



MASTER GENE LIST

A2ML1	FSHB	PITX2
AARS	FTCD	PITX3
AASS	FTH1	PKD1
ABAT	FTL	PKD1L1
ABCA1	FUBP1	PKD2
ABCA12	FUCA1	PKHD1
ABCA4	FUS	PKP2
ABCA7	FUT8	PLA2G12A
ABCB1	FXN	PLA2G6
ABCB11	FYCO1	PLAA
ABCB6	FYN	PLAG1
ABCB9	FZD3	PLCB1
ABCC2	FZD4	PLCG1
ABCC3	FZR1	PLCG2
ABCC6	G6PC	PLEC
ABCC8	G6PC3	PLEKHA1
ABCC9	G6PD	PLEKHG5
ABCD1	GAA	PLEKHM2
ABCD3	GAB2	PLK1
ABCD4	GABBR2	PLK2
ABCG1	GABRA1	PLN
ABI1	GABRA6	PLOD1
ABL1	GABRB2	PLP1
ABL2	GABRB3	PLPP3
ACACA	GABRD	PMAIP1
ACAD8	GABRG2	PML
ACAD9	GAD1	PMM2
ACADM	GADD45A	PMP22
ACADS	GAGE1	PMS1
ACADSB	GALC	PMS2
ACADVL	GALE	PNKD
ACAT1	GALK1	PNKP
ACD	GALNS	PNP
ACE	GALNT12	PNPLA2
ACE2	GALNT3	PNPLA6
ACER1	GALT	PNPO
ACKR3	GAMT	PNRC1
ACOX1	GAN	POGZ
ACP5	GARS	POLA1
ACSL6	GAS5	POLB
ACTA1	GAS7	POLD1
ACTA2	GAS8	POLD2
ACTB	GATA1	POLD3
ACTC1	GATA2	POLD4
ACTG1	GATA3	POLE
ACTL6B	GATA4	POLE2
ACTN2	GATA5	POLE3
ACVR1	GATA6	POLE4
ACVR1B	GATAD1	POLG
ACVR2A	GATM	POLG2
ACVR2B	GBA	POLH
ACVRL1	GBA2	POLI
ACY1	GBE1	POLK
ADA	GCDH	POLL

ADAM17	GCH1	POLM
ADAM22	GCNT2	POLN
ADAMTS2	GCSH	POLQ
ADAMTS20	GDAP1	POLR2A
ADAMTSL2	GDF1	POLR2B
ADAMTSL4	GDF11	POLR2C
ADAR	GDF2	POLR2D
ADCY10	GDF6	POLR2E
ADCY5	GDNF	POLR2F
ADD3	GEN1	POLR2G
ADGRA2	GFAP	POLR2H
ADGRB3	GFER	POLR2I
ADGRG1	GF1	POLR2J
ADGRG7	GFM1	POLR2J2
ADGRL3	GFPT1	POLR2K
ADGRV1	GHR	POLR2L
ADH1B	GHRL	POM121
ADK	GID4	POMC
ADNP	GIN51	POMGNT1
ADRA2A	GIPC3	POMGNT2
ADRB2	GIPR	POMK
ADRB3	GIT2	POMT1
ADSL	GJA1	POMT2
AEN	GJA3	POR
AFF1	GJA5	POT1
AFF3	GJA8	POU1F1
AFF4	GJB1	POU2AF1
AGA	GJB2	POU3F4
AGK	GJB3	POU4F3
AGL	GJB6	POU5F1
AGO2	GJC2	PPA2
AGPS	GLA	PPARG
AGR3	GLB1	PPARGC1A
AGRN	GLDC	PPARGC1B
AGRP	GLE1	PPCS
AGTR1	GLI1	PPFIBP1
AGXT	GLI2	PPM1D
AHCY	GLI3	PPM1L
AHI1	GLIS2	PPOX
AHRR	GLRA1	PPP1CB
AICDA	GLRB	PPP2R1A
AIFM1	GLUD1	PPP2R1B
AIP	GLUL	PPP2R2A
AIPL1	GLYCTK	PPP2R5D
AIRE	GM2A	PPP3CA
AJUBA	GMPPA	PPP4C
AK2	GMPPB	PPP4R1
AKAP9	GNA11	PPP4R2
AKT1	GNA13	PPP4R3A
AKT2	GNAL	PPP4R3B
AKT3	GNAO1	PPP4R4
ALAD	GNAQ	PPP6C
ALAS2	GNAS	PPT1
ALB	GNB1	PQBP1

ALDH18A1	GNB4	PRCC
ALDH1A3	GNE	PRDM1
ALDH2	GNMT	PRDM12
ALDH3A2	GNPAT	PRDM14
ALDH4A1	GNPDA2	PRDM16
ALDH5A1	GNPTAB	PREPL
ALDH7A1	GNPTG	PREX2
ALDOA	GNRH1	PRF1
ALDOB	GNRHR	PRG4
ALG1	GNS	PRICKLE1
ALG11	GOLGA5	PRIMA1
ALG12	GOPC	PRKAA1
ALG13	GOSR1	PRKACA
ALG14	GOSR2	PRKAG2
ALG2	GOT1	PRKAR1A
ALG3	GPAA1	PRKCA
ALG6	GPC3	PRKCB
ALG8	GPC6	PRKCD
ALG9	GPD1L	PRKCG
ALK	GPHN	PRKCI
ALMS1	GPR143	PRK CZ
ALOX12B	GPR34	PRKD1
ALPK2	GPR78	PRKDC
ALPK3	GPS2	PRKG1
ALPL	GPSM2	PRKG2
ALS2	GREM1	PRKRA
ALX4	GRHL2	PRNP
AMACR	GRHPR	PROC
AMER1	GRIA3	PRODH
AMH	GRID1	PROK2
AMHR2	GRIK1	PROKR2
AMPD1	GRIK3	PROP1
AMPD2	GRIK4	PROS1
AMPH	GRIN1	PRPH2
AMT	GRIN2A	PRPS1
ANG	GRIN2B	PRRT2
ANGPT1	GRIP1	PRRX1
ANK2	GRM3	PRRX2
ANKK1	GRM8	PRSS1
ANKRD1	GRN	PRSS56
ANKRD11	GRPR	PRSS8
ANKRD26	GRXCR1	PRX
ANKRD28	GSK3B	PSAP
ANKS6	GSS	PSAT1
ANO3	GSTM1	PSEN1
ANO5	GSTP1	PSEN2
ANOS1	GSTT1	PSENEEN
ANXA1	GTF2H1	PSIP1
ANXA10	GTF2H3	PSMA1
ANXA2	GTF2H4	PSMA2
AP1S3	GTF2H5	PSMA3
AP3B1	GTF2I	PSMA4
AP3B2	GTPBP2	PSMA5
AP3D1	GUCY1A2	PSMA6
AP4B1	GUCY2D	PSMA7
AP4E1	GUSB	PSMA8

AP4M1	GXYLT1	PSMB1
AP4S1	GYG1	PSMB10
AP5Z1	GYS1	PSMB11
APC	GYS2	PSMB2
APCDD1	H2AFX	PSMB3
APEX1	H3F3A	PSMB4
APITD1	H3F3B	PSMB5
APLF	H3F3C	PSMB6
APOB	HACE1	PSMB7
APOE	HADH	PSMB8
APOL1	HADHA	PSMB9
APP	HADHB	PSMC1
APRT	HAL	PSMC2
APTX	HAMP	PSMC3
AR	HAND1	PSMC4
ARAF	HAND2	PSMC5
ARFGEF2	HARS	PSMC6
ARFRP1	HAS2	PSMD1
ARG1	HAVCR2	PSMD10
ARHGAP20	HAX1	PSMD11
ARHGAP26	HBA1	PSMD12
ARHGAP35	HBA2	PSMD13
ARHGEF10	HBB	PSMD14
ARHGEF12	HCAR1	PSMD2
ARHGEF9	HCCS	PSMD3
ARID1A	HCFC1	PSMD4
ARID1B	HCK	PSMD5
ARID2	HCN1	PSMD6
ARID5B	HCN2	PSMD7
ARL13B	HCN4	PSMD8
ARL6	HDAC1	PSMD9
ARL6IP1	HDAC2	PSME1
ARMC4	HDAC3	PSME2
ARMS2	HDAC4	PSME3
ARNT	HDAC6	PSME4
ARNTL	HDAC8	PSMF1
ARPC1B	HECW2	PSMG1
ARSA	HELLS	PSMG2
ARSB	HEPACAM	PSMG3
ARSE	HERC1	PSMG4
ARSI	HES1	PSPH
ARX	HESX1	PSTPIP1
ASAH1	HEXA	PTCH1
ASL	HEXB	PTCH2
ASNS	HEY1	PTCHD1
ASPA	HFE	PTEN
ASPSCR1	HFE2	PTGFR
ASS1	HFM1	PTGS2
ASTN2	HGD	PTK2
ASXL1	HGF	PTK6
ASXL2	HGSNAT	PTP4A1
ATF1	HHEX	PTP4A3
ATIC	HIBCH	PTPN11

ATL1	HIC1	PTPN12
ATL3	HIF1A	PTPRC
ATM	HINT1	PTPRD
ATP13A2	HIP1	PTPRK
ATP1A1	HIPK1	PTPRO
ATP1A2	HIST1H1C	PTPRQ
ATP1A3	HIST1H1E	PTPRR
ATP1B4	HIST1H2BD	PTPRS
ATP2A1	HIST1H3A	PTPRT
ATP2B2	HIST1H3B	PTRF
ATP2B4	HIST1H3C	PTS
ATP4A	HIST1H3D	PURA
ATP6AP1	HIST1H3E	PVT1
ATP6AP2	HIST1H3F	PXDN
ATP6V0A2	HIST1H3G	PYGL
ATP6V0A4	HIST1H3H	PYGM
ATP6V0D2	HIST1H3I	PYY
ATP6V1B1	HIST1H3J	QARS
ATP7A	HIST1H4I	QDPR
ATP7B	HIST2H3C	QKI
ATP8B1	HIST2H3D	RAB18
ATR	HIST3H3	RAB23
ATRIP	HK1	RAB27A
ATRX	HLA-A	RAB35
AUH	HLA-B	RAB39B
AURKA	HLA-C	RAB3GAP1
AURKB	HLA-E	RAB3GAP2
AURKC	HLA-F	RAB7A
AUTS2	HLA-G	RAB9B
AXIN1	HLCS	RABEP1
AXIN2	HLF	RAC1
AXL	HLTF	RAC2
B2M	HMBS	RAD1
B3GALNT2	HMGA2	RAD17
B3GAT3	HMGB1	RAD18
B3GLCT	HMGCL	RAD21
B4GALNT1	HMGCS2	RAD23A
B4GALT1	HMGN1	RAD23B
B4GALT3	HMX1	RAD50
B4GALT7	HNF1A	RAD51
B4GAT1	HNF1B	RAD51B
B9D1	HNF4A	RAD51C
B9D2	HNRNPA1	RAD51D
BABAM1	HNRNPA2B1	RAD52
BACH1	HNRNPD1	RAD54B
BACH2	HNRNPU	RAD54L
BAG3	HOGA1	RAD54L2
BAG4	HOOK3	RAD9A
BAGE	HOXA1	RAD9B
BAIAP2L1	HOXA10	RAF1
BAK1	HOXA11	RAG1
BAP1	HOXA13	RAG2

BARD1	HOXA2	RAI1
BAX	HOXA9	RALGDS
BAZ2A	HOXB13	RANBP2
BAZ2B	HOXC11	RANGRF
BBC3	HOXC13	RAP1GDS1
BBIP1	HOXD11	RAPSN
BBS1	HOXD13	RARA
BBS10	HPCA	RARB
BBS12	HPD	RARG
BBS2	HPRT1	RASA1
BBS4	HPS1	RASA2
BBS5	HPS3	RASGRP1
BBS7	HPS4	RAX
BBS9	HPS6	RB1
BCAP31	HRAS	RBBP6
BCAS3	HRH2	RBCK1
BCAS4	HSD17B10	RBM10
BCAT1	HSD17B3	RBM15
BCAT2	HSD17B4	RBM20
BCKDHA	HSD3B1	RBM6
BCKDHB	HSD3B2	RBM8A
BCKDK	HSF4	RBP4
BCL10	HSP90AA1	RBX1
BCL11A	HSP90AB1	RCOR1
BCL11B	HSPA4	RCSD1
BCL2	HSPB1	RD3
BCL2A1	HSPB3	RDH12
BCL2L1	HSPB8	RDH5
BCL2L11	HSPD1	RDM1
BCL2L2	HSPG2	RDX
BCL2L2- PABPN1	HTR1A	RECQL
BCL3	HTR2A	RECQL4
BCL6	HTR2C	RECQL5
BCL7A	HTRA1	REEP1
BCL9	HTRA2	REEP2
BCOR	HUS1	REL
BCORL1	HUS1B	RELB
BCR	HUWE1	RELN
BCS1L	HYAL1	REN
BDNF	HYLS1	REPS1
BEST1	HYOU1	REST
BFSP1	IBA57	RET
BFSP2	ICK	REV1
BGN	ICOS	REV3L
BICC1	ICOSLG	RFC1
BICD2	ID3	RFC2
BIN1	ID4	RFC3
BIRC2	IDE	RFC4
BIRC3	IDH1	RFC5
BIRC5	IDH2	RFT1
BIRC6	IDS	RFWD2
BIVM- ERCC5	IDUA	RFX5
BLM	IER3IP1	RFXANK
BLNK	IFI30	RFXAP
BLOC1S6	IFIH1	RHBDF2

BMP2	IFNAR1	RHEB
BMP4	IFNAR2	RHOA
BMP7	IFNGR1	RHOH
BMPR1A	IFNGR2	RICTOR
BMPR1B	IFNL3	RIT1
BMPR2	IFT122	RLTPR
BORCS8- MEF2B	IFT140	RMI1
BRAF	IFT172	RMI2
BRAT1	IFT20	RMRP
BRCA1	IFT27	RNASEH2A
BRCA2	IFT43	RNASEH2B
BRD1	IFT52	RNASEH2C
BRD3	IFT80	RNASEL
BRD4	IFT81	RNF125
BRIP1	IGF1	RNF135
BRWD3	IGF1R	RNF146
BSCL2	IGF2	RNF168
BSND	IGF2R	RNF2
BTBD18	IGHMBP2	RNF213
BTD	IGLL1	RNF216
BTG1	IGSF10	RNF31
BTG2	IKBKAP	RNF43
BTK	IKKBK	RNU4ATAC
BTLA	IKBKE	ROGDI
BUB1	IKBKG	RORB
BUB1B	IKZF1	RORC
BVES	IKZF3	ROS1
C10orf54	IKZF4	RPA1
C11orf1	IL10	RPA2
C11orf95	IL10RA	RPA3
C12orf57	IL10RB	RPA4
C12orf65	IL11RA	RPE65
C15orf41	IL12B	RPGR
C19orf12	IL12RB1	RPGRIP1
C1QA	IL17F	RPGRIP1L
C1QB	IL17RA	RPL10
C1QC	IL17RC	RPL11
C1R	IL17RD	RPL15
C1S	IL1RN	RPL19
C2	IL2	RPL22
C21orf2	IL21	RPL26
C21orf59	IL21R	RPL27
C2CD2L	IL2RA	RPL31
C2CD3	IL2RG	RPL35A
C3	IL3	RPL5
C4A	IL36RN	RPN1
C4B	IL6	RPN2
C5	IL6ST	RPS10
C6	IL7R	RPS14
C7	ILDR1	RPS17
C8A	ILK	RPS19
C8B	IMPDH1	RPS24
C8G	INF2	RPS26
C8orf37	ING4	RPS27
C9	INHHA	RPS28
C9orf72	INHBA	RPS29

CA2	INO80	RPS6KA2
CA5A	INPP4A	RPS6KA4
CABP4	INPP4B	RPS6KB1
CACNA1A	INPP5D	RPS6KB2
CACNA1B	INPP5E	RPS7
CACNA1C	INPPL1	RPSA
CACNA1D	INSR	RPTOR
CACNA1H	INVS	RRAGC
CACNA1S	IQCB1	RRAS
CACNA2D1	IQCG	RRAS2
CACNA2D2	IQSEC2	RREB1
CACNB2	IRAK1	RRM1
CACNB4	IRAK4	RRM2B
CALM1	IRF2	RSPH1
CALM2	IRF2BP2	RSPH3
CALM3	IRF2BPL	RSPH4A
CALR	IRF3	RSPH9
CALR3	IRF4	RSPO1
CAMTA1	IRF6	RSPO2
CANX	IRF7	RTEL1
CAPN1	IRF8	RTN2
CAPN3	IRS1	RUNX1
CAPRIN1	IRS2	RUNX1T1
CARD11	IRS4	RXRA
CARD14	ISG15	RXRB
CARD9	ISPD	RXRG
CARM1	ITCH	RYBP
CARS	ITGA10	RYR1
CARS2	ITGA7	RYR2
CARTPT	ITGA9	S1PR2
CASC5	ITGAV	SACS
CASK	ITGB2	SALL4
CASP10	ITGB3	SAMD9
CASP7	ITK	SAMD9L
CASP8	ITM2B	SAMHD1
CASQ2	ITPA	SARDH
CASR	ITPKB	SARNP
CAT	IVD	SATB2
CAV1	JAG1	SBDS
CAV3	JAGN1	SBF1
CBFA2T3	JAK1	SBF2
CBFB	JAK2	SCARB2
CBL	JAK3	SCLT1
CBLB	JAM3	SCN10A
CBLC	JAZF1	SCN11A
CBR1	JPH2	SCN1A
CBS	JUN	SCN1B
CC2D1A	JUP	SCN2A
CC2D2A	KANK1	SCN2B
CCAR2	KANSL1	SCN3A
CCBE1	KARS	SCN3B
CCDC103	KAT6A	SCN4A
CCDC114	KAT6B	SCN4B

CCDC115	KATNAL2	SCN5A
CCDC151	KBTBD13	SCN8A
CCDC178	KCNA1	SCN9A
CCDC28A	KCNA2	SCP2
CCDC39	KCNA5	SDC3
CCDC40	KCNB1	SDC4
CCDC50	KCNC1	SDCCAG8
CCDC6	KCND3	SDHA
CCDC65	KCNE1	SDHAF2
CCDC78	KCNE2	SDHB
CCDC88C	KCNE3	SDHC
CCNB1	KCNE5	SDHD
CCNB1IP1	KCNH1	SEC16B
CCNB3	KCNH2	SEC23A
CCND1	KCNJ1	SEC23B
CCND2	KCNJ10	SEC24D
CCND3	KCNJ11	SEC31A
CCNE1	KCNJ13	SEMA3A
CCNF	KCNJ2	SEMA3E
CCNH	KCNJ5	SEMA4D
CCNO	KCNJ8	SEPN1
CCT5	KCNK3	2-Sep
CD160	KCNK9	5-Sep
CD19	KCNMA1	6-Sep
CD200	KCNQ1	9-Sep
CD22	KCNQ2	SERAC1
CD244	KCNQ3	SERP2
CD247	KCNQ4	SERPINA1
CD27	KCNT1	SERPINB6
CD274	KCNT2	SERPINC1
CD276	KCTD17	SERPINE1
CD28	KCTD7	SERPINF1
CD38	KDM4B	SERPING1
CD3D	KDM5A	SERPINI1
CD3E	KDM5C	SESN1
CD3G	KDM6A	SESN2
CD40	KDR	SESN3
CD40LG	KEAP1	SET
CD44	KEL	SETBP1
CD46	KIAA0196	SETD2
CD48	KIAA0586	SETX
CD55	KIAA0753	SF1
CD58	KIAA1524	SF3B1
CD59	KIAA1549	SFPQ
CD63	KIAA2022	SGCA
CD69	KIDINS220	SGCB
CD70	KIF14	SGCD
CD74	KIF1A	SGCE
CD79A	KIF1B	SGCG
CD79B	KIF1C	SGK1
CD80	KIF5A	SGSH
CD81	KIF5B	SH2B1
CD86	KIF6	SH2B3
CD8A	KIF7	SH2D1A
CDA	KISS1	SH3BP2
CDC25C	KISS1R	SH3D19

CDC27	KIT	SH3GL1
CDC42	KITLG	SH3TC2
CDC45	KL	SHANK2
CDC73	KLC1	SHANK3
CDCA7	KLC3	SHFM1
CDH1	KLF3	SHH
CDH11	KLF4	SHOC2
CDH2	KLF6	SHOX
CDH20	KLHL40	SHQ1
CDH23	KLHL41	SIGMAR1
CDH5	KLHL6	SIK1
CDK10	KLHL9	SIK3
CDK12	KLLN	SIL1
CDK2	KMT2A	SIM1
CDK4	KMT2B	SIN3A
CDK5RAP2	KMT2C	SIPA1L3
CDK6	KMT2D	SIRT1
CDK7	KMT5A	SIX1
CDK8	KMT5B	SIX3
CDKL5	KNSTRN	SIX5
CDKN1A	KPNB1	SIX6
CDKN1B	KPTN	SKI
CDKN1C	KRAS	SLAMF7
CDKN2A	KREMEN1	SLC12A1
CDKN2B	KSR1	SLC12A3
CDKN2C	KTN1	SLC12A5
CDON	KYNU	SLC12A6
CDX1	L1CAM	SLC13A5
CDX2	L2HGDH	SLC14A1
CEACAM16	LAG3	SLC16A12
CEBPA	LAMA2	SLC16A2
CEBPB	LAMA3	SLC16A8
CEBPD	LAMA4	SLC17A5
CEBPE	LAMB2	SLC17A8
CENPA	LAMB3	SLC19A2
CEP104	LAMC2	SLC19A3
CEP120	LAMP1	SLC1A3
CEP164	LAMP2	SLC20A2
CEP170B	LAMTOR2	SLC22A12
CEP290	LASP1	SLC22A5
CEP41	LAT	SLC25A1
CEP57	LATS1	SLC25A12
CEP83	LATS2	SLC25A13
CEP85L	LCA5	SLC25A15
CERKL	LCK	SLC25A20
CERS1	LCP1	SLC25A22
CES1	LCT	SLC25A46
CETP	LDHA	SLC26A1
CFAP53	LDLR	SLC26A2
CFB	LDLRAP1	SLC26A4
CFD	LEF1	SLC26A5
CFH	LEFTY2	SLC29A1
CFHR1	LEMD2	SLC29A3
CFHR2	LEP	SLC2A1
CFHR3	LEPR	SLC2A10

CFHR4	LFNG	SLC2A2
CFHR5	LGALS9	SLC2A9
CFI	LGI1	SLC33A1
CFL2	LGMN	SLC34A1
CFLAR	LGR5	SLC34A2
CFP	LHB	SLC34A3
CFTR	LHCGR	SLC35A1
CHAT	LHFP	SLC35A2
CHCHD10	LHFPL5	SLC35A3
CHCHD2	LHX2	SLC35C1
CHD2	LHX3	SLC35D1
CHD4	LHX4	SLC36A2
CHD6	LIAS	SLC37A4
CHD7	LIFR	SLC39A13
CHD8	LIG1	SLC39A8
CHEK1	LIG3	SLC3A1
CHEK2	LIG4	SLC40A1
CHIC2	LIM2	SLC45A2
CHKB	LIMK1	SLC45A3
CHM	LIMS2	SLC46A1
CHMP2B	LIN28B	SLC4A1
CHMP4B	LINC00598	SLC4A11
CHRM2	LINC00982	SLC52A1
CHRNA1	LINC01565	SLC52A2
CHRNA2	LIPA	SLC52A3
CHRNA4	LIPC	SLC5A7
CHRN1	LITAF	SLC6A1
CHRN2	LMBRD1	SLC6A19
CHRND	LMNA	SLC6A2
CHRNE	LMO1	SLC6A20
CHRNA	LMO2	SLC6A3
CHST11	LMOD3	SLC6A4
CHST14	LNP1	SLC6A5
CHST3	LNPEP	SLC6A8
CHST6	LOX	SLC6A9
CHSY1	LOXHD1	SLC7A7
CHUK	LPIN2	SLC7A8
CIC	LPP	SLC7A9
CIITA	LPXN	SLC9A3R1
CITED2	LRAT	SLC9A6
CIZ1	LRBA	SLC9A9
CKS1B	LRIG3	SLCO1B1
CLCN1	LRMP	SLCO1B3
CLCN2	LRP1B	SLIT2
CLCN4	LRP2	SLX1A
CLCN5	LRP4	SLX4
CLCN7	LRP6	SMAD2
CLDN14	LRPPRC	SMAD3
CLDN16	LRRC10	SMAD4
CLDN19	LRRC37B	SMAD6
CLIP1	LRRC6	SMAD7
CLN3	LRRC8A	SMAD9
CLN5	LRRK2	SMAP1
CLN6	LRSAM1	SMARCA2
CLN8	LRTOMT	SMARCA4
CLP1	LSS	SMARCA5

CLPB	LTBP1	SMARCAL1
CLRN1	LTBP3	SMARCB1
CLTC	LTF	SMARCD1
CLTCL1	LTK	SMARCD2
CMKLR1	LUC7L2	SMARCE1
CMPK1	LYL1	SMC1A
CMSS1	LYN	SMC3
CNBP	LYST	SMCHD1
CNGA3	LZTFL1	SMN1
CNGB3	LZTR1	SMO
CNKSR1	MAB21L2	SMOC1
CNOT2	MACROD1	SMPD1
CNPY3	MAD2L2	SMPX
CNR1	MAF	SMS
CNTN1	MAFB	SMUG1
CNTN2	MAG	SMYD3
CNTN6	MAGEA1	SNAI2
CNTNAP2	MAGEA12	SNAP25
CNTRL	MAGEA3	SNAP29
COASY	MAGEA4	SNCA
COCH	MAGEC2	SNCAIP
COG1	MAGEL2	SNCB
COG2	MAGI1	SND1
COG4	MAGI2	SNHG5
COG5	MAGT1	SNRNP200
COG6	MALT1	SNTA1
COG7	MAML1	SNX10
COG8	MAML2	SOBP
COL11A1	MAMLD1	SOCS1
COL12A1	MAN1B1	SOD1
COL18A1	MAN2B1	SORBS2
COL1A1	MANBA	SORL1
COL1A2	MAOA	SORT1
COL2A1	MAP2K1	SOS1
COL3A1	MAP2K2	SOS2
COL4A1	MAP2K4	SOX10
COL4A3	MAP3K1	SOX11
COL4A4	MAP3K13	SOX17
COL4A5	MAP3K14	SOX2
COL5A1	MAP3K7	SOX9
COL5A2	MAP3K8	SP110
COL6A1	MAP4K3	SP3
COL6A2	MAP7	SPAG1
COL6A3	MAPK1	SPAST
COL7A1	MAPK11	SPATA2
COL8A1	MAPK3	SPATA5
COL9A1	MAPK8	SPATA7
COL9A2	MAPK8IP1	SPECC1
COLEC11	MAPKAP1	SPECC1L
COLQ	MAPKBP1	SPEG
COMP	MAPRE1	SPEN
COMT	MAPT	SPG11
COPA	MARK1	SPG20
CORO1A	MARK4	SPG21
COX15	MARS	SPG7
COX6A1	MARVELD2	SPINK1
COX6C	MAS1L	SPINK5

COX7B	MASP1	SPO11
CP	MASP2	SPOP
CPA1	MAT1A	SPR
CPA6	MAT2A	SPRED1
CPOX	MATR3	SPRY4
CPS1	MAX	SPTA1
CPSF6	MBD1	SPTAN1
CPT1A	MBD4	SPTBN1
CPT2	MBD5	SPTLC1
CR2	MBNL1	SPTLC2
CRADD	MBTD1	SQSTM1
CRAT	MC1R	SRC
CRB1	MC3R	SRD5A2
CRBN	MC4R	SRD5A3
CREB1	MCCC1	SRF
CREB3L1	MCCC2	SRP54
CREB3L2	MCEE	SRP72
CREBBP	MCIDAS	SRSF2
CRELD1	MCL1	SRSF3
CRH	MCM2	SRY
CRIPAK	MCM3	SS18
CRKL	MCM3AP	SS18L1
CRLF2	MCM4	SSBP1
CROT	MCM5	SSBP2
CRTAP	MCM6	SSR4
CRTC1	MCM7	SSTR1
CRX	MCM8	SSTR2
CRYAA	MCOLN1	SSX1
CRYAB	MDC1	SSX2
CRYBA1	MDH2	SSX4
CRYBA2	MDM2	ST3GAL3
CRYBA4	MDM4	ST3GAL5
CRYBB1	MDS2	ST6GAL1
CRYBB2	MEAF6	STAC3
CRYBB3	MECOM	STAG2
CRYGB	MECP2	STAR
CRYGC	MED12	STAT1
CRYGD	MED13L	STAT2
CRYGS	MED17	STAT3
CRYM	MED25	STAT4
CSDE1	MEF2B	STAT5A
CSF1	MEF2C	STAT5B
CSF1R	MEFV	STAT6
CSF2RA	MEG9	STIM1
CSF2RB	MEGF10	STK11
CSF3R	MEGF8	STK19
CSMD3	MEN1	STK36
CSNK2A1	MERTK	STK4
CSPP1	MET	STK40
CSR3P	MFAP5	STMN1
CSTB	MFHAS1	STRA13
CTAG2	MFN2	STRA6
CTC1	MFRP	STRADA
CTCF	MFSD8	STRC
CTDP1	MGA	STRN
CTDSP2	MGAT2	STT3A
CTH	MGEA5	STT3B

CTLA4	MGMT	STX11
CTNNA1	MIB1	STX1B
CTNNA3	MICA	STXBP1
CTNNB1	MICB	STXBP2
CTNND2	MICU1	SUCLA2
CTNS	MID1	SUCLG1
CTPS1	MIER3	SUFU
CTRC	MIP	SUGCT
CTSA	MIR1260B	SUGP2
CTSB	MIR184	SUMF1
CTSC	MIR96	SUOX
CTSD	MITF	SUZ12
CTSF	MKKS	SYK
CTSK	MKL1	SYN1
CTSL	MKL2	SYN2
CTSS	MKNK1	SYNE1
CUBN	MKS1	SYNE2
CUL3	MLC1	SYNE3
CUL4A	MLF1	SYNGAP1
CUL4B	MLH1	SYNJ1
CUL5	MLH3	SYP
CUX1	MLLT1	SYT2
CXCR4	MLLT10	SZT2
CYB5A	MLLT11	TAB2
CYBA	MLLT3	TAC3
CYBB	MLLT4	TACC1
CYFIP2	MLLT6	TACC2
CYLD	MLYCD	TACC3
CYP11A1	MMAA	TACR3
CYP11B1	MMAB	TADA2A
CYP11B2	MMACHC	TAF1
CYP17A1	MMADHC	TAF15
CYP19A1	MME	TAF1L
CYP1A2	MMP2	TAF6
CYP1B1	MMP21	TAL1
CYP21A2	MMP9	TAL2
CYP24A1	MMMS19	TAOK1
CYP26B1	MN1	TAP1
CYP27A1	MNAT1	TAP2
CYP27B1	MNX1	TAPBP
CYP2A6	MOCOS	TAPBPL
CYP2B6	MOCS1	TARDBP
CYP2C19	MOGS	TAS2R38
CYP2C8	MORC2	TAT
CYP2C9	MORC4	TAZ
CYP2D6	MPC1	TBC1D20
CYP2R1	MPDU1	TBC1D24
CYP2U1	MPDZ	TBC1D7
CYP3A4	MPG	TBK1
CYP3A5	MPI	TBL1XR1
CYP4F2	MPL	TBR1
CYP7B1	MPP1	TBX1
CYSLTR2	MPV17	TBX15
D2HGDH	MPZ	TBX20
DAB2IP	MR1	TBX22
DACH1	MRE11A	TBX3
DACH2	MS4A1	TBX5

DAG1	MSH2	TCAP
DARS	MSH3	TCEB1
DAXX	MSH4	TCEB2
DBH	MSH5	TCEB3
DBT	MSH6	TCEB3B
DCAF17	MSI1	TCEB3CL
DCC	MSI2	TCERG1
DCDC2	MSN	TCF12
DCK	MSR1	TCF20
DCLRE1B	MSRB3	TCF3
DCLRE1C	MST1	TCF4
DCTN1	MST1R	TCF7L1
DCUN1D1	MSX1	TCF7L2
DCX	MSX2	TCIRG1
DDB1	MTAP	TCL1A
DDB2	MTCH2	TCN2
DDC	MTFMT	TCOF1
DDHD1	MTHFD1	TCP11L2
DDHD2	MTHFR	TCTA
DDIT3	MTM1	TCTEX1D2
DDOST	MTMR14	TCTN1
DDR1	MTMR2	TCTN2
DDR2	MTO1	TCTN3
DDX10	MTOR	TDG
DDX20	MTR	TDP1
DDX3X	MTRR	TDRD7
DDX41	MTTP	TEAD1
DDX58	MUC1	TEAD2
DEK	MUC16	TEAD3
DENND1A	MUC17	TEAD4
DENND5A	MUM1	TEC
DEPDC5	MURC	TECPR2
DES	MUS81	TECRL
DFNA5	MUSK	TECTA
DFNB31	MUT	TEK
DFNB59	MUTYH	TEKT4
DGKE	MVK	TELO2
DHCR24	MYB	TENM1
DHCR7	MYBL1	TENM3
DHDDS	MYBPC3	TERC
DHFR	MYC	TERT
DHH	MYCL	TET1
DHODH	MYCN	TET2
DHTKD1	MYD88	TFAP2A
DHX15	MYF6	TFAP2B
DIABLO	MYH11	TFE3
DIAPH1	MYH14	TFG
DIAPH3	MYH2	TFPT
DICER1	MYH6	TFR2
DIS3	MYH7	TFRC
DIS3L2	MYH9	TGFB1
DKC1	MYL2	TGFB2
DLAT	MYL3	TGFB3
DLD	MYL4	TGFB1

DLK1	MYLK	TGFBR2
DLX5	MYLK2	TGFBR3
DMC1	MYO15A	TGIF1
DMD	MYO18A	TGM1
DMP1	MYO1A	TGM7
DMRT1	MYO1B	TH
DNAAF1	MYO1F	THADA
DNAAF2	MYO3A	THAP1
DNAAF3	MYO5A	THBD
DNAAF5	MYO6	THBS1
DNAH1	MYO7A	THRAP3
DNAH11	MYO9A	THSD7B
DNAH5	MYOCD	TIA1
DNAH8	MYOD1	TICAM1
DNAI1	MYOT	TIMELESS
DNAI2	MYOZ2	TIMM8A
DNAJB1	MYPN	TIMP3
DNAJB13	MYSM1	TINF2
DNAJB2	NAA10	TIPARP
DNAJB6	NAB2	TIPIN
DNAJC12	NACC1	TIRAP
DNAJC19	NADK2	TJP2
DNAJC21	NAGA	TK2
DNAJC5	NAGLU	TLL1
DNAJC6	NAGS	TLR3
DNAL1	NALCN	TLR4
DNASE2	NAPA	TLX1
DNER	NAT1	TLX3
DNM1	NAT2	TMC1
DNM1L	NAV3	TMC6
DNM2	NBAS	TMC8
DNMT1	NBEAP1	TMCO1
DNMT3A	NBN	TMEM107
DNMT3B	NBR1	TMEM127
DNTT	NCAPG	TMEM138
DOCK2	NCF1	TMEM165
DOCK7	NCF2	TMEM173
DOCK8	NCF4	TMEM18
DOK7	NCOA1	TMEM189
DOLK	NCOA2	TMEM199
DOT1L	NCOA3	TMEM216
DPAGT1	NCOA4	TMEM231
DPM1	NCOR1	TMEM237
DPM2	NCSTN	TMEM43
DPM3	NDE1	TMEM5
DPYD	NDP	TMEM67
DPYS	NDRG1	TMEM70
DRC1	NDST1	TMEM94
DRD1	NDUFS4	TMEM97
DRD2	NDUFS7	TMIE
DRD3	NDUFS8	TMPO
DRD4	NDUFV1	TMPRSS2
DRD5	NEB	TMPRSS3
DROSHA	NEBL	TNF
DSC2	NECAP1	TNFAIP3
DSE	NEDD4L	TNFRSF11A
DSG2	NEFL	TNFRSF11B

DSP	NEGR1	TNFRSF13B
DSPP	NEIL1	TNFRSF13C
DST	NEIL2	TNFRSF14
DTHD1	NEIL3	TNFRSF17
DTNA	NEK1	TNFRSF18
DUSP2	NEK11	TNFRSF19
DUSP22	NEK2	TNFRSF1A
DUSP4	NEK8	TNFRSF4
DUSP6	NEU1	TNFRSF8
DXO	NEXN	TNFRSF9
DYM	NF1	TNFSF11
DYNC1H1	NF2	TNFSF12
DYNC2H1	NFAT5	TNFSF13B
DYNC2L1	NFATC2	TNFSF14
DYRK1A	NFE2L2	TNFSF18
DYSF	NFE2L3	TNFSF4
DYX1C1	NFIA	TNFSF9
E2F3	NFIB	TNK2
EBF1	NFIX	TNKS
EBP	NFKB1	TNNC1
EDA	NFKB2	TNNI2
EDAR	NFKBIA	TNNI3
EDARADD	NGF	TNNI3K
EDN3	NGFR	TNNT1
EDNRA	NGLY1	TNNT2
EDNRB	NHEJ1	TNPO3
EED	NHLRC1	TNXB
EEF1A2	NHP2	TOE1
EEFSEC	NHS	TOP1
EFEMP2	NIN	TOP2A
EFHC1	NIPA1	TOP2B
EFNB1	NIPA2	TOP3A
EGFL7	NIPBL	TOP3B
EGFR	NKX2-1	TOR1A
EGR1	NKX2-2	TOR1AIP1
EGR2	NKX2-3	TP53
EGR3	NKX2-4	TP53BP1
EGR4	NKX2-5	TP63
EHMT1	NKX2-6	TPH2
EIF1AX	NKX2-8	TPK1
EIF2AK4	NKX3-1	TPM1
EIF2B1	NKX3-2	TPM2
EIF2B2	NLGN3	TPM3
EIF2B3	NLGN4X	TPM4
EIF2B4	NLRC3	TPMT
EIF2B5	NLRC4	TPP1
EIF4A2	NLRP1	TPP2
EIF4E	NLRP12	TPR
EIF4G1	NLRP14	TPRN
ELAC2	NLRP3	TRAF2
ELANE	NLRP4	TRAF3
ELF3	NME8	TRAF3IP1
ELF4	NMNAT1	TRAF3IP2
ELK4	NOD2	TRAF5
ELL	NODAL	TRAF7

ELMO1	NONO	TRAFD1
ELN	NOP10	TRAPPC11
EMD	NOS1AP	TRDN
EME1	NOTCH1	TREM2
EME2	NOTCH2	TREX1
EML1	NOTCH3	TRHDE
EML4	NOTCH4	TRIM2
EMSY	NPC1	TRIM24
ENG	NPC2	TRIM27
ENO3	NPEPPS	TRIM32
ENPP1	NPHP1	TRIM33
ENTPD1	NPHP3	TRIM37
EOMES	NPHP4	TRIO
EP300	NPHS1	TRIOBP
EP400	NPHS2	TRIP11
EPAS1	NPLOC4	TRIP4
EPC1	NPM1	TRNT1
EPCAM	NPR2	TRPM3
EPG5	NPRL3	TRPM4
EPHA1	NPY	TRPS1
EPHA2	NQO1	TRPV4
EPHA3	NROB1	TRRAP
EPHA5	NROB2	TSC1
EPHA7	NR1D1	TSC2
EPHB1	NR2E3	TSEN54
EPHB2	NR2F1	TSFM
EPHB4	NR2F2	TSHB
EPHB6	NR3C1	TSHR
EPM2A	NR4A3	TSHZ2
EPOR	NR5A1	TSHZ3
EPPK1	NR6A1	TSPYL1
EPS15	NRAS	TSR2
ERAP1	NRCAM	TTC21B
ERAP2	NRDC	TTC37
ERBB2	NRG1	TTC7A
ERBB3	NRXN1	TTC8
ERBB4	NSD1	TTF1
ERC1	NSMCE3	TTN
ERCC1	NSUN2	TTPA
ERCC2	NT5C2	TTR
ERCC3	NT5C3A	TUBA1A
ERCC4	NT5E	TUBA4A
ERCC5	NTF3	TUBA8
ERCC6	NTF4	TUBB
ERCC6L2	NTHL1	TUBB2A
ERCC8	NTRK1	TUBB2B
ERF	NTRK2	TUBB3
ERG	NTRK3	TUBB4A
ERLIN1	NUF2	TUBD1
ERLIN2	NUMA1	TUBE1
ERRF1	NUP107	TUBG1
ESCO2	NUP214	TULP1
ESPN	NUP93	TUSC3
ESR1	NUP98	TWIST1
ESRRB	NUS1	TXNRD2
ETFA	NUTM1	TYK2
ETFB	NUTM2A	TYMP

ETFDH	NUTM2B	TYMS
ETHE1	OAT	TYR
ETNK1	OCA2	TYRO3
ETS1	OCRL	TYROBP
ETV1	OFD1	U2AF1
ETV4	OGG1	U2AF2
ETV5	OLIG2	UBA1
ETV6	OLR1	UBA5
EVC	OMD	UBE2A
EVC2	OPA1	UBE2B
EWSR1	OPA3	UBE2N
EXO1	OPHN1	UBE2T
EXOC2	OPRM1	UBE2V1
EXOSC3	OPTN	UBE2V2
EXT1	OR5L1	UBE3A
EXT2	ORAI1	UBQLN2
EXTL3	ORMDL2	UBR3
EYA1	OSTM1	UBR5
EYA4	OTC	UCHL1
EYS	OTOA	UCP1
EZH1	OTOF	UCP3
EZH2	OTOG	UGT1A1
EZR	OTOP1	UGT2B15
F11	OTULIN	UMOD
F13B	OTX2	UMPS
F2	P2RY8	UNC119
F5	P3H1	UNC13D
F7	P3H2	UNC45B
F8	P4HB	UNC80
F9	PABPN1	UNC93B1
FA2H	PACS1	UNG
FAAH	PAFAH1B1	UPB1
FAAP100	PAH	UPF1
FAAP24	PAK1	UPF3B
FADD	PAK3	UROD
FAH	PAK7	UROS
FAM126A	PALB2	USB1
FAM175A	PALLD	USH1C
FAM19A2	PANK2	USH1G
FAM20A	PAPPA	USH2A
FAM20C	PARK2	USP1
FAM46C	PARK7	USP16
FAM58A	PARN	USP18
FAN1	PARP1	USP25
FANCA	PARP2	USP42
FANCB	PARP3	USP6
FANCC	PARP4	USP8
FANCD2	PATZ1	USP9X
FANCE	PAX2	VAMP1
FANCF	PAX3	VAPB
FANCG	PAX5	VAV1
FANCI	PAX6	VCL
FANCL	PAX7	VCP
FANCM	PAX8	VDR

FARS2	PAX9	VEGFA
FAS	PBRM1	VEGFB
FASLG	PBX1	VEZF1
FAT1	PC	VGLL3
FAT3	PCBD1	VHL
FAT4	PCBP1	VIM
FBLN2	PCCA	VKORC1
FBLN5	PCCB	VPS13A
FBN1	PCDH11Y	VPS13B
FBN2	PCDH15	VPS13C
FBP1	PCDH19	VPS35
FBXO32	PCGF2	VPS37A
FBXO38	PCM1	VPS45
FBXO7	PCNA	VRK1
FBXW7	PCSK1	VSX2
FCGR1A	PCSK9	VTCN1
FCGR2A	PDCD1	VTN
FCGR2B	PDCD1LG2	VWF
FCGR3A	PDE11A	WAS
FCGR3B	PDE4DIP	WASF1
FCN3	PDE6D	WASF2
FCRL4	PDGFB	WBSCR17
FECH	PDGFRA	WDPCP
FEN1	PDGFRB	WDR1
FERMT3	PDHA1	WDR11
FEV	PDHB	WDR18
FEZF1	PDHX	WDR19
FGD4	PDIA3	WDR34
FGF1	PDK1	WDR35
FGF10	PDK3	WDR45
FGF12	PDLIM2	WDR48
FGF14	PDLIM3	WDR60
FGF19	PDP1	WDR70
FGF2	PDPK1	WFS1
FGF23	PDSS1	WHSC1
FGF3	PDZD7	WHSC1L1
FGF4	PDZRN3	WIPF1
FGF5	PEPD	WISP3
FGF6	PER1	WNK1
FGF7	PER2	WNK2
FGF8	PER3	WNT10A
FGF9	PEX1	WRAP53
FGFBP1	PEX10	WRN
FGFR1	PEX11B	WSB1
FGFR1OP	PEX12	WT1
FGFR1OP2	PEX13	WWOX
FGFR2	PEX14	WWP1
FGFR3	PEX16	WWTR1
FGFR4	PEX19	XDH
FH	PEX2	XIAP
FHIT	PEX26	XPA
FHL1	PEX3	XPC
FHL2	PEX5	XPNPEP3
FIG4	PEX6	XPO1
FIGF	PEX7	XPR1
FILIP1L	PFKM	XRCC1

FIP1L1	PFN1	XRCC2
FKBP14	PGAM2	XRCC3
FKBP9	PGAP3	XRCC4
FKRP	PGK1	XRCC5
FKTN	PGM1	XRCC6
FLCN	PGM3	YAP1
FLI1	PGR	YARS
FLNA	PHEX	YES1
FLNC	PHF1	YTHDF2
FLT1	PHF23	YWHAE
FLT3	PHF6	ZAP70
FLT3LG	PHGDH	ZBED4
FLT4	PHKA1	ZBTB16
FMO3	PHKA2	ZBTB2
FMR1	PHKB	ZBTB20
FN1	PHKG2	ZBTB24
FNBP1	PHOX2B	ZC3H7A
FNTA	PHYH	ZC3H7B
FOLR1	PICALM	ZEB2
FOSB	PIGA	ZFHX3
FOSL1	PIGF	ZFP64
FOXA1	PIGG	ZFPM2
FOXA2	PIGL	ZFYVE19
FOXC1	PIGM	ZFYVE26
FOXE3	PIGN	ZFYVE27
FOXG1	PIGO	ZIC1
FOXH1	PIGP	ZIC2
FOX1	PIGT	ZIC3
FOXL2	PIGV	ZMIZ1
FOXM1	PIGW	ZMYM2
FOXN1	PIH1D3	ZMYND10
FOXO1	PIK3C2B	ZMYND11
FOXO3	PIK3C2G	ZNF2
FOXO4	PIK3C3	ZNF207
FOXP1	PIK3CA	ZNF217
FOXP3	PIK3CB	ZNF226
FOXP4	PIK3CD	ZNF384
FPGS	PIK3CG	ZNF423
FPR1	PIK3R1	ZNF444
FRAS1	PIK3R2	ZNF473
FREM1	PIK3R3	ZNF521
FREM2	PILRA	ZNF585B
FRK	PILRB	ZNF595
FRRS1L	PIM1	ZNF687
FRS2	PIM2	ZNF703
FRYL	PINK1	ZRSR2

For further information connect with Raheel Biosciences Solutions.