

Supplementary Material

Supplementary Figures

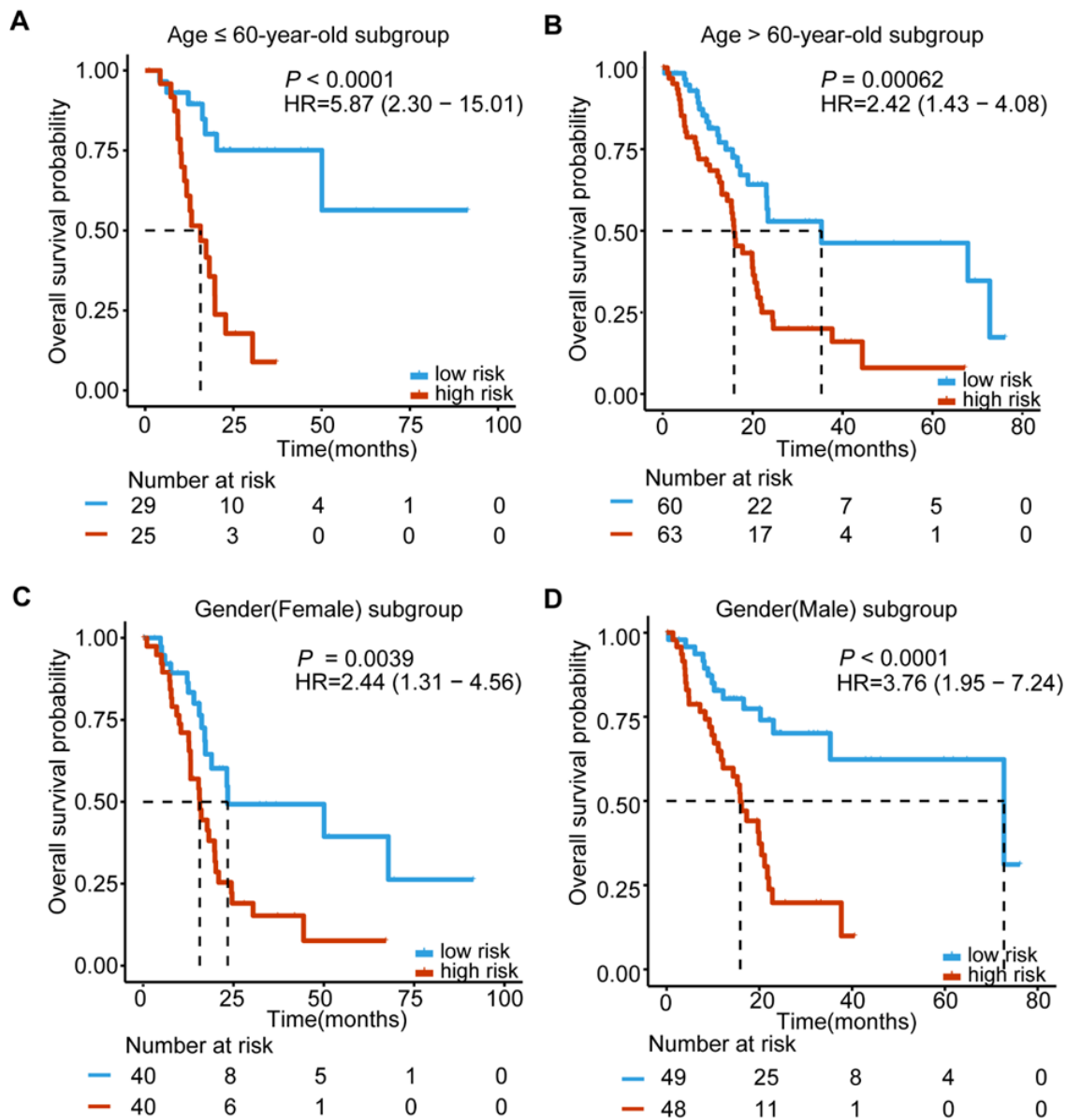


Figure S1. Kaplan–Meier survival analysis to assess the independence of the 5-lncRNA signature from age and gender. The patients from the entire TCGA were stratified into subgroups. The 5-lncRNA signature was applied to ≤ 60 -year-old patients (A), > 60 -year-old patients (B), female patients (C), and male patients (D), separately. The number of patients at risk is listed below the survival curves. The tick marks on the Kaplan–Meier curves represents the censored subjects. Two-sided log-rank test was adopted to determine the differences between the two curves.

Supplementary Tables

Table S1. Primers of five lncRNAs and internal control for qRT-PCR.

Primers		5'→3'
RP11-159F24.5	Forward	CCAGCCGAGAACTAACCACA
	Reverse	TGGCACCCATACACTTGCTC
RP11-744N12.2	Forward	CTCTGGACCGTCCTCCCTAC
	Reverse	ACCTGTTTTGGATGTCCGGG
RP11-388M20.1	Forward	CACCCATGTTAGCGGCAAGA
	Reverse	ACTTTGTCGTTGGCTCCAGA
RP11-356C4.5	Forward	ACCGACCGGAGACCATTG
	Reverse	TCAGCTGCACTGTCCAGAAAT
CTC-459F4.9	Forward	TCATGAGCAGAAGCCTCACG
	Reverse	AGGTGTTTGAACAACCTGA
ACTB	Forward	GGACCTGACTGACTACCTCAT
	Reverse	CGTAGCACAGCTTCTCCTTAAT

Table S2. Top 1000 significantly up-regulated DEGs in high versus low-risk PDAC patients in TCGA dataset

Gene symbol	logFC	AveExpr	t	Fold Change (FC)
PNLIP	2.045237	8.453061	2.17314	4.12741
TRY6	1.936282	7.877335	2.924158	3.82718
PRSS1	1.932067	9.50307	2.584373	3.816017
KLK1	1.836875	4.869373	3.719546	3.572355
PRSS3	1.831064	7.309151	4.558847	3.557995
CLPS	1.800149	7.168339	2.144448	3.482562
GP2	1.747505	7.158523	2.259119	3.357774
CELA2A	1.712074	6.783706	1.929192	3.276315
CPA1	1.705388	8.563021	1.90517	3.261167
CLDN18	1.675434	8.244075	2.829766	3.194155
CELA3B	1.651266	7.094141	1.927081	3.141091
CELA3A	1.639917	8.746538	1.802875	3.11648
REG4	1.572373	8.039968	2.624788	2.973934
CEACAM5	1.544647	7.380381	2.832229	2.917327
CELP	1.543434	3.674671	2.066348	2.914874
CTRB2	1.510808	9.171878	1.63593	2.849696
PLA2G1B	1.468344	5.978326	1.887268	2.767041
CPB1	1.462721	7.696889	1.701681	2.756277
IL22RA1	1.452328	3.720659	5.757311	2.736494
S100P	1.441578	5.436965	3.282831	2.716179
CELA2B	1.426758	5.360154	1.839683	2.688419
AMY2A	1.417243	6.080361	1.702134	2.670747
TNNT1	1.409591	0.431291	3.405826	2.656619
CTRB1	1.395167	8.510534	1.543311	2.63019
MUC17	1.387793	7.150697	2.378906	2.616781
SYCN	1.379225	5.298962	1.859538	2.601285
REG3A	1.361771	8.532898	1.708451	2.570006
CPA2	1.356443	6.727316	1.614509	2.560531
CTRC	1.356094	7.267493	1.615037	2.559912
KLK7	1.345123	4.540572	2.79319	2.540518
FER1L6	1.338335	4.602734	2.779934	2.528593
KLK8	1.338004	3.185317	2.807883	2.528013
CLCA1	1.331749	2.611451	2.387968	2.517076
COL17A1	1.31386	4.283096	3.049201	2.486059
SERPINB5	1.293013	4.339273	3.599424	2.450393
B3GNT6	1.277622	3.791894	2.782279	2.42439
ANXA10	1.268813	8.148976	2.927272	2.409632
PSAPL1	1.26565	3.235157	2.883912	2.404356
REG1A	1.265105	9.807173	1.776378	2.403446
TM4SF20	1.258912	3.466394	2.522031	2.393152
CA12	1.255527	-0.25065	4.597573	2.387544
EREG	1.226257	2.792088	3.371004	2.339593
KRT20	1.20095	2.633724	2.143313	2.29891

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PNLIPRP2	1.188325	5.814802	1.5164	2.278881
RASEF	1.187435	1.79485	4.01505	2.277475
ZG16	1.179663	0.956104	3.527917	2.265239
RNF186	1.170385	3.244428	4.222422	2.250718
DHRS9	1.168287	3.243168	2.946626	2.247446
PNLIPRP1	1.163862	5.978338	1.484242	2.240564
REG1B	1.157885	7.161506	1.400606	2.231301
DSG3	1.155498	2.196709	2.539544	2.227612
GABRP	1.154746	5.274919	2.554025	2.226451
FAM83A	1.151405	3.29532	2.67913	2.221302
SLC6A14	1.132297	5.08291	2.85339	2.192075
C12orf36	1.122629	5.128698	2.892948	2.177434
KBTBD12	1.120947	2.995614	3.296496	2.174897
SERPINI2	1.112764	3.386536	1.835151	2.162596
SDR16C5	1.108183	4.381438	3.329082	2.15574
HMGA2	1.102451	1.877789	3.357439	2.147191
CEL	1.088219	4.669586	1.448419	2.126115
KLK11	1.085085	4.590395	3.006377	2.1215
TMEM52	1.078618	0.708351	3.704898	2.112012
CTSE	1.07263	8.917552	2.378092	2.103264
NIPAL1	1.069147	0.829704	5.379772	2.098193
CUZD1	1.067097	3.754478	2.074998	2.095214
AQP8	1.063333	3.078192	1.798379	2.089754
DPCR1	1.050901	8.331693	1.75928	2.071824
CEACAM6	1.049887	7.632522	2.520969	2.070367
LIPH	1.046411	3.802355	4.364037	2.065386
UGT1A1	1.041587	2.252977	2.701012	2.058491
OVOL1	1.03308	1.258374	3.640215	2.046389
MT1H	1.03163	1.290242	3.256935	2.044332
GALNT5	1.024633	3.823432	3.302446	2.034441
GPRC5A	1.019827	3.377046	2.946854	2.027676
TMPRSS4	1.015572	5.586462	2.602024	2.021704
C6orf127	1.013906	0.944088	3.050764	2.019371
SPINK1	1.013341	8.9673	2.667077	2.01858
MYBPC1	1.001539	0.511259	1.998928	2.002135
DKK1	0.99502	3.023303	2.60283	1.993109
ITLN1	0.992204	2.043106	1.883063	1.989221
GSTA2	0.987485	2.212679	2.383432	1.982725
SERPINB3	0.986562	2.56507	1.995614	1.981458
PTF1A	0.983989	2.018834	2.395128	1.977927
PLA2G10	0.982515	4.708538	3.095579	1.975907
NTSR1	0.978507	3.379295	2.426189	1.970425
VSIG1	0.975145	4.864617	2.210536	1.965839
UGT1A10	0.968658	6.646577	2.130871	1.95702
C6orf222	0.967486	5.913323	2.948966	1.95543
POF1B	0.96675	4.090089	3.742872	1.954434

REG3G	0.960502	5.520569	1.296624	1.945987
TCN1	0.959011	7.266813	2.309854	1.943977
MYEOV	0.950976	4.806619	2.614094	1.93318
RAB27B	0.950622	1.618789	4.742788	1.932706
LOC84740	0.949802	4.530855	2.362915	1.931607
GKN2	0.94896	0.864808	2.821109	1.93048
PTPRR	0.945743	2.872663	4.235012	1.926181
TMPRSS2	0.944387	3.328939	4.219548	1.924371
TFF2	0.943765	8.588441	1.909446	1.923541
GJB4	0.942718	4.102233	2.852665	1.922146
PLA2G2F	0.941451	1.397294	2.680619	1.920459
REG1P	0.939568	3.724706	1.589798	1.917954
PDIA2	0.939336	4.076639	1.795237	1.917646
LGALS9B	0.938744	1.540188	2.978236	1.916859
FAM160A1	0.9368	0.322419	6.534918	1.914278
GRHL2	0.926936	1.798755	3.585336	1.901234
BCL2L14	0.92171	3.159743	3.48345	1.89436
INHBA	0.914457	2.583742	3.3976	1.884859
MFSD4	0.914169	1.809884	4.58528	1.884483
TMC5	0.913916	5.071053	3.210688	1.884152
GUCA1C	0.912901	1.215964	2.747557	1.882828
CST1	0.909541	5.39497	2.190184	1.878448
ATP10B	0.905309	4.294987	2.614667	1.872946
MUC4	0.904553	3.960972	2.179851	1.871964
MT1G	0.899999	1.405627	2.838821	1.866065
TFF1	0.89616	7.966299	1.766033	1.861105
POU2F3	0.889619	2.190491	3.042959	1.852687
AQP5	0.889275	4.962929	2.136345	1.852246
HOXA13	0.888346	0.964563	2.190174	1.851052
PIGR	0.888136	4.95877	2.092307	1.850783
RPL3L	0.887931	0.245597	3.197851	1.85052
PROM1	0.88725	3.923407	2.715317	1.849647
ITGB6	0.885785	4.245603	2.50132	1.847769
SFN	0.881216	2.159017	2.553622	1.841927
SULT1B1	0.880216	3.483334	2.621595	1.840651
GPHA2	0.878487	1.465142	2.204613	1.838446
CA9	0.876063	3.926881	2.181182	1.83536
CCK	0.872326	2.531196	2.276491	1.830613
GREM1	0.872313	4.284427	2.683446	1.830595
TRIM29	0.864428	3.28395	2.033675	1.820618
SLC7A11	0.862562	0.882459	4.29852	1.818265
KLK10	0.859477	4.604143	2.087932	1.814381
PRSS8	0.85628	2.29208	2.703458	1.810364
RBPJL	0.856249	3.253398	1.501925	1.810325
GJB5	0.85553	1.851036	2.343432	1.809424
C4orf31	0.854169	2.006111	3.382072	1.807717

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FERMT1	0.853051	2.840035	3.650136	1.806317
SYTL5	0.849604	2.021682	2.903647	1.802006
CAPN9	0.844943	3.748889	2.008684	1.796194
PGC	0.844704	5.560279	1.255339	1.795896
CXADR	0.841587	0.306294	4.970806	1.79202
TNS4	0.837799	3.29951	1.971267	1.787321
IL8	0.836707	2.026944	2.976542	1.785969
PRSS21	0.836214	2.213042	2.093533	1.785359
CDKL5	0.836006	0.334445	3.607123	1.785102
PLS1	0.835158	2.662009	4.997824	1.784053
GJB6	0.834507	0.342266	2.39603	1.783247
GKN1	0.834312	1.433918	2.163139	1.783007
AQP12B	0.831016	3.242953	1.884399	1.778938
XK	0.830579	1.151301	4.315545	1.778399
ST6GALNAC1	0.829691	4.07503	2.559686	1.777305
PSCA	0.827775	5.297038	1.536011	1.774946
LOC284578	0.827017	1.109339	3.671941	1.774014
LGALS4	0.825858	8.279622	2.103017	1.772589
KCTD14	0.824236	1.20242	4.173201	1.770597
FUT3	0.819629	4.754432	2.723474	1.764952
MET	0.817474	1.352748	4.385717	1.762317
TSPAN8	0.814402	6.983448	2.6331	1.758569
UCA1	0.813314	4.066285	2.117989	1.757243
FA2H	0.811204	3.798353	3.741077	1.754675
BCAS1	0.807348	3.948085	2.491267	1.749992
TRPA1	0.805426	0.596266	3.114298	1.747662
SLC6A20	0.802443	5.195894	2.748006	1.744052
ZNF488	0.80203	1.661028	3.34535	1.743552
GGT6	0.801249	2.756491	2.513291	1.74261
PLEK2	0.801035	2.420527	3.059009	1.74235
FMN1	0.798599	1.594724	4.171465	1.739411
AQP12A	0.798564	1.285981	2.43861	1.739369
SCNN1A	0.793061	2.678335	2.990431	1.732747
AKR7A3	0.791122	3.292027	3.012125	1.730419
CYP2S1	0.790862	2.931377	2.566307	1.730108
EHF	0.790309	2.889067	3.732564	1.729444
AGR2	0.787031	5.640002	2.383154	1.72552
GATM	0.786502	1.89692	2.882587	1.724887
EGF	0.785981	-0.45758	2.141989	1.724265
OASL	0.78577	1.441034	3.097817	1.724013
MUC5B	0.785727	6.585296	1.788664	1.723961
SLC28A3	0.784503	3.628833	2.574978	1.722499
C11orf86	0.784252	3.2291	2.194782	1.722199
STX19	0.780797	2.157941	3.606698	1.718079
ALDH3A1	0.780318	1.88238	2.167104	1.71751
FAM83B	0.77989	2.245068	3.315089	1.716999

HHIP	0.777465	2.332269	2.914495	1.714117
APOBEC1	0.771732	4.451296	2.136908	1.707318
ARL14	0.771596	6.141638	2.307938	1.707158
ACER2	0.769909	0.562279	3.90462	1.705163
AMY1A	0.768485	0.665036	1.689157	1.70348
BHLHA15	0.766278	1.035745	2.445375	1.700876
LAMA3	0.763877	3.209131	3.445911	1.698047
PLAC8	0.763575	3.724412	3.128725	1.697692
ZG16B	0.761853	3.604737	2.556861	1.695668
IMPA2	0.760173	0.395199	5.078067	1.693694
ACTBL2	0.759749	2.047662	3.140496	1.693196
ANKRD22	0.759278	2.222103	3.140936	1.692643
DSG2	0.753074	1.838189	5.901564	1.68538
ERBB3	0.752371	1.100858	4.578012	1.684559
HKDC1	0.750958	4.071056	2.674721	1.68291
GALNT3	0.750455	2.260315	4.356902	1.682323
ESRP1	0.750446	2.110413	5.248754	1.682313
HNF4G	0.750176	3.35369	3.370535	1.681998
COL10A1	0.748453	5.035225	2.065399	1.679991
UNC93A	0.746034	0.260528	3.266648	1.677176
SPRR1B	0.741036	2.460727	1.565855	1.671375
GCNT3	0.739258	6.293309	2.434519	1.669317
S100A14	0.73863	2.841647	2.131269	1.66859
SPINK4	0.738422	3.042445	1.473921	1.66835
ARHGEF38	0.737851	1.872054	3.696776	1.66769
FUT6	0.735916	4.47464	2.697692	1.665454
SPRR1A	0.735574	1.93355	1.692724	1.66506
EGLN3	0.73552	1.161731	2.977771	1.664998
CTRL	0.734328	3.120654	1.301015	1.663623
FCGBP	0.731513	1.726929	2.339954	1.660379
MICALCL	0.730419	0.851949	4.029425	1.659121
SLC13A5	0.729278	3.424935	1.642753	1.657809
TMEM97	0.729218	0.313144	4.213466	1.65774
DMBT1	0.727514	6.680586	1.480225	1.655783
LPAR3	0.726265	-1.02611	3.155393	1.65435
SI	0.725846	1.638453	1.499073	1.65387
FABP1	0.725605	1.350415	1.565963	1.653594
LGR4	0.725384	0.663399	5.543613	1.653341
GPR81	0.724389	0.408054	2.598652	1.6522
LAMB3	0.724064	3.156419	2.352671	1.651829
B3GNT7	0.721954	2.51758	3.357541	1.649414
LRG1	0.72192	2.017164	3.036023	1.649376
C1orf106	0.72062	3.029083	2.347709	1.64789
KIAA0754	0.719802	0.934562	2.974955	1.646956
RPSAP52	0.718957	1.64063	3.303137	1.645992
KLF5	0.718874	2.301756	3.537086	1.645896

DAZ1	0.718345	0.720196	1.508911	1.645294
B3GALT5	0.717454	4.828087	2.882994	1.644278
CASP14	0.717328	-0.27336	2.421431	1.644135
SLC9A4	0.714971	2.525387	1.662653	1.64145
HOXB9	0.71486	1.47862	1.895681	1.641323
CREB3L3	0.714015	2.062091	1.877675	1.640362
VSIG2	0.712668	4.8949	2.033857	1.638833
ERO1L	0.711405	0.919494	4.96189	1.637399
UHMK1	0.709776	-0.07784	3.617921	1.63555
LRRC31	0.707094	2.115215	1.885381	1.632512
FAT1	0.706413	0.97259	5.217492	1.631742
MMP3	0.704618	1.733379	2.241859	1.629713
BTNL8	0.703068	4.047771	1.738412	1.627963
C3orf52	0.701596	1.795933	3.799715	1.626303
IYD	0.701528	3.351696	2.05725	1.626227
PDZK1IP1	0.700412	3.24739	2.264458	1.624969
EPYC	0.699954	2.783277	1.506051	1.624453
GATA4	0.699084	5.342343	2.22677	1.623473
ADAMTS12	0.69841	2.45889	2.450477	1.622716
IGF2BP3	0.696922	1.487328	2.21448	1.621042
TNFRSF11B	0.696893	1.950092	2.617412	1.62101
TMEM45B	0.696427	2.706634	3.02194	1.620486
AADAC	0.696127	3.983295	2.138193	1.620149
TRHDE	0.695157	1.433749	2.294787	1.61906
PTK6	0.694075	2.80799	2.523665	1.617846
TNFSF15	0.69329	0.557251	3.43609	1.616967
TLR3	0.692855	0.736252	3.913288	1.616479
RNF39	0.692639	1.726949	3.012022	1.616237
STON1-GTF2A1L	0.68967	0.664282	2.377286	1.612915
ANKRD56	0.686627	1.204111	4.862424	1.609516
KPNA7	0.686096	3.383165	2.717433	1.608923
SERINC5	0.686035	0.134304	3.356832	1.608855
TFAP2C	0.685765	-1.48584	2.484176	1.608554
FAM59A	0.685516	0.414642	5.535136	1.608277
GJB2	0.684578	2.144397	2.242873	1.607232
SPINK5	0.683616	1.738375	2.383487	1.606161
CLDN4	0.683117	2.584789	3.404618	1.605605
GPT2	0.680258	-0.44675	4.533785	1.602427
LAMC2	0.67829	4.129341	2.392868	1.600242
DUSP4	0.678104	1.926457	5.057686	1.600036
FAM83D	0.677665	-0.16084	3.226678	1.599549
PVRL4	0.677591	2.500103	2.113544	1.599466
EPPK1	0.677534	1.056871	2.919391	1.599404
MOGAT3	0.67629	1.545655	2.059407	1.598025
GJB1	0.676288	3.801664	2.509042	1.598023
HOXC11	0.675604	0.633794	1.729635	1.597265

OCLN	0.674844	1.195066	4.861067	1.596424
GPA33	0.673705	3.173669	2.114416	1.595164
RHBDL2	0.672063	2.196133	3.035549	1.59335
KIAA1199	0.670586	2.694494	2.555586	1.591719
SLC9A2	0.667781	1.790246	1.97601	1.588628
KRT6A	0.667545	2.675337	1.199406	1.588368
IGF2BP2	0.665801	1.48543	3.105044	1.586449
LOC100127888	0.665675	3.204526	2.332944	1.58631
MEP1A	0.665434	1.139519	1.711766	1.586045
XDH	0.664677	3.205719	2.37819	1.585214
CDH3	0.664335	1.795385	2.734607	1.584838
FCGR3B	0.663758	1.112422	2.039845	1.584204
COL11A1	0.661684	4.097805	1.470785	1.581928
SLC39A5	0.661289	3.962246	1.614617	1.581495
FUT2	0.661115	3.604669	3.274475	1.581304
B4GALNT2	0.660952	-0.77716	2.44977	1.581126
MST1R	0.660693	3.502768	2.438335	1.580842
MIA2	0.660335	3.813104	2.74031	1.58045
AGR3	0.660162	4.888252	1.996641	1.58026
ATP8B1	0.659384	1.161809	5.287673	1.579408
ADAM9	0.658518	1.158792	4.899471	1.578461
RASSF6	0.658215	3.020569	4.051497	1.578129
MUC1	0.656737	3.668089	2.310594	1.576513
PRR11	0.656678	-0.46857	2.730385	1.576449
GJB3	0.654593	3.766767	2.028668	1.574172
C14orf34	0.653174	1.561835	2.359971	1.572624
CXCL17	0.653038	4.054921	1.635924	1.572476
C20orf114	0.652447	3.187088	1.233773	1.571832
PPP1R1B	0.648959	3.776974	1.761348	1.568037
NPR3	0.647967	1.334424	2.516089	1.566958
FOXA3	0.647657	5.738747	2.823994	1.566622
TMEM92	0.646426	3.615664	2.389926	1.565285
MYO5B	0.645632	0.939487	5.121354	1.564425
IRF6	0.645052	1.293044	4.45604	1.563796
LY6G6C	0.644773	0.086965	2.494272	1.563493
MAP3K13	0.644649	0.976964	4.511612	1.563359
ANXA3	0.644024	2.642917	2.675838	1.562682
GATA5	0.643816	-0.10967	1.849842	1.562457
TEX11	0.643593	2.115248	2.178797	1.562215
UGT8	0.642829	2.539979	3.437438	1.561388
CLCN1	0.642406	2.170034	2.253366	1.560931
CXCL5	0.641171	5.493161	1.367279	1.559595
AREG	0.640597	2.705624	2.544574	1.558974
DKK4	0.640165	2.05027	2.053222	1.558508
XKR9	0.639639	1.763238	2.813322	1.557939
ITGA2	0.639466	2.10116	3.723966	1.557752

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PADI1	0.639412	5.264886	1.283342	1.557695
WNT2	0.638505	2.579734	2.122486	1.556715
PITX1	0.638394	2.245732	1.946102	1.556595
MBNL3	0.637174	0.370933	3.626337	1.55528
MPZL3	0.636587	1.010735	3.489109	1.554647
MAL2	0.636465	2.175277	3.597943	1.554515
B3GNT3	0.636334	4.657438	3.019204	1.554375
HAS3	0.635795	0.205544	2.81179	1.553794
HSD17B2	0.635695	5.542528	2.0727	1.553686
LRRC8E	0.634913	0.6861	3.474176	1.552844
GPR109B	0.633873	-0.35825	2.386782	1.551725
KLK6	0.63308	4.410482	1.324136	1.550872
NBEAL1	0.632954	0.623042	3.50319	1.550737
HRASLS2	0.63189	2.410228	1.920653	1.549594
LPP	0.631889	0.503351	3.975494	1.549593
TNFRSF10A	0.630553	1.272107	3.540466	1.548159
ANLN	0.628975	0.043592	2.88126	1.546466
TMEM195	0.627184	2.103852	1.778942	1.544547
MSLN	0.62671	6.132755	1.38034	1.54404
MUC21	0.626019	0.235175	1.807308	1.543301
CGN	0.625171	2.362616	3.926266	1.542394
SSFA2	0.624357	0.82287	5.670749	1.541523
FAM3D	0.623736	4.58971	1.595317	1.54086
FAM108C1	0.623629	1.238152	3.754574	1.540745
GPR87	0.623175	2.140335	1.512558	1.540261
MECOM	0.622483	1.67198	3.813214	1.539523
GALNT7	0.622466	0.612821	4.583137	1.539505
CCL24	0.622276	2.385981	2.05968	1.539302
PPAP2C	0.621922	2.017492	2.982079	1.538924
SH3RF2	0.621338	2.602507	2.313695	1.538301
CYP2C18	0.619448	5.065958	1.78883	1.536287
ITGA6	0.618514	1.112898	4.6275	1.535293
SFTA2	0.618167	5.398023	1.733184	1.534924
DNAJC22	0.618014	1.827042	3.477428	1.534761
SHH	0.617905	3.152606	2.261657	1.534645
EPB41L4B	0.616106	1.311254	3.684393	1.532732
GDPD2	0.615164	1.603101	1.988632	1.531733
SH2D4A	0.614917	1.31121	3.732984	1.53147
FGFBP1	0.614523	2.431399	1.676833	1.531052
SLC30A2	0.614414	2.536901	1.463222	1.530936
ZDHHC20	0.613426	0.562856	3.089375	1.529887
EFNA2	0.612141	2.27501	2.185503	1.528525
BTBD16	0.611073	1.853714	2.409784	1.527395
UPK1B	0.610071	3.261252	1.24176	1.526335
LCOR	0.610007	0.486156	3.260378	1.526267
RHOF	0.609535	1.822365	2.742177	1.525768

HK2	0.609314	0.504301	2.808375	1.525534
ARL5B	0.609018	0.014034	5.372308	1.525221
TJP3	0.609013	3.110067	2.364741	1.525215
SLC34A2	0.6072	1.752796	1.627656	1.5233
TRIM31	0.60613	5.361354	1.669679	1.522171
LOC153328	0.606086	-0.89103	3.498691	1.522124
DNAH3	0.604531	1.379064	2.476299	1.520484
C4orf19	0.604169	2.62148	3.602077	1.520103
SLC38A5	0.603431	1.774597	1.976457	1.519325
ANXA13	0.603237	4.164542	1.810421	1.519121
LCN2	0.602742	6.025128	1.419112	1.5186
PAX7	0.601637	-0.25776	2.081501	1.517437
C19orf33	0.601512	3.930233	1.798227	1.517306
DSC2	0.601116	0.869057	4.595714	1.516889
ARNTL2	0.601021	1.69877	3.918156	1.51679
IGSF9	0.600763	1.247899	2.184257	1.516518
PRKAA2	0.600195	0.375168	3.067104	1.515921
MSX2	0.599961	1.50654	2.642971	1.515676
EPS8L3	0.599757	7.995032	1.753581	1.515461
TBX4	0.598827	-0.7799	2.881837	1.514485
GAN	0.596844	0.355477	4.79405	1.512404
FAM25A	0.596239	0.091045	2.993465	1.51177
UGT2B7	0.595532	2.560373	1.708488	1.51103
WBSCR26	0.595506	2.749392	2.227551	1.511002
SPDEF	0.594572	3.182807	1.863879	1.510025
TACSTD2	0.594454	2.613173	1.906367	1.509901
PTPLB	0.593828	-0.11404	3.264325	1.509246
KRT13	0.593462	1.528508	1.302373	1.508864
RHOV	0.593225	1.530076	1.996961	1.508615
SCEL	0.591938	3.721138	1.536589	1.507271
CHMP4C	0.59174	1.657256	4.625498	1.507063
PAQR5	0.590816	0.93351	3.053549	1.506099
BCAT1	0.590701	0.908356	2.714207	1.505979
GTF2A1	0.5894	-0.2578	3.330031	1.504621
REST	0.588903	-0.11475	2.981179	1.504103
RHPN2	0.588303	1.383183	3.449288	1.503478
DDX60	0.586341	0.728089	3.732333	1.501434
PRB1	0.582678	0.838628	2.365371	1.497626
SLC2A1	0.582608	0.916859	2.652926	1.497554
HHLA2	0.582466	4.813129	1.769147	1.497406
TMC7	0.582165	2.167489	3.00102	1.497095
GIPC2	0.581772	2.592847	2.868421	1.496687
ADAP1	0.581751	2.226106	2.968868	1.496665
PTPN14	0.581718	0.237297	4.104599	1.496663
MMP1	0.581534	4.791043	1.490463	1.496439
GPR35	0.580982	3.464784	2.453684	1.495867

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ZPLD1	0.580681	2.709147	1.964592	1.495555
EPN3	0.580611	1.815645	2.210702	1.495483
LOC93432	0.580584	2.91814	1.723067	1.495455
KLK13	0.580057	0.179414	2.186225	1.494908
KRT16	0.579105	3.931997	1.295048	1.493922
SGMS2	0.578191	1.472175	4.62378	1.492976
LEMD1	0.577023	3.450614	1.653288	1.491768
PRAP1	0.576483	2.408642	1.209838	1.491209
SLC2A10	0.576332	0.925115	3.74392	1.491054
LUZP2	0.576128	0.954169	2.266743	1.490843
SLCO4A1	0.575996	1.957324	2.657208	1.490707
HAPLN1	0.575323	-0.12153	1.891792	1.490011
COL12A1	0.574744	2.209335	2.417476	1.489413
PAR3B	0.574732	0.941063	2.89118	1.4894
DUOX2	0.574548	5.710105	1.339606	1.48921
HOXA11	0.574087	-0.6721	1.621904	1.488735
EPHA2	0.573499	2.043712	2.779913	1.488128
ECT2	0.572992	0.225647	4.056789	1.487605
STRN	0.572175	-0.09829	3.815804	1.486763
MGAT5	0.571185	0.419403	3.160451	1.485743
GDA	0.570788	4.615526	2.051207	1.485335
PSAT1	0.570662	-1.59861	2.689129	1.485205
METTL11B	0.570551	0.912487	3.064355	1.48509
MOCOS	0.570153	0.552712	3.130811	1.484681
LONRF3	0.568848	1.363729	3.946491	1.483339
NR1I2	0.568399	3.863247	1.544409	1.482877
CXCL11	0.568103	0.110239	2.066337	1.482573
CAPN8	0.568011	6.03774	1.726625	1.482479
CD55	0.567947	1.806618	3.423416	1.482412
TNNI3	0.566689	0.06548	1.794144	1.481121
GREB1L	0.56625	0.782567	2.243052	1.48067
IHH	0.56623	4.136121	1.600676	1.480649
RASSF3	0.565809	0.398839	3.035156	1.480218
HPDL	0.563979	0.646751	2.630833	1.478341
CXorf61	0.563949	0.700604	1.627215	1.478311
TSPAN1	0.563702	3.3308	2.415437	1.478057
INPP4B	0.562316	1.976962	3.246121	1.476638
PLA2G4F	0.56114	0.390745	2.086722	1.475435
TC2N	0.559532	1.655375	4.233775	1.473791
BTC	0.559413	0.968372	3.218445	1.473669
DDI2	0.558539	-0.25755	3.00358	1.472777
ABP1	0.558473	4.603355	1.863529	1.472709
ETV3	0.558159	0.107157	3.699214	1.472389
KANK4	0.557158	2.27644	1.934703	1.471368
MACC1	0.556543	2.519015	2.905928	1.47074
MUC2	0.556423	1.998925	0.97766	1.470619

MMP12	0.555823	2.633455	1.918414	1.470007
FGFR2	0.555731	0.246294	2.435597	1.469913
SLC25A21	0.55462	-0.03377	3.109981	1.468781
STYK1	0.554152	2.43433	2.403869	1.468305
ATL3	0.553944	0.088122	5.25119	1.468094
RNF128	0.552546	3.116316	2.99863	1.466671
FAR2	0.552396	0.479825	3.346558	1.466519
MFI2	0.552116	2.022681	2.267752	1.466235
WBSCR27	0.552003	0.107293	2.509206	1.46612
PI3	0.551595	3.36265	1.44501	1.465705
DSC3	0.551548	0.117505	1.736702	1.465658
TAOK1	0.551137	0.024357	3.09172	1.46524
ACSL5	0.549917	1.949731	2.569944	1.464001
CDHR2	0.54938	6.184954	1.474542	1.463456
PRR15	0.548882	2.693412	2.646311	1.462951
LOC201651	0.547127	1.766504	2.216637	1.461173
DLGAP5	0.546841	0.164385	2.538123	1.460883
EGFR	0.546213	0.181938	3.282618	1.460248
ANPEP	0.545084	1.549054	1.833121	1.459105
CLDN1	0.544616	1.772285	2.601091	1.458632
BCL2L15	0.544356	5.124517	2.028791	1.458369
TGFA	0.544226	1.492761	2.915006	1.458238
F3	0.543539	2.622616	2.905406	1.457543
REP15	0.543397	0.767973	2.359718	1.4574
HPGD	0.541403	2.229396	2.147816	1.455388
C17orf73	0.541095	2.943748	1.439571	1.455076
CREB3L1	0.540266	3.118014	2.716214	1.45424
PARD6B	0.539961	0.420798	4.035204	1.453933
GPR126	0.539795	1.719349	2.591849	1.453766
ASXL2	0.539581	-0.0826	3.170209	1.45355
CEP55	0.538771	0.330255	2.743667	1.452735
CHRM3	0.538706	0.41403	2.216054	1.452668
C9orf152	0.537772	3.770629	1.922407	1.451729
GDF15	0.537461	0.597834	2.132719	1.451416
HNF4A	0.536587	6.062346	2.449124	1.450537
AZGP1	0.536163	2.074016	1.77724	1.450111
CDCP1	0.536139	2.110076	4.047572	1.450087
VWA2	0.535007	2.561477	2.380144	1.448949
NEK2	0.534967	0.135263	2.660174	1.448909
TCEA3	0.533922	0.368868	2.911265	1.44786
SEL1L	0.533793	0.263556	4.98651	1.44773
RASAL1	0.533629	2.469089	2.146774	1.447565
DENND1B	0.533022	-0.02028	3.676369	1.446957
LGALS3	0.532893	1.326822	2.936546	1.446828
DLX3	0.532609	-1.12655	2.379257	1.446543
SGK196	0.532363	-0.2547	3.191676	1.446296

PRSS12	0.53157	2.60815	2.63622	1.445502
HIST1H2BN	0.531417	-0.62388	3.639439	1.445348
NMU	0.530906	2.628939	1.463274	1.444836
NFE2L3	0.53042	1.000828	3.987689	1.44435
F2RL1	0.529548	2.279772	3.301408	1.443477
BANF2	0.529213	0.283466	3.387859	1.443142
C7orf10	0.528765	1.10071	2.191949	1.442694
LANCL3	0.528673	1.055643	3.092469	1.442602
TYRP1	0.528501	0.771528	2.112473	1.44243
COL8A1	0.527871	2.031525	1.874436	1.4418
DNASE1	0.526438	0.425836	2.917312	1.440369
PROM2	0.526103	2.090485	1.625772	1.440034
WDR72	0.525521	2.362812	1.324814	1.439453
MMP7	0.525284	5.77453	1.313493	1.439217
MYPN	0.524355	1.256678	2.530674	1.438291
ERP27	0.523875	1.515639	1.343862	1.437812
MUC15	0.523842	0.263668	1.37899	1.437779
NPSR1	0.522709	2.873967	1.095417	1.43665
PRELID2	0.522644	1.31234	4.275343	1.436586
SLC27A2	0.522602	-0.29327	2.394135	1.436544
TMEM38A	0.521665	0.676497	3.402201	1.435611
UGT1A6	0.521229	2.762482	1.4381	1.435177
GCOM1	0.521216	2.217194	2.442924	1.435164
GALNT4	0.519675	1.839358	2.774633	1.433632
CBS	0.519136	-1.25795	2.360148	1.433097
ESYT3	0.518772	0.410524	2.759975	1.432735
PIWIL2	0.518207	1.364316	2.398206	1.432174
LASS6	0.517921	0.337563	4.679157	1.43189
KCNK1	0.517921	2.119438	3.100912	1.43189
SFTPA2	0.517805	1.050245	1.79991	1.431775
CDH1	0.517543	1.702941	4.07099	1.431515
ZNF704	0.517427	-0.08271	3.19934	1.4314
PTCHD3	0.517307	1.077624	2.137747	1.431281
NCOA2	0.51716	-0.23234	2.53482	1.431135
FGFRL1	0.516118	0.099958	3.15763	1.430102
HSD17B6	0.515749	-0.27218	2.518823	1.429736
ARHGAP32	0.515668	0.687601	4.901191	1.429656
AK3L1	0.515221	-0.3353	2.632217	1.429213
PRRG4	0.514356	0.431832	4.195988	1.428356
THBS2	0.513816	2.717779	2.171463	1.427822
LEFTY1	0.513366	3.942897	1.107183	1.427377
MKI67	0.512792	0.224682	2.714958	1.426808
CDHR5	0.512693	5.332438	1.626137	1.426711
SDC4	0.512208	0.945418	3.576471	1.426231
OTX1	0.51197	0.238855	2.761949	1.425996
FXYD3	0.511651	3.853279	2.229567	1.425681

FKBP9L	0.511151	1.263772	3.609065	1.425187
KRTCAP3	0.511145	1.910005	2.095031	1.425181
C1orf130	0.510987	3.445086	2.321412	1.425025
FBXW12	0.51084	0.516651	2.436222	1.424879
IFI27	0.510522	1.441327	2.236054	1.424566
FGD6	0.509458	1.042417	3.442251	1.423515
SLC12A2	0.50886	1.167389	3.338142	1.422925
ERN2	0.508025	7.202153	1.263117	1.422102
CCDC155	0.507918	-0.15601	3.378809	1.421996
ASPH	0.50777	0.51244	3.904793	1.421851
C12orf39	0.507026	-1.15762	2.465302	1.421118
NQO1	0.506776	1.666417	2.513626	1.420871
LY6D	0.506774	2.727017	0.947844	1.420869
VTCN1	0.505884	2.449704	1.583931	1.419993
TMTC2	0.505872	0.650643	4.143325	1.419982
MYOF	0.505299	1.195829	3.175234	1.419418
ANO1	0.504201	2.573713	3.03791	1.418337
ITGB4	0.50394	2.28089	2.026253	1.418081
PPM1L	0.502844	0.215836	3.442977	1.417005
KRT7	0.502335	4.135697	1.512934	1.416504
HSN2	0.502116	0.286903	2.688406	1.41629
TRIM15	0.502	5.081244	1.569372	1.416175
DPEP1	0.501991	4.465042	1.835469	1.416167
ARHGAP42	0.501488	0.635178	3.383284	1.415673
CCDC68	0.500177	2.288126	3.045233	1.414387
PCDH1	0.499632	1.742793	4.354158	1.413853
WNT7A	0.499304	3.764683	1.247305	1.413531
FAM190A	0.499269	1.07273	3.507277	1.413497
SLC5A1	0.498497	4.69153	1.780952	1.412741
LOC731779	0.498411	1.104793	1.990208	1.412657
SH3RF1	0.496994	0.965242	4.961522	1.41127
TMPRSS15	0.496263	1.064783	1.224702	1.410555
SLC30A1	0.496254	0.189724	5.036966	1.410547
UMOD	0.495735	0.304014	1.944895	1.410039
ABCC3	0.495494	3.150209	2.06741	1.409803
MUC13	0.494766	7.590866	1.606192	1.409092
C16orf11	0.494562	0.000973	3.262627	1.408893
STXBP6	0.494455	1.65046	2.614021	1.408788
ATOH1	0.494295	0.760731	1.661901	1.408632
PTGS2	0.494204	1.739444	1.791283	1.408544
SOX11	0.494023	0.566791	1.770177	1.408367
ALPI	0.49325	1.357984	1.411549	1.407612
LOC100271831	0.49296	1.341031	1.782405	1.40733
VIL1	0.492189	6.33512	1.616831	1.406578
PGA5	0.492093	0.206567	1.606193	1.406484
DUOXA2	0.491805	5.542204	1.14773	1.406203

SDCBP2	0.491501	3.314081	2.376717	1.405907
GPR110	0.491186	3.774366	1.429172	1.4056
ALDH1L2	0.490836	1.31863	2.451127	1.405259
FAM63B	0.490163	0.26157	3.270752	1.404603
NMUR2	0.4897	3.124249	1.206442	1.404153
LOC100188947	0.489119	0.041352	3.067251	1.403587
BMPR1B	0.488927	0.318963	2.316128	1.403401
GBP3	0.488519	0.926371	2.250561	1.403004
C6orf132	0.488473	1.536757	2.394376	1.402959
SAMD9	0.488462	1.257499	3.144449	1.402948
GALNT6	0.487587	0.984441	2.426247	1.402098
CASC5	0.487305	-0.0768	2.466848	1.401824
ANKFN1	0.485847	1.602069	1.907305	1.400408
C6orf223	0.485419	3.119391	1.745185	1.399992
ABO	0.484897	2.036112	1.658088	1.399486
EDIL3	0.484806	1.818922	1.901347	1.399397
PMAIP1	0.483856	0.163231	3.255383	1.398476
FOXL1	0.483628	4.043702	1.971528	1.398256
NCCRP1	0.482819	0.404165	1.362839	1.397472
AQP2	0.480941	1.680956	1.773134	1.395654
TMEM144	0.480163	0.380451	3.525844	1.394901
RHCG	0.479943	-0.49426	1.567666	1.394689
SMPDL3B	0.479934	1.478726	2.809226	1.39468
CKAP2L	0.479694	-0.26632	2.699556	1.394448
CCDC109A	0.479313	1.173404	4.120098	1.39408
IL1RN	0.477967	2.15998	1.719233	1.39278
FAM114A1	0.477521	0.700905	3.993785	1.392349
INHA	0.47752	1.176434	1.902035	1.392348
SLC44A4	0.477452	4.576925	1.973932	1.392282
RAET1L	0.477299	1.780944	1.688032	1.392135
KLHDC7A	0.47688	1.742612	1.964692	1.39173
RPS27	0.476833	0.484538	1.762445	1.391685
AMY2B	0.476724	2.551266	1.072504	1.39158
BARX2	0.47635	2.409965	1.878997	1.39122
PYCR1	0.475961	0.408227	3.430312	1.390844
P2RY2	0.47588	0.662809	2.210296	1.390766
CTSL2	0.475641	0.310423	2.258734	1.390536
PHGR1	0.47545	3.612175	1.102146	1.390351
EXOC6B	0.47437	-0.09772	3.083079	1.389311
CEACAM20	0.474258	0.397854	2.016047	1.389203
OAS1	0.474084	0.707167	2.746088	1.389036
HABP2	0.474041	4.873295	1.229722	1.388995
LEPROT	0.473788	0.297958	3.33419	1.388751
SRD5A3	0.472858	0.983281	3.742664	1.387856
EPCAM	0.472817	3.001685	3.45131	1.387817
BSPRY	0.472407	1.363828	3.53322	1.387422

SERTAD4	0.472215	0.061978	2.52362	1.387238
C9orf129	0.472207	0.263375	3.072584	1.38723
DOCK5	0.472006	1.091175	2.830578	1.387037
YIPF6	0.471176	-0.01157	5.960836	1.386239
BRIP1	0.471083	-0.76251	2.702446	1.38615
LMTK2	0.47105	0.308221	3.148771	1.386118
LAD1	0.470368	3.553586	2.230847	1.385463
CYP3A7	0.470094	1.281962	2.356839	1.385199
HS3ST1	0.469735	2.293309	2.270929	1.384855
GRHL1	0.469295	0.094505	2.856851	1.384433
TMBIM1	0.468904	1.306387	4.508646	1.384058
SLC44A1	0.468493	0.512266	5.099967	1.383663
KIF14	0.468339	-0.13244	2.332177	1.383515
SLC4A4	0.468156	3.329763	1.334491	1.38334
BACH1	0.468147	0.223158	4.78456	1.383332
SLK	0.467614	0.664269	4.786411	1.382821
HPSE	0.466879	0.804909	3.631763	1.382116
PDZD8	0.46685	0.82725	3.876278	1.382089
CENPI	0.466587	-0.52963	2.641307	1.381837
ATE1	0.466355	-0.04496	3.738965	1.381614
RAB11FIP1	0.46629	1.481863	4.041309	1.381552
RRM2	0.465747	-0.13458	2.550341	1.381032
RCC1	0.464837	-0.27004	2.754164	1.380162
SLC35A3	0.464597	0.160703	4.378525	1.379932
ANKS4B	0.464572	4.906031	1.66949	1.379908
SLC16A1	0.463856	-0.20381	3.194625	1.379223
ILDR1	0.46356	1.691628	3.109349	1.378941
RBM47	0.463492	0.701533	4.480267	1.378875
FRK	0.463086	1.10827	3.367739	1.378488
ABHD2	0.463071	1.363581	3.624588	1.378473
TMPPE	0.462166	0.149197	4.210951	1.377609
E2F8	0.462007	0.096617	2.337085	1.377457
EPO	0.461736	-0.1804	2.028098	1.377198
CYP3A4	0.461606	1.577495	1.347744	1.377074
TOP2A	0.461248	-0.22087	2.491178	1.376732
HS3ST5	0.460811	1.055534	1.895189	1.376315
CD9	0.460583	-0.32119	3.417741	1.376098
TMEM159	0.46055	0.560329	3.995575	1.376066
PRSS16	0.459406	1.335707	2.618901	1.374976
HMMR	0.45919	-0.04422	2.722579	1.37477
ANXA2P3	0.458643	0.605824	2.698176	1.374249
ESCO2	0.458577	-0.15968	2.77579	1.374185
OLFM4	0.458366	9.081458	0.846814	1.373985
FABP2	0.458304	1.534283	1.163114	1.373926
CCNT1	0.45813	-0.17099	2.397434	1.37376
SERPINB2	0.458049	3.627075	1.284116	1.373683

LMO7	0.457813	1.943687	3.498819	1.373459
C12orf56	0.457733	-0.68941	1.87872	1.373382
FLNB	0.457671	1.010022	3.128887	1.373323
LYPD2	0.45764	2.111267	0.989685	1.373293
IPMK	0.457594	-0.14988	2.651983	1.373249
GALE	0.457544	0.771706	3.018784	1.373202
POTEE	0.457407	-0.34049	3.238993	1.373072
NEBL	0.456863	0.462934	3.362097	1.372554
CLCN3	0.45682	0.295578	4.330573	1.372513
CDC25C	0.456807	-0.15511	2.322461	1.372501
SOX9	0.455947	1.552771	3.015876	1.371683
MYLK2	0.455617	0.861734	1.526212	1.37137
CCNI2	0.455408	1.766696	2.632901	1.37117
FAM111B	0.455273	-0.41766	2.786013	1.371042
MYO1E	0.454918	1.119771	4.052685	1.370705
FRRS1	0.454868	0.475374	2.08538	1.370658
BMP4	0.454437	2.273564	2.241141	1.370248
SLC16A7	0.454393	1.530966	2.176662	1.370206
NHLRC2	0.454198	0.042246	3.810348	1.370021
CD109	0.454099	0.475169	2.175926	1.369927
INSL4	0.454055	0.139216	2.751246	1.369885
PLEKHG6	0.453863	2.381015	2.953383	1.369703
SPP1	0.453574	2.014731	1.640549	1.369428
EIF2AK2	0.453437	0.042043	4.009996	1.369298
A2ML1	0.453178	0.28266	0.847322	1.369053
UGT1A9	0.45291	2.220075	1.163775	1.368799
PLA2R1	0.452546	1.082812	2.545137	1.368453
SGPP2	0.452258	2.110333	2.62693	1.36818
PPARG	0.451976	1.917385	2.168494	1.367912
KCNN4	0.451802	2.940806	1.535672	1.367747
CLSPN	0.451654	-0.59648	2.237714	1.367607
IL1RAP	0.45162	0.573119	2.632825	1.367575
PCDHGA10	0.451557	0.076376	1.914948	1.367516
NPTX1	0.451453	3.284599	1.730737	1.367417
REEP3	0.450845	0.471797	4.541107	1.366841
CLOCK	0.450761	0.135227	3.268696	1.366761
DIAPH2	0.449944	0.518908	4.813196	1.365987
WNT5A	0.449896	0.969127	2.267021	1.365942
REL	0.449706	0.204558	2.712297	1.365762
SHANK2	0.449129	0.615384	3.104963	1.365216
FAM196B	0.447991	-0.31072	2.280087	1.364139
CD2AP	0.447488	0.68943	4.51769	1.363664
CPA4	0.4474	0.353399	1.725473	1.363581
TDRD1	0.445579	0.850581	1.585156	1.361861
CCL20	0.445538	2.868722	1.331389	1.361822
GPR109A	0.444995	-0.34885	1.600008	1.36131

SLC16A10	0.444921	0.907595	2.384149	1.361239
TOB1	0.444723	0.622403	3.840682	1.361052
LOC284441	0.44439	-0.05681	3.144275	1.360739
LY75	0.444236	1.67504	2.257181	1.360593
LYZ	0.44413	3.333715	1.503094	1.360493
SCN5A	0.443673	0.517591	2.153613	1.360062
FAM55B	0.442841	0.402871	2.265887	1.359279
FZD5	0.442773	0.874353	3.631822	1.359214
SPAG4	0.442752	1.005628	2.633904	1.359194
PAWR	0.44275	0.357987	4.860965	1.359192
CRCT1	0.441933	1.588661	1.298722	1.358423
GPC4	0.441878	0.719659	3.327617	1.358372
LDLR	0.441692	1.908699	2.611755	1.358196
KIF18A	0.441506	-0.54437	2.452195	1.358021
PPP2R2C	0.441029	1.226857	1.48123	1.357573
ANTXR2	0.440612	1.695038	3.06048	1.35718
TNFRSF11A	0.44051	2.251925	2.352921	1.357084
ZNF702P	0.439393	0.109551	2.21147	1.356034
SMAGP	0.438917	1.524158	2.902227	1.355586
PPY	0.438769	7.96182	0.645799	1.355448
C5orf46	0.438729	2.858367	1.560809	1.35541
FBP2	0.438667	1.280782	1.521808	1.355351
MMEL1	0.438609	2.043242	1.807916	1.355297
HECW1	0.438232	0.950251	1.707341	1.354943
DEPDC1	0.437866	-0.4974	2.314862	1.354599
OAS3	0.437832	0.226607	2.914291	1.354567
UGCG	0.437772	0.419098	2.832697	1.354511
LIMS1	0.437368	0.347823	2.818963	1.354131
IQGAP2	0.437228	1.123002	2.494407	1.354
C1orf116	0.436461	3.28464	2.689352	1.353281
P4HA1	0.436412	0.128346	3.655316	1.353235
ECM1	0.436339	1.479901	2.159067	1.353166
ENTPD8	0.436196	2.911365	1.632133	1.353032
SEMG1	0.436039	1.294766	1.802379	1.352885
AKR1B10	0.435918	3.991404	1.039569	1.352771
RIF1	0.43568	-0.01346	3.539184	1.352548
PLOD2	0.435679	0.164538	2.634941	1.352548
MYOM3	0.435564	2.35061	1.820022	1.35244
C10orf118	0.435332	0.481933	3.731214	1.352222
PBK	0.435282	-0.4821	2.542252	1.352175
HIST1H2BC	0.434942	0.0757	2.259595	1.351856
PCSK9	0.434811	2.940431	1.693722	1.351733
EVPL	0.434787	1.68783	1.583339	1.351711
SEC14L4	0.434031	1.646566	1.783691	1.351003
DPP10	0.433856	0.524949	1.330762	1.350839
TPX2	0.433713	-0.33053	2.333873	1.350705

Supplementary Material

CXCR1	0.432808	1.158241	1.637316	1.349858
PTGES	0.432631	1.459715	1.667862	1.349693
EPR1	0.432406	-0.26478	2.125426	1.349482
NRG4	0.432339	1.070182	1.625578	1.349419
MAN2A1	0.432138	0.405638	2.846442	1.349231
C8orf12	0.432088	0.032232	2.346807	1.349185
STK31	0.431979	1.856821	1.598244	1.349083
SLC5A3	0.431667	-0.82495	3.738585	1.348791
NR4A2	0.431595	0.126288	2.272321	1.348724
TMEM125	0.431449	1.91605	2.895605	1.348587
CST4	0.431043	3.249536	1.447127	1.348208
SH2D3A	0.430423	2.097025	1.750132	1.347628
DSG4	0.430287	0.266195	2.808325	1.347501
CBLC	0.429588	3.220658	2.147797	1.346849
FGL1	0.429372	3.218614	0.914917	1.346647
CLDN7	0.429313	2.049049	2.941926	1.346592
C4BPA	0.429253	3.897109	1.054871	1.346536
C6orf150	0.428519	0.694411	3.107523	1.345852
BATF2	0.428215	0.791924	3.067849	1.345568
CLDN23	0.428019	1.897883	2.088529	1.345385
TOX3	0.427978	2.946714	1.987013	1.345347
KRT23	0.427853	3.596988	1.268622	1.34523
VNN1	0.427795	3.770656	1.404856	1.345176
FGG	0.427391	3.666825	0.904155	1.3448
FOXQ1	0.427259	3.34476	1.873538	1.344677
LNPEP	0.426776	0.150209	3.254122	1.344226
RETNLB	0.426759	0.074588	2.190903	1.344211
FNIP2	0.426721	0.489282	2.773895	1.344175
PKP2	0.42659	1.844626	2.669006	1.344053
AP1S3	0.426412	1.634503	2.824975	1.343887
MAB21L2	0.426018	3.051809	1.231671	1.34352
BUB1	0.425926	-0.22826	2.352325	1.343434
GAS2L3	0.425918	0.016541	1.974765	1.343427
IRAK2	0.425883	1.387386	2.750366	1.343394
BACE2	0.425813	1.619845	2.814995	1.343329
BAG4	0.425173	-0.24585	3.93794	1.342734
ITGA11	0.425152	2.339011	1.734577	1.342714
LOC641298	0.424852	-0.04178	1.82692	1.342435
SYTL4	0.424441	1.094307	3.243889	1.342052
GPR115	0.423527	3.186686	1.693714	1.341202
TCF7L2	0.423283	0.806367	3.653411	1.340975
C4BPB	0.42328	4.388281	1.393234	1.340973
PTAFR	0.42323	1.206148	2.23543	1.340926
BCMO1	0.423091	2.290428	2.151778	1.340797
NTN4	0.422795	1.021779	2.910152	1.340522
FN1	0.422749	1.409428	1.737176	1.340479

ASPM	0.422548	-0.03083	2.108612	1.340292
KIF20A	0.422444	-0.2833	2.209205	1.340196
KRT18	0.421216	2.191715	2.823525	1.339056
TMEM139	0.42027	2.033879	1.962364	1.338178
HIST1H2BJ	0.420131	-0.14714	2.012198	1.338049
C20orf151	0.420071	1.172312	1.699874	1.337993
MBOAT2	0.419505	0.723641	2.950601	1.337468
C1orf58	0.419163	-0.0116	3.486561	1.337152
E2F7	0.419145	-0.30872	2.096784	1.337135
PARD3	0.418951	0.095414	5.365957	1.336955
EXPH5	0.418891	0.585871	3.551021	1.336899
FLJ23867	0.418817	2.038423	2.037916	1.336831
ASAM	0.418698	1.622913	1.554973	1.336721
KRT80	0.418477	2.068939	1.690252	1.336516
CLDN10	0.418416	4.817734	0.985902	1.33646
PPP1R3B	0.418198	0.064296	3.827566	1.336258
SHROOM3	0.418172	2.197081	3.483899	1.336233
BARD1	0.417723	-0.21564	2.259614	1.335818
DIAPH3	0.416984	-0.11538	2.399273	1.335133
TSPAN15	0.416601	1.644594	2.773331	1.334779
CHRNA5	0.416597	1.352062	2.394859	1.334775
PRSS22	0.416253	3.790637	1.7657	1.334457
TMEM30B	0.415762	1.965909	3.408434	1.334003
GSTT1	0.415713	0.683348	0.800756	1.333958
C15orf38	0.415554	0.12167	4.877177	1.333811
LOXL2	0.414442	1.304646	2.160281	1.332783
IDE	0.413981	-0.02364	4.009394	1.332357
AMIGO2	0.413941	1.774992	2.278347	1.332321
COBL	0.413648	1.0249	2.985651	1.33205
GPR160	0.413519	0.518035	2.873001	1.331931
SPACA3	0.413325	0.922373	1.637673	1.331752
ANXA2P1	0.41301	1.364924	2.582387	1.331461
HNF1B	0.412958	5.074307	1.488764	1.331413
GDNF	0.412626	-0.00467	2.733256	1.331107
KLHL23	0.412231	0.216035	2.351889	1.330742
ST14	0.411552	2.006827	2.869284	1.330116
NCEH1	0.411479	0.705779	3.308848	1.330049
ARL6IP1	0.411442	0.119115	4.565281	1.330014
IGFBP1	0.411222	2.568303	1.181513	1.329812
SERPINA4	0.411103	7.151679	1.173002	1.329702
AHNAK2	0.411074	1.888905	1.452232	1.329675
? 652919	0.409973	0.179548	1.202296	1.328661
NAALADL2	0.409845	1.067705	2.728857	1.328543
ALB	0.40944	2.730791	0.821896	1.32817
LOC100124692	0.409015	4.307025	1.078182	1.327779
UEVLD	0.408925	0.057104	4.486642	1.327696

PLEKHA7	0.408502	1.334576	2.943139	1.327307
MME	0.408471	-0.27816	1.551322	1.327278
CDA	0.408335	1.858416	1.639893	1.327153
ROR1	0.408302	1.640763	2.096946	1.327123
SPRR3	0.408241	3.114098	0.830879	1.327067
UGT1A7	0.408161	-0.35474	1.805214	1.326994
SLC41A2	0.407995	1.468717	2.864435	1.32684
BAIAP2L1	0.407818	1.918711	2.825984	1.326678
ELOVL6	0.407763	0.363729	3.208627	1.326628
KALRN	0.407579	1.126411	3.001365	1.326458
PRB2	0.407185	0.809622	1.603377	1.326096
ANXA4	0.407162	2.338795	2.285532	1.326074
EPHB6	0.407101	1.501762	1.819301	1.326018
TMPRSS3	0.406877	4.151331	1.558453	1.325812
FAM83G	0.406767	1.095156	3.029655	1.325711
CEACAM18	0.406714	1.369361	1.440665	1.325663
CCRL1	0.406511	1.911025	2.084925	1.325476
EPHX4	0.406501	1.381563	1.907973	1.325467
SEMA4B	0.406237	0.764713	3.050799	1.325224
PRKG1	0.406213	1.383562	1.842054	1.325203
VILL	0.40616	3.342886	1.64965	1.325154
CDCA7	0.405938	0.913553	1.513292	1.32495
KIF23	0.405449	-0.2341	2.395697	1.324501
ZNF217	0.405338	-0.13854	3.503843	1.324399
SCUBE3	0.405274	0.6903	1.457186	1.32434
GULP1	0.405047	1.428751	2.87672	1.324132
STK38L	0.405019	0.883282	4.215662	1.324106
PLA2G4A	0.404919	1.345319	2.517408	1.324015
MTFR1	0.404703	-0.27304	5.670109	1.323816
GPR128	0.404445	2.598253	1.080911	1.32358
RAB3D	0.404135	-0.14919	3.951974	1.323295
SULF1	0.403992	2.615025	1.668268	1.323164
KIAA1211	0.403788	2.38051	2.370809	1.322977
ANO6	0.403279	0.185655	3.627921	1.32251
C10orf12	0.403114	0.204153	3.866664	1.322359
SULT2B1	0.402303	1.408209	1.481796	1.321616
HAVCR1	0.402295	0.996099	1.309291	1.321609
ELF3	0.402081	3.443389	2.053575	1.321412
CDS1	0.401403	1.009695	3.478204	1.320792
PAIP2B	0.401394	-0.75251	1.860892	1.320783
TAF1L	0.401298	-0.16873	3.131347	1.320696
MELK	0.40116	-0.05986	1.912869	1.320569
FAM13A	0.400985	0.270136	3.325868	1.320409
NGEF	0.400916	1.55267	1.716675	1.320346
SYTL2	0.400304	1.281015	2.440079	1.319786
EIF2C2	0.399972	0.168466	3.721712	1.319482

APOOL	0.399887	-0.42952	3.135391	1.319405
RC3H2	0.399786	-0.06312	3.570703	1.319312
GRB7	0.399652	2.011167	2.53177	1.31919
TSPAN5	0.399483	0.161331	2.529898	1.319035
KCNE3	0.39893	1.838982	1.846071	1.31853
ASAP2	0.398489	0.96649	3.443914	1.318127
PANK3	0.398173	0.039621	4.095219	1.317838
ANTXR1	0.398164	1.405677	2.005198	1.31783
ERN1	0.398149	0.571671	2.076846	1.317816
C4orf36	0.398047	-0.05591	3.053059	1.317723
MIPOL1	0.397879	0.391962	3.691198	1.317569
PPTC7	0.397075	0.038075	2.780577	1.316835
MARVELD3	0.396848	1.571982	3.389197	1.316628
TRIM40	0.396766	1.229421	1.632541	1.316553
PRRG1	0.396365	0.795362	3.476915	1.316187
SPOCK1	0.396054	0.925558	1.809174	1.315904
KIAA1522	0.395922	0.684624	3.254072	1.315783
CXCR2	0.395804	0.483821	1.479972	1.315676
BAGE2	0.395657	-0.26413	2.902602	1.315542
DNMBP	0.395594	0.88439	3.857769	1.315484
AZIN1	0.395472	-0.07031	6.152577	1.315373
ABTB2	0.395236	0.736216	2.459927	1.315158
EPS8	0.395112	0.989672	3.082037	1.315045
KRT6C	0.395103	1.471397	0.994665	1.315037
TGIF1	0.394916	0.132983	2.923011	1.314866
SLC39A8	0.394614	-0.36978	3.091227	1.314591
C1QL3	0.39458	-0.18102	1.794586	1.31456
MYO5C	0.39391	1.346467	3.134488	1.313949
PCDH7	0.393608	1.653881	1.782094	1.313675
SLC1A5	0.393445	0.240151	2.9892	1.313526
PYGB	0.393125	0.490551	3.215904	1.313235
GSDMB	0.392446	2.543922	1.762194	1.312617
PPAPDC1A	0.39243	2.52755	1.368095	1.312602
ENTHD1	0.392331	1.213472	1.543029	1.312512
C5orf23	0.39219	1.393907	1.682333	1.312384
MYH16	0.391801	2.48973	1.319125	1.31203
CHST4	0.391676	6.004372	1.16035	1.311917
ODAM	0.390676	4.014442	1.083074	1.311008
MATN4	0.390261	0.570795	1.661144	1.310631
F11R	0.390236	0.764032	3.514339	1.310607
DNAH2	0.390087	2.422751	1.525794	1.310473
C1orf210	0.389939	2.083703	2.577151	1.310338
MTNR1A	0.389939	0.968685	1.899827	1.310338
DQX1	0.389678	1.826103	1.024382	1.310101
SUCNR1	0.389364	0.854051	1.37059	1.309816
LRRC66	0.389271	3.53296	1.52437	1.309731

CHDH	0.388346	1.192914	2.77791	1.308892
CORO2A	0.388203	1.552676	2.14629	1.308762
SLC35F5	0.38791	0.089027	5.246326	1.308496
EPHA7	0.387146	-0.35689	1.208419	1.307803
NLN	0.387059	-0.43822	3.532119	1.307725
ETV4	0.386934	1.610399	2.176716	1.307611
TREM1	0.386548	1.783965	1.459808	1.307262
CTNND1	0.386546	0.394492	4.703836	1.30726
HIST1H2AG	0.386477	-0.63722	2.394299	1.307197
HOXA11AS	0.386032	-0.48769	1.250584	1.306794
IGFL3	0.386003	1.14108	1.449154	1.306768
SLC26A3	0.385493	0.394264	0.967062	1.306306
CAPN5	0.385362	2.092468	2.076639	1.306188
LDHA	0.38536	0.077059	2.998534	1.306186
KIAA1161	0.385198	0.755718	2.639599	1.306039
HIST1H1C	0.38494	0.121872	2.112475	1.305805
YES1	0.3846	0.101741	5.342865	1.305498
ANKRD36BP1	0.384582	-0.10793	1.923493	1.305481
ANG	0.384374	1.570096	2.358001	1.305293
TRIM44	0.384249	-0.04574	3.846499	1.30518
MMP8	0.384152	0.845237	1.514938	1.305093
SPIN4	0.383658	0.18485	3.21499	1.304646
CDH11	0.383222	1.833734	1.708971	1.304251
ATP2C2	0.383146	2.285003	1.781702	1.304183
MFSD9	0.383062	0.249491	4.705325	1.304107
TTC22	0.382804	1.910479	2.679772	1.303874
PLBD1	0.38247	2.044929	1.848995	1.303572
ABCC13	0.382068	-0.22352	2.20629	1.303209
PAFAH1B2	0.382003	0.010061	3.234056	1.30315
MAML2	0.381765	0.531612	2.525198	1.302935
KIAA1244	0.380972	1.136268	1.917316	1.302219
SMYD1	0.380917	-0.32998	1.434102	1.302169
PDE11A	0.380253	2.038757	2.028344	1.30157
NOX1	0.380201	1.380694	1.038375	1.301523
CYP2J2	0.379441	0.545844	2.164336	1.300838
C11orf90	0.379259	1.206221	2.119387	1.300674
KRT19	0.379215	3.973703	1.392059	1.300634

Table S3. Top 1000 significantly down-regulated DEGs in high versus low-risk PDAC patients in TCGA dataset

Gene symbol	logFC	AveExpr	t	Fold Change (FC)
AGAP6	-0.82896	0.298031	-7.28266	0.562933
ZNF789	-0.73484	0.185556	-7.25867	0.600886
CHKB-CPT1B	-0.97932	0.444076	-6.95515	0.507217
LOC100130557	-0.79092	-0.01894	-6.87096	0.577976
? 155060	-0.74192	0.087002	-6.88417	0.597945
LOC100129387	-0.65593	-0.33968	-6.90581	0.634664
TDRD10	-1.00335	-0.1307	-6.82133	0.498841
ANKRD23	-0.70175	0.175058	-6.8109	0.614825
KCNIP2	-1.16445	0.069399	-6.74413	0.446134
FAM13AOS	-0.83475	0.693129	-6.75041	0.560679
LOC100128288	-0.78869	-0.08332	-6.73324	0.578869
TRPV1	-0.74996	-0.20077	-6.73033	0.594619
NPFF	-0.98305	0.636419	-6.64283	0.505909
MYH3	-0.93248	-0.05713	-6.63969	0.523957
CAPN3	-0.92034	-0.24453	-6.54769	0.528384
SSPO	-1.33802	-0.23303	-6.52886	0.395564
REC8	-1.1813	0.599561	-6.51718	0.440953
C17orf86	-0.63963	-0.22703	-6.49203	0.641876
ZNF767	-0.62923	0.179294	-6.49339	0.64652
AGER	-0.95471	-0.29094	-6.44271	0.515946
EGFL8	-0.94211	0.482507	-6.43974	0.52047
LOC221442	-0.97101	0.338736	-6.38557	0.510149
LOC338799	-0.93198	0.158939	-6.37134	0.524138
C9orf45	-0.91522	-0.52864	-6.39088	0.530264
GABBR1	-0.8246	0.414914	-6.37382	0.564638
LOC390595	-0.82391	-0.14762	-6.4095	0.56491
LOC91316	-0.79584	0.194536	-6.39629	0.576006
FAM179A	-1.28586	1.202948	-6.34731	0.410126
CDK3	-0.79248	0.156282	-6.33814	0.577351
LY6G5B	-0.77118	0.15492	-6.31865	0.585938
SGSM2	-0.67129	-0.1488	-6.31526	0.627944
IL11RA	-0.65432	-0.19443	-6.31477	0.635375
HERC2P2	-0.94287	0.221057	-6.28724	0.520198
PLGLB2	-0.83256	0.016386	-6.28559	0.56153
NPPA	-0.8098	-0.12176	-6.27495	0.570461
CELF6	-1.04335	0.384394	-6.27008	0.4852
KIAA0895L	-0.66868	0.178569	-6.26522	0.629082
NCRNA00202	-0.88218	-0.48453	-6.22672	0.542547
SEC31B	-1.02138	0.244576	-6.21517	0.492644
TCTE3	-0.64803	0.127002	-6.21777	0.638152
PPIEL	-0.93456	-0.04495	-6.19391	0.523202
ACRC	-0.70467	0.193424	-6.19046	0.613584
UCP3	-0.6953	-0.30983	-6.19271	0.617582

ZGLP1	-0.91233	-0.04383	-6.18171	0.531325
AGAP4	-0.67352	0.381433	-6.18156	0.626976
TTLL3	-0.74404	0.620898	-6.16893	0.597066
FAM186A	-0.78792	0.004904	-6.14577	0.579178
DFNB59	-0.67241	0.225408	-6.13527	0.627457
CATSPER2	-0.74384	0.430986	-6.12411	0.59715
PNMA3	-1.37686	-0.58005	-6.07871	0.385056
C3orf47	-0.80324	-0.12361	-6.07697	0.57306
PILRB	-0.85615	0.108331	-6.0538	0.552426
NCRNA00174	-0.7598	-0.13386	-6.05093	0.590577
LOC728392	-1.16608	1.24698	-6.03614	0.44563
NFKBID	-0.81243	0.437924	-6.03209	0.569423
C6orf81	-0.92714	-0.32326	-5.99973	0.5259
LOC286367	-0.7	0.306923	-5.99236	0.615572
LOC100132287	-0.74537	0.200077	-5.97021	0.596515
COLQ	-0.72821	0.284038	-5.9664	0.603654
LOC168474	-0.83265	-0.49101	-5.95969	0.561498
EGFL7	-0.86763	0.242738	-5.92304	0.548045
NPIPL3	-0.87565	0.415212	-5.8822	0.545007
CROCCL2	-0.64998	0.264692	-5.8741	0.637291
RLTPR	-1.28929	0.516076	-5.86797	0.409153
CYP2D7P1	-1.07414	0.192393	-5.8616	0.474955
MTMR9L	-0.70447	0.93583	-5.85496	0.613666
GOLGA8A	-0.93225	0.354871	-5.81267	0.52404
KIAA1683	-0.9016	0.004983	-5.80431	0.535292
PROCA1	-0.63232	0.26235	-5.78439	0.645138
DNHD1	-0.71984	0.077745	-5.76504	0.607164
ZMAT1	-0.94556	0.20096	-5.75267	0.519228
CSAD	-0.73857	-0.19516	-5.75356	0.599331
PRRT1	-0.73185	0.076506	-5.74567	0.602131
LTB4R	-0.6892	-0.04121	-5.74299	0.620197
ZCCHC18	-1.03571	0.939406	-5.72513	0.487775
ATG16L2	-0.68445	0.39021	-5.72598	0.622242
CRYGS	-0.81109	0.506134	-5.6911	0.56995
C19orf76	-0.85901	0.497706	-5.66727	0.551331
CPT1B	-0.93174	0.288227	-5.66007	0.524226
WNT10B	-1.00895	0.198374	-5.6494	0.496907
ZNF540	-0.87997	0.141268	-5.64884	0.54338
SNHG10	-0.66304	0.112092	-5.64692	0.631544
ENO3	-0.73739	-0.80463	-5.63817	0.599825
TMEM151B	-0.87993	-0.0227	-5.62799	0.543395
C7orf51	-1.0675	1.457896	-5.61418	0.477145
SGK494	-0.64735	-0.30701	-5.61416	0.638454
CCR10	-0.90416	0.184724	-5.58995	0.534345
KANK3	-0.75536	0.220713	-5.58897	0.592398
MAPK11	-0.7034	0.253619	-5.5888	0.614124

RFPL3S	-0.74321	0.072657	-5.58745	0.59741
PGAM2	-0.77087	-0.51182	-5.58052	0.586065
KIAA1875	-1.05131	0.068222	-5.54887	0.48253
LRRC37A3	-0.71393	-0.3328	-5.53316	0.609656
SH2D3C	-0.69606	0.129933	-5.5333	0.617255
C10orf68	-0.69805	0.51434	-5.52024	0.616404
H2BFXP	-0.78065	0.53864	-5.508	0.582105
SLC25A18	-0.7661	-0.80586	-5.50525	0.588005
ADCY4	-0.7012	1.093276	-5.4539	0.615059
DPY19L2	-1.08944	0.14723	-5.44441	0.469943
LOC100133331	-0.65827	0.190559	-5.44356	0.633636
LOC349114	-0.68108	0.26264	-5.42822	0.623696
LPAL2	-0.71128	0.149274	-5.41393	0.610777
ARHGAP33	-0.6868	-0.22453	-5.40952	0.621231
CHRNA10	-0.69472	0.006875	-5.40445	0.61783
LCNL1	-0.92375	0.566363	-5.40138	0.527139
GHRLOS	-0.6436	0.010211	-5.3611	0.640114
C16orf79	-1.03091	0.261435	-5.35363	0.489403
C20orf160	-0.70756	0.240226	-5.35206	0.612356
PABPC1L	-0.91789	0.304028	-5.34715	0.529281
SLC12A1	-0.84771	-0.76061	-5.34729	0.555665
AGAP7	-0.77148	-0.06153	-5.3404	0.585815
SCNN1D	-0.99253	-0.02264	-5.33048	0.502596
LOC100129726	-0.68827	-0.03654	-5.31419	0.620599
A1BG	-0.79169	-0.30465	-5.30196	0.577666
VENTX	-0.80795	0.934427	-5.2853	0.571193
L3MBTL	-0.73432	0.241636	-5.27407	0.601101
CCDC17	-0.76524	0.066193	-5.27309	0.588357
ACCN3	-1.0122	0.203273	-5.26404	0.495789
CYP21A2	-1.04596	0.037575	-5.2605	0.484323
ZNF692	-0.65679	-0.11269	-5.25174	0.63429
FGF17	-1.05251	0.226014	-5.24962	0.482129
PLAC9	-0.97309	1.218229	-5.24135	0.509413
NTN5	-0.77089	-0.1068	-5.24053	0.586055
EID2B	-0.66131	-0.03554	-5.24085	0.632302
C6orf163	-0.68893	-0.31049	-5.23497	0.620314
GOLGA8B	-0.98911	0.359257	-5.22237	0.50379
FBXO41	-0.70056	0.307576	-5.21805	0.615331
SLC25A27	-0.91321	0.300753	-5.20842	0.531001
C21orf58	-0.85182	0.033213	-5.20888	0.554085
RELL2	-0.65374	0.105157	-5.19161	0.635632
KLRA1	-0.7708	0.328678	-5.18873	0.586093
LOC100216545	-0.65223	0.081466	-5.18407	0.636297
NOVA1	-1.21317	-0.26208	-5.17294	0.431321
RAMP2	-0.65258	0.290991	-5.14088	0.63614
SNHG3	-0.63251	0.14486	-5.13879	0.645051

FAM18A	-0.649	0.206388	-5.13732	0.637721
HFM1	-1.00247	-0.15457	-5.13307	0.499144
RASL10A	-0.71144	-0.22605	-5.13313	0.61071
SOX18	-0.76987	0.150212	-5.13204	0.58647
MEG3	-1.05812	2.683388	-5.12147	0.480259
VN1R1	-0.63385	0.075992	-5.10645	0.644454
SOX17	-0.74993	0.198948	-5.10015	0.594633
GRASP	-0.66536	0.887768	-5.09605	0.630533
TMEM86B	-0.73539	0.535441	-5.09205	0.600656
NCRNA00107	-0.73102	0.137444	-5.08267	0.602479
CPLX3	-0.64213	-0.93319	-5.08122	0.640767
HRC	-0.63588	-0.10412	-5.06599	0.643547
C1QTNF4	-1.03259	0.306061	-5.06394	0.488831
NEIL1	-0.73945	0.551086	-5.05606	0.598967
MZF1	-0.67645	0.213541	-5.05633	0.625702
HPX	-0.98827	-0.298	-5.05197	0.504082
KCNAB3	-0.75993	0.350168	-5.05239	0.590524
CNIH2	-1.29615	0.727154	-5.04905	0.407212
ROBO3	-0.67962	0.624719	-5.04441	0.624331
ASPDH	-1.33617	0.413998	-5.04278	0.39607
C6orf26	-0.74934	0.643272	-5.03737	0.594877
LOC100131434	-0.81697	0.528389	-5.03408	0.567634
LOC100270804	-0.67253	0.110494	-5.03119	0.627404
AHSA2	-0.71427	0.545225	-4.99969	0.609512
KCNT1	-0.75255	0.140222	-4.98866	0.593554
BZRAP1	-0.82123	-0.02502	-4.98221	0.56596
l-Sep	-0.94269	0.218755	-4.98058	0.520262
YJEFN3	-0.95086	-0.06651	-4.9782	0.517325
C2orf58	-0.64441	0.486096	-4.97759	0.639753
NSUN5P1	-0.82754	0.217622	-4.97418	0.563491
GPR162	-0.79465	0.495687	-4.97414	0.576482
PPP1R3F	-0.64513	-0.04433	-4.97049	0.639434
PHF21B	-1.16121	0.100781	-4.96642	0.447139
C14orf139	-0.76519	0.10946	-4.96678	0.588375
C21orf29	-1.15351	0.580181	-4.96076	0.449531
PDZD4	-0.88911	0.796618	-4.96022	0.539947
LOC100133161	-0.80398	0.432161	-4.94844	0.572766
PVRIG	-0.79014	0.365873	-4.94874	0.578287
SYT2	-0.70484	-0.45037	-4.94858	0.613511
SOAT2	-0.79754	0.274814	-4.94554	0.575327
C3orf35	-0.6809	0.5295	-4.94436	0.623777
C6orf174	-0.94577	0.689085	-4.93976	0.519151
C1orf220	-0.71636	0.611904	-4.9394	0.60863
STAR	-0.93488	-0.47655	-4.93129	0.523086
FAM69B	-0.73349	-0.61211	-4.92839	0.601445
LRDD	-0.66682	-0.2453	-4.92258	0.629896

USHBP1	-0.71591	0.40427	-4.90916	0.608819
FBLL1	-1.25276	0.776641	-4.9005	0.419646
LOC401431	-0.85748	-0.26895	-4.89734	0.551914
NRN1L	-0.81904	-0.00554	-4.88583	0.566819
LOC730668	-0.63633	0.250867	-4.8855	0.643348
LENG8	-0.62538	0.642735	-4.88366	0.648248
LRRC39	-0.74992	-0.22738	-4.87975	0.594637
NSUN5P2	-0.77457	0.207177	-4.87338	0.584561
LOC149134	-0.7434	-0.31288	-4.85751	0.597331
CPNE9	-0.81548	0.477719	-4.8559	0.568219
MEF2B	-0.89972	0.152682	-4.85298	0.53599
TAL1	-0.68805	0.289638	-4.84993	0.620692
C5orf27	-0.74484	-0.07	-4.83171	0.596733
FAM71F2	-0.74994	0.325315	-4.82995	0.594628
PLA2G6	-0.62369	-0.14163	-4.81818	0.649009
FOXD4L1	-0.71116	0.077815	-4.81628	0.610829
LOC219347	-0.68013	-1.02831	-4.80955	0.624108
C1orf228	-0.81643	0.090574	-4.80211	0.567847
IGLL3	-0.8073	0.656543	-4.80236	0.571451
CLDN5	-0.72437	0.898831	-4.79047	0.60526
FLJ45244	-0.65998	0.104677	-4.78351	0.632888
ZFR2	-1.0468	0.155328	-4.7781	0.48404
FAM43B	-0.78658	1.57812	-4.77152	0.579719
FAM95B1	-0.8629	0.762288	-4.76885	0.549846
LAT	-0.73221	0.381866	-4.7505	0.60198
GNB3	-0.7402	0.787766	-4.7441	0.598658
JAKMIP1	-1.12379	0.273021	-4.74189	0.458885
MAPK12	-0.6867	-0.25889	-4.73879	0.621275
MUSTN1	-0.92455	0.53432	-4.73427	0.526846
EML6	-0.81884	-0.30485	-4.73255	0.566898
RASA4	-0.65494	0.502037	-4.72234	0.635101
LRRC16B	-0.98183	0.212891	-4.71796	0.506336
ANKLE1	-0.69328	-0.76922	-4.71754	0.618448
LOC338758	-0.66577	-0.07723	-4.71438	0.63035
TDRD6	-0.776	0.081256	-4.71332	0.583985
DNAH1	-0.62774	0.543585	-4.70477	0.647189
TNFRSF25	-0.82167	0.429895	-4.69432	0.565788
P2RX2	-0.93279	0.326174	-4.69335	0.523845
REM2	-0.72562	0.566841	-4.68321	0.604737
LRRC4B	-1.00962	-0.1119	-4.67967	0.496678
CEACAM19	-0.76854	0.734272	-4.67315	0.587011
DLGAP3	-0.98519	0.155061	-4.66806	0.50516
PTH1R	-0.67248	0.571739	-4.66533	0.627427
HSD17B3	-0.98253	0.230104	-4.66173	0.506092
LYL1	-0.68023	0.412031	-4.66215	0.624067
RASAL3	-0.79478	0.441742	-4.63646	0.576429

ARRDC5	-0.72905	0.618126	-4.63311	0.603302
CACNA1A	-1.20016	1.90498	-4.62933	0.435227
HSD17B14	-0.72889	-0.20441	-4.6124	0.603366
C9orf139	-0.691	0.25511	-4.60678	0.619424
SPTBN5	-0.94163	1.075522	-4.59688	0.520644
VWCE	-0.68963	-1.16068	-4.59425	0.620014
ARHGAP4	-0.79876	0.17388	-4.59321	0.574842
LOC100190938	-0.71764	-0.83486	-4.58396	0.608091
LRRC24	-1.18129	-0.39089	-4.57712	0.440956
LOC644165	-0.73276	0.197166	-4.56467	0.601752
ARHGEF15	-0.63734	0.544121	-4.55603	0.642899
GNRH1	-0.63663	0.905035	-4.54967	0.643212
LOC100240726	-0.72713	0.367596	-4.53866	0.604106
GPX3	-0.95863	-0.40464	-4.53574	0.514546
LYG1	-0.66665	-0.08442	-4.52972	0.629969
STAT4	-0.80199	0.81231	-4.52547	0.573557
SPEG	-0.96548	0.592612	-4.52395	0.512108
FXYD7	-0.836	-0.16377	-4.51649	0.560194
SCRT1	-1.13678	0.935742	-4.51394	0.454774
RAMP3	-0.64503	0.7686	-4.51181	0.639478
RASGRP2	-1.05891	0.625865	-4.49851	0.479995
NCRNA00173	-0.77528	-1.46306	-4.49879	0.584277
TSPAN32	-0.82652	0.314082	-4.49574	0.563886
GDAP1L1	-1.22031	0.898765	-4.49419	0.429191
TSPAN7	-1.00923	-0.23006	-4.49132	0.49681
SPTBN4	-1.12094	0.598114	-4.49025	0.459793
C21orf15	-0.89041	-0.05557	-4.48967	0.539462
NCRNA00181	-0.69677	-0.23625	-4.48771	0.616952
TCAP	-0.80075	-0.28759	-4.4846	0.574049
SLC12A5	-1.13925	0.30603	-4.48341	0.453996
ATP1B2	-0.83114	-0.36622	-4.48097	0.562085
CES8	-0.7468	0.115851	-4.47835	0.595924
FXYD1	-0.89616	0.985664	-4.47754	0.537315
MGC16703	-0.79763	0.284721	-4.47383	0.575293
C19orf18	-0.69519	0.116759	-4.46833	0.617627
ICA1L	-0.65087	-0.02746	-4.46825	0.636898
CXorf50B	-0.62511	0.562119	-4.4641	0.648372
MCART6	-0.94047	0.644986	-4.46329	0.521062
RUNDC3A	-1.41069	1.213283	-4.45277	0.376132
NGFR	-1.18675	1.124355	-4.45178	0.439292
TTC23L	-0.68614	-0.49393	-4.44133	0.621516
DGCR9	-0.86573	0.081002	-4.44056	0.54877
MIR17HG	-0.69539	0.386633	-4.43975	0.617544
C2orf85	-0.82941	-0.11655	-4.43818	0.562759
SCN4A	-0.87729	-0.79097	-4.43598	0.544388
STMN3	-0.68296	0.259871	-4.43395	0.622887

MIAT	-0.90999	0.626472	-4.43159	0.532188
LINGO3	-1.03561	0.050626	-4.42807	0.487811
TSNAXIP1	-0.63916	0.384096	-4.42697	0.642087
C19orf35	-0.74599	0.538443	-4.41685	0.59626
PCSK1N	-1.61595	2.74651	-4.41351	0.32625
OR13A1	-0.81646	0.681991	-4.41123	0.567835
ATOH8	-0.72192	-0.4024	-4.40601	0.606291
TREML1	-0.75002	0.335073	-4.40429	0.594595
UPB1	-0.78545	-0.51218	-4.40329	0.58017
CRB2	-0.81138	-1.54987	-4.39088	0.569837
GOLGA2B	-0.66411	-0.0948	-4.38559	0.631077
KRT72	-0.71128	0.08661	-4.38417	0.610777
KCNK17	-1.05414	2.202967	-4.37633	0.481583
MTMR7	-0.76849	0.053233	-4.37424	0.58703
CPLX1	-0.77452	0.327534	-4.36158	0.584584
SNAP91	-1.19574	2.178211	-4.36122	0.436563
SLC22A17	-0.84199	0.548745	-4.35866	0.557872
SLC6A13	-0.7189	-2.06864	-4.35348	0.607562
NCRNA00105	-0.84188	0.441869	-4.3524	0.557917
FAM107A	-0.88566	-0.07421	-4.35157	0.541242
5-Sep	-0.62692	-0.05185	-4.35108	0.647559
TRPM6	-0.90265	-0.19776	-4.34456	0.534904
LCN10	-1.10551	0.887654	-4.34237	0.464739
BRSK1	-0.71599	0.31733	-4.34231	0.608788
C5orf39	-0.62755	0.322548	-4.33062	0.647275
MSTN	-0.69411	-0.26222	-4.32951	0.618091
GCGR	-1.17913	1.604325	-4.32832	0.441617
MGC42105	-0.83504	0.269354	-4.3277	0.560568
GIMAP1	-0.63549	0.415052	-4.32691	0.643721
CCDC78	-0.85853	0.168821	-4.32515	0.551514
FOXD4	-0.74798	-0.21322	-4.32335	0.595435
B3GAT1	-1.08134	-0.98425	-4.3151	0.472588
NLRP9	-0.83107	0.745666	-4.31525	0.562112
PIPOX	-0.89552	-0.2739	-4.30949	0.537553
CA3	-0.85418	0.870934	-4.30441	0.553181
LIMD2	-0.6952	0.104942	-4.30125	0.617623
HCG27	-0.62676	0.620081	-4.29912	0.647627
GNG7	-0.8002	0.094035	-4.29506	0.574271
CHST8	-1.07422	0.853187	-4.29268	0.474928
GRRP1	-0.76719	0.909192	-4.2856	0.587561
GRIN2C	-0.70343	-1.13739	-4.28441	0.614112
SHISA7	-1.20015	0.433501	-4.27692	0.435229
BCAM	-0.70037	-0.50193	-4.27348	0.615413
C15orf59	-0.74732	0.375369	-4.27179	0.595709
RBP5	-0.79864	0.32128	-4.2705	0.57489
CACNA1I	-1.00581	0.270547	-4.26811	0.49799

ZAP70	-0.96591	0.529352	-4.25644	0.511954
CDH12	-0.84475	-0.08251	-4.24562	0.556809
HSF4	-0.82418	0.326862	-4.23797	0.564802
ZNF781	-0.67989	0.220049	-4.2336	0.624212
GIMAP5	-0.70773	0.195711	-4.2326	0.612281
GPIHBP1	-0.74188	0.020695	-4.2204	0.597959
DHH	-0.76782	0.86177	-4.21792	0.587304
SUSD4	-0.91414	0.85555	-4.21389	0.530661
CNTNAP4	-0.79623	-0.55616	-4.21319	0.575852
MPZ	-0.73816	0.20845	-4.21447	0.599503
ITGA7	-0.67354	0.224605	-4.21245	0.626967
C5orf38	-1.25479	-1.04851	-4.21157	0.419054
LGI4	-0.72077	0.536774	-4.20562	0.606774
FAM19A1	-0.6311	-0.09259	-4.20585	0.645682
LBP	-1.55231	0.365659	-4.20389	0.340964
NCRNA00176	-0.69173	-0.14096	-4.19843	0.619111
ATP6V1G2	-0.65358	-0.26226	-4.19248	0.635702
LIPE	-0.67918	0.128638	-4.19216	0.624519
CCDC154	-0.78843	-0.25975	-4.19017	0.578975
CRIP3	-0.90834	0.177319	-4.18948	0.532797
PTPRCAP	-0.90679	0.35269	-4.18969	0.533371
NPR1	-0.65288	0.322057	-4.18934	0.636009
LOC283663	-1.00294	1.221775	-4.18554	0.498982
DUSP15	-0.75698	-0.4047	-4.18091	0.591736
LTC4S	-0.81119	0.493599	-4.18056	0.569912
CYP2D6	-0.83444	0.200295	-4.17729	0.5608
SCML4	-0.87789	1.058395	-4.17692	0.544164
CFP	-0.8781	0.547308	-4.17399	0.544085
SERPINF2	-0.73442	0.07589	-4.1735	0.601058
RIC3	-1.12189	0.43932	-4.16862	0.459493
PCDHA2	-0.74951	0.267103	-4.16539	0.594806
TRIM46	-0.67347	0.682062	-4.16353	0.626998
MST1	-0.63238	-0.38229	-4.15792	0.645112
OLFM2	-0.67379	-0.23358	-4.154	0.626859
CERKL	-0.64199	0.740591	-4.15288	0.64083
DDX25	-1.18896	0.370997	-4.15085	0.43862
CPT1C	-0.62457	1.491962	-4.14924	0.648611
FNDC5	-0.68567	-0.46767	-4.14808	0.621716
C4orf44	-0.64875	0.278908	-4.14326	0.637833
CARD9	-0.72092	0.264277	-4.14102	0.606709
CLEC3B	-0.74453	0.163774	-4.12986	0.596862
MGC16121	-0.66759	0.339392	-4.12849	0.629558
LOC100272228	-0.66915	0.33363	-4.12486	0.628877
CRMP1	-0.82782	0.642419	-4.12174	0.56338
KNDC1	-1.10325	0.694046	-4.11761	0.465466
HCST	-0.63682	0.282258	-4.11536	0.643128

GDF1	-1.00241	-0.73937	-4.10863	0.499164
SCN3B	-0.95156	0.936643	-4.11002	0.517074
ITGAD	-0.85386	-0.23482	-4.10773	0.553304
ANKK1	-0.76703	0.198582	-4.1041	0.587624
DMRTC1B	-1.0823	1.035335	-4.09733	0.472276
UCHL1	-0.76562	0.861261	-4.0963	0.588199
ZNF467	-0.67419	-0.00847	-4.09648	0.626683
SFRS13B	-0.6685	-0.02129	-4.09467	0.629159
CYFIP2	-0.64427	-0.57844	-4.09353	0.639818
VWA5B2	-1.54047	2.484647	-4.09055	0.343772
GRIA3	-1.06622	1.728934	-4.08967	0.477568
CDK5R2	-1.19445	3.025336	-4.08505	0.436953
KLKB1	-1.01823	1.35872	-4.0757	0.493721
CDK5R1	-0.70439	0.110757	-4.0746	0.613704
CORO2B	-0.68168	0.35776	-4.07155	0.623439
LRRC10B	-0.96708	0.862585	-4.07102	0.511539
NECAB2	-1.05715	1.596936	-4.06799	0.480582
DARC	-1.30543	1.747735	-4.06413	0.404601
GPR17	-0.70445	0.597861	-4.06255	0.613676
KLHDC8A	-0.68555	1.212099	-4.06284	0.621769
SLC4A8	-0.8298	0.541517	-4.04793	0.562605
KIAA0087	-0.67887	0.08199	-4.04794	0.624655
SLC25A34	-0.73082	0.767919	-4.04703	0.602562
CETP	-0.85511	-0.38496	-4.04422	0.552824
TTC16	-0.68553	-0.23165	-4.04198	0.621779
CTXN2	-1.01079	0.78522	-4.04048	0.496273
FAM129C	-1.4456	0.800198	-4.03216	0.367138
TBC1D10C	-0.87672	0.402358	-4.03061	0.544605
PRSS50	-1.02219	0.44274	-4.02972	0.49237
FSD1	-0.62801	-0.33571	-4.02825	0.647068
GPRASP1	-0.7301	0.961135	-4.02559	0.602861
REEP2	-0.88317	0.704867	-4.02467	0.542174
FTCD	-1.1962	-0.0569	-4.0194	0.436424
CHRN2	-1.16552	1.005288	-4.0148	0.445805
PPM1E	-0.91968	-0.32306	-4.01239	0.528625
UNC13A	-1.10127	2.169837	-4.01154	0.466106
LASS1	-0.93131	0.102827	-4.00963	0.524383
AQP7P1	-0.7949	1.205771	-4.00975	0.576384
C3orf32	-0.85765	0.398051	-4.00516	0.551852
RTN1	-1.03774	0.592154	-4.00458	0.487089
DNASE1L3	-1.16775	-0.81046	-4.00434	0.445115
GNG3	-0.68008	0.06858	-4.00307	0.62413
P2RY11	-0.68812	-0.02152	-4.00103	0.620661
ADAMTSL2	-0.6355	2.307517	-3.99976	0.643718
SLC29A4	-1.02776	0.698031	-3.9989	0.49047
MBL1P	-0.71454	0.871479	-3.99832	0.609401

MYT1	-1.23042	0.215187	-3.99697	0.426195
MAPK10	-0.71853	0.358115	-3.99651	0.607716
PATL2	-0.75344	0.240623	-3.994	0.593188
NCRNA00085	-0.6467	0.530638	-3.99128	0.638739
EBI3	-0.78344	0.025842	-3.99049	0.580981
PCBP3	-0.67957	1.50777	-3.9868	0.62435
FAM180B	-0.8377	0.35064	-3.98302	0.559534
GALNTL1	-0.95783	0.451314	-3.98244	0.51483
FEV	-1.32755	2.92809	-3.9818	0.398444
SAMD11	-0.69286	1.594189	-3.98046	0.618625
PRRT4	-0.82941	-1.10691	-3.97306	0.562758
AP3B2	-1.11842	0.055142	-3.97022	0.460598
RHOXF1	-0.62772	-0.07539	-3.9704	0.6472
PTCHD2	-0.96072	0.193125	-3.96882	0.5138
P2RX5	-0.94692	0.193691	-3.96887	0.518739
NPB	-0.76747	-0.12157	-3.96909	0.587445
PTCH2	-0.69392	1.346743	-3.96735	0.61817
RGAG4	-0.70917	0.248625	-3.96669	0.611672
STAG3	-0.83556	-0.01862	-3.96638	0.560364
ZNF80	-0.83595	0.473694	-3.96359	0.560215
C4orf39	-0.64295	-0.27649	-3.9629	0.640401
CHD5	-1.03639	1.340457	-3.96064	0.487544
FBXL16	-0.9662	-0.8788	-3.95994	0.511854
FAM20A	-0.68419	0.214196	-3.9573	0.622353
MYT1L	-1.15887	1.762561	-3.94984	0.447863
FIGF	-0.89931	-0.18121	-3.94723	0.536144
C21orf56	-0.66076	-0.015	-3.9468	0.632544
LRRN3	-0.84721	-0.09761	-3.94329	0.555859
AGAP2	-0.66494	0.191571	-3.9407	0.630714
HEPACAM	-0.84232	-0.64028	-3.93842	0.557745
ACTL6B	-1.40345	1.858862	-3.93687	0.378025
HCN2	-0.8497	0.203697	-3.93158	0.5549
GRIA2	-1.30759	1.273157	-3.92966	0.403997
KEL	-0.90758	0.059498	-3.92042	0.53308
RSPO4	-0.72955	-1.30558	-3.92081	0.603091
ACAP1	-0.82344	0.722587	-3.91317	0.565095
INSRR	-0.81095	0.896785	-3.91357	0.570008
WNT9B	-0.65368	0.294836	-3.91335	0.635659
CAPN14	-0.68737	-0.57078	-3.91237	0.620984
SEMA3G	-0.69202	0.430286	-3.90447	0.618985
PLIN1	-1.45451	0.664079	-3.9015	0.36488
TNNT3	-1.10369	-0.11715	-3.90201	0.465324
TCEAL5	-0.80895	0.74706	-3.90086	0.570799
JAKMIP3	-0.64247	0.248033	-3.90104	0.640617
FAM155B	-0.79928	-0.13618	-3.89624	0.574637
CLEC4F	-0.8395	0.592604	-3.88486	0.558836

CALY	-1.58451	3.720688	-3.88061	0.333437
WDR17	-0.9632	0.36696	-3.8792	0.51292
ZNF667	-0.62426	-0.04764	-3.87618	0.648751
SCN3A	-0.87048	0.813264	-3.87405	0.546964
FLJ40330	-0.85452	0.415832	-3.85919	0.553051
EIF4E1B	-0.69963	0.401381	-3.85818	0.615729
LOC389332	-1.21862	2.876495	-3.84481	0.429692
EFR3B	-0.70442	-0.73482	-3.84305	0.613689
RGS11	-0.74414	1.550178	-3.83877	0.597023
FAM153A	-0.89532	0.823559	-3.83809	0.537626
ZDHHC8P1	-0.96132	0.780684	-3.83719	0.513585
TUSC5	-1.47782	0.974848	-3.83422	0.35903
GLYAT	-0.63897	-1.30019	-3.83314	0.64217
ZSCAN1	-0.77137	-0.26374	-3.83236	0.585862
MRAP	-1.03447	0.170963	-3.8307	0.488195
CRHBP	-0.76522	-0.87765	-3.8288	0.588363
KIF5C	-0.9642	0.097912	-3.82489	0.512563
FAM57B	-0.85323	-0.03027	-3.81973	0.553544
C14orf180	-1.0066	0.488938	-3.81771	0.497717
LCN12	-0.77822	0.339871	-3.81608	0.583085
PSD	-0.69228	2.2792	-3.8124	0.618873
NELL2	-1.01513	-1.23626	-3.81216	0.494785
HPCA	-0.71647	1.147048	-3.8022	0.608584
DOCK3	-0.7305	-0.36114	-3.80137	0.602694
DAZL	-0.70554	0.473293	-3.79607	0.613214
PRR22	-0.68559	-0.4321	-3.78763	0.621751
HAP1	-0.95177	0.089931	-3.78656	0.516998
SLC7A10	-0.89256	-0.77405	-3.7793	0.538659
CELF3	-1.50887	3.968216	-3.77872	0.351387
CAMK2B	-1.28014	0.442709	-3.77765	0.411754
SNCB	-1.04686	0.945735	-3.77657	0.484019
MATK	-0.70841	0.003385	-3.77027	0.611993
ZNF831	-1.00671	0.850381	-3.76635	0.49768
KIF26A	-0.67517	0.090057	-3.75363	0.626257
TMEM145	-0.98533	0.012913	-3.75146	0.505108
CYP46A1	-0.77809	-0.24617	-3.74855	0.583137
BTBD17	-0.90639	0.760485	-3.74766	0.533517
PARVG	-0.6716	0.652303	-3.74473	0.627809
MPP2	-0.74749	0.124506	-3.74343	0.595639
FCN3	-0.6611	0.433036	-3.74131	0.632394
CFD	-0.79884	0.511946	-3.73933	0.574809
LOC440905	-0.98358	-0.12112	-3.7369	0.505722
SAMD3	-0.73184	1.138683	-3.73598	0.602134
MAP4K1	-0.85403	0.152233	-3.7324	0.553237
RIMBP2	-1.24556	1.946578	-3.72978	0.421744
SLIT1	-1.01989	0.264116	-3.72822	0.493155

BSN	-0.85797	0.122539	-3.72812	0.551728
GRM4	-1.29808	1.320519	-3.72664	0.406668
B4GALNT4	-0.91437	-0.6104	-3.72358	0.530576
TMPRSS6	-1.03156	1.481053	-3.72036	0.489182
DUSP26	-1.13015	2.45944	-3.71916	0.456869
CALB1	-1.10772	0.803475	-3.71725	0.464026
TMEM179	-1.09754	1.241365	-3.71582	0.467314
CD300LG	-1.05271	-0.66658	-3.7139	0.482062
FUT7	-0.63935	0.195272	-3.71322	0.642001
CABP7	-1.20355	2.569013	-3.71236	0.434206
CADM3	-1.11512	0.450176	-3.7115	0.461651
CMTM5	-0.75011	-0.2187	-3.70345	0.594558
BAI1	-0.72651	0.081579	-3.70329	0.604362
S100B	-0.78332	0.83059	-3.7029	0.581027
CCL14	-0.9833	0.955501	-3.69992	0.50582
UCN	-0.65404	-0.15689	-3.69911	0.635496
RIPPLY2	-0.88065	0.592074	-3.69815	0.543122
ACCN4	-0.68618	-0.09742	-3.69723	0.621496
BNIPL	-0.70093	-2.18298	-3.69694	0.615175
ST8SIA5	-0.65051	-0.58762	-3.69602	0.637054
ARHGAP9	-0.67262	0.625305	-3.69459	0.627367
ZDHHC22	-0.85221	0.421611	-3.69397	0.553936
ATP1A2	-1.0544	-0.15616	-3.69358	0.481496
RASD1	-0.87767	0.32797	-3.69335	0.544246
KCNC1	-1.03587	0.483054	-3.68427	0.487723
BMPER	-0.8053	-0.69697	-3.68136	0.572244
KCNK12	-0.67947	0.541688	-3.66887	0.624395
TTC18	-0.70894	0.139449	-3.66707	0.61177
F7	-0.81729	-0.26686	-3.66334	0.567506
MAST1	-0.81356	-0.05859	-3.65759	0.568974
FLJ45445	-0.76694	0.922939	-3.65769	0.587664
AFF3	-0.83358	-1.18164	-3.65317	0.561135
GPR123	-0.99695	1.549376	-3.64809	0.501056
LY6H	-0.87867	1.525509	-3.64769	0.543869
FCRL2	-1.15499	1.101172	-3.64733	0.449069
NAT8L	-0.92716	-0.53204	-3.64663	0.525891
PPP1R1A	-1.4378	1.653894	-3.64637	0.369129
LOC642597	-0.96332	1.628409	-3.63911	0.512877
KCNH3	-0.80302	0.277566	-3.63652	0.573148
PTGDS	-0.92523	1.520051	-3.63285	0.526595
MAP6	-0.71127	1.269134	-3.63167	0.610781
RND2	-0.6555	-1.30996	-3.63052	0.634857
RYR3	-0.62414	-0.92106	-3.62683	0.648807
NR0B1	-1.19209	1.90611	-3.62486	0.437668
LOC100302650	-0.71259	0.182849	-3.6219	0.610222
GNG2	-0.65534	0.446041	-3.62032	0.634926

P2RX6	-0.71871	0.251804	-3.61605	0.607642
SYT5	-1.202	2.337937	-3.6136	0.434674
SEZ6	-1.19859	1.717914	-3.60874	0.4357
C19orf36	-0.62889	0.509204	-3.60612	0.646676
IQSEC3	-0.83093	1.178938	-3.60367	0.562165
ADIPOQ	-1.95151	1.904391	-3.60165	0.258546
SYN1	-0.67885	1.394256	-3.6016	0.624664
SYP	-1.00769	1.285623	-3.60002	0.497341
FAM159A	-0.67856	0.714168	-3.60005	0.624787
CIDEA	-1.2047	0.279626	-3.59687	0.43386
SLC6A17	-1.13882	2.073935	-3.59676	0.454132
C3orf36	-0.63762	1.673401	-3.59595	0.642771
C1orf127	-1.21191	2.913154	-3.59322	0.431696
DPY19L2P4	-0.68581	-0.45794	-3.58958	0.621656
EMCN	-0.64082	0.175485	-3.58722	0.641346
BAI3	-0.895	0.804925	-3.58668	0.537746
ASCL2	-0.78755	-0.41094	-3.5813	0.579326
TMEM63C	-1.26739	0.171124	-3.57958	0.415412
DLG2	-0.78112	0.469104	-3.5792	0.581915
WDR86	-0.7159	0.41841	-3.57881	0.608826
JPH4	-0.72471	0.053881	-3.57607	0.605119
NKAIN1	-0.74853	-1.42902	-3.57519	0.59521
KCNQ2	-1.15401	1.203252	-3.5749	0.449375
CNR1	-0.87992	1.020114	-3.57127	0.543398
LCN6	-0.66677	0.386037	-3.56702	0.629917
HEPN1	-0.68998	-0.83393	-3.56473	0.619864
HOXA7	-0.72641	-1.51271	-3.55956	0.604404
LRRC50	-0.74425	-0.3576	-3.55553	0.596978
SSTR3	-1.17031	2.310048	-3.55064	0.444327
CBLN4	-1.00142	1.439833	-3.53702	0.499508
4-Mar	-0.98057	2.29217	-3.53136	0.506779
RGS22	-0.72396	0.719158	-3.52865	0.605432
KCNC2	-0.76516	-0.0222	-3.5261	0.588388
F10	-0.79974	2.092645	-3.52485	0.574453
DNASE1L2	-0.71933	0.100598	-3.5221	0.607379
PPP1R16B	-0.63241	0.235959	-3.52188	0.645097
TMEM121	-0.68167	-0.05159	-3.51821	0.623444
CDH10	-1.10517	1.318577	-3.51254	0.464846
DPYSL4	-0.73405	0.619666	-3.51027	0.601212
TMC8	-0.63275	0.562008	-3.51058	0.644948
TAGLN3	-1.16523	1.90508	-3.50883	0.445894
KCNH6	-1.35347	2.222117	-3.50206	0.391349
DSCAML1	-0.97819	1.13255	-3.5014	0.507617
RUNDC3B	-0.6312	0.039022	-3.50047	0.645641
GPR113	-0.66191	0.294572	-3.49902	0.632043
ODZ2	-0.81111	0.376164	-3.49791	0.569943

GNAO1	-0.74949	1.136611	-3.49791	0.594816
LOC162632	-0.90775	0.353429	-3.49737	0.533015
TBX1	-0.78659	-1.10925	-3.49287	0.579712
TTBK1	-0.75317	0.399144	-3.49041	0.593297
DPF1	-0.62695	-0.91593	-3.48621	0.647545
PLD4	-0.7914	0.535843	-3.48551	0.577783
MAP3K15	-1.21149	1.247421	-3.48239	0.431824
INA	-1.10332	1.926569	-3.48011	0.465443
GCK	-1.05611	2.139817	-3.47637	0.480926
ARHGAP15	-0.68638	0.525714	-3.47539	0.621411
STXBP5L	-1.07114	0.841631	-3.47443	0.475943
RXRG	-1.17612	0.624758	-3.47268	0.44254
SCAMP5	-0.65468	0.331935	-3.47035	0.635216
FAM184A	-0.63034	-0.77412	-3.46029	0.646024
PSTPIP1	-0.63942	0.411942	-3.45408	0.641972
CACNA2D2	-0.98222	0.793368	-3.45215	0.506199
P2RY8	-0.65171	0.494488	-3.44752	0.636526
PROK1	-0.82385	0.379676	-3.447	0.564934
SCG2	-1.02772	3.915725	-3.4467	0.490484
C19orf30	-1.34506	4.06727	-3.43877	0.393638
SLC6A16	-0.68297	0.034623	-3.4387	0.622882
SVOP	-1.27794	3.239154	-3.43832	0.412385
SELP	-0.83905	1.806044	-3.43588	0.559013
JPH3	-0.78109	1.470924	-3.43137	0.581927
LOC100188949	-0.66349	0.724225	-3.43102	0.63135
CACNA1B	-1.09262	0.527383	-3.42864	0.46891
FMN2	-1.05368	1.731681	-3.42317	0.481739
SEZ6L	-1.26438	2.756138	-3.42137	0.416279
NOL4	-1.22619	2.049495	-3.40829	0.427445
GRM7	-0.67737	0.551305	-3.40436	0.625306
ZNF385D	-0.77176	1.173024	-3.40155	0.585701
TMEM196	-1.04321	2.108437	-3.40073	0.485247
GFRA2	-0.66821	-0.28759	-3.38959	0.629288
PAX6	-0.82432	1.378371	-3.38801	0.56475
TMEM59L	-0.81369	1.726545	-3.38679	0.568925
CASKIN1	-0.78797	-1.38562	-3.38087	0.57916
KCNJ10	-0.65668	-1.61232	-3.37893	0.634335
GNG4	-0.8863	1.085081	-3.36864	0.541001
UNC80	-1.2346	1.901895	-3.36441	0.424961
C14orf115	-0.68156	1.349744	-3.36223	0.623493
CCDC151	-0.65647	-0.52709	-3.35624	0.634429
HRNBP3	-0.81887	0.364703	-3.35506	0.566885
PNMT	-0.87332	0.809132	-3.35488	0.545888
WNT6	-0.63257	-0.21869	-3.35116	0.645027
RMST	-0.78673	0.374455	-3.3463	0.579656
LONRF2	-0.72101	0.99296	-3.34351	0.606675

CCR7	-0.9677	0.958757	-3.3416	0.511321
NRSN1	-0.84081	1.154679	-3.33706	0.55833
ST18	-1.07316	2.668705	-3.33265	0.475278
RAB39B	-0.84793	-0.21234	-3.33141	0.555581
CD79B	-0.95006	0.670711	-3.32646	0.51761
HMGCLL1	-1.01437	1.616494	-3.32484	0.495045
MCOLN2	-0.67167	-0.03945	-3.31884	0.627782
CXorf57	-0.68036	0.516551	-3.31615	0.624011
KCNA5	-0.93731	1.804409	-3.31597	0.522205
SCG5	-1.03203	3.898225	-3.31469	0.489021
PPP2R2B	-0.64873	0.878707	-3.31324	0.637843
FAM153B	-0.72936	0.753577	-3.31262	0.603169
DYNC1I1	-0.69096	0.737269	-3.3113	0.619442
C7orf52	-1.02471	1.137706	-3.30966	0.491508
ASTN1	-0.98593	0.524243	-3.30799	0.5049
MGAT4C	-0.75269	0.062258	-3.30806	0.593495
APLNR	-0.62495	1.133362	-3.30308	0.648443
CELF4	-0.92532	0.800163	-3.29976	0.526563
C1QL1	-0.97918	0.369036	-3.29725	0.507267
FLJ43390	-1.30858	3.774262	-3.29671	0.403718
ADRA2C	-0.65401	0.958143	-3.29545	0.635514
FAM151A	-0.71519	-0.25334	-3.29495	0.609126
DCX	-0.87006	1.156465	-3.29349	0.547125
KLHL14	-0.85741	-0.96543	-3.29062	0.551944
AQP7	-0.71027	1.586854	-3.28272	0.611205
C8orf84	-0.63755	0.082263	-3.27948	0.642805
CHODL	-0.6492	-0.94934	-3.27686	0.637633
LGI3	-0.97442	-0.05009	-3.27646	0.508946
GRIK5	-0.82182	0.863337	-3.27247	0.565729
RTN4RL1	-0.74739	0.275177	-3.26968	0.595682
ITIH1	-0.82895	1.017724	-3.26753	0.562939
NEFH	-0.64513	-0.09404	-3.26667	0.639436
SNAP25	-0.92657	2.049423	-3.26637	0.526107
BLK	-1.27356	1.335143	-3.26551	0.413638
NAPSB	-0.78801	1.055447	-3.2641	0.579144
CDO1	-0.67085	1.253559	-3.2614	0.628138
SSTR2	-0.78825	0.570502	-3.23836	0.579047
NTS	-1.18759	0.312304	-3.23611	0.439036
TF	-0.97304	-1.11643	-3.23612	0.509433
GP1BA	-0.79806	0.139999	-3.23449	0.575121
MAL	-0.8154	-2.08863	-3.23088	0.56825
FRMPD1	-0.84659	-0.16978	-3.22936	0.556099
PAX4	-0.7153	1.336717	-3.22556	0.609079
KIF19	-0.85434	0.960591	-3.22317	0.553117
OXGR1	-0.71193	-0.5238	-3.22312	0.610504
NXF2	-0.83151	0.056393	-3.22255	0.56194

Supplementary Material

VPREB3	-1.08804	0.619901	-3.21669	0.4704
PCDHA3	-0.63366	1.201311	-3.20883	0.64454
TNMD	-0.72767	-0.36873	-3.20668	0.603878
10-Mar	-0.66172	0.233778	-3.20508	0.632126
HIF3A	-0.62798	1.363314	-3.20422	0.647083
C5orf20	-0.79784	0.028748	-3.20047	0.575211
CNTFR	-1.02743	-0.98596	-3.19925	0.490582
RGS7	-0.78372	2.054046	-3.1986	0.580866
PTPRN	-1.16267	5.564357	-3.19698	0.446685
NAP1L2	-0.72228	0.083685	-3.19097	0.606138
LOC100132354	-0.64924	0.716682	-3.18627	0.637617
DPYS	-0.65632	-0.93508	-3.1827	0.634495
BCL11A	-0.69592	-0.30373	-3.17933	0.617315
BTLA	-0.84691	0.602267	-3.17894	0.555974
MAPK8IP2	-0.76787	0.039103	-3.17861	0.587284
GNAZ	-0.63779	0.377684	-3.17171	0.642698
KCNJ11	-0.77697	0.783974	-3.16366	0.58359
PTPRQ	-0.63395	-0.1657	-3.16098	0.644409
CD37	-0.67222	0.830292	-3.15973	0.627542
IGSF11	-0.68356	0.860837	-3.15916	0.622626
C1orf168	-0.90753	0.200846	-3.15845	0.533095
IRX2	-1.10603	-0.62181	-3.15656	0.464571
ARX	-1.14241	2.352593	-3.15606	0.453002
ATCAY	-0.9512	1.616401	-3.1557	0.517204
VWDE	-0.99518	1.441825	-3.15463	0.501672
APOE	-0.69129	-0.32451	-3.15455	0.619299
PRR18	-0.66328	0.105363	-3.15429	0.631441
TCL1A	-1.4211	1.006958	-3.14868	0.373427
RSPH4A	-0.64197	-0.28538	-3.14847	0.640838
PLCXD3	-0.89439	2.735429	-3.14589	0.537973
HHATL	-0.86997	-0.45983	-3.14555	0.547158
RFX6	-1.21026	3.904981	-3.1314	0.432192
FFAR1	-1.0082	2.656742	-3.13144	0.497165
BEX2	-0.74704	-0.14904	-3.12768	0.595825
MAPT	-0.75697	-1.16182	-3.12487	0.591737
CD22	-0.92203	0.595437	-3.12399	0.527767
LHFPL4	-1.08466	2.574168	-3.1234	0.471503
DSCAM	-0.93975	0.937318	-3.12329	0.521323
CACNA1G	-0.65082	-0.06238	-3.11717	0.636917
TCEAL2	-0.98322	1.11108	-3.11536	0.505849
TEKT2	-0.76276	0.364353	-3.11295	0.589369
ABCC8	-1.457	5.312901	-3.11216	0.364249
INSM1	-1.15054	3.125834	-3.10781	0.450458
NPM2	-0.70671	0.830461	-3.10687	0.612715
ODZ1	-0.82616	-1.41658	-3.10674	0.56403
GIPR	-0.71826	3.301002	-3.10338	0.60783

KCNB2	-0.81105	1.806757	-3.09999	0.569967
NFASC	-0.64123	0.828458	-3.09783	0.641166
KLRK1	-0.65515	0.240423	-3.09185	0.635011
OLFM1	-0.65801	0.450373	-3.09164	0.633753
VGF	-1.06795	2.933798	-3.09139	0.476995
EFNB3	-0.64534	0.409503	-3.08606	0.639344
TRAF3IP3	-0.6417	0.48156	-3.08582	0.640956
NTRK3	-0.62536	-0.32879	-3.08518	0.648256
FCER2	-1.26925	1.074202	-3.0842	0.414875
BEX1	-1.17632	2.473284	-3.07933	0.44248
LGI1	-0.71184	0.617874	-3.07081	0.610542
ANK2	-0.69794	0.246071	-3.06594	0.61645
ASPA	-0.62486	0.335586	-3.06186	0.648481
SLC16A11	-0.65787	0.395856	-3.05883	0.633812
ADCYAP1	-1.02119	3.52895	-3.0521	0.49271
SBK2	-0.65439	0.791984	-3.05196	0.635345
PON1	-0.84179	0.529419	-3.0507	0.557951
ACSL6	-0.73234	-0.22147	-3.05078	0.601925
RGS9	-0.71397	1.503384	-3.04639	0.609641
RERGL	-0.79585	0.486351	-3.03755	0.576002
ANKRD55	-0.6394	0.322672	-3.03676	0.64198
KIAA1409	-0.98644	1.276231	-3.03383	0.504721
ATP1A3	-0.86202	0.589288	-3.02594	0.550183
PCDHA1	-0.83247	0.240081	-3.02495	0.561566
TACR1	-0.75728	0.29227	-3.02265	0.591611
KCNH2	-0.74881	1.935123	-3.02045	0.595093
DRD2	-0.69175	0.548632	-3.01626	0.619103
CCL19	-1.26327	2.324693	-3.01294	0.416598
KL	-0.76808	0.246189	-3.01297	0.5872
C1orf175	-0.6499	1.25716	-3.00999	0.637324
TNNT2	-0.88459	1.148688	-3.00832	0.541642
UGT2B4	-0.83824	-0.1979	-3.00623	0.559326
PPP4R4	-0.82566	-0.35669	-3.00247	0.564224
PLIN4	-1.08001	0.678995	-2.99728	0.473024
POMC	-0.6506	0.321389	-2.99223	0.637017
TLR10	-0.80564	0.501907	-2.99145	0.572108
SPAG6	-0.89747	-0.18756	-2.98687	0.536826
PRG4	-0.72825	2.899617	-2.98567	0.603637
LOC283174	-0.64765	1.4508	-2.98267	0.638321
PCP4	-0.9333	0.705458	-2.98094	0.523659
TMEM132C	-0.80697	2.296961	-2.98023	0.571579
CRYBA2	-1.34051	4.276082	-2.97904	0.39488
LINGO4	-0.64226	0.190519	-2.97827	0.640711
MAPK4	-0.82438	0.126555	-2.97522	0.564724
CBLN1	-0.80726	0.904684	-2.973	0.571466
CCNA1	-0.62538	-0.77056	-2.97068	0.648247

ZNHIT2	-0.63203	0.512264	-2.97	0.645266
GZMM	-0.65084	0.222172	-2.96449	0.636907
MSI1	-0.63421	0.333308	-2.9609	0.644296
C4orf7	-1.44018	2.808245	-2.95955	0.368522
SLCO1A2	-0.67713	-1.30425	-2.948	0.625407
C12orf34	-0.64776	-0.29322	-2.94638	0.638272
GPR142	-0.81671	2.175908	-2.94526	0.567733
FCRL1	-1.10419	1.017199	-2.94505	0.465163
FAM71E2	-0.72976	0.763751	-2.94222	0.603005
AGT	-0.72061	1.775999	-2.9421	0.606841
AMH	-0.87471	0.296914	-2.93591	0.545365
APLP1	-0.84606	2.225724	-2.93164	0.556302
GJD2	-1.11651	3.459355	-2.92104	0.461207
KCNMB2	-1.03263	2.311613	-2.91989	0.488819
SLC35F4	-0.63896	0.810212	-2.91898	0.642174
IGFN1	-0.83299	1.066397	-2.91616	0.561364
NKX2-2	-1.20768	4.342805	-2.91477	0.432965
DCLK1	-0.64215	0.015486	-2.91221	0.640758
THRSP	-0.83338	-1.1583	-2.90114	0.561214
TNFRSF13B	-0.88519	0.681281	-2.90061	0.541417
DPYSL5	-0.70792	-0.17252	-2.89804	0.612201
OGDHL	-0.95472	-0.27662	-2.89792	0.515941
HLA-DOB	-0.69729	0.721378	-2.89556	0.616728
TNFRSF13C	-0.76568	0.370002	-2.89491	0.588174
ADH1B	-1.06868	2.829442	-2.88747	0.476756
NCF1	-0.63622	0.450022	-2.88375	0.643396
NRXN1	-0.88293	2.565223	-2.87756	0.542265
SERPINA10	-0.97867	1.818929	-2.87454	0.507446
FAIM3	-0.70457	0.560106	-2.87416	0.613627
SLITRK2	-0.63667	-0.11089	-2.86539	0.643197
DPY19L2P1	-0.63682	-0.98608	-2.86379	0.643128
LOC389493	-0.75981	0.521497	-2.85958	0.590576
C1orf158	-0.65707	0.283045	-2.8563	0.634166
SYCE1L	-0.74196	0.284353	-2.85559	0.597928
PLA2G2D	-0.9652	0.430357	-2.85152	0.512206
MCOLN3	-0.69665	0.605217	-2.84746	0.617003
IRX1	-0.84279	-1.03102	-2.84344	0.557564
CHGA	-1.32038	6.586079	-2.83623	0.400429
LOC284749	-0.76547	0.931309	-2.83532	0.588262
CLU	-0.63788	0.311312	-2.83405	0.642657
GLRA3	-0.64565	0.51994	-2.83254	0.639206
FAM5B	-0.63659	-0.79751	-2.82791	0.643231
C5orf49	-0.64156	0.079702	-2.82289	0.641018
GPR18	-0.65962	0.385659	-2.82072	0.633043
PLCH2	-0.65612	0.949605	-2.81421	0.634581
PACSIN1	-0.66398	-0.23913	-2.80764	0.631133

FAM123C	-0.95051	3.03474	-2.80717	0.51745
LECT1	-0.72106	0.679969	-2.80562	0.606651
TPO	-0.70345	0.512954	-2.80226	0.614104
PTPN5	-0.71539	1.476811	-2.79806	0.609041
KIAA0748	-0.6526	0.536905	-2.79749	0.636131
DKFZp434J0226	-0.72056	2.305441	-2.79692	0.60686
INE2	-0.75527	-0.74428	-2.79353	0.592435
CTNNA2	-0.75369	0.941649	-2.7925	0.593087
NCF1B	-0.62545	0.421916	-2.79249	0.648218
PI16	-1.09437	1.492588	-2.79199	0.468342
NEFM	-0.64498	1.229669	-2.79119	0.6395
FABP4	-1.02304	1.08765	-2.78676	0.492079
IGSF1	-0.81807	0.566907	-2.78539	0.5672
SLC35F3	-0.73465	1.051698	-2.78212	0.600963
RASGRF1	-0.84423	1.06134	-2.78077	0.557008
KIAA0125	-0.9429	0.59634	-2.77846	0.520186
ACTC1	-0.8441	0.467959	-2.77209	0.557059
CD19	-1.14627	0.855191	-2.76279	0.451791
C1orf173	-0.73707	-0.06372	-2.761	0.599958
CNTN2	-0.69076	0.277268	-2.76027	0.619528
HMP19	-0.84349	2.393335	-2.7591	0.557296
KCNB1	-0.72439	-0.01609	-2.75636	0.605253
C16orf89	-0.81016	0.687134	-2.7501	0.570319
C4orf48	-0.87032	0.695726	-2.74712	0.547026
CXCR5	-0.90502	1.307041	-2.74658	0.534026
TRPM5	-0.85902	3.018761	-2.74595	0.551329
DACH2	-0.72017	0.912305	-2.7452	0.607028
GABRG2	-0.8296	1.095069	-2.74508	0.562686
L1CAM	-0.7859	1.303095	-2.74466	0.579989
KCNJ6	-0.68084	1.654029	-2.74392	0.6238
SULT4A1	-0.77569	1.003118	-2.7363	0.584108
KCNH8	-0.6371	2.447243	-2.73602	0.643004
SORCS1	-0.74445	0.99102	-2.73179	0.596897
CYP2C8	-0.7395	1.578518	-2.72733	0.598945
LEP	-1.04959	1.159216	-2.72265	0.483105
DPP6	-0.97165	2.332919	-2.71992	0.509922
SCG3	-1.15006	4.193168	-2.71927	0.450605
LGALS12	-0.66432	0.512815	-2.71353	0.630984
CD27	-0.64064	0.399461	-2.69875	0.641428
CLGN	-0.81884	-0.53522	-2.69627	0.566897
RELN	-0.91048	1.355233	-2.6932	0.532007
LOC145837	-0.7407	-0.4532	-2.68833	0.598449
GRIK3	-0.63218	0.67372	-2.6884	0.645202
ADH1A	-0.77287	1.800092	-2.68739	0.585253
SH3GL2	-0.95755	1.20174	-2.68721	0.514929
RAB3C	-0.66048	2.114815	-2.68384	0.632667

SYT7	-0.70041	0.803595	-2.68272	0.615396
CD48	-0.63068	0.520297	-2.68224	0.645872
PCSK1	-0.98987	3.494406	-2.67534	0.503524
CHRNA1	-0.66204	0.569235	-2.67281	0.631982
CLEC17A	-0.79735	0.705178	-2.67118	0.575406
FCRLA	-1.00523	0.122642	-2.66742	0.498191
LRFN2	-0.64633	0.418411	-2.65783	0.638902
KCNIP1	-0.7282	1.326268	-2.65572	0.603657
CAPSL	-0.76261	-0.14856	-2.65404	0.589428
CPLX2	-1.1865	4.296433	-2.65355	0.439366
NCF1C	-0.63328	0.426044	-2.64664	0.644708
NCAM1	-0.72208	0.674593	-2.64324	0.606223
CA10	-0.69998	0.053437	-2.6359	0.615582
GPD1	-0.73396	1.69957	-2.63114	0.60125
C19orf20	-0.69438	-0.02664	-2.6307	0.617976
CD1E	-0.70701	1.332414	-2.62927	0.612589
AVPR1B	-0.62925	1.125793	-2.628	0.646513
SYT4	-1.03887	4.113204	-2.62289	0.486708
MS4A1	-1.26213	1.167415	-2.62181	0.416928
LMO1	-0.76586	1.034764	-2.61904	0.588101
VTN	-0.91932	3.113579	-2.61627	0.528759
CHGB	-1.18927	5.573051	-2.61594	0.438524
TTLL6	-0.6829	2.410403	-2.61059	0.622914
RIMS2	-0.78702	-0.01819	-2.61007	0.579539
PART1	-0.81991	-0.62456	-2.60988	0.566478
NEURL	-0.78681	2.427322	-2.59896	0.579623
LOC126536	-0.76818	2.208686	-2.59394	0.587157
FCRL3	-0.8359	0.905579	-2.59262	0.560233
XKR7	-0.64991	0.879005	-2.59041	0.63732
ABCA8	-0.70834	1.386693	-2.57782	0.612024
PCDH8	-0.67807	0.165265	-2.57698	0.624999
CNR2	-0.79803	0.740531	-2.57297	0.575134
ANKS1B	-0.65387	-0.91875	-2.57239	0.635574
C1orf230	-0.67461	1.080578	-2.57058	0.626501
GPR44	-0.65165	1.517203	-2.56479	0.636553
SCARA5	-1.021	1.174504	-2.56318	0.492774
SLC7A14	-0.92659	2.970634	-2.55754	0.526099
APOH	-1.02869	3.702684	-2.54866	0.490156
GZMK	-0.69119	0.88265	-2.54452	0.619343
VIT	-0.73759	0.626403	-2.54304	0.599738
TMEM132D	-0.89924	2.102583	-2.54228	0.53617
WNK4	-0.77715	-0.04496	-2.53951	0.583517
HCN4	-0.6314	1.008653	-2.53964	0.645548
UPK3BL	-0.72532	-0.19906	-2.53672	0.604862
SCRT2	-0.62578	0.891467	-2.53123	0.648067
SFRP1	-0.78914	0.530132	-2.52412	0.57869

CLEC18B	-0.62472	-0.15206	-2.52085	0.648544
SLC6A4	-0.80339	1.265223	-2.51964	0.573003
COL4A3	-0.68944	0.067251	-2.51408	0.620096
CFHR1	-0.63562	0.263842	-2.51041	0.643666
MIOX	-0.67422	0.588339	-2.49384	0.626671
KCNA6	-0.65102	1.779859	-2.49022	0.636829
ASCL1	-0.66229	-0.21104	-2.48443	0.631877
C7	-0.74808	4.273564	-2.47837	0.595396
WISP2	-0.66293	0.626469	-2.45941	0.631595
ATP2B2	-0.62833	-0.87281	-2.45918	0.646925
CXCL13	-1.07633	0.502745	-2.45522	0.474235
ECEL1	-0.64199	1.897521	-2.43604	0.640829
CD1C	-0.68726	1.813457	-2.43158	0.621033
ZBTB16	-0.70163	1.28588	-2.42452	0.614877
FAM135B	-0.77482	1.129467	-2.42224	0.58446
FAM163A	-0.64515	1.539612	-2.41067	0.639428
CDKN2A	-0.81619	-0.19708	-2.3983	0.567939
SLITRK1	-0.63389	0.794453	-2.38457	0.644437
MLXIPL	-0.64035	2.262297	-2.36857	0.641557
LY6K	-0.87127	-1.0687	-2.36586	0.546665
RALYL	-0.71704	2.300006	-2.3407	0.608345
SLC4A10	-0.77348	2.129407	-2.33691	0.585006
ERO1LB	-0.63506	1.144287	-2.33608	0.643916
UCN3	-0.86495	4.31011	-2.33526	0.549064
ELAVL4	-0.66863	1.549603	-2.33493	0.629105
MAFA	-0.6714	1.618309	-2.32891	0.627899
ARC	-0.63725	-0.50852	-2.32871	0.642937
LILRA4	-0.63976	0.316548	-2.32447	0.641819
PRPH	-0.76049	2.195416	-2.316	0.590294
CFC1B	-1.18122	5.859296	-2.30789	0.440978
KIF5A	-0.62553	1.391429	-2.28927	0.648181
LPPR1	-0.62974	-0.38031	-2.28291	0.646295
PRKCG	-0.75154	2.480952	-2.28139	0.593967
RTBDN	-0.7369	1.306767	-2.27866	0.600028
GHRL	-0.75545	2.360762	-2.26079	0.592361
PCSK2	-1.08665	4.612013	-2.25834	0.470854
SPOCK3	-0.73036	0.661189	-2.23498	0.602753
KCNK16	-1.05173	5.388461	-2.23332	0.482388
NEUROD1	-0.94591	5.232371	-2.22268	0.519103
JSRP1	-0.64714	1.658097	-2.21957	0.638543
DAPL1	-0.62589	0.175564	-2.21364	0.64802
CR2	-1.27628	2.142257	-2.20739	0.41286
BIRC7	-0.69164	1.784894	-2.20526	0.619149
SST	-1.01146	7.501049	-2.19573	0.496044
ATRNL1	-0.64706	0.162978	-2.1896	0.638582
PAX5	-0.77393	0.735405	-2.18246	0.584821

GPR119	-0.7129	2.43677	-2.1754	0.610091
CHIT1	-0.87302	1.401594	-2.1696	0.546003
SYNGR4	-0.64541	1.547629	-2.15676	0.639311
GPR98	-0.67618	-1.2883	-2.15621	0.62582
C13orf36	-0.67288	1.19131	-2.15546	0.627254
PTPRT	-0.62505	0.602247	-2.14414	0.648398
CHRDL1	-0.73573	1.483152	-2.12877	0.600516
PTX3	-0.6497	1.207115	-2.08262	0.637415
HS6ST3	-0.67689	0.753618	-2.0812	0.625513
CCL21	-0.75335	2.613068	-2.07	0.593226
CLCA2	-0.65922	-1.55667	-1.99446	0.63322
IGF1	-0.6625	0.741902	-1.98512	0.631781
CCL17	-0.68536	2.244204	-1.97826	0.62185
ANGPTL7	-0.75561	1.975744	-1.97813	0.592295
HP	-0.65415	0.84541	-1.96303	0.635451
MADCAM1	-0.65363	3.25194	-1.95367	0.635677
HBA1	-0.94451	-1.17786	-1.93902	0.519606
FSTL5	-0.63093	1.505637	-1.93741	0.645761
CD79A	-0.7146	1.272561	-1.93567	0.609373
XPNPEP2	-0.6368	0.111048	-1.93459	0.643136
SAA1	-0.62978	2.361972	-1.8966	0.646276
KIF1A	-0.70226	2.646808	-1.89482	0.614609
DDC	-0.66973	3.053047	-1.89184	0.628625
RPS28	-0.79814	0.291033	-1.89054	0.575091
GAD2	-0.80037	4.443524	-1.87475	0.574204
CRH	-0.71097	2.141334	-1.8476	0.61091
G6PC2	-0.94707	5.675587	-1.83817	0.518685
SCGN	-0.83783	5.332842	-1.82322	0.559486
CDH22	-0.67731	2.596132	-1.80827	0.625332
NPHS1	-0.6697	2.749053	-1.80267	0.628637
CYP2C9	-0.63473	3.982243	-1.7717	0.644063
DLK1	-0.85395	4.07284	-1.76121	0.553267
IAPP	-0.95265	5.477357	-1.71189	0.516681
HEPACAM2	-0.64299	3.81685	-1.64168	0.640385
TSIX	-0.8441	-0.19474	-1.46824	0.557058
TTR	-0.83465	8.892266	-1.37051	0.56072
XIST	-0.71933	-0.37398	-0.85427	0.607378

Table S4. Association between 5-lncRNA signature-based classification and clinic-pathologic characteristics in PDAC patients involved in the study.

Features	Low-risk group	High-risk group	P value
Entire TCGA cohort (N=177)	N=89	N=88	
Age at diagnosis, years			
≤60	29(32.58%)	25(28.41%)	0.546
>60	60(67.42%)	63(71.59%)	
Gender			
Female	40(44.94%)	40(45.45%)	0.944
Male	49(55.06%)	48(54.55%)	
MSI status			
MSI-I	17(19.10%)	11(12.5%)	0.131
MSI-L	2(2.25%)	7(7.95%)	
MSS	70(78.65%)	70(79.55%)	
Histologic grade			
G1	17(19.32%)	13(14.94%)	0.547
G2	50(56.82%)	45(51.72%)	
G3	20(22.73%)	28(32.18%)	
G4	1(1.14%)	1(1.15%)	
TNM stage			
I	17(19.54%)	4(4.55%)	0.024
II	66(75.86%)	79(89.77%)	
III	2(2.30%)	2(2.27%)	
IV	2(2.30%)	3(3.41%)	
OS status			
Alive	59(66.29%)	26(29.55%)	<0.001
Dead	30(33.71%)	62(70.45%)	
Fudan Validation cohort (N=46)	N=23	N=23	
Age at diagnosis, years			
≤60	12(52.17%)	11(47.83%)	0.768
>60	11(47.83%)	12(52.17%)	
Gender			
Female	10(43.48%)	11(47.83%)	0.767
Male	13(56.52%)	12(52.17%)	
TNM stage			
I	6(27.27%)	4(19.05%)	0.450
II	12(54.55%)	9(42.86%)	
III	4(18.18%)	7(33.33%)	
IV	—	1(4.76%)	
OS status			
Alive	16(69.57%)	7(30.43%)	0.008
Dead	7(30.43%)	16(69.57%)	

Microsatellite instability (MSI); Microsatellite stable (MSS); MSI-indeterminate (MSI-I); MSI-low

(MSI-L); TNM, Tumor node metastasis