

Table S1 Associations between the ten miRNAs expression in tumor tissues and the clinicopathological characteristics of HCC patients in the TCGA-LIHC cohort

Variables	hsa-miR-454	hsa-miR-1293	hsa-miR-139	hsa-miR-99a	hsa-miR-130a	hsa-miR-22	hsa-miR-23b	hsa-miR-150	hsa-miR-152	hsa-miR-199b
Age (years)	P=0.348	P=0.543	P=0.593	P=0.021	P=0.282	P=0.011	P=0.061	P=0.332	P=0.016	P=0.343
<65	5.295±0.787	0.424±1.107	9.260±1.252	11.498±1.474	7.893±0.994	19.392±0.861	12.865±0.796	10.551±1.623	10.438±0.983	11.311±1.845
≥65	5.172±0.611	0.320±0.558	9.376±1.100	12.060±1.047	7.708±0.886	19.763±0.668	13.108±0.543	10.273±1.532	10.840±0.792	11.002±1.749
Gender	P=0.464	P=0.978	P=0.024	P=0.013	P=0.257	P=0.237	P=0.006	P=0.729	P=0.146	P=0.732
Male	5.226±0.721	0.388±1.072	9.440±1.194	11.861±1.348	7.888±0.866	19.566±0.808	13.049±0.642	10.429±1.455	10.644±0.864	11.175±1.786
Female	5.327±0.768	0.393±0.578	8.930±1.154	11.226±1.332	7.682±1.171	19.383±0.840	12.676±0.871	10.534±1.929	10.386±1.106	11.293±1.905
TNM stage	P=0.022	P=0.014	P=0.019	P=0.013	P=0.285	P=0.105	P=0.558	P=0.274	P=0.049	P=0.816
I	5.154±0.717	0.251±0.670	9.465±1.125	11.887±1.191	7.770±0.906	19.594±0.748	12.972±0.735	10.562±1.528	10.683±0.882	11.182±1.772
II-IIIa	5.453±0.732	0.667±1.331	8.966±1.287	11.282±1.607	7.954±1.060	19.357±0.931	12.895±0.722	10.250±1.715	10.352±1.020	11.258±1.912
Histologic grade	P=0.258	P=0.034	P=0.001	P=0.003	P=0.219	P=0.010	P=0.074	P=0.309	P=0.219	P=0.323
G1-G2	5.182±0.697	0.215±0.422	9.628±1.152	12.028±1.290	7.933±0.948	19.696±0.837	13.058±0.632	10.598±1.812	10.672±0.731	11.363±1.698
G3-G4	5.322±0.765	0.556±1.259	8.983±1.168	11.357±1.370	7.733±0.969	19.342±0.766	12.839±0.800	10.324±1.351	10.477±1.101	11.059±1.918
Ishak score	P=0.324	P=0.015	P=0.243	P=0.751	P=0.696	P=0.432	P=0.966	P=0.587	P=0.511	P=0.516
0-4	5.274±0.804	0.477±0.899	9.339±1.115	11.862±1.178	7.828±0.922	19.645±0.843	12.950±0.628	10.267±1.496	10.804±0.853	11.459±1.672
5-6	5.122±0.713	0.131±0.352	9.590±0.994	11.943±1.333	7.755±0.936	19.513±0.811	12.956±0.766	10.440±1.666	10.694±0.799	11.237±1.711
Child-Pugh grade	P=0.986	P=0.735	P=0.378	P=0.277	P=0.644	P=0.076	P=0.978	P=0.206	P=0.439	P=0.670
A	5.217±0.716	0.325±0.735	9.284±1.158	11.750±1.344	7.774±0.935	19.528±0.820	12.987±0.733	10.468±1.539	10.641±0.924	11.151±1.817
B-C	5.222±1.054	0.229±0.527	9.679±0.878	12.310±0.670	7.945±1.150	20.102±0.903	12.994±0.678	9.713±1.193	10.917±0.719	10.846±2.109
AFP	P=0.018	P=0.927	P<0.001	P<0.001	P=0.329	P<0.001	P=0.120	P=0.183	P=0.002	P=543
Negative	5.095±0.689	0.342±0.614	9.623±1.120	12.165±1.110	7.873±0.927	19.858±0.745	13.035±0.708	10.248±1.415	10.827±0.748	11.066±1.733
Positive	5.396±0.751	0.353±0.841	8.904±1.080	11.122±1.478	7.708±1.006	19.147±0.766	12.833±0.780	10.626±1.825	10.327±1.073	11.258±1.874
Hepatitis B/C	P=0.140	P=0.732	P=0.854	P=0.427	P=0.117	P=0.732	P=0.319	P=0.740	P=0.177	P=0.090
No	5.378±0.833	0.369±0.520	9.381±1.231	11.656±1.286	8.072±0.957	19.489±0.840	12.895±0.629	10.428±1.745	10.473±0.975	11.664±1.643
Yes	5.178±0.671	0.323±0.793	9.340±1.188	11.848±1.314	7.796±0.940	19.541±0.806	13.023±0.731	10.525±1.465	10.670±0.867	11.091±1.895
VI	P=0.308	P=0.084	P=0.018	P=0.001	P=0.597	P=0.107	P=0.011	P=0.783	P=0.001	P=0.480
No	5.212±0.727	0.297±0.717	9.457±1.126	11.936±1.159	7.803±0.962	19.589±0.776	13.048±0.707	10.483±1.540	10.751±0.810	11.136±1.793
Yes	5.349±0.745	0.600±1.345	8.938±1.299	11.115±1.633	7.896±0.964	19.348±0.894	12.713±0.732	10.402±1.727	10.166±1.089	11.371±1.871

Statistically significant P values are given in bold, P<0.05. AFP: alpha fetoprotein; VI: vascular invasion.

Table S2 The potential target genes of the five miRNAs

Upregulated Genes in HCC	Downregulated Genes in HCC
UHRF1BP1, IMPG2, CBX5, ZNF184, TOMM22, RBX1, SIX4, CBLN1, HSDL1, USP31, CPD, MYH1, TMEM109, USP5, RAB35, MDFI, ISL1, LNPEP, PFKFB4, TUSC2, WBP1, PCGF1, HAUS3, SSR1, SIX1, STRIP2, HOXD10, DMXL2, DHRS11, TRNT1, ATP6V1E1, SMARCC1, CHRM3, MYH4, NEDD4L, PLXNC1, RCBTB1, CIB2, FNBP1L, TOPBP1, NAP1L1, BCAT1, C12orf4, LYZ, C12orf49, LMNB1, NUAK1, DGKH, AACs, NDST1, AAGAB, MCM4, RPGRIP1L, CSE1L, NOVA2, LHX4, MCM6, CHST10, SSR3, KIAA1257, SUB1, SLC1A3, DOCK3, VPS33A, ZIC5, SSH2, PIP4K2B, POU2F1, GOLPH3L, LBR, SNRPG, RNF7, STXBP5L, HAPLN1, ATG12, FAM217A, ARMC1, ZNF343, SLC7A11, RNF219, GJA1, ZNF117, DTNA, RPIA, MSI2, PANX3, OLA1, RABGEF1, PPP4R1, ZNF286B, VBP1, C1orf158, MIS18A, KPNB1, PKNOX1, PRX, NACC1, MAML1, ZNF382, STT3B, HMGB2, MAD2L1, AFAP1L1, FBXO4, CAMLG, RAD21, TSC1, JAM3, CYR1, MESP1, GOLGA6L9, ZNF91, DNAJC18, CSNK1G1, MECP2, AGAP1, C15orf40, GAP43, CYCS, GBX2, TBCA, YWHAG, UTP23, MEPCE, TBC1D16, CBX2, ZNF431, LPL, ZNF624, GNPDA1, TMEM70, RACGAP1, AGGF1, OSBPL3, PLEKHF2, PNMA1, PLAG1, ZBED2, LASP1, CASK, AVL9, ZBTB34, ZNF572, UBE2O, SHISA2, CCDC102B, HTR1F, B4GALT3, GLS, SOX11, UACA, TAF1D, CREG2, ZNF579, CCZ1, AHCTF1, B3GNT5, ZNF704, IGDCC3, ZNF92, FOXK1, UQCR10, ZNF616, ZNF285, XKR3, LIMK2, PHF6, XPOT, NR2C1, ARHGEF37, ZNF529, UBL4B, FOXD2, CENPQ, ZNF354A, HNRNPC, ZNF224, ZNF420, ZNF721, KLHL7, ZNF788, ZNF587, ZNF695, SLC25A40, CAPRIN1, DNER, JARID2, DLX1, PDPK1, TRIM24, ZNF678, CCDC15, ZNF107, LIN28B, THUMPD3, ARID3B, ICK, SVIP, ZNF195, HNRNPA2B1, HTT, FOXN4, LINGO1, SLC17A5, ZNF527, MAGEA1, MAGEB10, FXR1, SRGAP1, TES, ZBTB18, ZNF669, CAMSAP2, PRDM10, VCP, HIST1H2AG, FRA10AC1, EDARADD, ZSWIM5, TRAPPC2, DMBX1, UBAP2, LRIG2, CLK2, HMG2, CHML, ACTN2, TSNAX, CCSAP, AGPAT4, RRP15, PTPN14, FLVCR1, LPGAT1, NUCKS1, ZBTB41, SWT1, CEP350, ZBTB37, TNFSF4, SUCO, DNM3, IGSF8, RIT1, MARCKS, EBF3, SNX27, Rragd, SH3PXD2A, IMPG1, ELOVL3, TLX1, PRRG3, C1orf146, SLC9A6, ZNF280C, FRAT2, ALG6, MAGOH, NACC2, SLC6A14, PIK3R3, DYDC2, POLR3A, PLA1, MAP7D1, S100PBP, RNF8, OGT, MATN1, SRPK1, PHF19, SNRPC, PTBP3, TMEM50A, ARR3, TXN, PJA1, TMEM38B, NCOA6, ZNF189, COL15A1, CBFA2T2, PTPDC1, MAPRE1, COL4A1, ABI1, STXBP4, PRR3, CUBN, PCDH17, CKAP4, CKAP2, NDP, TXNRD1, C6orf62, NRSN1, MAGEB2, SMPX, MAP7D2, SERF1B, ERCC8, STK35, ATP8A2, GAGE1, NKX3-2, ZIC4, HCG27, EOGT, TRIM71, COLQ, GOLM1, RUFY2, DCP2, NIN, BORA, ORMDL1, PIGX, HOXD13, WASF1, GALNT13, NT5DC3, ANO4, CNOT6, CASP3, ZNF207, AIMP1, AKAP5, CDC23, SPOCK1, DNAJC6, ZNF273, ZHX1, PURB, ATP6V1C1, ZNF286A, YWHAZ, ADNP, ST8SIA1, FAF1, PDE1C, HOXA3, STXBP6, ZNF461, OR51E1, PPARG, ZNF709, UBE2D2, PRAME, KSR1, RBM12B, QSER1, EPHB2, C20orf202, RPRD2, PDE7A, IQCE, ZNF681, PDGFA, SMS, GPSM2, NLK, RNF43, DAB2IP, MOGS, NEB, TET3, CCDC138, ZC3H8, CCDC14, RPL31, EXOC6B, COX20, HAT1, MAP4K4, RPP30, PRKCA, SNRPE, SMIM13, KIF20B, SATB2, C8orf59, HMGXB4, MAP10, ZNF732, STK36, ZNF716, ZNF679, ZNF284, ORC5, IRGQ, ALMS1, ZNF736, FAM120AOS, PHF14, GPBP1, TBL2, PKP4, ZNF234, XPO1, SESTD1, CNOT4, GPSM1, RDM1, SLC39A10, WASF2, HOXC4, TIA1, MAP4, PRR14L, ANKHD1, ROBO1, HSPA14, ABCC5, DPH6, ZNF138, CBLL1, USP46, RAD51AP1, HNRNPU, ZNF793, MSH6, ZNF550, STRBP, SS18L2, TECPR1, ANKMY2, LANCL1, VPS37D, CPSF4, POM121C, DGKI, ASNS, PPIH, NOL12, DEPDC1, PWWP2A, ZNF492, DONSON, TTC23, GPR89A, NFXL1, EYA1, SRPRB, DLG5, NUB1, UBN2, PTPRG, EIF2A, B3GALNT2, GK5, ZNF782, KIAA1524, RXRB, ZFP69B, NDUFA3, NR6A1, TRPC4, APOO, ACE, ST7L, SUPT20H, MCM7, DIEXF, NEU1, EZH2, DZIP3, GMPS, CEBPA, ABL2, DCK, PCDHA1, RAPGEF6, GOLGA6L4, CDH10, PPWD1, SH3RF2, TRIO, NDUFA2, ZFP62, ATR, FBXO32, CARD8, UNC13A, ADAMDEC1, NDUFAF6, ASAP1, UBE2V2, TBC1D31, TATDN3, SLC6A5, PCDHA2, E2F8, TMEM136, PCDHA5, AKIP1, RPS3, SLN, DCUN1D5, SAAL1, PCDHA8, NXF1, SPATA5L1, MYH2, SPA17, ZAR1L, EIF3F, FTH1, AMBRA1, NOL8, C17orf58, TSG101, OTUB1, SLCO1C1, SLC38A9, NDC1, TFRC, NPC2, RASSF3, BPIFB6, MAGEA8, FAM9C, RPTOR, MAGOHB, HOXC11, CS, PTPRR, OTOGL, ATP5G2, PRIM1, GAS2L3, ACYP1, DCAF4, PRPF39, MAP3K9, GMFB, IL11RA, TMPO, ISCA2, ZNF280D, TPM1, ZNF839, USP3, BLM, ANXA2, MYO5C, TCF24, TDRD12, TMEM178B, C15orf41, VAC14, WSCD1, TRIM37, DDX42, C18orf32, PIEZO2, CDH8, ZNF846, ANKRD27, ZNF226, TMEM101, ATXN7L3, PKN1, GPATCH1, ZNF233, ZNF225, EGLN2, ZNF43, ZNF432, ZNF114, ZNF552, ZNF730, ZNF333, ZNF728, ZNF30, HSPH1, PTBP2, HOXC8, CBY1, CSNK2A1, CHMP4B, MLEC, GOLT1B, PDZD11, SOX4, ATG14, CANX, FAM155B, TAF4, IER3IP1, STX6, TTYH3, NOV, FOXF2, NUP133, IKZF4, PTGES3, MEOX2, VMP1, CHMP3, R3HDM1, ADAM23, GTF2H1, ANKRD52, KCNN3, CCNA2, LIX1, SCUBE3, CCT6A, MMP10, PABPC3, ADAMTS18, ZNF618, MRAS, STC1, ZNF250, ITGA5, FRZB, PHAX, HIF1AN, PDIA3, SLC22A11, SLC25A33, ESCO2, FSTL5, SOCS5, HAS3, NPTX1, KLF13, CHST1, MARCH3, CDK5R1, UCP3, LARP4B, FOXP1, C5orf30, NHLH2, GPR137C, WIPF2, MLLT6, POU3F2, MYT1, RHD, SIRT7, ALX4, ZDHHC23, NR2C2AP, ZNF555, FMNL3, CSMD1, SRA1, SEC23B, CCDC88A, ERMP1, MASTL, DYRK2, ACSL4, ARID4B, SKP1, NPEPL1, ZDHHC9, VSIG10, ANGEL2, FAM45A, E2F2, ACBD3, H3F3A, MDM4, TBX19, DEDD, CHRN2B, SNAPIN, IGSF3, WNT2B, NEURL1B, RTCA, GABRA3, STX16, PRKAA2, CEP55, RPA2, FSD1L, OTUD3, GPR158, TLE1, KLHL21, PLCB4, PLCB1, ARX, RBM24, WRNIP1, DNM2, MFSD6, CIT, LRRC27, TCEA1, MKL1, UBXN2B, DIAPH3, FAM104A, RBFOX2, MATN3, AAK1, C7orf71, PPP6R1, IFRD2, E2F7, SNAP47, GNS, CTAGE15, L3MBTL1, RFX7, KAT7, ZNF3, RNF216, CNTNAP5, DUS4L, KIAA1549, SLC46A1, C12orf75, RBM17, THRA, KIF5A, ATXN7L2, PEX5L, CENPO, LAS1L, GGNBP2, CTAGE4, ARHGAP19, PLAC8L1, C5orf38, FZD6, MYBL1, TRIM3, NME7, CCKBR, BTBD10, STX16-NPEPL1, NEU3, CD163L1, FASTK, TRIM59, SLC25A14, SNURF, FICD, PROX2, ADCY4, RPS17, KANSL1, ZNF263, TOM1L2, FKTN, KCNJ6, DNAJC10, LIMD1, LARP1, CRTC1, RTN3, KIAA1522, HIC2, WDR26, FGF12, HS3ST2, TRIM68, NCAPD2, GPATCH8, BAZ2A, ST6GALNAC4, NOX4, PRRX1, CSMD2, GNB5, SYP, FNBP4, SRRM4, ITPK1, GNA12, CABLES2, ZNF385D, OLFML2A, RHO, EDIL3, PRDM9, MDGA1, RAD54B, DCC, RNF187, GGA2, METTL2A, ISG20L2, ANXA2R, VPS39, PRDM7, CHRNA3, SMAD3, TUBB, CCDC66, RHOG, TBC1D20, NUDCD3, IPO9, RGS17, SYT2, SMG7, CSAG1, DCX, PACSIN1, LY6G5B, TTLL6, ANKRD16, DNMT3A, HNRNPL, KCNQ3, AGPAT1, ELAVL1, DNAH3, LMBR1L, C7orf43, MTX2, LUC7L, WDR75, MAVS, SULT4A1, NCAPG2, ARPC1A, GMPPA, KIF7, SRM, C1orf198, PCBP4, ABCF1, NUP205, PRPF4B, SLC5A11, UTP18, CACNA1E, CNIH2, COMMD5, DNHD1, C11orf80, RPS2, AC010536.1, MYO18B, CDH13, AL590822.1, CKB, CNTR0B, VPS33B, TMEM98, KIF18B, ZNF599, WDR62, PGS1, RUVBL2, ZNF814, GPR63, ZRANB2, GABBR2, NAA25, CCT5, HOXA10, EBF1, BBC3, DPY30, DDX52, LYPLAL1, SHC1, TMEM69, DSN1, DFFA, KIF3A, TECRL, CDCA3, SMARCA4, OSR2, NT5C3A, SCHIP1, ZNF93, INO80C, HIST1H2BN	AKAP11, FAM135A, KLHL20, SOS2, C16orf70, MTMR9, ITGB8, HBP1, CAV2, CCSER2, CXCL6, CD69, HCFC2, TRIM23, HES1, SLC35D1, YIPF4, PFN2, ACVR2A, INHBA, BHLHE41, CDKN1A, ATXN1, EREG, IRF1, PTGER2, CDADC1, LDLR, PXDN, KDM6B, BTG1, BHLHE40, DSG1, PDGFRA, MDFIC, AKIRIN2, DYNC1LI2, TEX2, TMOD1, PPIG, HECW2, LRP6, KLF3, NOL4, RIMBP2, FECH, CRISPLD1, TIMP2, TANC1, LY75, ACVR1, PTPN4, EPB41L5, LRP2, OSBP, DDX6, UPK1B, FAM13A, PCDH10, PIKFYVE, CUL3, STAT3, FNDC4, PPARGC1A, CNOT6L, PPP2R3A, CPEB4, PIK3C2A, B4GALNT3, C14orf37, ZCCHC14, SIK1, LEFTY1, RAB5A, SETD7, DLC1, NRBF2, NPAT, ARID5B, FREM2, DIP2C, C4orf33, C18orf25, TGOLN2, CAMK4, RMND5A, DGKE, CCDC146, NCOA1, MEMO1, TGFA, PRICKLE2, SNIP1, OSBPL11, PGRMC2, SCRG1, IL15, ABCE1, LMBRD2, CASD1, ADCY1, GPER1, FAT3, WRN, HPRT1, FAM35A, SPRED1, BAG5, RAG1, KCNAB1, HIPK3, ARAP2, ARL6IP1, S1PR1, CCDC126, KLF7, CGGBP1, DSEL, VCP1P1, SPESP1, NAV2, DPYSL2, PDE12, LRCH1, ERCC4, DST, BTF3L4, STK33, ZFP91, CYBRD1, CA13, TSHZ1, ZBTB7A, WDFY3, ST8SIA3, DCUN1D3, C14orf28, FAM110C, SLC24A3, KCNJ15, SDR42E1, RAB12, CSF1, CYP2U1, FIGN, F3, TNRC6B, PCGF5, LIPA, SPTY2D1, WTAP, MAFF, TRIM2, SATB1, ZC3H12B, INSIG1, CFL2, FERMT2, ANKFY1, SLC24A2, SERINC3, BRWD1, ERBB4, RAP2C, DICER1, NR3C2, SLAIN1, FYN, APCDD1, ARHGEF26, MUM1L1, MBNL1, MIER1, HSD17B11, GDA, PELI1, TGFB2, MAP3K5, G3BP2, ATG2B, SCN3A, SPN, UGT1A8, PIGP, ZNF148, CLIP1, QKI, FBXO28, PROX1, RSPH3, PPP1R15B, CFHR5, SASH1, HIVEP2, HECA, KCNJ10, CRCT1, IKZF5, EPHA7, SNX14, DBT, AGL, ZNF275, PTP4A1, ANKRD13C, GADD45A, SERBP1, PDE4B, ENPP5, RUNX2, ZFYVE9, B4GALT5, EPS15, CMPK1, PTEN, TESK2, ZNF684, NAP1L3, AGO3, AGO4, MAFB, CHIC1, RC3H2, MBL2, GPRIN2, MAN1C1, CSGALNACT2, EDA, AR, SLC44A1, ABCA1, SPEN, ACBD5, NUDT10, CLCN5, TNFRSF1B, PRUNE2, RORB, SLC39A12, FBXO48, FAM107B, PRKD3, EDN1, PRNP, KBTBD6, FOSL2, NDEL1, TEK, GTPBP10, STEAP4, PTPRD, SMOC1, ITPRIPL2, SON, MTMR6, CDC37L1, DOK6, LRIG1, RNF180, LRP1B, ATG16L1, BDH1, MB21D2, ARHGEF4, ZNF800, MAF, PRKACB, PSAP, DAAM1, MAPK10, ARHGAP24, ULK2, FRMD6, UBB, USP8, PRKAA1, PAFAH1B1, PDOD1LG2, ARHGEF12, RGPD2, DLG2, PUS10, MYT1L, USP47, LDLRAD4, RUNX3, SAR1B, HERC3, NFIA, SLC8A1, ZFPM2, RAPGEF4, SH3D19, SCN9A, CPEB3, EXOC5, WDFY4, RAI2, KBTBD8, PLCL2, EIF2AK3, BIRC6, TBCEL, AC107021.1, NHSL1, PHACTR2, FBXO21, LRRK2, PCYOX1, HEATR5A, C3orf58, C1S, CHRM2, SMG1, CMYA5, FOSL1, CPEB1, ARFIP1, JADE1, IGF1, ESR1, RARB, SLC13A2, ROBO2, C4orf36, VPS13D, ALDH3A2, MED12L, DNAJC16, DD12, ST3GAL6, TNRC6A, LYSMD3, BMP2K, KLHL3, ZNF827, MAML3, PHF3, PAQR3, CLCN3, ZBTB38, MAT2B, SLC25A32, ST18, CCDC71L, LONRF1, ACAT1, PICALM, RAB30, SYBU, MGST1, SESN3, UBC, BACH2, SOD2, SRPX, CYLD, USP28, KLF11, TRERF1, CPEB2, M6PR, GABARAPL1, CAND1, HECTD1, NAA30, KMT2C, ZEB2, SECISBP2L, CHD9, CNOT1, MTMR10, MPDU1, ADCYAP1, DYNLL2, TMEM200C, RNF165, ZNF24, ZNF536, AC135983.2, ZNF429, EPHA8, STX1B, GTPBP1, CREBL2, THG1L, PRDM2, RNF11, ATP1B2, ELN, GATA5, RBBP8NL, SYT4, TMTC1, CCL21, TSPAN11, SLC5A7, YWHAE, HERC6, UGT2B10, SNX19, IGLON5, ARL6IP5, ANK3, CGNL1, MED13L, TIAM1, SLC25A34, RANBP3L, KIAA1161, SVOP, SNX20, ACER1, VWCE, FGA, IL7R, ANTXR1, ADCYAP1R1, SIK2, NMUR1, PRKACA, KLK10, DTD2, AMZ1, ZFYVE1, WDTC1, FAM46A, FAM124A, CAPN6, USP9X, ERGIC1, CALN1, PURA, LYPD6, TMEM217, ACACB, NCR3LG1, SYN1, MCCC2, SYDE2, TRIM29, ASCC1, PRELP, SEMA6D, REPS2, C1orf116, ZNF460, TGM2, ARMCX6, LRP2BP, CSRP1, HMCN1, QSOX1, GPA33, CTGF, LY9, CEP85L, SLC16A10, ADAMTSL4, INA, LDOC1, ABCA9, IFI44L, PKHD1, KCNB1, HIVEP3, ALDOB, UBXN10, ALDH4A1, ISCA1, FUZ, ATAD3C, CNTFR, GSG1L, ZDHHC21, IGF2, SEMA5A, AQP4, POU2F2, GPR55, OAS2, FABP1, AKAP13, IL16, CXXC4, CELF1, WNK2, KCNE1, DGKB, SIRPA, PLA2G2A, MASP2, CCDC141, PPP5D1, SLC51A, RPH3A, COL20A1, GTF2IRD2B, ATF5, PROM2, TBC1D10A, BBS9, UBE2J1, RMDN2, USO1, GLT1D1, PSD4, GLI2, MUC5B, SF1, NECAP1, DOCK5, TLE4, MAMDC4, PTPRE, KIDINS220, PHYKPL, PDZRN3, CCL15-CCL14, CASR, ZNF141, SORCS2, UGT2B7, ABLIM3, POU6F2, RNF217, RNF130, ABCA10, APLP2, IQSEC3, ZBTB16, ZNF662, MPDZ, HAL, RND2, SMG6, MMAB, TET2, PPP1R1A, DNAJC22, PDE1B, PCBP2, CIDEB, APBA2, TGIF2-C20orf24, MEIS3, TCF25, CAMTA2, SLC16A2, FUT5, EPOR, NFIC, HSBP1L1, PPP1R12B, FGFBP2, ARHGAP29, CACHD1, TLN2, LRRC8B, ZNF860, AKT3, ABHD13, PPM1B, CELF2, SNX1, STK38L, ARRB1, OSBPL10, ETV1, SIGLEC9, COL6A6, UBE2W, AIFM1, SYNE2, FFAR2, CNKSR3