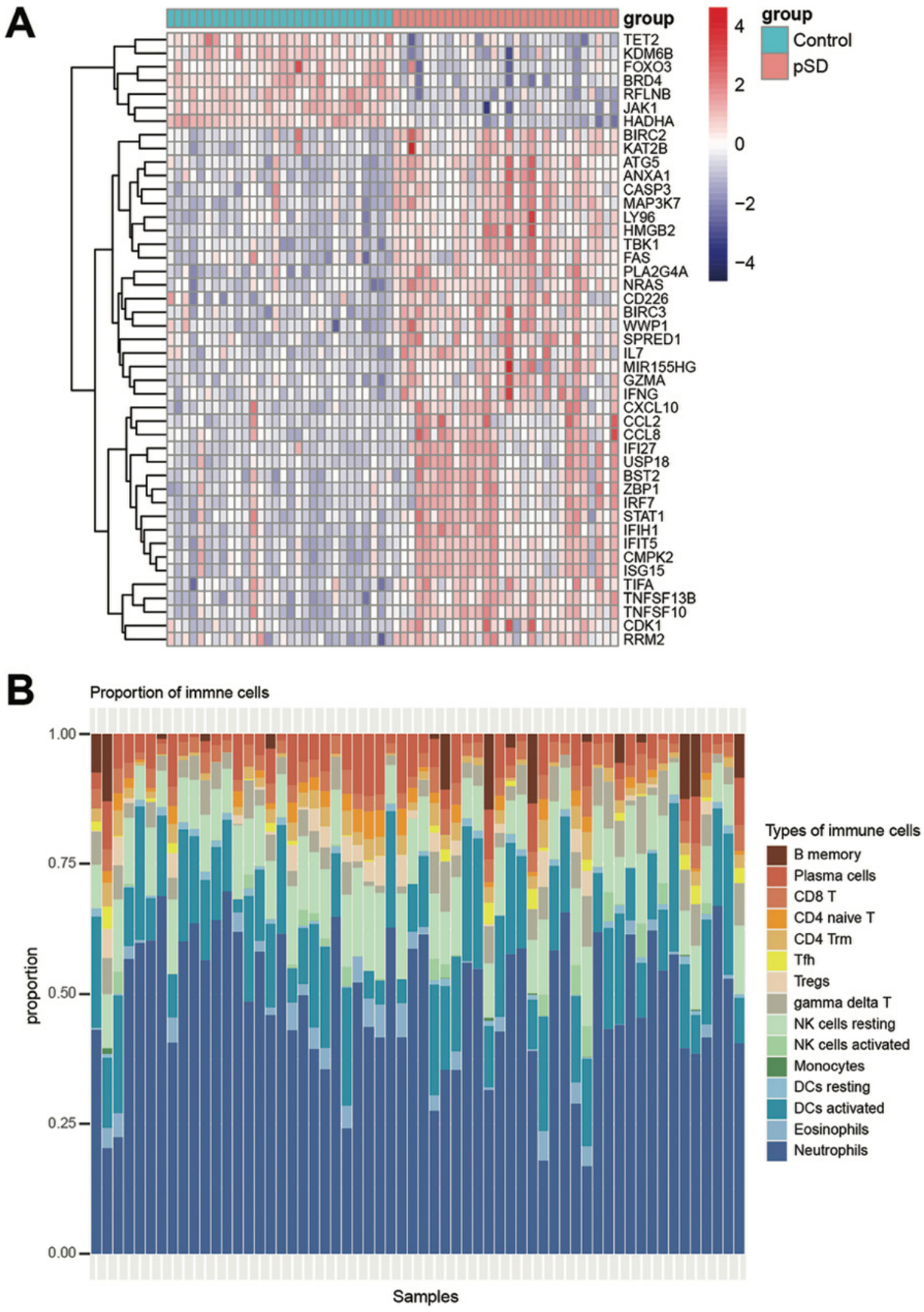
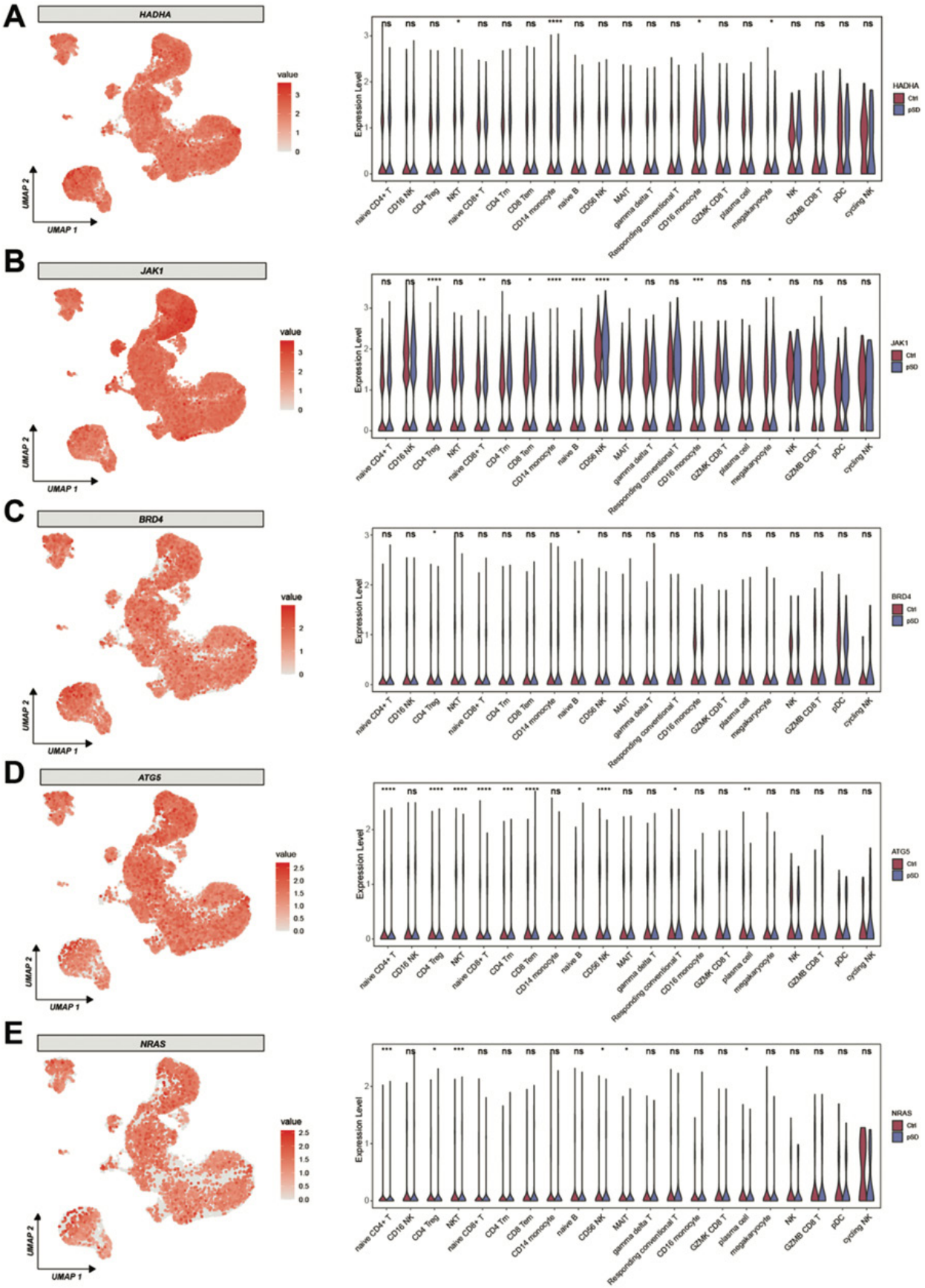
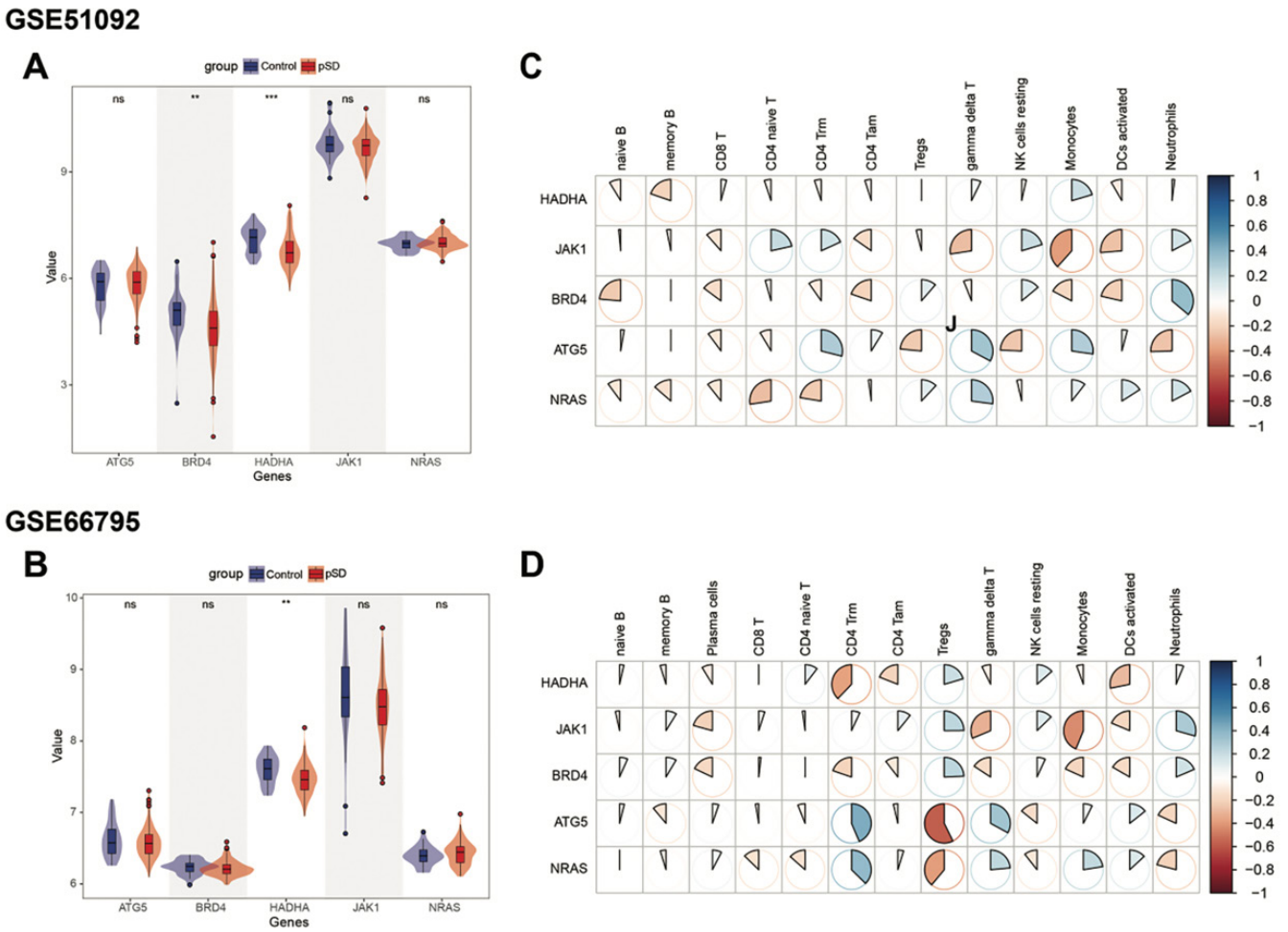


Supplementary Fig. S1. The expression and immune cell type composition of PSGs. (**A**) Heatmap of the expression of 45 PSGs in pSD. (**B**) Histogram of the relative abundance of immunocells in pSD.



Supplementary Fig. S2. The expression of hub PSGs at the single-cell level. The distribution of hub PSGs is marked with red dots in UMAP plots. The violin plots show the expression of HADHA, JAK1, BRD4, ATG5, and NRAS (*p<0.05, **p<0.01, ***p<0.001, ****p<0.0001).



Supplementary Fig. S3. Verification of hub PSGs in GSE51092 and GSE66795 datasets. (**A, B**) Violin plot of hub PSGs expression in pSD. (**C, D**) Heatmap showing the correlation of immune cells with hub PSGs. (*p<0.05, **p<0.01, ***p<0.001)

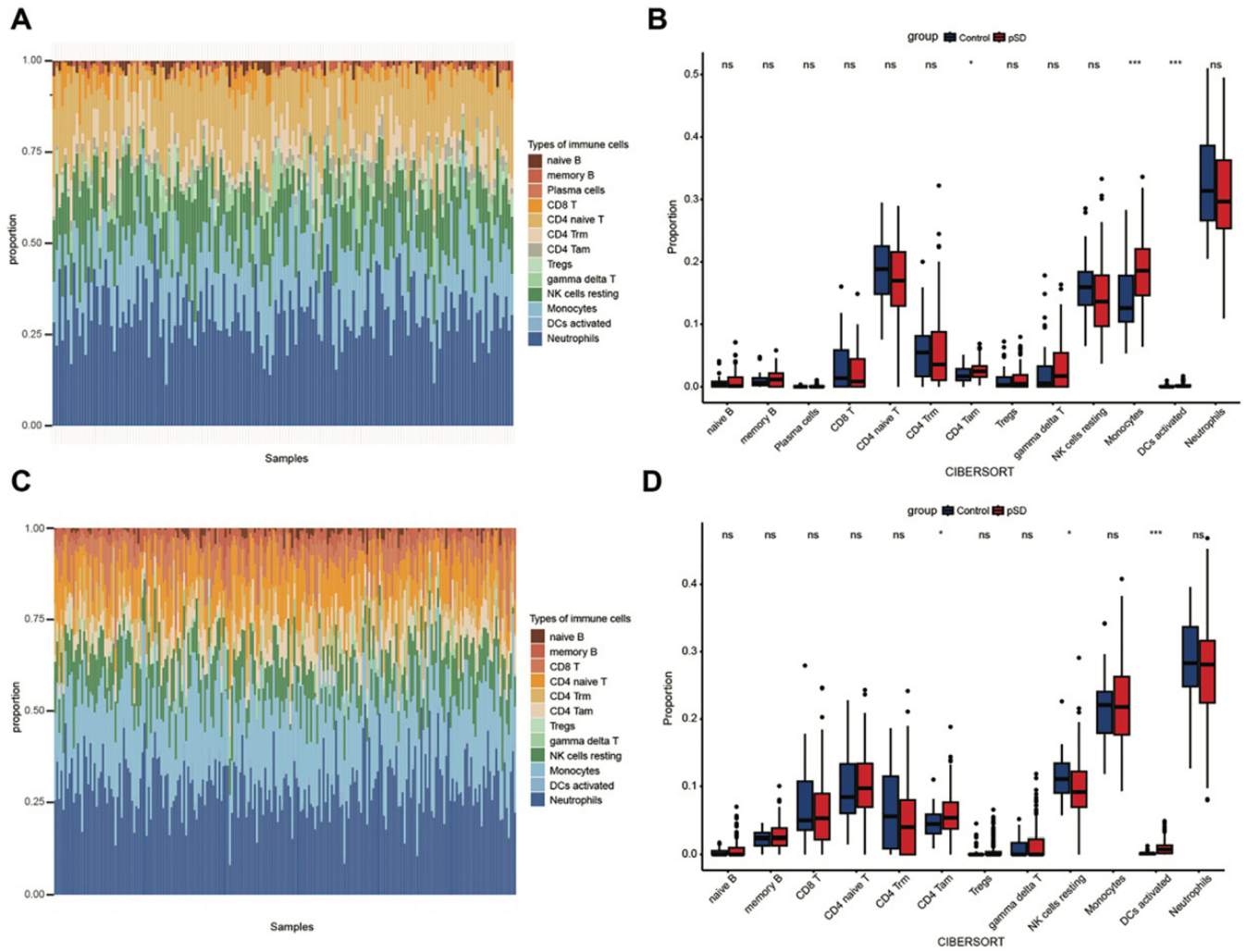
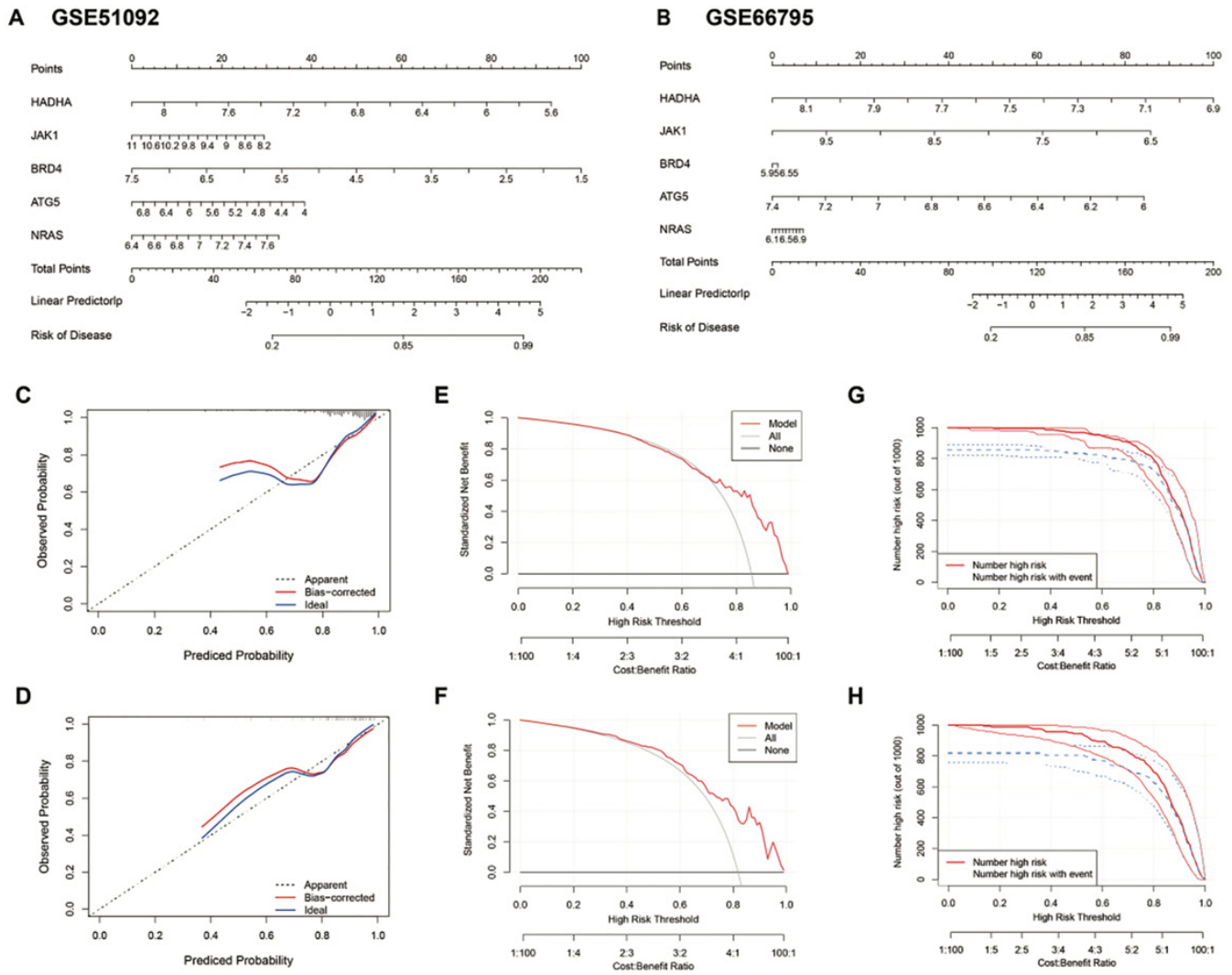
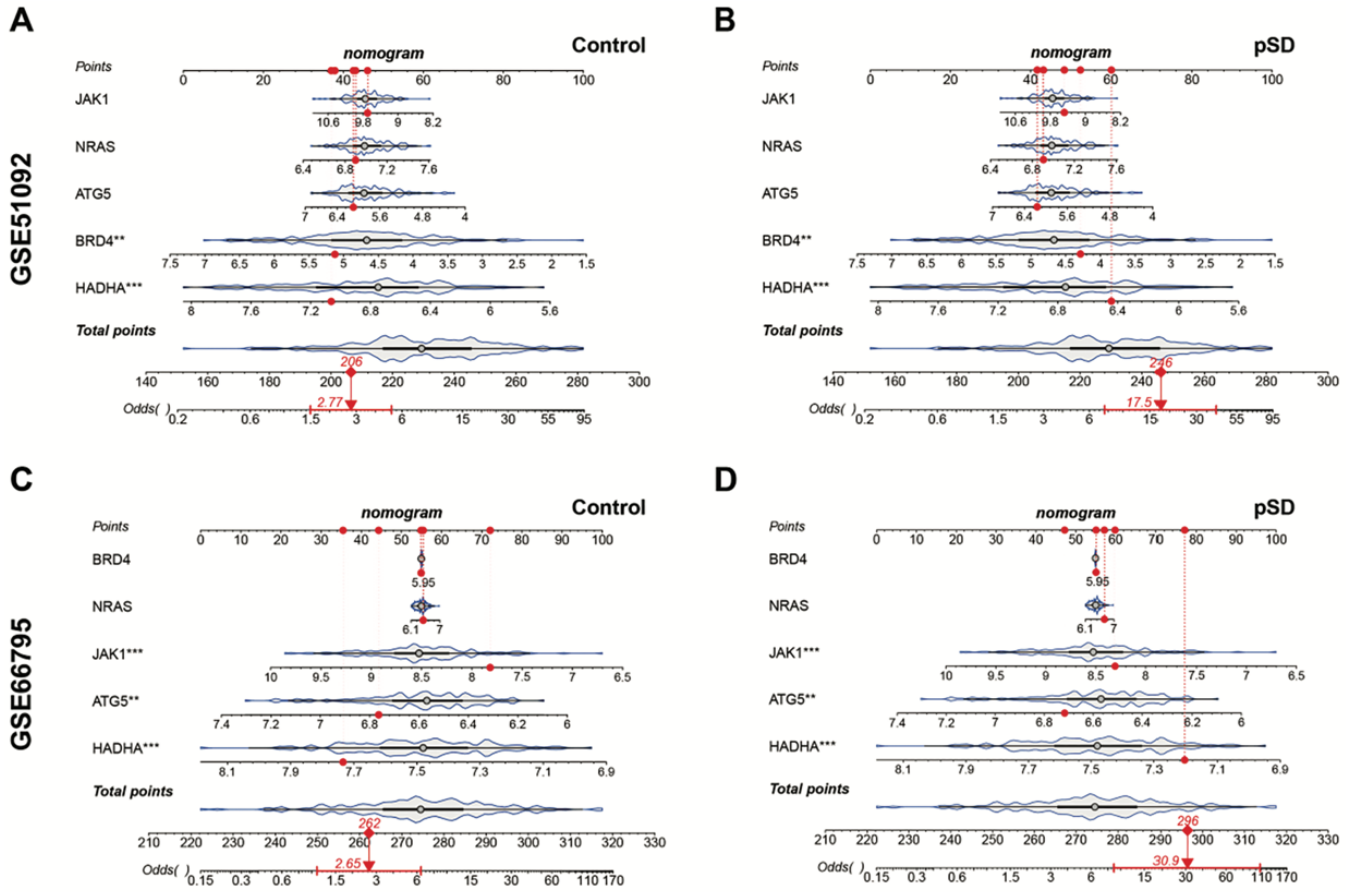


Fig. S4. The immune cell type composition of PSGs in GSE66795 and GSE51092. (**A**) Histogram of the relative abundance of immunocells in pSD in GSE66795. (**B**) The proportion of immune cells in the pSD and control groups in GSE66795. (**C**) Histogram of the relative abundance of immunocells in SS in GSE51092. (D) The proportion of immune cells in [a]the SS and control groups in GSE51092. (*p<0.05, **p<0.01, ***p<0.001)



Supplementary Fig. S5. Construction of the nomogram model of GSE51092 and GSE66795. (**A, B**) Construction of the nomogram model based on the hub PSGs. (**C**) Predictive robustness of the nomogram model as revealed by the calibration curve in GSE51092. (**D**) Predictive robustness of the nomogram model as revealed by the calibration curve in GSE66795. (**E**) Decisions based on the nomogram model may benefit pSD patients in GSE51092. (**F**) Decisions based on the nomogram model may benefit pSD patients in GSE66795. (**G**) Clinical impact of the nomogram model as assessed by the clinical impact curve in GSE51092. (**H**) Clinical impact of the nomogram model as assessed by the clinical impact curve in GSE66795.



Supplementary Fig. S6. Dynamic nomograms. (**A**) An example for a healthy control in GSE51092. (**B**) An example for predicting the probability of a patient having pSD in GSE51092. (**C**) An example for a healthy control in GSE66795. (**D**) An example for predicting the probability of a patient having pSD in GSE66795. (**p*<0.05, ***p*<0.01, ****p*<0.001).

Supplementary Table 1. Summary information of datasets.

Dataset	Subjects	Tissue	Experiment type	Platform	Collection country	Reference	PMID
GSE84844	30 pSD vs. 30 HC	Whole blood	Expression profiling by array	GPL570	Japan	Tasaki S et al.	28522454
GSE51092	190 pSD vs. 32 HC	PBMC	Expression profiling by array	GPL6884	USA	Lessard CJ et al.	24097067
GSE66795	131 pSD vs. 29 HC	Whole blood	Expression profiling by array	GPL10558	United Kingdom	James K et al.	26694930
GSE157278	5 pSD vs. 5 HC	PBMC	Expression profiling by high throughout sequencing	GPL24676	China	Hong X et al.	33603736

Supplementary Table 2. The list of 1539 PRGs.

AIM2	FADD	BHLHE41	ERP44	SMAD3	RAC1	CDK2	SOCS3	USP18	CIC	CXCL9	MAOB	TRL-TAG1-1	CD180	NAPSB	CRY2
CASP1	MEFV	CD73	CDC37	LGALS3	CDK7	VEGFC	WTAP	PLK2	GYPA	MFHAS1	PAK1	MIR141	IL7	IL1R1	DYNC1I1
CASP3	APOL1	NT5E	TRPM2	SMAD2	MIR146A	CASP10	USP8	NTN1	LGALS1	SPOP	KDM6B	MIR212	MBOAT4	ARMCX3	EPHA4
CASP4	VIM	PI3K	PDCD6IP	ULK1	ITIH4	ITCH	FFAR4	UNC5B	TRIM16	YBX1	CIITA	NSD2	IRF8	PRKCB	KCNA3
CASP5	CAPN1	AKT	VPS4B	MAP1LC3B	CDKN2A	HAVCR1	ARL2	FOXN1	TNFRSF10A	LACC1	CD27	ADARB2	DAND5	APOBEC3D	AHNAK2
CASP6	JUN	FOXO1	ATG3	AGT	APEX1	SOX10	PELI1	PDCD6	IER3	TNFSF13	SMYD1	HOXA9	MIR148A	MIR130A	PEA15
CASP8	XIST	P38-MAPK	STXBP3	ROS1	DGCR8	PPP1R3A	ATF2	PLSCR4	DFFB	CD80	EEF1A2	MAP1S	TNFRSF21	CLMP	GHRLOS
CASP9	MIR139	MAPK14	VPS28	IFNA1	CCL5	CYR61	IL22	ATG2B	BCL3	POU4F1	LONP1	PHLPP2	PAH	KDM3A	SNHG4
ELANE	ALK	VDR	NCR1	CXCR4	ANXA1	LDLR	UMOD	SLC39A5	JAK3	MGEA5	AMIGO2	MIR132	MYOD1	BRD2	HGF
GPX4	SIRT1	SYK	IL27	HSPA5	DPP4	OXT	CUX1	LRRC15	SMC4	CAMKMT	YAF2	CSF2	DTX1	BRDT	UCP1
GSDMA	BIRC3	BDNF	SEC22B	ALDH2	CLEC4E	MPV17	AZU1	ACVR2B-AS1	CDK1	SEMA4D	9-Mar	MAP4	LDB3	SNHG14	GPC3
GSDMB	BIRC2	KLF2	SIGLEC14	DNMT1	CA1	GABARAPL2	SCAF8	CYTH4	VOPP1	SPOCD1	APOM	MMS	MYBPC2	SNHG7	HOXC-AS2
GSDMC	UBE2D2	HK1	CGAS	F3	GABPA	SPHK1	TRIM29	CD59	STOML2	OGDHL	CPB1	SELENOO	IL5	ANXA7	PDHA1
GSDMD	LY96	RP105/CD180	F7AMM8	PIK3CB	BMPR2	HK2	ALPK1	LEPR	ALG1	MIR106B	LPAR1	NSD1	DUSP6	PIK3R2	WWP1
GSDME	RIPK3	NLRX1	G3QNY2	APP	CALCA	EPCAM	P2RY2	PTTG1	TIFA	CLSTN1	STAT5A	DHX58	NLRC5	RPAIN	CAMK2N1
IL18	GLMN	ASK	A0A2I2YG62	PDCD1	CASP2	IFI27	TIMP2	RFC2	BOK	KCNK5	DDIT4	TRPV2	CASP14	DCAF1	TTLL1
IL1B	IRGM	TRAF6	LOC100068406	CD4	BRAF	USP25	LOXL1-AS1	LRR1	NR0B1	TNFSF10	PDIA4	SRGN	NNT	GPT	PAK2
IL6	NLRP13	BAK	G1KWU3	JAK2	ROCK1	ERBIN	AOC1	ATP2B1-AS1	RCN2	ACLY	MT1L	NDUFA13	PIK3CD	AXL	MB
NLRC4	TUBB6	NFE2L2	F7GCS6	TBK1	KLF6	LITAF	GFAP	C1QTNF3	KRAS	ACACA	SPATA2	C1QTNF1	OPRK1	CYGB	NFS1
NLRP1	NOS2	MIR556	F6T749	GBP2	MUC5AC	ANXA3	CCL3	CRKL	SNIP1	TCF4	ELP2	SUMO1	KAT2B	FOSL2	GPR35
NLRP2	NOS1	UBR2	F6S7R9	TNFAIP3	IGF1	HMGCR	AIFM1	IER2	BAG3	SCIMP	EGLN1	HOMER1	EDNRB	LY6D	NEXN-AS1
NLRP3	PYDC2	PCSK9	LOC102165484	ERN1	IL4	ACAN	LAMP1	MIR34C	VPS51	ING5	BIRC5	USP46	CTSL	HCG11	CD209
NLRP6	IFI16	BRD4	G3QQR5	AIF1	TIGAR	SMPD1	C5AR1	COX8A	USP9X	PVR	CHEK1	ZEB2	KNG1	SPI1	INPP5D
NLRP7	AKT1	IKBKE	G3QV30	HDAC3	NOX1	SLC7A11	ADM	ADAM10	TNC	NECTIN2	DIABLO	AFP	TMPRSS11D	CDH5	GCLM
NOD1	EGFR	PKM	CASPA	CAT	RARRES2	IRF9	ALOX5	NR2E3	CALCR	CD226	IBSP	CES2	CD33	PODXL	SYVN1
NOD2	TP63	CRTAC1	CASPB	ITGAM	KDR	ITGAX	DNMT3B	MIR302C	STAT5B	ARID5B	RCN1	MAVS	SCYL1	SMARCA4	HADHA
PJVK	ATF6	CTSV	GSDMEA	VEGFA	PRDX3	ADRB2	MIR335	SERPINH1	POSTN	SOX4	SPRED1	TRIM8	CDK5	TWNK	PIF1
PLCG1	IRF1	UTS2	GSDMEB	IGF2BP1	BNIP3L	7-Mar	TNFRSF4	SNHG3	MAPK9	NCAPG	LETMD1	POC1B	JAZF1	COX1	GSTK1
PRKACA	IRF2	MLKL	NAIP2	SPP1	UQCRC1	SNAP25	IL9	KLRK1	GZMH	NINJ2	MLRL	ZNF667-AS1	CD40LG	TACR1	MIR137
PYCARD	POP1	APOE	RGD1359449	FAS	NPPA	STUB1	UCP2	TMEM65	GPR146	SLC6A14	RAD9A	SNHG11	AKT2	MAFB	MTUS2
SCAF11	ORMDL3	SDHB	NLRP1A	SIRT6	C3AR1	NOTCH1	FLI1	ERF	AQP5	HDAC4	PTPRD-AS1	THUMPD3-AS1	ETV5	HSPA12A	MET
TIRAP	MDM2	CD274	NAIP6	HOTAIR	DUSP14	KRT80	FPR2	LOXL1	MIR93	TNFSF15	KIAA1671	FLNB-AS1	TGFBI	FASLG	SDC4
TNF	BTK	DLX6-AS1	NLRP1B	TJP1	TRPV1	CD19	TNFRSF11B	ECBL	IGF2BP2	OSBPL3	USP30-AS1	UGDH-AS1	CDIP1	SNHG10	MTNR1B
GZMB	NFKB1	MIR23A	NAIP7	IL37	MIR34A	HOXA5	SPTA1	TRPA1	APBA3	TRIM59	SMURF2	SRI	MIR200B	HKDC1	SLC2A3
GZMA	STAT3	BSG	URR2	EZH2	NOS3	STK11	C5	LAG3	SREBF2	SH2D3C	HCN2	PRDX1	ITGAD	CAST	NR3C1
DHX9	BCL2	PGF	GSDMA2	LGMN	SGK1	ARNTL	TFE3	NKG7	TRIM52	CYP1A1	ORMDL1	MYCNOS	MUL1	ATP5A1	HMBOX1
NLRP9	TLR2	SLC16A4	GSDMC4	MPO	ZFAS1	PGAM5	COL2A1	IL23R	ANGPT2	KIAA0391	APOL2	ZNF32-AS2	ENPP3	MIR193BHG	RUBCN
NAIP	ANXA2	CHRFAM7A	NLRP9B	ALB	MAP3K5	PIK3R1	DES	IL23A	SLC31A2	OPA1	SH2D2A	NR1D1	HERC2	HHLA3	SOX2-OT
HMGB1	IL1RN	MIR124-1	GSDMC2	XBP1	HIF1A	CD8A	ABCA1	IL21	UFM1	ERAP2	TMEM109	CA9	ZNF407	PSG5	GATA1
KCNQ1OT1	BECN1	MIR195	CASP1-A	TICAM1	ITGB2	COL1A1	PPARA	NPAS4	MAP3K14	SFTPB	MRFAP1L1	ZNF532	PPP1CC	FBLN5	
FOXO3	CD14	GSK3B	GSDMA3	MIR29A	PVT1	CCR5	TINCR	HIF1A-AS2	RNASE1	ATP6AP2	EHBP1	CREB3L4	ASIP	DLC1	
MALAT1	GSTO1	PTGS2	GSDMC3	TOMM20	BCAR1	IL2	FHL1	ESRRG	OTUD4	MANF	CPSF6	MBTPS2	MMP7	CRNDE	
APIP	IL13	TRIM24	NAIP1	SOX9	P2RY12	E2F1	CCR2	COL1A2	SIGIRR	CTSS	RND3	BCLAF1	PARK7	USP48	
TXNIP	CHI3L1	MPEG1	NAIP5	DFNB59	FOS	TH	SPECC1	GPR176	HRC	CKLF	NAGLU	PVALB	CCDC18-AS1	PSRC1	
GBP1	PANX1	MIR204	CASP1-B	C3	TF	SMAD7	ATXN1L	ARID1A	CNR2	EZR	LGSN	OSM	FGD5-AS1	CD276	
MIR214	LRPPRC	HOTTIP	IPAH7.8	IFNG	MYC	PTPN2	MIR29B1	TLR1	GOLPH3	KAT6A	IL33	SF1	THPO	MACC1	

NEK7	CXCL8	EPHA2	LOC100068503	TRPV4	CAPN2	MAP3K11	SOCS1	IAPP	POU4F3	AOAH	PMEPA1	MVK	DLX6	CDCA8
GJA1	IL13RA2	ABL1	A0A287A923	RHOA	USP14	PLA2G4A	TNFAIP6	INS	PTAFR	BIK	EPHB2	HDAC8	TMPRSS2	MEX3A
P2RX7	IL32	CDK9	W5MJZ2	CMKLR1	ATG12	PRKG1	NAT10	APOL6	TYMP	TPPP3	BUD13	CRTC2	FURIN	SUGT1
MIR30C1	BST2	TREM1	W5MJV9	OCLN	SRY	PSMB5	APOA1	DSG3	PKLR	TNFAIP1	IQGAP1	MIR149	AHSA1	TXNRD2
MIR22	GPER1	TSLP	W5LZG1	ADIPOQ	S1PR2	PTK2	MINDY3	PKP1	DDX53	DRAM1	TIMD4	SCGB1A1	HSPA8	TYMS
TP53	LYST	ZDHHC1	W5M4Z5	PLK1	RIPK2	TERT	NR1I2	GALNT6	MRPL14	ANKRD22	STIM2	APOC3	HTR2A	MIR410
MALT1	CLEC5A	PTEN	A0A3Q1N5B5	CD68	CDH1	CSF3	DEGS1	TET1	PUSL1	PRDX5	FGF18	STS	CNOT9	HMGB2
AGER	GAS5	DRD2	K7E5T3	AAVS1	HDAC1	HDAC11	GRK2	GNA15	VIP	NCL	CAVIN2	PDCD4	MIR424	TFG
TET2	MIR223	ADORA1	F7GCD9	LCN2	CAV1	ADAMTS5	TLR3	USP11	COL4A5	GSTP1	SPTBN1	YY1	CNR1	MMP1
MIR125A	MIR15A	ADORA2B	J9NVR	MMP3	TNNT2	MIR23B	TSPO	BCL10	MRPL21	IFNB1	NORAD	ADAM17	CRISPLD2	NEIL3
MIR155	MIR20B	ADORA2A	HSPB3	ATF4	DKK1	FENDRR	MIR200C	KISS1R	MRPL39	ZNF674-AS1	FLNA	THBS1	CITED2	KISS1
EEF2K	NR1H2	ADORA3	TMEM173	AQP4	ANGPTL4	VTN	NOL3	GDF15	AQP2	MIR210	MIR20A	GJB1	TARDBP	GCG
PD-L1	CAMP	METTL3	GLI2	CALR	CLDN1	PRKAB1	BCL2L1	YTHDC1	USP1	SIRT5	ALKBH5	AQP1	RB1CC1	MUC20
FGF21	BAK1	TRIM31	HMOX1	CREB1	PHLDA1	SMIM1	IL1RL1	CARD10	FGF10	ADAR	HPSE	PPP1R1A	DUSP2	BACE1
KLF3-AS1	BAX	METTL14	MTOR	KLF4	OGT	SIGMAR1	MIR7-3HG	CXCL3	IFIT5	NDRG2	MIR30D	TRPC1	HECTD3	VASP
CEBPB	CHMP2A	MIR25	CTSB	PRMT5	CTLA4	ATP6AP1	NDUFB8	ADAMTS4	ACADVL	MS4A2	PLD2	GPR132	LTB4R	HTRA1
TFAM	CHMP2B	FNDC4	PRKAA1	CXCL12	DNMT3A	YTHDF1	MIR145	WDR5	ITPR2	CD5L	PLD1	LAMP2	CIRBP	CBX2
MEG3	CHMP3	FNDC5	MB21D1	KL	ACOD1	MDH1	NDUFB3	DOT1L	RPTOR	APRT	GPLD1	AR	SFRP1	KPNA2
MIR21	CHMP4A	TRIM21	MAPK1	OIP5-AS1	CASP12	GCLC	ATP5B	IGF2BP3	TRIM38	SNAI1	CPT1A	PBX3	MIR150	LPCAT1
MIR135B	CHMP4B	PRKN	RELA	ICAM1	GLP1R	MIR206	MFN2	MPC1	MIR22HG	DCDC2	MOV10	CYP1B1	PELI2	RRM2
MIR485	CHMP4C	DUOX1	LPA	BLZF1	TNFSF11	IDH2	SELL	ASAH2	KCNA4	ELF4	BRD3	PSMB8	BCAT1	TK1
STK4	CHMP6	FOXP3	IL10	LDHA	NQO1	TXNRD3	BGLAP	ABCG1	TRIM32	PEG3	FMR1	NLRP10	BGN	PDGFA
PRDM1	CHMP7	MIR107	SIRT3	MIF	CD38	PPP1R11	MIR495	IL18BP	CPOX	CXCR3	HMGN1	CTSD	TGFBR1	MIR155HG
PRF1	CYCS	VCAM1	SOD1	PSEN1	PTX3	CDK6	SHH	GLIPR1	PRDX6	SMIM25	ZEB1-AS1	EPS15L1	STAT6	CPEB1
MST1	IL1A	SESN2	PINK1	MIAT	CFLAR	CMPK2	GLI1	MTHFR	CARD11	PDP1	PCAT6	MC4R	ACHE	VCL
ELAVL1	DFNA5	BHLHE40	NFE2	HSPA4	TUG1	SAA1	MMP9	COX10-AS1	RASGRP4	FSCN1	TNRC6C-AS	ITPR1	SLC30A7	MTDH
TREM2	CASP11	TFAP2A	IL17A	CD36	CCL4	SLC2A1	FDX1	ABCG2	ROBO4	DERL2	ADCY1	TMEM59	NLRP11	C1QTNF9
CDKN2B-AS	NLRP12	E2F4	DNM1L	TRAF3	RBFOX3	FABP4	PML	PRG4	OTULIN	KHSRP	LRRC8A	ANGPT1	ETS1	CD86
MIR9-1	MYD88	ADAMTS9-AS	CASP7	JAK1	PYDC1	FOXP1	BRD9	RRAGA	TRIM45	DEPTOR	IRS1	CXCR2	FUBP3	FGF23
MIR9-2	RIG-I	NINJ1	KEAP1	IRF7	NLRC3	FASN	FYN	SRPK1	TNNI3K	CLIC4	MAPK8IP3	COL11A2	CCL8	NGB
MIR9-3	DDX58	TLR8	STAT1	TNFRSF1A	IRAK1	MMP2	TMBIM4	TRIM64	COX17	SARS2	BACH1	SENP7	SELENOM	HSP90B1
MIR497	STING	PKN2	PIK3CA	HDAC2	MIR326	PEBP1	CDK5RAP3	CRMP1	ALDOB	ENTPD1	CTCF	GGPS1	MIR31	MARK4
HDAC6	TAK1	DPEP1	NEAT1	FTH1	FOXO4	MAP2K7	DSP	MELTF	CXCL13	MEF2D	ELFN1-AS1	GCK	TOP1	OLR1
SQSTM1	MAP3K7	CHMP1A	MAPK3	SREBF1	CLEC7A	SETD7	TPM3	NR1H4	P2RY6	APELA	MIR23C	EXOSC3	DDR1	CD74
IRF3	RIPK1	ACE2	IRF6	CDKN1A	RBP4	SEZ6L2	CCL19	FOXM1	HAGLR	BDKRB2	GLRA3	UFL1	APLNR	KRT18
STING1	P2X7	LINC00958	S100A9	PDPK1	LINC-ROR	EGR1	MIR182	NR0B2	FXYD6	CDC20	PDE4B	SAMHD1	KCNJ8	PPP1CA
HNP1	DPP8	MIR4306	MAPT	SLC5A1	YTHDF2	S100A12	CCL17	STOM	TTC4	GATA6	PROC	CXCL5	NRAS	IGF2-AS
ZBP1	DPP9	YWHAE	SOD2	TXN	USF2	TRPC6	KRT17	KMT2D	ADGRA2	TDRKH	AQP9	LRP2	FANCC	HMGA1
PECAM1	SCGB3A2	HSP90AA1	H19	CD44	TLR5	MIR122	AGR2	CARD19	CPA4	DUSP4	SNX16	PADI2	MIR96	PRKCE
DDX3X	SDC1	NEDD4	PIK3CG	NFE2L1	CXCL2	TNFRSF12A	EIF4A3	SNRPN	ACSS2	WNT3	FLT4	ISG15	TSPAN4	CTSA
PRTN3	TOM20	HSP90AB1	NOX4	BMP7	NR4A1	NGF	FOXA2	PWARSN	TAF15	MIR665	IDO1	CRLF2	CXCL11	FLCN
SERPINB1	PELP1	IRAK3	EIF2AK3	VSIG4	NPHS1	WNK1	ZDHHC5	MIR340	RGS5	RBM15	TCEA3	RACK1	HSPD1	FNIP2
MRE11	CARD8	MELK	ATG5	ERBB2	CXCL1	PTBP1	ZDHHC9	HDAC9	MIR27A	DDX41	USP47	UCHL5	SPAG9	DFFA
PARP1	NF-kB	YWHAZ	MMP13	GDF11	CASR	LIN28B	MSLN	RRAGC	CRLS1	SLC10A3	CASZ1	HOXA3	CXCL10	STAT2
CTSG	P53	STXBP2	MAP1LC3A	P2RX4	KDM1A	PON1	PRSS30P	GNRH1	PLSCR3	CARM1	TYK2	TRAF2	KLF5	FERMT2
GBP5	APAF1	UBE2D3	TFEB	TIMP1	YAP1	NPY	EIF5A2	IGHG2	VPS4A	SKP2	GORASP1	LEP	SIRT2	KIF23
MKI67	LXRbeta	TLR9	CYBB	EP300	TNNI3	MCL1	HNRNPUL2	SCUBE3	STIM1	IL11	TRIM25	CEACAM5	GAPLINC	SPINK5

IL36G	JNK	IFIH1	CCL2	PCSK1	PFKFB3	ACSL4	CAVIN3	LRRC17	CCR7	AGTR1	SULT1A2	PDE8A	FOXP2	TNFRSF18
IL36B	MAPK8	HUWE1	ANXA5	FTO	EPO	TRIM63	TNFSF12	RFLNB	TRIM27	SMPD2	CCRL2	DHX33	PTPA	CX3CL1
CPTP	PKR	TNFSF13B	DDIT3	TGFB1	PTPN11	5-Mar	FLOT1	FBLIM1	OIP5	GDF5	GART	CD55	FBXO3	TRIML2
BNIP3	CIAP1	RAB5A	MCOLN1	SP1	SNHG1	FBXO32	BRCA1	GABRA3	TIMP3	OXTR	WT1	NPPB	TNFRSF14	MIR192
ANO6	CIAP2	ASIC1	S100A8	CCND1	SIRT4	APLN	DTX3L	PODXL2	TAP1	FTL	BMP2	SGMS1	RAC2	MFGE8
MIR103A2	TLR4	BRCC3	EIF2AK2	MIR200A	SRC	USP7	MVP	MIR18A	STAT4	SDF4	DNASE1L3	CRP	ADIPOR1	FUS
MIR103A1	EDC2	ATG7	GHRL	AHR	FGF5	PRKCA	S1PR3	NLRP14	MUC1	ATOH8	NUCB2	MIR383	MIR126	SIGLEC15

Supplementary Table 3. The differentially expressed genes of GSE84844.

	logFC	AveExpr	t	P.Value	adj.P.Val	B	regulate
ANKRD11	-0.520345785	9.38479757	-11.5642	3.19E-17	3.49E-13	28.7396477	down-regulated
SF3B1	-0.866287258	9.41444917	-11.53803	3.52E-17	3.49E-13	28.6456278	down-regulated
HIPK2	-0.564755032	6.47403633	-11.442063	5.03E-17	3.49E-13	28.3000766	down-regulated
SMARCC1	-0.590116643	8.22103204	-11.136147	1.59E-16	8.28E-13	27.1906586	down-regulated
SLC38A6	0.852108574	5.47366747	11.0410395	2.28E-16	9.50E-13	26.8433325	up-regulated
HADHA	-0.510367892	9.01249585	-10.939318	3.36E-16	1.16E-12	26.4706107	down-regulated
PRRC1	-0.50975866	7.25958203	-10.738551	7.22E-16	2.15E-12	25.7312614	down-regulated
EIF4G1	-0.792499233	7.01406518	-10.48109	1.94E-15	5.05E-12	24.7761098	down-regulated
ILF3	-0.744807953	8.16078832	-10.186698	6.06E-15	1.26E-11	23.6746778	down-regulated
CHMP5	1.358504422	8.15888804	10.1018457	8.43E-15	1.34E-11	23.3554483	up-regulated
SEC14L1	-1.018338876	10.4629912	-10.101348	8.44E-15	1.34E-11	23.353572	down-regulated
FANCL	1.076069105	6.28743217	10.0769197	9.28E-15	1.34E-11	23.2615274	up-regulated
PRDX4	0.635206748	8.26831033	10.0768366	9.29E-15	1.34E-11	23.2612139	up-regulated
SRRM1	-0.522953498	8.23994043	-10.067213	9.64E-15	1.34E-11	23.2249342	down-regulated
SKI	-0.991441249	7.27644877	-10.044174	1.05E-14	1.37E-11	23.1380415	down-regulated
PRDM2	-0.783376233	8.49165534	-9.9913589	1.30E-14	1.58E-11	22.9386387	down-regulated
MYH9	-0.678024823	9.87975183	-9.8656324	2.12E-14	2.32E-11	22.4628084	down-regulated
SAMD9	1.208419388	7.32485776	9.76606316	3.13E-14	3.10E-11	22.0848535	up-regulated
CEBPG	0.602642307	7.05482359	9.70707306	3.94E-14	3.73E-11	21.8604781	up-regulated
GLG1	-0.709539169	9.51518094	-9.6492003	4.95E-14	4.30E-11	21.6400309	down-regulated
ND4	-0.563851857	13.0068888	-9.5888342	6.28E-14	5.09E-11	21.4097532	down-regulated
SP100	0.749375252	9.2411225	9.54913897	7.34E-14	5.29E-11	21.2581462	up-regulated
TCF25	-0.528590462	9.85407913	-9.5216849	8.18E-14	5.68E-11	21.1532082	down-regulated
MTHFD2	0.886239221	8.47132711	9.47022484	1.00E-13	6.60E-11	20.9563316	up-regulated
CKS1B	0.763747919	6.58741622	9.37676189	1.45E-13	8.63E-11	20.5981696	up-regulated
CHD4	-0.619985381	8.13130588	-9.3476837	1.63E-13	9.42E-11	20.4865868	down-regulated
NIPSNAP3A	0.880662655	7.28678517	9.17564104	3.22E-13	1.68E-10	19.8249882	up-regulated
NFU1	0.657362679	7.06476283	9.13805107	3.74E-13	1.81E-10	19.6801242	up-regulated
CKS2	1.263216711	6.1692422	9.13791036	3.74E-13	1.81E-10	19.6795818	up-regulated
NXT2	0.813536495	7.7815996	9.12687718	3.91E-13	1.85E-10	19.6370417	up-regulated
TFEC	1.436452982	5.68474285	9.03925922	5.54E-13	2.51E-10	19.2988976	up-regulated
BCLAF3	0.739601597	5.11604933	9.01596504	6.08E-13	2.69E-10	19.2089048	up-regulated
C1GALT1	1.084131624	6.93414841	8.9108083	9.24E-13	4.01E-10	18.8021815	up-regulated
SLFN12	0.805274979	5.84398948	8.87449381	1.07E-12	4.54E-10	18.6615524	up-regulated
MRPS28	1.08593187	6.06416975	8.81009803	1.38E-12	5.42E-10	18.4119696	up-regulated
MRPS23	0.555121113	7.34251484	8.8065905	1.40E-12	5.42E-10	18.3983678	up-regulated
CIAO2A	0.647541654	9.16735075	8.80572774	1.41E-12	5.42E-10	18.395022	up-regulated
POLE4	0.622128563	6.93745312	8.7856644	1.52E-12	5.66E-10	18.3172029	up-regulated
CNIH4	1.058363501	7.86539033	8.74990395	1.76E-12	6.15E-10	18.1784398	up-regulated
JAK1	-0.576909042	8.72253467	-8.7468332	1.78E-12	6.15E-10	18.1665206	down-regulated
COMMD2	0.524042057	6.72124727	8.7288155	1.91E-12	6.42E-10	18.0965736	up-regulated
KIN	0.581475218	6.90804271	8.61093039	3.06E-12	9.53E-10	17.6384764	up-regulated
PKD2	0.619766387	5.92232899	8.57019593	3.61E-12	1.07E-09	17.4800104	up-regulated
GMNN	0.777420538	6.05430766	8.55540639	3.83E-12	1.09E-09	17.422455	up-regulated
VRK2	0.68623487	7.51669019	8.51304842	4.54E-12	1.24E-09	17.257554	up-regulated
UQCRQ	0.951305647	8.17616222	8.50707069	4.65E-12	1.26E-09	17.2342755	up-regulated
MRPL15	0.616904705	7.31171168	8.45740879	5.67E-12	1.50E-09	17.040818	up-regulated
ZNG1B	0.85430921	6.70802126	8.45077521	5.82E-12	1.51E-09	17.0149685	up-regulated
NDUFB2	0.647252173	9.41829814	8.43301995	6.26E-12	1.57E-09	16.9457708	up-regulated
ATXN7L3B	-0.640652662	7.25945679	-8.4273168	6.40E-12	1.59E-09	16.9235411	down-regulated

NHLRC3	0.50331155	7.17559379	8.41551788	6.71E-12	1.64E-09	16.8775465	up-regulated
RBBP8	0.823295111	6.55403495	8.40990335	6.86E-12	1.66E-09	16.8556579	up-regulated
WDFY1	0.593236914	9.05318593	8.40229955	7.08E-12	1.69E-09	16.8260119	up-regulated
AKAP7	0.904651088	6.72871659	8.36417011	8.25E-12	1.94E-09	16.6773152	up-regulated
IL15	0.919864252	6.95423367	8.362598	8.30E-12	1.94E-09	16.6711831	up-regulated
TCEAL8	0.524269966	6.38615808	8.34183644	9.02E-12	2.04E-09	16.5901917	up-regulated
ABRAXAS1	0.849961292	6.48457842	8.28566002	1.13E-11	2.48E-09	16.3709642	up-regulated
TMEM123	0.659569542	11.1670708	8.27504588	1.18E-11	2.55E-09	16.3295299	up-regulated
ORC4	0.535966868	7.92499409	8.25052521	1.30E-11	2.74E-09	16.2337939	up-regulated
TNFSF13B	0.813390544	10.5260966	8.22532008	1.44E-11	2.97E-09	16.1353646	up-regulated
ZNF184	0.738517266	6.15948905	8.22097415	1.47E-11	2.99E-09	16.1183911	up-regulated
POLR2A	-0.520633336	8.73330671	-8.211332	1.52E-11	3.05E-09	16.0807305	down-regulated
C1GALT1C1	0.702724893	7.65024465	8.2090887	1.54E-11	3.05E-09	16.0719681	up-regulated
BRD4	-0.631144954	10.1881106	-8.2036501	1.57E-11	3.09E-09	16.0507242	down-regulated
TBK1	0.602244841	8.00597235	8.196013	1.62E-11	3.16E-09	16.0208911	up-regulated
CGRRF1	0.852149784	6.63387029	8.18154158	1.72E-11	3.24E-09	15.9643561	up-regulated
BLVRA	0.705342498	7.00039777	8.18014101	1.73E-11	3.24E-09	15.9588842	up-regulated
POLR2K	1.303829801	5.94771834	8.13812137	2.05E-11	3.71E-09	15.7946913	up-regulated
UBL5	0.57109571	9.6364271	8.10503013	2.34E-11	4.16E-09	15.6653527	up-regulated
MS4A4A	1.12353278	5.44417692	8.07975172	2.59E-11	4.57E-09	15.5665324	up-regulated
RFLNB	-0.754267489	10.7903741	-8.0689758	2.70E-11	4.73E-09	15.5244017	down-regulated
TRIAP1	0.594162143	7.64153497	8.0368467	3.08E-11	5.29E-09	15.398771	up-regulated
BIRC3	0.820735691	8.60819893	8.01780999	3.32E-11	5.62E-09	15.3243237	up-regulated
MAGOH	0.569335165	6.89470037	8.0031198	3.52E-11	5.92E-09	15.2668695	up-regulated
ZNF322	0.630952437	5.35037327	7.9906553	3.71E-11	6.17E-09	15.218117	up-regulated
MRPL40	0.720534451	6.60877955	7.97881865	3.89E-11	6.42E-09	15.1718176	up-regulated
GIMAP2	0.77350187	9.73262274	7.97228105	3.99E-11	6.49E-09	15.1462445	up-regulated
CD69	1.295107708	6.25004029	7.95072408	4.35E-11	6.97E-09	15.0619153	up-regulated
NDC80	0.960222805	5.1874298	7.94793189	4.40E-11	7.00E-09	15.050992	up-regulated
C3orf14	0.798233524	6.30704716	7.94460465	4.46E-11	7.04E-09	15.0379753	up-regulated
ELOC	0.554345518	6.02918472	7.94265561	4.50E-11	7.04E-09	15.0303503	up-regulated
MASTL	0.776177954	5.14340033	7.94081862	4.53E-11	7.04E-09	15.0231635	up-regulated
ZUP1	0.884570382	5.83739232	7.937115	4.60E-11	7.09E-09	15.008674	up-regulated
RAP2C	0.639573672	8.61175627	7.92111689	4.90E-11	7.45E-09	14.9460828	up-regulated
SELENOT	0.526835248	9.67944945	7.89998033	5.34E-11	8.00E-09	14.8633826	up-regulated
PLA2G4A	0.736197068	5.60948428	7.86168601	6.23E-11	9.01E-09	14.7135364	up-regulated
SERPINI1	0.708820964	5.16351886	7.83631961	6.90E-11	9.72E-09	14.6142694	up-regulated
SMIM20	0.575361752	7.13158579	7.835912	6.91E-11	9.72E-09	14.6126742	up-regulated
HIKESHI	0.521149475	6.92534005	7.82839687	7.12E-11	9.82E-09	14.583264	up-regulated
ZNF518A	0.767372199	6.80375514	7.80591153	7.80E-11	1.04E-08	14.4952658	up-regulated
EOGT	0.655964867	5.34583749	7.80540738	7.81E-11	1.04E-08	14.4932928	up-regulated
TNFSF10	0.681105931	10.7564724	7.7823626	8.58E-11	1.10E-08	14.403102	up-regulated
TOGARAM1	0.707986091	6.01019076	7.78161612	8.60E-11	1.10E-08	14.4001804	up-regulated
PPIL4	0.731178463	6.3222049	7.78033685	8.65E-11	1.10E-08	14.3951737	up-regulated
CMC2	0.617370996	7.98936101	7.76627917	9.15E-11	1.16E-08	14.3401546	up-regulated
DDX60L	0.957732112	5.83830639	7.75041116	9.75E-11	1.22E-08	14.2780494	up-regulated
TWF1	0.803950797	7.47220661	7.74126279	1.01E-10	1.25E-08	14.2422437	up-regulated
TMCO1	0.836923048	6.89038194	7.69451538	1.22E-10	1.47E-08	14.0592785	up-regulated
ETNK1	0.616432508	6.70991599	7.68352291	1.28E-10	1.49E-08	14.0162552	up-regulated
THRA	-0.544740384	6.69533714	-7.6801178	1.29E-10	1.51E-08	14.0029281	down-regulated
DNAJC15	0.629314379	8.00278231	7.67515626	1.32E-10	1.51E-08	13.9835093	up-regulated
NMI	0.604828132	10.2982415	7.67469368	1.32E-10	1.51E-08	13.9816988	up-regulated

SNAPC3	0.502482	6.57478859	7.66962262	1.35E-10	1.52E-08	13.9618515	up-regulated
ZNF222	0.668124518	5.60824866	7.66630752	1.37E-10	1.53E-08	13.9488768	up-regulated
RPL22L1	1.416687692	6.59634213	7.66086191	1.40E-10	1.56E-08	13.9275637	up-regulated
IFIT5	1.310333198	9.19607729	7.65735134	1.42E-10	1.56E-08	13.913824	up-regulated
LOC102724965	0.820113929	5.49226111	7.65598172	1.43E-10	1.56E-08	13.9084636	up-regulated
COX7A2	0.667823576	10.4000539	7.65320273	1.44E-10	1.57E-08	13.8975872	up-regulated
SC5D	0.750488732	6.43968027	7.64770654	1.48E-10	1.60E-08	13.8760765	up-regulated
SORL1	-0.631408081	11.7077746	-7.6467943	1.48E-10	1.60E-08	13.8725061	down-regulated
ND2	-0.769961349	11.8888447	-7.6367956	1.54E-10	1.65E-08	13.833374	down-regulated
NRAS	0.631174819	6.20607142	7.62298481	1.63E-10	1.73E-08	13.7793237	up-regulated
LSM7	0.52020713	8.80358914	7.61104389	1.71E-10	1.79E-08	13.7325922	up-regulated
ESYT1	-0.520513079	9.55359191	-7.6108949	1.71E-10	1.79E-08	13.7320091	down-regulated
ALG10B	0.968704217	5.25457732	7.60417806	1.76E-10	1.82E-08	13.7057228	up-regulated
CALHM6	0.76565956	4.70332104	7.59138361	1.85E-10	1.88E-08	13.6556529	up-regulated
SRSF10	0.536905584	7.46545072	7.58568927	1.89E-10	1.91E-08	13.6333691	up-regulated
ACTR6	1.020149972	6.91255654	7.57652142	1.97E-10	1.96E-08	13.5974929	up-regulated
KMO	0.928052805	6.09431845	7.56628868	2.05E-10	2.03E-08	13.5574506	up-regulated
ATP6V1A	-0.656318834	7.40554883	-7.5590326	2.11E-10	2.08E-08	13.529057	down-regulated
CD93	-0.755765439	8.63825553	-7.5543969	2.15E-10	2.10E-08	13.5109175	down-regulated
NDUFA4	1.04365212	8.85384103	7.53676586	2.31E-10	2.21E-08	13.4419298	up-regulated
ZNF25	0.615587427	6.14304496	7.52989427	2.37E-10	2.26E-08	13.4150432	up-regulated
BORCS7	0.622550155	8.00166203	7.52660802	2.40E-10	2.27E-08	13.4021853	up-regulated
METTL4	0.532832787	7.04093455	7.50422698	2.63E-10	2.44E-08	13.3146204	up-regulated
PSMA2	0.626646708	6.85215196	7.50250039	2.65E-10	2.44E-08	13.3078655	up-regulated
EVI2A	1.240681381	9.61994712	7.49793495	2.70E-10	2.47E-08	13.2900045	up-regulated
GPR65	0.913109233	8.09981761	7.48763058	2.81E-10	2.56E-08	13.2496926	up-regulated
MRPL22	0.552871506	6.7663825	7.48598269	2.83E-10	2.56E-08	13.2432461	up-regulated
NAT1	0.940831706	6.76276726	7.48554517	2.84E-10	2.56E-08	13.2415345	up-regulated
STARD3NL	0.543902501	8.73079255	7.46913726	3.03E-10	2.66E-08	13.1773492	up-regulated
STK17B	0.678211967	7.90261657	7.45507714	3.21E-10	2.80E-08	13.122352	up-regulated
PARP9	0.891506592	9.80037529	7.45371159	3.22E-10	2.81E-08	13.1170108	up-regulated
CPEB2	0.826089952	8.17296487	7.43101769	3.53E-10	2.97E-08	13.0282505	up-regulated
TMEM126A	0.730312153	7.30592743	7.42955042	3.55E-10	2.97E-08	13.0225121	up-regulated
NAPG	0.523280907	5.33095492	7.42949322	3.55E-10	2.97E-08	13.0222884	up-regulated
ATG5	0.585246291	7.72633748	7.4117995	3.82E-10	3.16E-08	12.9530929	up-regulated
PEX13	0.584404321	4.66432507	7.405006	3.92E-10	3.23E-08	12.9265271	up-regulated
POT1	0.636606671	5.9615343	7.38691652	4.22E-10	3.40E-08	12.855794	up-regulated
RPL26L1	0.82439779	6.6884883	7.37684883	4.39E-10	3.53E-08	12.816431	up-regulated
CARNMT1	0.691020094	5.84780855	7.37601253	4.41E-10	3.53E-08	12.8131613	up-regulated
DDX60	1.307896435	8.86383869	7.37132562	4.49E-10	3.57E-08	12.7948372	up-regulated
GAS7	-0.702987967	9.0814663	-7.36064	4.69E-10	3.71E-08	12.7530624	down-regulated
SGO2	0.807091783	4.44795928	7.35399455	4.82E-10	3.80E-08	12.727084	up-regulated
FTX	-0.729030749	9.33545106	-7.3521282	4.85E-10	3.81E-08	12.7197884	down-regulated
CENPW	0.606133926	5.39361748	7.34586043	4.98E-10	3.87E-08	12.6952877	up-regulated
PNPT1	0.821886884	7.45201197	7.34555884	4.98E-10	3.87E-08	12.6941088	up-regulated
PKP4	-0.62123463	5.80847519	-7.3442081	5.01E-10	3.88E-08	12.688829	down-regulated
ZNF140	0.520612674	7.1338219	7.33700079	5.16E-10	3.98E-08	12.6606574	up-regulated
TMEM256	0.563162827	7.20349692	7.32632678	5.38E-10	4.14E-08	12.618938	up-regulated
BRWD3	-0.510072291	7.19009827	-7.3112001	5.72E-10	4.29E-08	12.5598212	down-regulated
MFN1	0.632570534	6.96507652	7.28871657	6.26E-10	4.66E-08	12.4719658	up-regulated
MAST3	-0.586144378	9.22884225	-7.2871092	6.30E-10	4.67E-08	12.4656856	down-regulated
C9orf72	0.908679593	5.44010296	7.2782002	6.53E-10	4.81E-08	12.4308782	up-regulated

SNX14	0.62743212	7.42757581	7.27819669	6.53E-10	4.81E-08	12.4308644	up-regulated
ALG14	0.574942575	5.58724654	7.27280545	6.68E-10	4.90E-08	12.4098022	up-regulated
ZMYM1	0.64730028	6.09563991	7.27115334	6.72E-10	4.91E-08	12.403348	up-regulated
COMMD3	0.502659404	7.90155131	7.26955145	6.77E-10	4.93E-08	12.3970901	up-regulated
ATP5F1C	0.724164166	9.23202987	7.25372713	7.21E-10	5.15E-08	12.3352757	up-regulated
TMEM68	0.695053329	5.16754882	7.25315363	7.23E-10	5.15E-08	12.3330356	up-regulated
KBTBD8	0.947587575	5.88465847	7.25184938	7.27E-10	5.15E-08	12.3279413	up-regulated
CD52	0.933184607	10.4375939	7.25100525	7.29E-10	5.15E-08	12.3246442	up-regulated
TDRD7	0.646401317	8.5295556	7.24039624	7.61E-10	5.33E-08	12.2832083	up-regulated
HMGB2	0.814950022	9.71492151	7.23000911	7.93E-10	5.52E-08	12.2426429	up-regulated
BTLA	0.903396965	6.31233079	7.2269568	8.03E-10	5.56E-08	12.2307233	up-regulated
FAM91A1	0.502595929	8.90242373	7.2254928	8.08E-10	5.56E-08	12.2250063	up-regulated
DCUN1D5	0.575522489	7.13155867	7.21582215	8.40E-10	5.70E-08	12.1872443	up-regulated
ARMT1	0.626890952	8.3628298	7.20301842	8.84E-10	5.96E-08	12.1372537	up-regulated
NOC3L	0.692611656	7.3026447	7.19517302	9.13E-10	6.07E-08	12.1066254	up-regulated
COMMD8	1.163859965	7.75643037	7.18908234	9.35E-10	6.20E-08	12.0828492	up-regulated
IMMP1L	0.791579298	5.58557082	7.18815849	9.39E-10	6.21E-08	12.0792429	up-regulated
IRS2	-0.766109334	9.23527152	-7.1547197	1.07E-09	6.94E-08	11.9487365	down-regulated
PHF5A	0.595521254	7.18904146	7.11972521	1.24E-09	7.82E-08	11.8122101	up-regulated
EPSTI1	1.838753966	9.49568447	7.11222565	1.27E-09	7.99E-08	11.7829588	up-regulated
SAMD9L	1.08155863	9.22886574	7.10061825	1.33E-09	8.20E-08	11.7376904	up-regulated
PMAIP1	0.782446617	7.06239263	7.08565344	1.42E-09	8.47E-08	11.6793379	up-regulated
C4orf33	0.634923681	5.40215214	7.08520335	1.42E-09	8.47E-08	11.6775831	up-regulated
RFC3	0.608429501	5.80618411	7.07931514	1.45E-09	8.65E-08	11.6546262	up-regulated
ELMOD2	0.824209888	5.21551463	7.07046028	1.51E-09	8.91E-08	11.6201063	up-regulated
RPA3	0.524593992	7.70299848	7.0577348	1.59E-09	9.35E-08	11.570504	up-regulated
CDKN2C	0.529526544	5.98760507	7.05441581	1.61E-09	9.42E-08	11.5575684	up-regulated
MR1	0.530499661	6.36545314	7.04679469	1.66E-09	9.65E-08	11.5278676	up-regulated
ATP5MJ	0.720842779	7.71389489	7.04640985	1.66E-09	9.65E-08	11.5263679	up-regulated
GEMIN2	0.789522287	4.54907048	7.03803882	1.72E-09	9.90E-08	11.4937482	up-regulated
MRPL13	0.93836906	5.7931072	7.03368808	1.75E-09	9.99E-08	11.476796	up-regulated
ATP6V1G1	0.505514366	10.3319091	7.0320809	1.76E-09	1.00E-07	11.4705341	up-regulated
TCAIM	0.615414728	4.92709915	7.0289084	1.78E-09	1.01E-07	11.4581737	up-regulated
TRMT10A	0.614855735	4.90253584	7.02868913	1.78E-09	1.01E-07	11.4573194	up-regulated
LAMTOR3	0.771717461	8.47672616	7.02421488	1.81E-09	1.02E-07	11.4398882	up-regulated
PSMG1	0.514687817	6.36738073	7.01878195	1.85E-09	1.03E-07	11.4187236	up-regulated
ZNRF2	0.579058191	6.08970114	7.01725039	1.86E-09	1.04E-07	11.4127575	up-regulated
NAA30	0.536373997	6.93410903	6.99790637	2.02E-09	1.12E-07	11.3374156	up-regulated
IFI44	2.336862132	7.73031483	6.97335148	2.22E-09	1.21E-07	11.2418089	up-regulated
ICOS	0.63371005	6.07371115	6.97064689	2.25E-09	1.22E-07	11.2312804	up-regulated
PSMA4	0.782345146	8.92760253	6.9663719	2.29E-09	1.23E-07	11.2146397	up-regulated
ECT2	0.733043013	5.14906594	6.95487734	2.40E-09	1.27E-07	11.1699015	up-regulated
NUP58	0.540978414	7.04758422	6.95027566	2.44E-09	1.29E-07	11.1519935	up-regulated
TIMM8B	0.766698042	7.95781043	6.94417106	2.50E-09	1.32E-07	11.1282386	up-regulated
HNRNPD-DT	0.568199074	5.20854056	6.94138963	2.53E-09	1.33E-07	11.117416	up-regulated
TAF1A	0.625777054	5.36491714	6.93321981	2.61E-09	1.36E-07	11.0856298	up-regulated
TTC33	0.935178355	6.00415163	6.92850991	2.66E-09	1.38E-07	11.0673069	up-regulated
GMFB	0.979434979	5.98243514	6.90537346	2.92E-09	1.50E-07	10.9773201	up-regulated
COQ2	0.560164547	6.82262659	6.89314529	3.07E-09	1.56E-07	10.9297739	up-regulated
TMEM164	-0.694872842	9.168834	-6.8891776	3.12E-09	1.58E-07	10.9143487	down-regulated
TRIM6	1.277123545	5.25999579	6.88627347	3.15E-09	1.59E-07	10.9030589	up-regulated
TVP23B	0.768945059	7.30582769	6.88232019	3.20E-09	1.61E-07	10.8876915	up-regulated

YEATS4	0.718275038	5.09246092	6.88048339	3.23E-09	1.62E-07	10.8805518	up-regulated
PSMC6	0.994485152	8.12449987	6.87705976	3.27E-09	1.63E-07	10.8672445	up-regulated
ZNHIT3	0.692774498	7.41889524	6.85319102	3.60E-09	1.79E-07	10.7744919	up-regulated
FAM8A1	0.512184284	10.6110822	6.85139748	3.63E-09	1.79E-07	10.7675239	up-regulated
KLHL20	0.510396838	6.43584186	6.8097934	4.28E-09	2.06E-07	10.6059543	up-regulated
DPH3	0.742698002	7.16812119	6.80350537	4.39E-09	2.09E-07	10.5815457	up-regulated
STARD4	0.586120426	6.0002414	6.79659567	4.52E-09	2.13E-07	10.5547273	up-regulated
CASP3	0.710225706	7.80947527	6.79415149	4.56E-09	2.15E-07	10.5452417	up-regulated
COX7A2P2	0.57026159	7.705679	6.79062019	4.62E-09	2.17E-07	10.5315379	up-regulated
RBX1	0.773927729	8.77151503	6.78488742	4.73E-09	2.21E-07	10.5092928	up-regulated
AIM2	0.834967533	7.77004092	6.77703566	4.88E-09	2.27E-07	10.4788295	up-regulated
BCL2A1	1.438355135	7.49944626	6.77518615	4.92E-09	2.29E-07	10.4716544	up-regulated
OBI1	0.605751974	6.6285315	6.77364203	4.95E-09	2.29E-07	10.4656643	up-regulated
PRAG1	-0.562782126	9.37088712	-6.7672067	5.08E-09	2.34E-07	10.4407019	down-regulated
GLCE	0.562320618	4.69940372	6.76140628	5.20E-09	2.38E-07	10.4182047	up-regulated
SNX4	0.737794525	6.06443691	6.76000885	5.23E-09	2.38E-07	10.4127851	up-regulated
EPB41	-0.850758932	8.22509962	-6.7501199	5.44E-09	2.44E-07	10.3744381	down-regulated
BLOC1S2	0.66672655	8.76996711	6.73550922	5.76E-09	2.56E-07	10.3177952	up-regulated
BTG3	0.665320677	5.55401914	6.73270735	5.83E-09	2.58E-07	10.3069349	up-regulated
GLRX	0.602488839	9.50590919	6.72211543	6.08E-09	2.67E-07	10.2658853	up-regulated
IFT25	0.802693492	5.07766478	6.71188944	6.34E-09	2.75E-07	10.2262628	up-regulated
CXCL10	1.261650546	5.65400794	6.71186637	6.34E-09	2.75E-07	10.2261734	up-regulated
IFT57	0.835526153	6.44600345	6.70561987	6.50E-09	2.82E-07	10.2019744	up-regulated
CDC27	-0.623452825	9.77199193	-6.7030276	6.56E-09	2.84E-07	10.1919329	down-regulated
NABP1	0.923330264	5.51192489	6.70250519	6.58E-09	2.84E-07	10.1899094	up-regulated
HAT1	1.024477768	6.59136217	6.69560525	6.76E-09	2.90E-07	10.1631847	up-regulated
ZSCAN18	-0.513736099	7.35246669	-6.6873228	6.99E-09	2.98E-07	10.1311105	down-regulated
DMXL1	0.509913458	7.30603577	6.68560962	7.04E-09	2.99E-07	10.1244769	up-regulated
RTP4	1.344703099	8.189132	6.67952072	7.21E-09	3.04E-07	10.1009021	up-regulated
AZI2	0.526192088	6.80709435	6.67758715	7.27E-09	3.06E-07	10.0934165	up-regulated
TP53INP2	-0.72836655	7.40243351	-6.6685231	7.53E-09	3.16E-07	10.0583299	down-regulated
CCDC146	0.528624491	6.21153771	6.66459768	7.65E-09	3.19E-07	10.0431372	up-regulated
PI4K2B	0.625679998	6.79310313	6.65194985	8.05E-09	3.32E-07	9.99419466	up-regulated
IFI6	1.502830633	10.6393661	6.64534479	8.26E-09	3.39E-07	9.96864113	up-regulated
CHUK	0.535257225	7.49406399	6.64434566	8.30E-09	3.39E-07	9.96477606	up-regulated
STAMBPL1	0.56051385	6.12501285	6.64318557	8.33E-09	3.40E-07	9.96028844	up-regulated
FMNL2	0.971440253	5.9444475	6.64254439	8.36E-09	3.41E-07	9.95780821	up-regulated
YIPF4	0.562624105	6.8330805	6.6190319	9.18E-09	3.68E-07	9.86688171	up-regulated
COPS2	0.993894347	8.07435564	6.61598467	9.29E-09	3.71E-07	9.85510134	up-regulated
VAMP4	0.514256602	5.62977757	6.61261804	9.41E-09	3.75E-07	9.84208717	up-regulated
PLEKHG3	-0.525320537	7.45234134	-6.6114864	9.46E-09	3.76E-07	9.83771293	down-regulated
DCAF16	-0.510126159	7.76234881	-6.6096875	9.53E-09	3.77E-07	9.83075978	down-regulated
GNL3L	-0.583164797	8.71939159	-6.5989513	9.94E-09	3.90E-07	9.78926753	down-regulated
PEX7	0.525156268	4.97445769	6.59213755	1.02E-08	3.99E-07	9.76294011	up-regulated
GEMIN6	0.632245981	5.5877068	6.58968	1.03E-08	4.02E-07	9.75344553	up-regulated
KDM6B	-0.648816219	7.86190599	-6.5860024	1.05E-08	4.07E-07	9.73923849	down-regulated
SNX2	0.509980617	8.87081374	6.58060811	1.07E-08	4.14E-07	9.718402	up-regulated
RWDD3	0.822265556	6.14615787	6.57145157	1.11E-08	4.26E-07	9.68303956	up-regulated
IFIH1	0.816694551	4.60592008	6.56575762	1.13E-08	4.32E-07	9.66105372	up-regulated
MMUT	0.517445056	6.34535275	6.56413947	1.14E-08	4.34E-07	9.6548062	up-regulated
HAUS1	0.800492869	6.24218611	6.56136353	1.15E-08	4.36E-07	9.64408917	up-regulated
CMC1	0.620613058	7.55178815	6.56002265	1.16E-08	4.37E-07	9.63891274	up-regulated

HBS1L	0.634053455	5.6852245	6.55335635	1.19E-08	4.47E-07	9.61318022	up-regulated
TRMT1L	0.526700949	6.96811081	6.5420959	1.25E-08	4.61E-07	9.56972399	up-regulated
MAP3K7	0.539164576	6.99976094	6.54132736	1.25E-08	4.62E-07	9.56675851	up-regulated
CASD1	0.569125761	6.42206386	6.52275372	1.35E-08	4.93E-07	9.49510864	up-regulated
COX7B	1.15897214	7.48565203	6.51468462	1.39E-08	5.05E-07	9.46399219	up-regulated
IFIT1	1.914821567	10.08504	6.51268136	1.40E-08	5.09E-07	9.45626815	up-regulated
SNRPG	0.832251548	8.20218518	6.51081341	1.41E-08	5.11E-07	9.44906625	up-regulated
CCRL2	0.575753763	6.09454327	6.50766967	1.43E-08	5.17E-07	9.43694628	up-regulated
C12orf4	0.62961417	5.01232061	6.50640828	1.44E-08	5.19E-07	9.43208357	up-regulated
AMN1	0.551539457	7.1553916	6.50140544	1.47E-08	5.27E-07	9.41279909	up-regulated
MRPL3	0.635644863	8.51116635	6.49846571	1.48E-08	5.33E-07	9.40146852	up-regulated
CD96	0.85284457	4.6372668	6.48945439	1.54E-08	5.49E-07	9.36674192	up-regulated
PDIK1L	0.696785006	6.15226575	6.4849332	1.57E-08	5.57E-07	9.34932206	up-regulated
GIN1	0.647740139	4.42958007	6.47289127	1.64E-08	5.78E-07	9.30293582	up-regulated
RIGI	0.935637676	8.78115313	6.47179243	1.65E-08	5.79E-07	9.2987038	up-regulated
SPCS3	0.589512224	6.77241382	6.47050845	1.66E-08	5.81E-07	9.29375893	up-regulated
SLC35A1	0.599324006	8.68757702	6.46762379	1.68E-08	5.86E-07	9.28265009	up-regulated
SPAST	0.609863621	5.35625249	6.4520637	1.78E-08	6.17E-07	9.22274385	up-regulated
CD2AP	0.625419391	7.87720678	6.44604747	1.83E-08	6.31E-07	9.19958853	up-regulated
E2F5	0.66315637	5.67948802	6.4451474	1.83E-08	6.32E-07	9.19612467	up-regulated
RWDD1	0.65362841	7.51258909	6.42843918	1.96E-08	6.69E-07	9.13184071	up-regulated
COMMD10	0.523234527	7.05386351	6.42497237	1.99E-08	6.76E-07	9.11850628	up-regulated
TIMM10	0.644104551	8.26332363	6.41781898	2.04E-08	6.92E-07	9.09099638	up-regulated
TRIM22	0.699262354	11.5612335	6.41204644	2.09E-08	7.06E-07	9.0688011	up-regulated
GSKIP	0.752813051	7.95519113	6.40882112	2.12E-08	7.11E-07	9.05640144	up-regulated
COG6	0.594334755	7.07096725	6.4087115	2.12E-08	7.11E-07	9.05598005	up-regulated
DNAJB4	0.65321895	5.52297564	6.40867728	2.12E-08	7.11E-07	9.0558485	up-regulated
SUB1	1.058777142	9.1421313	6.40003771	2.19E-08	7.28E-07	9.02264001	up-regulated
PGAP1	0.611901634	4.13389322	6.39987413	2.19E-08	7.28E-07	9.02201134	up-regulated
SLC30A1	0.555014065	8.82011042	6.39135084	2.27E-08	7.44E-07	8.98925841	up-regulated
USP15	0.581090153	9.3067193	6.38997869	2.28E-08	7.46E-07	8.9839864	up-regulated
KLHDC7B-DT	0.805622245	5.44191481	6.38138728	2.36E-08	7.67E-07	8.95098166	up-regulated
ANXA1	0.862723185	9.89730258	6.36691837	2.50E-08	8.03E-07	8.89541763	up-regulated
ZBTB21	0.602561107	6.49073399	6.35710066	2.60E-08	8.29E-07	8.85772953	up-regulated
PDCD10	0.858016953	8.86879114	6.35038025	2.67E-08	8.45E-07	8.83193797	up-regulated
MED21	0.558055933	7.01428594	6.34728784	2.70E-08	8.53E-07	8.82007179	up-regulated
GBP3	0.817050981	8.96221705	6.33994343	2.78E-08	8.75E-07	8.79189444	up-regulated
EMC2	0.704658976	6.37863129	6.33887764	2.79E-08	8.78E-07	8.78780602	up-regulated
IFIT3	1.490403467	10.5176228	6.33284534	2.86E-08	8.95E-07	8.76466841	up-regulated
TRMT13	0.647341912	6.9750384	6.33102626	2.88E-08	8.98E-07	8.75769201	up-regulated
ATP6V1C1	0.675117394	6.83374867	6.32843805	2.91E-08	9.02E-07	8.74776656	up-regulated
ZNF557	0.571841658	5.14022481	6.32531988	2.95E-08	9.09E-07	8.73580991	up-regulated
GCH1	0.548011776	9.9971247	6.32033504	3.01E-08	9.24E-07	8.71669796	up-regulated
CRYZ	0.585185288	6.90724168	6.31896824	3.02E-08	9.25E-07	8.71145819	up-regulated
RHNO1	0.50106621	5.79709546	6.30094244	3.25E-08	9.81E-07	8.64237605	up-regulated
ZNF302	0.886392007	6.24854913	6.30075726	3.25E-08	9.81E-07	8.6416666	up-regulated
NCEH1	0.634804764	5.00063986	6.28925503	3.40E-08	1.02E-06	8.59760714	up-regulated
FRMD3	0.811927304	6.29252477	6.278332	3.55E-08	1.06E-06	8.55578197	up-regulated
HES4	1.078046937	5.74223121	6.26908631	3.68E-08	1.08E-06	8.52039146	up-regulated
LY96	1.048139934	7.89701965	6.25605278	3.88E-08	1.13E-06	8.47052089	up-regulated
NDUFB3	0.78697332	7.88678692	6.24736572	4.01E-08	1.17E-06	8.43729372	up-regulated
DPM1	0.61985258	8.78689929	6.23147914	4.27E-08	1.23E-06	8.376555	up-regulated

PRPF39	0.660546511	6.69576693	6.22972804	4.30E-08	1.24E-06	8.36986213	up-regulated
LZTFL1	0.669288183	6.10467076	6.21712091	4.52E-08	1.28E-06	8.32168874	up-regulated
RPS27L	0.931661426	7.42018135	6.2064519	4.72E-08	1.33E-06	8.28093803	up-regulated
FAM200B	0.665403598	6.21120553	6.19931066	4.85E-08	1.36E-06	8.25367048	up-regulated
VRK1	0.503638539	7.13872797	6.19787239	4.88E-08	1.37E-06	8.24817953	up-regulated
COX16	0.823572284	6.76297186	6.19747664	4.89E-08	1.37E-06	8.24666873	up-regulated
IFT80	0.64498431	7.12506661	6.19629193	4.91E-08	1.38E-06	8.24214611	up-regulated
IMPA1	0.57099108	8.46617019	6.1953706	4.93E-08	1.38E-06	8.23862907	up-regulated
DYNLT2B	0.522067558	5.35512052	6.19261522	4.98E-08	1.39E-06	8.2281115	up-regulated
RBM12B	0.580348071	5.73668462	6.19014937	5.03E-08	1.40E-06	8.21870004	up-regulated
SAMD4A	0.807701762	6.23084094	6.17965468	5.24E-08	1.45E-06	8.17865408	up-regulated
IL18	0.523393719	5.54779935	6.16831053	5.48E-08	1.51E-06	8.13538411	up-regulated
RSAD2	2.384029175	9.47357109	6.16365545	5.58E-08	1.53E-06	8.11763352	up-regulated
TOMM5	0.774140804	7.11805129	6.16314461	5.59E-08	1.53E-06	8.11568579	up-regulated
ASAP1-IT1	-0.736427116	6.90949348	-6.1624739	5.61E-08	1.53E-06	8.11312844	down-regulated
THAP2	0.694435682	4.73314288	6.16010913	5.66E-08	1.54E-06	8.10411288	up-regulated
LIN52	0.510957461	6.13423102	6.15419037	5.79E-08	1.57E-06	8.0815511	up-regulated
ZBTB41	0.686388743	7.02688713	6.15358661	5.81E-08	1.57E-06	8.07924991	up-regulated
CPNE8	0.659302643	5.90454637	6.15161786	5.85E-08	1.58E-06	8.07174647	up-regulated
MZT1	0.602917267	6.19357091	6.15155626	5.85E-08	1.58E-06	8.0715117	up-regulated
SON	-0.519182646	10.1713212	-6.1512786	5.86E-08	1.58E-06	8.07045342	down-regulated
MAP4K3	0.806414494	4.97231993	6.14786367	5.94E-08	1.59E-06	8.05743983	up-regulated
CDK1	0.545188552	4.13151509	6.12713507	6.44E-08	1.71E-06	7.97848295	up-regulated
AMPD2	-0.559006885	9.75086982	-6.1263158	6.47E-08	1.72E-06	7.97536344	down-regulated
C2orf76	0.708623071	5.13723355	6.11723132	6.70E-08	1.77E-06	7.94078094	up-regulated
ETAA1	0.52469124	5.16311488	6.11246264	6.83E-08	1.80E-06	7.92263246	up-regulated
PCLAF	0.867668272	6.01441066	6.10818209	6.94E-08	1.82E-06	7.90634455	up-regulated
VAMP5	0.556350901	7.75102564	6.10751843	6.96E-08	1.82E-06	7.90381951	up-regulated
PLSCR1	0.987787325	9.42376998	6.09649127	7.27E-08	1.89E-06	7.86187378	up-regulated
LACTB2	0.561390589	5.35198237	6.0912273	7.42E-08	1.92E-06	7.84185681	up-regulated
SMIM30	0.552726207	5.66317908	6.08627432	7.57E-08	1.96E-06	7.82302623	up-regulated
SMAP2	-0.517290218	11.2078162	-6.0839877	7.64E-08	1.97E-06	7.81433402	down-regulated
DBI	0.774411211	8.71929222	6.08057256	7.74E-08	2.00E-06	7.80135348	up-regulated
NFE2L3	0.574315742	5.11947247	6.07251883	7.99E-08	2.05E-06	7.77074918	up-regulated
RIF1	0.605378305	5.85100594	6.06562771	8.21E-08	2.10E-06	7.74457065	up-regulated
TRMT11	0.626845473	6.10027299	6.04527411	8.89E-08	2.25E-06	7.66729256	up-regulated
TET2	-0.632463405	7.00904351	-6.035707	9.23E-08	2.32E-06	7.63099053	down-regulated
MRPL1	0.651065067	6.25993138	6.02845109	9.50E-08	2.38E-06	7.60346801	up-regulated
CMPK2	1.783652001	9.68291686	6.02756943	9.53E-08	2.38E-06	7.60012434	up-regulated
OTUD6B	0.609752782	6.27186609	6.02124799	9.77E-08	2.43E-06	7.57615397	up-regulated
LOC102723458	1.010808328	5.43610574	6.01457711	1.00E-07	2.48E-06	7.55086542	up-regulated
SLIRP	0.533919048	7.21611054	6.0144625	1.00E-07	2.48E-06	7.55043103	up-regulated
ISG15	1.668135231	10.9943748	6.01184118	1.01E-07	2.50E-06	7.54049588	up-regulated
CD58	0.616333808	8.7105871	6.00654428	1.03E-07	2.54E-06	7.52042334	up-regulated
TXNDC17	0.517626312	8.35544742	6.00570706	1.04E-07	2.54E-06	7.5172511	up-regulated
IMPA2	-0.654401367	9.15032226	-6.001812	1.05E-07	2.57E-06	7.50249435	down-regulated
CRIPT	0.577914856	6.533236	5.99510254	1.08E-07	2.63E-06	7.47708036	up-regulated
ZNF652	-0.502800188	9.41606196	-5.991916	1.10E-07	2.65E-06	7.46501313	down-regulated
AGL	0.624320004	7.68904085	5.98654661	1.12E-07	2.70E-06	7.44468309	up-regulated
NDUFA5	1.018053898	6.81390937	5.98627642	1.12E-07	2.70E-06	7.4436602	up-regulated
RAPGEF2	-0.530766956	7.31212193	-5.9793553	1.15E-07	2.75E-06	7.41746231	down-regulated
LOC374443	0.572690457	6.12343911	5.96775752	1.20E-07	2.85E-06	7.3735797	up-regulated

IFI44L	2.425063141	9.48022436	5.95519846	1.26E-07	2.97E-06	7.32608505	up-regulated
TMA16	0.557737395	4.38834752	5.95257308	1.28E-07	3.00E-06	7.31615996	up-regulated
NUSAP1	0.545230249	6.31854647	5.93510458	1.37E-07	3.16E-06	7.25015081	up-regulated
SCLT1	0.736963338	5.23443105	5.93157204	1.39E-07	3.19E-06	7.23680848	up-regulated
VBP1	0.606124206	8.65875183	5.92070626	1.45E-07	3.32E-06	7.19578195	up-regulated
C10orf88	0.529510349	5.64941055	5.92014306	1.45E-07	3.32E-06	7.19365597	up-regulated
THAP5	0.573538247	7.21079355	5.90334528	1.55E-07	3.51E-06	7.13027311	up-regulated
FOXO3	-0.685765157	9.93988647	-5.8988609	1.58E-07	3.57E-06	7.11336046	down-regulated
RPS15A	0.600874153	11.8103791	5.88500068	1.66E-07	3.75E-06	7.06110951	up-regulated
ZNF780A	0.556900174	5.34853696	5.88341161	1.67E-07	3.77E-06	7.05512108	up-regulated
COMMD6	1.173745568	8.32914818	5.87621562	1.72E-07	3.85E-06	7.02800856	up-regulated
SAR1B	0.58929455	5.62544132	5.87271806	1.75E-07	3.89E-06	7.01483402	up-regulated
RPS7	1.202769965	9.0137216	5.87096924	1.76E-07	3.90E-06	7.00824741	up-regulated
GZMA	0.905410871	9.25302246	5.86111277	1.83E-07	4.03E-06	6.97113494	up-regulated
LYSMD3	0.547260684	8.16285128	5.85393709	1.88E-07	4.12E-06	6.94412734	up-regulated
ARAP3	-0.541920121	8.63482243	-5.8440517	1.95E-07	4.23E-06	6.90693631	down-regulated
HERC5	1.497136427	9.88529598	5.83915032	1.99E-07	4.30E-06	6.88850256	up-regulated
EEF1E1	0.787541899	5.82076893	5.83793528	2.00E-07	4.30E-06	6.88393358	up-regulated
BBS10	0.626017166	6.22220347	5.81893125	2.15E-07	4.58E-06	6.81250682	up-regulated
CHAC2	0.67986967	4.88114398	5.81667147	2.17E-07	4.61E-06	6.80401783	up-regulated
ERI2	0.51260559	5.57638604	5.81194745	2.21E-07	4.69E-06	6.78627481	up-regulated
CAMK1D	-0.562247029	7.70312331	-5.8103481	2.22E-07	4.70E-06	6.78026887	down-regulated
CCDC125	-0.528035266	6.31101852	-5.8010773	2.31E-07	4.84E-06	6.74546312	down-regulated
EFCAB7	0.615569446	4.62189853	5.79906398	2.32E-07	4.87E-06	6.73790661	up-regulated
HSPA13	0.587979706	7.55114455	5.79730473	2.34E-07	4.89E-06	6.73130428	up-regulated
SCN3A	1.062061729	5.08527311	5.79340545	2.38E-07	4.96E-06	6.71667261	up-regulated
AKR1C3	1.004213052	6.27957915	5.79073896	2.40E-07	5.00E-06	6.70666854	up-regulated
BAZ2B	0.56970897	9.02210018	5.78927225	2.41E-07	5.02E-06	6.70116634	up-regulated
IFI27	3.32034572	8.33204968	5.7865485	2.44E-07	5.07E-06	6.69094953	up-regulated
MRPL47	0.722329721	7.421809	5.7856449	2.45E-07	5.08E-06	6.68756043	up-regulated
ST3GAL6	0.718849745	6.26362819	5.78144	2.49E-07	5.16E-06	6.67179132	up-regulated
RECQL	0.518812266	7.24086604	5.77816095	2.52E-07	5.20E-06	6.65949661	up-regulated
S100A8	0.746495065	12.0090706	5.77471088	2.56E-07	5.26E-06	6.64656288	up-regulated
TLR7	0.681645965	6.62439492	5.75919026	2.71E-07	5.52E-06	6.58840657	up-regulated
ZDHHC17	0.527218413	8.93452019	5.75891406	2.72E-07	5.52E-06	6.58737206	up-regulated
ANAPC10	0.825748534	4.85013658	5.7566178	2.74E-07	5.56E-06	6.57877193	up-regulated
EPS8	0.754053519	5.13797243	5.75033752	2.81E-07	5.66E-06	6.5552557	up-regulated
PIGA	0.522887308	5.99682581	5.7495773	2.82E-07	5.67E-06	6.55240959	up-regulated
PLEKHF2	0.526023394	8.69511567	5.7489473	2.82E-07	5.67E-06	6.55005109	up-regulated
CSTA	0.860146057	9.10398204	5.73805859	2.95E-07	5.87E-06	6.50929974	up-regulated
TIGIT	0.6036632	7.07764078	5.73150242	3.02E-07	6.01E-06	6.48477417	up-regulated
NMD3	0.681802227	5.19022896	5.72646779	3.08E-07	6.11E-06	6.46594613	up-regulated
KIF11	0.593083051	4.14473711	5.72587589	3.09E-07	6.12E-06	6.46373293	up-regulated
RPS27	0.577176859	12.3998691	5.72443475	3.10E-07	6.13E-06	6.45834458	up-regulated
TMEM38B	0.556036996	5.65392763	5.70549718	3.34E-07	6.54E-06	6.38757573	up-regulated
CCDC71L	0.609370682	6.52830283	5.69848817	3.43E-07	6.68E-06	6.3614014	up-regulated
NRGN	-0.830112314	10.0732303	-5.6928504	3.51E-07	6.81E-06	6.34035506	down-regulated
PHLDA1	0.544002648	4.51635882	5.69258747	3.51E-07	6.81E-06	6.33937351	up-regulated
STAT1	0.549442612	11.2138987	5.68898812	3.56E-07	6.86E-06	6.32594019	up-regulated
NIBAN1	-0.662696697	10.9599885	-5.6879916	3.57E-07	6.88E-06	6.32222151	down-regulated
RIN2	0.514758973	7.71405018	5.68149555	3.67E-07	7.02E-06	6.29798515	up-regulated
TIFA	0.51996588	8.93917091	5.67453076	3.77E-07	7.17E-06	6.27200944	up-regulated

TAFA1	0.74323087	4.83626424	5.67410555	3.77E-07	7.17E-06	6.27042391	up-regulated
SPRED1	0.667580114	4.14225047	5.66275512	3.94E-07	7.46E-06	6.22811369	up-regulated
CTSL	0.543921623	7.31184138	5.65952893	3.99E-07	7.53E-06	6.21609242	up-regulated
FBXO5	0.593589026	5.39756183	5.65549608	4.05E-07	7.64E-06	6.20106844	up-regulated
C1QB	0.719475135	5.19069987	5.65349236	4.08E-07	7.69E-06	6.19360499	up-regulated
SCO2	0.631039971	9.36124928	5.65276857	4.10E-07	7.70E-06	6.19090925	up-regulated
TATDN1	0.547673079	5.62429785	5.64959338	4.15E-07	7.78E-06	6.1790845	up-regulated
LAP3	0.81926221	9.81015053	5.64769545	4.18E-07	7.81E-06	6.17201738	up-regulated
OTUD6B-AS1	0.558342659	4.69895261	5.6441496	4.23E-07	7.89E-06	6.15881611	up-regulated
LNPK	0.639575876	4.77785839	5.63262779	4.43E-07	8.21E-06	6.11593814	up-regulated
USP18	1.479305126	7.11562881	5.61969363	4.65E-07	8.54E-06	6.06783706	up-regulated
RPS17	0.738607356	11.0426428	5.61963521	4.65E-07	8.54E-06	6.06761989	up-regulated
ZNF658	0.511709994	4.10451832	5.61780022	4.69E-07	8.59E-06	6.06079857	up-regulated
PTP4A1	0.619374183	6.75807749	5.60207556	4.98E-07	9.07E-06	6.00237346	up-regulated
MRPL50	0.744340322	4.33835457	5.60019757	5.02E-07	9.13E-06	5.99539929	up-regulated
SCOC	0.650426382	4.85919845	5.58246359	5.37E-07	9.63E-06	5.92957862	up-regulated
TIGD7	0.565299915	5.35271135	5.58034253	5.41E-07	9.68E-06	5.92171069	up-regulated
FAR1	0.746748602	5.86318788	5.57517957	5.52E-07	9.85E-06	5.90256313	up-regulated
RSL24D1	0.995460655	7.48136312	5.57456701	5.54E-07	9.86E-06	5.90029174	up-regulated
RAB18	0.56461859	8.17984864	5.56405415	5.76E-07	1.02E-05	5.86132245	up-regulated
MBOAT7	-0.502057834	10.7769383	-5.5610491	5.83E-07	1.02E-05	5.8501878	down-regulated
ZNF267	0.831543176	8.10796106	5.55720254	5.92E-07	1.04E-05	5.83593769	up-regulated
HMMR	0.539251063	4.13615852	5.55649713	5.93E-07	1.04E-05	5.83332478	up-regulated
OAS1	1.346571411	9.5832575	5.54485186	6.20E-07	1.07E-05	5.79020516	up-regulated
MYADM	-0.589915089	8.86968488	-5.5318031	6.52E-07	1.12E-05	5.74192413	down-regulated
TNFRSF17	1.200925878	5.73023719	5.52208087	6.77E-07	1.15E-05	5.70597611	up-regulated
ZNF708	0.633584712	5.85899822	5.50788587	7.15E-07	1.20E-05	5.65352772	up-regulated
RPL9	0.749730314	11.4097606	5.50627621	7.19E-07	1.21E-05	5.64758314	up-regulated
GON7	0.594528479	5.8185468	5.50562454	7.21E-07	1.21E-05	5.64517661	up-regulated
TRAT1	0.920590258	7.23120595	5.5037937	7.26E-07	1.22E-05	5.63841618	up-regulated
POLI	0.655894156	6.21786387	5.49364957	7.55E-07	1.26E-05	5.60097232	up-regulated
FPGT	0.667574267	6.08170316	5.49095721	7.63E-07	1.27E-05	5.5910382	up-regulated
RPL39	0.760705231	11.7615335	5.49030914	7.65E-07	1.28E-05	5.58864726	up-regulated
CLEC4D	0.830981322	5.51216712	5.48324256	7.86E-07	1.31E-05	5.56258236	up-regulated
FAM3C	0.501913957	7.6740793	5.48239075	7.88E-07	1.31E-05	5.55944126	up-regulated
ATP5PF	0.535553619	8.06614917	5.48198715	7.89E-07	1.31E-05	5.55795299	up-regulated
IL7	0.551520804	4.35199376	5.44920598	8.95E-07	1.46E-05	5.43719995	up-regulated
RRM2B	0.514044426	8.5648509	5.4452606	9.08E-07	1.47E-05	5.42268351	up-regulated
CYRIB	-0.525449574	8.78772501	-5.4418714	9.20E-07	1.49E-05	5.41021634	down-regulated
FBXO6	0.718580751	8.45807773	5.44040954	9.25E-07	1.49E-05	5.40483973	up-regulated
ZNF684	0.62677958	4.30384357	5.43227228	9.54E-07	1.53E-05	5.37492064	up-regulated
HOXA1	0.530806279	4.91276293	5.42485798	9.82E-07	1.57E-05	5.34767329	up-regulated
MIR155HG	0.779709208	4.44790288	5.42344032	9.87E-07	1.57E-05	5.34246492	up-regulated
SUCO	0.52356616	7.57194673	5.41835999	1.01E-06	1.60E-05	5.32380404	up-regulated
CETN3	0.999321736	5.13909268	5.41583178	1.02E-06	1.61E-05	5.31451981	up-regulated
ARL14EP	0.547797853	7.03549027	5.39568287	1.10E-06	1.71E-05	5.24058241	up-regulated
ODF2L	0.607082822	4.98562527	5.37678594	1.18E-06	1.82E-05	5.17132794	up-regulated
NFYB	0.692040283	6.23944438	5.36975519	1.21E-06	1.87E-05	5.1455834	up-regulated
HAUS3	0.509750009	6.81992213	5.36225923	1.25E-06	1.91E-05	5.11814869	up-regulated
ITGAV	0.66423843	6.69684563	5.35652856	1.27E-06	1.95E-05	5.09718415	up-regulated
ARL13B	0.618319503	5.01108728	5.34625924	1.32E-06	2.02E-05	5.05963606	up-regulated
WASL	-0.508157128	6.39772872	-5.3451868	1.33E-06	2.02E-05	5.0557165	down-regulated

KIF21A	0.638062666	5.9654831	5.33495785	1.38E-06	2.09E-05	5.01834456	up-regulated
BIRC2	0.508041872	9.86686564	5.3333628	1.39E-06	2.10E-05	5.01251934	up-regulated
SLC16A10	-0.835983573	5.84023429	-5.3329757	1.39E-06	2.10E-05	5.01110589	down-regulated
CENPQ	0.520398622	4.24234281	5.32797828	1.42E-06	2.12E-05	4.99285944	up-regulated
ZNF506	0.755731202	4.91215007	5.31247116	1.50E-06	2.23E-05	4.93628065	up-regulated
CHN1	0.515877291	5.90888796	5.30626895	1.54E-06	2.28E-05	4.9136684	up-regulated
IRF7	1.001691573	9.24396816	5.30186562	1.57E-06	2.30E-05	4.89762053	up-regulated
HINT3	0.613339444	5.69959531	5.29435624	1.61E-06	2.36E-05	4.87026404	up-regulated
PARP12	0.685572998	9.76419653	5.28941958	1.64E-06	2.39E-05	4.85228774	up-regulated
MRPL32	0.552812012	7.62659457	5.28312951	1.68E-06	2.44E-05	4.82939216	up-regulated
SIGLEC10	-0.594702918	6.81589853	-5.2826587	1.68E-06	2.44E-05	4.82767899	down-regulated
TMEM156	0.55095987	5.58337705	5.28118604	1.69E-06	2.45E-05	4.8223201	up-regulated
BST2	0.606427669	9.33196989	5.27828725	1.71E-06	2.48E-05	4.81177349	up-regulated
LARP7	0.532014722	7.06867159	5.26964429	1.77E-06	2.54E-05	4.7803409	up-regulated
EID3	0.514593371	4.63365334	5.26028354	1.83E-06	2.62E-05	4.74631964	up-regulated
KAT2B	0.517342235	9.37346155	5.25977261	1.84E-06	2.63E-05	4.74446335	up-regulated
ZBP1	0.753169519	8.09347977	5.25091021	1.90E-06	2.70E-05	4.7122755	up-regulated
ITGA4	0.65948209	7.41763307	5.24868859	1.92E-06	2.72E-05	4.70420991	up-regulated
WWP1	0.521649461	6.51074135	5.23633109	2.01E-06	2.83E-05	4.65936952	up-regulated
ELOVL6	0.610808636	5.47073932	5.23150734	2.04E-06	2.87E-05	4.64187697	up-regulated
GNAZ	-0.566658607	7.31699351	-5.2314263	2.04E-06	2.87E-05	4.64158319	down-regulated
LINC00487	1.165311474	4.30908223	5.22558037	2.09E-06	2.92E-05	4.62039221	up-regulated
KRCC1	0.595177797	8.15839095	5.22180308	2.12E-06	2.95E-05	4.60670475	up-regulated
COX7C	0.788007725	9.18236381	5.22075123	2.13E-06	2.96E-05	4.60289387	up-regulated
ZNF268	0.57780292	5.68025953	5.21834177	2.15E-06	2.98E-05	4.59416555	up-regulated
ZNF567	0.637535579	5.96421545	5.21393805	2.18E-06	3.01E-05	4.57821694	up-regulated
FAS	0.576209226	8.88491458	5.20535741	2.25E-06	3.09E-05	4.54715603	up-regulated
XRN1	0.725807935	5.74538016	5.19938388	2.31E-06	3.15E-05	4.52554419	up-regulated
MICU3	0.57501184	3.9891772	5.19658461	2.33E-06	3.18E-05	4.51541989	up-regulated
ZBTB16	-0.624796309	6.4178482	-5.174145	2.54E-06	3.41E-05	4.43433782	down-regulated
LINC02910	0.773495754	4.85288805	5.16497742	2.62E-06	3.51E-05	4.40125163	up-regulated
SAMSN1	0.579405374	7.00822801	5.16071725	2.67E-06	3.56E-05	4.38588432	up-regulated
TUBE1	0.644603632	6.39891478	5.15928835	2.68E-06	3.57E-05	4.38073111	up-regulated
N4BP2	0.543919827	6.3319065	5.15843446	2.69E-06	3.58E-05	4.37765188	up-regulated
ANKRD22	1.203133702	6.82704504	5.14036807	2.88E-06	3.79E-05	4.31254964	up-regulated
CD28	0.55960825	7.36621103	5.1325301	2.96E-06	3.87E-05	4.28433366	up-regulated
RRM2	0.712054026	5.85855468	5.09091419	3.46E-06	4.39E-05	4.13480889	up-regulated
LY6E	1.231355969	7.83737868	5.08231193	3.58E-06	4.51E-05	4.10396247	up-regulated
GORAB	0.593338148	6.2721432	5.07295005	3.70E-06	4.62E-05	4.07041625	up-regulated
SPATS2L	0.716963722	3.88177785	5.05127396	4.01E-06	4.97E-05	3.99284186	up-regulated
AUTS2	-0.538951666	7.74861869	-5.0427317	4.14E-06	5.11E-05	3.96230825	down-regulated
SNRPD1	0.529457666	6.17303333	5.03857491	4.21E-06	5.17E-05	3.94745796	up-regulated
ABCB10	0.549584426	7.37851838	5.03147489	4.32E-06	5.27E-05	3.92210445	up-regulated
DZIP3	0.534251224	5.39767105	5.01614245	4.57E-06	5.52E-05	3.86740445	up-regulated
SIGLEC1	1.270997611	6.35076901	5.01507377	4.59E-06	5.53E-05	3.86359444	up-regulated
LINC01857	0.731079347	5.05600159	5.00323333	4.80E-06	5.73E-05	3.82140393	up-regulated
IFNG	0.510466208	4.43802001	4.99656772	4.92E-06	5.86E-05	3.79767107	up-regulated
SPARC	-0.695602862	10.3966169	-4.98533	5.13E-06	6.07E-05	3.75768946	down-regulated
TC2N	0.645744182	5.91367775	4.97759856	5.28E-06	6.21E-05	3.73020451	up-regulated
CCNT2	0.549073628	7.37221493	4.9764995	5.30E-06	6.22E-05	3.72629885	up-regulated
ZWINT	0.544293139	5.96339865	4.96712917	5.49E-06	6.41E-05	3.69301514	up-regulated
SH2D1A	0.52181987	7.83142092	4.95087149	5.83E-06	6.76E-05	3.63533075	up-regulated

RBIS	0.534168159	4.68509655	4.93129459	6.26E-06	7.20E-05	3.56597697	up-regulated
NAP1L2	0.551673472	4.90578875	4.90090803	7.01E-06	7.89E-05	3.45856405	up-regulated
HBA2	-0.52331374	12.8650056	-4.8910107	7.26E-06	8.16E-05	3.42364059	down-regulated
ZMAT1	0.744907821	5.74894946	4.88691254	7.38E-06	8.25E-05	3.40918903	up-regulated
MED25	-0.517655023	10.561173	-4.8853154	7.42E-06	8.29E-05	3.40355838	down-regulated
TMX1	0.555994054	7.16014913	4.88182919	7.51E-06	8.39E-05	3.39127071	up-regulated
CCND3	-0.554849982	7.63725109	-4.8750261	7.70E-06	8.56E-05	3.36730345	down-regulated
SERPING1	1.158933658	7.65522905	4.86709829	7.93E-06	8.75E-05	3.33939206	up-regulated
RPS3A	0.798925733	11.2317724	4.85584717	8.27E-06	9.06E-05	3.29981506	up-regulated
RPL23	0.757027656	9.72010704	4.84733729	8.53E-06	9.31E-05	3.26990768	up-regulated
PTS	0.56339923	5.2848028	4.84293388	8.67E-06	9.42E-05	3.25444139	up-regulated
HGF	0.51936611	4.85086889	4.84029661	8.75E-06	9.48E-05	3.24518139	up-regulated
RNF217	0.607390632	5.18003707	4.80913266	9.81E-06	1.05E-04	3.13592979	up-regulated
GAPT	0.527147667	8.51623101	4.80476429	9.97E-06	1.06E-04	3.12064101	up-regulated
TNFAIP6	0.86496512	9.4624257	4.79355504	1.04E-05	1.10E-04	3.08143873	up-regulated
SEPTIN10	0.527480061	5.21955986	4.79195488	1.04E-05	1.11E-04	3.07584585	up-regulated
OASL	1.068491815	9.332273	4.79019685	1.05E-05	1.11E-04	3.06970217	up-regulated
DPH5-DT	0.519904785	6.90687761	4.78411154	1.07E-05	1.13E-04	3.04844415	up-regulated
LAMP3	1.13082811	6.30850485	4.78050287	1.09E-05	1.14E-04	3.03584368	up-regulated
DHRS9	0.608483303	8.79778245	4.76766161	1.14E-05	1.19E-04	2.99104087	up-regulated
ITPKB	-0.528901999	7.51757513	-4.7636158	1.16E-05	1.20E-04	2.97693643	down-regulated
ZFP1	0.506766083	5.86457348	4.75924842	1.18E-05	1.22E-04	2.96171747	up-regulated
SLC19A2	0.563428707	5.53120986	4.75845174	1.18E-05	1.22E-04	2.95894193	up-regulated
MPZL1	-0.570200472	7.82218704	-4.7544416	1.20E-05	1.24E-04	2.94497438	down-regulated
MT1E	0.590159877	9.1181522	4.73649902	1.28E-05	1.30E-04	2.88254622	up-regulated
BATF2	0.878410936	7.11391202	4.72912882	1.31E-05	1.33E-04	2.85693456	up-regulated
ZNF571	0.538311367	4.26252453	4.71578928	1.38E-05	1.39E-04	2.81062655	up-regulated
TXN	0.546223595	9.11350705	4.71247771	1.39E-05	1.40E-04	2.79913996	up-regulated
TMEM200A	0.58571394	4.21805436	4.70771024	1.42E-05	1.42E-04	2.78261002	up-regulated
TUBB1	-0.807459452	7.72613095	-4.7070434	1.42E-05	1.42E-04	2.78029842	down-regulated
NAP1L1	0.503398154	5.53921054	4.70582047	1.43E-05	1.43E-04	2.77605993	up-regulated
METTL18	0.546477829	6.27793593	4.7005659	1.46E-05	1.45E-04	2.75785362	up-regulated
CLIC2	0.661080069	5.30316036	4.69090095	1.51E-05	1.49E-04	2.72439105	up-regulated
PRKAG2	0.611394084	5.26350953	4.69080008	1.51E-05	1.49E-04	2.72404198	up-regulated
CD226	0.528217684	5.97906538	4.68662092	1.53E-05	1.51E-04	2.70958285	up-regulated
JAM3	-0.545628673	7.40208894	-4.6385687	1.82E-05	1.75E-04	2.54377169	down-regulated
AP1AR	0.576282312	5.88138155	4.63164286	1.87E-05	1.79E-04	2.51994037	up-regulated
TRIM5	0.542779737	8.04221859	4.62707807	1.90E-05	1.81E-04	2.50424272	up-regulated
SLC24A3	-0.636481315	6.03042429	-4.6235651	1.92E-05	1.83E-04	2.4921674	down-regulated
CISD2	0.835350975	6.30280798	4.61635345	1.97E-05	1.87E-04	2.46739176	up-regulated
CCL2	0.671384934	4.32496073	4.60990742	2.02E-05	1.90E-04	2.44526244	up-regulated
SLC15A2	0.508127275	6.05268745	4.59304823	2.15E-05	2.00E-04	2.38745568	up-regulated
STAP1	0.654138142	5.64715451	4.59230682	2.15E-05	2.01E-04	2.38491592	up-regulated
IGF1R	-0.588953964	7.1293473	-4.5858309	2.20E-05	2.05E-04	2.36274058	down-regulated
MPL	-0.677725834	5.73722408	-4.5836493	2.22E-05	2.06E-04	2.35527366	down-regulated
XAF1	0.972877713	10.0974149	4.56895591	2.34E-05	2.15E-04	2.30502784	up-regulated
CCL8	0.637320588	4.40395697	4.54826721	2.52E-05	2.29E-04	2.23441537	up-regulated
LINC02555	0.890253594	4.19698825	4.53080843	2.68E-05	2.41E-04	2.1749506	up-regulated
RPL7	0.59644728	11.5981617	4.52930442	2.69E-05	2.42E-04	2.16983325	up-regulated
OAS2	1.129705298	8.71341597	4.49466843	3.05E-05	2.69E-04	2.05222123	up-regulated
GUCY1A1	-0.548199074	6.66587063	-4.490079	3.10E-05	2.73E-04	2.03667122	down-regulated
RAB33B	0.530043877	7.41792956	4.48407646	3.17E-05	2.78E-04	2.01634535	up-regulated

IFI35	0.644944089	8.84167513	4.4748626	3.27E-05	2.86E-04	1.98517213	up-regulated
COX6C	0.52030746	8.54277217	4.47443614	3.28E-05	2.86E-04	1.98373009	up-regulated
FAM209A	0.522534642	4.67336571	4.46709799	3.36E-05	2.92E-04	1.95892747	up-regulated
CDC14A	0.709751109	5.13290863	4.46346547	3.41E-05	2.95E-04	1.94665737	up-regulated
ADGRE3	-0.502741895	8.3344946	-4.4409149	3.69E-05	3.15E-04	1.87059925	down-regulated
MGLL	-0.586131727	7.31943716	-4.4394217	3.71E-05	3.17E-04	1.86557	down-regulated
OAS3	0.960260763	6.06126894	4.42895338	3.85E-05	3.26E-04	1.83033609	up-regulated
SVIP	0.535010398	6.25421948	4.42877891	3.85E-05	3.26E-04	1.82974925	up-regulated
LIN7C	0.524232033	4.95195315	4.42357195	3.92E-05	3.31E-04	1.81224015	up-regulated
SENP7	0.522369032	4.50713299	4.4145312	4.05E-05	3.40E-04	1.78186471	up-regulated
MT2A	0.570512977	10.7875088	4.39488985	4.34E-05	3.60E-04	1.71598421	up-regulated
ABCC3	-0.503096024	6.44750002	-4.391756	4.39E-05	3.63E-04	1.70548692	down-regulated
F13A1	-0.528314492	10.1210355	-4.3718492	4.70E-05	3.86E-04	1.63889739	down-regulated
DSC2	-0.70279327	5.08977751	-4.3700931	4.73E-05	3.87E-04	1.63303073	down-regulated
BISPR	0.62440175	7.39152516	4.36232658	4.86E-05	3.96E-04	1.60709993	up-regulated
RPL34	0.820930784	9.39008592	4.35604131	4.97E-05	4.04E-04	1.58613241	up-regulated
ZCCHC2	0.633147826	8.78650795	4.34777236	5.12E-05	4.15E-04	1.55857173	up-regulated
MT1HL1	0.520364482	9.63032143	4.32161114	5.61E-05	4.48E-04	1.47155871	up-regulated
IGFBP3	0.521716637	5.88370044	4.31736484	5.69E-05	4.53E-04	1.45746179	up-regulated
PECAM1	-0.548887859	7.53800848	-4.307307	5.90E-05	4.67E-04	1.42410125	down-regulated
GBP1	0.674906996	10.3812687	4.27875805	6.51E-05	5.09E-04	1.32963596	up-regulated
IFIT2	0.764517237	10.0200799	4.27590424	6.58E-05	5.12E-04	1.32021166	up-regulated
GBP5	0.669493346	9.38409171	4.24844055	7.24E-05	5.54E-04	1.22969151	up-regulated
CENPK	0.824772356	5.75389197	4.24242771	7.39E-05	5.64E-04	1.20991567	up-regulated
MT1H	0.542548434	9.48663072	4.22269815	7.91E-05	5.96E-04	1.14513426	up-regulated
CD72	0.592271432	6.87120655	4.20963761	8.27E-05	6.19E-04	1.10234179	up-regulated
PTGS2	0.603437586	6.13514071	4.16948386	9.50E-05	6.96E-04	0.97124002	up-regulated
MX1	1.128097742	10.552577	4.16399714	9.68E-05	7.07E-04	0.9533803	up-regulated
FCGBP	-0.501145434	6.32397204	-4.1493114	1.02E-04	7.37E-04	0.90564199	down-regulated
DDX11L2	-0.73607902	7.68032514	-4.1257795	1.10E-04	7.89E-04	0.82934615	down-regulated
GZMK	0.530791611	9.14527808	4.12243603	1.12E-04	7.97E-04	0.81852578	up-regulated
MS4A7	0.509891899	9.53168695	4.05426492	1.41E-04	9.70E-04	0.5989995	up-regulated
GBP4	0.662092827	6.77247094	4.04660394	1.44E-04	9.92E-04	0.57446117	up-regulated
CTDSPL	-0.571109064	7.0302038	-4.0360691	1.50E-04	1.02E-03	0.54076188	down-regulated
ITGA2B	-0.586001955	7.95779076	-4.0358318	1.50E-04	1.03E-03	0.54000312	down-regulated
MOV10	0.542945157	6.97106809	4.03351504	1.51E-04	1.03E-03	0.53259939	up-regulated
TMEM255A	0.541107175	3.81355636	4.03227367	1.52E-04	1.04E-03	0.52863324	up-regulated
IKZF3	-0.575743989	6.27134547	-3.9887799	1.76E-04	1.17E-03	0.39012305	down-regulated
CARD16	0.529068246	8.31531622	3.98568902	1.77E-04	1.18E-03	0.3803134	up-regulated
MYBL1	0.508747543	8.66099506	3.97175404	1.86E-04	1.23E-03	0.33614324	up-regulated
SLC26A8	0.656311942	5.58064174	3.96686808	1.89E-04	1.25E-03	0.32067776	up-regulated
TRBV27	-0.749472785	8.9233253	-3.9518401	1.99E-04	1.30E-03	0.27318049	down-regulated
LRRN3	-0.94467163	8.20293278	-3.880419	2.52E-04	1.60E-03	0.04892713	down-regulated
LINC02904	0.556111652	4.85742688	3.81664676	3.11E-04	1.91E-03	-0.1492063	up-regulated
HELZ2	0.565000587	7.38109699	3.79558112	3.33E-04	2.02E-03	-0.2142104	up-regulated
MYOF	0.505958482	7.26023239	3.78950942	3.40E-04	2.05E-03	-0.2329049	up-regulated
IL18R1	0.55201774	6.76059841	3.74856928	3.89E-04	2.30E-03	-0.3584699	up-regulated
PFDN5	0.506619647	9.59420385	3.71760028	4.30E-04	2.50E-03	-0.452883	up-regulated
CASP5	0.611864954	6.77834335	3.7078072	4.44E-04	2.57E-03	-0.4826353	up-regulated
ANXA3	0.756311635	8.26008965	3.69910297	4.56E-04	2.64E-03	-0.5090378	up-regulated
FCGR1BP	0.665621589	9.31920815	3.69093584	4.68E-04	2.70E-03	-0.5337751	up-regulated
LGALS3BP	0.612000699	6.68257925	3.63092576	5.68E-04	3.18E-03	-0.7144622	up-regulated

LMNB1	0.530995843	7.43767255	3.57096065	6.88E-04	3.74E-03	-0.8930923	up-regulated
PRSS33	-0.865645651	8.00596361	-3.569718	6.90E-04	3.76E-03	-0.8967735	down-regulated
FCRL1	0.606867769	6.461017	3.55037832	7.34E-04	3.97E-03	-0.953955	up-regulated
ALOX12	-0.504160861	6.2959542	-3.5173579	8.15E-04	4.32E-03	-1.051111	down-regulated
LAIR2	0.662933675	7.68443397	3.4908467	8.85E-04	4.62E-03	-1.128677	up-regulated
HDC	-0.662801106	5.87444979	-3.4644516	9.61E-04	4.95E-03	-1.2055123	down-regulated
ERV3-2	0.627640085	7.04091314	3.32483489	1.48E-03	7.15E-03	-1.6053018	up-regulated
RHAG	0.521435366	3.91188533	3.27450746	1.72E-03	8.11E-03	-1.7466147	up-regulated
VWCE	-0.550663424	8.04418559	-3.257178	1.81E-03	8.48E-03	-1.7949228	down-regulated
IGF2BP2	-0.582030629	9.95019721	-3.2541871	1.83E-03	8.56E-03	-1.803242	down-regulated
CLEC12A	0.692885909	9.18057224	3.14101269	2.56E-03	1.13E-02	-2.1140199	up-regulated
PI3	-0.641975906	8.48060169	-3.069894	3.16E-03	1.34E-02	-2.3052317	down-regulated
TSPAN5	-0.531009711	10.5088804	-3.0669538	3.18E-03	1.35E-02	-2.3130678	down-regulated
FEZ1	-0.549105278	5.57826525	-2.9985458	3.88E-03	1.59E-02	-2.4938151	down-regulated
LPCAT2	0.527716227	6.66346958	2.95448642	4.40E-03	1.77E-02	-2.6086175	up-regulated
HEMGN	0.846178312	5.58173698	2.95161207	4.44E-03	1.78E-02	-2.6160627	up-regulated
JCHAIN	0.665051897	8.98279908	2.86436154	5.67E-03	2.19E-02	-2.8394421	up-regulated
ITLN1	0.591582504	5.46761843	2.84653591	5.96E-03	2.28E-02	-2.8844499	up-regulated
KLRC3	0.639379	5.5875513	2.82965971	6.24E-03	2.37E-02	-2.9268613	up-regulated
BPGM	0.675401039	8.65232182	2.78814861	7.00E-03	2.60E-02	-3.0303533	up-regulated
ORM1	-0.578879342	5.97507868	-2.718596	8.46E-03	3.06E-02	-3.2010825	down-regulated
CPA3	-0.753384989	6.44074486	-2.6990705	8.92E-03	3.19E-02	-3.2484026	down-regulated
RNASE2	0.561137981	8.22840971	2.62066482	1.10E-02	3.78E-02	-3.435692	up-regulated
CRISP3	0.53816457	4.00116063	2.54795971	1.33E-02	4.42E-02	-3.605407	up-regulated
TRIM58	-0.554694661	10.7063628	-2.5258886	1.41E-02	4.63E-02	-3.6561633	down-regulated

Supplementary Table 4. The list of 14,385 genes in the "turquoise" module of WGCNA.

DDR1	GGA1	MISFA	FAM170A	COX6A1	PITPNM1	NDP	GNRH1	C1R	POLDIP2	LTBP3	COMMD5	USP54	OLMALINC	ZNF566
RFC2	SRRM2	KDSR	LINC02796	RAB14	WIPI1	NMU	ARPC2	PRRC2B	MAPKAP1	TRIM45	NMRAL1	DTX1	SLC22A16	LOC100507395
PAX8	IFT56	TMEM184A	LINC00862	TMED10	C17orf75	HPD	OPRM1	MYL6	SELENOT	POPDC3	KCTD10	ANKRD37	DSEL	L3MBTL4-AS1
GUCA1A	SYCE1	RFT1	SH3PXD2B	VCL	R3HDM2	TNFAIP6	CLEC4M	TEX261	SPIN1	CABYR	SELENOS	MYEOV	MDGA1	LINC02372
THRA	LAPTM4B	PIGW	LINC00905	DEK	LRRC32	S100A3	GML	ERAL1	ARPC4	ZFYVE21	CHURC1	PARS2	LINC00865	LINC01525
PTPN21	CCDC187	BTBD8	LINC00102	CALR	MAPRE3	MERTK	NFAT5	COL6A1	WBP11	KLF8	ZHX1	MOSMO	PTPRG-AS1	UFSP1
CYP2E1	CEMIP	PPFIA2	DENND10	RPL5	RPS6KA3	ANKRD1	OPRPN	PEG10	TFG	KLHL12	JKAMP	SWSAP1	LOC100652768	MIR200CHG
EPHB3	STAU2	EFCAB5	FAM169A-AS1	HSBP1	KAT2B	USP5	FOXI1	MTUS1	DDX41	SLC27A6	CNOT10	OSCP1	STYXL2	ACOD1
CYP2A6	NLGN4X	TSEN54	EP300-AS1	ARPC1A	AKAP8	DSC3	CES3	KPNA6	PPME1	GLRX2	SCO1	ATCAY	ZBTB11-AS1	DPPA2
SCARB1	TACC1	LINC00942	LINC02426	SEPHS2	KIF1A	RAB33A	TBC1D29P	RBFOX2	MED4	SULT1E1	ARV1	FAM171B	ZNF624	NANOS3
TTLL12	SLC23A2	LOC100132356	LINC03019	RPL31	IGFBP6	MAPK11	ARHGEF16	STX12	CTDSP1	GPR87	BBS2	PLPP6	PGBD3	HAPSTR2
WFDC2	CCNY	HOOK3	LINC02240	ALDOA	VRK1	ATP2C2	ZNF157	ATXN7L3B	HIGD1A	TRHDE	UBE2T	TMEM200B	LCORL	DMRTB1
ADAM32	TYMS	LOC100996549	LOC107984678	SERP1	PDIA5	GNB3	CACNA1C	LSM14A	PPA1	PCID2	TATDN1	TUSC1	TMEM254-AS1	C9orf57
SPATA17	ADAMTS9	TMEM72	MACROD2-AS1	TAX1BP1	PALM	OVOL2	CDC14B	PHLDB1	GNL3	MYL7	CGN	TBCEL	MBNL1-AS1	AFMID
PRR22	L3MBTL4	ZDHHC18	DNMBP	MDH1	ACTN2	ELAVL4	TNFRSF4	PDS5A	PRELID3B	DDX25	SMOC2	IL17D	ADIRF-AS1	RNF212B
PXK	CDH7	TONSL	LINC00929	TRIM28	USP46	ZNF510	H4C6	MCM4	ARL8B	CLEC4A	NSRP1	UTP23	MIATNB	SPATA3
VPS18	TBC1D16	SIRT2	LOC101928201	IPO7	SENP3	KNG1	GPX5	PLEKHM2	TNS3	LRRC2	GSKIP	WTIP	TMEM132C	LOC102724030
TIMD4	NALCN	C22orf15	LINC01448	ACTR3	ACTA1	SPN	RFX2	SMG5	SDF4	TIAM2	MED10	UBLCP1	NRAD1	LOC101929609
SLC39A5	ATP8B3	LOC100130268	LINC02483	CD9	SMARCA1	SLC6A12	ZFHX3	EFR3A	ARMCX3	AKIP1	HSDL1	PLAC9	MUC17	FARS2-AS1
ATP6V1E2	SCARA5	DIXDC1	LOC101928937	PRDX2	MMP11	PTPN22	GRM6	POGZ	CPSF7	GBA3	HDGFL2	URB1-AS1	THSD7B	MIR924HG
CILP2	OR2L13	COX17	LINC00564	HADHB	PIK3CD	PPIL2	OPN1SW	VPS39	BACE2	GALNT6	EPDR1	ARHGEF25	KIAA1210	LRFN5-DT
TMEM196	KCNMB1	PLCG1-AS1	ZNF292	TXNIP	DMD	DPYS	MADCAM1	PNISR	METTL9	ACE2	G2E3	CRACR2B	GMDS-DT	DSP-AS1
SLC39A13	CALHM3	UACA	LOC105374042	RPN1	RAB11FIP2	RAD51C	IL1RL2	NUDT4	GTF3C5	DUSP13	TRMT10C	GALNT17	ZSWIM5	KRT27
BEST4	GLYATL2	PGK1	ERLNC1	ANXA1	FBLN2	WT1	SLC9A2	KCTD12	CDC27	MRM1	NTPCR	NRAV	ISL2	ITPKB-IT1
AK9	RELL1	LRRC38	LINC02325	EIF1AX	SCG5	ACADL	AGGF1	COG4	MMADHC	GIPC2	GON7	COX18	TTLL9	KIRREL3
CORO6	LINC00593	AHNAK2	EPIC1	TAF7	DAPK3	EPHA3	PPARD	SERPINE2	NAT10	ARSJ	PRMT6	CPT1C	TRAPPC3L	AADACL2
ALG10	PDE4D	TMEM147-AS1	LINC02743	RPLP0	AK6	UCN	H4C1	TM9SF4	EPS15	ECHDC1	GJB2	ZNF48	NOXA1	FAM47B
RAX2	NDUFA10	KPNA4	LOC101928135	ADD3	PLCB4	COLQ	NAB1	MRFAP1L1	ARFGAP1	OLAH	NAT14	HACE1	NXPH1	LOC101929050
MFAP3	TAF2	ZNF599	TBX5	HADH	LYRM1	HMGA1	TACR1	OPA1	RUSF1	HOOK1	WDR24	PAX8-AS1	LOC101927272	LINC00459
EYA3	SLC6A11	SYNE2	CCDC160	GNAI2	CRCP	CSNK2A1	CASP2	PREPL	LIMA1	AIPL1	SLC25A33	SUSD2	ZNF461	MIPEPP3
KLK8	ZNF655	PECAM1	LINC01821	RPS18	TAB1	LRRC23	PAIP1	ALDH1A1	KCTD3	HIKESHI	SEC11C	ADCK1	ATP2C2-AS1	FAM99B
CCDC65	LINC02363	ANKRD24	SCN1A-AS1	PLD3	SLC9A6	PLCH2	GUCY2F	COQ9	PTCD3	HS3ST3A1	FERMT3	INTS6L	HECW2-AS1	LOC101928419
PABIR3	TRIM7	ARIH1	GPD1	GOLGB1	DNASE1L1	ADGRB1	HERC4	MAP1B	PSME3IP1	ACAD10	EBPL	PRXL2C	SHROOM4	FNDC1-AS1
CFAP53	ARHGAP29	TERLR1	LOC338694	PABPC4	HPGD	PTPRR	CBFA2T3	ASXL1	FXYD6	E2F8	PNPLA8	EEFSEC	ZDHHC11	HS3ST5
ARMCX4	FBN2	PLEKHG2	MYOSLID-AS1	SF3B1	CXCL9	MATN3	ST8SIA3	TUBA4A	EMC7	TAC3	PRADC1	ZDHHC24	MAN1B1-DT	LOC102724551
RBBP6	IPP	MISP3	LINC01049	SMARCC1	PCDH1	ZNF35	GTF2B	MTMR4	TMEM214	SOX17	NTN4	MAGI2-AS3	LOC148696	ST3GAL3-AS1
CENPBD1P	RALGPS1	C14orf180	LINC01395	DCTN1	NR1H3	SLC22A18AS	UTY	AGRN	HERC2	ASB7	CCDC3	SCARF2	LOC441052	DPH6-DT
HOXD4	SEPTIN2	ORAI2	LINC01282	BCLAF1	CHST2	ZBTB6	REV3L	FNBP1	BACE1	COPS7B	ALKBH7	SFXN2	LINC00543	LMX1A-AS1
GSC	CLCNKB	IGHE	LINC01743	SON	GCLM	CPM	LAIR1	PSMD14	MCMBP	LGALSL	ABCB10	LNX2	BCO2	CDIPTOSP
SP7	MTUS2	AGA-DT	LOC101929460	RPS29	ATP5F1D	GINS1	CCL7	ATP13A3	KLHDC2	SIGLEC5	FGFRL1	TMEM86A	GCSAML-AS1	NRSN2-AS1
CNOT7	CD99L2	GARS1-DT	LOC101928894	DAP	MAPT	RAC3	ZNF442	RTF1	VPS4A	DDX43	TRPM7	LOC105371763	C10orf71	IZUMO2
PRSS33	SRCIN1	LMF1	LOC101926948	ARF4	HLA-DMB	ISL1	CFHR5	TNPO3	RSL24D1	EFCC1	TXNDC11	EXOC8	A1BG-AS1	LINC00836
CBARP	DNAAF5	LPP	CCDC33	PFKL	RAB11FIP3	AFF2	AIRE	SGSM2	MRPL42	PEAK1	DDX20	TMPO-AS1	LRFN1	LOC101928373
MCMDC2	WWC2	BEND5	IGFN1	GPX4	ACVR1	SRSF6	YJU2B	SCAP	PEF1	LONRF3	TMEM126A	TECPR1	BVES-AS1	SPATA3-AS1
TIRAP	UBE2DNL	LOC100131496	BMAL2-AS1	THBS1	TAF1C	FUT1	COL21A1	EPB41L1	PPP6R3	KCNE5	TMEM69	KLHDC9	CYP8B1	SEC61G-DT
LEAP2	LINC00301	TMCC1-DT	RNF17	CSE1L	MARK2	ANKRD7	TMX1	SULF1	KIAA0319L	AUNIP	RAB18	TMEM170A	MIR3142HG	PCCA-DT
SCIN	MAD2L1	LRRC27	LINC02353	CPE	KIF3B	EPHA4	SEMA6C	KDM1A	STUB1	ERO1B	SCOC	SH3BP5-AS1	PDE4DIPP2	TONSL-AS1
CTCFL	WFIKKN2	ZNF493	LINC01904	ITGB5	ARG2	EGR3	URM1	FAM168A	AFTPH	EPHX3	MS4A7	ALDH16A1	FAM209B	CADM1-AS1
C4orf33	RIOX2	CST13P	LINC02078	MGAT1	CNN1	BHMT	PSD	CLIP3	MAP7D1	CASZ1	HDAC8	SPEN-AS1	QRICH2	DOK7

ZNF333	ZFP42	C1orf53	LINC02126	ACLY	PPP1R26	CD33	ANP32E	MYO1B	BTBD1	XPNPEP3	BOK	ZBED10P	FBXL9P	LINC00293
TVP23C	PHTF2	LOC105369477	LINC02375	SRSF7	E2F6	SOX15	GIPR	FEM1B	RTL8A	ZNF334	MTIF3	MB21D2	RBM11	REC114
RDH10	MGC32805	FAM184A	MGAT5B	CDH1	IFT25	LLGL1	PSG6	ZNF384	VKORC1	APOBR	PSMG3	METTL14	UBAP1L	LOC105377085
GARIN4	ARHGEF2	LRTM2	LOC101927790	COX7C	NEBL	ELK3	REXO5	MYH10	ENOPH1	PRX	DHX37	STAMBPL1	ZNF684	MGC34796
GAPT	CNTN1	ZNF844	FOXP1-AS1	PLP2	CA12	ADRA2C	AVPR2	EP400	TRAPPC4	TBR1	DNAJC30	TSPAN11	ARHGAP8	TMEM275
CCDC185	CCDC82	TRMT9B	LINC02994	EIF2S1	NMI	ASGR2	EHD1	SBF1	TOMM22	CLCA4	PLEKHA3	TARS3	ADAM33	LINC02140
ENTHD1	STKLD1	SLC66A1L	NRG1-IT1	HAX1	USP20	CLPS	PABPC3	VGLL4	SAP30BP	RASIP1	LATS2	BCL9L	CAPN10-DT	CTD-2350J17.1
TSSK3	PDE8B	BLZF1	LINC01957	TIMP3	CDC6	ADAMDEC1	ISG20L2	UBE3B	CNOT6	STYK1	NUF2	TMEM201	TMEM30A	PEX5L-AS2
WFDC6	KANSL1L	AKNA	GNA14-AS1	IGFBP7	PUDP	RIMS2	EDRF1	PCMTD2	LAMTOR3	CPED1	ZNRF1	GPX8	NEURL3	ISM1-AS1
CLEC12A	UBE3C	PCNX4	LINC01243	PUM1	CHAF1A	PI4KB	CYP2C18	MICU2	DCXR	LMBR1L	CYP2S1	TBC1D24	HSBP1L1	LOC100507443
TMEM266	FBLIM1	LOC101927377	MIR4527HG	ARHGDIA	TAFAZZIN	LHX2	SOCS5	ZCCHC24	TCEAL9	ZC4H2	FAM118B	STK32C	WFDC3	CPA5
CALML6	SYT16	MCTS1	CALY	BHLHE40	FABP4	MOCS3	PTGIS	KIAA0930	TSPAN13	PIGZ	ZFYVE1	THAP5	DCDC1	LINC02944
NLRP5	SNED1	LINC02616	LINC01828	TERF2IP	TSNAX	SLC26A3	PRRC2A	ECPAS	TIMM10B	HIVEP3	ZNF581	RIMS4	ZNF541	LOC102724587
ODF4	RAB39A	LOC105371215	LINC01986	ARCN1	ZNF212	RHAG	PSG2	HMGXB3	MORF4L1	NEUROD6	ARRDC1-AS1	NACC1	SPART-AS1	LOC105375075
CLEC4F	TRIM72	TEX22	LOC105372069	UBA2	FZD6	SCML2	GAST	CENPB	ASNSD1	PDCD1LG2	SERTAD1	DIPK1B	CRB3	LOC100287808
WFDC9	FBXO8	ZNF33B	ZNF627	CHD4	KDM6A	IL3RA	DOHH	SNRNP27	SSBP3	SPACA9	TMEM60	SNHG18	LOC100129935	LOC284933
NEDD1	SPIRE1	CYP4F29P	LOC414300	HTRA1	CFAP410	CELA3B	CPVL	CERS6	EFHD2	PRSS21	DUSP23	ERMARD	ACTL10	LOC105376236
TTLL10	ACP1	METTL17	TMBIM4	LRPAP1	PTPN3	AGAP2	CYP2C8	SECISBP2L	MAT2B	IL22RA1	RAD18	RNF150	COL20A1	CDRT15
CALR3	PLA2G4C	ZNF219	SLC38A10	ITPR3	SYT1	CYP4F11	MYH4	KIFBP	INTS11	GID4	FBXW9	TEPSIN	EFCAB12	SLC35F4
ZNF22-AS1	CLDN20	KANSL1L-AS1	LOC101927018	PITPNA	SNAPC3	ABCC2	DDX11	YTHDC1	PHLDA1	PARPBP	ZSCAN21	ZNF75A	ZNF596	LINC01549
ETV3	UBE2O	TUSC7	CLYBL-AS2	PSMD1	ICA1	GJB5	FAT2	CLUH	CXCL14	TTC21B	RAVER1	LRSAM1	ANXA2R-AS1	LOC105378789
TM2D3	ASTN2	PLGLB2	LINC01432	RRBP1	NUP42	PTX3	EPPK1	SPRED2	ZNF22	TNMD	YAE1	FAM3D	UGT1A6	ZNF295-AS1
ZNF485	DZANK1	SSBP2	LINC01656	TNFAIP1	DNAL4	CNBP	ABCC3	SUCLG2	RPS27L	SPTBN5	GBP3	ZNF326	UGT1A1	MKNK1-AS1
WDR17	ITGA11	TTC5	LINC01875	LGMN	SPRY2	GDF10	OSBPL7	SPTSSA	TMEM248	TUBA8	NKAP	OXNAD1	SLFNL1-AS1	LINC01667
MFSD6L	AGBL3	ATP1A4	ERBB3	PPP1R7	KDELR3	APOBEC2	IL9R	SETD3	PRC1	KDM8	AMZ2P1	LRCH2	SIGLEC17P	LINC02116
CDH23	ZBED1	SNORA17B	LINC00587	PLS3	PDCD2	SYT5	PRSS16	SPECC1L	PPDPF	HAUS2	ATL3	STPG1	TDRD6	OVCH1-AS1
GPR182	ZNF585A	CABLES1	LOC105369213	RAD23B	ZWINT	CLCA2	CHIT1	FAM89B	UBL5	PLEKHG6	COPG2	CYP4X1	LRFN2	FNDC7
ESX1	ADCY7	RGPD4-AS1	HNF4A-AS1	SRRM1	CELSR2	ADRB2	PTGER3	GPATCH8	TSPYL2	CCDC134	TMEM175	TCEAL7	BPIFB2	INSM2
FAM167A-AS1	PDGFRA	RBFADN	LINC02345	ARIH2	PCBP2	IL13RA2	TRIM31	SETD2	WRNIP1	USP48	RASD1	GTSF1	ISX	LOC101927020
DNAJC5G	STEAP3	DLGAP4-AS1	TBC1D8B	PSMD13	BCAR3	ZNF222	IFNB1	TNS2	MPC1	FBXL8	MPV17L2	UBXN11	LINGO2	FFAR4
WDR88	RASSF5	PPARA	LOC101929269	ILK	TRIP13	PLA2G5	DMP1	MAPK1IP1L	MRPL15	IKZF5	CRISPLD1	ANKRD13B	TRIM55	FAM221B
PRUNE2	USP36	ADAMTS5	LOC101927247	DDX1	ETHE1	TPPP	DUX1	ADO	ELOVL1	BCO1	MRPL47	CPAMD8	LOC100652999	TERB2
MBD3L2	CIDECP1	SPATA24	LINC02270	SREBF2	SCG2	ZNF747	KIR2DL3	MAU2	RIPOR1	CRNN	HAGHL	BORCS5	ANKRD34A	SPEM1
ADAMTSL1	MTHFD2L	EDIL3	LINC00572	SLC2A1	LPAR1	CRYBB1	H4C8	TMEM131	GIT1	ANTXR1	GNB4	ST6GALNAC1	COX4I2	LOC101927089
MBD3L1	SLC12A1	MIR133A1HG	LINC01831	CDIPT	CEBPA	MPP3	TACR3	MXRA7	SNN	TMEM104	EXOSC3	RNF166	SLC22A31	LINC03095
TENT5D	CCDC158	SH3D19	NEGR1-IT1	COX7A2L	TCN2	GPR17	MYO7A	GPD1L	NMD3	SLC22A11	COMMD2	MRGPRF	BANF2	LINC01718
SERPINB11	ATP6V1B1	CCDC32	MAGIX	BGN	TCEAL1	GH2	PSG4	USP33	PRPF38B	FOXL2	CCDC8	TMEM63C	ZIK1	CDRT15L2
LINC00161	TOR1A	CCDC28A-AS1	LOC100129603	COPE	MVK	NME5	IL9	PIP5K1C	SLC38A2	MRPS18C	CPLX1	GPR15LG	ZNF691	LOC101928317
DSCR10	VWA5B2	MAP3K20-AS1	LINC01545	RALY	ME1	CEACAM7	STAM2	UBE2E1	COPS4	NPC1L1	TNFSF13B	ARMC5	SYT8	LINC02180
ABHD11	CYP2U1	PPM1H	RNF216	SRP9	CHST10	ANXA11	NFATC1	SPIDR	AZI2	ZC2HC1C	SPRTN	CLIC6	LINC01426	LINC00641
GAMT	PRKN	LINC00703	MAPT-AS1	ADRM1	AGAP1	MEOX2	KIR2DS1	SPART	PTMS	GNA14	FBXO44	RNF139-DT	GTSF1L	EWSAT1
PLCD3	ELMO2	PHEX-AS1	LINC02757	SDC1	STK3	RCVRN	ZBTB14	DESI1	MRPS16	NXF3	DLL4	RBMXL1	LINC00629	SNRPF-DT
IRF6	SDC3	SPATA22	LINC01220	CCN1	MYRF	GRB14	JADE2	LSM12	OSBPL9	ANO2	SYT4	TMEM139	ITPR3-AS1	RBPMS-AS1
PTPRC	TMEM135	MALAT1	LOC101929174	SEC11A	CEP104	CLC	KIR2DS5	LCN2	COMMD3	CDH10	RPS6KL1	RERG	NALCN-AS1	LINC01227
RAPH1	PRR16	NOL4L	LINC00307	PPIA	P3H4	CETP	CAV3	WEE1	MRPL13	KCNN2	PSD2	PCSK9	LOC93429	LINC02387
SMCR8	PCNP	PDE1A	TH2LCRR	MOB1A	TPST2	SELE	PCDHA9	PHIP	UFM1	ZNF385D	NECTIN4	IGFBPL1	LINC00687	KASH5
LACTB	WDR37	HMGA2	LINC01737	PRNP	TOE1	CPA2	MYH13	ZNHIT3	WDR41	ZBTB32	PDZD4	COG8	STK24-AS1	PANX3
BNC1	HMGCLL1	ATP6AP1-DT	LOC105374768	NDUFA5	PBX3	WNT10B	C4BPB	ZHX3	EMC8	SLC35F5	TMEM79	SAMD10	MIR4500HG	KRTAP19-3
IDI2	CSPP1	FOXN1	LINC01775	PSMA2	CLN5	PLA2G7	MAS1	CAP2	CXXC1	GAN	SWT1	CELF6	LRRC55	LOC100506851
CYP11B1	CAMKMT	STX17-DT	LINC01809	CCT6A	PRAME	SRPK3	ALK	RPRD2	TMEM9B	DNAI1	PKIB	ECSCR	NR2F2-AS1	LOC102724511

TAF8	MYRF-AS1	DOCK4	CTSLP8	RARS1	SLC5A6	EDA	KCNAB1	PRKAR1B	SLC12A7	PRSS50	TMEFF2	TLCD3B	GNAS-AS1	LOC105374775
COBL	ERCC8	MARF1	SOX6	STAT6	STK19	MAGEB2	ADRB1	SPRY1	ARGLU1	FBXL12	PARVG	COG1	PIRT	LINC02790
ZSCAN20	PRIM2	ZNF260	PARVA	ENC1	AURKA	VAV1	DLX4	CHD8	ZNF672	LTB4R2	C1QTNF6	MED30	ISM1	LOC102723364
RHBDL2	MLXIP	ATOH8	MYLK	ADIPOR2	CCNH	CST1	GABRR2	TMEM259	NDC1	ODAM	HHATL	MIRLET7D	MIR1-1HG	LOXHD1
FRAS1	EMSLR	TMEM134	LINC00869	NHERF1	TSC22D2	ZNF507	AMELY	MGRN1	AAAS	EVA1B	PPP2R2C	ZFP62	HERC2P7	LINC00462
CD300LG	TIA1	SRRM3	LINC01847	YME1L1	MTM1	HRG	SLIT1	GAPDH	ADISSP	SLC7A9	KIAA1549	TRIM59	ANKRD19P	GSTCD-AS1
CPA6	LINC01580	SERP2	LOC285638	BAZ2A	SNAPC2	PAX2	HOXB1	JCHAIN	PTGES2	HAND1	TALAM1	TLCD1	KCNA7	LINC02622
HIPK1	PCBD2	VPS9D1-AS1	RNF217-AS1	SF3A1	NRCAM	LHX1	RAX	AUTS2	CHMP5	DNMT3L	SPSB2	C16orf74	SPDYE1	MAGI2-AS2
MTBP	MPHOSPH6	MAP4K4	DKFZp451B082	COPB1	TESK1	B4GALT6	BMP3	MRPS31	RRAGC	HAPLN2	THAP2	ZC3H6	DPY19L3-DT	ANKRD20A11P
ACVR1C	HYDIN	ZBTB38	NOS1AP	IVNS1ABP	NID2	MMP17	RAB9BP1	DTX4	AAR2	MAP9	ZNF416	ZNF558	LPIN3	THORLNC
TMEM74	PRKD3	NOL3	SYTL4	ZFP36L2	IL2RG	LIG4	ERC2-IT1	CHD9	ANKRD10	SINHCAF	ZNF700	THAP6	FANK1	LINC01213
TIGD4	ABCC11	SNX29	DDX10	CUL3	CD48	GPR4	APLP2	ZNF609	TMEM165	ALDH8A1	AADAT	WDR53	PRR29	TDRD6-AS1
ART5	ESYT3	SMCHD1	ITPK1-AS1	PLEC	ADK	NRG1	TGDS	TMEM41B	TEX2	C19orf73	TMEM117	LGR6	CCDC120	LOC100505728
LINC01547	JRK	ZNF763	RAPGEF4-AS1	PPP2CB	GADD45G	YAF2	DMBT1	CHN1	IFT57	C10orf95	ITLN1	LGI4	DPH3P1	ZNF837
NLRP11	SCEL	C2CD3	HYDIN2	UBAP2L	TYROBP	SPINK1	KCNC4	UFL1	DERA	ENTPD7	IQCN	RTL5	WAC-AS1	LINC01500
ATP6V1C2	ZNF678	SPRING1	HMCN2	CACYBP	SLC34A2	ZNF136	CHST3	WWP1	MRPL4	BRD9	OLFM2	EVA1A	LOC101929305	LOC101927342
VTI1A	ANKS6	FAM120AOS	GADL1	DHX15	NDUFAF1	KPNA5	SIGLEC8	HACD2	UBR7	PLEKHA8P1	USP30	TXLNB	LOC105373942	LINC01255
KIF6	LINC00598	TNRC6B-DT	LOC101927610	TRAP1	CDC45	TM4SF5	PSG1	HIVEP2	MFSD1	LGALS14	RNF112	LOC389831	FRMD7	LINC00911
IQCD	SIK3	RANBP10	ANO8	RBM5	RFC3	PFKFB4	GAS2L1	DHX29	XAB2	ABCA11P	SLC25A18	C2orf76	SLITRK2	PRPF39-DT
TAGAP	FUT8	MRTFB	FMN1	SGTA	BCL9	PRKCE	AVPR1B	ZCCHC14	CMAS	EPB41L4B	SEMA5B	SHD	RSPH4A	LINC01339
STON2	CYP4A11	MACROH2A1	AHNAK	PHGDH	HSD11B2	CPN1	IFNA10	TIPARP	RBX1	CARD9	ZNF649	PEBP4	LOC100421494	FBXL22
SERPINA12	ZSWIM2	NFYC-AS1	CCDC40	TRAM1	FOXO3	CCDC9	SRP72	SMURF1	TIMM23	INO80D	ATAD3B	RP9	NAV2-AS4	MAPK15
LETM2	PSIP1	ZNF252P-AS1	LINC00559	PSMB3	PDE2A	ST8SIA5	EIF3J	ELN	HMOX2	CNNM1	ECRG4	CDC42EP5	ZNF630	TEX19
BSND	RCBTB1	FIRRE	CTBP1-AS	MGST3	COL7A1	PROC	C2orf83	LMF2	CCDC25	DNAI7	ZFAND4	PLBD2	FAM209A	ADAMTS9-AS1
CLEC4C	ACOT11	AP2A1	LINC02011	PPP1CB	FRG1	TGM4	C8orf17	ZNF3	RMDN3	GPALPP1	HYCC1	FAM241A	BCL2L12	LINC02985
ZDHHC15	FAM230I	NUTM2A-AS1	RPL34-DT	PLEKHB2	RAD51AP1	ZNF239	RNPEP	NUP188	NFYB	DCAF17	IFI27L2	PCNX3	PTCSC1	SCAT1
RAI1	VIL1	NNT-AS1	LOC401324	LRP10	GSTM4	ADH1C	PAPOLB	CRY2	CYBC1	LRRC8E	MEX3B	CPXM1	ZFP92	NMRAL2P
CDK15	LINC01234	TMED5	CDH4	CUL4A	MFNG	FMO4	PITX3	RNF4	GATAD2A	CCDC68	TMEM191A	TMEM161B	LINC01007	LOC105371472
ZNF570	ACAT1	MIR30DHG	LOC340184	ALDH2	CDKN2C	GPLD1	GAGE1	SEPTIN10	NIF3L1	SLC25A23	PCDHB5	LOC154761	PABPC5	TEX37
NUDT9P1	TSPEAR-AS2	NBPF3	LOC286359	SELENOP	ENPP4	MATK	HCG9	SCAMP5	RBM22	NUDT6	RNF32-DT	FAM104B	LINC01224	SLIT2-IT1
BTBD16	ZNF641	SLC2A1-DT	KCNT1	DPYSL3	EMILIN1	TLR3	ABCB11	PNPLA2	ERGIC2	NANOG	C19orf33	IGDCC4	C20orf173	LOC101929004
TSPEAR	CCDC190	MAPKBP1	LOC157273	TTC1	SIPA1	PRELID3A	EIF5	NUP160	SLC25A37	SPTBN4	RASD2	KLHL13	LOC101930081	LOC105379627
MIPOL1	FGFR4	SWINGN	ITGA9-AS1	EIF4E	MGST2	LY6D	TH	CAMSAP1	SMAP1	JPH3	ZMYND12	ARHGAP39	ODAD1	RSPO1
C6orf141	FILIP1L	DMRTA2	TVP23A	COL6A3	CKS2	P2RY2	BMP10	MFAP4	MKKS	MGAT4B	ZIC2	FOXN3-AS1	DEFB129	LINC02878
ABCC13	PDILT	LOC105377276	PLXND1	GBF1	RPS6KB1	PRKY	TNFAIP8	PLEKHM1	CRBN	GKN1	CRYGS	TMEM198	LINC03020	LOC105375116
GTF2A1L	ZBTB26	SREBF1	HERC6	COX6B1	CPOX	CDH18	EVI5	RND3	SCAMP2	MBD5	HSCB	VIT	LOC731157	SPATC1
TRPV3	ACY3	LINC00924	ZSCAN23	ATP6AP2	MYL6B	ADCYAP1	CACNA1I	SYNM	INF2	MUC16	AS3MT	ASB2	SELENOO	LOC105373714
CNBD1	LINC00051	FAM53A	FCRL2	CNN3	KLHL20	NPHP1	PTPRH	ANKRD46	GLT8D1	EIF5A2	CELF4	FAM86B2-DT	LINC00348	LOC105373554
ABCC12	LKAAEAR1	PLK5	CDON	BUB3	MB	ITIH4	HMHB1	PIK3R4	CENPT	AIDA	CD163L1	UCA1	GRIN3A	H2BC1
MMP21	DLGAP2	RGMB-AS1	LINC01104	MAPKAPK2	ZBTB43	PGGT1B	CRLF2	RCHY1	ARL5A	KMT5A	FAM167B	BEND3	LINC03014	LINC01753
TMEM190	EQTN	LINC00907	LOC284950	SCRN1	PPID	HOXA4	PGR	CLASP1	SLC52A2	RC3H2	KCNK6	SHANK3	TGIF2LY	LINC00454
GAS2L2	LINC00317	PEX14	LOC285422	JUN	CHKB	NTS	MALT1	MON2	TSR1	TPTE	TMPRSS13	LINGO1	KCNMB2-AS1	SNTG2-AS1
KCNG4	GOLGA3	SLC8A1-AS1	HSD17B4	NQO1	PKNOX1	SULT2A1	GPR50	TCF7L2	CDC42SE1	ZMYM1	DDX59	MYPOP	DEFB118	LOC105369645
CACNG5	SLC9C2	CLIP1	SFXN5	SHC1	PDGFB	HSD3B2	RRH	CAMSAP2	DDRGK1	ADAMTS13	CCDC88B	C2orf74-DT	KCTD16	DPPA5
LINC00308	RASGRF1	LINC00460	LOC100127955	SQSTM1	IQCE	CTRC	TRAF3	MTG1	OLFML3	PYY2	ACTRT3	PHACTR3	TSPAN16	AA06
WFDC11	RAG1	CARMIL1	GPR141	VBP1	CEBPG	NALF2	RBM3	OLFM4	SPATA20	FLJ13224	FKBP7	FAM98C	LINC01933	LINC01988
JAK1	LOC403312	GTF2H5	DISC1	ITGA3	MNT	PTHLH	CABP1	OBSL1	RSF1	TSHZ2	SGIP1	ZNF595	LINC01798	PDZD9
CDC42SE2	SYNJ2	ZNF704	ZMIZ1-AS1	MARS1	RNGTT	TEC	ST3GAL1	POLR2J	COQ8A	ZNF669	ZNF607	GATD1	VN1R108P	NAALADL2-AS3
TRNT1	ZNF398	ZNF765	LRRC37A8P	SUPT5H	ACOT8	MYBPH	AKAP13	CIC	ISOC1	RBM12B-AS1	EIF1AD	NRK	OXCT2	LOC105369890
TMEM163	IL16	CACNA1A	ZBTB8B	PYGB	PIGR	C8A	CYP2A13	LARP7	DERL1	HAO1	ZMYND15	TOR2A	NECAB1	NUDT10

ARHGAP5	OR2C3	CEP164	LOC101929073	RCN2	TMEM243	RYR3	MEF2A	CLEC16A	NSD3	IRX4	LY6K	C2orf69	LOC145845	NBAT1
HERPUD2	ARHGAP20	SNORA78	CAGE1	CTSC	RTN2	FOXD1	ALX4	FTL	TMEM254	TRPM8	RGS22	GPRIN1	TCAM1P	SERTM1
JMJD6	ADAM22	IFT80	AMN	AHSA1	PSMC1	TRDMT1	BPY2	NCAPD3	TRAPPC11	AP4E1	RADIL	CYB561D1	LOC105378367	C1GALT1C1L
SRCAP	TMEM26	MFGE8	IFT122	RPL41	SLC17A7	PLA2G1B	LHX5	WASHC4	CLDN1	PPP1R17	QNG1	RILPL2	SPINK13	CBY3
ARSG	P4HA2	RRP8	LINC02762	USP7	FAAH	GUCY2C	P2RX3	TBC1D2B	CDIP1	SCD5	CNDP1	GIRGL	LOC100134040	ACP4
ZNF101	BRD3	FAT3	C2orf50	GRSF1	CHKA	ZKSCAN7	CASP4LP	SORT1	TIMM13	FBXO17	MND1	SLU7	WDR97	SRFBP1
PTPN11	CLRN1	HCG18	GAB4	NFKBIA	ZNF195	CRLF1	IFNA13	ANKMY2	IP6K2	LRIF1	LRMDA	IL17RD	FER1L5	PRAM1
ZNF626	IDH1	SCML1	LINC00858	TSN	FLI1	KNTC1	PPBPP2	CIT	REXO2	PDPR	GPBP1	S100A16	LOC91450	ZBTB47-AS1
PHC3	EPB41L4A	RPL32P3	LOC158434	TGFBI	ACOX3	ABCB8	CBLB	GAPVD1	ARMT1	ATG3	C22orf23	LINC00261	POLN	CAVIN4
IL11RA	NAGA	THEMIS	PIGG	PFDN1	DBF4	EPPIN	CSN1S1	NAB2	OSTM1	KLHL7	CCL26	CEP85L	PTPN5	LOC101928087
HPS4	TRPV5	LOC100130992	SH2D4B	IGFBP4	RPP14	SMAD9	SLC12A3	AHCYL2	OXR1	ZNF701	ZNF256	CIBAR1	LOC284240	FOXCUT
UHMK1	LHFPL5	ANKRD20A12P	LOC283194	IDH3B	DCTN3	RFX1	CSH1	ASB1	DHX32	SLC45A2	RTBDN	NKAIN4	TBC1D27P	LINC02352
C5orf22	KLHL40	MAP3K11	VSTM2B-DT	AAMP	CDK5	SYN3	UGT8	FUBP3	NDUFB2	HYAL4	SPINK7	CCDC18	LOC101928881	ZNF615
PCDHGB7	CENPI	MORF4L2-AS1	C1orf220	TOMM70	GNA11	OPHN1	KCNJ4	SLC25A46	MRPL44	WRAP53	LINC00852	GAREM2	RNASE7	KRT17P5
ERC1	C10orf53	GTF2A1-AS1	INTS4P1	UBE2N	CDK2	SERPINA6	ERVH-4	UBXN7	MKNK2	PLEKHH3	KCNH3	E2F7	OR2A4	DLG3-AS1
JMJD1C-AS1	SYT9	LOC100507351	LCTL	ZFP36	VDR	GRP	POLR3D	PPFIBP2	MOCS2	TBC1D19	SLC23A1	STK33	MIR3147HG	TEX45
LRRC7	AVL9	PPP1R26-AS1	FAM83B	PSMA3	ELOVL6	CDH15	PCDH11X	RRP1B	LANCL2	DLK2	ARL6	AASDH	SH3RF3-AS1	ZFAND2A-DT
PPP1R3B	CCNG2	CYP4F35P	PLPPR5-AS1	DUSP3	CHD1	EXTL1	RCAN1	AXIN1	MYG1	SMAD5-AS1	AGPAT4-IT1	UTP15	SPAG17	LOC105374584
SLC9A7	IKZF2	LINC01018	SOBP	FHL1	MMP7	SHC3	RING1	LRP4	NUBP2	KLF4	C16orf95	SNORA72	MEF2C-AS1	TNNI3K
RFX6	USP6	NDUFB6	GARNL3	ZNHIT1	CHGB	CALCRL	P2RY6	DCUN1D4	TNKS2	KRT24	SLC4A11	ZNF503-AS2	BPIFB4	UNC5C-AS1
DNAJB7	TLL1	LOC100128288	LINC02044	KDM5B	CPT2	MSI1	CAPZA1	SUB1	UTP11	AAMDC	C1QTNF2	SNHG19	LINC00475	LOC105371692
UCN3	KCNH5	BAHCC1	BHLHE22-AS1	ACTG1	GPSM3	LIPF	IFNA1	PAQR4	NKIRAS2	ZBBX	CFC1	ARFGEF3	ESAM-AS1	FAR2P1
DIP2A	ARHGAP25	ZNF611	PLD5	LAMP1	PKMYT1	CARTPT	CCR4	MFSD5	GOLGA5	BNC2	HASPIN	DDIT4L	LINC00396	MIR3936HG
SENP8	ZNF843	FNIP1	YWHAEP7	VAMP2	PIM2	PON1	CACNA1F	COL14A1	RUFY1	IL17B	GPR84	SLC35F1	KRTAP3-2	ACSM2B
GRHL1	RPL13AP17	CACNA1G-AS1	LINC02145	RAE1	SKI	PDK3	FGF5	R3HCC1	MUL1	CUZD1	SSR4P1	CCDC126	LIMD1-AS1	ANO7
CNBD2	LINC01657	ELFN2	MRPS27	CLIC4	EDNRB	LGI1	NPY2R	MAPKAPK5	FAM111A	RERGL	MRI1	NAP1L5	DANT2	PXDNL
SLC2A13	VASH2	KDM4B	CFAP74	CLSTN1	LGALS4	COX6A2	LBX1	ARHGAP45	ZDHHC6	KDM4D	DDX11L2	EPOP	LINC00839	LINC02064
NIPA1	LINC01558	ABI3BP	TPT1-AS1	SORD	EBAG9	SLCO1B3	SGPL1	KLC1	MID1IP1	TRIM17	KIF9	MTFR2	CATSPERE	PCED1B-AS1
TUBA3FP	STPG2	LINC00567	LOC101929268	FSCN1	CAPN15	GNAL	PCK1	PIAS4	FBRS	RIC3	ADH4	NANP	MIR3681HG	ACOT6
CYB5D1	PTGFR	LOC284600	CEP41	GOLGA4	PPP1R3C	PRM1	MID2	WDR7	UGGT1	HHIPL2	TINAG	MMP25-AS1	LINC02555	TECRL
CREG2	MIER1	LINC01530	ANKRD31	UQCRQ	PMAIP1	PTGDR2	NR2E3	GADD45GIP1	AP1M2	DKKL1	DBIL5P	TMEM179B	ANKRD18B	ZNF674-AS1
RXFP1	CTDSPL2	FBXO9	COL27A1	ETF1	SYNGR1	MAP3K10	MMP24	ZNF282	ZBED5	ABHD17B	CLTRN	PIFO	PNPLA5	BMPER
SPEF2	UVSSA	LEKR1	CAST	SNW1	ALDH6A1	KIF14	GLP1R	ZZZ3	NCS1	MYO15A	CHST6	PPM1L	LINC02871	SNX31
DTD1	SLC10A7	OPRD1	LINC01512	GLB1	ZNF518A	XCL1	ESM1	TTI1	TBC1D15	DEPDC1	ZNF2	RAB37	C3orf85	RHOV
GOLM2	ATP6V0A2	HSDL2	ZNF804B	NME1	STK11	REN	URB1	SEC24A	PARL	SPATA6	LOC114224	CTXN1	TSPY26P	C2orf80
FGF1	SLC11A1	LINC02603	TCAF2	PODXL	SGSH	CPLX2	KCNJ5	CSTF2T	PDP1	CCDC102B	MSANTD4	C1orf52	MARVELD3	THEG5
ARPP21	ENTPD3	LOC101928047	USP49	FAT1	AMT	MYF6	TBPL1	GRAMD1B	ANKZF1	CNGB3	THUMPD3	RIPK3	MIR17HG	LINC02520
RHOXF1	CD96	TMEM80	RELL2	TXNL1	LOX	ZIC1	EDN3	SLC30A1	SLC25A10	MAVS	NAPSA	ZNF300	KRTAP9-4	CHSY3
ADAMTS17	ADGRA3	ZNF546	TMEM235	ZC3H15	SRSF10	DUSP8	IL17A	CBX7	SAV1	CD244	RGS18	ZNF584	MPND	PAQR7
DHH	ST6GAL2	SPATA19	KNCN	KRT18	GATB	HSPB3	CD164	PHF8	WDR74	N6AMT1	KLHL1	LSP1P5	LINC00557	LINC02450
KLHDC1	LINC01126	KAT6A	LOC339593	COX7A2	CTIF	FOXF2	SLC14A2	PXDC1	MRPL48	GPR88	FAM178B	OLIG1	TRIM54	DAW1
PCDHGA4	MOCS1	LINC00910	TREML4	INPPL1	PROM1	CFP	AMELX	MISP	EDEM2	LRAT	SLC46A2	PLEKHG4	TPTE2P6	LIPI
WWP2	FAM9A	HSPA1B	YTHDF3	CNN2	CD151	SCN2A	PPEF2	SMC5	SS18L2	EPN3	LRRIQ1	S1PR3	LOC100506472	ADAMTSL5
ST7L	FGD6	CEP68	TMEM151B	ALDH9A1	NPR2	BDNF	HOXB3	TCF20	BDH2	MYLIP	RBP5	ADCY5	LINC02149	WFDC5
KCNH8	BCL2L2	ANKRD20A5P	HOTTIP	AP1G2	GTSE1	G3BP2	CIAPIN1	RAB3GAP1	RNF7	DOK3	RIC1	ZNF25	KRTAP3-3	ZNF727
MCF2L	QKI	PRKXP1	MYH16	CALD1	RGS10	CACNG3	TANC2	FAM172A	PLEKHJ1	CCDC121	TNFRSF19	RSPO3	PTOV1-AS1	ANKRD33
SLCO6A1	MLLT6	KRAS	LINC01844	GPAA1	COL11A1	SERPINA7	KIR2DL4	C2CD5	RNPEPL1	IL36G	LGALS12	ATG4C	POU6F2-AS2	LOC101929208
PP2D1	PRR5-ARHGAP	LINC02273	CAD	PRDX3	NEO1	CDX2	ELAVL2	VWA8	KRCC1	CCNP	TKTL2	ARL13B	LOC100289333	GS1-279B7.1
KLC3	PGPEP1	PSEN1	LINC02891	NBL1	GOLIM4	PDE3A	HNF4A	CAMTA2	RABGEF1	CLDN16	CAPNS2	B4GAT1-DT	LOC101927769	FRG1EP
CIB3	CALN1	ST7-OT4	ABR	SND1	NF1	RARRES1	TUB	NCAPH	MAP4K3	PAQR5	TNFRSF18	HS3ST4	C6orf163	FAM187B

CADM2	STX19	LINC01419	GREP1	FXR1	YJU2	TNNI2	CACNA1E	ADGRF5	STYXL1	RGS17	BVES	ZNF354C	CST11	LOC105369595
DOCK8-AS1	PBLD	FBXO22	QPRT	CPSF1	RGS19	MYBPC2	MECOM	DYRK4	RHOT1	NGB	PCDHB10	ISM2	LINC00544	SLC26A9
SLC16A11	PRKAA1	NFYC	BSN-DT	CLPTM1	RGS4	DGKG	AQP6	TBC1D9	LGR4	TPSG1	HORMAD1	PSMG4	HYPK	LINC00466
HS6ST2	IGHV7-81	TWF2-DT	FBXW12	TNC	TMEM187	SLC1A1	CLCN1	GNPTAB	PRDM4	EDEM3	GHRL	SLC44A3	LINC00028	CBLN2
CAMKK1	TERF2	LINC01013	LINC02533	KRT19	TRIM16	NPFF	LINC01565	SYDE1	BEX1	PDE7B	ANKRD30A	ZSWIM3	FAM184B	MAP4K3-DT
ZNF625	LINC00508	SPDL1	LINC01238	COPS5	ABCA3	ZNF536	SHOX2	RFNG	DERL2	C11orf16	ARMC2	ZNF775	TLDC2	FENDRR
LIN9	TAT	LCE1E	LINC01619	CNIH1	COL16A1	FGF9	BAZ1B	APBB2	THOC7	LRRTM4	TEKT3	DACT3	LOC90246	SPINT1-AS1
CLEC4D	FHL5	VHL	VAC14-AS1	ARL1	RASSF1	CCL13	PRPS1	LRRC8B	TNIP2	ACKR4	SOST	VSIG2	GGT1	MYADML2
SLC25A27	ZNF277	CLU	LOC100630923	ACSL3	AK4	LRRTM2	IFNA16	ACKR3	PFDN2	FLJ42627	FBXW10	FREM1	ZBTB12	LOC101927608
GPRC6A	RPRD1A	SOX30	LOC101928519	SMC4	MED7	TIAM1	FGF8	ZDHHC17	MRPL22	MCF2L-AS1	ING5	MIR503HG	CCDC85A	LOC105375038
SLC44A5	DTWD1	LOC100507053	KIAA2012	RPS17	POT1	NR0B2	LGALS2	SGMS1	PPCS	PBRM1	ACTR3C	SLC52A3	EBF4	NRG4
ZNF417	HRH3	ATXN1	MS4A15	TIMP1	LIMK1	ABL2	MYO9B	MORC3	ERMP1	CORIN	SPATA16	AGR3	GRIN3B	ZNF600
ZNF781	TBX2-AS1	LINC01730	LINC00607	GJA1	FLRT2	TCL1B	NECTIN1	NEDD4	RCOR3	BATF3	C1QTNF7	N4BP2	SUN5	GAPLINC
HELB	UBE2W	PICSAR	LOC147004	MARCKS	F3	ZNF205	GABRD	MAPK8IP1	TMEM176A	THAP9	STK31	BLOC1S3	WFDC10A	EID2B
SEC62	RGR	CT83	LINC00700	GYS1	REEP1	CNGA1	SCNN1D	RANBP6	SESN1	PSORS1C1	OPTC	IFTAP	NYAP2	DHDDS-AS1
TRDN	AKR1E2	LACTB2-AS1	LOC107984399	AKAP1	GTF3C2	NOX1	GJC1	UTRN	ZC3H7A	EPB41L4A-DT	KCNQ5	LOXL3	DCDC2B	RBM46
SOCS4	CCDC148-AS1	SKIDA1	FLJ33534	DLG5	SP2	RORC	HIC1	TMF1	ZWILCH	ALLC	ENAM	MAP7D2	LOC349160	TCF24
ZNF547	C1orf43	ADAM23	TRPM2-AS	TOX4	SLCO2A1	SERPINB7	GRM2	WDR73	GMNN	ELSPBP1	FKSG29	TAMALIN	C11orf86	SH2D6
SIM1	C1S	ZFHX4	EMID1	API5	PIK3CA	GCG	HPR	NPTXR	COMMD8	SAP130	ZNF670	ACCS	LRRC74A	MAP3K15
TSNARE1	RHOJ	ZNF732	LINC03066	EGR1	KHSRP	MLANA	IKZF4	MAST3	KIF4A	DCHS2	SYT3	ZNF853	TBX5-AS1	GPR137C
CAPN13	IQCF3	PCAT18	ACTA2-AS1	SRSF4	CEP350	ZNF143	CLDN6	PABPN1	TIMM8B	KLHL28	PRKAG3	DNLZ	ADCY10P1	TSSK4
STMN1	PTH2	APELA	LINC00330	PSMC6	CLSTN3	CDX1	KCNC1	HAUS5	NRSN2	LRRC19	DRC7	SDSL	FAM83C-AS1	CFAP100
SIGLEC10	GNG12	CNPY1	LOC100133920	PGRMC2	BCAS1	TBC1D9B	KCNA1	FRMD4B	GOLPH3L	TCP11	TEX101	LINC00888	LYZL1	CRADD-AS1
RFX4	RBIS	TADA1	LINC00491	PPP1R10	FGFR3	HAS2	ABCC6	TTC28	DARS2	FSCN3	STUB1-DT	FBXL19	PRNT	HMGN2P46
WFIKKN1	RP1L1	SNX29P2	HFM1	PEX19	LRP3	MPPED1	ASB4	CREB3L1	USP21	DNASE2B	MIR7-3HG	DDIAS	TGM6	MALRD1
SENP1	SCN1A	SPATA41	LINC00410	NIPSNAP1	NAT9	TCTN2	SSTR1	RUSC2	S100PBP	ARHGAP28	SLC39A3	MFSD8	TFAP2D	PIK3IP1-DT
KLF14	RAPGEF6	LINC01532	LINC02595	MYBL2	ESS2	EPYC	H1-1	ZFTRAF1	PSPC1	ABCG5	MEIKIN	CMC1	EYS	LOC105376717
NXNL2	WNK3	MCFD2	LINC02905	TUBG1	GOLGA2	SEMG1	DRD5	OLFML2A	AKTIP	HHLA3	GBA2	PI16	ABHD16B	LINC00668
ZNF396	CPEB3	LINC02241	LINC02023	ACIN1	KYNU	RORB	LMX1B	ITPKC	C12orf4	FER1L4	MTPN	CLHC1	DEFB121	GLYCTK-AS1
SLC26A7	COL25A1	LINC02997	LOC642696	SNX1	SLC43A1	PDE1B	GJA8	ZBTB22	MICAL1	CCDC81	KIF2B	CARNMT1	FAM95A	LOC105374869
DENND1B	PPIP5K1	USP32P2	PSAPL1	BLTP2	EML2	MASP1	RFXAP	ANGEL1	RBM7	FGF20	PCDHB9	ZUP1	LINC00923	LOC105377134
ZNF619	EVC2	DIO3OS	LOC101929538	CLCN3	EFS	TBCCD1	HOXA11	UNC5B	LOC728392	LINC00115	GUCA1C	CEP44	SEL1L2	LINC01424
CILK1	MAP3K20	LOC101928505	MRTFA-AS1	NDUFS3	RHBDD3	PTPA	SLC6A7	TSR3	MRPS18A	TP53AIP1	TRPM5	POU2AF3	PCDHGB8P	PGLYRP2
GARIN2	MAGI1	TTLL11	ATP9B	SRSF1	TCAF1	NDRG2	TLX3	ATG4A	USP16	PODNL1	TEX35	UBASH3B	BHLHE23	LOC102723847
BCL2L14	ASXL2	MAPK10-AS1	ABHD12B	CD14	SLC12A2	RHO	H3C8	KLHL9	FAM204A	KCNK7	SUCNR1	MORN4	LINC02667	TEX53
HS6ST3	GRID1	LINC01852	CXXC1P1	TWF1	FLT1	DIO1	NEUROG1	TSPYL5	SMU1	ATP8B4	FLYWCH1	NDUFAF2	KCNT2	LINC02708
SLC26A1	WFS1	MILIP	SHANK2	SAFB	APEX2	WNT2B	FOXD3	ZNF473	ACTR6	THAP4	ZBTB37	CALHM6	TAS2R45	BCAN-AS1
CLDN15	TERT	NXPH2	CEBPZOS	JOSD1	EIF1AY	AJAP1	PCDHB11	OLFML2B	VPS13C	LMAN1L	DNAL1	ZNF784	ONECUT3	LOC105372179
RAB42	GALNTL6	HISLA	TXNDC8	COX6C	KIF21B	DHRS2	FUT2	GCSH	FANCL	UBQLN3	TTC29	CPNE8	GJD4	KLRK1-AS1
M1AP	SELENOI	TRAPPC13	LOC400748	MCM5	NEFH	METTL13	H3C7	MCAT	CDCA4	PLA2G2D	ANGPTL6	ALPK2	LOC286059	OTOS
ZSCAN4	KLHL6	LINC01635	LINC02003	RPA2	LARGE1	AKR7A3	OR7C2	ARID5A	TRIAP1	NPHS2	RETNLB	GGTA1	NIPAL4-DT	LOC440570
VWA5B1	SLC4A5	SPATA45	LINC01356	NDUFS5	APOC1	NOVA2	OR2J2	SS18L1	MBIP	FNDC11	FUT10	PNPLA7	LINC01267	PRRT3-AS1
LINC00311	ARMC8	PRR14	PNLDC1	WSB2	GALC	TRPM1	OR7A17	GSAP	GTF2IRD1	CD207	CRLS1	PYROXD2	LOC101927950	LURAP1L-AS1
HTR6	STRIP2	ZCCHC10	DLGAP2-AS1	MTHFD2	GSTM2	LTC4S	PPARG	SETD1B	ZNF639	NDST3	C19orf12	OSR1	NSMCE1-DT	CYMP
MAGEB6	VWA3B	MIR9-1HG	LOC729732	DAXX	FOSL1	LDB2	PTTG3P	MZT2A	NDE1	FAM110D	CHRDL2	ZBED3	LINC02535	LOC105378044
RUSC1-AS1	MED12L	TRPV6	KRT72	TMEM106C	FGF2	XPNPEP2	AFDN	SP3	SLC48A1	COQ8B	C4orf17	ENHO	OPN4	NOMO3
CACNG6	FOXJ2	CC2D2A	MRGPRG-AS1	ELAC2	ARHGAP4	CD5	FOXB1	GPX7	VPS54	SLC30A10	MRPL30	IRX2	CASP16P	LOC101928409
LMNTD1	ECE2	LINC02754	SLC24A3-AS1	CLINT1	LCAT	CD36	MTNR1B	TTC9	REV1	ANGPTL8	TTLL2	RHPN1	SCIRT	LOC101059948
CIRBP-AS1	CARD14	SMCO1	LINC01281	SNRPA	SOX12	NAPA	GNRH2	MAPK8IP3	VIPAS39	QPCTL	C2orf16	SMYD1	MAP1LC3B2	LAMA5-AS1
AXDND1	PAK6	ACKR2	ESCO2	ADNP	SPATA2	FHIT	OR10H3	SENP5	FBXO3	VAX2	LINC02882	PLIN4	LOC105376387	DCST2

ASMTL-AS1	MCF2	FLJ38576	ZBED3-AS1	NCAPD2	NUP58	FMO3	OR5I1	THAP3	PANK3	ZNF557	ANAPC11	GAB3	LOC100506405	RDH12
CD200R1	WDR19	IL21R-AS1	ATP5PO	EFCAB14	PLEKHO2	COA1	H2BC10	ROBO1	AACS	CSAG3	SOX7	LHFPL4	SEBOX	USP27X-DT
LINC00334	KCNH7	SMC2	LINC00887	RELA	MRC1	RCC1	GPR15	ZNF629	DNAJC15	CHST4	TBX22	MSC-AS1	OTOP2	BBOX1-AS1
ATOH7	HIF3A	LTBR	LINC01165	RNASE1	POLA2	MIS18BP1	OR2F1	SYP	SIL1	KCNK12	LINC00626	PLEKHA7	LINC02842	IGSF5
SEC16B	STAB1	D21S2088E	SPANXA2-OT1	ADAR	ARSA	ETV1	BTF3P11	TNNT1	LZTFL1	BIRC7	RP1	ZNF319	NEXMIF	CECR7
AMER1	LINC02961	SEPSECS-AS1	P4HB	FBLN1	KIF11	INSM1	KRTAP5-8	SETD1A	MED28	SLC16A8	BRK1	FOXA3	NEK2-DT	LINC01551
TBATA	ABCB9	ATG2B	ASIC5	DHCR7	LZTS3	CYP24A1	SOX1	CUL9	COMMD10	SPTLC3	CCL28	CCDC191	SSPOP	DNAI3
TNFRSF13C	PTK7	LINC01366	FSTL4	AEBP1	PDCL	UGT2B4	COL13A1	BICRAL	ALG12	SAMD4B	FAM186B	THAP8	OR6B1	PAN3-AS1
CAMK2N2	ZNF26	CBR3-AS1	PRMT5	SMG7	APOA1	SUPT3H	S1PR2	TAF6L	MACROH2A2	SLCO1C1	USP44	GALNT15	IGLV4-3	LOC105371079
ANKRD30BP2	ADAM9	LOC441666	GSN	VARS1	FZD1	ZSCAN12	TAF4	OTUD3	TVP23B	CEBPA-DT	SLC4A9	SPHKAP	TRAV30	XKR7
KCNG3	GCLC	FANCC	PAFAH1B2P2	SLC29A1	ZNF84	PIP	H2BC3	ADCY2	CMC2	CCDC15	HSD17B7P2	CDAN1	ZNF861P	ZFP28-DT
LINC01312	TPH2	LOC100132077	LINC02026	PRKAG1	GAS1	AMH	IFNA6	ZSCAN26	GID8	ARL14	NUMBL	NANOS1	TRAV34	NPW
FOXP2	SLC30A5	GYPA	IFITM10	ATXN2L	PLA2G15	CDH16	KCNG2	BBIP1	HEBP1	SLC25A21	INMT	ADCK5	OR1I1	PIP5KL1
B4GALNT2	ITGA9	LOC100505918	TMC1	VPS26A	RAD1	SIGLEC6	H4C7	CDR2L	TMEM242	SLC28A3	AKR1C6P	PRMT9	GABRR3	PACRG-AS3
FMR1NB	ZNF317	LOC101930421	LINC01103	ENG	SLC16A2	GTF2A1	GRIK4	ATP10D	DNMT3A	TMEM230	IL20	ZNF662	NUTM2F	FAM24A
GCSAML	AQP10	PCGF3-AS1	NUTM1	TBC1D5	EDNRA	CYTH3	H1-4	PIBF1	TOR3A	APOL5	LINC01521	LINC01116	LINC02256	LINC03008
SIGLEC11	RAP1A	ARIH2OS	EDN1	NIPSNAP2	PTPRZ1	TBXT	POU4F3	KRT4	GPN3	CPS1-IT1	MFSD14CP	MAP3K21	LOC105377776	ZNF283
IL23R	UNC5C	RNF130	MGA	LPCAT1	GAP43	GABRR1	GPR31	CEP170B	RPF1	HAND2	IL17C	MYZAP	LINC01808	LINC02303
CD276	MEGF10	GAU1	RUNX1T1	KRT5	GEM	RIBC2	HOXA6	SCAMP4	FAM222B	RNF19A	NMUR2	ABTB3	LINC02152	ACTL9
IFNL1	SLC38A4	C5orf64-AS1	SMIM13	TIMM17A	ZNF592	ABAT	OR10H1	ADCY1	TBC1D17	BCAS3	IFNK	TMTC2	CLSTN2-AS1	LOC105376489
C4orf36	TFAP2E	LOC101929622	NAT16	RNF14	ZNF142	DPF1	PDX1	LYSET	GREM1	SERINC2	MIR4755	ODF2L	PROKR2	RBM33-DT
FIGNL1	ITGB2	RB1-DT	ZNF852	SCCPDH	MMP1	CHRNA5	KCNA10	LOC730101	BBS1	DMRT1	P2RY12	LIN52	EME1	LOC105375282
RIMS1	PPHLN1	ACVR2B	RAMP2-AS1	SMARCD2	RABIF	GRIN2A	POU3F3	FBXL7	COLGALT1	CLEC1B	PRO1804	FAM83G	OR51B4	LOC100506446
PITPNM2	SCML4	SPATA31E1	ASB15	RTL8C	OSTF1	SLC2A2	KCNA2	TRANK1	KCTD5	ZNF214	KLF16	MTMR9LP	GALNT13	LOC105379385
PCDH10	ENTPD4	FBH1	TBL3	NET1	BBLN	XIAP	MC5R	SACS	TRMT2A	FNDC8	LOC284912	DPP10	PCDHB18P	LINC00482
TAB3	PIGQ	PRDM11	BTN2A2	USO1	BRPF1	MRAS	WNT1	LDAF1	TMEM14A	ACTL7A	ZBTB46-AS1	DYNLT2B	OR51B2	PATE2
GRK7	DNAJC11	ZC3H14	TMSB15B-AS1	HDAC2	TOM1L1	GLB1L	ANP32D	TENM4	ZCCHC8	SLC13A1	LOC84214	MTLN	LINC01257	SPATA31F1
MMEL1	C11orf58	LINC01093	LINC01144	PRKAB1	ARHGAP11A	CD28	OR2H2	RAP1GAP2	XPO4	KERA	PLEKHN1	CHROMR	LINC02673	LOC101593348
PDE8A	ZNF479	LINC00927	GLS2	SUPT7L	C15orf39	SYCP2	SOX14	APOOL	EXOSC5	CDKN2A-DT	DPY30	HJV	ANKRD60	TNS2-AS1
AKNAD1	BAGE	C16orf54	LINC02843	HSPB1	STRN3	PPEF1	H3C2	SALL2	ENY2	GUCY1B2	SRA1	MEG9	ELOVL3	C1QTNF12
RTL3	CAMTA1	ERCC6L2	LOC101927588	EFEMP1	ADCY9	INSL4	H3C3	TMEM30B	IFT46	UPB1	HCAR1	CNTROB	SRMS	PIERCE2
ATRIP	ABCB5	CHDH	SLC9B2	BNIP3	CDC7	KLHL24	SCN10A	CYLD	NDUFA4L2	CCT8L2	WDR87	BHLHE22	PCGEM1	DEFB132
ZIC5	OR4D2	MED26	CCDC148	CAPG	ELMO1	TAC1	SNCG	RMND5B	SLC35C1	RHBG	CACNG7	ZDHHC1	NOBOX	FREM3
TRIM67-AS1	POF1B	GPR12	HYAL6P	SH3GL1	DPH2	CLUL1	BTN2A3P	ATG2A	ALAD	ZSCAN2	SHANK2-AS3	SNHG9	OR51I2	LEF1-AS1
GABRG1	UBA1	LINC01936	LINC01599	COL3A1	HSD3B1	ZNF702P	TPT1P8	TOGARAM1	ZNF302	LIM2	GCC2-AS1	NINJ2-AS1	OR51B6	LINC00280
PANX2	NOP9	LINC02912	VSIG10L2	ATMIN	ATXN7	MIA	GJA3	PLCL2	STK26	NUP62CL	AK3	NOTUM	GCNT7	TMCO5B
ZNF114	EZHIP	HDAC2-AS2	ELMOD1	ZFR	PPIC	OPRL1	CD1E	TCF25	THEM6	EFHC2	DHRS4-AS1	SPIN4	OR14J1	LINC02517
CCDC27	MYO1D	LOC101927237	ST7-AS2	PLAT	PLLP	GUSBP14	GPR39	JCAD	TRPS1	AUP1	KAAG1	LTO1	KCNK16	LOC101928557
CFAP161	DUSP16	PIK3CD-AS1	EMP1	LRRFIP1	FAM216A	SLC7A1	HOXA3	CLIC5	FOCAD	TMEM176B	ACAD9	RASAL3	LOC101929718	LOC105370291
RBMY2FP	LOC645261	LINC00184	KRTAP11-1	FAM32A	DXO	TNP1	NTRK1	PRMT3	GLYR1	LOC105376204	SLC25A2	CCEPR	LGALS8-AS1	ZNF418
NEUROD2	CDH19	JAZF1-AS1	C14orf178	GDI1	ZNF140	IL24	SNTB1	NECTIN3	DCP1A	TRIM48	SPZ1	VXN	KLF18	SIX3-AS1
LINC02899	FGD3	CSNK1A1P1	CDC42BPG	NR3C1	PDPK1	PSG11	SPTAN1	FEM1C	WDR12	VRTN	TTTY11	SLC45A3	OR52D1	LINC02350
LINC00208	CCNL1	GRTP1-AS1	CRACD	TOMM34	PHF14	PTP4A3	PDIA3	YAP1	TMA16	MTMR8	MIOX	LINC-PINT	TPM3P4	TBX18-AS1
DNAH6	ALOX15B	MAMDC2-AS1	LOC151760	ABCE1	TBC1D8	CDKL5	FLNB	GDPD5	SMG8	ADM2	ROPN1	CLDN23	OR51I1	G2E3-AS1
LRRC15	AP1S3	KATNBL1	OR4M2-OT1	PON2	MYO5A	VIP	DDB1	TEX30	BPNT2	MMP26	CELA1	CAPN12	KRTAP4-8	AKAIN1
CFAP46	OTUD5	TENM3	LINC01618	DCAF11	BRCA1	NKX2-5	PCBP1	ABCA5	FAM13B	BPIFA1	PRDM7	ZCCHC12	KRTAP4-1	ZXDA
CBLL2	TSTD2	LINC02318	TNR	FAM3C	VTN	EFEMP2	EIF4G1	MTCL1	SLC35A5	C21orf62	GALP	ZSWIM7	KRTAP9-8	SANBR
ZMYM6	AFF4	LINC02846	SNHG4	RRM2	REST	ADGRG1	VAT1	CA5BP1	TBK1	TSKS	APOA5	SORCS2	NXF5	LOC105378067
SGCZ	EARS2	LOC100506489	LOC101928495	B2M	GABRE	KRBOX4	HADHA	ERI2	MAP1S	SHLD2	INGX	NPTN-IT1	LINC01347	SPACA3
LINC02551	UBA6	GS1-24F4.2	KRTAP13-1	DCN	CELSR1	MKRN3	ACTN1	LOC155060	LHPP	FBXO4	WNT8A	PUSL1	KRTAP4-2	KIF23-AS1

WNT9B	CCDC172	TMEM221	TBX20	ARAF	EEF1A2	CCT6B	XRCC5	LDB3	E4F1	SLC17A6	IL1F10	D2HGDH	LOC105376689	LOC102723678
DNAJB13	PPP1R12B	GRAPL	KRTAP7-1	CKS1B	SEC14L2	DAZL	RPS14	RPS12	HIF1AN	PRPF39	ZAN	CYS1	KRTAP4-3	MIDEAS-AS1
SCAMP1	CA8	ZNF138	ZNF92	UBE2A	RAPGEF1	DRD2	VCP	COQ2	APTX	PDZD7	KRTAP4-12	HCN3	KRTAP9-3	LINC00881
LINC00471	TRAPPC10	LINC00689	PRMT1	UQCRC1	PEX6	AP3D1	CD24	PLCB3	RNF38	ATP1B4	FRMD8P1	LOC101928092	KRTAP17-1	FAM47A
HAS3	NAA16	LINC01968	MAP3K2	DVL3	RAB40B	MED22	PPP2CA	PGAP4	CD320	PACS1	RACGAP1P1	SGTB	KRTAP4-6	TMEM132E
SLC30A8	LITAF	INO80C	RBMY3AP	RPS4Y1	IKBKE	CST6	PDIA4	ZC3H4	FHOD1	TSPAN32	C3orf20	ZDBF2	KRTAP4-4	RIPOR3-AS1
LOC439933	BRINP1	ZBTB40	TNXB	FARP1	GSTM1	NRL	CS	IQCK	RIOK2	EN1	ZNF33A	GTF2IRD2	KRTAP4-9	LINC01887
C11orf65	SLC39A6	CHPT1	TFE3	COASY	AHSG	INS	EID1	MFSD9	MRS2	IGF2-AS	CYP4F30P	ZSCAN22	PTCHD4	PYDC1
IQCF1	PPP1R1C	SPG11	RARA	PRDX4	INPP4A	SLC2A4	PA2G4	PHLPP2	HCFC1R1	CYP2W1	GPR174	ZDHHC12-DT	KRTAP2-1	LOC101929109
DEFB125	CELF1	ADAMTSL3	GRM5	PKP4	DZIP1	ENDOU	BRD2	TJP3	FBXO34	RNLS	VN1R10P	KBTBD3	NUTM2B	LOC105372485
WFDC10B	NRP2	LTB	HPRT1	CHMP1A	RAD54L	LIPC	RPL39	STON1	THTPA	RETN	VN1R3	ARHGAP27P1	IGLV1-44	LOC105371734
PKHD1	FMN2	LINC02656	XAGE-4	WDR82	LSM7	CBL	EIF3E	CLIC2	CEP55	KLK14	TTTY13	SVIL-AS1	LINC00470	VWC2
PKD1L1	SORBS2	ALDH1L1-AS2	EGFR	PLK2	FKBP5	MAGEC1	CCND1	DHX57	RCL1	SEMA6D	TTTY10	XIRP2	OBP2B	NETO1-DT
TENM1	TTLL3	TPPP2	RNF141	HEXB	PCGF3	C2orf27A	HNRNPUL1	MXRA8	C1orf115	FAM106A	UBAC2	CPNE4	OR8D2	PSLNR
REXO1L1P	IREB2	EBF3	LOC100128988	CCT2	ACOT13	CACNG1	TMCO1	MATCAP2	RMDN1	ADAMTSL4	MRPS36	NCK1-DT	LINC02504	LOC105374428
CNTNAP5	LINC02875	LOC105375875	LINC00628	CAPZB	ABCG1	GDF5	USP11	RPP40	LRRC20	CCDC170	INTS2	RBPMS2	R3HDML	LOC105369705
TMC2	FAM153B	FAM53B-AS1	TATDN2	ARPC1B	ATG14	RENBP	EIF2S2	BICC1	MIIP	PRR36	MRO	POLR2J2	DMBX1	LINC02419
SMCR5	ACTR3B	LOC105370475	ZSCAN5A	GNPAT	COX7A1	IL18R1	CDC42	SFI1	KCTD15	HKDC1	PCGF6	SLC25A35	OR51M1	C11orf97
BICD2	BEST3	SLC38A4-AS1	PWP2	RNF41	PIN4	DKK4	HLA-B	SATB2	ASH1L	MLST8	LCE3D	LYRM7	KLHL31	LINC00968
ZIM3	CYP4B1	LINC00960	LOC100287290	SETX	MMP19	TRH	RAB2A	SPDEF	ANAPC2	PDZRN4	MRPL27	STYX	CABP7	SFTA1P
NOX5	IFNLR1	LINC01490	AGAP4	NDUFS2	CLUAP1	PDE6A	ARPC3	ZNF862	NIT2	ELP6	MRPL36	COL22A1	PROX2	LINC02511
DAOA-AS1	RSRC1	TBX18	LRRK1	PGM1	MMP12	USP9Y	ATP6V1G1	ZC3H3	MRPL39	ADPRM	MRPL43	FAM162B	LOC102723506	LANCL3
ADGRG6	NPSA	PCAT7	BMERB1	DELE1	KLK3	PRPH2	SUMO1	ICOSLG	LYRM4	ZNF770	RNF26	CFC1B	MAS1L	WAKMAR2
KLHL4	TMCC2	COPA	MROH1	PPP5C	BSN	SSX1	LTA4H	ZNF184	MACO1	DAB1	ANGPTL1	NAT8L	LOC101929963	TEX26
SUOX	TYR	LCN6	CMTM6	WASHC5	SLC25A14	ADAMTSL2	PSMD11	CENPS	RFWD3	ADGB	UBE2J2	STAC2	FRG2EP	WDR38
ADGRF4	SLC25A41	LZTS1-AS1	MUC6	MED13	SLC7A7	PTGER2	KLHDC3	FAM114A1	CHORDC1	ZNF532	CFL2	ARHGAP5-AS1	LINC01859	LINC00680
SYTL5	ZNF215	SAMHD1	TUBA1B	CREBL2	NUAK1	APOBEC3B	MRPL3	SOSTDC1	KBTBD4	ZCWPW1	MS4A8	SH3RF2	OR5V1	LINC00877
ADGRF2	PIAS2	CDKN2B-AS1	FCGR2A	KIF5B	CHL1	CHRNA1	CCNG1	MFHAS1	MAGEH1	CRCT1	PACSIN1	DERL3	LINC03048	UBE2Q2P13
SYN2	ENTREP3	ABI1	PRSS23	MORF4L2	DLG4	SIX3	CHD3	FAM149B1	LMCD1	LRRC31	PPIL3	CES4A	LINC00309	POU2F2-AS1
ASB10	GABRG3	GPATCH11	DIP2C	EXT1	STC1	CHRNB2	HMGB2	SHC2	DUSP12	ELF5	TIGD7	SHF	MOGAT3	LOC105371485
NFKBID	PTCH1	TIMM17B	LOC400940	DYNLT1	UBOX5	RASA2	C6orf62	RAB40C	CDC73	SERPINA10	BEX2	ZNF397	TRBV25-1	IL6-AS1
WNT9A	FYCO1	HDHD5-AS1	HECTD2	NDUFA6	MRPL28	HTR2B	RAB8A	RND2	AURKAIP1	CST8	ND4	SNHG21	TRAV39	KRT222
GAL3ST2	RNH1	SLC38A2-AS1	FUS	ACAA2	DKK1	HTN1	POLE3	ERCC2	DCUN1D1	KCNQ1DN	FTHL17	ALG10B	LOC102724638	LOC105375571
PIP4K2B	QRFPR	LINC01186	TTC34	SDHC	EXO1	TNFRSF17	ATXN10	NPHP4	DTL	CHIA	MOV10L1	LYSMD4	TRBV24-1	SFTA2
ODF3	BPIFB6	LOC101928211	MMEL1-AS1	ST14	CGRRF1	DSG1	ADH5	DOCK3	MRGBP	OSGEPL1	RGS8	ZNF19	ITIH6	LRRC72
WFDC13	SDS	LOC105369167	ALDH3B1	TWF2	HMGCS2	NR0B1	THY1	PPWD1	FAM114A2	POMT2	TMTC1	ZNF449	OR2B3	AIFM3
CCDC197	TGFB3	MDFIC	SCTR	ZNF410	ASL	GLI1	REEP5	COPG2IT1	TBC1D13	TBX4	FCRL4	ZBTB8OS	GNAO1-AS1	MIOS-DT
SLFN5	AFAP1L1	RUVBL2	LOC105369974	TJP1	CCDC85B	HBZ	PRPF6	COL2A1	CISD1	CBLC	MCHR2	PITPNA-AS1	ZNF470	LINC00551
SERPINB12	CLCC1	LOC101927253	METAP1D	EXT2	PKIA	ZNF571	UBR5	ABTB2	RINT1	TM4SF20	TSSK6	SP6	LINC00917	LOC105378146
GIPC3	POFUT2	DDX42	MEDAG	METAP2	IDI1	IQCC	H1-0	CLCN2	REC8	FAIM	TM2D2	SFTA3	FRG1BP	PEX11G
PGLYRP3	ZACN	SYCE1L	ABCA8	EPHX1	UCHL3	CPB2	PLXNB2	CLBA1	LIMD2	KLRF1	PMCHL2	TMEM169	PHRF1	GLIS1
PSKH2	SERPINB5	LOC401261	TNK2-AS1	LTF	ACD	ZMYM5	HLA-DRA	LIN37	URGCP	ADARB2	ACTR3BP2	TYMSOS	ARL16	LOC105372766
MOGAT1	SLC22A7	ZFHX4-AS1	DUOX1	LANCL1	VCAN	POLR3G	ATP6V1D	ZNF688	HAUS6	KIF24	CDCA7	LINC02615	BCDIN3D	PINX1-DT
GPR78	BPIFA4P	FLRT2-AS1	TRIM36	ALDOC	NR4A2	MYOD1	TOP1	METTL18	HECA	ZIM2	WDR83	TRERF1	LDLRAD3	MIR670HG
H1-8	BBS9	BSDC1	IKZF1	EFNA1	ITGB3	UPK3B	RPS28	ZNF710	LEMD3	PPY2P	NIPSNAP3A	METTL25	ABHD13	LOC101929154
GNRHR2	TNK2	BTG1	SEPTIN7	GET3	MYH2	IGLL1	CYCS	CAND2	ZDHHC7	KLHL11	USP45	IMMP1L	RBM24	IQCJ-SCHIP1-AS1
MYOZ3	USP25	GPRC5D-AS1	CEP295	ACAA1	RPS6KA4	GLRX	SRI	GLCE	NUDT2	BMAL2	PHF6	LOC105379173	WDR89	LIN28B-AS1
BNIPL	UGGT2	SLC25A34	KANK1	SDHD	COL17A1	SI	NXF1	RWDD2A	TSSC4	ZNF692	MIEN1	CAPN8	XIRP1	LOC101929536
ASB11	ZCCHC7	SYF2	MAP3K9-DT	RPL38	CGA	GZMK	CYFIP1	PINLYP	TMEM39A	HEYL	UQCC2	TRIM69	SLC2A12	SYT6
OFCC1	CFI	ZNF7	BRPF3	RB1CC1	ACP5	SAG	ILF3	OSR2	INTS12	SPRR2C	FAM220A	ITGB2-AS1	RAB12	LOC102723657

SDR9C7	TAPBP	LIFR-AS1	RABGEF1P1	UBE4A	SPOP	GPR176	ID1	ATP11A	SUV39H1	LUZP4	AIFM2	C17orf100	PIH1D2	LOC105375707
TRIM40	LMOD3	TPM4	SRRM5	KDM5A	NEK2	FLT3	PRCC	ATP6V0E2	NUP37	DNMT3B	CHCHD6	SPATA5	SHLD1	FAM95C
CSN1S2AP	CA6	LINC00645	LOC105375509	SMS	CCNT2	SKIL	SEPHS1	APLNR	NSG2	PPP4R4	CFAP300	COL26A1	TRIM65	LOC105375602
WFDC12	KDELR1	SFXN3	ZBED6	ARHGAP35	HOMER3	GABRA1	ALDH7A1	OIP5	NRN1	PNPLA3	PYM1	LRRC3B	C4orf46	C17orf98
C11orf40	PTPRM	LOC646762	LOC400627	RAI14	NPR1	APBA1	DUT	COL9A2	EIF4ENIF1	ADAMTS8	SEC22C	ZNF436-AS1	BICDL2	TRAM1L1
DEFB119	LINC00824	DLGAP1-AS2	NADSYN1	ALDH3A2	APBB3	GP2	ERI3	KIF3A	WASHC3	RAVER2	MESP1	ZBTB49	CMTM8	LOC105378515
TAC4	TP63	LOC100506071	CTB-49A3.2	PPFIA1	NRF1	ZNF165	KPNB1	ZKSCAN4	SMO	PRR34	NUDT16L1	ZEB1-AS1	LRR1	LINC02091
TIGD1	PDZRN3	LOC399900	ACTG1P17	LDLR	TFAP2A	ATF7	UBC	NACAD	AVPI1	KLHL5	C7orf50	ATP6V0E2-AS	CHAC2	LINC01799
ALKBH5	MBNL1	VPS37C	SLC17A4	IDH3A	TRA2A	HCG4	RBM10	DHODH	HECTD3	RDH8	MRPL45	UQCC3	TAF3	CCDC154
CCDC69	SCRN3	PAIP2	NAA35	SDC4	CD52	PTPN6	TCF12	SH3BP1	ABHD10	FAM120C	BRMS1L	PROK1	ZNF542P	BTG1-DT
C5orf24	APOL4	PLEKHM3	LMO3	HNRNPL	ME3	CPSF4	KDM2A	TRMU	PHLDA3	NODAL	SLC30A2	KANK4	EIF3J-DT	KLLN
CDK8	ELAVL3	LOC101928191	LOC100288656	PLTP	ALPP	KAT5	STAT3	PHF24	MAN1B1	ASAP1-IT1	TMEM241	ZNF579	MIGA1	INSYN2A
PTK6	GDPD1	PRKCA	RPS16P5	BIRC2	SIKE1	ASIC2	PPIG	PHACTR1	IMPACT	IDI2-AS1	TMEM107	C7orf31	SHROOM1	MYCNUT
NKD1	CAPRIN2	LAMA3	DLEU7	IER2	FOXA1	KCNJ10	UCP2	ZNF500	SPON2	ADAMTS7	PERM1	RASSF6	MARVELD2	TMEM225
STK38	AGK	RAD51-AS1	CD6	SEC14L1	CDH5	IL7	KRT8	DNA2	PLEKHF2	FOXRED2	BUD13	FDCSP	ZBTB8A	THBS3-AS1
THEM4	MBD1	PHF21B	TTLL5	UQCR11	NPTX1	PNLIPRP1	KRT7	INPP5J	CHCHD7	ZNF556	PLPP7	PRKAG2-AS1	KRTCAP3	LOC100130452
CLSPN	G6PC1	DLX1	MFN2	PAF1	ATP2B2	ZNF43	TUBB	TOP3B	CRIPT	ANP32A-IT1	TXNDC17	WNK4	RASSF8-AS1	KCTD19
RBAK	SUGT1P1	SYDE2	PIEZO1	TSPO	SGCE	GPR143	COPS7A	PAMR1	YRDC	DENND6B	NAA38	PWWP3B	FBXO27	BCDIN3D-AS1
WDR62	PTGIR	LOC105372793	FABP6	PRMT2	HHEX	NPAS1	CADM1	RETREG1	MRPS33	PRDM14	CCDC77	HSPA12B	LINC01003	LINC01927
SLC39A12	PIK3IP1	WDFY2	FABP6-AS1	BRD4	CDC42EP1	KDM5D	MDK	NENF	LHFPL6	HEXA-AS1	CMSS1	C16orf89	TYW5	CFAP418
RNF168	LILRA5	ABHD1	LIMS1	IGBP1	AFP	TEK	SF3B4	IGHD	ACTR8	MZT2B	NT5C1A	LINC02482	SNHG30	KIF1C-AS1
SVEP1	SAMSN1	LINC00937	CARHSP1	ARFIP2	NFE2L3	CHRNB1	NSD2	IFT70A	NAA60	CWH43	GPR61	USP35	CCDC112	LINC02624
LOC652276	DAOA	LOC102723409	PTPRN2	COX7B	IFT88	CLCN5	CDC5L	ELOA-AS1	NCAPG	CPTP	USP26	SNHG10	LURAP1	LOC100996583
GATA4	KLHL17	MKLN1	HOPX	SLC4A2	ALDOB	TULP1	WDR45B	VPS13A	MECR	SENP7	PCDHGC5	DUSP28	LINC01004	MIR4307HG
TC2N	OR10A4	TRDN-AS1	RFFL	VWF	MAPK4	NTF3	TXN2	RPL35A	FZD4	SLC19A3	PARD6G	AGXT2	SLC38A9	BCL10-AS1
C9orf72	OR8D1	LOC101927069	CLYBL-AS1	SNX2	KIF23	FOXN2	CORO1A	PTOV1-AS2	RAP2C	RPS6KA6	PCDHAC2	SLC51A	MIX23	ZNF850
KCTD18	PTPRS	SPAG16	LOC105374423	DPF2	PANX1	GPT	DLD	RSBN1	ATP5IF1	CNNM3	LACRT	LRRC37B	WDR86	LINC02844
PLXNA3	KRTAP2-3	PPP4R1L	RALGAPA1	ARHGAP1	CCDC6	GRTP1	UBE2V2	PON3	SLC22A17	LINC00652	NFATC2	NRG3	ODF3B	FAM9C
PELO	BLID	GALNT14	OR5E1P	AP2S1	EPHB6	NTNG1	JAG1	C12orf29	S100A14	P3H1	KCNK4	LIAT1	PACRGL	ARLNC1
LACC1	GSX1	LDLRAD4-AS1	OR2M4	PLIN3	SCN3B	TFEC	TSPAN6	DLX5	NES	PBX3-DT	SNHG16	ZDHHC21	UNC45B	NUP210P1
TEX55	SMC1A	LOC101927066	PPP1R11	ABL1	NCK1	UMOD	CDKN1B	GPRASP3	VPS28	CRYL1	C4orf3	LDHD	SBSN	CYP4F22
KDM1B	RTN4IP1	LOC105376360	MAF	PRPF4B	CDH13	LMO1	HMG20B	CALM1	SMUG1	SNHG32	VPS25	TPCN2	DNAAF4	IGLON5
ATP6V0D2	SMOX	ZC2HC1A	SNORD8	WWTR1	WDHD1	MGAT5	UBA3	KRT81	RHBDF1	SLC52A1	DNAJC5	MFSD4A	SP2-DT	POT1-AS1
LHX4	H6PD	LINC00523	DNTT	ACTR1B	STX1A	CBX4	NR2F2	RBM4	TKFC	EDDM3B	LRRC8A	KIF12	FLJ32255	LOC105370890
DNAH11	SLA2	ZNF713	SNORA68	CLK3	KLK6	HPGDS	USP10	XYLT1	FANCF	ZNF665	SLC35A4	ANAPC1	ELAPOR2	LRGUK
PROSER3	KCNIP3	CSTF3-DT	PLD4	COPS8	CSPG4	TNFRSF8	PRKRA	PRPF40A	SYBU	TAOK3	ERLEC1	IGSF9	TRMT10B	TMIGD2
ADPRHL1	KLK4	NT5DC4	CTNND2	PYCR1	KRIT1	SLITRK3	UBE2G1	GOLGA8N	TSPAN15	GNB1L	ZFP91	USP51	NOXO1	DMRTA1
CDH24	CMTM3	RAD21-AS1	RETSAT	USF2	CENPC	TULP2	CLNS1A	TMEM262	ARMCX1	LIMS2	FYTTD1	GARIN5A	ABCA9	ODC1-DT
SEPSECS	PNKD	LOC101929248	CWF19L2	FARSA	CNKSR1	CHRNA4	RXRB	TRIM66	APIP	CSNK1G3	MAL2	DAPL1	GANC	CCDC54
GRIK5	CXADR	HCP5B	CUX2	CREBBP	PICK1	HOXC5	TM9SF1	PPP1R37	LACTB2	FAM200C	SELENON	RAB3C	FUNDC1	ZNF667-AS1
LRRN4	TAGLN	ASB3	ELK4	PKN1	NAP1L3	SYCP1	TCF3	MDM1	SEC22A	BPESC1	ANAPC16	C2CD4B	LOC728485	SCAND3
JPH2	RGS5	CBY1	PPP2R3B	CNOT8	DSC2	SSUH2	COL6A2	HIPK2	RNF43	DYM	SYS1	ANKRD29	NRROS	KBTBD12
PDE5A	CD209	CNR1	LDC1P	PPP1R2	HLF	ASGR1	DNAJA2	KSR1	SNX24	KCNJ14	LENG8	GKAP1	MYPN	LINC02109
SH2D1B	CFL1	HHLA2	PDXK	AASDHPPT	MAP2K5	BFSP1	NDRG4	IRF2BP1	GRAMD2B	SEMA6B	TTYH3	ANO5	C14orf28	TEX36
ADAMTS19	BAP1	SNAI3	MMP2	VEZF1	C2CD2L	CD1B	AKR1C3	TCHH	ZNF444	PADI3	ANKIB1	NUTM2B-AS1	GXYLT2	LINC01159
DDX31	CMTM1	LINC01535	LOC105371352	PCM1	USP6NL	MAFK	PRPF4	NGDN	ICE2	PLA2G3	MANBAL	C10orf143	MLIP	LINC01563
UMODL1	ERVH-6	LOC101928682	VRK3	CHPF	GNAO1	PCYT1B	AATF	SPRR1A	UTP6	DELEC1	STT3B	SPATA18	FAM161B	NQO2-AS1
RASEF	LYZ	RETREG1-AS1	HRK	ERCC3	ARHGEF5	DFFB	MAN2B1	CFH	PDGFC	KLK12	TMEM167A	HPDL	LVRN	TNFRSF10A-DT
PARD3B	SF1	LOC645485	LINC01346	MVP	NUDT1	CYP2B6	GPM6B	RPSA	GINS3	RNF31	NIFK	LOC100289361	NUDT19	NUS1P3
DST	GEMIN7	LHX9	PLCE1	KAT2A	TTF1	EDN2	AGR2	CACTIN	SEZ6L2	MS4A5	DYNC2I2	RTN4RL2	PPP1R32	TMEM231

ZNF441	STH	CELF2-AS1	ATP13A3-DT	PLOD3	EVI2A	KCNA5	QRICH1	TMEM223	ODR4	SAGE1	C12orf57	MIR4458HG	PIRC66
DCAF4L2	ATN1	LINC02995	MACC1	PPP2R5A	CHAF1B	FKBP6	RABGGTB	STARD5	CCDC51	GREM2	MIB1	LIN28B	ZNF383
STOX1	LLCFC1	WTAP	NSF	CSTF1	THBS4	RPL3L	TUBB6	OLIG2	RGCC	BEGAIN	WDR75	SPESP1	HAPLN4
CRMA	CDKN3	LINC02874	FGF22	DKK3	HOXB7	TMSB4Y	CETN2	ARHGAP33	SLC25A22	SLC35E1	SMIM30	LINC00920	MINCR
ARL10	RBM15	LINC02685	ARHGAP24	LAMA4	FAS	SLC35A3	ADCY6	CLMN	HJURP	GCM2	SULF2	PRDX6-AS1	PELI3
RNFT2	MRTFA	GPM6A-DT	SBF2-AS1	LSM3	MLF1	UPK3A	CXCR4	HOXA5	SLC38A7	TMOD3	CHTF8	PPP1R3F	CKMT2-AS1
ANKFN1	GNG2	FSIP2-AS2	PER3P1	GSK3A	VSIG4	PTH2R	LMO4	PRPH	CNIH4	HAO2	SMIM15	INSIG1-DT	FAM131C
KRT78	CDC25A	TMCO4	FAM200A	PES1	NR2C1	LY6H	FERMT2	STIMATE	OGN	KCNH4	ABHD12	GOLT1A	CD63-AS1
ZNF41	ZAR1	LINC02123	LOC105378726	FADS2	IFT140	ACRV1	MFSD10	ZNF250	VWA1	HRH2	UBE2Q2	ILDR2	RASL10B
AMMECR1	POSTN	HIP1	HPYR1	KHDC4	GPRASP1	ASMT	NELFE	EEF1AKMT3	MSL2	CLCA3P	FAM234A	SRARP	HRCT1
ZNF583	RHEB	C1RL-AS1	TYRO3P	EP300	MYB	DNAJC4	GPC3	OAZ3	PALMD	PRG3	STMP1	TINCR	ASB5
LUZP1	SLC66A1	RBMS3	OR7E104P	DES	ZBED4	AQP8	NDUFA2	COL11A2	RNF138	SLC30A6	CDCA5	L3MBTL3	USHBP1
ZNF75D	IRAK1	LINC01289	SPRY4-IT1	STT3A	RRAD	HTN3	TUSC3	SERPINA4	CDK5RAP3	LPAR3	ABHD16A	IL17RE	SYNE4
LINC00052	LINC00520	RP9P	MGAT3	BRD8	HLA-F	BRDT	PPP6R1	PYROXD1	CENPM	TRPC4	TMEM263	KIF7	ZNF280C
BRWD1	TRIB3	ENTPD1-AS1	LINC00674	UQCRH	RXYLT1	POU2F1	NUPR1	POLR2E	CIAO3	FRMD1	ARHGAP21	RBFOX3	FAM171A2
CCDC89	PHF23	ITGA1	OR5AK4P	NNMT	CKM	NDUFB1	EMG1	MYBL1	CHMP6	KIRREL1	NAV1	SDK1	APCDD1L
ZNF572	CCDC116	LINC00997	SH3GL1P2	PARP4	CACNA2D2	PNMT	CLCN7	SST	PACSIN3	TCP10L	GPAT4	LINC02067	C3orf70
RMDN2	FCRL5	GRIK1-AS2	ZNF160	PLK1	MAPK10	ERBB4	NFKB1	STUM	TMEM161A	IMPG2	CIAO2A	NAGS	ZNF425
PCDHAC1	ZNF385B	LOC497256	C20orf181	LSS	ESPL1	F2RL2	MINK1	AGFG1	EXOC5	GCNT4	TNKS1BP1	GLIS3	VPS37D
FAM124A	NKAPD1	LOC101928658	OR1C1	MTA1	HSD17B2	CCN4	PEG3	EXPH5	SLC8B1	ZNF407	CERCAM	MIR155HG	SPC24
ITIH5	MAP3K19	GAS5	OR8G1	E2F4	FGD1	NAT2	KIF1C	HLA-A	TAF1D	CEP72-DT	NDFIP2	MARCHF6-DT	STARD7-AS1
FANCB	MOG	DPH6	OR1Q1	SIPA1L1	TTK	DLEC1	ABCF2	ZNF23	FBXW7	FIRRM	WDFY1	GALNT9	DUBR
POMK	EXD2	MARK1	OR4D1	CD2BP2	ENDOG	MTHFR	TUBA1C	ERC2	ZMAT5	AHI1	HIBADH	TAFA5	HNRNPD-DT
ZNF709	CRISPLD2	LOC101928251	CLN6	VPS72	MELK	SEMA3A	HARS2	TWIST1	KIF20A	ELOA2	TCEAL8	XAGE2	ALKBH8
CCDC57	RHOA	ECI2-DT	LOC105376944	TOMM40	CCNF	ZNF44	KLHDC10	KRT20	DHRS11	ACOXL	COX20	MAMDC4	TMEM151A
SMC1B	THSD4	LINC00298	PNN	BMI1	RAD9A	ADCY8	SFN	FAM169A	RRP1	PRKCZ-AS1	UBTD2	MAEL	ZNF567
BRWD3	SAMD14	LOC105376037	ELOVL5	LAMC2	FOLR2	ADRB3	NR2F6	RPGRIP1L	DVL2	OBP2A	GPT2	LINC01614	USP46-DT
ASB16	MKS1	NKPD1	OR2L1P	NAE1	PSG5	CTF1	TSPAN4	C10orf95-AS1	ZNF574	GRAPL-AS1	SLAIN2	PPM1J	ZNF594
ERVV-1	AKT1S1	PGM5P2	OR5H1	ACTG2	BMPR1A	NGF	LAMB3	CHD5	STX18	MORC1	SHKBP1	SHISA3	KLB
GAL3ST3	BIRC5	ARHGEF1	OR9A1P	G6PD	ATG12	CELF3	CLN3	RABL3	SIDT2	FOXN3-AS2	ATAD1	HOXD-AS2	GAS2L3
C2CD6	IRGQ	IPO5P1	OR10A3	SEM1	FGL2	POM121L9P	TFPI2	SETD4	REXO4	PURG	PYCR2	INKA1	GAS5-AS1
UTS2R	UCHL1	PRR7-AS1	OR10D3	ATP5MJ	GLDC	CES1P1	MRC2	ENTREP2	NUP107	PDSS1	ZDHHC5	WDR31	SRL
USH1G	LINC02877	LOC101927543	OR1J2	GAK	MLH3	PMP2	ATP2B1	SOCS7	ANKRA2	SLC24A2	DMAC1	PTPDC1	ZFP3
SYN1	CYTH2	CAPS2	OR4C1P	SERPINF1	EEA1	SLC4A10	PRKD2	GRIP1	TMEM39B	SLC7A10	MICOS10	TENT5B	SMKR1
CNOT6L	HNRNPM	LOC105379477	CTTN	TACSTD2	PRKAR2A	SEMA3F	CRYAB	TUBB2B	PANK4	CENPJ	JMJD8	TMEM200C	TSLP
RHBDL3	RBM18	TSPAN10	OR1J4	MTOR	ENPEP	ACYP2	TASOR	DGCR6L	TMEM38B	GABRQ	GNPTG	ZNF502	RHOC
ZNF718	THUMPD3-AS1	NR5A2	OR5L2	PDAP1	ZBTB11	STATH	NFIB	CRYBG3	REEP4	CCDC177	TTC7A	ZNF680	VMO1
SNRNP48	MICALL2	LINC00705	OR5K1	LYPLA2	DCX	SLC6A3	NECAP1	CD7	EPS8L1	CA10	SARNP	C20orf85	PNMA6A
ANKRD52	TOLLIP-DT	LOC100129455	OR13C4	STAG1	ORC2	ALX1	POLR2H	TMSB15B	HOOK2	PSAT1	MRPS6	UNC79	PPP3CB-AS1
ZNF560	HEXD	SAMD11	FOXD4	NDUFA1	P3H3	TBX19	AZGP1	MYCL	SMC6	PRDM12	EXOC4	ZNF367	TMEM170B
RTTN	LINC02941	LINC02282	RAC1	LAMTOR5	B3GNT3	C22orf31	HBS1L	NFKBIB	ATAD2	ADGRF1	PPP1R18	GALNT5	LIN54
BTNL9	TTC28-AS1	HIVEP1	TREML5P	RSRC2	NME3	KCND1	ADCY3	BEAN1	SAYSD1	TRIM46	SETD7	PPM1N	ZNF182
PUS10	RPS24	STXBP3	CD74	SMARCA5	IL6ST	CRYBA4	SH2B1	ATP10B	IFT22	NYNRIN	CERS5	CARMIL3	VSTM1
LMLN	ERVFRD-1	LCNL1	SNORA74A	FNDC3A	CA3	FBP2	THAP12	GFOD2	NT5DC3	CFAP43	TMEM250	WFDC21P	LOC101927330
RAD9B	LZTS2	CPXCR1	CECR9	FEZ2	JADE3	RNF40	RGS16	MEIS3P1	CWF19L1	PNMA3	CFAP36	FITM1	CAHM
ZNF555	PDSS2	METTL14-DT	ZNF29P	PPP2R2A	GCHFR	HDAC6	HIGD2A	PAK3	C11orf71	HPSE2	ATXN7L3	ELFN1	NKX6-2
NYAP1	CUTALP	MRGPRF-AS1	DEFB114	BCR	MTERF1	HOXA7	UAP1	PLXDC1	ACP6	PRDM16	ROMO1	LINC01569	SP5
RSKR	WWP1-AS1	NCKAP5-AS2	SOX4	GTF3C1	PEX1	RASL10A	EFHD1	MYBPC1	FERMT1	SMIM2	LEMD2	AMDHD1	KCTD11
MRGPRX3	DNM2	AWAT1	ANXA2	GGPS1	ZNF646	MAP3K7	PI4K2A	FUT3	SIRT7	CDK5RAP2	CMIP	SMIM22	C9orf85
ABCA13	ADAM15	ARHGEF7-IT1	SNORA71B	ATP5PF	TAOK2	HYAL2	GPS2	NPEPPSP1	KRI1	H2AJ	TMEM205	BBS12	LIPH

ADGRG7	DCTN5	LINC01996	DEFB124	EHMT2	PDPN	LILRB5	KRT14	DAGLA	SRD5A3	GMEB1	TMEM101	CKAP2L	PRSS35
DUSP5P1	ARMCX5	LINC00636	SPP1	CSK	MGMT	HOXC6	SIN3B	TXLNGY	VAV3	DPP8	PHF13	ZNF320	LINC02604
DGKH	TCAIM	TMEM26-AS1	TROAP	BCKDHA	UGCG	MIOS	FAM163A	CRACDL	DALRD3	C21orf91	SMIM20	SLX4IP	DCST1-AS1
TMEM182	ST7-AS1	LOC105375253	KAZALD1	PAM	HUS1	STARD8	TNFRSF14	CLDN18	ZC3H12A	NDUFAF7	DAB2IP	GRAMD2A	MIEF2
C16orf46	GON4L	LCE1B	GAD2	NR4A1	PLK4	CHAD	PLPP3	ARID4B	PACC1	PGLYRP4	GOPC	TMEM150C	SPNS3
LSM14B	RPUSD3	FGF13-AS1	CADPS	TRIM2	ZFYVE9	ELANE	MED21	ZG16	TMEM51	A1CF	IGSF8	IRX3	UGT3A1
CASP8	CBX3	LOC101928386	HOATZ	COX5B	ATG4B	DAO	SH3BP2	MROH7	SPCS3	PLEKHA5	NBDY	LOC105370109	LINP1
PLB1	MIR1915HG	MCM3AP-AS1	GABRG2	HSF1	GJA4	NRG2	XPC	MYRIP	FHL3	RAB23	BOD1	CCBE1	NAPA-AS1
LINC02910	TSGA10	GRK4	RSPH3	FABP5	EEF1E1	LILRA3	SF3A2	PRDM10	KCTD9	CTAGE1	TOMM5	ITGA6-AS1	LRRC73
SLC5A3	KIAA2013	LINC00382	SRD5A3-AS1	UBE2K	BCL3	ARHGDIG	PAPOLA	ASXL3	PNMA8A	PADI1	NT5C3B	DIPK1C	HMCN1
GPR82	HUNK	LINC01644	CAMSAP3	ITGAV	TRIM3	AMHR2	TSC1	U2AF2	EGFL7	CPLANE2	BLOC1S2	SEZ6	RIMKLA
OXGR1	PRKCA-AS1	PLEKHA8	ITPRIPL2	CFB	RAMP1	SALL1	ENPP2	TKTL1	CEP192	RSPH6A	SNHG29	EML6	ZNF610
CDC14C	CRTAC1	LOC105370549	CSAD	SEC24C	PRR4	APOA4	ASMTL	HCG26	RPL26L1	KRTAP9-9	NUS1	SPATA33	PLA2G4F
SULT1C4	FBXO28	LOC101927143	SVOP	SPOCK1	CPS1	GNG7	SLC12A4	DIS3	ARRB1	C1QTNF1	ZCCHC3	SALL4	BHLHA15
TEAD1	MYL12A	LOC101929552	PPP4R3B	ACADS	GAS8	PAGE1	TMED7	SFTPD	TTC31	KRTAP1-1	PDRG1	SERTAD4	PPDPFL
CATSPER2	LINC02593	LINC01333	PIK3R2	CUX1	CTNS	NTSR2	FAM3A	DNAH7	ASB8	EPB41L5	ZNFX1	ZC3H12A-DT	OR2I1P
POU5F2	CHCT1	LINC02339	COSMOC	CBFB	INHBA	ZNF253	BAG2	PRSS53	FNDC4	KRTAP1-3	CEP20	PHETA1	LINC02937
RXFP2	LINC00661	LINC00944	LRRC66	RAB3GAP2	RASSF7	BRME1	KIF2C	GDF7	DUSP22	ADPGK	SYVN1	ZBTB42	MKX
BEND7	DAAM1	LINC02683	LINC00354	SERPINA3	SLC10A3	MATN1	GGA3	DTNB	MED23	SPACA1	FBXO45	ZNF738	SFR1
SSMEM1	CACNA1D	LOC100128993	LINC01843	GNPDA1	BNIP1	ICAM5	B4GALT2	MAGEA4	PPP1R13L	SLCO5A1	SNX14	NCR3LG1	RCOR2
BASP1-AS1	DIAPH3-AS1	LOC101929621	ZNF208	KDM5C	TCF21	TNFSF9	FZR1	ITGA8	WDR33	TIGD6	MRPL38	LCDR	INKA2-AS1
MIER3	EIF4A2	MRAP-AS1	LOC100505851	TCOF1	PTPN2	CLDN11	SMPD1	CADM4	TPRA1	TRMT1L	ZNF598	SMTNL2	LYPD5
PCDH15	IGFBP5	TEX49	SLC35F3-AS1	HTT	MAP4K2	CFHR2	MSH2	SLC49A3	ASRGL1	GPR63	C12orf75	FOXS1	XAGE3
TNRC6A	ATP5PD	KCNK15	PWRN2	KLF10	PLN	FOXE1	ZFPL1	IZUMO4	DEPTOR	STXBP6	KANSL1	ZNF823	LHFPL1
OTUD7A	BTBD7	C21orf91-OT1	RNF103	ABCF3	ALDH3B2	BAAT	EIF2B4	MUC5AC	NOC4L	SHCBP1L	CHMP4B	ANO4	NHIP
ERVW-1	MAPK8IP2	LOC105373876	EAF2	SRF	PTPRN	CRTAM	BTAF1	ATXN7L1	RNF25	DIAPH3	TBC1D23	TMEM44-AS1	LOC100128653
FGF13	LOC101928817	LOC105375839	CHRNA10	CARS1	FST	CPNE1	CREB3	TACR2	ASB13	CAB39L	PPP1R9B	ID2-AS1	KDF1
FBXL18	CSNK1A1	TSPYL1	ATP8B5P	COL1A2	LYPD3	GLE1	SPON1	C1orf105	POLR3K	ITM2C	MRRF	NAF1	CFAP95-DT
LINC01600	PEX13	FLJ37201	ARMC9	TIAL1	SNAP91	IL11	SERPINA5	TSSK2	ARHGAP15	PTDSS2	TMEM181	TIGD5	ZNF232-AS1
DEPDC4	MESP2	LINC01921	INTS6	USP1	DYRK1B	GUCY1A2	TEAD3	ERN2	CSGALNACT2	SNX27	POGLUT3	VEPH1	MOCS2-DT
COX6B2	NBEAL2	TIE1	CDNF	HSPBP1	SRPX	NFIC	FBXW11	CTRL	ATAT1	ETNPPL	CPNE2	LINC02893	BCL2L15
WDR64	GPR180	SCPEP1	IFT43	KEAP1	PLK3	GLYAT	APLP1	SEPTIN7P11	FBXO5	ANGPTL4	FBXL3	TPRG1	CAPSL
BTBD9	EME2	KIZ-AS1	CHERP	MAP2K2	CENPA	ZNF141	LRP5	UNC93A	TPPP3	TRIM8	SPRYD3	ZNF445	ZNF8-DT
HEATR9	EOLA1-DT	SIAH3	LINC02424	DBI	ADGRB2	CH25H	GPM6A	BCAT1	TRMT11	APOL2	SIN3A	OR51E1	SMIM6
ARHGAP42	SMTN	NBEAP1	FKBP15	PPP3CB	SHROOM2	SPTA1	KYAT3	IRGC	SIRT1	TCF7L1	SFXN4	DEFB123	LEISA1
LINC01101	LINC01138	ITGAD	SLC22A23	SLC35B1	C6orf47	SRD5A2	USP15	RFPL3S	CENPU	LRRC3	NCOA5	CLRN3	LINC01096
MFSD2A	MTMR11	AKT2	ZNF506	DENND2B	RDX	DCC	EMD	LOC105370752	GUF1	TDRD1	RPS19BP1	LINC03013	GATA6-AS1
ATM	HHIP	LINC01153	TTC7B-AS1	AP3S1	MAFG	SEMA3E	HLA-DQB1	CTRB2	GALNT12	COLEC12	RTKN	ASAH2B	SPRR2G
CALHM4	GPR173	VSTM2A-OT1	CARD11-AS1	NOTCH2	CSTA	PMCH	POP7	HRG-AS1	PAK1IP1	SLC25A32	ZNF622	SIX4	SNORA37
ATG9B	LINC01089	SFT2D1	HS1BP3	HDAC5	RAB3A	TGFBR1	NSL1	CT62	MRPL2	PMFBP1	SYAP1	PROSER2	HYKK
CXorf58	MIR124-1HG	QTRT2	ATP10A	LPIN2	CLASRP	LCT	PPT2	CYP2C9	NETO2	SLC2A10	SNHG5	ZNG1B	PAGE5
TFAP2B	MAGEE1	TRHDE-AS1	LINC01704	MBD3	SH3BGR	HCN4	PDZD2	MTMR6	NOC3L	SCRT1	ARHGAP18	ZDHHC22	HERPUD2-AS1
CCDC13	MAGOH-DT	LYRM9	LOC105374928	PCOLCE	SLC22A18	NEU3	CEP250	ATP1A3	MRPL35	PLA2G12A	CRAMP1	TMEM161B-DT	LINC02777
LINC02210	RTN4	SLC25A28	RGS13	COPS2	GPC4	RUSC1	RARRES2	HSPA12A	DCHS1	WNT5B	TTC14	ZNF608	LOC102723692
MRGPRX1	DNAJC7	NEDD9	LOC101927814	IDH3G	ITIH2	SCN9A	RBM4B	FBXL2	ISOC2	APOLD1	PLRG1	A1BG	ABCC6P1
HFE	SIK2	TMPRSS11B	MYH11	HCFC1	FGB	H4C5	NR2F1	NAT1	MAGOHB	TMPRSS5	MRPL14	UQCC5	BTLA
RLN3	SPEN	EDRF1-DT	SERPINE1	TUBGCP2	ITGB4	WT1-AS	RPA3	ELL2	GPATCH3	TEX14	FAM199X	LINC00526	LOC100130744
CSMD1	KDM6B	P4HA3	BABAM2-AS1	DEDD	PFN2	AQP7	DPAGT1	ADAMTS2	NCBP3	SLC25A31	ZFYVE27	CNTN3	LOC101928762
ADAMTS20	HEMK1	LINC02119	EML5	RANBP1	AHDC1	AGXT	RNF139	HOXA2	TMEM177	SLC17A5	SNHG8	ALOX12-AS1	GPR199P
SALL3	UNC13C	MKNK1	ECM2	MBD2	NKRF	LPAR4	POLR2F	TRAF3IP1	TLCD3A	NMRK2	MFSD14A	WIPF3	RBBP8NL

LCAL1	HOMER2	LOC283731	SREK1	H2AZ2	CIB2	MED20	SMYD5	GJA5	PLSCR4	PKD2L1	STRIP1	KANSL1-AS1	ZNF628
SLC17A8	LINC00290	TOR1AIP1	LOC102725116	FXYD3	TFF1	NAT8B	ASH2L	GPR65	NABP2	UNKL	DRAM2	C4orf48	KRBA1
SATB2-AS1	NAP1L1	IL12A-AS1	BLTP3A	ATG9A	GNL3L	CCNT1	NCBP1	MYH6	C9orf40	CHST8	STIM2	ZBTB45	LOC100506563
CFAP57	RAB11B-AS1	HEATR4	EDNRB-AS1	EDC4	VWA5A	NFRKB	AMOT	KLRB1	INTS8	CCAR2	CCDC97	LOC644656	RDH5
C5orf64	RASGRF2	ALG5	LINC01750	ACADM	FGFBP1	CNTN2	PLPP2	LHB	LRRC61	GSN-AS1	MRPL32	C5orf34	RFESD
ADAMTS15	ZNF778	NEXN-AS1	CCDC157	PCLAF	VIPR1	CXCR6	CACNB3	TFF2	RPS6KC1	DENND1C	NEPRO	C12orf60	LOH12CR2
EDARADD	TEX36-AS1	CMTM7	SLC16A1-AS1	ATG5	FOXN3	HSPH1	PLAA	MLLT1	YEATS4	KCNQ4	SMAP2	FRMD3	EPM2AIP1
CYP4Z2P	ARVCF	LINC01527	LOC101928371	PPP2R5D	RAD51	PTH	EXTL2	SPP2	GCC1	HTR3B	PIP4P1	GTF2I-AS1	FBLL1
C18orf15	ITFG1	LINC00996	LINC01792	DLG1	ZBTB48	CCR2	ZNF32	GFRA3	GMIP	TNFSF15	TRAPPC1	ZNF488	NECTIN3-AS1
MUC19	ESRRB	ARHGAP22	DDX50	CRMP1	MAP3K8	C8B	IGF1	ARFIP1	METTL25B	FEZF2	SLC39A10	SHE	ZNF285
NDUFV1-DT	SAXO2	HCG22	LINC01694	CTCF	TRO	SCN4A	CD34	ODF1	ZNF768	NOX3	HAUS1	SPACDR	SYCP2L
AQP4-AS1	LOC105379178	PABPC1	TTC23	PITPNB	FABP7	CRYBA1	RIPK2	FSHB	ZFAND1	INSL5	KNSTRN	ENPP6	VGLL2
CNTNAP4	LINC02575	DLGAP1	MTG2	SPOCK2	ITGA2	RIT2	SUGP1	ARSF	FAM193B	KCNE2	SLC25A29	SLC6A17	LOC102725228
FER1L6-AS1	MROH2A	DNHD1	LINC01012	IRF1	CCNE2	HSD17B3	NDN	CACNG2	CERS4	TMCO6	ZNF511	MIR3682	TMEM132D
CCDC162P	LOC105374809	GOLGA6L2	LOC401442	FADD	CFTR	FGF18	NCDN	NHLH2	CDKN2AIP	KCNMB2	PHF5A	SPSB4	CIB4
AGBL1	ANKRD36BP2	SDAD1-AS1	PRSS59P	CHMP2B	GABRP	CCL25	DLK1	ABO	TMEM106B	UTP14A	COMMD6	LINC01315	CCNT2-AS1
LINC02880	LINC02984	IER5	IRAK3	AIMP1	AKAP10	CST4	INSIG2	H3C11	RAB17	CFAP44	MRPL21	C1orf74	LOC101927263
TERB1	HSPA4L	TMEM132D-AS	LOC101928933	GMFB	CENPE	HS6ST1	NSG1	GPR20	HSPB7	NIPSNAP3B	CC2D1B	TMEM238	IDH1-AS1
MYO1H	LOC105379524	LOC101928708	CLK4	VAMP8	AUH	PRB3	EED	FCGR1BP	EHD3	CHRNA9	RBM27	ENDOV	THAP7-AS1
ASB14	RGS9BP	LINC02433	WASIR2	VAPB	PRIM1	CCDC106	PCYT2	OR1E1	CCDC59	DRICH1	ATOSA	FAM166B	LOC105372637
RPTN	RNASET2	C19orf84	DCAF13	CRIM1	NEB	PHOX2B	CD200	H4C2	ZSCAN32	LINC02809	FBXO32	LCA5	TMED6
LINC00269	LINC00408	LINC01029	TTLL13	GSTM3	ITGAE	MMP16	APOBEC3C	KRTAP5-9	PIP4K2C	PDE11A	MCRIP1	TMEM91	ZNF385C
VSTM4	CLEC2B	RMST	LOC101929528	MCRS1	GPR162	ALDH1A2	MINPP1	RLN2	PYCR3	IL26	CCDC50	CYP4V2	EPIST
STPG4	AIG1	LINC01241	LINC00165	HSPA13	IDUA	RAB27B	EPHB2	FOXC2	NFU1	IL1RAPL2	BORCS7	YJEFN3	CYP2T1P
FAM9B	LOC105370687	FAM217A	NBR1	ARL2	PARG	AKAP4	BMP7	HES2	QRSL1	AMBN	MTERF2	LRRC37A3	UNC5A
FLJ40288	SEPTIN7P9	ING2-DT	MZF1-AS1	CSNK1G2	GEMIN2	CHRND	DCAF7	CEBPE	PCYOX1L	LENEP	TMED8	BEX5	LINC01806
CES5A	VCPIP1	TEX26-AS1	FNTB	CRABP2	ENPP1	GJC2	GTF2F2	GHRH	BRF2	PKD2L2	ARL8A	C9orf152	LOC105372733
CFAP47	URI1	LOC105378052	CYP27C1	FOXM1	ING3	ATP2B3	PNMA2	TSHB	REX1BD	ARHGEF38	C1QC	ERICH3	ADAD2
DCAF8L2	LOC101927468	QKILA	SLC24A4	RANBP9	XRCC4	HGFAC	CYTIP	POU5F1B	HOXC10	CT55	NEURL1B	TIGD2	ZNF433-AS1
DNAH17	ZNF391	ZNF826P	NCOA6	PDK2	SLC22A5	MYCNOS	ACAT2	CMA1	TMPRSS4	VSX1	INO80	LINC00654	DEGS2
SLC35G3	LOC375196	ZNF107	ACBD5	LEPROTL1	SERPINF2	KITLG	ABCB7	H1-5	PNKP	KCNMB3	DNAJC19	SYCN	LOC729683
LINC01931	LOC100506271	ARHGAP26-AS	LRTOMT	ENSA	PIGF	CSRP2	PDLIM3	SLURP1	TMEM168	FAM215A	ZDHHC20	SRRM4	C6orf52
KIRREL3-AS3	EIF1B-AS1	LINC01520	LOC102724382	S100A13	MPDZ	NKX3-2	NXT2	H1-3	ARID3B	A4GNT	PYGO2	LINC00324	CCDC183
TMEM145	SEPTIN7P14	CRACR2A	FANCD2	NRIP1	RARB	CRISP1	GPR37	SERPINB10	TUT1	ANGPT4	TMEM199	TICRR	CFAP95
C15orf32	PWRN1	LINC00112	LRIG2-DT	HTATSF1	AOX1	GLI2	BUB1	H2BC17	MYO5C	GDF2	VPS37A	AARS2	C4orf54
TSGA10IP	MYRFL	TLX1NB	LOC101929007	ADAM10	BCAP29	SLC30A3	PLD2	ADCY10	PAM16	GPR132	PKDCC	UBR3	SSC4D
LINC00477	MYT1	SLC17A1	STXBP5L	TLK1	NCAPH2	TNFRSF11A	ALDH1B1	ARPP19	CUTC	EPN1	MIR100HG	DNAAF3	ZNF311
CCDC140	LOC101928896	LOC645188	LOC100422212	SLC30A9	RWDD3	SLC6A9	TBC1D22A	H2AC16	WDR91	PECR	DOCK7	ATXN7L2	ZNF439
C17orf78	TENT2	LOC105378997	PTPRK-AS1	MECP2	MAMLD1	CACNA2D1	PGF	SSTR5	TTC17	RPA4	GFM2	SPRED3	ARHGEF26-AS1
KSR2	TSEN2	ASTN1	LINC01970	PLOD2	RECQL	HAVCR1	ICE1	SSTR4	COL5A3	MEPE	GATAD2B	KHDC1	NKX2-1-AS1
PAX1	FGFR1OP2	LINC02171	LINC01992	IRF3	PLEKHA6	IMPG1	TMEM47	PTTG2	DNAJC12	PRDM9	ZCRB1	PEG3-AS1	DPEP2NB
TDH	SMIM21	LINC01120	SLC44A3-AS1	ATXN2	PEX12	PAX9	HSF2	FPR3	TRNAU1AP	FBXO24	TSEN15	CNIH2	FAM193B-DT
LINC00615	POM121L12	DPY19L1	LINC02186	EAPP	POM121	EN2	TTR	LILRP2	FHOD3	HHLA1	TP53RK	RAB39B	EPHA2-AS1
SERPINA9	FXYD2	FOSL2-AS1	NSUN3	APPBP2	SNPH	ERN1	CETN3	PCDHGC3	SDHAF3	MLXIPL	RPP25L	PLCXD3	GTPBP10
FBXL21P	C12orf76	RSU1	OPN5	TOPBP1	EFNA4	IAPP	ITGA7	SMR3A	MRPS17	CHST5	SMIM12	UBXN10	C8orf48
MRGPRX4	MCPH1-DT	PCOLCE-AS1	LINC01492	POLR2K	APOB	TTTY14	CYB561D2	TPSD1	PUS7	IL22	COA5	RSPH1	PRH1
A2ML1	LINC00899	SACS-AS1	IQUB	ICAM1	ARHGEF4	KRT75	CHUK	IFNA5	SLC2A8	FGF23	TMEM87B	SAPCD1-AS1	SLC16A12-AS1
CPO	PRRT3	PGD	CLXN	RANBP3	NEFM	HRC	CRY1	FGF3	SLC35E3	CCDC70	ATP5MK	MARCHF4	RNF180
MDS2	FAAP20	SLC25A3P1	LOC105378231	TNFAIP3	LAMA2	HDC	TFPI	AZU1	SPRR3	PRDM13	MPLKIP	LINC02716	TMEM52B
CNOT9	PCARE	HECW1-IT1	LYPD8	CSDE1	PLCD1	ZFP37	KIFC1	KRT36	PLGRKT	HRH4	GPAM	SERTAD4-AS1	CRIM1-DT

GJD3	ZNF366	LINC01917	LINC01398	NRAS	VRK2	ACO1	SLC19A2	TNFRSF21	STAG3L4	CCDC30	PM20D2	PSTK	IQCF6
HOXC12	STOML1	LOC101928626	HNRNPC	RPS19	NPM3	IL18RAP	CCDC93	VPS52	TFPT	PKD1L1-AS1	CDC26	PCAT19	LRRC10B
FERD3L	FILIP1	BCL2L13	INPP5D	TMEM94	ACTC1	SLC18A1	EYA2	ATP8B1	DCAF10	C3orf36	DEDD2	SMIM43	SDCBP2-AS1
LINC00314	MAPK12	LINC00556	PITPNC1	APBB1	USH1C	NLRP3	PTS	SSTR2	FASTKD1	BAIAP2L2	ABHD17C	DPY19L2	TIFAB
DGKB	COTL1	LOC107984974	ADAM18	MANF	UST	CELA2B	FBP1	IVL	MIS18A	PRORY	BRAT1	SGO2	LINC02802
NLRP8	HEATR1	MAOB	NHEG1	ITPR2	FPGT	PI4KA	CCHCR1	COL4A4	TMEM59L	MROH9	NUDCD1	ADAMTS14	RNF151
NLRP9	HCN1	LINC01425	C11orf21	WIPF1	ANG	CC2D1A	AKR1C2	CMKLR2	INAVA	LOC100131532	UBN2	IFI27L1	MIR124-2HG
TAF5	RGL3	ZNF451-AS1	PIGT	ACTL6A	ABCD1	POU3F2	NKX3-1	PHOX2A	PLEKHA4	FUZ	AMOTL1	PDCD7	GSG1L
PCSK6	ERICH1	LOC102723335	BMP1	SLC39A7	NCAN	SLC25A11	SERPINB3	MAGEA6	FASTKD5	CIDEB	CCDC124	PANTR1	C1orf87
JPH1	C6orf89	LINC01703	BCAS4	EFNB2	TRIL	NRAP	IFFO1	GPR3	ETNK1	TARS2	TMEM128	NIPAL4	LRRC2-AS1
NLRP10	LOC101927531	ZNF81	LOC284379	DPM1	SLC6A1	ZFP30	SERPINB9	MNX1	CCDC85C	RMC1	FRMD6	LINC01405	SLITRK1
KRT73	PHKG2	TNRC6C	FAM201B	SDHB	LRRN2	LEP	GM2A	UPK1A	PIDD1	MFSD11	ETFRF1	ZNF561	C3orf80
COX1	OLIG3	AGO2	LOC100132249	FASTK	KRT17	SLC10A2	HLA-DRB4	EPX	RNF121	RNFT1	NUP35	CLVS1	AJM1
KRT74	FAM185A	LINC01732	BMS1P20	RASA1	RNASE4	MFN1	PNPLA4	NHLH1	AP1AR	CHAT	GPANK1	UNC80	CCDC78
LMX1A	LOC105370622	NAV2-IT1	FAM13A	NPC1	PEX11A	VAMP1	MYL2	CYP11B2	CD248	SCT	LRRC58	SSC5D	CLIP1-AS1
GPR101	LMO7	CCDC14	IGF2BP3	GTF2E2	MYL11	AKR1D1	COQ7	ZBTB33	MYO9A	GFRA4	VPS26B	TDRG1	RASGEF1C
ILDR1	LOC100507389	LINC00691	SLC1A3	AXL	GCAT	LILRB1	ACE	H4C9	TPRKB	ERVK3-2	TMEM18	SOWAHA	IQCF2
RBM26	LOC105378589	LOC101929752	IQGAP3	TNFSF10	CAPN5	LTK	NR1D2	CLDN9	OPN3	ZNF155	DYNLL2	TRMT10A	LINC01233
VN1R2	ZNRF2P1	LINC02226	LOC105374325	RBM15B	CDC25C	NIPBL	REG1A	CALCB	MORC4	NBEA	ATE1	SNORC	TPTE2P5
VN1R5	LINC01785	LOC101928850	TDRD3	SNRPD1	DDR2	KCNJ12	MYCN	OSM	SEMA4C	OTOR	SCAF1	LINC00473	RIPPLY2
ND2	LINC00879	LOC101060553	SMARCA4	STK17A	RBBP5	ADGRE1	MFAP5	HOXA1	CORO7	SCMH1	DOCK8	CALHM5	MAP3K5-AS1
TAAR8	KRTAP19-1	LOC105372969	TP53BP1	OXSR1	PTPN4	LY6G6C	ECI1	COL4A3	REPIN1	TPK1	PCED1A	LINC00461	LINC01943
TAS2R39	KY	LOC105376100	LINC02099	NUDT21	CD58	PRKG1	TMEM131L	H2AC15	THNSL2	SCYL2	RELCH	CFAP206	LOC102724323
TAS2R38	LINC00515	ANKRD28	ABCA4	TMEM63A	KHK	ZNF667	CHRDL1	H3C12	ZNF668	C1orf56	OAF	TMEM225B	LOC105370997
TAS2R40	YPEL2	TXNRD1	ZFP69	DUSP11	ITGB3BP	MAPK6	ADAM19	DRD1	PIGN	DCAKD	SCRN2	LINC01504	FUT8-AS1
TAS2R41	VASH1	NID1	LOC105370697	CCNB2	ZSCAN9	SULT1A2	SEPT5-GP1BI	MYO1C	ZNHIT2	ASIC4	PPP4R2	NEURL2	EFCAB13-DT
TMEM171	HEXA	LINC01254	LRRC63	UMPS	ZNF324	ZNF225	TRIP11	NEAT1	METRN	COQ3	ANAPC7	MYOM3	FBXO43
VN1R4	LRRN4CL	EYA4	C3orf38	BET1	SPINK5	ZNF223	KHDRBS3	WDR43	HPS6	TRMT61B	ACAP3	RALY-AS1	TEX29
TAS2R50	TBC1D31	LINC01538	ARSK	EFNB1	DNALI1	PFDN5	DBP	SPRYD7	SRBD1	ANKRD2	MOB3A	SYNGAP1	LINC01561
CD8B	LOC400622	LINC01209	MGAT4A	PRORP	SMAD5	ALPK1	JAG2	USP19	RABEP2	FAM135A	PHF19	SYNPR	IQCF4P
MACROD2	LINC00606	SLC22A25	PPARGC1A	PTPN1	PLS1	HTR2A	KLK10	MUC3B	C1orf35	STMN4	SMIM19	LINC01816	ATP6V1FNB
DDAH1	TRAPPC12	LINC01091	CYSRT1	IGFBP2	MAP3K14	ARR3	GRIA1	CLK1	ATAD3A	HMGN5	TMEM54	LOC730098	H1-7
ATP6	LINC00928	LINC00616	SOGA3	FOXO1	PSPH	PHF2	CD69	MINDY2	ANKRD49	B3GNT4	TRAPPC6B	METTL21C	CFAP210
COX2	ARHGAP22-IT1	TBC1D22A-AS1	GRAMD4	POLR2A	CA9	KCNJ3	NPAT	RIF1	MOSPD3	GSG1	ZCCHC9	COPB2-DT	LOC105373225
EFNA2	LOC105376166	JAKMIP2-AS1	LZTS1	LTBP1	PCMT1	CITED1	KRT16	MAN2B2	HGH1	PITPNM3	ZBTB21	C9orf50	LOC100506790
ND6	LINC03032	LOC101929488	LOC105374240	TRIP10	NMB	MSTN	PHLDA2	CCNB1	TMEM184C	EMC6	RPL22L1	GSX2	C4orf47
SREK1IP1	LRRC52	ADGRF5-AS1	CFAP99	PHKB	RELB	KRT32	DCLRE1A	GATC	YIPF2	KIF18A	EEF2K	CCDC138	LRRC34
THRSP	LOC105378577	AHI1-DT	GRIA4	PRKACB	IL6	DLX2	H2BC12	BMP2K	PXMP2	CSRNP2	SHROOM3	ADAMTS10	LINC03006
FBXL19-AS1	LINC01365	BRPF3-AS1	CHM	PIK3R3	ACVR1B	CDH12	SFTPB	LINC01963	CTPS2	SF3B5	VMA21	XKRX	EVPLL
POLE4	COL1A1	LOC112268140	MYO3A	SLC20A2	TGFBRAP1	SLC18A3	IL33	CDC42EP4	ANKHD1	DCSTAMP	INAFM2	FGF14-AS2	HACD4
BCRP3	LOC105374989	ADARB2-AS1	CXCL2	USP8	RIN1	ADCYAP1R1	UCK2	NOTCH2NLA	AMDHD2	SGPP1	RWDD4	MIR497HG	FAM3D-AS1
TAL2	LINC00605	DHX35	PRCP	TFIP11	ACAP1	DIO3	NHERF2	SBSPON	SHQ1	SH3BGRL3	MZT1	NKX1-2	MNX1-AS1
INSL3	LINC01210	GYPE	SCART1	SLC7A8	RNF2	APOBEC1	DNASE2	POLR1F	NSD1	IL21	MRPL50	GLDN	CCER1
SYCP3	LOC105372394	LINC02544	LRRC74B	GPC1	APOH	CRTC1	CRADD	POLR2J3	ZNF839	C1orf21	DPH7	SMTNL1	TRIM63
TMIE	PLEKHG7	VPS35	PKIA-AS1	NELFB	TIMM8A	IL12A	AP4M1	PLCH1	ZNF576	RNF208	TMEM129	SCGB3A1	ODAPH
MUCL1	DLG1-AS1	DEFB108B	ZNF93	RFXANK	POLR3F	KIAA0087	SOX10	PLAC4	IPPK	LMAN2L	SH3RF1	LOC101928230	LINC00582
ATL2	LINC00692	TTTY7	C8orf74	ROCK2	GALK2	CACNA1B	HOXB13	ZNF468	ARMC7	SYNC	FBXO25	WDR35-DT	DPP3-DT
LINC00189	KIAA2012-AS1	LOC442028	FMNL1	CASP3	HGD	ZBTB18	CDH17	ZNF423	MYBBP1A	HOXB8	NRM	DUSP15	LOC105371046
KLHL35	ACSF3	KLHL8	DAB1-AS1	FBN1	EHHADH	HMMR	CDC42EP2	ATP6V1G2	TIGAR	GDAP1	CCDC43	C5orf63	EMC3-AS1
ZNF354B	TRIM50	LDLRAD4	GRIN2C	FOSB	DEPDC5	GNGT1	ZC3H13	RRP15	RCN3	ST8SIA2	SAAL1	GALNT16	SMAD3-DT

FOXC1	LYRM4-AS1	LINC02225	LOC100134368	SFSWAP	SURF2	CD101	SPHK2	NAAA	ASAP3	MZB1	IFFO2	ZNF879	CATSPERD
TRIM42	ENTPD3-AS1	LINC01360	PIK3C3	DNTTIP2	ESR1	CDH11	ADGRL3	HSPB6	ORC6	DLX6	SPRYD4	FOXD3-AS1	CEP83-DT
FSIP1	FAM229A	LOC101928961	LINC01588	ZMYM2	PDGFRL	GPC5	ADRA2A	TOX3	BCAN	PTCH2	SLAIN1	LINC02606	LSMEM2
FAM98B	HHIPL1	LINC00485	ZNF891	UBE2S	RBMS2	ADIPOQ	APBA2	N4BP3	HSD17B14	DEF6	ALG2	LINC02532	LSAMP-AS1
EFCAB13	NDUFAF6	LINC02179	BIVM	OXCT1	RPH3A	FRK	PKP3	SHANK1	IL20RA	CIDEA	PAG1	CNN3-DT	ENO1-AS1
GARIN3	PVR	ANKRD30BP3	CROCCP2	INPP5K	PAFAH2	TLX1	SELPLG	MAP3K1	DCUN1D2	TECTA	CIPC	PHOSPHO2	IL34
SLC9B1	NAV2	XCR1	RNF187	MAPKAPK3	SLC16A4	GABRA6	RHOD	DDN	LSM8	GPRC5D	ALKBH2	TBX15	FAM230C
TMCO5A	DPY19L4	LINC02431	LINC01300	CLDN7	KIF20B	SLC10A1	MYL1	CDK18	WDCP	SLC22A8	EBLN3P	RBAKDN	SYNDIG1L
XKR6	LINC00901	LOC283387	MFAP3L	LPCAT3	SOD3	BPTF	SEC31B	EIF4A1	THG1L	VWA7	CCDC117	ZNF469	ZNF347
TSGA13	SHISA9	LOC101929657	RGS20	INPP1	CXCL13	JAK3	SPC25	PLXDC2	ZNF232	KLF15	SAMD1	PLEKHG4B	LAMTOR5-AS1
SYNE3	DRP2	PEX2	LINC01834	SYNPO	SLC13A3	ZZEF1	FUT4	TRIM56	TTI2	PCDHB1	UBE2E2	BTBD17	ACTR3-AS1
CCDC141	SNAP25	TMEM105	LOC105371622	SACM1L	PARD6A	ISLR	SLIT2	LOC100294145	PRR15L	UGT1A8	NCBP2AS2	ITGB8-AS1	LOC105379807
HDX	CASC2	LOC102724612	TRIM24	CLPP	DOP1B	DNASE1L2	ITSN2	FAAP24	C2orf42	GPR27	COL12A1	FAXC	LINC00244
CDYL2	PAX7	LINC01581	GPBP1L1	PRKACA	PER2	AGRP	C3AR1	UNC13A	SAP30L	KCNIP1	LRATD1	SEPTIN7-DT	UVRAG-DT
C18orf54	LINC02724	DNM1P35	LINC00857	DHPS	ZNF174	ICAM4	TGFB2	IQSEC2	TRMT13	FRS2	POLR3H	SLC20A1-DT	LOC101928263
SYT14	SLC7A14	LL22NC03-63E9	PTPRG	ABCC1	AMPH	CNTN6	SLC25A16	BRINP2	OXSM	FGF14	NAA30	SLC45A1	BPIFA2
CDC20B	LINC01553	LINC02421	CNKSR3	DBN1	NR3C2	TNIP1	H2BC5	ZNF204P	ADGRL4	LYRM2	LRWD1	MYLK-AS1	LINC01913
TECTB	RHOQ-AS1	LINC02577	LINC00488	INTS3	KCNH2	ZIC3	AP5Z1	SLC38A6	MFF	GLP2R	CTHRC1	TMEM52	LOC101928214
VWA3A	TTC6	LOC286083	STRA6	STAMBP	LIF	SLC22A1	DHTKD1	PWAR5	RBP4	PCDHB6	FAM83D	RTKN2	LOC646903
HUS1B	FTCDNL1	LINC01516	SLC5A9	HEXIM1	LCP2	NR1I2	TP53TG1	SFT2D2	AMBRA1	NEUROD4	EPB41L4A-AS1	DSCR9	RIIAD1
NPB	GTF3C2-AS1	RAPGEF5	PAPLN-AS1	AHR	CDK20	FSCN2	OCLN	TOM1L2	RASL11B	PCDHB8	C8orf76	INSYN1	SCARNA2
CCDC34	LINC01016	HOXC-AS3	POLH-AS1	ELOC	GTPBP1	RBMXL2	MSC	GPC1-AS1	DUSP26	BCL2L10	ARL6IP6	OIT3	CCDC83
ENAH	WNT4	GRK3	GLI3	SLC25A4	GAD1	CETN1	IKBKG	TET1	TEFM	NPVF	STK11IP	PIWIL4	FBN1-DT
STK35	MZF1	DOCK5	LOC105375172	SPINT1	GLRB	GABRA3	ATP2C1	DOT1L	PBK	ULBP1	RPTOR	LINC02901	NEK5
LRRIQ3	NR2F1-AS1	LINC01613	EMSY	VAMP7	PIGA	USP2	TM4SF4	PIWIL1	DBR1	TAS2R1	LNPK	SHISA2	LOC105369199
KLC4	GPRIN3	LEMD1-AS1	CCP110	SLC37A4	LRP8	SLC9A3	TADA2A	ZNF37A	ADAP1	KCNK13	MRPL55	CELF5	LNCARSR
TIPRL	LINC02175	LINC00536	LOC100129098	GPX2	URB2	SPINK4	PARP3	KAT8	PODXL2	CLDN17	SYNPO2	CEACAM19	MRPL45P2
ITGB1	FAM216B	MIR4290HG	ALCAM	GCC2	FYB1	TNFSF8	RIPK1	FAM149A	DNAAF2	OR52A1	CCDC167	LOC145474	HOXB-AS1
VKORC1L1	PRPSAP1	LINC01692	ZFYVE28	AGT	TFAP2C	F9	MAGEA3	CTXND1	RASL12	CTLA4	PSMA3-AS1	ATXN1-AS1	LOC101927668
FBXL14	MIR194-2HG	LOC105370941	LRRC59	FUCA1	CDC14A	ZFP69B	VEGFC	ZNF780B	FSD1	BMP15	PLEKHH1	HSPB9	CCDC196
PPIL6	ZNF606-AS1	LINC02347	LINC02525	TAF15	BMP2	ART4	MAP2K7	ZNF8	ZNF236	FOXP3	KLHL42	ARHGEF39	PHKA1-AS1
ARK2N	PRCD	WARS2	HERPUD1	OGFR	CKMT2	F2RL3	FAP	CEACAM21	MYO15B	ATOH1	ZNF513	SHC4	ZFY-AS1
METTL6	LINC00671	LINC01069	TET2	GRK6	OGG1	PLA2G10	CAMK2B	KCNMA1	SLC41A3	ADAM29	KLHDC8B	FAM182A	NEK10
SGO1	GOLGA8IP	TAB2	CSGALNACT1	AAGAB	IGFBP1	AANAT	NPPA	ZNF484	MAIP1	LY6G6E	RNA45SN5	LINC01341	GPHA2
ZNF569	GUSBP1	MAGI1-IT1	MGC15885	RYK	KCNJ8	H2BC15	HGF	SLITRK5	BRIX1	OR10C1	RCSD1	ZNF597	FAM238B
CCSAP	LOC101928343	LINC01568	MEIS3	SLC16A3	FGL1	RFPL2	NCAM1	LRCH1	DACT1	CDX4	COG6	PARD3-DT	C10orf71-AS1
DUSP18	LINC00856	LOC100422781	SUGCT-AS1	DENND4B	FBXO46	PRKACG	NFKBIL1	SMG6	TIMM22	MPIG6B	RSPRY1	LOC100505942	KCNQ1OT1
CHRM3	MIR3150BHG	LINC02355	ARFGEF1-DT	PER1	DDC	KLRA1P	CSDC2	RBM34	FKBPL	OR11A1	COX14	PRDM15	LRRC71
LINC00525	TASOR2	STRC	AGO4	DNAJB12	SNTB2	CDK16	NRXN2	OTULINL	FBXL6	OR12D2	SLC27A4	ACSM2A	IGSF11-AS1
FAM218A	LINC00930	LINC01654	FLG2	CDC20	PSCA	LHCGR	ASCL1	SUSD5	BIN2	OR10J1	UBE2F	XRRA1	SLC5A11
RHEBL1	LOC105371967	GABRB3	LINC00682	CYTH1	APC2	LINC01587	ZNF268	TMPRSS6	WDR70	CHRM5	REEP3	MCPH1-AS1	LOC100505978
AMER2	CNTFR-AS1	LOC101927450	CLDN4	DDIT4	EIF2S3	CALM2	GABBR2	ACTL8	SEMA4G	NPPC	AGAP3	MORC2-AS1	MEIOB
ZNF644	PAXBP1-AS1	LOC339975	PTRH1	NIT1	MTF1	ZFY	ABCB1	SPATA2L	SCG3	HTR1A	LIX1L	WWC2-AS2	KCNIP2-AS1
TBC1D32	FAM83C	LINC00242	PAFAH1B2	UNC13B	PHYHIP	KCNA4	PIGO	PPFIA4	SCUBE2	MCHR1	MRPL54	LINC00844	LINC03031
B4GALNT3	KRBOX1-AS1	DSG4	SAMD5	EPHB4	ACVR2A	SIX6	GATA6	APOBEC3F	GTF3C4	CHRNG	FAM229B	SLC7A3	LINC03043
LRRC43	GRASLND	ERVMER61-1	CCDC198	E2F1	SNX4	MEP1B	OLR1	SCAI	TWSG1	P2RX2	TBRG1	LRRC46	KCNU1
CEP89	POLR3B	ATP13A5	TUSC8	CTSS	MN1	INE1	GPD2	THAP9-AS1	SRR	CHRM4	MMAB	ACMSD	TCTE1
AK7	RAP2A	DNASE1L3	ZNF782	LSM5	REEP2	SLC15A1	SLC25A1	BRSK2	RAB8B	GDNF	DAGLB	TSACC	AKAP14
ZFC3H1	DLEU2	LINC01416	PGM2L1	NBN	RCE1	EPO	HPX	BICDL1	HSPA14	GHSR	EPC2	DUOXA2	DNAJB8
IRAK2	ZNF497-AS1	LOC105378311	CAPZA2	FAM20B	S100A1	DSCR4	MAP2	FNBP1L	JAM2	OMP	HENMT1	LAMB2P1	TGM7

ICMT-DT	LPP-AS2	LOC101927166	FHIP1A	MOB4	SRP19	ANKRD40CL	CALML3	ZNF528	SLC39A4	HTR5A	NCEH1	OVOL1-AS1	PRORSD1P
OTOGL	TIPARP-AS1	NUDT16-DT	ZNF876P	ANK2	DCT	CNGA3	CCNO	AKIRIN1	ETAA1	GPR25	LRATD2	IL10RB-DT	ZNF473CR
MGC16025	LOC101927314	LINC01204	LHX8	PLAGL2	EHD2	APOF	PCGF1	LINC01140	NARS2	GRID2	VASN	TMEM102	SYCE2
SPATA25	ALDH1L2	LOC101927690	FRMD5	PIN1	SULT1C2	VEZT	UBE2E3	ZNF280B	MRPS22	MLNR	TRIM47	ICA1-AS1	ZNF829
GLIS3-AS1	LOC105377782	LMNTD2-AS1	TTC3	PHF1	CSPG5	ABI2	CARD10	FRMPD4	RBKS	NKX6-1	STEAP2	LINC03064	LOC105370638
IQCG	LOC100132078	TXLNA	LINC02249	SUCLA2	BARD1	CD300C	ORC3	PGBD5	CACFD1	MOS	TYSND1	LRFN5	LINC02492
MCM9	CEP290	ADGB-DT	LINC02987	YES1	ST3GAL2	CDR1	IDO1	EEF1AKMT2	ZNF408	NEU2	SLC35B4	IGSF10	C1QTNF1-AS1
PRR14L	ATP11A-AS1	ZNF660	SNX22	SOX9	TMSB15A	VCX2	NOS2	LRRC40	TMEM100	ZNF717	GZF1	PKHD1L1	ENKUR
AJUBA	PHACTR2-AS1	NRP1	LOC101928401	ZMPSTE24	GNA15	MYOG	SLC12A5	MINAR1	EGLN3	TNFSF18	NAA25	EXOC3L4	PRR30
KLHL32	TCTN1	LINC00540	FNDC3B	ETFB	GGCX	BIN3-IT1	PGM3	LRRC42	PHACTR4	FGF16	AEBP2	SLITRK4	RBMS3-AS3
DCBLD1	BLCAP	LOC105376081	LOC100130872	FPGS	SERPINI1	MMP25	CTSZ	SPICE1	DNAJB14	OR1G1	MGME1	STX1B	ZP1
SLAMF9	MEX3C	LOC100505716	LILRB4	BTBD3	ACADSB	PLXNA2	NAPG	ADTRP	PIGV	FGF17	TPRN	XKR4	LINC00993
GOLGA4-AS1	TPTE2P2	MIR2052HG	LOC105377399	CRYZ	AGTR1	MAPK7	RAPGEF3	DPY19L1P1	ZNF654	RBPJL	PTPMT1	ATP2A1-AS1	LINC01539
UBE2U	ARHGEF33	PACRG-AS1	SVIL	ADAM12	GRIA2	AGTR2	HAUS3	NRIP2	C10orf88	NMUR1	CASTOR2	BBS5	LOC102724929
METTL27	LAYN	C12orf42	LOC100996681	UBE2C	AKAP6	SCNN1G	TSHR	N4BP2L2-IT2	GIMAP4	UCP1	LOC728743	RTN4RL1	LOC101928462
LINC00638	NPHP3-AS1	LINC01777	YAE1-DT	HCLS1	PFDN4	F7	RND1	TTC22	OGFOD2	OR3A2	IAH1	MIR210HG	TTC36
RASGEF1B	SORCS1	LOC102723701	FLVCR2	PTPN9	BBOX1	EFNA5	SMG1	RC3H1	THUMPD2	NPFFR1	MRPL20-AS1	SMLR1	LINC01697
KCNJ5-AS1	NT5DC2	LINC02097	LINC00463	MMUT	ACOX2	SGCG	MAPK13	MCF2L2	FLRT3	OR1A1	NKIRAS1	LCN12	OSTM1-AS1
C21orf58	PRMT5-AS1	STAU2-AS1	PTPN18	KIF13B	HOXB6	ZNF45	UPK1B	DNM1	IL17RB	PLA2G2E	EIF4E3	HSF5	ACTRT2
STOML3	APCDD1L-DT	KIAA1755	ESR2	GSTA4	SH2B2	TCF15	CCL19	RAG2	SPHK1	TAS2R14	CHASERR	FAM210A	ZNF529-AS1
SILC1	LOC101928335	EPHA6	GDA	RHOBTB3	FAM131B	HTR2C	CTSV	ZNF550	ELP5	TAS2R4	NDUFAF8	NWD2	ELOVL2-AS1
FAM227B	ZNF577	LINC01505	HIRA	CREBZF	PLAG1	SLCO1A2	CELA3A	PIK3C2G	INTS15	TAAR3P	TMEM64	RNF157-AS1	APRG1
DTD2	ZNF474	LINC01845	LINC02861	HLTF	MDFI	DOC2B	AGER	DPY19L2P2	RNF128	TAAR2	PCDH18	LINC00886	PDE11A-AS1
SOX3	LINC01898	LINC00880	AADACP1	BAG5	ACHE	PHKG1	SEMA7A	SKIC8	ZNF350	TAS2R13	BTF3L4	LINC01088	PSMD7-DT
C3orf49	ALMS1-IT1	ARAP2	EREG	ARNT2	CBR3	KIR3DL2	ANXA9	FRG1CP	GLTP	TAS2R7	RIMKLB	PRAC1	LINC02619
NKX2-3	GIT2	CLMAT3	KANK2	RGS1	PDZK1	CD226	HR	IGSF9B	ETNK2	TAS2R10	MIDEAS	RFX5-AS1	FGF14-IT1
CIP2A	LOC101928651	LINC01242	LINC01134	STARD3	LRRC17	HAS1	ARC	LINC01949	CHAC1	TAS2R8	HID1	FAAH2	TPBGL
FAM222A-AS1	LRRC77P	PDXP-DT	IQCH	ILVBL	CFD	CASQ2	MAGOH	KRT86	TRIM62	OR1F1	CPSF2	LINC01119	CYP4Z1
TLE6	PTPRT-AS1	CIBAR1-DT	LCN8	LOXL2	ZBTB20	CDK13	PARD3	PMS2P4	CCNK	INSL6	TMEM41A	ADCY4	LOC105369746
TCEANC	CFLAR-AS1	VPS13C-DT	GMNC	STMN2	MDM2	STAU1	IGFBP3	NUP54	TSPAN12	IL36A	MOB1B	C19orf81	LOC105370027
RTP1	KCNK10	MED15P9	LOC100128079	AMOTL2	TNNC2	DSC1	ABCA2	IGLV3-25	PDCD5	GJD2	CTTNBP2NL	LOC389765	RSPO4
PRR35	PAPOLG	MARCHF10-DT	NMNAT1	MEF2D	CHEK1	MAGEA1	CLCA1	SNORA21	CAAP1	PCDHB12	KIF21A	FAM163B	TEX43
NXPE1	GAS1RR	MCHR2-AS1	ZNF736	LYPLA1	MRE11	BTC	RPL39L	CERNA1	OGDHL	OR2S2	CABLES2	TMEM61	MSANTD1
APOBEC3D	SERPINB6	LINC01148	SOX5	BCAM	SMAD3	ALOX15	SH2D1A	ZNF273	MSRA	PCDHB3	ISCA2	MARCHF10	SMIM32
LINC00315	CASC22	LINC02753	EEPD1	STAT5A	DCLK1	MMP8	SPAG1	EMX1	C1GALT1C1	HOXD12	OMA1	CST9L	NLRP7
COL6A5	KCP	LOC105375483	F2R	IMPA1	WAS	PZP	B3GALT2	SLC8A2	NIN	VN1R1	SWI5	SLC51B	ZFPM1
PGAM5	ANHX	LOC101928618	KIRREL3-AS2	SGSM3	AGPS	CENPF	PRM2	LFNG	KCNMB4	KCNAB3	VANGL2	KRTDAP	CCDC152
C4orf45	ZDHHC14	LOC101928551	DACT2	SSX2IP	PRSS2	TFRC	BANF1	TNN	THAP1	DEFB126	NAPEPLD	PDE4DIPP6	LOC102724938
CCDC149	LINC02838	LINC02493	LRRN1	C5orf15	HSD11B1	NMBR	TM7SF2	LINC00667	OLA1	PLA2G2F	SELENOM	CT75	IL22RA2
B3GALT5-AS1	OR2H1	LINC01924	LUARIS	NAA10	SEMA5A	ATP5ME	EFNA3	TRPC2	CENPQ	MED16	ARHGAP31	PRAC2	LOC105370829
SPIC	LINC00486	DTD1-AS1	FOXR2	MVD	SPA17	CTAG2	CCL11	ZNF749	PCOLCE2	ADAMTS12	B3GNT9	STAC3	SLC5A8
VPS13B	ESPNL	NCKAP5-AS1	PP12613	CYBA	FOSL2	CNGB1	INHA	PGAP2	ZDHHC13	OR51E2	BPIFB1	BCAR4	NAV2-AS2
P2RY10	TTC23L	CPEB2-DT	CDH22	FH	ATP2B4	LYZL6	ANXA10	LINC02172	WDR44	OR3A3	PAXX	ZNF497	PRSS58
IGSF22	LINC02028	LINC02060	LINC01876	RPL27A	MPPED2	ERCC6	PLA2G4A	ZNF529	ECHDC3	CCNL2	FCSK	LINC00673	FAS-AS1
ZBTB3	LINC02239	LINC01706	XYLB	PIAS3	ARHGAP44	VAMP4	ART3	MICOS10P1	TRMT12	TBL1XR1	TMEM218	NIM1K	LINC00708
TPH1	FAM201A	CASC6	COX10	MTSS1	DAG1	SH2D2A	ERCC4	RUNDC3B	OBI1	TEX13A	PPM1M	SLC36A4	LINC00644
DCST1	LEXM	CCDC144BP	FMO5	NDUFS1	GPR183	HMX1	TEF	LUZP2	PDGFD	RNF146	RNF145	ZNF883	TBC1D8-AS1
WDFY4	LINC01990	LINC00560	CSMD2-AS1	STK10	PEX7	SLC1A7	C6	SEMA3D	FBXO2	OR12D3	RPUSD1	DLX6-AS1	LINC02582
GPR26	LOC100507250	LOC105377938	SZT2	BAHD1	SLC22A3	GALNT10	GCFC2	EFR3B	KIF15	FGF21	FLYWCH2	LINC01896	LOC105370478
KIAA0825	MIR4300HG	NPSR1-AS1	LOC101928052	TCTA	AP1B1	CAMKK2	TRIM15	BTBD18	AK5	SLIRP	LZIC	KIAA1328	ZC2HC1B

CSNK1G2-AS1	LOC105371401	DGAT2-DT	SEC24B-AS1	PRDM2	TBKBP1	NTSR1	KCNJ13	PELP1	C22orf46P	HYI	ZDHHC12	DNAJC21	LMX1A-AS2
KLHL34	GAB1	LINC01192	RBSN	PAPSS2	ZNF354A	HBP1	CORT	ZNF37BP	SYNDIG1	CDCA3	MRFAP1	BEND4	LOC105375547
ZSCAN10	RNF212	LOC105370832	LINC01812	FOXK2	CALB2	SLC30A4	GABPA	KIAA1614	CEP76	MRPS15	FNDC5	CCDC110	SEC1P
SAMD3	WASHC1	CTU2	ASZ1	CAV1	BMP5	RS1	HSPA1L	GGCT	ZBTB10	TEX12	ZC3H18	PCSK4	LINC02314
GOT1L1	UBAC2-AS1	BARX1-DT	MROH2B	PDHX	OVGP1	TEX28	PLP1	SPG21	POLI	RBBP9	PTAR1	LNCOC1	C1orf100
LINC02870	KCNQ3	LOC101927310	EYA1	SV2A	ZNF211	USP34	B3GALT4	PRSS3P2	MED31	MC3R	ZNF385A	ASPDH	LINC02546
RBM48	LINC00665	LINC02864	LINC01653	SEMA3B	NPY1R	KCNS1	HSP90AA1	ADGRV1	MYO19	PRLH	ZNF436	DHRS7C	KCNH7-AS1
LINC00504	YEATS2	LINC01649	LINC01477	MYO1E	OCEL1	ATP12A	CMC4	STOML2	PALS1	TAS2R16	TIFA	ZNF233	PSMD14-DT
ZNF99	BTBD19	LINC01566	TBC1D26	SMAD2	SNAPC1	HTR1D	FZD2	EXOC6B	IL18BP	OR1A2	TTC8	TRABD2B	GABRG3-AS1
CFAP65	HOTAIRM1	LINC02047	LOC101928940	CUL2	MAP3K12	IBSP	CHRNA3	IHH	ELAC1	ADAM30	ZFP90	TAFA1	FHL1P1
SIGLECL1	TAX1BP3	LINC01514	LINC00276	CTNNBIP1	HOXB2	ENTPD2	CSF2	ZNF428	B3GNT2	GLT8D2	BROX	TTLL6	LINC00518
LDHAL6A	OVAAL	LINC02405	LINC02395	THBS2	HPCA	HOXD10	GRM4	GK2	GPRC5C	TEX15	FAM83H	HAGLROS	LOC105374621
MRGPRX2	ZSCAN16-AS1	LOC101927164	LOC101928526	TGFB1	CD3E	PLSCR2	IRX5	ACSM1	C1orf159	PCDHB13	REXO1	MICA-AS1	PPP1R36
NTN5	DICER1-AS1	PLCH1-AS1	LRRC37A7P	KIF2A	ILRUN	VENTX	ABCC8	BEX4	LRRC49	OR2W1	HEIH	MAILR	LINC01815
KLF17	HGSNAT	DACT3-AS1	KCNMA1-AS1	FBLN5	MC1R	PPP1R2C	WNT7A	ZNRF4	CLN8	TMEM14B	SNHG11	LOC100288123	MIR663AHG
CCDC105	LOC100505782	LOC101928273	LOC105376292	MTIF2	NPAS2	ALOX12B	MADD	OR7E24	CASD1	TAS2R3	STK36	C2orf92	BRINP3-DT
CCDC122	TFAP2A-AS1	OGFRP1	LOC101927131	CDYL	RAB35	RHBDL1	KCNK2	ABCA12	CDC37L1	BTNL2	ZFAND2B	LINC03040	LINC02221
C11orf42	ITGBL1	FZD4-DT	LYPD4	MGAT2	HPCAL1	TFDP3	CRISP2	GTF2H2B	SLC29A3	OR2C1	USP42	SEPTIN12	LOC105377323
DKFZp434L192	RBM25	EPN2-AS1	LINC01149	CSF1R	SCNN1B	CYP7B1	KCNF1	PRPS1L1	BOLA1	KLK15	TBC1D25	LOC100286922	TEX51
ZNF486	OOSP2	FGD5-AS1	CNTNAP2-AS1	DNM1L	HS3ST1	UGT2B15	GPR35	FAM182B	NUDT15	OR1D2	WDR36	IGDCC3	LINC02283
EXD1	KIF5C	LOC101928012	IQCM	GPRC5A	IRF5	HCRTR2	POU5F1P3	WDTC1	NHLRC2	OR6A2	TUBE1	EMX2OS	C12orf54
SLF2	MAMSTR	MYOCD-AS1	LOC101929116	UBE2M	KLK11	BTN1A1	TRIM33	ANKRD10-IT1	KLHL26	MC4R	UPRT	LITAFD	LOC100507513
NBPF4	ANXA8	LINC00970	LRRD1	PTK2B	PPP1R1A	ALG3	RGS6	DIRAS3	PGGHG	GPR32	VARS2	TEX38	ZNF705G
ZNF663P	HAR1A	LOC105378419	SETBP1-DT	NELFA	PLAU	HOXD13	CYP2B7P	ETV2	TRPM4	IL37	ANKRD13D	GLTPD2	LOC100507562
LINC00955	LMTK3	PRKG1-AS1	LINC02042	TP53BP2	UGP2	BFSP2	MAGEA8	HYMAI	MTERF3	MYL12B	ARHGAP30	SH2D5	RGS7BP
LOC162137	ZSCAN30	LOC101927948	ST8SIA1	RB1	ADORA1	NPY5R	ZFAND5	LAMB4	CAMKV	BNIP3L	SMIM26	LINC00967	RRS1-DT
C10orf126	VPS53	LINC02530	LOC100288590	SEC61B	SNX15	PROX1	AP4S1	PYGO1	NAP1L2	TOB2	MCEE	CATSPER3	TP53TG3HP
PIKFYVE	ZNF561-AS1	LINC01098	STK4	PICALM	RYR1	ZNF132	NAT8	SORCS3	KLF2	KPNA3	TMEM150A	C9orf131	LINC01010
LINC02907	INTS6-AS1	LOC101928491	LOC101929372	TBP	VGLL1	HTR1E	MAGEA10	KHDRBS2	IFT81	DENR	TADA2B	LOC105374953	PRR9
SHOC1	EEF1A1	LINC02043	ATRNL1	RABAC1	GZMA	CYP7A1	REM1	AGPAT1	DPM3	TMEM222	C1orf131	LINC03026	LOC101929341
SLC22A24	GABRB2	LINC02199	PDE9A-AS1	HAT1	GJB3	SLC22A14	XDH	HLA-DQB2	ZNF322	MED17	PTRHD1	C6orf118	BGLT3
FMO9P	CHADL	LINC02620	LINC02071	AP3B1	ZNF821	LECT2	MAB21L2	C14orf93	GAREM1	ZMIZ2	CLEC14A	FAM181B	SCGB2B2
C7orf33	TMEM198B	LOC101928475	LINC02510	SPAG5	KIAA0408	SCN5A	IFT20	CTAGE9	ZNF358	BHLHE41	SNX30	SPATA8	LINC03074
ELMOD2	PLD1	SLC25A53	STRN	NECTIN2	ZNF175	PLA2R1	LILRA4	DTNB-AS1	SERTAD3	C11orf68	AMN1	SLC35G1	LINC01364
ACER1	FAM111B	RCBTB2	LOC101928748	MAP1A	GHR	NFATC3	TNFSF13	ACVR2B-AS1	ADAT1	EIF4EBP1	ZNRF2	PALM3	HDAC4-AS1
TAAR1	ZNRD2-DT	LINC02763	LOC101928107	MRPL40	SRPX2	DDO	FLT4	ERV9-1	SLAMF8	ERLIN2	SVIP	ARX	SLC25A47
OSTCP1	LINC00632	LOC101928326	ZNF236-DT	PAK4	C5	RAC2	YWHAE	LTN1	GRHL2	PRPF18	POC1B	LINC02749	LOC100505711
LINC00305	ATP13A4	MIR548XHG	LINC01585	SETDB1	PDE10A	COLEC10	RBP3	PHF7	PRR11	GRWD1	ZBTB2	ZRANB2-AS1	HORMAD2
BFSP2-AS1	TMEM17	LINC02549	LOC101927798	AKAP11	PTPN14	CA5A	C8G	TSC2	ESRP2	ABHD6	ELMOD3	FGF7P3	PLAC8L1
STK32A	DDX11-AS1	DPP10-AS3	DYNC1I1	GLS	BTK	ADAM20	CD1A	ERICH2-DT	NEIL1	MIS12	MED19	LOC100505774	SCP2D1-AS1
LRRC28	CSMD2	LINGO1-AS2	CGNL1	CFDP1	ARHGEF15	MYF5	GNMT	BRMS1	LIN7C	MARK4	FAM91A1	CFAP221	SLC22A12
MIA2	SSTR5-AS1	GALNTL6-AS1	LOC102723831	RGP1	CPB1	ACR	SGCD	NEUROG2	CNTNAP1	SLC26A6	RUNDC1	LINC01023	LOC729296
GPHB5	TSKU-AS1	LOC101928565	LOC101927358	ARFRP1	ZNF415	CDK11B	NR5A1	TMEM238L	HPSE	GDF15	SMIM29	LOC102723665	SPATA12
DCD	HM13	LINC02112	SUCLA2-AS1	RHOG	PRSS12	SLC22A2	RASSF9	EPHA5	EPS8L3	RASSF4	CRTC2	MRLN	LOC105375206
IQSEC3	C16orf92	BECN1	TRAF5	ALDH1A3	CIZ1	BEST2	TPO	PLXNB1	C1orf50	CACNG4	HAUS8	GLOD5	LOC102723786
ZDHHC19	PDCD4	LOC100421171	LINC02209	SMARCD1	WDR76	IL10	SLC22A6	PRODHLP	LAMC3	PIMREG	FAM241B	SPACA4	SPATA31F3
ALG14	HCG11	PSMG3-AS1	ATP5F1A	S100A4	HAPLN1	SORBS1	CAMK4	SHBG	SNIP1	TMEM208	CHST14	FXYD4	LINC01118
PPP1R21	NEK8	LINC02204	PPP2R3C	DOCK1	KATNA1	SLC35A2	SLC6A2	SPATA5L1	TMEM45A	PEX16	ZNF830	DOCK9-DT	LOC100996671
TMEM237	IRAK1BP1	PRICKLE2-AS3	PHF20	ABCB6	ETFDH	SMR3B	IFNG	SEC16A	ELMO3	PIPOX	LYSMD3	SLC47A2	KRTAP10-12
ZNF564	ARMH4	LINC01722	LOC101928255	CDK9	CDH6	CSF3	SCN2B	FLG	ACBD4	WNT6	IFT172	IYD	LINC01883

B3GALT6	SYT9-AS1	LOC105373223	SLC6A15	MTRR	PCDH7	SLC22A13	SLCO1B1	PHF3	CLSTN2	STAP2	ADSS1	YTHDF3-DT	LOC101927098
SNX21	C11orf87	TTLL7-IT1	DNAH17-AS1	KRR1	VAV2	CCR9	PCDHGA8	DGCR11	TTYH1	LRTM1	PCGF5	FYB2	SOX21-AS1
RHOB	TPCN1	LINC02487	PREX2	KDM4A	RRAGB	MGAT4C	SSNA1	DTX2	SCARA3	ZFAND6	MITD1	CFAP126	EDDM13
ADAT3	DNASE1	LINC00326	SIRT5	MTFR1	STEAP1	POU6F2	CCKBR	KCNV1	BORCS6	TAF9B	AHSA2P	C2orf73	KRT25
CEL	COX10-DT	LOC101927829	LOC112268068	RFC5	TYK2	NKX2-8	TUBD1	LINC00563	RBFA	MTCH1	GORAB	LOC100505664	ADAM6
SPINK6	RAD54L2	LINC00895	LOC101928834	CDK1	BTG3	CNTN5	LGR5	AKAP8L	COA7	APOO	TRUB1	LOC101928045	CAND1.11
C22orf39	PABPC1L2B	LOC101928196	DEPDC1-AS1	MAPK9	PCP4	P2RY1	DEFB1	BTG2-DT	TTC33	DDX4	OTUD6B-AS1	TDRD5	LOC105377993
DTYMK	MEIOC	RECQL5	BRD7P3	TLE1	BABAM2	HNF4G	P2RX1	ANKRD53	EBI3	WDR4	ZMAT1	LOC102723924	C17orf50
MAPKAPK5-A	B3GAT1-DT	LINC02029	LOC101928844	RABEP1	SV2B	LY6G6D	CPNE6	ZNF804A	SULT4A1	ZNF83	ARL5B	FAM181A	SNRK-AS1
BRICD5	PROSER2-AS1	LOC101927636	LOC101928525	RFK	CSRP3	RHPN1-AS1	AFDN-DT	TRAV16	AGO3	RIC8A	MEX3A	ANKRD35	LINC00347
VSIG10	FAM181A-AS1	LINC01647	SEPTIN7P2	TSPAN31	TRAF6	GLRA2	GRIN2B	OR7E2P	PXMP4	PPAN	NOPCHAP1	FAM133A	KCTD6
NBR2	LINC00648	DDX59-AS1	LOC101928902	CLK2	PCSK5	PRSS3	FLRT1	INSRR	FA2H	INTS13	JMY	LINC01193	HEPACAM
NT5E	LINC02475	TMEM132D-AS	ZNF875	DVL1	KISS1	GAL	BARX2	RAB40AL	ARHGAP10	USP3	SPPL2A	DRC1	PGBD2
TRIM37	RBPMS	MUC4	LINC00566	IL4R	PAGE4	SFRP5	HGS	MTMR7	EMCN	ASB6	MIGA2	SCP2D1	PRR18
ARHGEF28	ASPG	LINC01393	TNNT3	THOP1	CHST1	PIR	RHD	MYH7B	ANKRD11	MYL10	ZNRF3	LINC02610	NEMP2
OSMR	TPR	LINC02065	DLEU7-AS1	NOTCH3	LIPT1	MLN	ALPG	NUDT7	NKAIN1	PYCARD	TMEM42	TRPC5OS	SDR16C5
NDST1	EHBP1L1	SCN8A	LOC101928510	CNOT3	ANGPT2	FABP2	SCN3A	ZNF835	C1GALT1	HSPB8	SHPRH	LOC105369602	ALKAL2
RSPO2	LOC102723722	NUDT17	MGAT4D	FCGBP	SNX7	TP53TG5	ICOS	DNAH2	RAI2	ACAD8	KLHL15	IGFL2	CRNDE
USB1	LINC02415	LY6E-DT	ANKRD26P3	PDLIM5	C1QL1	BTN3A1	NPY6R	GUCA1B	TASP1	LHX3	C19orf25	DLGAP3	C6orf132
GPNMB	BBX	LOC105369816	MMD2	PEX5	ROR2	TUBA4B	GLUD2	SIGLEC15	BCORL1	TRAPPC9	ARL14EP	C16orf86	SLC16A14
CEP57L1	KIDINS220	LINC01981	CASP8AP2	NPRL2	HRH1	MOGAT2	KCNJ6	NCLN	BICRA	DONSON	STARD4	CLDND2	CD2BP2-DT
ZNF12	GABRB1	SIGLEC16	LINC02245	EZH1	NOS3	NGLY1	R3HCC1L	SYT12	RIC8B	PCDHGB6	FRA10AC1	SPATA46	SCAMP1-AS1
ARSB	BCL10	SYTL3	TTC41P	PPIP5K2	GGT5	ZNF76	LINC00588	LOC101927770	SLC35C2	NYX	PARP10	ABCA17P	TMEM65
FRMD4A	ZNF382	CEPT1	LINC01782	TLN1	ALG13	RAB28	MAGEA12	UBQLN2	TMEM70	PIGP	ARRDC1	GPR155	B4GALNT4
ZBTB24	AREG	LOC105375527	CHIAP2	FBXO11	ETV6	UNC45A	MAGEA11	SSX2B	KLHL36	NLRP2	TEAD2	PRR19	LGI3
LARP1B	DPY19L2P4	TMEM273	AACSP1	CDH3	VGF	FGF12	ADH7	LOC105375582	EGFL6	MAP1LC3C	TBC1D20	IP6K3	GPIHBP1
DGLUCY	MCOLN3	CYREN	MGAT4EP	HDDC2	MYL3	TCP10L3	HLA-G	LINC00837	LAMP5	BRIP1	EVI5L	MYORG	PDE6B-AS1
TMEM239	MIR570HG	LOC105370746	TACC2	DCTN6	OLFM1	CA7	HNF1A	LINC01361	APOA2	VPS37B	LINC00938	POM121L10P	GATA5
MRAP	FLJ12825	CLECL1P	AP3B2	DRG2	ZNF652	PRKG2	BMPR1B	IGLL3P	CENPO	MAP6D1	VAT1L	KLRG2	GAS6-AS1
ZNF24	LRRC3C	HS3ST3B1	WIPI2	DFFA	DSG3	LAIR2	EFCAB11	SMG7-AS1	OSGIN1	WASF2	ERI1	FAM238C	SMIM31
TXNDC9	NT5C	SF3B6	LOC100127938	SAFB2	SMURF2	BDKRB1	TUBA3C	SLC5A4	C1orf116	COL5A2	CAPS	TEX48	LINC00106
DCAF8	LINC01465	ANKUB1	GTF2IP7	HS2ST1	TRAIP	ZNF189	MSH4	LOC100130331	TTC13	PRRC1	PPP1R35	MAJIN	DYNLRB2
SPTLC1	DPY19L2P3	DYNC2H1	DMXL1-DT	RNF44	HOXD9	GNAT1	SPAM1	ZNF721	PORCN	WDR48	TRIM41	TMEM179	RBM12B
ASH1L-AS1	CAPN14	CHFR	RNF144A	LAD1	LRP6	CHRNB4	BIRC3	IGHMBP2	HCFC2	RALGAPB	FAM89A	MED14OS	SHISA7
ZHX1-C8orf76	ZNF230	COQ10B	RAB7A	CNOT4	MYOM1	SLC6A4	B4GALT4	GPR176-DT	DUS2	YTHDF1	FDX2	H1-9P	ACOT12
MVB12B	ALDH1A2-AS1	SLC5A12	LOC100419741	VPS11	MMRN1	RO60	AKR1C4	UBXN8	BBS10	UBL4A	RNASEH2C	PCAT6	MUC12-AS1
EPHA8	CASC23	CSPG4P5	MIR3667HG	ATP1A2	SYT17	ATP2A3	GBX2	POLR1HASP	A4GALT	ARMC6	CREB3L4	ZFP57	LOC105377436
DEUP1	POLR1B	MIR4296	CCM2L	JARID2	MST1	TSBP1	GCGR	CBX2	DCLRE1B	G6PC3	DIPK2A	LOC101060400	TEX44
TMEM53	MCM8-AS1	LOC101927647	HIPK1-AS1	AP1S2	CPA1	GIPC1	CASR	PRAMEF12	LRFN4	ADSS2	CCNQ	SPPL2C	DGKK
GALNT18	SUCLG2-DT	FLNB-AS1	RNU6-501P	DMTF1	PRRG2	IL1RL1	TRIM10	SLC39A9	SHCBP1	PCIF1	TANGO6	LOC105374336	FAM240C
TUBGCP3	PIK3CD-AS2	ZPLD1	LOC101928730	DCK	PRRG1	KCNJ9	POLDIP3	ZXDB	RAD54B	R3HDM4	GGT7	LINC01874	LOC105376975
ENTPD5	MIRLET7BHG	SMARCC2	LOC105373150	DYNLT3	MEOX1	CDKN2B	TNPO2	ZNF280A	ZNF180	PPP2R2D	PPIL4	TCERG1L	DCAF12L1
MIR31HG	LOC105379362	LOC284798	ZNF365	SLC35A1	F10	CRYGC	INHBE	CYP2C19	SOWAHC	BRD7	TSTD1	ZNF582-DT	MIR5188
SPIN3	RERE	DAAM2-AS1	LINC01858	GNL1	ALKBH1	CCL1	GBAP1	ANKRD34C	CLCF1	RITA1	TMEM68	ARMC12	SLC6A18
TMTC4	SOS1	LINC00838	MYO5B	SNRPE	ALDH3A1	MAGEB1	ZNF235	SPATA31F2P	ENOX1	MICALL1	FAM222A	TMCO2	OOEP
CDCP1	MROCKI	C14orf39	CCDC169	PSD4	CALB1	NFKB2	MAGT1	SPEF1	RPAP2	DNAJC10	RCCD1	COX7B2	C12orf50
ULK2	MYCBP2	TRIM64EP	LINC01111	ZNF148	CRH	IL4	ZNF614	LRRC37BP1	C1orf54	WIZ	NHSL1	CA13	GKN2
SLC4A8	SPAAR	DOCK4-AS1	EGFLAM-AS4	SH2B3	KIAA0586	P4HA1	NAA11	HERC2P8	GCNT3	C6orf120	NRARP	PRDM16-DT	TMEM255B
CCDC60	ABCC9	CCND3	INTS7	ADNP2	ALAS1	FAM107A	GNAT2	CPN2	MYOZ1	RHOT2	PHETA2	LINC02688	LOC100130964
HSD17B12	AGAP11	LOC101927495	LOC101927539	CAV2	KALRN	GRM7	TTPA	TAF4B	SNCAIP	TMA7	ZNF71	PATE1	EPHA5-AS1

MSRB3	FAM161A	LOC284898	LINC03068	COL5A1	SH3GL3	MSL3	PHEX	GRM8	DSN1	DOCK6	ABRAXAS1	CAPSL-DT	ENPP7
ADIG	LCT-AS1	LINC00163	NR1I3	IDE	ADGRB3	ATP5MC2	HYAL1	LAMB2	TRPV4	OXLD1	PODN	PRSS54	TMC3-AS1
CCSER2	SH3PXD2A-AS	LIPC-AS1	LSAMP	STX5	AOAH	OPRK1	MOGS	MYH7	FJX1	CHPF2	MTX3	EID3	DYRK3-AS1
DNAI4	ZKSCAN8	P4HA3-AS1	LOC101928797	DHX8	PPP2R2B	DGKZ	SGCA	TMEM115	NDUFAF5	FAAP100	BMF	LINC00158	LINC02264
CFAP91	LOC100506606	LINC01788	FRRS1	PHYH	SNRPG	RYR2	GPER1	ZNF460	SLC47A1	NEFL	ORAI1	PPP3R2	LINC02269
SLC33A1	SLC25A43	SCTR-AS1	PPP6R2	ITGB1BP1	PAX6	PITX2	CCIN	ADAM3A	CLIC3	SHTN1	NSMCE2	TRIM71	SLC7A13
CLDND1	ACSL4	LOC101927159	LOXL4	SLC25A12	RAD52	SLC28A1	TNFSF11	CYSLTR1	ELOVL4	TRABD	CFAP73	LOC101928487	GLIPR1L1
OGDH	LINC02059	PPP4R3C	NDST4	CEBPZ	WNT2	DGKQ	PCLO	ADGRD2	DLL3	RAB9A	FBXO30	LRRC8C-DT	LINC00845
PHF21A	SMIM17	TRIQK	LINC01449	UGDH	FGA	SLC13A2	TNFRSF10D	XRCC3	WDR5B	RAB15	CD109	DNM1P46	SPRN
MCPH1	RASAL2	LINC03093	TMEM150B	RBBP8	RAPGEF4	CHRNA6	PPY	TAOK1	GEMIN6	PGAP3	IER5L	UNC5D	RASL11A
WFDC8	CPVL-AS2	GLYATL1	EVA1A-AS	ETV5	PCDH17	ROS1	NKX2-1	OVOL3	ZNF267	ADGRA2	ZSCAN29	RASGRP4	LASP1NB
ZNF446	ARHGEF7-AS2	SLMAP	LINC01467	AP1G1	HAAO	SHOX	SOAT2	PCDHB17P	BORA	DOLPP1	ZFAT	LINC00445	ARMH1
TWIST2	WHAMMP2	LOC101928833	MGC27382	ORC4	SNAPC4	ATP5MG	MORN3	TUBA3D	COX15	INTS5	KRT10-AS1	LINC01723	LINC01607
FAM53B	DGCR5	LINC01494	ZNF527	PSD3	FLAD1	OXT	LPO	ZNF540	ZNF16	KANSL2	TRIM11	MAPK8IP3-AS	C6orf58
SH3KBP1	SHB	CHL1-AS1	SPATA21	CAPN7	B9D1	HTR4	NRTN	HDAC3	ROBO3	MACIR	EEIG2	TSPYL6	LINC00226
MBLAC1	CPEB1-AS1	MTREX	LINC02380	MMP15	PCBP3	MAGEB3	CLDN14	CYP2A7P1	NME7	DTX3	CHTF18	SLC35D3	LBX2-AS1
C3orf33	IL6ST-DT	DHX9-AS1	ERVH-1	CRELD1	KIN	MAGEB4	SLC43A3	SEC14L3	RHCG	KLHL22	DIRAS1	LOC105371600	DLGAP1-AS1
DMAC2L	LINC01122	LINC02670	SMARCAD1-DT	SOCS2	TSPAN9	ABCD2	SPPL2B	ZNF10	CENPN	CLPB	ZNF462	LINC02502	FCRLB
POU2AF2	MFSD4A-AS1	LINC01526	LINC02653	CDC40	FMO1	LPA	WWOX	MUC7	TEDC2	CASKIN2	LINC02381	GPR150	FGFBP3
PLEKHS1	LINC00507	LINC00555	LRRTM4-AS1	APOE	WRN	RPL36AL	ZNF257	ANOS2P	SLC17A9	SMIM10L1	FAM110A	LINC01350	RTEL1-TNFRSF6B
TRMT44	PFN4	PIK3CA-DT	PRSS55	DGKA	NCAM2	SHH	LINC00260	LOC220077	RTL10	ZGPAT	CWC22	CACNG8	LOC100289230
LOC107986876	STIM1	ZNF491	ABCA1	TBC1D4	GAL3ST1	CRYGA	LDHAL6B	LCOR	COPZ2	DCAF15	ZNF618	LOC105372217	MICU3
IZUMO1	PPP1R27	LINC01107	LOC646736	HES1	XPA	ADRA1B	SPINT2	SEC14L4	KCNJ16	SDHAF1	UMAD1	CLEC12B	FAM83A
SH3YL1	LINC00320	LOC102724542	CLDN10-AS1	PSMA4	ASB9	ARID1A	NECAB3	SP3P	PLEKHF1	TJAP1	REEP6	C20orf141	ANKRD36
PTPRO	ANKRD44-IT1	ZBTB44-DT	LINC02016	TF	MTTP	HCN2	CALCA	ATXN8OS	EXO5	SYT13	C16orf87	LELP1	SETD9
GRIK1-AS1	CBX3P2	LINC00951	TBL1X	KCNAB2	CYP27B1	XRCC2	RGN	OR2B2	KIF16B	PAIP2B	CENPV	HOXA10-AS	KMT2E-AS1
TMLHE	LOC100240728	LINC01922	LINC01620	RNF6	DLEU1	KCNC3	GRB7	HOXB9	CADPS2	ELAPOR1	UBE2QL1	BOD1L2	IQCH-AS1
ZCCHC13	LINC02189	LINC02297	BDH1	MFAP1	MMP10	SLC4A7	NCR3	TMEM92-AS1	CPEB1	FAM174B	CASTOR1	RNF133	TAF1A-AS1
ARHGEF10	TMEM59	VWDE	FIGLA	PPL	BCL2A1	ARHGAP12	MXD4	KIR3DX1	RAB3IL1	PGAP6	MUC20	UPP2	SDHAF4
VPS50	ATP6AP1L	SGSM1	LINC00474	LZTR1	APOM	CYP1A2	HTR1B	TTC38	SPATA7	DENND2A	PHYHIPL	DPPA3	KRBOX5
LINC01869	STRADA	PLXNA4	MLX	PDCD6	UBFD1	H2BC13	TXNRD2	TMSB4X	PLA1A	WHRN	ARHGAP23	FAM228A	UBL7-DT
LINC02712	C10orf55	EPHA1-AS1	ADAMTS6	CD53	TFAP4	WNT8B	SLC6A5	ZNF287	CCDC28B	KCTD13	SFT2D3	DNAAF6	GLYCTK
BAALC-AS2	NDUFA7	LOC574538	STX8	MFAP2	BUD31	CAMK2A	DDX49	CHST12	NCAPG2	ZNF335	ANKRD44	CTXN3	HEXIM2
KATNAL2	BALR6	SLC7A11-AS1	PTPRN2-AS1	CCNA2	TYRP1	GAS8-AS1	RPL13P5	SLC66A3	TMEM143	COL8A2	MIB2	PLPPR5	LINC02562
PTGR3	WNK2	NLRP1	TAS2R19	KMT2B	GFRA1	HCRTR1	ARNT	DDR1-DT	DPH5	GPR153	TMEM25	FAM131B-AS2	SLC37A2
ITGAL	LOC100507403	TEX9	CRAT37	TP53I11	SCGN	CASK	ACVRL1	ZNF355P	CEND1	TXNRD3	PANK1	TMEM92	TMEM51-AS1
COCH	ARK2C	LOXL2-AS1	FAM47E	POLD1	MAP2K6	PEMT	AASS	GRIP2	NINJ2	IL17RC	ZFAND2A	RIPK2-DT	ZNF865
C1orf210	DIP2C-AS1	LOC101927914	SKOR1-AS1	RBP1	HSD17B6	TFCP2	SCN11A	BRCC3	THAP10	EOGT	CDCA2	DHDH	CCDC96
CERS3	LINC00906	CNGA4	KLF3-AS1	ASF1A	ANKRD26	CREM	CCN6	OR2B6	RWDD1	MRPL41	WDSUB1	GGN	ZNF524
DNAJC5B	MATN1-AS1	LOC101928446	STXBP2	SUCO	IL17RA	MUSK	FASLG	OR7E19P	TMEM50B	FBXO41	PABPC1L	LINC00710	SMIM10L2A
GPSM1	DSE	C8orf34	LOC100420872	ARHGAP32	TRPM2	PDCD1	NAA80	ATXN3L	ZNF226	PIERCE1	HDAC10	PLCZ1	SPTSSB
FRYL	ALKBH3-AS1	ZKSCAN3	TMPRSS2	TMPO	LRP2	KCNH1	ZEB1	HMGB3P1	FBXO38	EMX2	SHISA4	LINC01686	COL24A1
KLHL29	LOC100507634	LINC01813	LOC643201	CDH2	ATP5F1C	SERPINI2	ANXA2P1	KIR2DS4	WDR25	MMP24OS	UNC13D	LOC100506929	PTGES3L
CKAP2	MPDU1	FAM186A	LINC00452	EML3	PTPRD	WSCD2	SPAG11A	IGLV3-10	CEP85	LRCH4	SLC26A11	LOC100505841	RASSF10
MORN1	LINC01305	FAM169BP	EIF4EBP2	MTA2	ZMYND10	TMPRSS15	EVC	FOXL1	FGG	FAM110B	CISD2	RYR3-DT	LOC374443
ERAP2	STBD1	NAV2-AS5	CATSPERB	CTDSP2	SLC25A40	FZD9	FCGR2B	POM121L2	SIRT6	ZNF587B	FCHSD1	LINC00943	ZNF100
SSH1	PAQR3	PDK4	ART1	OCRL	PAH	NTN3	GTF2I	H2AC10P	SLC6A20	NXPH4	U2AF1L4	TEX47	LRRTM1
SART3	BIN3	OR7D2	SCAF11	PSMD5	POMC	TNFRSF13B	POU5F1P4	FZD8	KCNK5	EMILIN2	NAPRT	ZPBP2	GCNA
FANCM	ST18	MARCHF1	OR51B5	LDB1	GFRA2	HCRT	PDCD10	GNAT3	ACSS3	NXPH3	ROBO2	ELFN1-AS1	OTX1
C9orf43	LERFS	LINC00664	CMPK1	B3GAT3	CNTFR	FOXH1	POMZP3	AOC4P	DIRAS2	MRPL52	FOXK1	LINC02366	ACY1

NOCT	PARD6G-AS1	TRAPPC2	GBP1P1	PRAF2	PKP1	CDY1	CDH20	DKFZP434A062	TOR4A	GNG3	AMIGO1	LINC00851	ZSWIM9
FLJ25758	LOC283038	LOC286177	PMPCB	STX7	SCGB1A1	KRT37	TXNDC16	HTR3A	BAG4	CEMP1	FAM20C	ADAD1	LINC02731
TRIM4	WDR3	SV2C	LOC729291	SPR	TEP1	PTGER1	ERBB2	MAG	CERT1	ZSCAN31	SLC27A1	CFAP97D1	LINC00513
FHIP2A	GINS2	ZNF501	ELOA	VPS16	NCOA2	CMKLR1	COL4A6	DSCC1	ZNF767P	PFDN6	USP37	LINC00658	DTX2P1-UPK3BP1-PMS2P11
BLTP3B	LINC00624	CPLANE1	GAS6	EIF3B	BLM	FOXD2	ADRA1D	DHFRP3	FAM118A	NTM	WDR81	LOC101927839	ATP2B1-AS1
TTBK2	SLC26A5-AS1	LOC285819	MMP14	MRPL19	PGAM2	MOBP	GYG2	MYO7B	LRP12	KIF18B	RNF169	KRT71	LINC01133
CYP19A1	LINC00870	PCDH10-DT	PARTICL	PMM1	KCNQ2	ADAM2	LARP1	MGAM2	TTPAL	MEX3D	CNRIP1	TMEM114	ZNF780A
WDR49	LOC401312	MRPL23	BAD	PLEK	FABP3	SSX3	PKN2	RNASE2CP	ZNF606	ACTMAP	ZNF251	CNTD1	LINC01679
NPAS4	PICART1	LOC105378011	PRPF8	SLCO2B1	RBM42	KRT83	IBTK	MUC8	PEX5L	LOC105372602	CCDC71L	GARIN1B	LOC105373754
SVOPL	TBC1D12	MYLK3	CAPNS1	TPBG	DTNA	KRT85	HSF4	KIR3DL3	LRP1B	DND1	LUC7L2	NTRK3-AS1	ZNF420
LHFPL3-AS1	TTLL4	SPOCD1	RPL35	OTUD4	TNNI3	NPHS1	KCNB1	ZNF154	CEP83	DNAAF8	GIGYF1	LINC02349	FIBCD1
HNMT	ARHGAP19-SL	LOC285889	SRP14	RTN1	STAC	ARTN	ZNF271P	PRODH2	CASQ1	NDUFB2-AS1	FIBIN	TBC1D21	LOC100505715
ITPKB	DCTN1-AS1	STK24	GDI2	ADGRL1	DOC2A	ONECUT2	COL19A1	OR7E12P	MREG	PRND	FAM120B	CCNB3	SP2-AS1
GABRA2	CCDC38	LOC654780	RPL11	SIVA1	ADAM17	KIF25	CLIP2	KLK1	ALG6	AMIGO2	LMBRD2	LOC100505985	RFTN2
SUPT6H	LINC02436	LINC01181	ARF3	ELF4	CYP1A1	TBX6	KCNH6	C1orf68	DPPA4	ZNF764	FMC1	SLIT1-AS1	HPS1-AS1
RNF170	C7orf57	CARS1-AS1	RPL24	CEP57	BPHL	CRYBB3	KCNG1	TAF1	SUGCT	ARHGEF26	ATP11C	COX8C	TRIM61
PGLS	LOC101929748	MAP3K13	RPS27A	MED1	SH3GL2	INHBC	WASHC2C	LINC00302	PCDH12	EXOC1	EMB	LINC01523	LOC105379448
NFS1	NFIA	CLVS2	RPS13	EPHA2	CRP	TBX10	CD47	RAB11FIP4	KLF3	WDR13	MORN2	FCAMR	LINC01560
DYNC2LI1	IQCA1	LARGE-AS1	FAU	GCDH	F2	ALX3	NEK3	TMEM132A	RANBP17	ERV3-2	KIFC2	ZBTB20-AS1	ZNF404
CANT1	RUNDC3A-AS1	LOC101929586	RPL27	MED12	ITIH3	POU3F4	PDE6C	VENTXP1	C2orf49	MTMR14	EFCAB7	BOLA2	FAM21EP
STXBP4	VWA8-AS1	NCKAP5L	RPL34	CD68	F8	IGSF1	AURKC	DCLK2	TMEM121	KIF17	CHMP4C	LINC03024	LMOD2
LRRC18	GALE	CNDP2	NARS1	TNFRSF1B	SULT2B1	FUT9	HGC6.3	TM6SF2	DECR2	MYEF2	FAM20A	ATP13A4-AS1	TPRXL
SLCO4A1-AS1	LINC00642	DNAH10	RPS11	TRAPPC3	DUS4L	ZFHX2	SLC5A5	OSBPL10	MS4A6A	ADAMTS1	ZFP1	C1orf94	ZNF786
FARP2	FAM170B-AS1	LINC01920	RPL9	MAP3K3	DDX18	YWHAH-AS1	IGKC	PLAAT2	GDAP1L1	ZNF213-AS1	FAR2P2	LOC105371038	ANKS4B
DRAXIN	LOC101928068	TCEANC2	CTDNEP1	SNTA1	CYP3A5	MAGI2	DLAT	USP53	HPCAL4	MED15	KIAA1143	ZYG11A	HOGA1
HELQ	TRIML1	TEX41	ERH	MTX2	TCAP	SEC13	THPO	CYLC1	ZSCAN16	TRMO	MPEG1	LINC00922	CT66
GIN1	SAMD15	EBF2	ABCF1	UPF2	SLC27A2	ALOXE3	FAM153A	FAM224A	FZD3	FAM66D	STOX2	IQCF5	DNAJC3-DT
ATP23	LINC01142	LINC00659	DAD1	CCS	GSR	PRKAA2	GCK	LOC100289518	TMEM35A	RRN3	CLMP	FANCD2OS	SLC25A5-AS1
DENND4A	ASAP1-IT2	LOC101927623	YY1	LSP1	AKAP7	SERPINH1	CCKAR	MLLT10P1	STK32B	CERS2	SPRED1	LOC100130691	UNC5B-AS1
SIAE	GATM	PIEZO2	JTB	SEMA4D	DUSP9	CRYGB	GPR45	GDF11	BBS7	MRPL17	TTC32	SPAG5-AS1	CPNE9
BTG4	POLH	THEM5	KAT7	STX4	KLK7	KRT38	PSTPIP1	TRBV21-1	SEMA3G	TSNAXIP1	FBXL20	CFAP107	SNTN
PPP2R5C	LOC101927604	LOC101928622	SART1	CUL5	RAMP2	CYP2A7	FSHR	ATP8B2	SAMD9	IL36RN	TENT4B	TEX46	HOTAIR
CALHM1	MARCHF7	LOC340090	SPAG7	LSM1	VPS9D1	BTBD2	TADA3	FAM76A	KREMEN2	NACA2	PHYHD1	TPD52L3	LOC105377320
NT5C1B	LINC00550	ANKFY1	TAF10	CIAO1	KLK13	KLRC3	HAP1	MICU1	AGPAT4	RPL23AP53	LYPLAL1	LINC02805	RDM1
PKD1L2	MYO16	LOC339539	C1D	CAMLG	ITGAM	SPAST	FUT5	FCGR1A	SMPD3	ACTR10	PDP2	NOXRED1	LOC105371703
NR1H4	LOC285847	LOC107984784	RPL30	GFAP	TNK1	POU4F2	ANXA2P3	ADAM5	HS3ST2	DBNDD1	ARHGEF19	CCDC62	LOC105371414
HACD1	GRK5	TMEM108-AS1	ARF1	KLF9	NOVA1	CDH9	CHRD	GBX1	METTL4	ZNF112	DNAJC25	TMEM31	LOC100289495
PDE1C	CHRM3-AS2	SMPDL3A	CANX	STAM	NRXN3	TNFAIP8L1	GPR68	LOC101929550	LGI2	POLM	FAM110C	SAXO1	TEKT1
TP73	LOC100130548	DYNC2I1	SMNDC1	IPO13	TCP11L1	DLG3	CDK7	KRT84	TMOD2	ISYNA1	ESCO1	LINC01015	ADGRA1
NEK11	LOC105372547	LOC101929473	KXD1	CD4	SLC3A1	PSG9	KCND3	ELK2AP	MNS1	KLK5	GXYLT1	PRSS37	BANCR
LINC00656	UST-AS1	LINC01877	RPS7	LPL	TRPC1	TNP2	PTPRU	NCR2	YBX2	GMEB2	COMTD1	FATE1	LL0XNC01-250H12.3
TRAM2	LINC02466	THSD4-AS1	USP22	COX11	ROR1	NCKAP1	LRIT1	DIAPH2-AS1	QSER1	UBQLN4	ATG4D	DMGDH	LINC01857
CST9	LOC101928535	FCER1A	COX4I1	MAP4K5	ROM1	TPSAB1	SERPINB13	MUC3A	AP5S1	SH3BP4	HVCN1	LOC105371508	DDI1
VPS29	LPAR6	SEPTIN7P13	TMED2	AOC1	TUFT1	NR6A1	PCDHA2	DMPK	CPNE7	SPO11	GRPEL2	LINC02853	MAP3K2-DT
ACTR2	PURPL	LINC01271	RPL4	GGH	ASPH	CABP2	NSMCE4A	AMACR	FGGY	HNRNPUL2	RNF217	C10orf82	CSKMT
AZIN2	NANOS2	LINC01720	FNTA	FEZ1	WASL	POLQ	B3GALNT1	MKRN7P	HIGD1B	TNS4	WDR35	CABS1	LRRC4B
NELL1	LOC101928760	CARD19	ATP6V0E1	MNAT1	GRM3	DOK4	KIR3DS1	PMCHL1	GPATCH2L	TMEM209	XXYLT1	TEX33	PTMAP11
UEVLD	IPO11	TRAF3IP2-AS1	HNRNPK	AGL	REG3A	PPP2R3A	N4BP2L1	TRAT1	AGPAT3	CHD9NB	CHCHD1	SUN3	DNAJC27-AS1
LYG2	FHAD1	LOC400541	RPS3A	LOXL1	SIX1	PRB1	KIR2DL2	IGLV2-14	TREM2	ZDHHC8BP	GABPB1-AS1	ADAM7-AS2	DCAF12L2
CTNNB1	RAB17-DT	CYP17A1	HNRNPU	ADIRF	APOC3	ZNF304	IFNA17	MARCHF11	NLGN3	MYMX	C17orf58	ASB17	LOC102724859

APH1A	PDE6B	RNASE11-AS1	HSP90B1	TAF6	PCSK1	RASSF8	IER3IP1	TSPY1	DUOX2	RHEX	LRIG3	TMEM174	PTGER4P2-CDK2AP2P2
SPOCK3	LOC101927967	TPTE2P1	MSN	RABGGTA	MYOM2	ZFP2	PADI4	TRAV8-6	MYOT	ZNF480	ZNF518B	SLC22A9	LYPLAL1-AS1
GGNBP2	LNCAROD	CLNK	ACTN4	BCAT2	CCK	NCOR2	GGTLC1	ZPR1P1	PRRX2	OR7E47P	EGFLAM	LINC00919	LINC01554
ATF3	MAP3K14-AS1	LINC01756	APP	GTF2H4	MMP3	TMT1A	CHN2	PRDM1	MED18	EGOT	ZDHHC23	PRSS30P	HAVCR1P1
DMWD	CHIC1	LINC00437	RAD21	UNC50	HSD17B1	EGR4	SC5D	BTNL3	SLC27A5	ZNF324B	DPP9	TEX56P	LOC105376139
ZNF146	LINC02114	LINC02150	AP2B1	EMC2	CLGN	PQBP1	TYRO3	LOC100287387	RNF186	ALS2CL	ANAPC4	MUCL3	FLJ45513
REG4	ERCC6L2-AS1	DLG5-AS1	AP2M1	TFDP2	PART1	SLC5A2	RGSL1	OR1E3	PRR7	LAMA1	UBR1	ITPRID1	GPC2
KIAA1217	JRKL	LINC01121	MLEC	DYNC1LI2	CRAT	PRMT8	FKSG49	MAST1	HEY2	RNF126P1	ZNF407-AS1	CCDC74B	IGFL1
KIAA0513	NTRK3	EPCAM-DT	LASP1	FSTL3	PRSS22	CYP3A43	GABARAPL3	IGLV@	FN3K	FBXO31	PXYLP1	REG3G	LOC100506858
SLC35F6	CNPY2	LINC02709	CAP1	CD2AP	UQCRB	MGC4859	CSPG4P1Y	ADAM3B	MFSD13A	TUBBP5	DMKN	ERICH3-AS1	LOC728024
ZNF85	SELENOH	SLC25A48-AS1	NDRG1	RTCA	NME6	REG1CP	TBL1Y	IGHV3-47	DPF3	EFTUD2	UQCC6	C3P1	NDUFV2-AS1
JPX	LOC101926944	LOC101927040	PTPRF	WBP4	CDK5R2	CYLC2	ZIC4	COX7A2P2	NDNF	SNX6	FNDC1	APOA1-AS	ZNF284
DNAJC14	LINC00639	KRT40	YWHAZ	FAM193A	ZBTB7B	HUWE1	DSCAM	RPL15	SH2D4A	DBNL	CENPW	CASP14	PAK6-AS1
HILPDA	LINC02232	LOC285191	HDLBP	ZEB2	TULP3	CYP2R1	ADRA1A	SERHL2	RASAL1	VPS36	CPEB2	PCDHB2	LOC105375382
CFHR3	LINC02996	SAMD12	MARCKSL1	SRP54	ZNF197	SORBS3	PDC	NDRG3	STAG3	TMEM167B	HTRA3	PCDHB14	ZNF708
ST8SIA4	FAM135B	HOXA-AS2	GABARAP	BYSL	NGFR	LRRC1	DSTYK	OR2F2	CBX8	AP3M1	RHBDD1	OTX2	LINC00608
DNAJB9	LINC01087	LOC101929279	NUCB1	UTP14C	GREB1	LRP2BP	BMP4	OR1F2P	TMEM260	ST6GALNAC6	NADK2	RBP2	FLJ16779
CRTAP	INHBA-AS1	ZSCAN1	LDHA	SULT1A1	SLC7A4	AKAP5	GNRHR	CDC37P1	LIN7B	AGO1	EAF1	PCDHB7	MELTF-AS1
METTL26	MFF-DT	LOC101929413	SSR2	POLB	FCN3	CRISP3	KIR2DS2	OR7A10	FZD10	MSTO1	CXCL17	KCNJ11	TRARG1
FBF1	PLA2G4E-AS1	SCUBE1-AS1	CTSA	ELK1	BDKRB2	CSN3	HSPA2	IGHV3-72	ZNF329	PGP	ZBTB41	GPR55	LOC102723904
ANKRD13C	DIAPH1-AS1	LINC02139	TOMM20	NDUFB5	PDE4DIP	PSMD9	RAPSN	HLA-DRB6	VTCN1	PI4K2B	DENND6A	MIXL1	GRK3-AS1
SRGAP1	LINC02052	LOC102724434	CD63	PNO1	ITPKA	ATP6AP1	MAST2	KRT3	INCENP	PABIR2	PRPF40B	ULBP3	FZD10-AS1
MOXD1	FBXO38-DT	LINC02806	DNAJB1	AKAP17A	LIFR	F13B	TRBV10-2	IL23A	SMPX	BAIAP2L1	FIZ1	PCDHB4	OPALIN
ZNF808	GRID1-AS1	KRTAP5-AS1	SPTBN1	SKP2	ZC3H7B	KRT12	ALDOAP2	CTAGE11P	NOX4	ACER3	CCDC136	ABCG8	EPHX4
HEATR3	CASC17	LINC01097	LAPTM4A	COG5	RET	LALBA	DRD3	OR2J3	CPLX3	SLC35B3	VSTM2L	PCDHGC4	LINC02388
CARD8	LINC01020	GCSIR	UBE2L3	GPRC5B	PRKD1	IFNW1	ERG	KRT19P2	ZFPM2	AXIN2	RNPC3	ZP4	TMEM213
ARMC10	LOC100129175	LOC101929319	GRN	CPT1A	ZNF74	HTR7	FTH1P5	PRICKLE3	ZNF771	POLR1A	IGIP	TAS2R5	DRAIC
SAR1B	ZNF32-AS3	TMX4-AS1	HMGB1	MID1	ZBTB16	ADH1A	IGHG1	PRAMEF11	TESMIN	SUFU	DEPDC1B	PRM3	BRWD1-AS2
TMEM37	CARNMT1-AS1	IGF2BP2-AS1	SRSF11	FGFR2	ITGA4	FGFR1	IGHV3-73	TRGV5	ECT2	SMOC1	FGD5	LINC00029	LOC100240734
GFOD1	CEP112	FOXN4	SF3B3	COBLL1	MSH3	AIF1	IGKV1-17	IGKV1OR2-108	HAND2-AS1	DPYSL5	RGMB	FGF10	GHRLOS
ATF6B	ZNF787	NALF1-IT1	PPP2R1A	MON1B	FABP1	PPP1R8	IGK	ADD3-AS1	AGMAT	CMTR2	NOSTRIN	CHRAC1	LINC00391
CEP70	STXBP5-AS1	ADAMTS16-DT	HK1	CD163	NLGN1	HLCS	LBP	UBE2NL	SNX16	OTUD6B	LCLAT1	HOXB4	LINC01977
SERPINC1	LINC01056	LOC101928553	KDELR2	FDX1	CCNA1	TMEM8B	GPR135	TRAV10	SLC6A14	BLOC1S6	FAM78A	GJB6	CHST13
RAD51B	LOC101928663	LINC02800	EEF1B2	PLA2G2A	KCNN3	CD160	POU2F2	ZNF227	CDHR5	CENPK	HDDC3	CENPH	NCKAP5
OSCAR	SIM2	LINC00299	PRKCSH	PROCR	MICA	SPIN2A	PTGDS	PIWIL2	MEPCE	APLN	GNPDA2	NTF4	LHFPL3-AS2
NAALAD2	CD44	SOD1-DT	GOT2	XRCC1	FOXJ1	CYB5A	TRAV12-2	HLA-J	THNSL1	ZNF346	PLD6	HOXA13	FOXO6
MINDY3	ERVFH21-1	LINC01676	FKBP1A	FIG4	OMD	IL13	CADM3	CADM3-AS1	ZNF34	TMEM38A	NHLRC3	PCDHB15	LOC441179
ACSM5	GSTO1	LINC02254	ACADVL	CTSF	POLE2	ANAPC10	UGT2B28	LOC729815	ANGPTL3	FLVCR1	YDJC	NOG	LOC101928120
LINC00537	SLC16A1	LINC02153	SKP1	SLC25A20	PTH1R	POU1F1	DYNC1I2	CYP2D6	SYNPO2L	DCDC2	CCDC159	DMRT3	LINC02909
GSTCD	ERVH-3	TMEM232	MAPRE1	PCNT	PNLIP	AVP	MAK16	LINC01482	STEEP1	GPR83	EEF1AKMT1	CLEC3A	SLC5A10
VSTM2A	LINC02274	LINC00092	OS9	CXCL12	PLIN1	IL2	KIR3DL1	SHISA6	SCLY	FIGN	TMT1B	PRLHR	LSP1P4
TTC12	CAVIN1	LINC02465	RPL13A	MAN2C1	S100A7	INSR	BBC3	OR7E37P	WDR55	NEU4	TMEM256	PHAX	ZGLP1
C2	PHLDB3	USP3-AS1	RPL7	TG	SLC4A3	CXCL5	IGH	ABCA6	GAL3ST4	SURF4	ZNF414	COX19	CFAP90
TMEM126B	NEMF	DNAJB8-AS1	ACTR1A	HELZ	HBE1	SNCB	TSSK1B	CRX	GPATCH1	RAB10	B3GLCT	KRT80	FAM47C
RHOF	ZKSCAN1	LINC01362	CAPRIN1	NUCB2	RELN	CHRNB3	ANKRD40	MILR1	MRPS28	TMEM9	CCDC146	HOMEZ	DYDC2
DNAH14	TXLNG	IL6R-AS1	RPL10	TARBP2	RAB3B	NCR1	MGC2889	CACNA1S	MTRF1	RHBDD2	JOSD2	KIAA1586	DACH2
GPRIN2	EIF4G2	LINGO1-AS1	PPP1CC	IVD	ZNF443	CCL22	FMO2	OLFML1	SLC13A4	CXXC5	ZNF800	LRRCC1	LOC286437
SLC25A48	MTERF4	PRKAG2-AS2	PTP4A1	VEGFB	GTF2E1	ADPRH	HYAL3	CYRIB	CYP26B1	MRPS21	C11orf96	FBXW8	ITPR1-DT
MBP	RPS9	ST6GALNAC5	RPS27	BCL2	MSX1	SCN7A	RLN1	NXPE3	ZNF419	OSTC	TRIM35	PALD1	LOC101927609
FAM13C	RPAP3	LOC101927044	TPP1	CX3CL1	PLCL1	BMP8B	SLC25A17	ZNF816	ITGB1BP2	TIMMDC1	ADHFE1	SASS6	DZIP1L

WDR20	PLCG2	LINC01751	GNB1	PKD2	FOXF1	PAX4	ATP5PB	MT1M	CDKL3	LAMTOR1	FOXP4	SOX2-OT	KCTD4
CFAP97	NAALADL2	NMRK1	FTH1	FMR1	CGREF1	CHRNA2	PNLIPRP2	ZNF675	HOXC13	OCIAD1	SYTL1	TIMM29	LINC02703
ATP11B	ARID5B	PRR23E	RAN	DHX16	PPM1E	CACNA1G	LAT2	ARPIN	PRDM8	EIF2A	TYW3	HOXD8	LINC01354
DCAF5	LCMT1-AS2	DAND5	CAPN1	GSDME	MYH3	AKAP9	SERINC3	OR7E14P	ZBED2	ZRANB2	PLEKHG5	NUDT14	KBTBD8
KCTD17	SLC1A2	NUDT12	CALU	FRZB	COL10A1	LILRA1	AP2A2	STEAP1B	CYTL1	NIBAN2	EGLN2	ZSWIM4	LOC105374937
DYNLRB1	FAR1	LINC02579	NFE2L1	DIO2	ACSM3	SEZ6L	TREX2	RPL10L	AICDA	VTA1	PLEKHH2	LINC00958	FHIP1A-DT
SUV39H2	ERGIC3	FAM166A	RPLP1	RREB1	TDO2	CFHR4	KMT2D	BRINP3	ARL15	AP1M1	SNX33	HOXC9	SPATS1
CYB5R3	RABEPK	PPM1K-DT	LAMC1	FZD7	CLTCL1	FLNC	IGLJ3	RAB40A	CCDC186	SNX9	IGSF21	ZFP28	LINC01114
BPNT1	PRKAB2	LINC01864	BZW1	ITPR1	VIPR2	KRT76	PCDHGB5	ZSWIM1	HDAC11	TRAF7	PRIMPOL	ZNF658	UBE2E2-DT
ETV4	NORAD	LINC01342	GNAS	TBCE	PTPRT	ADAM11	PCDHA6	ZSCAN18	ZNF432	PRELID1	GHDC	MIR4453HG	LINC03002
PSMD10	CP	ZNF229	RPS15A	PNPLA6	CA1	TFR2	ATRN	CINP	EHF	SCYL1	GSTO2	ANKRD33B	LOC101928554
ZNF70	MATCAP1	MYCBPAP	PEA15	ERCC1	MYH1	GUCY2D	PCDHA10	SCUBE3	ZNF613	NAA20	SKA3	DOK6	NEBL-AS1
MYO18B	EIF2B5	LOC101927157	ACO2	UTP18	KCNK3	S100G	PCDHA3	USP27X	FKRP	SDHAF2	DNAJC18	ZNF490	LINC03011
ETFBKMT	TMED4	LOC101927467	DAZAP2	ALDH4A1	RXRG	CALCR	PCDHGA9	ANGEL2	ZNF14	FBXW5	ZNF316	TTC39B	SLC10A4
IFT70B	FBXO10	LINC02201	SPARCL1	RUFY3	PSMC3IP	CD40LG	PCDHGA10	SKA1	NUDT11	DNAJB11	LNP1	PNMA8B	HOXA-AS3
LENG9	SLF1	LINC00210	ACTB	SKIC2	PLXNB3	NAALADL1	PCDHGA11	SIX5	LY6G5C	FAM107B	CARMN	ZNF30	COL28A1
PCAT4	MDH1B	LRRC37A5P	LMAN2	ZKSCAN5	CSHL1	GIP	PCDHGA3	ZNF234	RCAN3	STARD3NL	FNDC10	ZKSCAN2	PM20D1
SLC1A6	SNORA65	CTD-2194D22.4	HSPD1	TRIP4	MMP13	CCL17	PCDHGA1	ZNF813	LINC00339	CWC15	FAM3B	GIMAP2	SLIT3-AS1
SYMPK	UBE2I	EFCAB6	PAFAH1B1	DEXI	TAF13	IL5RA	SERPINB4	SEC14L1P1	CHODL	MFSD14B	ZNF503	MAP10	HLA-DPB2
LIG3	MATR3	DSCAM-AS1	RPS10	HMGB3	H4C3	LNPEP	PARD6B	LRRC75B	GASK1B	AIF1L	RHPN2	PCDH20	CLCA4-AS1
LMNA	CCDC174	LOC101928389	TPI1	HCCS	AADAC	IL3	TUBB7P	ZBTB7C	COLEC11	MARVELD1	FBXL17	DSCAML1	LOC105377844
NKAIN2	LOC283788	LOC105372404	HYOU1	AQP3	MT3	KRT2	MYO1A	PLEKHA2	SLC12A8	TMEM14C	ZNF213	CTBP1-DT	LOC390705
RBM8A	FAM78B	PLCE1-AS2	SNRPD2	JUND	HOXD1	SCGB1D1	PAPPA2	WNT7B	GOLGA2P5	ZCCHC17	SFMBT2	BCLAF3	LOC101928014
MBTPS2	USP31	DIO2-AS1	PLOD1	BUB1B	FASTKD2	TGM5	ZNF471	MAGOH2P	ZMAT4	TRUB2	ADAT2	DNM3OS	FSIP2
CEP120	TSPAN17	LINC01734	RAP1B	ARHGEF17	EPHA1	EVX1	PLCB1	CNPY4	KLF13	VIRMA	CARMIL2	FOXP1-IT1	FREY1
CNKSR2	CSRNP3	METTL15	RPS21	CEACAM6	KL	RBMY2BP	MYH9	SEC61A1	HROB	COQ5	MRAP2	PCDHB16	LOC105274304
TGOLN2	LINC00957	WDR11-DT	BCAP31	CTSO	SCGB2A1	NUDT13	GANAB	CHCHD2	CTC-338M12.4	BCAR1	MUC15	BLACAT1	PRR32
LIPT2-AS1	PAPOLA-DT	DDX6	PPP1CA	DLGAP5	SFTPC	ZFX	ARL6IP1	NGRN	TTLL7	FUCA2	NGEF	GASK1A	LOC105378604
ANKMY1	PLXNA1	EOLA2-DT	SARAF	LMOD1	DPEP1	CST5	HSPA5	TMBIM1	LHX6	PITHD1	PDIK1L	LINC00933	GUSBP5
RUBCN	TNRC6B	LOC339666	AHCYL1	STS	CRHBP	GLRA3	TPT1	NAA50	SLFN12	FOXRED1	HAPLN3	CTTNBP2	FAM81B
PTBP2	MEG3	LINC01115	H2AZ1	SLC25A13	CD1C	GRPR	PRRC2C	COPG1	CEP97	AKIRIN2	C8orf58	ZNF616	LINC00323
SERPINB8	BAIAP2-DT	EP400P1	NCOR1	GPKOW	WNT5A	RFPL1	IPO5	UBE2Z	CCDC87	PIGS	POC5	FRG1HP	PPP1R3B-DT
MBLAC2	H1-10-AS1	LOC101929297	FLNA	RPS6KB2	PRRX1	PI15	COL4A2	TM9SF3	SPAG4	PTPN23	FGF11	DNM1P41	TIGIT
DGKE	TMEM229B	LOC101928283	RAB11A	MRPL33	IL15	RBM39	TMEM123	NRBP1	CCDC71	DCUN1D5	CCDC9B	SLX4	FHAD1-AS1
BCL6B	ATP5MF	LOC101928417	PSAP	DDX28	TBX2	MAML3	ARFGAP2	RTRAF	MAGEL2	TMUB1	CCNYL1	ADM5	SPEM2
ASCC1	ZNF17	LINC02850	RNF114	TPD52L1	IQCB1	CSN2	COL4A1	NDUFA4	GPR85	MRPL1	PCDH19	MACF1	PSMA8
EPHA7	ANKRD54	LINC01231	NOP56	SEMA3C	AK2	CCL27	SUGP2	PNRC2	NDOR1	HDHD2	CIART	S100A7A	LOC100506236
MYT1L	LINC00592	PACRG-AS2	PSMB1	RIDA	ADAM28	DNAH9	SZRD1	WDR83OS	BHMT2	MRPS23	INO80E	CD99P1	LINC02036
ZFYVE16	FN1	LINC02211	DNAJA1	DMXL1	CYP3A4	CAPN11	UBXN4	GPS1	EBLN2	DENND11	BOLA3	CLEC2L	STAM-DT
RNF32	SRC	LINC01648	UQCRC2	PCGF2	MEP1A	KIF25-AS1	CDV3	YKT6	FRS3	CCM2	SPINDOC	SLITRK6	FBN3
OSBPL1A	CTNNA1	ETS1-AS1	CKB	CDC42BPA	NPY	IFNA4	FAM168B	GALNT2	DKK2	RHOU	ZNF689	MROH8	TEPP
MAST4	SF3B2	AOX3P-AOX2P	RPL23	MRPS14	CEP135	GLG1	RSL1D1	SSR3	MMP28	TMEM98	TRAM2-AS1	TNFRSF14-AS1	LINC01511
RPRML	ATF1	MIR4435-2HG	SSR1	NSUN5	CEP162	MEF2C	MKI67	SNX5	FICD	MTFP1	TMEM119	ERVH48-1	SYNPR-AS1
CFAP61	DR1	LOC102723704	SELENOF	LUC7L3	PRG4	GLRA1	FLII	RAB11B	SLCO4A1	SPNS1	ANKS3	GPR158	TMCO1-AS1
NEK4	TNRC18	GLB1L3	AHCY	CSH2	TGM1	DPT	EXOC7	PRR13	ENPP3	NT5DC1	TSPAN18	LCA5L	ZNF543
SEPTIN4	GOLM1	LOC105371672	HLA-E	DNAJB4	ACTL6B	NR4A3	ATP6V0D1	NPLOC4	SLC16A10	ORMDL1	PET117	NKD2	GATA3-AS1
ZNF586	STX16	CHCHD5	RPLP2	SLIT3	FOXJ3	CITED2	MAPK3	CNOT2	RNF39	KMT2E	TMEM178B	ZNF554	C16orf78
ZNF594-DT	PUS7L	LOC101927657	PPM1G	GSTT1	FOXG1	ESRRG	WIPF2	NDFIP1	ZCCHC4	COX16	ZBTB46	LRRC4C	ATAD3C
METTL8	ZNF587	TLE1-DT	SRPRA	RGS3	SOCS6	MPP2	GSE1	ATP5F1E	ASPM	SESN2	PXN-AS1	HSPC324	LINC00327
FAM151A	LINC00662	LOC101927723	SLC3A2	TSPAN8	SCAND2P	CYB561	U2SURP	GOLPH3	GMPPB	SMARCAD1	DCUN1D3	ZNF530	C10orf62

Supplementary Table 5. The details of GO analysis.

ONTOLOGY	ID	Description	GeneRatio	BgRatio	pvalue	p.adjust	qvalue	geneID	Count	generatio
BP	GO:0042773	ATP synthesis coupled electron transport	13/418	102/18870	4.02E-07	8.06E-04	7.43E-04	ND2/COX7C/NDUFA5/UQCRQ/COX7A2/COX6C/COX7B/CDK1/COX7A2P2/NDUFA4/NDUFB2/DNAJC15/ND4	13	0.031
BP	GO:0042775	mitochondrial ATP synthesis coupled electron transport	13/418	102/18870	4.02E-07	8.06E-04	7.43E-04	ND2/COX7C/NDUFA5/UQCRQ/COX7A2/COX6C/COX7B/CDK1/COX7A2P2/NDUFA4/NDUFB2/DNAJC15/ND4	13	0.031
BP	GO:0006119	oxidative phosphorylation	15/418	148/18870	1.06E-06	1.11E-03	1.02E-03	ND2/COX7C/NDUFA5/UQCRQ/COX7A2/COX6C/COX7B/ATP5PF/CDK1/ATP5F1C/COX7A2P2/NDUFA4/NDUFB2/DNAJC15/ND4	15	0.036
BP	GO:0019646	aerobic electron transport chain	12/418	94/18870	1.11E-06	1.11E-03	1.02E-03	ND2/COX7C/NDUFA5/UQCRQ/COX7A2/COX6C/COX7B/COX7A2P2/NDUFA4/NDUFB2/DNAJC15/ND4	12	0.029
BP	GO:0002181	cytoplasmic translation	15/418	156/18870	2.07E-06	1.66E-03	1.53E-03	RPL34/RPL9/RPS7/RPS3A/RPL7/RPS27/RPS15A/RPL23/RPS17/EIF4G1/RPL39/RPL26L1/RWDD1/RPL22L1/CPEB2	15	0.036
BP	GO:0022904	respiratory electron transport chain	13/418	124/18870	3.80E-06	2.54E-03	2.34E-03	ND2/COX7C/NDUFA5/UQCRQ/COX7A2/COX6C/COX7B/CDK1/COX7A2P2/NDUFA4/NDUFB2/DNAJC15/ND4	13	0.031
BP	GO:0006123	mitochondrial electron transport, cytochrome c to oxygen	6/418	25/18870	1.41E-05	8.08E-03	7.45E-03	COX7C/COX7A2/COX6C/COX7B/COX7A2P2/NDUFA4	6	0.014
BP	GO:0009060	aerobic respiration	15/418	197/18870	3.49E-05	1.75E-02	1.61E-02	ND2/COX7C/NDUFA5/UQCRQ/COX7A2/COX6C/COX7B/ATP5PF/CDK1/ATP5F1C/COX7A2P2/NDUFA4/NDUFB2/DNAJC15/ND4	15	0.036
BP	GO:0006260	DNA replication	18/418	278/18870	5.18E-05	2.31E-02	2.13E-02	POLE4/NAP1L1/RRM2/PCLAF/CDK1/RBBP8/ORC4/RFC3/RECQL/KIN/RPA3/GMNN/FBXO5/NOC3L/ETAA1/OBI1/POLI/METTL4	18	0.043
BP	GO:0140053	mitochondrial gene expression	13/418	163/18870	7.17E-05	2.87E-02	2.65E-02	MRPL40/FOXO3/MRPL3/MRPL15/MRPL13/MRPL22/METTL4/MRPS28/MRPL1/MRPS23/MRPL47/MRPL32/MRPL50	13	0.031
BP	GO:0062197	cellular response to chemical stress	19/418	317/18870	9.09E-05	3.31E-02	3.05E-02	PEX13/KDM6B/ANXA1/ATG5/CASP3/CDK1/PKD2/KAT2B/FOXO3/FAS/VRK2/USP15/CHUK/HGF/PDCD10/RBX1/RWDD1/ECT2/CP	19	0.045
BP	GO:1903441	protein localization to ciliary membrane	4/418	12/18870	1.02E-04	3.40E-02	3.13E-02	IFT80/LZTFL1/EFCAB7/ARL13B	4	0.01
BP	GO:0045333	cellular respiration	16/418	243/18870	1.10E-04	3.40E-02	3.13E-02	ND2/COX7C/NDUFA5/UQCRQ/COX7A2/COX6C/COX7B/ATP5PF/CDK1/ATP5F1C/IFNG/COX7A2P2/NDUFA4/NDUFB2/DNAJC15/N	16	0.038
BP	GO:0032543	mitochondrial translation	11/418	130/18870	1.52E-04	4.16E-02	3.84E-02	MRPL40/MRPL3/MRPL15/MRPL13/MRPL22/MRPS28/MRPL1/MRPS23/MRPL47/MRPL32/MRPL50	11	0.026
BP	GO:0022900	electron transport chain	13/418	176/18870	1.56E-04	4.16E-02	3.84E-02	ND2/COX7C/NDUFA5/UQCRQ/COX7A2/COX6C/COX7B/CDK1/COX7A2P2/NDUFA4/NDUFB2/DNAJC15/ND4	13	0.031
CC	GO:0098798	mitochondrial protein-containing complex	32/439	300/19886	1.86E-13	1.10E-10	9.44E-11	ND2/COX7C/NDUFA5/UQCRQ/COX7A2/COX6C/COX7B/ATP5MJ/ATP5PF/MRPL40/ATP5F1C/MFN1/HADHA/MRPL3/COX7A2P2/NDUFA4/MRPL15/MRPL13/NDUFB2/MRPL22/TIMM8B/DNAJC15/MRPS28/MRPL1/MRPS23/MRPL47/ND4/TOMM5/MRPL32/MRPL50/IMMP1L/MICU3	32	0.073
CC	GO:0044391	ribosomal subunit	23/439	188/19886	3.10E-11	8.74E-09	7.52E-09	RPL34/RPL9/RPS7/RPS3A/RPL7/RPS27/RPS15A/RPL23/RPS17/MRPL40/RPL39/MRPL3/RPS27L/MRPL15/MRPL13/MRPL22/RPL26L1/MRPS28/MRPL1/MRPS23/MRPL47/MRPL32/MRPL50	23	0.052
CC	GO:0005840	ribosome	26/439	246/19886	4.45E-11	8.74E-09	7.52E-09	RPL34/RPL9/RPS7/RPS3A/RPL7/RPS27/RPS15A/RPL23/RPS17/MRPL40/RPL39/MRPL3/HBS1L/RSL24D1/RPS27L/MRPL15/MRPL13/MRPL22/RPL26L1/MRPS28/MRPL1/MRPS23/MRPL47/MRPL32/RPL22L1/MRPL50	26	0.059

CC	GO:0005743	mitochondrial inner membrane	36/439	497/19886	4.62E-10	6.80E-08	5.85E-08	ND2/COX7C/NDUFA5/UQCRQ/COX7A2/COX6C/COX7B/ATP5MJ/ATP5PF/MRPL40/ATP5F1C/HADHA/MRPL3/PLA2G4A/COQ2/COX7A2P2/NDUFA4/MRPL15/MRPL13/NDUFB2/MRPL22/TIMM8B/DNAJC15/MRPS28/MRPL1/MRPS23/COX16/ABCB10/TMEM126A/MRPL47/ND4/SMIM20/MRPL32/MRPL50/IMMP1L/MICU3	36	0.082
CC	GO:0015934	large ribosomal subunit	15/439	117/19886	4.59E-08	5.41E-06	4.65E-06	RPL34/RPL9/RPL7/RPL23/MRPL40/RPL39/MRPL3/MRPL15/MRPL13/MRPL22/RPL26L1/MRPL1/MRPL47/MRPL32/MRPL50	15	0.034
CC	GO:0098800	inner mitochondrial membrane protein complex	17/439	158/19886	8.18E-08	8.03E-06	6.91E-06	ND2/COX7C/NDUFA5/UQCRQ/COX7A2/COX6C/COX7B/ATP5MJ/ATP5PF/ATP5F1C/COX7A2P2/NDUFA4/NDUFB2/DNAJC15/ND4/IMMP1L/MICU3	17	0.039
CC	GO:0022626	cytosolic ribosome	13/439	118/19886	2.11E-06	1.77E-04	1.52E-04	RPL34/RPL9/RPS7/RPS3A/RPL7/RPS27/RPS15A/RPL23/RPS17/RPL39/HBS1L/RPS27L/RPL26L1	13	0.03
CC	GO:0000315	organellar large ribosomal subunit	9/439	56/19886	3.47E-06	2.23E-04	1.92E-04	MRPL40/MRPL3/MRPL15/MRPL13/MRPL22/MRPL1/MRPL47/MRPL32/MRPL50	9	0.021
CC	GO:0005762	mitochondrial large ribosomal subunit	9/439	56/19886	3.47E-06	2.23E-04	1.92E-04	MRPL40/MRPL3/MRPL15/MRPL13/MRPL22/MRPL1/MRPL47/MRPL32/MRPL50	9	0.021
CC	GO:0000313	organellar ribosome	11/439	89/19886	4.16E-06	2.23E-04	1.92E-04	MRPL40/MRPL3/MRPL15/MRPL13/MRPL22/MRPS28/MRPL1/MRPS23/MRPL47/MRPL32/MRPL50	11	0.025
CC	GO:0005761	mitochondrial ribosome	11/439	89/19886	4.16E-06	2.23E-04	1.92E-04	MRPL40/MRPL3/MRPL15/MRPL13/MRPL22/MRPS28/MRPL1/MRPS23/MRPL47/MRPL32/MRPL50	11	0.025
CC	GO:0098803	respiratory chain complex	11/439	91/19886	5.19E-06	2.54E-04	2.19E-04	ND2/COX7C/NDUFA5/UQCRQ/COX7A2/COX6C/COX7B/COX7A2P2/NDUFA4/NDUFB2/ND4	11	0.025
CC	GO:0005746	mitochondrial respirasome	11/439	94/19886	7.13E-06	3.23E-04	2.78E-04	ND2/COX7C/NDUFA5/UQCRQ/COX7A2/COX6C/COX7B/COX7A2P2/NDUFA4/NDUFB2/ND4	11	0.025
CC	GO:0005751	mitochondrial respiratory chain complex IV	6/439	25/19886	1.39E-05	5.84E-04	5.02E-04	COX7C/COX7A2/COX6C/COX7B/COX7A2P2/NDUFA4	6	0.014
CC	GO:0070469	respirasome	11/439	102/19886	1.57E-05	6.17E-04	5.30E-04	ND2/COX7C/NDUFA5/UQCRQ/COX7A2/COX6C/COX7B/COX7A2P2/NDUFA4/NDUFB2/ND4	11	0.025
CC	GO:0045277	respiratory chain complex IV	6/439	28/19886	2.79E-05	1.03E-03	8.83E-04	COX7C/COX7A2/COX6C/COX7B/COX7A2P2/NDUFA4	6	0.014
CC	GO:0070069	cytochrome complex	7/439	42/19886	3.37E-05	1.17E-03	1.00E-03	COX7C/UQCRQ/COX7A2/COX6C/COX7B/COX7A2P2/NDUFA4	7	0.016
CC	GO:0015935	small ribosomal subunit	8/439	75/19886	2.45E-04	7.70E-03	6.62E-03	RPS7/RPS3A/RPS27/RPS15A/RPS17/RPS27L/MRPS28/MRPS23	8	0.018
CC	GO:0005819	spindle	22/439	431/19886	2.56E-04	7.70E-03	6.62E-03	PTP4A1/PKP4/CDK1/PKD2/KAT2B/KIF11/CDC14A/HMMR/SPAST/HAUS3/MYH9/RIF1/TRAT1/CDC27/CHMP5/FBXO5/ECT2/DCUN1D5/HAUS1/MZT1/DYNLT2B/KBTBD8	22	0.05
CC	GO:0022627	cytosolic small ribosomal subunit	6/439	41/19886	2.61E-04	7.70E-03	6.62E-03	RPS7/RPS3A/RPS27/RPS15A/RPS17/RPS27L	6	0.014
CC	GO:0005689	U12-type spliceosomal complex	5/439	29/19886	3.93E-04	1.10E-02	9.47E-03	SF3B1/SNRPD1/LSM7/SNRPG/PHF5A	5	0.011
CC	GO:0071004	U2-type prespliceosome	4/439	17/19886	4.44E-04	1.14E-02	9.77E-03	SF3B1/LSM7/SNRPG/PRPF39	4	0.009
CC	GO:0071010	prespliceosome	4/439	17/19886	4.44E-04	1.14E-02	9.77E-03	SF3B1/LSM7/SNRPG/PRPF39	4	0.009
CC	GO:0034719	SMN-Sm protein complex	4/439	18/19886	5.61E-04	1.38E-02	1.18E-02	SNRPD1/GEMIN2/SNRPG/GEMIN6	4	0.009
CC	GO:0120114	Sm-like protein family complex	9/439	117/19886	1.16E-03	2.73E-02	2.35E-02	SF3B1/SNRPD1/LSM7/GEMIN2/SNRPG/LARP7/GEMIN6/PRPF39/PHF5A	9	0.021
CC	GO:0022625	cytosolic large ribosomal subunit	6/439	60/19886	2.05E-03	4.64E-02	3.98E-02	RPL34/RPL9/RPL7/RPL23/RPL39/RPL26L1	6	0.014
MF	GO:0003735	structural constituent of ribosome	22/431	176/18496	1.50E-10	1.27E-07	1.15E-07	RPL34/RPL9/RPS7/RPS3A/RPL7/RPS27/RPS15A/RPL23/RPS17/RPL39/MRPL3/RSL24D1/RPS27L/MRPL15/MRPL13/MRPL22/RPL26L1/MRPL1/MRPS23/MRPL47/MRPL32/RPL22L1	22	0.051

Supplementary Table 6. The details of KEGG analysis.

	Category	Subcategory	ID	Description	GeneRatio	BgRatio	pvalue	qvalue	geneID	Count
hsa03010	Genetic Information Processing	Translation	hsa03010	Ribosome	20/216	170/8773	5.61E-09	1.33E-06	6164/6133/6201/6189/6129/6232/6210/9349/6218/6170/11222/51187/51065/29088/28998/29093/51121/65008/64983/200916	20
hsa05171	Human Diseases	Infectious disease: viral	hsa05171	Coronavirus disease - COVID-19	18/216	233/8773	1.65E-05	1.92E-03	3716/6164/6133/6201/6189/6129/6232/6210/9349/6218/6885/6170/1147/51187/51065/29110/51121/200916	18
hsa00190	Metabolism	Energy metabolism	hsa00190	Oxidative phosphorylation	13/216	134/8773	2.43E-05	1.92E-03	4536/1350/4698/27089/1347/1345/1349/522/509/9550/4697/4708/4538	13
hsa05208	Human Diseases	Cancer: overview	hsa05208	Chemical carcinogenesis - reactive oxygen species	17/216	223/8773	3.39E-05	2.01E-03	4536/1350/4698/27089/1347/1345/1349/522/4893/2309/509/8644/1147/3082/4697/4708/4538	17
hsa05016	Human Diseases	Neurodegenerative disease	hsa05016	Huntington disease	19/216	306/8773	1.89E-04	8.94E-03	4536/1350/4698/5683/27089/1347/5706/1345/1349/522/5440/5430/836/5685/509/4697/55081/4708/4538	19
hsa05012	Human Diseases	Neurodegenerative disease	hsa05012	Parkinson disease	17/216	266/8773	2.95E-04	1.16E-02	4536/1350/4698/5683/27089/1347/5706/1345/1349/522/836/5685/509/55669/4697/4708/4538	17
hsa04115	Cellular Processes	Cell growth and death	hsa04115	p53 signaling pathway	8/216	75/8773	4.85E-04	1.64E-02	896/6241/836/983/5366/355/3486/92344	8
hsa04714	Organismal Systems	Environmental adaptation	hsa04714	Thermogenesis	15/216	232/8773	5.94E-04	1.67E-02	4536/6599/1350/4698/27089/1347/1345/1349/522/4893/509/4697/4708/51241/4538	15
hsa05014	Human Diseases	Neurodegenerative disease	hsa05014	Amyotrophic lateral sclerosis	20/216	364/8773	6.33E-04	1.67E-02	203228/4536/1350/4698/5683/27089/1347/5706/1345/1349/522/836/5685/9818/509/55916/4697/4708/29110	20
hsa05020	Human Diseases	Neurodegenerative disease	hsa05020	Prion disease	16/216	272/8773	1.09E-03	2.58E-02	4536/1350/4698/5683/27089/1347/5706/1345/1349/522/836/5685/509/4697/4708/4538	16
hsa04672	Organismal Systems	Immune system	hsa04672	Intestinal immune network for IgA production	6/216	49/8773	1.20E-03	2.58E-02	3676/3600/940/608/29851/10673	6
hsa05010	Human Diseases	Neurodegenerative disease	hsa05010	Alzheimer disease	19/216	384/8773	2.90E-03	5.72E-02	4536/1350/4698/5683/27089/1347/5706/1345/1349/522/4893/836/5685/355/509/1147/4697/4708/4538	19
hsa05022	Human Diseases	Neurodegenerative disease	hsa05022	Pathways of neurodegeneration - multiple diseases	22/216	476/8773	3.20E-03	5.84E-02	203228/4536/1350/4698/5683/27089/1347/5706/1345/1349/522/4893/836/5685/355/509/55669/4697/55081/4708/29110/4538	22
hsa05415	Human Diseases	Cardiovascular disease	hsa05415	Diabetic cardiomyopathy	12/216	203/8773	4.33E-03	6.93E-02	4536/1350/4698/27089/1347/1345/1349/522/509/4697/4708/4538	12
hsa03420	Genetic Information Processing	Replication and repair	hsa03420	Nucleotide excision repair	6/216	63/8773	4.39E-03	6.93E-02	56655/5440/5430/5983/6119/9978	6
hsa04932	Human Diseases	Endocrine and metabolic disease	hsa04932	Non-alcoholic fatty liver disease	10/216	155/8773	4.89E-03	7.23E-02	1350/4698/27089/1347/1345/1349/836/355/4697/4708	10
hsa04210	Cellular Processes	Cell growth and death	hsa04210	Apoptosis	9/216	135/8773	6.04E-03	8.41E-02	329/4893/8743/836/5366/355/597/1147/330	9
hsa04668	Environmental Information Processing	Signal transduction	hsa04668	TNF signaling pathway	8/216	114/8773	7.00E-03	8.86E-02	329/836/355/3600/8809/6885/1147/330	8
hsa05222	Human Diseases	Cancer: specific types	hsa05222	Small cell lung cancer	7/216	92/8773	7.43E-03	8.86E-02	1163/329/3685/836/1164/1147/330	7
hsa04215	Cellular Processes	Cell growth and death	hsa04215	Apoptosis - multiple species	4/216	32/8773	7.48E-03	8.86E-02	329/836/5366/330	4
hsa04110	Cellular Processes	Cell growth and death	hsa04110	Cell cycle	9/216	157/8773	1.54E-02	1.66E-01	896/983/5000/1031/8556/10393/996/9978/26271	9
hsa04514	Environmental Information Processing	Signaling molecules and interaction	hsa04514	Cell adhesion molecules	9/216	157/8773	1.54E-02	1.66E-01	5175/3685/965/3676/940/10666/2734/29851/201633	9
hsa05145	Human Diseases	Infectious disease: parasitic	hsa05145	Toxoplasmosis	7/216	111/8773	1.95E-02	2.01E-01	3716/329/836/6885/1147/3458/330	7
hsa05162	Human Diseases	Infectious disease: viral	hsa05162	Measles	8/216	138/8773	2.05E-02	2.02E-01	3716/896/836/355/940/6885/1147/29110	8
hsa04120	Genetic Information Processing	Folding, sorting and degradation	hsa04120	Ubiquitin mediated proteolysis	8/216	142/8773	2.39E-02	2.26E-01	329/6921/10393/330/11059/996/9978/55120	8
hsa05164	Human Diseases	Infectious disease: viral	hsa05164	Influenza A	9/216	171/8773	2.53E-02	2.28E-01	3716/896/8743/836/355/55916/1147/3458/29110	9
hsa03050	Genetic Information Processing	Folding, sorting and degradation	hsa03050	Proteasome	4/216	46/8773	2.60E-02	2.28E-01	5683/5706/5685/3458	4
hsa04622	Organismal Systems	Immune system	hsa04622	RIG-I-like receptor signaling pathway	5/216	72/8773	3.19E-02	2.70E-01	9474/6885/1147/64343/29110	5
hsa01524	Human Diseases	Drug resistance: antineoplastic	hsa01524	Platinum drug resistance	5/216	73/8773	3.36E-02	2.74E-01	329/836/5366/355/330	5
hsa04621	Organismal Systems	Immune system	hsa04621	NOD-like receptor signaling pathway	9/216	186/8773	4.02E-02	3.17E-01	3716/329/9474/6885/55669/1147/330/29110/2635	9
hsa04217	Cellular Processes	Cell growth and death	hsa04217	Necroptosis	8/216	159/8773	4.26E-02	3.21E-01	3716/329/8743/355/5321/3458/330/51510	8
hsa04650	Organismal Systems	Immune system	hsa04650	Natural killer cell mediated cytotoxicity	7/216	132/8773	4.43E-02	3.21E-01	4893/8743/836/355/3823/4068/3458	7
hsa04064	Environmental Information Processing	Signal transduction	hsa04064	NF-kappa B signaling pathway	6/216	105/8773	4.47E-02	3.21E-01	329/597/6885/1147/330/10673	6
hsa05166	Human Diseases	Infectious disease: viral	hsa05166	Human T-cell leukemia virus 1 infection	10/216	222/8773	4.76E-02	3.31E-01	3716/896/4893/8850/1031/3600/10393/1147/996/4801	10

Supplementary Table 7. The genes selected by the machine-learning models.

LASSO	ElasticNet	RF	SVM
HADHA	HADHA	HADHA	HADHA
JAK1	JAK1	JAK1	JAK1
NRAS	BRD4	TBK1	BRD4
BRD4	TBK1	BRD4	TBK1
ATG5	NRAS	ATG5	HMGB2
SPRED1	TNFSF13B	NRAS	TNFSF13B
TNFSF13B	TNFSF10	CXCL10	ATG5
WWP1	ATG5	TNFSF13B	NRAS
	MAP3K7	IFIH1	TNFSF10
	HMGB2	HMGB2	IFIH1
	IFIH1	TNFSF10	CASP3
	CASP3		MAP3K7
	CXCL10		CXCL10
	ANXA1		LY96
	ISG15		ANXA1
			STAT1
			TIFA
			ISG15
			BIRC2
			SPRED1
			GZMA
			FAS

Supplementary Table 8. The predictive performance of the machine-learning models.

Models	Dataset	AUC	Sensitivity	Specificity	PPV	NPV
LASSO	Training	0.994	0.967	0.933	0.935	0.965
LASSO	Validation1	0.705	0.733	0.586	0.889	0.327
LASSO	Validation2	0.749	0.758	0.688	0.935	0.324
ElasticNet	Training	0.992	0.967	0.902	0.906	0.964
ElasticNet	Validation1	0.795	0.829	0.941	0.987	0.549
ElasticNet	Validation2	0.813	0.838	0.924	0.988	0.489
SVM	Training	0.983	0.967	0.844	0.854	0.962
SVM	Validation1	0.824	0.876	0.828	0.958	0.6
SVM	Validation2	0.815	0.77	0.812	0.961	0.371
RF	Training	0.983	0.933	0.9	0.903	0.931
RF	Validation1	0.837	0.74	0.897	0.97	0.433
RF	Validation2	0.807	0.876	0.875	0.98	0.531

Supplementary Table 9. The weighted score of genes selected by models.

Gene	Frequency	Weighted_Score
HADHA	4	0.286383
JAK1	4	0.064867
BRD4	4	0.042163
ATG5	3	0.063837838
NRAS	3	0.061121622
TNFSF13E	3	0.029952703
TBK1	3	0.021193506
WWP1	2	0.03
SPRED1	2	0.028902041
MAP3K7	1	0.0246
TNFSF10	1	0.0105

Supplementary Table 10. Binding energies of the molecular docking between potential drugs and hub PSGs (kcal/mol).

	Danazol_CID_28417	Chlorhexidine_CID_9552079	Ampyrone_CID_138402726	Capsaicin_CID_1548943	N_Acetyl_L_cysteine_CID_12035	Methylprednisolone_CID_6741
HADHA (5ZQZ)	-9.1	-9.1	-6.1	-6.7	-4.4	-7.5
JAK1 (3EYG)	-8.9	-9.2	-7.5	-6.9	-4.3	-7.2
BRD4 (2NNU)	-7.3	-8.1	-5.9	-5.8	-4.3	-7.7
NRAS (3CON)	-8.1	-7.7	-6.7	-7.4	-5.1	-7.4
ATG5 (4GDK)	-8.6	-7.1	-6.4	-6.5	-5	-8.3