Supplemental Materials and Methods

Whole exome sequencing. Genomic DNA was extracted from whole blood from 567 early onset (age 0-18) IBD samples; 543 (95.8%) of these samples passed DNA QC. Libraries were prepared according to manufacturer instructions using 1 µg of input DNA per sample; whole exome capture was performed with the SureSelect Human All Exon 50-Mb Kit (Agilent Technologies). Libraries were validated with the KAPA Library Quantification Kit (KAPA Biosystems) and were then sequenced on the Illumina HiSeq platform according to standard protocols. Library preparation and sequencing was performed at Broad Institute's Genomics Platform, Cambridge, USA.

Filtering and validation of variants. Primers used for validation were designed using EmPrime or Primer3. M13 forward and reverse tags (Forward tag:TGTAAAACGACGGCCAGT; Reverse tag:CAGGAAACAGCTATGACC) were added to the primer sequence for easier Sanger downstream analysis. The PCR amplicons were purified using Promega, Wizard SV gel and PCR Clean-up System (Promega, Madison, WI) and sent to Genewiz, (South Plainfield, NJ) for sequencing. The Sanger sequencing results were analyzed using the online 4Peaks DNA sequence trace viewer software. The primers used for the validation are shown in Supplemental Table 2. Not all variants required Sanger validation since they were validated by either frequency, by cluster, or by 1000 genomes.

Circulating Neutrophil Purification and RNA Preparation. Neutrophils were purified using the MACxpress Neutrophil Isolation Kit according to the manufacturer's protocol (Miltenyi Biotec). After purification the neutrophils were centrifuged and re-suspended in RNAlater (Qiagen) and stored at -80°C until further processing. Neurophil RNA was extracted using TRIzol LS reagent (Life Technologies) according to the manufacturer's protocol.

RNA Sequencing and Analysis. Following removal of barcodes and primers, raw sequences were aligned to the Hg19 human genome, with reference annotations provided by UCSC.

Alignment was performed under the following parameters: 1) minimum identity of 90%; 2) maximum gaps of 5%; 3) minimum aligned read length of 25; 4) one match to output per read; and 5) reads with >5 matches were ignored. Reads were aligned using a proprietary Burrow Wheeler Transform-based method, COBWeb. Using the Expectation-Maximization algorithm, reads per transcript per million (RPKM) were computed from aligned reads. RPKM were thresholded at 1, normalized using the DESeq algorithm, and baselined to the median of all samples (N=40448 transcripts). Transcripts with reasonable expression, >3 reads in 100% of samples in at least one of the three conditions (control, normal ROS Crohns, low ROS Crohns) were included in differential analyses (N=13355 transcripts).

Ontological Analysis. In ontological analyses of genes derived from comparing low and normal ROS CD neutrophils to controls, up/down genes included those shared between the low/normal ROS CD vs controls comparisons and those that were specific to low or normal ROS CD (see Venn diagram). In order to provide more granular focus on the transcriptomic impact of low or normal ROS production on glycolysis in the CD background, we performed candidate gene identification and prioritization through Toppgene. Using 'glycolysis' as the query term, we used GATACA (gataca.cchmc.org) and ToppGene to build a glycolysis-related gene set. Using 90 glycolysis genes as the training set, we identified low/normal ROS-related genes with significant functional overlap ($p<0.05$) with glycolytic functions, processes, and pathways.

Supplemental Table 1. Characteristics of 543 IBD Participants with Exome Sequencing Data.

Age at diagnosis	Range	0-18
	Median	8
	Mean	7.5
Gender	Female	226 (42%)
	Male	317 (58%)
Diagnosis	CD	416 (77%)
	UC	89 (16%)
	IBD-other	38 (7%)
Self-identified race	African-American	86 (16%)
	Caucasian	376 (69%)
	South/East Asian	15 (3%)
	Other/Not recorded	66 (12%)

Supplemental Table 2. Primers used for Sanger Sequencing of NADPH Oxidase Gene Variants.

Supplemental Table 3. Clinical and Demographic Characteristics of the Participants with Neutrophil Function Testing

	Age at Diagnosis	Age at Testing	Male	White	AA	L1	L2	L3
Control (n=26)	NA	14(6-19)	13(50)	21(81)	4(15)	NA	NA	NA
CD (n=129)	11(1-20)	15(4-23)	79(61)	115(89)	11(9)	13(10)	18(14)	98(76)

AA: African-American; L1: ileal locaton; L2: colon-only location, L3: ileo-colonic location; CD: Crohn Disease; NA: not applicable; one control & three CD subjects were Asian; age is shown as mean(range) in years; remaining variables are shown as n(%)

Supplemental Table 4. Missense Mutations in Core NADPH Oxidase Genes in European, African, and East/South Asian Ancestry.

The minor allele frequency for validated missense mutations in core NADPH oxidase genes identified in 543 early onset IBD patients is shown for the dbSNP and ExAC databases for the indicated ancestries. Novel mutations for a database are indicated by "-" for the MAF.

Supplemental Table 5. Neutrophil Activation Markers and Functions in Patients Stratified by FMLP Induced ROS Production

	CD ROS Lo	CD ROS Nl
FPR1	27(24,31)	28(25,32)
CD64 Index	1.5(1.1,2)	1.2(1,1.4)
CD11B	1(0.9,1.1)*	1.2(1.1,1.3)
Phagocytosis	6.6(6.1,7.1)	7.3(6.6,8)
Killing	85(82,88)	85(83,88)

ROS Lo was defined as FMLP induced MFI < 360; data are shown as mean (95thCI) MFI for FPR1, CD64 Index, and CD11B; as number of *Staph Aureus* engulfed per cell for phagocytosis; and as percentage of *Staph Aureus* engulfed per cell for killing; *p<0.05 vs CD ROS Hi

Supplemental Table 6. Disease Activity and Treatment Exposures at the Time of Neutrophil Function Measurements

	Disease Duration	Moderate-Severe Activity	Antibiotic	Cortico-steroid	5ASA	IMM	Anti-TNF
CD Low ROS (n=61)	60(0-156)	4(7)	3(5)	5(8)	10(16)	19(31)	37(61)
CD Normal ROS (n=68)	55(0-138)	6(9)	8(12)	7(10)	11(16)	27(40)	41(60)

Low ROS was defined as FMLP induced MFI < 360; data are shown as mean (range) in months for disease duration or n(%) for other factors; The mean (95thCI) time between neutrophil function measurements and time of surgery was 27(14,40) months. Disease activity was defined by Physician Global Assessment (PGA); 5ASA: mesalamine; IMM: immune modulator, 6-mercaptopurine or methotrexate. Differences between groups were tested by chi2 test.

Supplemental Table 7. Clinical and Demographic Characteristics of CD Patients Stratified by Core *NADPH* Oxidase Gene Mutation Carriage

Supplemental Table 8. Core Neutrophil NADPH Oxidase Gene Expression in Normal and Low ROS CD Neutrophils.

Gene Symbol	Gene ID	CD ROS Nl (raw)	CD ROS Lo (raw)	Fold-Change	p-value	Regulation
CYBA	1535	459.6597	443.3696	1.002125	0.984565	up
CYBB	1536	2075.979	2225.3076	1.113678	0.641644	up
FPR1	2357	4200.4673	4128.7485	1.021205	0.912778	up
NCF1	653361	943.92926	898.38	-1.01132	0.954754	down
NCF2	4688	8668.249	9555.354	1.14527	0.496052	up
NCF4	4689	1044.3026	1149.8049	1.143907	0.418135	up
RAC1	5879	1451.679	1787.6343	1.279384	0.048853	up
RAC2	5880	5833.94	5662.6714	1.008444	0.936435	up

ROS Lo was defined as FMLP induced MFI < 360

Supplemental Table 9. Differentially Expressed Genes in Normal and Low ROS CD Neutrophils and Control Neutrophils.

Differentially expressed genes for each pair-wise comparison are indicated in bold font, with genes also contained within the glycolysis gene training set underlined.

Supplemental Table 10. Glycolysis Trained Gene Sets for Differentially Expressed Genes in Normal and Low ROS CD Neutrophils and Control Neutrophils.

Supplemental Table 11. Biologic Pathways Enriched in Differentially Expressed Genes in Normal and Low ROS CD Neutrophils and Control Neutrophils.

Supplemental Table 12. Core Genes Distinguishing Low ROS CD Neutrophils.

Fold-change differences for each pairwise comparison are shown.

Supplemental Table 13. Potentially Damaging Mutations in Core Genes which Distinguish Low ROS CD Neutrophils.

The minor allele frequency for potentially damaging missense mutations in 50 genes whose expression distinguishes low ROS CD neutrophils identified in 543 early onset IBD patients is shown for the dbSNP and ExAC databases for the indicated ancestries. Novel mutations for a database are indicated by “-“ for the MAF.

Supplemental Figure 1. Neutrophil ROS Production in CD and CGD patients and Healthy Controls.

Neutrophil ROS production was determined in the CCHMC Clinical Immunology Lab and is shown as the median (IQR) for healthy controls (n=11), CD patients (n=17), autosomal recessive (AR) CGD patients (n=5) and X-linked CGD patients (n=6). Differences between groups were tested by ANOVA with Tukey's multiple comparison test. a:$p=0.005$ versus control; b:$p<0.0001$ versus AR-CGD and X-linked CGD; c:$p<0.0001$ versus control and CD.

Supplemental Figure 2. Flow Cytometry Measurement of Neutrophil Cell Surface Proteins.

Representative data are shown for flow cytometry measurement of A) FPR1, B) CD11b, and C) the neutrophil CD64 index.

Supplemental Figure 3. Analytic Pipeline for Gene Expression Data.

Two analytic pipelines were followed to identify transcriptomic and functional signatures of low ROS CD neutrophils in comparison to normal ROS CD neutrophils and control neutrophils. Beginning with all highly expressed transcripts (N=13355), Welch's t-tests were used to identify differentially expressed genes ($p<0.05$ and $fc>1.5$). The first pipeline compared normal ROS CD neutrophils vs controls, and low ROS CD neutrophils vs controls. The second pipeline compared low ROS CD neutrophils vs normal ROS CD neutrophils. These gene lists were submitted for ontological analysis; further, genes from these lists were ranked by functional importance using a glycolysis training set. Top ranked genes were submitted for further ontological analysis.

Supplemental Figure 4. Venn diagram Showing Shared and Unique Genes Differentially Expressed in CD Neutrophils with Low and Normal ROS Production.

In the first analytic pipeline, differentially regulated genes between normal ROS CD neutrophils vs control neutrophils (N=618) and low ROS CD neutrophils vs control neutrophils (N=834) were overlapped using a Venn diagram. We identified 272 consistently downregulated and 105 consistently upregulated genes in low and normal ROS CD compared to controls. Further, we identified 186 down and 271 upregulated genes specific to low ROS CD neutrophils, and 195 down and 46 upregulated genes specific to normal ROS CD neutrophils.

Supplemental Figure 5. Metabolic and Immune Functions Differentially Expressed in CD Neutrophils with Normal and Low ROS Production Compared to Control Neutrophils.

A) Upregulated genes between normal ROS CD neutrophils vs control neutrophils (N=151) and between low ROS CD neutrophils and control neutrophils (N=376) were submitted to ToppCluster for ontological analysis. Highly significant and informative ontologies were selected to identify common mechanisms disrupted in CD neutrophils, and to identify disrupted mechanisms specific to low- and normal-ROS CD neutrophils. B) The same process was repeated for the 467 and 458 genes downregulated in normal and low ROS CD neutrophils, respectively, when compared to control neutrophils.

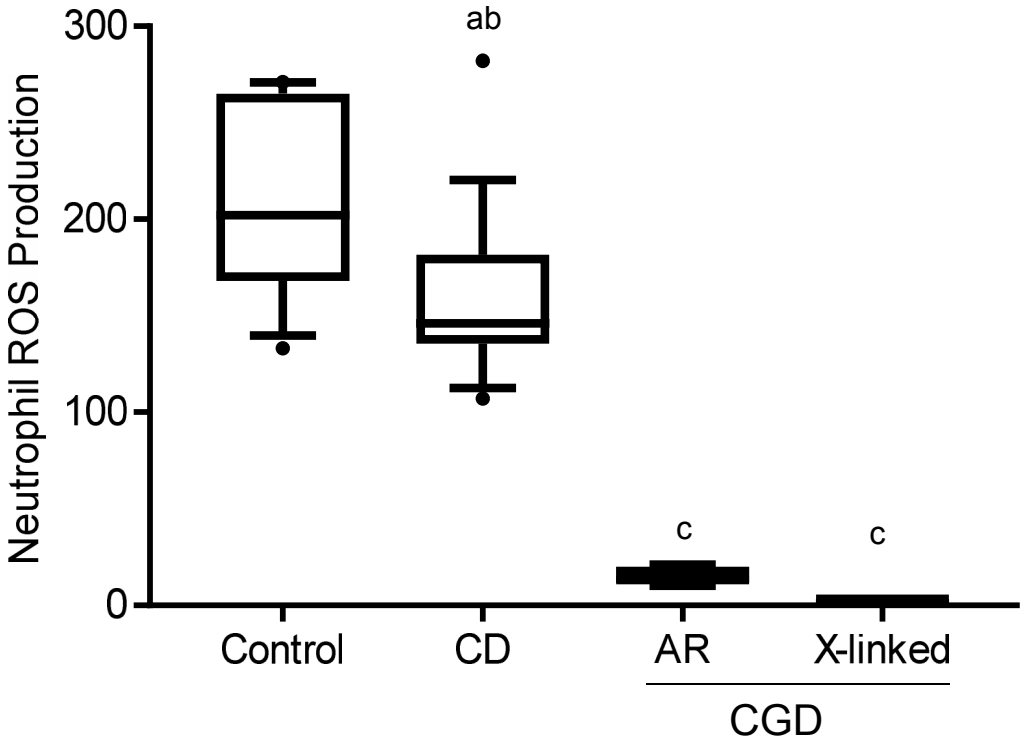
Supplemental Figure 6. Heat Map of Genes Differentially Expressed between CD Neutrophils with Normal or Low ROS Production and Control Neutrophils.

Candidate gene prioritization through functional enrichment analysis, using genes differentially regulated between normal (A) or low (B) ROS CD neutrophils and controls as the test set and a glycolysis gene list as the training set, ranked the test genes in order of importance in the context of glycolytic functions. Test genes with significant enrichment are included in the heatmap, where blue, black, and yellow correspond to expression below, at, and above the median, respectively.

Supplemental Figure 7. Metabolic and Immune Functions Differentially Expressed between CD Neutrophils with Low versus Normal ROS Production.

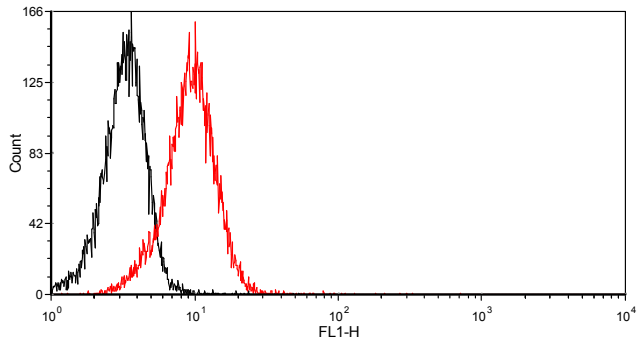
In the second analytic pipeline, low ROS CD neutrophils were compared directly to normal ROS to identify 411 differentially regulated genes. Up and downregulated genes were submitted to Toppcluster to identify mechanisms and pathways enriched in the gene sets, where highly significant and informative ontologies were included for visualization.

Supplemental Figure 1



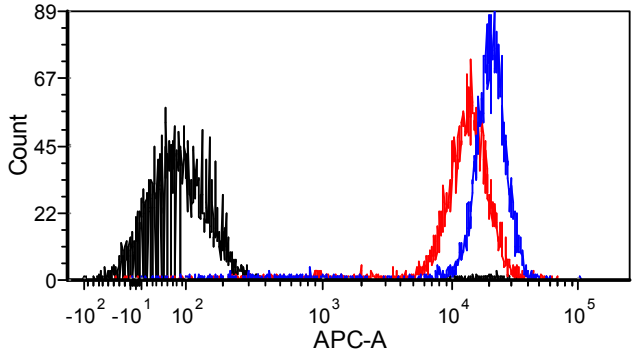
Supplemental Figure 2

A



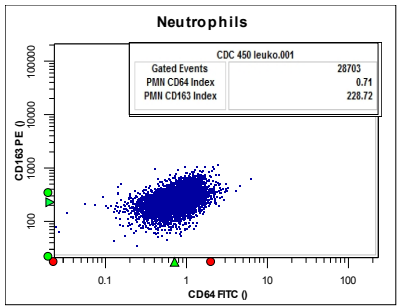
Black isotype, red FPR1

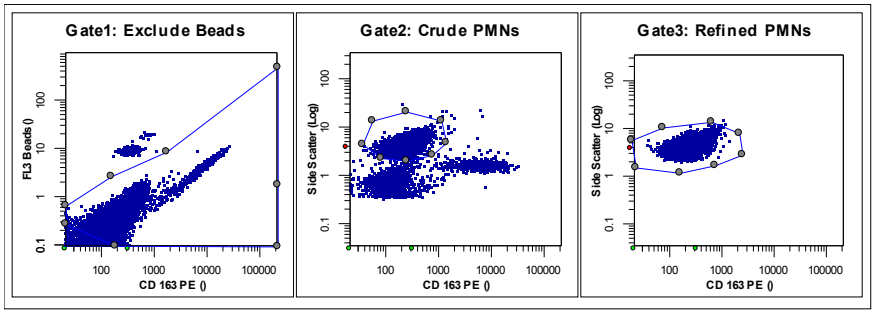
B



Black isotype,
Red low ROS CD CD11b
Blue high ROS CD CD11b

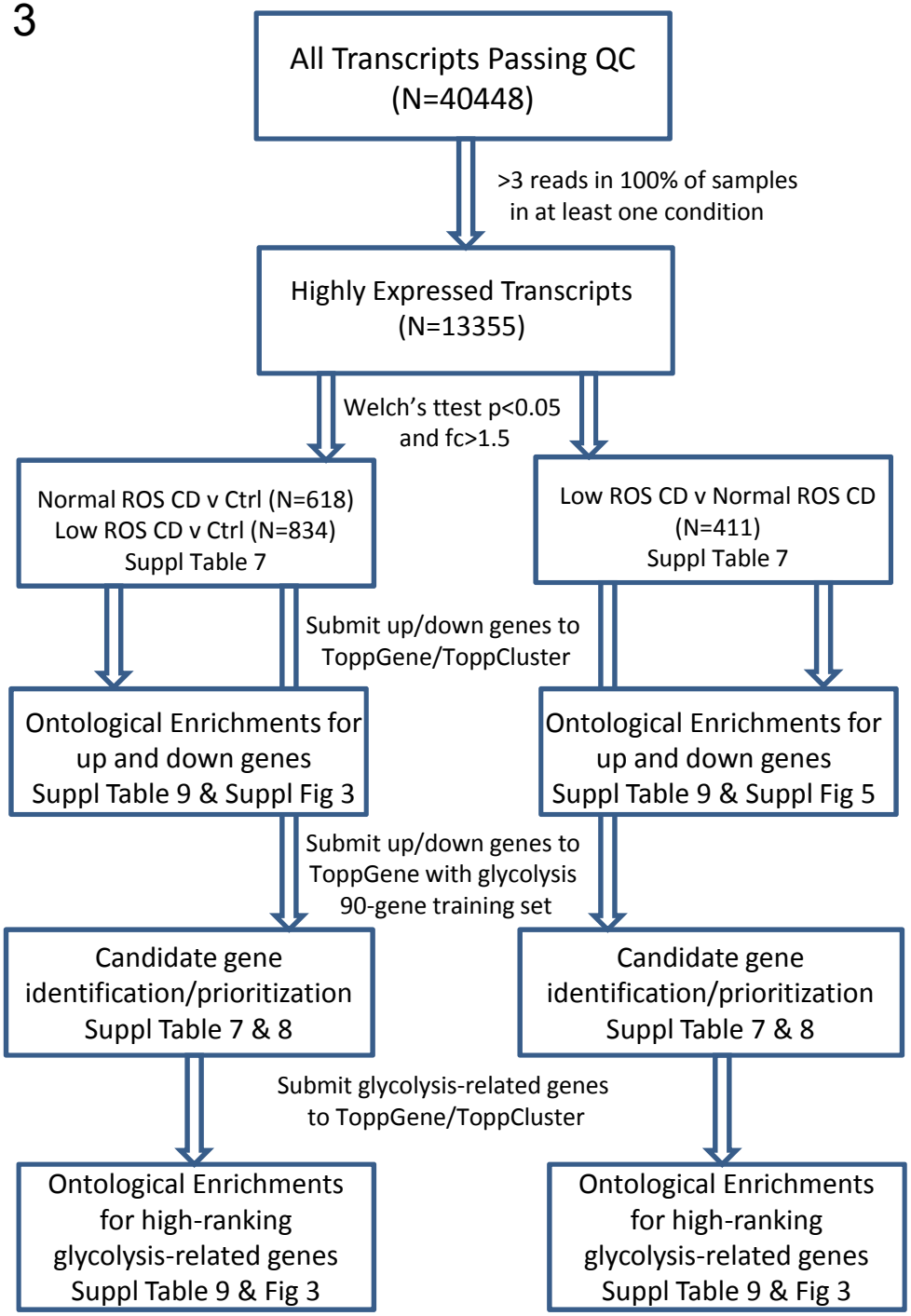
C



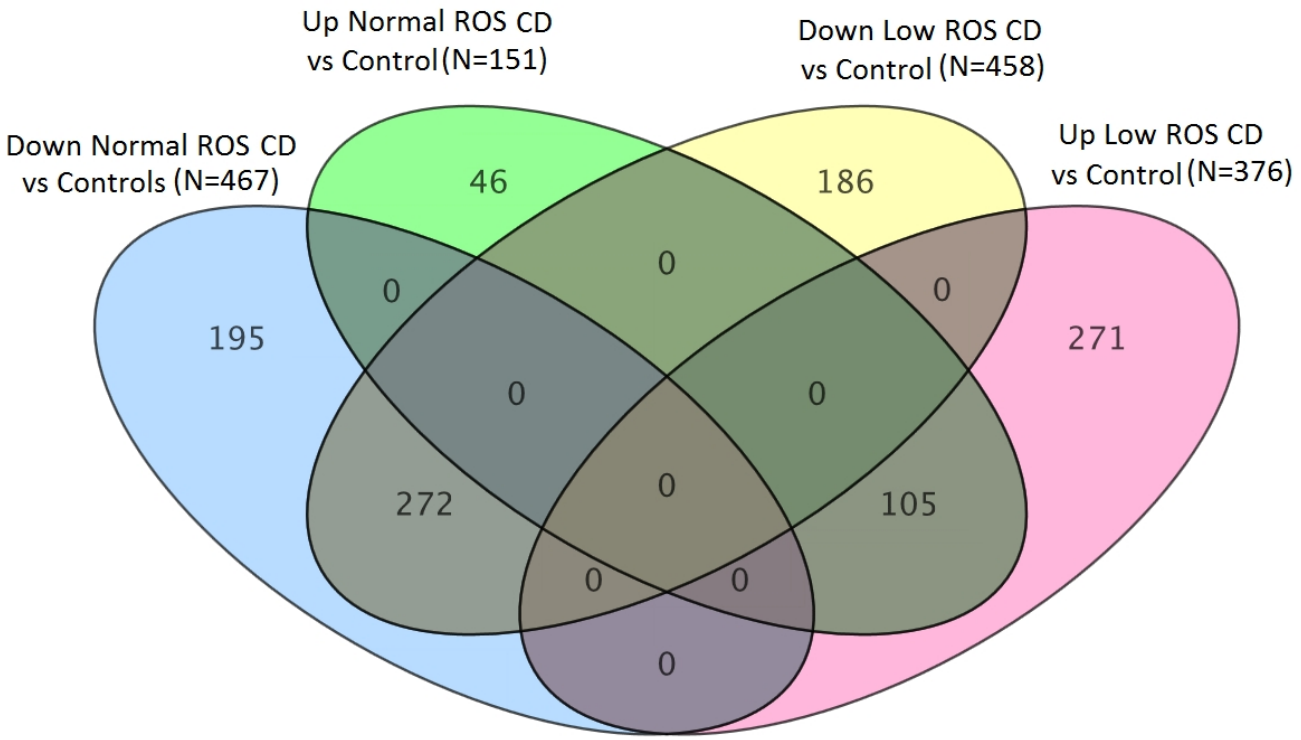


CD64 Index

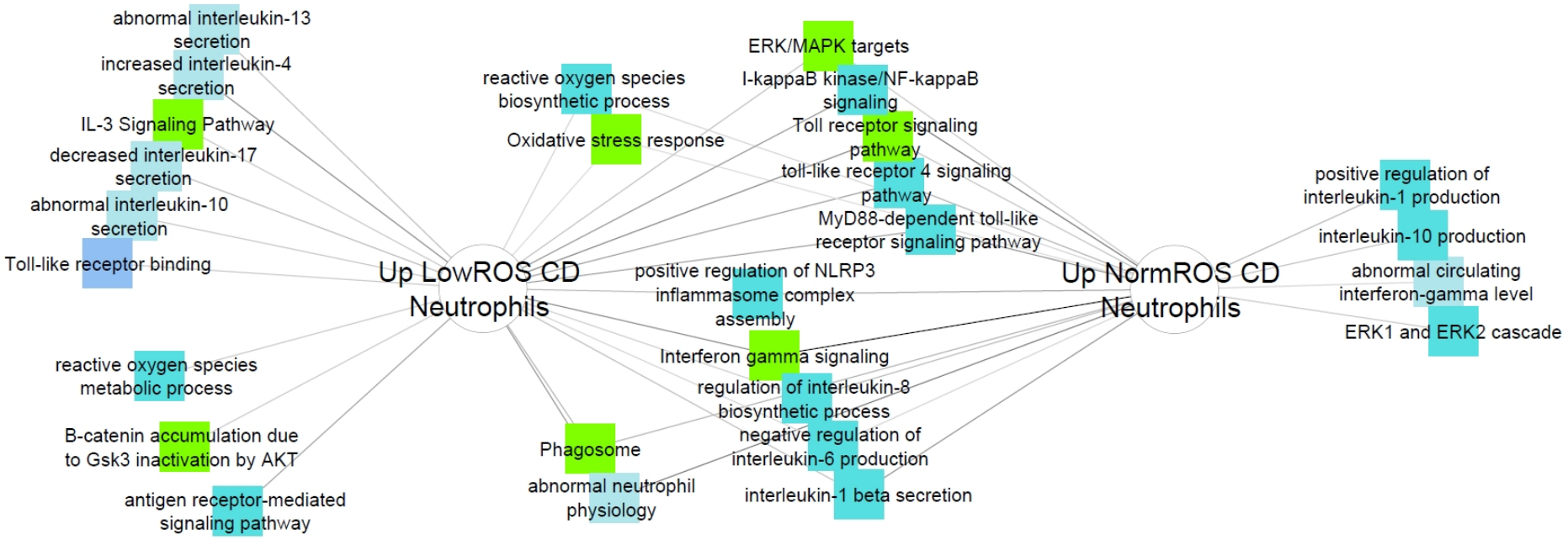
Supplemental Figure 3



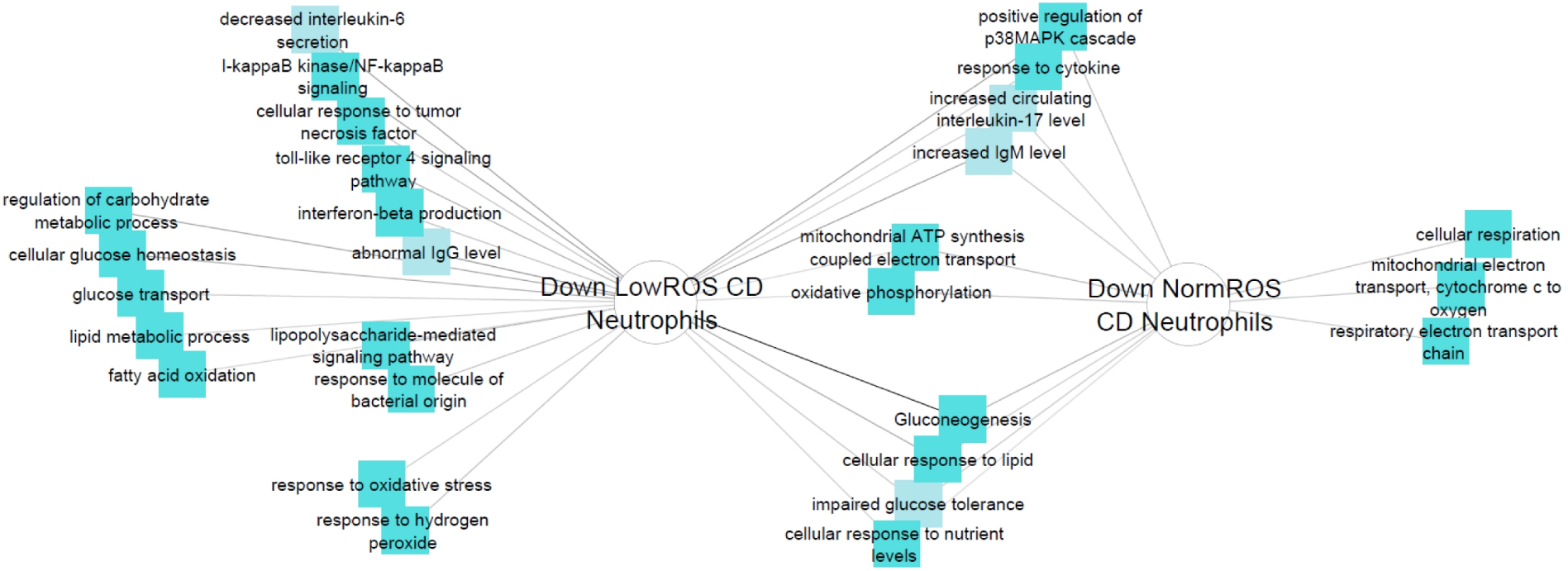
Supplemental Figure 4



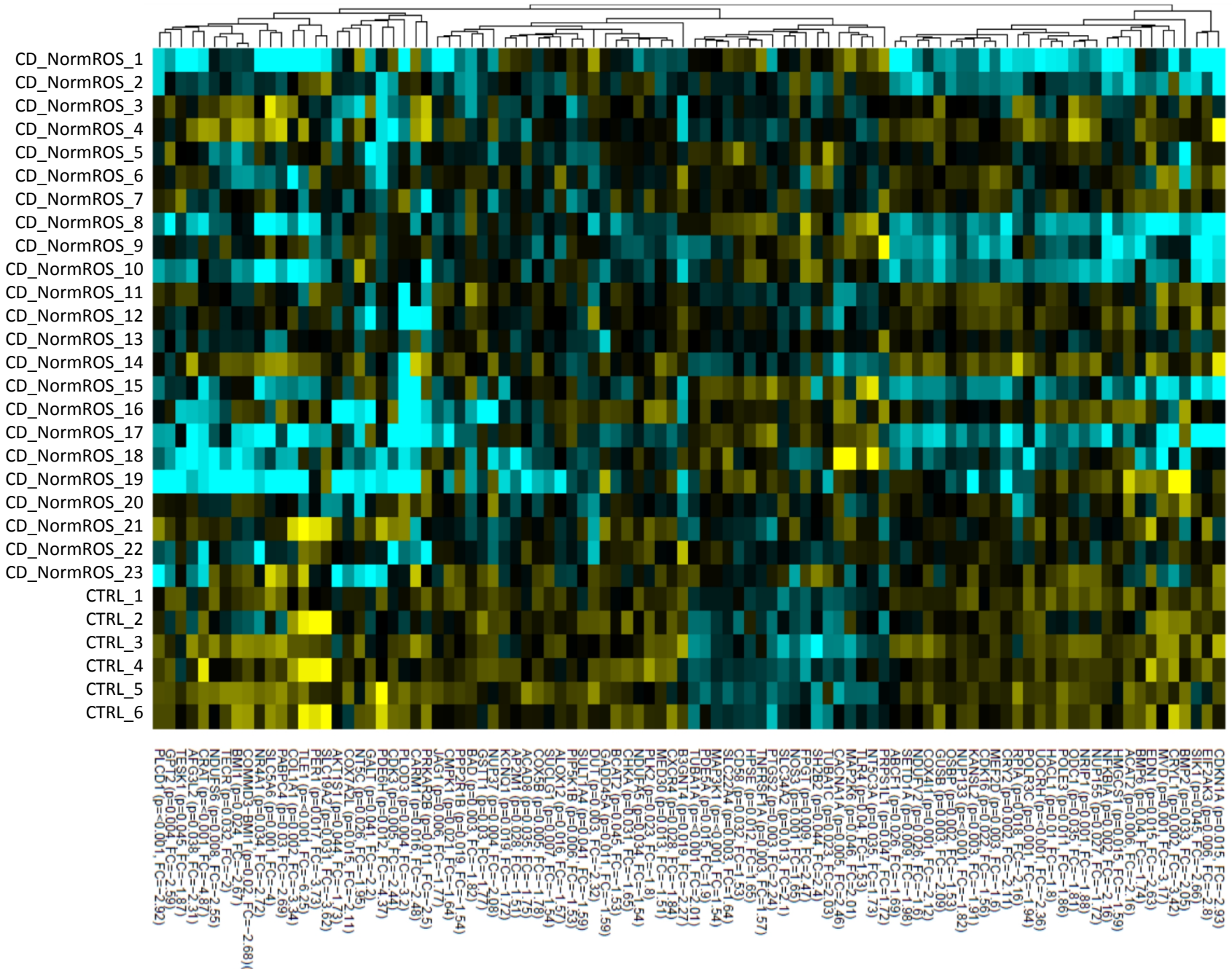
Supplemental Figure 5A



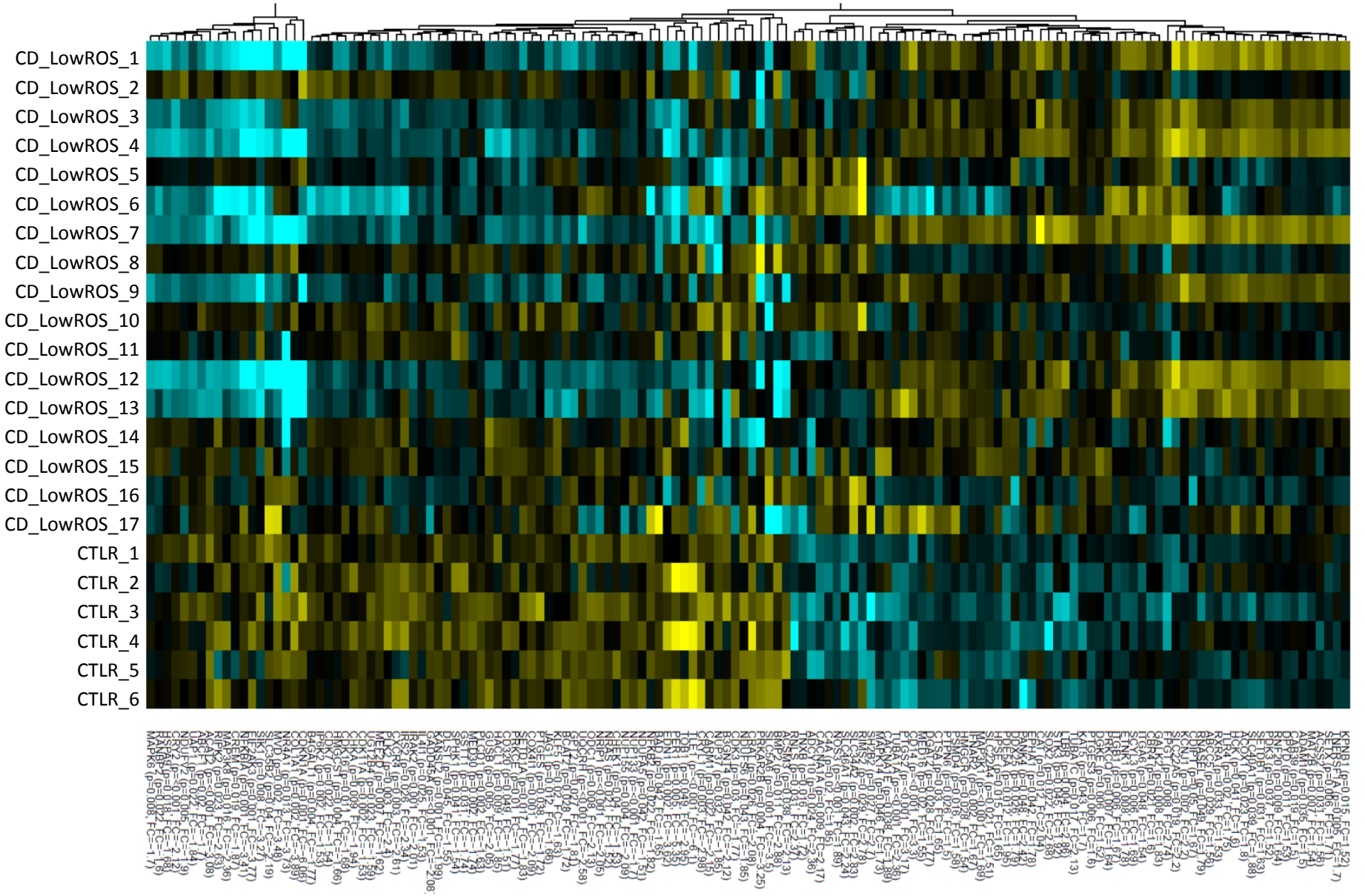
Supplemental Figure 5B



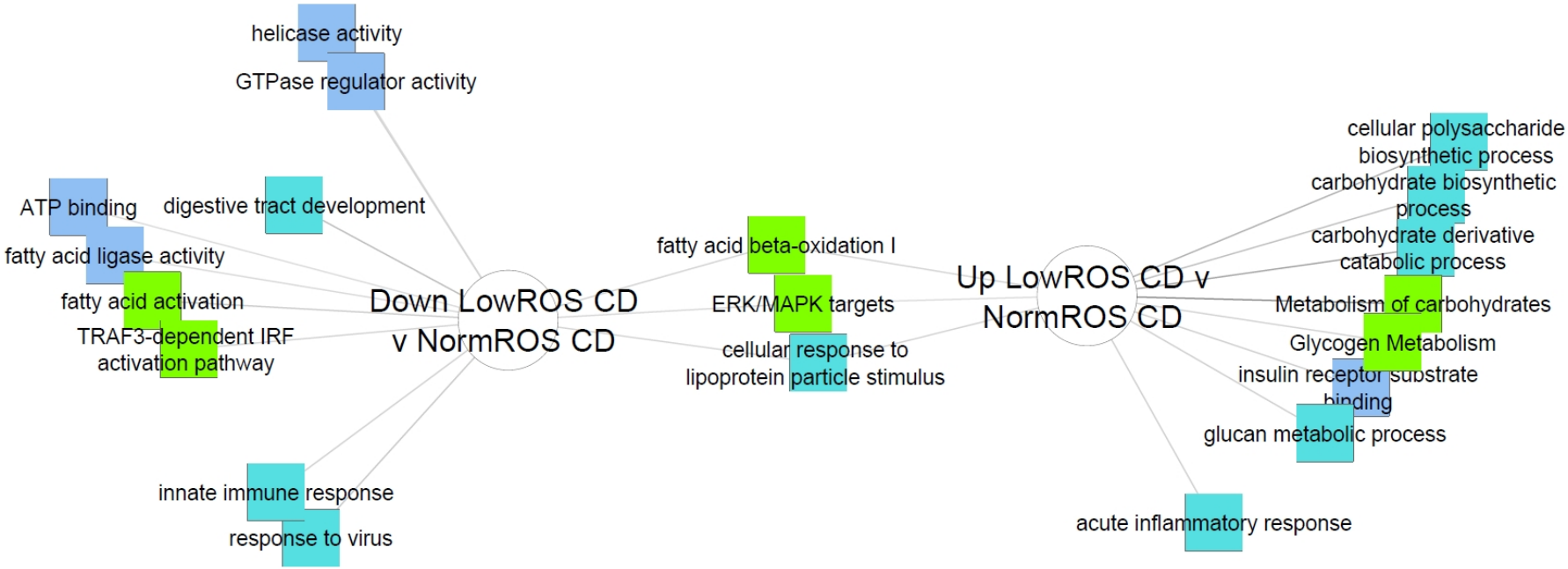
Supplemental Figure 6A



Supplemental Figure 6B



Supplemental Figure 7



Gene	chrom	pos	ref	alt	rsID	Sequencing Forward Primer (5'-3')	Sequencing Reverse Primer (5'-3')
CYBA	chr16	88643450	C	T	Novel	TGTAAAACGACGGCCAGTTCGCTGCATTTATTGCAGGTG	CAGGAAACAGCTATGACCAGTGTCCACCACGGGATCTTC
CYBA	chr16	88646184	C	T	rs779140893	TGTAAAACGACGGCCAGTGCAGTCATAAACCAAACGCAGGT	CAGGAAACAGCTATGACCAGAACACCCAGGACCGAAACA
CYBA	chr16	88646828	A	G	rs4673	TGTAAAACGACGGCCAGTGAAAAACACTGAGGTAAGTGGGGG	CAGGAAACAGCTATGACCAGTGCCAGACCTGTTGGAACC
CYBA	chr16	88647125	T	G	rs11547387	TGTAAAACGACGGCCAGTGAAAAACACTGAGGTAAGTGGGGG	CAGGAAACAGCTATGACCAGTGCCAGACCTGTTGGAACC
NCF1	chr7	74777318	C	T	rs782800778	TGTAAAACGACGGCCAGTAATCCAGGACAACCGCAAAGA	CAGGAAACAGCTATGACCAAACCACCTAAAAGGCCGAGC
NCF1	chr7	74779274	G	A	rs139225348	TGTAAAACGACGGCCAGTTCTCGGGCTTGACCTCATGTT	CAGGAAACAGCTATGACCTGAAGAAGTCGAGGAGGTGGG
NCF1	chr7	74779295	C	T	Novel	TGTAAAACGACGGCCAGTTCGGGCTTGACCTCATGTTCT	CAGGAAACAGCTATGACCTGAAGAAGTCGAGGAGGTGGG
NCF1	chr7	74779319	T	G	rs144018361	TGTAAAACGACGGCCAGTTCTCGGGCTTGACCTCATGTT	CAGGAAACAGCTATGACCTGAAGAAGTCGAGGAGGTGGG
NCF1	chr7	74779322	A	G	rs10614	TGTAAAACGACGGCCAGTTCGGGCTTGACCTCATGTTCT	CAGGAAACAGCTATGACCTGAAGAAGTCGAGGAGGTGGG
NCF1	chr7	74780830	C	A	Novel	TGTAAAACGACGGCCAGTTCTCTCCTCAGGACAAAAAAGCC	CAGGAAACAGCTATGACCTTCATTCAGCCGCAAACACTC
NCF2	chr1	183560204	G	A	rs55761650	TGTAAAACGACGGCCAGTACAGGGAAAGTCTGAGTGCTCAAC	CAGGAAACAGCTATGACCTTCAGGGTGACCAAGGCTTTC
NCF2	chr1	183563531	T	A	rs147744729	TGTAAAACGACGGCCAGTCCTCATTGCACTCACCACTGTGT	CAGGAAACAGCTATGACCTGTGCCAAATCACGAAACTGC
NCF2	chr1	183566954	A	G	rs35937854	TGTAAAACGACGGCCAGTCTCCAACTTAGCACATCTGGGC	CAGGAAACAGCTATGACCTCATGTTCAACGGGCAGGTAT
NCF2	chr1	183590217	C	T	rs147415774	TGTAAAACGACGGCCAGTGACTAGGACAGCCTTCACAAAGG	CAGGAAACAGCTATGACCAGGGTTATGAGTCAGTTGCCAAA
NCF4	chr22	36865055	C	A	rs112306225	TGTAAAACGACGGCCAGTTCCTCCTTAGGTTTTCGTCATCG	CAGGAAACAGCTATGACCTAGAGTGCTTGGGGTGGAAGC

Gene	chrom	pos	ref	alt	rsID	AA change	Alt allele effect	cadd	dbSNP MAF	hg19 pos (for Exac)	ExAC freq	ExAC European MAF	ExAC African MAF	ExAC East/South Asian MAF
CYBA	chr16	88643450	C	T	Novel	R164H	nonsynonymous	35	-	88709858	-	-	-	-
CYBA	chr16	88646184	C	T	rs779140893	A101T	nonsynonymous	24.9	0.000009	88712592	-	-	-	-
CYBA	chr16	88646816	C	T	rs149344911	V76M	nonsynonymous	24	0.000795	88713224	0.00075381	1.37412E-05	0.006755453	0.000557014
CYBA	chr16	88646828	A	G	rs4673	Y72H	nonsynonymous	11.7	0.689776	88713236	0.690830215	0.684183071	0.54867684	0.729532978
CYBA	chr16	88647125	T	G	rs11547387	K60T	nonsynonymous	3.32	0.003791	88713533	0.003870922	0.00516692	0.001614292	0.000460675
CYBB	chrX	37798966	G	A	rs139670417	R229H	nonsynonymous	26.7	0.000788	37658219	0.000667671	0.000180837	0.004772902	0
CYBB	chrX	37804069	G	C	rs141756032	G364R	nonsynonymous	23	0.003901	37663322	0.004000732	0.006105822	0.000587475	0.001194815
NCF1	chr7	74777318	C	T	rs782800778	R42W	nonsynonymous	31	0.000062	74191664	6.16034E-05	7.17731E-05	0.000108085	4.33163E-05
NCF1	chr7	74779274	G	A	rs139225348	G83R	nonsynonymous	20.2	0.008833	74193620	0.009059	0.01331	0.002852	0.0016795
NCF1	chr7	74779295	C	T	Novel	R90C	nonsynonymous	31	-	74193641	-	-	-	-
NCF1	chr7	74779319	T	G	rs144018361	C98G	nonsynonymous	22.9	0.000712	74193665	0.0007298	0.001215	0.0002341	0
NCF1	chr7	74779322	A	G	rs17856077, rs17295741, rs10614	S99G	nonsynonymous	-	-	74193668	0.4984	0.47845	0.3351	0.5174
NCF1	chr7	74780830	C	A	Novel	A149E	nonsynonymous	-	-	74195176	-	-	-	-
NCF1	chr7	74783529	G	A	rs145360423	W193*	stopGain	36	0.000646	74197872	0.0006464	0.001093	0.0001114	0
NCF2	chr1	183560204	G	A	rs55761650	P454S	nonsynonymous	0.75	0.004066	183529339	0.004118345	0.005930309	0.000768787	0.000993404
NCF2	chr1	183563229	T	A	rs35012521	N419I	nonsynonymous	28.4	0.005324	183532364	0.005370675	0.00550814	0.001249279	0.00723198
NCF2	chr1	183563301	C	T	rs145229115	R395Q	nonsynonymous	23.4	0.001036	183532436	0.001062568	0.00155415	0.000480492	0
NCF2	chr1	183563302	G	A	rs13306575	R395W	nonsynonymous	34	0.015222	183532437	0.015108826	0.000136329	0.001729771	0.016180329
NCF2	chr1	183563455	C	T	rs147908264	R386Q	nonsynonymous	13.4	0.002271	183532590	0.002298832	0.000818331	0.000192345	0.008465146
NCF2	chr1	183563531	T	A	rs147744729	T361S	nonsynonymous	26.6	0.001892	183532666	0.001871177	0.002114655	0.000770861	0.001550326
NCF2	chr1	183566954	A	G	rs35937854	V297A	nonsynonymous	22.9	0.004115	183536089	0.003724211	0.000122743	0.040753556	0
NCF2	chr1	183574503	G	A	rs376994104	A162V	nonsynonymous	35	0.000025	183543638	2.47093E-05	2.7265E-05	9.60984E-05	0
NCF2	chr1	183590217	C	T	rs147415774	R38Q	nonsynonymous	34	0.001408	183559352	0.001449657	0.00226306	0.000384468	0
NCF4	chr22	36865055	C	A	rs112306225	T85N	nonsynonymous	7.59	0.002867	37261097	0.002869607	0.002720004	0.009452348	3.98565E-05
NCF4	chr22	36870523	C	T	rs150976323	R151C	nonsynonymous	35	0.000056	37266565	4.9843E-05	0	0.000489141	3.99616E-05
NCF4	chr22	36875672	C	T	rs146911421	T216M	nonsynonymous	33	0.000647	37271714	0.000649253	0.000965144	0.000197824	7.98021E-05

Mutation	ROS	Age (years)	Male	White	African-American	L1	L2	L3	p	Duration	B2	B3	Sx
	median(IQR)	median(range)	n(%)	n(%)	n(%)	n(%)	n(%)	n(%)	n(%)	median(range)	n(%)	n(%)	n(%)
No mutation (n=20)	571(301,1005)	9(1-17)	13(65)	17(85)	3(15)	1(5)	4(20)	15(75)	9(45)	83(36-130)	4(20)	2(10)	6(30)
CYBA Y72H Hom (n=16)	350(198,545)	9(2-15)	7(50)	12(86)	2(14)	1(7)	2(14)	11(79)	6(43)	74(35-137)	3(21)	1(7)	4(29)
NADPH oxidase mutation (n=10)	329(211,377)	9(7-12)	8(80)	9(90)	1(10)	1(10)	3(30)	6(60)	8(80)	95(55-156)	6(60)	2(20)	7(70)
CYBA Y72H Hom CYBA V76M NCF2 R38Q	189	9	1	0	1	0	1	0	1	133	1	1	1
CYBA Y72H Hom NCF2 T361S	353	12	1	1	0	0	0	1	0	85	0	0	0
CYBA Y72H Hom NCF2 T361S	346	8	1	1	0	0	1	0	0	62	0	0	0
CYBA A101T NCF1 S99G Hom NCF1 G83R	349	10	0	1	0	0	1	0	1	104	1	0	1
CYBA K60T	790	11	1	1	0	0	0	1	1	55	0	0	0
NCF1S99G Hom	238	7	1	1	0	0	0	1	1	125	1	0	1
NCF1S99G Hom	312	7	0	1	0	0	0	1	1	81	1	0	1
NCF2 N419I	218	9	1	1	0	0	0	1	1	110	1	1	1
NCF2 P454S	174	9	1	1	0	0	0	1	1	156	0	0	1
NCF4 T85N	448	10	1	1	0	1	0	0	1	71	1	0	1

Hom: homozygous carriage
Remainder are heterozygous

ROS: fMLP induced neutrophil ROS production

L1: ileal location
L2: colon-only location
L3: ileo-colonic location

p:perianal disease

B2: stricturing behavior
B3: internal penetrating behavior
Sx: surgery

	LowROS CD v NormROS CD		NormROS CD v CTRL		LowROS CD v CTRL	
Gene Symbol	P-value	FC	P-value	FC	P-value	FC
A1CF	0.729	-1.075	**0.047**	**1.636**	0.127	1.522
A2M	**0.044**	**2.377**	0.884	-1.132	0.389	2.099
AAAS	**0.031**	**1.898**	0.547	-1.326	0.407	1.432
AAR2	0.452	1.297	**0.004**	**-3.029**	**0.011**	**-2.336**
ABCB6	0.891	-1.027	**0.017**	**-1.669**	**0.006**	**-1.714**
ABCC5	**0.037**	**1.593**	0.929	-1.020	**0.029**	**1.563**
ABCF1	0.991	-1.003	**0.026**	**-1.694**	**0.020**	**-1.699**
ABCF3	0.443	1.153	**0.007**	**-1.621**	**0.034**	-1.406
ABHD10	**0.041**	**1.846**	0.270	-1.642	0.757	1.124
ABHD12	0.561	-1.226	**0.029**	**-3.325**	**0.015**	**-4.075**
ABHD17B	0.088	-1.227	0.161	-1.252	**0.025**	**-1.536**
ABI3	**0.011**	**2.086**	0.536	-1.318	0.301	1.582
ABT1	**0.037**	1.409	**0.029**	**-2.069**	0.184	-1.469
ABTB2	0.692	1.103	0.087	1.825	**0.038**	**2.013**
ACAD8	**0.012**	**1.559**	**0.035**	**-1.747**	0.599	-1.121
ACAT2	0.242	-1.425	**0.006**	**-2.159**	**0.000**	**-3.076**
ACD	**0.039**	**2.182**	0.098	-2.054	0.882	1.062
ACOX1	0.210	1.341	0.193	1.344	**0.023**	**1.801**
ACPP	**0.031**	**1.555**	0.908	1.023	**0.029**	**1.590**
ACSL3	**0.015**	**-1.590**	0.847	-1.076	0.186	-1.711
ACSM3	0.227	-1.429	0.200	-1.488	**0.038**	**-2.127**
ACSS2	**0.018**	**1.616**	0.869	-1.035	**0.031**	**1.562**
ACTG1P4	0.587	-1.148	**0.000**	**3.276**	**0.001**	**2.854**
ACTR3B	**0.004**	**2.059**	0.755	-1.173	0.271	1.756
ACTR3C	**0.048**	**1.650**	0.641	1.128	**0.016**	**1.862**
ACYP1	**0.012**	**2.593**	0.279	-1.636	0.365	1.584
ADAM10	0.113	1.260	0.308	1.192	**0.035**	**1.502**
ADCY10	0.458	1.227	0.074	1.922	**0.024**	**2.357**
ADNP2	0.145	-1.321	0.173	-1.333	**0.009**	**-1.762**
ADPRHL2	0.949	-1.021	**0.024**	**-1.786**	**0.025**	**-1.824**
AEN	0.755	-1.139	**0.008**	**-3.246**	**0.001**	**-3.699**
AFF1	0.530	-1.114	**0.009**	**1.755**	**0.022**	**1.576**
AFG3L2	0.593	1.211	**0.038**	**-2.314**	0.099	-1.911
AGL	**0.019**	**1.535**	0.980	-1.008	0.233	1.522
AGPAT6	0.154	-1.491	0.149	-1.541	**0.013**	**-2.298**
AK8	**0.043**	**-1.501**	0.565	-1.295	0.164	-1.943
AKAP10	0.134	1.346	0.315	1.172	**0.016**	**1.578**

AKAP14	0.881	-1.048	**0.005**	**-2.810**	**0.005**	**-2.946**
AKT1S1	**0.018**	**1.805**	**0.044**	**-1.727**	0.803	1.045
ALG1L2	**0.022**	**1.725**	0.650	-1.118	0.069	1.542
ALG6	0.055	1.391	0.639	1.091	**0.047**	**1.518**
ALKBH2	**0.010**	**-2.613**	0.936	1.044	0.109	-2.503
ALKBH5	0.546	1.111	**0.006**	**-1.577**	**0.016**	-1.420
ALOX12	0.548	1.112	**0.016**	**-1.565**	0.066	-1.408
AMICA1	0.204	1.461	0.240	1.444	**0.029**	**2.110**
AMMECR1L	**0.027**	**1.562**	0.824	-1.081	0.271	1.445
ANAPC5	0.130	1.411	**0.030**	**-1.843**	0.243	-1.306
ANGPTL2	**0.046**	**1.871**	0.663	-1.318	0.556	1.420
ANGPTL7	0.460	1.245	**0.028**	**-1.823**	0.169	-1.464
ANKK1	**0.039**	**-1.577**	0.156	1.893	0.660	1.200
ANKRD55	0.214	1.514	0.369	1.443	**0.043**	**2.185**
ANKRD61	0.238	1.510	**0.000**	**-3.537**	**0.008**	**-2.343**
ANKRD65	0.623	1.063	**0.034**	1.488	**0.020**	**1.581**
ANP32B	0.866	1.027	**0.013**	**-1.838**	**0.015**	**-1.789**
ANP32C	0.273	1.290	**0.035**	**1.778**	**0.007**	**2.294**
ANXA4	**0.014**	**1.520**	0.457	-1.280	0.602	1.188
ANXA9	**0.017**	**2.312**	0.964	1.026	0.141	2.373
AP1AR	**0.034**	**-1.663**	**0.020**	**1.991**	0.458	1.197
AP2M1	**0.024**	1.396	**0.028**	**-1.506**	0.599	-1.079
AP4M1	0.223	-1.134	**0.006**	**-1.582**	**0.001**	**-1.794**
AP5S1	0.672	1.067	**0.003**	**-1.605**	**0.005**	**-1.504**
APBA3	**0.037**	**1.924**	0.469	-1.428	0.526	1.347
API5	**0.050**	**1.553**	0.480	-1.252	0.463	1.241
APOL1	0.624	-1.076	**0.004**	**1.823**	**0.007**	**1.694**
APOL2	0.877	-1.034	**0.007**	**1.927**	**0.010**	**1.864**
APOL6	0.379	-1.240	**0.006**	**2.176**	**0.023**	**1.754**
APOM	0.083	-1.367	0.151	-1.320	**0.013**	**-1.805**
APTX	0.277	1.312	**0.028**	**-1.728**	0.053	-1.317
AQP9	0.726	-1.055	**0.033**	**1.555**	0.079	1.475
AREG	0.062	-1.854	0.144	-2.763	**0.035**	**-5.122**
ARHGAP26-AS1	0.951	1.014	**0.000**	**1.752**	**0.011**	**1.776**
ARL13A	**0.012**	**2.404**	0.774	1.124	**0.043**	**2.701**
ARMCX5-GPRASP2	**0.038**	**1.911**	0.550	-1.270	0.349	1.505
ARPC5	0.187	1.323	0.221	1.364	**0.031**	**1.805**
ARPC5L	0.469	-1.197	**0.033**	**-1.670**	**0.010**	**-1.998**
ARRDC2	0.315	-1.295	**0.013**	**-2.240**	**0.002**	**-2.902**

ARSF	0.109	-1.342	0.075	-1.465	**0.005**	**-1.966**
ASAP1-IT1	0.103	1.304	0.140	1.495	**0.026**	**1.949**
ASB1	**0.034**	**1.756**	0.852	-1.074	0.204	1.635
ASF1B	**0.028**	**1.974**	0.566	1.384	0.098	2.732
ASNSD1	0.128	1.262	**0.038**	**-1.651**	0.205	-1.309
ASPH	**0.020**	**1.562**	0.996	1.002	0.309	1.565
ATF1	0.511	1.125	**0.046**	**1.669**	**0.022**	**1.877**
ATF4P4	0.282	-1.313	0.201	-1.360	**0.044**	**-1.786**
ATF6	0.166	1.264	0.219	1.278	**0.037**	**1.615**
ATG16L1	0.872	-1.034	**0.023**	**-1.508**	**0.013**	**-1.559**
ATG2A	0.387	-1.314	**0.026**	**-1.686**	**0.013**	**-2.216**
ATG9A	0.665	-1.070	**0.015**	**-1.516**	**0.007**	**-1.622**
ATL2	0.777	-1.050	**0.003**	**-1.627**	**0.001**	**-1.709**
ATP10D	0.539	1.243	0.068	1.878	**0.008**	**2.334**
ATP2C2	**0.008**	**2.209**	**0.024**	**-2.755**	0.569	-1.247
ATP8A2P3	0.718	1.204	**0.026**	**-2.456**	0.070	-2.040
ATPIF1	**0.011**	**1.532**	0.446	-1.180	0.219	1.298
ATXN2L	0.497	-1.116	0.067	-1.410	**0.027**	**-1.573**
ATXN7L3B	0.455	1.132	**0.025**	**-1.626**	0.075	-1.436
AUP1	0.239	1.281	**0.049**	**-1.766**	0.176	-1.379
AVL9	0.138	1.292	0.143	1.283	**0.005**	**1.657**
AZI1	0.687	-1.140	**0.011**	**-2.332**	**0.007**	**-2.660**
B3GNT4	0.841	1.069	**0.019**	**-2.266**	**0.042**	**-2.121**
B4GALT1	0.185	-1.281	**0.041**	-1.380	**0.004**	**-1.769**
BAD	0.726	1.105	**0.003**	**-1.823**	**0.042**	**-1.650**
BAGE2	0.983	-1.003	**0.044**	**1.748**	**0.047**	**1.743**
BAMBI	0.562	1.235	**0.000**	**-8.125**	**0.000**	**-6.579**
BARD1	**0.046**	**2.079**	0.265	-1.992	0.940	1.044
BBS1	0.381	1.303	0.090	2.766	**0.040**	**3.605**
BBS12	**0.050**	**2.137**	0.222	-1.952	0.873	1.095
BCAT2	0.538	-1.125	**0.045**	**-1.527**	**0.028**	**-1.719**
BCCIP	0.984	1.006	**0.014**	**-2.195**	**0.007**	**-2.182**
BCL11A	**0.044**	**1.680**	0.851	-1.102	0.424	1.525
BCL2L13	0.722	-1.047	**0.041**	**1.603**	0.062	1.531
BCL9L	0.192	-1.493	0.064	-2.221	**0.010**	**-3.316**
BCS1L	**0.013**	**2.124**	**0.014**	**-2.650**	0.503	-1.248
BEX1	0.578	1.267	**0.001**	**-5.609**	**0.005**	**-4.426**
BIRC3	0.152	-1.558	**0.016**	**-1.852**	**0.001**	**-2.887**
BLCAP	0.448	1.143	**0.010**	**-1.689**	0.064	-1.478

BLM	0.080	-1.558	0.083	-2.014	**0.012**	**-3.137**
BLOC1S1	**0.024**	**1.997**	0.323	1.685	**0.036**	**3.363**
BLOC1S4	0.282	1.476	**0.049**	**-2.073**	0.318	-1.404
BLVRA	0.449	-1.204	**0.041**	**-1.677**	**0.014**	**-2.020**
BMF	0.912	-1.028	**0.022**	**-1.920**	**0.009**	**-1.974**
BMI1	0.145	1.496	**0.024**	**-2.674**	0.132	-1.788
BMP2	0.424	-1.405	**0.033**	**-2.053**	**0.011**	**-2.885**
BMP2K	0.319	1.203	0.118	1.442	**0.032**	**1.735**
BMP6	0.551	1.158	**0.040**	**-1.741**	0.100	-1.503
BOD1	0.504	1.264	**0.001**	**-2.961**	**0.003**	**-2.343**
BRD9	0.080	1.517	**0.039**	**-2.279**	0.224	-1.502
BRF2	**0.025**	**1.918**	**0.035**	**-1.912**	0.988	1.003
BRI3BP	**0.007**	**2.144**	0.802	-1.150	0.278	1.865
BRMS1	0.282	-1.142	0.051	-1.656	**0.020**	**-1.891**
BRPF1	0.173	1.402	**0.041**	**-1.770**	0.142	-1.263
BSDC1	0.343	1.110	**0.003**	**-1.632**	**0.013**	-1.471
BTN3A3	0.272	1.394	0.169	1.612	**0.011**	**2.248**
BTRC	**0.010**	**2.080**	0.771	-1.195	0.364	1.740
C10orf105	0.529	-1.144	**0.040**	-1.315	**0.040**	**-1.504**
C10orf131	**0.013**	**2.081**	0.737	1.113	**0.005**	**2.315**
C10orf55	0.541	-1.423	**0.002**	**-4.661**	**0.002**	**-6.630**
C12orf61	0.171	-1.630	**0.001**	**-3.853**	**0.000**	**-6.279**
C14orf1	0.144	1.483	**0.022**	**-2.165**	0.160	-1.460
C16orf74	**0.031**	**1.567**	0.599	-1.285	0.689	1.220
C16orf93	**0.024**	**1.762**	0.348	1.678	0.068	2.957
C17orf102	0.591	1.146	**0.003**	**3.800**	**0.002**	**4.356**
C17orf96	**0.018**	**-2.690**	0.520	1.548	0.410	-1.738
C19orf25	**0.043**	**1.859**	0.273	1.398	**0.010**	**2.598**
C19orf47	**0.007**	**1.580**	0.457	-1.342	0.666	1.178
C19orf48	0.793	1.057	**0.037**	**-1.879**	**0.040**	**-1.777**
C1orf111	**0.034**	**1.818**	0.523	-1.367	0.589	1.330
C1orf141	0.113	-1.341	0.427	-1.164	**0.046**	**-1.561**
C1orf50	**0.023**	**2.231**	0.308	-1.587	0.448	1.405
C1orf56	0.310	-1.160	**0.005**	**-1.652**	**0.001**	**-1.916**
C1orf74	0.840	-1.075	**0.002**	**-2.765**	**0.003**	**-2.973**
C1QL3	**0.025**	**2.300**	0.739	-1.198	0.260	1.919
C20orf196	**0.049**	**1.980**	0.385	-1.521	0.592	1.302
C21orf67	**0.010**	**2.141**	0.314	-1.974	0.902	1.085
C21orf91	0.659	-1.088	**0.020**	**1.563**	0.089	1.437

C22orf26	**0.033**	**2.072**	0.203	-1.815	0.777	1.141
C22orf34	0.626	-1.099	**0.049**	**2.201**	0.075	2.003
C2orf47	0.769	-1.078	**0.003**	**-2.246**	**0.004**	**-2.422**
C2orf69	0.294	1.139	**0.004**	**-1.519**	**0.038**	-1.334
C4A	0.366	1.248	0.136	1.481	**0.020**	**1.848**
C5orf56	0.516	-1.109	**0.026**	**1.552**	0.075	1.399
C6orf203	0.211	1.643	**0.043**	**-2.372**	0.400	-1.444
C7orf10	**0.043**	**2.014**	0.581	-1.353	0.486	1.489
C7orf26	**0.007**	**1.541**	0.095	-1.465	0.794	1.051
C8orf76	0.623	1.107	**0.049**	**-1.505**	0.085	-1.359
C9orf50	**0.031**	**-1.629**	0.688	1.182	0.422	-1.378
CAAP1	0.116	-1.785	**0.016**	**-2.159**	**0.001**	**-3.853**
CAB39	0.274	1.208	0.121	1.246	**0.019**	**1.505**
CACNA1A	0.618	-1.131	**0.005**	**2.458**	**0.009**	**2.174**
CACNA1E	0.466	1.160	0.083	1.632	**0.038**	**1.893**
CAHM	**0.012**	**2.018**	0.906	1.046	0.054	2.110
CARHSP1	0.134	1.298	**0.030**	**-1.717**	0.198	-1.323
CARM1	0.723	1.151	**0.016**	**-2.480**	**0.022**	**-2.155**
CASP4	0.639	1.112	**0.011**	**2.001**	**0.005**	**2.225**
CAT	0.227	1.384	0.136	1.475	**0.012**	**2.042**
CBR4	0.156	1.187	0.108	1.349	**0.021**	**1.602**
CBWD2	0.840	1.041	0.052	1.507	**0.046**	**1.569**
CBWD3	0.361	1.227	0.137	1.428	**0.034**	**1.751**
CBWD4P	0.248	1.423	0.239	1.399	**0.017**	**1.991**
CBWD5	0.525	1.140	**0.017**	**1.666**	**0.007**	**1.899**
CBWD7	0.439	1.176	**0.024**	**1.648**	**0.006**	**1.937**
CBX4	0.203	-1.284	0.169	-1.359	**0.027**	**-1.744**
CCBL2	0.088	1.260	0.064	1.392	**0.005**	**1.753**
CCDC112	**0.033**	**1.520**	0.323	-1.389	0.769	1.094
CCDC117	0.580	-1.106	**0.002**	**-1.576**	**0.000**	**-1.743**
CCDC134	0.879	-1.075	**0.001**	**-3.098**	**0.009**	**-3.331**
CCDC138	0.495	1.194	**0.005**	**-2.280**	**0.024**	**-1.910**
CCDC157	**0.031**	**2.086**	0.335	-1.666	0.680	1.252
CCDC170	0.239	1.302	**0.011**	**-1.642**	0.300	-1.262
CCDC180	0.122	1.586	**0.025**	**-2.010**	0.382	-1.267
CCDC28A	0.287	-1.191	0.082	-1.347	**0.018**	**-1.605**
CCDC59	0.633	-1.103	**0.040**	**-1.547**	**0.011**	**-1.705**
CCDC96	**0.029**	**1.782**	0.153	2.308	**0.031**	**4.113**
CCL4	0.726	1.156	**0.018**	**-2.845**	**0.038**	**-2.462**

CCNB2	**0.023**	**1.995**	0.456	-1.402	0.388	1.423
CCNL2	0.197	1.157	**0.004**	**-1.569**	**0.037**	-1.356
CCR1	0.889	-1.045	**0.004**	**4.319**	**0.005**	**4.132**
CCR2	**0.043**	**2.277**	0.486	1.411	**0.044**	**3.213**
CCRL2	0.599	1.173	**0.046**	**-1.833**	0.113	-1.563
CCT2	0.294	-1.301	0.082	-1.801	**0.018**	**-2.343**
CCT4	0.413	1.226	**0.015**	**-1.862**	**0.008**	**-1.518**
CCT6B	0.650	-1.172	**0.047**	**-2.042**	**0.015**	**-2.395**
CD14	**0.022**	**2.038**	0.122	1.617	**0.000**	**3.295**
CD200R1	**0.023**	**2.731**	0.414	-1.699	0.491	1.607
CD274	0.140	-1.701	**0.000**	**4.654**	**0.007**	**2.735**
CD300A	0.439	1.192	0.107	1.506	**0.038**	**1.796**
CD300LF	0.458	1.167	0.095	1.371	**0.019**	**1.600**
CD320	0.289	-1.198	0.155	-1.260	**0.049**	**-1.509**
CD58	0.701	-1.049	**0.032**	**1.531**	0.055	1.459
CD7	0.193	-1.392	**0.031**	**2.021**	0.249	1.451
CD83	0.335	-1.618	**0.029**	**-2.711**	**0.004**	**-4.386**
CD9	**0.006**	**3.315**	0.735	-1.275	0.211	2.600
CDC20	**0.036**	**1.830**	0.950	-1.033	0.282	1.771
CDC42EP2	0.401	1.399	0.077	3.323	**0.032**	**4.648**
CDCA4	0.787	1.096	**0.006**	**-3.600**	**0.013**	**-3.284**
CDCA8	**0.010**	**2.076**	0.118	-2.217	0.882	-1.068
CDH13	**0.019**	**2.195**	0.925	-1.065	0.300	2.060
CDH17	0.464	-1.109	0.068	-1.399	**0.024**	**-1.552**
CDIP1	**0.032**	**2.077**	**0.044**	**-2.063**	0.980	1.007
CDIPT	0.189	1.596	0.880	1.047	**0.050**	**1.671**
CDK11A	0.873	-1.023	**0.001**	-1.493	**0.002**	**-1.528**
CDK16	0.730	-1.082	**0.022**	**-1.556**	**0.011**	**-1.683**
CDK2AP1	0.192	1.246	**0.040**	**-2.080**	0.123	-1.670
CDK2AP2	**0.032**	**1.983**	0.706	-1.178	0.218	1.683
CDK3	0.273	1.375	**0.005**	**-2.436**	**0.030**	**-1.772**
CDK7	0.244	-1.234	0.208	-1.245	**0.022**	**-1.537**
CDKN1A	0.191	-2.066	**0.015**	**-2.934**	**0.001**	**-6.064**
CEACAM21	**0.016**	**2.275**	0.753	-1.228	0.361	1.854
CEACAM3	0.220	1.274	0.195	1.305	**0.024**	**1.663**
CEBPE	**0.030**	**2.006**	0.639	-1.285	0.444	1.561
CEBPZ	0.338	-1.326	0.221	-1.456	**0.039**	**-1.930**
CENPC	0.575	-1.114	0.081	-1.395	**0.012**	**-1.554**
CFB	**0.020**	**1.790**	0.295	-1.389	0.342	1.289

CFD	0.361	1.534	**0.037**	**4.297**	**0.011**	**6.593**
CFH	**0.044**	**2.513**	0.371	-1.904	0.694	1.320
CGRRF1	0.163	-1.395	0.258	-1.295	**0.018**	**-1.807**
CHAC2	0.145	1.456	**0.033**	**-2.056**	0.190	-1.412
CHAF1A	0.888	-1.022	**0.022**	**-1.555**	**0.017**	**-1.590**
CHCHD10	0.513	1.260	**0.013**	**-3.322**	**0.045**	**-2.637**
CHEK1	0.186	-1.149	0.132	-1.331	**0.040**	**-1.530**
CHGA	0.225	1.439	0.122	2.014	**0.026**	**2.898**
CHKA	0.226	-1.178	**0.031**	**-1.645**	**0.009**	**-1.938**
CHST13	**0.047**	**1.552**	0.675	-1.133	0.341	1.370
CHTF18	**0.019**	**2.166**	0.472	1.646	0.090	3.564
CIAPIN1	0.121	1.571	**0.000**	**-3.599**	**0.001**	**-2.291**
CILP	**0.048**	**2.125**	0.809	-1.171	0.380	1.815
CIRBP	0.578	1.086	**0.002**	**-1.567**	**0.006**	-1.443
CIRH1A	0.559	-1.157	**0.020**	**-1.886**	**0.010**	**-2.182**
CISD1	0.354	1.364	0.108	2.648	**0.041**	**3.613**
CISH	0.699	1.107	0.054	3.278	**0.040**	**3.628**
CKLF-CMTM1	0.148	-2.598	0.081	-1.864	**0.011**	**-4.844**
CLC	0.744	1.145	**0.021**	**-4.690**	**0.035**	**-4.094**
CMPK1	0.138	1.332	**0.021**	**-1.643**	0.172	-1.234
CNGA1	0.444	-1.132	**0.001**	**2.085**	**0.003**	**1.842**
CNOT11	0.750	1.056	**0.029**	1.453	**0.027**	**1.535**
CNPY2	0.166	-1.478	0.250	-1.373	**0.035**	**-2.030**
CNR1	**0.025**	**3.280**	0.682	1.400	0.091	4.590
CNTF	0.081	-1.372	0.516	-1.105	**0.040**	**-1.516**
COL10A1	0.113	1.609	0.265	1.460	**0.012**	**2.348**
COL1A1	0.722	-1.167	**0.002**	**-3.336**	**0.002**	**-3.891**
COL23A1	**0.016**	**2.043**	0.598	-1.290	0.388	1.584
COL9A2	**0.028**	**2.360**	0.111	-3.307	0.628	-1.401
COMMD3	0.291	1.423	**0.004**	**-3.516**	**0.029**	**-2.471**
COMMD3-BMI1	0.101	1.515	**0.020**	**-2.683**	0.123	-1.772
COMT	**0.044**	**1.836**	0.361	-2.145	0.849	-1.168
COPS2	0.294	-1.192	0.101	-1.360	**0.012**	**-1.621**
COQ2	0.100	1.366	0.363	1.245	**0.035**	**1.700**
COQ9	**0.048**	**2.016**	0.418	-1.370	0.304	1.472
CORO1C	0.128	1.230	0.121	1.286	**0.009**	**1.582**
COX17	0.572	-1.113	**0.045**	**-1.611**	**0.022**	**-1.794**
COX4I1	0.940	1.014	**0.001**	**-2.121**	**0.001**	**-2.091**
COX5B	0.172	1.254	**0.005**	**-1.782**	0.069	-1.421

COX7A2L	**0.008**	**1.936**	**0.015**	**-2.112**	0.699	-1.091
CRAT	**0.006**	**2.335**	**0.000**	**-4.868**	**0.026**	**-2.085**
CREG1	**0.032**	-1.477	0.269	-1.281	**0.013**	**-1.891**
CRELD2	0.822	1.057	**0.038**	**2.175**	**0.030**	**2.300**
CREM	0.166	-1.522	0.439	-1.230	**0.019**	**-1.872**
CRISP3	**0.007**	**2.111**	0.551	-1.471	0.585	1.436
CRLF3	0.201	1.285	0.257	1.197	**0.022**	**1.539**
CRY2	0.987	-1.005	**0.002**	**-2.109**	**0.000**	**-2.119**
CRYL1	0.663	1.145	**0.002**	**-3.418**	**0.003**	**-2.984**
CSGALNACT1	**0.005**	**1.656**	0.161	-1.337	0.319	1.238
CSGALNACT2	0.466	-1.089	**0.045**	-1.439	**0.020**	**-1.567**
CTDSPL	**0.031**	**2.186**	**0.001**	**-4.730**	0.064	-2.164
CTGLF12P	**0.023**	**1.760**	0.340	-1.401	0.493	1.256
CTSA	0.163	1.270	0.230	1.303	**0.030**	**1.654**
CUL7	**0.017**	**1.851**	0.958	-1.021	0.137	1.813
CXCL1	0.068	1.441	0.194	1.398	**0.020**	**2.015**
CXCR1	0.289	1.345	0.080	1.821	**0.019**	**2.449**
CXCR3	**0.043**	**-2.203**	0.910	-1.101	0.309	-2.426
CXCR4	0.055	-1.416	**0.028**	**-1.842**	**0.003**	**-2.608**
CXorf40B	0.214	1.311	**0.013**	**-2.236**	0.050	-1.705
CYB561D2	0.665	1.151	**0.023**	**-1.898**	0.065	-1.649
DAOA-AS1	0.526	1.132	**0.017**	**2.099**	**0.009**	**2.377**
DAPP1	0.482	-1.161	**0.004**	**1.976**	**0.013**	**1.701**
DCAF7	0.146	1.348	0.389	1.166	**0.041**	**1.572**
DCHS2	0.812	1.073	**0.031**	**3.704**	**0.025**	**3.976**
DCTN6	0.149	-1.283	0.065	-1.441	**0.004**	**-1.850**
DDIT4	0.969	-1.010	**0.020**	**-1.683**	**0.014**	**-1.699**
DDT	**0.024**	**1.629**	0.180	-1.500	0.732	1.087
DDTL	**0.030**	**1.647**	0.759	-1.086	0.073	1.517
DDX24	0.726	-1.078	**0.030**	**-1.747**	**0.010**	**-1.882**
DDX25	0.485	-1.137	**0.008**	**2.041**	**0.026**	**1.795**
DDX27	0.975	-1.007	**0.001**	**-1.904**	**0.001**	**-1.917**
DDX28	0.088	1.621	**0.009**	**-2.721**	0.079	-1.679
DEFA4	**0.033**	**2.514**	0.878	-1.226	0.595	2.050
DENND2C	0.680	-1.080	**0.035**	**-1.548**	**0.023**	**-1.671**
DERA	**0.039**	**1.729**	0.737	-1.099	0.131	1.573
DGAT2	0.189	1.321	0.155	1.338	**0.028**	**1.768**
DGCR11	0.124	1.357	0.100	1.717	**0.019**	**2.330**
DGKE	0.899	1.018	**0.012**	1.492	**0.006**	**1.518**

DHRS12	0.197	1.330	0.076	1.885	**0.020**	**2.507**
DHRS7	**0.029**	**1.550**	0.355	-1.159	0.094	1.337
DHX40	0.454	-1.131	0.087	-1.339	**0.028**	**-1.515**
DIO2-AS1	0.219	-1.326	0.197	-1.353	**0.043**	**-1.795**
DIP2A-IT1	0.237	1.398	**0.023**	**-2.486**	0.130	-1.778
DISC1	0.896	1.024	0.053	1.480	**0.036**	**1.516**
DKK3	0.706	-1.094	**0.004**	**-2.003**	**0.004**	**-2.191**
DLG5	0.229	-1.449	0.152	-2.131	**0.048**	**-3.088**
DLGAP1-AS1	0.477	1.133	**0.012**	**-1.724**	**0.031**	**-1.521**
DLST	0.850	-1.027	0.062	-1.506	**0.045**	**-1.546**
DNAAF1	**0.029**	**-2.080**	0.142	-3.105	**0.032**	**-6.460**
DNAJA3	**0.002**	**2.609**	0.473	-1.630	0.475	1.601
DNAJB2	0.990	-1.003	**0.048**	**-1.642**	**0.022**	**-1.647**
DNAJB4	0.637	1.167	**0.049**	**-2.188**	0.114	-1.875
DNAJB7	0.125	1.297	**0.008**	**-1.601**	0.108	-1.234
DNAJB9	0.462	-1.210	0.114	-1.548	**0.033**	**-1.873**
DNAJC11	**0.014**	**2.574**	0.498	-1.578	0.464	1.631
DNAJC2	0.127	-1.233	0.208	-1.319	**0.044**	**-1.626**
DNASE1L1	**0.003**	**1.687**	0.473	1.321	0.066	2.228
DND1	0.064	1.545	0.492	1.200	**0.011**	**1.854**
DNMBP	0.604	-1.172	**0.017**	**-2.545**	**0.007**	**-2.981**
DPPA5	**0.030**	**1.641**	0.217	-1.601	0.949	1.025
DPRXP4	0.377	1.300	0.193	1.598	**0.033**	**2.078**
DPYD	0.427	1.133	**0.046**	1.347	**0.011**	**1.527**
DSTN	0.102	1.255	**0.030**	**-1.523**	0.254	-1.214
DTWD1	0.079	1.719	**0.005**	**-3.177**	0.105	-1.848
DUS2	**0.015**	**1.987**	0.282	-1.484	0.332	1.339
DUSP2	0.612	-1.279	0.126	-2.001	**0.033**	**-2.559**
DUSP23	**0.003**	**2.620**	0.088	-1.849	0.288	1.417
DUSP3	0.540	-1.100	**0.009**	**2.220**	**0.017**	**2.018**
DUSP4	**0.021**	**-3.439**	0.703	1.376	0.294	-2.500
DUSP6	0.150	1.264	**0.030**	**1.668**	**0.004**	**2.109**
DUT	0.151	1.436	**0.003**	**-2.323**	0.067	-1.618
E2F3	0.112	1.266	0.127	1.322	**0.010**	**1.673**
EDEM3	0.117	1.206	0.138	1.282	**0.017**	**1.546**
EDN1	0.329	-1.378	**0.015**	**-2.628**	**0.002**	**-3.620**
EFCAB10	0.821	1.053	**0.004**	**-2.259**	**0.007**	**-2.145**
EFCAB12	**0.018**	**1.636**	0.515	-1.221	0.290	1.340
EFEMP2	**0.004**	**2.351**	**0.004**	**-2.266**	0.875	1.038

EFNB2	0.696	1.166	**0.035**	**-3.974**	0.056	-3.407
EGFL8	**0.041**	**1.548**	0.244	1.668	**0.049**	**2.582**
EIF1B-AS1	**0.017**	**2.104**	0.966	-1.017	0.099	2.069
EIF2AK3	0.461	-1.346	**0.006**	**-2.803**	**0.001**	**-3.773**
EIF4E3	0.698	1.059	**0.023**	1.449	**0.013**	**1.534**
ELAC1	0.126	-1.227	**0.001**	**-1.659**	**0.000**	**-2.035**
ELL2	0.070	-1.609	0.051	-2.124	**0.005**	**-3.417**
ELL3	0.864	1.049	**0.006**	**-2.213**	**0.010**	**-2.111**
ELMO2	0.402	-1.175	**0.036**	**-1.623**	**0.010**	**-1.906**
ELP2	0.651	-1.143	**0.016**	**-1.988**	**0.002**	**-2.272**
EMC2	0.257	1.303	0.410	1.189	**0.005**	**1.550**
EMC8	0.072	1.446	**0.016**	**-2.240**	0.134	-1.549
EML6	0.213	1.153	**0.027**	1.391	**0.004**	**1.604**
EMR2	0.480	1.129	**0.042**	**1.569**	**0.015**	**1.772**
ENG	**0.019**	**2.346**	0.538	-1.624	0.644	1.444
ENKD1	**0.019**	**2.128**	0.643	-1.318	0.403	1.615
ENPP4	0.338	1.443	**0.001**	**-4.979**	**0.005**	**-3.449**
EPB41L4A-AS1	0.322	-1.527	0.180	-2.070	**0.042**	**-3.160**
EPB41L5	0.088	-1.440	**0.028**	**2.751**	0.114	1.910
EPHA1	0.176	1.245	0.163	1.426	**0.042**	**1.776**
EPHB4	**0.027**	**2.022**	0.866	-1.106	0.308	1.829
EPHX1	**0.013**	**2.309**	0.116	-2.050	0.773	1.126
EPHX3	**0.018**	**2.265**	0.536	1.253	**0.016**	**2.838**
EPPK1	**0.038**	**1.957**	0.353	-1.666	0.767	1.175
ERAP2	0.585	-1.142	**0.021**	**1.774**	**0.038**	**1.553**
EREG	**0.020**	-1.186	0.104	-1.292	**0.017**	**-1.532**
ERI1	0.970	1.009	**0.029**	**2.013**	**0.033**	**2.030**
ESRP2	0.145	1.466	**0.024**	**2.417**	**0.003**	**3.543**
ETNK1	0.099	1.381	0.157	1.292	**0.008**	**1.784**
EVI2A	0.751	1.057	**0.025**	**1.604**	**0.019**	**1.695**
EXOC5	0.171	1.232	0.209	1.302	**0.041**	**1.604**
EYS	0.556	1.134	**0.039**	1.465	**0.017**	**1.662**
EZH2	0.859	-1.066	0.064	-2.184	**0.035**	**-2.327**
F12	0.741	-1.102	**0.022**	**-1.811**	**0.024**	**-1.997**
F2RL1	0.228	1.271	**0.015**	**1.702**	**0.002**	**2.163**
F5	0.906	1.020	0.061	1.596	**0.047**	**1.628**
FABP3	0.307	-1.395	0.163	-1.996	**0.043**	**-2.784**
FADD	0.071	1.499	0.820	1.056	**0.027**	**1.583**
FADS3	0.411	1.292	**0.000**	**-3.037**	**0.004**	**-2.350**

FAM160A2	0.480	-1.098	0.067	-1.609	**0.038**	**-1.767**
FAM162A	0.216	1.423	**0.015**	**-2.780**	0.080	-1.953
FAM174B	**0.004**	**2.325**	0.668	1.230	0.055	2.859
FAM179A	0.114	-1.813	0.264	-1.467	**0.015**	**-2.659**
FAM184B	0.475	-1.085	**0.005**	**-1.552**	**0.001**	**-1.684**
FAM185A	0.554	1.124	0.058	1.494	**0.016**	**1.679**
FAM198B	**0.021**	**2.784**	0.468	1.569	**0.042**	**4.368**
FAM19A2	**0.048**	**1.740**	0.446	-1.433	0.678	1.215
FAM200A	**0.006**	**2.326**	0.512	-1.233	**0.044**	**1.887**
FAM209A	0.240	-1.320	0.252	-1.320	**0.022**	**-1.742**
FAM3A	0.585	1.180	**0.033**	**-1.966**	0.102	-1.666
FAM53B	0.165	1.270	**0.002**	**-1.682**	**0.020**	-1.324
FAM92B	0.212	1.168	**0.027**	1.486	**0.005**	**1.736**
FANCB	**0.027**	**1.710**	0.484	-1.243	0.258	1.376
FANK1	0.429	1.078	**0.024**	1.464	**0.011**	**1.578**
FAS-AS1	0.948	-1.016	**0.032**	**-1.781**	**0.012**	**-1.809**
FBXL14	0.069	1.781	0.418	1.425	**0.036**	**2.539**
FBXL5	0.612	1.086	**0.005**	**1.517**	**0.005**	**1.648**
FBXO22	0.596	-1.108	**0.010**	**-1.705**	**0.008**	**-1.889**
FBXO30	0.682	1.088	**0.016**	1.439	**0.037**	**1.565**
FBXO31	0.417	-1.421	**0.009**	**-3.895**	**0.002**	**-5.535**
FBXO38	0.671	1.064	**0.030**	1.415	**0.023**	**1.506**
FCGR1A	0.856	1.066	**0.003**	**3.559**	**0.002**	**3.795**
FCGR1B	0.949	1.019	**0.000**	**3.933**	**0.000**	**4.008**
FCGR1C	0.918	1.048	**0.002**	**5.517**	**0.001**	**5.782**
FCRLB	**0.042**	**-1.619**	**0.025**	**1.890**	0.496	1.167
FEM1B	0.057	1.222	**0.030**	**-1.612**	0.164	-1.319
FICD	**0.029**	**2.192**	**0.012**	**-2.535**	0.645	-1.157
FILIP1L	0.533	-1.362	**0.010**	**-3.246**	**0.001**	**-4.422**
FLJ10038	0.253	-1.191	**0.007**	**-2.166**	**0.002**	**-2.580**
FLJ14186	0.157	1.259	**0.047**	**-1.761**	0.203	-1.398
FLJ23867	0.299	-1.406	0.231	-1.373	**0.026**	**-1.931**
FLJ42393	0.108	1.341	0.096	2.782	**0.045**	**3.731**
FMNL2	0.723	-1.107	**0.039**	**1.768**	0.125	1.597
FNBP4	0.803	1.037	**0.043**	**-1.563**	0.055	-1.507
FOXC1	0.117	-1.943	**0.003**	**-3.472**	**0.000**	**-6.746**
FPGT	0.705	1.112	**0.009**	**2.468**	**0.008**	**2.744**
FUNDC2	0.859	1.051	**0.004**	**-2.342**	**0.003**	**-2.228**
FUT11	0.550	1.163	**0.017**	**-1.876**	0.092	-1.612

FUT7	0.179	1.396	0.118	2.395	**0.043**	**3.345**
FXR2	**0.028**	**1.700**	0.391	1.281	**0.009**	**2.177**
FYTTD1	0.154	-1.341	0.393	-1.228	**0.029**	**-1.647**
GAB3	0.100	1.409	0.359	1.155	**0.018**	**1.628**
GADD45A	0.123	-1.313	**0.011**	**-1.587**	**0.000**	**-2.085**
GADD45B	0.128	-1.719	0.108	-1.431	**0.008**	**-2.461**
GALK2	0.118	1.329	0.123	1.378	**0.008**	**1.831**
GALT	**0.018**	**2.061**	**0.041**	**-2.201**	0.840	-1.068
GATSL3	**0.035**	**2.073**	0.190	-2.101	0.981	-1.013
GBP1	0.485	-1.285	**0.004**	**3.132**	**0.016**	**2.436**
GBP1P1	0.414	-1.536	**0.024**	**2.549**	0.237	1.659
GBP2	0.504	-1.159	**0.002**	**1.938**	**0.015**	**1.673**
GBP3	0.231	-1.486	**0.007**	**2.278**	0.124	1.534
GBP4	0.413	-1.197	**0.011**	**1.836**	**0.014**	**1.534**
GBP5	0.477	-1.319	**0.003**	**3.228**	**0.014**	**2.447**
GEM	**0.040**	**-1.607**	**0.028**	**1.682**	0.779	1.047
GFOD1	0.893	-1.035	**0.042**	**-3.349**	**0.038**	**-3.466**
GGTA1P	**0.009**	**2.741**	0.510	-1.953	0.737	1.404
GHRLOS	0.931	-1.010	**0.000**	**-1.668**	**0.000**	**-1.685**
GIF	0.290	1.406	0.154	2.120	**0.048**	**2.981**
GIMAP4	0.980	1.009	0.053	2.753	**0.048**	**2.777**
GIMAP8	0.141	1.953	0.142	2.475	**0.020**	**4.833**
GINS3	**0.017**	**1.681**	0.574	-1.198	0.282	1.404
GJB2	0.537	1.296	**0.033**	**-2.199**	0.196	-1.697
GJB7	0.595	1.137	0.054	1.650	**0.017**	**1.875**
GLRX3	0.983	1.004	**0.000**	**-2.190**	**0.001**	**-2.181**
GMNN	0.071	1.659	0.252	1.539	**0.014**	**2.553**
GNG10	0.515	-1.138	**0.018**	**1.803**	0.055	1.584
GNRH1	0.198	1.365	0.428	1.201	**0.025**	**1.639**
GOLGA8T	**0.047**	**1.567**	0.092	-1.858	0.612	-1.186
GPN3	0.061	1.753	0.581	1.182	**0.027**	**2.072**
GPR155	0.617	1.071	**0.021**	1.420	**0.005**	**1.520**
GPR19	**0.006**	**2.942**	0.836	1.105	**0.037**	**3.250**
GPR85	0.927	-1.018	**0.043**	**1.649**	0.058	1.620
GPR98	0.335	1.163	**0.040**	**1.503**	**0.013**	**1.747**
GPT2	0.202	1.435	**0.004**	**-2.594**	**0.027**	**-1.807**
GRAMD1C	**0.023**	**2.295**	0.968	1.014	**0.028**	**2.327**
GRAMD4	**0.049**	**1.974**	0.710	-1.241	0.438	1.590
GRASP	0.135	-2.001	**0.000**	**-7.821**	**0.000**	**-15.650**

GRB10	**0.004**	**2.029**	0.339	-1.573	0.576	1.290
GRIP1	0.540	-1.239	**0.038**	**3.269**	0.085	2.638
GRIP2	0.095	1.314	**0.048**	**1.673**	**0.006**	**2.199**
GRPEL2	**0.011**	**2.110**	**0.016**	**-2.229**	0.842	-1.057
GSTT1	0.906	1.020	**0.030**	**-1.775**	**0.031**	**-1.741**
GTF2E2	0.089	1.355	0.519	1.162	**0.048**	**1.573**
GTF2I	0.707	-1.064	**0.023**	-1.458	**0.030**	**-1.552**
GTF3C2	**0.002**	**1.549**	0.199	-1.287	0.321	1.203
GTF3C4	0.603	-1.116	0.095	-1.550	**0.021**	**-1.729**
GTPBP4	0.548	1.229	**0.000**	**-3.472**	**0.000**	**-2.825**
GUSB	0.937	1.020	**0.003**	**-2.090**	**0.005**	**-2.050**
GVINP1	0.951	1.012	0.052	1.490	**0.015**	**1.508**
GYG2P1	**0.002**	**-1.723**	0.556	-1.120	**0.008**	**-1.930**
GYS1	**0.022**	**1.626**	0.904	1.063	0.291	1.727
HAAO	**0.004**	**2.817**	0.515	-1.418	0.232	1.986
HACL1	0.912	-1.023	**0.010**	**-1.804**	**0.009**	**-1.846**
HADH	**0.048**	**2.039**	0.830	-1.171	0.468	1.740
HCAR2	0.949	-1.013	**0.041**	**1.509**	0.060	1.489
HCAR3	0.611	-1.132	**0.022**	**1.636**	0.137	1.445
HCK	0.125	1.406	0.516	1.137	**0.041**	**1.599**
HCRTR1	**0.027**	**1.643**	0.526	1.351	0.115	2.219
HEATR1	0.058	1.860	**0.006**	**-2.414**	0.212	-1.298
HEXA	**0.046**	**1.643**	0.488	-1.474	0.836	1.115
HEXA-AS1	0.661	1.060	0.063	1.448	**0.041**	**1.535**
HIST1H1C	**0.003**	**1.668**	0.097	-1.612	0.884	1.035
HIST1H2AL	**0.034**	**2.127**	0.719	-1.365	0.600	1.558
HIST1H2BJ	0.638	-1.128	**0.029**	**1.665**	0.189	1.476
HIST2H2BF	0.685	1.139	**0.037**	**1.879**	**0.001**	**2.141**
HLA-DQA1	0.672	1.127	**0.042**	**1.819**	**0.009**	**2.049**
HLX	0.832	1.037	**0.030**	**1.647**	**0.023**	**1.708**
HMG20A	**0.003**	**1.950**	0.618	-1.161	0.096	1.679
HMGCR	0.782	1.033	**0.032**	1.494	**0.028**	**1.543**
HMGCS1	0.846	-1.043	**0.015**	**-1.587**	**0.004**	**-1.656**
HN1	0.082	1.264	0.227	1.313	**0.044**	**1.659**
HPRT1	**0.026**	**1.817**	0.688	-1.225	0.431	1.483
HPS4	0.133	-1.175	**0.000**	-1.458	**0.000**	**-1.713**
HPSE	0.979	1.004	**0.012**	**1.647**	**0.015**	**1.653**
HRH2	**0.041**	**1.783**	0.643	1.181	0.051	2.105
HSBP1L1	0.967	-1.012	**0.045**	**-2.972**	**0.041**	**-3.007**

HSD17B10	**0.013**	**2.391**	**0.040**	**-3.191**	0.567	-1.335
HSDL1	0.595	-1.098	0.063	-2.341	**0.044**	**-2.570**
HSPA13	0.479	-1.222	0.129	-1.493	**0.007**	**-1.824**
HSPA9	0.887	-1.041	0.065	-1.612	**0.018**	**-1.679**
HYAL2	**0.026**	**1.616**	0.596	1.256	0.123	2.029
HYI	**0.002**	**2.021**	0.394	-1.313	0.159	1.539
HYKK	0.480	-1.103	**0.037**	**1.926**	0.064	1.746
ICOSLG	0.313	-1.636	**0.046**	**-2.576**	**0.007**	**-4.214**
IER5	0.701	-1.136	**0.005**	**-2.257**	**0.003**	**-2.563**
IFI16	0.516	-1.148	**0.043**	**1.781**	0.107	1.551
IFI27L2	**0.043**	**-1.742**	0.580	1.238	0.382	-1.407
IFI44	**0.020**	**-2.283**	0.714	1.240	0.299	-1.842
IFI6	**0.033**	**-2.131**	0.994	1.004	0.179	-2.123
IFIH1	**0.046**	**-1.607**	0.470	1.209	0.227	-1.329
IFIT1B	0.597	-1.161	**0.005**	**5.854**	**0.008**	**5.044**
IFIT5	**0.048**	**-1.663**	0.572	1.295	0.570	-1.285
IFNAR2	0.381	1.132	**0.009**	1.472	**0.002**	**1.665**
IFNK	0.859	1.064	**0.032**	**-2.847**	0.053	-2.675
IFT122	**0.021**	**1.704**	**0.042**	**-1.736**	0.917	-1.018
IGSF8	**0.026**	**2.295**	0.294	-1.554	0.352	1.477
IL10RA	0.178	-1.298	**0.042**	**-1.628**	**0.004**	**-2.113**
IL21R	**0.036**	-1.364	0.230	-1.281	**0.011**	**-1.748**
IL4I1	0.054	-1.248	0.228	-1.225	**0.025**	**-1.528**
ILF2	0.658	1.125	**0.049**	**-1.831**	0.068	-1.628
ILF3	0.550	-1.168	**0.038**	**-1.828**	**0.006**	**-2.134**
ILKAP	0.672	1.083	**0.000**	**-2.066**	**0.000**	**-1.908**
IMP3	0.058	-2.142	0.267	-1.471	**0.011**	**-3.150**
INHBC	**0.039**	**2.644**	0.838	1.148	0.138	3.035
INO80B	0.061	1.346	**0.000**	**-1.858**	**0.022**	-1.380
INSR	**0.028**	**1.579**	0.286	-1.331	0.527	1.186
IP6K2	0.383	-1.129	**0.005**	-1.356	**0.002**	**-1.531**
IPO11	0.309	1.399	**0.031**	**-2.083**	0.210	-1.489
IPO8	0.285	1.214	0.146	1.330	**0.031**	**1.615**
IRAK1BP1	0.080	1.283	**0.042**	**1.580**	**0.005**	**2.027**
IRAK2	0.067	-1.383	**0.045**	-1.453	**0.001**	**-2.010**
IRF2BP1	**0.042**	**1.983**	0.715	-1.091	0.066	1.818
IRF2BP2	0.378	-1.265	0.167	-1.475	**0.033**	**-1.866**
IRF5	0.119	-1.426	**0.028**	**-1.927**	**0.002**	**-2.748**
IRS2	0.208	-1.325	0.103	-1.768	**0.026**	**-2.342**

ISCA1	0.164	-1.418	0.127	-1.431	**0.008**	**-2.029**
ITFG1	**0.003**	**1.545**	0.815	-1.038	**0.014**	1.488
ITGA6	0.217	1.263	0.334	1.216	**0.048**	**1.536**
ITGB1	0.264	1.230	0.052	1.359	**0.006**	**1.672**
ITGB1BP1	0.204	1.429	**0.020**	**-1.749**	0.406	-1.224
ITPA	**0.022**	**2.099**	0.383	-1.560	0.580	1.346
IWS1	0.069	1.312	0.171	1.205	**0.007**	**1.582**
JAG1	0.789	1.061	**0.006**	**-1.766**	**0.012**	**-1.664**
JAKMIP3	**0.044**	**2.037**	0.735	1.123	**0.017**	**2.287**
JMY	0.549	-1.265	**0.020**	**-2.770**	**0.004**	**-3.503**
JOSD1	0.804	-1.052	**0.015**	**-1.664**	**0.010**	**-1.750**
KANSL2	0.834	-1.041	**0.003**	**-1.909**	**0.001**	**-1.988**
KAT5	**0.007**	1.335	0.297	1.273	**0.043**	**1.698**
KBTBD11	**0.005**	**2.443**	0.056	-2.607	0.871	-1.067
KBTBD4	0.068	1.603	**0.036**	**-1.932**	0.428	-1.205
KCNE1	**0.039**	**1.971**	0.680	1.415	0.235	2.788
KCNH3	**0.030**	**2.016**	0.186	-2.268	0.829	-1.125
KCNJ1	**0.013**	**2.506**	0.702	-1.140	**0.002**	**2.198**
KCNJ15	0.922	1.022	**0.015**	**2.265**	**0.012**	**2.315**
KCNK17	**0.039**	**2.026**	0.454	-1.559	0.666	1.300
KCNQ1	0.161	1.347	**0.019**	**-1.718**	0.311	-1.275
KCNRG	0.448	1.321	0.081	1.676	**0.023**	**2.214**
KCTD10	0.707	-1.070	**0.012**	**-1.661**	**0.005**	**-1.777**
KCTD15	**0.015**	**2.687**	0.576	-1.329	0.182	2.021
KCTD2	**0.011**	1.444	**0.018**	**-1.502**	0.796	-1.040
KCTD4	0.586	1.085	**0.001**	**-1.690**	**0.009**	**-1.557**
KCTD5	0.413	1.214	**0.033**	**-1.689**	0.173	-1.391
KCTD6	**0.031**	**2.014**	0.758	-1.189	0.342	1.694
KDELR1	**0.010**	**1.621**	0.118	-1.672	0.918	-1.032
KIAA0040	0.524	1.151	0.067	1.533	**0.019**	**1.764**
KIAA1407	**0.005**	**1.746**	0.085	-1.377	0.136	1.268
KIAA1737	0.312	1.107	**0.001**	**-1.549**	**0.007**	-1.399
KIAA1984-AS1	**0.044**	**2.081**	0.180	-1.576	0.409	1.320
KIF24	0.077	1.335	0.188	1.390	**0.023**	**1.856**
KLF10	0.678	-1.211	0.053	-2.176	**0.020**	**-2.635**
KLF2	0.229	1.264	0.170	1.423	**0.043**	**1.799**
KLF5	0.507	-1.150	0.086	-1.418	**0.020**	**-1.630**
KLF9	0.948	-1.021	**0.000**	**-3.642**	**0.000**	**-3.717**
KLHDC10	**0.001**	**1.506**	0.591	-1.074	**0.017**	1.403

KLHDC2	0.925	1.013	**0.021**	**-1.504**	**0.032**	-1.485
KLHL11	0.503	1.143	**0.042**	**-1.775**	0.078	-1.553
KLHL21	0.849	1.025	**0.001**	**-1.515**	**0.006**	-1.479
KLHL22	**0.007**	**2.138**	0.066	-2.076	0.929	1.030
KLRAP1	0.847	1.032	**0.049**	**-1.517**	0.058	-1.470
KPNB1	0.588	1.112	0.061	1.366	**0.015**	**1.519**
KRI1	0.387	1.151	**0.041**	**-1.721**	0.095	-1.494
KRT23	0.133	1.652	**0.021**	**-1.957**	0.445	-1.185
KRT8	0.889	-1.019	**0.047**	**-1.508**	**0.046**	**-1.537**
KRT8P12	0.586	-1.088	0.060	-1.514	**0.036**	**-1.647**
KY	0.225	1.238	0.191	1.326	**0.036**	**1.641**
LACTB	0.146	-1.453	0.291	-1.246	**0.010**	**-1.810**
LAMP3	**0.031**	**-1.701**	0.067	1.581	0.583	-1.076
LEMD2	0.197	1.323	**0.019**	**-1.671**	**0.021**	-1.263
LGALS12	**0.048**	**2.099**	0.402	-1.685	0.717	1.246
LGALS8	0.255	-1.253	**0.000**	**2.069**	**0.002**	**1.651**
LILRA1	**0.031**	**1.576**	0.724	-1.101	0.189	1.431
LILRA5	0.550	-1.109	**0.039**	**1.600**	0.108	1.443
LINC00152	0.403	1.133	0.087	1.453	**0.031**	**1.646**
LINC00202-1	**0.040**	**1.504**	0.520	-1.153	0.263	1.305
LINC00266-1	0.683	1.093	0.069	1.810	**0.048**	**1.979**
LINC00282	0.428	1.199	**0.019**	**3.041**	**0.010**	**3.646**
LINC00324	**0.032**	**1.640**	0.651	1.306	0.211	2.143
LINC00537	0.311	1.263	0.079	1.578	**0.006**	**1.993**
LINC00582	**0.041**	**1.907**	0.752	1.122	0.090	2.140
LINC00593	**0.036**	**1.960**	0.194	2.047	**0.025**	**4.011**
LINC00629	0.698	-1.047	**0.030**	**1.527**	**0.048**	1.458
LINC00649	0.423	1.100	0.103	1.388	**0.046**	**1.527**
LINC00654	**0.010**	**2.177**	0.896	-1.051	0.058	2.072
LINC00667	0.986	-1.003	**0.008**	**-2.193**	**0.008**	**-2.199**
LINC00854	**0.018**	**2.269**	0.832	1.140	0.138	2.587
LINC00948	0.472	-1.186	0.084	-1.694	**0.036**	**-2.009**
LINC00960	0.144	1.352	0.600	1.122	**0.048**	**1.517**
LINC00987	**0.010**	**2.393**	0.307	-1.474	0.196	1.623
LINS	0.272	1.332	0.410	1.275	**0.037**	**1.698**
LLPH	0.229	-2.168	**0.036**	**-2.624**	**0.002**	**-5.690**
LOC100127888	**0.004**	**-2.214**	0.615	-1.461	0.147	-3.233
LOC100127974	0.817	-1.059	**0.022**	**-1.548**	**0.027**	**-1.640**
LOC100129518	0.284	-1.457	**0.017**	**-2.547**	**0.003**	**-3.711**

LOC100129726	0.296	-1.360	**0.002**	**-2.651**	**0.000**	**-3.605**
LOC100130093	**0.016**	**1.502**	0.501	1.036	**0.009**	**1.556**
LOC100130476	0.254	-1.548	**0.001**	**-3.560**	**0.000**	**-5.510**
LOC100133445	0.400	1.346	**0.043**	**-2.386**	0.180	-1.773
LOC100133985	**0.007**	**2.144**	0.191	1.997	**0.019**	**4.282**
LOC100287036	0.953	-1.013	**0.004**	**-1.781**	**0.002**	**-1.804**
LOC100287177	0.801	1.063	**0.027**	**-1.542**	0.081	-1.450
LOC100288846	**0.032**	**1.702**	0.203	-1.485	0.603	1.146
LOC100288897	0.965	-1.009	**0.031**	**1.792**	**0.035**	**1.776**
LOC100289473	**0.037**	**1.572**	0.170	-1.362	0.479	1.155
LOC100294362	0.277	-1.208	**0.013**	**1.986**	**0.046**	**1.644**
LOC100505549	0.193	1.290	0.289	1.262	**0.038**	**1.627**
LOC100505702	0.702	1.084	0.071	1.775	**0.047**	**1.924**
LOC100506207	0.296	-1.340	0.195	-1.428	**0.042**	**-1.914**
LOC100506241	0.394	1.259	0.095	1.630	**0.010**	**2.052**
LOC100506639	0.243	1.236	**0.022**	**-1.758**	0.100	-1.422
LOC100506655	0.884	-1.053	**0.024**	**-2.087**	**0.035**	**-2.197**
LOC100527964	**0.037**	**2.197**	0.580	1.457	0.104	3.202
LOC101927045	0.215	1.163	**0.038**	1.391	**0.005**	**1.617**
LOC101927069	0.085	1.582	**0.043**	**-1.989**	0.437	-1.257
LOC101927272	0.542	1.171	**0.050**	**2.491**	**0.023**	**2.918**
LOC101927865	**0.010**	**2.518**	**0.047**	**-2.424**	0.929	1.039
LOC101927902	0.150	-1.293	0.053	-1.531	**0.005**	**-1.980**
LOC101927939	**0.009**	**1.542**	0.952	1.014	0.085	1.563
LOC101928047	**0.048**	**1.872**	0.661	-1.357	0.638	1.380
LOC101928133	0.544	-1.135	**0.003**	**-1.744**	**0.000**	**-1.979**
LOC101928324	**0.040**	**1.783**	0.138	-1.773	0.987	1.006
LOC101928403	0.976	-1.011	**0.043**	**-1.796**	0.057	-1.816
LOC101928476	**0.032**	**-1.733**	0.960	1.017	0.181	-1.705
LOC101928527	0.123	1.292	0.146	1.577	**0.035**	**2.038**
LOC101928537	0.318	-1.191	**0.049**	**1.756**	0.126	1.474
LOC101928668	**0.049**	**1.856**	0.763	1.198	0.211	2.224
LOC101929736	**0.033**	**1.605**	0.112	-1.826	0.726	-1.138
LOC150381	**0.039**	**1.882**	0.834	1.123	0.191	2.115
LOC150776	0.698	1.087	**0.037**	**-1.969**	0.054	-1.812
LOC257358	0.334	1.309	**0.006**	**-2.593**	**0.041**	**-1.981**
LOC283922	0.391	1.146	**0.016**	**-1.752**	0.051	-1.529
LOC285389	0.439	-1.220	**0.028**	**1.582**	0.252	1.297
LOC285889	**0.029**	**1.818**	0.826	-1.046	0.067	1.737

LOC286367	0.253	1.236	0.137	1.531	**0.041**	**1.891**
LOC441009	0.207	1.359	0.100	2.448	**0.038**	**3.327**
LOC441124	0.583	1.130	**0.042**	**-1.988**	0.084	-1.759
LOC442075	0.310	-1.130	**0.002**	-1.441	**0.000**	**-1.628**
LOC494141	0.092	-1.343	**0.002**	**-1.759**	**0.000**	**-2.362**
LOC541473	**0.050**	**1.512**	0.093	-1.759	0.611	-1.163
LOC641776	**0.029**	**1.593**	0.154	1.665	**0.018**	**2.653**
LOC642846	0.510	1.356	**0.034**	**-4.855**	0.079	-3.579
LOC643733	0.607	-1.121	**0.014**	**2.282**	**0.033**	**2.035**
LOC644090	0.750	-1.063	**0.032**	**-1.804**	**0.021**	**-1.918**
LOC653712	0.966	-1.008	**0.032**	**2.046**	**0.034**	**2.031**
LOC727896	0.820	-1.040	**0.033**	**1.516**	**0.032**	1.458
LOC728323	0.368	1.204	**0.031**	**1.541**	**0.008**	**1.855**
LOC728431	**0.029**	**-2.097**	0.745	1.148	0.164	-1.827
LOC729739	0.070	1.236	0.080	1.406	**0.012**	**1.739**
LOC730668	0.421	1.144	0.074	1.387	**0.019**	**1.586**
LOXL4	0.205	1.275	0.227	1.315	**0.028**	**1.677**
LPAR6	0.339	1.234	0.118	1.529	**0.028**	**1.887**
LPCAT4	**0.009**	**2.325**	0.617	-1.426	0.474	1.631
LRP5L	0.067	-1.533	**0.014**	**-1.555**	**0.000**	**-2.384**
LRRC17	0.437	-1.185	**0.040**	**3.665**	0.063	3.093
LRRC34	**0.012**	**1.621**	0.758	-1.176	0.545	1.378
LRRC41	0.394	1.304	**0.001**	**-3.027**	**0.001**	**-2.322**
LSG1	0.260	-1.217	0.139	-1.264	**0.013**	**-1.538**
LTB4R2	**0.023**	**1.842**	0.059	1.726	**0.001**	**3.178**
LTBR	**0.030**	**1.619**	0.078	1.768	**0.004**	**2.863**
LUCAT1	0.514	1.131	**0.001**	**1.704**	**0.001**	**1.928**
LY6E	**0.023**	**-2.928**	0.732	1.437	0.511	-2.038
LYG1	**0.037**	**2.250**	0.590	-1.312	0.316	1.715
LYPD4	**0.011**	**1.833**	0.123	3.081	**0.034**	**5.645**
MACF1	0.219	1.215	0.167	1.310	**0.023**	**1.592**
MAD2L1BP	0.202	-1.318	0.112	-1.545	**0.019**	**-2.037**
MAGIX	0.168	1.422	0.369	1.319	**0.033**	**1.876**
MAGOH2	**0.024**	**1.880**	0.585	-1.285	0.426	1.462
MAK16	0.296	1.235	**0.002**	**-2.130**	**0.011**	**-1.725**
MAP2K6	0.774	-1.061	**0.046**	**2.009**	0.055	1.893
MAP3K1	0.398	1.097	**0.000**	**1.536**	**0.000**	**1.686**
MAP3K8	0.090	-1.530	0.158	-1.546	**0.016**	**-2.364**
MAPK14	0.664	1.086	0.069	1.594	**0.046**	**1.732**

MAPK6	0.230	-1.317	0.154	-1.289	**0.008**	**-1.698**
MAT2B	0.187	1.231	0.143	1.254	**0.007**	**1.544**
MBOAT4	0.645	1.169	**0.020**	**-2.276**	0.070	-1.947
MBP	0.264	1.264	0.242	1.242	**0.047**	**1.569**
MBTPS1	0.680	-1.058	**0.002**	**-1.696**	**0.000**	**-1.795**
MCM2	0.296	1.513	**0.049**	**-3.225**	0.187	-2.131
MCM3AP	**0.048**	**1.661**	0.233	-1.371	0.198	1.212
MCM3AP-AS1	0.266	1.439	**0.015**	**-2.145**	0.190	-1.490
MCM4	0.290	1.151	**0.042**	**-1.716**	0.112	-1.491
MCM7	0.080	1.748	**0.039**	**-2.115**	0.421	-1.210
MCTP2	0.226	1.215	0.128	1.285	**0.016**	**1.562**
MCU	**0.002**	**1.607**	0.316	-1.260	0.271	1.275
MEA1	**0.015**	**1.516**	0.563	-1.113	0.067	1.362
MED16	0.206	1.311	0.359	1.183	**0.020**	**1.551**
MED22	**0.014**	**1.637**	0.575	-1.152	0.113	1.421
MED26	0.793	-1.055	**0.037**	-1.446	**0.008**	**-1.525**
MED28	0.590	1.065	**0.006**	**-1.527**	**0.012**	-1.434
MED30	0.300	-1.153	**0.013**	**-1.505**	**0.002**	**-1.736**
MED4-AS1	0.395	-1.155	0.061	-1.371	**0.020**	**-1.584**
MEF2D	0.968	-1.008	**0.003**	**-1.603**	**0.007**	**-1.616**
MEI1	0.414	-1.167	0.074	-1.287	**0.023**	**-1.502**
MERTK	**0.006**	**2.173**	0.648	1.274	0.088	2.768
METRNL	0.270	-1.282	0.126	-1.381	**0.035**	**-1.770**
MGC12916	0.426	-1.345	0.119	-1.534	**0.033**	**-2.063**
MIA-RAB4B	**0.008**	**2.537**	0.775	1.214	0.110	3.080
MICB	0.602	1.128	0.189	1.379	**0.038**	**1.555**
MIER3	0.808	-1.051	**0.021**	**-1.515**	**0.021**	**-1.592**
MIF4GD	**0.036**	**1.985**	0.388	-1.756	0.847	1.130
MIR181A2HG	0.159	1.337	0.141	1.665	**0.033**	**2.226**
MIR3198-1	0.597	-1.144	0.089	-1.375	**0.036**	**-1.573**
MIR4435-1HG	0.102	1.344	0.184	1.397	**0.027**	**1.877**
MIR4742	**0.032**	**1.689**	0.392	1.410	0.058	2.382
MIS18BP1	0.766	1.045	**0.006**	**-1.594**	**0.018**	**-1.525**
MKKS	**0.030**	**2.034**	0.603	1.343	0.091	2.732
MLEC	**0.033**	**1.507**	0.410	-1.339	0.739	1.126
MLLT11	0.064	1.541	**0.000**	**-2.746**	**0.002**	**-1.781**
MMP14	**0.045**	**2.341**	0.067	2.420	**0.002**	**5.665**
MNDA	0.333	1.307	0.170	1.555	**0.034**	**2.032**
MOGS	0.149	1.329	**0.000**	**-2.291**	**0.008**	**-1.724**

MOSPD2	0.195	1.481	0.119	1.504	**0.006**	**2.227**
MOV10	**0.030**	**-1.727**	0.427	1.235	0.158	-1.399
MPP1	0.990	1.002	**0.042**	**1.524**	**0.044**	**1.527**
MRGBP	0.969	1.010	**0.040**	**-1.812**	0.062	-1.795
MRPL18	0.848	-1.058	0.079	-1.548	**0.028**	**-1.637**
MRPL4	0.440	1.201	**0.015**	**-2.200**	**0.038**	**-1.832**
MRPL51	**0.049**	**1.759**	0.769	1.138	0.115	2.001
MRPL55	**0.013**	**2.037**	**0.001**	**-2.912**	0.147	-1.430
MRS2	**0.045**	**2.195**	0.123	-2.247	0.963	-1.023
MRVI1-AS1	0.065	1.789	0.213	1.431	**0.001**	**2.560**
MSMP	0.116	1.498	**0.001**	**-2.332**	0.063	-1.557
MSRB1	0.471	1.215	0.076	1.797	**0.030**	**2.184**
MT2A	**0.017**	**-2.767**	0.179	-2.454	**0.014**	**-6.789**
MTERFD2	0.264	1.245	**0.010**	**-1.696**	**0.012**	-1.362
MTRNR2L5	0.288	1.820	0.114	1.866	**0.018**	**3.396**
MTRNR2L7	0.959	-1.013	**0.015**	**2.168**	**0.018**	**2.141**
MUL1	0.334	1.227	**0.048**	**-1.729**	0.177	-1.409
MVD	0.817	-1.098	**0.001**	**-3.170**	**0.002**	**-3.480**
MXD3	0.248	1.134	**0.037**	1.335	**0.008**	**1.514**
MXD4	0.615	1.110	**0.011**	**-1.936**	**0.025**	**-1.744**
MXI1	0.947	-1.014	**0.011**	**-1.707**	**0.008**	**-1.730**
MYBPH	**0.038**	**2.460**	0.096	-2.096	0.685	1.173
MYCBP2-AS1	**0.026**	**1.556**	0.369	-1.258	0.356	1.237
MYEF2	0.764	-1.047	**0.013**	-1.460	**0.015**	**-1.528**
MYEOV2	**0.044**	**1.916**	**0.036**	**-1.783**	0.776	1.075
MYL12B	**0.042**	1.262	0.120	1.263	**0.007**	**1.594**
MYL7	**0.028**	**1.528**	0.779	-1.046	0.105	1.461
MYO16-AS1	0.371	1.372	**0.032**	**-2.494**	0.156	-1.818
MYO7B	**0.023**	**2.102**	0.913	-1.056	0.147	1.991
MZF1	**0.019**	**1.861**	0.549	1.384	0.106	2.576
MZT1	0.581	1.178	**0.011**	**-2.117**	**0.040**	**-1.797**
N4BP3	0.462	-1.434	0.079	-2.776	**0.030**	**-3.982**
NAA10	**0.006**	**1.520**	0.191	1.406	**0.013**	**2.138**
NABP1	0.698	-1.063	**0.017**	**1.596**	0.051	1.502
NAGLU	**0.035**	**1.802**	0.740	-1.213	0.503	1.486
NAT9	**0.003**	**1.700**	0.909	-1.031	0.080	1.648
NBPF14	**0.023**	**1.698**	0.696	-1.177	0.404	1.443
NBPF3	0.125	1.230	**0.019**	**-1.795**	0.093	-1.459
NBPF9	0.907	-1.069	**0.026**	**-3.376**	**0.037**	**-3.609**

NCBP2	0.346	-1.168	0.069	-1.510	**0.017**	**-1.764**
NCBP2-AS2	0.273	1.267	**0.017**	**-2.857**	**0.049**	**-2.254**
NDC80	0.953	1.012	**0.041**	**-1.685**	**0.032**	**-1.664**
NDUFA5	0.863	1.021	**0.034**	**-1.542**	**0.042**	**-1.511**
NDUFAF1	0.376	1.204	0.126	1.532	**0.046**	**1.845**
NDUFB7	**0.020**	**1.910**	0.854	-1.130	0.436	1.690
NDUFS6	0.223	1.378	**0.008**	**-2.547**	**0.043**	**-1.848**
NDUFV2	0.445	-1.187	**0.026**	**-1.596**	**0.005**	**-1.895**
NEDD8-MDP1	**0.001**	**2.015**	0.206	-1.455	0.230	1.385
NEIL1	0.750	-1.113	0.183	-1.660	**0.047**	**-1.848**
NELFA	0.155	1.467	**0.010**	**-1.997**	0.138	-1.362
NET1	0.528	-1.277	**0.022**	**-2.324**	**0.006**	**-2.968**
NFE2	0.176	1.512	0.162	1.496	**0.009**	**2.263**
NFKB2	0.399	-1.222	0.057	-1.490	**0.022**	**-1.821**
NFKBIA	0.239	-1.579	**0.002**	**-2.158**	**0.001**	**-3.406**
NFKBIE	0.342	-1.473	**0.032**	**-2.008**	**0.006**	**-2.958**
NFU1	0.134	1.419	**0.029**	**-1.981**	0.187	-1.396
NFXL1	0.086	-1.471	**0.017**	**1.906**	0.297	1.296
NHLH1	**0.049**	**1.743**	0.913	1.037	**0.036**	**1.807**
NHP2	0.190	-1.542	**0.008**	**-2.996**	**0.001**	**-4.620**
NIF3L1	**0.028**	**1.614**	0.484	1.343	0.085	2.166
NISCH	0.099	1.422	**0.030**	**-1.716**	0.279	-1.207
NKRF	0.772	-1.064	0.056	-1.645	**0.031**	**-1.751**
NLGN4Y	0.311	-1.155	**0.044**	**2.045**	0.088	1.770
NLRP7	**0.023**	**2.021**	0.218	1.790	**0.020**	**3.617**
NMRAL1	**0.010**	**2.237**	0.822	-1.167	0.347	1.917
NNT	**0.030**	**1.833**	0.407	-1.494	0.648	1.227
NOP56	0.722	1.100	**0.025**	**-1.839**	**0.015**	**-1.672**
NOS3	0.388	1.142	**0.001**	**1.655**	**0.000**	**1.889**
NPRL3	0.515	-1.173	**0.016**	**-1.752**	**0.004**	**-2.056**
NPSR1-AS1	0.404	1.187	0.061	1.702	**0.015**	**2.021**
NR1H4	0.311	-1.362	0.133	-1.537	**0.029**	**-2.094**
NR4A1	0.478	-1.370	**0.034**	**-2.721**	**0.013**	**-3.727**
NR4A2	0.362	-1.312	0.053	-1.828	**0.002**	**-2.398**
NR4A3	0.331	-1.734	**0.025**	**-2.836**	**0.001**	**-4.917**
NRAS	0.454	-1.104	0.084	-1.377	**0.021**	**-1.520**
NRDE2	**0.002**	**1.639**	0.076	-1.464	0.575	1.119
NRIP1	0.684	-1.089	**0.001**	**-1.881**	**0.000**	**-2.048**
NRROS	0.500	1.229	**0.035**	**-2.134**	0.111	-1.737

NSUN5	0.414	1.184	**0.002**	**-2.052**	**0.003**	**-1.733**
NT5C	0.331	1.403	**0.026**	**-1.949**	0.292	-1.389
NT5C3A	0.305	-1.280	**0.035**	**1.727**	0.159	1.350
NUDT13	0.191	-1.320	**0.039**	**-1.510**	**0.001**	**-1.993**
NUDT17	0.265	-1.131	**0.012**	-1.454	**0.002**	**-1.644**
NUDT22	**0.005**	**2.025**	0.698	-1.227	0.342	1.650
NUDT3	**0.001**	**1.707**	0.669	-1.115	0.112	1.531
NUFIP1	0.902	1.053	**0.023**	**-2.290**	**0.042**	**-2.174**
NUMA1	0.126	1.182	**0.013**	**-1.509**	0.092	-1.277
NUP133	0.642	1.066	**0.000**	**-1.817**	**0.000**	**-1.704**
NUP155	0.301	-1.216	**0.027**	**-1.720**	**0.004**	**-2.092**
NUP37	0.709	1.121	**0.004**	**-2.079**	**0.032**	**-1.854**
NUTM2A	0.688	1.068	0.059	1.602	**0.032**	**1.711**
NXF1	0.469	1.092	**0.004**	**-1.530**	**0.024**	-1.401
OBFC1	0.403	1.169	**0.004**	**1.801**	**0.000**	**2.106**
OCEL1	**0.001**	**2.735**	0.217	-2.013	0.553	1.359
OCM	**0.013**	**2.199**	0.352	-1.575	0.514	1.396
OCRL	**0.012**	**2.115**	0.444	-1.514	0.520	1.397
ODC1	0.470	-1.179	**0.035**	**-1.808**	**0.008**	**-2.131**
OGFOD2	0.552	1.167	**0.017**	**3.849**	**0.010**	**4.491**
OGFR	0.140	1.416	**0.011**	**-2.033**	0.097	-1.435
OGFR-AS1	0.702	1.135	**0.010**	**-4.199**	**0.017**	**-3.701**
OR10V2P	**0.006**	**2.624**	0.247	-2.132	0.737	1.231
OR2A4	**0.020**	**1.831**	0.794	1.062	**0.024**	**1.946**
OR2A7	**0.006**	**1.928**	0.572	-1.134	0.073	1.699
OR52K1	0.311	1.416	0.165	1.965	**0.041**	**2.782**
OR52K2	0.143	1.599	0.225	1.560	**0.009**	**2.494**
OR7E5P	0.077	1.391	0.175	1.581	**0.039**	**2.200**
OR9A2	**0.012**	**2.368**	0.668	1.075	**0.006**	**2.545**
ORC5	0.490	1.299	**0.034**	**-2.802**	0.115	-2.157
ORM1	**0.030**	**2.015**	0.127	-2.094	0.929	-1.039
ORM2	**0.008**	**1.975**	0.631	-1.269	0.373	1.556
OSBP	0.925	1.015	**0.002**	**-1.532**	**0.002**	**-1.510**
OSBPL11	0.276	1.196	**0.009**	1.345	**0.003**	**1.609**
OSGEP	**0.034**	**2.182**	0.106	-2.370	0.849	-1.086
OSGIN2	**0.010**	-1.389	0.245	-1.237	**0.015**	**-1.718**
OTUD6B	0.844	-1.043	**0.048**	**-1.512**	0.054	-1.577
OVCH1-AS1	**0.029**	**1.955**	**0.039**	**1.663**	**0.000**	**3.250**
P2RY10	0.378	1.438	**0.044**	**-2.287**	0.234	-1.591

PABPC4	0.288	1.382	**0.030**	**-2.689**	0.102	-1.946
PAGR1	**0.046**	**1.633**	0.659	1.172	0.075	1.914
PANK4	0.490	1.154	0.090	2.095	**0.048**	**2.418**
PAPD5	0.081	-1.405	0.588	-1.127	**0.039**	**-1.583**
PAPSS2	**0.033**	**1.668**	0.364	1.698	0.101	2.833
PARP16	**0.026**	**1.538**	0.796	-1.070	0.213	1.437
PARP3	0.759	-1.058	**0.038**	**1.684**	0.072	1.591
PARP9	0.396	-1.177	**0.018**	**1.673**	0.097	1.421
PASK	**0.007**	**-1.523**	0.164	1.307	0.417	-1.165
PATE2	0.905	1.016	**0.035**	**1.538**	**0.035**	**1.563**
PATL2	0.145	1.249	**0.038**	**-1.501**	0.266	-1.202
PBDC1	**0.018**	**2.266**	0.388	-1.649	0.581	1.374
PCDHA5	**0.018**	**1.638**	0.467	-1.181	0.250	1.387
PCYT2	0.531	1.210	**0.010**	**-3.640**	**0.023**	**-3.009**
PDCD7	0.188	-1.196	0.144	-1.471	**0.049**	**-1.759**
PDCL3	0.341	-1.457	0.154	-1.953	**0.031**	**-2.846**
PDE5A	0.847	1.029	**0.015**	**1.900**	**0.012**	**1.955**
PDE6D	**0.000**	**1.882**	0.393	-1.382	0.397	1.363
PDE6H	**0.014**	**2.414**	**0.012**	**-4.370**	0.253	-1.810
PDE9A	**0.036**	**1.972**	0.265	-1.859	0.912	1.060
PDHA1	0.430	1.089	**0.037**	**-1.610**	0.073	-1.479
PDK3	0.412	1.155	0.117	1.315	**0.037**	**1.519**
PDRG1	**0.042**	**-2.097**	0.227	2.389	0.854	1.140
PECAM1	**0.035**	1.400	0.505	1.159	**0.047**	**1.623**
PER1	0.252	-1.434	**0.017**	**-3.730**	**0.005**	**-5.349**
PEX1	**0.044**	**1.633**	0.193	-1.381	0.280	1.182
PEX11B	0.108	1.240	**0.006**	**-1.688**	0.067	-1.361
PFKFB2	0.295	-1.223	0.073	-1.796	**0.025**	**-2.197**
PFN2	0.652	1.149	0.077	1.762	**0.038**	**2.025**
PGM5	**0.019**	**2.177**	0.323	-1.421	0.212	1.532
PGM5-AS1	**0.005**	**2.418**	0.614	-1.321	0.302	1.830
PGP	**0.016**	**1.820**	0.110	-1.805	0.977	1.009
PGPEP1L	**0.040**	**1.722**	0.713	-1.251	0.596	1.377
PHF1	0.723	-1.114	0.064	-1.556	**0.033**	**-1.734**
PHF15	0.082	-1.170	**0.015**	**-1.521**	**0.003**	**-1.779**
PIAS2	0.340	1.273	**0.022**	**-1.631**	0.273	-1.281
PIAS3	0.312	-1.201	**0.003**	**-1.684**	**0.000**	**-2.022**
PICALM	0.517	1.103	**0.009**	**1.509**	**0.006**	**1.664**
PIGK	**0.031**	**1.770**	0.790	-1.088	0.088	1.628

PIGO	0.079	-1.180	**0.018**	-1.281	**0.001**	**-1.511**
PIGV	0.993	1.003	**0.048**	**-1.884**	**0.044**	**-1.879**
PIH1D2	**0.040**	**1.823**	0.926	1.041	0.199	1.898
PIK3AP1	0.755	-1.047	**0.010**	**1.594**	**0.012**	**1.522**
PIM2	0.133	-1.389	0.180	-1.253	**0.010**	**-1.741**
PIN1	**0.018**	**1.867**	0.500	-1.379	0.509	1.354
PINX1	0.227	-1.213	0.208	-1.237	**0.035**	**-1.500**
PIP5K1B	**0.034**	1.429	**0.006**	**-1.526**	0.632	-1.068
PITHD1	0.481	1.109	**0.008**	**-1.617**	**0.014**	-1.457
PITRM1-AS1	0.743	1.116	**0.036**	**-2.080**	0.052	-1.863
PKDREJ	0.748	-1.149	**0.037**	**-2.497**	**0.026**	**-2.870**
PKI55	**0.023**	**2.070**	0.981	1.011	0.108	2.093
PKN3	**0.017**	**2.071**	0.210	-1.552	0.353	1.334
PKP4	**0.034**	**1.531**	0.622	-1.202	0.512	1.273
PLAU	0.346	-1.803	**0.022**	**-3.351**	**0.005**	**-6.043**
PLAUR	0.234	-1.351	0.141	-1.314	**0.021**	**-1.776**
PLCB1	**0.046**	**1.523**	0.125	-1.470	0.878	1.036
PLCD1	**0.017**	**1.793**	**0.000**	**-2.924**	**0.002**	**-1.630**
PLCD3	0.754	1.048	**0.041**	1.472	**0.039**	**1.542**
PLCL2	0.117	1.222	0.075	1.251	**0.002**	**1.528**
PLK2	0.121	-1.332	**0.023**	**-1.801**	**0.003**	**-2.400**
PLK3	0.921	-1.028	**0.017**	**-1.586**	0.070	-1.631
PLK4	0.118	2.141	**0.046**	**-3.962**	0.344	-1.850
PLOD3	**0.009**	**2.324**	**0.004**	**-3.200**	0.282	-1.377
PNMA1	0.386	1.322	**0.012**	**-2.945**	**0.034**	**-2.227**
POC5	**0.032**	**2.081**	0.891	-1.047	**0.036**	**1.988**
PODNL1	0.381	-1.175	**0.028**	**-1.761**	**0.009**	**-2.070**
POFUT2	0.544	-1.132	0.078	-1.373	**0.016**	**-1.554**
POLD3	0.382	1.158	0.095	1.412	**0.030**	**1.634**
POLE	**0.035**	**1.896**	0.323	-1.821	0.943	1.041
POLE3	0.898	1.026	**0.011**	**-1.864**	**0.012**	**-1.816**
POLE4	**0.003**	**2.705**	0.408	-1.569	0.300	1.724
POLI	**0.045**	1.241	0.244	1.213	**0.026**	**1.504**
POLR1C	0.805	1.096	**0.011**	**-3.435**	**0.015**	**-3.135**
POLR2G	**0.018**	**2.208**	0.165	-2.139	0.949	1.032
POLR2H	**0.030**	**2.109**	0.248	-2.224	0.934	-1.055
POLR2J3	0.532	-1.080	**0.022**	-1.445	**0.009**	**-1.560**
POLR3B	**0.026**	**1.528**	0.092	-1.604	0.847	-1.050
POLR3C	0.970	1.009	**0.001**	**-1.943**	**0.003**	**-1.926**

POLR3E	0.257	-1.466	**0.039**	**-1.708**	**0.005**	**-2.504**
PON3	0.424	1.097	0.063	1.478	**0.028**	**1.621**
POT1	0.103	1.297	0.091	1.219	**0.003**	**1.581**
POTEF	**0.015**	1.355	0.159	1.339	**0.015**	**1.815**
POTEI	0.181	1.291	0.242	1.291	**0.032**	**1.667**
PPDPF	0.135	-1.587	0.239	-1.532	**0.035**	**-2.432**
PPIAP30	**0.046**	1.352	**0.038**	**1.504**	**0.002**	**2.034**
PPIH	0.604	-1.211	**0.048**	**-2.962**	**0.023**	**-3.588**
PPM1M	0.164	1.257	0.179	1.323	**0.025**	**1.663**
PPP1R15A	0.828	-1.052	**0.047**	**-1.569**	0.066	-1.651
PPP1R15B	0.535	-1.110	**0.045**	-1.370	**0.021**	**-1.521**
PPP1R37	**0.031**	**1.913**	0.116	-1.932	0.980	-1.010
PPP1R7	**0.036**	**1.569**	0.691	1.160	0.128	1.820
PPP2R1B	0.542	1.096	**0.019**	**-1.537**	**0.050**	-1.402
PPP2R5D	**0.020**	**1.869**	0.210	-1.487	0.328	1.257
PRDM1	**0.011**	**-1.534**	0.237	-1.740	0.059	-2.668
PRDM8	0.795	1.040	0.057	2.505	**0.050**	**2.605**
PRKAR2B	0.523	-1.297	**0.011**	**-2.504**	**0.004**	**-3.248**
PRKCE	0.568	-1.125	0.070	-1.572	**0.010**	**-1.769**
PRKCQ	0.078	1.286	0.151	1.277	**0.007**	**1.642**
PRMT1	**0.032**	**1.703**	0.673	1.243	0.170	2.116
PRMT10	0.587	-1.120	**0.030**	**-1.766**	**0.010**	**-1.979**
PROK2	0.375	1.242	0.053	1.895	**0.019**	**2.353**
PRPS1L1	0.375	-1.249	**0.047**	**1.725**	0.210	1.381
PRR12	0.182	1.521	**0.049**	**-2.012**	0.267	-1.323
PRR24	**0.031**	**1.654**	0.608	-1.161	0.178	1.424
PRSS12	0.219	1.474	**0.018**	**-2.644**	0.068	-1.795
PSEN2	**0.032**	**2.038**	0.571	1.361	0.089	2.774
PSMD11	0.316	1.187	**0.003**	**-1.775**	**0.004**	-1.495
PSMD4	**0.011**	**1.583**	0.990	-1.002	**0.016**	**1.580**
PSMD5	0.374	-1.121	**0.017**	-1.466	**0.004**	**-1.643**
PSMD5-AS1	0.375	1.153	**0.013**	**-1.529**	0.112	-1.326
PSME1	0.390	1.122	0.118	1.344	**0.042**	**1.507**
PSMG1	0.462	1.331	**0.034**	**-3.169**	0.094	-2.380
PTER	**0.011**	**1.701**	0.696	1.114	**0.040**	**1.895**
PTGES	0.128	-1.206	0.134	-1.429	**0.038**	**-1.724**
PTGES3	0.549	1.071	**0.017**	1.496	**0.006**	**1.602**
PTGS2	0.087	1.418	**0.003**	**2.235**	**0.000**	**3.169**
PTMA	0.818	1.049	**0.031**	**-1.934**	**0.033**	**-1.844**

PTPMT1	0.345	1.208	**0.011**	**-2.224**	**0.030**	**-1.840**
PTPN6	0.184	1.205	0.172	1.248	**0.026**	**1.504**
PTPN9	**0.002**	**2.257**	0.376	-1.449	0.257	1.557
PTPRJ	0.295	1.153	0.094	1.343	**0.020**	**1.547**
PVRL2	**0.026**	**-2.164**	0.975	-1.019	0.169	-2.204
PZP	**0.039**	**2.358**	0.938	-1.051	0.225	2.244
QSOX1	0.364	-1.270	0.217	-1.292	**0.042**	**-1.642**
RAB11B-AS1	**0.038**	**-1.605**	0.953	-1.025	0.244	-1.646
RAB27A	0.270	1.169	0.084	1.335	**0.015**	**1.560**
RAB39A	**0.041**	**-1.791**	**0.022**	**2.525**	0.353	1.410
RAB41	**0.030**	**1.857**	0.868	-1.072	0.253	1.732
RAB4B-EGLN2	0.273	1.195	0.076	1.505	**0.025**	**1.798**
RABAC1	0.344	1.198	0.116	1.465	**0.032**	**1.754**
RABGGTB	0.554	-1.132	**0.006**	**-1.839**	**0.001**	**-2.082**
RAD21-AS1	0.929	1.011	**0.022**	**1.571**	**0.021**	**1.588**
RAD23A	0.550	-1.237	0.129	-1.832	**0.047**	**-2.265**
RANBP2	0.345	-1.248	0.196	-1.285	**0.022**	**-1.603**
RANBP9	0.282	-1.106	**0.013**	-1.410	**0.003**	**-1.559**
RANGAP1	**0.016**	**-1.559**	0.735	1.054	**0.038**	-1.479
RBM24	**0.038**	**-1.933**	0.477	-2.004	0.190	-3.872
RBM38	0.823	-1.067	0.113	-1.677	**0.028**	**-1.790**
RBMY2FP	**0.013**	**-1.897**	0.491	1.421	0.587	-1.335
RBPMS	0.232	1.446	0.146	1.437	**0.032**	**2.078**
RCOR2	0.285	1.448	0.050	2.570	**0.008**	**3.722**
RFC4	0.109	-1.269	0.270	-1.186	**0.023**	**-1.506**
RFX2	**0.043**	**1.543**	0.337	-1.361	0.672	1.134
RFXAP	0.826	1.079	**0.023**	**-2.513**	0.050	-2.329
RGPD3	0.566	-1.139	0.070	-1.467	**0.015**	**-1.671**
RGPD5	0.442	-1.178	**0.034**	**-1.835**	**0.007**	**-2.161**
RGPD6	0.418	-1.210	**0.033**	**-1.792**	**0.004**	**-2.169**
RGPD8	0.621	1.090	**0.003**	**-1.574**	**0.019**	-1.444
RGR	0.976	-1.004	**0.013**	**1.668**	**0.016**	**1.662**
RGS13	**0.007**	**-2.088**	**0.004**	**2.365**	0.555	1.133
RGS2	0.381	1.129	**0.020**	**1.779**	**0.008**	**2.009**
RGS6	0.171	1.417	0.112	1.765	**0.019**	**2.502**
RGS7	**0.045**	**-2.266**	0.116	2.216	0.964	-1.022
RGS9	0.313	1.305	0.121	1.461	**0.020**	**1.906**
RHOB	0.118	1.684	0.481	1.191	**0.039**	**2.006**
RILP	0.172	-1.354	**0.002**	**1.750**	0.259	1.293

RILPL2	0.339	-1.152	**0.012**	**-1.595**	**0.003**	**-1.839**
RIMS2	0.458	1.318	0.094	2.113	**0.029**	**2.784**
RIN2	0.807	-1.066	**0.046**	**1.758**	**0.039**	**1.649**
RIOK1	0.420	-1.248	**0.009**	**-2.107**	**0.000**	**-2.629**
RIPK2	0.067	-1.681	0.229	-1.566	**0.023**	**-2.633**
RIPK4	**0.026**	**2.404**	0.668	-1.384	0.466	1.738
RMDN2	0.070	1.337	0.303	1.215	**0.013**	**1.624**
RNASE6	0.692	-1.178	**0.031**	**-2.424**	**0.030**	**-2.856**
RNASEL	0.231	1.299	0.264	1.380	**0.049**	**1.792**
RNASET2	0.361	1.195	0.152	1.360	**0.047**	**1.626**
RNF122	0.221	1.277	**0.049**	**-1.657**	0.299	-1.298
RNF144A-AS1	**0.021**	**-1.588**	0.092	1.682	0.838	1.060
RNF146	0.264	1.253	**0.026**	**1.710**	**0.005**	**2.142**
RNF181	0.385	1.220	**0.022**	**-1.737**	**0.038**	-1.424
RNF20	**0.044**	1.402	0.378	1.168	**0.009**	**1.637**
RNF214	**0.013**	**1.613**	0.933	-1.023	0.126	1.577
RNH1	0.427	1.256	**0.006**	**-2.964**	**0.022**	**-2.359**
RNLS	0.604	1.122	0.056	2.114	**0.031**	**2.372**
RNMT	0.950	-1.018	**0.038**	**-1.998**	**0.023**	**-2.035**
RNPEP	**0.004**	**1.872**	0.953	-1.014	**0.013**	**1.846**
RPA3-AS1	0.183	1.382	0.058	1.526	**0.001**	**2.109**
RPIA	0.087	1.547	**0.018**	**-2.165**	0.250	-1.399
RPL21P44	0.476	1.184	**0.039**	**1.758**	**0.011**	**2.080**
RPL23AP53	0.394	1.165	0.099	1.436	**0.035**	**1.673**
RPL23AP7	0.579	1.069	**0.018**	**1.580**	**0.010**	**1.688**
RPL23AP82	0.203	1.155	0.060	1.349	**0.015**	**1.557**
RPRD1B	0.887	-1.025	**0.024**	**-1.662**	**0.021**	**-1.703**
RPS10P7	**0.044**	1.365	0.286	1.332	**0.042**	**1.817**
RPS26P11	0.516	-1.201	0.111	-1.558	**0.031**	**-1.871**
RPS6KA2	**0.029**	**1.715**	0.430	-1.307	0.398	1.312
RRN3P2	**0.037**	**1.582**	**0.046**	**-1.756**	0.683	-1.110
RSBN1	0.119	-1.288	0.353	-1.197	**0.045**	**-1.542**
RSRC1	0.080	1.404	0.642	1.086	**0.013**	**1.525**
RTCB	**0.046**	**2.061**	0.400	-1.835	0.867	1.123
RXRA	0.104	1.343	0.471	1.142	**0.033**	**1.533**
S100Z	**0.001**	**3.434**	0.739	-1.122	**0.004**	**3.060**
SAMD9L	0.732	-1.104	**0.018**	**2.047**	**0.012**	**1.854**
SAMHD1	0.587	-1.163	**0.012**	**1.951**	**0.020**	**1.677**
SAP30	0.460	-1.126	0.076	-1.504	**0.034**	**-1.694**

SART1	0.410	1.165	**0.014**	**-1.528**	0.056	-1.311
SCAND1	0.835	1.077	**0.026**	**-2.186**	**0.014**	**-2.030**
SCARNA14	0.615	-1.158	**0.001**	**-4.439**	**0.001**	**-5.139**
SCARNA5	0.284	1.379	**0.035**	**-1.807**	0.115	-1.311
SCLY	**0.000**	**2.659**	0.788	1.135	**0.048**	**3.017**
SCML1	0.451	-1.284	0.110	-1.978	**0.026**	**-2.541**
SCRN3	0.775	1.049	**0.025**	**1.528**	**0.012**	**1.603**
SCRT2	**0.043**	**1.654**	0.776	1.117	0.130	1.848
SCYL3	0.254	1.259	0.108	1.341	**0.006**	**1.689**
SDC2	**0.042**	**2.018**	0.237	-1.409	0.209	1.432
SDF4	**0.013**	**2.048**	0.934	1.030	**0.037**	**2.110**
SEC11C	0.132	-1.216	0.144	-1.488	**0.042**	**-1.809**
SEC61B	0.999	1.000	**0.036**	**-1.639**	**0.037**	**-1.639**
SECTM1	0.911	1.026	**0.048**	**2.060**	**0.048**	**2.113**
SEL1L3	**0.034**	**1.746**	0.476	-1.231	0.199	1.418
SELPLG	0.076	1.764	0.629	1.185	**0.030**	**2.090**
SEMA4B	0.714	1.086	0.056	1.495	**0.031**	**1.625**
SENP3	**0.009**	**1.610**	0.507	-1.253	0.448	1.285
SEPSECS	0.560	-1.101	0.063	-1.432	**0.035**	**-1.576**
SEPT14	0.761	1.060	**0.001**	**1.694**	**0.003**	**1.795**
SERHL2	**0.030**	**1.522**	0.742	1.120	0.158	1.705
SERPIND1	0.441	1.332	**0.011**	**-2.071**	0.139	-1.555
SERPINE2	**0.045**	**1.907**	0.276	-1.848	0.954	1.032
SERTAD2	0.756	-1.065	**0.012**	**-1.535**	**0.005**	**-1.634**
SESN1	0.807	-1.053	**0.016**	**-2.119**	**0.011**	**-2.232**
SESN2	0.233	-1.459	0.215	-1.375	**0.045**	**-2.007**
SETD1A	0.760	1.080	**0.009**	**-1.978**	**0.017**	**-1.832**
SETD6	0.880	1.038	**0.032**	**1.679**	**0.046**	**1.743**
SETD8	0.513	-1.129	0.058	-1.645	**0.029**	**-1.858**
SETDB1	**0.042**	1.443	0.553	1.130	**0.031**	**1.630**
SETX	0.187	1.249	0.075	1.366	**0.006**	**1.707**
SF3B5	0.369	1.200	**0.004**	**-1.795**	0.065	-1.496
SFI1	**0.008**	**1.649**	0.595	-1.141	0.137	1.446
SFT2D3	0.199	1.353	**0.020**	**-1.745**	0.110	-1.290
SGOL2	**0.024**	**1.967**	0.277	-1.582	0.579	1.243
SH2B2	0.522	1.125	**0.044**	**2.397**	**0.027**	**2.697**
SH2D4A	**0.008**	**2.396**	0.871	-1.106	0.248	2.165
SH3BP5L	0.056	1.332	0.057	1.380	**0.001**	**1.838**
SH3D19	0.407	-1.223	0.120	-1.425	**0.017**	**-1.742**

SHB	0.572	-1.324	**0.026**	**-3.471**	**0.009**	**-4.596**
SHROOM3	0.822	1.055	**0.023**	**1.844**	**0.020**	**1.946**
SIAH3	0.804	-1.041	**0.044**	**-1.902**	**0.036**	**-1.980**
SIGLEC15	**0.039**	**-1.808**	0.931	1.046	0.297	-1.729
SIGMAR1	**0.021**	**1.795**	0.431	-1.329	0.382	1.351
SIK1	0.679	-1.227	**0.045**	**-2.662**	**0.008**	**-3.266**
SIRPD	0.149	1.317	0.151	1.629	**0.043**	**2.146**
SLAMF7	0.504	-1.155	**0.009**	**1.623**	0.110	1.406
SLC16A14	0.635	1.192	**0.017**	**-2.666**	0.058	-2.236
SLC19A2	0.955	-1.012	**0.031**	**-3.618**	**0.030**	**-3.661**
SLC1A5	0.883	-1.060	**0.001**	**-5.420**	**0.001**	**-5.747**
SLC22A25	0.144	1.248	0.174	1.326	**0.029**	**1.654**
SLC22A4	0.627	-1.081	**0.003**	**1.635**	**0.021**	**1.512**
SLC22A5	0.383	1.329	0.088	1.658	**0.019**	**2.204**
SLC25A11	**0.018**	**2.118**	0.341	-1.504	0.396	1.408
SLC25A29	**0.046**	**1.979**	0.139	-1.749	0.736	1.131
SLC25A3	0.497	-1.126	**0.009**	**-1.523**	**0.003**	**-1.714**
SLC25A36	0.781	-1.087	**0.004**	**-2.156**	**0.001**	**-2.344**
SLC25A51	0.318	-1.209	**0.040**	**-1.772**	**0.012**	**-2.143**
SLC2A5	**0.009**	**3.120**	0.537	-1.720	0.511	1.814
SLC34A2	0.154	1.349	**0.013**	**2.096**	**0.002**	**2.827**
SLC35A5	0.132	1.449	0.416	1.194	**0.005**	**1.730**
SLC35B2	0.420	-1.341	0.139	-1.631	**0.040**	**-2.188**
SLC35D1	0.720	-1.056	0.057	-1.558	**0.033**	**-1.645**
SLC36A4	0.466	1.137	**0.000**	**-1.774**	**0.004**	**-1.560**
SLC3A2	0.786	1.078	**0.048**	**-1.727**	**0.020**	**-1.602**
SLC40A1	0.276	1.320	0.248	1.425	**0.039**	**1.881**
SLC46A1	0.469	1.142	0.078	1.963	**0.043**	**2.241**
SLC46A2	**0.033**	**1.915**	0.966	1.022	0.195	1.956
SLC4A2	**0.025**	**-1.894**	0.498	1.493	0.683	-1.269
SLC5A6	0.758	1.144	**0.001**	**-4.002**	**0.001**	**-3.500**
SLC7A5	0.226	-1.754	**0.022**	**-3.078**	**0.002**	**-5.399**
SLIRP	0.829	-1.054	**0.022**	**-1.876**	**0.031**	**-1.977**
SMARCB1	**0.017**	**1.508**	0.297	-1.324	0.632	1.139
SMIM3	0.354	1.269	**0.031**	**-2.475**	0.084	-1.951
SMTNL1	0.749	-1.103	**0.029**	**1.835**	0.065	1.663
SMURF1	0.461	-1.182	0.170	-1.293	**0.042**	**-1.528**
SNAPC4	0.084	1.454	0.665	1.112	**0.050**	**1.617**
SNED1	**0.044**	**1.764**	**0.015**	**-2.044**	0.468	-1.159

SNHG1	0.735	-1.083	**0.000**	**-2.673**	**0.000**	**-2.895**
SNHG11	0.093	1.779	**0.006**	**-3.085**	0.097	-1.734
SNHG17	0.492	-1.166	**0.007**	**-1.954**	**0.001**	**-2.279**
SNHG3	0.238	-1.164	**0.010**	**-1.510**	**0.001**	**-1.758**
SNHG5	0.875	1.021	**0.046**	**-1.637**	0.050	-1.604
SNHG9	0.545	1.223	**0.005**	**-2.757**	**0.019**	**-2.255**
SNORA48	0.326	-1.210	0.137	-1.375	**0.027**	**-1.663**
SNORA63	0.406	-1.132	**0.013**	-1.479	**0.002**	**-1.675**
SNORA70G	0.443	-1.109	**0.012**	-1.468	**0.002**	**-1.629**
SNORA79	0.401	-1.237	0.137	-1.424	**0.042**	**-1.762**
SNORD97	0.774	-1.093	**0.011**	**-1.719**	**0.035**	**-1.880**
SNUPN	0.441	1.086	**0.026**	**-1.514**	0.070	-1.395
SNX17	**0.002**	**1.979**	**0.017**	**-1.831**	0.665	1.080
SNX20	0.950	1.008	**0.028**	1.497	**0.024**	**1.509**
SNX30	0.586	1.070	**0.008**	**-1.606**	**0.019**	**-1.501**
SNX9	0.995	1.003	0.056	-2.835	**0.034**	**-2.826**
SOX2	**0.047**	1.397	0.090	1.921	**0.022**	**2.684**
SPAG5-AS1	0.591	1.121	**0.010**	**-1.827**	**0.038**	**-1.630**
SPHK1	0.506	-1.123	0.137	-1.372	**0.041**	**-1.541**
SPRY1	0.343	-1.500	**0.001**	**-3.574**	**0.000**	**-5.363**
SPRYD3	0.097	1.753	0.390	1.444	**0.041**	**2.531**
SPSB3	**0.049**	**1.615**	**0.021**	**-1.806**	0.493	-1.119
SPTB	**0.010**	**1.637**	0.705	1.077	**0.010**	**1.764**
SPTY2D1-AS1	0.827	1.097	**0.017**	**2.822**	**0.027**	**3.094**
SRSF2	0.364	-1.136	**0.031**	-1.412	**0.004**	**-1.605**
SRSF6	0.622	1.077	**0.007**	**-1.651**	**0.009**	**-1.532**
SSBP4	**0.041**	**-1.642**	0.963	1.024	0.376	-1.603
SSSCA1	0.722	-1.083	0.050	-1.554	**0.012**	**-1.683**
ST3GAL4	0.179	-1.310	**0.006**	**1.553**	0.409	1.186
ST6GALNAC3	0.072	1.624	**0.007**	**-1.955**	0.436	-1.204
STAG3L2	0.940	1.008	**0.002**	**-1.600**	**0.002**	**-1.588**
STAG3L3	0.603	1.063	**0.007**	**-1.776**	**0.013**	**-1.671**
STK11IP	**0.044**	1.387	0.225	1.312	**0.012**	**1.820**
STK25	**0.019**	**1.936**	0.880	1.080	0.171	2.092
STK3	0.345	1.222	0.143	1.574	**0.045**	**1.924**
STRA13	**0.018**	**1.841**	0.409	-1.502	0.682	1.226
STRAP	0.494	-1.157	0.206	-1.310	**0.042**	**-1.515**
STRIP1	0.758	1.051	**0.002**	**-1.611**	**0.007**	**-1.533**
STX11	0.089	-1.439	**0.037**	**1.570**	0.652	1.091

STX7	0.310	1.250	0.148	1.329	**0.039**	**1.661**
STX8	**0.017**	**1.987**	0.976	-1.015	0.181	1.958
SUCLG1	0.565	1.066	**0.007**	**-1.537**	**0.015**	-1.443
SUCO	0.563	-1.137	**0.022**	**-1.543**	**0.002**	**-1.754**
SULT1A4	0.762	1.051	**0.041**	**-1.593**	0.082	-1.515
SUMO1P3	0.196	-1.321	0.126	-1.329	**0.010**	**-1.755**
SUPT5H	0.799	-1.053	**0.015**	**-1.514**	**0.011**	**-1.594**
SYNE4	**0.039**	**1.691**	0.612	-1.205	0.408	1.404
SYT2	0.169	1.484	0.061	1.793	**0.005**	**2.662**
SYTL1	**0.032**	**1.679**	0.113	-1.536	0.595	1.093
SYVN1	0.151	1.330	**0.010**	**-1.740**	0.189	-1.308
TAF1C	0.293	-1.240	**0.003**	**-3.243**	**0.001**	**-4.021**
TAF5	0.476	1.181	**0.000**	**-2.112**	**0.003**	**-1.788**
TAGAP	0.410	-1.124	**0.017**	**1.584**	0.053	1.409
TAPSAR1	0.493	1.143	**0.038**	1.459	**0.015**	**1.668**
TARP	**0.050**	**2.182**	0.880	-1.143	0.461	1.908
TAS1R1	**0.040**	**2.000**	0.594	-1.342	0.467	1.491
TATDN1	0.718	-1.044	**0.007**	**1.603**	**0.010**	**1.536**
TATDN2	0.895	-1.016	**0.001**	**-1.555**	**0.001**	**-1.580**
TBC1D10A	**0.012**	**1.947**	0.076	-2.069	0.870	-1.063
TBC1D17	**0.006**	**1.944**	0.203	-1.355	**0.049**	1.435
TBCE	**0.006**	**1.585**	0.987	-1.005	0.154	1.577
TCAIM	0.368	1.239	0.098	1.555	**0.026**	**1.927**
TCEB2	0.093	1.392	**0.002**	**-1.872**	0.085	-1.344
TCHP	**0.048**	**1.607**	0.850	-1.047	0.052	1.535
TCOF1	0.725	-1.110	0.150	-1.540	**0.048**	**-1.709**
TCP1	0.603	-1.061	**0.033**	**-1.500**	**0.018**	**-1.591**
TCTN3	0.434	-1.342	0.146	-1.751	**0.037**	**-2.350**
TDP1	0.173	1.258	**0.022**	**-1.538**	0.165	-1.223
TECR	0.114	1.487	**0.032**	**-1.999**	0.225	-1.344
TESK1	0.379	1.289	**0.045**	**-1.874**	0.160	-1.454
TFCP2	**0.023**	**1.691**	0.962	-1.010	**0.009**	**1.674**
TFIP11	0.266	1.228	**0.000**	**-1.809**	**0.010**	-1.473
TFPI	0.744	-1.047	**0.003**	**1.533**	**0.009**	1.465
TGIF1	0.098	-1.377	0.059	-1.548	**0.003**	**-2.132**
TGM3	0.495	1.189	**0.048**	**2.869**	**0.027**	**3.410**
TGM4	**0.018**	**1.939**	0.315	-1.378	0.246	1.408
THOC1	0.529	-1.214	**0.018**	**-2.050**	**0.003**	**-2.489**
THOC6	**0.046**	**1.960**	0.803	1.055	0.053	2.067

THUMPD3	0.652	-1.087	**0.012**	**-1.528**	**0.002**	**-1.661**
THYN1	0.346	1.378	**0.050**	**-2.146**	0.228	-1.557
TIA1	0.250	1.200	0.058	1.575	**0.016**	**1.890**
TICAM1	0.120	-1.590	0.263	-1.272	**0.011**	**-2.022**
TICAM2	0.174	1.577	0.275	1.508	**0.014**	**2.378**
TIFA	0.263	-1.267	**0.010**	**2.032**	0.054	1.603
TIGD2	**0.022**	**1.790**	0.588	-1.243	0.393	1.440
TIMM17A	0.714	-1.102	**0.030**	**-1.730**	**0.014**	**-1.907**
TIMM8B	**0.003**	**1.661**	0.118	-1.599	0.881	1.039
TIMMDC1	**0.049**	**1.751**	0.442	-1.206	**0.046**	1.452
TINAGL1	**0.046**	-1.238	**0.036**	-1.315	**0.002**	**-1.627**
TLE1	0.951	1.025	**0.000**	**-6.252**	**0.000**	**-6.101**
TLR1	0.464	1.134	**0.003**	**1.630**	**0.002**	**1.848**
TLR4	0.518	1.142	**0.040**	**1.530**	**0.020**	**1.746**
TLR8	0.929	-1.017	**0.017**	**1.883**	**0.023**	**1.852**
TM2D2	0.483	-1.116	**0.042**	-1.424	**0.011**	**-1.590**
TMC3	**0.043**	**1.795**	0.325	-1.588	0.785	1.131
TMCO3	0.332	-1.205	0.130	-1.406	**0.038**	**-1.695**
TMCO6	0.150	1.249	0.135	1.308	**0.008**	**1.634**
TMED8	**0.037**	**1.697**	0.466	-1.342	0.524	1.265
TMEM132D	0.074	1.432	0.632	1.085	**0.008**	**1.553**
TMEM134	**0.043**	**-1.729**	0.073	1.653	0.864	-1.046
TMEM141	**0.021**	**1.809**	0.453	-1.450	0.661	1.248
TMEM185A	0.928	1.029	**0.030**	**-2.010**	**0.029**	**-1.953**
TMEM187	**0.019**	**2.109**	0.962	-1.022	0.173	2.063
TMEM189	0.854	-1.060	**0.025**	**-2.197**	**0.013**	**-2.329**
TMEM198B	0.224	1.399	**0.042**	**-2.247**	0.211	-1.605
TMEM214	**0.016**	1.480	**0.039**	**-1.554**	0.789	-1.050
TMEM216	**0.023**	**1.835**	0.846	-1.136	0.469	1.615
TMEM231	**0.029**	**1.522**	0.199	-1.426	0.798	1.067
TMEM249	**0.048**	**-1.649**	**0.023**	**1.728**	0.751	1.048
TMEM258	**0.037**	**1.683**	0.239	-1.309	0.204	1.286
TMEM39A	0.590	-1.107	0.078	-1.487	**0.039**	**-1.647**
TMEM44-AS1	0.122	1.366	0.333	1.320	**0.049**	**1.803**
TMEM51-AS1	0.147	1.313	0.307	1.214	**0.033**	**1.595**
TMEM65	0.400	1.110	**0.012**	**1.516**	**0.004**	**1.682**
TMEM72-AS1	0.137	1.141	0.053	1.362	**0.011**	**1.555**
TMOD2	0.370	1.258	0.269	1.272	**0.038**	**1.600**
TMPRSS11BNL	0.920	-1.015	**0.041**	**1.637**	0.052	1.613

TMUB1	**0.016**	**2.382**	0.192	1.530	**0.002**	**3.644**
TMX2	0.251	1.253	**0.000**	**-2.187**	**0.003**	**-1.745**
TNC	0.081	1.328	0.365	1.201	**0.030**	**1.595**
TNFAIP3	0.089	-2.084	**0.001**	**-3.316**	**0.000**	**-6.910**
TNFAIP8L2	0.193	1.746	0.088	2.399	**0.009**	**4.188**
TNFRSF10A	0.418	-1.081	0.084	-1.456	**0.046**	**-1.574**
TNFRSF1A	0.633	1.085	**0.003**	**1.571**	**0.005**	**1.705**
TNFRSF25	**0.048**	-1.197	0.090	-1.254	**0.007**	**-1.502**
TNFRSF8	**0.047**	**1.893**	0.108	2.549	**0.016**	**4.826**
TNFSF10	0.598	-1.151	**0.001**	**2.735**	**0.001**	**2.376**
TNXB	0.419	1.164	0.059	1.477	**0.016**	**1.719**
TOB1	0.835	-1.051	0.058	-2.812	**0.049**	**-2.954**
TOLLIP	0.121	1.355	0.118	1.747	**0.027**	**2.367**
TOMM20	0.581	-1.120	**0.028**	**-1.531**	**0.006**	**-1.715**
TOMM7	0.956	1.013	0.061	-1.709	**0.043**	**-1.688**
TOP1MT	0.546	1.227	**0.001**	**-3.438**	**0.004**	**-2.801**
TOP3B	0.252	1.346	**0.034**	**-1.668**	0.217	-1.239
TP53BP2	0.314	-1.192	**0.013**	-1.378	**0.001**	**-1.643**
TPM4	0.429	-1.143	**0.009**	**1.766**	**0.042**	**1.545**
TPPP3	**0.028**	**2.008**	0.390	1.163	**0.010**	**2.335**
TPST1	0.163	1.386	**0.021**	**-2.368**	0.120	-1.709
TPST2	**0.019**	**1.644**	0.388	1.302	**0.023**	**2.140**
TRAFD1	0.539	-1.118	**0.012**	**1.560**	**0.043**	1.395
TRANK1	0.475	1.201	0.264	1.279	**0.038**	**1.536**
TRAPPC1	**0.012**	**1.698**	0.674	-1.120	0.123	1.517
TRAPPC8	0.264	1.186	0.130	1.292	**0.025**	**1.531**
TREML1	0.497	1.181	0.172	1.498	**0.041**	**1.769**
TREML2	0.418	1.135	0.077	1.421	**0.035**	**1.613**
TRIM21	0.706	1.117	0.254	1.372	**0.040**	**1.533**
TRIM35	0.259	1.488	**0.016**	**-2.519**	0.146	-1.693
TRIM41	**0.019**	1.439	0.380	1.206	**0.019**	**1.736**
TRIM61	**0.047**	-1.436	0.130	-1.306	**0.003**	**-1.876**
TRIM6-TRIM34	0.344	1.307	0.153	1.885	**0.044**	**2.465**
TRIM9	**0.022**	**2.218**	0.812	1.082	**0.000**	**2.400**
TRMT13	0.347	1.224	0.142	1.396	**0.033**	**1.709**
TRMU	0.097	1.599	**0.016**	**-2.034**	0.286	-1.272
TRNAS6	0.944	1.020	**0.049**	**-3.589**	0.052	-3.519
TSC22D2	0.276	-1.236	0.228	-1.236	**0.016**	**-1.527**
TSHZ1	**0.045**	**-1.550**	0.444	-1.329	0.079	-2.060

TSN	0.874	1.025	**0.019**	**-1.570**	**0.022**	**-1.532**
TSNAX-DISC1	0.710	1.074	0.079	1.518	**0.040**	**1.631**
TSPYL2	0.136	-1.599	**0.016**	**-2.059**	**0.000**	**-3.293**
TSPYL4	0.477	1.087	**0.033**	**-1.624**	0.060	-1.495
TTC13	0.091	1.481	0.768	1.058	**0.015**	**1.567**
TTC31	**0.027**	**1.754**	0.121	-1.782	0.961	-1.016
TTC38	0.470	-1.266	**0.031**	**-2.450**	**0.009**	**-3.103**
TTLL12	**0.020**	**1.874**	0.751	1.230	0.222	2.304
TUBA1A	0.330	1.173	**0.000**	**2.008**	**0.000**	**2.355**
TUBA1B	0.056	1.320	0.086	1.642	**0.017**	**2.168**
TUBA1C	0.751	1.053	**0.023**	**2.027**	**0.017**	**2.134**
TUBB1	0.724	1.076	**0.025**	**-1.915**	**0.043**	**-1.780**
TULP2	0.845	-1.060	**0.038**	**-2.129**	**0.031**	**-2.257**
TWISTNB	0.471	-1.186	**0.008**	**-1.801**	**0.003**	**-2.136**
TXLNG	0.759	-1.071	**0.012**	**-1.816**	**0.001**	**-1.946**
TXNDC11	0.466	-1.205	0.083	-1.489	**0.014**	**-1.795**
UAP1	0.526	-1.148	0.082	-1.606	**0.022**	**-1.844**
UBE2MP1	**0.046**	**1.587**	0.556	1.222	0.084	1.940
UBE2O	0.576	1.105	**0.028**	**-1.618**	0.074	-1.465
UBE2W	0.503	1.129	**0.020**	1.426	**0.007**	**1.611**
UBL4A	**0.002**	**3.011**	0.523	-1.489	0.252	2.023
UBTD1	**0.047**	**1.908**	0.858	-1.111	0.381	1.718
UBTD2	**0.031**	**2.028**	0.742	-1.166	0.223	1.740
UG0898H09	0.122	1.227	0.188	1.319	**0.039**	**1.619**
UGCG	0.812	1.049	**0.006**	**-1.653**	**0.020**	**-1.576**
UGT2B4	0.492	-1.128	**0.048**	-1.414	**0.023**	**-1.594**
UHRF1BP1	0.102	-1.259	0.073	-1.570	**0.015**	**-1.976**
ULK4P3	**0.020**	**1.854**	0.118	-2.472	0.590	-1.333
UNC45A	**0.021**	**2.102**	0.415	-1.448	0.323	1.452
UPRT	0.562	1.212	**0.001**	**-2.855**	**0.019**	**-2.355**
UQCRH	0.696	-1.092	**0.000**	**-2.360**	**0.000**	**-2.578**
USP14	0.262	-1.274	**0.036**	**-1.565**	**0.003**	**-1.994**
USP36	0.476	-1.367	0.092	-2.096	**0.023**	**-2.866**
USP42	0.331	-1.236	0.214	-1.276	**0.023**	**-1.577**
USP47	0.327	-1.202	0.229	-1.266	**0.029**	**-1.522**
USPL1	0.141	-1.430	0.277	-1.353	**0.030**	**-1.935**
UTP14C	**0.006**	**1.782**	0.471	-1.194	0.065	1.491
UTP20	0.310	-1.160	**0.010**	-1.437	**0.002**	**-1.667**
UTS2B	0.621	1.091	**0.043**	**1.982**	**0.028**	**2.163**

VAMP8	**0.020**	**2.568**	0.922	1.073	0.193	2.755
VBP1	0.176	1.329	0.422	1.165	**0.003**	**1.549**
VDAC2	0.813	-1.040	**0.030**	-1.453	**0.018**	**-1.512**
VILL	0.508	-1.274	0.124	-1.805	**0.049**	**-2.299**
VIMP	0.271	1.272	**0.005**	**-2.060**	**0.020**	**-1.620**
VPS11	**0.036**	1.383	**0.028**	**-1.741**	0.287	-1.258
VPS25	**0.043**	-1.426	0.168	-1.398	**0.012**	**-1.994**
VPS26B	**0.016**	**1.616**	**0.007**	**-1.717**	0.609	-1.062
VPS45	0.510	1.316	**0.044**	**-2.621**	0.154	-1.992
VPS72	0.061	1.645	0.346	1.294	**0.008**	**2.128**
VPS9D1-AS1	0.536	-1.165	**0.018**	**2.227**	0.053	1.911
VWF	**0.009**	**2.862**	0.740	-1.194	0.119	2.397
WASH5P	**0.036**	**1.934**	0.075	-2.005	0.917	-1.036
WASIR2	**0.001**	-1.292	0.192	-1.163	**0.005**	**-1.502**
WBP11	0.713	-1.071	**0.028**	-1.498	**0.007**	**-1.604**
WDFY3-AS2	**0.028**	**2.036**	0.489	-1.397	0.416	1.457
WDR12	0.280	-1.160	**0.019**	**-1.896**	**0.007**	**-2.200**
WDR43	0.401	-1.389	**0.002**	**-2.816**	**0.000**	**-3.911**
WDR45B	0.996	-1.001	**0.002**	**-1.715**	**0.011**	**-1.717**
WDR52	**0.028**	**1.834**	0.730	-1.163	0.321	1.577
WDR59	**0.011**	**1.892**	**0.015**	**-2.017**	0.786	-1.066
WDR6	**0.034**	**1.805**	0.226	-1.567	0.635	1.152
WDR77	0.340	1.265	**0.008**	**-1.877**	**0.050**	-1.485
WDSUB1	0.870	1.046	**0.002**	**-2.063**	**0.014**	**-1.973**
WDYHV1	0.058	1.901	**0.007**	**-3.760**	0.121	-1.977
WHAMM	0.203	-1.282	0.061	-1.458	**0.003**	**-1.869**
WNT4	0.177	1.209	**0.042**	**1.933**	**0.015**	**2.337**
WSB1	0.747	1.073	**0.006**	**1.715**	**0.004**	**1.841**
WSB2	0.528	1.081	**0.009**	1.467	**0.002**	**1.586**
XAB2	0.934	-1.021	**0.017**	**-1.640**	**0.016**	**-1.674**
XPNPEP1	0.648	-1.108	0.060	-1.710	**0.027**	**-1.895**
XPO5	0.353	1.390	**0.044**	**-2.509**	0.125	-1.805
XRRA1	0.425	1.112	**0.029**	1.439	**0.006**	**1.600**
YAP1	**0.008**	**1.955**	0.344	1.831	0.073	3.580
YBX2	**0.026**	**2.202**	0.797	-1.106	0.134	1.991
YEATS4	0.941	1.025	**0.041**	**-2.256**	0.053	-2.202
YTHDF3-AS1	**0.005**	**2.153**	0.904	1.069	0.172	2.301
YWHAH	**0.014**	**2.168**	0.336	-1.509	0.357	1.437
ZBED4	0.069	1.312	**0.038**	**-1.686**	0.266	-1.285

ZBTB1	0.564	-1.130	**0.012**	**-1.690**	**0.005**	**-1.909**
ZBTB10	0.998	-1.001	0.071	-2.245	**0.039**	**-2.247**
ZBTB25	0.878	-1.028	**0.009**	**-1.724**	**0.010**	**-1.773**
ZBTB5	0.507	-1.279	0.131	-1.614	**0.018**	**-2.065**
ZC3H12A	0.224	-1.639	**0.030**	**-1.977**	**0.003**	**-3.241**
ZCCHC12	**0.035**	**1.726**	0.107	-2.723	0.436	-1.578
ZCCHC18	0.791	-1.106	**0.040**	**-3.339**	**0.029**	**-3.693**
ZDHHC13	**0.035**	**1.770**	**0.037**	**-1.649**	0.681	1.073
ZDHHC7	0.702	-1.057	**0.011**	-1.473	**0.009**	**-1.556**
ZFAND5	0.143	-1.190	0.077	-2.758	**0.048**	**-3.281**
ZFAS1	0.312	-1.153	0.051	-1.596	**0.020**	**-1.840**
ZFP36L2	0.220	-1.253	**0.007**	**-2.469**	**0.002**	**-3.092**
ZHX1-C8ORF76	0.855	1.049	**0.035**	**-1.717**	**0.019**	**-1.637**
ZHX2	0.223	1.181	0.145	1.365	**0.040**	**1.613**
ZNF134	0.513	1.142	**0.045**	**-1.612**	0.083	-1.412
ZNF14	0.677	1.067	**0.042**	**-1.548**	0.081	-1.450
ZNF140	0.143	1.499	0.230	1.511	**0.026**	**2.266**
ZNF165	0.462	-1.359	**0.015**	**-2.873**	**0.004**	**-3.905**
ZNF197	**0.006**	1.347	0.236	1.138	**0.001**	**1.533**
ZNF200	0.313	1.217	**0.024**	**1.816**	**0.007**	**2.210**
ZNF212	**0.044**	**1.750**	**0.022**	**-1.974**	0.624	-1.128
ZNF217	0.355	1.213	0.089	1.425	**0.025**	**1.729**
ZNF281	0.270	-1.183	0.103	-1.476	**0.033**	**-1.746**
ZNF322	**0.033**	**1.968**	0.974	-1.011	**0.044**	**1.948**
ZNF326	0.684	-1.114	**0.020**	**-1.668**	**0.010**	**-1.858**
ZNF331	0.237	-1.331	0.173	-1.616	**0.039**	**-2.151**
ZNF34	0.161	1.527	**0.011**	**-2.858**	0.072	-1.872
ZNF41	0.100	1.794	0.636	1.170	**0.027**	**2.098**
ZNF415	**0.018**	**1.883**	**0.044**	**-2.190**	0.652	-1.163
ZNF418	**0.005**	**2.167**	0.822	1.102	0.061	2.388
ZNF433	0.936	1.021	**0.043**	**-1.762**	**0.044**	**-1.726**
ZNF438	0.720	1.077	0.086	1.650	**0.047**	**1.777**
ZNF441	0.088	1.475	0.096	1.485	**0.008**	**2.190**
ZNF443	0.073	1.765	**0.032**	**-2.172**	0.471	-1.231
ZNF496	0.111	-1.519	0.542	-1.187	**0.039**	**-1.804**
ZNF511	**0.024**	**1.899**	0.122	-1.988	0.910	-1.047
ZNF561	0.309	1.147	**0.008**	**-1.571**	0.061	-1.369
ZNF581	0.897	1.029	**0.039**	**-1.544**	**0.018**	**-1.501**
ZNF582	**0.048**	**1.847**	0.237	-2.148	0.811	-1.163

ZNF583	**0.017**	**2.584**	0.366	1.612	**0.021**	**4.164**
ZNF589	**0.047**	**1.586**	0.668	-1.162	0.372	1.366
ZNF600	**0.029**	**1.947**	0.995	-1.004	0.313	1.939
ZNF606	**0.027**	**1.690**	0.705	1.183	0.147	1.999
ZNF613	0.916	-1.029	**0.007**	**1.944**	**0.028**	**1.889**
ZNF624	**0.022**	**2.195**	0.567	1.464	0.101	3.213
ZNF629	**0.004**	**2.052**	0.157	-1.595	0.368	1.287
ZNF638	0.247	1.270	0.076	1.351	**0.012**	**1.716**
ZNF641	**0.024**	**1.697**	0.525	1.134	**0.002**	**1.924**
ZNF66	**0.012**	**2.031**	0.959	1.021	0.123	2.074
ZNF660	**0.043**	**2.134**	0.779	-1.206	0.415	1.770
ZNF667-AS1	0.096	1.708	0.870	-1.040	**0.034**	**1.642**
ZNF668	0.067	1.775	**0.000**	**-3.557**	**0.001**	**-2.004**
ZNF706	0.714	1.080	**0.001**	**-2.171**	**0.003**	**-2.010**
ZNF720	0.390	1.092	**0.002**	1.432	**0.000**	**1.564**
ZNF767	0.125	1.482	0.331	1.420	**0.043**	**2.104**
ZNF784	**0.024**	**2.268**	**0.046**	**-2.154**	0.858	1.053
ZNF805	0.061	-1.239	0.268	-1.212	**0.033**	**-1.502**
ZNF821	0.760	-1.084	**0.025**	**-1.680**	**0.006**	**-1.822**
ZNHIT3	0.445	-1.089	**0.044**	-1.468	**0.019**	**-1.599**
ZSCAN32	0.885	1.025	**0.004**	**1.775**	**0.005**	**1.819**
ZSCAN4	**0.045**	**-1.580**	0.314	1.263	0.377	-1.250

	Norm ROS CD v Ctrl		Low ROS CD v Ctrl	
Gene Symbol	P-value	FC	P-value	FC
ABCC5	-	-	0.029	1.563
ABCF1	0.026	-1.694	0.020	1.699
ACAD8	0.035	-1.747	-	-
ACAT2	0.006	-2.159	0.000	3.076
ACOX1	-	-	0.023	1.801
ACSM3	-	-	0.038	2.127
ACSS2	-	-	0.031	1.562
ADAM10	-	-	0.035	1.502
ADCY10	-	-	0.024	2.357
AFG3L2	0.038	-2.314	-	-
AKT1S1	0.044	-1.727	-	-
ALOX12	0.016	-1.565	-	-
AP2M1	0.028	-1.506	-	-
B3GNT4	0.019	-2.266	0.042	2.121
B4GALT1	-	-	0.004	1.769
BAD	0.003	-1.823	0.042	1.650
BCAT2	0.045	-1.527	0.028	1.719
BMI1	0.024	-2.674	-	-
BMP2	0.033	-2.053	0.011	2.885
BMP6	0.040	-1.741	-	-
C4A	-	-	0.020	1.848
CAB39	-	-	0.019	1.505
CACNA1A	0.005	2.458	0.009	2.174
CACNA1E	-	-	0.038	1.893
CARM1	0.016	-2.480	0.022	2.155
CAT	-	-	0.012	2.042
CBR4	-	-	0.021	1.602
CD14	-	-	0.000	3.295
CD320	-	-	0.049	1.509
CD58	0.032	1.531	-	-
CDIPT	-	-	0.050	1.671
CDK11A	-	-	0.002	1.528
CDK16	0.022	-1.556	0.011	1.683
CDK3	0.005	-2.436	0.030	1.772
CDK7	-	-	0.022	1.537
CDKN1A	0.015	-2.934	0.001	6.064
CHEK1	-	-	0.040	1.530
CHKA	0.031	-1.645	0.009	1.938
CMPK1	0.021	-1.643	-	-
COL1A1	0.002	-3.336	0.002	3.891
COMMD3-BMI1	0.020	-2.683	-	-
COX4I1	0.001	-2.121	0.001	2.091
COX5B	0.005	-1.782	-	-
COX7A2L	0.015	-2.112	-	-
CRAT	0.000	-4.868	0.026	2.085
CREM	-	-	0.019	1.872
CRY2	0.002	-2.109	0.000	2.119
CRYL1	0.002	-3.418	0.003	2.984

CTSA	-	-	0.030	1.654
CXCR4	0.028	-1.842	0.003	2.608
DDX25	-	-	0.026	1.795
DGAT2	-	-	0.028	1.768
DGKE	-	-	0.006	1.518
DLST	-	-	0.045	1.546
DPYD	-	-	0.011	1.527
DUT	0.003	-2.323	-	-
EDN1	0.015	-2.628	0.002	3.620
EIF2AK3	0.006	-2.803	0.001	3.773
EPHA1	-	-	0.042	1.776
ETNK1	-	-	0.008	1.784
FPGT	0.009	2.468	0.008	2.744
GADD45A	0.011	-1.587	0.000	2.085
GALK2	-	-	0.008	1.831
GALT	0.041	-2.201	-	-
GPT2	0.004	-2.594	0.027	1.807
GSTT1	0.030	-1.775	0.031	1.741
GUSB	0.003	-2.090	0.005	2.050
HACL1	0.010	-1.804	0.009	1.846
HCK	-	-	0.041	1.599
HMGCR	-	-	0.028	1.543
HMGCS1	0.015	-1.587	0.004	1.656
HPSE	0.012	1.647	0.015	1.653
HSPA9	-	-	0.018	1.679
IFNAR2	-	-	0.002	1.665
IL4I1	-	-	0.025	1.528
IP6K2	-	-	0.002	1.531
IRAK2	-	-	0.001	2.010
IRS2	-	-	0.026	2.342
ITGA6	-	-	0.048	1.536
ITGB1	-	-	0.006	1.672
JAG1	0.006	-1.766	0.012	1.664
KANSL2	0.003	-1.909	0.001	1.988
KAT5	-	-	0.043	1.698
KCNJ1	-	-	0.002	2.198
KCNQ1	0.019	-1.718	-	-
KLF5	-	-	0.020	1.630
KPNB1	-	-	0.015	1.519
LTBR	-	-	0.004	2.863
MAP2K6	0.046	2.009	-	-
MAP3K1	0.000	1.536	0.000	1.686
MAP3K8	-	-	0.016	2.364
MAPK14	-	-	0.046	1.732
MAPK6	-	-	0.008	1.698
MAT2B	-	-	0.007	1.544
MED16	-	-	0.020	1.551
MED30	0.013	-1.505	0.002	1.736
MEF2D	0.003	-1.603	0.007	1.616
MVD	0.001	-3.170	0.002	3.480

NDUFA5	0.034	-1.542	0.042	1.511
NDUFS6	0.008	-2.547	0.043	1.848
NDUFV2	0.026	-1.596	0.005	1.895
NFKB2	-	-	0.022	1.821
NFKBIA	0.002	-2.158	0.001	3.406
NOS3	0.001	1.655	0.000	1.889
NR4A1	0.034	-2.721	0.013	3.727
NRAS	-	-	0.021	1.520
NRIP1	0.001	-1.881	0.000	2.048
NT5C	0.026	-1.949	-	-
NT5C3A	0.035	1.727	-	-
NUP133	0.000	-1.817	0.000	1.704
NUP155	0.027	-1.720	0.004	2.092
NUP37	0.004	-2.079	0.032	1.854
ODC1	0.035	-1.808	0.008	2.131
OSBP	0.002	-1.532	-	-
PABPC4	0.030	-2.689	-	-
PANK4	-	-	0.048	2.418
PDE5A	0.015	1.900	0.012	1.955
PDE6H	0.012	-4.370	-	-
PDK3	-	-	0.037	1.519
PER1	0.017	-3.730	0.005	5.349
PIP5K1B	0.006	-1.526	-	-
PLCD1	0.000	-2.924	0.002	1.630
PLK2	0.023	-1.801	0.003	2.400
PLOD3	0.004	-3.200	-	-
POLE3	0.011	-1.864	-	-
POLR3C	0.001	-1.943	-	-
PPP2R1B	0.019	-1.537	-	-
PRKAR2B	0.011	-2.504	0.004	3.248
PRKCE	-	-	0.010	1.769
PRKCQ	-	-	0.007	1.642
PRPS1L1	0.047	1.725	-	-
PSMD4	-	-	0.016	1.580
PTGES	-	-	0.038	1.724
PTGES3	-	-	0.006	1.602
PTGS2	0.003	2.235	0.000	3.169
PTPN6	-	-	0.026	1.504
RANBP2	-	-	0.022	1.603
RIMS2	-	-	0.029	2.784
RIPK2	-	-	0.023	2.633
RNASEL	-	-	0.049	1.792
RNF20	-	-	0.009	1.637
RNLS	-	-	0.031	2.372
RPIA	0.018	-2.165	-	-
RXRA	-	-	0.033	1.533
SCYL3	-	-	0.006	1.689
SETD1A	0.009	-1.978	0.017	1.832
SETDB1	-	-	0.031	1.630
SETX	-	-	0.006	1.707

SH2B2	0.044	2.397	0.027	2.697
SIK1	0.045	-2.662	0.008	3.266
SLC19A2	0.031	-3.618	-	-
SLC22A4	0.003	1.635	0.021	1.512
SLC22A5	-	-	0.019	2.204
SLC34A2	0.013	2.096	0.002	2.827
SLC35B2	-	-	0.040	2.188
SLC40A1	-	-	0.039	1.881
SLC46A1	-	-	0.043	2.241
SLC5A6	0.001	-4.002	0.001	3.500
SOX2	-	-	0.022	2.684
SPHK1	-	-	0.041	1.541
STK3	-	-	0.045	1.924
SUCLG1	0.007	-1.537	-	-
SULT1A4	0.041	-1.593	-	-
TECR	0.032	-1.999	-	-
TESK1	0.045	-1.874	-	-
TLE1	0.000	-6.252	0.000	6.101
TLR4	0.040	1.530	0.020	1.746
TNFRSF1A	0.003	1.571	0.005	1.705
TNXB	-	-	0.016	1.719
TOB1	-	-	0.049	2.954
TUBA1A	0.000	2.008	0.000	2.355
TUBA1C	0.023	2.027	0.017	2.134
UAP1	-	-	0.022	1.844
UGT2B4	-	-	0.023	1.594
UQCRH	0.000	-2.360	0.000	2.578

Ontology	Up LowROS CD v CTRL	Down LowROS CD v CTRL	Up NormROS CD v CTRL	Down NormROS CD v CTRL	Up LowROS CD v NormROS CD
ATP binding	P=2.05E-8: ADCY10,STK3,MAPK14,SETX,GALK2,RNASEL,PDK3,KCNJ1,SLC22A4,SLC22A5,SCYL3,PANK4,DDX25,ABCC5,ETNK1,DGKE,PRKCQ,ACSS2,HCK,MAP3K1,EPHA1	P=4.72E-7: CDK16,PLK2,ABCF1,ACSM3,SPHK1,MAP3K8,RIPK2,IRAK2,CDK11A,SIK1,PRKCE,CHEK1,PFKFB2,MAPK6,CHKA,EIF2AK3,HSPA9,MVD,IP6K2,CDK3,CDK7	-	P=1.97E-2: CDK16,CMPK1,PLK2,ABCF1,AFG3L2,PIP5K1B,SIK1,CHKA,TESK1,EIF2AK3,MVD,CDK3	P=5.91E-4: EPHB4,MKKS,ACSL3,DNAJA3,PASK,KCNJ1,RPS6KA2,ABCC5,RIPK4,MERTK,ACSS2,PAPSS2, PKN3,STK25
Carbohydrate metabolism	-	P=9.11E-7: B3GNT4,DDIT4,RANBP2,BAD,SIK1,PRKCE,IRS2,PLCD1,PFKFB2,B4GALT1	-	P=0.021: B3GNT4,CRYL1,GALT,PDHA1,GUSB,BAD,SIK1,PLCD1	P=5.64E-6: HEXA,PASK,GALT,AGL,GYS1,GRB10,SLC25A11,PLCD1,CSGALNACT1,HYAL2,SLC2A5,PGM5,DERA
Carboxylic acid metabolic process	P=1.24E-9: CBR4,CACNA1A,DPYD,MAPK14,DGAT2,PDK3,ACOX1,SLC22A4,SLC22A5,TLR4,KYAT3,PSMD4,SLC46A1, TNFRSF1A,ACSS2,PTGES3,TNXB,NOS3,PTGS2	P=9.11E-11: CRYL1,DDIT4,ACSM3,SPHK1,SLC5A6,PTGES,UGT2B4,PRKAR2B,BCAT2,PRKCE,HACL1,DLST,IRS2,PFKFB2,ODC1,GPT2,IL4I1,CRAT,EIF2AK3,CREM,EDN1,NDUFS6	2.47E-4: CACNA1A,NOS3,PTGS2,SLC22A4,TLR4,TNFRSF1A	P=7.37E-7: CRYL1,ACAD8,GALT,PDHA1,SLC5A6,TECR,PRKAR2B,BCAT2,HACL1,ODC1,SUCLG1,GPT2, CRAT,EIF2AK3,ALOX12,EDN1,NDUFS6	-
Fatty Acid Metabolism	P=9.36E-8: CBR4,MAPK14,DGAT2,PDK3,ACOX1,TLR4,TNFRSF1A,ACSS2,PTGES3,TNXB,PTGS2	P=5.97E-8: CRYL1,ACSM3,SPHK1,PTGES,PRKAR2B,HACL1,IRS2,CRAT,EIF2AK3,CREM,EDN1,NDUFS6	P=0.005: PTGS2,TLR4,TNFRSF1A	P=0.042: ACAT2,TECR	-
Fatty Acid Oxidation	P=0.005: MAPK14, DGAT2, ACOX1	P=0.008: HACL1,IRS2,CRAT	-	P=8.06E-4: ACAD8,HACL1,CRAT,ALOX12	P=0.005: ACAD8,HADH,CRAT
Galactose Melabolism	P=0.045: GALK2	-	-	-	P=9.53E-4: GALT,PGM5
Glucose Transport/Import	P=0.009: MAPK14,RNASEL,SH2B2	P=7.34E-5: RANBP2,NUP155,NUP37,NUP133,IRS2,EDN1	-	P=2.56E-3: NUP155,NUP37,NUP133	-
Glycogen biosynthesis	-	-	-	-	P=0.0012: PPP2R5D,AGL,GYS1
Insulin secretion	P=0.009: CACNA1A,CACNA1E,HMGCR,RIMS2	P=4.26E-4: CDK16,BAD,PRKCE,IRS2,PFKFB2,EIF2AK3	-	P=0.016: CDK16,BAD,KCNQ1,EIF2AK3	-
Lipopolysaccaride-mediated signaling	P=1.65E-6: MAPK14,CD14,TLR4,NOS3,HCK	P=9.01E-5: NFKBIA,RIPK2,IRAK2,PRKCE	P=0.001: NOS3,TLR4	-	-
Oxidation-reduction process	P=1.89E-4: CBR4,DPYD,MAPK14,RNLS,DGAT2,ACOX1,CAT,HMGCR,ACSS2,PTGES3,NOS3,PTGS2	-	-	-	P=3.1E-7: PASK,PLOD3,ACAD8,AGL,GYS1,ASPH,GRB10,HAAO,COX7A2L,HSD17B10,HADH,ACSS2,CRAT,NDUFB7,NNT,PGM5
Oxidative phosphorylation	-	P=2.8E-5: COX4I1,NDUFA5,UQCRH,NDUFS6,NDUFV2	-	P=0.008: NDUFA5,NDUFS6,NDUFV2	-
Reactive oxygen species biosynthesis	P=3.47E-4: MAPK14,PDK3,TLR4,CAT,NOS3,PTGS2	-	P=1.27E-4: NOS3,PTGS2,TLR4	-	-
Response to glucose	P=8.05E-4: CACNA1E,MAPK14,PDK3,PRKCQ,HMGCR	P=0.002: CDK16,BAD,PRKCE,IRS2,PFKFB2	-	-	-

Gene	Low ROS CD vs Normal ROS CD	Normal ROS CD vs Control	Low ROS CD vs Control
ACTR3B	1.77	-1.01	1.76
ACYP1	2.71	-1.71	1.58
AMPD3	1.67	-1.08	1.55
BRI3BP	2.23	-1.20	1.86
CD9	3.50	-1.35	2.60
CRISP3	2.07	-1.44	1.44
CSGALNACT	1.74	-1.41	1.24
CTXN2	3.43	-4.67	-1.36
DACH1	1.60	-1.05	1.51
DNAJA3	2.45	-1.53	1.60
DNAJC1	-1.59	1.39	-1.15
DNASE1L1	1.77	1.26	2.23
DUSP23	2.35	-1.66	1.42
EFCAB12	1.52	-1.13	1.34
EFEMP2	2.16	-2.08	1.04
GRB10	2.04	-1.59	1.29
GTF3C2	1.59	-1.32	1.20
GYG2P1	-1.72	-1.12	-1.93
HAAO	3.18	-1.60	1.99
HYI	1.86	-1.21	1.54
ITFG1	1.50	-1.01	1.49
KBTBD11	1.90	-2.03	-1.07
LINC00654	2.42	-1.17	2.07
LOC100127888	-2.58	-1.25	-3.23
LOC101927933	1.68	-1.08	1.56
LRRC34	1.83	-1.32	1.38
MCU	1.52	-1.19	1.28
MYCBP2-AS1	1.68	-1.36	1.24
NAA10	1.53	1.39	2.14
NAT9	1.65	-1.00	1.65
NDUFB7	2.03	-1.20	1.69
NEDD8-MDP	1.87	-1.35	1.38
NRDE2	1.56	-1.39	1.12
NUDT3	1.55	-1.01	1.53
OCEL1	2.70	-1.99	1.36
OCRL	2.38	-1.71	1.40
OR2A7	1.88	-1.11	1.70
ORM2	1.84	-1.18	1.56
PBDC1	2.63	-1.92	1.37
PDE6D	1.65	-1.21	1.36
POLE4	2.66	-1.54	1.72
PSMD4	1.61	-1.02	1.58
PTPN9	2.10	-1.35	1.56
PYCR1	-1.81	1.59	-1.14
RANGAP1	-1.66	1.12	-1.48
RAP2B	1.57	-1.36	1.16
RAPGEFL1	1.55	-1.09	1.43
RBMY2FP	-2.00	1.50	-1.34

RGS13	-1.81	2.04	1.13
RNPEP	1.83	1.01	1.85
S100Z	3.23	-1.06	3.06
SCLY	2.47	1.22	3.02
SLC46A2	2.27	-1.16	1.96
SNX17	1.71	-1.58	1.08
SPECC1L	1.52	-1.32	1.15
TBC1D17	1.74	-1.21	1.44
TIMM8B	1.60	-1.54	1.04
UBL4A	3.02	-1.49	2.02
ZNF629	1.81	-1.41	1.29

Gene	chrom	pos	ref	alt	rsID	AA change	Alt allele effect	cadd	dbSNP MAF	hg19 pos	ExAC freq	ExAC European MAF	ExAC African MAF	ExAC East Asian MAF	ExAC South Asian MAF	Validation
ACTR3B	chr7	152800645	A	G	Novel	Y72C	nonSynonymous	25.2	-	152497730	-	-	-	-	-	-
ACTR3B	chr7	152801700	G	A	Novel	R102Q	nonSynonymous	34	-	152498785	-	-	-	-	-	-
ACTR3B	chr7	152823439	C	T	rs149559061	A261V	nonSynonymous	20.3	0.000514	152520524	0.0005271	0.000809207	0.000288351	0	0.000181686	byCluster,byFrequency,by1000G
ACTR3B	chr7	152823405	C	T	rs140327402	R250W	nonSynonymous	23.5	0.049862	152520490	0.05	0.052101826	0.014148219	0.003929727	0.09446472	byCluster,byFrequency,by1000G
ACTR3B	chr7	152820410	G	C	rs781547923	E218Q	nonSynonymous	26.2	0.000013	152517495	0.00000824	0	0.000130548	0	0	unknown
AMPD3	chr11	10493490	G	A	rs75286033	G361S	nonSynonymous	13.8	0.003524	10515037	0.003278	0	0.035521236	0.000115875	0	byCluster,byFrequency,by1000G
AMPD3	chr11	10487341	C	T	rs76836360	R306W	nonSynonymous	35	0.000032	10508888	0.0006342	0	0.00664228	0	0.000242336	byCluster,byFrequency,by1000G
AMPD3	chr11	10493476	G	A	rs61388455	R356Q	nonSynonymous	21.4	0.001784	10515023	0.00159	6.01287E-05	0.016968762	0	0	byCluster,byFrequency,by1000G
AMPD3	chr11	10495666	T	C	rs36003153	Y455H	nonSynonymous	16.5	0.007748	10517213	0.007083	0.000135131	0.075959129	0.000115714	0	byCluster,byFrequency,by1000G
AMPD3	chr11	10496826	C	T	rs144107914	S482L	nonSynonymous	20.7	0.000008	10518373	0.000313	0.000554407	0	0	0	byCluster,byFrequency
AMPD3	chr11	10478587	G	A	rs149433198	D95N	nonSynonymous	28.9	0.000668	10500134	0.0006671	0.001215669	0	0	0	byCluster,byFrequency
AMPD3	chr11	10493383	A	G	rs147246880	N325S	nonSynonymous	16.4	0.001061	10514930	0.001095	0.001665266	0	0	0.000242248	byCluster,byFrequency,by1000G
AMPD3	chr11	10500097	T	G	rs146000615	F523L	nonSynonymous	21.6	0.00133	10521644	0.001367	0.002113753	0.000480862	0	0	byCluster,byFrequency,by1000G
AMPD3	chr11	10487356	G	T	rs117706710	V311L	nonSynonymous	27.4	0.000008	10508903	0.00733	0.011290032	0.001637765	0	0.002544529	byCluster,byFrequency,by1000G
AMPD3	chr11	10482189	C	T	rs11042836	R185W	nonSynonymous	21.7	0.000008	10503736	0.054	0.07738295	0.013084853	0.000116306	0.016545455	byCluster,byFrequency,byHapMap,by1000G
AMPD3	chr11	10493425	C	T	rs201115705	T339M	nonSynonymous	26.4	0.000437	10514972	0.0004365	0.000645045	0	0.000115687	0	byCluster,byFrequency
AMPD3	chr11	10461608	G	A	rs373716662	R30Q	nonSynonymous	23.7	0.000087	10483155	0.00008236	1.49876E-05	0	0.000808875	0.000121124	byCluster,byFrequency,by1000G
AMPD3	chr11	10482160	G	A	rs762205591	R175Q	nonSynonymous	27.2	0.000066	10503707	0.00006589	3.02179E-05	0	0.00023218	0.000121124	byCluster,byFrequency
BRI3BP	chr12	124993909	G	C	Novel	G40A	nonSynonymous	11.5	-	125478455	-	-	-	-	-	-
BRI3BP	chr12	124993933	G	C	Novel	R48P	nonSynonymous	28.6	-	125478479	-	-	-	-	-	-
BRI3BP	chr12	124993947	T	G	Novel	F53V	nonSynonymous	11.8	-	125478493	-	-	-	-	-	-
BRI3BP	chr12	124993948	T	G	Novel	F53C	nonSynonymous	25.3	-	125478494	-	-	-	-	-	-
BRI3BP	chr12	124993954	A	C	Novel	Q55P	nonSynonymous	24.4	-	125478500	-	-	-	-	-	-
BRI3BP	chr12	124993955	G	C	Novel	Q55H	nonSynonymous	25.3	-	125478501	-	-	-	-	-	-
BRI3BP	chr12	124993962	A	C	Novel	S58R	nonSynonymous	24.4	-	125478508	-	-	-	-	-	-
BRI3BP	chr12	125025038	C	T	rs367895302	P122S	nonSynonymous	27.3	0.000058	125509584	0.00005766	9.02609E-05	0	0	6.0687E-05	byCluster,byFrequency
BRI3BP	chr12	125025105	G	C	rs369500614	G144A	nonSynonymous	25.3	0.000165	125509651	0.0001647	0.000269833	0.000192234	0	0	byCluster,byFrequency
BRI3BP	chr12	124993932	C	A	rs868801899	R48S	nonSynonymous	26.7	-	125478478	-	-	-	-	-	unknown
CD9	chr12	6236255	A	G	rs150663369	I201V	nonSynonymous	23.4	0.000538	6345421	0.0005518	0.000869878	0	0	0	byCluster,byFrequency,by1000G
CD9	chr12	6235299	G	A	rs35799798	R140Q	nonSynonymous	27.4	0.000609	6344465	0.000626	0.000884187	0	0.000115554	0.00060562	byCluster,byFrequency,by1000G
CD9	chr12	6236250	T	G	rs770637195	V199G	nonSynonymous	28.2	0.000008	6345416	0.000008236	1.49966E-05	0	0	0	unknown
CRISP3	chr6	49733839	C	T	rs149267211	C109Y	nonSynonymous	25.6	0.000066	49701552	0.00006589	0.000120243	0	0	0	byCluster,byFrequency
CRISP3	chr6	49733743	C	G	rs75675396	G141A	nonSynonymous	23.8	0.000008	49701456	0.004555	0.001874007	0.000192197	0.007973192	0.000484555	byCluster,byFrequency,by1000G
CRISP3	chr6	49733726	C	A	rs1864312	A147S	nonSynonymous	10.6	0.000008	49701439	0.426	0.448097924	0.28830994	0.293179191	0.336423119	byCluster,byFrequency,byHapMap,by1000G
CRISP3	chr6	49737414	C	T	rs371866465	G18S	nonSynonymous	13.5	0.000092	49705127	0.0000906	0.000168252	0	0	0	byCluster,byFrequency
CRISP3	chr6	49731165	C	A	rs757797049	C216F	nonSynonymous	32	0.000008	49698878	0.000008236	1.50177E-05	0	0	0	unknown
CSGALNACT1	chr8	19505704	G	A	-	A44V	nonSynonymous	12.3	-	19363215	-	-	-	-	-	-
CSGALNACT1	chr8	19458601	G	A	rs147069782	L226F	nonSynonymous	27.9	0.000617	19316112	0.0005683	1.49835E-05	0.0060542	0	6.0562E-05	byCluster,byFrequency,by1000G
CSGALNACT1	chr8	19405929	C	T	rs139076756	E484K	nonSynonymous	28	0.000008	19263440	0.00001647	2.99706E-05	0	0	0	byCluster,byFrequency
CSGALNACT1	chr8	19405940	C	T	rs144295336	R480H	nonSynonymous	23.1	0.001092	19263451	0.001062	4.49573E-05	0.011147415	0	0	byCluster,byFrequency,by1000G
CSGALNACT1	chr8	19505795	G	A	rs117494579	R14W	nonSynonymous	28.7	0.000024	19363306	0.002331	6.054E-05	0.00029615	0.030891645	0.00036483	byCluster,byFrequency,by1000G
CSGALNACT1	chr8	19405961	A	T	rs17128366	F473Y	nonSynonymous	27.3	0.004913	19263472	0.004538	0.000119883	0.049875072	0	0.000121124	byCluster,byFrequency,byHapMap,by1000G
CSGALNACT1	chr8	19505426	C	T	rs17128518	V137I	nonSynonymous	11.2	0.002801	19362937	0.002537	0.000120337	0.027772383	0	6.05987E-05	byCluster,byFrequency,byHapMap,by1000G
CSGALNACT1	chr8	19458495	G	A	rs35868450	T261M	nonSynonymous	22.8	0.001202	19316006	0.001211	0.001348557	0.000288295	0.000115554	0.001332364	byCluster,byFrequency,by1000G
CSGALNACT1	chr8	19405817	C	G	rs61910741	R521P	nonSynonymous	34	0.000008	19263328	0.004126	0.00660502	0.001544998	0	0.00090843	byCluster,byFrequency,by1000G
CSGALNACT1	chr8	19405979	G	A	rs369428087	T467M	nonSynonymous	25.4	0.000641	19263490	0.0006589	0.000644349	0	0	0.00181686	byCluster,byFrequency,by1000G
CSGALNACT1	chr8	19458535	T	C	rs372233360	I248V	nonSynonymous	12.6	0.000033	19316046	0.00003295	4.49506E-05	9.60984E-05	0	0	byCluster,byFrequency
CSGALNACT1	chr8	19420366	T	C	rs745646945	N369S	nonSynonymous	22.8	0.000041	19277877	0.00004118	4.49532E-05	9.61354E-05	0	6.0562E-05	byFrequency
CSGALNACT1	chr8	19505630	G	A	rs755710398	R69C	nonSynonymous	33	0.000017	19363141	0.00001647	1.5024E-05	0	0.000115929	0	byFrequency
CSGALNACT1	chr8	19406037	C	T	rs779435105	G448R	nonSynonymous	34	0.000115	19263548	0.0001153	0.000104897	0	0	0.000363372	byFrequency
CTXN2	chr15	48201542	C	T	rs190880430	A81V	nonSynonymous	31	0.016279	48493739	0.017	0.006740776	0	0	0.037778905	byCluster,byFrequency,by1000G
DACH1	chr13	71866195	T	C	Novel	D192G	nonSynonymous	23.5	-	72440327	-	-	-	-	-	-
DACH1	chr13	71866222	G	T	Novel	P183H	nonSynonymous	23.5	-	72440354	-	-	-	-	-	-
DACH1	chr13	71866235	C	A	Novel	V179L	nonSynonymous	21.6	-	72440367	-	-	-	-	-	-
DACH1	chr13	71866237	G	C	Novel	P178R	nonSynonymous	22.8	-	72440369	-	-	-	-	-	-
DACH1	chr13	71866238	G	A	Novel	P178S	nonSynonymous	16.5	-	72440370	-	-	-	-	-	-
DACH1	chr13	71866249	G	A	Novel	S174L	nonSynonymous	22.3	-	72440381	-	-	-	-	-	-
DACH1	chr13	71866268	G	A	Novel	P168S	nonSynonymous	14	-	72440400	-	-	-	-	-	-
DACH1	chr13	71866270	A	G	Novel	L167P	nonSynonymous	23.3	-	72440402	-	-	-	-	-	-
DACH1	chr13	71866278	G	C	Novel	C164W	nonSynonymous	23.4	-	72440410	-	-	-	-	-	-
DACH1	chr13	71866279	C	A	Novel	C164F	nonSynonymous	16.8	-	72440411	-	-	-	-	-	-
DACH1	chr13	71866280	A	G	Novel	C164R	nonSynonymous	10.7	-	72440412	-	-	-	-	-	-
DACH1	chr13	71866649	C	G	Novel	A41P	nonSynonymous	16.3	-	72440787	-	-	-	-	-	-
DACH1	chr13	71866667	A	G	Novel	S35P	nonSynonymous	17.2	-	72440805	-	-	-	-	-	-
DACH1	chr13	71866676	A	G	Novel	S32P	nonSynonymous	19.8	-	72440814	-	-	-	-	-	-
DACH1	chr13	71866687	C	G	Novel	G28A	nonSynonymous	13.3	-	72440825	-	-	-	-	-	-
DACH1	chr13	71866690	G	A	Novel	S27F	nonSynonymous	21	-	72440828	-	-	-	-	-	-
DACH1	chr13	71866703	A	T	Novel	S23T	nonSynonymous	15.7	-	72440841	-	-	-	-	-	-

DACH1	chr13	71866726	G	C	Novel	P15R	nonSynonymous	14.8	-	72440864	-	-	-	-	-	-
DACH1	chr13	71866727	G	C	Novel	P15A	nonSynonymous	10.6	-	72440865	-	-	-	-	-	-
DACH1	chr13	71866732	A	C	Novel	L13R	nonSynonymous	17.9	-	72440870	-	-	-	-	-	-
DACH1	chr13	71866734	C	G	Novel	Q12H	nonSynonymous	15.9	-	72440872	-	-	-	-	-	-
DACH1	chr13	71866746	G	C	Novel	I8M	nonSynonymous	13.6	-	72440884	-	-	-	-	-	-
DACH1	chr13	71866748	T	G	Novel	I8L	nonSynonymous	18.5	-	72440886	-	-	-	-	-	-
DACH1	chr13	71866753	G	T	Novel	A6D	nonSynonymous	16.8	-	72440891	-	-	-	-	-	-
DACH1	chr13	71630562	T	A	Novel	S374C	nonSynonymous	24	-	72204694	-	-	-	-	-	-
DACH1	chr13	71489056	A	G	rs199546133	S555P	nonSynonymous	23.2	0.000787	72063188	0.000786	0.00097463	0.00010202	0	0.00109038	byCluster,byFrequency
DACH1	chr13	71475180	G	A	rs200697835	R682C	nonSynonymous	27.1	0.000639	72049312	0.0006374	0.00103501	0.000102166	0	0.00012133	byCluster,byFrequency
DACH1	chr13	71866706	T	A	rs367942830	T22S	nonSynonymous	15.5	0.00001	72440844	0.000008283	1.7301E-05	0	0	0	byCluster
DACH1	chr13	71557102	C	T	rs374225059	V498I	nonSynonymous	21	0.000008	72131234	0.00005792	0	0.000714286	0	0	byCluster,byFrequency
DACH1	chr13	71866742	G	T	rs573485179	P10T	nonSynonymous	14.5	0.00002	72440880	0.000008295	0	0.00013217	0	0	by1000G
DACH1	chr13	71866714	G	C	rs750752070	P19R	nonSynonymous	16.2	0.00001	72440852	0.000008285	0	0.000126358	0	0	unknown
DACH1	chr13	71866715	G	T	rs750752070	P19T	nonSynonymous	14.8	0.00001	72440853	0.000008285	0	0.000126358	0	0	unknown
DACH1	chr13	71866218	C	G	rs753279642	Q184H	nonSynonymous	14	0.000052	72440350	0.00004962	7.8284E-05	0	0	0	byFrequency
DACH1	chr13	71866225	G	C	rs754515488	T182S	nonSynonymous	12.4	0.000009	72440357	0.000008271	1.63484E-05	0	0	0	unknown
DACH1	chr13	71866718	G	C	rs761619897	P18A	nonSynonymous	10.8	0.00001	72440856	0.000008287	1.72897E-05	0	0	0	unknown
DACH1	chr13	71866351	C	G	rs766978855	S140T	nonSynonymous	11.1	-	72440483	0.00006668	0.000186637	0	0	0.000503145	unknown
DACH1	chr13	71866724	G	C	rs767294898	P16A	nonSynonymous	10.6	0.00001	72440862	0.000008287	0	0	0	0	unknown
DACH1	chr13	71866184	C	A	rs767389322	A196S	nonSynonymous	23.8	0.000033	72440316	0.00003308	0	0	0	0	byFrequency
DACH1	chr13	71866277	C	G	rs772936864	G165R	nonSynonymous	23.8	0.000019	72440409	0.000008384	3.66274E-05	0	0	0	byFrequency
DACH1	chr13	71866285	C	A	rs774654405	S162I	nonSynonymous	12	0.000022	72440417	0.000008461	4.22083E-05	0	0	0	unknown
DACH1	chr13	71866234	A	C	rs778381328	V179G	nonSynonymous	13.8	0.000009	72440366	0.000008271	0	0	0	0	-
DNAJA3	chr16	4454869	C	T	rs35375112	D466D	synonymous	17.9	0.000435	4504870	0.0004118	1.52161E-05	0.004521329	0	0	byCluster,byFrequency,by1000G
DNAJA3	chr16	4448739	C	G	rs147164370	P378A	nonSynonymous	13.2	0.000311	4498740	0.0002553	1.59023E-05	0.002972399	0	0	byCluster,byFrequency,by1000G
DNAJA3	chr16	4443141	G	A	rs141734527	R303Q	nonSynonymous	23.1	0.000375	4493142	0.0003459	3.01332E-05	0.003872967	0	0	byCluster,byFrequency,by1000G
DNAJA3	chr16	4447013	C	T	rs143480833	T375M	nonSynonymous	22.1	0.000723	4497014	0.000733	0.000811444	0	0	0.002160761	byCluster,byFrequency,by1000G
DNAJA3	chr16	4425933	C	T	rs201593669	R18W	nonSynonymous	23.5	0.000565	4475934	0.0002091	0	0.007082153	0	0	byCluster,byFrequency,by1000G
DNAJA3	chr16	4425895	G	T	rs374995696	C5F	nonSynonymous	15.5	0.00014	4475896	0.00004952	0.000403226	0	0	0	byCluster,byFrequency
DNAJA3	chr16	4448766	C	T	rs750067919	R387W	nonSynonymous	35	0.000008	4498767	0.000008236	1.52835E-05	0	0	0	unknown
DNAJC1	chr10	21919916	C	A	-	S184I	nonSynonymous	31	-	22208845	-	-	-	-	-	-
DNAJC1	chr10	21919903	T	A	Novel	R188S	nonSynonymous	24.7	-	22208832	-	-	-	-	-	-
DNAJC1	chr10	21919911	T	G	Novel	K186Q	nonSynonymous	24	-	22208840	-	-	-	-	-	-
DNAJC1	chr10	21919914	T	A	Novel	R185*	stopGain	39	-	22208843	-	-	-	-	-	-
DNAJC1	chr10	21919929	C	T	Novel	D180N	nonSynonymous	25.6	-	22208858	-	-	-	-	-	-
DNAJC1	chr10	21920956	C	T	rs149825372	D127N	nonSynonymous	24.1	0.000727	22209885	0.0007413	0.001116038	0.000195465	0	0.000499002	byCluster,byFrequency,by1000G
DNAJC1	chr10	21919926	C	T	rs533121915	E181K	nonSynonymous	23.9	0.0002	22208855	-	-	-	-	-	by1000G
DNAJC1	chr10	22003352	C	T	rs575609970	R28Q	nonSynonymous	12.3	0.00177	22292281	0.0007691	0	0	0	0.004712747	byCluster,byFrequency,by1000G
DNAJC1	chr10	21759183	G	A	rs776269885	P528L	nonSynonymous	30	0.000008	22048112	0.000008236	1.51071E-05	0	0	0	byFrequency
DNASE1L1	chrX	154405439	C	T	Novel	V44I	nonSynonymous	23.5	-	153633780	-	-	-	-	-	-
DNASE1L1	chrX	154405447	T	C	Novel	D41G	nonSynonymous	16.8	-	153633788	-	-	-	-	-	-
DNASE1L1	chrX	154405448	C	A	Novel	D41Y	nonSynonymous	29.2	-	153633789	-	-	-	-	-	-
DUSP23	chr1	159781314	G	A	rs148687167	D72N	nonSynonymous	11.5	0.003349	159751104	0.0007519	0	0.036480687	0	0	byCluster,byFrequency,by1000G
DUSP23	chr1	159782256	A	T	rs11544443	E124V	nonSynonymous	25.1	0.005103	159752046	0.005222	0.007942931	0.000480492	0	0.004118217	byCluster,byFrequency,byHapMap,by1000G
DUSP23	chr1	159782276	G	A	rs1129923	G131S	nonSynonymous	34	0.084226	159752066	0.085	0.098785789	0.014033064	0.003467406	0.128422583	byCluster,byFrequency,byOtherPop,byHapMap,by1000G
DUSP23	chr1	159781200	C	G	rs199665962	L34V	nonSynonymous	10.8	0.000057	159750990	0.0006973	0.004067107	0	0	0.001067806	byCluster,byFrequency,by1000G
DUSP23	chr1	159782226	G	A	rs200750638	R114Q	nonSynonymous	14.1	0.000166	159752016	0.0001647	0.000239787	0	0	0.000242277	byCluster,byFrequency,by1000G
EFCAB12	chr3	129401780	A	G	rs114112678	L511P	nonSynonymous	29.9	0.001627	129120623	0.001132	0	0.016441262	0	0.000157654	byCluster,byFrequency,by1000G
EFCAB12	chr3	129411181	G	A	rs139410166	R338C	nonSynonymous	27.6	0.000093	129130024	0.00004133	0	0.000186986	0.000915751	0	byFrequency,by1000G
EFCAB12	chr3	129411180	C	T	rs80141922	R338H	nonSynonymous	29.9	0.004619	129130023	0.002398	0	0.043890178	0	0.000180538	byCluster,byFrequency,by1000G
EFCAB12	chr3	129411228	G	A	rs73865436	T322M	nonSynonymous	23.3	0.004848	129130071	0.00436	0.000140397	0.050127714	0.000971817	0.000125329	byCluster,byFrequency,by1000G
EFCAB12	chr3	129421683	C	T	rs78778825	R57Q	nonSynonymous	25.3	0.001489	129140526	0.001349	0.00058804	0.011419753	0	6.09979E-05	byCluster,byFrequency,by1000G
EFCAB12	chr3	129411175	G	A	rs73202271	R340W	nonSynonymous	26.3	0.146756	129130018	0.075	0.167828987	0.149083594	0.053789731	0.147633646	byCluster,byFrequency,by1000G
EFCAB12	chr3	129401738	C	T	rs376335610	R525Q	nonSynonymous	21.4	0.000131	129120581	0.00006611	8.83236E-05	0	0.000260688	0.000382044	byCluster,byFrequency
EFCAB12	chr3	129401661	G	A	rs551533324	P551S	nonSynonymous	28.3	0.000797	129120504	0.0003809	0	0	0	0.003690888	byCluster,byFrequency,by1000G
EFCAB12	chr3	129402551	G	A	rs574254518	R478C	nonSynonymous	20.5	0.000076	129121394	0.00006619	5.36615E-05	0.000121921	0	0.000215363	byCluster,byFrequency,by1000G
EFCAB12	chr3	129401610	C	T	rs755969961	V568M	nonSynonymous	24.4	0.000049	129120453	0.000008365	8.86997E-05	0	0	0	unknown
EFEMP2	chr11	65870174	C	T	rs143662598	R185H	nonSynonymous	22.4	0.000017	65637645	0.00001647	3.05344E-05	0	0	0	byCluster,byFrequency
EFEMP2	chr11	65870222	C	T	rs141310608	R169H	nonSynonymous	31	0.000083	65637693	0.00008237	0.000121884	9.80392E-05	0	6.05767E-05	byCluster,byFrequency
EFEMP2	chr11	65871247	C	T	rs2234462	G93S	nonSynonymous	14.1	0.002788	65638718	0.002875	0.003572501	0.001058507	0	0.000968992	byCluster,byFrequency,by1000G
EFEMP2	chr11	65867027	G	A	rs761729008	P408L	nonSynonymous	32	0.000008	65634498	0.000008237	1.50825E-05	0	0	0	unknown
GRB10	chr7	50626884	T	C	rs200039264	K142R	nonSynonymous	11.2	0.000207	50694581	0.0001818	0	0.001835611	0.000231857	0	byCluster,byFrequency,by1000G
GRB10	chr7	50703839	G	A	rs755643751	R41*	stopGain	36	0.000025	50771536	0.0000248	1.49862E-05	0.000102041	0	0	byCluster,byFrequency
GRB10	chr7	50669772	G	C	rs869247136	P94A	nonSynonymous	12.5	0.000099	50737469	-	-	-	-	-	unknown
GTF3C2	chr2	27327178	T	A	Novel	K839M	nonSynonymous	31	-	27550045	-	-	-	-	-	-
GTF3C2	chr2	27327179	T	A	Novel	K839*	stopGain	40	-	27550046	-	-	-	-	-	-
GTF3C2	chr2	27327190	T	C	Novel	E835G	nonSynonymous	25.3	-	27550057	-	-	-	-	-	-
GTF3C2	chr2	27333776	A	T	Novel	C537*	stopGain	40	-	27556643	-	-	-	-	-	-

GTF3C2	chr2	27337253	C	A	Novel	R373L	nonSynonymous	24.5	-	27560120	-	-	-	-	-	-
GTF3C2	chr2	27343013	G	A	rs147615647	L128F	nonSynonymous	17.4	0.000865	27565880	0.0008648	0.001573458	0	0	0	byCluster,byFrequency
GTF3C2	chr2	27335967	G	C	rs148867164	L473V	nonSynonymous	21.8	0.001979	27558834	0.002043	0.003103448	0.000577034	0	0.000484614	byCluster,byFrequency,by1000G
GTF3C2	chr2	27327263	G	A	rs756909209	R811C	nonSynonymous	26.4	0.000033	27550130	0.00003295	4.52161E-05	0	0	6.24922E-05	byFrequency
GTF3C2	chr2	27336252	G	A	rs768291859	S434L	nonSynonymous	21.3	-	27559119	-	-	-	-	-	unknown
HAAO	chr2	42792507	C	G	rs151014776	W10C	nonSynonymous	34	0.000756	43019647	0.0006838	0	0.008127507	0	0	byCluster,byFrequency,by1000G
HAAO	chr2	42767674	C	G	rs34053133	G235R	nonSynonymous	28.7	0.005162	42994814	0.002588	0.010199804	0.001404494	0	0.000110375	byCluster,byFrequency,by1000G
HAAO	chr2	42788564	T	A	rs3816182	T42S	nonSynonymous	10.3	0.000055	43015704	0.284	0.245572238	0.21953095	0.59891254	0.293725775	byCluster,byFrequency,byHapMap,by1000G
HAAO	chr2	42767441	C	A	rs200552980	G286V	nonSynonymous	23.9	0.000156	42994581	0.00014	0.000241596	0.000237361	0	0	byCluster,byFrequency
HAAO	chr2	42767595	G	A	rs534302281	S261L	nonSynonymous	16.4	0.001433	42994735	0.0006392	0.000760209	0	0.000462963	0.00434122	byCluster,byFrequency,by1000G
HAAO	chr2	42767877	C	T	rs752749154	V228M	nonSynonymous	23	0.000082	42995017	0.00008236	1.50002E-05	0	0	0	byFrequency
HAAO	chr2	42770565	G	A	rs758353167	T123I	nonSynonymous	23.6	0.000053	42997705	0.00001002	0	0.000359971	0	0	byFrequency
HYI	chr1	43451669	G	A	rs189883688	R202W	nonSynonymous	34	0.000055	43917340	0.00004942	4.49721E-05	0	0.000346741	0	byCluster,byFrequency,by1000G
HYI	chr1	43451427	C	G	rs79439514	C248S	nonSynonymous	29.3	0.008965	43917098	0.008105	0.000180554	0.088798607	0	0	byCluster,byFrequency,by1000G
HYI	chr1	43451798	C	A	rs142648563	M185I	nonSynonymous	28.3	0.001681	43917469	0.001721	0.001892631	0.001157184	0	0	byCluster,byFrequency,by1000G
HYI	chr1	43453410	T	C	rs142369206	Y96C	nonSynonymous	23.5	0.025781	43919081	0.012	0.056687565	0.002650177	0	0.012641205	byCluster,byFrequency,by1000G
HYI	chr1	43453627	C	T	rs551641144	G56E	nonSynonymous	24.3	0.000515	43919298	0.0003221	0.000649351	0	0	0.000428449	byFrequency,by1000G
HYI	chr1	43451311	C	T	rs750597954	G254E	nonSynonymous	25.4	0.000008	43916982	0.000008236	1.50159E-05	0	0	0	unknown
ITFG1	chr16	47158973	T	C	-	Y560C	nonSynonymous	23.6	-	47192884	-	-	-	-	-	-
ITFG1	chr16	47365815	C	T	rs143860459	V259I	nonSynonymous	23.4	0.000524	47399726	0.0004942	0	0.005361669	0	0	byCluster,byFrequency,by1000G
ITFG1	chr16	47454148	C	T	rs148994423	!98!	nonSynonymous	14.7	0.000445	47488059	0.0004448	0.000689469	0	0	0.000302847	byCluster,byFrequency
ITFG1	chr16	47260633	C	A	rs118116323	R378L	nonSynonymous	14.7	0.000025	47294544	0.0005436	0.000899011	0.000192197	0	6.0562E-05	byCluster,byFrequency,by1000G
ITFG1	chr16	47454098	C	T	rs754315069	M114I	startLoss	29.4	0.000016	47488009	0.00001647	2.9976E-05	0	0	0	byFrequency
KBTBD11	chr8	2001712	C	A	Novel	L174M	nonSynonymous	24	-	1949878	-	-	-	-	-	-
KBTBD11	chr8	2002054	C	G	Novel	R288G	nonSynonymous	28.1	-	1950220	-	-	-	-	-	-
KBTBD11	chr8	2002322	G	A	Novel	R377H	nonSynonymous	23.2	-	1950488	-	-	-	-	-	-
KBTBD11	chr8	2002808	C	A	Novel	A539E	nonSynonymous	19.3	-	1950974	-	-	-	-	-	-
KBTBD11	chr8	2002595	A	G	rs140699745	Y468C	nonSynonymous	24.7	0.000389	1950761	0.000196	3.17763E-05	0.00441989	0	0	byCluster,byFrequency,by1000G
KBTBD11	chr8	2002538	C	G	rs747830773	A449G	nonSynonymous	27.6	0.000046	1950704	0.000008767	9.83284E-05	0	0	0	unknown
LRRC34	chr3	169804054	A	T	Novel	L219Q	nonSynonymous	23.9	-	169521842	-	-	-	-	-	-
LRRC34	chr3	169812545	C	A	Novel	A2S	nonSynonymous	13.3	-	169530333	-	-	-	-	-	-
LRRC34	chr3	169808739	G	A	rs9820986	P49L	nonSynonymous	15.2	0.001183	169526527	0.001031	0	0.01204028	0	0	byCluster,byFrequency,byHapMap,by1000G
LRRC34	chr3	169793643	G	A	rs140978440	Q431*	stopGain	34	0.000406	169511431	0.0004036	0.000722783	9.85804E-05	0	0	byCluster,byFrequency
LRRC34	chr3	169796797	A	T	rs10936600	L254I	nonSynonymous	19.8	0.282996	169514585	0.282	0.244200428	0.08761592	0.564037123	0.267550797	byCluster,byFrequency,by2Hit2Allele,byHapMap,by1000G
LRRC34	chr3	169793763	G	A	rs199832335	R391C	nonSynonymous	12.2	0.000158	169511551	0.0001565	0.000239974	9.62094E-05	0.00011566	0	byCluster,byFrequency,by1000G
LRRC34	chr3	169796293	G	A	rs377368072	L297F	nonSynonymous	23.5	0.000135	169514081	0.0001236	0	0.001347449	0	0	byCluster,byFrequency,by1000G
LRRC34	chr3	169804080	C	A	rs748452941	E210D	nonSynonymous	23.6	0.000008	169521868	0.000008237	0	0	0.00011558	0	unknown
MCU	chr10	72871381	G	A	rs142910615	R221Q	nonSynonymous	24.9	0.000132	74631139	0.0001318	0.000164834	0.000192308	0	0.000121139	byCluster,byFrequency
MCU	chr10	72859294	G	A	rs374215875	R113Q	nonSynonymous	16.2	0.000033	74619052	0.00003295	6.00222E-05	0	0	0	byCluster,byFrequency
MCU	chr10	72859249	A	G	rs766431129	Q98R	nonSynonymous	16.1	0.000008	74619007	0.000008236	0	9.60984E-05	0	0	unknown
NAA10	chrX	153930017	G	T	rs781810669	D226E	nonSynonymous	23.4	0.000023	153195470	0.00001647	0	0.000235294	0	0	byFrequency
NDUFB7	chr19	14566215	C	T	rs138937878	R111Q	nonSynonymous	28.7	0.000008	14677027	0.0001071	0.000168727	0.000101051	0	0	byCluster,byFrequency
NDUFB7	chr19	14566768	C	T	rs577914511	R93H	nonSynonymous	12.6	0.000353	14677580	0.0005082	0.000138083	0.000414594	0	0	byCluster,byFrequency,by1000G
NEDD8-MDP1	chr14	24215571	G	A	rs140361770	P81S	nonSynonymous	19.2	0.000634	24684777	0.0006342	0.001049381	0	0	0.000242277	byCluster,byFrequency
NEDD8-MDP1	chr14	24214098	C	A	rs145254894	G170W	nonSynonymous	34	0.000008	24683304	0.0078	0.012174983	0.002886836	0	0.000122654	byCluster,byFrequency,by1000G
NEDD8-MDP1	chr14	24214061	A	D	rs3215610	L182*	stopGain	!	0.11549	24683267	0.111	0.067068768	0.41969112	0.209953704	0.106712244	byCluster,byFrequency,by1000G
NRDE2	chr14	90278461	C	A	-	V1124L	nonSynonymous	17.1	-	90744805	-	-	-	-	-	-
NRDE2	chr14	90278353	G	T	-	L1160M	nonSynonymous	24.1	-	90744697	-	-	-	-	-	-
NRDE2	chr14	90298268	A	C	rs146810395	I553S	nonSynonymous	22.8	0.000066	90764612	0.00006589	1.50553E-05	0.000675545	0	0	byCluster,byFrequency
NRDE2	chr14	90292779	C	T	rs149932737	R587H	nonSynonymous	35	0.000025	90759123	0.00002471	2.99679E-05	9.60984E-05	0	0	byCluster,byFrequency
NRDE2	chr14	90318083	C	A	rs7140914	C32F	nonSynonymous	24.1	0.000016	90784427	0.002076	4.49762E-05	0.022395233	0	0.000121153	byCluster,byFrequency,byHapMap,by1000G
NRDE2	chr14	90288263	T	C	rs146015101	I1038V	nonSynonymous	20.4	0.00038	90754607	0.0003459	4.50072E-05	0.002211113	0.001618123	0.000121344	byCluster,byFrequency,by1000G
NRDE2	chr14	90304143	G	A	rs139586208	T266I	nonSynonymous	14.5	0.000269	90770487	0.0002636	0.00025475	0	0.000462214	0	byCluster,byFrequency,by1000G
NRDE2	chr14	90318014	G	A	rs137945038	P55L	nonSynonymous	11.5	0.000451	90784358	0.0004448	0.000615265	9.60984E-05	0.000808875	0.000242718	byCluster,byFrequency,by1000G
NRDE2	chr14	90288881	C	G	rs140496409	V832L	nonSynonymous	12.7	0.000008	90755225	0.0007907	0.000961827	0.00019305	0	0	byCluster,byFrequency
NRDE2	chr14	90304132	T	A	rs143888178	N270Y	nonSynonymous	29.7	0.001535	90770476	0.001565	0.00221776	0.000384394	0	0.001635174	byCluster,byFrequency,by1000G
NRDE2	chr14	90288671	G	A	rs142250129	R902C	nonSynonymous	13.8	0.002288	90755015	0.002281	0.002325302	0.000288684	0.00023116	0.004845548	byCluster,byFrequency,by1000G
NRDE2	chr14	90318089	C	T	rs148682249	S30N	nonSynonymous	27.9	0.001828	90784433	0.001894	0.003043387	0.001249519	0	0.000363504	byCluster,byFrequency,by1000G
NRDE2	chr14	90303972	C	T	rs138706639	R323Q	nonSynonymous	17.5	0.00005	90770316	0.002619	0.004454578	0.000577812	0	0	byCluster,byFrequency
NRDE2	chr14	90301265	C	T	rs79341977	V507M	nonSynonymous	26.9	0.000024	90767609	0.004736	0.006184171	0.001060343	0	0.006299976	byCluster,byFrequency,by1000G
NRDE2	chr14	90290518	C	G	rs45462994	L644F	nonSynonymous	25.6	0.007788	90756862	0.007841	0.010580894	0.001367455	0	0.004800681	byCluster,byFrequency,by1000G
NRDE2	chr14	90286410	G	A	rs116980182	R1081C	nonSynonymous	24	0.033192	90752754	0.034	0.047391161	0.006928406	0	0.012425749	byCluster,byFrequency,by1000G
NRDE2	chr14	90301298	T	A	rs199759819	M496L	nonSynonymous	12.7	0.000151	90767642	0.00014	0.000256232	0	0	0	byCluster,byFrequency,by1000G
NRDE2	chr14	90303001	T	A	rs199890497	N377I	nonSynonymous	29.6	0.000024	90769345	0.0001977	6.03482E-05	0	0.002089136	0.00012161	byCluster,byFrequency,by1000G
NRDE2	chr14	90301271	C	T	rs367936820	D505N	nonSynonymous	22.4	0.00004	90767615	0.00003295	3.01042E-05	0.000192827	0	0	byCluster,byFrequency,by1000G
NRDE2	chr14	90298352	C	T	rs766185250	S525N	nonSynonymous	32	0.000017	90764696	0.00001647	3.01987E-05	0	0	0	byFrequency
NRDE2	chr14	90292792	C	T	rs768142205	A583T	nonSynonymous	22.1	0.000008	90759136	0.000008236	1.4984E-05	0	0	0	unknown
NRDE2	chr14	90290309	C	T	rs771864754	R714H	nonSynonymous	23.8	0.000008	90756653	0.000008236	1.50047E-05	0	0	0	unknown
NRDE2	chr14	90303050	G	A	rs775950012	L361F	nonSynonymous	22.4	0.000008	90769394	0.000008237	0	0	0	0	unknown

NRDE2	chr14	90289033	C	T	rs777908634	C781Y	nonSynonymous	19.2	0.000016	90755377	0.00001647	2.99742E-05	0	0	0	byFrequency
NRDE2	chr14	90304342	T	A	rs781502472	K200*	stopGain	35	0.000017	90770686	0.00003295	6.03482E-05	0	0	0	byFrequency
NUDT3	chr6	34392285	G	T	rs146760187	F26L	nonSynonymous	19.3	0.001166	34360062	0.0008475	0.000291341	0.010138889	0	0	byCluster,byFrequency,by1000G
OCEL1	chr19	17227932	A	C	rs144196323	E182A	nonSynonymous	24.4	0.000578	17338741	0.0005024	0	0.005775895	0	0	byCluster,byFrequency,by1000G
OCEL1	chr19	17227118	C	T	rs144461877	A124V	nonSynonymous	13.3	0.000259	17337927	0.0002142	0	0.002523292	0	0	byCluster,byFrequency,by1000G
OCEL1	chr19	17228887	G	A	rs142863081	D253N	nonSynonymous	14.4	0.000778	17339696	0.0007495	9.0356E-05	0.007152523	0	0.000485201	byCluster,byFrequency,by1000G
OCEL1	chr19	17226748	G	T	rs10425488	R42L	nonSynonymous	23.1	0.091126	17337557	0.066	0.09580885	0.144380275	0	0.124835248	byCluster,byFrequency,by1000G
OCEL1	chr19	17227073	C	G	rs891203	A109G	nonSynonymous	11.4	0.17403	17337882	0.171	0.110112224	0.281461434	0.248145573	0.221905588	byCluster,byFrequency,by2Hit2Allele,byHapMap,by1000G
OCRL	chrX	129565818	G	A	rs137884245	D431N	nonSynonymous	23.1	0.00057	128699795	0.0005024	0	0.005226895	0	0	byCluster,byFrequency,by1000G
OCRL	chrX	129561251	G	A	rs138260625	M299I	nonSynonymous	17.4	0.005847	128695228	0.005436	2.08385E-05	0.000117523	0	0	byCluster,byFrequency,by1000G
OCRL	chrX	129540745	C	T	rs61752970	T14I	nonSynonymous	20.8	0.005202	128674722	0.005617	0.007226587	0.000949104	0	0.002174988	byCluster,byFrequency,by1000G
OCRL	chrX	129545013	A	G	rs747129019	N59D	nonSynonymous	25.1	0.000012	128678990	0.000008237	2.10859E-05	0	0	0	unknown
OCRL	chrX	129569323	A	C	rs770155745	N509T	nonSynonymous	10.4	0.000023	128703300	0.00003295	0	0	0.000301296	0	byFrequency
OCRL	chrX	129558899	G	A	rs781782723	R207Q	nonSynonymous	27	0.000033	128692876	0.00002471	0	0	0	9.87752E-05	byCluster,byFrequency,by1000G
OR2A7	chr7	144259214	C	A	Novel	V139F	nonSynonymous	11.5	-	143956307	-	-	-	-	-	-
OR2A7	chr7	144258913	G	C	rs200085936	T239S	nonSynonymous	21.3	0.017871	143956006	0.018	0.025689448	0.004036909	0.000115607	0.014356676	byCluster,byFrequency,by1000G
OR2A7	chr7	144258791	A	C	rs201738556	F280V	nonSynonymous	17.2	0.030447	143955884	0.028	0.012227629	0.059678094	0.127607362	0.026048127	byCluster,byFrequency,by1000G
OR2A7	chr7	144259402	G	A	rs368758668	T76M	nonSynonymous	22.9	0.000891	143956495	0.0005172	0.001597132	0	0	0.000329164	byCluster,byFrequency,by1000G
OR2A7	chr7	144258730	A	T	rs531173389	L300*	stopGain	36	0.000304	143955823	0.000281	0	0.003727866	0	0	byFrequency,by1000G
OR2A7	chr7	144259393	C	T	rs747912287	R79Q	nonSynonymous	10.8	0.000124	143956486	0.00006863	0	0.001651255	0	0.000123946	byFrequency
OR2A7	chr7	144259339	A	T	rs765364621	M97K	nonSynonymous	10.5	0.017131	143956432	0.002317	0.026816945	0.005208333	0	0.001428571	byFrequency
ORM2	chr9	114331879	G	A	rs148221879	D164N	nonSynonymous	16	0.000063	117094159	0.0008895	2.99814E-05	0.009645062	0.00011558	0.000181818	byCluster,byFrequency,by1000G
ORM2	chr9	114331627	T	G	rs151073288	F130C	nonSynonymous	22	0.000008	117093907	0.0000906	0.000134884	9.61354E-05	0	0	byCluster,byFrequency
ORM2	chr9	114330557	C	G	rs112599631	L80V	nonSynonymous	13.4	0.006559	117092837	0.006319	0.000194932	0.068944602	0	0.000363945	byCluster,byFrequency,by1000G
ORM2	chr9	114330830	T	C	rs2636889	V99A	nonSynonymous	22.6	0.030213	117093110	0.027	0.000494723	0.300865385	0	0.00036346	byCluster,byFrequency,by2Hit2Allele,byHapMap,by1000G
ORM2	chr9	114329923	C	T	rs143336597	L7F	nonSynonymous	11.4	0.009442	117092203	0.003122	0.013714286	0.009313155	0	0.00280112	byCluster,byFrequency,by1000G
ORM2	chr9	114331841	C	T	rs368086091	T151M	nonSynonymous	23.6	0.000238	117094121	0.0002306	0.000180337	0.000582411	0	0	byCluster,byFrequency,by1000G
PBDC1	chrX	76173586	T	A	Novel	V11D	nonSynonymous	24	-	75393421	-	-	-	-	-	-
PBDC1	chrX	76173589	C	G	Novel	S12C	nonSynonymous	23.3	-	75393424	-	-	-	-	-	-
PBDC1	chrX	76173594	G	A	Novel	E14K	nonSynonymous	25.4	-	75393429	-	-	-	-	-	-
PBDC1	chrX	76173597	T	A	Novel	L15M	nonSynonymous	11.7	-	75393432	-	-	-	-	-	-
PBDC1	chrX	76173600	G	C	Novel	V16L	nonSynonymous	10.6	-	75393435	-	-	-	-	-	-
PBDC1	chrX	76173607	T	G	Novel	V18G	nonSynonymous	20.5	-	75393442	-	-	-	-	-	-
PBDC1	chrX	76173614	T	A	Novel	H20Q	nonSynonymous	17	-	75393449	-	-	-	-	-	-
PBDC1	chrX	76173627	C	A	Novel	P25T	nonSynonymous	25.3	-	75393462	-	-	-	-	-	-
PBDC1	chrX	76173628	C	G	Novel	P25R	nonSynonymous	26.4	-	75393463	-	-	-	-	-	-
PBDC1	chrX	76173635	G	T	Novel	E27D	nonSynonymous	14.6	-	75393470	-	-	-	-	-	-
PBDC1	chrX	76173637	C	G	Novel	S28W	nonSynonymous	32	-	75393472	-	-	-	-	-	-
PBDC1	chrX	76177619	C	T	Novel	P138S	nonSynonymous	26.9	-	75397454	-	-	-	-	-	-
PBDC1	chrX	76177632	C	T	Novel	S142F	nonSynonymous	13.7	-	75397467	-	-	-	-	-	-
PBDC1	chrX	76177643	A	T	Novel	K146*	stopGain	32	-	75397478	-	-	-	-	-	-
PBDC1	chrX	76173606	G	C	rs781867907	V18L	nonSynonymous	19.5	0.000013	75393441	0.00000824	0	0	0	0	unknown
PBDC1	chrX	76173592	G	A	rs782161107	G13E	nonSynonymous	24.4	0.000013	75393427	0.000008241	0	0	0.000153894	0	unknown
PBDC1	chrX	76173622	C	T	rs782546549	S23F	nonSynonymous	24.8	0.000013	75393457	0.00001648	2.2478E-05	0	0	0	unknown
PBDC1	chrX	76177658	G	T	rs782709186	G151W	nonSynonymous	34	0.000068	75397493	0.00005766	4.2461E-05	0.000119789	0.000302343	0	byCluster,byFrequency,by1000G
PDE6D	chr2	231732999	C	T	rs142298615	D136N	nonSynonymous	23.4	0.000514	232597709	0.000486	0	0.005306831	0.00011558	6.05767E-05	byCluster,byFrequency,by1000G
PDE6D	chr2	231732996	C	T	rs146510084	D137N	nonSynonymous	23.6	0.000934	232597706	0.0008484	0.000284747	0.0075246	0	6.05767E-05	byCluster,byFrequency,by1000G
POLE4	chr2	74958840	C	G	Novel	P54R	nonSynonymous	29.5	-	75185967	-	-	-	-	-	-
POLE4	chr2	74958729	G	T	rs12366	G17V	nonSynonymous	23.3	0.396426	75185856	0.204	0.499827824	0.404100529	0.470588235	0.340281856	byCluster,byFrequency,by2Hit2Allele,byHapMap,by1000G
PSMD4	chr1	151266017	C	T	Novel	S223F	nonSynonymous	32	-	151238493	-	-	-	-	-	-
PSMD4	chr1	151266059	G	A	Novel	R237Q	nonSynonymous	24.4	-	151238535	-	-	-	-	-	-
PSMD4	chr1	151266113	G	A	Novel	G255D	nonSynonymous	28.4	-	151238589	-	-	-	-	-	-
PSMD4	chr1	151266358	C	T	rs181572831	R275C	nonSynonymous	24.6	0.000055	151238834	0.00004942	1.49835E-05	9.60984E-05	0	0.000121124	byCluster,byFrequency,by1000G
PTPN9	chr15	75524213	A	G	rs150017042	I98T	nonSynonymous	26.6	0.000008	75816554	0.000008236	0	9.61354E-05	0	0	byCluster
PTPN9	chr15	75473746	C	T	rs186045366	R384H	nonSynonymous	14.7	0.000873	75766087	0.0008566	0	0.00048506	0	0	byCluster,byFrequency,by1000G
PTPN9	chr15	75505708	C	T	rs146356869	R312H	nonSynonymous	23.8	0.000116	75798049	0.0001153	0.000195219	9.61169E-05	0	0	byCluster,byFrequency
PTPN9	chr15	75470703	T	C	rs150528240	T446A	nonSynonymous	11.1	0.000486	75763044	0.0004859	0.000839228	0.000288351	0	0	byCluster,byFrequency
PTPN9	chr15	75505702	T	A	rs149279759	N314I	nonSynonymous	19.9	0.000659	75798043	0.0006671	0.001082316	0.000192308	0	6.1237E-05	byCluster,byFrequency,by1000G
PYCR1	chr17	81936151	A	C	rs138792258	M37R	nonSynonymous	12.6	0.000141	79894027	0.00014	0.000257576	0	0	0	byCluster,byFrequency
PYCR1	chr17	81935479	G	A	rs150227130	T59M	nonSynonymous	25.8	0.000267	79893355	0.0002227	0.00043535	0	0	7.00574E-05	byCluster,byFrequency,by1000G
PYCR1	chr17	81934958	C	T	rs199585131	V170I	nonSynonymous	20.9	0.000145	79892834	0.0001402	0.000248927	0	0	0	byCluster,byFrequency
RANGAP1	chr22	41256754	A	T	-	V282D	nonSynonymous	18.3	-	41652758	-	-	-	-	-	-
RANGAP1	chr22	41256076	G	C	rs12167166	Q340E	nonSynonymous	13.2	0.000429	41652080	0.0003706	0	0.004273504	0	0	byCluster,byFrequency,by1000G
RANGAP1	chr22	41264743	G	A	rs148292488	A134V	nonSynonymous	22	0.000222	41660747	0.0001977	0	0.00230858	0	0	byCluster,byFrequency,by1000G
RANGAP1	chr22	41256749	T	C	rs148624391	I284V	nonSynonymous	23.3	0.000091	41652753	0.0000906	0.000120941	0	0	0.000181906	byCluster,byFrequency
RANGAP1	chr22	41256253	G	C	rs114673061	A309G	nonSynonymous	22.6	0.001836	41652257	0.00168	0.000314928	0.016454965	0	0	byCluster,byFrequency,by1000G
RANGAP1	chr22	41264747	C	G	rs2229752	E133Q	nonSynonymous	25.4	0.00004	41660751	-	-	-	-	-	byCluster,byFrequency,by1000G
RANGAP1	chr22	41256733	C	T	rs374322211	R289H	nonSynonymous	20.1	0.0001	41652737	0.00009884	0.000105964	0	0	0.000303398	byCluster,byFrequency
RANGAP1	chr22	41258030	G	C	rs772732178	A231G	nonSynonymous	25	0.000017	41654034	0.00001647	3.01087E-05	0	0	0	byFrequency

RANGAP1	chr22	41254375	G	A	rs777615097	P398L	nonSynonymous	10.3	0.000008	41650379	0.000008236	0	0	0.000115607	0	unknown
RANGAP1	chr22	41264755	T	A	rs780709524	Q130L	nonSynonymous	18	0.000008	41660759	0.000008236	1.50047E-05	0	0	0	unknown
RAPGEFL1	chr17	40184583	T	A	Novel	D95E	nonSynonymous	10.1	-	38340835	-	-	-	-	-	-
RAPGEFL1	chr17	40193768	C	G	rs143788634	L506V	nonSynonymous	23.8	0.000157	38350020	0.0001565	0	0.001730104	0	0	byCluster,byFrequency
RAPGEFL1	chr17	40191625	A	T	rs372662080	M369L	nonSynonymous	21.7	0.000102	38347877	0.00007415	0	0.001101591	0	0	byCluster,byFrequency,by1000G
RAPGEFL1	chr17	40188916	G	A	rs763119373	R144H	nonSynonymous	28.6	0.000025	38345168	0.00002471	0	0.000290529	0	0	byCluster,byFrequency
RAPGEFL1	chr17	40193408	C	T	rs767817765	R468W	nonSynonymous	27.8	0.000025	38349660	0.00002471	1.49849E-05	0.000192271	0	0	byFrequency
RAPGEFL1	chr17	40189243	G	A	rs768709613	V177M	nonSynonymous	25.4	0.000008	38345495	0.000008236	0	0	0	6.0562E-05	unknown
RGS13	chr1	192659493	G	C	rs16834603	L150F	nonSynonymous	17.3	0.013914	192628623	0.012	0.000113078	0.139133102	0	0.000190452	byCluster,byFrequency,byHapMap,by1000G
RGS13	chr1	192644342	G	A	rs768361269	R3K	nonSynonymous	14.9	0.000017	192613472	0.00001647	3.00661E-05	0	0	0	byFrequency
RNPEP	chr1	201983051	C	G	Novel	P129A	nonSynonymous	12.6	-	201952179	-	-	-	-	-	-
RNPEP	chr1	201983058	G	C	Novel	R131P	nonSynonymous	16.2	-	201952186	-	-	-	-	-	-
RNPEP	chr1	201983060	G	C	Novel	A132P	nonSynonymous	12.1	-	201952188	-	-	-	-	-	-
RNPEP	chr1	201983063	G	C	Novel	A133P	nonSynonymous	19.4	-	201952191	-	-	-	-	-	-
RNPEP	chr1	201983066	G	C	Novel	E134Q	nonSynonymous	12.6	-	201952194	-	-	-	-	-	-
RNPEP	chr1	201983077	G	C	Novel	Q137H	nonSynonymous	23.2	-	201952205	-	-	-	-	-	-
RNPEP	chr1	201983079	T	G	Novel	V138G	nonSynonymous	25.5	-	201952207	-	-	-	-	-	-
RNPEP	chr1	201983087	A	C	Novel	T141P	nonSynonymous	15.7	-	201952215	-	-	-	-	-	-
RNPEP	chr1	201983090	T	G	Novel	Y142D	nonSynonymous	31	-	201952218	-	-	-	-	-	-
RNPEP	chr1	201983091	A	C	Novel	Y142S	nonSynonymous	28.8	-	201952219	-	-	-	-	-	-
RNPEP	chr1	201983105	G	C	Novel	G147R	nonSynonymous	31	-	201952233	-	-	-	-	-	-
RNPEP	chr1	201997413	C	T	rs79980228	R317C	nonSynonymous	34	0.006233	201966541	0.005807	0.00014984	0.063328849	0	6.0562E-05	byCluster,byFrequency,by1000G
RNPEP	chr1	202005604	G	T	rs190562495	G614V	nonSynonymous	29.6	0.000127	201974732	0.0001235	0.000179813	0	0	0	byCluster,byFrequency,by1000G
RNPEP	chr1	202001659	G	C	rs143039696	A440P	nonSynonymous	24.1	0.000499	201970787	0.0004777	0.000809401	9.61538E-05	0	0	byCluster,byFrequency,by1000G
RNPEP	chr1	202005651	G	A	rs148685424	A630T	nonSynonymous	14.3	0.000016	201974779	0.001408	0.001798022	0	0	0.002785853	byCluster,byFrequency,by1000G
RNPEP	chr1	201996189	G	T	rs74710742	K260N	nonSynonymous	20.7	0.000008	201965317	0.011	0.015496673	0.003843936	0	0.00660126	byCluster,byFrequency,by1000G
RNPEP	chr1	202003320	C	G	rs146663755	P504A	nonSynonymous	22.6	0.000799	201972448	0.0001402	4.50E-05	0.001155	0.0001156	0	byCluster,byFrequency,by1000G
RNPEP	chr1	201989500	G	A	rs201047350	G236R	nonSynonymous	34	0.000058	201958628	0.00005765	2.99787E-05	0.000384394	0.000115554	0	byCluster,byFrequency
RNPEP	chr1	201983040	C	T	rs201819747	S125F	nonSynonymous	19.3	0.000782	201952168	0.0002353	0.002619325	0	0	0	byCluster,byFrequency
RNPEP	chr1	201997416	T	A	rs374485540	S318T	nonSynonymous	24	0.000033	201966544	0.00003295	0	0.000288295	0	0	byCluster,byFrequency
RNPEP	chr1	202004437	G	A	rs3820439	V579I	nonSynonymous	13.9	0.000008	201973565	0.325	0.279537132	0.252552495	0.377842227	0.496183669	byCluster,byFrequency,by2Hit2Allele,byHapMap,by1000G
RNPEP	chr1	201982956	G	T	rs549263851	R97L	nonSynonymous	12.9	0.000669	201952084	0.000293	0.000996016	0	0	0.000841184	byFrequency,by1000G
RNPEP	chr1	201983054	T	G	rs557054580	C130G	nonSynonymous	14.1	0.001254	201952182	0.0002764	0	0.0215311	0	0	byCluster,byFrequency,by1000G
RNPEP	chr1	201996214	G	T	rs575051595	E269*	stopGain	41	0.000099	201965342	0.00009884	7.49356E-05	0	0.000808875	0	byCluster,byFrequency
RNPEP	chr1	202003375	T	C	rs749095534	I522T	nonSynonymous	20.3	0.000149	201972503	0.0001483	0.000271035	0	0	0	byFrequency
RNPEP	chr1	201999913	A	T	rs750504839	T368S	nonSynonymous	12.4	0.000017	201969041	0.00001647	0	0.000200441	0	0	byFrequency
RNPEP	chr1	201983096	G	C	rs758926508	V144L	nonSynonymous	25.3	0.000009	201952224	0.000008978	0	0	0	0	unknown
RNPEP	chr1	202003449	C	T	rs760016335	P547S	nonSynonymous	25.6	0.000009	201972577	0.000008237	1.69848E-05	0	0	0	unknown
S100Z	chr5	76875477	C	T	rs148288662	R40*	stopGain	37	0.000648	76171302	0.0008686	0.001415876	0.000102103	0	0	byCluster,byFrequency,by1000G
S100Z	chr5	76875427	A	C	rs1320308	E23A	nonSynonymous	23.1	0.385973	76171252	0.616	0.678840215	0.57377551	0.568688982	0.352296135	byCluster,byFrequency,byOtherPop,by2Hit2Allele,byHapMap,by1000G
SCLY	chr2	238083338	C	T	rs143511249	R298W	nonSynonymous	22.3	0.000066	238991979	0.00006589	5.99502E-05	9.61723E-05	0	0.000121153	byCluster,byFrequency
SCLY	chr2	238082165	G	A	rs145727476	V253M	nonSynonymous	33	0.000052	238990806	0.00004942	7.9159E-05	0.000100402	0	0	byCluster,byFrequency
SCLY	chr2	238098333	C	T	rs148012854	A447V	nonSynonymous	19.3	0.000061	239006974	0.00048	0.000784071	0.000519076	0.000271813	0.000294291	byCluster,byFrequency
SCLY	chr2	238081747	G	A	rs3210400	A183T	nonSynonymous	14.3	0.353028	238990388	0.357	0.432888422	0.082564398	0.211667826	0.22497877	byCluster,byFrequency,byHapMap,by1000G
SLC46A2	chr9	112886572	C	T	rs144666415	V420M	nonSynonymous	28.2	0.000124	115648852	0.0001235	1.4984E-05	0.001153181	0	6.0562E-05	byCluster,byFrequency
SLC46A2	chr9	112889585	G	A	rs16917454	A366V	nonSynonymous	23.2	0.001687	115651865	0.001499	3.01468E-05	0.016082435	0	0.000127828	byCluster,byFrequency,byHapMap,by1000G
SLC46A2	chr9	112890656	C	T	rs145291738	R9Q	nonSynonymous	14.2	0.00086	115652936	0.0008087	9.63639E-05	0.009214032	0	0	byCluster,byFrequency,by1000G
SLC46A2	chr9	112879815	C	T	rs74339125	V459M	nonSynonymous	25.1	0.003584	115642095	0.00369	0.00594917	0.000960984	0	0.000423985	byCluster,byFrequency,by1000G
SLC46A2	chr9	112889913	C	T	rs112054166	D257N	nonSynonymous	22.7	0.006124	115652193	0.006293	0.00978717	0.001249279	0.000115554	0.00121124	byCluster,byFrequency,by1000G
SLC46A2	chr9	112889792	A	G	rs756996058	V297A	nonSynonymous	17.4	0.000016	115652072	0.00001647	1.49885E-05	0	0	0	byFrequency
SLC46A2	chr9	112890051	A	C	rs757764932	C211G	nonSynonymous	23.7	0.000025	115652331	0.00002471	4.56649E-05	0	0	0	byFrequency
SNX17	chr2	27374354	A	C	-	K178Q	nonSynonymous	23.9	-	27597221	-	-	-	-	-	-
SNX17	chr2	27374721	T	C	rs142888525	M215T	nonSynonymous	23	0.000099	27597588	0.00009884	0.00014988	0.000192197	0	0	byCluster,byFrequency
SNX17	chr2	27374730	G	A	rs145463878	R218Q	nonSynonymous	23.5	0.00015	27597597	0.0001483	0.000239808	0	0	0	byCluster,byFrequency,by1000G
SNX17	chr2	27373276	G	A	rs78946094	E96K	nonSynonymous	24.1	0.003254	27596143	0.003311	0.005533063	0.000770713	0	0.000181818	byCluster,byFrequency,by1000G
SNX17	chr2	27371275	A	C	rs147740391	N24H	nonSynonymous	26.6	0.005152	27594142	0.005271	0.00784503	0.001066098	0.000115929	0.000484731	byCluster,byFrequency,by1000G
SNX17	chr2	27375882	C	T	rs377585045	R339W	nonSynonymous	26.3	0.000008	27598749	0.00014	0	0.001057896	0.00023116	0.000121403	byCluster,byFrequency
SNX17	chr2	27376335	G	A	rs747235132	G402D	nonSynonymous	23	0.000008	27599202	0.000008236	1.50693E-05	0	0	0	unknown
SNX17	chr2	27376320	G	A	rs751199615	R397H	nonSynonymous	24.7	0.000017	27599187	0.00001647	0	0	0	0.00012444	byCluster,byFrequency
SNX17	chr2	27375112	C	T	rs770828684	R245W	nonSynonymous	27.2	0.000082	27597979	0.00008236	4.49775E-05	0	0	6.05767E-05	byFrequency
SPECC1L	chr22	24347122	C	T	rs148229290	P897S	nonSynonymous	22.7	0.001495	24743090	0.001359	1.49858E-05	0.000480492	0.017679686	0.000181686	byCluster,byFrequency,by1000G
SPECC1L	chr22	24365533	C	T	rs190313411	S962L	nonSynonymous	25.4	0.000047	24761501	0.00004118	2.99742E-05	0	0.000231107	6.0562E-05	byCluster,byFrequency,by1000G
SPECC1L	chr22	24328848	A	G	rs6004132	T717A	nonSynonymous	14.8	0.000512	24724816	0.0004859	3.15696E-05	0.004540967	0	0	byCluster,byFrequency,byHapMap,by1000G
SPECC1L	chr22	24334453	G	A	rs139167350	V814I	nonSynonymous	25.9	0.000247	24730421	0.0002471	0.000419551	0	0	0	byCluster,byFrequency
SPECC1L	chr22	24365530	C	T	rs5996694	A961V	nonSynonymous	22.8	0.002073	24761498	0.00215	0.001633546	0	0.000231107	6.0562E-05	byCluster,byFrequency,by1000G
SPECC1L	chr22	24313452	C	T	rs35783914	S98F	nonSynonymous	24.7	0.003657	24709420	0.003772	0.005531405	0.001057489	0	0.000970403	byCluster,byFrequency,by1000G
SPECC1L	chr22	24322440	G	A	rs55723436	R487H	nonSynonymous	32	0.005641	24718408	0.005716	0.00873763	0.002527216	0	0.002483343	byCluster,byFrequency,by1000G
SPECC1L	chr22	24321542	C	T	rs56168869	L188F	nonSynonymous	25.6	0.007082	24717510	0.007232	0.009006984	0.000673465	0	0.001514417	byCluster,byFrequency,by1000G
SPECC1L	chr22	24321580	A	T	rs56112030	L200F	nonSynonymous	17.4	0.000008	24717548	0.012	0.011450496	0.00163966	0.002543353	0.025681405	byCluster,byFrequency,by1000G

SPECC1L	chr22	24365499	G	A	rs204718	V951M	nonSynonymous	17.8	0.000071	24761467	1	1	1	0.999075358	1	byCluster,byFrequency,byHapMap,by1000G
SPECC1L	chr22	24321476	A	G	rs199673620	M166V	nonSynonymous	20.9	0.000617	24717444	0.000626	0.00107891	0.000288406	0	0	byCluster,byFrequency,by1000G
SPECC1L	chr22	24313419	C	T	rs199815517	S87F	nonSynonymous	24.1	0.000008	24709387	0.000008236	1.49858E-05	0	0	0	byCluster
SPECC1L	chr22	24321450	G	A	rs201337978	R157Q	nonSynonymous	17.8	0.000362	24717418	0.0003624	0.000449559	0	0	0.000848074	byCluster,byFrequency
TBC1D17	chr19	49884676	G	T	-	E454D	nonSynonymous	31	-	50387933	-	-	-	-	-	-
TBC1D17	chr19	49888574	A	G	Novel	S633G	nonSynonymous	27.3	-	50391831	-	-	-	-	-	-
TBC1D17	chr19	49884690	T	C	rs142816596	M459T	nonSynonymous	26.1	0.000318	50387947	0.0002883	0	0	0.003816794	6.05767E-05	byCluster,byFrequency,by1000G
TBC1D17	chr19	49882111	C	T	rs151237175	H200Y	nonSynonymous	21.5	0.000198	50385368	0.0001977	0.000299724	0	0	6.0562E-05	byCluster,byFrequency,by1000G
TBC1D17	chr19	49882046	C	T	rs146631204	P178L	nonSynonymous	34	0.000008	50385303	0.001038	0.001590636	9.61908E-05	0	0.00096911	byCluster,byFrequency
TBC1D17	chr19	49887746	A	G	rs149454222	N524S	nonSynonymous	23.3	0.001283	50391003	0.001244	0.002235279	0.000106406	0	0.000128551	byCluster,byFrequency,by1000G
TBC1D17	chr19	49882878	C	T	rs144381223	R305W	nonSynonymous	27.6	0.00134	50386135	0.001351	0.002268002	0.000103263	0	0.000521921	byCluster,byFrequency,by1000G
TBC1D17	chr19	49882362	G	C	rs200460228	D254H	nonSynonymous	23.9	0.00004	50385619	0.00004118	0	0.000292227	0	0	byCluster,byFrequency,by1000G
TBC1D17	chr19	49887766	T	G	rs371659502	C531G	nonSynonymous	27	0.000046	50391023	0.00004119	8.33806E-05	0	0	0	byCluster,byFrequency
TBC1D17	chr19	49880388	C	T	rs371768869	S102L	nonSynonymous	12.6	0.000116	50383645	0.0001153	0.00021234	0	0	0	byCluster,byFrequency
TBC1D17	chr19	49888509	C	T	rs376165198	P611L	nonSynonymous	23.7	0.000294	50391766	0.0001477	0	0.003117693	0	0	byCluster,byFrequency,by1000G
TBC1D17	chr19	49887728	C	T	rs763562597	T518I	nonSynonymous	32	0.000009	50390985	0.000008239	1.56769E-05	0	0	0	unknown
TIMM8B	chr11	112086719	G	A	rs368516346	A17V	nonSynonymous	22.9	0.00008	111957443	0.00005768	0.000121755	0	0	0	byCluster,byFrequency
UBL4A	chrX	154485830	C	A	rs781866836	V102F	nonSynonymous	26.8	0.000012	153714169	0.00000826	0	0	0	0.000161734	unknown
ZNF629	chr16	30784410	C	A	Novel	G25C	nonSynonymous	30	-	30795731	-	-	-	-	-	-
ZNF629	chr16	30781848	T	A	rs61741652	H827L	nonSynonymous	11.1	0.004595	30793169	0.003923	0.000184695	0.044731405	0	0	byCluster,byFrequency,by1000G
ZNF629	chr16	30784160	C	G	rs199766404	K56N	nonSynonymous	25.6	0.000713	30795481	0.000597	0.001159299	0	0	0	byCluster,byFrequency
ZNF629	chr16	30784473	C	T	rs374972176	E4K	nonSynonymous	23.7	0.000091	30795794	0.00003468	0.000205508	0	0	0	byCluster,byFrequency
ZNF629	chr16	30784224	G	T	rs748667104	P35H	nonSynonymous	22.6	0.000012	30795545	0.00002484	4.35161E-05	0	0.000166058	0	byFrequency
ZNF629	chr16	30782776	C	T	rs766764636	D518N	nonSynonymous	26.8	0.000008	30794097	0.000008239	0	0	0	6.05767E-05	unknown