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NEUROENDOCRINE GENOMICS FOR TUMOR VARIANT DISCOVERY

by

Jonathon Tessmann

A thesis submitted in partial fulfillment
of the requirements for the Master of Science
degree in Biomedical Engineering in the
Graduate College of
The University of Iowa

May 2018

Thesis Supervisor: Associate Professor Terry Braun

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Graduate College
The University of Iowa
Iowa City, Iowa

CERTIFICATE OF APPROVAL

MASTER'S THESIS

This is to certify that the Master's thesis of

Jonathon Tessmann

has been approved by the Examining Committee for
the thesis requirement for the Master of Science degree
in Biomedical Engineering at the May 2018 graduation.

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ABSTRACT

An exome sequencing analysis pipeline was constructed to analyze NET germline and somatic samples. SNPs and INDELS were called and annotated from germline and somatic tissue. CNVs were also called for the tumor samples. This was accomplished using open source bioinformatics software that has been developed by the research community. Broad Institute "best practices" were followed. Some of the tools that were used include BWA, SAMtools, GATK, Varscan, VT, VEP, and GEMINI. Computational resources were provided by The University of Iowa NEON computer cluster. 57 germline samples and 15 tumor samples across 23 families with a history of NETs produced 4,452 germline variants, 1,695 somatic variants, 5,853 LOH events, and 627 CNV calls. False positive and driver candidacy filtering was applied. One family with Currarino syndrome has an inherited germline missense variant in MNX1. This variant has a phred-scaled Combined Annotation Dependant Depletion score of 35, putting it in the top 0.031% of deleterious variants. CNV analysis demonstrates that 8 of the 15 tumor samples have large-scale deletions of chromosome 18, three of which have nearly the entire chromosome deleted. An affected tumor suppressor gene in this region includes DCC, which is present in all three variant discovery techniques. Variant prioritization techniques are effective, but need further development to increase candidate variant/gene discovery rate.

PUBLIC ABSTRACT

Developing new drugs and therapies to treat cancer requires an understanding of the underlying genetic variants which are causing the cancer to develop. Variants in certain genes will affect the bodies' ability to prevent tumor growth. This research aims to gain a better understanding of which genes are causing neuroendocrine tumors to form when they are mutated. We can accomplish this using programs and hardware that analyzes human genome samples. Once a person's DNA has been sequenced, we reconstruct it and analyze it for any variations. These variations are then examined for their biological impact and effect on the human body. This can lead to clues about genes and their roles in normal health and in the disease process. The intention is for the knowledge gained from this research to lead to insights in neuroendocrine tumors and improve human health and wellness.

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LIST OF ABBREVIATIONS

- 1KG – 1000 Genomes Project
- BAM – Binary Sequence Alignment Map
- BASH – Bourne Again Shell
- BED – Browser Extensible Data
- BWA – Burrows Wheeler Aligner
- CADD – Combined Annotation Dependent Depletion
- CBCB – Center for Bioinformatics and Computational Biology
- CNV – Copy Number Variant
- COSMIC – Catalogue of Somatic Mutations in Cancer
- DNA – Deoxyribonucleic Acid
- ExAC – Exome Aggregation Consortium
- GATK – Genome Analysis Toolkit
- GIAB – Genome in a Bottle
- GMAF – Global Minor Allele Frequency
- HGCS – Human Gene Connectome Server
- IGV – Integrative Genomics Viewer
- INDEL – Insertion or Deletion
- KEGG - Kyoto Encyclopedia of Genes and Genomes
- LOH – Loss of Heterozygosity
- NET – Neuroendocrine Tumors
- NGS – Next Generation Sequencing
- RAM – Random Access Memory

SNP – Single Nucleotide Polymorphism

SSH – Secure Shell

SQL – Structured Query Language

TSV – Tab Separated Value

UCSC – University of California, Santa Cruz

VCF – Variant Call Format

VEP – Variant Effect Predictor

WES – Whole Exome Sequencing

WGS – Whole Genome Sequencing

CHAPTER 1: INTRODUCTION

Variants in this type of cancer are not well understood due to low prevalence. NETs have a yearly prevalence of approximately 6 in 100,000.¹ DNA variants are genetic differences relative to a reference genome. Most variants appear to have no obvious functional effect on the biology of the organism (in this case human). Variants that occur in functional regions of the genome (promoters, coding regions of genes, splice junctions, transcription factor binding sites, and other regions) may affect the organism by conferring positive, negative or neutral selective advantage for the given environment. The pipeline described here aims specifically to identify variations that are characteristic of NETs. These variations can be in the germline, predisposing a person and their family to the disease. They can also be present in somatic samples, representing the extensive genetic alterations that tumor DNA may undergo.

Bioinformatics can be used to identify meaningful biological relationships using data analysis techniques and software. Researchers collect a wide variety of biological samples that are represented by varied data types including phenotypic, molecular and genetic data. Bioinformatics techniques are essential for compiling and analyzing this data, which may further guide research and lead to translational insights. The bioinformatics programs used in this work maps sequence data, performs variant calling, annotates variants, filters and prioritizes variants based on annotation and clinical data, performs statistical tests, and generates images of variants in the context of sequence data.

This thesis addresses poorly understood NET genetics by creating a novel workflow (software, computing resources, and data) to discover DNA variants present in

patients with neuroendocrine tumors (NETs). A bioinformatics pipeline was developed by the Center for Bioinformatics and Computational Biology to process and analyze DNA sequence reads. This pipeline generates DNA variants, annotates them with relevant biological impact, and organizes and distills results for manual review. Validation tests were also performed to evaluate the error rate of the variant calls for the parameters used. Our approach culminated in the discovery of novel genetic features related to NETs.

The pipeline described within aims to discover three different types of human genetic variation. Single nucleotide polymorphisms (SNP) are variations of a single base within the genome. While small, they are the most common form of genetic variation and account for approximately 90% of all variants.² They can lead to a plethora of codon changes; most notably start loss, stop loss, stop gain, and missense changes. Insertion or Deletion (INDEL) variants are entire shifts of the genome caused by inserting or deleting 1 to 10,000 base pairs.³ They can cause reading frame shifts depending on where they begin and end. Copy Number Variants (CNV) are the largest class of variant. They are duplications or deletions of the genome that are on the scale of Megabases. Entire genes or chromosomes can be removed from the genome or duplicated once or more.

Chapter 2 covers the background and significance of this study. Physiological impact of NETs is described, as well as the data that was acquired to perform all analyses. Chapter 3 describes the bioinformatics pipeline in detail, the computing resources used, lists the open-source bioinformatics tools used, and describes the testing performed to estimate the concordance of variant calls with established practices. Variant filtering parameters and techniques are described within chapter 4 including filtering based on

allele frequencies and inheritance patterns. Chapter 5 summarizes the germline and somatic variants called. Chapter 6 describes future directions and some of the limitations of this work. Chapter 7 gives concluding remarks.

CHAPTER 2: BACKGROUND AND SIGNIFICANCE

2.1 Neuroendocrine tumor physiology

NETs are cancerous neoplasms that arise in neuroendocrine cells of the endocrine and nervous systems. These are special cells which secrete hormones that are necessary in other tissues of the body. The symptoms created by NETs make them generally difficult to identify, and can develop for years until diagnosis. NETs are generally rare (yearly prevalence of 6 in 100,000), and despite the fact that they can cause excessive release of hormones and give rise to symptoms, they are often small enough to go unnoticed for years. The most common sites of growth include the pancreas, small bowel, and lungs⁴. Despite slow growth and small tumors, metastases are commonly found in the liver and may be found throughout the body.

NETs most commonly occur sporadically in patients, but up to 10% of patients have an inherited syndrome. These include multiple endocrine neoplasia type 1 (MEN-1) syndrome, multiple endocrine neoplasia type 2 (MEN-2) syndrome, von Hippel Lindau (VHL) syndrome, neurofibromatosis, and tuberousclerosis.⁵ Taking a family medical history is important for identifying individuals with an inherited predisposition. Identification of germline variants could yield valuable clues as to genes involved in NET formation.

Current literature suggests that there are a variety of genes and pathways implicated in causing NETs. The PI3L/Akt/mTOR pathway is currently being used for targeted therapy.⁶ It's an important intracellular signaling pathway that regulates the cell cycle. DAXX/ATRAX and MEN1 show promise as examples for what genes can have variations and predispose a family to NETs.⁶ Menin is a tumor suppressor associated with

MEN-1 syndrome, and DAXX/ATRX protect tandem repetitive elements during DNA hypomethylation.⁷

2.2 Whole exome sequencing

Next-generation sequencing (NGS) experiments are invaluable in identifying mutations of the human genome. Once a harmful mutation has been identified, its biological effect on the body can be better understood. From this gained insight, treatment options can be better informed and new drug targets or therapies can be considered to combat the disease. A common NGS assay is whole exome sequencing performed via high throughput, short read sequencing technology. Illumina machines⁸ are widely used in WGS and WES due to their affordability and quick runtime.

There are many trade-offs to consider when deciding whether a study should use WGS or WES. WGS covers the entirety of the genome, encapsulating regulatory regions such as promoters and enhancers. WES only includes the exons of the genome, making the regions covered about 99% smaller than WGS.⁹ Less information is contained within WES, but the cost of sequencing is dramatically reduced. This allows for high depth of coverage in targeted regions, reduced storage space for computational resources, and the feasibility for increasing the number of samples to sequence in a large population. Additionally, variants found in coding regions of genes are more likely to be functional, or affect the cell biology. For these reasons, WES was selected for the samples of this study.

2.3 Familial data

Dr. James Howe has collected fifty-seven germline exome samples and fifteen matching tumor samples taken from patients at the University of Iowa Hospitals and Clinics. Thirty-eight samples were taken from affected subjects, while nineteen were taken from unaffected family members. These subjects belong to twenty-three separate families who visit his practice. The tumor samples were all taken from separate families. Sequencing of thirty-three germline exomes and nine tumor exomes was performed by Centrillion Technologies. The rest of the sequencing was performed by the DNA Core Facility, Genomics Division, Iowa Institute of Human Genetics at The University of Iowa. Both organizations used the Agilent SureSelect Version 6 exon capture kit to target the exonic regions of the genome.

Gender and affection status is known across multiple generations for most of the families. This information provides valuable insight to the patterns of inheritance possible with NETs. This analysis assumed three possible affection states: unaffected, affected, or unknown. A subject has unknown affection status if they have not been diagnosed with NETs, but demonstrate precursor symptoms or heightened biomarkers that are related to cancer.

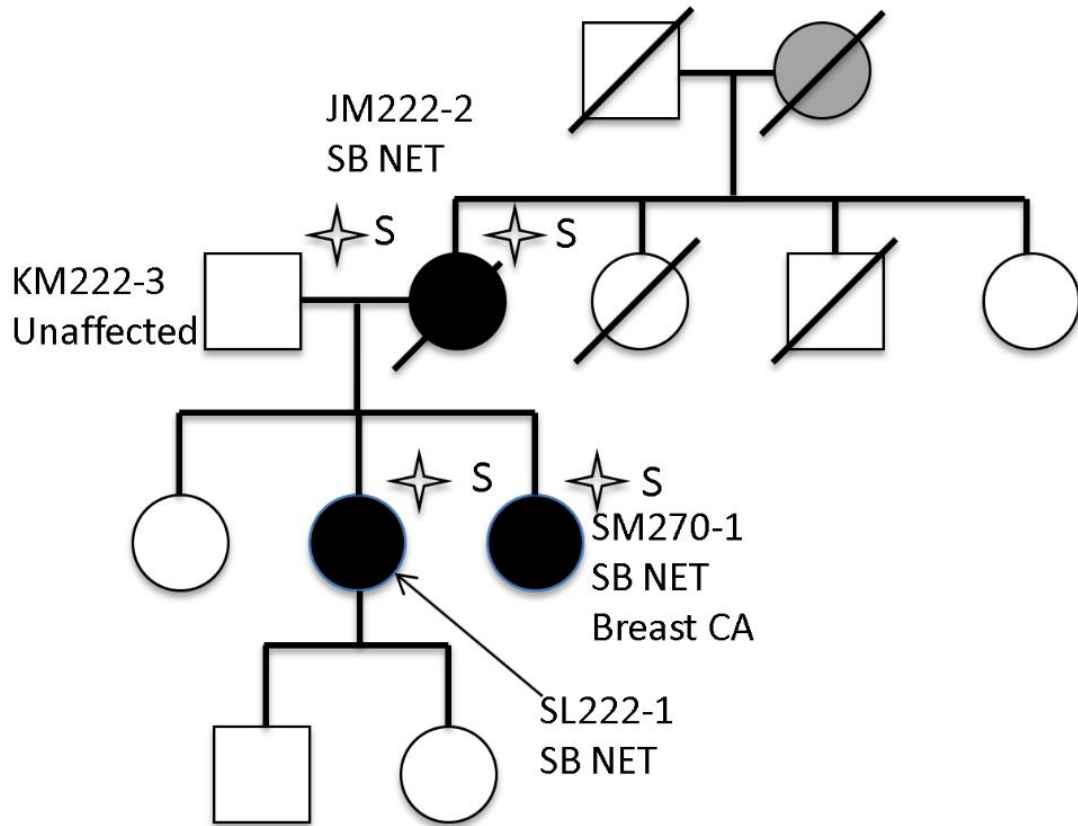


Figure 2-1: One of twenty-three pedigree charts generated for those shown to have a family history of neuroendocrine tumors. Affection status is known across four generations, with two demonstrating a pattern of inheritance. The mother is affected, along with two of her daughters. Both parents and the two affected daughters were sequenced for this study. The affected individuals all had small bowel NETs. White subjects are unaffected, black are affected, and grey are unknown. Starred subjects have been sequenced.

CHAPTER 3: PIPELINE CONSTRUCTION

3.1 Computation resources and implementation

The University of Iowa supports two high performance computing systems or "clusters" of computers named "neon" and "argon." The neon cluster was utilized for all computations necessary to complete this research. Standard Memory nodes were typically used for running the pipeline; these nodes contain 64 GB of RAM and 16 Cores running at 2.6 GHz. Neon runs CentOS 6.4 and utilizes the Sun Grid Engine (SGE) for job submission and resource queueing. Any software that required administrative rights for installation and/or execution could not be installed on the neon cluster and instead was used on a local computer. The local computer has 4 GB of RAM, 4 Cores at 3.2 GHz, and runs Ubuntu 16.04. Secure communication between NEON and local compute resources was accomplished using SSH for file transfers. All data was de-identified.

The pipeline is implemented using BASH scripts. The neon cluster uses the SGE for computational "job" submission. The execution of different bioinformatics programs are specified in BASH shell scripts. The SGE also supports "array jobs," where one or multiple programs can be executed on multiple nodes with similarly organized data, to allow for parallel job submission for multiple samples. This job submission uses a shared memory parallel environment. All 16 cores were used on each node.

3.2 Variant Calling Process

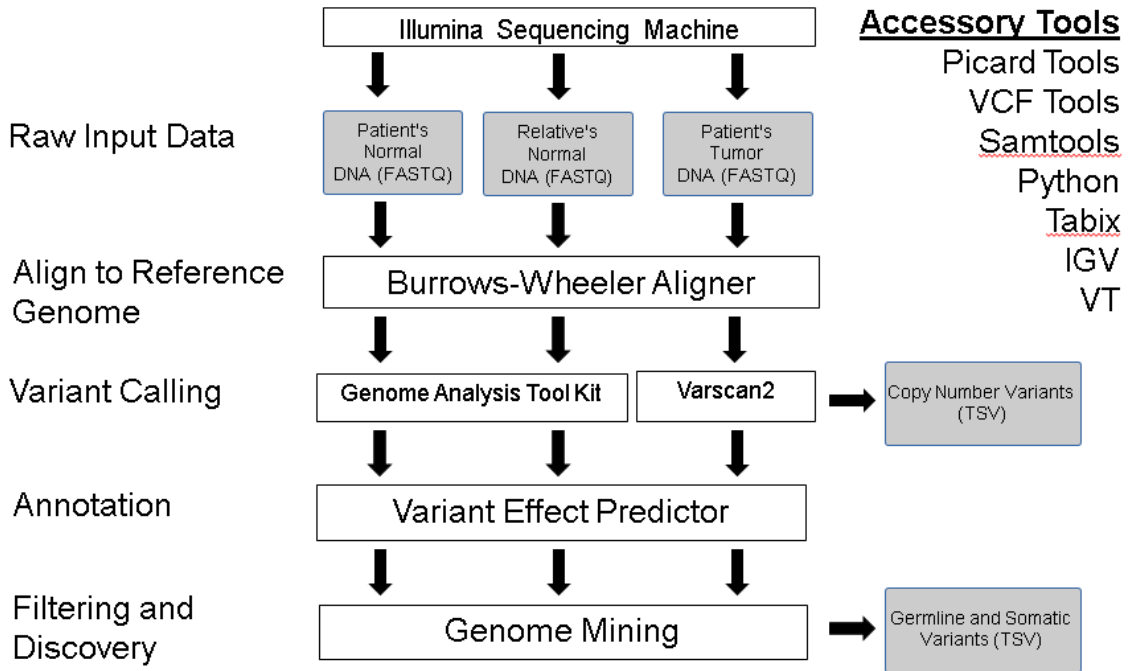


Figure 2-2: A Flow diagram demonstrating the inputs and outputs of every major bioinformatics software tool utilized in the pipeline. Many accessory tools were used to format data properly before being sent to the next processing step.

Initial input to the pipeline includes two paired-end sequencing FastQ files, and a reference genome for mapping. Reference genome b37 was used for alignment due to its recommendation by the Broad Institute for alignment in WES studies.¹⁰ It is a completed genome and is highly compatible with tools used later in the pipeline. Pipeline parameters were set to assume that all sequencing data is generated through Illumina high-throughput DNA sequencing. Alignment was performed using Burrows Wheeler Aligner (BWA)¹¹ while multithreading across 16 cores. Default command line parameters were used.

Following alignment, preprocessing of generated bam files (sorting and indexing) was performed using Samtools¹² and Picard¹³. Germline variant calling was performed

using Genome Analysis Toolkit. GATK "best practices" recommendations^{14,15} were followed; duplicate marking, indel realignment, base quality score recalibration, duplicate removal, were all performed prior to SNP and INDEL discovery using haplotype caller. Variant filtration was done using recommended hard filtering parameters. Tumor samples followed the same workflow until haplotype caller was used.

Somatic and CNV calling was performed using Varscan¹⁶. Varscan recommended protocols¹⁷ were followed; Basic Protocol 2 and Support Protocol 1 was followed for tumor-normal pair somatic mutation discovery, Loss of Heterozygosity (LOH) event discovery, and false positive filtering. Alternate Protocol 1 was followed to identify somatic CNV's in all tumor-normal pairs. Germline and Somatic variant calls were generated in VCF format, while CNV calls were output as tab-separated value (TSV) files.

The VT¹⁸ tool was used to split, left-align, and trim germline and somatic variants prior to annotation. This process was performed to guarantee parsimonious variant length and position. Representing a variant in as few nucleotides as possible and shifting it as far left as possible ensures proper annotation. Variant Effect Predictor¹⁹ was chosen to perform annotation of germline and somatic variants due to its ease of use, impact categorization, and plug-in capabilities. The CADD score plugin was used to annotate every SNP called, providing CADD "deleteriousness" scores. CADD is described in Chapter 4. CNV regions were annotated with gene names using UCSC genome browser²⁰.

GEMINI²¹ was used to further explore and organize annotated germline and somatic results. Filtering was accomplished using GEMINI's database query options and

built-in familial inheritance models. TSV output from this tool was then formatted and re-organized using Perl and Python, creating final results for manual inspection.

Tool	Version
BWA	0.7.15
GATK	3.6
GEMINI	0.20.0
Picard	2.6.0
Python	2.7.11
Samtools	1.3.1
Tabix	1.3.2
Varscan	2.4.3
VCFtools	0.1.15
VEP	83
VT	V0.5772-60f436c3

Table 3-1: Tools utilized and respective version numbers.

3.3 Testing and validation

To ensure that the pipeline was generating valid variant calls, Genome in a Bottle reference material was used to perform validation²². Genome in a Bottle is a consortium hosted by the National Institute of Standards and Technology for the purposes of creating standardized human genome reference standards, methods, and data. They offer a wide variety of files to be used for validation, including FastQ and VCF files.

High confidence VCF and FastQ files for NA24631, one member of a Chinese trio sequenced and aligned with GRCh37, were used for comparison. The paired-end FastQ files were evaluated with our pipeline to the point of VCF generation. This VCF was then compared to the VCF offered by GIAB using a Python script called Haplotype Comparison Tools, or “hap.py” for short. Recommended by GIAB, hap.py does not simply compare VCF records row by row. Rather, it will compare results in a super locus around the position of interest. Query and reference variants were split, left-aligned, and trimmed using VT before running hap.py.

The results of our “hap.py” comparison demonstrate that our pipeline performs well when calling SNPs. A precision of 99% shows that when we call a SNP variant, we are almost certainly not introducing false positive calls. A recall of 91% suggests that there are a small amount of SNP variants that our pipeline will not call. INDEL calling performed worse with a precision of 91% and a recall of 76%. There is a considerable number of INDELS which do not get called in our pipeline. However, attempting to increase recall will likely lower our precision. Furthermore, the ensemble variant calling process that GIAB uses is likely the cause of the reduced recall. GIAB uses two variant callers instead of one, which is likely to increase their total number of called variants. Overall, our called variants are of good quality because they introduce a low number of false positives.

[W] Total VCF records: 3,655,016		
[W] Non-reference VCF records: 3,655,016		
[I] Overlapping records at 1:144609939 for sample 0		
[I] Variants that overlap on the reference allele: 7		
[W] Total VCF records: 3,967,860		
[W] Non-reference VCF records: 3,966,012		
Metric Column	INDEL	SNP
FILTER	PASS	PASS
TRUTH.TOTAL	380,723	3,042,340
TRUTH.TP	288,047	2,780,164
TRUTH.FN	92,676	262,176
QUERY.TOTAL	497,283	3,335,023
QUERY.FP	27,969	30,110
QUERY.UNK	181,069	524,788
FP.GT	8,345	23316
METRIC.Recall	0.757	0.914
METRIC.Precision	0.912	0.989
METRIC.Frac_NA	0.364	0.157
METRIC.F1_Score	0.827	0.950

Table 3-2: Summary metrics generated as output by hap.py.

CHAPTER 4: VARIANT REFINEMENT METHODOLOGY

4.1 Filtering parameters

The typical human genome has on average 4.5 million variants from the reference genome.²³ In order to characterize the variant landscape of NETs, driver variants must be separated from passenger variants. Harmless variations are acquired by offspring which have no effect on phenotype. However, it is conceivable that when the accumulation of germline variants is inherited, their combined effect on specific metabolic pathways can predispose a person to NETs. Separating the phenotype causing variants from genetic variation is crucial to finding meaningful results in NGS data. To this end, filtering parameters were established with the intent of reducing results to the most impactful and disruptive germline variants.

Global Minor Allele Frequency is a statistic which tracks the frequency of occurrence of a specific variant amongst the global population of humans. It is assumed that if a germline variant is present within a large portion of the global population, then it is unlikely to be a causative variant because it is more common than the occurrence of the disease phenotype. A conservative threshold of less than one percent of the global population was selected as a filter. The exome sequencing databases used to determine this filter were EXaC²⁴ and 1KG²³.

VEP annotates every variant with a category and assigns a consequence severity. This "impact rating" is determined by analyzing the biological impact of the base pair change, and has four possible values: High, Moderate, Low, and Modifier. Variants which completely disrupt or alter the transcription of a protein are of interest because of the disruption on that gene or concomitant pathways. Filtering was performed to remove

any germline variants that were not High or Moderate Impact, as these categories encapsulate the most detrimental variants possible.

Impact	Variant Type	Description
High	Transcript Ablation	A deleted region includes a transcript feature
High	Splice Acceptor	The region at the end of a 3' intron is changed
High	Splice Donor	The region at the end of a 5' intron is changed
High	Stop Gained	Creation of a premature stop codon, shortening the transcript
High	Frameshift	Disruption of the translational reading frame
High	Stop Lost	Removal of a stop codon, lengthening the transcript
High	Start Lost	Removal of the start codon, eliminating a transcript
High	Transcript Amplification	Feature amplification of a region containing a transcript
Moderate	Inframe Insertion	Inframe and nonsynonymous; inserts bases into the sequence
Moderate	Inframe Deletion	Inframe and nonsynonymous; deletes bases from the sequence
Moderate	Missense Variant	Preserves length while changing an amino acid
Moderate	Protein Altering Variant	Changes the protein encoded in the sequence

Table 4-1: VEP Variant types and their corresponding impact predictions.

Combined Annotation Dependent Depletion (CADD) score is a tool for scoring the deleteriousness of single nucleotide variants in the human genome.²⁵ For every base pair in the human genome, a score is calculated to estimate how deleterious a base pair change would be from the reference to any of the other 3 bases. These scores can be used to set a threshold of deleteriousness, whereby variants that are not in the top percent can be removed as an unlikely driver variant. A Phred-scaled CADD score of twenty was selected to filter out germline variants that were not in the top one percent of deleteriousness. Furthermore, the continuous distribution of CADD scores allows for

prioritization of variants based on a higher score. CADD score was a component of the prioritization of the final variant list.

INDEL size filtering was used to reduce the number of false positive calls due to alignment error. Certain areas of the genome can be difficult to map reads due to these regions being filled with repetitive bases, paralogous sequences, or are highly heterogeneous. There are also problems in regions where there is very little read coverage. By removing germline INDELS of size ten or more, we remove variants that are based on these mapping artifacts.

If a germline INDEL is one or two base pairs wide, we assign it a CADD score of 30. This score is not in relation to the deleteriousness of a variant. This score is instead used to prioritize small germline INDELS higher in the variant list because indels do not otherwise have a CADD score on which to prioritize. Small INDELS are less likely to be a false positive because they are reliably called given the read size (100 bp), and the variant caller used (GATK).

Somatic variants were not heavily filtered. After filtering for false positives, there were 7,551 somatic/LOH variants called amongst the fifteen samples. Each sample contained a number of somatic variants that is consistent with previous literature.^{26,27} On average there were 503 variants per sample, the least being 73 in one sample and the most being 1439 in another sample. Further filtration of somatic variants was not performed. Prioritization methods were followed to ease identification of harmful variants. Variants with a 'HIGH' impact and a large phred-scaled CADD score are at the top of the list. Variants with 'MODIFIER' impact and a low CADD score are at the bottom.

CNVs which were smaller than five megabases were filtered from the final results. Five megabases was selected to be the filtering size because it is considered the “cytogenetic level of resolution.”²⁸ Any CNV larger than this is a large loss of the chromosome. CNV's on this scale are likely to be highly disruptive, causing the CNV to correlate with the phenotype. Any genes which fall in this region are then suspect for further scrutiny. Prioritization of CNV's was accomplished by sorting on fraction of chromosome affected, as well as event type. Deletions were prioritized over amplifications or copy number neutral events to further implicate the role tumor suppressor genes play on phenotype.

4.2 Familial patterns of inheritance

The samples used in this study were collected from twenty-three separate families, a majority of which demonstrate a family history of NET or cancer-like symptoms. In this study familial patterns of inheritance were leveraged to help identify predisposing germline variants. Utilizing the germline tissue of thirty-eight affected subjects and nineteen unaffected subjects, filtering rules were applied using GEMINI which retained any variants following a dominant model of inheritance, a recessive model of inheritance within the family (or were de novo). The rules applied for a dominant model of inheritance were provided by the GEMINI tool “autosomal_recessive” and are as follows:

- All affected must be heterozygous
- No unaffected can be heterozygous or homozygous alternate (can be unknown)
- At least 1 affected must have 1 affected parent (or have no parents).

The rules applied for a recessive model of inheritance were provided by the GEMINI tool “autosomal_dominant” and are as follows:

- All affected must be homozygous alternate
- No unaffected can be homozygous alternate (can be unknown)

The "We" family contains two unaffected parents and one affected child and is an exception amongst the other families. De novo variant analysis is possible in this family structure and the following rules were also applied to it:

- All affected must be heterozygous
- All unaffected must be homozygous reference or homozygous alternate
- At least one affected child must have unaffected parents
- If an affected has affected parents, it's not de novo
- All affected kids must have unaffected parents

These extensive filtering parameters greatly reduce the number of variants being analyzed for NET driver candidacy. At the time of this writing, the initial 4,352,978 germline variants called were reduced to 4,452 variants.

4.3 Automated alignment snapshots

It is common practice to visually inspect alignment of reads around a variant call to validate that it was made correctly. Misaligned reads in complex areas of the exome can generate calls that are highly suspect. Integrative Genomics Viewer²⁹ provides a graphical user interface to perform visual inspection of bam files and their alignment to the reference genome. Visual inspection is a powerful approach, but cumbersome when

attempting to validate thousands of variant calls. The process of generating snapshots from IGV was automated to decrease the time spent manually validating calls.

The Github repository of IGV-snapshot-automator³⁰ was used as the starting point of the program. Its batch script creation mode was utilized to generate the batch file IGV takes as input when being run in batch mode. BED files are used as input to this script; a python program was written to generate BED files from GEMINI output. A BASH script was used as the wrapper for this program, to accommodate the variety of system calls. The program takes as input a list of genes and the TSV file created by GEMINI. It then generates an IGV snapshot for every subject in a family that has a variant in a gene of interest.

A protocol was followed to determine whether a variant was called properly. Variants were either put into “good” or “bad” categories depending on how their snapshot looked while following this procedure:

1. Look for excessive variant calls (10 or more per 100 nucleotides) in the area surrounding the variant call of interest. If there are many variant calls, this is likely a misalignment.
2. Examine the depth of coverage in the area. If it is low (less than 10 reads), then there is very little evidence to support the variant call.
3. Compare the affected individuals to any unaffected individuals. Make sure that those affected within the family have the variant, while those who are unaffected do not.

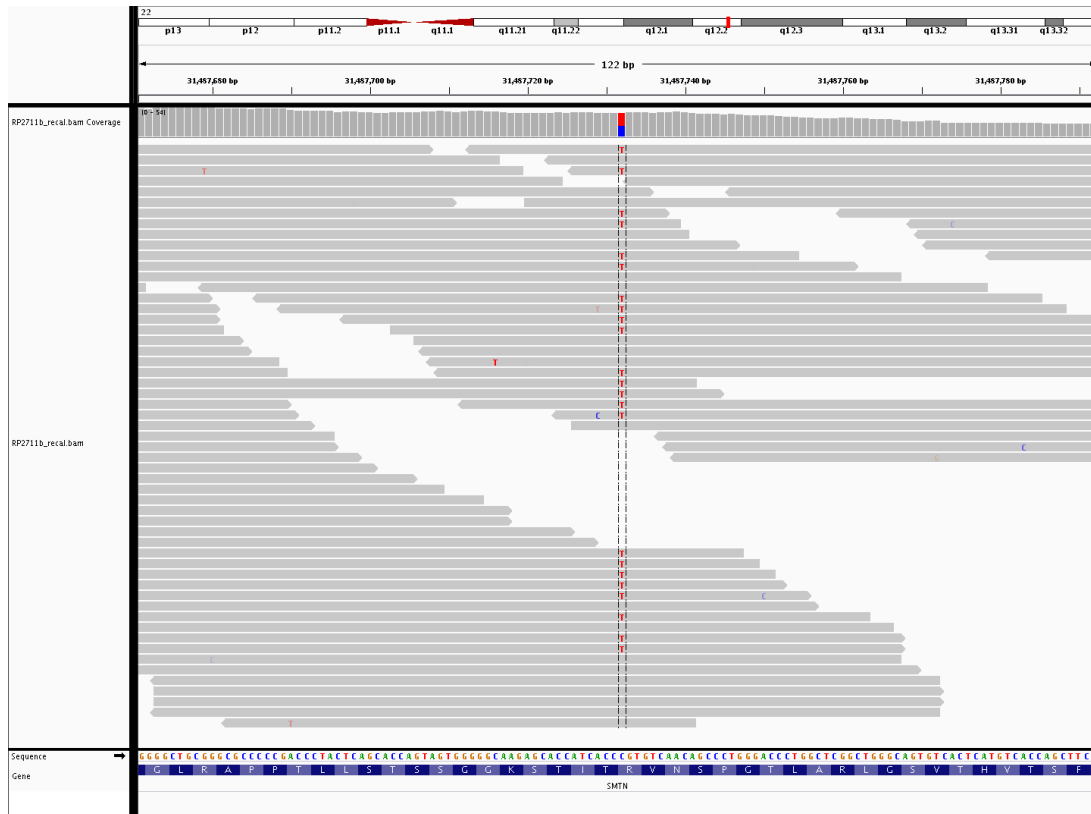


Figure 4-1: A screenshot taken from IGV in the affected individual RP2711b. This SNP takes place in the gene SMTN and is considered a “good” alignment. There are no extraneous variant calls nearby, there is sufficient depth of coverage in the area, and the subject is affected by NETs.

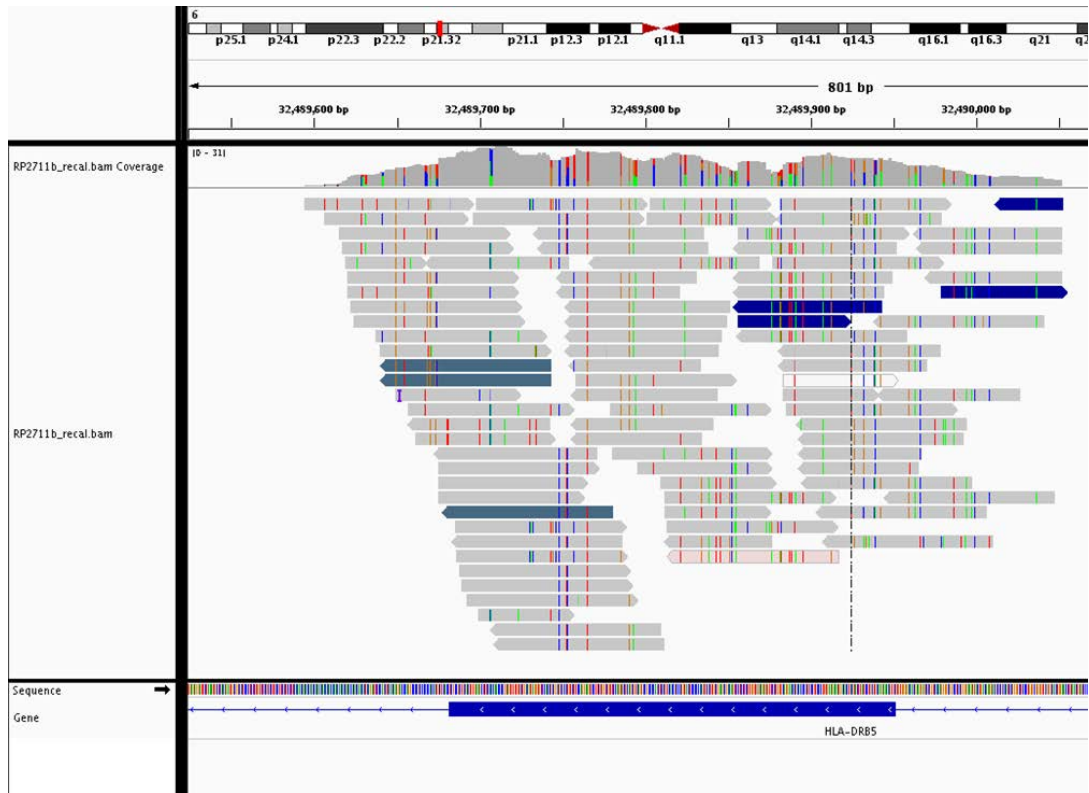


Figure 4-2: A screenshot taken from IGV in the affected individual RP2711b. This SNP takes place in the gene HLA-DRB5 and is considered a “bad” alignment. There are an excessive number of variant calls nearby, indicating that this area is problematic for the pipeline.

CHAPTER 5: RESULTS

5.1 Pipeline output

All output from GEMINI SQL queries is presented in Tab Separated Value (TSV) format. Columns represent annotation fields, while rows represent all called variants present on a family-by-family basis. Germline and somatic variant calls are presented in this format. CNV's are not annotated with VEP or GEMINI, and are instead presented in their own unique TSV format.

4,452 germline variants passed the filtering process and were manually evaluated for biological relevance. 1,697 somatic variants passed false positive filtering and went on for manual evaluation. 5,853 LOH events also passed the false positive filtering step. These are a specific type of somatic variant call where the normal tissue is heterozygous for the change, while the tumor is not. There were a total of 627 CNV calls that passed size filtering.

1	chrom	start	end	gene	ref	alt	type	vep_impact	impact	vep_cadd_family_id	samples
2	chr16	20952744	20952745	DNAH3	G	A	snp	HIGH	stop_gained	56 FamilyCof	MC3481b
3	chr2	84954912	84954913	DNAH6	C	T	snp	HIGH	stop_gained	52 FamilyBl	MB3451b
4	chr6	51484076	51484077	PKHD1	G	C	snp	HIGH	stop_gained	49 FamilyBl	MB3451b
5	chr6	142399708	142399709	NMBR	C	A	snp	HIGH	stop_gained	44 FamilySco	CK5032b,MS5031b
6	chr2	120439281	120439282	TMEM177	C	T	snp	HIGH	stop_gained	43 FamilyMo	JM1191b
7	chr12	9002852	9002853	A2ML1	G	A	snp	HIGH	stop_gained	42 FamilyNi	DN4461b
8	chr4	103826684	103826685	SLC9B1	T	A	snp	HIGH	stop_gained	42 FamilySco	CK5032b,MS5031b
9	chr4	103826684	103826685	SLC9B1	T	A	snp	HIGH	stop_gained	42 FamilyZv	JZ1851sbnl
10	chr4	103826684	103826685	SLC9B1	T	A	snp	HIGH	stop_gained	42 FamilyNi	DN4461b
11	chr4	103826684	103826685	SLC9B1	T	A	snp	HIGH	stop_gained	42 FamilyRo	AR5361b
12	chr4	190876286	190876287	FRG1	G	A	snp	HIGH	stop_gained	42 FamilyMe	JM3871b
13	chr4	190876286	190876287	FRG1	G	A	snp	HIGH	stop_gained	42 FamilyCof	MC3481b
14	chr6	117683843	117683844	ROS1	C	T	snp	HIGH	stop_gained	41 FamilyMe	JM3871b

Figure 5-1: Example spreadsheet demonstrating the data columns generated in fully annotated germline or somatic results. Rows are prioritized using CADD score. Highest scoring variants are commonly stop gains.

1	chrom	chr_start	chr_stop	seg_mean	p_value	event_type	event_size	size_class	arm	arm_fraction	chrom_fraction	genes
2	18	18531336	78005208	-0.696		0 deletion	59473873	large-scale	18q	97.69%	76.17%	GREB1L,ESCO1,SNRPD1,ABF
3	18	116879	14183462	-1.00928	1.68E-06	deletion	14066584	large-scale	18p	81.78%	18.02%	LINC00470,7SK,GNAL,CHMF
4	8	22384865	1.45E+08	0.5228	0.01614	amplification	122278342	large-scale	8q	98.31%	83.54%	ERICH1-AS1
5	20	68246	62959332	0.3626		0 amplification	62891087	large-scale	20q	99.81%	99.79%	
6	4	87610712	1.49E+08	0.3136	2.36E-08	amplification	61745830	large-scale	4q	43.87%	32.30%	ADH5,SLC2A9
7	5	5376339	58513070	0.3129	2.93E-08	amplification	53136732	large-scale	5p	88.89%	29.37%	KIAA0947,SNX18,ESM1,GZM
8	13	19746923	72440321	0.558057	2.42E-06	amplification	52693399	large-scale	13q	54.17%	45.75%	TUBA3C,ANKRD26P3,LINCO
9	7	6639429	56144645	0.3519	0.0165	amplification	49505217	large-scale	7p	82.65%	31.11%	ZCWPW1,ADAP1
10	4	9270060	49094763	0.3281	0.01812	amplification	39824704	large-scale	4p	79.02%	20.83%	ADH5,SLC2A9
11	4	1.51E+08	1.91E+08	0.540933	4.49E-08	amplification	39494605	large-scale	4q	28.06%	20.66%	ADH5,SLC2A9,C1QTNF7,CC
12	10	92999	38990297	0.3247	4.04E-34	amplification	38897299	large-scale	10p	96.76%	28.70%	R3HCC1L
13	17	43664071	81188062	0.3521		0 amplification	37523992	large-scale	17q	65.61%	46.21%	LOC644172,MGC57346,CRH
14	5	1.1E+08	1.46E+08	0.718867	1.13E-07	amplification	35592771	large-scale	5q	26.86%	19.67%	CT49,DNAH5,TRIO,TSLP,WD
15	10	83635226	1.16E+08	0.356025	0.00041	amplification	32456237	large-scale	10q	34.04%	23.95%	R3HCC1L
16	10	51370815	82904429	0.337933	0.00493	amplification	31533615	large-scale	10q	33.08%	23.27%	MIR5699,PRR26,AKR1CL1.A

Figure 5-2: Example spreadsheet demonstrating the columns of data generated for CNV calls. Results are prioritized using "event_type" and "event_size." These results are for a single individual.

5.2 Candidate driver variants in germline

A variant of high interest was found in the Motor Neuron and Pancreas

Homeobox 1 (MXN1) gene. This gene has been shown to be associated with Currarino Syndrome, an autosomal dominant hereditary condition. It is often characterized by sacral abnormalities, anorectal malformation, and presacral mass consisting of a teratoma or anterior sacral meningocele.³¹ One family that was sequenced and has a variant in this gene is afflicted with this disease, while also having NETs. As discussed previously, NETs are known to be prevalent in individuals with inherited familial syndromes. This suggests MXN1 is a gene of interest and should be further investigated to determine its biological relevance to NETs. Since this variant is described in the literature, it serves as a true positive.

Annotation evidence to support this claim is as follows:

- G -> A missense SNP of 'Moderate' impact
- Phred scaled CADD score of 35 (top 0.0316 %)
- Dominant model of Inheritance
 - BB4911b; affected; Sister; G/A
 - BB4913b; affected; Brother; G/A
 - SW4915b; unknown; Male distant relative; G/A
 - RR4912b; unaffected; Mother; ./.

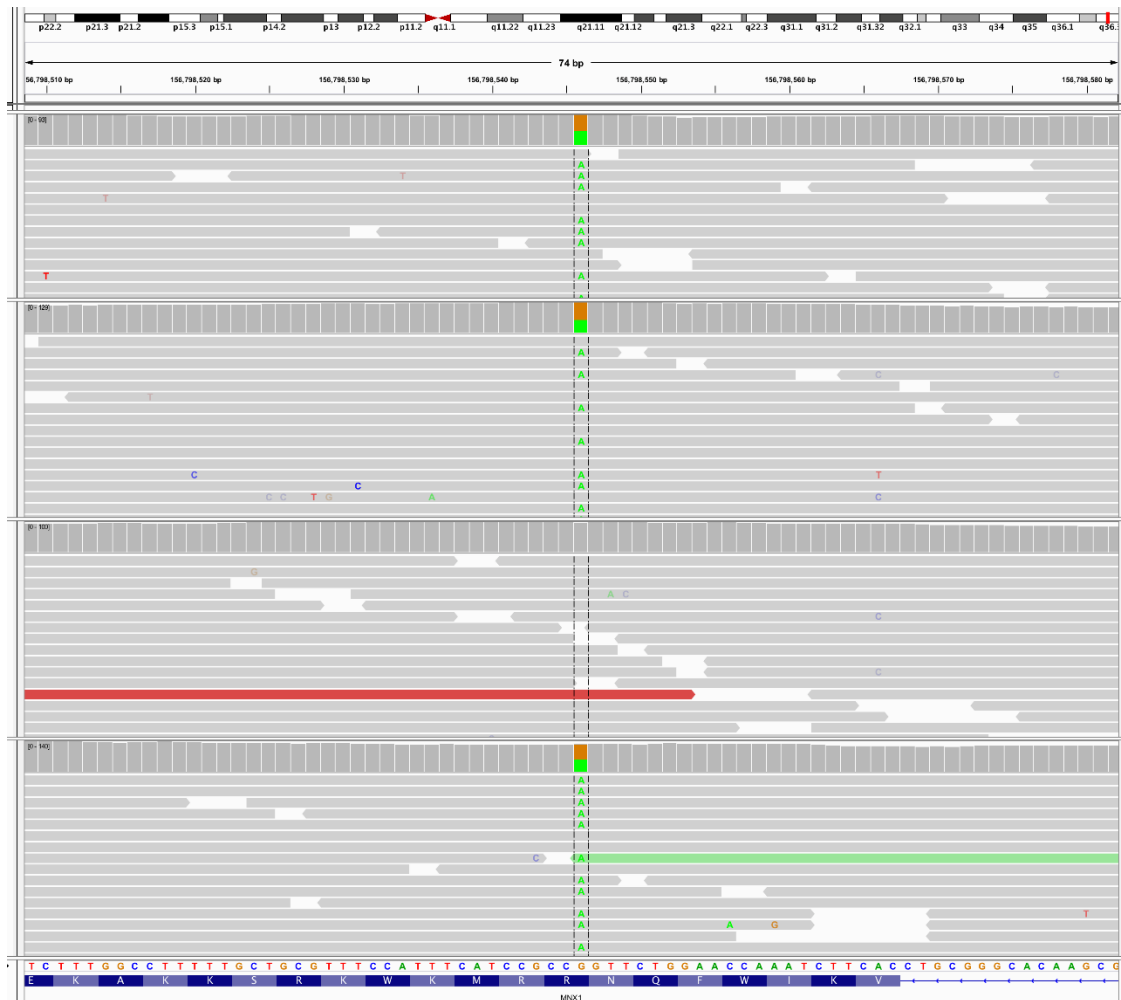


Figure 5-3: IGV alignment snapshot demonstrating the presence of the high quality variant call in MNX1. It is shared amongst all three affected family members, but not the unaffected individual who is second from the bottom

5.3 CNV analysis

Prior literature demonstrates that large scale deletions of chromosome 18 are prevalent in 50-66% of NETs across multiple primary sites.^{32,33} Eight of the fifteen tumor-normal pairs in this study have a deletion of chromosome 18 that is at least five megabases in size. There are three cases where chromosome 18 is almost entirely deleted. The largest deletion of chromosome 18q is seventy-eight megabases wide, which comprises 99.81% of the long chromosome arm and 99.79% of the total chromosome.

1	sample	chrom	chr_start	chr_stop	seg_mean	p_value	event_type	event_size	size_class	arm	arm_fract	chrom_fract	genes
79	TF3471	18	48128	77960656	-2.6623	1.47E-10	deletion	77912529	large-scale	18q	99.81%	99.79%	CETN1,CLUL1,C18orf56,TYMS,ENOSF1,C18orf42,LOC339290,
80	LK4881	18	18531336	78005208	-0.696		0 deletion	59473873	large-scale	18q	97.69%	76.17%	GREB1L,ESCO1,SNRPD1,ABHD3,MIR320C1,MIB1,mir-133b,IV
81	SM2701	18	48070	44301321	-1.51965	0.00317	deletion	44253252	large-scale	18p	99.72%	56.68%	
82	MC3481	18	43329751	78005178	-0.94875	2.02E-06	deletion	34675428	large-scale	18q	56.96%	44.41%	SIGLEC15,EPG5,PSTPIP2,7SK,Y_RNA,ATP5A1,TRNA_Lys,HAU
83	SM2701	18	47112921	77960630	-1.50852	0.00018	deletion	30847710	large-scale	18q	50.67%	39.51%	CETN1,CLUL1,C18orf56,TYMS,ENOSF1,C18orf42,LOC339290,
84	JZ1851	18	20948698	44527031	-0.92886	0.00118	deletion	23578334	large-scale	18q	38.73%	30.20%	RIOK3,C18orf8,NPC1,ANKRD29,LAMA3,Mir_548, TTC39C,CAI
85	JM1191	18	44559786	67872528	-0.8976	7.27E-06	deletion	23312743	large-scale	18q	38.29%	29.86%	HDHD2,IER3IP1,SKOR2,U6,BC040860,7SK,SMAD2,ZBTB7C,U
86	MC3481	18	18531249	39607590	-1.1492	1.89E-05	deletion	21076342	large-scale	18q	34.62%	26.99%	GREB1L,ESCO1,SNRPD1,ABHD3,MIR320C1,MIB1,mir-133b,IV
87	JZ1851	18	59157544	78016184	-0.77642	3.98E-07	deletion	18858641	large-scale	18q	30.98%	24.15%	CDH20,LOC100996669,RNF152,PIGN,KIAA1468,TNFRSF11A,;
88	TA2691	18	44560552	61234051	-0.86748	0.00399	deletion	16673500	large-scale	18q	27.39%	21.36%	HDHD2,IER3IP1,SKOR2,U6,BC040860,7SK,SMAD2,ZBTB7C,U
89	JZ1851	18	259030	15197726	-0.78107	0.00047	deletion	14938697	large-scale	18p	86.85%	19.13%	
90	LK4881	18	116879	14183462	-1.00928	1.68E-06	deletion	14066584	large-scale	18p	81.78%	18.02%	LINC00470,7SK,GNAL,CHMP1B,MPPE1,JMPA2,ANKRD62,C18
91	DN4461	18	30517863	44471219	-1.86617	9.06E-06	deletion	13953357	large-scale	18q	22.92%	17.87%	CCDC178,ASXL3,NOL4,DTNA,MAPRE2,ZNF397,ZSCAN30,AKI
92	MC3481	18	108043	13731646	-0.866	0.00274	deletion	13623604	large-scale	18p	79.21%	17.45%	ROCK1P1,LINC00470,7SK,DQ594439,DQ585728,DQ586209,I
93	JM1191	18	31311688	44526882	-0.89965	2.02E-05	deletion	13215195	large-scale	18q	21.71%	16.93%	NOL4,DTNA,MAPRE2,ZNF397,ZSCAN30,AKI128697,ZNF271,Z
94	JZ1851	18	44774198	56720502	-0.90467	6.86E-06	deletion	11946305	large-scale	18q	19.62%	15.30%	C18orf42,LOC339290,LINC00526,LINC00667,ZBTB14,EPB41L
95	TA2691	18	33831259	44526248	-0.856	4.18E-08	deletion	10694990	large-scale	18q	17.57%	13.70%	FHOD3,TPGS2,KIAA1328,BC037214,CELF4,MIR4318,U6,LINC
96	JM1191	18	108038	9211697	-0.94906	4.18E-05	deletion	9103660	large-scale	18p	52.93%	11.66%	KATNAL2,TCEB3B,HDHD2,IER3IP1,SKOR2,U6,BC040860,7SK,

Figure 5- 4: The list of large scale deletions in chromosome 18 that have been found in our tumor-normal pairs. The rows are prioritized by fraction of chromosome which is deleted. Some samples have multiple deletions.

5.4 Candidate gene identification

Using a combination of germline variants, somatic variants, and CNV's, we identified forty-six genes that occurred in all three variant types. Genes may contain multiple variants in multiple samples. Gene lists were created using the Linux command line tools cut, sort, uniq, and grep. These lists were compared using the Linux command comm, resulting in a list of genes that is the intersect of all three variant types. These genes are candidates for further review.

ACAA2	BMS1	DSC2	FZD8	LOXHD1	REST	WDFY4
ALDH1B1	CCDC178	DSC3	HAUS1	MOCOS	SERPINB10	WDR7
ALPK2	CHAT	DSG1	KIAA1328	MYO5B	SERPINB4	ZNF485
ANK3	CNDP2	DSG3	LAMA	MYOM1	SLC14A2	ZSCAN30
ANKRD26	CTDP1	FHOD3	LIMCH1	PAX5	SYT15	
ARMC4	DCC	FRMPD2	LIPG	POLR2B	TRAPPC8	
ASXL3	DSC1	FRYL	LOC642236	RBFA	TSHZ1	

Table 5-1: The forty-six genes that intersect all three variant types.

A gene of important note is DCC. It is a tumor suppressor gene that has been extensively studied and identified in colorectal, pancreatic, gastric, small intestinal, appendiceal, breast, prostatic, and squamous cell carcinomas.³²

CHAPTER 6: DISCUSSION

6.1 Limitations

CNV calling in cancer using WES is a challenging task. Without the entire genome, cancer CNV tools must rely on techniques that can introduce biases and noise to the data. One technique used to call CNV's in cancer is to compare read depth from tumor to normal and infer deletion or amplification.³⁴ This is the approach taken by VarScan and has been demonstrated to be effective. However, current literature which evaluates and compares cancer WES CNV calling tools suggests that there is large room for improvement.³⁵ The sparse exonic regions used to call CNV's impinge on the capabilities of this type of analysis. Large scale CNV's likely span multiple exons, introns, regulatory regions, and more. There is currently a need for more efficient and precise CNV calling methods when using WES data.

11 of the 23 family structures do not have more than one generation of sequenced subjects. 7 of these families have only a single person sequenced. This limits the filtering capabilities of our pipeline when applying patterns of inheritance. Variants that would normally be filtered out due to conflicting zygosity are left in the analysis, increasing passenger variant retention and false positive rates. This could be remedied in future works by completing familial triads of inheritance (having two parents sequenced, as well as the offspring). *De novo* analysis has yielded paltry results. Only one family has a triad with two unaffected parents and an affected offspring. Increasing the number of sequenced subjects per pedigree would aid in this analysis as well, even though they include some subjects are not affected by NETs.

NETs are not a well-studied form of cancer. Many online resources and databases do not have data specific to NETs. There is a wide variety of information available on cancers which coincide on the same primary site as these cancers. Pancreatic, small bowel, and lung cancers all have well documented variants, genes, and metabolic pathways. This lack of information can limit analysis techniques which can be performed, such as a pathway analysis using KEGG.³⁶ The Catalogue of Somatic Mutations in Cancer³⁷ (COSMIC) is the world's largest database for somatic mutations and their impact on cancer. It can be used to gain a better understanding of which genes are implicating a specific cancer phenotype. At the time this writing, there is not a cancer type specific to NETs, further limiting the ability to accumulate relevant information on this type of cancer.

6.2 Future directions

Bioinformatics is a field of study that is constantly introducing new analysis tools and techniques. New versions of tools are released on a regular basis which may improve on previous results. For example, the GATK Version 4 was recently released. New somatic variant callers (Mutect2 for example) are being developed and demonstrate comparable or better results to Varscan.³⁸ Using an ensemble of somatic variant callers could prove to be useful in identifying high-confidence calls.

Although there was a large reduction in the number of potential variants, it is still a challenging task to manually investigate thousands of variants. Prioritization of results plays a key role in data analysis. If high confidence variants with compelling evidence to implicate their biological relevance can be determined above other less compelling

variants, than the ability to identify disease-causing variants improves. One approach for improving prioritization is utilizing protein-protein interactions as a basis for imparting biological relevance to variant and the gene in which it resides. The Human Gene Connectome³⁹ is one such tool that does this. HGCS has created a connectome network for every gene in the human genome. The network is a weighted graph that has genes at every node, and a biological distance at every edge. The biological distance is calculated by inverting STRINGdb interaction likelihood scores. By following the route from a candidate gene to previously implicated gene, total distance can be calculated. Genes which are extremely close to one another will be prioritized highest. This methodology attempts to leverage knowledge of protein interaction pathways, as well as previously acquired knowledge on a given disease. Future versions of the NET analysis pipeline could easily accommodate this prioritization technique.

CHAPTER 7: CONCLUSION

We have demonstrated that our NET variant pipeline can discover known and novel genetic variations. It can take raw FastQ files taken from high throughput short read sequencing technologies as input and generate high confidence annotated variants which have been filtered for driver candidacy. Using germline and somatic samples, we generate three types of variants that are relevant to NETs: germline, somatic, and somatic CNV variants. If subjects from a family have been sequenced, we can use the family information to filter out germline variants that are not supported by patterns of inheritance. This approach increases the likelihood of identifying variants which link familial inherited diseases and NETs.

Variants and data from provided samples are currently under manual inspection. Mutations of the MNX1 gene can lead to development of Currarino Syndrome (an autosomal dominant hereditary condition) and is believed to play a role in NET formation. CNV calling of tumor samples is consistent with prior literature; over one-half of them demonstrate large-scale deletions of chromosome 18. Affected tumor suppressor genes include DCC, a netrin 1 receptor frequently downregulated in other forms of cancer (e.g. colorectal and esophageal). DCC appears across all three variant types, implicating it's possible involvement in the NET phenotype.

Future directions for the NET variant discovery pipeline include completion of inheritance triads for small families, addition of more families to increase sample size, ensemble variant calling, and further prioritization of results by leveraging prior knowledge, protein-protein interaction networks, and pathway analysis.

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APPENDIX A

Figure A-1: Pedigree chart for Ai Family

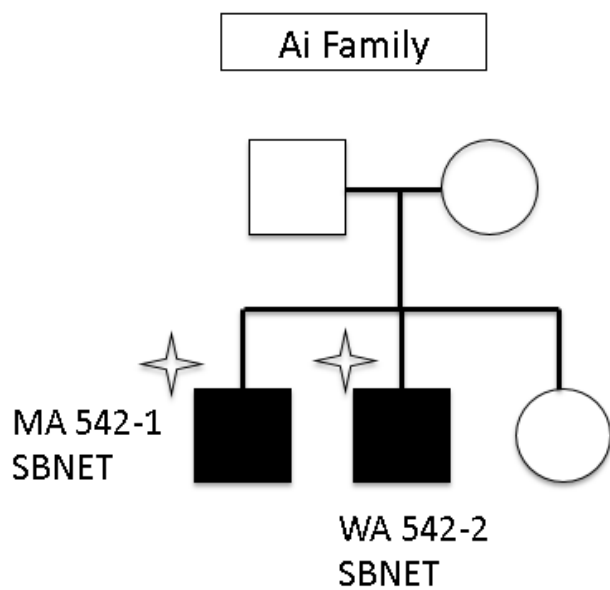


Figure A-2: Pedigree chart for Al Family

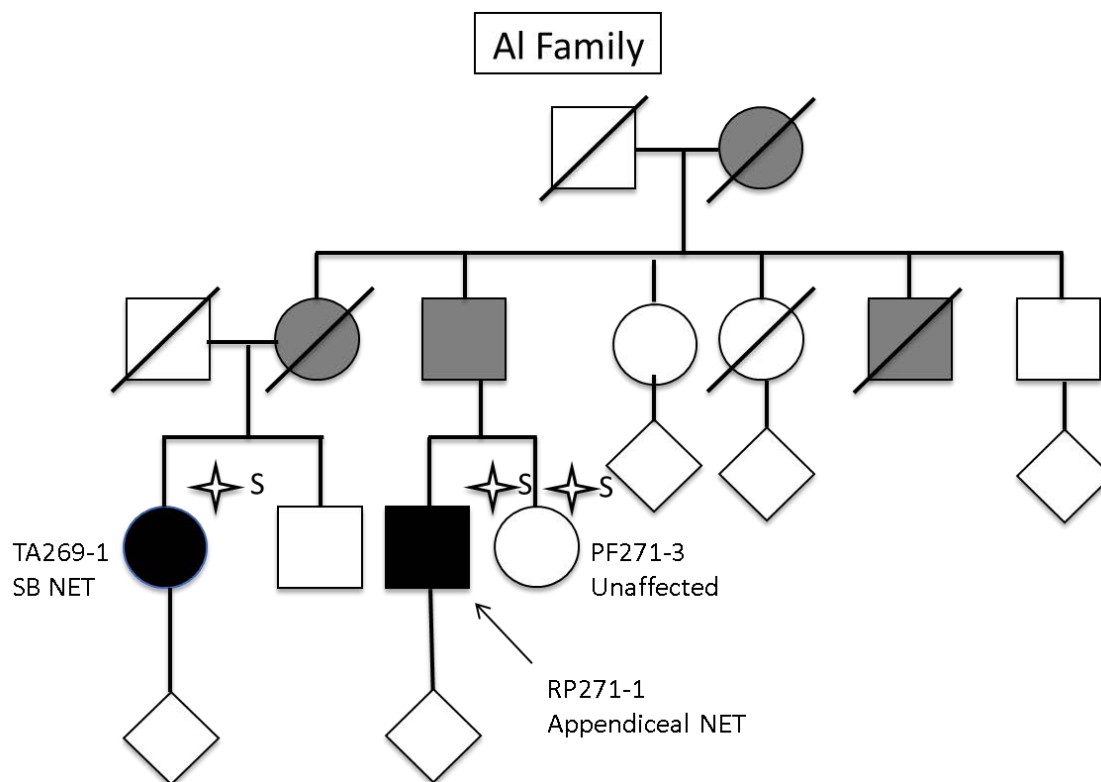


Figure A-3: Pedigree chart for BI Family

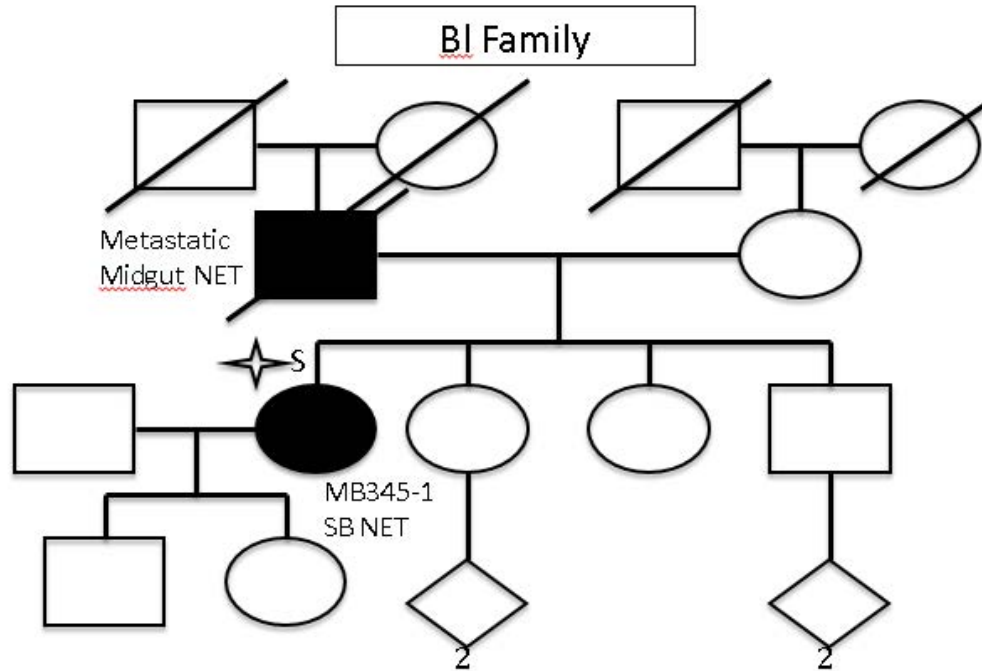


Figure A-4: Pedigree chart for Br Family

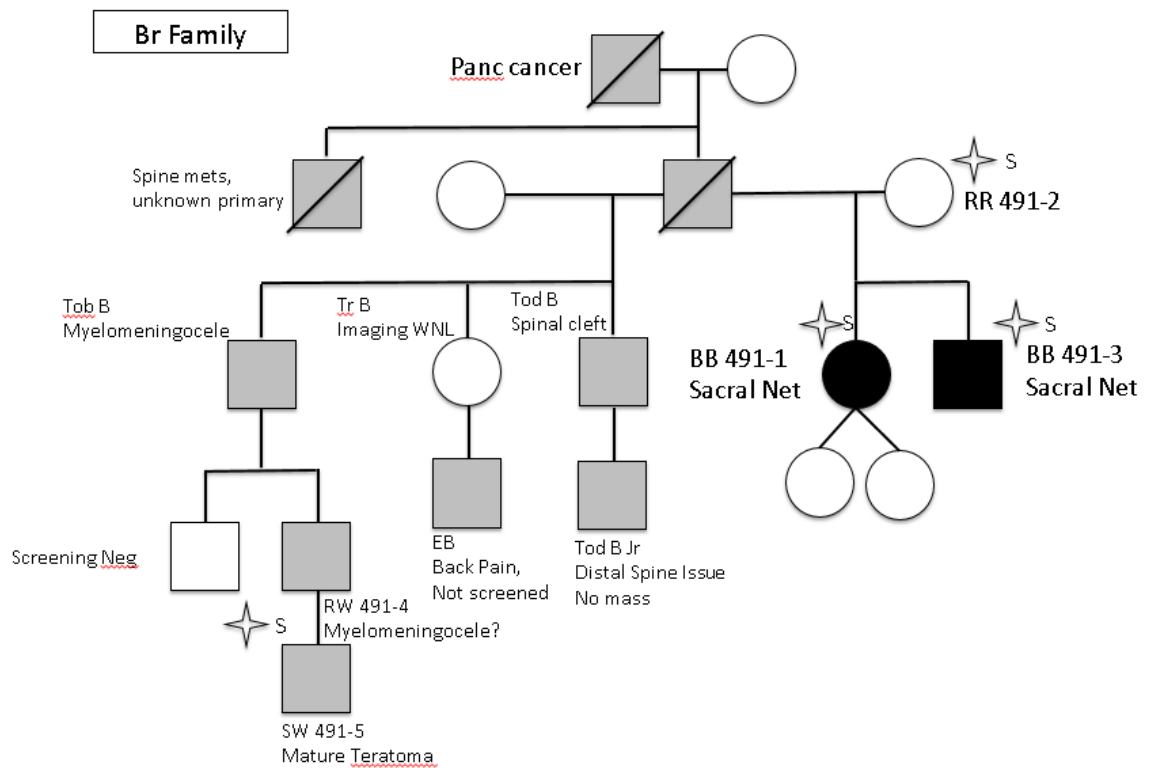


Figure A-5: Pedigree chart for Cor Family

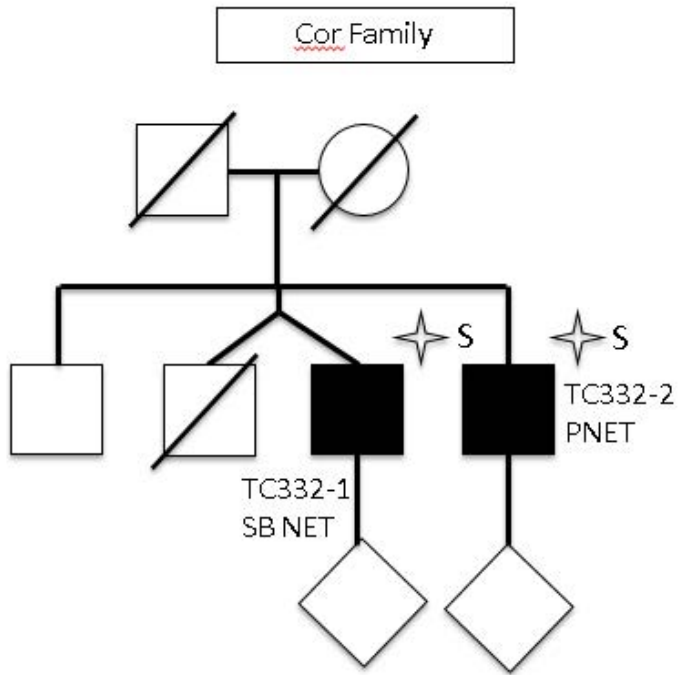


Figure A-6: Pedigree chart for Cof Family

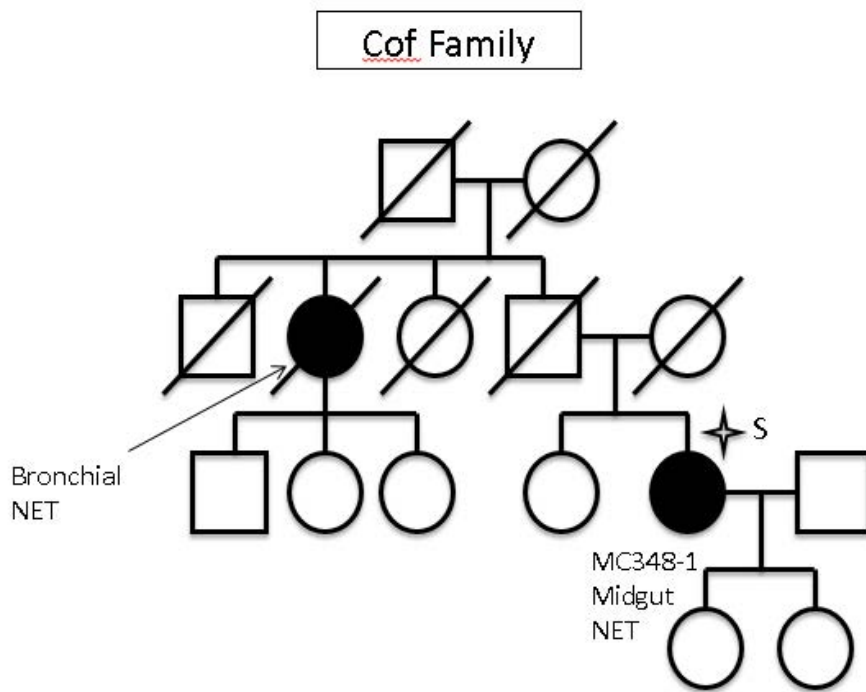


Figure A-7: Pedigree chart for Cr Family

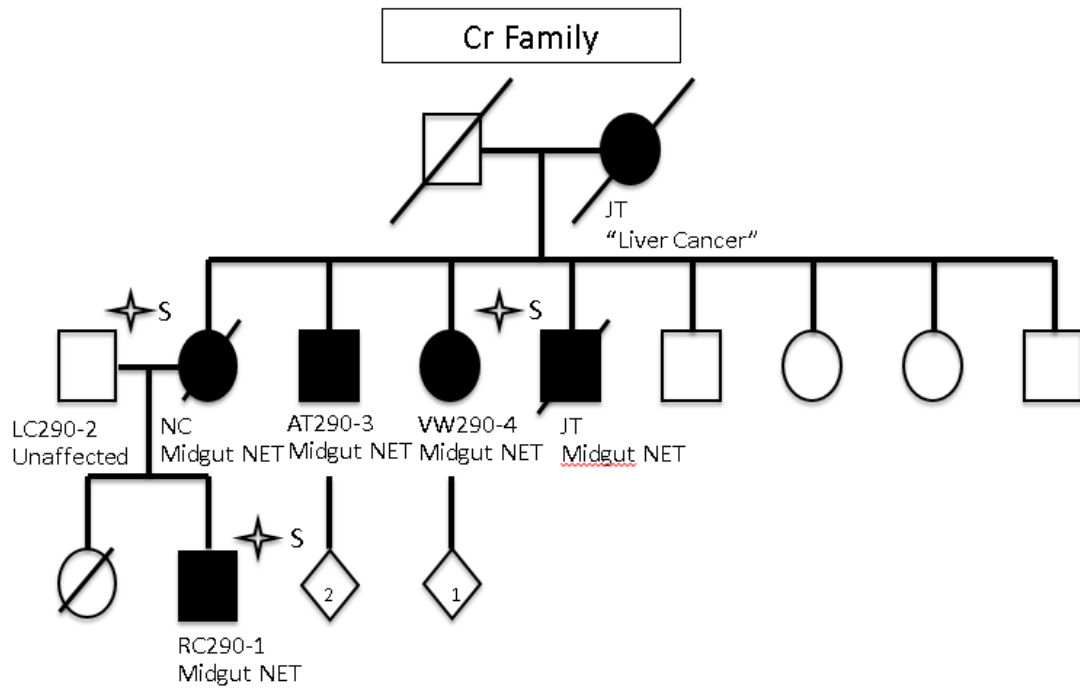


Figure A-8: Pedigree chart for F Family

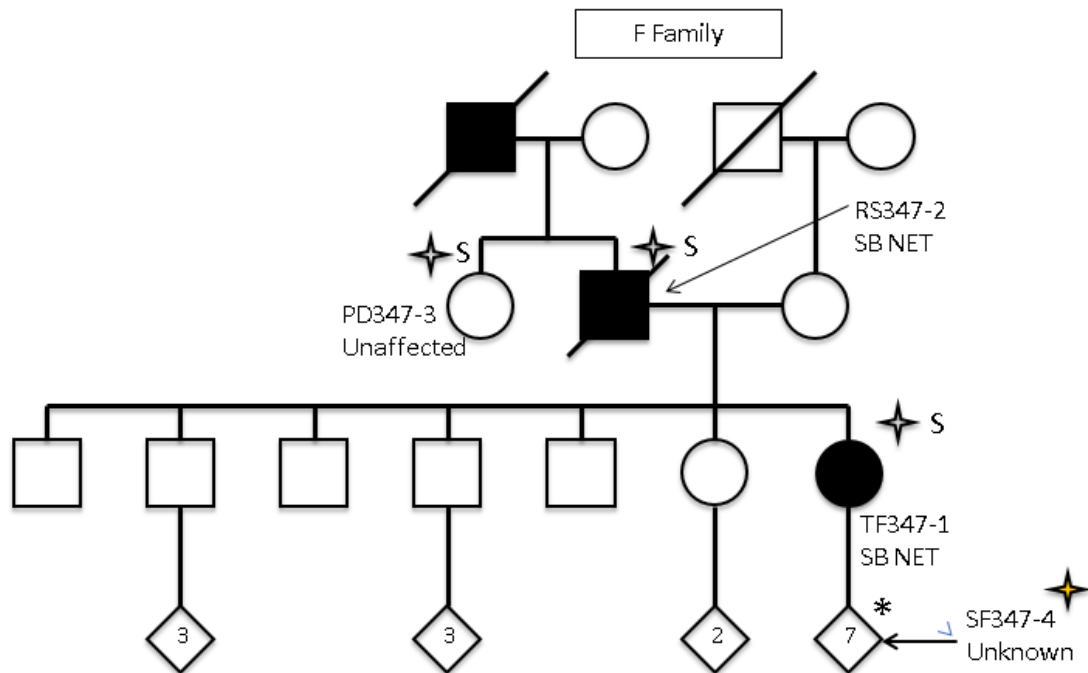


Figure A-9: Pedigree chart for He Family

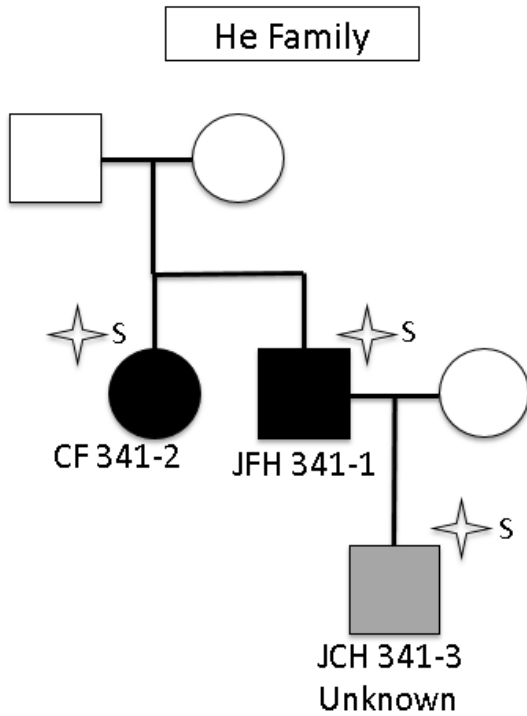


Figure A-10: Pedigree chart for Ke Family

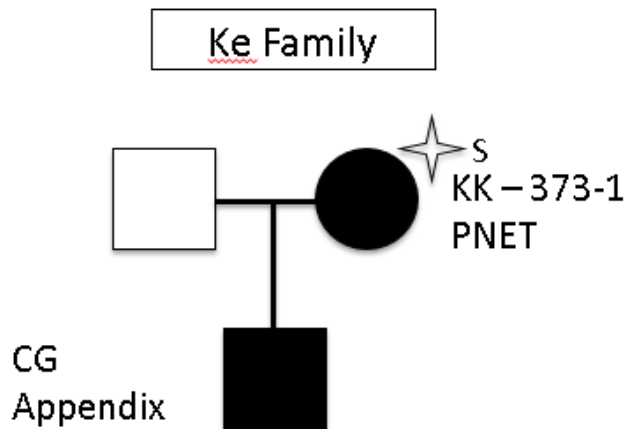


Figure A-11: Pedigree chart for Ko Family

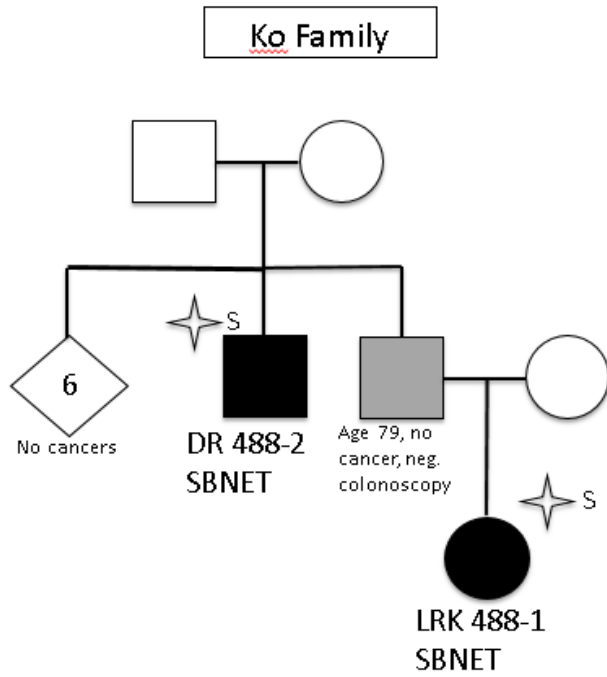


Figure A-12: Pedigree chart for Kr Family

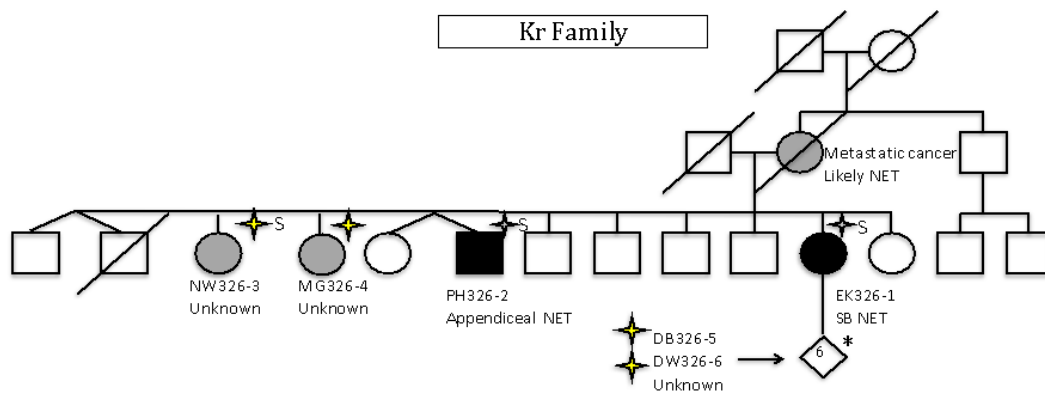


Figure A-13: Pedigree chart for L Family

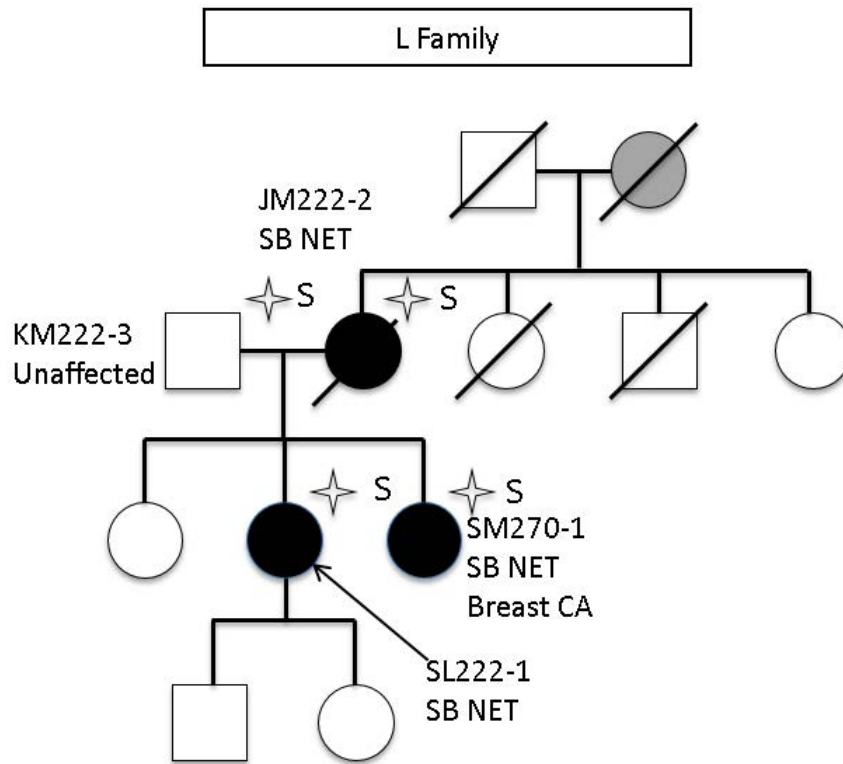


Figure A-14: Pedigree chart for Me Family

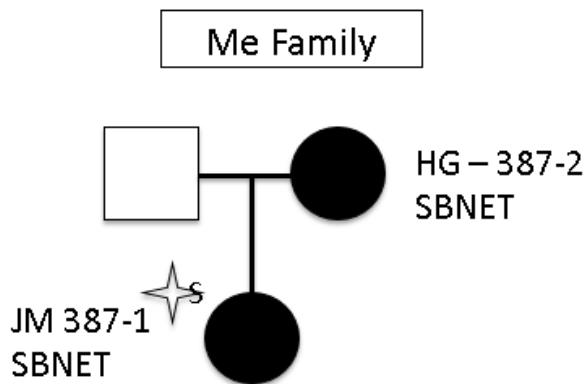


Figure A-15: Pedigree chart for Mil Family

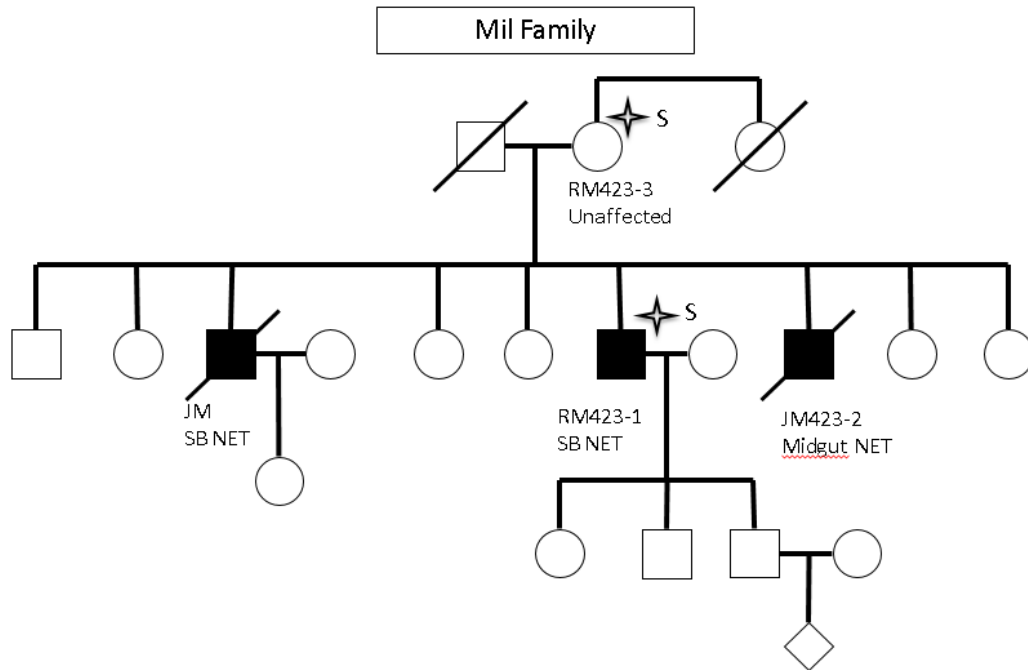


Figure A-16: Pedigree chart for Mo Family

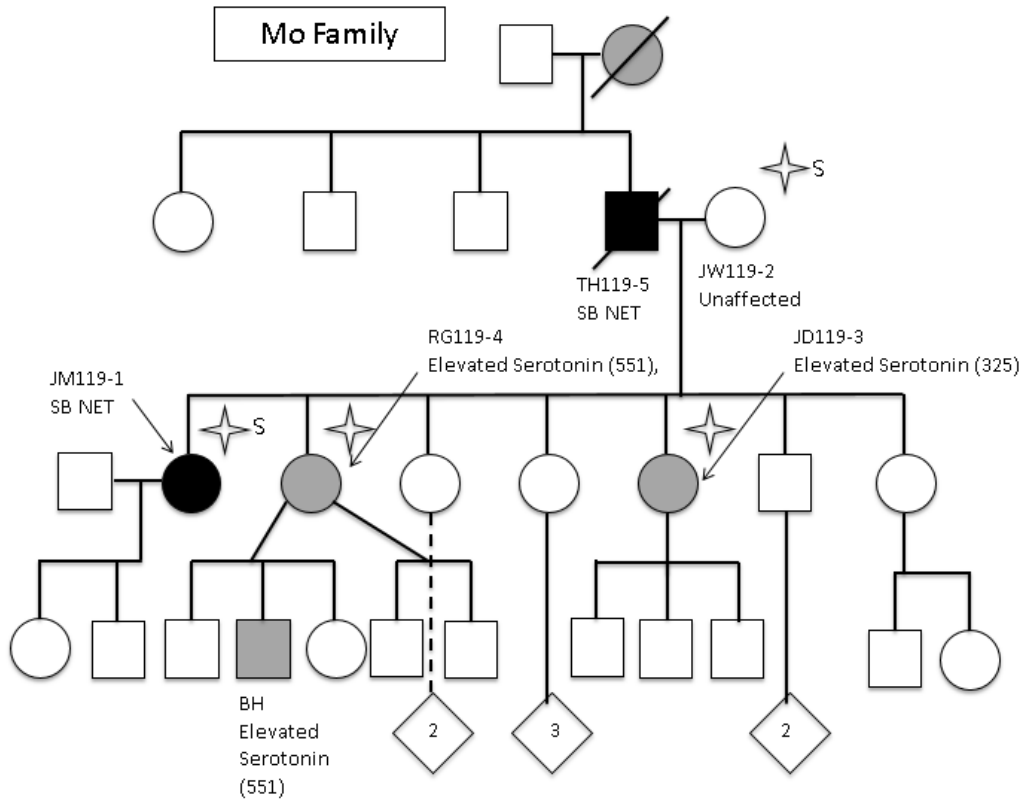


Figure A-17: Pedigree chart for Ni Family

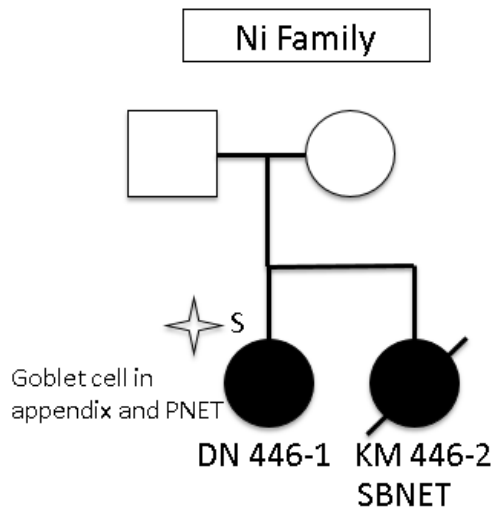


Figure A-18: Pedigree chart for Ro Family

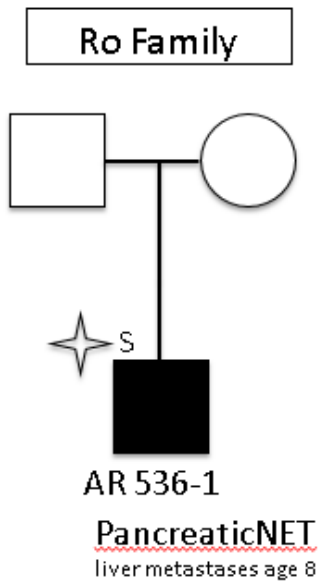


Figure A-19: Pedigree chart for S Family

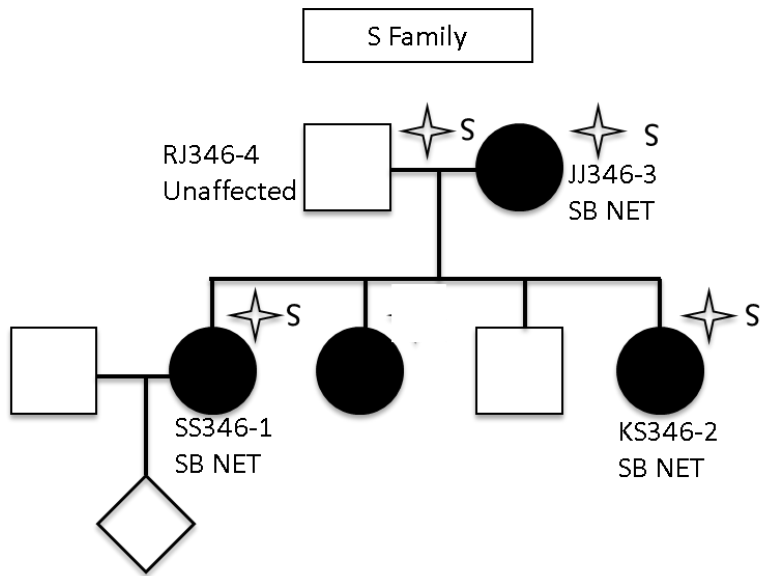


Figure A-20: Pedigree chart for Sco Family

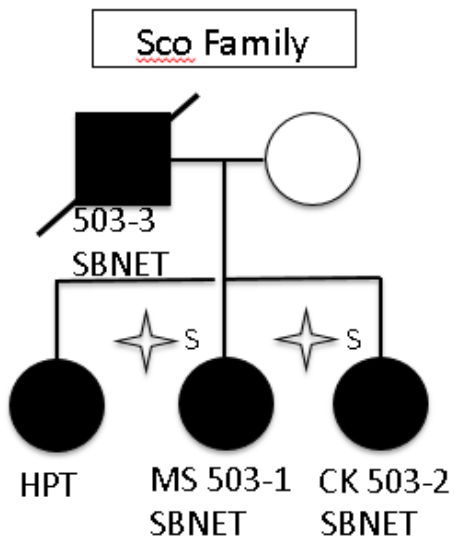


Figure A-21: Pedigree chart for W Family

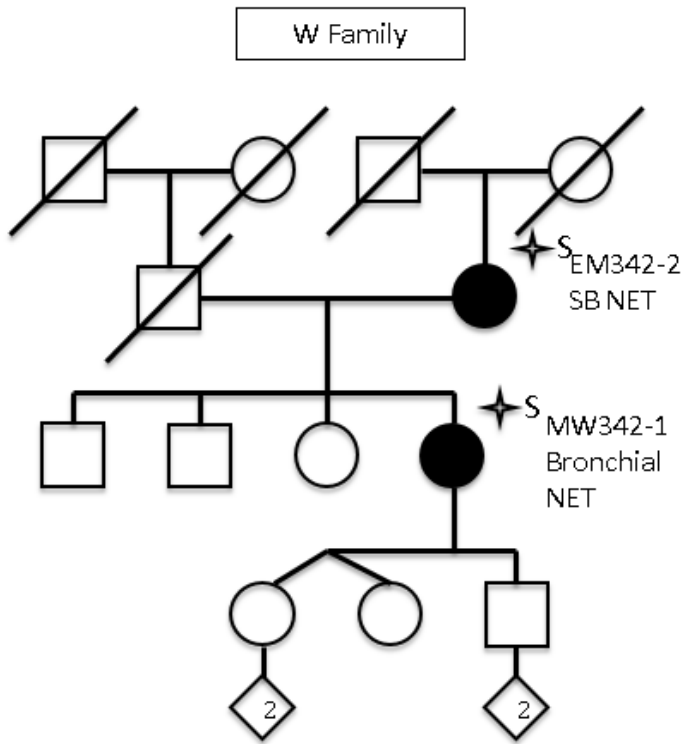


Figure A-22: Pedigree chart for We Family

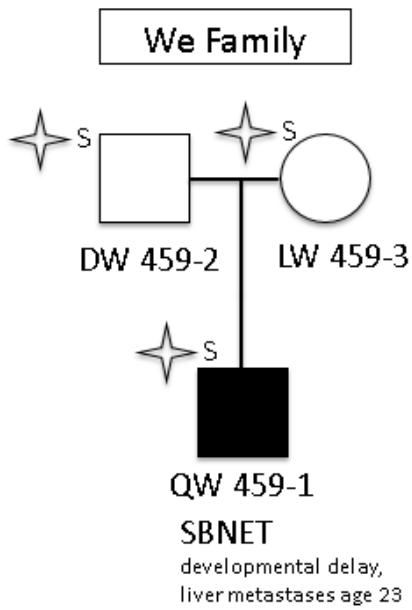
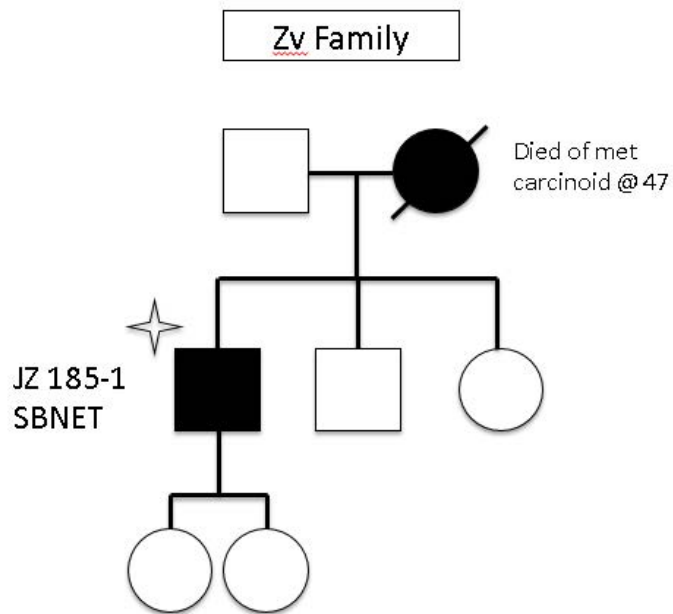


Figure A-23: Pedigree chart for Zv Family



APPENDIX B

Table B-1: Varscan copy number variant analysis output

sample	chrom	chr_start	chr_stop	event_type	size_class	arm	arm_fract	chrom_fract
AR5361	Y	28784349	59026281	deletion	large-scale	Yq	64.52%	50.94%
AR5361	1	121484277	142542923	deletion	focal	1q	14.12%	8.45%
AR5361	13	53312982	73319402	amplification	large-scale	13q	20.57%	17.37%
AR5361	21	19666581	26966421	amplification	large-scale	21q	20.90%	15.17%
AR5361	16	34408006	46509604	amplification	large-scale	16q	18.43%	13.39%
AR5361	Y	16031009	21751478	amplification	focal	Yq	12.20%	9.63%
AR5361	18	34740083	40857456	amplification	focal	18q	10.05%	7.84%
AR5361	16	59474679	66203563	amplification	focal	16q	12.52%	7.45%
AR5361	X	85341218	96327978	amplification	focal	Xq	11.61%	7.08%
AR5361	8	107773412	117778977	amplification	focal	8q	9.93%	6.84%
AR5361	18	61074293	66365173	amplification	focal	18q	8.69%	6.78%
AR5361	14	24908142	31091730	amplification	focal	14q	6.89%	5.76%
AR5361	3	75955746	87101720	amplification	focal	3p	12.25%	5.63%
AR5361	14	39900680	45356768	amplification	focal	14q	6.08%	5.08%
AR5361	X	77528164	85302513	amplification	focal	Xq	8.21%	5.01%
AR5361	13	86366895	92051470	amplification	focal	13q	5.84%	4.94%
AR5361	5	43555970	52285376	amplification	focal	5p	10.01%	4.83%
AR5361	11	36806304	43284519	amplification	focal	11p	12.06%	4.80%
AR5361	4	28363673	37455679	amplification	focal	4p	18.04%	4.76%
AR5361	X	30870743	38212013	amplification	focal	Xp	12.11%	4.73%
AR5361	14	82383260	87388810	amplification	focal	14q	5.58%	4.66%
AR5361	10	52436629	58748760	amplification	focal	10q	6.62%	4.66%
AR5361	9	7174694	13310071	amplification	focal	9p	12.52%	4.34%
AR5361	10	106072825	111768081	amplification	focal	10q	5.97%	4.20%
AR5361	6	57006645	64043548	amplification	focal	6p	6.55%	4.11%
AR5361	9	20331767	26116943	amplification	focal	9p	11.81%	4.10%
AR5361	6	90659820	97677159	amplification	focal	6q	6.37%	4.10%
AR5361	12	83358684	88623730	amplification	focal	12q	5.37%	3.93%
AR5361	6	64345599	70966509	amplification	focal	6q	6.01%	3.87%
AR5361	9	27169359	32459456	amplification	focal	9p	10.80%	3.75%
AR5361	4	176572811	183722977	amplification	focal	4q	5.08%	3.74%
AR5361	X	57705036	63407353	amplification	focal	Xp	4.78%	3.67%
AR5361	4	17827169	24578258	amplification	focal	4p	13.40%	3.53%
AR5361	4	121957001	128590234	amplification	focal	4q	4.71%	3.47%
AR5361	4	130003277	136292754	amplification	focal	4q	4.47%	3.29%
AR5361	5	25913446	31534999	amplification	focal	5p	11.61%	3.11%

Table B-1: Continued

AR5361	2	77743738	85069025	amplification	focal	2p	7.85%	3.01%
AR5361	1	100889627	108247435	amplification	focal	1p	5.89%	2.95%
AR5361	2	136742954	143638708	amplification	focal	2q	4.60%	2.84%
AR5361	4	89570935	94751307	amplification	focal	4q	3.68%	2.71%
AR5361	3	113866153	119156928	amplification	focal	3q	4.94%	2.67%
AR5361	4	62066088	67142596	amplification	focal	4q	3.61%	2.66%
AR5361	3	162292763	167512544	amplification	focal	3q	4.88%	2.64%
AR5361	2	184125483	190314148	amplification	focal	2q	4.13%	2.54%
AR5361	2	191353405	196642739	amplification	focal	2q	3.53%	2.17%
AR5361	2	114708944	119740192	amplification	focal	2q	3.36%	2.07%
AR5361	2	143712257	148730795	amplification	focal	2q	3.35%	2.06%
BB4911	3	78696950	96963192	deletion	focal	3p	13.52%	9.22%
BB4911	11	99690168	111327239	deletion	focal	11q	14.31%	8.62%
BB4911	1	121484290	142542926	deletion	focal	1q	14.12%	8.45%
BB4911	3	152177133	168834455	deletion	focal	3q	15.56%	8.41%
BB4911	3	132244657	145790445	deletion	focal	3q	12.66%	6.84%
BB4911	3	100583035	113146154	deletion	focal	3q	11.74%	6.34%
BB4911	3	58703118	69915582	deletion	focal	3p	12.32%	5.66%
BB4911	3	169283642	180324112	deletion	focal	3q	10.32%	5.58%
BB4911	3	113165257	121643816	deletion	focal	3q	7.92%	4.28%
BB4911	11	122929463	128356102	deletion	focal	11q	6.67%	4.02%
BB4911	11	89059915	94264717	deletion	focal	11q	6.40%	3.86%
BB4911	3	121649653	129188018	deletion	focal	3q	7.04%	3.81%
BB4911	3	239301	7348352	deletion	focal	3p	7.81%	3.59%
BB4911	3	190366194	195505825	deletion	focal	3q	4.80%	2.60%
BB4911	21	19506604	26966309	amplification	large-scale	21q	21.36%	15.50%
BB4911	20	6195711	13514738	amplification	large-scale	20p	26.61%	11.61%
BB4911	5	82359939	98217738	amplification	focal	5q	11.97%	8.77%
BB4911	13	86368379	95726543	amplification	focal	13q	9.62%	8.13%
BB4911	18	61383282	67266867	amplification	focal	18q	9.66%	7.54%
BB4911	4	170627941	183838097	amplification	focal	4q	9.39%	6.91%
BB4911	13	103501673	111102851	amplification	focal	13q	7.81%	6.60%
BB4911	16	61089637	66471495	amplification	focal	16q	10.01%	5.96%
BB4911	7	77754924	87073050	amplification	focal	7q	9.39%	5.86%
BB4911	13	61773824	68476827	amplification	focal	13q	6.89%	5.82%
BB4911	4	26741455	37592076	amplification	focal	4p	21.53%	5.68%
BB4911	X	31227663	39937266	amplification	focal	Xp	14.37%	5.61%
BB4911	5	99921800	109978083	amplification	focal	5q	7.59%	5.56%
BB4911	9	7799521	14759880	amplification	focal	9p	14.20%	4.93%

Table B-1: Continued

BB4911	13	53608398	59103459	amplification	focal	13q	5.65%	4.77%
BB4911	X	107319240	114251621	amplification	focal	Xq	7.32%	4.46%
BB4911	5	23526350	31299507	amplification	focal	5p	16.06%	4.30%
BB4911	11	36595586	42275207	amplification	focal	11p	10.58%	4.21%
BB4911	8	88885106	94715046	amplification	focal	8q	5.79%	3.98%
BB4911	9	117786320	123170740	amplification	focal	9q	5.84%	3.81%
BB4911	4	17816549	25030067	amplification	focal	4p	14.31%	3.77%
BB4911	X	123220314	128720918	amplification	focal	Xq	5.81%	3.54%
BB4911	6	65098547	70942465	amplification	focal	6q	5.31%	3.42%
BB4911	6	76623847	82462444	amplification	focal	6q	5.30%	3.41%
BB4911	2	140990634	149270512	amplification	focal	2q	5.52%	3.40%
BB4911	7	122114448	127228654	amplification	focal	7q	5.15%	3.21%
BB4911	7	16815636	21856163	amplification	focal	7p	8.41%	3.17%
BB4911	4	113970797	119217023	amplification	focal	4q	3.73%	2.74%
BB4911	4	10533348	15613960	amplification	focal	4p	10.08%	2.66%
BB4911	4	104041462	109086366	amplification	focal	4q	3.58%	2.64%
BB4911	4	57898709	62935953	amplification	focal	4q	3.58%	2.64%
BB4911	1	78511851	84609963	amplification	focal	1p	4.88%	2.45%
BB4911	1	186915793	192992010	amplification	focal	1q	4.89%	2.44%
BB4911	1	102251966	108327863	amplification	focal	1p	4.86%	2.44%
BB4911	1	214492110	220156642	amplification	focal	1q	4.56%	2.27%
BB4911	9	36594715	70183477	neutral	large-scale	9p	25.32%	23.79%
BB4911	18	34833771	43420060	neutral	focal	18q	14.10%	11.00%
BB4911	15	91576040	102187039	neutral	focal	15q	12.70%	10.35%
BB4911	17	20150341	26110182	neutral	focal	17p	16.04%	7.34%
BB4911	10	51854741	59986867	neutral	focal	10q	8.53%	6.00%
BB4911	X	139114864	147733087	neutral	focal	Xq	9.10%	5.55%
BB4911	15	66976331	72324913	neutral	focal	15q	6.40%	5.22%
BB4911	8	124545252	131812791	neutral	focal	8q	7.21%	4.97%
BB4911	6	160327932	166778929	neutral	focal	6q	5.86%	3.77%
BB4911	5	43487205	50055624	neutral	focal	5p	10.15%	3.63%
BB4911	8	43152075	48423862	neutral	focal	8p	5.37%	3.60%
BB4911	9	79164456	84199297	neutral	focal	9q	5.46%	3.57%
BB4911	8	49643033	54727233	neutral	focal	8q	5.05%	3.47%
BB4911	2	3685082	9519123	neutral	focal	2p	6.25%	2.40%
DN4461	21	10998332	34224075	deletion	large-scale	21q	60.19%	48.26%
DN4461	20	4610174	21362659	deletion	large-scale	20p	60.92%	26.58%
DN4461	3	72799222	121345755	deletion	large-scale	3q	28.35%	24.52%
DN4461	9	38543030	71623406	deletion	large-scale	9q	24.53%	23.43%

Table B-1: Continued

DN4461	14	50074050	73945373	deletion	large-scale	14q	26.60%	22.24%
DN4461	5	93076176	126792978	deletion	large-scale	5q	25.44%	18.64%
DN4461	4	120549959	155305713	deletion	large-scale	4q	24.69%	18.18%
DN4461	18	30517863	44471219	deletion	large-scale	18q	22.92%	17.87%
DN4461	9	12636	21941038	deletion	large-scale	9p	44.75%	15.53%
DN4461	13	54615342	72038796	deletion	large-scale	13q	17.91%	15.13%
DN4461	8	55538631	73993428	deletion	large-scale	8q	18.31%	12.61%
DN4461	9	72333125	88955806	deletion	focal	9q	18.03%	11.77%
DN4461	16	4941621	15069246	deletion	large-scale	16p	27.67%	11.21%
DN4461	11	101827583	116655736	deletion	focal	11q	18.24%	10.98%
DN4461	12	66541522	80839151	deletion	focal	12q	14.58%	10.68%
DN4461	20	23349407	30053223	deletion	focal	20p	15.09%	10.64%
DN4461	14	77846778	88940086	deletion	focal	14q	12.36%	10.33%
DN4461	10	50833819	64429946	deletion	focal	10q	14.26%	10.03%
DN4461	4	155458616	174242843	deletion	focal	4q	13.35%	9.83%
DN4461	1	53932328	78309077	deletion	focal	1p	19.50%	9.78%
DN4461	12	13174300	26231811	deletion	large-scale	12p	36.47%	9.76%
DN4461	10	8204071	21435405	deletion	large-scale	10p	32.91%	9.76%
DN4461	12	28412150	41463692	deletion	focal	12p	20.64%	9.75%
DN4461	8	81430933	94828658	deletion	focal	8q	13.30%	9.15%
DN4461	4	83372231	100851700	deletion	focal	4q	12.42%	9.14%
DN4461	17	48746327	56060541	deletion	focal	17q	12.79%	9.01%
DN4461	18	61393444	67508645	deletion	focal	18q	10.05%	7.83%
DN4461	10	121086259	131646767	deletion	focal	10q	11.08%	7.79%
DN4461	13	79189644	87871310	deletion	focal	13q	8.93%	7.54%
DN4461	13	31113630	39586185	deletion	focal	13q	8.71%	7.36%
DN4461	2	135093654	152717250	deletion	focal	2q	11.76%	7.25%
DN4461	14	42355775	50053131	deletion	focal	14q	8.58%	7.17%
DN4461	5	141233794	153796533	deletion	focal	5q	9.48%	6.94%
DN4461	8	38964444	48866834	deletion	focal	8p	14.55%	6.77%
DN4461	11	77446319	86270757	deletion	focal	11q	10.85%	6.54%
DN4461	13	90643919	98043789	deletion	focal	13q	7.61%	6.43%
DN4461	X	108619210	118587032	deletion	focal	Xq	10.53%	6.42%
DN4461	5	40854564	52405516	deletion	focal	5p	15.59%	6.38%
DN4461	X	140335579	149987575	deletion	focal	Xq	10.20%	6.22%
DN4461	7	11062494	20803038	deletion	focal	7p	16.26%	6.12%
DN4461	11	35706664	43954626	deletion	focal	11p	15.36%	6.11%
DN4461	13	103392114	110408679	deletion	focal	13q	7.21%	6.09%
DN4461	5	54557102	65466016	deletion	focal	5q	8.23%	6.03%

Table B-1: Continued

DN4461	5	79965918	90669980	deletion	focal	5q	8.08%	5.92%
DN4461	6	137322662	147136115	deletion	focal	6q	8.91%	5.74%
DN4461	7	30363204	39247180	deletion	focal	7p	14.83%	5.58%
DN4461	11	49597710	57089251	deletion	focal	11p	7.64%	5.55%
DN4461	12	58158482	65462317	deletion	focal	12q	7.45%	5.46%
DN4461	10	104850363	111967583	deletion	focal	10q	7.47%	5.25%
DN4461	12	85450472	92382865	deletion	focal	12q	7.07%	5.18%
DN4461	15	57355774	62552766	deletion	focal	15q	6.22%	5.07%
DN4461	4	101108891	110723176	deletion	focal	4q	6.83%	5.03%
DN4461	6	74446028	82973859	deletion	focal	6q	7.74%	4.98%
DN4461	11	94301145	100962479	deletion	focal	11q	8.19%	4.93%
DN4461	8	110703631	117875334	deletion	focal	8q	7.12%	4.90%
DN4461	4	57796861	67142409	deletion	focal	4q	6.64%	4.89%
DN4461	11	10829908	17393875	deletion	focal	11p	12.22%	4.86%
DN4461	4	174457773	183714921	deletion	focal	4q	6.58%	4.84%
DN4461	9	116958085	123628127	deletion	focal	9q	7.23%	4.72%
DN4461	10	64893185	71267167	deletion	focal	10q	6.69%	4.70%
DN4461	3	239290	9543790	deletion	focal	3p	10.22%	4.70%
DN4461	8	103840689	110654935	deletion	focal	8q	6.76%	4.66%
DN4461	6	89862646	97730339	deletion	focal	6q	7.14%	4.60%
DN4461	3	184631076	193711544	deletion	focal	3q	8.48%	4.59%
DN4461	3	28360825	37365924	deletion	focal	3p	9.90%	4.55%
DN4461	6	117884360	125619793	deletion	focal	6q	7.02%	4.52%
DN4461	3	170099093	178968819	deletion	focal	3q	8.29%	4.48%
DN4461	8	30916522	37418108	deletion	focal	8p	14.26%	4.44%
DN4461	1	214791877	225700637	deletion	focal	1q	8.78%	4.38%
DN4461	7	107399536	114329981	deletion	focal	7q	6.98%	4.35%
DN4461	3	161221206	169834990	deletion	focal	3q	8.05%	4.35%
DN4461	3	53886850	62318947	deletion	focal	3p	9.27%	4.26%
DN4461	8	12583272	18730198	deletion	focal	8p	13.48%	4.20%
DN4461	X	127184905	133674320	deletion	focal	Xq	6.85%	4.18%
DN4461	3	150140672	158422698	deletion	focal	3q	7.74%	4.18%
DN4461	3	15467782	23631308	deletion	focal	3p	8.97%	4.12%
DN4461	1	186278089	196461478	deletion	focal	1q	8.20%	4.09%
DN4461	8	136533245	142506483	deletion	focal	8q	5.93%	4.08%
DN4461	9	26886049	32541676	deletion	focal	9p	11.54%	4.01%
DN4461	4	17524310	25005822	deletion	focal	4p	14.84%	3.91%
DN4461	X	83141429	89177905	deletion	focal	Xq	6.38%	3.89%
DN4461	8	130777642	136470228	deletion	focal	8q	5.65%	3.89%

Table B-1: Continued

DN4461	9	106857544	112273754	deletion	focal	9q	5.87%	3.84%
DN4461	5	161112993	167956706	deletion	focal	5q	5.16%	3.78%
DN4461	10	88705465	93768622	deletion	focal	10q	5.31%	3.74%
DN4461	1	91383555	100672049	deletion	focal	1p	7.43%	3.73%
DN4461	2	210641971	219689148	deletion	focal	2q	6.04%	3.72%
DN4461	6	10414976	16739921	deletion	focal	6p	10.37%	3.70%
DN4461	2	80646482	89597024	deletion	focal	2p	9.59%	3.68%
DN4461	6	52546733	58776422	deletion	focal	6p	10.21%	3.64%
DN4461	4	113568986	120528455	deletion	focal	4q	4.94%	3.64%
DN4461	8	2796016	8098261	deletion	focal	8p	11.63%	3.62%
DN4461	2	153488470	162267913	deletion	focal	2q	5.86%	3.61%
DN4461	X	2640760	8095218	deletion	focal	Xp	9.00%	3.51%
DN4461	6	99322156	105296933	deletion	focal	6q	5.43%	3.49%
DN4461	2	1488294	9601239	deletion	focal	2p	8.70%	3.34%
DN4461	5	7878154	13794003	deletion	focal	5p	12.22%	3.27%
DN4461	7	135107047	140301761	deletion	focal	7q	5.23%	3.26%
DN4461	3	65387196	71591133	deletion	focal	3p	6.82%	3.13%
DN4461	2	64778706	72362507	deletion	focal	2p	8.13%	3.12%
DN4461	1	78428401	85929991	deletion	focal	1p	6.00%	3.01%
DN4461	2	179485935	186697753	deletion	focal	2q	4.81%	2.97%
DN4461	4	30732314	36345252	deletion	focal	4p	11.14%	2.94%
DN4461	3	142895260	148614319	deletion	focal	3q	5.34%	2.89%
DN4461	2	53831876	60679729	deletion	focal	2p	7.34%	2.82%
DN4461	1	113257739	120151759	deletion	focal	1p	5.52%	2.77%
DN4461	2	32696106	38973104	deletion	focal	2p	6.73%	2.58%
DN4461	2	192272768	197784822	deletion	focal	2q	3.68%	2.27%
DN4461	2	39008604	44209500	deletion	focal	2p	5.57%	2.14%
DN4461	2	75196256	80390140	deletion	focal	2p	5.57%	2.14%
DN4461	1	47650575	52826313	deletion	focal	1p	4.14%	2.08%
DN4461	Y	13801065	58979379	amplification	large-scale	Yq	96.38%	76.09%
DN4461	1	121484424	142620932	amplification	focal	1q	14.18%	8.48%
EK3261	11	105880286	123754813	deletion	large-scale	11q	21.98%	13.24%
EK3261	X	86868814	99405194	deletion	focal	Xq	13.24%	8.07%
EK3261	11	96098179	105845256	deletion	focal	11q	11.99%	7.22%
EK3261	X	37403149	46316521	deletion	focal	Xp	14.71%	5.74%
EK3261	3	172476774	178960858	deletion	focal	3q	6.06%	3.27%
EK3261	X	79286089	84329272	deletion	focal	Xq	5.33%	3.25%

Table B-1: Continued

EK3261	20	43880900	57611608	amplification	large-scale	20q	38.65%	21.79%
EK3261	Y	3720322	13859927	amplification	large-scale	Yp	70.24%	17.08%
EK3261	9	45363775	66516755	amplification	large-scale	9q	19.00%	14.98%
EK3261	16	6704380	18826345	amplification	large-scale	16p	33.12%	13.42%
EK3261	22	18070617	24451293	amplification	focal	22q	17.43%	12.44%
EK3261	19	24310112	30477323	amplification	focal	19q	12.19%	10.43%
EK3261	19	44515584	50463662	amplification	focal	19q	18.23%	10.06%
EK3261	22	46125238	51219195	amplification	focal	22q	13.92%	9.93%
EK3261	11	33182897	46071045	amplification	focal	11p	24.00%	9.55%
EK3261	14	78182026	88400980	amplification	focal	14q	11.39%	9.52%
EK3261	17	20330093	27993845	amplification	focal	17p	15.29%	9.44%
EK3261	1	121484294	144917545	amplification	focal	1q	16.03%	9.40%
EK3261	15	77133987	86262492	amplification	focal	15q	10.93%	8.90%
EK3261	15	93487611	101549313	amplification	focal	15q	9.65%	7.86%
EK3261	18	72009257	78005246	amplification	focal	18q	9.85%	7.68%
EK3261	8	133858129	143570437	amplification	focal	8q	9.64%	6.64%
EK3261	14	38306398	45372423	amplification	focal	14q	7.87%	6.58%
EK3261	17	10368849	15611649	amplification	focal	17p	21.85%	6.46%
EK3261	18	45422798	50432626	amplification	focal	18q	8.23%	6.42%
EK3261	4	1326532	13461590	amplification	focal	4p	24.08%	6.35%
EK3261	12	125302656	133732432	amplification	focal	12q	8.60%	6.30%
EK3261	14	67849125	74453773	amplification	focal	14q	7.36%	6.15%
EK3261	13	53617292	60435609	amplification	focal	13q	7.01%	5.92%
EK3261	10	78317005	86018250	amplification	focal	10q	8.08%	5.68%
EK3261	10	5788228	13489180	amplification	focal	10p	19.16%	5.68%
EK3261	15	23181788	28493829	amplification	focal	15q	6.36%	5.18%
EK3261	4	129960202	139103509	amplification	focal	4q	6.50%	4.78%
EK3261	4	27010270	36109247	amplification	focal	4p	18.05%	4.76%
EK3261	8	55647169	62588794	amplification	focal	8q	6.89%	4.74%
EK3261	13	103411215	108863427	amplification	focal	13q	5.61%	4.73%
EK3261	7	65227805	72708204	amplification	focal	7q	7.54%	4.70%
EK3261	13	109717896	115091704	amplification	focal	13q	5.52%	4.67%
EK3261	9	79946885	86465145	amplification	focal	9q	7.07%	4.62%
EK3261	6	18256049	25682147	amplification	focal	6p	12.17%	4.34%
EK3261	11	129061869	134856639	amplification	focal	11q	7.13%	4.29%
EK3261	7	883192	7477050	amplification	focal	7p	11.01%	4.14%
EK3261	2	120849031	130911401	amplification	focal	2q	6.71%	4.14%
EK3261	6	38994153	46047978	amplification	focal	6p	11.56%	4.12%
EK3261	10	225812	5762857	amplification	focal	10p	13.77%	4.09%

Table B-1: Continued

EK3261	5	171337648	178309747	amplification	focal	5q	5.26%	3.85%
EK3261	7	57529017	63529189	amplification	focal	7p	3.96%	3.77%
EK3261	4	177067054	184187098	amplification	focal	4q	5.06%	3.72%
EK3261	8	125499809	130764135	amplification	focal	8q	5.22%	3.60%
EK3261	7	42962862	48308648	amplification	focal	7p	8.92%	3.36%
EK3261	5	7773038	13717510	amplification	focal	5p	12.28%	3.29%
EK3261	6	160200991	165715616	amplification	focal	6q	5.01%	3.22%
EK3261	5	39721185	45267135	amplification	focal	5p	11.46%	3.07%
EK3261	2	89185434	96617250	amplification	focal	2p	4.41%	3.06%
EK3261	4	94343840	100140263	amplification	focal	4q	4.12%	3.03%
EK3261	6	137527431	142689072	amplification	focal	6q	4.69%	3.02%
EK3261	4	56756377	62453018	amplification	focal	4q	4.05%	2.98%
EK3261	5	140501	5457869	amplification	focal	5p	10.99%	2.94%
EK3261	5	102895683	108203318	amplification	focal	5q	4.01%	2.93%
EK3261	1	220170192	227192792	amplification	focal	1q	5.65%	2.82%
EK3261	5	162917476	167984687	amplification	focal	5q	3.82%	2.80%
EK3261	4	146041214	151207126	amplification	focal	4q	3.67%	2.70%
EK3261	3	113775372	118866195	amplification	focal	3q	4.76%	2.57%
EK3261	2	26612011	32602764	amplification	focal	2p	6.42%	2.46%
EK3261	2	101099680	107007490	amplification	focal	2q	3.94%	2.43%
EK3261	2	3625360	8873467	amplification	focal	2p	5.62%	2.16%
EK3261	1	227935389	232942380	amplification	focal	1q	4.03%	2.01%
JFH3411	9	45377063	65632075	deletion	large-scale	9q	18.04%	14.34%
JFH3411	13	46824500	60707157	deletion	focal	13q	14.27%	12.05%
JFH3411	9	19379978	32489563	deletion	large-scale	9p	26.75%	9.28%
JFH3411	9	6460911	12821597	deletion	focal	9p	12.98%	4.50%
JFH3411	1	186413147	192547366	deletion	focal	1q	4.94%	2.46%
JFH3411	Y	28785900	59001390	amplification	large-scale	Yq	64.46%	50.89%
JFH3411	18	12802	9104282	amplification	large-scale	18p	52.86%	11.64%
JFH3411	1	121310407	142621085	amplification	focal	1q	14.18%	8.55%
JFH3411	10	124711295	135473078	amplification	focal	10q	11.29%	7.94%
JFH3411	10	5140900	15639225	amplification	large-scale	10p	26.12%	7.75%
JFH3411	10	76468264	86018315	amplification	focal	10q	10.02%	7.05%
JFH3411	7	148489655	159025939	amplification	focal	7q	10.62%	6.62%
JFH3411	14	81562782	88401117	amplification	focal	14q	7.62%	6.37%
JFH3411	4	129960085	141287345	amplification	focal	4q	8.05%	5.93%
JFH3411	8	99076825	107670282	amplification	focal	8q	8.53%	5.87%
JFH3411	14	74762344	80669339	amplification	focal	14q	6.58%	5.50%
JFH3411	14	39796240	45329423	amplification	focal	14q	6.17%	5.15%

Table B-1: Continued

JFH3411	7	18684256	26709670	amplification	focal	7p	13.40%	5.04%
JFH3411	10	43279819	50038933	amplification	focal	10q	7.09%	4.99%
JFH3411	8	134262569	141566392	amplification	focal	8q	7.25%	4.99%
JFH3411	4	26744073	36115971	amplification	focal	4p	18.60%	4.90%
JFH3411	5	132072325	140769874	amplification	focal	5q	6.56%	4.81%
JFH3411	8	125989999	132916837	amplification	focal	8q	6.87%	4.73%
JFH3411	5	5457376	13911499	amplification	focal	5p	17.47%	4.67%
JFH3411	4	82125672	90816188	amplification	focal	4q	6.17%	4.55%
JFH3411	4	158282674	166924755	amplification	focal	4q	6.14%	4.52%
JFH3411	8	32504700	38965383	amplification	focal	8p	14.17%	4.41%
JFH3411	10	15889739	21845845	amplification	focal	10p	14.82%	4.39%
JFH3411	5	52360559	60189308	amplification	focal	5q	5.91%	4.33%
JFH3411	8	24358293	30565676	amplification	focal	8p	13.61%	4.24%
JFH3411	4	54342674	62445361	amplification	focal	4q	5.76%	4.24%
JFH3411	7	107167531	113517730	amplification	focal	7q	6.40%	3.99%
JFH3411	8	62602372	68131774	amplification	focal	8q	5.49%	3.78%
JFH3411	4	177089681	184192371	amplification	focal	4q	5.05%	3.72%
JFH3411	7	64973640	70880856	amplification	focal	7q	5.95%	3.71%
JFH3411	8	7308081	12589394	amplification	focal	8p	11.58%	3.61%
JFH3411	4	2835295	9241051	amplification	focal	4p	12.71%	3.35%
JFH3411	7	38813619	44025901	amplification	focal	7p	8.70%	3.28%
JFH3411	5	102895680	108168667	amplification	focal	5q	3.98%	2.91%
JFH3411	5	162943433	167986278	amplification	focal	5q	3.81%	2.79%
JFH3411	4	146435678	151520341	amplification	focal	4q	3.61%	2.66%
JM1191	Y	10011525	28583161	deletion	large-scale	Yq	34.31%	31.28%
JM1191	18	44559786	67872528	deletion	large-scale	18q	38.29%	29.86%
JM1191	18	31311688	44526882	deletion	large-scale	18q	21.71%	16.93%
JM1191	18	108038	9211697	deletion	large-scale	18p	52.93%	11.66%
JM1191	9	38615797	68433262	amplification	large-scale	9p	21.19%	21.12%
JM1191	21	20230155	27484329	amplification	large-scale	21q	20.77%	15.07%
JM1191	14	50779724	61115619	amplification	focal	14q	11.52%	9.63%
JM1191	7	56718399	64377892	amplification	focal	7p	5.31%	4.81%
JM1191	5	161576490	168201250	amplification	focal	5q	5.00%	3.66%
JM1191	4	55980196	62598400	amplification	focal	4q	4.70%	3.46%
JM1191	5	7773011	13718988	amplification	focal	5p	12.29%	3.29%
JM1191	1	79115891	84417763	amplification	focal	1p	4.24%	2.13%
JM1191	6	203307	12164643	neutral	focal	6p	19.61%	6.99%
JM1191	4	25384789	38119727	neutral	large-scale	4p	25.27%	6.66%
JM1191	14	39871606	45571760	neutral	focal	14q	6.35%	5.31%

Table B-1: Continued

JM1191	3	148459190	156233048	neutral	focal	3q	7.26%	3.93%
JM1191	4	49112694	55129962	neutral	focal	4q	3.36%	3.15%
JM1191	3	174577155	180381748	neutral	focal	3q	5.42%	2.93%
JZ1851	18	20948698	44527031	deletion	large-scale	18q	38.73%	30.20%
JZ1851	18	59157544	78016184	deletion	large-scale	18q	30.98%	24.15%
JZ1851	18	259030	15197726	deletion	large-scale	18p	86.85%	19.13%
JZ1851	18	44774198	56720502	deletion	large-scale	18q	19.62%	15.30%
JZ1851	1	121483742	142540569	deletion	focal	1q	14.12%	8.45%
JZ1851	18	15254317	20945426	deletion	focal	18p	11.31%	7.29%
JZ1851	12	72332747	94829195	neutral	large-scale	12q	22.94%	16.81%
JZ1851	8	27661912	49826316	neutral	large-scale	8p	39.34%	15.14%
JZ1851	13	53050728	66361922	neutral	focal	13q	13.68%	11.56%
JZ1851	9	6874886	19049827	neutral	focal	9p	24.85%	8.62%
JZ1851	8	116084	11710217	neutral	large-scale	8p	25.43%	7.92%
JZ1851	12	98927313	109252691	neutral	focal	12q	10.53%	7.71%
JZ1851	8	57075771	67430849	neutral	focal	8q	10.28%	7.07%
JZ1851	13	41932324	50041782	neutral	focal	13q	8.34%	7.04%
JZ1851	12	32873477	40672108	neutral	focal	12p	8.17%	5.83%
JZ1851	X	54784613	63564900	neutral	focal	Xp	9.60%	5.65%
JZ1851	2	114358919	127864600	neutral	focal	2q	9.01%	5.55%
JZ1851	9	19290709	27009219	neutral	focal	9p	15.75%	5.47%
JZ1851	7	149171570	157061015	neutral	focal	7q	7.95%	4.96%
JZ1851	3	113015703	121258400	neutral	focal	3q	7.70%	4.16%
JZ1851	4	17710935	25391558	neutral	focal	4p	15.24%	4.02%
JZ1851	2	14772857	24005586	neutral	focal	2p	9.90%	3.80%
JZ1851	6	49650049	56083788	neutral	focal	6p	10.55%	3.76%
JZ1851	10	64960160	70043292	neutral	focal	10q	5.33%	3.75%
JZ1851	X	123176483	128957573	neutral	focal	Xq	6.11%	3.72%
JZ1851	5	16815128	23520932	neutral	focal	5p	13.85%	3.71%
JZ1851	X	18181892	23858428	neutral	focal	Xp	9.37%	3.66%
JZ1851	6	64281883	70410570	neutral	focal	6q	5.57%	3.58%
JZ1851	4	114135246	120488343	neutral	focal	4q	4.51%	3.32%
JZ1851	7	56634970	61845573	neutral	focal	7p	5.45%	3.27%
JZ1851	6	111650622	116918832	neutral	focal	6q	4.78%	3.08%
JZ1851	2	136603715	143715321	neutral	focal	2q	4.74%	2.92%
JZ1851	2	47943645	54856824	neutral	focal	2p	7.41%	2.84%
JZ1851	1	93599563	100661601	neutral	focal	1p	5.65%	2.83%
JZ1851	1	213290728	220156111	neutral	focal	1q	5.53%	2.75%
JZ1851	3	109358	5252006	neutral	focal	3p	5.65%	2.60%

Table B-1: Continued

JZ1851	1	115256276	121312703	neutral	focal	1p	4.85%	2.43%
JZ1851	1	70895870	76076498	neutral	focal	1p	4.14%	2.08%
LK4881	18	18531336	78005208	deletion	large-scale	18q	97.69%	76.17%
LK4881	18	116879	14183462	deletion	large-scale	18p	81.78%	18.02%
LK4881	20	68246	62959332	amplification	large-scale	20q	99.81%	99.79%
LK4881	8	22384865	144663206	amplification	large-scale	8q	98.31%	83.54%
LK4881	17	43664071	81188062	amplification	large-scale	17q	65.61%	46.21%
LK4881	13	19746923	72440321	amplification	large-scale	13q	54.17%	45.75%
LK4881	4	87610712	149356541	amplification	large-scale	4q	43.87%	32.30%
LK4881	7	6639429	56144645	amplification	large-scale	7p	82.65%	31.11%
LK4881	5	5376339	58513070	amplification	large-scale	5p	88.89%	29.37%
LK4881	10	92999	38990297	amplification	large-scale	10p	96.76%	28.70%
LK4881	10	83635226	116091462	amplification	large-scale	10q	34.04%	23.95%
LK4881	10	51370815	82904429	amplification	large-scale	10q	33.08%	23.27%
LK4881	4	9270060	49094763	amplification	large-scale	4p	79.02%	20.83%
LK4881	4	151145800	190640404	amplification	large-scale	4q	28.06%	20.66%
LK4881	17	5936	16638022	amplification	large-scale	17p	69.30%	20.48%
LK4881	5	110285560	145878330	amplification	large-scale	5q	26.86%	19.67%
LK4881	14	45335054	65406554	amplification	large-scale	14q	22.36%	18.70%
LK4881	7	56892204	82476450	amplification	large-scale	7q	22.75%	16.08%
LK4881	5	145883303	171433549	amplification	large-scale	5q	19.28%	14.12%
LK4881	7	100643057	122757496	amplification	large-scale	7q	22.28%	13.90%
LK4881	7	122808402	143929607	amplification	large-scale	7q	21.28%	13.27%
LK4881	17	25290387	35771436	amplification	large-scale	17q	18.33%	12.91%
LK4881	7	82497245	100642148	amplification	focal	7q	18.28%	11.40%
LK4881	10	120795648	135491123	amplification	focal	10q	15.41%	10.84%
LK4881	14	91110330	102698100	amplification	focal	14q	12.91%	10.79%
LK4881	14	31176880	42355967	amplification	focal	14q	12.46%	10.41%
LK4881	13	99532739	111120626	amplification	focal	13q	11.91%	10.06%
LK4881	14	77873759	88421095	amplification	focal	14q	11.75%	9.83%
LK4881	4	52709347	71394930	amplification	focal	4q	13.28%	9.78%
LK4881	14	20764359	31058593	amplification	focal	14q	11.47%	9.59%
LK4881	5	58652382	75127233	amplification	focal	5q	12.43%	9.11%
LK4881	13	79940695	88330433	amplification	focal	13q	8.63%	7.28%
LK4881	14	67768582	75385194	amplification	focal	14q	8.49%	7.10%
LK4881	13	92345530	99520562	amplification	focal	13q	7.38%	6.23%
LK4881	5	86688002	96513266	amplification	focal	5q	7.41%	5.43%
LK4881	4	366917	9245745	amplification	focal	4p	17.62%	4.64%
LK4881	13	72440721	77750720	amplification	focal	13q	5.46%	4.61%

Table B-1: Continued

LK4881	8	116625	6699677	amplification	focal	8p	14.44%	4.50%
LK4881	5	171482666	179032789	amplification	focal	5q	5.70%	4.17%
LK4881	4	74301709	81307677	amplification	focal	4q	4.98%	3.67%
LK4881	5	80109585	86672237	amplification	focal	5q	4.95%	3.63%
LK4881	7	33027	5764947	amplification	focal	7p	9.57%	3.60%
LK4881	5	140348	5319162	amplification	focal	5p	10.70%	2.86%
LK4881	Y	9929949	58979372	neutral	large-scale	Yq	99.16%	82.61%
LK4881	2	14243	68385578	neutral	large-scale	2p	73.28%	28.11%
LK4881	19	27731918	43065838	neutral	large-scale	19q	46.99%	25.93%
LK4881	1	107867080	145826678	neutral	large-scale	1q	16.76%	15.23%
LK4881	19	43883138	52819211	neutral	large-scale	19q	27.39%	15.11%
LK4881	X	129271562	152014972	neutral	large-scale	Xq	24.02%	14.65%
LK4881	11	3113596	18884956	neutral	large-scale	11p	29.37%	11.68%
LK4881	1	76198303	103474150	neutral	focal	1p	21.82%	10.94%
LK4881	2	130939786	157407351	neutral	focal	2q	17.66%	10.88%
LK4881	6	152532559	170949252	neutral	focal	6q	16.72%	10.76%
LK4881	1	36564692	62393536	neutral	focal	1p	20.66%	10.36%
LK4881	X	54265436	69699152	neutral	focal	Xp	10.45%	9.94%
LK4881	3	179305728	195496050	neutral	focal	3q	15.13%	8.18%
LK4881	9	126132180	134504356	neutral	focal	9q	9.08%	5.93%
LK4881	1	157508832	171673484	neutral	focal	1q	11.40%	5.68%
LK4881	12	33031829	40037715	neutral	focal	12p	7.73%	5.23%
LK4881	3	239287	9984464	neutral	focal	3p	10.71%	4.92%
LK4881	1	185171865	196876015	neutral	focal	1q	9.42%	4.70%
LK4881	1	172410852	183095488	neutral	focal	1q	8.60%	4.29%
LK4881	1	12979	10408795	neutral	focal	1p	8.32%	4.17%
LK4881	12	42680569	48075347	neutral	focal	12q	5.50%	4.03%
LK4881	1	62675544	71328025	neutral	focal	1p	6.92%	3.47%
LK4881	1	236645487	245250502	neutral	focal	1q	6.93%	3.45%
LK4881	X	89293811	94329858	neutral	focal	Xq	5.32%	3.24%
MA5421	Y	28785878	58980678	deletion	large-scale	Yq	64.42%	50.86%
MA5421	1	121355701	142540605	deletion	focal	1q	14.12%	8.50%
MA5421	13	61774001	68476946	amplification	focal	13q	6.89%	5.82%
MA5421	9	6834692	14921779	amplification	focal	9p	16.50%	5.73%
MA5421	4	26689798	37559771	amplification	focal	4p	21.57%	5.69%
MA5421	14	39870662	45329707	amplification	focal	14q	6.08%	5.09%
MA5421	3	160971325	169099255	amplification	focal	3q	7.59%	4.10%
MA5421	5	100191694	107559806	amplification	focal	5q	5.56%	4.07%
MA5421	6	64487789	71004249	amplification	focal	6q	5.92%	3.81%

Table B-1: Continued

MA5421	4	171010546	177069415	amplification	focal	4q	4.30%	3.17%
MA5421	5	44113412	49707033	amplification	focal	5p	8.86%	3.09%
MA5421	4	62812589	68214437	amplification	focal	4q	3.84%	2.83%
MA5421	1	186919769	192607109	amplification	focal	1q	4.58%	2.28%
MA5421	Y	2654788	13368456	neutral	large-scale	Yp	78.76%	18.04%
MA5421	Y	16860598	23593593	neutral	focal	Yq	14.36%	11.34%
MA5421	13	53417919	61773901	neutral	focal	13q	8.59%	7.26%
MA5421	12	80645407	89763393	neutral	focal	12q	9.30%	6.81%
MA5421	3	77089709	89531189	neutral	focal	3p	13.67%	6.28%
MA5421	13	90015442	95695916	neutral	focal	13q	5.84%	4.93%
MA5421	6	160412340	167352511	neutral	focal	6q	6.30%	4.06%
MA5421	X	100740317	106808111	neutral	focal	Xq	6.41%	3.91%
MA5421	2	75916921	84928393	neutral	focal	2p	9.66%	3.71%
MC3481	18	43329751	78005178	deletion	large-scale	18q	56.96%	44.41%
MC3481	18	18531249	39607590	deletion	large-scale	18q	34.62%	26.99%
MC3481	18	108043	13731646	deletion	large-scale	18p	79.21%	17.45%
MC3481	Y	10033771	28583180	amplification	large-scale	Yq	34.31%	31.24%
MC3481	1	121310622	144895376	amplification	focal	1q	16.01%	9.46%
MC3481	X	1428405	12739079	amplification	focal	Xp	18.66%	7.28%
MC3481	X	142717421	152961803	amplification	focal	Xq	10.82%	6.60%
MC3481	X	119389073	129147026	amplification	focal	Xq	10.31%	6.28%
MC3481	14	45577515	51131958	amplification	focal	14q	6.19%	5.17%
MC3481	X	41073851	48767545	amplification	focal	Xp	12.70%	4.96%
MC3481	7	56754218	64152234	amplification	focal	7p	5.25%	4.65%
MC3481	5	161569214	169023711	amplification	focal	5q	5.63%	4.12%
MC3481	4	94179979	99993668	amplification	focal	4q	4.13%	3.04%
MC3481	12	32786540	48391852	neutral	focal	12q	12.84%	11.66%
MC3481	10	225817	14938921	neutral	large-scale	10p	36.60%	10.86%
MC3481	7	75144953	86537755	neutral	focal	7q	11.48%	7.16%
MC3481	6	157524928	168436178	neutral	focal	6q	9.91%	6.38%
MC3481	3	239265	10417288	neutral	focal	3p	11.18%	5.14%
MC3481	15	85164486	90172717	neutral	focal	15q	6.00%	4.88%
MC3481	2	73777411	84881669	neutral	focal	2p	11.90%	4.57%
MC3481	7	193219	6797298	neutral	focal	7p	11.03%	4.15%
MC3481	5	101627251	108704401	neutral	focal	5q	5.34%	3.91%
MC3481	3	27161286	32495749	neutral	focal	3p	5.86%	2.69%
MC3481	2	191064714	196545463	neutral	focal	2q	3.66%	2.25%
QW4591	13	49649308	76178968	deletion	large-scale	13q	27.27%	23.04%
QW4591	13	78470734	83597862	deletion	focal	13q	5.27%	4.45%

Table B-1: Continued

QW4591	Y	28796915	58980735	amplification	large-scale	Yq	64.39%	50.84%
QW4591	5	140368	134164304	neutral	large-scale	5p	99.71%	74.08%
QW4591	X	104478504	134033187	neutral	large-scale	Xq	31.22%	19.03%
QW4591	11	9007321	33744063	neutral	large-scale	11p	46.06%	18.32%
QW4591	8	12589120	38250488	neutral	large-scale	8p	56.27%	17.53%
QW4591	4	9943498	40356415	neutral	large-scale	4p	60.34%	15.91%
QW4591	Y	2655085	9159814	neutral	large-scale	Yp	52.04%	10.96%
QW4591	13	19042134	31548852	neutral	focal	13q	12.86%	10.86%
QW4591	2	141812609	165796014	neutral	focal	2q	16.00%	9.86%
QW4591	11	49942109	61118652	neutral	focal	11q	9.12%	8.28%
QW4591	11	35227726	45992918	neutral	focal	11p	20.05%	7.97%
QW4591	9	86588926	95179643	neutral	focal	9q	9.32%	6.08%
QW4591	7	6641637	14028703	neutral	focal	7p	12.33%	4.64%
QW4591	2	41454	11317996	neutral	focal	2p	12.09%	4.64%
QW4591	2	179620946	186412294	neutral	focal	2q	4.53%	2.79%
QW4591	1	172431238	178753750	neutral	focal	1q	5.09%	2.54%
SL2221	9	37492299	72472907	amplification	large-scale	9q	25.45%	24.77%
SL2221	X	8995723	37534880	amplification	large-scale	Xp	47.09%	18.38%
SL2221	X	80370619	105891556	amplification	large-scale	Xq	26.96%	16.44%
SL2221	15	75941417	91456870	amplification	large-scale	15q	18.57%	15.13%
SL2221	11	85437315	102219448	amplification	focal	11q	20.64%	12.43%
SL2221	14	37180612	50269954	amplification	focal	14q	14.58%	12.19%
SL2221	22	46088813	51160785	amplification	focal	22q	13.86%	9.89%
SL2221	13	51915321	60490235	amplification	focal	13q	8.82%	7.45%
SL2221	12	31079969	40912554	amplification	focal	12p	13.18%	7.35%
SL2221	14	81371049	88701594	amplification	focal	14q	8.17%	6.83%
SL2221	1	86515689	100797669	amplification	focal	1p	11.43%	5.73%
SL2221	X	38146489	46736898	amplification	focal	Xp	14.18%	5.53%
SL2221	6	57415222	66803974	amplification	focal	6p	5.88%	5.49%
SL2221	12	124882664	131293164	amplification	focal	12q	6.54%	4.79%
SL2221	6	3324075	11185767	amplification	focal	6p	12.89%	4.59%
SL2221	7	5460047	12410087	amplification	focal	7p	11.60%	4.37%
SL2221	X	129148012	135741344	amplification	focal	Xq	6.96%	4.25%
SL2221	X	57313343	63615281	amplification	focal	Xp	5.42%	4.06%
SL2221	12	40917451	46287260	amplification	focal	12q	5.48%	4.01%
SL2221	7	63924343	70227837	amplification	focal	7q	6.35%	3.96%
SL2221	6	11190091	17675838	amplification	focal	6p	10.63%	3.79%
SL2221	2	88748349	96810423	amplification	focal	2p	4.88%	3.32%
SL2221	2	152531817	158178165	amplification	focal	2q	3.77%	2.32%

Table B-1: Continued

SL2221	22	16123170	29537991	neutral	large-scale	22q	36.65%	26.15%
SL2221	4	26321398	69093739	neutral	large-scale	4p	47.78%	22.38%
SL2221	2	196821938	218801647	neutral	focal	2q	14.66%	9.04%
SL2221	3	239426	9594200	neutral	focal	3p	10.28%	4.72%
SM2701	18	48070	44301321	deletion	large-scale	18p	99.72%	56.68%
SM2701	13	46135435	109777639	deletion	large-scale	13q	65.43%	55.26%
SM2701	18	47112921	77960630	deletion	large-scale	18q	50.67%	39.51%
SM2701	16	70905831	90142356	deletion	large-scale	16q	35.79%	21.29%
SM2701	9	38527901	66513342	deletion	large-scale	9p	21.37%	19.82%
SM2701	13	33338661	44718010	deletion	focal	13q	11.70%	9.88%
SM2701	9	8633135	18777616	deletion	focal	9p	20.70%	7.18%
SM2701	10	50947829	60120789	deletion	focal	10q	9.62%	6.77%
SM2701	1	162353399	169509789	deletion	focal	1q	5.76%	2.87%
SM2701	1	101361660	106434456	deletion	focal	1p	4.06%	2.04%
SM2701	4	71388455	155491885	amplification	large-scale	4q	59.75%	44.00%
SM2701	20	68241	17716415	amplification	large-scale	20p	64.18%	28.00%
SM2701	5	72337003	118604518	amplification	large-scale	5q	34.91%	25.57%
SM2701	4	39229864	71024033	amplification	large-scale	4p	22.16%	16.63%
SM2701	20	54940159	61918113	amplification	focal	20q	19.64%	11.07%
SM2701	20	18005444	23375532	amplification	focal	20p	19.53%	8.52%
SM2701	4	171010697	187159381	amplification	focal	4q	11.47%	8.45%
SM2701	20	35090955	40161676	amplification	focal	20q	14.27%	8.05%
SM2701	5	41172347	54468656	amplification	focal	5p	14.93%	7.35%
SM2701	14	29242067	36947007	amplification	focal	14q	8.58%	7.18%
SM2701	14	52472253	60010070	amplification	focal	14q	8.40%	7.02%
SM2701	4	25929931	39219643	amplification	large-scale	4p	26.37%	6.95%
SM2701	7	75932103	86827330	amplification	focal	7q	10.98%	6.85%
SM2701	7	148701063	158119185	amplification	focal	7q	9.49%	5.92%
SM2701	7	120906302	130027763	amplification	focal	7q	9.19%	5.73%
SM2701	14	39639195	45468593	amplification	focal	14q	6.50%	5.43%
SM2701	11	48346399	55111497	amplification	focal	11p	9.97%	5.01%
SM2701	4	156760250	166261585	amplification	focal	4q	6.75%	4.97%
SM2701	7	47440416	55238047	amplification	focal	7p	13.02%	4.90%
SM2701	7	86848797	94048719	amplification	focal	7q	7.26%	4.52%
SM2701	5	31267540	39392420	amplification	focal	5p	16.79%	4.49%
SM2701	7	56717544	63726402	amplification	focal	7p	5.31%	4.40%
SM2701	5	64447698	72316315	amplification	focal	5q	5.94%	4.35%
SM2701	5	19502983	26915994	amplification	focal	5p	15.32%	4.10%
SM2701	5	162866454	170139897	amplification	focal	5q	5.49%	4.02%

Table B-1: Continued

SM2701	7	63924337	70227884	amplification	focal	7q	6.35%	3.96%
SM2701	5	7301571	14419996	amplification	focal	5p	14.71%	3.93%
SM2701	5	141046069	147719314	amplification	focal	5q	5.04%	3.69%
SM2701	5	143005	6753036	amplification	focal	5p	13.66%	3.65%
SM2701	7	94049559	99754952	amplification	focal	7q	5.75%	3.59%
SM2701	4	7055791	13601985	amplification	focal	4p	12.99%	3.42%
SM2701	7	130040541	135047482	amplification	focal	7q	5.05%	3.15%
SM2701	5	57878877	63513232	amplification	focal	5q	4.25%	3.11%
SM2701	6	153296211	161807902	neutral	focal	6q	7.73%	4.97%
SM2701	9	214356	7170038	neutral	focal	9p	14.20%	4.93%
SM2701	1	230916096	236368607	neutral	focal	1q	4.39%	2.19%
TA2691	18	44560552	61234051	deletion	large-scale	18q	27.39%	21.36%
TA2691	18	33831259	44526248	deletion	large-scale	18q	17.57%	13.70%
TA2691	9	21861802	26978140	deletion	focal	9p	10.44%	3.62%
TA2691	9	45363737	66516967	amplification	large-scale	9q	19.00%	14.98%
TA2691	1	121310661	144895341	amplification	focal	1q	16.01%	9.46%
TA2691	X	2638494	12905304	amplification	focal	Xp	16.94%	6.61%
TA2691	7	56754319	63529949	amplification	focal	7p	5.25%	4.26%
TA2691	X	108718817	114242588	amplification	focal	Xq	5.83%	3.56%
TA2691	X	41000375	46388328	amplification	focal	Xp	8.89%	3.47%
TA2691	5	161569228	167687215	amplification	focal	5q	4.62%	3.38%
TA2691	X	31284804	36303742	amplification	focal	Xp	8.28%	3.23%
TA2691	10	225796	69666616	neutral	large-scale	10p	99.44%	51.23%
TA2691	8	182897	10981558	neutral	focal	8p	23.68%	7.38%
TA2691	11	35231429	42261232	neutral	focal	11p	13.09%	5.21%
TA2691	5	43509313	52347359	neutral	focal	5p	10.10%	4.89%
TA2691	4	17706645	24810228	neutral	focal	4p	14.09%	3.72%
TF3471	18	48128	77960656	deletion	large-scale	18q	99.81%	99.79%
TF3471	5	142999	64267409	amplification	large-scale	5p	99.70%	35.44%
TF3471	20	2795893	23346180	amplification	large-scale	20p	74.73%	32.61%
TF3471	5	76646903	118691071	amplification	large-scale	5q	31.73%	23.24%
TF3471	20	44472226	54963225	amplification	large-scale	20q	29.53%	16.65%
TF3471	20	54970601	61918116	amplification	focal	20q	19.56%	11.02%
TF3471	1	121484501	144013927	amplification	focal	1q	15.30%	9.04%
TF3471	13	79952984	88325843	amplification	focal	13q	8.61%	7.27%
TF3471	5	157158383	169688089	amplification	focal	5q	9.46%	6.93%
TF3471	4	27587573	38691445	amplification	focal	4p	22.03%	5.81%
TF3471	13	53775069	60240865	amplification	focal	13q	6.65%	5.61%
TF3471	5	141046024	150028537	amplification	focal	5q	6.78%	4.97%

Table B-1: Continued

TF3471	5	64447704	72302310	amplification	focal	5q	5.93%	4.34%
TF3471	5	123983031	131630616	amplification	focal	5q	5.77%	4.23%
TF3471	5	170232734	176816594	amplification	focal	5q	4.97%	3.64%
TF3471	X	30852252	35966436	amplification	focal	Xp	8.44%	3.29%
TF3471	22	17072498	23736125	neutral	large-scale	22q	18.20%	12.99%
TF3471	17	5996	7232317	neutral	large-scale	17p	30.11%	8.90%
TF3471	8	182920	6794317	neutral	focal	8p	14.50%	4.52%
TF3471	X	2707679	8768243	neutral	focal	Xp	10.00%	3.90%

Table B-2: Gemini somatic variant analysis output

samples	chrom	start	end	gene	ref	alt	cadd
AR5361	2	202342902	202342903	STRADB	C	T	23.2
AR5361	1	156615113	156615114	BCAN	A	G	22.6
AR5361	17	5317438	5317439	NUP88	C	T	19.01
AR5361	7	80141417	80141418	GNAT3	A	G	15.48
AR5361	3	5126254	5126255		T	A	12.26
AR5361	1	237013550	237013551	MTR	T	A	11.4
AR5361	1	184006891	184006892	COLGALT2	T	A	10.82
AR5361	1	183155716	183155717	LAMC2	C	A	9.868
AR5361	GL0002 20.1	144796	144797		A	G	9.158
AR5361	20	35518799	35518800	TLDC2	T	C	9.087
AR5361	22	18211020	18211021	BCL2L13	T	A	8.661
AR5361	19	50832764	50832765	KCNC3	A	C	8.562
AR5361	9	69511308	69511309		T	A	7.95
AR5361	7	150419364	150419365	GIMAP1	G	A	7.422
AR5361	1	27481529	27481530	SLC9A1	A	G	6.865
AR5361	19	44056556	44056557	XRCC1	T	C	6.281
AR5361	17	18288297	18288298	EVPLL	G	A	6.116
AR5361	3	158291054	158291055	MLF1	T	G	5.848
AR5361	4	2498912	2498913	RNF4	T	C	5.589
AR5361	16	21217183	21217184	ZP2	C	G	5.542
AR5361	16	6704700	6704701	RBFOX1	G	A	4.979
AR5361	X	1229019	1229020		A	C	4.845
AR5361	14	90390485	90390486	EFCAB11	A	G	4.738
AR5361	19	49425418	49425419	NUCB1	A	G	4.574
AR5361	12	47170886	47170887	SLC38A4	C	A	4.564
AR5361	16	188605	188606	NPRL3	G	T	4.23
AR5361	17	75212436	75212437	SEC14L1	C	T	4.032
AR5361	7	38279890	38279891	TRGC2	T	C	3.997
AR5361	19	47184844	47184845	PRKD2	A	C	3.875
AR5361	2	226647269	226647270		C	T	3.583
AR5361	1	37547036	37547037		T	C	3.581
AR5361	14	64449255	64449256	SYNE2	G	A	3.481
AR5361	15	22513128	22513129	LOC642131	G	A	3.448
AR5361	19	4028106	4028107	PIAS4	C	T	3.435
AR5361	2	91798649	91798650		A	G	3.413
AR5361	21	11032336	11032337	LOC1019269 54	T	G	3.28
AR5361	19	39234040	39234041	CAPN12	G	T	2.954
AR5361	6	34605643	34605644	C6orf106	T	C	2.458
AR5361	19	613559	613560	HCN2	C	T	2.069
AR5361	7	114656738	114656739	MDFIC	T	C	2.004
AR5361	1	143399732	143399733		G	A	1.884
AR5361	1	7805207	7805208	CAMTA1	G	T	1.864
AR5361	20	50217345	50217346	ATP9A	A	C	1.847
AR5361	7	97558115	97558116		A	G	1.845

Table B-2: Continued

AR5361	8	7276745	7276746	DEFB4B	G	C	1.735
AR5361	19	13652718	13652719		C	T	1.723
AR5361	7	132246770	132246771	PLXNA4	A	C	1.713
AR5361	6	371920	371921		T	G	1.596
AR5361	14	20170992	20170993		C	G	1.595
AR5361	16	12973037	12973038		C	T	1.546
AR5361	2	228642738	228642739		T	C	1.465
AR5361	12	118589093	118589094	TAOK3	G	A	1.461
AR5361	3	103511305	103511306		C	T	1.387
AR5361	2	106105744	106105745		A	G	1.371
AR5361	13	25442630	25442631	RNF17	A	G	1.326
AR5361	6	76270646	76270647		A	G	1.289
AR5361	18	55280735	55280736	NARS	G	A	1.236
AR5361	18	53131209	53131210	TCF4	A	T	1.212
AR5361	10	117287423	117287424	ATRNL1	T	C	1.204
AR5361	9	136037538	136037539	GBGT1	A	G	1.172
AR5361	6	15853793	15853794		T	C	1.139
AR5361	1	143485028	143485029		G	A	1.081
AR5361	1	89505936	89505937		T	C	1.079
AR5361	18	60998566	60998567	KDSR	G	C	1.056
AR5361	6	151492916	151492917		C	T	1.002
AR5361	1	11148046	11148047	EXOSC10	G	C	0.918
AR5361	18	23526716	23526717		A	G	0.903
AR5361	14	82535714	82535715		T	C	0.882
AR5361	2	71770941	71770942	DYSF	G	C	0.854
AR5361	18	19853506	19853507		C	T	0.838
AR5361	4	26844208	26844209		T	C	0.821
AR5361	11	57390690	57390691		G	A	0.816
AR5361	3	176470273	176470274		G	A	0.804
AR5361	7	77612757	77612758		C	T	0.725
AR5361	3	149051270	149051271	TM4SF18	T	C	0.697
AR5361	5	89670653	89670654		A	G	0.542
AR5361	3	99440228	99440229	COL8A1	G	A	0.531
AR5361	14	106053099	106053100	IGHA2	T	G	0.43
AR5361	1	3611368	3611369	TP73	T	C	0.405
AR5361	3	195543529	195543530	MUC4	G	C	0.398
AR5361	6	14152243	14152244		T	C	0.341
AR5361	15	50546934	50546935	HDC	T	C	0.325
AR5361	9	132651372	132651373	FNBPI	T	G	0.313
AR5361	9	138650120	138650121	KCNT1	A	G	0.305
AR5361	1	215916757	215916758	USH2A	G	A	0.284
AR5361	16	86637321	86637322		C	G	0.256
AR5361	8	135381578	135381579		T	C	0.232
AR5361	20	60640314	60640315	TAF4	A	G	0.165
AR5361	15	84863807	84863808		A	C	0.101
AR5361	6	13000838	13000839	PHACTR1	G	A	0.099

Table B-2: Continued

AR5361	9	117994333	117994334	DEC1	T	C	0.067
AR5361	22	39616497	39616498	PDGFB	A	G	0.023
AR5361	1	32372388	32372389	PTP4A2	C	A	0.011
AR5361	1	3816891	3816892	C1orf174	T	TTC	
AR5361	1	35323712	35323713	SMIM12	T	TA	
AR5361	1	146674693	146674694	FMO5	C	CTT	
AR5361	1	204494755	204494756	MDM4	G	GT	
AR5361	11	4231921	4231922		A	AG	
AR5361	12	64020309	64020310	DPY19L2	T	TA	
AR5361	12	124208005	124208006	ATP6V0A2	A	AT	
AR5361	13	35482725	35482726		C	CTCCCTCCT	
AR5361	13	63862579	63862580		A	AAAGAAAGAG	
AR5361	15	98984517	98984518	FAM169B	A	ATC	
AR5361	16	8734829	8734830	METTL22	G	GCTGTCTGGCT GT	
AR5361	16	55864684	55864685	CES1	A	AGAAGGAAG	
AR5361	17	16649584	16649585	CCDC144A	C	CT	
AR5361	17	33801787	33801788	SLFN12L	C	CA	
AR5361	17	39926158	39926159	JUP	A	ATT	
AR5361	18	23526689	23526690		A	AAAGAG	
AR5361	19	1778013	1778014	ATP8B3	A	AAC	
AR5361	19	49949403	49949404	SLC17A7	C	CT	
AR5361	2	48742354	48742355	PPP1R21	T	TTCTCTCTCTC	
AR5361	2	77830561	77830562		A	AG	
AR5361	2	119605300	119605301	EN1	T	TG	
AR5361	2	129025598	129025599	HS6ST1	G	GT	
AR5361	2	208912889	208912890		T	TCCCTTCCCTG CCCTG	
AR5361	20	1454253	1454254	SIRPB2	A	AG	
AR5361	20	51306699	51306700		C	CT	
AR5361	21	16055957	16055958		A	AAAGG	
AR5361	22	37102306	37102307	CACNG2	T	TTC	
AR5361	3	85434949	85434950	CADM2	C	CTT	
AR5361	3	100542462	100542463	ABI3BP	C	CAAAA	
AR5361	3	150276152	150276153	EIF2A	C	CT	
AR5361	3	176470267	176470268		A	AAG	
AR5361	4	8451675	8451676	TRMT44	C	CTTTCTT	
AR5361	4	11142275	11142276		C	CTCT	
AR5361	4	106160227	106160228	TET2	T	TTTTTTTG	
AR5361	6	76270594	76270595		G	GAGAAGGAGG AGAAGA	
AR5361	6	161556117	161556118	AGPAT4	G	GTTGTGC	
AR5361	7	14703234	14703235	DGKB	T	TCCCTTCC	
AR5361	8	92052642	92052643	TMEM55A	C	CCACCACCAT	
AR5361	8	134727432	134727433		C	CT	
AR5361	9	134049833	134049834	NUP214	C	CT	
AR5361	X	7867666	7867667	PNPLA4	C	CCAGAGA	

Table B-2: Continued

AR5361	X	8270584	8270585		G	GA	
AR5361,EK3261,QW4591	17	78971149	78971150	CHMP6	C	CCCCCAGGACT GAGCACAGTC ACTCAGGCAGT GGGA	
BB4911	17	48680531	48680532	CACNA1G	C	T	35
BB4911	1	160323929	160323930	NCSTN	T	G	27.8
BB4911	1	215345489	215345490	KCNK2	A	G	26.7
BB4911	9	124855336	124855337	TLL11	C	T	22.8
BB4911	7	39991117	39991118	CDK13	A	G	22.5
BB4911	15	79068647	79068648	ADAMTS7	C	T	15.99
BB4911	4	67499	67500	ZNF595	A	C	15.85
BB4911	21	11026805	11026806	LOC1019269 54	G	A	13.15
BB4911	19	12867037	12867038	BEST2	C	T	13.13
BB4911	GL0002 18.1	57543	57544		C	T	11.11
BB4911	14	51297210	51297211	NIN	C	A	10.7
BB4911	GL0001 93.1	86775	86776		C	G	10.47
BB4911	GL0001 93.1	81301	81302		C	G	10.22
BB4911	15	102506272	102506273		G	A	10.13
BB4911	19	15053222	15053223	OR7C2	C	T	9.005
BB4911	9	66486885	66486886		C	A	8.525
BB4911	2	91777569	91777570		G	A	8.018
BB4911	2	182928538	182928539	PPP1R1C	C	T	7.772
BB4911	GL0001 93.1	86780	86781		C	G	6.919
BB4911	X	18194231	18194232	BEND2	A	C	6.834
BB4911	19	34895361	34895362	PDCD2L	G	A	6.055
BB4911	1	145109808	145109809		T	A	5.927
BB4911	17	79655961	79655962	HGS	G	T	5.807
BB4911	13	110853350	110853351	COL4A1	G	A	5.606
BB4911	20	30642026	30642027	HCK	G	A	5.367
BB4911	17	48157828	48157829	ITGA3	T	G	5.207
BB4911	9	141070138	141070139	TUBBP5	C	T	4.873
BB4911	2	232337729	232337730		A	G	4.632
BB4911	17	74536335	74536336	PRCD	G	T	4.509
BB4911	7	38505741	38505742	AMPH	T	C	4.084
BB4911	19	4156868	4156869	CREB3L3	C	T	3.821
BB4911	12	116866113	116866114	MIR4472-2	A	C	3.262
BB4911	10	27400660	27400661	YME1L1	C	T	2.983
BB4911	1	73856409	73856410		T	C	2.423
BB4911	4	79369575	79369576	FRAS1	A	G	2.34
BB4911	10	52443317	52443318		A	C	1.886
BB4911	6	29896963	29896964	HCG4B	C	T	1.808
BB4911	17	74472805	74472806	RHBDF2	G	C	1.794
BB4911	7	152497504	152497505	ACTR3B	G	T	1.343
BB4911	16	29816699	29816700	KIF22	T	C	1.252

Table B-2: Continued

BB4911	17	81026059	81026060		C	T	0.624
BB4911	6	101173619	101173620	ASCC3	G	A	0.546
BB4911	14	20685309	20685310		T	C	0.47
BB4911	21	11078514	11078515	BAGE2	A	T	0.42
BB4911	4	48906492	48906493	OCIAD2	A	C	0.347
BB4911	15	72511152	72511153	PKM	G	C	0.326
BB4911	2	95659290	95659291		T	C	0.268
BB4911	2	125464725	125464726	CNTNAP5	A	G	0.205
BB4911	18	15208217	15208218		C	T	0.079
BB4911	17	81026058	81026059		G	A	0.045
BB4911	19	23938401	23938402	ZNF681	T	C	0.015
BB4911	7	53302337	53302338		C	T	0.009
BB4911	1	169101272	169101273	ATP1B1	T	TG	
BB4911	1	200080461	200080462	NR5A2	A	AT	
BB4911	10	113915573	113915574	GPAM	C	CA	
BB4911	12	56826757	56826758	TIMELESS	A	AG	
BB4911	16	343818	343819	AXIN1	A	AGGATG	
BB4911	16	88815646	88815647	PIEZO1	C	CA	
BB4911	19	19650388	19650389	CILP2	A	AAGGG	
BB4911	2	79521339	79521340		G	GGAA	
BB4911	2	91986797	91986798		G	GAAAT	
BB4911	2	169681277	169681278	NOSTRIN	T	TTTTGTTTG	
BB4911	21	46122297	46122298	TSPEAR	A	AGCCCAGCGCC T	
BB4911	4	76721670	76721671	USO1	C	CTT	
BB4911	6	3550590	3550591		A	ATCTCCTCTT CTTCT	
BB4911	6	33231190	33231191	VPS52	C	CACACACACAC AG	
BB4911	9	116044904	116044905	PRPF4	C	CTT	
BB4911	X	151996538	151996539	CETN2	C	CT	
BB4911,AR5361	16	51081120	51081121		A	AAGCAGCAGC	
BB4911,AR5361	16	51081120	51081121		A	AAGCAGCAGC AGC	
DN4461	17	45234359	45234360	CDC27	A	C	39
DN4461	7	55914311	55914312	SEPT14	G	A	22.8
DN4461	19	48322334	48322335	CRX	C	A	14.1
DN4461	2	133019635	133019636	MIR663B	T	C	13.51
DN4461	16	57296080	57296081	PLLP	G	C	13.45
DN4461	12	120427280	120427281	CCDC64	A	G	13.35
DN4461	19	53740791	53740792	ZNF677	G	A	12.51
DN4461	9	68431275	68431276	LOC642236	T	C	11.98
DN4461	11	63237824	63237825	HRASLS5	A	G	10.73
DN4461	GL0002 41.1	34701	34702		G	A	10.42
DN4461	5	178506412	178506413	ZNF354C	T	C	9.884
DN4461	X	1531440	1531441	ASMTL	C	A	9.596
DN4461	3	50142667	50142668	RBM5	T	C	7.137
DN4461	2	214233629	214233630	SPAG16	G	A	6.938

Table B-2: Continued

DN4461	7	73150839	73150840	ABHD11	A	G	5.91
DN4461	4	37624527	37624528	RELL1	C	G	5.89
DN4461	17	26348830	26348831		A	G	5.875
DN4461	1	11182271	11182272	MTOR	C	T	5.373
DN4461	19	14091555	14091556	RFX1	A	G	4.971
DN4461	18	21703593	21703594	TTC39C	T	C	4.779
DN4461	12	104348834	104348835	C12orf73	G	A	4.547
DN4461	17	79683996	79683997	SLC25A10	T	G	4.375
DN4461	3	101076928	101076929	SENP7	T	C	4.371
DN4461	22	39440125	39440126	APOBEC3F	C	T	4.252
DN4461	17	57352449	57352450	GDPD1	A	G	4.149
DN4461	16	21558908	21558909		G	A	3.908
DN4461	16	22157406	22157407	VWA3A	C	T	3.577
DN4461	1	45125717	45125718	TMEM53	C	T	3.304
DN4461	4	109773360	109773361	COL25A1	G	T	3.203
DN4461	15	45146569	45146570		T	C	3.121
DN4461	12	8049502	8049503		C	G	3.087
DN4461	12	131451434	131451435	GPR133	A	G	2.792
DN4461	22	19438416	19438417	UFD1L	A	G	2.768
DN4461	2	11311963	11311964	PQLC3	A	G	2.724
DN4461	2	68358328	68358329	WDR92	A	C	2.664
DN4461	1	6587061	6587062	NOL9	C	T	2.581
DN4461	8	25101113	25101114	DOCK5	A	G	2.513
DN4461	9	132592999	132593000	C9orf78	G	A	2.445
DN4461	11	70796256	70796257	SHANK2	G	A	2.421
DN4461	X	147009767	147009768	FMR1	C	T	2.42
DN4461	17	45757333	45757334	KPNB1	T	A	2.413
DN4461	X	36004269	36004270	CXorf22	T	C	2.342
DN4461	14	70842182	70842183	SYNJ2BP	T	C	2.213
DN4461	17	53844546	53844547	PCTP	T	C	2.184
DN4461	5	140732344	140732345	PCDHGB1	T	C	2.102
DN4461	10	96261120	96261121	TBC1D12	A	G	2.079
DN4461	8	97252316	97252317	MTERFD1	C	A	2.037
DN4461	3	49311370	49311371	C3orf62	A	G	2.008
DN4461	12	56503933	56503934	PA2G4	C	G	2.005
DN4461	21	10952827	10952828	TPTE	G	A	1.849
DN4461	11	67371705	67371706	NDUFV1	T	G	1.803
DN4461	12	69986005	69986006	CCT2	T	C	1.777
DN4461	14	20147286	20147287		G	A	1.757
DN4461	6	117725369	117725370	ROS1	C	T	1.743
DN4461	6	43414853	43414854	ABCC10	A	G	1.626
DN4461	21	10952826	10952827	TPTE	G	A	1.611
DN4461	5	21462100	21462101	GUSBP1	A	T	1.605
DN4461	4	52926880	52926881	SPATA18	A	T	1.602
DN4461	19	54609664	54609665	NDUFA3	G	A	1.591
DN4461	15	94442452	94442453		G	A	1.562

Table B-2: Continued

DN4461	14	74204073	74204074	ELMSAN1	T	C	1.535
DN4461	1	54653469	54653470	CYB5RL	T	C	1.421
DN4461	8	25101119	25101120	DOCK5	T	C	1.407
DN4461	12	27063954	27063955	ASUN	G	A	1.394
DN4461	1	155903356	155903357	KIAA0907	A	G	1.377
DN4461	12	56503907	56503908	PA2G4	T	C	1.201
DN4461	15	89436384	89436385	HAPLN3	A	G	1.17
DN4461	7	121985456	121985457	CADPS2	T	G	1.072
DN4461	12	56215618	56215619	DNAJC14	A	G	1.071
DN4461	19	55386693	55386694	FCAR	A	C	1.068
DN4461	12	101746041	101746042	UTP20	A	G	1.043
DN4461	19	17384617	17384618	BABAM1	T	C	1.039
DN4461	7	122321298	122321299	CADPS2	A	T	1.016
DN4461	3	164786430	164786431	SI	T	G	0.944
DN4461	7	122321286	122321287	CADPS2	T	C	0.931
DN4461	2	122488278	122488279	MKI67IP	A	G	0.921
DN4461	17	62801341	62801342	PLEKHM1P	T	C	0.89
DN4461	X	149999544	149999545	CD99L2	T	G	0.843
DN4461	3	155461064	155461065	PLCH1	G	A	0.841
DN4461	5	141371580	141371581	RNF14	G	A	0.761
DN4461	2	73961408	73961409	TPRKB	T	A	0.737
DN4461	17	62801368	62801369	PLEKHM1P	T	C	0.72
DN4461	22	19207193	19207194	CLTCL1	C	T	0.675
DN4461	18	48331429	48331430	MRO	A	G	0.659
DN4461	3	132221116	132221117	DNAJC13	A	T	0.653
DN4461	12	93289207	93289208	EEA1	A	T	0.635
DN4461	16	70802781	70802782	VAC14	A	C	0.624
DN4461	1	169796671	169796672	C1orf112	G	A	0.555
DN4461	10	33201121	33201122	ITGB1	C	T	0.553
DN4461	9	127995802	127995803	RABEPK	G	A	0.511
DN4461	7	12692466	12692467	SCIN	A	G	0.506
DN4461	11	31703483	31703484	ELP4	C	T	0.491
DN4461	9	127934051	127934052	PPP6C	T	C	0.488
DN4461	17	49357943	49357944	UTP18	A	G	0.438
DN4461	16	24881461	24881462	SLC5A11	T	C	0.435
DN4461	13	50321226	50321227	KPNA3	T	C	0.421
DN4461	7	128142690	128142691	METTL2B	A	G	0.418
DN4461	22	47185229	47185230	TBC1D22A	T	G	0.403
DN4461	16	58749724	58749725	GOT2	C	G	0.387
DN4461	19	43383557	43383558	PSG1	A	C	0.361
DN4461	18	12955466	12955467	SEH1L	T	C	0.351
DN4461	11	118495584	118495585	PHLDB1	A	C	0.346
DN4461	2	33407477	33407478	LTBP1	T	C	0.343
DN4461	20	18162278	18162279	CSRP2BP	T	C	0.339
DN4461	9	34357797	34357798		G	A	0.333
DN4461	3	138007758	138007759	NME9	A	G	0.3

Table B-2: Continued

DN4461	22	47185222	47185223	TBC1D22A	T	C	0.298
DN4461	3	51738121	51738122	TEX264	G	C	0.293
DN4461	19	1575178	1575179	MBD3	G	A	0.274
DN4461	12	69986010	69986011	CCT2	A	C	0.201
DN4461	13	32849252	32849253	FRY	A	C	0.159
DN4461	1	45125718	45125719	TMEM53	A	G	0.137
DN4461	22	46323524	46323525	WNT7B	A	C	0.112
DN4461	22	47185204	47185205	TBC1D22A	A	G	0.11
DN4461	19	14863024	14863025	EMR2	A	G	0.109
DN4461	1	151205328	151205329	PIP5K1A	G	C	0.099
DN4461	19	53331070	53331071		A	T	0.095
DN4461	12	122861758	122861759	CLIP1	C	G	0.085
DN4461	15	40939410	40939411	CASC5	G	A	0.06
DN4461	4	57830490	57830491	NOA1	A	C	0.055
DN4461	1	207787795	207787796	CR1	T	C	0.052
DN4461	22	50564455	50564456	MOV10L1	T	C	0.03
DN4461	3	109019424	109019425	DPPA2	G	T	0.025
DN4461	16	29898897	29898898	SEZ6L2	A	G	0.023
DN4461	10	7627811	7627812	ITIH5	A	AG	
DN4461	10	17365225	17365226	ST8SIA6	G	GCGCGCA	
DN4461	11	9004375	9004376	NRIP3	C	CT	
DN4461	11	66036292	66036293	RAB1B	A	ACCC	
DN4461	12	21623283	21623284	RECQL	C	CAA	
DN4461	12	117084957	117084958		T	TC	
DN4461	16	11537344	11537345	LOC400499	A	AG	
DN4461	19	20414437	20414438		T	TG	
DN4461	19	23557360	23557361	ZNF91	C	CA	
DN4461	2	61009812	61009813	PAPOLG	T	TTA	
DN4461	2	130948318	130948319	MZT2B	T	TTG	
DN4461	2	142301896	142301897	LRP1B	C	CTT	
DN4461	3	142607821	142607822	PCOLCE2	C	CGCTCACACTG GCAGCAGCGCT G	
DN4461	3	188242665	188242666	LPP	C	CCCTT	
DN4461	7	127976999	127977000	RBM28	G	GC	
EK3261	19	53578396	53578397	ZNF160	G	A	35
EK3261	1	246899310	246899311	SCCPDH	G	A	32
EK3261	2	189871152	189871153	COL3A1	G	C	28.8
EK3261	22	37211178	37211179	PVALB	G	T	28.7
EK3261	10	134594416	134594417	INPP5A	A	G	25.4
EK3261	5	140221194	140221195	PCDHA8	G	C	25.2
EK3261	4	187540543	187540544	FAT1	A	C	24.9
EK3261	10	8097771	8097772	GATA3	A	G	24.8
EK3261	11	5758526	5758527	OR56B1	T	C	24.2
EK3261	19	6751124	6751125	TRIP10	T	C	23.8
EK3261	12	53010066	53010067	KRT73	A	T	23.6
EK3261	19	7692630	7692631	XAB2	A	C	23.3

Table B-2: Continued

EK3261	2	179418696	179418697	TTN	G	T	23.1
EK3261	14	56116529	56116530	KTN1	G	A	22.6
EK3261	22	42537251	42537252	CYP2D7P1	G	A	19.74
EK3261	8	119452140	119452141	SAMD12	C	T	16.53
EK3261	GL0002 05.1	117768	117769		C	A	13.86
EK3261	6	28244798	28244799	ZSCAN26	T	G	13.1
EK3261	5	31299511	31299512	CDH6	A	G	13.08
EK3261	1	53995550	53995551	GLIS1	C	T	12.57
EK3261	11	73441897	73441898	RAB6A	A	G	12.28
EK3261	19	17737434	17737435	UNC13A	A	G	11.76
EK3261	3	4693552	4693553	ITPR1	C	A	11.58
EK3261	6	33282627	33282628	ZBTB22	C	T	11.57
EK3261	12	9583299	9583300	DDX12P	C	T	10.25
EK3261	12	106730032	106730033	TCP11L2	G	T	10.18
EK3261	3	195376920	195376921		A	G	9.296
EK3261	7	143982775	143982776		G	A	9.055
EK3261	12	52567434	52567435	KRT80	G	A	9.022
EK3261	1	210407338	210407339	SERTAD4	T	A	8.776
EK3261	10	860681	860682	LARP4B	C	T	7.893
EK3261	16	7743480	7743481	RBFOX1	G	A	7.609
EK3261	1	207252149	207252150	PFKFB2	G	A	7.254
EK3261	11	19906055	19906056	NAV2	C	T	6.908
EK3261	11	89177437	89177438	NOX4	C	A	6.582
EK3261	14	51370968	51370969	ABHD12B	T	G	6.542
EK3261	10	122273290	122273291	PPAPDC1A	G	T	6.42
EK3261	6	158499301	158499302	SYNJ2	G	T	6.341
EK3261	X	6451863	6451864	VCX3A	C	T	6.219
EK3261	12	58007948	58007949	ARHGEF25	T	G	6.055
EK3261	4	122301368	122301369	QRFPR	A	G	5.842
EK3261	6	44219729	44219730	HSP90AB1	C	G	5.842
EK3261	12	27485973	27485974	ARNTL2	G	C	5.705
EK3261	1	16974977	16974978		A	G	5.497
EK3261	2	27324339	27324340	CGREF1	G	A	4.802
EK3261	6	35427010	35427011	FANCE	C	T	4.325
EK3261	10	94739	94740	TUBB8	T	G	4.31
EK3261	15	35185815	35185816	AQR	A	G	4.198
EK3261	3	152847192	152847193		G	A	4.084
EK3261	10	71689644	71689645	COL13A1	T	G	3.998
EK3261	7	12644501	12644502	SCIN	T	C	3.779
EK3261	1	232002331	232002332	DISC1	C	G	3.454
EK3261	14	107160324	107160325	IGHV1-68	G	A	3.415
EK3261	9	69777840	69777841		A	T	3.323
EK3261	5	168678302	168678303	SLIT3	G	A	3.039
EK3261	1	150276428	150276429	MRPS21	G	A	2.856
EK3261	2	72606776	72606777	EXOC6B	A	G	2.676

Table B-2: Continued

EK3261	19	15989404	15989405	CYP4F2	C	T	2.549
EK3261	18	3499160	3499161	DLGAP1	C	T	2.504
EK3261	6	49701623	49701624	CRISP3	A	C	2.389
EK3261	19	38315230	38315231	LOC100631378	G	T	2.355
EK3261	9	30689909	30689910		C	T	2.158
EK3261	5	34192943	34192944		A	G	2.016
EK3261	21	45650008	45650009	ICOSLG	T	G	1.991
EK3261	17	76424501	76424502	DNAH17	C	G	1.955
EK3261	11	4263450	4263451		T	G	1.909
EK3261	1	16902749	16902750	NBPF1	T	C	1.857
EK3261	17	15642317	15642318	TBC1D26	T	C	1.685
EK3261	6	109850200	109850201	AK9	C	A	1.663
EK3261	8	133984832	133984833	TG	T	C	1.615
EK3261	11	69970586	69970587	ANO1	T	G	1.581
EK3261	1	201042030	201042031	CACNA1S	T	A	1.512
EK3261	12	119560096	119560097	SRRM4	C	A	1.379
EK3261	12	56826756	56826757	TIMELESS	A	G	1.28
EK3261	14	19425347	19425348		C	G	0.783
EK3261	21	37711279	37711280	MORC3	G	A	0.745
EK3261	4	1374068	1374069	UVSSA	G	C	0.552
EK3261	5	178950206	178950207		A	G	0.531
EK3261	14	19422432	19422433		T	C	0.507
EK3261	16	89299689	89299690	ZNF778	A	T	0.485
EK3261	1	19071181	19071182	PAX7	A	G	0.419
EK3261	12	9573305	9573306	DDX12P	G	C	0.39
EK3261	19	53391274	53391275	ZNF320	A	G	0.309
EK3261	19	56290008	56290009		A	G	0.222
EK3261	9	44175225	44175226		G	C	0.216
EK3261	13	26620737	26620738	SHISA2	G	A	0.21
EK3261	17	30377010	30377011	LRRC37B	C	T	0.163
EK3261	X	6451868	6451869	VCX3A	C	T	0.146
EK3261	13	21563124	21563125	LATS2	A	G	0.118
EK3261	3	71247575	71247576	FOXP1	A	T	0.086
EK3261	20	33342476	33342477	NCOA6	G	A	0.07
EK3261	16	32889181	32889182	SLC6A10P	C	T	0.066
EK3261	3	186607556	186607557		T	C	0.05
EK3261	6	150266577	150266578	ULBP2	T	C	0.004
EK3261	1	9714539	9714540	PIK3CD	G	GAGGCCAGAC C	
EK3261	1	12264867	12264868	TNFRSF1B	C	CCAA	
EK3261	1	156898282	156898283	LRRC71	C	CTCT	
EK3261	1	207237232	207237233	PFKFB2	G	GGGGTGTGTGT GTGTGTGT	
EK3261	10	130262846	130262847		C	CA	
EK3261	12	7898823	7898824	CLEC4C	A	AG	
EK3261	12	15101032	15101033	ARHGDI	T	TGCGC	

Table B-2: Continued

EK3261	12	56556166	56556167	SMARCC2	T	TA	
EK3261	12	94287681	94287682	CRADD	G	GA	
EK3261	12	105454604	105454605	ALDH1L2	G	GAAAA	
EK3261	15	20462793	20462794		T	TA	
EK3261	16	16205166	16205167	ABCC1	G	GTGGGGC	
EK3261	16	90095596	90095597	C16orf3	T	TGGGGCAGCCT ACGGGGCAGG CTGC	
EK3261	17	29647360	29647361	EVI2A	T	TTA	
EK3261	18	43258918	43258919	SLC14A2	C	CTTT	
EK3261	19	8137849	8137850	FBN3	C	CGTGTGT	
EK3261	19	46299137	46299138	RSPH6A	T	TCTCTCGCCC TCCTCTC	
EK3261	2	79254028	79254029	REG3G	C	CA	
EK3261	2	112687156	112687157	MERTK	A	ATATTTATTTA TTTATT	
EK3261	21	34805196	34805197	IFNGR2	C	CT	
EK3261	21	45650007	45650008	ICOSLG	A	AC	
EK3261	21	47546389	47546390	COL6A2	T	TGGCCCGGCC GGCCCGGCC	
EK3261	3	72495592	72495593	RYBP	T	TA	
EK3261	3	167754851	167754852	GOLIM4	A	ATCTATGAATG CCCATTCATAG ATGGGCATTG T	
EK3261	3	189690815	189690816	LEPREL1	G	GA	
EK3261	5	76607929	76607930	PDE8B	C	CT	
EK3261	5	151167386	151167387	G3BP1	A	AC	
EK3261	6	160133515	160133516		A	AC	
EK3261	7	91706380	91706381	AKAP9	T	TTTA	
EK3261	8	142445539	142445540	MROH5	T	TGCCCGCGCC CTGGCC	
EK3261	9	38414029	38414030	IGFBPL1	T	TCACACACACA	
EK3261	GL0002 14.1	32389	32390		C	CTT	
EK3261,AR5361	17	37213526	37213527		T	TTTG	
EK3261,AR5361	8	2020376	2020377	MYOM2	G	GATGCTCTCTG CCCTCGGCCA TGAAAGCCTCC ATCGTTTC	
EK3261,MA5421	14	54416601	54416602	BMP4	T	A	0.002
EK3261,MA5421	16	11537346	11537347	LOC400499	A	AAAAAGAGAG AG	
EK3261,MA5421	16	11537346	11537347	LOC400499	A	AAAAAAGAGA GAG	
EK3261,QW4591	2	20302477	20302478		G	GAGAAGAAGA AGAAGAAGA	
EK3261,QW4591	2	20302477	20302478		G	GAGAAGAAGA AGAAGA	
JFH3411	8	90801588	90801589	RIPK2	T	A	35
JFH3411	9	15478517	15478518	PSIP1	T	A	35
JFH3411	2	230910582	230910583	SLC16A14	C	A	32
JFH3411	4	73944582	73944583	ANKRD17	G	C	31
JFH3411	12	48543492	48543493	ASB8	C	T	28.7

Table B-2: Continued

JFH3411	2	234959682	234959683	SPP2	A	T	26.8
JFH3411	1	43166635	43166636	YBX1	C	G	25
JFH3411	18	6974964	6974965	LAMA1	G	A	24.6
JFH3411	8	30657240	30657241	PPP2CB	C	A	23.4
JFH3411	5	133473770	133473771	TCF7	C	A	21.2
JFH3411	2	176032491	176032492	ATF2	C	T	19.9
JFH3411	3	107519886	107519887	BBX	C	T	16.24
JFH3411	1	146495751	146495752	LOC728989	C	T	15.89
JFH3411	4	145636290	145636291	HHIP	C	A	15.03
JFH3411	1	115438100	115438101	SYCP1	G	A	14.67
JFH3411	14	93708566	93708567	BTBD7	T	A	13.45
JFH3411	7	16606965	16606966	LRRC72	T	A	13.04
JFH3411	7	140080147	140080148	SLC37A3	G	A	13.04
JFH3411	17	18353454	18353455		C	T	12.68
JFH3411	11	94800755	94800756	SRSF8	G	A	11.69
JFH3411	5	111598108	111598109	EPB41L4A	G	C	11.28
JFH3411	GL0002 16.1	106073	106074		C	A	10.52
JFH3411	6	27368208	27368209	ZNF391	C	T	10.5
JFH3411	13	47361101	47361102	ESD	C	A	10.49
JFH3411	22	18769202	18769203	GGT3P	G	A	10.11
JFH3411	GL0001 95.1	80135	80136		C	T	10.08
JFH3411	16	56468316	56468317	NUDT21	T	C	10.05
JFH3411	17	81082687	81082688		G	A	9.206
JFH3411	6	49681211	49681212	CRISP2	A	G	9.107
JFH3411	GL0002 12.1	47567	47568		G	T	9.046
JFH3411	5	179334856	179334857	TBC1D9B	A	G	8.924
JFH3411	16	71059030	71059031	HYDIN	A	C	8.527
JFH3411	16	81129821	81129822	GCSH	G	A	8.447
JFH3411	MT	13927	13928		G	A	8.279
JFH3411	GL0002 20.1	145732	145733		G	C	8.196
JFH3411	16	89986951	89986952	MC1R	C	T	7.978
JFH3411	4	57776747	57776748	REST	C	G	7.293
JFH3411	11	130079318	130079319	ST14	G	T	7.214
JFH3411	4	100261577	100261578	ADH1C	T	A	7.156
JFH3411	9	34832996	34832997		C	T	6.941
JFH3411	8	126075990	126075991	KIAA0196	T	A	6.911
JFH3411	12	133351862	133351863	GOLGA3	T	C	6.813
JFH3411	12	9985940	9985941	KLRF1	C	T	6.798
JFH3411	20	31887983	31887984	BPIFB1	A	T	6.232
JFH3411	1	219055945	219055946		C	T	6.223
JFH3411	17	27224385	27224386	FLOT2	C	T	6.22
JFH3411	2	118771830	118771831	CCDC93	G	T	6.197
JFH3411	21	11078573	11078574	BAGE2	T	A	6.173
JFH3411	7	56887802	56887803		C	T	6.067

Table B-2: Continued

JFH3411	16	21412494	21412495	NPIP3	T	C	5.934
JFH3411	6	2990118	2990119	LINC01011	A	G	5.839
JFH3411	10	94369061	94369062	KIF11	T	A	5.831
JFH3411	11	89774110	89774111	TRIM49C	T	A	5.642
JFH3411	16	57509608	57509609	DOK4	C	T	5.517
JFH3411	19	55967555	55967556	ISOC2	A	G	5.428
JFH3411	17	81082686	81082687		G	A	5.36
JFH3411	16	89939928	89939929	TCF25	T	C	5.206
JFH3411	14	93368742	93368743		C	T	5.138
JFH3411	8	75937554	75937555	CRISPLD1	C	T	5.004
JFH3411	3	186437831	186437832	KNG1	A	G	4.9
JFH3411	9	41954794	41954795	MGC21881	C	G	4.784
JFH3411	7	140710043	140710044	MRPS33	G	T	4.771
JFH3411	2	91777402	91777403		T	C	4.291
JFH3411	9	82335299	82335300	TLE4	T	G	4.068
JFH3411	9	131133430	131133431	URM1	G	C	4.044
JFH3411	9	19287059	19287060	DENND4C	C	A	3.942
JFH3411	X	89293907	89293908		G	T	3.921
JFH3411	5	99727965	99727966		T	C	3.675
JFH3411	2	9525624	9525625	ASAP2	G	A	3.661
JFH3411	9	66517232	66517233		C	T	3.624
JFH3411	2	71708851	71708852	DYSF	C	T	3.54
JFH3411	2	91781110	91781111		A	T	3.344
JFH3411	2	239092892	239092893	ILKAP	C	A	3.244
JFH3411	3	132277736	132277737	ACAD11	T	C	3.118
JFH3411	4	39930098	39930099	PDS5A	A	C	3.05
JFH3411	8	53888072	53888073		T	C	3.038
JFH3411	11	7961184	7961185	OR10A3	A	G	2.972
JFH3411	8	7721183	7721184	SPAG11A	C	G	2.97
JFH3411	20	35757729	35757730	MROH8	C	A	2.956
JFH3411	1	1103470	1103471	MIR429	C	T	2.922
JFH3411	13	31722693	31722694	HSPH1	G	A	2.92
JFH3411	7	6056483	6056484	AIMP2	G	C	2.813
JFH3411	8	143407581	143407582	TSNARE1	T	C	2.592
JFH3411	11	86802682	86802683	TMEM135	T	G	2.545
JFH3411	18	53696242	53696243		C	T	2.537
JFH3411	2	37078107	37078108	STRN	G	T	2.422
JFH3411	19	22646671	22646672		G	A	2.385
JFH3411	8	12435579	12435580	LOC729732	G	A	2.369
JFH3411	8	93253301	93253302		C	G	2.276
JFH3411	19	54312795	54312796	NLRP12	C	G	2.256
JFH3411	22	20715447	20715448	LOC101927859	G	T	2.238
JFH3411	9	136359084	136359085		A	G	2.13
JFH3411	21	11154368	11154369		T	C	2.129
JFH3411	11	67290702	67290703	CABP2	C	A	2.111

Table B-2: Continued

JFH3411	1	143424026	143424027	MIR3118-3	A	C	2.105
JFH3411	3	30842349	30842350	GADL1	G	A	2.077
JFH3411	1	154294308	154294309	AQP10	T	C	2.049
JFH3411	20	44501073	44501074	ZSWIM3	A	G	2.009
JFH3411	2	4517944	4517945		C	G	2.001
JFH3411	7	140434613	140434614	BRAF	G	A	1.991
JFH3411	2	132593502	132593503		G	A	1.916
JFH3411	12	57112394	57112395	NACA	T	G	1.901
JFH3411	13	60849775	60849776		T	C	1.86
JFH3411	14	22944504	22944505	TRAJ58	A	G	1.859
JFH3411	10	22006738	22006739	MLLT10	T	C	1.776
JFH3411	3	197350321	197350322	LOC220729	T	C	1.732
JFH3411	16	14931267	14931268	NOMO1	T	C	1.727
JFH3411	8	10194916	10194917	MSRA	C	G	1.724
JFH3411	11	122742144	122742145	CRTAM	G	A	1.669
JFH3411	5	61687922	61687923	DIMT1	A	C	1.662
JFH3411	19	30054945	30054946	VSTM2B	G	T	1.525
JFH3411	7	156994352	156994353	UBE3C	A	T	1.403
JFH3411	13	111145456	111145457	COL4A2	T	C	1.4
JFH3411	4	4128482	4128483		A	G	1.367
JFH3411	3	173998741	173998742	NLGN1	T	C	1.357
JFH3411	16	32442172	32442173		G	A	1.168
JFH3411	4	121288866	121288867		G	A	1.157
JFH3411	6	20609631	20609632	CDKAL1	C	T	1.141
JFH3411	17	6560320	6560321	C17orf100	T	C	1.123
JFH3411	1	3428864	3428865	MEGF6	C	T	0.933
JFH3411	12	4708440	4708441	DYRK4	T	G	0.899
JFH3411	19	43697680	43697681	PSG4	G	A	0.868
JFH3411	19	9056104	9056105	MUC16	G	T	0.784
JFH3411	19	48525310	48525311	ELSPBP1	C	T	0.739
JFH3411	9	138274057	138274058		T	C	0.682
JFH3411	16	18875512	18875513	SMG1	T	C	0.607
JFH3411	5	79037903	79037904	CMYA5	T	C	0.546
JFH3411	7	11860368	11860369	THSD7A	A	T	0.533
JFH3411	12	11420494	11420495	PRB3	G	A	0.49
JFH3411	2	100242947	100242948	AFF3	T	C	0.466
JFH3411	12	6422919	6422920	PLEKHG6	G	A	0.446
JFH3411	6	1392710	1392711	FOXF2	A	C	0.444
JFH3411	1	143188416	143188417		A	C	0.429
JFH3411	15	42918674	42918675	STARD9	A	C	0.412
JFH3411	10	116064763	116064764	AFAP1L2	T	G	0.397
JFH3411	17	25747066	25747067	TBC1D3P5	C	T	0.395
JFH3411	10	37478535	37478536	ANKRD30A	T	C	0.263
JFH3411	7	140434596	140434597	BRAF	G	A	0.255
JFH3411	12	31249428	31249429	DDX11	T	C	0.226

Table B-2: Continued

JFH3411	7	76632801	76632802	LOC1005057 67	T	C	0.199
JFH3411	13	111145457	111145458	COL4A2	G	A	0.189
JFH3411	16	11609705	11609706		G	A	0.188
JFH3411	13	29899712	29899713	MTUS2	G	A	0.17
JFH3411	9	136274057	136274058	REXO4	G	T	0.162
JFH3411	16	19079999	19080000	COQ7	G	A	0.157
JFH3411	9	141069113	141069114		G	A	0.141
JFH3411	1	161205049	161205050	NR1I3	T	C	0.107
JFH3411	22	21579691	21579692	GGT2	A	G	0.09
JFH3411	3	99667490	99667491	FILIP1L	A	T	0.058
JFH3411	16	48201226	48201227	ABCC11	C	A	0.048
JFH3411	9	33796659	33796660	PRSS3	T	C	0.039
JFH3411	6	168430347	168430348	KIF25	A	T	0.029
JFH3411	18	77096062	77096063	ATP9B	T	C	0.021
JFH3411	6	31785380	31785381	HSPA1A	T	G	0.004
JFH3411	1	53925372	53925373	DMRTB1	G	GCCGCC	
JFH3411	1	109289731	109289732	STXBP3	G	GCCGCGCTCCC CACTCCTCCGC TCCCGT	
JFH3411	10	32856935	32856936	C10orf68	T	TG	
JFH3411	11	194322	194323	SCGB1C1	A	ACCCC	
JFH3411	11	207358	207359	BET1L	C	CGGCCACAGCC GCCTCAGACGT	
JFH3411	11	40879563	40879564	LRRC4C	A	AC	
JFH3411	12	6542826	6542827		C	CCTTCTTTT	
JFH3411	12	38597540	38597541		C	CGAGGAGGAG TTTGAGGAGTA TGCT	
JFH3411	12	54967639	54967640	PDE1B	T	TGAGAGA	
JFH3411	12	129298726	129298727	SLC15A4	A	AGACCTGAGC GCCGTATGATG CCTGTGGCTAT GGCTCCAGCTA TGG	
JFH3411	13	64320958	64320959		C	CCTTCCCCTCC TCCTTCCTCT TGCTTCTTCC T	
JFH3411	13	78317053	78317054	SLAIN1	C	CT	
JFH3411	13	110821843	110821844	COL4A1	A	AACACAC	
JFH3411	13	110861650	110861651	COL4A1	G	GAA	
JFH3411	13	112315736	112315737		C	CCTTCCCCTCC TCCTTCCTCT TGCTTCTTCC T	
JFH3411	14	89412771	89412772		G	GGAGGAGGAA AGAGAGAGAG GGA	
JFH3411	14	93368729	93368730		T	TC	
JFH3411	15	40650444	40650445	DISP2	T	TGCCGCCGCCA CC	
JFH3411	15	48594822	48594823	SLC12A1	C	CAAA	
JFH3411	17	17158127	17158128	COPS3	G	GA	
JFH3411	17	38146481	38146482	PSMD3	C	CTT	
JFH3411	17	59480331	59480332	TBX2	A	AGAGAGAGAG AGAGAGAG	

Table B-2: Continued

JFH3411	18	66367725	66367726	TMX3	T	TA	
JFH3411	19	6429386	6429387	SLC25A41	G	GGAGGAGGGG AGGAGGAGGG A	
JFH3411	19	45781080	45781081	MARK4	T	TTG	
JFH3411	19	45913152	45913153	CD3EAP	A	ATTAT	
JFH3411	19	48377797	48377798	SULT2A1	G	GA	
JFH3411	2	67865188	67865189		G	GAGGAAGGGA GGGAGGAAGG AAGGA	
JFH3411	2	162274606	162274607	TBR1	A	ATGTG	
JFH3411	2	225719780	225719781	DOCK10	G	GACAC	
JFH3411	22	22277313	22277314	PPM1F	C	CG	
JFH3411	22	50502468	50502469	MLC1	A	AGCACCCAC CCCACAGGCCA CTCACCTCCCC G	
JFH3411	3	38593127	38593128	SCN5A	T	TGG	
JFH3411	3	46945262	46945263	PTH1R	G	GA	
JFH3411	3	176771860	176771861	TBL1XR1	T	TGC	
JFH3411	3	196288492	196288493	WDR53	T	TA	
JFH3411	4	8451677	8451678	TRMT44	T	TTTCTTTTC	
JFH3411	4	9737761	9737762		G	GATAT	
JFH3411	4	47592992	47592993	ATP10D	T	TGG	
JFH3411	4	57180575	57180576	KIAA1211	C	CGGAGCGGAG GGAGCGGAG	
JFH3411	5	21751740	21751741	CDH12	T	TTGTGTGTGTG	
JFH3411	5	80546758	80546759	CKMT2	A	AACACACACA CAC	
JFH3411	5	148491287	148491288		A	AG	
JFH3411	6	2990117	2990118	LINC01011	C	CCGTCAGTTGT CACGGCGCTGG TGGGA	
JFH3411	6	8041544	8041545	BLOC1S5	C	CTTT	
JFH3411	6	20609506	20609507	CDKAL1	C	CCTCCTTCTCC TTCTT	
JFH3411	6	34003335	34003336	GRM4	T	TGAAAGAAGG CAGAATGAGG CAA	
JFH3411	7	29252609	29252610	CHN2	C	CACTCAGACCT GGTGCACCCAG TCCTGGAAT	
JFH3411	7	77006553	77006554	GSAP	T	TA	
JFH3411	7	150384030	150384031	GIMAP2	C	CAA	
JFH3411	8	1806308	1806309	ARHGEF10	A	AGTCCCCAGGA GG	
JFH3411	8	133492195	133492196	KCNQ3	A	AAC	
JFH3411	8	139688655	139688656	COL22A1	A	AAG	
JFH3411	9	112787678	112787679	PALM2- AKAP2	C	CT	
JFH3411	9	131598512	131598513	CCBL1	T	TTTCC	
JFH3411	X	50556159	50556160	SHROOM4	T	TGGCGGC	
JFH3411	X	110155645	110155646		G	GGAAGAAGAA GAAAA	
JFH3411,AR5361	17	10633319	10633320	TMEM220	G	GT	

Table B-2: Continued

JFH3411,AR5361	9	14775728	14775729	FREM1	A	AG	
JFH3411,AR5361	9	14775728	14775729	FREM1	A	AAG	
JFH3411,BB4911	17	48602097	48602098	MYCBPAP	T	A	1.17
JFH3411,EK3261	14	81574843	81574844	TSHR	T	A	5.455
JFH3411,EK3261	19	53050992	53050993	ZNF808	T	G	3.619
JFH3411,EK3261	14	81574844	81574845	TSHR	T	C	2.402
JFH3411,EK3261	1	40840248	40840249	SMAP2	T	TTGCG	
JFH3411,EK3261	19	53050992	53050993	ZNF808	T	TG	
JFH3411,JZ1851	4	8451677	8451678	TRMT44	T	TTTC	
JFH3411,MA5421	17	59480331	59480332	TBX2	A	AG	
JFH3411,QW4591	X	34148843	34148844	FAM47A	G	C	7.097
JFH3411,QW4591	X	34148840	34148841	FAM47A	A	G	0.002
JFH3411,QW4591	2	2283335	2283336	MYTIL	T	TGAAGGAAGA AAG	
JFH3411,QW4591	2	88409718	88409719	SMYD1	A	AGAGTGTGTGT GT	
JFH3411,QW4591	2	88409718	88409719	SMYD1	A	AGAGTGTGTGT	
JFH3411,QW4591	5	180049924	180049925	FLT4	A	AC	
JM1191	20	57273814	57273815	NPEPL1	G	T	34
JM1191	4	72332200	72332201	SLC4A4	C	A	33
JM1191	8	37688965	37688966	GPR124	G	A	22.9
JM1191	1	200842640	200842641	GPR25	C	T	22.6
JM1191	1	26665872	26665873	AIM1L	C	G	17.82
JM1191	12	105521008	105521009	KIAA1033	C	A	15.34
JM1191	8	48686808	48686809	PRKDC	C	T	14.96
JM1191	7	50444191	50444192	IKZF1	G	T	13.6
JM1191	7	6693437	6693438	ZNF316	C	T	12.08
JM1191	12	7869654	7869655	DPPA3	C	A	10.97
JM1191	21	9892002	9892003		A	G	10.91
JM1191	GL0002 29.1	7937	7938		G	A	10.4
JM1191	14	70936839	70936840	ADAM20P1	C	T	9.304
JM1191	1	248813270	248813271	OR2T27	C	A	8.436
JM1191	8	101149660	101149661	FBXO43	G	A	8.375
JM1191	7	101925337	101925338	CUX1	A	G	7.515
JM1191	5	150848664	150848665	SLC36A1	T	A	7.397
JM1191	15	20454100	20454101		T	A	7.198
JM1191	2	95527943	95527944		A	G	6.401
JM1191	19	44845384	44845385	ZFP112	C	T	5.927
JM1191	15	20454099	20454100		T	A	5.727
JM1191	1	17012109	17012110		T	C	4.802
JM1191	15	21936924	21936925	LOC646214	C	T	4.648
JM1191	9	67331137	67331138		G	A	3.776
JM1191	14	96864373	96864374	AK7	T	G	3.725
JM1191	14	19400537	19400538		G	A	3.489
JM1191	4	166150085	166150086	KLHL2	A	G	3.329
JM1191	5	74698916	74698917	COL4A3BP	T	A	3.164

Table B-2: Continued

JM1191	1	145014197	145014198	PDE4DIP	A	C	3.092
JM1191	14	88701336	88701337	KCNK10	C	T	3.027
JM1191	12	102060675	102060676	MYBPC1	C	T	2.499
JM1191	2	116593698	116593699	DPP10	T	G	1.786
JM1191	13	115067092	115067093	UPF3A	C	T	1.728
JM1191	8	21895012	21895013	NPM2	C	G	1.246
JM1191	5	78373513	78373514	BHMT2	A	T	0.977
JM1191	21	11047440	11047441	LOC101926954	T	C	0.899
JM1191	15	31089525	31089526		A	G	0.628
JM1191	12	7090888	7090889	LPCAT3	C	G	0.607
JM1191	2	27997374	27997375	MRPL33	T	G	0.512
JM1191	8	7673307	7673308	DEFB107A	A	G	0.378
JM1191	13	25527363	25527364	TPTE2P1	G	A	0.223
JM1191	12	11546685	11546686	PRB2	C	T	0.128
JM1191	20	23029694	23029695	THBD	G	C	0.044
JM1191	12	9586590	9586591	DDX12P	G	C	0.04
JM1191	11	1093226	1093227	MUC2	T	C	0.023
JM1191	3	189713345	189713346	LEPREL1	T	G	0.006
JM1191	1	114495347	114495348	HIPK1	G	GT	
JM1191	11	18111871	18111872	SAAL1	C	CA	
JM1191	12	53045614	53045615	KRT2	A	ACCTCCAAAGC CGCTGCCG	
JM1191	12	109547585	109547586	UNG	A	AAAT	
JM1191	19	48848701	48848702	TMEM143	C	CATTTATTT	
JM1191	19	54201809	54201810	MIR520B	G	GT	
JM1191	20	2633377	2633378	NOP56	A	AGAGCCTGGG CCT	
JM1191	21	47845988	47845989	PCNT	T	TTTC	
JM1191	22	32482126	32482127	SLC5A1	C	CA	
JM1191	3	195295701	195295702	APOD	T	TGGC	
JM1191	4	185620821	185620822	MLF1IP	C	CTCTT	
JM1191	7	142353576	142353577	TRBV23-1	C	CTTTGT	
JM1191,EK3261	19	41188889	41188890	NUMBL	T	TGG	
JZ1851	12	9309906	9309907	PZP	C	T	36
JZ1851	5	137754877	137754878	KDM3B	G	T	33
JZ1851	17	8110515	8110516	AURKB	T	A	27.6
JZ1851	2	86371584	86371585	IMMT	A	G	25.1
JZ1851	22	50277724	50277725	ZBED4	T	A	25
JZ1851	1	153965537	153965538	NUP210L	T	C	23.1
JZ1851	9	14307149	14307150	NFIB	T	C	23
JZ1851	15	21934162	21934163	LOC646214	C	A	19.31
JZ1851	16	4164364	4164365	ADCY9	C	T	18.4
JZ1851	2	179560154	179560155	TTN	G	T	16.19
JZ1851	X	13770860	13770861	OFD1	T	G	15.17
JZ1851	2	242707383	242707384	D2HGDH	A	G	14.95
JZ1851	1	21564710	21564711	ECE1	G	A	14.52

Table B-2: Continued

JZ1851	9	112184971	112184972	PTPN3	C	A	14.32
JZ1851	X	73071894	73071895	XIST	C	A	14.23
JZ1851	19	7681457	7681458	CAMSAP3	T	A	13.94
JZ1851	19	42388629	42388630	ARHGEF1	G	T	11.84
JZ1851	12	50036307	50036308	FMNL3	T	G	11.57
JZ1851	GL0002 43.1	41102	41103		T	G	11.27
JZ1851	8	38176186	38176187	WHSC1L1	T	G	11.01
JZ1851	GL0002 20.1	67917	67918		C	T	10.95
JZ1851	16	46392046	46392047		T	G	10.87
JZ1851	17	73747292	73747293	ITGB4	T	C	10.6
JZ1851	7	94287633	94287634	PEG10	G	A	10.49
JZ1851	2	128947715	128947716	UGGT1	C	G	10.16
JZ1851	2	48010716	48010717	MSH6	T	G	10.12
JZ1851	14	92302970	92302971	TC2N	G	A	9.787
JZ1851	21	11086768	11086769	BAGE2	C	T	9.718
JZ1851	GL0002 18.1	21041	21042		C	G	9.632
JZ1851	4	88536459	88536460	DSPP	C	T	9.44
JZ1851	21	10899759	10899760		T	A	9.433
JZ1851	1	16908180	16908181	NBPF1	C	T	9.305
JZ1851	9	139650166	139650167	LCN8	G	A	8.886
JZ1851	11	47808202	47808203	NUP160	C	G	8.802
JZ1851	2	96604472	96604473	ANKRD36C	T	A	8.694
JZ1851	4	186321635	186321636	UFSP2	G	A	8.309
JZ1851	8	68178479	68178480	ARFGEF1	C	A	8.216
JZ1851	21	11094944	11094945	BAGE2	C	T	7.937
JZ1851	3	149755683	149755684		A	G	7.925
JZ1851	15	75586678	75586679	GOLGA6D	C	G	7.757
JZ1851	Y	59016010	59016011		A	T	7.711
JZ1851	2	228373417	228373418	AGFG1	C	T	7.3
JZ1851	12	51632454	51632455	DAZAP2	G	C	6.098
JZ1851	1	164850622	164850623		A	G	6.091
JZ1851	21	11094954	11094955	BAGE2	A	G	6.073
JZ1851	22	45577372	45577373	NUP50	C	T	6.058
JZ1851	11	27523182	27523183	LIN7C	A	G	5.897
JZ1851	9	111696625	111696626	IKBKAP	G	T	5.813
JZ1851	15	23631563	23631564		G	T	5.356
JZ1851	22	21537840	21537841	LOC1019279 85	T	G	5.34
JZ1851	1	220156007	220156008	EPRS	G	A	5.306
JZ1851	17	43677588	43677589		G	A	5.259
JZ1851	9	35704966	35704967	TLN1	G	A	5.143
JZ1851	16	21262733	21262734	ANKS4B	T	G	4.913
JZ1851	21	10953011	10953012	TPTE	A	G	4.898
JZ1851	1	205561495	205561496	MFSD4	C	T	4.786
JZ1851	1	2325527	2325528	RER1	G	A	4.696

Table B-2: Continued

JZ1851	22	21242644	21242645	SNAP29	T	A	4.652
JZ1851	6	72260469	72260470		G	A	4.413
JZ1851	21	14807852	14807853		T	A	4.29
JZ1851	1	93819681	93819682	DR1	G	A	4.246
JZ1851	2	237405713	237405714	IQCA1	G	A	4.01
JZ1851	20	3667653	3667654	SIGLEC1	T	A	3.985
JZ1851	7	50611563	50611564	DDC	A	T	3.96
JZ1851	7	89866253	89866254	STEAP2	T	G	3.875
JZ1851	2	101967058	101967059	CREG2	C	T	3.871
JZ1851	17	44342751	44342752	LRRC37A	C	T	3.858
JZ1851	3	52960259	52960260	SFMBT1	G	A	3.654
JZ1851	21	11092793	11092794	BAGE2	T	C	3.637
JZ1851	10	19493215	19493216	C10orf112	T	G	3.564
JZ1851	12	7290388	7290389	CLSTN3	T	A	3.464
JZ1851	10	22006650	22006651	MLLT10	C	T	3.383
JZ1851	2	179825838	179825839	CCDC141	G	T	3.361
JZ1851	4	49553059	49553060		G	A	3.312
JZ1851	19	58180428	58180429	ZSCAN4	T	C	3.222
JZ1851	8	12399062	12399063	LOC1005069 90	A	T	3.09
JZ1851	21	11092792	11092793	BAGE2	G	A	3.068
JZ1851	5	135469754	135469755	SMAD5	A	G	3.037
JZ1851	21	11080199	11080200	BAGE2	T	C	2.945
JZ1851	19	10491338	10491339	TYK2	A	T	2.916
JZ1851	10	115535766	115535767	PLEKHS1	C	A	2.899
JZ1851	11	128750399	128750400		T	G	2.74
JZ1851	5	4438439	4438440		A	G	2.684
JZ1851	19	1164417	1164418	SBNO2	A	G	2.494
JZ1851	8	95894906	95894907	CCNE2	C	T	2.484
JZ1851	3	195708972	195708973	SDHAP1	C	G	2.474
JZ1851	19	45305075	45305076	CBLC	T	G	2.341
JZ1851	10	115745794	115745795		A	G	2.314
JZ1851	2	18326204	18326205		G	A	2.306
JZ1851	4	82095866	82095867	PRKG2	T	C	2.253
JZ1851	13	83420912	83420913		C	G	2.247
JZ1851	19	7074904	7074905	ZNF557	C	G	2.239
JZ1851	22	18910827	18910828	PRODH	T	G	2.041
JZ1851	22	44220875	44220876	SULT4A1	C	T	1.987
JZ1851	12	5841615	5841616	ANO2	G	A	1.972
JZ1851	3	115579976	115579977	LSAMP	T	C	1.942
JZ1851	X	110155630	110155631		A	G	1.922
JZ1851	4	106024653	106024654		T	G	1.905
JZ1851	17	8413374	8413375	MYH10	G	T	1.862
JZ1851	14	19818136	19818137		T	C	1.856
JZ1851	16	5128480	5128481	ALG1	C	G	1.802
JZ1851	8	72875038	72875039	LOC1001328 91	G	A	1.7

Table B-2: Continued

JZ1851	2	142231605	142231606	LRP1B	T	A	1.656
JZ1851	4	49553036	49553037		A	T	1.626
JZ1851	15	28927099	28927100	HERC2P9	G	C	1.512
JZ1851	2	225702386	225702387	DOCK10	A	C	1.511
JZ1851	9	36216340	36216341	GNE	T	C	1.458
JZ1851	1	148908673	148908674		T	A	1.389
JZ1851	4	179934476	179934477		G	A	1.361
JZ1851	3	70260769	70260770		T	C	1.354
JZ1851	7	132248483	132248484	PLXNA4	T	C	1.34
JZ1851	11	20140134	20140135	NAV2	A	G	1.32
JZ1851	17	42514115	42514116	GPATCH8	G	T	1.299
JZ1851	1	107273669	107273670		G	A	1.273
JZ1851	15	97097975	97097976		A	T	1.24
JZ1851	1	241156416	241156417	RGS7	A	G	1.197
JZ1851	6	49621781	49621782		T	C	1.158
JZ1851	7	132248290	132248291	PLXNA4	T	C	1.1
JZ1851	5	54768575	54768576	PPAP2A	A	G	1.042
JZ1851	8	38521782	38521783		A	G	1.029
JZ1851	19	3917607	3917608	ATCAY	A	G	0.985
JZ1851	12	9334760	9334761	PZP	A	T	0.929
JZ1851	14	44484173	44484174		G	A	0.852
JZ1851	2	236186258	236186259		A	G	0.837
JZ1851	4	150681193	150681194	LOC285423	G	A	0.828
JZ1851	21	11116234	11116235		C	T	0.816
JZ1851	2	228058627	228058628	COL4A3	G	A	0.793
JZ1851	3	163722398	163722399		A	C	0.764
JZ1851	2	7475266	7475267		G	A	0.75
JZ1851	6	81971334	81971335		G	A	0.718
JZ1851	1	16891684	16891685	NBPF1	T	C	0.715
JZ1851	6	135260346	135260347	ALDH8A1	T	C	0.702
JZ1851	21	11116337	11116338		A	C	0.664
JZ1851	6	3550617	3550618		C	T	0.639
JZ1851	4	123128688	123128689	KIAA1109	T	G	0.633
JZ1851	4	49505164	49505165		C	T	0.624
JZ1851	2	223572069	223572070	MOGAT1	A	G	0.614
JZ1851	20	47019895	47019896		A	T	0.583
JZ1851	12	72350304	72350305	TPH2	C	T	0.57
JZ1851	4	49505165	49505166		T	G	0.552
JZ1851	1	228614767	228614768	HIST3H3	T	C	0.548
JZ1851	16	31002832	31002833	STX1B	G	A	0.548
JZ1851	14	35943646	35943647		T	C	0.499
JZ1851	9	47213128	47213129		T	C	0.499
JZ1851	12	78538724	78538725	NAV3	A	G	0.474
JZ1851	20	18005678	18005679	OVOL2	G	C	0.445
JZ1851	10	115745778	115745779		G	A	0.436
JZ1851	19	727225	727226	PALM	G	A	0.433

Table B-2: Continued

JZ1851	11	108382083	108382084	EXPH5	C	T	0.43
JZ1851	9	33045802	33045803	SMU1	A	C	0.408
JZ1851	15	101529413	101529414	LRRK1	A	T	0.368
JZ1851	2	85535551	85535552	TCF7L1	T	C	0.366
JZ1851	19	6470630	6470631	DENND1C	G	T	0.339
JZ1851	10	50830009	50830010	CHAT	G	A	0.317
JZ1851	2	228058649	228058650	COL4A3	A	G	0.309
JZ1851	8	58844367	58844368		A	G	0.307
JZ1851	5	117774542	117774543		A	G	0.303
JZ1851	5	5775102	5775103		C	T	0.299
JZ1851	3	186302391	186302392	DNAJB11	G	T	0.298
JZ1851	3	139620441	139620442		G	C	0.273
JZ1851	1	65834396	65834397	DNAJC6	T	C	0.257
JZ1851	17	20459648	20459649		T	C	0.249
JZ1851	12	104014101	104014102	STAB2	G	T	0.224
JZ1851	9	96434293	96434294	LOC1019295 19	A	G	0.205
JZ1851	11	124958772	124958773	LOC1019293 61	G	C	0.201
JZ1851	2	139045456	139045457		A	G	0.2
JZ1851	16	58550051	58550052	SETD6	G	T	0.197
JZ1851	12	93131512	93131513	PLEKHG7	A	G	0.18
JZ1851	2	30864773	30864774	LCLAT1	C	T	0.15
JZ1851	8	40447493	40447494	ZMAT4	T	C	0.148
JZ1851	4	169341613	169341614	DDX60L	T	C	0.14
JZ1851	5	117774546	117774547		A	C	0.132
JZ1851	3	185797763	185797764	ETV5	A	T	0.124
JZ1851	4	68202088	68202089		A	C	0.118
JZ1851	8	80226802	80226803		T	C	0.095
JZ1851	8	29023425	29023426	KIF13B	T	C	0.094
JZ1851	1	17183525	17183526	TRNAG28	C	T	0.079
JZ1851	19	15997144	15997145	CYP4F2	A	C	0.079
JZ1851	16	58550050	58550051	SETD6	G	T	0.067
JZ1851	8	38521787	38521788		G	C	0.061
JZ1851	19	49949404	49949405	SLC17A7	A	T	0.059
JZ1851	7	16920180	16920181	AGR3	T	C	0.057
JZ1851	3	113373293	113373294	KIAA2018	G	C	0.053
JZ1851	7	75419499	75419500	CCL26	T	C	0.038
JZ1851	8	139648769	139648770	COL22A1	A	C	0.034
JZ1851	13	53617505	53617506	OLFM4	G	T	0.024
JZ1851	16	65101840	65101841	CDH11	T	G	0.006
JZ1851	2	217537042	217537043	IGFBP5	G	T	0.004
JZ1851	19	58385747	58385748	ZNF814	G	A	0.003
JZ1851	6	43310545	43310546	ZNF318	A	C	0.003
JZ1851	6	35801926	35801927	SRPK1	G	C	0.002
JZ1851	1	5761804	5761805		G	GAAAGAA	
JZ1851	1	29691911	29691912		C	CTTCTCT	

Table B-2: Continued

JZ1851	1	67242242	67242243	TCTEX1D1	G	GGT	
JZ1851	1	72748276	72748277	NEGR1	A	ATTATT	
JZ1851	10	43970961	43970962	ZNF487	G	GA	
JZ1851	11	57467885	57467886	ZDHHC5	A	AAT	
JZ1851	11	71276656	71276657	KRTAP5-10	A	AGGCTGTGGCT CCGGCTGTGGG	
JZ1851	11	125264854	125264855	PKNOX2	C	CGT	
JZ1851	12	51632453	51632454	DAZAP2	G	GTCC	
JZ1851	12	56844914	56844915	MIP	G	GA	
JZ1851	12	108350761	108350762		T	TTCCTCTTCTTC TTCC	
JZ1851	12	130521233	130521234	LOC1001909 40	C	CAAA	
JZ1851	12	132685939	132685940	GALNT9	A	AGGCCCATCC	
JZ1851	13	37579998	37579999	EXOSC8	C	CAA	
JZ1851	13	39450582	39450583	FREM2	T	TA	
JZ1851	15	43481298	43481299	CCNDBP1	A	AAAAAG	
JZ1851	15	101529412	101529413	LRRK1	T	TCTC	
JZ1851	17	41602323	41602324	DHX8	G	GT	
JZ1851	17	42514113	42514114	GPATCH8	A	AC	
JZ1851	18	19853491	19853492		C	CTCTTCCTCTT CT	
JZ1851	18	43846966	43846967	C18orf25	G	GTTT	
JZ1851	18	55156134	55156135	ONECUT2	T	TAG	
JZ1851	19	1037967	1037968	CNN2	C	CT	
JZ1851	19	33312274	33312275	LOC1019293 27	A	AGTGTGT	
JZ1851	19	39299279	39299280	LGALS4	A	AG	
JZ1851	19	45571899	45571900	CLASRP	G	GCC	
JZ1851	2	23588067	23588068		G	GAGGC	
JZ1851	2	24150512	24150513	UBXN2A	G	GGA	
JZ1851	2	25046360	25046361	ADCY3	A	AT	
JZ1851	2	31582237	31582238	XDH	C	CA	
JZ1851	2	111406967	111406968	BUB1	G	GA	
JZ1851	2	117835317	117835318		G	GCCCAT	
JZ1851	2	228058630	228058631	COL4A3	G	GAAGGAGAGG AGA	
JZ1851	2	231619088	231619089	CAB39	C	CCTCCCCTTC CCCTCCTT	
JZ1851	20	61455630	61455631	COL9A3	A	AT	
JZ1851	21	9673954	9673955		C	CT	
JZ1851	21	45405277	45405278	AGPAT3	T	TA	
JZ1851	22	40720293	40720294	TNRC6B	G	GT	
JZ1851	3	50264045	50264046	GNAI2	A	AT	
JZ1851	3	65245780	65245781		C	CGAAGGGAAG G	
JZ1851	3	139620429	139620430		T	TAA	
JZ1851	3	149051268	149051269	TM4SF18	C	CTCTTTTT	
JZ1851	4	88537521	88537522	DSPP	C	CAGCAGTGAC AGCAGCGAT	
JZ1851	4	150681174	150681175	LOC285423	G	GAAGGA	

Table B-2: Continued

JZ1851	4	155672912	155672913	LRAT	A	AAAG	
JZ1851	4	185620509	185620510	MLF1IP	A	AAATAAAAT	
JZ1851	5	5775128	5775129		C	CCTT	
JZ1851	5	33969169	33969170	SLC45A2	C	CTCTCTCTCTC TCTCTCTGTG	
JZ1851	5	132035251	132035252	KIF3A	C	CT	
JZ1851	5	176798069	176798070	RGS14	C	CG	
JZ1851	6	17881673	17881674	KIF13A	T	TA	
JZ1851	6	21299437	21299438		C	CCCTCCCTT	
JZ1851	6	76270597	76270598		A	AAGG	
JZ1851	6	76527020	76527021	MYO6	C	CA	
JZ1851	6	147890354	147890355	SAMD5	T	TA	
JZ1851	6	151492903	151492904		C	CTCTCTCTCTTT CTTCTTTCCCT CTT	
JZ1851	6	159959369	159959370		A	AAAGAAAGAA AGAAAG	
JZ1851	7	5660801	5660802	RNF216	G	GATCTTTTT	
JZ1851	7	24472633	24472634		G	GC	
JZ1851	7	42301504	42301505		C	CT	
JZ1851	8	28628714	28628715	INTS9	A	AT	
JZ1851	8	41508506	41508507	NKX6-3	G	GGT	
JZ1851	8	133984813	133984814	TG	G	GTT	
JZ1851	9	72273219	72273220	APBA1	C	CTCTT	
JZ1851	9	77314262	77314263		A	AG	
JZ1851	9	111696629	111696630	IKBKAP	G	GT	
JZ1851	9	139653816	139653817	LCN8	C	CCCCAGGGCCC CTCACACCTGT CCCCTGCCTCT TCA	
JZ1851	GL0002 19.1	79686	79687		T	TC	
JZ1851	GL0002 29.1	8759	8760		C	CTG	
JZ1851	X	151302889	151302890	MAGEA10	C	CT	
JZ1851,AR5361	1	11780669	11780670	DRAXIN	A	G	2.253
JZ1851,AR5361	4	186509746	186509747	SORBS2	C	T	0.037
JZ1851,AR5361	1	11780669	11780670	DRAXIN	A	AAG	
JZ1851,AR5361	12	116095623	116095624		T	TTCTTCTCCTC CTCCTTCTCCT TTTCTCCTCCT CC	
JZ1851,AR5361	16	16725099	16725100		C	CT	
JZ1851,AR5361	20	47019890	47019891		A	AGGG	
JZ1851,BB4911	4	162987468	162987469	FSTL5	C	CT	
JZ1851,JFH3411	10	95107323	95107324	MYOF	A	T	0.552
JZ1851,JFH3411	10	95107323	95107324	MYOF	A	AAAAAAAAAAG	
JZ1851,JFH3411,DN4461	1	11133955	11133956	EXOSC10	A	AAAG	
JZ1851,JFH3411,DN4461	1	11133955	11133956	EXOSC10	A	AAG	
JZ1851,LK4881	19	49685723	49685724	TRPM4	T	C	2.067
JZ1851,MA5421	2	179073492	179073493	OSBPL6	G	T	0.126

Table B-2: Continued

JZ1851,QW4591	4	1741533	1741534	TACC3	C	T	6.994
LK4881	7	98530879	98530880	TRRAP	T	G	29.7
LK4881	12	40876726	40876727	MUC19	G	A	22.9
LK4881	9	72724699	72724700	MAMDC2	T	C	22.9
LK4881	2	170753096	170753097	UBR3	G	A	22.5
LK4881	12	40876718	40876719	MUC19	G	A	20.3
LK4881	2	234873274	234873275	TRPM8	A	G	15.52
LK4881	4	164533974	164533975	MARCH1	C	G	14.85
LK4881	3	182631853	182631854	ATP11B	T	G	14.24
LK4881	19	51512598	51512599	KLK9	G	C	14.14
LK4881	12	8203151	8203152	FOXJ2	C	T	13.7
LK4881	19	49438517	49438518	DHDH	C	T	11.34
LK4881	GL0002 19.1	85599	85600		T	A	11.25
LK4881	5	171583993	171583994	STK10	G	A	11.15
LK4881	10	63809398	63809399	ARID5B	T	G	10.55
LK4881	GL0002 26.1	200	201		G	A	10.5
LK4881	6	15513546	15513547	JARID2	G	A	10.44
LK4881	GL0002 19.1	132886	132887		T	C	10.3
LK4881	1	167599789	167599790	RCSD1	G	C	10.13
LK4881	GL0002 14.1	131819	131820		A	G	9.843
LK4881	GL0002 31.1	22519	22520		T	C	9.811
LK4881	GL0002 34.1	38632	38633		C	G	9.709
LK4881	6	90573326	90573327	CASP8AP2	A	G	9.409
LK4881	17	4859111	4859112	ENO3	C	T	7.803
LK4881	14	19476104	19476105		C	T	7.554
LK4881	1	82431943	82431944	LPHN2	T	A	7.115
LK4881	15	40700021	40700022	IVD	C	T	6.591
LK4881	2	239140671	239140672		A	G	6.178
LK4881	21	9866458	9866459		G	T	5.713
LK4881	3	52022991	52022992	ACY1	T	C	5.337
LK4881	14	23002337	23002338	TRAJ8	A	G	5.255
LK4881	15	25277647	25277648		C	G	5.063
LK4881	15	65790174	65790175	DPP8	A	C	4.912
LK4881	15	48058047	48058048	SEMA6D	A	G	4.706
LK4881	7	106509619	106509620	PIK3CG	G	A	4.474
LK4881	6	31916040	31916041	CFB	G	A	3.961
LK4881	X	9677437	9677438	TBL1X	C	T	3.918
LK4881	9	69512165	69512166		C	T	3.547
LK4881	5	116488237	116488238		T	C	3.172
LK4881	3	10428065	10428066	ATP2B2	C	T	2.911
LK4881	1	248604451	248604452		A	G	2.884
LK4881	9	81651970	81651971		T	G	2.74
LK4881	1	143420219	143420220	MIR3118-3	C	T	2.525

Table B-2: Continued

LK4881	3	14106331	14106332	TPRXL	G	C	2.342
LK4881	12	9573290	9573291	DDX12P	A	G	2.127
LK4881	10	134925352	134925353	GPR123	G	A	1.861
LK4881	9	137988000	137988001	OLFM1	C	T	1.717
LK4881	5	71326302	71326303		C	T	1.679
LK4881	7	30805848	30805849	INMT	A	C	1.51
LK4881	7	127991260	127991261	PRRT4	G	A	1.468
LK4881	11	116026411	116026412		G	A	1.182
LK4881	12	106500159	106500160	NUAK1	T	A	1.152
LK4881	14	19401758	19401759		A	G	1.104
LK4881	12	53498783	53498784	SOAT2	A	T	0.926
LK4881	2	34140028	34140029		A	G	0.869
LK4881	3	97851849	97851850	OR5H1	G	A	0.864
LK4881	20	62597454	62597455	ZNF512B	T	C	0.848
LK4881	17	28557163	28557164	SLC6A4	G	A	0.709
LK4881	2	34140121	34140122		G	T	0.634
LK4881	1	146585916	146585917	NBPF13P	C	T	0.6
LK4881	1	154112167	154112168	NUP210L	A	C	0.283
LK4881	3	2569119	2569120	CNTN4	T	C	0.151
LK4881	11	71373512	71373513		T	C	0.142
LK4881	19	43440058	43440059	PSG7	C	A	0.133
LK4881	1	61064152	61064153		G	C	0.046
LK4881	3	3326679	3326680		C	T	0.033
LK4881	1	94964138	94964139	ABCD3	A	AT	
LK4881	1	117909958	117909959	MAN1A2	G	GGAA	
LK4881	1	200080463	200080464	NR5A2	C	CA	
LK4881	10	54910596	54910597		C	CCCT	
LK4881	10	99184668	99184669	PGAM1	A	AG	
LK4881	16	33404681	33404682		C	CTAG	
LK4881	16	64597211	64597212		A	AGAAGAAGAA GAG	
LK4881	18	19853473	19853474		T	TTCTTCTCC	
LK4881	19	4352836	4352837	MPND	G	GA	
LK4881	19	18898672	18898673	COMP	C	CTTTTCTTTT	
LK4881	19	56813949	56813950	LOC1005063 74	C	CCCCTT	
LK4881	22	23999930	23999931	GUSBP11	T	TCCC	
LK4881	3	3326663	3326664		T	TTCC	
LK4881	6	11210998	11210999	NEDD9	G	GGA	
LK4881	6	32632871	32632872	HLA-DQB1	A	AGGCCCCGGCC C	
LK4881	6	72091266	72091267	MIR30C2	T	TTA	
LK4881	6	80720486	80720487	TTK	G	GTA	
LK4881	7	63033166	63033167		T	TGAGGAG	
LK4881	9	97798983	97798984	C9orf3	C	CTTCTTTT	
LK4881,BB4911	18	19853473	19853474		T	TTCTTCTTCTTC C	
LK4881,JM1191	3	57431751	57431752	DNAH12	T	A	9.132

Table B-2: Continued

MA5421	5	133902225	133902226	PHF15	C	T	32
MA5421	11	66496560	66496561	SPTBN2	T	G	17.98
MA5421	9	124225650	124225651		T	C	14.27
MA5421	GL0001 93.1	81910	81911		C	T	11.13
MA5421	3	45786342	45786343	SACM1L	T	C	11.05
MA5421	GL0002 25.1	209664	209665		T	C	10.6
MA5421	1	934257	934258	HES4	C	A	10.48
MA5421	8	26614775	26614776	ADRA1A	G	A	9.367
MA5421	GL0002 24.1	3098	3099		G	T	9.112
MA5421	9	135528015	135528016	DDX31	C	A	8.841
MA5421	GL0002 14.1	132052	132053		G	C	8.441
MA5421	7	55276685	55276686	EGFR	C	T	8.393
MA5421	14	20106918	20106919		C	T	7.013
MA5421	2	240722369	240722370	LOC150935	A	G	6.967
MA5421	12	123334959	123334960	HIP1R	T	G	6.949
MA5421	9	133254596	133254597	HMCN2	T	A	6.586
MA5421	7	4845393	4845394	RADIL	C	A	6.006
MA5421	15	85452094	85452095	SLC28A1	C	T	5.896
MA5421	5	141511920	141511921	NDFIP1	G	A	5.869
MA5421	7	63220772	63220773	LOC1009963 80	C	T	5.598
MA5421	22	27248220	27248221		C	T	5.541
MA5421	5	26229009	26229010		G	T	5.192
MA5421	4	1830046	1830047	LETM1	A	G	4.989
MA5421	3	195412927	195412928	MUC20	G	A	4.883
MA5421	17	32614836	32614837	CCL11	T	A	4.859
MA5421	17	73234011	73234012	GGA3	C	T	4.596
MA5421	16	33294272	33294273		C	G	4.45
MA5421	15	26244733	26244734	LOC1001287 14	T	C	4.202
MA5421	9	67273406	67273407	AQP7P1	G	A	3.832
MA5421	3	9851673	9851674	TTLL3	A	G	3.779
MA5421	15	67934166	67934167	MAP2K5	A	G	3.672
MA5421	16	85867958	85867959		A	G	3.58
MA5421	4	7541406	7541407	SORCS2	A	C	3.501
MA5421	8	137542858	137542859		A	C	3.483
MA5421	20	19644108	19644109	SLC24A3	T	A	3.311
MA5421	7	2195893	2195894	MAD1L1	T	C	2.925
MA5421	11	113130677	113130678	NCAM1	G	A	2.767
MA5421	10	50014272	50014273	WDFY4	C	A	2.762
MA5421	8	143425142	143425143	TSNARE1	A	G	2.586
MA5421	9	113822703	113822704		G	A	2.586
MA5421	17	78390645	78390646	ENDOV	C	G	2.477
MA5421	17	79093474	79093475	AATK	C	G	2.444
MA5421	16	70237664	70237665		C	G	2.42

Table B-2: Continued

MA5421	5	94671024	94671025		C	T	2.172
MA5421	10	75532869	75532870	FUT11	A	C	2.11
MA5421	3	119332041	119332042	PLA1A	G	A	2.07
MA5421	8	126533958	126533959		C	T	2.07
MA5421	5	179382787	179382788	RNF130	T	G	2.051
MA5421	7	92627301	92627302		T	C	1.926
MA5421	5	71158966	71158967		C	T	1.634
MA5421	1	145311422	145311423	NBPF10	T	C	1.541
MA5421	20	55285917	55285918		T	C	1.446
MA5421	14	43491552	43491553		T	C	1.425
MA5421	1	229561625	229561626		G	A	1.314
MA5421	10	121051639	121051640	GRK5	A	C	1.307
MA5421	19	49551834	49551835	CGB8	T	C	1.303
MA5421	20	59431605	59431606		A	C	1.185
MA5421	2	171739392	171739393		A	G	1.089
MA5421	13	114778874	114778875	RASA3	T	C	1.013
MA5421	12	7362203	7362204	PEX5	G	T	1.002
MA5421	7	75052565	75052566	POM121C	T	C	0.979
MA5421	16	76003235	76003236		C	T	0.899
MA5421	18	61985888	61985889	LOC284294	T	C	0.861
MA5421	1	5020054	5020055		T	G	0.811
MA5421	4	58819875	58819876		A	G	0.763
MA5421	20	36231753	36231754		C	T	0.711
MA5421	4	154730079	154730080		T	C	0.661
MA5421	X	73618275	73618276		A	G	0.652
MA5421	16	76003166	76003167		T	C	0.536
MA5421	15	32792078	32792079	LOC1006531 33	C	T	0.53
MA5421	14	77872978	77872979	NOXRED1	G	C	0.513
MA5421	18	14937529	14937530		G	C	0.478
MA5421	17	39411506	39411507	KRTAP9-9	A	C	0.469
MA5421	14	33444513	33444514	NPAS3	G	T	0.415
MA5421	2	217391846	217391847		T	C	0.334
MA5421	8	41508528	41508529	NKX6-3	C	T	0.318
MA5421	11	2938254	2938255	SLC22A18	T	C	0.311
MA5421	1	170927572	170927573	MROH9	T	C	0.271
MA5421	17	80888360	80888361	TBCD	G	C	0.24
MA5421	12	116095621	116095622		C	T	0.218
MA5421	18	30908046	30908047	CCDC178	A	T	0.119
MA5421	7	88847452	88847453	ZNF804B	G	T	0.086
MA5421	8	143425157	143425158	TSNARE1	G	A	0.08
MA5421	22	20710212	20710213	FAM230A	A	T	0.075
MA5421	2	218206881	218206882	DIRC3	G	A	0.066
MA5421	10	44113371	44113372	ZNF485	C	T	0.047
MA5421	10	118897621	118897622	VAX1	G	A	0.038
MA5421	10	50918018	50918019	C10orf53	C	G	0.037

Table B-2: Continued

MA5421	7	116199668	116199669	CAV1	A	G	0.005
MA5421	1	119798939	119798940		T	TTCCCTTGCCCT TGCTTTGCCTT GCC	
MA5421	1	157555133	157555134	FCRL4	C	CTT	
MA5421	1	159750730	159750731	DUSP23	G	GT	
MA5421	10	18825170	18825171	CACNB2	C	CCTTTT	
MA5421	10	59302919	59302920		A	AG	
MA5421	11	236369	236370	PSMD13	C	CCGGCGCCCCG CCCG	
MA5421	11	18318549	18318550	HPS5	C	CA	
MA5421	11	25102575	25102576	LUZP2	T	TTTTG	
MA5421	11	61405177	61405178	RPLP0P2	T	TA	
MA5421	11	83167696	83167697	DLG2	C	CA	
MA5421	12	3829612	3829613	EFCAB4B	G	GCA	
MA5421	12	15101033	15101034	ARHGDIB	G	GCGGCACA	
MA5421	13	88013403	88013404		C	CACA	
MA5421	14	50779347	50779348	ATP5S	G	GCCCCGC	
MA5421	15	28016060	28016061	OCA2	C	CTCCCTCCCTC TTTTTCTCCT TCCT	
MA5421	15	91847573	91847574	SV2B	A	AAG	
MA5421	16	16725098	16725099		C	CA	
MA5421	16	68014738	68014739	DPEP3	T	TATTCATTC	
MA5421	17	1248582	1248583	YWHAE	T	TAA	
MA5421	17	44850988	44850989	WNT3	T	TC	
MA5421	17	78263390	78263391	RNF213	G	GA	
MA5421	19	2247126	2247127	SF3A2	G	GC	
MA5421	19	18172042	18172043	IL12RB1	G	GT	
MA5421	19	53456644	53456645	ZNF816	C	CAA	
MA5421	19	53895105	53895106	ZNF765	T	TTTGTTTG	
MA5421	19	58180426	58180427	ZSCAN4	T	TTC	
MA5421	2	48791696	48791697	STON1	C	CT	
MA5421	2	243152649	243152650		C	CCCAA	
MA5421	20	2467411	2467412	ZNF343	T	TA	
MA5421	20	2560026	2560027	TMC2	A	ATTTT	
MA5421	3	12618434	12618435	MKRN2	T	TTTG	
MA5421	3	13353463	13353464	NUP210	C	CCAA	
MA5421	3	45786338	45786339	SACM1L	T	TA	
MA5421	3	52489045	52489046	NISCH	T	TGG	
MA5421	3	53264840	53264841	TKT	T	TAG	
MA5421	3	110991861	110991862		A	ACCTCCCGCCT CCGCCTCCCG	
MA5421	3	197237469	197237470	BDH1	G	GTGT	
MA5421	5	58375664	58375665	PDE4D	G	GGGAGAGGAG AGGAGA	
MA5421	5	77240828	77240829		A	AG	
MA5421	7	17854574	17854575	SNX13	G	GAA	
MA5421	7	21150277	21150278		G	GAGA	

Table B-2: Continued

MA5421	7	73468799	73468800	ELN	C	CA	
MA5421	8	23186221	23186222	LOXL2	A	ATGTGTG	
MA5421	8	102453309	102453310		A	ATC	
MA5421	9	38168785	38168786		C	CCTCCTT	
MA5421	X	73618352	73618353		A	AAGG	
MA5421,AR5361	2	133636228	133636229	NCKAP5	G	A	1.577
MC3481	6	33679369	33679370	MNF1	G	A	36
MC3481	19	8808201	8808202	ACTL9	C	T	27.3
MC3481	10	91198709	91198710	SLC16A12	T	A	26.2
MC3481	1	22056253	22056254	USP48	T	C	25.7
MC3481	2	207173909	207173910	ZDBF2	C	G	25.6
MC3481	16	55907819	55907820	CES5A	C	G	24.1
MC3481	3	195456560	195456561	MUC20	C	G	22.9
MC3481	10	26436409	26436410	MYO3A	A	T	17.47
MC3481	X	20194443	20194444	RPS6KA3	C	T	16.49
MC3481	6	122779799	122779800	SERINC1	C	T	15.73
MC3481	1	55266441	55266442	TTC22	A	T	14.73
MC3481	11	5275518	5275519	HBG2	C	A	13.13
MC3481	X	50213338	50213339	DGKK	C	T	12.29
MC3481	14	99642398	99642399	BCL11B	C	T	12.19
MC3481	GL0002 37.1	2522	2523		A	G	12.18
MC3481	16	33752705	33752706		C	A	11.51
MC3481	GL0002 37.1	2521	2522		C	T	11.3
MC3481	GL0002 41.1	34360	34361		A	G	10.49
MC3481	GL0002 34.1	10890	10891		G	A	10.23
MC3481	GL0002 34.1	11055	11056		G	A	10.22
MC3481	GL0002 20.1	124700	124701		T	C	8.96
MC3481	16	21531110	21531111		T	C	8.601
MC3481	3	37053438	37053439	MLH1	A	G	8.303
MC3481	2	170356042	170356043	BBS5	A	G	7.511
MC3481	8	117887143	117887144	RAD21	G	A	6.565
MC3481	3	136141710	136141711	STAG1	A	G	6.464
MC3481	14	50935327	50935328	MAP4K5	G	A	5.482
MC3481	22	22042917	22042918	PPIL2	C	T	5.104
MC3481	14	22180411	22180412	TRAV2	G	A	5.044
MC3481	22	18842352	18842353		G	A	4.855
MC3481	12	121706532	121706533	CAMKK2	T	G	4.825
MC3481	12	112305499	112305500	MAPKAPK5	A	G	4.53
MC3481	X	117526731	117526732	WDR44	C	T	3.993
MC3481	3	126201353	126201354	URO1	C	G	3.914
MC3481	19	16797269	16797270	TMEM38A	C	T	3.746
MC3481	19	43680050	43680051	PSG5	C	T	3.445
MC3481	3	168820041	168820042	MECOM	A	G	3.339

Table B-2: Continued

MC3481	8	12236651	12236652	FAM66A	C	G	3.243
MC3481	2	130750445	130750446		C	A	2.911
MC3481	16	57738739	57738740	CCDC135	A	G	2.581
MC3481	X	9864548	9864549	SHROOM2	G	A	2.424
MC3481	2	215854243	215854244	ABCA12	A	T	2.34
MC3481	4	13340378	13340379	RAB28	T	G	2.065
MC3481	6	123539942	123539943	TRDN	A	C	1.765
MC3481	8	36763443	36763444	KCNU1	G	A	1.672
MC3481	8	47526041	47526042		T	C	1.52
MC3481	2	28084488	28084489	RBKS	T	C	1.322
MC3481	22	26114190	26114191	ADRBK2	T	C	1.296
MC3481	16	32190786	32190787		T	C	1.136
MC3481	4	16026998	16026999	PROM1	T	G	1.103
MC3481	17	72226944	72226945	TTYH2	A	G	0.813
MC3481	6	32725672	32725673	HLA-DQB2	A	C	0.576
MC3481	3	186507813	186507814	RFC4	A	G	0.483
MC3481	8	36763435	36763436	KCNU1	C	A	0.472
MC3481	1	12854355	12854356	PRAMEF1	T	C	0.136
MC3481	12	11506463	11506464	PRB1	C	T	0.099
MC3481	15	32738700	32738701	GOLGA8O	C	G	0.098
MC3481	5	117329052	117329053		C	G	0.09
MC3481	6	16327908	16327909	ATXN1	A	C	0.071
MC3481	15	74703928	74703929	SEMA7A	T	C	0.048
MC3481	9	136518096	136518097	DBH	A	G	0.039
MC3481	22	39381998	39381999	APOBEC3B	T	C	0.023
MC3481	8	134237634	134237635	WISP1	G	T	0.003
MC3481	6	32487352	32487353	HLA-DRB5	T	C	0.001
MC3481	1	45807062	45807063	TOE1	T	TG	
MC3481	12	2997057	2997058	RHNO1	C	CT	
MC3481	12	26819094	26819095	ITPR2	A	ATAGATAGATA GAT	
MC3481	12	102042984	102042985	MYBPC1	A	AT	
MC3481	17	80141891	80141892	CCDC57	T	TGCGCGC	
MC3481	20	18511457	18511458	SEC23B	C	CT	
MC3481	20	60909785	60909786	LAMA5	G	GTCAGGGC	
MC3481	4	1087326	1087327	RNF212	G	GCTGCCCAGGC TGGAGCCAGCC	
MC3481	4	44685223	44685224	GUF1	T	TA	
MC3481	6	407628	407629	IRF4	C	CT	
MC3481	6	32725671	32725672	HLA-DQB2	A	AG	
MC3481	6	147631420	147631421	STXBP5	T	TA	
MC3481	9	78808328	78808329	PCSK5	G	GAAAA	
QW4591	6	72960694	72960695	RIMS1	A	G	27.7
QW4591	19	50333985	50333986	MED25	G	A	25
QW4591	11	76938906	76938907	GDPD4	A	G	23.1
QW4591	7	27702389	27702390	HIBADH	C	A	17.05
QW4591	11	85339541	85339542	TMEM126B	G	T	16.97

Table B-2: Continued

QW4591	1	154243245	154243246	UBAP2L	G	T	16.61
QW4591	1	228437776	228437777	OBSCN	C	T	14.75
QW4591	5	135388806	135388807	TGFBI	A	C	12.66
QW4591	14	27066751	27066752	NOVA1	A	T	12.17
QW4591	9	139940652	139940653	NPDC1	C	A	11.7
QW4591	GL0001 92.1	180910	180911		C	T	10.69
QW4591	GL0002 12.1	336	337		T	C	9.979
QW4591	4	183370389	183370390	TENM3	C	T	9.622
QW4591	5	175394886	175394887	THOC3	C	T	9.518
QW4591	GL0002 24.1	4452	4453		T	C	9.515
QW4591	9	15214345	15214346	TTC39B	C	G	8.375
QW4591	14	66455501	66455502		A	G	7.843
QW4591	4	191030192	191030193		G	A	7.576
QW4591	5	20304485	20304486	CDH18	A	T	7.337
QW4591	3	195872112	195872113	LINC00885	A	G	7.099
QW4591	17	2570533	2570534	PAFAH1B1	A	G	6.973
QW4591	1	23758498	23758499	ASAP3	T	A	6.494
QW4591	3	172224770	172224771	TNFSF10	T	A	6.408
QW4591	12	27454965	27454966	STK38L	G	T	6.22
QW4591	1	103347179	103347180	COL11A1	T	A	6.21
QW4591	1	54692864	54692865	SSBP3	T	G	6.073
QW4591	6	97058338	97058339	FHL5	C	T	5.441
QW4591	12	115424314	115424315		C	T	4.713
QW4591	8	12042782	12042783	FAM86B1	A	G	3.985
QW4591	2	44622244	44622245	CAMKMT	A	G	3.832
QW4591	4	162987524	162987525	FSTL5	C	T	3.658
QW4591	22	45577410	45577411	NUP50	A	T	3.413
QW4591	5	159696335	159696336	CCNJL	T	C	3.31
QW4591	6	97058344	97058345	FHL5	G	T	2.896
QW4591	8	30407266	30407267	RBPMS	C	G	2.655
QW4591	5	40123895	40123896		A	G	2.645
QW4591	12	9585442	9585443	DDX12P	G	A	2.591
QW4591	21	47845991	47845992	PCNT	T	C	2.575
QW4591	2	30054063	30054064	ALK	G	A	2.288
QW4591	20	60939834	60939835	LAMA5	A	T	2.272
QW4591	3	195710814	195710815	SDHAP1	C	T	2.243
QW4591	20	25741923	25741924	FAM182B	C	G	2.211
QW4591	2	132806614	132806615		G	T	2.197
QW4591	2	125464495	125464496	CNTNAP5	A	G	2.135
QW4591	8	70516968	70516969	SULF1	G	A	1.884
QW4591	5	35954148	35954149	UGT3A1	G	T	1.736
QW4591	11	47727192	47727193	AGBL2	C	A	1.67
QW4591	19	50834769	50834770	KCNC3	A	C	1.669
QW4591	10	98170535	98170536	TLL2	G	A	1.641

Table B-2: Continued

QW4591	3	137907233	137907234	ARMC8	T	A	1.629
QW4591	6	113594474	113594475		C	T	1.523
QW4591	11	2185702	2185703	TH	G	A	1.49
QW4591	10	28259935	28259936	ARMC4	T	C	1.373
QW4591	7	102212757	102212758	POLR2J3	G	T	1.364
QW4591	6	84154297	84154298		C	T	1.157
QW4591	1	15532742	15532743	TMEM51	G	A	1.104
QW4591	15	85055738	85055739		A	C	1.092
QW4591	2	222431670	222431671	EPHA4	A	G	1.019
QW4591	3	115561098	115561099	LSAMP	G	A	0.893
QW4591	17	46632724	46632725	HOXB3	A	G	0.878
QW4591	2	186678923	186678924	FSIP2	T	C	0.873
QW4591	16	82882187	82882188	CDH13	G	T	0.86
QW4591	22	32820667	32820668	BPIFC	T	C	0.848
QW4591	9	34016315	34016316	UBAP2	A	G	0.837
QW4591	9	69845803	69845804		C	G	0.829
QW4591	12	108350779	108350780		C	T	0.781
QW4591	12	125979695	125979696	TMEM132B	A	C	0.676
QW4591	6	161005292	161005293	LPA	T	C	0.646
QW4591	22	47857656	47857657		T	A	0.645
QW4591	12	11544524	11544525	PRB2	T	A	0.554
QW4591	22	47147116	47147117		C	T	0.521
QW4591	12	108350912	108350913		T	C	0.457
QW4591	1	109656072	109656073	C1orf194	A	T	0.452
QW4591	15	29846609	29846610	FAM189A1	G	C	0.404
QW4591	12	63704446	63704447		G	T	0.368
QW4591	15	22709568	22709569	GOLGA8DP	A	C	0.31
QW4591	1	142688697	142688698		G	C	0.289
QW4591	10	104268859	104268860	SUFU	C	A	0.282
QW4591	9	96433933	96433934	LOC101929519	T	G	0.218
QW4591	4	87811359	87811360	C4orf36	G	A	0.156
QW4591	4	190329186	190329187		T	C	0.087
QW4591	11	75045987	75045988	ARRB1	G	T	0.072
QW4591	15	40329480	40329481	SRP14	A	G	0.045
QW4591	2	99779654	99779655	LIPT1	C	A	0.044
QW4591	12	108913380	108913381	FICD	T	A	0.037
QW4591	X	34148841	34148842	FAM47A	G	A	0.037
QW4591	20	472838	472839	CSNK2A1	G	T	0.033
QW4591	5	5775134	5775135		G	T	0.029
QW4591	1	9283841	9283842		C	T	0.019
QW4591	9	137740690	137740691	COL5A1	A	G	0.019
QW4591	3	45127275	45127276	CDCP1	C	A	0.004
QW4591	14	21960424	21960425	TOX4	G	T	0.002
QW4591	1	19071186	19071187	PAX7	G	GATAA	
QW4591	1	36282416	36282417	AGO4	A	AAAG	

Table B-2: Continued

QW4591	1	62417924	62417925	INADL	T	TGAGAGAGAG A	
QW4591	1	67796257	67796258	IL12RB2	G	GT	
QW4591	1	81970882	81970883		C	CCA	
QW4591	1	109656068	109656069	C1orf194	A	AGAGAGAGAG AGAGAGG	
QW4591	1	201081049	201081050	CACNA1S	T	TCCTCCTCTC CTCCTCCTCCC CCAC	
QW4591	10	50394112	50394113	C10orf128	G	GGAAGAAGAA	
QW4591	10	70205919	70205920	DNA2	C	CA	
QW4591	10	135103310	135103311	TUBGCP2	C	CGCCCGCTGCG CCGCGGACGCC AAGTCCT	
QW4591	11	720984	720985	EPS8L2	G	GGGA	
QW4591	11	26581397	26581398	MUC15	C	CAT	
QW4591	11	71945758	71945759	INPPL1	C	CAG	
QW4591	11	73999992	73999993	P4HA3	C	CA	
QW4591	11	133010657	133010658	OPCML	C	CGAA	
QW4591	12	6953257	6953258	GNB3	T	TG	
QW4591	12	7290390	7290391	CLSTN3	T	TGTGTGA	
QW4591	12	13153125	13153126	HEBP1	C	CGGCGGCAGG GCGGCAG	
QW4591	12	53514401	53514402	SOAT2	C	CA	
QW4591	12	110887809	110887810	ARPC3	G	GGA	
QW4591	12	118406109	118406110	KSR2	A	AGG	
QW4591	12	122826308	122826309	CLIP1	C	CCTT	
QW4591	13	49951026	49951027	CAB39L	G	GTAGATAGATA GATAGATAGA	
QW4591	13	114312605	114312606	ATP4B	T	TG	
QW4591	14	58699125	58699126	ACTR10	T	TC	
QW4591	14	81676359	81676360	GTF2A1	C	CTA	
QW4591	14	97532913	97532914		G	GTCCTTCCTC CT	
QW4591	15	84946554	84946555		A	AT	
QW4591	16	2949268	2949269	FLYWCH2	C	CTT	
QW4591	16	89952384	89952385	TCF25	C	CGCCCTTCTCT GTGGCT	
QW4591	17	17767525	17767526	TOM1L2	A	AT	
QW4591	17	78348532	78348533	RNF213	C	CT	
QW4591	18	5890003	5890004	TMEM200C	T	TA	
QW4591	18	14937488	14937489		G	GCCACTCCAGC CTCTGATGGAC TGCAAGCTGGG TCT	
QW4591	18	24173754	24173755	KCTD1	G	GGAGGAGGAG GAAGAT	
QW4591	19	15107339	15107340	SLC1A6	T	TTTCTTCTTCTT CTTC	
QW4591	19	22937167	22937168	LOC1019290 37	C	CA	
QW4591	2	26401757	26401758	GAREML	A	AGGAGGCGGA GGAGGAGGC	

Table B-2: Continued

QW4591	2	174502922	174502923		A	AAGAAGGAGG AGGAGGCCGA GGAGGAAGAG G	
QW4591	2	231330915	231330916	SP100	A	AAAAAC	
QW4591	2	233404333	233404334	CHRNA	C	CGGGCTGGCT	
QW4591	20	40813174	40813175	PTPRT	C	CTCTTCT	
QW4591	22	38037104	38037105	SH3BP1	T	TC	
QW4591	3	73178775	73178776		T	TTTCTTC	
QW4591	3	121913853	121913854	CASR	G	GCTCCTCCTCC TACTCCTGCT C	
QW4591	3	122259737	122259738	PARP9	G	GTT	
QW4591	3	141892040	141892041	GK5	T	TA	
QW4591	3	182559764	182559765	ATP11B	C	CA	
QW4591	3	184335409	184335410		A	AAGG	
QW4591	4	1388621	1388622	CRIPAK	T	TCA	
QW4591	4	1642927	1642928	FAM53A	G	GCGCA	
QW4591	4	88537521	88537522	DSPP	C	CAGCAGTGAC AGCAGCGAT	
QW4591	5	711803	711804	ZDHHC11B	C	CCCCAGTACTC TGTGCTCCCAT TT	
QW4591	5	56525767	56525768	GPBP1	G	GCGTCCCGTCC CGTCC	
QW4591	5	70818328	70818329	BDP1	C	CA	
QW4591	5	125928999	125929000	ALDH7A1	A	AAC	
QW4591	6	13231315	13231316	PHACTR1	G	GGAA	
QW4591	7	40228032	40228033	C7orf10	C	CCA	
QW4591	7	76116161	76116162	DTX2	G	GGGC	
QW4591	7	140036897	140036898	SLC37A3	C	CA	
QW4591	8	87520947	87520948	RMDN1	C	CCCGCCTCCTG CACAGCACCTC TT	
QW4591	8	110620036	110620037	SYBU	T	TCACA	
QW4591	8	145739174	145739175	RECQL4	C	CGTGGGCG	
QW4591	9	16582889	16582890	BNC2	G	GAC	
QW4591	9	78808343	78808344	PCSK5	G	GA	
QW4591	9	134640100	134640101		T	TTCTCCTCCT CCTCG	
QW4591, BB4911	11	117056608	117056609	SIDT2	A	AAAGAG	
QW4591, BB4911	11	117056608	117056609	SIDT2	A	AGAG	
QW4591, MA5421	22	43680760	43680761	SCUBE1	A	ATCGTCG	
SL2221	16	74761210	74761211	FA2H	T	G	27
SL2221	15	65676725	65676726	IGDCC4	C	T	24
SL2221	1	1666174	1666175	SLC35E2	C	T	22.9
SL2221	1	17271988	17271989	CROCC	G	A	22.6
SL2221	1	27101253	27101254	ARID1A	G	C	17.39
SL2221	19	7692671	7692672	XAB2	T	G	14.01
SL2221	8	52733049	52733050	PCMTD1	T	A	12.36
SL2221	4	104082348	104082349	CENPE	C	T	11.12

Table B-2: Continued

SL2221	GL0002 20.1	129312	129313		C	T	10.94
SL2221	7	102524834	102524835	FBXL13	T	C	9.888
SL2221	11	709400	709401	EPS8L2	A	G	8.734
SL2221	10	126301986	126301987	LHPP	C	T	8.524
SL2221	GL0002 30.1	18396	18397		A	C	7.99
SL2221	15	21071191	21071192	POTEB2	C	T	6.333
SL2221	19	536107	536108	CDC34	G	A	5.921
SL2221	3	45772771	45772772	SACM1L	G	A	5.191
SL2221	19	536106	536107	CDC34	T	C	4.635
SL2221	1	29845275	29845276		T	C	4.311
SL2221	22	21335258	21335259	AIFM3	C	A	3.565
SL2221	1	29845269	29845270		T	C	3.302
SL2221	10	126301969	126301970	LHPP	T	C	2.946
SL2221	6	36686406	36686407	RAB44	C	T	2.929
SL2221	2	11924949	11924950	LPIN1	T	C	2.739
SL2221	2	27852117	27852118	GPN1	A	C	1.718
SL2221	19	54723737	54723738	LILRB3	G	C	0.47
SL2221	5	158204424	158204425	EBF1	A	G	0.102
SL2221	22	46447713	46447714	C22orf26	T	C	0.016
SL2221	1	75679568	75679569	SLC44A5	C	CTT	
SL2221	1	86554812	86554813	COL24A1	G	GA	
SL2221	1	112240037	112240038	RAP1A	C	CT	
SL2221	11	86807150	86807151	TMEM135	C	CATATATATAA AGAAA	
SL2221	12	121678326	121678327	CAMKK2	C	CTTT	
SL2221	14	73563898	73563899	RBM25	C	CTTTTT	
SL2221	2	27852116	27852117	GPN1	A	AGGTCTT	
SL2221	21	47845990	47845991	PCNT	T	TC	
SL2221	7	92900511	92900512	CCDC132	G	GT	
SL2221,EK3261	2	130948317	130948318	MZT2B	T	TTTG	
SL2221,MC3481	12	132547092	132547093	EP400	A	ACAG	
SL2221,MC3481	12	132547092	132547093	EP400	A	ACAGCAGCAG CAG	
SM2701	19	42599763	42599764	POU2F2	C	T	34
SM2701	8	41397266	41397267	GINS4	C	G	34
SM2701	X	128710005	128710006	OCRL	C	T	34
SM2701	9	130210665	130210666	RPL12	A	C	26.8
SM2701	12	123444364	123444365	ABCB9	C	T	24.3
SM2701	10	134008511	134008512	DPYSL4	G	C	20.8
SM2701	17	38643433	38643434	TNS4	G	A	18.58
SM2701	19	35524672	35524673	SCN1B	G	A	16.92
SM2701	2	202501447	202501448	TMEM237	T	C	15.99
SM2701	1	52255293	52255294	NRD1	C	T	15.34
SM2701	4	119428086	119428087		T	A	14.8
SM2701	19	46341823	46341824	SYMPK	C	T	14.62
SM2701	22	38535945	38535946	PLA2G6	G	A	13.13

Table B-2: Continued

SM2701	X	118892750	118892751	SOWAHD	A	G	12.63
SM2701	21	32554912	32554913	TIAMI	G	A	11.63
SM2701	15	42618626	42618627	GANC	G	A	11.55
SM2701	GL0002 30.1	22363	22364		C	T	10.91
SM2701	2	131414393	131414394	POTEJ	C	T	10.69
SM2701	20	42199707	42199708	SGK2	T	G	10.67
SM2701	18	2937824	2937825	LPIN2	G	A	10.34
SM2701	7	141782015	141782016	MGAM	G	T	10.02
SM2701	12	69082804	69082805	NUP107	G	A	9.872
SM2701	7	142495125	142495126	TRBC2	G	A	9.29
SM2701	3	148939468	148939469	CP	A	G	7.228
SM2701	5	167984561	167984562	PANK3	A	C	6.458
SM2701	5	78610459	78610460	JMY	A	C	6.435
SM2701	12	81760916	81760917	PPFIA2	T	C	6.212
SM2701	16	34257417	34257418		G	A	5.658
SM2701	1	152975714	152975715	SPRR3	C	T	4.728
SM2701	14	107048884	107048885	IGHV3-53	C	T	4.444
SM2701	8	81905293	81905294	PAG1	G	A	4.229
SM2701	7	142495126	142495127	TRBC2	G	T	4.011
SM2701	17	5058706	5058707	USP6	G	A	3.677
SM2701	1	64089551	64089552	PGM1	T	A	3.626
SM2701	7	65552496	65552497	ASL	A	G	3.07
SM2701	15	67652096	67652097	IQCH	G	C	3.036
SM2701	19	46996185	46996186	PNMAL2	T	C	1.877
SM2701	1	11867043	11867044	CLCN6	T	C	1.661
SM2701	16	331988	331989	ARHGDIG	T	G	1.415
SM2701	7	102194965	102194966	SPDYE2	G	A	1.313
SM2701	2	234758613	234758614	HJURP	A	G	1.065
SM2701	X	128985998	128985999		A	G	0.895
SM2701	7	82784016	82784017	PCLO	G	T	0.555
SM2701	5	179298341	179298342	TBC1D9B	G	C	0.524
SM2701	12	70986198	70986199	PTPRB	A	G	0.309
SM2701	X	134292059	134292060	CXorf48	G	A	0.168
SM2701	4	144621778	144621779	FREM3	A	G	0.136
SM2701	5	76785406	76785407	WDR41	A	G	0.114
SM2701	3	42701080	42701081	ZBTB47	T	C	0.003
SM2701	5	74442642	74442643	ANKRD31	G	T	0.002
SM2701	17	48646375	48646376	CACNA1G	T	TGTGTGTTG	
SM2701	18	59942585	59942586	KIAA1468	G	GT	
SM2701	3	197544210	197544211	LRCH3	G	GTATT	
SM2701	7	147335932	147335933	CNTNAP2	C	CT	
SM2701,MA5421	10	28872480	28872481	WAC	C	CA	
TA2691	GL0002 05.1	117786	117787		G	A	18.92
TA2691	12	30607986	30607987		T	C	13.48
TA2691	1	170129668	170129669	METTL11B	C	T	12.46

Table B-2: Continued

TA2691	1	21932624	21932625	RAP1GAP	G	A	11.09
TA2691	GL0002 05.1	117886	117887		C	T	10.76
TA2691	GL0001 95.1	130270	130271		G	A	10.5
TA2691	5	1572396	1572397	SDHAP3	C	T	9.763
TA2691	16	33395982	33395983		T	C	9.02
TA2691	10	71244831	71244832	TSPAN15	C	A	7.613
TA2691	1	120611497	120611498	NOTCH2	G	C	6.042
TA2691	5	13842021	13842022	DNAH5	G	A	5.478
TA2691	11	44073174	44073175	ACCSL	A	T	5.303
TA2691	18	34156612	34156613	FHOD3	C	A	4.887
TA2691	1	17044661	17044662		G	C	4.721
TA2691	12	75687184	75687185	CAPS2	G	A	4.463
TA2691	6	335414	335415	DUSP22	T	C	4.408
TA2691	19	54745765	54745766	LILRA6	A	G	4.233
TA2691	9	139235525	139235526	GPSM1	C	A	3.949
TA2691	20	24993413	24993414	ACSS1	T	C	3.925
TA2691	20	61483984	61483985	TCFL5	A	G	3.878
TA2691	2	15417282	15417283	NBAS	T	A	3.586
TA2691	19	34884720	34884721	GPI	C	T	3.448
TA2691	7	150696007	150696008	NOS3	A	G	2.992
TA2691	2	96521219	96521220	ANKRD36C	G	A	1.335
TA2691	8	9669334	9669335		T	C	1.203
TA2691	9	138606585	138606586	KCNT1	T	C	1.139
TA2691	19	6689349	6689350	C3	C	A	0.971
TA2691	3	194477033	194477034	LOC1005073 91	C	T	0.96
TA2691	22	43572179	43572180	TTLL12	G	T	0.854
TA2691	7	150324569	150324570	GIMAP6	C	T	0.776
TA2691	12	10560823	10560824	KLRC4	T	A	0.311
TA2691	17	21199514	21199515	MAP2K3	C	T	0.305
TA2691	6	109818588	109818589	AK9	A	T	0.229
TA2691	15	84860762	84860763	LOC440300	T	C	0.097
TA2691	22	19034078	19034079	DGCR2	A	C	0.05
TA2691	17	6690571	6690572	FBXO39	T	TGTGTGTGC	
TA2691	19	45852953	45852954	KLC3	T	TGGGGTG	
TA2691	19	49894026	49894027	CCDC155	T	TC	
TA2691	3	136574577	136574578	SLC35G2	T	TTAA	
TA2691	3	145939754	145939755	PLSCR4	C	CA	
TA2691	4	154669992	154669993	RNF175	C	CAAAA	
TA2691	6	160666659	160666660	SLC22A2	A	AC	
TA2691	7	102722156	102722157	ARMC10	T	TATAAC	
TA2691	9	125496793	125496794		T	TCTG	
TA2691	9	138606580	138606581	KCNT1	C	CGG	
TA2691	GL0002 12.1	6736	6737		C	CA	
TF3471	11	73584286	73584287	COA4	G	A	30

Table B-2: Continued

TF3471	8	29207590	29207591	DUSP4	A	C	25.3
TF3471	19	55420708	55420709	NCR1	T	C	24.8
TF3471	10	7774355	7774356	ITIH2	T	C	21.8
TF3471	11	109963956	109963957	ZC3H12C	G	A	17.58
TF3471	16	341275	341276	AXIN1	C	T	15.8
TF3471	6	82933308	82933309	IBTK	C	T	15.07
TF3471	14	23844902	23844903	IL25	C	T	14.13
TF3471	3	183689411	183689412	ABCC5	A	C	13.83
TF3471	2	26726751	26726752	OTOF	G	A	10.93
TF3471	GL0002 20.1	123815	123816		C	T	10.68
TF3471	17	77812918	77812919	CBX4	A	C	10.57
TF3471	2	220147846	220147847	DNAJB2	G	A	10.26
TF3471	MT	2886	2887		T	C	9.539
TF3471	1	51873950	51873951	EPS15	G	A	9.462
TF3471	17	48673735	48673736	CACNA1G	T	G	8.987
TF3471	9	130491725	130491726	TTC16	T	C	5.744
TF3471	12	130941261	130941262	RIMBP2	G	A	4.397
TF3471	6	42619831	42619832	UBR2	T	C	4.317
TF3471	16	24922536	24922537	SLC5A11	T	G	4.154
TF3471	3	183209691	183209692	KLHL6	C	G	3.963
TF3471	1	201339114	201339115	TNNT2	C	A	3.439
TF3471	15	102389260	102389261	OR4F13P	C	T	2.813
TF3471	17	3301548	3301549	OR1E1	G	A	2.255
TF3471	4	1695204	1695205	SLBP	G	T	1.757
TF3471	11	102663481	102663482	MMP1	A	T	1.679
TF3471	1	24673865	24673866	GRHL3	A	G	1.136
TF3471	5	71591483	71591484	MRPS27	A	C	1.044
TF3471	6	10460124	10460125		A	T	0.348
TF3471	20	43470836	43470837		A	C	0.213
TF3471	X	14883507	14883508	FANCB	A	T	0.072
TF3471	10	106974122	106974123	SORCS3	A	G	0.069
TF3471	17	26684391	26684392	POLDIP2	T	C	0.011
TF3471	12	10149795	10149796	CLEC1B	T	C	0.009
TF3471	10	98778573	98778574	SLIT1	C	CTCA	
TF3471	11	102663475	102663476	MMP1	A	AG	
TF3471	17	64961327	64961328	CACNG4	G	GCGCA	
TF3471	19	36642560	36642561	COX7A1	G	GC	
TF3471	20	50781297	50781298	ZFP64	T	TAA	
TF3471	21	47959975	47959976	DIP2A	G	GCTGTGC	
TF3471	22	24037625	24037626	RGL4	C	CTGT	
TF3471	4	99218107	99218108	RAP1GDS1	G	GA	
TF3471	6	11192828	11192829	NEDD9	C	CTT	
TF3471,AR5361	2	130948319	130948320	MZT2B	T	TG	
TF3471,DN4461	1	67160937	67160938	SGIP1	T	TAA	
TF3471,DN4461	1	67160937	67160938	SGIP1	T	TAAA	

Table B-2: Continued

TF3471,QW4591	13	40298638	40298639	COG6	A	T	1.229
TF3471,SL2221	19	23650359	23650360		T	TTCCTTC	
TF3471,SM2701,SL2221	6	136582496	136582497	BCLAF1	G	T	25.4
TF3471,SM2701,SL2221	9	137688799	137688800	COL5A1	A	G	4.579

Table B-3: Gemini loss of heterozygosity analysis output

samples	chrom	start	end	gene	ref	alt	cadd
MC3481	19	33490584	33490585	RHPN2	G	A	39
EK3261	11	107375421	107375422	ALKBH8	C	A	35
EK3261	11	111327260	111327261		C	A	35
EK3261	X	142967467	142967468	UBE2NL	T	G	35
BB4911	3	184648314	184648315	VPS8	G	A	34
MC3481	18	50912507	50912508	DCC	G	A	33
LK4881	18	72345691	72345692	ZNF407	G	A	33
EK3261	1	104117920	104117921	AMY2B	G	A	32
DN4461	3	39178436	39178437	TTC21A	G	T	32
AR5361	9	139836911	139836912	FBXW5	C	T	31
EK3261	X	48629444	48629445	GLOD5	G	A	30
BB4911	3	167068255	167068256	ZBBX	T	A	29.6
EK3261	X	15307658	15307659	ASB11	T	A	29.5
BB4911	11	124740143	124740144	ROBO3	G	A	29.1
EK3261	11	108409783	108409784	EXPH5	T	A	29
MC3481	2	102003698	102003699	CREG2	A	G	28.8
BB4911	7	20762645	20762646	ABCB5	G	T	28.8
BB4911	3	50332500	50332501	HYAL3	C	T	28.4
BB4911	3	48508394	48508395	TREX1	G	A	28.1
DN4461	3	58302248	58302249	RPP14	C	T	27.9
EK3261	11	104762061	104762062	CASP12	C	T	27.7
QW4591	20	590654	590655	TCF15	G	C	27.7
BB4911	3	69336939	69336940	FRMD4B	T	C	27.7
BB4911	3	56695043	56695044	FAM208A	G	A	27.5
JFH3411	9	26995579	26995580	LRRC19	T	A	27.5
EK3261	X	108708551	108708552	GUCY2F	A	G	27.5
BB4911	10	115410233	115410234	NRAP	T	C	27.2
JFH3411	9	19290793	19290794	DENND4C	A	C	27
JFH3411	9	6328946	6328947	TPD52L3	T	C	26.9
DN4461	5	78181476	78181477	ARSB	C	T	26.7
JFH3411	9	289556	289557	DOCK8	G	A	26.7
LK4881	18	52586544	52586545	CCDC68	A	G	26.6
EK3261	X	153690630	153690631	PLXNA3	G	A	26.6
BB4911	10	112595718	112595719	RBM20	G	C	26.3
LK4881	18	346699	346700	COLEC12	C	T	26.3
SM2701	8	52732957	52732958	PCMTD1	G	A	26.3
BB4911	11	118983433	118983434	C2CD2L	C	T	26.2
BB4911	11	123886983	123886984	OR10G4	A	G	26.2
BB4911	3	178968633	178968634	KCNMB3	C	T	26.2
QW4591	7	44259761	44259762	CAMK2B	T	G	25.8
LK4881	18	43497709	43497710	EPG5	A	G	25.7
JFH3411	9	35906470	35906471	HRCT1	C	T	25.6
BB4911	3	49721531	49721532	MST1	G	A	25.5
QW4591	19	34843835	34843836	KIAA0355	G	C	25.4
EK3261	6	136582496	136582497	BCLAF1	G	T	25.4

Table B-3: Continued

BB4911	3	194080915	194080916	LRRC15	G	A	25.3
BB4911	3	97591152	97591153	CRYBG3	C	T	25.2
BB4911	11	123676230	123676231	OR6M1	G	T	25.1
BB4911	11	124440361	124440362	OR8A1	C	G	25.1
LK4881	18	10704618	10704619	PIEZO2	C	G	25.1
LK4881	18	28934374	28934375	DSG1	T	C	25.1
LK4881	18	72176082	72176083	CNDP2	T	C	25.1
BB4911	3	149374872	149374873	WWTR1	G	T	25.1
BB4911	3	161221704	161221705	OTOL1	A	C	25.1
EK3261	1	79095525	79095526	IF14L	G	A	25
JZ1851	18	2595442	2595443	NDC80	G	T	25
BB4911	3	108159976	108159977	MYH15	G	A	24.9
JFH3411	17	45820021	45820022	TBX21	A	C	24.8
LK4881	18	61585259	61585260	SERPINB1 0	T	C	24.8
EK3261	1	160969937	160969938	F11R	G	T	24.7
QW4591	20	45358004	45358005	SLC2A10	G	T	24.7
LK4881	7	134889140	134889141	WDR91	G	A	24.7
BB4911	11	108464208	108464209	EXPH5	T	C	24.6
DN4461	2	168101944	168101945	XIRP2	G	A	24.5
DN4461	22	24179921	24179922	DERL3	G	C	24.4
BB4911	3	8672533	8672534	SSUH2	T	C	24.4
BB4911	3	133475811	133475812	TF	G	A	24.4
BB4911	3	37574950	37574951	ITGA9	G	A	24.3
BB4911	3	10264479	10264480	IRAK2	C	G	24.2
LK4881	18	60021760	60021761	TNFRSF11 A	C	T	24.1
JZ1851	18	13826390	13826391	MC5R	C	G	23.9
TF3471	18	61654462	61654463	SERPINB8	A	G	23.9
QW4591	2	206305363	206305364	PARD3B	C	A	23.9
BB4911	3	37366458	37366459	GOLGA4	C	A	23.9
JFH3411	9	34371787	34371788	KIAA1161	A	T	23.9
LK4881,MC3481	18	71740742	71740743	FBXO15	A	G	23.7
DN4461	21	32253512	32253513	KRTAP11- 1	A	T	23.7
BB4911	3	46008789	46008790	FYCO1	G	A	23.7
DN4461	1	207109115	207109116	PIGR	C	T	23.6
EK3261	11	116728629	116728630	SIK3	G	C	23.6
BB4911	3	32769188	32769189	CNOT10	A	T	23.6
BB4911	3	138191231	138191232	ESYT3	G	A	23.6
JFH3411	9	286592	286593	DOCK8	C	A	23.6
JFH3411	9	19786019	19786020	SLC24A2	A	C	23.6
BB4911	11	111608257	111608258	PPP2R1B	C	G	23.5
JZ1851	18	580622	580623	CETN1	T	C	23.5
EK3261	X	7023677	7023678	HDHD1	G	A	23.5
SM2701	19	40030703	40030704	EID2	C	T	23.4
BB4911	3	194181526	194181527	ATP13A3	G	A	23.4

Table B-3: Continued

JFH3411	9	21816757	21816758	MTAP	G	A	23.4
JFH3411	9	38396064	38396065	ALDH1B1	G	T	23.4
EK3261	X	106844894	106844895	FRMPD3	C	T	23.4
JFH3411	13	52676274	52676275	NEK5	T	G	23.3
BB4911	3	81754731	81754732	GBE1	A	G	23.3
EK3261	X	20034242	20034243	MAP7D2	T	A	23.3
DN4461	16	28649786	28649787		G	A	23.2
LK4881	18	8784722	8784723	SOGA2	A	G	23.2
LK4881	18	55240504	55240505	FECB	C	T	23.2
JM1191	2	118732857	118732858	CCDC93	T	C	23.2
BB4911	3	9426223	9426224	THUMPD3	G	A	23.2
BB4911	3	130116695	130116696	COL6A5	A	C	23.2
JFH3411	9	4622452	4622453	SPATA6L	T	C	23.2
EK3261	11	108044090	108044091	NPAT	T	A	23.1
EK3261	11	119998233	119998234	TRIM29	C	T	23.1
SM2701	16	84485676	84485677	ATP2C2	T	A	23.1
DN4461	17	78346869	78346870	RNF213	C	A	23.1
JZ1851,LK4881	18	43262358	43262359	SLC14A2	G	A	23.1
DN4461	20	60910123	60910124	LAMA5	T	G	23.1
BB4911	3	10331456	10331457	GHRL	G	T	23.1
BB4911	3	49162283	49162284	LAMB2	C	T	23.1
BB4911	3	81698129	81698130	GBE1	T	C	23.1
EK3261	11	89447374	89447375	TRIM77	C	T	23
BB4911	11	123777735	123777736	OR8D4	T	C	23
JZ1851	18	10759839	10759840	PIEZO2	C	A	23
BB4911	3	165491279	165491280	BCHE	C	T	23
DN4461	9	139752898	139752899	MAMDC4	T	G	23
JFH3411	MT	10276	10277		A	C	23
TF3471	10	23482634	23482635	PTF1A	T	C	22.9
BB4911	11	100820662	100820663	ARHGAP4 2	G	A	22.9
JZ1851	18	9255981	9255982	ANKRD12	A	G	22.9
BB4911	3	38357960	38357961	SLC22A14	C	G	22.9
QW4591	3	49735540	49735541	RNF123	T	G	22.9
BB4911	3	148545574	148545575	CPB1	C	T	22.9
BB4911	3	195489008	195489009	MUC4	C	A	22.9
JFH3411	9	35712002	35712003	TLN1	G	A	22.9
EK3261	11	108381246	108381247	EXPH5	C	T	22.8
LK4881	18	14537948	14537949	POTEC	A	G	22.8
JFH3411	2	97877477	97877478	ANKRD36	G	A	22.8
AR5361	14	24760763	24760764	DHRS1	G	A	22.7
QW4591	1	161642773	161642774	FCGR2B	T	G	22.6
EK3261, BB4911	11	94862576	94862577	ENDOD1	G	T	22.6
SM2701	16	10837912	10837913	NUBP1	C	G	22.6
JZ1851	18	34324090	34324091	FHOD3	G	A	22.6
QW4591	22	37260159	37260160	NCF4	A	C	22.6

Table B-3: Continued

BB4911	11	123887163	123887164	OR10G4	A	C	22.5
BB4911	11	124180281	124180282	OR8D1	A	C	22.5
MC3481	18	8638355	8638356	RAB12	T	G	22.5
JFH3411	9	37441649	37441650	ZBTB5	T	C	22.5
BB4911	11	124180081	124180082	OR8D1	A	G	22.4
JFH3411	14	55605045	55605046	LGALS3	A	C	22.4
LK4881	18	60383981	60383982	PHLPP1	G	A	22.4
SL2221	19	56052794	56052795	SGK110	G	A	22.4
SM2701	16	78420774	78420775	WVOX	G	A	22.3
DN4461	9	107332376	107332377	OR13C8	T	A	22.3
EK3261	11	111724132	111724133	ALG9	C	T	22.2
JFH3411,QW4591	13	52524487	52524488	ATP7B	T	C	22.2
AR5361	20	6011933	6011934	CRLS1	C	T	22.2
JFH3411	1	38273787	38273788	YRDC	T	C	22.1
DN4461	12	48359675	48359676	TMEM106 C	G	T	22.1
JZ1851	18	33767529	33767530	MOCOS	C	T	22.1
EK3261	3	57857403	57857404	SLMAP	C	T	22.1
QW4591	6	109773806	109773807	MICAL1	G	C	22.1
JFH3411	9	35559212	35559213	RUSC2	C	T	22.1
EK3261	11	116655599	116655600	ZNF259	G	A	21.9
LK4881	18	48333202	48333203	MRO	C	G	21.9
JFH3411	9	35674052	35674053	CA9	G	A	21.9
EK3261	X	103268332	103268333	H2BFWT	G	A	21.9
DN4461	9	139368952	139368953	SEC16A	G	A	21.8
JFH3411	13	49794649	49794650	MLNR	C	A	21.7
BB4911	3	55508643	55508644	WNT5A	C	A	21.7
DN4461	9	139879169	139879170	LCNL1	G	A	21.7
JZ1851	18	24445846	24445847	AQP4	G	A	21.6
MC3481	18	43252882	43252883	SLC14A2	G	A	21.6
BB4911	3	66430466	66430467	LRIG1	C	G	21.6
JFH3411	13	58207710	58207711	PCDH17	G	T	21.5
JZ1851	18	54264360	54264361		G	A	21.4
AR5361	12	32889910	32889911	DNM1L	C	T	21.3
EK3261	11	86161387	86161388	ME3	C	G	21.1
BB4911	3	44884646	44884647	KIF15	C	A	21.1
JFH3411	9	34724240	34724241	FAM205A	C	A	21.1
EK3261	11	102651312	102651313	MMP10	G	C	21
DN4461	3	133941319	133941320	RYK	C	T	21
AR5361	11	870466	870467	CHID1	C	T	20.9
LK4881	18	50432601	50432602	DCC	C	G	20.9
BB4911	3	57138418	57138419	IL17RD	G	A	20.7
BB4911	11	108155131	108155132	ATM	G	A	20.6
BB4911	3	183774761	183774762	HTR3C	C	A	20.6
JFH3411	9	34726670	34726671	FAM205A	G	A	20.5
BB4911	3	100119795	100119796	TOMM70A	C	T	20.4

Table B-3: Continued

EK3261	X	118893053	118893054	SOWAHD	C	A	20.3
JZ1851	18	44236994	44236995	LOXHD1	A	T	20.2
JFH3411	9	16685538	16685539	BNC2	T	C	20.2
EK3261	X	154158179	154158180	F8	G	C	20
AR5361	17	59473879	59473880	TBX2	G	A	19.99
BB4911	3	66430810	66430811	LRIG1	T	G	19.98
EK3261	11	108129656	108129657	ATM	A	G	19.91
JZ1851	18	44560299	44560300	TCEB3B	C	T	19.87
JFH3411	9	20620574	20620575	MLLT3	G	A	19.73
JFH3411	9	18829951	18829952	ADAMTSL 1	A	G	19.61
TF3471	18	48346023	48346024	MRO	G	T	19.56
EK3261	11	119207927	119207928	RNF26	C	T	19.4
BB4911	3	167747021	167747022	GOLIM4	C	T	19.32
SM2701	18	21229100	21229101	ANKRD29	C	T	19.31
BB4911	3	118865969	118865970	C3orf30	G	A	19.29
LK4881	13	33095619	33095620	N4BP2L2	G	A	19.28
TF3471	17	5415622	5415623	LOC10192 8044	C	T	19.19
JFH3411	9	14776139	14776140	FREM1	C	T	19.13
EK3261	11	111848530	111848531	DIXDC1	C	T	19.1
TF3471,MC3481	18	56940306	56940307	RAX	G	T	19.02
BB4911	3	136237104	136237105	STAG1	C	T	19
EK3261	11	121361014	121361015	SORL1	G	A	18.94
EK3261	11	1651227	1651228	KRTAP5-5	C	G	18.93
DN4461	20	61929347	61929348	COL20A1	C	A	18.88
BB4911	3	9859455	9859456	TTLL3	C	G	18.78
EK3261	11	100998770	100998771	PGR	C	G	18.76
BB4911	3	67054648	67054649	KBTBD8	T	C	18.76
JFH3411	4	25125702	25125703	SEPSECS	C	G	18.75
BB4911	15	64706258	64706259	TRIP4	G	A	18.72
DN4461	17	7474538	7474539	SEN3	C	T	18.68
LK4881	20	1277689	1277690	SNPH	C	T	18.67
EK3261	11	116633861	116633862	BUD13	G	A	18.64
JM1191	18	14105015	14105016	ZNF519	C	A	18.54
JZ1851	4	38665817	38665818	KLF3	G	A	18.47
TF3471	18	61160286	61160287	SERPINB5	T	C	18.45
BB4911	11	118514624	118514625	PHLDB1	C	T	18.38
TF3471	18	43417751	43417752	SIGLEC15	C	G	18.36
BB4911	3	47618952	47618953	CSPG5	C	A	18.32
JFH3411	9	2828764	2828765	KIAA0020	C	G	18.31
EK3261	X	117528141	117528142	WDR44	C	T	18.24
DN4461	12	50467643	50467644	ASIC1	G	T	18.18
BB4911	3	52428987	52428988	DNAH1	C	A	18.17
BB4911	3	194349177	194349178	TMEM44	C	T	18.17
LK4881	7	100488657	100488658	ACHE	G	C	18.14
SM2701	16	87350772	87350773	C16orf95	C	A	18.13

Table B-3: Continued

JFH3411	4	158143091	158143092	GRIA2	A	G	18.13
JM1191	20	33296514	33296515	TP53INP2	C	G	18.12
BB4911	3	52941582	52941583	SFMBT1	C	T	18.11
DN4461	4	55991460	55991461	KDR	C	A	18.06
TF3471	18	61654328	61654329	SERPINB8	C	T	18.02
JFH3411	9	35661242	35661243	CCDC107	C	T	18.02
EK3261	X	88008806	88008807	CPXCR1	G	A	18.02
MC3481	18	30352113	30352114	KLHL14	C	G	17.99
JZ1851	18	73001989	73001990	TSHZ1	A	G	17.99
QW4591	13	78192206	78192207	SCEL	T	C	17.93
DN4461	8	87452866	87452867	WWP1	A	T	17.86
MA5421	16	29988940	29988941	TAOK2	A	G	17.85
JZ1851	18	54446734	54446735	WDR7	C	T	17.85
DN4461	9	126220113	126220114	DENND1A	C	T	17.85
LK4881	18	57026435	57026436	LMAN1	C	T	17.82
BB4911	3	179092988	179092989	MFN1	C	T	17.63
TF3471	18	47801799	47801800	MBD1	G	A	17.61
BB4911	3	44762829	44762830	ZNF502	A	G	17.61
JZ1851	18	6980522	6980523	LAMA1	T	C	17.6
DN4461	6	41100173	41100174	ADCY10P 1	C	T	17.59
BB4911	3	148786107	148786108	HLTF	C	T	17.57
JFH3411	9	4298463	4298464	GLIS3	T	C	17.56
AR5361	16	5097946	5097947	C16orf89	A	G	17.54
BB4911	3	8809221	8809222	OXTR	C	T	17.53
EK3261	X	48403152	48403153	TBC1D25	G	A	17.53
BB4911	11	120187970	120187971	POU2F3	G	A	17.52
EK3261	X	50146569	50146570	DGKK	C	T	17.51
BB4911	3	111760772	111760773	TMPRSS7	C	T	17.47
LK4881, DN4461	17	7185860	7185861	SLC2A4	T	C	17.41
BB4911	3	108107924	108107925	MYH15	C	A	17.39
BB4911	3	169381023	169381024	MECOM	C	A	17.35
EK3261	X	70373215	70373216	NLGN3	C	T	17.34
LK4881, MC3481	18	3164384	3164385	MYOM1	C	T	17.33
JZ1851	18	56196491	56196492	ALPK2	G	A	17.32
EK3261	11	93212244	93212245	SMCO4	C	T	17.3
JFH3411	13	51287407	51287408	DLEU7	C	G	17.29
BB4911	3	50679243	50679244	MAPKAP K3	G	A	17.26
BB4911	3	127323829	127323830	MCM2	C	T	17.22
SM2701	7	47879048	47879049	PKDIL1	G	A	17.22
BB4911	3	52237969	52237970	ALAS1	C	T	17.21
LK4881	18	29122798	29122799	DSG2	G	A	17.19
BB4911	3	133698348	133698349	SLCO2A1	C	T	17.18
DN4461	10	27529548	27529549	ACBD5	C	A	17.16
EK3261	X	24073760	24073761	EIF2S3	C	T	17.12
SM2701	2	42522755	42522756	EML4	A	G	17.11

Table B-3: Continued

JFH3411	8	128098560	128098561		T	A	17.02
JZ1851	18	56204488	56204489	ALPK2	C	G	16.98
DN4461	20	30414620	30414621	MYLK2	C	T	16.98
LK4881	4	99337880	99337881	RAP1GDS1	C	T	16.96
BB4911	3	184046469	184046470	EIF4G1	C	T	16.95
BB4911	3	108188992	108188993	MYH15	G	A	16.94
DN4461	17	36493585	36493586	GPR179	A	T	16.93
DN4461	6	32123638	32123639	PPT2	G	A	16.92
DN4461	9	114033503	114033504		A	G	16.92
BB4911	3	49849722	49849723	UBA7	G	A	16.91
EK3261	5	64023980	64023981	SREK1IP1	C	T	16.87
AR5361	2	197458365	197458366	HECW2	G	A	16.86
AR5361	8	7718186	7718187	SPAG11A	T	G	16.86
SM2701	4	167662962	167662963	SPOCK3	C	T	16.82
EK3261	11	94231846	94231847	ANKRD49	G	A	16.81
JFH3411	5	52778440	52778441	FST	C	G	16.81
JZ1851	14	91884247	91884248	CCDC88C	G	A	16.78
EK3261	11	95564258	95564259	CEP57	A	G	16.76
BB4911	3	13679334	13679335	FBLN2	C	T	16.75
BB4911	3	39401358	39401359		C	T	16.74
BB4911	3	59996968	59996969	FHIT	C	T	16.74
LK4881	18	23865850	23865851	TAF4B	C	T	16.73
JZ1851	18	50942652	50942653	DCC	C	T	16.7
QW4591	13	76180041	76180042	UCHL3	T	G	16.69
BB4911	3	42265368	42265369	TRAK1	C	T	16.69
BB4911	3	183432982	183432983	YEATS2	C	T	16.69
DN4461	9	34257094	34257095	KIF24	G	A	16.69
JZ1851	18	74090930	74090931	ZNF516	C	T	16.68
LK4881	4	1018704	1018705	FGFRL1	C	A	16.65
JFH3411	9	33625184	33625185	ANXA2P2	C	T	16.62
BB4911	3	49701982	49701983	BSN	G	A	16.61
LK4881	18	33750045	33750046	ELP2	C	T	16.56
JZ1851	18	59001001	59001002	CDH20	A	G	16.55
JFH3411	9	34178973	34178974	UBAP1	G	A	16.54
BB4911	11	118986629	118986630	C2CD2L	G	A	16.5
EK3261	X	37518805	37518806	LANCL3	C	T	16.48
JFH3411	9	2622133	2622134	VLDLR	C	T	16.47
JFH3411	9	32634466	32634467	TAF1L	T	C	16.47
JFH3411	4	119435060	119435061	CEP170P1	C	T	16.46
AR5361	17	77321878	77321879	RBFOX3	C	T	16.42
QW4591	17	38253668	38253669	NR1D1	C	A	16.4
LK4881	18	55027211	55027212	ST8SIA3	T	G	16.33
JFH3411	9	45733680	45733681	FAM27E2	T	A	16.33
JZ1851	18	18603576	18603577	ROCK1	C	T	16.26
EK3261	X	119421166	119421167	TMEM255A	C	A	16.25

Table B-3: Continued

BB4911	11	120998941	120998942	TECTA	C	T	16.24
EK3261	11	95657110	95657111	MTMR2	T	G	16.23
QW4591	12	26275554	26275555	BHLHE41	G	A	16.23
BB4911	3	49455329	49455330	AMT	C	T	16.22
JFH3411	9	35841611	35841612	TMEM8B	G	T	16.22
BB4911	3	10452392	10452393	ATP2B2	C	T	16.2
JFH3411	9	35829389	35829390	TMEM8B	C	T	16.2
AR5361	9	139752912	139752913	MAMDC4	C	T	16.2
JFH3411	20	9495296	9495297	LAMP5	C	T	16.17
BB4911	3	124692688	124692689	HEG1	C	T	16.15
DN4461	9	100823134	100823135	NANS	G	C	16.15
JZ1851	18	29426668	29426669	TRAPPC8	A	G	16.14
LK4881	8	94146655	94146656	C8orf87	G	T	16.08
DN4461	18	52928806	52928807	TCF4	C	T	16.07
BB4911	3	14712472	14712473	CCDC174	G	A	16.07
EK3261	X	152835199	152835200	ATP2B3	C	T	16.07
EK3261	22	43556921	43556922	TSPO	C	G	16.04
BB4911	3	115571363	115571364	LSAMP	C	T	16.04
BB4911	3	9407021	9407022	THUMPD3	T	C	16.02
LK4881	2	211341155	211341156	LANCL1	C	G	16
EK3261	1	20645683	20645684	VWA5B1	C	A	15.99
QW4591	13	50299676	50299677	KPNA3	T	C	15.97
BB4911	11	118895685	118895686	SLC37A4	C	T	15.93
BB4911	3	16261419	16261420	GALNT15	C	T	15.88
EK3261	X	71425234	71425235	ERCC6L	C	T	15.88
JZ1851	18	61022790	61022791	KDSR	C	T	15.87
DN4461	7	139138949	139138950	KLRG2	C	G	15.85
JFH3411	9	36003634	36003635		G	T	15.83
EK3261	11	111784228	111784229	HSPB2	C	T	15.8
JFH3411	7	154237841	154237842	DPP6	T	C	15.79
BB4911	3	14180705	14180706	TMEM43	C	T	15.78
BB4911	4	177608706	177608707	VEGFC	C	T	15.74
JFH3411,QW4591	13	50296114	50296115	KPNA3	C	T	15.73
EK3261	X	130930161	130930162	LOC28646 7	C	T	15.73
BB4911	3	139090697	139090698	COPB2	A	G	15.68
JFH3411	9	19409205	19409206	ACER2	G	C	15.68
BB4911	3	55508460	55508461	WNT5A	G	A	15.65
BB4911	3	174974176	174974177	NAALADL 2	C	G	15.65
JZ1851	18	8609503	8609504	RAB12	G	A	15.6
MC3481	18	8828951	8828952	SOGA2	C	T	15.6
BB4911	3	15476010	15476011	EAF1	C	G	15.6
JFH3411	9	7597987	7597988		C	T	15.6
LK4881	18	21747399	21747400	OSBPL1A	A	G	15.59
EK3261	X	50129368	50129369	DGKK	A	G	15.59
EK3261	11	123676387	123676388	OR6M1	G	A	15.57

Table B-3: Continued

JFH3411	9	35689974	35689975	TPM2	C	A	15.54
BB4911	3	12229014	12229015	SYN2	A	G	15.51
BB4911	3	183212025	183212026	KLHL6	C	T	15.5
BB4911	3	121643803	121643804	SLC15A2	C	T	15.49
MC3481	2	37506838	37506839	PRKD3	C	A	15.45
LK4881	7	12400836	12400837	VWDE	G	A	15.45
EK3261, BB4911	11	93212253	93212254	SMCO4	C	T	15.41
BB4911	3	63437976	63437977	SYNPR	C	G	15.4
BB4911	3	119171279	119171280	TMEM39A	C	G	15.37
JZ1851	1	72748279	72748280	NEGR1	T	A	15.36
BB4911	11	90015877	90015878		A	G	15.36
BB4911	3	127872505	127872506	EEFSEC	C	T	15.35
EK3261	11	119052825	119052826	NLRX1	C	A	15.32
AR5361	19	15027981	15027982		G	A	15.32
BB4911	11	118886116	118886117	CCDC84	C	T	15.27
BB4911	3	9918860	9918861	CIDEC	C	A	15.27
JZ1851	18	37202305	37202306	LINC00669	C	G	15.26
LK4881	9	137533633	137533634	COL5A1	C	G	15.26
DN4461	3	195477785	195477786	MUC4	C	T	15.23
BB4911	10	104595247	104595248	CYP17A1	G	A	15.22
EK3261, BB4911	11	120041109	120041110	TRIM29	T	A	15.21
EK3261	3	132106722	132106723		G	A	15.2
LK4881	15	100794362	100794363	ADAMTS1 7	C	T	15.19
JFH3411	9	34400979	34400980	FAM219A	G	A	15.19
EK3261	11	107381532	107381533	ALKBH8	G	A	15.18
BB4911	3	20043349	20043350	PP2D1	G	C	15.17
DN4461	22	23735419	23735420	ZDHHC8P 1	G	A	15.13
MA5421	12	132318880	132318881	MMP17	C	T	15.12
BB4911	3	64587817	64587818	ADAMTS9	G	A	15.12
SL2221	14	57268442	57268443	OTX2	C	T	15.1
JZ1851	18	5956237	5956238	L3MBTL4	C	T	15.1
BB4911	3	15807724	15807725	ANKRD28	T	A	15.06
BB4911	3	44284583	44284584	TOPAZ1	G	A	15.04
JFH3411	9	34725046	34725047	FAM205A	C	T	15
QW4591	12	54333504	54333505	HOXC13	A	C	14.95
JFH3411	13	51603767	51603768	GUCY1B2	T	C	14.94
JFH3411	14	71500350	71500351	PCNX	C	G	14.94
QW4591	1	43369004	43369005		G	A	14.91
BB4911	3	147111778	147111779	ZIC4	T	C	14.88
JZ1851, LK4881	18	29788106	29788107	MEP1B	G	A	14.82
JFH3411	9	7174672	7174673	KDM4C	G	A	14.82
BB4911	11	94760222	94760223	KDM4E	T	A	14.79
QW4591	13	52313194	52313195	WDFY2	C	T	14.79
MA5421	9	35687555	35687556	TPM2	G	C	14.79
EK3261	X	54837339	54837340	MAGED2	C	T	14.76

Table B-3: Continued

JFH3411	9	20764869	20764870	FOCAD	T	C	14.75
BB4911	3	40498844	40498845	RPL14	C	T	14.74
BB4911	3	52676064	52676065	PBRM1	C	T	14.74
EK3261	11	120823720	120823721	GRIK4	A	G	14.73
BB4911	3	128627020	128627021	ACAD9	A	G	14.7
BB4911	3	184971804	184971805	EHHADH	G	C	14.7
BB4911	3	195501148	195501149	MUC4	C	T	14.7
JFH3411	9	3898508	3898509	GLIS3	A	T	14.67
JFH3411	9	4576773	4576774	SLC1A1	G	A	14.67
JFH3411	9	35801855	35801856	NPR2	C	A	14.67
EK3261	X	1713020	1713021	AKAP17A	C	T	14.67
BB4911	3	44492106	44492107	ZNF445	G	T	14.66
BB4911	3	121641692	121641693	SLC15A2	G	A	14.66
BB4911	3	183976240	183976241	ECE2	A	G	14.66
BB4911	11	100998622	100998623	PGR	G	A	14.62
MC3481	8	101237330	101237331	SPAG1	C	A	14.61
BB4911	3	66444329	66444330	LRIG1	T	C	14.59
EK3261	11	94501609	94501610	AMOTL1	G	A	14.56
BB4911	3	137982717	137982718	ARMC8	T	G	14.55
BB4911	3	97594260	97594261	CRYBG3	G	A	14.52
DN4461	6	150201719	150201720	RAET1E	G	A	14.51
JZ1851	18	6977843	6977844	LAMA1	A	G	14.48
BB4911	3	38647641	38647642	SCN5A	G	T	14.48
AR5361	20	35374484	35374485	NDRG3	G	A	14.47
LK4881,MC3481	18	3176062	3176063	MYOM1	C	T	14.46
BB4911	20	60791403	60791404	HRH3	C	T	14.45
QW4591	13	53774730	53774731		T	C	14.44
JFH3411	14	79368937	79368938	NRXN3	T	G	14.44
BB4911	3	39180262	39180263	TTC21A	G	A	14.44
BB4911	3	133475721	133475722	TF	C	T	14.43
BB4911	11	113078046	113078047	NCAM1	C	T	14.42
BB4911	3	133167362	133167363	BFSP2	G	A	14.38
BB4911	3	179298998	179298999	ACTL6A	C	T	14.38
EK3261	X	69261817	69261818	AWAT2	A	G	14.38
LK4881	18	30349690	30349691	KLHL14	C	T	14.37
BB4911	3	8775660	8775661	CAV3	C	T	14.37
BB4911	3	132218622	132218623	DNAJC13	G	T	14.37
EK3261	11	123624657	123624658	OR6X1	G	T	14.36
BB4911	3	39186727	39186728	CSRNP1	C	T	14.35
EK3261	X	71493690	71493691	RPS4X	C	T	14.34
SM2701	10	116444186	116444187	ABLIM1	G	A	14.33
LK4881	1	230933897	230933898	CAPN9	C	T	14.31
BB4911	3	133342217	133342218	TOPBP1	C	T	14.31
DN4461	12	65528726	65528727		C	T	14.3
EK3261	X	117566781	117566782	WDR44	C	T	14.3

Table B-3: Continued

BB4911	3	54919350	54919351	CACNA2D3	A	G	14.29
BB4911	3	9867624	9867625	TTLL3	C	T	14.28
SM2701	6	66547345	66547346		C	G	14.24
EK3261	X	1537001	1537002	ASMTL	C	G	14.24
BB4911	3	32181760	32181761	GPD1L	C	T	14.23
JZ1851	18	29339618	29339619	SLC25A52	G	A	14.22
BB4911	3	50339621	50339622	HYAL1	C	T	14.2
BB4911	3	132106928	132106929		T	A	14.2
DN4461	17	3994001	3994002	ZZEF1	C	T	14.19
LK4881	18	166818	166819	USP14	T	C	14.19
DN4461	1	154209489	154209490	UBAP2L	T	C	14.18
EK3261	11	94322351	94322352	PIWIL4	A	T	14.18
TA2691	2	240003812	240003813	HDAC4	G	A	14.17
BB4911	3	113655206	113655207	GRAMD1C	C	T	14.17
LK4881	18	58291478	58291479		T	C	14.16
EK3261	X	150909306	150909307	CNGA2	G	T	14.14
LK4881,TF3471	18	59947117	59947118	KIAA1468	G	A	14.13
EK3261	X	46618320	46618321	SLC9A7	C	G	14.11
BB4911	3	183777918	183777919	HTR3C	G	A	14.1
LK4881	17	62497529	62497530	DDX5	T	G	14.07
EK3261	X	100243290	100243291	ARL13A	G	A	14.07
EK3261	11	102573568	102573569	MMP27	C	A	14.05
DN4461	2	131266529	131266530	POTEI	C	A	14.04
JFH3411	9	18830086	18830087	ADAMTSL1	G	A	14.04
JM1191	1	63881551	63881552	ALG6	C	T	14.01
EK3261	X	136743848	136743849		A	G	14.01
BB4911	11	113698001	113698002	USP28	C	T	13.96
EK3261	X	23689636	23689637	PRDX4	T	C	13.95
JFH3411	7	64527302	64527303	CCT6P3	T	G	13.91
JFH3411	9	27561627	27561628	C9orf72	T	C	13.91
AR5361	9	140051375	140051376	GRIN1	G	A	13.91
QW4591	1	144014067	144014068	SRGAP2B	T	C	13.9
QW4591	13	76169218	76169219	UCHL3	T	G	13.89
JFH3411	9	88379741	88379742		G	A	13.89
BB4911	10	105927459	105927460	WDR96	C	T	13.87
MA5421	11	117298554	117298555	DSCAML1	G	A	13.87
JFH3411	9	4679905	4679906	CDC37L1	A	G	13.87
BB4911	3	184560968	184560969	VPS8	T	C	13.86
JFH3411	9	35705758	35705759	TLN1	G	A	13.86
BB4911	3	124746181	124746182	HEG1	C	A	13.85
JZ1851	18	57864140	57864141		G	T	13.83
AR5361	1	11982372	11982373	KIAA2013	A	G	13.82
JFH3411	9	27455583	27455584	MOB3B	C	G	13.82
BB4911	3	10133948	10133949	FANCD2	A	G	13.81

Table B-3: Continued

EK3261	X	69250307	69250308	EDA	C	T	13.81
JM1191	X	24665272	24665273	PCYT1B	G	A	13.8
EK3261,BB4911	11	122929623	122929624	HSPA8	A	G	13.79
JFH3411	13	53602969	53602970	OLFM4	A	G	13.79
EK3261	X	23689635	23689636	PRDX4	A	T	13.79
MC3481	18	44601475	44601476	KATNAL2	C	G	13.77
JZ1851	18	55143765	55143766	ONECUT2	C	T	13.76
SM2701	7	12410361	12410362	VWDE	C	T	13.76
LK4881	18	33713286	33713287	ELP2	T	A	13.74
BB4911	3	112063849	112063850	CD200	C	A	13.72
JFH3411	9	6639238	6639239	GLDC	C	T	13.71
BB4911	3	49721797	49721798	MST1	C	A	13.7
JFH3411	9	35870224	35870225	OR13J1	G	A	13.67
EK3261	11	93141579	93141580	CCDC67	C	A	13.66
DN4461	16	74537590	74537591	GLG1	C	T	13.66
AR5361	9	140079521	140079522	ANAPC2	G	A	13.66
JFH3411	12	45465933	45465934		C	T	13.65
QW4591	13	76334817	76334818	LMO7	C	T	13.65
BB4911	3	9974808	9974809	IL17RC	G	A	13.65
DN4461	8	144940299	144940300	EPPK1	G	A	13.65
BB4911	X	138880834	138880835	ATP11C	C	T	13.65
JZ1851	18	53178060	53178061	TCF4	G	A	13.61
JFH3411	9	2729474	2729475	KCNV2	C	T	13.61
TF3471	18	21100239	21100240	C18orf8	C	T	13.6
BB4911	3	6903296	6903297	GRM7	C	T	13.6
TF3471	18	7011412	7011413	LAMA1	G	A	13.55
LK4881	18	20965033	20965034	TMEM241	G	A	13.55
JFH3411	19	39108626	39108627	MAP4K1	A	C	13.55
BB4911	11	124440616	124440617	OR8A1	C	T	13.54
LK4881	18	71958970	71958971	CYB5A	C	A	13.52
BB4911	3	49753002	49753003	RNF123	T	G	13.52
JZ1851,TF3471	18	74091960	74091961	ZNF516	C	T	13.48
JFH3411	9	21854739	21854740	MTAP	C	T	13.48
JFH3411	9	35664623	35664624	ARHGEF3 9	C	A	13.47
JFH3411	8	1068484	1068485	DLGAP2	C	T	13.46
EK3261	X	152771508	152771509	BGN	C	T	13.46
JFH3411	18	59936080	59936081	KIAA1468	A	T	13.45
BB4911	3	167023737	167023738	ZBBX	G	C	13.45
QW4591	5	79950735	79950736	MSH3	C	G	13.43
BB4911	11	85374992	85374993	CREBZF	C	T	13.42
JZ1851	18	54695498	54695499	WDR7	A	G	13.42
QW4591	6	33768631	33768632	MLN	T	G	13.4
BB4911	11	113113514	113113515	NCAM1	G	A	13.38
MA5421	5	94114589	94114590	MCTP1	G	T	13.37
BB4911	3	97664724	97664725	MINA	C	T	13.35

Table B-3: Continued

JFH3411	9	433977	433978	DOCK8	A	G	13.35
DN4461	9	116791160	116791161	ZNF618	T	C	13.35
JFH3411	9	35616582	35616583	CD72	A	T	13.34
EK3261	X	70361966	70361967	MED12	G	A	13.34
QW4591	3	109212890	109212891	FLJ25363	C	T	13.3
LK4881	18	76752262	76752263	SALL3	C	A	13.29
DN4461	21	32493030	32493031	TIAM1	A	G	13.28
BB4911	3	75385313	75385314		C	T	13.26
BB4911	3	121647285	121647286	SLC15A2	C	T	13.26
JFH3411	6	42608113	42608114	UBR2	C	A	13.26
LK4881	18	59774036	59774037	PIGN	C	T	13.23
MA5421	22	21174797	21174798	PI4KA	T	C	13.23
EK3261	5	68530609	68530610	CDK7	C	T	13.23
BB4911	3	108135679	108135680	MYH15	C	T	13.22
JFH3411	9	6413402	6413403	UHRF2	C	T	13.21
BB4911	3	131894552	131894553		G	A	13.18
JFH3411	9	421979	421980	DOCK8	T	A	13.18
JM1191	18	2616456	2616457	NDC80	G	C	13.17
BB4911	3	9425910	9425911	THUMP3	G	A	13.17
JZ1851	18	28913598	28913599	DSG1	C	T	13.15
BB4911	3	195452950	195452951	MUC20	G	C	13.14
JFH3411	4	122291521	122291522	QRFPR	T	C	13.14
JFH3411	7	75988020	75988021	YWHAG	A	G	13.14
JFH3411	9	35801435	35801436	NPR2	C	T	13.14
LK4881	18	21404333	21404334	LAMA3	A	G	13.13
BB4911	3	108366977	108366978	DZIP3	A	G	13.13
BB4911	11	118873839	118873840	CCDC84	T	C	13.11
AR5361	7	148395483	148395484	CUL1	G	C	13.1
BB4911	7	16685869	16685870	BZW2	C	T	13.08
QW4591	22	37319326	37319327	CSF2RB	A	C	13.07
BB4911	3	183660584	183660585	ABCC5	G	A	13.05
EK3261	X	65824985	65824986	EDA2R	C	T	13.04
JZ1851	2	173429032	173429033	PDK1	T	A	13.03
JZ1851	4	114900923	114900924	ARSJ	G	C	13.03
LK4881	18	20577668	20577669	RBBP8	G	A	13
TF3471	6	29080488	29080489	OR2J3	C	T	13
LK4881	18	59936141	59936142	KIAA1468	C	T	12.99
BB4911	3	172165726	172165727	GHSR	C	T	12.99
JFH3411	9	20953048	20953049	FOCAD	A	G	12.98
JZ1851	18	60997828	60997829	KDSR	C	G	12.96
BB4911	3	187416633	187416634	RTP2	C	A	12.95
BB4911	3	44775961	44775962	ZNF501	A	G	12.94
BB4911	3	127379269	127379270	PODXL2	C	T	12.92
DN4461	9	140277825	140277826	EXD3	C	T	12.92
MA5421	10	59958955	59958956	IPMK	C	A	12.9
QW4591	13	47279257	47279258	LRCH1	G	T	12.87

Table B-3: Continued

BB4911	11	89402686	89402687	FOLH1B	T	C	12.86
JFH3411	9	8389363	8389364	PTPRD	C	G	12.85
BB4911	11	108163486	108163487	ATM	C	T	12.84
AR5361	22	17376290	17376291		T	C	12.83
JFH3411	4	1795483	1795484	FGFR3	T	G	12.83
JFH3411	9	35720826	35720827	TLN1	G	A	12.83
BB4911	3	52727256	52727257	GNL3	G	A	12.82
BB4911	3	167000255	167000256	ZBBX	G	C	12.81
JFH3411	9	15591371	15591372	CCDC171	T	A	12.81
BB4911	3	113955319	113955320	ZNF80	C	T	12.79
JFH3411	9	422156	422157	DOCK8	T	C	12.79
JFH3411	1	179244749	179244750		C	T	12.78
LK4881	8	23118154	23118155	CHMP7	T	C	12.78
MC3481	18	21124944	21124945	NPC1	C	G	12.77
JZ1851	18	50450239	50450240	DCC	T	G	12.77
JZ1851	18	10797361	10797362	PIEZO2	T	G	12.76
AR5361	1	15599024	15599025	FHAD1	G	A	12.75
BB4911	11	124078704	124078705		T	A	12.75
TF3471	18	56202393	56202394	ALPK2	C	T	12.75
MC3481	18	61471528	61471529	SERPINB7	C	T	12.74
BB4911	11	112072929	112072930	BCO2	G	A	12.7
DN4461	2	142567909	142567910	LRP1B	T	C	12.68
AR5361	2	201785836	201785837	ORC2	G	A	12.68
LK4881	4	74285238	74285239	ALB	C	T	12.67
DN4461	1	7527995	7527996	CAMTA1	T	C	12.65
BB4911	3	119361411	119361412	POPDC2	T	C	12.65
DN4461	9	95279984	95279985	ECM2	C	A	12.64
EK3261	X	207361	207362	PLCXD1	C	T	12.64
MA5421	16	73178222	73178223	C16orf47	C	A	12.62
BB4911	3	58870147	58870148	C3orf67	T	G	12.62
JFH3411	9	442029	442030	DOCK8	C	T	12.62
JFH3411	9	35562548	35562549	FAM166B	G	A	12.61
BB4911	11	118949330	118949331	VPS11	C	T	12.6
TF3471	18	52265307	52265308	DYNAP	A	C	12.6
EK3261	11	118108002	118108003	MPZL3	G	A	12.59
JZ1851	18	34232609	34232610	FHOD3	C	T	12.57
JZ1851	18	61377471	61377472	SERPINB1 1	G	A	12.56
JZ1851	19	54515873	54515874	CACNG6	C	T	12.56
BB4911	3	38793988	38793989	SCN10A	G	A	12.55
BB4911	3	118269773	118269774		A	G	12.54
QW4591	17	46653998	46653999	HOXB4	G	A	12.53
EK3261	X	54841736	54841737	MAGED2	G	A	12.53
TF3471	20	19193681	19193682	SLC24A3	C	T	12.52
TF3471	18	66504350	66504351	CCDC102 B	G	A	12.51
BB4911	3	108107703	108107704	MYH15	C	T	12.51

Table B-3: Continued

BB4911	3	111688577	111688578	PHLDB2	C	T	12.51
LK4881	18	12984143	12984144	SEH1L	C	A	12.5
BB4911	3	108557819	108557820	TRAT1	T	C	12.5
AR5361	9	139973819	139973820	UAP1L1	C	T	12.5
TF3471	5	176738537	176738538	MXD3	C	A	12.47
AR5361	11	13331807	13331808	ARNTL	G	A	12.46
BB4911	3	31638361	31638362	STT3B	T	G	12.45
BB4911	11	118940956	118940957	VPS11	C	G	12.44
BB4911	3	45776752	45776753	SACM1L	A	G	12.44
DN4461	9	134350322	134350323	PRRC2B	C	G	12.44
JFH3411	7	129938597	129938598	CPA4	G	T	12.43
MA5421	14	78870203	78870204	NRXN3	T	C	12.42
JFH3411	19	49014879	49014880	LMTK3	A	G	12.42
EK3261	11	89868754	89868755	NAALAD2	G	A	12.4
BB4911	3	58117663	58117664	FLNB	G	A	12.4
BB4911	3	58377038	58377039	PXK	C	T	12.39
BB4911	1	160499849	160499850		A	C	12.38
BB4911	3	182871961	182871962	LAMP3	C	T	12.38
JFH3411	10	38645342	38645343		C	T	12.35
EK3261	11	117096651	117096652	PCSK7	G	A	12.34
EK3261	11	117308794	117308795	DSCAML1	G	A	12.33
BB4911	11	85448678	85448679	SYTL2	G	A	12.32
JFH3411	13	53608631	53608632	OLFM4	C	T	12.31
BB4911	3	63981634	63981635	ATXN7	C	T	12.31
EK3261	X	1755403	1755404	ASMT	C	T	12.31
QW4591	1	205687260	205687261	NUCKS1	C	A	12.3
BB4911	3	4842230	4842231	ITPR1	C	T	12.3
MA5421	11	117748080	117748081	FXVD6	C	T	12.29
DN4461	4	95170838	95170839	SMARCA D1	G	A	12.29
LK4881	18	3457605	3457606	TGIF1	C	T	12.27
DN4461	19	57955243	57955244	ZNF749	A	G	12.27
JFH3411	16	46388561	46388562		T	A	12.26
MC3481	18	658063	658064	C18orf56	G	C	12.26
JFH3411	9	27556779	27556780	C9orf72	G	A	12.26
TA2691	9	36116965	36116966	RECK	C	A	12.24
BB4911	3	132106323	132106324		C	A	12.23
QW4591	2	141027097	141027098	LRP1B	T	C	12.21
BB4911	3	119198872	119198873	POGLUT1	G	A	12.21
BB4911	3	133329942	133329943	TOPBP1	G	A	12.21
DN4461	7	141464764	141464765	TAS2R3	C	T	12.2
TF3471	18	21043105	21043106	RIOK3	T	C	12.19
BB4911	3	44914967	44914968	TGM4	G	A	12.19
JZ1851	18	8783834	8783835	SOGA2	T	C	12.18
JFH3411	9	8437140	8437141	PTPRD	G	C	12.18
JFH3411	9	35749844	35749845	RGP1	G	C	12.18

Table B-3: Continued

BB4911	11	126135784	126135785	SRPR	G	A	12.17
EK3261	11	113133675	113133676	NCAM1	T	G	12.14
AR5361	5	32388484	32388485	ZFR	G	C	12.14
EK3261	X	70324156	70324157	CXorf65	C	T	12.13
BB4911	11	118501021	118501022	PHLDB1	G	A	12.09
EK3261	12	122459973	122459974	BCL7A	A	C	12.09
BB4911	3	31789581	31789582	OSBPL10	T	C	12.09
JZ1851	18	70534490	70534491	NETO1	G	A	12.07
BB4911	3	180334622	180334623	CCDC39	C	T	12.07
BB4911	3	58409125	58409126	PXK	C	A	12.01
EK3261	X	152735958	152735959	HAUS7	C	T	12.01
EK3261	X	27999145	27999146	DCAF8L1	C	T	12
QW4591	13	60849545	60849546		C	T	11.99
BB4911	3	183368890	183368891	KLHL24	C	T	11.97
EK3261	11	102495997	102495998	MMP20	T	G	11.95
LK4881	18	56204409	56204410	ALPK2	C	T	11.95
DN4461	19	57133632	57133633	ZNF71	C	T	11.95
JM1191	4	39915453	39915454	PDS5A	G	C	11.95
BB4911	11	121475921	121475922	SORL1	T	A	11.94
EK3261	11	123513160	123513161	SCN3B	G	A	11.94
JFH3411	9	15000377	15000378	LOC38970 5	T	C	11.94
BB4911	11	125479495	125479496	STT3A	C	T	11.93
JZ1851	18	20513373	20513374	RBBP8	C	T	11.92
BB4911	3	195955761	195955762	SLC51A	G	A	11.92
EK3261	X	71379880	71379881	FLJ44635	G	A	11.92
SM2701	1	49332968	49332969	AGBL4	A	G	11.91
BB4911	3	31494992	31494993		C	T	11.91
EK3261	X	49084491	49084492	CACNA1F	C	T	11.91
DN4461	1	171083173	171083174	FMO3	C	T	11.9
EK3261, BB4911	12	106730033	106730034	TCPI1L2	C	T	11.9
DN4461	12	49666508	49666509	TUBA1C	C	T	11.89
TF3471, SM2701	18	72020474	72020475	C18orf63	T	C	11.89
BB4911	11	126277215	126277216	ST3GAL4	C	T	11.88
DN4461	14	100793616	100793617	SLC25A47	G	A	11.88
BB4911	3	183955108	183955109	VWA5B2	C	T	11.88
LK4881	16	46406858	46406859		T	A	11.87
DN4461	1	3418390	3418391	MEGF6	C	T	11.85
EK3261	11	120823607	120823608	GRIK4	G	A	11.85
BB4911	3	97607289	97607290	CRYBG3	G	A	11.84
BB4911	3	168867573	168867574	MECOM	A	G	11.84
BB4911	3	41841715	41841716	ULK4	A	C	11.81
BB4911	3	19574944	19574945	KCNH8	A	G	11.8
EK3261	X	54838076	54838077	MAGED2	C	T	11.8
EK3261	11	82984984	82984985	CCDC90B	T	A	11.79
BB4911	3	132106199	132106200		T	C	11.79

Table B-3: Continued

JFH3411	10	46963950	46963951	SYT15	G	A	11.78
SM2701	18	61156605	61156606	SERPINB5	G	C	11.78
MA5421	1	17264889	17264890	CROCC	T	G	11.76
BB4911	3	13679202	13679203	FBLN2	G	A	11.75
JFH3411	4	88536361	88536362	DSPP	G	A	11.75
EK3261	11	122709177	122709178	CRTAM	T	C	11.74
JM1191	12	21450264	21450265	SLCO1A2	G	T	11.72
JFH3411	GL00022 9.1	17043	17044		T	G	11.71
EK3261	1	38030779	38030780	DNALII	C	A	11.69
BB4911	3	38802250	38802251	SCN10A	A	G	11.69
MA5421	8	59404345	59404346	CYP7A1	T	C	11.68
QW4591	GL00021 2.1	63187	63188		A	G	11.67
JZ1851,TF3471	18	10691356	10691357	PIEZO2	G	A	11.66
JZ1851	19	4279680	4279681	SHD	G	A	11.65
JZ1851	18	5895162	5895163	TMEM200 C	A	G	11.64
BB4911	3	140185247	140185248	CLSTN2	T	C	11.64
JZ1851	18	5891636	5891637	TMEM200 C	C	A	11.63
BB4911	12	51773556	51773557	GALNT6	G	A	11.62
BB4911	3	66434642	66434643	LRIG1	T	C	11.61
EK3261	14	20086289	20086290		T	C	11.6
EK3261	X	32361032	32361033	DMD	C	T	11.6
BB4911	3	67411102	67411103	SUCLG2	C	T	11.59
BB4911	3	52778346	52778347	NEK4	T	C	11.58
MC3481	8	145138066	145138067	GPAA1	C	T	11.58
BB4911	3	120371368	120371369	HGD	G	A	11.56
MC3481	18	7567802	7567803	PTPRM	C	G	11.55
JFH3411	8	39525689	39525690	ADAM18	C	T	11.54
SM2701	16	3168921	3168922	ZNF205	G	A	11.53
LK4881	18	14999933	14999934		G	A	11.52
AR5361	11	75062782	75062783	ARRB1	G	A	11.51
EK3261,BB4911	11	113103995	113103996	NCAM1	T	G	11.51
QW4591	13	74339103	74339104	KLF12	G	T	11.51
TF3471,SL2221	18	66367606	66367607	TMX3	A	G	11.51
EK3261	X	16876979	16876980	RBBP7	G	A	11.51
BB4911	3	183951134	183951135	VWA5B2	C	T	11.5
EK3261	6	37448992	37448993	CMTR1	T	G	11.5
BB4911	3	133368361	133368362	TOPBP1	T	G	11.48
DN4461	6	132859436	132859437	TAAR9	C	T	11.48
EK3261	11	94322352	94322353	PIWIL4	G	A	11.46
BB4911	3	195510942	195510943	MUC4	G	T	11.46
TF3471	18	47765120	47765121	CCDC11	G	C	11.45
BB4911	3	98250985	98250986	GPR15	C	T	11.45
BB4911	3	197574935	197574936	LRCH3	G	C	11.45
SM2701	4	140375295	140375296	RAB33B	C	G	11.45

Table B-3: Continued

BB4911	3	75386296	75386297		G	A	11.44
BB4911	3	108072424	108072425	HHLA2	C	T	11.44
DN4461	7	134261673	134261674	AKR1B15	C	T	11.44
BB4911	3	122598290	122598291	DIRC2	A	G	11.43
JFH3411	21	47642271	47642272	LSS	C	T	11.42
EK3261	X	100793167	100793168	ARMCX4	A	G	11.42
BB4911	11	124863135	124863136	CCDC15	C	A	11.41
SM2701	GL00022 0.1	142154	142155		C	T	11.41
EK3261	X	1546791	1546792	ASMTL	G	A	11.41
TF3471	18	12351341	12351342	AFG3L2	C	T	11.4
BB4911	3	123166639	123166640	ADCY5	G	A	11.39
EK3261	11	82535962	82535963	PRCP	C	T	11.38
QW4591	6	96463944	96463945	FUT9	G	C	11.37
EK3261	X	23801310	23801311	SAT1	C	T	11.37
MC3481	18	6985269	6985270	LAMA1	C	T	11.36
BB4911	3	44611895	44611896	ZKSCAN7	A	G	11.36
DN4461	9	125330677	125330678	OR1L8	T	G	11.36
EK3261	X	26157791	26157792	MAGEB18	C	T	11.36
JZ1851	18	48327814	48327815	MRO	G	A	11.34
BB4911	3	12510488	12510489		T	G	11.34
JFH3411	9	36263434	36263435	GNE	T	G	11.32
DN4461	14	104452639	104452640	TDRD9	G	A	11.31
BB4911	11	107607311	107607312		T	C	11.3
JFH3411	14	34931216	34931217	SPTSSA	A	C	11.3
LK4881	18	13069781	13069782	CEP192	C	T	11.3
LK4881	19	39993590	39993591	DLL3	C	G	11.3
BB4911	3	52507781	52507782	NISCH	G	A	11.3
MA5421	GL00020 9.1	120466	120467		T	A	11.3
JZ1851	1	63885221	63885222	ALG6	T	G	11.29
DN4461	1	90486411	90486412	ZNF326	T	G	11.29
BB4911	12	49658614	49658615	TUBA1C	C	G	11.29
BB4911	3	142408605	142408606	PLS1	G	A	11.29
AR5361	GL00019 2.1	305932	305933		T	A	11.29
LK4881	18	60645508	60645509	PHLPP1	C	T	11.28
EK3261	9	139137637	139137638	QSOX2	G	C	11.28
QW4591	2	105489000	105489001		C	A	11.27
JFH3411	9	34723743	34723744	FAM205A	C	A	11.26
LK4881	18	33719433	33719434	ELP2	C	T	11.25
SM2701	11	556062	556063	C11orf35	C	T	11.24
LK4881	18	41559320	41559321		C	G	11.24
BB4911	3	16312563	16312564	OXNAD1	C	T	11.22
BB4911	3	27472935	27472936	SLC4A7	C	T	11.21
EK3261	5	161277898	161277899	GABRA1	A	T	11.21
JZ1851	18	29432623	29432624	TRAPPC8	T	C	11.2

Table B-3: Continued

JFH3411	GL00023 7.1	2576	2577		C	T	11.2
JZ1851	18	12672654	12672655	CEP76	A	G	11.19
JZ1851	18	72163591	72163592	CNDP2	G	A	11.18
BB4911	3	18580230	18580231		G	A	11.17
DN4461	2	69398262	69398263	ANTXR1	G	A	11.16
BB4911	3	27494588	27494589	SLC4A7	A	C	11.16
MA5421	GL00019 3.1	81922	81923		C	T	11.14
LK4881	5	126171998	126171999	LMNB1	T	C	11.1
QW4591	21	34602600	34602601	IFNAR2	T	G	11.09
EK3261	1	145112700	145112701		G	A	11.08
BB4911	11	118373860	118373861	KMT2A	C	T	11.07
JZ1851	18	12420422	12420423	SLMO1	C	T	11.07
LK4881	18	13068131	13068132	CEP192	T	C	11.07
JFH3411	21	47744324	47744325	PCNT	T	C	11.07
BB4911	11	124078703	124078704		G	A	11.06
LK4881	18	29104697	29104698	DSG2	C	T	11.06
LK4881	18	59166540	59166541	CDH20	C	T	11.06
JZ1851	18	55146885	55146886	ONECUT2	C	T	11.05
DN4461	9	132988708	132988709	NCS1	T	G	11.05
JFH3411	GL00021 8.1	40555	40556		G	A	11.04
EK3261	1	52628053	52628054	ZFYVE9	A	G	11.02
BB4911	11	87013437	87013438	TMEM135	G	A	11.02
EK3261	X	1719987	1719988	AKAP17A	G	A	10.99
DN4461	GL00019 2.1	229866	229867		C	T	10.98
JZ1851	18	59480000	59480001	RNF152	C	T	10.96
BB4911	3	43073760	43073761	FAM198A	G	A	10.95
LK4881	GL00022 0.1	67917	67918		C	T	10.95
MA5421	19	1989866	1989867	BTBD2	G	A	10.93
BB4911	3	27243044	27243045	LOC10192 9642	G	C	10.93
EK3261	11	117403234	117403235	DSCAML1	G	T	10.92
AR5361	19	14116642	14116643	RFX1	C	T	10.92
DN4461	6	80657085	80657086	ELOVL4	C	G	10.92
BB4911	11	120099678	120099679	OAF	G	A	10.91
EK3261	11	83501965	83501966	DLG2	T	C	10.9
JFH3411	18	5196887	5196888	C18orf42	C	G	10.9
DN4461	3	195505834	195505835	MUC4	C	T	10.9
BB4911	3	196742394	196742395	MF12	G	A	10.9
JFH3411	9	21304687	21304688	IFNA5	A	T	10.88
QW4591	GL00021 4.1	109193	109194		G	A	10.88
EK3261	11	111412382	111412383	LAYN	C	A	10.87
EK3261	11	123477351	123477352	GRAMD1 B	G	A	10.87
JZ1851	18	60996359	60996360	KDSR	T	C	10.87

Table B-3: Continued

BB4911	11	4958960	4958961		C	T	10.85
LK4881	7	154738408	154738409	PAXIP1	T	C	10.85
LK4881	GL00019 4.1	73525	73526		C	T	10.84
LK4881	18	21441716	21441717	LAMA3	C	T	10.83
BB4911	3	121295833	121295834	ARGFX	C	T	10.82
DN4461	5	82837896	82837897	VCAN	G	A	10.82
LK4881	18	32418185	32418186	DTNA	T	A	10.81
LK4881	18	54305563	54305564	TXNL1	C	T	10.81
AR5361	1	237013552	237013553	MTR	T	A	10.8
EK3261	14	91161861	91161862	TTC7B	C	T	10.8
MC3481	18	21083737	21083738	C18orf8	C	T	10.8
MC3481	GL00022 0.1	119821	119822		T	C	10.8
DN4461	10	118380344	118380345	PNLIPRP2	C	T	10.79
QW4591	13	50095126	50095127	PHF11	A	G	10.79
JZ1851	18	10487917	10487918	APCDD1	C	T	10.77
BB4911	3	38101244	38101245	DLEC1	C	T	10.77
MA5421	3	183977754	183977755	CAMK2N2	C	G	10.77
JZ1851	GL00022 0.1	121033	121034		C	T	10.77
BB4911	3	10077954	10077955	FANCD2	A	G	10.76
EK3261, BB4911	11	92590447	92590448	FAT3	A	G	10.75
QW4591	13	80910785	80910786	SPRY2	C	A	10.75
MC3481	18	13682080	13682081	FAM210A	A	G	10.75
JZ1851, LK4881	18	28898200	28898201	DSG1	A	G	10.73
QW4591	GL00019 5.1	79529	79530		C	T	10.73
EK3261	X	50130543	50130544	DGKK	G	A	10.73
JFH3411	GL00019 2.1	495323	495324		C	T	10.73
SM2701	4	15009231	15009232	CPEB2	C	T	10.72
QW4591	4	139402773	139402774		T	C	10.71
JFH3411	9	35734955	35734956	CREB3	C	T	10.71
EK3261	GL00019 5.1	129192	129193		C	T	10.71
DN4461	12	427574	427575	KDM5A	A	G	10.7
BB4911	3	151986261	151986262	MBNL1	C	T	10.7
EK3261	X	70832446	70832447	ACRC	C	T	10.7
DN4461	9	100823083	100823084	NANS	T	C	10.69
BB4911	3	12208994	12208995	SYN2	T	A	10.68
BB4911	3	195510826	195510827	MUC4	C	T	10.68
LK4881	4	44682464	44682465	GUF1	T	C	10.67
JZ1851	18	4151215	4151216	DLGAP1	G	C	10.66
LK4881	5	75008147	75008148	POC5	A	G	10.66
MA5421	GL00020 5.1	122944	122945		T	G	10.66
LK4881	18	29793525	29793526	MEP1B	C	T	10.65
TA2691	1	17026003	17026004	ESPNP	C	G	10.64
AR5361	17	27876560	27876561	TAOK1	A	G	10.64

Table B-3: Continued

MA5421	GL00021 4.1	129192	129193		C	T	10.64
EK3261	11	117376412	117376413	DSCAML1	G	A	10.63
BB4911	3	138724756	138724757	PRR23A	C	G	10.63
BB4911	3	133335786	133335787	TOPBP1	C	T	10.62
JFH3411	9	289480	289481	DOCK8	C	T	10.62
JFH3411	9	35618522	35618523	CD72	G	A	10.62
EK3261	X	100514985	100514986	DRP2	G	A	10.61
BB4911	3	136088037	136088038	STAG1	G	A	10.6
AR5361	1	150678909	150678910	HORMAD 1	T	C	10.59
AR5361	2	61384905	61384906	C2orf74	T	C	10.59
BB4911	3	52610650	52610651	PBRM1	T	A	10.59
JFH3411	GL00019 5.1	131420	131421		C	T	10.59
MA5421	9	470258	470259	KANK1	G	A	10.58
JZ1851	GL00019 5.1	92232	92233		C	T	10.58
BB4911	3	132196815	132196816	DNAJC13	A	T	10.56
EK3261	X	84563134	84563135	POF1B	T	A	10.56
EK3261	11	118925340	118925341	HYOU1	G	A	10.55
LK4881	18	19153493	19153494	ESCO1	C	T	10.55
LK4881	18	21739724	21739725	CABYR	T	C	10.54
BB4911	19	47922425	47922426	MEIS3	G	A	10.54
BB4911	11	111635641	111635642	PPP2R1B	A	G	10.53
JZ1851	18	13825726	13825727	MC5R	A	C	10.53
JFH3411	4	139482853	139482854		C	A	10.53
JFH3411,QW4591	13	47273457	47273458	LRCH1	G	C	10.51
LK4881	18	76753062	76753063	SALL3	C	T	10.5
MA5421	10	126089433	126089434	OAT	G	A	10.49
BB4911	3	75388160	75388161		T	C	10.49
JFH3411	8	124300995	124300996		T	A	10.49
EK3261	X	141290864	141290865	MAGEC2	C	T	10.49
TF3471	18	12703191	12703192	PSMG2	C	T	10.48
JZ1851	2	71216245	71216246	TEX261	A	C	10.48
SM2701	14	20859204	20859205	TEP1	C	T	10.47
JFH3411	20	9510262	9510263	LAMP5	T	A	10.47
BB4911	3	111260974	111260975	CD96	C	T	10.47
QW4591	13	79194647	79194648	RNF219	T	C	10.45
EK3261	11	107925556	107925557	CUL5	T	C	10.44
DN4461	17	9846520	9846521	GAS7	G	C	10.44
LK4881,TF3471	18	6978344	6978345	LAMA1	G	A	10.42
EK3261	19	45754778	45754779	MARK4	A	G	10.42
SM2701	GL00021 8.1	41708	41709		G	A	10.42
LK4881	13	42644175	42644176	DGKH	T	A	10.41
BB4911	3	113594376	113594377	GRAMD1 C	A	G	10.41
JZ1851	18	23866481	23866482	TAF4B	C	T	10.4

Table B-3: Continued

BB4911	3	118865800	118865801	C3orf30	C	T	10.4
JFH3411	9	215268	215269	C9orf66	A	C	10.4
EK3261	11	117965529	117965530	TMPRSS4	A	G	10.38
LK4881	18	33725873	33725874	ELP2	T	G	10.38
LK4881	GL00021 4.1	131945	131946		C	T	10.38
BB4911	GL00022 2.1	14898	14899		A	G	10.38
EK3261	11	98437314	98437315		C	G	10.37
JFH3411	17	81082226	81082227		G	A	10.37
JFH3411	9	6007499	6007500	KIAA2026	G	A	10.37
DN4461	GL00022 0.1	143883	143884		C	G	10.37
AR5361	GL00021 9.1	153663	153664		G	A	10.37
BB4911	3	53844183	53844184	CACNA1D	G	A	10.36
JZ1851	18	9284601	9284602	ANKRD12	T	C	10.35
JFH3411	9	44174604	44174605		C	T	10.35
JZ1851	16	46405089	46405090		T	C	10.34
EK3261	X	56296650	56296651	KLF8	G	A	10.34
LK4881	GL00021 8.1	45248	45249		C	T	10.34
MC3481	18	13763113	13763114	RNMT	T	C	10.33
QW4591	GL00019 5.1	86675	86676		G	A	10.33
BB4911	3	49758763	49758764	RNF123	A	G	10.32
JZ1851	15	81575543	81575544	IL16	C	T	10.31
JZ1851	16	46405109	46405110		C	T	10.31
EK3261	5	132198198	132198199	GDF9	G	A	10.31
AR5361	GL00019 5.1	121	122		A	T	10.31
TF3471	5	73207516	73207517	ARHGEF2 8	T	C	10.29
MC3481	18	43307337	43307338	SLC14A1	C	A	10.28
MA5421	19	17530828	17530829	MVB12A	C	A	10.28
DN4461	7	149476118	149476119	SSPO	G	T	10.28
LK4881	18	55335365	55335366	LOC10050 5549	G	T	10.26
AR5361	20	10344243	10344244		C	T	10.26
DN4461	GL00021 2.1	6512	6513		G	A	10.26
BB4911	3	121353253	121353254	HCLS1	T	C	10.25
BB4911	3	134898741	134898742	EPHB1	C	T	10.25
MC3481	3	195245804	195245805	PPP1R2	G	A	10.25
JZ1851	6	160148409	160148410	WTAP	G	A	10.25
BB4911	3	155893883	155893884	KCNAB1	A	G	10.24
LK4881	18	14613505	14613506		C	A	10.22
BB4911	2	52937316	52937317		T	G	10.22
LK4881	20	62222210	62222211	GMEB2	T	G	10.22
BB4911	3	39450064	39450065	RPSA	C	T	10.22
DN4461	22	40055303	40055304	CACNA1I	T	C	10.21

Table B-3: Continued

EK3261	X	45051110	45051111	CXorf36	C	T	10.21
BB4911	11	118955678	118955679	HMBS	C	T	10.2
QW4591	13	83597783	83597784		A	T	10.2
BB4911	3	122296637	122296638	PARP15	G	A	10.2
BB4911	4	6602254	6602255	MAN2B2	A	G	10.2
BB4911	3	139068276	139068277	MRPS22	G	A	10.19
EK3261	X	27766044	27766045	DCAF8L2	A	G	10.19
DN4461	9	84302488	84302489	TLE1	G	A	10.18
BB4911	3	21462786	21462787	ZNF385D	G	A	10.17
SM2701	1	45101477	45101478	RNF220	T	C	10.15
BB4911	16	70070507	70070508	PDXDC2P	G	A	10.15
BB4911	GL00023 0.1	22568	22569		G	A	10.15
JZ1851,TF3471	18	19192254	19192255	SNRPD1	C	T	10.14
JFH3411	9	15784630	15784631	CCDC171	A	G	10.14
JZ1851	MT	16092	16093		T	C	10.13
EK3261	X	119504438	119504439	ATP1B4	G	A	10.13
EK3261	11	89867871	89867872	NAALAD2	C	T	10.12
JFH3411	3	195511958	195511959	MUC4	G	A	10.12
DN4461	7	151254174	151254175	PRKAG2	T	C	10.12
DN4461	11	70034025	70034026	ANO1	G	A	10.11
JFH3411	9	370243	370244	DOCK8	A	G	10.1
JFH3411	9	14859295	14859296	FREM1	G	A	10.09
JFH3411	9	17135114	17135115	CNTLN	C	T	10.09
BB4911	3	50927539	50927540	DOCK3	G	T	10.08
EK3261	X	38226602	38226603	OTC	A	G	10.08
JFH3411	GL00024 1.1	17833	17834		C	T	10.08
DN4461	14	90738566	90738567	PSMC1	A	G	10.07
JFH3411	9	39171470	39171471	CNTNAP3	C	T	10.07
JFH3411	9	35802582	35802583	NPR2	C	T	10.06
JFH3411	GL00019 2.1	311574	311575		C	T	10.06
BB4911	11	118959330	118959331	HMBS	G	A	10.05
BB4911	3	130124988	130124989	COL6A5	C	T	10.05
LK4881	18	48575747	48575748	SMAD4	T	G	10.03
DN4461	19	38702776	38702777	DPF1	C	T	10.02
BB4911	3	143297590	143297591	SLC9A9	A	C	10.01
BB4911	3	1424717	1424718	CNTN6	G	A	9.998
JFH3411	9	35957354	35957355	OR2S2	G	A	9.995
LK4881	17	1388972	1388973	MYO1C	C	T	9.986
QW4591	13	50123621	50123622	RCBTB1	G	C	9.978
MA5421	GL00019 5.1	92427	92428		A	G	9.97
JZ1851	18	59483309	59483310	RNF152	G	A	9.96
QW4591	13	53422659	53422660	PCDH8	C	T	9.948
BB4911	3	52404110	52404111	DNAH1	G	A	9.948
DN4461	22	45809623	45809624	RIBC2	C	A	9.946

Table B-3: Continued

JFH3411	4	165109968	165109969	MARCH1	C	A	9.934
EK3261	X	48838150	48838151	GRIPAP1	C	T	9.924
BB4911	3	112243228	112243229		C	T	9.92
JZ1851	18	13826087	13826088	MC5R	C	T	9.916
QW4591	GL00023 0.1	17992	17993		A	T	9.911
JFH3411	9	26998089	26998090	LRRC19	C	T	9.907
TA2691	8	61742845	61742846	CHD7	C	G	9.905
LK4881	5	110491711	110491712		T	C	9.894
JFH3411	9	15203774	15203775	TTC39B	G	A	9.894
BB4911	11	117395496	117395497	DSCAML1	C	A	9.877
QW4591	16	88716533	88716534	CYBA	A	G	9.876
JFH3411	17	4859144	4859145	ENO3	C	T	9.868
BB4911	3	121641820	121641821	SLC15A2	A	G	9.858
EK3261	5	142693845	142693846	NR3C1	A	G	9.854
AR5361	Y	13266436	13266437		G	A	9.844
BB4911	3	57335875	57335876	DNAH12	C	T	9.837
EK3261	X	153551704	153551705	TKTL1	T	C	9.829
AR5361	2	31361402	31361403	GALNT14	A	C	9.801
MA5421	15	79838943	79838944		A	G	9.799
BB4911	3	53126142	53126143	RFT1	G	A	9.795
BB4911	3	52584714	52584715	PBRM1	A	G	9.793
BB4911	3	170893069	170893070	TNIK	G	A	9.784
BB4911	3	184573554	184573555	VPS8	C	T	9.784
JZ1851	8	73566015	73566016	KCNB2	T	C	9.773
LK4881	18	74692335	74692336	MBP	A	G	9.77
BB4911	3	16242228	16242229	GALNT15	G	A	9.763
JM1191	GL00019 5.1	94491	94492		C	G	9.759
BB4911	3	195477790	195477791	MUC4	G	A	9.758
MA5421	10	104262627	104262628	ACTR1A	G	A	9.757
JFH3411	9	22029444	22029445	CDKN2B- AS1	G	A	9.756
EK3261	11	86123466	86123467	CCDC81	G	A	9.75
LK4881	18	5238411	5238412	LINC00667	C	A	9.748
JM1191, DN4461	15	90969334	90969335	IQGAP1	G	T	9.742
BB4911	11	12341060	12341061	MICALCL	A	G	9.735
BB4911	3	195341753	195341754		T	A	9.718
TA2691	2	203990955	203990956	NBEAL1	C	A	9.716
JFH3411	5	177658944	177658945	PHYKPL	C	T	9.712
JZ1851	1	236275076	236275077		C	T	9.693
TF3471	18	1278664	1278665	LINC00470	C	T	9.69
JFH3411	2	243166535	243166536		T	A	9.689
BB4911	3	195511936	195511937	MUC4	C	T	9.675
BB4911	3	52557037	52557038	STAB1	C	T	9.673
BB4911	3	184157141	184157142		C	G	9.67
EK3261	11	87908562	87908563	RAB38	G	A	9.669

Table B-3: Continued

LK4881	18	8069867	8069868	PTPRM	C	T	9.666
BB4911	3	38035774	38035775	VILL	G	A	9.665
TF3471,SM2701	18	3581965	3581966	DLGAP1	G	A	9.662
BB4911	3	36887972	36887973	TRANK1	C	G	9.66
EK3261	5	54153033	54153034		C	A	9.657
EK3261	X	130412177	130412178	IGSF1	C	G	9.652
EK3261	X	149680553	149680554	MAMLD1	C	T	9.65
BB4911	3	134670523	134670524	EPHB1	C	T	9.647
BB4911	3	98235543	98235544	CLDND1	G	T	9.638
BB4911	3	28533657	28533658	ZCWPW2	G	A	9.637
TA2691	GL00022 0.1	136490	136491		G	A	9.63
JFH3411	7	151875088	151875089	KMT2C	T	A	9.62
JFH3411	13	50510400	50510401	SPRYD7	C	G	9.617
DN4461	12	57848707	57848708	INHBE	C	G	9.615
EK3261	X	100807908	100807909	ARMCX1	A	G	9.614
DN4461	9	114464486	114464487	C9orf84	T	C	9.61
JFH3411	13	51590432	51590433	GUCY1B2	C	T	9.596
JFH3411	13	48669063	48669064	MED4	C	T	9.59
LK4881	18	5233104	5233105	LINC00667	C	G	9.587
DN4461	9	131196703	131196704	CERCAM	G	A	9.584
EK3261	11	119206374	119206375	RNF26	G	A	9.576
DN4461	20	33857710	33857711	MMP24	A	C	9.573
AR5361	7	4923560	4923561	RADIL	C	A	9.571
BB4911	3	121646640	121646641	SLC15A2	A	G	9.566
JFH3411	4	139482764	139482765		C	T	9.559
LK4881	18	59768374	59768375	PIGN	A	G	9.556
JFH3411	9	17273877	17273878	CNTLN	A	G	9.547
BB4911	3	35257957	35257958		C	G	9.545
JFH3411	10	56287568	56287569	PCDH15	T	C	9.54
BB4911	6	63921852	63921853		A	G	9.518
MC3481	18	20513431	20513432	RBBP8	C	T	9.502
EK3261	X	49103223	49103224	CCDC22	G	A	9.502
JFH3411,QW4591	13	52482609	52482610		G	A	9.5
QW4591	13	78216872	78216873	SCEL	A	G	9.499
EK3261	17	19607814	19607815	SLC47A2	G	A	9.497
BB4911	11	109964186	109964187	ZC3H12C	G	A	9.49
MA5421	2	169847543	169847544	ABCB11	T	G	9.487
DN4461	12	53662623	53662624	ESPL1	C	A	9.484
LK4881	18	14146161	14146162		G	A	9.477
EK3261	X	71379852	71379853	FLJ44635	C	T	9.477
EK3261	11	111338327	111338328	BTG4	A	G	9.472
EK3261	19	45754773	45754774	MARK4	A	G	9.471
SM2701	9	116997993	116997994	COL27A1	T	C	9.469
JM1191	9	124083525	124083526	GSN	C	A	9.469
AR5361	9	140077638	140077639	ANAPC2	G	A	9.469

Table B-3: Continued

JZ1851	18	9887856	9887857	TXNDC2	G	A	9.461
BB4911	3	68788362	68788363	FAM19A4	G	T	9.455
SM2701	16	88502481	88502482	ZNF469	C	T	9.453
BB4911	3	196613074	196613075	SENP5	C	T	9.445
DN4461	11	74880356	74880357	SLCO2B1	G	A	9.44
QW4591	13	76055601	76055602	TBC1D4	G	A	9.437
EK3261	11	102398592	102398593	MMP7	C	T	9.433
JZ1851	18	48458661	48458662	ME2	G	A	9.417
BB4911	11	124135661	124135662	OR8G5	A	G	9.413
BB4911	3	37695259	37695260	ITGA9	A	G	9.413
EK3261	1	16862211	16862212	LOC100133301	C	T	9.412
BB4911	3	167051768	167051769	ZBBX	T	C	9.399
LK4881	9	123943883	123943884	RAB14	C	T	9.398
LK4881	18	44135049	44135050	LOXHD1	G	A	9.396
JZ1851	17	36402398	36402399		A	C	9.392
SM2701	16	72110871	72110872	HPR	G	A	9.389
BB4911	11	94533372	94533373	AMOTL1	C	T	9.385
BB4911	3	170137143	170137144	CLDN11	A	G	9.376
EK3261	X	322256	322257	PPP2R3B	G	A	9.365
JFH3411	13	113862634	113862635	PCID2	C	T	9.359
TF3471	18	7008590	7008591	LAMA1	T	C	9.358
JZ1851	21	43823735	43823736	UBASH3A	C	A	9.355
MC3481	18	30093721	30093722	WBP11P1	A	C	9.349
JZ1851	18	24445691	24445692	AQP4	C	T	9.347
JZ1851	18	48087042	48087043	MAPK4	C	T	9.337
BB4911	3	10312506	10312507	TATDN2	A	G	9.336
EK3261	11	119063907	119063908	CCDC153	C	T	9.33
MA5421	2	206863873	206863874	INO80D	C	T	9.306
BB4911	3	68934433	68934434	FAM19A4	T	G	9.306
BB4911	3	131756348	131756349	CPNE4	A	G	9.299
LK4881	18	14146623	14146624		G	A	9.297
EK3261	11	107420529	107420530	ALKBH8	A	G	9.268
BB4911	3	196386963	196386964	NRROS	C	G	9.259
BB4911	3	124748225	124748226	HEG1	G	A	9.257
EK3261	X	3592724	3592725	PRKX	G	A	9.255
DN4461	1	62732420	62732421	KANK4	T	C	9.253
TF3471	5	168213006	168213007	SLIT3	G	A	9.239
JFH3411	13	53171316	53171317	HNRNPA1L2	C	T	9.234
LK4881	7	23737890	23737891	FAM221A	A	G	9.226
JFH3411,QW4591	13	52544804	52544805	ATP7B	C	G	9.223
TF3471	18	9888068	9888069	TXNDC2	A	G	9.223
AR5361	19	691024	691025	PRSS57	C	T	9.222
JFH3411	9	99984583	99984584		T	A	9.206
LK4881	1	27153702	27153703	ZDHC18	A	G	9.202
JZ1851	18	47088654	47088655	LIPG	T	G	9.182

Table B-3: Continued

LK4881	18	6997817	6997818	LAMA1	A	C	9.175
EK3261	20	48729517	48729518	UBE2V1	C	T	9.174
EK3261	11	116968797	116968798	SIK3	G	A	9.173
LK4881	10	93220870	93220871	HECTD2	A	G	9.172
BB4911	3	40468895	40468896	ENTPD3	C	T	9.154
AR5361	9	139620694	139620695	FAM69B	C	T	9.154
QW4591	9	68415354	68415355	MIR4477A	C	T	9.124
DN4461	1	160309663	160309664	COPA	T	G	9.122
LK4881	7	102212879	102212880	POLR2J3	G	C	9.122
TA2691	1	112533631	112533632	LOC64335 5	G	A	9.121
JZ1851	18	77156102	77156103	NFATC1	G	C	9.111
LK4881	5	10237154	10237155	FAM173B	G	A	9.104
JZ1851	18	29202755	29202756	B4GALT6	T	A	9.1
DN4461	9	136645078	136645079	VAV2	G	C	9.093
BB4911	3	138195528	138195529	ESYT3	C	T	9.09
DN4461	11	34938114	34938115	PDHX	C	A	9.089
MC3481	18	48370	48371		G	A	9.088
JFH3411	7	29763807	29763808	LOC10192 8208	T	G	9.083
DN4461	1	39988144	39988145	BMP8A	T	C	9.081
EK3261	X	38080702	38080703	SRPX	G	T	9.078
BB4911	11	128786502	128786503	KCNJ5	C	T	9.067
EK3261	11	104937527	104937528		C	A	9.065
MC3481	18	43684560	43684561	HAUS1	C	A	9.065
JZ1851	18	50278685	50278686	DCC	G	A	9.064
TF3471,MC3481	18	43319518	43319519	SLC14A1	G	A	9.063
JZ1851	18	47093863	47093864	LIPG	C	T	9.059
EK3261	GL00022 4.1	675	676		T	C	9.047
JFH3411	9	78790206	78790207	PCSK5	C	A	9.043
BB4911	3	165555124	165555125	BCHE	C	T	9.042
EK3261	X	103267864	103267865	H2BFWT	C	T	9.03
BB4911	3	9870856	9870857	ARPC4- TTLL3	G	A	9.026
JFH3411	1	27339236	27339237	FAM46B	C	G	9.017
EK3261	11	89939568	89939569	CHORDC1	T	C	9.011
JZ1851	9	25684780	25684781		C	T	9.011
EK3261	X	152909046	152909047	DUSP9	G	C	9.009
LK4881	18	21511033	21511034	LAMA3	C	A	9.004
QW4591	3	119812807	119812808	GSK3B	C	A	8.995
JZ1851	9	66494003	66494004		G	A	8.993
BB4911	3	125770162	125770163	SLC41A3	T	G	8.991
JFH3411	5	73045421	73045422	ARHGEF2 8	G	C	8.99
EK3261	5	179247881	179247882	SQSTM1	G	A	8.988
LK4881	18	10672781	10672782	PIEZO2	T	A	8.979
EK3261	10	93558483	93558484	TNKS2	T	C	8.975
JFH3411	4	17841464	17841465	NCAPG	A	G	8.973

Table B-3: Continued

JZ1851	18	50832101	50832102	DCC	A	G	8.972
DN4461	9	93650014	93650015	SYK	T	A	8.972
TF3471	18	43490601	43490602	EPG5	G	A	8.967
JM1191	18	3176016	3176017	MYOM1	C	T	8.966
JFH3411	20	10015678	10015679	ANKEF1	C	T	8.964
JFH3411	9	34627939	34627940	ARID3C	C	T	8.945
DN4461	9	95647526	95647527		C	A	8.942
JZ1851	22	24103583	24103584	C22orf15	G	A	8.935
EK3261	X	68381263	68381264	PJA1	C	A	8.918
BB4911	3	75377714	75377715		C	T	8.91
DN4461	12	48919659	48919660	OR8S1	G	A	8.905
LK4881	14	106926648	106926649	IGHV3-43	C	A	8.895
EK3261	X	49397626	49397627		T	C	8.891
JFH3411	19	38851454	38851455	CATSPER G	A	C	8.889
DN4461	7	61967599	61967600		G	T	8.889
DN4461	GL00023 0.1	18076	18077		G	T	8.886
EK3261	21	10996024	10996025		C	T	8.878
JFH3411	9	35606883	35606884	TESK1	G	A	8.876
BB4911	3	3189278	3189279	TRNT1	A	G	8.872
BB4911	3	9798139	9798140	OGG1	C	G	8.867
BB4911	3	124732617	124732618	HEG1	A	G	8.864
TF3471	GL00022 0.1	121300	121301		T	C	8.857
BB4911	3	122642589	122642590	SEMA5B	G	A	8.852
EK3261	X	130219722	130219723	ARHGAP3 6	T	C	8.837
SM2701	1	110596233	110596234	STRIP1	G	A	8.836
JZ1851	18	55027333	55027334	ST8SIA3	G	T	8.831
BB4911	11	126343134	126343135	KIRREL3	A	C	8.821
EK3261	3	14106308	14106309	TPRXL	C	T	8.811
EK3261	11	111780836	111780837	CRYAB	G	A	8.809
EK3261	11	119064393	119064394	CCDC153	C	T	8.799
DN4461	12	49579695	49579696	TUBA1A	C	G	8.793
BB4911	3	14220094	14220095	XPC	C	G	8.79
DN4461	15	35834546	35834547	DPH6	T	C	8.788
BB4911	3	113323786	113323787	SIDT1	G	A	8.782
BB4911	11	126294816	126294817	KIRREL3	G	A	8.78
BB4911	7	142499070	142499071	TRBC2	T	C	8.768
BB4911	3	113464858	113464859	NAA50	A	G	8.761
BB4911	3	31495218	31495219		C	A	8.755
BB4911	3	27490193	27490194	SLC4A7	T	C	8.744
EK3261	X	1428606	1428607	CSF2RA	C	T	8.743
JFH3411	13	53217269	53217270	HNRNPA1 L2	A	G	8.742
JZ1851	5	178219222	178219223		A	G	8.74
JZ1851	18	6948613	6948614	LAMA1	A	G	8.733
LK4881	18	33718620	33718621	ELP2	A	T	8.732

Table B-3: Continued

BB4911	3	58089850	58089851	FLNB	G	A	8.732
TF3471	18	7117781	7117782	LAMA1	A	G	8.726
BB4911	3	123247213	123247214	PTPLB	G	A	8.72
JFH3411	9	35606737	35606738	TESK1	C	G	8.692
DN4461	17	44060774	44060775	MAPT	C	T	8.682
LK4881,TF3471	18	44149473	44149474	LOXHD1	G	A	8.673
BB4911	11	119692260	119692261		T	C	8.654
LK4881	18	60191427	60191428	ZCCHC2	G	A	8.654
BB4911	3	180365955	180365956	CCDC39	G	A	8.654
QW4591	13	75813553	75813554	CTAGE11 P	C	A	8.651
DN4461	9	140002186	140002187	MAN1B1	C	T	8.648
BB4911	11	86782727	86782728	TMEM135	T	G	8.64
DN4461	15	40662772	40662773	DISP2	C	T	8.638
EK3261	19	5896438	5896439	NDUFA11	T	G	8.638
MA5421	11	82612886	82612887	C11orf82	C	T	8.636
JFH3411	1	163043087	163043088	RGS4	A	G	8.629
BB4911	11	118867694	118867695	CCDC84	C	T	8.62
JFH3411	21	36262290	36262291	RUNX1	G	A	8.61
BB4911	3	58196582	58196583	DNASE1L 3	G	A	8.61
EK3261	16	15116520	15116521	PDXDC1	C	T	8.607
JFH3411	17	64188107	64188108	CEP112	C	A	8.603
DN4461	3	17053498	17053499	PLCL2	A	G	8.595
EK3261	X	205372	205373	PLCXD1	A	G	8.588
SM2701	1	38061571	38061572	GNL2	G	T	8.586
BB4911	11	124180476	124180477	OR8D1	G	A	8.586
JFH3411	7	31848705	31848706	PDE1C	A	G	8.575
BB4911	11	86013379	86013380	C11orf73	G	A	8.574
LK4881	18	44122947	44122948	LOXHD1	T	G	8.573
JFH3411	10	390677	390678	DIP2C	C	T	8.563
JM1191	X	118925704	118925705	RPL39	C	T	8.55
LK4881	2	38960926	38960927	GALM	G	A	8.545
BB4911	3	119885692	119885693	GPR156	C	A	8.545
EK3261	11	118973132	118973133	C2CD2L	G	A	8.536
QW4591	13	51508966	51508967	RNASEH2 B	T	G	8.531
BB4911	3	196674748	196674749	PIGZ	C	T	8.523
LK4881	8	142204325	142204326	DENND3	C	G	8.521
BB4911	11	126110977	126110978	FAM118B	C	A	8.52
LK4881	7	148851212	148851213	ZNF398	G	A	8.514
JFH3411	13	53009047	53009048	VPS36	C	T	8.495
DN4461	19	58963017	58963018	ZNF324B	C	G	8.493
EK3261	11	93921809	93921810	PANX1	G	A	8.491
EK3261	X	23722834	23722835	ACOT9	A	G	8.486
EK3261	X	142716393	142716394	SLITRK4	A	G	8.485
BB4911	11	117695339	117695340	FXVD6- FXVD2	C	T	8.484

Table B-3: Continued

EK3261	X	71823193	71823194	PHKA1	A	G	8.475
JZ1851	3	165811956	165811957		C	A	8.469
EK3261	11	85692180	85692181	PICALM	A	C	8.468
EK3261	11	93464174	93464175	TAF1D	A	C	8.467
SL2221	8	125154458	125154459	FER1L6-AS2	G	A	8.466
SM2701	7	149513559	149513560	SSPO	T	C	8.445
JZ1851	18	15325722	15325723	LOC644669	G	A	8.442
BB4911	3	97806943	97806944	OR5AC2	T	C	8.433
AR5361	9	140055702	140055703	GRIN1	G	A	8.432
LK4881	18	56204643	56204644	ALPK2	T	G	8.431
JFH3411	13	47224513	47224514	LRCH1	G	A	8.429
LK4881	18	13072978	13072979	CEP192	T	C	8.428
EK3261	11	114318658	114318659	REXO2	C	A	8.427
BB4911	3	185331164	185331165	SENP2	C	A	8.425
LK4881	19	55831722	55831723	TMEM150B	T	G	8.408
BB4911	3	39453056	39453057	RPSA	C	T	8.407
MC3481	18	7033036	7033037	LAMA1	G	A	8.394
EK3261	11	93583528	93583529	VSTM5	C	T	8.39
LK4881	18	25573400	25573401	CDH2	T	C	8.389
MC3481	18	56247179	56247180	ALPK2	T	C	8.384
AR5361	19	19497003	19497004	GATAD2A	C	T	8.375
JZ1851	19	16222431	16222432	RAB8A	C	T	8.374
MA5421	9	107485061	107485062		G	A	8.372
LK4881	8	134147240	134147241	TG	T	C	8.37
BB4911	15	42109222	42109223	MAPKBP1	T	C	8.367
SM2701	4	175649860	175649861	GLRA3	T	G	8.367
DN4461	19	50940777	50940778	MYBPC2	C	T	8.365
EK3261	11	86153910	86153911	ME3	G	A	8.361
AR5361	X	900538	900539		T	C	8.361
BB4911	3	14724412	14724413	C3orf20	G	A	8.358
JFH3411	10	72503541	72503542	ADAMTS14	C	T	8.352
AR5361	19	58892509	58892510	ZNF837	C	T	8.348
EK3261	X	70326292	70326293	CXorf65	T	C	8.346
EK3261	11	122665548	122665549	UBASH3B	C	T	8.343
EK3261	11	113860424	113860425	HTR3A	A	G	8.34
TF3471	18	77710617	77710618	PQLC1	C	T	8.334
BB4911	3	146309714	146309715	PLSCR5	A	T	8.331
JFH3411	14	107246845	107246846		T	C	8.325
JZ1851	18	6913533	6913534	ARHGAP28	C	T	8.323
AR5361	1	16860767	16860768	LOC100133301	C	G	8.322
JZ1851	17	3806663	3806664	P2RX1	T	A	8.317
JZ1851	10	50011052	50011053	WDFY4	C	A	8.315
LK4881	18	70210747	70210748	CBLN2	G	A	8.313

Table B-3: Continued

AR5361	2	44617323	44617324	CAMKMT	T	A	8.313
DN4461	21	40596084	40596085	BRWD1	G	A	8.306
JFH3411	5	72798723	72798724	BTF3	T	G	8.298
JZ1851	3	44622368	44622369	ZKSCAN7	G	C	8.29
BB4911	3	182880479	182880480	LAMP3	A	G	8.289
BB4911	17	51512645	51512646		C	T	8.283
JZ1851	8	13563101	13563102		A	G	8.265
JFH3411	9	35679060	35679061	CA9	C	T	8.262
MA5421	11	72853226	72853227	FCHSD2	G	A	8.26
BB4911	3	27442335	27442336	SLC4A7	G	A	8.257
JFH3411	9	34220854	34220855	UBAP1	G	A	8.25
LK4881	18	57492433	57492434		A	G	8.236
JFH3411	9	17579369	17579370	SH3GL2	T	C	8.235
TF3471	14	23902752	23902753	MYH7	G	A	8.232
DN4461	3	42234757	42234758	TRAK1	C	A	8.231
BB4911	3	386246	386247	CHL1	C	T	8.222
BB4911	6	88182703	88182704	SLC35A1	G	C	8.22
JFH3411	9	34256346	34256347	KIF24	C	T	8.215
DN4461	4	90756549	90756550	SNCA	C	G	8.212
JFH3411	9	36840445	36840446	PAX5	G	A	8.208
JFH3411	13	50275514	50275515	KPNA3	C	T	8.204
QW4591	16	71109661	71109662	HYDIN	C	G	8.203
JFH3411	13	47261969	47261970	LRCH1	T	C	8.2
JFH3411	20	10026356	10026357	ANKEF1	T	C	8.198
LK4881, DN4461	18	33828979	33828980	MOCOS	C	G	8.195
JFH3411	12	104235778	104235779	NT5DC3	C	T	8.19
JZ1851	18	47369757	47369758	MYO5B	C	T	8.181
BB4911	3	38519423	38519424	ACVR2B	A	G	8.179
SL2221	7	38292915	38292916	TRGC2	C	T	8.174
QW4591	GL00022 4.1	3471	3472		G	T	8.174
MC3481	18	61650864	61650865	SERPINB8	G	A	8.169
QW4591	19	41222962	41222963	ADCK4	T	C	8.169
LK4881	18	55253709	55253710	FECH	G	A	8.163
EK3261	11	111154723	111154724	C11orf53	C	A	8.162
EK3261	11	117342671	117342672	DSCAML1	T	C	8.154
BB4911	3	9768335	9768336	CPNE9	C	G	8.152
BB4911	3	33728587	33728588	CLASP2	T	C	8.15
EK3261	X	18779720	18779721	PPEF1	A	G	8.149
JFH3411	1	16974148	16974149		C	A	8.147
MC3481	18	12512558	12512559	SPIRE1	C	A	8.146
MC3481	18	43595801	43595802	PSTPIP2	C	T	8.144
JFH3411	8	76468138	76468139	HNF4G	C	G	8.129
LK4881	18	2847729	2847730	EMILIN2	C	G	8.127
DN4461	9	131568362	131568363	TBC1D13	A	G	8.127
MC3481	18	7023370	7023371	LAMA1	A	G	8.124

Table B-3: Continued

LK4881	22	20713089	20713090	LOC101927859	C	T	8.115
JFH3411	4	9157397	9157398	FAM86KP	G	C	8.106
BB4911	3	29529906	29529907	RBMS3	G	A	8.104
EK3261	X	152772472	152772473	BGN	C	T	8.099
MC3481	18	56274513	56274514	ALPK2	A	G	8.087
BB4911	3	56787450	56787451	ARHGEF3	C	T	8.079
BB4911	3	9757085	9757086	CPNE9	C	G	8.078
BB4911	3	9122070	9122071	SRGAP3	G	A	8.067
EK3261	11	119054487	119054488	NLRX1	C	T	8.048
BB4911	7	66767913	66767914		G	A	8.047
DN4461	16	88778614	88778615	CTU2	G	A	8.032
BB4911	3	46713456	46713457	ALS2CL	C	G	8.032
AR5361	1	38422949	38422950	SF3A3	A	T	8.031
JZ1851,LK4881	18	23873462	23873463	TAF4B	T	C	8.024
DN4461	15	75699522	75699523	SIN3A	G	A	8.022
EK3261	X	73066438	73066439	XIST	T	C	8.022
BB4911	3	47913497	47913498	MAP4	C	T	8.019
AR5361	8	33778359	33778360		G	A	8.011
QW4591	13	75813347	75813348	CTAGE11P	G	A	8.009
BB4911	3	194369578	194369579	LSG1	C	A	8.008
EK3261	X	15540298	15540299	BMX	T	C	8.008
EK3261	12	569741	569742	B4GALNT3	C	G	8.006
JZ1851	16	28510844	28510845	IL27	A	G	8
EK3261	X	1317403	1317404	CRLF2	T	C	7.998
LK4881	18	61564393	61564394	SERPINB2	A	G	7.993
DN4461	6	18368247	18368248	RNF144B	C	T	7.991
TF3471	9	80917069	80917070	PSAT1	C	T	7.991
LK4881	18	14613814	14613815		A	G	7.981
EK3261	X	100743545	100743546	ARMCX4	C	T	7.98
LK4881	18	8248040	8248041	PTPRM	G	T	7.979
BB4911	11	116691633	116691634	APOA4	C	A	7.976
BB4911	11	124086174	124086175		T	C	7.97
BB4911	3	175436042	175436043	NAALADL2	A	G	7.97
EK3261	11	93862492	93862493	PANX1	A	C	7.967
LK4881	6	136977567	136977568	MAP3K5	T	C	7.964
AR5361	20	33346046	33346047	NCOA6	T	C	7.96
MA5421	8	83663751	83663752		C	G	7.958
EK3261	21	38604569	38604570	DSCR3	C	T	7.957
EK3261	X	322385	322386	PPP2R3B	C	T	7.957
BB4911	3	143692017	143692018	C3orf58	C	G	7.955
QW4591	13	52603193	52603194	UTP14C	G	T	7.953
BB4911	3	119378976	119378977	POPDC2	G	A	7.94
JFH3411	9	34407571	34407572	FAM219A	G	C	7.938
JM1191	X	1500136	1500137	IL3RA	C	T	7.934

Table B-3: Continued

AR5361	15	34729609	34729610	GOLGA8A	G	A	7.928
JZ1851	3	138025395	138025396	NME9	A	G	7.926
BB4911	1	17683156	17683157	PADI4	A	G	7.921
EK3261	X	152823727	152823728	ATP2B3	G	C	7.921
EK3261	11	119005131	119005132	HINFP	C	T	7.899
JZ1851	18	14866216	14866217		C	T	7.897
JZ1851	18	47318502	47318503	ACAA2	T	A	7.896
AR5361	1	183155715	183155716	LAMC2	T	A	7.895
AR5361	7	150497825	150497826	TMEM176 B	C	A	7.895
JFH3411,EK3261	1	16975044	16975045		G	A	7.893
JFH3411	6	109703845	109703846	CD164	C	A	7.883
JFH3411	9	967980	967981	DMRT1	G	C	7.881
EK3261	X	1414224	1414225	CSF2RA	C	T	7.877
JM1191	11	61044018	61044019	VWCE	T	A	7.876
BB4911	3	176769607	176769608	TBL1XR1	G	A	7.875
JFH3411	1	155247700	155247701	HCN3	A	C	7.874
JFH3411	14	50033048	50033049		G	A	7.868
AR5361	GL00019 2.1	305931	305932		G	C	7.839
SM2701	6	66547321	66547322		T	G	7.833
JFH3411	12	110012509	110012510	MVK	C	G	7.826
BB4911	3	10138068	10138069	FANCD2	T	G	7.818
QW4591	13	77562629	77562630	CLN5	C	G	7.812
BB4911	3	20216518	20216519	SGOL1	T	A	7.809
TA2691	7	66056802	66056803		C	T	7.808
JFH3411	17	6328670	6328671	AIPL1	C	A	7.806
BB4911	3	113522543	113522544	ATP6V1A	T	C	7.799
JZ1851,MC3481	18	14157290	14157291		A	T	7.782
JFH3411	9	69206923	69206924	CBWD6	T	A	7.782
EK3261	11	117163764	117163765	BACE1	C	A	7.778
BB4911	11	107729560	107729561	SLC35F2	T	C	7.77
JFH3411	4	164621786	164621787	MARCH1	T	A	7.768
JZ1851	18	3262192	3262193	MYL12B	T	C	7.758
BB4911	3	189713204	189713205	LEPREL1	T	C	7.758
EK3261	X	138869367	138869368	ATP11C	T	C	7.753
JFH3411	9	5467954	5467955	CD274	G	A	7.752
SL2221	22	36682706	36682707	MYH9	G	A	7.751
JZ1851	18	55032623	55032624	ST8SIA3	T	A	7.748
AR5361	9	140006201	140006202	DPP7	G	A	7.74
BB4911	3	3221429	3221430	CRBN	C	T	7.737
LK4881	18	14632841	14632842		C	T	7.734
JZ1851	11	124967773	124967774	TMEM218	G	A	7.729
AR5361	13	96485416	96485417	UGGT2	A	G	7.713
JFH3411	7	158560620	158560621	ESYT2	A	C	7.708
JFH3411	9	32987285	32987286	APTX	G	A	7.706
DN4461	11	57137370	57137371	P2RX3	G	A	7.704

Table B-3: Continued

JZ1851	18	12658190	12658191	SPIRE1	T	G	7.698
JZ1851	16	21531493	21531494		T	C	7.68
JZ1851	18	57636823	57636824		C	T	7.677
AR5361	15	48054071	48054072	SEMA6D	G	A	7.676
JFH3411	9	24545512	24545513	IZUMO3	G	A	7.671
BB4911	3	121643892	121643893	SLC15A2	T	C	7.666
SM2701	6	71666226	71666227	B3GAT2	G	A	7.66
DN4461	14	39532491	39532492	SEC23A	T	C	7.657
JZ1851	19	1113975	1113976	SBNO2	C	T	7.651
JFH3411	20	9352901	9352902	PLCB4	A	G	7.64
DN4461	11	66247843	66247844	DPP3	G	A	7.635
BB4911	3	187897282	187897283	LPP	G	A	7.63
BB4911	3	185960413	185960414	DGKG	G	A	7.626
SM2701	19	9435181	9435182	ZNF559	C	T	7.622
DN4461	17	40278080	40278081	RAB5C	T	A	7.613
BB4911	3	183994535	183994536	ECE2	A	G	7.613
BB4911	3	52821176	52821177	ITIH1	A	C	7.606
SL2221	1	214656667	214656668	PTPN14	G	C	7.6
JFH3411	9	33328811	33328812	NFX1	A	G	7.584
BB4911	3	38768246	38768247	SCN10A	G	A	7.581
AR5361	4	56375881	56375882	CLOCK	G	T	7.569
EK3261	11	118765266	118765267	CXCR5	G	C	7.562
EK3261	11	120175748	120175749	POU2F3	A	G	7.557
BB4911	3	9834904	9834905	ARPC4	C	T	7.554
LK4881	4	104493863	104493864		A	T	7.554
AR5361	9	140136670	140136671	TUBB4B	C	G	7.546
JZ1851	18	54697252	54697253	WDR7	G	A	7.541
EK3261	X	71549511	71549512	HDAC8	G	C	7.539
DN4461	1	16714094	16714095	SZRD1	C	T	7.536
BB4911	3	65350693	65350694	MAG11	A	G	7.535
BB4911	3	120347165	120347166	HGD	C	A	7.535
BB4911	3	28552643	28552644	ZCWPW2	G	T	7.525
QW4591	18	46233986	46233987	CTIF	T	C	7.518
QW4591	13	77589724	77589725	FBXL3	A	C	7.511
EK3261	X	100505880	100505881	DRP2	C	G	7.51
BB4911	4	187078865	187078866	FAM149A	C	T	7.507
JZ1851	10	111678619	111678620	XPNPEP1	A	G	7.506
EK3261, BB4911	11	103058125	103058126	DYNC2H1	C	T	7.505
LK4881	7	100635590	100635591	MUC12	C	A	7.505
JZ1851	14	22071104	22071105		G	A	7.494
JFH3411	5	72188801	72188802	TNPO1	C	T	7.492
BB4911	3	49829325	49829326	CDHR4	G	A	7.491
JZ1851	10	73820000	73820001	SPOCK2	A	G	7.484
BB4911	3	56052838	56052839	ERC2	G	T	7.483
QW4591	13	75812171	75812172	CTAGE11 P	G	A	7.482

Table B-3: Continued

BB4911	1	202843126	202843127	RABIF	C	T	7.477
MC3481	18	24035787	24035788	KCTD1	G	A	7.476
JFH3411	20	10030187	10030188	ANKEF1	T	A	7.475
BB4911	3	33458265	33458266	UBP1	T	C	7.475
DN4461	9	115095043	115095044	PTBP3	G	A	7.475
JFH3411	17	80009009	80009010	RFNG	C	G	7.468
BB4911	3	49570881	49570882	DAG1	T	C	7.468
JZ1851	9	34320263	34320264	KIF24	A	G	7.468
BB4911	3	49739085	49739086	RNF123	C	T	7.461
AR5361	7	312938	312939		G	A	7.461
LK4881	18	59894763	59894764	KIAA1468	T	C	7.45
AR5361	6	35888619	35888620	SRPK1	G	C	7.448
JFH3411	9	38423825	38423826	IGFBPL1	T	A	7.445
BB4911	3	58196317	58196318	DNASE1L3	C	T	7.444
BB4911	3	194408703	194408704	FAM43A	A	G	7.438
EK3261	X	125298689	125298690	DCAF12L2	G	A	7.433
JFH3411	9	27203133	27203134	TEK	A	G	7.419
JFH3411	2	15378502	15378503	NBAS	C	A	7.414
DN4461	7	150730998	150730999	ABCB8	G	A	7.408
QW4591	10	5326845	5326846		C	T	7.401
LK4881	2	31467350	31467351	EHD3	T	A	7.401
EK3261	X	103182759	103182760		C	T	7.4
BB4911	3	37048632	37048633	MLH1	A	G	7.394
MC3481	18	51804258	51804259	POLI	C	T	7.38
JFH3411	15	102304746	102304747	LOC101927594	A	G	7.374
JZ1851	18	59001701	59001702	CDH20	A	T	7.371
BB4911	11	126278074	126278075	ST3GAL4	C	T	7.368
MA5421	11	47464518	47464519	RAPSN	G	A	7.367
DN4461	14	105398786	105398787	PLD4	G	C	7.364
QW4591	13	75814343	75814344	CTAGE11P	C	A	7.36
BB4911	3	54930772	54930773	CACNA2D3	A	G	7.358
BB4911	3	38888877	38888878	SCN11A	C	G	7.355
BB4911	3	47705114	47705115	SMARCC1	C	T	7.353
JZ1851	18	57567637	57567638	PMAIP1	G	C	7.323
DN4461	14	20265264	20265265		T	A	7.316
BB4911	11	108047118	108047119	NPAT	T	C	7.315
BB4911	3	140178484	140178485	CLSTN2	G	A	7.315
BB4911	3	57294084	57294085	APPL1	C	G	7.314
EK3261	11	108535791	108535792	DDX10	C	T	7.313
BB4911	11	122022926	122022927	MIR100HG	C	T	7.311
LK4881	18	14998227	14998228		G	A	7.311
AR5361	11	6703763	6703764	MRPL17	T	G	7.308
DN4461	14	74550907	74550908	ALDH6A1	A	T	7.307
JZ1851	18	47339363	47339364	ACAA2	C	T	7.305

Table B-3: Continued

BB4911	3	127391017	127391018	PODXL2	A	G	7.29
BB4911	11	86017601	86017602	C11orf73	T	C	7.289
JFH3411	15	102304757	102304758	LOC101927594	C	G	7.28
DN4461	17	19999780	19999781	SPECC1	G	A	7.275
MA5421	16	18804736	18804737	ARL6IP1	C	T	7.273
BB4911	3	43122965	43122966	GTDC2	G	A	7.272
EK3261	X	207450	207451	PLCXD1	C	T	7.268
BB4911	3	136139877	136139878	STAG1	G	A	7.263
BB4911	3	147113585	147113586	ZIC4	A	T	7.263
EK3261	11	102668779	102668780	MMP1	A	G	7.258
BB4911	3	14615055	14615056		T	C	7.257
QW4591	2	190176487	190176488		G	A	7.253
JFH3411	9	35663227	35663228	ARHGEF39	G	C	7.237
LK4881	14	96728991	96728992	BDKRB1	C	T	7.234
JZ1851	18	59475827	59475828	RNF152	A	T	7.222
JFH3411	9	44078454	44078455		C	T	7.22
DN4461	12	57881757	57881758	MARS	G	A	7.219
EK3261	X	118699319	118699320	CXorf56	A	G	7.218
LK4881	6	33095554	33095555	HLA-DPB2	T	A	7.217
MA5421,AR5361	9	4741807	4741808	AK3	C	T	7.216
BB4911	11	89402556	89402557	FOLH1B	G	T	7.208
BB4911	3	119900211	119900212	GPR156	G	C	7.204
BB4911	3	119534152	119534153	NR112	C	T	7.2
JFH3411	9	33750747	33750748	PRSS3	G	T	7.196
MA5421	3	183602316	183602317	PARL	G	A	7.188
TA2691	17	27576298	27576299	CRYBA1	T	G	7.185
LK4881	18	6943263	6943264	LAMA1	G	A	7.183
JZ1851	18	32707331	32707332	MAPRE2	C	T	7.182
EK3261,BB4911	11	118851137	118851138	FOXR1	C	T	7.181
BB4911	3	32663237	32663238		A	G	7.181
JZ1851	1	180404132	180404133	ACBD6	C	T	7.175
JZ1851	18	9536690	9536691	RALBP1	G	A	7.171
BB4911	3	128203005	128203006	GATA2	G	T	7.171
QW4591	13	51484002	51484003	RNASEH2B	G	C	7.162
BB4911	3	63982081	63982082	ATXN7	G	A	7.162
JFH3411	14	20678001	20678002		T	C	7.158
JFH3411	4	68411304	68411305	CENPC	G	T	7.156
AR5361	21	11055812	11055813	BAGE2	G	A	7.151
JFH3411	9	738237	738238	KANK1	G	A	7.151
LK4881	10	27535016	27535017	ACBD5	T	C	7.149
BB4911	11	89531539	89531540	TRIM49	C	T	7.147
AR5361	3	196210807	196210808	RNF168	T	C	7.134
SM2701	18	21529721	21529722	LAMA3	G	A	7.133
EK3261	17	8113627	8113628	AURKB	T	G	7.13

Table B-3: Continued

AR5361	19	15027887	15027888		C	T	7.129
JZ1851	18	55018998	55018999	ST8SIA3	C	G	7.124
BB4911	3	40286016	40286017	MYRIP	T	C	7.114
JFH3411	12	98896175	98896176	LOC643770	T	G	7.112
JFH3411	9	34106409	34106410	DCAF12	C	T	7.103
QW4591	3	87680339	87680340		A	G	7.1
BB4911	3	52325038	52325039	GLYCTK	G	A	7.092
JZ1851	1	1510800	1510801	SSU72	C	T	7.088
TF3471	11	44255613	44255614	EXT2	T	C	7.086
JZ1851	18	50451820	50451821	DCC	T	G	7.083
TF3471	18	47809870	47809871	CXXC1	G	T	7.081
BB4911	11	118828183	118828184	UPK2	C	A	7.079
JFH3411	9	34407330	34407331	FAM219A	G	A	7.078
LK4881	18	29784369	29784370	MEP1B	C	T	7.077
JFH3411	9	19033034	19033035	FAM154A	G	A	7.072
EK3261	X	100911065	100911066	ARMCX2	C	T	7.068
AR5361	6	31432005	31432006	HCP5	G	A	7.065
EK3261	5	145508339	145508340	LARS	A	G	7.063
DN4461	Y	59031832	59031833		T	C	7.062
LK4881	18	76753587	76753588	SALL3	A	G	7.057
BB4911	2	1591236	1591237		C	T	7.054
JZ1851	19	3784534	3784535	MATK	G	A	7.053
BB4911	10	116307503	116307504	ABLIM1	A	G	7.043
BB4911	3	111710205	111710206	ABHD10	T	C	7.034
JFH3411	9	35610911	35610912	CD72	A	G	7.026
EK3261	X	103359422	103359423	ZCCHC18	C	G	7.025
BB4911	3	124731688	124731689	HEG1	T	A	7.022
EK3261	X	31697635	31697636	DMD	A	G	7.022
MA5421	3	123066484	123066485	ADCY5	G	T	7.021
AR5361	9	71627363	71627364	PIP5K1B	T	G	7.013
EK3261	X	30236912	30236913	MAGEB2	G	A	7.012
QW4591	13	50465944	50465945	CTAGE10P	C	T	7.008
JFH3411	7	96338733	96338734	SHFM1	G	A	7.005
EK3261, BB4911	11	102576467	102576468	MMP27	C	A	7.004
JZ1851	18	71930757	71930758	CYB5A	G	A	6.995
LK4881	18	70531960	70531961	NETO1	T	C	6.994
BB4911	3	30029723	30029724	RBMS3	C	T	6.993
MC3481	7	12675545	12675546	SCIN	A	G	6.99
JFH3411	9	11012048	11012049		T	A	6.985
LK4881	18	6959393	6959394	LAMA1	G	A	6.983
JZ1851	18	13612071	13612072	LDLRAD4	C	T	6.977
QW4591	2	113882641	113882642	IL1RN	G	A	6.975
AR5361	1	179522081	179522082	NPHS2	C	A	6.973
MA5421	6	32008962	32008963	TNXB	C	T	6.973
BB4911	3	186293587	186293588	DNAJB11	A	G	6.971

Table B-3: Continued

BB4911	3	56041370	56041371	ERC2	T	C	6.97
TA2691	19	2341102	2341103	SPPL2B	G	A	6.966
JFH3411	9	7174772	7174773	KDM4C	G	A	6.966
AR5361	12	106431587	106431588		A	C	6.958
LK4881	17	43483550	43483551	ARHGAP27	C	T	6.956
SM2701	9	37486382	37486383	POLR1E	G	A	6.948
MA5421	14	69921478	69921479	SLC39A9	A	G	6.947
QW4591	13	49107240	49107241	RCBTB2	T	C	6.946
EK3261	12	109491589	109491590	USP30	C	T	6.943
EK3261	X	41554813	41554814	GPR34	T	C	6.941
TF3471	18	47527790	47527791	MYO5B	A	G	6.94
BB4911	16	23536365	23536366	EARS2	T	C	6.931
EK3261	11	119181169	119181170	MCAM	T	C	6.929
LK4881	13	65532929	65532930		A	G	6.927
QW4591	4	65135	65136	ZNF595	T	G	6.922
JFH3411	4	47886318	47886319	NFXL1	A	C	6.92
BB4911	3	194369579	194369580	LSG1	C	A	6.916
TF3471	13	36939687	36939688	SPG20	C	T	6.915
MC3481	9	113007288	113007289	TXN	T	G	6.913
AR5361	17	6718428	6718429	TEKT1	A	G	6.908
BB4911	3	191093309	191093310	CCDC50	A	G	6.907
JFH3411	9	19376407	19376408	RPS6	A	G	6.907
BB4911	2	38755372	38755373		C	G	6.902
BB4911	3	21447956	21447957	VENTXP7	C	T	6.901
JFH3411	9	37486602	37486603	POLR1E	A	G	6.889
BB4911	3	184700425	184700426	VPS8	C	T	6.882
BB4911	3	197581146	197581147	LRCH3	A	G	6.882
EK3261	X	23761385	23761386	ACOT9	C	G	6.881
EK3261	X	48751470	48751471	TIMM17B	A	G	6.879
BB4911	11	125616501	125616502	PATE1	T	A	6.878
SM2701	4	37446873	37446874	KIAA1239	C	T	6.878
JFH3411	9	376928	376929	DOCK8	A	G	6.874
DN4461	7	77326409	77326410	RSBN1L	T	C	6.862
EK3261	X	1470936	1470937	IL3RA	C	T	6.862
JZ1851	18	60054179	60054180	TNFRSF11A	A	G	6.861
EK3261	1	17017674	17017675	ESPNP	C	A	6.859
BB4911	3	184046354	184046355	EIF4G1	C	T	6.855
JZ1851	18	33647669	33647670	RPRD1A	G	A	6.843
EK3261	X	138686877	138686878	MCF2	G	A	6.838
MC3481	18	65179828	65179829	DSEL	G	A	6.837
AR5361	19	39441045	39441046	FBXO17	G	A	6.814
BB4911	3	133553526	133553527	RAB6B	C	T	6.809
EK3261	X	68381786	68381787	PJA1	C	T	6.803
DN4461	20	33894462	33894463	UQCC	A	G	6.798
EK3261	X	13758374	13758375	OFD1	G	A	6.796

Table B-3: Continued

EK3261	X	49098630	49098631	CCDC22	A	G	6.796
BB4911	3	13671182	13671183	FBLN2	T	A	6.793
BB4911	3	52382821	52382822	DNAH1	C	T	6.793
MA5421	6	91278419	91278420	MAP3K7	T	C	6.791
JFH3411	9	34089394	34089395	DCAF12	T	C	6.791
LK4881	18	9522605	9522606	RALBP1	G	A	6.788
EK3261	X	73043816	73043817	XIST	T	C	6.787
MA5421	9	67700971	67700972		C	A	6.785
LK4881	4	185616437	185616438	MLF1IP	C	T	6.784
BB4911	3	46400061	46400062	CCR2	G	A	6.783
JFH3411	10	104591151	104591152	CYP17A1	T	A	6.781
BB4911	3	182614492	182614493	ATP11B	T	C	6.768
JZ1851	18	10532896	10532897	NAPG	T	C	6.767
JFH3411	9	14770657	14770658	FREM1	G	T	6.762
AR5361	3	15314666	15314667	SH3BP5	G	C	6.76
LK4881	7	45110289	45110290	CCM2	G	A	6.76
BB4911	3	139068007	139068008	MRPS22	T	A	6.759
BB4911	11	113111664	113111665	NCAM1	G	A	6.757
JZ1851	X	2418537	2418538	ZBED1	C	T	6.754
JFH3411	X	107979652	107979653	IRS4	A	C	6.754
JFH3411	9	35958046	35958047	OR2S2	T	C	6.751
JFH3411	21	42615292	42615293	BACE2	C	T	6.745
TF3471	5	78944370	78944371	PAPD4	G	C	6.745
JM1191	20	2633403	2633404	NOP56	C	G	6.744
SM2701	16	71955399	71955400	IST1	T	G	6.738
EK3261	X	84306501	84306502	APOOL	T	A	6.725
QW4591	13	52585547	52585548	ATP7B	G	T	6.72
BB4911	3	10370485	10370486	ATP2B2	G	C	6.719
QW4591	13	61986917	61986918	PCDH20	C	A	6.715
MC3481	X	134807814	134807815	LOC64471 7	C	A	6.713
MA5421	11	113134604	113134605	NCAM1	G	A	6.71
JFH3411	15	65930635	65930636	SLC24A1	A	G	6.71
QW4591	13	78315666	78315667	SLAIN1	G	A	6.703
BB4911	3	121642047	121642048	SLC15A2	A	T	6.698
BB4911	3	39452122	39452123	RPSA	G	A	6.695
MC3481	18	12634985	12634986	SPIRE1	T	G	6.692
JFH3411	4	158043558	158043559	GLRB	C	T	6.684
JZ1851	20	49552903	49552904	DPM1	A	G	6.683
JZ1851,MA5421	18	11909258	11909259	MPPE1	G	A	6.681
JZ1851	8	21906358	21906359	DMTN	A	G	6.679
JZ1851	8	609866	609867	ERICH1	A	G	6.676
DN4461	6	29897258	29897259	HCG4B	T	A	6.67
EK3261	X	129349294	129349295	ZNF280C	T	G	6.666
JZ1851	18	29542706	29542707		A	G	6.658
JZ1851	18	77439843	77439844	CTDPI	G	T	6.656

Table B-3: Continued

JZ1851	18	5954870	5954871	L3MBTL4	T	A	6.651
AR5361	6	135318853	135318854	HBS1L	A	T	6.65
DN4461	2	209033096	209033097	C2orf80	A	G	6.649
JFH3411	11	71945777	71945778	INPPL1	T	A	6.644
JFH3411	7	88964195	88964196	ZNF804B	T	A	6.642
DN4461	7	97596091	97596092	MIR5692C 2	T	A	6.641
AR5361	2	207984650	207984651	KLF7	C	T	6.638
BB4911	3	8556616	8556617	LMCD1	A	G	6.634
JFH3411	9	34500878	34500879	DNAI1	C	T	6.622
EK3261	14	19412924	19412925	LOC64242 6	C	G	6.62
LK4881	6	148761602	148761603	SASH1	C	A	6.619
JFH3411	19	15729363	15729364	CYP4F8	C	A	6.614
QW4591	2	109065492	109065493	GCC2	T	G	6.611
EK3261	11	112093151	112093152	PTS	C	T	6.608
BB4911	2	231191755	231191756	SP140L	C	T	6.608
MC3481	3	113638391	113638392	GRAMD1 C	T	C	6.603
EK3261	11	98436673	98436674		A	G	6.599
BB4911	3	10084223	10084224	FANCD2	C	T	6.599
MA5421	3	156258416	156258417	SSR3	G	A	6.594
EK3261	X	27766775	27766776	DCAF8L2	G	A	6.594
EK3261	11	120186189	120186190	POU2F3	G	A	6.593
BB4911	14	23764706	23764707	HOMEZ	A	G	6.593
JZ1851	18	23970946	23970947	TAF4B	G	T	6.593
JFH3411	9	19516089	19516090	SLC24A2	C	G	6.587
AR5361	9	139618282	139618283	FAM69B	A	G	6.587
BB4911	3	10085129	10085130	FANCD2	C	G	6.582
BB4911	11	119548697	119548698	PVRL1	T	G	6.568
JFH3411	17	37783400	37783401	PPP1R1B	T	G	6.568
BB4911	3	42740433	42740434	HHATL	G	A	6.568
JZ1851	18	65183918	65183919	DSEL	G	C	6.563
JZ1851	3	157098829	157098830	VEPH1	C	T	6.56
LK4881	6	32307531	32307532	C6orf10	G	A	6.56
LK4881	22	24921557	24921558	UPB1	C	T	6.556
JFH3411	7	2394315	2394316	EIF3B	C	G	6.556
EK3261	11	84732233	84732234	DLG2	C	T	6.543
DN4461	17	15603113	15603114	ZNF286A	G	T	6.532
BB4911	3	9860622	9860623	TTLL3	T	G	6.53
DN4461	9	115968861	115968862	FKBP15	T	C	6.53
TF3471	20	36989380	36989381	LBP	G	A	6.528
LK4881	5	180708750	180708751		C	G	6.526
JFH3411	9	34402662	34402663	FAM219A	C	T	6.525
LK4881	10	105127586	105127587	TAF5	G	T	6.519
SM2701	4	39918648	39918649	PDS5A	G	A	6.519
JZ1851	18	6974838	6974839	LAMA1	T	A	6.518

Table B-3: Continued

JFH3411	16	984112	984113	LMF1	C	A	6.515
BB4911	3	3116437	3116438	IL5RA	G	A	6.515
DN4461	17	38179491	38179492	MED24	A	G	6.514
AR5361	15	57539637	57539638	TCF12	T	C	6.513
AR5361	9	141016530	141016531	CACNA1B	C	T	6.507
JFH3411	7	143084573	143084574	ZYX	G	A	6.506
EK3261	11	116629948	116629949	BUD13	C	T	6.501
JZ1851	18	33023748	33023749		T	C	6.498
DN4461	19	7441648	7441649	ARHGEF18	C	T	6.498
BB4911	3	183907031	183907032	ABCF3	G	C	6.494
BB4911	11	112099409	112099410	PTS	T	C	6.489
QW4591	13	76111701	76111702	COMMD6	A	G	6.488
MA5421	2	172412615	172412616	CYBRD1	C	A	6.488
MC3481	3	58376189	58376190	PXK	T	C	6.479
DN4461	9	139354096	139354097	SEC16A	G	A	6.478
BB4911	3	121630327	121630328	SLC15A2	A	G	6.465
MA5421	18	21441784	21441785	LAMA3	G	A	6.463
JFH3411	6	1392672	1392673	FOXF2	A	T	6.463
BB4911	3	150881773	150881774	MED12L	A	C	6.462
BB4911	3	138176532	138176533	ESYT3	A	T	6.461
JZ1851	18	54264533	54264534		T	C	6.455
JFH3411	17	16733873	16733874		G	A	6.454
LK4881	20	30647238	30647239	HCK	C	T	6.45
MA5421	18	32953193	32953194	ZNF396	A	G	6.446
BB4911	3	42234739	42234740	TRAK1	G	A	6.446
QW4591	1	16363041	16363042	CLCNKA	C	T	6.439
BB4911	3	139090480	139090481	COPB2	C	T	6.437
JZ1851	12	46317003	46317004	SCAF11	T	A	6.434
JZ1851	4	107842958	107842959	DKK2	T	C	6.429
MA5421	2	178417834	178417835	TTC30B	T	G	6.425
DN4461	19	15890625	15890626	CYP4F24P	G	A	6.417
BB4911	11	124056565	124056566		G	A	6.416
JZ1851	18	6730015	6730016	ARHGAP28	G	C	6.411
DN4461	12	116446444	116446445	MED13L	C	T	6.409
BB4911	12	21590620	21590621	PYROXD1	T	C	6.405
JZ1851	17	80020973	80020974	DUS1L	C	T	6.399
TA2691	1	156252290	156252291	SMG5	A	G	6.398
JFH3411	4	158005875	158005876	GLRB	G	A	6.393
JZ1851	18	14997662	14997663		A	T	6.392
QW4591	3	195488199	195488200	MUC4	T	G	6.392
AR5361	1	31654939	31654940	NKAIN1	C	T	6.391
EK3261	11	107917086	107917087	CUL5	A	G	6.376
BB4911	11	119216278	119216279	MFRP	G	A	6.373
BB4911	2	26739246	26739247	OTOF	T	A	6.37
DN4461	3	9769007	9769008	CPNE9	A	T	6.364

Table B-3: Continued

JFH3411	13	49852429	49852430	CDADC1	T	G	6.359
EK3261	X	130218450	130218451	ARHGAP3 6	G	A	6.358
EK3261	1	91781643	91781644	HFM1	C	G	6.355
MA5421	18	44038556	44038557	RNF165	C	T	6.355
MA5421	18	14997512	14997513		C	T	6.352
BB4911	3	38568610	38568611	EXOG	C	T	6.351
EK3261	11	93118514	93118515	CCDC67	G	A	6.342
JFH3411	9	8451754	8451755	PTPRD	T	C	6.336
QW4591	21	35254895	35254896	ITSN1	A	G	6.323
EK3261	11	117095360	117095361	PCSK7	C	T	6.322
BB4911	3	33075694	33075695	TMPPE	A	G	6.32
BB4911	1	158612547	158612548	SPTA1	T	A	6.319
JFH3411	9	33971739	33971740	UBAP2	A	G	6.317
EK3261	11	113644260	113644261	ZW10	G	A	6.312
JZ1851	18	20838285	20838286	CABLES1	G	T	6.308
JFH3411	9	34318653	34318654	KIF24	G	A	6.307
TF3471	18	55365010	55365011	ATP8B1	G	A	6.299
JFH3411	9	432329	432330	DOCK8	C	G	6.298
BB4911	5	168620434	168620435	SLIT3	C	A	6.294
QW4591	13	77565971	77565972	CLN5	A	G	6.289
JFH3411	9	21818309	21818310	MTAP	C	T	6.284
BB4911	3	52325758	52325759	GLYCTK	A	G	6.282
JZ1851	18	9530698	9530699	RALBP1	A	G	6.279
BB4911	3	42133148	42133149	TRAK1	C	G	6.278
BB4911	11	126315055	126315056	KIRREL3	C	A	6.277
JZ1851	18	44561794	44561795	TCEB3B	C	T	6.259
BB4911	3	184766391	184766392	VPS8	G	A	6.257
EK3261	11	104971209	104971210	CARD17	C	T	6.256
TF3471	18	12703066	12703067	PSMG2	A	G	6.25
MC3481	18	48346225	48346226	MRO	C	T	6.25
MC3481	18	706588	706589	ENOSF1	A	G	6.248
BB4911	3	10258761	10258762	IRAK2	G	C	6.245
BB4911	3	33454341	33454342	UBP1	G	A	6.242
BB4911	3	14188761	14188762	XPC	G	C	6.241
MC3481	11	11976627	11976628	USP47	G	A	6.239
BB4911	3	52831008	52831009	ITIH3	C	T	6.238
LK4881	18	61471661	61471662	SERPINB7	G	T	6.235
LK4881	11	46889712	46889713	LRP4	T	C	6.231
MA5421	19	51409979	51409980	KLK4	T	C	6.228
BB4911	3	14615240	14615241		C	T	6.225
EK3261	11	117698761	117698762	FXVD2	G	A	6.224
JZ1851	18	13649599	13649600	LDLRAD4	C	T	6.224
LK4881	18	59780423	59780424	PIGN	A	G	6.218
BB4911	11	118867802	118867803	CCDC84	G	C	6.212
MC3481	18	14542889	14542890	POTEC	G	C	6.211

Table B-3: Continued

JZ1851	18	2937645	2937646	LPIN2	A	G	6.208
JFH3411	9	27610742	27610743		C	T	6.206
BB4911	3	21447524	21447525	VENTXP7	G	A	6.205
MC3481	7	55004545	55004546		C	T	6.196
LK4881	18	55240707	55240708	FECH	T	C	6.185
BB4911	3	25836022	25836023	OXSM	C	T	6.182
DN4461	X	49105609	49105610	CCDC22	T	C	6.177
JZ1851	18	55021724	55021725	ST8SIA3	A	C	6.175
LK4881	18	76754870	76754871	SALL3	G	T	6.175
EK3261	X	1422942	1422943	CSF2RA	T	C	6.173
LK4881	18	57567698	57567699	PMAIP1	G	A	6.171
JFH3411	13	52701781	52701782	NEK5	T	C	6.167
EK3261	11	108093207	108093208	NPAT	A	T	6.166
EK3261	X	55187420	55187421	FAM104B	G	A	6.166
DN4461	9	96392186	96392187	PHF2	G	A	6.164
JZ1851	18	28936573	28936574	DSG1	A	C	6.161
BB4911	3	46026258	46026259	FYCO1	G	A	6.146
JFH3411	9	33637972	33637973	TRBV23O R9-2	C	T	6.139
BB4911	3	128987270	128987271	COPG1	T	G	6.122
JFH3411	20	10032412	10032413	ANKEF1	T	G	6.112
BB4911	11	120292476	120292477	ARHGEF1 2	T	C	6.101
BB4911	3	14189339	14189340	XPC	A	G	6.099
JZ1851	18	46190720	46190721	CTIF	G	A	6.097
JZ1851	18	20513817	20513818	RBBP8	C	G	6.094
MC3481	13	100637101	100637102	ZIC2	T	C	6.091
EK3261	X	38240586	38240587	OTC	T	A	6.089
DN4461	22	26839212	26839213	ASPHD2	G	A	6.088
JZ1851	17	27276420	27276421	PHF12	G	T	6.08
EK3261	X	123034510	123034511	XIAP	A	C	6.079
JZ1851	18	66511026	66511027	CCDC102 B	C	T	6.073
JFH3411	7	147259373	147259374	CNTNAP2	A	G	6.073
EK3261	X	122805420	122805421	THOC2	C	A	6.072
JFH3411	3	50264888	50264889	GNAI2	T	G	6.071
BB4911	3	32031023	32031024	ZNF860	C	T	6.07
BB4911	15	75459479	75459480		A	T	6.068
BB4911	3	167217963	167217964	WDR49	A	G	6.066
JM1191	17	33818129	33818130	SLFN12L	G	A	6.065
BB4911	3	151100676	151100677	P2RY12	T	G	6.063
EK3261, BB4911	11	119986166	119986167	TRIM29	T	C	6.06
BB4911	11	122795687	122795688	C11orf63	T	C	6.059
AR5361	21	11046758	11046759	LOC10192 6954	C	T	6.055
JFH3411	9	19576948	19576949	SLC24A2	T	G	6.052
MC3481	15	58430762	58430763	AQP9	A	G	6.038
EK3261	X	67719084	67719085	YIPF6	G	T	6.037

Table B-3: Continued

EK3261	X	1422867	1422868	CSF2RA	G	A	6.028
EK3261	X	130408744	130408745	IGSF1	G	A	6.027
DN4461	7	6476236	6476237	DAGLB	C	T	6.025
LK4881	5	476847	476848	SLC9A3	C	T	6.024
LK4881	18	12008390	12008391	IMPA2	C	T	6.023
SM2701	22	39095697	39095698	JOSD1	C	G	6.019
JZ1851	11	117014925	117014926	PAFAH1B 2	G	A	6.014
QW4591	13	75812406	75812407	CTAGE11 P	G	A	6.007
EK3261	12	21176246	21176247	SLCO1B7	A	G	5.986
BB4911	3	14157912	14157913	CHCHD4	A	G	5.986
JFH3411	7	12611178	12611179	SCIN	C	T	5.98
LK4881	7	132854874	132854875		C	T	5.98
JZ1851	6	20486753	20486754	E2F3	C	T	5.978
JZ1851	18	28571062	28571063	DSC3	C	T	5.976
BB4911	11	118509667	118509668	PHLDB1	A	G	5.975
SM2701	16	77775458	77775459	NUDT7	G	A	5.962
BB4911	3	42265633	42265634	TRAK1	C	T	5.958
BB4911	3	57321915	57321916	ASB14	T	G	5.956
QW4591	3	170059234	170059235		C	A	5.952
SM2701	14	23550125	23550126	ACIN1	T	C	5.946
JZ1851	11	68305493	68305494	PPP6R3	C	T	5.945
SM2701	2	230579015	230579016	DNER	G	A	5.945
QW4591	10	133966726	133966727	JAKMIP3	G	A	5.942
BB4911	11	105481920	105481921	GRIA4	T	C	5.93
BB4911	11	126161373	126161374	TIRAP	C	T	5.928
MA5421	7	56442582	56442583		C	G	5.926
EK3261	11	120040441	120040442	TRIM29	T	G	5.925
LK4881	17	42084096	42084097	NAGS	C	G	5.923
EK3261	22	16953803	16953804		A	C	5.923
EK3261	9	99145933	99145934	SLC35D2	A	C	5.917
BB4911	3	41291080	41291081	ULK4	G	A	5.914
DN4461	19	15890624	15890625	CYP4F24P	C	G	5.913
EK3261	X	1546600	1546601	ASMTL	T	C	5.909
EK3261	X	73325811	73325812	FTX	T	A	5.908
JZ1851	14	76129286	76129287	TTLL5	C	G	5.901
QW4591	13	79928476	79928477	RBM26	A	G	5.9
MC3481	18	30969566	30969567	CCDC178	G	T	5.9
MA5421	16	60688797	60688798		C	T	5.898
BB4911	11	118938956	118938957	VPS11	G	A	5.895
BB4911	3	197846635	197846636		C	A	5.894
LK4881	17	73999631	73999632	CDK3	C	T	5.893
BB4911	3	37107469	37107470	LRRFIP2	G	A	5.892
JFH3411	9	6040875	6040876		C	T	5.89
BB4911	11	117061503	117061504	SIDT2	G	A	5.888
LK4881	10	104157710	104157711	NFKB2	T	G	5.887

Table B-3: Continued

LK4881	17	9590318	9590319	USP43	T	G	5.879
EK3261	X	30237002	30237003	MAGEB2	C	T	5.877
MA5421	11	101918685	101918686	C11orf70	A	C	5.873
JFH3411	20	8717712	8717713	PLCB1	G	A	5.872
SM2701	18	66542107	66542108	CCDC102 B	T	A	5.871
MC3481	3	124379640	124379641	KALRN	C	A	5.869
TA2691	X	91542865	91542866	PCDH11X	T	A	5.867
BB4911	10	5708359	5708360	ASB13	G	A	5.866
DN4461	17	25854187	25854188	KSR1	A	G	5.861
BB4911	11	113270373	113270374	ANKK1	C	T	5.851
MA5421	11	47610272	47610273	FAM180B	T	A	5.85
BB4911	11	118500962	118500963	PHLDB1	G	A	5.84
JFH3411	11	46897864	46897865	LRP4	C	T	5.839
AR5361	6	2990118	2990119	LINC01011	A	G	5.839
EK3261	11	107948857	107948858	CUL5	T	A	5.833
DN4461	19	52403515	52403516	ZNF649	T	C	5.832
EK3261	X	117528055	117528056	WDR44	G	A	5.831
MA5421	11	77931345	77931346	GAB2	C	T	5.827
LK4881	8	10584211	10584212	SOX7	C	T	5.826
BB4911	3	130881408	130881409	NEK11	T	C	5.823
MA5421	11	33061646	33061647	TCP11L1	A	T	5.821
DN4461	12	57858834	57858835	GLI1	G	A	5.816
TA2691	17	76394448	76394449	PGS1	C	T	5.816
DN4461	10	5558348	5558349		G	A	5.812
BB4911	13	24696507	24696508	SPATA13	C	T	5.811
DN4461	8	11996269	11996270	USP17L7	G	A	5.803
EK3261	X	149105826	149105827	CXorf40B	G	A	5.795
BB4911	3	44635460	44635461	ZNF660	G	A	5.793
JFH3411	9	35559368	35559369	RUSC2	G	A	5.791
BB4911	2	53956882	53956883	ASB3	T	G	5.789
BB4911	3	52584786	52584787	PBRM1	T	C	5.789
JM1191	16	21210005	21210006	ZP2	C	T	5.788
JZ1851	9	115448166	115448167	INIP	A	G	5.783
BB4911	3	38390055	38390056	XYLB	G	C	5.78
JFH3411	4	186381933	186381934	CCDC110	C	T	5.777
AR5361	14	45707040	45707041	MIS18BP1	T	C	5.776
BB4911	11	118938879	118938880	VPS11	A	G	5.772
BB4911	3	9406835	9406836	THUMPD3	T	C	5.771
BB4911	3	8335988	8335989	LMCD1- AS1	T	A	5.768
BB4911	11	94862287	94862288	ENDOD1	G	A	5.766
JFH3411	13	48891235	48891236	RB1	A	G	5.759
MC3481	4	122301358	122301359	QRFPR	A	G	5.756
DN4461	22	38463651	38463652	PICK1	T	G	5.755
JZ1851	11	76405871	76405872		T	C	5.746
DN4461	8	144658914	144658915	NAPRT1	A	C	5.746

Table B-3: Continued

JFH3411	2	186667359	186667360	FSIP2	A	C	5.745
MA5421	10	73591828	73591829	PSAP	G	A	5.741
DN4461	3	148562619	148562620	CPB1	A	G	5.741
BB4911	3	191075011	191075012	CCDC50	G	T	5.738
BB4911	3	130546696	130546697		A	G	5.737
EK3261	5	94994338	94994339	SPATA9	A	G	5.731
SM2701	5	178986977	178986978	RUFY1	C	G	5.728
BB4911	3	195341646	195341647		T	G	5.727
BB4911	3	133368198	133368199	TOPBP1	C	T	5.724
LK4881	14	22636953	22636954	TRAV30	C	T	5.717
LK4881	10	43326626	43326627	BMS1	A	C	5.698
AR5361	9	140051237	140051238	GRIN1	A	G	5.694
TF3471	22	18210408	18210409	BCL2L13	T	G	5.693
BB4911	21	10922785	10922786	TPTE	C	A	5.688
AR5361	9	139686555	139686556	TMEM141	G	A	5.687
JFH3411	9	19033005	19033006	FAM154A	G	T	5.673
JZ1851	14	94577630	94577631	IFI27	T	A	5.667
LK4881	1	220953200	220953201	MARC2	T	G	5.666
DN4461	12	7087710	7087711	LPCAT3	T	C	5.666
JZ1851	18	43523311	43523312	EPG5	G	A	5.665
BB4911	3	183952772	183952773	VWA5B2	C	T	5.665
BB4911	3	112727183	112727184	C3orf17	A	T	5.66
BB4911	3	130158342	130158343	COL6A5	C	T	5.657
DN4461	17	42929758	42929759	EFTUD2	C	G	5.656
SM2701	16	84493031	84493032	ATP2C2	C	T	5.655
BB4911	3	66431279	66431280	LRIG1	C	T	5.655
TF3471	5	179675051	179675052	MAPK9	C	A	5.645
EK3261	11	92599850	92599851	FAT3	G	A	5.64
EK3261	11	116654158	116654159	ZNF259	A	G	5.64
MA5421	13	40836409	40836410		T	A	5.639
DN4461	9	118054181	118054182	DEC1	G	A	5.639
DN4461	3	183491719	183491720	YEATS2	T	C	5.629
AR5361	20	6025454	6025455	LRRN4	C	T	5.624
AR5361	17	30228883	30228884	UTP6	G	A	5.621
JZ1851	9	38644420	38644421		T	C	5.621
JZ1851,MC3481	18	60985878	60985879	BCL2	T	C	5.617
BB4911	3	112338026	112338027	CCDC80	T	C	5.617
JZ1851	18	22033260	22033261	IMPACT	G	A	5.611
EK3261	14	50802971	50802972	CDKL1	G	A	5.61
AR5361	4	190671877	190671878		C	T	5.61
JFH3411	9	5832927	5832928	ERMP1	G	C	5.603
BB4911	3	38521155	38521156	ACVR2B	T	C	5.602
EK3261	X	117576116	117576117	WDR44	G	A	5.602
AR5361	3	158384919	158384920	GFM1	C	T	5.597
EK3261	11	103780609	103780610	PDGFD	C	T	5.596
AR5361	22	50499238	50499239	MLC1	C	T	5.592

Table B-3: Continued

JFH3411	9	126834135	126834136		G	A	5.591
MC3481	18	8088596	8088597	PTPRM	A	G	5.59
EK3261	11	118037563	118037564	SCN2B	G	A	5.588
JFH3411	9	27197281	27197282	TEK	T	G	5.58
BB4911	3	178959143	178959144	KCNMB3	C	T	5.576
JFH3411	11	1643224	1643225	KRTAP5-4	G	A	5.572
JFH3411	9	20885239	20885240	FOCAD	G	A	5.571
TF3471	8	30841330	30841331		C	T	5.57
EK3261	4	17489045	17489046	QDPR	G	A	5.567
MA5421	6	31085339	31085340	CDSN	G	A	5.567
JZ1851	5	1816865	1816866	NDUFS6	T	A	5.564
LK4881	16	74938082	74938083	WDR59	A	G	5.562
BB4911	3	39179908	39179909	TTC21A	G	A	5.562
BB4911	3	13523009	13523010	HDAC11	T	C	5.56
BB4911	13	42407737	42407738	VWA8	A	G	5.555
JZ1851	18	28907095	28907096	DSG1	C	T	5.554
EK3261	16	15116624	15116625	PDXDC1	G	T	5.553
QW4591	7	102212761	102212762	POLR2J3	G	A	5.552
LK4881	12	40919534	40919535	MUC19	A	G	5.547
BB4911	3	109178706	109178707	FLJ25363	C	G	5.543
LK4881	10	51785597	51785598		C	T	5.537
DN4461	22	40057272	40057273	CACNA1I	T	C	5.534
JFH3411	16	83711778	83711779	CDH13	T	G	5.529
DN4461	18	2750476	2750477	SMCHD1	A	G	5.528
BB4911	3	168804430	168804431	MECOM	G	A	5.521
BB4911	3	1424849	1424850	CNTN6	T	G	5.518
QW4591	18	61164370	61164371	SERPINB5	G	A	5.517
JFH3411	9	36091132	36091133	RECK	G	A	5.517
BB4911	3	10045029	10045030	LOC40105 2	C	A	5.516
TF3471	18	67992683	67992684	SOCS6	C	T	5.515
SM2701	1	21050269	21050270	SH2D5	C	T	5.511
BB4911	12	9465133	9465134	LOC64284 6	C	G	5.51
JZ1851	9	116751004	116751005	ZNF618	T	G	5.509
EK3261	2	159434499	159434500	PKP4	A	G	5.503
AR5361	9	140093287	140093288	TPRN	G	A	5.501
MC3481	14	93429263	93429264	ITPK1	C	T	5.492
JZ1851	18	2590333	2590334	NDC80	T	C	5.489
JZ1851	18	28570778	28570779	DSC3	A	G	5.487
JM1191	17	66137426	66137427		A	G	5.483
BB4911	3	52556889	52556890	STAB1	A	G	5.483
BB4911	3	10044456	10044457	LOC40105 2	C	T	5.48
JFH3411	9	4706213	4706214	CDC37L1	C	T	5.476
TF3471	18	2552885	2552886	METTL4	G	A	5.472
JFH3411	10	90497587	90497588	LIPK	A	G	5.468

Table B-3: Continued

BB4911	3	46482860	46482861	LTF	G	A	5.465
JZ1851	18	67991721	67991722	SOCS6	C	T	5.464
JZ1851	9	72723061	72723062	MAMDC2	G	A	5.459
BB4911	11	114576625	114576626	NXPE2	A	T	5.457
JM1191,EK3261	X	41194067	41194068	DDX3X	G	C	5.457
JZ1851	18	54268509	54268510	TXNL1	A	G	5.456
LK4881	18	60109716	60109717		C	T	5.455
EK3261	X	149396132	149396133	MIR2114	C	T	5.448
BB4911	14	88934701	88934702	PTPN21	G	A	5.442
BB4911	3	54798257	54798258	CACNA2D3	G	A	5.44
MC3481	18	12982758	12982759	SEH1L	T	A	5.438
LK4881	18	61562689	61562690	SERPINB2	C	T	5.438
EK3261	X	5821785	5821786	NLGN4X	G	A	5.438
TA2691	19	39977172	39977173	TIMM50	G	A	5.437
DN4461	12	56998671	56998672	BAZ2A	G	T	5.431
BB4911	3	172546586	172546587		C	G	5.43
EK3261,BB4911	11	111754573	111754574	C11orf1	A	C	5.429
SM2701	16	87873441	87873442	SLC7A5	C	G	5.427
EK3261	X	152770229	152770230	BGN	G	A	5.425
LK4881	18	43698308	43698309	HAUS1	C	T	5.421
AR5361	1	179858332	179858333	TOR1AIP1	C	T	5.42
BB4911	11	120998224	120998225	TECTA	A	G	5.419
JFH3411	9	34407203	34407204	FAM219A	T	C	5.419
MA5421	11	117283090	117283091	CEP164	C	T	5.413
DN4461	9	95526684	95526685	BICD2	G	A	5.407
JZ1851	18	60630530	60630531	PHLPP1	T	C	5.405
QW4591	1	143402981	143402982		T	C	5.403
BB4911	3	52471941	52471942	SEMA3G	G	A	5.393
JZ1851	15	25438805	25438806	SNORD115-14	C	T	5.392
EK3261	11	113105906	113105907	NCAM1	C	A	5.387
JZ1851	14	23872381	23872382	MYH6	C	T	5.385
DN4461	17	5972747	5972748	WSCD1	T	A	5.384
LK4881	10	135083811	135083812	ADAM8	C	A	5.374
DN4461	6	47686234	47686235	GPR115	C	A	5.369
JZ1851	10	71566059	71566060	COL13A1	G	A	5.363
BB4911	3	187416252	187416253	RTP2	C	T	5.358
BB4911	11	118898318	118898319	SLC37A4	G	A	5.354
TF3471	18	61558612	61558613	SERPINB2	C	T	5.354
AR5361	5	180237676	180237677	MGAT1	C	T	5.352
EK3261	X	152988897	152988898	BCAP31	T	G	5.352
JM1191	17	21906391	21906392	FLJ36000	A	G	5.349
JZ1851	18	13764015	13764016	RNMT	A	T	5.342
AR5361	7	123388473	123388474	WASL	A	G	5.341
JM1191	X	8949316	8949317		C	T	5.339
JM1191	12	46582539	46582540	SLC38A1	T	A	5.338

Table B-3: Continued

BB4911	3	182587125	182587126	ATP11B	G	A	5.337
DN4461	9	136214954	136214955	MED22	A	G	5.335
JZ1851	18	66480747	66480748	CCDC102 B	A	G	5.334
JFH3411	4	109969455	109969456	COL25A1	T	A	5.333
LK4881	8	100709036	100709037	VPS13B	G	T	5.333
JFH3411	9	34521866	34521867	ENHO	T	C	5.331
BB4911	16	1497136	1497137	CLCN7	C	T	5.319
JFH3411	9	27284707	27284708	EQTN	T	A	5.304
AR5361	9	140077728	140077729	ANAPC2	G	A	5.303
BB4911	19	55605693	55605694	PPP1R12C	A	G	5.3
MC3481	18	13040083	13040084	CEP192	A	C	5.299
MC3481	6	138619999	138620000	KIAA1244	A	G	5.299
JZ1851	18	11753715	11753716	GNAL	G	A	5.294
BB4911	11	89405189	89405190	FOLH1B	A	G	5.293
JZ1851	18	9103763	9103764	NDUFV2	G	A	5.291
TF3471	6	33656968	33656969	ITPR3	G	A	5.291
JFH3411	1	205053699	205053700	TMEM81	A	C	5.289
BB4911	3	15900972	15900973	ANKRD28	A	C	5.287
JFH3411	20	9523378	9523379	PAK7	A	G	5.285
BB4911	11	120312745	120312746	ARHGEF1 2	G	A	5.279
DN4461	8	1765424	1765425	MIR596	T	C	5.274
JZ1851	17	9979759	9979760	GAS7	T	G	5.271
JZ1851	18	32842354	32842355	ZSCAN30	A	T	5.262
EK3261	11	120989334	120989335	TECTA	A	G	5.253
EK3261	5	109202832	109202833	MAN2A1	C	T	5.253
MC3481	18	48364	48365		G	C	5.246
EK3261	11	101080124	101080125		G	A	5.24
MA5421	11	76926300	76926301	MYO7A	C	T	5.237
MC3481	18	55319443	55319444	ATP8B1	G	A	5.236
JZ1851	18	28649214	28649215	DSC2	A	G	5.232
BB4911	3	44621325	44621326	ZKSCAN7	T	C	5.232
MA5421	2	91775291	91775292		G	A	5.231
AR5361	1	32647306	32647307	TXLNA	T	G	5.226
JZ1851	9	38015728	38015729	SHB	T	G	5.218
TF3471	20	33063829	33063830	ITCH	A	C	5.217
BB4911	3	36534539	36534540	STAC	G	A	5.217
EK3261	X	2209750	2209751	DHRXS	T	G	5.216
EK3261	X	48891335	48891336	TFE3	G	T	5.214
JFH3411	9	17747172	17747173	SH3GL2	C	A	5.212
JZ1851	9	139908138	139908139	ABCA2	A	G	5.212
JZ1851	18	5955553	5955554	L3MBTL4	A	G	5.21
LK4881	2	201194278	201194279	SPATS2L	C	A	5.21
JZ1851	18	34648154	34648155	KIAA1328	A	C	5.208
DN4461	2	202151162	202151163	CASP8	A	G	5.199
BB4911	3	121643698	121643699	SLC15A2	G	A	5.197

Table B-3: Continued

BB4911	3	9034557	9034558	SRGAP3	C	T	5.195
JFH3411	5	5241967	5241968	ADAMTS1 6	T	A	5.191
EK3261	X	23685963	23685964	PRDX4	T	C	5.191
JZ1851	9	112151348	112151349	PTPN3	C	T	5.185
BB4911	17	49073853	49073854	SPAG9	C	T	5.178
JZ1851	9	112460839	112460840	PALM2	T	A	5.178
QW4591	13	59104238	59104239		C	T	5.177
JFH3411	4	57459489	57459490	THEGL	A	G	5.177
LK4881	18	21437930	21437931	LAMA3	G	C	5.172
BB4911	3	141724327	141724328	TFDP2	T	C	5.172
LK4881	17	3821732	3821733	P2RX1	C	T	5.171
BB4911	3	130140112	130140113	COL6A5	T	A	5.168
DN4461	2	65132098	65132099	LOC40095 8	G	A	5.162
QW4591	13	51397439	51397440	DLEU7	C	A	5.161
JFH3411	10	111631780	111631781	XPNPEP1	G	A	5.157
DN4461	6	129478994	129478995	LAMA2	G	A	5.155
TA2691	16	57197848	57197849	FAM192A	A	G	5.148
JZ1851	18	44268610	44268611	ST8SIA5	G	T	5.139
TF3471	20	36937245	36937246	BPI	G	A	5.132
BB4911	3	8730288	8730289	SSUH2	C	G	5.13
BB4911	3	64184675	64184676	PRICKLE2	G	A	5.13
SM2701	6	116878946	116878947	FAM26D	C	T	5.128
JZ1851	1	55580929	55580930	USP24	G	A	5.127
BB4911	3	12510388	12510389		G	A	5.127
BB4911	3	38158981	38158982	DLEC1	G	A	5.124
QW4591	13	50108251	50108252	RCBTB1	T	C	5.12
JZ1851	18	33783029	33783030	MOCOS	T	C	5.12
BB4911	10	8203308	8203309		C	A	5.113
JZ1851	1	85464842	85464843	MCOLN2	T	A	5.11
LK4881	8	144636480	144636481	GSDMD	C	G	5.11
EK3261	X	6995536	6995537	HDHD1	C	A	5.11
QW4591	13	75814383	75814384	CTAGE11 P	C	T	5.109
JZ1851	18	34232951	34232952	FHOD3	T	C	5.109
BB4911	3	138329861	138329862	FAIM	G	A	5.105
EK3261	11	113846005	113846006	HTR3A	T	C	5.104
BB4911	3	130884168	130884169	NEK11	C	T	5.102
BB4911	3	170105377	170105378	SKIL	C	T	5.102
JFH3411	9	33948651	33948652	UBAP2	T	C	5.101
JZ1851	11	568210	568211	RASSF7	G	A	5.098
JZ1851	18	63624944	63624945		T	A	5.095
BB4911	3	6814987	6814988		C	T	5.094
BB4911	3	49832787	49832788	CDHR4	G	A	5.094
EK3261	X	150565559	150565560	VMA21	G	T	5.09
JZ1851	18	35078534	35078535	CELF4	G	A	5.084

Table B-3: Continued

JZ1851	3	46402017	46402018	CCR2	G	A	5.084
EK3261	3	190999989	190999990	UTS2B	C	T	5.083
DN4461	9	139934906	139934907	NPDC1	G	A	5.077
BB4911	3	167034813	167034814	ZBBX	T	C	5.075
DN4461	10	95405813	95405814	PDE6C	C	A	5.069
EK3261	11	117859208	117859209	IL10RA	G	A	5.069
TA2691	20	4778894	4778895	RASSF2	A	G	5.066
EK3261	X	71379701	71379702	FLJ44635	T	C	5.066
LK4881	18	34475736	34475737	KIAA1328	A	G	5.065
MC3481	18	58310808	58310809		G	A	5.065
BB4911	11	118888618	118888619	RPS25	A	G	5.062
QW4591	13	59104855	59104856		A	G	5.059
JFH3411	13	60590306	60590307	DIAPH3	C	T	5.059
EK3261	X	152927887	152927888		A	G	5.058
LK4881	14	62212674	62212675	HIF1A	C	T	5.05
BB4911	11	125647981	125647982	PATE2	C	T	5.044
JZ1851	18	28916289	28916290	DSG1	G	A	5.044
EK3261	X	49081290	49081291	CACNA1F	G	A	5.043
EK3261	5	52355853	52355854	ITGA2	T	C	5.041
BB4911	3	111692692	111692693	PHLDB2	A	G	5.036
BB4911	3	157004270	157004271	VEPH1	C	G	5.036
LK4881	18	61391227	61391228	SERPINB1 1	T	C	5.032
EK3261	1	214813486	214813487	CENPF	A	G	5.017
JFH3411	5	52502525	52502526		T	C	5.017
EK3261	X	16168676	16168677	GRPR	T	C	5.016
JZ1851	18	14393806	14393807		C	G	5.013
JFH3411	9	35681121	35681122	CA9	C	A	5.011
JZ1851	18	5960164	5960165	L3MBTL4	G	A	5.01
AR5361	6	32809222	32809223	PSMB8	C	A	5.007
DN4461	8	17166865	17166866	MTMR7	G	A	5.003
EK3261	X	302138	302139	PPP2R3B	G	C	5
EK3261	7	149480853	149480854	SSPO	T	G	4.999
JZ1851	18	10551963	10551964	NAPG	A	G	4.997
BB4911	11	126137853	126137854	SRPR	G	A	4.993
EK3261	X	50135326	50135327	DGKK	C	A	4.989
BB4911	3	38568526	38568527	EXOG	A	G	4.987
LK4881	18	264011	264012	THOC1	G	A	4.986
LK4881	18	61647068	61647069	SERPINB8	G	A	4.984
EK3261	X	129147372	129147373	BCORL1	G	A	4.983
BB4911	3	118381302	118381303		C	A	4.982
JM1191,EK3261	X	152752076	152752077	LOC10050 9091	C	A	4.98
JFH3411	7	75442586	75442587	CCL24	A	G	4.961
DN4461	19	619260	619261	POLRMT	G	A	4.958
JZ1851	18	77917478	77917479	PARD6G	G	A	4.952
BB4911	3	82855736	82855737		A	G	4.951

Table B-3: Continued

BB4911	9	125330738	125330739	OR1L8	G	A	4.95
BB4911	3	12211045	12211046	SYN2	G	T	4.943
EK3261	X	100609546	100609547	BTK	G	A	4.934
BB4911	11	110697304	110697305		C	G	4.93
BB4911	3	124728807	124728808	HEG1	C	A	4.926
BB4911	3	139318240	139318241	NMNAT3	A	T	4.926
JZ1851	18	2919633	2919634	LPIN2	T	G	4.924
BB4911	11	87846802	87846803	RAB38	G	A	4.917
EK3261	5	115351149	115351150	AQPEP	T	G	4.915
EK3261, BB4911	11	121360883	121360884	SORL1	T	A	4.911
BB4911	3	97331268	97331269	EPHA6	A	C	4.9
BB4911	3	64589850	64589851	ADAMTS9	A	G	4.894
SM2701	7	23730982	23730983	FAM221A	T	G	4.892
BB4911	3	124739891	124739892	HEG1	G	A	4.889
BB4911	3	190030679	190030680	CLDN1	A	G	4.886
QW4591	9	74801321	74801322	GDA	C	T	4.886
BB4911	3	2777621	2777622	CNTN4	A	G	4.877
QW4591	13	49951141	49951142	CAB39L	T	C	4.876
QW4591	13	73355657	73355658	DIS3	A	C	4.876
JZ1851	17	29233082	29233083	TEFM	C	T	4.876
JM1191	10	129183371	129183372	DOCK1	T	A	4.875
JFH3411	16	21817456	21817457	RRN3P1	G	A	4.875
BB4911	11	102707338	102707339	MMP3	C	A	4.874
LK4881	19	17768817	17768818	UNC13A	A	G	4.873
BB4911	3	39185076	39185077	CSRNP1	G	A	4.871
SM2701	11	124947050	124947051	SLC37A2	A	G	4.867
EK3261	X	91931598	91931599		A	G	4.867
JZ1851, LK4881	18	77135339	77135340	ATP9B	C	T	4.864
EK3261	11	117263102	117263103	CEP164	T	C	4.861
QW4591	13	77574982	77574983	CLN5	A	G	4.857
JZ1851	18	14145017	14145018		T	C	4.854
LK4881	18	29049017	29049018	DSG3	C	T	4.853
JZ1851	18	55150992	55150993	ONECUT2	A	C	4.851
LK4881	17	48746134	48746135	ABCC3	C	T	4.85
QW4591	5	178411366	178411367	GRM6	A	G	4.849
JFH3411	22	20712276	20712277	LOC10192 7859	C	T	4.846
JM1191	3	12644880	12644881	RAF1	A	T	4.844
EK3261	X	49087486	49087487	CACNA1F	G	A	4.844
JFH3411	15	100340295	100340296		C	G	4.843
JFH3411	9	15564099	15564100	CCDC171	C	T	4.841
JZ1851	18	28710431	28710432	DSC1	T	C	4.837
QW4591	15	43477875	43477876	CCNDBP1	T	G	4.836
BB4911	3	52264906	52264907	TWF2	T	C	4.829
LK4881	1	12342680	12342681	VPS13D	G	A	4.827
TF3471	18	47527816	47527817	MYO5B	T	G	4.82

Table B-3: Continued

BB4911	3	58303068	58303069	RPP14	C	T	4.818
LK4881	5	179036256	179036257	RUFY1	C	T	4.818
DN4461	1	156106862	156106863	LMNA	C	T	4.817
EK3261	1	173569175	173569176	SLC9C2	T	C	4.814
JFH3411,QW4591	13	47279453	47279454	LRCH1	A	G	4.809
JZ1851	10	5496065	5496066	NET1	C	T	4.807
BB4911	11	118986971	118986972	C2CD2L	C	T	4.798
LK4881	2	171570487	171570488	SP5	C	G	4.789
DN4461	7	138818743	138818744	TTC26	G	A	4.787
BB4911	3	49720392	49720393	APEH	C	G	4.781
BB4911	3	189033297	189033298	TPRG1	C	T	4.781
LK4881	18	55334294	55334295	ATP8B1	G	A	4.78
JFH3411	9	117209260	117209261	DFNB31	A	G	4.78
DN4461	22	40058998	40058999	CACNA1I	C	T	4.779
BB4911	3	127983494	127983495	EEFSEC	T	C	4.779
MA5421	14	105395428	105395429	PLD4	A	G	4.776
JM1191	20	47858958	47858959	DDX27	C	T	4.776
JZ1851	18	55028650	55028651	ST8SIA3	A	G	4.775
TF3471	5	904373	904374	TRIP13	T	G	4.775
JFH3411	9	66517549	66517550		G	A	4.775
BB4911	11	118958868	118958869	HMBS	G	T	4.77
BB4911	3	9829225	9829226	TADA3	A	C	4.765
DN4461	9	86468714	86468715	KIF27	A	T	4.761
EK3261	11	102738074	102738075	MMP12	T	C	4.758
QW4591	13	77575136	77575137	CLN5	A	G	4.755
JFH3411	9	17273730	17273731	CNTLN	A	G	4.752
AR5361	9	139565149	139565150	EGFL7	A	G	4.751
JZ1851	16	89984369	89984370	MC1R	T	C	4.75
LK4881	18	13095608	13095609	CEP192	T	C	4.748
JZ1851	18	54265846	54265847	TXNL1	G	A	4.743
JZ1851	18	43524144	43524145	EPG5	C	A	4.742
EK3261	11	107326339	107326340	CWF19L2	C	A	4.74
BB4911	3	179182471	179182472		G	A	4.74
LK4881	4	143344784	143344785	INPP4B	T	G	4.738
EK3261	X	19606953	19606954	SH3KBP1	C	T	4.737
AR5361	19	1533882	1533883	PLK5	T	G	4.734
LK4881	4	49163518	49163519		G	A	4.734
BB4911	10	111890361	111890362	ADD3	C	A	4.73
BB4911	3	154802919	154802920	MME	T	C	4.73
EK3261	X	91931815	91931816		A	G	4.73
JZ1851	18	61225800	61225801	SERPINB1 2	C	T	4.729
QW4591	1	152975714	152975715	SPRR3	C	T	4.728
JZ1851	18	10789013	10789014	PIEZO2	G	A	4.728
JFH3411	9	304768	304769	DOCK8	G	A	4.727
SM2701	17	8219477	8219478	ARHGEF1 5	A	G	4.722

Table B-3: Continued

BB4911	10	118359547	118359548	PNLIPRP1	T	C	4.71
EK3261	X	19377192	19377193	PDHA1	C	T	4.709
BB4911	3	183491339	183491340	YEATS2	T	C	4.708
JZ1851	5	106531074	106531075		C	T	4.707
JFH3411	9	35740695	35740696	GBA2	C	T	4.704
BB4911	3	121659196	121659197	SLC15A2	G	A	4.701
BB4911	11	124861540	124861541	CCDC15	A	G	4.696
JFH3411	10	126471429	126471430	METTL10	C	A	4.694
JZ1851	18	33078045	33078046	INO80C	A	G	4.694
JZ1851	2	242129265	242129266	ANO7	C	T	4.691
BB4911	3	178959358	178959359	KCNMB3	A	G	4.686
JZ1851	7	36339425	36339426	EPPD1	G	A	4.682
JZ1851	17	27313286	27313287	SEZ6	T	C	4.678
JZ1851	2	61937965	61937966		C	T	4.678
JZ1851	18	55217695	55217696	FECH	G	A	4.672
AR5361	19	5152897	5152898	KDM4B	T	A	4.67
EK3261	X	44171952	44171953	EFHC2	T	C	4.67
BB4911	3	64667058	64667059	ADAMTS9	G	T	4.668
JFH3411	20	58456950	58456951	SYCP2	G	A	4.667
LK4881	18	72179578	72179579	CNDP2	G	A	4.664
MA5421	15	21935193	21935194	LOC64621 4	C	A	4.662
BB4911	3	140178278	140178279	CLSTN2	G	A	4.661
MA5421	14	102515014	102515015	DYNC1H1	G	A	4.659
LK4881	11	43755779	43755780	HSD17B12	C	T	4.654
QW4591	13	75915216	75915217	TBC1D4	T	A	4.65
BB4911	3	139076819	139076820	COPB2	G	T	4.649
JZ1851	18	54696382	54696383	WDR7	T	C	4.647
SM2701	20	60927411	60927412	LAMA5	G	A	4.642
BB4911	11	107502246	107502247	ELMOD1	G	A	4.64
LK4881	18	12982759	12982760	SEH1L	G	A	4.64
EK3261	19	18898674	18898675	COMP	C	T	4.64
JM1191	18	28991060	28991061	DSG4	T	G	4.638
BB4911	3	128987729	128987730	COPG1	G	A	4.637
EK3261	11	104870944	104870945	CASP5	C	T	4.636
BB4911	3	134225968	134225969	CEP63	T	C	4.634
BB4911	3	10167263	10167264	BRK1	G	C	4.633
JZ1851	18	50273251	50273252	DCC	G	A	4.632
JZ1851	18	58287310	58287311		A	G	4.63
LK4881	18	3188714	3188715	MYOM1	T	C	4.628
BB4911	3	196158654	196158655	UBXN7	C	A	4.627
BB4911	7	150438137	150438138	GIMAP1- GIMAP5	G	A	4.621
JFH3411,QW4591	13	48671080	48671081	MED4	A	G	4.62
TF3471	19	49533498	49533499	CGB2	G	A	4.617
JFH3411	9	35753897	35753898	MSMP	G	A	4.617
DN4461	5	1708982	1708983	MIR4277	G	A	4.615

Table B-3: Continued

JFH3411	5	74376570	74376571	ANKRD31	C	T	4.614
MC3481	11	62009610	62009611	SCGB1D2	C	T	4.611
BB4911	3	16411530	16411531	RFTN1	T	C	4.61
MC3481	6	32318035	32318036	C6orf10	A	G	4.606
AR5361	16	26845551	26845552		A	G	4.601
BB4911	3	164760770	164760771	SI	T	C	4.601
LK4881	18	5232842	5232843	LINC00526	C	T	4.599
BB4911	3	122843211	122843212	PDIA5	C	T	4.599
JFH3411	14	22054397	22054398		C	T	4.597
LK4881	4	1719571	1719572	TMEM129	A	G	4.587
JZ1851	18	8243927	8243928	PTPRM	A	G	4.582
BB4911	3	9829170	9829171	TADA3	G	A	4.582
MA5421	3	119395938	119395939	COX17	C	A	4.582
LK4881	20	30647235	30647236	HCK	T	C	4.578
LK4881	18	72914279	72914280	ZADH2	G	A	4.572
DN4461	1	119927679	119927680	HAO2	A	G	4.57
TA2691	2	160239377	160239378	BAZ2B	A	G	4.568
EK3261, DN4461	16	89017619	89017620	CBFA2T3	C	G	4.566
BB4911	3	141904976	141904977	GK5	G	A	4.566
SL2221	1	22307679	22307680	CELA3B	C	T	4.564
MA5421	18	77730806	77730807	HSBP1L1	C	A	4.557
LK4881	18	61393643	61393644	SERPINB1 1	T	A	4.553
BB4911	3	39141095	39141096	GORASP1	A	G	4.553
MA5421	9	140002753	140002754	MAN1B1	C	T	4.55
TA2691	14	96556845	96556846	LOC10192 9186	C	T	4.549
LK4881	4	186762135	186762136	SORBS2	G	A	4.549
JFH3411	14	45489943	45489944	FAM179B	C	G	4.547
JZ1851, SM2701	18	61066462	61066463	VPS4B	A	G	4.546
LK4881	18	70450878	70450879	NETO1	C	T	4.543
JFH3411	9	11012114	11012115		C	T	4.543
JFH3411	11	108013360	108013361	ACAT1	C	T	4.542
JZ1851	18	3129130	3129131	MYOM1	T	C	4.538
EK3261	X	69574620	69574621	KIF4A	C	T	4.533
QW4591	13	50464623	50464624	CTAGE10 P	G	A	4.527
JZ1851, TF3471	18	18983765	18983766	GREB1L	C	T	4.526
BB4911	3	51273710	51273711	DOCK3	A	G	4.524
TF3471	18	12014219	12014220	IMPA2	G	A	4.522
JFH3411	9	4844703	4844704	RCL1	T	C	4.521
JZ1851	18	6928546	6928547	LINC00668	T	A	4.519
EK3261	11	102666163	102666164	MMP1	T	C	4.516
MA5421	3	176469635	176469636		T	A	4.512
JZ1851	18	66251520	66251521		C	A	4.511
BB4911	3	62612194	62612195	CADPS	G	T	4.511
BB4911	3	183756425	183756426	HTR3D	T	C	4.511

Table B-3: Continued

JZ1851	22	42906957	42906958	RRP7A	C	T	4.51
BB4911	3	33216349	33216350	SUSD5	G	A	4.507
JM1191	3	42304608	42304609	CCK	A	G	4.506
BB4911	11	102678437	102678438	WTAPP1	C	T	4.503
BB4911	10	118398045	118398046	PNLIPRP2	C	A	4.498
QW4591	13	49281553	49281554	CYSLTR2	A	G	4.498
DN4461	1	214814570	214814571	CENPF	C	T	4.496
EK3261	6	129478738	129478739	LAMA2	G	A	4.496
QW4591	X	103495170	103495171	ESX1	G	C	4.496
JZ1851	18	9679456	9679457		G	A	4.495
BB4911	3	14942023	14942024	FGD5	T	C	4.491
AR5361	16	51735997	51735998		G	A	4.489
BB4911	3	183535762	183535763	MAP6D1	A	G	4.489
DN4461	9	137314207	137314208	RXRA	C	T	4.486
LK4881	X	25664162	25664163		T	C	4.479
AR5361	22	45954277	45954278	FBLN1	G	A	4.478
QW4591	13	79929325	79929326	RBM26	G	A	4.473
MA5421	11	104768908	104768909	CASP12	T	C	4.471
JZ1851	18	14632789	14632790		C	T	4.466
TA2691	16	81396286	81396287	GAN	C	T	4.464
BB4911	3	157146306	157146307	VEPH1	A	T	4.462
JFH3411	9	28148699	28148700	LINGO2	C	T	4.462
MA5421	10	46215430	46215431		A	G	4.461
LK4881	13	27334083	27334084	GPR12	T	C	4.457
MA5421	7	44284782	44284783	CAMK2B	C	T	4.457
MA5421	14	47121178	47121179	RPL10L	G	A	4.454
JM1191	18	47908555	47908556	SKA1	G	A	4.454
LK4881	18	60209708	60209709	ZCCHC2	C	G	4.454
MA5421	11	117053164	117053165	SIDT2	A	G	4.453
LK4881	16	28608229	28608230	SULT1A2	G	A	4.448
DN4461	22	39711350	39711351	RPL3	A	G	4.445
BB4911	9	20993460	20993461	FOCAD	T	G	4.445
EK3261	3	39230841	39230842	XIRP1	T	G	4.442
BB4911	5	41009241	41009242	MROH2B	C	T	4.439
JZ1851	6	29692432	29692433	HLA-F	T	C	4.437
BB4911	3	9754333	9754334	CPNE9	C	T	4.436
BB4911	3	171442634	171442635	PLD1	C	T	4.431
TF3471	18	77513840	77513841	CTDP1	G	A	4.43
SM2701	5	112257590	112257591	REEP5	C	G	4.429
QW4591	13	79918322	79918323	RBM26	T	C	4.428
EK3261	1	17084814	17084815	MST1L	G	A	4.426
MA5421	17	25756889	25756890	TBC1D3P5	G	A	4.425
BB4911	16	88666047	88666048	ZC3H18	G	A	4.423
AR5361	15	81180980	81180981	KIAA1199	G	A	4.422
EK3261	X	148890178	148890179		C	A	4.421
JFH3411	X	1317598	1317599	CRLF2	T	C	4.42

Table B-3: Continued

BB4911	3	186338831	186338832	AHSG	G	A	4.419
JZ1851	18	61231416	61231417	SERPINB1 2	A	G	4.418
JZ1851,LK4881	18	61471886	61471887	SERPINB7	G	A	4.418
MA5421	19	49537082	49537083	CGB1	C	T	4.418
AR5361	9	140249253	140249254	EXD3	G	A	4.418
BB4911	3	52561778	52561779	NT5DC2	C	T	4.417
BB4911	3	108172816	108172817	MYH15	C	T	4.417
AR5361	3	195926287	195926288	ZDHHC19	A	G	4.413
BB4911	11	119183864	119183865	MCAM	C	T	4.41
LK4881	20	29628561	29628562		C	G	4.408
JFH3411	21	32598002	32598003	TIAM1	A	T	4.408
JZ1851	8	65205246	65205247		G	A	4.407
JFH3411	4	76832444	76832445	NAAA	C	G	4.404
JFH3411	7	75912619	75912620	SRRM3	G	T	4.4
AR5361	18	48610383	48610384	SMAD4	A	G	4.399
AR5361	17	38251656	38251657	NR1D1	C	A	4.397
BB4911	3	195925354	195925355	ZDHHC19	C	T	4.392
BB4911	8	56637894	56637895		T	A	4.392
EK3261	19	23780762	23780763		C	T	4.388
JZ1851	18	11885911	11885912	MPPE1	C	A	4.379
BB4911	3	158178855	158178856	RSRC1	G	A	4.374
JM1191	8	28707569	28707570	INTS9	C	T	4.374
DN4461	19	7626070	7626071	PNPLA6	T	C	4.372
LK4881	10	121668655	121668656	SEC23IP	T	G	4.37
BB4911	3	59999660	59999661	FHIT	T	A	4.369
QW4591	20	62328262	62328263	TNFRSF6B	T	G	4.367
EK3261	X	1428422	1428423	CSF2RA	G	A	4.366
JZ1851	18	58290212	58290213		G	C	4.364
EK3261	11	83641607	83641608	DLG2	G	A	4.363
LK4881	18	59772925	59772926	PIGN	G	A	4.361
BB4911	3	185304017	185304018	SENP2	T	C	4.358
LK4881	4	39122576	39122577	KLHL5	A	G	4.357
JFH3411	7	108208801	108208802	THAP5	G	A	4.351
EK3261	X	19443632	19443633	MAP3K15	C	T	4.348
MA5421	11	116654434	116654435	ZNF259	C	T	4.347
BB4911	3	108107950	108107951	MYH15	C	T	4.344
EK3261	X	122338204	122338205	GRIA3	T	A	4.344
BB4911	3	14963336	14963337	FGD5	C	T	4.339
BB4911	3	111677525	111677526	PHLDB2	G	A	4.339
BB4911	11	118355641	118355642	KMT2A	A	C	4.336
EK3261	13	20000396	20000397	TPTE2	C	A	4.335
AR5361	7	158510440	158510441		C	T	4.332
BB4911	3	10081630	10081631	FANCD2	A	G	4.331
BB4911	3	148558446	148558447	CPB1	G	A	4.326
LK4881	10	9766177	9766178		G	C	4.319

Table B-3: Continued

MA5421	16	88708487	88708488	IL17C	C	T	4.319
EK3261	X	91758964	91758965	PCDH11X	C	T	4.319
JM1191	1	157740188	157740189	FCRL2	A	G	4.318
JZ1851	18	53714421	53714422		G	A	4.316
AR5361	1	183104078	183104079	LAMC1	C	G	4.311
EK3261	19	13002569	13002570	GCDH	T	G	4.307
EK3261	X	49077071	49077072	CACNA1F	G	A	4.307
MA5421	11	125774196	125774197	PUS3	T	C	4.306
JFH3411	2	158818796	158818797	UPP2	A	G	4.305
MA5421	17	17721456	17721457	SREBF1	A	G	4.304
JFH3411	9	4722684	4722685	AK3	C	G	4.303
EK3261	11	111896323	111896324	DLAT	C	T	4.302
LK4881	18	55335239	55335240	LOC100505549	A	G	4.301
JFH3411	9	35734902	35734903	CREB3	T	G	4.301
EK3261	11	94731758	94731759	KDM4D	G	A	4.3
JFH3411,QW4591	13	52701636	52701637	NEK5	T	G	4.3
LK4881	18	47787401	47787402	CCDC11	G	A	4.3
BB4911	3	58092345	58092346	FLNB	A	G	4.3
BB4911	19	10284460	10284461	DNMT1	C	T	4.298
LK4881	14	50433110	50433111		T	G	4.295
JZ1851	18	2705699	2705700	SMCHD1	A	G	4.294
BB4911	3	9730283	9730284	MTMR14	A	G	4.293
BB4911	3	46001062	46001063	FYCO1	G	A	4.293
JFH3411	21	44371232	44371233	LOC100996619	A	G	4.291
BB4911	19	3771879	3771880	RAX2	C	T	4.279
JFH3411	7	45002857	45002858	MYO1G	G	A	4.278
JZ1851	18	15005735	15005736		G	A	4.277
TF3471	2	238648143	238648144	LRRFIP1	C	G	4.277
BB4911	3	123376066	123376067	MYLK	G	A	4.277
DN4461	3	170800201	170800202	TNIK	C	T	4.273
AR5361	15	30763252	30763253		T	C	4.266
LK4881	11	67816935	67816936	TCIRG1	A	G	4.265
JZ1851	18	52559293	52559294	RAB27B	G	A	4.265
BB4911	3	53685038	53685039	CACNA1D	T	C	4.265
BB4911	3	142895781	142895782		C	G	4.263
JFH3411	9	117933	117934	FOXD4	C	G	4.263
LK4881	7	31442	31443		A	G	4.259
AR5361	6	116156031	116156032		C	T	4.256
BB4911	3	62764871	62764872	CADPS	G	A	4.255
LK4881	18	61394402	61394403	SERPINB1 1	A	G	4.254
BB4911	3	9985655	9985656	CRELD1	C	T	4.252
BB4911	3	21467244	21467245	ZNF385D	A	C	4.25
JFH3411	10	35930414	35930415	FZD8	G	C	4.248
TF3471	15	34654717	34654718	LPCAT4	C	T	4.248

Table B-3: Continued

EK3261	5	64629985	64629986	ADAMTS6	C	T	4.243
BB4911	2	85890770	85890771	SFTP8	T	G	4.242
EK3261	22	25747926	25747927	LRP5L	T	G	4.242
BB4911	3	185300588	185300589	SENP2	T	C	4.235
MA5421	5	175015521	175015522		T	G	4.234
JFH3411	13	52707239	52707240	NEK3	C	G	4.228
JZ1851	18	55034847	55034848	ST8SIA3	G	A	4.228
EK3261	11	119205829	119205830	RNF26	A	G	4.223
EK3261	21	47566391	47566392	FTCD	A	C	4.222
DN4461	12	133702258	133702259	ZNF891	C	T	4.22
QW4591	13	54615363	54615364		A	C	4.22
AR5361	20	1170711	1170712	TMEM74B	C	T	4.219
JZ1851	18	4005121	4005122	DLGAP1	T	C	4.218
EK3261	X	8095172	8095173	MIR651	T	A	4.218
MC3481	19	52132404	52132405	SIGLEC5	G	A	4.214
AR5361	4	57887251	57887252	POLR2B	G	A	4.214
BB4911	3	32663039	32663040		T	C	4.212
BB4911	3	27473065	27473066	SLC4A7	A	G	4.211
EK3261	8	144811630	144811631	FAM83H	C	G	4.211
BB4911	3	10442778	10442779	ATP2B2	C	T	4.21
JFH3411	9	35842300	35842301	TMEM8B	G	A	4.204
QW4591	13	51595009	51595010	GUCY1B2	T	C	4.2
LK4881	17	21201666	21201667	MAP2K3	T	C	4.198
EK3261	11	86175077	86175078	ME3	G	A	4.197
LK4881	18	48230895	48230896	MAPK4	C	T	4.197
AR5361	1	204892502	204892503	NFASC	C	T	4.196
DN4461	6	30889119	30889120	VAR52	A	G	4.194
EK3261	11	119146658	119146659	CBL	G	C	4.192
JFH3411	9	36151163	36151164	GLIPR2	G	A	4.186
JZ1851	18	9860157	9860158	RAB31	C	G	4.185
BB4911	3	66465258	66465259	LRIG1	T	C	4.182
JZ1851	18	48321481	48321482	MRO	C	A	4.181
LK4881	17	36700346	36700347	SRCIN1	C	T	4.179
JM1191,EK3261	X	68919866	68919867	EDA	C	T	4.174
JZ1851	14	91059657	91059658	TTC7B	T	C	4.169
JZ1851	18	13651496	13651497	LDLRAD4	C	A	4.168
JZ1851	18	56279024	56279025	ALPK2	T	G	4.165
JZ1851	8	18125069	18125070		G	C	4.165
JFH3411	13	50656503	50656504	DLEU2	G	C	4.157
JZ1851	18	56963741	56963742	CPLX4	C	T	4.157
LK4881	18	43405791	43405792	SIGLEC15	T	C	4.156
JFH3411	7	6963997	6963998		C	G	4.153
QW4591	13	77561277	77561278	CLN5	G	A	4.152
MC3481	18	13124608	13124609	CEP192	T	C	4.152
DN4461	5	7859701	7859702	MTRR	T	G	4.151
BB4911	3	38749025	38749026	SCN10A	T	A	4.148

Table B-3: Continued

SL2221	16	20860896	20860897	LOC81691	C	T	4.146
AR5361	20	61963291	61963292	COL20A1	C	A	4.146
LK4881	4	142155213	142155214	ZNF330	T	C	4.142
JZ1851	18	6978475	6978476	LAMA1	T	G	4.139
EK3261	4	70212703	70212704		G	A	4.136
EK3261	X	131231256	131231257	FRMD7	G	A	4.135
QW4591	13	52725373	52725374	NEK3	C	T	4.133
JZ1851	18	34802583	34802584	KIAA1328	G	A	4.128
JFH3411	8	146054702	146054703	ZNF7	C	T	4.128
MA5421	2	242155306	242155307	ANO7	C	A	4.124
JZ1851	3	45429890	45429891	LARS2	C	A	4.124
AR5361	5	72800407	72800408	BTF3	G	C	4.124
TF3471	6	33403421	33403422	SYNGAP1	C	T	4.124
BB4911	22	30940130	30940131	SEC14L6	G	A	4.121
BB4911	3	39453609	39453610	RPSA	C	T	4.119
JM1191	9	74845948	74845949	GDA	C	T	4.113
AR5361	12	18876113	18876114	PLCZ1	T	C	4.111
LK4881	18	55862846	55862847	NEDD4L	G	A	4.108
DN4461	9	130167339	130167340	SLC2A8	C	A	4.108
MA5421	12	47163305	47163306	SLC38A4	C	T	4.088
AR5361	12	132610740	132610741	EP400NL	T	C	4.085
EK3261	11	95562326	95562327	CEP57	G	A	4.081
JZ1851	18	51053175	51053176	DCC	T	G	4.08
JFH3411	3	56674189	56674190	FAM208A	A	C	4.078
DN4461	12	6493900	6493901	LTBR	G	A	4.077
MC3481	22	16350322	16350323		T	C	4.073
MC3481	18	44771480	44771481	SKOR2	C	T	4.071
BB4911	3	58635196	58635197	FAM3D	G	A	4.068
AR5361	6	30382578	30382579		C	T	4.066
MA5421	18	9255717	9255718	ANKRD12	G	A	4.064
MC3481	18	55111483	55111484	ONECUT2	T	C	4.063
EK3261	1	216370107	216370108	USH2A	C	T	4.06
BB4911	3	44620718	44620719	ZKSCAN7	C	T	4.059
JZ1851	18	8706234	8706235	SOGA2	G	C	4.056
BB4911	1	19071194	19071195	PAX7	G	A	4.046
SL2221	22	18560824	18560825	PEX26	A	G	4.04
EK3261	X	19390751	19390752	MAP3K15	C	G	4.039
AR5361	13	113816159	113816160	PROZ	C	A	4.037
JFH3411	7	94352688	94352689		A	G	4.036
JZ1851	3	194219565	194219566		G	A	4.033
JFH3411	9	27173179	27173180	TEK	C	T	4.032
JM1191	16	1402196	1402197	GNPTG	A	G	4.031
EK3261	11	100820554	100820555	ARHGAP4 2	C	G	4.03
BB4911	11	125478208	125478209	STT3A	C	T	4.026
AR5361	17	67047427	67047428	ABCA9	G	A	4.026

Table B-3: Continued

JFH3411	9	989942	989943	DMRT3	T	C	4.026
EK3261	10	1093991	1093992	ID11	A	G	4.023
BB4911	9	136522058	136522059	DBH	C	T	4.023
JZ1851	1	144863207	144863208	PDE4DIP	A	G	4.019
BB4911	3	150908843	150908844	MED12L	G	A	4.011
BB4911	6	29939676	29939677	HCG9	A	T	4.009
BB4911	11	113239081	113239082	TTC12	G	A	4.008
QW4591	7	1027224	1027225	CYP2W1	T	G	4.004
JZ1851	18	77927865	77927866	PARD6G	A	G	4.003
BB4911	3	133486957	133486958	TF	G	C	4.002
JFH3411	8	41369366	41369367	GOLGA7	C	T	3.997
BB4911	11	123988330	123988331	VWA5A	G	A	3.995
LK4881	18	10795040	10795041	PIEZO2	A	G	3.99
EK3261	X	2638498	2638499	CD99	G	A	3.987
JZ1851	18	71749321	71749322	FBXO15	C	T	3.985
MA5421	19	1086786	1086787	POLR2E	C	T	3.979
JM1191	4	63682912	63682913		T	C	3.978
DN4461, BB4911	5	25190671	25190672		C	T	3.978
JZ1851	18	14377681	14377682		C	T	3.977
SM2701	2	130986903	130986904		C	G	3.977
JFH3411	22	22960945	22960946	IGLV3-30	A	C	3.977
BB4911	3	127336933	127336934	MCM2	A	G	3.977
SM2701	4	44652186	44652187	YIPF7	C	G	3.975
BB4911	3	28533457	28533458	ZCWPW2	A	G	3.973
JZ1851	18	23970579	23970580	TAF4B	G	A	3.963
JZ1851	18	2547479	2547480	METTL4	T	C	3.958
SM2701	18	43568716	43568717	PSTPIP2	T	C	3.955
JFH3411	1	205884645	205884646	SLC26A9	C	G	3.953
LK4881	5	105751501	105751502		A	G	3.953
LK4881	3	111997509	111997510	SLC9C1	T	A	3.952
BB4911	11	117246565	117246566	CEP164	G	A	3.95
JM1191	4	16017897	16017898	PROM1	T	G	3.95
AR5361	4	79434388	79434389	FRAS1	C	T	3.945
JZ1851	18	6947361	6947362	LAMA1	C	G	3.943
JZ1851	5	179016663	179016664	RUFY1	A	T	3.943
JM1191	7	128369869	128369870	FAM71F1	G	A	3.943
SM2701	20	47621553	47621554	ARFGEF2	G	A	3.942
QW4591	17	60365761	60365762		C	T	3.938
EK3261	X	34150505	34150506	FAM47A	C	T	3.936
QW4591	13	49951309	49951310	CAB39L	G	T	3.935
AR5361	1	228476748	228476749	OBSCN	C	T	3.931
BB4911	3	46717930	46717931	ALS2CL	T	C	3.931
BB4911	3	37407663	37407664	GOLGA4	G	T	3.93
JM1191	18	10731389	10731390	PIEZO2	C	G	3.927
DN4461	7	149174264	149174265	ZNF746	G	A	3.927
BB4911	3	32662530	32662531		T	C	3.924

Table B-3: Continued

BB4911	3	197239265	197239266	BDH1	C	G	3.923
BB4911	3	167078543	167078544	ZBBX	T	C	3.922
JZ1851	18	52265784	52265785	DYNAP	T	A	3.921
QW4591	4	88986802	88986803	PKD2	C	A	3.92
BB4911	3	130145174	130145175	COL6A5	G	A	3.919
BB4911	3	52558903	52558904	NT5DC2	A	T	3.917
BB4911	3	174577368	174577369	NAALADL 2	C	T	3.914
QW4591	15	85484001	85484002	SLC28A1	C	T	3.91
DN4461	6	30890568	30890569	VARS2	G	T	3.907
BB4911	3	418088	418089	CHL1	C	T	3.904
AR5361	11	3048902	3048903	CARS	C	G	3.903
JZ1851	18	13649541	13649542	LDLRAD4	C	T	3.899
JZ1851	5	6748517	6748518	PAPD7	A	G	3.895
JFH3411	9	19332139	19332140	DENND4C	A	C	3.892
JZ1851,LK4881	18	14132401	14132402	ZNF519	G	C	3.889
LK4881	6	33651974	33651975	ITPR3	C	G	3.888
JFH3411	9	27609206	27609207		G	A	3.886
DN4461	15	42143226	42143227	SPTBN5	T	C	3.877
JFH3411	4	119434891	119434892	CEP170P1	G	A	3.876
JZ1851	11	102625551	102625552		A	G	3.872
EK3261	14	95690354	95690355	CLMN	A	G	3.872
JFH3411	19	2878467	2878468	ZNF556	A	T	3.872
JZ1851	6	53072441	53072442		T	G	3.871
JZ1851	8	112671023	112671024		T	G	3.868
JFH3411	9	2831148	2831149	KIAA0020	A	C	3.859
JZ1851	19	44259231	44259232	SMG9	G	T	3.857
JM1191	11	8486118	8486119	STK33	A	T	3.853
EK3261, BB4911	11	120837820	120837821	GRIK4	G	A	3.837
BB4911	3	47712201	47712202	SMARCC1	T	C	3.837
SM2701	14	60944958	60944959	C14orf39	A	G	3.835
JFH3411	16	15021964	15021965	LOC10028 8162	C	T	3.834
JZ1851	20	7840334	7840335		G	A	3.834
AR5361	12	2028045	2028046	CACNA2D 4	C	T	3.832
JFH3411	9	215056	215057	C9orf66	T	C	3.828
JFH3411	9	5335469	5335470	RLN1	C	T	3.828
DN4461	9	130489188	130489189	TTC16	C	T	3.826
EK3261	11	102642898	102642899	MMP10	C	T	3.825
TF3471	5	57753436	57753437	PLK2	G	A	3.82
BB4911	3	174814737	174814738	NAALADL 2	G	A	3.819
JZ1851	18	61170924	61170925	SERPINB5	T	C	3.818
SM2701	16	81743327	81743328	CMIP	A	G	3.816
TA2691	17	72249870	72249871	TTYH2	G	C	3.816
JZ1851	12	123460718	123460719	OGFOD2	C	G	3.815
AR5361	19	15027888	15027889		A	G	3.815

Table B-3: Continued

LK4881,TF3471	18	41559267	41559268		T	G	3.814
MA5421	11	93412825	93412826	KIAA1731	T	C	3.811
BB4911	3	148562398	148562399	CPBI	G	A	3.811
JZ1851	9	18889788	18889789	ADAMTSL1	G	A	3.807
EK3261	6	70386319	70386320	LMBRD1	C	T	3.806
JFH3411	3	195706562	195706563	SDHAP1	G	A	3.804
JFH3411	14	103749367	103749368		T	C	3.803
LK4881	10	135088740	135088741	ADAM8	C	T	3.8
BB4911	3	7732978	7732979	GRM7	T	C	3.8
DN4461	19	13323605	13323606	CACNA1A	G	A	3.796
MC3481	3	161064192	161064193	SPTSSB	A	T	3.792
SM2701	20	49626970	49626971	KCNG1	C	T	3.79
DN4461	14	69117386	69117387	RAD51B	A	G	3.785
BB4911	3	51352362	51352363	DOCK3	A	G	3.782
EK3261	11	103004252	103004253	DYNC2H1	T	C	3.781
BB4911	3	113442197	113442198	NAA50	C	A	3.78
JZ1851	9	86641224	86641225		C	T	3.779
AR5361	3	49114543	49114544	QRICH1	C	T	3.776
JZ1851	18	77724725	77724726	HSBP1L1	A	C	3.773
JFH3411	9	44078407	44078408		T	G	3.773
BB4911	3	10049012	10049013	LOC401052	G	A	3.772
SM2701	4	140811083	140811084	MAML3	C	T	3.771
BB4911	3	11886450	11886451	TAMM41	G	A	3.77
JFH3411	9	17781809	17781810	SH3GL2	G	A	3.77
AR5361	15	73028872	73028873	BBS4	G	A	3.769
JFH3411	9	27290932	27290933	EQTN	A	G	3.769
EK3261	X	66765626	66765627	AR	G	A	3.768
JZ1851	1	222662025	222662026		C	T	3.764
LK4881	19	8175562	8175563	FBN3	G	A	3.764
AR5361	17	48652832	48652833	CACNA1G	C	T	3.763
JFH3411	9	8436559	8436560	PTPRD	A	T	3.763
SM2701	16	75146710	75146711	LDHD	C	G	3.762
JFH3411	9	36218376	36218377	GNE	C	G	3.762
LK4881	10	71649308	71649309	COL13A1	A	G	3.761
LK4881	18	33725930	33725931	ELP2	G	A	3.76
BB4911	11	99941321	99941322	CNTN5	C	T	3.759
AR5361	9	117166546	117166547	DFNB31	A	G	3.759
TF3471	11	102663477	102663478	MMP1	A	G	3.757
BB4911	3	180042255	180042256		A	G	3.756
MA5421	19	3648527	3648528	PIP5K1C	G	A	3.75
TF3471	1	111825753	111825754	CHIAP2	C	T	3.749
LK4881	10	6066199	6066200	IL2RA	C	G	3.748
BB4911	3	38101363	38101364	DLEC1	A	G	3.748
AR5361	22	41325067	41325068	XPNPEP3	G	A	3.746
JZ1851	6	152721028	152721029	SYNE1	T	C	3.746

Table B-3: Continued

MC3481	18	47373465	47373466	MYO5B	G	A	3.744
JZ1851	19	8976074	8976075	MUC16	G	A	3.744
DN4461	16	88792894	88792895	PIEZO1	C	G	3.738
AR5361	6	33377483	33377484	KIFC1	G	C	3.736
JZ1851	7	150123063	150123064		G	A	3.736
DN4461	17	60351456	60351457	TBC1D3P2	G	A	3.733
JFH3411	9	18826609	18826610	ADAMTSL1	G	A	3.733
BB4911	3	195495915	195495916	MUC4	G	C	3.732
AR5361	1	230888425	230888426	CAPN9	A	T	3.728
AR5361	6	144681229	144681230	UTRN	C	T	3.725
BB4911	11	86123463	86123464	CCDC81	T	C	3.718
JFH3411	9	27168314	27168315	TEK	G	A	3.718
BB4911	3	141712312	141712313	TFDP2	G	A	3.71
JZ1851	18	50912351	50912352	DCC	T	C	3.706
JFH3411	22	18861017	18861018		T	G	3.702
AR5361	8	7686700	7686701	DEFB106A	T	A	3.701
JFH3411	9	5774224	5774225	KIAA1432	T	G	3.701
BB4911	11	120690371	120690372	GRIK4	T	C	3.698
BB4911	3	75388242	75388243		T	C	3.696
DN4461	9	100965471	100965472	TBC1D2	C	T	3.696
JFH3411	5	169116085	169116086	DOCK2	C	G	3.695
AR5361	9	139572067	139572068	AGPAT2	C	G	3.693
BB4911	3	49395756	49395757	GPX1	G	A	3.692
EK3261	X	3747371	3747372		C	T	3.692
BB4911	3	68782212	68782213	FAM19A4	A	G	3.68
JFH3411,QW4591	13	52511605	52511606	ATP7B	G	A	3.672
SM2701	5	13914119	13914120	DNAH5	T	C	3.666
JFH3411	8	9090901	9090902		A	G	3.666
JFH3411	9	36303535	36303536		G	A	3.666
JFH3411	9	32334263	32334264		T	G	3.664
BB4911	3	33444285	33444286	UBP1	T	G	3.663
JZ1851	11	65294829	65294830	SCYL1	C	A	3.662
LK4881	8	12231883	12231884	FAM66A	C	T	3.662
EK3261	X	73045808	73045809	XIST	T	C	3.661
MA5421	X	65296910	65296911		C	T	3.66
JFH3411	10	70392374	70392375	TET1	G	A	3.657
DN4461	15	70477517	70477518		A	G	3.657
EK3261	X	40556491	40556492	MED14	C	G	3.652
BB4911	3	46654131	46654132	LOC100132146	G	A	3.65
MA5421	4	154165464	154165465	TRIM2	C	T	3.65
JZ1851	18	12859013	12859014	PTPN2	C	T	3.649
QW4591	13	75894014	75894015	TBC1D4	T	C	3.648
EK3261	X	68382835	68382836	PJA1	G	A	3.648
BB4911	3	42448295	42448296	LYZL4	T	C	3.646

Table B-3: Continued

DN4461	9	139142709	139142710	LOC101928722	G	A	3.642
LK4881	1	16914527	16914528	NBPF1	T	A	3.636
TF3471	11	1265785	1265786	MUC5B	C	T	3.636
AR5361	20	60799244	60799245	HRH3	C	T	3.635
QW4591	3	33876943	33876944	PDCD6IP	C	A	3.634
JFH3411	9	35722281	35722282	TLN1	T	C	3.634
MA5421	9	137982231	137982232	OLFM1	T	G	3.631
LK4881	5	94820638	94820639	TTC37	G	A	3.63
BB4911	6	57512339	57512340		C	T	3.63
LK4881	5	58287555	58287556	PDE4D	C	A	3.629
LK4881	1	143392480	143392481		C	A	3.628
LK4881	18	59806189	59806190	PIGN	C	T	3.628
BB4911	3	57011233	57011234	ARHGEF3	T	C	3.628
SL2221	9	136653616	136653617	VAV2	G	C	3.628
JFH3411	10	129208964	129208965	DOCK1	A	G	3.627
AR5361	2	152466727	152466728	NEB	T	C	3.623
DN4461	9	140483075	140483076	ZMYND19	G	A	3.622
EK3261	11	102713045	102713046	MMP3	C	T	3.615
BB4911	3	46489014	46489015	LTF	A	G	3.611
DN4461	9	137271317	137271318	RXRA	C	A	3.606
BB4911	3	13383648	13383649	NUP210	G	A	3.603
EK3261	22	16366263	16366264		C	T	3.598
DN4461	16	75263973	75263974	BCAR1	T	C	3.597
JFH3411	13	84768847	84768848	LINC00333	T	G	3.596
MA5421	12	15101035	15101036	ARHGDI1	A	G	3.591
BB4911	3	158308874	158308875	MLF1	T	C	3.585
TF3471	3	195941117	195941118	ZDHHC19	C	G	3.584
JM1191	19	12768842	12768843	MAN2B1	G	T	3.582
BB4911	3	122680170	122680171	SEMA5B	A	G	3.582
DN4461	14	24505613	24505614	DHRS4L1	A	G	3.581
EK3261	11	95672428	95672429		C	T	3.577
BB4911	3	87372755	87372756		G	A	3.577
BB4911	3	58095465	58095466	FLNB	G	T	3.572
QW4591	15	28141349	28141350	OCA2	G	T	3.568
JM1191	8	3015555	3015556	CSMD1	A	G	3.568
DN4461	11	62158923	62158924	ASRGL1	C	T	3.561
JZ1851	18	13651136	13651137	LDLRAD4	C	T	3.558
BB4911	3	52692358	52692359	PBRM1	C	G	3.552
BB4911	3	8675538	8675539	SSUH2	G	A	3.549
BB4911	3	53212573	53212574	PRKCD	C	G	3.549
BB4911,MA5421	11	86098679	86098680	CCDC81	T	C	3.545
MA5421	12	30041931	30041932		A	G	3.545
SM2701	4	154579923	154579924		G	A	3.545
DN4461	8	132996358	132996359	EFR3A	C	T	3.535
LK4881	10	106927229	106927230	SORCS3	C	T	3.532

Table B-3: Continued

AR5361	19	53888812	53888813	ZNF525	G	A	3.532
EK3261	X	16709625	16709626	CTPS2	G	A	3.528
LK4881	1	119157210	119157211		G	T	3.527
MA5421	1	146418490	146418491	NBPF12	T	C	3.526
DN4461	3	132435822	132435823	NPHP3	C	T	3.523
JZ1851	18	29493532	29493533	TRAPPC8	T	A	3.522
JZ1851	18	54816175	54816176	BOD1L2	A	G	3.522
JFH3411	9	35662250	35662251	ARHGEF3 9	T	C	3.522
LK4881	11	100847342	100847343	ARHGAP4 2	T	A	3.52
DN4461	13	24890049	24890050	C1QTNF9	G	A	3.52
BB4911	19	54200996	54200997	MIR520B	C	T	3.518
MA5421	4	945224	945225	TMEM175	A	G	3.517
BB4911	3	17470113	17470114	TBC1D5	C	T	3.514
AR5361	7	57642489	57642490		A	G	3.514
TF3471	6	109591585	109591586	LOC10099 6634	A	G	3.513
JFH3411	13	95696703	95696704	ABCC4	C	A	3.51
TA2691	5	102360746	102360747	PAM	A	C	3.509
LK4881	18	21698539	21698540	TTC39C	C	T	3.506
EK3261	11	122678727	122678728	UBASH3B	A	G	3.502
LK4881	18	77137201	77137202	ATP9B	A	G	3.5
QW4591	13	75814069	75814070	CTAGE11 P	C	G	3.499
QW4591	17	71239227	71239228	C17orf80	T	G	3.496
JM1191	6	28699916	28699917	TRNAV18	A	G	3.496
JFH3411	8	3076666	3076667	CSMD1	A	G	3.494
BB4911	3	58131514	58131515	FLNB	C	T	3.492
BB4911	3	133380025	133380026	TOPBP1	A	T	3.492
LK4881	16	30537844	30537845	ZNF768	G	A	3.488
SM2701	18	26232929	26232930		G	A	3.487
JZ1851	18	54318171	54318172	WDR7	A	G	3.486
EK3261	14	92279982	92279983	TC2N	T	G	3.48
BB4911	3	37144534	37144535	LRRFIP2	C	A	3.469
DN4461	16	84879323	84879324	CRISPLD2	T	C	3.46
QW4591	19	2832931	2832932	ZNF554	A	C	3.459
EK3261	11	108014798	108014799	ACAT1	C	T	3.454
JFH3411,QW4591	13	52971892	52971893	THSD1	G	A	3.446
LK4881,MC3481	16	74394744	74394745	LOC28392 2	A	G	3.445
QW4591	13	75880666	75880667	TBC1D4	G	A	3.444
JFH3411	9	35711805	35711806	TLN1	G	T	3.443
BB4911	3	48338172	48338173	NME6	C	T	3.442
JZ1851	4	144028646	144028647		A	T	3.439
JFH3411	22	31022642	31022643	TCN2	A	C	3.437
BB4911	3	44613013	44613014	ZKSCAN7	G	T	3.437
SM2701	7	100841379	100841380	MOGAT3	G	A	3.436
JZ1851	18	10696042	10696043	PIEZO2	T	C	3.435

Table B-3: Continued

BB4911	3	177347154	177347155	LINC00578	G	A	3.433
EK3261	3	195392990	195392991	SDHAP2	A	T	3.431
BB4911	3	42244320	42244321	TRAK1	G	A	3.428
BB4911	3	183996212	183996213	ECE2	C	T	3.428
BB4911	3	16344321	16344322	OXNAD1	G	A	3.427
QW4591	9	21638591	21638592		G	A	3.427
JZ1851	18	72026373	72026374	C18orf63	T	C	3.424
MA5421	16	57994234	57994235	CNGB1	C	A	3.423
EK3261	11	117152539	117152540	RNF214	G	T	3.419
AR5361	6	31327189	31327190	HLA-B	C	T	3.418
JZ1851	7	5023201	5023202	RNF216P1	C	T	3.417
QW4591	13	74992999	74993000	LINC00381	G	A	3.415
AR5361	5	145383748	145383749	SH3RF2	G	A	3.414
DN4461	9	130495632	130495633	TOR2A	C	G	3.41
SM2701	2	241706226	241706227	KIF1A	C	T	3.398
BB4911	11	120007888	120007889	TRIM29	G	T	3.394
AR5361	8	133054077	133054078	OC90	A	G	3.394
BB4911	6	29896679	29896680	HCG4B	A	G	3.393
AR5361	9	140083319	140083320	SSNA1	G	C	3.392
BB4911	3	136035736	136035737	PCCB	A	G	3.385
JFH3411	10	62418790	62418791	ANK3	G	A	3.369
JZ1851	16	18806172	18806173	ARL6IP1	G	T	3.368
BB4911	3	140993543	140993544	ACPL2	G	A	3.366
BB4911	3	9036009	9036010	SRGAP3	T	G	3.364
JFH3411	16	33741082	33741083		G	C	3.363
MA5421	4	38346885	38346886		A	G	3.363
BB4911	17	67502137	67502138	MAP2K6	G	A	3.362
JZ1851	14	105932543	105932544	MTA1	G	A	3.359
DN4461	4	102946391	102946392	BANK1	G	A	3.359
JZ1851	5	82264819	82264820		G	A	3.359
AR5361	8	33313328	33313329	FUT10	G	A	3.359
TA2691	11	114121357	114121358	ZBTB16	T	A	3.357
BB4911	11	125280040	125280041	PKNOX2	G	A	3.35
JZ1851	18	22010420	22010421	IMPACT	C	T	3.35
JFH3411	9	140161646	140161647	NELFB	G	A	3.345
JFH3411	9	6606745	6606746	GLDC	T	C	3.338
JZ1851	18	2921443	2921444	LPIN2	T	C	3.336
JZ1851	18	33849042	33849043	MOCOS	G	A	3.335
EK3261	X	8501119	8501120	KAL1	C	A	3.335
BB4911	3	139246381	139246382	RBP1	A	G	3.333
EK3261, BB4911	11	86175192	86175193	ME3	A	G	3.332
JFH3411	13	48830600	48830601	ITM2B	A	C	3.331
TF3471	17	6371737	6371738	PITPNM3	A	G	3.331
JFH3411	4	143043403	143043404	INPP4B	C	T	3.329
BB4911	11	120707643	120707644	GRIK4	C	T	3.328
QW4591	1	16894663	16894664	NBPF1	C	T	3.325

Table B-3: Continued

JFH3411	8	82443386	82443387	FABP12	T	C	3.324
BB4911	3	36915813	36915814	TRANK1	T	G	3.323
EK3261	X	150565329	150565330	VMA21	G	C	3.322
JZ1851	18	43844733	43844734	C18orf25	T	G	3.321
AR5361	20	3232030	3232031	C20orf194	C	T	3.321
JZ1851	10	101150255	101150256	CNNM1	A	G	3.316
BB4911	3	40251281	40251282	MYRIP	G	A	3.316
JFH3411	5	172461242	172461243	ATP6V0E1	C	T	3.316
EK3261	X	2635619	2635620	CD99	C	G	3.315
EK3261	X	48382173	48382174	EBP	G	T	3.315
DN4461	X	2232523	2232524	DHRSX	A	G	3.314
EK3261	11	125648215	125648216	PATE2	C	T	3.313
LK4881	18	61584641	61584642	SERPINB1 0	A	G	3.313
JZ1851	1	10690882	10690883	PEX14	C	T	3.312
BB4911	11	118888830	118888831	RPS25	T	C	3.312
BB4911	11	93788816	93788817	HEPHL1	G	T	3.308
JFH3411	17	37813855	37813856	STARD3	G	C	3.307
EK3261	X	22116229	22116230	PHEX	T	A	3.307
BB4911	3	13399947	13399948	NUP210	T	C	3.303
JFH3411	4	9385658	9385659		C	T	3.3
BB4911	11	120097497	120097498	OAF	T	C	3.299
JZ1851	14	73686309	73686310	PSEN1	C	A	3.299
BB4911	3	10421106	10421107	ATP2B2	A	G	3.298
QW4591	3	37327628	37327629	GOLGA4	C	T	3.294
EK3261	11	102622757	102622758		A	G	3.284
JM1191	18	10787046	10787047	PIEZO2	G	A	3.281
BB4911	3	140978920	140978921	ACPL2	C	T	3.281
EK3261	X	54836360	54836361	MAGED2	A	G	3.28
EK3261	X	50341597	50341598	SHROOM4	G	A	3.279
BB4911	11	124857707	124857708	CCDC15	G	A	3.277
BB4911	14	104917656	104917657		G	A	3.277
MA5421	7	63028445	63028446		G	A	3.275
AR5361	7	37887262	37887263	NME8	A	G	3.274
JFH3411	6	43040367	43040368	KLC4	A	C	3.273
BB4911	3	14200472	14200473	XPC	G	A	3.272
BB4911	3	155481608	155481609	C3orf33	G	A	3.269
JZ1851	20	61993766	61993767	CHRNA4	C	G	3.268
JZ1851	18	43245985	43245986	SLC14A2	T	G	3.267
LK4881	7	56355926	56355927		G	A	3.266
LK4881	8	21840533	21840534	XPO7	A	G	3.266
JFH3411	X	43266962	43266963		G	T	3.266
TA2691	16	77317755	77317756	ADAMTS1 8	G	A	3.264
MA5421	11	73006912	73006913	P2RY6	C	G	3.257
SM2701	18	53727501	53727502		T	C	3.255
JM1191	18	12951737	12951738	SEH1L	G	A	3.253

Table B-3: Continued

BB4911	3	133375784	133375785	TOPBP1	G	A	3.253
JZ1851	18	10552471	10552472	NAPG	T	C	3.25
BB4911	3	43095244	43095245	FAM198A	A	G	3.245
EK3261, BB4911	11	102650245	102650246	MMP10	G	A	3.242
BB4911	3	44906745	44906746	TMEM42	A	G	3.24
JM1191	20	62496758	62496759	TPD52L2	T	C	3.237
BB4911	3	109027156	109027157	DPPA2	C	T	3.234
JZ1851	18	55018748	55018749	ST8SIA3	A	T	3.233
EK3261	11	93085389	93085390	CCDC67	T	C	3.23
QW4591	6	57372198	57372199		T	C	3.225
BB4911	3	195956969	195956970	SLC51A	C	T	3.222
DN4461	12	108136171	108136172	PRDM4	A	G	3.216
LK4881	7	75053625	75053626	POM121C	G	A	3.212
JZ1851	18	47177382	47177383		C	T	3.211
EK3261	12	9161803	9161804	KLRG1	C	A	3.209
JZ1851	18	60998526	60998527	KDSR	C	G	3.197
JZ1851	18	57570332	57570333	PMAIP1	G	T	3.194
BB4911	3	14965465	14965466	FGD5	C	T	3.194
BB4911	11	122805909	122805910	C11orf63	C	A	3.193
JZ1851, MC3481	18	5956424	5956425	L3MBTL4	C	T	3.187
JFH3411	9	33442951	33442952	AQP3	G	A	3.187
EK3261	11	119185346	119185347	MCAM	G	A	3.184
EK3261	X	54840012	54840013	MAGED2	C	T	3.178
BB4911	2	24248473	24248474	MFSD2B	G	A	3.176
LK4881	18	33854101	33854102		A	C	3.175
TA2691	16	56686241	56686242	MT1B	C	T	3.174
TA2691	14	21504446	21504447	NDRG2	A	G	3.171
LK4881	18	43502189	43502190	EPG5	G	T	3.167
MA5421	2	28821738	28821739	PLB1	T	G	3.164
BB4911	3	44970965	44970966	ZDHHC3	C	T	3.164
QW4591	3	107646594	107646595	LINC00636	T	G	3.162
JZ1851	4	39483114	39483115	LIAS	A	G	3.162
BB4911	11	113234774	113234775	TTC12	A	G	3.161
LK4881	17	12896073	12896074	ELAC2	T	C	3.16
BB4911	3	155991347	155991348	KCNAB1	G	T	3.16
JZ1851	11	122489999	122490000		T	C	3.158
JFH3411	21	35281182	35281183	ATP5O	G	A	3.156
BB4911	3	10065425	10065426	FANCD2	C	T	3.155
AR5361	16	16696805	16696806		C	T	3.153
EK3261	11	119148572	119148573	CBL	G	T	3.152
LK4881	21	18976384	18976385	BTG3	C	A	3.152
LK4881	9	123166106	123166107	CDK5RAP2	A	G	3.152
EK3261	19	19380342	19380343	TM6SF2	T	C	3.151
JZ1851, LK4881, MC3481	18	21883551	21883552	OSBPL1A	G	A	3.146
TF3471	17	10431274	10431275	MYH2	A	G	3.144

Table B-3: Continued

LK4881	18	61306689	61306690	SERPINB4	G	A	3.144
AR5361	3	61981359	61981360	PTPRG	T	G	3.137
AR5361	5	32054091	32054092	PDZD2	C	G	3.137
BB4911	3	122880190	122880191	PDIA5	T	C	3.133
EK3261	X	50119084	50119085	DGKK	C	T	3.133
AR5361	10	15107825	15107826	ACBD7	T	C	3.131
BB4911	3	140185366	140185367	CLSTN2	G	A	3.126
JFH3411	9	44175534	44175535		T	C	3.124
LK4881	18	5840616	5840617	MIR3976	G	T	3.123
JFH3411	9	6534844	6534845	GLDC	T	C	3.115
JZ1851	17	3417703	3417704	TRPV3	G	A	3.113
JFH3411	13	50592873	50592874	KCNRG	C	A	3.111
BB4911	8	22464063	22464064	KIAA1967	T	C	3.106
LK4881	10	42949663	42949664	CCNYL2	A	T	3.105
JFH3411	13	113771961	113771962	F7	T	C	3.105
BB4911	3	183861749	183861750	EIF2B5	A	C	3.104
LK4881	16	66432189	66432190	CDH5	C	T	3.101
BB4911	3	52825461	52825462	ITIH1	A	G	3.096
BB4911	3	51936948	51936949	IQCF1	T	C	3.095
JFH3411	20	44045569	44045570	PIGT	A	C	3.093
MA5421	1	164546159	164546160	PBX1	A	T	3.085
JZ1851	13	95818192	95818193	ABCC4	C	T	3.083
JZ1851	10	99181007	99181008		G	A	3.08
BB4911	11	122888569	122888570	LOC34105 6	G	T	3.08
BB4911	3	12533538	12533539	TSEN2	C	T	3.08
EK3261, BB4911	11	107675565	107675566	SLC35F2	C	T	3.079
DN4461, BB4911	3	52800283	52800284	NEK4	T	C	3.077
AR5361	6	4192817	4192818		G	A	3.074
AR5361	2	240052327	240052328	HDAC4	C	T	3.072
JZ1851	21	17493824	17493825	LINC00478	G	T	3.07
AR5361	9	140450158	140450159	DPH7	C	T	3.07
BB4911	3	82857228	82857229		A	C	3.069
JFH3411	1	161570356	161570357	FCGR2C	C	T	3.063
JZ1851	18	59477258	59477259	RNF152	A	T	3.063
LK4881, BB4911	8	24899718	24899719		A	G	3.063
EK3261	11	113848272	113848273	HTR3A	A	T	3.061
EK3261	11	102709424	102709425	MMP3	A	G	3.06
SM2701	16	84485748	84485749	ATP2C2	C	T	3.058
EK3261	X	100245605	100245606	ARL13A	A	G	3.057
BB4911	3	60898270	60898271	FHIT	G	A	3.055
EK3261	X	30715826	30715827	GK	C	T	3.053
JFH3411	9	20765096	20765097	FOCAD	A	G	3.049
JFH3411	9	32333629	32333630		T	C	3.039
JFH3411	6	160132590	160132591		A	G	3.037
DN4461	8	39142263	39142264	ADAM32	A	G	3.035

Table B-3: Continued

BB4911	11	86889447	86889448	TMEM135	C	T	3.034
JZ1851.MC3481	18	11886562	11886563	MPPE1	C	G	3.034
JFH3411	14	88406142	88406143	GALC	T	C	3.029
BB4911	14	105335048	105335049	CEP170B	C	T	3.029
AR5361	16	84623515	84623516	COTL1	A	C	3.029
JFH3411	9	6639495	6639496	GLDC	A	T	3.027
JM1191	4	116964838	116964839		C	A	3.025
JZ1851	18	29409318	29409319	TRAPPC8	C	T	3.024
SM2701	14	77295191	77295192	C14orf166 B	G	A	3.023
AR5361	1	48657547	48657548		C	T	3.015
BB4911	3	121563354	121563355	EAF2	T	C	3.015
TF3471	20	29873956	29873957		A	G	3.013
JFH3411	9	6875053	6875054	KDM4C	A	G	3.013
BB4911	19	5708472	5708473	LONP1	G	A	3.011
JM1191	15	94945323	94945324	MCTP2	G	A	3.006
EK3261	17	75635882	75635883		T	G	3.006
JFH3411	21	47678773	47678774	MCM3AP	A	G	3.004
JZ1851	7	70626894	70626895	WBSCR17	G	A	3.001
JFH3411	8	102555059	102555060	GRHL2	G	A	3.001
MC3481	18	55338655	55338656	ATP8B1	G	A	3
BB4911	3	142681248	142681249	PAQR9	G	A	2.985
EK3261	11	102668701	102668702	MMP1	T	C	2.984
BB4911	11	113712277	113712278	USP28	G	T	2.984
BB4911	16	1484347	1484348	CCDC154	T	G	2.983
MA5421	9	136380075	136380076	TMEM8C	A	C	2.971
AR5361	9	140084752	140084753	SSNA1	A	G	2.97
EK3261	5	6623249	6623250	NSUN2	A	G	2.968
JFH3411	4	118496918	118496919		T	C	2.967
EK3261	11	94964103	94964104	SESN3	T	C	2.966
JFH3411	13	59102874	59102875		T	C	2.965
JZ1851	18	55027060	55027061	ST8SIA3	C	A	2.96
BB4911	11	126310298	126310299	KIRREL3	T	C	2.954
JFH3411	9	33618027	33618028		A	G	2.954
MC3481	7	29132211	29132212	CPVL	A	G	2.953
JFH3411	20	9546553	9546554	PAK7	G	A	2.952
LK4881	18	21898555	21898556	OSBPL1A	T	C	2.95
BB4911	3	52720079	52720080	GNL3	A	C	2.95
JFH3411	8	141407697	141407698	TRAPPC9	T	C	2.949
BB4911	3	47680118	47680119	SMARCC1	T	C	2.947
TA2691	10	126301969	126301970	LHPP	T	C	2.946
JFH3411	4	1073759	1073760	RNF212	C	T	2.946
BB4911	1	119935506	119935507	HAO2	A	T	2.942
BB4911	3	9089177	9089178	SRGAP3	A	G	2.941
JFH3411	1	17263556	17263557	CROCC	G	A	2.94
LK4881	18	59774185	59774186	PIGN	T	C	2.94

Table B-3: Continued

QW4591	3	172224769	172224770	TNFSF10	C	A	2.936
JM1191	11	104839221	104839222	CASP4	A	G	2.932
BB4911	3	129044168	129044169	H1FX-AS1	G	A	2.928
JZ1851	18	72252136	72252137	CNDP1	A	G	2.925
EK3261	11	83585583	83585584	DLG2	T	A	2.92
JFH3411	9	446351	446352	DOCK8	G	C	2.912
JZ1851	18	50936779	50936780	DCC	G	A	2.907
JZ1851,LK4881	18	74273829	74273830	LINC00908	T	C	2.906
DN4461	18	14542908	14542909	POTEC	G	A	2.904
AR5361	3	71777491	71777492	EIF4E3	G	A	2.903
BB4911	3	136196027	136196028	STAG1	T	C	2.903
JZ1851	18	32724323	32724324	MAPRE2	T	C	2.895
JZ1851	18	74153145	74153146	ZNF516	G	A	2.895
LK4881	2	89512774	89512775	IGKV1-27	T	G	2.895
SM2701	12	53823188	53823189	AMHR2	G	A	2.894
AR5361	10	6933246	6933247		C	G	2.892
BB4911	3	142413406	142413407	PLS1	C	T	2.887
JFH3411	9	27212965	27212966	TEK	T	C	2.885
JFH3411	10	22193421	22193422	DNAJC1	T	C	2.884
JZ1851	18	77915382	77915383	PARD6G	C	T	2.883
AR5361	5	176070956	176070957	EIF4E1B	T	C	2.882
JZ1851	18	59481451	59481452	RNF152	C	T	2.877
AR5361	10	91184873	91184874	IFIT5	A	G	2.875
BB4911	3	151423574	151423575		G	A	2.873
SL2221	8	82547477	82547478		G	A	2.873
JFH3411,QW4591	13	52520703	52520704	ATP7B	C	A	2.868
BB4911	3	9979659	9979660	CRELD1	A	G	2.867
JFH3411	14	73581073	73581074	RBM25	T	C	2.865
JZ1851	18	2916053	2916054	LPIN2	G	A	2.865
JZ1851	4	3311893	3311894	RGS12	C	A	2.863
EK3261	X	130217019	130217020	ARHGAP3 6	G	C	2.863
DN4461	9	133342269	133342270	ASS1	A	C	2.858
BB4911	11	122489594	122489595		G	A	2.857
DN4461	5	101726769	101726770	SLCO6A1	T	C	2.854
JZ1851	18	5895322	5895323	TMEM200 C	A	G	2.851
JZ1851	6	44145180	44145181	CAPN11	C	T	2.846
BB4911	3	44868380	44868381	KIF15	G	T	2.842
MA5421	11	101929899	101929900	C11orf70	T	C	2.839
BB4911	12	122625991	122625992	MLXIP	A	G	2.839
EK3261	X	153176560	153176561	ARHGAP4	G	A	2.839
BB4911	3	150845573	150845574	MED12L	C	T	2.837
JZ1851	4	107246429	107246430	AIMP1	A	G	2.837
JFH3411	9	27217521	27217522	TEK	G	A	2.835
JZ1851	6	158504364	158504365	SYNJ2	G	A	2.829
JZ1851	18	29036315	29036316	DSG3	A	G	2.827

Table B-3: Continued

JZ1851	18	32725040	32725041	MAPRE2	C	G	2.827
JZ1851	18	72776890	72776891	ZNF407	C	T	2.826
JFH3411	8	11786254	11786255		G	A	2.826
TF3471	9	68357317	68357318		C	G	2.826
DN4461	7	77522909	77522910	PHTF2	G	A	2.824
EK3261	X	84258842	84258843	APOOL	C	G	2.824
DN4461	12	49500508	49500509	LMBR1L	C	T	2.822
QW4591	13	71498251	71498252		G	A	2.82
JZ1851	10	66868090	66868091		A	C	2.819
BB4911	11	114401610	114401611	NXPE1	A	G	2.819
LK4881	18	29426867	29426868	TRAPPC8	A	T	2.819
MA5421	11	102207023	102207024	BIRC3	C	T	2.818
JFH3411	9	36136197	36136198	GLIPR2	G	C	2.817
JZ1851	18	70827879	70827880	LOC40065 5	A	T	2.815
DN4461	20	23618426	23618427	CST3	C	T	2.815
BB4911	3	195395271	195395272	SDHAP2	C	T	2.814
BB4911	11	121483400	121483401	SORL1	C	T	2.812
QW4591	8	142528937	142528938		T	G	2.81
EK3261	12	103237957	103237958	PAH	A	C	2.803
QW4591	13	52603774	52603775	UTP14C	C	T	2.8
BB4911	6	47501569	47501570	CD2AP	T	C	2.798
JFH3411	13	50204458	50204459	ARL11	T	C	2.796
JFH3411	4	84364603	84364604	HELQ	C	T	2.796
MA5421	6	39858907	39858908	DAAM2	T	A	2.796
DN4461	19	50962061	50962062	MYBPC2	G	A	2.793
BB4911	10	7683872	7683873	ITIH5	A	T	2.791
LK4881	X	2833855	2833856	ARSD	T	C	2.791
LK4881	14	71325904	71325905		A	C	2.79
AR5361	4	49514926	49514927		C	G	2.79
BB4911	3	119196333	119196334	POGLUT1	G	T	2.789
JZ1851	3	150332198	150332199	SELT	T	G	2.788
MC3481	1	211923434	211923435	LPGAT1	G	A	2.787
MA5421	7	138008207	138008208		A	G	2.785
BB4911	3	122942600	122942601	SEC22A	C	T	2.784
SM2701	7	99810642	99810643	STAG3	T	G	2.784
BB4911	3	10138188	10138189	FANCD2	T	C	2.781
MA5421	14	75378184	75378185	RPS6KL1	G	A	2.778
AR5361	11	98295304	98295305		C	T	2.774
JFH3411	19	19037228	19037229	DDX49	T	G	2.774
JFH3411	13	50510198	50510199	SPRYD7	A	C	2.772
EK3261	11	108225482	108225483	ATM	C	T	2.77
BB4911	3	27256542	27256543	NEK10	T	C	2.767
JZ1851	18	5577257	5577258	EPB41L3	T	C	2.766
DN4461	16	4715011	4715012	MGRN1	C	T	2.765
BB4911	14	88974416	88974417	PTPN21	T	C	2.76

Table B-3: Continued

BB4911	11	89938751	89938752	CHORDC1	A	T	2.753
JFH3411	16	450403	450404	NME4	A	C	2.751
DN4461	X	70886505	70886506	LOC101059915	C	A	2.75
TF3471	9	139648720	139648721	LCN8	T	C	2.749
DN4461	12	109704176	109704177	ACACB	G	A	2.747
JFH3411	4	5966617	5966618	C4orf50	A	G	2.746
BB4911	9	139309254	139309255	PMPCA	G	A	2.743
AR5361	19	17616040	17616041	SLC27A1	G	A	2.732
EK3261	X	102755550	102755551	RAB40A	T	A	2.73
JFH3411,AR5361	22	27858042	27858043		T	G	2.727
JFH3411	4	162434557	162434558	FSTL5	T	C	2.727
BB4911	9	88844633	88844634	C9orf153	T	G	2.721
BB4911	11	124078708	124078709		T	C	2.72
LK4881	18	3089521	3089522	MYOM1	G	T	2.72
EK3261,AR5361	22	16414199	16414200		A	G	2.719
JFH3411	9	27192035	27192036	TEK	A	G	2.719
JZ1851	18	55018871	55018872	ST8SIA3	A	C	2.714
EK3261	2	130737577	130737578	RAB6C	G	A	2.71
BB4911	3	197847273	197847274		G	A	2.71
JZ1851	12	104741957	104741958	TXNRD1	C	T	2.709
QW4591	5	175512210	175512211	FAM153B	C	T	2.708
MA5421	3	75373176	75373177		A	G	2.705
LK4881	18	14378681	14378682		T	A	2.703
MC3481	18	3100428	3100429	MYOM1	G	A	2.701
JFH3411	9	19520755	19520756	SLC24A2	G	A	2.698
JZ1851	18	15000131	15000132		C	G	2.693
AR5361	1	229052295	229052296		G	A	2.692
QW4591	13	52482735	52482736		A	G	2.691
BB4911	3	52477079	52477080	SEMA3G	T	C	2.69
MC3481	7	75613997	75613998	POR	C	T	2.69
BB4911	3	142222283	142222284	ATR	A	G	2.685
BB4911	11	117335721	117335722	DSCAML1	T	C	2.681
BB4911	12	104064697	104064698	STAB2	C	T	2.681
EK3261	11	102449930	102449931	MMP20	T	C	2.678
AR5361	19	17633932	17633933	FAM129C	A	G	2.677
DN4461	9	117145608	117145609	AKNA	G	A	2.676
LK4881	18	43667527	43667528	ATP5A1	T	C	2.675
DN4461	1	16975229	16975230		G	C	2.668
MA5421	2	91876788	91876789		T	G	2.666
BB4911	3	43095100	43095101	FAM198A	A	G	2.664
JZ1851	11	1619201	1619202	KRTAP5-2	G	A	2.661
JFH3411	19	3528853	3528854	FZR1	T	C	2.661
QW4591	13	75813874	75813875	CTAGE11P	G	A	2.66
BB4911	3	183683123	183683124	ABCC5	G	A	2.66
EK3261	21	33641250	33641251	MIS18A	C	T	2.658

Table B-3: Continued

DN4461	4	184932630	184932631	STOX2	A	G	2.65
BB4911	3	183524192	183524193	YEATS2	T	C	2.647
BB4911	15	20875141	20875142	NBEAP1	T	C	2.646
JFH3411	9	33466713	33466714	NOL6	G	A	2.645
AR5361	7	6070855	6070856	EIF2AK1	C	T	2.642
BB4911	17	76142401	76142402	C17orf99	G	A	2.64
MC3481	18	47406937	47406938	MYO5B	T	C	2.64
JZ1851	7	142021523	142021524	TRBV5-1	G	T	2.638
BB4911	3	37107021	37107022	LRRFIP2	C	A	2.633
JFH3411	8	62489537	62489538	ASPH	A	C	2.633
BB4911	5	132036488	132036489	KIF3A	A	T	2.632
JZ1851	20	19677624	19677625	SLC24A3	G	A	2.628
LK4881	1	19775491	19775492	CAPZB	A	G	2.625
EK3261	11	120355229	120355230	ARHGEF1 2	A	G	2.62
MC3481	18	43480925	43480926	EPG5	A	G	2.617
JZ1851	3	57887795	57887796	SLMAP	T	C	2.617
JZ1851	15	20216313	20216314		C	T	2.611
JFH3411	10	12068444	12068445	UPF2	A	C	2.606
JZ1851	10	17278170	17278171	VIM	C	G	2.605
EK3261	11	117308182	117308183	DSCAML1	A	G	2.605
LK4881	18	3025463	3025464		A	G	2.605
BB4911	3	142896106	142896107		A	G	2.602
DN4461	8	2091247	2091248	MYOM2	A	G	2.596
BB4911	11	96092375	96092376	CCDC82	C	T	2.595
BB4911	3	18308477	18308478	LOC33986 2	T	C	2.592
AR5361	14	39681902	39681903		G	A	2.59
SM2701	18	26232315	26232316		A	G	2.59
DN4461	9	69238267	69238268	CBWD6	G	A	2.581
DN4461	17	71675262	71675263		C	T	2.579
JZ1851	18	6837445	6837446	ARHGAP2 8	G	A	2.576
JFH3411	9	35616555	35616556	CD72	G	T	2.575
AR5361	22	37774900	37774901	ELFN2	T	C	2.574
BB4911	3	6828363	6828364		A	G	2.574
BB4911	3	111685571	111685572	PHLDB2	C	T	2.574
JZ1851	18	61074387	61074388	VPS4B	G	A	2.572
EK3261	X	67937274	67937275	STARD8	C	T	2.57
MA5421	17	18786098	18786099	PRPSAP2	G	A	2.567
BB4911	3	141932355	141932356	GK5	G	A	2.567
SM2701	18	71990032	71990033	C18orf63	G	T	2.564
DN4461	2	185243699	185243700	MIR548AE 1	C	T	2.559
JZ1851	18	61233738	61233739	SERPINB1 2	T	C	2.558
MA5421	17	34935981	34935982	GGNBP2	T	G	2.556
BB4911	3	183719174	183719175	ABCC5	C	T	2.556
JZ1851	18	2917356	2917357	LPIN2	G	A	2.555

Table B-3: Continued

BB4911	3	119128397	119128398	ARHGAP3 1	G	A	2.552
TF3471	11	47758448	47758449	FNBP4	T	C	2.548
DN4461	19	56280398	56280399	RFPL4AL1	A	G	2.548
QW4591	7	1654185	1654186	TFAMP1	G	A	2.548
JZ1851	18	55030479	55030480	ST8SIA3	G	C	2.543
BB4911	3	194063610	194063611	CPN2	G	A	2.542
JZ1851	10	126150606	126150607	LHPP	C	T	2.54
EK3261	X	49069365	49069366	CACNA1F	C	T	2.537
DN4461	6	57006932	57006933	ZNF451	T	C	2.536
JFH3411	9	44084305	44084306		C	G	2.534
JFH3411	9	5418507	5418508	PLGRKT	G	A	2.53
JFH3411	9	18907121	18907122	ADAMTSL 1	T	C	2.53
DN4461	16	89299829	89299830	ZNF778	A	G	2.525
JFH3411	5	127692820	127692821	FBN2	T	C	2.525
MA5421	15	49168840	49168841	SHC4	G	A	2.52
EK3261	11	111750429	111750430	C11orf1	A	G	2.516
BB4911	4	187078937	187078938	FAM149A	G	A	2.515
JZ1851	18	28962229	28962230	DSG4	A	G	2.512
TF3471	18	9549148	9549149	PPP4R1	C	G	2.508
JZ1851	18	77550947	77550948		T	A	2.505
AR5361	17	41219779	41219780	BRCA1	T	C	2.502
BB4911	3	18308435	18308436	LOC33986 2	A	G	2.502
LK4881	18	13096435	13096436	CEP192	T	C	2.5
JZ1851,AR5361	12	102060675	102060676	MYBPC1	C	T	2.499
BB4911	8	30958560	30958561	WRN	C	T	2.497
DN4461	16	2259765	2259766	BRICD5	A	G	2.495
JZ1851	18	1361209	1361210	LINC00470	C	T	2.493
BB4911	3	17209194	17209195	TBC1D5	G	A	2.492
JFH3411	5	146434145	146434146	PPP2R2B	C	T	2.492
MA5421	12	101295806	101295807	ANO4	G	T	2.485
DN4461	5	869545	869546	BRD9	C	T	2.484
LK4881	18	77455870	77455871	CTDP1	C	T	2.483
MA5421	1	86563406	86563407	COL24A1	C	T	2.482
JFH3411	9	36117209	36117210	RECK	C	G	2.481
JFH3411	9	33750844	33750845	PRSS3	G	C	2.48
EK3261	X	152018831	152018832	NSDHL	T	G	2.475
MC3481	18	43508799	43508800	EPG5	G	A	2.474
JZ1851	3	197377209	197377210		C	T	2.473
BB4911	11	102735102	102735103	MMP12	A	G	2.472
JZ1851	19	55397216	55397217	FCAR	A	G	2.472
QW4591	14	96953515	96953516	AK7	A	C	2.47
BB4911	3	73434085	73434086	PDZRN3	A	G	2.466
BB4911	15	23467042	23467043		G	A	2.465
EK3261	11	100537483	100537484		G	A	2.464

Table B-3: Continued

BB4911	3	27243118	27243119	LOC10192 9642	G	A	2.463
BB4911	3	170016947	170016948	PRKCI	C	T	2.462
DN4461	1	74575048	74575049	LRRIQ3	A	T	2.461
JZ1851	18	60562297	60562298	PHLPP1	A	T	2.459
BB4911	11	126135138	126135139	SRPR	G	T	2.458
QW4591	19	17294953	17294954	MYO9B	T	C	2.458
JFH3411	8	85687106	85687107	RALYL	G	A	2.454
MA5421	11	125451421	125451422	EI24	A	G	2.453
JFH3411	4	137276888	137276889		T	C	2.452
JZ1851	9	79852886	79852887	VPS13A	C	T	2.45
EK3261	X	148890964	148890965		C	T	2.448
QW4591	13	52657688	52657689	NEK5	T	G	2.446
BB4911	3	37407488	37407489	GOLGA4	A	G	2.446
EK3261	X	117531098	117531099	WDR44	C	A	2.446
QW4591	13	50102809	50102810	PHF11	G	A	2.442
JFH3411	5	177099273	177099274		C	A	2.439
MA5421	16	52785087	52785088		T	A	2.438
BB4911	3	10967738	10967739	SLC6A11	T	C	2.434
JZ1851,LK4881	18	14752767	14752768	ANKRD30 B	G	A	2.43
BB4911	3	128292059	128292060	C3orf27	G	A	2.43
BB4911	3	12560762	12560763	TSEN2	A	T	2.429
AR5361	1	38196840	38196841	EPHA10	T	C	2.427
BB4911	3	63649491	63649492	SNTN	A	G	2.425
BB4911	22	28395313	28395314	TTC28	C	T	2.424
QW4591	13	77566157	77566158	CLN5	A	G	2.421
EK3261	11	117090557	117090558	PCSK7	C	T	2.416
LK4881	7	9767254	9767255		T	G	2.416
JZ1851,MC3481	18	48326377	48326378	MRO	G	T	2.413
DN4461	7	154172153	154172154	DPP6	G	A	2.413
BB4911	3	10452230	10452231	ATP2B2	G	A	2.408
JFH3411	9	30774205	30774206		A	T	2.407
JFH3411	9	22029546	22029547	CDKN2B- AS1	T	C	2.406
BB4911	12	42606134	42606135	YAF2	C	T	2.403
BB4911	12	56097024	56097025	ITGA7	A	C	2.401
JZ1851	2	31352175	31352176	GALNT14	A	T	2.401
MC3481	7	1914176	1914177	MAD1L1	C	A	2.401
EK3261	12	9573294	9573295	DDX12P	G	A	2.4
SM2701	11	134241093	134241094	GLB1L2	A	G	2.399
JFH3411	18	47378333	47378334	MYO5B	T	C	2.398
JZ1851	18	50451499	50451500	DCC	A	C	2.397
BB4911	6	136582202	136582203	BCLAF1	T	C	2.392
BB4911	3	86063848	86063849	CADM2	G	A	2.391
JZ1851	11	59981800	59981801	MS4A4E	T	C	2.39
EK3261	17	78914118	78914119	RPTOR	T	G	2.389

Table B-3: Continued

EK3261	X	84189812	84189813	UBE2DNL	A	G	2.387
JZ1851	18	3025040	3025041		A	T	2.386
JFH3411	9	27218725	27218726	TEK	C	T	2.386
JZ1851	4	4411558	4411559	NSG1	T	C	2.385
BB4911	3	64599278	64599279	ADAMTS9	T	C	2.382
EK3261	X	41203118	41203119	DDX3X	G	A	2.381
LK4881	11	107325376	107325377	CWF19L2	T	A	2.38
JZ1851	4	89647068	89647069	FAM13A	A	G	2.38
QW4591	2	7046290	7046291		A	T	2.378
JZ1851	16	64595231	64595232		A	G	2.376
JZ1851	9	131598533	131598534	CCBL1	C	T	2.373
QW4591	13	71498464	71498465		T	C	2.37
AR5361	16	83033474	83033475	CDH13	A	G	2.369
BB4911	3	38541317	38541318	EXOG	C	A	2.365
LK4881	5	157170985	157170986	LSM11	G	A	2.36
EK3261	X	2609982	2609983	CD99	T	C	2.36
BB4911	3	97364938	97364939	EPHA6	A	G	2.359
JZ1851	18	43310850	43310851	SLC14A1	G	A	2.358
JFH3411,QW4591	13	50244040	50244041	EBPL	T	C	2.356
QW4591	13	75915214	75915215	TBC1D4	T	C	2.35
BB4911	3	52551283	52551284	STAB1	G	T	2.349
BB4911	3	183211905	183211906	KLHL6	A	G	2.347
LK4881	15	75080871	75080872	CSK	T	C	2.345
LK4881	18	19100853	19100854	GREB1L	A	G	2.343
BB4911	21	34617728	34617729	IFNAR2	A	G	2.342
DN4461	10	72181459	72181460	EIF4EBP2	G	T	2.339
JZ1851	18	5954986	5954987	L3MBTL4	T	C	2.337
BB4911	3	133493826	133493827	TF	T	C	2.335
BB4911	3	37090273	37090274	MLH1	C	T	2.334
MA5421	3	147003251	147003252		C	T	2.334
BB4911	3	5023220	5023221	BHLHE40	T	G	2.332
AR5361	4	190672021	190672022		T	G	2.331
JFH3411	9	33613902	33613903	TRBV200 R9-2	A	G	2.329
LK4881	4	155305490	155305491	DCHS2	C	T	2.328
LK4881	17	18208333	18208334	TOP3A	C	A	2.326
QW4591	2	198355152	198355153	HSPD1	T	G	2.326
BB4911	3	52551264	52551265	STAB1	T	C	2.326
JFH3411	13	52710135	52710136	NEK3	T	G	2.325
BB4911	3	45821623	45821624	SLC6A20	T	C	2.325
BB4911	3	174792645	174792646	NAALADL 2	G	A	2.324
JFH3411	12	99078267	99078268	APAF1	C	G	2.323
QW4591	17	67219702	67219703	ABCA10	G	A	2.322
JZ1851,LK4881	18	9775371	9775372	RAB31	A	G	2.322
JFH3411	5	40972370	40972371	C7	A	G	2.322
JZ1851	2	174165927	174165928		G	A	2.316

Table B-3: Continued

JM1191	5	156763683	156763684	CYFIP2	C	T	2.316
DN4461	9	97729933	97729934	C9orf3	A	T	2.314
JZ1851	1	17551033	17551034	PADII	A	T	2.313
BB4911	3	195968642	195968643	PCYT1A	G	A	2.313
AR5361	3	33110189	33110190	GLBI	G	T	2.306
BB4911	11	118915754	118915755	HYOU1	G	C	2.304
AR5361	14	94274304	94274305		T	C	2.304
BB4911	19	43371957	43371958	PSG1	C	T	2.301
LK4881	7	141760292	141760293	MGAM	T	G	2.299
JFH3411	9	40332851	40332852		A	T	2.295
JZ1851	15	80413934	80413935	ZFAND6	C	T	2.292
MA5421	11	59829803	59829804	MS4A3	C	T	2.29
BB4911	3	186276392	186276393	TBCCD1	C	T	2.286
JZ1851	6	87158075	87158076		A	G	2.283
JZ1851	6	168481262	168481263	FRMD1	G	T	2.281
AR5361	15	34740618	34740619		T	C	2.278
BB4911	3	130569556	130569557	ATP2C1	T	G	2.278
LK4881	7	128520290	128520291	KCP	A	T	2.277
JZ1851	10	89125890	89125891		C	T	2.275
QW4591	13	55015251	55015252		A	C	2.274
MA5421	8	134100580	134100581	TG	G	A	2.273
DN4461	8	72914637	72914638	LOC100132891	G	A	2.269
JZ1851	18	24435586	24435587	AQP4	A	C	2.267
JFH3411	1	16903235	16903236	NBPF1	C	T	2.266
JFH3411	7	63020477	63020478		T	G	2.264
BB4911	11	118239265	118239266	UBE4A	G	A	2.26
QW4591	6	31445513	31445514		A	G	2.258
QW4591	2	187299680	187299681		G	A	2.257
BB4911	3	37774172	37774173	ITGA9	C	T	2.257
JFH3411	1	146748005	146748006	CHD1L	A	C	2.256
JZ1851	18	77663408	77663409	PQLC1	C	G	2.247
JZ1851	3	136162307	136162308	STAG1	T	C	2.247
MA5421	16	89653031	89653032	CPNE7	G	A	2.246
MA5421	16	27523307	27523308	GTF3C1	A	G	2.245
DN4461	1	10725497	10725498	CASZ1	G	A	2.24
EK3261	2	150432376	150432377	MMADHC	C	G	2.238
BB4911	11	91545211	91545212		C	G	2.235
BB4911	3	112666614	112666615	CD200R1	A	G	2.233
JZ1851	10	89125610	89125611		C	G	2.23
LK4881,MC3481	18	74702863	74702864	MBP	G	A	2.227
BB4911	3	52643306	52643307	PBRM1	A	G	2.227
BB4911	3	182858286	182858287	LAMP3	C	T	2.224
BB4911	8	56365319	56365320	XKR4	G	T	2.224
JFH3411	9	36840622	36840623	PAX5	G	A	2.223
BB4911	3	46722691	46722692	ALS2CL	G	T	2.219

Table B-3: Continued

AR5361	5	180041315	180041316	FLT4	A	G	2.217
MA5421	7	149423249	149423250	KRBA1	G	A	2.214
DN4461	20	58564372	58564373	CDH26	A	G	2.213
MC3481	7	102739042	102739043	ARMC10	C	T	2.212
JFH3411	9	14801709	14801710	FREM1	C	A	2.212
LK4881	10	134157874	134157875	LRRC27	G	A	2.211
JZ1851	21	36975304	36975305		C	T	2.209
DN4461	16	57065198	57065199	NLRC5	G	A	2.204
JZ1851	18	77663939	77663940	PQLC1	G	A	2.204
JFH3411	22	36123312	36123313	APOL5	G	A	2.203
AR5361	1	15792799	15792800	CELA2A	G	A	2.202
QW4591	13	81565902	81565903		T	C	2.202
MA5421	2	240629280	240629281		A	G	2.201
EK3261	X	48672787	48672788	HDAC6	G	A	2.198
LK4881	13	114155964	114155965	TMCO3	G	A	2.195
LK4881,MA5421	7	158055813	158055814	PTPRN2	C	T	2.193
JFH3411	9	14770579	14770580	FREM1	G	A	2.193
JFH3411	5	18783484	18783485		A	G	2.192
EK3261	X	34962908	34962909	FAM47B	A	C	2.187
EK3261	11	117109269	117109270	RNF214	G	T	2.184
JM1191	2	17959453	17959454	GEN1	T	C	2.179
BB4911	3	97806615	97806616	OR5AC2	G	A	2.178
MC3481	18	673015	673016	TYMS	C	T	2.175
JZ1851	9	102732236	102732237	STX17	T	C	2.173
DN4461	6	32427734	32427735		G	T	2.162
EK3261	11	100537406	100537407		A	T	2.16
AR5361	21	47337820	47337821	PCBP3	G	A	2.159
EK3261	11	106408070	106408071		C	T	2.158
QW4591	13	75915215	75915216	TBC1D4	A	C	2.158
JZ1851	3	31721773	31721774	OSBPL10	A	G	2.156
LK4881	7	71916347	71916348	CALN1	G	A	2.156
LK4881	12	8757480	8757481	AICDA	G	A	2.154
BB4911	5	102368026	102368027	PAM	C	T	2.148
TF3471	18	7117622	7117623	LAMA1	G	C	2.147
JFH3411	9	5801120	5801121	ERMP1	A	G	2.147
DN4461	19	54754864	54754865	LILRB5	A	G	2.146
EK3261	X	26179531	26179532		A	G	2.146
BB4911	3	38134437	38134438	DLEC1	A	G	2.141
BB4911	3	141923505	141923506	GK5	C	T	2.141
JZ1851	18	77455689	77455690	CTDP1	C	T	2.137
EK3261	X	148627503	148627504	CXorf40A	C	G	2.137
QW4591	6	31597699	31597700	PRRC2A	C	T	2.134
JZ1851	2	242076943	242076944	PASK	G	A	2.133
LK4881	18	14522149	14522150	POTEC	T	G	2.132
JZ1851	2	236210360	236210361		C	T	2.13
JFH3411	20	5990726	5990727	CRLS1	T	G	2.128

Table B-3: Continued

LK4881	4	165850805	165850806	LOC10105 9914	A	G	2.128
JZ1851	18	55028479	55028480	ST8SIA3	C	G	2.123
BB4911	3	66428281	66428282	SLC25A26	C	T	2.123
AR5361	8	61773284	61773285	CHD7	C	T	2.118
AR5361	9	140389612	140389613	PNPLA7	C	T	2.118
LK4881	2	152230189	152230190	TNFAIP6	G	A	2.115
BB4911	3	41497164	41497165	ULK4	G	A	2.115
JZ1851	3	169782753	169782754	GPR160	G	A	2.115
JFH3411	9	17761378	17761379	SH3GL2	C	T	2.115
BB4911	3	52824609	52824610	ITIH1	G	A	2.113
JFH3411	10	75532869	75532870	FUT11	A	C	2.11
EK3261	6	21595396	21595397	SOX4	T	G	2.11
JFH3411	13	53297961	53297962	LECT1	G	A	2.109
BB4911	11	119692210	119692211		A	T	2.107
AR5361	2	1969754	1969755	MYT1L	A	G	2.106
JFH3411	10	130262745	130262746		A	C	2.105
QW4591	13	50035207	50035208	SETDB2	G	A	2.105
BB4911	2	90464854	90464855		C	A	2.103
BB4911	3	63437857	63437858	SYNPR	T	C	2.101
LK4881	18	8809567	8809568	SOGA2	G	A	2.1
JZ1851	15	90286893	90286894	WDR93	C	T	2.091
SM2701	16	82882282	82882283	CDH13	C	G	2.089
JFH3411	4	158238829	158238830	GRIA2	T	C	2.089
QW4591	13	50465820	50465821	CTAGE10 P	G	A	2.085
AR5361	1	161633591	161633592	FCGR2B	T	C	2.082
MC3481	7	34790122	34790123	NPSR1	T	C	2.081
JFH3411	9	36162225	36162226	GLIPR2	C	T	2.081
BB4911	3	154866452	154866453	MME	T	C	2.079
JZ1851	18	54398921	54398922	WDR7	G	T	2.078
EK3261	20	8708165	8708166	PLCB1	A	G	2.078
MA5421	11	64793057	64793058	SNX15	C	T	2.077
QW4591	13	21916904	21916905	LINC00539	G	A	2.075
EK3261	X	130678595	130678596	OR13H1	C	G	2.075
BB4911	3	75465296	75465297		T	C	2.073
JFH3411	12	55042359	55042360	DCD	T	G	2.072
AR5361	12	56482179	56482180	ERBB3	T	G	2.072
JZ1851	10	5202402	5202403	AKR1CL1	C	G	2.071
EK3261	X	18265831	18265832	SCML2	T	C	2.071
EK3261	11	113856680	113856681	HTR3A	G	T	2.07
JZ1851	2	123340840	123340841		G	A	2.067
TA2691	3	27184800	27184801	LOC10192 9642	T	A	2.066
EK3261	14	52308446	52308447		A	G	2.062
JZ1851	10	114169551	114169552	ACSL5	G	A	2.055
BB4911	3	63974083	63974084	ATXN7	T	C	2.054

Table B-3: Continued

JFH3411	4	109943525	109943526	COL25A1	G	A	2.051
QW4591	22	41626088	41626089	CHADL	A	C	2.043
JM1191	16	74702432	74702433	RFWD3	C	G	2.042
JFH3411	2	233840990	233840991	NGEF	T	C	2.041
JFH3411	9	19395649	19395650		T	C	2.04
JZ1851,TF3471	18	74083353	74083354	ZNF516	A	C	2.039
JFH3411	9	34318739	34318740	KIF24	G	C	2.035
LK4881	18	13015290	13015291	CEP192	A	G	2.034
AR5361	19	45385758	45385759	PVRL2	G	C	2.034
BB4911	11	117973672	117973673	TMPRSS4	G	A	2.033
BB4911	11	126163063	126163064	TIRAP	A	G	2.033
DN4461	X	55248375	55248376	PAGE5	A	G	2.032
EK3261	11	118083663	118083664	AMICA1	A	G	2.031
BB4911	3	142895173	142895174		T	G	2.03
MA5421	12	94965988	94965989	TMCC3	A	T	2.025
JZ1851	16	15083867	15083868	PDXDC1	A	C	2.023
LK4881	19	58089520	58089521	ZNF416	G	C	2.023
JFH3411	5	140047599	140047600	WDR55	C	T	2.022
AR5361	9	140167876	140167877	NELFB	T	G	2.022
BB4911	14	35408647	35408648		A	G	2.019
TF3471	18	61310373	61310374	SERPINB4	C	T	2.016
JZ1851	18	8384847	8384848	PTPRM	A	C	2.015
MA5421	13	110822287	110822288	COL4A1	G	A	2.014
MC3481	18	74074706	74074707	ZNF516	C	T	2.013
LK4881	21	11064822	11064823	BAGE2	A	G	2.011
QW4591	9	90744935	90744936	SPATA31C 2	T	C	2.01
LK4881	18	3656057	3656058	DLGAP1	T	C	2.006
BB4911	3	10114801	10114802	FANCD2	T	C	2.004
EK3261	X	16168466	16168467	GRPR	T	C	2.004
EK3261	X	27479338	27479339	SMEK3P	A	G	2.003
DN4461	20	43835821	43835822	SEMG1	T	C	2.002
EK3261	5	137760082	137760083	KDM3B	A	C	2.002
EK3261	2	160318944	160318945	BAZ2B	A	G	2.001
LK4881	18	6588974	6588975	LOC10013 0480	A	G	1.992
JFH3411	5	141847239	141847240		A	G	1.992
AR5361	8	104130469	104130470		A	G	1.991
BB4911	3	27233497	27233498	LOC10192 9642	C	A	1.986
MA5421	4	55971845	55971846	KDR	G	T	1.983
JFH3411	15	65641621	65641622	IGDCC3	G	T	1.982
JZ1851,MC3481	18	6588928	6588929	LOC10013 0480	A	T	1.98
JZ1851	18	32722916	32722917	MAPRE2	A	C	1.978
BB4911	1	197343762	197343763	CRB1	T	C	1.976
EK3261	X	119054000	119054001	AKAP14	C	T	1.974
AR5361	15	45120966	45120967		G	A	1.97

Table B-3: Continued

JZ1851	8	112671019	112671020		T	G	1.97
LK4881	18	58297969	58297970		C	T	1.969
JZ1851	2	100242774	100242775	AFF3	C	T	1.967
EK3261	X	46316573	46316574	KRBOX4	G	C	1.967
AR5361	14	104384034	104384035	C14orf2	G	A	1.961
BB4911	11	92568148	92568149	FAT3	A	G	1.958
BB4911	3	10400642	10400643	ATP2B2	G	A	1.956
TA2691	5	110491532	110491533		C	T	1.955
BB4911	3	44599102	44599103	ZKSCAN7	T	G	1.954
JFH3411	13	48916894	48916895	RB1	C	T	1.951
DN4461	14	60070548	60070549	RTN1	T	C	1.951
AR5361	19	14042260	14042261	LOC101928772	A	G	1.951
JZ1851	14	102196929	102196930	LINC00239	T	C	1.95
LK4881	18	9512984	9512985	RALBP1	G	A	1.95
EK3261	X	1546875	1546876	ASMTL	A	G	1.949
QW4591	18	14795991	14795992	ANKRD30B	A	G	1.948
JZ1851	2	116593696	116593697	DPP10	T	G	1.948
BB4911	17	21221279	21221280	MAP2K3	C	T	1.944
MA5421	1	120539212	120539213	NOTCH2	G	T	1.94
TF3471	12	113724944	113724945	TPCN1	A	G	1.939
JZ1851	15	21930539	21930540	LOC646214	A	G	1.939
AR5361	2	50778193	50778194	NRXN1	A	G	1.939
JZ1851	12	62415572	62415573	FAM19A2	A	T	1.938
DN4461	16	28944395	28944396	CD19	C	G	1.937
BB4911	4	119555092	119555093	LOC729218	C	G	1.937
QW4591	16	89952396	89952397	TCF25	C	T	1.936
LK4881	14	94929366	94929367	SERPINA9	G	T	1.935
JZ1851	19	53099408	53099409	ZNF137P	T	C	1.934
AR5361	2	74063672	74063673	STAMPB	T	C	1.934
EK3261	X	1331494	1331495	CRLF2	G	C	1.934
QW4591	13	47358539	47358540	ESD	T	C	1.933
JFH3411	5	99728441	99728442		G	A	1.933
MA5421	7	43776047	43776048		G	A	1.933
JZ1851	18	54815024	54815025	BOD1L2	G	T	1.932
JZ1851	13	42644704	42644705	DGKH	T	C	1.928
QW4591	19	53050993	53050994	ZNF808	T	G	1.926
AR5361	16	73048416	73048417	ZFH3	C	T	1.925
JZ1851,LK4881	18	2726364	2726365	SMCHD1	C	G	1.924
LK4881	3	124951171	124951172	ZNF148	T	C	1.924
LK4881	8	139700910	139700911	COL22A1	A	G	1.924
AR5361	2	228642736	228642737		T	C	1.923
JFH3411	8	110530773	110530774	PKHD1L1	T	C	1.921
BB4911	3	121366122	121366123	HCLS1	C	T	1.919
EK3261	14	38014927	38014928	MIPOL1	C	T	1.918

Table B-3: Continued

MC3481	16	32833777	32833778		C	T	1.915
AR5361	6	37605404	37605405	MDGA1	C	T	1.915
JFH3411,QW4591	13	48523566	48523567	SUCLA2	T	C	1.914
AR5361	9	138021155	138021156		A	G	1.913
MA5421	15	24057149	24057150		G	A	1.907
MA5421	19	49538664	49538665	CGB2	C	T	1.901
EK3261	2	44942351	44942352	CAMKMT	G	A	1.897
JFH3411	4	133198349	133198350		T	G	1.896
EK3261	X	152913813	152913814	DUSP9	C	A	1.894
LK4881	18	63511175	63511176	CDH7	T	C	1.889
AR5361	19	43696021	43696022	PSG4	T	A	1.889
DN4461	21	41151002	41151003	IGSF5	T	A	1.888
JFH3411	10	98820066	98820067	SLIT1	G	A	1.885
SM2701	11	117266647	117266648	CEP164	G	C	1.883
JZ1851	16	14863860	14863861	NPIPA2	A	G	1.882
EK3261	19	6898218	6898219	EMR1	C	T	1.88
JZ1851	18	29783163	29783164	MEP1B	G	A	1.875
BB4911	3	8543756	8543757	LMCD1	A	C	1.873
DN4461	9	89763573	89763574	C9orf170	A	C	1.873
JM1191	18	67406414	67406415	DOK6	G	C	1.869
JZ1851	18	75146929	75146930		G	A	1.868
AR5361	12	70078574	70078575	BEST3	T	G	1.867
BB4911	3	182563087	182563088	ATP11B	C	G	1.867
AR5361	12	10784163	10784164	STYK1	C	T	1.864
JZ1851	14	106229621	106229622	IGHG3	A	G	1.861
BB4911	11	110118363	110118364	RDX	A	C	1.86
EK3261	11	93886837	93886838	PANX1	G	C	1.859
EK3261	11	116628400	116628401	BUD13	T	C	1.857
SM2701	18	26233080	26233081		A	G	1.851
JFH3411	10	91498474	91498475	KIF20B	G	A	1.845
JFH3411	13	49866868	49866869	CDADC1	G	C	1.845
BB4911	11	106697171	106697172	GUCY1A2	T	C	1.843
JFH3411	9	17781817	17781818	SH3GL2	C	G	1.843
EK3261	X	48459101	48459102	WDR13	C	G	1.842
JFH3411	4	110602429	110602430	CCDC109 B	T	G	1.84
TA2691	6	90422626	90422627	MDN1	G	C	1.839
BB4911	3	126202146	126202147	UROCI	G	A	1.837
JFH3411	9	2717921	2717922	KCNV2	C	G	1.837
JZ1851	12	6428620	6428621	PLEKHG6	A	T	1.835
BB4911	3	37083739	37083740	MLH1	A	G	1.833
AR5361	13	27047664	27047665		G	A	1.83
AR5361	2	239007231	239007232	SCLY	A	G	1.828
JZ1851	21	11080297	11080298	BAGE2	C	T	1.828
DN4461	2	45812665	45812666	SRBD1	A	G	1.827
BB4911	10	105658587	105658588	OBFC1	G	C	1.825

Table B-3: Continued

LK4881	18	29172864	29172865	TTR	G	A	1.822
LK4881	17	50008687	50008688	CA10	G	A	1.821
DN4461	10	3179841	3179842	PITRM1	C	T	1.817
LK4881	7	139992553	139992554		C	T	1.817
JZ1851	18	28571648	28571649	DSC3	A	T	1.815
EK3261	22	16157826	16157827		C	G	1.815
JZ1851	11	67803214	67803215	NDUFS8	G	A	1.811
MA5421	11	68844719	68844720	TPCN2	C	T	1.811
MA5421	11	86868277	86868278	TMEM135	A	T	1.808
MA5421	4	39301522	39301523	RFC1	A	T	1.805
EK3261	11	116619389	116619390	BUD13	A	T	1.804
JFH3411	13	112685908	112685909		G	A	1.8
JFH3411	8	103745574	103745575		C	T	1.799
MC3481	18	43420176	43420177	SIGLEC15	G	A	1.798
JFH3411	9	27297300	27297301	EQTN	A	G	1.798
JZ1851,LK4881	18	21891974	21891975	OSBPL1A	A	G	1.797
BB4911	3	42242686	42242687	TRAK1	G	A	1.796
LK4881	18	25757047	25757048	CDH2	A	C	1.791
JZ1851	6	143766275	143766276	ADAT2	A	G	1.791
JFH3411	7	44302325	44302326	CAMK2B	A	G	1.789
JFH3411	9	20720598	20720599	FOCAD	A	C	1.785
JFH3411	9	6475318	6475319	UHRF2	G	A	1.784
MA5421	12	31158518	31158519		C	A	1.783
BB4911	3	142669478	142669479		A	G	1.779
JZ1851	2	232655970	232655971	COPS7B	T	C	1.774
JZ1851	12	81661914	81661915	PPFIA2	T	C	1.773
MC3481	18	12057073	12057074		C	T	1.773
JZ1851	2	136934652	136934653		T	C	1.773
JFH3411	4	39297199	39297200	RFC1	G	A	1.773
BB4911	3	170218861	170218862	SLC7A14	T	C	1.772
JM1191	15	94577032	94577033		T	C	1.77
MC3481	11	64338227	64338228	SLC22A11	A	G	1.767
LK4881	18	53177669	53177670	TCF4	T	C	1.765
BB4911	3	131404640	131404641	CPNE4	C	A	1.765
JFH3411	7	4801585	4801586	FOXK1	T	C	1.764
BB4911	11	114401576	114401577	NXPE1	T	C	1.762
BB4911	18	47748454	47748455		C	T	1.762
JFH3411	17	29647361	29647362	NF1	A	T	1.759
BB4911	3	37818804	37818805	ITGA9	G	C	1.759
MA5421	12	129410788	129410789	GLT1D1	G	A	1.757
JFH3411	9	19435161	19435162	ACER2	T	C	1.757
BB4911	5	98858543	98858544		C	G	1.756
JZ1851	14	105604010	105604011	JAG2	T	C	1.755
MA5421	8	1857292	1857293	ARHGEF10	A	G	1.755
SL2221	4	169325295	169325296	DDX60L	G	A	1.754

Table B-3: Continued

BB4911	3	25775355	25775356	NGLY1	A	C	1.752
BB4911	3	10106531	10106532	FANCD2	C	T	1.749
DN4461	3	23312540	23312541	UBE2E2	C	G	1.748
BB4911	3	119170217	119170218	TMEM39A	A	G	1.748
DN4461	9	72901091	72901092	SMC5	C	T	1.748
QW4591	13	53217492	53217493	HNRNPA1 L2	A	G	1.746
EK3261	17	73601543	73601544	MYO15B	A	G	1.746
AR5361	8	120818482	120818483	TAF2	G	A	1.738
LK4881	18	33829076	33829077	MOCOS	T	C	1.737
BB4911	3	183226113	183226114	KLHL6	G	T	1.734
JFH3411	9	14784664	14784665	FREM1	A	G	1.734
JFH3411	3	86063252	86063253	CADM2	T	C	1.732
QW4591	3	6400359	6400360		A	C	1.726
JFH3411	9	27213611	27213612	TEK	G	C	1.726
LK4881	18	43319059	43319060	SLC14A1	T	C	1.725
JM1191	18	319934	319935	COLEC12	T	C	1.724
MC3481	18	21901627	21901628	OSBPL1A	T	C	1.723
DN4461	22	37580441	37580442	C1QTNF6	A	T	1.722
DN4461	17	71746795	71746796	LOC10013 4391	A	G	1.716
JZ1851	8	135218575	135218576		G	A	1.715
JFH3411	7	29252162	29252163	CHN2	A	G	1.714
JZ1851	9	130259829	130259830	LRSAM1	C	A	1.714
JZ1851	7	118032226	118032227		G	A	1.713
DN4461	17	42978553	42978554	CCDC103	T	C	1.711
JZ1851	18	72024221	72024222	C18orf63	A	C	1.709
DN4461	5	36136674	36136675	LMBRD2	C	T	1.707
BB4911	3	150420437	150420438	FAM194A	T	C	1.702
JFH3411	10	102566513	102566514	PAX2	T	C	1.7
BB4911	11	104866460	104866461	CASP5	A	T	1.7
JZ1851	1	66235868	66235869		G	A	1.699
MA5421	11	71605331	71605332	LOC10013 3315	A	G	1.697
BB4911	11	85966176	85966177	EED	G	T	1.697
EK3261	X	48291664	48291665		G	A	1.693
JZ1851	18	14450350	14450351		A	C	1.689
EK3261	11	118037812	118037813	SCN2B	G	T	1.688
BB4911	3	38523494	38523495	ACVR2B	G	T	1.687
JZ1851	18	34803164	34803165	KIAA1328	A	G	1.683
EK3261	11	93844033	93844034	HEPHL1	G	T	1.679
JFH3411	9	311813	311814	DOCK8	C	G	1.666
BB4911	3	52643684	52643685	PBRM1	T	C	1.665
JZ1851	18	28710021	28710022	DSC1	G	T	1.663
JFH3411	9	33624428	33624429		A	C	1.663
EK3261	5	80512973	80512974	RASGRF2	G	T	1.662
JZ1851	6	24173191	24173192	DCDC2	G	A	1.66

Table B-3: Continued

BB4911	11	118873986	118873987	CCDC84	T	C	1.658
JZ1851	12	69119617	69119618	NUP107	T	G	1.656
MA5421	1	175162267	175162268	KIAA0040	C	T	1.655
JFH3411	10	98157459	98157460	TLL2	G	T	1.654
BB4911	3	60716213	60716214	FHIT	T	C	1.654
JZ1851	7	56872153	56872154		A	T	1.654
LK4881	2	128050133	128050134	ERCC3	T	C	1.648
BB4911,MA5421	10	118466663	118466664	HSPA12A	G	A	1.647
JZ1851	18	14797912	14797913	ANKRD30 B	C	T	1.647
AR5361	13	23425576	23425577		T	A	1.646
JFH3411	4	58361064	58361065		A	G	1.644
MA5421	11	66291559	66291560	BBS1	A	G	1.643
QW4591	13	83032512	83032513		C	T	1.641
MA5421	18	43591272	43591273	PSTPIP2	A	G	1.641
QW4591	4	14514388	14514389		T	C	1.63
JFH3411	14	19806913	19806914		G	T	1.629
JFH3411	19	34109574	34109575	CHST8	C	T	1.627
JFH3411	9	21695892	21695893		A	G	1.626
DN4461	3	120130898	120130899	FSTL1	T	C	1.62
BB4911	11	123504958	123504959	SCN3B	C	G	1.617
AR5361	21	47931244	47931245	DIP2A	A	G	1.616
JZ1851	18	60206675	60206676	ZCCHC2	A	G	1.612
EK3261	X	130420501	130420502	IGSF1	A	C	1.611
LK4881	1	202220946	202220947	LGR6	G	A	1.609
BB4911	3	195723936	195723937		A	G	1.609
JFH3411	15	92647367	92647368	SLCO3A1	G	A	1.608
QW4591	20	62406885	62406886	ZBTB46	T	C	1.608
TF3471	18	260139	260140	THOC1	T	A	1.605
JZ1851	18	5955180	5955181	L3MBTL4	G	A	1.605
AR5361	19	4145133	4145134		A	G	1.605
DN4461	2	39993166	39993167	THUMP2	T	C	1.604
AR5361	10	7547214	7547215		C	T	1.603
LK4881	7	154760368	154760369	PAXIP1	A	G	1.603
DN4461	12	48389642	48389643	COL2A1	A	C	1.597
QW4591	5	169961499	169961500	KCNIP1	A	G	1.594
DN4461	1	21751213	21751214		G	A	1.593
JM1191	3	87372468	87372469		C	T	1.593
JZ1851	18	28989673	28989674	DSG4	C	T	1.591
TF3471	18	56202119	56202120	ALPK2	G	A	1.589
JZ1851	14	85384518	85384519		C	G	1.587
JFH3411	8	49643242	49643243	EFCAB1	A	G	1.587
EK3261	11	123464720	123464721	GRAMD1 B	A	G	1.584
SM2701	3	191098120	191098121	CCDC50	C	T	1.583
JZ1851	18	48241745	48241746	MAPK4	A	G	1.582
BB4911	3	20053580	20053581	PP2D1	C	T	1.577

Table B-3: Continued

JM1191	X	11157740	11157741	ARHGAP6	C	A	1.576
MC3481	13	25467022	25467023	CENPJ	C	A	1.572
QW4591	16	70604216	70604217	SF3B3	A	C	1.569
JFH3411	10	49440345	49440346	FRMPD2	C	T	1.567
LK4881	18	12785943	12785944	PTPN2	A	G	1.566
TA2691	1	215916729	215916730	USH2A	G	A	1.563
JZ1851	8	60368755	60368756		G	T	1.56
DN4461, BB4911	11	117709027	117709028	FXVD6	G	A	1.558
DN4461	8	109215367	109215368	EIF3E	T	C	1.558
JZ1851	11	28866104	28866105		T	C	1.555
JFH3411	9	15047868	15047869		A	G	1.552
JFH3411	10	69299191	69299192	CTNNA3	C	T	1.547
QW4591	14	106128348	106128349		G	A	1.545
BB4911	3	15301362	15301363	SH3BP5	G	A	1.54
DN4461	16	89299806	89299807	ZNF778	A	G	1.539
SM2701	10	15103968	15103969	ACBD7	G	A	1.538
BB4911	3	194081088	194081089	LRRC15	C	T	1.538
BB4911	3	189547734	189547735	TP63	T	C	1.537
JFH3411	19	1091783	1091784	POLR2E	T	G	1.536
JZ1851	10	103599324	103599325	KCNIP2	A	T	1.535
SM2701	19	4432972	4432973	CHAF1A	G	A	1.535
BB4911	3	132120188	132120189		T	C	1.529
QW4591	7	70249769	70249770	AUTS2	C	T	1.527
TF3471	18	57022753	57022754	LMAN1	T	C	1.526
DN4461	20	37252209	37252210	ARHGAP40	C	A	1.524
BB4911	11	107514319	107514320	ELMOD1	T	C	1.522
LK4881	17	10899107	10899108		C	T	1.521
SL2221	1	24507181	24507182	IFNLR1	T	C	1.516
BB4911	3	183551732	183551733	PARL	A	C	1.514
TF3471	18	61325693	61325694	SERPINB3	G	T	1.512
AR5361	10	104495492	104495493	SFXN2	G	A	1.511
MA5421	3	170669047	170669048		T	C	1.509
AR5361	5	178207879	178207880	AACSP1	T	C	1.508
JZ1851	18	6947142	6947143	LAMA1	A	C	1.507
BB4911	12	52906524	52906525	KRT5	A	G	1.505
MA5421	16	57597596	57597597	GPR114	C	G	1.505
DN4461	6	15507559	15507560	JARID2	C	T	1.503
BB4911	3	121353327	121353328	HCLS1	A	C	1.501
JFH3411	7	151932823	151932824	KMT2C	A	T	1.495
BB4911	3	37170716	37170717	LRRFIP2	T	C	1.493
BB4911	5	7299228	7299229		G	A	1.492
EK3261	1	55066872	55066873	ACOT11	T	C	1.491
BB4911	3	33605299	33605300	CLASP2	G	A	1.491
AR5361	3	61981358	61981359	PTPRG	T	C	1.49
LK4881	17	73559562	73559563	LLGL2	G	A	1.488

Table B-3: Continued

MA5421	11	113712525	113712526	USP28	T	C	1.487
QW4591	12	6103843	6103844	VWF	G	A	1.485
JZ1851	18	38564030	38564031		T	C	1.483
JFH3411	8	110397638	110397639	PKHD1L1	A	T	1.483
BB4911	3	68934282	68934283	FAM19A4	T	C	1.482
QW4591	14	21504553	21504554	NDRG2	G	A	1.48
EK3261	16	33613218	33613219		C	T	1.477
BB4911	3	156233026	156233027	KCNAB1	A	G	1.477
LK4881	10	7808085	7808086	KIN	T	C	1.476
DN4461	4	5803903	5803904	EVC	C	T	1.475
BB4911	11	118970877	118970878	DPAGT1	A	C	1.474
BB4911	3	128614184	128614185	ACAD9	A	C	1.474
DN4461	9	95016214	95016215	IARS	C	T	1.472
LK4881	18	77805948	77805949	RBFA	A	C	1.471
DN4461	7	299641	299642	FAM20C	G	A	1.469
LK4881	13	44979451	44979452		T	C	1.468
MA5421	16	89299889	89299890	ZNF778	A	G	1.468
BB4911	3	130851195	130851196	NEK11	C	T	1.467
BB4911	3	186299106	186299107	DNAJB11	G	A	1.467
QW4591	17	81009486	81009487	B3GNTL1	C	G	1.464
MA5421	4	47033771	47033772	GABRB1	G	T	1.461
JZ1851	22	41606029	41606030	CHADL	A	C	1.457
MA5421	15	75643713	75643714	NEIL1	T	C	1.456
JZ1851,LK4881	18	54361836	54361837	WDR7	C	T	1.456
SL2221	4	6925008	6925009	TBC1D14	A	C	1.451
JFH3411	4	7678015	7678016	SORCS2	A	C	1.45
QW4591	22	22664565	22664566	LOC96610	A	G	1.449
BB4911	3	44612894	44612895	ZKSCAN7	C	G	1.446
BB4911	11	118886655	118886656	RPS25	G	A	1.44
JFH3411	19	19298098	19298099	MEF2BNB	T	A	1.44
EK3261	X	124456277	124456278	LOC10012 9520	C	T	1.44
MA5421	3	182598862	182598863	ATP11B	A	G	1.439
JZ1851	18	4151376	4151377	DLGAP1	C	G	1.437
BB4911	2	171715132	171715133	GAD1	C	G	1.437
JZ1851	19	31089861	31089862		T	C	1.436
DN4461	3	64527464	64527465	ADAMTS9	C	T	1.433
LK4881,MC3481	18	13041031	13041032	CEP192	G	A	1.432
JZ1851	18	55983329	55983330	NEDD4L	T	C	1.431
EK3261	20	29449607	29449608		A	G	1.43
BB4911	3	189689903	189689904	LEPREL1	A	G	1.425
JZ1851	18	55226382	55226383	FECH	G	C	1.424
LK4881	4	5747077	5747078	EVC	A	G	1.424
SM2701	16	89838077	89838078	FANCA	A	G	1.423
BB4911	3	48299438	48299439	ZNF589	T	C	1.423
JFH3411	9	24544849	24544850	IZUMO3	C	G	1.422

Table B-3: Continued

BB4911	11	93212160	93212161	SMCO4	A	G	1.421
JFH3411	9	15183531	15183532	TTC39B	C	G	1.418
JZ1851	6	151492926	151492927		C	T	1.416
LK4881	20	31877897	31877898	BPIFB1	C	T	1.415
SM2701	7	36483212	36483213	ANLN	T	C	1.415
JZ1851	16	6034072	6034073	RBFOX1	A	C	1.414
QW4591	2	233395028	233395029	CHRND	T	C	1.412
AR5361	9	140395102	140395103	PNPLA7	G	T	1.412
LK4881	2	209204318	209204319	PIKFYVE	A	G	1.411
AR5361	18	76345948	76345949		G	A	1.406
BB4911	3	52728803	52728804	GLT8D1	C	T	1.406
QW4591	15	48593700	48593701	SLC12A1	G	C	1.402
AR5361	1	12920319	12920320	PRAMEF2	C	G	1.401
AR5361	22	17446905	17446906	GAB4	G	A	1.4
LK4881	17	58180171	58180172	LOC65365 3	T	C	1.399
JZ1851	18	14538009	14538010	POTEC	T	C	1.399
JZ1851	1	11104711	11104712	MASP2	G	A	1.395
JZ1851	18	61265869	61265870	SERPINB1 3	C	T	1.395
BB4911	3	47956505	47956506	MAP4	T	C	1.395
QW4591	15	20462908	20462909		G	A	1.391
QW4591	13	110845464	110845465	COL4A1	G	A	1.39
MC3481	1	12164436	12164437	TNFRSF8	C	T	1.388
JZ1851	18	74778514	74778515	MBP	G	T	1.387
EK3261	11	103780454	103780455	PDGFD	A	G	1.382
MA5421	6	16161424	16161425		A	G	1.381
AR5361	11	120984086	120984087	TECTA	C	G	1.38
BB4911	11	124056376	124056377		T	C	1.38
QW4591	13	53395091	53395092		G	A	1.38
JZ1851	15	25222303	25222304	SNRPN	C	A	1.379
QW4591	13	50035150	50035151	SETDB2	G	C	1.368
MA5421	17	79525947	79525948	NPLOC4	G	C	1.367
EK3261	18	12028199	12028200	IMPA2	G	C	1.363
BB4911	3	46009490	46009491	FYCO1	C	T	1.362
AR5361	4	115160481	115160482		C	T	1.361
AR5361	2	42469743	42469744	EML4	C	G	1.36
BB4911	3	45515647	45515648	LARS2	T	C	1.36
LK4881	15	38790884	38790885	RASGRP1	T	C	1.359
MC3481	18	55335411	55335412	LOC10050 5549	A	G	1.359
JFH3411	4	84518557	84518558	AGPAT9	C	T	1.359
QW4591	3	113334751	113334752	SIDT1	A	G	1.358
BB4911	3	119246826	119246827	CD80	T	C	1.357
JFH3411	5	93720016	93720017	KIAA0825	C	T	1.357
MA5421	16	89299898	89299899	ZNF778	A	G	1.355
DN4461	1	149279738	149279739	LOC38869 2	C	T	1.353

Table B-3: Continued

QW4591	22	50714779	50714780	PLXNB2	A	T	1.353
LK4881	22	18717692	18717693	LOC64264 3	G	A	1.352
DN4461	5	178267378	178267379		A	G	1.35
MA5421	6	44149112	44149113	CAPN11	A	G	1.348
JZ1851	18	44558911	44558912	KATNAL2	T	C	1.346
JFH3411	19	22780449	22780450	LOC44051 8	A	T	1.344
QW4591	19	21022354	21022355		C	A	1.342
JZ1851	20	39055692	39055693		T	G	1.342
AR5361	4	100982994	100982995		C	T	1.342
JZ1851	1	16893334	16893335	NBPF1	T	C	1.337
BB4911	3	58097395	58097396	FLNB	T	C	1.336
EK3261	X	152609667	152609668	ZNF275	T	C	1.336
JZ1851	18	77917263	77917264	PAR6G	T	C	1.335
JZ1851	8	57757768	57757769		T	C	1.335
BB4911	3	8730259	8730260	SSUH2	G	A	1.327
LK4881	18	61325904	61325905	SERPINB3	T	G	1.324
AR5361	22	26944310	26944311	TPST2	G	A	1.319
BB4911	3	118878788	118878789	C3orf30	C	T	1.318
JFH3411	1	46909070	46909071		T	C	1.317
LK4881	15	85438396	85438397	SLC28A1	A	C	1.314
EK3261	X	3573507	3573508	PRKX	C	T	1.307
JFH3411	6	52065641	52065642		G	A	1.304
LK4881	7	9767253	9767254		A	T	1.302
AR5361	2	99923479	99923480	LYG1	T	C	1.3
LK4881	12	124832605	124832606	NCOR2	A	G	1.299
EK3261	X	70342819	70342820	MED12	A	G	1.299
QW4591, DN4461	10	117856391	117856392	GFRA1	G	A	1.298
JFH3411	5	151304305	151304306	GLRA1	G	A	1.298
BB4911	3	111709663	111709664	ABHD10	T	C	1.297
BB4911	11	114799913	114799914		C	T	1.296
AR5361	12	133000122	133000123	LOC10192 8629	G	C	1.295
AR5361	4	113198888	113198889	TIFA	A	T	1.293
BB4911	11	108006046	108006047	ACAT1	A	C	1.292
MA5421	1	27312815	27312816	OSTCP2	G	A	1.291
MA5421	5	32010253	32010254	PDZD2	T	C	1.291
QW4591	13	52342205	52342206	DHRS12	G	A	1.288
JFH3411	2	189950555	189950556	COL5A2	G	A	1.287
BB4911	3	108158573	108158574	MYH15	C	T	1.287
BB4911	11	110035261	110035262	ZC3H12C	A	G	1.283
MA5421	20	54805703	54805704		A	G	1.281
MA5421	2	87060043	87060044	CD8B	T	C	1.28
LK4881	7	76265666	76265667	LOC10050 5767	C	T	1.28
BB4911	3	121351479	121351480	HCLS1	T	C	1.279
DN4461	6	29864314	29864315		T	G	1.278

Table B-3: Continued

BB4911	11	125497465	125497466	CHEK1	G	T	1.272
EK3261	X	53436231	53436232	SMC1A	G	T	1.27
BB4911	3	195510899	195510900	MUC4	G	T	1.269
DN4461	1	21752765	21752766		A	G	1.267
JZ1851	5	180552411	180552412	OR2V1	G	C	1.265
JZ1851	18	66513839	66513840	CCDC102 B	C	A	1.264
JZ1851	19	6730854	6730855	GPR108	A	C	1.264
EK3261	X	71518798	71518799	CITED1	G	T	1.262
BB4911	3	4942299	4942300	BHLHE40- AS1	T	C	1.261
DN4461	12	71533237	71533238	TSPAN8	G	T	1.26
DN4461	17	6358988	6358989	PITPNM3	G	C	1.26
JFH3411	9	34242191	34242192	UBAP1	C	T	1.259
JM1191	10	125602942	125602943	CPXM2	G	A	1.257
TF3471	20	57572613	57572614	CTSZ	T	C	1.255
JZ1851,JFH3411	9	71877230	71877231		T	C	1.254
BB4911	11	123513510	123513511	SCN3B	G	A	1.249
JFH3411	5	43367508	43367509		T	C	1.249
DN4461	9	32459449	32459450	DDX58	T	G	1.248
AR5361	9	140249252	140249253	EXD3	A	C	1.247
MA5421	6	105548444	105548445	BVES	G	A	1.246
EK3261	11	116708019	116708020	APOA1	A	G	1.245
LK4881	18	203080	203081	USP14	A	C	1.245
BB4911	3	52814255	52814256	ITIH1	T	A	1.239
SM2701	10	115962811	115962812	TDRD1	G	A	1.238
LK4881	20	62829972	62829973	MYT1	C	G	1.237
DN4461	9	40702759	40702760	SPATA31 A3	T	G	1.236
DN4461	9	84275094	84275095	TLE1	C	T	1.236
EK3261	X	107374692	107374693	ATG4A	T	C	1.236
DN4461	8	131842221	131842222	ADCY8	G	C	1.235
AR5361	20	61975623	61975624	CHRNA4	G	C	1.233
BB4911	3	193042963	193042964	ATP13A5	G	A	1.232
EK3261	X	122758528	122758529	THOC2	G	A	1.231
JZ1851	1	172549293	172549294	SUCO	C	G	1.23
LK4881	7	24839711	24839712	OSBPL3	T	G	1.23
DN4461	16	57509604	57509605	DOK4	T	C	1.225
JZ1851	18	19031975	19031976	GREB1L	T	C	1.225
EK3261	X	55514817	55514818	USP51	C	T	1.222
JZ1851	18	6950998	6950999	LAMA1	A	G	1.22
MA5421	5	157117607	157117608		G	C	1.219
QW4591	10	22635365	22635366	SPAG6	T	C	1.218
DN4461	9	107555710	107555711	ABCA1	C	G	1.218
EK3261	11	86111699	86111700	CCDC81	A	T	1.217
AR5361	11	116026447	116026448		A	G	1.216
EK3261	11	88925327	88925328	TYR	A	C	1.215

Table B-3: Continued

BB4911	3	132063976	132063977	ACPP	T	C	1.214
JFH3411	9	36643130	36643131	MELK	A	G	1.214
EK3261	X	152090808	152090809	ZNF185	T	C	1.214
MA5421	18	53131209	53131210	TCF4	A	T	1.212
JZ1851	16	77401291	77401292	ADAMTS18	T	C	1.208
LK4881	18	43246155	43246156	SLC14A2	G	A	1.207
JZ1851	6	131505230	131505231	AKAP7	G	T	1.206
BB4911	3	138091700	138091701	MRAS	G	T	1.204
EK3261	X	100745824	100745825	ARMCX4	T	C	1.202
BB4911	3	189625217	189625218		G	A	1.199
DN4461	11	126526180	126526181	KIRREL3	A	G	1.195
JZ1851	1	224360140	224360141		G	A	1.193
JFH3411	14	51382404	51382405	PYGL	T	C	1.193
BB4911	3	100238507	100238508	TMEM45A	A	G	1.192
JFH3411	4	76572190	76572191	G3BP2	A	C	1.192
SM2701	16	81941443	81941444	PLCG2	C	T	1.19
AR5361	20	62934474	62934475	LINC00266-1	A	G	1.19
LK4881	10	28247956	28247957	ARMC4	A	C	1.188
LK4881	18	59954764	59954765	KIAA1468	G	T	1.187
BB4911	10	71098194	71098195	HK1	G	T	1.184
DN4461	22	18737354	18737355	LOC642643	A	G	1.184
QW4591	6	166172020	166172021		G	A	1.183
EK3261, BB4911	11	120319063	120319064	ARHGEF12	A	C	1.181
LK4881	18	61390569	61390570	SERPINB11	T	G	1.181
BB4911	X	75250155	75250156		A	G	1.181
BB4911	10	82049253	82049254	MAT1A	C	T	1.18
BB4911	11	94771564	94771565		G	A	1.18
AR5361	2	199318767	199318768		C	T	1.179
MA5421	2	37586680	37586681	QPCT	A	G	1.175
DN4461	22	29819080	29819081		G	A	1.175
JFH3411	9	30773721	30773722		T	C	1.175
JZ1851	2	236120916	236120917		T	C	1.174
LK4881	4	165578265	165578266		T	C	1.174
DN4461	9	137677016	137677017	COL5A1	G	A	1.172
LK4881	12	92494970	92494971	C12orf79	A	G	1.171
BB4911	3	97365037	97365038	EPHA6	G	A	1.17
BB4911	2	216903893	216903894	PECR	A	C	1.169
BB4911	11	103870754	103870755	PDGFD	G	C	1.167
JFH3411	21	11079985	11079986	BAGE2	A	G	1.166
JM1191	9	67273451	67273452	AQP7P1	A	T	1.166
BB4911	4	1050652	1050653	RNF212	G	A	1.164
JFH3411	8	6577534	6577535	AGPAT5	A	G	1.164
JZ1851	11	73074057	73074058	ARHGEF17	A	G	1.163

Table B-3: Continued

LK4881	18	6928422	6928423	LINC00668	A	G	1.162
EK3261	11	103270606	103270607	DYNC2H1	G	A	1.161
EK3261	11	95520694	95520695	FAM76B	T	C	1.159
QW4591	7	65079529	65079530		T	C	1.157
BB4911	3	196453466	196453467	PIGX	A	C	1.154
JFH3411	8	1806318	1806319	ARHGEF10	T	A	1.154
BB4911	3	154890205	154890206	MME	G	A	1.151
EK3261	X	6975751	6975752	HDHD1	G	T	1.151
JZ1851	10	123247036	123247037	FGFR2	C	T	1.15
MA5421	7	144068162	144068163	ARHGEF5	T	C	1.15
DN4461	21	43529641	43529642	UMODL1	A	C	1.149
MA5421	5	98859859	98859860		T	G	1.148
EK3261	11	119065708	119065709	CCDC153	G	C	1.147
AR5361	18	74092365	74092366	ZNF516	G	A	1.144
BB4911	3	70175260	70175261		T	C	1.142
TF3471	13	100181914	100181915	TM9SF2	A	G	1.141
DN4461	2	239139882	239139883	LOC151174	G	C	1.141
BB4911	3	52420900	52420901	DNAH1	G	A	1.14
AR5361	1	1655927	1655928	CDK11A	G	C	1.139
JM1191	16	88946954	88946955	CBFA2T3	A	G	1.138
JFH3411	8	106087219	106087220		C	T	1.137
JZ1851	18	9562041	9562042	PPP4R1	C	T	1.135
BB4911	3	37575038	37575039	ITGA9	G	A	1.134
BB4911	3	107769318	107769319	CD47	A	C	1.134
JZ1851	17	74717603	74717604	JMJD6	C	T	1.131
JFH3411	9	35650457	35650458	SIT1	G	A	1.131
AR5361	2	198761893	198761894	PLCL1	T	C	1.13
MC3481	7	21599505	21599506	DNAH11	A	G	1.128
LK4881	18	13104040	13104041	CEP192	G	A	1.124
BB4911	3	194080982	194080983	LRRC15	C	T	1.123
EK3261	10	38667002	38667003	HSD17B7P2	A	G	1.122
JFH3411,QW4591	13	52511361	52511362	ATP7B	C	G	1.121
JFH3411	8	144636948	144636949	GSDMD	T	C	1.12
TF3471	18	694205	694206	ENOSF1	A	G	1.119
EK3261	X	118829466	118829467	SEPT6	G	T	1.119
JZ1851	18	77709708	77709709	PQLC1	T	C	1.118
TF3471	13	24876651	24876652	SPATA13	G	A	1.117
JFH3411	9	5762532	5762533	KIAA1432	A	C	1.115
EK3261	X	67431920	67431921	OPHN1	C	T	1.115
AR5361	6	92398184	92398185		C	T	1.114
LK4881	18	55334105	55334106	ATP8B1	G	T	1.113
JZ1851	4	49791	49792	ZNF595	A	G	1.11
LK4881	13	50125789	50125790	RCBTB1	G	A	1.109
JFH3411	9	21854433	21854434	MTAP	A	T	1.107

Table B-3: Continued

EK3261	15	25307431	25307432	SNORD11 6-6	A	C	1.106
MC3481	18	5437966	5437967	EPB41L3	C	T	1.104
JFH3411	9	44148215	44148216		T	C	1.101
EK3261	X	151997272	151997273	CETN2	A	C	1.1
SL2221	6	33145709	33145710	COL11A2	A	G	1.098
TF3471	1	20853035	20853036		G	A	1.097
JZ1851	6	2605492	2605493		A	G	1.097
JFH3411	9	28148299	28148300	LINGO2	T	C	1.096
DN4461	12	72287158	72287159	TBC1D15	T	C	1.093
QW4591	13	75813266	75813267	CTAGE11 P	A	G	1.093
BB4911	3	184010047	184010048	ECE2	G	C	1.093
BB4911	3	14201351	14201352	XPC	T	C	1.089
JFH3411	4	2376422	2376423	ZFYVE28	A	G	1.089
DN4461	6	108243123	108243124	SEC63	A	G	1.088
QW4591	11	44640015	44640016	CD82	A	G	1.085
JM1191	8	121292804	121292805	COL14A1	G	C	1.085
JM1191	4	69492551	69492552		G	A	1.084
MA5421	8	145680817	145680818	CYHR1	C	T	1.084
AR5361	7	21611398	21611399	DNAH11	G	C	1.082
JFH3411	9	35707337	35707338	TLN1	G	A	1.082
MC3481	18	74702998	74702999	MBP	C	G	1.081
AR5361	1	192575014	192575015		A	C	1.08
EK3261	10	85965818	85965819	CDHR1	A	G	1.08
EK3261	3	138724373	138724374	PRR23A	T	G	1.08
DN4461	9	116241706	116241707	RGS3	T	C	1.079
MA5421	13	78165636	78165637	SCEL	A	T	1.078
QW4591	1	202221092	202221093	LGR6	G	T	1.077
EK3261	11	102391424	102391425	MMP7	G	A	1.077
QW4591	15	91009834	91009835	IQGAP1	T	C	1.075
JZ1851	18	3395373	3395374		C	T	1.071
JFH3411	5	14798594	14798595	ANKH	T	C	1.071
AR5361	6	32301909	32301910	C6orf10	G	A	1.071
BB4911	3	10065143	10065144	FANCD2	G	A	1.069
JZ1851	11	132885325	132885326	OPCML	T	G	1.066
QW4591	21	39084929	39084930	KCNJ6	T	C	1.062
BB4911	3	185341969	185341970	SENP2	G	A	1.062
EK3261	X	125955427	125955428	CXorf64	G	A	1.062
LK4881	10	49420314	49420315	FRMPD2	C	T	1.059
BB4911	2	91776365	91776366		A	G	1.056
QW4591	3	197349142	197349143	LOC22072 9	T	C	1.055
BB4911	19	3746206	3746207	TJP3	T	C	1.054
JZ1851,LK4881	18	13459839	13459840	LDLRAD4	G	T	1.053
LK4881	7	65866449	65866450	LINC00174	C	T	1.052
AR5361	8	91424757	91424758		G	A	1.051

Table B-3: Continued

EK3261	11	113992535	113992536	ZBTB16	G	T	1.045
JZ1851	9	18671828	18671829	ADAMTSL 1	A	T	1.045
JFH3411	9	68501894	68501895		G	T	1.043
EK3261	11	118110976	118110977	MPZL3	T	C	1.037
QW4591	13	35498287	35498288		C	T	1.037
BB4911	3	195925457	195925458	ZDHHC19	A	C	1.037
JZ1851	10	7618379	7618380	ITIH5	C	T	1.032
BB4911	3	122807994	122807995	PDIA5	G	A	1.032
BB4911	3	15282227	15282228	CAPN7	T	G	1.03
JFH3411	9	12704724	12704725	TYRP1	C	T	1.028
QW4591	8	38826364	38826365	PLEKHA2	T	C	1.025
EK3261	1	6695928	6695929	DNAJC11	T	C	1.024
EK3261	X	150349870	150349871	GPR50	A	G	1.023
AR5361	2	176606021	176606022		G	A	1.022
BB4911	11	125648320	125648321	PATE2	C	T	1.021
JZ1851	5	14380323	14380324	TRIO	G	T	1.019
EK3261	11	117864046	117864047	IL10RA	A	G	1.015
QW4591	13	114778874	114778875	RASA3	T	C	1.013
BB4911	11	125489787	125489788	STT3A	A	C	1.012
BB4911	3	196746628	196746629	MFI2	T	C	1.012
DN4461	9	138391516	138391517	C9orf116	A	C	1.009
TA2691	14	90391071	90391072	EFCAB11	T	G	1.007
JZ1851	18	50994207	50994208	DCC	G	T	1.007
MA5421	6	32334240	32334241	C6orf10	G	T	1.003
JZ1851	2	194141423	194141424		G	C	1.002
BB4911	3	150932074	150932075	P2RY14	T	G	1.002
JZ1851,MA5421	6	151492916	151492917		C	T	1.002
EK3261	X	2828121	2828122	ARSD	C	T	1.002
AR5361	15	84063019	84063020		A	G	1
TF3471	18	5433569	5433570	EPB41L3	A	C	0.999
TA2691	15	22963959	22963960	CYFIP1	C	T	0.997
JFH3411	21	11082235	11082236	BAGE2	T	C	0.996
LK4881	18	72264472	72264473	ZNF407	C	T	0.995
AR5361	14	20360994	20360995		G	C	0.994
BB4911	3	64145492	64145493	PRICKLE2	G	A	0.992
BB4911	11	122489872	122489873		T	C	0.99
LK4881	18	2934535	2934536	LPIN2	G	C	0.989
EK3261	X	39932807	39932808	BCOR	G	A	0.985
TF3471	17	57344600	57344601	GDPD1	C	A	0.984
AR5361	3	101579643	101579644	NFKBIZ	A	T	0.983
BB4911	15	20464970	20464971		T	G	0.981
BB4911	3	46449863	46449864	CCRL2	G	T	0.981
BB4911	3	113128050	113128051	WDR52	G	T	0.978
BB4911	11	124095883	124095884	OR8G2	A	G	0.977
JFH3411	6	105300106	105300107	HACE1	C	T	0.974

Table B-3: Continued

EK3261	X	13734068	13734069	OFD1	A	C	0.972
LK4881	5	139199936	139199937	PSD2	G	A	0.971
JFH3411	9	6835181	6835182	KDM4C	C	T	0.971
JFH3411	9	34096872	34096873	DCAF12	T	C	0.971
MC3481	18	9549119	9549120	PPP4R1	A	G	0.97
LK4881	18	41901923	41901924		A	G	0.968
MA5421	14	94361497	94361498		T	G	0.964
JZ1851	18	33422664	33422665		A	G	0.961
JZ1851	18	66513378	66513379	CCDC102 B	A	G	0.961
BB4911	11	110128993	110128994	RDX	C	G	0.957
SM2701,JFH3411	7	124469266	124469267	POT1	A	T	0.957
JZ1851	3	107576915	107576916	LINC00635	C	T	0.956
JFH3411	9	27610656	27610657		A	G	0.956
AR5361	4	165785590	165785591		G	A	0.955
JFH3411	14	19806987	19806988		G	T	0.954
JFH3411	5	122739420	122739421	CEP120	G	C	0.953
EK3261	X	92927633	92927634	NAP1L3	G	C	0.952
JFH3411	7	150739329	150739330	ABCB8	G	C	0.951
JZ1851	12	104014103	104014104	STAB2	A	T	0.949
JZ1851	10	115745790	115745791		G	A	0.948
LK4881	18	64176364	64176365	CDH19	G	T	0.946
QW4591	15	51643332	51643333	GLDN	T	C	0.945
BB4911	3	9426329	9426330	THUMPD3	A	G	0.945
EK3261	11	119181673	119181674	MCAM	G	C	0.944
JZ1851	18	2750237	2750238	SMCHD1	A	G	0.939
JFH3411	7	91706095	91706096	AKAP9	T	C	0.939
LK4881	8	139626355	139626356	COL22A1	G	A	0.938
JFH3411	9	18826499	18826500	ADAMTSL 1	T	C	0.937
QW4591	1	158443668	158443669		T	C	0.936
JFH3411	10	118274583	118274584		A	G	0.935
JFH3411	21	47862187	47862188	PCNT	T	C	0.935
DN4461	1	17409240	17409241	PADI2	G	A	0.934
AR5361	9	139684980	139684981	TMEM141	A	C	0.934
AR5361	12	9334760	9334761	PZP	A	T	0.929
JZ1851	3	111854571	111854572	GCSAM	C	T	0.928
LK4881	5	16676102	16676103	MYO10	T	C	0.926
MA5421	9	134271632	134271633		C	T	0.926
DN4461	9	77415283	77415284	TRPM6	A	C	0.923
JFH3411	9	27608666	27608667		T	C	0.921
QW4591	1	142809535	142809536		T	C	0.916
QW4591	X	100532506	100532507	TAF7L	A	T	0.916
DN4461	X	2645365	2645366	CD99	G	C	0.913
JFH3411	9	39178214	39178215	CNTNAP3	T	C	0.911
JZ1851	8	114165404	114165405	CSMD3	A	G	0.907
QW4591	6	120732831	120732832		A	T	0.906

Table B-3: Continued

LK4881	15	40582168	40582169	PLCB2	A	T	0.904
JZ1851	18	29800118	29800119	MEP1B	A	G	0.904
TF3471	5	172588026	172588027	BNIP1	G	T	0.904
JFH3411	4	109937945	109937946	COL25A1	A	G	0.903
LK4881	18	7015975	7015976	LAMA1	C	T	0.901
JZ1851,LK4881,M C3481	18	77246977	77246978	NFATC1	G	A	0.901
JZ1851	10	124992700	124992701		C	T	0.894
EK3261	16	77393450	77393451	ADAMTS1 8	A	C	0.894
AR5361	19	4350310	4350311	MPND	T	C	0.89
BB4911	20	51306847	51306848		T	C	0.89
MA5421	17	72466086	72466087	CD300A	C	T	0.888
AR5361	6	32946327	32946328	BRD2	G	C	0.888
SM2701	18	3112230	3112231	MYOM1	G	C	0.887
SM2701	4	74285822	74285823	ALB	G	A	0.886
JZ1851	1	144615443	144615444	LOC10192 9455	T	G	0.885
LK4881	18	56586685	56586686	ZNF532	A	G	0.885
BB4911	3	196448102	196448103	PIGX	C	T	0.884
MA5421	8	2965106	2965107	CSMD1	G	C	0.884
JZ1851	1	3747579	3747580	CEP104	C	T	0.883
QW4591	15	76462040	76462041	C15orf27	C	G	0.882
BB4911	20	8773095	8773096	PLCB1	C	A	0.88
JFH3411	9	33969351	33969352	UBAP2	T	C	0.878
JZ1851	20	25343257	25343258	ABHD12	G	A	0.875
JZ1851	9	73408734	73408735	TRPM3	C	T	0.875
QW4591	2	77830629	77830630		G	A	0.872
JFH3411	13	52657286	52657287	NEK5	A	G	0.867
BB4911	3	146176074	146176075	PLSCR2	C	T	0.865
JFH3411	7	32613019	32613020	AVL9	A	G	0.865
MA5421	15	32792074	32792075	LOC10065 3133	G	T	0.864
MA5421	9	86731278	86731279		T	C	0.863
DN4461	9	94939614	94939615		T	C	0.863
JM1191	16	82882187	82882188	CDH13	G	T	0.86
BB4911	3	43097709	43097710	FAM198A	A	G	0.86
JZ1851	6	99526465	99526466		A	G	0.86
QW4591	7	158886173	158886174	VIPR2	A	G	0.859
AR5361	21	11154411	11154412		A	G	0.858
EK3261	4	79202778	79202779	FRAS1	G	A	0.857
BB4911	3	124746048	124746049	HEG1	A	G	0.855
BB4911	3	189038647	189038648	TPRG1	T	C	0.855
JFH3411	7	38424662	38424663	AMPH	G	A	0.854
MA5421	1	169559634	169559635	SELP	T	C	0.853
AR5361	2	61128267	61128268	REL	G	A	0.851
BB4911	3	195505246	195505247	MUC4	G	T	0.848
BB4911	12	106723189	106723190	TCP11L2	A	G	0.846

Table B-3: Continued

LK4881	7	105121399	105121400	PUS7	G	A	0.846
BB4911	3	50825066	50825067	DOCK3	T	C	0.845
TF3471	19	50128542	50128543	PRR12	A	G	0.841
DN4461, BB4911	3	195511835	195511836	MUC4	C	G	0.84
JZ1851	18	19853506	19853507		C	T	0.838
MA5421	4	39469415	39469416	LIAS	C	G	0.838
AR5361	9	135962576	135962577	CELP	A	T	0.837
JZ1851	11	115179382	115179383	CADM1	A	G	0.834
JFH3411	5	10870590	10870591		A	C	0.832
JZ1851	16	8876691	8876692	ABAT	C	T	0.831
JZ1851	10	62418646	62418647	ANK3	G	A	0.829
DN4461	16	89299852	89299853	ZNF778	G	A	0.829
SM2701	10	120923795	120923796	SFXN4	C	T	0.827
MA5421	8	21551288	21551289	GFRA2	G	A	0.827
JZ1851	18	48322402	48322403	MRO	C	T	0.826
JZ1851	11	20289508	20289509		T	C	0.824
JZ1851	3	186704923	186704924	ST6GAL1	A	G	0.824
LK4881	18	55335549	55335550	LOC100505549	A	C	0.821
EK3261	X	102978805	102978806	GLRA4	G	C	0.814
TF3471	8	134052224	134052225	TG	T	C	0.812
MA5421	2	3340628	3340629	TSSC1	G	A	0.81
BB4911	3	179109734	179109735	MFN1	A	G	0.81
BB4911	16	1484337	1484338	CCDC154	A	G	0.807
DN4461	8	142445537	142445538	MROH5	T	C	0.807
JZ1851	18	6898414	6898415	ARHGAP28	C	T	0.8
AR5361	12	70329511	70329512	MYRFL	G	A	0.799
BB4911	3	60716036	60716037	FHIT	T	C	0.798
EK3261	11	118981024	118981025	C2CD2L	A	G	0.794
MA5421	5	7596002	7596003	ADCY2	C	G	0.793
JFH3411	6	41198908	41198909	TREML4	T	C	0.793
BB4911	3	140185293	140185294	CLSTN2	G	A	0.792
JFH3411	4	164066709	164066710	NAF1	T	C	0.792
SM2701	18	56149047	56149048	ALPK2	A	G	0.791
BB4911	3	127396219	127396220	ABTB1	T	C	0.791
MA5421	7	139565721	139565722	TBXAS1	G	A	0.791
BB4911	3	127783697	127783698	SEC61A1	A	T	0.79
BB4911	3	187420330	187420331	LOC100131635	A	C	0.79
DN4461	15	74364702	74364703	GOLGA6A	G	C	0.789
BB4911	3	37547256	37547257	ITGA9	G	A	0.789
DN4461	9	139341611	139341612	SEC16A	T	C	0.784
LK4881, SM2701	17	78084941	78084942	GAA	G	T	0.783
AR5361	7	40108854	40108855	CDK13	C	T	0.783
AR5361	4	134161676	134161677		G	A	0.779
LK4881	18	43665981	43665982	ATP5A1	C	T	0.777

Table B-3: Continued

EK3261	22	16953726	16953727		A	G	0.776
BB4911	3	168269755	168269756	MIR551B	A	G	0.775
BB4911	3	167006611	167006612	ZBBX	G	T	0.771
BB4911	16	14026950	14026951	ERCC4	G	T	0.77
EK3261	X	52576656	52576657		T	C	0.769
BB4911	3	10081544	10081545	FANCD2	G	C	0.768
DN4461	8	113347768	113347769	CSMD3	A	T	0.768
JZ1851	12	272458	272459	IQSEC3	C	G	0.764
AR5361	19	7214722	7214723	INSR	G	A	0.764
JM1191	10	70056599	70056600	PBLD	C	T	0.763
JFH3411	13	52549739	52549740	ATP7B	T	C	0.763
LK4881	18	28662775	28662776	DSC2	G	A	0.763
DN4461	19	12014354	12014355	ZNF69	C	G	0.763
MA5421	9	11012342	11012343		G	A	0.763
BB4911	3	38813008	38813009	SCN10A	T	C	0.76
MA5421	8	64074750	64074751		G	T	0.758
JFH3411	22	50959187	50959188	NCAPH2	C	T	0.757
EK3261	14	38205021	38205022	TTC6	T	C	0.756
JFH3411	16	89970628	89970629	TCF25	T	G	0.756
JFH3411,QW4591	17	73626922	73626923	RECQL5	G	T	0.755
BB4911	11	113211369	113211370	TTC12	T	G	0.753
BB4911	19	50721073	50721074	MYH14	G	A	0.753
MC3481	20	52786072	52786073	CYP24A1	T	C	0.753
BB4911	11	117785259	117785260	TMPRSS13	T	C	0.749
MC3481	19	51837331	51837332	VSIG10L	A	G	0.749
JFH3411	4	70948629	70948630	CSN1S2AP	A	G	0.749
JFH3411	9	14868652	14868653	FREM1	A	T	0.749
AR5361	2	107787871	107787872		T	C	0.747
BB4911	3	44607012	44607013	ZKSCAN7	T	C	0.745
AR5361	1	142801139	142801140		A	C	0.743
BB4911	3	64640211	64640212	ADAMTS9	G	T	0.74
JZ1851, BB4911	3	197837966	197837967		T	G	0.74
TF3471	11	102565855	102565856	MMP27	A	T	0.737
JFH3411	8	11657920	11657921	FDFT1	G	C	0.737
EK3261	11	122659917	122659918	UBASH3B	T	G	0.735
AR5361	19	39909713	39909714	PLEKHG2	G	A	0.734
EK3261	5	115173607	115173608	ATG12	T	C	0.734
EK3261	X	38158192	38158193	RPGR	T	C	0.734
JFH3411	10	102777277	102777278	PDZD7	G	A	0.733
JZ1851	18	33849867	33849868	MOCOS	G	T	0.732
QW4591	3	4842487	4842488	ITPR1	G	T	0.73
BB4911	3	13672391	13672392	FBLN2	G	C	0.73
LK4881	17	25746939	25746940	TBC1D3P5	A	G	0.729
BB4911	13	50495554	50495555	SPRYD7	T	C	0.726
BB4911	3	11952072	11952073		C	G	0.725
QW4591	13	76101978	76101979	COMMD6	G	A	0.723

Table B-3: Continued

BB4911	3	13379451	13379452	NUP210	G	A	0.721
MA5421	19	8111724	8111725		T	C	0.72
LK4881	10	127731535	127731536	ADAM12	G	A	0.719
MA5421	5	56317753	56317754		C	G	0.716
SM2701, BB4911	10	92678764	92678765	ANKRD1	A	G	0.713
EK3261	1	16910070	16910071	NBPF1	C	T	0.712
JFH3411	11	51451574	51451575		G	A	0.712
AR5361	11	117039165	117039166	PAFAH1B 2	T	G	0.712
LK4881	18	77107933	77107934	ATP9B	C	T	0.711
EK3261	X	152613111	152613112	ZNF275	C	T	0.711
BB4911	22	23813485	23813486		A	G	0.71
BB4911	3	109049383	109049384	DPPA4	T	C	0.708
AR5361	14	95841423	95841424		C	T	0.702
BB4911	3	40552915	40552916	ZNF620	T	C	0.701
BB4911	3	189612335	189612336	TP63	C	T	0.701
AR5361	9	140110695	140110696	NDOR1	T	C	0.7
JZ1851, BB4911	3	10049921	10049922	LOC40105 2	G	C	0.699
DN4461	15	84492674	84492675	ADAMTSL 3	T	C	0.697
DN4461	19	49543055	49543056	CGB5	G	C	0.697
BB4911	3	39152574	39152575	TTC21A	C	G	0.696
DN4461	1	54653290	54653291	CYB5RL	C	T	0.695
AR5361	7	48666473	48666474	ABCA13	G	T	0.694
AR5361	16	78062842	78062843	CLEC3A	A	T	0.693
DN4461	3	128257213	128257214		G	A	0.689
EK3261	11	92531355	92531356	FAT3	A	G	0.685
JZ1851	18	41900963	41900964		G	T	0.681
BB4911	5	102368492	102368493	PAM	C	T	0.681
AR5361	1	246674775	246674776	SMYD3	C	T	0.68
JFH3411	19	49964524	49964525	ALDH16A 1	G	A	0.68
EK3261	X	100243458	100243459	ARL13A	G	T	0.68
JZ1851	18	55144747	55144748	ONECUT2	G	A	0.679
AR5361	9	141016261	141016262	CACNA1B	T	G	0.678
BB4911	8	125074440	125074441	FER1L6	T	C	0.677
BB4911	10	112349203	112349204	SMC3	A	G	0.675
MA5421	1	96887369	96887370		C	T	0.672
EK3261	15	21137247	21137248		G	A	0.671
JFH3411	5	102537199	102537200	PPIP5K2	T	G	0.671
BB4911	19	15289612	15289613	NOTCH3	A	T	0.67
JFH3411	8	11687517	11687518	FDFT1	G	A	0.67
JM1191	12	122348745	122348746	PSMD9	A	G	0.668
QW4591	13	74289798	74289799	KLF12	A	T	0.663
JZ1851	18	55157811	55157812	ONECUT2	G	T	0.663
DN4461	12	123344909	123344910	HIP1R	A	C	0.659
BB4911	3	42735149	42735150	HHATL	T	C	0.659

Table B-3: Continued

DN4461	17	4877119	4877120	CAMTA2	G	A	0.658
JZ1851	18	47753490	47753491	CCDC11	T	C	0.655
AR5361	1	16370059	16370060	CLCNKB	C	T	0.65
BB4911	3	10089772	10089773	FANCD2	A	C	0.648
BB4911	3	14174317	14174318	TMEM43	G	A	0.648
MA5421	7	88847450	88847451	ZNF804B	A	T	0.648
EK3261	11	94264881	94264882	LOC64303 7	G	A	0.646
MC3481	18	76933688	76933689	ATP9B	G	A	0.646
JFH3411	13	52660594	52660595	NEK5	T	C	0.645
MA5421	17	17183866	17183867	COPS3	G	A	0.645
BB4911	3	44509709	44509710	ZNF445	T	C	0.645
AR5361	14	99097946	99097947		C	T	0.644
JFH3411	9	8436702	8436703	PTPRD	C	G	0.644
LK4881	11	130749714	130749715	SNX19	A	G	0.643
JM1191	X	96139728	96139729	RPA4	T	A	0.642
MA5421	13	107316284	107316285	LINC00443	G	A	0.64
JZ1851	10	112391889	112391890		A	G	0.639
BB4911	6	3550617	3550618		C	T	0.639
TF3471	17	17716661	17716662	SREBF1	G	C	0.638
JFH3411	4	71227801	71227802	SMR3A	A	G	0.635
BB4911	11	126162467	126162468	TIRAP	G	A	0.633
JZ1851	19	45116775	45116776	IGSF23	G	A	0.633
DN4461	7	100411277	100411278	EPHB4	T	C	0.633
JFH3411	2	113079575	113079576	ZC3H6	C	A	0.632
MA5421	3	32130507	32130508		C	T	0.632
LK4881	17	76486578	76486579	DNAH17	T	C	0.631
BB4911	3	111637815	111637816	PHLDB2	A	G	0.631
EK3261	X	145076301	145076302	MIR888	T	G	0.631
BB4911	3	128614132	128614133	ACAD9	C	T	0.627
MC3481	20	29449610	29449611		G	T	0.624
EK3261	10	38638904	38638905		G	A	0.622
QW4591	13	50102991	50102992	PHF11	T	C	0.621
JFH3411	8	28341057	28341058	FBXO16	A	G	0.621
BB4911	3	133347603	133347604	TOPBP1	T	C	0.619
BB4911	3	53324914	53324915	DCPIA	A	G	0.618
AR5361	7	74524985	74524986	GTF2IRD2 B	G	A	0.618
JFH3411	9	1056727	1056728	DMRT2	G	C	0.616
EK3261	X	118893412	118893413	SOWAHD	T	C	0.615
EK3261	11	123454977	123454978	GRAMD1 B	T	C	0.61
JZ1851,LK4881	18	28898293	28898294	DSG1	A	G	0.609
JZ1851	18	43309910	43309911	SLC14A1	C	T	0.609
TF3471	18	47017819	47017820	RPL17	A	G	0.608
EK3261	X	100532984	100532985	TAF7L	T	C	0.608
DN4461	6	29864561	29864562		A	G	0.603

Table B-3: Continued

JFH3411	9	452148	452149	DOCK8	G	C	0.603
AR5361	20	61997560	61997561	CHRNA4	A	G	0.602
BB4911	3	130383972	130383973	COL6A6	G	A	0.602
JZ1851	15	57835593	57835594	CGNL1	G	T	0.6
JZ1851	7	53574524	53574525		A	T	0.6
LK4881	18	77926861	77926862	PAR6G	G	A	0.599
BB4911	3	172393938	172393939	NCEH1	T	C	0.599
BB4911	3	170013845	170013846	PRKCI	G	A	0.597
AR5361	4	22912293	22912294		G	T	0.597
BB4911	2	232337673	232337674		A	G	0.594
EK3261	X	30261001	30261002	MAGEB4	A	G	0.594
EK3261	17	7011983	7011984	ASGR2	A	C	0.593
DN4461	4	77296599	77296600	CCDC158	T	C	0.592
BB4911	3	183906514	183906515	ABCF3	T	C	0.591
JFH3411	X	40691974	40691975	LOC10013 2831	T	G	0.591
JM1191	18	6912003	6912004	ARHGAP2 8	G	A	0.588
JZ1851	18	77927111	77927112	PAR6G	G	A	0.587
DN4461	X	50653774	50653775	BMP15	C	G	0.587
AR5361	14	52227808	52227809		A	C	0.586
JZ1851	18	29703352	29703353	RNF138	G	T	0.585
JFH3411	9	35801232	35801233	NPR2	T	C	0.585
JFH3411	8	6576272	6576273	AGPAT5	G	C	0.584
JFH3411	8	13912850	13912851		T	C	0.583
JZ1851	17	44363884	44363885	LRRC37A	G	T	0.582
EK3261	6	25482675	25482676	LRRC16A	A	G	0.582
JM1191	15	100604019	100604020	ADAMTS1 7	G	A	0.581
JZ1851	19	8197781	8197782	FBN3	G	A	0.581
BB4911	3	38926911	38926912	SCN11A	C	G	0.581
JZ1851	16	54719965	54719966		A	C	0.577
AR5361	17	45907038	45907039	MRPL10	G	A	0.574
JZ1851	15	20555514	20555515		G	T	0.572
SL2221	5	5186415	5186416	ADAMTS1 6	T	G	0.571
JZ1851	11	89372523	89372524	FOLH1B	T	C	0.57
JFH3411	9	18573359	18573360	ADAMTSL 1	G	A	0.57
JFH3411	9	17366567	17366568	CNTLN	A	T	0.569
JZ1851	18	50923931	50923932	DCC	G	T	0.567
DN4461	1	204915392	204915393	NFASC	A	G	0.565
JFH3411	13	59104083	59104084		G	C	0.564
LK4881	17	52555086	52555087		G	A	0.561
LK4881	20	5159343	5159344	CDS2	C	T	0.558
QW4591	1	1646656	1646657	CDK11A	T	C	0.557
JZ1851	18	72998525	72998526	TSHZ1	G	A	0.557
BB4911	21	15870637	15870638	SAMSN1	C	T	0.557

Table B-3: Continued

BB4911	3	58179027	58179028	DNASE1L3	T	C	0.557
AR5361	11	18104985	18104986	SAAL1	A	C	0.556
AR5361	8	131982600	131982601	ADCY8	C	T	0.554
EK3261	X	100387336	100387337	CENPI	C	T	0.552
QW4591	X	18660470	18660471	RS1	A	C	0.551
MA5421	15	49517173	49517174	GALK2	T	G	0.545
JM1191	6	29641636	29641637	ZFP57	G	A	0.545
QW4591	6	76270603	76270604		A	G	0.545
EK3261	X	153050147	153050148	SRPK3	C	T	0.545
EK3261, BB4911	11	108225660	108225661	ATM	A	G	0.543
BB4911	13	24933796	24933797		C	T	0.543
MA5421	1	31350565	31350566	SDC3	T	C	0.539
BB4911	3	20025924	20025925	RAB5A	G	A	0.536
JZ1851, AR5361	X	103495089	103495090	ESX1	G	C	0.536
EK3261	5	147703415	147703416		C	T	0.533
QW4591	7	48886192	48886193		G	A	0.531
LK4881	18	51056850	51056851	DCC	C	A	0.528
MA5421	19	39687393	39687394	NCCRP1	G	T	0.528
DN4461	15	49429409	49429410	COPS2	A	G	0.525
EK3261	16	89017616	89017617	CBFA2T3	G	C	0.525
BB4911	9	99674185	99674186	ZNF782	T	C	0.523
AR5361	16	5278781	5278782		G	A	0.52
JFH3411	22	24268997	24268998		C	T	0.52
LK4881	12	10137644	10137645	CLEC12A	T	G	0.519
EK3261	X	26213218	26213219	MAGEB6	T	C	0.517
DN4461	7	45125774	45125775	NACAD	G	A	0.516
LK4881	18	43316537	43316538	SLC14A1	A	G	0.513
DN4461	9	95647973	95647974		G	C	0.512
AR5361	9	140128643	140128644	SLC34A3	G	A	0.512
QW4591	13	47297351	47297352	LRCH1	G	A	0.511
JZ1851	4	150681179	150681180	LOC285423	G	A	0.511
MA5421	3	93847428	93847429	NSUN3	A	G	0.509
AR5361	4	41421713	41421714	LIMCH1	T	G	0.508
JFH3411	9	35792422	35792423	NPR2	T	C	0.508
AR5361	1	158443598	158443599		T	C	0.506
JFH3411	10	81995057	81995058		G	A	0.505
LK4881	4	156850514	156850515	CTSO	G	T	0.505
SM2701	20	60927499	60927500	LAMA5	G	C	0.502
DN4461	9	137660193	137660194	COL5A1	G	T	0.502
AR5361	3	73166811	73166812		G	T	0.5
AR5361	19	7626274	7626275	PNPLA6	C	G	0.498
MC3481	18	67365667	67365668	DOK6	A	G	0.497
SL2221	1	158736516	158736517	OR6N1	A	T	0.496
JFH3411	5	133311841	133311842	VDAC1	G	C	0.496
BB4911	1	239826211	239826212	CHRM3	T	C	0.495

Table B-3: Continued

BB4911	3	8556783	8556784	LMCD1	A	C	0.494
JZ1851	18	29776540	29776541	MEP1B	T	C	0.493
EK3261	X	117700140	117700141	DOCK11	A	G	0.491
BB4911	11	62871459	62871460	SLC22A24	C	T	0.489
TF3471	18	8825191	8825192	SOGA2	A	G	0.488
TF3471	16	2339504	2339505	ABCA3	G	T	0.487
JZ1851	21	43763725	43763726	TFF2	G	A	0.487
JM1191	X	118146809	118146810	LONRF3	C	T	0.487
DN4461	1	154285389	154285390		A	T	0.486
MC3481	18	14378532	14378533		G	C	0.486
EK3261	11	102584606	102584607	MMP8	T	C	0.485
BB4911	3	75397678	75397679		G	A	0.484
DN4461	5	10638363	10638364	ANKRD33 B	A	G	0.484
JZ1851	5	153872976	153872977		G	C	0.484
DN4461	6	66063512	66063513	EYS	G	A	0.482
JZ1851,LK4881,M C3481	18	14752956	14752957	ANKRD30 B	G	A	0.479
JZ1851	18	14937529	14937530		G	C	0.478
LK4881	18	77420702	77420703		C	G	0.475
JZ1851	18	10488738	10488739	APCDD1	G	C	0.473
AR5361	4	8451680	8451681	TRMT44	T	C	0.473
AR5361	17	17573036	17573037		C	T	0.47
BB4911	3	121648167	121648168	SLC15A2	G	A	0.469
AR5361	9	96029638	96029639	WNK2	T	C	0.468
AR5361	14	95841416	95841417		C	T	0.467
DN4461	5	41018451	41018452	MROH2B	A	T	0.466
LK4881	15	20464859	20464860		G	T	0.464
DN4461	18	33545124	33545125		T	C	0.464
JFH3411	13	51594740	51594741	GUCY1B2	T	G	0.462
EK3261	X	50122931	50122932	DGKK	A	T	0.461
QW4591	5	19593823	19593824	CDH18	T	C	0.46
LK4881	18	29104877	29104878	DSG2	G	A	0.459
BB4911	3	14520559	14520560	SLC6A6	G	C	0.456
MC3481	4	36509179	36509180		G	C	0.456
EK3261	X	100645474	100645475	RPL36A	G	A	0.455
DN4461	1	34033511	34033512	CSMD2	G	C	0.454
MA5421	10	48900028	48900029	LOC10106 0581	T	G	0.451
BB4911	8	21711650	21711651		A	C	0.446
AR5361	22	50288589	50288590	ZBED4	A	G	0.445
BB4911	15	22955012	22955013	CYFIP1	T	G	0.442
JZ1851	16	84891988	84891989	CRISPLD2	G	A	0.441
BB4911	3	16639753	16639754	DAZL	G	T	0.438
JFH3411	3	49903575	49903576	CAMKV	G	T	0.438
MA5421	10	50394167	50394168	C10orf128	A	G	0.437
BB4911	3	97888437	97888438	OR5H15	G	C	0.434

Table B-3: Continued

AR5361	3	185383227	185383228	IGF2BP2	A	G	0.434
TF3471,MA5421	18	29543269	29543270		G	A	0.433
AR5361	3	44826325	44826326	KIF15	C	T	0.432
AR5361	10	82207716	82207717		A	C	0.43
JFH3411	13	52391340	52391341	LINC00282	C	T	0.43
JZ1851	16	70678820	70678821	IL34	A	G	0.43
AR5361	19	11095895	11095896	SMARCA4	T	C	0.43
LK4881	2	91806355	91806356		T	C	0.43
DN4461	11	6591156	6591157	DNHD1	A	G	0.427
TF3471	17	39883594	39883595	HAP1	T	C	0.426
BB4911	3	9390344	9390345		T	C	0.426
MA5421	3	145941576	145941577	PLSCR4	A	G	0.426
LK4881	9	141032872	141032873		C	G	0.426
BB4911	11	114441935	114441936	NXPE4	A	G	0.423
LK4881	10	7788494	7788495	ITIH2	T	C	0.42
DN4461	4	5803902	5803903	EVC	A	G	0.413
TF3471,SM2701	10	5040002	5040003	AKR1C2	G	A	0.408
JFH3411	5	74642847	74642848	HMGCR	A	T	0.405
JZ1851	18	13643178	13643179	LDLRAD4	C	A	0.402
BB4911	3	66460857	66460858	LRIG1	T	C	0.402
JFH3411	16	67320314	67320315	PLEKHG4	C	A	0.399
JFH3411	9	33935735	33935736	UBAP2	A	G	0.399
TA2691	19	1123377	1123378	SBNO2	A	C	0.398
JZ1851	3	166735891	166735892		C	T	0.398
EK3261	11	118971250	118971251	DPAGT1	A	G	0.397
MA5421	1	72969501	72969502		T	C	0.396
AR5361	17	80680588	80680589	FN3KRP	G	A	0.395
MA5421	6	169628597	169628598	THBS2	A	G	0.394
EK3261	X	150867320	150867321	PRRG3	C	T	0.394
TF3471	3	167084766	167084767	ZBBX	G	T	0.393
EK3261	X	46387920	46387921	ZNF674	G	A	0.393
MA5421	12	10342355	10342356	TMEM52B	A	T	0.392
QW4591	20	29632831	29632832		A	C	0.388
AR5361	8	40554993	40554994	ZMAT4	C	G	0.388
LK4881	18	15005784	15005785		C	T	0.385
LK4881,JFH3411	9	18928038	18928039	FAM154A	A	G	0.383
BB4911	3	37627286	37627287	ITGA9	G	C	0.378
JFH3411	7	48506415	48506416	ABCA13	G	C	0.378
QW4591	19	38702843	38702844	DPF1	G	A	0.377
JFH3411	6	166902658	166902659	RPS6KA2	T	C	0.377
JM1191	X	129283519	129283520	AIFM1	A	G	0.377
QW4591	20	61273682	61273683	SLCO4A1	T	C	0.376
AR5361	9	140329617	140329618	ENTPD8	A	G	0.375
JM1191	7	65425893	65425894	GUSB	A	G	0.37
BB4911	3	136059536	136059537	STAG1	G	C	0.369
AR5361	5	64838757	64838758	CENPK	G	C	0.369

Table B-3: Continued

JZ1851	12	40943328	40943329	MUC19	G	A	0.366
AR5361	8	38840797	38840798	HTRA4	G	C	0.365
BB4911	3	10073823	10073824	FANCD2	G	C	0.364
DN4461	10	46999731	46999732	GPRIN2	G	A	0.363
AR5361	13	99460172	99460173	DOCK9	T	A	0.362
MA5421	7	50663024	50663025	GRB10	G	C	0.362
JFH3411	9	740591	740592	KANK1	G	C	0.362
JFH3411	4	66214042	66214043	EPHA5	G	A	0.361
LK4881	18	33718446	33718447	ELP2	C	T	0.359
JFH3411	10	79579829	79579830	DLG5	G	A	0.356
LK4881	18	21897188	21897189	OSBPL1A	A	G	0.355
DN4461	19	23414166	23414167	ZNF724P	T	G	0.354
JM1191,EK3261	X	16873057	16873058	RBBP7	A	C	0.354
JZ1851	10	53683879	53683880	PRKG1	C	T	0.353
SM2701	11	63069714	63069715	SLC22A10	A	G	0.353
AR5361	14	106511619	106511620	IGHV3-6	G	C	0.353
EK3261	11	119059403	119059404	PDZD3	G	A	0.351
EK3261	X	109325485	109325486	TMEM164	T	C	0.351
JFH3411	14	19807269	19807270		A	C	0.349
EK3261	X	100604756	100604757	BTK	T	G	0.349
JZ1851	18	72226454	72226455	CNDP1	A	T	0.347
BB4911	3	31638393	31638394	STT3B	G	C	0.346
LK4881	18	12892	12893		G	C	0.345
BB4911	3	148872986	148872987	HPS3	G	A	0.343
BB4911	3	50645792	50645793	CISH	C	G	0.342
JFH3411	10	81993409	81993410		T	C	0.341
JZ1851	18	30091634	30091635	WBP11P1	T	C	0.336
MC3481	18	45711739	45711740	ZBTB7C	T	C	0.336
DN4461	7	44027347	44027348	POLR2J4	A	G	0.336
BB4911	3	119426306	119426307	MAATS1	T	C	0.334
JFH3411	9	5805000	5805001	ERMP1	A	G	0.334
JFH3411	9	28863458	28863459	LINGO2	A	T	0.334
MA5421	19	1164448	1164449	SBNO2	A	G	0.333
EK3261	X	151935356	151935357	MAGEA3	T	C	0.332
JZ1851	12	31579077	31579078	DENND5B	G	C	0.331
EK3261	X	3747313	3747314		G	A	0.331
LK4881	4	49323455	49323456		G	C	0.328
DN4461	X	146271439	146271440	MIR513C	A	G	0.328
JM1191	14	88707206	88707207	KCNK10	G	T	0.327
JFH3411	9	36003719	36003720		T	C	0.327
SM2701	12	121666259	121666260	P2RX4	A	G	0.326
EK3261	11	123154903	123154904		C	T	0.324
AR5361	7	75124851	75124852	SPDYE5	G	C	0.323
JZ1851	9	95738382	95738383	FGD3	C	G	0.321
EK3261	10	104176639	104176640	PSD	A	C	0.32
LK4881	16	58763701	58763702	GOT2	C	T	0.32

Table B-3: Continued

JFH3411	22	20152365	20152366		G	C	0.32
BB4911	3	187386830	187386831	SST	T	C	0.32
EK3261	11	93148178	93148179	CCDC67	T	C	0.319
JFH3411	10	72704518	72704519		G	C	0.318
BB4911	11	124095646	124095647	OR8G2	A	C	0.318
MA5421	22	21188963	21188964	PI4KA	T	C	0.318
LK4881	8	9564436	9564437	TNKS	A	G	0.318
JZ1851	8	41508528	41508529	NKX6-3	C	T	0.318
EK3261	X	142795224	142795225	SPANXN2	G	A	0.318
DN4461	8	142445679	142445680	MROH5	A	T	0.317
EK3261	X	50118956	50118957	DGKK	C	T	0.317
EK3261	11	102825090	102825091	MMP13	T	G	0.316
BB4911	3	59908125	59908126	FHIT	A	G	0.316
EK3261	X	150793978	150793979	PASD1	G	A	0.316
JFH3411	7	46184916	46184917		C	T	0.315
JZ1851	1	55085686	55085687	FAM151A	G	C	0.313
BB4911	3	148562396	148562397	CPB1	G	C	0.312
EK3261	11	94758709	94758710	KDM4E	T	C	0.311
JZ1851	7	68033203	68033204		G	A	0.311
DN4461	19	41522714	41522715	CYP2B6	C	T	0.31
JFH3411	20	2951452	2951453	PTPRA	T	C	0.31
BB4911	3	42218241	42218242	TRAK1	A	T	0.309
JFH3411	5	734032	734033	ZDHH11 B	G	A	0.306
TF3471	5	180047792	180047793	FLT4	G	C	0.306
DN4461	14	90204490	90204491		A	G	0.305
JFH3411	10	126100849	126100850	OAT	T	C	0.304
JZ1851,JFH3411	9	71877228	71877229		C	T	0.304
DN4461	3	9876300	9876301	TTLL3	G	T	0.302
QW4591	3	195505835	195505836	MUC4	G	C	0.302
JFH3411	7	159026163	159026164		G	T	0.302
JFH3411	9	36003422	36003423		G	A	0.301
JM1191,AR5361	3	186302391	186302392	DNAJB11	G	T	0.298
EK3261	12	24102666	24102667	SOX5	T	C	0.297
SL2221	2	9994287	9994288	TAF1B	C	G	0.297
JFH3411	9	15188105	15188106	TTC39B	T	C	0.297
BB4911	3	195397907	195397908	SDHAP2	T	A	0.296
SM2701	14	30102024	30102025	PRKD1	T	C	0.295
QW4591	17	7990554	7990555	ALOX12B	G	C	0.295
JZ1851	7	149512673	149512674	SSPO	G	A	0.295
JZ1851	18	47361959	47361960	MYO5B	G	T	0.294
JFH3411	2	242794251	242794252	PDCD1	T	G	0.294
JZ1851	18	30969543	30969544	CCDC178	G	A	0.292
JZ1851	18	74270540	74270541	LINC00908	T	G	0.292
DN4461	18	77894843	77894844	ADNP2	G	A	0.292
DN4461	2	238443406	238443407	MLPH	G	C	0.292

Table B-3: Continued

JZ1851,MC3481	18	50917981	50917982	DCC	C	T	0.291
JZ1851	10	42996234	42996235		A	G	0.29
MA5421	20	37524601	37524602	PPP1R16B	T	C	0.29
LK4881	5	16762023	16762024	MYO10	A	C	0.289
JFH3411	9	44076699	44076700		G	C	0.289
EK3261	X	19041591	19041592	GPR64	C	T	0.289
JFH3411,QW4591	13	50656581	50656582	DLEU1	T	A	0.284
DN4461	22	45182206	45182207	ARHGAP8	G	A	0.282
LK4881	18	21696598	21696599	TTC39C	A	C	0.28
JFH3411	9	34407422	34407423	FAM219A	C	T	0.277
QW4591	X	96171423	96171424	DIAPH2	T	C	0.274
JFH3411	10	93240703	93240704	HECTD2	A	T	0.272
DN4461	6	25918687	25918688	SLC17A2	G	A	0.272
QW4591	2	91766778	91766779		A	T	0.271
LK4881	1	12900003	12900004		A	G	0.27
JZ1851	18	61264297	61264298	SERPINB1 3	G	A	0.27
JFH3411	22	18860831	18860832		G	C	0.27
BB4911	3	196674971	196674972	PIGZ	C	T	0.27
BB4911	12	64020320	64020321	DPY19L2	C	A	0.268
MC3481	6	150342451	150342452	RAET1L	A	T	0.268
BB4911	16	29124660	29124661	RRN3P2	G	T	0.267
AR5361	6	63080205	63080206		G	A	0.267
JFH3411	13	49051480	49051481	RB1	T	A	0.266
LK4881	18	43579394	43579395	PSTPIP2	T	C	0.266
TA2691,SM2701	7	100635374	100635375	MUC12	A	C	0.265
DN4461	19	19387742	19387743	SUGP1	A	C	0.264
BB4911	3	46718297	46718298	ALS2CL	A	G	0.263
BB4911	3	52825584	52825585	ITIH1	T	C	0.262
EK3261	X	70349946	70349947	MED12	A	C	0.262
TF3471	6	33410511	33410512	SYNGAP1	T	G	0.26
AR5361	8	30954257	30954258	WRN	C	T	0.257
EK3261	X	89177672	89177673	TGIF2LX	G	A	0.257
QW4591	9	131726623	131726624	NUP188	G	T	0.255
MA5421	8	7340322	7340323	DEFB106B	A	G	0.254
JZ1851	8	110922486	110922487		C	T	0.253
LK4881	12	9446976	9446977	LOC64284 6	G	C	0.252
MC3481	18	14850374	14850375	ANKRD30 B	G	A	0.252
EK3261	11	103818343	103818344	PDGFD	G	C	0.251
JFH3411	13	52599134	52599135	ALG11	A	G	0.251
LK4881	8	143382820	143382821	TSNARE1	G	A	0.25
JZ1851	18	44561099	44561100	TCEB3B	C	G	0.249
BB4911	3	111785207	111785208	TMPRSS7	G	A	0.246
BB4911	3	194081178	194081179	LRRC15	G	A	0.246
DN4461	9	107484678	107484679		G	C	0.245

Table B-3: Continued

JFH3411	9	439101	439102	DOCK8	G	C	0.244
BB4911	3	53215874	53215875	PRKCD	A	C	0.243
BB4911	7	150438160	150438161	GIMAP1- GIMAP5	T	G	0.242
EK3261	14	74375955	74375956	ZNF410	A	C	0.241
JZ1851,TA2691	11	62488917	62488918	HNRNPUL 2	A	G	0.24
BB4911	11	119216503	119216504	MFRP	C	T	0.239
DN4461	19	40366413	40366414	FCGBP	G	C	0.237
DN4461	13	92084466	92084467	GPC5	G	C	0.236
JZ1851	15	66423071	66423072	MEGF11	A	G	0.234
BB4911	3	9952787	9952788	IL17RE	T	C	0.234
JFH3411	8	103745543	103745544		C	T	0.234
BB4911	3	38101364	38101365	DLEC1	G	T	0.233
JFH3411	8	55435355	55435356		G	T	0.233
BB4911	3	167191651	167191652	SERPINI2	C	T	0.23
JZ1851,BB4911	7	151504018	151504019	PRKAG2	T	C	0.23
EK3261,DN4461	11	119992870	119992871	TRIM29	T	A	0.228
MC3481	18	56587787	56587788	ZNF532	T	C	0.227
BB4911	3	195511042	195511043	MUC4	T	C	0.227
JZ1851	8	104183458	104183459	BAALC	C	A	0.227
MA5421	1	202827397	202827398		A	G	0.226
JZ1851	3	93657355	93657356	PROS1	G	A	0.226
JFH3411	1	31445931	31445932	PUM1	C	G	0.225
AR5361	7	106290184	106290185		G	A	0.224
AR5361	9	123781017	123781018	C5	G	A	0.224
EK3261	X	71521866	71521867	CITED1	G	C	0.224
LK4881	2	114173879	114173880		C	T	0.22
QW4591	4	160670250	160670251		T	C	0.22
LK4881	18	56585944	56585945	ZNF532	G	A	0.217
JZ1851	1	229561608	229561609		G	T	0.216
BB4911	11	123880580	123880581		T	C	0.216
JZ1851	10	99140968	99140969	RRP12	T	C	0.214
DN4461	4	57883174	57883175	POLR2B	G	C	0.214
JZ1851	8	38414096	38414097		T	C	0.212
LK4881	18	45555828	45555829	ZBTB7C	T	C	0.211
BB4911	3	13612935	13612936	FBLN2	A	G	0.21
JFH3411	9	27609513	27609514		G	A	0.21
DN4461	1	152975828	152975829	SPRR3	A	G	0.209
LK4881	17	10537164	10537165	MYH3	T	C	0.209
TF3471	6	70965124	70965125	COL9A1	A	C	0.209
MA5421	18	40685437	40685438	RIT2	A	G	0.206
BB4911	3	196674258	196674259	PIGZ	G	A	0.206
AR5361	9	140416024	140416025	PNPLA7	A	G	0.204
JZ1851	2	233468307	233468308	EFHD1	G	A	0.203
JZ1851	18	6999627	6999628	LAMA1	T	C	0.2
DN4461	22	37533794	37533795	IL2RB	G	C	0.2

Table B-3: Continued

JZ1851	10	16948389	16948390	CUBN	G	C	0.196
SL2221	6	57499187	57499188		C	T	0.195
BB4911	3	184033407	184033408	EIF4G1	A	T	0.194
DN4461	19	50383635	50383636	TBC1D17	T	C	0.193
DN4461	3	126219029	126219030	UROC1	T	C	0.193
JZ1851	8	94211671	94211672		C	T	0.192
EK3261	11	123676412	123676413	OR6M1	G	A	0.19
LK4881	22	31666025	31666026	LIMK2	A	G	0.19
MA5421	13	111145457	111145458	COL4A2	G	A	0.189
JZ1851	15	67819648	67819649	C15orf61	A	T	0.187
JZ1851	18	40470390	40470391	RIT2	G	T	0.187
MA5421	1	34052304	34052305	CSMD2	C	T	0.185
AR5361	7	141481597	141481598	TAS2R4	T	C	0.184
BB4911	3	57131528	57131529	IL17RD	A	C	0.183
BB4911	3	136045212	136045213	PCCB	G	A	0.183
JZ1851	7	83278226	83278227	SEMA3E	C	A	0.183
JZ1851	9	111214073	111214074		G	C	0.182
BB4911	3	143293011	143293012	SLC9A9	A	G	0.181
JFH3411	5	148977828	148977829	ARHGEF3 7	T	C	0.18
JZ1851	18	61465809	61465810	SERPINB7	A	G	0.179
AR5361	22	20146148	20146149		G	A	0.177
BB4911	3	184550500	184550501	VPS8	A	G	0.177
MA5421	7	57212421	57212422	ZNF479	T	C	0.177
MA5421	8	73123852	73123853	LOC39223 2	A	G	0.177
JZ1851	18	10482092	10482093	APCDD1	A	G	0.176
BB4911	11	101826948	101826949	KIAA1377	T	C	0.175
JZ1851	18	72023695	72023696	C18orf63	T	C	0.175
AR5361	9	139418259	139418260	NOTCH1	A	G	0.175
EK3261	X	151909155	151909156	CSAG1	A	G	0.175
BB4911	3	27047501	27047502		T	C	0.174
EK3261	X	100743036	100743037	ARMCX4	C	T	0.172
JM1191	2	17773523	17773524	VSNL1	G	A	0.171
EK3261	5	168123128	168123129	SLIT3	C	T	0.169
JFH3411	12	110489316	110489317	C12orf76	C	T	0.168
AR5361	6	167717658	167717659	UNC93A	C	T	0.168
DN4461	9	17791190	17791191	SH3GL2	G	A	0.168
JZ1851	18	72025267	72025268	C18orf63	C	T	0.167
JFH3411	9	35682254	35682255	TPM2	G	C	0.167
BB4911	11	125891268	125891269	CDON	C	T	0.165
JZ1851	14	21186651	21186652		C	T	0.165
QW4591	19	54726022	54726023	LILRB3	G	A	0.165
JFH3411,QW4591	13	52548139	52548140	ATP7B	A	C	0.164
TF3471	18	6890433	6890434	ARHGAP2 8	A	G	0.164
DN4461	19	41403324	41403325		T	C	0.163

Table B-3: Continued

BB4911	3	142670466	142670467		C	T	0.163
JM1191	9	136274057	136274058	REXO4	G	T	0.162
MA5421	10	18825176	18825177	CACNB2	T	C	0.161
JZ1851	2	75243519	75243520		C	T	0.16
BB4911	3	37774303	37774304	ITGA9	C	T	0.16
JFH3411	9	35707053	35707054	TLN1	C	T	0.16
QW4591	11	48387017	48387018		G	T	0.158
QW4591	2	128802025	128802026		G	C	0.158
BB4911	3	52833804	52833805	ITIH3	C	A	0.158
JZ1851	7	98232359	98232360		A	T	0.158
JFH3411	9	36003036	36003037		G	A	0.157
EK3261	11	119474607	119474608		C	G	0.153
JZ1851	18	61322994	61322995	SERPINB3	T	C	0.152
AR5361	9	139642998	139642999	LCN6	G	A	0.151
SM2701	1	159336947	159336948		T	C	0.15
AR5361	3	191033762	191033763	UTS2B	G	A	0.149
JFH3411	11	24428309	24428310		G	T	0.148
AR5361	19	48047277	48047278	ZNF541	T	C	0.148
BB4911	3	172224302	172224303	TNFSF10	A	G	0.148
BB4911	11	124792172	124792173	HEPACA M	C	G	0.147
JZ1851,TF3471	18	33968938	33968939	FHOD3	A	G	0.147
DN4461	1	117669615	117669616		T	C	0.144
BB4911	3	141327473	141327474	RASA2	G	A	0.144
EK3261	X	50130716	50130717	DGKK	T	C	0.144
LK4881	11	117042579	117042580	PAFAH1B 2	G	C	0.143
MC3481	18	58290329	58290330		A	T	0.142
JZ1851	19	8197702	8197703	FBN3	G	A	0.142
DN4461	2	91780799	91780800		T	C	0.141
JFH3411	7	121757025	121757026	AASS	T	C	0.14
AR5361	18	19648870	19648871		G	A	0.138
AR5361	13	94482883	94482884	GPC6	A	C	0.137
QW4591	5	169961495	169961496	KCNIP1	G	A	0.137
JFH3411	9	15784495	15784496	CCDC171	C	G	0.137
EK3261	X	114424733	114424734	RBMXL3	C	T	0.137
EK3261	X	119760628	119760629	C1GALT1 C1	A	T	0.137
LK4881	5	150409347	150409348	TNIP1	T	C	0.136
EK3261	11	112065482	112065483	BCO2	A	C	0.134
BB4911	3	46944273	46944274	PTH1R	T	C	0.134
BB4911	3	169621459	169621460		G	A	0.134
EK3261	X	102842040	102842041	TCEAL4	T	C	0.134
JZ1851	18	28913744	28913745	DSG1	G	A	0.133
JZ1851	1	65901053	65901054	LEPROT	T	C	0.132
MA5421	6	35502577	35502578		G	C	0.132
QW4591	12	39723406	39723407	KIF21A	G	C	0.13

Table B-3: Continued

QW4591	12	53564501	53564502	CSAD	G	T	0.13
JZ1851	7	1912987	1912988	MAD1L1	A	G	0.129
EK3261	11	119003321	119003322	HINFP	C	A	0.128
SL2221	16	20618218	20618219		G	T	0.128
LK4881,JFH3411	8	11007543	11007544	XKR6	G	T	0.128
BB4911	1	20900591	20900592		G	C	0.126
JFH3411	20	26101855	26101856		G	A	0.126
BB4911	3	46009863	46009864	FYCO1	C	G	0.126
LK4881	18	47176792	47176793		A	G	0.123
MC3481	18	55321075	55321076	LOC10050 5549	A	G	0.123
JM1191	2	239160463	239160464	PER2	C	G	0.123
AR5361	6	90455428	90455429	MDN1	T	C	0.123
EK3261	X	130423542	130423543	IGSF1	G	C	0.123
BB4911	3	183960251	183960252	ALG3	A	C	0.122
BB4911	3	3887507	3887508	LRRN1	C	G	0.12
JZ1851	5	56224833	56224834	MIER3	T	A	0.12
EK3261	X	48760792	48760793	SLC35A2	C	T	0.12
AR5361	13	38357024	38357025	TRPC4	G	A	0.119
MA5421	1	16950089	16950090		G	A	0.117
MC3481	11	1161712	1161713	MUC5AC	G	C	0.117
QW4591	13	35482721	35482722		T	C	0.117
JZ1851	9	80795415	80795416		T	C	0.117
MC3481	19	22792461	22792462	LOC10099 6349	T	A	0.116
LK4881	5	76785406	76785407	WDR41	A	G	0.114
JZ1851	11	100924360	100924361	PGR	T	C	0.113
BB4911	3	42568928	42568929	VIPR1	T	C	0.113
BB4911	3	103017137	103017138		G	C	0.113
BB4911	11	124266911	124266912	OR8B3	A	G	0.112
JFH3411	13	52482428	52482429		T	C	0.112
LK4881	18	6301902	6301903	L3MBTL4	G	A	0.112
JZ1851	19	10421384	10421385	FDX1L	G	C	0.112
QW4591	2	27715856	27715857	FNDC4	A	C	0.112
MA5421	4	5962707	5962708	C4orf50	A	G	0.112
EK3261	X	152818434	152818435	ATP2B3	G	A	0.112
MA5421	2	233834784	233834785	NGEF	A	T	0.11
EK3261	11	111156835	111156836	C11orf53	T	C	0.109
BB4911	11	123814488	123814489	OR6T1	A	G	0.109
BB4911	11	105795030	105795031	GRIA4	G	A	0.107
MA5421	13	99655227	99655228	DOCK9	G	A	0.107
JZ1851	18	2503016	2503017		A	G	0.107
BB4911	3	141331221	141331222	RASA2	G	A	0.107
BB4911	3	156877706	156877707	CCNL1	A	T	0.107
AR5361	1	110489828	110489829		G	A	0.106
QW4591	4	132889238	132889239		A	G	0.106
JZ1851	7	44841774	44841775	PPIA	T	C	0.106

Table B-3: Continued

EK3261	X	152158978	152158979	PNMA5	T	C	0.106
EK3261,BB4911	11	103057047	103057048	DYNC2H1	A	G	0.105
BB4911	3	10261293	10261294	IRAK2	A	G	0.104
BB4911	2	109369719	109369720	RANBP2	G	T	0.099
MA5421	5	86825547	86825548		C	G	0.098
AR5361	1	164312586	164312587		G	A	0.097
BB4911	11	118896115	118896116	SLC37A4	A	C	0.097
AR5361	3	35709503	35709504	ARPP21	A	G	0.097
BB4911	3	105266330	105266331	ALCAM	A	G	0.097
BB4911	3	13679043	13679044	FBLN2	G	A	0.096
EK3261	X	23398213	23398214	PTCHD1	T	C	0.096
JZ1851	18	51469125	51469126		G	A	0.095
JZ1851	18	54814374	54814375	BOD1L2	C	G	0.095
JFH3411	5	75001581	75001582	POC5	A	G	0.095
EK3261	11	5655761	5655762	TRIM34	T	C	0.094
EK3261	11	88925241	88925242	TYR	G	C	0.094
EK3261,BB4911	11	111781046	111781047	CRYAB	A	C	0.094
EK3261	X	13771575	13771576	OFD1	A	G	0.094
JZ1851	11	81574396	81574397		A	G	0.092
JFH3411	9	21227584	21227585	IFNA17	G	A	0.092
DN4461	7	537958	537959	PDGFA	T	C	0.091
BB4911	11	122489781	122489782		A	G	0.09
MA5421	14	93649200	93649201	MOAP1	G	C	0.09
JZ1851	18	67515063	67515064	DOK6	A	C	0.09
BB4911	3	183368215	183368216	KLHL24	A	T	0.089
BB4911	3	195515189	195515190	MUC4	G	A	0.089
JFH3411	7	64410058	64410059		C	T	0.088
MA5421	1	37154567	37154568		A	G	0.087
EK3261	11	94326764	94326765	PIWIL4	G	C	0.087
JZ1851	17	34758431	34758432	TBC1D3H	C	T	0.087
BB4911	3	9422209	9422210	THUMPD3	T	C	0.087
JFH3411	2	197065963	197065964	HECW2	C	A	0.086
QW4591	13	52345636	52345637	DHRS12	G	C	0.085
DN4461	2	1499926	1499927	TPO	A	C	0.085
BB4911	3	126181070	126181071	ZXDC	A	C	0.085
QW4591	3	195509514	195509515	MUC4	T	A	0.085
BB4911	3	12299312	12299313		A	G	0.084
EK3261	X	1719896	1719897	AKAP17A	C	G	0.083
EK3261	X	15498033	15498034	PIR	T	C	0.083
AR5361	1	9655794	9655795	TMEM201	G	A	0.082
DN4461	19	12963142	12963143	MAST1	T	C	0.082
DN4461	9	137740864	137740865	COL5A1	T	C	0.082
EK3261	X	100749584	100749585	ARMCX4	C	T	0.082
JZ1851	18	32722153	32722154	MAPRE2	C	A	0.081
BB4911	3	49200297	49200298	CCDC71	G	A	0.081
DN4461	15	86313047	86313048	KLHL25	T	C	0.08

Table B-3: Continued

EK3261	X	53114326	53114327	TSPYL2	T	C	0.079
EK3261	X	148798222	148798223	MAGEA11	T	C	0.079
LK4881	14	20215988	20215989	OR4Q3	A	G	0.078
DN4461	19	6417859	6417860	KHSRP	G	A	0.078
LK4881	8	22436680	22436681	PDLIM2	C	T	0.078
BB4911	3	196743129	196743130	MF12	T	C	0.077
JZ1851	19	54224190	54224191	MIR517B	A	G	0.076
JFH3411	9	34723934	34723935	FAM205A	C	T	0.076
BB4911	3	123988038	123988039	KALRN	T	C	0.075
EK3261	X	55479298	55479299	MAGEH1	G	A	0.075
JFH3411	17	43552811	43552812	PLEKHM1	A	G	0.074
EK3261	X	148062376	148062377	AFF2	G	A	0.074
QW4591	22	20715952	20715953	USP41	A	T	0.073
EK3261,QW4591	X	2420870	2420871	ZBED1	G	C	0.073
TF3471	18	12358996	12358997	AFG3L2	A	G	0.071
LK4881	18	21946571	21946572	OSBPL1A	T	A	0.071
EK3261	5	145533127	145533128	LARS	T	C	0.071
QW4591	22	45928840	45928841	FBLN1	G	A	0.07
BB4911	3	33552003	33552004	CLASP2	T	C	0.07
BB4911	3	52400739	52400740	DNAH1	G	C	0.07
LK4881	10	17156150	17156151	CUBN	A	G	0.068
BB4911	11	102567206	102567207	MMP27	T	A	0.068
MA5421	10	134699246	134699247	TTC40	T	G	0.067
BB4911	3	15046087	15046088	NR2C2	T	C	0.067
EK3261	5	1393752	1393753	SLC6A3	A	G	0.066
EK3261	11	117090544	117090545	PCSK7	T	C	0.065
JZ1851	18	19995752	19995753	CTAGE1	T	C	0.065
JFH3411	1	46909026	46909027		T	C	0.064
MA5421	1	239419203	239419204		A	C	0.064
BB4911	3	33414467	33414468	FBXL2	G	C	0.064
BB4911	3	39373901	39373902	CCR8	C	G	0.064
QW4591	19	7032898	7032899	MBD3L5	T	G	0.063
JFH3411	7	57069934	57069935		G	C	0.063
JM1191	9	137740648	137740649	COL5A1	A	G	0.063
BB4911	11	113802600	113802601	HTR3B	A	G	0.061
JZ1851	18	34647322	34647323	KIAA1328	T	A	0.061
LK4881	18	59781799	59781800	PIGN	A	G	0.061
DN4461	12	166863	166864		G	A	0.06
JFH3411	6	153555723	153555724		A	G	0.06
EK3261	X	48847496	48847497	GRIPAP1	T	C	0.06
EK3261	11	118769441	118769442	BCL9L	A	G	0.059
BB4911	3	130128231	130128232	COL6A5	G	A	0.059
QW4591	7	151945100	151945101	KMT2C	G	C	0.058
JFH3411	9	34407040	34407041	FAM219A	C	T	0.058
BB4911	11	85627107	85627108	CCDC83	T	C	0.057
JZ1851	18	905124	905125	ADCYAP1	A	G	0.057

Table B-3: Continued

JFH3411	13	52603240	52603241	UTP14C	A	G	0.056
LK4881	18	61377578	61377579	SERPINB1 1	A	C	0.056
BB4911	3	119327669	119327670	PLA1A	G	A	0.056
DN4461	9	137741872	137741873	MIR3689A	A	G	0.056
JZ1851	18	598415	598416	CLUL1	G	C	0.055
BB4911	3	184633246	184633247	VPS8	A	C	0.055
EK3261	X	152872060	152872061		G	A	0.055
EK3261	11	92534441	92534442	FAT3	A	G	0.054
JFH3411	17	10542885	10542886	MYH3	T	C	0.054
MC3481	18	56246441	56246442	ALPK2	T	C	0.054
BB4911	3	38739844	38739845	SCN10A	A	G	0.054
MC3481	18	72346700	72346701	ZNF407	T	C	0.053
LK4881	18	71793279	71793280	FBXO15	G	T	0.052
DN4461	6	7231769	7231770	RREB1	A	G	0.052
JFH3411	9	11012532	11012533		T	C	0.052
AR5361	19	16856014	16856015	NWD1	T	C	0.051
BB4911	3	116746475	116746476		A	T	0.051
DN4461	9	113234506	113234507	SVEP1	T	C	0.051
EK3261	15	34673721	34673722	GOLGA8A	C	T	0.05
JFH3411	8	143850857	143850858	LYNX1	G	C	0.05
AR5361	9	22154407	22154408		A	G	0.05
EK3261	X	120008978	120008979	CT47B1	T	C	0.05
EK3261	11	111179053	111179054	C11orf93	A	G	0.049
JFH3411,QW4591	13	52515353	52515354	ATP7B	A	G	0.049
EK3261	X	68725639	68725640	FAM155B	T	C	0.049
BB4911	3	124646593	124646594	MUC13	A	G	0.047
BB4911	3	185307878	185307879	SENP2	A	T	0.047
BB4911	3	197432062	197432063	KIAA0226	T	C	0.047
AR5361	9	122012137	122012138	BRINP1	G	A	0.047
MA5421	19	49259855	49259856	FGF21	T	C	0.046
BB4911	3	194062518	194062519	CPN2	C	T	0.046
JFH3411	9	44076631	44076632		G	A	0.046
MA5421	10	135033636	135033637	KNDC1	C	G	0.045
MA5421	11	25102579	25102580	LUZP2	T	G	0.045
BB4911	3	9990799	9990800	PRRT3	G	C	0.045
AR5361	9	140327662	140327663	NOXA1	C	T	0.045
JZ1851	10	80519301	80519302		C	G	0.044
MC3481	18	77894864	77894865	ADNP2	C	A	0.044
BB4911	3	8590312	8590313	LMCD1	T	C	0.044
BB4911	3	197566253	197566254	LRCH3	T	C	0.044
AR5361	9	90939325	90939326		G	A	0.044
DN4461	1	16256006	16256007	SPEN	T	C	0.043
BB4911	3	132319360	132319361	ACKR4	A	C	0.043
DN4461	9	72459639	72459640	C9orf135	G	A	0.043
EK3261	X	48676838	48676839	HDAC6	G	A	0.043

Table B-3: Continued

MA5421	13	26305351	26305352	ATP8A2	A	G	0.042
JZ1851	18	55153280	55153281	ONECUT2	C	G	0.042
AR5361	3	127445050	127445051	MGLL	C	A	0.042
EK3261	X	128880613	128880614	XPNPEP2	T	C	0.042
BB4911	3	42733467	42733468	KLHL40	T	C	0.041
BB4911	3	53213656	53213657	PRKCD	T	C	0.041
JFH3411	8	72981326	72981327	TRPA1	A	G	0.041
JZ1851	18	74451253	74451254		A	T	0.04
BB4911	3	119347559	119347560	PLA1A	A	G	0.04
AR5361	9	139569065	139569066	AGPAT2	A	G	0.039
JFH3411	9	734678	734679	KANK1	G	T	0.038
BB4911	11	124085879	124085880		A	G	0.036
EK3261	14	58831141	58831142	ARID4A	A	G	0.036
AR5361	20	25281833	25281834	ABHD12	G	C	0.036
LK4881	8	144944175	144944176	EPPK1	T	C	0.036
AR5361	12	47735406	47735407		T	C	0.034
LK4881	7	74193667	74193668	NCF1	G	A	0.034
BB4911	3	195507542	195507543	MUC4	G	T	0.033
EK3261	X	2700156	2700157	XG	G	A	0.033
MC3481	18	7017321	7017322	LAMA1	A	G	0.032
EK3261	6	26375142	26375143	BTN3A2	G	C	0.032
BB4911	11	118896114	118896115	SLC37A4	A	G	0.031
AR5361	X	143002811	143002812		G	C	0.031
EK3261	X	148797898	148797899	MAGEA11	T	A	0.031
AR5361	10	4159741	4159742		A	G	0.03
MC3481	18	48446952	48446953	ME2	C	T	0.03
BB4911	3	149485292	149485293	ANKUB1	T	C	0.03
EK3261	X	30261157	30261158	MAGEB4	G	C	0.03
EK3261	X	135462705	135462706	GPR112	T	C	0.03
DN4461	14	22409538	22409539	TRAV9-2	C	T	0.029
JZ1851,LK4881,T F3471	18	19154142	19154143	ESCO1	G	A	0.029
BB4911	3	40251391	40251392	MYRIP	T	C	0.029
BB4911	5	5775134	5775135		G	T	0.029
AR5361	9	108214941	108214942	FSD1L	G	T	0.029
EK3261	X	101139757	101139758	ZMAT1	C	T	0.029
JZ1851	18	55221647	55221648	FECH	T	C	0.028
JZ1851	18	24633263	24633264	CHST9	G	C	0.027
JZ1851	18	55150412	55150413	ONECUT2	T	C	0.027
BB4911	3	194063152	194063153	CPN2	G	A	0.027
DN4461	8	1616717	1616718	DLGAP2	A	G	0.027
JFH3411	9	117427	117428	FOXD4	G	C	0.027
JFH3411	9	35042295	35042296	C9orf131	G	A	0.027
LK4881	18	59821842	59821843	PIGN	T	C	0.026
JZ1851	2	3264289	3264290	TSSC1	G	A	0.026
JZ1851	1	176671913	176671914	PAPPA2	A	T	0.025

Table B-3: Continued

BB4911	11	89443807	89443808	TRIM77	A	C	0.025
AR5361	9	93345046	93345047	LOC34051 5	A	G	0.025
DN4461	1	175742435	175742436		G	T	0.024
QW4591	13	53983444	53983445		G	C	0.024
AR5361	15	50574620	50574621	GABPB1	G	A	0.024
BB4911	3	38168124	38168125	ACAA1	A	C	0.024
TA2691	6	29274485	29274486	OR14J1	T	C	0.023
BB4911	11	123909072	123909073	OR10G7	C	G	0.022
QW4591	13	80910850	80910851	SPRY2	A	C	0.022
MA5421	16	5224557	5224558		T	A	0.022
LK4881	18	72914321	72914322	ZADH2	G	A	0.022
BB4911	3	190106073	190106074	CLDN16	G	C	0.022
JFH3411	8	143998322	143998323	CYP11B2	G	C	0.022
QW4591	11	49873059	49873060		G	T	0.021
BB4911	11	113270014	113270015	ANKK1	G	C	0.021
DN4461	13	24892840	24892841	C1QTNF9	G	C	0.021
LK4881	18	61621804	61621805	HMSD	G	C	0.021
JZ1851,LK4881	18	68003720	68003721		C	A	0.021
BB4911	11	118949798	118949799	VPS11	G	A	0.02
QW4591	13	52646202	52646203	NEK5	T	C	0.02
BB4911	3	171404477	171404478	PLD1	C	A	0.02
BB4911	11	110035300	110035301	ZC3H12C	A	G	0.019
BB4911	3	48309827	48309828	ZNF589	C	G	0.019
QW4591	5	156482488	156482489	HAVCR1	T	G	0.019
DN4461	9	138590927	138590928	SOHLH1	C	T	0.019
EK3261	11	116691674	116691675	APOA4	T	A	0.018
JZ1851	18	77456171	77456172	CTDP1	A	G	0.018
JFH3411	20	26101853	26101854		C	T	0.018
JFH3411	20	26101854	26101855		A	G	0.018
BB4911	3	38945559	38945560	SCN11A	A	G	0.018
JFH3411	13	53419138	53419139	PCDH8	T	G	0.017
BB4911	3	9991100	9991101	PRRT3	C	G	0.017
JFH3411	9	6468446	6468447	UHRF2	A	G	0.017
JFH3411	9	35802091	35802092	NPR2	G	C	0.017
MC3481	1	186276290	186276291	PRG4	A	G	0.016
DN4461	11	1267916	1267917	MUC5B	T	C	0.016
BB4911	11	118499393	118499394	PHLDB1	C	G	0.016
LK4881,MC3481	18	48190439	48190440	MAPK4	G	A	0.016
BB4911	3	52802401	52802402	NEK4	A	C	0.016
BB4911	3	174814919	174814920	NAALADL 2	A	G	0.016
JFH3411	9	27296704	27296705	EQTN	A	G	0.016
DN4461	9	130493512	130493513	TTC16	A	G	0.016
EK3261	X	106200201	106200202	MORC4	G	A	0.016
EK3261	11	100846935	100846936	ARHGAP4 2	A	G	0.015

Table B-3: Continued

EK3261	11	108381643	108381644	EXPH5	T	C	0.015
BB4911	3	14725877	14725878	C3orf20	A	G	0.015
EK3261	X	130409900	130409901	IGSF1	C	T	0.015
EK3261	X	131212511	131212512	FRMD7	A	G	0.015
DN4461	1	63912545	63912546	ITGB3BP	G	T	0.014
EK3261	11	113570404	113570405	TMPRSS5	T	C	0.014
JZ1851	18	44585954	44585955	KATNAL2	G	A	0.014
JZ1851	18	76757711	76757712	SALL3	G	A	0.014
BB4911	3	113673124	113673125	ZDHHC23	A	G	0.014
BB4911	3	149193683	149193684	TM4SF4	T	C	0.014
EK3261	9	139906668	139906669	ABCA2	G	C	0.014
EK3261	X	109694684	109694685	RGAG1	T	A	0.014
JFH3411	12	87565014	87565015		A	C	0.013
JZ1851	18	19449677	19449678	MIB1	C	G	0.013
MC3481	18	48604847	48604848	SMAD4	C	T	0.013
JZ1851	18	72998267	72998268	TSHZ1	T	C	0.013
BB4911	3	49714224	49714225	APEH	T	C	0.013
JFH3411	5	140052270	140052271	DND1	A	G	0.013
JZ1851	18	11886866	11886867	MPPE1	G	A	0.012
BB4911	18	72234336	72234337	CNDP1	A	C	0.012
JFH3411	3	188242680	188242681	LPP	G	T	0.012
JFH3411	9	36169597	36169598	CCIN	T	C	0.012
DN4461	1	145296371	145296372	NBPF10	A	G	0.011
BB4911	11	123886319	123886320	OR10G4	A	G	0.011
BB4911	3	33194989	33194990	SUSD5	C	A	0.011
AR5361	3	49396750	49396751	RHOA	T	C	0.011
BB4911	3	97887956	97887957	OR5H15	T	C	0.011
LK4881	7	100635678	100635679	MUC12	C	G	0.011
EK3261	11	92532676	92532677	FAT3	T	C	0.01
EK3261	11	103123998	103123999	DYNC2H1	G	T	0.01
EK3261	11	105880659	105880660	MSANTD4	A	G	0.01
JZ1851	18	55145115	55145116	ONECUT2	A	G	0.01
BB4911	3	38645419	38645420	SCN5A	T	C	0.01
JFH3411	9	1057317	1057318	DMRT2	A	G	0.01
DN4461	9	109689858	109689859	ZNF462	T	C	0.01
DN4461	1	2144787	2144788	C1orf86	A	G	0.009
BB4911	11	111156718	111156719	C11orf53	T	C	0.009
JM1191	18	11689698	11689699	GNAL	G	A	0.009
JZ1851	18	19109764	19109765	ESCO1	G	A	0.009
JFH3411	22	37102263	37102264	CACNG2	T	C	0.009
SL2221	7	154863466	154863467	HTR5A	G	T	0.009
JFH3411	8	143958940	143958941	CYP11B1	A	G	0.009
EK3261	11	116701534	116701535	APOC3	T	C	0.008
BB4911	11	124310621	124310622	OR8B8	A	G	0.008
QW4591	16	2152128	2152129	PKD1	A	G	0.008
MA5421	17	80622675	80622676	RAB40B	G	C	0.008

Table B-3: Continued

TF3471	18	55338865	55338866	ATP8B1	A	T	0.008
DN4461	2	38809161	38809162	HNRNPLL	C	T	0.008
TF3471	21	46355709	46355710	FAM207A	A	G	0.008
BB4911	3	4829731	4829732	ITPR1	A	G	0.008
JFH3411	7	100552250	100552251	MUC3A	T	C	0.008
JFH3411	9	33618357	33618358		A	G	0.008
EK3261	X	134991077	134991078	SAGE1	A	G	0.008
EK3261	11	102713464	102713465	MMP3	A	G	0.007
QW4591	13	50057632	50057633	SETDB2	A	G	0.007
JFH3411,QW4591	13	50296025	50296026	KPNA3	T	C	0.007
BB4911	3	118945795	118945796	B4GALT4	G	C	0.007
BB4911	3	195956826	195956827	SLC51A	T	C	0.007
EK3261	11	95825796	95825797	MAML2	A	G	0.006
QW4591	13	53395035	53395036		A	G	0.006
MC3481	18	6993672	6993673	LAMA1	T	C	0.006
LK4881	18	42529995	42529996	SETBP1	G	C	0.006
MA5421	6	117114402	117114403	GPRC6A	G	A	0.006
JM1191,EK3261	X	118893136	118893137	SOWAHD	T	C	0.006
EK3261	X	125299187	125299188	DCAF12L2	T	G	0.006
EK3261	X	151899912	151899913	MAGEA12	T	C	0.006
BB4911	11	85347172	85347173	TMEM126 B	C	T	0.005
EK3261	11	100847049	100847050	ARHGAP4 2	A	G	0.005
JFH3411	13	52602918	52602919	UTP14C	A	C	0.005
EK3261,QW4591	16	28507444	28507445	APOBR	G	C	0.005
LK4881	18	76753767	76753768	SALL3	C	G	0.005
BB4911	3	52558132	52558133	STAB1	T	C	0.005
JFH3411	4	120241848	120241849	FABP2	A	G	0.005
EK3261	X	70344762	70344763	MED12	G	T	0.005
BB4911	11	124789754	124789755	HEPN1	T	C	0.004
EK3261	14	33294041	33294042	AKAP6	G	A	0.004
QW4591	16	58811481	58811482		G	C	0.004
LK4881	18	43669979	43669980	ATP5A1	T	C	0.004
JZ1851	18	55154528	55154529	ONECUT2	G	A	0.004
BB4911	3	46480957	46480958	LTF	C	G	0.004
BB4911	3	49161659	49161660	LAMB2	T	C	0.004
BB4911	3	52558007	52558008	STAB1	T	C	0.004
BB4911	3	184144584	184144585		A	G	0.004
BB4911	3	191093052	191093053	CCDC50	T	C	0.004
BB4911	3	194081391	194081392	LRRC15	G	A	0.004
DN4461	X	2942108	2942109	ARSH	T	C	0.004
EK3261	X	111698612	111698613	ZCCHC16	T	C	0.004
EK3261,BB4911	11	85436698	85436699	SYTL2	A	G	0.003
JFH3411	13	52709937	52709938	NEK3	A	C	0.003
DN4461	14	22409570	22409571	TRAV9-2	A	G	0.003
JZ1851	14	106359494	106359495	IGHD1-20	C	G	0.003

Table B-3: Continued

MC3481	18	43481074	43481075	EPG5	G	A	0.003
JZ1851	18	44560874	44560875	TCEB3B	C	A	0.003
LK4881	18	66542005	66542006	CCDC102 B	G	T	0.003
LK4881	18	67531641	67531642	CD226	T	C	0.003
LK4881	18	72999831	72999832	TSHZ1	G	A	0.003
BB4911	3	37368754	37368755	GOLGA4	T	A	0.003
BB4911	3	52409420	52409421	DNAH1	A	G	0.003
BB4911	3	52555956	52555957	STAB1	T	C	0.003
BB4911	3	113377360	113377361	KIAA2018	A	G	0.003
BB4911	3	118867046	118867047	C3orf30	C	G	0.003
BB4911	3	148459883	148459884	AGTR1	A	G	0.003
BB4911	3	155200132	155200133	PLCH1	T	C	0.003
BB4911	3	187416718	187416719	RTP2	T	C	0.003
BB4911	3	195515121	195515122	MUC4	G	C	0.003
JFH3411	9	4625428	4625429	SPATA6L	T	C	0.003
TF3471	X	54497146	54497147	FGD1	T	G	0.003
EK3261	X	130412410	130412411	IGSF1	C	T	0.003
TF3471	1	186276584	186276585	PRG4	A	C	0.002
DN4461	10	27389196	27389197	ANKRD26	T	C	0.002
BB4911	10	113940328	113940329	GPAM	T	C	0.002
BB4911	11	104869707	104869708	CASP5	G	C	0.002
BB4911	11	105923563	105923564	KBTBD3	C	T	0.002
EK3261	11	108384206	108384207	EXPH5	C	T	0.002
EK3261	11	111747296	111747297	FDXACB1	A	G	0.002
BB4911	11	120099657	120099658	OAF	A	G	0.002
BB4911	11	123894233	123894234	OR10G9	A	G	0.002
BB4911	11	123894401	123894402	OR10G9	A	G	0.002
DN4461	12	32137564	32137565	KIAA1551	G	A	0.002
AR5361	13	20660912	20660913	ZMYM2	A	G	0.002
JFH3411,QW4591	13	49951192	49951193	CAB39L	T	C	0.002
AR5361	14	54416601	54416602	BMP4	T	A	0.002
JZ1851	14	74042188	74042189	ACOT2	A	G	0.002
AR5361	15	97098092	97098093		A	T	0.002
DN4461	16	29395452	29395453	NPIP11	A	G	0.002
LK4881	18	6958608	6958609	LAMA1	T	C	0.002
JZ1851	18	8784369	8784370	SOGA2	A	G	0.002
JZ1851	18	28649041	28649042	DSC2	T	C	0.002
JFH3411	18	44774492	44774493	SKOR2	A	C	0.002
LK4881	18	46284586	46284587	CTIF	T	C	0.002
TF3471,MC3481	18	61602359	61602360	SERPINB1 0	G	A	0.002
JZ1851	18	72998885	72998886	TSHZ1	T	C	0.002
SM2701	20	62194029	62194030	HELZ2	G	C	0.002
BB4911	3	9952705	9952706	IL17RE	A	G	0.002
BB4911	3	9991162	9991163	PRRT3	A	G	0.002
BB4911	3	38768299	38768300	SCN10A	T	C	0.002

Table B-3: Continued

BB4911	3	44948589	44948590	TGM4	G	A	0.002
BB4911	3	46501267	46501268	LTF	C	T	0.002
BB4911	3	122437320	122437321	PARP14	T	C	0.002
BB4911	3	128720486	128720487	EFCC1	A	G	0.002
BB4911	3	194081634	194081635	LRRC15	T	C	0.002
MC3481	3	195505828	195505829	MUC4	G	A	0.002
BB4911	3	195515294	195515295	MUC4	A	C	0.002
BB4911	3	196674972	196674973	PIGZ	T	C	0.002
BB4911	3	196742289	196742290	MFI2	T	C	0.002
EK3261	4	70146803	70146804	UGT2B28	G	C	0.002
QW4591	6	32552028	32552029	HLA-DRB1	A	T	0.002
DN4461	8	20036826	20036827	SLC18A1	C	G	0.002
JFH3411	9	6012733	6012734	RANBP6	A	C	0.002
JFH3411	9	34256538	34256539	KIF24	A	G	0.002
AR5361	9	140243843	140243844	EXD3	C	T	0.002
EK3261	X	34149266	34149267	FAM47A	C	A	0.002
EK3261	X	54836504	54836505	MAGED2	A	G	0.002
EK3261	X	78426987	78426988	GPR174	T	C	0.002
EK3261	X	133379027	133379028	CCDC160	T	C	0.002
DN4461	11	5862652	5862653	OR52E6	T	C	0.001
EK3261	11	92531849	92531850	FAT3	A	G	0.001
EK3261, BB4911	11	102713619	102713620	MMP3	T	C	0.001
BB4911	11	113270159	113270160	ANKK1	A	G	0.001
BB4911	11	117267883	117267884	CEP164	A	G	0.001
EK3261	11	118967757	118967758	DPAGT1	T	C	0.001
EK3261	11	119043655	119043656	NLRX1	C	T	0.001
BB4911	11	123894118	123894119	OR10G9	A	G	0.001
BB4911	11	123909626	123909627	OR10G7	T	C	0.001
JFH3411, QW4591	13	50205024	50205025	ARL11	T	C	0.001
QW4591	13	52365353	52365354	DHRS12	G	T	0.001
JFH3411, QW4591	13	52440129	52440130	CCDC70	A	G	0.001
JM1191	16	70154479	70154480	PDPR	A	G	0.001
LK4881	18	8784611	8784612	SOGA2	A	G	0.001
MC3481	18	9255783	9255784	ANKRD12	C	A	0.001
LK4881	18	31324933	31324934	ASXL3	A	G	0.001
MC3481	18	56149098	56149099	ALPK2	T	C	0.001
TF3471	18	61379837	61379838	SERPINB1 1	T	G	0.001
JZ1851	18	72998003	72998004	TSHZ1	T	C	0.001
MC3481	18	72998898	72998899	TSHZ1	G	A	0.001
LK4881	18	72999204	72999205	TSHZ1	G	A	0.001
JZ1851	18	77440127	77440128	CTDP1	T	G	0.001
DN4461	19	4511646	4511647	PLIN4	C	G	0.001
JFH3411	22	18835297	18835298	LOC10192 9738	T	C	0.001
JZ1851	22	29885593	29885594	NEFH	A	T	0.001

Table B-3: Continued

JZ1851	22	46780520	46780521	CELSR1	T	C	0.001
BB4911	3	7620788	7620789	GRM7	T	C	0.001
BB4911	3	44948673	44948674	TGM4	G	C	0.001
LK4881	3	46586621	46586622	LRRC2	T	C	0.001
BB4911	3	134077469	134077470	AMOTL2	C	G	0.001
BB4911	3	135720850	135720851	PPP2R3A	G	T	0.001
BB4911	3	183778009	183778010	HTR3C	G	C	0.001
BB4911	3	183959507	183959508	VWA5B2	A	C	0.001
BB4911	3	184039665	184039666	EIF4G1	A	G	0.001
BB4911	3	186443017	186443018	KNG1	T	C	0.001
JFH3411	3	195505787	195505788	MUC4	G	C	0.001
TF3471	4	140811122	140811123	MAML3	T	C	0.001
DN4461	6	32188382	32188383	NOTCH4	T	C	0.001
DN4461	7	1097182	1097183	GPR146	G	A	0.001
DN4461	7	73279481	73279482	WBSCR28	T	C	0.001
JFH3411	8	30702601	30702602	TEX15	T	C	0.001
JFH3411	9	34310926	34310927	KIF24	T	C	0.001
JFH3411	9	34725741	34725742	FAM205A	T	C	0.001
JFH3411	9	35957668	35957669	OR2S2	T	C	0.001
DN4461	9	140865988	140865989	CACNA1B	A	T	0.001
EK3261	X	26157219	26157220	MAGEB18	C	T	0.001
EK3261	X	30254375	30254376	MAGEB3	T	C	0.001
EK3261	X	44094684	44094685	EFHC2	G	T	0.001
EK3261	X	48418125	48418126	TBC1D25	A	G	0.001
EK3261	X	65382684	65382685	HEPH	T	C	0.001
EK3261	X	84363139	84363140	SATL1	A	G	0.001
EK3261	X	100743825	100743826	ARMCX4	A	G	0.001
EK3261	X	102004316	102004317	BHLHB9	A	G	0.001
EK3261	X	111698035	111698036	ZCCHC16	T	C	0.001
EK3261	X	125299466	125299467	DCAF12L2	G	T	0.001
EK3261	X	151821276	151821277	GABRQ	T	A	0.001
EK3261	X	151935731	151935732	MAGEA3	A	G	0.001
EK3261	X	152226541	152226542	PNMA3	T	C	0.001
JZ1851	1	1158533	1158534	SDF4	G	GAC	
LK4881	1	24106509	24106510	PITHD1	A	AT	
JZ1851	1	29016714	29016715	GMEB1	G	GGT	
AR5361	1	31838550	31838551	ZCCHC17	T	TA	
QW4591	1	33336248	33336249	FNDC5	C	CT	
QW4591	1	33722426	33722427	ZNF362	A	AGCG	
TA2691	1	36888301	36888302	OSCP1	C	CT	
TA2691	1	40253767	40253768	BMP8B	C	CA	
AR5361	1	76084780	76084781	SLC44A5	A	AGAAG	
QW4591	1	84750559	84750560		G	GGAGGA	
MC3481	1	84765339	84765340	SAMD13	G	GTATA	
SM2701	1	89851099	89851100	GBP6	G	GT	
JFH3411	1	94312542	94312543	BCAR3	C	CCG	

Table B-3: Continued

MA5421	1	99387627	99387628	LPPR5	T	TA	
EK3261	1	111739770	111739771	DENND2D	G	GCAGGACAAA	
MA5421	1	120381685	120381686	NBPF7	G	GTGTGAGTCA	
DN4461	1	120612039	120612040	NOTCH2	T	TCCTCCTCCG	
JFH3411	1	150528117	150528118	ADAMTSL 4	T	TACAC	
QW4591	1	154409892	154409893	IL6R	A	AT	
AR5361	1	159612765	159612766		A	AAG	
QW4591	1	179402036	179402037	AXDND1	C	CA	
AR5361	1	187115868	187115869		T	TCTC	
DN4461	1	202156134	202156135	PTPRVP	C	CCCTCGCT	
JZ1851	1	227562719	227562720		T	TATTTCC	
LK4881	1	236767180	236767181	HEATR1	G	GA	
JZ1851	1	240916420	240916421		T	TCTTCCTTCCCTTC	
MA5421	1	241934824	241934825	WDR64	C	CA	
SL2221	10	13489147	13489148	BEND7	T	TGCAGA	
QW4591	10	14372305	14372306	FRMD4A	G	GA	
AR5361	10	33144131	33144132	C10orf68	G	GT	
MA5421	10	38145560	38145561	ZNF248	G	GA	
QW4591	10	59317805	59317806		G	GGAGA	
EK3261	10	94268315	94268316	IDE	G	GA	
TF3471	10	96163411	96163412	TBC1D12	T	TCGGAGC	
LK4881	10	99010964	99010965	ARHGAP1 9	G	GGGGAAGGGGAA	
JFH3411	10	99789247	99789248	CRTAC1	A	AGCG	
EK3261	10	102770292	102770293	PDZD7	T	TGCTGCG	
EK3261	10	105110739	105110740	PCGF6	A	AGGAGGC	
LK4881	10	115355170	115355171	NRAP	G	GC	
BB4911	10	120070842	120070843	FAM204A	G	GA	
AR5361	10	122358655	122358656	C10orf85	A	AGTG	
JM1191	10	124183689	124183690	PLEKHA1	T	TC	
EK3261	10	134237248	134237249		C	CTGTG	
AR5361	11	1117003	1117004		C	CCCTCTCCCTCCTTCC TT	
MA5421	11	5289895	5289896	HBE1	A	AAAAC	
DN4461	11	10820662	10820663	EIF4G2	T	TA	
MA5421	11	49088576	49088577		G	GT	
EK3261	11	66321926	66321927	ACTN3	C	CA	
JFH3411	11	66512289	66512290	C11orf80	G	GGGC	
EK3261	11	67412202	67412203	ACY3	C	CCA	
QW4591	11	67433707	67433708	ALDH3B2	C	CG	
AR5361	11	71713447	71713448	IL18BP	G	GT	
TA2691	11	86807151	86807152	TMEM135	A	ATAT	
BB4911	11	96123733	96123734	JRKL	T	TG	
BB4911	11	100556304	100556305	ARHGAP4 2	A	AT	
EK3261	11	107677398	107677399	SLC35F2	C	CA	
BB4911	11	108345514	108345515	KDEL2	G	GA	

Table B-3: Continued

JZ1851	11	111745317	111745318	FDXACB1	C	CAA	
QW4591	11	112138559	112138560		A	ATCAGG	
JZ1851	11	114280097	114280098	RBM7	G	GTTTGT	
BB4911	11	116026235	116026236		A	AAAGGAAGGG	
BB4911	11	118889395	118889396	TRAPPC4	G	GAGGAGA	
DN4461	11	133010657	133010658	OPCML	C	CGAA	
SL2221	11	134031835	134031836	NCAPD3	C	CAA	
SM2701	12	1950010	1950011	CACNA2D4	A	AC	
AR5361	12	6756759	6756760	ACRBP	C	CT	
TA2691	12	11182824	11182825	TAS2R31	A	AACAC	
JZ1851	12	11803277	11803278	ETV6	T	TC	
MA5421	12	13153125	13153126	HEBP1	C	CGGCGGCAGGGCGGCA G	
MA5421	12	19626308	19626309	AEBP2	A	AAATT	
AR5361	12	29009281	29009282		G	GA	
QW4591	12	40894744	40894745	MUC19	A	ACTGAGAATAC	
DN4461	12	44192423	44192424	TWF1	T	TA	
AR5361	12	50157976	50157977	TMBIM6	T	TC	
QW4591	12	54730827	54730829	COPZ1	AG	A	
LK4881	12	56869948	56869949	GLS2	C	CT	
SL2221	12	66856973	66856974	GRIP1	T	TA	
QW4591	12	72019988	72019989	ZFC3H1	T	TAC	
JZ1851	12	79702407	79702408	SYT1	G	GAA	
JM1191	12	80645733	80645734	OTOGL	A	AT	
LK4881,MA5421	12	80746233	80746234	OTOGL	G	GAAT	
JM1191	12	81660962	81660963	PPFIA2	C	CA	
AR5361	12	84290170	84290171		A	ATAAT	
AR5361	12	102060673	102060674	MYBPC1	C	CAT	
MA5421	12	106287703	106287704		A	AG	
MA5421	12	108350728	108350729		T	TCC	
QW4591	12	109490425	109490426	USP30	C	CCGGCGG	
MA5421	12	109957692	109957693	UBE3B	T	TAAGATTC	
QW4591	12	117061950	117061951		A	AAGGAGG	
QW4591	12	117084929	117084930		T	TTTTCCCTTCC	
EK3261	12	117905635	117905636	KSR2	T	TA	
QW4591	12	122826307	122826308	CLIP1	T	TC	
AR5361	12	124116816	124116817	EIF2B1	T	TA	
EK3261	13	32834537	32834538	FRY	C	CTATCT	
AR5361	13	44551902	44551903		T	TTCC	
JFH3411	13	47279374	47279375	LRCH1	C	CT	
QW4591	13	47279679	47279680	LRCH1	A	AT	
JFH3411	13	47365449	47365450	ESD	G	GT	
JFH3411	13	49865726	49865727	CDADC1	G	GCC	
QW4591	13	52585590	52585591	ATP7B	T	TCGGCG	
JFH3411,QW4591	13	52718049	52718050	NEK3	C	CT	
QW4591	13	52742232	52742233	MRPS31P5	A	AGT	

Table B-3: Continued

QW4591	13	75915249	75915250	TBC1D4	T	TA	
QW4591	13	76820821	76820822		T	TTCC	
MA5421	13	78998294	78998295	RNF219- AS1	C	CAGGA	
JZ1851	13	87863039	87863040		T	TTCC	
AR5361	13	98119930	98119931	RAP2A	C	CT	
AR5361	14	21852240	21852241	SUPT16H	G	GT	
LK4881	14	23867118	23867119	MYH6	T	TCTC	
JFH3411	14	65009533	65009534	HSPA2	C	CT	
TA2691	14	72932329	72932330	RGS6	G	GTGGA	
DN4461	14	75373625	75373626	RPS6KL1	C	CTGAT	
LK4881	14	77644743	77644744	LOC10192 6998	C	CCTTCT	
EK3261	14	77935238	77935239	AHSA1	T	TG	
JM1191	14	81448950	81448951	TSHR	G	GA	
JZ1851	14	82909992	82909993		C	CCCTCTTCCCCTT	
JZ1851	14	92302920	92302921	TC2N	A	AGGCGAGGCAAGGCGG GGAGG	
JZ1851	14	97980626	97980627		C	CCCCTCCTTCTTTTTT	
JFH3411	14	107094939	107094940	IGHV4-61	C	CGAGGAGGGAGACCAC AGAGCA	
QW4591	15	41315590	41315591	INO80	A	AAT	
JFH3411,MA5421	15	45028918	45028919	TRIM69	C	CT	
MA5421	15	45968236	45968237	SQRDL	T	TA	
TF3471	15	62546459	62546460		T	TCTC	
MA5421	15	63445924	63445925	RPS27L	C	CA	
BB4911	16	419598	419599	MRPL28	A	AGCTCTGCTCGCCTCCC CGACCT	
AR5361	16	3452452	3452453	ZNF174	C	CTT	
JZ1851	16	12972904	12972905		A	ACTTCCTTCTTCTTCTC CTTCTTC	
LK4881	16	20361086	20361087	UMOD	T	TTCTGCCAGA	
AR5361	16	33958161	33958162	LINC00273	C	CTCTT	
BB4911	16	57713930	57713931	GPR97	C	CT	
QW4591	16	58705943	58705944	SLC38A7	T	TC	
SM2701	16	67197775	67197776	FBXL8	C	CG	
SL2221	16	69704121	69704122	NFAT5	C	CTG	
QW4591	16	77756592	77756593	NUDT7	T	TG	
MC3481	16	84063319	84063320	SLC38A8	A	AAGGAAG	
JFH3411	16	88572647	88572648	ZFPM1	A	AG	
MA5421	16	89291944	89291945	ZNF778	A	AT	
AR5361	16	90053803	90053804		G	GACA	
JFH3411	17	4098572	4098573	ANKFY1	A	AT	
SL2221	17	4859101	4859102	ENO3	T	TTGTCTCTGCTC	
MA5421	17	18266609	18266610	SHMT1	A	AC	
JZ1851	17	20279653	20279654	CCDC144 CP	C	CT	
JZ1851	17	20772808	20772809	CCDC144 NL	C	CGG	
JZ1851	17	21312408	21312409	KCNJ12	A	AG	

Table B-3: Continued

EK3261	17	36358654	36358655	LOC440434	C	CG	
JZ1851	17	38107348	38107349		T	TCCTCC	
TA2691	17	39740302	39740303	KRT14	A	ATC	
JZ1851	17	46622334	46622335	HOXB2	A	AC	
SM2701	17	62130388	62130389	ERN1	G	GCCT	
EK3261	17	65689052	65689053	PITPNC1	G	GT	
JFH3411	17	73626917	73626918	RECQL5	C	CTG	
LK4881	17	79372927	79372928	BAHCC1	A	AGTGT	
JZ1851	18	723393	723394	YES1	C	CAT	
JZ1851	18	2503008	2503009		A	AG	
LK4881	18	3075502	3075503	MYOM1	C	CAAA	
LK4881	18	3174075	3174076	MYOM1	A	AAC	
JZ1851	18	4446438	4446439	DLGAP1	A	AAGCAGCAGC	
QW4591	18	8786116	8786117	SOGA2	C	CCCA	
JZ1851	18	12986801	12986802	SEH1L	G	GT	
JZ1851,LK4881	18	13459878	13459879	LDLRAD4	T	TA	
BB4911	18	19853494	19853495		T	TTCC	
JZ1851	18	29652990	29652991	RNF125	A	ATTAAATTT	
SM2701	18	42456669	42456670	SETBP1	C	CTCTT	
MA5421	18	51900787	51900788	C18orf54	T	TTTAA	
BB4911,AR5361	18	54346744	54346745	WDR7	A	AT	
JZ1851	18	55156133	55156134	ONECUT2	C	CCA	
JFH3411	18	60034072	60034073	TNFRSF11A	G	GC	
JZ1851	18	60053509	60053510	TNFRSF11A	A	AT	
JZ1851	18	65183987	65183988	LOC643542	T	TGA	
JZ1851	18	67518134	67518135	DOK6	G	GC	
JZ1851	18	74728108	74728109	MBP	G	GTTT	
AR5361	19	613553	613554	HCN2	G	GGGGGCTGGGGCC	
AR5361	19	3776193	3776194	RAX2	T	TAAGTG	
QW4591	19	12763349	12763350	MAN2B1	C	CT	
MA5421	19	13942939	13942940	ZSWIM4	C	CT	
QW4591	19	17516399	17516400	BST2	A	AGCTGAAAG	
AR5361	19	23309462	23309463	ZNF730	G	GT	
MA5421	19	35491325	35491326	GRAMD1A	A	AGCCCT	
MA5421	19	39234190	39234191	CAPN12	C	CCG	
MA5421	19	40430994	40430995	FCGBP	A	AAG	
AR5361	19	40505486	40505487	ZNF546	A	AT	
QW4591	19	41931453	41931454	B3GNT8	A	AGGCCAGGGCCGG	
JZ1851	19	58859054	58859055	A1BG	C	CCCCAGGCCGCG	
JZ1851	2	487873	487874		T	TGCAGACCCCACGCCG GTTCCCTCC	
QW4591	2	2283336	2283337	MYT1L	G	GAAGGAAGA	
JFH3411	2	11725178	11725179	GREB1	G	GA	
BB4911	2	15533733	15533734	NBAS	G	GAAATGAAAGCGTATG TCTACAC	

Table B-3: Continued

EK3261	2	24387177	24387178	FAM228B	G	GC	
JZ1851	2	27669364	27669365	IFT172	G	GT	
AR5361	2	29196267	29196268		T	TC	
MA5421	2	35058822	35058823		G	GAAC	
AR5361	2	48791696	48791697	STON1	C	CT	
MC3481	2	68444170	68444171	PPP3R1	C	CGCAG	
MA5421	2	74333219	74333220	TET3	C	CT	
QW4591	2	91766728	91766729		C	CAG	
TA2691	2	112687156	112687157	MERTK	A	ATATTTATTTATT	
LK4881	2	127130238	127130239		G	GCCACTTGTCCA	
MC3481	2	133108678	133108679		C	CT	
MA5421	2	152298561	152298562	RIF1	T	TTTTTA	
LK4881	2	160132195	160132196	WDSUB1	A	AC	
MA5421	2	178986122	178986123	RBM45	G	GTA	
AR5361	2	217343135	217343136	SMARCAL1	G	GC	
MA5421	2	217391829	217391830		C	CCCTTT	
AR5361	2	218674326	218674327	TNS1	G	GATGGATGGATGGATG GATGC	
SM2701	2	219616609	219616610	TTLL4	C	CTTT	
AR5361	2	230453213	230453214	DNER	G	GA	
AR5361	2	239007207	239007208	SCLY	C	CCGCCCCACATGGGAA	
AR5361	2	243153449	243153450		A	AGGCGC	
AR5361	20	1454249	1454250	SIRPB2	C	CT	
JZ1851,AR5361	20	47019893	47019894		G	GAGGATGA	
EK3261	20	48562082	48562083	RNF114	G	GTTGGACACC	
BB4911	20	60909785	60909786	LAMA5	G	GTCAGGGC	
AR5361	21	11110155	11110156		A	ATGTGTG	
LK4881	21	14410883	14410884	ANKRD30 BP2	G	GC	
JFH3411	21	35248367	35248368	ITSN1	T	TTCTC	
MA5421	21	43332602	43332603	C2CD2	T	TTTA	
DN4461	21	43529651	43529652	UMODL1	A	AC	
MA5421	21	47834368	47834369	PCNT	C	CCCTCCTCCT	
AR5361	22	18211019	18211020	BCL2L13	G	GA	
DN4461	22	24135967	24135968	SMARCB1	C	CT	
JZ1851	22	25627869	25627870	CRYBB2	G	GGTGT	
MA5421	22	28202284	28202285	MN1	A	AAC	
AR5361	22	29438753	29438754	ZNRF3	A	AG	
DN4461	22	31983286	31983287	SFI1	A	ATTTGTTTTTTT	
JZ1851	22	45580568	45580569	NUP50	G	GTT	
BB4911	22	49900787	49900788		G	GAGAAGA	
JFH3411	22	50528482	50528483	MOV10L1	G	GCGGCGGTGA	
SM2701	3	3137154	3137155	IL5RA	A	AT	
BB4911	3	24270499	24270500	THRB	G	GA	
JM1191	3	36869878	36869879	TRANK1	A	AGAAG	
BB4911	3	37627285	37627286	ITGA9	G	GCC	

Table B-3: Continued

TA2691	3	51393705	51393706	DOCK3	C	CAG	
JFH3411	3	52272944	52272945	TWF2	C	CG	
AR5361	3	53910918	53910919	ACTR8	G	GT	
BB4911	3	58244367	58244368	ABHD6	C	CT	
JFH3411,QW4591	3	58631183	58631184	FAM3D	G	GAAATA	
BB4911	3	64004408	64004409	PSMD6	C	CA	
BB4911	3	97367229	97367230	EPHA6	C	CA	
BB4911	3	97467609	97467610	EPHA6	A	ACT	
AR5361	3	103744653	103744654		A	AGAAGGAAG	
AR5361	3	108117355	108117356	MYH15	T	TG	
BB4911	3	121634170	121634171	SLC15A2	A	AT	
QW4591	3	125993664	125993665		T	TA	
BB4911	3	132153332	132153333	DNAJC13	T	TAG	
JFH3411	3	137748821	137748822	CLDN18	C	CA	
BB4911	3	149192850	149192851	TM4SF4	G	GC	
BB4911	3	149238594	149238595	WWTR1	C	CTTAA	
AR5361	3	150276150	150276151	EIF2A	A	AT	
QW4591	3	184100957	184100958	CHRD	C	CG	
JFH3411	3	184429132	184429133	MAGEF1	A	ATCC	
QW4591	3	195400917	195400918	SDHAP2	C	CT	
JZ1851,MC3481	3	195681431	195681432		C	CG	
SM2701	3	197500393	197500394	FYTTD1	T	TTTTG	
DN4461	3	197866708	197866709		T	TGAG	
MA5421	4	888035	888036	GAK	C	CT	
JFH3411	4	48537602	48537603	FRYL	T	TACACAC	
JZ1851	4	53661677	53661678	LOC152578	A	AG	
DN4461	4	54327031	54327032	LNX1	C	CTAT	
QW4591	4	74464284	74464285	RASSF6	T	TTG	
TF3471	4	100064165	100064166	ADH4	G	GA	
JFH3411	4	109858748	109858749	COL25A1	A	ACC	
MA5421,AR5361	4	120549457	120549458	PDE5A	G	GCAAGTACATTTTGTGTA TTTGAAC	
JFH3411	4	129043600	129043601	LARP1B	T	TG	
AR5361	4	132664121	132664122		G	GTT	
SM2701	4	152609997	152609998	PET112	C	CA	
LK4881	4	155718170	155718171	RBM46	A	ATT	
MA5421	4	162841813	162841814	FSTL5	T	TA	
JZ1851	4	162987453	162987454	FSTL5	C	CTTCTTCTTCTTCTCT	
JZ1851	4	162987471	162987472	FSTL5	C	CT	
MA5421	4	186370675	186370676	CCDC110	T	TA	
JFH3411	4	187511303	187511304	FAT1	G	GT	
AR5361	4	189192048	189192049		C	CCAGCAG	
JM1191,JFH3411	5	5200219	5200220	ADAMTS16	A	ATC	
QW4591	5	19593804	19593805	CDH18	T	TTCCTCCTCCTCC	
JFH3411	5	25910591	25910592		G	GAGA	

Table B-3: Continued

QW4591	5	43292482	43292483	HMGCS1	C	CTTACTATGAA	
LK4881	5	60628180	60628181	ZSWIM6	A	AGCG	
JZ1851	5	61810429	61810430	IPO11	C	CGGGAGA	
AR5361	5	62005850	62005851		C	CCCTT	
MA5421	5	66751110	66751111		C	CTCCCTCCCTTCT	
QW4591	5	79950162	79950163	DHFR	C	CTGGCGCGTCCCGCCC AGGT	
JZ1851	5	80321874	80321875	RASGRF2	C	CTCCT	
JM1191	5	96111926	96111927	ERAP1	T	TAGCCCATTTCATGAAA A	
EK3261	5	98221382	98221383	CHD1	A	AT	
BB4911	5	125759523	125759524	GRAMD3	A	ACT	
JFH3411	5	126073443	126073444		T	TA	
LK4881	5	139199951	139199952	PSD2	C	CG	
QW4591, BB4911	5	147504304	147504305	SPINK5	C	CT	
TA2691	5	147695282	147695283	SPINK7	C	CTCA	
TA2691	5	159833354	159833355	SLU7	A	AT	
DN4461	5	169961474	169961475	KCNIP1	A	AAGG	
MA5421	5	171621407	171621408	EFCAB9	A	AT	
BB4911	5	177398860	177398861		C	CA	
JFH3411	5	178293174	178293175	ZNF354B	C	CT	
AR5361	6	2990117	2990118	LINC01011	C	CCGTCAGTTGTACCGG CGCTGGTGGGA	
JZ1851	6	4079446	4079447	C6orf201	T	TCGCGGGCCCGGGGT CGC	
JFH3411	6	26104070	26104071	HIST1H4C	G	GA	
MA5421	6	29643874	29643875	ZFP57	A	ATGTGTGTGTGTGTGTG TG	
JFH3411	6	33372055	33372056	KIFC1	T	TC	
JZ1851	6	45171986	45171987	SUPT3H	A	AAAGAAG	
SL2221	6	57499195	57499196		C	CA	
BB4911	6	67883230	67883231		G	GAGAAGC	
QW4591	6	74182999	74183000	MTO1	C	CAGAT	
JZ1851	6	76270567	76270568		A	AAGAAGGAGG	
SL2221	6	79595166	79595167	IRAK1BP1	A	ACTTAT	
MC3481	6	160888077	160888078	LPAL2	C	CA	
QW4591	6	164927299	164927300		T	TCCCTCCCTG	
JFH3411	6	166172003	166172004		G	GA	
QW4591	6	167268852	167268853	RPS6KA2	T	TGAA	
TF3471, DN4461	7	8181554	8181555	ICA1	C	CCA	
JFH3411	7	18863642	18863643	HDAC9	A	AGAAGAG	
JFH3411	7	23761072	23761073	STK31	A	AT	
JFH3411	7	23872023	23872024	STK31	C	CTTTG	
LK4881	7	30485702	30485703	NOD1	G	GC	
AR5361	7	47428504	47428505	TNS3	G	GGGGAGA	
DN4461	7	81366209	81366210	HGF	G	GGTGTGTGT	
DN4461	7	88119006	88119007		T	TCTTCTCCTC	
MA5421	7	103003240	103003241	SLC26A5	C	CTT	
DN4461	7	104681496	104681497	KMT2E	C	CA	

Table B-3: Continued

JFH3411	7	140125523	140125524	RAB19	C	CAA	
QW4591	7	148904292	148904293	ZNF282	C	CAAGGTTCTTCATAAG	
DN4461	7	151385096	151385097	PRKAG2	G	GGGA	
MA5421	7	156764268	156764269	NOM1	T	TG	
AR5361	7	158590546	158590547	ESYT2	G	GA	
MA5421	7	159024455	159024456		G	GAGGGAGCAACCT	
LK4881	8	1431829	1431830	DLGAP2	G	GCAGGGAGGCAGGTGC AGGAGGTGGGGAC	
BB4911	8	42780831	42780832	HOOK3	A	AT	
AR5361	8	51614280	51614281	SNTG1	T	TTTC	
JZ1851	8	71197088	71197089	NCOA2	A	AGGGAGAG	
JFH3411	8	82441531	82441532	FABP12	T	TG	
MC3481	8	101522890	101522891	ANKRD46	T	TA	
JZ1851	8	129011063	129011064	PVT1	C	CCCTT	
EK3261	8	139688655	139688656	COL22A1	A	AAG	
AR5361	8	142213299	142213300	SLC45A4	A	AGAGAGG	
JFH3411	9	968149	968150	DMRT1	C	CT	
JFH3411	9	3855962	3855963	GLIS3	C	CA	
JFH3411	9	4125632	4125633	GLIS3	A	AGT	
JFH3411	9	5813076	5813077	ERMP1	A	AT	
JFH3411	9	6639394	6639395	GLDC	C	CT	
MA5421	9	7103579	7103580	KDM4C	G	GT	
JFH3411	9	18907048	18907049	ADAMTSL 1	A	AT	
JFH3411	9	27217790	27217791	TEK	T	TC	
AR5361	9	30689415	30689416		C	CTT	
JFH3411	9	37436631	37436632	GRHPR	C	CCT	
AR5361	9	71849285	71849286	TJP2	T	TTTTC	
JZ1851	9	78711103	78711104	PCSK5	T	TAC	
TA2691	9	79922844	79922845	VPS13A	C	CT	
QW4591	9	80343586	80343587	GNAQ	G	GA	
BB4911	9	84202836	84202837	TLE1	G	GTGTGCATCCCGCC	
BB4911	9	102589218	102589219	NR4A3	G	GT	
LK4881	9	104239492	104239493	TMEM246	A	AAAACAAAC	
MA5421	9	112170700	112170701	PTPN3	T	TAAAC	
JFH3411	9	116860766	116860767	KIF12	G	GGA	
JZ1851	9	127998360	127998361	HSPA5	T	TA	
DN4461	9	130287554	130287555	FAM129B	G	GGAA	
DN4461	9	132681276	132681277	FNBP1	C	CT	
JFH3411	9	133967309	133967310	LAMC3	T	TCA	
QW4591	9	139090464	139090465	LHX3	T	TC	
DN4461	9	140003528	140003529	MAN1B1	G	GC	
QW4591	9	140320926	140320927	NOXA1	T	TGGGTC	
EK3261	X	2149855	2149856	DHRX	T	TC	
DN4461	X	2232511	2232512	DHRX	A	AAGGAAGGG	
TF3471	X	2729539	2729540	XG	T	TA	
AR5361	X	15262812	15262813	ASB9	T	TG	

Table B-3: Continued

QW4591	X	15268311	15268312	ASB9	G	GCAT	
EK3261	X	38240554	38240555	OTC	G	GT	
AR5361	X	38663738	38663739	MID1IP1	T	TGTG	
JFH3411	X	48126413	48126414	SSX1	G	GA	
EK3261	X	48306834	48306835		G	GT	
SM2701	X	69964083	69964084	TEX11	G	GA	
EK3261	X	71495387	71495388	RPS4X	T	TCTA	
LK4881	X	91586370	91586371	PCDH11X	T	TTCCTCC	
DN4461	X	134655675	134655676	DDX26B	T	TGC	
LK4881	GL00021 1.1	112538	112539		C	CAT	
DN4461	GL00021 2.1	6536	6537		G	GTTTT	
QW4591	Y	3720515	3720516		A	AT	

Table B-4: Gemini recessive model of inheritance germline variant analysis output

id	chrom	start	end	gene	ref	alt	cadd
Ai	1	17086084	17086085	MST1L	G	GC	30
Ai	1	152185811	152185812	HRNR	C	CAG	30
Ai	1	152185816	152185819	HRNR	CCA	C	30
Ai	1	179335261	179335264	AXDND1	GTA	G	30
Ai	1	248801601	248801602	OR2T35	T	TCA	30
Ai	X	65412037	65412038	HEPH	G	A	27.5
Ai	X	48673425	48673426	HDAC6	C	G	22.9
Ai	GL000212.1	37450	37451		A	ACTCCT	0
Ai	15	102300825	102300829	LOC101927628	AGCT	A	0
Ai	3	42251576	42251580	TRAK1	CGGA	C	0
Ai	8	11666217	11666224	FDFT1	GTCCCAC	G	0
Ai	GL000212.1	37448	37449		T	TCTG	0
Ai	X	27765398	27765399	DCAF8L2	A	AGAG	0
Bl	14	106329448	106329451	IGHJ6	ATG	A	30
Bl	14	106329452	106329453	IGHJ6	A	ACC	30
Bl	6	32609295	32609296	HLA-DQA1	A	AG	30
Bl	6	32609297	32609299	HLA-DQA1	CA	C	30
Bl	15	25222105	25222106	SNRPN	G	T	23.3
Bl	1	186344311	186344312	TPR	C	T	22.8
Bl	GL000212.1	89697	89698		G	A	22.4
Bl	20	62707974	62707975	RGS19	G	C	22.2
Bl	14	24769848	24769849	NOP9	A	AGAGGAGGAG	0
Bl	6	170871048	170871049	TBP	G	GCAA	0
Bl	9	95237023	95237027	ASPN	CTCA	C	0
Br	3	195513536	195513537	MUC4	A	AGG	30
Br	3	195513538	195513541	MUC4	CAT	C	30
Co	14	106329448	106329451	IGHJ6	ATG	A	30
Co	14	106329452	106329453	IGHJ6	A	ACC	30
Co	X	48682139	48682140	HDAC6	G	A	26.4
Co	X	128642060	128642061	SMARCA1	G	A	25.9
Co	X	47307171	47307172	ZNF41	G	A	22.9
Co	8	11666217	11666224	FDFT1	GTCCCAC	G	0
Cof	1	16865769	16865771	LOC100133301	CT	C	30
Cof	1	179335261	179335264	AXDND1	GTA	G	30
Cof	12	9555194	9555195	LOC728715	T	TC	30
Cof	14	106329448	106329451	IGHJ6	ATG	A	30
Cof	14	106329452	106329453	IGHJ6	A	ACC	30
Cof	15	20740313	20740314	GOLGA6L6	C	T	29.7

Table B-4: Continued

Cof	7	142836645	142836646	PIP	C	T	23.3
Cof	2	65299329	65299330	CEP68	T	A	23
Cof	14	24769848	24769849	NOP9	A	AGAG	0
Cof	6	170871048	170871049	TBP	G	GCAA	0
Cof	7	100636444	100636448	MUC12	TGAC	T	0
Cof	GL000212.1	119492	119499		TTCTCTC	T	0
He	11	1643223	1643226	KRTAP5-4	CGG	C	30
He	14	106329448	106329451	IGHJ6	ATG	A	30
He	14	106329452	106329453	IGHJ6	A	ACC	30
He	5	180377065	180377066	BTNL8	A	G	23.8
He	8	11666217	11666224	FDFT1	GTCCAC	G	0
Ke	14	106329448	106329451	IGHJ6	ATG	A	30
Ke	14	106329452	106329453	IGHJ6	A	ACC	30
Ke	4	780646	780647	CPLX1	C	CG	30
Ke	15	60734682	60734683	NARG2	A	G	29.7
Ke	GL000212.1	119492	119497		TTCTC	T	0
Ke	8	11666217	11666224	FDFT1	GTCCAC	G	0
Kr	8	11666217	11666224	FDFT1	GTCCAC	G	0
Me	1	16865769	16865771	LOC100133301	CT	C	30
Me	1	248722427	248722428	OR2T29	A	ACG	30
Me	1	248801601	248801602	OR2T35	T	TCA	30
Me	17	42255669	42255670	ASB16	G	T	20.1
Me	6	29893661	29893670	HCG4B	GCTCCCTCT	G	0
Me	11	66512289	66512290	C11orf80	G	GGGCGGCGGC	0
Me	7	11871468	11871469	THSD7A	A	AGCAGCG	0
Me	8	11666217	11666224	FDFT1	GTCCAC	G	0
Mil	X	10096746	10096747	WWC3	C	T	27.3
Mil	X	48419199	48419200	TBC1D25	G	A	24.1
Mil	6	42204015	42204016	TRERF1	G	A	23.3
Mil	9	95237023	95237027	ASPN	CTCA	C	0
Mo	14	106329448	106329451	IGHJ6	ATG	A	30
Mo	14	106329452	106329453	IGHJ6	A	ACC	30
Mo	10	7290604	7290605	SFMBT2	C	T	25.4
Ni	1	16865769	16865771	LOC100133301	CT	C	30
Ni	14	106329448	106329451	IGHJ6	ATG	A	30
Ni	14	106329452	106329453	IGHJ6	A	ACC	30
Ni	2	91636148	91636149	LOC101060169	C	CA	30
Ni	4	190989198	190989200	DUX2	GC	G	30
Ni	6	32551950	32551953	HLA-DRB1	GCC	G	30

Table B-4: Continued

Ni	17	77079574	77079575	ENGASE	G	A	23.6
Ni	14	24769848	24769849	NOP9	A	AGAG	0
Ni	5	6448843	6448844	UBE2QL1	T	TGCG	0
Ni	6	170871045	170871046	TBP	A	ACAG	0
Ni	8	11666217	11666224	FDFT1	GTCCCAC	G	0
Ni	X	110987995	110987999	ALG13	ACCT	A	0
Ro	1	17086084	17086085	MST1L	G	GC	30
Ro	12	40882386	40882388	MUC19	TA	T	30
Ro	14	106329448	106329451	IGHJ6	ATG	A	30
Ro	14	106329452	106329453	IGHJ6	A	ACC	30
Ro	6	32489742	32489744	HLA-DRB5	CG	C	30
Ro	6	32489754	32489755	HLA-DRB5	G	GCT	30
Ro	7	143269135	143269137	CTAGE15	CA	C	30
Ro	GL000212.1	73822	73824		AG	A	30
Ro	X	118230508	118230509	KIAA1210	C	T	26.6
Ro	X	37663321	37663322	CYBB	G	C	23
Ro	Y	15029412	15029413	DDX3Y	G	C	22.8
Ro	14	24769848	24769849	NOP9	A	AGAGGAG	0
Ro	19	2015539	2015543	BTBD2	GGGC	G	0
Ro	6	32489747	32489751	HLA-DRB5	CGCG	C	0
Ro	7	156802642	156802649	MNX1	AGCGGCG	A	0
Ro	8	11666217	11666224	FDFT1	GTCCCAC	G	0
Ro	X	66765157	66765158	AR	T	TGCAGCAGCA	0
Sc0	1	17086084	17086085	MST1L	G	GC	30
Sc0	1	179335261	179335264	AXDND1	GTA	G	30
Sc0	2	91636148	91636149	LOC101060169	C	CG	30
Sc0	4	190989198	190989200	DUX2	GC	G	30
Sc0	GL000212.1	89697	89698		G	A	22.4
Sc0	2	132250066	132250067	MZT2A	G	GGGAGCGGCA	0
Sc0	8	11666217	11666224	FDFT1	GTCCCAC	G	0
We	14	106329448	106329451	IGHJ6	ATG	A	30
We	14	106329452	106329453	IGHJ6	A	ACC	30
We	2	85360827	85360828	TCF7L1	G	GGGCGGC	0
Zv	14	106329448	106329451	IGHJ6	ATG	A	30
Zv	14	106329452	106329453	IGHJ6	A	ACC	30

Table B-4: Continued

Zv	2	91636148	91636149	LOC101060169	C	CG	30
Zv	20	1592041	1592044	SIRPB1	CCA	C	30
Zv	20	1592046	1592048	SIRPB1	TG	T	30
Zv	X	111155721	111155722	TRPC5	C	T	24.1
Zv	X	65427068	65427069	HEPH	G	A	24
Zv	6	32486331	32486332	HLA-DRB5	C	G	23.9
Zv	13	100622666	100622670	ZIC5	TGGC	T	0
Zv	3	42251576	42251577	TRAK1	C	CGGAGGA	0
Zv	5	6448843	6448844	UBE2QL1	T	TGCG	0
Zv	8	11666217	11666224	FDFT1	GTCCCAC	G	0
Zv	9	95237023	95237030	ASPN	CTCATCA	C	0
Zv	GL000212.1	62387	62391		TGTC	T	0
Zv	GL000212.1	62754	62755		C	CTAA	0
Zv	X	27765398	27765405	DCAF8L2	AGAGGAG	A	0
Zv	X	66765157	66765158	AR	T	TGCAGCAGCA	0

Table B-5: Gemini dominant model of inheritance germline variant analysis output

id	chrom	start	end	gene	ref	alt	cadd
Ai	1	20517762	20517763	UBXN10	C	T	36
Ai	7	143048770	143048771	CLCN1	C	T	36
Ai	12	42538351	42538352	GXYLT1	C	A	35
Ai	7	142008652	142008653	TRBV3-1	T	A	35
Ai	13	39550714	39550715	STOML3	C	T	35
Ai	17	80136978	80136979	CCDC57	C	T	35
Ai	3	44943163	44943164	TGM4	G	A	34
Ai	5	179331788	179331789	TBC1D9B	C	T	34
Ai	8	2057232	2057233	MYOM2	C	T	34
Ai	19	3546263	3546264	MFSD12	C	T	34
Ai	15	78786318	78786319	IREB2	C	T	33
Ai	12	53205600	53205601	KRT4	C	T	33
Ai	2	219146736	219146737	TMBIM1	G	A	32
Ai	6	152631565	152631566	SYNE1	G	T	32
Ai	3	97677973	97677974	MINA	G	A	32
Ai	3	157155338	157155339	PTX3	G	C	31
Ai	10	96480152	96480154	CYP2C18	GA	G	30
Ai	11	57313468	57313469	SMTNL1	C	CG	30
Ai	12	9555194	9555195	LOC728715	T	TC	30
Ai	12	12247920	12247923	BCL2L14	ATT	A	30
Ai	12	53343130	53343131	KRT18	G	GA	30
Ai	13	25671271	25671273	PABPC3	AG	A	30
Ai	13	25671331	25671333	PABPC3	CA	C	30
Ai	14	106329448	106329451	IGHJ6	ATG	A	30
Ai	14	106329452	106329453	IGHJ6	A	ACC	30
Ai	15	74392544	74392546	LOC732265	TA	T	30
Ai	17	41002162	41002165	AOC2	CAG	C	30
Ai	19	17397500	17397501	ANKLE1	T	TTG	30
Ai	19	55286771	55286774	KIR2DL1	AAG	A	30
Ai	19	55286774	55286775	KIR2DL1	G	GCA	30
Ai	2	91636148	91636149	LOC101060169	C	CA	30
Ai	2	91636148	91636149	LOC101060169	C	CG	30
Ai	2	133075477	133075479	ZNF806	TC	T	30
Ai	2	133075903	133075904	ZNF806	C	CA	30
Ai	2	133076116	133076118	ZNF806	CA	C	30
Ai	21	11021162	11021163	LOC101926954	T	TA	30
Ai	4	3076649	3076652	HTT	AGC	A	30
Ai	4	3076652	3076654	HTT	AG	A	30

Table B-5: Continued

Ai	4	103822481	103822484	SLC9B1	AAC	A	30
Ai	6	31239110	31239111	HLA-C	G	GCC	30
Ai	6	31239112	31239115	HLA-C	AGG	A	30
Ai	6	32489742	32489744	HLA-DRB5	CG	C	30
Ai	6	32489754	32489755	HLA-DRB5	G	GCT	30
Ai	6	32552059	32552060	HLA-DRB1	A	AG	30
Ai	7	100550471	100550472	MUC3A	C	CAG	30
Ai	7	100550472	100550475	MUC3A	GCC	G	30
Ai	7	142008633	142008636	TRBV3-1	ACG	A	30
Ai	7	142008638	142008639	TRBV3-1	A	AGG	30
Ai	7	142197960	142197963	TRBV11-2	TGC	T	30
Ai	7	142197964	142197965	TRBV11-2	C	CCA	30
Ai	7	142231792	142231793	TRBV10-1	A	AT	30
Ai	7	142231795	142231798	TRBV10-1	CCA	C	30
Ai	7	142231799	142231800	TRBV10-1	G	GA	30
Ai	7	142231804	142231805	TRBV10-1	C	CTG	30
Ai	7	142231807	142231810	TRBV10-1	GCC	G	30
Ai	9	33797927	33797928	PRSS3	G	GCC	30
Ai	9	33797927	33797928	PRSS3	G	GCT	30
Ai	9	33797929	33797932	PRSS3	GAC	G	30
Ai	9	35684821	35684822	TPM2	C	CGG	30
Ai	GL000212.1	128872	128875		GTC	G	30
Ai	GL000212.1	10741	10742		T	TG	30
Ai	1	45166716	45166717	C1orf228	G	C	29.9
Ai	3	172482203	172482204	ECT2	G	A	29.8
Ai	17	1372838	1372839	MYO1C	C	T	29.4
Ai	19	19646466	19646467	YJEFN3	G	A	28.9
Ai	5	108171408	108171409	FER	G	T	28.8
Ai	17	48542713	48542714	CHAD	G	T	28.8
Ai	11	67164846	67164847	RAD9A	C	A	28.5
Ai	16	81398683	81398684	GAN	T	G	28.1
Ai	15	75651093	75651094	MAN2C1	G	A	27.9
Ai	5	179440134	179440135	RNF130	T	A	27.8
Ai	10	95276972	95276973	CEP55	G	A	27.8
Ai	10	105906085	105906086	WDR96	G	A	27.8
Ai	19	17397352	17397353	ANKLE1	C	T	27.6
Ai	19	1009412	1009413	GRIN3B	G	A	27.5
Ai	10	46159085	46159086	ZFAND4	G	A	27.3
Ai	1	46655644	46655645	POMGNT1	C	T	27

Table B-5: Continued

Ai	5	131939180	131939181	RAD50	G	C	26.9
Ai	1	202128420	202128421	PTPN7	C	T	26.9
Ai	10	99338261	99338262	ANKRD2	C	T	26.7
Ai	3	50382963	50382964	ZMYND10	A	C	26.6
Ai	4	8293192	8293193	HTRA3	G	A	26.6
Ai	12	88496625	88496626	CEP290	C	T	26.5
Ai	17	7296524	7296525	PLSCR3	C	T	26.4
Ai	17	3195502	3195503	OR3A1	C	A	26.4
Ai	12	53343006	53343007	KRT18	G	A	26.3
Ai	10	99473817	99473818	MARVELD1	T	C	26.2
Ai	13	25671291	25671292	PABPC3	C	T	26.2
Ai	21	43161238	43161239	RIPK4	G	A	26.2
Ai	13	25671026	25671027	PABPC3	A	G	26.1
Ai	17	38319104	38319105	CASC3	T	G	26.1
Ai	12	53343131	53343132	KRT18	G	T	25.8
Ai	21	43543192	43543193	UMODL1	G	A	25.8
Ai	14	45711339	45711340	MIS18BP1	G	C	25.8
Ai	17	42992708	42992709	GFAP	C	T	25.7
Ai	5	137680761	137680762	FAM53C	C	T	25.7
Ai	16	19020737	19020738	TMC7	G	T	25.6
Ai	17	36958424	36958425	CWC25	G	T	25.6
Ai	5	176072209	176072210	EIF4E1B	G	A	25.6
Ai	12	58120854	58120855	AGAP2	C	G	25.5
Ai	15	76523729	76523730	ETFPA	T	G	25.3
Ai	12	71972584	71972585	LGR5	G	A	25.3
Ai	16	25251429	25251430	ZKSCAN2	T	C	25.3
Ai	1	170961359	170961360	MROH9	G	A	25.2
Ai	1	1289445	1289446	MXRA8	C	T	25.2
Ai	11	549945	549946	LRRC56	C	T	25.1
Ai	10	21102898	21102899	NEBL	T	G	25
Ai	12	133389912	133389913	GOLGA3	C	A	25
Ai	1	179783166	179783167	FAM163A	G	T	25
Ai	17	62045450	62045451	SCN4A	G	A	24.9
Ai	12	49121342	49121343	LINC00935	G	A	24.8
Ai	17	10231334	10231335	MYH13	C	T	24.8
Ai	7	142231779	142231780	TRBV10-1	C	T	24.7
Ai	10	22618252	22618253	COMMD3-BMI1	A	T	24.7
Ai	15	45392276	45392277	DUOX2	C	T	24.7
Ai	12	53343068	53343069	KRT18	G	T	24.6

Table B-5: Continued

Ai	15	41859668	41859669	TYRO3	C	T	24.5
Ai	2	179451453	179451454	TTN	G	A	24.5
Ai	7	142750196	142750197	OR6V1	A	T	24.5
Ai	14	24035547	24035548	APIG2	C	T	24.4
Ai	5	55088579	55088580	DDX4	A	G	24.4
Ai	9	32550895	32550896	TOPORS	G	C	24.3
Ai	14	64596822	64596823	SYNE2	C	A	24.2
Ai	14	21679665	21679666	HNRNPC	C	T	24.1
Ai	6	7231753	7231754	RREB1	C	G	24.1
Ai	13	25670954	25670955	PABPC3	C	T	23.9
Ai	12	27156224	27156225	TM7SF3	A	G	23.8
Ai	15	56756242	56756243	MNS1	A	G	23.8
Ai	17	4488300	4488301	SMTNL2	T	G	23.7
Ai	10	105207300	105207301	CALHM2	C	T	23.7
Ai	3	148601438	148601439	CPA3	G	C	23.7
Ai	9	133231634	133231635	HMCN2	T	C	23.6
Ai	1	12175657	12175658	TNFRSF8	G	A	23.6
Ai	16	84230331	84230332	ADAD2	A	G	23.6
Ai	12	53343104	53343105	KRT18	C	T	23.5
Ai	12	53343224	53343225	KRT18	C	T	23.5
Ai	17	41926224	41926225	CD300LG	G	A	23.5
Ai	2	112619980	112619981	ANAPC1	G	A	23.5
Ai	19	23927188	23927189	ZNF681	T	G	23.5
Ai	9	111881849	111881850	TMEM245	G	A	23.4
Ai	18	72168606	72168607	CNDP2	C	T	23.4
Ai	6	24128353	24128354	NRSN1	A	C	23.3
Ai	1	21099963	21099964	HP1BP3	T	C	23.3
Ai	15	66840940	66840941	LCTL	G	C	23.3
Ai	4	951981	951982	TMEM175	C	G	23.3
Ai	12	53343058	53343059	KRT18	C	A	23.2
Ai	3	52430696	52430697	DNAH1	C	T	23.2
Ai	9	79323347	79323348	PRUNE2	G	A	23.2
Ai	3	17208340	17208341	TBC1D5	G	T	23.1
Ai	11	65425763	65425764	RELA	C	T	23.1
Ai	1	225586970	225586971	DNAH14	A	T	23
Ai	1	12907517	12907518	HNRNPCL1	T	A	23
Ai	10	134996848	134996849	KNDC1	C	T	23
Ai	12	11174466	11174467	TAS2R19	A	C	22.9
Ai	3	13372015	13372016	NUP210	C	T	22.9

Table B-5: Continued

Ai	17	57058176	57058177	PPM1E	C	T	22.9
Ai	1	28948447	28948448	TAF12	C	T	22.8
Ai	6	52664028	52664029	GSTA1	G	A	22.8
Ai	12	52818418	52818419	KRT75	C	T	22.6
Ai	4	144620192	144620193	FREM3	C	A	22.5
Ai	13	73482746	73482747	PIBF1	C	A	22.5
Ai	5	77335014	77335015	AP3B1	G	T	22.4
Ai	9	68433566	68433567	LOC642236	C	T	22.3
Ai	12	88584311	88584312	TMTC3	C	A	22.3
Ai	1	12907518	12907519	HNRNPCL1	C	A	22.1
Ai	17	37826315	37826316	PNMT	G	A	22
Ai	1	183192389	183192390	LAMC2	G	A	21.9
Ai	20	2795863	2795864	C20orf141	C	T	21.9
Ai	2	219319665	219319666	USP37	C	T	21.9
Ai	11	66083042	66083043	CD248	C	T	21.8
Ai	16	84089630	84089631	MBTPS1	C	T	21.7
Ai	12	53343039	53343040	KRT18	C	A	21.3
Ai	20	2844678	2844679	VPS16	G	A	21.2
Ai	12	123290816	123290817	CCDC62	A	C	21.1
Ai	13	28143387	28143388	LNX2	C	T	21.1
Ai	1	47748128	47748129	STIL	G	A	20.6
Ai	1	12907445	12907446	HNRNPCL1	C	T	20.4
Ai	11	64116841	64116842	CCDC88B	G	T	20.2
Ai	11	1651225	1651226	KRTAP5-5	T	TGGAG	0
Ai	11	1651227	1651228	KRTAP5-5	C	CTGTGG	0
Ai	13	25671309	25671315	PABPC3	TTATGA	T	0
Ai	19	8999496	8999497	MUC16	G	GACCA	0
Ai	19	8999496	8999501	MUC16	GGCTT	G	0
Ai	19	8999497	8999502	MUC16	GCTTT	G	0
Ai	19	17397500	17397501	ANKLE1	T	TTGTG	0
Ai	GL000212.1	119492	119497		TTCTC	T	0
Ai	GL000212.1	128872	128877		GTCTC	G	0
Ai	17	71241320	71241325	C17orf80	CGTAA	C	0
Ai	11	64083294	64083298	ESRRA	CGGG	C	0
Ai	11	65325324	65325325	LTBP3	C	CCAG	0
Ai	12	7045890	7045891	ATN1	A	ACAG	0
Ai	12	7045890	7045891	ATN1	A	ACAGCAG	0
Ai	12	106641397	106641407	CKAP4	TGCCCGGCC	T	0
Ai	12	132547092	132547093	EP400	A	ACAGCAG	0

Table B-5: Continued

Ai	13	100622666	100622670	ZIC5	TGGC	T	0
Ai	13	100622666	100622667	ZIC5	T	TGGC	0
Ai	14	24769848	24769849	NOP9	A	AGAGGAG	0
Ai	14	24769848	24769849	NOP9	A	AGAG	0
Ai	14	71275772	71275776	MAP3K9	GCCT	G	0
Ai	16	12009529	12009530	GSPT1	C	CCCGCCG	0
Ai	2	73613030	73613031	ALMS1	T	TGGAGGA	0
Ai	2	132250066	132250067	MZT2A	G	GGGAGCGCA	0
Ai	3	28617459	28617463	LOC100652807	GCGC	G	0
Ai	5	140953562	140953563	DIAPH1	T	TGGA	0
Ai	5	140953562	140953563	DIAPH1	T	TGGAGGA	0
Ai	6	32489747	32489751	HLA-DRB5	CGCG	C	0
Ai	6	32552131	32552132	HLA-DRB1	T	TATA	0
Ai	6	170871045	170871046	TBP	A	ACAG	0
Ai	6	170871045	170871049	TBP	ACAG	A	0
Ai	6	170871045	170871055	TBP	ACAGCAGCAG	A	0
Ai	6	170871045	170871052	TBP	ACAGCAG	A	0
Ai	6	170871048	170871049	TBP	G	GCAA	0
Ai	9	35906582	35906583	HRCT1	T	TCCA	0
Ai	9	95237023	95237024	ASPN	C	CTCA	0
Ai	9	95237023	95237024	ASPN	C	CTCATCA	0
Ai	GL000212.1	122140	122147		GTCCTCC	G	0
Ai	GL000212.1	122140	122144		GTCC	G	0
Ai	GL000212.1	122140	122141		G	GTCCTCCTCC	0
Ai	GL000212.1	122140	122141		G	GTCC	0
Ai	19	49657709	49657719	HRC	ACATCATCAT	A	0
Ai	1	14108058	14108062	PRDM2	AAAG	A	0
Ai	19	49657709	49657710	HRC	A	ACATCAT	0
Al	18	50832035	50832036	DCC	G	A	34
Al	11	57313468	57313469	SMTNL1	C	CG	30
Al	2	233399883	233399884	CHRND	C	CT	30
Al	6	32487157	32487158	HLA-DRB5	G	GCA	30
Al	6	32487210	32487212	HLA-DRB5	AC	A	30
Al	6	32487214	32487215	HLA-DRB5	C	CT	30
Al	GL000212.1	119492	119495		TTC	T	30
Al	GL000212.1	119492	119493		T	TTC	30
Al	6	32046874	32046875	TNXB	T	A	27.2
Al	22	31487731	31487732	SMTN	C	T	27
Al	14	23652037	23652038	SLC7A8	G	A	25.1

Table B-5: Continued

Al	14	20585783	20585784	OR4K17	C	A	24.9
Al	6	41001867	41001868	UNC5CL	G	T	23.4
Al	6	32489891	32489892	HLA-DRB5	G	A	23.1
Al	6	37414211	37414212	CMTR1	G	A	22.5
Al	12	11183120	11183121	TAS2R31	G	A	22
Al	6	32489924	32489925	HLA-DRB5	C	T	20.9
Al	GL000212.1	119492	119497		TTCTC	T	0
Al	GL000212.1	119492	119493		T	TGCC	0
Al	GL000212.1	119492	119501		TTCTCTCTC	T	0
Al	6	32552127	32552131	HLA-DRB1	TCCC	T	0
Al	GL000212.1	119492	119499		TTCTCTC	T	0
Bl	2	84954912	84954913	DNAH6	C	T	52
Bl	6	51484076	51484077	PKHD1	G	C	49
Bl	11	121456970	121456971	SORL1	C	A	40
Bl	13	25671368	25671369	PABPC3	G	T	38
Bl	13	25671209	25671210	PABPC3	C	T	35
Bl	7	142008652	142008653	TRBV3-1	T	A	35
Bl	11	46894989	46894990	LRP4	G	A	35
Bl	13	42465595	42465596	VWA8	C	T	35
Bl	16	19490785	19490786	TMC5	C	T	35
Bl	8	145727079	145727080	PPP1R16A	C	T	35
Bl	5	171479939	171479940	STK10	C	T	35
Bl	11	116692388	116692389	APOA4	G	A	34
Bl	1	200090074	200090075	NR5A2	T	A	34
Bl	12	42499710	42499711	GXYLT1	C	A	34
Bl	19	30106231	30106232	POP4	G	C	34
Bl	5	5209320	5209321	ADAMTS16	G	A	34
Bl	3	184073551	184073552	CLCN2	G	A	34
Bl	7	4856886	4856887	RADIL	C	T	34
Bl	7	142991714	142991715	CASP2	G	A	34
Bl	10	28224091	28224092	ARMC4	C	A	34
Bl	14	37180614	37180615	SLC25A21	C	T	34
Bl	9	140952559	140952560	CACNA1B	G	A	34
Bl	9	100112769	100112770	CCDC180	C	T	34
Bl	1	118166009	118166010	FAM46C	C	T	33
Bl	12	42499738	42499739	GXYLT1	C	T	33
Bl	15	89424647	89424648	HAPLN3	G	A	33
Bl	18	47500827	47500828	MYO5B	G	A	33
Bl	2	233741052	233741053	C2orf82	T	C	33

Table B-5: Continued

Bl	15	64275842	64275843	DAPK2	C	T	33
Bl	2	71376470	71376471	MPHOSPH10	G	A	33
Bl	1	211654618	211654619	RD3	G	A	33
Bl	16	70190569	70190570	PDPR	C	T	33
Bl	11	116701352	116701353	APOC3	C	T	32
Bl	5	150925829	150925830	FAT2	G	A	32
Bl	12	9321533	9321534	PZP	G	A	32
Bl	19	56005260	56005261	SSC5D	G	A	32
Bl	2	29087914	29087915	TRMT61B	G	A	32
Bl	2	192701328	192701329	SDPR	C	T	32
Bl	5	140896532	140896533	DIAPH1	G	C	32
Bl	5	150911461	150911462	FAT2	G	A	32
Bl	7	1937884	1937885	MAD1L1	C	T	32
Bl	10	85997362	85997363	LRIT1	G	A	32
Bl	4	113359751	113359752	ALPK1	G	A	32
Bl	1	62582249	62582250	INADL	G	A	31
Bl	12	105605024	105605025	APPL2	C	T	31
Bl	2	141751625	141751626	LRP1B	C	T	31
Bl	2	165548773	165548774	COBLL1	A	G	31
Bl	2	196640628	196640629	DNAH7	C	G	31
Bl	6	99819434	99819435	COQ3	A	C	31
Bl	8	145133688	145133689	EXOSC4	G	T	31
Bl	14	23844978	23844979	IL25	C	T	31
Bl	11	16824598	16824599	PLEKHA7	C	T	31
Bl	12	11183034	11183035	TAS2R31	C	T	30
Bl	17	7127981	7127982	ACADVL	G	A	30
Bl	1	20066372	20066375	TMCO4	GGA	G	30
Bl	10	97175423	97175424	SORBS1	A	AG	30
Bl	11	57313468	57313469	SMTNL1	C	CG	30
Bl	12	12247920	12247923	BCL2L14	ATT	A	30
Bl	12	66641619	66641621	IRAK3	AC	A	30
Bl	13	21729289	21729290	SKA3	C	CAG	30
Bl	13	21734125	21734126	SKA3	T	TCA	30
Bl	13	25670800	25670801	PABPC3	T	TG	30
Bl	13	25671271	25671273	PABPC3	AG	A	30
Bl	13	25671331	25671333	PABPC3	CA	C	30
Bl	19	33444598	33444601	CEP89	CTT	C	30
Bl	2	97851072	97851074	ANKRD36	GC	G	30
Bl	2	97851077	97851078	ANKRD36	A	AG	30

Table B-5: Continued

Bl	2	133075477	133075479	ZNF806	TC	T	30
Bl	2	133075903	133075904	ZNF806	C	CA	30
Bl	2	133076116	133076118	ZNF806	CA	C	30
Bl	4	107248656	107248658	AIMP1	TA	T	30
Bl	6	32489742	32489744	HLA-DRB5	CG	C	30
Bl	7	100550472	100550475	MUC3A	GCC	G	30
Bl	7	142008633	142008636	TRBV3-1	ACG	A	30
Bl	7	142008638	142008639	TRBV3-1	A	AGG	30
Bl	7	142139333	142139335	TRBV7-6	CG	C	30
Bl	7	142139336	142139337	TRBV7-6	C	CCA	30
Bl	7	142139338	142139340	TRBV7-6	GA	G	30
Bl	7	142168507	142168509	TRBV5-4	TC	T	30
Bl	7	142168514	142168515	TRBV5-4	T	TC	30
Bl	9	33797927	33797928	PRSS3	G	GCC	30
Bl	9	33797927	33797928	PRSS3	G	GCT	30
Bl	9	33797929	33797932	PRSS3	GAC	G	30
Bl	9	35684821	35684822	TPM2	C	CGG	30
Bl	9	99799623	99799625	CTSV	CT	C	30
Bl	GL000212.1	119492	119495		TTC	T	30
Bl	GL000212.1	119492	119493		T	TTC	30
Bl	GL000212.1	128872	128875		GTC	G	30
Bl	GL000212.1	10741	10742		T	TG	30
Bl	8	145616214	145616215	ADCK5	C	T	29.6
Bl	13	114309236	114309237	ATP4B	C	T	29.5
Bl	16	71571657	71571658	CHST4	C	T	29.3
Bl	2	88383995	88383996	SMYD1	C	A	28.9
Bl	4	159836466	159836467	C4orf45	C	T	28.9
Bl	11	111952742	111952743	C11orf57	G	C	28.6
Bl	1	9019047	9019048	CA6	C	A	28.4
Bl	2	48030585	48030586	MSH6	G	C	28.2
Bl	9	21971136	21971137	CDKN2A	T	G	28.2
Bl	19	50720991	50720992	MYH14	G	A	28.2
Bl	5	140579833	140579834	PCDHB11	G	A	28.2
Bl	16	84492778	84492779	ATP2C2	G	A	28.1
Bl	5	140803054	140803055	PCDHGA11	A	G	28
Bl	1	35370418	35370419	DLGAP3	G	A	27.9
Bl	6	26446010	26446011	BTN3A3	G	A	27.8
Bl	2	239040064	239040065	ESPNL	G	A	27.7
Bl	X	19507027	19507028	MAP3K15	A	G	27.5

Table B-5: Continued

Bl	1	41013072	41013073	ZNF684	T	A	27.5
Bl	6	150022976	150022977	LATS1	G	A	27.4
Bl	1	184706780	184706781	EDEM3	T	C	27.3
Bl	6	31727562	31727563	MSH5	A	G	27.3
Bl	3	19924171	19924172	EFHB	C	T	27.3
Bl	6	43023898	43023899	MRPL2	C	T	27.2
Bl	17	43482467	43482468	ARHGAP27	G	C	27.2
Bl	12	72666649	72666650	TRHDE	A	T	27.2
Bl	20	61340731	61340732	NTSR1	C	T	27
Bl	17	4047226	4047227	CYB5D2	C	T	26.8
Bl	6	46563803	46563804	CYP39A1	T	G	26.8
Bl	2	172187095	172187096	METTL8	A	C	26.7
Bl	3	183995793	183995794	ECE2	T	C	26.7
Bl	12	42499737	42499738	GXYLT1	T	C	26.6
Bl	14	68050565	68050566	PLEKHH1	C	T	26.6
Bl	1	1389818	1389819	ATAD3C	C	T	26.5
Bl	11	4968154	4968155	OR51A4	T	C	26.5
Bl	10	15113875	15113876	OLAH	G	C	26.5
Bl	14	64066401	64066402	WDR89	A	G	26.4
Bl	1	158747042	158747043	OR6N2	C	G	26.4
Bl	17	3195502	3195503	OR3A1	C	A	26.4
Bl	1	117487606	117487607	PTGFRN	A	G	26.3
Bl	13	25671291	25671292	PABPC3	C	T	26.2
Bl	12	52962049	52962050	KRT74	G	A	26.2
Bl	3	52876852	52876853	TMEM110	C	T	26.2
Bl	1	21573712	21573713	ECE1	C	A	26.1
Bl	1	207646921	207646922	CR2	C	T	26.1
Bl	13	25671026	25671027	PABPC3	A	G	26.1
Bl	15	42614092	42614093	GANC	A	G	26.1
Bl	11	46665853	46665854	ATG13	C	G	25.8
Bl	X	71830941	71830942	PHKA1	C	T	25.8
Bl	17	79098631	79098632	AATK	G	A	25.7
Bl	21	47535925	47535926	COL6A2	G	A	25.6
Bl	1	42628580	42628581	GUCA2A	C	T	25.5
Bl	2	169820800	169820801	ABCB11	C	T	25.5
Bl	2	141116419	141116420	LRP1B	C	T	25.4
Bl	11	59282802	59282803	OR4D9	C	T	25.2
Bl	11	6942889	6942890	OR2D3	G	A	25.2
Bl	21	43714711	43714712	ABCG1	G	A	25.2

Table B-5: Continued

Bl	5	31534392	31534393	C5orf22	A	G	25.2
Bl	16	3100087	3100088	MMP25	G	A	25.2
Bl	6	75823016	75823017	COL12A1	G	A	25.2
Bl	12	42499700	42499701	GXYLT1	C	A	25.1
Bl	2	26534040	26534041	GPR113	T	C	25.1
Bl	1	1255872	1255873	CPSF3L	C	T	25
Bl	21	28211990	28211991	ADAMTS1	T	C	25
Bl	6	29571480	29571481	GABBR1	C	T	25
Bl	1	38049503	38049504	GNL2	C	G	25
Bl	7	138265336	138265337	TRIM24	C	G	25
Bl	1	38155365	38155366	C1orf109	G	T	24.9
Bl	1	205901025	205901026	SLC26A9	C	T	24.9
Bl	17	66928427	66928428	ABCA8	C	G	24.8
Bl	2	141032020	141032021	LRP1B	T	A	24.8
Bl	7	142231779	142231780	TRBV10-1	C	T	24.7
Bl	20	33875485	33875486	FAM83C	G	A	24.7
Bl	16	5122040	5122041	ALG1	C	A	24.7
Bl	20	2597715	2597716	TMC2	A	T	24.6
Bl	1	247492116	247492117	ZNF496	C	G	24.6
Bl	11	61277322	61277323	LRRC10B	G	A	24.5
Bl	11	65414343	65414344	SIPA1	C	G	24.5
Bl	19	15491045	15491046	AKAP8L	C	T	24.5
Bl	6	116836994	116836995	FAM26E	C	T	24.5
Bl	7	141311082	141311083	AGK	A	C	24.5
Bl	1	171527236	171527237	PRRC2C	A	G	24.5
Bl	16	48577064	48577065	N4BP1	C	T	24.5
Bl	17	41165631	41165632	IFI35	G	A	24.5
Bl	9	3829342	3829343	GLIS3	G	A	24.4
Bl	1	203740056	203740057	LAX1	G	A	24.4
Bl	2	33752239	33752240	RASGRP3	G	A	24.4
Bl	1	22191360	22191361	HSPG2	G	C	24.3
Bl	13	25670775	25670776	PABPC3	C	T	24.3
Bl	22	17690427	17690428	CECR1	C	G	24.3
Bl	20	23667794	23667795	CST4	C	T	24.3
Bl	17	7999966	7999967	ALOXE3	A	G	24.3
Bl	10	134663932	134663933	TTC40	A	G	24.3
Bl	2	10262969	10262970	RRM2	G	C	24.2
Bl	7	84651848	84651849	SEMA3D	G	T	24.2
Bl	13	25670796	25670797	PABPC3	C	G	24.1

Table B-5: Continued

Bl	1	27124129	27124130	PIGV	C	T	24.1
Bl	X	119005967	119005968	NDUFA1	G	C	24.1
Bl	20	61834854	61834855	YTHDF1	G	A	24
Bl	14	64066394	64066395	WDR89	C	T	23.9
Bl	15	42146986	42146987	SPTBN5	C	T	23.9
Bl	4	84337915	84337916	HELQ	G	A	23.9
Bl	11	59423149	59423150	PATL1	G	A	23.9
Bl	13	25670954	25670955	PABPC3	C	T	23.9
Bl	2	55093953	55093954	EML6	C	T	23.8
Bl	2	210801603	210801604	UNC80	T	G	23.8
Bl	4	5721083	5721084	EVC	A	G	23.8
Bl	11	124496410	124496411	TBRG1	C	A	23.7
Bl	13	25671428	25671429	PABPC3	G	T	23.7
Bl	17	60837249	60837250	10-Mar	T	G	23.7
Bl	20	33581970	33581971	MYH7B	T	C	23.7
Bl	7	146818169	146818170	CNTNAP2	G	C	23.7
Bl	10	112269907	112269908	DUSP5	C	G	23.7
Bl	8	145736253	145736254	MFSD3	C	T	23.7
Bl	14	21109504	21109505	OR6S1	G	T	23.7
Bl	5	140559028	140559029	PCDHB8	G	C	23.7
Bl	10	27322305	27322306	ANKRD26	C	T	23.7
Bl	14	75142986	75142987	AREL1	A	C	23.6
Bl	21	10941965	10941966	TPTE	A	G	23.6
Bl	5	138738336	138738337	SPATA24	C	T	23.6
Bl	17	74574835	74574836	ST6GALNAC2	A	G	23.5
Bl	16	711134	711135	WDR90	C	T	23.5
Bl	9	101911507	101911508	TGFBR1	A	G	23.5
Bl	9	134004863	134004864	NUP214	G	A	23.5
Bl	11	62445870	62445871	UBXN1	G	A	23.5
Bl	19	44571259	44571260	ZNF223	C	A	23.5
Bl	13	25671167	25671168	PABPC3	C	T	23.4
Bl	7	142206519	142206520	TRBV10-2	C	A	23.4
Bl	12	45169925	45169926	NELL2	C	T	23.4
Bl	4	140640526	140640527	MAML3	G	A	23.4
Bl	18	77805895	77805896	RBFA	G	T	23.4
Bl	21	34971473	34971474	CRYZL1	T	C	23.4
Bl	13	38143471	38143472	POSTN	A	G	23.4
Bl	19	49206523	49206524	FUT2	C	T	23.4
Bl	19	9000168	9000169	MUC16	C	T	23.3

Table B-5: Continued

Bl	13	41341136	41341137	MRPS31	G	A	23.3
Bl	19	8176946	8176947	FBN3	T	C	23.3
Bl	8	24261546	24261547	ADAMDEC1	C	T	23.3
Bl	16	30536747	30536748	ZNF768	A	C	23.2
Bl	16	81173164	81173165	PKD1L2	A	G	23.2
Bl	19	8999394	8999395	MUC16	T	C	23.2
Bl	16	86602432	86602433	FOXC2	T	C	23.2
Bl	X	21675433	21675434	KLHL34	A	G	23.2
Bl	2	189861932	189861933	COL3A1	C	A	23.2
Bl	16	70697671	70697672	MTSS1L	G	A	23.1
Bl	6	138584705	138584706	KIAA1244	G	T	23.1
Bl	12	57618852	57618853	NXPH4	G	A	23.1
Bl	5	172396482	172396483	RPL26L1	G	A	23
Bl	2	141299368	141299369	LRP1B	C	T	23
Bl	5	130764824	130764825	RAPGEF6	G	A	23
Bl	11	55927583	55927584	OR8K5	A	T	23
Bl	3	49694229	49694230	BSN	G	A	23
Bl	6	31683296	31683297	LY6G6D	A	G	22.9
Bl	9	95068058	95068059	NOL8	T	C	22.9
Bl	22	36695009	36695010	MYH9	C	T	22.9
Bl	7	99755342	99755343	C7orf43	C	T	22.9
Bl	11	58346952	58346953	ZFP91	G	A	22.9
Bl	2	170030638	170030639	LRP2	C	T	22.9
Bl	19	12575794	12575795	ZNF709	C	T	22.8
Bl	2	203980767	203980768	NBEAL1	A	C	22.8
Bl	14	52526890	52526891	NID2	G	A	22.8
Bl	2	197872573	197872574	ANKRD44	C	T	22.8
Bl	9	68433463	68433464	LOC642236	C	T	22.7
Bl	4	71508136	71508137	ENAM	A	G	22.7
Bl	19	44571263	44571264	ZNF223	T	G	22.7
Bl	1	241798304	241798305	CHML	C	T	22.6
Bl	1	100575940	100575941	SASS6	C	G	22.6
Bl	7	142574966	142574967	TRPV6	G	A	22.6
Bl	8	101721708	101721709	PABPC1	T	A	22.5
Bl	9	140109077	140109078	NDOR1	A	T	22.5
Bl	19	6156560	6156561	ACSBG2	C	T	22.5
Bl	8	95777488	95777489	DPY19L4	G	T	22.5
Bl	10	119799955	119799956	RAB11FIP2	G	C	22.4
Bl	5	140188708	140188709	PCDHA4	G	T	22.4

Table B-5: Continued

Bl	19	42817571	42817572	TMEM145	C	T	22.4
Bl	3	12851675	12851676	CAND2	G	A	22.4
Bl	1	31656763	31656764	NKAIN1	C	G	22.3
Bl	2	135908021	135908022	RAB3GAP1	C	A	22.3
Bl	13	25670766	25670767	PABPC3	A	G	22.2
Bl	3	4704815	4704816	ITPR1	G	A	22.2
Bl	9	84607078	84607079	SPATA31D1	A	G	22.1
Bl	13	46730641	46730642	LCPI	C	T	22.1
Bl	7	99998719	99998720	ZCWPW1	C	T	22
Bl	1	228559966	228559967	OBSCN	C	T	22
Bl	7	40027676	40027677	CDK13	T	A	21.9
Bl	7	154875967	154875968	HTR5A	G	A	21.9
Bl	15	75652906	75652907	MAN2C1	T	A	21.9
Bl	3	10413596	10413597	ATP2B2	C	T	21.8
Bl	1	1354883	1354884	ANKRD65	C	T	21.7
Bl	18	8244167	8244168	PTPRM	G	C	21.6
Bl	17	35872408	35872409	DUSP14	C	T	21.6
Bl	X	12939899	12939900	TLR8	T	A	21.5
Bl	7	20767980	20767981	ABCB5	T	C	21.3
Bl	22	38528887	38528888	PLA2G6	C	T	21.2
Bl	10	75006931	75006932	DNAJC9	G	T	20.9
Bl	5	72419401	72419402	TMEM171	G	A	20.8
Bl	4	79238619	79238620	FRAS1	C	T	20.8
Bl	7	105656470	105656471	CDHR3	G	A	20.8
Bl	6	89868077	89868078	PM20D2	A	G	20.7
Bl	9	33797950	33797951	PRSS3	A	C	20.5
Bl	13	95735519	95735520	ABCC4	C	A	20.4
Bl	2	179395779	179395780	TTN	T	G	20.2
Bl	6	56436917	56436918	DST	C	T	20.2
Bl	2	220309684	220309685	SPEG	G	A	20.2
Bl	13	21729289	21729290	SKA3	C	CAGTTTCTT	0
Bl	13	25671309	25671315	PABPC3	TTATGA	T	0
Bl	19	52888073	52888074	ZNF880	G	GGAGGC	0
Bl	2	97851081	97851086	ANKRD36	GTAAT	G	0
Bl	GL000212.1	119492	119497		TTCTC	T	0
Bl	GL000212.1	119492	119493		T	TGCCC	0
Bl	GL000212.1	119492	119501		TTCTCTCTC	T	0
Bl	GL000212.1	128872	128877		GTCTC	G	0
Bl	1	1387452	1387456	ATAD3C	CAGG	C	0

Table B-5: Continued

Bl	11	1017442	1017446	MUC6	CGTG	C	0
Bl	11	66512289	66512290	C11orf80	G	GGGCGGCGGC	0
Bl	12	7045890	7045894	ATN1	ACAG	A	0
Bl	12	7045890	7045900	ATN1	ACAGCAGCAG	A	0
Bl	12	7045890	7045891	ATN1	A	ACAG	0
Bl	12	7045890	7045891	ATN1	A	ACAGCAG	0
Bl	12	132547092	132547093	EP400	A	ACAGCAG	0
Bl	13	25671148	25671152	PABPC3	ACGG	A	0
Bl	13	25671153	25671163	PABPC3	AGACGGAAC	A	0
Bl	13	79176482	79176486	POU4F1	CTGG	C	0
Bl	13	100622666	100622670	ZIC5	TGGC	T	0
Bl	13	100622666	100622667	ZIC5	T	TGGC	0
Bl	14	71275772	71275776	MAP3K9	GCCT	G	0
Bl	14	103804755	103804756	EIF5	A	ACAC	0
Bl	15	72767213	72767214	ARIH1	T	TGGC	0
Bl	15	72767213	72767220	ARIH1	TGGCGGC	T	0
Bl	16	12009529	12009530	GSPT1	C	CCCGCCG	0
Bl	16	88677895	88677902	ZC3H18	GGGAGAA	G	0
Bl	17	43319433	43319440	FMNL1	TCCGCCG	T	0
Bl	2	85360827	85360828	TCF7L1	G	GGGCGGC	0
Bl	2	100055291	100055295	REV1	TGAA	T	0
Bl	2	100055751	100055755	REV1	ATCT	A	0
Bl	2	118771681	118771682	CCDC93	T	TGCCGCC	0
Bl	3	27763426	27763427	EOMES	G	GCGC	0
Bl	4	54966978	54966988	GSX2	GGCGGCGGCC	G	0
Bl	6	42897356	42897360	CNPY3	TTGC	T	0
Bl	7	65419352	65419356	VKORC1L1	TTTA	T	0
Bl	7	142168497	142168501	TRBV5-4	GCCA	G	0
Bl	7	142168501	142168502	TRBV5-4	T	TTTC	0
Bl	8	11666217	11666224	FDFT1	GTCCCAC	G	0
Bl	9	84607067	84607074	SPATA31D1	ACCCTTG	A	0
Bl	9	100616699	100616700	FOXE1	A	AGCC	0
Bl	GL000212.1	119492	119499		TTCTCTC	T	0
Bl	1	153587807	153587811	S100A14	TTGA	T	0
Bl	19	15133892	15133893	CCDC105	A	ACGC	0
Bl	20	44520236	44520237	CTSA	C	CCTG	0
Bl	2	105472686	105472690	POU3F3	CCGG	C	0
Bl	3	42955838	42955842	ZNF662	AAAG	A	0
Br	10	6264823	6264824	PFKFB3	C	T	40

Table B-5: Continued

Br	2	196771408	196771409	DNAH7	G	A	38
Br	8	54142212	54142213	OPRK1	G	A	36
Br	7	156798545	156798546	MNX1	G	A	35
Br	19	42914667	42914668	LIPE	G	A	34
Br	1	33160911	33160912	SYNC	G	A	34
Br	2	9633091	9633092	ADAM17	C	T	34
Br	2	153575304	153575305	ARL6IP6	G	T	33
Br	12	11183034	11183035	TAS2R31	C	T	30
Br	13	25671331	25671333	PABPC3	CA	C	30
Br	16	624621	624623	PIGQ	AG	A	30
Br	6	13470804	13470805	GFOD1	A	AT	30
Br	7	142168507	142168509	TRBV5-4	TC	T	30
Br	7	142168514	142168515	TRBV5-4	T	TC	30
Br	GL000212.1	119456	119458		CG	C	30
Br	GL000212.1	119487	119488		T	TCG	30
Br	X	118603960	118603962	SLC25A5	CT	C	30
Br	17	21319410	21319411	KCNJ12	G	GT	30
Br	1	19433123	19433124	UBR4	C	T	29.4
Br	2	141777553	141777554	LRP1B	C	T	29.2
Br	6	32551934	32551935	HLA-DRB1	G	C	28.4
Br	1	10521656	10521657	DFFA	G	A	27.9
Br	2	141130669	141130670	LRP1B	G	A	27.2
Br	1	17292974	17292975	CROCC	G	A	26.8
Br	20	44664421	44664422	SLC12A5	C	T	26.6
Br	18	9570160	9570161	PPP4R1	C	T	26.5
Br	8	70515475	70515476	SULF1	A	G	26.5
Br	8	18079745	18079746	NAT1	C	T	26.4
Br	7	142460397	142460398	PRSS1	G	A	26.2
Br	19	4511887	4511888	PLIN4	C	T	25.6
Br	1	62704045	62704046	KANK4	C	T	25.1
Br	17	73570323	73570324	LLGL2	C	T	25
Br	15	48451886	48451887	MYEF2	T	G	24.7
Br	1	207787762	207787763	CR1	G	A	24.7
Br	22	41634086	41634087	CHADL	A	C	24.6
Br	17	27010339	27010340	SUPT6H	G	C	24.6
Br	1	248551273	248551274	OR2T6	G	A	24.4
Br	3	8672533	8672534	SSUH2	T	C	24.4
Br	15	63889752	63889753	FBXL22	C	G	24.3
Br	7	4002374	4002375	SDK1	G	A	24.3

Table B-5: Continued

Br	19	14521089	14521090	DDX39A	T	C	24.1
Br	2	179400129	179400130	TTN	G	A	23.9
Br	X	118604005	118604006	SLC25A5	A	G	23.8
Br	12	108096761	108096762	PWP1	T	C	23.8
Br	6	160952815	160952816	LPA	T	C	23.7
Br	8	7215820	7215821	ZNF705G	G	A	23.6
Br	19	14877181	14877182	EMR2	A	G	23.6
Br	17	21203960	21203961	MAP2K3	G	A	23.5
Br	12	14019002	14019003	GRIN2B	T	C	23.4
Br	2	169417779	169417780	CERS6	C	G	23.4
Br	6	33282921	33282922	ZBTB22	T	C	23.4
Br	19	1370741	1370742	MUM1	G	A	23.4
Br	16	4924866	4924867	UBN1	C	A	23.3
Br	19	9000168	9000169	MUC16	C	T	23.3
Br	7	6189372	6189373	USP42	C	T	23.3
Br	19	45295663	45295664	CBLC	A	G	23.2
Br	2	55407643	55407644	CLHC1	A	T	23.1
Br	1	200534650	200534651	KIF14	T	G	23.1
Br	6	4099364	4099365	C6orf201	G	T	23
Br	X	118603957	118603958	SLC25A5	G	A	22.8
Br	1	41012662	41012663	ZNF684	C	T	22.7
Br	9	68433566	68433567	LOC642236	C	T	22.3
Br	1	21144018	21144019	EIF4G3	T	G	22.2
Br	X	118603983	118603984	SLC25A5	G	A	21.9
Br	2	75891857	75891858	GCFC2	A	C	21.4
Br	6	32816447	32816448	TAP1	G	A	21.3
Br	8	110592150	110592151	SYBU	A	G	20.6
Br	9	33797950	33797951	PRSS3	A	C	20.5
Br	17	76127795	76127796	TMC8	A	G	20.3
Br	1	152187309	152187310	HRNR	C	CATGT	0
Br	19	8999496	8999497	MUC16	G	GACCA	0
Br	19	8999496	8999501	MUC16	GGCTT	G	0
Br	19	8999497	8999502	MUC16	GCTTT	G	0
Br	22	41634086	41634087	CHADL	A	ACGCGCGCC	0
Br	2	201354936	201354945	KCTD18	AGGCGCGGT	A	0
Br	1	17085588	17085595	MST1L	AGCGCTG	A	0
Br	2	73308222	73308226	RAB11FIP5	TTCC	T	0
Br	2	73308222	73308229	RAB11FIP5	TTCCTCC	T	0
Br	2	118771681	118771682	CCDC93	T	TGCCGCC	0

Table B-5: Continued

Br	2	131129927	131129928	PTPN18	A	AGACGGG	0
Br	4	186274646	186274650	SNX25	AGAG	A	0
Br	6	16327914	16327915	ATXN1	A	ATGCTGCTGC	0
Br	6	16327914	16327915	ATXN1	A	ATGCTGC	0
Br	6	16327914	16327918	ATXN1	ATGC	A	0
Br	7	142168497	142168501	TRBV5-4	GCCA	G	0
Br	7	142168501	142168502	TRBV5-4	T	TTTC	0
Br	7	151878505	151878506	KMT2C	G	GGGAATAAGA	0
Br	9	141107535	141107536	FAM157B	G	GGCAGCA	0
Br	GL000212.1	119458	119462		CTCT	C	0
Br	19	49657709	49657719	HRC	ACATCATCAT	A	0
Br	16	2880782	2880786	ZG16B	TCTC	T	0
Br	19	49657709	49657710	HRC	A	ACATCAT	0
Co	8	24339763	24339764	ADAM7	C	A	36
Co	7	141464062	141464063	TAS2R3	G	A	36
Co	13	25671209	25671210	PABPC3	C	T	35
Co	15	78807406	78807407	HYKK	T	A	35
Co	16	74678523	74678524	RFWD3	C	T	35
Co	11	95519379	95519380	FAM76B	C	T	35
Co	4	123342476	123342477	ADAD1	C	T	35
Co	10	52005094	52005095	ASAH2	G	A	34
Co	12	33535421	33535422	SYT10	C	A	34
Co	11	47834481	47834482	NUP160	G	A	34
Co	12	71158452	71158453	PTPRR	G	A	34
Co	3	10331518	10331519	GHRL	C	T	34
Co	13	38156537	38156538	POSTN	C	T	34
Co	1	201185706	201185707	IGFN1	C	T	33
Co	17	37825997	37825998	PNMT	C	T	33
Co	2	27259420	27259421	TMEM214	G	A	33
Co	11	62594688	62594689	STX5	G	A	33
Co	19	49113160	49113161	FAM83E	C	T	33
Co	6	32489843	32489844	HLA-DRB5	C	T	32
Co	15	70347481	70347482	TLE3	G	A	32
Co	7	91694603	91694604	AKAP9	G	A	32
Co	1	160134011	160134012	ATP1A4	C	T	31
Co	12	42717896	42717897	ZCRB1	C	T	31
Co	19	6454619	6454620	SLC25A23	C	T	31
Co	2	15534390	15534391	NBAS	G	A	31
Co	14	23844978	23844979	IL25	C	T	31

Table B-5: Continued

Co	12	11183034	11183035	TAS2R31	C	T	30
Co	16	27761438	27761439	KIAA0556	C	T	30
Co	11	57313468	57313469	SMTNL1	C	CG	30
Co	13	25671271	25671273	PABPC3	AG	A	30
Co	2	48027952	48027955	MSH6	TAA	T	30
Co	2	133075477	133075479	ZNF806	TC	T	30
Co	2	133076116	133076118	ZNF806	CA	C	30
Co	21	42749715	42749716	MX2	G	GT	30
Co	3	42244385	42244387	TRAK1	TC	T	30
Co	4	338196	338197	ZNF141	T	TGA	30
Co	4	338200	338203	ZNF141	ATC	A	30
Co	7	100550472	100550475	MUC3A	GCC	G	30
Co	7	142231792	142231793	TRBV10-1	A	AT	30
Co	7	142231795	142231798	TRBV10-1	CCA	C	30
Co	7	142231799	142231800	TRBV10-1	G	GA	30
Co	7	142231804	142231805	TRBV10-1	C	CTG	30
Co	7	142231807	142231810	TRBV10-1	GCC	G	30
Co	9	33797927	33797928	PRSS3	G	GCC	30
Co	9	33797927	33797928	PRSS3	G	GCT	30
Co	9	33797929	33797932	PRSS3	GAC	G	30
Co	GL000212.1	128872	128875		GTC	G	30
Co	18	28647998	28647999	DSC2	T	TTC	30
Co	1	151006405	151006406	PRUNE	C	G	28.6
Co	14	24724662	24724663	TGM1	C	T	28.6
Co	3	38565575	38565576	EXOGL	G	T	28.5
Co	11	5068091	5068092	OR52J3	G	A	28.1
Co	14	102916164	102916165	TECPR2	C	T	28
Co	1	64011656	64011657	EFCAB7	A	G	27.8
Co	2	73493744	73493745	FBXO41	C	T	27.6
Co	11	3688616	3688617	CHRNA10	C	T	27.4
Co	19	55790902	55790903	HSPBP1	C	A	27.4
Co	1	115130507	115130508	DENND2C	A	G	27.3
Co	16	29825021	29825022	PRRT2	C	T	27.3
Co	16	15808875	15808876	MYH11	C	G	27.3
Co	16	66998369	66998370	CES3	C	T	27.2
Co	2	1652361	1652362	PXDN	C	T	27
Co	1	18962816	18962817	PAX7	G	A	26.7
Co	19	55593836	55593837	EPS8L1	G	C	26.7
Co	2	26696373	26696374	OTOF	C	T	26.7

Table B-5: Continued

Co	11	3697573	3697574	NUP98	C	T	26.4
Co	3	153905609	153905610	ARHGEF26	A	G	26.4
Co	15	55790523	55790524	DYX1C1	G	A	26
Co	17	72340433	72340434	KIF19	G	T	25.8
Co	1	159410353	159410354	OR10J1	A	T	25.7
Co	17	62038601	62038602	SCN4A	T	C	25.6
Co	13	96601605	96601606	UGGT2	G	A	25.5
Co	12	6030294	6030295	ANO2	C	T	25.5
Co	11	121495815	121495816	SORL1	A	T	25.5
Co	15	90177031	90177032	KIF7	C	T	25.4
Co	17	66878098	66878099	ABCA8	C	T	25.4
Co	1	42880441	42880442	RIMKLA	G	A	25.2
Co	5	35013057	35013058	AGXT2	C	T	25.1
Co	13	47409563	47409564	HTR2A	C	T	25.1
Co	21	31654829	31654830	KRTAP24-1	C	T	24.9
Co	1	26520353	26520354	CATSPER4	T	C	24.9
Co	11	118425757	118425758	IFT46	G	C	24.9
Co	1	153662422	153662423	NPR1	G	A	24.8
Co	7	142231779	142231780	TRBV10-1	C	T	24.7
Co	19	3530813	3530814	FZR1	G	A	24.7
Co	15	78454049	78454050	IDH3A	T	A	24.7
Co	15	44673139	44673140	CASC4	G	T	24.6
Co	3	183908977	183908978	ABCF3	G	C	24.5
Co	17	7697644	7697645	DNAH2	G	A	24.5
Co	9	125486716	125486717	OR1L4	G	A	24.4
Co	19	12868838	12868839	BEST2	C	G	24.3
Co	8	110454319	110454320	PKHD1L1	C	T	24.2
Co	10	64952756	64952757	JMJD1C	T	C	24
Co	11	2337869	2337870	TSPAN32	G	C	24
Co	19	13930269	13930270	ZSWIM4	C	T	23.7
Co	20	36868105	36868106	KIAA1755	G	A	23.7
Co	6	26017633	26017634	HIST1H1A	C	G	23.6
Co	5	96078455	96078456	CAST	A	G	23.6
Co	3	13367356	13367357	NUP210	G	A	23.6
Co	8	17726236	17726237	FGL1	T	C	23.5
Co	11	55035846	55035847	TRIM48	A	T	23.5
Co	1	204230440	204230441	PLEKHA6	G	A	23.5
Co	7	142206519	142206520	TRBV10-2	C	A	23.4
Co	19	39218648	39218649	ACTN4	G	A	23.4

Table B-5: Continued

Co	5	176011443	176011444	CDHR2	C	T	23.4
Co	2	27353508	27353509	ABHD1	A	G	23.3
Co	6	136599845	136599846	BCLAF1	C	T	23.2
Co	15	81221511	81221512	KIAA1199	G	A	23.2
Co	16	82034459	82034460	SDR42E1	C	T	23.2
Co	18	14105448	14105449	ZNF519	T	G	23.1
Co	14	23873939	23873940	MYH6	C	T	23.1
Co	10	49934019	49934020	WDFY4	G	A	23.1
Co	11	116692232	116692233	APOA4	G	T	23
Co	7	100552387	100552388	MUC3A	C	T	22.9
Co	19	2251136	2251137	AMH	C	G	22.9
Co	7	141747645	141747646	MGAM	C	T	22.9
Co	15	42145592	42145593	SPTBN5	C	T	22.9
Co	9	91963130	91963131	SECISBP2	T	G	22.8
Co	12	48181901	48181902	HDAC7	G	A	22.8
Co	11	56468601	56468602	OR9G1	G	A	22.6
Co	6	32552049	32552050	HLA-DRB1	A	T	22.5
Co	GL000212.1	89697	89698		G	A	22.4
Co	1	235611728	235611729	TBCE	C	A	22.4
Co	5	17275965	17275966	BASP1	C	T	22.3
Co	12	10170943	10170944	CLEC12B	A	G	22.1
Co	12	11183120	11183121	TAS2R31	G	A	22
Co	3	47284564	47284565	KIF9	G	A	22
Co	12	11183122	11183123	TAS2R31	T	C	21.6
Co	18	46736028	46736029	DYM	G	A	20.7
Co	19	8999496	8999497	MUC16	G	GACCA	0
Co	19	8999496	8999501	MUC16	GGCTT	G	0
Co	19	8999497	8999502	MUC16	GCTTT	G	0
Co	GL000212.1	128872	128877		GTCTC	G	0
Co	11	1017442	1017446	MUC6	CGTG	C	0
Co	12	7045890	7045894	ATN1	ACAG	A	0
Co	12	7045890	7045900	ATN1	ACAGCAGCAG	A	0
Co	12	7045890	7045891	ATN1	A	ACAG	0
Co	12	7045890	7045891	ATN1	A	ACAGCAG	0
Co	13	100622666	100622670	ZIC5	TGGC	T	0
Co	13	100622666	100622667	ZIC5	T	TGGC	0
Co	2	118771681	118771682	CCDC93	T	TGCCGCC	0
Co	2	131129927	131129928	PTPN18	A	AGACGGG	0
Co	21	46047827	46047831	KRTAP10-9	TCTC	T	0

Table B-5: Continued

Co	3	42251576	42251580	TRAK1	CGGA	C	0
Co	3	42251576	42251577	TRAK1	C	CGGA	0
Co	3	42251576	42251577	TRAK1	C	CGGAGGA	0
Co	5	82832988	82832992	VCAN	TGAA	T	0
Co	9	141107535	141107536	FAM157B	G	GGCAGCA	0
Co	19	49657709	49657719	HRC	ACATCATCAT	A	0
Co	20	44520236	44520237	CTSA	C	CCTG	0
Co	19	49657709	49657710	HRC	A	ACATCAT	0
Cof	16	20952744	20952745	DNAH3	G	A	56
Cof	4	190876286	190876287	FRG1	G	A	42
Cof	1	74808801	74808802	FPGT-TNNI3K	C	T	40
Cof	1	38059444	38059445	GNL2	G	A	38
Cof	13	25671368	25671369	PABPC3	G	T	38
Cof	X	57475021	57475022	FAAH2	G	T	36
Cof	16	1825981	1825982	EME2	C	T	36
Cof	21	10942994	10942995	TPTE	G	A	35
Cof	7	142008652	142008653	TRBV3-1	T	A	35
Cof	1	151509340	151509341	CGN	C	T	35
Cof	4	53728767	53728768	RASL11B	C	T	35
Cof	10	95930938	95930939	PLCE1	C	T	35
Cof	1	46512265	46512266	PIK3R3	G	A	34
Cof	10	99160876	99160877	RRP12	G	A	34
Cof	17	38936586	38936587	KRT27	C	T	34
Cof	19	36247869	36247870	HSPB6	G	A	34
Cof	20	39983333	39983334	LPIN3	G	A	34
Cof	7	905609	905610	SUN1	G	T	34
Cof	10	124036347	124036348	BTBD16	C	T	34
Cof	18	28712550	28712551	DSC1	C	G	34
Cof	5	179331788	179331789	TBC1D9B	C	T	34
Cof	12	95528592	95528593	FGD6	G	A	34
Cof	14	31774323	31774324	HEATR5A	C	T	34
Cof	3	14180730	14180731	TMEM43	C	T	34
Cof	18	34261510	34261511	FHOD3	C	T	34
Cof	6	32549612	32549613	HLA-DRB1	G	A	33
Cof	16	334919	334920	PDIA2	C	T	33
Cof	17	37650788	37650789	CDK12	C	G	33
Cof	7	6057525	6057526	AIMP2	C	T	33
Cof	12	133257788	133257789	POLE	G	A	33
Cof	19	15233713	15233714	ILVBL	G	A	33

Table B-5: Continued

Cof	18	50912507	50912508	DCC	G	A	33
Cof	3	100057992	100057993	NIT2	G	A	33
Cof	19	55670800	55670801	DNAAF3	G	A	33
Cof	2	219611870	219611871	TTLL4	G	A	33
Cof	8	125061949	125061950	FER1L6	G	T	33
Cof	12	113532885	113532886	DTX1	G	A	32
Cof	19	18254688	18254689	MAST3	C	G	32
Cof	3	13916572	13916573	WNT7A	C	T	32
Cof	6	32489843	32489844	HLA-DRB5	C	T	32
Cof	9	4849540	4849541	RCL1	C	G	32
Cof	10	124746477	124746478	PSTK	G	C	32
Cof	2	220470709	220470710	STK11IP	G	A	32
Cof	1	233511775	233511776	KIAA1804	C	T	32
Cof	8	110255378	110255379	NUDCD1	C	A	31
Cof	5	170216247	170216248	GABRP	G	T	31
Cof	5	35641647	35641648	SPEF2	G	A	31
Cof	16	20429390	20429391	ACSM5	G	A	31
Cof	7	148947861	148947862	ZNF212	G	A	31
Cof	12	11183034	11183035	TAS2R31	C	T	30
Cof	1	45485781	45485782	ZSWIM5	C	A	30
Cof	21	33697575	33697576	URB1	G	A	30
Cof	10	102770313	102770316	PDZD7	TAC	T	30
Cof	12	12247920	12247923	BCL2L14	ATT	A	30
Cof	13	21729289	21729290	SKA3	C	CAG	30
Cof	13	25671271	25671273	PABPC3	AG	A	30
Cof	13	25671331	25671333	PABPC3	CA	C	30
Cof	19	53958387	53958390	ZNF761	CAT	C	30
Cof	2	97851072	97851074	ANKRD36	GC	G	30
Cof	2	97851077	97851078	ANKRD36	A	AG	30
Cof	2	133075477	133075479	ZNF806	TC	T	30
Cof	2	133075903	133075904	ZNF806	C	CA	30
Cof	2	133076116	133076118	ZNF806	CA	C	30
Cof	3	195508448	195508450	MUC4	AG	A	30
Cof	3	195508453	195508454	MUC4	T	TC	30
Cof	7	100550472	100550475	MUC3A	GCC	G	30
Cof	7	100551325	100551326	MUC3A	C	CA	30
Cof	7	100551328	100551329	MUC3A	C	CA	30
Cof	7	100551330	100551333	MUC3A	GTA	G	30
Cof	7	100682604	100682607	MUC17	AAG	A	30

Table B-5: Continued

Cof	7	100682610	100682611	MUC17	A	ATG	30
Cof	7	142008633	142008636	TRBV3-1	ACG	A	30
Cof	7	142008638	142008639	TRBV3-1	A	AGG	30
Cof	7	142197960	142197963	TRBV11-2	TGC	T	30
Cof	7	142197964	142197965	TRBV11-2	C	CCA	30
Cof	7	142231792	142231793	TRBV10-1	A	AT	30
Cof	7	142231795	142231798	TRBV10-1	CCA	C	30
Cof	7	142231799	142231800	TRBV10-1	G	GA	30
Cof	7	142231804	142231805	TRBV10-1	C	CTG	30
Cof	7	142231807	142231810	TRBV10-1	GCC	G	30
Cof	9	33797927	33797928	PRSS3	G	GCC	30
Cof	9	33797927	33797928	PRSS3	G	GCT	30
Cof	9	33797929	33797932	PRSS3	GAC	G	30
Cof	X	142803690	142803692	SPANXN2	AT	A	30
Cof	8	67590021	67590023	C8orf44	CG	C	30
Cof	9	131709580	131709581	DOLK	A	AT	30
Cof	4	49063891	49063893	CWH43	CA	C	30
Cof	16	336887	336888	PDIA2	C	CA	30
Cof	11	47660293	47660294	MTCH2	C	T	29.9
Cof	19	1037717	1037718	CNN2	G	T	29.9
Cof	12	18891316	18891317	CAPZA3	C	T	29.9
Cof	19	1037715	1037716	CNN2	G	A	29.8
Cof	17	72847791	72847792	GRIN2C	G	A	29.4
Cof	4	190876271	190876272	FRG1	G	A	29.4
Cof	5	138729512	138729513	PROB1	G	A	29
Cof	10	50958894	50958895	OGDHL	T	A	29
Cof	11	74203255	74203256	LIPT2	T	A	29
Cof	7	100410778	100410779	EPHB4	A	G	28.9
Cof	1	12337666	12337667	VPS13D	C	T	28.8
Cof	8	37756846	37756847	RAB11FIP1	G	C	28.7
Cof	19	44224042	44224043	IRGC	G	A	28.6
Cof	10	115411593	115411594	NRAP	G	A	28.4
Cof	11	3691084	3691085	CHRNA10	C	G	28.3
Cof	14	102484881	102484882	DYNC1H1	C	T	28.3
Cof	19	14829631	14829632	ZNF333	G	A	28.3
Cof	5	140362124	140362125	PCDHA5	C	G	28.2
Cof	8	30948044	30948045	WRN	A	G	28.1
Cof	19	50367434	50367435	PNKP	C	A	28
Cof	12	70949013	70949014	PTPRB	G	A	27.8

Table B-5: Continued

Cof	6	32826266	32826267	PSMB9	C	T	27.7
Cof	5	16794854	16794855	MYO10	G	A	27.7
Cof	2	31570400	31570401	XDH	C	T	27.5
Cof	6	39284596	39284597	KCNK16	T	G	27.4
Cof	1	99161183	99161184	SNX7	C	A	27.4
Cof	17	35538238	35538239	ACACA	G	T	27.2
Cof	12	80771817	80771818	OTOGL	A	C	27.2
Cof	1	5924452	5924453	NPHP4	T	G	27.1
Cof	22	50471714	50471715	TTLL8	T	G	27.1
Cof	1	16063239	16063240	SLC25A34	G	A	27
Cof	5	139936824	139936825	SRA1	G	C	27
Cof	9	139946039	139946040	ENTPD2	G	A	27
Cof	10	7774396	7774397	ITIH2	A	G	26.9
Cof	3	133119384	133119385	BFSP2	T	A	26.9
Cof	10	103988297	103988298	ELOVL3	T	A	26.9
Cof	11	62446178	62446179	UBXN1	G	C	26.8
Cof	12	56995855	56995856	BAZ2A	G	C	26.8
Cof	11	47660294	47660295	MTCH2	A	G	26.6
Cof	16	68719118	68719119	CDH3	T	C	26.5
Cof	3	43073795	43073796	FAM198A	G	A	26.5
Cof	19	3736238	3736239	TJP3	G	A	26.5
Cof	1	21054040	21054041	SH2D5	A	G	26.4
Cof	15	74884098	74884099	ARID3B	G	A	26.4
Cof	X	13612989	13612990	EGFL6	G	A	26.4
Cof	19	1037714	1037715	CNN2	T	C	26.3
Cof	6	28333658	28333659	ZKSCAN3	A	G	26.3
Cof	17	71468355	71468356	SDK2	A	G	26.3
Cof	11	82644684	82644685	C11orf82	G	T	26.2
Cof	2	69093412	69093413	BMP10	G	A	26.1
Cof	8	52732960	52732961	PCMTD1	G	T	26
Cof	19	51535329	51535330	KLK12	G	A	25.9
Cof	16	778352	778353	HAGHL	G	A	25.7
Cof	16	31422130	31422131	ITGAD	G	A	25.7
Cof	13	73401236	73401237	PIBF1	G	A	25.7
Cof	10	69644588	69644589	SIRT1	C	T	25.5
Cof	16	2235025	2235026	CASKIN1	G	A	25.4
Cof	4	190876306	190876307	FRG1	G	A	25.3
Cof	16	55903639	55903640	CES5A	G	A	25.3
Cof	12	52574732	52574733	KRT80	A	G	25.2

Table B-5: Continued

Cof	9	111625148	111625149	ACTL7A	T	C	25.2
Cof	19	41622480	41622481	CYP2F1	G	C	25.2
Cof	19	38964205	38964206	RYR1	G	A	25.1
Cof	17	8168899	8168900	PFAS	G	A	25
Cof	18	29450900	29450901	TRAPPC8	C	T	25
Cof	22	50512704	50512705	MLC1	G	T	25
Cof	5	146658873	146658874	STK32A	A	T	25
Cof	6	76331307	76331308	SENP6	A	G	24.9
Cof	16	3707065	3707066	DNASE1	C	T	24.9
Cof	17	8141896	8141897	CTC1	C	G	24.9
Cof	20	34785934	34785935	EPB41L1	C	G	24.9
Cof	1	150484843	150484844	ECM1	A	T	24.8
Cof	7	142231779	142231780	TRBV10-1	C	T	24.7
Cof	1	228464254	228464255	OBSCN	T	C	24.7
Cof	2	32396365	32396366	SLC30A6	A	G	24.6
Cof	11	102593265	102593266	MMP8	C	T	24.6
Cof	4	17640879	17640880	FAM184B	C	G	24.6
Cof	3	62204646	62204647	PTPRG	G	A	24.5
Cof	10	26792143	26792144	APBB1IP	G	A	24.5
Cof	21	47817246	47817247	PCNT	C	T	24.5
Cof	6	41057431	41057432	NFYA	A	G	24.4
Cof	19	59059518	59059519	TRIM28	A	C	24.4
Cof	22	50873414	50873415	PPP6R2	G	A	24.4
Cof	7	1587439	1587440	TMEM184A	G	A	24.4
Cof	2	219258855	219258856	SLC11A1	T	C	24.4
Cof	10	106075499	106075500	ITPRIP	G	A	24.3
Cof	12	124824868	124824869	NCOR2	G	A	24.3
Cof	7	138968396	138968397	UBN2	G	A	24.2
Cof	3	8578996	8578997	LMCD1	A	C	24.1
Cof	4	158224857	158224858	GRIA2	G	A	24.1
Cof	12	86199584	86199585	RASSF9	C	G	24.1
Cof	4	79428632	79428633	FRAS1	T	A	24
Cof	2	219754821	219754822	WNT10A	G	A	24
Cof	1	118488734	118488735	WDR3	T	C	23.9
Cof	20	2779511	2779512	CPXM1	C	T	23.9
Cof	1	203696547	203696548	ATP2B4	C	T	23.9
Cof	13	25670954	25670955	PABPC3	C	T	23.9
Cof	9	123605137	123605138	PSMD5	G	A	23.8
Cof	21	15599566	15599567	RBM11	G	A	23.8

Table B-5: Continued

Cof	5	118264365	118264366	DTWD2	C	T	23.8
Cof	5	180377065	180377066	BTNL8	A	G	23.8
Cof	17	67151206	67151207	ABCA10	C	A	23.8
Cof	19	8670114	8670115	ADAMTS10	C	T	23.8
Cof	7	142651353	142651354	KEL	G	A	23.8
Cof	10	108924081	108924082	SORCS1	G	A	23.7
Cof	12	53590579	53590580	ITGB7	G	A	23.7
Cof	4	6302815	6302816	WFS1	C	G	23.7
Cof	3	148601438	148601439	CPA3	G	C	23.7
Cof	14	22133789	22133790	OR4E2	G	A	23.6
Cof	11	119061076	119061077	CCDC153	T	C	23.6
Cof	5	140739864	140739865	PCDHGB2	G	A	23.5
Cof	19	43698715	43698716	PSG4	G	A	23.5
Cof	1	226578277	226578278	PARP1	C	A	23.4
Cof	14	68041048	68041049	PLEKHH1	G	A	23.4
Cof	17	35545287	35545288	ACACA	G	C	23.4
Cof	17	41245119	41245120	BRCA1	T	A	23.4
Cof	19	48607880	48607881	PLA2G4C	G	T	23.4
Cof	4	140640526	140640527	MAML3	G	A	23.4
Cof	13	21732059	21732060	SKA3	C	G	23.3
Cof	12	113416524	113416525	OAS2	G	A	23.3
Cof	20	47874182	47874183	ZNFX1	T	G	23.3
Cof	16	20556527	20556528	ACSM2B	C	T	23.3
Cof	1	203008235	203008236	PPFIA4	C	A	23.3
Cof	15	48537092	48537093	SLC12A1	A	C	23.2
Cof	19	45262861	45262862	BCL3	G	C	23.2
Cof	5	11364897	11364898	CTNND2	C	T	23.2
Cof	20	44692201	44692202	NCOA5	A	G	23.2
Cof	6	32489891	32489892	HLA-DRB5	G	A	23.1
Cof	14	20845878	20845879	TEP1	G	A	23.1
Cof	14	24776703	24776704	CIDEB	C	T	23
Cof	7	103236964	103236965	RELN	G	T	23
Cof	9	131767805	131767806	NUP188	T	G	23
Cof	16	66503704	66503705	BEAN1	C	A	23
Cof	10	16942830	16942831	CUBN	C	A	22.9
Cof	11	9606884	9606885	WEE1	G	A	22.9
Cof	1	48267173	48267174	TRABD2B	C	T	22.9
Cof	2	74717205	74717206	TTC31	C	T	22.8
Cof	10	74100835	74100836	DNAJB12	C	T	22.8

Table B-5: Continued

Cof	19	7607740	7607741	PNPLA6	C	T	22.8
Cof	15	99514334	99514335	PGPEP1L	A	G	22.8
Cof	8	145622444	145622445	CPSF1	G	A	22.7
Cof	2	219528897	219528898	RNF25	C	G	22.7
Cof	15	86123808	86123809	AKAP13	C	T	22.7
Cof	7	100187348	100187349	FBXO24	T	A	22.7
Cof	1	202722127	202722128	KDM5B	T	C	22.6
Cof	4	101109194	101109195	DDIT4L	C	T	22.6
Cof	11	1017293	1017294	MUC6	A	T	22.5
Cof	17	8661695	8661696	SPDYE4	G	A	22.5
Cof	4	160275126	160275127	RAPGEF2	C	T	22.4
Cof	16	30435600	30435601	DCTPP1	C	G	22.4
Cof	12	122817560	122817561	CLIP1	A	C	22.3
Cof	5	177577922	177577923	NHP2	C	T	22.3
Cof	11	129739545	129739546	NFRKB	T	C	22.3
Cof	10	35930044	35930045	FZD8	G	C	22
Cof	X	152482608	152482609	MAGEA1	T	G	21.9
Cof	19	53058714	53058715	ZNF808	G	C	21.8
Cof	2	74710513	74710514	TTC31	G	T	21.6
Cof	20	56798105	56798106	ANKRD60	A	C	21.2
Cof	6	41652794	41652795	TFEB	C	T	21.1
Cof	2	74588716	74588717	DCTN1	G	A	21.1
Cof	5	167871501	167871502	WWC1	G	T	20.8
Cof	20	61391382	61391383	NTSR1	T	C	20.8
Cof	10	71835572	71835573	H2AFY2	T	G	20.6
Cof	9	33797950	33797951	PRSS3	A	C	20.5
Cof	22	46627779	46627780	PPARA	C	T	20.5
Cof	17	74078112	74078113	ZACN	G	A	20.5
Cof	13	80095077	80095078	NDFIP2	G	A	20.4
Cof	7	2742513	2742514	AMZ1	C	T	20.3
Cof	13	21729289	21729290	SKA3	C	CAGTTTCTT	0
Cof	13	25671309	25671315	PABPC3	TTATGA	T	0
Cof	19	8999496	8999497	MUC16	G	GACCA	0
Cof	19	8999496	8999501	MUC16	GGCTT	G	0
Cof	19	43382252	43382258	PSG1	GATGTA	G	0
Cof	2	97851081	97851086	ANKRD36	GTAAT	G	0
Cof	3	49846855	49846860	UBA7	CTGTT	C	0
Cof	10	125780751	125780755	CHST15	CGGG	C	0
Cof	11	1017442	1017446	MUC6	CGTG	C	0

Table B-5: Continued

Cof	11	111594602	111594606	SIK2	TCTC	T	0
Cof	12	7045890	7045894	ATN1	ACAG	A	0
Cof	12	7045890	7045900	ATN1	ACAGCAGCAG	A	0
Cof	12	7045890	7045891	ATN1	A	ACAG	0
Cof	12	7045890	7045891	ATN1	A	ACAGCAG	0
Cof	12	132547092	132547093	EP400	A	ACAGCAG	0
Cof	16	12009529	12009530	GSPT1	C	CCCGCCG	0
Cof	19	41173870	41173874	NUMBL	CTGT	C	0
Cof	2	118771681	118771682	CCDC93	T	TGCCGCC	0
Cof	3	27763426	27763427	EOMES	G	GCGC	0
Cof	3	42251576	42251580	TRAK1	CGGA	C	0
Cof	3	42251576	42251577	TRAK1	C	CGGAGGA	0
Cof	7	23339041	23339042	MALSU1	C	CGGG	0
Cof	8	11666217	11666224	FDFT1	GTCCCAC	G	0
Cof	9	95237023	95237024	ASPN	C	CTCA	0
Cof	9	95237023	95237024	ASPN	C	CTCATCA	0
Cof	X	24382372	24382373	SUPT20HL1	T	TTGCTGCTGC	0
Cof	X	66765157	66765158	AR	T	TGCAGCA	0
Cof	X	136648983	136648987	ZIC3	ACGC	A	0
Cof	12	32134716	32134720	KIAA1551	ACCT	A	0
Cof	21	35791777	35791781	KCNE1	ATAT	A	0
Cof	19	49657709	49657719	HRC	ACATCATCAT	A	0
Cof	22	39024891	39024895	FAM227A	GAGA	G	0
Cof	1	26670649	26670650	AIM1L	T	TTCC	0
Cof	6	7910869	7910870	TXNDC5	T	TCCG	0
Cof	19	49657709	49657710	HRC	A	ACATCAT	0
F	7	142008652	142008653	TRBV3-1	T	A	35
F	12	109536365	109536366	UNG	C	T	35
F	12	42499710	42499711	GXYLT1	C	A	34
F	22	46677526	46677527	TTC38	C	T	34
F	8	125052175	125052176	FER1L6	G	A	34
F	6	32549612	32549613	HLA-DRB1	G	A	33
F	12	42499738	42499739	GXYLT1	C	T	33
F	8	22049595	22049596	BMP1	G	A	33
F	11	62381841	62381842	ROM1	G	A	32
F	8	144994063	144994064	PLEC	G	A	31
F	1	20141404	20141405	RNF186	C	T	30
F	13	103386628	103386630	CCDC168	GT	G	30
F	17	691356	691357	RNMTL1	G	A	29.1

Table B-5: Continued

F	15	58467164	58467165	AQP9	A	T	28.9
F	3	145824346	145824347	PLOD2	G	A	28.8
F	15	49048566	49048567	CEP152	A	G	28.7
F	12	42499737	42499738	GXYLT1	T	C	26.6
F	4	40351166	40351167	CHRNA9	A	G	26
F	7	8153585	8153586	ICA1	T	G	26
F	11	73796877	73796878	C2CD3	T	C	25.5
F	3	184910077	184910078	EHHADH	G	A	25.2
F	12	42499700	42499701	GXYLT1	C	A	25.1
F	19	813815	813816	LPPR3	C	T	24.4
F	12	123058922	123058923	KNTC1	C	T	24.2
F	9	35061052	35061053	VCP	C	G	23.9
F	1	41107563	41107564	RIMS3	C	T	23.9
F	17	10354726	10354727	MYH4	T	G	23.9
F	13	25670954	25670955	PABPC3	C	T	23.9
F	6	88372823	88372824	ORC3	C	G	23.7
F	4	2910307	2910308	ADD1	G	A	23.7
F	11	17627547	17627548	OTOG	G	A	23.6
F	19	1987561	1987562	BTBD2	C	A	23.4
F	11	72408129	72408130	ARAP1	G	C	23.2
F	9	5462875	5462876	CD274	C	G	23
F	11	57958577	57958578	OR9Q2	G	A	22.9
F	9	35663005	35663006	ARHGEF39	C	T	22.7
F	1	235922670	235922671	LYST	T	G	22.7
F	3	141295906	141295907	RASA2	G	T	22.5
F	6	168440825	168440826	KIF25	C	G	22.3
F	20	62496734	62496735	TPD52L2	A	G	21.5
F	19	418947	418948	SHC2	C	T	21.2
F	19	10225258	10225259	PPAN-P2RY11	G	A	20.1
F	21	33044275	33044279	SCAF4	CTGT	C	0
F	22	20920812	20920819	MED15	ACAGCAG	A	0
F	3	69168399	69168403	LMOD3	GTGT	G	0
F	3	159482270	159482274	SCHIP1	GGCA	G	0
F	3	112693644	112693648	CD200R1	TAAG	T	0
He	19	40711086	40711087	MAP3K10	G	T	39
He	12	8995807	8995808	A2ML1	C	T	35
He	7	142008652	142008653	TRBV3-1	T	A	35
He	17	45438787	45438788	EFCAB13	C	T	35
He	3	50326291	50326292	IFRD2	C	T	35

Table B-5: Continued

He	17	10424642	10424643	MYH2	C	T	35
He	13	28539068	28539069	CDX2	G	A	34
He	5	159840526	159840527	SLU7	C	T	34
He	2	44055162	44055163	ABCG5	C	T	34
He	5	131729379	131729380	SLC22A5	G	A	34
He	8	19263327	19263328	CSGALNACT1	C	G	34
He	12	111856075	111856076	SH2B3	C	T	33
He	4	187118691	187118692	CYP4V2	G	A	33
He	5	121786958	121786959	SNCAIP	G	A	33
He	19	2733301	2733302	SLC39A3	G	A	32
He	3	93754190	93754191	ARL13B	G	T	32
He	12	39751214	39751215	KIF21A	C	G	32
He	3	184714198	184714199	VPS8	G	T	31
He	3	194371880	194371881	LSG1	G	C	31
He	10	129905110	129905111	MKI67	C	CTG	30
He	11	20417437	20417440	PRMT3	CAT	C	30
He	11	57313468	57313469	SMTNL1	C	CG	30
He	11	118827665	118827667	UPK2	CT	C	30
He	12	12247920	12247923	BCL2L14	ATT	A	30
He	12	40880360	40880363	MUC19	GCT	G	30
He	14	107108271	107108272	IGHV3-63	A	AG	30
He	18	34409114	34409115	KIAA1328	C	CG	30
He	2	48808540	48808541	STON1-GTF2A1L	G	GA	30
He	2	97851072	97851074	ANKRD36	GC	G	30
He	2	97851077	97851078	ANKRD36	A	AG	30
He	2	133075477	133075479	ZNF806	TC	T	30
He	2	133075903	133075904	ZNF806	C	CA	30
He	2	133076116	133076118	ZNF806	CA	C	30
He	21	11021162	11021163	LOC101926954	T	TA	30
He	7	31697912	31697914	CCDC129	CT	C	30
He	7	100550471	100550472	MUC3A	C	CAG	30
He	7	100550472	100550475	MUC3A	GCC	G	30
He	7	142008633	142008636	TRBV3-1	ACG	A	30
He	7	142008638	142008639	TRBV3-1	A	AGG	30
He	7	142168507	142168509	TRBV5-4	TC	T	30
He	7	142168514	142168515	TRBV5-4	T	TC	30
He	7	142231792	142231793	TRBV10-1	A	AT	30
He	7	142231795	142231798	TRBV10-1	CCA	C	30
He	7	142231799	142231800	TRBV10-1	G	GA	30

Table B-5: Continued

He	7	142231804	142231805	TRBV10-1	C	CTG	30
He	9	33797927	33797928	PRSS3	G	GCC	30
He	9	33797927	33797928	PRSS3	G	GCT	30
He	9	33797929	33797932	PRSS3	GAC	G	30
He	9	79117511	79117512	GCNT1	A	AG	30
He	GL000212.1	128872	128875		GTC	G	30
He	GL000212.1	10741	10742		T	TG	30
He	X	118603960	118603962	SLC25A5	CT	C	30
He	11	12270792	12270795	MICAL2	GGT	G	30
He	11	111864233	111864234	DIXDC1	G	T	29.3
He	2	113496452	113496453	CKAP2L	G	A	29.1
He	3	124578211	124578212	ITGB5	C	G	29
He	11	48152184	48152185	PTPRJ	C	T	28.9
He	1	76345822	76345823	MSH4	A	G	28.6
He	15	31197014	31197015	FAN1	T	G	28.4
He	11	57003727	57003728	APLNR	C	T	27.9
He	5	102282588	102282589	PAM	C	T	27.8
He	12	109719558	109719559	FOXN4	C	T	27.5
He	4	111434660	111434661	ENPEP	C	T	27.4
He	16	57832135	57832136	KIFC3	G	A	27.4
He	9	124534951	124534952	DAB2IP	G	T	27.3
He	6	109954144	109954145	AK9	G	A	27.1
He	15	55663992	55663993	CCPG1	T	C	27
He	2	27262011	27262012	TMEM214	G	A	26.9
He	17	4720501	4720502	PLD2	C	T	26.8
He	2	110015222	110015223	SH3RF3	A	G	26.8
He	1	204092086	204092087	SOX13	G	A	26.7
He	9	289556	289557	DOCK8	G	A	26.7
He	14	65406401	65406402	GPX2	G	A	26.7
He	15	89390512	89390513	ACAN	C	T	26.5
He	1	38484794	38484795	UTP11L	A	G	26.4
He	11	61487669	61487670	DAGLA	A	G	26.3
He	15	65116209	65116210	PIF1	G	A	26.3
He	13	25671026	25671027	PABPC3	A	G	26.1
He	3	112709993	112709994	GTPBP8	C	T	26.1
He	X	118604029	118604030	SLC25A5	T	C	26.1
He	15	74509751	74509752	LOC101929303	T	G	26
He	9	128678096	128678097	PBX3	C	T	26
He	12	20522834	20522835	PDE3A	T	C	25.9

Table B-5: Continued

He	5	131721061	131721062	SLC22A5	C	T	25.9
He	11	55944466	55944467	OR5J2	C	T	25.7
He	11	116655858	116655859	ZNF259	C	T	25.6
He	14	60448778	60448779	LRRC9	G	A	25.4
He	1	175046834	175046835	TNN	C	T	25.4
He	11	71146885	71146886	DHCR7	C	G	25.2
He	17	9408404	9408405	STX8	C	G	25.1
He	11	20119221	20119222	NAV2	G	A	25.1
He	11	35006144	35006145	PDHX	A	G	25
He	15	89453046	89453047	MFGE8	A	T	25
He	18	54694327	54694328	WDR7	G	C	24.9
He	17	10222461	10222462	MYH13	G	A	24.8
He	7	142231779	142231780	TRBV10-1	C	T	24.7
He	9	96002096	96002097	WNK2	G	T	24.7
He	2	228110690	228110691	COL4A3	C	A	24.7
He	2	53927509	53927510	ASB3	T	C	24.5
He	15	62283294	62283295	VPS13C	T	C	24.4
He	11	63885450	63885451	FLRT1	G	T	24.4
He	2	63282738	63282739	OTX1	G	C	24.4
He	4	120192844	120192845	USP53	A	T	24.4
He	5	148407569	148407570	SH3TC2	C	G	24.4
He	7	142510340	142510341	TRBV30	G	A	24.4
He	17	1028675	1028676	ABR	C	T	24.4
He	5	149206427	149206428	PPARGC1B	G	C	24.3
He	12	113405327	113405328	OAS3	G	A	24.3
He	7	2671861	2671862	TTYH3	T	G	24.3
He	X	118604013	118604014	SLC25A5	G	A	24.2
He	6	44371682	44371683	CDC5L	A	C	24.2
He	2	150438707	150438708	MMADHC	T	G	24.2
He	11	2428441	2428442	TRPM5	C	T	24
He	11	67017967	67017968	KDM2A	A	C	24
He	1	186337027	186337028	TPR	T	A	24
He	5	140475664	140475665	PCDHB2	C	A	24
He	13	25670954	25670955	PABPC3	C	T	23.9
He	2	179395914	179395915	TTN	C	T	23.8
He	X	118604005	118604006	SLC25A5	A	G	23.8
He	18	47109954	47109955	LIPG	A	G	23.8
He	11	118422525	118422526	IFT46	G	A	23.7
He	19	23159107	23159108	ZNF728	T	A	23.7

Table B-5: Continued

He	14	51348344	51348345	ABHD12B	G	T	23.5
He	4	123156141	123156142	KIAA1109	T	C	23.5
He	7	142206519	142206520	TRBV10-2	C	A	23.4
He	20	24944482	24944483	APMAP	G	A	23.4
He	11	9597485	9597486	WEE1	G	T	23.4
He	11	47367883	47367884	MYBPC3	A	C	23.3
He	19	9000168	9000169	MUC16	C	T	23.3
He	17	4720548	4720549	PLD2	G	A	23.3
He	3	48627788	48627789	COL7A1	C	A	23.3
He	12	56345540	56345541	DGKA	A	G	23.3
He	18	32834231	32834232	ZSCAN30	G	A	23.3
He	3	12857895	12857896	CAND2	C	T	23.1
He	10	26518670	26518671	GAD2	G	A	23.1
He	4	100571565	100571566	LOC285556	T	C	23.1
He	5	140502432	140502433	PCDHB4	G	C	23.1
He	1	36884614	36884615	OSCP1	C	T	23
He	2	242743531	242743532	GAL3ST2	T	C	22.9
He	14	105413322	105413323	AHNAK2	G	A	22.8
He	2	97845606	97845607	ANKRD36	G	A	22.8
He	X	118603957	118603958	SLC25A5	G	A	22.8
He	2	97845615	97845616	ANKRD36	G	T	22.7
He	5	149755361	149755362	TCOF1	G	A	22.7
He	2	179419407	179419408	TTN	G	A	22.6
He	5	89990446	89990447	GPR98	G	A	22.6
He	15	41192298	41192299	VPS18	G	A	22.5
He	X	1540720	1540721	ASMTL	C	G	22.4
He	3	12851675	12851676	CAND2	G	A	22.4
He	1	155261648	155261649	PKLR	C	T	22.3
He	12	110206629	110206630	FAM222A	C	T	22.2
He	13	20717029	20717030	GJA3	C	T	22.1
He	1	156018298	156018299	UBQLN4	C	T	22.1
He	15	78322384	78322385	TBC1D2B	C	T	21.9
He	X	118603983	118603984	SLC25A5	G	A	21.9
He	11	76371564	76371565	LRRC32	G	A	21.9
He	3	195490308	195490309	MUC4	C	T	21.9
He	10	126136377	126136378	NKX1-2	T	C	21.8
He	22	50721187	50721188	PLXNB2	C	T	21.8
He	18	31320332	31320333	ASXL3	C	G	21.5
He	14	44976099	44976100	FSCB	T	C	21.3

Table B-5: Continued

He	16	66975426	66975427	CES2	G	A	21.3
He	4	15005407	15005408	CPEB2	G	A	21.2
He	9	121929725	121929726	BRINP1	G	A	21.2
He	17	73569665	73569666	LLGL2	C	T	21.2
He	22	38528887	38528888	PLA2G6	C	T	21.2
He	9	33797950	33797951	PRSS3	A	C	20.5
He	1	12907445	12907446	HNRNPCL1	C	T	20.4
He	12	40880383	40880391	MUC19	ACCATCAG	A	0
He	12	40880393	40880399	MUC19	GAAGTC	G	0
He	19	8999496	8999497	MUC16	G	GACCA	0
He	19	8999496	8999501	MUC16	GGCTT	G	0
He	19	8999497	8999502	MUC16	GCTTT	G	0
He	4	113508646	113508651	C4orf21	CTCTG	C	0
He	GL000212.1	128872	128877		GTCTC	G	0
He	10	125780751	125780755	CHST15	CGGG	C	0
He	11	722410	722411	EPS8L2	C	CCTG	0
He	11	6662744	6662748	DCHS1	CCAG	C	0
He	11	65325324	65325325	LTBP3	C	CCAG	0
He	12	132547092	132547093	EP400	A	ACAGCAG	0
He	13	79176482	79176486	POU4F1	CTGG	C	0
He	13	100622666	100622670	ZIC5	TGGC	T	0
He	16	12009529	12009530	GSPT1	C	CCCGCCG	0
He	16	72831356	72831357	ZFHX3	C	CTTGTTG	0
He	2	73308222	73308226	RAB11FIP5	TTCC	T	0
He	2	73308222	73308229	RAB11FIP5	TTCCTCC	T	0
He	22	20920812	20920819	MED15	ACAGCAG	A	0
He	22	21539593	21539597	LOC101927985	CGTT	C	0
He	22	50886753	50886757	SBF1	ACTC	A	0
He	3	40503519	40503529	RPL14	ACTGCTGCTG	A	0
He	3	42251576	42251580	TRAK1	CGGA	C	0
He	3	42251576	42251577	TRAK1	C	CGGA	0
He	3	42251576	42251577	TRAK1	C	CGGAGGA	0
He	5	146258289	146258293	PPP2R2B	AGCT	A	0
He	7	142168497	142168501	TRBV5-4	GCCA	G	0
He	7	142168501	142168502	TRBV5-4	T	TTTC	0
He	9	95237023	95237027	ASPN	CTCA	C	0
He	9	95237023	95237024	ASPN	C	CTCATCATCA	0
He	GL000212.1	62387	62391		TGTC	T	0
He	GL000212.1	62754	62755		C	CTAA	0

Table B-5: Continued

He	GL000212.1	122140	122147		GTCCTCC	G	0
He	GL000212.1	122140	122144		GTCC	G	0
He	GL000212.1	122140	122141		G	GTCCTCCTCC	0
He	GL000212.1	122140	122141		G	GTCC	0
He	14	39901256	39901266	FBXO33	CGTCGCAGCT	C	0
Ke	10	125521562	125521563	CPXM2	C	T	40
Ke	13	25671368	25671369	PABPC3	G	T	38
Ke	16	2094789	2094790	NTHL1	G	T	38
Ke	6	27806580	27806581	HIST1H2BN	C	T	37
Ke	17	7760573	7760574	LSMD1	C	T	37
Ke	19	40520893	40520894	ZNF546	C	T	36
Ke	3	178916622	178916623	PIK3CA	C	T	36
Ke	14	64066362	64066363	WDR89	G	A	35
Ke	4	141372655	141372656	LOC152586	G	A	35
Ke	4	76782055	76782056	PPEF2	C	T	35
Ke	12	28702010	28702011	CCDC91	C	T	35
Ke	17	73732139	73732140	ITGB4	C	T	35
Ke	19	49339622	49339623	HSD17B14	C	A	35
Ke	1	48877223	48877224	SPATA6	C	A	34
Ke	11	120776121	120776122	GRIK4	C	T	34
Ke	12	122958689	122958690	ZCCHC8	G	A	34
Ke	15	40557026	40557027	PAK6	C	T	34
Ke	2	20189001	20189002	WDR35	C	A	34
Ke	5	38370407	38370408	EGFLAM	G	A	34
Ke	14	91763719	91763720	CCDC88C	G	A	34
Ke	15	41865922	41865923	TYRO3	C	T	33
Ke	19	39096291	39096292	MAP4K1	G	A	33
Ke	2	201750424	201750425	PPIL3	C	T	33
Ke	14	81737170	81737171	STON2	G	A	33
Ke	17	38324553	38324554	CASC3	C	T	33
Ke	12	50561022	50561023	CERS5	G	A	33
Ke	1	100343253	100343254	AGL	G	A	33
Ke	6	36099049	36099050	MAPK13	C	T	33
Ke	5	179069466	179069467	C5orf60	C	T	32
Ke	3	43096927	43096928	FAM198A	G	A	32
Ke	17	66538222	66538223	FAM20A	C	T	32
Ke	19	7997575	7997576	TIMM44	G	T	32
Ke	19	33149860	33149861	ANKRD27	G	A	32
Ke	3	52836532	52836533	ITIH3	G	A	32

Table B-5: Continued

Ke	6	142397029	142397030	NMBR	G	A	32
Ke	16	84212874	84212875	TAF1C	G	A	31
Ke	9	123874802	123874803	CNTRL	G	A	31
Ke	4	108948849	108948850	HADH	C	A	31
Ke	1	2290142	2290143	MORN1	G	A	31
Ke	6	117128307	117128308	GPRC6A	C	T	31
Ke	12	11183034	11183035	TAS2R31	C	T	30
Ke	3	125879754	125879755	ALDH1L1	C	T	30
Ke	11	1651642	1651643	KRTAP5-5	C	CTG	30
Ke	11	1651644	1651647	KRTAP5-5	ACT	A	30
Ke	11	57313468	57313469	SMTNL1	C	CG	30
Ke	12	9555194	9555195	LOC728715	T	TC	30
Ke	12	12247920	12247923	BCL2L14	ATT	A	30
Ke	12	42499816	42499817	GXYLT1	A	ATT	30
Ke	13	25671271	25671273	PABPC3	AG	A	30
Ke	13	25671331	25671333	PABPC3	CA	C	30
Ke	15	43533183	43533184	TGM5	C	CA	30
Ke	19	33444598	33444601	CEP89	CTT	C	30
Ke	19	33444608	33444611	CEP89	GAT	G	30
Ke	19	33444609	33444611	CEP89	AT	A	30
Ke	19	33444620	33444623	CEP89	GTT	G	30
Ke	2	31425035	31425038	CAPN14	ACT	A	30
Ke	2	97851072	97851074	ANKRD36	GC	G	30
Ke	2	97851077	97851078	ANKRD36	A	AG	30
Ke	2	133075477	133075479	ZNF806	TC	T	30
Ke	2	133075903	133075904	ZNF806	C	CA	30
Ke	2	133076116	133076118	ZNF806	CA	C	30
Ke	22	50753069	50753070	DENND6B	C	CT	30
Ke	4	38798146	38798147	TLR1	C	CA	30
Ke	5	733914	733915	ZDHHC11B	T	TAA	30
Ke	5	733918	733921	ZDHHC11B	CAT	C	30
Ke	6	30996990	30996991	MUC22	A	ATG	30
Ke	6	32489742	32489744	HLA-DRB5	CG	C	30
Ke	7	100550472	100550475	MUC3A	GCC	G	30
Ke	7	100550629	100550630	MUC3A	C	CA	30
Ke	7	100550631	100550632	MUC3A	T	TCG	30
Ke	7	100551310	100551313	MUC3A	CTG	C	30
Ke	7	100551313	100551314	MUC3A	C	CAT	30
Ke	7	100551325	100551326	MUC3A	C	CA	30

Table B-5: Continued

Ke	7	100551328	100551329	MUC3A	C	CA	30
Ke	7	100551330	100551333	MUC3A	GTA	G	30
Ke	7	142168507	142168509	TRBV5-4	TC	T	30
Ke	7	142168514	142168515	TRBV5-4	T	TC	30
Ke	7	142231792	142231793	TRBV10-1	A	AT	30
Ke	7	142231795	142231798	TRBV10-1	CCA	C	30
Ke	7	142231799	142231800	TRBV10-1	G	GA	30
Ke	7	142231804	142231805	TRBV10-1	C	CTG	30
Ke	7	142231807	142231810	TRBV10-1	GCC	G	30
Ke	8	38677317	38677319	TACC1	AG	A	30
Ke	9	33797927	33797928	PRSS3	G	GCC	30
Ke	9	33797927	33797928	PRSS3	G	GCT	30
Ke	9	33797929	33797932	PRSS3	GAC	G	30
Ke	9	86383758	86383760	GKAP1	TA	T	30
Ke	GL000212.1	119456	119458		CG	C	30
Ke	GL000212.1	119487	119488		T	TCG	30
Ke	X	140995383	140995386	MAGEC1	CAG	C	30
Ke	18	61306958	61306960	SERPINB4	AG	A	30
Ke	7	16502200	16502202	SOSTDC1	CT	C	30
Ke	2	118771718	118771719	CCDC93	C	CG	30
Ke	1	225273308	225273310	DNAH14	GA	G	30
Ke	3	128634097	128634100	LOC100132731	CAG	C	30
Ke	19	14492256	14492258	CD97	CA	C	30
Ke	2	27849927	27849930	CCDC121	GTC	G	30
Ke	12	42499801	42499802	GXYLT1	C	A	29.8
Ke	19	19232370	19232371	TMEM161A	C	T	29.7
Ke	9	115593047	115593048	SNX30	T	C	29.7
Ke	8	124693508	124693509	ANXA13	G	A	29.7
Ke	22	19467699	19467700	CDC45	C	T	29.6
Ke	16	67981605	67981606	SLC12A4	C	T	29.4
Ke	20	10393438	10393439	MKKS	C	A	29.3
Ke	17	41955314	41955315	MPP2	G	A	29.3
Ke	7	116411989	116411990	MET	C	T	29.2
Ke	2	48809254	48809255	STON1-GTF2A1L	G	A	29
Ke	2	141113993	141113994	LRP1B	G	A	28.9
Ke	6	31731194	31731195	SAPCD1	C	T	28.7
Ke	2	200820873	200820874	C2orf47	C	G	28.5
Ke	13	31858865	31858866	B3GALT1	C	T	28.4
Ke	20	62178593	62178594	SRMS	C	T	28.3

Table B-5: Continued

Ke	16	11272329	11272330	CLEC16A	G	A	28.2
Ke	22	26270268	26270269	MYO18B	G	T	28.1
Ke	3	53262091	53262092	TKT	G	A	28.1
Ke	2	130949587	130949588	TUBA3E	C	T	27.9
Ke	17	2227571	2227572	TSR1	G	A	27.9
Ke	19	9868685	9868686	ZNF846	T	A	27.9
Ke	1	22895819	22895820	EPHA8	G	A	27.9
Ke	3	27490230	27490231	SLC4A7	C	T	27.7
Ke	18	3135691	3135692	MYOM1	T	A	27.7
Ke	4	189060802	189060803	TRIML1	T	A	27.7
Ke	12	53170488	53170489	KRT76	G	A	27.6
Ke	1	207245683	207245684	PFKFB2	C	T	27.4
Ke	1	99161183	99161184	SNX7	C	A	27.4
Ke	19	55790902	55790903	HSPBP1	C	A	27.4
Ke	4	6303848	6303849	WFS1	A	T	27.3
Ke	16	70286630	70286631	AARS	T	A	27.3
Ke	7	101921291	101921292	CUX1	A	C	27.3
Ke	6	36714276	36714277	CPNE5	C	T	27.2
Ke	16	85696634	85696635	GSE1	A	T	27
Ke	5	81608562	81608563	ATP6AP1L	T	C	26.8
Ke	19	47883125	47883126	DHX34	C	T	26.7
Ke	19	55593836	55593837	EPS8L1	G	C	26.7
Ke	4	8293192	8293193	HTRA3	G	A	26.6
Ke	12	42499824	42499825	GXYLT1	A	C	26.5
Ke	19	57329116	57329117	PEG3	G	C	26.5
Ke	20	3687140	3687141	SIGLEC1	C	A	26.4
Ke	10	72462118	72462119	ADAMTS14	C	G	26.4
Ke	14	64066401	64066402	WDR89	A	G	26.4
Ke	12	88533295	88533296	CEP290	C	T	26.2
Ke	13	25671291	25671292	PABPC3	C	T	26.2
Ke	13	41507768	41507769	ELF1	G	A	26.2
Ke	13	25671026	25671027	PABPC3	A	G	26.1
Ke	15	40659712	40659713	DISP2	C	T	26.1
Ke	7	103234201	103234202	RELN	C	T	26.1
Ke	16	1391387	1391388	BAIAP3	G	A	26
Ke	2	85617309	85617310	ELMOD3	G	A	26
Ke	8	110453027	110453028	PKHD1L1	C	A	26
Ke	8	135614552	135614553	ZFAT	G	C	25.9
Ke	11	117153203	117153204	RNF214	G	T	25.8

Table B-5: Continued

Ke	3	129247703	129247704	RHO	A	G	25.8
Ke	1	243349654	243349655	CEP170	C	T	25.8
Ke	2	172336595	172336596	DCAF17	G	A	25.8
Ke	1	167515349	167515350	CREG1	T	A	25.7
Ke	15	52529716	52529717	MYO5C	C	T	25.7
Ke	15	101551006	101551007	LRRK1	C	A	25.7
Ke	2	69002360	69002361	ARHGAP25	A	G	25.6
Ke	20	44171403	44171404	EPPIN	C	T	25.6
Ke	4	57860576	57860577	POLR2B	A	G	25.6
Ke	12	55945515	55945516	OR6C4	C	A	25.5
Ke	2	128065314	128065315	MAP3K2	A	G	25.5
Ke	2	234749672	234749673	HJURP	C	T	25.5
Ke	18	18964285	18964286	GREB1L	G	A	25.5
Ke	1	175046834	175046835	TNN	C	T	25.4
Ke	4	190876306	190876307	FRG1	G	A	25.3
Ke	11	33308003	33308004	HIPK3	C	G	25.3
Ke	19	1620974	1620975	TCF3	C	T	25.2
Ke	1	55080448	55080449	FAM151A	G	A	25.1
Ke	18	28934374	28934375	DSG1	T	C	25.1
Ke	8	72981336	72981337	TRPA1	G	A	25
Ke	5	140784253	140784254	PCDHGA9	C	T	25
Ke	11	63994509	63994510	NUDT22	C	G	25
Ke	13	111290802	111290803	CARKD	C	T	24.9
Ke	20	42143935	42143936	L3MBTL1	G	A	24.8
Ke	1	32669917	32669918	CCDC28B	G	A	24.8
Ke	6	42819872	42819873	GLTSCR1L	C	A	24.8
Ke	6	29323244	29323245	OR5V1	G	C	24.8
Ke	19	13411450	13411451	CACNA1A	T	G	24.8
Ke	7	142231779	142231780	TRBV10-1	C	T	24.7
Ke	17	75208178	75208179	SEC14L1	C	T	24.7
Ke	6	21595711	21595712	SOX4	C	T	24.7
Ke	17	7752522	7752523	KDM6B	A	C	24.7
Ke	12	121570898	121570899	P2RX7	G	T	24.6
Ke	3	126226624	126226625	UROCI	G	A	24.6
Ke	20	1918142	1918143	SIRPA	C	T	24.6
Ke	8	144999199	144999200	PLEC	G	A	24.5
Ke	11	107381617	107381618	ALKBH8	T	C	24.5
Ke	1	22923858	22923859	EPHA8	C	A	24.5
Ke	12	96409437	96409438	LTA4H	G	T	24.4

Table B-5: Continued

Ke	1	2433628	2433629	PLCH2	C	T	24.4
Ke	6	153042909	153042910	MYCT1	C	T	24.3
Ke	9	33548628	33548629	ANKRD18B	G	A	24.3
Ke	2	179419353	179419354	TTN	G	A	24.3
Ke	9	35398632	35398633	UNC13B	G	A	24.3
Ke	11	22239807	22239808	ANO5	A	G	24.3
Ke	11	130275571	130275572	ADAMTS8	C	T	24.2
Ke	16	360042	360043	AXIN1	C	T	24.2
Ke	18	43704838	43704839	HAUS1	T	C	24.1
Ke	19	33444612	33444613	CEP89	A	G	24.1
Ke	3	52382984	52382985	DNAH1	C	T	24.1
Ke	5	44809547	44809548	MRPS30	C	G	24.1
Ke	4	41652520	41652521	LIMCH1	G	A	24.1
Ke	1	155629944	155629945	YY1AP1	G	C	24
Ke	17	4836035	4836036	GP1BA	C	T	24
Ke	3	44955173	44955174	TGM4	T	C	24
Ke	8	131916247	131916248	ADCY8	C	T	24
Ke	14	64066394	64066395	WDR89	C	T	23.9
Ke	16	14334125	14334126	MKL2	C	A	23.9
Ke	13	25670954	25670955	PABPC3	C	T	23.9
Ke	19	45682875	45682876	BLOC1S3	C	G	23.9
Ke	21	46929371	46929372	COL18A1	G	A	23.8
Ke	1	17281277	17281278	CROCC	G	A	23.8
Ke	17	76451829	76451830	DNAH17	C	T	23.8
Ke	16	88599683	88599684	ZFPM1	G	A	23.7
Ke	8	22064488	22064489	BMP1	A	C	23.7
Ke	1	29602226	29602227	PTPRU	G	T	23.7
Ke	13	96546879	96546880	UGGT2	G	A	23.6
Ke	1	159683813	159683814	CRP	G	A	23.6
Ke	4	177713325	177713326	VEGFC	T	A	23.6
Ke	12	56646299	56646300	ANKRD52	C	G	23.5
Ke	9	106858521	106858522	SMC2	A	G	23.5
Ke	18	29410899	29410900	TRAPPC8	A	G	23.5
Ke	19	57642609	57642610	USP29	A	G	23.5
Ke	21	43896151	43896152	RSPH1	C	T	23.5
Ke	12	48114610	48114611	ENDOU	C	A	23.5
Ke	2	226378241	226378242	NYAP2	G	A	23.5
Ke	10	27687673	27687674	PTCHD3	T	C	23.4
Ke	7	142206519	142206520	TRBV10-2	C	A	23.4

Table B-5: Continued

Ke	17	80320302	80320303	TEX19	G	T	23.4
Ke	4	57777077	57777078	REST	G	A	23.4
Ke	16	53468574	53468575	RBL2	C	T	23.3
Ke	3	38052024	38052025	PLCD1	G	C	23.3
Ke	11	119050956	119050957	NLRX1	C	T	23.3
Ke	8	24261546	24261547	ADAMDEC1	C	T	23.3
Ke	11	77672170	77672171	INTS4	G	T	23.2
Ke	12	49168797	49168798	ADCY6	C	A	23.2
Ke	11	18745679	18745680	IGSF22	A	T	23.1
Ke	16	20476994	20476995	ACSM2A	G	A	23.1
Ke	9	135762804	135762805	C9orf9	T	G	23.1
Ke	2	98275401	98275402	ACTR1B	A	G	23.1
Ke	20	17617286	17617287	RRBP1	C	T	23.1
Ke	1	95538341	95538342	ALG14	C	A	23.1
Ke	1	47013430	47013431	KNCN	G	A	23.1
Ke	11	65366881	65366882	MAP3K11	C	T	23.1
Ke	4	15542494	15542495	CC2D2A	G	A	23
Ke	16	67685831	67685832	RLTPR	G	A	23
Ke	16	72110636	72110637	HPR	C	A	23
Ke	13	31729775	31729776	HSPH1	T	G	23
Ke	6	110424640	110424641	WASF1	G	A	22.9
Ke	19	38857810	38857811	CATSPERG	C	T	22.9
Ke	10	94733903	94733904	EXOC6	C	T	22.9
Ke	20	870880	870881	ANGPT4	C	T	22.9
Ke	3	73114208	73114209	PPP4R2	C	G	22.9
Ke	20	60883190	60883191	ADRM1	C	T	22.9
Ke	6	29910599	29910600	HLA-A	T	C	22.8
Ke	1	36557400	36557401	ADPRHL2	A	G	22.8
Ke	3	196613408	196613409	SENP5	C	T	22.8
Ke	13	96624884	96624885	UGGT2	C	T	22.7
Ke	11	86048462	86048463	C11orf73	G	A	22.6
Ke	11	1017293	1017294	MUC6	A	T	22.5
Ke	22	19217421	19217422	CLTCL1	C	T	22.5
Ke	11	130773240	130773241	SNX19	G	C	22.5
Ke	8	145005768	145005769	PLEC	C	T	22.4
Ke	11	18195643	18195644	MRGPRX4	C	T	22.3
Ke	1	32145692	32145693	COL16A1	C	T	22.3
Ke	1	157789819	157789820	FCRL1	G	A	22.2
Ke	4	113353320	113353321	ALPK1	G	T	22.1

Table B-5: Continued

Ke	3	135745761	135745762	PPP2R3A	C	T	21.8
Ke	2	179462684	179462685	TTN	A	G	21.7
Ke	3	138461425	138461426	PIK3CB	C	T	21.7
Ke	7	134223009	134223010	AKR1B10	G	A	21.7
Ke	22	24468351	24468352	CABIN1	G	A	21.5
Ke	19	55329813	55329814	KIR3DL1	G	C	21.5
Ke	4	114823689	114823690	ARSJ	C	T	21.4
Ke	4	153897774	153897775	FHDC1	C	A	21.4
Ke	19	38708476	38708477	DPF1	C	T	21.4
Ke	5	13902244	13902245	DNAH5	G	C	21.4
Ke	14	58690405	58690406	ACTR10	A	T	21.3
Ke	6	32816447	32816448	TAP1	G	A	21.3
Ke	3	130159600	130159601	COL6A5	G	C	21.1
Ke	1	89449411	89449412	RBMXL1	C	T	21.1
Ke	22	45898896	45898897	FBLN1	C	A	21
Ke	9	5747389	5747390	KIAA1432	C	A	21
Ke	11	60781434	60781435	CD6	C	T	20.8
Ke	17	78061564	78061565	CCDC40	G	A	20.8
Ke	16	2028188	2028189	TBL3	C	T	20.8
Ke	9	33797950	33797951	PRSS3	A	C	20.5
Ke	1	23280204	23280205	LACTBL1	G	C	20.5
Ke	1	203452412	203452413	PRELP	G	A	20.4
Ke	7	5644941	5644942	FSCN1	C	T	20.3
Ke	21	46086469	46086470	KRTAP12-2	G	A	20.3
Ke	1	22834627	22834628	ZBTB40	G	GAGGT	0
Ke	12	42499812	42499816	GXYLT1	CGTA	C	0
Ke	13	25671309	25671315	PABPC3	TTATGA	T	0
Ke	19	33444614	33444619	CEP89	AGCTG	A	0
Ke	19	33444619	33444625	CEP89	AGTTTC	A	0
Ke	2	97851081	97851086	ANKRD36	GTAAT	G	0
Ke	6	30996985	30996990	MUC22	TCCAC	T	0
Ke	1	167515356	167515360	CREG1	ATTC	A	0
Ke	1	209605635	209605645	MIR205HG	TAGCAGCAGC	T	0
Ke	1	209605635	209605642	MIR205HG	TAGCAGC	T	0
Ke	10	125780751	125780755	CHST15	CGGG	C	0
Ke	11	1017442	1017446	MUC6	CGTG	C	0
Ke	11	6662744	6662748	DCHS1	CCAG	C	0
Ke	11	65325324	65325325	LTBP3	C	CCAG	0
Ke	12	7045890	7045891	ATN1	A	ACAG	0

Table B-5: Continued

Ke	12	7045890	7045891	ATN1	A	ACAGCAG	0
Ke	13	25671148	25671152	PABPC3	ACGG	A	0
Ke	14	24769848	24769849	NOP9	A	AGAGGAG	0
Ke	14	24769848	24769849	NOP9	A	AGAG	0
Ke	14	24769848	24769849	NOP9	A	AGAGGAGGAG	0
Ke	14	50704377	50704381	L2HGDH	ATGT	A	0
Ke	15	72767213	72767214	ARIH1	T	TGGC	0
Ke	15	72767213	72767220	ARIH1	TGGCGGC	T	0
Ke	16	12009529	12009530	GSPT1	C	CCCGCCG	0
Ke	16	87637892	87637902	JPH3	CCTGCTGCTG	C	0
Ke	2	85360827	85360828	TCF7L1	G	GGGCGGC	0
Ke	3	42251576	42251580	TRAK1	CGGA	C	0
Ke	3	42251576	42251577	TRAK1	C	CGGAGGA	0
Ke	4	15004735	15004739	CPEB2	CCCT	C	0
Ke	6	139694961	139694965	CITED2	CTGG	C	0
Ke	7	100550560	100550561	MUC3A	C	CGAT	0
Ke	7	100550624	100550625	MUC3A	C	CACT	0
Ke	7	100550637	100550644	MUC3A	ATCTACT	A	0
Ke	7	100550645	100550646	MUC3A	C	CGAG	0
Ke	7	100550647	100550651	MUC3A	CAGT	C	0
Ke	7	100551291	100551295	MUC3A	CATT	C	0
Ke	7	100551296	100551297	MUC3A	T	TCCC	0
Ke	7	142168497	142168501	TRBV5-4	GCCA	G	0
Ke	7	142168501	142168502	TRBV5-4	T	TTTC	0
Ke	8	8560617	8560618	CLDN23	G	GCAAGCC	0
Ke	9	95237023	95237027	ASPN	CTCA	C	0
Ke	9	95237023	95237024	ASPN	C	CTCA	0
Ke	9	100616699	100616700	FOXE1	A	AGCC	0
Ke	GL000212.1	102058	102062		TTTC	T	0
Ke	GL000212.1	102058	102065		TTTCTTC	T	0
Ke	GL000212.1	102058	102068		TTTCTTCTTC	T	0
Ke	GL000212.1	119458	119462		CTCT	C	0
Ke	12	121880446	121880450	KDM2B	CCTT	C	0
Ke	13	100622836	100622837	ZIC5	C	CCGG	0
Ko	12	42538351	42538352	GXYLT1	C	A	35
Ko	12	57398223	57398224	ZBTB39	G	A	35
Ko	10	99683121	99683122	CRTAC1	G	A	35
Ko	10	61802476	61802477	ANK3	C	T	35
Ko	5	52337982	52337983	ITGA2	G	A	34

Table B-5: Continued

Ko	3	57401265	57401266	DNAH12	C	T	34
Ko	10	43297638	43297639	BMS1	G	A	34
Ko	12	65224219	65224220	TBC1D30	C	T	34
Ko	1	230914749	230914750	CAPN9	G	A	33
Ko	15	64680150	64680151	TRIP4	A	G	33
Ko	19	1037755	1037756	CNN2	G	A	33
Ko	20	52774674	52774675	CYP24A1	G	A	33
Ko	15	66621381	66621382	DIS3L	G	A	33
Ko	19	1037780	1037781	CNN2	C	A	32
Ko	16	20429552	20429553	ACSM5	C	T	32
Ko	17	76117123	76117124	TMC6	G	A	32
Ko	19	49714086	49714087	TRPM4	G	T	31
Ko	10	63976967	63976968	RTKN2	C	T	31
Ko	14	23844978	23844979	IL25	C	T	31
Ko	12	11183034	11183035	TAS2R31	C	T	30
Ko	12	12247920	12247923	BCL2L14	ATT	A	30
Ko	12	40884663	40884664	MUC19	C	CA	30
Ko	15	74392544	74392546	LOC732265	TA	T	30
Ko	2	91636148	91636149	LOC101060169	C	CA	30
Ko	2	91636148	91636149	LOC101060169	C	CG	30
Ko	2	97851072	97851074	ANKRD36	GC	G	30
Ko	2	97851077	97851078	ANKRD36	A	AG	30
Ko	2	133075477	133075479	ZNF806	TC	T	30
Ko	2	133075903	133075904	ZNF806	C	CA	30
Ko	2	133076116	133076118	ZNF806	CA	C	30
Ko	21	11021162	11021163	LOC101926954	T	TA	30
Ko	4	338196	338197	ZNF141	T	TGA	30
Ko	4	338200	338203	ZNF141	ATC	A	30
Ko	6	32552059	32552060	HLA-DRB1	A	AG	30
Ko	7	100550471	100550472	MUC3A	C	CAG	30
Ko	7	100550472	100550475	MUC3A	GCC	G	30
Ko	7	142139333	142139335	TRBV7-6	CG	C	30
Ko	7	142139336	142139337	TRBV7-6	C	CCA	30
Ko	7	142139338	142139340	TRBV7-6	GA	G	30
Ko	7	142168507	142168509	TRBV5-4	TC	T	30
Ko	7	142168514	142168515	TRBV5-4	T	TC	30
Ko	7	142197960	142197963	TRBV11-2	TGC	T	30
Ko	7	142197964	142197965	TRBV11-2	C	CCA	30
Ko	7	142231792	142231793	TRBV10-1	A	AT	30

Table B-5: Continued

Ko	7	142231795	142231798	TRBV10-1	CCA	C	30
Ko	7	142231799	142231800	TRBV10-1	G	GA	30
Ko	7	142231804	142231805	TRBV10-1	C	CTG	30
Ko	7	142231807	142231810	TRBV10-1	GCC	G	30
Ko	9	33797927	33797928	PRSS3	G	GCC	30
Ko	9	33797927	33797928	PRSS3	G	GCT	30
Ko	9	33797929	33797932	PRSS3	GAC	G	30
Ko	GL000212.1	128872	128875		GTC	G	30
Ko	6	170013749	170013751	WDR27	AC	A	30
Ko	7	35288306	35288307	TBX20	T	G	29.9
Ko	1	213244365	213244366	RPS6KC1	C	A	29.2
Ko	1	26189516	26189517	PAQR7	C	T	28.9
Ko	12	113407465	113407466	OAS3	G	A	28.7
Ko	2	97849219	97849220	ANKRD36	G	A	28.4
Ko	2	39456515	39456516	CDKL4	C	T	28.4
Ko	20	62178593	62178594	SRMS	C	T	28.3
Ko	15	76496144	76496145	C15orf27	C	T	26.9
Ko	10	73472493	73472494	CDH23	A	G	26.7
Ko	2	103340232	103340233	MFSB9	C	A	26.6
Ko	16	31012491	31012492	STX1B	A	G	26.5
Ko	12	53343006	53343007	KRT18	G	A	26.3
Ko	18	346699	346700	COLEC12	C	T	26.3
Ko	10	71662506	71662507	COL13A1	G	A	26.3
Ko	X	118604029	118604030	SLC25A5	T	C	26.1
Ko	19	3011085	3011086	TLE2	C	T	25.8
Ko	19	50747533	50747534	MYH14	G	T	25.8
Ko	10	73377111	73377112	CDH23	G	A	25.7
Ko	12	64814250	64814251	XPOT	G	A	25.4
Ko	11	1078455	1078456	MUC2	C	T	25.4
Ko	14	64469983	64469984	SYNE2	G	T	25.3
Ko	7	135047810	135047811	CNOT4	G	C	25.2
Ko	19	15299050	15299051	NOTCH3	G	A	25.1
Ko	12	42538333	42538334	GXYLT1	C	A	25
Ko	12	21229412	21229413	SLCO1B7	G	A	25
Ko	8	144406173	144406174	TOP1MT	C	G	24.9
Ko	7	142231779	142231780	TRBV10-1	C	T	24.7
Ko	9	139258051	139258052	DNLZ	G	A	24.4
Ko	19	1037765	1037766	CNN2	G	A	24.3
Ko	14	57746931	57746932	AP5M1	T	A	24.3

Table B-5: Continued

Ko	16	2329070	2329071	ABCA3	G	A	24.3
Ko	X	118604013	118604014	SLC25A5	G	A	24.2
Ko	2	219754821	219754822	WNT10A	G	A	24
Ko	16	20566589	20566590	ACSM2B	C	A	23.8
Ko	X	118604005	118604006	SLC25A5	A	G	23.8
Ko	8	1950457	1950458	KBTBD11	T	G	23.7
Ko	4	983278	983279	SLC26A1	A	T	23.5
Ko	7	142206519	142206520	TRBV10-2	C	A	23.4
Ko	8	145058259	145058260	PARP10	C	T	23.4
Ko	15	68117155	68117156	SKOR1	G	A	23.4
Ko	19	9000168	9000169	MUC16	C	T	23.3
Ko	12	42538339	42538340	GXYLT1	C	A	23.2
Ko	16	52473563	52473564	TOX3	G	A	23.2
Ko	4	187584529	187584530	FAT1	G	A	23
Ko	12	11174466	11174467	TAS2R19	A	C	22.9
Ko	4	338129	338130	ZNF141	C	G	22.9
Ko	7	64004096	64004097	ZNF680	C	G	22.8
Ko	3	13379371	13379372	NUP210	G	A	22.6
Ko	13	103387195	103387196	CCDC168	G	A	22.6
Ko	11	1017293	1017294	MUC6	A	T	22.5
Ko	11	64083289	64083290	ESRRA	G	A	22.4
Ko	11	92616484	92616485	FAT3	A	C	22.2
Ko	2	232392956	232392957	NMUR1	G	A	22.2
Ko	11	64083292	64083293	ESRRA	G	T	22.1
Ko	16	20946806	20946807	DNAH3	C	G	22
Ko	12	54379122	54379123	HOXC10	G	C	21.6
Ko	12	51449739	51449740	LETMD1	A	G	21.4
Ko	9	33797950	33797951	PRSS3	A	C	20.5
Ko	12	132269772	132269773	SFSWAP	G	A	20.5
Ko	1	200801934	200801935	CAMSAP2	A	G	20.3
Ko	12	113730815	113730816	TPCN1	C	T	20.3
Ko	2	97851081	97851086	ANKRD36	GTAAT	G	0
Ko	3	138724377	138724382	PRR23A	GACCT	G	0
Ko	GL000212.1	128872	128877		GTCTC	G	0
Ko	1	17085588	17085595	MSTIL	AGCGCTG	A	0
Ko	11	64083294	64083298	ESRRA	CGGG	C	0
Ko	11	66512289	66512290	C11orf80	G	GGGCGGCGGC	0
Ko	12	7045890	7045894	ATN1	ACAG	A	0
Ko	12	7045890	7045900	ATN1	ACAGCAGCAG	A	0

Table B-5: Continued

Ko	12	7045890	7045891	ATN1	A	ACAG	0
Ko	12	7045890	7045891	ATN1	A	ACAGCAG	0
Ko	12	12251906	12251910	BCL2L14	TGAA	T	0
Ko	15	72767213	72767214	ARIH1	T	TGGC	0
Ko	15	72767213	72767220	ARIH1	TGGCGGC	T	0
Ko	19	50360992	50360996	PTOV1	TCAA	T	0
Ko	2	10192445	10192449	KLF11	GAGA	G	0
Ko	2	73613030	73613031	ALMS1	T	TGGAGGA	0
Ko	2	73613030	73613034	ALMS1	TGGA	T	0
Ko	3	42251576	42251577	TRAK1	C	CGGA	0
Ko	3	42251576	42251577	TRAK1	C	CGGAGGA	0
Ko	3	138724377	138724381	PRR23A	GACC	G	0
Ko	5	146258289	146258293	PPP2R2B	AGCT	A	0
Ko	7	142168497	142168501	TRBV5-4	GCCA	G	0
Ko	7	142168501	142168502	TRBV5-4	T	TTTC	0
Ko	9	95237023	95237027	ASPN	CTCA	C	0
Ko	9	95237023	95237024	ASPN	C	CTCATCA	0
Ko	GL000212.1	119492	119499		TTCTCTC	T	0
Ko	22	21212965	21212972	PI4KA	GCCGCCT	G	0
Ko	7	128829038	128829039	SMO	G	GGCT	0
Kr	13	25671368	25671369	PABPC3	G	T	38
Kr	7	142008652	142008653	TRBV3-1	T	A	35
Kr	17	4803795	4803796	C17orf107	G	T	35
Kr	17	4796749	4796750	MINK1	C	T	35
Kr	6	136709644	136709645	MAP7	G	A	35
Kr	11	113683077	113683078	USP28	C	A	34
Kr	14	74874622	74874623	SYNDIG1L	C	T	34
Kr	12	56642598	56642599	ANKRD52	C	T	34
Kr	3	45537794	45537795	LARS2	G	A	34
Kr	16	334919	334920	PDIA2	C	T	33
Kr	1	204228557	204228558	PLEKHA6	G	A	33
Kr	3	78655974	78655975	ROBO1	C	A	33
Kr	3	182804566	182804567	MCCC1	C	T	33
Kr	2	128389921	128389922	MYO7B	G	A	33
Kr	20	30370132	30370133	TPX2	G	A	32
Kr	3	51312517	51312518	DOCK3	C	T	32
Kr	2	228769663	228769664	DAW1	T	G	31
Kr	3	195965652	195965653	PCYT1A	G	A	31
Kr	12	12247920	12247923	BCL2L14	ATT	A	30

Table B-5: Continued

Kr	12	75785051	75785052	GLIPR1L2	C	CT	30
Kr	13	25671271	25671273	PABPC3	AG	A	30
Kr	13	25671331	25671333	PABPC3	CA	C	30
Kr	19	9024841	9024844	MUC16	GTT	G	30
Kr	19	9024844	9024845	MUC16	C	CCT	30
Kr	19	33444598	33444601	CEP89	CTT	C	30
Kr	19	33444608	33444611	CEP89	GAT	G	30
Kr	2	97851072	97851074	ANKRD36	GC	G	30
Kr	2	97851077	97851078	ANKRD36	A	AG	30
Kr	2	133075477	133075479	ZNF806	TC	T	30
Kr	2	133075903	133075904	ZNF806	C	CA	30
Kr	2	133076116	133076118	ZNF806	CA	C	30
Kr	6	32489742	32489744	HLA-DRB5	CG	C	30
Kr	6	32549397	32549399	HLA-DRB1	AC	A	30
Kr	7	15725818	15725821	MEOX2	TGG	T	30
Kr	7	15725821	15725823	MEOX2	TG	T	30
Kr	7	31697912	31697914	CCDC129	CT	C	30
Kr	7	100550472	100550475	MUC3A	GCC	G	30
Kr	7	100551325	100551326	MUC3A	C	CA	30
Kr	7	100551328	100551329	MUC3A	C	CA	30
Kr	7	100551330	100551333	MUC3A	GTA	G	30
Kr	7	142008633	142008636	TRBV3-1	ACG	A	30
Kr	7	142008638	142008639	TRBV3-1	A	AGG	30
Kr	7	142119875	142119877	TRBV7-7	CG	C	30
Kr	7	142119878	142119879	TRBV7-7	C	CCA	30
Kr	9	33797929	33797932	PRSS3	GAC	G	30
Kr	9	35684821	35684822	TPM2	C	CGG	30
Kr	GL000212.1	128872	128875		GTC	G	30
Kr	7	116411989	116411990	MET	C	T	29.2
Kr	17	76490717	76490718	DNAH17	G	C	29.1
Kr	3	32800975	32800976	CNOT10	A	T	28.9
Kr	4	40440534	40440535	RBM47	G	A	28.8
Kr	6	32551934	32551935	HLA-DRB1	G	C	28.4
Kr	13	110818602	110818603	COL4A1	C	T	28.4
Kr	7	100086598	100086599	NYAP1	C	T	28.2
Kr	4	48582945	48582946	FRYL	T	C	28
Kr	9	4662015	4662016	SPATA6L	G	C	27.9
Kr	1	22182114	22182115	HSPG2	G	A	27.6
Kr	20	61340731	61340732	NTSR1	C	T	27

Table B-5: Continued

Kr	4	154669845	154669846	RNF175	G	A	26.9
Kr	6	51613424	51613425	PKHD1	C	T	26.5
Kr	3	39142561	39142562	GORASP1	G	A	26.5
Kr	11	18332976	18332977	HPS5	C	T	26.3
Kr	10	71662506	71662507	COL13A1	G	A	26.3
Kr	13	25671291	25671292	PABPC3	C	T	26.2
Kr	5	42711407	42711408	GHR	T	C	26.2
Kr	13	25671026	25671027	PABPC3	A	G	26.1
Kr	1	2700305	2700306	TTC34	C	T	25.8
Kr	9	4663123	4663124	PPAPDC2	G	C	25.8
Kr	17	69518	69519	RPH3AL	T	C	25.7
Kr	11	73796877	73796878	C2CD3	T	C	25.5
Kr	4	134073006	134073007	PCDH10	C	T	25.4
Kr	6	29407960	29407961	OR10C1	C	T	25.4
Kr	3	52818418	52818419	ITIH1	G	C	25.3
Kr	19	2097947	2097948	IZUMO4	C	T	25.2
Kr	2	166514314	166514315	CSRNP3	G	A	25.1
Kr	15	75499653	75499654	C15orf39	C	T	25.1
Kr	6	28359072	28359073	ZSCAN12	A	G	25.1
Kr	3	58110118	58110119	FLNB	G	C	25
Kr	14	22038171	22038172	OR10G3	C	T	25
Kr	1	15789246	15789247	CELA2A	G	A	24.9
Kr	19	624893	624894	POLRMT	T	A	24.9
Kr	12	53586535	53586536	ITGB7	C	T	24.9
Kr	18	73000087	73000088	TSHZ1	G	A	24.7
Kr	19	41066068	41066069	SPTBN4	G	A	24.6
Kr	9	35752047	35752048	RGP1	C	A	24.5
Kr	7	40132655	40132656	CDK13	G	A	24.3
Kr	13	77531178	77531179	IRG1	A	G	24.3
Kr	5	63509508	63509509	RNF180	G	A	24.2
Kr	1	9323785	9323786	H6PD	G	A	24.1
Kr	1	31897691	31897692	SERINC2	C	T	24
Kr	2	219754821	219754822	WNT10A	G	A	24
Kr	17	80404515	80404516	C17orf62	T	C	23.9
Kr	13	25670954	25670955	PABPC3	C	T	23.9
Kr	19	20807846	20807847	ZNF626	T	A	23.8
Kr	X	1761788	1761789	ASMT	C	T	23.8
Kr	1	17281277	17281278	CROCC	G	A	23.8
Kr	17	9408380	9408381	STX8	C	T	23.8

Table B-5: Continued

Kr	13	25671428	25671429	PABPC3	G	T	23.7
Kr	8	124089482	124089483	TBC1D31	C	G	23.5
Kr	5	112769674	112769675	TSSK1B	C	A	23.5
Kr	19	16860095	16860096	NWD1	T	C	23.4
Kr	6	32552016	32552017	HLA-DRB1	G	C	23.4
Kr	7	142206519	142206520	TRBV10-2	C	A	23.4
Kr	17	4017694	4017695	ZZEF1	T	C	23.3
Kr	2	45233477	45233478	SIX2	G	A	23.2
Kr	7	38398173	38398174	TRGV3	A	G	23.2
Kr	6	52701084	52701085	GSTA5	T	C	23.2
Kr	5	98129337	98129338	RGMB	C	T	23.1
Kr	6	32489891	32489892	HLA-DRB5	G	A	23.1
Kr	1	17596816	17596817	PADI3	C	T	23.1
Kr	5	176759169	176759170	LMAN2	C	T	23.1
Kr	12	13061726	13061727	GPRC5A	A	G	23.1
Kr	17	47230175	47230176	B4GALNT2	G	A	23
Kr	10	134037966	134037967	STK32C	C	T	22.8
Kr	9	68433463	68433464	LOC642236	C	T	22.7
Kr	14	24610395	24610396	EMC9	A	C	22.7
Kr	1	100152735	100152736	PALMD	A	C	22.7
Kr	12	18891317	18891318	CAPZA3	G	A	22.3
Kr	5	64956556	64956557	TRAPPC13	C	A	22.3
Kr	1	120548094	120548095	NOTCH2	C	A	22.2
Kr	11	71945596	71945597	INPPL1	G	A	22.1
Kr	8	142451312	142451313	MROH5	C	T	22.1
Kr	3	65456153	65456154	MAGI1	A	T	22.1
Kr	17	61895164	61895165	DDX42	A	G	22.1
Kr	19	1127694	1127695	SBNO2	T	C	22
Kr	5	73197088	73197089	ARHGEF28	G	A	22
Kr	2	99988118	99988119	EIF5B	A	G	21.4
Kr	4	981683	981684	IDUA	C	G	21.4
Kr	17	17697403	17697404	RAI1	C	T	21.4
Kr	9	33797950	33797951	PRSS3	A	C	20.5
Kr	10	119774576	119774577	RAB11FIP2	G	A	20.3
Kr	3	57443623	57443624	DNAH12	A	C	20.2
Kr	13	25671309	25671315	PABPC3	TTATGA	T	0
Kr	2	97851081	97851086	ANKRD36	GTAAT	G	0
Kr	GL000212.1	128872	128877		GTCTC	G	0
Kr	11	1017442	1017446	MUC6	CGTG	C	0

Table B-5: Continued

Kr	12	7045890	7045894	ATN1	ACAG	A	0
Kr	12	56628732	56628739	SLC39A5	CGCTCCG	C	0
Kr	12	132547092	132547093	EP400	A	ACAGCAG	0
Kr	14	24769848	24769849	NOP9	A	AGAGGAG	0
Kr	14	24769848	24769849	NOP9	A	AGAG	0
Kr	14	24769848	24769849	NOP9	A	AGAGGAGGAG	0
Kr	16	87637892	87637902	JPH3	CCTGCTGCTG	C	0
Kr	17	43319433	43319440	FMNL1	TCCGCCG	T	0
Kr	17	56056603	56056604	VEZF1	T	TTGC	0
Kr	17	56056603	56056604	VEZF1	T	TTGCTGC	0
Kr	17	56056603	56056607	VEZF1	TTGC	T	0
Kr	8	65494019	65494020	BHLHE22	G	GGCAGCA	0
Kr	9	141107535	141107536	FAM157B	G	GGCAGCA	0
Kr	20	44520236	44520237	CTSA	C	CCTG	0
Kr	6	28333275	28333279	ZKSCAN3	ATCG	A	0
Kr	6	7910869	7910870	TXNDC5	T	TCCG	0
L	5	145895393	145895394	GPR151	G	A	36
L	7	142008652	142008653	TRBV3-1	T	A	35
L	14	71227823	71227824	MAP3K9	C	T	35
L	19	50215152	50215153	CPT1C	C	T	35
L	18	34261474	34261475	FHOD3	C	T	35
L	2	9633091	9633092	ADAM17	C	T	34
L	5	150481021	150481022	ANXA6	C	T	33
L	10	94828370	94828371	CYP26C1	C	T	32
L	22	50515852	50515853	MLC1	C	T	32
L	9	114199289	114199290	KIAA0368	G	A	32
L	14	102729909	102729910	MOK	C	T	32
L	20	43043248	43043249	HNF4A	G	A	31
L	3	121340710	121340712	FBXO40	AC	A	30
L	7	142231799	142231800	TRBV10-1	G	GA	30
L	7	142231804	142231805	TRBV10-1	C	CTG	30
L	7	142231807	142231810	TRBV10-1	GCC	G	30
L	9	84608473	84608474	SPATA31D1	C	CA	30
L	5	148384454	148384455	SH3TC2	T	A	29.4
L	8	126059526	126059527	KIAA0196	G	C	29.2
L	1	76205721	76205722	ACADM	G	T	28.9
L	12	40629435	40629436	LRRK2	T	C	27.5
L	12	48919767	48919768	OR8S1	G	A	27.1
L	2	140990867	140990868	LRP1B	C	T	27

Table B-5: Continued

L	22	46657960	46657961	PKDREJ	G	A	26.4
L	X	107224975	107224976	TEX13B	G	A	26.3
L	12	4747333	4747334	AKAP3	C	T	26.3
L	5	39202117	39202118	FYB	C	A	26.1
L	17	79429034	79429035	BAHCC1	C	T	25.9
L	3	186572472	186572473	ADIPOQ	C	G	25.9
L	11	85445364	85445365	SYTL2	G	C	25.9
L	3	121340712	121340713	FBXO40	T	A	25.7
L	15	68653945	68653946	ITGA11	C	T	25.3
L	5	177638964	177638965	PHYKPL	T	A	25.3
L	19	49207113	49207114	FUT2	G	A	25.1
L	10	73579325	73579326	PSAP	C	T	25
L	17	62045450	62045451	SCN4A	G	A	24.9
L	12	53675411	53675412	ESPL1	T	C	24.2
L	3	113375771	113375772	KIAA2018	C	T	23.9
L	12	117484380	117484381	TESC	C	T	23.9
L	19	49714496	49714497	TRPM4	C	T	23.8
L	19	55888984	55888985	TMEM190	G	A	23.7
L	19	49484880	49484881	GYS1	C	T	23.5
L	7	142206519	142206520	TRBV10-2	C	A	23.4
L	3	119886456	119886457	GPR156	G	A	23.1
L	8	110417227	110417228	PKHD1L1	T	C	23.1
L	14	103987743	103987744	CKB	G	A	22.9
L	8	113241051	113241052	CSMD3	T	G	22.9
L	6	109787475	109787476	ZBTB24	C	T	22.7
L	16	50345640	50345641	ADCY7	A	G	22.6
L	7	94996779	94996780	PON3	C	T	22.6
L	5	17275965	17275966	BASP1	C	T	22.3
L	11	64027665	64027666	PLCB3	A	C	21.3
L	17	74276206	74276207	QRICH2	T	C	20.8
L	11	65325324	65325325	LTBP3	C	CCAG	0
L	12	7045890	7045891	ATN1	A	ACAG	0
L	21	35987250	35987260	RCAN1	GGCCGCCTCC	G	0
L	9	95237023	95237027	ASPN	CTCA	C	0
L	9	95237023	95237024	ASPN	C	CTCATCATCA	0
L	9	95237023	95237024	ASPN	C	CTCA	0
L	9	95237023	95237024	ASPN	C	CTCATCA	0
L	9	95237023	95237024	ASPN	C	CTCCTCA	0
Me	4	190876286	190876287	FRG1	G	A	42

Table B-5: Continued

Me	6	117683843	117683844	ROS1	C	T	41
Me	11	34119268	34119269	CAPRN1	C	T	39
Me	13	25671368	25671369	PABPC3	G	T	38
Me	11	75509316	75509317	DGAT2	C	A	37
Me	22	23063546	23063547	IGLV3-19	C	A	36
Me	12	7805413	7805414	APOBEC1	C	T	36
Me	13	25671209	25671210	PABPC3	C	T	35
Me	7	142008652	142008653	TRBV3-1	T	A	35
Me	8	18080114	18080115	NAT1	C	T	35
Me	2	26700056	26700057	OTOF	G	A	35
Me	16	23707214	23707215	ERN2	C	T	35
Me	10	105905242	105905243	WDR96	C	T	35
Me	12	124337791	124337792	DNAH10	C	T	35
Me	21	47626585	47626586	LSS	C	T	34
Me	6	56500451	56500452	DST	G	A	34
Me	4	152637228	152637229	PET112	G	A	34
Me	16	70190513	70190514	PDPR	G	A	34
Me	3	54925425	54925426	CACNA2D3	C	T	34
Me	6	32549612	32549613	HLA-DRB1	G	A	33
Me	21	32119309	32119310	KRTAP21-2	G	A	33
Me	12	42499738	42499739	GXYLT1	C	T	33
Me	14	91804463	91804464	CCDC88C	C	T	33
Me	18	12686316	12686317	CEP76	C	T	33
Me	19	3964960	3964961	DAPK3	G	A	33
Me	7	73731891	73731892	CLIP2	G	A	33
Me	1	226567723	226567724	PARP1	C	G	33
Me	20	62191382	62191383	HELZ2	G	A	33
Me	16	75665145	75665146	KARS	G	A	33
Me	12	96379883	96379884	HAL	C	T	33
Me	22	26181396	26181397	MYO18B	C	T	33
Me	10	86012746	86012747	RGR	G	T	32
Me	11	57314100	57314101	SMTNL1	T	A	32
Me	18	12506612	12506613	SPIRE1	C	A	32
Me	20	61981783	61981784	CHRNA4	C	T	32
Me	3	53857494	53857495	CHDH	G	A	32
Me	1	29338415	29338416	EPB41	C	T	32
Me	17	4448923	4448924	MYBBP1A	G	A	31
Me	12	124297902	124297903	DNAH10	C	T	31
Me	14	23844978	23844979	IL25	C	T	31

Table B-5: Continued

Me	11	119045950	119045951	NLRX1	C	T	31
Me	12	11183034	11183035	TAS2R31	C	T	30
Me	7	100732843	100732844	TRIM56	C	T	30
Me	3	33883491	33883492	PDCD6IP	G	A	30
Me	11	3681476	3681477	ART1	T	TC	30
Me	12	12247920	12247923	BCL2L14	ATT	A	30
Me	12	122690998	122691000	B3GNT4	TC	T	30
Me	13	25670800	25670801	PABPC3	T	TG	30
Me	13	25671271	25671273	PABPC3	AG	A	30
Me	13	25671331	25671333	PABPC3	CA	C	30
Me	14	106994008	106994010	IGHV3-48	GC	G	30
Me	17	1386157	1386160	MYO1C	CAG	C	30
Me	19	9006760	9006763	MUC16	CGG	C	30
Me	19	33444598	33444601	CEP89	CTT	C	30
Me	19	33444608	33444611	CEP89	GAT	G	30
Me	2	97851072	97851074	ANKRD36	GC	G	30
Me	2	97851077	97851078	ANKRD36	A	AG	30
Me	2	133075477	133075479	ZNF806	TC	T	30
Me	2	133075903	133075904	ZNF806	C	CA	30
Me	2	133076116	133076118	ZNF806	CA	C	30
Me	20	62577619	62577620	UCKL1	C	CCT	30
Me	4	338196	338197	ZNF141	T	TGA	30
Me	4	338200	338203	ZNF141	ATC	A	30
Me	4	74347530	74347531	AFM	G	GT	30
Me	6	29911317	29911319	HLA-A	CG	C	30
Me	7	100550472	100550475	MUC3A	GCC	G	30
Me	7	142008633	142008636	TRBV3-1	ACG	A	30
Me	7	142008638	142008639	TRBV3-1	A	AGG	30
Me	7	142119875	142119877	TRBV7-7	CG	C	30
Me	7	142119878	142119879	TRBV7-7	C	CCA	30
Me	7	142119880	142119882	TRBV7-7	GA	G	30
Me	7	142139333	142139335	TRBV7-6	CG	C	30
Me	7	142139336	142139337	TRBV7-6	C	CCA	30
Me	7	142139338	142139340	TRBV7-6	GA	G	30
Me	7	142168507	142168509	TRBV5-4	TC	T	30
Me	7	142168514	142168515	TRBV5-4	T	TC	30
Me	9	33797927	33797928	PRSS3	G	GCC	30
Me	9	33797927	33797928	PRSS3	G	GCT	30
Me	9	33797929	33797932	PRSS3	GAC	G	30

Table B-5: Continued

Me	9	37731086	37731087	FRMPD1	A	AC	30
Me	9	97365718	97365719	FBP1	A	AC	30
Me	GL000212.1	128872	128875		GTC	G	30
Me	GL000212.1	10741	10742		T	TG	30
Me	22	29091855	29091857	CHEK2	AG	A	30
Me	1	149908525	149908526	MTMR11	G	GC	30
Me	9	140444626	140444627	PNPLA7	C	CT	30
Me	19	23328750	23328751	ZNF730	A	AT	30
Me	5	180477252	180477254	BTNL9	AC	A	30
Me	16	336699	336702	PDIA2	ACT	A	30
Me	11	47660293	47660294	MTCH2	C	T	29.9
Me	2	95541446	95541447	TEKT4	C	T	29.9
Me	9	133936523	133936524	LAMC3	C	A	29.9
Me	22	38121794	38121795	TRIOBP	C	T	29.9
Me	15	78921601	78921602	CHRN4	G	A	29.9
Me	2	95541426	95541427	TEKT4	G	T	29.5
Me	4	190876271	190876272	FRG1	G	A	29.4
Me	3	50375432	50375433	RASSF1	A	G	29.3
Me	2	230841010	230841011	FBXO36	C	T	29.2
Me	7	99145677	99145678	FAM200A	C	G	29.2
Me	14	73739313	73739314	PAPLN	G	A	29
Me	15	65447267	65447268	CLPX	A	G	29
Me	11	60703997	60703998	TMEM132A	G	T	29
Me	3	50375430	50375431	RASSF1	T	G	28.9
Me	2	95541441	95541442	TEKT4	C	T	28.8
Me	3	145824346	145824347	PLOD2	G	A	28.8
Me	4	184205429	184205430	WWC2	C	T	28.8
Me	1	223994626	223994627	TP53BP2	A	C	28.6
Me	11	107393164	107393165	ALKBH8	C	T	28.6
Me	17	39977248	39977249	FKBP10	T	C	28.6
Me	2	36737127	36737128	CRIM1	G	A	28.3
Me	19	17983256	17983257	SLC5A5	C	G	28
Me	2	242757459	242757460	NEU4	G	A	28
Me	9	136521653	136521654	DBH	G	A	27.7
Me	1	11253683	11253684	ANGPTL7	G	T	27.2
Me	1	212911801	212911802	NSL1	G	A	27.1
Me	7	107575903	107575904	LAMB1	C	T	27
Me	5	35779247	35779248	SPEF2	A	G	26.8
Me	1	201046057	201046058	CACNA1S	C	T	26.8

Table B-5: Continued

Me	11	119216200	119216201	MFRP	G	C	26.7
Me	22	44324766	44324767	PNPLA3	G	A	26.7
Me	17	28378220	28378221	EFCAB5	G	A	26.7
Me	11	47660294	47660295	MTCH2	A	G	26.6
Me	12	42499737	42499738	GXYLT1	T	C	26.6
Me	15	79760610	79760611	KIAA1024	G	A	26.6
Me	5	43702784	43702785	NNT	C	G	26.6
Me	14	73733284	73733285	PAPLN	G	A	26.6
Me	11	4968154	4968155	OR51A4	T	C	26.5
Me	11	118513077	118513078	PHLDB1	C	T	26.5
Me	18	43252903	43252904	SLC14A2	G	A	26.5
Me	6	29911319	29911320	HLA-A	G	T	26.3
Me	13	25671291	25671292	PABPC3	C	T	26.2
Me	14	65390838	65390839	CHURC1	A	G	26.2
Me	13	25671026	25671027	PABPC3	A	G	26.1
Me	2	128757357	128757358	SAP130	A	C	26.1
Me	2	180838367	180838368	CWC22	T	C	26
Me	7	86825986	86825987	TMEM243	A	G	26
Me	3	48726169	48726170	IP6K2	T	G	25.9
Me	3	10401575	10401576	ATP2B2	C	T	25.9
Me	17	40934938	40934939	WNK4	C	T	25.8
Me	10	43609993	43609994	RET	C	T	25.8
Me	7	100084598	100084599	NYAP1	G	A	25.7
Me	1	34190950	34190951	CSMD2	C	G	25.7
Me	12	104378699	104378700	TDG	T	G	25.6
Me	17	43523024	43523025	PLEKHM1	C	T	25.6
Me	8	66617139	66617140	MTRF1	C	G	25.6
Me	11	34999681	34999682	PDHX	G	C	25.6
Me	10	119798923	119798924	RAB11FIP2	G	T	25.5
Me	3	147114031	147114032	ZIC4	C	G	25.5
Me	15	75684851	75684852	SIN3A	G	C	25.4
Me	22	40742704	40742705	ADSL	A	G	25.4
Me	4	37591782	37591783	C4orf19	G	A	25.4
Me	4	190876306	190876307	FRG1	G	A	25.3
Me	22	40742701	40742702	ADSL	C	G	25.3
Me	11	6662117	6662118	DCHS1	C	T	25.2
Me	11	1858040	1858041	SYT8	G	A	25.2
Me	4	155254539	155254540	DCHS2	G	C	25.1
Me	13	25671194	25671195	PABPC3	A	G	25

Table B-5: Continued

Me	20	44469365	44469366	SNX21	A	C	25
Me	2	32724714	32724715	BIRC6	C	G	25
Me	2	220337689	220337690	SPEG	G	A	25
Me	9	2718737	2718738	KCNV2	C	A	24.9
Me	11	19207877	19207878	CSRP3	C	T	24.9
Me	5	74916220	74916221	ANKDD1B	G	A	24.9
Me	11	118425757	118425758	IFT46	G	C	24.9
Me	11	36614560	36614561	RAG2	G	T	24.9
Me	1	93720073	93720074	CCDC18	G	A	24.8
Me	12	112628646	112628647	HECTD4	C	T	24.8
Me	X	153219848	153219849	HCFC1	G	A	24.8
Me	18	20936612	20936613	TMEM241	C	T	24.8
Me	19	14910751	14910752	OR7C1	A	G	24.8
Me	4	85540673	85540674	CDS1	C	G	24.8
Me	8	42259391	42259392	VDAC3	C	A	24.8
Me	16	67222998	67222999	EXOC3L1	G	A	24.8
Me	7	142231779	142231780	TRBV10-1	C	T	24.7
Me	4	1657174	1657175	FAM53A	G	A	24.7
Me	14	55462482	55462483	WDHD1	C	T	24.7
Me	5	150947890	150947891	FAT2	C	G	24.7
Me	2	114493366	114493367	SLC35F5	T	A	24.7
Me	17	81052023	81052024	METRNL	G	C	24.6
Me	1	248112343	248112344	OR2L8	T	G	24.6
Me	X	19433334	19433335	MAP3K15	G	A	24.6
Me	2	233410387	233410388	CHRNA	C	T	24.6
Me	2	84899497	84899498	DNAH6	A	T	24.6
Me	20	39832370	39832371	ZHX3	C	T	24.6
Me	5	141041638	141041639	ARAP3	C	T	24.5
Me	20	61391377	61391378	NTSR1	A	G	24.5
Me	22	25755877	25755878	LRP5L	G	A	24.5
Me	12	100926307	100926308	NR1H4	T	C	24.4
Me	8	145112397	145112398	OPLAH	G	A	24.4
Me	8	100844595	100844596	VPS13B	G	T	24.3
Me	12	9354957	9354958	PZP	C	T	24.3
Me	2	30987040	30987041	CAPN13	G	C	24.3
Me	5	176011197	176011198	CDHR2	A	G	24.3
Me	20	61917062	61917063	ARFGAP1	A	G	24.2
Me	1	203054979	203054980	MYOG	C	T	24.2
Me	2	26683873	26683874	OTOF	C	T	24.2

Table B-5: Continued

Me	17	18659394	18659395	FBXW10	A	G	24.2
Me	13	25670796	25670797	PABPC3	C	G	24.1
Me	16	23716458	23716459	ERN2	T	G	24.1
Me	21	47532404	47532405	COL6A2	G	A	24.1
Me	X	119005967	119005968	NDUFA1	G	C	24.1
Me	2	227661002	227661003	IRS1	C	G	24.1
Me	17	73261867	73261868	MRPS7	G	A	24
Me	2	1079279	1079280	SNTG2	A	C	23.9
Me	13	25670954	25670955	PABPC3	C	T	23.9
Me	19	45682875	45682876	BLOC1S3	C	G	23.9
Me	5	118264365	118264366	DTWD2	C	T	23.8
Me	1	8926473	8926474	ENO1	G	T	23.8
Me	17	6328963	6328964	AIPL1	C	A	23.8
Me	4	38798293	38798294	TLR1	T	G	23.8
Me	1	19415445	19415446	UBR4	G	A	23.7
Me	13	25671428	25671429	PABPC3	G	T	23.7
Me	2	179632597	179632598	TTN	C	T	23.7
Me	20	49219010	49219011	FAM65C	C	G	23.7
Me	12	11214600	11214601	TAS2R46	A	G	23.6
Me	4	57873019	57873020	POLR2B	C	T	23.6
Me	4	100808496	100808497	LAMTOR3	T	C	23.5
Me	6	74473329	74473330	CD109	C	A	23.5
Me	1	27744824	27744825	WASF2	C	G	23.5
Me	22	23523601	23523602	BCR	C	T	23.5
Me	22	20043503	20043504	TANGO2	G	A	23.5
Me	17	1386152	1386153	MYO1C	A	C	23.4
Me	6	27368989	27368990	ZNF391	G	A	23.4
Me	7	142206519	142206520	TRBV10-2	C	A	23.4
Me	3	186272511	186272512	TBCCD1	T	C	23.4
Me	2	179404549	179404550	TTN	G	A	23.4
Me	1	35260207	35260208	GJA4	C	T	23.4
Me	17	4542793	4542794	ALOX15	C	G	23.4
Me	6	33282921	33282922	ZBTB22	T	C	23.4
Me	2	186656321	186656322	FSIP2	A	G	23.3
Me	7	6189372	6189373	USP42	C	T	23.3
Me	9	8484297	8484298	PTPRD	C	A	23.3
Me	19	18709283	18709284	CRLF1	A	G	23.2
Me	10	103900765	103900766	PPRC1	C	G	23.2
Me	9	140006377	140006378	DPP7	G	A	23.2

Table B-5: Continued

Me	10	24908527	24908528	ARHGAP21	C	T	23.2
Me	1	151773724	151773725	LINGO4	C	T	23.1
Me	9	8518342	8518343	PTPRD	G	A	23.1
Me	11	65366881	65366882	MAP3K11	C	T	23.1
Me	6	44233402	44233403	NFKBIE	G	A	23.1
Me	1	94000369	94000370	FBNP1L	A	T	23
Me	3	148558742	148558743	CPB1	G	A	23
Me	10	79566593	79566594	DLG5	G	A	23
Me	4	100443827	100443828	C4orf17	C	A	23
Me	6	130467237	130467238	SAMD3	G	A	23
Me	16	19049252	19049253	TMC7	A	T	23
Me	22	40742707	40742708	ADSL	C	G	22.9
Me	7	56132023	56132024	SUMF2	C	G	22.9
Me	7	100064766	100064767	TSC22D4	A	T	22.9
Me	7	150164188	150164189	GIMAP8	C	G	22.9
Me	2	99978073	99978074	EIF5B	A	T	22.9
Me	6	89808349	89808350	SRSF12	G	C	22.9
Me	3	110912134	110912135	PVRL3	A	T	22.9
Me	3	148880042	148880043	HPS3	G	A	22.9
Me	12	56827208	56827209	TIMELESS	C	A	22.9
Me	9	68433463	68433464	LOC642236	C	T	22.7
Me	X	70836618	70836619	CXCR3	A	T	22.7
Me	22	43525261	43525262	BIK	C	T	22.7
Me	15	67528777	67528778	AAGAB	A	T	22.6
Me	16	72992377	72992378	ZFH3	G	C	22.5
Me	12	18576898	18576899	PIK3C2G	C	A	22.5
Me	11	64083289	64083290	ESRRA	G	A	22.4
Me	18	30928851	30928852	CCDC178	A	G	22.3
Me	17	76198594	76198595	AFMID	G	A	22.3
Me	11	1016969	1016970	MUC6	C	T	22.2
Me	X	26213124	26213125	MAGEB6	C	T	22.2
Me	11	64083292	64083293	ESRRA	G	T	22.1
Me	17	4488004	4488005	SMTNL2	G	C	22.1
Me	17	39535671	39535672	KRT34	G	A	22.1
Me	3	124369670	124369671	KALRN	C	T	22.1
Me	12	11183120	11183121	TAS2R31	G	A	22
Me	6	132859965	132859966	TAAR9	T	A	22
Me	4	75938177	75938178	PARM1	C	T	22
Me	11	18740267	18740268	IGSF22	C	T	21.9

Table B-5: Continued

Me	X	115303906	115303907	AGTR2	C	T	21.8
Me	1	225340409	225340410	DNAH14	G	A	21.8
Me	2	55555476	55555477	CCDC88A	C	G	21.7
Me	12	11183122	11183123	TAS2R31	T	C	21.6
Me	20	8770211	8770212	PLCB1	A	G	21.6
Me	3	57394011	57394012	DNAH12	T	C	21.4
Me	8	105509716	105509717	LRP12	A	C	21.4
Me	3	187088744	187088745	RTP4	G	C	21.4
Me	21	47546079	47546080	COL6A2	G	A	21.3
Me	12	124298076	124298077	DNAH10	C	T	21.3
Me	16	22161178	22161179	VWA3A	C	T	21.2
Me	2	179567339	179567340	TTN	G	A	21.2
Me	11	62931476	62931477	SLC22A25	A	T	20.8
Me	2	204305087	204305088	RAPH1	G	T	20.6
Me	10	50944527	50944528	OGDHL	C	A	20.6
Me	9	33797950	33797951	PRSS3	A	C	20.5
Me	3	185146498	185146499	MAP3K13	G	A	20.5
Me	8	3443721	3443722	CSMD1	G	C	20.4
Me	16	67327641	67327642	KCTD19	C	T	20.4
Me	7	5353448	5353449	TNRC18	G	C	20.3
Me	19	5694902	5694903	LONP1	C	G	20.3
Me	9	32543284	32543285	TOPORS	T	G	20.2
Me	19	1122150	1122151	SBNO2	G	A	20.1
Me	1	17085998	17086003	MST1L	CCCCG	C	0
Me	13	25671309	25671315	PABPC3	TTATGA	T	0
Me	2	97851081	97851086	ANKRD36	GTAAT	G	0
Me	GL000212.1	119492	119497		TTCTC	T	0
Me	GL000212.1	128872	128877		GTCTC	G	0
Me	1	6529181	6529188	PLEKHG5	TTCCTCC	T	0
Me	11	1017442	1017446	MUC6	CGTG	C	0
Me	11	64083294	64083298	ESRRA	CGGG	C	0
Me	12	26275154	26275155	BHLHE41	C	CGCG	0
Me	12	54718954	54718955	COPZ1	C	CGCG	0
Me	12	132547092	132547093	EP400	A	ACAGCAG	0
Me	13	100622666	100622670	ZIC5	TGGC	T	0
Me	13	100622666	100622667	ZIC5	T	TGGC	0
Me	13	108518705	108518715	FAM155A	TGCTGCTGCC	T	0
Me	14	24769848	24769849	NOP9	A	AGAGGAG	0
Me	14	24769848	24769849	NOP9	A	AGAG	0

Table B-5: Continued

Me	14	24769848	24769849	NOP9	A	AGAGGAGGAG	0
Me	14	106993937	106993941	IGHV3-48	GTAC	G	0
Me	15	72767213	72767214	ARIH1	T	TGGC	0
Me	15	72767213	72767220	ARIH1	TGGCGGC	T	0
Me	2	95541464	95541468	TEKT4	TGCC	T	0
Me	2	95541470	95541471	TEKT4	G	GGCA	0
Me	2	118771681	118771682	CCDC93	T	TGCCGCC	0
Me	22	40814746	40814747	MKL1	G	GGCGGT	0
Me	3	27763426	27763427	EOMES	G	GCGC	0
Me	3	42251576	42251580	TRAK1	CGGA	C	0
Me	3	42251576	42251577	TRAK1	C	CGGA	0
Me	3	42251576	42251577	TRAK1	C	CGGAGGA	0
Me	5	68411136	68411137	SLC30A5	T	TCGA	0
Me	5	127419930	127419937	SLC12A2	TGCGCGC	T	0
Me	5	127419930	127419931	SLC12A2	T	TGCG	0
Me	6	32552131	32552132	HLA-DRB1	T	TATA	0
Me	7	6662039	6662040	ZNF853	G	GGCA	0
Me	7	96635419	96635429	DLX6	AGCCGCCGCC	A	0
Me	7	142168497	142168501	TRBV5-4	GCCA	G	0
Me	7	142168501	142168502	TRBV5-4	T	TTTC	0
Me	9	95237023	95237027	ASPN	CTCA	C	0
Me	9	95237023	95237024	ASPN	C	CTCA	0
Me	9	100616699	100616700	FOXE1	A	AGCC	0
Me	9	141107535	141107536	FAM157B	G	GGCAGCA	0
Me	GL000212.1	119492	119499		TTCTCTC	T	0
Me	X	66765157	66765161	AR	TGCA	T	0
Me	X	66765157	66765158	AR	T	TGCAGCAGCA	0
Me	X	66765157	66765158	AR	T	TGCAGCA	0
Me	15	42979358	42979365	STARD9	CAGCACA	C	0
Me	19	1621906	1621910	TCF3	TGAG	T	0
Me	5	140725580	140725581	PCDHGA3	A	ACCGTGG	0
Mil	2	202245414	202245415	TRAK2	G	A	38
Mil	1	26517792	26517793	CATSPER4	C	T	35
Mil	7	92098548	92098549	ERVW-1	G	A	35
Mil	11	8734269	8734270	ST5	C	T	35
Mil	11	18456372	18456373	LDHC	C	T	35
Mil	9	127690543	127690544	GOLGA1	C	T	34
Mil	12	6471252	6471253	SCNN1A	A	G	33
Mil	15	89866656	89866657	POLG	C	G	33

Table B-5: Continued

Mil	20	3731478	3731479	HSPA12B	G	A	33
Mil	6	131211537	131211538	EPB41L2	C	T	33
Mil	8	144801295	144801296	MAPK15	G	A	33
Mil	3	131208886	131208887	MRPL3	C	A	33
Mil	6	7883467	7883468	TXNDC5	C	T	33
Mil	22	50655542	50655543	SELO	G	A	33
Mil	6	32489843	32489844	HLA-DRB5	C	T	32
Mil	19	55593645	55593646	EPS8L1	C	G	32
Mil	19	44676339	44676340	ZNF226	G	A	31
Mil	2	53943802	53943803	GPR75-ASB3	C	T	31
Mil	6	15524864	15524865	DTNBP1	C	T	31
Mil	3	148871364	148871365	HPS3	C	A	31
Mil	13	21751163	21751164	MRP63	C	T	31
Mil	12	11183034	11183035	TAS2R31	C	T	30
Mil	1	44463257	44463258	SLC6A9	C	T	30
Mil	11	57313468	57313469	SMTNL1	C	CG	30
Mil	14	107108271	107108272	IGHV3-63	A	AG	30
Mil	19	17397455	17397458	ANKLE1	GGT	G	30
Mil	19	33444598	33444601	CEP89	CTT	C	30
Mil	2	97851072	97851074	ANKRD36	GC	G	30
Mil	2	97851077	97851078	ANKRD36	A	AG	30
Mil	2	198571183	198571185	MARS2	TG	T	30
Mil	3	195514112	195514114	MUC4	AG	A	30
Mil	6	32487157	32487158	HLA-DRB5	G	GCA	30
Mil	6	32487210	32487212	HLA-DRB5	AC	A	30
Mil	6	32487214	32487215	HLA-DRB5	C	CT	30
Mil	6	32489742	32489744	HLA-DRB5	CG	C	30
Mil	6	32549397	32549399	HLA-DRB1	AC	A	30
Mil	6	32549401	32549402	HLA-DRB1	C	CT	30
Mil	6	32609295	32609296	HLA-DQA1	A	AG	30
Mil	6	32609297	32609299	HLA-DQA1	CA	C	30
Mil	6	170871053	170871055	TBP	AG	A	30
Mil	7	31697912	31697914	CCDC129	CT	C	30
Mil	7	100550629	100550630	MUC3A	C	CA	30
Mil	7	100550631	100550632	MUC3A	T	TCG	30
Mil	7	142139333	142139335	TRBV7-6	CG	C	30
Mil	7	142139336	142139337	TRBV7-6	C	CCA	30
Mil	7	142139338	142139340	TRBV7-6	GA	G	30
Mil	7	142206742	142206743	TRBV10-2	C	CTG	30

Table B-5: Continued

Mil	7	142206745	142206748	TRBV10-2	GCC	G	30
Mil	GL000212.1	119456	119458		CG	C	30
Mil	GL000212.1	119487	119488		T	TCG	30
Mil	11	67270110	67270111	PITPNM1	C	T	29.9
Mil	1	115219981	115219982	AMPD1	G	A	29.7
Mil	11	18754783	18754784	PTPN5	C	T	29.6
Mil	9	139401801	139401802	NOTCH1	C	T	29.6
Mil	17	1372838	1372839	MYO1C	C	T	29.4
Mil	20	10393438	10393439	MKKS	C	A	29.3
Mil	1	222717221	222717222	HHIPL2	C	T	28.9
Mil	4	128807474	128807475	PLK4	C	T	28.8
Mil	6	32551934	32551935	HLA-DRB1	G	C	28.4
Mil	12	76741340	76741341	BBS10	C	T	28.3
Mil	16	11272329	11272330	CLEC16A	G	A	28.2
Mil	8	23150850	23150851	R3HCC1	C	T	28
Mil	2	180835442	180835443	CWC22	C	G	27.8
Mil	10	105005930	105005931	LOC729020	C	T	27.7
Mil	11	722541	722542	EPS8L2	C	T	27.7
Mil	13	46824549	46824550	LRRC63	C	T	27.7
Mil	6	99850510	99850511	PNISR	T	C	27.5
Mil	10	70987122	70987123	HKDC1	C	T	27.3
Mil	17	73895711	73895712	MRPL38	A	G	27.3
Mil	16	1576680	1576681	IFT140	G	A	27.2
Mil	12	6471250	6471251	SCNN1A	C	G	26.9
Mil	3	32766959	32766960	CNOT10	T	C	26.9
Mil	3	183948573	183948574	VWA5B2	C	T	26.7
Mil	16	88598419	88598420	ZFPM1	C	G	26.6
Mil	1	66081790	66081791	LEPROT	C	T	26.5
Mil	10	16967416	16967417	CUBN	T	C	26.4
Mil	14	106363827	106363828	IGHD2-15	C	T	26.2
Mil	16	88800138	88800139	PIEZO1	C	T	26.2
Mil	3	197428622	197428623	KIAA0226	C	T	26.1
Mil	1	109801344	109801345	CELSR2	C	T	26.1
Mil	18	8384673	8384674	PTPRM	A	G	25.6
Mil	5	40934516	40934517	C7	A	G	25.6
Mil	15	26107945	26107946	ATP10A	C	G	25.6
Mil	1	229665957	229665958	ABCB10	C	T	25.6
Mil	1	23280164	23280165	LACTBL1	C	A	25.6
Mil	1	155290260	155290261	FDPS	T	A	25.5

Table B-5: Continued

Mil	2	27461497	27461498	CAD	A	T	25.4
Mil	12	112600963	112600964	HECTD4	G	C	25.3
Mil	20	25491320	25491321	NINL	A	G	25.3
Mil	4	151357909	151357910	LRBA	G	T	25.3
Mil	11	866624	866625	TSPAN4	G	A	25.3
Mil	11	65658348	65658349	CCDC85B	A	G	25.1
Mil	17	7909873	7909874	GUCY2D	C	T	25
Mil	10	51130454	51130455	PARG	C	T	25
Mil	16	88800059	88800060	PIEZO1	C	T	25
Mil	12	111800605	111800606	FAM109A	C	T	24.8
Mil	19	13411450	13411451	CACNA1A	T	G	24.8
Mil	1	47717093	47717094	STIL	G	A	24.7
Mil	20	23028639	23028640	THBD	G	A	24.7
Mil	12	113612454	113612455	DDX54	T	C	24.7
Mil	19	47285705	47285706	SLC1A5	T	A	24.5
Mil	17	39967769	39967770	LEPREL4	C	T	24.5
Mil	10	127685986	127685987	FANK1	A	G	24.3
Mil	11	65658345	65658346	CCDC85B	A	G	24.2
Mil	5	148989258	148989259	ARHGEF37	G	A	24.1
Mil	11	205999	206000	BET1L	G	C	24.1
Mil	12	112219723	112219724	ALDH2	T	G	24.1
Mil	19	44470504	44470505	ZNF221	G	A	24.1
Mil	3	136646967	136646968	NCK1	G	A	24
Mil	9	139256566	139256567	DNLZ	A	G	23.9
Mil	9	140637822	140637823	EHMT1	C	T	23.9
Mil	1	150131323	150131324	PLEKHO1	G	A	23.9
Mil	16	31475716	31475717	ARMC5	C	T	23.8
Mil	14	76964664	76964665	ESRRB	C	T	23.8
Mil	5	140790020	140790021	PCDHGB6	C	T	23.8
Mil	20	60901931	60901932	LAMA5	C	T	23.8
Mil	16	84444205	84444206	ATP2C2	C	G	23.8
Mil	3	33194430	33194431	SUSD5	C	A	23.7
Mil	1	176833426	176833427	ASTN1	T	C	23.6
Mil	11	65658351	65658352	CCDC85B	C	G	23.5
Mil	6	47678542	47678543	GPR115	T	C	23.5
Mil	10	29784025	29784026	SVIL	A	G	23.5
Mil	11	20648377	20648378	SLC6A5	C	T	23.4
Mil	11	65658354	65658355	CCDC85B	C	G	23.4
Mil	3	142402974	142402975	PLS1	T	C	23.4

Table B-5: Continued

Mil	16	4606634	4606635	C16orf96	G	A	23.4
Mil	5	71528271	71528272	MRPS27	T	G	23.3
Mil	17	35872942	35872943	DUSP14	G	A	23.3
Mil	7	47343056	47343057	TNS3	G	A	23.2
Mil	2	85571284	85571285	RETSAT	C	T	23.2
Mil	9	79323347	79323348	PRUNE2	G	A	23.2
Mil	5	35667267	35667268	SPEF2	G	A	23.2
Mil	6	32489891	32489892	HLA-DRB5	G	A	23.1
Mil	19	6427483	6427484	SLC25A41	C	T	23.1
Mil	9	6014445	6014446	RANBP6	T	G	23.1
Mil	17	57158551	57158552	TRIM37	G	A	23.1
Mil	16	1652417	1652418	IFT140	C	T	23.1
Mil	7	92098697	92098698	ERVW-1	A	C	23
Mil	8	61654097	61654098	CHD7	C	T	23
Mil	19	47285706	47285707	SLC1A5	C	T	23
Mil	1	118166384	118166385	FAM46C	G	A	23
Mil	1	231114866	231114867	ARV1	C	G	22.9
Mil	12	11174466	11174467	TAS2R19	A	C	22.9
Mil	19	1037680	1037681	CNN2	G	A	22.9
Mil	10	85961592	85961593	CDHR1	C	T	22.9
Mil	5	140735220	140735221	PCDHGA4	T	C	22.9
Mil	12	99093209	99093210	APAF1	G	A	22.8
Mil	6	161152904	161152905	PLG	C	T	22.8
Mil	10	132896630	132896631	TCERG1L	A	T	22.7
Mil	1	179494573	179494574	AXDND1	G	A	22.5
Mil	17	43893885	43893886	CRHR1	C	T	22.5
Mil	3	172046840	172046841	FNDC3B	G	T	22.5
Mil	11	9455300	9455301	IPO7	G	C	22.3
Mil	19	1037678	1037679	CNN2	C	T	22.3
Mil	19	15290235	15290236	NOTCH3	G	T	22.3
Mil	17	42393998	42393999	RUNDC3A	G	A	22.2
Mil	2	242423698	242423699	FARP2	A	C	22.1
Mil	X	118603983	118603984	SLC25A5	G	A	21.9
Mil	8	95655584	95655585	ESRP1	C	G	21.9
Mil	17	2595179	2595180	CLUH	C	G	21.7
Mil	16	67572603	67572604	FAM65A	C	T	21.6
Mil	9	135507432	135507433	DDX31	C	T	21.5
Mil	19	54599313	54599314	OSCAR	C	G	21.2
Mil	22	29121086	29121087	CHEK2	A	G	21.1

Table B-5: Continued

Mil	6	32489924	32489925	HLA-DRB5	C	T	20.9
Mil	19	813792	813793	LPPR3	C	T	20.4
Mil	2	198267392	198267393	SF3B1	T	C	20.4
Mil	19	17397455	17397460	ANKLE1	GGTGT	G	0
Mil	2	97851081	97851086	ANKRD36	GTAAT	G	0
Mil	6	170871053	170871058	TBP	AGCAG	A	0
Mil	1	154842198	154842199	KCNN3	G	GGCT	0
Mil	11	6662744	6662748	DCHS1	CCAG	C	0
Mil	15	72957309	72957313	GOLGA6B	TGAG	T	0
Mil	16	86544231	86544235	FOXF1	CGGG	C	0
Mil	17	56056603	56056604	VEZF1	T	TTGC	0
Mil	17	56056603	56056604	VEZF1	T	TTGCTGC	0
Mil	17	56056603	56056607	VEZF1	TTGC	T	0
Mil	2	73308222	73308226	RAB11FIP5	TTCC	T	0
Mil	3	27763426	27763427	EOMES	G	GCGC	0
Mil	4	169317252	169317256	DDX60L	CCTT	C	0
Mil	6	32552127	32552131	HLA-DRB1	TCCC	T	0
Mil	6	43970502	43970503	C6orf223	C	CGCGGCG	0
Mil	6	43970502	43970503	C6orf223	C	CGCG	0
Mil	7	5352664	5352665	TNRC18	T	TGAGGAG	0
Mil	7	100550624	100550625	MUC3A	C	CACT	0
Mil	7	100550637	100550644	MUC3A	ATCTACT	A	0
Mil	7	100550645	100550646	MUC3A	C	CGAG	0
Mil	7	100550647	100550651	MUC3A	CAGT	C	0
Mil	GL000212.1	119458	119462		CTCT	C	0
Mil	GL000212.1	122140	122147		GTCCTCC	G	0
Mil	GL000212.1	122140	122144		GTCC	G	0
Mil	GL000212.1	122140	122141		G	GTCCTCCTCC	0
Mil	GL000212.1	122140	122141		G	GTCC	0
Mil	19	49000876	49000886	LMTK3	AGCGGTGGCG	A	0
Mil	14	68108961	68108965	ARG2	TACA	T	0
Mil	1	201617944	201617945	NAV1	C	CCGG	0
Mil	9	99180257	99180258	ZNF367	G	GGGC	0
Mo	2	120439281	120439282	TMEM177	C	T	43
Mo	10	100152772	100152773	PYROXD2	C	A	35
Mo	12	42499710	42499711	GXYLT1	C	A	34
Mo	9	21166118	21166119	IFNA21	C	T	34
Mo	16	4411001	4411002	CORO7	C	T	34
Mo	17	34854120	34854121	MYO19	C	T	34

Table B-5: Continued

Mo	2	152346521	152346522	NEB	G	A	34
Mo	16	334919	334920	PDIA2	C	T	33
Mo	12	42499738	42499739	GXYLT1	C	T	33
Mo	12	49663328	49663329	TUBA1C	G	A	33
Mo	17	21318780	21318781	KCNJ12	C	T	33
Mo	17	7287831	7287832	TNK1	C	A	33
Mo	18	43262407	43262408	SLC14A2	G	A	33
Mo	X	17705905	17705906	NHS	C	T	32
Mo	9	35813520	35813521	HINT2	G	A	31
Mo	19	34832463	34832464	KIAA0355	G	A	31
Mo	2	239039863	239039864	ESPNL	G	A	31
Mo	14	23844978	23844979	IL25	C	T	31
Mo	1	7889982	7889985	PER3	CCA	C	30
Mo	10	75184514	75184516	MSS51	TA	T	30
Mo	17	27043029	27043031	RAB34	TC	T	30
Mo	2	128145799	128145802	LOC100506922	TCC	T	30
Mo	7	100551310	100551313	MUC3A	CTG	C	30
Mo	7	100696410	100696413	MUC17	CAA	C	30
Mo	7	142197960	142197963	TRBV11-2	TGC	T	30
Mo	7	142197964	142197965	TRBV11-2	C	CCA	30
Mo	4	74702808	74702809	CXCL6	G	GT	30
Mo	16	336887	336888	PDIA2	C	CA	30
Mo	11	17436059	17436060	ABCC8	G	A	29.8
Mo	12	42499801	42499802	GXYLT1	C	A	29.8
Mo	15	48559764	48559765	SLC12A1	G	A	29.1
Mo	2	158156094	158156095	GALNT5	A	C	28.2
Mo	2	105687795	105687796	MRPS9	G	A	28.1
Mo	4	178283445	178283446	NEIL3	G	T	27.5
Mo	X	118605016	118605017	SLC25A5	C	T	26.9
Mo	22	31336015	31336016	MORC2	G	A	26.9
Mo	16	1265314	1265315	CACNA1H	G	A	26.8
Mo	12	42499737	42499738	GXYLT1	T	C	26.6
Mo	12	78604292	78604293	NAV3	T	C	26.6
Mo	12	42499824	42499825	GXYLT1	A	C	26.5
Mo	7	1097335	1097336	GPR146	C	T	26.5
Mo	6	121562640	121562641	TBC1D32	C	T	26.4
Mo	1	22168854	22168855	HSPG2	G	A	26.4
Mo	11	403626	403627	PKP3	G	A	26.3
Mo	12	53343006	53343007	KRT18	G	A	26.3

Table B-5: Continued

Mo	9	91956346	91956347	SECISBP2	A	G	26.3
Mo	8	92139322	92139323	LRRC69	A	T	26.1
Mo	3	46307063	46307064	CCR3	G	A	26.1
Mo	10	99350209	99350210	C10orf62	C	T	26
Mo	1	45807149	45807150	TOE1	T	C	25.9
Mo	20	56793723	56793724	ANKRD60	G	A	25.9
Mo	6	43006407	43006408	CUL7	A	G	25.7
Mo	15	101906516	101906517	PCSK6	T	C	25.6
Mo	1	113235477	113235478	MOV10	G	A	25.6
Mo	16	3021918	3021919	PAQR4	G	C	25.6
Mo	1	110200293	110200294	GSTM4	G	A	25.3
Mo	3	57614058	57614059	DENND6A	C	G	25.3
Mo	10	12160890	12160891	DHTKD1	A	G	25.2
Mo	17	15973773	15973774	NCOR1	T	G	25.2
Mo	12	42499700	42499701	GXYLT1	C	A	25.1
Mo	5	78135213	78135214	ARSB	T	G	25.1
Mo	13	52518280	52518281	ATP7B	G	T	25.1
Mo	19	49100152	49100153	SULT2B1	G	A	25.1
Mo	12	44915944	44915945	NELL2	C	T	25
Mo	3	147128044	147128045	ZIC1	T	C	25
Mo	6	73331938	73331939	KCNQ5	G	A	25
Mo	6	21595711	21595712	SOX4	C	T	24.7
Mo	4	147741396	147741397	TTC29	T	A	24.6
Mo	3	9074341	9074342	SRGAP3	A	G	24.6
Mo	11	100168409	100168410	CNTN5	T	A	24.6
Mo	20	1918142	1918143	SIRPA	C	T	24.6
Mo	10	61552762	61552763	CCDC6	G	A	24.6
Mo	2	54895569	54895570	SPTBN1	C	T	24.5
Mo	15	41488230	41488231	EXD1	G	C	24.5
Mo	17	79205671	79205672	ENTHD2	G	A	24.5
Mo	12	113629239	113629240	C12orf52	C	G	24.4
Mo	2	1670149	1670150	PXDN	G	A	24.3
Mo	3	436383	436384	CHL1	A	T	24.3
Mo	9	131745251	131745252	NUP188	T	C	24.2
Mo	8	144895819	144895820	SCRIB	C	T	24.2
Mo	2	163361157	163361158	KCNH7	T	A	24.2
Mo	4	3446078	3446079	HGFAC	G	T	24.2
Mo	19	35260441	35260442	ZNF599	C	T	24.2
Mo	8	36675231	36675232	KCNU1	C	T	24.1

Table B-5: Continued

Mo	22	18566287	18566288	PEX26	C	G	24.1
Mo	5	176863188	176863189	GRK6	G	C	24
Mo	2	71185529	71185530	ATP6V1B1	G	A	24
Mo	19	10102491	10102492	COL5A3	G	A	24
Mo	2	220435324	220435325	OBSL1	G	T	23.8
Mo	12	49360193	49360194	WNT10B	A	G	23.6
Mo	1	233802496	233802497	KCNK1	G	A	23.6
Mo	9	18770659	18770660	ADAMTSL1	G	A	23.5
Mo	20	56191386	56191387	ZBP1	C	A	23.5
Mo	11	111958676	111958677	SDHD	A	G	23.5
Mo	7	142206519	142206520	TRBV10-2	C	A	23.4
Mo	19	9000168	9000169	MUC16	C	T	23.3
Mo	3	132394162	132394163	UBA5	T	C	23.3
Mo	11	8707254	8707255	RPL27A	C	T	23.3
Mo	15	68120353	68120354	SKOR1	C	T	23.3
Mo	1	184006379	184006380	COLGALT2	C	T	23.3
Mo	12	14943550	14943551	WBP11	G	A	23.2
Mo	19	39877177	39877178	PAF1	G	A	23.1
Mo	3	100523691	100523692	ABI3BP	C	G	23
Mo	11	65402011	65402012	PCNXL3	G	A	22.9
Mo	20	5903478	5903479	CHGB	A	G	22.9
Mo	7	100552387	100552388	MUC3A	C	T	22.9
Mo	22	20754994	20754995	ZNF74	G	A	22.8
Mo	19	8999420	8999421	MUC16	G	C	22.5
Mo	5	140346869	140346870	PCDHAC2	G	C	22.5
Mo	1	155231926	155231927	SCAMP3	C	T	22.4
Mo	9	68433566	68433567	LOC642236	C	T	22.3
Mo	X	134992605	134992606	SAGE1	A	G	21.9
Mo	5	16794850	16794851	MYO10	C	T	21.8
Mo	20	32245788	32245789	NECAB3	T	C	21.8
Mo	3	135745761	135745762	PPP2R3A	C	T	21.8
Mo	8	124349974	124349975	ATAD2	G	C	21.7
Mo	1	42047820	42047821	HIVEP3	T	C	21.6
Mo	X	108719158	108719159	GUCY2F	G	T	21.6
Mo	2	74652239	74652240	WDR54	T	C	21.6
Mo	16	57832066	57832067	KIFC3	G	T	21.3
Mo	3	100467231	100467232	TFG	C	G	21
Mo	16	27375028	27375029	IL4R	T	C	21
Mo	18	331716	331717	COLEC12	C	T	20.9

Table B-5: Continued

Mo	7	3991492	3991493	SDK1	C	T	20.9
Mo	4	148589710	148589711	PRMT10	G	A	20.8
Mo	X	70518563	70518564	NONO	G	T	20.5
Mo	8	110539234	110539235	PKHD1L1	T	C	20.3
Mo	1	84417584	84417585	TTLL7	T	C	20.3
Mo	20	57768654	57768655	ZNF831	G	A	20.3
Mo	22	24034670	24034671	RGL4	T	C	20.2
Mo	7	74193619	74193620	NCF1	G	A	20.2
Mo	12	42499812	42499816	GXYLT1	CGTA	C	0
Mo	1	154842198	154842199	KCNN3	G	GGCTGCT	0
Mo	1	154842198	154842199	KCNN3	G	GGCT	0
Mo	1	209605635	209605645	MIR205HG	TAGCAGCAGC	T	0
Mo	1	209605635	209605642	MIR205HG	TAGCAGC	T	0
Mo	12	132547092	132547093	EP400	A	ACAGCAG	0
Mo	15	23686087	23686091	GOLGA6L2	TCTC	T	0
Mo	16	12009529	12009530	GSPT1	C	CCCGCCG	0
Mo	16	87637892	87637902	JPH3	CCTGCTGCTG	C	0
Mo	17	56056603	56056604	VEZF1	T	TTGC	0
Mo	17	56056603	56056604	VEZF1	T	TTGCTGC	0
Mo	17	56056603	56056607	VEZF1	TTGC	T	0
Mo	3	27763426	27763427	EOMES	G	GCGC	0
Mo	3	40503519	40503529	RPL14	ACTGCTGCTG	A	0
Mo	5	146258289	146258293	PPP2R2B	AGCT	A	0
Mo	6	90121643	90121647	RRAGD	ATCC	A	0
Mo	7	100551291	100551295	MUC3A	CATT	C	0
Mo	7	100551296	100551297	MUC3A	T	TCCC	0
Mo	9	95237023	95237030	ASPN	CTCATCA	C	0
Mo	9	96009980	96009981	WNK2	C	CCGG	0
Mo	9	100616705	100616706	FOXE1	C	CGTGCCGCA	0
Mo	GL000212.1	102058	102062		TTTC	T	0
Mo	GL000212.1	102058	102065		TTTCTTC	T	0
Mo	GL000212.1	102058	102068		TTTCTTCTTC	T	0
Mo	20	44520236	44520237	CTSA	C	CCTG	0
Mo	20	61448928	61448938	COL9A3	TCCCCGGCCC	T	0
Mo	12	106641376	106641377	CKAP4	C	CGGA	0
Ni	12	9002852	9002853	A2ML1	G	A	42
Ni	4	103826684	103826685	SLC9B1	T	A	42
Ni	13	25671368	25671369	PABPC3	G	T	38
Ni	17	39221815	39221816	KRTAP2-4	C	T	38

Table B-5: Continued

Ni	16	24873989	24873990	SLC5A11	G	A	38
Ni	4	103826768	103826769	SLC9B1	G	A	37
Ni	X	37553592	37553593	XK	T	G	37
Ni	9	133799255	133799256	FIBCD1	G	A	37
Ni	3	108147679	108147680	MYH15	G	A	37
Ni	10	126138500	126138501	NKX1-2	C	T	36
Ni	14	77275863	77275864	ANGEL1	G	A	36
Ni	13	25671209	25671210	PABPC3	C	T	35
Ni	7	142008652	142008653	TRBV3-1	T	A	35
Ni	1	161495756	161495757	HSPA6	C	T	35
Ni	1	201750160	201750161	NAV1	C	T	35
Ni	13	47351600	47351601	ESD	C	T	35
Ni	22	45946445	45946446	FBLN1	C	T	35
Ni	19	12874382	12874383	HOOK2	C	T	35
Ni	1	144857704	144857705	PDE4DIP	G	A	34
Ni	11	71718275	71718276	NUMA1	G	A	34
Ni	4	41682975	41682976	LIMCH1	G	A	34
Ni	5	78384362	78384363	BHMT2	C	A	34
Ni	6	30865940	30865941	DDR1	C	T	34
Ni	3	56468976	56468977	ERC2	C	T	34
Ni	9	35649906	35649907	SIT1	G	A	34
Ni	11	47834481	47834482	NUP160	G	A	34
Ni	9	131763937	131763938	NUP188	G	A	34
Ni	1	144994669	144994670	PDE4DIP	C	A	34
Ni	19	6755080	6755081	SH2D3A	G	A	33
Ni	1	43903085	43903086	SZT2	C	A	33
Ni	15	78786318	78786319	IREB2	C	T	33
Ni	19	1037755	1037756	CNN2	G	A	33
Ni	2	55186336	55186337	EML6	G	A	33
Ni	22	38167666	38167667	TRIOBP	G	A	33
Ni	4	156832658	156832659	TDO2	A	G	33
Ni	4	68424561	68424562	STAP1	G	A	33
Ni	8	68396041	68396042	CPA6	C	T	33
Ni	16	31486013	31486014	TGFB111	G	A	32
Ni	19	1037780	1037781	CNN2	C	A	32
Ni	20	42310480	42310481	MYBL2	G	C	32
Ni	3	62268527	62268528	PTPRG	A	G	32
Ni	20	376969	376970	TRIB3	C	T	32
Ni	19	33149860	33149861	ANKRD27	G	A	32

Table B-5: Continued

Ni	12	88589106	88589107	TMTC3	G	A	32
Ni	6	94068111	94068112	EPHA7	A	G	31
Ni	17	40821632	40821633	PLEKHH3	C	A	31
Ni	16	68011575	68011576	DPEP3	C	T	31
Ni	11	116631541	116631542	BUD13	G	C	31
Ni	12	11183034	11183035	TAS2R31	C	T	30
Ni	21	33697575	33697576	URB1	G	A	30
Ni	3	33883491	33883492	PDCD6IP	G	A	30
Ni	1	111661441	111661442	DRAM2	G	GT	30
Ni	12	9555194	9555195	LOC728715	T	TC	30
Ni	12	12247920	12247923	BCL2L14	ATT	A	30
Ni	12	40880360	40880363	MUC19	GCT	G	30
Ni	12	53343130	53343131	KRT18	G	GA	30
Ni	13	25671271	25671273	PABPC3	AG	A	30
Ni	13	25671331	25671333	PABPC3	CA	C	30
Ni	14	106091125	106091127	IGHG4	CG	C	30
Ni	14	106725643	106725646	IGHV3-23	CCA	C	30
Ni	14	106725646	106725647	IGHV3-23	A	ATG	30
Ni	14	107108271	107108272	IGHV3-63	A	AG	30
Ni	15	74392544	74392546	LOC732265	TA	T	30
Ni	19	17397500	17397501	ANKLE1	T	TTG	30
Ni	2	133075477	133075479	ZNF806	TC	T	30
Ni	2	133075903	133075904	ZNF806	C	CA	30
Ni	2	133076116	133076118	ZNF806	CA	C	30
Ni	21	11021162	11021163	LOC101926954	T	TA	30
Ni	3	195505928	195505931	MUC4	GCC	G	30
Ni	4	338196	338197	ZNF141	T	TGA	30
Ni	4	338200	338203	ZNF141	ATC	A	30
Ni	4	103822481	103822484	SLC9B1	AAC	A	30
Ni	4	185612833	185612834	CCDC111	G	GC	30
Ni	6	32489754	32489755	HLA-DRB5	G	GCT	30
Ni	7	27192101	27192102	HOXA5	C	CT	30
Ni	7	31697912	31697914	CCDC129	CT	C	30
Ni	7	56087290	56087292	PSPH	AC	A	30
Ni	7	100550471	100550472	MUC3A	C	CAG	30
Ni	7	100550472	100550475	MUC3A	GCC	G	30
Ni	7	100550629	100550630	MUC3A	C	CA	30
Ni	7	100550631	100550632	MUC3A	T	TCG	30
Ni	7	142008633	142008636	TRBV3-1	ACG	A	30

Table B-5: Continued

Ni	7	142008638	142008639	TRBV3-1	A	AGG	30
Ni	7	142139333	142139335	TRBV7-6	CG	C	30
Ni	7	142139336	142139337	TRBV7-6	C	CCA	30
Ni	7	142139338	142139340	TRBV7-6	GA	G	30
Ni	7	142197960	142197963	TRBV11-2	TGC	T	30
Ni	7	142197964	142197965	TRBV11-2	C	CCA	30
Ni	7	142206742	142206743	TRBV10-2	C	CTG	30
Ni	7	142206745	142206748	TRBV10-2	GCC	G	30
Ni	7	142231792	142231793	TRBV10-1	A	AT	30
Ni	7	142231795	142231798	TRBV10-1	CCA	C	30
Ni	7	142231799	142231800	TRBV10-1	G	GA	30
Ni	7	142231804	142231805	TRBV10-1	C	CTG	30
Ni	7	142231807	142231810	TRBV10-1	GCC	G	30
Ni	8	87656007	87656009	CNGB3	AG	A	30
Ni	9	33797927	33797928	PRSS3	G	GCC	30
Ni	9	33797927	33797928	PRSS3	G	GCT	30
Ni	9	33797929	33797932	PRSS3	GAC	G	30
Ni	9	35906600	35906601	HRCT1	C	CCA	30
Ni	GL000212.1	64635	64638		TCC	T	30
Ni	GL000212.1	64638	64640		TC	T	30
Ni	GL000212.1	119456	119458		CG	C	30
Ni	GL000212.1	119487	119488		T	TCG	30
Ni	GL000212.1	119495	119496		T	TCG	30
Ni	GL000212.1	128872	128875		GTC	G	30
Ni	GL000212.1	10741	10742		T	TG	30
Ni	15	82574732	82574735	FAM154B	AAC	A	30
Ni	5	140683300	140683301	SLC25A2	G	GT	30
Ni	11	12270792	12270795	MICAL2	GGT	G	30
Ni	7	45148835	45148837	TBRG4	TG	T	30
Ni	1	144881546	144881547	PDE4DIP	G	A	29.9
Ni	11	57003781	57003782	APLNR	G	A	29.9
Ni	19	1037717	1037718	CNN2	G	T	29.9
Ni	15	66845437	66845438	LCTL	T	G	29.8
Ni	19	1037715	1037716	CNN2	G	A	29.8
Ni	16	4847823	4847824	ROGDI	C	T	29.8
Ni	3	112991984	112991985	BOC	G	A	29.7
Ni	6	51637535	51637536	PKHD1	G	T	29.6
Ni	10	12162209	12162210	DHTKD1	A	G	29.5
Ni	11	82549449	82549450	PRCP	G	A	29.4

Table B-5: Continued

Ni	7	103061824	103061825	SLC26A5	A	G	29.3
Ni	20	10393438	10393439	MKKS	C	A	29.3
Ni	1	244582096	244582097	ADSS	C	T	29.2
Ni	1	218520314	218520315	TGFB2	G	A	29.2
Ni	2	196602772	196602773	DNAH7	G	A	29.2
Ni	8	121528390	121528391	MTBP	C	T	28.6
Ni	14	56083243	56083244	KTN1	A	T	28.3
Ni	6	97000485	97000486	UFL1	C	G	28.3
Ni	1	2419116	2419117	PLCH2	G	A	28.1
Ni	8	142199127	142199128	DENND3	C	T	28.1
Ni	3	58302248	58302249	RPP14	C	T	27.9
Ni	1	35370418	35370419	DLGAP3	G	A	27.9
Ni	15	43990916	43990917	CKMT1A	G	T	27.7
Ni	11	36597228	36597229	RAG1	C	T	27.6
Ni	15	30011098	30011099	TJP1	G	A	27.5
Ni	12	109719558	109719559	FOXN4	C	T	27.5
Ni	10	106159258	106159259	CCDC147	G	A	27.4
Ni	12	49689403	49689404	PRPH	G	T	27.4
Ni	15	79059269	79059270	ADAMTS7	G	A	27.2
Ni	1	168278092	168278093	TBX19	G	A	27.1
Ni	7	12373138	12373139	VWDE	A	C	27.1
Ni	7	56087299	56087300	PSPH	C	T	27.1
Ni	7	148701235	148701236	PDIA4	C	T	27.1
Ni	19	7447760	7447761	ARHGEF18	T	C	27
Ni	2	241659226	241659227	KIF1A	C	T	26.8
Ni	21	43985957	43985958	SLC37A1	A	T	26.8
Ni	8	92374628	92374629	SLC26A7	G	A	26.7
Ni	16	57601981	57601982	GPR114	G	C	26.7
Ni	5	110436344	110436345	WDR36	A	C	26.7
Ni	12	7254519	7254520	C1RL	C	T	26.5
Ni	4	57976317	57976318	IGFBP7	T	C	26.5
Ni	3	48716535	48716536	NCKIPSD	G	A	26.5
Ni	6	4032321	4032322	PRPF4B	C	T	26.4
Ni	17	3195502	3195503	OR3A1	C	A	26.4
Ni	12	53343006	53343007	KRT18	G	A	26.3
Ni	19	1037714	1037715	CNN2	T	C	26.3
Ni	9	34622483	34622484	ARID3C	C	A	26.3
Ni	4	186111305	186111306	KIAA1430	G	A	26.3
Ni	13	25671291	25671292	PABPC3	C	T	26.2

Table B-5: Continued

Ni	19	50949162	50949163	MYBPC2	G	A	26.2
Ni	13	25671026	25671027	PABPC3	A	G	26.1
Ni	19	34895646	34895647	PDCD2L	G	A	26.1
Ni	3	127327308	127327309	MCM2	G	A	26.1
Ni	12	53343131	53343132	KRT18	G	T	25.8
Ni	4	106157697	106157698	TET2	T	C	25.8
Ni	2	220432456	220432457	OBSL1	G	A	25.7
Ni	4	113303631	113303632	ALPK1	A	G	25.7
Ni	2	72406555	72406556	EXOC6B	C	T	25.4
Ni	6	35208932	35208933	SCUBE3	G	C	25.4
Ni	9	116346546	116346547	RGS3	G	A	25.4
Ni	10	27303462	27303463	ANKRD26	C	T	25.4
Ni	19	45860625	45860626	ERCC2	G	C	25.3
Ni	X	15863554	15863555	AP1S2	T	C	25.1
Ni	13	78216921	78216922	SCEL	C	T	25.1
Ni	20	37659384	37659385	DHX35	C	T	25.1
Ni	17	80430448	80430449	NARF	A	G	25
Ni	2	109473378	109473379	CCDC138	T	G	25
Ni	4	147561890	147561891	POU4F2	C	A	25
Ni	20	5283322	5283323	PROKR2	A	C	24.9
Ni	9	140361767	140361768	PNPLA7	C	T	24.8
Ni	12	49121342	49121343	LINC00935	G	A	24.8
Ni	17	63156440	63156441	RGS9	G	A	24.8
Ni	16	1273557	1273558	TPSG1	C	T	24.8
Ni	2	158182140	158182141	ERMN	G	A	24.8
Ni	7	142231779	142231780	TRBV10-1	C	T	24.7
Ni	19	49355522	49355523	PLEKHA4	C	G	24.7
Ni	5	72373316	72373317	FCHO2	T	G	24.7
Ni	12	102113934	102113935	CHPT1	C	T	24.7
Ni	19	3000654	3000655	TLE2	C	T	24.7
Ni	10	77158945	77158946	ZNF503	T	C	24.6
Ni	12	53343068	53343069	KRT18	G	T	24.6
Ni	20	10389307	10389308	MKKS	T	C	24.6
Ni	16	4625930	4625931	C16orf96	C	T	24.6
Ni	19	45855506	45855507	ERCC2	G	C	24.5
Ni	2	168101944	168101945	XIRP2	G	A	24.5
Ni	20	61391377	61391378	NTSR1	A	G	24.5
Ni	10	50943322	50943323	OGDHL	A	C	24.4
Ni	5	156533729	156533730	HAVCR2	G	A	24.4

Table B-5: Continued

Ni	13	26273376	26273377	ATP8A2	G	A	24.4
Ni	11	93844086	93844087	HEPHL1	G	A	24.4
Ni	1	180974504	180974505	STX6	C	T	24.3
Ni	3	49211713	49211714	KLHDC8B	C	A	24.3
Ni	X	153137641	153137642	L1CAM	G	C	24.3
Ni	1	46496399	46496400	MAST2	G	A	24.3
Ni	2	158152916	158152917	GALNT5	T	C	24.3
Ni	X	31089927	31089928	FTHL17	G	A	24.1
Ni	4	41652520	41652521	LIMCH1	G	A	24.1
Ni	14	24529249	24529250	LRRRC16B	G	A	24
Ni	2	241622112	241622113	AQP12B	C	T	24
Ni	7	117254713	117254714	CFTR	A	G	24
Ni	1	207073700	207073701	IL24	C	T	24
Ni	1	214169810	214169811	PROX1	G	A	23.9
Ni	20	16360653	16360654	KIF16B	T	C	23.9
Ni	16	5115750	5115751	C16orf89	C	A	23.9
Ni	10	121182693	121182694	GRK5	C	T	23.9
Ni	13	25670954	25670955	PABPC3	C	T	23.9
Ni	11	64811899	64811900	SAC3D1	C	T	23.8
Ni	19	33135342	33135343	ANKRD27	A	G	23.7
Ni	8	1950457	1950458	KBTBD11	T	G	23.7
Ni	X	71521799	71521800	CITED1	C	G	23.7
Ni	12	56996505	56996506	BAZ2A	C	G	23.7
Ni	12	53343083	53343084	KRT18	G	C	23.6
Ni	12	132313057	132313058	MMP17	C	T	23.6
Ni	14	96781799	96781800	ATG2B	T	C	23.6
Ni	3	35785415	35785416	ARPP21	C	T	23.6
Ni	12	71537950	71537951	TSPAN8	C	T	23.6
Ni	1	53722911	53722912	LRP8	A	C	23.5
Ni	11	55035846	55035847	TRIM48	A	T	23.5
Ni	20	56191386	56191387	ZBP1	C	A	23.5
Ni	14	65205464	65205465	PLEKHG3	G	C	23.5
Ni	13	25671167	25671168	PABPC3	C	T	23.4
Ni	3	127390334	127390335	PODXL2	G	A	23.4
Ni	14	106725652	106725653	IGHV3-23	A	T	23.3
Ni	2	167266446	167266447	SCN7A	T	C	23.3
Ni	10	115364551	115364552	NRAP	C	G	23.3
Ni	12	46591790	46591791	SLC38A1	C	T	23.3
Ni	19	9000168	9000169	MUC16	C	T	23.3

Table B-5: Continued

Ni	2	219000598	219000599	CXCR2	A	T	23.3
Ni	20	25656059	25656060	ZNF337	G	T	23.3
Ni	12	69083372	69083373	NUP107	G	A	23.3
Ni	1	203008235	203008236	PPFIA4	C	A	23.3
Ni	3	49698114	49698115	BSN	G	A	23.3
Ni	1	5965454	5965455	NPHP4	C	T	23.3
Ni	12	42538339	42538340	GXYLT1	C	A	23.2
Ni	12	53343058	53343059	KRT18	C	A	23.2
Ni	19	8999394	8999395	MUC16	T	C	23.2
Ni	19	43991254	43991255	PHLDB3	C	G	23.2
Ni	X	21675433	21675434	KLHL34	A	G	23.2
Ni	19	1818838	1818839	REXO1	G	A	23.2
Ni	12	49168797	49168798	ADCY6	C	A	23.2
Ni	5	180048640	180048641	FLT4	G	A	23.1
Ni	11	73811642	73811643	C2CD3	C	T	23.1
Ni	16	21133338	21133339	DNAH3	G	A	23.1
Ni	21	30439334	30439335	CCT8	C	T	23.1
Ni	6	125284071	125284072	RNF217	C	T	23
Ni	8	21938696	21938697	DMTN	G	A	23
Ni	2	159170301	159170302	CCDC148	T	C	23
Ni	19	1531835	1531836	PLK5	G	T	23
Ni	16	1561036	1561037	IFT140	G	A	22.9
Ni	4	338129	338130	ZNF141	C	G	22.9
Ni	9	3879428	3879429	GLIS3	C	A	22.9
Ni	10	88719757	88719758	SNCG	T	C	22.9
Ni	3	148880042	148880043	HPS3	G	A	22.9
Ni	1	92263004	92263005	TGFBR3	C	G	22.8
Ni	4	151000276	151000277	DCLK2	G	T	22.8
Ni	3	182987590	182987591	B3GNT5	G	A	22.8
Ni	GL000212.1	65061	65062		G	A	22.7
Ni	12	51068408	51068409	DIP2B	G	A	22.7
Ni	11	56468601	56468602	OR9G1	G	A	22.6
Ni	16	732798	732799	JMJD8	C	T	22.6
Ni	20	44815291	44815292	CDH22	C	T	22.6
Ni	14	94430710	94430711	ASB2	G	A	22.6
Ni	6	105563676	105563677	BVES	A	G	22.6
Ni	1	15802963	15802964	CELA2B	G	T	22.5
Ni	19	54496344	54496345	CACNG6	G	A	22.5
Ni	8	101721708	101721709	PABPC1	T	A	22.5

Table B-5: Continued

Ni	11	8132420	8132421	RIC3	C	T	22.5
Ni	11	64083289	64083290	ESRRA	G	A	22.4
Ni	16	19126516	19126517	ITPRIPL2	A	T	22.4
Ni	12	18891317	18891318	CAPZA3	G	A	22.3
Ni	9	107332376	107332377	OR13C8	T	A	22.3
Ni	15	42028819	42028820	MGA	A	G	22.2
Ni	1	12169688	12169689	TNFRSF8	C	T	22.1
Ni	11	64083292	64083293	ESRRA	G	T	22.1
Ni	1	205238262	205238263	TMCC2	C	A	22
Ni	2	219319665	219319666	USP37	C	T	21.9
Ni	15	81234286	81234287	KIAA1199	C	G	21.8
Ni	20	48429461	48429462	SLC9A8	G	T	21.7
Ni	19	17445469	17445470	ANO8	C	T	21.5
Ni	12	104160075	104160076	STAB2	C	T	21.4
Ni	5	13902244	13902245	DNAH5	G	C	21.4
Ni	12	53342967	53342968	KRT18	C	T	21.3
Ni	12	53343039	53343040	KRT18	C	A	21.3
Ni	13	27255401	27255402	WASF3	C	G	21.3
Ni	19	58131668	58131669	ZNF134	A	T	21.2
Ni	X	21450760	21450761	CNKSR2	C	A	21.1
Ni	5	127614490	127614491	FBN2	A	G	21.1
Ni	7	5413922	5413923	TNRC18	C	T	21
Ni	11	45203807	45203808	PRDM11	C	T	20.9
Ni	16	613609	613610	C16orf11	C	T	20.8
Ni	9	33797950	33797951	PRSS3	A	C	20.5
Ni	12	132269772	132269773	SFSWAP	G	A	20.5
Ni	1	12907445	12907446	HNRNPCL1	C	T	20.4
Ni	19	44117960	44117961	SRRM5	C	T	20.3
Ni	9	36882048	36882049	PAX5	C	T	20.3
Ni	1	152187301	152187306	HRNR	GATCC	G	0
Ni	12	40880383	40880391	MUC19	ACCATCAG	A	0
Ni	12	40880393	40880399	MUC19	GAAGTC	G	0
Ni	13	25671309	25671315	PABPC3	TTATGA	T	0
Ni	19	8999496	8999497	MUC16	G	GACCA	0
Ni	19	8999496	8999501	MUC16	GGCTT	G	0
Ni	19	8999497	8999502	MUC16	GCTTT	G	0
Ni	19	9021177	9021185	MUC16	GCCATAAC	G	0
Ni	19	17397500	17397501	ANKLE1	T	TTGTG	0
Ni	6	29893661	29893670	HCG4B	GCTCCCTCT	G	0

Table B-5: Continued

Ni	8	1950459	1950465	KBTBD11	GCGCCC	G	0
Ni	GL000212.1	119492	119497		TTCTC	T	0
Ni	GL000212.1	119492	119493		T	TGCC	0
Ni	GL000212.1	128872	128877		GTCTC	G	0
Ni	10	125780751	125780755	CHST15	CGGG	C	0
Ni	11	64083294	64083298	ESRRA	CGGG	C	0
Ni	11	66512289	66512290	C11orf80	G	GGGCGGCGGC	0
Ni	12	6777065	6777069	ZNF384	CTGT	C	0
Ni	12	7045890	7045894	ATN1	ACAG	A	0
Ni	12	7045890	7045900	ATN1	ACAGCAGCAG	A	0
Ni	12	7045890	7045891	ATN1	A	ACAG	0
Ni	12	7045890	7045891	ATN1	A	ACAGCAG	0
Ni	12	132547092	132547093	EP400	A	ACAGCAG	0
Ni	13	25671148	25671152	PABPC3	ACGG	A	0
Ni	13	25671153	25671163	PABPC3	AGACGGAAC	A	0
Ni	13	100635006	100635016	ZIC2	CCCACCACCA	C	0
Ni	14	21960795	21960799	TOX4	ATTG	A	0
Ni	14	106993937	106993941	IGHV3-48	GTAC	G	0
Ni	15	41730622	41730626	RTF1	CGAT	C	0
Ni	16	15814096	15814100	MYH11	GCTT	G	0
Ni	16	87637892	87637902	JPH3	CCTGCTGCTG	C	0
Ni	17	7788363	7788364	CHD3	G	GCCA	0
Ni	17	56056603	56056604	VEZF1	T	TTGC	0
Ni	17	56056603	56056604	VEZF1	T	TTGCTGC	0
Ni	17	56056603	56056607	VEZF1	TTGC	T	0
Ni	17	74068526	74068527	SRP68	T	TGCCGCC	0
Ni	19	8575761	8575771	ZNF414	CGGCCGCGGG	C	0
Ni	19	9021173	9021174	MUC16	A	AGGGGCT	0
Ni	19	45412047	45412051	APOE	GCTC	G	0
Ni	2	73613030	73613031	ALMS1	T	TGGAGGA	0
Ni	2	73613030	73613034	ALMS1	TGGA	T	0
Ni	2	85360827	85360828	TCF7L1	G	GGGCGGC	0
Ni	2	118771681	118771682	CCDC93	T	TGCCGCC	0
Ni	2	131129927	131129928	PTPN18	A	AGACGGG	0
Ni	3	27763426	27763427	EOMES	G	GCGC	0
Ni	3	42251576	42251577	TRAK1	C	CGGA	0
Ni	3	42251576	42251577	TRAK1	C	CGGAGGA	0
Ni	3	63898359	63898360	ATXN7	G	GGCAGCAGCA	0
Ni	3	63898359	63898369	ATXN7	GGCAGCAGCA	G	0

Table B-5: Continued

Ni	5	60628152	60628156	ZSWIM6	GGGC	G	0
Ni	6	42897356	42897360	CNPY3	TTGC	T	0
Ni	6	159166669	159166673	SYTL3	AAAG	A	0
Ni	6	170871012	170871013	TBP	A	ACAG	0
Ni	7	5352634	5352635	TNRC18	T	TGAG	0
Ni	7	5352634	5352638	TNRC18	TGAG	T	0
Ni	7	27192102	27192103	HOXA5	G	GGCC	0
Ni	7	94292806	94292810	PEG10	CCAA	C	0
Ni	7	100550280	100550281	MUC3A	C	CTCA	0
Ni	7	100550624	100550625	MUC3A	C	CACT	0
Ni	7	100550637	100550644	MUC3A	ATCTACT	A	0
Ni	7	100550645	100550646	MUC3A	C	CGAG	0
Ni	7	100550647	100550651	MUC3A	CAGT	C	0
Ni	9	95237023	95237027	ASPN	CTCA	C	0
Ni	9	95237023	95237024	ASPN	C	CTCA	0
Ni	GL000212.1	62462	62466		CGAG	C	0
Ni	GL000212.1	62754	62755		C	CTAA	0
Ni	GL000212.1	119458	119462		CTCT	C	0
Ni	X	24382372	24382373	SUPT20HL1	T	TTGCTGCTGC	0
Ni	X	66765157	66765161	AR	TGCA	T	0
Ni	X	66765157	66765158	AR	T	TGCAGCAGCA	0
Ni	X	66765157	66765158	AR	T	TGCAGCA	0
Ni	X	55514923	55514927	USP51	GATC	G	0
Ni	6	20212418	20212422	MBOAT1	CCCG	C	0
Ni	19	49657709	49657719	HRC	ACATCATCAT	A	0
Ni	5	140802852	140802856	PCDHGA11	ACCT	A	0
Ni	12	52284538	52284539	ANKRD33	T	TGGCCCA	0
Ni	2	43451738	43451739	ZFP36L2	C	CCTGCTG	0
Ni	16	19126042	19126046	ITPRIPL2	TCTC	T	0
Ni	6	7910869	7910870	TXNDC5	T	TCCG	0
Ni	19	49657709	49657710	HRC	A	ACATCAT	0
Ro	4	103826684	103826685	SLC9B1	T	A	42
Ro	4	103826768	103826769	SLC9B1	G	A	37
Ro	11	60201249	60201250	MS4A5	C	T	36
Ro	14	64066470	64066471	WDR89	G	A	36
Ro	12	42538351	42538352	GXYLT1	C	A	35
Ro	14	64066362	64066363	WDR89	G	A	35
Ro	22	29075650	29075651	TTC28	G	A	35
Ro	7	142008652	142008653	TRBV3-1	T	A	35

Table B-5: Continued

Ro	17	45438787	45438788	EFCAB13	C	T	35
Ro	2	242046865	242046866	PASK	C	T	35
Ro	3	111672861	111672862	PHLDB2	G	A	35
Ro	8	21957263	21957264	FAM160B2	C	T	35
Ro	2	68613680	68613681	PLEK	C	T	35
Ro	19	8429322	8429323	ANGPTL4	G	A	35
Ro	1	115417138	115417139	SYCP1	G	A	34
Ro	1	146742599	146742600	CHD1L	C	T	34
Ro	11	61724874	61724875	BEST1	G	A	34
Ro	15	29443998	29443999	FAM189A1	C	T	34
Ro	4	110685720	110685721	CFI	C	T	34
Ro	12	56087067	56087068	ITGA7	C	T	34
Ro	19	44079590	44079591	XRCC1	C	A	34
Ro	2	219204533	219204534	PNKD	G	A	34
Ro	5	70819925	70819926	BDP1	C	T	34
Ro	8	120575248	120575249	ENPP2	C	T	34
Ro	6	32549612	32549613	HLA-DRB1	G	A	33
Ro	10	91098713	91098714	IFIT3	C	T	33
Ro	14	68045911	68045912	PLEKHH1	G	A	33
Ro	1	53373559	53373560	ECHDC2	C	T	33
Ro	2	233399867	233399868	CHRND	G	A	33
Ro	2	222301219	222301220	EPHA4	C	A	32
Ro	20	30497596	30497597	TTLL9	C	T	32
Ro	4	20552460	20552461	SLIT2	G	A	32
Ro	6	32489843	32489844	HLA-DRB5	C	T	32
Ro	6	51929794	51929795	PKHD1	G	A	32
Ro	6	138638450	138638451	KIAA1244	G	A	32
Ro	3	51312517	51312518	DOCK3	C	T	32
Ro	9	88193970	88193971	AGTPBP1	C	A	32
Ro	18	56184342	56184343	ALPK2	G	A	32
Ro	2	210518056	210518057	MAP2	G	A	32
Ro	7	128843395	128843396	SMO	G	A	32
Ro	20	13029650	13029651	SPTLC3	C	T	31
Ro	7	23508146	23508147	IGF2BP3	G	A	31
Ro	9	139836911	139836912	FBXW5	C	T	31
Ro	15	41102165	41102166	ZFYVE19	C	T	31
Ro	11	17656671	17656672	OTOG	G	A	31
Ro	14	23844978	23844979	IL25	C	T	31
Ro	16	50756539	50756540	NOD2	G	C	31

Table B-5: Continued

Ro	7	92098917	92098918	ERVW-1	G	A	30
Ro	1	20141404	20141405	RNF186	C	T	30
Ro	1	147931152	147931153	LOC101929383	A	AC	30
Ro	1	179335261	179335264	AXDND1	GTA	G	30
Ro	1	216420435	216420437	USH2A	TC	T	30
Ro	1	248801601	248801602	OR2T35	T	TCA	30
Ro	11	57313468	57313469	SMTNL1	C	CG	30
Ro	12	9555194	9555195	LOC728715	T	TC	30
Ro	12	12247920	12247923	BCL2L14	ATT	A	30
Ro	12	40884663	40884664	MUC19	C	CA	30
Ro	12	53343130	53343131	KRT18	G	GA	30
Ro	13	25671271	25671273	PABPC3	AG	A	30
Ro	13	25671331	25671333	PABPC3	CA	C	30
Ro	14	106774215	106774218	IGHV7-27	ATT	A	30
Ro	14	106774219	106774220	IGHV7-27	C	CCA	30
Ro	15	59981588	59981589	BNIP2	G	GA	30
Ro	15	74392544	74392546	LOC732265	TA	T	30
Ro	16	28354288	28354291	NPIB6	GCA	G	30
Ro	18	61584737	61584739	SERPINB10	GA	G	30
Ro	19	7550896	7550897	PEX11G	A	AC	30
Ro	19	17397455	17397458	ANKLE1	GGT	G	30
Ro	19	49002057	49002059	LMTK3	CG	C	30
Ro	2	91636148	91636149	LOC101060169	C	CA	30
Ro	2	91636148	91636149	LOC101060169	C	CG	30
Ro	2	95619131	95619132	LOC100652780	G	GCA	30
Ro	2	95619133	95619135	LOC100652780	GT	G	30
Ro	2	97851072	97851074	ANKRD36	GC	G	30
Ro	2	132795675	132795678	LOC101060825	CTT	C	30
Ro	2	133075477	133075479	ZNF806	TC	T	30
Ro	2	133075903	133075904	ZNF806	C	CA	30
Ro	2	133076116	133076118	ZNF806	CA	C	30
Ro	20	34793922	34793925	EPB41L1	GGA	G	30
Ro	21	11021162	11021163	LOC101926954	T	TA	30
Ro	21	11029595	11029597	LOC101926954	AC	A	30
Ro	4	338196	338197	ZNF141	T	TGA	30
Ro	4	338200	338203	ZNF141	ATC	A	30
Ro	4	103822481	103822484	SLC9B1	AAC	A	30
Ro	6	32552059	32552060	HLA-DRB1	A	AG	30
Ro	6	32609295	32609296	HLA-DQA1	A	AG	30

Table B-5: Continued

Ro	6	32609297	32609299	HLA-DQA1	CA	C	30
Ro	6	99322165	99322168	FBXL4	GCT	G	30
Ro	6	168376881	168376882	HGC6.3	G	GT	30
Ro	7	56087290	56087292	PSPH	AC	A	30
Ro	7	100550472	100550475	MUC3A	GCC	G	30
Ro	7	142008633	142008636	TRBV3-1	ACG	A	30
Ro	7	142008638	142008639	TRBV3-1	A	AGG	30
Ro	7	142197960	142197963	TRBV11-2	TGC	T	30
Ro	7	142197964	142197965	TRBV11-2	C	CCA	30
Ro	7	142231792	142231793	TRBV10-1	A	AT	30
Ro	7	142231795	142231798	TRBV10-1	CCA	C	30
Ro	7	142231799	142231800	TRBV10-1	G	GA	30
Ro	7	142231804	142231805	TRBV10-1	C	CTG	30
Ro	7	142231807	142231810	TRBV10-1	GCC	G	30
Ro	8	1921830	1921831	LOC101928058	G	GC	30
Ro	9	33797927	33797928	PRSS3	G	GCC	30
Ro	9	33797927	33797928	PRSS3	G	GCT	30
Ro	9	33797929	33797932	PRSS3	GAC	G	30
Ro	9	35684821	35684822	TPM2	C	CGG	30
Ro	9	35906600	35906601	HRCT1	C	CCA	30
Ro	GL000212.1	119492	119495		TTC	T	30
Ro	GL000212.1	119492	119493		T	TTC	30
Ro	GL000212.1	128872	128875		GTC	G	30
Ro	GL000212.1	10741	10742		T	TG	30
Ro	X	118603960	118603962	SLC25A5	CT	C	30
Ro	6	170013749	170013751	WDR27	AC	A	30
Ro	12	53343230	53343231	KRT18	G	C	29.9
Ro	20	20270951	20270952	C20orf26	C	A	29.9
Ro	19	3739010	3739011	TJP3	G	A	29.7
Ro	11	75905854	75905855	WNT11	G	A	29.3
Ro	7	99145677	99145678	FAM200A	C	G	29.2
Ro	6	32975285	32975286	HLA-DOA	A	G	29.2
Ro	16	2259409	2259410	BRICD5	G	A	29.1
Ro	4	88989110	88989111	PKD2	G	A	29.1
Ro	19	34003643	34003644	PEPD	G	A	28.9
Ro	4	103808518	103808519	CISD2	C	T	28.8
Ro	5	108171408	108171409	FER	G	T	28.8
Ro	6	44329573	44329574	SPATS1	G	A	28.5
Ro	17	77710989	77710990	ENPP7	C	T	28.4

Table B-5: Continued

Ro	1	237838083	237838084	RYR2	A	G	28.2
Ro	18	12986931	12986932	SEH1L	C	T	28.2
Ro	16	3726072	3726073	TRAP1	C	T	27.9
Ro	17	73888166	73888167	TRIM65	G	A	27.9
Ro	19	11510958	11510959	RGL3	C	T	27.8
Ro	5	102282588	102282589	PAM	C	T	27.8
Ro	5	71756518	71756519	ZNF366	C	A	27.7
Ro	X	118603872	118603873	SLC25A5	G	T	27.6
Ro	1	45224989	45224990	KIF2C	T	C	27.6
Ro	12	63543692	63543693	AVPR1A	G	T	27.6
Ro	7	43484851	43484852	HECW1	G	A	27.5
Ro	3	9027339	9027340	SRGAP3	G	A	27.4
Ro	6	44272248	44272249	AARS2	G	A	27.4
Ro	13	51825650	51825651	FAM124A	C	T	27.3
Ro	1	11158182	11158183	EXOSC10	T	C	27.1
Ro	7	56087299	56087300	PSPH	C	T	27.1
Ro	5	33643558	33643559	ADAMTS12	A	T	27
Ro	3	33195500	33195501	SUSD5	T	C	26.9
Ro	1	216270468	216270469	USH2A	G	A	26.8
Ro	16	67692210	67692211	ACD	C	T	26.5
Ro	7	121733189	121733190	AASS	G	A	26.5
Ro	3	43073795	43073796	FAM198A	G	A	26.5
Ro	14	64066401	64066402	WDR89	A	G	26.4
Ro	1	159902413	159902414	IGSF9	C	G	26.4
Ro	17	3195502	3195503	OR3A1	C	A	26.4
Ro	19	10469918	10469919	TYK2	G	A	26.4
Ro	12	53343006	53343007	KRT18	G	A	26.3
Ro	11	27363004	27363005	CCDC34	T	A	26.3
Ro	2	220107996	220107997	GLB1L	G	A	26.3
Ro	19	2041839	2041840	MKNK2	T	C	26.2
Ro	19	52569243	52569244	ZNF841	C	T	26.2
Ro	11	3681155	3681156	ART1	G	A	26.2
Ro	13	25671026	25671027	PABPC3	A	G	26.1
Ro	X	118603755	118603756	SLC25A5	T	A	26.1
Ro	X	118604029	118604030	SLC25A5	T	C	26.1
Ro	12	3129870	3129871	TEAD4	G	A	26.1
Ro	2	70524476	70524477	FAM136A	G	C	26
Ro	1	63063615	63063616	ANGPTL3	C	T	26
Ro	1	983712	983713	AGRN	C	T	25.9

Table B-5: Continued

Ro	X	118603924	118603925	SLC25A5	G	A	25.9
Ro	12	53343131	53343132	KRT18	G	T	25.8
Ro	17	902062	902063	TIMM22	G	A	25.8
Ro	2	31600071	31600072	XDH	G	C	25.8
Ro	11	70271498	70271499	CTTN	T	G	25.7
Ro	2	70524451	70524452	FAM136A	A	G	25.6
Ro	1	153941505	153941506	CREB3L4	C	A	25.6
Ro	11	62444433	62444434	UBXN1	G	A	25.5
Ro	4	187539307	187539308	FAT1	G	C	25.5
Ro	19	17534350	17534351	MVB12A	C	G	25.5
Ro	10	99437680	99437681	AVP11	C	T	25.4
Ro	19	54677946	54677947	MBOAT7	T	A	25.4
Ro	12	2994577	2994578	RHNO1	C	G	25.4
Ro	18	77659306	77659307	KCNG2	G	T	25.3
Ro	19	10472987	10472988	TYK2	C	T	25.3
Ro	12	53682042	53682043	ESPL1	C	G	25.3
Ro	3	196674366	196674367	PIGZ	C	G	25.2
Ro	3	170811628	170811629	TNIK	T	G	25.2
Ro	3	184910077	184910078	EHHADH	G	A	25.2
Ro	3	46586533	46586534	LRRC2	A	G	25.1
Ro	3	9876511	9876512	TTLL3	T	C	25.1
Ro	13	111143600	111143601	COL4A2	A	G	25.1
Ro	17	6663898	6663899	XAF1	G	T	25
Ro	12	42538333	42538334	GXYLT1	C	A	25
Ro	8	144690263	144690264	PYCR1	C	T	25
Ro	17	39155947	39155948	KRTAP3-2	G	A	25
Ro	15	75641681	75641682	NEIL1	T	C	24.9
Ro	16	66511494	66511495	BEAN1	C	T	24.9
Ro	16	11367445	11367446	PRM3	A	G	24.9
Ro	1	86048525	86048526	CYR61	C	G	24.9
Ro	14	23244660	23244661	SLC7A7	G	A	24.8
Ro	1	34330136	34330137	HMGB4	C	A	24.8
Ro	7	142231779	142231780	TRBV10-1	C	T	24.7
Ro	2	27598774	27598775	SNX17	A	C	24.7
Ro	6	109764051	109764052	SMPD2	C	T	24.7
Ro	10	103298117	103298118	BTRC	G	A	24.7
Ro	1	156878472	156878473	PEAR1	C	T	24.7
Ro	12	53343068	53343069	KRT18	G	T	24.6
Ro	17	11783470	11783471	DNAH9	C	A	24.6

Table B-5: Continued

Ro	21	35208931	35208932	ITSN1	G	T	24.5
Ro	18	20569273	20569274	RBBP8	A	G	24.5
Ro	12	57849398	57849399	INHBE	C	T	24.5
Ro	10	17891605	17891606	LOC101928757	C	G	24.5
Ro	12	53343208	53343209	KRT18	G	A	24.4
Ro	9	72913052	72913053	SMC5	C	T	24.4
Ro	12	133264263	133264264	PXMP2	C	T	24.4
Ro	8	98041636	98041637	CPQ	G	A	24.4
Ro	17	13504060	13504061	HS3ST3A1	G	T	24.3
Ro	2	179411490	179411491	TTN	C	T	24.3
Ro	6	28876772	28876773	TRIM27	G	A	24.3
Ro	12	113405327	113405328	OAS3	G	A	24.3
Ro	12	50724443	50724444	FAM186A	G	C	24.3
Ro	15	45398359	45398360	DUOX2	C	A	24.2
Ro	7	102086967	102086968	ORAI2	G	C	24.2
Ro	X	118604013	118604014	SLC25A5	G	A	24.2
Ro	1	46976939	46976940	DMBX1	G	T	24.1
Ro	10	126370560	126370561	FAM53B	G	T	24
Ro	13	95034731	95034732	GPC6	T	C	24
Ro	19	47593341	47593342	ZC3H4	C	G	24
Ro	7	142247516	142247517	TRBV7-3	C	A	24
Ro	7	97482483	97482484	ASNS	G	A	24
Ro	14	64066394	64066395	WDR89	C	T	23.9
Ro	19	10745478	10745479	SLC44A2	G	A	23.9
Ro	2	234717838	234717839	MROH2A	C	A	23.9
Ro	9	130588090	130588091	ENG	C	T	23.9
Ro	22	43950948	43950949	EFCAB6	G	A	23.9
Ro	13	25670954	25670955	PABPC3	C	T	23.9
Ro	2	86832539	86832540	RNF103	A	T	23.8
Ro	X	118604005	118604006	SLC25A5	A	G	23.8
Ro	7	143013390	143013391	CLCN1	A	C	23.8
Ro	22	25597400	25597401	CRYBB3	C	G	23.8
Ro	2	131414403	131414404	POTEJ	C	T	23.8
Ro	14	20404339	20404340	OR4K1	A	G	23.8
Ro	17	73567800	73567801	LLGL2	G	A	23.8
Ro	6	43307398	43307399	ZNF318	G	A	23.8
Ro	7	73450895	73450896	ELN	G	A	23.7
Ro	8	30969149	30969150	WRN	C	G	23.7
Ro	11	94192598	94192599	MRE11A	G	T	23.7

Table B-5: Continued

Ro	17	2282778	2282779	SGSM2	G	A	23.7
Ro	12	53343083	53343084	KRT18	G	C	23.6
Ro	12	53343104	53343105	KRT18	C	T	23.5
Ro	12	53343224	53343225	KRT18	C	T	23.5
Ro	2	112619980	112619981	ANAPC1	G	A	23.5
Ro	4	68530953	68530954	UBA6	G	A	23.5
Ro	1	243471327	243471328	SDCCAG8	C	G	23.5
Ro	5	56778304	56778305	ACTBL2	A	G	23.5
Ro	17	48183339	48183340	PDK2	G	A	23.4
Ro	17	48625939	48625940	SPATA20	G	A	23.4
Ro	20	62373837	62373838	SLC2A4RG	A	G	23.4
Ro	4	96163630	96163631	UNC5C	C	T	23.4
Ro	12	52885432	52885433	KRT6A	G	T	23.4
Ro	17	4542793	4542794	ALOX15	C	G	23.4
Ro	3	93615435	93615436	PROS1	A	T	23.3
Ro	3	42599170	42599171	SEC22C	C	T	23.3
Ro	10	113926223	113926224	GPAM	A	G	23.3
Ro	12	42538339	42538340	GXYLT1	C	A	23.2
Ro	12	53343058	53343059	KRT18	C	A	23.2
Ro	17	39280195	39280196	KRTAP4-12	C	A	23.2
Ro	19	13041286	13041287	FARSA	G	A	23.2
Ro	4	83827765	83827766	THAP9	G	A	23.2
Ro	12	21689945	21689946	GYS2	A	G	23.2
Ro	1	114133194	114133195	MAGI3	T	C	23.2
Ro	2	179486222	179486223	TTN	C	T	23.2
Ro	10	88446829	88446830	LDB3	G	A	23.2
Ro	11	86518872	86518873	PRSS23	C	G	23.1
Ro	2	179603060	179603061	TTN	C	T	23.1
Ro	6	32489891	32489892	HLA-DRB5	G	A	23.1
Ro	14	22321080	22321081	TRAV8-3	A	C	23.1
Ro	10	90492270	90492271	LIPK	T	A	23.1
Ro	19	8196586	8196587	FBN3	G	A	23.1
Ro	9	106860778	106860779	SMC2	A	C	23.1
Ro	14	64989812	64989813	ZBTB1	G	C	23.1
Ro	3	14703093	14703094	CCDC174	G	A	23.1
Ro	1	12907517	12907518	HNRNPCL1	T	A	23
Ro	12	124827709	124827710	NCOR2	C	T	23
Ro	19	1923154	1923155	SCAMP4	C	T	23
Ro	11	7441779	7441780	SYT9	G	A	22.9

Table B-5: Continued

Ro	19	13065101	13065102	GADD45GIP1	G	A	22.9
Ro	2	102791993	102791994	IL1R1	G	A	22.9
Ro	16	11348705	11348706	SOCS1	C	G	22.9
Ro	17	7188458	7188459	SLC2A4	C	T	22.9
Ro	15	33446747	33446748	FMN1	G	A	22.9
Ro	7	135358887	135358888	C7orf73	C	T	22.9
Ro	2	97845606	97845607	ANKRD36	G	A	22.8
Ro	X	118603957	118603958	SLC25A5	G	A	22.8
Ro	1	74836075	74836076	TNNI3K	G	C	22.8
Ro	22	20709895	20709896	FAM230A	C	T	22.8
Ro	6	161152904	161152905	PLG	C	T	22.8
Ro	14	65208878	65208879	PLEKHG3	C	G	22.7
Ro	15	83657841	83657842	C15orf40	G	T	22.7
Ro	2	97845615	97845616	ANKRD36	G	T	22.7
Ro	7	100652429	100652430	MUC12	C	T	22.7
Ro	2	28113156	28113157	RBKS	A	G	22.6
Ro	2	237349714	237349715	IQCA1	C	G	22.6
Ro	5	31483689	31483690	DROSHA	A	C	22.5
Ro	8	27315810	27315811	PTK2B	A	G	22.5
Ro	2	179585311	179585312	TTN	G	A	22.5
Ro	17	39412058	39412059	KRTAP9-9	G	A	22.5
Ro	16	1391136	1391137	BAIAP3	C	T	22.4
Ro	9	68433566	68433567	LOC642236	C	T	22.3
Ro	14	64066325	64066326	WDR89	C	T	22.3
Ro	5	35795822	35795823	SPEF2	G	A	22.3
Ro	2	207171310	207171311	ZDBF2	C	T	22.3
Ro	1	12907518	12907519	HNRNPCL1	C	A	22.1
Ro	12	66696546	66696547	HELB	G	A	22
Ro	2	179512133	179512134	TTN	G	A	21.9
Ro	X	118603983	118603984	SLC25A5	G	A	21.9
Ro	22	50721187	50721188	PLXNB2	C	T	21.8
Ro	17	61909291	61909292	PSMC5	G	A	21.7
Ro	1	113161691	113161692	ST7L	G	A	21.7
Ro	2	74652239	74652240	WDR54	T	C	21.6
Ro	2	201438265	201438266	SGOL2	A	G	21.5
Ro	6	30889402	30889403	VAR52	C	A	21.5
Ro	11	64332777	64332778	SLC22A11	C	T	21.4
Ro	20	1459053	1459054	SIRPB2	G	A	21.4
Ro	3	73673261	73673262	PDZRN3	C	G	21.4

Table B-5: Continued

Ro	15	42676689	42676690	CAPN3	G	A	21.4
Ro	12	53343039	53343040	KRT18	C	A	21.3
Ro	19	54782894	54782895	LILRB2	G	A	21.3
Ro	4	15005407	15005408	CPEB2	G	A	21.2
Ro	22	32108219	32108220	PRR14L	T	C	21.1
Ro	1	203008284	203008285	PPFIA4	C	T	21
Ro	7	30793364	30793365	INMT	C	T	20.7
Ro	1	12907445	12907446	HNRNPCL1	C	T	20.4
Ro	1	52867838	52867839	ORC1	C	G	20.4
Ro	2	230579018	230579019	DNER	G	A	20.4
Ro	20	34278458	34278459	NFS1	T	C	20.3
Ro	5	64848333	64848334	CENPK	C	T	20.2
Ro	19	1496347	1496348	REEP6	G	A	20.2
Ro	1	205197865	205197866	TMCC2	C	G	20.1
Ro	11	60070089	60070094	MS4A4A	TAATC	T	0
Ro	13	25671309	25671315	PABPC3	TTATGA	T	0
Ro	16	28354286	28354287	NPIPB6	G	GGACAA	0
Ro	18	29055975	29055980	DSG3	CAGCT	C	0
Ro	19	8999496	8999497	MUC16	G	GACCA	0
Ro	19	8999496	8999501	MUC16	GGCTT	G	0
Ro	19	8999497	8999502	MUC16	GCTTT	G	0
Ro	19	17397455	17397460	ANKLE1	GGTGT	G	0
Ro	2	70524507	70524508	FAM136A	A	ACAGC	0
Ro	2	70524510	70524515	FAM136A	ACTGT	A	0
Ro	2	90413233	90413243	LOC101060017	GATCTTTGCC	G	0
Ro	22	23653974	23653975	BCR	T	TCCGG	0
Ro	6	29893661	29893670	HCG4B	GCTCCCTCT	G	0
Ro	9	45442424	45442429	LOC101927903	GTCTC	G	0
Ro	GL000212.1	119492	119497		TTCTC	T	0
Ro	GL000212.1	119492	119493		T	TGCC	0
Ro	GL000212.1	119492	119501		TTCTCTCTC	T	0
Ro	GL000212.1	128872	128877		GTCTC	G	0
Ro	1	225334917	225334922	DNAH14	CAATT	C	0
Ro	1	1025773	1025777	C1orf159	CCCA	C	0
Ro	1	17085588	17085595	MSTIL	AGCGCTG	A	0
Ro	1	148252776	148252777	LOC100288142	T	TCTC	0
Ro	1	154842198	154842199	KCNN3	G	GGCTGCT	0
Ro	1	209605635	209605645	MIR205HG	TAGCAGCAGC	T	0
Ro	1	209605635	209605642	MIR205HG	TAGCAGC	T	0

Table B-5: Continued

Ro	10	125780751	125780755	CHST15	CGGG	C	0
Ro	11	1017442	1017446	MUC6	CGTG	C	0
Ro	11	12316343	12316344	MICALCL	G	GCTC	0
Ro	11	12316343	12316353	MICALCL	GCTCCTCCTC	G	0
Ro	11	12316343	12316344	MICALCL	G	GCTCCTC	0
Ro	11	12316343	12316344	MICALCL	G	GCTCCTCCTC	0
Ro	11	64083294	64083298	ESRRA	CGGG	C	0
Ro	12	7045890	7045900	ATN1	ACAGCAGCAG	A	0
Ro	12	7045890	7045891	ATN1	A	ACAGCAG	0
Ro	12	18854539	18854540	PLCZ1	A	ATCC	0
Ro	12	18854539	18854546	PLCZ1	ATCCTCC	A	0
Ro	12	40881225	40881226	MUC19	T	TTGG	0
Ro	13	100622666	100622670	ZIC5	TGGC	T	0
Ro	13	100622666	100622667	ZIC5	T	TGGC	0
Ro	17	56056603	56056604	VEZF1	T	TTGC	0
Ro	17	56056603	56056604	VEZF1	T	TTGCTGC	0
Ro	17	56056603	56056607	VEZF1	TTGC	T	0
Ro	2	73308222	73308226	RAB11FIP5	TTCC	T	0
Ro	2	73308222	73308229	RAB11FIP5	TTCCTCC	T	0
Ro	2	88926728	88926729	EIF2AK3	C	CCAG	0
Ro	2	172967127	172967131	DLX2	GGCT	G	0
Ro	22	21539518	21539522	LOC101927985	AGAC	A	0
Ro	22	21539593	21539597	LOC101927985	CGTT	C	0
Ro	3	40503519	40503529	RPL14	ACTGCTGCTG	A	0
Ro	3	42251576	42251580	TRAK1	CGGA	C	0
Ro	3	42251576	42251577	TRAK1	C	CGGA	0
Ro	3	42251576	42251577	TRAK1	C	CGGAGGA	0
Ro	4	3076602	3076603	HTT	C	CCAG	0
Ro	5	6448843	6448844	UBE2QL1	T	TGCG	0
Ro	5	60628152	60628156	ZSWIM6	GGGC	G	0
Ro	6	16327914	16327915	ATXN1	A	ATGCTGCTGC	0
Ro	6	16327914	16327915	ATXN1	A	ATGC	0
Ro	6	16327914	16327915	ATXN1	A	ATGCTGC	0
Ro	6	16327914	16327918	ATXN1	ATGC	A	0
Ro	7	96635419	96635429	DLX6	AGCCGCCGCC	A	0
Ro	9	45442424	45442431	LOC101927903	GTCTCTC	G	0
Ro	9	133556991	133557001	PRDM12	TCGCCGCCGC	T	0
Ro	9	133556991	133556992	PRDM12	T	TCGC	0
Ro	9	141107535	141107536	FAM157B	G	GGCAGCA	0

Table B-5: Continued

Ro	GL000212.1	62754	62755		C	CTAA	0
Ro	GL000212.1	63718	63722		CGAG	C	0
Ro	GL000212.1	119492	119499		TTCTCTC	T	0
Ro	GL000212.1	122140	122147		GTCCTCC	G	0
Ro	GL000212.1	122140	122144		GTCC	G	0
Ro	GL000212.1	122140	122141		G	GTCCTCCTCC	0
Ro	GL000212.1	122140	122141		G	GTCC	0
Ro	X	25031775	25031779	ARX	TGCC	T	0
Ro	19	49657709	49657719	HRC	ACATCATCAT	A	0
Ro	19	30433499	30433500	URI1	T	TCGGCCC	0
Ro	9	99180257	99180258	ZNF367	G	GGGC	0
Ro	19	49657709	49657710	HRC	A	ACATCAT	0
S	3	108672557	108672558	GUCA1C	C	A	35
S	4	141372655	141372656	LOC152586	G	A	35
S	9	123673660	123673661	TRAF1	C	T	35
S	13	60348894	60348895	DIAPH3	G	A	34
S	8	21959725	21959726	FAM160B2	G	A	33
S	20	42162995	42162996	L3MBTL1	G	A	32
S	1	220101498	220101499	SLC30A10	G	A	31
S	15	65684689	65684690	IGDCC4	T	C	31
S	15	45724277	45724278	C15orf48	G	GA	30
S	6	32609295	32609296	HLA-DQA1	A	AG	30
S	6	32609297	32609299	HLA-DQA1	CA	C	30
S	1	38397629	38397630	INPP5B	T	TA	30
S	15	43893733	43893734	STRC	G	A	29
S	2	42994813	42994814	HAAO	C	G	28.7
S	15	69011846	69011847	CORO2B	G	A	28.5
S	20	62407113	62407114	ZBTB46	A	T	27.7
S	1	183914680	183914681	COLGALT2	T	A	26.9
S	18	3188777	3188778	MYOM1	C	T	26.2
S	1	224544641	224544642	CNIH4	T	G	26.1
S	6	43020438	43020439	CUL7	C	T	25.9
S	14	70883621	70883622	SYNJ2BP-COX16	G	A	24.7
S	3	16638351	16638352	DAZL	G	A	24.5
S	6	21594846	21594847	SOX4	C	G	24.5
S	9	125486716	125486717	OR1L4	G	A	24.4
S	20	60884426	60884427	LAMA5	C	T	24.4
S	9	111663929	111663930	IKBKAP	C	T	23.9
S	1	181765941	181765942	CACNA1E	G	A	23.9

Table B-5: Continued

S	1	16531262	16531263	ARHGEF19	C	T	23.8
S	15	44166531	44166532	FRMD5	C	T	23.5
S	17	80038406	80038407	FASN	C	A	23.2
S	1	32120422	32120423	COL16A1	T	C	23.1
S	9	123929919	123929920	CNTRL	G	A	23.1
S	9	126125326	126125327	CRB2	G	A	22.9
S	3	148880042	148880043	HPS3	G	A	22.9
S	2	42946133	42946134	MTA3	A	G	22.8
S	7	42949772	42949773	C7orf25	C	T	22.8
S	1	75072553	75072554	C1orf173	G	A	22.7
S	12	11183120	11183121	TAS2R31	G	A	22
S	12	11183122	11183123	TAS2R31	T	C	21.6
S	20	48491255	48491256	SLC9A8	C	T	21.6
S	8	106813786	106813787	ZFPM2	C	T	20.5
S	1	180199700	180199701	LHX4	G	A	20.5
S	11	93490518	93490519	C11orf54	T	C	20.1
S	19	1236044	1236051	C19orf26	CAGTGGT	C	0
Sc	6	142399708	142399709	NMBR	C	A	44
Sc	4	103826684	103826685	SLC9B1	T	A	42
Sc	13	25671368	25671369	PABPC3	G	T	38
Sc	4	103826768	103826769	SLC9B1	G	A	37
Sc	22	29075650	29075651	TTC28	G	A	35
Sc	7	142008652	142008653	TRBV3-1	T	A	35
Sc	3	10357088	10357089	SEC13	C	T	35
Sc	17	40370280	40370281	STAT5B	G	A	34
Sc	14	103342014	103342015	TRAF3	C	T	34
Sc	2	70046462	70046463	ANXA4	C	T	34
Sc	8	19263327	19263328	CSGALNACT1	C	G	34
Sc	17	48193232	48193233	SAMD14	C	T	34
Sc	4	110638823	110638824	PLA2G12A	C	T	34
Sc	5	90001236	90001237	GPR98	G	A	33
Sc	2	149806439	149806440	KIF5C	G	T	32
Sc	18	47329069	47329070	ACAA2	C	A	32
Sc	1	43898743	43898744	SZT2	C	T	31
Sc	1	53793509	53793512	LRP8	CTG	C	30
Sc	11	57313468	57313469	SMTNL1	C	CG	30
Sc	12	9555194	9555195	LOC728715	T	TC	30
Sc	12	12247920	12247923	BCL2L14	ATT	A	30
Sc	12	53343130	53343131	KRT18	G	GA	30

Table B-5: Continued

Sco	13	25671271	25671273	PABPC3	AG	A	30
Sco	13	25671331	25671333	PABPC3	CA	C	30
Sco	14	106329448	106329451	IGHJ6	ATG	A	30
Sco	14	106329452	106329453	IGHJ6	A	ACC	30
Sco	14	106774215	106774218	IGHV7-27	ATT	A	30
Sco	14	106774219	106774220	IGHV7-27	C	CCA	30
Sco	15	74392544	74392546	LOC732265	TA	T	30
Sco	17	20768754	20768756	CCDC144NL	CT	C	30
Sco	19	17397500	17397501	ANKLE1	T	TTG	30
Sco	2	96592973	96592976	ANKRD36C	GTT	G	30
Sco	2	97851072	97851074	ANKRD36	GC	G	30
Sco	2	97851077	97851078	ANKRD36	A	AG	30
Sco	2	133075477	133075479	ZNF806	TC	T	30
Sco	2	133075903	133075904	ZNF806	C	CA	30
Sco	2	133076116	133076118	ZNF806	CA	C	30
Sco	21	11021162	11021163	LOC101926954	T	TA	30
Sco	3	50340077	50340078	HYAL1	C	CAA	30
Sco	4	338196	338197	ZNF141	T	TGA	30
Sco	4	338200	338203	ZNF141	ATC	A	30
Sco	4	103822481	103822484	SLC9B1	AAC	A	30
Sco	6	32551960	32551961	HLA-DRB1	G	GTC	30
Sco	6	32551960	32551961	HLA-DRB1	G	GT	30
Sco	6	32551961	32551962	HLA-DRB1	C	CT	30
Sco	7	100550471	100550472	MUC3A	C	CAG	30
Sco	7	100550472	100550475	MUC3A	GCC	G	30
Sco	7	142008633	142008636	TRBV3-1	ACG	A	30
Sco	7	142231792	142231793	TRBV10-1	A	AT	30
Sco	7	142231795	142231798	TRBV10-1	CCA	C	30
Sco	7	142231799	142231800	TRBV10-1	G	GA	30
Sco	7	142231804	142231805	TRBV10-1	C	CTG	30
Sco	7	142231807	142231810	TRBV10-1	GCC	G	30
Sco	9	33797927	33797928	PRSS3	G	GCC	30
Sco	9	33797927	33797928	PRSS3	G	GCT	30
Sco	9	33797929	33797932	PRSS3	GAC	G	30
Sco	GL000212.1	128872	128875		GTC	G	30
Sco	GL000212.1	10741	10742		T	TG	30
Sco	12	53343230	53343231	KRT18	G	C	29.9
Sco	9	137779250	137779251	FCN2	G	A	29.7
Sco	9	136507331	136507332	DBH	G	A	29.6

Table B-5: Continued

Sco	5	167719176	167719177	WWC1	C	G	29.4
Sco	17	42991448	42991449	GFAP	C	T	29.4
Sco	10	50863187	50863188	CHAT	G	A	29.4
Sco	4	169060674	169060675	ANXA10	C	T	29.4
Sco	6	15496929	15496930	JARID2	C	T	29.2
Sco	12	6638141	6638142	NCAPD2	T	C	29.1
Sco	5	77461465	77461466	AP3B1	C	G	29
Sco	10	49440274	49440275	FRMPD2	C	T	28.6
Sco	3	120952485	120952486	STXBP5L	G	A	28.6
Sco	6	32551934	32551935	HLA-DRB1	G	C	28.4
Sco	15	89449924	89449925	MFG8	A	C	28.3
Sco	9	78973430	78973431	PCSK5	G	A	28.2
Sco	5	90059269	90059270	GPR98	C	A	27.7
Sco	6	32084336	32084337	ATF6B	T	A	27.7
Sco	2	159499112	159499113	PKP4	A	G	27.7
Sco	5	178035454	178035455	CLK4	T	A	27.5
Sco	7	99764239	99764240	GAL3ST4	A	G	27.1
Sco	17	1637173	1637174	WDR81	G	A	27.1
Sco	16	89178530	89178531	ACSF3	C	T	27.1
Sco	17	10215943	10215944	MYH13	G	A	27.1
Sco	12	108145599	108145600	PRDM4	C	G	27
Sco	9	140361778	140361779	PNPLA7	T	G	26.9
Sco	1	17292974	17292975	CROCC	G	A	26.8
Sco	17	76167997	76167998	SYNGR2	A	G	26.7
Sco	22	40797646	40797647	SGSM3	T	C	26.7
Sco	12	53343006	53343007	KRT18	G	A	26.3
Sco	13	25671291	25671292	PABPC3	C	T	26.2
Sco	13	25671026	25671027	PABPC3	A	G	26.1
Sco	12	53343131	53343132	KRT18	G	T	25.8
Sco	17	18881604	18881605	FAM83G	C	A	25.8
Sco	1	203140636	203140637	MYBPH	G	A	25.7
Sco	19	11516011	11516012	RGL3	C	G	25.7
Sco	19	54782681	54782682	LILRB2	C	T	25.6
Sco	2	211442211	211442212	CPS1	G	A	25.6
Sco	8	21956095	21956096	FAM160B2	G	A	25.6
Sco	1	204587762	204587763	LRRN2	G	T	25.2
Sco	16	81323952	81323953	BCMO1	G	C	25.2
Sco	17	15973773	15973774	NCOR1	T	G	25.2
Sco	19	10742577	10742578	SLC44A2	G	A	24.8

Table B-5: Continued

Sco	13	28494500	28494501	PDX1	G	A	24.8
Sco	7	142231779	142231780	TRBV10-1	C	T	24.7
Sco	11	64878233	64878234	VPS51	G	C	24.7
Sco	12	53343068	53343069	KRT18	G	T	24.6
Sco	16	90106768	90106769	GAS8	A	G	24.5
Sco	12	53343208	53343209	KRT18	G	A	24.4
Sco	5	60194106	60194107	ERCC8	G	T	24.4
Sco	11	62554112	62554113	TAF6L	C	G	24.3
Sco	11	101832688	101832689	KIAA1377	A	T	24.2
Sco	3	12598665	12598666	MKRN2	T	C	23.9
Sco	2	179400129	179400130	TTN	G	A	23.9
Sco	19	45682875	45682876	BLOC1S3	C	G	23.9
Sco	4	88902909	88902910	SPP1	T	C	23.8
Sco	5	41313743	41313744	PLCXD3	A	G	23.7
Sco	12	53343083	53343084	KRT18	G	C	23.6
Sco	8	55538906	55538907	RP1	T	A	23.6
Sco	12	53343104	53343105	KRT18	C	T	23.5
Sco	12	53343224	53343225	KRT18	C	T	23.5
Sco	2	112619980	112619981	ANAPC1	G	A	23.5
Sco	12	122710553	122710554	DIABLO	G	C	23.5
Sco	1	186270800	186270801	PRG4	T	G	23.4
Sco	19	14938932	14938933	OR7A5	C	T	23.4
Sco	10	81932594	81932595	ANXA11	G	A	23.4
Sco	10	112544124	112544125	RBM20	C	T	23.3
Sco	12	53343058	53343059	KRT18	C	A	23.2
Sco	2	171687534	171687535	GAD1	A	T	23.2
Sco	2	107446664	107446665	ST6GAL2	G	C	23.2
Sco	19	58639330	58639331	ZNF329	G	A	23.1
Sco	19	52909226	52909227	ZNF528	C	T	23.1
Sco	4	100571565	100571566	LOC285556	T	C	23.1
Sco	1	225586970	225586971	DNAH14	A	T	23
Sco	13	51915354	51915355	SERPINE3	C	T	23
Sco	12	113873315	113873316	SDSL	C	T	23
Sco	21	33362463	33362464	HUNK	G	A	22.9
Sco	10	115364584	115364585	NRAP	A	G	22.9
Sco	6	33382861	33382862	PHF1	C	T	22.8
Sco	11	63064893	63064894	SLC22A10	C	A	22.8
Sco	19	5719904	5719905	LONP1	G	A	22.7
Sco	1	175092636	175092637	TNN	C	T	22.7

Table B-5: Continued

Sco	15	89414705	89414706	ACAN	G	A	22.5
Sco	19	54782670	54782671	LILRB2	G	C	22.3
Sco	6	18197820	18197821	KDM1B	T	C	22.1
Sco	8	75928927	75928928	CRISPLD1	G	T	22.1
Sco	X	32509624	32509625	DMD	A	C	21.8
Sco	12	53343039	53343040	KRT18	C	A	21.3
Sco	1	186151389	186151390	HMCN1	A	G	21.2
Sco	8	72981374	72981375	TRPA1	G	T	20.9
Sco	17	4541965	4541966	ALOX15	C	T	20.8
Sco	1	12907445	12907446	HNRNPCL1	C	T	20.4
Sco	1	161049498	161049499	PVRL4	G	A	20.4
Sco	19	56466630	56466631	NLRP8	T	C	20.3
Sco	19	50098721	50098722	PRR12	G	T	20.2
Sco	1	53793512	53793520	LRP8	CAGCAGCA	C	0
Sco	1	152187301	152187306	HRNR	GATCC	G	0
Sco	1	152187309	152187310	HRNR	C	CATGT	0
Sco	13	25671309	25671315	PABPC3	TTATGA	T	0
Sco	19	8999496	8999497	MUC16	G	GACCA	0
Sco	19	8999496	8999501	MUC16	GGCTT	G	0
Sco	19	8999497	8999502	MUC16	GCTTT	G	0
Sco	19	17397500	17397501	ANKLE1	T	TTGTG	0
Sco	2	97851081	97851086	ANKRD36	GTAAT	G	0
Sco	20	55108505	55108506	FAM209B	C	CAATA	0
Sco	20	55108506	55108511	FAM209B	CGTGT	C	0
Sco	6	29893661	29893670	HCG4B	GCTCCCTCT	G	0
Sco	8	97318675	97318680	PTDSS1	CTGAG	C	0
Sco	GL000212.1	119492	119497		TTCTC	T	0
Sco	GL000212.1	119492	119493		T	TGCC	0
Sco	GL000212.1	128872	128877		GTCTC	G	0
Sco	1	209605635	209605642	MIR205HG	TAGCAGC	T	0
Sco	11	64083294	64083298	ESRRA	CGGG	C	0
Sco	12	7045890	7045900	ATN1	ACAGCAGCAG	A	0
Sco	12	18854539	18854540	PLCZ1	A	ATCC	0
Sco	12	18854539	18854546	PLCZ1	ATCCTCC	A	0
Sco	13	25671148	25671152	PABPC3	ACGG	A	0
Sco	13	25671153	25671163	PABPC3	AGACGGAAC	A	0
Sco	17	43319433	43319440	FMNL1	TCCGCCG	T	0
Sco	2	73613030	73613031	ALMS1	T	TGGAGGA	0
Sco	2	131129927	131129928	PTPN18	A	AGACGGG	0

Table B-5: Continued

Sco	3	40503519	40503529	RPL14	ACTGCTGCTG	A	0
Sco	4	3076602	3076603	HTT	C	CCAGCAGCAG	0
Sco	5	107716711	107716712	FBXL17	A	ACCG	0
Sco	6	16327914	16327915	ATXN1	A	ATGCTGCTGC	0
Sco	6	16327914	16327915	ATXN1	A	ATGC	0
Sco	6	16327914	16327915	ATXN1	A	ATGCTGC	0
Sco	6	16327914	16327918	ATXN1	ATGC	A	0
Sco	6	43483698	43483699	YIPF3	A	AGCAGCAGCT	0
Sco	6	43970502	43970503	C6orf223	C	CGCGGCG	0
Sco	8	65494019	65494020	BHLHE22	G	GGCAGCA	0
Sco	9	91994532	91994539	SEMA4D	CTTTACT	C	0
Sco	9	95237023	95237030	ASPN	CTCATCA	C	0
Sco	9	95237023	95237027	ASPN	CTCA	C	0
Sco	9	95237023	95237024	ASPN	C	CTCATCATCA	0
Sco	9	95237023	95237024	ASPN	C	CTCA	0
Sco	9	95237023	95237024	ASPN	C	CTCATCA	0
Sco	9	95237023	95237024	ASPN	C	CTCCTCA	0
Sco	9	100616699	100616700	FOXE1	A	AGCC	0
Sco	GL000212.1	37448	37449		T	TCTG	0
Sco	X	27765398	27765399	DCAF8L2	A	AGAGGAG	0
Sco	X	27765398	27765399	DCAF8L2	A	AGAG	0
Sco	X	27765398	27765405	DCAF8L2	AGAGGAG	A	0
Sco	X	66765157	66765161	AR	TGCA	T	0
Sco	X	66766355	66766365	AR	TGGCGGCGGC	T	0
Sco	13	31035496	31035500	HMGB1	TTCA	T	0
W	12	1005521	1005522	WNK1	C	T	35
W	20	33588805	33588806	MYH7B	G	A	34
W	3	9768849	9768850	CPNE9	G	A	34
W	9	33466165	33466166	NOL6	C	G	34
W	4	119203329	119203330	PRSS12	G	A	34
W	4	170506524	170506525	NEK1	C	T	34
W	18	28934292	28934293	DSG1	C	T	34
W	20	33582045	33582046	MYH7B	C	T	34
W	11	59629024	59629025	TCN1	A	C	33
W	1	117631470	117631471	TTF2	G	A	33
W	2	97493835	97493836	CNNM3	G	A	33
W	4	87687592	87687593	PTPN13	G	A	33
W	17	37825997	37825998	PNMT	C	T	33
W	3	50334461	50334462	NAT6	G	A	33

Table B-5: Continued

W	6	32489843	32489844	HLA-DRB5	C	T	32
W	12	52790683	52790684	KRT82	C	T	32
W	12	11183034	11183035	TAS2R31	C	T	30
W	9	134395551	134395552	POMT1	T	A	30
W	20	42208626	42208627	SGK2	C	T	30
W	11	57313468	57313469	SMTNL1	C	CG	30
W	11	118530098	118530099	TREH	A	AG	30
W	2	133075477	133075479	ZNF806	TC	T	30
W	2	133076116	133076118	ZNF806	CA	C	30
W	6	32489754	32489755	HLA-DRB5	G	GCT	30
W	7	100550472	100550475	MUC3A	GCC	G	30
W	7	142231792	142231793	TRBV10-1	A	AT	30
W	7	142231795	142231798	TRBV10-1	CCA	C	30
W	7	142231799	142231800	TRBV10-1	G	GA	30
W	7	142231804	142231805	TRBV10-1	C	CTG	30
W	7	142231807	142231810	TRBV10-1	GCC	G	30
W	9	33797929	33797932	PRSS3	GAC	G	30
W	9	35684821	35684822	TPM2	C	CGG	30
W	9	37515904	37515905	FBXO10	T	TC	30
W	2	242157292	242157293	ANO7	C	T	29.8
W	3	39229780	39229781	XIRP1	C	T	29.7
W	2	239053599	239053600	KLHL30	C	A	29.6
W	10	105205259	105205260	PDCD11	A	G	29.5
W	10	98109534	98109535	OPALIN	C	A	29.3
W	15	55916702	55916703	PRTG	T	G	29.1
W	9	139835739	139835740	FBXW5	A	T	28.8
W	2	170806480	170806481	UBR3	C	T	28.6
W	10	114925405	114925406	TCF7L2	C	G	28.5
W	19	10748381	10748382	SLC44A2	G	C	27.6
W	16	30566978	30566979	ZNF764	C	T	27
W	7	26903990	26903991	SKAP2	G	C	27
W	7	98786091	98786092	KPNA7	G	A	27
W	17	56798127	56798128	RAD51C	A	G	26.6
W	3	43073795	43073796	FAM198A	G	A	26.5
W	11	134047318	134047319	NCAPD3	T	C	26.4
W	7	96810438	96810439	ACN9	A	C	26.4
W	17	3195502	3195503	OR3A1	C	A	26.4
W	4	843548	843549	GAK	G	A	26.2
W	12	123481018	123481019	PITPNM2	C	T	26.2

Table B-5: Continued

W	16	2871102	2871103	PRSS21	C	A	26.1
W	15	54919252	54919253	UNC13C	T	C	25.9
W	2	15432774	15432775	NBAS	C	T	25.7
W	X	67942428	67942429	STARD8	C	T	25.4
W	2	128100701	128100702	MAP3K2	C	T	25.4
W	10	61833413	61833414	ANK3	A	G	25.4
W	10	44112298	44112299	ZNF485	T	C	25.3
W	19	15299050	15299051	NOTCH3	G	A	25.1
W	9	139110555	139110556	QSOX2	G	A	25
W	1	52498765	52498766	KTI12	T	C	24.9
W	19	54761022	54761023	LILRB5	C	G	24.9
W	6	46719832	46719833	ANKRD66	T	C	24.9
W	7	142231779	142231780	TRBV10-1	C	T	24.7
W	11	92533787	92533788	FAT3	A	C	24.7
W	11	64878233	64878234	VPS51	G	C	24.7
W	9	133294223	133294224	HMCN2	C	T	24.5
W	9	125486716	125486717	OR1L4	G	A	24.4
W	16	48117658	48117659	ABCC12	A	T	24.4
W	7	43508619	43508620	HECW1	C	G	24.3
W	11	7111135	7111136	RBMXL2	G	T	24.3
W	4	185724502	185724503	ACSL1	C	T	24.2
W	5	140810902	140810903	PCDHGA12	G	C	24.1
W	14	105683937	105683938	BRF1	C	G	23.9
W	13	25670954	25670955	PABPC3	C	T	23.9
W	12	53045868	53045869	KRT2	G	A	23.8
W	17	8167850	8167851	PFAS	G	A	23.8
W	19	281467	281468	PPAP2C	G	A	23.6
W	11	92715080	92715081	MTNR1B	G	A	23.5
W	19	39522559	39522560	FBXO27	C	G	23.4
W	7	142206519	142206520	TRBV10-2	C	A	23.4
W	11	124794706	124794707	HEPACAM	G	C	23.3
W	14	23991303	23991304	ZFHX2	C	T	23.3
W	1	75688100	75688101	SLC44A5	T	G	23.3
W	3	42599170	42599171	SEC22C	C	T	23.3
W	1	197019867	197019868	F13B	T	C	23.2
W	6	159654193	159654194	FNDC1	C	T	23.2
W	17	62020421	62020422	SCN4A	G	A	23
W	8	21767278	21767279	DOK2	G	A	23
W	11	116692292	116692293	APOA4	C	A	23

Table B-5: Continued

W	19	6534727	6534728	TNFSF9	G	C	22.9
W	1	200522591	200522592	KIF14	C	T	22.8
W	11	66103862	66103863	RIN1	G	A	22.7
W	5	149755361	149755362	TCOF1	G	A	22.7
W	12	132399749	132399750	ULK1	G	A	22.6
W	11	1017293	1017294	MUC6	A	T	22.5
W	6	32552049	32552050	HLA-DRB1	A	T	22.5
W	7	142176596	142176597	TRBV7-4	G	T	22.4
W	4	128719745	128719746	HSPA4L	G	A	22.3
W	X	53115461	53115462	TSPYL2	G	C	22.2
W	3	52282457	52282458	PPM1M	C	G	22.2
W	12	118582476	118582477	PEBP1	C	T	22.1
W	2	24522799	24522800	ITSN2	C	T	22.1
W	9	5745979	5745980	KIAA1432	C	G	21.8
W	19	49930351	49930352	LOC100507003	C	A	20.9
W	16	2820683	2820684	SRRM2	C	T	20.9
W	17	41610576	41610577	ETV4	G	T	20.7
W	19	55870457	55870458	FAM71E2	C	T	20.3
W	7	98991669	98991670	ARPC1B	C	A	20.2
W	16	2301526	2301527	ECI1	A	G	20
W	13	25671309	25671315	PABPC3	TTATGA	T	0
W	11	1017442	1017446	MUC6	CGTG	C	0
W	11	65325324	65325325	LTBP3	C	CCAG	0
W	13	100622666	100622670	ZIC5	TGGC	T	0
W	13	100622666	100622667	ZIC5	T	TGGC	0
W	16	82032732	82032736	SDR42E1	CAGA	C	0
W	2	73613030	73613031	ALMS1	T	TGGAGGA	0
W	2	73613030	73613034	ALMS1	TGGA	T	0
W	22	20920812	20920819	MED15	ACAGCAG	A	0
W	6	114181300	114181301	MARCKS	G	GTGAGGC	0
W	7	70255575	70255576	AUTS2	G	GCCA	0
W	7	100550582	100550589	MUC3A	AACCACC	A	0
W	7	142168497	142168501	TRBV5-4	GCCA	G	0
W	9	95237023	95237027	ASPN	CTCA	C	0
W	9	95237023	95237024	ASPN	C	CTCA	0
W	1	212459453	212459454	PPP2R5A	T	TGTC	0
Zv	4	103826684	103826685	SLC9B1	T	A	42
Zv	4	103826768	103826769	SLC9B1	G	A	37
Zv	7	142008652	142008653	TRBV3-1	T	A	35

Table B-5: Continued

Zv	9	21481173	21481174	IFNE	G	A	35
Zv	12	50727869	50727870	FAM186A	G	A	35
Zv	1	19446118	19446119	UBR4	G	A	35
Zv	14	75139604	75139605	AREL1	G	A	35
Zv	7	71130456	71130457	WBSCR17	G	A	35
Zv	18	28605747	28605748	DSC3	C	T	35
Zv	1	153659534	153659535	NPR1	G	A	34
Zv	11	74985169	74985170	ARRB1	C	T	34
Zv	12	21628488	21628489	RECQL	C	T	34
Zv	14	24573155	24573156	PCK2	C	T	34
Zv	5	149301252	149301253	PDE6A	G	A	34
Zv	20	33575433	33575434	MYH7B	C	T	34
Zv	16	716511	716512	WDR90	C	T	34
Zv	19	10398464	10398465	ICAM4	C	T	33
Zv	2	37000955	37000956	VIT	C	G	33
Zv	3	126735396	126735397	PLXNA1	G	A	33
Zv	12	120750397	120750398	SIRT4	C	T	33
Zv	5	140772572	140772573	PCDHGA8	C	T	33
Zv	22	25251371	25251372	SGSM1	C	T	33
Zv	22	45198033	45198034	ARHGAP8	C	T	33
Zv	19	45322109	45322110	BCAM	G	A	32
Zv	4	155526117	155526118	FGG	C	T	32
Zv	17	59485757	59485758	TBX2	C	T	32
Zv	21	33691526	33691527	URB1	C	T	32
Zv	8	2824256	2824257	CSMD1	C	T	32
Zv	1	231114993	231114994	ARV1	A	G	31
Zv	8	144994063	144994064	PLEC	G	A	31
Zv	1	6164677	6164679	LOC101928723	GC	G	30
Zv	1	179335261	179335264	AXDND1	GTA	G	30
Zv	1	248801601	248801602	OR2T35	T	TCA	30
Zv	12	53343130	53343131	KRT18	G	GA	30
Zv	14	106774215	106774218	IGHV7-27	ATT	A	30
Zv	14	106774219	106774220	IGHV7-27	C	CCA	30
Zv	15	74392544	74392546	LOC732265	TA	T	30
Zv	18	72997847	72997850	TSHZ1	CTG	C	30
Zv	19	17397500	17397501	ANKLE1	T	TTG	30
Zv	2	96592969	96592970	ANKRD36C	G	GAT	30
Zv	2	96592973	96592976	ANKRD36C	GTT	G	30
Zv	2	97851072	97851074	ANKRD36	GC	G	30

Table B-5: Continued

Zv	2	97851077	97851078	ANKRD36	A	AG	30
Zv	2	133075477	133075479	ZNF806	TC	T	30
Zv	2	133075903	133075904	ZNF806	C	CA	30
Zv	2	133076116	133076118	ZNF806	CA	C	30
Zv	2	241874855	241874856	LOC728763	C	CA	30
Zv	2	242026956	242026957	SNED1	G	GC	30
Zv	21	11021162	11021163	LOC101926954	T	TA	30
Zv	21	11029595	11029597	LOC101926954	AC	A	30
Zv	4	780646	780647	CPLX1	C	CG	30
Zv	4	103822481	103822484	SLC9B1	AAC	A	30
Zv	6	31239110	31239111	HLA-C	G	GCC	30
Zv	6	31239112	31239115	HLA-C	AGG	A	30
Zv	6	32487157	32487158	HLA-DRB5	G	GCA	30
Zv	6	32552059	32552060	HLA-DRB1	A	AG	30
Zv	6	32609295	32609296	HLA-DQA1	A	AG	30
Zv	6	32609297	32609299	HLA-DQA1	CA	C	30
Zv	7	19738031	19738033	TWISTNB	CT	C	30
Zv	7	100550471	100550472	MUC3A	C	CAG	30
Zv	7	100550472	100550475	MUC3A	GCC	G	30
Zv	7	142008633	142008636	TRBV3-1	ACG	A	30
Zv	7	142008638	142008639	TRBV3-1	A	AGG	30
Zv	7	142197960	142197963	TRBV11-2	TGC	T	30
Zv	7	142197964	142197965	TRBV11-2	C	CCA	30
Zv	7	142231792	142231793	TRBV10-1	A	AT	30
Zv	7	142231795	142231798	TRBV10-1	CCA	C	30
Zv	7	142231799	142231800	TRBV10-1	G	GA	30
Zv	7	142231804	142231805	TRBV10-1	C	CTG	30
Zv	7	142231807	142231810	TRBV10-1	GCC	G	30
Zv	8	27880847	27880848	NUGGC	C	CG	30
Zv	9	33797927	33797928	PRSS3	G	GCC	30
Zv	9	33797927	33797928	PRSS3	G	GCT	30
Zv	9	33797929	33797932	PRSS3	GAC	G	30
Zv	9	35684821	35684822	TPM2	C	CGG	30
Zv	9	35906600	35906601	HRCT1	C	CCA	30
Zv	GL000212.1	119492	119495		TTC	T	30
Zv	GL000212.1	128872	128875		GTC	G	30
Zv	GL000212.1	10741	10742		T	TG	30
Zv	X	118603960	118603962	SLC25A5	CT	C	30
Zv	15	75012996	75012998	CYP1A1	TA	T	30

Table B-5: Continued

Zv	2	203848306	203848307	CARF	C	CA	30
Zv	18	14105270	14105272	ZNF519	TG	T	30
Zv	3	14581877	14581879	GRIP2	CT	C	30
Zv	16	336699	336702	PDIA2	ACT	A	30
Zv	22	32643446	32643448	SLC5A4	AC	A	30
Zv	12	53343230	53343231	KRT18	G	C	29.9
Zv	18	7016578	7016579	LAMA1	C	T	29.9
Zv	12	18891316	18891317	CAPZA3	C	T	29.9
Zv	7	134730251	134730252	AGBL3	C	T	29.9
Zv	9	35376084	35376085	UNC13B	C	T	29.6
Zv	17	18923026	18923027	SLC5A10	G	A	29.6
Zv	2	39083499	39083500	DHX57	A	G	29.4
Zv	4	87672234	87672235	PTPN13	G	T	29.4
Zv	7	128441491	128441492	CCDC136	G	A	29.4
Zv	14	64676750	64676751	SYNE2	C	T	29.4
Zv	5	31799377	31799378	PDZD2	C	T	29.2
Zv	6	33372925	33372926	KIFC1	C	T	29.2
Zv	15	28375358	28375359	HERC2	A	G	29.1
Zv	9	124535525	124535526	DAB2IP	C	T	29
Zv	1	184792356	184792357	FAM129A	C	T	28.8
Zv	17	10558209	10558210	MYH3	C	T	28.8
Zv	4	103808518	103808519	CISD2	C	T	28.8
Zv	6	31631804	31631805	GPANK1	C	G	28.7
Zv	19	4512815	4512816	PLIN4	G	A	28.5
Zv	10	115336940	115336941	HABP2	C	T	28.5
Zv	6	29556368	29556369	OR2H2	C	A	28.4
Zv	4	102751013	102751014	BANK1	G	C	28.3
Zv	1	109154857	109154858	FAM102B	G	A	28.2
Zv	5	150945386	150945387	FAT2	C	T	28.2
Zv	2	113832773	113832774	IL1F10	C	T	28.2
Zv	11	73753105	73753106	C2CD3	A	G	28
Zv	15	86273755	86273756	AKAP13	A	G	27.9
Zv	11	111747675	111747676	FDXACB1	C	T	27.7
Zv	19	51483732	51483733	KLK7	C	T	27.7
Zv	X	118603872	118603873	SLC25A5	G	T	27.6
Zv	17	19470501	19470502	SLC47A1	G	A	27.5
Zv	3	147128391	147128392	ZIC1	C	A	27.5
Zv	12	55420866	55420867	NEUROD4	G	T	27.3
Zv	17	38296865	38296866	CASC3	G	A	27.2

Table B-5: Continued

Zv	5	75591630	75591631	SV2C	G	A	27
Zv	7	23299647	23299648	GPNMB	C	G	26.9
Zv	11	68562287	68562288	CPT1A	C	T	26.9
Zv	15	63092899	63092900	TLN2	G	C	26.9
Zv	6	36698470	36698471	RAB44	G	A	26.6
Zv	11	76237602	76237603	C11orf30	G	A	26.5
Zv	7	100228654	100228655	TFR2	G	T	26.5
Zv	1	53323032	53323033	ZYG11A	T	C	26.4
Zv	12	53343006	53343007	KRT18	G	A	26.3
Zv	22	28379226	28379227	TTC28	G	A	26.3
Zv	1	241886644	241886645	WDR64	G	C	26.3
Zv	15	65116209	65116210	PIF1	G	A	26.3
Zv	13	25671026	25671027	PABPC3	A	G	26.1
Zv	X	118603755	118603756	SLC25A5	T	A	26.1
Zv	17	41143046	41143047	RUNDC1	G	C	26.1
Zv	2	70524476	70524477	FAM136A	G	C	26
Zv	3	125843263	125843264	ALDH1L1	C	T	26
Zv	12	53298581	53298582	KRT8	C	A	26
Zv	X	118603924	118603925	SLC25A5	G	A	25.9
Zv	10	50531905	50531906	C10orf71	C	T	25.9
Zv	9	38397153	38397154	ALDH1B1	T	C	25.9
Zv	16	31501797	31501798	SLC5A2	A	G	25.9
Zv	8	56698800	56698801	TGS1	C	T	25.9
Zv	3	48726169	48726170	IP6K2	T	G	25.9
Zv	12	53343131	53343132	KRT18	G	T	25.8
Zv	16	67916164	67916165	EDC4	G	A	25.8
Zv	5	7892936	7892937	MTRR	A	G	25.8
Zv	8	103564005	103564006	ODF1	G	C	25.8
Zv	19	2733187	2733188	SLC39A3	C	T	25.8
Zv	10	100177983	100177984	HPS1	C	T	25.7
Zv	2	70524451	70524452	FAM136A	A	G	25.6
Zv	19	4013275	4013276	PIAS4	A	T	25.6
Zv	16	83712032	83712033	CDH13	C	T	25.5
Zv	13	23911233	23911234	SACS	G	T	25.5
Zv	3	108780835	108780836	MORC1	T	A	25.5
Zv	8	144590048	144590049	ZC3H3	G	A	25.4
Zv	11	124756981	124756982	ROBO4	G	A	25.4
Zv	3	184910068	184910069	EHHADH	T	A	25.4
Zv	2	25354315	25354316	EFR3B	C	T	25.3

Table B-5: Continued

Zv	1	115400086	115400087	SYCP1	A	G	25.3
Zv	9	140008442	140008443	DPP7	G	A	25.3
Zv	6	99848777	99848778	PNISR	G	A	25.1
Zv	19	15299050	15299051	NOTCH3	G	A	25.1
Zv	1	23419558	23419559	LUZP1	C	T	25
Zv	19	10670344	10670345	KRII	G	A	25
Zv	8	70667792	70667793	SLCO5A1	C	T	25
Zv	19	58213742	58213743	ZNF154	G	A	24.9
Zv	1	109795741	109795742	CELSR2	T	A	24.9
Zv	1	247320104	247320105	ZNF124	G	T	24.8
Zv	1	186083251	186083252	HMCN1	C	T	24.8
Zv	11	124266757	124266758	OR8B3	G	A	24.8
Zv	19	5831767	5831768	FUT6	C	T	24.8
Zv	1	156352647	156352648	RHBG	G	C	24.8
Zv	7	142231779	142231780	TRBV10-1	C	T	24.7
Zv	1	222713501	222713502	HHIPL2	G	A	24.7
Zv	12	53343068	53343069	KRT18	G	T	24.6
Zv	2	168108351	168108352	XIRP2	T	C	24.6
Zv	16	4625930	4625931	C16orf96	C	T	24.6
Zv	11	48328524	48328525	OR4S1	C	T	24.5
Zv	5	90106377	90106378	GPR98	G	A	24.5
Zv	2	43934590	43934591	PLEKHH2	G	A	24.5
Zv	19	48048899	48048900	ZNF541	C	A	24.5
Zv	12	53343208	53343209	KRT18	G	A	24.4
Zv	11	60899475	60899476	VPS37C	C	T	24.4
Zv	22	45241183	45241184	ARHGAP8	C	A	24.3
Zv	7	43508619	43508620	HECW1	C	G	24.3
Zv	11	65352936	65352937	EHBP1L1	G	C	24.2
Zv	X	118604013	118604014	SLC25A5	G	A	24.2
Zv	2	37513363	37513364	PRKD3	T	C	24.2
Zv	3	108117611	108117612	MYH15	G	A	24.2
Zv	5	127666297	127666298	FBN2	C	T	24.2
Zv	14	94931041	94931042	SERPINA9	A	G	24
Zv	16	3085355	3085356	CCDC64B	C	T	24
Zv	7	142247516	142247517	TRBV7-3	C	A	24
Zv	22	20761111	20761112	ZNF74	T	A	24
Zv	14	89327621	89327622	TTC8	A	C	23.9
Zv	21	34804510	34804511	IFNGR2	A	T	23.9
Zv	19	17316801	17316802	MYO9B	G	A	23.9

Table B-5: Continued

Zv	1	120438576	120438577	ADAM30	G	A	23.9
Zv	16	840627	840628	CHTF18	T	C	23.9
Zv	16	84351951	84351952	WFDC1	G	A	23.9
Zv	7	44556372	44556373	NPC1L1	C	A	23.8
Zv	X	118604005	118604006	SLC25A5	A	G	23.8
Zv	6	39824129	39824130	DAAM2	G	A	23.8
Zv	1	227922873	227922874	JMJD4	G	C	23.8
Zv	4	48611051	48611052	FRYL	A	G	23.7
Zv	6	32487163	32487164	HLA-DRB5	G	A	23.7
Zv	6	43336991	43336992	ZNF318	G	C	23.7
Zv	20	3653494	3653495	ADAM33	G	A	23.7
Zv	9	127216377	127216378	GPR144	T	C	23.6
Zv	1	156814967	156814968	INSRR	G	C	23.6
Zv	11	62863502	62863503	SLC22A24	G	T	23.6
Zv	12	53343083	53343084	KRT18	G	C	23.6
Zv	20	43851138	43851139	SEMG2	C	T	23.6
Zv	9	131396068	131396069	WDR34	C	T	23.6
Zv	1	17601262	17601263	PADI3	T	C	23.6
Zv	2	20870531	20870532	GDF7	C	A	23.6
Zv	5	167474473	167474474	TENM2	A	G	23.6
Zv	11	3239877	3239878	MRGPRG	C	G	23.5
Zv	12	53343104	53343105	KRT18	C	T	23.5
Zv	12	53343224	53343225	KRT18	C	T	23.5
Zv	2	112619980	112619981	ANAPC1	G	A	23.5
Zv	6	30459349	30459350	HLA-E	T	A	23.5
Zv	16	81298253	81298254	BCMO1	C	T	23.5
Zv	3	148562271	148562272	CPB1	G	A	23.5
Zv	6	30520366	30520367	GNL1	C	T	23.5
Zv	3	130380989	130380990	COL6A6	G	T	23.4
Zv	3	141497142	141497143	GRK7	C	A	23.4
Zv	6	32552016	32552017	HLA-DRB1	G	C	23.4
Zv	10	100177943	100177944	HPS1	C	T	23.4
Zv	6	157099798	157099799	ARID1B	G	A	23.4
Zv	6	143095681	143095682	HIVEP2	C	A	23.3
Zv	6	167595374	167595375	TCP10L2	G	A	23.3
Zv	8	145732179	145732180	GPT	G	C	23.3
Zv	11	134183849	134183850	GLB1L3	T	C	23.3
Zv	12	53343058	53343059	KRT18	C	A	23.2
Zv	4	154505986	154505987	KIAA0922	C	T	23.2

Table B-5: Continued

Zv	17	10411252	10411253	MYH1	C	T	23.2
Zv	7	2354054	2354055	SNX8	A	G	23.1
Zv	22	35806755	35806756	MCM5	G	A	23.1
Zv	7	131870088	131870089	PLXNA4	C	T	23.1
Zv	1	12907517	12907518	HNRNPCL1	T	A	23
Zv	1	89834181	89834182	GBP6	C	A	23
Zv	17	12666897	12666898	MYOCD	T	G	23
Zv	14	67759389	67759390	MPP5	G	A	23
Zv	17	3833664	3833665	ATP2A3	C	T	23
Zv	1	33236254	33236255	KIAA1522	G	A	23
Zv	17	76502806	76502807	DNAH17	C	T	23
Zv	3	135870103	135870104	MSL2	C	T	23
Zv	13	50589693	50589694	KCNRG	C	T	22.9
Zv	12	50500140	50500141	GPD1	T	C	22.9
Zv	6	56999584	56999585	ZNF451	C	A	22.9
Zv	X	118603957	118603958	SLC25A5	G	A	22.8
Zv	2	18768317	18768318	NT5C1B-RDH14	C	T	22.8
Zv	9	68433463	68433464	LOC642236	C	T	22.7
Zv	3	53126511	53126512	RFT1	G	A	22.7
Zv	15	41797057	41797058	LTK	C	T	22.7
Zv	1	203186066	203186067	CHIT1	G	A	22.7
Zv	3	196743238	196743239	MFI2	C	T	22.7
Zv	11	12262589	12262590	MICAL2	C	T	22.6
Zv	19	2222157	2222158	DOT1L	C	T	22.6
Zv	5	114469835	114469836	TRIM36	C	T	22.6
Zv	11	1017293	1017294	MUC6	A	T	22.5
Zv	11	71943967	71943968	INPPL1	T	C	22.5
Zv	2	234433142	234433143	USP40	C	T	22.5
Zv	5	179043171	179043172	HNRNPH1	C	A	22.5
Zv	5	114605464	114605465	CCDC112	C	T	22.5
Zv	6	43174224	43174225	CUL9	G	A	22.4
Zv	1	3102750	3102751	PRDM16	G	A	22.4
Zv	2	48809608	48809609	STON1-GTF2A1L	C	G	22.4
Zv	3	33453170	33453171	UBP1	T	C	22.3
Zv	17	18923085	18923086	SLC5A10	T	C	22.2
Zv	5	139947723	139947724	SLC35A4	C	T	22.2
Zv	6	31605015	31605016	PRRC2A	T	C	22.2
Zv	1	12907518	12907519	HNRNPCL1	C	A	22.1
Zv	18	33767529	33767530	MOCOS	C	T	22.1

Table B-5: Continued

Zv	12	118582476	118582477	PEBP1	C	T	22.1
Zv	5	256446	256447	SDHA	A	G	22
Zv	10	69991241	69991242	ATOH7	T	C	22
Zv	2	121106679	121106680	INHBB	C	T	21.9
Zv	X	118603983	118603984	SLC25A5	G	A	21.9
Zv	7	1784587	1784588	ELFN1	G	A	21.8
Zv	6	3259295	3259296	PSMG4	C	G	21.8
Zv	19	37149259	37149260	ZNF461	G	A	21.7
Zv	4	36286014	36286015	DTHD1	A	C	21.7
Zv	22	40661300	40661301	TNRC6B	A	T	21.6
Zv	19	34868408	34868409	GPI	G	A	21.5
Zv	9	129987603	129987604	GARNL3	C	T	21.4
Zv	1	115486987	115486988	SYCP1	G	T	21.3
Zv	12	53343039	53343040	KRT18	C	A	21.3
Zv	11	65350825	65350826	EHBPI1L1	A	T	21.3
Zv	4	266170	266171	ZNF732	G	A	21.3
Zv	3	419600	419601	CHL1	G	A	21
Zv	2	68615545	68615546	PLEK	A	C	21
Zv	15	38776669	38776670	FAM98B	G	A	20.8
Zv	19	11408911	11408912	TSPAN16	T	C	20.7
Zv	2	89327171	89327172	IGKV3-11	G	T	20.6
Zv	3	27338697	27338698	NEK10	T	C	20.6
Zv	14	72054754	72054755	SIPA1L1	C	A	20.5
Zv	1	23280204	23280205	LACTBL1	G	C	20.5
Zv	1	12907445	12907446	HNRNPCL1	C	T	20.4
Zv	18	44137399	44137400	LOXHD1	C	T	20.2
Zv	11	28119308	28119309	KIF18A	T	G	20.1
Zv	19	8999496	8999497	MUC16	G	GACCA	0
Zv	19	8999496	8999501	MUC16	GGCTT	G	0
Zv	19	8999497	8999502	MUC16	GCTTT	G	0
Zv	19	17397500	17397501	ANKLE1	T	TTGTG	0
Zv	2	70524507	70524508	FAM136A	A	ACAGC	0
Zv	2	70524510	70524515	FAM136A	ACTGT	A	0
Zv	2	97851081	97851086	ANKRD36	GTAAT	G	0
Zv	20	3662577	3662583	ADAM33	ACTGGC	A	0
Zv	22	20708960	20708966	FAM230A	CGAGGT	C	0
Zv	22	23653974	23653975	BCR	T	TCCGG	0
Zv	3	39521530	39521535	MOBP	GAAAA	G	0
Zv	9	45442424	45442429	LOC101927903	GTCTC	G	0

Table B-5: Continued

Zv	GL000212.1	128872	128877		GTCTC	G	0
Zv	1	17085588	17085595	MST1L	AGCGCTG	A	0
Zv	1	148252776	148252777	LOC100288142	T	TCTC	0
Zv	1	154842198	154842199	KCNN3	G	GGCTGCT	0
Zv	1	154842198	154842199	KCNN3	G	GGCT	0
Zv	1	209605635	209605645	MIR205HG	TAGCAGCAGC	T	0
Zv	1	209605635	209605642	MIR205HG	TAGCAGC	T	0
Zv	10	46970745	46970755	SYT15	CGGGCGCCAG	C	0
Zv	11	1017442	1017446	MUC6	CGTG	C	0
Zv	11	6662744	6662748	DCHS1	CCAG	C	0
Zv	11	64083294	64083298	ESRRA	CGGG	C	0
Zv	11	66512289	66512290	C11orf80	G	GGGCGGCGGC	0
Zv	11	95825373	95825380	MAML2	TTGCTGC	T	0
Zv	12	18854539	18854546	PLCZ1	ATCCTCC	A	0
Zv	12	132547092	132547093	EP400	A	ACAGCAG	0
Zv	12	133226382	133226383	POLE	G	GGCT	0
Zv	14	24769848	24769849	NOP9	A	AGAGGAG	0
Zv	14	24769848	24769849	NOP9	A	AGAG	0
Zv	14	24769848	24769849	NOP9	A	AGAGGAGGAG	0
Zv	14	103804755	103804756	EIF5	A	ACAC	0
Zv	15	23086363	23086364	NIPA1	G	GGCC	0
Zv	15	30905310	30905314	GOLGA8H	CGGA	C	0
Zv	15	83455618	83455622	FSD2	GCTT	G	0
Zv	17	48777240	48777244	ANKRD40	ATCT	A	0
Zv	17	56056603	56056604	VEZF1	T	TTGC	0
Zv	17	56056603	56056604	VEZF1	T	TTGCTGC	0
Zv	17	56056603	56056607	VEZF1	TTGC	T	0
Zv	18	77496382	77496389	CTDP1	ACGACAG	A	0
Zv	19	52381692	52381696	ZNF577	CCTT	C	0
Zv	2	73308222	73308226	RAB11FIP5	TTCC	T	0
Zv	2	73308222	73308229	RAB11FIP5	TTCCTCC	T	0
Zv	2	85360827	85360828	TCF7L1	G	GGGCGGC	0
Zv	2	88926728	88926729	EIF2AK3	C	CCAG	0
Zv	2	132250066	132250067	MZT2A	G	GGGAGCGGCA	0
Zv	20	58544053	58544057	CDH26	AGAT	A	0
Zv	22	20920812	20920819	MED15	ACAGCAG	A	0
Zv	3	27763426	27763427	EOMES	G	GCGC	0
Zv	3	40503519	40503529	RPL14	ACTGCTGCTG	A	0
Zv	3	63898359	63898360	ATXN7	G	GGCAGCAGCA	0

Table B-5: Continued

Zv	3	63898359	63898369	ATXN7	GGCAGCAGCA	G	0
Zv	4	3076602	3076603	HTT	C	CCAGCAGCAG	0
Zv	4	3076602	3076612	HTT	CCAGCAGCAG	C	0
Zv	4	3076602	3076603	HTT	C	CCAGCAG	0
Zv	4	3076602	3076603	HTT	C	CCAG	0
Zv	5	140953562	140953563	DIAPH1	T	TGGA	0
Zv	5	140953562	140953563	DIAPH1	T	TGGAGGA	0
Zv	5	146258289	146258293	PPP2R2B	AGCT	A	0
Zv	6	16327914	16327915	ATXN1	A	ATGCTGCTGC	0
Zv	6	16327914	16327915	ATXN1	A	ATGC	0
Zv	6	16327914	16327915	ATXN1	A	ATGCTGC	0
Zv	6	16327914	16327918	ATXN1	ATGC	A	0
Zv	6	34857301	34857302	ANKS1A	G	GGCGGCG	0
Zv	6	43970502	43970503	C6orf223	C	CGCGGCG	0
Zv	6	43970502	43970503	C6orf223	C	CGCG	0
Zv	6	143832706	143832707	FUCA2	G	GGCAGCA	0
Zv	6	170871048	170871049	TBP	G	GCAA	0
Zv	7	26224598	26224602	NFE2L3	CAAT	C	0
Zv	7	156802642	156802649	MNX1	AGCGGCG	A	0
Zv	9	20414309	20414310	MLLT3	A	ACTGCTG	0
Zv	9	45442424	45442431	LOC101927903	GTCTCTC	G	0
Zv	9	100616699	100616700	FOXE1	A	AGCC	0
Zv	9	141107535	141107536	FAM157B	G	GGCAGCA	0
Zv	GL000212.1	119492	119499		TTCTCTC	T	0
Zv	GL000212.1	122140	122147		GTCCTCC	G	0
Zv	GL000212.1	122140	122144		GTCC	G	0
Zv	GL000212.1	122140	122141		G	GTCCTCTCC	0
Zv	GL000212.1	122140	122141		G	GTCC	0
Zv	19	49657709	49657719	HRC	ACATCATCAT	A	0
Zv	14	55642704	55642711	DLGAP5	CCAAAAT	C	0
Zv	16	67859706	67859710	TSNAXIP1	CAGG	C	0
Zv	20	44520236	44520237	CTSA	C	CCTG	0
Zv	9	136272147	136272151	REXO4	CCTT	C	0
Zv	7	134618472	134618476	CALD1	GGGA	G	0
Zv	10	76788658	76788668	KAT6B	GGAAGAGGAA	G	0

Table B-5: Continued

Zv	19	49657709	49657710	HRC	A	ACATCAT	0
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