

Supplementary Table 1

Gene	log2 fold change	FDR <i>P</i> value	Gene	log2 fold change	FDR <i>P</i> value
TPPP3	4.197426995	1.88E-02	SLITRK1	-3.72781887	1.49E-02
AC011462.1	3.961167125	2.44E-02	PAGE1	-3.727008449	5.76E-03
EEF1E1-BLOC1S5	3.917524841	1.42E-02	HS3ST5	-3.714691237	5.44E-03
FOXH1	3.831039929	1.49E-02	POTEC	-3.710692466	6.58E-05
MYOM2	3.814673057	1.83E-02	SYT4	-3.707993031	2.81E-02
HIST1H2AD	3.59259881	5.75E-03	RPTN	-3.696352189	1.41E-04
FSCN1	3.454846041	2.42E-02	FGA	-3.695158569	2.60E-05
CYGB	3.431886797	3.41E-02	HSFY1	-3.68908496	3.59E-02
AC011452.2	3.236418793	1.64E-02	KRT6A	-3.665687132	2.72E-03
IGSF9	3.115311225	1.03E-02	IFNA4	-3.6644516	4.97E-02
PHLDA2	3.021206009	6.98E-03	RFPL4AL1	-3.630948991	5.97E-03
MYBPC2	2.981840635	4.61E-02	OR4D10	-3.61659217	4.12E-03
PSORS1C1	2.818304748	3.79E-02	SPATA31D3	-3.612413327	3.41E-03
PANK1	2.802544885	1.98E-02	GYPB	-3.605150674	3.10E-02
HIST1H2BO	2.730128445	4.19E-03	CT45A5	-3.602945693	1.33E-02
HSPA6	2.726492764	3.30E-03	NPY1R	-3.571919248	1.49E-02
FXD2	2.725484448	1.07E-04	MYL2	-3.560794827	6.38E-03
HBA1	2.709679939	6.31E-04	OR52N2	-3.540757464	1.38E-02
PEAK3	2.562601043	3.59E-02	PRL	-3.527743289	1.27E-02
HIST1H3I	2.497146564	1.82E-03	CHRM2	-3.518298802	2.72E-03
FGFBP2	2.46290405	4.12E-03	DUOX2	-3.501612258	5.09E-03
HSPA1A	2.450703969	6.98E-03	TRIM49B	-3.501375591	1.18E-05
GPR141	2.388509182	4.96E-02	PRAMEF15	-3.49081866	3.01E-03
HIST2H2AB	2.361692631	1.14E-02	MYH2	-3.486691273	5.22E-09
H2AFX	2.355853294	1.49E-03	CALCRL	-3.480381815	6.16E-03
GCHFR	2.329714908	4.07E-03	PSG1	-3.437969542	3.01E-02
RIMS3	2.262027915	1.43E-04	CSNK1A1L	-3.434329619	4.25E-02
CATSPER1	2.250983091	3.99E-02	AICDA	-3.424202324	5.52E-03
AL121845.3	2.232891655	6.09E-03	EPGN	-3.414740471	1.99E-02
HIST1H3F	2.216586131	2.85E-02	EMX2	-3.393279653	4.82E-02
LGALS1	2.188975151	1.06E-06	NDNF	-3.382733142	1.26E-02
BBC3	2.18459262	1.48E-02	NEFL	-3.326194441	1.74E-03
HILPDA	2.172906682	1.93E-02	AMY1C	-3.324616482	2.08E-02
HIST1H2BM	2.165116039	3.84E-02	KRT6C	-3.312918259	2.36E-02
HIST1H2BB	2.123431504	1.28E-02	SSX5	-3.310372278	4.72E-02
SLC2A14	2.107328087	4.58E-02	CCDC85A	-3.29421739	2.76E-02
HIST1H4L	2.105328887	1.59E-02	PDE11A	-3.293877462	1.42E-02
HIST1H2BJ	2.094711455	4.23E-03	TXNDC2	-3.255927579	2.30E-02
CES1	2.086572777	1.49E-02	HNRNPCL3	-3.242355778	8.62E-03

KLF2	2.072401514	1.62E-03	MMP13	-3.24233104	2.71E-03
ADAMTSL5	2.070630302	4.19E-02	OR10K1	-3.236162926	9.99E-03
LSM7	2.044729088	1.16E-03	OMD	-3.22677736	8.88E-04
CAPN8	2.030590867	2.98E-02	HHIP	-3.208959671	1.43E-02
HIST2H4A	2.005953475	6.36E-03	ZNF99	-3.207649333	7.91E-04
RPL28	2.004904358	5.96E-05	XAGE1A	-3.205311165	1.12E-02
HIST1H2BG	2.003266839	2.41E-03	PRAMEF19	-3.190134662	2.56E-02
MRPL54	2.001463877	3.36E-04	SSX7	-3.143499668	4.60E-02
TMEM191B	1.994976019	2.12E-06	OR6Q1	-3.137277365	4.89E-02
PTGDS	1.981154049	3.06E-02	DAW1	-3.136803075	4.10E-04
PXN	1.976412589	4.23E-03	OR4F4	-3.136521872	6.40E-03
LMNA	1.949646434	1.50E-02	SPATA31A7	-3.133825764	5.69E-03
DNAJB1	1.947260839	2.16E-02	ZNF479	-3.131940055	5.82E-05
HIST2H3D	1.941638238	4.76E-03	P2RY12	-3.127378809	5.75E-03
TMEM191C	1.940010079	9.88E-04	F13B	-3.127016397	7.91E-04
MZT2A	1.925756411	6.92E-04	OR10K2	-3.125400412	5.00E-02
RPS15	1.911506967	6.65E-04	HBG2	-3.116670955	3.97E-03
C2orf92	1.905609194	4.58E-02	POTEM	-3.109878764	1.81E-04
A1BG	1.904261503	2.72E-03	STEAP1	-3.065217704	1.47E-02
TEX14	1.901420737	5.57E-03	PHEX	-3.059164876	1.02E-03
EGR1	1.89598458	2.51E-03	CDRT15	-3.052013445	3.11E-02
HIST2H2BE	1.883936691	4.20E-02	OR4F3	-3.037394805	5.90E-04
UQCR11	1.883083136	6.92E-04	ZNF716	-3.036927829	7.38E-05
FAM229A	1.867037953	4.58E-02	OR4F17	-3.031381363	3.75E-03
HIST3H2BB	1.848410105	4.28E-03	TRIM51GP	-3.020690326	8.32E-03
C11orf98	1.846365188	8.21E-03	USP17L22	-3.011796752	1.85E-04
BTBD19	1.835706908	2.01E-02	CLCA4	-2.987791586	1.57E-03
OSBPL5	1.834700609	1.43E-02	USP17L25	-2.986631879	2.51E-03
HIST1H4H	1.825680115	8.02E-03	OR4D11	-2.976989887	1.29E-02
IER2	1.824300269	2.96E-03	MSTN	-2.972765959	3.40E-02
BORCS8	1.814390242	3.09E-03	MNS1	-2.970948687	1.54E-02
ELOB	1.813536873	3.31E-03	ZNF729	-2.942873158	9.71E-05
HIST2H2AA3	1.810073817	3.32E-03	ADH1C	-2.934291553	2.09E-02
XCL2	1.80099794	2.04E-02	GAGE2E	-2.929302773	1.06E-03
TIMP1	1.79586615	2.45E-02	LRRTM3	-2.927006632	3.62E-02
DUSP1	1.791197526	2.97E-02	FGF10	-2.923809817	6.98E-03
UQCC3	1.789340115	6.98E-03	TRHR	-2.923289407	9.92E-04
TMEM160	1.781020201	5.50E-04	MUC22	-2.914439576	1.95E-02
SDHAF1	1.776096549	3.14E-02	PRAMEF18	-2.906559787	2.81E-02
RPS26	1.775078597	4.02E-02	OPRPN	-2.899569134	3.68E-02
HIST1H2AC	1.77379034	1.83E-02	ODAM	-2.898900145	8.22E-03
HIST1H3A	1.773429588	7.64E-04	SLC7A14	-2.894094776	3.66E-02
HIST1H4F	1.772885653	3.51E-02	ZNF676	-2.891012808	1.16E-04

SF3B5	1.768329799	1.57E-03	OVCH1	-2.871177811	1.69E-03
METRNL	1.767029084	1.81E-02	DSPP	-2.862546679	1.51E-04
CCDC85B	1.766159539	3.88E-02	C18orf63	-2.846995703	7.38E-05
MYPOP	1.761695011	4.35E-02	BMP5	-2.838802751	2.67E-04
HIST1H4I	1.760787957	3.88E-02	NXPE4	-2.813217578	1.45E-02
MRPL41	1.756457112	3.27E-03	CASQ2	-2.813197369	9.23E-03
FAM153C	1.745748637	4.51E-02	IL13RA2	-2.785938559	3.82E-02
TMEM238	1.743778793	4.91E-02	TMEM26	-2.783209453	1.87E-02
TOMM7	1.739891117	9.00E-04	CLDN16	-2.776670673	7.91E-04
DDIT3	1.728121832	5.49E-03	RFX6	-2.771423462	1.85E-04
MRPS12	1.727456487	8.01E-04	PRDM5	-2.769111866	8.24E-05
TRAPPC5	1.723768441	1.43E-03	OCRL	-2.763537216	2.76E-03
CYP2F1	1.720223816	1.45E-02	PRAMEF25	-2.755590013	1.99E-02
DNLZ	1.718273952	2.57E-03	GAGE1	-2.753989881	3.40E-03
FAM229B	1.71077635	3.59E-02	OR11H1	-2.748828557	1.43E-03
NPM2	1.7019092	4.08E-02	SPAM1	-2.737570828	3.30E-02
NDUFAF8	1.701348873	2.51E-03	KRT25	-2.735178264	3.29E-02
NDUFB7	1.700560731	1.97E-03	ANGPTL3	-2.728391241	4.75E-02
POLR2L	1.700217066	4.76E-03	AGXT2	-2.725685223	1.57E-03
IL17RC	1.693942539	1.09E-02	GCKR	-2.71731009	3.01E-02
SCAND1	1.689921015	8.02E-03	PLCZ1	-2.711370484	1.06E-03
DEDD2	1.672643529	4.07E-03	PNLDC1	-2.71012199	4.55E-03
PTRH1	1.663565701	1.75E-03	ANGPTL5	-2.709566935	2.20E-02
RPS28	1.662756344	2.76E-02	IL22	-2.709112318	3.94E-02
C4orf48	1.660238786	2.67E-02	FAM189A2	-2.702030944	5.68E-03
CTU1	1.656103073	2.76E-02	FRZB	-2.698157487	3.21E-02
PTRHD1	1.653734175	9.00E-04	ASIC5	-2.696692197	4.70E-02
HIST1H2AM	1.644740722	4.23E-03	CSN1S1	-2.683089043	9.70E-03
GADD45B	1.644566839	1.49E-02	HMGCS2	-2.668385397	2.53E-02
HIST1H3D	1.642193236	1.49E-02	MAP1B	-2.65854671	1.67E-03
GAS7	1.639447364	4.50E-02	USP17L26	-2.64412078	4.25E-03
POMC	1.63279584	3.03E-02	GRPR	-2.627493361	2.44E-02
UBALD1	1.630892912	4.20E-02	H3F3C	-2.627087205	2.49E-02
C19orf53	1.630138242	8.32E-04	TRIM51	-2.626754271	2.69E-03
AC005258.1	1.627880058	3.72E-02	RPE65	-2.616438244	4.00E-03
CD70	1.626619001	1.48E-02	NRK	-2.610760905	6.93E-04
RPL41	1.623413211	2.61E-04	SLCO1B3- SLCO1B7	-2.608975263	2.16E-02
TMEM229B	1.616916351	3.90E-02	ACKR4	-2.604310846	7.03E-03
BMP8A	1.596354123	1.49E-02	SSX4	-2.596057432	1.76E-02
S1PR1	1.595679018	3.34E-02	DEFB107B	-2.588249198	4.42E-02
HIST1H2AI	1.595600239	2.76E-02	NLRP14	-2.581021721	1.31E-05
HIC2	1.595233707	1.81E-02	RRH	-2.579822344	6.26E-03

SBK1	1.594833805	1.45E-02	LVRN	-2.574798763	2.78E-03
RHOB	1.590096025	2.61E-02	POTED	-2.574452667	8.02E-03
MZT2B	1.584107371	2.51E-03	ZNF735	-2.566923983	1.89E-02
SCD5	1.580263655	1.33E-02	CYP7A1	-2.562897205	3.25E-03
ATF3	1.578451254	3.68E-02	TMPRSS11A	-2.555610174	2.29E-02
LRRC75A	1.575061402	5.21E-03	XDH	-2.553452901	4.10E-04
ICAM2	1.568405613	2.51E-02	CFHR4	-2.548838273	3.25E-03
SULT2B1	1.568217643	1.83E-02	TAS2R43	-2.543437929	3.58E-02
MICALL2	1.563744703	4.97E-02	DSP	-2.54022306	5.83E-05
C11orf71	1.563438459	9.90E-03	GOLGA6L6	-2.539469254	2.13E-02
COMMD6	1.563184389	5.06E-03	TBX18	-2.532125747	3.99E-02
SIAH2	1.560796936	1.27E-03	ZNF679	-2.52696052	1.43E-03
TNFAIP8L1	1.55783305	1.18E-02	ABCC8	-2.520517493	2.72E-03
H2AFJ	1.554320468	1.32E-02	ZNF705E	-2.512750583	6.45E-03
HIST1H4A	1.552400946	6.83E-03	ENAM	-2.510379357	7.38E-04
MICOS13	1.550324253	1.75E-03	CCDC110	-2.509992083	4.29E-02
AC090227.2	1.550204648	3.28E-02	ZNF705A	-2.486495865	7.91E-04
SNRPD2	1.549274852	4.52E-03	MCHR2	-2.477566215	3.15E-02
IER5	1.549119264	3.04E-02	CSN2	-2.466256351	4.78E-02
RNFT2	1.546874368	1.24E-02	HEPACAM2	-2.458586408	2.19E-02
COX14	1.545973812	2.51E-03	GADL1	-2.445802533	3.75E-03
HIST1H2AE	1.540860335	2.42E-02	SLC7A2	-2.433433764	1.42E-02
S1PR5	1.540723871	4.50E-02	OR4N2	-2.432726434	1.43E-03
HIST1H3J	1.534218848	1.39E-02	GRIA2	-2.429419007	6.65E-05
COMTD1	1.529208784	2.71E-03	KIAA0319	-2.426594744	1.49E-02
CHRNE	1.524103733	1.95E-02	SLC6A15	-2.425495521	2.71E-03
SMPD3	1.522191551	5.75E-03	GRXCR1	-2.418916423	2.56E-02
RFLNB	1.520671514	2.43E-02	MYCT1	-2.416197153	4.45E-02
AP002990.1	1.520427006	3.72E-02	MGAM2	-2.406981482	7.86E-04
AL441992.3	1.518515783	4.83E-02	GABRA1	-2.405964197	9.88E-04
C6orf226	1.515471614	1.02E-02	APOB	-2.404875901	2.01E-03
BLVRB	1.51288053	2.41E-03	AMY2A	-2.396507938	6.99E-04
RPS19BP1	1.507747564	3.88E-03	CCN6	-2.393108567	6.98E-03
FAM207A	1.507033424	3.56E-03	ROS1	-2.384308024	1.02E-03
CYBA	1.506054614	8.10E-03	OR2T29	-2.381858157	3.88E-02
PPP1R14B	1.503186929	2.78E-02	KDR	-2.380906286	4.55E-03
BAD	1.50135741	4.98E-03	CYP24A1	-2.379441434	3.32E-02
PIGBOS1	1.499739103	3.04E-02	FSHR	-2.378839753	3.10E-02
HIST1H4J	1.498181809	1.51E-03	FGF5	-2.371966053	3.68E-02
SMIM4	1.495505583	4.55E-03	ANGPTL1	-2.369482971	4.91E-02
BEX2	1.493593773	4.57E-02	SERPINI2	-2.360887573	1.86E-02
SELENOM	1.48872667	2.84E-02	LTK	-2.359204617	1.98E-02
CDKN2D	1.486014891	4.81E-02	ZNF723	-2.358733171	4.75E-02

RGCC	1.47822494	3.15E-02	OR7E24	-2.35672216	5.75E-03
BOLA2B	1.478213306	4.12E-03	PRAMEF11	-2.356198721	3.70E-02
NDUFA13	1.474383043	4.08E-03	TNFRSF11A	-2.355607855	7.06E-03
TMA7	1.47365146	4.00E-03	GOLGA8S	-2.355384636	1.14E-02
C1orf216	1.471531802	2.47E-02	OR4F21	-2.350606541	3.40E-02
GADD45GIP1	1.471107578	7.95E-03	GREB1	-2.347581042	2.17E-02
ME3	1.470846537	4.72E-02	CCDC144A	-2.34705144	5.57E-03
B9D2	1.468897256	6.23E-03	NUTM2D	-2.34536489	4.23E-02
CDKN2A	1.447277542	4.75E-02	CA8	-2.342770787	4.07E-03
DPM3	1.446639755	1.10E-02	TRIM64B	-2.341303293	1.81E-02
C1orf162	1.446387788	4.26E-02	RNF175	-2.332900526	3.84E-02
ENSA	1.444511966	1.51E-04	AMPD1	-2.326778399	1.22E-02
MGMT	1.443612328	4.12E-03	CFAP69	-2.323653537	9.99E-03
ISG15	1.441838665	3.17E-02	MMRN1	-2.319953099	1.76E-03
SPATA33	1.439861693	2.53E-03	COL12A1	-2.319026625	4.10E-04
OST4	1.436114237	7.91E-04	ZNF722P	-2.313957132	2.12E-02
PXMP2	1.435524472	2.44E-02	ZNF433	-2.305050937	4.55E-03
ROMO1	1.432456671	2.51E-03	EPHA7	-2.298371263	2.73E-03
RPS9	1.430456618	5.97E-03	TRIM48	-2.286095231	2.10E-02
HIST2H2AC	1.424610526	2.65E-02	LIPI	-2.271486401	5.52E-03
CITED2	1.42459347	3.28E-02	DSG4	-2.267581008	8.02E-03
ZNF66	1.422349997	3.63E-02	SCN2A	-2.267048068	1.35E-04
CCDC24	1.421102161	2.19E-02	KCNU1	-2.26683305	1.82E-03
RPS14	1.415161466	1.97E-03	USP17L29	-2.262735023	1.70E-02
ZNF428	1.411550595	1.22E-03	NTRK2	-2.262278067	1.90E-02
ERVK3-1	1.409712025	2.01E-02	ZNF730	-2.255852456	1.05E-02
EXOSC4	1.409404488	7.95E-03	USP17L30	-2.252993772	1.92E-02
C12orf57	1.40773596	5.57E-03	NOX4	-2.245701744	4.09E-03
NENF	1.406241231	1.31E-02	B3GALNT1	-2.242437023	4.95E-02
SPHK2	1.400802292	2.10E-02	PGR	-2.238974145	2.97E-02
ATF5	1.400698009	3.14E-02	TMPRSS15	-2.23605692	8.10E-04
AP000311.1	1.396880073	4.55E-03	ANOS1	-2.228415833	2.25E-03
RPS10	1.396860826	1.12E-02	UGT2B28	-2.225625474	3.60E-02
SSNA1	1.396790945	1.97E-02	CHRNA6	-2.218085142	4.58E-02
MRPL52	1.39529262	1.91E-02	C8A	-2.216738559	4.72E-02
HIST3H2A	1.394703726	1.70E-02	SLCO1B1	-2.214036147	3.38E-03
PNKD	1.391620601	1.14E-02	USP17L27	-2.211802277	2.20E-02
RXRA	1.390210353	1.18E-02	HGF	-2.209552499	1.45E-02
CCDC167	1.388445316	2.53E-03	SCN9A	-2.208366076	5.73E-03
HIST1H4C	1.387075442	4.11E-02	ASZ1	-2.202693294	3.57E-02
RIC3	1.383558778	3.07E-02	HLA-DOB	-2.202468715	2.36E-02
POLR2I	1.38226419	1.33E-02	ARHGAP29	-2.191160857	4.23E-03
PGP	1.379284297	1.49E-02	SPTA1	-2.190467027	1.62E-02

NME3	1.37480996	3.88E-02	CRISPLD1	-2.189596845	2.73E-02
SULT1A4	1.373794695	5.00E-02	MUC12	-2.187815841	1.82E-03
NUDT2	1.370291159	5.33E-03	RSPO3	-2.186380838	4.98E-02
CENPX	1.369547553	1.88E-02	ADAMTS20	-2.182859567	5.40E-04
RAB39B	1.369378234	3.18E-02	BLK	-2.178606449	2.28E-02
AC009690.1	1.36862488	3.01E-02	CDH6	-2.174797567	2.72E-02
SWI5	1.36658289	7.03E-03	DNAH12	-2.174730281	4.96E-04
RPS19	1.366101816	5.12E-03	IGSF10	-2.17169813	4.34E-02
NCBP2-AS2	1.364231098	3.58E-02	TDRD15	-2.171560587	3.59E-02
PHPT1	1.363800787	1.15E-03	OR4K2	-2.170171447	3.28E-02
NOSIP	1.363412412	4.59E-03	COL11A1	-2.16355433	2.50E-05
CYSTM1	1.36046188	1.81E-02	MYPN	-2.158473176	2.88E-03
CRIP1	1.359885197	6.12E-03	SCN3A	-2.157199135	7.58E-03
VAMP5	1.359349014	3.49E-02	EGF	-2.156405868	1.97E-03
RRAS	1.355176889	4.43E-02	KCNJ3	-2.150642171	4.34E-02
C7orf50	1.353875445	3.75E-03	GOLGA6L1	-2.147504923	1.27E-03
LAGE3	1.353542854	1.65E-02	TLL1	-2.143492431	6.70E-04
HIST1H2AJ	1.351407998	3.04E-02	PHKA1	-2.130642778	4.07E-03
FBXL15	1.350073209	3.00E-02	C6	-2.125411119	1.02E-03
TRAPPC6A	1.349700943	4.76E-03	LRP2	-2.118566286	1.23E-05
UQCR10	1.349375153	4.07E-03	ABCA4	-2.118144214	7.23E-04
ANAPC11	1.341642883	7.41E-03	GOLGA8F	-2.114902056	2.97E-02
COX7A2	1.34095962	1.76E-02	SH3TC2	-2.114312514	4.93E-03
PRR12	1.333541244	4.75E-02	PTGS2	-2.102563806	5.69E-03
RPL13	1.328941284	1.33E-02	PAX3	-2.093276045	3.15E-02
RPL23A	1.328443834	1.10E-02	ABCB11	-2.083997786	1.28E-02
ZNF480	1.328019084	8.22E-03	CACNA2D1	-2.082719777	2.20E-03
LRRC23	1.323266396	4.08E-03	SYCP1	-2.081588862	3.31E-03
RPL35	1.321827014	2.16E-02	ZNF705G	-2.077035343	8.08E-04
C19orf25	1.317972747	1.73E-02	SLC1A3	-2.073516588	4.56E-03
TIMM13	1.316129051	1.07E-02	POTEH	-2.070822376	8.10E-03
HIST1H2BN	1.31592733	2.04E-02	PTPN21	-2.070014735	3.02E-03
AURKAIP1	1.314718956	6.12E-03	FLT1	-2.06916343	4.08E-03
ZMAT5	1.310577337	2.76E-02	GABRG2	-2.06604792	1.95E-03
COX6B1	1.310143747	1.56E-02	MPP4	-2.051324004	3.70E-02
EFHD2	1.308705529	3.66E-02	ADAMTS18	-2.047701942	2.59E-04
MRPL23	1.308173289	3.87E-02	TUSC3	-2.038413682	6.40E-04
MRPL53	1.307955731	2.10E-02	OGN	-2.035334417	3.03E-02
SERTAD1	1.307090304	3.67E-02	GUCY1B1	-2.034131356	1.63E-02
RPS2	1.304023065	1.82E-03	RPS6KA6	-2.030726829	3.56E-02
DUSP28	1.300460844	2.34E-02	OLFM3	-2.027865331	1.48E-02
MCRIP2	1.297035095	4.80E-02	ZNF462	-2.026436711	4.79E-03
CCDC200	1.292553012	3.14E-02	TDRD1	-2.024843898	1.23E-02

ARIH2OS	1.292051077	2.73E-02	NWD2	-2.018203514	3.40E-02
FUOM	1.291157453	4.58E-02	ADAMTS3	-2.016399768	2.72E-03
NUDT1	1.291009683	7.70E-03	FAM81B	-2.012992841	3.68E-02
PYCARD	1.2904543	3.59E-02	SERINC2	-2.007872682	4.70E-02
RPS10-NUDT3	1.287326416	1.55E-02	MUC7	-2.006922683	4.02E-02
FRMD8	1.285460201	5.75E-03	TBX15	-2.006851383	2.34E-02
HOOK2	1.283817555	2.82E-02	DSG2	-2.001277057	6.22E-03
NAA38	1.282979089	5.68E-03	SLC4A10	-1.998143907	2.17E-03
ALKBH7	1.282597219	1.48E-02	GAS2L3	-1.993456108	3.30E-03
RPL29	1.281985663	2.08E-02	C11orf88	-1.99171635	4.75E-02
TUBB2A	1.280057943	2.67E-02	POTEG	-1.989268261	2.59E-04
LIME1	1.279974849	3.34E-02	SMARCA1	-1.987355991	4.16E-02
REX1BD	1.27991426	3.03E-02	TRIM49	-1.986197598	1.49E-02
RPS21	1.278878458	3.41E-02	PIWIL3	-1.979294286	1.65E-02
COA4	1.277467397	1.46E-02	TEK	-1.977295409	1.43E-03
MAP2K7	1.276805784	1.05E-02	UGT1A8	-1.973411477	2.42E-02
LSM10	1.272990139	1.18E-02	ELAVL2	-1.970819506	1.70E-02
TNFSF14	1.272769339	1.73E-02	CAMSAP2	-1.967273253	1.27E-03
RPS5	1.271290139	1.65E-02	NR1H4	-1.966250075	9.81E-03
SIVA1	1.271008682	2.84E-02	LRRIQ1	-1.96541125	3.92E-03
NDUFA3	1.268362856	3.81E-02	SPATA31A3	-1.960741813	3.68E-02
CBX6	1.267669433	2.16E-02	HCRTR2	-1.956358157	1.38E-02
TMSB10	1.26705712	4.97E-03	ABCC9	-1.955065187	4.31E-03
ENDOG	1.266901465	1.49E-02	IL26	-1.953230018	1.70E-02
DGCR6L	1.26675237	3.57E-02	SLC12A1	-1.951177673	1.57E-03
MYADM	1.262778296	3.99E-02	FSIP2	-1.946748579	9.31E-03
CISD3	1.260374488	9.32E-03	NPIPA7	-1.945390716	3.36E-02
RPS16	1.260278409	3.71E-03	OTOGL	-1.936946466	2.93E-03
CTNNBIP1	1.25868019	3.99E-02	USP17L24	-1.933748406	4.87E-02
RPL36	1.258482464	1.49E-02	FILIP1	-1.932624431	4.91E-03
ABHD14A	1.256544268	6.22E-03	PKHD1	-1.931670246	1.12E-04
MIDN	1.253965651	3.75E-02	FAT4	-1.926946684	3.38E-03
RBKS	1.252263881	4.66E-02	HMGA2	-1.926560158	2.56E-02
EDF1	1.249480207	7.16E-03	TRHDE	-1.924722399	2.17E-03
NDUFS7	1.240677475	2.02E-02	SLC22A2	-1.922709389	4.59E-02
EEF1D	1.23984491	3.90E-03	TSBP1	-1.919543593	2.64E-02
MRPL14	1.239359959	5.69E-03	RIMS1	-1.919411151	1.67E-03
MRPS24	1.238194192	3.45E-03	CALCR	-1.917771959	3.45E-02
ZNHIT1	1.230366169	5.61E-03	PTPRQ	-1.915142088	4.08E-03
ECI1	1.229884448	2.09E-02	TMEM236	-1.914714108	5.91E-03
TMEM256	1.228310936	2.76E-02	CNTN3	-1.903534531	7.33E-03
SIT1	1.227439543	3.58E-02	PCDH17	-1.899483078	4.45E-02
RPS15A	1.227230932	2.56E-02	ANO5	-1.898768363	9.11E-04

COX5B	1.227171838	4.75E-03	MYB	-1.898212822	3.25E-03
RABIF	1.227011563	1.98E-03	ZFHX4	-1.896247771	4.07E-03
METTL26	1.225686399	1.27E-02	STON1-GTF2A1L	-1.895118552	1.77E-03
POLD4	1.224097983	2.98E-02	SLC17A8	-1.888587682	1.42E-02
ATP5ME	1.221033864	2.01E-02	PCDH11X	-1.888292513	1.05E-02
NTHL1	1.22047609	3.07E-02	MUC19	-1.88759616	2.69E-03
NFKBIL1	1.220156424	9.23E-03	CD36	-1.887290172	1.05E-02
MRPL34	1.219953886	3.08E-02	COL5A1	-1.886593421	1.26E-02
NDUFA11	1.21831454	4.32E-02	UGT2B15	-1.8841084	1.36E-03
PSMB10	1.218275939	1.26E-02	C12orf40	-1.878814906	3.29E-03
EHD4	1.216630807	1.31E-02	CCL20	-1.876537878	3.99E-02
SHISAL2A	1.212967682	4.79E-02	SPINK5	-1.875784136	2.68E-02
GZMM	1.212552345	9.14E-03	DDX4	-1.873486358	1.49E-02
NCF1	1.208474841	2.16E-02	ZNF804B	-1.871826595	1.46E-02
FKBP2	1.206878599	1.13E-02	PKHD1L1	-1.86986053	1.43E-03
CHCHD5	1.204891606	1.79E-02	ECT2	-1.861898526	4.79E-03
PPP1R35	1.204421366	7.04E-03	ARFGEF3	-1.861860317	2.56E-02
USF1	1.202837624	1.09E-02	SVEP1	-1.860040337	9.78E-04
RPL13A	1.201047247	1.05E-02	KCTD3	-1.855505586	1.86E-02
MPG	1.197958365	2.70E-02	WDR17	-1.854851625	4.31E-02
LAMTOR4	1.1966781	2.60E-03	UBA1	-1.827732124	1.26E-02
S100A6	1.19544759	2.99E-02	MEP1B	-1.824568156	4.26E-02
DOHH	1.194411499	2.41E-02	CARD6	-1.821214275	2.56E-02
HLA-DPB1	1.191702973	1.83E-02	GDA	-1.820528853	3.40E-02
TBCC	1.189692776	7.50E-03	LIN7A	-1.819929268	3.45E-02
SLC25A42	1.188754834	7.14E-03	MYBPC1	-1.818746078	2.53E-03
MRPL12	1.184232539	3.01E-02	CWH43	-1.812240385	2.85E-02
GSTP1	1.183064971	2.86E-02	CDH7	-1.809068836	3.00E-02
APRT	1.182730211	1.25E-02	PRR27	-1.806930353	4.97E-02
POLR2F	1.179591673	2.95E-03	PCLO	-1.805043118	1.52E-03
ENDOV	1.177989504	1.48E-02	RGPD4	-1.804024882	7.95E-03
OPA3	1.176274587	1.65E-02	CCDC168	-1.799054993	6.51E-03
RPL32	1.175860541	2.61E-02	EYA4	-1.789729626	3.25E-03
NDUFS8	1.174785873	2.58E-02	PPARG	-1.783409909	4.39E-02
FAU	1.174481733	2.95E-03	HMCN1	-1.780914065	7.91E-04
HIST1H1C	1.173729286	3.93E-02	COL6A3	-1.778281055	2.89E-03
PDP2	1.170852985	3.51E-02	CLNK	-1.776316868	4.29E-02
B3GALT4	1.170781408	4.72E-02	FBN2	-1.774574316	9.92E-04
FMC1	1.170323332	3.90E-02	LRP6	-1.774522878	2.13E-02
PAXX	1.163099124	3.60E-02	PPARGC1A	-1.767843066	2.48E-02
C1orf35	1.158973997	2.56E-02	PTPN20	-1.764657236	9.70E-03
RNF181	1.158462742	2.15E-02	ZBBX	-1.759950578	4.34E-02
RPL18	1.155303507	1.47E-02	CDH19	-1.755321656	3.34E-02

DUSP23	1.154829047	8.10E-03	RELN	-1.753975553	2.20E-03
RPL24	1.149289016	2.56E-02	COL24A1	-1.744327216	4.95E-03
TRMT112	1.142129217	3.88E-03	GHR	-1.744076109	3.56E-03
RPL22	1.141283668	3.28E-02	CLMN	-1.737655297	3.07E-02
IFI27L2	1.1409498	9.16E-03	ADAM18	-1.737050364	2.24E-02
SNX12	1.140108147	2.21E-02	PTPN21	-1.731707253	1.23E-02
TSTD1	1.133784051	1.24E-02	BAAT	-1.726630838	3.92E-02
ARL2	1.132036863	3.68E-02	SI	-1.724776878	1.50E-02
BCL7C	1.13146595	1.79E-02	GRIA4	-1.716497711	1.65E-02
ITPA	1.127218073	1.73E-02	KIT	-1.715731323	2.51E-03
ATP5F1D	1.126588964	3.31E-02	ADAM32	-1.712138678	8.17E-03
SHLD1	1.126394475	1.19E-02	COL6A6	-1.709030365	1.63E-02
DDT	1.125751997	1.81E-02	ADGRV1	-1.707479351	1.82E-03
ZBTB4	1.124290436	3.41E-02	RACGAP1	-1.707324226	2.02E-02
COX17	1.124026001	2.89E-02	TACR3	-1.706914001	3.26E-02
AC008764.4	1.121851959	4.56E-03	GRIN2A	-1.706639122	2.01E-02
TMEM9	1.120221484	3.68E-02	LPCAT2	-1.705926493	2.56E-02
GTSF1	1.119787825	4.77E-02	SEMA3D	-1.705328778	1.49E-02
FXN	1.111169555	4.43E-02	XIRP2	-1.704026004	2.76E-02
BID	1.109943351	5.68E-03	ADGRL2	-1.701983354	3.25E-03
NDRG1	1.108912408	1.73E-02	MERTK	-1.697969218	3.10E-02
DHRS4L2	1.108589525	1.43E-03	DCHS2	-1.691878032	1.27E-02
CCS	1.107626916	2.20E-03	CPED1	-1.691761982	7.50E-03
RPP21	1.106540193	2.51E-03	MOXD1	-1.688042892	2.51E-02
C4orf3	1.102270411	5.80E-03	ST3GAL6	-1.687797564	2.78E-02
UNK	1.100740939	2.64E-02	DIO2	-1.684771701	3.19E-02
TFPT	1.099664457	2.36E-02	DNAH5	-1.682561237	1.81E-02
TMSB4X	1.09886496	1.83E-02	TICRR	-1.675285975	1.62E-02
RPL37A	1.098093527	1.63E-02	ZNF521	-1.67458852	3.21E-02
NMNAT1	1.092672906	4.47E-02	TBXAS1	-1.670609211	4.49E-02
COA3	1.091468227	2.90E-02	CMYA5	-1.669795437	7.95E-03
MAST3	1.086848239	3.59E-02	CSMD3	-1.669146019	5.68E-03
DIP2C	1.086491008	4.71E-02	CDON	-1.665573643	1.51E-03
CIAO2B	1.08518535	2.75E-02	CNTNAP4	-1.661572721	1.02E-02
UPP1	1.083974291	4.33E-02	FREM2	-1.661229947	2.41E-02
FBXO32	1.081325398	3.59E-02	ABCA9	-1.660941617	3.68E-02
RPL18A	1.08073951	2.19E-02	DAB2	-1.653848883	3.99E-02
UBA52	1.077539365	2.41E-02	DEPDC1	-1.653665258	3.04E-02
SPSB2	1.075902081	4.34E-02	NPIP8	-1.642589541	4.19E-03
TIMM29	1.075211985	4.55E-02	BMPER	-1.639134085	5.97E-03
DUSP2	1.07458374	1.40E-02	ADGRG6	-1.637455929	2.19E-02
ARL6IP4	1.074510525	3.33E-02	CFTR	-1.634089332	1.82E-03
NDUFS6	1.072367916	3.99E-02	VLDLR	-1.632488033	2.02E-02

NMRAL1	1.070556416	5.68E-03	HECTD2	-1.631783403	3.69E-02
TMEM205	1.069893328	3.03E-02	RP1	-1.630595286	1.73E-02
RGS19	1.065640309	4.75E-02	PCDH15	-1.629615339	2.26E-03
S100A10	1.057400498	2.11E-02	PKP2	-1.629412505	4.78E-03
D2HGDH	1.056758172	4.01E-02	MYO1H	-1.628993712	1.89E-02
MRPL55	1.055050987	1.92E-02	ZNF724	-1.623929427	3.73E-02
RPL26	1.055022038	3.03E-02	PTPN13	-1.623210151	2.72E-03
RHOF	1.054134863	4.43E-02	NTNG1	-1.612416511	1.77E-02
RPL14	1.053740123	2.26E-03	PPFIA2	-1.606025093	2.80E-02
RPL36AL	1.051693685	4.43E-02	SCN11A	-1.602522356	3.19E-02
ATP5IF1	1.051144531	4.14E-02	COL6A5	-1.598410266	1.43E-02
DYNLL2	1.049207038	2.55E-02	HCN1	-1.592761531	2.54E-02
TMEM141	1.048481803	3.67E-02	PIAS3	-1.592707612	1.73E-02
CD52	1.046090748	4.70E-02	SEMA3E	-1.590201567	1.65E-02
DEF8	1.04579128	2.10E-02	CR1L	-1.589248042	4.88E-02
RPS17	1.042277629	2.77E-02	SLC5A11	-1.588517246	4.97E-02
CCDC12	1.041380839	3.10E-02	IMPG2	-1.579007716	3.02E-02
USE1	1.040267123	2.07E-02	KCNH8	-1.574735692	3.56E-03
RPS27	1.039164833	2.30E-02	KCNH5	-1.570333126	9.91E-03
HSD17B8	1.031669319	3.81E-02	CTTNBP2	-1.56463394	3.40E-02
GATD1	1.030959931	3.52E-03	CDH9	-1.563872555	3.01E-02
CHCHD10	1.029141115	3.01E-02	SEMA5A	-1.562218608	1.65E-02
AC008770.4	1.028047099	3.99E-02	ATP13A5	-1.560491736	4.51E-02
MRPS18A	1.026226747	4.82E-02	CNTN1	-1.558712696	1.96E-02
UXT	1.024579828	4.34E-02	POTEJ	-1.552782229	1.86E-02
C2orf68	1.024444255	2.71E-02	LAMA3	-1.551867892	7.75E-03
SDF2L1	1.024378511	4.88E-02	COL1A2	-1.535319308	8.28E-03
FAM173A	1.024177663	3.04E-02	COL19A1	-1.532476295	2.57E-02
PAFAH1B3	1.02193331	4.14E-02	CLCN5	-1.527557687	5.80E-03
GDF11	1.020899905	4.79E-02	CRB1	-1.527248793	3.04E-03
RPL38	1.018457925	2.09E-02	RGS6	-1.526132209	1.10E-02
COX4I1	1.01836853	2.61E-02	WDR49	-1.522670167	3.99E-02
VAMP8	1.014464498	2.12E-02	CCNG2	-1.511145965	6.09E-03
EIF3G	1.013957033	2.33E-02	NRCAM	-1.50819234	3.59E-02
MRPL22	1.01309664	2.02E-02	C4A	-1.507972668	2.97E-02
NDUFAF3	1.008849761	2.84E-02	SCN1A	-1.507143022	3.55E-02
LYRM2	1.00884237	2.85E-02	FAM20A	-1.502564826	4.60E-02
RPL19	1.006428694	4.88E-02	IL1R1	-1.501194007	3.97E-02
RBM14-RBM4	1.005427903	3.21E-02	ANKRD30B	-1.499532662	2.58E-02
ADI1	1.002413837	3.67E-02	STIL	-1.491618061	2.10E-02
IFT43	1.002342853	4.19E-03	COL4A3	-1.490250867	1.49E-02
SERF2	1.001564064	1.10E-02	LMNTD1	-1.485983928	3.99E-02
CCDC107	1.001275507	3.46E-02	WDFY3	-1.485592658	4.66E-03

RPL27A	1.000568164	4.79E-02	SLC35A4	-1.481115495	4.26E-02
TRIM43	-7.229355156	2.12E-06	CNTN6	-1.47875727	1.45E-02
SPDYE15	-7.126122646	2.55E-02	NEB	-1.478206822	5.48E-03
CT45A3	-6.84663301	1.11E-09	FREM1	-1.475802784	4.08E-02
SPDYE15	-6.292009684	1.72E-02	DMXL2	-1.475235427	7.00E-03
CT45A1	-6.235688056	2.25E-04	PDE11A	-1.468579611	4.79E-02
UGT1A7	-6.085844647	3.01E-05	LEPR	-1.467447459	1.21E-02
TRIM49C	-6.080092592	4.80E-08	KCNMA1	-1.466471167	1.81E-02
IFNA8	-5.74607382	5.58E-04	NBPF3	-1.465480257	2.92E-02
SPDYE13	-5.447788692	2.15E-03	CENPI	-1.461494049	4.70E-02
PRPS1L1	-5.425681781	6.65E-04	PPP1R9A	-1.457146302	1.22E-02
GYS2	-5.305214097	2.27E-02	ADAM12	-1.452091497	2.82E-02
PENK	-5.253028195	8.66E-04	C2CD6	-1.451331197	2.04E-02
LIPF	-5.132335318	4.10E-04	ZNF93	-1.449146021	1.07E-02
XAGE1B	-5.125195206	4.08E-03	ERBB4	-1.447793752	5.69E-03
IL12B	-5.099158387	1.08E-02	MUC16	-1.447762291	2.95E-02
UGT1A9	-5.086180075	1.29E-03	TEAD1	-1.440483358	4.88E-02
TEX13C	-5.018872139	2.82E-02	PROSER1	-1.436621836	3.01E-02
USP17L17	-5.016777378	1.48E-02	LMF2	-1.434781275	4.41E-02
SULT1E1	-5.009355214	3.56E-03	ZNF90	-1.430354331	2.11E-02
TBX22	-4.906552739	1.09E-03	DNAH6	-1.429224812	5.49E-03
HSD3B2	-4.88718085	4.03E-03	ZFP69	-1.428375256	4.61E-02
NMUR2	-4.887072601	1.10E-03	CIP2A	-1.410666487	2.11E-02
OR5AK2	-4.886947837	1.04E-03	DBN1	-1.408986018	1.48E-02
OR5M10	-4.858224471	4.17E-03	GLI3	-1.40759042	4.14E-02
PRAMEF9	-4.766044287	5.38E-03	RIMS2	-1.406365133	4.79E-02
PRR23D2	-4.759865838	1.71E-03	SLC44A5	-1.399264054	4.37E-02
MBD3L4	-4.759441769	5.06E-03	ANK2	-1.395888526	3.68E-02
OR5A1	-4.638438909	4.54E-03	SGSH	-1.395320424	3.86E-02
NOX5	-4.607230414	4.70E-02	RGPD2	-1.395104914	4.17E-02
Z83844.1	-4.593599361	1.77E-14	NAALAD2	-1.394352412	4.14E-02
MBD3L3	-4.586683234	2.58E-02	DSC2	-1.389268568	3.28E-02
SSX1	-4.500844737	2.73E-03	EPHA6	-1.384195934	3.27E-02
CCDC160	-4.466943865	3.59E-02	ANK1	-1.378029991	1.07E-02
DEFB105A	-4.452288795	1.89E-02	DTNA	-1.367372735	1.50E-02
TBC1D3I	-4.439278051	3.34E-02	CCDC150	-1.36483974	2.98E-02
PPBP	-4.434793764	8.99E-04	PDZRN4	-1.361544204	2.82E-02
SLC2A2	-4.410349296	3.04E-02	NBEA	-1.3565313	2.20E-02
RFPL4A	-4.407000386	3.26E-04	MAOA	-1.343116991	3.86E-02
IFNA10	-4.359861653	6.22E-03	BRIP1	-1.341945765	3.01E-02
KLHL14	-4.353758442	1.84E-02	ABCA12	-1.341300886	2.01E-02
GCM2	-4.349747617	3.10E-02	NAV3	-1.334399311	1.64E-02
AL445989.1	-4.348822986	6.29E-04	N4BP2	-1.326037224	1.77E-02

IL9	-4.308526183	2.46E-02	DCC	-1.321434925	3.28E-02
PCDHB7	-4.294210444	4.25E-02	ANLN	-1.321301776	4.95E-02
ALX1	-4.28693484	1.10E-02	ZNF404	-1.319975368	2.38E-02
DMP1	-4.285291218	1.40E-04	RANBP2	-1.318138354	3.59E-02
CABS1	-4.201946494	2.57E-02	PIEZO2	-1.303796563	4.63E-02
OR4K1	-4.18995185	3.40E-03	LAYN	-1.300888055	4.40E-02
GOLGA6L22	-4.170138563	1.08E-05	RGPD3	-1.300778308	4.78E-03
OR5T3	-4.153839583	1.48E-02	DCDC1	-1.298035211	3.04E-02
TEX50	-4.131400102	2.32E-02	AHI1	-1.287367775	3.56E-02
ZNF705D	-4.123760819	8.29E-05	MYO16	-1.286718387	2.49E-02
AC127029.3	-4.06546557	1.14E-02	DDR2	-1.279464514	4.17E-02
GLYATL3	-4.050549943	4.70E-02	SCYL2	-1.272448291	1.32E-02
OR5I1	-4.046611317	1.54E-02	GRAMD2B	-1.26748115	3.17E-02
AL590132.1	-4.009274075	9.57E-03	ZNF574	-1.261030929	4.27E-02
F9	-3.98311911	2.34E-02	ADGRB3	-1.257304138	4.66E-02
KRTAP19-1	-3.982019556	3.03E-02	UBAP2L	-1.255930378	1.62E-02
OR11G2	-3.968955196	6.12E-03	ROBO1	-1.236616564	4.34E-02
LGALS9B	-3.966394818	4.16E-02	LRP1B	-1.236392997	2.54E-02
MS4A3	-3.960423764	1.44E-02	TCF4	-1.235892399	2.09E-02
TRIM64	-3.954520095	5.55E-03	HDAC9	-1.221266176	1.76E-02
UGT2A2	-3.940979013	4.79E-03	COPG2	-1.200820446	1.83E-02
UGT2B10	-3.924616308	1.53E-05	RANBP17	-1.1975752	3.88E-02
LMO3	-3.901175511	1.81E-02	VPS52	-1.187480928	4.98E-02
NBPF4	-3.895847222	1.23E-05	NRXN1	-1.176335221	3.38E-02
CLCA1	-3.88243496	4.43E-04	AF241726.2	-1.174213625	3.43E-02
CDY1	-3.860625872	3.43E-02	LMBRD2	-1.167158788	3.04E-02
IL17A	-3.843372911	4.27E-02	COL4A4	-1.16322357	4.89E-02
OR4K5	-3.839833553	8.26E-03	DGKA	-1.157743057	4.59E-02
OR11H12	-3.828525267	7.91E-04	PARBP	-1.146389993	4.98E-02
GOLGA6C	-3.82809646	5.94E-05	LIG4	-1.140317653	2.92E-02
GPR179	-3.822154449	4.70E-02	NBPF1	-1.121654236	2.66E-02
ZNF728	-3.812233935	4.80E-08	ESYT1	-1.120573543	2.51E-02
HRNR	-3.769676743	5.94E-05	SMC4	-1.104742398	4.51E-02
OR4F5	-3.766077376	6.47E-04	PPME1	-1.0847579	2.07E-02
RGS4	-3.765720957	1.10E-02	CNTNAP2	-1.072791827	4.25E-02
UCP1	-3.754600965	5.90E-04	HACE1	-1.063311919	3.99E-02
			ZNF518B	-1.023022831	4.68E-02