

Nome gene	Nome gene	Nome gene	Nome gene	Nome gene	Nome gene
A	B	C	D	E	F
A2M	B2M	C11orf40	D2HGDH	E2F1	F10
A4GALT	B3GALNT1	C12orf10	DAAM1	E2F4	F11
A4GNT	B3GALNT2	C12orf4	DAB1	E2F5	F12
AAAS	B3GALT1	C12orf57	DAB2	EARS2	F13A1
AADAC	B3GALT2	C12orf65	DACH1	EBAG9	F13B
AADA2L2	B3GALT5	C12orf66	DAD1	EBF4	F2
AAGAB	B3GALT6	C14orf2	DAG1	EBP	F2R
AANAT	B3GAT1	C15orf41	DAO	ECE1	F2RL1
AARS	B3GAT2	C15orf62	DAOA	ECE2	F3
AARS2	B3GAT3	C16orf58	DAPK1	ECEL1	F5
AASS	B3GLCT	C18orf8	DAPK3	ECHS1	F7
ABAT	B3GNT2	C19orf12	DAPP1	ECI1	F8
ABCA1	B3GNT3	C1GALT1	DARS	ECM1	F9
ABCA10	B3GNT4	C1GALT1C1	DARS2	ECM2	FA2H
ABCA12	B3GNT5	C1orf127	DAXX	ECSIT	FAAH
ABCA13	B3GNT6	C1QA	DAZ1	EDA	FAAH2
ABCA2	B3GNT7	C1QB	DAZ2	EDA2R	FAAP100
ABCA3	B3GNT8	C1QC	DAZ3	EDAR	FAAP24
ABCA4	B4GALNT1	C1QTNF5	DAZ4	EDARADD	FABP1
ABCA5	B4GALNT2	C1R	DAZL	EDN1	FABP2
ABCA7	B4GALNT3	C1S	DBF4B	EDN2	FABP3
ABCB1	B4GALNT4	C2	DBH	EDN3	FABP4
ABCB11	B4GALT1	C21orf2	DBI	EDNRA	FABP6
ABCB4	B4GALT2	C21orf59	DBP	EDNRB	FABP7
ABCB5	B4GALT3	C21orf91	DBT	EDRF1	FADD
ABCB6	B4GALT4	C2CD3	DCAF11	EEF1A2	FADS2
ABCB7	B4GALT5	C2CD5	DCAF13	EEF1B2	FAH
ABCC1	B4GALT6	C2orf42	DCAF17	EEF2	FAM111A
ABCC11	B4GALT7	C2orf71	DCAF4	EEF2K	FAM111B
ABCC12	B4GAT1	C2orf80	DCAF8	EFCAB13	FAM120A
ABCC2	B9D1	C3	DCAKD	EFCAB5	FAM120AOS
ABCC3	B9D2	C3AR1	DCBLD1	EFEMP1	FAM120B
ABCC4	BAALC	C3orf35	DCBLD2	EFEMP2	FAM126A
ABCC6	BAAT	C4A	DCC	EFHC1	FAM136A
ABCC8	BABAM1	C4B	DCDC2	EFHC2	FAM161A
ABCC9	BACE1	C4BPA	DCHS1	EFNA5	ABRAXAS2
ABCD1	BACH1	C4orf19	DCK	EFNB1	FAM177A1
ABCD3	BAG3	C5	DCLK1	EFR3A	FAM189B
ABCD4	BAG6	C5AR2	DCLRE1A	EFTUD2	FAM205A
ABCG1	BANF1	C5orf42	DCLRE1B	EGF	FAM20A
ABCG2	BANK1	C6	DCLRE1C	EGFR	FAM20C
ABCG5	BAP1	C6orf15	DCN	EGLN1	FAM3C
ABCG8	BARD1	C7	DCP1B	EGR2	FAM46C
ABHD1	BARX2	C7orf43	DCPS	EGR3	FAM47B
ABHD12	BAX	C8A	DCTD	EHBP1	FAM71A
ABHD5	BAZ1B	C8B	DCTN1	EHD2	FAM81B
ABI3BP	BBIP1	C8orf37	DCX	EHHADH	FAM83H

ABL1	BBS1	C9	DCXR	EHMT1	FAM8A1
ABL2	BBS10	C9orf72	DDAH1	EHMT2	FAM91A1
ABO	BBS12	CA1	DDAH2	EIF2AK3	FAM9C
ABRAXAS1	BBS2	CA12	DDB1	EIF2AK4	FAN1
ACACA	BBS4	CA2	DDB2	EIF2B1	FANCA
ACACB	BBS5	CA4	DDC	EIF2B2	FANCB
ACAD10	BBS7	CA5A	DDHD1	EIF2B3	FANCC
ACAD11	BBS9	CA6	DDHD2	EIF2B4	FANCD2
ACAD8	BCAM	CA8	DDIT3	EIF2B5	FANCE
ACAD9	BCAP31	CABIN1	DDOST	EIF2D	FANCF
ACADL	BCAS2	CABP2	DDR1	EIF2S3	FANCG
ACADM	BCAT1	CABP4	DDR2	EIF3H	FANCI
ACADS	BCAT2	CACHD1	DDRGK1	EIF4A3	FANCL
ACADSB	BCHE	CACNA1A	DDX10	EIF4B	FANCM
ACADVL	BCKDHA	CACNA1B	DDX11	EIF4E	FAR1
ACAN	BCKDHB	CACNA1C	DDX20	EIF4G1	FARS2
ACAT1	BCKDK	CACNA1D	DDX25	EIF4H	FAS
ACAT2	BCL10	CACNA1E	DDX39B	ELAC2	FASLG
ACBD5	BCL11A	CACNA1F	DDX3X	ELANE	FASN
ACBD6	BCL2	CACNA1G	DDX3Y	ELAVL2	FASTKD2
ACCS	BCL2A1	CACNA1H	DDX47	ELAVL4	FAT1
ACE	BCL2L1	CACNA1S	DDX5	ELF4	FAT2
ACHE	BCL2L11	CACNA2D1	DDX53	ELK1	FAT3
ACKR1	BCL2L2	CACNA2D2	DDX58	ELK3	FAT4
ACKR3	BCL3	CACNA2D3	DDX59	ELMOD2	FBLIM1
ACLY	BCL6	CACNA2D4	DEAF1	ELMOD3	FBLN1
ACMSD	BCL7A	CACNB2	DEC1	ELN	FBLN2
ACO2	BCL9	CACNB4	DECR1	ELOA	FBLN5
ACOX1	BCLAF1	CACNG2	DEF6	ELOA2	FBN1
ACP1	BCO1	CACNG3	DEFB1	ELOA3	FBN2
ACP2	BCOR	CACNG4	DEFB124	ELOA3D	FBN3
ACP5	BCORL1	CADM1	DEFB126	ELOB	FBP1
ACP6	BCR	CADPS2	DEFB4A	ELOC	FBXL4
ACR	BCS1L	CALCA	DEK	ELOVL4	FBXL6
ACSF3	BDKRB2	CALCR	DENND1A	ELOVL5	FBXO10
ACSL4	BDNF	CALCRL	DENND5A	ELP1	FBXO11
ACSL5	BDP1	CALHM1	DENR	ELP2	FBXO18
ACSL6	BEAN1	CALM1	DEPDC5	ELP4	FBXO25
ACSM2B	BEND2	CALM2	DES	EMC1	FBXO28
ACSM3	BEST1	CALM3	DESI2	EMC4	FBXO31
ACTA1	BEX4	CALR	DGAT1	EMD	FBXO38
ACTA2	BFSP1	CALR3	DGAT2L6	EME1	FBXO7
ACTB	BFSP2	CAMK2G	DGCR2	EME2	FBXW11
ACTC1	BGN	CAMK4	DGCR5	EMG1	FBXW4
ACTG1	BHLHA9	CAMKK1	DGCR6	EML1	FBXW7
ACTG2	BHLHE41	CAMKK2	DGCR8	EML4	FCAR
ACTN1	BHMT	CAMKMT	DGKD	EMP2	FCER1A
ACTN2	BICC1	CAMP	DGKE	EMX1	FCER1G
ACTN3	BICD1	CAMSAP2	DGUOK	EMX2	FCER2
ACTN4	BICD2	CAMTA1	DHCR24	EN2	FCGR1A

ACTR3C	BICRA	CAMTA2	DHCR7	ENAM	FCGR2A
ACTRT1	BIN1	CANT1	DHDDS	ENDOV	FCGR2B
ACVR1	BIRC5	CAPN1	DHFR	ENG	FCGR2C
ACVR1B	BIVM	CAPN10	DHH	ENO1	FCGR3A
ACVR1C	BLK	CAPN12	DHODH	ENO3	FCGR3B
ACVR2A	BLM	CAPN13	DHRS4L1	ENOX1	FCGRT
ACVR2B	BLMH	CAPN3	DHTKD1	ENPP1	FCN1
ACVRL1	BLNK	CAPN5	DHX16	ENSA	FCN2
ACY1	BLOC1S3	CAPRIN1	DHX36	ENTPD1	FCN3
ADA	BLOC1S5	CARD11	DHX37	EOGT	FCRL3
ADA2	BLOC1S6	CARD14	DHX38	EOMES	FCRL6
ADAM10	BLVRA	CARD8	DIABLO	EP300	FDFT1
ADAM12	BMI1	CARD9	DIAPH1	EPAS1	FDX1L
ADAM17	BMP1	CARS2	DIAPH2	EPB41	FECH
ADAM19	BMP10	CARTPT	DIAPH3	EPB41L1	FEM1A
ADAM22	BMP15	CASC16	DICER1	EPB41L2	FEM1B
ADAM23	BMP2	CASC4	DIO1	EPB41L4A	FEN1
ADAM33	BMP2K	CASK	DIO2	EPB42	FERMT1
ADAM7	BMP3	CASP1	DIP2A	EPC2	FERMT3
ADAM9	BMP4	CASP10	DIP2B	EPCAM	FEV
ADAMTS1	BMP5	CASP12	DIP2C	EPG5	FEZF1
ADAMTS10	BMP7	CASP2	DIRC2	EPHA2	FEZF2
ADAMTS13	BMPER	CASP3	DIS3L2	EPHA3	FFAR1
ADAMTS16	BMPR1A	CASP5	DISC1	EPHA4	FFAR4
ADAMTS17	BMPR1B	CASP8	DISP1	EPHA5	FGA
ADAMTS18	BMPR2	CASP9	DKC1	EPHA6	FGB
ADAMTS19	BMS1	CASQ1	DKK1	EPHA7	FGD1
ADAMTS2	BNC2	CASQ2	DKK2	EPHB1	FGD3
ADAMTSL2	BOC	CASR	DKK3	EPHB2	FGD4
ADAMTSL3	BOLA1	CAST	DKK4	EPHB4	FGF1
ADAMTSL4	BOLA2	CAT	DLAT	EPHB6	FGF10
ADAR	BOLA2B	CATSPER1	DLC1	EPHX1	FGF13
ADARB1	BOLA3	CATSPER2	DLD	EPHX2	FGF14
ADCY1	BPGM	CATSPER3	DLEC1	EPM2A	FGF16
ADCY10	BPI	CATSPER4	DLG1	EPO	FGF17
ADCY3	BPIFA1	CAV1	DLG2	EPOR	FGF2
ADCY5	BPIFA3	CAV3	DLG3	EPS8	FGF20
ADCY6	BPIFB6	CAVIN1	DLG4	EPX	FGF22
ADCY9	BPY2	CAVIN4	DLG5	ERAP1	FGF23
ADCYAP1	BRAF	CBFA2T2	DLGAP2	ERAP2	FGF3
ADD1	BRAP	CBFA2T3	DLGAP3	ERBB2	FGF5
ADD2	BRAT1	CBFB	DLL1	ERBB3	FGF8
ADGRA2	BRCA1	CBL	DLL3	ERBB4	FGF9
ADGRA3	BRCA2	CBLB	DLL4	ERC1	FGFBP1
ADGRG1	BRCC3	CBR1	DLST	ERCC1	FGFR1
ADGRG4	BRD1	CBR3	DLX3	ERCC2	FGFR10P
ADGRV1	BRD2	CBS	DLX5	ERCC3	FGFR2
ADH1A	BRD4	CBX2	DLX6	ERCC4	FGFR3
ADH1B	BRF1	CBX4	DMAC2	ERCC5	FGFR4
ADH1C	BRIP1	CBY1	DMBT1	ERCC6	FGFRL1

ADH4	BRSK2	CC2D1A	DMBX1	ERCC6L2	FGG
ADH5	BRWD1	CC2D2A	DMC1	ERCC8	FH
ADH7	BRWD3	CCBE1	DMD	ERF	FHIT
ADIPOQ	BSCL2	CCDC103	DMGDH	ERG	FHL1
ADIPOR1	BSG	CCDC107	DMP1	ERLIN1	FHL2
ADK	BSND	CCDC114	DMPK	ERLIN2	FHOD3
ADM	BST1	CCDC127	DMRT1	ERMAP	FIG4
ADNP	BTAF1	CCDC14	DMXL1	ERMARD	FIGLA
ADORA1	BTBD9	CCDC148	DMXL2	ERRFI1	FIGN
ADORA2A	BTC	CCDC151	DNA2	ESAM	FIP1L1
ADORA3	BTD	CCDC170	DNAAF1	ESCO2	FKBP10
ADRA1A	BTK	CCDC18	DNAAF2	ESPL1	FKBP14
ADRA2A	BTLA	CCDC198	DNAAF3	ESPN	FKBP1A
ADRA2B	BTN1A1	CCDC22	DNAAF4	ESR1	FKBP4
ADRA2C	BTN2A1	CCDC28B	DNAAF5	ESR2	FKBP5
ADRB1	BTNL2	CCDC33	DNAH1	ESRRB	FKBP6
ADRB2	BTRC	CCDC39	DNAH11	ESRRG	FKBP8
ADRB3	BUB1	CCDC40	DNAH3	ESS2	FKBPL
ADSL	BUB1B	CCDC50	DNAH5	ETFA	FKRP
ADTRP	BUB3	CCDC6	DNAH7	ETFB	FKTN
AEBP1	BVES	CCDC62	DNAH9	ETFDH	FLCN
AFF2		CCDC65	DNAI1	ETHE1	FLG
AFF3		CCDC66	DNAI2	ETNPPL	FLI1
AFF4		CCDC78	DNAJA4	ETS1	FLNA
AFG3L2		CCDC8	DNAJB2	ETV4	FLNB
AFP		CCDC85C	DNAJB6	ETV6	FLNC
AGA		CCDC88C	DNAJC13	EVC	FLOT1
AGBL1		CCDC90B	DNAJC19	EVC2	FLRT1
AGBL4		CCHCR1	DNAJC3	EVI5	FLRT3
AGER		CCK	DNAJC30	EWSR1	FLT1
AGGF1		CCKAR	DNAJC5	EXO1	FLT3
AGK		CCKBR	DNAJC6	EXO5	FLT4
AGL		CCL11	DNAL1	EXOC4	FLVCR1
AGMO		CCL13	DNAL4	EXOC6B	FLVCR2
AGO1		CCL17	DNASE1	EXOC8	FMN1
AGO2		CCL2	DNASE1L3	EXOSC3	FMN2
AGPAT2		CCL22	DNASE2	EXOSC5	FMO1
AGPS		CCL26	DND1	EXOSC8	FMO2
AGRN		CCL3	DNM1	EXPH5	FMO3
AGRP		CCL3L1	DNM1L	EXT1	FMO4
AGT		CCL4L1	DNM2	EXT2	FMO5
AGTPBP1		CCL5	DNMT1	EXTL1	FMO6P
AGTR1		CCL7	DNMT3A	EXTL2	FMOD
AGTR2		CCM2	DNMT3B	EXTL3	FMR1
AGXT		CCNA2	DNMT3L	EYA1	FN1
AGXT2		CCND1	DNTT	EYA4	FN3K
AHCY		CCND2	DOC2A	EYS	FNBP1
AHDC1		CCND3	DOCK3	EZH2	FNBP4
AHI1		CCNE1	DOCK4		FOLH1
AHNAK2		CCNH	DOCK6		FOLR1

AHR	CCNO	DOCK7	FOS
AHRR	CCNQ	DOCK8	FOXA1
AHSG	CCNT2	DOCK9	FOXA2
AHSP	CCPG1	DOK1	FOXA3
AICDA	CCR1	DOK2	FOXC1
AIF1	CCR2	DOK5	FOXC2
AIFM1	CCR3	DOK7	FOXD1
AIMP1	CCR5	DOLK	FOXD3
AIP	CCR6	DOLPP1	FOXD4
AIPL1	CCR7	DOT1L	FOXE1
AIRE	CCRL2	DPAGT1	FOXE3
AK1	CCSER1	DPCD	FOXF1
AK2	CCT5	DPH1	FOXF2
AK7	CCT7	DPM1	FOXG1
AK8	CD109	DPM2	FOXH1
AKAP1	CD14	DPM3	FOXI1
AKAP10	CD151	DPP10	FOXJ1
AKAP13	CD177	DPP3	FOXK1
AKAP2	CD19	DPP4	FOXL1
AKAP9	CD1A	DPP6	FOXL2
AKR1B1	CD1E	DPY19L2	FOXM1
AKR1C2	CD200	DPYD	FOXN1
AKR1C3	CD207	DPYS	FOXO1
AKR1C4	CD209	DPYSL2	FOXP1
AKR1D1	CD22	DRC1	FOXP2
AKR7A2	CD226	DRD1	FOXP3
AKR7A3	CD24	DRD2	FOXP4
AKT1	CD244	DRD3	FOXRED1
AKT2	CD247	DRD4	FPGS
AKT3	CD27	DRD5	FPR1
ALAD	CD2AP	DROSHA	FPR2
ALAS2	CD320	DRP2	FRA10AC1
ALB	CD36	DSC2	FRAS1
ALCAM	CD38	DSC3	FREM1
ALDH16A1	CD3D	DSCAM	FREM2
ALDH18A1	CD3E	DSCR8	FREM3
ALDH1A1	CD3EAP	DSE	FRG1
ALDH1A2	CD3G	DSG1	FRK
ALDH1A3	CD4	DSG2	FRMD5
ALDH1B1	CD40	DSG3	FRMD6
ALDH2	CD40LG	DSG4	FRMD7
ALDH3A2	CD44	DSP	FRMPD4
ALDH4A1	CD46	DSPP	FRRS1L
ALDH5A1	CD5	DST	FRY
ALDH6A1	CD55	DSTYK	FRZB
ALDH7A1	CD58	DTHD1	FSBP
ALDOA	CD59	DTNA	FSCB
ALDOB	CD72	DTNB	FSCN2
ALG1	CD74	DTNBP1	FSHB
ALG10	CD79A	DUOX1	FSHR

ALG10B	CD79B	DUOX2	FST
ALG11	CD80	DUOXA2	FSTL1
ALG12	CD81	DUSP15	FSTL4
ALG13	CD82	DUSP22	FSTL5
ALG14	CD86	DUSP23	FTCD
ALG2	CD8A	DUSP3	FTH1
ALG3	CD96	DUSP6	FTHL17
ALG5	CDA	DUT	FTL
ALG6	CDAN1	DUX4	FTO
ALG8	CDKAL1	DUX4L3	FTSJ1
ALG9	CDC25A	DVL1	FUBP1
ALK	CDC25C	DVL2	FUCA1
ALKBH2	CDC27	DXO	FURIN
ALKBH3	CDC42	DYM	FUS
ALMS1	CDC42BPB	DYNAP	FUT1
ALOX12	CDC5L	DYNC1H1	FUT2
ALOX12B	CDC6	DYNC1I1	FUT3
ALOX15	CDC73	DYNC2H1	FUT6
ALOX5	CDCA7L	DYRK1A	FUT7
ALOX5AP	CDH1	DYRK1B	FUT8
ALOXE3	CDH12	DYSF	FUZ
ALPL	CDH13		FXN
ALPP	CDH15		FXYD2
ALS2	CDH18		FXYD6
ALS2CL	CDH19		FYB2
ALX1	CDH2		FYCO1
ALX3	CDH20		FZD1
ALX4	CDH23		FZD3
AMACR	CDH3		FZD4
AMBN	CDH5		FZD6
AMD1	CDH8		FZD9
AMELX	CDH9		FZR1
AMELY	CDHR1		
AMER1	CDK11A		
AMH	CDK12		
AMHR2	CDK16		
AMN	CDK19		
AMPD1	CDK4		
AMPD2	CDK5		
AMPD3	CDK5R1		
AMT	CDK5RAP2		
ANAPC1	CDK5RAP3		
ANG	CDK6		
ANGPT1	CDK7		
ANGPT2	CDK8		
ANGPTL3	CDKL3		
ANGPTL4	CDKL5		
ANGPTL5	CDKN1A		
ANGPTL6	CDKN1B		
ANK1	CDKN1C		

ANK2	CDKN2A
ANK3	CDKN2AIP
ANKH	CDKN2B
ANKK1	CDKN2B-AS1
ANKLE2	CDKN2C
ANKRD1	CDON
ANKRD11	CDSN
ANKRD26	CDT1
ANKRD28	CDX1
ANKRD44	CDX2
ANKRD52	CDY1
ANKS1A	CDY2A
ANKS1B	CDYL
ANKS3	CEACAM16
ANKS6	CEBPA
ANLN	CEBPE
ANO10	CECR2
ANO3	CEL
ANO5	CELF4
ANO6	CELF6
ANO7	CELSR1
ANOS1	CELSR2
ANTXR1	CEMIP
ANTXR2	CENPE
ANXA1	CENPJ
ANXA11	CENPS
ANXA5	CENPX
AOAH	CEP120
AOC1	CEP126
AP1S1	CEP135
AP1S2	CEP152
AP1S3	CEP164
AP2S1	CEP170B
AP3B1	CEP19
AP3B2	CEP250
AP3D1	CEP290
AP4B1	CEP41
AP4E1	CEP57
AP4M1	CEP63
AP4S1	CEP68
AP5Z1	CEP83
APAF1	CEP85L
APBA2	CEP89
APBB1	CER1
APBB1IP	CERKL
APBB2	CERS3
APBB3	CERS6
APC	CES1
APC2	CES2
APCDD1	CETN2

APCS	CETP
APEX1	CFAP53
APEX2	CFAP57
APH1A	CFB
APH1B	CFC1
APLF	CFD
APLNR	CFH
APOA1	CFHR1
APOA2	CFHR2
APOA4	CFHR3
APOA5	CFHR4
APOB	CFHR5
APOBEC1	CFI
APOBEC3B	CFL1
APOBEC3G	CFL2
APOBEC3H	CFLAR
APOC1	CFP
APOC2	CFTR
APOC3	CGA
APOC4	CGB3
APOD	CGNL1
APOE	CHAF1B
APOH	CHAMP1
APOL1	CHAT
APOL2	CHCHD10
APOL3	CHD1
APOL4	CHD1L
APOL6	CHD2
APOM	CHD3
APOPT1	CHD4
APP	CHD6
APRT	CHD7
APTX	CHD8
AQP1	CHDH
AQP2	CHEK1
AQP3	CHEK2
AQP4	CHFR
AQP5	CHGA
AQP7	CHGB
AR	CHI3L1
ARAF	CHI3L2
AREG	CHIA
AREL1	CHIC2
ARF4	CHIT1
ARFGEF2	CHKB
ARFRP1	CHL1
ARG1	CHM
ARHGAP18	CHMP1A
ARHGAP24	CHMP2B
ARHGAP26	CHMP4B

ASB10	CLCN3
ASCC1	CLCN4
ASCC3	CLCN5
ASCL1	CLCN6
ASH1L	CLCN7
ASIC3	CLCNKA
ASIP	CLCNKB
ASL	CLDN1
ASMT	CLDN14
ASMTL	CLDN16
ASNS	CLDN19
ASPA	CLDN23
ASPH	CLEC10A
ASPM	CLEC11A
ASPN	CLEC2D
ASPRV1	CLEC3B
ASPSCR1	CLEC4D
ASS1	CLEC4E
ASTN2	CLEC4M
ASXL1	CLEC7A
ASXL3	CLHC1
ATAD3A	CLIC2
ATAD3B	CLIC5
ATCAY	CLIP1
ATF1	CLIP2
ATF3	CLK1
ATF5	CLK2
ATF6	CLMP
ATG16L1	CLN3
ATG7	CLN5
ATIC	CLN6
ATL1	CLN8
ATL3	CLNK
ATM	CLOCK
ATN1	CLP1
ATOH7	CLPB
ATP10A	CLPP
ATP10D	CLPS
ATP11B	CLPTM1
ATP13A2	CLPTM1L
ATP13A4	CLRN1
ATP13A5	CLSTN1
ATP1A1	CLSTN2
ATP1A2	CLTCL1
ATP1A3	CLU
ATP1B1	CLUL1
ATP1B4	CLYBL
ATP2A1	CMA1
ATP2A2	CMIP
ATP2A3	CMPK1

ATP2B2	CNBP
ATP2B3	CNDP1
ATP2B4	CNDP2
ATP2C1	CNGA1
ATP5A1	CNGA3
ATP5B	CNGB1
ATP5C1	CNGB3
ATP5E	CNKSR1
ATP5G1	CNKSR2
ATP5G2	CNN2
ATP5G3	CNNM2
ATP5I	CNNM4
ATP5J	CNOT3
ATP5O	CNOT4
ATP6AP2	CNPY3
ATP6V0A1	CNR1
ATP6V0A2	CNR2
ATP6V0A4	CNTF
ATP6V0C	CNTLN
ATP6V1B1	CNTN1
ATP6V1B2	CNTN2
ATP7A	CNTN4
ATP7B	CNTN6
ATP8A2	CNTNAP1
ATP8B1	CNTNAP2
ATPAF2	CNTNAP4
ATR	CNTNAP5
ATRIP	COA1
ATRN	COA5
ATRNL1	COA6
ATRX	COASY
ATXN1	COCH
ATXN10	COG1
ATXN2	COG2
ATXN3	COG3
ATXN3L	COG4
ATXN7	COG5
ATXN8OS	COG6
AUH	COG7
AUP1	COG8
AURKA	COL10A1
AURKB	COL11A1
AURKC	COL11A2
AUTS2	COL12A1
AVP	COL15A1
AVPR1A	COL17A1
AVPR1B	COL18A1
AVPR2	COL1A1
AXIN1	COL1A2
AXIN2	COL21A1

AXL
AZIN2

COL25A1
COL27A1
COL2A1
COL3A1
COL4A1
COL4A2
COL4A3
COL4A3BP
COL4A4
COL4A5
COL4A6
COL5A1
COL5A2
COL6A1
COL6A2
COL6A3
COL6A4P2
COL6A5
COL6A6
COL7A1
COL8A2
COL9A1
COL9A2
COL9A3
COLEC11
COLQ
COMMD1
COMP
COMT
COPS2
COQ2
COQ4
COQ5
COQ6
COQ8A
COQ8B
COQ9
CORIN
CORO1A
COX10
COX14
COX15
COX20
COX4I1
COX4I2
COX5A
COX5B
COX6A1
COX6B1
COX6C

COX7A1
COX7A2
COX7B
COX7B2
COX7C
CP
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CPOX
CPQ
CPS1
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CPT1C
CPT2
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CPZ
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CR2
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CRAT
CRB1
CRB2
CRBN
CREB1
CREB3
CREB3L1
CREB3L3
CREBBP
CRELD1
CRELD2
CRH
CRHR1
CRIM1
CRIPT
CRISP2
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CRKL
CRLF1
CRMP1
CROCC
CRP
CRTAP
CRTC1
CRX

CRY1
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CRYAB
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CRYBB3
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CRYGD
CRYGEP
CRYGS
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CRYM
CRYZL1
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CSF1R
CSF2
CSF2RA
CSF2RB
CSF3R
CSGALNACT1
CSH1
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CSMD3
CSNK1A1L
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CSNK1E
CSNK1G1
CSNK2A2
CSNK2A3
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CST9
CSTA
CSTB
CSTF2
CSTF2T
CT45A2
CTC1
CTCF
CTDP1

CTF1
CTGF
CTH
CTHRC1
CTLA4
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CTNNA3
CTNNB1
CTNND1
CTNND2
CTNS
CTPS1
CTRC
CTSA
CTSB
CTSC
CTSD
CTSF
CTSG
CTSK
CTSZ
CTTNBP2
CUBN
CUEDC1
CUL2
CUL3
CUL4A
CUL4B
CUL5
CUL7
CUX1
CUX2
CWF19L1
CX3CL1
CX3CR1
CXCL10
CXCL11
CXCL12
CXCL16
CXCL5
CXCL8
CXCR1
CXCR3
CXCR4
CXCR6
CYB5A
CYB5R3
CYB5R4
CYBA

CYBB
CYBRD1
CYC1
CYCS
CYFIP1
CYLD
CYP11A1
CYP11B1
CYP11B2
CYP17A1
CYP19A1
CYP1A1
CYP1A2
CYP1B1
CYP21A2
CYP24A1
CYP26A1
CYP26B1
CYP26C1
CYP27A1
CYP27B1
CYP2A13
CYP2A6
CYP2B6
CYP2C18
CYP2C19
CYP2C8
CYP2C9
CYP2D6
CYP2D7
CYP2E1
CYP2F1
CYP2G1P
CYP2J2
CYP2R1
CYP2U1
CYP2W1
CYP3A4
CYP3A43
CYP3A5
CYP3A7-CYP3A51P
CYP3A7
CYP46A1
CYP4A11
CYP4A22
CYP4B1
CYP4F12
CYP4F2
CYP4F22
CYP4F3

CYP4V2
CYP7A1
CYP7B1
CYR61
CYS1
CYSLTR1
CYSLTR2

Nome gene	Nome gene	Nome gene	Nome gene	Nome gene	Nome gene	Nome gene
G	H	I	J	K	L	M
G6PC	H19	IAPP	JAG1	KALRN	L1CAM	MAB21L2
G6PC2	H2AFX	IARS2	JAG2	KANK1	L2HGDH	MACC1
G6PC3	H2BFWT	IBA57	JAGN1	KANK2	L3MBTL1	MACF1
G6PD	H3F3A	IBSP	JAK1	KANK4	LACTB	MACROD2
GAA	H6PD	ICAM1	JAK2	KANSL1	LAMA1	MAD1L1
GAB2	HABP2	ICAM4	JAK3	KANSL2	LAMA2	MAD2L1
GABARAPL1	HACD1	ICAM5	JAM3	KARS	LAMA3	MADD
GABBR1	HACE1	ICK	JARID2	KAT2A	LAMA4	MAEA
GABBR2	HADH	ICOS	JCAD	KAT6A	LAMA5	MAF
GABRA1	HADHA	ID3	JMJD1C	KAT6B	LAMB1	MAFA
GABRA2	HADHB	ID4	JMJD7-PLA2G4B	KATNAL2	LAMB2	MAFB
GABRA5	HAGH	IDE	JPH2	KATNB1	LAMB3	MAG
GABRA6	HAL	IDH1	JPH3	KBTBD13	LAMB4	MAGEC3
GABRB3	HAMP	IDH2	JRK	KCNA1	LAMC1	MAGEE2
GABRD	HAND1	IDH3B	JUN	KCNA2	LAMC2	MAGEL2
GABRG1	HAND2	IDO1	JUNB	KCNA3	LAMC3	MAGI1
GABRG2	HAP1	IDS	JUP	KCNA4	LAMP2	MAGI2
GABRG3	HAPLN1	IDUA		KCNA5	LAMTOR2	MAGT1
GABRR2	HARS	IER3IP1		KCNA6	LAPTM4B	MAK
GAD1	HARS2	IFI30		KCNAB1	LARGE1	MALT1
GAD2	HAS1	IFI44L		KCNAB2	LARGE2	MAML2
GADD45A	HAS2	IFIH1		KCNB1	LARP7	MAMLD1
GADD45B	HAVCR1	IFITM3		KCNB2	LARS	MAN1A2
GAGE8	HAX1	IFITM5		KCNC1	LARS2	MAN1B1
GAK	HBA1	IFNA1		KCNC2	LAS1L	MAN2A1
GAL3ST1	HBA2	IFNA10		KCNC3	LAT2	MAN2B1
GAL3ST2	HBB	IFNA17		KCND2	LBH	MANBA
GAL3ST3	HBD	IFNA2		KCND3	LBP	MANBAL
GAL3ST4	HBE1	IFNAR1		KCNE1	LBR	MANSC1
GALC	HBEGF	IFNAR2		KCNE2	LCA5	MAOA
GALE	HBG1	IFNB1		KCNE3	LCAT	MAOB
GALK1	HBG2	IFNG		KCNE4	LCE3B	MAP1A
GALNS	HBM	IFNGR1		KCNE5	LCE3C	MAP2
GALNT11	HBQ1	IFNGR2		KCNH1	LCE5A	MAP2K1
GALNT12	HBS1L	IFNL3		KCNH2	LCK	MAP2K2
GALNT13	HBZ	IFNL4		KCNH3	LCN10	MAP2K3
GALNT14	HCAR1	IFRD1		KCNH5	LCT	MAP2K4
GALNT17	HCCS	IFT122		KCNIP4	LDB1	MAP2K7
GALNT18	HCFC1	IFT140		KCNJ1	LDB3	MAP3K1
GALNT2	HCK	IFT172		KCNJ10	LDHA	MAP3K14
GALNT3	HCLS1	IFT27		KCNJ11	LDHB	MAP3K15
GALNT5	HCN1	IFT43		KCNJ12	LDLR	MAP3K6
GALNT6	HCN2	IFT80		KCNJ13	LDLRAD4	MAP3K8
GALNT7	HCN3	IFT88		KCNJ15	LDLRAP1	MAP4
GALNT8	HCN4	IGBP1		KCNJ2	LECT2	MAP4K5
GALNT9	HCP5	IGF1		KCNJ3	LEF1	MAP6
GALNTL5	HCRT	IGF1R		KCNJ5	LEFTY2	MAP7D1

GALNTL6	HCRTR1	IGF2	KCNJ6	LEMD3	MAP7D3
GALP	HCRTR2	IGF2BP2	KCNJ8	LEP	MAPK1
GALT	HDAC1	IGF2R	KCNJ9	LEPR	MAPK10
GAMT	HDAC4	IGFALS	KCNK17	P3H1	MAPK14
GAN	HDAC6	IGFBP1	KCNK18	LETM1	MAPK3
GAP43	HDAC8	IGFBP3	KCNK3	LFNG	MAPK8IP1
GARS	HDAC9	IGFBP5	KCNK6	LGALS13	MAPRE2
GAS1	HDC	IGFBP7	KCNK9	LGALS2	MAPT
GAS2L2	HDGFL2	IGHA1	KCNMA1	LGALS3	MARCH3
GAS6	HDHD5	IGHG2	KCNMB1	LGI1	MARK1
GATA1	HDLBP	IGHM	KCNMB3	LGI4	MARS
GATA2	HDX	IGHMBP2	KCNMB4	LGR4	MARS2
GATA3	HELQ	IGKV1-5	KCNN2	LGR5	MARVELD2
GATA4	HEPACAM	IGLL1	KCNN3	LHB	MASP1
GATA5	HEPACAM2	IGSF1	KCNQ1	LHCGR	MASP2
GATA6	HEPH	IGSF3	KCNQ2	LHFPL5	MAST4
GATAD1	HERC1	IGSF8	KCNQ3	LHX1	MASTL
GATAD2B	HERC2	IHH	KCNQ4	LHX3	MAT1A
GATM	HES1	IKBIP	KCNQ5	LHX4	MAT2A
GBA	HES6	IKBKB	KCNS1	LHX8	MATN3
GBA2	HES7	IKBKE	KCNS3	LIAS	MATN4
GBA3	HESX1	IKBKG	KCNT1	LIF	MATR3
GBE1	HEXA	IKZF1	KCNV1	LIFR	MAVS
GBGT1	HEXB	IKZF3	KCNV2	LIG1	MAX
GC	HEY1	IL10	KCTD1	LIG3	MBD1
GCDH	HEY2	IL10RA	KCTD13	LIG4	MBD3
GCG	HFE	IL10RB	KCTD3	LILRA3	MBD4
GCGR	HFE2	IL11	KCTD7	LIM2	MBD5
GCH1	HFM1	IL11RA	KDM1A	LIMK1	MBD6
GCK	HGD	IL12A	KDM3A	LIMS2	MBL2
GCKR	HGF	IL12B	KDM4C	LIN28A	MBNL1
GCLC	HGSNAT	IL12RB1	KDM5A	LIN28B	MBOAT7
GCLM	HHEX	IL12RB2	KDM5B	LIN7A	MBTPS2
GCM2	HHIP	IL13	KDM5C	LINGO2	MC1R
GCNT1	HIBADH	IL15	KDM5D	LINS1	MC2R
GCNT2	HIBCH	IL16	KDM6A	LIPA	MC3R
GCSH	HID1	IL17A	KDM6B	LIPC	MC4R
GDAP1	HIF1A	IL17F	KDR	LIPE	MCC
GDF1	HIF1AN	IL17RA	KDSR	LIPG	MCCC1
GDF15	HIGD2A	IL17RB	KEAP1	LIPH	MCCC2
GDF2	HINT1	IL17RD	KEL	LIPI	MCEE
GDF3	HIP1	IL17REL	KERA	LIPN	MCF2
GDF5	HIST1H2AE	IL18	KHDC3L	LIPT1	MCF2L2
GDF6	HIST1H4B	IL18R1	KHK	LITAF	MCFD2
GDF9	HIST2H4A	IL18RAP	KIAA0100	LLGL1	MCHR1
GDI1	HIST3H3	IL19	KIAA0232	LMAN1	MCL1
GDNF	HIVEP2	IL1A	KIAA0319	LMAN2L	MCM3AP
GEMIN2	HK1	IL1B	KIAA0513	LMBR1	MCM4
GEMIN4	HK2	IL1R1	KIAA1109	LMBRD1	MCM5
GEN1	HLA-A	IL1RAPL1	KIAA1210	LMF1	MCM6

GFAP	HLA-B	IL1RL1	KIAA1217	LMNA	MCM8
GFER	HLA-C	IL1RN	KIAA1549	LMNB1	MCM9
GFI1	HLA-DMB	IL2	KIAA1586	LMNB2	MCOLN1
GFI1B	HLA-DOA	IL20RA	KIF11	LMO1	MCPH1
GFM1	HLA-DPB1	IL20RB	KIF14	LMO2	MCTP2
GFM2	HLA-DPB2	IL21	KIF17	LMO4	MCUB
GFPT1	HLA-DQA1	IL21R	KIF18A	LMOD3	MDC1
GFPT2	HLA-DQB1	IL23R	KIF1A	LMTK3	MDGA2
GFRA1	HLA-DRA	IL2RA	KIF1B	LMX1B	MDH1
GFRA2	HLA-DRB1	IL2RG	KIF1BP	LNX2	MDH2
GGCX	HLA-DRB5	IL3	KIF1C	loc344967	MDK
GGH	HLA-E	IL31RA	KIF21A	LONP1	MDM2
GGT5	HLA-G	IL34	KIF22	LOR	MDM4
GH1	HLCS	IL36RN	KIF23	LOX	MDN1
GH2	HLTF	IL4	KIF27	LOXHD1	ME2
GHR	HLX	IL4R	KIF2A	LOXL1	MECOM
GHRH	HMBS	IL5	KIF3C	LOXL2	MECP2
GHRHR	HMCN1	IL6	KIF4A	LPA	MED12
GHRL	HMG20B	IL6R	KIF5A	LPAR1	MED13
GHSR	HMGA1	IL6ST	KIF5B	LPAR6	MED13L
GIF	HMGA2	IL7	KIF5C	LPIN1	MED17
GIGYF2	HMGB1	IL7R	KIF6	LPIN2	MED20
GIMAP8	HMGB3	IL9	KIF7	LPIN3	MED23
GIP	HMGCL	IL9R	KIFAP3	LPL	MED25
GIPC3	HMGCR	ILDR1	KIR2DL1	LPP	MEF2A
GIPR	HMGCS2	ILK	KIR2DL3	LRAT	MEF2C
GIT1	HMMR	IMMP2L	KIR2DL4	LRBA	MEFV
GJA1	HMOX1	IMMT	KIR3DL1	LRCH1	MEGF10
GJA3	HMOX2	IMPA2	KIR3DL2	LRFN5	MEGF11
GJA4	HMSD	IMPAD1	KIRREL3	LRGUK	MEGF8
GJA5	HMX1	IMPDH1	KISS1	LRIG2	MEIS1
GJA8	HMX2	IMPDH2	KISS1R	LRIT3	MEIS2
GJB1	HNF1A	IMPG1	KIT	LRMDA	MELK
GJB2	HNF1B	IMPG2	KITLG	LRP1	MELTF
GJB3	HNF4A	INF2	KIZ	LRP1B	MEN1
GJB4	HNMT	ING1	KL	LRP2	MEOX1
GJB6	HNRNPA1	INHA	KLB	LRP4	MEP1B
GJC2	HNRNPA2B1	INHBA	KLC1	LRP5	MEPE
GJC3	HNRNPDL	INMT	KLF1	LRP6	MERTK
GJD2	HNRNPH3	INO80	KLF10	LRP8	MESD
GK	HNRNPU	INPP4A	KLF11	LRPAP1	MESP1
GLA	HOGA1	INPP5B	KLF5	LRPPRC	MESP2
GLB1	HOMER2	INPP5D	KLF6	LRRC29	MEST
GLCC1	HOMEZ	INPP5K	KLF7	LRRC4	MET
GLDC	HOXA1	INPPL1	KLF8	LRRC41	METTL14
GLE1	HOXA10	INS	KLHDC8B	LRRC6	METTL23
GLI1	HOXA11	INSIG1	KLHL10	LRRC69	MFAP4
GLI2	HOXA13	INSIG2	KLHL15	LRRC8A	MFAP5
GLI3	HOXA2	INSL3	KLHL3	LRRFIP2	MFF
GLIS2	HOXA3	INSL6	KLHL40	LRRIQ1	MFGE8

GLIS3	HOXA4	INSR	KLHL41	LRRK2	MFHAS1
GLMN	HOXB1	INTU	KLHL6	LRRTM1	MFN2
GLO1	HOXB13	INVS	KLHL7	LRSAM1	MFRP
GLP1R	HOXB6	IPP	KLHL9	LRTOMT	MFSD2A
GLRA1	HOXB8	IQCB1	KLK1	LTA	MFSD4B
GLRA4	HOXC13	IQCE	KLK12	LTBP1	MFSD8
GLRB	HOXD10	IQGAP1	KLK15	LTBP2	MGAT1
GLRX5	HOXD13	IQGAP2	KLK3	LTBP3	MGAT2
GLS	HOXD4	IQGAP3	KLK4	LTBP4	MGAT3
GLTP	HP	IQSEC2	KLK7	LTBR	MGAT4A
GLUD1	HPCA	IRAK1	KLKB1	LTC4S	MGAT4B
GLUD2	HPCAL4	IRAK3	KLLN	LTF	MGAT4C
GLUL	HPD	IRAK4	KLRK1	LTK	MGAT5
GLYCTK	HPGD	IRF1	KMT2A	LTN1	MGAT5B
GM2A	HPRT1	IRF2	KMT2C	LUM	MGEA5
GMDS	HPS1	IRF4	KMT2D	LUZP2	MGLL
GMIP	HPS3	IRF5	KMT2E	LUZP4	MGME1
GMPPA	HPS4	IRF6	KMT5A	LY6G6F	MGMT
GMPPB	HPS5	IRF7	KMT5B	LY96	MGP
GMPS	HPS6	IRF8	KNG1	LYL1	MGST2
GNA11	HPSE2	IRF9	KNL1	LYN	MGST3
GNA13	HR	IRGM	KPNA1	LYRM4	MIA3
GNA14	HRAS	IRS1	KPNA7	LYRM7	MIAT
GNAI2	HRC	IRS2	KPTN	LYST	MIB1
GNAI3	HRG	IRS4	KRAS	LYZ	MICA
GNAL	HRH2	IRX4	KRIT1	LZTFL1	MICAL3
GNAO1	HRH3	IRX5	KRT1	LZTR1	MICALCL
GNAQ	HS1BP3	ISCA2	KRT10	LZTS1	MICB
GNAS	HS6ST1	ISCU	KRT12		MICU1
GNAS-AS1	HSD11B1	ISG15	KRT13		MID1
GNAT1	HSD11B2	ISL1	KRT14		MID2
GNAT2	HSD17B1	ISPD	KRT16		MIF
GNB1L	HSD17B10	ISYNA1	KRT17		MIIP
GNB3	HSD17B2	ITCH	KRT18		MINDY2
GNB4	HSD17B3	ITGA1	KRT2		MINPP1
GNB5	HSD17B4	ITGA11	KRT3		MIP
GNE	HSD3B1	ITGA2	KRT31		MIPOL1
GNG2	HSD3B2	ITGA2B	KRT37		MIR106B
GNG7	HSD3B7	ITGA3	KRT38		MIR124-1
GNMT	HSF1	ITGA4	KRT4		MIR125A
GNPAT	HSF4	ITGA5	KRT5		MIR126
GNPTAB	HSFY1	ITGA6	KRT6A		MIR140
GNPTG	HSP90AA1	ITGA7	KRT6B		MIR146A
GNRH1	HSP90B1	ITGA8	KRT6C		MIR16-1
GNRHR	HSPA1A	ITGA9	KRT71		MIR17
GNS	HSPA1B	ITGAE	KRT74		MIR17HG
GOLGA3	HSPA1L	ITGAM	KRT75		MIR182
GOLGA5	HSPA5	ITGB1	KRT8		MIR184
GON4L	HSPA8	ITGB2	KRT81		MIR191
GOPC	HSPA9	ITGB3	KRT83		MIR196A2

GORAB	HSPB1	ITGB4	KRT85	MIR206
GOSR2	HSPB3	ITGB6	KRT86	MIR24-1
GOT1	HSPB6	ITIH1	KRT9	MIR27A
GP1BA	HSPB7	ITIH3	KRTAP1-1	MIR2861
GP1BB	HSPB8	ITIH4	KRTAP4-8	MIR30C1
GP2	HSPD1	ITIH6	KRTAP9-3	MIR34B
GP6	HSPG2	ITK	KYNU	MIR499A
GP9	HTN3	ITM2B		MIR502
GPAM	HTR1A	ITPA		MIR510
GPANK1	HTR1B	ITPK1		MIR890
GPATCH8	HTR2A	ITPKC		MIR892B
GPBAR1	HTR2B	ITPR1		MIR934
GPC3	HTR2C	ITPR2		MIR96
GPC4	HTR3A	ITPR3		MIRLET7E
GPC5	HTR3B	ITSN1		MITF
GPC6	HTR3C	ITSN2		MKKS
GPD1	HTR3E	IVD		MKL1
GPD1L	HTR5A	IYD		MKL2
GPD2	HTR6			MKRN3
GPHN	HTR7			MKS1
GPI	HTRA1			MLC1
GPIHBP1	HTRA2			MLF1
GPNMB	HTT			MLH1
GPR1	HUS1			MLH3
GPR101	HUS1B			MLLT10
GPR12	HUWE1			MLLT11
GPR132	HVCN1			MLLT3
GPR137B	HYAL1			MLPH
GPR139	HYDIN			MLXIPL
GPR143	HYLS1			MLYCD
GPR152	HYMAI			MMAA
GPR179				MMAB
GPR33				MMACHC
GPR37				MMADHC
GPR55				MME
GPR68				MMEL1
GPRC5A				MMP1
GPRIN3				MMP10
GPS1				MMP12
GPSM2				MMP13
GPT				MMP14
GPT2				MMP19
GPX1				MMP2
GPX4				MMP20
GRB10				MMP3
GREM1				MMP7
GRHL1				MMP8
GRHL2				MMP9
GRHL3				MMRN2
GRHPR				MMS19

GRIA1	MN1
GRIA2	MNAT1
GRIA3	MND1
GRID1	MNX1
GRID2	MOB4
GRIK1	MOCOS
GRIK2	MOCS1
GRIK3	MOCS2
GRIK4	MOG
GRIN1	MOGS
GRIN2A	MOK
GRIN2B	MOV10
GRIN3A	MPC1
GRIP1	MPDU1
GRK1	MPDZ
GRK3	MPG
GRK4	MPHOSPH8
GRK5	MPI
GRM1	MPL
GRM3	MPLKIP
GRM5	MPO
GRM6	MPP3
GRM7	MPP4
GRM8	MPP6
GRN	MPP7
GRPR	MPST
GRXCR1	MPV17
GRXCR2	MPZ
GSC	MR1
GSDMA	MRAP
GSDMB	MRAP2
GSDME	MRC1
GSE1	MRE11A
GSK3B	MREG
GSN	MRI1
GSPT1	MRPL12
GSPT2	MRPL3
GSR	MRPL36
GSS	MRPL40
GSTA1	MRPL44
GSTA2	MRPL48
GSTA3	MRPS16
GSTK1	MRPS2
GSTM1	MRPS22
GSTM3	MRRF
GSTM4	MS4A1
GSTO1	MS4A10
GSTO2	MS4A12
GSTP1	MS4A2
GSTT1	MS4A3

GSTT2
GSTT2B
GSTZ1
GTF2E1
GTF2H1
GTF2H2
GTF2H2C
GTF2H3
GTF2H4
GTF2H5
GTF2I
GTF2IRD1
GTF2IRD2
GTPBP3
GUCA1A
GUCA1B
GUCY1A2
GUCY1A3
GUCY2C
GUCY2D
GUCY2F
GULOP
GUSB
GYG1
GYG2
GYPA
GYPB
GYPC
GYPE
GYS1
GYS2
GZMB

MS4A6A
MS4A6E
MSH2
MSH3
MSH4
MSH5
MSH6
MSMB
MSMO1
MSR1
MSRA
MSRB3
MST1
MST1R
MSTN
MSX1
MSX2
MT1A
MT2A
MTA1
MTA2
MTA3
MTAP
MTCH2
MTF1
MTFMT
MTHFD1
MTHFD1L
MTHFR
MTHFS
MTM1
MTMR12
MTMR14
MTMR2
MTMR8
MTMR9
MTNR1A
MTNR1B
MTO1
MTOR
MTPAP
MTR
MTRR
MTSS1
MTSS1L
MTPP
MTUS1
MUC1
MUC13
MUC2

MUC3A
MUC4
MUC5B
MUC6
MUC7
MUS81
MUSK
MUT
MUTYH
MVK
MX1
MXI1
MXRA5
MYB
MYBBP1A
MYBL2
MYBPC1
MYBPC3
MYC
MYCBP2
MYCL
MYCN
MYCT1
MYD88
MYF5
MYF6
MYH11
MYH13
MYH14
MYH15
MYH2
MYH3
MYH4
MYH6
MYH7
MYH7B
MYH8
MYH9
MYL1
MYL2
MYL3
MYLIP
MYLK
MYLK2
MYO15A
MYO18B
MYO1A
MYO1C
MYO1D
MYO1E

MYO1F
MYO3A
MYO5A
MYO5B
MYO5C
MYO6
MYO7A
MYO7B
MYO7B
MYO9B
MYOC
MYOCD
MYOD1
MYOD1
MYOF
MYOM1
MYOT
MYOZ2
MYPN
MYT1
MYT1L

Nome gene	Nome gene	Nome gene	Nome gene	Nome gene	Nome gene	Nome gene
N	O	P	Q	R	S	T
NAA10	OAS1	P2RX1	QARS	RAB10	S100A14	T
NAA15	OAS2	P2RX2	QDPR	RAB11FIP5	S100B	TAAR1
NAALADL2	OAS3	P2RX4	QKI	RAB18	S1PR1	TAAR2
NADK2	OAT	P2RX5		RAB23	S1PR3	TAAR6
NAGA	OAZ1	P2RX7		RAB25	SAA1	TAAR9
NAGLU	OBSCN	P2RY1		RAB27A	SAA2	TAB2
NAGPA	OBSL1	P2RY11		RAB27B	SACS	TAC3
NAGS	OCA2	P2RY12		RAB28	SAE1	TACC3
NAIP	OCLN	P2RY4		RAB29	SAG	TACO1
NALCN	OCRL	P3H2		RAB2A	SAGE1	TACR1
NAMPT	ODAPH	PABPC4L		RAB33B	SALL1	TACR3
NANOS1	ODC1	PABPN1		RAB34	SALL2	TACSTD2
NAPRT	OFD1	PACRG		RAB39B	SALL4	TADA2A
NARS2	OGDH	PACS1		RAB3A	SAMD4A	TAF1
NAT1	OGG1	PADI4		RAB3GAP1	SAMD9	TAF15
NAT2	OGT	PADI6		RAB3GAP2	SAMHD1	TAF1C
NAT8L	OLFM2	PAFAH1B1		RAB40AL	SAR1B	TAF1L
NAV1	OLIG2	PAFAH1B3		RAB7A	SARDH	TAF2
NAV2	OLR1	PAH		RABGGTA	SARS	TAF4B
NBAS	OMG	PAK3		RABL6	SARS2	TAF6
NBEA	OOEP	PAK5		RAC1	SART1	TAF7L
NBEAL2	OPA1	PALB2		RAC2	SART3	TAL1
NBN	OPA3	PALLD		RAD1	SASH1	TAL2
NBPF1	OPCML	PAM16		RAD17	SASS6	TALDO1
NCALD	OPHN1	PAMR1		RAD18	SAT1	TANC1
NCAM1	OPLAH	PANK2		RAD21	SATB2	TANC2
NCAM2	OPN1LW	PAPD7		RAD21L1	SATL1	TAP1
NCAN	OPN1MW	PAPOLA		RAD23A	SBDS	TAP2
NCAPD2	OPN1SW	PAPSS2		RAD23B	SBF1	TAPBP
NCAPG2	OPN4	PARD3B		RAD50	SBF2	TARDBP
NCF1	OPRD1	PARD6A		RAD51	SBK3	TARS2
NCF2	OPRK1	PARD6G		RAD51B	SBNO1	TAS1R1
NCF4	OPRL1	PARK7		RAD51C	SC5D	TAS1R2
NCK2	OPRM1	PARL		RAD51D	SCAMP4	TAS1R3
NCKAP1	OPTC	PARN		RAD52	SCAP	TAS2R16
NCKAP5	OPTN	PARP1		RAD54B	SCAPER	TAS2R19
NCOA1	OR10V1	PARP2		RAD54L	SCARB1	TAS2R3
NCOA3	OR10X1	PARP3		RAD54L2	SCARB2	TAS2R38
NCOA4	OR13G1	PARP4		RAD9A	SCARF2	TAS2R43
NCR3	OR13H1	PARS2		RAD9B	SCG2	TAS2R46
NCS1	OR1B1	PASK		RAET1L	SCG3	TAS2R50
NCSTN	OR1J1	PAWR		RAF1	SCG5	TAS2R9
NDE1	OR2J3	PAX1		RAG1	SCGB1A1	TAT
NDN	OR2M2	PAX2		RAG2	SCGB1D2	TAZ
NDOR1	OR4M2	PAX3		RAI1	SCGB3A2	TBC1D1
NDP	OR51G1	PAX4		RALGAPA1	SCLT1	TBC1D20
NDRG1	OR52H1	PAX5		RALGDS	SCN10A	TBC1D23

NDST1	OR52N4	PAX6	RANBP2	SCN11A	TBC1D24
NDST2	OR5AC2	PAX7	RANBP6	SCN1A	TBC1D30
NDST3	OR5H6	PAX8	RANGRF	SCN1B	TBC1D4
NDST4	OR7D4	PAX9	RAP1A	SCN2A	TBC1D7
NDUFA1	OR8H1	PAXIP1	RAP1B	SCN2B	TBC1D9
NDUFA10	OR8K3	PBRM1	RAP1GDS1	SCN3A	TBCE
NDUFA11	ORAI1	PBX1	RAPGEF1	SCN3B	TBCK
NDUFA12	ORC1	PBX3	RAPGEF4	SCN4A	TBK1
NDUFA13	ORC4	PBX4	RAPSN	SCN4B	TBL1X
NDUFA2	ORC6	PC	RARA	SCN5A	TBL1XR1
NDUFA3	ORM1	PCBD1	RARB	SCN7A	TBL1Y
NDUFA4	ORMDL3	PCBP3	RARS	SCN8A	TBP
NDUFA5	OSBPL2	PCCA	RARS2	SCN9A	TBR1
NDUFA6	OSGIN1	PCCB	RASA1	SCNN1A	TBX1
NDUFA7	OSMR	PCDH11X	RASA2	SCNN1B	TBX10
NDUFA8	OSR1	PCDH15	RASGEF1B	SCNN1D	TBX15
NDUFA9	OSTM1	PCDH18	RASGRP1	SCNN1G	TBX18
NDUFAB1	OTC	PCDH19	RASGRP2	SCO1	TBX19
NDUFAF1	OTOA	PCDH9	RASSF1	SCO2	TBX2
NDUFAF2	OTOF	PCDHA1	RASSF5	SCP2	TBX20
NDUFAF3	OTOG	PCDHA10	RAX	SCRIB	TBX21
NDUFAF4	OTOGL	PCDHA13	RAX2	SCT	TBX22
NDUFAF5	OTOR	PCDHA3	RB1	SCUBE2	TBX3
NDUFAF6	OTUD4	PCDHB16	RB1CC1	SDC3	TBX4
NDUFAF7	OTX2	PCDHB4	RBBP8	SDCCAG8	TBX5
NDUFB1	OVCH2	PCDHGB4	RBCK1	SDHA	TBX6
NDUFB10	OVGP1	PCGF2	RBFA	SDHAF1	TBXA2R
NDUFB11	OXA1L	PCK1	RBFOX1	SDHAF2	TBXAS1
NDUFB3	OXCT1	PCK2	RBFOX3	SDHAF3	TCAP
NDUFB4	OXTR	PCLO	RBL1	SDHB	TCF12
NDUFB6		PCM1	RBL2	SDHC	TCF21
NDUFB7		PCMT1	RBM10	SDHD	TCF3
NDUFB8		PCNA	RBM15	SDR39U1	TCF4
NDUFB9		PCNT	RBM20	SEC23A	TCF7
NDUFC1		PCOLCE	RBM28	SEC23B	TCF7L1
NDUFC2		PCP4	RBM43	SEC24D	TCF7L2
NDUFS1		PCSK1	RBM8A	SEC63	TCIRG1
NDUFS2		PCSK2	RBMXL2	SECISBP2	TCL1A
NDUFS3		PCSK5	RBMY1A1	SEL1L	TCL1B
NDUFS4		PCSK7	RBP3	SELE	TCN1
NDUFS5		PCSK9	RBP4	SELENON	TCN2
NDUFS6		PCYT1A	RBPJ	SELENOP	TCOF1
NDUFS7		PDAP1	RBX1	SELENOS	TCP1
NDUFS8		PDCD1	RC3H1	SELL	TCTE1
NDUFV1		PDCD10	RCAN1	SELP	TCTE3
NDUFV2		PDCD5	RCBTB1	SELPLG	TCTN1
NDUFV3		PDE10A	RCHY1	SEM1	TCTN2
NEB		PDE11A	RD3	SEMA3A	TCTN3
NEBL		PDE1A	RDH11	SEMA3D	TDG
NECAP1		PDE1C	RDH12	SEMA3E	TDGF1

NECTIN1	PDE4B	RDH5	SEMA4A	TDO2
NECTIN3	PDE4D	RDH8	SEMA4C	TDP1
NECTIN4	PDE6A	RDM1	SEMA4D	TDP2
NEDD4	PDE6B	RDX	SEMA4G	TDRD7
NEDD4L	PDE6C	RECQL	SEMA5A	TEAD1
NEDD9	PDE6D	RECQL4	SEMA6D	TEC
NEFH	PDE6G	RECQL5	SEMA7A	TECPR2
NEFL	PDE6H	REEP1	SEMG1	TECR
NEFM	PDE7B	REEP2	SELENOF	TECTA
NEGR1	PDE8B	REL	SEPSECS	TEK
NEIL1	PDGFB	RELN	SEPT12	TEKT2
NEIL2	PDGFC	REN	SEPT14	TELO2
NEIL3	PDGFRA	REPS2	SEPT5	TENM1
NEK1	PDGFRB	RERE	SEPT7	TENM2
NEK2	PDGFRL	REST	SEPT9	TENM3
NEK8	PDHA1	RET	SERAC1	TENM4
NELFA	PDHB	RETN	SERHL2	TEP1
NELL1	PDHX	RETREG1	SERPINA1	TERC
NEO1	PDIA4	REV1	SERPINA10	TERT
NEU1	PDK1	REV3L	SERPINA3	TET1
NEU2	PDK2	RFC1	SERPINA6	TET2
NEUROD1	PDK3	RFC2	SERPINA7	TEX13B
NEUROG3	PDK4	RFC3	SERPINB11	TEX14
NEXMIF	PDLIM3	RFC4	SERPINB3	TEX28
NEXN	PDLIM4	RFC5	SERPINB4	TF
NF1	PDLIM5	RFT1	SERPINB5	TFAM
NF2	PDP1	RFWD2	SERPINB6	TFAP2A
NFAT5	PDPK1	RFX2	SERPINB7	TFAP2B
NFATC1	PDPR	RFX3	SERPINC1	TFB1M
NFATC2	PDSS1	RFX5	SERPIND1	TFCP2
NFATC3	PDSS2	RFX6	SERPINE1	TFDP1
NFATC4	PDX1	RFX8	SERPINF1	TFE3
NFE2L1	PDXK	RFXANK	SERPINF2	TFF1
NFE2L2	PDYN	RFXAP	SERPING1	TFG
NFIA	PDZD7	RGL1	SERPINH1	TFPI
NFIB	PEAR1	RGL2	SERPINI1	TFR2
NFIX	PECAM1	RGMA	SERPINI2	TFRC
NFKB1	PECR	RGR	SERTAD1	TG
NFKB2	PENT	RGS2	SESN2	TGDS
NFKBIA	PENK	RGS5	SETBP1	TGFB1
NFKBIL1	PEPD	RGS6	SETD2	TGFB2
NFKBIZ	PER1	RGS7	SETD5	TGFB3
NFS1	PER2	RGS9	SETDB1	TGFBI
NFU1	PER3	RGS9BP	SETDB2	TGFBR1
NGEF	PET100	RHAG	SETX	TGFBR2
NGF	PEX1	RHBDD2	SEZ6	TGFBR3
NGFR	PEX10	RHBDF2	SEZ6L	TGFBRAP1
NGLY1	PEX11B	RHCE	SEZ6L2	TGIF1
NHEJ1	PEX12	RHD	SF3B1	TGM1
NHLRC1	PEX13	RHO	SF3B4	TGM2

NHP2	PEX14	RHOB	SFPQ	TGM4
NHS	PEX16	RHOG	SFRP1	TGM5
NICN1	PEX19	RHOH	SFTPA1	TGM6
NID1	PEX2	RHPN2	SFTPA2	TH
NIN	PEX26	RIC1	SFTPB	THADA
NINJ1	PEX3	RICTOR	SFTPC	THAP1
NIPA1	PEX5	RIMS1	SFTPD	THBD
NIPA2	PEX6	RIMS2	SFXN4	THBS1
NIPAL4	PEX7	RIMS3	SGCA	THBS2
NIPBL	PFAS	RIN2	SGCB	THBS4
NIPSNAP1	PFKFB1	RINT1	SGCD	THOC2
NIPSNAP3A	PFKL	RIOK2	SGCE	THOC6
NISCH	PFKM	RIPK2	SGCG	THPO
NKAIN2	PFN1	RIPK3	SGK1	THRA
NKAIN3	PGAM1	RIPK4	SGO1	THRB
NKX2-1	PGAM2	RIPOR2	SGSH	THSD7A
NKX2-2	PGAM5	RIT1	SGSM3	THSD7B
NKX2-3	PGAP1	RIT2	SH2B1	TIA1
NKX2-5	PGAP2	RLBP1	SH2B3	TICAM1
NKX2-6	PGAP3	RLIM	SH2D1A	TIMELESS
NKX3-1	PGBD1	RMDN2	SH3BP2	TIMM21
NKX3-2	PGBD3	RMI1	SH3GL1	TIMM44
NLGN1	PGBD4	RMI2	SH3PXD2B	TIMM8A
NLGN2	PGC	RMND1	SH3TC2	TIMP1
NLGN3	PGD	RMRP	SHANK1	TIMP2
NLGN4X	PGK1	RNASE3	SHANK2	TIMP3
NLGN4Y	PGM1	RNASEH2A	SHANK3	TINAG
NLRC4	PGM3	RNASEH2B	SHARPIN	TINF2
NLRP1	PGR	RNASEH2C	SHBG	TIPARP
NLRP10	PGRMC1	RNASEL	SHH	TIPIN
NLRP11	PHACTR1	RNASET2	SHMT1	TIRAP
NLRP12	PHB	RNF113A	SHOC2	TJP1
NLRP13	PHB2	RNF114	SHOX	TJP2
NLRP14	PHC1	RNF125	SHOX2	TK2
NLRP2	PHEX	RNF128	SHROOM3	TLE6
NLRP3	PHF11	RNF135	SHROOM4	TLK1
NLRP4	PHF2	RNF139	SI	TLL1
NLRP5	PHF21A	RNF168	SIAE	TLR1
NLRP6	PHF3	RNF170	SIGLEC12	TLR10
NLRP7	PHF6	RNF2	SIGLEC14	TLR2
NLRP8	PHF8	RNF20	SIGLEC16	TLR3
NLRP9	PHGDH	RNF212	SIGMAR1	TLR4
NLRX1	PHIP	RNF213	SIK3	TLR5
NMB	PHKA1	RNF216	SIL1	TLR6
NME1	PHKA2	RNF219	SIM1	TLR7
NME5	PHKB	RNF32	SIM2	TLR8
NME7	PHKG2	RNF38	SIPA1	TLR9
NME8	PHLDA2	RNF39	SIPA1L1	TLX1
NMNAT1	PHLPP2	RNF6	SIRT1	TLX2
NMT2	PHOX2A	RNF8	SIRT3	TLX3

NMU	PHOX2B	RNLS	SIRT5	TM4SF19
NNMT	PHYH	RNMT	SIX1	TM4SF20
NNT	PHYKPL	RNU4ATAC	SIX2	TMC1
NOBOX	PI3	ROBO1	SIX3	TMC3
NOD1	PI4KA	ROBO2	SIX5	TMC6
NOD2	PIAS1	ROBO3	SIX6	TMC8
NODAL	PIBF1	ROCK1	SKI	TMCO1
NOG	PICALM	ROCK2	SKIV2L	TMEM114
NOL3	PICK1	ROGDI	SLA2	TMEM121
NOP10	PID1	ROM1	SLBP	TMEM126A
NOP56	PIEZO1	ROPN1L	SLC10A1	TMEM127
NOS1	PIEZO2	ROR2	SLC10A2	TMEM135
NOS1AP	PIF1	RORA	SLC11A1	TMEM138
NOS2	PIGA	RORC	SLC11A2	TMEM165
NOS3	PIGL	ROS1	SLC12A1	TMEM173
NOTCH1	PIGM	RP1	SLC12A2	TMEM185A
NOTCH2	PIGN	RP1L1	SLC12A3	TMEM187
NOTCH3	PIGO	RP2	SLC12A5	TMEM189
NOTCH4	PIGQ	RP9	SLC12A6	TMEM2
NOX3	PIGR	RPA1	SLC12A7	TMEM216
NPAP1	PIGT	RPA2	SLC13A2	TMEM231
NPAS2	PIGV	RPA3	SLC13A5	TMEM237
NPAS3	PIGW	RPA4	SLC14A1	TMEM240
NPAS4	PIGZ	RPE65	SLC14A2	TMEM38B
NPAT	PIK3C2G	RPGR	SLC15A1	TMEM39A
NPC1	PIK3C3	RPGRIP1	SLC16A1	TMEM43
NPC1L1	PIK3CA	RPGRIP1L	SLC16A12	TMEM47
NPC2	PIK3CB	RPH3AL	SLC16A2	TMEM5
NPFFR2	PIK3CD	RPIA	SLC16A3	TMEM67
NPHP1	PIK3CG	RPL10	SLC16A7	TMEM70
NPHP3	PIK3R1	RPL11	SLC17A1	TMEM8A
NPHP4	PIK3R2	RPL15	SLC17A3	TMEM9
NPHS1	PIK3R4	RPL21	SLC17A5	TMEM92
NPHS2	PIK3R5	RPL24	SLC17A8	TMEM98
NPL	PIKFYVE	RPL26	SLC17A9	TMEM99
NPM1	PIM1	RPL27	SLC18A1	TMIE
NPPA	PIMREG	RPL35A	SLC19A1	TMLHE
NPPB	PIN1	RPL36	SLC19A2	TMPO
NPPC	PINK1	RPL38	SLC19A3	TMPRSS11A
NPR1	PIP4K2A	RPL5	SLC1A1	TMPRSS15
NPR2	PIP5K1B	RPL6	SLC1A2	TMPRSS3
NPR3	PIP5K1C	RPN2	SLC1A3	TMPRSS4
NPSR1	PIR	RPS10	SLC1A5	TMPRSS5
NPTN	PITPNA	RPS14	SLC20A2	TMPRSS6
NPY	PITPNM3	RPS15	SLC22A1	TMTC3
NPY1R	PITX1	RPS17	SLC22A11	TNC
NPY2R	PITX2	RPS19	SLC22A12	TNF
NQO1	PITX3	RPS24	SLC22A14	TNFAIP1
NQO2	PIWIL3	RPS26	SLC22A18	TNFAIP2
NROB1	PIWIL4	RPS27	SLC22A2	TNFAIP3

NROB2	PJVK	RPS27A	SLC22A25	TNFRSF10A
NR1H2	PKD1	RPS28	SLC22A3	TNFRSF10B
NR1H3	PKD1L1	RPS29	SLC22A4	TNFRSF11A
NR1H4	PKD2	RPS3	SLC22A5	TNFRSF11B
NR1I2	PKHD1	RPS4Y2	SLC22A6	TNFRSF13B
NR1I3	PKHD1L1	RPS5	SLC22A9	TNFRSF13C
NR2E1	PKLR	RPS6KA3	SLC23A1	TNFRSF1A
NR2E3	PKM	RPS6KB1	SLC24A1	TNFRSF1B
NR2F1	PKN3	RPS6KL1	SLC24A2	TNFRSF25
NR2F2	PKNOX1	RPS7	SLC24A4	TNFRSF4
NR3C1	PKP1	RPSA	SLC24A5	TNFRSF9
NR3C2	PKP2	RPTOR	SLC25A1	TNFSF10
NR4A1	PLA2G10	RRAS	SLC25A12	TNFSF11
NR4A2	PLA2G2A	RRAS2	SLC25A13	TNFSF12
NR4A3	PLA2G2D	RREB1	SLC25A15	TNFSF13B
NR5A1	PLA2G4A	RRH	SLC25A19	TNFSF14
NRAS	PLA2G4C	RRM1	SLC25A20	TNFSF15
NRCAM	PLA2G5	RRM2	SLC25A21	TNFSF18
NRG1	PLA2G6	RRM2B	SLC25A22	TNFSF4
NRG3	PLA2G7	RRP1B	SLC25A3	TNFSF8
NRIP1	PLAG1	RS1	SLC25A38	TNK2
NRL	PLAGL1	rs10748087	SLC25A39	TNKS
NRN1	PLAT	rs11130795	SLC25A4	TNKS2
NRP2	PLAU	rs12682834	SLC25A43	TNNC1
NRTN	PLAUR	rs1393978	SLC25A46	TNNI2
NRXN1	PLCB1	rs2583136	SLC25A5	TNNI3
NRXN2	PLCB2	rs2988039	SLC26A1	TNNI3K
NRXN3	PLCB4	rs37535	SLC26A10	TNNT1
NSD1	PLCD1	rs4411641	SLC26A2	TNNT2
NSD2	PLCD4	rs6074704	SLC26A3	TNNT3
NSD3	PLCE1	rs6512586	SLC26A4	TNP1
NSDHL	PLCG1	rs6666954	SLC26A5	TNPO2
NSMCE3	PLCG2	rs6841061	SLC26A6	TNPO3
NSMF	PLCZ1	rs8045964	SLC26A8	TNR
NSUN2	PLD2	rs9388856	SLC26A9	TNRC6B
NSUN7	PLD3	RSC1A1	SLC27A1	TNS2
NT5C1B	PLEC	RSPH1	SLC27A4	TNS3
NT5C2	PLEKHA1	RSPH4A	SLC27A5	TNXB
NT5C3A	PLEKHG4	RSPH9	SLC28A1	TOMM40
NT5E	PLEKHG5	RSPO1	SLC28A2	TOP1
NTAN1	PLEKHM1	RSPO4	SLC28A3	TOP1MT
NTF3	PLG	RSRC1	SLC29A1	TOP2A
NTF4	PLIN1	RTEL1	SLC29A2	TOP3A
NTHL1	PLIN4	RTF1	SLC29A3	TOP3B
NTM	PLK1	RTL4	SLC29A4	TOPBP1
NTNG1	PLK4	RTN2	SLC2A1	TOPORS
NTRK1	PLN	RTN3	SLC2A10	TOR1A
NTRK2	PLOD1	RTN4R	SLC2A2	TOR1AIP1
NTRK3	PLOD2	RTN4RL1	SLC2A4	TOX3
NUAK1	PLOD3	RTTN	SLC2A9	TP53

NUB1	PLP1	RUBCN	SLC30A10	TP53AIP1
NUBPL	PLP2	RUNX1	SLC30A2	TP53BP1
NUCB2	PLRG1	RUNX1T1	SLC30A5	TP53I3
NUDC	PLS3	RUNX2	SLC30A8	TP53RK
NUDT1	PLSCR3	RUNX3	SLC31A1	TP63
NUDT15	PLTP	RUVBL1	SLC33A1	TP73
NUDT6	PLXNA1	RXFP2	SLC34A1	TPCN2
NUDT7	PLXNA2	RXRA	SLC34A2	TPH1
NUMA1	PLXNA3	RXRG	SLC34A3	TPH2
NUMBL	PLXNA4	RYK	SLC35A1	TPI1
NUP107	PLXNB1	RYR1	SLC35A2	TPK1
NUP155	PLXNB3	RYR2	SLC35A3	TPM1
NUP214	PLXND1	RYR3	SLC35C1	TPM2
NUP62	PMAIP1		SLC35D1	TPM3
NXF3	PML		SLC35D3	TPMT
NXF5	PMM2		SLC35F3	TPO
NXN	PMP22		SLC35G2	TPP1
NXNL1	PMPCA		SLC36A2	TPP2
NYX	PMS1		SLC37A4	TPPP
	PMS2		SLC38A8	TPRN
	PMS2P3		SLC39A12	TPSB2
	PNKD		SLC39A13	TPTE
	PNKP		SLC39A4	TRA2B
	PNLIP		SLC39A5	TRAC
	PNMT		SLC3A1	TRADD
	PNP		SLC40A1	TRAF3
	PNPLA1		SLC41A1	TRAF3IP1
	PNPLA2		SLC44A2	TRAF3IP2
	PNPLA3		SLC45A2	TRAF6
	PNPLA6		SLC46A1	TRAF7
	PNPO		SLC47A1	TRAK1
	PNPT1		SLC47A2	TRAK2
	POC1A		SLC4A1	TRAP1
	POC1B		SLC4A10	TRAPPC10
	PODXL		SLC4A11	TRAPPC11
	POF1B		SLC4A3	TRAPPC2
	POFUT1		SLC4A4	TRAPPC9
	POFUT2		SLC4A5	TRB
	POGLUT1		SLC4A7	TRBV9
	POGZ		SLC52A1	TRD
	POLA1		SLC52A2	TRDN
	POLB		SLC52A3	TREH
	POLD1		SLC5A1	TREM2
	POLD2		SLC5A11	TRERF1
	POLD3		SLC5A2	TREX1
	POLD4		SLC5A5	TREX2
	POLE		SLC5A7	TRH
	POLE2		SLC6A1	TRHR
	POLE3		SLC6A11	TRIB1
	POLE4		SLC6A12	TRIB2

POLG	SLC6A13	TRIB3
POLG2	SLC6A14	TRIL
POLH	SLC6A17	TRIM17
POLI	SLC6A18	TRIM2
POLK	SLC6A19	TRIM21
POLL	SLC6A2	TRIM22
POLM	SLC6A20	TRIM24
POLN	SLC6A3	TRIM28
POLQ	SLC6A4	TRIM32
POLR1C	SLC6A5	TRIM33
POLR1D	SLC6A6	TRIM37
POLR2A	SLC6A8	TRIM5
POLR2B	SLC6A9	TRIM63
POLR2C	SLC7A1	TRIO
POLR2D	SLC7A10	TRIOBP
POLR2E	SLC7A11	TRIP11
POLR2F	SLC7A14	TRIP12
POLR2G	SLC7A2	TRIP13
POLR2H	SLC7A5	TRIT1
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POLR2J	SLC7A9	TRMT10A
POLR2J3	SLC8A1	TRMT44
POLR2K	SLC9A1	TRMU
POLR2L	SLC9A3	TRNT1
POLR2M	SLC9A3R1	TROAP
POLR3A	SLC9A6	TROVE2
POLR3B	SLC9A9	TRPA1
POLRMT	SLCO1A2	TRPC3
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POMGNT2	SLCO1C1	TRPC6
POMK	SLCO2A1	TRPM1
POMP	SLCO2B1	TRPM2
POMT1	SLCO5A1	TRPM3
POMT2	SLFN5	TRPM4
PON1	SLIT1	TRPM6
PON2	SLIT3	TRPM7
PON3	SLITRK1	TRPS1
POP1	SLITRK5	TRPV1
POR	SLITRK6	TRPV3
PORCN	SLK	TRPV4
POSTN	SLMAP	TRPV5
POT1	SLTM	TRRAP
POU1F1	SLURP1	TSC1
POU2F1	SLX1A	TSC2
POU3F3	SLX1B	TSEN15
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POU4F3	SMAD1	TSEN34
POU5F1	SMAD2	TSEN54
POU5F1B	SMAD3	TSFM

POU6F2	SMAD4	TSG101
PPARA	SMAD5	TSHB
PPARD	SMAD6	TSHR
PPARG	SMAD7	TSHZ1
PPARGC1A	SMAD9	TSLP
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PPAT	SMARCA2	TSPAN17
PPIA	SMARCA4	TSPAN7
PIIB	SMARCA4	TSPAN7
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PPM1B	SMARCA1	TSPAN12
PPM1D	SMARCA2	TSPAN17
PPM1G	SMARCA4	TSPAN7
PPM1K	SMARCA4	TSPAN7
PPOX	SMARCA4	TSPAN7
PPP1R12B	SMARCA1	TSPAN12
PPP1R15B	SMARCA2	TSPAN17
PPP1R17	SMARCA4	TSPAN7
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PPP1R3A	SMARCA4	TSPAN7
PPP1R3C	SMARCA4	TSPAN7
PPP1R8	SMARCA4	TSPAN7
PPP2R1A	SMARCA4	TSPAN7
PPP2R1B	SMARCA4	TSPAN7
PPP2R2A	SMARCA4	TSPAN7
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PPP2R2C	SMARCA4	TSPAN7
PPP2R5B	SMARCA4	TSPAN7
PPP2R5C	SMARCA4	TSPAN7
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PPP4R3B	SMARCA4	TSPAN7
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PPP6R3	SMARCA4	TSPAN7
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PRAG1	SMARCA4	TSPAN7
PRAM1	SMARCA4	TSPAN7
PRAMEF2	SMARCA4	TSPAN7
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PRB3	SMARCA4	TSPAN7
	SMARCB1	TSPYL1
	SMARCC1	TSR2
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	SMC1B	TSSK4
	SMC3	TST
	SMC5	TTBK2
	SMC6	TTC19
	SMCHD1	TTC21B
	SMG1	TTC37
	SMG6	TTC5
	SMIM1	TTC7A
	SMIM3	TTC8
	SMN1	TTF2
	SMN2	TTI2
	SMNDC1	TTLL1
	SMO	TTLL11
	SMOC1	TTLL5
	SMOC2	TTN
	SMOX	TTPA
	SMPD1	TTR
	SMPD3	TTY13
	SMPX	TUB
	SMS	TUBA1A
	SMUG1	TUBA4A
	SMYD3	TUBA8
	SNAI2	TUBB
	SNAP25	TUBB1
	SNAP29	TUBB2A
	SNAPC4	TUBB2B
	SNAPC5	TUBB3
	SNCA	TUBB4A
	SNCAIP	TUBG1
	SNCB	TUBGCP4
	SNIP1	TUBGCP5
	SNORD115-1	TUBGCP6
	SNORD116-1	TUFM
	SNORD116-10	TULP1
	SNORD50A	TULP3

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PRCC	SNRNP200	TUSC1
PRCD	SNRPB	TUSC3
PRCP	SNRPE	TWIST1
PRDM1	SNRPN	TWIST2
PRDM16	SNTA1	TWNK
PRDM2	SNTB1	TXLNB
PRDM5	SNTG1	TXN2
PRDM9	SNTG2	TXNIP
PRDX4	SNURF	TXNL4A
PREPL	SNX1	TXNRD2
PRF1	SNX10	TYK2
PRG4	SNX14	TYMP
PRICKLE1	SNX19	TYMS
PRICKLE2	SNX3	TYR
PRIMPOL	SNX5	TYRO3
PRKAA2	SNX8	TYROBP
PRKACA	SOAT1	TYRP1
PRKACG	SOBP	
PRKAG2	SOCS1	
PRKAG3	SOCS3	
PRKAR1A	SOD1	
PRKCA	SOD2	
PRKCB	SOD3	
PRKCD	SOGA3	
PRKCG	SOHLH1	
PRKCH	SORBS1	
PRKCSH	SORCS1	
PRKD1	SORD	
PRKD3	SORL1	
PRKDC	SORT1	
PRKG1	SOS1	
PRKG2	SOS2	
PRKN	SOST	
PRKRA	SOX10	
PRL	SOX11	
PRLH	SOX17	
PRLHR	SOX18	
PRLR	SOX2	
PRM1	SOX3	
PRM2	SOX4	
PRMT2	SOX5	
PRMT3	SOX6	
PRMT7	SOX7	
PRMT9	SOX8	
PRND	SOX9	
PRNP	SP100	
PROC	SP110	
PROCR	SP7	
PRODH	SP8	

PROK1	SPAG1
PROK2	SPAG16
PROKR1	SPAG17
PROKR2	SPANXN1
PROM1	SPANXN5
PROP1	SPART
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PROX1	SPATA13
PROX2	SPATA16
PROZ	SPATA21
PRPF19	SPATA31C1
PRPF3	SPATA32
PRPF31	SPATA5L1
PRPF39	SPATA7
PRPF4	SPDL1
PRPF6	SPECC1
PRPF8	SPECC1L
PRPH	SPEF2
PRPH2	SPEG
PRPS1	SPERT
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PRRC2A	SPG21
PRRT2	SPG7
PRRX1	SPI1
PRSS1	SPINK1
PRSS12	SPINK5
PRSS3P2	SPINT2
PRSS56	SPO11
PRSS8	SPOCK1
PRTG	SPOP
PRX	SPP1
PRY	SPP2
PRY2	SPR
PSAP	SPRED1
PSAT1	SPRED2
PSCA	SPRN
PSEN1	SPRR3
PSEN2	SPRTN
PSENEEN	SPRY2
PSMA4	SPRY3
PSMA6	SPRY4
PSMA7	SPSB1
PSMB8	SPTA1
PSMB9	SPTAN1
PSMC3IP	SPTB
PSMD7	SPTBN1
PSPH	SPTBN2
PSPN	SPTBN5
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PSTPIP2	SPTLC2

PTAFR	SQSTM1
PTCD1	SRC
PTCH1	SRCAP
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PTCHD1	SRD5A3
PTCHD3	SREBF1
PTCSC3	SREBF2
PTDSS1	SREK1
PTEN	SRGAP2
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PTGDR	SRI
PTGDR2	SRP72
PTGDS	SRPX
PTGER2	SRPX2
PTGER4	SRR
PTGES2	SRSF2
PTGIR	SRY
PTGIS	SS18
PTGS1	SS18L1
PTGS2	SSBP1
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PTH2R	SSR4
PTHLH	SST
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PTPN21	ST3GAL2
PTPN22	ST3GAL3
PTPN23	ST3GAL4
PTPN6	ST3GAL5
PTPRB	ST3GAL6
PTPRC	ST5
PTPRCAP	ST6GAL1
PTPRD	ST6GAL2
PTPRF	ST6GALNAC1
PTPRJ	ST6GALNAC2
PTPRK	ST6GALNAC3
PTPRN2	ST6GALNAC4
PTPRO	ST6GALNAC5
PTPRQ	ST6GALNAC6
PTPRT	ST7
PTPRZ1	ST8SIA1
PTRH2	ST8SIA2
PTS	ST8SIA3
PUF60	ST8SIA4

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PYGO1
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PZP

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ST8SIA6
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SULT2B1
SULT4A1
SUMF1
SUMO1
SUMO4
SUN1
SUN2
SUOX
SUPT16H
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SUPT5H
SURF1
SUZ12
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SVIL
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SYCP3
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SYN1
SYN2
SYN3
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SYNE1
SYNE2
SYNE4
SYNGAP1
SYNGR1
SYNJ1
SYNM
SYNPO
SYNPR
SYP
SYT11

SYT14
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SYT2
SYTL3
SYTL5
SZT2

Nome gene	Nome gene	Nome gene	Nome gene	Nome gene	Nome gene
U	V	W	X	Y	Z
U2AF1	VAMP1	WAC	XBP1	YAP1	ZAN
UACA	VAMP7	WAS	XDH	YARS	ZAP70
UBA1	VANGL1	WASF3	XG	YARS2	ZBTB11
UBA3	VANGL2	WASHC4	XIAP	YBX2	ZBTB16
UBA7	VAPB	WASHC5	XIRP1	YTHDF2	ZBTB17
UBAC2	VARS2	WDFY3	XIST	YWHAE	ZBTB18
UBB	VAV3	WDFY4	XK	YY1	ZBTB20
UBD	VAX1	WDPCP	XKR4		ZBTB24
UBE2A	VAX2	WDR11	XKR6		ZBTB38
UBE2B	VCAM1	WDR13	XKRY		ZBTB40
UBE2I	VCAN	WDR19	XPA		ZBTB41
UBE2N	VCL	WDR27	XPC		ZBTB42
UBE2NL	VCP	WDR31	XPNPEP2		ZC3H12B
UBE2T	VCX3A	WDR34	XPNPEP3		ZC3H14
UBE2V1	VCY	WDR35	XPO1		ZC3H3
UBE2V2	VDAC1	WDR36	XPO5		ZC3HAV1
UBE3A	VDR	WDR4	XRCC1		ZC4H2
UBE3B	VEGFA	WDR45	XRCC2		ZCCHC12
UBE3C	VEGFC	WDR45B	XRCC3		ZCCHC13
UBIAD1	VHL	WDR48	XRCC4		ZCCHC8
UBN2	VIL1	WDR5	XRCC5		ZDHHC15
UBQLN1	VIM	WDR60	XRCC6		ZDHHC17
UBQLN2	VIP	WDR62	XYLT1		ZDHHC2
UBR1	VIPAS39	WDR66	XYLT2		ZDHHC8
UBR3	VIPR2	WDR72			ZDHHC9
UBR5	VKORC1	WDR73			ZEB1
UBR7	VLDLR	WDR81			ZEB2
UBTF	VMA21	WDR93			ZFAT
UCHL1	VNN1	WFS1			ZFHX3
UCN	VPREB1	WHRN			ZFHX4
UCP1	VPS13A	WIPF1			ZFP36
UCP2	VPS13B	WISP3			ZFP36L1
UCP3	VPS33B	WNK1			ZFP36L2
UFD1	VPS35	WNK3			ZFP57
UGCG	VPS37A	WNK4			ZFP69
UGGT1	VPS45	WNT1			ZFP90
UGGT2	VPS53	WNT10A			ZFPL1
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UGT1A3	VSIG1	WNT3			ZFY
UGT1A4	VSIG4	WNT4			ZFYVE26
UGT1A5	VSX1	WNT5A			ZFYVE27
UGT1A6	VSX2	WNT5B			ZHX3
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ULK4		ZNF175
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UMPS		ZNF213
UNC119		ZNF224
UNC13B		ZNF24
UNC13C		ZNF292
UNC13D		ZNF311
UNC45B		ZNF335
UNC5C		ZNF33A
UNC5CL		ZNF347
UNC80		ZNF350
UNC93A		ZNF365
UNC93B1		ZNF385B
UNG		ZNF395
UNKL		ZNF407
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UPF2		ZNF41
UPF3B		ZNF419
UPK3A		ZNF420
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UQCRFS1		ZNF45
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UQCRQ		ZNF469
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UROD		ZNF507
UROS		ZNF513
USB1		ZNF517
USF1		ZNF526
USH1C		ZNF582
USH1G		ZNF592
USH2A		ZNF599
USP1		ZNF627
USP15		ZNF638
USP24		ZNF644
USP26		ZNF668
USP27X		ZNF674
USP3		ZNF683

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