07	0.01499876	0.00065535	0.002955322	0.000910356	0.000727286	0.001077008	0.000478652	0.000677159
EXOG	8	0.020173528	0	4.028701	0.776465797	0	0.00924156	0.00297858	0.023682356	0.000502683	0.002529668	0.040112294	0.004482541	0.034832299
SLIT1	8	0.020225111	1	7.219702	0.406368864	6.43558E-08	0.00425288	0.00226635	0.003013173	0.001219771	0.001124446	0.000369359	0.000836513	0.000382423
DOHH	8	0.020339737	1	9.156864	0.241589229	9.34657E-07	0.00741763	0.00113136	0.002336414	0.000482747	0.001906946	0.000789932	0.000742948	0.000686707
SEPSECS	8	0.020736186	1	8.81514	0.266202188	4.19098E-07	0.00202138	0.00048017	0.002988987	0.001384132	0.001335363	0.000373868	0.000551667	0.000314073
AK3	8	0.020885597	0	6.395318	0.494420711	0	0.00526168	0.00092497	0.007794774	0.004407557	0.001268944	0.000382774	0.001200701	0.001149742
KRT4	8	0.021622877	1	8.570852	0.284952031	2.47466E-07	0.00618769	0.00067736	0.002630984	0.001190137	0.00084342	0.001198353	0.000561078	0.00068147
IMPA1	8	0.021730046	1	12.08311	0.097858737	1.22642E-06	0.00174926	0.0004104	0.019157128	0.000234852	0.003632578	0.000321601	0.000612867	0.000336656
HEXB	8	0.021885195	1	10.18382	0.178393727	3.94474E-07	0.00306204	0.00049495	0.008885796	0.00044445	0.000524358	0.000607461	0.0007856	0.001481151
CMA1	8	0.021961078	1	8.762454	0.270163838	3.98154E-07	0.04668875	0.00082348	0.001588523	0.000901489	0.000880719	0.000403509	0.000560926	0.001198582
STAC3	8	0.022275224	0	6.664303	0.464648691	0	0.0175845	0.00132609	0.002556098	0.007386304	0.00128479	0.000475234	0.000627912	0.003139309
HNRNPL	8	0.022819318	0	4.597825	0.708907717	0	0.00397493	0.00179799	0.01253881	0.000819055	0.006878514	0.001162103	0.006369447	0.001493267
BCAS1	8	0.022942656	1	8.218452	0.313725918	4.56037E-08	0.20923289	0.00176425	0.003792659	0.001056583	0.000624351	0.000686712	0.000813172	0.000899847
CYB561	8	0.023050935	1	7.406781	0.387788447	6.59543E-08	0.00820908	0.00064255	0.004971925	0.00164087	0.001693177	0.001286779	0.002006352	0.000516483
POU2F1	8	0.023126914	1	9.107073	0.245059805	1.58689E-07	0.04631003	0.00042152	0.002011562	0.000657489	0.001113352	0.000596415	0.00175144	0.000556389
DARS	8	0.023169023	0	6.5882	0.472976117	0	0.00474884	0.00071724	0.003357888	0.003701379	0.000578099	0.000545748	0.000588381	0.000874806
DUSP27	8	0.023315176	0	4.124637	0.765315009	0	0.00363062	0.00194918	0.003046407	0.000766066	0.001713427	0.001831281	0.003449431	0.002617794
VHL	8	0.023484531	1	9.004133	0.252359458	3.71435E-07	0.00294489	0.00111082	0.006394255	0.000539376	0.000768987	0.001127539	0.00128425	0.000485243
KCNJ2	8	0.023527354	0	5.864895	0.555610613	0	0.01848803	0.00594014	0.001775533	0.000788754	0.001468476	0.001480917	0.004006826	0.002051686
ZNF230	8	0.023857716	1	8.585256	0.283819425	3.80892E-07	0.00291296	0.00056556	0.004808402	0.000478084	0.001289836	0.023301563	0.000619903	0.000597285
FYTTD1	8	0.023895855	0	6.176651	0.519280947	0	0.00326821	0.00180919	0.01289303	0.000513491	0.001789474	0.013450449	0.003738624	0.006697986
FGF17	8	0.023914505	0	3.172276	0.868620987	0	0.00751195	0.00471118	0.079120311	0.000788052	0.009021768	0.001594845	0.001668632	0.001501956
OR13C4	8	0.024086342	0	6.663943	0.464687924	0	0.01417967	0.00104667	0.004051104	0.001026854	0.003290279	0.001064706	0.001552707	0.003937009
BRK1	8	0.024119586	1	9.283704	0.232923943	6.56653E-07	0.00281166	0.00099853	0.00545479	0.000514018	0.000764554	0.00097968	0.001371415	0.000431147

ZNF506	8	0.025153533	0	5.214501	0.633804783	0	0.00896869	0.0047687	0.003646452	0.000831127	0.002167801	0.000986495	0.0135644	0.002424162
SLC35A4	8	0.025222845	0	5.404534	0.610722415	0	0.00442725	0.00106611	0.007800349	0.001223673	0.011600411	0.000750139	0.006238141	0.002571812
APBB3	8	0.025289114	0	5.564095	0.591464429	0	0.00902747	0.0012763	0.006164843	0.001114963	0.01126191	0.000747854	0.011929356	0.004229788
SLC25A33	8	0.025574058	1	7.569711	0.372059136	1.37575E-07	0.00642653	0.0006781	0.003377063	0.003948601	0.000685094	0.000903672	0.002542897	0.000822851
ECSCR	8	0.02641329	0	5.610533	0.585887167	0	0.10554376	0.00707176	0.001814035	0.000507504	0.034225562	0.009770728	0.003463963	0.007332946
SCRT1	8	0.026422488	0	6.765879	0.453656898	0	0.00291062	0.0024681	0.029068663	0.001069225	0.002030017	0.001244876	0.00203244	0.001021878
SYT3	8	0.026461108	1	7.808049	0.349824054	9.55208E-08	0.0028914	0.00154012	0.005393128	0.001065292	0.000937351	0.000845364	0.000846873	0.001193815
PROM1	8	0.026480791	0	5.890411	0.552602387	0	0.01265837	0.00051197	0.05202655	0.003935517	0.001771849	0.000695907	0.001312802	0.001628558
ENO3	8	0.026605304	1	7.564247	0.372579712	2.54101E-07	0.0017102	0.00064083	0.078542996	0.002546606	0.017475118	0.000375386	0.0008946	0.002479227
PSCA	8	0.026659814	0	6.96821	0.432197305	0	0.00261318	0.00136087	0.011348047	0.00406863	0.001342164	0.000632673	0.000659963	0.001406446
ALDH6A1	8	0.026840781	1	8.422015	0.296854816	5.74975E-07	0.00845202	0.00119411	0.011761515	0.00184664	0.00100598	0.0020931	0.000497076	0.000477318
TCP10L2	8	0.027028067	1	9.211508	0.237825335	3.6317E-07	0.01110135	0.00081	0.001410939	0.0014279	0.000631645	0.000450953	0.000896527	0.000534564
SULF1	8	0.027192101	0	6.982555	0.430698474	0	0.00558382	0.00403609	0.002363017	0.001453648	0.001134561	0.0006953	0.045375887	0.001470623
STXBP6	8	0.027398924	1	7.43708	0.384831209	1.07075E-09	0.00591805	0.00453923	0.004838727	0.000621385	0.001518434	0.001413432	0.00141155	0.002094321
SRA1	8	0.027678337	0	5.997798	0.54000651	0	0.02915255	0.00128032	0.00762669	0.00116337	0.007348557	0.000786428	0.00999755	0.003939119
SLC27A3	8	0.027762173	1	8.848379	0.263725952	1.34506E-06	0.00415409	0.00081508	0.001935007	0.002375213	0.001248594	0.000670562	0.000577305	0.000484965
AIF1L	8	0.027790108	1	7.596139	0.369548004	2.01893E-07	0.00999696	0.00403972	0.00437096	0.002838793	0.00065667	0.000607904	0.000562383	0.000926438
ZNF705A	8	0.027790177	1	9.683445	0.207233242	7.57618E-07	0.00862376	0.00079648	0.002254562	0.000612719	0.000563595	0.000522782	0.002828551	0.000842784
SLC7A10	8	0.028195738	1	7.358252	0.392555389	1.43676E-07	0.18764889	0.00064894	0.050108945	0.001609794	0.001442975	0.000554851	0.000460418	0.040926693
DNAJC14	8	0.028237826	1	9.893616	0.194682766	5.35696E-06	0.00192103	0.00081523	0.005037244	0.000682656	0.000637054	0.00086385	0.001036736	0.000534996
ATXN10	8	0.02827204	1	7.939389	0.337968892	1.18538E-07	0.00826676	0.00053658	0.002130903	0.001669681	0.0081648	0.000458222	0.000840634	0.001691271
MUTYH	8	0.028443322	1	8.994807	0.253029062	1.2681E-06	0.00337217	0.00077599	0.001634165	0.000760676	0.000643947	0.000369711	0.002524276	0.001018506
VAMP5	8	0.02852842	1	8.8031	0.267103581	4.8661E-07	0.0209177	0.00040194	0.498828966	0.000720372	0.000882619	0.000979315	0.00201068	0.001144072
TXNRD2	8	0.028531365	0	6.527511	0.479672082	0	0.00603366	0.00311402	0.002558572	0.00128687	0.003699476	0.000878066	0.004385811	0.000925237
CCDC78	8	0.028605215	1	10.55567	0.159209195	2.33068E-06	0.00330102	0.00054465	0.002430188	0.000766383	0.000397675	0.000535408	0.00051227	0.000772171
MEX3A	8	0.028613899	1	9.932087	0.192454835	1.05856E-06	0.00234064	0.00068596	0.002804411	0.000731707	0.000998737	0.000861902	0.000557094	0.000677467
UHRF1	8	0.028847797	0.83	7.058665	0.422797353	2.72712E-09	0.00323674	0.00249212	0.001629908	0.00085144	0.00274534	0.001037257	0.025453048	0.01819455
TMEM9B	8	0.029089228	1	11.03073	0.137284044	1.27915E-06	0.00301203	0.00074792	0.002051816	0.00045775	0.00071472	0.00093792	0.000493989	0.000484138
CP	8	0.029266549	0	6.387714	0.49527572	0	0.00740492	0.00341268	0.00545781	0.001151147	0.001503864	0.000858327	0.001865003	0.025412945
LDLRAD1	8	0.029519151	1	7.952553	0.336796335	3.93578E-07	0.00610518	0.00106426	0.061496477	0.001349057	0.012033703	0.000560889	0.000606744	0.00092668
TAS2R7	8	0.029736801	1	7.585635	0.370544744	1.8615E-07	0.00357023	0.00112332	0.004445248	0.000858202	0.001018215	0.00077406	0.007250159	0.004134647
VTI1B	8	0.029795717	0	5.170004	0.63922556	0	0.02479386	0.00128659	0.003394271	0.00043786	0.00219561	0.000676589	0.002944291	0.001058063
CAB39L	8	0.029845602	1	9.185891	0.239584007	6.41986E-07	0.23795192	0.00031386	0.002641599	0.000973573	0.000847517	0.000361874	0.000460368	0.007199001
SLC6A20	8	0.030059467	0	6.85908	0.443698562	0	0.00204852	0.00140902	0.0040643	0.000489121	0.004706319	0.007490339	0.019697052	0.004837548
PISD	8	0.030063782	0	6.261528	0.509565575	0	0.06975017	0.00080819	0.002243063	0.007898087	0.002260457	0.000415891	0.012339364	0.003329869
CRIPT	8	0.030270145	1	9.265671	0.234140631	2.89719E-07	0.00169132	0.00149987	0.004071596	0.001148975	0.000612766	0.000474559	0.000820863	0.000710862
TMCO2	8	0.030300686	1	7.684996	0.361188206	1.12124E-07	0.00649473	0.00204593	0.001644397	0.000711946	0.011402778	0.000524644	0.001357105	0.009825296
OR51E2	8	0.03036246	1	7.180374	0.410344264	7.46045E-08	0.0032099	0.00144161	0.002749892	0.004999715	0.000803511	0.000779541	0.001247247	0.000633337
ALDH1B1	8	0.030483893	0	6.794367	0.450599928	0	0.00983893	0.00129081	0.002533723	0.002877023	0.001538663	0.000600303	0.000881175	0.076803262
INSM1	8	0.030719452	0	4.886435	0.67381988	0	0.00288233	0.00663732	0.007000324	0.000859243	0.003051781	0.001283847	0.014535594	0.001587673
PTPRN2	8	0.030763517	1	9.189542	0.239332724	5.52619E-08	0.00148862	0.0007312	0.041688379	0.001140631	0.00103606	0.000745475	0.001127799	0.000576728
GUF1	8	0.030976429	1	9.825888	0.198656808	1.73305E-07	0.00335341	0.00372467	0.011153475	0.000361411	0.000979245	0.00089577	0.002460591	0.000578788
CD276	8	0.031004391	0	5.972464	0.54296826	0	0.00158295	0.00179037	0.085807713	0.000779829	0.005519741	0.00255156	0.003136014	0.003483758
RAD9B	8	0.031045343	0	6.930486	0.436153363	0	0.00314381	0.004989	0.001442573	0.000767217	0.041056414	0.001625263	0.003261024	0.006381176
AP2B1	8	0.03147428	1	8.968455	0.254928764	2.2275E-07	0.00273164	0.0008877	0.003182082	0.000589009	0.000945554	0.002365737	0.000978208	0.000840784
MTAP	8	0.03152504	0	3.44592	0.840919984	0	0.00689711	0.00149715	0.003483371	0.003208752	0.016846803	0.000519105	0.003129002	0.001574989
NIPSNAP3A	8	0.031688168	1	9.934046	0.192341924	3.49576E-07	0.00819129	0.0006787	0.001632043	0.000839384	0.000861874	0.00064555	0.000652577	0.001164767
HECTD1	8	0.031734128	1	8.032636	0.329724902	6.14874E-07	0.01702354	0.00046452	0.052614583	0.001210442	0.001106967	0.002205734	0.00285669	0.000379063
ZIC1	8	0.031898796	1	7.897586	0.341711289	3.68556E-08	0.03168059	0.00076527	0.017776366	0.000643391	0.001911395	0.002907575	0.000844175	0.001348899
RNF223	8	0.031912094	1	7.799195	0.350633473	1.46651E-06	0.05069547	0.00105248	0.010068706	0.002934412	0.001144503	0.002394378	0.000593733	0.000752676
AGXT2	8	0.032159507	0	4.975502	0.662952929	0	0.00354856	0.00101054	0.074847264	0.002246141	0.002469605	0.000848422	0.001738393	0.000960872
SH3GLB2	8	0.032265016	1	7.265215	0.401798063	6.74535E-08	0.01996272	0.00122296	0.024766887	0.002310105	0.001153469	0.000784864	0.000688869	0.003512366

GLYCTK	8	0.032335907	0	6.996345	0.429260528	0	0.04369554	0.00121838	0.002477224	0.001570702	0.003541419	0.001147262	0.001192852	0.000970383
GTF2E1	8	0.032336983	0	6.630258	0.468364383	0	0.01176144	0.00430718	0.003206193	0.000952403	0.005319057	0.001095041	0.016313201	0.001300457
HTATIP2	8	0.032442094	1	8.843615	0.264079785	3.85945E-08	0.00376876	0.00155626	0.007620214	0.000534203	0.002593451	0.001260012	0.000750877	0.001302357
IPO4	8	0.032546295	0	6.544127	0.47783406	0	0.01020639	0.00567781	0.004015465	0.008497051	0.001203492	0.000506656	0.000698859	0.004272386
SLC5A11	8	0.032576937	1	8.296096	0.307209956	8.43569E-08	0.00366125	0.00161663	0.00636843	0.000738403	0.001018725	0.001518909	0.000974819	0.000960995
XIRP2	8	0.032727233	1	11.79579	0.107477533	2.12139E-06	0.00834446	0.00032321	0.002884795	0.000335811	0.00016357	0.000416547	0.000225623	0.000318841
RIPPLY2	8	0.03274794	1	7.224981	0.405837022	3.59208E-08	0.00162889	0.00108976	0.014910558	0.001154273	0.004837727	0.000728904	0.004398615	0.003498306
HIVEP1	8	0.032836497	1	11.91753	0.103303657	3.99518E-07	0.00372732	0.00055	0.001728084	0.000447846	0.000381382	0.000719884	0.000612187	0.000425709
TRIM66	8	0.033063942	1	9.24523	0.235525838	5.71957E-07	0.00572704	0.00069972	0.004571776	0.001117547	0.000616809	0.000820798	0.000702961	0.00240379
DGAT1	8	0.03308657	1	7.398563	0.388593095	1.4552E-07	0.00280918	0.00636399	0.005470862	0.000878659	0.002251407	0.001280113	0.001225946	0.001228844
C7orf61	8	0.03312007	1	10.62278	0.155940664	1.83712E-06	0.00329988	0.00068366	0.011021179	0.000533554	0.00068802	0.000538817	0.000542608	0.005528909
WDR49	8	0.033195281	1	8.533896	0.287873449	1.15362E-07	0.01086745	0.00154066	0.026139311	0.000483388	0.00078859	0.002215751	0.003076974	0.00073133
BCL2L11	8	0.03329423	0	6.591594	0.472603097	0	0.00304733	0.0040288	0.003789005	0.000839879	0.002713881	0.003510416	0.001863824	0.001393345
C9orf47	8	0.033317731	1	7.641913	0.365225491	6.58244E-09	0.00161816	0.00119604	0.007528601	0.00072128	0.009431167	0.001363846	0.001806097	0.002345678
HES4	8	0.033453393	1	7.769483	0.353358964	1.13248E-06	0.01183762	0.00101237	0.005164645	0.021472118	0.001504594	0.001753322	0.000561387	0.000699296
ARVCF	8	0.033472086	1	8.337096	0.303809489	6.19987E-08	0.00415777	0.00093548	0.002585225	0.001037761	0.001901088	0.000810493	0.000752515	0.001635966
C11orf16	8	0.033514914	1	12.47324	0.08603127	2.87462E-06	0.00369658	0.00074217	0.001655804	0.000396627	0.000538269	0.000736465	0.000438863	0.000506424
STUB1	8	0.033630655	1	9.670158	0.208048431	3.26164E-06	0.00576805	0.00084873	0.002315796	0.001198476	0.00051577	0.000566213	0.000713775	0.001405206
DNAJC21	8	0.033673023	0	4.974669	0.663054661	0	0.00920366	0.00107552	0.004978134	0.002195731	0.002202239	0.000887875	0.001168338	0.001254344
NYAP1	8	0.033783272	1	10.17234	0.179015759	1.41275E-06	0.0053883	0.00075301	0.015121754	0.000546237	0.000914372	0.000623793	0.000597669	0.008868962
SOX4	8	0.033956985	0.98	7.069522	0.421677398	6.88934E-08	0.00925472	0.00268262	0.062893853	0.000541041	0.002043007	0.006524588	0.001180031	0.001387976
GPCPD1	8	0.033968614	1	7.27709	0.400610778	9.92376E-09	0.00399323	0.001979	0.003735555	0.001158913	0.00108142	0.001014354	0.001253759	0.002576756
WDR93	8	0.034114174	0	6.705883	0.460131986	0	0.00471936	0.0010895	0.002414087	0.001261196	0.002949391	0.001048717	0.006540071	0.002543391
LRFN3	8	0.03412264	1	7.082051	0.420387124	4.02714E-08	0.00589276	0.00088603	0.002060949	0.002011213	0.00167687	0.00098418	0.00136056	0.001312315
TTPA	8	0.034199402	1	7.52815	0.376030918	4.82551E-08	0.09565362	0.00185921	0.002025154	0.001240269	0.003371841	0.000886776	0.001233947	0.000804483
SPAG7	8	0.034329906	1	7.453287	0.38325534	2.1394E-07	0.00200169	0.00062683	0.015866171	0.005434806	0.017463558	0.000420167	0.000985415	0.021772462
RNF180	8	0.034564509	1	12.92078	0.074062245	7.54304E-07	0.00255949	0.0005373	0.001846843	0.000263759	0.003085925	0.0005647	0.000916577	0.000397434
PIK3C3	8	0.034884151	0	6.895286	0.439863629	0	0.00933819	0.00086954	0.001862286	0.003092711	0.021391576	0.000573051	0.006528931	0.002513447
CBFA2T2	8	0.034971368	0	6.543469	0.47790669	0	0.00768336	0.00191383	0.004133581	0.002018346	0.001166362	0.000634688	0.001631188	0.003397515
CDK5RAP3	8	0.035109052	0	4.753439	0.690022699	0	0.00379014	0.00152505	0.006581649	0.000965479	0.004813649	0.001222695	0.009011855	0.003246004
KRT79	8	0.03519351	1	9.667115	0.20823551	3.45126E-07	0.00202864	0.00090943	0.01203614	0.000992191	0.000846972	0.001438049	0.000621687	0.000763774
CHRNE	8	0.035329929	1	7.888195	0.34255601	3.47204E-07	0.00162437	0.00066934	0.008977886	0.002889323	0.052010947	0.00040954	0.000993109	0.001354477
LRP3	8	0.035536981	1	8.102192	0.323669051	5.88049E-07	0.01273257	0.0006057	0.005781668	0.001419602	0.001154735	0.000452319	0.000371854	0.238922165
WDR82	8	0.035729451	0	6.734169	0.457072997	0	0.00767518	0.0023339	0.206422173	0.001340245	0.002694911	0.001413651	0.001141207	0.001044382
LACTB2	8	0.035760222	0	5.723211	0.57241445	0	0.00519157	0.00096557	0.004003895	0.001583931	0.003732844	0.000901898	0.003010495	0.002641295
MMP19	8	0.035774838	1	10.58108	0.157964743	1.01546E-05	0.00256229	0.00073944	0.002194413	0.000679512	0.000622875	0.000739303	0.001294853	0.000414585
CLRN2	8	0.035864078	0	4.238907	0.751885529	0	0.02233405	0.03163237	0.018130418	0.00079316	0.003823189	0.001686913	0.235634102	0.001776656
PRDM9	8	0.035927381	1	7.943095	0.337638504	3.5168E-08	0.00316309	0.00944048	0.05473878	0.000422166	0.001088484	0.003033618	0.001955723	0.000787147
ANKAR	8	0.035939999	0.27	7.019223	0.426881087	9.93379E-09	0.12521666	0.00092172	0.005253698	0.001953225	0.000568444	0.000418627	0.000973311	0.001991929
TSC22D4	8	0.035962258	1	10.54915	0.159529492	1.6117E-06	0.00298099	0.00073354	0.008383877	0.000566975	0.000765452	0.000555885	0.000581217	0.007791046
PLEC	8	0.035998837	1	9.901596	0.194218866	1.29652E-06	0.00268613	0.00107795	0.002821851	0.001085702	0.000521617	0.00067291	0.001333689	0.00048446
FBXO7	8	0.036135323	0	6.5174	0.48079227	0	0.00347742	0.00144581	0.004048149	0.001190494	0.003699268	0.000878382	0.007305285	0.007191332
GSDMD	8	0.036141537	0	5.087634	0.649269619	0	0.00755155	0.00086359	0.004424266	0.000436654	0.003423171	0.002506377	0.008678772	0.003194699
KRTAP15-1	8	0.03615944	1	8.545942	0.28691876	5.9745E-07	0.00259336	0.00050886	0.005016573	0.014743534	0.00070283	0.002262069	0.000892782	0.000522005
ZNF620	8	0.036301646	1	10.43414	0.165276633	4.25978E-07	0.00343363	0.00056492	0.003432721	0.000503695	0.001181271	0.002041416	0.000488499	0.000908893
OR7D2	8	0.036362371	1	9.550938	0.215481048	6.16559E-07	0.00510551	0.00104261	0.001843503	0.001067151	0.001017228	0.000915357	0.000951834	0.000452445
SLC13A5	8	0.036388159	1	9.246519	0.235438264	2.24079E-07	0.0121331	0.00060224	0.001561521	0.001376774	0.000982685	0.000625948	0.000854358	0.001548995
REC8	8	0.036521724	0	6.859172	0.443688772	0	0.01112867	0.00497161	0.002881935	0.026478545	0.001186806	0.000508808	0.00070627	0.004009321
ACTR3B	8	0.036673338	1	10.4485	0.164549695	6.70847E-08	0.01207888	0.00117526	0.001511164	0.000610998	0.000993466	0.000751821	0.000789407	0.001494481
ZNF846	8	0.036889264	1	7.312405	0.397092994	2.68196E-07	0.00170368	0.02959229	0.004067355	0.001233828	0.000854445	0.000402364	0.001120802	0.000879079
ZMAT2	8	0.03691555	1	10.06674	0.184822812	2.79568E-06	0.00266829	0.00023759	0.002696166	0.000427945	0.008102858	0.000218154	0.00050123	0.00045163
MLXIPL	8	0.036965543	0	6.481068	0.484828506	0	0.00235531	0.01426824	0.006106058	0.000654841	0.038748985	0.064634179	0.001419543	0.022397398

ADCY9	8	0.037082792	1	7.186758	0.409697365	7.39561E-09	0.00753231	0.00150669	0.00964642	0.001761932	0.000840757	0.001297928	0.00193565	0.000859872
OLFML1	8	0.037094505	1	9.32999	0.22982425	1.64523E-07	0.00689721	0.00068049	0.005105275	0.000863135	0.000817006	0.001345809	0.000718172	0.002274877
FNDC3A	8	0.037264796	1	8.955281	0.255882666	1.96574E-07	0.00220903	0.00078154	0.010343474	0.001788406	0.000627987	0.000937267	0.001472164	0.001022446
PILRA	8	0.037669689	1	11.67143	0.111895052	3.27379E-06	0.00337242	0.00060878	0.008821737	0.000449556	0.000559103	0.00045593	0.000451267	0.009684895
RHBDL1	8	0.037830874	1	10.04237	0.186185016	3.46706E-06	0.00298662	0.00079324	0.002105124	0.001269865	0.000575016	0.00058235	0.000708569	0.001309242
EHF	8	0.037954369	0	2.728192	0.908957296	0	0.06479703	0.01047616	0.004383159	0.000814841	0.003437224	0.002856379	0.001993642	0.003678592
UPK1B	8	0.038102074	1	10.19069	0.17802226	2.59873E-07	0.0037512	0.001833	0.004264321	0.000562873	0.000659194	0.001013696	0.001357646	0.001061486
DLG1	8	0.038111221	1	7.747538	0.355381415	5.14419E-08	0.00237222	0.00238934	0.002977516	0.002972424	0.000824039	0.000660147	0.001285895	0.001134364
REN	8	0.038124802	1	7.69826	0.359951348	1.28451E-08	0.00141535	0.01081905	0.005208719	0.000687034	0.00217556	0.001458206	0.001855102	0.001755548
ASCL3	8	0.038171722	1	12.89753	0.074644696	2.62648E-06	0.00651365	0.00078353	0.001467994	0.00041966	0.000542912	0.000774801	0.000461501	0.000519563
OR11L1	8	0.038182307	1	11.57649	0.115374695	8.21429E-07	0.00162062	0.0012326	0.00337635	0.000552042	0.000634837	0.0006451	0.000976308	0.000535915
AADACL4	8	0.03835661	1	8.875907	0.261688644	4.08175E-07	0.00364641	0.00087193	0.002058912	0.00513981	0.000636166	0.000771165	0.001000021	0.001082096
SRSF12	8	0.038377726	0	6.754094	0.454924863	0	0.00302647	0.0032149	0.009684205	0.000711765	0.001908766	0.005250791	0.003238338	0.002796843
MFSD1	8	0.038723766	0	6.937599	0.435405902	0	0.003652	0.00223495	0.003707457	0.002288103	0.001314843	0.000995615	0.000959059	0.001138061
SCP2	8	0.038770553	1	7.538256	0.375062556	1.33596E-07	0.00460165	0.0008924	0.00319193	0.004931517	0.000637602	0.000489002	0.006059293	0.00133977
TMEM147	8	0.038792513	0	6.970937	0.431912179	0	0.00311915	0.00265449	0.005079914	0.001154966	0.016823285	0.001040684	0.00129858	0.018877956
CCDC85C	8	0.038828051	1	11.05948	0.136045334	3.88872E-07	0.00229322	0.00120414	0.001894294	0.000587897	0.000728021	0.000828022	0.001301468	0.00069889
SIRT4	8	0.038840487	1	9.242564	0.235706978	1.35546E-06	0.00866052	0.00147667	0.004049606	0.009345006	0.00060015	0.001633568	0.000503811	0.000640073
BCL7B	8	0.038906348	1	8.608542	0.281995659	3.90791E-07	0.00409285	0.00083592	0.011744562	0.000465407	0.00157875	0.00247364	0.000839639	0.003807264
SIPA1L1	8	0.039049067	0	5.055795	0.65315424	0	0.26638248	0.0018278	0.003289806	0.003030106	0.001105128	0.000802705	0.001684881	0.00113946
FAM160B2	8	0.039114633	0	3.236262	0.86231988	0	0.02745099	0.00820884	0.00422694	0.000946156	0.0054142	0.002023683	0.001804618	0.001734111
NPFFR1	8	0.039121656	0	4.349499	0.738756062	0	0.05388794	0.00347611	0.034225555	0.001152492	0.020476392	0.001182413	0.001334704	0.003148305
VAV1	8	0.039190964	1	7.75992	0.354239365	6.27162E-08	0.15388961	0.00142249	0.00640082	0.000676068	0.002778649	0.003772819	0.001540842	0.000630891
TNN	8	0.039204742	1	7.433659	0.385164347	6.72595E-09	0.00923013	0.00243391	0.003338635	0.000985619	0.001003842	0.001328122	0.003369922	0.001630554
NUFIP1	8	0.039229975	1	9.390971	0.225791017	2.67529E-08	0.02698094	0.0005941	0.020431535	0.001010252	0.000808996	0.000867206	0.000628394	0.010925493
GPR32	8	0.03928163	0	2.88078	0.895807639	0	0.00518832	0.00180155	0.045605841	0.000897707	0.010734076	0.002747054	0.002433437	0.002430751
SPATA6L	8	0.039434462	1	7.930788	0.33873655	1.065E-07	0.00394842	0.00098946	0.002768723	0.002374869	0.000696086	0.000471557	0.001238287	0.010651091
RHOT2	8	0.039568403	1	10.28765	0.172850389	3.85641E-06	0.00475265	0.00072634	0.001767422	0.00140029	0.000542758	0.000517172	0.000613058	0.001336927
GEN1	8	0.039576603	0	5.302232	0.623132873	0	0.0077499	0.0008529	0.007311634	0.004834294	0.002341442	0.000620088	0.001120936	0.089844116
HHLA1	8	0.03960343	1	7.502713	0.378475522	2.41161E-08	0.0033327	0.00128247	0.006693926	0.00120528	0.001804572	0.000745385	0.000984089	0.013367485
FAM189A2	8	0.039661395	0	5.715591	0.573322719	0	0.00222461	0.00218481	0.03519111	0.001626431	0.002915261	0.000318521	0.002271561	0.000643558
DAAM2	8	0.039736459	1	9.823699	0.198786406	3.12643E-07	0.00239786	0.0010172	0.001503166	0.000686654	0.000925044	0.000306331	0.000607766	0.001776893
SSTR3	8	0.039806312	1	7.284496	0.399871402	6.12472E-09	0.00943311	0.00127774	0.022595218	0.001070752	0.001161054	0.001813509	0.001355867	0.002011526
SIRPB2	8	0.03981995	1	9.237449	0.236054825	1.78761E-07	0.00259475	0.00062619	0.002232815	0.001430117	0.000926298	0.000961722	0.001134964	0.001172869
SLC29A4	8	0.039877973	1	7.79779	0.350762025	4.30727E-07	0.01140251	0.00230678	0.002821792	0.001339825	0.000872141	0.000808076	0.001094124	0.002295977
HR	8	0.039889578	0	2.552426	0.923097874	0	0.01531719	0.00474817	0.003767673	0.000895025	0.015168725	0.002101503	0.001763925	0.003294006
TNNT1	8	0.039987685	1	9.044138	0.24950267	1.57513E-06	0.01741439	0.0017969	0.010765873	0.0006411	0.000673824	0.002947213	0.001192073	0.000823575
FBXO21	8	0.039997809	0	6.196175	0.517039034	0	0.00187672	0.00098922	0.038238637	0.008643892	0.002923981	0.000680931	0.00139485	0.000938318
XIRP1	8	0.040102141	1	7.74423	0.355686868	4.60384E-08	0.02882223	0.00222855	0.001739762	0.001094634	0.001118693	0.000585372	0.001434906	0.014781688
KIFC2	8	0.040286714	0	6.181438	0.518730949	0	0.00372694	0.00282343	0.002490043	0.00105189	0.0026093	0.002010241	0.001426798	0.002193312
VAMP8	8	0.040347842	1	9.981945	0.18959894	9.83249E-07	0.00317649	0.00034801	0.007248166	0.000674816	0.00086977	0.000781071	0.001956366	0.001054724
ZCWPW1	8	0.040375487	1	12.03093	0.099546346	3.40783E-06	0.00288436	0.00060341	0.006274786	0.000441364	0.000572269	0.000457281	0.000462999	0.012896466
MEPCE	8	0.040375487	1	12.03093	0.099546346	3.40783E-06	0.00288436	0.00060341	0.006274786	0.000441364	0.000572269	0.000457281	0.000462999	0.012896466
CNIH4	8	0.040574081	1	8.708077	0.274299889	9.07653E-07	0.00184373	0.00056064	0.004040471	0.00242177	0.001665925	0.000774923	0.001216238	0.001021739
PAPPA	8	0.040705842	1	9.528625	0.216895824	1.00243E-07	0.00286592	0.00227344	0.004848553	0.000829864	0.003383175	0.000557554	0.000592243	0.000605434
MXD3	8	0.040764226	0	6.69879	0.460900833	0	0.00402212	0.00088744	0.012310668	0.004454301	0.001406223	0.001377389	0.000803411	0.000648234
AP4S1	8	0.040765472	1	9.240728	0.235831798	7.38793E-07	0.00308496	0.00048484	0.004348687	0.001011324	0.000832654	0.006774666	0.00228496	0.000450474
NFE2L1	8	0.040992526	1	7.651216	0.364351171	1.48716E-07	0.00296598	0.00082359	0.005149657	0.095799502	0.001665267	0.000657583	0.000667149	0.005744078
GOLT1A	8	0.041171568	0	6.880583	0.441418686	0	0.00711038	0.00239466	0.002452955	0.000698462	0.002209887	0.006394832	0.003776592	0.005134683
NDUFB2	8	0.04125013	1	9.648325	0.20939373	1.74589E-06	0.00503759	0.00074918	0.00177811	0.000938184	0.00136454	0.001455352	0.00113665	0.0005708
HRAS	8	0.041299865	0.21	7.014412	0.42738083	8.39324E-09	0.0024369	0.00344458	0.010726787	0.001884928	0.001304151	0.000760583	0.001340089	0.023984052
B3GNT5	8	0.041469209	0	6.393898	0.49458037	0	0.00289699	0.0215557	0.002370598	0.00073596	0.003413881	0.024894176	0.003211166	0.002355363

TIGD5	8	0.041547046	0	5.238563	0.630875646	0	0.01201823	0.00054387	0.02141622	0.000351336	0.000926808	0.00244071	0.006451801	0.000640455
TRMT6	8	0.041670411	0	6.998143	0.429073266	0	0.00313246	0.00206378	0.002932001	0.001275525	0.00129232	0.001364477	0.002601628	0.003112422
RAD1	8	0.041752394	0	6.031199	0.536111198	0	0.00893112	0.00113823	0.029402327	0.001538967	0.004570093	0.001165983	0.001734754	0.002135917
CFHR4	8	0.041866379	1	9.131728	0.243336419	8.70056E-07	0.00560299	0.00055767	0.001782252	0.001486588	0.001316107	0.00059905	0.000856137	0.002540415
AKTIP	8	0.041900845	1	16.00301	0.025088896	4.59699E-07	0.00126063	0.00070864	0.001511207	0.00028288	0.000739487	0.000575614	0.001014736	0.00050384
KCNQ5	8	0.041937531	1	8.511286	0.289671891	3.62457E-08	0.0242409	0.00100114	0.001710207	0.001343962	0.000874652	0.00072504	0.003472922	0.001207595
IRAK2	8	0.041965177	1	8.94259	0.256804199	9.32761E-08	0.00590327	0.00164135	0.002441115	0.000702133	0.001048849	0.001369862	0.002753783	0.000746924
RNF31	8	0.042008295	0	6.718646	0.458750311	0	0.02439744	0.00926167	0.003663861	0.007892863	0.001413173	0.000527105	0.000786655	0.019623746
F13B	8	0.042060399	1	9.663401	0.208464024	1.51547E-06	0.00203514	0.00057453	0.002235011	0.001823737	0.000757482	0.00041924	0.000627449	0.002472628
ATAD5	8	0.042311274	1	10.30115	0.17213999	3.62544E-06	0.13415983	0.00448728	0.017237956	0.001124737	0.000408413	0.000679314	0.000663144	0.000560832
PNPO	8	0.042616023	0	4.944516	0.666734251	0	0.01409997	0.00142324	0.003809613	0.001900597	0.005003492	0.000904424	0.001510758	0.002180358
ZNF619	8	0.042623616	1	11.13259	0.132939266	5.98171E-07	0.00211609	0.00050919	0.011741272	0.000477588	0.001153772	0.002504684	0.000438724	0.000811707
TATDN2	8	0.042890526	1	7.569536	0.372075738	9.22524E-09	0.00942778	0.0028363	0.001633699	0.000830273	0.00137164	0.001725493	0.003670159	0.001597557
CSNK1A1L	8	0.042927923	1	8.742671	0.27166302	1.5732E-07	0.00317364	0.00046854	0.005686177	0.001533515	0.001108368	0.003410282	0.001842959	0.000812833
RAB24	8	0.042947427	0	6.101524	0.527946325	0	0.03486724	0.00092194	0.016135016	0.004313422	0.001288552	0.001484939	0.000839882	0.000652952
TOE1	8	0.042968057	1	10.14151	0.180695108	1.95267E-06	0.00317408	0.00079439	0.001473013	0.000745074	0.000646787	0.000381537	0.002789221	0.001048132
TEX33	8	0.04298728	1	7.547816	0.374148076	3.3207E-08	0.02251066	0.00105714	0.021372983	0.000995711	0.003279906	0.003208318	0.000986044	0.000861502
VPS29	8	0.043161498	0	4.286099	0.746297566	0	0.00651736	0.00559005	0.001754457	0.000868074	0.053626849	0.001948505	0.003422324	0.007730322
NSD1	8	0.04334851	1	7.486791	0.380011036	5.39344E-08	0.00510234	0.00097052	0.006253009	0.001611837	0.002119796	0.002338793	0.000911895	0.000871299
OTOGL	8	0.043401884	1	9.766005	0.202226095	7.2571E-07	0.01190921	0.00129321	0.004316961	0.001166982	0.000473714	0.000598954	0.004069	0.000560309
VPS26B	8	0.043435121	0	6.812766	0.448631643	0	0.00738908	0.0014502	0.005708398	0.001030681	0.007621301	0.003367769	0.001493574	0.001842483
OR2W3	8	0.043518803	1	12.09553	0.097460741	1.15636E-06	0.00218792	0.00166334	0.00309213	0.000538579	0.000482108	0.000545481	0.001038485	0.000612598
PRM3	8	0.043569005	0	6.587359	0.47306864	0	0.00237296	0.00241881	0.005236031	0.001553641	0.001611735	0.00118742	0.003661634	0.001247866
NAB2	8	0.043598504	0	6.636883	0.467640105	0	0.01025528	0.00089951	0.003669227	0.002820195	0.011780427	0.000750187	0.001165266	0.010539003
STK24	8	0.043636748	1	11.54783	0.116443957	8.36705E-07	0.00198596	0.00049749	0.002628763	0.001291402	0.000531188	0.000592549	0.000326022	0.000605798
F2RL1	8	0.043641348	1	9.901923	0.194199895	1.99259E-07	0.00198923	0.00118111	0.004531451	0.000811222	0.001558671	0.001111092	0.000717625	0.001008414
PSMC6	8	0.043711052	1	8.265942	0.309728683	1.04007E-07	0.00232822	0.00149225	0.013357716	0.003474978	0.000885935	0.001514407	0.00109147	0.000704545
EVC	8	0.043761247	0	6.560179	0.476061779	0	0.00355865	0.00289048	0.004972734	0.002435549	0.003504224	0.000682878	0.00120152	0.001710846
PRELP	8	0.043795254	1	7.161915	0.412218421	5.13268E-09	0.00182282	0.00682654	0.018214411	0.000826373	0.001957284	0.002007984	0.001720789	0.009365397
SNX19	8	0.043829632	0	5.406045	0.610539448	0	0.00337703	0.00168905	0.019879906	0.003360709	0.001291409	0.000847816	0.003269922	0.000875187
CCDC158	8	0.043945301	0	6.360431	0.498349335	0	0.00495993	0.00092616	0.005432669	0.002087496	0.009845209	0.001074493	0.00242669	0.001096496
OR7E24	8	0.043952601	0	6.650203	0.466185652	0	0.01047443	0.00133701	0.006939158	0.002259864	0.001041981	0.001659466	0.001372501	0.000776478
FGFR1	8	0.043978209	1	9.79003	0.200787809	1.2211E-06	0.00247774	0.00063121	0.002916293	0.001196925	0.001801149	0.000403571	0.000444232	0.001849616
CDK5RAP1	8	0.044064128	0	5.279822	0.62585663	0	0.00308481	0.00166322	0.005419546	0.002423776	0.001247107	0.000791221	0.002178327	0.003759675
ARC	8	0.044130209	0	5.705531	0.574522475	0	0.015732	0.00234527	0.003097344	0.007570504	0.001313177	0.000692995	0.000862972	0.001466159
PSMG4	8	0.044286593	1	12.29261	0.091337655	9.60092E-07	0.00169011	0.00054196	0.004836991	0.000447653	0.000775247	0.00061922	0.000906424	0.004264467
WDFY2	8	0.044302534	0	4.272898	0.747862947	0	0.00336492	0.00429792	0.026807862	0.000968781	0.002386175	0.001372754	0.002994185	0.010275924
AZGP1	8	0.044306823	1	9.352338	0.228339503	3.17706E-07	0.00471184	0.0007513	0.001900585	0.001388445	0.001086106	0.000893246	0.000813527	0.001883252
NRIP3	8	0.04435565	1	9.390128	0.225846348	2.66647E-07	0.00315494	0.00102342	0.003440703	0.000639493	0.001161718	0.006655586	0.00070527	0.000996581
DRAXIN	8	0.044410984	0	3.185724	0.867306111	0	0.03808925	0.01082736	0.00570329	0.001213562	0.002596203	0.000994955	0.009406754	0.0051822
EXOC3L2	8	0.044637963	1	7.514945	0.377298698	4.46346E-08	0.00729024	0.00085529	0.002478273	0.001341114	0.001528208	0.001223422	0.002081046	0.002039876
PLEKHF1	8	0.044805199	1	7.262175	0.402102352	5.53965E-09	0.01558679	0.00400818	0.001764312	0.001219215	0.001297881	0.00111068	0.00232312	0.002188246
NDUFB4	8	0.044837451	0	6.931699	0.436025828	0	0.00238736	0.00160875	0.003790595	0.000601672	0.001733389	0.001963444	0.007472972	0.005538524
RGS22	8	0.044917697	0	6.537877	0.478524912	0	0.01801721	0.00098649	0.063723989	0.003261394	0.002983496	0.000758032	0.000888801	0.046350626
PGRMC2	8	0.044975787	1	10.66429	0.153947647	2.93618E-07	0.00189221	0.00040794	0.028519015	0.000720559	0.001137308	0.000902737	0.000792912	0.001440089
C12orf4	8	0.044995704	1	9.530996	0.216745146	1.34874E-07	0.00492095	0.0045898	0.197663946	0.000556872	0.00075399	0.000654423	0.001367817	0.007233806
GLYATL1	8	0.045100229	1	7.55985	0.372998944	9.60069E-08	0.00236734	0.00185609	0.002072774	0.002727782	0.000995459	0.000646263	0.001279766	0.000905468
OCA2	8	0.045137933	1	11.46174	0.119707868	1.46246E-07	0.00135925	0.00064814	0.002355145	0.0007052	0.000752918	0.000506508	0.001418115	0.000986714
CXCL2	8	0.045418607	1	9.403667	0.224958459	7.84571E-07	0.0019513	0.0007998	0.010430708	0.002203228	0.002582471	0.000924638	0.000607221	0.00077834
CC2D1A	8	0.045453299	0	4.539398	0.715968091	0	0.10907605	0.00129101	0.007725134	0.000510317	0.002302501	0.001776792	0.013996053	0.026133085
PI4K2B	8	0.045460951	1	10.07244	0.184505456	1.73046E-06	0.00129006	0.00037496	0.008949498	0.007095234	0.001312269	0.000334291	0.000530328	0.00055914
ARL5A	8	0.045504445	1	8.046392	0.328520923	6.53306E-07	0.00290313	0.00138357	0.002884775	0.001589465	0.000809583	0.000416012	0.000516854	0.010872929

BRIX1	8	0.045545591	0	5.960529	0.544365714	0	0.01640143	0.00115828	0.023495501	0.001647478	0.005098524	0.001117942	0.001816788	0.002683437
SSR2	8	0.045590093	1	12.25737	0.092406621	3.34537E-06	0.00303779	0.00044238	0.00165375	0.000584129	0.000949828	0.00080693	0.000487997	0.000767258
ENG	8	0.045606967	1	12.08239	0.097881673	1.1604E-06	0.00320766	0.0013915	0.002616097	0.000465334	0.001035219	0.00105762	0.000465451	0.000580427
EDNRB	8	0.045662288	1	10.29351	0.172541762	2.51941E-08	0.00203677	0.00150273	0.001512557	0.00043553	0.001506849	0.00124702	0.001083914	0.001827565
ME3	8	0.045775522	1	7.993488	0.333168519	1.0074E-07	0.0021419	0.00359283	0.002429916	0.001813147	0.002679499	0.000388271	0.000949829	0.000445809
AKIP1	8	0.045794834	1	13.00861	0.071898898	2.51914E-06	0.00190702	0.00080735	0.001775499	0.000519137	0.000734149	0.000944433	0.000572745	0.000749625
PARP8	8	0.046035349	1	7.869148	0.344273683	3.68331E-08	0.02056109	0.00063197	0.014273455	0.00210059	0.001172839	0.000679598	0.001059761	0.00333823
TIFAB	8	0.046065913	1	7.897649	0.34170568	9.12432E-08	0.06039431	0.00405018	0.005501082	0.001498517	0.000764834	0.000869693	0.002681173	0.001031514
NAA60	8	0.046101245	1	9.824295	0.198751124	7.32995E-07	0.01566677	0.0010269	0.009305306	0.001436931	0.000537664	0.002139965	0.000742719	0.001229149
SARS	8	0.046228691	1	7.284504	0.399870681	4.03935E-08	0.00212731	0.00157274	0.003083881	0.011592581	0.001407548	0.000657095	0.000871745	0.002139655
TICAM1	8	0.046262581	0	6.103216	0.52775049	0	0.00943044	0.00298971	0.002218536	0.00114697	0.001340384	0.00164135	0.002837534	0.006884238
C12orf29	8	0.046382133	0	6.702044	0.460548026	0	0.00174365	0.0071651	0.004766455	0.000512925	0.00233152	0.000839004	0.002260967	0.00175254
LCT	8	0.04647102	1	10.21871	0.176514662	2.4541E-06	0.02349465	0.00088564	0.001521409	0.059191332	0.00049015	0.00049582	0.00056488	0.000854311
VIMP	8	0.046645334	1	10.26069	0.174275663	3.87266E-07	0.00490713	0.00556523	0.009632153	0.000638203	0.000669826	0.00134745	0.001029835	0.000560437
GTF2B	8	0.046821113	0	6.27409	0.508134668	0	0.00416551	0.00090984	0.005604601	0.00052448	0.008801532	0.004440349	0.005960411	0.00394648
RPL14	8	0.046862115	1	9.287358	0.232678024	8.23125E-07	0.00924788	0.00067218	0.013373506	0.00058185	0.002352732	0.002298427	0.000457069	0.000747058
HBE1	8	0.047006254	1	7.400707	0.388383022	9.23976E-09	0.00222122	0.00298874	0.004733718	0.00054509	0.001774093	0.004018196	0.001504588	0.009151256
NUDT18	8	0.047539618	0	3.042514	0.881041636	0	0.01763038	0.01105106	0.003966571	0.000989542	0.006187969	0.002367481	0.001762177	0.002241927
RPH3AL	8	0.047555617	1	7.214612	0.406881949	7.28232E-09	0.00268751	0.00892591	0.009594176	0.001276482	0.001562369	0.001181862	0.001223767	0.002825364
SEC24B	8	0.047563251	1	10.23101	0.175855774	8.19272E-07	0.00143	0.00071794	0.009028088	0.001557198	0.001003656	0.000789769	0.000758865	0.00121285
OR2V1	8	0.047691362	1	7.502464	0.378499558	4.42255E-08	0.00260149	0.00103166	0.00483863	0.001717615	0.002586114	0.001232156	0.001024466	0.001557897
CUBN	8	0.047699113	1	10.11354	0.182229895	2.07167E-07	0.00835727	0.00072122	0.002264626	0.00038286	0.000619971	0.01357455	0.003282834	0.00043813
E2F1	8	0.047767093	1	7.548799	0.374054098	1.72419E-07	0.06973186	0.00161233	0.003928459	0.001414591	0.000875549	0.000529521	0.001966387	0.002516881
MBD3L3	8	0.04784156	0	5.198034	0.63581035	0	0.0056771	0.00368689	0.002810228	0.001199076	0.00200996	0.00156024	0.193266599	0.001505577
DHRS9	8	0.047875271	1	12.34849	0.089665406	5.85147E-07	0.00310936	0.00115886	0.001445127	0.000460949	0.000570027	0.000406313	0.001970764	0.001263909
NFATC2	8	0.047918016	1	7.267244	0.401595023	4.001E-09	0.00299031	0.00100703	0.004249563	0.002035848	0.001454171	0.001718052	0.001454127	0.000961316
C1orf198	8	0.048026111	1	7.225009	0.4058342	2.11678E-09	0.00141816	0.00201679	0.003092674	0.000858272	0.008262956	0.001898979	0.003390087	0.009068293
ROBO1	8	0.048055403	0	5.499897	0.599196346	0	0.0047151	0.00367485	0.005886932	0.002438781	0.006323619	0.000438078	0.003825602	0.001367557
PPP1R35	8	0.048076377	1	9.800355	0.200172307	2.31476E-06	0.45863647	0.00094141	0.006680877	0.000720046	0.00106132	0.000920397	0.000748347	0.095945858
SYT9	8	0.048082474	1	9.778359	0.201485463	8.31668E-08	0.00305403	0.00118065	0.005522135	0.000694963	0.000677983	0.003190919	0.001228401	0.001084782
DKK4	8	0.048126841	1	10.22021	0.176433955	6.87902E-06	0.01693117	0.00154199	0.004673729	0.002168677	0.000420298	0.00057555	0.00058131	0.00151936
FNDC5	8	0.048134063	1	9.190707	0.239252568	1.19664E-06	0.00248699	0.00058249	0.002639164	0.009274423	0.001892933	0.00134034	0.001167326	0.000462852
SYK	8	0.048318205	0	4.488273	0.722128981	0	0.00396687	0.00222409	0.004898877	0.005423683	0.004374457	0.00066109	0.001099823	0.001645007
VWA8	8	0.048433369	0	6.271713	0.50840526	0	0.00155645	0.00240954	0.008590528	0.000952455	0.004773639	0.002461543	0.00930635	0.002265148
ADIPOR2	8	0.048552679	1	11.47946	0.119029719	7.60716E-07	0.03458831	0.00049166	0.0027788	0.000659773	0.001271304	0.000782611	0.000412458	0.001598977
PEX12	8	0.048560569	0	6.628482	0.468558655	0	0.0081297	0.00150403	0.251104382	0.000976678	0.002199473	0.027004474	0.001900161	0.001389671
OPRL1	8	0.048673567	1	7.913658	0.340269033	1.56252E-07	0.02012644	0.00150914	0.002037879	0.002182019	0.000988929	0.001112289	0.002280001	0.000895431
KIDINS220	8	0.048677049	1	8.893454	0.260396421	3.69728E-07	0.00704679	0.0004774	0.005293307	0.000856449	0.002084665	0.004029348	0.001335316	0.001172195
LTF	8	0.048694916	1	7.615575	0.367708529	6.52498E-08	0.00203732	0.00102335	0.027371797	0.004186033	0.004809003	0.001035684	0.00149646	0.000748288
SYT13	8	0.048743669	1	7.484725	0.380210533	5.06512E-08	0.00274594	0.00849934	0.00182082	0.000828073	0.001518903	0.000357185	0.002134194	0.000514125
MMS19	8	0.048746709	1	10.40677	0.166669764	7.61529E-07	0.00219391	0.00113416	0.001707119	0.001358524	0.000877786	0.000694665	0.000819123	0.000941806
PLA2G1B	8	0.04880599	1	9.815873	0.199250135	1.51985E-06	0.00347445	0.00137714	0.059149685	0.007433854	0.000666833	0.002813936	0.000465354	0.00070597
PPM1M	8	0.048824109	0	6.84385	0.44531736	0	0.00604744	0.00389756	0.006362219	0.001470391	0.002490086	0.001604215	0.001314078	0.001239357
NUP188	8	0.048858695	0	5.673714	0.578321635	0	0.03534594	0.00383406	0.002519835	0.004962685	0.002536309	0.000660367	0.000969326	0.002198964
MTO1	8	0.048877958	1	10.9993	0.138649674	2.52815E-06	0.00397214	0.0005212	0.002223733	0.002366288	0.000445057	0.001203718	0.000565391	0.001027213
SPPL3	8	0.04906579	1	8.28984	0.307731298	1.71153E-07	0.00196593	0.00292914	0.017317096	0.006132866	0.001550478	0.000736212	0.000705862	0.00093215
ITGB3	8	0.049113948	1	11.60714	0.114241335	1.93974E-06	0.00207949	0.00036249	0.004435451	0.000719324	0.000401124	0.001011876	0.001625333	0.000556
PUF60	8	0.049142975	1	12.54028	0.084133553	1.51298E-06	0.03175159	0.00100986	0.001522699	0.000571981	0.001043386	0.000723969	0.000541698	0.001318995
KRTAP13-4	8	0.049230481	1	7.83548	0.347324583	2.64784E-07	0.00332286	0.00066969	0.006437955	0.013268042	0.00095917	0.003490548	0.001265825	0.000723519
HRG	8	0.049260119	0.42	7.029434	0.425821622	7.54114E-10	0.00415498	0.00161097	0.001873878	0.000773454	0.005172106	0.008254838	0.041655624	0.062038651
FZD8	8	0.049271394	1	9.182486	0.239818561	4.48322E-06	0.003382	0.00463216	0.008056225	0.021678526	0.000698549	0.000595146	0.000484097	0.001021293
EGFLAM	8	0.049283242	1	10.37073	0.168519823	4.30152E-07	0.00350022	0.00046084	0.00774309	0.002710091	0.00046303	0.000621597	0.000471316	0.121638695

BHMT	8	0.049375	1	12.04243	0.099172005	7.20452E-07	0.00284254	0.00065898	0.001552093	0.00067989	0.000639677	0.000761387	0.001677281	0.000791239
AUTS2	8	0.049490875	1	15.16263	0.033970313	1.70325E-07	0.00137337	0.00072188	0.008963006	0.000248086	0.000356446	0.000795023	0.000741915	0.000383028
PILRB	8	0.049516596	1	12.12098	0.09664979	3.19482E-06	0.00252259	0.00073474	0.020197378	0.000550496	0.000631167	0.000599516	0.000537569	0.017868253
SMC6	8	0.049617118	0	5.383946	0.613216533	0	0.03075281	0.00078372	0.003519478	0.026747369	0.004148414	0.000568916	0.001099522	0.010797822
FAM71F2	8	0.049627875	1	8.081922	0.325425559	8.9981E-08	0.0054946	0.00085377	0.001571661	0.001413014	0.002841064	0.000627469	0.001759265	0.003876028
DNAH1	8	0.04969525	0	6.609853	0.470598852	0	0.05604942	0.00072781	0.084583308	0.002679764	0.004555018	0.001433729	0.001836102	0.000888766
POLB	8	0.049778286	1	9.557788	0.215048275	4.20099E-06	0.042003	0.002355	0.008701193	0.002713672	0.0004737	0.00058622	0.000696511	0.001875451
PPARG	8	0.049785963	1	10.24835	0.174930838	1.147E-06	0.4573623	0.00051041	0.00153114	0.001560314	0.00032237	0.000360255	0.000727731	0.000612399
NAP1L1	8	0.049900953	1	8.056091	0.327673908	1.23156E-07	0.00315906	0.00061524	0.003891549	0.001163203	0.000683222	0.0016326	0.001032937	0.001665274
MKNK2	8	0.049933429	1	8.204261	0.314927555	6.12475E-07	0.00393958	0.00074094	0.001973149	0.005719982	0.002029577	0.001098125	0.001553953	0.000664417

Table S20 Significant Hub genes from our gene and subnetwork GWAS meta-analysis using ancMETA encompassing SUIC, ICV, Accumbens, Caudate, Hippocampus, Pallidum, Thalamus, and Putamen.

Hub	#Study	Overall P	I2	Q	P_Q	TAU^2	P_SUIC	P_Caudate	P_ICV	P_Accumbens	P_Thalamus	P_Pallidum	P_Putamen	P_Hippocampus
NEB	8	0.012302913	1	7.281386846	0.400181726	8.41235E-08	0.438468873	0.080733476	0.164008836	0.198514257	0.060761644	0.05192356	0.086343832	0.05589216
EEF1D	8	0.013837851	0	6.125197453	0.525209242	0	0.241087857	0.065678583	0.43335622	0.032676875	0.139487549	0.372736815	0.416809474	0.115125485
B2M	8	0.019059473	0	6.532272676	0.479144971	0	0.346704076	0.086914278	0.235764534	0.41484868	0.081157771	0.062212497	0.076919986	0.039469176
VHL	8	0.023484531	1	9.004132885	0.252359458	3.71435E-07	0.237637108	0.106876577	0.352992635	0.053430086	0.075453131	0.108364329	0.122067561	0.048153577
UHRF1	8	0.028847797	0.831108778	7.058665186	0.422797353	2.72712E-09	0.252664899	0.211437468	0.150638613	0.083196494	0.226542302	0.1002721	0.460482077	0.444929136
HIVEP1	8	0.032836497	1	11.91753323	0.103303657	3.99518E-07	0.275023659	0.05446206	0.158319411	0.04449258	0.037957261	0.070797486	0.060480338	0.042319831
BCL2L11	8	0.03329423	0	6.591594207	0.472603097	0	0.243069362	0.287165046	0.277600597	0.082116566	0.224729427	0.265559577	0.168615918	0.13133715
STUB1	8	0.033630655	1	9.670158374	0.208048431	3.26164E-06	0.33950303	0.082943588	0.20020802	0.114622584	0.051132685	0.056035212	0.070216076	0.132331136
VIM	8	0.03508344	1	10.34526898	0.169836999	3.98693E-08	0.147782268	0.089675646	0.302762902	0.048420763	0.102744726	0.101323118	0.094126154	0.161578361
CDK5RAP3	8	0.035109052	0	4.753438811	0.690022699	0	0.277647527	0.142220253	0.356629357	0.093740807	0.314037406	0.116738425	0.391949756	0.25311991
WDR82	8	0.035729451	0	6.734168601	0.457072997	0	0.374882569	0.201388736	0.495799971	0.126853698	0.22362762	0.133037208	0.109577196	0.100915809
DLG1	8	0.038111221	1	7.747537572	0.355381415	5.14419E-08	0.203866892	0.204964581	0.239386391	0.239114594	0.080633899	0.065092065	0.122209066	0.108970335
RAP2A	8	0.039105006	0	6.072461067	0.531314421	0	0.308177198	0.295991701	0.158236416	0.087901792	0.403978485	0.126307996	0.217579276	0.466646317
MEPCE	8	0.040375487	1	12.03092846	0.099546346	3.40783E-06	0.234344406	0.059633491	0.350583551	0.043856769	0.056622099	0.045417368	0.045977472	0.423014947
HRAS	8	0.041299865	0.205462712	7.014412001	0.42738083	8.39324E-09	0.207984801	0.262557774	0.408211276	0.170182968	0.123775372	0.074658618	0.126840423	0.458078809
IRAK2	8	0.041965177	1	8.942589817	0.256804199	9.32761E-08	0.34260425	0.151543669	0.208250544	0.06910676	0.101318874	0.129361054	0.227025851	0.073365236
STK24	8	0.043636748	1	11.54782934	0.116443957	8.36705E-07	0.177559375	0.04935022	0.219734709	0.122682157	0.052633827	0.058584385	0.032488953	0.059863966
FGFR1	8	0.043978209	1	9.790030172	0.200787809	1.2211E-06	0.210543966	0.062312452	0.23608947	0.114486678	0.163908434	0.040142913	0.044138159	0.16755574
RPL14	8	0.046862115	1	9.287358424	0.232678024	8.23125E-07	0.394508957	0.066245132	0.425663513	0.057549658	0.202610046	0.19906932	0.045396581	0.073377913
E2F1	8	0.047767093	1	7.548799032	0.374054098	1.72419E-07	0.485712677	0.149243193	0.283248505	0.133115767	0.085442156	0.052471622	0.176146554	0.212966968
NFATC2	8	0.047918016	1	7.267244161	0.401595023	4.001E-09	0.240067561	0.097532055	0.29537167	0.181125254	0.136405689	0.157543495	0.136402084	0.093359381
NAP1L1	8	0.049900953	1	8.056090503	0.327673908	1.23156E-07	0.248798888	0.060774531	0.2817772	0.111521968	0.067301181	0.150851867	0.099881427	0.153427967

Table S21 Significant Pathways per Reactome

description	term name	FDR value	p-value	transferred FDR value	Genes
Disease	HSA-1643685	1.12E-10	4.91E-14	0.995078198	PSMD8|NFKBIA|POLR2I|PIK3R2|CCND1|LTF|APOA1|TUBA4A|IRAK2| VHL|PSMA6|ELOB|CP|CPSF6|GTF2E1|APP|ADAMTS1|S100A1|DUSP16| UBE2E1|PPFIBP1|SLC34A1|MRE11|PSEN1|GTF2F2|HNRNPA1|POLR2K| BLM|FGF17|G3BP2|MTOR|EXO1|DLL1|DUSP10|TAB2|VTA1|MAP3K7| GTF2B|HSPG2|RNF5|SYK|STAM|B4GALT1|RAD1|RAD9B|BCL2L11|EXT2| RPL14|RPS8|MAP2K7|CD14|ACAN|FGFR1|HRAS|SNRPB|RPS24|VAMP2|CHD4| ATP1A1|ITGB3|POLR2A|MAP2K6|AP2S1|VAV1|CYFIP2|AP2B1|CDC42
Signaling by Receptor Tyrosine Kinases	HSA-9006934	3.92E-09	3.43E-12	0.840671393	STUB1|POLR2I|PIK3R2|CMA1|KIDINS220|AXL|PRKCE|RANBP10|PSEN1| GTF2F2|HNRNPA1|POLR2K|FGF17|MTOR|TAB2|STAM|SHB|PRKCZ|PTPRZ1| MDK|FGFR1|HRAS|CHD4|ADAP1|ITGB3|POLR2A|AP2S1|VAV1|YAP1| CYFIP2|AP2B1|ADCYAP1R1|CDC42
Signal Transduction	HSA-162582	2.95E-07	3.88E-10	0.653017798	DLD|PSMD8|NFKBIA|PARD6A|SMPD3|STUB1|POLR2I|PIK3R2|PFN1|CCND1| RGS2|TUBA4A|CMA1|VHL|KIDINS220|DSG1|PSMA6|APP|MAD2L1|RAD21| DUSP16|LEO1|AXL|PRKCE|TMOD3|RANBP10|PSEN1|ALDH1A3|ARHGEF25| GTF2F2|HNRNPA1|POLR2K|DLG1|NET1|ITSN2|FGF17|MTOR|ACTN2|DLL1| DUSP10|CDC73|UCHL5|TAB2|MAP3K7|TRAF1|SYK|STAM|SHB|PRKCZ|B4GALT1| UCN3|ADRA1A|ITSN1|EVL|BCL2L11|PICALM|PTPRZ1|CRHR1|MDK|FGFR1|HRAS| AMOTL2|RACK1|CHD4|ADAP1|VIM|NUMB|ITGB3|POLR2A|AP2S1|VAV1|YAP1| CYFIP2|AP2B1|ADCYAP1R1|CDC42
Adaptive Immune System	HSA-1280218	1.50E-06	2.62E-09	0.582390874	LCP2|PSMD8|NFKBIA|STUB1|PIK3R2|TUBA4A|VHL|RNF144B|PSMA6|ELOB| S100A1|UBE2E1|TRIM41|KIF15|MTOR|TAB2|MAP3K7|UBE2U|UBR2|HLA-DQA2| HLA-DQB1|UBR4|SYK|EVL|NFATC2|ITGB2|CD14|HRAS|AP2S1|VAV1| MAP3K14|AP2B1|KCTD7|FYB1|CDC42
Infectious disease	HSA-5663205	4.01E-06	8.78E-09	0.539685563	PSMD8|NFKBIA|POLR2I|LTF|TUBA4A|IRAK2|VHL|PSMA6|ELOB|GTF2E1|APP| DUSP16|GTF2F2|HNRNPA1|POLR2K|G3BP2|TAB2|VTA1|MAP3K7|GTF2B|HSPG2| SYK|STAM|RPL14|RPS8|MAP2K7|SNRPB|RPS24|VAMP2|CHD4|ATP1A1| POLR2A|MAP2K6|AP2S1|VAV1|CYFIP2|AP2B1|CDC42
Immune System	HSA-168256	1.13E-05	2.97E-08	0.494692156	LCP2|PSMD8|NFKBIA|STUB1|PIK3R2|RAB3A|CCND1|MLEC|LTF|TUBA4A|IRAK2| VHL|DSG1|RNF144B|PSMA6|ELOB|IRF8|APP|S100A1|UBE2E1|PRKCE|TRIM41| KIF15|MRE11|PSEN1|POLR2K|PIGR|MTOR|TAB2|DHX9|MAP3K7|UBE2U|UBR2|HLA-DQA2|HLA-DQB1| AGER|UBR4|SYK|FTL|B4GALT1|EVL|BCL2L11|PTPRZ1|NFATC2|ITGB2|MAP2K7|CD14| HRAS|VAMP2|VIM|MAP2K6|AP2S1|VAV1|CYFIP2|MAP3K14|AP2B1|KCTD7|FYB1|EIF4A3|CDC42
Nervous system development	HSA-9675108	1.30E-05	3.99E-08	0.488605665	PSMD8|PIK3R2|PFN1|TUBA4A|PSMA6|ELOB|SLIT1|PABPC1|MAGOHB|PSEN1|DLG1|ITSN1| EVL|RPL14|RPS8|DCC|FGFR1|HRAS|RPS24|ROBO1|NUMB|ITGB3|AP2S1|YAP1|AP2B1|RDX|EIF4A3|CDC42
Axon guidance	HSA-422475	1.76E-05	6.26E-08	0.475448733	PSMD8|PIK3R2|PFN1|TUBA4A|PSMA6|ELOB|SLIT1|PABPC1|MAGOHB|PSEN1|DLG1|ITSN1| EVL|RPL14|RPS8|DCC|FGFR1|HRAS|RPS24|ROBO1|NUMB|ITGB3|AP2S1|AP2B1|RDX|EIF4A3|CDC42
Processing of Capped Intron-Containing Pre-mRNA	HSA-72203	1.76E-05	6.15E-08	0.475448733	SF3A1|HNRNPL|POLR2I|CPSF6|SRRM2|CSTF3|MAGOHB|GTF2F2|HNRNPA1|POLR2K| DHX9|CHTOP|PPIL1|SMU1|PRPF40A|SNRPB|PUF60|POLR2A|EIF4A3
mRNA Splicing - Major Pathway	HSA-72163	2.28E-05	9.99E-08	0.464206515	SF3A1|HNRNPL|POLR2I|SRRM2|MAGOHB|GTF2F2|HNRNPA1|POLR2K|DHX9|PPIL1| SMU1|PRPF40A|SNRPB|PUF60|POLR2A|EIF4A3
Developmental Biology	HSA-1266738	6.67E-05	3.51E-07	0.417587417	PSMD8|POLR2I|PIK3R2|PFN1|MED31|BMP4|TUBA4A|DSG1|MED4| PSMA6|ELOB|SLIT1|PABPC1|MAGOHB|PSEN1|POLR2K|DLG1|THRAP3| DLL1|ITSN1|EVL|RPL14|RPS8|DCC|FGFR1|HRAS|RPS24|ROBO1|NUMB| ITGB3|POLR2A|MAP2K6|AP2S1|YAP1|AP2B1|CTCF|RDX|EIF4A3|CDC42
RNA Polymerase II Pre-transcription Events	HSA-674695	1.10E-04	6.48E-07	0.395860731	POLR2I|ELOB|GTF2E1|LEO1|GTF2F2|POLR2K|CDC73|GTF2B|RTF1|POLR2A

Fc epsilon receptor (FCERI) signaling	HSA-2454202	1.50E-04	9.43E-07	0.382390874	LCP2|PSMD8|NFKBIA|PIK3R2|PSMA6|TAB2|MAP3K7|SYK|NFATC2|MAP2K7|HRAS|VAV1
Signaling by ROBO receptors	HSA-376176	1.60E-04	1.07E-06	0.379588002	PSMD8|PFN1|PSMA6|ELOB|SLIT1|PABPC1|MAGOHB|EVL|RPL14|RPS8| DCC|RPS24|ROBO1|EIF4A3|CDC42
TCR signaling	HSA-202403	2.40E-04	1.68E-06	0.361978876	LCP2|PSMD8|NFKBIA|PIK3R2|PSMA6|TAB2|MAP3K7|HLA-DQA2|HLA-DQB1|EVL|FYB1
Cytokine Signaling in Immune system	HSA-1280215	2.70E-04	2.10E-06	0.356863624	PSMD8|NFKBIA|PIK3R2|CCND1|IRAK2|PSMA6|ELOB|IRF8|APP|UBE2E1|TAB2| MAP3K7|HLA-DQA2|HLA-DQB1|AGER|SYK|BCL2L11|PTPRZ1|ITGB2|MAP2K7| HRAS|VAMP2|VIM|MAP2K6|VAV1|MAP3K14|EIF4A3|CDC42
Metabolism of RNA	HSA-8953854	2.70E-04	2.05E-06	0.356863624	PSMD8|SF3A1|HNRNPL|POLR2I|PSMA6|CPSF6|SRRM2|PABPC1|CSTF3|MAGOHB|PPP2R2A| GTF2F2|HNRNPA1|POLR2K|DHX9|CHTOP|PPIL1|RPL14|RPS8|SMU1|ELAVL1|PRPF40A| SNRPB|RPP14|RPS24|PUF60|POLR2A|EIF4A3
VEGFA-VEGFR2 Pathway	HSA-4420097	3.20E-04	2.67E-06	0.349485002	PIK3R2|AXL|MTOR|SHB|PRKCZ|HRAS|ITGB3|VAV1|CYFIP2|CDC42
Formation of RNA Pol II elongation complex	HSA-112382	4.60E-04	4.14E-06	0.333724217	POLR2I|ELOB|LEO1|GTF2F2|POLR2K|CDC73|RTF1|POLR2A
Innate Immune System	HSA-168249	4.60E-04	4.01E-06	0.333724217	LCP2|PSMD8|NFKBIA|PIK3R2|RAB3A|MLEC|LTF|IRAK2|DSG1|PSMA6|APP|S100A1| PRKCE|MRE11|PSEN1|POLR2K|PIGR|TAB2|DHX9|MAP3K7|AGER|UBR4|SYK|FTL| B4GALT1|NFATC2|ITGB2|MAP2K7|CD14|HRAS|MAP2K6|VAV1|CYFIP2|MAP3K14|CDC42
Death Receptor Signaling	HSA-73887	4.60E-04	3.99E-06	0.333724217	NFKBIA|SMPD3|STUB1|PSEN1|NET1|TAB2|MAP3K7|TRAF1|ITSN1|BCL2L11|RACK1|VAV1
RNA Polymerase II Transcription	HSA-73857	4.80E-04	5.08E-06	0.331875876	PSMD8|STUB1|POLR2I|MED31|CCND1|MED4|PSMA6|ELOB|CPSF6|GTF2E1|LEO1| UBE2E1|ZNF3|FANCI|CSTF3|MAGOHB|MRE11|GTF2F2|POLR2K|BLM|NR3C2|MTOR| EXO1|DLL1|CDC73|CHTOP|PRMT6|GTF2B|RAD1|SMARCA2|RTF1|RAD9B|BCL2L11| NFATC2|SNRPB|CHD4|DDIT3|POLR2A|MAP2K6|YAP1|EIF4A3
Signaling by FGFR in disease	HSA-1226099	6.30E-04	7.21E-06	0.320065945	POLR2I|CPSF6|GTF2F2|POLR2K|FGF17|FGFR1|HRAS|POLR2A
MyD88:MAL(TIRAP) cascade initiated on plasma membrane	HSA-166058	6.30E-04	7.58E-06	0.320065945	NFKBIA|IRAK2|APP|S100A1|TAB2|MAP3K7|AGER|MAP2K7|CD14|MAP2K6
Diseases of signal transduction by growth factor receptors and second messengers	HSA-5663202	6.30E-04	7.18E-06	0.320065945	PSMD8|POLR2I|PIK3R2|PSMA6|CPSF6|DUSP16|PPFIBP1|PSEN1|GTF2F2|POLR2K| FGF17|MTOR|DLL1|DUSP10|BCL2L11|FGFR1|HRAS|ITGB3|POLR2A|VAV1
Toll Like Receptor 4 (TLR4) Cascade	HSA-166016	7.10E-04	9.89E-06	0.314874165	NFKBIA|IRAK2|APP|S100A1|TAB2|MAP3K7|AGER|ITGB2|MAP2K7|CD14|MAP2K6
Metabolism of proteins	HSA-392499	0.0011	1.58E-05	0.295860731	PSMD8|JOSD1|NFKBIA|TBCB|RAB3A|AIMP2|MLEC|LTF|APOA1|BMP4|TUBA4A| CMA1|VHL|PSMA6|ELOB|CP|POLB|APP|ADAMTS1|RAD21|LEO1|UBE2E1|COPS6| PABPC1|SLC34A1|BLM|NR3C2|CDC73|UCHL5|MAP3K7|ARFGEF2|HSPG2|RNF5| UBD|STAM|B4GALT1|RTF1|VDAC1|RPL14|RPS8|DDX17|PEX5|PPP6C|EEF1D|RPS24| VAMP2|MRPL37|PIGN|KCTD7|SRP72|ITM2B
TRAF6 mediated induction of NFkB and MAP kinases upon TLR7/8 or 9 activation	HSA-975138	0.0014	2.15E-05	0.285387196	NFKBIA|IRAK2|APP|TAB2|MAP3K7|AGER|MAP2K7|CD14|MAP2K6
GPVI-mediated activation cascade	HSA-114604	0.0015	2.27E-05	0.282390874	LCP2|PIK3R2|SYK|PRKCZ|VAV1|CDC42
TRIF(TICAM1)-mediated TLR4 signaling	HSA-937061	0.002	3.33E-05	0.269897	NFKBIA|IRAK2|APP|TAB2|MAP3K7|AGER|MAP2K7|CD14|MAP2K6
Signaling by Interleukins	HSA-449147	0.0026	4.74E-05	0.258502665	PSMD8|NFKBIA|PIK3R2|CCND1|IRAK2|PSMA6|APP|TAB2|MAP3K7|AGER| SYK|PTPRZ1|ITGB2|MAP2K7|VAMP2|VIM|MAP2K6|VAV1|CDC42
TAK1-dependent IKK and NF-kappa-B activation	HSA-445989	0.0028	5.70E-05	0.255284197	NFKBIA|IRAK2|APP|TAB2|MAP3K7|AGER
Regulation of expression of SLITs and ROBOs	HSA-9010553	0.0028	5.39E-05	0.255284197	PSMD8|PSMA6|ELOB|SLIT1|PABPC1|MAGOHB|RPL14|RPS8|RPS24|ROBO1|EIF4A3

Interleukin-1 signaling	HSA-9020702	0.0028	5.36E-05	0.255284197	PSMD8|NFKBIA|IRAK2|PSMA6|APP|TAB2|MAP3K7|AGER|MAP2K6
Signaling by FGFR	HSA-190236	0.003	6.14E-05	0.252287875	POLR2I|GTF2F2|HNRNPA1|POLR2K|FGF17|FGFR1|HRAS|POLR2A
Signaling by FGFR2 in disease	HSA-5655253	0.0031	6.42E-05	0.250863831	POLR2I|GTF2F2|POLR2K|FGF17|HRAS|POLR2A
FGFR2 alternative splicing	HSA-6803529	0.0032	6.91E-05	0.249485002	POLR2I|GTF2F2|HNRNPA1|POLR2K|POLR2A
Costimulation by the CD28 family	HSA-388841	0.0036	7.78E-05	0.24436975	PIK3R2|MTOR|HLA-DQA2|HLA-DQB1|VAV1|MAP3K14|CDC42
Downstream TCR signaling	HSA-202424	0.004	8.85E-05	0.239794001	PSMD8|NFKBIA|PIK3R2|PSMA6|TAB2|MAP3K7|HLA-DQA2|HLA-DQB1
Cell Cycle	HSA-1640170	0.0042	1.10E-04	0.237675071	PSMD8|POLR2I|CCND1|TUBA4A|PSMA6|CEP164|SMC2|MAD2L1|RAD21|UBE2E1| PPP2R2A|MRE11|POLR2K|BLM|SYNE2|EXO1|RAD1|RAD9B| CEP250|SUN1|PPP6C|POLR2A|ACD
HIV Transcription Initiation	HSA-167161	0.0042	1.00E-04	0.237675071	POLR2I|GTF2E1|GTF2F2|POLR2K|GTF2B|POLR2A
RNA Polymerase II HIV Promoter Escape	HSA-167162	0.0042	1.00E-04	0.237675071	POLR2I|GTF2E1|GTF2F2|POLR2K|GTF2B|POLR2A
Transcription of the HIV genome	HSA-167172	0.0042	1.10E-04	0.237675071	POLR2I|ELOB|GTF2E1|GTF2F2|POLR2K|GTF2B|POLR2A
CLEC7A (Dectin-1) signaling	HSA-5607764	0.0042	1.20E-04	0.237675071	PSMD8|NFKBIA|PSMA6|TAB2|MAP3K7|SYK|NFATC2|MAP3K14
RNA Polymerase II Promoter Escape	HSA-73776	0.0042	1.00E-04	0.237675071	POLR2I|GTF2E1|GTF2F2|POLR2K|GTF2B|POLR2A
RNA Polymerase II Transcription Pre-Initiation And Promoter Opening	HSA-73779	0.0042	1.00E-04	0.237675071	POLR2I|GTF2E1|GTF2F2|POLR2K|GTF2B|POLR2A
RNA Polymerase II Transcription Initiation	HSA-75953	0.0042	1.00E-04	0.237675071	POLR2I|GTF2E1|GTF2F2|POLR2K|GTF2B|POLR2A
MyD88 cascade initiated on plasma membrane	HSA-975871	0.0042	9.49E-05	0.237675071	NFKBIA|IRAK2|APP|TAB2|MAP3K7|AGER|MAP2K7|MAP2K6
IRAK2 mediated activation of TAK1 complex upon TLR7/8 or 9 stimulation	HSA-975163	0.0046	1.30E-04	0.233724217	IRAK2|TAB2|MAP3K7|CD14
Pausing and recovery of Tat-mediated HIV elongation	HSA-167238	0.0049	1.40E-04	0.230980392	POLR2I|ELOB|GTF2F2|POLR2K|POLR2A
Tat-mediated HIV elongation arrest and recovery	HSA-167243	0.0049	1.40E-04	0.230980392	POLR2I|ELOB|GTF2F2|POLR2K|POLR2A
Toll Like Receptor 3 (TLR3) Cascade	HSA-168164	0.0049	1.50E-04	0.230980392	NFKBIA|IRAK2|APP|TAB2|MAP3K7|AGER|MAP2K7|MAP2K6
Generation of second messenger molecules	HSA-202433	0.0049	1.40E-04	0.230980392	LCP2|HLA-DQA2|HLA-DQB1|EVL|FYB1
Signaling by FGFR2	HSA-5654738	0.0049	1.40E-04	0.230980392	POLR2I|GTF2F2|HNRNPA1|POLR2K|FGF17|HRAS|POLR2A
Platelet activation, signaling and aggregation	HSA-76002	0.0049	1.50E-04	0.230980392	LCP2|PIK3R2|PFN1|APOA1|TUBA4A|APP|PRKCE|ACTN2|SYK| PRKCZ|ITGB3|VAV1|CDC42
SARS-CoV Infections	HSA-9679506	0.0049	1.40E-04	0.230980392	NFKBIA|IRAK2|VHL|HNRNPA1|G3BP2|TAB2|MAP3K7|HSPG2| SYK|RPS8|SNRPB|RPS24|CHD4|ATP1A1|AP2S1|VAV1|AP2B1
TRAF6-mediated induction of TAK1 complex within TLR4 complex	HSA-937072	0.0051	1.60E-04	0.229242982	IRAK2|TAB2|MAP3K7|CD14

HIV Infection	HSA-162906	0.0055	1.80E-04	0.225963731	PSMD8|POLR2I|PSMA6|ELOB|GTF2E1|GTF2F2|POLR2K|VTA1|GTF2B|POLR2A|AP2S1|AP2B1
HIV elongation arrest and recovery	HSA-167287	0.0058	1.90E-04	0.223657201	POLR2I|ELOB|GTF2F2|POLR2K|POLR2A
Pausing and recovery of HIV elongation	HSA-167290	0.0058	1.90E-04	0.223657201	POLR2I|ELOB|GTF2F2|POLR2K|POLR2A
FGFR2 mutant receptor activation	HSA-1839126	0.0058	1.90E-04	0.223657201	POLR2I|GTF2F2|POLR2K|FGF17|POLR2A
CD28 co-stimulation	HSA-389356	0.0058	1.90E-04	0.223657201	PIK3R2|MTOR|VAV1|MAP3K14|CDC42
Cargo recognition for clathrin-mediated endocytosis	HSA-8856825	0.0061	2.10E-04	0.221467016	COPS6|ITSN2|STAM|ITSN1|PICALM|VAMP2|AP2S1|AP2B1
FCERI mediated MAPK activation	HSA-2871796	0.0062	2.10E-04	0.220760831	LCP2|SYK|MAP2K7|HRAS|VAV1
TNF signaling	HSA-75893	0.0062	2.20E-04	0.220760831	SMPD3|STUB1|TAB2|MAP3K7|TRAF1|RACK1
Impaired BRCA2 binding to RAD51	HSA-9709570	0.0062	2.10E-04	0.220760831	MRE11|BLM|EXO1|RAD1|RAD9B
DNA Repair	HSA-73894	0.0064	2.30E-04	0.219382003	POLR2I|POLB|PCLAF|COPS6|FANCI|MRE11|POLR2K|USP1|BLM |EXO1|RAD1|RAD9B|POLR2A|ACD
C-type lectin receptors (CLRs)	HSA-5621481	0.007	2.50E-04	0.215490196	PSMD8|NFKBIA|PSMA6|TAB2|MAP3K7|SYK|NFATC2|HRAS|MAP3K14
Striated Muscle Contraction	HSA-390522	0.0074	2.70E-04	0.213076828	TMOD3|ACTN2|VIM|TNNT1|NEB
Signaling by FGFR2 IIIa TM	HSA-8851708	0.0076	2.80E-04	0.211918641	POLR2I|GTF2F2|POLR2K|POLR2A
HDR through Single Strand Annealing (SSA)	HSA-5685938	0.0081	3.00E-04	0.209151498	MRE11|BLM|EXO1|RAD1|RAD9B
JNK (c-Jun kinases) phosphorylation and activation mediated by activated human TAK1	HSA-450321	0.0087	3.30E-04	0.206048075	IRAK2|TAB2|MAP3K7|MAP2K7
Signaling by the B Cell Receptor (BCR)	HSA-983705	0.0087	3.30E-04	0.206048075	PSMD8|NFKBIA|PSMA6|MAP3K7|SYK|NFATC2|HRAS|VAV1
Presynaptic phase of homologous DNA pairing and strand exchange	HSA-5693616	0.0098	3.80E-04	0.200877392	MRE11|BLM|EXO1|RAD1|RAD9B
TP53 Regulates Transcription of DNA Repair Genes	HSA-6796648	0.0102	4.00E-04	0.199139983	POLR2I|ELOB|FANCI|GTF2F2|POLR2K|POLR2A
RHOU GTPase cycle	HSA-9013420	0.0106	4.20E-04	0.197469413	PARD6A|PIK3R2|ITSN2|STAM|CDC42
Activated TAK1 mediates p38 MAPK activation	HSA-450302	0.0111	4.60E-04	0.195467702	IRAK2|TAB2|MAP3K7|MAP2K6
L1CAM interactions	HSA-373760	0.0115	4.80E-04	0.193930216	TUBA4A|DLG1|FGFR1|NUMB|ITGB3|AP2S1|AP2B1|RDX
Abortive elongation of HIV-1 transcript in the absence of Tat	HSA-167242	0.0125	5.30E-04	0.190308999	POLR2I|GTF2F2|POLR2K|POLR2A
RNA Polymerase II Transcription Termination	HSA-73856	0.0126	5.50E-04	0.189962945	CPSF6|CSTF3|MAGOHB|CHTOP|SNRPB|EIF4A3
Extracellular matrix organization	HSA-1474244	0.0127	5.60E-04	0.189619628	BMP4|CMA1|NID1|HAPLN1|PLOD2|APP|ADAMTS1|PLEC|PSEN1| HSPG2|ITGB2|ACAN|ITGB3
Formation of HIV-1 elongation complex containing HIV-1 Tat	HSA-167200	0.0129	5.70E-04	0.188941029	POLR2I|ELOB|GTF2F2|POLR2K|POLR2A

Formation of HIV elongation complex in the absence of HIV Tat	HSA-167152	0.0152	6.90E-04	0.181815641	POLR2I|ELOB|GTF2F2|POLR2K|POLR2A
Regulation of commissural axon pathfinding by SLIT and ROBO	HSA-428542	0.0157	7.20E-04	0.180410035	SLIT1|DCC|ROBO1
IRAK2 mediated activation of TAK1 complex	HSA-937042	0.0157	7.20E-04	0.180410035	IRAK2|TAB2|MAP3K7
Vesicle-mediated transport	HSA-5653656	0.0177	8.30E-04	0.175202673	RAB3A|APOA1|LRP1|TUBA4A|APP|COPS6|KIF15|DENND5A|ITSN2|VTA1|SNAPIN| KIF20B|FTL|STAM|ITSN1|PICALM|TBC1D10A|PPP6C|VAMP2|AP2S1|AP2B1
Recycling pathway of L1	HSA-437239	0.0191	9.10E-04	0.171896663	TUBA4A|NUMB|AP2S1|AP2B1|RDX
RNA Pol II CTD phosphorylation and interaction with CE during HIV infection	HSA-167160	0.0192	9.20E-04	0.171669877	POLR2I|GTF2F2|POLR2K|POLR2A
RNA Pol II CTD phosphorylation and interaction with CE	HSA-77075	0.0192	9.20E-04	0.171669877	POLR2I|GTF2F2|POLR2K|POLR2A
RNA polymerase II transcribes snRNA genes	HSA-6807505	0.0197	9.60E-04	0.170553377	POLR2I|GTF2E1|GTF2F2|POLR2K|GTF2B|POLR2A
Transcriptional Regulation by TP53	HSA-3700989	0.0199	9.80E-04	0.170114692	POLR2I|ELOB|FANCI|MRE11|GTF2F2|POLR2K|BLM|MTOR|EXO1|RAD1| RAD9B|CHD4|POLR2A|MAP2K6
Late Phase of HIV Life Cycle	HSA-162599	0.0212	0.001	0.167366414	POLR2I|ELOB|GTF2E1|GTF2F2|POLR2K|VTA1|GTF2B|POLR2A
mRNA Splicing - Minor Pathway	HSA-72165	0.0215	0.0011	0.166756154	POLR2I|GTF2F2|POLR2K|SNRPB|POLR2A
DAP12 signaling	HSA-2424491	0.023	0.0012	0.163827216	LCP2|PIK3R2|SYK|HRAS
mRNA Capping	HSA-72086	0.023	0.0012	0.163827216	POLR2I|GTF2F2|POLR2K|POLR2A
Post-translational protein modification	HSA-597592	0.0238	0.0012	0.162342304	PSMD8|JOSD1|NFKBIA|RAB3A|MLEC|APOA1|BMP4|TUBA4A|VHL|PSMA6|ELOB| CP|POLB|APP|ADAMTS1|RAD21|LEO1|UBE2E1|COPS6|BLM|NR3C2|CDC73|UCHL5| MAP3K7|RNF5|UBD|STAM|B4GALT1|RTF1|VDAC1|DDX17|PEX5|PPP6C|PIGN|KCTD7
Signaling by Rho GTPases, Miro GTPases and RHOBTB3	HSA-9716542	0.0238	0.0012	0.162342304	PARD6A|PIK3R2|PFN1|TUBA4A|VHL|KIDINS220|DSG1|MAD2L1|TMOD3|ARHGEF25| NET1|ITSN2|STAM|PRKCZ|ITSN1|EVL|PICALM|VIM|VAV1|CYFIP2|CDC42
E3 ubiquitin ligases ubiquitinate target proteins	HSA-8866654	0.026	0.0014	0.158502665	LEO1|UBE2E1|CDC73|RTF1|PEX5
Downstream signaling events of B Cell Receptor (BCR)	HSA-1168372	0.0263	0.0014	0.158004425	PSMD8|NFKBIA|PSMA6|MAP3K7|NFATC2|HRAS
Class I MHC mediated antigen processing & presentation	HSA-983169	0.0265	0.0014	0.157675413	PSMD8|STUB1|VHL|RNF144B|PSMA6|ELOB|S100A1|UBE2E1|TRIM41|UBE2U| UBR2|UBR4|CD14|KCTD7
Hemostasis	HSA-109582	0.0291	0.0016	0.153610701	LCP2|PIK3R2|PFN1|APOA1|TUBA4A|APP|PSG6|PRKCE|KIF15|ACTN2|KIF20B|SYK| PRKCZ|ITGB2|PSG5|HRAS|ITGB3|VAV1|CDC42
Nucleotide-binding domain, leucine rich repeat containing receptor (NLR) signaling pathways	HSA-168643	0.0291	0.0016	0.153610701	IRAK2|APP|TAB2|MAP3K7|MAP2K6
Nuclear signaling by ERBB4	HSA-1251985	0.0294	0.0016	0.153165267	PSEN1|TAB2|ADAP1|YAP1
Reproduction	HSA-1474165	0.0305	0.0017	0.151570016	RAD21|MRE11|BLM|SYNE2|B4GALT1|SUN1|ACD

Nonsense Mediated Decay (NMD) enhanced by the Exon Junction Complex (EJC)	HSA-975957	0.0305	0.0017	0.151570016	PABPC1|MAGOHB|PPP2R2A|RPL14|RPS8|RPS24|EIF4A3
Signaling by NTRK1 (TRKA)	HSA-187037	0.0313	0.0018	0.150445566	PIK3R2|KIDINS220|HRAS|CHD4|AP2S1|AP2B1|ADCYAP1R1
Formation of the Early Elongation Complex	HSA-113418	0.0314	0.0018	0.150307035	POLR2I|GTF2F2|POLR2K|POLR2A
Formation of the HIV-1 Early Elongation Complex	HSA-167158	0.0314	0.0018	0.150307035	POLR2I|GTF2F2|POLR2K|POLR2A
TNFR1-induced NFkappaB signaling pathway	HSA-5357956	0.0314	0.0018	0.150307035	TAB2|MAP3K7|TRAF1|RACK1
mRNA 3-end processing	HSA-72187	0.0314	0.0018	0.150307035	CPSF6|CSTF3|MAGOHB|CHTOP|EIF4A3
Antigen processing: Ubiquitination & Proteasome degradation	HSA-983168	0.0314	0.0019	0.150307035	PSMD8|STUB1|VHL|RNF144B|PSMA6|ELOB|UBE2E1|TRIM41|UBE2U|UBR2|UBR4|KCTD7
Signaling by ERBB4	HSA-1236394	0.033	0.002	0.148148606	PSEN1|TAB2|HRAS|ADAP1|YAP1
FCERI mediated Ca+2 mobilization	HSA-2871809	0.033	0.002	0.148148606	LCP2|SYK|NFATC2|VAV1
Signaling by Nuclear Receptors	HSA-9006931	0.0331	0.002	0.148017201	DLD|POLR2I|PIK3R2|CCND1|RAD21|ALDH1A3|GTF2F2|POLR2K|PRKCZ|HRAS|POLR2A
Signaling by Rho GTPases	HSA-194315	0.0348	0.0021	0.145842076	PARD6A|PIK3R2|PFN1|TUBA4A|KIDINS220|DSG1|MAD2L1|TMOD3|ARHGEF25|NET1| ITSN2|STAM|PRKCZ|ITSN1|EVL|PICALM|VIM|VAV1|CYFIP2|CDC42
Meiosis	HSA-1500620	0.0354	0.0022	0.145099674	RAD21|MRE11|BLM|SYNE2|SUN1|ACD
NOD1/2 Signaling Pathway	HSA-168638	0.0354	0.0022	0.145099674	IRAK2|TAB2|MAP3K7|MAP2K6
Membrane Trafficking	HSA-199991	0.0354	0.0022	0.145099674	RAB3A|TUBA4A|APP|COPS6|KIF15|DENND5A|ITSN2|VTA1|SNAPIN|KIF20B|FTL| STAM|ITSN1|PICALM|TBC1D10A|PPP6C|VAMP2|AP2S1|AP2B1
ESR-mediated signaling	HSA-8939211	0.0354	0.0022	0.145099674	POLR2I|PIK3R2|CCND1|RAD21|GTF2F2|POLR2K|PRKCZ|HRAS|POLR2A
Fcgamma receptor (FCGR) dependent phagocytosis	HSA-2029480	0.0365	0.0023	0.143770714	PIK3R2|PRKCE|SYK|VAV1|CYFIP2|CDC42
MAP kinase activation	HSA-450294	0.038	0.0024	0.14202164	IRAK2|TAB2|MAP3K7|MAP2K7|MAP2K6
PCP/CE pathway	HSA-4086400	0.04	0.0026	0.139794001	PSMD8|PARD6A|PFN1|PSMA6|AP2S1|AP2B1
Regulation of TP53 Activity	HSA-5633007	0.0412	0.0027	0.138510278	MRE11|BLM|MTOR|EXO1|RAD1|RAD9B|CHD4|MAP2K6
RHO GTPase cycle	HSA-9012999	0.0412	0.0027	0.138510278	PARD6A|PIK3R2|KIDINS220|DSG1|TMOD3|ARHGEF25|NET1|ITSN2|STAM| ITSN1|PICALM|VIM|VAV1|CYFIP2|CDC42
EPH-Ephrin signaling	HSA-2682334	0.0413	0.0027	0.138404995	PSEN1|ITSN1|HRAS|AP2S1|AP2B1|CDC42
RAF/MAP kinase cascade	HSA-5673001	0.0424	0.0028	0.137263414	PSMD8|PIK3R2|PSMA6|DUSP16|DLG1|FGF17|ACTN2|DUSP10|FGFR1|HRAS|ITGB3
Telomere Maintenance	HSA-157579	0.0429	0.0029	0.136754271	POLR2I|POLR2K|BLM|PPP6C|POLR2A|ACD
Signaling by FGFR1 in disease	HSA-5655302	0.0431	0.0029	0.136552273	CPSF6|FGF17|FGFR1|HRAS
Regulation of cortical dendrite branching	HSA-8985801	0.0431	0.0029	0.136552273	SLIT1|ROBO1
MAPK family signaling cascades	HSA-5683057	0.0445	0.003	0.135163999	PSMD8|PIK3R2|PSMA6|DUSP16|DLG1|FGF17|ACTN2|DUSP10|FGFR1|HRAS|ITGB3|CDC42
Generic Transcription Pathway	HSA-212436	0.0461	0.0032	0.133629907	PSMD8|STUB1|POLR2I|MED31|CCND1|MED4|PSMA6|ELOB|UBE2E1|ZNF3| FANCI|MRE11|GTF2F2|POLR2K|BLM|NR3C2|MTOR|EXO1|DLL1| PRMT6|RAD1|SMARCA2|RAD9B|BCL2L11|NFATC2|CHD4|DDIT3|POLR2A|MAP2K6|YAP1

p75 NTR receptor-mediated signalling	HSA-193704	0.0496	0.0035	0.130451832	NFKBIA|PSEN1|NET1|ITSN1|BCL2L11|VAV1

Table S22 Significant Pathway per KEGG

description	term name	FDR value	p-value	transferred FDR value	Genes
Osteoclast differentiation	hsa04380	1.30E-04	3.98E-07	0.388605665	LCP2|NFKBIA|PIK3R2|TAB2|MAP3K7|SYK|NFATC2|MAP2K7|FHL2|ITGB3|MAP2K6|MAP3K14
Rap1 signaling pathway	hsa04015	1.30E-04	4.85E-07	0.388605665	LCP2|PARD6A|PIK3R2|PFN1|FGF17|PRKCZ|EVL|ITGB2|FGFR1|HRAS|ITGB3|TLN2|MAP2K6|VAV1|CDC42
T cell receptor signaling pathway	hsa04660	1.30E-04	5.12E-07	0.388605665	LCP2|NFKBIA|PIK3R2|DLG1|MAP3K7|NFATC2|MAP2K7|HRAS|VAV1|MAP3K14|CDC42
Viral carcinogenesis	hsa05203	3.90E-04	4.70E-06	0.340893539	NFKBIA|PIK3R2|CCND1|POLB|GTF2E1|DLG1|GTF2B|TRAF1|UBR4|SYK|HRAS|CHD4|CDC42
Epstein-Barr virus infection	hsa05169	5.10E-04	7.66E-06	0.329242982	PSMD8|NFKBIA|PIK3R2|CCND1|TAB2|MAP3K7|HLA-DQA2|SYK|BCL2L11|MAP2K7|VIM|MAP2K6|MAP3K14
Salmonella infection	hsa05132	0.001	1.80E-05	0.3	NFKBIA|PFN1|FHOD1|FYCO1|TAB2|MAP3K7|GAPDH|MAP2K7|CD14|HRAS|MAP2K6|CYFIP2|CDC42
Human T-cell leukemia virus 1 infection	hsa05166	0.001	1.88E-05	0.3	NFKBIA|PIK3R2|CCND1|POLB|MAD2L1|DLG1|HLA-DQA2|VDAC1|NFATC2|ITGB2|HRAS|TLN2|MAP3K14
Yersinia infection	hsa05135	0.001	2.16E-05	0.3	LCP2|NFKBIA|PIK3R2|TAB2|MAP3K7|NFATC2|MAP2K7|MAP2K6|VAV1|CDC42
Tight junction	hsa04530	0.0011	2.87E-05	0.295860731	PARD6A|CCND1|TUBA4A|PRKCE|PPP2R2A|DLG1|PRKCZ|MAP2K7|AMOTL2|RDX|CDC42
Fc epsilon RI signaling pathway	hsa04664	0.0024	7.12E-05	0.261978876	LCP2|PIK3R2|SYK|MAP2K7|HRAS|MAP2K6|VAV1
Cellular senescence	hsa04218	0.003	9.75E-05	0.252287875	PIK3R2|CCND1|MRE11|MTOR|RAD1|RAD9B|VDAC1|NFATC2|HRAS|MAP2K6
Shigellosis	hsa05131	0.0032	1.10E-04	0.249485002	NFKBIA|PIK3R2|PFN1|HK2|PRKCE|MTOR|TAB2|MAP3K7|VDAC1|CD14|TLN2|CDC42
TNF signaling pathway	hsa04668	0.0077	3.00E-04	0.211350927	NFKBIA|PIK3R2|TAB2|MAP3K7|TRAF1|MAP2K7|MAP2K6|MAP3K14
Neurotrophin signaling pathway	hsa04722	0.0077	3.10E-04	0.211350927	NFKBIA|PIK3R2|IRAK2|KIDINS220|PSEN1|MAP2K7|HRAS|CDC42
Regulation of actin cytoskeleton	hsa04810	0.0077	3.20E-04	0.211350927	PIK3R2|PFN1|FGF17|ITGB2|FGFR1|HRAS|ITGB3|VAV1|CYFIP2|RDX|CDC42
MAPK signaling pathway	hsa04010	0.0077	3.60E-04	0.211350927	DUSP16|FGF17|DUSP10|TAB2|MAP3K7|MAP2K7|CD14|FGFR1|HRAS|DDIT3|MAP2K6|MAP3K14|CDC42
Thyroid hormone signaling pathway	hsa04919	0.0096	4.80E-04	0.201772877	PIK3R2|CCND1|BMP4|MED4|MTOR|HRAS|ATP1A1|ITGB3
Kaposi sarcoma-associated herpesvirus infection	hsa05167	0.0098	5.20E-04	0.200877392	NFKBIA|PIK3R2|CCND1|ATG3|MTOR|SYK|NFATC2|MAP2K7|HRAS|MAP2K6
Hippo signaling pathway	hsa04390	0.0098	5.40E-04	0.200877392	PARD6A|CCND1|BMP4|PPP2R2A|DLG1|CRB1|PRKCZ|ITGB2|YAP1
Hepatitis B	hsa05161	0.0108	6.40E-04	0.196657624	NFKBIA|PIK3R2|TAB2|MAP3K7|HSPG2|NFATC2|MAP2K7|HRAS|MAP2K6
AGE-RAGE signaling pathway in diabetic complications	hsa04933	0.0108	6.60E-04	0.196657624	PIK3R2|CCND1|PRKCE|AGER|PRKCZ|HRAS|CDC42
MicroRNAs in cancer	hsa05206	0.0108	6.70E-04	0.196657624	PIK3R2|CCND1|PRKCE|MTOR|BCL2L11|HRAS|VIM|ITGB3|RDX
Type II diabetes mellitus	hsa04930	0.0108	6.90E-04	0.196657624	PIK3R2|HK2|PRKCE|MTOR|PRKCZ
Proteoglycans in cancer	hsa05205	0.0108	6.90E-04	0.196657624	PIK3R2|CCND1|MTOR|HSPG2|FGFR1|HRAS|ITGB3|VAV1|RDX|CDC42

Alzheimer disease	hsa05010	0.011	8.20E-04	0.195860731	PSMD8|PIK3R2|LRP1|TUBA4A|PSMA6|APP|PSEN1| MTOR|AGER|VDAC1|GAPDH|MAP2K7|HRAS|DDIT3
Apoptosis	hsa04210	0.011	8.30E-04	0.195860731	NFKBIA|PIK3R2|TUBA4A|TRAF1|BCL2L11|HRAS|DDIT3|MAP3K14
Toll-like receptor signaling pathway	hsa04620	0.011	8.30E-04	0.195860731	NFKBIA|PIK3R2|TAB2|MAP3K7|MAP2K7|CD14|MAP2K6
Spliceosome	hsa03040	0.011	8.70E-04	0.195860731	SF3A1|MAGOHB|HNRNPA1|PPIL1|PRPF40A|SNRPB|PUF60|EIF4A3
NF-kappa B signaling pathway	hsa04064	0.011	8.80E-04	0.195860731	NFKBIA|TAB2|MAP3K7|TRAF1|SYK|CD14|MAP3K14
HIF-1 signaling pathway	hsa04066	0.011	9.20E-04	0.195860731	PIK3R2|VHL|ELOB|HK2|ENO3|MTOR|GAPDH
Human immunodeficiency virus 1 infection	hsa05170	0.011	9.50E-04	0.195860731	NFKBIA|PIK3R2|ELOB|MTOR|TAB2|MAP3K7|NFATC2| MAP2K7|HRAS|MAP2K6
Human papillomavirus infection	hsa05165	0.0115	0.0011	0.193930216	PARD6A|PIK3R2|CCND1|PPP2R2A|PSEN1|DLG1| MTOR|UBR4|PRKCZ|HRAS|CHD4|ITGB3|CDC42
B cell receptor signaling pathway	hsa04662	0.0126	0.0012	0.189962945	NFKBIA|PIK3R2|SYK|NFATC2|HRAS|VAV1
Axon guidance	hsa04360	0.0131	0.0013	0.18827287	PARD6A|PIK3R2|SLIT1|PRKCZ|NFATC2|DCC|HRAS|ROBO1|CDC42
Huntington disease	hsa05016	0.0145	0.0015	0.1838632	PSMD8|POLR2I|TUBA4A|PSMA6|POLR2K|MTOR| TGM2|VDAC1|MAP2K7|POLR2A|AP2S1|AP2B1
Colorectal cancer	hsa05210	0.0147	0.0016	0.183268267	PIK3R2|CCND1|MTOR|BCL2L11|DCC|HRAS
PD-L1 expression and PD-1 checkpoint pathway in cancer	hsa05235	0.0189	0.0021	0.17235382	NFKBIA|PIK3R2|MTOR|NFATC2|HRAS|MAP2K6
AMPK signaling pathway	hsa04152	0.0198	0.0022	0.170333481	PIK3R2|CCND1|PPP2R2A|MTOR|MAP3K7|ADRA1A|ELAVL1
Natural killer cell mediated cytotoxicity	hsa04650	0.0198	0.0022	0.170333481	LCP2|PIK3R2|SYK|NFATC2|ITGB2|HRAS|VAV1
Renal cell carcinoma	hsa05211	0.0264	0.0031	0.157839607	PIK3R2|VHL|ELOB|HRAS|CDC42
Endocytosis	hsa04144	0.0264	0.0032	0.157839607	PARD6A|VTA1|ARFGEF2|SH3GLB2|STAM|PRKCZ| HRAS|AP2S1|AP2B1|CDC42
Fluid shear stress and atherosclerosis	hsa05418	0.0264	0.0033	0.157839607	PIK3R2|BMP4|MAP3K7|PRKCZ|MAP2K7|ITGB3|MAP2K6
Prostate cancer	hsa05215	0.0272	0.0035	0.15654311	NFKBIA|PIK3R2|CCND1|MTOR|FGFR1|HRAS
Acute myeloid leukemia	hsa05221	0.0272	0.0036	0.15654311	PIK3R2|CCND1|MTOR|CD14|HRAS
Central carbon metabolism in cancer	hsa05230	0.0282	0.0038	0.154975089	PIK3R2|HK2|MTOR|FGFR1|HRAS
Leishmaniasis	hsa05140	0.0292	0.004	0.153461715	NFKBIA|TAB2|MAP3K7|HLA-DQA2|ITGB2
C-type lectin receptor signaling pathway	hsa04625	0.03	0.0042	0.152287875	NFKBIA|PIK3R2|SYK|NFATC2|HRAS|MAP3K14
Melanoma	hsa05218	0.0332	0.0047	0.147886192	PIK3R2|CCND1|FGF17|FGFR1|HRAS
EGFR tyrosine kinase inhibitor resistance	hsa01521	0.0424	0.0062	0.137263414	PIK3R2|AXL|MTOR|BCL2L11|HRAS
Breast cancer	hsa05224	0.0424	0.0062	0.137263414	PIK3R2|CCND1|FGF17|MTOR|DLL1|FGFR1|HRAS

Table S23 Significant Pathways per WikiPathways

description	term name	FDR value	p-value	transferred FDR value	Genes
VEGFA-VEGFR2 signaling	WP3888	6.44E-08	8.25E-11	0.719111413	NFKBIA|PIK3R2|PFN1|CCND1|FHOD1|FAM120A|ADAMTS1| PRKCE|TMOD3|PABPC1|MTOR|STAM|SHB|PRKCZ|SMARCA2| PTPRZ1|NFATC2|GAPDH|MAP2K7|FHL2|HRAS|RACK1|NUMB| ITGB3|MAP2K6|AP2S1|NAP1L1|CDC42
RANKL/RANK signaling pathway	WP2018	7.97E-07	2.04E-09	0.609854168	NFKBIA|PIK3R2|MTOR|TAB2|MAP3K7|TRAF1|SYK| MAP2K7|FHL2|MAP2K6|CDC42
T-cell receptor signaling pathway	WP69	5.07E-05	1.95E-07	0.429499204	LCP2|NFKBIA|PIK3R2|MAP3K7|NFATC2|HRAS|VIM|

					VAV1|MAP3K14|FYB1|CDC42
IL-1 signaling pathway	WP195	5.49E-05	2.81E-07	0.426042766	NFKBIA|PIK3R2|IRAK2|TAB2|MAP3K7|PRKCZ|MAP2K7|MAP2K6|MAP3K14
T-cell antigen receptor (TCR) pathway during Staphylococcus aureus infection	WP3863	1.10E-04	6.98E-07	0.395860731	LCP2|NFKBIA|CHP1|DLG1|MAP3K7|NFATC2|MAP2K7|MAP3K14|CALM1
TGF-beta signaling pathway	WP366	8.20E-04	6.26E-06	0.308618615	TGFBR3|PARD6A|PIK3R2|CCND1|APP|UCHL5|MAP3K7| ITGB3|MAP2K6|YAP1|CDC42
Alzheimers disease and miRNA effects	WP2059	0.0011	9.60E-06	0.295860731	PSMD8|PIK3R2|LRP1|TUBA4A|PSMA6|APP|PSEN1|MTOR| AGER|VDAC1|GAPDH|MAP2K7|HRAS|DDIT3|CALM1
TNF-alpha signaling pathway	WP231	0.0011	1.35E-05	0.295860731	NFKBIA|TAB2|MAP3K7|TRAF1|PRKCZ|MAP2K7|HRAS|MAP2K6|MAP3K14
Interleukin-1 (IL-1) structural pathway	WP2637	0.0011	1.20E-05	0.295860731	NFKBIA|IRAK2|TAB2|MAP3K7|MAP2K7|MAP2K6|MAP3K14
Alzheimers disease	WP5124	0.0011	9.60E-06	0.295860731	PSMD8|PIK3R2|LRP1|TUBA4A|PSMA6|APP|PSEN1|MTOR| AGER|VDAC1|GAPDH|MAP2K7|HRAS|DDIT3|CALM1
B cell receptor signaling pathway	WP23	0.0014	2.00E-05	0.285387196	NFKBIA|PIK3R2|MAP3K7|SYK|NFATC2|HRAS|MAP2K6|VAV1|CDC42
Cardiac hypertrophic response	WP2795	0.0016	2.41E-05	0.279588002	MTOR|MAP3K7|NFATC2|MAP2K7|MAP2K6|MAP3K14|CALM1
Eukaryotic transcription initiation	WP405	0.0034	5.70E-05	0.246852108	POLR2I|GTF2E1|GTF2F2|POLR2K|GTF2B|POLR2A
Brain-derived neurotrophic factor (BDNF) signaling pathway	WP2380	0.0037	6.71E-05	0.243179828	NFKBIA|PIK3R2|RAB3A|KIDINS220|DLG1|MTOR|BCL2L11| HRAS|RACK1|CDC42
MAPK signaling pathway	WP382	0.0044	8.49E-05	0.235654732	DUSP16|FGF17|DUSP10|TAB2|MAP3K7|MAP2K7|CD14|FGFR1| HRAS|DDIT3|MAP2K6|MAP3K14|CDC42
Malignant pleural mesothelioma	WP5087	0.0044	8.59E-05	0.235654732	CCND1|SETDB1|ADAMTS1|MAD2L1|FGF17|MTOR|BAG2|AGER| ITGB2|MAP2K7|MDK|FGFR1|HRAS|DDIT3|ITGB3|TNNT1|MAP2K6|YAP1
TROP2 regulatory signaling	WP5300	0.0057	1.20E-04	0.224412514	CCND1|PSEN1|MDK|RACK1|VIM|NUMB
Signal transduction through IL1R	WP4496	0.0082	1.90E-04	0.208618615	NFKBIA|IRAK2|MAP3K7|MAP2K6|MAP3K14
p38 MAPK signaling pathway	WP400	0.0099	2.40E-04	0.200436481	MAP3K7|HRAS|DDIT3|MAP2K6|CDC42
DNA IR-damage and cellular response via ATR	WP4016	0.0099	2.50E-04	0.200436481	POLB|CEP164|FANCI|MRE11|USP1|EXO1|RAD1
Glioblastoma signaling pathways	WP2261	0.0101	2.70E-04	0.199567863	PIK3R2|CCND1|PRKCZ|MAP2K7|FGFR1|HRAS|MAP2K6
Clear cell renal cell carcinoma pathways	WP4018	0.0101	2.70E-04	0.199567863	KCNJ2|VHL|PLOD2|HK2|ENO3|MTOR|GAPDH
Gastrin signaling pathway	WP4659	0.0113	3.30E-04	0.194692156	NFKBIA|PIK3R2|CCND1|PRKCE|MTOR|ELAVL1|HRAS|CDC42
Mesodermal commitment pathway	WP2857	0.012	3.70E-04	0.192081875	CCND1|BMP4|ARID5B|DLL1|EXT2|CEP250|FGFR1|UBR5|YAP1
Modulators of TCR signaling and T cell activation	WP5072	0.012	3.70E-04	0.192081875	LCP2|NFKBIA|PIK3R2|ELOB|VAV1|MAP3K14
Regulation of actin cytoskeleton	WP51	0.0129	4.30E-04	0.188941029	PIK3R2|PFN1|FGF17|CD14|FGFR1|VAV1|CYFIP2|RDX|CDC42
Androgen receptor signaling pathway	WP138	0.0133	4.60E-04	0.187614836	STUB1|PIK3R2|CCND1|ZMIZ1|FHL2|RACK1|CDC42
Ebstein-Barr virus LMP1 signaling	WP262	0.0149	5.30E-04	0.182681373	NFKBIA|MAP3K7|TRAF1|MAP3K14
Fatty Acids and Lipoproteins Transport in Hepatocytes	WP5323	0.0149	5.50E-04	0.182681373	PON1|APOA1|LRP1|APP|ITSN2|SCP2|AGER|ITSN1|PICALM| VDAC1|PEX5|HRAS|AP2S1|AP2B1|CDC42
mRNA processing	WP411	0.0162	6.20E-04	0.179048499	SF3A1|HNRNPL|CSTF3|HNRNPA1|DHX9|PRPF40A|SNRPB|POLR2A
Neurodegeneration with brain iron accumulation (NBIA) subtypes pathway	WP4577	0.0162	6.30E-04	0.179048499	CP|ATG3|MTOR|SCP2|FTL
Insulin signaling	WP481	0.0164	6.70E-04	0.178515615	PIK3R2|MTOR|MAP3K7|PRKCZ|MAP2K7|HRAS|VAMP2| MAP2K6|MAP3K14
EGF/EGFR signaling pathway	WP437	0.018	7.60E-04	0.174472749	PIK3R2|MTOR|STAM|PRKCZ|HRAS|AP2S1|VAV1|AP2B1|CDC42
Envelope proteins and their potential roles in EDMD physiopathology	WP4535	0.018	7.60E-04	0.174472749	PLEC|SYNE2|YY1AP1|SUN1|HRAS
Head and neck squamous cell carcinoma	WP4674	0.0187	8.40E-04	0.172815839	PIK3R2|CCND1|MTOR|FGFR1|HRAS|NUMB
Toll-like receptor signaling pathway	WP75	0.0201	9.20E-04	0.169680394	NFKBIA|PIK3R2|TAB2|MAP3K7|MAP2K7|CD14|MAP2K6
MAPK and NFkB signaling pathways inhibited by Yersinia YopJ	WP3849	0.0238	0.0011	0.162342304	NFKBIA|MAP2K6|MAP3K14
Endoderm differentiation	WP2853	0.0257	0.0013	0.159006688	APP|LEO1|PABPC1|CDC73|RTF1|CEP250|ELAVL1|UBR5
DNA damage response (only ATM dependent)	WP710	0.0266	0.0013	0.157511836	PIK3R2|CCND1|MAP3K7|SCP2|BCL2L11|HRAS|CDC42

Interferon type I signaling pathways	WP585	0.0288	0.0015	0.154060751	PIK3R2|MTOR|RACK1|MAP2K6|VAV1
MicroRNAs in cardiomyocyte hypertrophy	WP1544	0.0317	0.0017	0.149894074	PIK3R2|MTOR|MAP2K7|MAP2K6|MAP3K14|CALM1
EGFR tyrosine kinase inhibitor resistance	WP4806	0.0317	0.0017	0.149894074	PIK3R2|CCND1|AXL|MTOR|BCL2L11|HRAS
Embryonic stem cell pluripotency pathways	WP3931	0.0335	0.0019	0.147495519	PIK3R2|BMP4|FGF17|MTOR|FGFR1|HRAS|MAP2K6
Hepatitis B infection	WP4666	0.0335	0.0019	0.147495519	PIK3R2|TAB2|MAP3K7|HSPG2|NFATC2|MAP2K7|HRAS|MAP2K6
Neurogenesis regulation in the olfactory epithelium	WP5265	0.0335	0.0018	0.147495519	APP|MRE11|PSEN1|DLL1|NUMB
Breast cancer pathway	WP4262	0.0376	0.0022	0.142481216	PIK3R2|CCND1|MRE11|FGF17|MTOR|DLL1|FGFR1|HRAS
ErbB signaling pathway	WP673	0.0386	0.0023	0.14134127	PIK3R2|CCND1|MTOR|BCL2L11|MAP2K7|HRAS
Notch signaling pathway	WP61	0.0395	0.0024	0.14034029	PIK3R2|CCND1|PSEN1|DLL1|NUMB
DYRK1A	WP5180	0.0414	0.0026	0.138299966	CCND1|APP|PSEN1|MTOR|DLL1
G13 signaling pathway	WP524	0.0414	0.0026	0.138299966	PIK3R2|PFN1|CDC42|CALM1
Striated muscle contraction pathway	WP383	0.0442	0.0029	0.135457773	ACTN2|VIM|TNNT1|NEB

Table S24 Significant GO Biological Processes

description	term name	FDR value	p-value	transferred FDR value	Genes
Positive regulation of biological process	GO:0048518	2.01E-12	1.28E-16	1.169680394	LCP2|TGFBR3|TOMM22|GTPBP1|NFKBIA|PARD6A|SMPD3|STUB1|HNRNPL|PIK3R2|RAB3A|PON1| AIMP2|PFN1|MED31|CCND1|LTF|RGS2|APOA1|LRP1|KCNJ2|BMP4|CMA1|VHL|KIDINS220|FHOD1| MED4|RNF144B|ELOB|CBFA2T2|NID1|CPSF6|IRF8|SETDB1|GOLPH3L|ARID5B|APP|ADAMTS1| SMC2|HK2|S100A1|FYCO1|MAD2L1|RAD21|LEO1|AKTIP|AXL|RNFT1|PRKCE|MEPCE|TMOD3| FANCI|PABPC1|CC2D1A|TRIM41|SLC34A1|MRE11|PSEN1|ALDH1A3|ZMIZ1|CHP1|GTF2F2| HNRNPA1|HOXA9|DLG1|LYAR|THRAP3|NET1|BLM|ITSN2|SYNE2|NR3C2|FGF17|G3BP2| MTOR|TGM2|ACTN2|DLL1|DUSP10|PROX1|CDC73|UCHL5|TAB2|DHX9|SNAPIN|CHTOP| S100A14|MAP3K7|BAG2|ZNF451|SCP2|KIF20B|ARFGEF2|TRAF1|HLA-DQA2|HLA-DQB1| AGER|SIK3|SYK|UBD|STAM|SHB|PRKCZ|B4GALT1|UCN3|ADRA1A|ESM1|SMARCA2|RTF1| EVL|BCL2L11|PICALM|PTPRZ1|VDAC1|NFATC2|DDX17|GAPDH|CEP250|MYCBP|ITGB2| MAP2K7|TBC1D10A|ELAVL1|MDK|CD14|PEX5|FGFR1|HRAS|EEF1D|VAMP2|ROBO1|RACK1| UBR5|CDK5RAP3|CHD4|ATP1A1|VIM|DDIT3|NUMB|ITGB3|POLR2A|MAP2K6|VAV1|NAP1L1| YAP1|CYFIP2|MAP3K14|ACD|ADCYAP1R1|KCTD7|FYB1|CTCF|RDX|HOXA13|EIF4A3|CDC42|CALM1
Positive regulation of cellular process	GO:0048522	6.16E-12	7.85E-16	1.121041929	LCP2|TGFBR3|TOMM22|GTPBP1|NFKBIA|PARD6A|SMPD3|STUB1|HNRNPL|PIK3R2|RAB3A| AIMP2|PFN1|MED31|CCND1|LTF|RGS2|APOA1|LRP1|KCNJ2|BMP4|VHL|KIDINS220|FHOD1| MED4|RNF144B|ELOB|CBFA2T2|NID1|CPSF6|IRF8|SETDB1|GOLPH3L|ARID5B|APP| ADAMTS1|SMC2|FYCO1|MAD2L1|RAD21|LEO1|AKTIP|AXL|RNFT1|PRKCE|MEPCE|TMOD3| PABPC1|CC2D1A|TRIM41|SLC34A1|MRE11|PSEN1|ALDH1A3|ZMIZ1|CHP1|GTF2F2|HNRNPA1| HOXA9|DLG1|LYAR|THRAP3|NET1|BLM|ITSN2|SYNE2|NR3C2|FGF17|G3BP2|MTOR|TGM2| ACTN2|DLL1|DUSP10|PROX1|CDC73|UCHL5|TAB2|DHX9|SNAPIN|CHTOP|S100A14| MAP3K7|ZNF451|SCP2|KIF20B|TRAF1|HLA-DQA2|HLA-DQB1|AGER|SIK3|SYK|UBD|STAM| SHB|PRKCZ|B4GALT1|UCN3|ADRA1A|ESM1|SMARCA2| RTF1|EVL|BCL2L11|PICALM|PTPRZ1|VDAC1|NFATC2|DDX17|GAPDH|CEP250|MYCBP|ITGB2| MAP2K7|ELAVL1|MDK|CD14|FGFR1|HRAS|EEF1D|VAMP2|ROBO1|RACK1|UBR5|CDK5RAP3| CHD4|VIM|DDIT3|NUMB|ITGB3|POLR2A|MAP2K6|VAV1|NAP1L1|YAP1|CYFIP2|MAP3K14| ACD|ADCYAP1R1|CTCF|RDX|HOXA13|EIF4A3|CDC42|CALM1
Cellular process	GO:0009987	8.84E-10	1.69E-13	0.905354773	LCP2|APPBP2|TRAM2|DLD|TGFBR3|PSMD8|SF3A1|TOMM22|GTPBP1|NFKBIA|NUTF2| PARD6A|SMPD3|STUB1|HNRNPL|TBCB|POLR2I|PIK3R2|RAB3A|PON1|AIMP2|PFN1| MED31|CCND1|MLEC|LTF|RGS2|APOA1|CRIPT|LRP1|KCNJ2|BMP4|TUBA4A|CMA1| IRAK2|VHL|KIDINS220|DSG1|FHOD1|MED4|RNF144B|PSMA6|ELOB|CBFA2T2|NID1| GPAT3|CP|POLB|SNX19|SLIT1|CPSF6|IRF8|RMC1|SETDB1|GOLPH3L|HAPLN1|CEP164|

					ARID5B|PLOD2|ATG3|GTF2E1|APP|ADAMTS1|SMC2|CACHD1|HK2|PSG6|S100A1|FYCO1| MAD2L1|RAD21|DUSP16|LEO1|SLC9A5|PCLAF|AKTIP|AXL|SRRM2|PANK1|UBE2E1|CHRNB1| SOSTDC1|PRKCE|ZNF3|MEPCE|TMOD3|FANCI|PABPC1|PPFIBP1|CSTF3|RANBP10|OSBPL2| MAGOHB|TRIM41|SLC34A1|PLEC|KIF15|ENO3|PPP2R2A|MRE11|PSEN1|DENND5A|ALDH1A3| ZMIZ1|TMEM216|ARHGEF25|CHP1|GTF2F2|HNRNPA1|POLR2K|USP1|HOXA9|DLG1|LYAR| THRAP3|NET1|BLM|ITSN2|PIGR|SYNE2|NR3C2|FGF17|G3BP2|MTOR|TGM2|EXO1|ACTN2| DLL1|DUSP10|PROX1|CRB1|CDC73|UCHL5|DHX9|VTA1|YY1AP1|SNAPIN|CHTOP|S100A14| BCCIP|MAP3K7|PRMT6|GTF2B|BAG2|UBE2U|SCP2|KIF20B|ARFGEF2|SH3GLB2|UBR2|PPIL1| TRAF1|TMEM38B|HSPG2|HLA-DQA2|HLA-DQB1|AGER|RNF5|UBR4|SIK3|SYK|MBNL2|UBD| FTL|STAM|SHB|SLC22A6|PRKCZ|ATAD3A| B4GALT1|UCN3|ADRA1A|ITSN1|RAD1|SMARCA2|HACD2|RTF1|RAD9B|EVL|BCL2L11| PICALM|PTPRZ1|VDAC1|EXT2|NFATC2|RPL14|MARF1|RPS8|DDX17|GAPDH|SMU1|CEP250| ITGB2|MAP2K7|CRHR1|PSG5|PAICS|SUN1|TBC1D10A|ELAVL1|MDK|CD14|PRPF40A|FHL2| RABL2A|ACAN|DCC|RNF212|PEX5|PPP6C|FGFR1|SELENBP1|HRAS|EEF1D|SNRPB|RPP14| RPS24|GPHN|VAMP2|ROBO1|GC|AMOTL2|RACK1|UBR5|PUF60|CDK5RAP3|CHD4|ADAP1| ATP1A1|VIM|DDIT3|DTX3|NUMB|ITGB3|APBA2|TLN2|POLR2A|TNNT1|MAP2K6|AP2S1|VAV1| MRPL37|NAP1L1|YAP1|CYFIP2|MAP3K14|ACD|AP2B1|ADCYAP1R1|NEB|PIGN|KCTD7|FYB1| CTCF|SRP72|RDX|HOXA13|EIF4A3|CDC42|MTHFD1|CALM1
Macromolecule metabolic process	GO:0043170	2.36E-09	6.01E-13	0.8627088	APPBP2|DLD|TGFBR3|PSMD8|SF3A1|JOSD1|GTPBP1|SMPD3|STUB1|HNRNPL|POLR2I| AIMP2|MED31|CCND1|MLEC|LTF|APOA1|BMP4|CMA1|IRAK2|VHL|MED4|RNF144B| PSMA6|ELOB|CBFA2T2|POLB|CPSF6|SETDB1|CEP164|PLOD2|ATG3|GTF2E1|APP| ADAMTS1|WDYHV1|RAD21|DUSP16|LEO1|PCLAF|AKTIP|AXL|SRRM2|UBE2E1| COPS6|RNFT1|PRKCE|MEPCE|FANCI|PABPC1|CSTF3|MAGOHB|TRIM41|SLC34A1| PLEC|PPP2R2A|MRE11|PSEN1|GTF2F2|HNRNPA1|POLR2K|USP1|HOXA9|DLG1|LYAR| THRAP3|BLM|MTOR|TGM2|EXO1|DUSP10|PROX1|CRB1|CDC73|UCHL5|DHX9|SNAPIN| CHTOP|BCCIP|MAP3K7|PRMT6|GTF2B|BAG2|ZNF451|UBE2U|ARFGEF2|UBR2|PPIL1| TRAF1|RNF5|UBR4|SIK3|SYK|MBNL2|UBD|STAM|PRKCZ|B4GALT1|RAD1|RTF1|RAD9B| PTPRZ1|EXT2|NFATC2|RPL14|MARF1|RPS8|DDX17|GAPDH|SMU1|MAP2K7|TBC1D10A| PRPF40A|ACAN|RNF212|PPP6C|FGFR1|EEF1D|SNRPB|RPP14|RPS24|GPHN|RACK1|UBR5| PUF60|CDK5RAP3|CHD4|DDIT3|DTX3|POLR2A|MAP2K6|MRPL37|NAP1L1|CYFIP2| MAP3K14|ACD|PIGN|CTCF|HOXA13|EIF4A3|CDC42
Multicellular organism development	GO:0007275	2.47E-09	7.86E-13	0.860730305	DLD|TGFBR3|SMPD3|TBCB|PIK3R2|RAB3A|AIMP2|PFN1|MED31|CCND1|LTF|RGS2| APOA1|LRP1|BMP4|CMA1|KIDINS220|CBFA2T2|NID1|POLB|SNX19|SLIT1|IRF8| HAPLN1|ARID5B|APP|ADAMTS1|S100A1|LEO1|AXL|SOSTDC1|TMOD3|SLC34A1| PLEC|ENO3|PSEN1|ALDH1A3|ZMIZ1|ARHGEF25|USP1|HOXA9|DLG1|LYAR|SYNE2| FGF17|MTOR|TGM2|EXO1|ACTN2|DLL1|DUSP10|PROX1|CRB1|CDC73|UCHL5|TAB2| YY1AP1|SNAPIN|CHTOP|KIF20B|PPIL1|TMEM38B|HSPG2|AGER|SYK|UBD|SHB|PRKCZ| B4GALT1|ADRA1A|ESM1|RAD1|SMARCA2|RTF1|EVL|BCL2L11|PICALM|PTPRZ1|EXT2| ITGB2|CRHR1|SUN1|MDK|FHL2|ACAN|DCC|PEX5|FGFR1|PLEKHA5|SNRPB|ROBO1| AMOTL2|RACK1|CDK5RAP3|VIM|DDIT3|NUMB|ITGB3|APBA2|MAP2K6|VAV1|NAP1L1| YAP1|CYFIP2|ACD|AP2B1|ADCYAP1R1|NEB|HOXA13|ITM2B|EIF4A3|CDC42|MTHFD1|CALM1
Regulation of cellular component organization	GO:0051128	5.04E-09	1.93E-12	0.829756946	SMPD3|STUB1|PIK3R2|RAB3A|PFN1|RGS2|APOA1|CRIPT|LRP1|BMP4|KIDINS220| FHOD1|CBFA2T2|NID1|SLIT1|SETDB1|ATG3|APP|SMC2|FYCO1|MAD2L1|RAD21| AXL|PRKCE|TMOD3|KIF15|MRE11|PSEN1|DENND5A|HNRNPA1|DLG1|NET1|ITSN2| SYNE2|G3BP2|MTOR|ACTN2|DLL1|PROX1|CDC73|UCHL5|SNAPIN|PRMT6|KIF20B| HSPG2|RNF5|SYK|STAM|PRKCZ|ATAD3A|RAD1|SMARCA2|EVL|BCL2L11|PICALM| VDAC1|NFATC2|MAP2K7|MDK|CD14|DCC|PEX5|HRAS|ROBO1|RACK1|VIM|NUMB| ITGB3|AP2S1|YAP1|CYFIP2|ACD|NEB|CTCF|RDX|HOXA13|CDC42|CALM1
Cellular component organization or biogenesis	GO:0071840	5.70E-09	2.54E-12	0.824412514	TRAM2|TGFBR3|SF3A1|TOMM22|PARD6A|SMPD3|PIK3R2|RAB3A|AIMP2|PFN1| MED31|APOA1|CRIPT|KCNJ2|TUBA4A|CMA1|KIDINS220|DSG1|FHOD1|MED4| ELOB|NID1|SNX19|SLIT1|CPSF6|SETDB1|GOLPH3L|CEP164|ATG3|GTF2E1|APP| ADAMTS1|SMC2|HK2|MAD2L1|RAD21|PCLAF|AKTIP|CHRNB1|PRKCE|TMOD3| PPFIBP1|RANBP10|OSBPL2|PLEC|MRE11|PSEN1|ALDH1A3|ZMIZ1|TMEM216|ARHGEF25| CHP1|GTF2F2|DLG1|LYAR|BLM|SYNE2|G3BP2|MTOR|TGM2|EXO1|ACTN2|PROX1|CRB1|

					CDC73|UCHL5|DHX9|VTA1|SNAPIN|BCCIP|PRMT6|GTF2B|SCP2|KIF20B|ARFGEF2| SH3GLB2|UBR2|TRAF1|TMEM38B|HLA-DQA2|HLA-DQB1|AGER|SIK3|UBD|STAM| PRKCZ|ATAD3A|B4GALT1|SMARCA2|EVL|BCL2L11| PICALM|PTPRZ1|RPL14|MARF1|RPS8|DDX17|GAPDH|CEP250|ITGB2|SUN1|ELAVL1| MDK|PRPF40A|ACAN|DCC|RNF212|PEX5|PPP6C|SNRPB|RPS24|GPHN|VAMP2|ROBO1| AMOTL2|PUF60|CDK5RAP3|CHD4|VIM|NUMB|ITGB3|TLN2|TNNT1|AP2S1|VAV1|NAP1L1| YAP1|CYFIP2|ACD|NEB|KCTD7|CTCF|RDX|HOXA13|EIF4A3|CDC42|CALM1
Regulation of molecular function	GO:0065009	1.28E-08	6.52E-12	0.789279003	LCP2|TGFBR3|NFKBIA|STUB1|HNRNPL|PIK3R2|PON1|AIMP2|PFN1|CCND1|LTF|RGS2| APOA1|LRP1|BMP4|IRAK2|KIDINS220|PSMA6|SPINK7|ARID5B|APP|S100A1|MAD2L1| DUSP16|AKTIP|AXL|PRKCE|MEPCE|TRIM41|PLEC|PPP2R2A|MRE11|PSEN1|DENND5A| ARHGEF25|CHP1|DLG1|NET1|BLM|ITSN2|G3BP2|MTOR|TGM2|ACTN2|DUSP10|PROX1| UCHL5|TAB2|DHX9|SNAPIN|CHTOP|BCCIP|MAP3K7|GTF2B|BAG2|ARFGEF2|TRAF1| AGER|SYK|SHB|PRKCZ|ADRA1A|ITSN1|BCL2L11|PICALM|GAPDH|ITGB2|MAP2K7| CRHR1|TBC1D10A|FGFR1|HRAS|EEF1D|VAMP2|ROBO1|RACK1|CDK5RAP3|ADAP1| DDIT3|ITGB3|MAP2K6|VAV1|CYFIP2|MAP3K14|ACD|ADCYAP1R1|KCTD7|RDX|EIF4A3|CDC42|CALM1
Cellular component organization	GO:0016043	3.85E-08	2.33E-11	0.741453927	TRAM2|TGFBR3|SF3A1|TOMM22|PARD6A|SMPD3|PIK3R2|RAB3A|AIMP2|PFN1|MED31| APOA1|CRIPT|KCNJ2|TUBA4A|CMA1|KIDINS220|DSG1|FHOD1|MED4|ELOB|NID1| SNX19|SLIT1|CPSF6|SETDB1|GOLPH3L|CEP164|ATG3|GTF2E1|APP|ADAMTS1|SMC2|HK2| MAD2L1|RAD21|PCLAF|AKTIP|CHRNB1|PRKCE|TMOD3|PPFIBP1|RANBP10|OSBPL2| PLEC|MRE11|PSEN1|ALDH1A3|ZMIZ1|TMEM216|ARHGEF25|CHP1|GTF2F2|DLG1|BLM| SYNE2|G3BP2|MTOR|TGM2|EXO1|ACTN2|PROX1|CRB1|CDC73|UCHL5|DHX9|VTA1| SNAPIN|BCCIP|PRMT6|GTF2B|SCP2|KIF20B|ARFGEF2|SH3GLB2|UBR2|TRAF1|TMEM38B| HLA-DQA2|HLA-DQB1|AGER|SIK3|UBD|STAM|PRKCZ|ATAD3A|B4GALT1|SMARCA2|EVL| BCL2L11|PICALM|PTPRZ1|MARF1|GAPDH|CEP250|ITGB2|SUN1|ELAVL1|MDK|PRPF40A| ACAN|DCC|RNF212|PEX5|PPP6C|SNRPB|GPHN|VAMP2|ROBO1|AMOTL2|PUF60|CDK5RAP3| CHD4|VIM|NUMB|ITGB3|TLN2|TNNT1|AP2S1|VAV1|NAP1L1|YAP1|CYFIP2|ACD|NEB| KCTD7|CTCF|RDX|HOXA13|CDC42|CALM1
Positive regulation of molecular function	GO:0044093	3.85E-08	2.21E-11	0.741453927	LCP2|STUB1|HNRNPL|PON1|AIMP2|PFN1|CCND1|LTF|APOA1|LRP1|BMP4|IRAK2|PSMA6| ARID5B|APP|S100A1|AKTIP|AXL|TRIM41|MRE11|PSEN1|CHP1|DLG1|NET1|MTOR|TGM2| ACTN2|PROX1|TAB2|DHX9|CHTOP|MAP3K7|GTF2B|TRAF1|AGER|SYK|PRKCZ|ADRA1A| BCL2L11|PICALM|ITGB2|MAP2K7|CRHR1|TBC1D10A|FGFR1|HRAS|ROBO1|RACK1| ADAP1|DDIT3|ITGB3|MAP2K6|VAV1|CYFIP2|ACD|ADCYAP1R1|KCTD7|CDC42|CALM1
Anatomical structure development	GO:0048856	5.90E-08	4.14E-11	0.722914799	DLD|TGFBR3|SMPD3|TBCB|PIK3R2|RAB3A|AIMP2|PFN1|MED31|CCND1|LTF|RGS2| APOA1|LRP1|BMP4|CMA1|VHL|KIDINS220|CBFA2T2|NID1|POLB|SNX19|SLIT1|IRF8| HAPLN1|ARID5B|APP|ADAMTS1|HK2|S100A1|LEO1|AXL|CHRNB1|SOSTDC1|TMOD3| SLC34A1|PLEC|ENO3|PSEN1|ALDH1A3|ZMIZ1|ARHGEF25|USP1|HOXA9|DLG1|LYAR| SYNE2|FGF17|MTOR|TGM2|EXO1|ACTN2|DLL1|DUSP10|PROX1|CRB1|CDC73|UCHL5| TAB2|YY1AP1|SNAPIN|CHTOP|BCCIP|KIF20B|PPIL1|TMEM38B|HSPG2|AGER|SYK|UBD| SHB|PRKCZ|B4GALT1|ADRA1A|ESM1|RAD1|SMARCA2|RTF1|EVL|BCL2L11|PICALM| PTPRZ1|VDAC1|EXT2|NFATC2|MARF1|DDX17|ITGB2|CRHR1|SUN1|MDK|FHL2|ACAN| DCC|PEX5|FGFR1|PLEKHA5|HRAS|SNRPB|ROBO1|AMOTL2|RACK1|CDK5RAP3|VIM| DDIT3|NUMB|ITGB3|APBA2|TNNT1|MAP2K6|VAV1|NAP1L1|YAP1|CYFIP2|ACD| AP2B1|ADCYAP1R1|NEB|RDX|HOXA13|ITM2B|EIF4A3|CDC42|MTHFD1|CALM1
Regulation of organelle organization	GO:0033043	7.06E-08	5.40E-11	0.71511953	SMPD3|PIK3R2|RAB3A|PFN1|APOA1|CRIPT|LRP1|BMP4|FHOD1|SETDB1|ATG3|APP| SMC2|FYCO1|MAD2L1|RAD21|PRKCE|TMOD3|KIF15|MRE11|HNRNPA1|DLG1|SYNE2| G3BP2|MTOR|ACTN2|PROX1|UCHL5|PRMT6|KIF20B|RNF5|STAM|RAD1|SMARCA2| EVL|BCL2L11|VDAC1|MAP2K7|MDK|HRAS|ITGB3|YAP1|CYFIP2|ACD|NEB|CTCF|RDX|HOXA13|CDC42
System development	GO:0048731	7.06E-08	5.75E-11	0.71511953	TGFBR3|SMPD3|TBCB|PIK3R2|RAB3A|AIMP2|PFN1|CCND1|LTF|RGS2|APOA1| LRP1|BMP4|CMA1|KIDINS220|CBFA2T2|NID1|POLB|SNX19|SLIT1|IRF8|HAPLN1| ARID5B|APP|ADAMTS1|S100A1|AXL|TMOD3|SLC34A1|PLEC|ENO3|PSEN1| ALDH1A3|ZMIZ1|ARHGEF25|USP1|HOXA9|DLG1|LYAR|SYNE2|FGF17|MTOR|TGM2| EXO1|ACTN2|DLL1|DUSP10|PROX1|CRB1|UCHL5|TAB2|YY1AP1|SNAPIN|KIF20B| TMEM38B|HSPG2|AGER|SYK|UBD|SHB|PRKCZ|B4GALT1|ADRA1A|ESM1|RAD1| SMARCA2|EVL|BCL2L11|PICALM|PTPRZ1|EXT2|CRHR1|SUN1|MDK|FHL2|ACAN|

					DCC|PEX5|FGFR1|PLEKHA5|SNRPB|ROBO1|AMOTL2|CDK5RAP3|VIM|DDIT3| NUMB|ITGB3|APBA2|MAP2K6|VAV1|NAP1L1|YAP1|CYFIP2|ACD|AP2B1|NEB| HOXA13|ITM2B|EIF4A3|CDC42|MTHFD1|CALM1
Response to organic substance	GO:0010033	1.70E-07	1.52E-10	0.676955108	TGFBR3|NFKBIA|SMPD3|STUB1|HNRNPL|PIK3R2|PON1|CCND1|RGS2|LRP1|BMP4|CMA1| IRAK2|KIDINS220|DSG1|POLB|IRF8|ARID5B|APP|HK2|AXL|CHRNB1|SOSTDC1|PRKCE| TRIM41|SLC34A1|PPP2R2A|PSEN1|ZMIZ1|HOXA9|BLM|NR3C2|FGF17|MTOR|TGM2| ACTN2|DUSP10|CDC73|TAB2|DHX9|S100A14|MAP3K7|UBR2|TRAF1|TMEM38B|AGER| RNF5|SYK|UBD|SLC22A6|PRKCZ|UCN3|ADRA1A|BCL2L11|EXT2|DDX17|GAPDH| ITGB2|MAP2K7|CRHR1|MDK|CD14|FHL2|FGFR1|VAMP2|RACK1|UBR5|CDK5RAP3| ATP1A1|VIM|DDIT3|ITGB3|MAP2K6|YAP1|ADCYAP1R1|RDX|HOXA13|EIF4A3|CDC42|CALM1
Metabolic process	GO:0008152	1.97E-07	1.88E-10	0.670553377	APPBP2|TRAM2|DLD|TGFBR3|PSMD8|SF3A1|JOSD1|GTPBP1|SMPD3|STUB1|HNRNPL| POLR2I|PIK3R2|PON1|AIMP2|MED31|CCND1|MLEC|LTF|APOA1|LRP1|BMP4|CMA1| IRAK2|VHL|MED4|RNF144B|PSMA6|ELOB|CBFA2T2|GPAT3|POLB|CPSF6|IRF8|RMC1| SETDB1|CEP164|ARID5B|PLOD2|ATG3|GTF2E1|APP|ADAMTS1|WDYHV1|HK2|RAD21| DUSP16|LEO1|PCLAF|AKTIP|AXL|SRRM2|PANK1|UBE2E1|COPS6|RNFT1|PRKCE| MEPCE|FANCI|PABPC1|CSTF3|OSBPL2|MAGOHB|TRIM41|SLC34A1|PLEC|ENO3| PPP2R2A|MRE11|PSEN1|ALDH1A3|ZMIZ1|GTF2F2|HNRNPA1|POLR2K|USP1|HOXA9| DLG1|LYAR|THRAP3|BLM|MTOR|TGM2|EXO1|DUSP10|PROX1|CRB1|CDC73|UCHL5| DHX9|VTA1|SNAPIN|CHTOP|BCCIP|MAP3K7|PRMT6|GTF2B|BAG2|ZNF451|UBE2U| SCP2|ARFGEF2|UBR2|PPIL1|TRAF1|TMEM38B|HSPG2|RNF5|UBR4|SIK3|SYK|MBNL2| UBD|STAM|PRKCZ|B4GALT1|RAD1|HACD2|RTF1|RAD9B|PTPRZ1|VDAC1|EXT2|NFATC2| RPL14|MARF1|RPS8|DDX17|GAPDH|SMU1|MAP2K7|PAICS|TBC1D10A|PRPF40A| ACAN|RNF212|PEX5|PPP6C|FGFR1|HRAS|EEF1D|SNRPB|RPP14|RPS24|GPHN|GC| RACK1|UBR5|PUF60|CDK5RAP3|CHD4|DDIT3|DTX3|POLR2A|MAP2K6|VAV1| MRPL37|NAP1L1|CYFIP2|MAP3K14|ACD|PIGN|CTCF|HOXA13|EIF4A3|CDC42|MTHFD1|CALM1
Regulation of transferase activity	GO:0051338	2.05E-07	2.09E-10	0.668824614	LCP2|STUB1|PIK3R2|CCND1|LTF|RGS2|APOA1|BMP4|APP|MAD2L1|DUSP16|AXL| PLEC|MRE11|PSEN1|CHP1|DLG1|BLM|MTOR|DUSP10|PROX1|TAB2|BCCIP|MAP3K7| BAG2|AGER|SYK|SHB|PRKCZ|ADRA1A|MAP2K7|FGFR1|HRAS|ROBO1|RACK1| CDK5RAP3|ITGB3|MAP2K6|ACD|CDC42|CALM1
Positive regulation of transport	GO:0051050	2.12E-07	2.30E-10	0.667366414	NFKBIA|PARD6A|SMPD3|PIK3R2|RAB3A|PON1|APOA1|LRP1|KCNJ2|CPSF6| GOLPH3L|APP|AXL|PRKCE|SLC34A1|PSEN1|CHP1|DLG1|LYAR|ACTN2|DLL1| DHX9|SNAPIN|SCP2|KIF20B|SYK|STAM|PRKCZ|UCN3|ITGB2|CD14|HRAS| VAMP2|RACK1|UBR5|MAP2K6|ADCYAP1R1|KCTD7|RDX|CDC42|CALM1
Anatomical structure morphogenesis	GO:0009653	2.82E-07	3.24E-10	0.654975089	DLD|TGFBR3|SMPD3|RAB3A|PFN1|LTF|LRP1|BMP4|VHL|KIDINS220|POLB|SLIT1| ARID5B|APP|ADAMTS1|LEO1|AXL|SOSTDC1|TMOD3|SLC34A1|PLEC|PSEN1| ALDH1A3|ZMIZ1|ARHGEF25|HOXA9|DLG1|FGF17|MTOR|TGM2|ACTN2|DLL1| PROX1|CRB1|CDC73|UCHL5|KIF20B|HSPG2|SYK|SHB|PRKCZ|B4GALT1|ESM1| RTF1|EVL|BCL2L11|PICALM|PTPRZ1|EXT2|ITGB2|MDK|FHL2|ACAN|DCC|FGFR1| HRAS|ROBO1|AMOTL2|RACK1|NUMB|ITGB3|TNNT1|YAP1|CYFIP2|ACD|NEB| HOXA13|EIF4A3|CDC42|MTHFD1
Nucleobase-containing compound metabolic process	GO:0006139	4.92E-07	6.26E-10	0.63080349	DLD|SF3A1|GTPBP1|SMPD3|STUB1|HNRNPL|POLR2I|MED31|BMP4|MED4|ELOB| CBFA2T2|POLB|CPSF6|CEP164|GTF2E1|APP|HK2|RAD21|LEO1|PCLAF|SRRM2| PANK1|MEPCE|FANCI|PABPC1|CSTF3|MAGOHB|ENO3|MRE11|GTF2F2|HNRNPA1| POLR2K|USP1|HOXA9|DLG1|LYAR|THRAP3|BLM|MTOR|EXO1|PROX1|CDC73| UCHL5|DHX9|BCCIP|PRMT6|GTF2B|UBE2U|UBR2|PPIL1|MBNL2|RAD1|HACD2|RTF1| RAD9B|NFATC2|RPL14|MARF1|RPS8|DDX17|GAPDH|SMU1|PAICS|PRPF40A|RNF212| EEF1D|SNRPB|RPP14|RPS24|UBR5|PUF60|POLR2A|NAP1L1|ACD|CTCF|HOXA13|EIF4A3|MTHFD1
Primary metabolic process	GO:0044238	4.92E-07	5.96E-10	0.63080349	APPBP2|DLD|TGFBR3|PSMD8|SF3A1|JOSD1|GTPBP1|SMPD3|STUB1|HNRNPL|POLR2I| PIK3R2|PON1|AIMP2|MED31|CCND1|MLEC|LTF|APOA1|LRP1|BMP4|CMA1|IRAK2| VHL|MED4|RNF144B|PSMA6|ELOB|CBFA2T2|GPAT3|POLB|CPSF6|SETDB1|CEP164| PLOD2|ATG3|GTF2E1|APP|ADAMTS1|WDYHV1|HK2|RAD21|DUSP16|LEO1|PCLAF| AKTIP|AXL|SRRM2|PANK1|UBE2E1|COPS6|RNFT1|PRKCE|MEPCE|FANCI|PABPC1| CSTF3|OSBPL2|MAGOHB|TRIM41|SLC34A1|ENO3|PPP2R2A|MRE11|PSEN1|ALDH1A3| GTF2F2|HNRNPA1|POLR2K|USP1|HOXA9|DLG1|LYAR|THRAP3|BLM|MTOR|TGM2|

					EXO1|DUSP10|PROX1|CDC73|UCHL5|DHX9|SNAPIN|BCCIP|MAP3K7|PRMT6|GTF2B| BAG2|ZNF451|UBE2U|SCP2|UBR2|PPIL1|TRAF1|TMEM38B|HSPG2|RNF5|UBR4|SIK3| SYK|MBNL2|UBD|STAM|PRKCZ|B4GALT1|RAD1|HACD2|RTF1|RAD9B|PTPRZ1|EXT2| NFATC2|RPL14|MARF1|RPS8|DDX17|GAPDH|SMU1|MAP2K7|PAICS|TBC1D10A|PRPF40A| ACAN|RNF212|PEX5|PPP6C|FGFR1|EEF1D|SNRPB|RPP14|RPS24|GPHN|GC|RACK1|UBR5| PUF60|CDK5RAP3|CHD4|DDIT3|DTX3|POLR2A|MAP2K6|MRPL37|NAP1L1|CYFIP2| MAP3K14|ACD|PIGN|CTCF|HOXA13|EIF4A3|CDC42|MTHFD1
Regulation of protein metabolic process	GO:0051246	4.92E-07	6.64E-10	0.63080349	LCP2|GTPBP1|NFKBIA|PARD6A|SMPD3|STUB1|HNRNPL|AIMP2|CCND1|LTF|RGS2| APOA1|LRP1|BMP4|RNF144B|ELOB|SPINK7|APP|MAD2L1|DUSP16|AKTIP|COPS6| RNFT1|PRKCE|FANCI|PABPC1|PLEC|MRE11|PSEN1|ZMIZ1|CHP1|DLG1|BLM|FGF17| MTOR|DUSP10|PROX1|UCHL5|TAB2|DHX9|CHTOP|BCCIP|MAP3K7|PRMT6|BAG2| ZNF451|HSPG2|AGER|SYK|SHB|PRKCZ|ADRA1A|RTF1|BCL2L11|PICALM|MARF1| GAPDH|ITGB2|MAP2K7|TBC1D10A|ELAVL1|FGFR1|HRAS|EEF1D|ROBO1|RACK1| UBR5|CDK5RAP3|VIM|ITGB3|MAP2K6|CYFIP2|CTCF|RDX|ITM2B|EIF4A3|CALM1
Cellular localization	GO:0051641	4.92E-07	7.03E-10	0.63080349	APPBP2|TRAM2|TOMM22|NFKBIA|NUTF2|PIK3R2|RAB3A|CRIPT|LRP1|BMP4|FHOD1| SNX19|SLIT1|GOLPH3L|ATG3|APP|HK2|FYCO1|MAD2L1|RAD21|DUSP16|AKTIP| AXL|PRKCE|OSBPL2|MAGOHB|PLEC|PSEN1|DENND5A|CHP1|HNRNPA1|DLG1| ITSN2|PIGR|SYNE2|G3BP2|ACTN2|CRB1|DHX9|VTA1|SNAPIN|CHTOP|BCCIP| SCP2|KIF20B|ARFGEF2|TMEM38B|AGER|SYK|FTL|STAM|PRKCZ|ITSN1|BCL2L11| PICALM|CEP250|ITGB2|SUN1|TBC1D10A|ELAVL1|RABL2A|PEX5|PPP6C|SELENBP1| GPHN|VAMP2|DDIT3|APBA2|AP2S1|ACD|AP2B1|FYB1|CTCF|SRP72|RDX|EIF4A3|CDC42|CALM1
Biological regulation	GO:0065007	4.92E-07	6.06E-10	0.63080349	LCP2|DLD|TGFBR3|TOMM22|GTPBP1|NFKBIA|PARD6A|SMPD3|STUB1|HNRNPL| PIK3R2|RAB3A|PON1|AIMP2|PFN1|MED31|CCND1|LTF|RGS2|APOA1|CCDC92|CRIPT| LRP1|KCNJ2|BMP4|CMA1|IRAK2|VHL|KIDINS220|DSG1|FHOD1|MED4|RNF144B| PSMA6|ELOB|CBFA2T2|NID1|GPAT3|CP|POLB|SNX19|SLIT1|CPSF6|IRF8|RMC1| SETDB1|GOLPH3L|SPINK7|ARID5B|ATG3|APP|ADAMTS1|SMC2|HK2|PSG6|S100A1| FYCO1|MAD2L1|RAD21|DUSP16|LEO1|SLC9A5|PCLAF|TSC22D4|AKTIP|AXL|COPS6| CHRNB1|RNFT1|SOSTDC1|PRKCE|ZNF3|MEPCE|TMOD3|FANCI|PABPC1|CC2D1A| RANBP10|MAGOHB|TRIM41|SLC34A1|PLEC|KIF15|PPP2R2A|MRE11|PSEN1|DENND5A| ALDH1A3|ZMIZ1|ARHGEF25|CHP1|GTF2F2|HNRNPA1|POLR2K|USP1|HOXA9|DLG1| LYAR|THRAP3|NET1|BLM|ITSN2|PIGR|SYNE2|NR3C2|FGF17|G3BP2|MTOR|TGM2|ACTN2| DLL1|DUSP10|PROX1|CRB1|CDC73|UCHL5|TAB2|DHX9|YY1AP1|SNAPIN|CHTOP| S100A14|BCCIP|MAP3K7|PRMT6|GTF2B|BAG2|ZNF451|SCP2|KIF20B|ARFGEF2| UBR2|TRAF1|TMEM38B|HSPG2|HLA-DQA2|HLA-DQB1|AGER|RNF5|SIK3|SYK|MBNL2| UBD|FTL|STAM|SHB|PRKCZ|ATAD3A|B4GALT1|UCN3|ADRA1A|ITSN1|ESM1|RAD1| SMARCA2|RTF1|RAD9B|EVL|BCL2L11|PICALM|PTPRZ1|VDAC1|EXT2|NFATC2| MARF1|DDX17|GAPDH|SMU1|CEP250|MYCBP|ITGB2|MAP2K7|CRHR1|TBC1D10A| ELAVL1|MDK|CD14|PRPF40A|FHL2|DCC|PEX5|FGFR1|HRAS|EEF1D|IKZF2|RPS24| GPHN|VAMP2|ROBO1|AMOTL2|RACK1|UBR5|PUF60|CDK5RAP3|CHD4|ADAP1| ATP1A1|VIM|DDIT3|DTX3|NUMB|ITGB3|APBA2|POLR2A|TNNT1|MAP2K6|AP2S1| VAV1|NAP1L1|YAP1|CYFIP2|MAP3K14|ACD|AP2B1|ADCYAP1R1|NEB|KCTD7| FYB1|CTCF|RDX|HOXA13|ITM2B|EIF4A3|CDC42|MTHFD1|CALM1
Developmental process	GO:0032502	5.55E-07	8.49E-10	0.625570702	DLD|TGFBR3|SMPD3|TBCB|PIK3R2|RAB3A|AIMP2|PFN1|MED31|CCND1|LTF|RGS2| APOA1|LRP1|BMP4|CMA1|VHL|KIDINS220|CBFA2T2|NID1|POLB|SNX19|SLIT1|IRF8| HAPLN1|ARID5B|APP|ADAMTS1|HK2|S100A1|LEO1|AXL|CHRNB1|SOSTDC1|ZNF3| TMOD3|SLC34A1|PLEC|ENO3|PSEN1|ALDH1A3|ZMIZ1|ARHGEF25|USP1|HOXA9|DLG1| LYAR|ITSN2|SYNE2|FGF17|MTOR|TGM2|EXO1|ACTN2|DLL1|DUSP10|PROX1|CRB1| CDC73|UCHL5|TAB2|DHX9|YY1AP1|SNAPIN|CHTOP|BCCIP|KIF20B|UBR2|PPIL1| TMEM38B|HSPG2|AGER|SYK|UBD|SHB|PRKCZ|B4GALT1|ADRA1A|ESM1|RAD1| SMARCA2|RTF1|EVL|BCL2L11|PICALM|PTPRZ1|VDAC1|EXT2|NFATC2|MARF1| DDX17|MYCBP|ITGB2|CRHR1|SUN1|MDK|FHL2|ACAN|DCC|PEX5|FGFR1|PLEKHA5| HRAS|SNRPB|ROBO1|AMOTL2|RACK1|CDK5RAP3|VIM|DDIT3|NUMB|ITGB3|APBA2| TNNT1|MAP2K6|VAV1|NAP1L1|YAP1|CYFIP2|ACD|AP2B1|ADCYAP1R1|NEB|RDX| HOXA13|ITM2B|EIF4A3|CDC42|MTHFD1|CALM1

Organic substance metabolic process	GO:0071704	5.55E-07	8.82E-10	0.625570702	APPBP2|DLD|TGFBR3|PSMD8|SF3A1|JOSD1|GTPBP1|SMPD3|STUB1|HNRNPL|POLR2I|PIK3R2|PON1|AIMP2|MED31|CCND1|MLEC|LTF|APOA1|LRP1|BMP4|CMA1|IRAK2|VHL|MED4|RNF144B|PSMA6|ELOB|CBFA2T2|GPAT3|POLB|CPSF6|SETDB1|CEP164|PLOD2|ATG3|GTF2E1|APP|ADAMTS1|WDYHV1|HK2|RAD21|DUSP16|LEO1|PCLAF|AKTIP|AXL|SRRM2|PANK1|UBE2E1|COPS6|RNFT1|PRKCE|MEPCE|FANCI|PABPC1|CSTF3|OSBPL2|MAGOHB|TRIM41|SLC34A1|PLEC|ENO3|PPP2R2A|MRE11|PSEN1|ALDH1A3|GTF2F2|HNRNPA1|POLR2K|USP1|HOXA9|DLG1|LYAR|THRAP3|BLM|MTOR|TGM2|EXO1|DUSP10|PROX1|CRB1|CDC73|UCHL5|DHX9|SNAPIN|CHTOP|BCCIP|MAP3K7|PRMT6|GTF2B|BAG2|ZNF451|UBE2U|SCP2|ARFGEF2|UBR2|PPIL1|TRAF1|TMEM38B|HSPG2|RNF5|UBR4|SIK3|SYK|MBNL2|UBD|STAM|PRKCZ|B4GALT1|RAD1|HACD2|RTF1|RAD9B|PTPRZ1|VDAC1|EXT2|NFATC2|RPL14|MARF1|RPS8|DDX17|GAPDH|SMU1|MAP2K7|PAICS|TBC1D10A|PRPF40A|ACAN|RNF212|PEX5|PPP6C|FGFR1|EEF1D|SNRPB|RPP14|RPS24|GPHN|GC|RACK1|UBR5|PUF60|CDK5RAP3|CHD4|DDIT3|DTX3|POLR2A|MAP2K6|MRPL37|NAP1L1|CYFIP2|MAP3K14|ACD|PIGN|CTCF|HOXA13|EIF4A3|CDC42|MTHFD1
Cellular metabolic process	GO:0044237	7.20E-07	1.19E-09	0.61426675	APPBP2|DLD|TGFBR3|PSMD8|SF3A1|GTPBP1|SMPD3|STUB1|HNRNPL|POLR2I|PIK3R2|PON1|AIMP2|MED31|CCND1|MLEC|APOA1|LRP1|BMP4|CMA1|IRAK2|MED4|RNF144B|PSMA6|ELOB|CBFA2T2|GPAT3|POLB|CPSF6|IRF8|RMC1|SETDB1|CEP164|PLOD2|ATG3|GTF2E1|APP|HK2|RAD21|DUSP16|LEO1|PCLAF|AXL|SRRM2|PANK1|UBE2E1|PRKCE|MEPCE|FANCI|PABPC1|CSTF3|OSBPL2|MAGOHB|SLC34A1|PLEC|ENO3|PPP2R2A|MRE11|PSEN1|ALDH1A3|ZMIZ1|GTF2F2|HNRNPA1|POLR2K|USP1|HOXA9|DLG1|LYAR|THRAP3|BLM|MTOR|EXO1|DUSP10|PROX1|CDC73|UCHL5|DHX9|VTA1|SNAPIN|BCCIP|MAP3K7|PRMT6|GTF2B|UBE2U|SCP2|ARFGEF2|UBR2|PPIL1|TMEM38B|RNF5|UBR4|SIK3|SYK|MBNL2|UBD|STAM|PRKCZ|B4GALT1|RAD1|HACD2|RTF1|RAD9B|PTPRZ1|VDAC1|EXT2|NFATC2|RPL14|MARF1|RPS8|DDX17|GAPDH|SMU1|MAP2K7|PAICS|PRPF40A|ACAN|RNF212|PEX5|PPP6C|FGFR1|HRAS|EEF1D|SNRPB|RPP14|RPS24|GPHN|RACK1|UBR5|PUF60|DDIT3|POLR2A|MAP2K6|VAV1|MRPL37|NAP1L1|MAP3K14|ACD|PIGN|CTCF|HOXA13|EIF4A3|CDC42|MTHFD1|CALM1
Nucleic acid metabolic process	GO:0090304	7.42E-07	1.28E-09	0.612959609	SF3A1|SMPD3|STUB1|HNRNPL|POLR2I|MED31|BMP4|MED4|ELOB|CBFA2T2|POLB|CPSF6|CEP164|GTF2E1|APP|RAD21|LEO1|PCLAF|SRRM2|MEPCE|FANCI|PABPC1|CSTF3|MAGOHB|MRE11|GTF2F2|HNRNPA1|POLR2K|USP1|HOXA9|LYAR|THRAP3|BLM|EXO1|PROX1|CDC73|UCHL5|DHX9|BCCIP|PRMT6|GTF2B|UBE2U|UBR2|PPIL1|MBNL2|RAD1|RTF1|RAD9B|NFATC2|RPL14|MARF1|RPS8|DDX17|SMU1|PRPF40A|RNF212|EEF1D|SNRPB|RPP14|RPS24|UBR5|PUF60|POLR2A|NAP1L1|ACD|CTCF|HOXA13|EIF4A3
Nitrogen compound metabolic process	GO:0006807	7.55E-07	1.35E-09	0.612205305	APPBP2|DLD|TGFBR3|PSMD8|SF3A1|JOSD1|GTPBP1|SMPD3|STUB1|HNRNPL|POLR2I|PON1|AIMP2|MED31|CCND1|MLEC|LTF|APOA1|BMP4|CMA1|IRAK2|VHL|MED4|RNF144B|PSMA6|ELOB|CBFA2T2|POLB|CPSF6|SETDB1|CEP164|ARID5B|PLOD2|ATG3|GTF2E1|APP|ADAMTS1|WDYHV1|HK2|RAD21|DUSP16|LEO1|PCLAF|AKTIP|AXL|SRRM2|PANK1|UBE2E1|COPS6|RNFT1|PRKCE|MEPCE|FANCI|PABPC1|CSTF3|MAGOHB|TRIM41|SLC34A1|ENO3|PPP2R2A|MRE11|PSEN1|GTF2F2|HNRNPA1|POLR2K|USP1|HOXA9|DLG1|LYAR|THRAP3|BLM|MTOR|TGM2|EXO1|DUSP10|PROX1|CDC73|UCHL5|DHX9|SNAPIN|BCCIP|MAP3K7|PRMT6|GTF2B|BAG2|ZNF451|UBE2U|UBR2|PPIL1|TRAF1|RNF5|UBR4|SIK3|SYK|MBNL2|UBD|STAM|PRKCZ|B4GALT1|RAD1|HACD2|RTF1|RAD9B|PTPRZ1|EXT2|NFATC2|RPL14|MARF1|RPS8|DDX17|GAPDH|SMU1|MAP2K7|PAICS|TBC1D10A|PRPF40A|ACAN|RNF212|PPP6C|FGFR1|EEF1D|SNRPB|RPP14|RPS24|GPHN|RACK1|UBR5|PUF60|CDK5RAP3|CHD4|DDIT3|DTX3|POLR2A|MAP2K6|MRPL37|NAP1L1|CYFIP2|MAP3K14|ACD|PIGN|CTCF|HOXA13|EIF4A3|CDC42|MTHFD1
Regulation of kinase activity	GO:0043549	7.79E-07	1.44E-09	0.610846254	LCP2|PIK3R2|CCND1|LTF|RGS2|BMP4|APP|DUSP16|AXL|PLEC|MRE11|PSEN1|CHP1|DLG1|BLM|MTOR|DUSP10|PROX1|TAB2|BCCIP|MAP3K7|AGER|SYK|SHB|PRKCZ|ADRA1A|MAP2K7|FGFR1|HRAS|ROBO1|RACK1|CDK5RAP3|ITGB3|MAP2K6|CDC42|CALM1
Regulation of catalytic activity	GO:0050790	9.00E-07	1.72E-09	0.604575749	LCP2|STUB1|PIK3R2|AIMP2|CCND1|LTF|RGS2|APOA1|LRP1|BMP4|KIDINS220|SPINK7|APP|S100A1|MAD2L1|DUSP16|AXL|PRKCE|PLEC|PPP2R2A|MRE11|PSEN1|DENND5A|ARHGEF25|CHP1|DLG1|NET1|BLM|ITSN2|MTOR|TGM2|DUSP10|PROX1|UCHL5|TAB2|DHX9|CHTOP|BCCIP|MAP3K7|BAG2|ARFGEF2|AGER|SYK|SHB|PRKCZ|ADRA1A|ITSN1|

					BCL2L11|PICALM|GAPDH|ITGB2|MAP2K7|CRHR1|TBC1D10A|FGFR1|HRAS|EEF1D| ROBO1|RACK1|CDK5RAP3|ADAP1|ITGB3|MAP2K6|VAV1|CYFIP2|MAP3K14|ACD| ADCYAP1R1|RDX|CDC42|CALM1
Heterocycle metabolic process	GO:0046483	9.08E-07	1.79E-09	0.604191415	DLD|SF3A1|GTPBP1|SMPD3|STUB1|HNRNPL|POLR2I|MED31|BMP4|MED4|ELOB| CBFA2T2|POLB|CPSF6|CEP164|GTF2E1|APP|HK2|RAD21|LEO1|PCLAF|SRRM2|PANK1| MEPCE|FANCI|PABPC1|CSTF3|MAGOHB|SLC34A1|ENO3|MRE11|GTF2F2|HNRNPA1| POLR2K|USP1|HOXA9|DLG1|LYAR|THRAP3|BLM|MTOR|EXO1|PROX1|CDC73|UCHL5| DHX9|BCCIP|PRMT6|GTF2B|UBE2U|UBR2|PPIL1|MBNL2|RAD1|HACD2|RTF1|RAD9B| NFATC2|RPL14|MARF1|RPS8|DDX17|GAPDH|SMU1|PAICS|PRPF40A|RNF212|EEF1D| SNRPB|RPP14|RPS24|GPHN|UBR5|PUF60|POLR2A|NAP1L1|ACD|CTCF|HOXA13|EIF4A3|MTHFD1
Regulation of protein modification process	GO:0031399	1.10E-06	2.25E-09	0.595860731	LCP2|PARD6A|SMPD3|STUB1|AIMP2|CCND1|LTF|RGS2|APOA1|LRP1|BMP4|APP| MAD2L1|DUSP16|AKTIP|COPS6|PRKCE|FANCI|PLEC|MRE11|PSEN1|ZMIZ1|CHP1| DLG1|BLM|FGF17|MTOR|DUSP10|PROX1|TAB2|CHTOP|BCCIP|MAP3K7|PRMT6| BAG2|ZNF451|AGER|SYK|SHB|PRKCZ|ADRA1A|RTF1|ITGB2|MAP2K7|FGFR1| HRAS|ROBO1|RACK1|UBR5|CDK5RAP3|ITGB3|MAP2K6|CTCF|CALM1
Organic cyclic compound metabolic process	GO:1901360	1.20E-06	2.52E-09	0.592081875	DLD|SF3A1|GTPBP1|SMPD3|STUB1|HNRNPL|POLR2I|PON1|MED31|APOA1|BMP4| MED4|ELOB|CBFA2T2|POLB|CPSF6|CEP164|GTF2E1|APP|HK2|RAD21|LEO1|PCLAF| SRRM2|PANK1|MEPCE|FANCI|PABPC1|CSTF3|OSBPL2|MAGOHB|SLC34A1|ENO3| MRE11|GTF2F2|HNRNPA1|POLR2K|USP1|HOXA9|DLG1|LYAR|THRAP3|BLM|MTOR| EXO1|PROX1|CDC73|UCHL5|DHX9|BCCIP|PRMT6|GTF2B|UBE2U|SCP2|UBR2|PPIL1| MBNL2|RAD1|HACD2|RTF1|RAD9B|NFATC2|RPL14|MARF1|RPS8|DDX17|GAPDH| SMU1|PAICS|PRPF40A|RNF212|EEF1D|SNRPB|RPP14|RPS24|GPHN|GC|UBR5| PUF60|POLR2A|NAP1L1|ACD|CTCF|HOXA13|EIF4A3|MTHFD1
Cellular aromatic compound metabolic process	GO:0006725	1.68E-06	3.64E-09	0.577469072	DLD|SF3A1|GTPBP1|SMPD3|STUB1|HNRNPL|POLR2I|PON1|MED31|BMP4|MED4| ELOB|CBFA2T2|POLB|CPSF6|CEP164|GTF2E1|APP|HK2|RAD21|LEO1|PCLAF|SRRM2| PANK1|MEPCE|FANCI|PABPC1|CSTF3|MAGOHB|SLC34A1|ENO3|MRE11|GTF2F2| HNRNPA1|POLR2K|USP1|HOXA9|DLG1|LYAR|THRAP3|BLM|MTOR|EXO1|PROX1| CDC73|UCHL5|DHX9|BCCIP|PRMT6|GTF2B|UBE2U|UBR2|PPIL1|MBNL2|RAD1| HACD2|RTF1|RAD9B|NFATC2|RPL14|MARF1|RPS8|DDX17|GAPDH|SMU1|PAICS| PRPF40A|RNF212|EEF1D|SNRPB|RPP14|RPS24|UBR5|PUF60|POLR2A|NAP1L1| ACD|CTCF|HOXA13|EIF4A3|MTHFD1
Positive regulation of nitrogen compound metabolic process	GO:0051173	2.03E-06	4.54E-09	0.569250396	LCP2|GTPBP1|NFKBIA|STUB1|HNRNPL|PIK3R2|AIMP2|MED31|CCND1|LTF|LRP1| BMP4|VHL|FHOD1|MED4|RNF144B|ELOB|IRF8|ARID5B|APP|LEO1|AKTIP|RNFT1| MEPCE|FANCI|PABPC1|MRE11|PSEN1|ZMIZ1|CHP1|GTF2F2|HNRNPA1|HOXA9|DLG1| LYAR|THRAP3|BLM|FGF17|MTOR|ACTN2|DLL1|PROX1|CDC73|UCHL5|TAB2|DHX9| CHTOP|MAP3K7|BAG2|ZNF451|AGER|SYK|PRKCZ|ADRA1A|SMARCA2|RTF1|BCL2L11| PICALM|NFATC2|DDX17|MYCBP|ITGB2|MAP2K7|TBC1D10A|ELAVL1|MDK|FGFR1| HRAS|ROBO1|RACK1|CDK5RAP3|CHD4|VIM|DDIT3|ITGB3|POLR2A|MAP2K6| YAP1|CYFIP2|ACD|CTCF|RDX|HOXA13|EIF4A3|CALM1
Positive regulation of cellular metabolic process	GO:0031325	2.04E-06	4.69E-09	0.569036983	LCP2|GTPBP1|NFKBIA|STUB1|HNRNPL|PIK3R2|MED31|CCND1|LTF|APOA1|BMP4| VHL|FHOD1|MED4|RNF144B|ELOB|IRF8|ARID5B|APP|FYCO1|LEO1|AKTIP|AXL| PRKCE|MEPCE|PABPC1|MRE11|PSEN1|ZMIZ1|CHP1|GTF2F2|HNRNPA1|HOXA9| DLG1|LYAR|THRAP3|BLM|FGF17|MTOR|ACTN2|DLL1|PROX1|CDC73|UCHL5|TAB2| DHX9|CHTOP|MAP3K7|ZNF451|AGER|SYK|PRKCZ|ADRA1A|SMARCA2|RTF1| BCL2L11|PICALM|VDAC1|NFATC2|DDX17|MYCBP|ITGB2|MAP2K7|ELAVL1|MDK| FGFR1|HRAS|ROBO1|RACK1|CDK5RAP3|CHD4|VIM|DDIT3|ITGB3|POLR2A| MAP2K6|YAP1|ACD|ADCYAP1R1|CTCF|HOXA13|EIF4A3|CDC42|CALM1
Regulation of protein kinase activity	GO:0045859	2.07E-06	4.89E-09	0.568402965	LCP2|CCND1|LTF|RGS2|BMP4|APP|DUSP16|PLEC|PSEN1|CHP1|DLG1|BLM|MTOR| DUSP10|PROX1|TAB2|BCCIP|MAP3K7|AGER|SYK|SHB|PRKCZ|ADRA1A|MAP2K7| FGFR1|HRAS|ROBO1|RACK1|CDK5RAP3|ITGB3|MAP2K6|CALM1
Positive regulation of metabolic process	GO:0009893	2.27E-06	5.50E-09	0.564397414	LCP2|GTPBP1|NFKBIA|STUB1|HNRNPL|PIK3R2|AIMP2|MED31|CCND1|LTF|APOA1| LRP1|BMP4|VHL|FHOD1|MED4|RNF144B|ELOB|IRF8|ARID5B|APP|FYCO1|LEO1| AKTIP|AXL|RNFT1|PRKCE|MEPCE|FANCI|PABPC1|MRE11|PSEN1|ZMIZ1|CHP1| GTF2F2|HNRNPA1|HOXA9|DLG1|LYAR|THRAP3|BLM|FGF17|MTOR|ACTN2|DLL1|

					PROX1|CDC73|UCHL5|TAB2|DHX9|CHTOP|MAP3K7|BAG2|ZNF451|SCP2|ARFGEF2| AGER|SYK|PRKCZ|ADRA1A|SMARCA2|RTF1|BCL2L11|PICALM|VDAC1|NFATC2| DDX17|GAPDH|MYCBP|ITGB2|MAP2K7|TBC1D10A|ELAVL1|MDK|CD14|FGFR1| HRAS|ROBO1|RACK1|UBR5|CDK5RAP3|CHD4|VIM|DDIT3|ITGB3|POLR2A|MAP2K6| YAP1|CYFIP2|ACD|ADCYAP1R1|CTCF|RDX|HOXA13|EIF4A3|CDC42|CALM1
Regulation of biological process	GO:0050789	2.30E-06	5.72E-09	0.563827216	LCP2|DLD|TGFBR3|TOMM22|GTPBP1|NFKBIA|PARD6A|SMPD3|STUB1|HNRNPL| PIK3R2|RAB3A|PON1|AIMP2|PFN1|MED31|CCND1|LTF|RGS2|APOA1|CCDC92|CRIPT| LRP1|KCNJ2|BMP4|CMA1|IRAK2|VHL|KIDINS220|FHOD1|MED4|RNF144B|PSMA6| ELOB|CBFA2T2|NID1|GPAT3|POLB|SLIT1|CPSF6|IRF8|RMC1|SETDB1|GOLPH3L|SPINK7| ARID5B|ATG3|APP|ADAMTS1|SMC2|HK2|PSG6|S100A1|FYCO1|MAD2L1|RAD21|DUSP16| LEO1|PCLAF|TSC22D4|AKTIP|AXL|COPS6|CHRNB1|RNFT1|SOSTDC1|PRKCE|ZNF3| MEPCE|TMOD3|FANCI|PABPC1|CC2D1A|RANBP10|MAGOHB|TRIM41|SLC34A1| PLEC|KIF15|MRE11|PSEN1|DENND5A|ALDH1A3|ZMIZ1|ARHGEF25|CHP1|GTF2F2| HNRNPA1|POLR2K|USP1|HOXA9|DLG1|LYAR|THRAP3|NET1|BLM|ITSN2|PIGR| SYNE2|NR3C2|FGF17|G3BP2|MTOR|TGM2|ACTN2|DLL1|DUSP10|PROX1|CDC73| UCHL5|TAB2|DHX9|YY1AP1|SNAPIN|CHTOP|S100A14|BCCIP|MAP3K7|PRMT6|BAG2| ZNF451|SCP2|KIF20B|ARFGEF2|UBR2|TRAF1|TMEM38B|HSPG2|HLA-DQA2|HLA-DQB1| AGER|RNF5|SIK3|SYK|MBNL2|UBD|STAM|SHB|PRKCZ|ATAD3A|B4GALT1| UCN3|ADRA1A|ITSN1|ESM1|RAD1|SMARCA2|RTF1|RAD9B|EVL|BCL2L11|PICALM| PTPRZ1|VDAC1|EXT2|NFATC2|MARF1|DDX17|GAPDH|SMU1|CEP250|MYCBP|ITGB2| MAP2K7|CRHR1|TBC1D10A|ELAVL1|MDK|CD14|PRPF40A|FHL2|DCC|PEX5|FGFR1| HRAS|EEF1D|IKZF2|VAMP2|ROBO1|AMOTL2|RACK1|UBR5|PUF60|CDK5RAP3|CHD4| ADAP1|ATP1A1|VIM|DDIT3|DTX3|NUMB|ITGB3|APBA2|POLR2A|TNNT1|MAP2K6| AP2S1|VAV1|NAP1L1|YAP1|CYFIP2|MAP3K14|ACD|ADCYAP1R1|NEB|KCTD7| FYB1|CTCF|RDX|HOXA13|ITM2B|EIF4A3|CDC42|CALM1
Negative regulation of metabolic process	GO:0009892	2.89E-06	7.37E-09	0.553910216	PARD6A|SMPD3|HNRNPL|CCND1|LTF|RGS2|APOA1|LRP1|BMP4|VHL|CBFA2T2| IRF8|SETDB1|SPINK7|ARID5B|APP|HK2|MAD2L1|DUSP16|TSC22D4|AXL|PRKCE| ZNF3|MEPCE|PABPC1|CC2D1A|MAGOHB|PLEC|PSEN1|CHP1|HNRNPA1|DLG1| LYAR|THRAP3|BLM|MTOR|DLL1|DUSP10|PROX1|CDC73|UCHL5|TAB2|DHX9|YY1AP1| PRMT6|BAG2|ZNF451|UBR2|HSPG2|AGER|RNF5|SHB|PRKCZ|ADRA1A|SMARCA2| RTF1|PICALM|VDAC1|NFATC2|MARF1|DDX17|GAPDH|ITGB2|ELAVL1|FHL2|HRAS| ROBO1|RACK1|UBR5|CDK5RAP3|CHD4|ATP1A1|DDIT3|ITGB3|MAP2K6|YAP1| ACD|CTCF|ITM2B|EIF4A3|CALM1
Regulation of intracellular signal transduction	GO:1902531	3.85E-06	1.01E-08	0.541453927	NFKBIA|PIK3R2|LTF|RGS2|APOA1|BMP4|GPAT3|APP|MAD2L1|DUSP16|AXL|PRKCE| CC2D1A|PSEN1|ARHGEF25|CHP1|DLG1|NET1|NR3C2|MTOR|TGM2|DUSP10|PROX1| TAB2|MAP3K7|PRMT6|ARFGEF2|UBR2|TRAF1|AGER|SIK3|SYK|UBD|PRKCZ| ADRA1A|ITSN1|BCL2L11|GAPDH|MAP2K7|CD14|FHL2|FGFR1|HRAS|EEF1D| ROBO1|RACK1|CDK5RAP3|DDIT3|ITGB3|MAP2K6|VAV1|MAP3K14| ADCYAP1R1|RDX|CDC42|CALM1
Positive regulation of response to stimulus	GO:0048584	4.77E-06	1.28E-08	0.532148162	LCP2|TGFBR3|NFKBIA|LTF|APOA1|BMP4|NID1|APP|MAD2L1|AXL|RNFT1|PRKCE| CC2D1A|TRIM41|PSEN1|ZMIZ1|NET1|NR3C2|MTOR|TGM2|DLL1|PROX1|CDC73| UCHL5|TAB2|DHX9|S100A14|MAP3K7|TRAF1|HLA-DQB1|AGER|SIK3|SYK| UBD|SHB|PRKCZ|ADRA1A|ESM1|SMARCA2|BCL2L11|VDAC1|NFATC2|GAPDH| ITGB2|MAP2K7|MDK|CD14|FGFR1|HRAS|EEF1D|ROBO1|RACK1|UBR5| CDK5RAP3|DDIT3|ITGB3|MAP2K6|VAV1|YAP1|CYFIP2|MAP3K14|ADCYAP1R1|FYB1|CDC42
Regulation of primary metabolic process	GO:0080090	5.06E-06	1.39E-08	0.529584948	LCP2|GTPBP1|NFKBIA|PARD6A|SMPD3|STUB1|HNRNPL|PIK3R2|AIMP2|PFN1| MED31|CCND1|LTF|RGS2|APOA1|LRP1|BMP4|IRAK2|VHL|FHOD1|MED4|RNF144B| PSMA6|ELOB|CBFA2T2|CPSF6|IRF8|SPINK7|ARID5B|APP|MAD2L1|RAD21|DUSP16| LEO1|TSC22D4|AKTIP|COPS6|RNFT1|PRKCE|ZNF3|MEPCE|FANCI|PABPC1|CC2D1A| TRIM41|PLEC|MRE11|PSEN1|ZMIZ1|CHP1|GTF2F2|HNRNPA1|POLR2K|USP1|HOXA9| DLG1|LYAR|THRAP3|BLM|NR3C2|FGF17|G3BP2|MTOR|ACTN2|DLL1|DUSP10|PROX1| CDC73|UCHL5|TAB2|DHX9|YY1AP1|CHTOP|BCCIP|MAP3K7|PRMT6|BAG2|ZNF451| SCP2|TRAF1|HSPG2|AGER|SYK|MBNL2|SHB|PRKCZ|ADRA1A|SMARCA2|RTF1| BCL2L11|PICALM|NFATC2|MARF1|DDX17|GAPDH|SMU1|MYCBP|ITGB2|MAP2K7|

					TBC1D10A|ELAVL1|MDK|FHL2|FGFR1|HRAS|EEF1D|IKZF2|ROBO1|RACK1|UBR5| PUF60|CDK5RAP3|CHD4|ATP1A1|VIM|DDIT3|ITGB3|POLR2A|MAP2K6|YAP1|CYFIP2| ACD|ADCYAP1R1|CTCF|RDX|HOXA13|ITM2B|EIF4A3|CDC42|CALM1
Regulation of transport	GO:0051049	7.35E-06	2.06E-08	0.513371266	NFKBIA|PARD6A|SMPD3|PIK3R2|RAB3A|PON1|RGS2|APOA1|LRP1|KCNJ2|BMP4| CPSF6|GOLPH3L|ATG3|APP|HK2|AXL|PRKCE|SLC34A1|PSEN1|CHP1|DLG1|LYAR| TGM2|ACTN2|DLL1|DHX9|SNAPIN|SCP2|KIF20B|TMEM38B|SYK|STAM|PRKCZ|UCN3| ADRA1A|PICALM|VDAC1|ITGB2|CRHR1|CD14|HRAS|VAMP2|RACK1|UBR5| ATP1A1|NUMB|ITGB3|APBA2|MAP2K6|AP2S1|ADCYAP1R1|KCTD7|RDX|CDC42|CALM1
Positive regulation of cellular component organization	GO:0051130	1.09E-05	3.13E-08	0.49625735	SMPD3|STUB1|PFN1|RGS2|APOA1|LRP1|KIDINS220|FHOD1|CBFA2T2|SETDB1| APP|SMC2|FYCO1|RAD21|AXL|PRKCE|MRE11|PSEN1|HNRNPA1|DLG1|G3BP2| MTOR|ACTN2|DLL1|PROX1|UCHL5|SYK|EVL|BCL2L11|VDAC1|NFATC2| MAP2K7|MDK|CD14|HRAS|ROBO1|RACK1|ACD|HOXA13|CDC42
Response to endogenous stimulus	GO:0009719	1.14E-05	3.34E-08	0.494309515	TGFBR3|SMPD3|PIK3R2|CCND1|LRP1|BMP4|KIDINS220|DSG1|APP|SOSTDC1| PRKCE|TRIM41|SLC34A1|PSEN1|ZMIZ1|BLM|NR3C2|FGF17|MTOR|TGM2| ACTN2|MAP3K7|UBR2|TMEM38B|AGER|SYK|PRKCZ|UCN3|ADRA1A|BCL2L11| EXT2|DDX17|ITGB2|CRHR1|MDK|FHL2|FGFR1|VAMP2|UBR5| ATP1A1|VIM|DDIT3|ITGB3|YAP1|RDX|EIF4A3|CALM1
Regulation of response to stimulus	GO:0048583	1.16E-05	3.48E-08	0.493554201	LCP2|TGFBR3|NFKBIA|STUB1|PIK3R2|LTF|RGS2|APOA1|CCDC92|LRP1|BMP4| CMA1|IRAK2|VHL|PSMA6|CBFA2T2|NID1|GPAT3|SLIT1|APP|MAD2L1|DUSP16| AXL|RNFT1|SOSTDC1|PRKCE|CC2D1A|TRIM41|PSEN1|ZMIZ1|ARHGEF25|CHP1| USP1|DLG1|LYAR|NET1|PIGR|NR3C2|MTOR|TGM2|DLL1|DUSP10|PROX1|CDC73| UCHL5|TAB2|DHX9|S100A14|MAP3K7|PRMT6|ZNF451|ARFGEF2|UBR2|TRAF1| HLA-DQB1|AGER|SIK3|SYK|UBD|SHB|PRKCZ|ADRA1A|ITSN1|ESM1|SMARCA2| BCL2L11|VDAC1|NFATC2|GAPDH|ITGB2|MAP2K7|MDK|CD14|FHL2|FGFR1| HRAS|EEF1D|ROBO1|RACK1|UBR5|CDK5RAP3|DDIT3|ITGB3|TNNT1|MAP2K6| VAV1|YAP1|CYFIP2|MAP3K14|ADCYAP1R1|FYB1|RDX|HOXA13|EIF4A3|CDC42|CALM1
Regulation of nitrogen compound metabolic process	GO:0051171	1.16E-05	3.51E-08	0.493554201	LCP2|GTPBP1|NFKBIA|PARD6A|SMPD3|STUB1|HNRNPL|PIK3R2|AIMP2|PFN1| MED31|CCND1|LTF|RGS2|APOA1|LRP1|BMP4|IRAK2|VHL|FHOD1|MED4|RNF144B| PSMA6|ELOB|CBFA2T2|CPSF6|IRF8|SPINK7|ARID5B|APP|MAD2L1|RAD21|DUSP16| LEO1|TSC22D4|AKTIP|COPS6|RNFT1|PRKCE|ZNF3|MEPCE|FANCI|PABPC1|CC2D1A| TRIM41|PLEC|MRE11|PSEN1|ZMIZ1|CHP1|GTF2F2|HNRNPA1|POLR2K|USP1|HOXA9| DLG1|LYAR|THRAP3|BLM|NR3C2|FGF17|G3BP2|MTOR|ACTN2|DLL1|DUSP10|PROX1| CDC73|UCHL5|TAB2|DHX9|YY1AP1|CHTOP|BCCIP|MAP3K7|PRMT6|BAG2|ZNF451| TRAF1|HSPG2|AGER|SYK|MBNL2|SHB|PRKCZ|ADRA1A|SMARCA2|RTF1|BCL2L11| PICALM|NFATC2|MARF1|DDX17|GAPDH|SMU1|MYCBP|ITGB2|MAP2K7|TBC1D10A| ELAVL1|MDK|FHL2|FGFR1|HRAS|EEF1D|IKZF2|ROBO1|RACK1|UBR5|PUF60| CDK5RAP3|CHD4|VIM|DDIT3|ITGB3|POLR2A|MAP2K6|YAP1|CYFIP2|ACD| CTCF|RDX|HOXA13|ITM2B|EIF4A3|CALM1
Regulation of cellular metabolic process	GO:0031323	1.25E-05	3.89E-08	0.490308999	LCP2|GTPBP1|NFKBIA|PARD6A|SMPD3|STUB1|HNRNPL|PIK3R2|PFN1|MED31| CCND1|LTF|RGS2|APOA1|LRP1|BMP4|IRAK2|VHL|FHOD1|MED4|RNF144B|PSMA6| ELOB|CBFA2T2|CPSF6|IRF8|RMC1|ARID5B|APP|HK2|FYCO1|RAD21|DUSP16|LEO1| TSC22D4|AKTIP|AXL|PRKCE|ZNF3|MEPCE|PABPC1|CC2D1A|TRIM41|PLEC|MRE11| PSEN1|ZMIZ1|CHP1|GTF2F2|HNRNPA1|POLR2K|USP1|HOXA9|DLG1|LYAR|THRAP3| BLM|NR3C2|FGF17|G3BP2|MTOR|ACTN2|DLL1|DUSP10|PROX1|CDC73|UCHL5|TAB2| DHX9|YY1AP1|CHTOP|BCCIP|MAP3K7|PRMT6|ZNF451|SCP2|TRAF1|AGER|RNF5| SYK|MBNL2|SHB|PRKCZ|ADRA1A|SMARCA2|RTF1|BCL2L11|PICALM|VDAC1| NFATC2|MARF1|DDX17|GAPDH|SMU1|MYCBP|ITGB2|MAP2K7|ELAVL1|MDK|FHL2| FGFR1|HRAS|EEF1D|IKZF2|ROBO1|RACK1|UBR5|PUF60|CDK5RAP3|CHD4|ATP1A1| VIM|DDIT3|ITGB3|POLR2A|MAP2K6|YAP1|ACD|ADCYAP1R1|CTCF|HOXA13|ITM2B| EIF4A3|CDC42|CALM1
Positive regulation of catalytic activity	GO:0043085	1.27E-05	4.04E-08	0.489619628	LCP2|STUB1|AIMP2|CCND1|LTF|APOA1|APP|S100A1|AXL|MRE11|PSEN1|DLG1| NET1|MTOR|TGM2|PROX1|TAB2|DHX9|CHTOP|MAP3K7|AGER|SYK|PRKCZ| ADRA1A|BCL2L11|PICALM|ITGB2|MAP2K7|CRHR1|TBC1D10A|FGFR1|HRAS| ROBO1|RACK1|ADAP1|ITGB3|MAP2K6|VAV1|CYFIP2|ACD|ADCYAP1R1|CDC42|CALM1

Negative regulation of biological process	GO:0048519	1.27E-05	4.03E-08	0.489619628	TGFBR3|NFKBIA|PARD6A|SMPD3|STUB1|HNRNPL|PIK3R2|AIMP2|PFN1|MED31|CCND1| LTF|RGS2|APOA1|LRP1|BMP4|VHL|RNF144B|CBFA2T2|SLIT1|IRF8|SETDB1|SPINK7| ARID5B|ATG3|APP|ADAMTS1|HK2|MAD2L1|RAD21|DUSP16|LEO1|TSC22D4|AXL| SOSTDC1|PRKCE|ZNF3|MEPCE|TMOD3|PABPC1|CC2D1A|MAGOHB|PLEC|MRE11| PSEN1|DENND5A|CHP1|HNRNPA1|HOXA9|DLG1|LYAR|THRAP3|BLM|MTOR|ACTN2| DLL1|DUSP10|PROX1|CDC73|UCHL5|TAB2|DHX9|YY1AP1|SNAPIN|PRMT6|BAG2| ZNF451|UBR2|TMEM38B|HSPG2|AGER|RNF5|SYK|SHB|PRKCZ|ATAD3A|B4GALT1| ADRA1A|RAD1|SMARCA2|RTF1|RAD9B|EVL|PICALM|PTPRZ1|VDAC1|NFATC2| MARF1|DDX17|GAPDH|ITGB2|CRHR1|ELAVL1|MDK|FHL2|DCC|PEX5|HRAS|ROBO1| RACK1|UBR5|CDK5RAP3|CHD4|ATP1A1|VIM|DDIT3|NUMB|ITGB3|TNNT1| MAP2K6|YAP1|ACD|ADCYAP1R1|CTCF|RDX|ITM2B|EIF4A3|CDC42|CALM1
Regulation of cellular process	GO:0050794	1.27E-05	4.20E-08	0.489619628	LCP2|DLD|TGFBR3|TOMM22|GTPBP1|NFKBIA|PARD6A|SMPD3|STUB1|HNRNPL| PIK3R2|RAB3A|AIMP2|PFN1|MED31|CCND1|LTF|RGS2|APOA1|CRIPT|LRP1|KCNJ2| BMP4|IRAK2|VHL|KIDINS220|FHOD1|MED4|RNF144B|PSMA6|ELOB|CBFA2T2| NID1|GPAT3|POLB|SLIT1|CPSF6|IRF8|RMC1|SETDB1|GOLPH3L|ARID5B|ATG3|APP| ADAMTS1|SMC2|HK2|PSG6|S100A1|FYCO1|MAD2L1|RAD21|DUSP16|LEO1|PCLAF| TSC22D4|AKTIP|AXL|CHRNB1|RNFT1|SOSTDC1|PRKCE|ZNF3|MEPCE|TMOD3| PABPC1|CC2D1A|RANBP10|TRIM41|SLC34A1|PLEC|KIF15|MRE11|PSEN1|DENND5A| ALDH1A3|ZMIZ1|ARHGEF25|CHP1|GTF2F2|HNRNPA1|POLR2K|USP1|HOXA9| DLG1|LYAR|THRAP3|NET1|BLM|ITSN2|PIGR|SYNE2|NR3C2|FGF17|G3BP2|MTOR| TGM2|ACTN2|DLL1|DUSP10|PROX1|CDC73|UCHL5|TAB2|DHX9|YY1AP1|SNAPIN| CHTOP|S100A14|BCCIP|MAP3K7|PRMT6|ZNF451|SCP2|KIF20B|ARFGEF2|UBR2| TRAF1|TMEM38B|HSPG2|HLA-DQA2|HLA-DQB1|AGER|RNF5|SIK3|SYK|MBNL2| UBD|STAM|SHB|PRKCZ|ATAD3A|B4GALT1| UCN3|ADRA1A|ITSN1|ESM1|RAD1|SMARCA2|RTF1|RAD9B|EVL|BCL2L11|PICALM| PTPRZ1|VDAC1|EXT2|NFATC2|MARF1|DDX17|GAPDH|SMU1|CEP250|MYCBP| ITGB2|MAP2K7|CRHR1|ELAVL1|MDK|CD14|PRPF40A|FHL2|DCC|PEX5|FGFR1| HRAS|EEF1D|IKZF2|VAMP2|ROBO1|AMOTL2|RACK1|UBR5|PUF60|CDK5RAP3|CHD4| ADAP1|ATP1A1|VIM|DDIT3|DTX3|NUMB|ITGB3|APBA2|POLR2A|MAP2K6|AP2S1| VAV1|NAP1L1|YAP1|CYFIP2|MAP3K14|ACD|ADCYAP1R1|NEB|FYB1|CTCF| RDX|HOXA13|ITM2B|EIF4A3|CDC42|CALM1
Positive regulation of protein metabolic process	GO:0051247	1.27E-05	4.10E-08	0.489619628	LCP2|NFKBIA|STUB1|HNRNPL|AIMP2|CCND1|LTF|LRP1|BMP4|RNF144B|ELOB| APP|AKTIP|RNFT1|FANCI|PABPC1|MRE11|PSEN1|CHP1|DLG1|FGF17|MTOR| PROX1|TAB2|DHX9|CHTOP|MAP3K7|BAG2|AGER|SYK|PRKCZ|ADRA1A|RTF1| BCL2L11|PICALM|MAP2K7|TBC1D10A|ELAVL1|FGFR1|HRAS|ROBO1| RACK1|CDK5RAP3|VIM|ITGB3|MAP2K6|CYFIP2|RDX|EIF4A3|CALM1
Regulation of protein phosphorylation	GO:0001932	1.30E-05	4.58E-08	0.488605665	LCP2|PARD6A|SMPD3|CCND1|LTF|RGS2|APOA1|LRP1|BMP4|APP|DUSP16| AKTIP|PRKCE|PLEC|MRE11|PSEN1|CHP1|DLG1|BLM|FGF17|MTOR|DUSP10| PROX1|TAB2|BCCIP|MAP3K7|AGER|SYK|SHB|PRKCZ|ADRA1A|ITGB2| MAP2K7|FGFR1|HRAS|ROBO1|RACK1|CDK5RAP3|ITGB3|MAP2K6|CALM1
Regulation of localization	GO:0032879	1.30E-05	4.48E-08	0.488605665	NFKBIA|PARD6A|SMPD3|PIK3R2|RAB3A|PON1|RGS2|APOA1|CRIPT|LRP1| KCNJ2|BMP4|CPSF6|GOLPH3L|ATG3|APP|HK2|AXL|PRKCE|MEPCE|SLC34A1| PSEN1|CHP1|DLG1|LYAR|TGM2|ACTN2|DLL1|DHX9|SNAPIN|SCP2|KIF20B| TMEM38B|SYK|STAM|PRKCZ|UCN3|ADRA1A|PICALM|VDAC1|CEP250| ITGB2|CRHR1|CD14|HRAS|VAMP2|RACK1|UBR5|CDK5RAP3|ATP1A1| DDIT3|NUMB|ITGB3|APBA2|MAP2K6|AP2S1|YAP1|ADCYAP1R1|KCTD7|RDX|CDC42|CALM1
Regulation of metabolic process	GO:0019222	1.35E-05	4.82E-08	0.486966623	LCP2|GTPBP1|NFKBIA|PARD6A|SMPD3|STUB1|HNRNPL|PIK3R2|AIMP2|PFN1| MED31|CCND1|LTF|RGS2|APOA1|LRP1|BMP4|IRAK2|VHL|FHOD1|MED4|RNF144B| PSMA6|ELOB|CBFA2T2|CPSF6|IRF8|RMC1|SETDB1|SPINK7|ARID5B|APP|HK2| FYCO1|MAD2L1|RAD21|DUSP16|LEO1|TSC22D4|AKTIP|AXL|COPS6|RNFT1| PRKCE|ZNF3|MEPCE|FANCI|PABPC1|CC2D1A|MAGOHB|TRIM41|PLEC|MRE11| PSEN1|ZMIZ1|CHP1|GTF2F2|HNRNPA1|POLR2K|USP1|HOXA9|DLG1|LYAR| THRAP3|BLM|NR3C2|FGF17|G3BP2|MTOR|ACTN2|DLL1|DUSP10|PROX1|CDC73| UCHL5|TAB2|DHX9|YY1AP1|CHTOP|BCCIP|MAP3K7|PRMT6|BAG2|ZNF451|

					SCP2|ARFGEF2|UBR2|TRAF1|HSPG2|AGER|RNF5|SYK|MBNL2|SHB|PRKCZ| ADRA1A|SMARCA2|RTF1|BCL2L11|PICALM|VDAC1|NFATC2|MARF1|DDX17| GAPDH|SMU1|MYCBP|ITGB2|MAP2K7|TBC1D10A|ELAVL1|MDK|CD14|FHL2| FGFR1|HRAS|EEF1D|IKZF2|ROBO1|RACK1|UBR5|PUF60|CDK5RAP3|CHD4|ATP1A1| VIM|DDIT3|ITGB3|APBA2|POLR2A|MAP2K6|YAP1|CYFIP2|ACD| ADCYAP1R1|CTCF|RDX|HOXA13|ITM2B|EIF4A3|CDC42|CALM1
Regulation of phosphorylation	GO:0042325	1.57E-05	5.70E-08	0.480410035	LCP2|PARD6A|SMPD3|PIK3R2|CCND1|LTF|RGS2|APOA1|LRP1|BMP4|APP|DUSP16| AKTIP|AXL|PRKCE|PLEC|MRE11|PSEN1|CHP1|DLG1|BLM|FGF17|MTOR|DUSP10| PROX1|TAB2|BCCIP|MAP3K7|AGER|SYK|SHB|PRKCZ|ADRA1A|ITGB2|MAP2K7| FGFR1|HRAS|ROBO1|RACK1|CDK5RAP3|ITGB3|MAP2K6|CDC42|CALM1
Regulation of binding	GO:0051098	1.61E-05	5.94E-08	0.479317412	TGFBR3|NFKBIA|STUB1|HNRNPL|PON1|LRP1|BMP4|APP|AKTIP|MEPCE|PSEN1| DHX9|SNAPIN|GTF2B|BAG2|AGER|RACK1|DDIT3|ACD|EIF4A3|CDC42|CALM1
Cellular response to organic substance	GO:0071310	1.61E-05	5.97E-08	0.479317412	TGFBR3|NFKBIA|SMPD3|STUB1|PIK3R2|CCND1|LRP1|BMP4|CMA1|IRAK2|KIDINS220| IRF8|ARID5B|APP|HK2|AXL|SOSTDC1|PRKCE|TRIM41|SLC34A1|PSEN1|ZMIZ1|BLM| NR3C2|FGF17|MTOR|TGM2|ACTN2|CDC73|DHX9|MAP3K7|UBR2|TRAF1|TMEM38B| AGER|RNF5|SYK|PRKCZ|UCN3|BCL2L11|EXT2|DDX17|GAPDH|MAP2K7|CRHR1| CD14|FGFR1|VAMP2|RACK1|UBR5|CDK5RAP3|ATP1A1|VIM|DDIT3|ITGB3| MAP2K6|YAP1|RDX|EIF4A3|CDC42
Regulation of vesicle-mediated transport	GO:0060627	1.64E-05	6.26E-08	0.478515615	SMPD3|RAB3A|APOA1|LRP1|ATG3|APP|AXL|LYAR|TGM2|ACTN2| DLL1|SNAPIN|SYK|STAM|ADRA1A|PICALM|ITGB2|CD14|VAMP2| RACK1|NUMB|ITGB3|APBA2|AP2S1|RDX|CDC42|CALM1
Localization	GO:0051179	1.73E-05	6.72E-08	0.47619539	APPBP2|TRAM2|TOMM22|NFKBIA|NUTF2|SMPD3|PIK3R2|RAB3A|CCND1|LTF| APOA1|CRIPT|LRP1|KCNJ2|BMP4|FHOD1|CP|SNX19|SLIT1|IRF8|GOLPH3L| ATG3|APP|CACHD1|HK2|FYCO1|MAD2L1|RAD21|DUSP16|SLC9A5|AKTIP| AXL|CHRNB1|PRKCE|OSBPL2|MAGOHB|SLC34A1|PLEC|PSEN1|DENND5A| CHP1|HNRNPA1|DLG1|ITSN2|PIGR|SYNE2|G3BP2|MTOR|TGM2|ACTN2|DLL1| CRB1|DHX9|VTA1|SNAPIN|CHTOP|BCCIP|SCP2|KIF20B|ARFGEF2|TMEM38B| HSPG2|AGER|RNF5|SYK|FTL|STAM|SLC22A6|PRKCZ|ADRA1A|ITSN1|BCL2L11| PICALM|VDAC1|EXT2|CEP250|ITGB2|CRHR1|SUN1|TBC1D10A|ELAVL1|CD14| RABL2A|PEX5|PPP6C|SELENBP1|HRAS|GPHN|VAMP2|GC|ATP1A1|DDIT3| ITGB3|APBA2|AP2S1|VAV1|ACD|AP2B1|FYB1|CTCF|SRP72|RDX|EIF4A3|CDC42|CALM1
Positive regulation of macromolecule metabolic process	GO:0010604	1.84E-05	7.32E-08	0.473518218	LCP2|GTPBP1|NFKBIA|STUB1|HNRNPL|PIK3R2|AIMP2|MED31|CCND1|LTF| LRP1|BMP4|VHL|FHOD1|MED4|RNF144B|ELOB|IRF8|ARID5B|APP|LEO1|AKTIP| RNFT1|MEPCE|FANCI|PABPC1|MRE11|PSEN1|ZMIZ1|CHP1|GTF2F2|HNRNPA1| HOXA9|DLG1|LYAR|THRAP3|BLM|FGF17|MTOR|ACTN2|DLL1|PROX1|CDC73| UCHL5|TAB2|DHX9|CHTOP|MAP3K7|BAG2|ZNF451|ARFGEF2|AGER|SYK|PRKCZ| ADRA1A|SMARCA2|RTF1|BCL2L11|PICALM|NFATC2|DDX17|GAPDH|MYCBP| MAP2K7|TBC1D10A|ELAVL1|MDK|CD14|FGFR1|HRAS|ROBO1|RACK1|UBR5| CDK5RAP3|CHD4|VIM|DDIT3|ITGB3|POLR2A|MAP2K6|YAP1|CYFIP2|ACD| CTCF|RDX|HOXA13|EIF4A3|CALM1
Positive regulation of intracellular signal transduction	GO:1902533	1.84E-05	7.29E-08	0.473518218	LTF|APOA1|BMP4|APP|MAD2L1|AXL|PRKCE|CC2D1A|PSEN1|NET1|NR3C2| TGM2|PROX1|TAB2|MAP3K7|TRAF1|AGER|SIK3|SYK|UBD|PRKCZ|ADRA1A| BCL2L11|GAPDH|MAP2K7|CD14|FGFR1|HRAS|EEF1D|ROBO1|RACK1| CDK5RAP3|DDIT3|ITGB3|MAP2K6|MAP3K14|ADCYAP1R1|CDC42
Regulation of macromolecule metabolic process	GO:0060255	1.86E-05	7.57E-08	0.473048706	LCP2|GTPBP1|NFKBIA|PARD6A|SMPD3|STUB1|HNRNPL|PIK3R2|AIMP2|PFN1| MED31|CCND1|LTF|RGS2|APOA1|LRP1|BMP4|IRAK2|VHL|FHOD1|MED4|RNF144B| PSMA6|ELOB|CBFA2T2|CPSF6|IRF8|SETDB1|SPINK7|ARID5B|APP|MAD2L1| RAD21|DUSP16|LEO1|TSC22D4|AKTIP|AXL|COPS6|RNFT1|PRKCE|ZNF3|MEPCE| FANCI|PABPC1|CC2D1A|MAGOHB|TRIM41|PLEC|MRE11|PSEN1|ZMIZ1|CHP1| GTF2F2|HNRNPA1|POLR2K|USP1|HOXA9|DLG1|LYAR|THRAP3|BLM|NR3C2| FGF17|G3BP2|MTOR|ACTN2|DLL1|DUSP10|PROX1|CDC73|UCHL5|TAB2|DHX9| YY1AP1|CHTOP|BCCIP|MAP3K7|PRMT6|BAG2|ZNF451|ARFGEF2|UBR2|TRAF1| HSPG2|AGER|SYK|MBNL2|SHB|PRKCZ|ADRA1A|SMARCA2|RTF1|BCL2L11|PICALM| NFATC2|MARF1|DDX17|GAPDH|SMU1|MYCBP|ITGB2|MAP2K7|TBC1D10A|ELAVL1|

					MDK|CD14|FHL2|FGFR1|HRAS|EEF1D|IKZF2|ROBO1|RACK1|UBR5|PUF60|CDK5RAP3| CHD4|VIM|DDIT3|ITGB3|APBA2|POLR2A|MAP2K6|YAP1|CYFIP2|ACD|CTCF| RDX|HOXA13|ITM2B|EIF4A3|CALM1
Regulation of biological quality	GO:0065008	1.94E-05	8.06E-08	0.471219827	DLD|TGFBR3|SMPD3|STUB1|PIK3R2|RAB3A|PFN1|CCND1|LTF|RGS2|APOA1|CRIPT| KCNJ2|BMP4|CMA1|VHL|DSG1|CP|POLB|SNX19|SLIT1|APP|HK2|SLC9A5|AXL| CHRNB1|PRKCE|TMOD3|PABPC1|SLC34A1|PLEC|PSEN1|ALDH1A3|CHP1|DLG1| LYAR|THRAP3|PIGR|MTOR|TGM2|ACTN2|DLL1|CRB1|CDC73|DHX9|SNAPIN|S100A14| BAG2|SCP2|AGER|RNF5|SYK|FTL|PRKCZ|UCN3|ADRA1A|EVL|BCL2L11|PICALM| EXT2|GAPDH|CRHR1|ELAVL1|DCC|HRAS|RPS24|GPHN|VAMP2|RACK1|CDK5RAP3| ATP1A1|VIM|DDIT3|NUMB|ITGB3|APBA2|MAP2K6|AP2S1|VAV1|YAP1|CYFIP2| AP2B1|ADCYAP1R1|NEB|KCTD7|RDX|HOXA13|EIF4A3|MTHFD1|CALM1
Response to oxygen-containing compound	GO:1901700	1.95E-05	8.21E-08	0.470996539	TGFBR3|NFKBIA|SMPD3|HNRNPL|PIK3R2|PON1|CCND1|RGS2|LRP1|CMA1|IRAK2| DSG1|POLB|IRF8|APP|AXL|CHRNB1|PRKCE|TRIM41|SLC34A1|PLEC|PSEN1|HOXA9| NET1|BLM|MTOR|TGM2|ACTN2|DUSP10|CDC73|TAB2|S100A14|UBR2|AGER|PRKCZ| UCN3|BCL2L11|MAP2K7|CRHR1|CD14|VAMP2|RACK1|ATP1A1|VIM|ITGB3| MAP2K6|YAP1|ADCYAP1R1|HOXA13|CALM1
Negative regulation of cellular process	GO:0048523	2.58E-05	1.12E-07	0.458838029	TGFBR3|NFKBIA|PARD6A|STUB1|HNRNPL|PIK3R2|AIMP2|PFN1|MED31|CCND1| LTF|RGS2|APOA1|LRP1|BMP4|VHL|RNF144B|CBFA2T2|SLIT1|IRF8|ARID5B|APP| ADAMTS1|HK2|MAD2L1|RAD21|DUSP16|LEO1|TSC22D4|AXL|SOSTDC1|PRKCE| ZNF3|MEPCE|TMOD3|PABPC1|CC2D1A|PLEC|MRE11|PSEN1|DENND5A|CHP1| HNRNPA1|HOXA9|DLG1|LYAR|THRAP3|BLM|MTOR|ACTN2|DLL1|DUSP10|PROX1| CDC73|UCHL5|TAB2|DHX9|YY1AP1|SNAPIN|PRMT6|ZNF451|UBR2|TMEM38B| HSPG2|RNF5|SHB|PRKCZ|ATAD3A|B4GALT1|ADRA1A|RAD1|SMARCA2|RTF1| RAD9B|EVL|PICALM|PTPRZ1|VDAC1|NFATC2|MARF1|GAPDH|ITGB2|CRHR1| ELAVL1|MDK|FHL2|DCC|PEX5|HRAS|ROBO1|RACK1|UBR5|CDK5RAP3|CHD4| ATP1A1|VIM|DDIT3|NUMB|ITGB3|YAP1|ACD|ADCYAP1R1|CTCF| RDX|ITM2B|EIF4A3|CDC42|CALM1
Establishment of localization in cell	GO:0051649	2.58E-05	1.10E-07	0.458838029	APPBP2|TRAM2|TOMM22|NFKBIA|NUTF2|RAB3A|LRP1|FHOD1|SNX19|SLIT1| ATG3|APP|HK2|FYCO1|MAD2L1|DUSP16|AKTIP|AXL|PRKCE|OSBPL2|MAGOHB| PSEN1|DENND5A|CHP1|HNRNPA1|DLG1|ITSN2|SYNE2|VTA1|SNAPIN|CHTOP| BCCIP|SCP2|TMEM38B|SYK|STAM|PRKCZ|ITSN1|BCL2L11|PICALM|SUN1|TBC1D10A| ELAVL1|RABL2A|PEX5|PPP6C|VAMP2|AP2S1|ACD|AP2B1|SRP72|EIF4A3|CDC42|CALM1
Positive regulation of signal transduction	GO:0009967	3.06E-05	1.35E-07	0.451427857	TGFBR3|LTF|APOA1|BMP4|NID1|APP|MAD2L1|AXL|PRKCE|CC2D1A|TRIM41|PSEN1| ZMIZ1|NET1|NR3C2|TGM2|DLL1|PROX1|CDC73|UCHL5|TAB2|MAP3K7|TRAF1| AGER|SIK3|SYK|UBD|PRKCZ|ADRA1A|ESM1|BCL2L11|GAPDH|MAP2K7|CD14| FGFR1|HRAS|EEF1D|ROBO1|RACK1|UBR5|CDK5RAP3|DDIT3|ITGB3| MAP2K6|YAP1|CYFIP2|MAP3K14|ADCYAP1R1|CDC42
Regulation of cell communication	GO:0010646	3.06E-05	1.35E-07	0.451427857	TGFBR3|NFKBIA|STUB1|PIK3R2|RAB3A|LTF|RGS2|APOA1|LRP1|BMP4|IRAK2|VHL| CBFA2T2|NID1|GPAT3|APP|MAD2L1|DUSP16|AXL|SOSTDC1|PRKCE|CC2D1A| TRIM41|PSEN1|ZMIZ1|ARHGEF25|CHP1|DLG1|NET1|NR3C2|MTOR|TGM2|DLL1| DUSP10|PROX1|CDC73|UCHL5|TAB2|SNAPIN|MAP3K7|PRMT6|ZNF451|ARFGEF2| UBR2|TRAF1|AGER|SIK3|SYK|UBD|PRKCZ|UCN3|ADRA1A|ITSN1|ESM1|BCL2L11| GAPDH|MAP2K7|CRHR1|MDK|CD14|FHL2|DCC|FGFR1|HRAS|EEF1D|VAMP2| ROBO1|RACK1|UBR5|CDK5RAP3|DDIT3|ITGB3|APBA2|MAP2K6|VAV1|YAP1| CYFIP2|MAP3K14|ADCYAP1R1|RDX|HOXA13|EIF4A3|CDC42|CALM1
Response to stress	GO:0006950	3.09E-05	1.40E-07	0.451004152	TGFBR3|NFKBIA|SMPD3|STUB1|HNRNPL|POLR2I|PIK3R2|RAB3A|CCND1|LTF|CCDC92| LRP1|IRAK2|VHL|POLB|IRF8|CEP164|PLOD2|APP|HK2|RAD21|PCLAF|TSC22D4|AXL| PRKCE|FANCI|TRIM41|SLC34A1|PLEC|MRE11|PSEN1|ZMIZ1|HNRNPA1|USP1|LYAR| NET1|BLM|G3BP2|MTOR|EXO1|DUSP10|UCHL5|DHX9|S100A14|BCCIP|MAP3K7|PRMT6| UBE2U|HSPG2|AGER|RNF5|SYK|UBD|PRKCZ|ATAD3A|B4GALT1|UCN3|RAD1|RAD9B| BCL2L11|VDAC1|NFATC2|MARF1|DDX17|GAPDH|ITGB2|MAP2K7|CRHR1|MDK|CD14 |PPP6C|HRAS|UBR5|CDK5RAP3|VIM|DDIT3|ITGB3|MAP2K6|VAV1|YAP1| MAP3K14|ACD|ADCYAP1R1|CDC42

Animal organ development	GO:0048513	3.09E-05	1.40E-07	0.451004152	TGFBR3|SMPD3|PIK3R2|RAB3A|AIMP2|CCND1|LTF|RGS2|APOA1|BMP4|CMA1|NID1| POLB|SNX19|SLIT1|IRF8|ARID5B|APP|ADAMTS1|HK2|S100A1|AXL|SOSTDC1|TMOD3| SLC34A1|PLEC|ENO3|PSEN1|ALDH1A3|ZMIZ1|HOXA9|DLG1|LYAR|SYNE2|FGF17| MTOR|TGM2|ACTN2|DLL1|PROX1|CRB1|UCHL5|TAB2|YY1AP1|PPIL1|TMEM38B| HSPG2|SYK|UBD|SHB|ADRA1A|RAD1|EVL|BCL2L11|PICALM|PTPRZ1|EXT2|DDX17| CRHR1|SUN1|MDK|FHL2|ACAN|DCC|PEX5|FGFR1|HRAS|SNRPB|ROBO1|CDK5RAP3| VIM|NUMB|MAP2K6|VAV1|YAP1|AP2B1|NEB|HOXA13|EIF4A3|CDC42|MTHFD1|CALM1
Regulation of signal transduction	GO:0009966	3.37E-05	1.57E-07	0.44723701	TGFBR3|NFKBIA|STUB1|PIK3R2|LTF|RGS2|APOA1|LRP1|BMP4|IRAK2|VHL|CBFA2T2| NID1|GPAT3|APP|MAD2L1|DUSP16|AXL|SOSTDC1|PRKCE|CC2D1A|TRIM41|PSEN1| ZMIZ1|ARHGEF25|CHP1|DLG1|NET1|NR3C2|MTOR|TGM2|DLL1|DUSP10|PROX1| CDC73|UCHL5|TAB2|MAP3K7|PRMT6|ZNF451|ARFGEF2|UBR2|TRAF1|AGER|SIK3| SYK|UBD|PRKCZ|ADRA1A|ITSN1|ESM1|BCL2L11|GAPDH|MAP2K7|MDK|CD14| FHL2|FGFR1|HRAS|EEF1D|ROBO1|RACK1|UBR5|CDK5RAP3|DDIT3|ITGB3| MAP2K6|VAV1|YAP1|CYFIP2|MAP3K14|ADCYAP1R1|RDX|HOXA13|EIF4A3|CDC42|CALM1
Regulation of signaling	GO:0023051	3.37E-05	1.57E-07	0.44723701	TGFBR3|NFKBIA|STUB1|PIK3R2|RAB3A|LTF|RGS2|APOA1|LRP1|BMP4|IRAK2| VHL|CBFA2T2|NID1|GPAT3|APP|MAD2L1|DUSP16|AXL|SOSTDC1|PRKCE|CC2D1A| TRIM41|PSEN1|ZMIZ1|ARHGEF25|CHP1|DLG1|NET1|NR3C2|MTOR|TGM2|DLL1| DUSP10|PROX1|CDC73|UCHL5|TAB2|SNAPIN|MAP3K7|PRMT6|ZNF451|ARFGEF2| UBR2|TRAF1|AGER|SIK3|SYK|UBD|PRKCZ|UCN3|ADRA1A|ITSN1|ESM1|BCL2L11| GAPDH|MAP2K7|CRHR1|MDK|CD14|FHL2|DCC|FGFR1|HRAS|EEF1D|VAMP2| ROBO1|RACK1|UBR5|CDK5RAP3|DDIT3|ITGB3|APBA2|MAP2K6|VAV1|YAP1| CYFIP2|MAP3K14|ADCYAP1R1|RDX|HOXA13|EIF4A3|CDC42|CALM1
Establishment of localization	GO:0051234	3.61E-05	1.72E-07	0.44424928	APPBP2|TRAM2|TOMM22|NFKBIA|NUTF2|SMPD3|PIK3R2|RAB3A|CCND1|LTF| APOA1|CRIPT|LRP1|KCNJ2|FHOD1|CP|SNX19|SLIT1|IRF8|GOLPH3L|ATG3|APP| CACHD1|HK2|FYCO1|MAD2L1|DUSP16|SLC9A5|AKTIP|AXL|CHRNB1|PRKCE| OSBPL2|MAGOHB|SLC34A1|PSEN1|DENND5A|CHP1|HNRNPA1|DLG1|ITSN2| PIGR|SYNE2|G3BP2|TGM2|DLL1|DHX9|VTA1|SNAPIN|CHTOP|BCCIP|SCP2|ARFGEF2| TMEM38B|HSPG2|AGER|RNF5|SYK|FTL|STAM|SLC22A6|PRKCZ|ADRA1A|ITSN1| BCL2L11|PICALM|VDAC1|EXT2|ITGB2|CRHR1|SUN1|TBC1D10A|ELAVL1|CD14| RABL2A|PEX5|PPP6C|SELENBP1|HRAS|VAMP2|GC|ATP1A1|DDIT3|ITGB3| APBA2|AP2S1|VAV1|ACD|AP2B1|SRP72|RDX|EIF4A3|CDC42|CALM1
Regulation of MAP kinase activity	GO:0043405	3.70E-05	1.80E-07	0.443179828	RGS2|BMP4|APP|DUSP16|PSEN1|DUSP10|MAP3K7|AGER|SYK|MAP2K7| FGFR1|HRAS|ROBO1|CDK5RAP3|MAP2K6
Positive regulation of organelle organization	GO:0010638	3.73E-05	1.83E-07	0.442829117	SMPD3|PFN1|APOA1|FHOD1|SETDB1|SMC2|FYCO1|RAD21| PRKCE|MRE11|HNRNPA1|DLG1|G3BP2|MTOR|ACTN2|PROX1| UCHL5|EVL|BCL2L11|VDAC1|MAP2K7|HRAS|ACD|HOXA13|CDC42
Response to chemical	GO:0042221	3.73E-05	1.85E-07	0.442829117	TGFBR3|NFKBIA|SMPD3|STUB1|HNRNPL|PIK3R2|PON1|CCND1|RGS2|APOA1| LRP1|BMP4|CMA1|IRAK2|VHL|KIDINS220|DSG1|POLB|SLIT1|IRF8|ARID5B|APP| HK2|AXL|CHRNB1|SOSTDC1|PRKCE|TRIM41|SLC34A1|PLEC|PPP2R2A|PSEN1| ZMIZ1|ARHGEF25|HNRNPA1|HOXA9|NET1|BLM|PIGR|NR3C2|FGF17|MTOR|TGM2| ACTN2|DUSP10|CDC73|TAB2|DHX9|S100A14|S100A16|MAP3K7|UBR2|TRAF1| TMEM38B|AGER|RNF5|SYK|UBD|SLC22A6|PRKCZ|UCN3|ADRA1A|BCL2L11|EXT2| NFATC2|DDX17|GAPDH|ITGB2|MAP2K7|CRHR1|MDK|CD14|FHL2|DCC|FGFR1| HRAS|GPHN|VAMP2|ROBO1|RACK1|UBR5|CDK5RAP3|ATP1A1|VIM|DDIT3| ITGB3|MAP2K6|VAV1|YAP1|ADCYAP1R1|RDX|HOXA13|EIF4A3|CDC42|CALM1
Positive regulation of transferase activity	GO:0051347	4.05E-05	2.04E-07	0.439254498	LCP2|STUB1|CCND1|LTF|APOA1|APP|AXL|MRE11|PSEN1|DLG1|MTOR|PROX1| TAB2|MAP3K7|AGER|SYK|PRKCZ|ADRA1A|MAP2K7|FGFR1|HRAS|ROBO1| ITGB3|MAP2K6|ACD|CDC42|CALM1
Protein localization	GO:0008104	4.07E-05	2.12E-07	0.439040559	APPBP2|TRAM2|TOMM22|NFKBIA|NUTF2|PIK3R2|RAB3A|CRIPT|LRP1|BMP4| SNX19|GOLPH3L|ATG3|HK2|RAD21|DUSP16|AKTIP|PRKCE|PLEC|PSEN1|CHP1| DLG1|PIGR|G3BP2|ACTN2|CRB1|DHX9|VTA1|SNAPIN|SCP2|KIF20B|ARFGEF2| AGER|SYK|STAM|PRKCZ|ITSN1|CEP250|ITGB2|SUN1|ELAVL1|RABL2A|PEX5| SELENBP1|GPHN|VAMP2|DDIT3|APBA2|AP2S1|ACD|AP2B1|FYB1|CTCF| SRP72|RDX|CDC42|CALM1

Animal organ morphogenesis	GO:0009887	4.07E-05	2.09E-07	0.439040559	TGFBR3|SMPD3|LTF|BMP4|POLB|SLIT1|ARID5B|ADAMTS1|SOSTDC1|SLC34A1| PSEN1|ALDH1A3|ZMIZ1|HOXA9|DLG1|FGF17|MTOR|TGM2|DLL1|PROX1|CRB1| UCHL5|HSPG2|SYK|EVL|BCL2L11|EXT2|FHL2|ACAN|FGFR1|HRAS|ROBO1| YAP1|HOXA13|EIF4A3|CDC42|MTHFD1
Regulation of phosphate metabolic process	GO:0019220	4.07E-05	2.08E-07	0.439040559	LCP2|PARD6A|SMPD3|PIK3R2|CCND1|LTF|RGS2|APOA1|LRP1|BMP4|APP| DUSP16|AKTIP|AXL|PRKCE|PLEC|MRE11|PSEN1|CHP1|DLG1|BLM|FGF17| MTOR|DUSP10|PROX1|TAB2|BCCIP|MAP3K7|SCP2|AGER|SYK|SHB|PRKCZ| ADRA1A|ITGB2|MAP2K7|FGFR1|HRAS|ROBO1|RACK1|CDK5RAP3|ITGB3| MAP2K6|ADCYAP1R1|CDC42|CALM1
Protein modification process	GO:0036211	4.07E-05	2.13E-07	0.439040559	APPBP2|DLD|TGFBR3|JOSD1|STUB1|AIMP2|MED31|CCND1|MLEC|APOA1| BMP4|IRAK2|VHL|RNF144B|ELOB|SETDB1|PLOD2|ATG3|APP|WDYHV1|DUSP16| LEO1|AKTIP|AXL|UBE2E1|COPS6|RNFT1|PRKCE|TRIM41|PPP2R2A|PSEN1|USP1| MTOR|TGM2|DUSP10|CDC73|UCHL5|MAP3K7|PRMT6|GTF2B|ZNF451|UBE2U| UBR2|PPIL1|TRAF1|RNF5|UBR4|SIK3|SYK|UBD|PRKCZ|B4GALT1|RTF1|PTPRZ1| EXT2|GAPDH|MAP2K7|RNF212|PPP6C|FGFR1|SNRPB|GPHN|RACK1|UBR5| CDK5RAP3|CHD4|DTX3|MAP2K6|MAP3K14|PIGN|CDC42
Gene expression	GO:0010467	4.25E-05	2.31E-07	0.437161107	SF3A1|GTPBP1|STUB1|HNRNPL|POLR2I|AIMP2|MED31|BMP4|CMA1|MED4| ELOB|CBFA2T2|POLB|CPSF6|GTF2E1|APP|LEO1|SRRM2|PABPC1|CSTF3| MAGOHB|PLEC|PSEN1|GTF2F2|HNRNPA1|POLR2K|HOXA9|LYAR|THRAP3| EXO1|PROX1|CRB1|CDC73|DHX9|SNAPIN|CHTOP|GTF2B|PPIL1|MBNL2| RTF1|EXT2|NFATC2|RPL14|RPS8|DDX17|SMU1|TBC1D10A|PRPF40A|EEF1D| SNRPB|RPP14|RPS24|RACK1|PUF60|DDIT3|POLR2A|MRPL37|CYFIP2|HOXA13|EIF4A3
Intracellular transport	GO:0046907	4.30E-05	2.38E-07	0.436653154	APPBP2|TRAM2|TOMM22|NFKBIA|NUTF2|RAB3A|LRP1|FHOD1|SLIT1|ATG3| APP|HK2|FYCO1|DUSP16|AKTIP|OSBPL2|MAGOHB|PSEN1|DENND5A|CHP1| HNRNPA1|ITSN2|SYNE2|VTA1|SNAPIN|CHTOP|SCP2|SYK|STAM|PRKCZ| ITSN1|BCL2L11|PICALM|SUN1|TBC1D10A|ELAVL1|RABL2A|PEX5|PPP6C| AP2S1|ACD|AP2B1|SRP72|EIF4A3|CDC42
Cellular nitrogen compound metabolic process	GO:0034641	4.62E-05	2.59E-07	0.433535802	DLD|SF3A1|GTPBP1|SMPD3|STUB1|HNRNPL|POLR2I|AIMP2|MED31|BMP4| CMA1|MED4|ELOB|CBFA2T2|POLB|CPSF6|CEP164|GTF2E1|APP|HK2|RAD21| LEO1|PCLAF|SRRM2|PANK1|MEPCE|FANCI|PABPC1|CSTF3|MAGOHB|SLC34A1| ENO3|MRE11|PSEN1|GTF2F2|HNRNPA1|POLR2K|USP1|HOXA9|DLG1|LYAR| THRAP3|BLM|MTOR|EXO1|PROX1|CDC73|UCHL5|DHX9|BCCIP|PRMT6|GTF2B| UBE2U|UBR2|PPIL1|MBNL2|RAD1|HACD2|RTF1|RAD9B|NFATC2|RPL14|MARF1| RPS8|DDX17|GAPDH|SMU1|PAICS|PRPF40A|RNF212|EEF1D|SNRPB|RPP14| RPS24|RACK1|UBR5|PUF60|POLR2A|MRPL37|NAP1L1|ACD|CTCF|HOXA13|EIF4A3|MTHFD1
Regulation of cell cycle process	GO:0010564	5.16E-05	2.94E-07	0.42873503	SMPD3|CCND1|BMP4|APP|ADAMTS1|SMC2|MAD2L1|RAD21|PRKCE|MEPCE| TMOD3|KIF15|MRE11|DLG1|BLM|PROX1|CDC73|KIF20B|UBD|RAD1|SMARCA2| RAD9B|CEP250|PRPF40A|CDK5RAP3|CTCF|RDX|HOXA13|CDC42|CALM1
Intracellular signal transduction	GO:0035556	5.16E-05	2.93E-07	0.42873503	LCP2|TGFBR3|NFKBIA|SMPD3|PIK3R2|CCND1|IRAK2|POLB|SETDB1|APP|S100A1| MAD2L1|AXL|PRKCE|MRE11|PSEN1|CHP1|DLG1|NET1|BLM|G3BP2|MTOR|DUSP10| MAP3K7|ARFGEF2|TMEM38B|SIK3|SYK|PRKCZ|ADRA1A|ITSN1|RAD1|RAD9B| BCL2L11|NFATC2|MAP2K7|FGFR1|HRAS|CDK5RAP3|DDIT3|MAP2K6|VAV1| YAP1|MAP3K14|ADCYAP1R1|RDX|CDC42|CALM1
Response to stimulus	GO:0050896	5.16E-05	2.99E-07	0.42873503	LCP2|TGFBR3|GTPBP1|NFKBIA|SMPD3|STUB1|HNRNPL|POLR2I|PIK3R2| RAB3A|PON1|CCND1|LTF|RGS2|APOA1|CCDC92|LRP1|KCNJ2|BMP4|CMA1| IRAK2|VHL|KIDINS220|DSG1|POLB|SLIT1|IRF8|SETDB1|CEP164|ARID5B|PLOD2| APP|ADAMTS1|HK2|PSG6|S100A1|MAD2L1|RAD21|LEO1|PCLAF|TSC22D4|AXL| CHRNB1|SOSTDC1|PRKCE|FANCI|RANBP10|TRIM41|SLC34A1|PLEC|PPP2R2A| MRE11|PSEN1|ALDH1A3|ZMIZ1|ARHGEF25|CHP1|HNRNPA1|USP1|HOXA9|DLG1| LYAR|NET1|BLM|PIGR|NR3C2|FGF17|G3BP2|MTOR|TGM2|EXO1|ACTN2|DLL1| DUSP10|PROX1|CRB1|CDC73|UCHL5|TAB2|DHX9|S100A14|S100A16|BCCIP| MAP3K7|PRMT6|UBE2U|ARFGEF2|UBR2|TRAF1|TMEM38B|HSPG2|HLA-DQA2| HLA-DQB1|AGER|RNF5|SIK3|SYK|UBD|STAM|SHB|SLC22A6|PRKCZ|ATAD3A| B4GALT1|UCN3|ADRA1A|ITSN1|RAD1|RTF1|RAD9B|EVL|BCL2L11|VDAC1|EXT2|

					NFATC2|MARF1|DDX17|GAPDH|CEP250|ITGB2|MAP2K7|CRHR1|MDK|CD14|FHL2| DCC|PPP6C|FGFR1|HRAS|EEF1D|GPHN|VAMP2|ROBO1|AMOTL2|RACK1|UBR5| CDK5RAP3|ADAP1|ATP1A1|VIM|DDIT3|DTX3|ITGB3|MAP2K6|VAV1|YAP1| MAP3K14|ACD|ADCYAP1R1|FYB1|RDX|HOXA13|EIF4A3|CDC42|CALM1
Negative regulation of macromolecule metabolic process	GO:0010605	5.68E-05	3.33E-07	0.424565166	PARD6A|SMPD3|HNRNPL|CCND1|LTF|RGS2|APOA1|LRP1|BMP4|VHL|CBFA2T2| IRF8|SETDB1|SPINK7|ARID5B|APP|MAD2L1|DUSP16|TSC22D4|AXL|PRKCE| ZNF3|MEPCE|PABPC1|CC2D1A|MAGOHB|PLEC|PSEN1|CHP1|HNRNPA1|DLG1| LYAR|THRAP3|BLM|DLL1|DUSP10|PROX1|CDC73|UCHL5|DHX9|YY1AP1|PRMT6| BAG2|ZNF451|UBR2|HSPG2|AGER|SHB|PRKCZ|SMARCA2|RTF1|PICALM|NFATC2| MARF1|DDX17|GAPDH|ELAVL1|FHL2|HRAS|ROBO1|RACK1|UBR5|CDK5RAP3| CHD4|DDIT3|ITGB3|YAP1|ACD|CTCF|ITM2B|EIF4A3|CALM1
Regulation of cell cycle	GO:0051726	5.91E-05	3.51E-07	0.422841252	SMPD3|CCND1|BMP4|APP|ADAMTS1|SMC2|MAD2L1|RAD21|PCLAF|PRKCE| MEPCE|TMOD3|KIF15|MRE11|DLG1|BLM|PROX1|CDC73|UCHL5|YY1AP1|BCCIP| KIF20B|UBD|SHB|RAD1|SMARCA2|RAD9B|BCL2L11|CEP250|PRPF40A| HRAS|RACK1|CDK5RAP3|MAP2K6|CTCF|RDX|HOXA13|CDC42|CALM1
Regulation of protein serine/threonine kinase activity	GO:0071900	6.53E-05	3.92E-07	0.418508682	CCND1|LTF|RGS2|BMP4|APP|DUSP16|PSEN1|BLM|DUSP10|PROX1|BCCIP| MAP3K7|AGER|SYK|MAP2K7|FGFR1|HRAS|ROBO1|CDK5RAP3|MAP2K6|CALM1
Positive regulation of kinase activity	GO:0033674	6.70E-05	4.06E-07	0.41739252	LCP2|CCND1|LTF|APP|AXL|MRE11|PSEN1|DLG1|MTOR|PROX1|TAB2|MAP3K7| AGER|SYK|PRKCZ|ADRA1A|MAP2K7|FGFR1|HRAS|ROBO1|ITGB3|MAP2K6|CDC42|CALM1
Anatomical structure formation involved in morphogenesis	GO:0048646	6.70E-05	4.08E-07	0.41739252	TGFBR3|SMPD3|PFN1|BMP4|ADAMTS1|LEO1|TMOD3|SLC34A1|PLEC|PSEN1| ALDH1A3|TGM2|ACTN2|DLL1|PROX1|CRB1|CDC73|KIF20B|HSPG2|SYK|SHB| B4GALT1|ESM1|RTF1|BCL2L11|EXT2|ITGB2|FHL2|ROBO1|AMOTL2|ITGB3| TNNT1|YAP1|NEB|MTHFD1
Cell differentiation	GO:0030154	7.20E-05	4.45E-07	0.41426675	DLD|TGFBR3|SMPD3|TBCB|PIK3R2|RAB3A|AIMP2|CCND1|RGS2|LRP1|BMP4| KIDINS220|CBFA2T2|SNX19|SLIT1|IRF8|ARID5B|APP|LEO1|AXL|CHRNB1|SOSTDC1| ZNF3|TMOD3|PLEC|PSEN1|ZMIZ1|ARHGEF25|LYAR|ITSN2|SYNE2|FGF17|MTOR| ACTN2|DLL1|DUSP10|PROX1|CRB1|CDC73|DHX9|YY1AP1|SNAPIN|BCCIP|KIF20B| TMEM38B|HSPG2|AGER|SYK|UBD|SHB|PRKCZ|B4GALT1|ADRA1A|SMARCA2|RTF1| PICALM|PTPRZ1|VDAC1|EXT2|NFATC2|MARF1|DDX17|ITGB2|SUN1|MDK|FHL2| ACAN|DCC|PEX5|FGFR1|ROBO1|CDK5RAP3|VIM|NUMB|ITGB3|TNNT1|MAP2K6| VAV1|YAP1|CYFIP2|ADCYAP1R1|NEB|RDX|HOXA13|CDC42
Macromolecule localization	GO:0033036	7.56E-05	4.72E-07	0.41214782	APPBP2|TRAM2|TOMM22|NFKBIA|NUTF2|SMPD3|PIK3R2|RAB3A|APOA1|CRIPT| LRP1|BMP4|SNX19|GOLPH3L|ATG3|HK2|RAD21|DUSP16|AKTIP|PRKCE|OSBPL2| MAGOHB|PLEC|PSEN1|CHP1|HNRNPA1|DLG1|PIGR|G3BP2|ACTN2|CRB1|DHX9| VTA1|SNAPIN|CHTOP|SCP2|KIF20B|ARFGEF2|AGER|SYK|STAM|PRKCZ|ITSN1| CEP250|ITGB2|SUN1|ELAVL1|RABL2A|PEX5|SELENBP1|GPHN|VAMP2|DDIT3| APBA2|AP2S1|ACD|AP2B1|FYB1|CTCF|SRP72|RDX|EIF4A3|CDC42|CALM1
Positive regulation of cell communication	GO:0010647	7.79E-05	4.92E-07	0.410846254	TGFBR3|LTF|APOA1|BMP4|NID1|APP|MAD2L1|AXL|PRKCE|CC2D1A|TRIM41| PSEN1|ZMIZ1|NET1|NR3C2|TGM2|DLL1|PROX1|CDC73|UCHL5|TAB2|MAP3K7| TRAF1|AGER|SIK3|SYK|UBD|PRKCZ|UCN3|ADRA1A|ESM1|BCL2L11|GAPDH| MAP2K7|CD14|FGFR1|HRAS|EEF1D|VAMP2|ROBO1|RACK1|UBR5|CDK5RAP3| DDIT3|ITGB3|MAP2K6|YAP1|CYFIP2|MAP3K14|ADCYAP1R1|CDC42
Positive regulation of signaling	GO:0023056	8.41E-05	5.36E-07	0.4075204	TGFBR3|LTF|APOA1|BMP4|NID1|APP|MAD2L1|AXL|PRKCE|CC2D1A|TRIM41| PSEN1|ZMIZ1|NET1|NR3C2|TGM2|DLL1|PROX1|CDC73|UCHL5|TAB2|MAP3K7| TRAF1|AGER|SIK3|SYK|UBD|PRKCZ|UCN3|ADRA1A|ESM1|BCL2L11|GAPDH| MAP2K7|CD14|FGFR1|HRAS|EEF1D|VAMP2|ROBO1|RACK1|UBR5|CDK5RAP3| DDIT3|ITGB3|MAP2K6|YAP1|CYFIP2|MAP3K14|ADCYAP1R1|CDC42
Negative regulation of cellular metabolic process	GO:0031324	9.06E-05	5.83E-07	0.40428718	PARD6A|HNRNPL|CCND1|RGS2|LRP1|BMP4|VHL|CBFA2T2|IRF8|ARID5B|APP| HK2|DUSP16|TSC22D4|ZNF3|MEPCE|PABPC1|CC2D1A|PLEC|PSEN1|CHP1|HNRNPA1| DLG1|LYAR|THRAP3|BLM|MTOR|DUSP10|PROX1|CDC73|UCHL5|TAB2|DHX9| YY1AP1|PRMT6|ZNF451|RNF5|SHB|PRKCZ|ADRA1A|SMARCA2|RTF1|VDAC1| NFATC2|MARF1|GAPDH|ITGB2|ELAVL1|FHL2|RACK1|UBR5|CDK5RAP3|CHD4| ATP1A1|DDIT3|ITGB3|YAP1|ACD|CTCF|ITM2B|EIF4A3|CALM1

Response to lipid	GO:0033993	9.56E-05	6.28E-07	0.401954211	NFKBIA|PON1|CCND1|BMP4|IRAK2|DSG1|IRF8|AXL|PRKCE|TRIM41|SLC34A1| ZMIZ1|HOXA9|NR3C2|DUSP10|CDC73|TAB2|S100A14|SYK|UCN3|BCL2L11| DDX17|MAP2K7|MDK|CD14|UBR5|ATP1A1|VIM|YAP1|ADCYAP1R1|HOXA13|CALM1
Cellular response to stress	GO:0033554	1.20E-04	7.82E-07	0.392081875	NFKBIA|SMPD3|STUB1|HNRNPL|POLR2I|PIK3R2|CCND1|VHL|POLB|CEP164| HK2|RAD21|PCLAF|AXL|PRKCE|FANCI|SLC34A1|PLEC|MRE11|PSEN1|ZMIZ1| HNRNPA1|USP1|NET1|BLM|MTOR|EXO1|DUSP10|UCHL5|BCCIP|MAP3K7| PRMT6|UBE2U|RNF5|UCN3|RAD1|RAD9B|BCL2L11|NFATC2|MARF1| MAP2K7|HRAS|UBR5|CDK5RAP3|DDIT3|MAP2K6|YAP1|ACD
Cellular response to chemical stimulus	GO:0070887	1.20E-04	8.20E-07	0.392081875	TGFBR3|NFKBIA|SMPD3|STUB1|PIK3R2|CCND1|LRP1|BMP4|CMA1|IRAK2| VHL|KIDINS220|IRF8|ARID5B|APP|HK2|AXL|CHRNB1|SOSTDC1|PRKCE|TRIM41| SLC34A1|PLEC|PSEN1|ZMIZ1|HNRNPA1|NET1|BLM|NR3C2|FGF17|MTOR|TGM2| ACTN2|CDC73|DHX9|MAP3K7|UBR2|TRAF1|TMEM38B|AGER|RNF5|SYK|PRKCZ| UCN3|BCL2L11|EXT2|DDX17|GAPDH|ITGB2|MAP2K7|CRHR1|MDK|CD14|FGFR1| VAMP2|RACK1|UBR5|CDK5RAP3|ATP1A1|VIM|DDIT3|ITGB3|MAP2K6|VAV1| YAP1|RDX|EIF4A3|CDC42
Cellular response to endogenous stimulus	GO:0071495	1.20E-04	8.38E-07	0.392081875	TGFBR3|SMPD3|PIK3R2|LRP1|BMP4|KIDINS220|APP|SOSTDC1|PRKCE|TRIM41| SLC34A1|PSEN1|ZMIZ1|BLM|NR3C2|FGF17|MTOR|TGM2|ACTN2|MAP3K7|UBR2| TMEM38B|AGER|PRKCZ|UCN3|BCL2L11|EXT2|DDX17|CRHR1|FGFR1| VAMP2|UBR5|ATP1A1|VIM|ITGB3|YAP1|RDX|EIF4A3
Protein metabolic process	GO:0019538	1.30E-04	8.60E-07	0.388605665	APPBP2|DLD|TGFBR3|PSMD8|JOSD1|GTPBP1|STUB1|AIMP2|MED31|CCND1| MLEC|LTF|APOA1|BMP4|CMA1|IRAK2|VHL|RNF144B|PSMA6|ELOB|SETDB1| PLOD2|ATG3|APP|ADAMTS1|WDYHV1|DUSP16|LEO1|AKTIP|AXL|UBE2E1| COPS6|RNFT1|PRKCE|TRIM41|SLC34A1|PPP2R2A|PSEN1|USP1|DLG1|MTOR|TGM2| DUSP10|CDC73|UCHL5|SNAPIN|MAP3K7|PRMT6|GTF2B|BAG2|ZNF451|UBE2U|UBR2| PPIL1|TRAF1|RNF5|UBR4|SIK3|SYK|UBD|STAM|PRKCZ|B4GALT1|RTF1|PTPRZ1|EXT2| RPL14|RPS8|GAPDH|MAP2K7|TBC1D10A|ACAN|RNF212|PPP6C|FGFR1|EEF1D|SNRPB| RPS24|GPHN|RACK1|UBR5|CDK5RAP3|CHD4|DDIT3|DTX3|MAP2K6| MRPL37|CYFIP2|MAP3K14|PIGN|CDC42
Cell surface receptor signaling pathway	GO:0007166	1.40E-04	9.95E-07	0.385387196	LCP2|TGFBR3|NFKBIA|SMPD3|STUB1|PIK3R2|CCND1|APOA1|LRP1|BMP4|IRAK2| KIDINS220|ARID5B|APP|ADAMTS1|LEO1|AXL|CHRNB1|SOSTDC1|PRKCE| RANBP10|PSEN1|ZMIZ1|PIGR|FGF17|DLL1|CDC73|MAP3K7|TRAF1|HLA-DQB1| AGER|SYK|SHB|PRKCZ|RTF1|EVL|BCL2L11|NFATC2|ITGB2|MAP2K7| CRHR1|CD14|DCC|FGFR1|HRAS|ROBO1|AMOTL2|ADAP1|VIM|DDIT3| DTX3|ITGB3|VAV1|YAP1|ADCYAP1R1|FYB1|CDC42
Macromolecule modification	GO:0043412	1.40E-04	1.00E-06	0.385387196	APPBP2|DLD|TGFBR3|JOSD1|STUB1|AIMP2|MED31|CCND1|MLEC|APOA1|BMP4| IRAK2|VHL|RNF144B|ELOB|SETDB1|PLOD2|ATG3|APP|WDYHV1|DUSP16|LEO1| AKTIP|AXL|UBE2E1|COPS6|RNFT1|PRKCE|MEPCE|TRIM41|PPP2R2A|PSEN1|USP1| MTOR|TGM2|DUSP10|CDC73|UCHL5|MAP3K7|PRMT6|GTF2B|ZNF451|UBE2U| UBR2|PPIL1|TRAF1|RNF5|UBR4|SIK3|SYK|UBD|PRKCZ|B4GALT1|RTF1|PTPRZ1| EXT2|GAPDH|MAP2K7|RNF212|PPP6C|FGFR1|SNRPB|GPHN|RACK1|UBR5| CDK5RAP3|CHD4|DTX3|MAP2K6|MAP3K14|PIGN|CTCF|CDC42
Immune response-regulating signaling pathway	GO:0002764	1.80E-04	1.23E-06	0.374472749	LCP2|NFKBIA|IRAK2|PRKCE|PSEN1|PIGR|S100A14|MAP3K7|HLA-DQB1| SYK|SHB|NFATC2|MAP2K7|CD14|HRAS|MAP2K6|VAV1|FYB1
Positive regulation of protein kinase activity	GO:0045860	1.80E-04	1.24E-06	0.374472749	LCP2|CCND1|LTF|APP|PSEN1|DLG1|MTOR|PROX1|TAB2|MAP3K7|AGER| SYK|PRKCZ|ADRA1A|MAP2K7|FGFR1|HRAS|ROBO1|ITGB3|MAP2K6|CALM1
Regulation of multicellular organismal process	GO:0051239	1.80E-04	1.24E-06	0.374472749	TGFBR3|NFKBIA|SMPD3|PFN1|CCND1|LTF|RGS2|APOA1|LRP1|KCNJ2|BMP4| CMA1|SLIT1|IRF8|APP|ADAMTS1|HK2|S100A1|LEO1|AXL|SOSTDC1|PRKCE| PSEN1|ZMIZ1|HOXA9|DLG1|MTOR|TGM2|DLL1|DUSP10|PROX1|CDC73|UCHL5| DHX9|MAP3K7|PRMT6|ARFGEF2|TMEM38B|HSPG2|AGER|SYK|SHB|PRKCZ| ADRA1A|SMARCA2|EVL|BCL2L11|PTPRZ1|GAPDH|ITGB2|CRHR1|ELAVL1| MDK|CD14|DCC|PEX5|FGFR1|HRAS|ROBO1|RACK1|ATP1A1|DDIT3|NUMB| ITGB3|TNNT1|MAP2K6|NAP1L1|YAP1|EIF4A3|CALM1

Central nervous system development	GO:0007417	1.90E-04	1.36E-06	0.37212464	RGS2|LRP1|BMP4|CMA1|SLIT1|HAPLN1|APP|S100A1|AXL|ENO3|PSEN1|ALDH1A3| ZMIZ1|SYNE2|MTOR|DLL1|DUSP10|PROX1|UCHL5|HSPG2|AGER|RAD1|BCL2L11| PTPRZ1|SUN1|MDK|ACAN|DCC|PEX5|SNRPB|ROBO1|CDK5RAP3|VIM|NUMB|CDC42|CALM1
Immune system process	GO:0002376	2.10E-04	1.54E-06	0.367778071	LCP2|TGFBR3|GTPBP1|SMPD3|PIK3R2|LTF|CCDC92|LRP1|BMP4|POLB|IRF8|APP| AXL|PRKCE|ZNF3|TMOD3|PLEC|PSEN1|HOXA9|DLG1|LYAR|PIGR|G3BP2| MTOR|EXO1|DLL1|DHX9|YY1AP1|MAP3K7|HLA-DQA2|HLA-DQB1|AGER| SYK|UBD|SHB|ATAD3A|B4GALT1|BCL2L11|PICALM|PTPRZ1| NFATC2|DDX17|GAPDH|ITGB2|CRHR1|MDK|CD14|PPP6C|HRAS|RPS24| VAMP2|CDK5RAP3|VIM|VAV1|MAP3K14|FYB1|CDC42|MTHFD1
Transport	GO:0006810	2.10E-04	1.51E-06	0.367778071	APPBP2|TRAM2|TOMM22|NFKBIA|NUTF2|SMPD3|PIK3R2|RAB3A|CCND1| LTF|APOA1|LRP1|KCNJ2|FHOD1|CP|SNX19|SLIT1|IRF8|GOLPH3L|ATG3|APP| CACHD1|HK2|FYCO1|DUSP16|SLC9A5|AKTIP|AXL|CHRNB1|PRKCE|OSBPL2| MAGOHB|SLC34A1|PSEN1|DENND5A|CHP1|HNRNPA1|ITSN2|PIGR|SYNE2| G3BP2|TGM2|DLL1|DHX9|VTA1|SNAPIN|CHTOP|SCP2|ARFGEF2|TMEM38B| HSPG2|AGER|RNF5|SYK|FTL|STAM|SLC22A6|PRKCZ|ADRA1A|ITSN1|BCL2L11| PICALM|VDAC1|EXT2|ITGB2|CRHR1|SUN1|TBC1D10A|ELAVL1|CD14|RABL2A| PEX5|PPP6C|SELENBP1|HRAS|VAMP2|GC|ATP1A1|DDIT3|ITGB3|APBA2| AP2S1|VAV1|ACD|AP2B1|SRP72|EIF4A3|CDC42
Positive regulation of protein localization	GO:1903829	2.20E-04	1.66E-06	0.365757732	PARD6A|PIK3R2|LRP1|GOLPH3L|APP|PRKCE|MEPCE|PSEN1|CHP1|DLG1|KIF20B| PRKCZ|UCN3|CEP250|ITGB2|HRAS|VAMP2|RACK1|UBR5|CDK5RAP3|YAP1|RDX
Cell development	GO:0048468	2.40E-04	1.76E-06	0.361978876	DLD|TGFBR3|SMPD3|RAB3A|LRP1|BMP4|KIDINS220|SLIT1|ARID5B|APP|AXL| CHRNB1|TMOD3|PLEC|PSEN1|ZMIZ1|ARHGEF25|LYAR|MTOR|ACTN2|DLL1| PROX1|CRB1|SNAPIN|KIF20B|AGER|PRKCZ|B4GALT1|ADRA1A|SMARCA2| PICALM|PTPRZ1|NFATC2|MARF1|MDK|FHL2|ACAN|DCC|PEX5|ROBO1| VIM|NUMB|ITGB3|TNNT1|YAP1|CYFIP2|NEB|RDX|HOXA13|CDC42
Cellular response to DNA damage stimulus	GO:0006974	2.50E-04	1.90E-06	0.360205999	STUB1|POLR2I|CCND1|POLB|CEP164|RAD21|PCLAF|FANCI|MRE11|PSEN1| USP1|BLM|MTOR|EXO1|UCHL5|BCCIP|PRMT6|UBE2U|RAD1|RAD9B| BCL2L11|NFATC2|MARF1|UBR5|CDK5RAP3|DDIT3|MAP2K6|YAP1|ACD
Negative regulation of nitrogen compound metabolic process	GO:0051172	2.60E-04	1.95E-06	0.358502665	PARD6A|SMPD3|HNRNPL|CCND1|LTF|RGS2|LRP1|BMP4|VHL|CBFA2T2|IRF8| SPINK7|ARID5B|APP|MAD2L1|DUSP16|TSC22D4|PRKCE|ZNF3|MEPCE|PABPC1| CC2D1A|PLEC|PSEN1|CHP1|HNRNPA1|DLG1|LYAR|THRAP3|BLM|DUSP10|PROX1| CDC73|UCHL5|DHX9|YY1AP1|PRMT6|BAG2|ZNF451|HSPG2|SHB|PRKCZ| SMARCA2|RTF1|PICALM|NFATC2|MARF1|GAPDH|ITGB2|ELAVL1|FHL2| RACK1|UBR5|CDK5RAP3|CHD4|DDIT3|ITGB3|YAP1|ACD|CTCF|ITM2B|EIF4A3|CALM1
Regulation of immune system process	GO:0002682	3.00E-04	2.31E-06	0.352287875	LCP2|NFKBIA|SMPD3|LTF|APOA1|BMP4|IRAK2|APP|PSG6|LEO1|AXL|PRKCE| TRIM41|PSEN1|ZMIZ1|HOXA9|DLG1|LYAR|PIGR|MTOR|DLL1|DUSP10|CDC73| DHX9|S100A14|MAP3K7|PRMT6|HLA-DQA2|HLA-DQB1|AGER|SYK|SHB| PRKCZ|SMARCA2|NFATC2|ITGB2|MAP2K7|MDK|CD14|HRAS|ITGB3|MAP2K6|VAV1|FYB1
Multicellular organismal process	GO:0032501	3.30E-04	2.54E-06	0.348148606	DLD|TGFBR3|SMPD3|TBCB|PIK3R2|RAB3A|AIMP2|PFN1|MED31|CCND1|LTF| RGS2|APOA1|LRP1|KCNJ2|BMP4|CMA1|KIDINS220|DSG1|CBFA2T2|NID1|POLB| SNX19|SLIT1|IRF8|HAPLN1|ARID5B|APP|ADAMTS1|PSG6|S100A1|LEO1|AXL| CHRNB1|SOSTDC1|PRKCE|TMOD3|SLC34A1|PLEC|ENO3|PSEN1|ALDH1A3| ZMIZ1|ARHGEF25|USP1|HOXA9|DLG1|LYAR|PIGR|SYNE2|FGF17|MTOR|TGM2| EXO1|ACTN2|DLL1|DUSP10|PROX1|CRB1|CDC73|UCHL5|TAB2|DHX9|YY1AP1| SNAPIN|CHTOP|KIF20B|UBR2|PPIL1|TMEM38B|HSPG2|AGER|SYK|UBD|SHB| SLC22A6|PRKCZ|B4GALT1|UCN3|ADRA1A|ESM1|RAD1|SMARCA2|RTF1|EVL| BCL2L11|PICALM|PTPRZ1|VDAC1|EXT2|MARF1|CEP250|MYCBP|ITGB2|CRHR1| PSG5|SUN1|MDK|FHL2|ACAN|DCC|PEX5|FGFR1|PLEKHA5|SNRPB|ROBO1| AMOTL2|RACK1|CDK5RAP3|ATP1A1|VIM|DDIT3|NUMB|ITGB3|APBA2|TNNT1| MAP2K6|VAV1|NAP1L1|YAP1|CYFIP2|ACD|AP2B1|ADCYAP1R1|NEB| HOXA13|ITM2B|EIF4A3|CDC42|MTHFD1|CALM1
Regulation of actin cytoskeleton organization	GO:0032956	3.40E-04	2.63E-06	0.346852108	PIK3R2|PFN1|APOA1|LRP1|FHOD1|PRKCE|TMOD3|DLG1|MTOR| ACTN2|PROX1|EVL|MDK|HRAS|ITGB3|CYFIP2|NEB|RDX|CDC42

Positive regulation of intracellular transport	GO:0032388	3.60E-04	2.80E-06	0.34436975	PIK3R2|CPSF6|PSEN1|CHP1|ACTN2|DHX9|SNAPIN|SCP2|KIF20B|ITGB2|HRAS|VAMP2|UBR5|RDX
RNA metabolic process	GO:0016070	3.70E-04	2.92E-06	0.343179828	SF3A1|HNRNPL|POLR2I|MED31|BMP4|MED4|ELOB|CBFA2T2|CPSF6|GTF2E1| APP|LEO1|SRRM2|MEPCE|PABPC1|CSTF3|MAGOHB|GTF2F2|HNRNPA1|POLR2K| HOXA9|LYAR|THRAP3|EXO1|PROX1|CDC73|DHX9|GTF2B|PPIL1|MBNL2|RTF1| NFATC2|RPL14|MARF1|RPS8|DDX17|SMU1|PRPF40A|EEF1D|SNRPB|RPP14| RPS24|PUF60|POLR2A|HOXA13|EIF4A3
Regulation of actin filament-based process	GO:0032970	3.90E-04	3.17E-06	0.340893539	PIK3R2|PFN1|APOA1|LRP1|KCNJ2|FHOD1|PRKCE|TMOD3|DLG1|MTOR| ACTN2|PROX1|EVL|MDK|HRAS|ITGB3|CYFIP2|NEB|RDX|CDC42
Organic cyclic compound biosynthetic process	GO:1901362	3.90E-04	3.12E-06	0.340893539	DLD|SMPD3|POLR2I|MED31|APOA1|BMP4|MED4|ELOB|CBFA2T2|POLB|GTF2E1| LEO1|PCLAF|PANK1|OSBPL2|MRE11|GTF2F2|POLR2K|USP1|HOXA9|DLG1|MTOR| PROX1|CDC73|DHX9|GTF2B|SCP2|HACD2|RTF1|NFATC2|PAICS|EEF1D| GPHN|POLR2A|ACD|HOXA13|MTHFD1
Heterocycle biosynthetic process	GO:0018130	4.00E-04	3.22E-06	0.339794001	DLD|SMPD3|POLR2I|MED31|BMP4|MED4|ELOB|CBFA2T2|POLB|GTF2E1|LEO1| PCLAF|PANK1|MRE11|GTF2F2|POLR2K|USP1|HOXA9|DLG1|MTOR|PROX1| CDC73|DHX9|GTF2B|HACD2|RTF1|NFATC2|PAICS|EEF1D|GPHN|POLR2A|ACD|HOXA13|MTHFD1
Regulation of catabolic process	GO:0009894	4.20E-04	3.43E-06	0.337675071	GTPBP1|STUB1|PIK3R2|APOA1|LRP1|RNF144B|ELOB|RMC1|APP|FYCO1| MAD2L1|RNFT1|PRKCE|PABPC1|PSEN1|THRAP3|MTOR|UCHL5|TAB2|DHX9| MAP3K7|BAG2|RNF5|ADRA1A|BCL2L11|VDAC1|GAPDH|ELAVL1|RACK1| CDK5RAP3|VIM|DDIT3|RDX|EIF4A3
Programmed cell death	GO:0012501	4.60E-04	3.76E-06	0.333724217	NFKBIA|AIMP2|RNF144B|POLB|ATG3|APP|HK2|RAD21|AKTIP|AXL|PRKCE| PSEN1|ALDH1A3|MTOR|DHX9|S100A14|MAP3K7|TRAF1|SHB|ADRA1A|BCL2L11| VDAC1|GAPDH|ITGB2|MAP2K7|CD14|DCC|HRAS|RACK1|PUF60|CDK5RAP3| DDIT3|MAP2K6|YAP1|CYFIP2|HOXA13
Apoptotic process	GO:0006915	4.80E-04	4.01E-06	0.331875876	NFKBIA|AIMP2|RNF144B|POLB|ATG3|APP|HK2|RAD21|AKTIP|AXL|PRKCE| PSEN1|ALDH1A3|MTOR|S100A14|MAP3K7|TRAF1|SHB|ADRA1A|BCL2L11| VDAC1|GAPDH|ITGB2|MAP2K7|CD14|DCC|HRAS|RACK1|PUF60| CDK5RAP3|DDIT3|MAP2K6|YAP1|CYFIP2|HOXA13
mRNA processing	GO:0006397	5.60E-04	4.73E-06	0.325181197	SF3A1|HNRNPL|CPSF6|APP|LEO1|SRRM2|PABPC1|CSTF3|MAGOHB|HNRNPA1| THRAP3|CDC73|DHX9|PPIL1|MBNL2|DDX17|SMU1|PRPF40A|SNRPB|PUF60|EIF4A3
Regulation of mitotic cell cycle	GO:0007346	5.60E-04	4.68E-06	0.325181197	SMPD3|CCND1|BMP4|APP|ADAMTS1|MAD2L1|RAD21|MEPCE|TMOD3|MRE11| DLG1|BLM|CDC73|KIF20B|UBD|SHB|SMARCA2|RAD9B|CDK5RAP3|RDX|HOXA13|CDC42
Nucleobase-containing compound biosynthetic process	GO:0034654	5.60E-04	4.74E-06	0.325181197	DLD|SMPD3|POLR2I|MED31|BMP4|MED4|ELOB|CBFA2T2|POLB|GTF2E1|LEO1| PCLAF|PANK1|MRE11|GTF2F2|POLR2K|USP1|HOXA9|DLG1|PROX1|CDC73| DHX9|GTF2B|HACD2|RTF1|NFATC2|PAICS|EEF1D|POLR2A|ACD|HOXA13|MTHFD1
Regulation of cellular localization	GO:0060341	6.20E-04	5.27E-06	0.320760831	PARD6A|PIK3R2|CRIPT|LRP1|BMP4|CPSF6|GOLPH3L|APP|PRKCE|MEPCE|PSEN1| CHP1|DLG1|ACTN2|DHX9|SNAPIN|SCP2|KIF20B|PRKCZ|UCN3|PICALM|CEP250| ITGB2|HRAS|VAMP2|RACK1|UBR5|CDK5RAP3|NUMB|ITGB3|YAP1|ADCYAP1R1|RDX
Positive regulation of cell cycle	GO:0045787	6.30E-04	5.47E-06	0.320065945	SMPD3|CCND1|APP|ADAMTS1|SMC2|MAD2L1|RAD21|PRKCE|MEPCE| TMOD3|PROX1|CDC73|KIF20B|SHB|BCL2L11|RDX|HOXA13|CDC42
Regulation of multicellular organismal development	GO:2000026	6.30E-04	5.38E-06	0.320065945	TGFBR3|NFKBIA|SMPD3|CCND1|LTF|RGS2|BMP4|CMA1|SLIT1|ADAMTS1|HK2| S100A1|LEO1|AXL|PSEN1|ZMIZ1|HOXA9|DLG1|MTOR|TGM2|DLL1|DUSP10|PROX1| CDC73|UCHL5|PRMT6|HSPG2|AGER|SYK|SHB|PRKCZ|SMARCA2|PTPRZ1| ITGB2|MDK|DCC|ROBO1|RACK1|NUMB|ITGB3|NAP1L1|YAP1
Gliogenesis	GO:0042063	6.40E-04	5.62E-06	0.319382003	LRP1|APP|PLEC|PSEN1|ZMIZ1|SYNE2|MTOR|DLL1|DUSP10|CRB1|AGER|PTPRZ1|SUN1|MDK|VIM
Protein modification by small protein conjugation	GO:0032446	7.20E-04	6.33E-06	0.31426675	APPBP2|STUB1|AIMP2|MED31|VHL|RNF144B|ELOB|ATG3|LEO1|AKTIP|UBE2E1| COPS6|RNFT1|TRIM41|CDC73|ZNF451|UBE2U|UBR2|TRAF1|RNF5|UBR4| UBD|RNF212|RACK1|UBR5|CDK5RAP3|DTX3|CDC42
Positive regulation of cell cycle process	GO:0090068	7.30E-04	6.44E-06	0.313667714	SMPD3|CCND1|APP|ADAMTS1|SMC2|MAD2L1|RAD21|PRKCE|MEPCE| TMOD3|CDC73|KIF20B|RDX|HOXA13|CDC42

Regulation of cell death	GO:0010941	7.40E-04	6.64E-06	0.313076828	TOMM22|AIMP2|CCND1|LTF|LRP1|BMP4|VHL|RNF144B|APP|MAD2L1|AXL| MRE11|PSEN1|ALDH1A3|CHP1|NET1|MTOR|TGM2|ACTN2|DLL1|CDC73| TRAF1|HSPG2|SYK|UBD|PRKCZ|ATAD3A|B4GALT1|BCL2L11|PICALM|PTPRZ1| VDAC1|ITGB2|MAP2K7|MDK|FHL2|DCC|FGFR1|HRAS|EEF1D| RACK1|DDIT3|ITGB3|MAP2K6|YAP1|ADCYAP1R1|HOXA13
Positive regulation of multicellular organismal process	GO:0051240	8.00E-04	7.18E-06	0.309691001	TGFBR3|CCND1|LTF|RGS2|LRP1|BMP4|CMA1|IRF8|APP|HK2|S100A1|AXL| PRKCE|PSEN1|ZMIZ1|MTOR|TGM2|DLL1|DUSP10|PROX1|DHX9|MAP3K7| ARFGEF2|AGER|SYK|SHB|PRKCZ|ADRA1A|SMARCA2|PTPRZ1|GAPDH| ITGB2|MDK|CD14|PEX5|HRAS|ROBO1|RACK1|ATP1A1|DDIT3|NUMB|ITGB3|NAP1L1|YAP1
Nucleus localization	GO:0051647	8.00E-04	7.37E-06	0.309691001	FHOD1|SLIT1|SYNE2|MTOR|SUN1|CDC42
Cardiac cell development	GO:0055006	8.00E-04	7.21E-06	0.309691001	TGFBR3|PLEC|MTOR|ACTN2|PROX1|ADRA1A|FHL2|NEB
Cellular response to stimulus	GO:0051716	8.10E-04	7.52E-06	0.309151498	LCP2|TGFBR3|GTPBP1|NFKBIA|SMPD3|STUB1|HNRNPL|POLR2I|PIK3R2|CCND1| RGS2|APOA1|LRP1|KCNJ2|BMP4|CMA1|IRAK2|VHL|KIDINS220|POLB|IRF8| SETDB1|CEP164|ARID5B|APP|ADAMTS1|HK2|PSG6|S100A1|MAD2L1|RAD21| LEO1|PCLAF|AXL|CHRNB1|SOSTDC1|PRKCE|FANCI|RANBP10|TRIM41|SLC34A1| PLEC|MRE11|PSEN1|ZMIZ1|CHP1|HNRNPA1|USP1|DLG1|NET1|BLM|PIGR|NR3C2| FGF17|G3BP2|MTOR|TGM2|EXO1|ACTN2|DLL1|DUSP10|CRB1|CDC73|UCHL5| DHX9|S100A14|BCCIP|MAP3K7|PRMT6|UBE2U|ARFGEF2|UBR2|TRAF1|TMEM38B| HLA-DQB1|AGER|RNF5|SIK3|SYK|STAM|SHB|PRKCZ|UCN3|ADRA1A|ITSN1|RAD1| RTF1|RAD9B|EVL|BCL2L11|EXT2|NFATC2|MARF1|DDX17|GAPDH|ITGB2| MAP2K7|CRHR1|MDK|CD14|DCC|FGFR1|HRAS|EEF1D|VAMP2|ROBO1|AMOTL2| RACK1|UBR5|CDK5RAP3|ADAP1|ATP1A1|VIM|DDIT3|DTX3|ITGB3|MAP2K6| VAV1|YAP1|MAP3K14|ACD|ADCYAP1R1|FYB1|RDX|EIF4A3|CDC42|CALM1
Nervous system development	GO:0007399	8.80E-04	8.23E-06	0.305551733	TBCB|RAB3A|PFN1|CCND1|RGS2|LRP1|BMP4|CMA1|KIDINS220|SLIT1|HAPLN1| APP|S100A1|AXL|PLEC|ENO3|PSEN1|ALDH1A3|ZMIZ1|ARHGEF25|SYNE2|FGF17| MTOR|DLL1|DUSP10|PROX1|CRB1|UCHL5|SNAPIN|KIF20B|HSPG2|AGER|PRKCZ| RAD1|SMARCA2|EVL|BCL2L11|PICALM|PTPRZ1|SUN1|MDK|ACAN|DCC|PEX5| FGFR1|SNRPB|ROBO1|CDK5RAP3|VIM|NUMB|APBA2|NAP1L1|CYFIP2| ITM2B|CDC42|MTHFD1|CALM1
Positive regulation of protein serine/threonine kinase activity	GO:0071902	9.50E-04	8.94E-06	0.302227639	CCND1|LTF|APP|PSEN1|PROX1|MAP3K7|AGER|SYK|MAP2K7|FGFR1| HRAS|ROBO1|MAP2K6|CALM1
Negative regulation of gene expression	GO:0010629	9.80E-04	9.22E-06	0.300877392	HNRNPL|LTF|RGS2|APOA1|LRP1|BMP4|VHL|SETDB1|APP|AXL|PABPC1| MAGOHB|PSEN1|THRAP3|DLL1|DHX9|UBR2|AGER|PICALM|MARF1| DDX17|GAPDH|ELAVL1|HRAS|ROBO1|RACK1|CHD4|DDIT3|YAP1|CTCF|EIF4A3
Protein modification by small protein conjugation or removal	GO:0070647	0.001	9.82E-06	0.3	APPBP2|JOSD1|STUB1|AIMP2|MED31|VHL|RNF144B|ELOB|ATG3|LEO1| AKTIP|UBE2E1|COPS6|RNFT1|TRIM41|USP1|CDC73|UCHL5|ZNF451| UBE2U|UBR2|TRAF1|RNF5|UBR4|UBD|RNF212|RACK1|UBR5|CDK5RAP3|DTX3|CDC42
Forebrain cell migration	GO:0021885	0.0011	1.09E-05	0.295860731	SLIT1|AXL|PSEN1|ZMIZ1|SYNE2|SUN1|PEX5|ROBO1
Cardiocyte differentiation	GO:0035051	0.0011	1.02E-05	0.295860731	TGFBR3|BMP4|PLEC|MTOR|ACTN2|PROX1|ADRA1A|FHL2|NEB|CDC42
Regulation of mRNA processing	GO:0050684	0.0011	1.05E-05	0.295860731	HNRNPL|CPSF6|LEO1|HNRNPA1|THRAP3|CDC73|DHX9|MBNL2|DDX17|SMU1|PUF60
Negative regulation of molecular function	GO:0044092	0.0012	1.17E-05	0.292081875	NFKBIA|STUB1|LTF|RGS2|APOA1|LRP1|BMP4|IRAK2|SPINK7|APP|MAD2L1| DUSP16|PRKCE|MEPCE|PLEC|PSEN1|CHP1|G3BP2|ACTN2|DUSP10|PROX1| UCHL5|BAG2|SHB|PRKCZ|PICALM|GAPDH|CRHR1|HRAS| RACK1|CDK5RAP3|DDIT3|ITGB3|RDX|EIF4A3|CALM1
Negative regulation of cellular	GO:0051129	0.0012	1.21E-05	0.292081875	PFN1|APOA1|BMP4|CBFA2T2|SLIT1|APP|MAD2L1|RAD21|TMOD3|PSEN1| DENND5A|HNRNPA1|SNAPIN|HSPG2|PRKCZ|RAD1|EVL| PICALM|DCC|PEX5|VIM|ITGB3|YAP1|ACD|RDX|CDC42

component organization					
Clathrin-dependent endocytosis	GO:0072583	0.0012	1.23E-05	0.292081875	ITSN2|DLL1|ITSN1|PICALM|AP2S1|AP2B1
Cell cycle	GO:0007049	0.0013	1.32E-05	0.288605665	PARD6A|SMPD3|CCND1|RGS2|TUBA4A|CEP164|APP|SMC2|MAD2L1| RAD21|PCLAF|PRKCE|TMOD3|FANCI|PLEC|KIF15|MRE11|DLG1|BLM| EXO1|CDC73|BCCIP|KIF20B|UBR2|RAD1|RAD9B|BCL2L11|MARF1| CEP250|SUN1|PRPF40A|RNF212|PPP6C|RACK1|CDK5RAP3|DDIT3|HOXA13|CALM1
Response to organonitrogen compound	GO:0010243	0.0013	1.35E-05	0.288605665	TGFBR3|NFKBIA|SMPD3|STUB1|HNRNPL|PIK3R2|CCND1|RGS2|LRP1| APP|PRKCE|TRIM41|SLC34A1|PPP2R2A|PSEN1|BLM|MTOR|TGM2| ACTN2|UBR2|TMEM38B|AGER|RNF5|SYK|PRKCZ|BCL2L11|ITGB2|CRHR1|VAMP2|VIM|ITGB3|CALM1
Positive regulation of MAP kinase activity	GO:0043406	0.0013	1.26E-05	0.288605665	APP|PSEN1|MAP3K7|AGER|SYK|MAP2K7|FGFR1|HRAS|ROBO1|MAP2K6
Regulation of mRNA metabolic process	GO:1903311	0.0013	1.33E-05	0.288605665	GTPBP1|HNRNPL|CPSF6|LEO1|PABPC1|HNRNPA1|THRAP3|CDC73| DHX9|MBNL2|DDX17|SMU1|ELAVL1|PUF60|VIM|EIF4A3
Response to nitrogen compound	GO:1901698	0.0014	1.40E-05	0.285387196	TGFBR3|NFKBIA|SMPD3|STUB1|HNRNPL|PIK3R2|CCND1|RGS2|LRP1| APP|CHRNB1|PRKCE|TRIM41|SLC34A1|PPP2R2A|PSEN1|BLM|MTOR|TGM2| ACTN2|DHX9|UBR2|TMEM38B|AGER|RNF5|SYK|PRKCZ|BCL2L11| ITGB2|CRHR1|VAMP2|VIM|ITGB3|CALM1
Positive regulation of protein modification process	GO:0031401	0.0015	1.59E-05	0.282390874	LCP2|STUB1|AIMP2|CCND1|LTF|BMP4|APP|AKTIP|FANCI|MRE11|PSEN1| CHP1|DLG1|FGF17|MTOR|PROX1|TAB2|CHTOP|MAP3K7|AGER|SYK|PRKCZ| ADRA1A|RTF1|MAP2K7|FGFR1|HRAS|ROBO1|RACK1|CDK5RAP3|ITGB3|MAP2K6|CALM1
Tube development	GO:0035295	0.0015	1.60E-05	0.282390874	TGFBR3|SMPD3|RAB3A|AIMP2|PFN1|LRP1|BMP4|CBFA2T2|SOSTDC1| PSEN1|ZMIZ1|DLG1|TGM2|DLL1|PROX1|KIF20B|TMEM38B|HSPG2|SYK| SHB|B4GALT1|ESM1|BCL2L11|ROBO1|AMOTL2|ITGB3|YAP1|HOXA13|CDC42|MTHFD1
Cellular macromolecule metabolic process	GO:0044260	0.0015	1.59E-05	0.282390874	APPBP2|PSMD8|GTPBP1|SMPD3|STUB1|POLR2I|AIMP2|MLEC|APOA1|RNF144B| PSMA6|ELOB|POLB|SETDB1|CEP164|RAD21|PCLAF|UBE2E1|MEPCE|FANCI| PABPC1|MAGOHB|SLC34A1|MRE11|PSEN1|USP1|THRAP3|BLM|EXO1|UCHL5| DHX9|BCCIP|PRMT6|UBE2U|ARFGEF2|UBR2|RNF5|UBR4|UBD|STAM|B4GALT1| RAD1|RTF1|RAD9B|EXT2|RPL14|MARF1|RPS8|ACAN|RNF212|EEF1D| SNRPB|RPS24|RACK1|UBR5|DDIT3|MRPL37|NAP1L1|ACD|PIGN|CTCF|EIF4A3
Positive regulation of supramolecular fiber organization	GO:1902905	0.0015	1.52E-05	0.282390874	PFN1|APOA1|FHOD1|APP|PRKCE|PSEN1|DLG1|MTOR|ACTN2|PROX1|EVL|CDC42
Regulation of protein localization to membrane	GO:1905475	0.0016	1.69E-05	0.279588002	PIK3R2|CRIPT|LRP1|PRKCE|CHP1|DLG1|PRKCZ|PICALM|ITGB2|HRAS|RACK1|NUMB
Cellular component biogenesis	GO:0044085	0.002	2.08E-05	0.269897	TGFBR3|SF3A1|SMPD3|AIMP2|MED31|APOA1|KCNJ2|DSG1|MED4|ELOB|CPSF6| CEP164|ATG3|APP|TMOD3|OSBPL2|PLEC|PSEN1|ALDH1A3|TMEM216|DLG1| LYAR|BLM|G3BP2|TGM2|EXO1|ACTN2|PROX1|CDC73|DHX9|VTA1|BCCIP| GTF2B|UBR2|TRAF1|HLA-DQA2|HLA-DQB1|UBD|STAM|EVL|PICALM| RPL14|RPS8|DDX17|CEP250|ELAVL1|RNF212|PEX5|PPP6C|SNRPB|RPS24| VAMP2|PUF60|ITGB3|TLN2|TNNT1|AP2S1|NAP1L1|YAP1|ACD|NEB|KCTD7|CTCF|EIF4A3|CDC42
Transcription elongation from RNA polymerase II promoter	GO:0006368	0.0021	2.27E-05	0.267778071	POLR2I|ELOB|LEO1|GTF2F2|CDC73|RTF1
Embryonic morphogenesis	GO:0048598	0.0021	2.30E-05	0.267778071	DLD|PFN1|BMP4|LEO1|PSEN1|ALDH1A3|HOXA9|DLG1|DLL1|PROX1|CDC73| KIF20B|RTF1|BCL2L11|EXT2|ITGB2|RACK1|ITGB3|YAP1|ACD|HOXA13|EIF4A3|MTHFD1
Cell communication	GO:0007154	0.0023	2.54E-05	0.263827216	LCP2|TGFBR3|GTPBP1|NFKBIA|SMPD3|STUB1|HNRNPL|PIK3R2|RAB3A|CCND1| RGS2|APOA1|LRP1|BMP4|IRAK2|KIDINS220|POLB|SNX19|SETDB1|ARID5B| APP|ADAMTS1|PSG6|S100A1|MAD2L1|LEO1|AXL|CHRNB1|SOSTDC1|PRKCE| RANBP10|SLC34A1|PLEC|MRE11|PSEN1|ZMIZ1|CHP1|HNRNPA1|DLG1|NET1| BLM|PIGR|NR3C2|FGF17|G3BP2|MTOR|TGM2|ACTN2|DLL1|DUSP10|CRB1|

					CDC73|SNAPIN|S100A14|MAP3K7|ARFGEF2|TRAF1|TMEM38B|HLA-DQB1| AGER|SIK3|SYK|STAM|SHB|PRKCZ|UCN3|ADRA1A|ITSN1|RAD1| RTF1|RAD9B|EVL|BCL2L11|VDAC1|EXT2|NFATC2|DDX17|ITGB2|MAP2K7| CRHR1|MDK|CD14|DCC|FGFR1|HRAS|VAMP2|ROBO1|AMOTL2|UBR5| CDK5RAP3|ADAP1|ATP1A1|VIM|DDIT3|DTX3|ITGB3|APBA2|MAP2K6| VAV1|YAP1|MAP3K14|ADCYAP1R1|FYB1|RDX|CDC42|CALM1
Circulatory system development	GO:0072359	0.0023	2.46E-05	0.263827216	TGFBR3|LRP1|BMP4|ADAMTS1|PLEC|PSEN1|ZMIZ1|MTOR|ACTN2|DLL1| PROX1|TAB2|HSPG2|SYK|SHB|B4GALT1|ADRA1A|ESM1|FHL2|ACAN| ROBO1|AMOTL2|DDIT3|ITGB3|YAP1|AP2B1|NEB|HOXA13|CDC42|MTHFD1
Astrocyte development	GO:0014002	0.0024	2.62E-05	0.261978876	LRP1|APP|PSEN1|DLL1|AGER|VIM
Signaling	GO:0023052	0.0026	2.94E-05	0.258502665	LCP2|TGFBR3|GTPBP1|NFKBIA|SMPD3|STUB1|PIK3R2|RAB3A|CCND1|RGS2| APOA1|LRP1|KCNJ2|BMP4|IRAK2|KIDINS220|POLB|SNX19|SETDB1|ARID5B| APP|ADAMTS1|PSG6|S100A1|MAD2L1|LEO1|AXL|CHRNB1|SOSTDC1|PRKCE| RANBP10|PLEC|MRE11|PSEN1|ZMIZ1|CHP1|DLG1|NET1|BLM|PIGR|NR3C2| FGF17|G3BP2|MTOR|TGM2|ACTN2|DLL1|DUSP10|CRB1|CDC73|SNAPIN| S100A14|MAP3K7|ARFGEF2|TRAF1|TMEM38B|HLA-DQB1|AGER|SIK3| SYK|STAM|SHB|PRKCZ|UCN3|ADRA1A|ITSN1|RAD1|RTF1| RAD9B|EVL|BCL2L11|VDAC1|EXT2|NFATC2|DDX17|ITGB2|MAP2K7| CRHR1|MDK|CD14|DCC|FGFR1|HRAS|VAMP2|ROBO1|AMOTL2|UBR5| CDK5RAP3|ADAP1|ATP1A1|VIM|DDIT3|DTX3|ITGB3|APBA2|MAP2K6| VAV1|YAP1|MAP3K14|ADCYAP1R1|FYB1|RDX|CDC42|CALM1
Regulation of DNA-binding transcription factor activity	GO:0051090	0.0026	2.89E-05	0.258502665	NFKBIA|LTF|IRAK2|PSMA6|ARID5B|APP|TRIM41|CHP1|G3BP2| PROX1|DHX9|MAP3K7|TRAF1|AGER|SYK|PRKCZ|ITGB2|CDK5RAP3|DDIT3
Brain development	GO:0007420	0.0027	3.03E-05	0.256863624	RGS2|BMP4|CMA1|SLIT1|APP|S100A1|AXL|ENO3|PSEN1|ALDH1A3| ZMIZ1|SYNE2|DLL1|PROX1|UCHL5|HSPG2|RAD1|BCL2L11| SUN1|MDK|PEX5|SNRPB|ROBO1|CDK5RAP3|NUMB|CDC42|CALM1
Macromolecule biosynthetic process	GO:0009059	0.0027	2.98E-05	0.256863624	GTPBP1|SMPD3|POLR2I|AIMP2|MED31|MLEC|APOA1|BMP4|MED4| ELOB|CBFA2T2|POLB|GTF2E1|LEO1|PCLAF|MRE11|PSEN1|GTF2F2| POLR2K|USP1|HOXA9|PROX1|CDC73|DHX9|GTF2B|B4GALT1|RTF1|EXT2| NFATC2|RPL14|RPS8|ACAN|EEF1D|RPS24|RACK1|POLR2A|MRPL37|ACD|PIGN|HOXA13
Regulation of biosynthetic process	GO:0009889	0.0027	3.18E-05	0.256863624	GTPBP1|NFKBIA|SMPD3|HNRNPL|PIK3R2|PFN1|MED31|CCND1|LTF|RGS2| APOA1|BMP4|IRAK2|VHL|FHOD1|MED4|PSMA6|ELOB|CBFA2T2|IRF8| ARID5B|APP|RAD21|LEO1|TSC22D4|ZNF3|MEPCE|PABPC1|CC2D1A|TRIM41| PSEN1|ZMIZ1|CHP1|GTF2F2|HNRNPA1|POLR2K|HOXA9|DLG1|LYAR|THRAP3| BLM|NR3C2|G3BP2|MTOR|ACTN2|DLL1|PROX1|CDC73|UCHL5|DHX9|YY1AP1| MAP3K7|PRMT6|ZNF451|SCP2|TRAF1|AGER|SYK|PRKCZ|SMARCA2|RTF1|PICALM| NFATC2|MARF1|DDX17|GAPDH|MYCBP|ITGB2|MAP2K7|ELAVL1|MDK|FHL2| HRAS|EEF1D|IKZF2|RACK1|CDK5RAP3|CHD4|ATP1A1|VIM|DDIT3|POLR2A| MAP2K6|YAP1|ACD|ADCYAP1R1|CTCF|HOXA13|ITM2B|EIF4A3
Glial cell differentiation	GO:0010001	0.0027	2.97E-05	0.256863624	LRP1|APP|PLEC|PSEN1|MTOR|DLL1|DUSP10|CRB1|AGER|PTPRZ1|MDK|VIM
Positive regulation of phosphate metabolic process	GO:0045937	0.0027	3.06E-05	0.256863624	LCP2|CCND1|LTF|BMP4|APP|AKTIP|AXL|MRE11|PSEN1|CHP1|DLG1|FGF17| MTOR|PROX1|TAB2|MAP3K7|AGER|SYK|PRKCZ|ADRA1A|MAP2K7|FGFR1| HRAS|ROBO1|RACK1|ITGB3|MAP2K6|ADCYAP1R1|CDC42|CALM1
Regulation of neuron death	GO:1901214	0.0027	3.02E-05	0.256863624	AIMP2|CCND1|APP|AXL|PSEN1|CHP1|BCL2L11|PICALM|PTPRZ1| ITGB2|MAP2K7|MDK|DCC|HRAS|RACK1|DDIT3
Response to peptide	GO:1901652	0.0027	2.97E-05	0.256863624	TGFBR3|NFKBIA|SMPD3|HNRNPL|PIK3R2|LRP1|APP|TRIM41|SLC34A1| PSEN1|MTOR|ACTN2|AGER|PRKCZ|BCL2L11|CRHR1|VAMP2|VIM|ITGB3
Positive regulation of biosynthetic process	GO:0009891	0.0028	3.32E-05	0.255284197	NFKBIA|HNRNPL|PIK3R2|MED31|APOA1|BMP4|VHL|FHOD1|MED4|IRF8| ARID5B|APP|LEO1|MEPCE|PABPC1|PSEN1|ZMIZ1|CHP1|GTF2F2|HNRNPA1| HOXA9|LYAR|THRAP3|BLM|MTOR|ACTN2|DLL1|PROX1|CDC73|UCHL5|DHX9| ZNF451|SMARCA2|PICALM|NFATC2|DDX17|MYCBP|ITGB2|MAP2K7|ELAVL1|

					MDK|HRAS|CDK5RAP3|CHD4|VIM|DDIT3|MAP2K6|YAP1| ACD|ADCYAP1R1|CTCF|HOXA13|EIF4A3
Muscle cell development	GO:0055001	0.0028	3.37E-05	0.255284197	CHRNB1|TMOD3|PLEC|MTOR|ACTN2|PROX1|ADRA1A|NFATC2|FHL2|TNNT1|NEB
Head development	GO:0060322	0.0028	3.22E-05	0.255284197	RGS2|BMP4|CMA1|SLIT1|ARID5B|APP|S100A1|AXL|ENO3|PSEN1|ALDH1A3| ZMIZ1|SYNE2|DLL1|PROX1|UCHL5|HSPG2|RAD1|BCL2L11|SUN1| MDK|PEX5|SNRPB|ROBO1|CDK5RAP3|NUMB|CDC42|CALM1
Cellular response to oxygen-containing compound	GO:1901701	0.0028	3.30E-05	0.255284197	NFKBIA|SMPD3|PIK3R2|LRP1|CMA1|IRAK2|IRF8|APP|AXL|CHRNB1|PRKCE| TRIM41|PLEC|PSEN1|NET1|BLM|MTOR|TGM2|ACTN2|CDC73|UBR2|AGER| PRKCZ|BCL2L11|MAP2K7|CRHR1|CD14|VAMP2|RACK1|VIM|ITGB3|MAP2K6|YAP1
Response to abiotic stimulus	GO:0009628	0.0029	3.42E-05	0.2537602	TGFBR3|NFKBIA|STUB1|RAB3A|CCND1|KCNJ2|VHL|POLB|PLOD2|APP|HK2| PCLAF|TSC22D4|PRKCE|PLEC|CHP1|USP1|NET1|BLM|MTOR|CRB1|AGER| UCN3|RAD1|RAD9B|CEP250|MAP2K7|MDK|CD14|HRAS|EEF1D|ITGB3|YAP1|MAP3K14
Positive regulation of phosphorylation	GO:0042327	0.0029	3.43E-05	0.2537602	LCP2|CCND1|LTF|BMP4|APP|AKTIP|AXL|MRE11|PSEN1|DLG1|FGF17|MTOR| PROX1|TAB2|MAP3K7|AGER|SYK|PRKCZ|ADRA1A|MAP2K7|FGFR1| HRAS|ROBO1|RACK1|ITGB3|MAP2K6|CDC42|CALM1
Regulation of macromolecule biosynthetic process	GO:0010556	0.003	3.69E-05	0.252287875	GTPBP1|NFKBIA|SMPD3|HNRNPL|PIK3R2|PFN1|MED31|CCND1|LTF|RGS2| BMP4|IRAK2|VHL|FHOD1|MED4|PSMA6|ELOB|CBFA2T2|IRF8|ARID5B|APP| RAD21|LEO1|TSC22D4|ZNF3|MEPCE|PABPC1|CC2D1A|TRIM41|PSEN1|ZMIZ1| CHP1|GTF2F2|HNRNPA1|POLR2K|HOXA9|DLG1|LYAR|THRAP3|BLM|NR3C2| G3BP2|MTOR|ACTN2|DLL1|PROX1|CDC73|UCHL5|DHX9|YY1AP1|MAP3K7| PRMT6|ZNF451|TRAF1|AGER|SYK|PRKCZ|SMARCA2|RTF1|PICALM|NFATC2| MARF1|DDX17|GAPDH|MYCBP|ITGB2|MAP2K7|ELAVL1|MDK|FHL2|HRAS| EEF1D|IKZF2|RACK1|CDK5RAP3|CHD4|VIM|DDIT3|POLR2A| MAP2K6|YAP1|ACD|CTCF|HOXA13|ITM2B|EIF4A3
Homeostatic process	GO:0042592	0.003	3.60E-05	0.252287875	DLD|TGFBR3|PIK3R2|LTF|APOA1|KCNJ2|BMP4|CMA1|CP|POLB|APP|HK2| SLC9A5|AXL|TMOD3|SLC34A1|PLEC|PSEN1|CHP1|LYAR|PIGR|TGM2|DLL1| CRB1|SNAPIN|S100A14|AGER|FTL|BCL2L11|PICALM|EXT2|RPS24| RACK1|CDK5RAP3|ATP1A1|DDIT3|YAP1|KCTD7|HOXA13|MTHFD1
Cardiac muscle cell development	GO:0055013	0.003	3.66E-05	0.252287875	PLEC|MTOR|ACTN2|PROX1|ADRA1A|FHL2|NEB
mRNA metabolic process	GO:0016071	0.0032	3.88E-05	0.249485002	SF3A1|HNRNPL|POLR2I|CPSF6|APP|LEO1|SRRM2|PABPC1|CSTF3| MAGOHB|HNRNPA1|THRAP3|CDC73|DHX9|PPIL1|MBNL2| DDX17|SMU1|PRPF40A|EEF1D|SNRPB|PUF60|EIF4A3
Positive regulation of cellular biosynthetic process	GO:0031328	0.0032	4.01E-05	0.249485002	NFKBIA|HNRNPL|PIK3R2|MED31|APOA1|BMP4|VHL|FHOD1|MED4| IRF8|ARID5B|APP|LEO1|MEPCE|PABPC1|PSEN1|ZMIZ1|CHP1|GTF2F2| HNRNPA1|HOXA9|LYAR|THRAP3|BLM|MTOR|ACTN2|DLL1|PROX1| CDC73|UCHL5|DHX9|ZNF451|SMARCA2|PICALM|NFATC2|DDX17|MYCBP| ITGB2|MAP2K7|ELAVL1|MDK|HRAS|CDK5RAP3|CHD4|VIM|DDIT3| YAP1|ACD|ADCYAP1R1|CTCF|HOXA13|EIF4A3
Regulation of cellular component biogenesis	GO:0044087	0.0032	3.88E-05	0.249485002	SMPD3|STUB1|PIK3R2|RAB3A|PFN1|APOA1|FHOD1|SLIT1|SETDB1|ATG3| APP|PRKCE|TMOD3|KIF15|DLG1|SYNE2|G3BP2|MTOR|RNF5|SYK| STAM|PRKCZ|EVL|BCL2L11|PEX5|HRAS|RACK1|YAP1|CYFIP2|RDX|CDC42
Immune response-regulating cell surface receptor signaling pathway	GO:0002768	0.0033	4.24E-05	0.248148606	LCP2|PRKCE|PSEN1|PIGR|MAP3K7|HLA-DQB1|SYK|SHB|NFATC2|MAP2K7|HRAS|VAV1|FYB1
Nuclear migration	GO:0007097	0.0033	4.14E-05	0.248148606	FHOD1|SLIT1|SYNE2|SUN1|CDC42
Positive regulation of macromolecule biosynthetic process	GO:0010557	0.0033	4.08E-05	0.248148606	NFKBIA|HNRNPL|PIK3R2|MED31|BMP4|VHL|FHOD1|MED4|IRF8|ARID5B| APP|LEO1|MEPCE|PABPC1|PSEN1|ZMIZ1|CHP1|GTF2F2|HNRNPA1|HOXA9| LYAR|THRAP3|BLM|MTOR|ACTN2|DLL1|PROX1|CDC73|UCHL5|DHX9| ZNF451|SMARCA2|PICALM|NFATC2|DDX17|MYCBP|MAP2K7|ELAVL1| MDK|HRAS|CDK5RAP3|CHD4|VIM|DDIT3|MAP2K6|YAP1|ACD|CTCF|HOXA13|EIF4A3

Regulation of actin filament length	GO:0030832	0.0033	4.17E-05	0.248148606	PIK3R2|PFN1|PRKCE|TMOD3|DLG1|MTOR|ACTN2|EVL|CYFIP2|NEB|RDX
Regulation of cellular catabolic process	GO:0031329	0.0033	4.08E-05	0.248148606	GTPBP1|STUB1|PIK3R2|APOA1|RNF144B|ELOB|RMC1|APP|FYCO1|PABPC1| PSEN1|THRAP3|MTOR|UCHL5|TAB2|DHX9|MAP3K7|RNF5|ADRA1A| BCL2L11|VDAC1|GAPDH|ELAVL1|RACK1|VIM|DDIT3|EIF4A3
Positive regulation of protein phosphorylation	GO:0001934	0.0034	4.34E-05	0.246852108	LCP2|CCND1|LTF|BMP4|APP|AKTIP|MRE11|PSEN1|DLG1|FGF17|MTOR| PROX1|TAB2|MAP3K7|AGER|SYK|PRKCZ|ADRA1A|MAP2K7|FGFR1| HRAS|ROBO1|RACK1|ITGB3|MAP2K6|CALM1
Regulation of hemopoiesis	GO:1903706	0.0034	4.28E-05	0.246852108	NFKBIA|LTF|BMP4|LEO1|AXL|ZMIZ1|HOXA9|MTOR|DLL1| DUSP10|CDC73|PRMT6|AGER|SYK|SHB|PRKCZ|SMARCA2|MDK
Receptor-mediated endocytosis	GO:0006898	0.0035	4.63E-05	0.245593196	LRP1|ITSN2|DLL1|HSPG2|SYK|ITSN1|PICALM|ITGB2|CD14|AP2S1|AP2B1
Establishment of protein localization	GO:0045184	0.0035	4.64E-05	0.245593196	APPBP2|TRAM2|TOMM22|NFKBIA|NUTF2|PIK3R2|RAB3A|CRIPT|LRP1| SNX19|GOLPH3L|ATG3|HK2|DUSP16|AKTIP|PRKCE|PSEN1|CHP1|VTA1| SNAPIN|ARFGEF2|SYK|STAM|ITSN1|ELAVL1|RABL2A|PEX5| SELENBP1|VAMP2|DDIT3|APBA2|AP2S1|ACD|AP2B1|SRP72|RDX|CALM1
Developmental growth	GO:0048589	0.0035	4.54E-05	0.245593196	TGFBR3|SMPD3|BMP4|SLIT1|ARID5B|APP|PLEC|ZMIZ1|MTOR| DLL1|TMEM38B|PRKCZ|ADRA1A|RTF1|MDK|APBA2|YAP1|CYFIP2
Regulation of developmental process	GO:0050793	0.0035	4.62E-05	0.245593196	TGFBR3|NFKBIA|SMPD3|CCND1|LTF|RGS2|APOA1|BMP4|CMA1|VHL|NID1| SLIT1|APP|ADAMTS1|HK2|S100A1|LEO1|AXL|SOSTDC1|PSEN1|ZMIZ1|HOXA9| DLG1|ITSN2|MTOR|TGM2|DLL1|DUSP10|PROX1|CDC73|UCHL5|PRMT6|HSPG2| AGER|SYK|SHB|PRKCZ|SMARCA2|BCL2L11|PTPRZ1|NFATC2|DDX17|ITGB2| ELAVL1|MDK|PRPF40A|DCC|PEX5|FGFR1|ROBO1|RACK1|CDK5RAP3| CHD4|DDIT3|NUMB|ITGB3|NAP1L1|YAP1|RDX|CDC42
Regulation of alternative mRNA splicing, via spliceosome	GO:0000381	0.0037	4.92E-05	0.243179828	HNRNPL|HNRNPA1|THRAP3|MBNL2|DDX17|SMU1|PUF60
Regulation of cell differentiation	GO:0045595	0.0037	5.03E-05	0.243179828	NFKBIA|CCND1|LTF|RGS2|APOA1|BMP4|VHL|NID1|SLIT1|APP|LEO1|AXL| SOSTDC1|PSEN1|ZMIZ1|HOXA9|MTOR|TGM2|DLL1|DUSP10|PROX1|CDC73| PRMT6|AGER|SYK|SHB|PRKCZ|SMARCA2|PTPRZ1|NFATC2|DDX17|MDK| DCC|FGFR1|ROBO1|CDK5RAP3|CHD4|DDIT3|NUMB|ITGB3|NAP1L1|YAP1|CDC42
Cardiac muscle cell differentiation	GO:0055007	0.0037	4.88E-05	0.243179828	BMP4|PLEC|MTOR|ACTN2|PROX1|ADRA1A|FHL2|NEB
Cellular response to biotic stimulus	GO:0071216	0.0037	5.02E-05	0.243179828	NFKBIA|IRAK2|IRF8|AXL|PRKCE|TRIM41|CDC73|SYK|BCL2L11|MAP2K7|CD14|VIM|DDIT3
Protein localization to membrane	GO:0072657	0.0037	5.01E-05	0.243179828	TRAM2|TOMM22|RAB3A|GOLPH3L|ATG3|DLG1|PIGR|ACTN2|SCP2|AGER| PRKCZ|ITGB2|PEX5|GPHN|VAMP2|FYB1|SRP72|RDX|CALM1
Positive regulation of protein transport	GO:0051222	0.0038	5.21E-05	0.24202164	PARD6A|PIK3R2|GOLPH3L|APP|PRKCE|PSEN1|CHP1|KIF20B|PRKCZ| UCN3|ITGB2|HRAS|VAMP2|RACK1|UBR5
Regulation of cellular biosynthetic process	GO:0031326	0.004	5.43E-05	0.239794001	GTPBP1|NFKBIA|HNRNPL|PIK3R2|PFN1|MED31|CCND1|LTF|RGS2|APOA1| BMP4|IRAK2|VHL|FHOD1|MED4|PSMA6|ELOB|CBFA2T2|IRF8|ARID5B|APP| RAD21|LEO1|TSC22D4|ZNF3|MEPCE|PABPC1|CC2D1A|TRIM41|PSEN1|ZMIZ1| CHP1|GTF2F2|HNRNPA1|POLR2K|HOXA9|DLG1|LYAR|THRAP3|BLM|NR3C2| G3BP2|MTOR|ACTN2|DLL1|PROX1|CDC73|UCHL5|DHX9|YY1AP1|MAP3K7| PRMT6|ZNF451|SCP2|TRAF1|AGER|SYK|PRKCZ|SMARCA2|RTF1|PICALM|NFATC2| MARF1|DDX17|GAPDH|MYCBP|ITGB2|MAP2K7|ELAVL1|MDK|FHL2|HRAS| EEF1D|IKZF2|RACK1|CDK5RAP3|CHD4|ATP1A1|VIM|DDIT3|POLR2A|YAP1| ACD|ADCYAP1R1|CTCF|HOXA13|ITM2B|EIF4A3
Tube morphogenesis	GO:0035239	0.004	5.47E-05	0.239794001	TGFBR3|PFN1|LRP1|BMP4|SOSTDC1|PSEN1|ZMIZ1|DLG1|TGM2|DLL1|PROX1| KIF20B|HSPG2|SYK|SHB|B4GALT1|ESM1|BCL2L11|ROBO1|AMOTL2|ITGB3|YAP1|HOXA13|MTHFD1
Gland development	GO:0048732	0.004	5.59E-05	0.239794001	TGFBR3|CCND1|APOA1|BMP4|POLB|ARID5B|HK2|SOSTDC1|PSEN1| ALDH1A3|HOXA9|TGM2|PROX1|BCL2L11|CRHR1|MDK|CDK5RAP3|HOXA13

Positive regulation of developmental process	GO:0051094	0.004	5.44E-05	0.239794001	TGFBR3|CCND1|LTF|APOA1|BMP4|CMA1|VHL|NID1|APP|HK2|S100A1|AXL| PSEN1|ZMIZ1|ITSN2|MTOR|TGM2|DLL1|DUSP10|PROX1|AGER|SYK|SHB|PRKCZ| SMARCA2|PTPRZ1|NFATC2|ITGB2|MDK|PEX5|FGFR1|ROBO1|RACK1| NUMB|ITGB3|NAP1L1|YAP1|CDC42
Regulation of protein localization	GO:0032880	0.0042	5.79E-05	0.237675071	PARD6A|PIK3R2|CRIPT|LRP1|BMP4|GOLPH3L|APP|PRKCE|MEPCE|PSEN1| CHP1|DLG1|ACTN2|KIF20B|PRKCZ|UCN3|PICALM|CEP250|ITGB2|HRAS| VAMP2|RACK1|UBR5|CDK5RAP3|NUMB|ITGB3|YAP1|RDX
Response to hormone	GO:0009725	0.0043	5.96E-05	0.236653154	TGFBR3|PIK3R2|CCND1|BMP4|DSG1|PRKCE|SLC34A1|ZMIZ1|NR3C2|MTOR| ACTN2|PRKCZ|UCN3|ADRA1A|BCL2L11|DDX17|CRHR1|MDK|FHL2| VAMP2|UBR5|ATP1A1|ITGB3|YAP1|RDX|CALM1
Regulation of supramolecular fiber organization	GO:1902903	0.0043	5.95E-05	0.236653154	PIK3R2|PFN1|APOA1|FHOD1|APP|PRKCE|TMOD3|PSEN1|DLG1| MTOR|ACTN2|PROX1|HSPG2|EVL|CYFIP2|RDX|CDC42
Regulation of gene expression	GO:0010468	0.0045	6.35E-05	0.234678749	GTPBP1|NFKBIA|HNRNPL|PIK3R2|PFN1|MED31|CCND1|LTF|RGS2|APOA1| LRP1|BMP4|IRAK2|VHL|FHOD1|MED4|PSMA6|ELOB|CBFA2T2|IRF8|SETDB1| ARID5B|APP|RAD21|LEO1|TSC22D4|AXL|ZNF3|MEPCE|PABPC1|CC2D1A| MAGOHB|TRIM41|PSEN1|ZMIZ1|CHP1|GTF2F2|HNRNPA1|POLR2K|HOXA9| DLG1|LYAR|THRAP3|BLM|NR3C2|FGF17|G3BP2|MTOR|ACTN2|DLL1|PROX1| CDC73|UCHL5|DHX9|YY1AP1|MAP3K7|PRMT6|BAG2|ZNF451|ARFGEF2|UBR2| TRAF1|AGER|SYK|MBNL2|PRKCZ|SMARCA2|RTF1|PICALM|NFATC2|MARF1| DDX17|GAPDH|SMU1|MYCBP|ITGB2|MAP2K7|ELAVL1|MDK|CD14|FHL2|HRAS| EEF1D|IKZF2|ROBO1|RACK1|UBR5|PUF60|CDK5RAP3|CHD4|VIM|DDIT3| ITGB3|APBA2|POLR2A|YAP1|CTCF|RDX|HOXA13|EIF4A3
Phagocytosis	GO:0006909	0.0046	6.58E-05	0.233724217	LRP1|IRF8|AXL|PRKCE|TGM2|SYK|ITGB2|CD14|ITGB3|VAV1|CDC42
Heart development	GO:0007507	0.0046	6.64E-05	0.233724217	TGFBR3|BMP4|ADAMTS1|PLEC|PSEN1|ZMIZ1|MTOR|ACTN2|DLL1|PROX1| TAB2|ADRA1A|FHL2|ACAN|ROBO1|YAP1|AP2B1|NEB|HOXA13|CDC42|MTHFD1
Telencephalon cell migration	GO:0022029	0.0046	6.51E-05	0.233724217	SLIT1|PSEN1|ZMIZ1|SYNE2|SUN1|PEX5|ROBO1
Cellular component assembly	GO:0022607	0.0046	6.55E-05	0.233724217	TGFBR3|SF3A1|SMPD3|AIMP2|MED31|APOA1|KCNJ2|DSG1|MED4|ELOB|CPSF6| CEP164|ATG3|APP|TMOD3|OSBPL2|PLEC|PSEN1|ALDH1A3|TMEM216|DLG1| BLM|G3BP2|TGM2|EXO1|ACTN2|PROX1|CDC73|DHX9|VTA1|BCCIP|GTF2B| UBR2|TRAF1|HLA-DQA2|HLA-DQB1|UBD|STAM|EVL|PICALM|CEP250|ELAVL1|RNF212|PEX5|PPP6C| SNRPB|VAMP2|PUF60|ITGB3|TLN2|TNNT1|AP2S1|NAP1L1|YAP1|ACD|NEB|KCTD7|CTCF|CDC42
Negative regulation of protein modification process	GO:0031400	0.0046	6.61E-05	0.233724217	PARD6A|RGS2|LRP1|BMP4|MAD2L1|DUSP16|PRKCE|PLEC|PSEN1|CHP1| DUSP10|PRMT6|BAG2|ZNF451|SHB|PRKCZ|RACK1|UBR5|CDK5RAP3|CALM1
Regulation of lipase activity	GO:0060191	0.0046	6.62E-05	0.233724217	RGS2|APOA1|LRP1|PRKCZ|ADRA1A|FGFR1|HRAS|ADCYAP1R1
Regulation of cell development	GO:0060284	0.0046	6.61E-05	0.233724217	LTF|APOA1|BMP4|SLIT1|PSEN1|MTOR|TGM2|DLL1|DUSP10|PROX1| SHB|PTPRZ1|MDK|DCC|ROBO1|NUMB|ITGB3|NAP1L1|YAP1|CDC42
Protein ubiquitination	GO:0016567	0.005	7.30E-05	0.230103	APPBP2|STUB1|AIMP2|MED31|VHL|RNF144B|ELOB|ATG3|LEO1|AKTIP|UBE2E1|RNFT1| TRIM41|CDC73|UBE2U|UBR2|TRAF1|RNF5|UBR4|UBD|RACK1|UBR5|DTX3|CDC42
Regulation of membrane potential	GO:0042391	0.005	7.25E-05	0.230103	DLD|LTF|KCNJ2|APP|CHRNB1|SLC34A1|PSEN1|DLG1|MTOR|ACTN2| PRKCZ|UCN3|ADRA1A|RACK1|ATP1A1|KCTD7|EIF4A3|CALM1
Membrane organization	GO:0061024	0.0051	7.47E-05	0.229242982	TRAM2|TOMM22|RAB3A|APOA1|GOLPH3L|HK2|CHRNB1|OSBPL2|PLEC|CHP1|DLG1|CRB1|SNAPIN| SCP2|SH3GLB2|STAM|BCL2L11|PICALM|ITGB2|SUN1|PEX5|PPP6C|GPHN|VAMP2|CDC42|CALM1
Skeletal system development	GO:0001501	0.0053	7.92E-05	0.227572413	SMPD3|LTF|BMP4|SNX19|HAPLN1|ARID5B|PSEN1|USP1|HOXA9|DLG1|TGM2| TMEM38B|EXT2|ACAN|FGFR1|MAP2K6|ACD|HOXA13|EIF4A3|MTHFD1
Regulation of phospholipase activity	GO:0010517	0.0053	7.78E-05	0.227572413	RGS2|LRP1|PRKCZ|ADRA1A|FGFR1|HRAS|ADCYAP1R1
Regulation of endocytosis	GO:0030100	0.0053	7.82E-05	0.227572413	LRP1|APP|AXL|DLL1|SYK|PICALM|CD14|NUMB|ITGB3|AP2S1|CDC42|CALM1

Regulation of cell cycle phase transition	GO:1901987	0.0053	7.90E-05	0.227572413	CCND1|APP|ADAMTS1|MAD2L1|RAD21|MEPCE|TMOD3|MRE11|DLG1| BLM|PROX1|CDC73|UBD|RAD1|SMARCA2|RAD9B|CDK5RAP3|RDX
Tissue development	GO:0009888	0.0055	8.27E-05	0.225963731	TGFBR3|SMPD3|AIMP2|PFN1|CCND1|BMP4|CBFA2T2|SNX19|ARID5B|LEO1| SOSTDC1|PLEC|PSEN1|ALDH1A3|DLG1|MTOR|TGM2|ACTN2|DLL1|PROX1| CDC73|BCCIP|KIF20B|TMEM38B|HSPG2|B4GALT1|ADRA1A|RTF1|VDAC1|EXT2| DDX17|ITGB2|FHL2|ACAN|FGFR1|HRAS|ROBO1|VIM|ITGB3| YAP1|NEB|RDX|HOXA13|CDC42|MTHFD1
mRNA splicing, via spliceosome	GO:0000398	0.0056	8.49E-05	0.225181197	SF3A1|SRRM2|PABPC1|MAGOHB|HNRNPA1|DHX9|PPIL1|DDX17| SMU1|PRPF40A|SNRPB|PUF60|EIF4A3
Transcription, DNA-templated	GO:0006351	0.0059	8.99E-05	0.222914799	POLR2I|MED31|BMP4|MED4|ELOB|CBFA2T2|GTF2E1|LEO1|GTF2F2| POLR2K|HOXA9|PROX1|CDC73|DHX9|GTF2B|RTF1|NFATC2|EEF1D|POLR2A|HOXA13
Transcription by RNA polymerase II	GO:0006366	0.0059	9.05E-05	0.222914799	POLR2I|MED31|BMP4|MED4|ELOB|GTF2E1|LEO1|GTF2F2| POLR2K|PROX1|CDC73|GTF2B|RTF1|NFATC2|POLR2A|HOXA13
Cell activation	GO:0001775	0.006	9.26E-05	0.222184875	LCP2|PIK3R2|LRP1|IRF8|APP|AXL|PRKCE|ZNF3|PSEN1|HOXA9|DLG1| MTOR|EXO1|DLL1|YY1AP1|AGER|SYK|UBD|SHB|ITGB2|MDK|VAMP2|ITGB3|VAV1
Astrocyte activation involved in immune response	GO:0002265	0.0061	9.43E-05	0.221467016	LRP1|APP|PSEN1
DNA metabolic process	GO:0006259	0.0061	9.51E-05	0.221467016	SMPD3|STUB1|POLR2I|POLB|CEP164|RAD21|PCLAF|FANCI|MRE11|USP1| BLM|EXO1|UCHL5|DHX9|BCCIP|PRMT6|UBE2U|UBR2|RAD1| RAD9B|MARF1|RNF212|UBR5|NAP1L1|ACD|CTCF
Positive regulation of binding	GO:0051099	0.0061	9.64E-05	0.221467016	HNRNPL|PON1|LRP1|BMP4|APP|AKTIP|PSEN1|DHX9|GTF2B|ACD|CALM1
Immune response	GO:0006955	0.0063	9.92E-05	0.220065945	LCP2|TGFBR3|GTPBP1|PIK3R2|LTF|CCDC92|LRP1|IRF8|APP|AXL| PRKCE|PLEC|PSEN1|LYAR|PIGR|G3BP2|MTOR|EXO1|DLL1|DHX9| HLA-DQA2|HLA-DQB1|SYK|UBD|ATAD3A|GAPDH|CRHR1|MDK|CD14|PPP6C|HRAS| VAMP2|VIM|VAV1|MAP3K14|FYB1|CDC42
Artery development	GO:0060840	0.0064	1.00E-04	0.219382003	LRP1|BMP4|ZMIZ1|PROX1|ROBO1|DDIT3|AP2B1|HOXA13
Cerebral cortex cell migration	GO:0021795	0.007	1.10E-04	0.215490196	PSEN1|ZMIZ1|SYNE2|SUN1|PEX5|ROBO1
Positive regulation of cell adhesion	GO:0045785	0.007	1.10E-04	0.215490196	PIK3R2|APOA1|NID1|PRKCE|ZMIZ1|TGM2|DUSP10|HLA-DQA2|HLA-DQB1| AGER|SYK|SHB|PRKCZ|SMARCA2|ITGB2|MDK|ITGB3|VAV1|CDC42
Immune system development	GO:0002520	0.0072	1.20E-04	0.21426675	TGFBR3|SMPD3|PIK3R2|BMP4|POLB|IRF8|APP|AXL|TMOD3|PSEN1|HOXA9| LYAR|MTOR|EXO1|DLL1|YY1AP1|SYK|UBD|SHB|BCL2L11| PICALM|PTPRZ1|CDK5RAP3|VAV1|CDC42
Hematopoietic or lymphoid organ development	GO:0048534	0.0074	1.20E-04	0.213076828	TGFBR3|SMPD3|PIK3R2|BMP4|POLB|IRF8|APP|AXL|TMOD3|PSEN1| HOXA9|LYAR|MTOR|DLL1|YY1AP1|SYK|UBD|SHB|BCL2L11|PICALM|PTPRZ1|CDK5RAP3|VAV1|CDC42
Regulation of immune response	GO:0050776	0.0075	1.20E-04	0.212493874	LCP2|NFKBIA|LTF|IRAK2|APP|PRKCE|TRIM41|PSEN1|LYAR| PIGR|DUSP10|DHX9|S100A14|MAP3K7|HLA-DQB1|AGER|SYK| SHB|PRKCZ|NFATC2|ITGB2|MAP2K7|CD14|HRAS|MAP2K6|VAV1|FYB1
Leukocyte activation	GO:0045321	0.0076	1.20E-04	0.211918641	LCP2|PIK3R2|IRF8|APP|AXL|PRKCE|ZNF3|PSEN1|DLG1|MTOR| EXO1|DLL1|YY1AP1|AGER|SYK|UBD|SHB|ITGB2|MDK|VAMP2|VAV1
Negative regulation of protein metabolic process	GO:0051248	0.0078	1.30E-04	0.21079054	PARD6A|LTF|RGS2|LRP1|BMP4|SPINK7|APP|MAD2L1|DUSP16|PRKCE| PLEC|PSEN1|CHP1|DUSP10|UCHL5|PRMT6|BAG2|ZNF451|HSPG2|SHB| PRKCZ|PICALM|MARF1|GAPDH|RACK1|UBR5|CDK5RAP3|ITGB3|ITM2B|EIF4A3|CALM1
Epithelial cell fate commitment	GO:0072148	0.0078	1.30E-04	0.21079054	SOSTDC1|DLL1|PROX1|HOXA13
Cellular biosynthetic process	GO:0044249	0.0079	1.30E-04	0.210237291	DLD|GTPBP1|SMPD3|POLR2I|PIK3R2|AIMP2|MED31|MLEC|APOA1| BMP4|MED4|ELOB|CBFA2T2|GPAT3|POLB|PLOD2|GTF2E1|LEO1|PCLAF| PANK1|OSBPL2|MRE11|PSEN1|ALDH1A3|GTF2F2|POLR2K|USP1|HOXA9| DLG1|MTOR|PROX1|CDC73|DHX9|GTF2B|SCP2|TMEM38B|SYK|B4GALT1|HACD2| RTF1|EXT2|NFATC2|RPL14|RPS8|PAICS|ACAN|EEF1D|RPS24|GPHN|

					RACK1|POLR2A|MRPL37|ACD|PIGN|HOXA13|MTHFD1
Cellular nitrogen compound biosynthetic process	GO:0044271	0.0079	1.30E-04	0.210237291	DLD|GTPBP1|SMPD3|POLR2I|AIMP2|MED31|BMP4|MED4|ELOB|CBFA2T2| POLB|GTF2E1|LEO1|PCLAF|PANK1|MRE11|GTF2F2|POLR2K|USP1|HOXA9| DLG1|MTOR|PROX1|CDC73|DHX9|GTF2B|HACD2|RTF1|NFATC2|RPL14|RPS8| PAICS|EEF1D|RPS24|RACK1|POLR2A|MRPL37|ACD|HOXA13|MTHFD1
Regulation of RNA metabolic process	GO:0051252	0.0079	1.30E-04	0.210237291	GTPBP1|NFKBIA|HNRNPL|PIK3R2|PFN1|MED31|CCND1|LTF|BMP4|IRAK2|VHL| FHOD1|MED4|PSMA6|CBFA2T2|CPSF6|IRF8|ARID5B|APP|RAD21|LEO1|TSC22D4| ZNF3|MEPCE|PABPC1|CC2D1A|TRIM41|PSEN1|ZMIZ1|CHP1|GTF2F2|HNRNPA1| POLR2K|HOXA9|DLG1|LYAR|THRAP3|BLM|NR3C2|G3BP2|MTOR|ACTN2|DLL1| PROX1|CDC73|UCHL5|DHX9|YY1AP1|MAP3K7|PRMT6|ZNF451|TRAF1|AGER|SYK| MBNL2|PRKCZ|SMARCA2|RTF1|PICALM|NFATC2|DDX17|SMU1|MYCBP|ITGB2| MAP2K7|ELAVL1|MDK|FHL2|HRAS|IKZF2|PUF60|CDK5RAP3|CHD4| VIM|DDIT3|POLR2A|YAP1|CTCF|HOXA13|EIF4A3
Regulation of cellular component size	GO:0032535	0.008	1.30E-04	0.209691001	PIK3R2|PFN1|SLIT1|PRKCE|TMOD3|DLG1|MTOR|ACTN2|SNAPIN| EVL|PICALM|DCC|VAV1|CYFIP2|NEB|RDX
Localization within membrane	GO:0051668	0.0081	1.40E-04	0.209151498	TRAM2|TOMM22|RAB3A|GOLPH3L|ATG3|DLG1|PIGR|ACTN2|SCP2|ARFGEF2| AGER|PRKCZ|ITGB2|PEX5|GPHN|VAMP2|FYB1|SRP72|RDX|CALM1
Positive regulation of NF-kappaB transcription factor activity	GO:0051092	0.0082	1.40E-04	0.208618615	LTF|IRAK2|PSMA6|APP|DHX9|MAP3K7|TRAF1|AGER|PRKCZ|ITGB2
Regulation of mitotic cell cycle phase transition	GO:1901990	0.0082	1.40E-04	0.208618615	CCND1|APP|ADAMTS1|MAD2L1|RAD21|MEPCE|TMOD3|MRE11| DLG1|BLM|CDC73|UBD|SMARCA2|CDK5RAP3|RDX
Regulation of MAPK cascade	GO:0043408	0.0083	1.40E-04	0.208092191	PIK3R2|RGS2|BMP4|APP|DUSP16|PRKCE|PSEN1|DLG1|DUSP10|MAP3K7| TRAF1|AGER|SYK|PRKCZ|ADRA1A|MAP2K7|FGFR1|HRAS|ROBO1|CDK5RAP3|ITGB3|MAP2K6|CDC42
Regulation of protein localization to cell periphery	GO:1904375	0.0083	1.40E-04	0.208092191	PIK3R2|LRP1|PRKCE|DLG1|PRKCZ|PICALM|HRAS|RACK1|NUMB
Organelle organization	GO:0006996	0.0084	1.40E-04	0.207572071	TRAM2|TOMM22|PARD6A|SMPD3|RAB3A|PFN1|CRIPT|TUBA4A|FHOD1|SNX19| SETDB1|GOLPH3L|CEP164|ATG3|SMC2|HK2|MAD2L1|RAD21|PCLAF|AKTIP|TMOD3| RANBP10|PLEC|MRE11|PSEN1|TMEM216|CHP1|GTF2F2|DLG1|BLM|SYNE2|G3BP2| MTOR|EXO1|ACTN2|PROX1|UCHL5|DHX9|VTA1|SNAPIN|BCCIP|PRMT6|ARFGEF2| UBR2|TMEM38B|SIK3|STAM|PRKCZ|ATAD3A|SMARCA2|EVL|BCL2L11|PICALM| MARF1|GAPDH|CEP250|SUN1|MDK|PRPF40A|RNF212|PEX5|PPP6C|VAMP2| AMOTL2|CHD4|VIM|TLN2|TNNT1|NAP1L1|ACD|NEB|CTCF|HOXA13|CDC42|CALM1
Positive regulation of gene expression	GO:0010628	0.0086	1.50E-04	0.206550155	HNRNPL|BMP4|IRF8|APP|PABPC1|PSEN1|THRAP3|FGF17|MTOR|DLL1|DHX9| MAP3K7|BAG2|ARFGEF2|AGER|SYK|PRKCZ|NFATC2|GAPDH|ELAVL1|MDK| CD14|HRAS|ROBO1|UBR5|VIM|DDIT3|ITGB3|POLR2A|YAP1|CTCF|RDX|EIF4A3
Regulation of protein-containing complex assembly	GO:0043254	0.0086	1.50E-04	0.206550155	STUB1|PIK3R2|RAB3A|PFN1|PRKCE|TMOD3|DLG1|MTOR|SYK|PRKCZ| EVL|BCL2L11|PEX5|RACK1|CYFIP2|RDX|CDC42
DNA repair	GO:0006281	0.0087	1.50E-04	0.206048075	STUB1|POLR2I|POLB|CEP164|RAD21|PCLAF|FANCI|MRE11|USP1|BLM| EXO1|UCHL5|BCCIP|PRMT6|UBE2U|RAD1|RAD9B|MARF1|UBR5
Integrin-mediated signaling pathway	GO:0007229	0.0087	1.50E-04	0.206048075	APOA1|ADAMTS1|SYK|ITGB2|ITGB3|VAV1|FYB1|CDC42
Embryo development	GO:0009790	0.0087	1.50E-04	0.206048075	DLD|PFN1|BMP4|KIDINS220|POLB|LEO1|PSEN1|ALDH1A3|ZMIZ1|HOXA9| DLG1|DLL1|PROX1|CDC73|CHTOP|KIF20B|PPIL1|RTF1|BCL2L11|EXT2| ITGB2|FGFR1|RACK1|ITGB3|APBA2|YAP1|ACD|HOXA13|EIF4A3|CDC42|MTHFD1
Cell migration	GO:0016477	0.0087	1.50E-04	0.206048075	TGFBR3|APOA1|SLIT1|ARID5B|AXL|PLEC|PSEN1|ZMIZ1|NET1|SYNE2|PROX1| SYK|PRKCZ|B4GALT1|NFATC2|ITGB2|SUN1|MDK|PRPF40A| DCC|PEX5|FGFR1|ROBO1|AMOTL2|DDIT3|ITGB3|VAV1|CDC42

Fc receptor signaling pathway	GO:0038093	0.0087	1.50E-04	0.206048075	PRKCE|PIGR|MAP3K7|SYK|MAP2K7|VAV1
Regulation of cytoskeleton organization	GO:0051493	0.0089	1.60E-04	0.205060999	PIK3R2|PFN1|APOA1|LRP1|FHOD1|PRKCE|TMOD3|KIF15|DLG1|MTOR| ACTN2|PROX1|EVL|MDK|HRAS|ITGB3|CYFIP2|NEB|RDX|CDC42
Cellular response to ionizing radiation	GO:0071479	0.0092	1.60E-04	0.203621217	NET1|BLM|RAD1|RAD9B|HRAS|EEF1D|YAP1
Regulation of actomyosin structure organization	GO:0110020	0.0092	1.60E-04	0.203621217	PIK3R2|PFN1|APOA1|FHOD1|MTOR|PROX1|EVL|CDC42
Myeloid cell homeostasis	GO:0002262	0.0093	1.70E-04	0.203151705	TGFBR3|BMP4|AXL|TMOD3|LYAR|BCL2L11|RPS24|CDK5RAP3|MTHFD1
Response to organic cyclic compound	GO:0014070	0.0093	1.70E-04	0.203151705	NFKBIA|CCND1|BMP4|DSG1|APP|PRKCE|SLC34A1|PPP2R2A|ZMIZ1|HOXA9| BLM|NR3C2|TGM2|DHX9|TMEM38B|SLC22A6|UCN3|BCL2L11|DDX17| MDK|UBR5|ATP1A1|YAP1|ADCYAP1R1|HOXA13|EIF4A3|CALM1
Telencephalon development	GO:0021537	0.0093	1.70E-04	0.203151705	BMP4|SLIT1|PSEN1|ALDH1A3|ZMIZ1|SYNE2|PROX1|UCHL5|SUN1|MDK|PEX5|ROBO1|NUMB
Regulation of actin polymerization or depolymerization	GO:0008064	0.0094	1.70E-04	0.202687215	PIK3R2|PFN1|PRKCE|TMOD3|DLG1|MTOR|ACTN2|EVL|CYFIP2|RDX
Cell activation involved in immune response	GO:0002263	0.0095	1.70E-04	0.202227639	LRP1|IRF8|APP|PRKCE|PSEN1|MTOR|EXO1|DLL1|SYK|MDK|VAMP2
Cellular response to lipid	GO:0071396	0.0095	1.70E-04	0.202227639	NFKBIA|BMP4|IRAK2|IRF8|AXL|PRKCE|TRIM41|ZMIZ1|NR3C2|CDC73| SYK|BCL2L11|DDX17|MAP2K7|CD14|UBR5|ATP1A1|VIM|YAP1
Positive regulation of hydrolase activity	GO:0051345	0.0096	1.70E-04	0.201772877	APOA1|APP|NET1|MTOR|TGM2|AGER|SYK|PRKCZ|ADRA1A|BCL2L11|PICALM| TBC1D10A|FGFR1|HRAS|ROBO1|RACK1|ADAP1|VAV1|CYFIP2|ADCYAP1R1|CALM1
Protein-containing complex organization	GO:0043933	0.0097	1.80E-04	0.201322827	TGFBR3|SF3A1|AIMP2|MED31|APOA1|KCNJ2|MED4|ELOB|CPSF6|GTF2E1| APP|OSBPL2|PLEC|ALDH1A3|DLG1|BLM|G3BP2|TGM2|CDC73|DHX9| VTA1|SNAPIN|GTF2B|TRAF1|HLA-DQA2|HLA-DQB1|EVL|PICALM|ELAVL1| PEX5|PPP6C|SNRPB|VAMP2|PUF60|AP2S1|NAP1L1|YAP1|KCTD7|CALM1
Skeletal system morphogenesis	GO:0048705	0.0097	1.80E-04	0.201322827	SMPD3|LTF|BMP4|ARID5B|PSEN1|HOXA9|DLG1|EXT2|ACAN|FGFR1|EIF4A3|MTHFD1
Positive regulation of cytoskeleton organization	GO:0051495	0.0097	1.80E-04	0.201322827	PFN1|APOA1|FHOD1|PRKCE|DLG1|MTOR|ACTN2|PROX1|EVL|HRAS|CDC42
Establishment of organelle localization	GO:0051656	0.0097	1.80E-04	0.201322827	RAB3A|FHOD1|SLIT1|FYCO1|MAD2L1|PSEN1|DLG1|SYNE2|SNAPIN| BCCIP|SYK|PRKCZ|PICALM|SUN1|PPP6C|CDC42
Cellular response to peptide	GO:1901653	0.0097	1.80E-04	0.201322827	SMPD3|PIK3R2|LRP1|APP|TRIM41|PSEN1|ACTN2|AGER|PRKCZ| BCL2L11|CRHR1|VAMP2|VIM|ITGB3
mRNA 3-end processing	GO:0031124	0.0098	1.80E-04	0.200877392	CPSF6|APP|LEO1|PABPC1|CSTF3|CDC73
Regulation of intracellular transport	GO:0032386	0.0098	1.80E-04	0.200877392	PIK3R2|BMP4|CPSF6|PSEN1|CHP1|ACTN2|DHX9|SNAPIN|SCP2|KIF20B|ITGB2|HRAS|VAMP2|UBR5|RDX
Regulation of hydrolase activity	GO:0051336	0.0098	1.80E-04	0.200877392	LTF|RGS2|APOA1|LRP1|SPINK7|APP|CHP1|NET1|MTOR|TGM2|UCHL5|AGER| SYK|PRKCZ|ADRA1A|BCL2L11|PICALM|GAPDH|TBC1D10A|FGFR1| HRAS|ROBO1|RACK1|CDK5RAP3|ADAP1|VAV1|CYFIP2|ADCYAP1R1|RDX|CALM1
Blood vessel development	GO:0001568	0.0099	1.90E-04	0.200436481	TGFBR3|LRP1|BMP4|PSEN1|ZMIZ1|DLL1|PROX1|HSPG2|SYK|SHB| B4GALT1|ESM1|ROBO1|AMOTL2|DDIT3|ITGB3|YAP1|AP2B1|HOXA13
Regulation of anatomical structure size	GO:0090066	0.0099	1.90E-04	0.200436481	PIK3R2|PFN1|RGS2|SLIT1|PRKCE|TMOD3|DLG1|MTOR|ACTN2|SNAPIN| ADRA1A|EVL|PICALM|EXT2|DCC|VAV1|CYFIP2|NEB|RDX

Centrosome localization	GO:0051642	0.01	1.90E-04	0.2	FHOD1|MAD2L1|DLG1|SYNE2|SUN1
Cellular response to nitrogen compound	GO:1901699	0.01	1.90E-04	0.2	SMPD3|PIK3R2|LRP1|APP|CHRNB1|TRIM41|SLC34A1|PSEN1|BLM|MTOR| TGM2|ACTN2|DHX9|UBR2|TMEM38B|AGER|PRKCZ|BCL2L11|CRHR1|VAMP2|VIM|ITGB3
Positive regulation of DNA-binding transcription factor activity	GO:0051091	0.0101	1.90E-04	0.199567863	LTF|IRAK2|PSMA6|ARID5B|APP|TRIM41|DHX9|MAP3K7|TRAF1|AGER|PRKCZ|ITGB2|DDIT3
Immune response-activating cell surface receptor signaling pathway	GO:0002429	0.0102	1.90E-04	0.199139983	LCP2|PRKCE|PSEN1|MAP3K7|HLA-DQB1|SYK|SHB|NFATC2|HRAS|VAV1|FYB1
Astrocyte activation	GO:0048143	0.0102	1.90E-04	0.199139983	LRP1|APP|PSEN1|AGER
Negative regulation of cell differentiation	GO:0045596	0.0104	2.00E-04	0.198296666	NFKBIA|CCND1|LTF|RGS2|BMP4|SLIT1|APP|LEO1|SOSTDC1|PSEN1|HOXA9| DLL1|DUSP10|PROX1|CDC73|SHB|SMARCA2|NFATC2|MDK|DCC|DDIT3|ITGB3|YAP1
Organonitrogen compound metabolic process	GO:1901564	0.0104	2.00E-04	0.198296666	APPBP2|DLD|TGFBR3|PSMD8|JOSD1|GTPBP1|SMPD3|STUB1|PON1|AIMP2| MED31|CCND1|MLEC|LTF|APOA1|BMP4|CMA1|IRAK2|VHL|RNF144B|PSMA6| ELOB|SETDB1|PLOD2|ATG3|APP|ADAMTS1|WDYHV1|HK2|DUSP16|LEO1| AKTIP|AXL|PANK1|UBE2E1|COPS6|RNFT1|PRKCE|TRIM41|SLC34A1|ENO3|PPP2R2A| PSEN1|USP1|DLG1|MTOR|TGM2|DUSP10|CDC73|UCHL5|SNAPIN|MAP3K7|PRMT6| GTF2B|BAG2|ZNF451|UBE2U|UBR2|PPIL1|TRAF1|RNF5|UBR4|SIK3|SYK|UBD| STAM|PRKCZ|B4GALT1|HACD2|RTF1|PTPRZ1|EXT2|RPL14|RPS8|GAPDH|MAP2K7| PAICS|TBC1D10A|ACAN|RNF212|PPP6C|FGFR1|EEF1D|SNRPB|RPS24|GPHN| RACK1|UBR5|CDK5RAP3|CHD4|DDIT3|DTX3|MAP2K6|MRPL37|CYFIP2|MAP3K14|PIGN|CDC42|MTHFD1
Vesicle-mediated transport in synapse	GO:0099003	0.0106	2.10E-04	0.197469413	RAB3A|PSEN1|ITSN2|SNAPIN|ITSN1|PICALM|VAMP2|AP2S1|AP2B1
Regulation of actin filament bundle assembly	GO:0032231	0.0107	2.10E-04	0.197061622	PIK3R2|PFN1|APOA1|FHOD1|MTOR|EVL|RDX|CDC42
Positive regulation of catabolic process	GO:0009896	0.0115	2.20E-04	0.193930216	GTPBP1|STUB1|APOA1|LRP1|RNF144B|ELOB|APP|FYCO1|RNFT1|PRKCE| PABPC1|PSEN1|MTOR|MAP3K7|BAG2|BCL2L11|VDAC1|RACK1|RDX
Regulation of protein binding	GO:0043393	0.0117	2.30E-04	0.193181414	TGFBR3|STUB1|LRP1|BMP4|APP|AKTIP|PSEN1|SNAPIN|BAG2|RACK1|CDC42
Positive regulation of chromosome organization	GO:2001252	0.0119	2.30E-04	0.192445304	SETDB1|SMC2|RAD21|MRE11|HNRNPA1|UCHL5|MAP2K7|ACD
Cellular component morphogenesis	GO:0032989	0.012	2.40E-04	0.192081875	RAB3A|KIDINS220|SLIT1|APP|TMOD3|PLEC|ARHGEF25|ACTN2|PROX1|KIF20B| PRKCZ|PICALM|PTPRZ1|MDK|DCC|ROBO1|NUMB|TNNT1|CYFIP2|NEB|CDC42
mRNA polyadenylation	GO:0006378	0.0122	2.40E-04	0.191364017	APP|LEO1|PABPC1|CSTF3|CDC73
Regulation of nucleobase-containing compound metabolic process	GO:0019219	0.0122	2.40E-04	0.191364017	GTPBP1|NFKBIA|HNRNPL|PIK3R2|PFN1|MED31|CCND1|LTF|BMP4|IRAK2|VHL| FHOD1|MED4|PSMA6|CBFA2T2|CPSF6|IRF8|ARID5B|APP|RAD21|LEO1|TSC22D4| ZNF3|MEPCE|PABPC1|CC2D1A|TRIM41|MRE11|PSEN1|ZMIZ1|CHP1|GTF2F2|HNRNPA1| POLR2K|USP1|HOXA9|DLG1|LYAR|THRAP3|BLM|NR3C2|G3BP2|MTOR|ACTN2| DLL1|PROX1|CDC73|UCHL5|DHX9|YY1AP1|MAP3K7|PRMT6|ZNF451|TRAF1| AGER|SYK|MBNL2|PRKCZ|SMARCA2|RTF1|PICALM|NFATC2|DDX17|SMU1| MYCBP|ITGB2|MAP2K7|ELAVL1|MDK|FHL2|HRAS|IKZF2|UBR5|PUF60| CDK5RAP3|CHD4|VIM|DDIT3|POLR2A|YAP1|ACD|CTCF|HOXA13|EIF4A3
Cell cycle process	GO:0022402	0.0123	2.40E-04	0.191009489	PARD6A|SMPD3|CCND1|APP|SMC2|MAD2L1|RAD21|PCLAF|TMOD3|PLEC| MRE11|DLG1|BLM|BCCIP|UBR2|RAD1|RAD9B|BCL2L11|MARF1| CEP250|SUN1|RNF212|PPP6C|CDK5RAP3|HOXA13|CALM1
Striated muscle cell differentiation	GO:0051146	0.013	2.60E-04	0.188605665	BMP4|TMOD3|PLEC|MTOR|ACTN2|PROX1|ADRA1A|NFATC2|FHL2|TNNT1|NEB

Regulation of actin filament organization	GO:0110053	0.013	2.60E-04	0.188605665	PIK3R2|PFN1|APOA1|FHOD1|PRKCE|TMOD3|DLG1|MTOR|ACTN2|EVL|CYFIP2|RDX|CDC42
Regulation of lipid transport	GO:0032368	0.0132	2.70E-04	0.187942607	NFKBIA|PON1|APOA1|LRP1|SCP2|SYK|CRHR1|ITGB3|MAP2K6
Hemopoiesis	GO:0030097	0.0136	2.70E-04	0.186646109	TGFBR3|SMPD3|PIK3R2|BMP4|IRF8|APP|AXL|TMOD3|PSEN1|HOXA9|LYAR| MTOR|DLL1|YY1AP1|SYK|UBD|SHB|PICALM|PTPRZ1|CDK5RAP3|VAV1|CDC42
Response to magnesium ion	GO:0032026	0.0139	2.80E-04	0.18569852	SMPD3|CCND1|SLC34A1|CD14
Toll-like receptor 4 signaling pathway	GO:0034142	0.0139	2.80E-04	0.18569852	NFKBIA|PRKCE|S100A14|CD14
Signal transduction	GO:0007165	0.014	2.90E-04	0.185387196	LCP2|TGFBR3|GTPBP1|NFKBIA|SMPD3|STUB1|PIK3R2|CCND1|RGS2|APOA1| LRP1|BMP4|IRAK2|KIDINS220|POLB|SETDB1|ARID5B|APP|ADAMTS1|PSG6| S100A1|MAD2L1|LEO1|AXL|CHRNB1|SOSTDC1|PRKCE|RANBP10|MRE11|PSEN1| ZMIZ1|CHP1|DLG1|NET1|BLM|PIGR|NR3C2|FGF17|G3BP2|MTOR|TGM2|ACTN2| DLL1|DUSP10|CDC73|S100A14|MAP3K7|ARFGEF2|TRAF1|TMEM38B|HLA-DQB1| AGER|SIK3|SYK|STAM|SHB|PRKCZ|UCN3|ADRA1A|ITSN1|RAD1|RTF1 |RAD9B|EVL|BCL2L11|EXT2|NFATC2|DDX17|ITGB2|MAP2K7|CRHR1|MDK| CD14|DCC|FGFR1|HRAS|ROBO1|AMOTL2|UBR5|CDK5RAP3|ADAP1|VIM|DDIT3| DTX3|ITGB3|MAP2K6|VAV1|YAP1|MAP3K14|ADCYAP1R1|FYB1|RDX|CDC42|CALM1
Antigen receptor-mediated signaling pathway	GO:0050851	0.0143	2.90E-04	0.184466396	LCP2|PSEN1|MAP3K7|HLA-DQB1|SYK|SHB|NFATC2|HRAS|FYB1
Organic substance biosynthetic process	GO:1901576	0.0143	2.90E-04	0.184466396	DLD|GTPBP1|SMPD3|POLR2I|PIK3R2|AIMP2|MED31|MLEC|APOA1|BMP4|MED4| ELOB|CBFA2T2|GPAT3|POLB|PLOD2|GTF2E1|LEO1|PCLAF|PANK1|OSBPL2|MRE11| PSEN1|ALDH1A3|GTF2F2|POLR2K|USP1|HOXA9|DLG1|MTOR|PROX1|CDC73|DHX9| GTF2B|SCP2|TMEM38B|SYK|B4GALT1|HACD2|RTF1|EXT2|NFATC2|RPL14|RPS8| PAICS|ACAN|EEF1D|RPS24|GPHN|RACK1|POLR2A|MRPL37|ACD|PIGN|HOXA13|MTHFD1
Glial cell activation	GO:0061900	0.0148	3.00E-04	0.182973828	LRP1|APP|PSEN1|AGER|ITGB2
Transcription initiation from RNA polymerase II promoter	GO:0006367	0.0149	3.10E-04	0.182681373	POLR2I|MED31|MED4|ELOB|GTF2E1|GTF2F2|GTF2B
Positive regulation of cell population proliferation	GO:0008284	0.0149	3.10E-04	0.182681373	TGFBR3|SMPD3|CCND1|LTF|BMP4|ADAMTS1|ZMIZ1|DLG1|FGF17|DLL1|PROX1| DHX9|CHTOP|KIF20B|AGER|SYK|PRKCZ|B4GALT1|ESM1|SMARCA2| NFATC2|MDK|FGFR1|HRAS|ITGB3|NAP1L1|YAP1|CDC42
Vesicle-mediated transport	GO:0016192	0.0149	3.10E-04	0.182681373	RAB3A|LRP1|SNX19|IRF8|GOLPH3L|APP|AKTIP|AXL|PRKCE|PSEN1|DENND5A| ITSN2|PIGR|TGM2|DLL1|VTA1|SNAPIN|ARFGEF2|HSPG2|AGER|SYK|STAM|ITSN1| PICALM|ITGB2|TBC1D10A|CD14|PPP6C|HRAS|VAMP2|ITGB3|AP2S1|VAV1|AP2B1|CDC42
Regulation of actin filament polymerization	GO:0030833	0.0149	3.10E-04	0.182681373	PIK3R2|PFN1|PRKCE|TMOD3|DLG1|MTOR|EVL|CYFIP2|RDX
Cell morphogenesis	GO:0000902	0.015	3.20E-04	0.182390874	RAB3A|VHL|KIDINS220|SLIT1|APP|AXL|PLEC|ARHGEF25|PROX1|CRB1|KIF20B| PRKCZ|PICALM|PTPRZ1|MDK|DCC|ROBO1|NUMB|ITGB3|YAP1|CYFIP2|HOXA13|CDC42
Biosynthetic process	GO:0009058	0.0154	3.30E-04	0.181247928	TRAM2|DLD|GTPBP1|SMPD3|POLR2I|PIK3R2|AIMP2|MED31|MLEC|APOA1|BMP4| MED4|ELOB|CBFA2T2|GPAT3|POLB|PLOD2|GTF2E1|LEO1|PCLAF|PANK1|OSBPL2| MRE11|PSEN1|ALDH1A3|GTF2F2|POLR2K|USP1|HOXA9|DLG1|MTOR|PROX1|CDC73| DHX9|GTF2B|SCP2|TMEM38B|SYK|B4GALT1|HACD2|RTF1|EXT2|NFATC2|RPL14| RPS8|PAICS|ACAN|EEF1D|RPS24|GPHN|RACK1|POLR2A|MRPL37|ACD|PIGN|HOXA13|MTHFD1
Response to ionizing radiation	GO:0010212	0.0154	3.20E-04	0.181247928	CCND1|POLB|NET1|BLM|RAD1|RAD9B|HRAS|EEF1D|YAP1
Regulation of protein localization to nucleus	GO:1900180	0.0154	3.20E-04	0.181247928	PIK3R2|BMP4|APP|MEPCE|PSEN1|CHP1|UBR5|CDK5RAP3|YAP1

Cellular response to organonitrogen compound	GO:0071417	0.0156	3.30E-04	0.18068754	SMPD3|PIK3R2|LRP1|APP|TRIM41|SLC34A1|PSEN1|BLM|MTOR|TGM2|ACTN2| UBR2|TMEM38B|AGER|PRKCZ|BCL2L11|CRHR1|VAMP2|VIM|ITGB3
Heart morphogenesis	GO:0003007	0.016	3.40E-04	0.179588002	TGFBR3|BMP4|ADAMTS1|PSEN1|ZMIZ1|MTOR|DLL1|PROX1|FHL2|ROBO1|YAP1|CDC42
Positive regulation of cholesterol transport	GO:0032376	0.016	3.40E-04	0.179588002	NFKBIA|PON1|APOA1|LRP1|SCP2
Regulation of JUN kinase activity	GO:0043506	0.016	3.40E-04	0.179588002	DUSP16|DUSP10|MAP3K7|AGER|SYK|MAP2K7
Glial cell development	GO:0021782	0.0162	3.50E-04	0.179048499	LRP1|APP|PLEC|PSEN1|DLL1|AGER|MDK|VIM
Cellular response to hormone stimulus	GO:0032870	0.0162	3.50E-04	0.179048499	PIK3R2|BMP4|PRKCE|SLC34A1|ZMIZ1|NR3C2|ACTN2|PRKCZ|UCN3| BCL2L11|DDX17|CRHR1|VAMP2|UBR5|ATP1A1|ITGB3|YAP1|RDX
Response to steroid hormone	GO:0048545	0.0162	3.50E-04	0.179048499	CCND1|BMP4|DSG1|ZMIZ1|NR3C2|UCN3|BCL2L11|DDX17|MDK|UBR5|ATP1A1|YAP1|CALM1
Cellular response to abiotic stimulus	GO:0071214	0.0167	3.60E-04	0.177728353	KCNJ2|PLEC|CHP1|NET1|BLM|MTOR|CRB1|RAD1|RAD9B|HRAS|EEF1D|ITGB3|YAP1|MAP3K14
Toll-like receptor signaling pathway	GO:0002224	0.0169	3.70E-04	0.17721133	NFKBIA|IRAK2|PRKCE|S100A14|MAP3K7|CD14
Negative regulation of protein phosphorylation	GO:0001933	0.017	3.70E-04	0.176955108	PARD6A|RGS2|LRP1|BMP4|DUSP16|PLEC|PSEN1|CHP1|DUSP10|SHB|PRKCZ|RACK1|CDK5RAP3|CALM1
Cell junction organization	GO:0034330	0.017	3.80E-04	0.176955108	PARD6A|RAB3A|PFN1|DSG1|APP|CHRNB1|PPFIBP1|PLEC|PSEN1| DLG1|ACTN2|SNAPIN|GPHN|CHD4|NUMB|ITGB3|TLN2|CDC42
Cardiac muscle tissue development	GO:0048738	0.017	3.80E-04	0.176955108	TGFBR3|BMP4|PLEC|MTOR|ACTN2|PROX1|ADRA1A|FHL2|NEB|CDC42
Regulation of epithelial cell proliferation	GO:0050678	0.017	3.70E-04	0.176955108	TGFBR3|CCND1|BMP4|DLG1|DUSP10|PROX1|CDC73|B4GALT1| MDK|FGFR1|HRAS|ROBO1|ITGB3|YAP1|CDC42
Response to external stimulus	GO:0009605	0.0179	4.00E-04	0.174714697	NFKBIA|HNRNPL|PON1|CCND1|LTF|APOA1|CCDC92|KCNJ2|BMP4|IRAK2|SLIT1| IRF8|APP|AXL|PRKCE|TRIM41|SLC34A1|PLEC|ALDH1A3|ARHGEF25|HNRNPA1| LYAR|G3BP2|MTOR|DUSP10|PROX1|CRB1|CDC73|TAB2|DHX9|S100A14|RNF5| SYK|UBD|ATAD3A|UCN3|ADRA1A|DDX17|GAPDH|CEP250|ITGB2|MAP2K7| MDK|CD14|DCC|PPP6C|HRAS|ROBO1|VIM|DDIT3|ITGB3|VAV1|MAP3K14|CDC42
Nitrogen compound transport	GO:0071705	0.0179	4.00E-04	0.174714697	APPBP2|TRAM2|TOMM22|NFKBIA|NUTF2|SMPD3|PIK3R2|RAB3A|LRP1|SNX19| GOLPH3L|ATG3|DUSP16|AKTIP|PRKCE|MAGOHB|PSEN1|CHP1|HNRNPA1|G3BP2| DHX9|VTA1|SNAPIN|CHTOP|ARFGEF2|SYK|STAM|ITSN1|CRHR1|ELAVL1| RABL2A|PEX5|SELENBP1|VAMP2|APBA2|AP2S1|ACD|AP2B1|SRP72|EIF4A3
RNA splicing	GO:0008380	0.0186	4.20E-04	0.173048706	SF3A1|SRRM2|PABPC1|MAGOHB|HNRNPA1|THRAP3|DHX9|PPIL1| MBNL2|DDX17|SMU1|PRPF40A|SNRPB|PUF60|EIF4A3
Protein complex oligomerization	GO:0051259	0.0187	4.20E-04	0.172815839	KCNJ2|CPSF6|APP|OSBPL2|ALDH1A3|BLM|G3BP2|TGM2|EVL|ELAVL1|PEX5|KCTD7
Cellular response to amyloid-beta	GO:1904646	0.0187	4.20E-04	0.172815839	LRP1|APP|PSEN1|AGER|BCL2L11
Endothelial cell fate commitment	GO:0060839	0.0188	4.30E-04	0.172584215	DLL1|PROX1|HOXA13
Positive regulation of aspartic-type endopeptidase activity involved in amyloid precursor protein catabolic process	GO:1902961	0.0188	4.30E-04	0.172584215	APP|AGER|PICALM
RNA processing	GO:0006396	0.019	4.30E-04	0.17212464	SF3A1|HNRNPL|CPSF6|APP|LEO1|SRRM2|PABPC1|CSTF3|MAGOHB|HNRNPA1| LYAR|THRAP3|CDC73|DHX9|PPIL1|MBNL2|RPL14|RPS8|

					DDX17|SMU1|PRPF40A|SNRPB|RPP14|RPS24|PUF60|EIF4A3
Myofibril assembly	GO:0030239	0.019	4.30E-04	0.17212464	TMOD3|PLEC|ACTN2|PROX1|TNNT1|NEB
Midbrain development	GO:0030901	0.019	4.30E-04	0.17212464	CMA1|S100A1|ENO3|UCHL5|RAD1|CDC42|CALM1
Positive regulation of actin filament bundle assembly	GO:0032233	0.019	4.30E-04	0.17212464	PFN1|APOA1|FHOD1|MTOR|EVL|CDC42
Regulation of protein modification by small protein conjugation or removal	GO:1903320	0.019	4.30E-04	0.17212464	STUB1|AIMP2|MAD2L1|COPS6|PRKCE|FANCI|PSEN1|ZMIZ1|CHP1|BAG2|UBR5|CDK5RAP3
Myeloid leukocyte activation	GO:0002274	0.0195	4.50E-04	0.170996539	LCP2|APP|PRKCE|PSEN1|AGER|SYK|UBD|ITGB2|VAMP2
Transcytosis	GO:0045056	0.0199	4.60E-04	0.170114692	LRP1|PIGR|AGER|PICALM
Regulation of plasma membrane bounded cell projection organization	GO:0120035	0.0199	4.60E-04	0.170114692	PFN1|RGS2|KIDINS220|CBFA2T2|SLIT1|ATG3|APP|PSEN1|DENND5A| SYNE2|MTOR|SNAPIN|EVL|MDK|DCC|HRAS|ROBO1|VIM|YAP1|RDX|CDC42
Positive regulation of cell death	GO:0010942	0.02	4.60E-04	0.169897	TOMM22|AIMP2|LRP1|BMP4|APP|PSEN1|ALDH1A3|NET1|TGM2|SYK| UBD|B4GALT1|BCL2L11|PICALM|ITGB2|MAP2K7|RACK1|DDIT3|MAP2K6|HOXA13
Positive regulation of proteolysis	GO:0045862	0.0204	4.80E-04	0.169036983	STUB1|RNF144B|ELOB|APP|RNFT1|PSEN1|BAG2|AGER|SYK| BCL2L11|PICALM|TBC1D10A|ROBO1|RACK1|CYFIP2
Protein tetramerization	GO:0051262	0.0208	4.90E-04	0.168193667	KCNJ2|CPSF6|APP|OSBPL2|ALDH1A3|EVL|PEX5
Positive regulation of cell differentiation	GO:0045597	0.021	5.00E-04	0.167778071	LTF|APOA1|BMP4|VHL|NID1|APP|AXL|ZMIZ1|MTOR|TGM2|DUSP10|PROX1| AGER|SYK|SHB|PRKCZ|SMARCA2|PTPRZ1|MDK|FGFR1| ROBO1|NUMB|ITGB3|NAP1L1|YAP1|CDC42
Synaptic vesicle recycling	GO:0036465	0.0214	5.10E-04	0.166958623	RAB3A|ITSN2|ITSN1|PICALM|VAMP2|AP2B1
Blood vessel morphogenesis	GO:0048514	0.0214	5.10E-04	0.166958623	TGFBR3|LRP1|BMP4|ZMIZ1|DLL1|PROX1|HSPG2|SYK|SHB| B4GALT1|ESM1|ROBO1|AMOTL2|ITGB3|YAP1|HOXA13
Protein transport	GO:0015031	0.0218	5.20E-04	0.166154351	APPBP2|TRAM2|TOMM22|NFKBIA|NUTF2|PIK3R2|RAB3A|LRP1|SNX19| GOLPH3L|ATG3|DUSP16|AKTIP|PRKCE|PSEN1|CHP1|VTA1|SNAPIN|ARFGEF2| SYK|STAM|ITSN1|ELAVL1|RABL2A|PEX5|SELENBP1|VAMP2|APBA2|AP2S1|ACD|AP2B1|SRP72
Regulation of stress fiber assembly	GO:0051492	0.0218	5.20E-04	0.166154351	PIK3R2|PFN1|APOA1|FHOD1|MTOR|EVL|CDC42
Positive regulation of neuron death	GO:1901216	0.0218	5.20E-04	0.166154351	AIMP2|APP|BCL2L11|PICALM|ITGB2|MAP2K7|DDIT3
Fc-epsilon receptor signaling pathway	GO:0038095	0.0222	5.30E-04	0.165364703	MAP3K7|SYK|MAP2K7|VAV1
Regulation of striated muscle contraction	GO:0006942	0.0229	5.50E-04	0.164016452	RGS2|KCNJ2|DLG1|TMEM38B|ADRA1A|ATP1A1|CALM1
Neurogenesis	GO:0022008	0.0234	5.70E-04	0.163078414	RAB3A|CCND1|LRP1|BMP4|KIDINS220|SLIT1|APP|AXL|PLEC|PSEN1|ZMIZ1| ARHGEF25|SYNE2|MTOR|DLL1|DUSP10|PROX1|CRB1|SNAPIN|KIF20B| AGER|PRKCZ|PICALM|PTPRZ1|SUN1|MDK|DCC|PEX5|FGFR1|ROBO1|VIM|NUMB|CYFIP2|CDC42
Post-embryonic development	GO:0009791	0.0242	5.90E-04	0.161618463	RAB3A|BMP4|ARID5B|PSEN1|MTOR|CRB1|BCL2L11
Negative regulation of cell projection organization	GO:0031345	0.0242	5.90E-04	0.161618463	CBFA2T2|SLIT1|APP|PSEN1|DENND5A|SNAPIN|EVL|DCC|VIM|YAP1

Positive regulation of lipase activity	GO:0060193	0.0242	5.90E-04	0.161618463	APOA1|PRKCZ|ADRA1A|FGFR1|HRAS|ADCYAP1R1
Organelle localization	GO:0051640	0.0253	6.20E-04	0.159687948	RAB3A|FHOD1|SLIT1|FYCO1|MAD2L1|PSEN1|DLG1|SYNE2|MTOR|SNAPIN| BCCIP|SYK|PRKCZ|PICALM|SUN1|PPP6C|CDC42|CALM1
Synaptic vesicle cycle	GO:0099504	0.0254	6.20E-04	0.159516628	RAB3A|PSEN1|ITSN2|SNAPIN|ITSN1|PICALM|VAMP2|AP2B1
Neural nucleus development	GO:0048857	0.0256	6.30E-04	0.159176003	S100A1|ENO3|ALDH1A3|RAD1|CDC42|CALM1
Protein-containing complex assembly	GO:0065003	0.0272	6.70E-04	0.15654311	TGFBR3|SF3A1|AIMP2|MED31|APOA1|KCNJ2|MED4|ELOB|CPSF6|APP| OSBPL2|ALDH1A3|DLG1|BLM|G3BP2|TGM2|CDC73|DHX9|GTF2B| TRAF1|HLA-DQA2|HLA-DQB1|EVL|PICALM|ELAVL1|PEX5| PPP6C|SNRPB|VAMP2|PUF60|AP2S1|NAP1L1|YAP1|KCTD7
Positive regulation of RNA metabolic process	GO:0051254	0.0278	6.90E-04	0.15559552	GTPBP1|NFKBIA|PIK3R2|MED31|BMP4|VHL|FHOD1|MED4|IRF8|ARID5B|APP| LEO1|MEPCE|PABPC1|PSEN1|ZMIZ1|GTF2F2|HOXA9|LYAR|THRAP3|BLM| MTOR|ACTN2|DLL1|PROX1|CDC73|UCHL5|DHX9|ZNF451|SMARCA2|PICALM| NFATC2|DDX17|MYCBP|MAP2K7|MDK|HRAS|CDK5RAP3|CHD4|DDIT3|POLR2A|YAP1|CTCF|HOXA13
Muscle cell differentiation	GO:0042692	0.0284	7.10E-04	0.154668166	BMP4|CHRNB1|TMOD3|PLEC|MTOR|ACTN2|PROX1|ADRA1A|NFATC2|FHL2|TNNT1|NEB
Negative regulation of blood circulation	GO:1903523	0.0284	7.10E-04	0.154668166	APP|AGER|ADRA1A|ATP1A1
Protein homooligomerization	GO:0051260	0.0285	7.10E-04	0.154515514	KCNJ2|APP|OSBPL2|ALDH1A3|BLM|G3BP2|TGM2|EVL|ELAVL1|KCTD7
Cellular response to lipopolysaccharide	GO:0071222	0.0285	7.10E-04	0.154515514	NFKBIA|IRAK2|IRF8|AXL|PRKCE|TRIM41|CDC73|MAP2K7|CD14|VIM
Forebrain development	GO:0030900	0.0288	7.20E-04	0.154060751	BMP4|SLIT1|APP|AXL|PSEN1|ALDH1A3|ZMIZ1|SYNE2|PROX1|UCHL5|SUN1|MDK|PEX5|ROBO1|NUMB
Receptor internalization	GO:0031623	0.0288	7.30E-04	0.154060751	LRP1|SYK|PICALM|ITGB2|AP2S1|AP2B1
Histone H2B ubiquitination	GO:0033523	0.0288	7.20E-04	0.154060751	LEO1|UBE2E1|CDC73
Establishment of centrosome localization	GO:0051660	0.0288	7.20E-04	0.154060751	FHOD1|MAD2L1|DLG1
Histone ubiquitination	GO:0016574	0.0299	7.60E-04	0.152432881	LEO1|UBE2E1|CDC73|UBE2U|UBR2
Positive regulation of lymphocyte differentiation	GO:0045621	0.0299	7.60E-04	0.152432881	AXL|ZMIZ1|DUSP10|SYK|SHB|PRKCZ|SMARCA2|MDK
Positive regulation of endocytosis	GO:0045807	0.0307	7.80E-04	0.151286162	LRP1|APP|AXL|DLL1|SYK|CD14|CDC42
Positive regulation of MAPK cascade	GO:0043410	0.0309	7.90E-04	0.151004152	BMP4|APP|PRKCE|PSEN1|MAP3K7|TRAF1|AGER|SYK|PRKCZ| ADRA1A|MAP2K7|FGFR1|HRAS|ROBO1|ITGB3|MAP2K6|CDC42
Positive regulation of cholesterol efflux	GO:0010875	0.0315	8.10E-04	0.150168945	NFKBIA|PON1|APOA1|LRP1
Substantia nigra development	GO:0021762	0.0321	8.30E-04	0.149349497	S100A1|ENO3|RAD1|CDC42|CALM1
Response to lipopolysaccharide	GO:0032496	0.0321	8.30E-04	0.149349497	NFKBIA|IRAK2|IRF8|AXL|PRKCE|TRIM41|DUSP10|CDC73|TAB2|S100A14|MAP2K7|CD14|VIM
Regulation of tumor necrosis factor production	GO:0032680	0.0321	8.30E-04	0.149349497	LTF|APP|AXL|PSEN1|DHX9|ARFGEF2|AGER|SYK|CD14
Protein localization to organelle	GO:0033365	0.0321	8.30E-04	0.149349497	TRAM2|TOMM22|NFKBIA|NUTF2|CRIPT|BMP4|HK2|RAD21|DLG1| DHX9|KIF20B|SYK|STAM|CEP250|SUN1|ELAVL1|PEX5|DDIT3|ACD|CTCF|SRP72|CALM1

Negative regulation of transferase activity	GO:0051348	0.0321	8.20E-04	0.149349497	RGS2|BMP4|MAD2L1|DUSP16|PLEC|PSEN1|CHP1|DUSP10|BAG2|SHB|RACK1|CDK5RAP3
Positive regulation of leukocyte cell-cell adhesion	GO:1903039	0.0321	8.20E-04	0.149349497	ZMIZ1|DUSP10|HLA-DQA2|HLA-DQB1|AGER|SYK|SHB|PRKCZ|SMARCA2|ITGB2|MDK|VAV1
Positive regulation of cell migration	GO:0030335	0.0326	8.50E-04	0.14867824	PFN1|BMP4|APP|ADAMTS1|PRKCE|SYNE2|MTOR|PROX1|S100A14| KIF20B|AGER|MDK|FGFR1|HRAS|RACK1|NUMB|ITGB3|RDX
Pattern recognition receptor signaling pathway	GO:0002221	0.0335	8.80E-04	0.147495519	NFKBIA|IRAK2|PRKCE|S100A14|MAP3K7|CD14|MAP2K6
Positive regulation of tumor necrosis factor production	GO:0032760	0.0335	8.80E-04	0.147495519	APP|PSEN1|DHX9|ARFGEF2|AGER|SYK|CD14
Response to radiation	GO:0009314	0.0348	9.20E-04	0.145842076	CCND1|POLB|APP|PCLAF|USP1|NET1|BLM|CRB1|RAD1|RAD9B| CEP250|MAP2K7|HRAS|EEF1D|ITGB3|YAP1
Hormone-mediated signaling pathway	GO:0009755	0.0348	9.20E-04	0.145842076	BMP4|ZMIZ1|NR3C2|UCN3|DDX17|CRHR1|UBR5|YAP1
Adrenal gland development	GO:0030325	0.0348	9.20E-04	0.145842076	APOA1|ARID5B|CRHR1|MDK
Erythrocyte homeostasis	GO:0034101	0.0349	9.20E-04	0.145717457	TGFBR3|BMP4|AXL|TMOD3|LYAR|RPS24|CDK5RAP3
Positive regulation of cell activation	GO:0050867	0.0349	9.20E-04	0.145717457	APP|AXL|ZMIZ1|DUSP10|HLA-DQA2|HLA-DQB1|AGER|SYK|SHB|PRKCZ|SMARCA2|NFATC2|ITGB2|MDK|VAV1
Gastrulation	GO:0007369	0.0351	9.40E-04	0.145469288	DLD|BMP4|LEO1|CDC73|RTF1|EXT2|ITGB2|RACK1|ITGB3
Ventricular septum development	GO:0003281	0.0357	9.60E-04	0.144733178	TGFBR3|BMP4|PROX1|ROBO1|AP2B1|HOXA13
Regulation of cardiac muscle contraction	GO:0055117	0.0357	9.60E-04	0.144733178	RGS2|KCNJ2|DLG1|TMEM38B|ADRA1A|CALM1
Regulation of programmed cell death	GO:0043067	0.0358	9.70E-04	0.144611697	TOMM22|CCND1|LTF|BMP4|VHL|RNF144B|APP|MAD2L1|AXL|MRE11| PSEN1|ALDH1A3|NET1|MTOR|TGM2|ACTN2|DLL1|CDC73|TRAF1|SYK| UBD|PRKCZ|ATAD3A|B4GALT1|BCL2L11|PTPRZ1|VDAC1|MAP2K7| MDK|FHL2|FGFR1|HRAS|RACK1|DDIT3|MAP2K6|YAP1|HOXA13
Positive regulation of transcription, DNA-templated	GO:0045893	0.0358	9.60E-04	0.144611697	NFKBIA|PIK3R2|MED31|BMP4|VHL|FHOD1|MED4|IRF8|ARID5B|APP| LEO1|MEPCE|PSEN1|ZMIZ1|GTF2F2|HOXA9|LYAR|THRAP3|BLM|MTOR| ACTN2|DLL1|PROX1|CDC73|UCHL5|DHX9|ZNF451|SMARCA2|PICALM| NFATC2|DDX17|MYCBP|MAP2K7|MDK|HRAS|CDK5RAP3|CHD4|DDIT3|YAP1|CTCF|HOXA13
T cell receptor signaling pathway	GO:0050852	0.036	9.80E-04	0.14436975	LCP2|PSEN1|MAP3K7|HLA-DQB1|SHB|HRAS|FYB1
Negative regulation of catalytic activity	GO:0043086	0.0361	9.80E-04	0.14424928	LTF|RGS2|APOA1|LRP1|BMP4|SPINK7|APP|MAD2L1|DUSP16|PLEC|PSEN1| CHP1|DUSP10|UCHL5|BAG2|SHB|PRKCZ|PICALM|GAPDH|HRAS|RACK1|CDK5RAP3|RDX
Endocytosis	GO:0006897	0.0362	9.90E-04	0.144129143	LRP1|APP|ITSN2|DLL1|HSPG2|AGER|SYK|ITSN1|PICALM|ITGB2| CD14|HRAS|VAMP2|AP2S1|AP2B1|CDC42
Regulation of developmental growth	GO:0048638	0.0369	0.001	0.143297363	TGFBR3|RGS2|BMP4|SLIT1|APP|ITSN2|DLL1|DUSP10|PROX1|BCL2L11|DCC|PEX5|YAP1
Negative regulation of myoblast differentiation	GO:0045662	0.0374	0.001	0.14271284	BMP4|SOSTDC1|DLL1|DDIT3
Positive regulation of protein localization to membrane	GO:1905477	0.0374	0.001	0.14271284	LRP1|PRKCE|CHP1|DLG1|ITGB2|HRAS|RACK1

Positive regulation of immune system process	GO:0002684	0.0381	0.0011	0.141907502	LCP2|APP|AXL|PRKCE|TRIM41|PSEN1|ZMIZ1|DUSP10|DHX9|S100A14|MAP3K7|HLA-DQA2|HLA-DQB1|AGER|SYK|SHB|PRKCZ|SMARCA2|NFATC2|ITGB2|MDK|HRAS|ITGB3|VAV1|FYB1
Negative regulation of protein kinase activity	GO:0006469	0.0381	0.0011	0.141907502	RGS2|BMP4|DUSP16|PLEC|PSEN1|CHP1|DUSP10|SHB|RACK1|CDK5RAP3
Positive regulation of nucleobase-containing compound metabolic process	GO:0045935	0.0386	0.0011	0.14134127	GTPBP1|NFKBIA|PIK3R2|MED31|BMP4|VHL|FHOD1|MED4|IRF8|ARID5B|APP|LEO1|MEPCE|PABPC1|MRE11|PSEN1|ZMIZ1|GTF2F2|HNRNPA1|HOXA9|LYAR|THRAP3|BLM|MTOR|ACTN2|DLL1|PROX1|CDC73|UCHL5|DHX9|ZNF451|SMARCA2|PICALM|NFATC2|DDX17|MYCBP|MAP2K7|MDK|HRAS|CDK5RAP3|CHD4|DDIT3|POLR2A|YAP1|ACD|CTCF|HOXA13
Positive regulation of epithelial cell proliferation	GO:0050679	0.0392	0.0011	0.140671393	CCND1|BMP4|PROX1|B4GALT1|MDK|FGFR1|HRAS|ITGB3|YAP1|CDC42
Synaptic vesicle maturation	GO:0016188	0.0402	0.0011	0.139577395	RAB3A|SNAPIN|PICALM
Regulation of protein localization to plasma membrane	GO:1903076	0.0406	0.0011	0.139147397	PIK3R2|LRP1|PRKCE|DLG1|PICALM|RACK1|NUMB
Steroid hormone mediated signaling pathway	GO:0043401	0.0412	0.0012	0.138510278	BMP4|ZMIZ1|NR3C2|DDX17|UBR5|YAP1
Regulation of neurogenesis	GO:0050767	0.0412	0.0012	0.138510278	SLIT1|PSEN1|MTOR|TGM2|DLL1|DUSP10|PROX1|PTPRZ1|MDK|DCC|ROBO1|NUMB|NAP1L1|YAP1
Cell fate commitment involved in formation of primary germ layer	GO:0060795	0.0412	0.0012	0.138510278	BMP4|LEO1|CDC73|RTF1
Regulation of leukocyte cell-cell adhesion	GO:1903037	0.0412	0.0012	0.138510278	BMP4|ZMIZ1|DLG1|DUSP10|HLA-DQA2|HLA-DQB1|AGER|SYK|SHB|PRKCZ|SMARCA2|ITGB2|MDK|VAV1
Dorsal/ventral axon guidance	GO:0033563	0.0413	0.0012	0.138404995	SLIT1|DCC
Positive regulation of cellular component biogenesis	GO:0044089	0.0413	0.0012	0.138404995	SMPD3|STUB1|PFN1|APOA1|FHOD1|SETDB1|PRKCE|DLG1|G3BP2|MTOR|SYK|STAM|EVL|BCL2L11|HRAS|RACK1|CDC42
Smooth endoplasmic reticulum calcium ion homeostasis	GO:0051563	0.0413	0.0012	0.138404995	APP|PSEN1
Positive regulation of endothelin production	GO:1904472	0.0413	0.0012	0.138404995	APP|AGER
Negative regulation of determination of dorsal identity	GO:2000016	0.0413	0.0012	0.138404995	SOSTDC1|DDIT3
Regulation of cell adhesion	GO:0030155	0.042	0.0012	0.137675071	PIK3R2|APOA1|BMP4|NID1|PRKCE|ZMIZ1|DLG1|TGM2|DLL1|DUSP10|HLA-DQA2|HLA-DQB1|AGER|SYK|SHB|PRKCZ|SMARCA2|ITGB2|MDK|ITGB3|VAV1|RDX|CDC42
Positive regulation of endopeptidase activity	GO:0010950	0.0425	0.0012	0.137161107	APP|AGER|SYK|BCL2L11|PICALM|TBC1D10A|ROBO1|RACK1|CYFIP2
Heart process	GO:0003015	0.0436	0.0013	0.136051351	KCNJ2|MTOR|EXT2|ATP1A1|MAP2K6|YAP1|CDC42
Regulation of apoptotic process	GO:0042981	0.0441	0.0013	0.135556141	TOMM22|CCND1|LTF|BMP4|VHL|RNF144B|APP|MAD2L1|AXL|MRE11|PSEN1|ALDH1A3|NET1|MTOR|TGM2|ACTN2|DLL1|CDC73|TRAF1|UBD|PRKCZ|ATAD3A|B4GALT1|BCL2L11|

					PTPRZ1|VDAC1|MAP2K7|MDK|FHL2|FGFR1|HRAS|RACK1|DDIT3|MAP2K6|YAP1|HOXA13
Cell fate commitment	GO:0045165	0.0445	0.0013	0.135163999	BMP4|LEO1|SOSTDC1|PSEN1|MTOR|DLL1|PROX1|CDC73|RTF1|HOXA13|CDC42
Regulation of protein ubiquitination	GO:0031396	0.0446	0.0013	0.135066514	STUB1|AIMP2|MAD2L1|PRKCE|FANCI|PSEN1|CHP1|BAG2|UBR5|CDK5RAP3
Positive regulation of T cell activation	GO:0050870	0.0457	0.0013	0.13400838	ZMIZ1|DUSP10|HLA-DQA2|HLA-DQB1|AGER|SYK|SHB|PRKCZ|SMARCA2|MDK|VAV1
Negative regulation of signal transduction	GO:0009968	0.0461	0.0014	0.133629907	TGFBR3|NFKBIA|STUB1|PIK3R2|LTF|RGS2|APOA1|LRP1|BMP4|VHL|CBFA2T2|APP|DUSP16| SOSTDC1|PSEN1|CHP1|DLG1|MTOR|DLL1|DUSP10|ZNF451|UBR2|PRKCZ|ADRA1A|MDK|FHL2| ROBO1|RACK1|CDK5RAP3|DDIT3|YAP1|EIF4A3
Endodermal cell fate commitment	GO:0001711	0.0465	0.0014	0.133254705	LEO1|CDC73|RTF1
Positive regulation of actin filament polymerization	GO:0030838	0.0465	0.0014	0.133254705	PFN1|PRKCE|DLG1|MTOR|EVL
Positive regulation of stress fiber assembly	GO:0051496	0.0465	0.0014	0.133254705	APOA1|FHOD1|MTOR|EVL|CDC42
Response to alcohol	GO:0097305	0.0465	0.0014	0.133254705	TGFBR3|CCND1|RGS2|POLB|PRKCE|BLM|UCN3|CRHR1|CD14|ADCYAP1R1|CALM1
Positive regulation of protein catabolic process	GO:0045732	0.0468	0.0014	0.132975415	STUB1|LRP1|RNF144B|ELOB|APP|RNFT1|PSEN1|BAG2|RACK1|RDX
Negative regulation of mitotic cell cycle	GO:0045930	0.0468	0.0014	0.132975415	CCND1|BMP4|MAD2L1|RAD21|MRE11|DLG1|BLM|CDC73|RAD9B|CDK5RAP3
Regulation of chromosome organization	GO:0033044	0.0474	0.0014	0.132422166	SETDB1|SMC2|MAD2L1|RAD21|MRE11|HNRNPA1|UCHL5|SMARCA2|MAP2K7|ACD|CTCF
Establishment of protein localization to organelle	GO:0072594	0.0485	0.0015	0.131425826	TRAM2|TOMM22|NFKBIA|NUTF2|HK2|SYK|STAM|ELAVL1|PEX5|DDIT3|ACD|SRP72|CALM1
Regulation of ruffle assembly	GO:1900027	0.0485	0.0015	0.131425826	PFN1|EVL|HRAS|RDX
Regulation of neuron apoptotic process	GO:0043523	0.049	0.0015	0.130980392	CCND1|APP|AXL|PSEN1|BCL2L11|PTPRZ1|MAP2K7|MDK|HRAS|DDIT3
Organelle transport along microtubule	GO:0072384	0.049	0.0015	0.130980392	FYCO1|SYNE2|SNAPIN|PRKCZ|SUN1|CDC42
Regulation of cation transmembrane transport	GO:1904062	0.049	0.0015	0.130980392	RGS2|KCNJ2|APP|PRKCE|CHP1|DLG1|ACTN2|TMEM38B|VDAC1|CRHR1|VAMP2|ITGB3|ADCYAP1R1|CALM1
Positive regulation of lymphocyte activation	GO:0051251	0.0493	0.0015	0.130715308	AXL|ZMIZ1|DUSP10|HLA-DQA2|HLA-DQB1|AGER|SYK|SHB|PRKCZ|SMARCA2|NFATC2|MDK|VAV1

Table S25 Significant GO Cellular Component

description	term name	FDR value	p-value	transferred FDR value	Genes
Cytosol	GO:0005829	9.22E-17	4.50E-20	1.603526908	LCP2|PSMD8|JOSD1|GTPBP1|NFKBIA|NUTF2|PARD6A|STUB1|HNRNPL| TBCB|PIK3R2|RAB3A|AIMP2|PFN1|CCND1|RGS2|APOA1|TUBA4A|CMA1| IRAK2|VHL|KIDINS220|DSG1|FHOD1|RNF144B|PSMA6|ELOB|IRF8| GOLPH3L|FAM120A|CEP164|ATG3|GTF2E1|APP|SMC2|WDYHV1|HK2|

					S100A1|MAD2L1|RAD21|DUSP16|AKTIP|PANK1|UBE2E1|COPS6|PRKCE| FANCI|PABPC1|CC2D1A|PPFIBP1|RANBP10|OSBPL2|MAGOHB|SLC34A1| PLEC|KIF15|ENO3|PPP2R2A|MRE11|DENND5A|ALDH1A3|ZMIZ1|TMEM216| ARHGEF25|POLR2K|USP1|DLG1|NET1|BLM|ITSN2|NR3C2|G3BP2|MTOR|TGM2| ACTN2|DUSP10|PROX1|CDC73|UCHL5|TAB2|DHX9|VTA1|SNAPIN|S100A16| BCCIP|MAP3K7|BAG2|SCP2|KIF20B|ARFGEF2|SH3GLB2|UBR2|TRAF1|UBR4| SYK|UBD|FTL|STAM|SHB|PRKCZ|ADRA1A|ITSN1|EVL|BCL2L11|PICALM| NFATC2|RPL14|RPS8|DDX17|GAPDH|CEP250|MAP2K7|PAICS|TBC1D10A| ELAVL1|DCC|PEX5|PPP6C|FGFR1|SELENBP1|PLEKHA5|HRAS|EEF1D|SNRPB|
Protein-containing complex	GO:0032991	8.36E-14	8.17E-17	1.307779372	RPS24|GPHN|VAMP2|GC|AMOTL2|RACK1|UBR5|CDK5RAP3|ADAP1|VIM| DDIT3|TNNT1|MAP2K6|AP2S1|VAV1|YAP1|CYFIP2|MAP3K14|AP2B1| NEB|PIGN|KCTD7|FYB1|SRP72|EIF4A3|CDC42|MTHFD1|CALM1 LCP2|APPBP2|DLD|TGFBR3|PSMD8|SF3A1|TOMM22|GTPBP1|NFKBIA| NUTF2|PARD6A|STUB1|HNRNPL|POLR2I|PIK3R2|RAB3A|PON1|AIMP2| MED31|CCND1|MLEC|LTF|APOA1|LRP1|KCNJ2|KIDINS220|MED4|RNF144B| PSMA6|ELOB|NID1|POLB|CPSF6|RMC1|CEP164|ATG3|GTF2E1|APP|SMC2| CACHD1|S100A1|MAD2L1|RAD21|LEO1|AKTIP|AXL|SRRM2|UBE2E1|COPS6| CHRNB1|MEPCE|FANCI|PABPC1|RANBP10|MAGOHB|KIF15|ENO3|PPP2R2A| MRE11|PSEN1|TMEM216|GTF2F2|HNRNPA1|POLR2K|HOXA9|DLG1|THRAP3| BLM|PIGR|SYNE2|NR3C2|G3BP2|MTOR|CRB1|CDC73|UCHL5|DHX9|SNAPIN| CHTOP|BCCIP|MAP3K7|GTF2B|BAG2|UBE2U|SCP2|KIF20B|UBR2|PPIL1| HSPG2|HLA-DQA2|HLA-DQB1|SYK|FTL|STAM|SLC22A6|B4GALT1|RAD1| SMARCA2|RTF1|RAD9B|BCL2L11|PICALM|VDAC1|EXT2|NFATC2|RPL14|RPS8| DDX17|GAPDH|SMU1|CEP250|ITGB2|SUN1|ELAVL1|CD14|PRPF40A|PEX5|FGFR1| HRAS|EEF1D|SNRPB|RPP14|RPS24|VAMP2|RACK1|UBR5|CDK5RAP3|CHD4| ATP1A1|VIM|DDIT3|ITGB3|POLR2A|TNNT1|AP2S1|MRPL37|YAP1|CYFIP2 |ACD|AP2B1|ADCYAP1R1|FYB1|SRP72|EIF4A3|CDC42|CALM1
Organelle	GO:0043226	1.33E-13	1.95E-16	1.287614836	APPBP2|TRAM2|DLD|TGFBR3|PSMD8|SF3A1|TOMM22|NFKBIA|NUTF2| PARD6A|SMPD3|STUB1|HNRNPL|TBCB|POLR2I|RABAC1|PIK3R2|RAB3A| PON1|AIMP2|PFN1|MED31|CCND1|MLEC|LTF|RGS2|APOA1|CCDC92|CRIPT| LRP1|KCNJ2|BMP4|TUBA4A|CMA1|IRAK2|VHL|KIDINS220|DSG1|FHOD1| MED4|RNF144B|PSMA6|ELOB|CBFA2T2|NID1|GPAT3|CP|POLB|SNX19|CPSF6| IRF8|RMC1|SETDB1|GOLPH3L|FAM120A|CEP164|ARID5B|PLOD2|GTF2E1|APP| ADAMTS1|SMC2|WDYHV1|HK2|CCDC58|S100A1|FYCO1|MAD2L1|RAD21|DUSP16| LEO1|PCLAF|TSC22D4|AKTIP|AXL|SRRM2|PANK1|UBE2E1|COPS6|CHRNB1| RNFT1|PRKCE|ZNF3|MEPCE|TMOD3|FANCI|PABPC1|CC2D1A|CSTF3|RANBP10| OSBPL2|MAGOHB|TRIM41|SLC34A1|PLEC|KIF15|ENO3|PPP2R2A|MRE11|PSEN1| DENND5A|ALDH1A3|ZMIZ1|TMEM216|ARHGEF25|CHP1|GTF2F2|HNRNPA1| POLR2K|USP1|HOXA9|DLG1|LYAR|THRAP3|NET1|BLM|ITSN2|PIGR|SYNE2| NR3C2|G3BP2|MTOR|TGM2|EXO1|ACTN2|DLL1|DUSP10|PROX1|CRB1|CDC73| UCHL5|TAB2|DHX9|VTA1|YY1AP1|SNAPIN|CHTOP|S100A14|S100A16|BCCIP| MAP3K7|PRMT6|GTF2B|BAG2|ZNF451|UBE2U|SCP2|KIF20B|ARFGEF2| SH3GLB2|UBR2|PPIL1|TMEM38B|HSPG2|HLA-DQA2|HLA-DQB1|AGER|RNF5| UBR4|SIK3|SYK|MBNL2|UBD|FTL|STAM|SHB|SLC22A6|PRKCZ|ATAD3A| B4GALT1|ADRA1A|ITSN1|RAD1|SMARCA2|HACD2|RTF1|RAD9B|EVL|BCL2L11| PICALM|VDAC1|EXT2|NFATC2|RPL14|MARF1|RPS8|DDX17|GAPDH|SMU1| CEP250|MYCBP|ITGB2|MAP2K7|CRHR1|PAICS|SUN1|TBC1D10A|ELAVL1|CD14| PRPF40A|FHL2|ACAN|DCC|RNF212|PEX5|PPP6C|FGFR1|SELENBP1|PLEKHA5| HRAS|EEF1D|SNRPB|IKZF2|RPP14|RPS24|GPHN|VAMP2|ROBO1|GC|AMOTL2| RACK1|UBR5|PUF60|CDK5RAP3|CHD4|ADAP1|ATP1A1|VIM|DDIT3|DTX3|NUMB| ITGB3|APBA2|TLN2|POLR2A|TNNT1|MAP2K6|AP2S1|MRPL37|NAP1L1|YAP1|CYFIP2| MAP3K14|ACD|AP2B1|ADCYAP1R1|NEB|PIGN|FYB1|CTCF|SRP72|RDX| HOXA13|ITM2B|EIF4A3|CDC42|MTHFD1|CALM1
Intracellular anatomical structure	GO:0005622	3.00E-12	5.87E-15	1.152287875	LCP2|APPBP2|TRAM2|DLD|TGFBR3|PSMD8|SF3A1|TOMM22|JOSD1|GTPBP1|

					NFKBIA|NUTF2|PARD6A|SMPD3|STUB1|HNRNPL|TBCB|POLR2I|RABAC1| PIK3R2|RAB3A|PON1|AIMP2|PFN1|MED31|CCND1|MLEC|LTF|RGS2|APOA1| CCDC92|CRIPT|LRP1|KCNJ2|BMP4|TUBA4A|CMA1|IRAK2|VHL|KIDINS220| DSG1|FHOD1|MED4|RNF144B|PSMA6|ELOB|CBFA2T2|GPAT3|CP|POLB|SNX19| CPSF6|IRF8|RMC1|SETDB1|GOLPH3L|FAM120A|CEP164|ARID5B|PLOD2|ATG3| GTF2E1|APP|ADAMTS1|SMC2|WDYHV1|HK2|CCDC58|S100A1|FYCO1|MAD2L1| RAD21|DUSP16|LEO1|PCLAF|TSC22D4|AKTIP|AXL|SRRM2|PANK1|UBE2E1| COPS6|RNFT1|PRKCE|ZNF3|MEPCE|TMOD3|FANCI|PABPC1|CC2D1A|PPFIBP1| CSTF3|RANBP10|OSBPL2|MAGOHB|TRIM41|SLC34A1|PLEC|KIF15|ENO3| PPP2R2A|MRE11|PSEN1|DENND5A|ALDH1A3|ZMIZ1|TMEM216|ARHGEF25| CHP1|GTF2F2|HNRNPA1|POLR2K|USP1|HOXA9|DLG1|LYAR|THRAP3|NET1| BLM|ITSN2|PIGR|SYNE2|NR3C2|FGF17|G3BP2|MTOR|TGM2|EXO1|ACTN2|DLL1| DUSP10|PROX1|CDC73|UCHL5|TAB2|DHX9|VTA1|YY1AP1|SNAPIN|CHTOP|S100A14| S100A16|BCCIP|MAP3K7|PRMT6|GTF2B|BAG2|ZNF451|UBE2U|SCP2|KIF20B| ARFGEF2|SH3GLB2|UBR2|PPIL1|TRAF1|TMEM38B|HSPG2|HLA-DQA2|HLA-DQB1| AGER|RNF5|UBR4|SIK3|SYK|MBNL2|UBD|FTL|STAM|SHB|PRKCZ|ATAD3A| B4GALT1|ADRA1A|ITSN1|RAD1|SMARCA2|HACD2|RTF1|RAD9B|EVL|BCL2L11| PICALM|VDAC1|EXT2|NFATC2|RPL14|MARF1|RPS8|DDX17|GAPDH|SMU1|CEP250| MYCBP|ITGB2|MAP2K7|CRHR1|PAICS|SUN1|TBC1D10A|ELAVL1|MDK|CD14| PRPF40A|FHL2|ACAN|DCC|RNF212|PEX5|PPP6C|FGFR1|SELENBP1|PLEKHA5|HRAS| EEF1D|SNRPB|IKZF2|RPP14|RPS24|GPHN|VAMP2|ROBO1|GC|AMOTL2|RACK1| UBR5|PUF60|CDK5RAP3|CHD4|ADAP1|ATP1A1|VIM|DDIT3|DTX3|NUMB|ITGB3| APBA2|TLN2|POLR2A|TNNT1|MAP2K6|AP2S1|VAV1|MRPL37|NAP1L1|YAP1|CYFIP2| MAP3K14|ACD|AP2B1|ADCYAP1R1|NEB|PIGN|KCTD7|FYB1|CTCF|SRP72| RDX|HOXA13|ITM2B|EIF4A3|CDC42|MTHFD1|CALM1
Intracellular organelle	GO:0043229	1.04E-11	2.53E-14	1.098296666	APPBP2|TRAM2|DLD|PSMD8|SF3A1|TOMM22|NFKBIA|NUTF2|PARD6A|SMPD3| STUB1|HNRNPL|TBCB|POLR2I|RABAC1|PIK3R2|RAB3A|PON1|AIMP2|PFN1| MED31|CCND1|MLEC|LTF|RGS2|APOA1|CCDC92|LRP1|KCNJ2|BMP4|TUBA4A| CMA1|IRAK2|VHL|KIDINS220|DSG1|FHOD1|MED4|RNF144B|PSMA6|ELOB| CBFA2T2|GPAT3|CP|POLB|SNX19|CPSF6|IRF8|RMC1|SETDB1|GOLPH3L|FAM120A| CEP164|ARID5B|PLOD2|GTF2E1|APP|ADAMTS1|SMC2|WDYHV1|HK2|CCDC58| S100A1|FYCO1|MAD2L1|RAD21|DUSP16|LEO1|PCLAF|TSC22D4|AKTIP|AXL|SRRM2| PANK1|UBE2E1|COPS6|RNFT1|PRKCE|ZNF3|MEPCE|TMOD3|FANCI|PABPC1| CC2D1A|CSTF3|RANBP10|OSBPL2|MAGOHB|TRIM41|SLC34A1|PLEC|KIF15|PPP2R2A| MRE11|PSEN1|DENND5A|ZMIZ1|TMEM216|ARHGEF25|CHP1|GTF2F2|HNRNPA1| POLR2K|USP1|HOXA9|DLG1|LYAR|THRAP3|NET1|BLM|ITSN2|PIGR|SYNE2|NR3C2| G3BP2|MTOR|TGM2|EXO1|ACTN2|DLL1|DUSP10|PROX1|CDC73|UCHL5|TAB2|DHX9| VTA1|YY1AP1|SNAPIN|CHTOP|S100A16|BCCIP|MAP3K7|PRMT6|GTF2B|BAG2| ZNF451|UBE2U|SCP2|KIF20B|ARFGEF2|SH3GLB2|UBR2|PPIL1|TMEM38B| HSPG2|HLA-DQA2|HLA- DQB1|AGER|RNF5|UBR4|SIK3|SYK|MBNL2|UBD|FTL|STAM|SHB|PRKCZ|ATAD3A| B4GALT1|ADRA1A|ITSN1|RAD1|SMARCA2|HACD2|RTF1|RAD9B|EVL|BCL2L11| PICALM|VDAC1|EXT2|NFATC2|RPL14|MARF1|RPS8|DDX17|GAPDH|SMU1|CEP250| MYCBP|ITGB2|MAP2K7|CRHR1|SUN1|ELAVL1|CD14|PRPF40A|FHL2|ACAN|RNF212| PEX5|PPP6C|FGFR1|SELENBP1|PLEKHA5|HRAS|EEF1D|SNRPB|IKZF2|RPP14| RPS24|GPHN|VAMP2|ROBO1|GC|AMOTL2|RACK1|UBR5|PUF60|CDK5RAP3|CHD4| ADAP1|ATP1A1|VIM|DDIT3|DTX3|NUMB|ITGB3|APBA2|TLN2|POLR2A|TNNT1| MAP2K6|AP2S1|MRPL37|NAP1L1|YAP1|CYFIP2|MAP3K14|ACD|AP2B1|ADCYAP1R1| NEB|PIGN|FYB1|CTCF|SRP72|RDX|HOXA13|ITM2B|EIF4A3|CDC42|MTHFD1|CALM1
Nuclear lumen	GO:0031981	2.96E-11	8.68E-14	1.052870829	APPBP2|PSMD8|SF3A1|NFKBIA|NUTF2|STUB1|HNRNPL|POLR2I|MED31|CCND1| RGS2|CCDC92|VHL|FHOD1|MED4|PSMA6|ELOB|POLB|CPSF6|IRF8|SETDB1|CEP164| ARID5B|GTF2E1|SMC2|S100A1|MAD2L1|RAD21|DUSP16|LEO1|PCLAF|SRRM2| PANK1|UBE2E1|COPS6|FANCI|CC2D1A|CSTF3|MAGOHB|TRIM41|SLC34A1|PPP2R2A| MRE11|PSEN1|ZMIZ1|GTF2F2|HNRNPA1|POLR2K|USP1|HOXA9|LYAR|THRAP3| BLM|SYNE2|NR3C2|MTOR|EXO1|DUSP10|PROX1|CDC73|UCHL5|TAB2|DHX9|VTA1|

					YY1AP1|CHTOP|S100A16|BCCIP|MAP3K7|PRMT6|GTF2B|ZNF451|SCP2|KIF20B| SH3GLB2|PPIL1|AGER|UBR4|SIK3|MBNL2|UBD|SHB|PRKCZ|ADRA1A|RAD1|SMARCA2| RTF1|RAD9B|NFATC2|RPS8|DDX17|SMU1|MYCBP|ELAVL1|PRPF40A|FHL2|RNF212| PPP6C|SELENBP1|PLEKHA5|HRAS|EEF1D|SNRPB|RPP14|RPS24|RACK1|UBR5|PUF60| CDK5RAP3|CHD4|VIM|DTX3|ITGB3|POLR2A|MAP2K6|YAP1| MAP3K14|ACD|CTCF|HOXA13|EIF4A3|CALM1
Membrane-bounded organelle	GO:0043227	4.23E-11	1.45E-13	1.037365963	APPBP2|TRAM2|DLD|TGFBR3|PSMD8|SF3A1|TOMM22|NFKBIA|NUTF2|PARD6A| SMPD3|STUB1|HNRNPL|POLR2I|RABAC1|PIK3R2|RAB3A|PON1|AIMP2|PFN1|MED31| CCND1|MLEC|LTF|RGS2|APOA1|CCDC92|LRP1|KCNJ2|BMP4|TUBA4A|CMA1| IRAK2|VHL|KIDINS220|DSG1|FHOD1|MED4|RNF144B|PSMA6|ELOB|CBFA2T2| NID1|GPAT3|CP|POLB|SNX19|CPSF6|IRF8|RMC1|SETDB1|GOLPH3L|FAM120A| CEP164|ARID5B|PLOD2|GTF2E1|APP|ADAMTS1|SMC2|WDYHV1|HK2|CCDC58| S100A1|FYCO1|MAD2L1|RAD21|DUSP16|LEO1|PCLAF|TSC22D4|AKTIP|AXL| SRRM2|PANK1|UBE2E1|COPS6|RNFT1|PRKCE|ZNF3|MEPCE|FANCI|PABPC1|CC2D1A| CSTF3|RANBP10|OSBPL2|MAGOHB|TRIM41|SLC34A1|PLEC|ENO3|PPP2R2A|MRE11| PSEN1|DENND5A|ALDH1A3|ZMIZ1|TMEM216|CHP1|GTF2F2|HNRNPA1|POLR2K|USP1| HOXA9|DLG1|LYAR|THRAP3|NET1|BLM|ITSN2|PIGR|SYNE2|NR3C2|MTOR|TGM2| EXO1|ACTN2|DLL1|DUSP10|PROX1|CRB1|CDC73|UCHL5|TAB2|DHX9|VTA1|YY1AP1| SNAPIN|CHTOP|S100A14|S100A16|BCCIP|MAP3K7|PRMT6|GTF2B|ZNF451|SCP2| KIF20B|ARFGEF2|SH3GLB2|UBR2|PPIL1|TMEM38B|HSPG2|HLA-DQA2|HLA-DQB1| AGER|RNF5|UBR4|SIK3|SYK|MBNL2|UBD|FTL|STAM|SHB|SLC22A6|PRKCZ| ATAD3A|B4GALT1|ADRA1A|ITSN1|RAD1|SMARCA2|HACD2|RTF1|RAD9B|BCL2L11| PICALM|VDAC1|EXT2|NFATC2|RPL14|MARF1|RPS8|DDX17|GAPDH|SMU1|CEP250| MYCBP|ITGB2|MAP2K7|CRHR1|PAICS|SUN1|TBC1D10A|ELAVL1|CD14|PRPF40A|FHL2| ACAN|RNF212|PEX5|PPP6C|FGFR1|SELENBP1|PLEKHA5|HRAS|EEF1D|SNRPB|IKZF2| RPP14|RPS24|VAMP2|ROBO1|GC|AMOTL2|RACK1|UBR5|PUF60|CDK5RAP3|CHD4| ADAP1|ATP1A1|VIM|DDIT3|DTX3|NUMB|ITGB3|APBA2|POLR2A|MAP2K6|AP2S1| MRPL37|NAP1L1|YAP1|CYFIP2|MAP3K14|ACD|AP2B1|ADCYAP1R1|NEB| PIGN|FYB1|CTCF|SRP72|RDX|HOXA13|ITM2B|EIF4A3|CDC42|MTHFD1|CALM1
Cytoplasm	GO:0005737	2.50E-10	9.79E-13	0.960205999	LCP2|APPBP2|TRAM2|DLD|TGFBR3|PSMD8|TOMM22|JOSD1|GTPBP1|NFKBIA| NUTF2|PARD6A|SMPD3|STUB1|HNRNPL|TBCB|RABAC1|PIK3R2|RAB3A|AIMP2| PFN1|CCND1|MLEC|LTF|RGS2|APOA1|CCDC92|CRIPT|LRP1|KCNJ2|BMP4|TUBA4A| CMA1|IRAK2|VHL|KIDINS220|DSG1|FHOD1|RNF144B|PSMA6|ELOB|GPAT3|CP| POLB|SNX19|CPSF6|IRF8|RMC1|SETDB1|GOLPH3L|FAM120A|CEP164|PLOD2|ATG3| GTF2E1|APP|ADAMTS1|SMC2|WDYHV1|HK2|CCDC58|S100A1|FYCO1|MAD2L1| RAD21|DUSP16|PCLAF|AKTIP|PANK1|UBE2E1|COPS6|RNFT1|PRKCE|TMOD3| FANCI|PABPC1|CC2D1A|PPFIBP1|RANBP10|OSBPL2|MAGOHB|TRIM41|SLC34A1| PLEC|KIF15|ENO3|PPP2R2A|MRE11|PSEN1|DENND5A|ALDH1A3|ZMIZ1|TMEM216| ARHGEF25|CHP1|HNRNPA1|POLR2K|USP1|DLG1|LYAR|NET1|BLM|ITSN2|PIGR| SYNE2|NR3C2|FGF17|G3BP2|MTOR|TGM2|ACTN2|DLL1|DUSP10|PROX1|CDC73| UCHL5|TAB2|DHX9|VTA1|YY1AP1|SNAPIN|CHTOP|S100A14|S100A16|BCCIP|MAP3K7| BAG2|SCP2|KIF20B|ARFGEF2|SH3GLB2|UBR2|TRAF1|TMEM38B|HSPG2|HLA-DQA2|HLA- DQB1|RNF5|UBR4|SIK3|SYK|MBNL2|UBD|FTL|STAM|SHB|PRKCZ|ATAD3A|B4GALT1| ADRA1A|ITSN1|HACD2|EVL|BCL2L11|PICALM|VDAC1|EXT2|NFATC2|RPL14|MARF1| RPS8|DDX17|GAPDH|SMU1|CEP250|MYCBP|ITGB2|MAP2K7|CRHR1|PAICS|SUN1| TBC1D10A|ELAVL1|MDK|CD14|FHL2|ACAN|DCC|PEX5|PPP6C|FGFR1|SELENBP1| PLEKHA5|HRAS|EEF1D|SNRPB|RPP14|RPS24|GPHN|VAMP2|ROBO1|GC|AMOTL2| RACK1|UBR5|CDK5RAP3|CHD4|ADAP1|ATP1A1|VIM|DDIT3|DTX3|NUMB|ITGB3| APBA2|TLN2|POLR2A|TNNT1|MAP2K6|AP2S1|VAV1|MRPL37|NAP1L1|YAP1|CYFIP2| MAP3K14|AP2B1|ADCYAP1R1|NEB|PIGN|KCTD7|FYB1|SRP72|RDX| ITM2B|EIF4A3|CDC42|MTHFD1|CALM1
Cell junction	GO:0030054	3.31E-10	1.53E-12	0.948017201	LCP2|PARD6A|RABAC1|PIK3R2|RAB3A|PFN1|CCND1|CRIPT|LRP1|KCNJ2|DSG1| FHOD1|HAPLN1|APP|CHRNB1|PRKCE|TMOD3|PABPC1|PPFIBP1|PLEC|PPP2R2A| PSEN1|CHP1|DLG1|ITSN2|SYNE2|TGM2|ACTN2|DLL1|CRB1|SNAPIN|ARFGEF2| HSPG2|AGER|PRKCZ|B4GALT1|UCN3|ADRA1A|ITSN1|EVL|PICALM|PTPRZ1|

					VDAC1|RPL14|RPS8|ITGB2|ELAVL1|FHL2|ACAN|DCC|PLEKHA5|HRAS|GPHN| VAMP2|AMOTL2|PUF60|ATP1A1|VIM|NUMB|ITGB3|APBA2|TLN2|AP2S1|VAV1| YAP1|CYFIP2|AP2B1|ADCYAP1R1|FYB1|RDX|EIF4A3|CDC42|CALM1
Intracellular organelle lumen	GO:0070013	3.31E-10	1.45E-12	0.948017201	APPBP2|DLD|PSMD8|SF3A1|NFKBIA|NUTF2|STUB1|HNRNPL|POLR2I|MED31| CCND1|LTF|RGS2|APOA1|CCDC92|BMP4|VHL|FHOD1|MED4|PSMA6|ELOB|CP| POLB|CPSF6|IRF8|SETDB1|CEP164|ARID5B|GTF2E1|APP|SMC2|CCDC58|S100A1| MAD2L1|RAD21|DUSP16|LEO1|PCLAF|SRRM2|PANK1|UBE2E1|COPS6|FANCI| CC2D1A|CSTF3|MAGOHB|TRIM41|SLC34A1|PPP2R2A|MRE11|PSEN1|ZMIZ1|GTF2F2| HNRNPA1|POLR2K|USP1|HOXA9|LYAR|THRAP3|BLM|SYNE2|NR3C2|MTOR|EXO1| ACTN2|DUSP10|PROX1|CDC73|UCHL5|TAB2|DHX9|VTA1|YY1AP1|CHTOP|S100A16| BCCIP|MAP3K7|PRMT6|GTF2B|ZNF451|SCP2|KIF20B|SH3GLB2|PPIL1|HSPG2|AGER| UBR4|SIK3|MBNL2|UBD|FTL|SHB|PRKCZ|ATAD3A|ADRA1A|RAD1|SMARCA2|RTF1| RAD9B|VDAC1|NFATC2|RPS8|DDX17|SMU1|MYCBP|ELAVL1|PRPF40A|FHL2|ACAN| RNF212|PEX5|PPP6C|SELENBP1|PLEKHA5|HRAS|EEF1D|SNRPB|RPP14|RPS24|GC| RACK1|UBR5|PUF60|CDK5RAP3|CHD4|VIM|DTX3|ITGB3|POLR2A|MAP2K6| MRPL37|YAP1|MAP3K14|ACD|CTCF|HOXA13|EIF4A3|CALM1
Nucleoplasm	GO:0005654	3.93E-10	2.50E-12	0.940560745	APPBP2|PSMD8|SF3A1|NFKBIA|NUTF2|STUB1|HNRNPL|POLR2I|MED31|CCND1| CCDC92|VHL|FHOD1|MED4|PSMA6|ELOB|POLB|CPSF6|IRF8|SETDB1|CEP164| ARID5B|GTF2E1|SMC2|S100A1|MAD2L1|RAD21|DUSP16|LEO1|PCLAF|SRRM2| UBE2E1|COPS6|FANCI|CSTF3|MAGOHB|TRIM41|SLC34A1|PPP2R2A|MRE11|PSEN1| ZMIZ1|GTF2F2|HNRNPA1|POLR2K|USP1|HOXA9|LYAR|THRAP3|BLM|SYNE2|NR3C2| MTOR|EXO1|DUSP10|PROX1|CDC73|UCHL5|TAB2|DHX9|VTA1|YY1AP1|CHTOP| BCCIP|MAP3K7|PRMT6|GTF2B|ZNF451|SCP2|KIF20B|SH3GLB2|PPIL1|UBR4|SIK3| MBNL2|UBD|SHB|ADRA1A|RAD1|SMARCA2|RTF1|RAD9B|NFATC2|RPS8|DDX17| SMU1|MYCBP|ELAVL1|PRPF40A|FHL2|PPP6C|PLEKHA5|HRAS|EEF1D|SNRPB|RPP14| RPS24|RACK1|UBR5|PUF60|CHD4|DTX3|ITGB3|POLR2A|MAP2K6|YAP1| MAP3K14|ACD|CTCF|HOXA13|EIF4A3|CALM1
Intracellular membrane-bounded organelle	GO:0043231	1.11E-09	7.60E-12	0.895467702	APPBP2|TRAM2|DLD|PSMD8|SF3A1|TOMM22|NFKBIA|NUTF2|PARD6A|SMPD3| STUB1|HNRNPL|POLR2I|RABAC1|PIK3R2|RAB3A|PON1|AIMP2|PFN1|MED31| CCND1|MLEC|LTF|RGS2|APOA1|CCDC92|LRP1|KCNJ2|BMP4|CMA1|IRAK2|VHL| KIDINS220|DSG1|FHOD1|MED4|RNF144B|PSMA6|ELOB|CBFA2T2|GPAT3|CP|POLB| SNX19|CPSF6|IRF8|RMC1|SETDB1|GOLPH3L|FAM120A|CEP164|ARID5B|PLOD2| GTF2E1|APP|ADAMTS1|SMC2|WDYHV1|HK2|CCDC58|S100A1|FYCO1|MAD2L1| RAD21|DUSP16|LEO1|PCLAF|TSC22D4|AKTIP|AXL|SRRM2|PANK1|UBE2E1|COPS6| RNFT1|PRKCE|ZNF3|MEPCE|FANCI|PABPC1|CC2D1A|CSTF3|RANBP10|OSBPL2| MAGOHB|TRIM41|SLC34A1|PLEC|PPP2R2A|MRE11|PSEN1|DENND5A|ZMIZ1|CHP1| GTF2F2|HNRNPA1|POLR2K|USP1|HOXA9|DLG1|LYAR|THRAP3|NET1|BLM|PIGR| SYNE2|NR3C2|MTOR|TGM2|EXO1|ACTN2|DLL1|DUSP10|PROX1|CDC73|UCHL5| TAB2|DHX9|VTA1|YY1AP1|SNAPIN|CHTOP|S100A16|BCCIP|MAP3K7|PRMT6|GTF2B| ZNF451|SCP2|KIF20B|ARFGEF2|SH3GLB2|UBR2|PPIL1|TMEM38B|HSPG2|HLA-DQA2|HLA- DQB1|AGER|RNF5|UBR4|SIK3|SYK|MBNL2|UBD|FTL|STAM|SHB|PRKCZ| ATAD3A|B4GALT1|ADRA1A|ITSN1|RAD1|SMARCA2|HACD2|RTF1|RAD9B|BCL2L11| PICALM|VDAC1|EXT2|NFATC2|MARF1|RPS8|DDX17|GAPDH|SMU1|MYCBP|ITGB2| MAP2K7|CRHR1|SUN1|ELAVL1|CD14|PRPF40A|FHL2|ACAN|RNF212|PEX5|PPP6C| FGFR1|SELENBP1|PLEKHA5|HRAS|EEF1D|SNRPB|IKZF2|RPP14|RPS24|VAMP2| ROBO1|GC|AMOTL2|RACK1|UBR5|PUF60|CDK5RAP3|CHD4|ADAP1|ATP1A1| VIM|DDIT3|DTX3|NUMB|ITGB3|APBA2|POLR2A|MAP2K6|AP2S1|MRPL37|NAP1L1| YAP1|CYFIP2|MAP3K14|ACD|AP2B1|ADCYAP1R1|PIGN|FYB1|CTCF| SRP72|HOXA13|ITM2B|EIF4A3|CDC42|MTHFD1|CALM1
Vesicle	GO:0031982	2.99E-08	2.19E-10	0.752432881	APPBP2|DLD|TGFBR3|NUTF2|HNRNPL|RABAC1|RAB3A|PON1|PFN1|MLEC|LTF| APOA1|LRP1|TUBA4A|CMA1|IRAK2|KIDINS220|DSG1|PSMA6|NID1|CP|SNX19| RMC1|PLOD2|APP|ADAMTS1|SMC2|FYCO1|DUSP16|AXL|PANK1|PABPC1|CC2D1A| SLC34A1|PLEC|ENO3|PSEN1|ALDH1A3|CHP1|HNRNPA1|DLG1|THRAP3|ITSN2|PIGR| SYNE2|MTOR|TGM2|ACTN2|DLL1|TAB2|VTA1|SNAPIN|S100A14|S100A16|

					MAP3K7|ARFGEF2|HSPG2|HLA-DQA2|HLA-DQB1|UBR4|SYK|FTL|STAM| SLC22A6|PRKCZ|B4GALT1|ITSN1|PICALM|VDAC1| EXT2|RPL14|RPS8|GAPDH|CEP250|ITGB2|CRHR1|PAICS|TBC1D10A|ELAVL1| CD14|FGFR1|SELENBP1|VAMP2|GC|AMOTL2|RACK1|ATP1A1|VIM|DDIT3| NUMB|ITGB3|APBA2|AP2S1|NAP1L1|CYFIP2|AP2B1|ADCYAP1R1| NEB|RDX|ITM2B|CDC42|MTHFD1|CALM1
Nucleus	GO:0005634	6.47E-08	5.06E-10	0.718909572	APPBP2|DLD|PSMD8|SF3A1|NFKBIA|NUTF2|PARD6A|STUB1|HNRNPL|POLR2I| PIK3R2|AIMP2|PFN1|MED31|CCND1|LTF|RGS2|CCDC92|LRP1|IRAK2|VHL|FHOD1| MED4|PSMA6|ELOB|CBFA2T2|POLB|CPSF6|IRF8|SETDB1|FAM120A|CEP164| ARID5B|GTF2E1|APP|SMC2|WDYHV1|S100A1|MAD2L1|RAD21|DUSP16|LEO1| PCLAF|TSC22D4|AKTIP|SRRM2|PANK1|UBE2E1|COPS6|PRKCE|ZNF3|MEPCE| FANCI|PABPC1|CC2D1A|CSTF3|RANBP10|MAGOHB|TRIM41|SLC34A1|PPP2R2A| MRE11|PSEN1|ZMIZ1|CHP1|GTF2F2|HNRNPA1|POLR2K|USP1|HOXA9|DLG1|LYAR| THRAP3|NET1|BLM|SYNE2|NR3C2|MTOR|TGM2|EXO1|DUSP10|PROX1|CDC73| UCHL5|TAB2|DHX9|VTA1|YY1AP1|CHTOP|S100A16|BCCIP|MAP3K7|PRMT6|GTF2B| ZNF451|SCP2|KIF20B|SH3GLB2|UBR2|PPIL1|TMEM38B|AGER|UBR4|SIK3|SYK| MBNL2|UBD|SHB|PRKCZ|ADRA1A|ITSN1|RAD1|SMARCA2|RTF1|RAD9B|PICALM| VDAC1|NFATC2|RPS8|DDX17|GAPDH|SMU1|MYCBP|MAP2K7|SUN1|ELAVL1| PRPF40A|FHL2|RNF212|PPP6C|FGFR1|SELENBP1|PLEKHA5|HRAS|EEF1D|SNRPB| IKZF2|RPP14|RPS24|RACK1|UBR5|PUF60|CDK5RAP3|CHD4|ADAP1|VIM|DDIT3|DTX3| NUMB|ITGB3|POLR2A|MAP2K6|NAP1L1|YAP1|CYFIP2|MAP3K14| ACD|FYB1|CTCF|HOXA13|EIF4A3|CALM1
Anchoring junction	GO:0070161	2.18E-07	1.81E-09	0.666154351	LCP2|PARD6A|RABAC1|PIK3R2|RAB3A|PFN1|CCND1|CRIPT|LRP1|KCNJ2|DSG1| FHOD1|APP|CHRNB1|TMOD3|PABPC1|PPFIBP1|PLEC|PSEN1|CHP1|DLG1|SYNE2| TGM2|ACTN2|DLL1|CRB1|SNAPIN|ARFGEF2|HSPG2|PRKCZ|B4GALT1|ITSN1|EVL| RPS8|ITGB2|FHL2|GPHN|VAMP2|AMOTL2|VIM|NUMB|ITGB3| TLN2|VAV1|CYFIP2|ADCYAP1R1|FYB1|RDX|CDC42
Intracellular non-membrane-bounded organelle	GO:0043232	1.15E-06	1.01E-08	0.593930216	APPBP2|PARD6A|STUB1|HNRNPL|TBCB|POLR2I|PFN1|RGS2|CCDC92|LRP1| TUBA4A|CMA1|FHOD1|PSMA6|POLB|CPSF6|IRF8|SETDB1|CEP164|APP|SMC2| HK2|MAD2L1|RAD21|LEO1|PCLAF|AXL|PANK1|PRKCE|TMOD3|FANCI|PABPC1| CC2D1A|OSBPL2|TRIM41|SLC34A1|PLEC|KIF15|MRE11|PSEN1|TMEM216|ARHGEF25| CHP1|GTF2F2|POLR2K|HOXA9|DLG1|LYAR|BLM|ITSN2|SYNE2|NR3C2|G3BP2| TGM2|ACTN2|PROX1|CDC73|UCHL5|DHX9|YY1AP1|SNAPIN|CHTOP|S100A16| BCCIP|PRMT6|GTF2B|BAG2|UBE2U|KIF20B|ARFGEF2|UBR2|AGER|UBR4|UBD| SHB|PRKCZ|ATAD3A|ADRA1A|RAD1|SMARCA2|RTF1|RAD9B|EVL|VDAC1| NFATC2|RPL14|RPS8|DDX17|GAPDH|CEP250|ELAVL1|FHL2|RNF212|SELENBP1| EEF1D|RPP14|RPS24|GPHN|RACK1|CDK5RAP3|CHD4|VIM|DDIT3|TLN2|POLR2A| TNNT1|MAP2K6|MRPL37|NAP1L1|MAP3K14|ACD|NEB|FYB1| CTCF|RDX|HOXA13|EIF4A3|CDC42|CALM1
Nuclear protein-containing complex	GO:0140513	1.36E-05	1.32E-07	0.486646109	SF3A1|NUTF2|POLR2I|MED31|MED4|ELOB|CPSF6|GTF2E1|MAD2L1|RAD21| LEO1|SRRM2|COPS6|MEPCE|PABPC1|MAGOHB|MRE11|GTF2F2|HNRNPA1| POLR2K|THRAP3|SYNE2|CDC73|UCHL5|CHTOP|BCCIP|MAP3K7|GTF2B|PPIL1| RAD1|SMARCA2|RTF1|RAD9B|NFATC2|SMU1|SUN1|PRPF40A| SNRPB|CHD4|DDIT3|POLR2A|YAP1|ACD|EIF4A3
Extracellular vesicle	GO:1903561	3.05E-05	3.13E-07	0.451570016	TGFBR3|NUTF2|HNRNPL|RAB3A|PON1|PFN1|LTF|APOA1|TUBA4A|PSMA6| NID1|CP|PLOD2|APP|SMC2|AXL|PABPC1|CC2D1A|PLEC|ENO3|ALDH1A3|CHP1| HNRNPA1|DLG1|THRAP3|ITSN2|PIGR|SYNE2|TGM2|ACTN2|VTA1|S100A14| S100A16|HSPG2|FTL|SLC22A6|PRKCZ|B4GALT1|VDAC1|EXT2|RPL14|RPS8| GAPDH|CEP250|ITGB2|PAICS|TBC1D10A|CD14|SELENBP1|GC|RACK1| ATP1A1|VIM|ITGB3|CYFIP2|NEB|RDX|ITM2B|CDC42|MTHFD1
Ribonucleoprotein complex	GO:1990904	3.47E-05	4.06E-07	0.445967053	SF3A1|HNRNPL|PSMA6|CPSF6|SRRM2|MEPCE|PABPC1|MAGOHB|HNRNPA1| G3BP2|DHX9|PPIL1|NFATC2|RPL14|RPS8|DDX17|GAPDH|SMU1|ELAVL1| PRPF40A|SNRPB|RPP14|RPS24|RACK1|VIM|MRPL37|ACD|SRP72|EIF4A3
Synapse	GO:0045202	3.67E-05	4.49E-07	0.443533394	RABAC1|RAB3A|PFN1|CRIPT|KCNJ2|HAPLN1|APP|CHRNB1|PRKCE|PPFIBP1|

					PPP2R2A|PSEN1|DLG1|ITSN2|ACTN2|SNAPIN|ARFGEF2|AGER|PRKCZ|UCN3| ADRA1A|ITSN1|PICALM|PTPRZ1|VDAC1|RPL14|ELAVL1|ACAN|DCC|PLEKHA5| HRAS|GPHN|VAMP2|ATP1A1|NUMB|ITGB3|APBA2|TLN2|AP2S1| CYFIP2|AP2B1|EIF4A3|CDC42|CALM1
Extracellular exosome	GO:0070062	3.78E-05	4.81E-07	0.44225082	TGFBR3|NUTF2|HNRNPL|PON1|PFN1|LTF|APOA1|TUBA4A|PSMA6|NID1|CP|PLOD2| APP|SMC2|AXL|PABPC1|CC2D1A|PLEC|ENO3|ALDH1A3|CHP1|HNRNPA1|DLG1| THRAP3|ITSN2|PIGR|SYNE2|TGM2|ACTN2|VTA1|S100A14|S100A16|HSPG2|FTL| SLC22A6|PRKCZ|B4GALT1|VDAC1|EXT2|RPL14|RPS8|GAPDH|CEP250|ITGB2| PAICS|TBC1D10A|CD14|SELENBP1|GC|RACK1|ATP1A1| VIM|ITGB3|CYFIP2|NEB|RDX|ITM2B|CDC42|MTHFD1
Focal adhesion	GO:0005925	9.37E-05	1.24E-06	0.402826041	PIK3R2|PFN1|LRP1|PABPC1|PPFIBP1|PLEC|CHP1|SYNE2|TGM2|ACTN2| HSPG2|EVL|RPS8|ITGB2|FHL2|VIM|NUMB|ITGB3|TLN2|RDX|CDC42
Cellular anatomical entity	GO:0110165	1.30E-04	1.74E-06	0.388605665	LCP2|APPBP2|TRAM2|DLD|TGFBR3|PSMD8|SF3A1|TOMM22|JOSD1|GTPBP1| NFKBIA|NUTF2|PARD6A|SMPD3|STUB1|HNRNPL|TBCB|POLR2I|RABAC1| PIK3R2|RAB3A|PON1|AIMP2|PFN1|MED31|CCND1|MLEC|LTF|RGS2|APOA1| CCDC92|CRIPT|LRP1|KCNJ2|BMP4|TUBA4A|CMA1|IRAK2|VHL|KIDINS220| DSG1|FHOD1|MED4|RNF144B|PSMA6|ELOB|CBFA2T2|NID1|GPAT3|CP|POLB| SNX19|SLIT1|CPSF6|IRF8|RMC1|SETDB1|GOLPH3L|HAPLN1|SPINK7|FAM120A| CEP164|ARID5B|PLOD2|ATG3|GTF2E1|APP|ADAMTS1|SMC2|WDYHV1|CACHD1| HK2|CCDC58|PSG6|S100A1|FYCO1|MAD2L1|RAD21|DUSP16|LEO1|SLC9A5| PCLAF|TSC22D4|AKTIP|AXL|SRRM2|PANK1|UBE2E1|COPS6|CHRNB1|RNFT1| SOSTDC1|PRKCE|ZNF3|MEPCE|TMOD3|FANCI|PABPC1|CC2D1A|PPFIBP1| CSTF3|RANBP10|OSBPL2|MAGOHB|TRIM41|SLC34A1|PLEC|KIF15|ENO3|PPP2R2A| MRE11|PSEN1|DENND5A|ALDH1A3|ZMIZ1|TMEM216|ARHGEF25|CHP1|GTF2F2| HNRNPA1|POLR2K|USP1|HOXA9|DLG1|LYAR|THRAP3|NET1|BLM|ITSN2|PIGR| SYNE2|NR3C2|FGF17|G3BP2|MTOR|TGM2|EXO1|ACTN2|DLL1|DUSP10|PROX1| CRB1|CDC73|UCHL5|TAB2|DHX9|VTA1|YY1AP1|SNAPIN|CHTOP|S100A14|S100A16| BCCIP|MAP3K7|PRMT6|GTF2B|BAG2|ZNF451|UBE2U|SCP2|KIF20B|ARFGEF2| SH3GLB2|UBR2|PPIL1|TRAF1|TMEM38B|HSPG2|HLA-DQA2|HLA-DQB1|AGER| RNF5|UBR4|SIK3|SYK|MBNL2|UBD|FTL|STAM|SHB|SLC22A6|PRKCZ| ATAD3A|B4GALT1|UCN3|ADRA1A|ITSN1|ESM1|RAD1|SMARCA2|HACD2|RTF1| RAD9B|EVL|BCL2L11|PICALM|PTPRZ1|VDAC1|EXT2|NFATC2|RPL14|MARF1|RPS8| DDX17|GAPDH|SMU1|CEP250|MYCBP|ITGB2|MAP2K7|CRHR1|PSG5|PAICS|SUN1| TBC1D10A|ELAVL1|MDK|CD14|PRPF40A|FHL2|ACAN|DCC|RNF212|PEX5|PPP6C| FGFR1|SELENBP1|TMEM232|PLEKHA5|HRAS|EEF1D|SNRPB|IKZF2|RPP14|RPS24| GPHN|VAMP2|ROBO1|GC|AMOTL2|RACK1|UBR5|PUF60|CDK5RAP3|CHD4|ADAP1| ATP1A1|VIM|DDIT3|DTX3|NUMB|ITGB3|APBA2|TLN2|POLR2A|TNNT1|MAP2K6| AP2S1|VAV1|MRPL37|NAP1L1|YAP1|CYFIP2|MAP3K14|ACD|AP2B1|ADCYAP1R1| NEB|PIGN|KCTD7|FYB1|CTCF|SRP72|RDX|HOXA13|ITM2B|EIF4A3|CDC42|MTHFD1|CALM1
Catalytic complex	GO:1902494	1.70E-04	2.42E-06	0.376955108	APPBP2|DLD|PSMD8|SF3A1|GTPBP1|PARD6A|STUB1|POLR2I|PIK3R2|MED31| CCND1|MLEC|RNF144B|PSMA6|ELOB|ATG3|GTF2E1|LEO1|SRRM2|UBE2E1| PABPC1|RANBP10|MAGOHB|ENO3|PPP2R2A|GTF2F2|HNRNPA1|POLR2K|CDC73| UCHL5|DHX9|BCCIP|MAP3K7|GTF2B|UBE2U|UBR2|PPIL1|SMARCA2| RTF1|HRAS|SNRPB|RPP14|CHD4|POLR2A|EIF4A3|CALM1
Clathrin-coated pit	GO:0005905	0.0011	1.60E-05	0.295860731	LRP1|APP|ITSN2|ITSN1|PICALM|NUMB|AP2S1|AP2B1
RNA polymerase II, holoenzyme	GO:0016591	0.0011	1.85E-05	0.295860731	POLR2I|GTF2E1|LEO1|GTF2F2|POLR2K|CDC73|GTF2B|RTF1|POLR2A
Postsynapse	GO:0098794	0.0011	1.74E-05	0.295860731	RAB3A|CRIPT|KCNJ2|APP|CHRNB1|DLG1|ACTN2|ARFGEF2|AGER|PRKCZ| ADRA1A|PICALM|RPL14|ELAVL1|DCC|PLEKHA5|GPHN|ATP1A1| ITGB3|APBA2|AP2S1|AP2B1|EIF4A3|CDC42
Cytoplasmic vesicle	GO:0031410	0.0013	2.15E-05	0.288605665	APPBP2|DLD|RABAC1|RAB3A|MLEC|LTF|APOA1|LRP1|CMA1|IRAK2|KIDINS220| DSG1|SNX19|RMC1|APP|ADAMTS1|FYCO1|DUSP16|PANK1|SLC34A1|PSEN1| CHP1|PIGR|MTOR|ACTN2|DLL1|TAB2|VTA1|SNAPIN|MAP3K7|ARFGEF2| HLA-DQA2|HLA-DQB1|UBR4|SYK|FTL|STAM|PRKCZ|B4GALT1|ITSN1|PICALM|ITGB2| CRHR1|ELAVL1|CD14|FGFR1|VAMP2|AMOTL2|ATP1A1|VIM|DDIT3|

					NUMB|ITGB3|APBA2|AP2S1|NAP1L1|AP2B1|ADCYAP1R1|ITM2B|CDC42|CALM1
Sarcomere	GO:0030017	0.0015	2.61E-05	0.282390874	STUB1|PSMA6|TMOD3|PLEC|PSEN1|ARHGEF25|SYNE2| ACTN2|ADRA1A|FHL2|TNNT1|NEB|CALM1
Intracellular protein-containing complex	GO:0140535	0.002	3.67E-05	0.269897	APPBP2|PSMD8|NFKBIA|STUB1|POLR2I|MED31|RNF144B|PSMA6|ELOB| ATG3|GTF2E1|LEO1|UBE2E1|RANBP10|PPP2R2A|GTF2F2|POLR2K| MTOR|CDC73|UCHL5|MAP3K7|GTF2B|UBE2U|UBR2|FTL|RTF1|POLR2A
Endosome	GO:0005768	0.0026	4.79E-05	0.258502665	RAB3A|LTF|APOA1|LRP1|IRAK2|KIDINS220|SNX19|RMC1|APP|FYCO1| PANK1|SLC34A1|PSEN1|TAB2|VTA1|MAP3K7|ARFGEF2|HLA-DQA2| HLA-DQB1|STAM|PRKCZ|ITSN1|PICALM|CRHR1|CD14|AMOTL2|DDIT3| NUMB|AP2S1|AP2B1|ADCYAP1R1|ITM2B
Perinuclear region of cytoplasm	GO:0048471	0.0038	7.36E-05	0.24202164	HNRNPL|RAB3A|APP|MAD2L1|PCLAF|COPS6|PRKCE|SLC34A1|PLEC| PSEN1|DLG1|TGM2|SNAPIN|S100A14|KIF20B|ARFGEF2|PRKCZ| PICALM|GAPDH|CEP250|HRAS|VAMP2|RACK1|UBR5|CYFIP2
Catalytic step 2 spliceosome	GO:0071013	0.0038	7.67E-05	0.24202164	SF3A1|SRRM2|PABPC1|MAGOHB|HNRNPA1|PPIL1|SNRPB|EIF4A3
U2-type spliceosomal complex	GO:0005684	0.0045	9.49E-05	0.234678749	SF3A1|SRRM2|MAGOHB|PPIL1|SMU1|PRPF40A|SNRPB|EIF4A3
Transferase complex	GO:1990234	0.0058	1.30E-04	0.223657201	APPBP2|DLD|PARD6A|STUB1|POLR2I|PIK3R2|MED31|CCND1|MLEC| RNF144B|ELOB|ATG3|GTF2E1|LEO1|UBE2E1|RANBP10|GTF2F2| POLR2K|CDC73|BCCIP|MAP3K7|GTF2B|UBE2U|UBR2|RTF1|SNRPB|POLR2A
Cytoskeleton	GO:0005856	0.0063	1.40E-04	0.220065945	APPBP2|PARD6A|TBCB|PFN1|CCDC92|LRP1|TUBA4A|FHOD1|POLB|CEP164| APP|HK2|MAD2L1|RAD21|LEO1|PCLAF|AXL|PRKCE|TMOD3|CC2D1A| SLC34A1|PLEC|KIF15|PSEN1|TMEM216|CHP1|GTF2F2|DLG1|ITSN2|SYNE2| ACTN2|DHX9|SNAPIN|BCCIP|BAG2|KIF20B|ARFGEF2|UBR4|PRKCZ| SMARCA2|EVL|GAPDH|CEP250|GPHN|CDK5RAP3|CHD4|VIM|TLN2| TNNT1|MAP2K6|NEB|FYB1|RDX|HOXA13|CDC42|CALM1
Cell-cell junction	GO:0005911	0.0068	1.60E-04	0.216749109	LCP2|PARD6A|CCND1|KCNJ2|DSG1|FHOD1|APP|TMOD3|DLG1|DLL1| CRB1|PRKCZ|B4GALT1|AMOTL2|ITGB3|VAV1|ADCYAP1R1|RDX|CDC42
Endomembrane system	GO:0012505	0.0076	1.90E-04	0.211918641	TRAM2|DLD|NUTF2|SMPD3|STUB1|RABAC1|RAB3A|CCND1|MLEC|LTF| APOA1|LRP1|KCNJ2|BMP4|CMA1|IRAK2|VHL|KIDINS220|DSG1|GPAT3|CP| SNX19|RMC1|GOLPH3L|PLOD2|APP|HK2|S100A1|FYCO1|MAD2L1|PANK1| RNFT1|PRKCE|SLC34A1|PSEN1|DENND5A|CHP1|DLG1|ITSN2|PIGR|SYNE2| NR3C2|MTOR|TGM2|ACTN2|DUSP10|TAB2|VTA1|SNAPIN|MAP3K7|SCP2| ARFGEF2|TMEM38B|HSPG2|HLA-DQA2|HLA-DQB1|RNF5|UBR4|FTL| STAM|PRKCZ|B4GALT1|ADRA1A|ITSN1|HACD2| BCL2L11|PICALM|EXT2|MARF1|RPS8|GAPDH|ITGB2|CRHR1|SUN1|ELAVL1| CD14|ACAN|PEX5|HRAS|RPS24|VAMP2|AMOTL2|ATP1A1|DDIT3|NUMB| ITGB3|APBA2|AP2S1|AP2B1|ADCYAP1R1|PIGN|SRP72|ITM2B|CDC42|CALM1
Membrane raft	GO:0045121	0.0126	3.10E-04	0.189962945	LCP2|APP|SLC34A1|PSEN1|DLG1|DLL1|SLC22A6|PRKCZ|ADRA1A| VDAC1|ITGB2|CD14|ATP1A1|ADCYAP1R1
Microtubule cytoskeleton	GO:0015630	0.0129	3.30E-04	0.188941029	APPBP2|PARD6A|TBCB|CCDC92|TUBA4A|POLB|CEP164|APP|HK2|MAD2L1| RAD21|LEO1|PCLAF|CC2D1A|SLC34A1|KIF15|PSEN1|CHP1|GTF2F2|DLG1| ITSN2|DHX9|SNAPIN|BCCIP|BAG2|KIF20B|ARFGEF2|UBR4|PRKCZ| GAPDH|CEP250|CDK5RAP3|CHD4|VIM|CDC42|CALM1
Cdc73/Paf1 complex	GO:0016593	0.0162	4.30E-04	0.179048499	LEO1|CDC73|RTF1
Extracellular region	GO:0005576	0.0198	5.40E-04	0.170333481	TGFBR3|NUTF2|SMPD3|HNRNPL|RAB3A|PON1|PFN1|LTF|APOA1|BMP4| TUBA4A|CMA1|PSMA6|NID1|CP|SLIT1|HAPLN1|SPINK7|CEP164|PLOD2| APP|ADAMTS1|SMC2|PSG6|S100A1|AXL|SOSTDC1|PABPC1|CC2D1A|PLEC| ENO3|ALDH1A3|CHP1|HNRNPA1|DLG1|THRAP3|ITSN2|PIGR|SYNE2|FGF17| TGM2|ACTN2|DLL1|CRB1|VTA1|S100A14|S100A16|KIF20B|HSPG2|AGER|FTL| SLC22A6|PRKCZ|B4GALT1|UCN3|ESM1|PTPRZ1|VDAC1|EXT2|RPL14|RPS8| GAPDH|CEP250|ITGB2|PSG5|PAICS|TBC1D10A|MDK|CD14|ACAN|FGFR1|SELENBP1| GC|RACK1|ATP1A1|VIM|ITGB3|CYFIP2|NEB|RDX|ITM2B|CDC42|MTHFD1|CALM1
Membrane	GO:0016020	0.0198	5.30E-04	0.170333481	LCP2|APPBP2|TRAM2|TGFBR3|TOMM22|JOSD1|GTPBP1|NFKBIA|NUTF2|PARD6A| SMPD3|HNRNPL|RABAC1|PIK3R2|RAB3A|AIMP2|PFN1|CCND1|MLEC|LTF|RGS2|

					APOA1|LRP1|KCNJ2|IRAK2|VHL|KIDINS220|DSG1|FHOD1|MED4|RNF144B|NID1| GPAT3|CP|SNX19|CPSF6|RMC1|GOLPH3L|FAM120A|PLOD2|APP|CACHD1|HK2| PSG6|FYCO1|RAD21|SLC9A5|AKTIP|AXL|CHRNB1|RNFT1|PRKCE|FANCI|PABPC1| CC2D1A|PPFIBP1|OSBPL2|SLC34A1|PLEC|KIF15|ENO3|PSEN1|DENND5A|TMEM216| ARHGEF25|CHP1|HNRNPA1|DLG1|ITSN2|PIGR|SYNE2|NR3C2|MTOR|TGM2|EXO1| DLL1|CRB1|TAB2|DHX9|VTA1|SNAPIN|S100A16|MAP3K7|ZNF451|SCP2|ARFGEF2| SH3GLB2|TRAF1|TMEM38B|HSPG2|HLA-DQA2|HLA-DQB1|AGER|RNF5|UBR4| SYK|FTL|STAM|SHB|SLC22A6|PRKCZ|ATAD3A|B4GALT1| ADRA1A|ITSN1|HACD2|EVL|BCL2L11|PICALM|PTPRZ1|VDAC1|EXT2|RPL14| MARF1|RPS8|DDX17|GAPDH|ITGB2|CRHR1|PAICS|SUN1|TBC1D10A|ELAVL1| CD14|PRPF40A|DCC|PEX5|FGFR1|SELENBP1|TMEM232|PLEKHA5|HRAS|RPS24| GPHN|VAMP2|ROBO1|AMOTL2|RACK1|UBR5|CDK5RAP3|CHD4|ADAP1|ATP1A1| VIM|NUMB|ITGB3|APBA2|TLN2|AP2S1|VAV1|MRPL37|NAP1L1|YAP1|CYFIP2| AP2B1|ADCYAP1R1|PIGN|KCTD7|FYB1|RDX|ITM2B|EIF4A3|CDC42|MTHFD1|CALM1
Transferase complex, transferring phosphorus-containing groups	GO:0061695	0.0198	5.40E-04	0.170333481	PARD6A|POLR2I|PIK3R2|CCND1|GTF2E1|LEO1|GTF2F2|POLR2K|CDC73| BCCIP|GTF2B|RTF1|POLR2A
Nucleolus	GO:0005730	0.0243	6.90E-04	0.161439373	POLR2I|RGS2|SMC2|LEO1|PANK1|CC2D1A|TRIM41|POLR2K|LYAR|BLM| UCHL5|DHX9|YY1AP1|CHTOP|S100A16|PRMT6|KIF20B|AGER|UBD| RTF1|DDX17|SELENBP1|EEF1D|RPP14|CDK5RAP3|MAP3K14|CTCF|EIF4A3
Spliceosomal complex	GO:0005681	0.0266	7.70E-04	0.157511836	SF3A1|SRRM2|PABPC1|MAGOHB|HNRNPA1|PPIL1|SMU1|PRPF40A|SNRPB|EIF4A3
Z disc	GO:0030018	0.0285	8.30E-04	0.154515514	STUB1|PLEC|PSEN1|SYNE2|ACTN2|ADRA1A|FHL2|NEB
Transcription preinitiation complex	GO:0097550	0.0306	9.10E-04	0.151427857	GTF2E1|GTF2F2|GTF2B
Neuron projection	GO:0043005	0.0345	0.001	0.14621809	RAB3A|RGS2|CRIPT|KCNJ2|APP|CHRNB1|PLEC|PSEN1|DLG1|LYAR|MTOR| ACTN2|CRB1|SNAPIN|BAG2|KIF20B|ARFGEF2|PRKCZ|UCN3|ITSN1| CEP250|CRHR1|DCC|GPHN|VAMP2|ROBO1|RACK1|ATP1A1|VIM| APBA2|CYFIP2|ADCYAP1R1|EIF4A3|CDC42|CALM1
U2-type precatalytic spliceosome	GO:0071005	0.0349	0.0011	0.145717457	SF3A1|SRRM2|MAGOHB|SMU1|SNRPB
Plasma membrane protein complex	GO:0098797	0.0362	0.0011	0.144129143	TGFBR3|LRP1|KCNJ2|CACHD1|CHRNB1|PSEN1|DLG1|CRB1| HSPG2|HLA-DQA2|HLA-DQB1|SYK|PICALM|ITGB2|ATP1A1|ITGB3|AP2S1|AP2B1|CALM1
Filopodium	GO:0030175	0.0379	0.0012	0.142136079	APP|SYNE2|ACTN2|B4GALT1|ITGB3|RDX|CDC42
Bounding membrane of organelle	GO:0098588	0.0379	0.0012	0.142136079	TOMM22|NUTF2|SMPD3|RAB3A|MLEC|LRP1|IRAK2|DSG1|CP|SNX19| RMC1|GOLPH3L|PLOD2|HK2|PLEC|PSEN1|DENND5A|CHP1| PIGR|SYNE2|MTOR|TAB2|VTA1|SNAPIN|MAP3K7|ARFGEF2|TMEM38B|HLA-DQA2|HLA- DQB1|UBR4|STAM|B4GALT1|BCL2L11|VDAC1|EXT2|ITGB2| CD14|PEX5|HRAS|VAMP2|ROBO1|NUMB|ITGB3|AP2S1|AP2B1|ITM2B|CDC42|CALM1
Glutamatergic synapse	GO:0098978	0.0429	0.0014	0.136754271	PFN1|PPP2R2A|DLG1|PRKCZ|ADRA1A|ELAVL1|ACAN|PLEKHA5|HRAS|NUMB|ITGB3|AP2B1|EIF4A3
Condensed nuclear chromosome	GO:0000794	0.0459	0.0016	0.133818731	SMC2|RAD21|BLM|RAD1|RAD9B|RNF212
Fibrillar center	GO:0001650	0.0459	0.0015	0.133818731	LEO1|CC2D1A|YY1AP1|AGER|UBD|SELENBP1|EEF1D|MAP3K14
Endocytic vesicle	GO:0030139	0.0459	0.0016	0.133818731	LTF|APOA1|LRP1|MTOR|HLA-DQA2|HLA-DQB1|SYK|PICALM|VAMP2|VIM|AP2S1|AP2B1|CDC42

Table S26 Significant GO Molecular Function

description	term name	FDR value	p-value	transferred FDR value	Genes	
Binding	GO:0005488	1.87E-12	4.79E-16	1.172815839	DLD|TGFBR3|SF3A1|GTPBP1|NFKBIA|NUTF2|PARD6A|SMPD3|STUB1| HNRNPL|POLR2I|RABAC1|PIK3R2|RAB3A|PON1|PFN1|CCND1|MLEC|LTF| RGS2|APOA1|CCDC92|CRIPT|LRP1|KCNJ2|BMP4|TUBA4A|CMA1|IRAK2|VHL| KIDINS220|DSG1|FHOD1|MED4|RNF144B|PSMA6|ELOB|CBFA2T2|NID1|CP|	

					POLB|SNX19|SLIT1|CPSF6|IRF8|SETDB1|GOLPH3L|HAPLN1|FAM120A|ARID5B| PLOD2|ATG3|GTF2E1|APP|ADAMTS1|SMC2|HK2|PSG6|S100A1|FYCO1|MAD2L1| RAD21|DUSP16|LEO1|PCLAF|AXL|SRRM2|PANK1|UBE2E1|CHRNB1|RNFT1| SOSTDC1|PRKCE|ZNF3|MEPCE|TMOD3|FANCI|PABPC1|CC2D1A|PPFIBP1|CSTF3| OSBPL2|MAGOHB|TRIM41|SLC34A1|PLEC|KIF15|ENO3|MRE11|PSEN1|DENND5A| ALDH1A3|ZMIZ1|CHP1|GTF2F2|HNRNPA1|POLR2K|HOXA9|DLG1|LYAR|THRAP3| BLM|ITSN2|SYNE2|NR3C2|FGF17|G3BP2|MTOR|TGM2|EXO1|ACTN2|DLL1|DUSP10| PROX1|CRB1|CDC73|UCHL5|TAB2|DHX9|VTA1|SNAPIN|CHTOP|S100A14|S100A16| BCCIP|MAP3K7|PRMT6|GTF2B|BAG2|ZNF451|UBE2U|SCP2|KIF20B|ARFGEF2| SH3GLB2|UBR2|PPIL1|TRAF1|TMEM38B|HSPG2|HLA-DQA2|HLA-DQB1|AGER| RNF5|UBR4|SIK3|SYK|MBNL2|UBD|FTL|STAM|SHB|SLC22A6|PRKCZ| ATAD3A|B4GALT1|UCN3|ADRA1A|ITSN1|ESM1|RAD1|SMARCA2|HACD2|RTF1| EVL|BCL2L11|PICALM|PTPRZ1|VDAC1|EXT2|NFATC2|RPL14|MARF1|RPS8|DDX17| GAPDH|CEP250|ITGB2|MAP2K7|CRHR1|PAICS|SUN1|TBC1D10A|ELAVL1|MDK| CD14|PRPF40A|FHL2|RABL2A|ACAN|RNF212|PEX5|PPP6C|FGFR1|SELENBP1| PLEKHA5|HRAS|EEF1D|SNRPB|IKZF2|RPP14|RPS24|GPHN|VAMP2|ROBO1|GC| RACK1|UBR5|PUF60|CDK5RAP3|CHD4|ADAP1|ATP1A1|VIM|DDIT3|DTX3|NUMB| ITGB3|APBA2|TLN2|POLR2A|TNNT1|MAP2K6|AP2S1|VAV1|MRPL37|NAP1L1|YAP1| CYFIP2|MAP3K14|ACD|AP2B1|ADCYAP1R1|NEB|KCTD7|FYB1|CTCF|SRP72| RDX|HOXA13|ITM2B|EIF4A3|CDC42|MTHFD1|CALM1	
Protein binding	GO:0005515	1.87E-12	3.79E-16	1.172815839	TGFBR3|NFKBIA|NUTF2|PARD6A|SMPD3|STUB1|RABAC1|PIK3R2|RAB3A| PON1|PFN1|CCND1|MLEC|RGS2|APOA1|CCDC92|CRIPT|LRP1|KCNJ2|BMP4| TUBA4A|IRAK2|VHL|KIDINS220|DSG1|FHOD1|MED4|RNF144B|PSMA6|ELOB| NID1|CP|POLB|SLIT1|ATG3|APP|PSG6|S100A1|MAD2L1|DUSP16|LEO1|AXL| SRRM2|PANK1|RNFT1|SOSTDC1|PRKCE|ZNF3|TMOD3|FANCI|PABPC1|CC2D1A| PPFIBP1|TRIM41|SLC34A1|PLEC|KIF15|MRE11|PSEN1|DENND5A|ALDH1A3|ZMIZ1| CHP1|HNRNPA1|HOXA9|DLG1|LYAR|THRAP3|BLM|SYNE2|FGF17|MTOR|ACTN2| DLL1|DUSP10|PROX1|CDC73|TAB2|DHX9|VTA1|SNAPIN|S100A14|S100A16|BCCIP| MAP3K7|PRMT6|GTF2B|BAG2|SCP2|KIF20B|ARFGEF2|SH3GLB2|PPIL1|TRAF1| TMEM38B|HSPG2|AGER|RNF5|UBR4|SYK|FTL|STAM|SHB|SLC22A6|PRKCZ|ATAD3A| B4GALT1|UCN3|ADRA1A|ITSN1|ESM1|SMARCA2|HACD2|RTF1|EVL|BCL2L11| PICALM|PTPRZ1|VDAC1|EXT2|NFATC2|RPL14|GAPDH|CEP250|ITGB2|MAP2K7| PAICS|SUN1|TBC1D10A|ELAVL1|MDK|FHL2|PEX5|FGFR1|HRAS|EEF1D|RPS24| GPHN|VAMP2|ROBO1|GC|RACK1|UBR5|PUF60|CDK5RAP3|CHD4|ATP1A1|VIM| DDIT3|NUMB|ITGB3|APBA2|TLN2|POLR2A|TNNT1|MAP2K6|AP2S1|VAV1| NAP1L1|YAP1|CYFIP2|ACD|AP2B1|ADCYAP1R1|NEB|KCTD7|FYB1| CTCF|SRP72|RDX|CDC42|CALM1	
Enzyme binding	GO:0019899	5.33E-05	3.24E-08	0.427327279	NFKBIA|NUTF2|PARD6A|STUB1|PIK3R2|RAB3A|PFN1|CCND1|MLEC|APOA1| TUBA4A|VHL|RNF144B|ELOB|POLB|ATG3|APP|PSG6|S100A1|DUSP16|LEO1| PRKCE|FANCI|PSEN1|DENND5A|CHP1|HOXA9|DLG1|DUSP10|CDC73|DHX9| MAP3K7|GTF2B|BAG2|TRAF1|RNF5|SYK|STAM|PRKCZ|HACD2|RTF1|BCL2L11| PICALM|VDAC1|NFATC2|CEP250|ITGB2|MAP2K7|ELAVL1|PEX5|RACK1| CDK5RAP3|CHD4|ITGB3|POLR2A|MAP2K6|CYFIP2|ACD|ADCYAP1R1|RDX|CDC42|CALM1	
Cell adhesion molecule binding	GO:0050839	1.10E-04	8.56E-08	0.395860731	PFN1|APP|TMOD3|CC2D1A|PPFIBP1|PLEC|MRE11|PSEN1|DLG1|ACTN2| SH3GLB2|HSPG2|SYK|ESM1|PICALM|PTPRZ1|RPL14|ITGB2|PAICS| TBC1D10A|EEF1D|RACK1|PUF60|NUMB|ITGB3|TLN2|RDX	
Amide binding	GO:0033218	4.70E-04	4.78E-07	0.332790214	NFKBIA|APOA1|LRP1|CMA1|APP|PANK1|SCP2|PPIL1|HSPG2|HLA- DQB1|AGER|PICALM|VDAC1|ITGB2|CRHR1|CD14|PEX5|APBA2|AP2B1|ADCYAP1R1|ITM2B	
Protein C-terminus binding	GO:0008022	0.0011	1.51E-06	0.295860731	RABAC1|RAB3A|MAD2L1|PABPC1|MRE11|DLG1|VTA1|HSPG2|CEP250| MAP2K7|PEX5|HRAS|POLR2A|YAP1	
Peptide binding	GO:0042277	0.0011	1.34E-06	0.295860731	NFKBIA|APOA1|LRP1|CMA1|APP|PPIL1|HSPG2|HLA-DQB1|AGER|PICALM| ITGB2|CRHR1|CD14|PEX5|APBA2|AP2B1|ADCYAP1R1|ITM2B	
Cadherin binding	GO:0045296	0.0019	3.06E-06	0.27212464	PFN1|TMOD3|CC2D1A|PPFIBP1|PLEC|MRE11|PSEN1|DLG1|SH3GLB2| PICALM|RPL14|PAICS|TBC1D10A|EEF1D|RACK1|PUF60|NUMB|RDX	

Protein domain specific binding	GO:0019904	0.0025	4.65E-06	0.260205999	TGFBR3|STUB1|CRIPT|KIDINS220|FHOD1|APP|SRRM2|SLC34A1|PSEN1| HNRNPA1|DLG1|ACTN2|PROX1|KIF20B|PPIL1|SYK|EVL|GAPDH|CEP250| TBC1D10A|ROBO1|RACK1|VIM|DDIT3|SRP72|CDC42|CALM1	
Phosphoprotein binding	GO:0051219	0.0067	1.35E-05	0.21739252	PIK3R2|PFN1|LEO1|THRAP3|MTOR|SYK|SHB|RTF1|VAV1	
Proline-rich region binding	GO:0070064	0.0067	1.50E-05	0.21739252	RABAC1|PFN1|CCND1|ITSN1|YAP1	
Identical protein binding	GO:0042802	0.0078	1.89E-05	0.21079054	NFKBIA|NUTF2|SMPD3|STUB1|RABAC1|PON1|APOA1|CCDC92|KCNJ2|IRAK2| FHOD1|APP|S100A1|MAD2L1|PANK1|ZNF3|TRIM41|SLC34A1|MRE11|ALDH1A3| HNRNPA1|LYAR|BLM|MTOR|ACTN2|S100A16|MAP3K7|BAG2|KIF20B|SH3GLB2| TRAF1|TMEM38B|AGER|RNF5|FTL|SLC22A6|ATAD3A|B4GALT1|VDAC1| GAPDH|PAICS|ELAVL1|FHL2|FGFR1|GPHN|ROBO1|RACK1|PUF60| VIM|DDIT3|ITGB3|APBA2|MAP2K6|KCTD7|CDC42	
Protein phosphorylated amino acid binding	GO:0045309	0.0125	3.31E-05	0.190308999	PIK3R2|PFN1|LEO1|SYK|SHB|RTF1|VAV1	
Protein-containing complex binding	GO:0044877	0.0137	3.89E-05	0.186327943	TGFBR3|CCND1|APOA1|CRIPT|LRP1|FHOD1|NID1|CPSF6|APP|SLC34A1| SYNE2|MTOR|ACTN2|UCHL5|DHX9|HSPG2|HLA-DQA2|HLA-DQB1| AGER|RNF5|SYK|UBD|PRKCZ|ESM1|PTPRZ1|MARF1|ITGB2| SNRPB|RACK1|VIM|ITGB3|TLN2|ACD|NEB|FYB1|SRP72|EIF4A3	
Amyloid-beta binding	GO:0001540	0.016	4.88E-05	0.179588002	APOA1|LRP1|HSPG2|AGER|PICALM|ITGB2|APBA2|ITM2B	
Cytoskeletal protein binding	GO:0008092	0.0211	6.83E-05	0.167571754	STUB1|RAB3A|PFN1|RGS2|CRIPT|FHOD1|POLB|AXL|PRKCE|TMOD3| PLEC|KIF15|CHP1|DLG1|SYNE2|ACTN2|BCCIP|BAG2|KIF20B|ARFGEF2| B4GALT1|EVL|BCL2L11|PICALM|GAPDH|GC|TLN2|TNNT1|NEB|RDX|CALM1	
RNA binding	GO:0003723	0.0246	8.48E-05	0.160906489	SF3A1|GTPBP1|HNRNPL|PFN1|LRP1|PSMA6|CPSF6|FAM120A|SRRM2| MEPCE|PABPC1|CSTF3|MAGOHB|PLEC|HNRNPA1|LYAR|THRAP3|G3BP2| UCHL5|DHX9|CHTOP|S100A16|BCCIP|MBNL2|RTF1|RPL14|MARF1|RPS8| DDX17|ELAVL1|PRPF40A|SNRPB|RPP14|RPS24|RACK1|UBR5|PUF60| VIM|POLR2A|MRPL37|NAP1L1|SRP72|RDX|EIF4A3	
Kinase binding	GO:0019900	0.0261	9.51E-05	0.158335949	PARD6A|STUB1|PIK3R2|CCND1|TUBA4A|PSG6|DUSP16|CHP1|DLG1| DUSP10|MAP3K7|SYK|PRKCZ|BCL2L11|VDAC1|CEP250|ITGB2|MAP2K7| ELAVL1|RACK1|CDK5RAP3|ITGB3|POLR2A|MAP2K6|CDC42|CALM1	
Catalytic activity, acting on a protein	GO:0140096	0.0261	9.71E-05	0.158335949	TGFBR3|JOSD1|STUB1|MED31|CCND1|LTF|CMA1|IRAK2|VHL|RNF144B| PSMA6|SETDB1|PLOD2|ATG3|ADAMTS1|DUSP16|AKTIP|AXL|UBE2E1| COPS6|RNFT1|SOSTDC1|PRKCE|TRIM41|PSEN1|USP1|DLG1|MTOR|TGM2| DUSP10|UCHL5|MAP3K7|PRMT6|GTF2B|ZNF451|UBE2U|UBR2|PPIL1| RNF5|UBR4|SIK3|SYK|PRKCZ|PTPRZ1|GAPDH|MAP2K7|RNF212|PPP6C| FGFR1|UBR5|DTX3|ITGB3|MAP2K6|MAP3K14|CDC42	
Ubiquitin-like protein transferase activity	GO:0019787	0.0274	1.10E-04	0.156224944	STUB1|MED31|VHL|RNF144B|ATG3|AKTIP|UBE2E1|RNFT1|TRIM41| ZNF451|UBE2U|UBR2|RNF5|UBR4|RNF212|UBR5|DTX3|CDC42	
Organic cyclic compound binding	GO:0097159	0.0274	1.10E-04	0.156224944	DLD|SF3A1|GTPBP1|HNRNPL|POLR2I|RAB3A|PFN1|LTF|APOA1|LRP1| TUBA4A|IRAK2|PSMA6|ELOB|POLB|CPSF6|IRF8|SETDB1|FAM120A|ARID5B| PLOD2|APP|SMC2|HK2|RAD21|AXL|SRRM2|PANK1|UBE2E1|PRKCE|ZNF3| MEPCE|FANCI|PABPC1|CC2D1A|CSTF3|OSBPL2|MAGOHB|PLEC|KIF15| MRE11|ALDH1A3|GTF2F2|HNRNPA1|POLR2K|HOXA9|LYAR|THRAP3|BLM| NR3C2|G3BP2|MTOR|TGM2|EXO1|PROX1|UCHL5|DHX9|CHTOP|S100A16| BCCIP|MAP3K7|GTF2B|BAG2|UBE2U|SCP2|KIF20B|SIK3|SYK|MBNL2|PRKCZ| ATAD3A|RAD1|SMARCA2|RTF1|VDAC1|NFATC2|RPL14|MARF1|RPS8| DDX17|GAPDH|MAP2K7|PAICS|ELAVL1|PRPF40A|RABL2A|FGFR1| HRAS|EEF1D|SNRPB|IKZF2|RPP14|RPS24|GPHN|GC|RACK1| UBR5|PUF60|CHD4|ATP1A1|VIM|DDIT3|POLR2A|MAP2K6| MRPL37|NAP1L1|YAP1|MAP3K14|ACD|CTCF|SRP72|RDX|HOXA13| ITM2B|EIF4A3|CDC42|MTHFD1	
Lipoprotein particle receptor binding	GO:0070325	0.0283	1.30E-04	0.154821356	APOA1|LRP1|APP|HSPG2|PICALM	

RNA polymerase II complex binding	GO:0000993	0.0458	2.10E-04	0.133913452	LEO1|CDC73|DHX9|GTF2B|RTF1	

Table S27 Enriched Human Monarch Phenotype

description	term name	FDR value	p-value	transferred FDR value	Genes
Phenotypic abnormality	HP:0000118	2.91E-06	2.39E-10	0.553610701	DLD|TGFBR3|SF3A1|NFKBIA|STUB1|PIK3R2|PON1|AIMP2|PFN1|CCND1|LTF|APOA1| CRIPT|LRP1|KCNJ2|BMP4|TUBA4A|VHL|KIDINS220|DSG1|PSMA6|NID1|CP|IRF8| FAM120A|CEP164|PLOD2|APP|CACHD1|FYCO1|RAD21|CHRNB1|FANCI|CC2D1A| PPFIBP1|OSBPL2|SLC34A1|PLEC|KIF15|ENO3|MRE11|PSEN1|DENND5A|ALDH1A3| ZMIZ1|TMEM216|HNRNPA1|DLG1|BLM|SYNE2|NR3C2|FGF17|MTOR|ACTN2|DLL1| CRB1|CDC73|TAB2|VTA1|YY1AP1|MAP3K7|SCP2|ARFGEF2|TMEM38B|HSPG2|HLA-DQA2|HLA- DQB1|SIK3|FTL|SLC22A6|PRKCZ|ATAD3A|B4GALT1|ADRA1A|SMARCA2|PICALM| EXT2|NFATC2|CEP250|ITGB2|PSG5|PRPF40A|FHL2|ACAN|DCC|PEX5|FGFR1| SELENBP1|HRAS|SNRPB|IKZF2|RPS24|GPHN|VAMP2|ROBO1|GC|AMOTL2|PUF60| CHD4|ATP1A1|VIM|NUMB|ITGB3|POLR2A|TNNT1|AP2S1|YAP1|CYFIP2|ACD|ADCYAP1R1| NEB|PIGN|KCTD7|FYB1|CTCF|SRP72|RDX|HOXA13|ITM2B|EIF4A3|CDC42|MTHFD1|CALM1
Abnormality of the nervous system	HP:0000707	4.27E-05	7.00E-09	0.436957212	DLD|STUB1|PIK3R2|PON1|AIMP2|PFN1|APOA1|CRIPT|LRP1|KCNJ2|BMP4|TUBA4A| VHL|KIDINS220|NID1|CP|FAM120A|CEP164|APP|CACHD1|RAD21|CHRNB1|FANCI| CC2D1A|PLEC|KIF15|MRE11|PSEN1|DENND5A|ALDH1A3|ZMIZ1|TMEM216|HNRNPA1| BLM|SYNE2|FGF17|MTOR|ACTN2|DLL1|CRB1|CDC73|TAB2|YY1AP1|MAP3K7|SCP2| ARFGEF2|TMEM38B|HSPG2|FTL|SLC22A6|PRKCZ|ATAD3A|B4GALT1|SMARCA2|PICALM| EXT2|CEP250|PSG5|PRPF40A|ACAN|DCC|PEX5|FGFR1|HRAS|SNRPB|RPS24|GPHN| VAMP2|ROBO1|PUF60|CHD4|ATP1A1|VIM|ITGB3|POLR2A|TNNT1|AP2S1|YAP1|CYFIP2| ACD|ADCYAP1R1|NEB|PIGN|KCTD7|CTCF|ITM2B|EIF4A3|CDC42|MTHFD1|CALM1
Abnormal nervous system physiology	HP:0012638	4.27E-05	8.48E-09	0.436957212	DLD|STUB1|PIK3R2|PON1|AIMP2|PFN1|APOA1|CRIPT|LRP1|KCNJ2|BMP4|TUBA4A| VHL|KIDINS220|NID1|CP|FAM120A|CEP164|APP|CACHD1|RAD21|CHRNB1|FANCI| CC2D1A|PLEC|KIF15|MRE11|PSEN1|DENND5A|ZMIZ1|TMEM216|HNRNPA1|BLM| SYNE2|FGF17|MTOR|ACTN2|DLL1|CRB1|CDC73|TAB2|YY1AP1|MAP3K7|SCP2|ARFGEF2| TMEM38B|HSPG2|FTL|SLC22A6|ATAD3A|B4GALT1|SMARCA2|EXT2|CEP250|ACAN| DCC|PEX5|FGFR1|HRAS|SNRPB|RPS24|GPHN|VAMP2|ROBO1|PUF60|CHD4|ATP1A1| VIM|POLR2A|TNNT1|AP2S1|YAP1|CYFIP2|ACD|ADCYAP1R1|NEB|PIGN| KCTD7|CTCF|ITM2B|EIF4A3|CDC42|MTHFD1|CALM1
Abnormality of the musculature	HP:0003011	1.60E-04	6.66E-08	0.379588002	DLD|STUB1|PIK3R2|PON1|AIMP2|PFN1|APOA1|KCNJ2|BMP4|VHL|KIDINS220|CP| PLOD2|APP|RAD21|CHRNB1|CC2D1A|SLC34A1|PLEC|KIF15|ENO3|MRE11|PSEN1| DENND5A|ZMIZ1|TMEM216|HNRNPA1|SYNE2|FGF17|MTOR|ACTN2|DLL1|CRB1| CDC73|MAP3K7|SCP2|ARFGEF2|HSPG2|FTL|ATAD3A|B4GALT1|SMARCA2|EXT2| FHL2|ACAN|DCC|PEX5|FGFR1|HRAS|SNRPB|RPS24|GPHN|VAMP2|PUF60|CHD4| ATP1A1|POLR2A|TNNT1|AP2S1|CYFIP2|ACD|NEB|PIGN|CTCF|HOXA13|ITM2B|CDC42
Abnormal skeletal muscle morphology	HP:0011805	1.60E-04	6.75E-08	0.379588002	STUB1|PIK3R2|PON1|AIMP2|PFN1|KCNJ2|BMP4|VHL|KIDINS220|CP|PLOD2|APP| RAD21|CHRNB1|CC2D1A|PLEC|KIF15|ENO3|MRE11|PSEN1|ZMIZ1|HNRNPA1|SYNE2| FGF17|MTOR|ACTN2|DLL1|MAP3K7|SCP2|HSPG2|FTL|ATAD3A|B4GALT1|FHL2| ACAN|PEX5|FGFR1|HRAS|SNRPB|RPS24|PUF60|ATP1A1|POLR2A| TNNT1|CYFIP2|NEB|PIGN|CTCF|HOXA13|CDC42
Abnormality of the musculoskeletal system	HP:0033127	1.60E-04	5.25E-08	0.379588002	DLD|NFKBIA|STUB1|PIK3R2|PON1|AIMP2|PFN1|APOA1|CRIPT|LRP1|KCNJ2|BMP4| VHL|KIDINS220|NID1|CP|IRF8|CEP164|PLOD2|APP|RAD21|CHRNB1|FANCI|CC2D1A| SLC34A1|PLEC|KIF15|ENO3|MRE11|PSEN1|DENND5A|ZMIZ1|TMEM216|HNRNPA1| BLM|SYNE2|FGF17|MTOR|ACTN2|DLL1|CRB1|CDC73|TAB2|YY1AP1|MAP3K7|SCP2|

					ARFGEF2|TMEM38B|HSPG2|FTL|ATAD3A|B4GALT1|SMARCA2|EXT2|ITGB2|FHL2| ACAN|DCC|PEX5|FGFR1|HRAS|SNRPB|RPS24|GPHN|VAMP2|PUF60|CHD4|ATP1A1| POLR2A|TNNT1|AP2S1|CYFIP2|ACD|NEB|PIGN|KCTD7|CTCF| HOXA13|ITM2B|EIF4A3|CDC42|MTHFD1
Hematological measurement	EFO:0004503	2.90E-04	1.67E-07	0.3537602	LCP2|APPBP2|SF3A1|TOMM22|JOSD1|GTPBP1|NFKBIA|SMPD3|AIMP2|PFN1| CCND1|MLEC|CCDC92|TUBA4A|IRAK2|KIDINS220|MED4|CBFA2T2|NID1|IRF8| RMC1|GOLPH3L|FAM120A|CEP164|ARID5B|APP|CCDC58|SLC9A5|PCLAF|TSC22D4| AXL|PANK1|PRKCE|FANCI|PABPC1|RANBP10|OSBPL2|SLC34A1|PLEC|ENO3|PSEN1| ZMIZ1|CHP1|USP1|HOXA9|THRAP3|ITSN2|SYNE2|NR3C2|G3BP2|MTOR|TGM2| EXO1|PROX1|TAB2|BCCIP|PRMT6|GTF2B|KIF20B|TRAF1|HLA-DQB1|SIK3|SYK| MBNL2|UBD|B4GALT1|ITSN1|SMARCA2|RTF1|EVL|BCL2L11| PICALM|NFATC2|ITGB2|MAP2K7|SUN1|TBC1D10A|FGFR1|SELENBP1|TMEM232| PLEKHA5|IKZF2|RPP14|GC|AMOTL2|UBR5|CHD4|ADAP1|ATP1A1|VIM|NUMB|ITGB3| TLN2|POLR2A|VAV1|NAP1L1|YAP1|MAP3K14|ACD|AP2B1|NEB|FYB1|CTCF|EIF4A3|MTHFD1
Morphological central nervous system abnormality	HP:0002011	3.70E-04	2.41E-07	0.343179828	DLD|STUB1|PIK3R2|PON1|AIMP2|PFN1|CRIPT|KCNJ2|BMP4|TUBA4A|VHL|KIDINS220| NID1|CP|CEP164|APP|RAD21|FANCI|CC2D1A|PLEC|KIF15|MRE11|PSEN1|DENND5A| ALDH1A3|ZMIZ1|TMEM216|HNRNPA1|BLM|FGF17|MTOR|DLL1|CRB1|MAP3K7|SCP2| ARFGEF2|HSPG2|FTL|PRKCZ|ATAD3A|B4GALT1|SMARCA2|PICALM|EXT2|PSG5|DCC| PEX5|FGFR1|HRAS|SNRPB|RPS24|GPHN|VAMP2|ROBO1|PUF60|CHD4|ATP1A1| ITGB3|POLR2A|CYFIP2|ACD|PIGN|KCTD7|CTCF|ITM2B|CDC42
Abnormality of head or neck	HP:0000152	4.90E-04	3.96E-07	0.330980392	DLD|NFKBIA|STUB1|PIK3R2|PON1|AIMP2|PFN1|LTF|CRIPT|LRP1|KCNJ2|BMP4| VHL|KIDINS220|NID1|CP|IRF8|PLOD2|RAD21|CHRNB1|FANCI|CC2D1A|PLEC|KIF15| MRE11|PSEN1|DENND5A|ALDH1A3|ZMIZ1|TMEM216|HNRNPA1|DLG1|BLM|FGF17| MTOR|ACTN2|DLL1|CRB1|CDC73|TAB2|MAP3K7|SCP2|ARFGEF2|TMEM38B|HSPG2| HLA-DQA2|FTL|ATAD3A|B4GALT1|SMARCA2|EXT2|ITGB2|ACAN|DCC|PEX5|FGFR1| SELENBP1|HRAS|SNRPB|RPS24|PUF60|CHD4|ITGB3|POLR2A|YAP1| CYFIP2|ACD|NEB|PIGN|KCTD7|FYB1|CTCF|EIF4A3|CDC42
Aplasia/Hypoplasia involving the central nervous system	HP:0002977	4.90E-04	3.94E-07	0.330980392	DLD|STUB1|PIK3R2|AIMP2|CRIPT|KCNJ2|BMP4|KIDINS220|NID1|CEP164|APP| RAD21|FANCI|CC2D1A|KIF15|MRE11|PSEN1|DENND5A|ALDH1A3|ZMIZ1|TMEM216| BLM|DLL1|CRB1|ARFGEF2|HSPG2|FTL|ATAD3A|B4GALT1|SMARCA2|EXT2|DCC| PEX5|FGFR1|HRAS|SNRPB|RPS24|GPHN|VAMP2|ROBO1|PUF60| POLR2A|CYFIP2|ACD|PIGN|KCTD7|CTCF|CDC42
Deviation of finger	HP:0004097	4.90E-04	3.61E-07	0.330980392	CRIPT|KCNJ2|BMP4|RAD21|FANCI|ZMIZ1|TMEM216|BLM|YY1AP1|MAP3K7| SMARCA2|EXT2|FGFR1|HRAS|SNRPB|PUF60|PIGN|CTCF|HOXA13|EIF4A3|CDC42
Finger clinodactyly	HP:0040019	4.90E-04	3.74E-07	0.330980392	KCNJ2|BMP4|RAD21|FANCI|ZMIZ1|TMEM216|BLM|YY1AP1|MAP3K7|SMARCA2| EXT2|FGFR1|HRAS|SNRPB|PUF60|PIGN|CTCF|HOXA13|EIF4A3
Abnormality of the head	HP:0000234	6.10E-04	6.54E-07	0.321467016	DLD|NFKBIA|STUB1|PIK3R2|PON1|AIMP2|PFN1|LTF|CRIPT|LRP1|KCNJ2|BMP4| VHL|KIDINS220|NID1|CP|IRF8|PLOD2|RAD21|CHRNB1|FANCI|CC2D1A|PLEC|KIF15| MRE11|DENND5A|ALDH1A3|ZMIZ1|TMEM216|HNRNPA1|DLG1|BLM|FGF17|MTOR| ACTN2|DLL1|CRB1|CDC73|TAB2|MAP3K7|SCP2|ARFGEF2|TMEM38B|HSPG2 |HLA-DQA2|FTL|ATAD3A|B4GALT1|SMARCA2|EXT2|ITGB2|ACAN|DCC|PEX5|FGFR1| SELENBP1|HRAS|SNRPB|RPS24|PUF60|CHD4|ITGB3|POLR2A|YAP1|CYFIP2| ACD|NEB|PIGN|KCTD7|FYB1|CTCF|EIF4A3|CDC42
Abnormality of the skeletal system	HP:0000924	6.30E-04	7.20E-07	0.320065945	DLD|NFKBIA|STUB1|PIK3R2|AIMP2|CRIPT|KCNJ2|BMP4|VHL|KIDINS220|NID1| IRF8|CEP164|PLOD2|APP|RAD21|CHRNB1|FANCI|CC2D1A|SLC34A1|PLEC|KIF15| MRE11|DENND5A|ZMIZ1|TMEM216|HNRNPA1|BLM|SYNE2|FGF17|MTOR|ACTN2| DLL1|CRB1|CDC73|TAB2|YY1AP1|MAP3K7|ARFGEF2|TMEM38B|HSPG2|ATAD3A| B4GALT1|SMARCA2|EXT2|ITGB2|ACAN|DCC|PEX5|FGFR1|HRAS|SNRPB|RPS24| GPHN|PUF60|CHD4|ATP1A1|POLR2A|TNNT1|AP2S1|CYFIP2|ACD|NEB| PIGN|KCTD7|CTCF|HOXA13|EIF4A3|CDC42|MTHFD1
Abnormal musculoskeletal physiology	HP:0011843	6.30E-04	7.61E-07	0.320065945	PIK3R2|AIMP2|KCNJ2|BMP4|VHL|PLOD2|RAD21|CHRNB1|FANCI|SLC34A1| PLEC|KIF15|MRE11|ZMIZ1|HNRNPA1|SYNE2|FGF17|DLL1|CDC73|TAB2|YY1AP1| MAP3K7|ARFGEF2|TMEM38B|HSPG2|SMARCA2|EXT2|ITGB2|ACAN|DCC|PEX5| FGFR1|HRAS|SNRPB|GPHN|PUF60|TNNT1|AP2S1|NEB|PIGN|CTCF|HOXA13|CDC42

Abnormal nervous system morphology	HP:0012639	6.30E-04	7.24E-07	0.320065945	DLD|STUB1|PIK3R2|PON1|AIMP2|PFN1|CRIPT|KCNJ2|BMP4|TUBA4A|VHL|KIDINS220|NID1|CP|CEP164|APP|RAD21|CHRNB1|FANCI|CC2D1A|PLEC|KIF15|MRE11|PSEN1|DENND5A|ALDH1A3|ZMIZ1|TMEM216|HNRNPA1|BLM|FGF17|MTOR|DLL1|CRB1|MAP3K7|SCP2|ARFGEF2|HSPG2|FTL|PRKCZ|ATAD3A|B4GALT1|SMARCA2|PICALM|EXT2|DCC|PEX5|FGFR1|HRAS|SNRPB|RPS24|GPHN|VAMP2|ROBO1|PUF60|CHD4|ATP1A1|ITGB3|POLR2A|CYFIP2|ACD|NEB|PIGN|KCTD7|CTCF|ITM2B|CDC42
Abnormal muscle physiology	HP:0011804	6.40E-04	9.39E-07	0.319382003	DLD|STUB1|PIK3R2|PON1|PFN1|APOA1|BMP4|VHL|KIDINS220|CP|APP|RAD21|CHRNB1|CC2D1A|SLC34A1|PLEC|KIF15|ENO3|MRE11|PSEN1|DENND5A|ZMIZ1|TMEM216|HNRNPA1|SYNE2|FGF17|MTOR|ACTN2|DLL1|CRB1|CDC73|ARFGEF2|HSPG2|FTL|ATAD3A|B4GALT1|SMARCA2|EXT2|FHL2|DCC|PEX5|FGFR1|HRAS|GPHN|VAMP2|PUF60|CHD4|ATP1A1|POLR2A|TNNT1|AP2S1|CYFIP2|ACD|NEB|PIGN|CTCF|ITM2B|CDC42
Abnormality of the face	HP:0000271	6.70E-04	1.26E-06	0.31739252	NFKBIA|STUB1|PIK3R2|PON1|AIMP2|PFN1|LTF|CRIPT|LRP1|KCNJ2|BMP4|VHL|KIDINS220|NID1|CP|IRF8|PLOD2|RAD21|CHRNB1|FANCI|CC2D1A|PLEC|KIF15|MRE11|DENND5A|ALDH1A3|ZMIZ1|TMEM216|HNRNPA1|DLG1|BLM|FGF17|MTOR|ACTN2|DLL1|CRB1|TAB2|MAP3K7|SCP2|TMEM38B|HSPG2|HLA-DQA2|FTL|ATAD3A|SMARCA2|EXT2|ITGB2|ACAN|DCC|PEX5|FGFR1|SELENBP1|HRAS|SNRPB|RPS24|PUF60|CHD4|ITGB3|POLR2A|YAP1|CYFIP2|ACD|NEB|PIGN|FYB1|CTCF|EIF4A3|CDC42
Abnormal axial skeleton morphology	HP:0009121	6.70E-04	1.15E-06	0.31739252	DLD|NFKBIA|STUB1|PIK3R2|AIMP2|CRIPT|KCNJ2|BMP4|VHL|KIDINS220|NID1|IRF8|PLOD2|RAD21|CHRNB1|FANCI|CC2D1A|PLEC|KIF15|MRE11|DENND5A|ZMIZ1|TMEM216|HNRNPA1|BLM|SYNE2|MTOR|ACTN2|DLL1|CRB1|CDC73|TAB2|MAP3K7|ARFGEF2|TMEM38B|HSPG2|ATAD3A|B4GALT1|SMARCA2|EXT2|ACAN|DCC|PEX5|FGFR1|HRAS|SNRPB|RPS24|PUF60|CHD4|POLR2A|TNNT1|CYFIP2|ACD|NEB|PIGN|KCTD7|CTCF|HOXA13|EIF4A3|CDC42
Proximal placement of thumb	HP:0009623	6.70E-04	1.11E-06	0.31739252	CRIPT|BMP4|RAD21|PIGN|HOXA13|EIF4A3|CDC42
Abnormal skeletal morphology	HP:0011842	6.70E-04	1.05E-06	0.31739252	DLD|NFKBIA|STUB1|PIK3R2|AIMP2|CRIPT|KCNJ2|BMP4|VHL|KIDINS220|NID1|IRF8|CEP164|PLOD2|RAD21|CHRNB1|FANCI|CC2D1A|SLC34A1|PLEC|KIF15|MRE11|DENND5A|ZMIZ1|TMEM216|HNRNPA1|BLM|SYNE2|FGF17|MTOR|ACTN2|DLL1|CRB1|CDC73|TAB2|YY1AP1|MAP3K7|ARFGEF2|TMEM38B|HSPG2|ATAD3A|B4GALT1|SMARCA2|EXT2|ACAN|DCC|PEX5|FGFR1|HRAS|SNRPB|RPS24|GPHN|PUF60|CHD4|POLR2A|TNNT1|AP2S1|CYFIP2|ACD|NEB|PIGN|KCTD7|CTCF|HOXA13|EIF4A3|CDC42|MTHFD1
Abnormality of brain morphology	HP:0012443	6.70E-04	1.07E-06	0.31739252	DLD|STUB1|PIK3R2|AIMP2|CRIPT|KCNJ2|BMP4|VHL|KIDINS220|NID1|CP|CEP164|APP|RAD21|FANCI|CC2D1A|KIF15|MRE11|PSEN1|DENND5A|ZMIZ1|TMEM216|HNRNPA1|BLM|FGF17|MTOR|DLL1|CRB1|MAP3K7|SCP2|ARFGEF2|HSPG2|FTL|PRKCZ|ATAD3A|B4GALT1|SMARCA2|PICALM|EXT2|PSG5|DCC|PEX5|FGFR1|HRAS|SNRPB|RPS24|GPHN|VAMP2|ROBO1|PUF60|CHD4|ATP1A1|ITGB3|POLR2A|CYFIP2|ACD|PIGN|KCTD7|CTCF|ITM2B|CDC42
Neurodevelopmental abnormality	HP:0012759	6.90E-04	1.35E-06	0.316115091	DLD|STUB1|PIK3R2|AIMP2|CRIPT|KCNJ2|BMP4|KIDINS220|CEP164|APP|RAD21|CHRNB1|FANCI|CC2D1A|PLEC|KIF15|MRE11|PSEN1|DENND5A|ZMIZ1|TMEM216|HNRNPA1|BLM|MTOR|ACTN2|DLL1|CRB1|TAB2|YY1AP1|MAP3K7|ARFGEF2|TMEM38B|HSPG2|ATAD3A|B4GALT1|SMARCA2|EXT2|ACAN|DCC|PEX5|FGFR1|HRAS|SNRPB|RPS24|GPHN|VAMP2|ROBO1|PUF60|CHD4|ATP1A1|POLR2A|TNNT1|YAP1|CYFIP2|ACD|NEB|PIGN|KCTD7|CTCF|EIF4A3|CDC42|MTHFD1
Abnormal forebrain morphology	HP:0100547	7.80E-04	1.59E-06	0.31079054	DLD|STUB1|PIK3R2|AIMP2|CRIPT|KCNJ2|BMP4|KIDINS220|NID1|CP|APP|RAD21|FANCI|CC2D1A|KIF15|MRE11|PSEN1|DENND5A|ZMIZ1|TMEM216|HNRNPA1|BLM|FGF17|MTOR|DLL1|SCP2|ARFGEF2|HSPG2|FTL|PRKCZ|ATAD3A|SMARCA2|PICALM|EXT2|DCC|PEX5|FGFR1|HRAS|SNRPB|RPS24|GPHN|VAMP2|ROBO1|PUF60|POLR2A|CYFIP2|ACD|PIGN|KCTD7|CTCF|ITM2B|CDC42
Deviation of the thumb	HP:0009603	8.80E-04	1.87E-06	0.305551733	CRIPT|BMP4|RAD21|PIGN|HOXA13|EIF4A3|CDC42
Abnormal cerebral morphology	HP:0002060	0.001	2.28E-06	0.3	DLD|STUB1|PIK3R2|AIMP2|CRIPT|KCNJ2|BMP4|KIDINS220|NID1|CP|APP|RAD21|FANCI|CC2D1A|KIF15|MRE11|PSEN1|DENND5A|ZMIZ1|TMEM216|HNRNPA1|BLM|MTOR|DLL1|SCP2|ARFGEF2|HSPG2|FTL|PRKCZ|ATAD3A|SMARCA2|PICALM|EXT2|DCC|PEX5|FGFR1|HRAS|SNRPB|RPS24|GPHN|VAMP2|ROBO1|PUF60|POLR2A|CYFIP2|ACD|PIGN|KCTD7|CTCF|ITM2B|CDC42

Abnormality of the cardiovascular system	HP:0001626	0.0013	3.12E-06	0.288605665	DLD|SF3A1|PIK3R2|CCND1|APOA1|LRP1|KCNJ2|VHL|DSG1|NID1|CP|IRF8|CEP164| APP|RAD21|FANCI|PLEC|KIF15|MRE11|PSEN1|ZMIZ1|TMEM216|HNRNPA1|BLM| SYNE2|NR3C2|FGF17|MTOR|ACTN2|DLL1|CRB1|CDC73|TAB2|VTA1|YY1AP1|MAP3K7| ARFGEF2|HSPG2|PRKCZ|ATAD3A|SMARCA2|PICALM|EXT2|NFATC2|PSG5|FHL2| DCC|PEX5|FGFR1|HRAS|SNRPB|RPS24|PUF60|CHD4|NUMB|ITGB3| NEB|PIGN|FYB1|CTCF|HOXA13|CDC42|CALM1
Regional abnormality of skin	HP:0011356	0.0013	2.98E-06	0.288605665	BMP4|DSG1|PLOD2|RAD21|PLEC|PSEN1|ZMIZ1|BLM|MTOR|ACTN2|MAP3K7| HSPG2|SMARCA2|FHL2|PEX5|HRAS|PUF60|NEB|PIGN|CTCF|HOXA13
Clinodactyly	HP:0030084	0.0013	3.18E-06	0.288605665	KCNJ2|BMP4|RAD21|FANCI|KIF15|ZMIZ1|TMEM216|BLM|YY1AP1|MAP3K7| SMARCA2|EXT2|FGFR1|HRAS|SNRPB|PUF60|PIGN|CTCF|HOXA13|EIF4A3|CDC42
Abnormal muscle tone	HP:0003808	0.0016	4.12E-06	0.279588002	DLD|STUB1|PIK3R2|PON1|PFN1|BMP4|KIDINS220|CP|APP|RAD21|CHRNB1| CC2D1A|SLC34A1|KIF15|MRE11|PSEN1|DENND5A|ZMIZ1|TMEM216|HNRNPA1| SYNE2|FGF17|MTOR|ACTN2|DLL1|CRB1|ARFGEF2|HSPG2|FTL|ATAD3A|B4GALT1| SMARCA2|EXT2|DCC|PEX5|FGFR1|HRAS|GPHN|VAMP2|PUF60|CHD4| POLR2A|TNNT1|CYFIP2|ACD|NEB|PIGN|CTCF|ITM2B|CDC42
Abnormality of the mouth	HP:0000153	0.0019	4.93E-06	0.27212464	NFKBIA|PIK3R2|PON1|AIMP2|PFN1|LTF|KCNJ2|BMP4|NID1|IRF8|RAD21|CHRNB1| FANCI|PLEC|KIF15|MRE11|DENND5A|ZMIZ1|TMEM216|HNRNPA1|DLG1| BLM|FGF17|MTOR|ACTN2|DLL1|CRB1|TAB2|MAP3K7|TMEM38B|HSPG2| HLA-DQA2|ATAD3A|SMARCA2|EXT2|ITGB2|DCC|PEX5|FGFR1|SELENBP1|HRAS| SNRPB|RPS24|PUF60|ITGB3|POLR2A|YAP1|CYFIP2|ACD|NEB|PIGN|CTCF|EIF4A3|CDC42
Abnormality of eye movement	HP:0000496	0.0021	5.70E-06	0.267778071	STUB1|CRIPT|BMP4|KIDINS220|NID1|CP|CEP164|APP|RAD21|CHRNB1|FANCI| PLEC|KIF15|MRE11|PSEN1|ZMIZ1|TMEM216|FGF17|MTOR|ACTN2|DLL1|CRB1| MAP3K7|SCP2|HSPG2|SIK3|FTL|ATAD3A|EXT2|DCC|PEX5|FGFR1|HRAS|RPS24| PUF60|VIM|POLR2A|YAP1|CYFIP2|NEB|PIGN|CTCF|HOXA13|CDC42
Abnormal skull morphology	HP:0000929	0.0021	6.05E-06	0.267778071	DLD|NFKBIA|STUB1|PIK3R2|AIMP2|CRIPT|KCNJ2|BMP4|KIDINS220|NID1|IRF8| PLOD2|RAD21|FANCI|CC2D1A|PLEC|KIF15|MRE11|DENND5A|ZMIZ1|TMEM216| HNRNPA1|BLM|MTOR|DLL1|CRB1|CDC73|TAB2|MAP3K7|ARFGEF2|TMEM38B| HSPG2|ATAD3A|B4GALT1|SMARCA2|EXT2|ACAN|PEX5|FGFR1|HRAS|SNRPB| RPS24|PUF60|CHD4|POLR2A|CYFIP2|ACD|NEB|PIGN|KCTD7|CTCF|EIF4A3|CDC42
Short finger	HP:0009381	0.0021	5.67E-06	0.267778071	CRIPT|BMP4|RAD21|FANCI|KIF15|ZMIZ1|MTOR|MAP3K7|ACAN|FGFR1| RPS24|PUF60|NEB|PIGN|HOXA13|EIF4A3
Abnormal metencephalon morphology	HP:0011283	0.0021	6.28E-06	0.267778071	STUB1|AIMP2|BMP4|VHL|NID1|CP|CEP164|RAD21|FANCI|MRE11|DENND5A| ZMIZ1|TMEM216|DLL1|CRB1|MAP3K7|FTL|ATAD3A|B4GALT1|DCC| FGFR1|HRAS|GPHN|CHD4|CYFIP2|ACD|PIGN|KCTD7|CDC42
Abnormality of joint mobility	HP:0011729	0.0021	6.23E-06	0.267778071	PIK3R2|AIMP2|KCNJ2|BMP4|PLOD2|RAD21|CHRNB1|FANCI|PLEC|KIF15| MRE11|ZMIZ1|SYNE2|FGF17|DLL1|TAB2|MAP3K7|ARFGEF2|HSPG2|SMARCA2| EXT2|ACAN|DCC|PEX5|FGFR1|HRAS|SNRPB|GPHN|PUF60|TNNT1| NEB|PIGN|CTCF|HOXA13|CDC42
Abnormality of the lower limb	HP:0002814	0.0022	7.30E-06	0.265757732	STUB1|PIK3R2|CRIPT|KCNJ2|BMP4|VHL|DSG1|PLOD2|RAD21|FANCI|PLEC| MRE11|PSEN1|ZMIZ1|TMEM216|SYNE2|FGF17|MTOR|ACTN2|DLL1|MAP3K7| ARFGEF2|TMEM38B|HSPG2|ATAD3A|SMARCA2|EXT2|FHL2|ACAN|DCC|PEX5| FGFR1|HRAS|SNRPB|GPHN|PUF60|CHD4|ATP1A1|NEB|PIGN|CTCF|HOXA13|EIF4A3|CDC42
Aplasia/Hypoplasia of the phalanges of the hand	HP:0009767	0.0022	7.38E-06	0.265757732	CRIPT|KCNJ2|BMP4|RAD21|FANCI|KIF15|MTOR|MAP3K7|SMARCA2| FGFR1|PUF60|PIGN|HOXA13|EIF4A3
Abnormal calvaria morphology	HP:0002683	0.0023	8.40E-06	0.263827216	NFKBIA|PIK3R2|CRIPT|BMP4|KIDINS220|NID1|RAD21|FANCI|PLEC|KIF15| DENND5A|TMEM216|HNRNPA1|BLM|MTOR|TAB2|MAP3K7|HSPG2| ATAD3A|ACAN|PEX5|FGFR1|HRAS|CHD4|POLR2A|CYFIP2|PIGN|CTCF
Abnormal 5th finger morphology	HP:0004207	0.0023	8.03E-06	0.263827216	PIK3R2|KCNJ2|BMP4|RAD21|FANCI|KIF15|ZMIZ1|TMEM216|BLM| SMARCA2|EXT2|FGFR1|HRAS|SNRPB|PUF60|PIGN|CTCF|HOXA13|EIF4A3
Aplasia/hypoplasia involving bones of the upper limbs	HP:0006496	0.0023	8.06E-06	0.263827216	CRIPT|KCNJ2|BMP4|RAD21|FANCI|KIF15|ZMIZ1|MTOR|YY1AP1|MAP3K7| SMARCA2|EXT2|ACAN|PEX5|FGFR1|SNRPB|RPS24|PUF60|NEB|PIGN|HOXA13|EIF4A3

Clinodactyly of the 5th finger	HP:0004209	0.0024	8.96E-06	0.261978876	KCNJ2|BMP4|RAD21|FANCI|ZMIZ1|BLM|SMARCA2|EXT2|FGFR1| HRAS|SNRPB|PUF60|PIGN|CTCF|HOXA13|EIF4A3
Deviation of the 5th finger	HP:0009179	0.0025	9.33E-06	0.260205999	KCNJ2|BMP4|RAD21|FANCI|ZMIZ1|BLM|SMARCA2|EXT2|FGFR1| HRAS|SNRPB|PUF60|PIGN|CTCF|HOXA13|EIF4A3
Behavioral abnormality	HP:0000708	0.0027	1.10E-05	0.256863624	DLD|PON1|AIMP2|PFN1|KCNJ2|VHL|CP|FAM120A|APP|CACHD1|RAD21| CC2D1A|PLEC|KIF15|MRE11|PSEN1|ZMIZ1|TMEM216|HNRNPA1|SYNE2| FGF17|MTOR|DLL1|CRB1|CDC73|SCP2|ARFGEF2|HSPG2|FTL|ATAD3A|SMARCA2| EXT2|CEP250|ACAN|DCC|PEX5|FGFR1|HRAS|GPHN|VAMP2|PUF60|ATP1A1| VIM|POLR2A|AP2S1|CYFIP2|NEB|CTCF|ITM2B|CDC42
Abnormality of the skin	HP:0000951	0.0027	1.05E-05	0.256863624	NFKBIA|STUB1|APOA1|CRIPT|LRP1|KCNJ2|BMP4|VHL|DSG1|PSMA6|PLOD2| RAD21|CHRNB1|FANCI|PLEC|KIF15|MRE11|PSEN1|ZMIZ1|BLM|SYNE2|FGF17| MTOR|ACTN2|CRB1|TAB2|MAP3K7|ARFGEF2|HSPG2|HLA-DQB1|SMARCA2| EXT2|NFATC2|ITGB2|FHL2|DCC|PEX5|FGFR1|HRAS|IKZF2| RPS24|PUF60|ITGB3|ACD|NEB|PIGN|FYB1|CTCF|HOXA13|CDC42|MTHFD1
Abnormal thumb morphology	HP:0001172	0.0027	1.05E-05	0.256863624	STUB1|CRIPT|BMP4|RAD21|FANCI|ZMIZ1|TMEM216|MAP3K7|ACAN|FGFR1| RPS24|PUF60|NEB|PIGN|HOXA13|EIF4A3|CDC42
Abnormality of the integument	HP:0001574	0.0028	1.13E-05	0.255284197	NFKBIA|STUB1|AIMP2|APOA1|CRIPT|LRP1|KCNJ2|BMP4|VHL|DSG1|PSMA6| PLOD2|RAD21|CHRNB1|FANCI|PLEC|KIF15|MRE11|PSEN1|DENND5A|ZMIZ1| TMEM216|BLM|SYNE2|FGF17|MTOR|ACTN2|CRB1|TAB2|MAP3K7|ARFGEF2| HSPG2|HLA-DQB1|FTL|ATAD3A|SMARCA2|EXT2|NFATC2|ITGB2|FHL2|ACAN|DCC|PEX5| FGFR1|HRAS|IKZF2|RPS24|PUF60|ITGB3|CYFIP2|ACD|NEB|PIGN| FYB1|CTCF|HOXA13|CDC42|MTHFD1
Abnormal central motor function	HP:0011442	0.0028	1.18E-05	0.255284197	DLD|STUB1|PON1|PFN1|APOA1|KCNJ2|VHL|KIDINS220|NID1|CP|CEP164| APP|RAD21|CC2D1A|PLEC|KIF15|MRE11|PSEN1|DENND5A|ZMIZ1|TMEM216| HNRNPA1|SYNE2|FGF17|MTOR|DLL1|CRB1|SCP2|ARFGEF2|HSPG2|FTL|ATAD3A| EXT2|DCC|PEX5|FGFR1|GPHN|VAMP2|PUF60|TNNT1|CYFIP2|ACD|NEB|PIGN|KCTD7|ITM2B|CDC42
Abnormality of connective tissue	HP:0003549	0.0031	1.31E-05	0.250863831	PIK3R2|AIMP2|LRP1|KCNJ2|BMP4|PLOD2|RAD21|CHRNB1|FANCI|PLEC|KIF15| PSEN1|BLM|SYNE2|FGF17|MTOR|ACTN2|DLL1|CRB1|CDC73|MAP3K7|ARFGEF2| TMEM38B|HSPG2|SMARCA2|FHL2|PEX5|FGFR1|HRAS|SNRPB|GPHN| PUF60|POLR2A|TNNT1|AP2S1|NEB|PIGN|CTCF|CDC42
Abnormal thorax morphology	HP:0000765	0.0034	1.49E-05	0.246852108	PIK3R2|KCNJ2|PLOD2|RAD21|CHRNB1|ZMIZ1|SYNE2|MTOR|DLL1|MAP3K7| ARFGEF2|HSPG2|ATAD3A|EXT2|ACAN|PEX5|FGFR1|HRAS|SNRPB|RPS24| PUF60|CHD4|POLR2A|TNNT1|NEB|PIGN|CDC42
Abnormal cerebellum morphology	HP:0001317	0.0034	1.52E-05	0.246852108	STUB1|AIMP2|BMP4|VHL|NID1|CP|CEP164|RAD21|FANCI|MRE11|DENND5A| ZMIZ1|TMEM216|DLL1|CRB1|MAP3K7|FTL|ATAD3A|B4GALT1|FGFR1| HRAS|GPHN|CHD4|CYFIP2|ACD|PIGN|KCTD7|CDC42
Growth abnormality	HP:0001507	0.0034	1.54E-05	0.246852108	DLD|STUB1|AIMP2|CCND1|CRIPT|KCNJ2|BMP4|VHL|KIDINS220|DSG1|CEP164| PLOD2|RAD21|FANCI|SLC34A1|PLEC|KIF15|MRE11|ZMIZ1|TMEM216|HNRNPA1| BLM|SYNE2|NR3C2|FGF17|MTOR|DLL1|CRB1|CDC73|TAB2|YY1AP1|MAP3K7| ARFGEF2|TMEM38B|HSPG2|ATAD3A|SMARCA2|EXT2|ACAN|DCC|PEX5|FGFR1| HRAS|SNRPB|RPS24|ROBO1|PUF60|CHD4|POLR2A|CYFIP2|ACD|NEB|PIGN|CTCF|EIF4A3|CDC42
Aplasia/hypoplasia of the extremities	HP:0009815	0.0034	1.46E-05	0.246852108	CRIPT|KCNJ2|BMP4|RAD21|FANCI|KIF15|ZMIZ1|MTOR|YY1AP1|MAP3K7| HSPG2|SMARCA2|EXT2|ACAN|PEX5|FGFR1|SNRPB|RPS24|PUF60|CHD4|NEB|PIGN|HOXA13|EIF4A3
Abnormality of higher mental function	HP:0011446	0.0037	1.76E-05	0.243179828	DLD|STUB1|PIK3R2|AIMP2|PFN1|BMP4|TUBA4A|VHL|KIDINS220|CP|APP|RAD21| CHRNB1|FANCI|CC2D1A|PLEC|KIF15|MRE11|PSEN1|DENND5A|ZMIZ1|TMEM216| HNRNPA1|BLM|FGF17|MTOR|DLL1|CRB1|TAB2|YY1AP1|MAP3K7|ARFGEF2| HSPG2|FTL|ATAD3A|SMARCA2|EXT2|DCC|PEX5|FGFR1|HRAS|SNRPB|RPS24| GPHN|VAMP2|ROBO1|PUF60|CHD4|YAP1|CYFIP2|ACD|NEB|PIGN|KCTD7|CTCF|ITM2B|CDC42|MTHFD1
Aplasia/hypoplasia involving bones of the extremities	HP:0045060	0.0037	1.73E-05	0.243179828	CRIPT|KCNJ2|BMP4|RAD21|FANCI|KIF15|ZMIZ1|MTOR|YY1AP1|MAP3K7| SMARCA2|EXT2|ACAN|PEX5|FGFR1|SNRPB|RPS24|PUF60|CHD4|NEB|PIGN|HOXA13|EIF4A3
Abnormality of the kidney	HP:0000077	0.0041	2.00E-05	0.238721614	PIK3R2|APOA1|BMP4|VHL|CEP164|RAD21|FANCI|SLC34A1|PLEC|ZMIZ1| TMEM216|BLM|FGF17|DLL1|CDC73|YY1AP1|MAP3K7|HSPG2|EXT2|DCC|PEX5| FGFR1|HRAS|SNRPB|RPS24|PUF60|CHD4|ATP1A1|ITGB3|AP2S1|YAP1|PIGN|HOXA13|CDC42

Brachydactyly	HP:0001156	0.0041	2.03E-05	0.238721614	CRIPT|KCNJ2|BMP4|RAD21|KIF15|ZMIZ1|TMEM216|YY1AP1|MAP3K7| SMARCA2|ACAN|FGFR1|HRAS|PUF60|PIGN|HOXA13
Abnormal joint morphology	HP:0001367	0.0051	2.66E-05	0.229242982	STUB1|PIK3R2|BMP4|PLOD2|RAD21|FANCI|SYNE2|DLL1|CDC73|MAP3K7| ARFGEF2|HSPG2|SMARCA2|EXT2|ACAN|DCC|PEX5|FGFR1|HRAS|SNRPB| GPHN|PUF60|CHD4|AP2S1|NEB|PIGN|CTCF|HOXA13|EIF4A3|MTHFD1
Abnormality of metabolism/homeostasis	HP:0001939	0.0051	2.57E-05	0.229242982	DLD|NFKBIA|STUB1|PON1|CCND1|APOA1|KCNJ2|VHL|DSG1|CP|IRF8|PLOD2| APP|RAD21|FANCI|SLC34A1|PLEC|ENO3|MRE11|PSEN1|HNRNPA1|BLM|SYNE2| NR3C2|MTOR|ACTN2|DLL1|CRB1|CDC73|HSPG2|FTL|ATAD3A|B4GALT1|SMARCA2| FHL2|ACAN|PEX5|FGFR1|HRAS|RPS24|GPHN|ROBO1|GC|ATP1A1|ITGB3| AP2S1|YAP1|NEB|PIGN|KCTD7|FYB1|ITM2B|CDC42|MTHFD1|CALM1
Abnormality of the male genitalia	HP:0010461	0.0051	2.65E-05	0.229242982	BMP4|VHL|RAD21|FANCI|PLEC|ZMIZ1|TMEM216|BLM|FGF17|MTOR|DLL1| CRB1|CDC73|MAP3K7|HSPG2|ATAD3A|SMARCA2|EXT2|DCC|PEX5|FGFR1| HRAS|RPS24|ROBO1|PUF60|CHD4|NEB|PIGN|CTCF|HOXA13|CDC42
Abnormality of skin morphology	HP:0011121	0.0055	2.94E-05	0.225963731	NFKBIA|STUB1|APOA1|CRIPT|LRP1|KCNJ2|BMP4|VHL|DSG1|PLOD2|RAD21| CHRNB1|FANCI|PLEC|KIF15|MRE11|PSEN1|ZMIZ1|BLM|SYNE2|FGF17|MTOR| ACTN2|CRB1|MAP3K7|ARFGEF2|HSPG2|SMARCA2|EXT2|ITGB2|FHL2|DCC| PEX5|FGFR1|HRAS|RPS24|PUF60|ITGB3|ACD|NEB|PIGN|FYB1|CTCF|HOXA13|CDC42
Abnormality of limbs	HP:0040064	0.0055	2.99E-05	0.225963731	STUB1|PIK3R2|CRIPT|KCNJ2|BMP4|VHL|KIDINS220|DSG1|CEP164|PLOD2|RAD21| CHRNB1|FANCI|PLEC|KIF15|MRE11|PSEN1|ZMIZ1|TMEM216|BLM|SYNE2|FGF17| MTOR|ACTN2|DLL1|YY1AP1|MAP3K7|ARFGEF2|TMEM38B|HSPG2|ATAD3A| SMARCA2|EXT2|FHL2|ACAN|DCC|PEX5|FGFR1|HRAS|SNRPB|RPS24|GPHN| PUF60|CHD4|ATP1A1|CYFIP2|NEB|PIGN|CTCF|HOXA13|EIF4A3|CDC42
Abnormality of the upper urinary tract	HP:0010935	0.0056	3.08E-05	0.225181197	PIK3R2|APOA1|BMP4|VHL|CEP164|RAD21|FANCI|SLC34A1|PLEC|ZMIZ1|TMEM216| BLM|FGF17|DLL1|CDC73|YY1AP1|MAP3K7|HSPG2|EXT2|DCC|PEX5|FGFR1|HRAS| SNRPB|RPS24|PUF60|CHD4|ATP1A1|ITGB3|AP2S1|YAP1|PIGN|HOXA13|CDC42
Aplasia/hypoplasia involving bones of the hand	HP:0005927	0.0057	3.27E-05	0.224412514	CRIPT|KCNJ2|BMP4|RAD21|FANCI|KIF15|ZMIZ1|MTOR|YY1AP1|MAP3K7| SMARCA2|EXT2|ACAN|FGFR1|RPS24|PUF60|NEB|PIGN|HOXA13|EIF4A3
Abnormal eye physiology	HP:0012373	0.0057	3.21E-05	0.224412514	DLD|STUB1|PIK3R2|APOA1|CRIPT|BMP4|VHL|KIDINS220|NID1|CP|CEP164|APP| RAD21|CHRNB1|FANCI|CC2D1A|PLEC|KIF15|MRE11|PSEN1|ZMIZ1|TMEM216| BLM|SYNE2|FGF17|MTOR|ACTN2|DLL1|CRB1|TAB2|MAP3K7|SCP2|HSPG2|SIK3| FTL|ATAD3A|SMARCA2|EXT2|CEP250|DCC|PEX5|FGFR1|HRAS|RPS24|VAMP2| AMOTL2|PUF60|CHD4|VIM|POLR2A|YAP1|CYFIP2|NEB|PIGN| KCTD7|CTCF|HOXA13|ITM2B|CDC42
Abnormality of movement	HP:0100022	0.0057	3.20E-05	0.224412514	DLD|STUB1|AIMP2|PFN1|VHL|KIDINS220|CP|APP|CHRNB1|FANCI|CC2D1A| PLEC|KIF15|MRE11|PSEN1|DENND5A|ZMIZ1|TMEM216|HNRNPA1|SYNE2| FGF17|MTOR|ACTN2|DLL1|CRB1|SCP2|HSPG2|FTL|ATAD3A|EXT2|ACAN| DCC|PEX5|FGFR1|HRAS|GPHN|VAMP2|PUF60|CHD4|ATP1A1|TNNT1| CYFIP2|ACD|NEB|PIGN|KCTD7|ITM2B
Abnormality of the vertebral column	HP:0000925	0.0058	3.35E-05	0.223657201	PIK3R2|AIMP2|KCNJ2|BMP4|VHL|PLOD2|RAD21|CHRNB1|FANCI|PLEC|KIF15| ZMIZ1|TMEM216|HNRNPA1|SYNE2|ACTN2|DLL1|MAP3K7|ARFGEF2|TMEM38B| HSPG2|ATAD3A|SMARCA2|EXT2|ACAN|DCC|PEX5|FGFR1|HRAS| SNRPB|RPS24|PUF60|NEB|PIGN|CTCF|HOXA13|CDC42
Abnormality of vision	HP:0000504	0.0064	3.77E-05	0.219382003	DLD|PIK3R2|APOA1|BMP4|VHL|KIDINS220|CEP164|APP|CHRNB1|FANCI| CC2D1A|PSEN1|ZMIZ1|TMEM216|FGF17|DLL1|CRB1|MAP3K7|HSPG2|SMARCA2| CEP250|DCC|PEX5|FGFR1|HRAS|VAMP2|PUF60|VIM|POLR2A|YAP1|CYFIP2|PIGN|KCTD7|ITM2B|CDC42
Abnormality of body weight	HP:0004323	0.0065	3.90E-05	0.218708664	DLD|CCND1|CRIPT|BMP4|VHL|KIDINS220|CEP164|RAD21|FANCI|SLC34A1| KIF15|ZMIZ1|TMEM216|BLM|SYNE2|NR3C2|FGF17|MTOR|DLL1|CRB1|CDC73| YY1AP1|MAP3K7|ARFGEF2|HSPG2|SMARCA2|EXT2|DCC|PEX5|FGFR1|HRAS| SNRPB|RPS24|ROBO1|PUF60|POLR2A|CYFIP2|ACD|NEB|PIGN|CTCF|CDC42
Abnormality of the forehead	HP:0000290	0.0066	4.02E-05	0.218045606	NFKBIA|PIK3R2|CRIPT|KCNJ2|BMP4|KIDINS220|NID1|RAD21|FANCI|DENND5A| ZMIZ1|TMEM216|MTOR|TAB2|MAP3K7|HSPG2|ATAD3A|SMARCA2|EXT2| ACAN|PEX5|FGFR1|HRAS|RPS24|PUF60|POLR2A|CYFIP2|PIGN|CTCF|CDC42
Ventriculomegaly	HP:0002119	0.0066	3.98E-05	0.218045606	BMP4|KIDINS220|NID1|RAD21|FANCI|MRE11|DENND5A|ZMIZ1|TMEM216|MTOR|

					DLL1|B4GALT1|FGFR1|HRAS|PUF60|CHD4|ATP1A1|POLR2A|CYFIP2|ACD|PIGN|CTCF|CDC42
Short phalanx of finger	HP:0009803	0.0066	4.16E-05	0.218045606	CRIPT|KCNJ2|BMP4|KIF15|MTOR|MAP3K7|SMARCA2|FGFR1|PUF60|PIGN|HOXA13|EIF4A3
Short digit	HP:0011927	0.0066	4.09E-05	0.218045606	CRIPT|KCNJ2|BMP4|RAD21|FANCI|KIF15|ZMIZ1|TMEM216|MTOR|YY1AP1| MAP3K7|SMARCA2|ACAN|FGFR1|HRAS|RPS24|PUF60|NEB|PIGN|HOXA13|EIF4A3
Anthropometric measurement	EFO:0004302	0.0069	4.49E-05	0.216115091	LCP2|APPBP2|TRAM2|TGFBR3|GTPBP1|SMPD3|MED31|CCND1|CCDC92|LRP1| TUBA4A|VHL|KIDINS220|FHOD1|ELOB|CBFA2T2|NID1|SNX19|RMC1|SETDB1| HAPLN1|FAM120A|ARID5B|PLOD2|SMC2|HK2|LEO1|SLC9A5|AKTIP|SRRM2|CHRNB1| PRKCE|FANCI|CSTF3|PLEC|KIF15|PPP2R2A|ZMIZ1|HOXA9|DLG1|BLM|ITSN2| NR3C2|MTOR|PROX1|CRB1|UCHL5|TAB2|VTA1|YY1AP1|PRMT6|GTF2B| ARFGEF2|HSPG2|HLA-DQA2|HLA-DQB1|RNF5|SIK3|UBD|PRKCZ|ITSN1| HACD2|BCL2L11|PTPRZ1|EXT2|NFATC2|DDX17|CEP250|MAP2K7|CRHR1| SUN1|TBC1D10A|FHL2|ACAN|DCC|FGFR1|PLEKHA5|RPP14|GPHN|ROBO1| AMOTL2|ATP1A1|ITGB3|TLN2|TNNT1|MAP2K6|YAP1|CYFIP2|NEB|RDX|CDC42
Body weights and measures	EFO:0004324	0.0069	4.49E-05	0.216115091	LCP2|APPBP2|TRAM2|TGFBR3|GTPBP1|SMPD3|MED31|CCND1|CCDC92| LRP1|TUBA4A|VHL|KIDINS220|FHOD1|ELOB|CBFA2T2|NID1|SNX19|RMC1| SETDB1|HAPLN1|FAM120A|ARID5B|PLOD2|SMC2|LEO1|SLC9A5|AKTIP|SRRM2| CHRNB1|PRKCE|FANCI|CSTF3|PLEC|KIF15|PPP2R2A|ZMIZ1|HOXA9|DLG1|BLM| ITSN2|MTOR|PROX1|CRB1|UCHL5|TAB2|VTA1|YY1AP1|PRMT6|GTF2B|ARFGEF2| HSPG2|HLA-DQA2|HLA-DQB1|RNF5|SIK3|UBD|PRKCZ|ITSN1|HACD2|BCL2L11| PTPRZ1|EXT2|NFATC2| DDX17|CEP250|CRHR1|SUN1|TBC1D10A|FHL2|ACAN|DCC|FGFR1|PLEKHA5|RPP14| GPHN|ROBO1|AMOTL2|ATP1A1|ITGB3|TLN2|TNNT1|MAP2K6|YAP1|CYFIP2|NEB|RDX|CDC42
Abnormality of male external genitalia	HP:0000032	0.0069	4.59E-05	0.216115091	BMP4|RAD21|FANCI|PLEC|ZMIZ1|TMEM216|BLM|FGF17|MTOR|DLL1|CRB1|CDC73| MAP3K7|HSPG2|ATAD3A|SMARCA2|EXT2|DCC|PEX5|FGFR1|HRAS| RPS24|ROBO1|PUF60|CHD4|NEB|PIGN|CTCF|HOXA13|CDC42
Cleft palate	HP:0000175	0.0069	4.48E-05	0.216115091	KCNJ2|BMP4|NID1|RAD21|FANCI|TMEM216|DLG1|FGF17|DLL1|MAP3K7| HSPG2|SMARCA2|DCC|PEX5|FGFR1|SNRPB|RPS24|POLR2A|YAP1|NEB|PIGN|CTCF|EIF4A3
Abnormality of finger	HP:0001167	0.0069	4.58E-05	0.216115091	STUB1|PIK3R2|CRIPT|KCNJ2|BMP4|RAD21|FANCI|KIF15|ZMIZ1|TMEM216|BLM| MTOR|YY1AP1|MAP3K7|HSPG2|SMARCA2|EXT2|ACAN|PEX5|FGFR1|HRAS| SNRPB|RPS24|PUF60|CHD4|NEB|PIGN|CTCF|HOXA13|EIF4A3|CDC42
Short long bone	HP:0003026	0.0069	4.42E-05	0.216115091	KCNJ2|RAD21|FANCI|MAP3K7|HSPG2|SMARCA2|EXT2|PEX5|FGFR1|SNRPB|PUF60|HOXA13|EIF4A3
Abnormal esophagus physiology	HP:0025270	0.0069	4.70E-05	0.216115091	STUB1|PFN1|APP|RAD21|PLEC|PSEN1|BLM|DLL1|CDC73|MAP3K7|ARFGEF2| FTL|EXT2|FGFR1|HRAS|SNRPB|GPHN|PUF60|POLR2A|CYFIP2|NEB|PIGN|CTCF
Abnormality of globe location	HP:0100886	0.0069	4.47E-05	0.216115091	PIK3R2|CRIPT|KCNJ2|KIDINS220|FANCI|PLEC|KIF15|ZMIZ1|TMEM216|FGF17| MTOR|DLL1|CRB1|MAP3K7|HSPG2|ATAD3A|EXT2|PEX5|FGFR1| HRAS|RPS24|PUF60|CHD4|POLR2A|NEB|PIGN|CTCF|CDC42
Oral cleft	HP:0000202	0.0071	5.00E-05	0.214874165	KCNJ2|BMP4|NID1|RAD21|FANCI|TMEM216|DLG1|FGF17|DLL1|MAP3K7| HSPG2|SMARCA2|DCC|PEX5|FGFR1|SNRPB|RPS24|PUF60|POLR2A|YAP1|NEB|PIGN|CTCF|EIF4A3
Abnormal oral cavity morphology	HP:0000163	0.0074	5.25E-05	0.213076828	NFKBIA|PIK3R2|AIMP2|LTF|KCNJ2|BMP4|NID1|IRF8|RAD21|CHRNB1| FANCI|PLEC|KIF15|DENND5A|ZMIZ1|TMEM216|DLG1|BLM|FGF17|MTOR| ACTN2|DLL1|CRB1|TAB2|MAP3K7|TMEM38B|HSPG2|HLA-DQA2|ATAD3A| SMARCA2|EXT2|ITGB2|DCC|PEX5|FGFR1|HRAS|SNRPB| RPS24|PUF60|ITGB3|POLR2A|YAP1|CYFIP2|ACD|NEB|PIGN|CTCF|EIF4A3|CDC42
Aplasia/Hypoplasia of the thumb	HP:0009601	0.0077	5.72E-05	0.211350927	RAD21|FANCI|MAP3K7|ACAN|FGFR1|RPS24|PIGN|HOXA13|EIF4A3
Abnormal palm morphology	HP:0100871	0.0077	5.59E-05	0.211350927	KCNJ2|BMP4|DSG1|RAD21|PLEC|PSEN1|MTOR|ACTN2|YY1AP1|MAP3K7| SMARCA2|FHL2|PEX5|FGFR1|HRAS|PUF60|PIGN|CTCF
Abnormality of the urethra	HP:0000795	0.0082	6.17E-05	0.208618615	BMP4|RAD21|FANCI|PLEC|ZMIZ1|TMEM216|MTOR|MAP3K7|PEX5|FGFR1| RPS24|PUF60|NEB|PIGN|HOXA13|CDC42
Abnormality of the voice	HP:0001608	0.0082	6.32E-05	0.208618615	VHL|RAD21|PLEC|ZMIZ1|BLM|SYNE2|FGF17|CDC73|HSPG2|FTL|ACAN| DCC|FGFR1|HRAS|SNRPB|PIGN|EIF4A3
Abnormal cerebral ventricle morphology	HP:0002118	0.0082	6.34E-05	0.208618615	PIK3R2|BMP4|KIDINS220|NID1|RAD21|FANCI|MRE11|DENND5A|ZMIZ1|TMEM216| MTOR|DLL1|HSPG2|B4GALT1|DCC|FGFR1|HRAS|PUF60|CHD4|

					ATP1A1|POLR2A|CYFIP2|ACD|PIGN|CTCF|CDC42
Short metacarpal	HP:0010049	0.0082	6.10E-05	0.208618615	KCNJ2|RAD21|FANCI|MAP3K7|SMARCA2|EXT2|FGFR1|HOXA13|EIF4A3
Abnormal long bone morphology	HP:0011314	0.0082	6.26E-05	0.208618615	KCNJ2|CEP164|PLOD2|RAD21|FANCI|KIF15|ZMIZ1|TMEM216|HNRNPA1|MAP3K7| TMEM38B|HSPG2|SMARCA2|EXT2|ACAN|PEX5|FGFR1|HRAS|SNRPB| PUF60|NEB|CTCF|HOXA13|EIF4A3
Abnormality of the ear	HP:0000598	0.0084	6.61E-05	0.207572071	STUB1|KCNJ2|BMP4|VHL|RAD21|FANCI|PPFIBP1|OSBPL2|PLEC|KIF15|PSEN1| DENND5A|ZMIZ1|TMEM216|BLM|FGF17|ACTN2|DLL1|CRB1|TAB2|MAP3K7| TMEM38B|HSPG2|ADRA1A|SMARCA2|EXT2|CEP250|FHL2|ACAN|DCC|PEX5| FGFR1|HRAS|SNRPB|RPS24|PUF60|CHD4|YAP1|NEB|PIGN|CTCF|SRP72| RDX|HOXA13|ITM2B|EIF4A3|CDC42|MTHFD1|CALM1
Protein measurement	EFO:0004747	0.0085	6.78E-05	0.207058107	APPBP2|TRAM2|TGFBR3|SF3A1|TOMM22|JOSD1|GTPBP1|NUTF2|SMPD3|PON1| LTF|APOA1|CCDC92|LRP1|MED4|RNF144B|NID1|CP|POLB|SLIT1|IRF8|RMC1| SETDB1|HAPLN1|FAM120A|CEP164|ARID5B|APP|CACHD1|FYCO1|SLC9A5| AKTIP|AXL|PANK1|CHRNB1|PRKCE|FANCI|PABPC1|RANBP10|TRIM41|SLC34A1| PLEC|KIF15|PPP2R2A|PSEN1|ZMIZ1|USP1|HOXA9|ITSN2|PIGR|SYNE2|NR3C2| G3BP2|MTOR|TGM2|EXO1|PROX1|CRB1|TAB2|BCCIP|PRMT6|GTF2B|ARFGEF2| UBR2|PPIL1|TRAF1|HSPG2|HLA-DQB1|AGER|SIK3|UBD|STAM|SHB|B4GALT1| ITSN1|ESM1|SMARCA2|CCDC158|EVL|BCL2L11|NFATC2|MARF1|MYCBP| ITGB2|MAP2K7|PSG5|SUN1|DCC|SELENBP1|TMEM232|EEF1D|IKZF2|RPP14| GPHN|ROBO1|GC|UBR5|ADAP1|NUMB|ITGB3|TLN2|POLR2A|MAP2K6|VAV1| MRPL37|YAP1|CYFIP2|MAP3K14|ACD|AP2B1|NEB|CTCF|RDX|EIF4A3|CDC42
Echolalia	HP:0010529	0.0086	6.91E-05	0.206550155	PLEC|PSEN1|SMARCA2|FGFR1|PUF60
Aplasia/Hypoplasia of the cerebrum	HP:0007364	0.0089	7.21E-05	0.205060999	DLD|PIK3R2|AIMP2|CRIPT|KCNJ2|BMP4|KIDINS220|NID1|RAD21|FANCI| CC2D1A|KIF15|MRE11|DENND5A|ZMIZ1|TMEM216|BLM|DLL1|ARFGEF2|HSPG2| SMARCA2|EXT2|DCC|PEX5|FGFR1|HRAS|SNRPB|RPS24|VAMP2|PUF60| POLR2A|CYFIP2|ACD|PIGN|KCTD7|CTCF|CDC42
Neurodevelopmental delay	HP:0012758	0.0089	7.22E-05	0.205060999	DLD|STUB1|PIK3R2|AIMP2|CRIPT|BMP4|KIDINS220|CEP164|APP|RAD21|CHRNB1| FANCI|CC2D1A|PLEC|KIF15|MRE11|DENND5A|ZMIZ1|TMEM216|MTOR|ACTN2| DLL1|CRB1|ARFGEF2|TMEM38B|ATAD3A|B4GALT1|SMARCA2|EXT2|DCC|PEX5| FGFR1|HRAS|RPS24|GPHN|VAMP2|ROBO1|PUF60|ATP1A1|POLR2A|TNNT1| CYFIP2|ACD|NEB|PIGN|KCTD7|CTCF|EIF4A3|CDC42
Abnormality of the eye	HP:0000478	0.009	7.45E-05	0.204575749	DLD|STUB1|PIK3R2|APOA1|CRIPT|KCNJ2|BMP4|VHL|KIDINS220|NID1|CP|CEP164| APP|FYCO1|RAD21|CHRNB1|FANCI|CC2D1A|PLEC|KIF15|MRE11|PSEN1|DENND5A| ALDH1A3|ZMIZ1|TMEM216|HNRNPA1|BLM|SYNE2|FGF17|MTOR|ACTN2|DLL1| CRB1|TAB2|MAP3K7|SCP2|TMEM38B|HSPG2|SIK3|FTL|ATAD3A|SMARCA2|EXT2| CEP250|DCC|PEX5|FGFR1|HRAS|RPS24|VAMP2|ROBO1|AMOTL2|PUF60|CHD4| VIM|POLR2A|YAP1|CYFIP2|NEB|PIGN|KCTD7|CTCF|HOXA13|ITM2B|CDC42
Abnormality of the dentition	HP:0000164	0.0093	7.80E-05	0.203151705	NFKBIA|AIMP2|KCNJ2|RAD21|PLEC|KIF15|ZMIZ1|BLM|FGF17|DLL1|TAB2|MAP3K7| TMEM38B|HSPG2|SMARCA2|EXT2|ITGB2|DCC|FGFR1|HRAS|SNRPB| PUF60|POLR2A|CYFIP2|CTCF|EIF4A3|CDC42
Abnormal heart morphology	HP:0001627	0.0094	7.92E-05	0.202687215	DLD|PIK3R2|VHL|DSG1|NID1|RAD21|FANCI|KIF15|PSEN1|TMEM216|HNRNPA1| SYNE2|ACTN2|DLL1|TAB2|YY1AP1|MAP3K7|ARFGEF2|HSPG2|ATAD3A|SMARCA2| EXT2|FHL2|PEX5|FGFR1|HRAS|SNRPB|RPS24|PUF60|CHD4|NEB|PIGN|CTCF|HOXA13|CDC42
Abnormal cardiac septum morphology	HP:0001671	0.0095	8.09E-05	0.202227639	PIK3R2|DSG1|RAD21|FANCI|KIF15|TAB2|YY1AP1|MAP3K7|SMARCA2|EXT2| PEX5|FGFR1|HRAS|SNRPB|RPS24|PUF60|CHD4|PIGN|CTCF|HOXA13|CDC42
Short thumb	HP:0009778	0.0096	8.24E-05	0.201772877	RAD21|FANCI|MAP3K7|ACAN|RPS24|PIGN|HOXA13|EIF4A3
Abnormality of the hand	HP:0001155	0.0099	8.66E-05	0.200436481	STUB1|PIK3R2|CRIPT|KCNJ2|BMP4|DSG1|RAD21|CHRNB1|FANCI|PLEC|KIF15| PSEN1|ZMIZ1|TMEM216|BLM|MTOR|ACTN2|YY1AP1|MAP3K7|HSPG2|SMARCA2| EXT2|FHL2|ACAN|PEX5|FGFR1|HRAS|SNRPB|RPS24|PUF60| CHD4|NEB|PIGN|CTCF|HOXA13|EIF4A3|CDC42
Ptosis	HP:0000508	0.0101	8.95E-05	0.199567863	PIK3R2|RAD21|CHRNB1|FANCI|PLEC|ZMIZ1|TMEM216|SYNE2|FGF17|TAB2| HSPG2|SMARCA2|DCC|PEX5|FGFR1|HRAS|RPS24|PUF60|CHD4|YAP1|CYFIP2|NEB|CDC42

Abnormality of the skull base	HP:0002693	0.0101	8.90E-05	0.199567863	NID1|MRE11|DENND5A|TMEM216|MAP3K7|B4GALT1|FGFR1|HRAS|PUF60|POLR2A|PIGN|CDC42
Abnormality of cardiovascular system morphology	HP:0030680	0.0105	9.43E-05	0.19788107	DLD|PIK3R2|VHL|DSG1|NID1|APP|RAD21|FANCI|KIF15|PSEN1|ZMIZ1|TMEM216| HNRNPA1|SYNE2|FGF17|ACTN2|DLL1|TAB2|YY1AP1|MAP3K7|ARFGEF2|HSPG2| PRKCZ|ATAD3A|SMARCA2|PICALM|EXT2|NFATC2|PSG5|FHL2|DCC|PEX5| FGFR1|HRAS|SNRPB|RPS24|PUF60|CHD4|ITGB3|NEB|PIGN|CTCF|HOXA13|CDC42
High forehead	HP:0000348	0.0107	9.91E-05	0.197061622	PIK3R2|CRIPT|BMP4|ZMIZ1|MTOR|ATAD3A|EXT2|PEX5|FGFR1|HRAS|POLR2A|CYFIP2|CTCF
Growth delay	HP:0001510	0.0107	9.71E-05	0.197061622	STUB1|AIMP2|CRIPT|DSG1|CEP164|PLOD2|RAD21|FANCI|SLC34A1|PLEC|KIF15| MRE11|ZMIZ1|TMEM216|HNRNPA1|BLM|FGF17|MTOR|DLL1|TAB2|MAP3K7| TMEM38B|HSPG2|ATAD3A|SMARCA2|EXT2|ACAN|DCC|PEX5|FGFR1| HRAS|SNRPB|RPS24|ROBO1|PUF60|CHD4|CYFIP2|ACD|NEB|CTCF|EIF4A3
Abnormal cardiovascular system physiology	HP:0011025	0.0107	9.69E-05	0.197061622	DLD|PIK3R2|APOA1|KCNJ2|VHL|DSG1|CP|CEP164|APP|PLEC|PSEN1|HNRNPA1| SYNE2|NR3C2|ACTN2|DLL1|CDC73|TAB2|YY1AP1|MAP3K7|ARFGEF2|HSPG2| PRKCZ|SMARCA2|PICALM|PEX5|FGFR1|HRAS|PUF60|ITGB3|PIGN|CTCF|CDC42|CALM1
Abnormal facial shape	HP:0001999	0.0111	1.00E-04	0.195467702	STUB1|KCNJ2|BMP4|PLOD2|CHRNB1|FANCI|CC2D1A|KIF15|MRE11|DENND5A| ZMIZ1|TMEM216|BLM|MTOR|DLL1|TAB2|MAP3K7|HSPG2|ATAD3A| SMARCA2|EXT2|PEX5|FGFR1|HRAS|PUF60|CHD4|NEB|PIGN|CTCF|CDC42
Abnormality of the upper limb	HP:0002817	0.0111	1.00E-04	0.195467702	STUB1|PIK3R2|CRIPT|KCNJ2|BMP4|DSG1|PLOD2|RAD21|CHRNB1|FANCI|PLEC| KIF15|PSEN1|ZMIZ1|TMEM216|BLM|SYNE2|MTOR|ACTN2|YY1AP1|MAP3K7|HSPG2| SMARCA2|EXT2|FHL2|ACAN|PEX5|FGFR1|HRAS|SNRPB|RPS24|PUF60|CHD4| NEB|PIGN|CTCF|HOXA13|EIF4A3|CDC42
Cognitive impairment	HP:0100543	0.0112	1.10E-04	0.195078198	STUB1|PIK3R2|AIMP2|TUBA4A|KIDINS220|CP|APP|RAD21|FANCI|CC2D1A|KIF15| MRE11|PSEN1|ZMIZ1|TMEM216|HNRNPA1|BLM|MTOR|DLL1|CRB1|TAB2|YY1AP1| MAP3K7|ARFGEF2|HSPG2|FTL|ATAD3A|SMARCA2|EXT2|DCC|PEX5|FGFR1|HRAS| SNRPB|GPHN|VAMP2|ROBO1|PUF60|CHD4|YAP1|CYFIP2|ACD| PIGN|KCTD7|CTCF|ITM2B|CDC42|MTHFD1
Synostosis of joints	HP:0100240	0.0113	1.10E-04	0.194692156	RAD21|FANCI|MAP3K7|EXT2|DCC|FGFR1|HRAS|PUF60|NEB|HOXA13
Abnormality of skull size	HP:0000240	0.0123	1.20E-04	0.191009489	DLD|PIK3R2|AIMP2|CRIPT|KCNJ2|BMP4|RAD21|FANCI|CC2D1A|KIF15|MRE11| DENND5A|ZMIZ1|TMEM216|BLM|MTOR|DLL1|ARFGEF2|HSPG2|B4GALT1|SMARCA2| EXT2|ACAN|PEX5|FGFR1|HRAS|SNRPB|RPS24|PUF60|CHD4|POLR2A| CYFIP2|ACD|PIGN|KCTD7|CTCF|CDC42
Abnormal midface morphology	HP:0000309	0.0125	1.20E-04	0.190308999	KCNJ2|BMP4|KIDINS220|KIF15|ZMIZ1|TMEM216|BLM|MTOR|MAP3K7|HSPG2| EXT2|ACAN|FGFR1|HRAS|SNRPB|PUF60|PIGN|CTCF|CDC42
Aplasia/Hypoplasia involving the metacarpal bones	HP:0005914	0.0128	1.30E-04	0.189279003	KCNJ2|RAD21|FANCI|MAP3K7|SMARCA2|EXT2|FGFR1|HOXA13|EIF4A3
Cryptorchidism	HP:0000028	0.0129	1.30E-04	0.188941029	BMP4|RAD21|FANCI|ZMIZ1|TMEM216|BLM|FGF17|MTOR|MAP3K7|HSPG2| ATAD3A|SMARCA2|EXT2|DCC|PEX5|FGFR1|HRAS|ROBO1|CHD4|PIGN|CTCF|CDC42
Neural tube defect	HP:0045005	0.0129	1.30E-04	0.188941029	NID1|FANCI|PLEC|TMEM216|DLL1|CRB1|MAP3K7|HSPG2|EXT2|FGFR1| SNRPB|PUF60|PIGN
Long philtrum	HP:0000343	0.0131	1.30E-04	0.18827287	RAD21|ZMIZ1|MTOR|MAP3K7|HSPG2|SMARCA2|EXT2|FGFR1|HRAS| SNRPB|PUF60|NEB|PIGN|CTCF|CDC42
Gastroesophageal reflux	HP:0002020	0.0131	1.30E-04	0.18827287	RAD21|BLM|DLL1|MAP3K7|ARFGEF2|EXT2|FGFR1|HRAS|SNRPB|GPHN| PUF60|POLR2A|CYFIP2|PIGN|CTCF
Abnormality of the urinary system	HP:0000079	0.0133	1.40E-04	0.187614836	DLD|PIK3R2|APOA1|BMP4|VHL|CEP164|PLOD2|RAD21|FANCI|SLC34A1|PLEC| ZMIZ1|TMEM216|HNRNPA1|BLM|NR3C2|FGF17|MTOR|DLL1|CDC73|YY1AP1| MAP3K7|HSPG2|ATAD3A|SMARCA2|EXT2|DCC|PEX5|FGFR1|HRAS|SNRPB| RPS24|GPHN|PUF60|CHD4|ATP1A1|ITGB3|AP2S1|YAP1|NEB|PIGN|HOXA13|CDC42
Intellectual disability	HP:0001249	0.0133	1.40E-04	0.187614836	PIK3R2|AIMP2|KIDINS220|APP|RAD21|FANCI|CC2D1A|KIF15|MRE11|PSEN1| ZMIZ1|TMEM216|HNRNPA1|BLM|MTOR|DLL1|CRB1|TAB2|YY1AP1|MAP3K7| ARFGEF2|HSPG2|ATAD3A|SMARCA2|EXT2|DCC|PEX5|FGFR1|HRAS|SNRPB| GPHN|VAMP2|ROBO1|PUF60|CHD4|YAP1|CYFIP2|ACD|PIGN|KCTD7|CTCF|CDC42|MTHFD1

Congenital malformation of the great arteries	HP:0011603	0.0133	1.40E-04	0.187614836	NID1|FANCI|ZMIZ1|DLL1|TAB2|YY1AP1|MAP3K7|ARFGEF2|EXT2|FGFR1| SNRPB|PUF60|CHD4|PIGN|CTCF|CDC42
Feeding difficulties	HP:0011968	0.0133	1.40E-04	0.187614836	DLD|AIMP2|RAD21|CC2D1A|KIF15|ZMIZ1|TMEM216|BLM|NR3C2|MTOR| ACTN2|DLL1|MAP3K7|HSPG2|ATAD3A|SMARCA2|EXT2|PEX5|FGFR1| HRAS|SNRPB|GPHN|PUF60|POLR2A|CYFIP2|NEB|PIGN|CTCF|EIF4A3
Abnormality of digestive system physiology	HP:0025032	0.0133	1.40E-04	0.187614836	DLD|NFKBIA|STUB1|PON1|AIMP2|PFN1|CCND1|VHL|CEP164|APP|RAD21| CC2D1A|PLEC|KIF15|PSEN1|ZMIZ1|TMEM216|HNRNPA1|BLM|NR3C2|MTOR| ACTN2|DLL1|CDC73|MAP3K7|ARFGEF2|HSPG2|FTL|ATAD3A|SMARCA2|EXT2| PEX5|FGFR1|HRAS|SNRPB|GPHN|PUF60|ITGB3|POLR2A|CYFIP2|NEB|PIGN|CTCF|EIF4A3|MTHFD1
Mutism	HP:0002300	0.014	1.50E-04	0.185387196	PLEC|PSEN1|HNRNPA1|FTL|SMARCA2|FGFR1
Abnormal appendicular skeleton morphology	HP:0011844	0.014	1.50E-04	0.185387196	STUB1|PIK3R2|CRIPT|KCNJ2|BMP4|CEP164|PLOD2|RAD21|FANCI|PLEC|KIF15| ZMIZ1|TMEM216|HNRNPA1|BLM|MTOR|DLL1|YY1AP1|MAP3K7|ARFGEF2| TMEM38B|HSPG2|ATAD3A|SMARCA2|EXT2|ACAN|PEX5|FGFR1|HRAS|SNRPB| RPS24|GPHN|PUF60|CHD4|TNNT1|NEB|PIGN|CTCF|HOXA13|EIF4A3|CDC42
Cardiovascular measurement	EFO:0004298	0.0144	1.60E-04	0.184163751	TRAM2|TGFBR3|GTPBP1|NFKBIA|NUTF2|SMPD3|PON1|CCND1|APOA1|CCDC92| LRP1|RNF144B|POLB|SNX19|CEP164|CCDC58|SLC9A5|AXL|PRKCE|PABPC1|PLEC| KIF15|ZMIZ1|USP1|DLG1|ITSN2|SYNE2|NR3C2|EXO1|GTF2B|TRAF1|SIK3|MBNL2| B4GALT1|ITSN1|HACD2|NFATC2|SUN1|PPP6C|FGFR1|TMEM232|PLEKHA5|ROBO1| ADAP1|ITGB3|TLN2|MAP2K6|MRPL37|NAP1L1|YAP1|NEB|CCDC7|PIGN|KCTD7|CTCF|RDX
Cerebellar malformation	HP:0002438	0.0144	1.60E-04	0.184163751	NID1|FANCI|DENND5A|TMEM216|MAP3K7|B4GALT1|FGFR1|HRAS|CHD4|PIGN|CDC42
Abnormality of body height	HP:0000002	0.0147	1.60E-04	0.183268267	AIMP2|CRIPT|CEP164|PLOD2|RAD21|FANCI|PLEC|KIF15|MRE11|ZMIZ1|TMEM216| HNRNPA1|FGF17|MTOR|DLL1|TAB2|MAP3K7|TMEM38B|HSPG2|SMARCA2|EXT2| ACAN|PEX5|FGFR1|HRAS|SNRPB|RPS24|ROBO1|PUF60|CHD4|CYFIP2|ACD|NEB|CTCF|EIF4A3
Abnormal foot morphology	HP:0001760	0.0147	1.60E-04	0.183268267	CRIPT|KCNJ2|BMP4|DSG1|PLOD2|RAD21|FANCI|PLEC|MRE11|PSEN1|ZMIZ1|TMEM216| SYNE2|FGF17|MTOR|ACTN2|MAP3K7|HSPG2|ATAD3A|SMARCA2|EXT2|FHL2|ACAN| DCC|PEX5|FGFR1|HRAS|PUF60|ATP1A1|NEB|PIGN|CTCF|HOXA13|EIF4A3|CDC42
Short stature	HP:0004322	0.0147	1.60E-04	0.183268267	AIMP2|CRIPT|CEP164|PLOD2|RAD21|FANCI|PLEC|KIF15|MRE11|ZMIZ1|TMEM216| HNRNPA1|MTOR|DLL1|TAB2|MAP3K7|TMEM38B|HSPG2|SMARCA2|EXT2|ACAN|PEX5| FGFR1|HRAS|SNRPB|RPS24|ROBO1|PUF60|CHD4|CYFIP2|ACD|CTCF|EIF4A3
Ventricular septal defect	HP:0001629	0.015	1.70E-04	0.182390874	PIK3R2|DSG1|RAD21|FANCI|TAB2|YY1AP1|EXT2|PEX5|FGFR1|HRAS| SNRPB|RPS24|PUF60|CHD4|PIGN|HOXA13
Abnormal skin morphology of the palm	HP:0040211	0.015	1.70E-04	0.182390874	BMP4|DSG1|RAD21|PLEC|PSEN1|MTOR|ACTN2|MAP3K7|SMARCA2|FHL2| PEX5|HRAS|PUF60|PIGN|CTCF
Aplasia/Hypoplasia of the cerebellum	HP:0007360	0.0151	1.70E-04	0.182102305	STUB1|BMP4|NID1|CEP164|RAD21|MRE11|DENND5A|TMEM216|CRB1|ATAD3A| B4GALT1|FGFR1|HRAS|GPHN|ACD|PIGN|CDC42
Erythrocyte measurement	EFO:0005047	0.0152	1.80E-04	0.181815641	APPBP2|JOSD1|SMPD3|MLEC|CCDC92|MED4|CBFA2T2|CEP164|APP|CCDC58| SLC9A5|AXL|PRKCE|PABPC1|SLC34A1|PLEC|USP1|HOXA9|SYNE2|MTOR|EXO1| PROX1|TAB2|BCCIP|KIF20B|SIK3|SYK|B4GALT1|ITSN1|EVL|BCL2L11|PICALM| NFATC2|MAP2K7|UBR5|CHD4|VIM|POLR2A|NAP1L1|NEB|FYB1|CTCF|EIF4A3
Abnormality of the digestive system	HP:0025031	0.0152	1.80E-04	0.181815641	DLD|NFKBIA|STUB1|PON1|AIMP2|PFN1|CCND1|APOA1|VHL|CP|IRF8|CEP164|PLOD2| APP|RAD21|FANCI|CC2D1A|PLEC|KIF15|PSEN1|ZMIZ1|TMEM216|HNRNPA1|BLM| NR3C2|MTOR|ACTN2|DLL1|CDC73|MAP3K7|ARFGEF2|HSPG2|FTL|ATAD3A|SMARCA2| EXT2|ITGB2|DCC|PEX5|FGFR1|HRAS|SNRPB|RPS24|GPHN|PUF60|CHD4|ITGB3|POLR2A| AP2S1|CYFIP2|NEB|PIGN|CTCF|EIF4A3|CDC42|MTHFD1
Complete blood cell count	EFO:0004586	0.0153	1.80E-04	0.181530857	LCP2|SF3A1|NFKBIA|SMPD3|CCND1|MLEC|CCDC92|IRAK2|KIDINS220|IRF8|RMC1| GOLPH3L|FAM120A|CEP164|ARID5B|APP|PCLAF|TSC22D4|AXL|PRKCE|OSBPL2|SLC34A1| PLEC|ZMIZ1|CHP1|USP1|HOXA9|ITSN2|SYNE2|NR3C2|TGM2|EXO1|PROX1|TAB2|BCCIP|KIF20B| TRAF1|HLA-DQB1|SIK3|SYK|B4GALT1|ITSN1|RTF1|BCL2L11|PICALM|NFATC2|ITGB2|TBC1D10A| SELENBP1|TMEM232|IKZF2|GC|CHD4|ADAP1|ATP1A1|ITGB3|TLN2|VAV1| YAP1|MAP3K14|AP2B1|FYB1|CTCF|MTHFD1
High palate	HP:0000218	0.0153	1.80E-04	0.181530857	KCNJ2|BMP4|RAD21|CHRNB1|FANCI|ZMIZ1|TMEM216|ACTN2|DLL1|TAB2|MAP3K7| HSPG2|SMARCA2|PEX5|FGFR1|HRAS|SNRPB|RPS24|POLR2A|NEB|PIGN|EIF4A3

Abnormal circulating metabolite concentration	HP:0032180	0.0153	1.80E-04	0.181530857	DLD|APOA1|KCNJ2|VHL|DSG1|CP|APP|SLC34A1|PLEC|ENO3|PSEN1|HNRNPA1|SYNE2| NR3C2|ACTN2|CDC73|HSPG2|FTL|ATAD3A|B4GALT1|FHL2|PEX5| FGFR1|HRAS|GPHN|ATP1A1|AP2S1|NEB|PIGN|CALM1
Joint dislocation	HP:0001373	0.0154	1.80E-04	0.181247928	RAD21|FANCI|DLL1|MAP3K7|ARFGEF2|HSPG2|SMARCA2|EXT2|FGFR1|SNRPB| GPHN|PUF60|NEB|EIF4A3
Abnormal penis morphology	HP:0000036	0.0155	1.90E-04	0.18096683	BMP4|RAD21|FANCI|ZMIZ1|FGF17|MTOR|DLL1|CRB1|ATAD3A|DCC|PEX5|FGFR1| RPS24|ROBO1|PUF60|CHD4|NEB|PIGN|CTCF|HOXA13|CDC42
Abnormal posterior cranial fossa morphology	HP:0000932	0.0161	1.90E-04	0.179317412	NID1|MRE11|DENND5A|TMEM216|B4GALT1|FGFR1|HRAS|PUF60|POLR2A|PIGN|CDC42
Abnormal hand morphology	HP:0005922	0.0161	2.00E-04	0.179317412	PIK3R2|CRIPT|KCNJ2|BMP4|RAD21|FANCI|KIF15|ZMIZ1|TMEM216|BLM|MTOR|YY1AP1| MAP3K7|SMARCA2|EXT2|ACAN|FGFR1|HRAS|SNRPB|RPS24|PUF60|NEB|PIGN|CTCF|HOXA13|EIF4A3|CDC42
Abnormality of the diencephalon	HP:0010662	0.0161	2.00E-04	0.179317412	CP|TMEM216|FGF17|DLL1|SCP2|FTL|DCC|FGFR1
Abnormality of skin adnexa morphology	HP:0011138	0.0161	2.00E-04	0.179317412	NFKBIA|STUB1|AIMP2|CRIPT|LRP1|BMP4|DSG1|RAD21|PLEC|KIF15|DENND5A|ZMIZ1| TMEM216|BLM|FGF17|MTOR|MAP3K7|HSPG2|FTL|ATAD3A|SMARCA2|EXT2| ACAN|FGFR1|HRAS|RPS24|PUF60|CYFIP2|ACD|PIGN|CTCF|HOXA13|CDC42
Vertebral segmentation defect	HP:0003422	0.0176	2.20E-04	0.175448733	RAD21|FANCI|MAP3K7|DCC|FGFR1|HRAS|PUF60|NEB
Decreased body weight	HP:0004325	0.0176	2.20E-04	0.175448733	DLD|CCND1|CRIPT|BMP4|VHL|RAD21|FANCI|SLC34A1|KIF15|ZMIZ1|TMEM216|BLM| NR3C2|FGF17|DLL1|CDC73|YY1AP1|MAP3K7|ARFGEF2|HSPG2|SMARCA2|EXT2| PEX5|FGFR1|HRAS|SNRPB|RPS24|ROBO1|PUF60|POLR2A|CYFIP2|ACD|NEB|CTCF|CDC42
Abnormal corpus callosum morphology	HP:0001273	0.0178	2.30E-04	0.174958	STUB1|PIK3R2|AIMP2|BMP4|KIDINS220|NID1|FANCI|CC2D1A|KIF15|ZMIZ1|TMEM216| MTOR|DLL1|ARFGEF2|ATAD3A|DCC|FGFR1|HRAS|VAMP2|PUF60|POLR2A|CYFIP2|PIGN|KCTD7|CDC42
Abnormality of the curvature of the vertebral column	HP:0010674	0.0178	2.30E-04	0.174958	PIK3R2|AIMP2|KCNJ2|PLOD2|CHRNB1|FANCI|PLEC|ZMIZ1|TMEM216|HNRNPA1| SYNE2|ACTN2|DLL1|MAP3K7|ARFGEF2|TMEM38B|HSPG2|ATAD3A| SMARCA2|EXT2|ACAN|DCC|PEX5|FGFR1|HRAS|SNRPB|PUF60|NEB|CDC42
Localized skin lesion	HP:0011355	0.0179	2.30E-04	0.174714697	APOA1|CRIPT|LRP1|KCNJ2|VHL|FANCI|PLEC|KIF15|ZMIZ1|BLM|MTOR|CRB1| MAP3K7|ARFGEF2|EXT2|ITGB2|FGFR1|HRAS|PUF60|ACD|PIGN|CTCF|HOXA13|CDC42
Abnormal bone ossification	HP:0011849	0.018	2.30E-04	0.174472749	CRIPT|CEP164|PLOD2|FANCI|SLC34A1|PLEC|FGF17|CDC73|MAP3K7| TMEM38B|HSPG2|EXT2|DCC|PEX5|FGFR1|HRAS|SNRPB|AP2S1|CTCF|HOXA13
High density lipoprotein cholesterol measurement	EFO:0004612	0.0184	2.40E-04	0.173518218	TRAM2|TGFBR3|NUTF2|SMPD3|APOA1|CCDC92|LRP1|IRF8|CEP164|SLC9A5| AXL|RANBP10|ZMIZ1|SYNE2|G3BP2|UBR2|HLA-DQB1| SIK3|BCL2L11|MAP2K7|GPHN|ADAP1|CTCF|RDX
Dilated fourth ventricle	HP:0002198	0.0184	2.40E-04	0.173518218	NID1|MRE11|DENND5A|TMEM216|B4GALT1|FGFR1|HRAS|PIGN|CDC42
Lower-limb joint contracture	HP:0005750	0.0184	2.40E-04	0.173518218	PIK3R2|PLOD2|PLEC|SYNE2|MAP3K7|HSPG2|HRAS|TNNT1|NEB|PIGN
Abnormal renal morphology	HP:0012210	0.019	2.50E-04	0.17212464	PIK3R2|BMP4|VHL|CEP164|RAD21|FANCI|SLC34A1|PLEC|ZMIZ1|TMEM216|FGF17| DLL1|CDC73|YY1AP1|MAP3K7|HSPG2|DCC|PEX5|FGFR1|HRAS|SNRPB|RPS24|PUF60|AP2S1|PIGN|CDC42
Abnormal conjugate eye movement	HP:0000549	0.0191	2.60E-04	0.171896663	CRIPT|KIDINS220|RAD21|FANCI|KIF15|ZMIZ1|TMEM216|MTOR|DLL1|CRB1| MAP3K7|HSPG2|SIK3|FTL|ATAD3A|EXT2|DCC|PEX5|FGFR1|HRAS| RPS24|PUF60|POLR2A|YAP1|PIGN|CTCF|HOXA13|CDC42
Atrophy/Degeneration affecting the central nervous system	HP:0007367	0.0192	2.60E-04	0.171669877	STUB1|PON1|AIMP2|PFN1|BMP4|TUBA4A|KIDINS220|APP|RAD21|CC2D1A|PSEN1| ZMIZ1|HNRNPA1|DLL1|FTL|FGFR1|HRAS|GPHN|PUF60|CYFIP2|ACD|PIGN|KCTD7|CDC42
Abnormal motor neuron morphology	HP:0002450	0.0194	2.60E-04	0.171219827	PON1|PFN1|TUBA4A|PSEN1|HNRNPA1|SCP2
Aplasia/hypoplasia involving the skeleton	HP:0009115	0.0195	2.70E-04	0.170996539	CRIPT|KCNJ2|BMP4|RAD21|FANCI|KIF15|ZMIZ1|TMEM216|BLM|MTOR|TAB2|YY1AP1| MAP3K7|HSPG2|ATAD3A|SMARCA2|EXT2|ACAN|PEX5|FGFR1|HRAS| SNRPB|RPS24|PUF60|CHD4|NEB|PIGN|HOXA13|EIF4A3
Increased susceptibility to fractures	HP:0002659	0.0196	2.70E-04	0.170774393	PLOD2|SLC34A1|HNRNPA1|FGF17|YY1AP1|TMEM38B|EXT2|DCC|FGFR1|HRAS|NEB
Amyotrophic lateral sclerosis	HP:0007354	0.0196	2.70E-04	0.170774393	PON1|PFN1|TUBA4A|PSEN1|HNRNPA1

EMG abnormality	HP:0003457	0.0198	2.80E-04	0.170333481	APOA1|CHRNB1|PLEC|PSEN1|HNRNPA1|SYNE2|ACTN2|DLL1|HSPG2|FHL2|TNNT1|NEB
Lower extremity joint dislocation	HP:0030311	0.0198	2.80E-04	0.170333481	RAD21|FANCI|DLL1|MAP3K7|ARFGEF2|HSPG2|FGFR1|SNRPB|GPHN|PUF60|NEB|EIF4A3
Abnormal neck morphology	HP:0025668	0.0206	2.90E-04	0.168613278	CP|RAD21|FANCI|PSEN1|MAP3K7|SCP2|HSPG2|ACAN|DCC|PEX5|FGFR1| HRAS|SNRPB|RPS24|PUF60|NEB|PIGN|CDC42
Micrognathia	HP:0000347	0.0209	3.00E-04	0.167985371	CRIPT|KCNJ2|BMP4|RAD21|FANCI|ZMIZ1|TMEM216|BLM|TAB2|MAP3K7|HSPG2| ATAD3A|SMARCA2|PEX5|FGFR1|HRAS|SNRPB|RPS24|PUF60|NEB|PIGN|EIF4A3
Hypotonia	HP:0001252	0.0209	3.00E-04	0.167985371	DLD|PIK3R2|BMP4|KIDINS220|RAD21|CHRNB1|CC2D1A|SLC34A1|KIF15|MRE11| DENND5A|ZMIZ1|TMEM216|SYNE2|FGF17|MTOR|ACTN2|DLL1|CRB1|ARFGEF2| ATAD3A|B4GALT1|SMARCA2|EXT2|DCC|PEX5|FGFR1|HRAS|GPHN|VAMP2| PUF60|CHD4|POLR2A|TNNT1|CYFIP2|NEB|PIGN|CTCF|CDC42
Global developmental delay	HP:0001263	0.0209	3.10E-04	0.167985371	DLD|STUB1|PIK3R2|CRIPT|BMP4|KIDINS220|CEP164|APP|RAD21|FANCI|CC2D1A| PLEC|KIF15|DENND5A|ZMIZ1|TMEM216|MTOR|DLL1|CRB1|ARFGEF2|TMEM38B| ATAD3A|B4GALT1|SMARCA2|EXT2|DCC|PEX5|FGFR1|HRAS|GPHN|VAMP2| ROBO1|PUF60|ATP1A1|CYFIP2|ACD|PIGN|CTCF|EIF4A3|CDC42
Cerebellar hypoplasia	HP:0001321	0.0209	3.00E-04	0.167985371	STUB1|BMP4|NID1|CEP164|MRE11|DENND5A|TMEM216|ATAD3A|B4GALT1| FGFR1|HRAS|GPHN|ACD|PIGN|CDC42
Aplasia/Hypoplasia of the cerebellar vermis	HP:0006817	0.0209	3.00E-04	0.167985371	BMP4|NID1|CEP164|MRE11|DENND5A|TMEM216|CRB1|B4GALT1|FGFR1|HRAS|PIGN|CDC42
Abnormal dermatoglyphics	HP:0007477	0.0209	3.00E-04	0.167985371	BMP4|RAD21|MTOR|MAP3K7|SMARCA2|PEX5|HRAS|PUF60|PIGN|CTCF|HOXA13
Aplasia/Hypoplasia of the mandible	HP:0009118	0.0209	3.00E-04	0.167985371	CRIPT|KCNJ2|BMP4|RAD21|FANCI|ZMIZ1|TMEM216|BLM|TAB2|MAP3K7|HSPG2| ATAD3A|SMARCA2|PEX5|FGFR1|HRAS|SNRPB|RPS24|PUF60|NEB|PIGN|EIF4A3
Abnormal systemic arterial morphology	HP:0011004	0.0209	3.00E-04	0.167985371	PIK3R2|VHL|APP|FANCI|ZMIZ1|DLL1|TAB2|YY1AP1|ARFGEF2|FGFR1|HRAS| RPS24|PUF60|CHD4|PIGN|CTCF
Visual impairment	HP:0000505	0.0211	3.10E-04	0.167571754	DLD|PIK3R2|BMP4|VHL|KIDINS220|CEP164|FANCI|CC2D1A|ZMIZ1|TMEM216|FGF17| DLL1|CRB1|MAP3K7|HSPG2|SMARCA2|CEP250|DCC|PEX5|FGFR1|VAMP2| PUF60|VIM|POLR2A|YAP1|PIGN|KCTD7|ITM2B|CDC42
Abnormal metacarpal morphology	HP:0005916	0.0213	3.20E-04	0.16716204	KCNJ2|RAD21|FANCI|TMEM216|MAP3K7|SMARCA2|EXT2|FGFR1|HOXA13|EIF4A3
Erythrocyte indices	EFO:0004306	0.0214	3.20E-04	0.166958623	APPBP2|JOSD1|SMPD3|MLEC|CCDC92|CBFA2T2|CEP164|APP|CCDC58|SLC9A5|AXL| PRKCE|PABPC1|SLC34A1|PLEC|USP1|HOXA9|SYNE2|MTOR|EXO1|PROX1|TAB2|BCCIP| KIF20B|SYK|B4GALT1|ITSN1|EVL|BCL2L11|PICALM|NFATC2|MAP2K7|UBR5| CHD4|VIM|POLR2A|NAP1L1|NEB|FYB1|CTCF|EIF4A3
Abnormal upper limb bone morphology	HP:0040070	0.0214	3.20E-04	0.166958623	KCNJ2|RAD21|FANCI|ZMIZ1|TMEM216|MAP3K7|SMARCA2|EXT2|ACAN|PEX5| FGFR1|HRAS|SNRPB|PUF60|HOXA13|EIF4A3
Aphasia	HP:0002381	0.022	3.30E-04	0.165757732	APP|PLEC|PSEN1|ZMIZ1|HNRNPA1|SMARCA2|FGFR1
Abnormal morphology of the nasal alae	HP:0000429	0.0223	3.40E-04	0.165169514	AIMP2|CRIPT|RAD21|PLEC|KIF15|TMEM216|DLL1|CRB1|MAP3K7|ATAD3A| SMARCA2|EXT2|PEX5|FGFR1|HRAS|PUF60|PIGN|CTCF|CDC42
Gait disturbance	HP:0001288	0.0223	3.40E-04	0.165169514	STUB1|AIMP2|CP|APP|MRE11|PSEN1|ZMIZ1|TMEM216|HNRNPA1|SYNE2|FGF17| MTOR|ACTN2|DLL1|HSPG2|FTL|ATAD3A|EXT2|ACAN|DCC|PEX5|FGFR1| GPHN|VAMP2|CHD4|ATP1A1|CYFIP2|NEB
Abnormality of the genital system	HP:0000078	0.0226	3.50E-04	0.164589156	STUB1|BMP4|VHL|CEP164|RAD21|FANCI|PLEC|MRE11|ZMIZ1|TMEM216|BLM| FGF17|MTOR|DLL1|CRB1|CDC73|MAP3K7|SCP2|HSPG2|ATAD3A|SMARCA2|EXT2| DCC|PEX5|FGFR1|HRAS|RPS24|ROBO1|PUF60|CHD4|ITGB3|NEB|PIGN|CTCF|HOXA13|CDC42
Abnormal palmar dermatoglyphics	HP:0001018	0.0233	3.60E-04	0.163264408	BMP4|RAD21|MTOR|MAP3K7|SMARCA2|PEX5|HRAS|PUF60|PIGN|CTCF
Constitutional symptom	HP:0025142	0.0233	3.60E-04	0.163264408	PON1|PFN1|CCND1|KCNJ2|VHL|FAM120A|SLC34A1|PLEC|ENO3|HNRNPA1|SYNE2| CDC73|TAB2|HSPG2|FTL|EXT2|ACAN|DCC|FGFR1|SELENBP1|HRAS| NUMB|POLR2A|AP2S1|NEB|MTHFD1|CALM1
Abnormality of the philtrum	HP:0000288	0.0235	3.70E-04	0.162893214	RAD21|KIF15|DENND5A|ZMIZ1|MTOR|DLL1|TAB2|MAP3K7|HSPG2|SMARCA2| EXT2|FGFR1|HRAS|SNRPB|PUF60|NEB|PIGN|CTCF|CDC42
Abnormality of the nose	HP:0000366	0.024	3.80E-04	0.161978876	NFKBIA|PIK3R2|AIMP2|CRIPT|KCNJ2|RAD21|FANCI|PLEC|KIF15|DENND5A|

					ZMIZ1|TMEM216|BLM|FGF17|MTOR|DLL1|CRB1|TAB2|MAP3K7|SCP2|HSPG2| ATAD3A|SMARCA2|EXT2|ACAN|DCC|PEX5|FGFR1|HRAS|RPS24|PUF60| ITGB3|NEB|PIGN|FYB1|CTCF|EIF4A3|CDC42
Aplasia/Hypoplasia affecting the eye	HP:0008056	0.0241	3.90E-04	0.161798296	BMP4|VHL|FANCI|ALDH1A3|TMEM216|CRB1|HSPG2|ATAD3A|SMARCA2| FGFR1|HRAS|ROBO1|PUF60|YAP1|PIGN
Abnormal upper lip morphology	HP:0000177	0.0247	4.00E-04	0.160730305	KCNJ2|RAD21|KIF15|DENND5A|ZMIZ1|TMEM216|MTOR|DLL1|TAB2|MAP3K7| HSPG2|SMARCA2|EXT2|FGFR1|HRAS|SNRPB|PUF60|YAP1|CYFIP2|NEB|PIGN|CTCF|CDC42
Hip dislocation	HP:0002827	0.0247	4.00E-04	0.160730305	RAD21|FANCI|DLL1|MAP3K7|HSPG2|FGFR1|SNRPB|GPHN|PUF60|NEB|EIF4A3
Hypospadias	HP:0000047	0.0252	4.10E-04	0.159859946	BMP4|RAD21|FANCI|ZMIZ1|MTOR|PEX5|FGFR1|RPS24|PUF60|NEB|PIGN|HOXA13|CDC42
Frontal bossing	HP:0002007	0.0252	4.10E-04	0.159859946	NFKBIA|PIK3R2|CRIPT|NID1|FANCI|DENND5A|TMEM216|MTOR|ATAD3A|ACAN| PEX5|FGFR1|HRAS|PIGN
Abnormal eye morphology	HP:0012372	0.0255	4.20E-04	0.159345982	STUB1|PIK3R2|APOA1|CRIPT|KCNJ2|BMP4|VHL|KIDINS220|CP|CEP164|FYCO1| RAD21|FANCI|PLEC|KIF15|DENND5A|ALDH1A3|ZMIZ1|TMEM216|HNRNPA1|BLM|FGF17| MTOR|DLL1|CRB1|MAP3K7|TMEM38B|HSPG2|FTL|ATAD3A|SMARCA2|EXT2|PEX5| FGFR1|HRAS|RPS24|ROBO1|PUF60|CHD4|VIM|POLR2A|YAP1|CYFIP2|NEB| PIGN|KCTD7|CTCF|ITM2B|CDC42
Posteriorly rotated ears	HP:0000358	0.0256	4.20E-04	0.159176003	BMP4|RAD21|TMEM216|MAP3K7|HSPG2|ACAN|PEX5|FGFR1|HRAS|SNRPB|PUF60|PIGN|CTCF|CDC42
Abnormal shape of the frontal region	HP:0011218	0.0256	4.20E-04	0.159176003	NFKBIA|PIK3R2|CRIPT|NID1|FANCI|DENND5A|TMEM216|MTOR|ATAD3A|ACAN|PEX5|FGFR1|HRAS|PIGN
Abnormal aortic morphology	HP:0001679	0.0261	4.40E-04	0.158335949	PIK3R2|FANCI|ZMIZ1|DLL1|TAB2|ARFGEF2|FGFR1|HRAS|RPS24|PUF60|CHD4|PIGN|CTCF
Abnormal location of ears	HP:0000357	0.0262	4.40E-04	0.158169871	KCNJ2|BMP4|RAD21|KIF15|ZMIZ1|TMEM216|TAB2|MAP3K7|HSPG2|ACAN|PEX5| FGFR1|HRAS|SNRPB|RPS24|PUF60|CHD4|NEB|PIGN|CTCF|EIF4A3|CDC42
Cerebellar vermis hypoplasia	HP:0001320	0.0262	4.40E-04	0.158169871	BMP4|NID1|CEP164|MRE11|DENND5A|TMEM216|B4GALT1|FGFR1|HRAS|PIGN|CDC42
Abnormal finger phalanx morphology	HP:0005918	0.0267	4.60E-04	0.157348874	PIK3R2|CRIPT|KCNJ2|BMP4|RAD21|FANCI|KIF15|ZMIZ1|TMEM216|BLM|MTOR|MAP3K7| SMARCA2|ACAN|FGFR1|RPS24|PUF60|PIGN|HOXA13|EIF4A3
Anteverted nares	HP:0000463	0.0291	5.00E-04	0.153610701	AIMP2|CRIPT|RAD21|KIF15|TMEM216|DLL1|CRB1|MAP3K7|ATAD3A|SMARCA2|EXT2| PEX5|FGFR1|HRAS|PUF60|PIGN|CTCF
Abnormal bone structure	HP:0003330	0.0291	5.00E-04	0.153610701	CRIPT|CEP164|PLOD2|FANCI|SLC34A1|PLEC|HNRNPA1|FGF17|CDC73|MAP3K7|TMEM38B| HSPG2|EXT2|DCC|PEX5|FGFR1|HRAS|SNRPB|AP2S1|CTCF|HOXA13
Microcephaly	HP:0000252	0.0309	5.40E-04	0.151004152	DLD|AIMP2|CRIPT|KCNJ2|BMP4|RAD21|FANCI|CC2D1A|KIF15|MRE11|DENND5A|ZMIZ1| TMEM216|BLM|DLL1|ARFGEF2|HSPG2|SMARCA2|EXT2|PEX5|FGFR1|SNRPB| RPS24|PUF60|POLR2A|CYFIP2|ACD|KCTD7|CTCF|CDC42
Frontotemporal dementia	HP:0002145	0.0309	5.30E-04	0.151004152	TUBA4A|APP|PSEN1|HNRNPA1
Limb joint contracture	HP:0003121	0.0311	5.40E-04	0.150723961	PIK3R2|BMP4|PLOD2|PLEC|SYNE2|MAP3K7|HSPG2|PEX5|HRAS|SNRPB|TNNT1|NEB|PIGN|CTCF
Optic nerve hypoplasia	HP:0000609	0.0312	5.50E-04	0.150584541	FANCI|ALDH1A3|ATAD3A|FGFR1|ROBO1|PUF60
Abnormality of prenatal development or birth	HP:0001197	0.0314	5.60E-04	0.150307035	KIDINS220|RAD21|FANCI|PLEC|PSEN1|TMEM216|NR3C2|DLL1|HSPG2|ATAD3A|EXT2| ITGB2|PEX5|FGFR1|HRAS|SNRPB|RPS24|PUF60|POLR2A|CYFIP2|NEB|PIGN|CTCF|CALM1
Seizure	HP:0001250	0.0314	5.50E-04	0.150307035	DLD|STUB1|PIK3R2|AIMP2|CRIPT|BMP4|CEP164|APP|RAD21|CC2D1A|KIF15|PSEN1| DENND5A|ZMIZ1|TMEM216|FGF17|MTOR|DLL1|CRB1|ARFGEF2|FTL|ATAD3A|SMARCA2| EXT2|DCC|PEX5|FGFR1|HRAS|GPHN|VAMP2|ROBO1|PUF60|ATP1A1|POLR2A| CYFIP2|PIGN|KCTD7|CDC42|MTHFD1|CALM1
Bone fracture related measurement	EFO:0004516	0.0315	5.60E-04	0.150168945	TGFBR3|CCDC92|LRP1|BMP4|CBFA2T2|GPAT3|ARID5B|HK2|FYCO1|AXL|PRKCE|CSTF3| OSBPL2|KIF15|HOXA9|DLG1|ITSN2|NR3C2|MTOR|CRB1|BCL2L11|PTPRZ1|ITGB2| MAP2K7|PRPF40A|ACAN|RNF212|IKZF2|ROBO1|CHD4|TLN2|POLR2A|CDC42|MTHFD1
Abnormality of the outer ear	HP:0000356	0.0315	5.60E-04	0.150168945	KCNJ2|BMP4|RAD21|FANCI|PLEC|KIF15|DENND5A|ZMIZ1|TMEM216|BLM|TAB2| MAP3K7|HSPG2|SMARCA2|EXT2|ACAN|PEX5|FGFR1|HRAS|SNRPB|RPS24|PUF60| CHD4|NEB|PIGN|CTCF|HOXA13|EIF4A3|CDC42
Involuntary movements	HP:0004305	0.0315	5.60E-04	0.150168945	STUB1|PFN1|VHL|CP|APP|CC2D1A|KIF15|MRE11|PSEN1|DENND5A|TMEM216|HNRNPA1| FGF17|DLL1|SCP2|FTL|EXT2|DCC|FGFR1|GPHN|VAMP2|PUF60|TNNT1|CYFIP2|PIGN|KCTD7|ITM2B
Abdominal symptom	HP:0011458	0.0315	5.70E-04	0.150168945	DLD|PON1|AIMP2|PFN1|CCND1|VHL|RAD21|CC2D1A|PLEC|KIF15|ZMIZ1|TMEM216|

					HNRNPA1|BLM|NR3C2|MTOR|ACTN2|DLL1|CDC73|MAP3K7|HSPG2|ATAD3A|SMARCA2| EXT2|PEX5|FGFR1|HRAS|SNRPB|GPHN|PUF60|POLR2A|CYFIP2|NEB|PIGN|CTCF|EIF4A3|MTHFD1
Dandy-Walker malformation	HP:0001305	0.0324	5.90E-04	0.148945499	NID1|DENND5A|TMEM216|B4GALT1|FGFR1|HRAS|PIGN|CDC42
Abnormality of bone mineral density	HP:0004348	0.0324	5.90E-04	0.148945499	CRIPT|CEP164|PLOD2|FANCI|SLC34A1|PLEC|FGF17|CDC73|MAP3K7|TMEM38B| HSPG2|EXT2|DCC|FGFR1|HRAS|AP2S1|CTCF
Abnormal lower limb bone morphology	HP:0040069	0.0324	5.90E-04	0.148945499	KCNJ2|BMP4|PLOD2|RAD21|FANCI|ZMIZ1|TMEM216|MAP3K7|TMEM38B|HSPG2| SMARCA2|EXT2|ACAN|PEX5|FGFR1|PUF60|CHD4|PIGN|CTCF|HOXA13|EIF4A3
Cardiovascular disease biomarker measurement	EFO:0005278	0.0327	6.20E-04	0.148545225	TRAM2|TGFBR3|GTPBP1|NFKBIA|NUTF2|SMPD3|PON1|CCND1|APOA1|CCDC92|LRP1| RNF144B|POLB|SNX19|CEP164|CCDC58|SLC9A5|AXL|PRKCE|PABPC1|PLEC|KIF15| ZMIZ1|USP1|DLG1|ITSN2|SYNE2|NR3C2|EXO1|GTF2B|TRAF1|SIK3|MBNL2|ITSN1| HACD2|NFATC2|SUN1|PPP6C|FGFR1|PLEKHA5|ROBO1|ADAP1|TLN2|MAP2K6| MRPL37|NAP1L1|YAP1|CCDC7|KCTD7|CTCF|RDX
Abnormal testis morphology	HP:0000035	0.0327	6.30E-04	0.148545225	BMP4|RAD21|FANCI|ZMIZ1|TMEM216|BLM|FGF17|MTOR|CRB1|CDC73|MAP3K7| HSPG2|ATAD3A|SMARCA2|EXT2|DCC|PEX5|FGFR1|HRAS|ROBO1|CHD4|PIGN|CTCF|CDC42
Vesicoureteral reflux	HP:0000076	0.0327	6.20E-04	0.148545225	RAD21|FANCI|ZMIZ1|MAP3K7|PUF60|CHD4|PIGN|HOXA13
Abnormal mandible morphology	HP:0000277	0.0327	6.20E-04	0.148545225	AIMP2|CRIPT|KCNJ2|BMP4|RAD21|FANCI|ZMIZ1|TMEM216|BLM|CDC73|TAB2|MAP3K7| HSPG2|ATAD3A|SMARCA2|ACAN|PEX5|FGFR1|HRAS|SNRPB|RPS24|PUF60|NEB|PIGN|EIF4A3
Hypertelorism	HP:0000316	0.0327	6.20E-04	0.148545225	PIK3R2|KCNJ2|FANCI|KIF15|ZMIZ1|TMEM216|FGF17|MTOR|MAP3K7|HSPG2|EXT2| PEX5|FGFR1|HRAS|RPS24|CHD4|POLR2A|NEB|PIGN|CTCF|CDC42
Low-set ears	HP:0000369	0.0327	6.00E-04	0.148545225	KCNJ2|BMP4|RAD21|KIF15|ZMIZ1|TMEM216|TAB2|MAP3K7|HSPG2|ACAN|PEX5| FGFR1|HRAS|SNRPB|RPS24|CHD4|NEB|PIGN|CTCF|EIF4A3|CDC42
Abnormal nasal morphology	HP:0005105	0.0327	6.20E-04	0.148545225	NFKBIA|PIK3R2|AIMP2|CRIPT|KCNJ2|RAD21|PLEC|KIF15|DENND5A|ZMIZ1|TMEM216| BLM|FGF17|MTOR|DLL1|CRB1|TAB2|MAP3K7|HSPG2|ATAD3A|SMARCA2|EXT2| ACAN|PEX5|FGFR1|HRAS|RPS24|PUF60|NEB|PIGN|CTCF|EIF4A3|CDC42
Abnormal nostril morphology	HP:0005288	0.0327	6.30E-04	0.148545225	AIMP2|CRIPT|RAD21|KIF15|TMEM216|DLL1|CRB1|MAP3K7|ATAD3A|SMARCA2| EXT2|PEX5|FGFR1|HRAS|PUF60|PIGN|CTCF
Limb undergrowth	HP:0009826	0.0327	6.10E-04	0.148545225	RAD21|FANCI|KIF15|MTOR|HSPG2|EXT2|ACAN|FGFR1|PUF60|EIF4A3
Functional abnormality of the gastrointestinal tract	HP:0012719	0.0327	6.10E-04	0.148545225	NFKBIA|STUB1|PFN1|APP|RAD21|PLEC|PSEN1|BLM|DLL1|CDC73|MAP3K7|ARFGEF2| FTL|EXT2|FGFR1|HRAS|SNRPB|GPHN|PUF60|ITGB3|POLR2A|CYFIP2|NEB|PIGN|CTCF
Decreased head circumference	HP:0040195	0.0327	6.00E-04	0.148545225	DLD|AIMP2|CRIPT|KCNJ2|BMP4|RAD21|FANCI|CC2D1A|KIF15|MRE11|DENND5A| ZMIZ1|TMEM216|BLM|DLL1|ARFGEF2|HSPG2|SMARCA2|EXT2|PEX5|FGFR1| SNRPB|RPS24|PUF60|POLR2A|CYFIP2|ACD|KCTD7|CTCF|CDC42
Abnormality of lower limb joint	HP:0100491	0.0327	6.10E-04	0.148545225	STUB1|PIK3R2|PLOD2|RAD21|FANCI|DLL1|MAP3K7|ARFGEF2|HSPG2|EXT2|ACAN| FGFR1|HRAS|SNRPB|GPHN|PUF60|CHD4|NEB|EIF4A3
Neurological speech impairment	HP:0002167	0.0337	6.60E-04	0.14723701	STUB1|AIMP2|PFN1|BMP4|VHL|KIDINS220|CP|APP|RAD21|CC2D1A|PLEC|KIF15| MRE11|PSEN1|DENND5A|ZMIZ1|HNRNPA1|FGF17|MTOR|DLL1|HSPG2|FTL|ATAD3A| SMARCA2|EXT2|DCC|FGFR1|HRAS|PUF60|CYFIP2|NEB|PIGN|KCTD7|CTCF|CDC42
External genital hypoplasia	HP:0003241	0.0337	6.60E-04	0.14723701	BMP4|RAD21|TMEM216|FGF17|DLL1|CRB1|MAP3K7|HSPG2|ATAD3A|SMARCA2| DCC|FGFR1|ROBO1|CHD4|NEB|CTCF|HOXA13
Abnormal cheek morphology	HP:0004426	0.0337	6.60E-04	0.14723701	KCNJ2|KIDINS220|TMEM216|MAP3K7|HSPG2|EXT2|FGFR1|HRAS|PUF60|PIGN
Abnormality of globe size	HP:0100887	0.0345	6.80E-04	0.14621809	PIK3R2|BMP4|FANCI|ALDH1A3|TMEM216|CRB1|SMARCA2|FGFR1|HRAS|PUF60|YAP1|PIGN
Recurrent fractures	HP:0002757	0.0346	6.90E-04	0.14609239	PLOD2|FGF17|YY1AP1|TMEM38B|EXT2|DCC|FGFR1|HRAS
Aplasia/hypoplasia affecting bones of the axial skeleton	HP:0009122	0.0347	7.00E-04	0.145967053	CRIPT|KCNJ2|BMP4|RAD21|FANCI|ZMIZ1|TMEM216|BLM|TAB2|MAP3K7|HSPG2| ATAD3A|SMARCA2|PEX5|FGFR1|HRAS|SNRPB|RPS24|PUF60|CHD4|NEB|PIGN|EIF4A3
Abnormality of the immune system	HP:0002715	0.0349	7.00E-04	0.145717457	TGFBR3|NFKBIA|STUB1|CCND1|APOA1|CRIPT|DSG1|PSMA6|IRF8|RAD21|FANCI| PLEC|KIF15|PSEN1|TMEM216|BLM|MTOR|ACTN2|DLL1|CDC73|MAP3K7|HSPG2| HLA-DQB1|SMARCA2|PICALM|NFATC2|ITGB2|FHL2|PEX5|FGFR1|HRAS|IKZF2|RPS24| POLR2A|AP2S1|ACD|PIGN|CTCF|HOXA13|CDC42|MTHFD1

Upper motor neuron dysfunction	HP:0002493	0.0352	7.20E-04	0.145345734	DLD|STUB1|PON1|PFN1|APOA1|KIDINS220|APP|RAD21|CC2D1A|MRE11|PSEN1| DENND5A|HNRNPA1|FGF17|MTOR|DLL1|CRB1|ARFGEF2|HSPG2|FTL| ATAD3A|EXT2|DCC|PEX5|FGFR1|GPHN|CYFIP2|ACD|PIGN|ITM2B
Heterotropia	HP:0032012	0.0352	7.10E-04	0.145345734	CRIPT|KIDINS220|TMEM216|CRB1|SIK3|ATAD3A|PEX5|PUF60|PIGN|CDC42
Tetralogy of Fallot	HP:0001636	0.0353	7.20E-04	0.145222529	NID1|FANCI|DLL1|TAB2|FGFR1|PUF60|CHD4|PIGN
Abnormal cerebral subcortex morphology	HP:0010993	0.0353	7.20E-04	0.145222529	STUB1|PIK3R2|AIMP2|BMP4|KIDINS220|NID1|CP|FANCI|CC2D1A|KIF15|PSEN1| ZMIZ1|TMEM216|MTOR|DLL1|ARFGEF2|FTL|ATAD3A|DCC|FGFR1|HRAS|VAMP2| PUF60|POLR2A|CYFIP2|PIGN|KCTD7|CDC42
Enlarged posterior fossa	HP:0005445	0.0356	7.30E-04	0.144855	NID1|DENND5A|TMEM216|B4GALT1|FGFR1|HRAS|POLR2A|PIGN|CDC42
Low-set, posteriorly rotated ears	HP:0000368	0.0358	7.40E-04	0.144611697	RAD21|TMEM216|HSPG2|ACAN|PEX5|FGFR1|HRAS|PIGN|CTCF|CDC42
Strabismus	HP:0000486	0.0369	7.70E-04	0.143297363	CRIPT|KIDINS220|RAD21|FANCI|KIF15|ZMIZ1|TMEM216|MTOR|DLL1|CRB1|MAP3K7| HSPG2|SIK3|ATAD3A|EXT2|PEX5|FGFR1|HRAS|RPS24|PUF60|POLR2A|YAP1| PIGN|CTCF|HOXA13|CDC42
Thin corpus callosum	HP:0033725	0.037	7.70E-04	0.143179828	STUB1|PIK3R2|AIMP2|BMP4|KIDINS220|NID1|FANCI|CC2D1A|KIF15|ZMIZ1|TMEM216| DLL1|ARFGEF2|DCC|FGFR1|HRAS|VAMP2|PUF60|POLR2A|PIGN|KCTD7|CDC42
Flexion contracture	HP:0001371	0.0379	8.00E-04	0.142136079	PIK3R2|AIMP2|BMP4|PLOD2|CHRNB1|PLEC|KIF15|SYNE2|FGF17|DLL1|MAP3K7|HSPG2| PEX5|FGFR1|HRAS|SNRPB|TNNT1|NEB|PIGN|CTCF|CDC42
Atrial septal defect	HP:0001631	0.0379	7.90E-04	0.142136079	PIK3R2|RAD21|FANCI|KIF15|MAP3K7|SMARCA2|EXT2|FGFR1|HRAS|SNRPB|RPS24| CHD4|PIGN|CTCF
Abnormal digit morphology	HP:0011297	0.0379	7.90E-04	0.142136079	STUB1|PIK3R2|CRIPT|KCNJ2|BMP4|CEP164|RAD21|FANCI|PLEC|KIF15|ZMIZ1| TMEM216|BLM|MTOR|YY1AP1|MAP3K7|HSPG2|SMARCA2|EXT2|ACAN|PEX5| FGFR1|HRAS|SNRPB|RPS24|PUF60|CHD4|NEB|PIGN|CTCF|HOXA13|EIF4A3|CDC42
Abnormal morphology of the great vessels	HP:0030962	0.0379	8.00E-04	0.142136079	PIK3R2|NID1|FANCI|ZMIZ1|DLL1|TAB2|YY1AP1|MAP3K7|ARFGEF2|EXT2|FGFR1| HRAS|SNRPB|RPS24|PUF60|CHD4|PIGN|CTCF|CDC42
Joint contracture	HP:0034392	0.0379	8.00E-04	0.142136079	PIK3R2|AIMP2|BMP4|PLOD2|CHRNB1|PLEC|KIF15|SYNE2|FGF17|DLL1|MAP3K7| HSPG2|PEX5|FGFR1|HRAS|SNRPB|TNNT1|NEB|PIGN|CTCF|CDC42
Scoliosis	HP:0002650	0.0388	8.30E-04	0.141116827	PIK3R2|AIMP2|KCNJ2|PLOD2|CHRNB1|FANCI|ZMIZ1|TMEM216|SYNE2|ACTN2| DLL1|MAP3K7|ARFGEF2|TMEM38B|HSPG2|ATAD3A|SMARCA2|EXT2|DCC| PEX5|FGFR1|HRAS|SNRPB|PUF60|NEB|CDC42
Skeletal muscle atrophy	HP:0003202	0.0388	8.30E-04	0.141116827	STUB1|PIK3R2|PON1|PFN1|CHRNB1|PLEC|MRE11|HNRNPA1|SYNE2|ACTN2| HSPG2|ATAD3A|ACAN|PEX5|POLR2A|TNNT1|NEB
Atrophy/Degeneration affecting the cerebrum	HP:0007369	0.0388	8.30E-04	0.141116827	STUB1|AIMP2|BMP4|KIDINS220|APP|RAD21|CC2D1A|PSEN1|ZMIZ1|DLL1|FTL| FGFR1|HRAS|GPHN|PUF60|CYFIP2|ACD|PIGN|KCTD7|CDC42
Body height	EFO:0004339	0.0399	8.70E-04	0.13990271	TRAM2|TGFBR3|SMPD3|MED31|CCND1|LRP1|ELOB|CBFA2T2|RMC1|ARID5B| PLOD2|SMC2|SRRM2|PRKCE|FANCI|CSTF3|PLEC|PPP2R2A|ZMIZ1|BLM|MTOR| CRB1|VTA1|YY1AP1|PRMT6|HSPG2|UBD|PRKCZ|ITSN1|BCL2L11|PTPRZ1| EXT2|NFATC2|CEP250|FHL2|ACAN|DCC|FGFR1|PLEKHA5|RPP14| GPHN|AMOTL2|TLN2|TNNT1|MAP2K6|YAP1|CYFIP2|CDC42
Muscle weakness	HP:0001324	0.0399	8.60E-04	0.13990271	PON1|PFN1|VHL|CHRNB1|SLC34A1|PLEC|HNRNPA1|SYNE2|FGF17|ACTN2| CDC73|HSPG2|EXT2|DCC|PEX5|FGFR1|HRAS|GPHN|PUF60|ATP1A1|TNNT1|AP2S1|CYFIP2|NEB|PIGN
Abnormal blood ion concentration	HP:0003111	0.0401	8.80E-04	0.139685563	KCNJ2|VHL|DSG1|CP|SLC34A1|NR3C2|CDC73|FGFR1|HRAS|ATP1A1|AP2S1|CALM1
Abnormal cerebral white matter morphology	HP:0002500	0.0415	9.10E-04	0.13819519	STUB1|PIK3R2|AIMP2|BMP4|KIDINS220|NID1|FANCI|CC2D1A|KIF15|PSEN1| ZMIZ1|TMEM216|MTOR|DLL1|ARFGEF2|ATAD3A|DCC|FGFR1|HRAS|VAMP2| PUF60|POLR2A|CYFIP2|PIGN|KCTD7|CDC42
Microphthalmia	HP:0000568	0.0417	9.20E-04	0.137986395	BMP4|FANCI|ALDH1A3|TMEM216|CRB1|SMARCA2|FGFR1|HRAS|PUF60|YAP1|PIGN
Fused cervical vertebrae	HP:0002949	0.0417	9.20E-04	0.137986395	FANCI|MAP3K7|DCC|PUF60
Renal agenesis	HP:0000104	0.0423	9.40E-04	0.137365963	TMEM216|FGF17|DLL1|DCC|FGFR1|RPS24|PUF60|PIGN|CDC42
Abnormality of the gastrointestinal tract	HP:0011024	0.0433	9.60E-04	0.13635121	NFKBIA|STUB1|PFN1|CCND1|APP|RAD21|FANCI|PLEC|PSEN1|TMEM216|BLM| MTOR|DLL1|CDC73|MAP3K7|ARFGEF2|FTL|EXT2|ITGB2|DCC|PEX5|FGFR1| HRAS|SNRPB|RPS24|GPHN|PUF60|CHD4|ITGB3|POLR2A|AP2S1|CYFIP2|NEB|PIGN|CTCF

Abnormal pinna morphology	HP:0000377	0.0434	9.70E-04	0.136251027	KCNJ2|BMP4|RAD21|FANCI|PLEC|KIF15|DENND5A|ZMIZ1|TMEM216|BLM|TAB2| MAP3K7|HSPG2|SMARCA2|ACAN|PEX5|FGFR1|HRAS|SNRPB|RPS24| PUF60|CHD4|NEB|PIGN|CTCF|HOXA13|EIF4A3|CDC42
Brain atrophy	HP:0012444	0.0437	9.80E-04	0.135951856	STUB1|AIMP2|BMP4|KIDINS220|APP|RAD21|CC2D1A|PSEN1|ZMIZ1|HNRNPA1| DLL1|FTL|FGFR1|HRAS|GPHN|PUF60|CYFIP2|ACD|PIGN|KCTD7|CDC42
Delayed skeletal maturation	HP:0002750	0.0439	9.90E-04	0.135753548	KCNJ2|RAD21|KIF15|FGF17|TAB2|MAP3K7|HSPG2|SMARCA2|ACAN|DCC|FGFR1|HRAS
Myopathy	HP:0003198	0.0439	9.90E-04	0.135753548	CHRNB1|PLEC|PSEN1|HNRNPA1|SYNE2|ACTN2|DLL1|HSPG2|B4GALT1|FHL2|TNNT1|NEB
Fatigable weakness of respiratory muscles	HP:0030196	0.0439	9.90E-04	0.135753548	PON1|PFN1|CHRNB1|HNRNPA1|NEB
Short phalanx of the thumb	HP:0009660	0.0456	0.001	0.134103516	RAD21|FANCI|MAP3K7|HOXA13
Esotropia	HP:0000565	0.0459	0.001	0.133818731	KIDINS220|TMEM216|CRB1|SIK3|ATAD3A|PEX5|PUF60|PIGN
Esodeviation	HP:0020045	0.0459	0.0011	0.133818731	KIDINS220|ZMIZ1|TMEM216|CRB1|SIK3|ATAD3A|PEX5|PUF60|PIGN
Toe syndactyly	HP:0001770	0.046	0.0011	0.133724217	KCNJ2|BMP4|RAD21|FANCI|PLEC|ZMIZ1|TMEM216|FGFR1|PUF60|CTCF
Coarctation of aorta	HP:0001680	0.0469	0.0011	0.132882716	DLL1|FGFR1|HRAS|RPS24|PUF60|CHD4|CTCF
Hypoplastic male external genitalia	HP:0000050	0.0474	0.0011	0.132422166	BMP4|RAD21|TMEM216|FGF17|DLL1|CRB1|MAP3K7|HSPG2|ATAD3A|SMARCA2| DCC|FGFR1|ROBO1|CHD4|NEB|HOXA13
Abnormality of toe	HP:0001780	0.0475	0.0011	0.132330639	KCNJ2|BMP4|RAD21|FANCI|PLEC|ZMIZ1|TMEM216|HSPG2|SMARCA2|EXT2| ACAN|FGFR1|HRAS|PUF60|PIGN|CTCF|HOXA13|EIF4A3|CDC42
Heel bone mineral density	EFO:0009270	0.0479	0.0011	0.131966449	TGFBR3|LRP1|BMP4|GPAT3|ARID5B|AXL|PRKCE|CSTF3|HOXA9|DLG1|NR3C2| MTOR|CRB1|BCL2L11|PTPRZ1|ITGB2|PRPF40A|RNF212|IKZF2|ROBO1| CHD4|TLN2|POLR2A|CDC42|MTHFD1
Intracranial cystic lesion	HP:0010576	0.0484	0.0011	0.131515464	NID1|DENND5A|TMEM216|B4GALT1|FGFR1|HRAS|PUF60|PIGN|CDC42
Patent ductus arteriosus	HP:0001643	0.0486	0.0011	0.131336373	FANCI|ZMIZ1|YY1AP1|MAP3K7|ARFGEF2|EXT2|SNRPB|PUF60|PIGN|CTCF|CDC42
Feeding difficulties in infancy	HP:0008872	0.0492	0.0012	0.13080349	RAD21|KIF15|ZMIZ1|TMEM216|BLM|ACTN2|DLL1|MAP3K7|HSPG2|ATAD3A| SMARCA2|PEX5|FGFR1|HRAS|PUF60|PIGN|CTCF
sRAGE measurement	EFO:0007622	0.0495	0.0012	0.13053948	AGER|RNF5
Convulsive status epilepticus	HP:0032660	0.0495	0.0012	0.13053948	PEX5|VAMP2
Bone measurement	EFO:0004512	0.0496	0.0012	0.130451832	TGFBR3|GTPBP1|CCND1|LTF|CCDC92|LRP1|BMP4|VHL|CBFA2T2|GPAT3|RMC1| SETDB1|ARID5B|HK2|FYCO1|AKTIP|AXL|PRKCE|CSTF3|OSBPL2|TRIM41|PLEC| KIF15|HOXA9|DLG1|ITSN2|NR3C2|MTOR|CRB1|TAB2|VTA1|HSPG2|HLA-DQB1| BCL2L11|PTPRZ1|DDX17|ITGB2|MAP2K7|PRPF40A|FHL2|ACAN|RNF212| IKZF2|ROBO1|CHD4|ATP1A1|ITGB3|TLN2|POLR2A|CDC42|MTHFD1