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AC135068.2	AC244517.10	ACCSL	ACOX3
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AC138647.1	ACAA2	ACER3	ACP5
AC138696.1	ACACA	ACHE	ACP6
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AC138969.1	ACAD9	ACKR2	ACR
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AC211486.12	ACAP1	ACOT2	ACSL4
AC231656.1	ACAP2	ACOT4	ACSL5
AC231657.3	ACAP3	ACOT6	ACSL6
AC233723.1	ACAT1	ACOT7	ACSM1
AC233992.2	ACAT2	ACOT8	ACSM2A
AC235565.2	ACBD3	ACOT9	ACSM2B
AC236972.4	ACBD4	ACOT11	ACSM3



ACSM4	ACTR5	ADAM12	ADAMTS17
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ACSM6	ACTR8	ADAM17	ADAMTS19
ACSS1	ACTR10	ADAM18	ADAMTS20
ACSS2	ACTRT1	ADAM19	ADAMTSL1
ACSS3	ACTRT2	ADAM20	ADAMTSL2
ACTA1	ACTRT3	ADAM21	ADAMTSL3
ACTA2	ACVR1	ADAM22	ADAMTSL4
ACTB	ACVR1B	ADAM23	ADAMTSL5
ACTBL2	ACVR1C	ADAM28	ADAP1
ACTC1	ACVR2A	ADAM29	ADAP2
ACTG1	ACVR2B	ADAM30	ADAR
ACTG2	ACVRL1	ADAM32	ADARB1
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ACTL6B	ACY3	ADAMDEC1	ADAT1
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ACTL7B	ACYP2	ADAMTS2	ADAT3
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ACTL9	AD000671.2	ADAMTS4	ADCK2
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ACTN2	ADAD1	ADAMTS7	ADCY2
ACTN3	ADAD2	ADAMTS8	ADCY3
ACTN4	ADAL	ADAMTS9	ADCY4
ACTR1A	ADAM2	ADAMTS10	ADCY5
ACTR1B	ADAM7	ADAMTS12	ADCY6
ACTR2	ADAM8	ADAMTS13	ADCY7
ACTR3	ADAM9	ADAMTS14	ADCY8
ACTR3B	ADAM10	ADAMTS15	ADCY9
ACTR3C	ADAM11	ADAMTS16	ADCY10

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ADD2	ADGRL4	ADPRHL2	AFF2
ADD3	ADGRV1	ADPRM	AFF3
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ADGRE5	ADIPOR2	ADSS	AGAP5
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ADGRF2	ADK	ADSS2	AGAP9
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AGMAT	AHNAK2	AK8	AKR1C3
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AGT	AIMP2	AKAP13	AL022238.4
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AGXT	AJM1	AKIRIN2	AL031681.3
AGXT2	AJUBA	AKNA	AL031708.1
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AHDC1	AK5	AKR1B15	AL034430.2

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AL672142.1	ALDH9A1	ALKBH7	AMDHD1
AL691442.2	ALDH16A1	ALKBH8	AMDHD2
AL713999.1	ALDH18A1	ALLC	AMELX
AL772284.2	ALDOA	ALMS1	AMELY
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AL807752.7	ALDOC	ALOX5AP	AMER2
AL845331.2	ALG1	ALOX12	AMER3
AL928654.3	ALG1L	ALOX12B	AMFR
AL929554.2	ALG1L2	ALOX15	AMH
ALAD	ALG2	ALOX15B	AMHR2
ALAS1	ALG3	ALOXE3	AMIGO1
ALAS2	ALG5	ALPG	AMIGO2
ALB	ALG6	ALPI	AMIGO3
ALCAM	ALG8	ALPK1	AMMECR1
ALDH1A1	ALG9	ALPK2	AMMECR1L
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ALDH3B1	ALKAL2	ALX4	AMPH
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ALDH5A1	ALKBH3	AMBN	AMY1A
ALDH6A1	ALKBH4	AMBP	AMY1B



AMY1C	ANK1	ANKRD13C	ANKRD37
AMY2A	ANK2	ANKRD13D	ANKRD39
AMY2B	ANK3	ANKRD16	ANKRD40
AMZ1	ANKAR	ANKRD17	ANKRD40CL
AMZ2	ANKDD1A	ANKRD18A	ANKRD42
ANAPC1	ANKDD1B	ANKRD18B	ANKRD44
ANAPC2	ANKEF1	ANKRD20A1	ANKRD45
ANAPC4	ANKFN1	ANKRD20A2	ANKRD46
ANAPC5	ANKFY1	ANKRD20A3	ANKRD49
ANAPC7	ANKH	ANKRD20A4	ANKRD50
ANAPC10	ANKHD1	ANKRD22	ANKRD52
ANAPC11	ANKHD1- EIF4EBP3	ANKRD23	ANKRD53
ANAPC13		ANKRD24	ANKRD54
ANAPC15	ANKIB1	ANKRD26	ANKRD55
ANAPC16	ANKK1	ANKRD27	ANKRD60
ANG	ANKLE1	ANKRD28	ANKRD61
ANGEL1	ANKLE2	ANKRD29	ANKRD62
ANGEL2	ANKMY1	ANKRD30A	ANKRD63
ANGPT1	ANKMY2	ANKRD30B	ANKRD65
ANGPT2	ANKRA2	ANKRD30BL	ANKRD66
ANGPT4	ANKRD1	ANKRD31	ANKS1A
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ANGPTL3	ANKRD7	ANKRD34A	ANKS4B
ANGPTL4	ANKRD9	ANKRD34B	ANKS6
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ANHX	ANKRD13B	ANKRD36C	ANO2

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ANO5	ANXA13	AP4M1	AP003071.5
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ANO7	AOC1	AP5B1	AP003419.1
ANO8	AOC2	AP5M1	AP006333.1
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ANP32B	AP1B1	AP000350.4	APBB1
ANP32C	AP1G1	AP000471.1	APBB1IP
ANP32D	AP1G2	AP000552.6	APBB2
ANP32E	AP1M1	AP000646.1	APBB3
ANPEP	AP1M2	AP000721.1	APC
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ANTXR1	AP1S2	AP000812.4	APCDD1
ANTXR2	AP1S3	AP000812.5	APCDD1L
ANTXRL	AP2A1	AP000944.5	APCS
ANXA1	AP2A2	AP001267.5	APEH
ANXA2	AP2B1	AP001273.2	APELA
ANXA2R	AP2M1	AP001453.5	APEX1
ANXA3	AP2S1	AP001458.2	APEX2
ANXA4	AP3B1	AP001781.2	APH1A
ANXA5	AP3B2	AP001931.1	APH1B
ANXA6	AP3D1	AP001931.2	API5
ANXA7	AP3M1	AP002373.1	APIP
ANXA8	AP3M2	AP002495.1	APLF
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ANXA9	AP3S2	AP002748.5	APLNR

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APLP2	APOL4	ARAP1	ARHGAP9
APMAP	APOL5	ARAP2	ARHGAP10
APOA1	APOL6	ARAP3	ARHGAP11A
APOA2	APOLD1	ARC	ARHGAP11A- SCG5
APOA4	APOM	ARCN1	ARHGAP11B
APOA5	APOO	AREG	ARHGAP12
APOB	APOOL	AREL1	ARHGAP15
APOBEC1	APOPT1	ARF1	ARHGAP17
APOBEC2	APP	ARF3	ARHGAP18
APOBEC3A	APPBP2	ARF4	ARHGAP19
APOBEC3B	APPL1	ARF5	ARHGAP19- SLIT1
APOBEC3C	APPL2	ARF6	ARHGAP20
APOBEC3D	APRT	ARFGAP1	ARHGAP21
APOBEC3F	APTX	ARFGAP2	ARHGAP22
APOBEC3G	AQP1	ARFGAP3	ARHGAP23
APOBEC3H	AQP2	ARFGEF1	ARHGAP24
APOBEC4	AQP3	ARFGEF2	ARHGAP25
APOBR	AQP4	ARFGEF3	ARHGAP26
APOC1	AQP5	ARFIP1	ARHGAP27
APOC2	AQP6	ARFIP2	ARHGAP28
APOC3	AQP7	ARFRP1	ARHGAP29
APOC4	AQP8	ARG1	ARHGAP30
APOC4-APOC2	AQP9	ARG2	ARHGAP31
APOD	AQP10	ARGFX	ARHGAP32
APOE	AQP11	ARGLU1	ARHGAP33
APOF	AQP12A	ARHGAP1	ARHGAP34
APOH	AQP12B	ARHGAP4	ARHGAP35
APOL1	AQR	ARHGAP5	ARHGAP36
APOL2	AR	ARHGAP6	ARHGAP39



ARHGAP40	ARHGEF38	ARL6IP5	ARMCX4
ARHGAP42	ARHGEF39	ARL6IP6	ARMCX5
ARHGAP44	ARHGEF40	ARL8A	ARMCX5- GPRASP2
ARHGAP45	ARID1A	ARL8B	ARMCX6
ARHGDIA	ARID1B	ARL9	ARMH1
ARHGDIB	ARID2	ARL10	ARMH2
ARHGDIG	ARID3A	ARL11	ARMH3
ARHGEF1	ARID3B	ARL13A	ARMH4
ARHGEF2	ARID3C	ARL13B	ARMS2
ARHGEF3	ARID4A	ARL14	ARMT1
ARHGEF4	ARID4B	ARL14EP	ARNT
ARHGEF5	ARID5A	ARL14EPL	ARNT2
ARHGEF6	ARID5B	ARL15	ARNTL
ARHGEF7	ARIH1	ARL16	ARNTL2
ARHGEF9	ARIH2	ARL17A	ARPC1A
ARHGEF10	ARIH2OS	ARL17B	ARPC1B
ARHGEF10L	ARL1	ARMC1	ARPC2
ARHGEF11	ARL2	ARMC2	ARPC3
ARHGEF12	ARL2BP	ARMC3	ARPC4
ARHGEF15	ARL2-SNX15	ARMC4	ARPC4-TTLL3
ARHGEF16	ARL3	ARMC5	ARPC5
ARHGEF17	ARL4A	ARMC6	ARPC5L
ARHGEF18	ARL4C	ARMC7	ARPIN
ARHGEF19	ARL4D	ARMC8	ARPIN-AP3S2
ARHGEF25	ARL5A	ARMC9	ARPP19
ARHGEF26	ARL5B	ARMC10	ARPP21
ARHGEF28	ARL5C	ARMC12	ARR3
ARHGEF33	ARL6	ARMCX1	ARRB1
ARHGEF35	ARL6IP1	ARMCX2	ARRB2
ARHGEF37	ARL6IP4	ARMCX3	



ARRDC1	ASAP3	ASGR1	ASTN1
ARRDC2	ASB1	ASGR2	ASTN2
ARRDC3	ASB2	ASH1L	ASXL1
ARRDC4	ASB3	ASH2L	ASXL2
ARRDC5	ASB4	ASIC1	ASXL3
ARSA	ASB5	ASIC2	ASZ1
ARSB	ASB6	ASIC3	ATAD1
ARSD	ASB7	ASIC4	ATAD2
ARSE	ASB8	ASIC5	ATAD2B
ARSF	ASB9	ASIP	ATAD3A
ARSG	ASB10	ASL	ATAD3B
ARSH	ASB11	ASMT	ATAD3C
ARSI	ASB12	ASMTL	ATAD5
ARSJ	ASB13	ASNA1	ATAT1
ARSK	ASB14	ASNS	ATCAY
ARSL	ASB15	ASNSD1	ATE1
ART1	ASB16	ASPA	ATF1
ART3	ASB17	ASPDH	ATF2
ART4	ASB18	ASPG	ATF3
ART5	ASCC1	ASPH	ATF4
ARTN	ASCC2	ASPHD1	ATF5
ARV1	ASCC3	ASPHD2	ATF6
ARVCF	ASCL1	ASPM	ATF6B
ARX	ASCL2	ASPN	ATF7
AS3MT	ASCL3	ASPRV1	ATF7IP
ASAH1	ASCL4	ASPSCR1	ATF7IP2
ASAH2	ASCL5	ASRGL1	ATF7-NPFF
ASAH2B	ASDURF	ASS1	ATG2A
ASAP1	ASF1A	ASTE1	ATG2B
ASAP2	ASF1B	ASTL	ATG3

ATG4A	ATP1B1	ATP5MPL	ATP6V1G2-DDX39B
ATG4B	ATP1B2	ATP5PB	ATP6V1G3
ATG4C	ATP1B3	ATP5PD	ATP6V1H
ATG4D	ATP1B4	ATP5PF	ATP7A
ATG5	ATP2A1	ATP5PO	ATP7B
ATG7	ATP2A2	ATP5S	ATP8A1
ATG9A	ATP2A3	ATP6AP1	ATP8A2
ATG9B	ATP2B1	ATP6AP1L	ATP8B1
ATG10	ATP2B2	ATP6AP2	ATP8B2
ATG12	ATP2B3	ATP6V0A1	ATP8B3
ATG13	ATP2B4	ATP6V0A2	ATP8B4
ATG14	ATP2C1	ATP6V0A4	ATP9A
ATG16L1	ATP2C2	ATP6V0B	ATP9B
ATG16L2	ATP4A	ATP6V0C	ATP10A
ATG101	ATP4B	ATP6V0D1	ATP10B
ATIC	ATP5F1A	ATP6V0D2	ATP10D
ATL1	ATP5F1B	ATP6V0E1	ATP11A
ATL2	ATP5F1C	ATP6V0E2	ATP11B
ATL3	ATP5F1D	ATP6V1A	ATP11C
ATM	ATP5F1E	ATP6V1B1	ATP12A
ATMIN	ATP5IF1	ATP6V1B2	ATP13A1
ATN1	ATP5MC1	ATP6V1C1	ATP13A2
ATOH1	ATP5MC2	ATP6V1C2	ATP13A3
ATOH7	ATP5MC3	ATP6V1D	ATP13A4
ATOH8	ATP5MD	ATP6V1E1	ATP13A5
ATOX1	ATP5ME	ATP6V1E2	ATP23
ATP1A1	ATP5MF	ATP6V1F	ATPAF1
ATP1A2	ATP5MF-PTCD1	ATP6V1FNB	ATPAF2
ATP1A3	ATP5MG	ATP6V1G1	ATPSCKMT
ATP1A4	ATP5MGL	ATP6V1G2	



ATR	AVPI1	B3GNT5	BAG1
ATRAID	AVPR1A	B3GNT6	BAG2
ATRIP	AVPR1B	B3GNT7	BAG3
ATRN	AVPR2	B3GNT8	BAG4
ATRN1	AWAT1	B3GNT9	BAG5
ATRX	AWAT2	B3GNT10	BAG6
ATXN1	AXDND1	B3GNTL1	BAGE2
ATXN1L	AXIN1	B4GALNT1	BAHCC1
ATXN2	AXIN2	B4GALNT2	BAHD1
ATXN2L	AXL	B4GALNT3	BAIAP2
ATXN3	AZGP1	B4GALNT4	BAIAP2L1
ATXN3L	AZI2	B4GALT1	BAIAP2L2
ATXN7	AZIN1	B4GALT2	BAIAP3
ATXN7L1	AZIN2	B4GALT3	BAK1
ATXN7L2	AZU1	B4GALT4	BAMBI
ATXN7L3	B2M	B4GALT5	BANF1
ATXN7L3B	B3GALNT1	B4GALT6	BANF2
ATXN10	B3GALNT2	B4GALT7	BANK1
AUH	B3GALT1	B4GAT1	BANP
AUNIP	B3GALT2	B9D1	BAP1
AUP1	B3GALT4	B9D2	BARD1
AURKA	B3GALT5	BAALC	BARHL1
AURKAIP1	B3GALT6	BAAT	BARHL2
AURKB	B3GAT1	BABAM1	BARX1
AURKC	B3GAT2	BABAM2	BARX2
AUTS2	B3GAT3	BACE1	BASP1
AVEN	B3GLCT	BACE2	BATF
AVIL	B3GNT2	BACH1	BATF2
AVL9	B3GNT3	BACH2	BATF3
AVP	B3GNT4	BAD	BAX



BAZ1A	BCDIN3D	BCO2	BEX4
BAZ1B	BCHE	BCOR	BEX5
BAZ2A	BCKDHA	BCORL1	BFAR
BAZ2B	BCKDHB	BCR	BFSP1
BBC3	BCKDK	BCS1L	BFSP2
BBIP1	BCL2	BDH1	BGLAP
BBOF1	BCL2A1	BDH2	BGN
BBOX1	BCL2L1	BDKRB1	BHLHA9
BBS1	BCL2L2	BDKRB2	BHLHA15
BBS2	BCL2L2-PABPN1	BDNF	BHLHB9
BBS4	BCL2L10	BDP1	BHLHE22
BBS5	BCL2L11	BEAN1	BHLHE23
BBS7	BCL2L12	BECN1	BHLHE40
BBS9	BCL2L13	BECN2	BHLHE41
BBS10	BCL2L14	BEGAIN	BHMG1
BBS12	BCL2L15	BEND2	BHMT
BBX	BCL3	BEND3	BHMT2
BCAM	BCL6	BEND4	BICC1
BCAN	BCL6B	BEND5	BICD1
BCAP29	BCL7A	BEND6	BICD2
BCAP31	BCL7B	BEND7	BICDL1
BCAR1	BCL7C	BEST1	BICDL2
BCAR3	BCL9	BEST2	BICRA
BCAS1	BCL9L	BEST3	BICRAL
BCAS2	BCL10	BEST4	BID
BCAS3	BCL11A	BET1	BIK
BCAS4	BCL11B	BET1L	BIN1
BCAT1	BCLAF1	BEX1	BIN2
BCAT2	BCLAF3	BEX2	BIN3
BCCIP	BCO1	BEX3	BIRC2



BIRC3	BMP2K	BOLA1	BPY2C
BIRC5	BMP3	BOLA2	BRAF
BIRC6	BMP4	BOLA2B	BRAP
BIRC7	BMP5	BOLA2-SMG1P6	BRAT1
BIRC8	BMP6	BOLA3	BRCA1
BIVM	BMP7	BOLL	BRCA2
BIVM-ERCC5	BMP8A	BOP1	BRCC3
BLACAT1	BMP8B	BORA	BRD1
BLCAP	BMP10	BORCS5	BRD2
BLID	BMP15	BORCS6	BRD3
BLK	BMPER	BORCS7	BRD3OS
BLM	BMPR1A	BORCS7-ASMT	BRD4
BLMH	BMPR1B	BORCS8	BRD7
BLNK	BMPR2	BORCS8-MEF2B	BRD8
BLOC1S1	BMS1	BPGM	BRD9
BLOC1S2	BMT2	BPHL	BRDT
BLOC1S3	BMX	BPI	BRF1
BLOC1S4	BNC1	BPIFA1	BRF2
BLOC1S5	BNC2	BPIFA2	BRI3
BLOC1S5-TXNDC5	BNIP1	BPIFA3	BRI3BP
BLOC1S6	BNIP2	BPIFB1	BRICD5
BLVRA	BNIP3	BPIFB2	BRINP1
BLVRB	BNIP3L	BPIFB3	BRINP2
BLZF1	BNIP5	BPIFB4	BRINP3
BMERB1	BNIPL	BPIFB6	BRIP1
BMF	BOC	BPIFC	BRIX1
BMI1	BOD1	BPNT1	BRK1
BMP1	BOD1L1	BPTF	BRMS1
BMP2	BOD1L2	BPY2	BRMS1L
	BOK	BPY2B	BROX

BRPF1	BTBD19	BVES	C1QTNF9
BRPF3	BTC	BX255925.3	C1QTNF9B
BRS3	BTB	BX276092.9	C1QTNF12
BRSK1	BTF3	BX470111.1	C1R
BRSK2	BTF3L4	BX664615.2	C1RL
BRWD1	BTG1	BYSL	C1S
BRWD3	BTG2	BZW1	C1orf21
BSCL2	BTG3	BZW2	C1orf35
BSDC1	BTG4	C1D	C1orf43
BSG	BTK	C1GALT1	C1orf50
BSN	BTLA	C1GALT1C1	C1orf52
BSND	BTN1A1	C1GALT1C1L	C1orf53
BSPH1	BTN2A1	C1QA	C1orf54
BSPRY	BTN2A2	C1QB	C1orf56
BST1	BTN3A1	C1QBP	C1orf61
BST2	BTN3A2	C1QC	C1orf68
BSX	BTN3A3	C1QL1	C1orf74
BTAF1	BTNL2	C1QL2	C1orf87
BTBD1	BTNL3	C1QL3	C1orf94
BTBD2	BTNL8	C1QL4	C1orf100
BTBD3	BTNL9	C1QTNF1	C1orf105
BTBD6	BTNL10	C1QTNF2	C1orf109
BTBD7	BTRC	C1QTNF3	C1orf112
BTBD8	BUB1	C1QTNF3-AMACR	C1orf115
BTBD9	BUB1B	C1QTNF4	C1orf116
BTBD10	BUB1B-PAK6	C1QTNF5	C1orf122
BTBD11	BUB3	C1QTNF6	C1orf123
BTBD16	BUD13	C1QTNF7	C1orf127
BTBD17	BUD23	C1QTNF8	C1orf131
BTBD18	BUD31		C1orf141

C1orf146	C2orf42	C3orf49	C5orf15
C1orf158	C2orf49	C3orf52	C5orf22
C1orf159	C2orf50	C3orf56	C5orf24
C1orf162	C2orf54	C3orf58	C5orf30
C1orf167	C2orf66	C3orf62	C5orf34
C1orf174	C2orf68	C3orf67	C5orf38
C1orf185	C2orf69	C3orf70	C5orf46
C1orf189	C2orf70	C3orf80	C5orf47
C1orf194	C2orf72	C3orf84	C5orf49
C1orf195	C2orf73	C3orf85	C5orf51
C1orf198	C2orf74	C3orf86	C5orf52
C1orf210	C2orf76	C4A	C5orf58
C1orf216	C2orf78	C4B	C5orf60
C1orf226	C2orf80	C4BPA	C5orf63
C1orf229	C2orf81	C4BPB	C5orf67
C1orf232	C2orf83	C4orf3	C6
C2	C2orf88	C4orf17	C6orf10
C2CD2	C2orf91	C4orf19	C6orf15
C2CD2L	C2orf92	C4orf33	C6orf47
C2CD3	C3	C4orf36	C6orf48
C2CD4A	C3AR1	C4orf45	C6orf52
C2CD4B	C3orf14	C4orf46	C6orf58
C2CD4C	C3orf18	C4orf47	C6orf62
C2CD4D	C3orf20	C4orf48	C6orf89
C2CD5	C3orf22	C4orf50	C6orf106
C2CD6	C3orf30	C4orf51	C6orf118
C2orf15	C3orf33	C4orf54	C6orf120
C2orf16	C3orf35	C5	C6orf132
C2orf27A	C3orf36	C5AR1	C6orf136
C2orf40	C3orf38	C5AR2	C6orf141



C6orf163	C8orf59	C9orf152	C11orf65
C6orf201	C8orf74	C9orf153	C11orf68
C6orf203	C8orf76	C9orf163	C11orf71
C6orf222	C8orf82	C10orf53	C11orf74
C6orf223	C8orf86	C10orf55	C11orf80
C6orf226	C8orf88	C10orf62	C11orf86
C7	C8orf89	C10orf67	C11orf87
C7orf25	C9	C10orf71	C11orf88
C7orf26	C9orf3	C10orf82	C11orf91
C7orf31	C9orf16	C10orf88	C11orf94
C7orf33	C9orf24	C10orf90	C11orf95
C7orf43	C9orf40	C10orf95	C11orf96
C7orf50	C9orf43	C10orf99	C11orf97
C7orf55-LUC7L2	C9orf47	C10orf105	C11orf98
C7orf57	C9orf50	C10orf113	C12orf4
C7orf61	C9orf57	C10orf120	C12orf10
C7orf65	C9orf62	C10orf142	C12orf29
C7orf66	C9orf64	C10orf143	C12orf40
C7orf77	C9orf66	C11orf1	C12orf42
C8A	C9orf72	C11orf16	C12orf43
C8B	C9orf78	C11orf21	C12orf45
C8G	C9orf84	C11orf24	C12orf49
C8orf33	C9orf85	C11orf40	C12orf50
C8orf34	C9orf92	C11orf42	C12orf54
C8orf37	C9orf116	C11orf45	C12orf56
C8orf44	C9orf129	C11orf49	C12orf57
C8orf44-SGK3	C9orf131	C11orf52	C12orf60
C8orf48	C9orf135	C11orf53	C12orf65
C8orf49	C9orf139	C11orf54	C12orf66
C8orf58	C9orf147	C11orf58	C12orf71



C12orf73	C16orf71	C17orf107	C20orf96
C12orf74	C16orf72	C17orf113	C20orf141
C12orf75	C16orf74	C18orf12	C20orf144
C12orf76	C16orf78	C18orf21	C20orf173
C12orf77	C16orf82	C18orf25	C20orf194
C13orf42	C16orf86	C18orf32	C20orf202
C13orf46	C16orf87	C18orf54	C20orf203
C14orf28	C16orf89	C18orf63	C20orf204
C14orf39	C16orf90	C19orf12	C21orf2
C14orf93	C16orf91	C19orf18	C21orf58
C14orf119	C16orf92	C19orf24	C21orf59- TCP10L
C14orf132	C16orf95	C19orf25	C21orf62
C14orf177	C16orf96	C19orf33	C21orf91
C14orf178	C16orf97	C19orf38	C22orf15
C14orf180	C17orf47	C19orf44	C22orf23
C15orf38-AP3S2	C17orf49	C19orf47	C22orf24
C15orf39	C17orf50	C19orf48	C22orf31
C15orf40	C17orf51	C19orf53	C22orf34
C15orf41	C17orf53	C19orf54	C22orf39
C15orf48	C17orf58	C19orf57	C22orf42
C15orf53	C17orf64	C19orf66	C22orf46
C15orf56	C17orf67	C19orf67	CA1
C15orf61	C17orf75	C19orf70	CA2
C15orf62	C17orf77	C19orf71	CA3
C15orf65	C17orf78	C19orf73	CA4
C16orf45	C17orf80	C19orf81	CA5A
C16orf46	C17orf97	C19orf84	CA5B
C16orf54	C17orf98	C19orf85	CA6
C16orf58	C17orf99	C20orf27	CA7
C16orf70	C17orf100	C20orf85	



CA8	CACNA1H	CALB1	CAMK2A
CA9	CACNA1I	CALB2	CAMK2B
CA10	CACNA1S	CALCA	CAMK2D
CA11	CACNA2D1	CALCB	CAMK2G
CA12	CACNA2D2	CALCOCO1	CAMK2N1
CA13	CACNA2D3	CALCOCO2	CAMK2N2
CA14	CACNA2D4	CALCR	CAMK4
CAAP1	CACNB1	CALCRL	CAMKK1
CAB39	CACNB2	CALD1	CAMKK2
CAB39L	CACNB3	CALHM1	CAMKMT
CABCOCO1	CACNB4	CALHM2	CAMKV
CABIN1	CACNG1	CALHM3	CAMLG
CABLES1	CACNG2	CALHM4	CAMP
CABLES2	CACNG3	CALHM5	CAMSAP1
CABP1	CACNG4	CALHM6	CAMSAP2
CABP2	CACNG5	CALM1	CAMSAP3
CABP4	CACNG6	CALM2	CAMTA1
CABP5	CACNG7	CALM3	CAMTA2
CABP7	CACNG8	CALML3	CAND1
CABS1	CACTIN	CALML4	CAND2
CABYR	CACUL1	CALML5	CANT1
CACFD1	CACYBP	CALML6	CANX
CACHD1	CAD	CALN1	CAP1
CACNA1A	CADM1	CALR	CAP2
CACNA1B	CADM2	CALR3	CAPG
CACNA1C	CADM3	CALU	CAPN1
CACNA1D	CADM4	CALY	CAPN2
CACNA1E	CADPS	CAMK1	CAPN3
CACNA1F	CADPS2	CAMK1D	CAPN5
CACNA1G	CAGE1	CAMK1G	CAPN6



CAPN7	CARF	CASP10	CBFA2T2
CAPN8	CARHSP1	CASP14	CBFA2T3
CAPN9	CARM1	CASQ1	CBFB
CAPN10	CARMIL1	CASQ2	CBL
CAPN11	CARMIL2	CASR	CBLB
CAPN12	CARMIL3	CASS4	CBLC
CAPN13	CARNMT1	CAST	CBLIF
CAPN14	CARNS1	CASTOR1	CBLL1
CAPN15	CARS	CASTOR2	CBLL2
CAPNS1	CARS1	CASTOR3	CBLN1
CAPNS2	CARS2	CASZ1	CBLN2
CAPRIN1	CARTPT	CAT	CBLN3
CAPRIN2	CASC1	CATIP	CBLN4
CAPS	CASC3	CATSPER1	CBR1
CAPS2	CASC4	CATSPER2	CBR3
CAPSL	CASC10	CATSPER3	CBR4
CAPZA1	CASD1	CATSPER4	CBS
CAPZA2	CASK	CATSPERB	CBSL
CAPZA3	CASKIN1	CATSPERD	CBWD1
CAPZB	CASKIN2	CATSPERE	CBWD2
CARD6	CASP1	CATSPERG	CBWD3
CARD8	CASP2	CATSPERZ	CBWD5
CARD9	CASP3	CAV1	CBWD6
CARD10	CASP4	CAV2	CBX1
CARD11	CASP5	CAV3	CBX2
CARD14	CASP6	CAVIN1	CBX3
CARD16	CASP7	CAVIN2	CBX4
CARD17	CASP8	CAVIN3	CBX5
CARD18	CASP8AP2	CAVIN4	CBX6
CARD19	CASP9	CBARP	CBX7



CBX8	CCDC32	CCDC77	CCDC112
CBY1	CCDC33	CCDC78	CCDC113
CBY2	CCDC34	CCDC80	CCDC114
CBY3	CCDC36	CCDC81	CCDC115
CC2D1A	CCDC38	CCDC82	CCDC116
CC2D1B	CCDC39	CCDC83	CCDC117
CC2D2A	CCDC40	CCDC84	CCDC120
CC2D2B	CCDC42	CCDC85A	CCDC121
CCAR1	CCDC43	CCDC85B	CCDC122
CCAR2	CCDC47	CCDC85C	CCDC124
CCBE1	CCDC50	CCDC86	CCDC125
CCDC3	CCDC51	CCDC87	CCDC126
CCDC6	CCDC54	CCDC88A	CCDC127
CCDC7	CCDC57	CCDC88B	CCDC129
CCDC8	CCDC58	CCDC88C	CCDC130
CCDC9	CCDC59	CCDC89	CCDC134
CCDC9B	CCDC60	CCDC90B	CCDC136
CCDC12	CCDC61	CCDC91	CCDC137
CCDC13	CCDC62	CCDC92	CCDC138
CCDC14	CCDC63	CCDC92B	CCDC140
CCDC15	CCDC65	CCDC93	CCDC141
CCDC17	CCDC66	CCDC96	CCDC142
CCDC18	CCDC68	CCDC97	CCDC144A
CCDC22	CCDC69	CCDC102A	CCDC144NL
CCDC24	CCDC70	CCDC102B	CCDC146
CCDC25	CCDC71	CCDC103	CCDC148
CCDC27	CCDC71L	CCDC105	CCDC149
CCDC28A	CCDC73	CCDC106	CCDC150
CCDC28B	CCDC74A	CCDC107	CCDC151
CCDC30	CCDC74B	CCDC110	CCDC152



CCDC153	CCDC187	CCL13	CCNB3
CCDC154	CCDC188	CCL14	CCNC
CCDC155	CCDC189	CCL15	CCND1
CCDC157	CCDC190	CCL15-CCL14	CCND2
CCDC158	CCDC191	CCL16	CCND3
CCDC159	CCDC192	CCL17	CCNDBP1
CCDC160	CCDC194	CCL18	CCNE1
CCDC163	CCDC195	CCL19	CCNE2
CCDC166	CCDC196	CCL20	CCNF
CCDC167	CCDC197	CCL21	CCNG1
CCDC168	CCDC198	CCL22	CCNG2
CCDC169	CCDC200	CCL23	CCNH
CCDC169- SOHLH2	CCDC201	CCL24	CCNI
CCDC170	CCER1	CCL25	CCNI2
CCDC171	CCER2	CCL26	CCNJ
CCDC172	CCHCR1	CCL27	CCNJL
CCDC173	CCIN	CCL28	CCNK
CCDC174	CCK	CCM2	CCNL1
CCDC175	CCKAR	CCM2L	CCNL2
CCDC177	CCKBR	CCN1	CCNO
CCDC178	CCL1	CCN2	CCNQ
CCDC179	CCL2	CCN3	CCNT1
CCDC180	CCL3	CCN4	CCNT2
CCDC181	CCL3L3	CCN5	CCNY
CCDC182	CCL4	CCN6	CCNYL1
CCDC183	CCL4L2	CCNA1	CCP110
CCDC184	CCL5	CCNA2	CCPG1
CCDC185	CCL7	CCNB1	CCR1
CCDC186	CCL8	CCNB1IP1	CCR2
	CCL11	CCNB2	CCR3



CCR4	CD2BP2	CD48	CD164
CCR5	CD3D	CD52	CD164L2
CCR6	CD3E	CD53	CD177
CCR7	CD3EAP	CD55	CD180
CCR8	CD3G	CD58	CD200
CCR9	CD4	CD59	CD200R1
CCR10	CD5	CD63	CD200R1L
CCRL2	CD5L	CD68	CD207
CCS	CD6	CD69	CD209
CCSAP	CD7	CD70	CD226
CCSER1	CD8A	CD72	CD244
CCSER2	CD8B	CD74	CD247
CCT2	CD8B2	CD79A	CD248
CCT3	CD9	CD79B	CD274
CCT4	CD14	CD80	CD276
CCT5	CD19	CD81	CD300A
CCT6A	CD22	CD82	CD300C
CCT6B	CD24	CD83	CD300E
CCT7	CD27	CD84	CD300H
CCT8	CD28	CD86	CD300LB
CCT8L2	CD33	CD93	CD300LD
CCZ1	CD34	CD96	CD300LF
CCZ1B	CD36	CD99	CD300LG
CD1A	CD37	CD99L2	CD302
CD1B	CD38	CD101	CD320
CD1C	CD40	CD109	CDA
CD1D	CD40LG	CD151	CDADC1
CD1E	CD44	CD160	CDAN1
CD2	CD46	CD163	CDC5L
CD2AP	CD47	CD163L1	CDC6



CDC7	CDC123	CDH23	CDK13
CDC14A	CDCA2	CDH24	CDK14
CDC14B	CDCA3	CDH26	CDK15
CDC14C	CDCA4	CDHR1	CDK16
CDC16	CDCA5	CDHR2	CDK17
CDC20	CDCA7	CDHR3	CDK18
CDC20B	CDCA7L	CDHR4	CDK19
CDC23	CDCA8	CDHR5	CDK20
CDC25A	CDCP1	CDIP1	CDKAL1
CDC25B	CDCP2	CDIPT	CDKL1
CDC25C	CDH1	CDK1	CDKL2
CDC26	CDH2	CDK2	CDKL3
CDC27	CDH3	CDK2AP1	CDKL4
CDC34	CDH4	CDK2AP2	CDKL5
CDC37	CDH5	CDK3	CDKN1A
CDC37L1	CDH6	CDK4	CDKN1B
CDC40	CDH7	CDK5	CDKN1C
CDC42	CDH8	CDK5R1	CDKN2A
CDC42BPA	CDH9	CDK5R2	CDKN2AIP
CDC42BPB	CDH10	CDK5RAP1	CDKN2AIPNL
CDC42BPG	CDH11	CDK5RAP2	CDKN2B
CDC42EP1	CDH12	CDK5RAP3	CDKN2C
CDC42EP2	CDH13	CDK6	CDKN2D
CDC42EP3	CDH15	CDK7	CDKN3
CDC42EP4	CDH16	CDK8	CDNF
CDC42EP5	CDH17	CDK9	CDO1
CDC42SE1	CDH18	CDK10	CDON
CDC42SE2	CDH19	CDK11A	CDPF1
CDC45	CDH20	CDK11B	CDR1
CDC73	CDH22	CDK12	CDR2



CDR2L	CEACAM21	CENPBD1	CEP63
CDRT1	CEBPA	CENPC	CEP68
CDRT4	CEBPB	CENPE	CEP70
CDRT15	CEBPD	CENPF	CEP72
CDRT15L2	CEBPE	CENPH	CEP76
CDS1	CEBPG	CENPI	CEP78
CDS2	CEBPZ	CENPJ	CEP83
CDSN	CEBPZOS	CENPK	CEP85
CDT1	CECR2	CENPL	CEP85L
CDV3	CEL	CENPM	CEP89
CDX1	CELA1	CENPN	CEP95
CDX2	CELA2A	CENPO	CEP97
CDX4	CELA2B	CENPP	CEP104
CDY1	CELA3A	CENPQ	CEP112
CDY1B	CELA3B	CENPS	CEP120
CDY2A	CELF1	CENPS-CORT	CEP126
CDY2B	CELF2	CENPT	CEP128
CDYL	CELF3	CENPU	CEP131
CDYL2	CELF4	CENPV	CEP135
CEACAM1	CELF5	CENPVL1	CEP152
CEACAM3	CELF6	CENPVL2	CEP162
CEACAM4	CELSR1	CENPVL3	CEP164
CEACAM5	CELSR2	CENPW	CEP170
CEACAM6	CELSR3	CENPX	CEP170B
CEACAM7	CEMIP	CEP19	CEP192
CEACAM8	CEMIP2	CEP41	CEP250
CEACAM16	CEMP1	CEP44	CEP290
CEACAM18	CEND1	CEP55	CEP295
CEACAM19	CENPA	CEP57	CEP295NL
CEACAM20	CENPB	CEP57L1	CEP350



CEPT1	CFAP54	CFH	CHAF1A
CER1	CFAP57	CFHR1	CHAF1B
CERCAM	CFAP58	CFHR2	CHAMP1
CERK	CFAP61	CFHR3	CHAT
CERKL	CFAP65	CFHR4	CHCHD1
CERS1	CFAP69	CFHR5	CHCHD2
CERS2	CFAP70	CFI	CHCHD3
CERS3	CFAP73	CFL1	CHCHD4
CERS4	CFAP74	CFL2	CHCHD5
CERS5	CFAP77	CFLAR	CHCHD6
CERS6	CFAP97	CFP	CHCHD7
CERT1	CFAP97D1	CFTR	CHCHD10
CES1	CFAP97D2	CGA	CHD1
CES2	CFAP99	CGAS	CHD1L
CES3	CFAP100	CGB1	CHD2
CES4A	CFAP126	CGB2	CHD3
CES5A	CFAP157	CGB3	CHD4
CETN1	CFAP161	CGB5	CHD5
CETN2	CFAP206	CGB7	CHD6
CETN3	CFAP221	CGB8	CHD7
CETP	CFAP298	CGGBP1	CHD8
CFAP20	CFAP298-TCP10L	CGN	CHD9
CFAP36	CFAP299	CGNL1	CHDH
CFAP43	CFAP300	CGREF1	CHEK1
CFAP44	CFAP410	CGRRF1	CHEK2
CFAP45	CFB	CH25H	CHERP
CFAP46	CFC1	CHAC1	CHFR
CFAP47	CFC1B	CHAC2	CHGA
CFAP52	CFD	CHAD	CHGB
CFAP53	CFDP1	CHADL	CHI3L1



CHI3L2	CHPF2	CHST3	CIB4
CHIA	CHPT1	CHST4	CIC
CHIC1	CHRA1	CHST5	CIDEA
CHIC2	CHRD	CHST6	CIDEB
CHID1	CHRD1	CHST7	CIDEC
CHIT1	CHRD2	CHST8	CIITA
CHKA	CHRFAM7A	CHST9	CILK1
CHKB	CHRM1	CHST10	CILP
CHKB-CPT1B	CHRM2	CHST11	CILP2
CHL1	CHRM3	CHST12	CINP
CHM	CHRM4	CHST13	CIP2A
CHML	CHRM5	CHST14	CIPC
CHMP1A	CHRNA1	CHST15	CIR1
CHMP1B	CHRNA2	CHSY1	CIRBP
CHMP2A	CHRNA3	CHSY3	CISD1
CHMP2B	CHRNA4	CHTF8	CISD2
CHMP3	CHRNA5	CHTF18	CISD3
CHMP4A	CHRNA6	CHTOP	CISH
CHMP4B	CHRNA7	CHUK	CIT
CHMP4C	CHRNA9	CHURC1	CITED1
CHMP5	CHRNA10	CHURC1-FNTB	CITED2
CHMP6	CHRNA1	CIAO1	CITED4
CHMP7	CHRNA2	CIAO2A	CIZ1
CHN1	CHRNA3	CIAO2B	CKAP2
CHN2	CHRNA4	CIAO3	CKAP2L
CHODL	CHRNA5	CIAPIN1	CKAP4
CHORDC1	CHRNA6	CIART	CKAP5
CHP1	CHRNA7	CIB1	CKB
CHP2	CHST1	CIB2	CKLF
CHPF	CHST2	CIB3	CKLF-CMTM1



CKM	CLDN6	CLEC4C	CLIC5
CKMT1A	CLDN7	CLEC4D	CLIC6
CKMT1B	CLDN8	CLEC4E	CLINT1
CKMT2	CLDN9	CLEC4F	CLIP1
CKS1B	CLDN10	CLEC4G	CLIP2
CKS2	CLDN11	CLEC4M	CLIP3
CLASP1	CLDN12	CLEC4O	CLIP4
CLASP2	CLDN14	CLEC5A	CLK1
CLASRP	CLDN15	CLEC6A	CLK2
CLBA1	CLDN16	CLEC7A	CLK3
CLC	CLDN17	CLEC9A	CLK4
CLCA1	CLDN18	CLEC10A	CLLU1OS
CLCA2	CLDN19	CLEC11A	CLMN
CLCA4	CLDN20	CLEC12A	CLMP
CLCC1	CLDN22	CLEC12B	CLN3
CLCF1	CLDN23	CLEC14A	CLN5
CLCN1	CLDN24	CLEC16A	CLN6
CLCN2	CLDN25	CLEC17A	CLN8
CLCN3	CLDN34	CLEC18A	CLNK
CLCN4	CLDND1	CLEC18B	CLNS1A
CLCN5	CLDND2	CLEC18C	CLOCK
CLCN6	CLEC1A	CLEC19A	CLP1
CLCN7	CLEC1B	CLEC20A	CLPB
CLCNKA	CLEC2A	CLECL1	CLPP
CLCNKB	CLEC2B	CLGN	CLPS
CLDN1	CLEC2D	CLHC1	CLPSL1
CLDN2	CLEC2L	CLIC1	CLPSL2
CLDN3	CLEC3A	CLIC2	CLPTM1
CLDN4	CLEC3B	CLIC3	CLPTM1L
CLDN5	CLEC4A	CLIC4	CLPX



CLRN1	CMTM1	CNKS3	CNST
CLRN2	CMTM2	CNMD	CNTD1
CLRN3	CMTM3	CNN1	CNTD2
CLSPN	CMTM4	CNN2	CNTF
CLSTN1	CMTM5	CNN3	CNTFR
CLSTN2	CMTM6	CNNM1	CNTLN
CLSTN3	CMTM7	CNNM2	CNTN1
CLTA	CMTM8	CNNM3	CNTN2
CLTB	CMTR1	CNNM4	CNTN3
CLTC	CMTR2	CNOT1	CNTN4
CLTCL1	CMYA5	CNOT2	CNTN5
CLTRN	CNBD1	CNOT3	CNTN6
CLU	CNBD2	CNOT4	CNTNAP1
CLUAP1	CNBP	CNOT6	CNTNAP2
CLUH	CNDP1	CNOT6L	CNTNAP3
CLUL1	CNDP2	CNOT7	CNTNAP3B
CLVS1	CNEP1R1	CNOT8	CNTNAP3C
CLVS2	CNFN	CNOT9	CNTNAP4
CLYBL	CNGA1	CNOT10	CNTNAP5
CMA1	CNGA2	CNOT11	CNTRL
CMAS	CNGA3	CNP	CNTROB
CMBL	CNGA4	CNPPD1	COA1
CMC1	CNGB1	CNPY1	COA3
CMC2	CNGB3	CNPY2	COA4
CMC4	CNIH1	CNPY3	COA5
CMIP	CNIH2	CNPY3-GNMT	COA6
CMKLR1	CNIH3	CNPY4	COA7
CMPK1	CNIH4	CNR1	COA8
CMPK2	CNKS1	CNR2	COASY
CMSS1	CNKS2	CNRIP1	COBL



COBLL1	COL6A6	COLEC11	COPS5
COCH	COL7A1	COLEC12	COPS6
COG1	COL8A1	COLGALT1	COPS7A
COG2	COL8A2	COLGALT2	COPS7B
COG3	COL9A1	COLQ	COPS8
COG4	COL9A2	COMMD1	COPS9
COG5	COL9A3	COMMD2	COPZ1
COG6	COL10A1	COMMD3	COPZ2
COG7	COL11A1	COMMD3-BMI1	COQ2
COG8	COL11A2	COMMD4	COQ3
COIL	COL12A1	COMMD5	COQ4
COL1A1	COL13A1	COMMD6	COQ5
COL1A2	COL14A1	COMMD7	COQ6
COL2A1	COL15A1	COMMD8	COQ7
COL3A1	COL16A1	COMMD9	COQ8A
COL4A1	COL17A1	COMMD10	COQ8B
COL4A2	COL18A1	COMP	COQ9
COL4A2-AS2	COL19A1	COMT	COQ10A
COL4A3	COL20A1	COMTD1	COQ10B
COL4A3BP	COL21A1	COP1	CORIN
COL4A4	COL22A1	COPA	CORO1A
COL4A5	COL23A1	COPB1	CORO1B
COL4A6	COL24A1	COPB2	CORO1C
COL5A1	COL25A1	COPE	CORO2A
COL5A2	COL26A1	COPG1	CORO2B
COL5A3	COL27A1	COPG2	CORO6
COL6A1	COL28A1	COPRS	CORO7
COL6A2	COLCA1	COPS2	CORO7-PAM16
COL6A3	COLCA2	COPS3	CORT
COL6A5	COLEC10	COPS4	COTL1



COX4I1	CPA4	CPNE8	CRACD
COX4I2	CPA5	CPNE9	CRACR2A
COX5A	CPA6	CPO	CRACR2B
COX5B	CPAMD8	CPOX	CRADD
COX6A1	CPB1	CPPED1	CRAMP1
COX6A2	CPB2	CPQ	CRAT
COX6B1	CPD	CPS1	CRB1
COX6B2	CPE	CPSF1	CRB2
COX6C	CPEB1	CPSF2	CRB3
COX7A1	CPEB2	CPSF3	CRBN
COX7A2	CPEB3	CPSF4	CRCP
COX7A2L	CPEB4	CPSF4L	CRCT1
COX7B	CPED1	CPSF6	CREB1
COX7B2	CPHXL	CPSF7	CREB3
COX7C	CPLANE1	CPT1A	CREB3L1
COX8A	CPLANE2	CPT1B	CREB3L2
COX8C	CPLX1	CPT1C	CREB3L3
COX10	CPLX2	CPT2	CREB3L4
COX11	CPLX3	CPTP	CREB5
COX14	CPLX4	CPVL	CREBBP
COX15	CPM	CPXCR1	CREBL2
COX16	CPN1	CPXM1	CREBRF
COX17	CPN2	CPXM2	CREBZF
COX18	CPNE1	CPZ	CREG1
COX19	CPNE2	CR1	CREG2
COX20	CPNE3	CR1L	CRELD1
CP	CPNE4	CR2	CRELD2
CPA1	CPNE5	CR589904.2	CREM
CPA2	CPNE6	CRABP1	CRH
CPA3	CPNE7	CRABP2	CRHBP



CRHR1	CRTAP	CRYZL2P- SEC16B	CSNK1A1
CRHR2	CRTC1		CSNK1A1L
CRIM1	CRTC2	CS	CSNK1D
CRIP1	CRTC3	CSAD	CSNK1E
CRIP2	CRX	CSAG1	CSNK1G1
CRIP3	CRY1	CSAG2	CSNK1G2
CRIPAK	CRY2	CSAG3	CSNK1G3
CRIPT	CRYAA	CSDC2	CSNK2A1
CRISP1	CRYAA2	CSDE1	CSNK2A2
CRISP2	CRYAB	CSE1L	CSNK2A3
CRISP3	CRYBA1	CSF1	CSNK2B
CRISPLD1	CRYBA2	CSF1R	CSNKA2IP
CRISPLD2	CRYBA4	CSF2	CSPG4
CRK	CRYBB1	CSF2RA	CSPG5
CRKL	CRYBB2	CSF2RB	CSPP1
CRLF1	CRYBB3	CSF3	CSRNP1
CRLF2	CRYBG1	CSF3R	CSRNP2
CRLF3	CRYBG2	CSGALNACT1	CSRNP3
CRLS1	CRYBG3	CSGALNACT2	CSRP1
CRMP1	CRYGA	CSH1	CSRP2
CRNDE	CRYGB	CSH2	CSRP3
CRNKL1	CRYGC	CSHL1	CST1
CRNN	CRYGD	CSK	CST2
CROCC	CRYGN	CSKMT	CST3
CROCC2	CRYGS	CSMD1	CST4
CROT	CRYL1	CSMD2	CST5
CRP	CRYM	CSMD3	CST6
CRPPA	CRYZ	CSN1S1	CST7
CRTAC1	CRYZL1	CSN2	CST8
CRTAM		CSN3	CST9



CST9L	CT47B1	CTLA4	CTSV
CST11	CT55	CTNNA1	CTSW
CSTA	CT62	CTNNA2	CTSZ
CSTB	CT83	CTNNA3	CTTN
CSTF1	CTAG1A	CTNNAL1	CTTNBP2
CSTF2	CTAG1B	CTNNB1	CTTNBP2NL
CSTF2T	CTAG2	CTNNBIP1	CTU1
CSTF3	CTAGE1	CTNNBL1	CTU2
CSTL1	CTAGE4	CTNND1	CTXN1
CT45A1	CTAGE6	CTNND2	CTXN2
CT45A2	CTAGE8	CTNS	CTXN3
CT45A3	CTAGE9	CTPS1	CTXND1
CT45A5	CTAGE15	CTPS2	CTXND2
CT45A6	CTBP1	CTR9	CU639417.1
CT45A7	CTBP2	CTRB1	CUBN
CT45A8	CTBS	CTRB2	CUEDC1
CT45A9	CTC1	CTRC	CUEDC2
CT45A10	CTCF	CTRL	CUL1
CT47A1	CTCFL	CTSA	CUL2
CT47A2	CTDNEP1	CTSB	CUL3
CT47A3	CTDP1	CTSC	CUL4A
CT47A4	CTDSP1	CTSD	CUL4B
CT47A5	CTDSP2	CTSE	CUL5
CT47A6	CTDSPL	CTSF	CUL7
CT47A7	CTDSPL2	CTSG	CUL9
CT47A8	CTF1	CTSH	CUTA
CT47A9	CTGF	CTSK	CUTC
CT47A10	CTH	CTSL	CUX1
CT47A11	CTHRC1	CTSO	CUX2
CT47A12	CTIF	CTSS	CUZD1

CWC15	CXXC1	CYB561D2	CYP2R1
CWC22	CXXC4	CYBA	CYP2S1
CWC25	CXXC5	CYBB	CYP2U1
CWC27	CXorf21	CYBC1	CYP2W1
CWF19L1	CXorf36	CYBRD1	CYP3A4
CWF19L2	CXorf38	CYC1	CYP3A5
CWH43	CXorf40A	CYCS	CYP3A7
CX3CL1	CXorf40B	CYFIP1	CYP3A7- CYP3A51P
CX3CR1	CXorf49	CYFIP2	CYP3A43
CXADR	CXorf49B	CYGB	CYP4A11
CXCL1	CXorf51A	CYHR1	CYP4A22
CXCL2	CXorf51B	CYLC1	CYP4B1
CXCL3	CXorf56	CYLC2	CYP4F2
CXCL5	CXorf57	CYLD	CYP4F3
CXCL6	CXorf58	CYP1A1	CYP4F8
CXCL8	CXorf65	CYP1A2	CYP4F11
CXCL9	CXorf66	CYP1B1	CYP4F12
CXCL10	CXorf67	CYP2A6	CYP4F22
CXCL11	CYB5A	CYP2A7	CYP4V2
CXCL12	CYB5B	CYP2A13	CYP4X1
CXCL13	CYB5D1	CYP2B6	CYP4Z1
CXCL14	CYB5D2	CYP2C8	CYP7A1
CXCL16	CYB5R1	CYP2C9	CYP7B1
CXCL17	CYB5R2	CYP2C18	CYP8B1
CXCR1	CYB5R3	CYP2C19	CYP11A1
CXCR2	CYB5R4	CYP2D6	CYP11B1
CXCR3	CYB5RL	CYP2D7	CYP11B2
CXCR4	CYB561	CYP2E1	CYP17A1
CXCR5	CYB561A3	CYP2F1	CYP19A1
CXCR6	CYB561D1	CYP2J2	

CYP20A1	DAAM1	DAZ1	DCAF10
CYP21A2	DAAM2	DAZ2	DCAF11
CYP24A1	DAB1	DAZ3	DCAF12
CYP26A1	DAB2	DAZ4	DCAF12L1
CYP26B1	DAB2IP	DAZAP1	DCAF12L2
CYP26C1	DACH1	DAZAP2	DCAF13
CYP27A1	DACH2	DAZL	DCAF15
CYP27B1	DACT1	DBF4	DCAF16
CYP27C1	DACT2	DBF4B	DCAF17
CYP39A1	DACT3	DBH	DCAKD
CYP46A1	DAD1	DBI	DCANP1
CYP51A1	DAG1	DBN1	DCBLD1
CYR61	DAGLA	DBNDD1	DCBLD2
CYREN	DAGLB	DBNDD2	DCC
CYRIA	DALRD3	DBNL	DCD
CYRIB	DAND5	DBP	DCDC1
CYS1	DAO	DBR1	DCDC2
CYSLTR1	DAOA	DBT	DCDC2B
CYSLTR2	DAP	DBX1	DCDC2C
CYSRT1	DAP3	DBX2	DCHS1
CYSTM1	DAPK1	DCAF1	DCHS2
CYTH1	DAPK2	DCAF4	DCK
CYTH2	DAPK3	DCAF4L1	DCLK1
CYTH3	DAPL1	DCAF4L2	DCLK2
CYTH4	DAPP1	DCAF5	DCLK3
CYTIP	DARS	DCAF6	DCLRE1A
CYTL1	DARS1	DCAF7	DCLRE1B
CYYR1	DARS2	DCAF8	DCLRE1C
CZIB	DAW1	DCAF8L1	DCN
D2HGDH	DAXX	DCAF8L2	DGP1A



DCP1B	DDI1	DDX25	DEF8
DCP2	DDI2	DDX27	DEFA1
DCPS	DDIAS	DDX28	DEFA1B
DCST1	DDIT3	DDX31	DEFA3
DCST2	DDIT4	DDX39A	DEFA4
DCSTAMP	DDIT4L	DDX39B	DEFA5
DCT	DDN	DDX41	DEFA6
DCTD	DDO	DDX42	DEFB1
DCTN1	DDOST	DDX43	DEFB4A
DCTN2	DDR1	DDX46	DEFB4B
DCTN3	DDR2	DDX47	DEFB103A
DCTN4	DDRGK1	DDX49	DEFB103B
DCTN5	DDT	DDX50	DEFB104A
DCTN6	DDTL	DDX51	DEFB104B
DCTPP1	DDX1	DDX52	DEFB105A
DCUN1D1	DDX3X	DDX53	DEFB105B
DCUN1D2	DDX3Y	DDX54	DEFB106A
DCUN1D3	DDX4	DDX55	DEFB106B
DCUN1D4	DDX5	DDX56	DEFB107A
DCUN1D5	DDX6	DDX58	DEFB107B
DCX	DDX10	DDX59	DEFB108B
DCXR	DDX11	DDX60	DEFB109B
DDA1	DDX17	DDX60L	DEFB110
DDAH1	DDX18	DEAF1	DEFB112
DDAH2	DDX19A	DEC1	DEFB113
DDB1	DDX19B	DECR1	DEFB114
DDB2	DDX20	DECR2	DEFB115
DDC	DDX21	DEDD	DEFB116
DDHD1	DDX23	DEDD2	DEFB118
DDHD2	DDX24	DEF6	DEFB119



DEFB121	DENND4B	DGAT2	DHRS4
DEFB123	DENND4C	DGAT2L6	DHRS4L1
DEFB124	DENND5A	DGCR2	DHRS4L2
DEFB125	DENND5B	DGCR6	DHRS7
DEFB126	DENND6A	DGCR6L	DHRS7B
DEFB127	DENND6B	DGCR8	DHRS7C
DEFB128	DENND10	DGKA	DHRS9
DEFB129	DENND11	DGKB	DHRS11
DEFB130A	DENR	DGKD	DHRS12
DEFB130B	DEPDC1	DGKE	DHRS13
DEFB131A	DEPDC1B	DGKG	DHRSX
DEFB131B	DEPDC4	DGKH	DHTKD1
DEFB132	DEPDC5	DGKI	DHX8
DEFB133	DEPDC7	DGKK	DHX9
DEFB134	DEPP1	DGKQ	DHX15
DEFB135	DEPTOR	DGKZ	DHX16
DEFB136	DERA	DGLUCY	DHX29
DEGS1	DERL1	DGUOK	DHX30
DEGS2	DERL2	DHCR7	DHX32
DEK	DERL3	DHCR24	DHX33
DELE1	DERPC	DHDDS	DHX34
DENND1A	DES	DHDH	DHX35
DENND1B	DESI1	DHFR	DHX36
DENND1C	DESI2	DHFR2	DHX37
DENND2A	DET1	DHH	DHX38
DENND2B	DEUP1	DHODH	DHX40
DENND2C	DEXI	DHPS	DHX57
DENND2D	DFFA	DHRS1	DHX58
DENND3	DFFB	DHRS2	DIABLO
DENND4A	DGAT1	DHRS3	DIAPH1



DIAPH2	DKK1	DLX5	DNAAF2
DIAPH3	DKK2	DLX6	DNAAF3
DICER1	DKK3	DMAC1	DNAAF4
DIDO1	DKK4	DMAC2	DNAAF5
DIMT1	DKKL1	DMAC2L	DNAH1
DIO1	DLAT	DMAP1	DNAH2
DIO2	DLC1	DMBT1	DNAH3
DIO3	DLD	DMBX1	DNAH5
DIP2A	DLEC1	DMC1	DNAH6
DIP2B	DLEU7	DMD	DNAH7
DIP2C	DLG1	DMGDH	DNAH8
DIPK1A	DLG2	DMKN	DNAH9
DIPK1B	DLG3	DMP1	DNAH10
DIPK1C	DLG4	DMPK	DNAH11
DIPK2A	DLG5	DMRT1	DNAH12
DIPK2B	DLGAP1	DMRT2	DNAH14
DIRAS1	DLGAP2	DMRT3	DNAH17
DIRAS2	DLGAP3	DMRTA1	DNAI1
DIRAS3	DLGAP4	DMRTA2	DNAI2
DIRC1	DLGAP5	DMRTB1	DNAJA1
DIRC2	DLK1	DMRTC1	DNAJA2
DIS3	DLK2	DMRTC1B	DNAJA3
DIS3L	DLL1	DMRTC2	DNAJA4
DIS3L2	DLL3	DMTF1	DNAJB1
DISC1	DLL4	DMTN	DNAJB2
DISP1	DLST	DMWD	DNAJB3
DISP2	DLX1	DMXL1	DNAJB4
DISP3	DLX2	DMXL2	DNAJB5
DIXDC1	DLX3	DNA2	DNAJB6
DKC1	DLX4	DNAAF1	DNAJB7



DNAJB8	DNAJC25	DNTTIP1	DOT1L
DNAJB9	DNAJC25-GNG10	DNTTIP2	DPAGT1
DNAJB11	DNAJC27	DOC2A	DPCD
DNAJB12	DNAJC28	DOC2B	DPEP1
DNAJB13	DNAJC30	DOCK1	DPEP2
DNAJB14	DNAL1	DOCK2	DPEP2NB
DNAJC1	DNAL4	DOCK3	DPEP3
DNAJC2	DNALI1	DOCK4	DPF1
DNAJC3	DNASE1	DOCK5	DPF2
DNAJC4	DNASE1L1	DOCK6	DPF3
DNAJC5	DNASE1L2	DOCK7	DPH1
DNAJC5B	DNASE1L3	DOCK8	DPH2
DNAJC5G	DNASE2	DOCK9	DPH3
DNAJC6	DNASE2B	DOCK10	DPH3P1
DNAJC7	DND1	DOCK11	DPH5
DNAJC8	DNER	DOHH	DPH6
DNAJC9	DNHD1	DOK1	DPH7
DNAJC10	DNLZ	DOK2	DPM1
DNAJC11	DNM1	DOK3	DPM2
DNAJC12	DNM1L	DOK4	DPM3
DNAJC13	DNM2	DOK5	DPP3
DNAJC14	DNM3	DOK6	DPP4
DNAJC15	DNMBP	DOK7	DPP6
DNAJC16	DNMT1	DOLK	DPP7
DNAJC17	DNMT3A	DOLPP1	DPP8
DNAJC18	DNMT3B	DONSON	DPP9
DNAJC19	DNMT3L	DOP1A	DPP10
DNAJC21	DNPEP	DOP1B	DPPA2
DNAJC22	DNPH1	DOPEY1	DPPA3
DNAJC24	DNTT	DOPEY2	DPPA4



DPPA5	DRGX	DTWD2	DUSP14
DPRX	DRICH1	DTX1	DUSP15
DPT	DROSHA	DTX2	DUSP16
DPY19L1	DRP2	DTX3	DUSP18
DPY19L2	DSC1	DTX3L	DUSP19
DPY19L3	DSC2	DTX4	DUSP21
DPY19L4	DSC3	DTYMK	DUSP22
DPY30	DSCAM	DUOX1	DUSP23
DPYD	DSCAML1	DUOX2	DUSP26
DPYS	DSCC1	DUOXA1	DUSP27
DPYSL2	DSE	DUOXA2	DUSP28
DPYSL3	DSEL	DUPD1	DUT
DPYSL4	DSG1	DUS1L	DUX4
DPYSL5	DSG2	DUS2	DUXA
DQX1	DSG3	DUS3L	DUXB
DR1	DSG4	DUS4L	DVL1
DRAM1	DSN1	DUS4L-BCAP29	DVL2
DRAM2	DSP	DUSP1	DVL3
DRAP1	DSPP	DUSP2	DWORF
DRAXIN	DST	DUSP3	DXO
DRC1	DSTN	DUSP4	DYDC1
DRC3	DSTYK	DUSP5	DYDC2
DRC7	DTD1	DUSP6	DYM
DRD1	DTD2	DUSP7	DYNAP
DRD2	DTHD1	DUSP8	DYNC1H1
DRD3	DTL	DUSP9	DYNC1I1
DRD4	DTNA	DUSP10	DYNC1I2
DRD5	DTNB	DUSP11	DYNC1LI1
DRG1	DTNBP1	DUSP12	DYNC1LI2
DRG2	DTWD1	DUSP13	DYNC2H1



DYNC2LI1	EARS2	ECT2L	EEF1AKMT4- ECE2
DYNLL1	EBAG9	EDA	EEF1AKNMT
DYNLL2	EBF1	EDA2R	EEF1B2
DYNLRB1	EBF2	EDAR	EEF1D
DYNLRB2	EBF3	EDARADD	EEF1E1
DYNLT1	EBF4	EDC3	EEF1E1- BLOC1S5
DYNLT3	EBI3	EDC4	EEF1G
DYRK1A	EBLN1	EDDM3A	EEF2
DYRK1B	EBLN2	EDDM3B	EEF2K
DYRK2	EBNA1BP2	EDDM13	EEF2KMT
DYRK3	EBP	EDEM1	EEFSEC
DYRK4	EBPL	EDEM2	EEPD1
DYSF	ECD	EDEM3	EFCAB1
DYTN	ECE1	EDF1	EFCAB2
DZANK1	ECE2	EDIL3	EFCAB3
DZIP1	ECEL1	EDN1	EFCAB5
DZIP1L	ECH1	EDN2	EFCAB6
DZIP3	ECHDC1	EDN3	EFCAB7
E2F1	ECHDC2	EDNRA	EFCAB8
E2F2	ECHDC3	EDNRB	EFCAB9
E2F3	ECHS1	EDRF1	EFCAB10
E2F4	ECI1	EEA1	EFCAB11
E2F5	ECI2	EED	EFCAB12
E2F6	ECM1	EEF1A1	EFCAB13
E2F7	ECM2	EEF1A2	EFCAB14
E2F8	ECPAS	EEF1AKMT1	EFCC1
E4F1	ECRG4	EEF1AKMT2	EFEMP1
EAF1	ECSCR	EEF1AKMT3	EFEMP2
EAF2	ECSIT	EEF1AKMT4	EFHB
EAPP	ECT2		



EFHC1	EHBP1	EIF2D	EIF4ENIF1
EFHC2	EHBP1L1	EIF2S1	EIF4G1
EFHD1	EHD1	EIF2S2	EIF4G2
EFHD2	EHD2	EIF2S3	EIF4G3
EFL1	EHD3	EIF2S3B	EIF4H
EFNA1	EHD4	EIF3A	EIF5
EFNA2	EHF	EIF3B	EIF5A
EFNA3	EHHADH	EIF3C	EIF5A2
EFNA4	EHMT1	EIF3CL	EIF5AL1
EFNA5	EHMT2	EIF3D	EIF5B
EFNB1	EI24	EIF3E	EIF6
EFNB2	EID1	EIF3F	EIPR1
EFNB3	EID2	EIF3G	ELAC1
EFR3A	EID2B	EIF3H	ELAC2
EFR3B	EID3	EIF3I	ELANE
EFS	EIF1	EIF3J	ELAVL1
EFTUD2	EIF1AD	EIF3K	ELAVL2
EGF	EIF1AX	EIF3L	ELAVL3
EGFL6	EIF1AY	EIF3M	ELAVL4
EGFL7	EIF1B	EIF4A1	ELF1
EGFL8	EIF2A	EIF4A2	ELF2
EGFLAM	EIF2AK1	EIF4A3	ELF3
EGFR	EIF2AK2	EIF4B	ELF4
EGLN1	EIF2AK3	EIF4E	ELF5
EGLN2	EIF2AK4	EIF4E1B	ELFN1
EGLN3	EIF2B1	EIF4E2	ELFN2
EGR1	EIF2B2	EIF4E3	ELK1
EGR2	EIF2B3	EIF4EBP1	ELK3
EGR3	EIF2B4	EIF4EBP2	ELK4
EGR4	EIF2B5	EIF4EBP3	ELL



ELL2	ELP5	EMP3	ENPP4
ELL3	ELP6	EMSY	ENPP5
ELMO1	ELSPBP1	EMX1	ENPP6
ELMO2	EMB	EMX2	ENPP7
ELMO3	EMC1	EN1	ENSA
ELMOD1	EMC2	EN2	ENTHD1
ELMOD2	EMC3	ENAH	ENTPD1
ELMOD3	EMC4	ENAM	ENTPD2
ELMSAN1	EMC6	ENC1	ENTPD3
ELN	EMC7	ENDOD1	ENTPD4
ELOA	EMC8	ENDOG	ENTPD5
ELOA2	EMC9	ENDOU	ENTPD6
ELOA3	EMC10	ENDOV	ENTPD7
ELOA3B	EMCN	ENG	ENTPD8
ELOA3C	EMD	ENGASE	ENTR1
ELOA3D	EME1	ENHO	ENY2
ELOB	EME2	ENKD1	EOGT
ELOC	EMG1	ENKUR	EOLA1
ELOF1	EMID1	ENO1	EOLA2
ELOVL1	EMILIN1	ENO2	EOMES
ELOVL2	EMILIN2	ENO3	EP300
ELOVL3	EMILIN3	ENO4	EP400
ELOVL4	EML1	ENOPH1	EPAS1
ELOVL5	EML2	ENOSF1	EPB41
ELOVL6	EML3	ENOX1	EPB41L1
ELOVL7	EML4	ENOX2	EPB41L2
ELP1	EML5	ENPEP	EPB41L3
ELP2	EML6	ENPP1	EPB41L4A
ELP3	EMP1	ENPP2	EPB41L4B
ELP4	EMP2	ENPP3	EPB41L5



EPB42	EPO	ERCC3	ERMAP
EPC1	EPOP	ERCC4	ERMARD
EPC2	EPOR	ERCC5	ERMN
EPCAM	EPPIN	ERCC6	ERMP1
EPDR1	EPPIN-WFDC6	ERCC6L	ERN1
EPG5	EPPK1	ERCC6L2	ERN2
EPGN	EPRS	ERCC8	ERO1A
EPHA1	EPRS1	EREG	ERO1B
EPHA2	EPS8	ERF	ERP27
EPHA3	EPS8L1	ERFE	ERP29
EPHA4	EPS8L2	ERFL	ERP44
EPHA5	EPS8L3	ERG	ERRFI1
EPHA6	EPS15	ERG28	ERV3-1
EPHA7	EPS15L1	ERGIC1	ERV3-1-ZNF117
EPHA8	EPSTI1	ERGIC2	ERVFRD-1
EPHA10	EPX	ERGIC3	ERVH48-1
EPHB1	EPYC	ERH	ERVK3-1
EPHB2	EQTN	ERI1	ERVMER34-1
EPHB3	ERAL1	ERI2	ERVV-1
EPHB4	ERAP1	ERI3	ERVV-2
EPHB6	ERAP2	ERICH1	ERVW-1
EPHX1	ERAS	ERICH2	ESAM
EPHX2	ERBB2	ERICH3	ESCO1
EPHX3	ERBB3	ERICH4	ESCO2
EPHX4	ERBB4	ERICH5	ESD
EPM2A	ERBIN	ERICH6	ESF1
EPM2AIP1	ERC1	ERICH6B	ESM1
EPN1	ERC2	ERLEC1	ESPL1
EPN2	ERCC1	ERLIN1	ESPN
EPN3	ERCC2	ERLIN2	ESPNL



ESR1	ETV3	EXOC3L1	EYS
ESR2	ETV3L	EXOC3L2	EZH1
ESRP1	ETV4	EXOC3L4	EZH2
ESRP2	ETV5	EXOC4	EZHIP
ESRRA	ETV6	EXOC5	EZR
ESRRB	ETV7	EXOC6	F2
ESRRG	EVA1A	EXOC6B	F2R
ESS2	EVA1B	EXOC7	F2RL1
ESX1	EVA1C	EXOC8	F2RL2
ESYT1	EVC	EXOG	F2RL3
ESYT2	EVC2	EXOSC1	F3
ESYT3	EVI2A	EXOSC2	F5
ETAA1	EVI2B	EXOSC3	F7
ETDA	EVI5	EXOSC4	F8
ETDB	EVI5L	EXOSC5	F8A1
ETDC	EVL	EXOSC6	F8A2
ETF1	EVPL	EXOSC7	F8A3
ETFA	EVPLL	EXOSC8	F9
ETFB	EVX1	EXOSC9	F10
ETFBKMT	EVX2	EXOSC10	F11
ETFDH	EWSR1	EXPH5	F11R
ETFRF1	EXD1	EXT1	F12
ETHE1	EXD2	EXT2	F13A1
ETNK1	EXD3	EXTL1	F13B
ETNK2	EXO1	EXTL2	FA2H
ETNPPL	EXO5	EXTL3	FAAH
ETS1	EXOC1	EYA1	FAAH2
ETS2	EXOC1L	EYA2	FAAP20
ETV1	EXOC2	EYA3	FAAP24
ETV2	EXOC3	EYA4	FAAP100



FABP1	FAM13A	FAM53A	FAM83E
FABP2	FAM13B	FAM53B	FAM83F
FABP3	FAM13C	FAM53C	FAM83G
FABP4	FAM19A1	FAM57A	FAM83H
FABP5	FAM19A2	FAM57B	FAM84A
FABP6	FAM19A3	FAM69A	FAM84B
FABP7	FAM19A4	FAM69B	FAM86B1
FABP9	FAM19A5	FAM69C	FAM86B2
FABP12	FAM20A	FAM71A	FAM86C1
FADD	FAM20B	FAM71B	FAM89A
FADS1	FAM20C	FAM71C	FAM89B
FADS2	FAM24A	FAM71D	FAM90A1
FADS3	FAM24B	FAM71E1	FAM90A26
FADS6	FAM25A	FAM71E2	FAM91A1
FAF1	FAM25C	FAM71F1	FAM92A
FAF2	FAM25E	FAM71F2	FAM92B
FAH	FAM25G	FAM72A	FAM95C
FAHD1	FAM32A	FAM72B	FAM98A
FAHD2A	FAM43A	FAM72C	FAM98B
FAHD2B	FAM43B	FAM72D	FAM98C
FAIM	FAM45A	FAM76A	FAM102A
FAIM2	FAM47A	FAM76B	FAM102B
FAM3A	FAM47B	FAM78A	FAM104A
FAM3B	FAM47C	FAM78B	FAM104B
FAM3C	FAM47E	FAM81A	FAM106A
FAM3D	FAM47E-STBD1	FAM81B	FAM106B
FAM8A1	FAM49A	FAM83A	FAM106C
FAM9A	FAM49B	FAM83B	FAM107A
FAM9B	FAM50A	FAM83C	FAM107B
FAM9C	FAM50B	FAM83D	FAM110A



FAM110B	FAM135A	FAM168B	FAM189A2
FAM110C	FAM135B	FAM169A	FAM189B
FAM110D	FAM136A	FAM169B	FAM192A
FAM111A	FAM149A	FAM170A	FAM193A
FAM111B	FAM149B1	FAM170B	FAM193B
FAM114A1	FAM151A	FAM171A1	FAM198A
FAM114A2	FAM151B	FAM171A2	FAM198B
FAM117A	FAM153A	FAM171B	FAM199X
FAM117B	FAM153B	FAM172A	FAM200A
FAM118A	FAM153C	FAM173A	FAM200B
FAM118B	FAM155A	FAM173B	FAM204A
FAM120A	FAM155B	FAM174A	FAM205A
FAM120AOS	FAM156A	FAM174B	FAM205C
FAM120B	FAM156B	FAM174C	FAM206A
FAM120C	FAM160A1	FAM177A1	FAM207A
FAM122A	FAM160A2	FAM177B	FAM208A
FAM122B	FAM160B1	FAM178B	FAM208B
FAM122C	FAM160B2	FAM180A	FAM209A
FAM124A	FAM161A	FAM180B	FAM209B
FAM124B	FAM161B	FAM181A	FAM210A
FAM126A	FAM162A	FAM181B	FAM210B
FAM126B	FAM162B	FAM183A	FAM213A
FAM129A	FAM163A	FAM184A	FAM214A
FAM129B	FAM163B	FAM184B	FAM214B
FAM129C	FAM166A	FAM185A	FAM216A
FAM131A	FAM166B	FAM186A	FAM216B
FAM131B	FAM166C	FAM186B	FAM217A
FAM131C	FAM167A	FAM187A	FAM217B
FAM133A	FAM167B	FAM187B	FAM218A
FAM133B	FAM168A	FAM189A1	FAM219A



FAM219B	FANCC	FATE1	FBXL15
FAM220A	FANCD2	FAU	FBXL16
FAM221A	FANCD2OS	FAXC	FBXL17
FAM221B	FANCE	FAXDC2	FBXL18
FAM222A	FANCF	FBF1	FBXL19
FAM222B	FANCG	FBH1	FBXL20
FAM227A	FANCI	FBL	FBXL22
FAM227B	FANCL	FBLIM1	FBXO2
FAM228A	FANCM	FBLL1	FBXO3
FAM228B	FANK1	FBLN1	FBXO4
FAM229A	FAP	FBLN2	FBXO5
FAM229B	FAR1	FBLN5	FBXO6
FAM234A	FAR2	FBLN7	FBXO7
FAM234B	FARP1	FBN1	FBXO8
FAM236A	FARP2	FBN2	FBXO9
FAM236B	FARS2	FBN3	FBXO10
FAM236C	FARSA	FBP1	FBXO11
FAM236D	FARSB	FBP2	FBXO15
FAM237A	FAS	FBRS	FBXO16
FAM237B	FASLG	FBRSL1	FBXO17
FAM240A	FASN	FBXL2	FBXO21
FAM240B	FASTK	FBXL3	FBXO22
FAM240C	FASTKD1	FBXL4	FBXO24
FAM241A	FASTKD2	FBXL5	FBXO25
FAM241B	FASTKD3	FBXL6	FBXO27
FAM243A	FASTKD5	FBXL7	FBXO28
FAM243B	FAT1	FBXL8	FBXO30
FAN1	FAT2	FBXL12	FBXO31
FANCA	FAT3	FBXL13	FBXO32
FANCB	FAT4	FBXL14	FBXO33



FBXO34	FCGR1B	FECH	FGD6
FBXO36	FCGR2A	FEM1A	FGF1
FBXO38	FCGR2B	FEM1B	FGF2
FBXO39	FCGR3A	FEM1C	FGF3
FBXO40	FCGR3B	FEN1	FGF4
FBXO41	FCGRT	FER	FGF5
FBXO42	FCHO1	FER1L5	FGF6
FBXO43	FCHO2	FER1L6	FGF7
FBXO44	FCHSD1	FERD3L	FGF8
FBXO45	FCHSD2	FERMT1	FGF9
FBXO46	FCMR	FERMT2	FGF10
FBXO47	FCN1	FERMT3	FGF11
FBXO48	FCN2	FES	FGF12
FBXW2	FCN3	FETUB	FGF13
FBXW4	FCRL1	FEV	FGF14
FBXW5	FCRL2	FEZ1	FGF16
FBXW7	FCRL3	FEZ2	FGF17
FBXW8	FCRL4	FEZF1	FGF18
FBXW9	FCRL5	FEZF2	FGF19
FBXW10	FCRL6	FFAR1	FGF20
FBXW11	FCRLA	FFAR2	FGF21
FBXW12	FCRLB	FFAR3	FGF22
FCAMR	FCSK	FFAR4	FGF23
FCAR	FDCSP	FGA	FGFBP1
FCER1A	FDFT1	FGB	FGFBP2
FCER1G	FDPS	FGD1	FGFBP3
FCER2	FDX1	FGD2	FGFR1
FCF1	FDX2	FGD3	FGFR10P
FCGBP	FDXACB1	FGD4	FGFR10P2
FCGR1A	FDXR	FGD5	FGFR2



FGFR3	FIS1	FLJ44635	FMR1
FGFR4	FITM1	FLNA	FMR1NB
FGFRL1	FITM2	FLNB	FN1
FGG	FIZ1	FLNC	FN3K
FGGY	FJX1	FLOT1	FN3KRP
FGL1	FKBP1A	FLOT2	FNBP1
FGL2	FKBP1B	FLRT1	FNBP1L
FGR	FKBP1C	FLRT2	FNBP4
FH	FKBP2	FLRT3	FNDC1
FHAD1	FKBP3	FLT1	FNDC3A
FHDC1	FKBP4	FLT3	FNDC3B
FHIT	FKBP5	FLT3LG	FNDC4
FHL1	FKBP6	FLT4	FNDC5
FHL2	FKBP7	FLVCR1	FNDC7
FHL3	FKBP8	FLVCR2	FNDC8
FHL5	FKBP9	FLYWCH1	FNDC9
FHOD1	FKBP10	FLYWCH2	FNDC10
FHOD3	FKBP11	FMC1	FNDC11
FIBCD1	FKBP14	FMC1-LUC7L2	FNIP1
FIBIN	FKBP15	FMN1	FNIP2
FIBP	FKBPL	FMN2	FNTA
FICD	FKRP	FMNL1	FNTB
FIG4	FKTN	FMNL2	FO393400.1
FIGLA	FLACC1	FMNL3	FO681492.1
FIGN	FLAD1	FMO1	FOCAD
FIGNL1	FLCN	FMO2	FOLH1
FIGNL2	FLG	FMO3	FOLH1B
FILIP1	FLG2	FMO4	FOLR1
FILIP1L	FLI1	FMO5	FOLR2
FIP1L1	FLII	FMOD	FOLR3



FOPNL	FOXJ1	FP565260.2	FRMPD1
FOS	FOXJ2	FP565260.3	FRMPD2
FOSB	FOXJ3	FP565260.4	FRMPD3
FOSL1	FOXK1	FP565260.6	FRMPD4
FOSL2	FOXK2	FPGS	FRRS1
FOXA1	FOXL1	FPGT	FRRS1L
FOXA2	FOXL2	FPGT-TNNI3K	FRS2
FOXA3	FOXL2NB	FPR1	FRS3
FOXB1	FOXL3	FPR2	FRY
FOXB2	FOXM1	FPR3	FRYL
FOXC1	FOXN1	FRA10AC1	FRZB
FOXC2	FOXN2	FRAS1	FSBP
FOXD1	FOXN3	FRAT1	FSCB
FOXD2	FOXN4	FRAT2	FSCN1
FOXD3	FOXO1	FREM1	FSCN2
FOXD4	FOXO3	FREM2	FSCN3
FOXD4L1	FOXO3B	FREM3	FSD1
FOXD4L3	FOXO4	FRG1	FSD1L
FOXD4L4	FOXO6	FRG2	FSD2
FOXD4L5	FOXP1	FRG2B	FSHB
FOXD4L6	FOXP2	FRG2C	FSHR
FOX E1	FOXP3	FRK	FSIP1
FOX E3	FOXP4	FRMD1	FSIP2
FOXF1	FOXQ1	FRMD3	FST
FOXF2	FOXR1	FRMD4A	FSTL1
FOXG1	FOXR2	FRMD4B	FSTL3
FOXH1	FOXRED1	FRMD5	FSTL4
FOXI1	FOXRED2	FRMD6	FSTL5
FOXI2	FOXS1	FRMD7	FTCD
FOXI3	FP565260.1	FRMD8	FTCDNL1



FTCD-AS1	FUZ	G3BP1	GABRG1
FTH1	FXN	G3BP2	GABRG2
FTHL17	FXR1	G6PC	GABRG3
FTHL18	FXR2	G6PC2	GABRP
FTL	FXYD1	G6PC3	GABRQ
FTMT	FXYD2	G6PD	GABRR1
FTO	FXYD3	GAA	GABRR2
FTSJ1	FXYD4	GAB1	GABRR3
FTSJ3	FXYD5	GAB2	GAD1
FUBP1	FXYD6	GAB3	GAD2
FUBP3	FXYD6-FXYD2	GAB4	GADD45A
FUCA1	FXYD7	GABARAP	GADD45B
FUCA2	FYB1	GABARAPL1	GADD45G
FUK	FYB2	GABARAPL2	GADD45GIP1
FUNDC1	FYCO1	GABBR1	GADL1
FUNDC2	FYN	GABBR2	GAGE1
FUOM	FYTTD1	GABPA	GAGE2A
FURIN	FZD1	GABPB1	GAGE2E
FUS	FZD2	GABPB2	GAGE10
FUT1	FZD3	GABRA1	GAGE12B
FUT2	FZD4	GABRA2	GAGE12C
FUT3	FZD5	GABRA3	GAGE12D
FUT4	FZD6	GABRA4	GAGE12E
FUT5	FZD7	GABRA5	GAGE12F
FUT6	FZD8	GABRA6	GAGE12G
FUT7	FZD9	GABRB1	GAGE12H
FUT8	FZD10	GABRB2	GAGE12J
FUT9	FZR1	GABRB3	GAGE13
FUT10	G0S2	GABRD	GAK
FUT11	G2E3	GABRE	GAL



GAL3ST1	GALP	GASK1B	GBX2
GAL3ST2	GALR1	GAST	GC
GAL3ST3	GALR2	GATA1	GCA
GAL3ST4	GALR3	GATA2	GCAT
GALC	GALT	GATA3	GCC1
GALE	GAMT	GATA4	GCC2
GALK1	GAN	GATA5	GCDH
GALK2	GANAB	GATA6	GCFC2
GALM	GANC	GATAD1	GCG
GALNS	GAP43	GATAD2A	GCGR
GALNT1	GAPDH	GATAD2B	GCH1
GALNT2	GAPDHS	GATB	GCHFR
GALNT3	GAPT	GATC	GCK
GALNT4	GAPVD1	GATD1	GCKR
GALNT5	GAR1	GATD3A	GCLC
GALNT6	GAREM1	GATD3B	GCLM
GALNT7	GAREM2	GATM	GCM1
GALNT8	GARNL3	GBA	GCM2
GALNT9	GARS	GBA2	GCN1
GALNT10	GARS1	GBE1	GCNA
GALNT11	GART	GBF1	GCNT1
GALNT12	GAS1	GBGT1	GCNT2
GALNT13	GAS2	GBP1	GCNT3
GALNT14	GAS2L1	GBP2	GCNT4
GALNT15	GAS2L2	GBP3	GCNT7
GALNT16	GAS2L3	GBP4	GCOM1
GALNT17	GAS6	GBP5	GCSAM
GALNT18	GAS7	GBP6	GCSAML
GALNTL5	GAS8	GBP7	GCSAML-AS1
GALNTL6	GASK1A	GBX1	GCSH



GDA	GEMIN7	GGN	GIMAP6
GDAP1	GEMIN8	GGNBP2	GIMAP7
GDAP1L1	GEN1	GGPS1	GIMAP8
GDAP2	GET1	GGT1	GIMD1
GDE1	GET1-SH3BGR	GGT2	GIN1
GDF1	GET3	GGT5	GINM1
GDF2	GET4	GGT6	GINS1
GDF3	GFAP	GGT7	GINS2
GDF5	GFER	GGTLC1	GINS3
GDF5OS	GFI1	GGTLC2	GINS4
GDF6	GFI1B	GGTLC3	GIP
GDF7	GFM1	GH1	GIPC1
GDF9	GFM2	GH2	GIPC2
GDF10	GFOD1	GHDC	GIPC3
GDF11	GFOD2	GHITM	GIPR
GDF15	GFPT1	GHR	GIT1
GDI1	GFPT2	GHRH	GIT2
GDI2	GFRA1	GHRHR	GJA1
GNDF	GFRA2	GHRL	GJA3
GDPD1	GFRA3	GHSR	GJA4
GDPD2	GFRA4	GID4	GJA5
GDPD3	GFRAL	GID8	GJA8
GDPD4	GFY	GIF	GJA9
GDPD5	GGA1	GIGYF1	GJA10
GDPGP1	GGA2	GIGYF2	GJB1
GEM	GGA3	GIMAP1	GJB2
GEMIN2	GGACT	GIMAP1-GIMAP5	GJB3
GEMIN4	GGCT	GIMAP2	GJB4
GEMIN5	GGCX	GIMAP4	GJB5
GEMIN6	GGH	GIMAP5	GJB6



GJB7	GLIPR1	GLTPD2	GNA13
GJC1	GLIPR1L1	GLUD1	GNA14
GJC2	GLIPR1L2	GLUD2	GNA15
GJC3	GLIPR2	GLUL	GNAI1
GJD2	GLIS1	GLYAT	GNAI2
GJD3	GLIS2	GLYATL1	GNAI3
GJD4	GLIS3	GLYATL1B	GNAL
GJE1	GLMN	GLYATL2	GNAO1
GK	GLMP	GLYATL3	GNAQ
GK2	GLO1	GLYCTK	GNAS
GK3P	GLOD4	GLYR1	GNAT1
GK5	GLOD5	GM2A	GNAT2
GKAP1	GLP1R	GMCL1	GNAT3
GKN1	GLP2R	GMCL2	GNAZ
GKN2	GLRA1	GMDS	GNB1
GLA	GLRA2	GMEB1	GNB1L
GLB1	GLRA3	GMEB2	GNB2
GLB1L	GLRA4	GMFB	GNB3
GLB1L2	GLRB	GMFG	GNB4
GLB1L3	GLRX	GMIP	GNB5
GLCCI1	GLRX2	GML	GNE
GLCE	GLRX3	GMNC	GNG2
GLDC	GLRX5	GMNN	GNG3
GLDN	GLS	GMPPA	GNG4
GLE1	GLS2	GMPPB	GNG5
GLG1	GLT1D1	GMPR	GNG7
GLI1	GLT6D1	GMPR2	GNG8
GLI2	GLT8D1	GMPS	GNG10
GLI3	GLT8D2	GNA11	GNG11
GLI4	GLTP	GNA12	GNG12



GNG13	GOLGA6L2	GOLT1B	GPATCH4
GNG14	GOLGA6L3	GON4L	GPATCH8
GNGT1	GOLGA6L4	GON7	GPATCH11
GNGT2	GOLGA6L6	GOPC	GPBAR1
GNL1	GOLGA6L7	GORAB	GPBP1
GNL2	GOLGA6L9	GORASP1	GPBP1L1
GNL3	GOLGA6L10	GORASP2	GPC1
GNL3L	GOLGA6L22	GOSR1	GPC2
GNLY	GOLGA7	GOSR2	GPC3
GNMT	GOLGA7B	GOT1	GPC4
GNPAT	GOLGA8A	GOT1L1	GPC5
GNPDA1	GOLGA8B	GOT2	GPC6
GNPDA2	GOLGA8F	GP1BA	GPCPD1
GNPNAT1	GOLGA8G	GP1BB	GPD1
GNPTAB	GOLGA8H	GP2	GPD1L
GNPTG	GOLGA8J	GP5	GPD2
GNRH1	GOLGA8K	GP6	GPBR1
GNRH2	GOLGA8M	GP9	GPHA2
GNRHR	GOLGA8N	GPA33	GPHB5
GNS	GOLGA8O	GPAA1	GPHN
GOLGA1	GOLGA8Q	GPALPP1	GPI
GOLGA2	GOLGA8R	GPAM	GPIHBP1
GOLGA3	GOLGA8S	GPANK1	GPKOW
GOLGA4	GOLGA8T	GPAT2	GPLD1
GOLGA5	GOLGB1	GPAT3	GPM6A
GOLGA6A	GOLIM4	GPAT4	GPM6B
GOLGA6B	GOLM1	GPATCH1	GPN1
GOLGA6C	GOLPH3	GPATCH2	GPN2
GOLGA6D	GOLPH3L	GPATCH2L	GPN3
GOLGA6L1	GOLT1A	GPATCH3	GPNMB



GPR1	GPR63	GPR150	GPS2
GPR3	GPR65	GPR151	GPSM1
GPR4	GPR68	GPR152	GPSM2
GPR6	GPR75	GPR153	GPSM3
GPR12	GPR75-ASB3	GPR155	GPT
GPR15	GPR78	GPR156	GPT2
GPR17	GPR82	GPR157	GPX1
GPR18	GPR83	GPR158	GPX2
GPR19	GPR84	GPR160	GPX3
GPR20	GPR85	GPR161	GPX4
GPR21	GPR87	GPR162	GPX5
GPR22	GPR88	GPR171	GPX6
GPR25	GPR89A	GPR173	GPX7
GPR26	GPR89B	GPR174	GPX8
GPR27	GPR101	GPR176	GRAMD1A
GPR31	GPR107	GPR179	GRAMD1B
GPR32	GPR108	GPR180	GRAMD1C
GPR33	GPR119	GPR182	GRAMD2A
GPR34	GPR132	GPR183	GRAMD2B
GPR35	GPR135	GPRASP1	GRAMD4
GPR37	GPR137	GPRASP2	GRAP
GPR37L1	GPR137B	GPRC5A	GRAP2
GPR39	GPR137C	GPRC5B	GRAPL
GPR42	GPR139	GPRC5C	GRASP
GPR45	GPR141	GPRC5D	GRB2
GPR50	GPR142	GPRC6A	GRB7
GPR52	GPR143	GPRIN1	GRB10
GPR55	GPR146	GPRIN2	GRB14
GPR61	GPR148	GPRIN3	GREB1
GPR62	GPR149	GPS1	GREB1L



GREM1	GRK1	GSDMC	GSTT2B
GREM2	GRK2	GSDMD	GSTT4
GRHL1	GRK3	GSDME	GSTZ1
GRHL2	GRK4	GSE1	GSX1
GRHL3	GRK5	GSG1	GSX2
GRHPR	GRK6	GSG1L	GTDC1
GRIA1	GRK7	GSG1L2	GTF2A1
GRIA2	GRM1	GSK3A	GTF2A1L
GRIA3	GRM2	GSK3B	GTF2A2
GRIA4	GRM3	GSKIP	GTF2B
GRID1	GRM4	GSN	GTF2E1
GRID2	GRM5	GSPT1	GTF2E2
GRID2IP	GRM6	GSPT2	GTF2F1
GRIFIN	GRM7	GSR	GTF2F2
GRIK1	GRM8	GSS	GTF2H1
GRIK2	GRN	GSTA1	GTF2H2
GRIK3	GRP	GSTA2	GTF2H2C
GRIK4	GRPEL1	GSTA3	GTF2H3
GRIK5	GRPEL2	GSTA4	GTF2H4
GRIN1	GRPR	GSTA5	GTF2H5
GRIN2A	GRSF1	GSTCD	GTF2I
GRIN2B	GRTP1	GSTK1	GTF2IRD1
GRIN2C	GRWD1	GSTM1	GTF2IRD2
GRIN2D	GRXCR1	GSTM2	GTF2IRD2B
GRIN3A	GRXCR2	GSTM3	GTF3A
GRIN3B	GSAP	GSTM4	GTF3C1
GRINA	GSC	GSTM5	GTF3C2
GRIP1	GSC2	GSTO1	GTF3C3
GRIP2	GSDMA	GSTO2	GTF3C4
GRIPAP1	GSDMB	GSTP1	GTF3C5



GTF3C6	GXYLT2	H2AB2	H2AW
GTPBP1	GYG1	H2AB3	H2AX
GTPBP2	GYG2	H2AC1	H2AZ1
GTPBP3	GYPA	H2AC4	H2AZ2
GTPBP4	GYPB	H2AC6	H2BC1
GTPBP6	GYPC	H2AC7	H2BC3
GTPBP8	GYPE	H2AC8	H2BC4
GTPBP10	GYS1	H2AC11	H2BC5
GTSE1	GYS2	H2AC12	H2BC6
GTSF1	GZF1	H2AC13	H2BC7
GTSF1L	GZMA	H2AC14	H2BC8
GUCA1A	GZMB	H2AC15	H2BC9
GUCA1B	GZMH	H2AC16	H2BC10
GUCA1C	GZMK	H2AC17	H2BC11
GUCA2A	GZMM	H2AC18	H2BC12
GUCA2B	H1F0	H2AC19	H2BC13
GUCD1	H1FNT	H2AC20	H2BC14
GUCY1A1	H1FOO	H2AC21	H2BC15
GUCY1A2	H1FX	H2AFB1	H2BC17
GUCY1B1	H1-0	H2AFB2	H2BC18
GUCY2C	H1-1	H2AFB3	H2BC21
GUCY2D	H1-2	H2AFJ	H2BE1
GUCY2F	H1-3	H2AFV	H2BFM
GUF1	H1-4	H2AFX	H2BFWT
GUK1	H1-5	H2AFY	H2BS1
GULP1	H1-6	H2AFY2	H2BU1
GUSB	H1-7	H2AFZ	H2BW1
GVQW2	H1-8	H2AJ	H2BW2
GVQW3	H1-10	H2AL1RP	H3.Y
GXYLT1	H2AB1	H2AP	H3C1



H3C2	H4C9	HAPLN2	HBG2
H3C3	H4C11	HAPLN3	HBM
H3C4	H4C12	HAPLN4	HBP1
H3C6	H4C13	HARBI1	HBQ1
H3C7	H4C14	HARS	HBS1L
H3C8	H4C15	HARS1	HBZ
H3C10	H4-16	HARS2	HCAR1
H3C11	H6PD	HAS1	HCAR2
H3C12	HAAO	HAS2	HCAR3
H3C13	HABP2	HAS3	HCCS
H3C14	HABP4	HASPIN	HCFC1
H3C15	HACD1	HAT1	HCFC1R1
H3F3A	HACD2	HAUS1	HCFC2
H3F3B	HACD3	HAUS2	HCK
H3F3C	HACD4	HAUS3	HCLS1
H3Y1	HACE1	HAUS4	HCN1
H3Y2	HACL1	HAUS5	HCN2
H3-2	HADH	HAUS6	HCN3
H3-3A	HADHA	HAUS7	HCN4
H3-3B	HADHB	HAUS8	HCRT
H3-4	HAGH	HAVCR1	HCRTTR1
H3-5	HAGHL	HAVCR2	HCRTTR2
H4C1	HAL	HAX1	HCST
H4C2	HAMP	HBA1	HDAC1
H4C3	HAND1	HBA2	HDAC2
H4C4	HAND2	HBB	HDAC3
H4C5	HAO1	HBD	HDAC4
H4C6	HAO2	HBE1	HDAC5
H4C7	HAP1	HBEGF	HDAC6
H4C8	HAPLN1	HBG1	HDAC7

HDAC8	HECW1	HES6	HIBADH
HDAC9	HECW2	HES7	HIBCH
HDAC10	HEG1	HESX1	HIC1
HDAC11	HELB	HEXA	HIC2
HDC	HELLS	HEXB	HID1
HDDC2	HELQ	HEXD	HIF1A
HDDC3	HELT	HEXDC	HIF1AN
HDGF	HELZ	HEXIM1	HIF3A
HDGFL1	HELZ2	HEXIM2	HIGD1A
HDGFL2	HEMGN	HEY1	HIGD1B
HDGFL3	HEMK1	HEY2	HIGD1C
HDHD2	HENMT1	HEYL	HIGD2A
HDHD3	HEPACAM	HFE	HIGD2B
HDHD5	HEPACAM2	HFM1	HIKESHI
HDLBP	HEPH	HGC6.3	HILPDA
HDX	HEPHL1	HGD	HINFP
HEATR1	HEPN1	HGF	HINT1
HEATR3	HERC1	HGFAC	HINT2
HEATR4	HERC2	HGH1	HINT3
HEATR5A	HERC3	HGS	HIP1
HEATR5B	HERC4	HGSNAT	HIP1R
HEATR6	HERC5	HHAT	HIPK1
HEATR9	HERC6	HHATL	HIPK2
HEBP1	HERPUD1	HHEX	HIPK3
HEBP2	HERPUD2	HHIP	HIPK4
HECA	HES1	HHIPL1	HIRA
HECTD1	HES2	HHIPL2	HIRIP3
HECTD2	HES3	HHLA1	HIST1H1A
HECTD3	HES4	HHLA2	HIST1H1B
HECTD4	HES5	HHLA3	HIST1H1C



HIST1H1D	HIST1H3A	HIST2H3D	HLA-DRA
HIST1H1E	HIST1H3B	HIST2H4A	HLA-DRB1
HIST1H1T	HIST1H3C	HIST2H4B	HLA-DRB5
HIST1H2AA	HIST1H3D	HIST3H2A	HLA-E
HIST1H2AB	HIST1H3E	HIST3H2BB	HLA-F
HIST1H2AC	HIST1H3F	HIST3H3	HLA-G
HIST1H2AD	HIST1H3G	HIST4H4	HLCS
HIST1H2AE	HIST1H3H	HIVEP1	HLF
HIST1H2AG	HIST1H3I	HIVEP2	HLTF
HIST1H2AH	HIST1H3J	HIVEP3	HLX
HIST1H2AI	HIST1H4A	HJURP	HM13
HIST1H2AJ	HIST1H4B	HJV	HMBOX1
HIST1H2AK	HIST1H4C	HK1	HMBS
HIST1H2AL	HIST1H4D	HK2	HMCES
HIST1H2AM	HIST1H4E	HK3	HMCN1
HIST1H2BA	HIST1H4F	HKDC1	HMCN2
HIST1H2BB	HIST1H4G	HKR1	HMG20A
HIST1H2BC	HIST1H4H	HLA-A	HMG20B
HIST1H2BD	HIST1H4I	HLA-B	HMGA1
HIST1H2BE	HIST1H4J	HLA-C	HMGA2
HIST1H2BF	HIST1H4K	HLA-DMA	HMGB1
HIST1H2BG	HIST1H4L	HLA-DMB	HMGB2
HIST1H2BH	HIST2H2AA3	HLA-DOA	HMGB3
HIST1H2BI	HIST2H2AA4	HLA-DOB	HMGB4
HIST1H2BJ	HIST2H2AB	HLA-DPA1	HMGCL
HIST1H2BK	HIST2H2AC	HLA-DPB1	HMGCLL1
HIST1H2BL	HIST2H2BE	HLA-DQA1	HMGCR
HIST1H2BM	HIST2H2BF	HLA-DQA2	HMGCS1
HIST1H2BN	HIST2H3A	HLA-DQB1	HMGCS2
HIST1H2BO	HIST2H3C	HLA-DQB2	HMGN1

HMGN2	HNRNPCL4	HOXA2	HOXD3
HMGN3	HNRNPD	HOXA3	HOXD4
HMGN4	HNRNPDL	HOXA4	HOXD8
HMGN5	HNRNPF	HOXA5	HOXD9
HMGXB3	HNRNPH1	HOXA6	HOXD10
HMGXB4	HNRNPH2	HOXA7	HOXD11
HMHB1	HNRNPH3	HOXA9	HOXD12
HMMR	HNRNPK	HOXA10	HOXD13
HMOX1	HNRNPL	HOXA11	HP
HMOX2	HNRNPLL	HOXA13	HP1BP3
HMSD	HNRNPM	HOXB1	HPCA
HMX1	HNRNPR	HOXB2	HPCAL1
HMX2	HNRNPU	HOXB3	HPCAL4
HMX3	HNRNPUL1	HOXB4	HPD
HNF1A	HNRNPUL2	HOXB5	HPDL
HNF1B	HNRNPUL2- BSCL2	HOXB6	HPF1
HNF4A		HOXB7	HPGD
HNF4G	HOGA1	HOXB8	HPGDS
HNMT	HOMER1	HOXB9	HPN
HNRNPA0	HOMER2	HOXB13	HPR
HNRNPA1	HOMER3	HOXC4	HPRT1
HNRNPA1L2	HOMEZ	HOXC5	HPS1
HNRNPA1P48	HOOK1	HOXC6	HPS3
HNRNPA2B1	HOOK2	HOXC8	HPS4
HNRNPA3	HOOK3	HOXC9	HPS5
HNRNPAB	HOPX	HOXC10	HPS6
HNRNPC	HORMAD1	HOXC11	HPSE
HNRNPCL1	HORMAD2	HOXC12	HPSE2
HNRNPCL2	HOTS	HOXC13	HPX
HNRNPCL3	HOXA1	HOXD1	HR

HRAS	HSD3B2	HSH2D	HSPE1
HRASLS	HSD3B7	HSP90AA1	HSPE1-MOB4
HRASLS2	HSD11B1	HSP90AB1	HSPG2
HRASLS5	HSD11B1L	HSP90B1	HSPH1
HRC	HSD11B2	HSPA1A	HTATIP2
HRCT1	HSD17B1	HSPA1B	HTATSF1
HRG	HSD17B2	HSPA1L	HTD2
HRH1	HSD17B3	HSPA2	HTN1
HRH2	HSD17B4	HSPA4	HTN3
HRH3	HSD17B6	HSPA4L	HTR1A
HRH4	HSD17B7	HSPA5	HTR1B
HRK	HSD17B8	HSPA6	HTR1D
HRNR	HSD17B10	HSPA8	HTR1E
HROB	HSD17B11	HSPA9	HTR1F
HS1BP3	HSD17B12	HSPA12A	HTR2A
HS2ST1	HSD17B13	HSPA12B	HTR2B
HS3ST1	HSD17B14	HSPA13	HTR2C
HS3ST2	HSDL1	HSPA14	HTR3A
HS3ST3A1	HSDL2	HSPB1	HTR3B
HS3ST3B1	HSF1	HSPB2	HTR3C
HS3ST4	HSF2	HSPB2-C11orf52	HTR3D
HS3ST5	HSF2BP	HSPB3	HTR3E
HS3ST6	HSF4	HSPB6	HTR4
HS6ST1	HSF5	HSPB7	HTR5A
HS6ST2	HSFX1	HSPB8	HTR6
HS6ST3	HSFX2	HSPB9	HTR7
HSBP1	HSFX3	HSPB11	HTRA1
HSBP1L1	HSFX4	HSPBAP1	HTRA2
HSCB	HSFY1	HSPBP1	HTRA3
HSD3B1	HSFY2	HSPD1	HTRA4



HTT	ICAM4	IFFO1	IFNA13
HUNK	ICAM5	IFFO2	IFNA14
HUS1	ICE1	IFI6	IFNA16
HUS1B	ICE2	IFI16	IFNA17
HUWE1	ICK	IFI27	IFNA21
HVCN1	ICMT	IFI27L1	IFNAR1
HYAL1	ICOS	IFI27L2	IFNAR2
HYAL2	ICOSLG	IFI30	IFNB1
HYAL3	ID1	IFI35	IFNE
HYAL4	ID2	IFI44	IFNG
HYDIN	ID3	IFI44L	IFNGR1
HYI	ID4	IFIH1	IFNGR2
HYKK	IDE	IFIT1	IFNK
HYLS1	IDH1	IFIT1B	IFNL1
HYOU1	IDH2	IFIT2	IFNL2
HYPK	IDH3A	IFIT3	IFNL3
HYPM	IDH3B	IFIT5	IFNLR1
IAH1	IDH3G	IFITM1	IFNW1
IAPP	IDI1	IFITM2	IFRD1
IARS	IDI2	IFITM3	IFRD2
IARS1	IDNK	IFITM5	IFT20
IARS2	IDO1	IFITM10	IFT22
IBA57	IDO2	IFNA1	IFT27
IBSP	IDS	IFNA2	IFT43
IBTK	IDUA	IFNA4	IFT46
ICA1	IER2	IFNA5	IFT52
ICA1L	IER3	IFNA6	IFT57
ICAM1	IER3IP1	IFNA7	IFT74
ICAM2	IER5	IFNA8	IFT80
ICAM3	IER5L	IFNA10	IFT81

IFT88	IGHA1	IGHD5OR15-5B	IGHV1-45
IFT122	IGHA2	IGHD5-5	IGHV1-46
IFT140	IGHD	IGHD5-12	IGHV1-58
IFT172	IGHD1OR15-1A	IGHD5-18	IGHV1-69
IFTAP	IGHD1OR15-1B	IGHD5-24	IGHV1-69D
IGBP1	IGHD1-1	IGHD6-6	IGHV1-69-2
IGDCC3	IGHD1-7	IGHD6-13	IGHV2OR16-5
IGDCC4	IGHD1-14	IGHD6-19	IGHV2-5
IGF1	IGHD1-20	IGHD6-25	IGHV2-26
IGF1R	IGHD1-26	IGHD7-27	IGHV2-70
IGF2	IGHD2OR15-2A	IGHE	IGHV2-70D
IGF2BP1	IGHD2OR15-2B	IGHG1	IGHV3OR15-7
IGF2BP2	IGHD2-2	IGHG2	IGHV3OR16-8
IGF2BP3	IGHD2-8	IGHG3	IGHV3OR16-9
IGF2R	IGHD2-15	IGHG4	IGHV3OR16-10
IGFALS	IGHD2-21	IGHJ1	IGHV3OR16-12
IGFBP1	IGHD3OR15-3A	IGHJ2	IGHV3OR16-13
IGFBP2	IGHD3OR15-3B	IGHJ3	IGHV3-7
IGFBP3	IGHD3-3	IGHJ4	IGHV3-11
IGFBP4	IGHD3-9	IGHJ5	IGHV3-13
IGFBP5	IGHD3-10	IGHJ6	IGHV3-15
IGFBP6	IGHD3-16	IGHM	IGHV3-16
IGFBP7	IGHD3-22	IGHMBP2	IGHV3-20
IGFBPL1	IGHD4OR15-4A	IGHV1OR15-1	IGHV3-21
IGFL1	IGHD4OR15-4B	IGHV1OR15-9	IGHV3-23
IGFL2	IGHD4-4	IGHV1OR21-1	IGHV3-30
IGFL3	IGHD4-11	IGHV1-2	IGHV3-33
IGFL4	IGHD4-17	IGHV1-3	IGHV3-35
IGFLR1	IGHD4-23	IGHV1-18	IGHV3-38
IGFN1	IGHD5OR15-5A	IGHV1-24	IGHV3-43



IGHV3-48	IGKJ5	IGKV2-24	IGLL5
IGHV3-49	IGKV1D-8	IGKV2-28	IGLON5
IGHV3-53	IGKV1D-12	IGKV2-30	IGLV1-36
IGHV3-64	IGKV1D-13	IGKV2-40	IGLV1-40
IGHV3-64D	IGKV1D-16	IGKV3D-7	IGLV1-44
IGHV3-66	IGKV1D-17	IGKV3D-11	IGLV1-47
IGHV3-69-1	IGKV1D-33	IGKV3D-15	IGLV1-50
IGHV3-72	IGKV1D-37	IGKV3D-20	IGLV1-51
IGHV3-73	IGKV1D-39	IGKV3OR2-268	IGLV2-8
IGHV3-74	IGKV1D-42	IGKV3-7	IGLV2-11
IGHV4OR15-8	IGKV1D-43	IGKV3-11	IGLV2-14
IGHV4-4	IGKV1OR2-108	IGKV3-15	IGLV2-18
IGHV4-28	IGKV1-5	IGKV3-20	IGLV2-23
IGHV4-30-2	IGKV1-6	IGKV4-1	IGLV2-33
IGHV4-31	IGKV1-8	IGKV5-2	IGLV3-1
IGHV4-34	IGKV1-9	IGKV6D-21	IGLV3-9
IGHV4-39	IGKV1-12	IGKV6D-41	IGLV3-10
IGHV4-59	IGKV1-13	IGKV6-21	IGLV3-12
IGHV4-61	IGKV1-16	IGLC1	IGLV3-16
IGHV5-10-1	IGKV1-17	IGLC2	IGLV3-19
IGHV5-51	IGKV1-27	IGLC3	IGLV3-21
IGHV6-1	IGKV1-33	IGLC7	IGLV3-22
IGHV7-4-1	IGKV1-37	IGLJ1	IGLV3-25
IGHV7-81	IGKV1-39	IGLJ2	IGLV3-27
IGIP	IGKV2D-24	IGLJ3	IGLV3-32
IGKC	IGKV2D-26	IGLJ4	IGLV4-3
IGKJ1	IGKV2D-28	IGLJ5	IGLV4-60
IGKJ2	IGKV2D-29	IGLJ6	IGLV4-69
IGKJ3	IGKV2D-30	IGLJ7	IGLV5-37
IGKJ4	IGKV2D-40	IGLL1	IGLV5-45



IGLV5-48	IKZF4	IL9R	IL18RAP
IGLV5-52	IKZF5	IL10	IL19
IGLV6-57	IL1A	IL10RA	IL20
IGLV7-43	IL1B	IL10RB	IL20RA
IGLV7-46	IL1F10	IL11	IL20RB
IGLV8-61	IL1R1	IL11RA	IL21
IGLV9-49	IL1R2	IL12A	IL21R
IGLV10-54	IL1RAP	IL12B	IL22
IGLV11-55	IL1RAPL1	IL12RB1	IL22RA1
IGSF1	IL1RAPL2	IL12RB2	IL22RA2
IGSF3	IL1RL1	IL13	IL23A
IGSF5	IL1RL2	IL13RA1	IL23R
IGSF6	IL1RN	IL13RA2	IL24
IGSF8	IL2	IL15	IL25
IGSF9	IL2RA	IL15RA	IL26
IGSF9B	IL2RB	IL16	IL27
IGSF10	IL2RG	IL17A	IL27RA
IGSF11	IL3	IL17B	IL31
IGSF21	IL3RA	IL17C	IL31RA
IGSF22	IL4	IL17D	IL32
IGSF23	IL4I1	IL17F	IL33
IHH	IL4R	IL17RA	IL34
IK	IL5	IL17RB	IL36A
IKBIP	IL5RA	IL17RC	IL36B
IKBKB	IL6	IL17RD	IL36G
IKBKE	IL6R	IL17RE	IL36RN
IKBKG	IL6ST	IL17REL	IL37
IKZF1	IL7	IL18	ILDR1
IKZF2	IL7R	IL18BP	ILDR2
IKZF3	IL9	IL18R1	ILF2



ILF3	INHA	INSIG2	INVS
ILK	INHBA	INSL3	IP6K1
ILKAP	INHBB	INSL4	IP6K2
ILRUN	INHBC	INSL5	IP6K3
ILVBL	INHBE	INSL6	IPCEF1
IMMP1L	INIP	INSM1	IPMK
IMMP2L	INKA1	INSM2	IPO4
IMMT	INKA2	INSR	IPO5
IMP3	INMT	INSRR	IPO7
IMP4	INMT-MINDY4	INSYN1	IPO8
IMPA1	INO80	INSYN2	IPO9
IMPA2	INO80B	INSYN2A	IPO11
IMPACT	INO80B-WBP1	INSYN2B	IPO13
IMPAD1	INO80C	INS-IGF2	IPP
IMPDH1	INO80D	INTS1	IPPK
IMPDH2	INO80E	INTS2	IQANK1
IMPG1	INPP1	INTS3	IQCA1
IMPG2	INPP4A	INTS4	IQCA1L
INA	INPP4B	INTS5	IQCB1
INAFM1	INPP5A	INTS6	IQCC
INAFM2	INPP5B	INTS6L	IQCD
INAVA	INPP5D	INTS7	IQCE
INCA1	INPP5E	INTS8	IQCF1
INCENP	INPP5F	INTS9	IQCF2
INF2	INPP5J	INTS10	IQCF3
ING1	INPP5K	INTS11	IQCF5
ING2	INPPL1	INTS12	IQCF6
ING3	INS	INTS13	IQCG
ING4	INSC	INTS14	IQCH
ING5	INSIG1	INTU	IQCJ

IQCJ-SCHIP1	IRGM	ITCH	ITGB7
IQCK	IRGQ	ITFG1	ITGB8
IQCM	IRS1	ITFG2	ITGBL1
IQCN	IRS2	ITGA1	ITIH1
IQGAP1	IRS4	ITGA2	ITIH2
IQGAP2	IRX1	ITGA2B	ITIH3
IQGAP3	IRX2	ITGA3	ITIH4
IQSEC1	IRX3	ITGA4	ITIH5
IQSEC2	IRX4	ITGA5	ITIH6
IQSEC3	IRX5	ITGA6	ITK
IQUB	IRX6	ITGA7	ITLN1
IRAK1	ISCA1	ITGA8	ITLN2
IRAK1BP1	ISCA2	ITGA9	ITM2A
IRAK2	ISCU	ITGA10	ITM2B
IRAK3	ISG15	ITGA11	ITM2C
IRAK4	ISG20	ITGAD	ITPA
IREB2	ISG20L2	ITGAE	ITPK1
IRF1	ISL1	ITGAL	ITPKA
IRF2	ISL2	ITGAM	ITPKB
IRF2BP1	ISLR	ITGAV	ITPKC
IRF2BP2	ISLR2	ITGAX	ITPR1
IRF2BPL	ISM1	ITGB1	ITPR2
IRF3	ISM2	ITGB1BP1	ITPR3
IRF4	ISOC1	ITGB1BP2	ITPRID1
IRF5	ISOC2	ITGB2	ITPRID2
IRF6	IST1	ITGB3	ITPRIP
IRF7	ISX	ITGB3BP	ITPRIPL1
IRF8	ISY1	ITGB4	ITPRIPL2
IRF9	ISY1-RAB43	ITGB5	ITSN1
IRGC	ISYNA1	ITGB6	ITSN2

IVD	JHY	KANK4	KBTD12
IVL	JKAMP	KANSL1	KBTD13
IVNS1ABP	JMJD1C	KANSL1L	KCMF1
IWS1	JMJD4	KANSL2	KCNA1
IYD	JMJD6	KANSL3	KCNA2
IZUMO1	JMJD7	KANTR	KCNA3
IZUMO1R	JMJD7-PLA2G4B	KARS	KCNA4
IZUMO2	JMJD8	KARS1	KCNA5
IZUMO3	JMY	KAT2A	KCNA6
IZUMO4	JOSD1	KAT2B	KCNA7
JADE1	JOSD2	KAT5	KCNA10
JADE2	JPH1	KAT6A	KCNAB1
JADE3	JPH2	KAT6B	KCNAB2
JAG1	JPH3	KAT7	KCNAB3
JAG2	JPH4	KAT8	KCNB1
JAGN1	JPT1	KAT14	KCNB2
JAK1	JPT2	KATNA1	KCNC1
JAK2	JRK	KATNAL1	KCNC2
JAK3	JRKL	KATNAL2	KCNC3
JAKMIP1	JSRP1	KATNB1	KCNC4
JAKMIP2	JTB	KATNBL1	KCND1
JAKMIP3	JUN	KAZALD1	KCND2
JAM2	JUNB	KAZN	KCND3
JAM3	JUND	KBTD2	KCNE1
JAML	JUP	KBTD3	KCNE1B
JARID2	KAAG1	KBTD4	KCNE2
JAZF1	KALRN	KBTD6	KCNE3
JCAD	KANK1	KBTD7	KCNE4
JCHAIN	KANK2	KBTD8	KCNE5
JDP2	KANK3	KBTD11	KCNF1



KCNG1	KCNJ16	KCNQ5	KCTD20
KCNG2	KCNJ18	KCNRG	KCTD21
KCNG3	KCNK1	KCNS1	KDELC1
KCNG4	KCNK2	KCNS2	KDELC2
KCNH1	KCNK3	KCNS3	KDELR1
KCNH2	KCNK4	KCNT1	KDELR2
KCNH3	KCNK5	KCNT2	KDELR3
KCNH4	KCNK6	KCNU1	KDF1
KCNH5	KCNK7	KCNV1	KDM1A
KCNH6	KCNK9	KCNV2	KDM1B
KCNH7	KCNK10	KCP	KDM2A
KCNH8	KCNK12	KCTD1	KDM2B
KCNIP1	KCNK13	KCTD2	KDM3A
KCNIP2	KCNK15	KCTD3	KDM3B
KCNIP3	KCNK16	KCTD4	KDM4A
KCNIP4	KCNK17	KCTD5	KDM4B
KCNJ1	KCNK18	KCTD6	KDM4C
KCNJ2	KCNMA1	KCTD7	KDM4D
KCNJ3	KCNMB1	KCTD8	KDM4E
KCNJ4	KCNMB2	KCTD9	KDM4F
KCNJ5	KCNMB3	KCTD10	KDM5A
KCNJ6	KCNMB4	KCTD11	KDM5B
KCNJ8	KCNN1	KCTD12	KDM5C
KCNJ9	KCNN2	KCTD13	KDM5D
KCNJ10	KCNN3	KCTD14	KDM6A
KCNJ11	KCNN4	KCTD15	KDM6B
KCNJ12	KCNQ1	KCTD16	KDM7A
KCNJ13	KCNQ2	KCTD17	KDM8
KCNJ14	KCNQ3	KCTD18	KDR
KCNJ15	KCNQ4	KCTD19	KDSR



KEAP1	KIAA1024	KIF1B	KIF21A
KEL	KIAA1024L	KIF1BP	KIF21B
KERA	KIAA1107	KIF1C	KIF22
KHDC1	KIAA1109	KIF2A	KIF23
KHDC1L	KIAA1143	KIF2B	KIF24
KHDC3L	KIAA1147	KIF2C	KIF25
KHDC4	KIAA1191	KIF3A	KIF26A
KHDRBS1	KIAA1210	KIF3B	KIF26B
KHDRBS2	KIAA1211	KIF3C	KIF27
KHDRBS3	KIAA1211L	KIF4A	KIFAP3
KHK	KIAA1217	KIF4B	KIFBP
KHNYN	KIAA1257	KIF5A	KIFC1
KHSRP	KIAA1324	KIF5B	KIFC2
KIAA0040	KIAA1324L	KIF5C	KIFC3
KIAA0100	KIAA1328	KIF6	KIN
KIAA0232	KIAA1522	KIF7	KIR2DL1
KIAA0319	KIAA1549	KIF9	KIR2DL3
KIAA0319L	KIAA1549L	KIF11	KIR2DL4
KIAA0355	KIAA1551	KIF12	KIR2DS4
KIAA0391	KIAA1586	KIF13A	KIR3DL1
KIAA0408	KIAA1614	KIF13B	KIR3DL2
KIAA0513	KIAA1671	KIF14	KIR3DL3
KIAA0556	KIAA1755	KIF15	KIRREL1
KIAA0586	KIAA1841	KIF16B	KIRREL2
KIAA0753	KIAA1958	KIF17	KIRREL3
KIAA0754	KIAA2012	KIF18A	KISS1
KIAA0825	KIAA2013	KIF18B	KISS1R
KIAA0895	KIAA2026	KIF19	KIT
KIAA0895L	KIDINS220	KIF20A	KITLG
KIAA0930	KIF1A	KIF20B	KIZ



KL	KLHDC8A	KLHL30	KLRC2
KLB	KLHDC8B	KLHL31	KLRC3
KLC1	KLHDC9	KLHL32	KLRC4
KLC2	KLHDC10	KLHL33	KLRC4-KLRK1
KLC3	KLHL1	KLHL34	KLRD1
KLC4	KLHL2	KLHL35	KLRF1
KLF1	KLHL3	KLHL36	KLRF2
KLF2	KLHL4	KLHL38	KLRG1
KLF3	KLHL5	KLHL40	KLRG2
KLF4	KLHL6	KLHL41	KLRK1
KLF5	KLHL7	KLHL42	KMO
KLF6	KLHL8	KLK1	KMT2A
KLF7	KLHL9	KLK2	KMT2B
KLF8	KLHL10	KLK3	KMT2C
KLF9	KLHL11	KLK4	KMT2D
KLF10	KLHL12	KLK5	KMT2E
KLF11	KLHL13	KLK6	KMT5A
KLF12	KLHL14	KLK7	KMT5B
KLF13	KLHL15	KLK8	KMT5C
KLF14	KLHL17	KLK9	KNCN
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KLHDC1	KLHL23	KLK14	KNSTRN
KLHDC2	KLHL24	KLK15	KNTC1
KLHDC3	KLHL25	KLKB1	KPNA1
KLHDC4	KLHL26	KLLN	KPNA2
KLHDC7A	KLHL28	KLRB1	KPNA3
KLHDC7B	KLHL29	KLRC1	KPNA4



KPNA5	KRT13	KRT76	KRTAP4-8
KPNA6	KRT14	KRT77	KRTAP4-9
KPNA7	KRT15	KRT78	KRTAP4-11
KPNB1	KRT16	KRT79	KRTAP4-12
KPRP	KRT17	KRT80	KRTAP4-16
KPTN	KRT18	KRT81	KRTAP5-1
KRAS	KRT19	KRT82	KRTAP5-2
KRBA1	KRT20	KRT83	KRTAP5-3
KRBA2	KRT23	KRT84	KRTAP5-4
KRBOX1	KRT24	KRT85	KRTAP5-5
KRBOX4	KRT25	KRT86	KRTAP5-6
KRCC1	KRT26	KRT222	KRTAP5-7
KREMEN1	KRT27	KRTAP1-1	KRTAP5-8
KREMEN2	KRT28	KRTAP1-3	KRTAP5-9
KRI1	KRT31	KRTAP1-4	KRTAP5-10
KRIT1	KRT32	KRTAP1-5	KRTAP5-11
KRR1	KRT33A	KRTAP2-1	KRTAP6-1
KRT1	KRT33B	KRTAP2-2	KRTAP6-2
KRT2	KRT34	KRTAP2-3	KRTAP6-3
KRT3	KRT35	KRTAP2-4	KRTAP7-1
KRT4	KRT36	KRTAP3-1	KRTAP8-1
KRT5	KRT37	KRTAP3-2	KRTAP9-1
KRT6A	KRT38	KRTAP3-3	KRTAP9-2
KRT6B	KRT39	KRTAP4-1	KRTAP9-3
KRT6C	KRT40	KRTAP4-2	KRTAP9-4
KRT7	KRT71	KRTAP4-3	KRTAP9-6
KRT8	KRT72	KRTAP4-4	KRTAP9-7
KRT9	KRT73	KRTAP4-5	KRTAP9-8
KRT10	KRT74	KRTAP4-6	KRTAP9-9
KRT12	KRT75	KRTAP4-7	KRTAP10-1



KRTAP10-2	KRTAP19-8	L2HGDH	LAMP1
KRTAP10-3	KRTAP20-1	L3HYPDH	LAMP2
KRTAP10-4	KRTAP20-2	L3MBTL1	LAMP3
KRTAP10-5	KRTAP20-3	L3MBTL2	LAMP5
KRTAP10-6	KRTAP20-4	L3MBTL3	LAMTOR1
KRTAP10-7	KRTAP21-1	L3MBTL4	LAMTOR2
KRTAP10-8	KRTAP21-2	L34079.1	LAMTOR3
KRTAP10-9	KRTAP21-3	LACC1	LAMTOR4
KRTAP10-10	KRTAP22-1	LACRT	LAMTOR5
KRTAP10-11	KRTAP22-2	LACTB	LANCL1
KRTAP10-12	KRTAP23-1	LACTB2	LANCL2
KRTAP11-1	KRTAP24-1	LACTBL1	LANCL3
KRTAP12-1	KRTAP25-1	LAD1	LAP3
KRTAP12-2	KRTAP26-1	LAG3	LAPTM4A
KRTAP12-3	KRTAP27-1	LAGE3	LAPTM4B
KRTAP12-4	KRTAP29-1	LAIR1	LAPTM5
KRTAP13-1	KRTCAP2	LAIR2	LARGE1
KRTAP13-2	KRTCAP3	LALBA	LARGE2
KRTAP13-3	KRTDAP	LAMA1	LARP1
KRTAP13-4	KSR1	LAMA2	LARP1B
KRTAP15-1	KSR2	LAMA3	LARP4
KRTAP16-1	KTI12	LAMA4	LARP4B
KRTAP17-1	KTN1	LAMA5	LARP6
KRTAP19-1	KXD1	LAMB1	LARP7
KRTAP19-2	KY	LAMB2	LARS
KRTAP19-3	KYAT1	LAMB3	LARS1
KRTAP19-4	KYAT3	LAMB4	LARS2
KRTAP19-5	KYNU	LAMC1	LAS1L
KRTAP19-6	L1CAM	LAMC2	LASP1
KRTAP19-7	L1TD1	LAMC3	LAT



LAT2	LCE4A	LDHC	LETMD1
LATS1	LCE5A	LDHD	LEUTX
LATS2	LCE6A	LDLR	LEXM
LAX1	LCK	LDLRAD1	LFNG
LAYN	LCLAT1	LDLRAD2	LGALS1
LBH	LCMT1	LDLRAD3	LGALS2
LBHD1	LCMT2	LDLRAD4	LGALS3
LBHD2	LCN1	LDLRAP1	LGALS3BP
LBP	LCN2	LDOC1	LGALS4
LBR	LCN6	LEAP2	LGALS7
LBX1	LCN8	LECT2	LGALS7B
LBX2	LCN9	LEF1	LGALS8
LCA5	LCN10	LEFTY1	LGALS9
LCA5L	LCN12	LEFTY2	LGALS9B
LCAT	LCN15	LEKR1	LGALS9C
LCE1A	LCNL1	LELP1	LGALS12
LCE1B	LCOR	LEMD1	LGALS13
LCE1C	LCORL	LEMD2	LGALS14
LCE1D	LCP1	LEMD3	LGALS16
LCE1E	LCP2	LENEP	LGALSL
LCE1F	LCT	LENG1	LGI1
LCE2A	LCTL	LENG8	LGI2
LCE2B	LDAH	LENG9	LGI3
LCE2C	LDB1	LEO1	LGI4
LCE2D	LDB2	LEP	LGMN
LCE3A	LDB3	LEPR	LGR4
LCE3B	LDHA	LEPROT	LGR5
LCE3C	LDHAL6A	LEPROTL1	LGR6
LCE3D	LDHAL6B	LETM1	LGSN
LCE3E	LDHB	LETM2	LHB



LHCGR	LILRB4	LINC02210- CRHR1	LLPH
LHFPL1	LILRB5		LMAN1
LHFPL2	LIM2	LINC02218	LMAN1L
LHFPL3	LIMA1	LINC02801	LMAN2
LHFPL4	LIMCH1	LINGO1	LMAN2L
LHFPL5	LIMD1	LINGO2	LMBR1
LHFPL6	LIMD2	LINGO3	LMBR1L
LHPP	LIME1	LINGO4	LMBRD1
LHX1	LIMK1	LINS1	LMBRD2
LHX2	LIMK2	LIPA	LMCD1
LHX3	LIMS1	LIPC	LMF1
LHX4	LIMS2	LIPE	LMF2
LHX5	LIMS3	LIPF	LMLN
LHX6	LIMS4	LIPG	LMLN2
LHX8	LIN7A	LIPH	LMNA
LHX9	LIN7B	LIPI	LMNB1
LIAS	LIN7C	LIPJ	LMNB2
LIF	LIN9	LIPK	LMNTD1
LIFR	LIN28A	LIPM	LMNTD2
LIG1	LIN28B	LIPN	LMO1
LIG3	LIN37	LIPT1	LMO2
LIG4	LIN52	LIPT2	LMO3
LILRA1	LIN54	LITAF	LMO4
LILRA2	LINC00514	LITAFD	LMO7
LILRA4	LINC00634	LIX1	LMOD1
LILRA5	LINC00672	LIX1L	LMOD2
LILRA6	LINC01638	LKAAEAR1	LMOD3
LILRB1	LINC01862	LLCFC1	LMTK2
LILRB2	LINC02203	LLGL1	LMTK3
LILRB3		LLGL2	LMX1A



LMX1B	LOC100129484	LOC102724957	LOXL4
LNP1	LOC100129697	LOC105369274	LPA
LNPEP	LOC100131107	LOC105370980	LPAR1
LNPK	LOC100132202	LOC105372977	LPAR2
LNx1	LOC100133315	LOC105376731	LPAR3
LNx2	LOC100287036	LOC105378696	LPAR4
LOC149373	LOC100287896	LOC105378979	LPAR5
LOC150051	LOC100289561	LOC107984974	LPAR6
LOC283710	LOC100505502	LOC107986453	LPCAT1
LOC284898	LOC100505841	LOC110117498	LPCAT2
LOC388282	LOC100506422	LOC110117498- PIK3R3	LPCAT3
LOC388813	LOC100996413	LOC112577516	LPCAT4
LOC389199	LOC100996842	LOC112577592	LPGAT1
LOC389602	LOC101059915	LOC112694756	LPIN1
LOC389895	LOC101927572	LOC114483834	LPIN2
LOC390877	LOC101928120	LOC114841035	LPIN3
LOC400499	LOC101928436	LOC114841037	LPL
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LOC643802	LOC101928841	LONP2	LPP
LOC644090	LOC101929372	LONRF1	LPXN
LOC645177	LOC102723360	LONRF2	LRAT
LOC645188	LOC102723899	LONRF3	LRATD1
LOC645202	LOC102723971	LOR	LRATD2
LOC647264	LOC102723996	LORICRIN	LRBA
LOC728392	LOC102724159	LOX	LRCH1
LOC730098	LOC102724219	LOXHD1	LRCH2
LOC730183	LOC102724265	LOXL1	LRCH3
LOC100128108	LOC102724488	LOXL2	LRCH4
LOC100128242	LOC102724843	LOXL3	LRCOL1
LOC100129307	LOC102724951		LRFN1



LRFN2	LRR1	LRRC27	LRRC63
LRFN3	LRRC1	LRRC28	LRRC66
LRFN4	LRRC2	LRRC29	LRRC69
LRFN5	LRRC3	LRRC30	LRRC70
LRG1	LRRC3B	LRRC31	LRRC71
LRGUK	LRRC3C	LRRC32	LRRC72
LRIF1	LRRC4	LRRC34	LRRC73
LRIG1	LRRC4B	LRRC36	LRRC74A
LRIG2	LRRC4C	LRRC37A	LRRC74B
LRIG3	LRRC6	LRRC37A2	LRRC75A
LRIT1	LRRC7	LRRC37A3	LRRC75B
LRIT2	LRRC8A	LRRC37B	LRRC1
LRIT3	LRRC8B	LRRC38	LRRC1
LRMDA	LRRC8C	LRRC39	LRRC1
LRMP	LRRC8D	LRRC40	LRRC1
LRP1	LRRC8E	LRRC41	LRRC1
LRP1B	LRRC9	LRRC42	LRRC1
LRP2	LRRC10	LRRC43	LRRC1
LRP2BP	LRRC10B	LRRC45	LRRC1
LRP3	LRRC14	LRRC46	LRRC1
LRP4	LRRC14B	LRRC47	LRRC1
LRP5	LRRC15	LRRC49	LRRC1
LRP5L	LRRC17	LRRC52	LRRC1
LRP6	LRRC18	LRRC53	LRRC1
LRP8	LRRC19	LRRC55	LRRC1
LRP10	LRRC20	LRRC56	LRRC1
LRP11	LRRC23	LRRC57	LRRC1
LRP12	LRRC24	LRRC58	LRRC1
LRPAP1	LRRC25	LRRC59	LRRC1
LRPPRC	LRRC26	LRRC61	LRRC1



LRTM1	LTBP1	LY6G6F	LYRM4
LRTM2	LTBP2	LY6G6F-LY6G6D	LYRM7
LRTOMT	LTBP3	LY6H	LYRM9
LRWD1	LTBP4	LY6K	LYSMD1
LSAMP	LTBR	LY6L	LYSMD2
LSG1	LTC4S	LY9	LYSMD3
LSM1	LTF	LY75	LYSMD4
LSM2	LTK	LY75-CD302	LYST
LSM3	LTN1	LY86	LYVE1
LSM4	LTO1	LY96	LYZ
LSM5	LTV1	LYAR	LYZL1
LSM6	LUC7L	LYG1	LYZL2
LSM7	LUC7L2	LYG2	LYZL4
LSM8	LUC7L3	LYL1	LYZL6
LSM10	LUM	LYN	LZIC
LSM11	LURAP1	LYNX1	LZTFL1
LSM12	LURAP1L	LYNX1-SLURP2	LZTR1
LSM14A	LUZP1	LYPD1	LZTS1
LSM14B	LUZP2	LYPD2	LZTS2
LSMEM1	LUZP4	LYPD3	LZTS3
LSMEM2	LUZP6	LYPD4	M1AP
LSP1	LVRN	LYPD5	M6PR
LSR	LXN	LYPD6	MAATS1
LSS	LY6D	LYPD6B	MAB21L1
LST1	LY6E	LYPD8	MAB21L2
LTA	LY6G5B	LYPLA1	MAB21L3
LTA4H	LY6G5C	LYPLA2	MAB21L4
LTB	LY6G6C	LYPLAL1	MACC1
LTB4R	LY6G6D	LYRM1	MACF1
LTB4R2	LY6G6E	LYRM2	MACIR



MACO1	MAGEA9B	MAGI2	MAN2B2
MACROD1	MAGEA10	MAGI3	MAN2C1
MACROD2	MAGEA10- MAGEA5	MAGIX	MANBA
MACROH2A1	MAGEA11	MAGOH	MANBAL
MACROH2A2	MAGEA12	MAGOH2	MANEA
MAD1L1	MAGEB1	MAGT1	MANEAL
MAD2L1	MAGEB2	MAIP1	MANF
MAD2L1BP	MAGEB3	MAJIN	MANSC1
MAD2L2	MAGEB4	MAK	MANSC4
MADCAM1	MAGEB5	MAK16	MAOA
MADD	MAGEB6	MAL	MAOB
MAEA	MAGEB6B	MAL2	MAP1A
MAEL	MAGEB10	MALL	MAP1B
MAF	MAGEB16	MALRD1	MAP1LC3A
MAF1	MAGEB17	MALSU1	MAP1LC3B
MAFA	MAGEB18	MALT1	MAP1LC3B2
MAFB	MAGEC1	MAMDC2	MAP1LC3C
MAFF	MAGEC2	MAMDC4	MAP1S
MAFG	MAGEC3	MAML1	MAP2
MAFK	MAGED1	MAML2	MAP2K1
MAG	MAGED2	MAML3	MAP2K2
MAGEA1	MAGED4	MAMLD1	MAP2K3
MAGEA2	MAGED4B	MAMSTR	MAP2K4
MAGEA2B	MAGEE1	MAN1A1	MAP2K5
MAGEA3	MAGEE2	MAN1A2	MAP2K6
MAGEA4	MAGEF1	MAN1B1	MAP2K7
MAGEA5	MAGEH1	MAN1C1	MAP3K1
MAGEA6	MAGEL2	MAN2A1	MAP3K2
MAGEA8	MAGI1	MAN2A2	MAP3K3
MAGEA9		MAN2B1	MAP3K4

MAP3K5	MAPK1	MARCH3	MARS1
MAP3K6	MAPK1IP1L	MARCH4	MARS2
MAP3K7	MAPK3	MARCH5	MARVELD1
MAP3K7CL	MAPK4	MARCH6	MARVELD2
MAP3K8	MAPK6	MARCH7	MARVELD3
MAP3K9	MAPK7	MARCH8	MAS1
MAP3K10	MAPK8	MARCH9	MAS1L
MAP3K11	MAPK8IP1	MARCH10	MASP1
MAP3K12	MAPK8IP2	MARCH11	MASP2
MAP3K13	MAPK8IP3	MARCHF1	MAST1
MAP3K14	MAPK9	MARCHF2	MAST2
MAP3K15	MAPK10	MARCHF3	MAST3
MAP3K19	MAPK11	MARCHF4	MAST4
MAP3K20	MAPK12	MARCHF5	MASTL
MAP3K21	MAPK13	MARCHF6	MAT1A
MAP4	MAPK14	MARCHF7	MAT2A
MAP4K1	MAPK15	MARCHF8	MAT2B
MAP4K2	MAPKAP1	MARCHF9	MATK
MAP4K3	MAPKAPK2	MARCHF10	MATN1
MAP4K4	MAPKAPK3	MARCHF11	MATN2
MAP4K5	MAPKAPK5	MARCKS	MATN3
MAP6	MAPKBP1	MARCKSL1	MATN4
MAP6D1	MAPRE1	MARCO	MATR3
MAP7	MAPRE2	MARCOL	MAU2
MAP7D1	MAPRE3	MARF1	MAVS
MAP7D2	MAPT	MARK1	MAX
MAP7D3	MARC1	MARK2	MAZ
MAP9	MARC2	MARK3	MB
MAP10	MARCH1	MARK4	MB21D2
MAP11	MARCH2	MARS	MBD1



MBD2	MC5R	MCOLN2	ME2
MBD3	MCAM	MCOLN3	ME3
MBD3L1	MCAT	MCPH1	MEA1
MBD3L2	MCC	MCRIP1	MEAF6
MBD3L2B	MCCC1	MCRIP2	MEAK7
MBD3L3	MCCC2	MCRS1	MECOM
MBD3L4	MCCD1	MCTP1	MECP2
MBD3L5	MCEE	MCTP2	MECR
MBD4	MCEMP1	MCTS1	MED1
MBD5	MCF2	MCTS2P	MED4
MBD6	MCF2L	MCU	MED6
MBIP	MCF2L2	MCUB	MED7
MBL2	MCFD2	MCUR1	MED8
MBLAC1	MCHR1	MDC1	MED9
MBLAC2	MCHR2	MDFI	MED10
MBNL1	MCIDAS	MDFIC	MED11
MBNL2	MCL1	MDFIC2	MED12
MBNL3	MCM2	MDGA1	MED12L
MBOAT1	MCM3	MDGA2	MED13
MBOAT2	MCM3AP	MDH1	MED13L
MBOAT4	MCM4	MDH1B	MED14
MBOAT7	MCM5	MDH2	MED14OS
MBP	MCM6	MDK	MED15
MBTD1	MCM7	MDM1	MED16
MBTPS1	MCM8	MDM2	MED17
MBTPS2	MCM9	MDM4	MED18
MC1R	MCM10	MDN1	MED19
MC2R	MCMBP	MDP1	MED20
MC3R	MCMDC2	MDS2	MED21
MC4R	MCOLN1	ME1	MED22

MED23	MELTF	METTL9	MFN2
MED24	MEMO1	METTL11B	MFNG
MED25	MEN1	METTL13	MFRP
MED26	MEOX1	METTL14	MFSD1
MED27	MEOX2	METTL15	MFSD2A
MED28	MEP1A	METTL16	MFSD2B
MED29	MEP1B	METTL17	MFSD3
MED30	MEPCE	METTL18	MFSD4A
MED31	MEPE	METTL21A	MFSD4B
MEDAG	MERTK	METTL21C	MFSD5
MEF2A	MESD	METTL22	MFSD6
MEF2B	MESP1	METTL23	MFSD6L
MEF2C	MESP2	METTL24	MFSD8
MEF2D	MEST	METTL25	MFSD9
MEFV	MET	METTL26	MFSD10
MEGF6	METAP1	METTL27	MFSD11
MEGF8	METAP1D	MEX3A	MFSD12
MEGF9	METAP2	MEX3B	MFSD13A
MEGF10	METRN	MEX3C	MFSD14A
MEGF11	METRNL	MEX3D	MFSD14B
MEI1	METTL1	MFAP1	MFSD14C
MEI4	METTL2A	MFAP2	MGA
MEIG1	METTL2B	MFAP3	MGAM
MEIKIN	METTL3	MFAP3L	MGAM2
MEIOB	METTL4	MFAP4	MGARP
MEIOC	METTL5	MFAP5	MGAT1
MEIS1	METTL6	MFF	MGAT2
MEIS2	METTL7A	MFGE8	MGAT3
MEIS3	METTL7B	MFHAS1	MGAT4A
MELK	METTL8	MFN1	MGAT4B



MGAT4C	MICU2	MIOX	MLH3
MGAT4D	MICU3	MIP	MLIP
MGAT5	MID1	MIPEP	MLKL
MGAT5B	MID1IP1	MIPOL1	MLLT1
MGLL	MID2	MIR1-1HG	MLLT3
MGME1	MIDEAS	MIS12	MLLT6
MGMT	MIDN	MIS18A	MLLT10
MGP	MIEF1	MIS18BP1	MLLT11
MGRN1	MIEF2	MISP	MLN
MGST1	MIEN1	MISP3	MLNR
MGST2	MIER1	MITD1	MLPH
MGST3	MIER2	MITF	MLST8
MIA	MIER3	MIXL1	MLX
MIA2	MIF	MKI67	MLXIP
MIA3	MIF4GD	MKKS	MLXIPL
MIA-RAB4B	MIGA1	MKLN1	MLYCD
MIB1	MIGA2	MKNK1	MMAA
MIB2	MIIP	MKNK2	MMAB
MICA	MILR1	MKRN1	MMACHC
MICAL1	MINAR1	MKRN2	MMADHC
MICAL2	MINAR2	MKRN2OS	MMD
MICAL3	MINDY1	MKRN3	MMD2
MICALCL	MINDY2	MKS1	MME
MICALL1	MINDY3	MKX	MMEL1
MICALL2	MINDY4	MLANA	MMGT1
MICB	MINDY4B	MLC1	MMP1
MICOS10	MINK1	MLEC	MMP2
MICOS10-NBL1	MINOS1	MLF1	MMP3
MICOS13	MINPP1	MLF2	MMP7
MICU1	MIOS	MLH1	MMP8



MMP9	MNS1	MORF4L2	MPO
MMP10	MNT	MORN1	MPP1
MMP11	MNX1	MORN2	MPP2
MMP12	MOAP1	MORN3	MPP3
MMP13	MOB1A	MORN4	MPP4
MMP14	MOB1B	MORN5	MPP5
MMP15	MOB2	MOS	MPP6
MMP16	MOB3A	MOSMO	MPP7
MMP17	MOB3B	MOSPD1	MPPE1
MMP19	MOB3C	MOSPD2	MPPED1
MMP20	MOB4	MOSPD3	MPPED2
MMP21	MOBP	MOV10	MPRIP
MMP23B	MOCOS	MOV10L1	MPST
MMP24	MOCS1	MOXD1	MPV17
MMP24OS	MOCS2	MPC1	MPV17L
MMP24-AS1- EDEM2	MOCS3	MPC1L	MPV17L2
MMP25	MOG	MPC2	MPZ
MMP26	MOGAT1	MPDU1	MPZL1
MMP27	MOGAT2	MPDZ	MPZL2
MMP28	MOGAT3	MPEG1	MPZL3
MMRN1	MOGS	MPG	MR1
MMRN2	MOK	MPHOSPH6	MRAP
MMS19	MON1A	MPHOSPH8	MRAP2
MMS22L	MON1B	MPHOSPH9	MRAS
MMUT	MON2	MPHOSPH10	MRC1
MN1	MORC1	MPI	MRC2
MNAT1	MORC2	MPIG6B	MRE11
MND1	MORC3	MPL	MREG
MNDA	MORC4	MPLKIP	MRFAP1
	MORF4L1	MPND	MRFAP1L1



MRGBP	MRPL11	MRPL45	MRPS23
MRGPRD	MRPL12	MRPL46	MRPS24
MRGPRE	MRPL13	MRPL47	MRPS25
MRGPRF	MRPL14	MRPL48	MRPS26
MRGPRG	MRPL15	MRPL49	MRPS27
MRGPRX1	MRPL16	MRPL50	MRPS28
MRGPRX2	MRPL17	MRPL51	MRPS30
MRGPRX3	MRPL18	MRPL52	MRPS31
MRGPRX4	MRPL19	MRPL53	MRPS33
MRI1	MRPL20	MRPL54	MRPS34
MRLN	MRPL21	MRPL55	MRPS35
MRM1	MRPL22	MRPL57	MRPS36
MRM2	MRPL23	MRPL58	MRRF
MRM3	MRPL24	MRPS2	MRS2
MRNIP	MRPL27	MRPS5	MRTFA
MRO	MRPL28	MRPS6	MRTFB
MROH1	MRPL30	MRPS7	MRT04
MROH2A	MRPL32	MRPS9	MRVI1
MROH2B	MRPL33	MRPS10	MS4A1
MROH6	MRPL34	MRPS11	MS4A2
MROH7	MRPL35	MRPS12	MS4A3
MROH7-TTC4	MRPL36	MRPS14	MS4A4A
MROH8	MRPL37	MRPS15	MS4A4E
MROH9	MRPL38	MRPS16	MS4A5
MRPL1	MRPL39	MRPS17	MS4A6A
MRPL2	MRPL40	MRPS18A	MS4A6E
MRPL3	MRPL41	MRPS18B	MS4A7
MRPL4	MRPL42	MRPS18C	MS4A8
MRPL9	MRPL43	MRPS21	MS4A10
MRPL10	MRPL44	MRPS22	MS4A12



MS4A13	MSRA	MTBP	MTMR1
MS4A14	MSRB1	MTCH1	MTMR2
MS4A15	MSRB2	MTCH2	MTMR3
MS4A18	MSRB3	MTCL1	MTMR4
MSANTD1	MSS51	MTCP1	MTMR6
MSANTD2	MST1	MTDH	MTMR7
MSANTD3	MST1L	MTERF1	MTMR8
MSANTD3- TMEFF1	MST1R	MTERF2	MTMR9
MSANTD4	MSTN	MTERF3	MTMR10
MSC	MSTO1	MTERF4	MTMR11
MSGN1	MSX1	MTF1	MTMR12
MSH2	MSX2	MTF2	MTMR14
MSH3	MT1A	MTFMT	MTNR1A
MSH4	MT1B	MTFP1	MTNR1B
MSH5	MT1E	MTFR1	MTO1
MSH5-SAPCD1	MT1F	MTFR1L	MTOR
MSH6	MT1G	MTFR2	MTPAP
MSI1	MT1H	MTG1	MTPN
MSI2	MT1HL1	MTG2	MTR
MSL1	MT1M	MTHFD1	MTRES1
MSL2	MT1X	MTHFD1L	MTREX
MSL3	MT2A	MTHFD2	MTRF1
MSLN	MT3	MTHFD2L	MTRF1L
MSLNL	MT4	MTHFR	MTRNR2L1
MSMB	MTA1	MTHFS	MTRNR2L2
MSMO1	MTA2	MTHFSD	MTRNR2L3
MSMP	MTA3	MTIF2	MTRNR2L4
MSN	MTAP	MTIF3	MTRNR2L5
MSR1	MTARC1	MTLN	MTRNR2L6
	MTARC2	MTM1	MTRNR2L7



MTRNR2L8	MUC19	MYB	MYH9
MTRNR2L9	MUC20	MYBBP1A	MYH10
MTRNR2L10	MUC21	MYBL1	MYH11
MTRNR2L11	MUC22	MYBL2	MYH13
MTRNR2L12	MUCL1	MYBPC1	MYH14
MTRNR2L13	MUCL3	MYBPC2	MYH15
MTRR	MUL1	MYBPC3	MYL1
MTSS1	MUM1	MYBPH	MYL2
MTSS1L	MUM1L1	MYBPHL	MYL3
MTSS2	MUS81	MYC	MYL4
MTTP	MUSK	MYCBP	MYL5
MTURN	MUSTN1	MYCBP2	MYL6
MTUS1	MUT	MYCBPAP	MYL6B
MTUS2	MUTYH	MYCL	MYL7
MTX1	MVB12A	MYCN	MYL9
MTX2	MVB12B	MYCT1	MYL10
MTX3	MVD	MYD88	MYL12A
MUC1	MVK	MYDGF	MYL12B
MUC2	MVP	MYEF2	MYLIP
MUC3A	MX1	MYEOV	MYLK
MUC4	MX2	MYF5	MYLK2
MUC5AC	MXD1	MYF6	MYLK3
MUC5B	MXD3	MYH1	MYLK4
MUC6	MXD4	MYH2	MYLPF
MUC7	MXI1	MYH3	MYMK
MUC12	MXRA5	MYH4	MYMX
MUC13	MXRA7	MYH6	MYNN
MUC15	MXRA8	MYH7	MYO1A
MUC16	MYADM	MYH7B	MYO1B
MUC17	MYADML2	MYH8	MYO1C



MYO1D	MYOM3	NAA20	NAGPA
MYO1E	MYORG	NAA25	NAGS
MYO1F	MYOT	NAA30	NAIF1
MYO1G	MYOZ1	NAA35	NAIP
MYO1H	MYOZ2	NAA38	NALCN
MYO3A	MYOZ3	NAA40	NAMPT
MYO3B	MYPN	NAA50	NANOG
MYO5A	MYPOP	NAA60	NANOGB
MYO5B	MYRF	NAA80	NANOGP8
MYO5C	MYRFL	NAAA	NANOS1
MYO6	MYRIP	NAALAD2	NANOS2
MYO7A	MYSM1	NAALADL1	NANOS3
MYO7B	MYT1	NAALADL2	NANP
MYO9A	MYT1L	NAB1	NANS
MYO9B	MYZAP	NAB2	NAP1L1
MYO10	MZB1	NABP1	NAP1L2
MYO15A	MZF1	NABP2	NAP1L3
MYO15B	MZT1	NACA	NAP1L4
MYO16	MZT2A	NACA2	NAP1L5
MYO18A	MZT2B	NACAD	NAPA
MYO18B	N4BP1	NACC1	NAPB
MYO19	N4BP2	NACC2	NAPEPLD
MYOC	N4BP2L1	NADK	NAPG
MYOCD	N4BP2L2	NADK2	NAPRT
MYOCOS	N4BP3	NADSYN1	NAPSA
MYOD1	N6AMT1	NAE1	NARF
MYOF	NAA10	NAF1	NARS
MYOG	NAA11	NAGA	NARS1
MYOM1	NAA15	NAGK	NARS2
MYOM2	NAA16	NAGLU	NASP



NAT1	NBPF12	NCK2	NDN
NAT2	NBPF14	NCKAP1	NDNF
NAT8	NBPF15	NCKAP1L	NDOR1
NAT8L	NBPF19	NCKAP5	NDP
NAT9	NBPF20	NCKAP5L	NDRG1
NAT10	NBPF26	NCKIPSD	NDRG2
NAT14	NBR1	NCL	NDRG3
NAT16	NCALD	NCLN	NDRG4
NATD1	NCAM1	NCMAP	NDST1
NAV1	NCAM2	NCOA1	NDST2
NAV2	NCAN	NCOA2	NDST3
NAV3	NCAPD2	NCOA3	NDST4
NAXD	NCAPD3	NCOA4	NDUFA1
NAXE	NCAPG	NCOA5	NDUFA2
NBAS	NCAPG2	NCOA6	NDUFA3
NBDY	NCAPH	NCOA7	NDUFA4
NBEA	NCAPH2	NCOR1	NDUFA4L2
NBEAL1	NCBP1	NCOR2	NDUFA5
NBEAL2	NCBP2	NCR1	NDUFA6
NBL1	NCBP2AS2	NCR2	NDUFA7
NBN	NCBP2L	NCR3	NDUFA8
NBPF1	NCBP2-AS2	NCR3LG1	NDUFA9
NBPF3	NCBP3	NCS1	NDUFA10
NBPF4	NCCRP1	NCSTN	NDUFA11
NBPF6	NCDN	NDC1	NDUFA12
NBPF7	NCEH1	NDC80	NDUFA13
NBPF8	NCF1	NDE1	NDUFAB1
NBPF9	NCF2	NDEL1	NDUFAF1
NBPF10	NCF4	NDFIP1	NDUFAF2
NBPF11	NCK1	NDFIP2	NDUFAF3



NDUFAF4	NEB	NEK7	NEUROD1
NDUFAF5	NEBL	NEK8	NEUROD2
NDUFAF6	NECAB1	NEK9	NEUROD4
NDUFAF7	NECAB2	NEK10	NEUROD6
NDUFAF8	NECAB3	NEK11	NEUROG1
NDUFB1	NECAP1	NELFA	NEUROG2
NDUFB2	NECAP2	NELFB	NEUROG3
NDUFB3	NECTIN1	NELFCD	NEXMIF
NDUFB4	NECTIN2	NELFE	NEXN
NDUFB5	NECTIN3	NELL1	NF1
NDUFB6	NECTIN4	NELL2	NF2
NDUFB7	NEDD1	NEMF	NFAM1
NDUFB8	NEDD4	NEMP1	NFASC
NDUFB9	NEDD4L	NEMP2	NFAT5
NDUFB10	NEDD8	NENF	NFATC1
NDUFB11	NEDD8-MDP1	NEO1	NFATC2
NDUFC1	NEDD9	NEPRO	NFATC2IP
NDUFC2	NEFH	NES	NFATC3
NDUFC2-KCTD14	NEFL	NET1	NFATC4
NDUFS1	NEFM	NETO1	NFE2
NDUFS2	NEGR1	NETO2	NFE2L1
NDUFS3	NEIL1	NEU1	NFE2L2
NDUFS4	NEIL2	NEU2	NFE2L3
NDUFS5	NEIL3	NEU3	NFE4
NDUFS6	NEK1	NEU4	NFIA
NDUFS7	NEK2	NEURL1	NFIB
NDUFS8	NEK3	NEURL1B	NFIC
NDUFV1	NEK4	NEURL2	NFIL3
NDUFV2	NEK5	NEURL3	NFIX
NDUFV3	NEK6	NEURL4	NFKB1



NFKB2	NHS	NIT2	NLE1
NFKBIA	NHSL1	NKAIN1	NLGN1
NFKBIB	NHSL2	NKAIN2	NLGN2
NFKBID	NIBAN1	NKAIN3	NLGN3
NFKBIE	NIBAN2	NKAIN4	NLGN4X
NFKBIL1	NIBAN3	NKAP	NLGN4Y
NFKBIZ	NICN1	NKAPD1	NLK
NFRKB	NID1	NKAPL	NLN
NFS1	NID2	NKD1	NLRC3
NFU1	NIF3L1	NKD2	NLRC4
NFX1	NIFK	NKG7	NLRC5
NFXL1	NIM1K	NKIRAS1	NLRP1
NFYA	NIN	NKIRAS2	NLRP2
NFYB	NINJ1	NKPD1	NLRP2B
NFYC	NINJ2	NKRF	NLRP3
NGB	NINL	NKTR	NLRP4
NGDN	NIP7	NKX1-1	NLRP5
NGEF	NIPA1	NKX1-2	NLRP6
NGF	NIPA2	NKX2-1	NLRP7
NGFR	NIPAL1	NKX2-2	NLRP8
NGLY1	NIPAL2	NKX2-3	NLRP9
NGRN	NIPAL3	NKX2-4	NLRP10
NHEJ1	NIPAL4	NKX2-5	NLRP11
NHLH1	NIPBL	NKX2-6	NLRP12
NHLH2	NIPSNAP1	NKX2-8	NLRP13
NHLRC1	NIPSNAP2	NKX3-1	NLRP14
NHLRC2	NIPSNAP3A	NKX3-2	NLRX1
NHLRC3	NIPSNAP3B	NKX6-1	NMB
NHLRC4	NISCH	NKX6-2	NMBR
NHP2	NIT1	NKX6-3	NMD3



NME1	NOC3L	NOP58	NPAS3
NME1-NME2	NOC4L	NOS1	NPAS4
NME2	NOCT	NOS1AP	NPAT
NME3	NOD1	NOS2	NPB
NME4	NOD2	NOS3	NPBWR1
NME5	NODAL	NOSIP	NPBWR2
NME6	NOG	NOSTRIN	NPC1
NME7	NOL3	NOTCH1	NPC1L1
NME8	NOL4	NOTCH2	NPC2
NME9	NOL4L	NOTCH2NLA	NPDC1
NMI	NOL6	NOTCH2NLB	NPEPL1
NMNAT1	NOL7	NOTCH2NLC	NPEPPS
NMNAT2	NOL8	NOTCH3	NPFF
NMNAT3	NOL9	NOTCH4	NPFFR1
NMRAL1	NOL10	NOTO	NPFFR2
NMRK1	NOL11	NOTUM	NPHP1
NMRK2	NOL12	NOV	NPHP3
NMS	NOLC1	NOVA1	NPHP3-ACAD11
NMT1	NOM1	NOVA2	NPHP4
NMT2	NOMO1	NOX1	NPHS1
NMU	NOMO2	NOX3	NPHS2
NMUR1	NOMO3	NOX4	NPIPA1
NMUR2	NONO	NOX5	NPIPA2
NNAT	NOP2	NOXA1	NPIPA3
NNMT	NOP9	NOXO1	NPIPA5
NNT	NOP10	NOXRED1	NPIPA7
NOA1	NOP14	NPAP1	NPIPA8
NOB1	NOP16	NPAP1L	NPIPA9
NOBOX	NOP53	NPAS1	NPIP2
NOC2L	NOP56	NPAS2	NPIP3

NPIPB4	NPVF	NR4A2	NRP2
NPIPB5	NPW	NR4A3	NRROS
NPIPB6	NPY	NR5A1	NRSN1
NPIPB7	NPY1R	NR5A2	NRSN2
NPIPB8	NPY2R	NR6A1	NRTN
NPIPB9	NPY4R	NRAP	NRXN1
NPIPB11	NPY4R2	NRARP	NRXN2
NPIPB12	NPY5R	NRAS	NRXN3
NPIPB13	NQO1	NRBF2	NSA2
NPIPB15	NQO2	NRBP1	NSD1
NPL	NR0B1	NRBP2	NSD2
NPLOC4	NR0B2	NRCAM	NSD3
NPM1	NR1D1	NRDC	NSDHL
NPM2	NR1D2	NRDE2	NSF
NPM3	NR1H2	NREP	NSFL1C
NPNT	NR1H3	NRF1	NSG1
NPPA	NR1H4	NRG1	NSG2
NPPB	NR1I2	NRG2	NSL1
NPPC	NR1I3	NRG3	NSMAF
NPR1	NR2C1	NRG4	NSMCE1
NPR2	NR2C2	NRGN	NSMCE2
NPR3	NR2C2AP	NRIP1	NSMCE3
NPRL2	NR2E1	NRIP2	NSMCE4A
NPRL3	NR2E3	NRIP3	NSMF
NPS	NR2F1	NRK	NSRP1
NPSR1	NR2F2	NRL	NSUN2
NPTN	NR2F6	NRM	NSUN3
NPTX1	NR3C1	NRN1	NSUN4
NPTX2	NR3C2	NRN1L	NSUN5
NPTXR	NR4A1	NRP1	NSUN6

NSUN7	NTS	NUDT14	NUP133
NT5C	NTSR1	NUDT15	NUP153
NT5C1A	NTSR2	NUDT16	NUP155
NT5C1B	NUAK1	NUDT16L1	NUP160
NT5C1B-RDH14	NUAK2	NUDT17	NUP188
NT5C2	NUB1	NUDT18	NUP205
NT5C3A	NUBP1	NUDT19	NUP210
NT5C3B	NUBP2	NUDT21	NUP210L
NT5DC1	NUBPL	NUDT22	NUP214
NT5DC2	NUCB1	NUF2	NUPL2
NT5DC3	NUCB2	NUFIP1	NUPR1
NT5DC4	NUCKS1	NUFIP2	NUPR2
NT5E	NUDC	NUGGC	NUS1
NT5M	NUDCD1	NUMA1	NUSAP1
NTAN1	NUDCD2	NUMB	NUTF2
NTF3	NUDCD3	NUMBL	NUTM1
NTF4	NUDT1	NUP35	NUTM2A
NTHL1	NUDT2	NUP37	NUTM2B
NTM	NUDT3	NUP42	NUTM2D
NTMT1	NUDT4	NUP43	NUTM2E
NTN1	NUDT4B	NUP50	NUTM2F
NTN3	NUDT5	NUP54	NUTM2G
NTN4	NUDT6	NUP58	NVL
NTN5	NUDT7	NUP62	NWD1
NTNG1	NUDT8	NUP62CL	NWD2
NTNG2	NUDT9	NUP85	NXF1
NTPCR	NUDT10	NUP88	NXF2
NTRK1	NUDT11	NUP93	NXF2B
NTRK2	NUDT12	NUP98	NXF3
NTRK3	NUDT13	NUP107	NXF5



NXN	OBSCN	OGFOD2	OOEP
NXNL1	OBSL1	OGFOD3	OOSP1
NXNL2	OC90	OGFR	OOSP2
NXPE1	Oca.02	OGFRL1	OOSP3
NXPE2	OCEL1	OGG1	OOSP4A
NXPE3	OCIAD1	OGN	OOSP4B
NXPE4	OCIAD2	OGT	OPA1
NXPH1	OCLM	OIP5	OPA3
NXPH2	OCLN	OIT3	OPALIN
NXPH3	OCM	OLA1	OPCML
NXPH4	OCM2	OLAH	OPHN1
NXT1	OCRL	OLFM1	OPLAH
NXT2	OCSTAMP	OLFM2	OPN1LW
NYAP1	ODAM	OLFM3	OPN1MW
NYAP2	ODAPH	OLFM4	OPN1MW2
NYNRIN	ODC1	OLFML1	OPN1MW3
NYX	ODF1	OLFML2A	OPN1SW
OAF	ODF2	OLFML2B	OPN3
OARD1	ODF2L	OLFML3	OPN4
OAS1	ODF3	OLIG1	OPN5
OAS2	ODF3B	OLIG2	OPRD1
OAS3	ODF3L1	OLIG3	OPRK1
OASL	ODF3L2	OLR1	OPRL1
OAT	ODF4	OMA1	OPRM1
OAZ1	ODR4	OMD	OPRPN
OAZ2	OFD1	OMG	OPTC
OAZ3	OGA	OMP	OPTN
OBI1	OGDH	ONECUT1	OR1A1
OBP2A	OGDHL	ONECUT2	OR1A2
OBP2B	OGFOD1	ONECUT3	OR1B1



OR1C1	OR2A12	OR2K2	OR2W1
OR1D2	OR2A14	OR2L2	OR2W3
OR1D5	OR2A25	OR2L3	OR2W5
OR1E1	OR2A42	OR2L5	OR2Y1
OR1E2	OR2AE1	OR2L8	OR2Z1
OR1E3	OR2AG1	OR2L13	OR3A1
OR1F1	OR2AG2	OR2M2	OR3A2
OR1F12	OR2AJ1	OR2M3	OR3A3
OR1G1	OR2AK2	OR2M4	OR4A5
OR1I1	OR2AP1	OR2M5	OR4A15
OR1J1	OR2AT4	OR2M7	OR4A16
OR1J2	OR2B2	OR2S2	OR4A47
OR1J4	OR2B3	OR2T1	OR4B1
OR1K1	OR2B6	OR2T2	OR4C3
OR1L1	OR2B11	OR2T3	OR4C5
OR1L3	OR2C1	OR2T4	OR4C6
OR1L4	OR2C3	OR2T5	OR4C11
OR1L6	OR2D2	OR2T6	OR4C12
OR1L8	OR2D3	OR2T7	OR4C13
OR1M1	OR2F1	OR2T8	OR4C15
OR1N1	OR2F2	OR2T10	OR4C16
OR1N2	OR2G2	OR2T11	OR4C45
OR1Q1	OR2G3	OR2T12	OR4C46
OR1S1	OR2G6	OR2T27	OR4D1
OR1S2	OR2H1	OR2T29	OR4D2
OR2A1	OR2H2	OR2T33	OR4D5
OR2A2	OR2I1P	OR2T34	OR4D6
OR2A4	OR2J1	OR2T35	OR4D9
OR2A5	OR2J2	OR2V1	OR4D10
OR2A7	OR2J3	OR2V2	OR4D11



OR4E1	OR4X2	OR5J2	OR6C65
OR4E2	OR5A1	OR5K1	OR6C68
OR4F3	OR5A2	OR5K2	OR6C70
OR4F4	OR5AC2	OR5K3	OR6C74
OR4F5	OR5AK2	OR5K4	OR6C75
OR4F6	OR5AL1	OR5L1	OR6C76
OR4F15	OR5AN1	OR5L2	OR6F1
OR4F16	OR5AP2	OR5M1	OR6J1
OR4F17	OR5AR1	OR5M3	OR6K2
OR4F21	OR5AS1	OR5M8	OR6K3
OR4F29	OR5AU1	OR5M9	OR6K6
OR4K1	OR5B2	OR5M10	OR6M1
OR4K2	OR5B3	OR5M11	OR6N1
OR4K3	OR5B12	OR5P2	OR6N2
OR4K5	OR5B17	OR5P3	OR6P1
OR4K13	OR5B21	OR5R1	OR6Q1
OR4K14	OR5BS1P	OR5T1	OR6S1
OR4K15	OR5C1	OR5T2	OR6T1
OR4K17	OR5D3P	OR5T3	OR6V1
OR4L1	OR5D13	OR5V1	OR6X1
OR4M1	OR5D14	OR5W2	OR6Y1
OR4M2	OR5D16	OR6A2	OR7A5
OR4N2	OR5D18	OR6B1	OR7A10
OR4N4	OR5F1	OR6B2	OR7A17
OR4N5	OR5H1	OR6B3	OR7C1
OR4P4	OR5H2	OR6C1	OR7C2
OR4Q3	OR5H6	OR6C2	OR7D2
OR4S1	OR5H14	OR6C3	OR7D4
OR4S2	OR5H15	OR6C4	OR7E24
OR4X1	OR5I1	OR6C6	OR7G1



OR7G2	OR9K2	OR10K2	OR13F1
OR7G3	OR9Q1	OR10P1	OR13G1
OR8A1	OR9Q2	OR10Q1	OR13H1
OR8B2	OR10A2	OR10R2	OR13J1
OR8B3	OR10A3	OR10S1	OR14A2
OR8B4	OR10A4	OR10T2	OR14A16
OR8B8	OR10A5	OR10V1	OR14C36
OR8B12	OR10A6	OR10W1	OR14I1
OR8D1	OR10A7	OR10X1	OR14J1
OR8D2	OR10AD1	OR10Z1	OR14K1
OR8D4	OR10AG1	OR11A1	OR51A2
OR8G1	OR10C1	OR11G2	OR51A4
OR8G2P	OR10D3	OR11H1	OR51A7
OR8G5	OR10G2	OR11H2	OR51B2
OR8H1	OR10G3	OR11H4	OR51B4
OR8H2	OR10G4	OR11H6	OR51B5
OR8H3	OR10G6	OR11H7	OR51B6
OR8I2	OR10G7	OR11H12	OR51C1P
OR8J1	OR10G8	OR11L1	OR51D1
OR8J3	OR10G9	OR12D1	OR51E1
OR8K1	OR10H1	OR12D2	OR51E2
OR8K3	OR10H2	OR12D3	OR51F1
OR8K5	OR10H3	OR13A1	OR51F2
OR8S1	OR10H4	OR13C2	OR51G1
OR8U1	OR10H5	OR13C3	OR51G2
OR9A2	OR10J1	OR13C4	OR51H1
OR9A4	OR10J3	OR13C5	OR51I1
OR9G1	OR10J4	OR13C8	OR51I2
OR9G4	OR10J5	OR13C9	OR51J1
OR9I1	OR10K1	OR13D1	OR51L1



OR51M1	OR52W1	OSBPL7	OTOR
OR51Q1	OR52Z1	OSBPL8	OTOS
OR51S1	OR56A1	OSBPL9	OTP
OR51T1	OR56A3	OSBPL10	OTUB1
OR51V1	OR56A4	OSBPL11	OTUB2
OR52A1	OR56A5	OSCAR	OTUD1
OR52A5	OR56B1	OSCP1	OTUD3
OR52B2	OR56B4	OSER1	OTUD4
OR52B4	ORAI1	OSGEP	OTUD5
OR52B6	ORAI2	OSGEPL1	OTUD6A
OR52D1	ORAI3	OSGIN1	OTUD6B
OR52E1	ORC1	OSGIN2	OTUD7A
OR52E2	ORC2	OSM	OTUD7B
OR52E4	ORC3	OSMR	OTULIN
OR52E5	ORC4	OSR1	OTULINL
OR52E6	ORC5	OSR2	OTX1
OR52E8	ORC6	OST4	OTX2
OR52H1	ORM1	OSTC	OVCA2
OR52I1	ORM2	OSTF1	OVCH1
OR52I2	ORMDL1	OSTM1	OVCH2
OR52J3	ORMDL2	OSTN	OVGP1
OR52K1	ORMDL3	OTC	OVOL1
OR52K2	OS9	OTOA	OVOL2
OR52L1	OSBP	OTOF	OVOL3
OR52M1	OSBP2	OTOG	OXA1L
OR52N1	OSBPL1A	OTOGL	OXCT1
OR52N2	OSBPL2	OTOL1	OXCT2
OR52N4	OSBPL3	OTOP1	OXER1
OR52N5	OSBPL5	OTOP2	OXGR1
OR52R1	OSBPL6	OTOP3	OXLD1



OXNAD1	P3R3URF-PIK3R3	PADI4	PALLD
OXR1		PADI6	PALM
OXSM	P4HA1	PAEP	PALM2
OXSR1	P4HA2	PAF1	PALM2AKAP2
OXT	P4HA3	PAFAH1B1	PALM2-AKAP2
OXTR	P4HB	PAFAH1B2	PALM3
P2RX1	P4HTM	PAFAH1B3	PALMD
P2RX2	PA2G4	PAFAH2	PAM
P2RX3	PAAF1	PAG1	PAM16
P2RX4	PABPC1	PAGE1	PAMR1
P2RX5	PABPC1L	PAGE2	PAN2
P2RX5-TAX1BP3	PABPC1L2A	PAGE2B	PAN3
P2RX6	PABPC1L2B	PAGE3	PANK1
P2RX7	PABPC3	PAGE4	PANK2
P2RY1	PABPC4	PAGE5	PANK3
P2RY2	PABPC4L	PAGR1	PANK4
P2RY4	PABPC5	PAH	PANO1
P2RY6	PABPN1	PAICS	PANX1
P2RY8	PABPN1L	PAIP1	PANX2
P2RY10	PACC1	PAIP2	PANX3
P2RY11	PACRG	PAIP2B	PAOX
P2RY12	PACRGL	PAK1	PAPLN
P2RY13	PACS1	PAK1IP1	PAPOLA
P2RY14	PACS2	PAK2	PAPOLB
P3H1	PACSIN1	PAK3	PAPOLG
P3H2	PACSIN2	PAK4	PAPPA
P3H3	PACSIN3	PAK5	PAPPA2
P3H4	PADI1	PAK6	PAPSS1
P3R3URF	PADI2	PALB2	PAPSS2
	PADI3	PALD1	PAQR3



PAQR4	PARS2	PBOV1	PCDHA1
PAQR5	PARVA	PBRM1	PCDHA2
PAQR6	PARVB	PBX1	PCDHA3
PAQR7	PARVG	PBX2	PCDHA4
PAQR8	PASD1	PBX3	PCDHA5
PAQR9	PASK	PBX4	PCDHA6
PARD3	PATE1	PBXIP1	PCDHA7
PARD3B	PATE2	PC	PCDHA8
PARD6A	PATE3	PCARE	PCDHA9
PARD6B	PATE4	PCBD1	PCDHA10
PARD6G	PATJ	PCBD2	PCDHA11
PARG	PATL1	PCBP1	PCDHA12
PARK7	PATL2	PCBP2	PCDHA13
PARL	PATZ1	PCBP3	PCDHAC1
PARM1	PAWR	PCBP4	PCDHAC2
PARN	PAX1	PCCA	PCDHACT
PARP1	PAX2	PCCB	PCDHB1
PARP2	PAX3	PCDH1	PCDHB2
PARP3	PAX4	PCDH7	PCDHB3
PARP4	PAX5	PCDH8	PCDHB4
PARP6	PAX6	PCDH9	PCDHB5
PARP8	PAX7	PCDH10	PCDHB6
PARP9	PAX8	PCDH11X	PCDHB7
PARP10	PAX9	PCDH11Y	PCDHB8
PARP11	PAXBP1	PCDH12	PCDHB9
PARP12	PAXIP1	PCDH15	PCDHB10
PARP14	PAXX	PCDH17	PCDHB11
PARP15	PBDC1	PCDH18	PCDHB12
PARP16	PBK	PCDH19	PCDHB13
PARPBP	PBLD	PCDH20	PCDHB14



PCDHB15	PCGF5	PCSK6	PDE3B
PCDHB16	PCGF6	PCSK7	PDE4A
PCDHGA1	PCID2	PCSK9	PDE4B
PCDHGA2	PCIF1	PCTP	PDE4C
PCDHGA3	PCK1	PCYOX1	PDE4D
PCDHGA4	PCK2	PCYOX1L	PDE4DIP
PCDHGA5	PCLAF	PCYT1A	PDE5A
PCDHGA6	PCLO	PCYT1B	PDE6A
PCDHGA7	PCM1	PCYT2	PDE6B
PCDHGA8	PCMT1	PDAP1	PDE6C
PCDHGA9	PCMTD1	PDC	PDE6D
PCDHGA10	PCMTD2	PDCD1	PDE6G
PCDHGA11	PCNA	PDCD1LG2	PDE6H
PCDHGA12	PCNP	PDCD2	PDE7A
PCDHGB1	PCNT	PDCD2L	PDE7B
PCDHGB2	PCNX1	PDCD4	PDE8A
PCDHGB3	PCNX2	PDCD5	PDE8B
PCDHGB4	PCNX3	PDCD6	PDE9A
PCDHGB5	PCNX4	PDCD6IP	PDE10A
PCDHGB6	PCOLCE	PDCD7	PDE11A
PCDHGB7	PCOLCE2	PDCD10	PDE12
PCDHGC3	PCOTH	PDCD11	PDF
PCDHGC4	PCP2	PDCL	PDGFA
PCDHGC5	PCP4	PDCL2	PDGFB
PCED1A	PCP4L1	PDCL3	PDGFC
PCED1B	PCSK1	PDE1A	PDGFD
PCF11	PCSK1N	PDE1B	PDGFRA
PCGF1	PCSK2	PDE1C	PDGFRB
PCGF2	PCSK4	PDE2A	PDGFRL
PCGF3	PCSK5	PDE3A	PDHA1



PDHA2	PDX1	PELO	PEX26
PDHB	PDXDC1	PELP1	PF4
PDHX	PDXK	PEMT	PF4V1
PDIA2	PDXP	PENK	PFAS
PDIA3	PDYN	PEPD	PFDN1
PDIA4	PDZD2	PER1	PFDN2
PDIA5	PDZD3	PER2	PFDN4
PDIA6	PDZD4	PER3	PFDN5
PDIK1L	PDZD7	PERCC1	PFDN6
PDILT	PDZD8	PERM1	PFKFB1
PDK1	PDZD9	PERP	PFKFB2
PDK2	PDZD11	PES1	PFKFB3
PDK3	PDZK1	PET100	PFKFB4
PDK4	PDZK1IP1	PET117	PFKL
PDLIM1	PDZRN3	PEX1	PFKM
PDLIM2	PDZRN4	PEX2	PFKP
PDLIM3	PEA15	PEX3	PFN1
PDLIM4	PEAK1	PEX5	PFN2
PDLIM5	PEAK3	PEX5L	PFN3
PDLIM7	PEAR1	PEX6	PFN4
PDP1	PEBP1	PEX7	PGA3
PDP2	PEBP4	PEX10	PGA4
PDPK1	PECAM1	PEX11A	PGA5
PDPN	PECR	PEX11B	PGAM1
PDPR	PEF1	PEX11G	PGAM2
PDRG1	PEG3	PEX12	PGAM4
PDS5A	PEG10	PEX13	PGAM5
PDS5B	PELI1	PEX14	PGAP1
PDSS1	PELI2	PEX16	PGAP2
PDSS2	PELI3	PEX19	PGAP3



PGAP4	PGS1	PHF21B	PHYHD1
PGAP6	PHACTR1	PHF23	PHYHIP
PGBD1	PHACTR2	PHF24	PHYHIPL
PGBD2	PHACTR3	PHGDH	PHYKPL
PGBD3	PHACTR4	PHGR1	PI3
PGBD4	PHAX	PHIP	PI4K2A
PGBD5	PHB	PHKA1	PI4K2B
PGC	PHB2	PHKA2	PI4KA
PGD	PHC1	PHKB	PI4KB
PGF	PHC2	PHKG1	PI15
PGGHG	PHC3	PHKG2	PI16
PGGT1B	PHETA1	PHLDA1	PIANP
PGK1	PHETA2	PHLDA2	PIAS1
PGK2	PHEX	PHLDA3	PIAS2
PGLS	PHF1	PHLDB1	PIAS3
PGLYRP1	PHF2	PHLDB2	PIAS4
PGLYRP2	PHF3	PHLDB3	PIBF1
PGLYRP3	PHF5A	PHLPP1	PICALM
PGLYRP4	PHF6	PHLPP2	PICK1
PGM1	PHF7	PHOSPHO1	PID1
PGM2	PHF8	PHOSPHO2	PIDD1
PGM2L1	PHF10	PHOSPHO2- KLHL23	PIEZO1
PGM3	PHF11		PIEZO2
PGM5	PHF12	PHOX2A	PIF1
PGP	PHF13	PHOX2B	PIFO
PGPEP1	PHF14	PHPT1	PIGA
PGPEP1L	PHF19	PHRF1	PIGB
PGR	PHF20	PHTF1	PIGBOS1
PGRMC1	PHF20L1	PHTF2	PIGC
PGRMC2	PHF21A	PHYH	PIGF



PIGG	PIK3IP1	PIR	PKHD1
PIGH	PIK3R1	PIRT	PKHD1L1
PIGK	PIK3R2	PISD	PKIA
PIGL	PIK3R3	PITHD1	PKIB
PIGM	PIK3R4	PITPNA	PKIG
PIGN	PIK3R5	PITPNB	PKLR
PIGO	PIK3R6	PITPNC1	PKM
PIGP	PIKFYVE	PITPNM1	PKMYT1
PIGQ	PILRA	PITPNM2	PKN1
PIGR	PILRB	PITPNM3	PKN2
PIGS	PIM1	PITRM1	PKN3
PIGT	PIM2	PITX1	PKNOX1
PIGU	PIM3	PITX2	PKNOX2
PIGV	PIMREG	PITX3	PKP1
PIGW	PIN1	PIWIL1	PKP2
PIGX	PIN4	PIWIL2	PKP3
PIGY	PINK1	PIWIL3	PKP4
PIGZ	PINLYP	PIWIL4	PLA1A
PIH1D1	PINX1	PJA1	PLA2G1B
PIH1D2	PIP	PJA2	PLA2G2A
PIH1D3	PIP4K2A	PJVK	PLA2G2C
PIK3AP1	PIP4K2B	PKD1	PLA2G2D
PIK3C2A	PIP4K2C	PKD1L1	PLA2G2E
PIK3C2B	PIP4P1	PKD1L2	PLA2G2F
PIK3C2G	PIP4P2	PKD1L3	PLA2G3
PIK3C3	PIP5K1A	PKD2	PLA2G4A
PIK3CA	PIP5K1B	PKD2L1	PLA2G4B
PIK3CB	PIP5K1C	PKD2L2	PLA2G4C
PIK3CD	PIP5KL1	PKDCC	PLA2G4D
PIK3CG	PIPOX	PKDREJ	PLA2G4E



PLA2G4F	PLCB2	PLEKHA5	PLGLB1
PLA2G5	PLCB3	PLEKHA6	PLGLB2
PLA2G6	PLCB4	PLEKHA7	PLGRKT
PLA2G7	PLCD1	PLEKHA8	PLIN1
PLA2G10	PLCD3	PLEKHB1	PLIN2
PLA2G12A	PLCD4	PLEKHB2	PLIN3
PLA2G12B	PLCE1	PLEKHD1	PLIN4
PLA2G15	PLCG1	PLEKHF1	PLIN5
PLA2G16	PLCG2	PLEKHF2	PLK1
PLA2R1	PLCH1	PLEKHG1	PLK2
PLAA	PLCH2	PLEKHG2	PLK3
PLAAT1	PLCL1	PLEKHG3	PLK4
PLAAT2	PLCL2	PLEKHG4	PLK5
PLAAT3	PLCXD1	PLEKHG4B	PLLP
PLAAT4	PLCXD2	PLEKHG5	PLN
PLAAT5	PLCXD3	PLEKHG6	PLOD1
PLAC1	PLCZ1	PLEKHG7	PLOD2
PLAC8	PLD1	PLEKHH1	PLOD3
PLAC8L1	PLD2	PLEKHH2	PLP1
PLAC9	PLD3	PLEKHH3	PLP2
PLAG1	PLD4	PLEKHJ1	PLPBP
PLAGL1	PLD5	PLEKHM1	PLPP1
PLAGL2	PLD6	PLEKHM2	PLPP2
PLAT	PLEC	PLEKHM3	PLPP3
PLAU	PLEK	PLEKHN1	PLPP4
PLAUR	PLEK2	PLEKHO1	PLPP5
PLB1	PLEKHA1	PLEKHO2	PLPP6
PLBD1	PLEKHA2	PLEKHS1	PLPP7
PLBD2	PLEKHA3	PLET1	PLPPR1
PLCB1	PLEKHA4	PLG	PLPPR2



PLPPR3	PMF1	PNMA8B	POGK
PLPPR4	PMF1-BGLAP	PNMA8C	POGLUT1
PLPPR5	PMFBP1	PNMT	POGLUT2
PLRG1	PMIS2	PNN	POGLUT3
PLS1	PML	PN01	POGZ
PLS3	PMM1	PNOC	POLA1
PLSCR1	PMM2	PNP	POLA2
PLSCR2	PMP2	PNPLA1	POLB
PLSCR3	PMP22	PNPLA2	POLD1
PLSCR4	PMPCA	PNPLA3	POLD2
PLSCR5	PMPCB	PNPLA4	POLD3
PLTP	PMS1	PNPLA5	POLD4
PLVAP	PMS2	PNPLA6	POLDIP2
PLXDC1	PMVK	PNPLA7	POLDIP3
PLXDC2	PNCK	PNPLA8	POLE
PLXNA1	PNISR	PNPO	POLE2
PLXNA2	PNKD	PNPT1	POLE3
PLXNA3	PNKP	PNRC1	POLE4
PLXNA4	PNLDC1	PNRC2	POLG
PLXNB1	PNLIP	POC1A	POLG2
PLXNB2	PNLIPRP1	POC1B	POLH
PLXNB3	PNLIPRP3	POC1B-GALNT4	POLI
PLXNC1	PNMA1	POC5	POLK
PLXND1	PNMA2	PODN	POLL
PM20D1	PNMA3	PODNL1	POLM
PM20D2	PNMA5	PODXL	POLN
PMAIP1	PNMA6A	PODXL2	POLQ
PMCH	PNMA6E	POF1B	POLR1A
PMEL	PNMA6F	POFUT1	POLR1B
PMEPA1	PNMA8A	POFUT2	POLR1C

POLR1D	POM121L2	POTEF	PPARG
POLR1E	POM121L12	POTEG	PPARGC1A
POLR2A	POMC	POTEH	PPARGC1B
POLR2B	POMGNT1	POTEI	PPAT
POLR2C	POMGNT2	POTEJ	PPBP
POLR2D	POMK	POTEM	PPCDC
POLR2E	POMP	POU1F1	PPCS
POLR2F	POMT1	POU2AF1	PPDPF
POLR2G	POMT2	POU2F1	PPDPFL
POLR2H	POMZP3	POU2F2	PPEF1
POLR2I	PON1	POU2F3	PPEF2
POLR2J	PON2	POU3F1	PPFIA1
POLR2J2	PON3	POU3F2	PPFIA2
POLR2J3	POP1	POU3F3	PPFIA3
POLR2K	POP4	POU3F4	PPFIA4
POLR2L	POP5	POU4F1	PPFIBP1
POLR2M	POP7	POU4F2	PPFIBP2
POLR3A	POPDC2	POU4F3	PPHLN1
POLR3B	POPDC3	POU5F1	PPIA
POLR3C	POR	POU5F1B	PPIAL4A
POLR3D	PORCN	POU5F2	PPIAL4C
POLR3E	POSTN	POU6F1	PPIAL4D
POLR3F	POT1	POU6F2	PPIAL4E
POLR3G	POTEA	PP2D1	PPIAL4F
POLR3GL	POTEB	PPA1	PPIAL4G
POLR3H	POTEB2	PPA2	PPIAL4H
POLR3K	POTEB3	PPAN	PPIB
POLRMT	POTEC	PPAN-P2RY11	PPIC
POM121	POTED	PPARA	PPID
POM121C	POTEE	PPARD	PPIE

PPIF	PPP1R1C	PPP1R17	PPP3R2
PPIG	PPP1R2	PPP1R18	PPP4C
PPIH	PPP1R2B	PPP1R21	PPP4R1
PPIL1	PPP1R2C	PPP1R26	PPP4R2
PPIL2	PPP1R3A	PPP1R27	PPP4R3A
PPIL3	PPP1R3B	PPP1R32	PPP4R3B
PPIL4	PPP1R3C	PPP1R35	PPP4R3C
PPIL6	PPP1R3D	PPP1R36	PPP4R4
PPIP5K1	PPP1R3E	PPP1R37	PPP5C
PPIP5K2	PPP1R3F	PPP1R42	PPP5D1
PPL	PPP1R3G	PPP2CA	PPP6C
PPM1A	PPP1R7	PPP2CB	PPP6R1
PPM1B	PPP1R8	PPP2R1A	PPP6R2
PPM1D	PPP1R9A	PPP2R1B	PPP6R3
PPM1E	PPP1R9B	PPP2R2A	PPRC1
PPM1F	PPP1R10	PPP2R2B	PPT1
PPM1G	PPP1R11	PPP2R2C	PPT2
PPM1H	PPP1R12A	PPP2R2D	PPT2-EGFL8
PPM1J	PPP1R12B	PPP2R3A	PPTC7
PPM1K	PPP1R12C	PPP2R3B	PPWD1
PPM1L	PPP1R13B	PPP2R3C	PPY
PPM1M	PPP1R13L	PPP2R5A	PQBP1
PPM1N	PPP1R14A	PPP2R5B	PQLC1
PPME1	PPP1R14B	PPP2R5C	PQLC2
PPOX	PPP1R14C	PPP2R5D	PQLC2L
PPP1CA	PPP1R14D	PPP2R5E	PQLC3
PPP1CB	PPP1R15A	PPP3CA	PRAC1
PPP1CC	PPP1R15B	PPP3CB	PRAC2
PPP1R1A	PPP1R16A	PPP3CC	PRADC1
PPP1R1B	PPP1R16B	PPP3R1	PRAF2



PRAG1	PRC1	PRELP	PRKAR1A
PRAM1	PRCC	PREP	PRKAR1B
PRAME	PRCD	PREPL	PRKAR2A
PRAMEF1	PRCP	PREX1	PRKAR2B
PRAMEF2	PRDM1	PREX2	PRKCA
PRAMEF4	PRDM2	PRF1	PRKCB
PRAMEF5	PRDM4	PRG2	PRKCD
PRAMEF6	PRDM5	PRG3	PRKCE
PRAMEF7	PRDM6	PRG4	PRKCG
PRAMEF8	PRDM7	PRH1	PRKCH
PRAMEF9	PRDM8	PRH1-TAS2R14	PRKCI
PRAMEF10	PRDM9	PRH2	PRKCQ
PRAMEF11	PRDM10	PRICKLE1	PRKCSH
PRAMEF12	PRDM11	PRICKLE2	PRKCZ
PRAMEF13	PRDM12	PRICKLE3	PRKD1
PRAMEF14	PRDM13	PRICKLE4	PRKD2
PRAMEF15	PRDM14	PRIM1	PRKD3
PRAMEF17	PRDM15	PRIM2	PRKDC
PRAMEF18	PRDM16	PRIMA1	PRKG1
PRAMEF19	PRDX1	PRIMPOL	PRKG2
PRAMEF20	PRDX2	PRKAA1	PRKN
PRAMEF25	PRDX3	PRKAA2	PRKRA
PRAMEF26	PRDX4	PRKAB1	PRKRIP1
PRAMEF27	PRDX5	PRKAB2	PRKX
PRAMEF33	PRDX6	PRKACA	PRKY
PRAP1	PREB	PRKACB	PRL
PRB1	PRELID1	PRKACG	PRLH
PRB2	PRELID2	PRKAG1	PRLHR
PRB3	PRELID3A	PRKAG2	PRLR
PRB4	PRELID3B	PRKAG3	PRM1

PRM2	PROSER3	PRR9	PRR34
PRM3	PROX1	PRR11	PRR35
PRMT1	PROX2	PRR12	PRR36
PRMT2	PROZ	PRR13	PRRC1
PRMT3	PRPF3	PRR14	PRRC2A
PRMT5	PRPF4	PRR14L	PRRC2B
PRMT6	PRPF4B	PRR15	PRRC2C
PRMT7	PRPF6	PRR15L	PRRG1
PRMT8	PRPF8	PRR16	PRRG2
PRMT9	PRPF18	PRR18	PRRG3
PRND	PRPF19	PRR19	PRRG4
PRNP	PRPF31	PRR20A	PRRT1
PROB1	PRPF38A	PRR20B	PRRT1B
PROC	PRPF38B	PRR20C	PRRT2
PROCA1	PRPF39	PRR20D	PRRT3
PROCR	PRPF40A	PRR20E	PRRT4
PRODH	PRPF40B	PRR20G	PRRX1
PRODH2	PRPH	PRR22	PRRX2
PROK1	PRPH2	PRR23A	PRSS1
PROK2	PRPS1	PRR23B	PRSS2
PROKR1	PRPS1L1	PRR23C	PRSS3
PROKR2	PRPS2	PRR23D1	PRSS8
PROM1	PRPSAP1	PRR23D2	PRSS12
PROM2	PRPSAP2	PRR25	PRSS16
PROP1	PRR3	PRR26	PRSS21
PRORP	PRR4	PRR27	PRSS22
PRORY	PRR5	PRR29	PRSS23
PROS1	PRR5L	PRR30	PRSS27
PROSER1	PRR5-ARHGAP8	PRR32	PRSS33
PROSER2	PRR7	PRR33	PRSS35



PRSS36	PSAPL1	PSMA8	PSMD12
PRSS37	PSAT1	PSMB1	PSMD13
PRSS38	PSCA	PSMB2	PSMD14
PRSS41	PSD	PSMB3	PSME1
PRSS42	PSD2	PSMB4	PSME2
PRSS45	PSD3	PSMB5	PSME3
PRSS45P	PSD4	PSMB6	PSME3IP1
PRSS47	PSEN1	PSMB7	PSME4
PRSS48	PSEN2	PSMB8	PSMF1
PRSS50	PSENEN	PSMB9	PSMG1
PRSS51	PSG1	PSMB10	PSMG2
PRSS53	PSG2	PSMB11	PSMG3
PRSS54	PSG3	PSMC1	PSMG4
PRSS55	PSG4	PSMC2	PSORS1C1
PRSS56	PSG5	PSMC3	PSORS1C2
PRSS57	PSG6	PSMC3IP	PSPC1
PRSS58	PSG7	PSMC4	PSPH
PRTFDC1	PSG8	PSMC5	PSPN
PRTG	PSG9	PSMC6	PSRC1
PRTN3	PSG11	PSMD1	PSTK
PRUNE1	PSIP1	PSMD2	PSTPIP1
PRUNE2	PSKH1	PSMD3	PSTPIP2
PRX	PSKH2	PSMD4	PTAFR
PRXL2A	PSMA1	PSMD5	PTAR1
PRXL2B	PSMA2	PSMD6	PTBP1
PRXL2C	PSMA3	PSMD7	PTBP2
PRY	PSMA4	PSMD8	PTBP3
PRY2	PSMA5	PSMD9	PTCD1
PRYP3	PSMA6	PSMD10	PTCD2
PSAP	PSMA7	PSMD11	PTCD3

PTCH1	PTGS1	PTPN12	PTRH2
PTCH2	PTGS2	PTPN13	PTRHD1
PTCHD1	PTH	PTPN14	PTS
PTCHD3	PTH1R	PTPN18	PTTG1
PTCHD4	PTH2	PTPN20	PTTG1IP
PTCRA	PTH2R	PTPN21	PTTG2
PTDSS1	PTHLH	PTPN22	PTX3
PTDSS2	PTK2	PTPN23	PTX4
PTEN	PTK2B	PTPRA	PUDP
PTER	PTK6	PTPRB	PUF60
PTF1A	PTK7	PTPRC	PUM1
PTGDR	PTMA	PTPRCAP	PUM2
PTGDR2	PTMS	PTPRD	PUM3
PTGDS	PTN	PTPRE	PURA
PTGER1	PTOV1	PTPRF	PURB
PTGER2	PTP4A1	PTPRG	PURG
PTGER3	PTP4A2	PTPRH	PUS1
PTGER4	PTP4A3	PTPRJ	PUS3
PTGES	PTPA	PTPRK	PUS7
PTGES2	PTPDC1	PTPRM	PUS7L
PTGES3	PTPMT1	PTPRN	PUS10
PTGES3L	PTPN1	PTPRN2	PUSL1
PTGES3L- AARSD1	PTPN2	PTPRO	PVALB
PTGFR	PTPN3	PTPRQ	PVALEF
PTGFRN	PTPN4	PTPRR	PVR
PTGIR	PTPN5	PTPRS	PVRIG
PTGIS	PTPN6	PTPRT	PWP1
PTGR1	PTPN7	PTPRU	PWP2
PTGR2	PTPN9	PTPRZ1	PWWP2A
	PTPN11	PTRH1	PWWP2B



PWWP3A	QARS	RAB3D	RAB12
PWWP3B	QARS1	RAB3GAP1	RAB13
PXDC1	QDPR	RAB3GAP2	RAB14
PXDN	QKI	RAB3IL1	RAB15
PXDNL	QPCT	RAB3IP	RAB17
PXK	QPCTL	RAB4A	RAB18
PXMP2	QPRT	RAB4B	RAB19
PXMP4	QRFPR	RAB4B-EGLN2	RAB20
PXN	QRFPR	RAB5A	RAB21
PXT1	QRICH1	RAB5B	RAB22A
PXYLP1	QRICH2	RAB5C	RAB23
PYCARD	QRSL1	RAB5IF	RAB24
PYCR1	QSER1	RAB6A	RAB25
PYCR2	QSOX1	RAB6B	RAB26
PYCR3	QSOX2	RAB6C	RAB27A
PYDC1	QTRT1	RAB6D	RAB27B
PYDC2	QTRT2	RAB7A	RAB28
PYDC5	R3HCC1	RAB7B	RAB29
PYGB	R3HCC1L	RAB8A	RAB30
PYGL	R3HDM1	RAB8B	RAB31
PYGM	R3HDM2	RAB9A	RAB32
PYGO1	R3HDM4	RAB9B	RAB33A
PYGO2	R3HDML	RAB10	RAB33B
PYHIN1	RAB1A	RAB11A	RAB34
PYM1	RAB1B	RAB11B	RAB35
PYROXD1	RAB2A	RAB11FIP1	RAB36
PYROXD2	RAB2B	RAB11FIP2	RAB37
PYURF	RAB3A	RAB11FIP3	RAB38
PYY	RAB3B	RAB11FIP4	RAB39A
PZP	RAB3C	RAB11FIP5	RAB39B



RAB40A	RAD17	RALB	RAP1GDS1
RAB40AL	RAD18	RALBP1	RAP2A
RAB40B	RAD21	RALGAPA1	RAP2B
RAB40C	RAD21L1	RALGAPA2	RAP2C
RAB41	RAD23A	RALGAPB	RAPGEF1
RAB42	RAD23B	RALGDS	RAPGEF2
RAB43	RAD50	RALGPS1	RAPGEF3
RAB44	RAD51	RALGPS2	RAPGEF4
RABAC1	RAD51AP1	RALY	RAPGEF5
RABEP1	RAD51AP2	RALYL	RAPGEF6
RABEP2	RAD51B	RAMAC	RAPGEFL1
RABEPK	RAD51C	RAMACL	RAPH1
RABGAP1	RAD51D	RAMP1	RAPSN
RABGAP1L	RAD52	RAMP2	RARA
RABGEF1	RAD54B	RAMP3	RARB
RABGGTA	RAD54L	RAN	RARG
RABGGTB	RAD54L2	RANBP1	RARRES1
RABIF	RADIL	RANBP2	RARRES2
RABL2A	RADX	RANBP3	RARRES3
RABL2B	RAE1	RANBP3L	RARS
RABL3	RAET1E	RANBP6	RARS1
RABL6	RAET1G	RANBP9	RARS2
RAC1	RAET1L	RANBP10	RASA1
RAC2	RAF1	RANBP17	RASA2
RAC3	RAG1	RANGAP1	RASA3
RACGAP1	RAG2	RANGRF	RASA4
RACK1	RAI1	RAP1A	RASA4B
RAD1	RAI2	RAP1B	RASAL1
RAD9A	RAI14	RAP1GAP	RASAL2
RAD9B	RALA	RAP1GAP2	RASAL3



RASD1	RAX	RBM11	RBMS1
RASD2	RAX2	RBM12	RBMS2
RASEF	RB1	RBM12B	RBMS3
RASGEF1A	RB1CC1	RBM14	RBMX
RASGEF1B	RBAK	RBM14-RBM4	RBMX2
RASGEF1C	RBAK-RBAKDN	RBM15	RBMXL1
RASGRF1	RBBP4	RBM15B	RBMXL2
RASGRF2	RBBP5	RBM17	RBMXL3
RASGRP1	RBBP6	RBM18	RBMY1A1
RASGRP2	RBBP7	RBM19	RBMY1B
RASGRP3	RBBP8	RBM20	RBMY1D
RASGRP4	RBBP8NL	RBM22	RBMY1E
RASIP1	RBBP9	RBM23	RBMY1F
RASL10A	RBCK1	RBM24	RBMY1J
RASL10B	RBFA	RBM25	RBP1
RASL11A	RBFOX1	RBM26	RBP2
RASL11B	RBFOX2	RBM27	RBP3
RASL12	RBFOX3	RBM28	RBP4
RASSF1	RBIS	RBM33	RBP5
RASSF2	RBKS	RBM34	RBP7
RASSF3	RBL1	RBM38	RBPJ
RASSF4	RBL2	RBM39	RBPJL
RASSF5	RBM3	RBM41	RPMS
RASSF6	RBM4	RBM42	RPMS2
RASSF7	RBM4B	RBM43	RBSN
RASSF8	RBM5	RBM44	RBX1
RASSF9	RBM6	RBM45	RC3H1
RASSF10	RBM7	RBM46	RC3H2
RAVER1	RBM8A	RBM47	RCAN1
RAVER2	RBM10	RBM48	RCAN2



RCAN3	REC8	REP15	RFESD
RCBTB1	REC114	REPIN1	RFFL
RCBTB2	RECK	REPS1	RFK
RCC1	RECQL	REPS2	RFLNA
RCC1L	RECQL4	RER1	RFLNB
RCC2	RECQL5	RERE	RFNG
RCCD1	REELD1	RERG	RFPL1
RCE1	REEP1	RERGL	RFPL2
RCHY1	REEP2	RESF1	RFPL3
RCL1	REEP3	RESP18	RFPL4A
RCN1	REEP4	REST	RFPL4AL1
RCN2	REEP5	RET	RFPL4B
RCN3	REEP6	RETN	RFT1
RCOR1	REG1A	RETNLB	RFTN1
RCOR2	REG1B	RETREG1	RFTN2
RCOR3	REG3A	RETREG2	RFWD3
RCSD1	REG3G	RETREG3	RFX1
RCVRN	REG4	RETSAT	RFX2
RD3	REL	REV1	RFX3
RD3L	RELA	REV3L	RFX4
RDH5	RELB	REX1BD	RFX5
RDH8	RELCH	REX01	RFX6
RDH10	RELL1	REX02	RFX7
RDH11	RELL2	REX04	RFX8
RDH12	RELN	REX05	RFXANK
RDH13	RELT	RFC1	RFXAP
RDH14	REM1	RFC2	RGCC
RDH16	REM2	RFC3	RGL1
RDM1	REN	RFC4	RGL2
RDX	RENB	RFC5	RGL3



RGL4	RGS17	RHOC	RIMBP3
RGMA	RGS18	RHOD	RIMBP3B
RGMB	RGS19	RHOF	RIMBP3C
RGN	RGS20	RHOG	RIMKLA
RGP1	RGS21	RHOH	RIMKLB
RGPD1	RGS22	RHOJ	RIMS1
RGPD2	RGSL1	RHOQ	RIMS2
RGPD3	RHAG	RHOT1	RIMS3
RGPD4	RHBDD1	RHOT2	RIMS4
RGPD5	RHBDD2	RHOU	RIN1
RGPD6	RHBDD3	RHOV	RIN2
RGPD8	RHBDF1	RHOXF1	RIN3
RGR	RHBDF2	RHOXF2	RING1
RGS1	RHBDL1	RHOXF2B	RINL
RGS2	RHBDL2	RHPN1	RINT1
RGS3	RHBDL3	RHPN2	RIOK1
RGS4	RHBG	RIBC1	RIOK2
RGS5	RHCE	RIBC2	RIOK3
RGS6	RHCG	RIC1	RIOX1
RGS7	RHD	RIC3	RIOX2
RGS7BP	RHEB	RIC8A	RIPK1
RGS8	RHEBL1	RIC8B	RIPK2
RGS9	RHEX	RICTOR	RIPK3
RGS9BP	RHNO1	RIDA	RIPK4
RGS10	RHO	RIF1	RIPOR1
RGS11	RHOA	RIIAD1	RIPOR2
RGS12	RHOB	RILP	RIPOR3
RGS13	RHOBTB1	RILPL1	RIPPLY1
RGS14	RHOBTB2	RILPL2	RIPPLY2
RGS16	RHOBTB3	RIMBP2	RIPPLY3

RIT1	RNASEH1	RNF32	RNF145
RIT2	RNASEH2A	RNF34	RNF146
RITA1	RNASEH2B	RNF38	RNF148
RLBP1	RNASEH2C	RNF39	RNF149
RLF	RNASEK	RNF40	RNF150
RLIM	RNASEK- C17orf49	RNF41	RNF151
RLN1		RNF43	RNF152
RLN2	RNASEL	RNF44	RNF157
RLN3	RNASET2	RNF103	RNF165
RMC1	RND1	RNF103-CHMP3	RNF166
RMDN1	RND2	RNF111	RNF167
RMDN2	RND3	RNF112	RNF168
RMDN3	RNF2	RNF113A	RNF169
RMI1	RNF4	RNF113B	RNF170
RMI2	RNF5	RNF114	RNF175
RMND1	RNF6	RNF115	RNF180
RMND5A	RNF7	RNF121	RNF181
RMND5B	RNF8	RNF122	RNF182
RNASE1	RNF10	RNF123	RNF183
RNASE2	RNF11	RNF125	RNF185
RNASE3	RNF13	RNF126	RNF186
RNASE4	RNF14	RNF128	RNF187
RNASE6	RNF17	RNF130	RNF207
RNASE7	RNF19A	RNF133	RNF208
RNASE8	RNF19B	RNF135	RNF212
RNASE9	RNF20	RNF138	RNF212B
RNASE10	RNF24	RNF139	RNF213
RNASE11	RNF25	RNF141	RNF214
RNASE12	RNF26	RNF144A	RNF215
RNASE13	RNF31	RNF144B	RNF216



RNF217	ROPN1L	RPL3	RPL26
RNF219	ROR1	RPL3L	RPL26L1
RNF220	ROR2	RPL4	RPL27
RNF222	RORA	RPL5	RPL27A
RNF223	RORB	RPL6	RPL28
RNF224	RORC	RPL7	RPL29
RNF225	ROS1	RPL7A	RPL30
RNF227	RP1	RPL7L1	RPL31
RNFT1	RP1L1	RPL8	RPL32
RNFT2	RP2	RPL9	RPL34
RNGTT	RP9	RPL10	RPL35
RNH1	RPA1	RPL10A	RPL35A
RNLS	RPA2	RPL10L	RPL36
RNMT	RPA3	RPL11	RPL36A
RNPC3	RPA4	RPL12	RPL36AL
RNPEP	RPAIN	RPL13	RPL36A- HNRNPH2
RNPEPL1	RPAP1	RPL13A	RPL37
RNPS1	RPAP2	RPL14	RPL37A
RO60	RPAP3	RPL15	RPL38
ROBO1	RPE	RPL17	RPL39
ROBO2	RPE65	RPL17-C18orf32	RPL39L
ROBO3	RPEL1	RPL18	RPL41
ROBO4	RPF1	RPL18A	RPLP0
ROCK1	RPF2	RPL19	RPLP1
ROCK2	RPGR	RPL21	RPLP2
ROGDI	RPGRIP1	RPL22	RPN1
ROM1	RPGRIP1L	RPL22L1	RPN2
ROMO1	RPH3A	RPL23	RPP14
ROPN1	RPH3AL	RPL23A	RPP21
ROPN1B	RPIA	RPL24	



RPP25	RPS9	RPUSD2	RSBN1
RPP25L	RPS10	RPUSD3	RSBN1L
RPP30	RPS10-NUDT3	RPUSD4	RSC1A1
RPP38	RPS11	RRAD	RSF1
RPP40	RPS12	RRAGA	RSKR
RPRD1A	RPS13	RRAGB	RSL1D1
RPRD1B	RPS14	RRAGC	RSL24D1
RPRD2	RPS15	RRAGD	RSPH1
RPRM	RPS15A	RRAS	RSPH3
RPRML	RPS16	RRAS2	RSPH4A
RPS2	RPS17	RRBP1	RSPH6A
RPS3	RPS18	RREB1	RSPH9
RPS3A	RPS19	RRH	RSPH10B
RPS4X	RPS19BP1	RRM1	RSPH10B2
RPS4Y1	RPS20	RRM2	RSPH14
RPS4Y2	RPS21	RRM2B	RSP01
RPS5	RPS23	RRN3	RSP02
RPS6	RPS24	RRNAD1	RSP03
RPS6KA1	RPS25	RRP1	RSP04
RPS6KA2	RPS26	RRP1B	RSPRY1
RPS6KA3	RPS27	RRP7A	RSRC1
RPS6KA4	RPS27A	RRP8	RSRC2
RPS6KA5	RPS27L	RRP9	RSRP1
RPS6KA6	RPS28	RRP12	RSU1
RPS6KB1	RPS29	RRP15	RTBDN
RPS6KB2	RPSA	RRP36	RTCA
RPS6KC1	RPSAP58	RRS1	RTCB
RPS6KL1	RPTN	RS1	RTEL1
RPS7	RPTOR	RSAD1	RTEL1- TNFRSF6B
RPS8	RPUSD1	RSAD2	



RTF1	RUBCNL	RYK	S100Z
RTF2	RUFY1	RYR1	SAA1
RTKN	RUFY2	RYR2	SAA2
RTKN2	RUFY3	RYR3	SAA2-SAA4
RTL1	RUFY4	S1PR1	SAA4
RTL3	RUNDC1	S1PR2	SAAL1
RTL4	RUNDC3A	S1PR3	SAC3D1
RTL5	RUNDC3B	S1PR4	SACM1L
RTL6	RUNX1	S1PR5	SACS
RTL8A	RUNX1T1	S100A1	SAE1
RTL8B	RUNX2	S100A2	SAFB
RTL8C	RUNX3	S100A3	SAFB2
RTL9	RUSC1	S100A4	SAG
RTL10	RUSC2	S100A5	SAGE1
RTN1	RUVBL1	S100A6	SALL1
RTN2	RUVBL2	S100A7	SALL2
RTN3	RWDD1	S100A7A	SALL3
RTN4	RWDD2A	S100A7L2	SALL4
RTN4IP1	RWDD2B	S100A8	SAMD1
RTN4R	RWDD3	S100A9	SAMD3
RTN4RL1	RWDD4	S100A10	SAMD4A
RTN4RL2	RXFP1	S100A11	SAMD4B
RTP1	RXFP2	S100A12	SAMD5
RTP2	RXFP3	S100A13	SAMD7
RTP3	RXFP4	S100A14	SAMD8
RTP4	RXRA	S100A16	SAMD9
RTP5	RXRB	S100B	SAMD9L
RTRAF	RXRG	S100G	SAMD10
RTTN	RXYLT1	S100P	SAMD11
RUBCN	RYBP	S100PBP	SAMD12

SAMD13	SATB1	SCAPER	SCIMP
SAMD14	SATB2	SCARA3	SCIN
SAMD15	SATL1	SCARA5	SCLT1
SAMHD1	SAV1	SCARB1	SCLY
SAMM50	SAXO1	SCARB2	SCMH1
SAMSN1	SAXO2	SCARF1	SCML1
SAP18	SAYSD1	SCARF2	SCML2
SAP25	SBDS	SCART1	SCML4
SAP30	SBF1	SCCPDH	SCN1A
SAP30BP	SBF2	SCD	SCN1B
SAP30L	SBK1	SCD5	SCN2A
SAP130	SBK2	SCEL	SCN2B
SAPCD1	SBK3	SCFD1	SCN3A
SAPCD2	SBNO1	SCFD2	SCN3B
SAR1A	SBNO2	SCG2	SCN4A
SAR1B	SBSN	SCG3	SCN4B
SARAF	SBSPON	SCG5	SCN5A
SARDH	SC5D	SCGB1A1	SCN7A
SARM1	SCAF1	SCGB1C1	SCN8A
SARNP	SCAF4	SCGB1C2	SCN9A
SARS	SCAF8	SCGB1D1	SCN10A
SARS1	SCAF11	SCGB1D2	SCN11A
SARS2	SCAI	SCGB1D4	SCNM1
SART1	SCAMP1	SCGB2A1	SCNN1A
SART3	SCAMP2	SCGB2A2	SCNN1B
SASH1	SCAMP3	SCGB2B2	SCNN1D
SASH3	SCAMP4	SCGB3A1	SCNN1G
SASS6	SCAMP5	SCGB3A2	SCO1
SAT1	SCAND1	SCGN	SCO2
SAT2	SCAP	SCHIP1	SCOC

SCP2	SDC3	SEC14L1	SEL1L
SCP2D1	SDC4	SEC14L2	SEL1L2
SCPEP1	SDCBP	SEC14L3	SEL1L3
SCRG1	SDCBP2	SEC14L4	SELE
SCRIB	SDCCAG8	SEC14L5	SELENBP1
SCRN1	SDE2	SEC14L6	SELENOF
SCRN2	SDF2	SEC16A	SELENOH
SCRN3	SDF2L1	SEC16B	SELENOI
SCRT1	SDF4	SEC22A	SELENOK
SCRT2	SDHA	SEC22B	SELENOM
SCT	SDHAF1	SEC22C	SELENON
SCTR	SDHAF2	SEC23A	SELENOO
SCUBE1	SDHAF3	SEC23B	SELENOP
SCUBE2	SDHAF4	SEC23IP	SELENOS
SCUBE3	SDHB	SEC24A	SELENOT
SCX	SDHC	SEC24B	SELENOV
SCYGR1	SDHD	SEC24C	SELENOW
SCYGR2	SDK1	SEC24D	SELL
SCYGR3	SDK2	SEC31A	SELP
SCYGR4	SDR9C7	SEC31B	SELPLG
SCYGR5	SDR16C5	SEC61A1	SEM1
SCYGR6	SDR39U1	SEC61A2	SEMA3A
SCYGR7	SDR42E1	SEC61B	SEMA3B
SCYGR8	SDR42E2	SEC61G	SEMA3C
SCYL1	SDS	SEC62	SEMA3D
SCYL2	SDSL	SEC63	SEMA3E
SCYL3	SEBOX	SECISBP2	SEMA3F
SDAD1	SEC11A	SECISBP2L	SEMA3G
SDC1	SEC11C	SECTM1	SEMA4A
SDC2	SEC13	SEH1L	SEMA4B

SEMA4C	SEPT7	SERINC4	SERPINE2
SEMA4D	SEPT8	SERINC5	SERPINE3
SEMA4F	SEPT9	SERP1	SERPINF1
SEMA4G	SEPT10	SERP2	SERPINF2
SEMA5A	SEPT11	SERPINA1	SERPING1
SEMA5B	SEPT12	SERPINA3	SERPINH1
SEMA6A	SEPT14	SERPINA4	SERPINI1
SEMA6B	SEPTIN1	SERPINA5	SERPINI2
SEMA6C	SEPTIN2	SERPINA6	SERTAD1
SEMA6D	SEPTIN3	SERPINA7	SERTAD2
SEMA7A	SEPTIN4	SERPINA9	SERTAD3
SEMG1	SEPTIN5	SERPINA10	SERTAD4
SEMG2	SEPTIN6	SERPINA11	SERTM1
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SENP2	SEPTIN8	SERPINB1	SESN1
SENP3	SEPTIN9	SERPINB2	SESN2
SENP3-EIF4A1	SEPTIN10	SERPINB3	SESN3
SENP5	SEPTIN11	SERPINB4	SESTD1
SENP6	SEPTIN12	SERPINB5	SET
SENP7	SEPTIN14	SERPINB6	SETBP1
SENP8	SERAC1	SERPINB7	SETD1A
SEPHS1	SERBP1	SERPINB8	SETD1B
SEPHS2	SERF1A	SERPINB9	SETD2
SEPSECS	SERF1B	SERPINB10	SETD3
SEPT1	SERF2	SERPINB11	SETD4
SEPT2	SERGEF	SERPINB12	SETD5
SEPT3	SERHL2	SERPINB13	SETD6
SEPT4	SERINC1	SERPINC1	SETD7
SEPT5	SERINC2	SERPIND1	SETD9
SEPT6	SERINC3	SERPINE1	SETDB1

SETDB2	SFT2D2	SGPP1	SH3D19
SETDB2-PHF11	SFT2D3	SGPP2	SH3D21
SETMAR	SFTA2	SGSH	SH3GL1
SETSIP	SFTA3	SGSM1	SH3GL2
SETX	SFTPA1	SGSM2	SH3GL3
SEZ6	SFTPA2	SGSM3	SH3GLB1
SEZ6L	SFTPb	SGTA	SH3GLB2
SEZ6L2	SFTPC	SGTB	SH3KBP1
SF1	SFTPD	SH2B1	SH3PXD2A
SF3A1	SFXN1	SH2B2	SH3PXD2B
SF3A2	SFXN2	SH2B3	SH3RF1
SF3A3	SFXN3	SH2D1A	SH3RF2
SF3B1	SFXN4	SH2D1B	SH3RF3
SF3B2	SFXN5	SH2D2A	SH3TC1
SF3B3	SGCA	SH2D3A	SH3TC2
SF3B4	SGCB	SH2D3C	SH3YL1
SF3B5	SGCD	SH2D4A	SHANK1
SF3B6	SGCE	SH2D4B	SHANK2
SFI1	SGCG	SH2D5	SHANK3
SFMBT1	SGCZ	SH2D6	SHARPIN
SFMBT2	SGF29	SH2D7	SHB
SFN	SGIP1	SH3BGR	SHBG
SFPQ	SGK1	SH3BGRL	SHC1
SFR1	SGK2	SH3BGRL2	SHC2
SFRP1	SGK3	SH3BGRL3	SHC3
SFRP2	SGMS1	SH3BP1	SHC4
SFRP4	SGMS2	SH3BP2	SHCBP1
SFRP5	SGO1	SH3BP4	SHCBP1L
SFSWAP	SGO2	SH3BP5	SHD
SFT2D1	SGPL1	SH3BP5L	SHE

SHF	SHROOM4	SIM1	SKA1
SHFL	SHTN1	SIM2	SKA2
SHH	SI	SIMC1	SKA3
SHISA2	SIAE	SIN3A	SKAP1
SHISA3	SIAH1	SIN3B	SKAP2
SHISA4	SIAH2	SINHCAF	SKI
SHISA5	SIAH3	SIPA1	SKIDA1
SHISA6	SIDT1	SIPA1L1	SKIL
SHISA7	SIDT2	SIPA1L2	SKIV2L
SHISA8	SIGIRR	SIPA1L3	SKOR1
SHISA9	SIGLEC1	SIRPA	SKOR2
SHISAL1	SIGLEC5	SIRPB1	SKP1
SHISAL2A	SIGLEC6	SIRPB2	SKP2
SHISAL2B	SIGLEC7	SIRPD	SLA
SHKBP1	SIGLEC8	SIRPG	SLA2
SHLD1	SIGLEC9	SIRT1	SLAIN1
SHLD2	SIGLEC10	SIRT2	SLAIN2
SHLD3	SIGLEC11	SIRT3	SLAMF1
SHMT1	SIGLEC12	SIRT4	SLAMF6
SHMT2	SIGLEC14	SIRT5	SLAMF7
SHOC1	SIGLEC15	SIRT6	SLAMF8
SHOC2	SIGLEC16	SIRT7	SLAMF9
SHOX	SIGLECL1	SIT1	SLBP
SHOX2	SIGMAR1	SIVA1	SLC1A1
SHPK	SIK1	SIX1	SLC1A2
SHPRH	SIK1B	SIX2	SLC1A3
SHQ1	SIK2	SIX3	SLC1A4
SHROOM1	SIK3	SIX4	SLC1A5
SHROOM2	SIKE1	SIX5	SLC1A6
SHROOM3	SIL1	SIX6	SLC1A7



SLC2A1	SLC5A3	SLC7A2	SLC9C1
SLC2A2	SLC5A4	SLC7A3	SLC9C2
SLC2A3	SLC5A5	SLC7A4	SLC10A1
SLC2A4	SLC5A6	SLC7A5	SLC10A2
SLC2A4RG	SLC5A7	SLC7A6	SLC10A3
SLC2A5	SLC5A8	SLC7A6OS	SLC10A4
SLC2A6	SLC5A9	SLC7A7	SLC10A5
SLC2A7	SLC5A10	SLC7A8	SLC10A6
SLC2A8	SLC5A11	SLC7A9	SLC10A7
SLC2A9	SLC5A12	SLC7A10	SLC11A1
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SLC4A1AP	SLC6A9	SLC9A2	SLC12A8
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SLC4A5	SLC6A14	SLC9A4	SLC13A3
SLC4A7	SLC6A15	SLC9A5	SLC13A4
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SLC4A10	SLC6A18	SLC9A8	SLC14A2
SLC4A11	SLC6A19	SLC9A9	SLC15A1
SLC5A1	SLC6A20	SLC9B1	SLC15A2
SLC5A2	SLC7A1	SLC9B2	SLC15A3



SLC15A4	SLC19A2	SLC24A1	SLC25A29
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SLC16A1	SLC20A1	SLC24A3	SLC25A31
SLC16A2	SLC20A2	SLC24A4	SLC25A32
SLC16A3	SLC22A1	SLC24A5	SLC25A33
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SLC16A7	SLC22A5	SLC25A4	SLC25A37
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SLC17A6	SLC22A18	SLC25A20	SLC25A52
SLC17A7	SLC22A18AS	SLC25A21	SLC25A53
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SLC18A1	SLC22A25	SLC25A24	SLC26A3
SLC18A2	SLC22A31	SLC25A25	SLC26A4
SLC18A3	SLC23A1	SLC25A26	SLC26A5
SLC18B1	SLC23A2	SLC25A27	SLC26A6
SLC19A1	SLC23A3	SLC25A28	SLC26A7



SLC26A8	SLC33A1	SLC35G2	SLC39A7
SLC26A9	SLC34A1	SLC35G3	SLC39A8
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SLC27A2	SLC35A2	SLC36A1	SLC39A12
SLC27A3	SLC35A3	SLC36A2	SLC39A13
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SLC29A1	SLC35C1	SLC38A1	SLC43A2
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SLC30A8	SLC35F2	SLC39A1	SLC46A1
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SLC31A1	SLC35F5	SLC39A4	SLC47A1
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SLC32A1	SLC35G1	SLC39A6	SLC48A1



SLC49A3	SLFN12	SMAD4	SMCO2
SLC49A4	SLFN12L	SMAD5	SMCO3
SLC50A1	SLFN13	SMAD6	SMCO4
SLC51A	SLFN14	SMAD7	SMCP
SLC51B	SLFNL1	SMAD9	SMCR8
SLC52A1	SLIRP	SMAGP	SMDT1
SLC52A2	SLIT1	SMAP1	SMG1
SLC52A3	SLIT2	SMAP2	SMG5
SLC66A1	SLIT3	SMARCA1	SMG6
SLC66A1L	SLITRK1	SMARCA2	SMG7
SLC66A2	SLITRK2	SMARCA4	SMG8
SLC66A3	SLITRK3	SMARCA5	SMG9
SLCO1A2	SLITRK4	SMARCA1	SMIM1
SLCO1B1	SLITRK5	SMARCA1	SMIM2
SLCO1B3	SLITRK6	SMARCB1	SMIM3
SLCO1B3- SLCO1B7	SLK	SMARCC1	SMIM4
SLCO1B7	SLMAP	SMARCC2	SMIM5
SLCO1C1	SLN	SMARCD1	SMIM6
SLCO2A1	SLPI	SMARCD2	SMIM7
SLCO2B1	SLTM	SMARCD3	SMIM8
SLCO3A1	SLU7	SMARCE1	SMIM9
SLCO4A1	SLURP1	SMC1A	SMIM10
SLCO4C1	SLURP2	SMC1B	SMIM10L1
SLCO5A1	SLX1A	SMC2	SMIM10L2A
SLCO6A1	SLX1B	SMC3	SMIM10L2B
SLF1	SLX4	SMC4	SMIM11A
SLF2	SLX4IP	SMC5	SMIM11B
SLFN5	SMAD1	SMC6	SMIM12
SLFN11	SMAD2	SMCHD1	SMIM13
	SMAD3	SMCO1	SMIM14

SMIM15	SMNDC1	SNAP23	SNRPA
SMIM17	SMO	SNAP25	SNRPA1
SMIM18	SMOC1	SNAP29	SNRPB
SMIM19	SMOC2	SNAP47	SNRPB2
SMIM20	SMOX	SNAP91	SNRPC
SMIM21	SMPD1	SNAPC1	SNRPD1
SMIM22	SMPD2	SNAPC2	SNRPD2
SMIM23	SMPD3	SNAPC3	SNRPD3
SMIM24	SMPD4	SNAPC4	SNRPE
SMIM25	SMPDL3A	SNAPC5	SNRPF
SMIM26	SMPDL3B	SNAPIN	SNRPG
SMIM27	SMPX	SNCA	SNRPN
SMIM28	SMR3A	SNCAIP	SNTA1
SMIM29	SMR3B	SNCB	SNTB1
SMIM30	SMS	SNCG	SNTB2
SMIM31	SMTN	SND1	SNTG1
SMIM32	SMTNL1	SNED1	SNTG2
SMIM33	SMTNL2	SNF8	SNTN
SMIM34A	SMU1	SNIP1	SNU13
SMIM34B	SMUG1	SNN	SNUPN
SMIM35	SMURF1	SNORC	SNURF
SMIM36	SMURF2	SNPH	SNW1
SMIM38	SMYD1	SNRK	SNX1
SMIM39	SMYD2	SNRNP25	SNX2
SMIM40	SMYD3	SNRNP27	SNX3
SMIM41	SMYD4	SNRNP35	SNX4
SMKR1	SMYD5	SNRNP40	SNX5
SMLR1	SNAI1	SNRNP48	SNX6
SMN1	SNAI2	SNRNP70	SNX7
SMN2	SNAI3	SNRNP200	SNX8



SNX9	SOCS6	SOX4	SPAAR
SNX10	SOCS7	SOX5	SPACA1
SNX11	SOD1	SOX6	SPACA3
SNX12	SOD2	SOX7	SPACA4
SNX13	SOD3	SOX8	SPACA5
SNX14	SOGA1	SOX9	SPACA5B
SNX15	SOGA3	SOX10	SPACA6
SNX16	SOHLH1	SOX11	SPACA7
SNX17	SOHLH2	SOX12	SPACA9
SNX18	SON	SOX13	SPAG1
SNX19	SORBS1	SOX14	SPAG4
SNX20	SORBS2	SOX15	SPAG5
SNX21	SORBS3	SOX17	SPAG6
SNX22	SORCS1	SOX18	SPAG7
SNX24	SORCS2	SOX21	SPAG8
SNX25	SORCS3	SOX30	SPAG9
SNX27	SORD	SP1	SPAG11A
SNX29	SORL1	SP2	SPAG11B
SNX30	SORT1	SP3	SPAG16
SNX31	SOS1	SP4	SPAG17
SNX32	SOS2	SP5	SPAM1
SNX33	SOST	SP6	SPANXA1
SOAT1	SOSTDC1	SP7	SPANXA2
SOAT2	SOWAHA	SP8	SPANXB1
SOBP	SOWAHB	SP9	SPANXC
SOCS1	SOWAHC	SP100	SPANXD
SOCS2	SOWAHD	SP110	SPANXN1
SOCS3	SOX1	SP140	SPANXN2
SOCS4	SOX2	SP140L	SPANXN3
SOCS5	SOX3	SPA17	SPANXN4



SPANXN5	SPATA31A5	SPDYE2B	SPHK1
SPARC	SPATA31A6	SPDYE3	SPHK2
SPARCL1	SPATA31A7	SPDYE4	SPHKAP
SPART	SPATA31C1	SPDYE5	SPI1
SPAST	SPATA31C2	SPDYE6	SPIB
SPATA1	SPATA31D1	SPDYE8P	SPIC
SPATA2	SPATA31D3	SPDYE9P	SPICE1
SPATA2L	SPATA31D4	SPDYE11	SPIDR
SPATA3	SPATA31E1	SPDYE16	SPIN1
SPATA4	SPATA32	SPDYE17	SPIN2A
SPATA5	SPATA33	SPDYE18	SPIN2B
SPATA5L1	SPATA45	SPDYE21P	SPIN3
SPATA6	SPATA46	SPECC1	SPIN4
SPATA6L	SPATA48	SPECC1L	SPINDOC
SPATA7	SPATC1	SPECC1L- ADORA2A	SPINK1
SPATA8	SPATC1L	SPEF1	SPINK2
SPATA9	SPATS1	SPEF2	SPINK4
SPATA12	SPATS2	SPEG	SPINK5
SPATA13	SPATS2L	SPEGNB	SPINK6
SPATA16	SPC24	SPEM1	SPINK7
SPATA17	SPC25	SPEM2	SPINK8
SPATA18	SPCS1	SPEM3	SPINK9
SPATA19	SPCS2	SPEN	SPINK13
SPATA20	SPCS3	SPERT	SPINK14
SPATA21	SPDEF	SPESP1	SPINT1
SPATA22	SPDL1	SPG7	SPINT2
SPATA24	SPDYA	SPG11	SPINT3
SPATA25	SPDYC	SPG21	SPINT4
SPATA31A1	SPDYE1	SPHAR	SPIRE1
SPATA31A3	SPDYE2		SPIRE2



SPN	SPRR2E	SPTY2D1	SRM
SPNS1	SPRR2F	SPTY2D1OS	SRMS
SPNS2	SPRR2G	SPX	SRP9
SPNS3	SPRR3	SPZ1	SRP14
SPO11	SPRR4	SQLE	SRP19
SPOCD1	SPRR5	SQOR	SRP54
SPOCK1	SPRTN	SQSTM1	SRP68
SPOCK2	SPRY1	SRA1	SRP72
SPOCK3	SPRY2	SRARP	SRPK1
SPON1	SPRY3	SRBD1	SRPK2
SPON2	SPRY4	SRC	SRPK3
SPOP	SPRYD3	SRCAP	SRPRA
SPOPL	SPRYD4	SRCIN1	SRPRB
SPOUT1	SPRYD7	SRD5A1	SRPX
SPP1	SPSB1	SRD5A2	SRPX2
SPP2	SPSB2	SRD5A3	SRR
SPPL2A	SPSB3	SREBF1	SRRD
SPPL2B	SPSB4	SREBF2	SRRM1
SPPL2C	SPTA1	SREK1	SRRM2
SPPL3	SPTAN1	SREK1IP1	SRRM3
SPR	SPTB	SRF	SRRM4
SPRED1	SPTBN1	SRFBP1	SRRM5
SPRED2	SPTBN2	SRGAP1	SRRT
SPRED3	SPTBN4	SRGAP2	SRSF1
SPRN	SPTBN5	SRGAP2B	SRSF2
SPRR1A	SPTLC1	SRGAP2C	SRSF3
SPRR1B	SPTLC2	SRGAP3	SRSF4
SPRR2A	SPTLC3	SRGN	SRSF5
SPRR2B	SPTSSA	SRI	SRSF6
SPRR2D	SPTSSB	SRL	SRSF7



SRSF8	SST	ST6GAL1	STAM2
SRSF9	SSTR1	ST6GAL2	STAMBP
SRSF10	SSTR2	ST6GALNAC1	STAMBPL1
SRSF11	SSTR3	ST6GALNAC2	STAP1
SRSF12	SSTR4	ST6GALNAC3	STAP2
SRXN1	SSTR5	ST6GALNAC4	STAR
SRY	SSU72	ST6GALNAC5	STARD3
SS18	SSU72P2	ST6GALNAC6	STARD3NL
SS18L1	SSU72P3	ST7	STARD4
SS18L2	SSU72P4	ST7L	STARD5
SSB	SSU72P5	ST8SIA1	STARD6
SSBP1	SSU72P7	ST8SIA2	STARD7
SSBP2	SSU72P8	ST8SIA3	STARD8
SSBP3	SSUH2	ST8SIA4	STARD9
SSBP4	SSX1	ST8SIA5	STARD10
SSC4D	SSX2	ST8SIA6	STARD13
SSC5D	SSX2B	ST13	STAT1
SSFA2	SSX2IP	ST14	STAT2
SSH1	SSX3	ST18	STAT3
SSH2	SSX4	ST20	STAT4
SSH3	SSX4B	ST20-MTHFS	STAT5A
SSMEM1	SSX5	STAB1	STAT5B
SSNA1	SSX7	STAB2	STAT6
SSPN	ST3GAL1	STAC	STATH
SSR1	ST3GAL2	STAC2	STAU1
SSR2	ST3GAL3	STAC3	STAU2
SSR3	ST3GAL4	STAG1	STBD1
SSR4	ST3GAL5	STAG2	STC1
SSRP1	ST3GAL6	STAG3	STC2
SSSCA1	ST5	STAM	STEAP1

STEAP1B	STK35	STRADB	STX18
STEAP2	STK36	STRAP	STX19
STEAP3	STK38	STRBP	STXBP1
STEAP4	STK38L	STRC	STXBP2
STH	STK39	STRIP1	STXBP3
STIL	STK40	STRIP2	STXBP4
STIM1	STKLD1	STRIT1	STXBP5
STIM2	STMN1	STRN	STXBP5L
STIMATE	STMN2	STRN3	STXBP6
STIMATE- MUSTN1	STMN3	STRN4	STYK1
STING1	STMN4	STS	STYX
STIP1	STMND1	STT3A	STYXL1
STK3	STMP1	STT3B	SUB1
STK4	STN1	STUB1	SUCLA2
STK10	STOM	STUM	SUCLG1
STK11	STOML1	STX1A	SUCLG2
STK11IP	STOML2	STX1B	SUCNR1
STK16	STOML3	STX2	SUCO
STK17A	STON1	STX3	SUDS3
STK17B	STON1-GTF2A1L	STX4	SUFU
STK19	STON2	STX5	SUGCT
STK24	STOX1	STX6	SUGP1
STK25	STOX2	STX7	SUGP2
STK26	STPG1	STX8	SUGT1
STK31	STPG2	STX10	SULF1
STK32A	STPG3	STX11	SULF2
STK32B	STPG4	STX12	SULT1A1
STK32C	STRA6	STX16	SULT1A2
STK33	STRA8	STX16-NPEPL1	SULT1A3
	STRADA	STX17	SULT1A4



SULT1B1	SURF1	SYCE2	SYNJ2BP
SULT1C2	SURF2	SYCE3	SYNJ2BP-COX16
SULT1C3	SURF4	SYCN	SYNM
SULT1C4	SURF6	SYCP1	SYNPO
SULT1E1	SUSD1	SYCP2	SYNPO2
SULT2A1	SUSD2	SYCP2L	SYNPO2L
SULT2B1	SUSD3	SYCP3	SYNPR
SULT4A1	SUSD4	SYDE1	SYNRG
SULT6B1	SUSD5	SYDE2	SYP
SUMF1	SUSD6	SYF2	SYPL1
SUMF2	SUV39H1	SYK	SYPL2
SUMO1	SUV39H2	SYMPK	SYS1
SUMO2	SUZ12	SYN1	SYS1-DBNDD2
SUMO3	SV2A	SYN2	SYT1
SUMO4	SV2B	SYN3	SYT2
SUN1	SV2C	SYNC	SYT3
SUN2	SVBP	SYNCRIP	SYT4
SUN3	SVEP1	SYNDIG1	SYT5
SUN5	SVIL	SYNDIG1L	SYT6
SUOX	SVIP	SYNE1	SYT7
SUPT3H	SVOP	SYNE2	SYT8
SUPT4H1	SVOPL	SYNE3	SYT9
SUPT5H	SWAP70	SYNE4	SYT10
SUPT6H	SWI5	SYNGAP1	SYT11
SUPT7L	SWSAP1	SYNGR1	SYT12
SUPT16H	SWT1	SYNGR2	SYT13
SUPT20H	SYAP1	SYNGR3	SYT14
SUPT20HL1	SYBU	SYNGR4	SYT15
SUPT20HL2	SYCE1	SYNJ1	SYT16
SUPV3L1	SYCE1L	SYNJ2	SYT17

SYTL1	TADA2B	TAF11L9	TAP1
SYTL2	TADA3	TAF11L10	TAP2
SYTL3	TAF1	TAF11L11	TAPBP
SYTL4	TAF1A	TAF11L12	TAPBPL
SYTL5	TAF1B	TAF11L13	TAPT1
SYVN1	TAF1C	TAF11L14	TARBP1
SZRD1	TAF1D	TAF12	TARBP2
SZT2	TAF1L	TAF13	TARDBP
TAAR1	TAF2	TAF15	TARM1
TAAR2	TAF3	TAFA1	TARP
TAAR5	TAF4	TAFA2	TARS
TAAR6	TAF4B	TAFA3	TARS1
TAAR8	TAF5	TAFA4	TARS2
TAAR9	TAF5L	TAFA5	TARS3
TAB1	TAF6	TAGAP	TARSL2
TAB2	TAF6L	TAGLN	TAS1R1
TAB3	TAF7	TAGLN2	TAS1R2
TAC1	TAF7L	TAGLN3	TAS1R3
TAC3	TAF8	TAL1	TAS2R1
TAC4	TAF9	TAL2	TAS2R3
TACC1	TAF9B	TALDO1	TAS2R4
TACC2	TAF10	TAMM41	TAS2R5
TACC3	TAF11	TANC1	TAS2R7
TACO1	TAF11L2	TANC2	TAS2R8
TACR1	TAF11L3	TANGO2	TAS2R9
TACR2	TAF11L4	TANGO6	TAS2R10
TACR3	TAF11L5	TANK	TAS2R13
TACSTD2	TAF11L6	TAOK1	TAS2R14
TADA1	TAF11L7	TAOK2	TAS2R16
TADA2A	TAF11L8	TAOK3	TAS2R19

TAS2R20	TBC1D3E	TBC1D22B	TBRG4
TAS2R30	TBC1D3F	TBC1D23	TBX1
TAS2R31	TBC1D3G	TBC1D24	TBX2
TAS2R38	TBC1D3H	TBC1D25	TBX3
TAS2R39	TBC1D3I	TBC1D26	TBX4
TAS2R40	TBC1D3J	TBC1D28	TBX5
TAS2R41	TBC1D3K	TBC1D29	TBX6
TAS2R42	TBC1D3L	TBC1D30	TBX10
TAS2R43	TBC1D4	TBC1D31	TBX15
TAS2R46	TBC1D5	TBC1D32	TBX18
TAS2R50	TBC1D7	TBCA	TBX19
TAS2R60	TBC1D7- LOC100130357	TBCB	TBX20
TASOR	TBC1D8	TBCC	TBX21
TASOR2	TBC1D8B	TBCCD1	TBX22
TASP1	TBC1D9	TBCD	TBXA2R
TAT	TBC1D9B	TBCE	TBXAS1
TATDN1	TBC1D10A	TBCEL	TBXT
TATDN2	TBC1D10B	TBCK	TC2N
TATDN3	TBC1D10C	TBK1	TCAF1
TAX1BP1	TBC1D12	TBKBP1	TCAF2
TAX1BP3	TBC1D13	TBL1X	TCAF2C
TAZ	TBC1D14	TBL1XR1	TCAIM
TBATA	TBC1D15	TBL1Y	TCAP
TBC1D1	TBC1D16	TBL2	TCEA1
TBC1D2	TBC1D17	TBL3	TCEA2
TBC1D2B	TBC1D19	TBP	TCEA3
TBC1D3	TBC1D20	TBPL1	TCEAL1
TBC1D3B	TBC1D21	TBPL2	TCEAL2
TBC1D3C	TBC1D22A	TBR1	TCEAL3
TBC1D3D		TBRG1	TCEAL4

TCEAL5	TCN1	TDRD7	TEN1
TCEAL6	TCN2	TDRD9	TEN1-CDK3
TCEAL7	TCOF1	TDRD10	TENM1
TCEAL8	TCP1	TDRD12	TENM2
TCEAL9	TCP10	TDRD15	TENM3
TCEANC	TCP10L	TDRKH	TENM4
TCEANC2	TCP10L2	TDRP	TENT2
TCERG1	TCP11	TEAD1	TENT4A
TCERG1L	TCP11L1	TEAD2	TENT4B
TCF3	TCP11L2	TEAD3	TENT5A
TCF4	TCP11X1	TEAD4	TENT5B
TCF7	TCP11X2	TEC	TENT5C
TCF7L1	TCTA	TECPR1	TENT5D
TCF7L2	TCTE1	TECPR2	TEP1
TCF12	TCTE3	TECR	TEPP
TCF15	TCTEX1D1	TECRL	TEPSIN
TCF19	TCTEX1D2	TECTA	TERB1
TCF20	TCTEX1D4	TECTB	TERB2
TCF21	TCTN1	TEDC1	TERF1
TCF23	TCTN2	TEDC2	TERF2
TCF24	TCTN3	TEDDM1	TERF2IP
TCF25	TDG	TEF	TERT
TCFL5	TDGF1	TEFM	TES
TCHH	TDO2	TEK	TESC
TCHHL1	TDP1	TEKT1	TESK1
TCHP	TDP2	TEKT2	TESK2
TCIM	TDRD1	TEKT3	TESMIN
TCIRG1	TDRD3	TEKT4	TESPA1
TCL1A	TDRD5	TEKT5	TET1
TCL1B	TDRD6	TELO2	TET2



TET3	TEX50	TFG	TGM6
TEX2	TEX51	TFIP11	TGM7
TEX9	TEX52	TFPI	TGOLN2
TEX10	TEX53	TFPI2	TGS1
TEX11	TEX54	TFPT	TH
TEX12	TEX55	TFR2	THADA
TEX13A	TEX101	TFRC	THAP1
TEX13B	TEX261	TG	THAP2
TEX13C	TEX264	TGDS	THAP3
TEX13D	TF	TGFA	THAP4
TEX14	TFAM	TGFB1	THAP5
TEX15	TFAP2A	TGFB1I1	THAP6
TEX19	TFAP2B	TGFB2	THAP7
TEX22	TFAP2C	TGFB3	THAP8
TEX26	TFAP2D	TGFB1	THAP9
TEX28	TFAP2E	TGFBR1	THAP10
TEX29	TFAP4	TGFBR2	THAP11
TEX30	TFB1M	TGFBR3	THAP12
TEX33	TFB2M	TGFBR3L	THBD
TEX35	TFCP2	TGFBRAP1	THBS1
TEX36	TFCP2L1	TGIF1	THBS2
TEX37	TFDP1	TGIF2	THBS3
TEX38	TFDP2	TGIF2LX	THBS4
TEX43	TFDP3	TGIF2LY	THEG
TEX44	TFE3	TGIF2-RAB5IF	THEG5
TEX45	TFEB	TGM1	THEGL
TEX46	TFEC	TGM2	THEM4
TEX47	TFF1	TGM3	THEM5
TEX48	TFF2	TGM4	THEM6
TEX49	TFF3	TGM5	THEMIS



THEMIS2	TIAM1	TIMM23B	TLCD3B
THG1L	TIAM2	TIMM29	TLCD4
THNSL1	TICAM1	TIMM44	TLCD4-RWDD3
THNSL2	TICAM2	TIMM50	TLCD5
THOC1	TICRR	TIMMDC1	TLDC1
THOC2	TIE1	TIMP1	TLDC2
THOC3	TIFA	TIMP2	TLE1
THOC5	TIFAB	TIMP3	TLE2
THOC6	TIGAR	TIMP4	TLE3
THOC7	TIGD1	TINAG	TLE4
THOP1	TIGD2	TINAGL1	TLE5
THPO	TIGD3	TINCR	TLE6
THRA	TIGD4	TINF2	TLE7
THRAP3	TIGD5	TIPARP	TLK1
THRB	TIGD6	TIPIN	TLK2
THRSP	TIGD7	TIPRL	TLL1
THSD1	TIGIT	TIRAP	TLL2
THSD4	TIMD4	TJAP1	TLN1
THSD7A	TIMELESS	TJP1	TLN2
THSD7B	TIMM8A	TJP2	TLNRD1
THSD8	TIMM8B	TJP3	TLR1
THTPA	TIMM9	TK1	TLR2
THUMPD1	TIMM10	TK2	TLR3
THUMPD2	TIMM10B	TKFC	TLR4
THUMPD3	TIMM13	TKT	TLR5
THY1	TIMM17A	TKTL1	TLR6
THYN1	TIMM17B	TKTL2	TLR7
TIA1	TIMM21	TLCD1	TLR8
TIAF1	TIMM22	TLCD2	TLR9
TIAL1	TIMM23	TLCD3A	TLR10

TLX1	TMC4	TMEM9	TMEM47
TLX2	TMC5	TMEM9B	TMEM50A
TLX3	TMC6	TMEM11	TMEM50B
TM2D1	TMC7	TMEM14A	TMEM51
TM2D2	TMC8	TMEM14B	TMEM52
TM2D3	TMCC1	TMEM14C	TMEM52B
TM4SF1	TMCC2	TMEM17	TMEM53
TM4SF4	TMCC3	TMEM18	TMEM54
TM4SF5	TMCO1	TMEM19	TMEM56
TM4SF18	TMCO2	TMEM25	TMEM56-RWDD3
TM4SF19	TMCO3	TMEM26	TMEM59
TM4SF19- TCTEX1D2	TMCO4	TMEM30A	TMEM59L
TM4SF20	TMCO5A	TMEM30B	TMEM60
TM6SF1	TMCO6	TMEM31	TMEM61
TM6SF2	TMDD1	TMEM33	TMEM62
TM7SF2	TMED1	TMEM35A	TMEM63A
TM7SF3	TMED2	TMEM35B	TMEM63B
TM9SF1	TMED3	TMEM37	TMEM63C
TM9SF2	TMED4	TMEM38A	TMEM64
TM9SF3	TMED5	TMEM38B	TMEM65
TM9SF4	TMED6	TMEM39A	TMEM67
TMA7	TMED7	TMEM39B	TMEM68
TMA16	TMED7-TICAM2	TMEM40	TMEM69
TMBIM1	TMED8	TMEM41A	TMEM70
TMBIM4	TMED9	TMEM41B	TMEM71
TMBIM6	TMED10	TMEM42	TMEM72
TMC1	TMEFF1	TMEM43	TMEM74
TMC2	TMEFF2	TMEM44	TMEM74B
TMC3	TMEM8A	TMEM45A	TMEM79
	TMEM8B	TMEM45B	TMEM80

TMEM81	TMEM115	TMEM143	TMEM176A
TMEM82	TMEM116	TMEM144	TMEM176B
TMEM86A	TMEM117	TMEM145	TMEM177
TMEM86B	TMEM119	TMEM147	TMEM178A
TMEM87A	TMEM120A	TMEM150A	TMEM178B
TMEM87B	TMEM120B	TMEM150B	TMEM179
TMEM88	TMEM121	TMEM150C	TMEM179B
TMEM88B	TMEM121B	TMEM151A	TMEM181
TMEM89	TMEM123	TMEM151B	TMEM182
TMEM91	TMEM125	TMEM154	TMEM183A
TMEM92	TMEM126A	TMEM155	TMEM183B
TMEM94	TMEM126B	TMEM156	TMEM184A
TMEM95	TMEM127	TMEM158	TMEM184B
TMEM97	TMEM128	TMEM159	TMEM184C
TMEM98	TMEM129	TMEM160	TMEM185A
TMEM99	TMEM130	TMEM161A	TMEM185B
TMEM100	TMEM131	TMEM161B	TMEM186
TMEM101	TMEM131L	TMEM163	TMEM187
TMEM102	TMEM132A	TMEM164	TMEM189
TMEM104	TMEM132B	TMEM165	TMEM189- UBE2V1
TMEM105	TMEM132C	TMEM167A	TMEM190
TMEM106A	TMEM132D	TMEM167B	TMEM191B
TMEM106B	TMEM132E	TMEM168	TMEM191C
TMEM106C	TMEM134	TMEM169	TMEM192
TMEM107	TMEM135	TMEM170A	TMEM196
TMEM108	TMEM136	TMEM170B	TMEM198
TMEM109	TMEM138	TMEM171	TMEM199
TMEM110- MUSTN1	TMEM139	TMEM173	TMEM200A
TMEM114	TMEM140	TMEM174	TMEM200B
	TMEM141	TMEM175	

TMEM200C	TMEM232	TMEM259	TMPRSS6
TMEM201	TMEM233	TMEM260	TMPRSS7
TMEM202	TMEM234	TMEM262	TMPRSS9
TMEM203	TMEM235	TMEM263	TMPRSS11A
TMEM204	TMEM236	TMEM265	TMPRSS11B
TMEM205	TMEM237	TMEM266	TMPRSS11D
TMEM206	TMEM238	TMEM267	TMPRSS11E
TMEM207	TMEM238L	TMEM268	TMPRSS11F
TMEM208	TMEM239	TMEM269	TMPRSS12
TMEM209	TMEM240	TMEM270	TMPRSS13
TMEM210	TMEM241	TMEM271	TMPRSS15
TMEM211	TMEM242	TMEM272	TMSB4X
TMEM212	TMEM243	TMEM273	TMSB4Y
TMEM213	TMEM244	TMEM275	TMSB10
TMEM214	TMEM245	TMF1	TMSB15A
TMEM215	TMEM246	TMIE	TMSB15B
TMEM216	TMEM247	TMIGD1	TMTC1
TMEM217	TMEM248	TMIGD2	TMTC2
TMEM218	TMEM249	TMIGD3	TMTC3
TMEM219	TMEM250	TMLHE	TMTC4
TMEM220	TMEM251	TMOD1	TMUB1
TMEM221	TMEM252	TMOD2	TMUB2
TMEM222	TMEM253	TMOD3	TMX1
TMEM223	TMEM254	TMOD4	TMX2
TMEM225	TMEM255A	TMPO	TMX3
TMEM225B	TMEM255B	TMPPE	TMX4
TMEM229A	TMEM256	TMPRSS2	TNC
TMEM229B	TMEM256- PLSCR3	TMPRSS3	TNF
TMEM230		TMPRSS4	TNFAIP1
TMEM231	TMEM258	TMPRSS5	TNFAIP2

TNFAIP3	TNFSF8	TNNT2	TOMM20L
TNFAIP6	TNFSF9	TNNT3	TOMM22
TNFAIP8	TNFSF10	TNP1	TOMM34
TNFAIP8L1	TNFSF11	TNP2	TOMM40
TNFAIP8L2	TNFSF12	TNPO1	TOMM40L
TNFAIP8L2-SCNM1	TNFSF12-TNFSF13	TNPO2	TOMM70
TNFAIP8L3	TNFSF13	TNPO3	TONSL
TNFRSF1A	TNFSF13B	TNR	TOP1
TNFRSF1B	TNFSF14	TNRC6A	TOP1MT
TNFRSF4	TNFSF15	TNRC6B	TOP2A
TNFRSF6B	TNFSF18	TNRC6C	TOP2B
TNFRSF8	TNIK	TNRC18	TOP3A
TNFRSF9	TNIP1	TNS1	TOP3B
TNFRSF10A	TNIP2	TNS2	TOPAZ1
TNFRSF10B	TNIP3	TNS3	TOPBP1
TNFRSF10C	TNK1	TNS4	TOPORS
TNFRSF10D	TNK2	TNXB	TOR1A
TNFRSF11A	TNKS	TOB1	TOR1AIP1
TNFRSF11B	TNKS1BP1	TOB2	TOR1AIP2
TNFRSF12A	TNKS2	TOE1	TOR1B
TNFRSF13B	TNMD	TOGARAM1	TOR2A
TNFRSF13C	TNN	TOGARAM2	TOR3A
TNFRSF14	TNNC1	TOLLIP	TOR4A
TNFRSF17	TNNC2	TOM1	TOX
TNFRSF18	TNNI1	TOM1L1	TOX2
TNFRSF19	TNNI2	TOM1L2	TOX3
TNFRSF21	TNNI3	TOMM5	TOX4
TNFRSF25	TNNI3K	TOMM6	TP53
TNFSF4	TNNT1	TOMM7	TP53AIP1
		TOMM20	TP53BP1

TP53BP2	TPM1	TRA2B	TRAJ13
TP53I3	TPM2	TRABD	TRAJ14
TP53I11	TPM3	TRABD2A	TRAJ15
TP53I13	TPM4	TRABD2B	TRAJ16
TP53INP1	TPMT	TRAC	TRAJ17
TP53INP2	TPO	TRADD	TRAJ18
TP53RK	TPP1	TRAF1	TRAJ19
TP53TG3	TPP2	TRAF2	TRAJ20
TP53TG3B	TPPP	TRAF3	TRAJ21
TP53TG3C	TPPP2	TRAF3IP1	TRAJ22
TP53TG3D	TPPP3	TRAF3IP2	TRAJ23
TP53TG3E	TPR	TRAF3IP3	TRAJ24
TP53TG3F	TPRA1	TRAF4	TRAJ25
TP53TG5	TPRG1	TRAF5	TRAJ26
TP63	TPRG1L	TRAF6	TRAJ27
TP73	TPRKB	TRAF7	TRAJ28
TPBG	TPRN	TRAJD1	TRAJ29
TPBGL	TPRX1	TRAIP	TRAJ30
TPCN1	TPSAB1	TRAJ1	TRAJ31
TPCN2	TPSB2	TRAJ2	TRAJ32
TPD52	TPSD1	TRAJ3	TRAJ33
TPD52L1	TPSG1	TRAJ4	TRAJ34
TPD52L2	TPST1	TRAJ5	TRAJ35
TPD52L3	TPST2	TRAJ6	TRAJ36
TPGS1	TPT1	TRAJ7	TRAJ37
TPGS2	TPTE	TRAJ8	TRAJ38
TPH1	TPTE2	TRAJ9	TRAJ39
TPH2	TPTEP2-CSNK1E	TRAJ10	TRAJ40
TPI1	TPX2	TRAJ11	TRAJ41
TPK1	TRA2A	TRAJ12	TRAJ42

TRAJ43	TRAPPC5	TRAV12-3	TRBD2
TRAJ44	TRAPPC6A	TRAV13-1	TRBJ1-1
TRAJ45	TRAPPC6B	TRAV13-2	TRBJ1-2
TRAJ46	TRAPPC8	TRAV14DV4	TRBJ1-3
TRAJ47	TRAPPC9	TRAV16	TRBJ1-4
TRAJ48	TRAPPC10	TRAV17	TRBJ1-5
TRAJ49	TRAPPC11	TRAV18	TRBJ1-6
TRAJ50	TRAPPC12	TRAV19	TRBJ2-1
TRAJ52	TRAPPC13	TRAV20	TRBJ2-2
TRAJ53	TRARG1	TRAV21	TRBJ2-2P
TRAJ54	TRAT1	TRAV22	TRBJ2-3
TRAJ56	TRAV1-1	TRAV23DV6	TRBJ2-4
TRAJ57	TRAV1-2	TRAV24	TRBJ2-5
TRAJ58	TRAV2	TRAV25	TRBJ2-6
TRAJ59	TRAV3	TRAV26-1	TRBJ2-7
TRAJ61	TRAV4	TRAV26-2	TRBV2
TRAK1	TRAV5	TRAV27	TRBV3-1
TRAK2	TRAV6	TRAV29DV5	TRBV4-1
TRAM1	TRAV7	TRAV30	TRBV4-2
TRAM1L1	TRAV8-1	TRAV34	TRBV5-1
TRAM2	TRAV8-2	TRAV35	TRBV5-3
TRANK1	TRAV8-3	TRAV36DV7	TRBV5-4
TRAP1	TRAV8-4	TRAV38-1	TRBV5-5
TRAPPC1	TRAV8-6	TRAV38-2DV8	TRBV5-6
TRAPPC2	TRAV8-7	TRAV39	TRBV5-7
TRAPPC2B	TRAV9-1	TRAV40	TRBV6-1
TRAPPC2L	TRAV9-2	TRAV41	TRBV6-2
TRAPPC3	TRAV10	TRBC1	TRBV6-3
TRAPPC3L	TRAV12-1	TRBC2	TRBV6-4
TRAPPC4	TRAV12-2	TRBD1	TRBV6-5

TRBV6-6	TRBV24-1	TRGJ1	TRIM9
TRBV6-7	TRBV25-1	TRGJ2	TRIM10
TRBV6-8	TRBV27	TRGJP	TRIM11
TRBV7-1	TRBV28	TRGJP1	TRIM13
TRBV7-2	TRBV29-1	TRGJP2	TRIM14
TRBV7-3	TRBV30	TRGV1	TRIM15
TRBV7-4	TRDC	TRGV2	TRIM16
TRBV7-6	TRDD1	TRGV3	TRIM16L
TRBV7-7	TRDD2	TRGV4	TRIM17
TRBV7-9	TRDD3	TRGV5	TRIM21
TRBV9	TRDJ1	TRGV8	TRIM22
TRBV10-1	TRDJ2	TRGV9	TRIM23
TRBV10-2	TRDJ3	TRGV10	TRIM24
TRBV10-3	TRDJ4	TRGV11	TRIM25
TRBV11-1	TRDMT1	TRH	TRIM26
TRBV11-2	TRDN	TRHDE	TRIM27
TRBV11-3	TRDV1	TRHR	TRIM28
TRBV12-3	TRDV2	TRIAP1	TRIM29
TRBV12-4	TRDV3	TRIB1	TRIM31
TRBV12-5	TREH	TRIB2	TRIM32
TRBV13	TREM1	TRIB3	TRIM33
TRBV14	TREM2	TRIL	TRIM34
TRBV15	TREML1	TRIM2	TRIM35
TRBV16	TREML2	TRIM3	TRIM36
TRBV17	TREML4	TRIM4	TRIM37
TRBV18	TRERF1	TRIM5	TRIM38
TRBV19	TREX1	TRIM6	TRIM39
TRBV20OR9-2	TREX2	TRIM6-TRIM34	TRIM39-RPP21
TRBV20-1	TRGC1	TRIM7	TRIM40
TRBV23-1	TRGC2	TRIM8	TRIM41



TRIM42	TRIM66	TRMT9B	TRPM4
TRIM43	TRIM67	TRMT10A	TRPM5
TRIM43B	TRIM68	TRMT10B	TRPM6
TRIM44	TRIM69	TRMT10C	TRPM7
TRIM45	TRIM71	TRMT11	TRPM8
TRIM46	TRIM72	TRMT12	TRPS1
TRIM47	TRIM73	TRMT13	TRPT1
TRIM48	TRIM74	TRMT44	TRPV1
TRIM49	TRIM75P	TRMT61A	TRPV2
TRIM49B	TRIM77	TRMT61B	TRPV3
TRIM49C	TRIML1	TRMT112	TRPV4
TRIM49D1	TRIML2	TRMU	TRPV5
TRIM49D2	TRIO	TRNAU1AP	TRPV6
TRIM50	TRIOBP	TRNP1	TRRAP
TRIM51	TRIP4	TRNT1	TRUB1
TRIM51GP	TRIP6	TRO	TRUB2
TRIM52	TRIP10	TROAP	TSACC
TRIM54	TRIP11	TROVE2	TSBP1
TRIM55	TRIP12	TRPA1	TSC1
TRIM56	TRIP13	TRPC1	TSC2
TRIM58	TRIQK	TRPC3	TSC22D1
TRIM59	TRIR	TRPC4	TSC22D2
TRIM60	TRIT1	TRPC4AP	TSC22D3
TRIM61	TRMO	TRPC5	TSC22D4
TRIM62	TRMT1	TRPC5OS	TSEN2
TRIM63	TRMT1L	TRPC6	TSEN15
TRIM64	TRMT2A	TRPC7	TSEN34
TRIM64B	TRMT2B	TRPM1	TSEN54
TRIM64C	TRMT5	TRPM2	TSFM
TRIM65	TRMT6	TRPM3	TSG101

TSGA10	TSPAN15	TSSK3	TTC23
TSGA10IP	TSPAN16	TSSK4	TTC23L
TSGA13	TSPAN17	TSSK6	TTC24
TSHB	TSPAN18	TST	TTC25
TSHR	TSPAN19	TSTA3	TTC26
TSHZ1	TSPAN31	TSTD1	TTC27
TSHZ2	TSPAN32	TSTD2	TTC28
TSHZ3	TSPAN33	TSTD3	TTC29
TSKS	TSPEAR	TTBK1	TTC30A
TSKU	TSPO	TTBK2	TTC30B
TSLP	TSPO2	TTC1	TTC31
TSN	TSPOAP1	TTC3	TTC32
TSNARE1	TSPY1	TTC4	TTC33
TSNAX	TSPY2	TTC5	TTC34
TSNAXIP1	TSPY3	TTC6	TTC36
TSNAX-DISC1	TSPY4	TTC7A	TTC37
TSPAN1	TSPY8	TTC7B	TTC38
TSPAN2	TSPY9P	TTC8	TTC39A
TSPAN3	TSPY10	TTC9	TTC39B
TSPAN4	TSPYL1	TTC9B	TTC39C
TSPAN5	TSPYL2	TTC9C	TTF1
TSPAN6	TSPYL4	TTC12	TTF2
TSPAN7	TSPYL5	TTC13	TTI1
TSPAN8	TSPYL6	TTC14	TTI2
TSPAN9	TSR1	TTC16	TTK
TSPAN10	TSR2	TTC17	TTL
TSPAN11	TSR3	TTC19	TTLL1
TSPAN12	TSSC4	TTC21A	TTLL2
TSPAN13	TSSK1B	TTC21B	TTLL3
TSPAN14	TSSK2	TTC22	TTLL4

TTLL5	TUBB2B	TVP23A	TXNRD1
TTLL6	TUBB3	TVP23B	TXNRD2
TTLL7	TUBB4A	TVP23C	TXNRD3
TTLL8	TUBB4B	TVP23C-CDRT4	TXNRD3NB
TTLL9	TUBB6	TWF1	TYK2
TTLL10	TUBB8	TWF2	TYMP
TTLL11	TUBB8B	TWIST1	TYMS
TTLL12	TUBB8P12	TWIST2	TYMSOS
TTLL13P	TUBD1	TWISTNB	TYR
TTN	TUBE1	TWNK	TYRO3
TTPA	TUBG1	TWSG1	TYROBP
TTPAL	TUBG2	TXK	TYRP1
TTR	TUBGCP2	TXLNA	TYSND1
TTYH1	TUBGCP3	TXLNB	TYW1
TTYH2	TUBGCP4	TXLNG	TYW1B
TTYH3	TUBGCP5	TXN	TYW3
TUB	TUBGCP6	TXN2	TYW5
TUBA1A	TUFM	TXNDC2	U2AF1
TUBA1B	TUFT1	TXNDC5	U2AF1L4
TUBA1C	TULP1	TXNDC8	U2AF1L5
TUBA3C	TULP2	TXNDC9	U2AF2
TUBA3D	TULP3	TXNDC11	U2SURP
TUBA3E	TULP4	TXNDC12	U52112.2
TUBA4A	TUNAR	TXNDC15	UACA
TUBA4B	TUSC1	TXNDC16	UAP1
TUBA8	TUSC2	TXNDC17	UAP1L1
TUBAL3	TUSC3	TXNIP	UBA1
TUBB	TUT1	TXNL1	UBA2
TUBB1	TUT4	TXNL4A	UBA3
TUBB2A	TUT7	TXNL4B	UBA5



UBA6	UBE2H	UBIAD1	UBXN6
UBA7	UBE2I	UBL3	UBXN7
UBA52	UBE2J1	UBL4A	UBXN8
UBAC1	UBE2J2	UBL4B	UBXN10
UBAC2	UBE2K	UBL5	UBXN11
UBALD1	UBE2L3	UBL7	UCHL1
UBALD2	UBE2L5	UBLCP1	UCHL3
UBAP1	UBE2L6	UBN1	UCHL5
UBAP1L	UBE2M	UBN2	UCK1
UBAP2	UBE2N	UBOX5	UCK2
UBAP2L	UBE2O	UBP1	UCKL1
UBASH3A	UBE2Q1	UBQLN1	UCMA
UBASH3B	UBE2Q2	UBQLN2	UCN
UBB	UBE2Q2L	UBQLN3	UCN2
UBC	UBE2QL1	UBQLN4	UCN3
UBD	UBE2R2	UBQLNL	UCP1
UBE2A	UBE2S	UBR1	UCP2
UBE2B	UBE2T	UBR2	UCP3
UBE2C	UBE2U	UBR3	UEVLD
UBE2D1	UBE2V1	UBR4	UFC1
UBE2D2	UBE2V2	UBR5	UFD1
UBE2D3	UBE2W	UBR7	UFL1
UBE2D4	UBE2Z	UBTD1	UFM1
UBE2E1	UBE3A	UBTD2	UFSP1
UBE2E2	UBE3B	UBTF	UFSP2
UBE2E3	UBE3C	UBTFL1	UGCG
UBE2F	UBE3D	UBXN1	UGDH
UBE2F-SCLY	UBE4A	UBXN2A	UGGT1
UBE2G1	UBE4B	UBXN2B	UGGT2
UBE2G2	UBFD1	UBXN4	UGP2



UGT1A1	ULBP3	UNKL	URB2
UGT1A3	ULK1	UPB1	URGCP
UGT1A4	ULK2	UPF1	URGCP-MRPS24
UGT1A5	ULK3	UPF2	URI1
UGT1A6	ULK4	UPF3A	URM1
UGT1A7	UMAD1	UPF3B	UROC1
UGT1A8	UMOD	UPK1A	UROD
UGT1A9	UMODL1	UPK1B	UROS
UGT1A10	UMPS	UPK2	USB1
UGT2A1	UNC5A	UPK3A	USE1
UGT2A2	UNC5B	UPK3B	USF1
UGT2A3	UNC5C	UPK3BL1	USF2
UGT2B4	UNC5CL	UPK3BL2	USF3
UGT2B7	UNC5D	UPP1	USH1C
UGT2B10	UNC13A	UPP2	USH1G
UGT2B11	UNC13B	UPRT	USH2A
UGT2B15	UNC13C	UQCC1	USHBP1
UGT2B17	UNC13D	UQCC2	USO1
UGT2B28	UNC45A	UQCC3	USP1
UGT3A1	UNC45B	UQCR10	USP2
UGT3A2	UNC50	UQCR11	USP3
UGT8	UNC79	UQCRB	USP4
UHMK1	UNC80	UQCRC1	USP5
UHRF1	UNC93A	UQCRC2	USP6
UHRF1BP1	UNC93B1	UQCRFS1	USP6NL
UHRF1BP1L	UNC119	UQCRH	USP7
UHRF2	UNC119B	UQCRHL	USP8
UIMC1	UNCX	UQCRQ	USP9X
ULBP1	UNG	URAD	USP9Y
ULBP2	UNK	URB1	USP10



USP11	USP17L29	USP47	VAC14
USP12	USP17L30	USP48	VAMP1
USP13	USP18	USP49	VAMP2
USP14	USP19	USP50	VAMP3
USP15	USP20	USP51	VAMP4
USP16	USP21	USP53	VAMP5
USP17L1	USP22	USP54	VAMP7
USP17L2	USP24	USPL1	VAMP8
USP17L3	USP25	UST	VANGL1
USP17L4	USP26	UTF1	VANGL2
USP17L5	USP27X	UTP3	VAPA
USP17L7	USP28	UTP4	VAPB
USP17L8	USP29	UTP6	VARS
USP17L10	USP30	UTP11	VARS1
USP17L11	USP31	UTP14A	VARS2
USP17L12	USP32	UTP14C	VASH1
USP17L13	USP33	UTP15	VASH2
USP17L15	USP34	UTP18	VASN
USP17L17	USP35	UTP20	VASP
USP17L18	USP36	UTP23	VAT1
USP17L19	USP37	UTP25	VAT1L
USP17L20	USP38	UTRN	VAV1
USP17L21	USP39	UTS2	VAV2
USP17L22	USP40	UTS2B	VAV3
USP17L23	USP41	UTS2R	VAX1
USP17L24	USP42	UTY	VAX2
USP17L25	USP43	UVRAG	VBP1
USP17L26	USP44	UVSSA	VCAM1
USP17L27	USP45	UXS1	VCAN
USP17L28	USP46	UXT	VCL



VCP	VIM	VPS13A	VRK1
VCPIP1	VIP	VPS13B	VRK2
VCPKMT	VIPAS39	VPS13C	VRK3
VCX	VIPR1	VPS13D	VRTN
VCX2	VIPR2	VPS16	VSIG1
VCX3A	VIRMA	VPS18	VSIG2
VCX3B	VIT	VPS25	VSIG4
VCY	VKORC1	VPS26A	VSIG8
VCY1B	VKORC1L1	VPS26B	VSIG10
VDAC1	VLDLR	VPS26C	VSIG10L
VDAC2	VMA21	VPS28	VSIG10L2
VDAC3	VMAC	VPS29	VSIR
VDR	VMO1	VPS33A	VSNL1
VEGFA	VMP1	VPS33B	VSTM1
VEGFB	VN1R1	VPS35	VSTM2A
VEGFC	VN1R2	VPS35L	VSTM2B
VEGFD	VN1R3	VPS36	VSTM2L
VENTX	VN1R4	VPS37A	VSTM4
VEPH1	VN1R5	VPS37B	VSTM5
VEZF1	VNN1	VPS37C	VSX1
VEZT	VNN2	VPS37D	VSX2
VGf	VNN3	VPS39	VTa1
VGLL1	VOPP1	VPS41	VTCN1
VGLL2	VPREB1	VPS45	VTI1A
VGLL3	VPREB3	VPS50	VTI1B
VGLL4	VPS4A	VPS51	VTN
VHL	VPS4B	VPS52	VWA1
VHLL	VPS8	VPS53	VWA2
VIL1	VPS9D1	VPS54	VWA3A
VILL	VPS11	VPS72	VWA3B



VWA5A	WBP2NL	WDR34	WDR77
VWA5B1	WBP4	WDR35	WDR78
VWA5B2	WBP11	WDR36	WDR81
VWA7	WDCP	WDR37	WDR82
VWA8	WDFY1	WDR38	WDR83
VWC2	WDFY2	WDR41	WDR83OS
VWC2L	WDFY3	WDR43	WDR86
VWCE	WDFY4	WDR44	WDR87
VWDE	WDHD1	WDR45	WDR88
VWF	WDPCP	WDR45B	WDR89
VXN	WDR1	WDR46	WDR90
WAC	WDR3	WDR47	WDR91
WAPL	WDR4	WDR48	WDR92
WARS	WDR5	WDR49	WDR93
WARS1	WDR5B	WDR53	WDR97
WARS2	WDR6	WDR54	WDSUB1
WAS	WDR7	WDR55	WDTC1
WASF1	WDR11	WDR59	WDYHV1
WASF2	WDR12	WDR60	WEE1
WASF3	WDR13	WDR61	WEE2
WASHC1	WDR17	WDR62	WFDC1
WASHC2A	WDR18	WDR63	WFDC2
WASHC2C	WDR19	WDR64	WFDC3
WASHC3	WDR20	WDR66	WFDC5
WASHC4	WDR24	WDR70	WFDC6
WASHC5	WDR25	WDR72	WFDC8
WASL	WDR26	WDR73	WFDC9
WBP1	WDR27	WDR74	WFDC10A
WBP1L	WDR31	WDR75	WFDC10B
WBP2	WDR33	WDR76	WFDC11



WFDC12	WNT6	WWTR1	XPNPEP1
WFDC13	WNT7A	XAB2	XPNPEP2
WFIKKN1	WNT7B	XAF1	XPNPEP3
WFIKKN2	WNT8A	XAGE1A	XPO1
WFS1	WNT8B	XAGE1B	XPO4
WHAMM	WNT9A	XAGE2	XPO5
WHRN	WNT9B	XAGE3	XPO6
WIF1	WNT10A	XAGE5	XPO7
WIPF1	WNT10B	XBP1	XPOT
WIPF2	WNT11	XCL1	XPR1
WIPF3	WNT16	XCL2	XRCC1
WIP11	WRAP53	XCR1	XRCC2
WIP12	WRAP73	XDH	XRCC3
WISP1	WRB	XG	XRCC4
WISP2	WRB-SH3BGR	XIAP	XRCC5
WISP3	WRN	XIRP1	XRCC6
WIZ	WRNIP1	XIRP2	XRN1
WLS	WSB1	XK	XRN2
WNK1	WSB2	XKR3	XRRA1
WNK2	WSCD1	XKR4	XXYLT1
WNK3	WSCD2	XKR5	XYLB
WNK4	WT1	XKR6	XYLT1
WNT1	WTAP	XKR7	XYLT2
WNT2	WTIP	XKR8	YAE1
WNT2B	WWC1	XKR9	YAF2
WNT3	WWC2	XKRX	YAP1
WNT3A	WWC3	XKRY	YARS
WNT4	WWOX	XKRY2	YARS1
WNT5A	WWP1	XPA	YARS2
WNT5B	WWP2	XPC	YBEY



YBX1	YTHDF1	ZBED4	ZBTB24
YBX2	YTHDF2	ZBED5	ZBTB25
YBX3	YTHDF3	ZBED6	ZBTB26
YDJC	YWHAB	ZBED6CL	ZBTB32
YEATS2	YWHAE	ZBED8	ZBTB33
YEATS4	YWHAG	ZBED9	ZBTB34
YES1	YWHAH	ZBP1	ZBTB37
YIF1A	YWHAQ	ZBTB1	ZBTB38
YIF1B	YWHAZ	ZBTB2	ZBTB39
YIPF1	YY1	ZBTB3	ZBTB40
YIPF2	YY1AP1	ZBTB4	ZBTB41
YIPF3	YY2	ZBTB5	ZBTB42
YIPF4	Z82190.2	ZBTB6	ZBTB43
YIPF5	Z82206.1	ZBTB7A	ZBTB44
YIPF6	Z83844.1	ZBTB7B	ZBTB45
YIPF7	Z83844.3	ZBTB7C	ZBTB46
YJEFN3	Z84488.2	ZBTB8A	ZBTB47
YJU2	Z84492.2	ZBTB8B	ZBTB48
YKT6	Z98752.3	ZBTB8OS	ZBTB49
YLPM1	ZACN	ZBTB9	ZC2HC1A
YME1L1	ZADH2	ZBTB10	ZC2HC1B
YOD1	ZAN	ZBTB11	ZC2HC1C
YPEL1	ZAP70	ZBTB12	ZC3H3
YPEL2	ZAR1	ZBTB14	ZC3H4
YPEL3	ZAR1L	ZBTB16	ZC3H6
YPEL4	ZASP	ZBTB17	ZC3H7A
YPEL5	ZBBX	ZBTB18	ZC3H7B
YRDC	ZBED1	ZBTB20	ZC3H8
YTHDC1	ZBED2	ZBTB21	ZC3H10
YTHDC2	ZBED3	ZBTB22	ZC3H11A



ZC3H11B	ZDHHC1	ZFAND3	ZFP92
ZC3H12A	ZDHHC2	ZFAND4	ZFPL1
ZC3H12B	ZDHHC3	ZFAND5	ZFPM1
ZC3H12C	ZDHHC4	ZFAND6	ZFPM2
ZC3H12D	ZDHHC5	ZFAT	ZFR
ZC3H13	ZDHHC6	ZFC3H1	ZFR2
ZC3H14	ZDHHC7	ZFHX2	ZFX
ZC3H15	ZDHHC8	ZFHX3	ZFY
ZC3H18	ZDHHC9	ZFHX4	ZFYVE1
ZC3HAV1	ZDHHC11	ZFP1	ZFYVE9
ZC3HAV1L	ZDHHC11B	ZFP2	ZFYVE16
ZC3HC1	ZDHHC12	ZFP3	ZFYVE19
ZC4H2	ZDHHC13	ZFP14	ZFYVE21
ZCCHC2	ZDHHC14	ZFP28	ZFYVE26
ZCCHC3	ZDHHC15	ZFP30	ZFYVE27
ZCCHC4	ZDHHC16	ZFP36	ZFYVE28
ZCCHC7	ZDHHC17	ZFP36L1	ZG16
ZCCHC8	ZDHHC18	ZFP36L2	ZG16B
ZCCHC9	ZDHHC19	ZFP37	ZGLP1
ZCCHC10	ZDHHC20	ZFP41	ZGPAT
ZCCHC12	ZDHHC21	ZFP42	ZGRF1
ZCCHC13	ZDHHC22	ZFP57	ZHX1
ZCCHC14	ZDHHC23	ZFP62	ZHX1-C8orf76
ZCCHC17	ZDHHC24	ZFP64	ZHX2
ZCCHC18	ZEB1	ZFP69	ZHX3
ZCCHC24	ZEB2	ZFP69B	ZIC1
ZCRB1	ZER1	ZFP82	ZIC2
ZCWPW1	ZFAND1	ZFP90	ZIC3
ZCWPW2	ZFAND2A	ZFP91	ZIC4
ZDBF2	ZFAND2B	ZFP91-CNTF	ZIC5

ZIK1	ZNF2	ZNF56	ZNF121
ZIM2	ZNF3	ZNF57	ZNF124
ZIM3	ZNF7	ZNF66	ZNF131
ZKSCAN1	ZNF8	ZNF69	ZNF132
ZKSCAN2	ZNF10	ZNF70	ZNF133
ZKSCAN3	ZNF12	ZNF71	ZNF134
ZKSCAN4	ZNF14	ZNF74	ZNF135
ZKSCAN5	ZNF16	ZNF75A	ZNF136
ZKSCAN7	ZNF17	ZNF75D	ZNF138
ZKSCAN8	ZNF18	ZNF76	ZNF140
ZMAT1	ZNF19	ZNF77	ZNF141
ZMAT2	ZNF20	ZNF79	ZNF142
ZMAT3	ZNF22	ZNF80	ZNF143
ZMAT4	ZNF23	ZNF81	ZNF146
ZMAT5	ZNF24	ZNF83	ZNF148
ZMIZ1	ZNF25	ZNF84	ZNF154
ZMIZ2	ZNF26	ZNF85	ZNF155
ZMPSTE24	ZNF28	ZNF90	ZNF157
ZMYM1	ZNF30	ZNF91	ZNF160
ZMYM2	ZNF32	ZNF92	ZNF165
ZMYM3	ZNF33A	ZNF93	ZNF169
ZMYM4	ZNF33B	ZNF98	ZNF174
ZMYM5	ZNF34	ZNF99	ZNF175
ZMYM6	ZNF35	ZNF100	ZNF177
ZMYND8	ZNF37A	ZNF101	ZNF180
ZMYND10	ZNF41	ZNF106	ZNF181
ZMYND11	ZNF43	ZNF107	ZNF182
ZMYND12	ZNF44	ZNF112	ZNF184
ZMYND15	ZNF45	ZNF114	ZNF185
ZMYND19	ZNF48	ZNF117	ZNF189

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ZNF195	ZNF250	ZNF296	ZNF358
ZNF197	ZNF251	ZNF300	ZNF362
ZNF200	ZNF253	ZNF302	ZNF365
ZNF202	ZNF254	ZNF304	ZNF366
ZNF205	ZNF256	ZNF311	ZNF367
ZNF207	ZNF257	ZNF316	ZNF382
ZNF208	ZNF260	ZNF317	ZNF383
ZNF211	ZNF263	ZNF318	ZNF384
ZNF212	ZNF264	ZNF319	ZNF385A
ZNF213	ZNF266	ZNF320	ZNF385B
ZNF214	ZNF267	ZNF322	ZNF385C
ZNF215	ZNF268	ZNF324	ZNF385D
ZNF217	ZNF273	ZNF324B	ZNF391
ZNF219	ZNF274	ZNF326	ZNF394
ZNF221	ZNF275	ZNF329	ZNF395
ZNF222	ZNF276	ZNF330	ZNF396
ZNF223	ZNF277	ZNF331	ZNF397
ZNF224	ZNF280A	ZNF333	ZNF398
ZNF225	ZNF280B	ZNF334	ZNF404
ZNF226	ZNF280C	ZNF335	ZNF407
ZNF227	ZNF280D	ZNF337	ZNF408
ZNF229	ZNF281	ZNF341	ZNF410
ZNF230	ZNF282	ZNF343	ZNF414
ZNF232	ZNF283	ZNF345	ZNF415
ZNF233	ZNF284	ZNF346	ZNF416
ZNF234	ZNF285	ZNF347	ZNF417
ZNF235	ZNF286A	ZNF350	ZNF418
ZNF236	ZNF286B	ZNF354A	ZNF419
ZNF239	ZNF287	ZNF354B	ZNF420
ZNF248	ZNF292	ZNF354C	ZNF423

ZNF425	ZNF474	ZNF518A	ZNF559
ZNF426	ZNF479	ZNF518B	ZNF559-ZNF177
ZNF428	ZNF480	ZNF519	ZNF560
ZNF429	ZNF483	ZNF521	ZNF561
ZNF430	ZNF484	ZNF524	ZNF562
ZNF431	ZNF485	ZNF525	ZNF563
ZNF432	ZNF486	ZNF526	ZNF564
ZNF433	ZNF487	ZNF527	ZNF565
ZNF436	ZNF488	ZNF528	ZNF566
ZNF438	ZNF490	ZNF529	ZNF567
ZNF439	ZNF491	ZNF530	ZNF568
ZNF440	ZNF492	ZNF532	ZNF569
ZNF441	ZNF493	ZNF534	ZNF570
ZNF442	ZNF496	ZNF536	ZNF571
ZNF443	ZNF497	ZNF540	ZNF572
ZNF444	ZNF500	ZNF541	ZNF573
ZNF445	ZNF501	ZNF543	ZNF574
ZNF446	ZNF502	ZNF544	ZNF575
ZNF449	ZNF503	ZNF546	ZNF576
ZNF451	ZNF506	ZNF547	ZNF577
ZNF454	ZNF507	ZNF548	ZNF578
ZNF460	ZNF510	ZNF549	ZNF579
ZNF461	ZNF511	ZNF550	ZNF580
ZNF462	ZNF511-PRAP1	ZNF551	ZNF581
ZNF467	ZNF512	ZNF552	ZNF582
ZNF468	ZNF512B	ZNF554	ZNF583
ZNF469	ZNF513	ZNF555	ZNF584
ZNF470	ZNF514	ZNF556	ZNF585A
ZNF471	ZNF516	ZNF557	ZNF585B
ZNF473	ZNF517	ZNF558	ZNF586

ZNF587	ZNF625	ZNF671	ZNF705G
ZNF587B	ZNF625-ZNF20	ZNF672	ZNF706
ZNF589	ZNF626	ZNF674	ZNF707
ZNF592	ZNF627	ZNF675	ZNF708
ZNF593	ZNF628	ZNF676	ZNF709
ZNF594	ZNF629	ZNF677	ZNF710
ZNF595	ZNF630	ZNF678	ZNF711
ZNF596	ZNF638	ZNF679	ZNF713
ZNF597	ZNF639	ZNF680	ZNF714
ZNF598	ZNF641	ZNF681	ZNF716
ZNF599	ZNF644	ZNF682	ZNF717
ZNF600	ZNF646	ZNF683	ZNF718
ZNF605	ZNF648	ZNF684	ZNF720
ZNF606	ZNF649	ZNF687	ZNF721
ZNF607	ZNF652	ZNF688	ZNF723
ZNF608	ZNF653	ZNF689	ZNF724
ZNF609	ZNF654	ZNF691	ZNF726
ZNF610	ZNF655	ZNF692	ZNF727
ZNF611	ZNF658	ZNF695	ZNF728
ZNF613	ZNF660	ZNF696	ZNF729
ZNF614	ZNF660-ZNF197	ZNF697	ZNF730
ZNF615	ZNF662	ZNF699	ZNF732
ZNF616	ZNF664	ZNF700	ZNF735
ZNF618	ZNF664-RFLNA	ZNF701	ZNF736
ZNF619	ZNF665	ZNF703	ZNF737
ZNF620	ZNF667	ZNF704	ZNF738
ZNF621	ZNF668	ZNF705A	ZNF740
ZNF622	ZNF669	ZNF705B	ZNF746
ZNF623	ZNF670	ZNF705D	ZNF747
ZNF624	ZNF670-ZNF695	ZNF705E	ZNF749



ZNF750	ZNF792	ZNF852	ZPR1
ZNF761	ZNF793	ZNF853	ZRANB1
ZNF763	ZNF799	ZNF860	ZRANB2
ZNF764	ZNF800	ZNF862	ZRANB3
ZNF765	ZNF804A	ZNF865	ZRSR2
ZNF765-ZNF761	ZNF804B	ZNF875	ZSCAN1
ZNF766	ZNF805	ZNF878	ZSCAN2
ZNF768	ZNF806	ZNF879	ZSCAN4
ZNF770	ZNF808	ZNF880	ZSCAN5A
ZNF771	ZNF813	ZNF883	ZSCAN5B
ZNF772	ZNF814	ZNF888	ZSCAN5C
ZNF773	ZNF816	ZNF891	ZSCAN9
ZNF774	ZNF816- ZNF321P	ZNFX1	ZSCAN10
ZNF775	ZNF821	ZNHIT1	ZSCAN12
ZNF776	ZNF823	ZNHIT2	ZSCAN16
ZNF777	ZNF827	ZNHIT3	ZSCAN18
ZNF778	ZNF829	ZNHIT6	ZSCAN20
ZNF780A	ZNF830	ZNRD1	ZSCAN21
ZNF780B	ZNF831	ZNRD2	ZSCAN22
ZNF781	ZNF835	ZNRF1	ZSCAN23
ZNF782	ZNF836	ZNRF2	ZSCAN25
ZNF783	ZNF837	ZNRF3	ZSCAN26
ZNF784	ZNF839	ZNRF4	ZSCAN29
ZNF785	ZNF841	ZP1	ZSCAN30
ZNF786	ZNF843	ZP2	ZSCAN31
ZNF787	ZNF844	ZP3	ZSCAN32
ZNF788P	ZNF845	ZP4	ZSWIM1
ZNF789	ZNF846	ZPBP	ZSWIM2
ZNF790	ZNF850	ZPBP2	ZSWIM3
ZNF791		ZPLD1	ZSWIM4

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ZSWIM5

ZSWIM6

ZSWIM7

ZSWIM8

ZSWIM9

ZUP1

ZW10

ZWILCH

ZWINT

ZXDA

ZXDB

ZXDC

ZYG11A

ZYG11B

ZYG

ZZEF1

ZZZ3