

Supplementary Table 5. The 917 candidate marker genes for the diagnostic model for early HCC in the training set.

Gene	Early HCC vs. Controls		Early HCC vs. CHB/LC	
	Coefficient ^a	AUC ^b	Coefficient ^a	AUC ^b
SOX9	0.722	81.30%	0.211	63.50%
EVC	0.703	76.20%	0.314	68.30%
CHST9	0.398	75.50%	0.150	62.40%
PDX1	0.730	76.50%	0.204	60.40%
NPBWR1	0.651	73.10%	0.317	63.40%
FAT1	0.335	74.10%	0.108	61.00%
MEIS2	0.398	71.40%	0.188	62.40%
A2M	0.761	72.40%	0.235	58.90%
SERPINA10	0.479	72.00%	0.177	58.40%
LBP	0.597	70.20%	0.237	61.30%
PROX1	0.239	69.70%	0.133	61.40%
APOB	0.286	70.50%	0.104	59.10%
FMO3	0.296	69.60%	0.151	60.60%
FREM2	0.288	68.50%	0.130	62.80%
SDC2	0.300	69.10%	0.151	60.70%
FAM20A	0.453	68.50%	0.168	60.30%
GPAM	0.309	68.50%	0.172	60.30%
CFH	0.277	68.00%	0.178	60.80%
PAH	0.208	68.30%	0.116	60.30%
NR1H4	0.233	68.40%	0.108	59.80%
PTPRS	-0.572	66.80%	-0.473	63.00%
SIAH3	-0.690	66.10%	-0.573	64.10%
GATA4	0.296	68.00%	0.128	60.10%
SALL1	0.344	68.10%	0.184	59.80%
SLC27A5	0.463	67.30%	0.204	61.40%
SS18L1	0.588	67.30%	0.271	60.90%
TOX3	0.190	68.40%	0.079	59.00%
KCNK1	0.224	67.70%	0.120	60.10%
TF	0.445	68.50%	0.202	57.90%
FARP1	0.417	67.50%	0.252	59.80%
GOT2	0.675	67.60%	0.278	59.50%
PQLC1	0.651	67.10%	0.258	60.50%
SERPINA5	0.302	67.00%	0.161	60.50%
SOX13	0.508	67.80%	0.187	59.30%
CDH2	0.205	66.10%	0.153	62.20%
ITIH2	0.322	66.20%	0.252	62.20%
ADIG	0.443	65.20%	0.399	63.80%
HSD17B6	0.524	67.20%	0.237	59.60%
IL21R	-0.451	65.90%	-0.321	61.70%
A1CF	0.255	67.10%	0.139	58.70%
KLB	0.507	65.90%	0.383	61.20%
SLC10A1	0.574	67.10%	0.218	58.80%
YAP1	0.282	67.70%	0.118	57.60%
APOH	0.434	66.40%	0.236	59.80%
BAIAP2L1	0.371	66.90%	0.160	59.00%
GPR37	0.315	65.40%	0.194	62.00%
PRTG	-0.384	64.40%	-0.311	63.80%
RAI14	0.278	67.00%	0.124	58.70%

UGDH	0.521	67.20%	0.299	58.10%
ACSM2A	0.237	66.90%	0.108	58.60%
NEDD4L	0.893	67.20%	0.374	58.00%
RAPGEF5	0.787	67.50%	0.337	57.40%
RHPN2	0.302	66.00%	0.165	60.10%
ZKSCAN1	0.787	66.10%	0.383	59.90%
ADGRG5	-0.710	66.80%	-0.395	58.40%
CFHR3	0.222	66.10%	0.133	59.60%
PRLR	0.211	66.00%	0.106	59.60%
CAP2	0.505	65.90%	0.357	59.80%
ELOVL2	0.326	65.70%	0.228	60.20%
ACACB	0.427	64.60%	0.302	61.70%
CARD11	-0.524	65.00%	-0.364	61.20%
F2	0.440	64.50%	0.385	62.30%
MROH2B	0.209	65.90%	0.108	59.20%
ONECUT2	0.196	65.40%	0.121	60.20%
PARD6G	0.456	64.00%	0.436	63.10%
PLG	0.173	66.00%	0.093	59.10%
TTPA	0.268	66.10%	0.152	58.80%
AGXT2	0.209	65.00%	0.138	60.80%
AK4	0.564	65.10%	0.324	60.70%
DIO1	0.621	66.60%	0.254	57.80%
DOCK2	-0.516	66.00%	-0.233	58.90%
ADH1A	0.265	66.20%	0.132	58.20%
IGF1	0.218	66.10%	0.103	58.20%
SPP2	0.210	65.40%	0.124	59.70%
CNN3	0.441	66.50%	0.202	57.10%
GC	0.218	66.20%	0.108	57.80%
SLC22A3	0.198	65.50%	0.113	59.20%
AOX1	0.389	63.60%	0.394	62.50%
KNG1	0.401	65.80%	0.229	58.40%
NINL	0.292	64.80%	0.164	60.40%
RORC	0.471	65.50%	0.206	58.90%
SLAMF6	-0.460	65.20%	-0.223	59.40%
SEPP1	0.570	66.20%	0.277	57.10%
HCN3	0.476	64.80%	0.235	59.90%
MYT1	0.375	62.80%	0.433	63.60%
SLC7A2	0.197	65.50%	0.110	58.40%
EPO	0.414	63.90%	0.246	61.10%
FRK	0.208	65.30%	0.119	58.50%
GLIS3	0.290	65.20%	0.151	58.50%
ABCG8	0.262	64.70%	0.169	59.10%
ACOT13	0.563	64.10%	0.325	60.40%
GALNT8	-0.535	64.20%	-0.331	60.50%
KIAA0907	0.764	64.20%	0.563	60.20%
RP4-608O15.3	0.252	65.20%	0.134	58.30%
APOBEC1	-0.619	64.50%	-0.343	59.30%
ARHGAP19-SLIT1	-0.772	64.00%	-0.483	60.40%
FAM71F1	-0.540	64.70%	-0.290	59.10%
LRRC61	0.593	64.80%	0.290	58.80%
LY86	-0.443	64.80%	-0.232	58.90%
MFAP5	-0.608	63.60%	-0.464	61.20%

NPAS2	0.257	63.30%	0.207	61.70%
CLDN1	0.415	66.00%	0.207	56.30%
DNAH2	-0.679	64.60%	-0.392	58.90%
SMIM14	0.311	64.00%	0.206	60.10%
UGT2B4	0.204	65.20%	0.112	57.80%
AGT	0.532	64.90%	0.227	58.10%
DDR2	0.312	64.50%	0.192	58.80%
ENPP1	0.218	64.80%	0.146	58.40%
SDHC	0.522	61.90%	0.559	64.00%
SLC25A42	0.454	64.10%	0.239	59.70%
GLYATL3	0.311	64.20%	0.221	59.10%
MET	0.450	65.00%	0.239	57.60%
PAQR9	0.393	65.60%	0.181	56.50%
TLL2	0.303	64.90%	0.149	57.70%
BANF2	0.594	63.30%	0.384	60.60%
HABP2	0.352	64.70%	0.198	57.80%
INTU	-0.389	63.10%	-0.223	61.00%
PBLD	0.726	64.20%	0.366	58.90%
SERPINA9	0.258	63.70%	0.153	60.00%
TLL2	-0.684	62.80%	-0.567	61.50%
GREM2	0.131	63.80%	0.087	59.30%
PVR	0.685	64.50%	0.324	58.00%
SEC16B	0.267	62.20%	0.361	62.50%
XYLT1	-0.432	64.00%	-0.243	59.00%
COQ10A	0.478	63.70%	0.252	59.20%
CPEB1	-0.352	63.00%	-0.317	60.70%
LIPG	0.238	64.50%	0.145	57.80%
MGMT	0.284	62.50%	0.333	61.60%
NHSL1	0.381	64.30%	0.210	57.90%
PC	0.456	63.50%	0.277	59.50%
RBPMS	0.570	65.50%	0.261	55.60%
SERPINA12	0.242	63.70%	0.148	59.30%
ZNF254	0.370	62.00%	0.307	62.40%
BPHL	0.685	64.10%	0.357	58.20%
CCDC80	-0.508	63.30%	-0.269	59.70%
CNGA3	-0.523	62.80%	-0.298	60.50%
FAM168B	0.594	62.70%	0.500	60.80%
FGL1	0.341	63.30%	0.212	59.70%
PRMT8	-0.460	61.90%	-0.405	62.40%
PRUNE2	-0.457	62.70%	-0.323	60.80%
ST8SIA2	-0.471	63.50%	-0.213	59.50%
UAP1	0.456	63.50%	0.283	58.90%
WSB2	0.700	63.50%	0.361	58.90%
CYP4F12	0.258	63.50%	0.172	58.80%
MDH2	0.534	63.80%	0.232	58.30%
RAD54L2	0.433	60.90%	0.629	63.90%
TNFRSF13B	-0.534	63.10%	-0.312	59.40%
C4orf19	0.220	63.50%	0.144	58.50%
CADM1	0.160	63.90%	0.091	57.80%
FOXP4	0.435	62.00%	0.375	61.40%
GATA6	0.284	64.20%	0.153	57.20%
GHR	0.250	64.40%	0.137	56.50%

ITIH1	0.412	62.70%	0.280	60.00%
KCNT2	0.227	63.00%	0.184	59.40%
TBC1D16	0.651	63.60%	0.293	58.20%
ALDH8A1	0.340	63.20%	0.224	58.60%
EPB41L4B	0.308	63.70%	0.186	57.80%
ERICH5	0.489	62.10%	0.431	61.00%
GPC6	0.207	63.20%	0.164	58.60%
GPR55	-0.571	62.40%	-0.396	60.20%
GRIP1	-0.409	62.90%	-0.190	59.10%
LRP6	0.404	65.00%	0.202	55.10%
OCLN	0.483	63.40%	0.345	58.40%
PDZK1	0.398	61.00%	0.438	63.20%
PECR	0.453	62.50%	0.374	60.20%
PPP2R1B	0.582	63.70%	0.386	57.80%
SFXN5	0.399	61.30%	0.345	62.50%
TNIP3	-0.332	61.70%	-0.276	61.60%
ATP1B3	-0.433	61.20%	-0.424	62.40%
C2orf82	0.467	62.50%	0.413	59.90%
CCNYL1	0.619	63.80%	0.402	57.10%
CFAP58	-0.483	62.90%	-0.322	59.10%
HUS1	0.673	63.20%	0.414	58.40%
PON3	0.209	63.10%	0.134	58.70%
WBP2NL	-0.668	62.20%	-0.657	60.50%
ZBTB5	0.424	63.40%	0.245	57.90%
ZFHX4	0.140	62.70%	0.115	59.30%
ADCY1	0.323	62.10%	0.275	60.10%
APOBEC3G	-0.452	62.60%	-0.291	59.20%
AZGP1	0.419	63.00%	0.266	58.70%
CXADR	0.332	63.30%	0.231	58.00%
EDDM3A	-0.445	63.00%	-0.245	58.50%
ELK4	0.595	62.30%	0.400	59.90%
FN1	0.287	63.40%	0.185	57.80%
PIP5K1A	0.579	62.70%	0.322	59.10%
PPP6R2	0.623	62.50%	0.345	59.30%
TRPM8	0.223	62.70%	0.153	59.00%
TTBK1	0.516	62.90%	0.310	58.70%
CFAP77	-0.513	62.40%	-0.376	59.50%
CLEC4C	-0.441	63.50%	-0.244	57.00%
CP	0.468	64.30%	0.239	55.70%
LMOD3	-0.539	63.20%	-0.277	57.80%
NPLOC4	0.689	62.10%	0.373	60.20%
PTPN3	0.232	62.60%	0.170	59.10%
SHFM1	0.285	63.20%	0.184	57.80%
SLC6A1	0.290	63.50%	0.165	57.20%
TECTB	0.323	62.30%	0.257	59.70%
AK8	-0.549	62.50%	-0.357	58.80%
F13B	0.233	63.00%	0.156	57.80%
HSPA4	0.550	61.30%	0.479	61.30%
NDUFA3	0.527	62.30%	0.284	59.30%
PHACTR3	-0.443	62.50%	-0.222	58.70%
PSPH	0.538	62.10%	0.386	59.90%
TLE1	0.283	61.60%	0.254	60.50%

VSNL1	0.243	62.30%	0.182	59.20%
AGMO	0.157	62.40%	0.139	58.90%
C8B	0.184	62.40%	0.123	58.90%
CYP7A1	0.272	62.30%	0.219	58.80%
IPPK	0.585	60.00%	0.685	63.50%
SOX5	0.113	62.40%	0.094	58.90%
ARMC6	0.511	61.90%	0.334	59.50%
RPRD2	0.701	61.40%	0.694	60.70%
DYRK4	-0.450	61.60%	-0.334	59.70%
GPR1	-0.279	60.90%	-0.302	61.10%
HS6ST1	0.560	62.80%	0.323	57.50%
PCCA	0.556	61.60%	0.498	59.70%
PEBP4	-0.637	60.90%	-0.739	61.10%
SERPINI2	-0.319	61.40%	-0.193	60.20%
SLC22A9	0.241	62.40%	0.157	58.10%
THEGL	-0.405	60.70%	-0.422	61.70%
ZNF175	-0.484	62.10%	-0.277	58.90%
ADD2	-0.432	60.90%	-0.423	60.80%
BTLA	-0.360	61.40%	-0.303	60.00%
C11orf63	-0.492	61.60%	-0.366	59.30%
EFCAB5	-0.536	62.00%	-0.311	58.50%
FRMD5	-0.414	60.10%	-0.385	62.40%
KLKB1	0.176	62.70%	0.112	57.20%
RSAD2	-0.341	60.60%	-0.297	61.30%
RSPO4	-0.474	61.60%	-0.416	59.70%
SCAMP5	-0.642	62.10%	-0.371	58.40%
VIT	-0.571	61.30%	-0.332	59.90%
CASQ2	-0.528	61.90%	-0.304	58.70%
CYTIP	-0.476	62.80%	-0.331	56.70%
FGD6	1.174	63.10%	0.484	56.30%
MAPRE3	0.483	61.80%	0.324	58.70%
RUFY4	-0.429	62.50%	-0.268	57.50%
SNRPE	0.447	61.80%	0.324	58.90%
TFB2M	0.517	61.40%	0.532	59.70%
UNC45B	-0.447	61.80%	-0.330	58.80%
ABL2	0.679	60.70%	0.624	60.60%
CBX1	0.517	61.40%	0.349	59.10%
KCNA1	-0.397	61.10%	-0.249	60.00%
LPGAT1	0.464	60.70%	0.475	60.90%
PCMTD2	0.440	60.40%	0.399	61.30%
SEC14L4	0.216	62.00%	0.148	58.30%
SYNE4	0.346	61.40%	0.254	59.30%
TOMM70A	0.441	61.90%	0.364	58.10%
VDAC1	0.545	61.40%	0.391	59.20%
MARC2	0.303	62.40%	0.196	56.90%
HSD3B2	0.474	61.60%	0.423	58.60%
HSPA9	-0.495	61.00%	-0.456	59.60%
KCTD19	0.770	61.00%	0.475	59.70%
KIAA1147	0.646	61.20%	0.335	59.50%
PHYH	0.391	61.70%	0.294	58.20%
SIK2	0.456	62.70%	0.260	56.50%
SLC45A3	0.638	62.90%	0.304	56.00%

SLIT1	-0.591	60.80%	-0.478	60.10%
TGM7	-0.564	62.00%	-0.326	57.70%
USP30	0.291	61.60%	0.256	58.60%
AARS	0.391	60.80%	0.344	60.00%
AFMID	0.490	61.40%	0.367	58.70%
ALDH3A1	0.404	61.40%	0.346	58.50%
ARHGAP22	-0.452	61.30%	-0.305	58.90%
FCRL3	-0.331	60.40%	-0.330	60.60%
FMO4	0.276	61.80%	0.200	58.00%
FUBP3	0.395	60.50%	0.356	60.40%
GLMP	0.353	60.10%	0.329	61.40%
OTUD7B	0.668	62.50%	0.375	56.50%
TRIM59	-0.587	61.10%	-0.506	59.30%
MARCH10	0.526	60.00%	0.336	61.00%
ALDH9A1	0.483	61.50%	0.600	58.30%
BCL6	0.532	59.20%	0.346	62.80%
C5orf45	-0.415	61.10%	-0.435	58.90%
LECT1	-0.481	60.60%	-0.433	59.80%
POM121	0.458	59.50%	0.455	62.20%
RMND1	0.444	61.40%	0.392	58.40%
SACS	-0.551	60.90%	-0.399	59.30%
ZNF565	0.416	61.00%	0.304	59.20%
ABAT	0.284	60.90%	0.215	59.00%
ABCC9	0.149	61.70%	0.099	57.40%
CCDC58	0.280	61.00%	0.201	58.80%
CHDH	0.382	61.10%	0.266	58.90%
DLGAP3	-0.460	60.10%	-0.462	60.70%
DNAH3	-1.013	61.00%	-0.806	59.00%
FOXA3	0.429	61.70%	0.310	57.40%
IL5RA	-0.523	61.80%	-0.270	57.40%
PADI1	-0.470	61.00%	-0.307	58.90%
TMEM75	0.364	60.80%	0.302	59.20%
ADAMTS17	0.163	61.40%	0.110	57.90%
CCR3	-0.325	60.40%	-0.403	60.00%
CHN2	0.506	60.90%	0.387	58.70%
DDC	0.270	61.00%	0.188	58.60%
FBXO17	0.280	61.30%	0.188	58.00%
GCN1	0.394	60.70%	0.376	59.30%
IRF6	0.357	62.00%	0.202	56.60%
KCNMB4	-0.253	59.40%	-0.346	61.80%
KRT73	-0.395	60.60%	-0.377	59.40%
PNPLA3	0.309	61.20%	0.203	58.20%
SLC25A13	0.347	60.40%	0.381	59.80%
TBCE	0.500	58.90%	0.851	62.70%
TMEM97	0.467	62.10%	0.306	56.50%
WFDC3	-0.530	61.10%	-0.390	58.40%
AFF4	0.592	62.30%	0.334	55.70%
BAG3	0.492	61.10%	0.390	57.90%
HAO1	0.190	61.20%	0.172	57.90%
HBB	-0.402	61.30%	-0.202	57.90%
HNF1B	0.340	60.80%	0.265	58.90%
HRG	0.310	61.80%	0.208	56.70%

OR7A5	-0.390	60.50%	-0.382	59.40%
P4HA3	-0.509	60.30%	-0.361	59.80%
PCYOX1	0.463	60.00%	0.603	60.10%
PON1	0.241	60.40%	0.276	59.60%
RORA	0.209	61.00%	0.171	58.30%
SYNDIG1L	-0.402	61.00%	-0.307	58.30%
TRABD2B	0.225	61.00%	0.184	58.50%
TREM1	-0.351	61.70%	-0.226	56.80%
ACOT12	0.271	61.00%	0.236	58.00%
ADI1	0.534	60.90%	0.455	58.40%
BDH1	0.365	60.10%	0.280	60.00%
CCDC144NL	-0.320	59.70%	-0.287	60.70%
CCDC64	0.691	60.40%	0.584	59.20%
CRY2	0.393	59.90%	0.290	60.10%
HLF	0.381	61.80%	0.278	56.40%
HPX	0.450	60.70%	0.374	58.70%
ITIH3	0.347	60.40%	0.299	59.10%
LSMEM2	0.360	60.40%	0.301	59.20%
NR5A2	0.485	60.70%	0.480	58.40%
PLXNA2	0.710	60.70%	0.490	58.60%
SLC15A1	0.210	60.70%	0.188	58.50%
TADA1	0.562	60.70%	0.594	58.70%
ABCG5	0.332	60.80%	0.292	58.10%
ADCK3	0.551	59.20%	0.755	61.30%
C1R	0.390	61.00%	0.303	57.80%
DMGDH	0.310	61.00%	0.243	57.70%
GCNT1	-0.404	61.50%	-0.269	56.70%
GPR75-ASB3	0.464	60.60%	0.435	58.50%
hsa-mir-150	0.342	61.30%	0.251	57.20%
MTCH2	0.403	61.20%	0.308	57.30%
NNT	0.426	59.80%	0.546	60.00%
PXDC1	0.630	61.10%	0.387	57.60%
ACLY	0.340	59.60%	0.346	60.30%
ARHGEF28	0.351	61.10%	0.347	57.10%
C6orf203	0.407	59.50%	0.374	60.30%
ETF1	0.442	59.70%	0.466	59.90%
HTR3D	-0.482	60.80%	-0.341	57.80%
INTS3	0.594	59.20%	0.524	61.00%
KCNIP1	-0.332	58.50%	-0.550	62.30%
KPNA7	0.232	59.70%	0.277	60.10%
LEMD1	-0.329	59.40%	-0.491	60.50%
PLA2G5	-0.303	59.10%	-0.370	61.30%
POGZ	0.517	59.10%	0.590	61.20%
RBFOX2	0.383	62.20%	0.237	55.10%
RHOD	0.362	60.30%	0.293	58.80%
RPH3A	-0.257	58.20%	-0.563	62.80%
SGK223	0.539	64.20%	-0.283	51.00%
USP41	-0.557	62.00%	-0.332	55.40%
ACSF2	0.351	59.90%	0.275	59.40%
MELK	-0.408	59.60%	-0.361	59.80%
NOX5	-0.517	59.20%	-0.521	60.80%
WDR49	-0.247	59.10%	-0.278	61.00%

AKR1C2	0.317	60.60%	0.254	57.60%
ARHGAP42	0.139	59.60%	0.190	59.50%
CD48	-0.302	61.00%	-0.249	56.80%
CSRNP2	0.504	58.90%	0.606	61.00%
DPYSL5	-0.694	61.00%	-0.461	56.80%
ERBB3	0.309	60.40%	0.261	58.10%
GOT1	0.437	60.70%	0.288	57.50%
LPO	-0.546	60.30%	-0.491	58.30%
PLCL1	-0.216	58.40%	-0.276	61.90%
UMODL1	-0.369	59.90%	-0.319	59.00%
WDFY4	-0.300	59.10%	-0.411	60.50%
MARC1	0.582	59.20%	0.801	60.20%
ATP9A	0.494	59.00%	0.544	60.30%
CHKA	-0.574	59.50%	-0.465	59.50%
CLMP	0.121	59.90%	0.105	58.70%
F11	0.809	60.50%	0.546	57.60%
MAP4	0.472	61.40%	0.324	55.80%
PTPRR	0.358	66.00%	-0.197	53.50%
SIRPB2	-0.362	60.70%	-0.284	57.00%
SLC6A17	-0.403	58.50%	-0.438	61.30%
TMEM25	0.409	61.30%	0.243	55.90%
ABCC2	0.295	59.70%	0.293	58.70%
DSP	0.385	59.40%	0.492	59.40%
GNAL	-0.695	60.30%	-0.468	57.70%
PDIA4	0.376	59.00%	0.379	60.20%
RAB40B	0.394	59.50%	0.333	59.20%
RFC1	0.480	59.30%	0.538	59.50%
RP11-574F21.3	0.407	60.10%	0.365	58.00%
RUNX3	-0.340	59.80%	-0.327	58.60%
SLC9A2	-0.330	59.40%	-0.329	59.40%
UCK2	0.634	59.00%	0.522	60.40%
CLEC1A	-0.267	58.70%	-0.351	60.40%
FBXO21	0.635	59.90%	0.552	58.00%
FGF5	-0.228	58.70%	-0.214	60.30%
FLAD1	0.406	59.30%	0.283	59.20%
MYH15	-0.358	59.70%	-0.333	58.40%
PEX14	0.539	59.50%	0.492	58.80%
TAF4	0.476	59.00%	0.460	60.00%
XKR6	-0.402	59.90%	-0.451	58.30%
ADCY8	0.219	65.30%	-0.147	52.90%
C1orf53	0.341	60.50%	0.267	56.60%
CACNG2	-0.423	59.40%	-0.338	58.70%
DUSP16	0.486	59.80%	0.467	57.90%
F7	0.216	59.50%	0.174	58.70%
FGF19	0.317	60.20%	0.239	57.20%
GBAS	0.482	59.20%	0.431	59.30%
GCSH	0.250	59.40%	0.319	59.00%
GTPBP4	0.418	58.20%	0.479	61.00%
HSD11B1	0.301	59.80%	0.271	58.00%
IRS1	0.457	62.10%	0.236	53.30%
NOXRED1	-0.458	59.10%	-0.385	59.30%
NPEPPS	0.622	59.90%	0.545	57.70%

RALGPS2	0.291	59.80%	0.294	58.20%
RNASEH2B	-0.386	59.50%	-0.393	58.60%
ROR2	-0.387	58.40%	-0.488	60.90%
SCN8A	0.244	60.20%	0.214	57.30%
SLC13A1	0.243	65.40%	-0.138	53.30%
SLC25A10	0.388	60.50%	0.235	56.80%
TFEC	-0.245	59.60%	-0.199	58.50%
XKR3	-0.252	58.90%	-0.242	59.90%
ASB13	0.435	60.00%	0.330	57.40%
GGCX	0.388	59.40%	0.321	58.60%
GNPDA1	0.462	59.50%	0.336	58.50%
IKZF3	-0.377	57.90%	-0.658	61.40%
NID1	0.531	59.60%	0.398	58.20%
TIMM17A	0.291	59.60%	0.302	58.30%
ZNF705A	-0.346	59.30%	-0.381	58.70%
AIPL1	-0.338	58.10%	-0.527	60.70%
COPS7B	0.311	59.70%	0.289	57.70%
COQ10B	0.642	60.40%	0.395	56.40%
HDLBP	0.730	58.60%	0.913	59.90%
LINGO1	-0.308	58.00%	-0.365	61.10%
LRRC38	-0.381	59.30%	-0.301	58.20%
MKKS	0.401	59.70%	0.344	57.60%
RNF183	-0.399	60.20%	-0.269	56.60%
THAP4	0.471	58.90%	0.462	59.10%
TMEM177	0.333	59.70%	0.273	57.50%
AKR1D1	0.290	59.50%	0.310	57.80%
CSNK2A1	0.519	59.30%	0.466	58.00%
GLDC	0.231	59.30%	0.241	58.20%
GRK7	-0.540	59.60%	-0.537	57.40%
HIST1H2BN	-0.298	58.50%	-0.311	59.80%
TMEM63C	-0.357	58.60%	-0.351	59.60%
VEZT	0.511	59.70%	0.477	57.40%
AK5	-0.314	59.50%	-0.336	57.50%
EPB41L3	-0.274	58.80%	-0.375	58.90%
GORAB	0.463	59.80%	0.299	56.80%
MTRF1	0.270	58.70%	0.306	59.00%
NADK2	0.288	59.70%	0.294	57.00%
OPN3	0.402	58.60%	0.381	59.30%
PSMB4	0.336	59.60%	0.253	57.20%
RDH10	0.275	59.20%	0.279	58.00%
SHC2	0.244	58.90%	0.270	58.80%
SPTAN1	0.443	58.70%	0.581	59.20%
TMEM186	0.218	58.90%	0.208	58.40%
CGN	0.371	59.40%	0.285	57.30%
EIF2AK4	0.403	58.60%	0.530	58.90%
PGPEP1L	-0.278	58.20%	-0.334	59.70%
PHLDB3	0.425	58.80%	0.321	58.60%
SEZ6L	-0.235	58.10%	-0.404	59.90%
VPS11	0.313	59.00%	0.283	58.30%
ACRV1	-0.325	58.50%	-0.285	58.70%
ARMC1	0.259	59.00%	0.278	57.80%
C11orf86	0.317	59.90%	0.222	55.90%

CABP1	-0.499	60.10%	-0.374	55.80%
CGNL1	0.329	58.90%	0.415	58.00%
KRT78	-0.386	58.20%	-0.307	59.40%
RASSF5	0.324	58.60%	0.323	58.60%
SERPINB12	-0.382	59.40%	-0.311	57.20%
TTLL9	-0.431	58.20%	-0.576	59.40%
USP13	0.867	59.70%	0.543	56.40%
CD22	-0.353	58.50%	-0.392	58.70%
CFHR5	0.145	59.00%	0.158	57.60%
CTD-3214H19.16	-0.324	58.30%	-0.303	58.80%
DHODH	0.531	59.40%	0.380	56.90%
GCAT	0.261	58.30%	0.353	58.90%
HSD17B7	0.261	58.00%	0.328	59.30%
ILF2	0.297	58.70%	0.308	58.20%
METAP2	0.371	57.70%	0.566	59.90%
MYLK3	-0.437	58.50%	-0.622	58.60%
PDCD6	0.444	57.70%	0.541	59.90%
PTPRB	0.408	64.50%	-0.198	53.40%
SEC23B	0.455	57.80%	0.519	59.80%
SPATS2L	0.421	60.60%	0.260	54.40%
ZNF488	-0.307	58.60%	-0.381	58.10%
ADAM23	-0.293	57.50%	-0.212	60.10%
ARMT1	0.238	59.40%	0.255	56.40%
C1orf43	0.534	58.10%	0.418	58.90%
CCT5	0.392	57.90%	0.459	59.50%
COBLL1	0.270	60.00%	0.226	55.20%
CRHBP	-0.352	57.60%	-0.335	60.00%
DCST2	0.345	58.40%	0.305	58.40%
GRM4	-0.249	57.50%	-0.310	60.20%
ILDR1	-0.292	58.60%	-0.402	58.00%
LMO1	-0.318	58.30%	-0.299	58.60%
NIT2	0.475	59.50%	0.364	56.10%
PIEZO2	0.468	58.20%	0.697	58.70%
PSMF1	0.565	58.80%	0.455	57.70%
RP11-407N17.3	0.376	59.00%	0.319	57.20%
ZSCAN22	0.264	58.30%	0.271	58.40%
ADGRE2	-0.320	59.10%	-0.278	56.80%
AMBP	0.367	59.50%	0.278	55.80%
CDKN1B	0.353	59.70%	0.257	55.50%
CHI3L1	0.288	58.20%	0.272	58.40%
DCUN1D4	0.355	59.40%	0.283	56.30%
GBF1	0.439	58.50%	0.733	57.80%
HECTD1	0.369	58.60%	0.466	57.60%
LARP1	0.494	57.90%	0.534	59.00%
LOXHD1	-0.399	57.90%	-0.325	59.00%
MREG	0.220	58.30%	0.298	58.30%
NDUFAF5	0.310	58.50%	0.316	57.90%
PSMD4	0.403	58.40%	0.313	58.00%
SPACA3	-0.364	58.60%	-0.248	57.70%
ADGRL4	0.281	64.10%	-0.164	53.40%
C5	0.267	59.20%	0.311	56.20%
CASR	-0.353	59.00%	-0.334	56.50%

CDCP1	-0.350	59.40%	-0.363	55.80%
GTF2I	0.577	58.80%	0.642	56.90%
IGDCC3	-0.291	56.70%	-0.507	61.30%
ITK	-0.399	58.70%	-0.474	57.30%
L3MBTL4	0.183	57.50%	0.225	59.40%
MCOLN2	-0.269	57.30%	-0.505	60.10%
MICALCL	-0.542	57.20%	-0.446	60.30%
MYH13	-0.344	58.10%	-0.404	58.40%
NOP58	0.559	59.40%	0.413	55.90%
PI4KB	0.456	57.60%	0.407	59.30%
PPP2R1A	0.319	57.40%	0.392	59.80%
SLC25A33	0.639	58.80%	0.434	57.00%
VSIG10	0.438	58.30%	0.554	58.10%
ZNF3	0.340	58.90%	0.308	56.80%
ZNF831	-0.257	57.50%	-0.423	59.70%
ATL2	0.469	58.20%	0.600	58.00%
CRABP1	-0.370	57.70%	-0.420	59.00%
CRP	0.358	58.40%	0.286	57.60%
DLGAP1	-0.402	56.60%	-0.526	61.00%
FBXO28	0.387	58.40%	0.406	57.40%
FOLR2	-0.413	60.00%	-0.300	54.30%
KDM2A	0.613	58.30%	0.575	57.90%
LRRC42	0.351	59.00%	0.347	56.40%
SLAMF7	-0.307	59.00%	-0.302	56.20%
ABCD3	0.301	59.20%	0.263	55.50%
BUD31	0.426	57.60%	0.499	58.60%
C4BPA	0.362	58.70%	0.281	56.70%
CDKN2AIPNL	0.294	58.10%	0.352	57.80%
CFI	0.202	58.70%	0.262	56.60%
CKMT2	0.307	58.00%	0.391	58.00%
DTYMK	0.297	57.80%	0.300	58.40%
GCKR	0.226	58.00%	0.223	58.10%
LONP2	0.355	58.30%	0.362	57.40%
MED23	0.243	58.60%	0.234	56.90%
NANOS1	0.375	58.70%	0.312	56.70%
PADI3	-0.398	59.00%	-0.318	55.90%
PRDM5	-0.142	58.20%	-0.181	57.70%
PSMB1	0.311	58.80%	0.312	56.20%
SMYD2	0.541	57.70%	0.680	58.50%
ZNF563	0.425	59.30%	0.380	55.40%
CACNA2D4	-0.543	59.60%	-0.370	54.70%
CDC26	0.220	57.80%	0.226	58.10%
COX5A	0.493	58.50%	0.381	56.70%
CRTC2	0.283	57.20%	0.324	59.30%
GGACT	0.238	58.50%	0.221	56.90%
NEK4	0.403	56.90%	0.536	59.70%
RP11-15K19.2	0.258	57.10%	0.307	59.50%
RP1-37E16.12	0.286	57.60%	0.382	58.40%
BAZ2A	0.473	57.60%	0.439	58.20%
DAP3	0.502	57.70%	0.510	58.10%
ERBB4	0.165	63.20%	-0.125	52.90%
MYL2	-0.327	57.80%	-0.432	57.70%

SLC25A21	0.171	62.60%	-0.120	51.80%
TUBG2	0.249	57.30%	0.292	58.70%
UBXN4	0.285	57.20%	0.457	58.90%
CAPN9	0.276	57.30%	0.374	58.50%
CD72	-0.461	59.10%	-0.412	55.10%
DLK2	0.248	57.70%	0.299	57.70%
DYX1C1	-0.364	57.50%	-0.411	58.00%
HPSE2	-0.179	57.00%	-0.201	59.00%
SCN10A	-0.215	56.00%	-0.372	61.00%
SKP2	0.317	57.40%	0.357	58.30%
TCAIM	0.307	57.70%	0.417	57.80%
ZBTB10	0.373	58.50%	0.302	56.10%
CCKBR	-0.373	58.40%	-0.266	55.90%
DCC	0.150	63.10%	-0.107	53.40%
F5	0.251	58.10%	0.318	56.60%
NLRP7	-0.256	57.70%	-0.322	57.30%
PDS5A	0.399	57.10%	0.557	58.40%
PLEKHH1	-0.383	57.60%	-0.429	57.60%
SLC7A11	-0.351	57.50%	-0.359	57.80%
XRCC6	0.448	58.10%	0.419	56.80%
APLNR	0.264	58.20%	0.273	56.00%
CNNM2	-0.916	61.30%	0.613	49.90%
FETUB	0.279	58.80%	0.236	55.20%
KCNH5	0.166	62.90%	-0.121	53.30%
PCDH15	0.161	62.80%	-0.116	53.00%
ADAM18	0.182	62.80%	-0.128	53.50%
CCDC85A	0.249	63.10%	-0.165	53.90%
CHD3	-0.402	59.00%	-0.350	54.10%
CNTF	0.262	57.20%	0.366	57.90%
COG2	0.362	56.40%	0.535	59.30%
CREB3L1	-0.341	58.00%	-0.319	56.30%
EIF2B4	0.263	56.70%	0.345	58.60%
ESCO1	0.450	58.20%	0.433	55.70%
LGALS8	0.431	56.50%	0.536	59.20%
PPP4R1	0.392	57.30%	0.471	57.60%
MARCH11	-0.212	62.70%	-0.252	53.60%
AMER2	0.311	56.10%	0.395	59.70%
FBXO25	0.365	57.60%	0.332	56.70%
HEBP2	-0.293	56.60%	-0.373	58.60%
KRT72	0.175	56.90%	-0.161	58.20%
MBNL2	0.612	58.70%	0.395	54.50%
PRKAA1	0.363	56.90%	0.407	58.20%
TANC2	-0.263	57.00%	-0.288	57.90%
TGDS	0.351	58.40%	0.310	55.00%
TIGIT	-0.466	57.20%	-0.524	57.50%
VRTN	-0.326	56.20%	-0.512	59.50%
AGBL4	0.186	62.40%	-0.151	53.10%
AQP12B	-0.184	56.00%	-0.262	59.70%
BPNT1	0.470	58.20%	0.342	55.30%
ELAVL2	0.196	62.70%	-0.166	53.70%
HACD2	0.289	57.10%	0.465	57.40%
HCRTR2	0.187	62.80%	-0.120	54.00%

OOSP2	-0.455	58.20%	-0.264	55.30%
PRRX2	-0.261	56.40%	-0.352	58.60%
RGPD3	0.185	58.10%	0.202	55.30%
SLC1A6	-0.227	57.50%	-0.233	56.60%
SPHKAP	0.165	62.10%	-0.109	52.40%
TSHZ1	0.585	56.90%	0.538	57.60%
TYR	0.172	62.90%	-0.141	54.00%
ASTN1	0.178	62.20%	-0.125	53.10%
ATCAY	-0.368	57.50%	-0.297	56.30%
GNRH1	0.307	56.40%	0.431	58.30%
MAP3K13	0.357	57.90%	0.323	55.50%
NXPH1	0.160	62.50%	-0.139	53.70%
TPTE	0.146	62.30%	-0.109	53.20%
AGBL1	0.142	62.30%	-0.113	53.50%
CCDC60	0.272	62.30%	-0.221	53.50%
CDH12	0.142	62.60%	-0.125	54.10%
KCNG4	-0.318	56.70%	-0.348	57.60%
LRRC3B	0.235	62.80%	-0.149	54.40%
SYT13	-0.255	56.00%	-0.303	58.90%
WWP1	0.335	57.20%	0.389	56.60%
ZNF589	-0.538	57.30%	-0.464	56.40%
CBFA2T2	0.629	56.70%	0.941	57.10%
CCNI2	0.299	56.50%	0.386	57.60%
EPHA6	0.145	62.60%	-0.124	54.40%
HOXD10	0.283	60.80%	-0.233	49.00%
IWS1	0.465	56.80%	0.584	57.10%
SI	0.185	62.50%	-0.141	54.20%
SIGLEC1	-0.302	57.20%	-0.331	56.30%
SLC35F4	0.164	62.10%	-0.134	53.30%
TBATA	-0.264	56.00%	-0.386	58.60%
TLL1	0.251	63.40%	-0.190	55.90%
AGFG2	0.409	57.40%	0.388	55.60%
AL590483.1	0.359	58.50%	0.264	53.50%
CAPN13	-0.335	55.80%	-0.350	58.60%
HIGD2B	-0.262	55.70%	-0.395	58.80%
KCTD8	0.143	62.50%	-0.141	54.60%
OLFM1	0.313	60.80%	-0.263	50.90%
PANK1	0.256	57.70%	0.268	55.00%
PLA2G4E	-0.364	56.10%	-0.542	58.30%
PYY	0.321	57.40%	0.318	55.40%
RIOK2	0.287	57.00%	0.304	56.50%
TPMT	0.277	56.80%	0.339	56.70%
UBA2	0.394	55.50%	0.609	59.10%
VSTM2A	0.198	61.80%	-0.190	53.00%
ZFH3	0.510	56.60%	0.599	57.40%
C9orf3	0.496	56.60%	0.755	57.00%
KRT79	-0.274	55.30%	-0.308	59.30%
LCN15	-0.235	56.70%	-0.254	56.70%
LINGO2	0.145	62.50%	-0.117	54.80%
NAV2	0.299	57.30%	0.360	55.70%
OLFML2B	-0.399	58.60%	-0.358	53.00%
TUSC3	0.223	63.00%	-0.136	55.90%

ZNF676	0.256	62.20%	-0.181	54.20%
ADGRD2	-0.273	56.70%	-0.251	56.50%
CCDC129	0.169	60.60%	-0.164	51.30%
CHCHD2	0.252	56.50%	0.311	56.90%
DCLK1	0.158	61.30%	-0.141	52.80%
P2RY6	-0.279	57.10%	-0.306	55.80%
SLC35F1	0.207	62.00%	-0.169	54.10%
TFAP2D	0.168	60.90%	-0.130	52.00%
TMEM231	-0.429	56.20%	-0.449	57.50%
UNCX	0.292	61.30%	-0.231	52.80%
XRN1	0.326	57.40%	0.348	54.90%
ADRA2C	0.298	60.30%	-0.245	51.00%
ANKRD30A	0.138	62.30%	-0.124	54.80%
ASPHD2	-0.296	57.40%	-0.294	54.70%
CA10	0.168	61.40%	-0.126	53.30%
DIP2B	0.527	56.50%	0.641	56.50%
GFRAL	0.166	61.50%	-0.153	53.40%
IRX1	0.238	60.30%	-0.219	51.10%
RP11-257K9.8	-0.238	55.60%	-0.408	58.30%
SFT2D2	0.493	56.40%	0.397	56.90%
SLC23A2	0.497	56.20%	0.690	57.10%
SUV420H1	0.370	55.80%	0.483	57.90%
SYNPR	0.168	61.80%	-0.131	54.00%
WWC2	0.248	57.60%	0.275	54.40%
ADAM2	0.185	61.90%	-0.180	54.40%
BRINP3	0.146	61.30%	-0.128	53.40%
MYO1A	-0.439	58.00%	-0.334	53.20%
THSD7B	0.143	61.20%	-0.090	53.20%
BTN1A1	-0.315	55.50%	-0.339	57.90%
FAM35A	0.338	56.40%	0.441	56.00%
MED13	0.342	57.40%	0.355	54.20%
P2RX5-TAX1BP3	0.245	55.20%	0.361	58.50%
PAWR	0.323	57.40%	0.308	53.90%
TMEM173	-0.249	57.20%	-0.283	54.40%
ANKRD30B	0.154	61.20%	-0.133	53.70%
CHL1	0.127	60.20%	-0.163	48.50%
FAM64A	-0.259	55.30%	-0.320	57.90%
GSG1L	-0.272	55.40%	-0.428	57.80%
KCNE1	-0.476	57.00%	-0.411	54.50%
NELL2	0.148	61.00%	-0.116	53.20%
FAM198B	0.311	59.90%	-0.189	51.50%
FUT9	0.142	61.70%	-0.130	55.10%
RP11-11N7.5	0.319	57.10%	0.326	54.00%
SHISA6	0.134	60.20%	-0.106	52.00%
CH17-140K24.8	0.270	61.10%	-0.225	54.00%
CTNNB1	-0.758	59.50%	0.467	51.00%
FCN2	-0.293	57.00%	-0.296	54.10%
IMPA1	0.287	56.30%	0.360	55.40%
KRT20	-0.231	54.70%	-0.343	58.40%
LRFN5	0.166	61.80%	-0.163	55.50%
POLB	0.394	57.10%	0.419	53.80%
SEMA3A	0.220	60.80%	-0.172	53.50%

DUSP23	0.292	54.90%	0.366	57.90%
GRIN2A	0.188	60.60%	-0.164	53.20%
HECTD4	-1.057	59.90%	0.816	52.10%
NUCKS1	0.571	56.80%	0.556	54.10%
SOX11	0.355	60.40%	-0.227	53.40%
SPAM1	0.195	60.40%	-0.148	53.40%
CST9	-0.284	55.70%	-0.372	55.70%
FZD10	0.309	60.10%	-0.227	52.90%
NDFIP1	0.464	56.80%	0.354	53.70%
RSPO1	-0.259	54.70%	-0.367	57.50%
SMO	0.351	55.70%	0.380	55.60%
ZNF420	0.257	60.40%	-0.200	53.60%
ANKFN1	-0.271	55.30%	-0.259	56.20%
DNER	0.216	60.40%	-0.207	54.00%
MYLK	-0.519	58.70%	0.321	49.50%
NR2F2	0.348	61.80%	-0.274	56.60%
OTUD7A	-0.309	54.10%	-0.431	58.50%
PAX1	0.221	60.40%	-0.218	54.00%
USP6	-0.375	55.70%	-0.530	55.30%
WDR26	0.357	54.90%	0.380	56.90%
GULP1	0.237	60.40%	-0.163	54.20%
SPATA6	0.252	60.30%	-0.219	54.10%
ZNF728	0.205	60.60%	-0.177	54.70%
GABRA4	0.198	59.40%	-0.199	52.70%
SYT2	-0.330	55.10%	-0.464	55.90%
UNC80	0.216	60.20%	-0.262	54.30%
ALG11	-0.403	59.10%	0.329	52.00%
ALOX12B	-0.263	55.50%	-0.344	54.90%
ARID4B	0.519	55.70%	0.551	54.60%
NXPE4	0.204	59.90%	-0.160	53.60%
OR4N2	0.134	59.70%	-0.105	53.60%
TSSC1	-1.174	61.20%	0.565	56.40%
CCDC39	0.169	60.20%	-0.175	54.80%
GPR158	0.131	59.70%	-0.119	53.70%
GRIA2	0.142	59.70%	-0.174	53.80%
HTT	-1.057	59.80%	0.709	53.90%
PON2	0.258	55.80%	0.282	54.00%
TECRL	0.145	60.00%	-0.153	54.40%
CCDC174	-0.596	59.70%	0.380	54.00%
COL11A1	0.115	59.80%	-0.143	54.40%
FMN2	0.144	59.10%	-0.147	52.90%
HS6ST3	0.132	59.40%	-0.136	53.40%
KCNIP4	0.136	59.30%	-0.129	53.30%
KCNQ3	0.182	60.10%	-0.203	55.00%
ALCAM	0.243	54.90%	0.251	55.10%
CDH8	0.157	60.60%	-0.151	56.10%
FSTL5	0.135	59.50%	-0.174	54.00%
GABRA6	0.145	59.40%	-0.155	53.90%
MSR1	0.192	60.10%	-0.188	55.00%
ZNF134	-0.280	55.40%	-0.330	54.20%
BRCA1	-0.779	57.80%	0.544	49.30%
CDH18	0.115	60.00%	-0.138	55.00%

CLEC19A	0.238	58.80%	-0.226	52.70%
CXCR2	-0.225	55.10%	-0.245	54.60%
GRIA4	0.141	60.30%	-0.189	55.90%
NETO1	0.133	59.10%	-0.175	53.50%
NOL11	-0.504	58.20%	0.434	48.30%
NOVA2	0.378	58.70%	-0.298	52.70%
RIMS1	0.163	60.40%	-0.153	56.10%
SPIN1	-0.497	58.20%	0.511	51.50%
TRIML2	0.235	59.20%	-0.192	53.60%
EPHA5	0.125	59.50%	-0.131	54.50%
LRRIQ3	0.135	59.50%	-0.167	54.40%
VAX1	0.272	58.60%	-0.258	52.70%
ZNF71	0.429	60.00%	-0.384	55.50%
ANO3	0.132	58.90%	-0.130	53.80%
EPHA7	0.164	60.40%	-0.168	56.40%
FHL5	0.157	59.00%	-0.182	54.00%
OR10S1	-0.204	54.60%	-0.267	54.80%
SNAP91	0.168	59.60%	-0.167	55.10%
ZNF732	0.233	59.40%	-0.194	54.70%
CYP4B1	0.248	59.10%	-0.222	54.40%
EGR2	0.232	58.30%	-0.239	52.60%
HFE2	0.324	54.40%	0.365	55.10%
NBEAL1	0.271	54.90%	0.361	53.90%
RPF2	-0.474	57.30%	0.385	49.30%
UBE3C	-0.860	59.70%	0.941	55.30%
HSPB11	-0.414	57.70%	0.424	51.90%
LGR4	0.295	55.10%	0.215	53.20%
RAB39A	0.341	57.50%	-0.280	51.40%
SLCO6A1	0.152	59.30%	-0.214	55.00%
UBE2H	0.456	54.60%	0.517	54.30%
ZNF229	0.207	58.90%	-0.226	54.30%
CSMD3	0.104	58.90%	-0.126	54.40%
HTR1E	0.145	58.00%	-0.166	52.90%
KIAA0232	-0.467	57.70%	0.534	52.10%
SLC5A8	0.171	59.00%	-0.240	54.80%
SLC6A15	0.176	59.20%	-0.198	55.00%
SLFN5	0.347	57.30%	-0.241	51.40%
SNTG2	0.226	58.50%	-0.192	53.60%
HS3ST4	0.130	59.00%	-0.168	54.90%
IQCF5	-0.233	55.10%	-0.322	52.50%
LRRIQ1	0.141	58.80%	-0.163	54.70%
NRSN1	0.194	58.70%	-0.222	54.30%
PXDN	0.250	58.00%	-0.232	53.20%
THRAP3	0.496	54.00%	0.717	54.90%
GABRB1	0.147	58.80%	-0.184	54.90%
TRIML1	0.313	58.70%	-0.237	54.70%
FOXE1	0.202	57.50%	-0.272	52.60%
GRID2	0.134	58.80%	-0.154	55.20%
MYRFL	0.327	57.70%	-0.241	53.20%
SCCPDH	-0.408	57.90%	0.613	53.40%
SORCS3	0.117	59.00%	-0.144	55.60%
TPST1	-0.580	58.00%	0.754	53.60%

NOS1AP	-0.525	58.40%	0.417	54.80%
PHOSPHO1	0.277	56.50%	-0.239	51.20%
UGT8	0.170	58.60%	-0.199	55.10%
UPF2	-0.552	57.90%	0.820	53.80%
B3GALT5	0.250	59.40%	-0.321	57.00%
PKIB	0.165	58.30%	-0.249	55.00%
SHC3	0.225	57.40%	-0.335	53.00%
CHD6	-0.491	57.00%	0.459	52.40%
ITCH	0.452	54.30%	0.590	52.70%
NELL1	0.117	58.70%	-0.162	55.90%
STXBP5L	0.118	58.90%	-0.154	56.30%
TAC1	0.170	58.00%	-0.203	54.30%
TIMD4	0.209	57.30%	-0.223	53.20%
TMPRSS11F	0.152	58.50%	-0.164	55.60%
ADAMTS20	0.147	58.30%	-0.162	55.60%
KCTD16	0.155	57.60%	-0.206	54.00%
OPRK1	0.149	57.20%	-0.172	53.40%
SLC5A1	0.272	58.70%	-0.335	56.20%
TRPM7	-0.370	56.70%	0.606	52.10%
PARM1	0.236	57.60%	-0.243	54.50%
PPP1R3A	0.162	58.70%	-0.230	56.40%
ZNF716	0.166	57.80%	-0.179	54.60%
ADAMTS18	0.160	57.30%	-0.177	53.90%
TACR3	0.130	58.80%	-0.171	56.90%
TPO	0.214	57.50%	-0.228	54.30%
TPTE2	0.124	57.70%	-0.177	54.70%
ADCY10	-0.472	56.10%	0.453	51.80%
PCCB	-0.550	56.40%	0.435	52.70%
FBN2	0.164	57.50%	-0.172	55.10%
PDP1	0.308	56.00%	-0.352	51.90%
ZNF534	0.185	57.80%	-0.240	55.40%
CSRP2BP	-0.502	57.20%	0.629	54.80%
GABRG2	0.122	57.70%	-0.161	55.70%
NXPE2	0.158	57.60%	-0.217	55.60%
ZNF560	0.153	57.50%	-0.187	55.30%
ZNF618	-0.439	56.20%	0.463	52.60%
ADGRB3	0.146	58.00%	-0.135	56.60%
NLRP13	0.138	57.20%	-0.232	55.10%
SLC4A10	0.137	57.50%	-0.216	55.80%
SMIM17	0.206	57.60%	-0.281	55.80%
SAMM50	-0.348	56.00%	0.454	53.00%
UBE2G2	-0.512	57.10%	0.571	55.00%
GABRB2	0.135	56.60%	-0.169	54.30%
ZNF667	0.216	57.20%	-0.228	55.70%
C14orf177	0.170	56.00%	-0.227	53.80%
KRT86	0.366	57.10%	-0.382	55.70%
PCDH10	0.160	57.00%	-0.186	55.60%
STEAP1B	0.332	56.50%	-0.357	54.80%
XKR4	0.124	57.20%	-0.179	56.20%
EDNRB	0.281	56.80%	-0.250	55.70%
HTN3	0.185	56.50%	-0.217	55.10%
LY6E	0.288	56.50%	-0.235	55.10%

NMUR2	0.139	55.90%	-0.176	54.00%
DIS3L	-0.443	55.10%	0.437	52.70%
FAM193A	-0.634	56.20%	0.871	54.80%
TTC29	0.122	56.80%	-0.196	56.20%
CCDC59	0.143	56.40%	-0.191	55.50%
MUC16	0.121	57.10%	-0.201	56.90%
ACACA	-0.629	55.70%	0.787	54.50%
BARX2	0.251	56.70%	-0.233	56.50%
C15orf40	-0.525	55.90%	0.440	54.90%
TRIM36	0.251	55.90%	-0.275	54.90%
ZNF454	0.214	56.70%	-0.256	56.30%
CCDC141	0.210	56.00%	-0.221	55.40%
LY96	0.234	55.80%	-0.344	55.10%
ZNF107	0.230	55.80%	-0.286	54.90%
ZNF471	0.175	56.50%	-0.246	56.40%
CLIC5	0.313	56.50%	-0.423	56.60%
LILRB1	0.192	53.50%	-0.255	49.30%
SLC8A1	0.188	55.10%	-0.231	53.80%
BACE1	-0.450	57.00%	0.657	58.00%
PDE4B	0.311	55.90%	-0.382	55.60%
ALDH5A1	-0.400	55.00%	0.484	54.20%
SP110	0.321	54.40%	-0.326	53.10%
ZFYVE1	-0.485	55.10%	0.626	54.40%
BTNL9	0.309	56.40%	-0.347	57.40%
CD300E	0.186	53.30%	-0.205	51.20%
CDH17	0.230	55.40%	-0.328	55.50%
FAM19A4	0.146	55.70%	-0.193	56.00%
SAXO1	0.240	55.40%	-0.294	55.70%
YARS	-0.468	54.30%	0.526	53.90%
IL15	0.243	54.60%	-0.322	55.30%
KLHL14	0.188	55.30%	-0.221	56.70%
PLEKHA7	-0.535	54.50%	0.539	55.10%
NFRKB	-0.487	54.80%	0.525	55.80%
MX1	0.286	53.40%	-0.221	53.60%
HHIP	0.140	54.30%	-0.169	56.90%
IFI44L	0.232	52.50%	-0.207	56.70%
SAP130	-0.544	55.50%	0.871	58.50%

Notes: ^a Coefficient was based on the logistic regression adjusted for age and gender for each gene in the training set. ^b AUC was calculated for each gene in the training set. AUC: area under curve; CHB: chronic hepatitis B virus infection; Controls: patients with benign liver lesions and healthy individuals; HCC: hepatocellular carcinoma; LC: liver cirrhosis.