

Common targets of the herbal pairing of Dangshen and Huangqi (DHP) in treating Chronic heart failure (CHF)

DHP potential targets	CHF-related targets	Common targets of DHP in treating CHF
ACHE	TTN	ACHE
NFKB1	IL6	NFKB1
CA2	TNF	CA2
CA7	ACE	MAOA
CA1	ALB	ESR1
CA3	IL1B	EGFR
CA6	IL10	IL2
CA12	TP53	CYP19A1
CA14	INS	XDH
CA9	TGFB1	ABCB1
CA4	NPPA	TYR
CA13	SCN5A	PTGS1
CA5B	TERT	SLC6A2
CA5A	GATA4	HTR2A
MAOA	REN	MIF
ESR1	MYH7	TLR9
ESR2	CD40LG	PON1
NQO1	TLR4	SNCA
EGFR	IFNG	STS
HSD17B2	F2	PPARA
ALOX12	VEGFA	IGFBP3
IL2	ELN	TNNC1
ADORA1	MYH6	HSP90AA1
ADORA2A	TNNT2	IGFBP1
HSD17B1	NKX2-5	CTSD
CYP19A1	LMNA	SRD5A2
PTPRS	TNNI3	CCR5
CBR1	IGF1	NR3C2
XDH	GJA1	SERPINA6
PFKFB3	ABL1	HMGCR
ABCB1	APOE	NR3C1
ESRRA	NPPB	CYP17A1
ABCG2	FN1	AR
TYR	CCL2	NOS2
PTGS1	MPO	PTPN1
SLC6A2	NOTCH1	BCHE
ALDH2	STAT3	SLC6A4
TBXAS1	PRKAG2	VDR
MGAM	NOS3	DHCR7
HTR2A	DMD	G6PD
HTR2C	HLA-DRB1	HSD11B1
ESRRB	KCNQ1	HSD11B2
ALOX15	PTPN11	MDM2
MIF	LEP	PPARG
TLR9	IL1RN	TERT
PON1	TTR	FABP3
NOX4	ADRB2	PTPN11
MCL1	RYR2	NTRK1
PIM1	AGTR1	MMP1
SNCA	AKT1	FLT1
STS	PPARG	GRM1
PPARA	CCR6	PDGFRA
BACE1	FBN1	JAK3
IGFBP3	APOB	JAK2
AKR1B1	CFTR	PDE4A
MAOB	CACNA1C	PRKCG
HSP90B1	CTLA4	CYP27A1
TNNC1	TBX5	LRRK2
HSP90AA1	SOD1	ALOX5
IGFBP6	CRP	PSEN2
IGFBP4	AGT	CACNA2D1
IGFBP5	DSP	TGFBR1
IGFBP2	THBD	FLT3
IGFBP1	MMP2	PIK3CA
TNNC2	HFE	PDGFRB
TNNC3	HRAS	PSEN1
CTSD	GATA6	CHRM3
SRD5A1	JAG1	SRC
SRD5A2	APOA1	ADRB2
CCR5	FLNA	PDE5A
NR3C2	SERPINE1	SCN5A
SERPINA6	MTHFR	ADRB1
SIGMAR1	STAT1	ADRB3
SHBG	KRAS	DRD2
NR1I2	WT1	DRD4
HSD17B3	FAS	TRPV3
FABP1	ADRB1	TLR4
HMGCR	HMOX1	REN
CYP51A1	ENG	ZAP70
PGR	MMP1	XIAP
NR3C1	POMC	AKT1
CDC25A	GJA5	MAPK14
NR1I3	JAK2	F2
CYP17A1	MIR21	F10
FAAH	RYR1	CYP2D6
TRPV1	CTNNA1	MAPK1
AR	MYBPC3	NOS1
HSD3B1	TBX1	IGF1R
PTGES	CPT2	INSR
PTPN6	RTEL1	RET
PTPN2	SMAD4	MAP2K1
NPC1L1	B2M	MET
NOS2	DES	NTRK2
PIM3	KCNH2	ACVRL1

FNTA	COMT	ABL1
ACACB	SERPINA1	KIT
FNTB	KCNJ5	CHRN2
NR1H3	PON1	GLI1
RORC	POLG	JUN
SREBF2	CCN2	PTGS2
RORA	TGFB2	RAF1
PTPN1	HADHA	BCL2
CYP2C19	MYPN	APP
BCHE	LPL	PDE4D
CHRM2	GLA	EPHX1
NR1H2	KCNJ2	LCK
SLC6A4	SPP1	CD81
VDR	NR3C2	SLC6A3
DHCR7	MMP3	AVPR2
G6PD	TTN-AS1	TGM1
GLRA1	EDN1	F13A1
HSD11B1	CAV1	SLC5A1
CES2	TGFB3	CTSK
PTGER1	BRAF	VCP
PTGER2	IL13	TTR
PPARD	ERCC6	MMP9
SQLE	MIR126	MMP2
HSD11B2	SLC17A5	CD38
UGT2B7	LPA	ARG1
MDM2	PTEN	CFTR
POLB	CCR5	MPO
PREP	CYBB	PIK3R1
ATP12A	ACTC1	KDR
FABP4	LDLR	MMP3
PPARG	MT-CYB	ALK
TERT	FLNC	PLG
FABP3	HLA-DQB1	F3
FABP5	ZIC3	ALPL
ADORA3	NLRP3	ERCC5
MAPK3	CXCL8	SLC46A1
PRKCH	MIR146A	HDAC8
PTPN11	NRAS	MME
AKR1B10	PRDM16	PYGM
PTPRF	HLA-B	CASP3
PLA2G1B	FGF23	HTT
ACP1	CHD7	MTOR
TOP2A	TBX20	PIK3CD
TNKS	MIR17	PIK3CG
NTRK1	FOS	PRF1
CYP1B1	TNFRSF1A	EP300
PGK1	MECP2	CCND1
MGLL	VDR	FGFR1
SLC5A7	FGFR1	COMT
MMP1	IL2RA	TUBB3
FLT1	KIT	NR1H4
GRM5	CYBA	CYP11B1
GRM1	TNFSF11	SCN9A
TACR1	CAV3	BRAF
PDGFRA	LDB3	ELANE
CRHR1	EGFR	PLAU
RPS6KB1	GAA	SLC22A12
AURKA	CYP11B2	MYLK
JAK3	BDNF	MAPT
JAK2	FMR1	SLC5A2
TRPM8	EDNRA	HRAS
UTS2R	HAMP	PLAT
NAAA	PKD1	GBA
MTNR1B	TLR3	SLC2A1
HTR7	ADA	LGALS3
FPR2	TFRC	
PGGT1B	PTPN22	
PDE4A	MIR223	
PDE4C	GHRL	
PRKCG	TF	
PRKCA	SHH	
HCRTR2	PRTN3	
HCRTR1	CEP290	
CYP27A1	TNFRSF1B	
P2RX7	LTA	
GRM2	CFH	
SIRT3	EPO	
SIRT2	NPHP1	
LRRK2	BMP2	
MTNR1A	SRC	
CXCR2	RAF1	
ROCK2	ANK2	
PDE10A	NF1	
PDE7A	PKD2	
ALOX5	TRPM4	
PSEN2	CASR	
KDM1A	TGFBR1	
CACNA2D1	MTOR	
TGM2	TET2	
PDE1B	G6PD	
TGFBR1	CXCR4	
FLT3	BAG3	
HDAC6	ITGB3	
CHRNA7	FOXP3	
HDAC1	ALMS1	
PIK3CA	EGF	

KCNA5	TPM1
QPCT	BMP4
IDO1	MBL2
PARP2	PSEN1
GPBAR1	CD79A
ABAT	ENPP1
PDGFRB	CRYAB
PSENE1	C3
NCSTN	TAZ
APH1A	PTPRC
PSEN1	GBA
APH1B	MYL2
CHRM1	CCL11
CHRM3	LOX
DPP4	TMEM67
SRC	MGP
PRKCCQ	TNFRSF11B
JAK1	SMAD3
ADRB2	JUP
PDE5A	NOD2
SCN5A	MMP9
PDE11A	ACTB
LAP3	MIR155
PEPD	RETN
CHRNA4	ASXL1
ADRB1	H19
ADRB3	BBS2
GRIN2B	RPGRIP1L
IRAK4	FKRP
CHRM4	ECE1
CHRM5	UMOD
HTR1A	ESR1
DRD2	CALR
DRD4	NODAL
DRD3	TGFBR2
CHEK1	LAMA2
TRPV3	AVP
ADRA1A	HAND2
TLR4	SOS1
SLC18A3	CDKN2A
SLC6A9	DSG2
XPNPEP1	ITGAM
XPNPEP2	HLA-DPB1
PRMT6	NPHP3
PRMT8	SCN1B
PRMT1	INVS
REN	BMP2
OPRM1	ATM
HTR4	U2AF1
PNMT	VCL
FDFT1	FASLG
ADRA1D	GPT
HTR2B	NR3C1
SYK	SFTPB
ZAP70	COL1A1
LYN	SDHA
GSK3B	PITX2
XIAP	GLI3
BIRC2	MT-CO1
ADRA1B	FCGR2A
AKT1	HADHB
MAPK14	LCAT
LTA4H	COL3A1
ADRA2A	RET
MAP3K12	ABCA1
F2	TH
F10	HTR2A
HRH3	GNAS
CYP2D6	THPO
DRD1	TNFRSF13B
MAPK1	IL4
NOS1	ABCB1
OGFRL1	SNCA
DPP7	ACTA1
DPP8	TSC2
DPP9	HBB
PARP1	MKS1
PIM2	OFD1
IGF1R	EMD
INSR	CP
RET	ACADVL
AURKB	MEFV
MAP2K1	WDR19
MET	ABCC9
NTRK2	MAP2K2
ACVRL1	CRELD1
ROS1	HLA-A
NTRK3	CD19
BRD2	MME
ABL1	BMP6
KIT	PIK3CA
CHRN2	FGF8
GLI1	VWF
JUN	HNF1B
GRB2	XDH
ATP1A1	SCO2

CNR1	CACNB2
FFAR1	EDNRB
PTGS2	MPL
SCD	MYOT
PTGIR	IFIH1
CNR2	FXN
NPY1R	PDGFRB
NPY5R	ACTA2
SSTR4	BBS1
RAF1	TLR5
HRH4	PCSK9
BCL2	NCF2
FKBP1A	TMEM70
PTAFR	EVC
SMO	CYP2C9
IDH1	FLT1
F2R	CASP8
MAPK10	ADIPOQ
APP	PDCD1
PDE4D	ISL1
EPHX1	ALOX5
SOAT1	IL2
C5AR1	DTNA
LCK	GDNF
CALCRL	CITED2
CDC7	FGFR3
HRH2	CD36
ROCK1	PLA2G7
CDC25B	F5
CD81	AHI1
SLC6A3	SLC25A4
CES1	NPHS2
AVPR2	DSC2
AVPR1A	ICAM1
EPHX2	CAT
TGM1	SELENON
F13A1	GATA1
GABBR1	SFTPC
SLC5A1	TSC1
TGM6	CFC1
CTSK	IFNA1
METAP1	AIRE
MCHR1	DBH
CTSS	TERC
CTSB	TTC21B
S1PR3	NOTCH2
S1PR1	INSR
PLA2G4A	MAPK1
VCP	BTK
PRKCD	PDGFRA
KCNK2	KCNJ11
CDK5	IL17A
CDK1	SLC22A5
GLO1	EVC2
TTR	MAP2K1
MMP9	SETBP1
MMP2	PRKG1
MMP12	IFT140
CD38	TWNK
TNKS2	SDHB
TOP1	BRCA2
ARG1	TKT
ABCC1	MT-TL1
CDK6	NPHS1
CSNK2A1	IL18
CFTR	IFT172
AMY1A	FGA
GRK6	MT-ND1
CDK2	CD2AP
AHR	APOC3
GPR35	MT-ATP6
DAPK1	EP300
MPO	LAMP2
PIK3R1	PMM2
PYGL	ACTN2
PTK2	WDR35
KDR	MIR142
MMP13	CACNA1D
MMP3	IFT122
PLK1	TBX4
PKN1	CACNA1S
NEK2	CYP17A1
CXCR1	MYD88
CAMK2B	NCF1
ALK	MYH11
NEK6	ACTN4
AXL	C4A
NUAK1	HJV
AKR1C2	MIR150
AKR1C1	FGFR2
AKR1C3	CREBBP
AKR1C4	TP63
AKR1A1	CD4
KDM4E	LEPR
PLG	PSAP
CDK5R1	ACADM

CCNB1	DGUOK
CCNB2	INPP5E
CCNB3	GSN
ALOX15B	IGF2R
F3	CC2D2A
ADAMTS5	MTR
WEE1	PLG
NDUFA4	CSR3P
MKNK1	WRN
CLK4	NR1H4
CLK1	LBR
CLK2	IGF2
CLK3	ACAD9
DYRK1B	MT-TK
CDC25C	MT-CO3
LDHB	IDUA
ALPL	ELANE
CDK4	CASQ2
QPCTL	ABCC8
CDK7	ACADS
CDK9	MAPT
ALDH3A1	IFT43
CCNA1	ADRB3
CCNA2	BSCL2
CCNH	TMEM216
CCNT1	EYA4
DHODH	VCAM1
ERCC5	TRPV4
FEN1	F7
TYMS	PLN
DHFR	CSF2RA
SLC46A1	SLC4A1
SLC19A1	ADM
FOLR1	ERBB2
FOLR2	H2AC18
FPGS	MIR145
HDAC8	HCN4
GART	SMPD1
ATIC	SOX9
MME	TREX1
PYGM	NFE2L2
SF3B3	BCR
PSMB5	BBS4
CSNK2A2	CASP3
CASP3	TIMP1
EPHB2	NKX2-1
NR4A1	F3
HTT	HYDIN
HSP90AB1	FANCA
DAO	TK2
MAPKAPK2	LIPC
RPS6KA2	NEK8
EZR	FHL1
HDAC3	TCAP
HDAC2	TLR2
HDAC5	GATA2
HDAC7	NEK9
NCOR1	SCNN1A
HDAC11	ZFPM2
HDAC4	MIR210
HDAC9	MT-CO2
HDAC10	SELP
ADORA2B	AQP2
MMP8	NOS1
LNPEP	PPARGC1A
DNM1	MPV17
MMP25	PSMB8
MMP16	CCND1
ADAM17	GATA3
BMP1	DNAJC19
MMP7	CBL
ADAM10	POLG2
CSNK1G1	NPHP4
RPS6KA1	CSF3
BAD	OTC
PDK1	ABCA3
MTOR	HSD11B2
PIK3CD	MIR195
PIK3CB	GNRH1
PIK3CG	ADAMTS13
PRF1	GNB3
IMPDH1	NR5A1
IMPDH2	KIAA0586
SGK1	MYLK
CASP7	CFI
TAAR1	BRCA1
DYRK2	FBN2
EP300	SURF1
FCER2	SLC25A20
NCOR2	HLA-DQA1
CCND1	CD28
CCNE1	STAT4
CCNE2	KMT2A
CCND2	SGCD
CCND3	NAGLU
FGFR1	TRPC6

COMT	PIK3C2A
ERN1	COL1A2
ALPG	PON2
PLAA	STAT5B
TUBB1	COL5A1
MBD2	MEN1
TUBB3	GH1
ANPEP	LRP5
GRM4	PAX2
DBF4	TMEM43
SAE1	MUC1
NR1H4	ABCB11
GABRA2	COL4A5
FABP2	ATP8B1
HSF1	APOL1
GABRB2	RASA1
GABRG2	ATRX
UBA2	SERPINA3
PDE3A	MT-ND4
PDE3B	HBA1
CYP11B1	TYMP
SLC27A1	AVPR2
SCN9A	CORIN
BRAF	FOXF1
GABRA1	KCND3
GABRA5	COQ2
PPP1CA	GUSB
RG54	PRKAR1A
GABRA3	TFAP2B
GABRA6	MEF2A
CSNK1D	NOS2
NQO2	GATA5
PLK3	PTCH1
PLK2	ACVRL1
MERTK	MIR144
KCNK9	RPS19
SLC1A3	IL12B
PDE2A	CSF3R
TTK	JAK3
HTR3A	FKTN
ELANE	FANCD2
PLAU	EPRS1
ALOX5AP	MDM2
BRD4	MSX1
BRD3	TRIP4
IKBKE	DNMT3A
NPBWR1	MYH9
PKN2	NSD1
BDKRB2	IFT80
CYP1A1	GALNS
BRPF1	RBM20
CDK8	SDHD
GABRB3	CST3
CCNC	CD59
OPRD1	STAR
MPG	CLCNKB
SLC22A12	INF2
APEX1	CDKN1C
MYLK	IL7R
ODC1	SALL1
TAS2R31	RPL5
NAE1	NIPBL
MAPT	SERPINC1
SLC5A2	HBA2
HRAS	DKC1
CHIA	CYP27B1
DUSP3	TXNRD2
PLAT	IL23R
EIF4A1	MYOCD
SLC29A1	SCNN1B
GBA	SLC19A2
SLC28A2	CHAT
SLC2A1	SAA1
MGMT	HSPG2
ADK	VCP
HSPA5	SMARCA4
LGALS3	KMT2D
LGALS1	SAMHD1
LGALS7	ALPL
LGALS9	RRM2B
OXTR	ARL13B
CMA1	SCN4B
CTSG	IRF5
	CIITA
	KNG1
	BCS1L
	MED13L
	DNAH8
	NPY
	MIR221
	MRAP
	GHR
	DNAH1
	SELE
	MIR34A
	CCL5

BAZ1B
IL2RB
HLA-DPA1
MIR483
KCNJ8
KCNE2
KCNJ1
EDN3
EZH2
HP
FBLN5
NR2F2
IKBKG
IL1A
CSF2
MB
PRKD1
LCN2
GLB1
APP
COL2A1
ACP5
CALCA
CD46
PLEC
AGPAT2
MIR27A
CD34
DNAJC21
NKX2-6
DNMT1
PRF1
DNAI1
SBDS
CDH2
NEB
TYR
APOA5
IGF1R
IL5
TEK
FCGR3B
RPGR
SCNN1G
ITGA2B
COL4A3
MYL3
PMS2
NFU1
LAMA4
PARN
CR2
ARSA
LZTR1
SMAD9
TRMU
FANCI
RUNX2
MYLK2
PNPLA2
SLC10A2
ZMPSTE24
RUNX1
HADH
ABCC6
GDF1
PRL
ARG1
MT-ND6
CEP164
MC2R
CYP11A1
IL7
CBS
PSEN2
MIR499A
GTF2IRD1
MECOM
FGF10
CDH1
LRP2
MVK
MIR22
ETV6
SCN4A
BCHE
PYGM
SLC12A1
ABCB4
TCIRG1
SALL4
PLAT
NOTCH3
SLC2A10
ARID1B
TPM3

FANCM
FTO
TBX18
LTBP4
DAG1
NPPC
PPARA
DYNC2H1
GFAP
NTRK1
SLC12A3
MEG3
MIR208A
CHRM3
CFHR5
KDM6A
EFEMP2
MAPK14
FGF2
SCN3B
MIF
BMPR1A
TFAM
SCN2B
ABCG5
BOLA3
SI
AMPD1
MUC5B
MMP14
BBS5
KCNE1
MYOZ2
SRSF2
HUWE1
ETFDH
RAG1
IL1R1
NPM1
RAD51
TPI1
RNU4ATAC
FAH
TINF2
COL4A4
SLC40A1
HNRNPA1
MT-ND5
IGHMBP2
NFKB1
SOX10
BBS7
HMGCR
BGLAP
XK
LIMK1
FANCB
CD40
FABP3
NRXN1
SCN9A
PKP2
CYP11B1
IDS
DDC
HPRT1
CAPN3
FOXC2
SMC1A
GLI2
DYNC2I1
DCTN1
SGO1
CYCS
LRRC56
FOXC1
TMEM231
NEK1
ZAP70
SCARB2
ANXA5
CYP21A2
GAPDH
AGL
IRS1
TCTN2
KAT6B
MTM1
GALC
RAG2
DYNC2LI1
CLIP2
EPOR
HIRA
GTF2I
TNFRSF11A

COX5A
PF4
ERCC1
SHOC2
DMPK
HNF1A
DNASE1
CXCL12
TFR2
MYC
FIG4
PTPN1
EPHX1
SEC24C
TCTN3
EHMT1
CD3D
SLC6A4
HSPA4
RBPJ
RAC1
MIR29B1
TNFRSF13C
DNMT3B
RSPH9
LIG4
XPNPEP3
ASS1
HLA-C
MIR196A2
NPC1
GCK
BCL2
CXCL10
WDPCP
MMUT
TNNI3K
FANCF
RFC2
NSD2
RAI1
SMAD6
SDCCAG8
TRAF3IP1
MIR132
RERE
UFD1
CTNNA3
ARSB
GP1BB
PTH
NR0B1
FANCC
PEX7
DNAH5
CD8A
B9D1
LCK
GBE1
CETP
SGCA
COL5A2
NDUFB11
HIF1A
PTGS2
TLR9
FLNB
RAD51C
FOXL2
TBL2
CCL3
F9
ACTG1
DYSF
MRAS
RSPH4A
RAP1A
PDSS2
CYP19A1
TBX2
ABCG8
SCN1A
KIF7
NDUFS2
NBAS
TBX21
PEX1
IFT27
MIR29A
AKAP9
CLCN5
MIR181A1
GGT1
SCN3A
SST
MT-ND2

IKBB
DDX58
SOD2
PEX5
MLXIPL
GNPTAB
TCF4
IL12RB1
SLC19A3
INPPL1
WFS1
PDE5A
IGFBP3
APOA2
CD247
MTRR
LAMB2
KDR
FIP1L1
LMOD3
MIR143
KITLG
ATP7A
TYK2
SLC6A2
CTCF
ALDH18A1
ATP6V0A2
SGSH
PLA2G6
AGXT
CEP120
FUCA1
DARS2
LRP6
LGALS3
CFHR1
GSR
AGK
BCOR
EPAS1
PRODH
B9D2
HGF
ATP7B
IKZF1
ATXN2
MIR20A
CFB
TMPO
NHP2
KCNK3
SOX2
DLL1
PIK3R1
CASP10
OLR1
NDUFB8
SNAP29
ERCC4
IFNA2
MLYCD
SLC22A12
NNT
NBN
DOCK8
PRNP
BBS10
FANCG
SCN8A
MIAT
PTH1R
ALK
PPBP
DNAH11
IFT52
SETX
SCN10A
MIR199A1
GYS1
SH2D1A
DYNC2I2
IL17F
XIAP
ANKRD1
CTSD
ERCC2
APTX
OCRL
NOP10
MIR222
MUSK
COG7
IQCB1
SGCG
FANCL

NDUFAF3
APRT
KL
SLC4A4
DSTYK
PRKN
SPTA1
SH2B3
PPP1CB
ELP1
KIF1B
PDX1
SLX4
SMARCA2
IBA57
IL21
AFF4
COX10
SKIV2L
SLC2A4
ITGB2
SQSTM1
MTTP
NPC2
MIR30E
NEDD4L
FOXH1
GLI1
AMH
RTEL1-TNFRSF6B
LMX1B
FOXP1
DNAAF3
FH
ARVCF
GPC3
SDHC
FCGR2B
CALM2
CACNA1A
RMRP
MIR122
TALDO1
TNFAIP3
ATP5F1A
PKHD1
PTGS1
MAPK8
ESCO2
LZTFL1
F13A1
BBS12
GLE1
VEGFC
CAVIN1
SRP72
CTSA
ADD1
HSPB1
PEX6
LIPA
APC
CSPP1
CCR1
POLR3A
DCLRE1C
TARDBP
COL4A1
SOS2
VKORC1
HNRNPA2B1
CDC42
BANF1
PNP
TAC1
PALB2
CDKN3
DPM1
NEU1
ARMC4
PDGFB
TRPM6
HIBCH
GNRHR
SMARCB1
SLC39A8
DNAI2
EIF2AK3
MKKS
HLA-G
A2ML1
WNT4
MC4R
IL3
KLHL40
C2CD3

IRF8
ZEB2
WRAP53
CASP1
DNM1L
RB1
TBK1
CALM1
MASP2
WAS
NDUFAF2
PLAU
IL12A
MEGF10
TMEM126B
AARS2
SERAC1
SEPSecs
ACE2
SLC22A4
G6PC3
SARS2
CX3CR1
ABCC2
MS4A1
SLC2A1
TRDN
ANKS6
SMN1
SPEG
RAD21
RPL11
RAB7A
WASHC5
SMC3
HMGB1
CPS1
UGT1A1
SF3B1
COQ8B
OTX2
CYP2D6
GDF15
CPOX
HSPD1
HTT
FANCE
SELL
HES7
CASP9
ADCY5
FAN1
VHL
HNF4A
ATP2A2
TTC8
RARB
PDHA1
IL2RG
KISS1
MATR3
SLC2A9
ATAD1
FLI1
LARS2
CREB1
RBM8A
PGM1
PKLR
GTPBP3
ACHE
MIPEP
CDC45
TSHR
TCOF1
DRD4
STAG3
ERAP1
PAX3
APOH
RNASE3
PAH
GSTM1
AGTR2
CRKL
HSP90AA1
UTS2
JUN
PEX2
MIR424
TTC37
AGER
HSD11B1
IGHM
NTRK2
NDUFAF1

ECHS1
RBCK1
TRPM7
BBS9
KCNE3
ARSL
RRAS
CUBN
ASAH1
IFNB1
SERPINA6
PECAM1
CD81
LAMA3
SLC1A2
RASA2
TNFSF4
SETD2
NDUFS4
MT-ATP8
PLOD1
FECH
EPG5
ZIC2
C5
PDE4D
BGN
MIR33A
C4B
MT-TV
NAGS
SON
RECQL4
PIGA
MGME1
MIR140
C9orf72
CD38
CCDC40
COG2
HMGA2
RSPH3
BTNL2
DNASE1L3
GCG
ADSL
BSND
SOD3
MT-TS1
TWIST1
CRH
LRRK2
FLG
AFP
ATXN3
CCDC114
ADCY10
CHGA
GZMB
PHEX
HELLS
SLC52A3
HDAC8
DDX11
CEP83
SPINK1
NLRP1
GUCY2C
TRMT10C
PTGIS
CACNA2D1
MIR423
RREB1
IL17RA
PMP22
COG1
ETS1
PRKDC
CCDC39
NUP188
CXCR3
PDE4A
TMEM237
DRD2
CPT1A
CS
KCNQ1OT1
TNFSF12
TNNC1
GANAB
ATXN1
STK11
SIRT1
MIR10A
SNRPB
NF2

TGIF1
TBX3
PIK3CG
HSD17B4
DGKE
DDX41
GRIN2A
MAFB
AHCY
IGFBP1
LTBP2
SLC8A1
AFF2
SCN2A
SPINK5
ICOSLG
LRBA
ANGPT2
ARX
MYRF
FUZ
DVL3
CHKB
RPL26
KCNE5
G6PC
RPS26
PIGL
VIP
SOX3
MYH8
CCDC151
CYP3A5
DLL4
SLC34A1
ALG3
ADAT3
CHRNA1
UBE2T
AK2
HK1
ASL
FTH1
NEFL
SEMA3A
RNASEH2C
ALG12
DCDC2
GYG1
GLUL
NR2E3
GNE
USH1C
PQBP1
ENAM
OPTN
SLC25A13
SLC25A15
PRG4
SF3B4
STUB1
BCKDK
ADAR
TUBB3
NDRG1
EMG1
HAX1
SLC9A6
SEC23B
CRTAP
CEBPA
CIB2
SPTLC1
POMT1
PRPF8
EBP
DLL3
CLDN16
CTSC
SEPTIN9
GJB6
SRCAP
AFG3L2
CLP1
KERA
SLC7A9
GLMN
WDR45
CHEK2
CHM
HPS5
PDCD10
PRRT2
KRT71
LYST
PARK7

TMC6
SLC46A1
CHRNA2
EFHC1
CHRNA
CHRNA
CHUK
C1QTNF5
ERCC8
TMC1
CLCN1
ANTXR2
CLCN7
TPP1
CLN3
CLN5
TPH2
FGD4
USH1G
CNGA3
CNTN1
EDARADD
COL6A1
COL6A2
COL6A3
COL7A1
DIS3L2
COL10A1
COL11A1
COL11A2
COMP
COX6A1
HGSNAT
AMER1
CRX
CRYAA
CRYBA1
CRYBB2
CRYGB
CRYGC
CRYGD
SLC34A3
CRYGS
CSF1R
OTOA
DSG4
CSTB
CTH
CTNNA1
CTNS
CTSK
MARVELD2
CYLD
C8orf37
VPS13B
CYP27A1
STRC
DNAAF4
SPRED1
TRPV3
DBT
DCN
DDB2
TMPRSS6
RNF168
LCA5
TIMM8A
COCH
GLIS3
DHCR7
DLG3
DLX3
AGA
DMP1
DYNC1H1
DNM2
DPYD
SLC26A3
DSG1
SLC26A2
TOR1A
ECM1
EDA
EFNB1
MEGF8
EGR2
EIF2B1
EPHA2
UBR1
DZIP1L
FLCN
UNC13D
EPB41
ANO5
CLN8

ERCC3
ERCC5
AKT2
ALAS2
EXT1
EYA1
ABCD1
F8
F10
F11
F12
LRTOMT
EFEMP1
ALDH3A2
FGD1
FGF9
FGF14
CILK1
RAB3GAP1
RAB18
TRIM32
FOXE1
FOXO1
SPART
PHF8
SLC35D1
MLC1
NBEAL2
FLT3
VPS13A
FLT4
DDHD2
FMO3
SATB2
ATP13A2
DICER1
CRB1
ETHE1
ZFYVE26
CLDN14
ARL2BP
LEMD3
AMACR
LRRC6
AIPL1
ABCA4
SLC17A8
FSHR
FTL
MSRB3
SLC37A4
MFS8
WDR72
GALK1
WHRN
GALNT3
GALT
GAMT
PNKD
MMACHC
CNTNAP2
AUTS2
ABHD12
LDLRAP1
PRPF31
KIFBP
ABCA12
GARS1
GAS8
BLOC1S6
VPS33B
SACS
GCDH
GCH1
CNNM4
IL36RN
GDI1
GFPT1
AMHR2
GJA3
GJA8
ATP2C1
GJB1
GJB2
GJB3
GK
DISC1
GNMT
GLDC
GLRB
AMT
GM2A
GNA11
GNAO1
GNAQ
GNAT2

GP1BA
GP9
SUMF1
CYP4V2
DOK7
PNPLA1
ANK1
TPRN
ILDR1
GRID2
GRN
OSTM1
GRM1
ANKRD11
GRM6
MSH6
ICOS
UBIAD1
GUCY2D
HCCS
HEXA
HEXB
HGD
HINT1
MNX1
HLCS
HMBS
HMX1
HOXA1
HOXA13
HOXD13
HPD
HPS1
HSF4
HYAL1
SLC6A19
OTOG
FREM2
RD3
LRIT3
TUBB2B
IGSF1
IHH
INSL3
IRF6
AR
ITGA7
ITGB4
ITPR2
IVD
KCNA1
AGRN
KCNJ10
KCNQ3
NHLRC1
ACAT1
KRT1
KRT2
KRT5
KRT9
KRT10
KRT14
KRT16
IFITM5
BLOC1S3
PCARE
LIN28B
L1CAM
LAMB3
LAMC2
LHCGR
LIM2
LRP4
LTBP3
TACSTD2
EPCAM
MAF
STS
MAN2B1
MANBA
MAOA
MATN3
MAX
CHST6
MET
MGAT2
MID1
MIP
MITF
MLH1
TRPM1
MPZ
MRE11
GPR179
ASPA
MSH2

MSX2
ND6
TRIM37
MYH3
MYO5A
MYO5B
MYO6
MYO7A
NDP
NEUROD1
ATP1A2
ATP1A3
NGF
NHS
ATP2A1
NPR2
ROR2
GPR143
CISD2
OAT
PIVK
OCA2
OPA1
ALDH7A1
PAFAH1B1
SMARCAL1
DUOX2
PAX4
PAX6
PAX7
CDON
TBX22
PCCA
PCCB
SOST
ACOX1
ABHD5
ZDHHC9
SAR1B
PCNT
MYO15A
CRBN
CD320
ZMYND10
PDE6A
PDE6C
CABP2
PDE6B
SUFU
SLC26A4
SERPINF1
ATP8A2
PFKM
PHKA1
PHYH
SERPIN1
PIK3CD
PITX1
SERPINF2
PLP1
MYO3A
POLH
GDAP1
ATR
ADAMTSL4
MAGEL2
KIF1A
CNGB3
PIIB
DYM
PPOX
CLN6
PPP1R3A
THAP1
SLC29A3
SLC35C1
PPT1
DHDKD1
KIF21A
FERMT1
POMGNT1
SLC39A4
TMEM127
VPS35
TDP1
HR
PRKCG
ANKH
PROC
PRSS1
HTRA1
FAM20C
COQ8A
RPGRIPI
SLURP1
GJC2

MCOLN1
JPH3
TBC1D24
ALS2
CHD8
BARD1
PTS
NLRC4
RAB27A
BCKDHA
BCKDHB
OPN1LW
RDH5
PRPH2
RHO
GRK1
RIT1
RLBP1
HPSE2
NYX
ALX4
RP1
RP2
RPE65
RPS6KA3
RS1
ATXN7
SCO1
VIPAS39
TRAPPC2
CDH23
SMOC1
BLM
P3H1
STRA6
ROBO3
LMBR1
SIL1
SGCB
SH3BP2
PRSS56
SHOX
NMNAT1
P2RY12
PORCN
SIX1
SIX3
PINK1
SLC1A1
REEP1
SLC2A2
SLC3A1
PCDH15
SLC5A1
SLC5A2
CPLANE1
SLC6A3
SLC6A8
SLC16A2
SMS
SNRPN
SPAST
SPG7
SPTBN2
SRD5A2
SRY
ELOVL4
STIM1
BTD
TACR3
TAF1
TAT
TBP
TBX6
TECTA
BUB1B
TFAP2A
TGFB1
TGM1
THRB
TIMP3
TNNI2
TNNT1
TPMT
TPO
TRPS1
TPA
TULP1
UBE3A
UROD
UROS
USH2A
CLRN1
VIM
BEST1
WNT5A

WNT7A
XPA
XPC
CA2
CA8
CACNA1F
CARD14
ALDH5A1
FA2H
EPM2A
CDC73
SH3TC2
USB1
L2HGDH
PANK2
DCAF17
FRAS1
OPA3
SPG11
CFAP43
AAAS
PABPN1
GAN
CLPP
GDF5
KDM5C
AXIN1
BAP1
TTC25
CCM2
FERMT3
SLC4A11
BRIP1
ADGRV1
DTNBP1
FAM161A
PHF6
HPS3
GNPAT
FOXN1
ZNF469
KISS1R
GLIS2
ATCAY
SHANK3
AGPS
AP3B1
SLC25A12
STX11
SERPINH1
ADAM9
HESX1
CCN6
PROM1
PER2
KRIT1
EIF2B4
EIF2B2
EIF2B5
MTMR2
AP1S2
SGCE
BCL10
PHOX2B
ACVR1
PSTPIP1
SLC7A7
PAPSS2
LRSAM1
USP8
SLC25A46
PRPF3
SLC6A5
NEXN
LGI1
LARGE1
LRAT
NOG
BBIP1
DRC1
REEP6
ADGRG1
S1PR2
ACVR2B
MMP20
TRIP11
EFTUD2
RAB28
GRHPR
OTOF
FOXP2
RP1L1
ECEL1
ITM2B
BMS1
PLEKHM1

MAGI2
MFN2
MED12
SLC12A6