

Supplementary TABLE 1 PCGs and LncRNAs in Turquoise module

	ID	C o u n t
P	TRIP6,EPHA10,DOK4,CTF1,RALGAPA2,GATM,ARHGEF26,CRYAB,EFEMP2,NLRP12,HSPB8,C	8
C	AV2,NUP210,CAMKK2,SNX7,SLIT1,HPN,RND2,DNAH5,FEZ1,PINLYP,ANGPT1,BEND5,FRMP	8
G	D3,ESRP2,SMPDL3B,ZNF850,TINAGL1,TMTC4,C12orf75,NECAB1,ACTC1,HPD,C2orf72,CSR P1,CAV1,PLP2,C2orf88,REPS2,PCSK6,ANXA6,NKX2-3,CASKIN1,TMIE,C8orf88,FAXDC2,ST5, TMLHE,PYCR1,SBSPON,CCDC110,PLCD3,RASL12,SH3RF1,CFL2,POPDC2,RBM38,GSTM5,N KAPL,TPM1,KCNF1,PDLIM5,MPP2,CGREF1,SLC19A1,MYL9,MXRA7,ARHGEF25,DES,GJA1,O R51C1P,GNAL,SIM2,IFI27L2,TRPM4,DBNDD2,RAB3D,MYLK,ABCC4,SMIM10,MYZAP,PTGS1, KCNIP3,PHYHIPL,EFEMP1,ASPA,RAB34,PGM5,TAGLN,LRFN1,TPM2,CACNA1D,FRMD6,KCT D17,HIST3H2A,LGR6,KCNMB1,DNAJB5,MGARP,MANEAL,RAB9B,C16orf45,RHBDL3,SGCB, RRAS,LMOD1,CNN1,CNTFR,ASB2,ZFP69B,EMP3,NT5E,CCDC69,RGN,FBXO17,MARVELD1,A POF,SMARCD3,NCS1,FAM162B,ACTA2,KCNJ8,MPP6,LINC00672,TCEAL7,PALLD,CD200,PRT FDC1,PPARGC1A,HSPB2,FERMT2,GLRA4,RFX3,SMTN,TGFB1I1,SBK1,ACOX2,PPM1H,PDLIM 7,CCDC27,PGF,GBP6,ASPHD1,SEC14L6,CDK5R1,CEND1,ACTG2,RND3,HIPK2,TMEM108,LI MS2,CCDC8,COX7A1,MSRB3,SPDG,DPT,JAZF1,CLIP3,PPP1R9A,ENO2,PNCK,C15orf41,DBN DD1,ARFGEF3,TSLP,COL4A6,ZNF516,DKK3,NAALADL1,CAVIN1,MAMLD1,FAM222A,UBXN1 O,FXVD6,HAEO,MAL,MYH6,HSPB6,PRICKLE2,TP53INP1,CMTM4,JPH4,POU3F1,VWA5A,CH RDL1,GOLM1,SLMAP,PPP1R14A,PAK3,PRR36,PIPOX,GMDS,PCP4,COPZ2,FAM107A,DMPK, PDE1C,MIPEP,MCCC2,ANO6,CMTM5,C2orf40,PLAC9,EPB41L3,RBPMS,S100A4,EID3,HACD 1,SPTBN2,SYNM,TCN2,RARRES2,ELL3,NACAD,TMEM35A,JPH2,B3GAT1,CLIP4,SELENOM,C PEB1,NYAP1,GDPD1,RBFOX3,TCEAL2,SEMA3B,C20orf194,CHD5,TMEM200B,PPP2R2B,EHD 2,TUBA1A,KANK2,SCN2B,FZD8,CERS1,HIST3H2BB,TRO,NDP,RAB19,CECR2,PNMA1,TENT5B ,ARHGEF38,ITGB1BP2,EFCAB1,WIF1,GPM6A,C1orf54,HAPLN2,WFDC1,SGCA,NCAM1,PRK G1,UBE2QL1,CAND2,GJB1,LGALS1,TSACC,SDK1,ITPKA,NEURL1B,SLC47A1,TCEAL6,MCOLN 2,CBX8,CENPN,SERINC5,SLC12A8,PMP22,CCDC181,NFATC4,MARCKSL1,ETV5,MYH11,HOX D13,ANKRD35,LRR17,ATP8A2,PPP1R1A,LPAR1,SLC43A1,ABHD2,RNF175,TSPAN2,PI16,SE RP2,DDO,DMC1,RAB6C,SCRG1,PHGR1,KIFC3,ROR2,SSPN,NEXN,PDPN,ACSS3,INMT,DNAJB 4,DPF1,KRT9,OR51E2,FXVD1,RGS9,SRD5A2,FASN,CHDH,ADM2,BHMT2,FNIP2,FABP3,AFF2 ,TUBB6,RCAN2,KLHL35,STOX2,SYNPO2,PDZRN4,ERG,TRNP1,TLCD1,F12,MAMSTR,TES,UAP 1,B4GALNT4,TRIM36,FAM178B,CA9,COL21A1,TRPC1,SMIM28,TMEM184A,ADH1B,MAMD C2,SMOC1,DPYSL3,PLPP7,DZIP1,MRAP2,PRR7,LY6G6D,IGSF1,SVIL,FHOD3,GIPC2,GLIS1,AD CY5,RPRM,EPHB1,KLHL4,CALD1,SH3BGR,CPLX1,WFIKKN2,GPRIN1,ILK,FLNC,TDRD1,SLC7A 11,TWIST2,C1QL1,MCC,GCNT1,PODXL2,SPARCL1,ADRA1D,STAC,CRIP3,CCDC89,PLIN4,RIIA D1,FLNA,SLC24A3,GPRASP1,IQSEC3,TSPAN1,MYOCD,PENK,EGF,TCEAL5,NWD1,MRGPRF,T	5

UBB2A,ANKRD53,GPX8,LAYN,HIST1H2BN,DRD2,MEIS2,LARGE1,EDNRA,AGMAT,GLDN,CCD
C85A,MCAM,COLEC10,FGF2,OXER1,AMIGO2,ATP1A2,GYPC,SAMD5,LY6G6F-LY6G6D,NOG,
EVX2,CABP4,ATP2B4,PTGDS,POMC,GALNT7,SYNC,BEND4,CLEC3B,REEP2,STK33,SMKR1,F7
,MEIS1,RBPMS2,RPL22L1,DTNA,DMD,S100B,LRRTM3,PRKCB,ADAMTS18,TNS1,MBOAT2,C
PA1,EPCAM,ZIC2,C9orf152,CCDC178,C9orf24,REEP1,RBP4,CBLC,BRSK2,GNG13,CNRIP1,TR
IB1,HLA-DMB,CTTNBP2,GAS1,PRIMA1,SNAI2,CHST2,GSDMA,ASB12,GPRC6A,CAVIN2,SOR
BS1,TTBK1,MAP1A,NLRP1,UGT3A1,CASC10,FGF7,MAP3K20,GPR156,LYVE1,HEPH,CYS1,AB
CG4,CD300LG,MYORG,GPM6B,GRIK5,NLGN3,TMEM158,NXNL2,NTF3,MOV10L1,SERPINF1
,IGFBP6,ADAMTS5,HIF3A,ULBP1,HS3ST3A1,FILIP1,CCDC3,DACT3,CYP2J2,AMPH,MYB,UNC
5A,UCHL1,OTX1,PLN,ANO5,TRPC3,WSCD2,EFHC2,PNMA8B,ANGPTL1,ANK2,VCL,SLC8A2,H
TR1E,WISP2,EFS,NLRP8,ZNF711,CFD,GRPR,DLL3,KCNMA1,IP6K3,TMEM252,MYO6,CES1,IG
DCC4,TMOD1,KCNJ3,PPP1R12B,TTLL6,KCNH2,IL33,GCK,MIXL1,KCNH5,PCYT1B,CAP2,ARM
CX1,LUZP2,DCN,CDH23,MRV1,MATN2,CAMK2N2,KCNQ4,XG,ARHGAP20,KCNQ5,SPOCK3,
CPXM1,C3orf70,LRCH2,GHRHR,PLCL1,FAM163A,GPX3,ITIH5,NHS,TEX26,SH3GL3,NMUR1,
VIT,PPP1R14C,RIMS3,FOXF1,PLP1,RAP1GAP,CCDC54,FFAR2,DGKG,PNMA2,NFE2L3,RAB40
A,MYO3A,SV2C,ADRA1B,ADRB3,NEDD4L,PGR,CASQ2,AKR1C1,SPON1,CSRNP3,C5orf30,GP
R62,GLYATL1,KNDC1,PSD2,LRRC3B,CSDC2,HCN2,KCNAB1,HSPB3,GATA5,KBTBD13,SMS,SC
UBE1,HLF,DAB1,GABRB3,KLHL30,ITGA7,ZNF804A,TRHDE,EPHA8,HIST1H2BC,CPED1,BHLH
A15,DYNC1I1,RBFOX1,PRR16,EMILIN3,GJC1,SLC27A2,CACNA2D3,MASP1,STARD8,KRT86,
HMGCLL1,NGFR,MGAT5B,RAB17,SLC2A5,GJC2,BDNF,SCARA5,LGI3,GAL3ST3,KCNH8,RPE6
5,CAMK1G,NAALADL2,VEGFD,PNMA8A,RNF112,MPO,CXCL13,SEPT12,RAB6D,CAVIN3,GAL
R1,ITGA9,SLC8A1,PMP2,FRMD7,PGPEP1L,NRP2,RGS22,SLIT3,METTLL24,STEAP4,TGFBR3L,S
TX19,SPON2,C19orf48,C11orf87,SLC2A4,RIPOR2,RET,SLC35F4,OGN,F10,TIMP3,DISP3,HOX
D12,LINGO2,TMEM169,FGF10,AHNAK2,JAKMIP2,PLEKHB1,KCNK3,LRRN3,C16orf89,GSC,T
ACR2,ADAMTS8,P2RX1,CTNND2,TNNI3K,KRT40,NKAIN1,SLC4A4,MLC1,ADGRL3,SGCG,H2
AFJ,B3GALT2,SHISAL1,CRHBP,AQP10,RRAD,CLEC18B,CPNE5,PRPH2,SSTR2,ADAM33,SORC
S3,GFI1B,ESPNL,PABPC1L2B,KRT14,CYTL1,PTGIS,FAM19A2,PTGER3,HSD11B1,GLT1D1,TUL
P1,AMH,ASIP,PF4V1,EDIL3,ITGB3,LRFN5,LRRTM1,WNT2B,DLX1,ITGA5,ADRA1A,C1QTNF2,
CCDC80,SLC1A6,CCDC190,PLEKHS1,SEMA3A,PTCHD1,CSPG4,SAPCD2,PRSS12,FILIP1L,DLG
AP2,NEGR1,MAOB,CDH2,SV2B,CHST6,EDN3,CFAP221,SLC51B,PAGE4,P2RY12,CNR1,SLC26
A5,CELSR3,THEG,PRSS35,SULT1E1,PCDH10,ADGRB3,FOLH1,GPRC5D,BAIAP2L2,NELL2,FOX
D1,FRRS1L,LFNG,ARHGDI,ATOH7,CHRD1,MCHR1,NMRK2,CSRP2,OSR1,NPAS4,ELMOD1,
SP5,ATCAY,CALB2,KANK4,CRYGD,AL096711.2,FCER1A,NRK,PNMA8C,PIANP,DNASE2B,KCN
N2,AARD,AMER2,NPPC,KCNS2,ZP2,DNAJC22,CHRNA4,SLC38A11,CDH20,FAM9B,MAGEE2,
CLDN8,TBX4,ELAVL3,ABCD2,CDH17,TEKT3,CNTN1,ADGRD1,HIST1H2BG,ENPP6,ANKRD45,
CDH18,CLEC3A,CLVS2,TENM2,INMT-MINDY4,PCSK2,TGFB3,APCDD1L,PRDM6,C1QTNF7,P
KHD1L1,DLX2,TBX5,ELANE,HEPACAM,MTUS2,ADCYAP1R1,TRPM8,CCL21,ZNF536,XKR4,T
MEM196,PCOLCE2,NTRK1,CMA1,NPY5R,XPNPEP2,MYT1L,ATRNL1,PLA2G2A,DNAH8,CH2
5H,RASGRF1,GPR37L1,KCNK10,IGF2,DAPL1,EN2,HS3ST4,TMEM229A,SLC22A7,FOXF2,CEL
F5,SLC5A7,EYA1,UNC93A,INSYN2B,ANKRD7,ALDH3B2,COL9A2,APOB,GSG1L,PRAC1,ZFP57
,ACP7,FAM19A1,F5,SSTR3,HHIPL2,PRND,MTTP,UGT3A2,OR13A1,CTSG,KCNU1,KCNB2,BEX

1,CHRM2,INSM1,IGSF10,ITPRID1,LRP1B,L1TD1,BMP5,MARCO,HAPLN1,SMIM32,SRRM4,DRD5,MMP23B,CLC,PCDHA4,CBS,PCDHA11,OOEP,TMEFF2,C12orf56,HECW1,CBSL,SMIM31,CHIT1,SERTM1,ALKAL1,COL6A5,EPYC,LGSN,SPSB4,MNX1

I	AC002511.1,AC002511.2,AC004066.2,AC004846.1,AC004982.1,AC004982.2,AC005064.1,	2
n	AC005180.1,AC005180.2,AC005330.1,AC005696.1,AC005730.2,AC006262.1,AC007128.1,	6
c	AC007743.1,AC007920.1,AC008555.2,AC009005.1,AC009119.1,AC009271.1,AC009549.1,	3
R	AC010136.1,AC010273.2,AC010776.2,AC011445.1,AC011472.1,AC011523.1,AC012085.2,	
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	AC022915.2,AC024941.2,AC025419.1,AC036108.3,AC061961.1,AC068756.1,AC069120.1,	
	AC069148.1,AC073046.1,AC073133.1,AC073133.2,AC073525.1,AC078864.1,AC078993.1,	
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	AC084864.1,AC087516.2,AC090515.4,AC090825.1,AC092111.1,AC092490.1,AC092718.2,	
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	AC100768.2,AC103740.2,AC104561.3,AC104667.2,AC105383.1,AC105384.1,AC106798.1,	
	AC106881.1,AC108718.1,AC113383.1,AC116312.1,AC116351.1,AC124944.1,AC128687.2,	
	AC131097.4,AC133785.1,AC135012.3,AC135803.1,AC141930.1,AC144450.1,AC144831.1,	
	AC147067.2,AC233976.1,ADAMTS9-AS1,AF001548.1,AF111167.2,AF165147.1,AL021408.	
	1,AL031123.2,AL031663.3,AL031985.3,AL034345.2,AL034346.1,AL049775.1,AL049838.1,	
	AL096828.3,AL109955.1,AL121821.1,AL122058.1,AL133346.1,AL136366.1,AL138960.1,A	
	L139158.2,AL139339.1,AL158055.1,AL158847.1,AL160412.1,AL161457.1,AL161716.1,AL	
	161729.2,AL162411.1,AL162424.1,AL163051.1,AL353746.1,AL354707.1,AL355974.2,AL3	
	57054.4,AL359313.1,AL365181.4,AL365259.1,AL391335.1,AL445426.1,AL512598.1,AL51	
	3217.1,AL513283.1,AL513318.2,AL592114.3,AL596442.2,AL603840.1,AL662890.1,AL731	
	533.2,AP000438.1,AP000662.1,AP000688.1,AP000802.1,AP000911.1,AP001107.5,AP001	
	610.2,AP001636.3,AP002498.1,AP002884.1,AP003548.1,AP003774.1,AP003973.2,AP005	
	205.2,AP005264.1,AP006748.1,ARLNC1,ATXN2-AS,BOLA3-AS1,BX324167.1,C5orf66-AS1,	
	C8orf31,C9orf163,CERS3-AS1,DARS-AS1,DHCR24-DT,DLX6-AS1,DNMBP-AS1,DRAIC,ELF3-	
	AS1,ELFN1-AS1,ERVH48-1,FAM198B-AS1,FAM222A-AS1,FBXL19-AS1,FENDRR,FLJ20021,F	
	OXPA-AS1,FRMD6-AS2,GAS6-DT,HPN-AS1,IL21-AS1,JAZF1-AS1,LINC00304,LINC00398,LIN	
	C00494,LINC00654,LINC00665,LINC00702,LINC00836,LINC00857,LINC00877,LINC00891,L	
	INC00900,LINC00908,LINC00924,LINC00940,LINC00968,LINC00992,LINC01019,LINC0103	
	1,LINC01081,LINC01082,LINC01134,LINC01411,LINC01507,LINC01518,LINC01550,LINC01	
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	02343,LINC02351,LINC02489,LINC02492,LINC02550,LINC02585,MAGI2-AS3,MBNL1-AS1,	
	MEF2C-AS1,MIR100HG,MIR1-1HG-AS1,MKX-AS1,MNX1-AS2,MRGPRF-AS1,PCA3,PCAT14,	
	PCAT18,PCAT5,PCAT7,PGM5-AS1,PGM5P4-AS1,PLA2G4C-AS1,RGMB-AS1,RMDN2-AS1,RX	
	YLT1-AS1,SNHG3,SNHG4,SPATA3-AS1,TBX5-AS1,TRHDE-AS1,TRPC7-AS1,TSPEAR-AS1,TTTY1	
	5,UBXN10-AS1,UNQ6494,VPS9D1-AS1,Z69733.1,Z83851.1,ZNF350-AS1	