

Table SI. Top 200 upregulated DEGs and the top 200 downregulated DEGs.

Upregulated DEGs	T-test value	P-value	Downregulated DEGs	T-test value	P-value
PPAP2C	10.48	<0.001	GLMP	-4.95	<0.001
IL20RA	8.91	<0.001	SAYS1D	-4.96	<0.001
CDKN1A	8.82	<0.001	ELF4	-4.96	<0.001
CCDC125	8.39	<0.001	ADGRF3	-4.96	<0.001
MKNK2	8.24	<0.001	HVLP	-4.97	<0.001
HADH	8.09	<0.001	U2SURP	-4.98	<0.001
LOC101928690	8.04	<0.001	DPM1	-4.99	<0.001
SORBS2	8.04	<0.001	MAGOH	-4.99	<0.001
XPNPEPL	7.98	<0.001	LOC200227	-4.99	<0.001
PAQR4	7.92	<0.001	TOC	-5.00	<0.001
ARL4D	7.89	<0.001	ZBED9	-5.00	<0.001
KDM4B	7.81	<0.001	CELF4	-5.00	<0.001
ATP2C2	7.79	<0.001	DHX36	-5.01	<0.001
MGC5370	7.77	<0.001	LOC221364	-5.01	<0.001
SLC27A2	7.73	<0.001	ZNF519	-5.01	<0.001
ABHD5	7.61	<0.001	LOC220729	-5.01	<0.001
SCAMP4	7.61	<0.001	LOC642749	-5.01	<0.001
KIAA1324	7.59	<0.001	LOC102723892	-5.01	<0.001
ESR1	7.59	<0.001	RNLS	-5.02	<0.001
PHKB	7.55	<0.001	BCL2L1	-5.03	<0.001
VPS26B	7.55	<0.001	DYRK2	-5.05	<0.001
KFSD	7.47	<0.001	LATS2	-5.05	<0.001
BSPRY	7.45	<0.001	PARS2	-5.06	<0.001
ENTPD3	7.45	<0.001	FAM117A	-5.06	<0.001
SPDEF	7.20	<0.001	LOC348522	-5.06	<0.001
FDFT1	7.14	<0.001	SCRN1	-5.07	<0.001
ACOX3	7.13	<0.001	FNBP1	-5.07	<0.001
RPS27L	7.11	<0.001	BEX2	-5.07	<0.001
GALNT10	7.11	<0.001	POLQ	-5.09	<0.001
PIK3R3	7.08	<0.001	IRF5	-5.09	<0.001
LOC115469	7.04	<0.001	DIPP	-5.10	<0.001
B4GALNT3	7.04	<0.001	NOL11	-5.10	<0.001
C5AR2	6.96	<0.001	POFUT1	-5.11	<0.001
LOC91413	6.85	<0.001	MRGBP	-5.11	<0.001
COX18	6.84	<0.001	YEATS2	-5.11	<0.001
LPCAT2	6.79	<0.001	TNFSF10	-5.12	<0.001
MON1B	6.79	<0.001	AMPD2	-5.13	<0.001
LOC92033	6.76	<0.001	KCTD1	-5.14	<0.001
DKFZP586J0523	6.74	<0.001	PPT1	-5.16	<0.001
C6orf2	6.71	<0.001	COA5	-5.16	<0.001
AEN	6.70	<0.001	LAMA5	-5.16	<0.001
HSD17B4	6.69	<0.001	PXDC1	-5.17	<0.001
SGCB	6.63	<0.001	LINC00472	-5.17	<0.001
SEC16A	6.61	<0.001	C6ORF62	-5.18	<0.001
RAB11FIP3	6.61	<0.001	MTF2	-5.18	<0.001
CHMP7	6.54	<0.001	RAE1	-5.19	<0.001
RASSF6	6.53	<0.001	C3ORF17	-5.19	<0.001
CCDC160	6.51	<0.001	ITGB8	-5.19	<0.001
FOXA2	6.49	<0.001	DKFZp762M186	-5.20	<0.001
TTC38	6.47	<0.001	USP32	-5.20	<0.001
KDM7A	6.46	<0.001	HCG18	-5.21	<0.001
EEF2	6.45	<0.001	NUDT16P1	-5.22	<0.001
INTS10	6.45	<0.001	DKFZP434H0350	-5.23	<0.001
HSBP1	6.44	<0.001	ACVR1B	-5.23	<0.001
PGR	6.42	<0.001	TTK	-5.23	<0.001
AADAT	6.41	<0.001	PPP4R1L	-5.23	<0.001

Table SI. Continued.

Upregulated DEGs	T-test value	P-value	Downregulated DEGs	T-test value	P-value
VIM	6.38	<0.001	DHX35	-5.26	<0.001
TRPM4	6.36	<0.001	NFYA	-5.27	<0.001
C10ORF32	6.35	<0.001	PAPLN	-5.28	<0.001
GNB5	6.33	<0.001	TSC22D2	-5.28	<0.001
CRYL1	6.29	<0.001	DNAJC13	-5.29	<0.001
AP3D1	6.28	<0.001	PTBP2	-5.29	<0.001
SGSM3	6.27	<0.001	C6orf114	-5.29	<0.001
TMEM62	6.27	<0.001	AURKA	-5.30	<0.001
MCPH1	6.24	<0.001	HOK-2	-5.30	<0.001
RBBP7	6.22	<0.001	XPO1	-5.31	<0.001
SLC11A2	6.20	<0.001	TTI1	-5.32	<0.001
HSDL1	6.19	<0.001	MRPS22	-5.32	<0.001
TJP3	6.17	<0.001	STON2	-5.32	<0.001
OSTF1	6.16	<0.001	GTF3C2	-5.33	<0.001
C9ORF152	6.16	<0.001	MSL3L2	-5.33	<0.001
ANO1	6.16	<0.001	LINC00667	-5.33	<0.001
STAP2	6.11	<0.001	MOCS3	-5.33	<0.001
KIAA1532	6.11	<0.001	CDR2L	-5.33	<0.001
WSB2	6.09	<0.001	WDR43	-5.34	<0.001
SH3RF2	6.07	<0.001	LOC131725	-5.34	<0.001
CAMK2N1	6.06	<0.001	LOC88724	-5.34	<0.001
SOX17	6.05	<0.001	MFF	-5.34	<0.001
HS3ST1	6.04	<0.001	FXR1	-5.34	<0.001
DAPK2	6.03	<0.001	LOC148971	-5.34	<0.001
BBC3	6.02	<0.001	NGDN	-5.35	<0.001
JHDM1D-AS1	6.01	<0.001	KIAA0338	-5.35	<0.001
CYB5R1	5.99	<0.001	CMTR1	-5.35	<0.001
CSNK1G2	5.97	<0.001	LOC135763	-5.35	<0.001
HSPC236	5.97	<0.001	SCN8A	-5.37	<0.001
TTC9	5.95	<0.001	FLJ20756	-5.37	<0.001
PPP2R2C	5.95	<0.001	SRGAP1	-5.38	<0.001
PHLDA1	5.95	<0.001	EHHADH	-5.38	<0.001
SALL1	5.95	<0.001	LOC100508721	-5.38	<0.001
PLIN3	5.94	<0.001	EHD3	-5.38	<0.001
FAM214A	5.92	<0.001	CRIM1	-5.41	<0.001
CA8	5.92	<0.001	MGAT4A	-5.41	<0.001
LEF1	5.92	<0.001	INPP4A	-5.41	<0.001
SEC61B	5.91	<0.001	ELMO2	-5.43	<0.001
CHDH	5.91	<0.001	TBL1XR1	-5.45	<0.001
PIGR	5.91	<0.001	PAX8	-5.45	<0.001
EXPH5	5.91	<0.001	STARD7	-5.45	<0.001
TNFRSF10B	5.90	<0.001	REP15	-5.46	<0.001
ELF5	5.87	<0.001	ERF	-5.46	<0.001
LOC51578	5.86	<0.001	LOC149670	-5.46	<0.001
HMG20B	5.86	<0.001	LOC51589	-5.46	<0.001
TMX4	5.86	<0.001	PRTH	-5.47	<0.001
ZBTB18	5.85	<0.001	GPRC5C	-5.48	<0.001
ABR	5.84	<0.001	ZNF192P1	-5.48	<0.001
FLJ22593	5.83	<0.001	CADASIL	-5.48	<0.001
ELP3	5.83	<0.001	TM9SF4	-5.49	<0.001
LOC102724791	5.82	<0.001	RNF213	-5.50	<0.001
STEAP1	5.82	<0.001	HSPC056	-5.50	<0.001
HSDL2	5.82	<0.001	ARMCX1	-5.50	<0.001
LOC118736	5.82	<0.001	GPR158	-5.51	<0.001
ATP6V0E2	5.82	<0.001	LOC100130182	-5.52	<0.001
TP73	5.82	<0.001	WBP5	-5.53	<0.001

Table SI. Continued.

Upregulated DEGs	T-test value	P-value	Downregulated DEGs	T-test value	P-value
LOC649350	5.81	<0.001	ZNF98	-5.53	<0.001
CYB5A	5.81	<0.001	BEX4	-5.53	<0.001
LOC92497	5.81	<0.001	RBMS1	-5.56	<0.001
CRACR2B	5.80	<0.001	LINC00657	-5.56	<0.001
NANS	5.78	<0.001	SLCO3A1	-5.59	<0.001
SLC12A2	5.78	<0.001	BLOC1S5	-5.59	<0.001
ARSD	5.77	<0.001	TRIM39	-5.60	<0.001
PTPN3	5.77	<0.001	TMCC3	-5.60	<0.001
SCP	5.77	<0.001	E2F3	-5.60	<0.001
LOC129863	5.76	<0.001	DVL3	-5.60	<0.001
SMYD2	5.73	<0.001	ZNF64	-5.61	<0.001
TMPRSS13	5.73	<0.001	RTFDC1	-5.62	<0.001
MRAP2	5.73	<0.001	GMEB2	-5.63	<0.001
DFNB49	5.72	<0.001	RASL7A	-5.64	<0.001
ARHGAP26	5.72	<0.001	LOC220808	-5.64	<0.001
PHLPP1	5.70	<0.001	SLC38A9	-5.70	<0.001
DOT1L	5.69	<0.001	FAM131A	-5.70	<0.001
NEIL2	5.69	<0.001	ARHGAP23	-5.72	<0.001
DKFZP586D1519	5.67	<0.001	STK38	-5.72	<0.001
KCTD14	5.67	<0.001	MAGED2	-5.73	<0.001
EEN	5.66	<0.001	HSPBAP1	-5.73	<0.001
PI4K2B	5.66	<0.001	CSTF1	-5.74	<0.001
LMF1	5.64	<0.001	PLAG1	-5.76	<0.001
TTC19	5.63	<0.001	CLDN6	-5.77	<0.001
SLC35D2	5.62	<0.001	LSG1	-5.77	<0.001
DYNLT1	5.60	<0.001	CDKN2A-AS1	-5.79	<0.001
SIPA1L2	5.60	<0.001	PPP2R3A	-5.79	<0.001
DTWD1	5.60	<0.001	TMEM127	-5.79	<0.001
R3HCC1	5.59	<0.001	ALS2CR1	-5.79	<0.001
PLEKHS1	5.59	<0.001	THEMIS2	-5.80	<0.001
VMAC	5.59	<0.001	PRO1068	-5.80	<0.001
MCF2L	5.57	<0.001	CDKN2B	-5.80	<0.001
TRPS1	5.56	<0.001	SENP5	-5.82	<0.001
SLC47A1	5.54	<0.001	MIC5	-5.84	<0.001
NUDT18	5.54	<0.001	MFSD6L	-5.84	<0.001
ALG9	5.52	<0.001	SLC8A1	-5.84	<0.001
PRR5L	5.51	<0.001	AJUBA	-5.85	<0.001
FLJ21736	5.51	<0.001	KANSL3	-5.85	<0.001
ROBO2	5.50	<0.001	FLS353	-5.87	<0.001
GOLT1A	5.50	<0.001	TAF1B	-5.88	<0.001
FAM46C	5.50	<0.001	CIAO1	-5.89	<0.001
SEPN1	5.50	<0.001	WDR53	-5.89	<0.001
PLA2G4A	5.50	<0.001	BAK1	-5.89	<0.001
TAPT1	5.49	<0.001	KIAA0989	-5.90	<0.001
ADAMTS19	5.49	<0.001	TFG	-5.90	<0.001
KLHL25	5.48	<0.001	FLJ10215	-5.96	<0.001
CLIM1	5.45	<0.001	ANKRD13A	-5.99	<0.001
ERMN	5.45	<0.001	TMEM41A	-5.99	<0.001
KDELC2	5.43	<0.001	NUAK2	-6.00	<0.001
SIDT1	5.43	<0.001	TJAP1	-6.02	<0.001
SESN1	5.41	<0.001	C6ORF132	-6.06	<0.001
GEMIN8	5.40	<0.001	RP42	-6.08	<0.001
CAPS	5.39	<0.001	MB21D2	-6.11	<0.001
MYO5C	5.39	<0.001	NHLRC1	-6.12	<0.001
SARAF	5.39	<0.001	MGC11139	-6.18	<0.001
NEIL1	5.39	<0.001	GNA13	-6.20	<0.001

Table SI. Continued.

Upregulated DEGs	T-test value	P-value	Downregulated DEGs	T-test value	P-value
FH	5.38	<0.001	SENP2	-6.23	<0.001
GMPPB	5.37	<0.001	PBX2	-6.26	<0.001
CBFB	5.37	<0.001	FIGNL2	-6.29	<0.001
MOB3A	5.37	<0.001	ARHGAP29	-6.30	<0.001
NLRX1	5.36	<0.001	NDUFAF7	-6.34	<0.001
MPZL2	5.35	<0.001	SPATA2	-6.44	<0.001
ELOVL5	5.34	<0.001	YIPF4	-6.45	<0.001
LOC116013	5.34	<0.001	ATP8B2	-6.45	<0.001
FAM200B	5.33	<0.001	HIF3A	-6.46	<0.001
EFTUD1	5.33	<0.001	IGF2BP2	-6.47	<0.001
CCDC159	5.33	<0.001	WNT7A	-6.52	<0.001
LNX	5.32	<0.001	LOC105374030	-6.53	<0.001
ZFHX3	5.32	<0.001	PRKCI	-6.59	<0.001
IRAK4	5.32	<0.001	TFDP2	-6.61	<0.001
EIF4E	5.32	<0.001	MAGEH1	-6.62	<0.001
FAM149A	5.31	<0.001	SFMBT1	-6.73	<0.001
PNCA1	5.31	<0.001	PTPN2	-6.73	<0.001
TRIM2	5.31	<0.001	FLJ25157	-6.73	<0.001
FBXL5	5.29	<0.001	LOC100129188	-6.78	<0.001
INSIG1	5.29	<0.001	TMEM185B	-6.93	<0.001
EPHA7	5.28	<0.001	SIRT5	-6.98	<0.001
PRR15	5.28	<0.001	FLJ13164	-7.04	<0.001
ZNF516	5.28	<0.001	NOL4L	-7.06	<0.001
COBL	5.28	<0.001	PARD6B	-7.09	<0.001
FAM219B	5.27	<0.001	CDKN2A	-7.11	<0.001
ZFYVE19	5.27	<0.001	GLIS2	-7.14	<0.001
LOC133400	5.26	<0.001	ERK	-7.15	<0.001
TTI2	5.26	<0.001	LOC115125	-7.15	<0.001
TSPAN5	5.25	<0.001	LDAH	-7.22	<0.001
PKDCC	5.25	<0.001	FLJ22673	-7.28	<0.001
COLCA1	5.25	<0.001	LOC100131190	-7.52	<0.001
NMRK1	5.24	<0.001	DDX27	-7.72	<0.001

P<0.05 was considered to indicate a statistically significant result. DEG, differentially expressed gene.