

KEGG_GLY(http://www.ACSS2	GCK	PGK2	PGK1	PDHB	PDHA1	PDHA2
KEGG_CITR(http://www.IDH3B	DLST	PCK2	CS	PDHB	PCK1	PDHA1
KEGG_PEN(http://www.RPE	RPIA	PGM2	PGLS	PRPS2	FBP2	PFKM
KEGG_PEN(http://www.UGT1A10	UGT1A8	RPE	UGT1A7	UGT1A6	UGT2B28	UGT1A5
KEGG_FRU(http://www.MPI	PMM2	PMM1	FBP2	PFKM	GMDS	PFKFB4
KEGG_GAL(http://www.GCK	GALK1	GLB1	GALE	B4GALT1	PGM2	LALBA
KEGG_ASCI(http://www.UGT1A10	UGT1A8	UGT1A7	UGT1A6	ALDH1B1	UGT2B28	ALDH2
KEGG_FAT(http://www.CPT1A	CPT1C	ACADS	ALDH1B1	ACADSB	ACADL	ALDH2
KEGG_STEF(http://www.SOAT1	LSS	SQLE	EBP	CYP51A1	DHCR7	CYP27B1
KEGG_PRI(http://www.CYP46A1	SLC27A5	BAAT	CYP7B1	AKR1C4	HSD17B4	SCP2
KEGG_STEF(http://www.SRD5A3	AKR1C4	CYP3A5	HSD3B2	UGT2B28	HSD3B1	COMT
KEGG_OXI(http://www.ATP6V1G1	UQCR10	NDUFA5	NDUFA4	COX6CP3	PPA2	ATP5J2
KEGG_PUR(http://www.POLR2G	NT5C2	POLR2H	ENPP3	POLR2E	POLR2F	ENPP1
KEGG_PYRI(http://www.NT5C2	POLR2G	POLR2H	POLR2E	POLR2F	POLR2I	POLR2J
KEGG_ALA(http://www.GLUD2	GFPT2	AGXT2	CPS1	GLS2	ABAT	ADSS
KEGG_GLY(http://www.ALAS1	ALAS2	GLYCTK	MAOB	AGXT2	MAOA	AOC2
KEGG_CYSI(http://www.AMD1	SRM	ADI1	AHCY	DNMT1	SDS	TRDMT1
KEGG_VALI(http://www.AOX1	ALDH1B1	ACADS	ACADSB	ABAT	ALDH2	ACADM
KEGG_VALI(http://www.PDHB	VAR2	IARS2	PDHA1	PDHA2	LARS	LARS2
KEGG_LYSII(http://www.SUV39H2	AASDHPPT	DLST	ALDH1B1	AASDH	ALDH2	ACAT2
KEGG_ARG(http://www.SRM	ADC	GLUD2	GLS2	ARG1	ARG2	GLUD1
KEGG_HIST(http://www.CNDP1	MAOB	MAOA	ALDH1B1	ALDH2	METTL6	ALDH3A1
KEGG_TYR(http://www.MAOB	MAOA	HPD	AOX1	AOC2	TYR	HGD
KEGG_PHE(http://www.ALDH1A3	ALDH3B1	ALDH3B2	MAOB	MAOA	HPD	GOT2
KEGG_TRYI(http://www.MAOB	MAOA	IDO2	AOX1	ALDH1B1	AANAT	ALDH2
KEGG_BET(http://www.CNDP1	SRM	ECHS1	ALDH9A1	ALDH3A2	GAD1	GAD2
KEGG_TAU(http://www.GGT7	CSAD	GGT5	GGT1	GAD1	BAAT	GAD2
KEGG_SELE(http://www.METTL6	AHCY	WBSCR22	SEPHS1	GGT1	SEPHS2	METTL2B
KEGG_GLU(http://www.SRM	GGT1	GSTP1	GSTT2	GSTT1	GSTZ1	RRM2B
KEGG_STA(http://www.ENPP3	GCK	ENPP1	AMY2B	UGT2B28	PGM2	UXS1
KEGG_N_G(http://www.ALG13	DOLPP1	RPN1	ALG14	MAN1B1	ALG3	B4GALT1
KEGG_OTH(http://www.ENGASE	GLB1	MANBA	MAN2B1	GBA	NEU4	NEU2
KEGG_O_G(http://www.GALNT4	GALNTL2	GALNTL5	GALNT6	GALNT5	GALNTL1	GALNTL6
KEGG_AMI(http://www.MPI	GCK	GFPT2	GALK1	GALE	PMM2	PGM2
KEGG_GLY(http://www.HS3ST3A1	HPSE	HPSE2	GLB1	GUSB	HYAL3	GNS
KEGG_GLY(http://www.DSE	B3GALT6	CHPF	XYLT1	CHSY3	XYLT2	CHST14
KEGG_GLY(http://www.CHST2	B3GNT1	B3GNT2	CHST1	B4GALT1	B3GNT7	ST3GAL2
KEGG_GLY(http://www.HS3ST5	EXT2	EXT1	NDST3	XYLT1	XYLT2	B3GAT1
KEGG_GLY(http://www.MBOAT2	GPAM	LIPG	DGKZ	DGKE	DGKD	DGKH
KEGG_INO(http://www.PLCB2	PLCB1	INPP1	IPMK	PLCD1	PLCB3	PLCB4
KEGG_GLY(http://www.PIGP	PIGW	PIGM	PIGN	PIGS	PIGF	DPM2
KEGG_GLY(http://www.PEMT	PLA2G15	GPD1	GPD1L	LPGAT1	GPAM	MBOAT2
KEGG_ETHI(http://www.ENPP2	PAFAH1B1	PPAP2B	LPCAT1	PLA2G3	ENPP6	LPCAT4
KEGG_ARA(http://www.EPHX2	CYP2E1	ALOX5	CYP4A11	CYP2J2	GGT1	PLA2G3
KEGG_LINC(http://www.CYP2E1	CYP3A5	CYP2J2	CYP3A4	PLA2G3	AKR1B10	CYP2C18
KEGG_ALPI(http://www.JMJD7-PLA	PLA2G6	PLA2G2E	PLA2G10	PLA2G2A	PLA2G4A	PLA2G5
KEGG_SPHI(http://www.GAL3ST1	SGPP2	GLB1	GALC	SGMS2	GBA	SPHK2
KEGG_GLY(http://www.B3GNT4	B3GNT2	ST3GAL6	B4GALT1	B3GNT5	FUT9	FUT7
KEGG_GLY(http://www.A4GALT	B3GALT5	GLA	FUT9	ST3GAL2	GBGT1	ST3GAL1
KEGG_GLY(http://www.ST6GALNA(ST6GALNA(ST6GALNA(B4GALNT1	GLB1	ST6GALNA(SLC33A1

KEGG_PYRI	http://www.ACSS2	PCK2	ME3	GRHPR	PDHB	PCK1	PDHA1
KEGG_GLY	http://www.ACO1	GLYCTK	MTHFD2	GRHPR	CS	HAO1	MDH2
KEGG_PRO	http://www.ACSS2	ALDH1B1	ABAT	LOC283398	ALDH2	ACADM	ACAT2
KEGG_BUT	http://www.AACS	PDHB	ALDH1B1	ACADS	PDHA1	ABAT	PDHA2
KEGG_ONE	http://www.MTHFD2	GART	TYMS	FTCD	ALDH1L1	MTHFS	MTFMT
KEGG_RIBC	http://www.ACPT	ENPP3	ENPP1	ACP6	RFK	ACPP	FLAD1
KEGG_NIC	http://www.NMNAT1	NT5C2	ENPP3	ENPP1	BST1	NNT	AOX1
KEGG_PAN	http://www.PPCS	ENPP3	PANK3	PPCDC	ENPP1	VNN2	VNN1
KEGG_FOL	http://www.QDPR	ALPP	ALPPL2	DHFR	GGH	GCH1	FPGS
KEGG_RET	http://www.RPE65	CYP3A5	UGT2B28	CYP4A11	CYP3A4	RDH8	DHRS3
KEGG_POR	http://www.ALAS1	COX10	UGT1A10	ALAS2	UGT1A8	UGT1A7	ALAD
KEGG_TER	http://www.GGPS1	PDSS1	HMGCS2	IDI2	HMGCS1	MVK	ACAT2
KEGG_LIM	http://www.NAT6	ECHS1	ALDH9A1	ALDH3A2	HADHA	ALDH1B1	EHHADH
KEGG_NITF	http://www.CA5A	CA5B	CA6	CA12	CA7	GLUD2	CA2
KEGG_SUL	http://www.SULT1E1	PAPSS1	SULT1A4	SULT1A3	PAPSS2	CHST11	SULT1A1
KEGG_AMI	http://www.CARS2	DARS2	RARS	SARS	VAR2	YARS2	WARS
KEGG_MET	http://www.CYP2F1	CYP2E1	AKR1C4	EPHX1	CYP3A5	UGT2B28	CYP3A4
KEGG_DRU	http://www.CYP2E1	CYP3A5	UGT2B28	CYP3A4	GSTP1	GSTT2	GSTT1
KEGG_DRU	http://www.XDH	CYP3A5	UGT2B28	UPB1	CYP3A4	GMPS	UPP2
KEGG_BIO	http://www.ACOT4	TECR	BAAT	ELOVL5	ELOVL6	ACOT2	YOD1
KEGG_ABC	http://www.ABCA7	ABCG4	ABCD1	ABCC12	ABCA1	TAP2	ABCA6
KEGG_RIBC	http://www.RPL35	RPL23	RPL3	RPL3L	RPL31	RPL4	RPL5
KEGG_RNA	http://www.LSM5	MPHOSPH	SKIV2L2	PATL1	EXOSC4	PNPT1	EXOSC2
KEGG_RNA	http://www.POLR2G	POLR2H	POLR2E	POLR2F	POLR1C	POLR2I	POLR2J
KEGG_BAS	http://www.TBPL2	TAF1L	TAF2	TAF4	TAF7L	TAF1	TAF9B
KEGG_DNA	http://www.DNA2	POLE4	POLE3	PRIM1	PRIM2	POLD4	RFC4
KEGG_SPL	http://www.EFTUD2	LSM5	SF3A1	HNRNPA1L	SF3B2	PRPF19	SNRNP27
KEGG_PRO	http://www.LOC652826	PSMD11	PSMD12	PSMC1P4	PSMD13	PSMB11	PSMA1
KEGG_PRO	http://www.SRPR	IMMP1L	SRP9P1	SRP9	SRP14	SEC61B	SEC63
KEGG_PPA	http://www.SLC27A5	SLC27A4	SORBS1	ACADL	CYP4A11	ACADM	APOA2
KEGG_BAS	http://www.NEIL2	MPG	SMUG1	XRCC1	POLE4	HMGB1	POLE3
KEGG_NUC	http://www.MNAT1	POLE4	ERCC4	POLE3	ERCC3	ERCC6	ERCC5
KEGG_MIS	http://www.MLH3	POLD1	MLH1	POLD2	RFC1	MSH2	RFC3
KEGG_HON	http://www.RAD54L	XRCC3	RAD51B	NBN	RAD52	RAD51D	XRCC2
KEGG_NON	http://www.XRCC4	MRE11A	POLL	POLM	LOC731751	NHEJ1	LIG4
KEGG_MAF	http://www.JUN	MEF2C	ELK4	ELK1	JUND	GADD45B	ZAK
KEGG_ERB	http://www.JUN	SOS2	PAK3	RAF1	PRKCB	BTC	SHC1
KEGG_CAL	http://www.CALM2	PTGFR	BST1	PTGER1	F2R	CALM1	PTGER3
KEGG_CYT	http://www.CCL26	TNFSF13	HGF	CCL3L1	TNFSF12	TNFRSF8	TNFSF10
KEGG_CHE	http://www.CCL26	STAT3	STAT1	STAT2	CCL3L1	CCL2	GNB4
KEGG_PHO	http://www.PLCB2	CALM2	INPP1	PLCB1	PLCD1	PRKCB	PRKCA
KEGG_NEU	http://www.PTGER	PTGER2	PTGER1	PTGER4	PTGER3	CALCRL	TACR3
KEGG_CELL	http://www.CDC16	CDC7	CDC45	GADD45B	DBF4	ANAPC1	CREBBP
KEGG_OOC	http://www.CDC16	CALM2	CALM1	IGF1	RPS6KA6	PPP3R2	PPP3CC
KEGG_P53	http://www.CASP9	CASP8	SFN	TSC2	IGF1	CDK1	GADD45B
KEGG_UBI	http://www.CDC16	KLHL13	PIAS3	UBA6	UBE2L6	BIRC3	HERC1
KEGG_SNA	http://www.STX12	STX2	VAMP5	GOSR2	SNAP29	STX7	STX6
KEGG_REG	http://www.ATG4A	ULK3	BECN1	IFNA5	IFNA4	IFNA2	GABARAPL
KEGG_LYSC	http://www.PLA2G15	AP3B2	GGA1	SLC11A1	PPT1	MFSD8	CTSZ
KEGG_END	http://www.F2R	EPN3	IQSEC1	IQSEC3	ADRBK2	ADRBK1	ADRB3

KEGG_PER	http://www.ebi.ac.uk/KEGG/pathway/map/EPHX2	XDH	BAAT	MVK	CAT	NUDT19	PMVK
KEGG_MTC	http://www.ebi.ac.uk/KEGG/pathway/map/TSC2	IGF1	RPS6KA6	MTOR	EIF4B	EIF4E	EIF4EBP1
KEGG_APO	http://www.ebi.ac.uk/KEGG/pathway/map/CASP10	CASP9	CASP8	CASP7	CHUK	PRKAR2B	TNF
KEGG_CAR	http://www.ebi.ac.uk/KEGG/pathway/map/CACNA2D1	CACNB1	COX8A	CACNB2	UQCR10	COX7C	CACNB3
KEGG_VAS	http://www.ebi.ac.uk/KEGG/pathway/map/CALM2	CALD1	CALM1	CYP4A11	CALCRL	PTGIR	PPP1R14A
KEGG_WN	http://www.ebi.ac.uk/KEGG/pathway/map/JUN	LRP5	LRP6	PPP3R2	SFRP2	SFRP1	PPP3CC
KEGG_DOR	http://www.ebi.ac.uk/KEGG/pathway/map/SOS2	NOTCH4	NOTCH3	NOTCH2	EGFR	NOTCH1	KRAS
KEGG_NOT	http://www.ebi.ac.uk/KEGG/pathway/map/HES5	DTX3	NOTCH4	DTX3L	NOTCH3	NOTCH2	EP300
KEGG_HED	http://www.ebi.ac.uk/KEGG/pathway/map/CSNK1A1L	HHIP	PTCH2	GAS1	WNT3A	ZIC2	WNT9B
KEGG_TGF	http://www.ebi.ac.uk/KEGG/pathway/map/TFDP1	NOG	TNF	GDF7	INHBB	INHBC	COMP
KEGG_AXO	http://www.ebi.ac.uk/KEGG/pathway/map/UNC5B	PLXNB2	PPP3R2	PPP3CC	PPP3R1	PAK4	NGEF
KEGG_VEG	http://www.ebi.ac.uk/KEGG/pathway/map/CASP9	RAF1	PRKCB	PRKCA	PPP3R2	PPP3CC	PPP3R1
KEGG_FOC	http://www.ebi.ac.uk/KEGG/pathway/map/JUN	LOC100418518	ELK1	HGF	PARVA	FN1	TNN
KEGG_ECM	http://www.ebi.ac.uk/KEGG/pathway/map/GP1BA	COL6A2	COL6A3	GP1BB	COL5A2	COL6A1	LAMA1
KEGG_CELL	http://www.ebi.ac.uk/KEGG/pathway/map/CDH5	JAM3	CDH3	NLGN3	CDH4	CD80	NLGN1
KEGG_ADH	http://www.ebi.ac.uk/KEGG/pathway/map/MLLT4	LOC100418518	SORBS1	WAS	SNAI2	IGF1R	RHOA
KEGG_TIG	http://www.ebi.ac.uk/KEGG/pathway/map/INADL	JAM3	LOC100418518	MLLT4	CSDA	PPP2R2D	MAGI2
KEGG_GAP	http://www.ebi.ac.uk/KEGG/pathway/map/PLCB2	GRM5	SOS2	ADCY8	PLCB1	ADCY9	ADCY6
KEGG_CON	http://www.ebi.ac.uk/KEGG/pathway/map/F2	F2R	VWF	KNG1	FGB	PLAT	SERPIND1
KEGG_ANT	http://www.ebi.ac.uk/KEGG/pathway/map/HLA-DOA	HLA-DOB	KLRC3	KLRD1	KLRC1	KLRC2	RFXAP
KEGG_REN	http://www.ebi.ac.uk/KEGG/pathway/map/LNPEP	ACE2	REN	ANPEP	CMA1	CTSA	CTSG
KEGG_TOLI	http://www.ebi.ac.uk/KEGG/pathway/map/JUN	CD80	CD86	STAT1	TLR9	CCL3	MYD88
KEGG_NOC	http://www.ebi.ac.uk/KEGG/pathway/map/TRIP6	CASP8	CHUK	TAB3	CXCL1	RIPK2	TNF
KEGG_RIG	http://www.ebi.ac.uk/KEGG/pathway/map/CASP10	CASP8	CXCL10	CHUK	TRIM25	TNF	IFNA5
KEGG_CYT	http://www.ebi.ac.uk/KEGG/pathway/map/CXCL10	CHUK	IFNA5	IFNA4	IFNA2	POLR1D	CCL5
KEGG_JAK	http://www.ebi.ac.uk/KEGG/pathway/map/STAT3	STAT4	STAT1	STAT2	PIAS3	TYK2	IL21R
KEGG_HEM	http://www.ebi.ac.uk/KEGG/pathway/map/GP1BA	GP1BB	EPO	IL9R	CD33	TNF	GP9
KEGG_NAT	http://www.ebi.ac.uk/KEGG/pathway/map/ZAP70	TNFSF10	ITGAL	PPP3R2	PPP3CC	PPP3R1	FCER1G
KEGG_T_C	http://www.ebi.ac.uk/KEGG/pathway/map/JUN	ZAP70	MALT1	CD28	PDPK1	PPP3R2	PPP3CC
KEGG_B_C	http://www.ebi.ac.uk/KEGG/pathway/map/JUN	SOS2	CHUK	RAF1	PRKCB	MALT1	CARD11
KEGG_FC_f	http://www.ebi.ac.uk/KEGG/pathway/map/SOS2	RAF1	PRKCB	PRKCA	PDPK1	TNF	MAP2K4
KEGG_FC_c	http://www.ebi.ac.uk/KEGG/pathway/map/FCGR1A	SPHK1	PIP4K2B	WASF2	PLA2G6	VAV1	WASF1
KEGG_LEU	http://www.ebi.ac.uk/KEGG/pathway/map/CDH5	JAM3	MLLT4	LOC100418518	TXK	ITGAL	ITGAM
KEGG_INTE	http://www.ebi.ac.uk/KEGG/pathway/map/HLA-DRB4	TNFRSF13C	HLA-DRB5	HLA-DOA	HLA-DOB	HLA-DRB3	CD80
KEGG_CIRC	http://www.ebi.ac.uk/KEGG/pathway/map/NPAS2	PER3	PER2	CSNK1D	CRY1	BHLHE41	BHLHE40
KEGG_LON	http://www.ebi.ac.uk/KEGG/pathway/map/GRM5	PLCB2	ADCY8	CALM2	PLCB1	RAF1	PRKCB
KEGG_NEU	http://www.ebi.ac.uk/KEGG/pathway/map/JUN	FRS2	CALM2	CALM1	PDPK1	RPS6KA6	TP73
KEGG_LON	http://www.ebi.ac.uk/KEGG/pathway/map/GRM5	PLCB2	RYR1	PLCB1	RAF1	PRKCB	PRKCA
KEGG_OLF	http://www.ebi.ac.uk/KEGG/pathway/map/CALM2	CALM1	OR11H4	OR52W1	OR5AU1	ADRBK2	OR2M2
KEGG_TAS	http://www.ebi.ac.uk/KEGG/pathway/map/TAS2R60	GRM4	PLCB2	ADCY8	ADCY6	TAS2R42	TAS1R2
KEGG_REG	http://www.ebi.ac.uk/KEGG/pathway/map/LOC100418518	BRK1	FN1	ENAH	DIAPH1	SSH2	RRAS2
KEGG_INSL	http://www.ebi.ac.uk/KEGG/pathway/map/GCK	CALM2	PPARGC1A	ELK1	CALM1	EIF4E	EIF4EBP1
KEGG_GNR	http://www.ebi.ac.uk/KEGG/pathway/map/JUN	CALM2	ELK1	CALM1	MAP2K4	JMJD7-PLA	MMP2
KEGG_PRO	http://www.ebi.ac.uk/KEGG/pathway/map/CDC16	ADCY8	ADCY9	ADCY6	RAF1	ADCY7	ADCY5
KEGG_MEL	http://www.ebi.ac.uk/KEGG/pathway/map/CALM2	CALM1	TYR	CREB3L1	FZD1	FZD4	FZD6
KEGG_ADIF	http://www.ebi.ac.uk/KEGG/pathway/map/STAT3	CHUK	PTPN11	PPARGC1A	NPY	TNF	SLC2A4
KEGG_TYPI	http://www.ebi.ac.uk/KEGG/pathway/map/PIK3R5	GCK	MAPK8	TNF	MAFA	SOCS1	SLC2A4
KEGG_TYPI	http://www.ebi.ac.uk/KEGG/pathway/map/HLA-DRB4	HLA-DRB5	LTA	HLA-DOA	HLA-DOB	HLA-DRB3	CD80
KEGG_MAT	http://www.ebi.ac.uk/KEGG/pathway/map/MNX1	NEUROG3	GCK	HHEX	HES1	MAFA	PAX6
KEGG_ALD	http://www.ebi.ac.uk/KEGG/pathway/map/PIK3R5	SFN	NR3C2	PRKCB	PRKCA	FXYD4	KRAS

KEGG_VAS	http://www.ADCY9	ADCY6	DYNLL2	DYNC1L12	VAMP2	DCTN6	CREB3L4
KEGG_PRO	http://www.SLC25A10	GLUD2	PCK2	CA2	CA4	PCK1	GLS2
KEGG_ALZ	http://www.UQCR10	NAE1	CALM2	NDUFA5	NDUFA4	COX6CP3	CALM1
KEGG_PAR	http://www.UQCR10	NDUFA5	NDUFA4	COX6CP3	UBE2L6	NDUFS7	CYTB
KEGG_AM	http://www.CASP9	TNF	CAT	PPP3R2	PPP3CC	PPP3R1	ALS2
KEGG_HUN	http://www.POLR2G	POLR2H	POLR2E	UQCR10	POLR2F	NDUFA5	PPARGC1A
KEGG_PRIC	http://www.NCAM2	EGR1	NCAM1	ELK1	NOTCH1	PRKX	C6
KEGG_VIBF	http://www.LOC10041	ATP6V1G1	PDIA4	ADCY9	PRKCB	SLC12A2	SEC61B
KEGG_EPIT	http://www.JUN	JAM3	ATP6V1G1	CHUK	PTPN11	CXCL1	MAP2K4
KEGG_PAT	http://www.LOC10041	TUBA1A	PRKCA	KRT18	WAS	CLDN1	TUBB4A
KEGG_LEIS	http://www.JUN	HLA-DOA	HLA-DOB	PRKCB	STAT1	ELK1	TNF
KEGG_PAT	http://www.JUN	STAT3	TFG	STAT1	HGF	BIRC5	FN1
KEGG_COL	http://www.JUN	CASP9	RAF1	BIRC5	APC2	RHOA	LEF1
KEGG_REN	http://www.JUN	SOS2	PAK3	PTPN11	RAF1	HGF	PAK2
KEGG_PAN	http://www.CASP9	E2F1	STAT3	CHUK	RAF1	ARHGEF6	STAT1
KEGG_END	http://www.CASP9	SOS2	RAF1	ELK1	APC2	LEF1	BAD
KEGG_GLIC	http://www.SOS2	CALM2	E2F1	PRKCB	RAF1	SHC1	PRKCA
KEGG_PRO	http://www.CASP9	SOS2	E2F1	CHUK	RAF1	IGF1	CREB3L4
KEGG_THY	http://www.PAX8	HRAS	CCDC6	TFG	NCOA4	KRAS	CTNNB1
KEGG_BAS	http://www.HHIP	FZD1	APC2	FZD4	FZD6	PTCH2	FZD7
KEGG_MEL	http://www.E2F1	RAF1	FGF9	HGF	FGF8	FGF7	IGF1
KEGG_BLA	http://www.HRAS	E2F1	RAF1	EGFR	CDKN2A	KRAS	EGF
KEGG_CHR	http://www.SOS2	E2F1	CHUK	PTPN11	RAF1	SHC1	BAD
KEGG_ACU	http://www.SOS2	CHUK	STAT3	ZBTB16	RAF1	RARA	PML
KEGG_SMA	http://www.CASP9	MAX	E2F1	CHUK	LAMA1	RARB	PIAS3
KEGG_NON	http://www.CASP9	SOS2	E2F1	PRKCB	RAF1	PRKCA	RARB
KEGG_AST	http://www.HLA-DRB4	HLA-DRB5	HLA-DOA	HLA-DOB	HLA-DRB3	IL3	TNF
KEGG_AUT	http://www.HLA-DOA	HLA-DOB	CD80	CD86	CD28	IFNA5	IFNA4
KEGG_SYST	http://www.CD80	CD86	HIST3H2BB	CD28	H2AFY	H3.X	HIST1H2AA
KEGG_ALLC	http://www.HLA-DRB4	HLA-DRB5	HLA-DOA	HLA-DOB	HLA-DRB3	CD80	CD86
KEGG_GRA	http://www.HLA-DRB4	KIR2DL1	HLA-DRB5	HLA-DOA	HLA-DOB	HLA-DRB3	CD80
KEGG_PRIN	http://www.ZAP70	CD4	TNFRSF13C	IKBKG	IL2RG	REFAP	TAP2
KEGG_HYP	http://www.CACNA2D1	CACNB1	LOC10041	CACNB2	CACNB3	CACNB4	CACNG1
KEGG_ARR	http://www.CACNA2D1	CACNB1	LOC10041	CACNB2	CACNB3	CACNB4	CACNG1
KEGG_DILA	http://www.CACNA2D1	CACNB1	LOC10041	CACNB2	ADCY8	CACNB3	ADCY9
KEGG_VIRA	http://www.CASP9	LOC10041	CASP8	HLA-DOA	HLA-DOB	CD80	CD86

PGM2	TPI1	ACSS1	FBP1	ADH1B	HK2	ADH1C	HK1	HK3
LOC642502	PDHA2	LOC283398	FBP1	SDHD	OGDH	SDHB	IDH3A	SDHC
PFKL	TALDO1	TKT	FBP1	TKTL2	PGD	RBKS	ALDOA	ALDOC
CRYL1	UGDH	UGT2A1	GUSB	UGT1A9	DCXR	LOC729020	DHDH	UGT2B11
PFKL	MTMR6	TPI1	PHPT1	PFKFB3	FUK	PFKFB2	MTMR1	PFKFB1
PFKM	PFKL	MGAM	HK2	HK1	HK3	GALT	G6PC2	GLA
UGT1A5	MIOX	UGDH	UGT2A1	ALDH9A1	ALDH3A2	UGT1A9	ALDH7A1	UGT2B11
ACADM	CYP4A11	ACAT2	ACADVL	ACAT1	ACAA2	HADH	HADHB	HADHA
DHCR24	HSD17B7	MSMO1	FDFT1	SC5DL	LIPA	CEL	TM7SF2	NSDHL
AKR1D1	ACOX2	HSD3B7	CYP27A1	AMACR	CYP7A1	CYP8B1	CYP39A1	CH25H
SULT2B1	CYP3A4	CYP7A1	CYP11A1	AKR1C3	HSD11B2	SULT1E1	HSD11B1	HSD17B2
NDUFS7	CYTB	ATP6V0A1	ATP6V1G2	ATP6V0B	ATP5O	COX2	COX1	ATP6AP1
XDH	POLR2I	POLR2J	POLE3	ADSS	PRPS2	ADSL	NME6	POLR1D
POLE3	TYMS	TXNRD1	NME6	POLR1D	PNPT1	POLR2K	DHODH	POLD3
ADSL	GLUD1	GLS	ASL	IL4I1	GPT	GFPT1	GPT2	DDO
GATM	SDS	AOC3	GNMT	SHMT1	GCAT	PHGDH	DMGDH	SHMT2
DNMT3A	DNMT3B	LDHC	IL4I1	SMS	LDHB	ENOPH1	BHMT	GOT2
ACAT2	HSD17B10	ACAT1	OXCT1	ACAA2	IL4I1	HADH	MCEE	HADHB
VARS	BCAT1	BCAT2	IARS					
PLOD2	PLOD1	TMLHE	EHMT2	ACAT1	SETD8	HADH	SETMAR	OGDH
GLS	ASL	CKMT1A	P4HA2	SMS	CKB	NOS3	NOS2	NOS1
WBSCR22	HAL	HNMT	DDC	ACY3	ALDH1A3	METTTL2B	ALDH3B1	ALDH3B2
METTTL6	ALDH3A1	COMT	AOC3	WBSCR22	IL4I1	GSTZ1	DDC	ADH7
AOC2	ALDH3A1	AOC3	PAH	GOT1	PRDX6	TAT	MIF	NAT6
WARS	IDO1	CAT	ACAT2	ACAT1	IL4I1	HADH	OGDH	TPH1
AOC2	ALDH1B1	HIBCH	ABAT	EHHADH	ALDH2	ACADM	UPB1	ALDH7A1
GGT6	CDO1	ADO						
HEMK1	GGT6	LCMT2	PAPSS1	PAPSS2	TRMT11	MARS2	SCLY	AHCYL1
SMS	PGD	GSTO1	GSTA5	MGST2	LAP3	MGST1	MGST3	GSTA3
UGDH	MGAM	GYS1	GYS2	HK2	HK3	HK1	GBA3	GUSB
MGAT5	RPN2	STT3A	MGAT3	DAD1	MGAT2	ALG12	TUSC3	MAN1C1
NEU1	FUCA1	FUCA2	AGA	MAN2C1	MAN2B2	NEU3	HEXB	HEXA
GALNT13	GCNT3	GALNT10	ST6GALNA1	GALNT9	GALNT7	GCNT4	GALNT11	GCNT1
PMM1	AMDHD2	GNPDA2	GMD5	UXS1	GNPNAT1	NANS	UGDH	CY5R3
HYAL4	HYAL1	HYAL2	SPAM1	HGSNAT	GALNS	IDUA	HS3ST3B1	SGSH
B3GAT1	CHSY1	CHST11	CHPF2	CHST15	B4GALT7	CHST7	UST	CHST13
B4GALT3	ST3GAL1	B4GALT2	B4GALT4	CHST4	ST3GAL3	FUT8	CHST6	
NDST1	GLCE	HS3ST3B1	HS2ST1	HS6ST2	B3GAT3	HS3ST1	B3GALT6	HS3ST2
MBOAT1	GK	DGAT2	GK2	GLA	ALDH7A1	AGK	DAK	AGPAT3
MIOX	TPI1	INPP5A	INPP5B	INPP4A	INPPL1	SYNJ2	PIP4K2B	PLCD3
PIGQ	PIGH	PIGO	PIGG	PIGZ	GPAA1	PIGU	PGAP1	PIGT
MBOAT7	CHAT	LPCAT1	PTDSS1	ACHE	PLA2G3	DGKZ	ETNK1	DGKE
PLA2G4E	JMJD7-PLA	CHPT1	AGPS	PLA2G6	PAFAH1B3	PLA2G2E	PLA2G10	PAFAH2
AKR1C3	PTGIS	ALOX12B	CYP4F2	CYP2C18	PTGES2	ALOX15B	ALOX15	JMJD7-PLA
CYP1A2	ALOX15	PLA2G4E	JMJD7-PLA	PLA2G6	PLA2G2E	PLA2G10	PLA2G2A	PLA2G4A
PLA2G12B	PLA2G4B	PLA2G2F	FADS2	ACOX3	PLA2G2C	PLA2G2D	PLA2G3	PLA2G12A
NEU2	PPAP2B	NEU1	ACER2	UGCG	DEGS2	ARSA	SPHK1	SGPL1
FUT6	FUT5	FUT4	FUT3	FUT2	FUT1	B3GNT1	GCNT2	B3GNT3
FUT2	FUT1	HEXB	NAGA	ST8SIA1	B3GALNT1	HEXA		
ST3GAL5	ST3GAL2	ST3GAL1	HEXB	ST8SIA1	B3GALT4	ST8SIA5	HEXA	

ALDH1B1	PDHA2	HAGH	ALDH2	ACAT2	ACAT1	LDHC	LDHD	HAGHL
MDH1	MTHFD2L	PGP	MTHFD1L	MTHFD1	HAO2	AFMID	HYI	ACO2
ACAT1	LDHC	MCEE	HADHA	ALDH6A1	ACSS1	LDHB	ECHS1	ALDH9A1
ALDH2	ACAT2	ACAT1	OXCT1	HADH	BDH1	HADHA	ACSM1	HMGCL
AMT	MTHFD2L	DHFR	SHMT1	MTHFD1L	MTHFD1	MTR	ATIC	MTHFR
TYR	MTMR7	MTMR6	PHPT1	MTMR1	ACP1	ACP2	ACP5	MTMR2
CD38	NT5M	NADSYN1	NUDT12	NT5C1B	NT5C3	C9orf95	NT5C1A	QPRT
PANK1	PANK4	UPB1	DPYS	COASY	DPYD	PANK2	BCAT1	BCAT2
SPR	ALPL	PTS	ALPI					
CYP2C18	ADH1B	ADH1C	ADH4	ADH5	DGAT2	ADH1A	BCMO1	RDH10
UGT1A6	CPOX	BLVRA	UGT2B28	BLVRB	UGT1A5	UROS	HCCS	UGT2A1
ACAT1	FDPS	PDSS2	PMVK	DHDDS	MVD	HMGCR	IDI1	
YOD1	ALDH2	ALDH7A1						
CPS1	CA3	CA4	GLS2	GLUL	CA8	CA14	GLUD1	CA9
SULT2B1	SUOX	BPNT1	CHST13	SULT1A2	CHST12			
AARS	FARSA	HARS	SARS2	RARS2	NARS	LARS2	FARSB	AARS2
GSTP1	GSTT2	GSTT1	AKR1C3	GSTZ1	CYP2C18	ADH1B	CYP2S1	ADH1C
GSTZ1	CYP2C18	CYP2D6	ADH1B	FMO4	ADH1C	ADH4	ADH5	GSTO1
HPRT1	CDA	GUSB	IMPDH1	IMPDH2	CES2	UCKL1	UGT2B11	TPMT
ELOVL2	FADS1	FADS2	ACOX3	PECR	SCD5	SCD	PTPLA	ACAA1
TAP1	ABCA5	ABCB8	ABCA10	ABCD4	ABCA3	ABCB11	ABCD3	ABCA2
RPL32	RPS10	RPL34	RPS11	RPS12	RPL36AL	RPS13	RPL35A	RPL37A
SKIV2L	XRN2	EXOSC5	TTC37	LSM6	EXOSC3	EXOSC1	EDC4	CNOT3
POLR3D	POLR1D	POLR3K	POLR3GL	POLR1B	POLR2K	POLR2J2	POLR2L	POLR3H
GTF2A1L	STON1	TBP	GTF2A1	GTF2B	GTF2A2	TAF11	TAF12	TAF5L
RFC5	RPA1	POLA1	RPA3	POLD3	RNASEH2B	RPA2	PCNA	RPA4
HNRNPA3	LSM6	USP39	DDX42	NCBP1	SF3B1	MAGOH	CDC40	SF3B3
PSMD4	POMP	PSMD6	PSMD7	PSMA5	PSMD8	PSMA4	PSMA3	PSMA2
SRPRB	SRP19	SRP54	SEC61G	HSPA5	IMMP2L	SEC61A2	OXA1L	SEC11A
CD36	FADS2	APOA1	CYP7A1	SLC27A1	SCD	CYP8B1	UCP1	DBI
POLD4	MBD4	OGG1	UNG	POLD3	PCNA	NEIL1	POLE2	PARP4
GTF2H5	POLD4	ERCC2	RFC4	CETN2	RFC5	RPA1	RAD23B	RBX1
RFC2	MSH3	POLD4	PMS2	RFC4	LIG1	RFC5	RPA1	MSH6
POLD4	BLM	EME1	RPA1	RAD51	POLD3	RAD50	RPA3	RPA2
FEN1	DNTT	XRCC5	RAD50	XRCC6	PRKDC	DCLRE1C		
STMN1	RRAS2	MAP3K5	MAP3K1	MAP3K3	MAP3K4	MAP3K7	MAP3K8	AKT1
PRKCA	ELK1	NRG1	PAK2	MTOR	PAK4	MAP2K4	EIF4EBP1	BAD
ATP2A1	OXTR	PPP3R2	P2RX4	TACR3	P2RX5	PPP3CC	ADRB3	ATP2A3
CCL2	TNFSF8	TNFSF9	CCL3	TNFSF14	IL21R	CCL5	CCL4	CCL13
CCL3	ADRBK2	ADRBK1	CCL5	CCL4	CX3CR1	CCL13	CCL11	CCL8
PLCB3	CALM1	PLCB4	DGKZ	INPP5A	DGKE	INPP5B	DGKD	INPP4A
PTGIR	ADRB3	ADRB2	HRH4	ADRA2C	ADRB1	TACR1	ADRA2A	ADRA2B
MDM2	ABL1	SMC1B	LOC728622	GADD45G	ATM	ATR	ANAPC7	RBL2
SLK	PPP3R1	IGF1R	ANAPC1	SPDYC	ITPR3	SMC1B	LOC728622	CHP2
RCHY1	ZMAT3	IGFBP3	RRM2B	BAI1	TP73	SERPIN5	RPRM	PPM1D
XIAP	PML	HERC2	PRPF19	ANAPC1	UBE2S	UBE2O	UBE2M	UBE2Q2
STX1A	STX11	STX16	VAMP1	VAMP3	BNIP1	STX3	VAMP2	STX10
ATG12	IFNG	IFNA1	ATG4B	PRKAA2	PRKAA1	GABARAPL	PIK3C3	INS
NAGPA	IGF2R	ARSG	ATP6V0A1	CTSW	ATP6V0B	LGMIN	CTSS	AP4S1
ADRB2	EPN2	STAMBP	ADRB1	IGF1R	CLTCL1	HGS	VPS37C	FAM125B

PEX16	HAO2	FAR2	PRDX5	HMGCL	PHYH	DDO	ACSL6	AGPS
RICTOR	INS	PGF	ULK1	RHEB	BRAF	HIF1A	PDPK1	RPTOR
TNFSF10	BIRC3	XIAP	PPP3R2	PPP3CC	PPP3R1	MYD88	FADD	CFLAR
CACNB4	CACNG1	COX6CP3	FXYD2	CACNG8	RYR2	CACNG6	ATP2A2	CACNG7
JMJD7-PLA	ROCK1	PLA2G6	PLA2G2E	MRVI1	PLA2G10	BRAF	ITPR3	PLA2G4B
VANGL1	PPP3R1	FZD1	FZD4	APC2	FZD6	FZD7	SEN2	FZD8
FMN2	LOC652554	ETV7	PIWIL3	ETV6	PIWIL2	MAP2K1	PIWIL1	GRB2
HES1	NOTCH1	NUMB	PSEN2	PSEN1	PTCRA	SNW1	APH1A	KAT2A
WNT9A	LRP2	CSNK1G1	WNT2B	WNT11	WNT10B	IHH	SMO	WNT10A
INHBA	THBS4	RHOA	CREBBP	ROCK1	ID1	ID2	RPS6KB1	RPS6KB2
SEMA4C	SEMA4A	PLXNC1	ROCK1	ABLIM3	PTK2	ROBO1	SLIT2	ROBO2
SH2D2A	PLA2G3	SPHK1	BAD	PRKCG	JMJD7-PLA	PLA2G6	RAC2	PTK2
IGF1	BIRC3	XIAP	COMP	THBS4	IGF1R	DIAPH1	ITGA11	PGF
VWF	HSPG2	TNN	FN1	ITGA9	GP9	COMP	IBSP	CD36
CD86	CD28	CD274	PDCD1LG2	ITGA9	ITGAL	NRCAM	ITGAM	CD34
CREBBP	LEF1	ACTN4	PTPN6	ACTN1	SNAI1	ERBB2	WASF2	RAC2
MPP5	TJP3	MYH13	ZAK	EPB41L3	MYH14	RRAS2	MYH1	CTTN
TUBA1A	RAF1	PRKCB	ADCY7	PRKCA	PLCB3	PLCB4	ADCY5	GRM1
MBL2	F3	F5	SERPINA1	PLAUR	F7	PLAU	F10	F9
RFX5	IFNA5	IFNA4	IFNA2	IFNA1	LGMN	PSME3	CTSS	HLA-C
THOP1	AGT	AGTR1	ACE	AGTR2	NLN	ENPEP	CPA3	MAS1
CCL5	MAP2K4	CCL4	LBP	RIPK1	TLR6	IKBKB	LY96	MAP3K8
BIRC3	CCL2	XIAP	CCL5	NOD1	CARD6	CCL13	CCL11	CCL8
IFNA4	IFNA2	ATG12	TBKBP1	FADD	SIKE1	IFNA1	RIPK1	IL8
CCL4	IFNA1	RIPK1	POLR3K	AIM2	IKBKB	IFNA17	CASP1	IFNA21
CREBBP	SOCS5	IL23A	CTF1	STAM	SPRY4	IL22	JAK1	AKT1
ITGAM	CD34	CD36	GP5	ITGA4	ITGA3	KITLG	ITGA2B	FCGR1A
SH2D1B	HLA-G	BRAF	VAV1	SHC4	PRF1	VAV2	NRAS	CHP2
PPP3R1	PAK4	ICOS	VAV1	IKBKB	MAP3K8	MAP3K7	AKT1	AKT2
PPP3R2	PPP3CC	PPP3R1	PTPN6	INPP5D	DAPP1	RAC2	MAP2K2	RAC3
PLA2G3	FCER1G	MS4A2	FCER1A	PRKCD	INPP5D	PRKCE	JMJD7-PLA	MAPK9
PLA2G4B	PIKFYVE	VASP	AKT1	AKT2	PIP5K1A	AMPH	DOCK2	PIP5K1B
ITGA4	SIPA1	ROCK1	MMP2	PTK2	MYL7	NCF4	MMP9	NCF2
CD86	CD28	TNFSF13	TNFSF13B	CCL27	IL15RA	IL15	ICOSLG	ITGA4
NR1D1	CRY2	CSNK1E	PER1	CLOCK	ARNTL			
PLCB3	PRKCA	CALM1	PLCB4	RPS6KA6	PPP3R2	GRM1	PPP3CC	PPP3R1
MAP3K5	RPS6KA5	BRAF	MAP3K1	MAP3K3	IKBKB	ABL1	AKT1	SHC4
PLCB3	PLCB4	IGF1	CRHR1	GRM1	CRH	IGF1R	PLA2G3	GRID2
OR2M7	OR2T33	OR4F5	CLCA4	OR52K1	OR52I1	OR51D1	OR2J2	OR8I2
TAS1R1	TRPM5	ACCN1	PDE1A	CACNA1A	ITPR3	CACNA1B	TAS2R5	ADCY4
ITGA11	ROCK1	PTK2	MYL7	ARHGEF7	ARPC4	CD14	FGD3	ARPC5
PRKAG2	FBP1	HK2	HK1	RHEB	BRAF	PDPK1	IKBKB	EXOC7
PLA2G2E	PLA2G6	PLA2G10	MAP3K1	MAP3K3	ITPR3	MAP3K4	PLA2G4B	CGA
SPDYA	IGF1	RPS6KA6	CDK1	ANAPC10	IGF1R	ANAPC1	INS	ANAPC11
FZD7	LEF1	CREBBP	CREB3	FZD8	FZD9	POMC	WNT9B	WNT9A
CD36	SLC2A1	MTOR	ADIPOR2	PRKAG2	ACSL6	POMC	MAPK9	MAPK10
SLC2A2	MTOR	SOCS2	SOCS3	INS	PRKCD	PRKCE	MAPK9	HK2
CD86	CD28	TNF	ICA1	IFNG	LOC652614	PTPRN2	HLA-C	HLA-B
SLC2A2	BHLHA15	HNF1B	HNF4G	NKX6-1	HNF1A	FOXA3	HNF4A	NKX2-2
FXYD2	IGF1	SCNN1G	SCNN1B	SCNN1A	ATP1B2	KCNJ1	ATP1B3	ATP1A4

AQP4	PRKX	RAB11A	DYNLL1	DCTN2	AQP3	CREB3L1	ADCY3	CREB3
FXSD2	MDH1	SLC38A3	ATP1A1	GLUD1	ATP1A3	SLC4A4	ATP1A2	GLS
ATP2A1	PPP3R2	EIF2AK3	PPP3CC	ATP2A3	PPP3R1	ATP2A2	NDUFS7	CYTB
COX2	ATP5O	COX1	COX8C	COX3	LOC729317	COX5B	COX4I1	ATP6
BAD	CCS	MAP3K5	TOMM40L	GRIN1	GRIN2A	MAPK11	GRIN2B	SOD1
NDUFA4	POLR2I	COX6CP3	POLR2J	TAF4	NRF1	DCTN2	CREB3L1	NDUFS7
CCL5	C5	IL1B	SOD1	STIP1	MAP2K2	HSPA1A	MAP2K1	BAX
PRKCA	TJP2	KDELRL3	ATP6V0A1	ATP6V1G2	KDELRL2	ATP6V0B	ATP6V1G3	ATP6AP1
CCL5	NOD1	ADAM17	ATP6V0A1	ATP6V1G2	ATP6V0B	ATP6V1G3	CXCR2	ATP6AP1
TUBB4B	TUBB3	RHOA	CTTN	ROCK1	TUBB2A	WASL	LOC646821	LY96
ITGAM	ITGA4	MYD88	FCGR2C	FCGR1A	HLA-DMB	HLA-DMA	PTPN6	IRAK4
BIRC3	IGF1	XIAP	PML	JUP	HHIP	IGF1R	FZD1	FZD4
MSH6	BAD	MAPK9	MAPK10	RAC2	RAC3	BRAF	MLH1	MAP2K1
SLC2A1	PAK4	CREBBP	TCEB1	TCEB2	PGF	MAP2K2	TGFA	BRAF
RAD51	BAD	PGF	MAPK9	MAPK10	ERBB2	RAC2	BRCA2	TGFA
ERBB2	MAP2K2	BRAF	MLH1	MAP2K1	PDPK1	ILK	AKT1	AKT2
CALM1	IGF1	MTOR	IGF1R	PRKCG	PDGFRB	MAP2K2	TGFA	BRAF
MTOR	CREB3L1	PDGFD	NKX3-1	IGF1R	GSTP1	CREB3	CREBBP	LEF1
LEF1	CCND1	MAP2K2	TCF7L1	BRAF	MAP2K1	RXR	RXR	RXR
FZD8	LEF1	FZD9	WNT3A	DVL3	WNT9B	DVL2	WNT9A	FZD3
FGF6	FGF5	PDGFD	IGF1R	FGF3	FGF4	FGF1	FGF2	FGF21
CDKN1A	TYMP	VEGFA	ARAF	VEGFC	VEGFB	PGF	IL8	CCND1
CTBP2	CTBP1	MAP2K2	BRAF	MECOM	MAP2K1	IKBKB	MDM2	RB1
JUP	MTOR	CEBPA	LEF1	EIF4EBP1	BAD	PIM2	MAP2K2	BRAF
FN1	BIRC3	XIAP	ITGA3	ITGA2B	COL4A6	PTK2	COL4A1	COL4A2
BAD	PRKCG	ERBB2	MAP2K2	TGFA	BRAF	MAP2K1	RXR	PDPK1
CCL11	EPX	FCER1G	MS4A2	HLA-DMB	FCER1A	HLA-DMA	IL9	CD40LG
IFNA2	TSHR	TSHB	IFNA1	HLA-C	HLA-B	HLA-DMB	HLA-DMA	HLA-A
HIST1H2AC	HIST3H2A	HIST1H2AE	FCGR1A	HIST2H2AB	HIST2H3C	HIST2H2AA	C9	CTSG
CD28	TNF	IFNG	LOC652614	HLA-C	HLA-B	HLA-DMB	HLA-DMA	HLA-F
CD86	KLRD1	KLRC1	CD28	TNF	KIR2DL2	KIR2DL3	IFNG	LOC652614
RFX5	CD8A	CD8B	TAP1	ICOS	UNG	IL7R	ADA	CD40LG
TNF	ITGA9	IGF1	RYR2	CACNG8	LMNA	CACNG6	ATP2A2	CACNG7
ITGA9	CACNG8	RYR2	JUP	LMNA	CACNG6	ATP2A2	CACNG7	ITGA4
CACNB4	ADCY6	CACNG1	ADCY7	ADCY5	TNF	ITGA9	IGF1	RYR2
CD28	EIF4G3	ITGAL	ICAM1	CXADR	MYH13	HLA-C	HLA-B	MYH14

ADH4	PGAM2	ADH5	PGAM1	ADH1A	ALDOC	ALDH7A1	LDHAL6B	PKLR
IDH2	IDH1	ACO1	ACLY	MDH2	DLD	MDH1	DLAT	OGDHL
ALDOB	H6PD	LOC72902C	PRPS1L1	PRPS1	DERA	G6PD	PGM1	TKTL1
UGP2	XYLB	UGT2B10	AKR1B1	UGT2B7	UGT2B4	UGT2A3	UGT1A4	UGT2B17
AKR1B10	FPGT	KHK	FBP1	MTMR2	HK2	HK3	HK1	ALDOA
GANC	LCT	GALK2	G6PC	UGP2	PGM1	AKR1B1	B4GALT2	GAA
UGT2B10	UGT2B7	UGT2B4	UGT2A3	UGT1A4	UGT1A1	UGT2B17	UGT1A3	UGT2B15
CYP4A22	ADH7	ADH6	ACSL6	ADH1B	ADH1C	ADH4	ECHS1	ADH5
SOAT2								
HSD17B3	CYP21A2	HSD17B1	CYP19A1	CYP17A1	CYP11B2	CYP11B1	HSD17B6	HSD17B7
COX8C	COX3	COX5B	COX4I1	ATP6V0A4	ATP12A	ATP6	ATP8	ATP5H
PNPT1	POLR2K	PDE11A	POLD3	POLR2L	AK1	NME1-NMI	AK2	AK4
POLR2L	NME1-NMI	POLA2	UPRT	CANT1	NME4	NME1	NME2	NME3
ADSSL1	ACY3	GAD1	GAD2	GOT2	AGXT	GLUL	NIT2	GOT1
SRR	PSAT1	BHMT	GLDC	DLD	GAMT	PSPH	AGXT	SARDH
CDO1	APIP	GOT1	LDHAL6B	TAT	AHCYL1	MTAP	MAT2B	LDHA
DBT	HADHA	ALDH6A1	HMGCL	IVD	BCKDHB	ACAD8	ECHS1	ALDH9A1
HADHA	BBOX1	AASS	ECHS1	ALDH9A1	ALDH3A2	SUV420H1	SUV39H1	ASH1L
GOT2	GLUL	P4HA1	ABP1	ALDH7A1	LAP3	AGMAT	GOT1	PYCR1
ALDH9A1	ALDH3A2	HEMK1	LCMT2	UROC1	TRMT11	ABP1	ALDH7A1	FTCD
DBH	ADH6	METTL2B	ADH1B	ALDH1A3	ADH1C	ALDH3B1	ADH4	ALDH3B2
IL4I1	DDC							
HADHA	DDC	AFMID	CYP1A1	CYP1A2	CYP1B1	ASMT	ECHS1	ALDH9A1
AOC3	DPYS	DPYD	MLYCD	HADHA	SMS			
GGT7	GGT5	MAT2B	MAT1A	LCMT1	CBS	AHCYL2	CTH	MAT2A
GSTM1	GPX7	GSTA4	GPX6	GSTM4	GGCT	GSTM3	GSTM2	GSTM5
TREH	AMY1A	AMY1B	AMY1C	AMY2A	UGT2B11	PYGB	PYGM	PYGL
DPM2	DPM1	GANAB	ALG1	MGAT4A	ALG10B	STT3B	MAN1A2	ALG10
GALNT8	GALNT14	B3GNT6	C1GALT1	GALNTL4	GALNT12	GALNT2	GALNT3	WBSCR17
GFPT1	FUK	NANP	CYB5R1	FPGT	HEXB	HEXA	HK2	HK1
HEXB	NAGLU	HEXA	IDS	ARSB				
CSGALNAC	B3GAT2	CSGALNAC	CHST3	CHST12	B3GAT3			
HS6ST1	HS3ST3A1	NDST2	NDST4	HS6ST3	B4GALT7	B3GAT2	EXTL1	EXTL2
AWAT2	AGPAT4	AKR1B1	PNLIPRP2	PNLIPRP1	PNLIP	DGAT1	GLYCK	LPL
PIKFYVE	IMPA1	IMPA2	PIP5K1A	PIP5K1B	ISYNA1	INPP5J	INPP5K	SYNJ1
PIGK	PIGY	PIGL	PIGV	PIGB	PIGX	PIGA	GPLD1	PIGC
DGKD	PCYT1A	DGKH	JMJD7-PLA	CHPT1	MBOAT1	PLA2G6	PLA2G2E	PLA2G10
PLA2G2A	PLA2G4A	PLA2G5	PLA2G12B	PLA2G4B	PLA2G7	PLA2G2F	PPAP2A	PPAP2C
PLA2G6	PLA2G2E	PLA2G10	PLA2G2A	PLA2G4A	PLA2G5	PTGS2	PLA2G12B	PTGS1
CYP3A43	PLA2G5	PLA2G12B	PLA2G4B	PLA2G2F	PLA2G2C	PLA2G2D	CYP2C9	PLA2G12A
ACOX1	PLA2G4E	PLA2G1B						
NEU3	SMPD4	SGMS1	ACER3	CERK	SMPD2	ENPP7	DEGS1	SGPP1
B3GALT5	ABO	B4GALT3	B4GALT2	ST3GAL4	B4GALT4	ST3GAL3	B3GALT2	B3GALT1

ACSS1	LDHB	ACYP2	ME1	ACYP1	ALDH9A1	ALDH3A2	ME2	DLD
ALDH3A2	PCCB	HIBCH	EHHADH	PCCA	ALDH7A1	LDHAL6B	SUCLG1	MLYCD
AKR1B10	ECHS1	ALDH9A1	GAD1	ALDH3A2	ACSM3	GAD2	ACSM4	HMGCS2
SHMT2								
NAMPT	NT5C	NMNAT3	PNP	NMNAT2	NT5E	NADK	NNMT	
CYP26A1	UGT2B11	CYP2C9	AWAT2	CYP26C1	CYP2C19	CYP2C8	CYP2B6	UGT2A3
GUSB	FTMT	UGT1A9	MMAB	FECH	HMOX1	HMOX2	UGT2B11	PPOX
CA1	GLS	AMT	HAL	ASNS	CA13	CTH		
YARS	NARS2	GARS	IARS2	KARS	WARS2	TARSL2	LARS	VARs
ADH4	ADH5	GSTO1	ADH1A	GSTA5	MGST2	MGST1	MGST3	GSTA3
ADH1A	GSTA5	MGST2	MGST1	FMO1	FMO2	MGST3	FMO3	GSTA3
NAT1	CES5A	CYP2A13	UGT2A3	UGT1A4	CYP3A7	UGT1A1	UGT1A3	UGT1A10
HADHA	ACOT1	ACOT7	ACOX1	HSD17B12	PTPLB			
ABCC2	ABCC11	ABCC6	ABCC3	ABCC9	ABCG2	ABCC4	ABCC5	ABCA12
RPS15	RPL37	RPL38	RPL14	RPS15A	FAU	RPSA	RPS16	RPL27
CNOT2	XRN1	PARN	C1D	PAPOLA	DDX6	DCP1A	ZCCHC7	ENO1
POLR1E	POLR2J3	POLR1A	POLR3C	POLR2B	POLR3A	POLR3G	POLR3B	POLR2A
TAF13	GTF2IRD1	TAF9	TAF10	GTF2H2	LOC391764	TAF7	GTF2H1	TAF6L
RNASEH1	RNASEH2C	MCM4	POLE2	MCM3	MCM6	MCM5	POLA2	MCM7
SRSF9	ACIN1	TXNL4A	TCERG1	U2AF2	RBM17	PRPF38B	THOC1	PLRG1
PSMF1	IFNG	PSME4	PSME3	LOC100132	PSMB10	PSMB9	PSMD2	PSMD3
SPCS1	SEC11C	SPCS2	SEC62	SPCS3	SEC61A1	SRP72	SRP68	
NR1H3	ACSL6	ME1	MMP1	GK	GK2	APOA5	RXRb	RXRG
PARP3	PARP2	POLB	APEX1	POLL	POLD1	POLD2	POLE	NEIL3
DDB2	RPA3	POLD3	RPA2	RAD23A	PCNA	RPA4	DDB1	POLE2
RPA3	POLD3	RPA2	PCNA	SSBP1	RPA4	EXO1		
RPA4	RAD51C	MRE11A	BRCA2	POLD1	POLD2	MUS81	TOP3A	RAD54B
AKT2	ARRB2	CD14	ARRB1	NRAS	DUSP16	CHP2	RASGRP3	NFKB2
PRKCG	NRG3	MAPK9	ERBB4	MAPK10	PTK2	ERBB2	ERBB3	MAP2K2
P2RX1	PPP3R1	ADRB2	ATP2A2	P2RX3	ADRB1	TACR1	TACR2	SPHK1
IL17RB	CCL11	CCL8	CCL7	TNFRSF17	TNFSF11	IL23A	CTF1	FLT1
CCL7	CCL3L3	ROCK1	PTK2	BRAF	CXCL14	VAV1	CCL14	CCL15
PRKCG	INPPL1	DGKH	INPP5D	SYNJ2	PIP4K2B	ITPR3	PLCD3	PIKFYVE
TACR2	GPR35	THRB	THRA	PTH2R	PTH1R	PRSS3	PRSS2	NPY5R
ANAPC5	RBL1	MYC	CDC14B	SMC1A	CDC14A	LOC731751	SKP1	TGFB2
ANAPC7	ANAPC5	FBXO43	SMC1A	REC8	MAPK12	BTRC	PRKX	SKP1
BID	MDM4	BAX	MDM2	TP53AIP1	CASP3	TP53I3	PMAIP1	PIDD
MAP3K1	UBE4A	BRCA1	MDM2	UBE2K	UBE2D4	UBOX5	KLHL9	UBR5
VAMP7	SNAP47	SEC22B	VAMP4	VAMP8	YKT6	SNAP23	BET1L	STX18
ATG5	ULK1	PIK3R4	ATG7	IFNA17	IFNA21	IFNA6	IFNA7	IFNA8
LAMP2	ATP6AP1	LAPTM5	AP1S3	CLTCL1	AP4B1	AP3B1	LAMP3	ATP6V0A4
PIP4K2B	RUFY1	SMAP2	HLA-G	FLT1	STAM	MDM2	PIKFYVE	VPS37D

SOD1	SOD2	MPV17L	NOS2	HAO1	HSD17B4	CRAT	PAOX	ACOX2
AKT1	AKT2	RPS6KA2	RPS6KA3	RPS6KB1	MLST8	AKT3	RPS6KB2	TSC1
RIPK1	BAD	IRAK4	BID	BAX	IKBKB	CASP6	IL1A	AKT1
TPM2	CYTB	TPM1	ATP1B2	ATP1B3	ATP1A4	ATP1B1	COX2	COX7B
MYL6B	PLA2G2F	EDNRA	GNA12	GNA11	GNA13	PRKX	GUCY1A2	MYLK
LEF1	CREBBP	FZD9	PRICKLE1	CTBP2	ROCK1	CTBP1	WNT9B	WNT9A
SPIRE2	CPEB1	MAPK3	ETS1	ETS2	SPIRE1	SOS1	PIWIL4	MAPK1
ADAM17	RFNG	RBPJ	DTX1	CREBBP	DTX2	MAML1	CTBP2	NCOR2
WNT4	CSNK1G3	SHH	WNT1	CSNK1D	RAB23	CSNK1A1	CSNK1G2	CSNK1E
CUL1	LOC728622	ID4	SMAD3	MAPK3	RBL2	SMAD4	RBL1	NODAL
PLXNA1	ABL1	PLXNA2	PLXNB3	PLXNB1	SEMA3G	ITGB1	SEMA3F	NRAS
PLA2G2E	PLA2G10	NOS3	MAPK11	MAP2K2	PLA2G2A	RAC3	PLA2G4A	PTGS2
PARVG	ROCK1	PTK2	MYL7	FLT1	FLT4	AKT1	RELN	AKT2
CHAD	GP5	VTN	THBS4	ITGA4	ITGA3	ITGA2B	ITGA7	ITGA5
CD276	ICOSLG	CADM3	ITGA4	ICOS	SIGLEC1	CADM1	HLA-G	CLDN20
PTPRJ	WASL	LOC646821	RAC3	PTPRF	WASF1	MAP3K7	FGFR1	IQGAP1
MYH15	MYL7	CRB3	CLDN20	AKT1	AKT2	MYL12A	AKT3	NRAS
CDK1	PDGFD	TUBB4A	ADRB1	TUBB4B	TUBB3	PRKCG	PDGFRB	TUBB2A
TFPI	F8	KLKB1	CR2	MASP1	C9	A2M	CR1	F12
HLA-B	HLA-DMB	HLA-DMA	HLA-A	HSPA1L	HSPA1B	HSPA2	KIR2DS5	HLA-G
MME								
MAP3K7	AKT1	AKT2	CD14	CTSK	AKT3	SPP1	IKBKE	NFKB1
CARD8	CCL7	MEFV	IL8	MAPK9	MAPK10	MAPK11	ERBB2IP	MAPK13
MAPK9	IL12B	MAPK10	ISG15	MAPK11	MAP3K1	IL12A	MAPK13	IKBKB
IFNA6	POLR3H	IFNA7	IFNA8	IFNA10	IFNA13	IFNA14	IFNA16	POLR3C
AKT2	JAK3	JAK2	AKT3	STAT5B	STAT5A	TPO	STAT6	MYC
ITGA5	FCER2	GYPA	THPO	IL1R2	IL7R	MME	IL11RA	CD19
ITGB2	GZMB	NFAT5	FCGR3B	RAET1E	ULBP3	FCGR3A	CSF2	PIK3R5
NRAS	AKT3	VAV2	CHP2	NFAT5	NFKB1	NFKBIB	NFKBIA	PAK6
CD19	MAP2K1	VAV1	CD22	CD72	IKBKB	CD79A	AKT1	CD81
MAPK10	PLA2G6	RAC2	IL13	PLA2G2E	PLA2G10	MAPK11	MAP2K2	PLA2G2A
ARPC4	ARPC5	AKT3	VAV2	ARPC1B	ARPC3	SCIN	WASF3	FCGR2A
CLDN20	PECAM1	VAV1	VASP	VCAM1	ITGB1	MYL12A	THY1	VAV2
TGFB1	ICOS	CCR9	MAP3K14	CXCR4	CCL25	TNFRSF17	HLA-DMB	HLA-DMA
CREBBP	PPP1R12A	PRKCG	GRIN1	GRIN2A	GRIN2B	MAP2K2	GRIN2C	BRAF
AKT2	NRAS	AKT3	SH2B1	NFKB1	NFKBIB	NFKBIA	NFKBIE	PIK3R5
PRKCG	JMJD7-PLA	CACNA1A	PLA2G6	PLA2G2E	PLA2G10	MAP2K2	PLA2G2A	BRAF
OR2D2	OR2D3	OR4K13	OR4K2	OR2AK2	OR4N5	OR2L3	OR4K17	OR2L8
GNAT3	GNG13	TAS2R3	TAS2R9	TAS1R3	TAS2R1	KCNB1	TAS2R16	TAS2R4
MYL12A	NRAS	ARPC1B	ARPC3	TIAM1	SCIN	PAK6	PFN1	PFN2
AKT1	SHC4	AKT2	NRAS	AKT3	PYGB	PYGM	ACACB	INPP5K
PLA2G2F	NRAS	MAPK14	MAPK12	KRAS	GNA11	PRKX	CALML5	ADCY3
SPDYC	MAPK9	MAPK10	MAPK11	BRAF	MAPK13	MAP2K1	ADCY4	AKT1
CREB1	WNT2B	WNT11	EDN1	WNT10B	NRAS	EDNRB	LOC652799	KRAS
PRKCQ	RXRB	RXRG	IKBKB	PRKAG3	RXRA	TNFRSF1B	ADIPOR1	AKT1
CACNA1A	MAPK10	HK3	HK1	PIK3R3	CACNA1D	CACNA1E	CACNA1B	PDX1
INS	IL1B	HLA-DMB	PTPRN	HLA-DMA	HLA-F	HLA-E	HLA-A	IL2
ONECUT1	NEUROD1	INS	FOXA2	PAX4	PDX1	IAPP	NR5A2	PKLR
ATP1B1	NEDD4L	INS	PRKCG	PIK3R3	HSD11B2	HSD11B1	SLC9A3R2	PDPK1

RAB5B	AVPR2	RAB5A	CREB3L3	NSF	DCTN5	AVP	CREB3L2	RAB11B
ATP1B2	ATP1B3	ATP1A4	ATP1B1	AQP1	ATP1B4	SLC9A3		
ADAM17	BACE2	ATP5O	COX2	COX1	COX8C	MME	COX3	COX5B
UCHL1	ATP8	ATP5H	NDUFA2	NDUFA3	NDUFA1	LOC100133	SNCAIP	APAF1
GRIN2C	BID	GRIN2D	MAP2K3	MAPK13	NOS1	BAX	NEFM	GRIA2
CYTB	CREBBP	CREB3	POLR2K	ATP5O	COX2	COX1	UCP1	CLTCL1
PRKACA	PRKACB	PRKACG	IL1A	HSPA5	PRNP	C9	C1QB	C1QA
PRKCG	CFTR	LOC646821	ATP6V1F	ERO1L	ATP6V0A4	ATP6V0A2	ATP6V0D1	KCNQ1
CXCR1	IL8	F11R	MAPK9	MAPK10	MAPK11	MAPK13	IKBKB	ATP6V1F
ABL1	TUBA1B	ARPC4	CD14	ARPC5	ITGB1	ARPC1B	ARPC3	ACTG1
IL12B	MAPK11	NCF4	NCF2	PTGS2	MAPK13	IL12A	NOS2	MAP3K7
GSTP1	FZD6	FZD7	FZD8	LEF1	FZD9	MSH6	PGF	CTBP2
BAX	AKT1	CASP3	AKT2	AKT3	AXIN1	AXIN2	SMAD3	MAPK3
FLCN	MAP2K1	HIF1A	AKT1	ARNT2	AKT2	RAPGEF1	AKT3	NRAS
BRAF	RAC3	MAP2K1	IKBKB	RB1	JAK1	AKT1	AKT2	AKT3
NRAS	AKT3	GRB2	AXIN1	AXIN2	MAPK3	TCF7	CTNNA1	MYC
MAP2K1	MDM2	RB1	AKT1	SHC4	AKT2	NRAS	AKT3	GRB2
BAD	INS	PDGFRB	ERBB2	MAP2K2	TGFA	BRAF	MAP2K1	FGFR2
PPARG	TP53	RET	NRAS	TPR	MAPK3	TCF7	NTRK1	MYC
DVL1	WNT2B	WNT11	WNT10B	SMO	AXIN1	WNT4	WNT10A	AXIN2
BAD	PDGFRB	MAP2K2	BRAF	MAP2K1	MDM2	RB1	AKT1	AKT2
ERBB2	MMP2	MMP1	MAP2K2	RPS6KA5	BRAF	MMP9	MAP2K1	CDK4
ABL1	AKT1	AKT2	SHC4	AKT3	NRAS	GRB2	STAT5B	SMAD3
MAP2K1	KIT	FLT3	SPI1	IKBKB	AKT1	AKT2	RPS6KB1	NRAS
PTGS2	NOS2	COL4A4	RXRB	RXRG	IKBKB	RXRA	RB1	SKP2
RXRG	RB1	RXRA	RASSF1	AKT1	AKT2	NRAS	AKT3	GRB2
HLA-DPA1	CD40	HLA-DPB1	IL13	HLA-DQA1	HLA-DQA2	HLA-DQB1	PRG2	RNASE3
HLA-G	TG	CGA	IFNA17	IFNA21	IFNA6	IFNA7	PRF1	IFNA8
H3.Y	HIST1H4I	FCGR3B	FCGR2A	C8A	HIST3H3	C7	FCGR3A	C8G
HLA-E	HLA-A	IL2	CD40LG	HLA-DPA1	CD40	IL12B	HLA-DPB1	HLA-DQA1
HLA-C	HLA-B	HLA-DMB	IL1B	HLA-DMA	HLA-F	HLA-E	HLA-A	IL2
CD40	AICDA	BTK	BLNK	CD19	RAG2	RAG1	CD3D	CD3E
ITGA4	TPM2	ITGA3	TPM1	ITGA2B	ITGA7	ITGA5	EMD	ITGA11
ITGA3	ITGA2B	ITGA7	LEF1	ITGA5	EMD	ACTN4	ITGA11	DSC2
CACNG8	CACNG6	LMNA	CACNG7	ATP2A2	ADRB1	ITGA4	TPM2	ITGA3
HLA-DMB	HLA-DMA	MYH1	HLA-A	DMD	MYH15	RAC2	LOC646821	BID

MDH2	DLAT	MDH1	ALDH7A1	PC	GLO1	LDHAL6B	LDHA	ACACB
LDHA	SUCLA2	ACACB	MUT	SUCLG2	ACACA	ACSS3	LDHAL6A	
EHHADH	HMGCS1	ALDH7A1	ALDH5A1	BDH2	OXCT2	ACSM2A	ACSM5	L2HGDH
CYP2A13	UGT1A4	CYP3A7	UGT1A1	UGT1A3	CYP26B1	DHRS9	UGT1A10	DGAT1
FTH1	UGT2B10	UGT2B7	UROD	UGT2B4	COX15	HMBS	CP	UGT2A3
PARS2	MARS2	CARS	IARS	TARS2	SEPSECS	MTFMT	TARS	DARS
GSTM1	UGT2B11	CYP2C9	GSTA4	CYP2C19	GSTM4	CYP2C8	GSTM3	CYP2B6
GSTM1	UGT2B11	CYP2C9	FMO5	GSTA4	CYP2C19	GSTM4	CYP2C8	GSTM3
UGT1A8	UGT1A7	ITPA	UGT1A6	UGT1A5	CYP2A6	CYP2A7	DPYS	TYMP
ABCG1	ABCB4	CFTR	ABCB1	ABCC1	ABCD2	ABCB6	ABCB7	ABCA8
RPS17	RPL26	RPL24	RPL29	RPL28	RPL27A	UBA52	RPL30	RPL36
CNOT4	CNOT7	PAPD7	EXOSC8	C1DP3	HSPA9	LSM1	CNOT6L	EXOSC6
POLR3F	POLR2D	POLR2C	ZNRD1					
GTF2F2	GTF2F1	GTF2E2	TAF4B	TAF6	GTF2E1	TAF5	GTF2I	GTF2H4
POLD1	POLD2	RNASEH2A	POLE	RFC1	RFC3	RFC2	MCM2	FEN1
CCDC12	MAGOHB	HSPA8	LSM7	CHERP	NAA38	PQBP1	RBMX	LSM4
PSMC6	PSMD1	PSMC4	PSMB3	PSMC5	PSMD14	PSMB2	PSME1	PSMC3
PLTP	PDPK1	RXRA	ILK	APOC3	ACOX2	ACOX3	CYP27A1	OLR1
TDG	APEX2	LIG3	HMGB1P1	NTHL1	HMGB1P4	FEN1	LIG1	MUTYH
ERCC1	POLD1	POLD2	POLE	RFC1	RFC3	RFC2	XPC	XPA
SHFM1	TOP3B	SSBP1						
NFKB1	MYC	NFATC4	MAPK14	FLNC	FLNA	KRAS	FLNB	PRKX
TGFA	BRAF	MAP2K1	MAP2K7	ABL1	NRG2	AKT1	ABL2	AKT2
CCKAR	CCKBR	NTSR1	PDGFRB	LOC729317	SLC8A1	ITPR3	SLC8A3	PLCD3
CCL14	FLT3	CCL15	FLT3LG	FLT4	IL22	CD27	CCL18	CCL17
IKBKB	AKT1	AKT2	JAK3	SHC4	DOCK2	JAK2	CCL18	GRK7
IMPA1	IMPA2	PIP5K1A	PIP5K1B	INPP5J	CDS1	INPP5K	SYNJ1	PLCD4
PRSS1	CGA	NPY1R	NPY2R	RXFP1	MCHR1	LPAR4	DRD1	DRD2
TGFB1	GADD45A	STAG1	LOC650621	PLK1	RBX1	STAG2	TGFB3	MCM4
FBXW11	CALML5	ADCY3	ADCY2	LOC650621	PLK1	ADCY1	RBX1	STAG3
RFWD2	PERP	GADD45G	EI24	SESN2	ATM	ATR	SESN3	CHEK2
UBE3A	UBE2R2	RFWD2	TRIM37	FBXW8	UBE2E3	LOC652671	LOC728622	ANAPC7
GOSR1	SNAP25	USE1	STX5	STX4	STX19	VTI1B	BET1	VTI1A
IFNA10	IFNA13	IFNA14	ULK2	IFNA16	ATG4C	ATG4D	BECN1P1	ATG3
CTSL1	ABCB9	AP1B1	CTSK	SLC11A2	GNPTAB	SMPD1	CTSH	AP1G1
PIP5K1A	VPS28	CHMP2B	FAM125A	PIP5K1B	RAB11FIP1	ACAP1	ARRB2	AP2A2

PEX11G	ACOX3	AMACR	PEX5	MLYCD	ACOT8	ACAA1	SLC27A2	SLC25A17
ULK2	CAB39	MAPK3	CAB39L	RPS6	MAPK1	RPS6KA1	PIK3R5	ULK3
CASP3	AKT2	TNFRSF1A	AKT3	CHP2	ATM	ENDOG	NFKB1	NFKBIA
COX1	COX7A1	COX7A2	COX8C	COX6C	COX3	CACNA2D3	COX6B1	CACNA1D
ADCY3	MYL6	CALML5	ADCY2	ADCY1	PLA2G4E	KCNMB3	PRKACA	GNAQ
CTNNBIP1	DAAM2	TBL1XR1	MMP7	CER1	MAP3K7	VANGL2	WNT2B	WNT11
CTBP1	DVL3	JAG2	DVL2	NUMBL	MAML2	KAT2B	DLL4	PSENN
BMP8A	GSK3B	WNT7A	BTRC	WNT7B	WNT8A	WNT8B	WNT2	WNT3
SMAD1	MYC	SMAD2	MAPK1	SMURF2	SMURF1	EP300	BMP8A	GDF5
ROBO3	CHP2	NFAT5	SEMA6D	RHOD	PAK6	PLXNA3	NCK1	NFATC4
PLA2G5	MAPK13	PLA2G12B	MAP2K1	KDR	PLA2G4B	AKT1	PLA2G2F	AKT2
LAMC2	MYL12A	LAMB2	LAMB3	LAMC1	LAMA4	LAMA5	LAMB1	PAK6
COL5A1	COL4A6	ITGA11	SV2C	COL2A1	COL3A1	COL4A1	AGRN	COL4A2
PECAM1	CD22	ITGB7	SELL	VCAM1	ITGAV	SELP	SPN	ITGB1
SMAD3	MAPK3	TCF7	SMAD4	ACTG1	INSR	WASF3	CTNNA1	PTPRB
EXOC3	CTNNA1	JAM2	CSNK2A1	CLDN18	LLGL1	LLGL2	CSNK2A2	KRAS
MAP2K2	ITPR3	MAP2K1	MAP2K5	LPAR1	ADCY4	TUBA1B	NRAS	GRB2
F13A1	F11	C8A	F13B	C7	C8G	C8B	CD59	SERPINA5
KIR3DL1	KIR3DL2	HSPA1A	RFXANK	CREB1	IFNA17	HSPA5	CD74	HSPA4
NFKBIA	PIK3R5	TLR5	TIRAP	MAPK14	MAPK12	RELA	TRAF6	TRAF3
CASP5	IKBKB	NOD2	MAP3K7	CASP1	CARD18	TNFAIP3	SUGT1	MAPK3
MAP3K7	IFNA17	DAK	IFNA21	IFNA6	IFNA7	IFNA8	IFNA10	OTUD5
IKBKE	POLR3G	POLR3B	POLR3F	NFKB1	NFKBIB	NFKBIA	IRF3	IKBKG
IL24	SPRED1	PIK3R5	CSF2	IL13RA2	PIAS1	IL13RA1	CNTF	PRLR
MS4A1	TFRC	CD22	KIT	FLT3	ITGB3	FLT3LG	IL1A	CR2
NCR1	HCST	NCR2	NFATC4	NFATC3	KRAS	SHC3	CD247	RAET1L
NFKBIE	NCK1	CTLA4	CSF2	PIK3R5	CD4	NFATC4	MAPK14	MAPK12
CR2	AKT2	CD79B	VAV2	AKT3	NRAS	CHP2	GRB2	RASGRP3
RAC3	MAP2K3	PLA2G4A	MAPK13	PLA2G5	PLA2G12B	MAP2K1	VAV1	MAP2K7
FCGR3A	FCGR2B	PIK3R5	DNM2	CFL2	CFL1	PIP5K1C	PLA2G4E	ASAP2
ITGB2	CTNNA1	JAM2	PIK3R5	CLDN18	MAPK14	MAPK12	VCL	CLDN17
CCL28	LTBR	PIGR	IL2	CD40LG	HLA-DPA1	CD40	AICDA	HLA-DPB1
GRIN2D	ITPR3	CACNA1C	MAP2K1	GRIA2	GRIA1	RPS6KA2	RPS6KA3	NRAS
MAPK14	NGFRAP1	MAPK12	RELA	KRAS	SHC3	TRAF6	NGF	CALML5
PLA2G4A	ITPR3	PLA2G5	PLA2G12B	MAP2K1	NOS1	GRIA3	GRIA2	GRIA1
ARRB2	OR11G2	OR11L1	OR5P2	OR5P3	OR6C1	OR6C75	OR10AG1	OR6C76
SCNN1G	GNB3	PRKX	GNG3	SCNN1B	SCNN1A	TAS2R43	TAS2R40	TAS2R41
PIK3R5	IQGAP3	KRAS	CFL2	CFL1	MYL2	MYLK	BDKRB1	MYL5
PYGL	ACACA	PIK3R5	PDE3B	PHKB	PHKA2	PHKA1	FLOT2	KRAS
ADCY2	ADCY1	PLA2G4E	CAMK2A	CAMK2B	CAMK2D	CAMK2G	PRKACA	GNAQ
AKT2	RPS6KA2	RPS6KA3	AKT3	CPEB1	MAPK3	ANAPC7	ANAPC5	ANAPC2
PRKX	GNAI1	GNAI2	CALML5	ADCY3	ADCY2	ADCY1	CREB3L3	WNT5B
AKT2	TNFRSF1A	JAK2	LEPR	AKT3	CPT1B	LEP	ACACB	NFKB1
CACNA1C	ADIPOQ	IKBKB	IRS2	ABCC8	SOCS4	PIK3CA	CACNA1G	PIK3CB
HLA-DPA1	IL12B	HLA-DPB1	GAD1	HLA-DQA1	HLA-G	HLA-DQA2	IL12A	CPE
ATP1A1	IRS2	ATP1A3	ATP1A2	PIK3CA	PIK3CB	PIK3CD	MAPK3	IRS1

STX4	PRKACA	PRKACB	PRKACG	CREB1	GNAS	DYNC2H1	DYNC1H1	DCTN4
ITPR3	PSENNEN	LRP1	COX4I1	APOE	ATP6	ATP8	CHP2	ATP5H
05.wrz	UBE2G2	UBE2G1	ATP5G1P5	VDAC1	VDAC2	VDAC3	UBE2J2	UQCRCQ
SLC1A2	NEFH	GRIA1	MAP2K6	TNFRSF1B	CASP1	CASP3	NEFL	TNFRSF1A
COX8C	DNALI1	POLR2L	COX3	LOC729317	COX5B	COX4I1	CREB1	HIP1
LAMC1	C1QC	MAPK3	FYN	C8A	C7	IL6	C8G	C8B
ARF1	ACTG1	ATP6V0E2	SEC61G	ATP6V1H	PRKX	ATP6V1E2	MUC2	KDELRL1
ATP6V0A4	CASP3	ATP6V0A2	ATP6V0D1	NFKB1	RAC1	NFKBIA	JAM2	IKBKKG
ARPC2	NCL	TUBB7P	TUBA3D	NCK1	YWHAQ	TLR5	TUBB2B	TUBAL3
IL1A	JAK1	JAK2	ITGB1	ITGB2	CR1	MAPK3	FCGR3B	NFKB1
CTBP1	WNT9B	PTK2	WNT9A	PTGS2	HIF1A	FLT3	FLT3LG	ABL1
SMAD4	TCF7	RAC1	MYC	TCF7L2	SMAD2	MAPK1	PIK3R5	MAPK8
ARNT	CUL2	GRB2	MAPK3	ETS1	EGLN2	EGLN3	PAK6	RAC1
SMAD3	MAPK3	SMAD4	NFKB1	RAC1	SMAD2	MAPK1	PIK3R5	IKBKKG
SOS1	MAPK1	TCF7L2	PIK3R5	HRAS	EGFR	GSK3B	KRAS	CTNNA2
MAPK3	SOS1	MAPK1	PIK3R5	HRAS	EGFR	KRAS	CDKN2A	SHC3
PDPK1	IKBKKB	MDM2	RB1	CREB1	AKT1	AKT2	FGFR1	AKT3
TPM3	CDH1	MAPK1	TCF7L2					
TCF7	TCF7L2	SHH	WNT1	GSK3B	WNT7A	WNT7B	WNT8A	WNT8B
FGFR1	FGF14	FGF17	FGF16	AKT3	NRAS	FGF10	FGF11	FGF12
MDM2	RB1	FIGF	RASSF1	TP53	E2F3	FGFR3	E2F2	NRAS
MAPK3	STAT5A	SMAD4	NFKB1	NFKBIA	SOS1	MYC	MAPK1	RUNX1
AKT3	RPS6KB2	LOC652671	GRB2	STAT5B	MAPK3	TCF7	STAT5A	NFKB1
AKT1	AKT2	PIAS2	ITGAV	LAMC2	ITGB1	AKT3	LAMB2	LAMB3
MAPK3	SOS1	MAPK1	PIK3R5	HRAS	EGFR	KRAS	CDKN2A	EGF
IL4	IL5	IL10	HLA-DRB1	HLA-DRA				
IFNA10	IFNA13	IFNA14	GZMB	IFNA16	TPO	IL10	CTLA4	HLA-DRB4
FCGR2B	C8B	HLA-DRB4	HLA-DRB5	HLA-DRB3	C6	C5	ELANE	HIST4H4
HLA-G	HLA-DQA2	IL12A	HLA-DQB1	PRF1	FAS	FASLG	GZMB	IL4
HLA-DPA1	HLA-DPB1	HLA-DQA1	HLA-G	KIR3DL1	HLA-DQA2	KIR3DL2	HLA-DQB1	IL1A
RFXANK	AIRE	CD79A	TNFRSF13B	JAK3	IGLL1	CIITA	LCK	PTPRC
PRKAG2	DMD	CACNA2D3	CACNA1D	SLC8A1	LOC646821	CACNA1C	TNNI3	CACNA1F
DSG2	ACTN1	DMD	CACNA2D3	CACNA1D	SLC8A1	LOC646821	CACNA1C	CACNA1F
TPM1	ITGA2B	ITGA7	ITGA5	EMD	ITGA11	DMD	CACNA2D3	CACNA1D
HLA-G	RAC3	ABL1	ABL2	CASP3	EIF4G2	PRF1	EIF4G1	ITGB2

ALDH3A1	AKR1A1	FBP2	PFKM	PFKL	LDHC	GAPDH	ENO3	ENO2
ACAA1	CPT2	CPT1B	ACOX1	ECI2	ECI1	ACSL3	ACSL4	
UGT1A6	UGT1A5	HSD17B8	AKR1C2	AKR1C1	CYP1A1	CYP1B1	STS	UGT2A1
ATP6V0D2	COX7A2L	ATP5G3	ATP6V1C2	ATP5G2	ATP5G1	ATP5F1	ATP5E	COX5A
NME2	DGUOK	POLR3C	NME3	POLR3G	POLR3F	PRUNE	C17orf48	PDE4B
CTPS	POLA1	ENTPD8	POLE2	POLD1	POLD2	POLE	CAD	CMPK2
HIBADH	ACAA1	OXCT2	MUT	MCCC2	BCAT1	AUH	BCAT2	BCKDHA
ALDH7A1	WHSC1L1	EHMT1	SETDB1	AADAT	SETD2	SETDB2	PLOD3	NSD1
P4HA3	ALDH1B1	GATM	ALDH2	OTC	PRODH2	OAT	CKM	ACY1
MIF	NAT6	PNMT	DCT	LCMT1	TPO	TH	FAH	
TDO2	HAAO	KYNU	AADAT	TPH2	ACMSD			
TXNDC12	GPX1	GPX2	GPX3	IDH2	GPX4	IDH1	OPLAH	GCLM
AGL	UGT1A5	SI	UGT2A1	GBE1	UGT1A9	G6PC2	GANC	G6PC
MAN2A2	MAN1A1	MAN2A1	ST6GAL1	B4GALT3	ALG5	B4GALT2	MGAT5B	ALG9
UGP2	GALK2	TSTA3	PGM1	CMAS	PGM3	GNPDA1	GMPPA	GPI
DGKI	LCLAT1	AGPAT9	MGLL	AGPAT6	ALDH9A1	ALDH3A2	PNPLA3	PPAP2A
PIK3C3	PIK3C2B	PIK3C2G	PIP4K2A	PIK3C2A	PTEN	PIP4K2C	MINPP1	IPPK
PCYT2	CDS1	AGPAT3	AGPAT4	PGS1	LYPLA1	PLA2G1B	C17orf48	CDIPT
CYP2B6	CBR3	CYP2U1	PLA2G1B	LTA4H	PTGES	GPX5	GPX1	CYP4A22
SPTLC2	SPTLC1	SMPD3	KDSR	UGT8	ASAH2			

ACACA	PKLR	AKR1B1	LDHAL6A	PKM2	ACOT12			
UGT1A8	UGT1A7	UGT1A6	ALDH1A1	RETSAT	RDH12	LRAT	RDH11	UGT1A5
UGT1A4	EARS2	UGT2B17	UGT1A1	EPRS	UGT2B15	UGT1A3		
HARS2	PSTK	QARS	EARS2	EPRS	FARS2	MARS		
GSTM2	UGT2A3	UGT1A4	UGT1A1	CYP3A7	UGT1A3	GSTM5	UGT1A10	UGT1A8
CYP2B6	GSTM2	UGT2A3	CYP2A13	UGT1A4	UGT1A1	CYP3A7	UGT1A3	GSTM5
DPYD	UMPS	UCK2	TK1	TK2	UPP1	UGT2A1	CYP3A43	CES1
ABCA4	ABCC8	ABCC10	ABCB10	ABCB9	ABCA13	ABCA9	ABCB5	ABCG5
RPS20	RPS19	RPS18	RPS4X	RSL24D1P1	RPS4Y1	RPS5	RPL22L1	RPL26L1
LSM7	NAA38	RQCD1	LSM4	CNOT1	CNOT10	EXOSC7	LSM3	DIS3
TBPL1	GTF2H3							
LIG1	SSBP1							
EIF4A3	SF3A3	DDX46	RBM25	PRPF40A	THOC3	NHP2L1	PRPF40B	LSM2
PSMB5	PSME2	PSMB4	SHFM1	PSMC1	PSMB7	PSMC2	PSMB6	PSMB8
CPT2	ACAA1	CPT1B	ANGPTL4	SLC27A2	LPL	FABP1	CPT1A	PCK2
PARP1								
GTF2H2	GTF2H1	CDK7	LIG1	CUL4A	CUL4B	ERCC8	CCNH	GTF2H4
TRAF6	TGFB2	DUSP1	DUSP2	TGFB1	TRAF2	BDNF	TAB2	ECSIT
SHC4	RPS6KB1	RPS6KB2	AKT3	NRAS	GRB2	AREG	STAT5B	MAPK3
EDNRA	P2RX7	CHP2	DRD1	DRD5	TRHR	EDNRB	PHKB	PHKA2
CCL20	CCL19	CCL21	CCL23	CCL22	TPO	CCL16	CSF2	CSF1R
ARRB2	CCL17	ARRB1	CCL20	VAV2	CCL19	AKT3	NRAS	CCL21
ITPKA	PIK3R5	ITPKB	ITPK1	CDIPT	ITPR1	ITPR2	DGKQ	CDS2
DRD3	DRD4	DRD5	TRHR	NMUR2	SSTR2	SSTR3	SSTR1	PRLR
ORC6	CCND1	MAD1L1	MCM3	MCM6	MCM5	YWHAB	CCNA2	MCM7
PGR	YWHAB	CAMK2A	BUB1	CAMK2B	CAMK2D	CAMK2G	PRKACA	PRKACB
APAF1	CDKN2A	RRM2	CDKN1A	BBC3	GADD45A	TNFRSF10B	DDB2	GTSE1
ANAPC5	UBE2QL1	PIAS1	SMURF1	STUB1	UBE2G2	BTRC	UBE2G1	UBE2I
TSNARE1	STX8	STX1B	STX17					
GABARAP								
CTSG	CTSE	LAPTM4A	GM2A	LAMP1	CTSO	GGA2	CTSL2	AP3M1
GRK7	ARRB1	AP2B1	AP2A1	EEA1	GRK1	CSF1R	SMURF1	LOC652799

MPV17	PIPOX	FAR1	DAO	ABCD1	DECR2	SCP2	HACL1	GSTK1
EIF4E1B	STK11	EIF4E2	VEGFA	PRKAA2	VEGFC	PRKAA1	VEGFB	STRADA
CAPN2	PIK3R5	IKBKG	CAPN1	IL3RA	IL3	RELA	ENDOD1	APAF1
SLC8A1	COX5B	SLC9A1	LOC64431C	CACNA1C	TNNI3	CACNA1F	COX4I1	ATP1A1
PRKACB	PRKACG	GNAS	CALML3	PLA2G2D	PLA2G12A	AGTR1	MYH11	CALM3
WNT10B	DKK2	LOC728622	CHP2	AXIN1	AXIN2	DKK4	NFAT5	MYC
DLL3	DVL1	CIR1	DLL1	LFNG	JAG1	MAML3	HDAC1	HDAC2
PRKX	WNT5A	WNT6	FBXW11	STK36	WNT5B	GLI1	DHH	PRKACA
SKP1	CHRD	TGFB2	TGFB1	IFNG	CDKN2B	PPP2CB	PPP2CA	PPP2R1A
NTNG1	SEMA6A	NFATC3	KRAS	SRGAP3	L1CAM	CFL2	CFL1	GNAI1
NRAS	AKT3	CHP2	NFAT5	MAPK3	RAC1	PLA2G1B	MAPK1	MAPKAPK3
PIK3R5	CAPN2	LAMB4	FLNC	FLNA	FLNB	MYL2	MYLK	MYL5
COL4A4	ITGB3	ITGB4	RELN	ITGB5	ITGB6	ITGB7	LAMC2	ITGAV
SELPLG	ITGB2	CDH2	JAM2	CTLA4	HLA-DRB4	CLDN18	CD4	HLA-DRB5
RAC1	TCF7L2	SMAD2	MAPK1	CSNK2A1	PVRL3	CSNK2A2	EP300	EGFR
CLDN17	PARD6B	MAGI1	GNAI1	GNAI2	MYL2	VAPA	MYL5	CSNK2B
MAPK3	DRD1	GUCY1B3	DRD2	MAPK7	GUCY1A3	PRKG1	SOS1	TUBB7P
FGG	CD55	C6	C5AR1	C5	BDKRB1	C4BPB	C4BPA	C4B
IFNA21	CTSL1	IFNA6	IFI30	IFNA7	IFNA8	IFNA10	IFNA13	CIITA
TOLLIP	CXCL11	TAB2	TLR7	TLR8	CXCL10	CASP8	TICAM1	CHUK
PSTPIP1	NFKB1	NFKBIB	NFKBIA	MAPK1	IKBKG	CARD9	MAPK8	MAPK14
IFNA13	IFNA14	IFNA16	DDX3X	IKBKE	NFKB1	NFKBIB	NFKBIA	IRF3
TREX1	POLR1C	IL18	RELA	ZBP1	POLR3D	RIPK3	IFNB1	IL33
CNTFR	PRL	SOCS1	IFNE	CSF2RB	CSF2RA	IL23R	CSF3	SOCS3
CD14	CR1	TPO	EPOR	IL11	CSF2	HLA-DRB4	CD4	CSF1R
HLA-E	PAK1	LCP2	KLRK1	PLCG1	PLCG2	PTK2B	NFATC2	NFATC1
NFATC3	RELA	KRAS	CD8A	CD8B	CD247	NCK2	MAP3K14	PAK7
NFAT5	MAPK3	NFKB1	NFKBIB	RAC1	NFKBIA	SOS1	FCGR2B	NFKBIE
PLA2G4B	MAP2K6	AKT1	PLA2G2F	AKT2	VAV2	AKT3	NRAS	GRB2
DNM3	PAK1	CRK	CRKL	PLCG1	PLCG2	PLD1	ARPC5L	PLD2
GNAI1	MYL2	GNAI2	CTNND1	MYL5	PXN	RAPGEF3	MYL10	ARHGAP5
HLA-DQA1	HLA-DQA2	HLA-DQB1	TNFRSF13B	ITGB7	CXCL12	CCR10	MADCAM1	IL4
CHP2	PPP1R1A	PPP1CC	PPP1CA	PPP1CB	MAPK3	RPS6KA1	MAPK1	HRAS
BDNF	NGFR	SH2B3	CSK	CAMK4	YWHAB	BCL2	CAMK2A	CAMK2B
PLA2G4B	PLA2G2F	NRAS	MAPK3	GUCY1B3	GUCY1A3	PRKG1	PRKG2	MAPK1
OR6C70	OR5J2	OR52A1	OR4M2	OR51S1	OR4N2	GUCA1B	OR52R1	GUCA1A
TAS2R39	TAS2R14	PRKACA	PRKACB	PRKACG	GNAS	TAS2R38	GNB1	TAS2R20
PIP5K1C	BDKRB2	CSK	MYL10	APC	PIP4K2C	MYH9	ARPC5L	MYH10
SHC3	SOCS1	PRKX	PRKAB2	CALML5	PRKAB1	PRKAA2	PRKAA1	PDE3A
PRKACB	PRKACG	GNRHR	GNAS	GNRH2	GNRH1	CALML3	PLA2G2D	PLD1
ANAPC4	MAD2L1	RPS6KA1	MAPK1	PIK3R5	PDE3B	MAPK8	CDC23	MAPK14
CAMK2A	CAMK2B	CAMK2D	CAMK2G	PRKACA	GNAQ	PRKACB	PRKACG	GNAS
NFKBIB	NFKBIA	NFKBIE	IKBKG	MAPK8	CPT1A	PCK2	CPT1C	PCK1
PIK3CD	PRKCZ	KCNJ11	MAPK3	IRS1	PKLR	INSR	PKM2	PIK3CG
HLA-DQB1	GAD2	IL1A	HSPD1	PRF1	FAS	FASLG	GZMB	HLA-DRB1
SGK1	ATP1B4	INSR	PIK3CG	IRS4	PIK3R1	PIK3R2	MAPK1	

DYNC1I2	DCTN1	DYNC1I1	CREB5	AQP2	DYNC2LI1	ARHGDI1	ARHGDI2	DYNC1LI1
NDUFA2	NDUFA3	NDUFA1	CAPN2	LPL	CAPN1	LOC100133333	APAF1	ATP5G1P5
ATP5D	UBE2L3	COX7A2L	ATP5G3	ATP5G2	ATP5G1	ATP5F1	ATP5E	COX5A
DAXX	CHP2	RAC1	MAPK14	MAPK12	APAF1	GPX1	RAB5A	BCL2
AP2A2	ATP6	AP2B1	DCTN4	ATP8	TAF4B	ATP5H	AP2A1	NDUFA2
MAPK1								
ADCY3	ATP6V0D2	ATP6V0E1	ATP6V1C2	ACTB	TJP1	TCIRG1	PRKACA	PRKACB
MAPK8	MAPK14	MAPK12	EGFR	RELA	ATP6V0E2	ATP6V1H	ATP6V1E2	PTPRZ1
CTNNB1	TUBA3C	TUBB8	TUBA8	TUBA4A	NCK2	TUBA1C	ACTB	LOC653888
FCGR2A	IL10	NFKBIB	NFKBIA	FCGR3A	MARCKSL1	MAPK1	HLA-DRB4	HLA-DRB5
WNT2B	JAK1	WNT11	AKT1	WNT10B	AKT2	LAMC2	SMO	NRAS
APPL1	GSK3B	KRAS	CTNNB1	TGFB2	TGFB1	ARAF	TGFBR2	TGFBR1
SOS1	MAPK1	PIK3R5	HRAS	EP300	EPAS1	KRAS	TGFB2	TGFB1
MAPK8	EGFR	RELA	KRAS	CDKN2A	EGF	TGFB2	TGFB1	VEGFA
EGF	CTNNB1	ARAF	CCND1	PTEN	PIK3R3	TCF7L1	FOXO3	APC
CDKN1A	EGF	ARAF	CALML5	CCND1	PTEN	PIK3R3	PDGFA	CAMK2A
NRAS	GRB2	CREB5	MAPK3	TCF7	NFKB1	INSRR	NFKBIA	SOS1
WNT2	WNT3	WNT5A	CTNNB1	WNT6	STK36	FZD10	WNT5B	FZD5
FGF13	MAPK3	FGF19	MAPK1	PIK3R5	FGF20	HRAS	EGFR	PDGFC
MAPK3	DAPK3	DAPK2	DAPK1	THBS1	MYC	CDH1	MAPK1	
PIK3R5	IKBKG	HRAS	RELA	GAB2	CBLB	CDKN2A	KRAS	CBL
MYC	SOS1	TCF7L2	MAPK1	RUNX1	PIK3R5	IKBKG	HRAS	LOC652799
LAMC1	LAMA4	LAMA5	LAMB1	NFKB1	NFKBIA	MYC	PIK3R5	PIAS1
RASSF5	FHIT	STK4	ARAF	CCND1	PIK3R3	FOXO3	CDK4	TP53
HLA-DRB5	HLA-DRB3	LOC652614	HLA-F	HLA-E	IL2	CD40LG	HLA-DPA1	CD40
C4B	C4A	HIST2H4B	HLA-DPA1	H2AFB3	HLA-DPB1	HLA-DQA1	HLA-DQA2	HLA-DQB1
IL5	IL10	HLA-DRB1	HLA-DRA					
PRF1	FAS	FASLG	GZMB	KIR2DL5A	IL6	HLA-DRB1	HLA-DRA	
DCLRE1C								
ITGB3	CACNA2D2	CACNA1S	ITGB4	PRKAG3	TNNC1	ITGB5	ITGB6	ITGB7
ITGB3	CACNA2D2	CACNA1S	ITGB4	ITGB5	ITGB6	ITGB7	ITGAV	ITGB1
SLC8A1	LOC646821	CACNA1C	TNNI3	CACNA1F	ITGB3	CACNA2D2	CACNA1S	ITGB4
ACTG1	RAC1	SGCD	HLA-DRB4	SGCG	HLA-DRB5	SGCA	SGCB	HLA-DRB3

PGAM4 ADH7 ADH6 LDHB ALDH1A3 ALDH3B1 ALDH3B2 ALDH9A1 ALDH3A2

SRD5A2 SRD5A1 CYP3A43 CYP7B1 UGT1A9 AKR1D1 HSD17B12 UGT2B10 UGT2B7
TCIRG1 UQCRHL ATP4B ATP6V1D ATP4A ATP5A1 ATP5J ATP5I SDHA
PDE4C PDE3B PDE4A NUDT2 GMPR2 PDE6C PDE6D PDE4D PDE6A
POLR1E NT5C1A POLR3A DCTD POLR2B POLR2A DCK POLR2D POLR2C

MCCC1

PIPOX

SAT2 ALDH9A1 ALDH3A2 CKMT1B PYCRL GAMT PRODH ALDH4A1 CKMT2

GGT6 ANPEP GGT7 GSTO2 GGT5 G6PD ODC1
UGP2 PGM1 UGT2B10 UGT2B7 UGT2B4 GAA GPI UGT2B17 UGT2B15
MOGS FUT8 MGAT1

GMPPB

PPAP2C AGPAT1 AGPAT2 CEL GPAT2 LIPF
PIK3CA PIK3CB PIK3CD PLCG1 PLCG2 PLCZ1 PI4KB PIK3CG INPP5E
DGKQ CDS2 DGKB DGKG PPAP2B DGKA DGKI PHOSPHO1LCLAT1
GPX2 GPX3 GPX4 CYP4F3 PLA2G4E LTC4S GGT6 GGT7 GGT5

CYP2A6 CYP2A7 CYP4A22 DHRS4 CYP1A1 CYP1A2 ADH7 ADH6 UGT2A1

UGT1A7 GSTA1 UGT1A6 GSTA2 ALDH3A1 UGT1A5 GSTK1 AKR1C2 AKR1C1
UGT1A10 UGT1A8 UGT1A7 GSTA1 UGT1A6 MAOB GSTA2 MAOA AOX1
UGT1A9 NAT2 UGT2B10 UGT2B7 UGT2B4 UCK1 UGT2B17 UGT2B15

ABCG8

RPS6 RPLP2 RPL22 RPL23A RPL18 RPL18A RPL19 RPL21 RPS3A
ENO3 ENO2 CNOT6 C1DP2 LSM2 DCP2 HSPD1 EXOSC9 EXOSC10

SRSF8 SF3A2 SMNDC1 BCAS2 NCBP2 PRPF8 LOC120364 THOC4 DDX39B
PSMA6 PSMA7 PSMB1 PSMA8 PSMA6P4

FABP4 CPT1C FABP2 PCK1 SCP2 PPARA AQP7 PLIN1 CYP4A22

GTF2H3

TGFBR2 DUSP7 TGFBR1 DUSP5 DUSP6 DUSP3 TGFB3 PLA2G4E DUSP4
STAT5A PAK6 SOS1 MYC MAPK1 NCK1 PIK3R5 NRG4 HRAS
PHKA1 GNA15 GNA11 VDAC1 VDAC2 CHRM1 VDAC3 CHRM2 PRKX
TNFRSF13C IL13RA1 CSF1 PRLR PRL TNFRSF14 IFNE CCL24 CSF2RB
CCL23 TIAM1 CCL22 GNG13 STAT5B NFKB1 GRK1 NFKBIB NFKBIA
INPP4B DGKB DGKG DGKA DGKI PLCE1 CALML5 PIP5K1C PIK3C3
PRL C5AR1 UTS2R BDKRB1 BDKRB2 NPBWR2 NPBWR1 PRLHR CSH1
BUB1 CHEK1 WEE2 MCM2 PTTG1 CDC27 CDC25B CDC25C LOC65161C
PRKACG FBXO5 SGOL1 PTTG1 CALML3 CDC27 CDC25C PLCZ1 CDC20
SIAH1 CCND1 CD82 PTEN CDK2 CHEK1 SESN1 CDK4 SERPINE1
SOCS1 UBE2H UBE2J2 SKP1 TRAF6 FBXW11 UBE2L3 NHLRC1 UBE2N

CTSC GBA AP3D1 CD164 ATP6V1H HGSNAT ABCA2 DNASE2B AGA
SH3GLB1 VPS4A ARFGAP3 DNMT2 HSPA8 VPS36 PARD6B RAB31 RAB11A

PEX1	NUDT12	ABCD4	ABCD3	PEX11B	PEX19	ECH1	IDH2	IDH1
PIK3R3	FIGF	DDIT4	PIK3CA	PIK3CB	PIK3CD	PIK3CG	PIK3R1	PIK3R2
PRKX	CSF2RB	TNFRSF10A	TRAF2	TNFRSF10C	NGF	TNFRSF10B	TNFRSF10C	MAP3K14
CACNA2D2	CACNA1S	COX7B2	ATP1A3	TNNC1	ATP1A2	UQCRB	COX6A2	SLC9A6
PLCB2	KCNMB2	ADCY8	PLCB1	ADCY9	PPP1R12B	ADCY6	ADCY7	PRKCB
SOX17	CSNK2A1	CSNK2A2	NFATC4	CSNK1A1	NFATC3	CSNK1E	BTRC	PRKX

NCSTN	DTX4	MFNG	RBPJL					
PRKACB	SUFU	BMP4	PRKACG	BMP2	GLI2	BMP7	GLI3	PTCH1
ID3	SMAD5	RBX1	FST	PITX2	PPP2R1B	TGFBR2	AMHR2	LTBP1
UNC5A	GNAI2	RND1	NCK2	MET	SLIT1	SLIT3	PAK7	NTN1
PIK3R5	HRAS	NFATC4	MAPK14	MAPK12	NFATC3	MAPKAPK2	KRAS	SPHK2
PIP5K1C	MET	MYL10	BIRC2	COL11A1	LAMC3	COL11A2	THBS3	THBS2
ITGB1	LAMB2	SPP1	LAMB3	LAMC1	COL1A1	LAMA4	LAMA5	LAMB1
CNTN1	NLGN2	HLA-DRB3	NRXN3	ALCAM	SELE	CD8A	CD8B	CD6
VCL	CTNNA2	CTNNB1	CTNND1	FARP2	CSNK2B	TGFBR2	PTPRM	PVRL4
SYMPK	MYL10	IGSF5	ASH1L	YES1	MAGI3	GNAI3	CLDN16	CLDN23
PRKG2	MAPK1	TUBA3D	HRAS	GJD2	CSNK1D	EGFR	TUBB2B	ITPR1
C4A	BDKRB2	CFH	CFB	CPB2	CD46	PROS1	SERPINF2	PROC
IFNA14	IFNA16	KIR2DL5A	HSPA6	HLA-DRB4	CD4	KIR2DL1	HLA-DRB5	LTA

TNF	IFNA5	IFNA4	IFNA2	FADD	IFNA1	IRAK4	IL8	MAPK9
MAPK12	IL18	RELA	PYDC1	TRAF6	HSP90AA1	PYCARD	TAB2	NLRC4
IFIH1	IKBKG	MAPK8	MAPK14	MAPK12	RELA	DDX3Y	IFNE	TRAF6
PYCARD	POLR3GL	IL1B	ADAR	DDX58	MAVS	CCL4L1	TBK1	TMEM173
CCND1	IL22RA2	CSH1	BCL2L1	CSF3R	PIAS4	CBLC	CLCF1	OSMR
HLA-DRB5	CSF1	HLA-DRB3	IL3RA	IL3	CD59	LOC652795	CD9	CD8A
LCK	SOS2	PTPN11	KLRC3	RAF1	PRKCB	KLRD1	SHC1	KLRC1
CD3D	CD3E	PAK1	CD3G	CBLC	LCP2	PLCG1	NFATC2	NFATC1
MAPK1	PIK3R5	IKBKG	HRAS	IFITM1	NFATC4	RELA	NFATC3	GSK3B
MAPK3	RAC1	SOS1	PLA2G1B	MAPK1	CSF2	PIK3R5	HRAS	MAPK8
CDC42	PRKCB	RAF1	PRKCA	ARF6	WAS	FCGR2C	PRKCG	PRKCD
BCAR1	GNAI3	CLDN16	CLDN23	EZR	CXCL12	PLCG1	PLCG2	PTK2B
IL5	IL10	IL6	HLA-DRB1	HLA-DRA				

ITPR1	EP300	ITPR2	KRAS	PRKX	ARAF	CALML5	ADCY1	RAP1A
CAMK2D	FOXO3	CAMK2G	IRS2	SORT1	CALML3	CRK	SH2B2	CRKL
PLA2G1B	HRAS	ITPR1	ITPR2	GNA12	GNA13	GNA11	KRAS	GNAI1
OR51F2	OR13H1	OR9K2	CAMK2A	CAMK2B	CAMK2D	CAMK2G	OR51B5	OR10J5
TAS2R50	TAS2R45	TAS2R8	TAS2R46	TAS2R7	TAS2R13	TAS2R19	TAS2R10	TAS2R31
ARHGEF4	FGF9	FGF8	FGF7	FGF6	FGF5	WAS	PDGFD	FGF3
SOCS3	FOXO1	PRKACA	PRKACB	G6PC2	PRKACG	IRS2	CBLC	CALML3
PLA2G12A	PLD2	HBEGF	CALM3	PTK2B	MAP3K2	CDC42	PLCB2	ADCY8
MAPK12	KRAS	PRKX	GNAI1	CCNA1	GNAI2	FZR1	ADCY3	HSP90AA1
GNAI3	WNT16	GNAO1	CALML3	DCT	CALM3	PLCB2	ADCY8	ADCY9
RELA	STK11	PPARA	TRAF2	PRKAB2	PRKAB1	PRKAA2	PRKAA1	SOCS3
IRS4	PIK3R1	PIK3R2	MAPK1					
HLA-DRA								

RAB5C

HSD17B10	APH1A	UQCRQ	ATP5D	CALML5	GAPDH	ATF6	COX7A2L	IDE
UBA7	UBA1	SLC25A6	UQCRHL	SLC25A5	ATP5A1	SLC25A4	ATP5J	CYCS
BCL2L1	PRPH2	PPP3CB	TP53	PPP3CA	PRPH	DERL1	CYCS	TOMM40
NDUFA3	NDUFA1	DNAI1	LOC100133	APAF1	ATP5G1P5	VDAC1	VDAC2	VDAC3
PRKACG	GNAS	ATP6V1D	SEC61A2	ATP6V1A	PLCG1	PLCG2	ATP6V1E1	ATP6V1B2
ATP6V0D2	MAP3K14	ATP6V0E1	ATP6V1C2	ADAM10	TJP1	MET	CSK	SRC
ROCK2	TUBB1	HCLS1	EZR	ARHGEF2	ARPC1A	TLR4	TUBB6	ARPC5L
HLA-DRB3	MAPK14	MAPK12	RELA	IFNGR2	TRAF6	TGFB2	TGFB1	IFNG
LAMB2	ARNT	TPR	LAMB3	AXIN1	LAMC1	AXIN2	STAT5B	STAT5A
TGFB3	CCND1	PIK3R3	BCL2	TCF7L1	MSH2	APC	RALGDS	TP53
FH	VEGFA	ARAF	VEGFC	VEGFB	RBX1	MET	TGFB3	PAK7
ARAF	VEGFC	VEGFB	TGFBR2	TGFBR1	TGFB3	CCND1	PIK3R3	RALB
TP53	PIK3CA	PIK3CB	PIK3CD	CTNNA3	PIK3CG	PIK3R1	PIK3R2	CDH1
PDGFB	CAMK2B	PDGFRA	CAMK2D	CAMK2G	CDK4	TP53	E2F3	CALML3
TCF7L2	MAPK1	PIK3R5	IKBKG	HRAS	EP300	EGFR	RELA	PDGFC
GLI1	TCF7L1	BMP4	SUFU	APC	BMP2	GLI2	PTCH1	GLI3
CDKN2A	KRAS	CDKN1A	EGF	FGF23	FGF18	ARAF	MET	CCND1
SHC3	CDKN1B	CDKN1A	TGFB2	TGFB1	ARAF	TGFBR2	TGFBR1	TGFB3
RUNX1T1	RELA	KRAS	LOC65234	CCNA1	ARAF	CCND1	PIK3R3	TCF7L1
IKBKG	LAMB4	RELA	APAF1	CDKN1B	LAMA3	LAMA2	TRAF6	TRAF5
E2F3	E2F2	PIK3CA	PIK3CB	CDK6	PIK3CD	PLCG1	PLCG2	PIK3CG
HLA-DPB1	HLA-DQA1	HLA-DQA2	HLA-DQB1	FAS	FASLG	IL4	IL5	HLA-DRB1
HIST2H4A	HIST1H2BB	H2AFX	H2AFZ	HIST1H2BC	C2	H3F3B	C1S	C3
ITGAV	ITGB1	TPM4	ACTC1	ACTG1	CACNA2D4	MYBPC3	TPM3	ITGA10
TCF7	ACTG1	CACNA2D4	PKP2	CTNNA1	CDH2	TCF7L2	ITGA10	SGCD
ADCY4	TNNC1	ITGB5	ITGB6	ITGB7	ITGAV	ITGB1	TPM4	ACTC1
DAG1	CD55	LAMA2	LOC652614	ACTB	HLA-F	HLA-E	CD40LG	CCND1

GALM ALDOA DLD DLAT ALDOB G6PC2 LDHA G6PC PGM1

UGT2B4 UGT2B17 UGT2B15
ATP6V1A ATP6V1E1 NDUFA4L2 ATP6V1B2 ATP6V1B1 ATP6V1C1 ATP6V0C COX10 COX8A
PRIM1 PRIM2 AK5 GMPR NME5 PDE7B PDE5A POLD4 GUCY1A2
UCK1 UPB1 TXNRD2 CMPK1 POLR3K RRM2B PNP POLR1B UPP2

PYCR2 ODC1

OCRL PI4KA

TAZ AGPAT9 GNPAT LPCAT4 PLA2G4E AGPAT6 CHKA PPAP2A PPAP2C

HPGDS PLA2G2C PTGDS PLA2G2D PLA2G12A TBXAS1

ALDH1A2 CYP3A43 DHRS4L2 RDH16 UGT1A9 RDH5 UGT2B10 UGT2B7 PNPLA4

CYP1A1 ADH7 CYP1A2 CYP1B1 ADH6 UGT2A1 ALDH1A3 ALDH3B1 ALDH3B2
ALDH3A1 UGT1A5 GSTK1 CYP2A6 CYP2A7 ADH7 CYP1A2 ADH6 UGT2A1

RPL10A RPS27L RPS3 RPS2 MRPL13 RPL17 RPL15 RPL36A RPL12
EDC3 DCPS PAPOLB DCP1B WDR61 CNOT8 PAPOLG

CWC15 DDX23 PRPF18 CDC5L SF3B5 SNRNP40 PRPF31 SNW1 DHX15

FABP3 FABP5 FABP6 FABP7 ACSL5 ADIPOQ SLC27A6 HMGCS2 EHHADH

CACNG5 CACNG4 NF1 PLA2G12A NFATC2 RASGRP4 MAP3K2 MAX DUSP10
MAPK8 EGFR GSK3B CBLB KRAS CBL SHC3 CDKN1B CDKN1A
PLN BDKRB1 MYLK PLCE1 CHRM3 ADCY3 CALML5 LTB4R2 ADCY2
CSF2RA TGFB2 TGFB1 CX3CL1 IL23R XCL1 CXCL5 CXCL11 CXCL6
CCL16 PIK3R5 RELA GNG7 GNG5 KRAS SHC3 FGR GNB3
PIK3C2B PIK3C2G PIP4K2A PIK3C2A PTEN PIK3R3 PIP4K2C IPPK CALML3
NPFFR2 TAAR6 NTSR2 APLNR NMUR1 GPR83 GABRQ PLG C3AR1
CDC25A CDC6 CDC20 BUB3 YWHAZ CCND2 YWHAH CCNB1 YWHAG
YWHAZ YWHAH CALM3 CCNB1 YWHAG YWHAE CCNE1 PTTG2 ADCY8
TP53 CCNE2 FAS CDK6 CYCS STEAP3 CCNB2 LOC651610 CCND2
UBE4B MGRN1 LOC650621 RBX1 DDB2 NEDD4L SOCS3 SIAH1 DDB1

AP3M2 ATP6V0D2 ARSA CTSD CTSB ARSB TCIRG1 GNS PPT2
TRAF6 CHMP4A PDCD6IP LDLR PIP5K1C NEDD4L ACAP3 CHMP5 ARAP2

DHRS4	GNPAT	PEX2	PXMP2	PEX26	PEX3	PEX6	PXMP4	PEX10
IL1RAP	IL1B	IRAK2	IL1R1	IRAK1	TRADD	PIK3R3	BCL2	BCL2L1
TPM4	ACTC1	COX6A1	CACNA2D4	UQCRH	UQCRC1	UQCRC2	TPM3	UQCRC1
RAF1	PLCB3	PRKCA	ADCY5	PLCB4	MYL9	ARHGEF11	KCNMB1	KCNMA1
SKP1	FBXW11	RBX1	CSNK2B	SIAH1	TBL1Y	WNT5B	CCND1	CAMK2A
BMP8B	WNT16	BMP5	BMP6					
LEFTY1	AMH	TGFBR1	SMAD9	LEFTY2	SMAD7	ROCK2	TGFB3	SMAD6
PAK1	LRRC4C	SEMA3C	GNAI3	CXCL12	SEMA5A	NFATC2	NFATC1	DCC
HSPB1	VEGFA	PXN	PLA2G4E	SRC	PIK3R3	PPP3CB	PPP3CA	PIK3CA
THBS1	VWF	ZYX	IBSP	VTN	PDGFD	PPP1R12A	BAD	ACTN4
COL1A2	ITGA10	GP6	ITGA8	LAMB4	TNR	CD47	SV2A	CD44
CLDN17	L1CAM	ITGB8	MAG	VCAN	HLA-F	NFASC	HLA-E	NRXN1
TGFBR1	ACTB	TJP1	MET	SSX2IP	SRC	NLK	TCF7L1	YES1
MYH3	MYH2	MYH4	MYH7	MYH6	MYH9	MYH8	MYH11	MYH10
ITPR2	PDGFC	TUBAL3	GNA11	KRAS	EGF	PRKX	GJA1	GNAI1
FGA	SERPINE1	PLG	C2	SERPINC1	C1S	C3AR1	C3	C1QB
KIR3DL3	HLA-DRB3	TAP2	KIR2DS4	TAPBP	CD8A	CD8B	TAP1	KIR2DS3
IL12B	MAPK10	MAPK11	MAP2K2	MAP2K3	IL12A	MAPK13	MAP2K1	MAP2K7
IL1B	HSP90B1	NLRP3	NLRP1	NAIP	BIRC2	CXCL2	HSP90AB1	TAB1
TRAF3	TRAF2	IFNB1	TANK	CYLD	TRADD	ATG5	DDX58	PIN1
CCL4L2	POLR3A	IL6	IRF7					
IL20	CCND2	CCND3	SOS2	EPO	PTPN11	IL9R	MPL	SPRED2
CD8B	CD44	CD7	CD5	CSF2RA	CD55	DNTT	CSF3	IL1B
PRKCA	KLRC2	TNF	ICAM2	IFNA5	IFNA4	IFNA2	ICAM1	IFNA1
LCK	CDC42	RASGRP1	SOS2	PAK3	CHUK	RAF1	TNF	CARD11
KRAS	SYK	BTK	PIK3R3	BLNK	PIK3AP1	PPP3CB	PPP3CA	LILRB3
IL3	MAPK14	MAPK12	GAB2	KRAS	LAT	SYK	PLA2G4E	BTK
INPP5D	HCK	PRKCE	RAC2	MYO10	WASL	PLA2G4A	DNM1L	MAP2K1
RHOH	OCLN	CDC42	ACTN2	ACTN3	PTPN11	PRKCB	PRKCA	CLDN10
RAPGEF3	CAMK4	CAMK2A	RAP1B	CAMK2B	CAMK2D	CAMK2G	PRKACA	GNAQ
PLCG1	PLCG2	YWHAZ	ARHGDIA	CALM3	YWHAH	ARHGDIB	YWHAG	YWHAE
GNAI2	GUCY1A2	PPP2CB	ARAF	PPP2CA	PPP2R1A	PPP2R1B	PLA2G4E	GNAQ
CALML3	OR2H1	CALM3	OR7G2	OR7G3	OR10A2	OR10V1	PDC	OR7A10
FGF4	FGF1	FGF2	FGD1	PPP1R12A	FGF21	ACTN4	ACTN1	MAP2K2
FLOT1	CRK	SH2B2	CRKL	RHOQ	PRKAG1	PRKAR1A	PRKAR2A	PRKAR1B
SOS2	ADCY9	PLCB1	ADCY6	ADCY7	PRKCB	RAF1	PLCB3	PRKCA
ARAF	LOC650621	ADCY2	PLK1	ADCY1	PDE3A	ANAPC13	MOS	PIK3R3
PLCB1	ADCY6	ADCY7	PRKCB	RAF1	PLCB3	PRKCA	PLCB4	ADCY5
TRADD	ACSL5	ADIPOQ	G6PC2	IRS2	ACSL1	AGRP	PRKAG1	G6PC

ATP5G3	ATP5G2	ADAM10	ATP5G1	ATP5F1	ATP5E	COX5A	CDK5R1	ERN1
SDHA	SLC18A1	SLC18A2	NDUFA4L2	TH	SLC25A31	CASP9	COX8A	COX7C
CHP								
UQCQRQ	ATP5D	DNAH1	BBC3	BDNF	COX7A2L	ATP5G3	ATP5G2	CREB3L3
ATP6V1B1	SEC61A1	ATP6V1C1	ATP6V0C					
TCIRG1	IGSF5	PAK1	GIT1	ATP6V1D	ATP6V1A	PLCG1	PLCG2	HBEGF
TUBB	YWHAZ	FYN	OCLN	CDC42	CDH1	TUBA3E		
IFNGR1	TAB2	IL1B	IRAK1	TGFB3	HLA-DPA1	HLA-DPB1	HLA-DQA1	HLA-DQA2
LAMA4	LAMA5	NFKB2	LAMB1	NFKB1	CTNNA1	NFKBIA	TPM3	MYC
MSH3	PIK3CA	PIK3CB	CYCS	PIK3CD	FOS	PIK3CG	DCC	PIK3R1
RAP1A	PIK3R3	RAP1B	PDGFB	EGLN1	VHL	PAK1	FIGF	CRK
BCL2L1	RALA	CDK4	FIGF	RALBP1	RALGDS	TP53	E2F3	E2F2
E2F2	PIK3CA	PIK3CB	CDK6	PIK3CD	PLCG1	SHC2	PLCG2	CALM3
GSK3B	KRAS	CDKN1B	EGF	CDKN1A	CTNNB1	HSP90AA1	ARAF	AR
WNT16	TP53	FZD2						
PTEN	PIK3R3	PDGFA	FGF22	PDGFB	PDGFRA	CDK4	TP53	E2F3
CCND1	PIK3R3	BCL2L1	CDK4	CBLC	TP53	E2F3	E2F2	CRK
PPARD	PIK3CA	PIK3CB	PIM1	PIK3CD	PIK3CG	PIK3R1	PIK3R2	
TRAF3	CDKN2B	TRAF2	FHIT	TRAF1	ITGA6	CCND1	PTEN	ITGA2
PIK3R1	PIK3R2							
HLA-DRA								
C1QB	HIST1H2A	C1QA	H3F3A	C1R	C1QC	HIST1H2BK	ACTN2	HLA-DRB1
SGCD	SGCG	SGCA	ITGA8	SGCB	CACNG2	DAG1	CACNG3	LAMA2
SGCG	SGCA	ITGA8	SGCB	CACNG2	CTNNA2	DAG1	CACNG3	CTNNB1
ACTG1	CACNA2D4	MYBPC3	TPM3	ITGA10	SGCD	SGCG	SGCA	ITGA8
HLA-DPA1	CD40	HLA-DPB1	MYH7B	HLA-DQA1	HLA-DQA2	HLA-DQB1	CAV1	MYH3

GPI

COX7C	LOC642502	SDHD	SDHB	SDHC	ATP6V1G3	COX7B	COX7A1	COX7A2
FHIT	ADCY3	ADCY2	ADCY1	POLA1	PDE3A	PDE2A	PDE1C	ADSSL1
CTPS2	POLR2J2	CDA	NT5M	DUT	POLR3H	UCKL1	POLR2J3	POLR1A

LYPLA2	PLA2G2C	AGPAT1	PLA2G2D	LPCAT2	PLA2G12A	AGPAT2	PLD1	CHKB
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UGT2B4 UGT2B17 UGT2B15

CYP3A43 UGT1A9 DHDH GSTO2 UGT2B10 UGT2B7 UGT2B4 UGT2B17 UGT2B15
ALDH1A3 ALDH3B1 ALDH3B2 CYP3A43 UGT1A9 GSTO2 UGT2B10 UGT2B7 UGT2B4

RPL13 RPL41 RPL10 RPL39 RPL11 RPL8 RPL9 RPL13A RPL7A

WBP11 HNRNPU CTNBL1 HNRNPK TRA2A SNRNP200 HSPA1L HSPA1B RBM22

UBC PPARG PPARD ACSL1 SCD5 ACOX1 ACSL3 ACSL4

FGF9 FGF8 FGF7 FGF6 FGF5 FGF3 FGF4 FGF1 FGF2
EGF EREG ARAF NCK2 PAK7 SRC PIK3R3 CAMK2A CAMK2B
ADCY1 BDKRB2 PDE1C CYSLTR1 GNA14 PDE1B CAMK4 CAMK2A CAMK2B
CCR2 CCL25 CSF3 TGFBR2 TGFBR1 MET TGFB3 CXCR3 CSF3R
GNB2 CCL24 PRKX GNG4 GNG3 GNAI1 GNG10 GNAI2 GNG11
PIK3CA PIK3CB PIK3CD PLCG1 PLCG2 PLCZ1 PI4KB CALM3 INPP5E
AGTR1 GALR1 AGTR2 SSTR5 SSTR4 ADCYAP1R TSHR GRIK1 TSHB
YWHAE CCNE1 ORC3 CCND3 PTTG2 SFN E2F1 TFDP1 ZBTB17
ADCY9 ADCY6 ADCY7 ADCY5 SPDYA CDK1 ESPL1 ANAPC10 INS
SHISA5 CCNB1 CCNG1 CCNE1 CCNB3 THBS1 CCNG2 CCND3
DET1 RNF7 BIRC2 UBE2U UBE2Z UBA7 VHL UBA1 UBE2NL

DNASE2 SORT1 ASAH1 AP4E1 GALNS AP4M1 PSAPL1 IDUA IDS
IQSEC2 HLA-F MET HLA-E ARAP3 ASAP2 RAB11B RAB11FIP5 ZFYVE20

ABCD2	PEX7	ACSL5	PEX13	PEX12	EHHADH	PEX14	AGXT	PRDX1
BIRC2	IRAK3	PRKACA	PRKACB	PRKACG	PPP3CB	TP53	PPP3CA	PIK3CA
CACNG2	CACNG3	UQCR11	UQCRQ	MYL3	TNNT2	MYL2	LOC727947	COX6B2
RHOA	PLA2G3	PPP1R12A	PRKCG	PRKCH	PRKCD	PRKCE	PLA2G2A	MAP2K2
NLK	CAMK2B	CAMK2D	CAMK2G	PRKACA	APC	PRKACB	PRKACG	WNT16
BMPR2	GDF6	BMPR1A	BMPR1B	ACVRL1	ACVR2B	ACVR2A	ACVR1	BMP4
CDC42	UNC5D	SRGAP2	SEMA6C	SEMA6B	PAK3	SEMA3D	EPHB4	EPHB6
PIK3CB	PIK3CD	PLA2G2C	PLCG1	SHC2	PLA2G2D	PLCG2	PLA2G12A	NFATC2
ACTN1	MAPK9	MAPK10	LOC646821	MAP2K1	RASGRF1	ILK	RAPGEF1	GRB2
DAG1	TNXB	LAMA3	LAMA2	SDC3	ITGB8	ITGA6	ITGA2	ITGA1
HLA-DPA1	HLA-DPB1	HLA-DQA1	HLA-DQA2	HLA-DQB1	NRXN2	CD2	CLDN16	CLDN23
FER	BAIAP2	CTNNA3	LMO7	FYN	ACP1	PTPN1	PARD3	CDC42
OCLN	CDC42	ACTN2	ACTN3	PARD6A	PRKCB	PRKCA	CLDN10	CASK
HTR2A	TUBA3C	GNAI2	GUCY1A2	HTR2C	HTR2B	TUBB8	TUBA8	ADCY3
CFD	C1QA	C1R	C1QC	CFI	SERPING1	MASP2	THBD	
HSPA8	KIR2DL4	CANX	KIR2DS1	KIR2DL2	KIR2DL3	KLRC4	LOC652614	NFYC
MAP2K6	IFNA17	IFNA21	IFNA6	IFNA7	IFNA8	IFNA10	IFNA13	IFNA14
IL6								
MAVS	IFNK	DHX58	TBK1	TMEM173	IFNW1	AZI2	NLRX1	IRF7
IFNA5	IFNA4	IFNA2	IL28RA	SOCS2	IFNA1	CISH	PTPN6	IL9
IL1R1	IL2RA	ITGA6	IL6R	ITGA2	ITGA1	CSF3R	IL7	CD37
RAET1G	HLA-C	HLA-B	PTPN6	PRKCG	HLA-A	RAC2	SH3BP2	BID
PAK2	RHOA	PTPN6	PDCD1	MAPK9	MAPK11	MAP2K2	PRKCQ	MAPK13
PIK3CA	PIK3CB	PIK3CD	PLCG2	BCL10	NFATC2	FOS	NFATC1	PIK3CG
PIK3R3	PIK3CA	PIK3CB	LCP2	PIK3CD	PLA2G2C	PLCG1	PLA2G2D	PLCG2
DNM1	MARCKS	RPS6KB1	RPS6KB2	ASAP3	MAPK3	PLA2G4F	ARPC2	RAC1
CLDN8	CLDN2	CLDN6	MYL9	CLDN5	CLDN1	ICAM1	RHOA	CXCR4
PRKACB	PRKACG	PPP3CB	CALML3	PPP3CA	ATF4	CALM3	CHP	CALML6
CDC42	SOS2	PTPN11	RAF1	SHC1	RIPK2	RHOA	BAD	IRAK4
GNAS	PPP1R17	GNAI3	GNAO1	GNAZ	PLA2G2C	PLA2G2D	PLA2G12A	LYN
OR13C5	OR9G4	OR10H5	OR4P4	OR2C1	OR1F1	OR1D2	OR10A4	OR5B3
LOC646821	MAP2K1	ARHGEF12	FGFR2	FGFR4	FGFR3	FGFR1	FGF14	FGF17
CALM3	PTPN1	SOS2	RAF1	SHC1	PRKAR2B	TSC2	SORBS1	SLC2A4
ADCY5	PLCB4	PLA2G3	PRKCD	MAPK9	MAPK10	MAPK11	PLA2G2A	MAP2K2
PGR	CCNA2	BUB1	PKMYT1	PRKACA	CDK2	PRKACB	PRKACG	CDC26
CREB3L4	ASIP	KITLG	PRKCG	MC1R	WNT3A	DVL3	DVL2	MAP2K2
IRS1	CAMKK1	CAMKK2	IRS4	ACSL3	ACSL4			

GNAQ	UQCRHL	ATP5A1	BACE1	CALML3	APBB1	ATP5J	CYCS	SDHA
LOC642502	PPID	SDHD	SDHB	SDHC	PINK1	COX7B	COX7A1	COX7A2
ATP5G1	ATP5F1	ATP5E	COX5A	GNAQ	DNAH2	SLC25A6	SP1	UQCRHL
ATP6V1E1	ATP6V1B2	LYN	ATP6V1B1	CDC42	ATP6V1C1	ATP6V0C		
HLA-DQB1	C3	NCF1	TLR4	TAB1	IL4	TLR2	FOS	CYBA
PIK3R5	CSF1R	SHH	LAMB4	CCDC6	NCOA4	KRAS	CSF2RA	TRAF6
PIK3R2								
PIK3CA	PIK3CB	CRKL	PIK3CD	GAB1	PIK3CG	PIK3R1	CDC42	PIK3R2
PIK3CA	PIK3CB	CDK6	PIK3CD	PLD1	PIK3CG	PIK3R1	CDC42	PIK3R2
PIK3CG	PIK3R1	PIK3R2	CALML6					
CREB3L3	HSP90B1	SRD5A2	CREB3L2	CCND1	PTEN	PIK3R3	BCL2	PDGFA
E2F2	PIK3CA	PIK3CB	CDK6	PIK3CD	MITF	PIK3CG	PIK3R1	PIK3R2
PIK3CA	PIK3CB	CDK6	CRKL	PIK3CD	SHC2	HDAC1	BCR	HDAC2
TRAF4	PIK3R3	BCL2	BCL2L1	BIRC2	CDK2	PIAS4	CDK4	LAMC3
ACTN3	HLA-DRA	HIST1H2AC	HLA-DOA	HLA-DOB	HIST1H3F	TNF	HIST1H4D	FCGR2C
TGFB2	MYL3	TNNT2	MYL2	TGFB1	PRKAB2	PRKAB1	PRKAA2	ITGB8
LAMA2	GJA1	ITGB8	ACTB	ITGA6	ITGA2	ITGA1	CACNG5	CACNG4
SGCB	CACNG2	DAG1	CACNG3	PRKX	PLN	LAMA2	TGFB2	MYL3
MYH2	CYCS	MYH4	MYH7	MYH6	MYH9	MYH8	MYH11	FYN

COX6C	COX17	ATP5B	COX6B1	ATP5C1	LOC644310	ATP6V1F	COX7B2	ATP6V0A2
ADA	ENTPD8	POLE2	PDE8A	PDE9A	PDE1B	NUDT9	POLD1	GDA
POLR3B	ENTPD4	ITPA	POLR1C	POLE4	RRM1	RRM2	POLR3D	NT5C3

PISD	PLD2	PCYT1B	GPAT2	LCAT	CRLS1	GPD2
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UGT2B17 UGT2B15

RPS26 RPS27 RPS25 RPS29 RPLP1 RPS27A RPLP0 RPS28 RPS24

HSPA2 HSPA1A ZMAT2 PRPF6 DHX16 U2AF1 PRPF38A HNRNPC DDX5

PTPN5 FGF21 IL1R2 MAPK9 CACNA2D3 MAPK10 MAPK11 RASGRP2 PLA2G2A
CAMK2D CAMK2G PAK1 CBLC CRK PIK3CA PIK3CB CRKL PIK3CD
PDGFRA CAMK2D CAMK2G PRKACA PRKACB GNAQ SLC25A6 PRKACG GNAS
CLCF1 IL17B CXCL12 CCR10 OSMR CCL4L2 XCR1 IL20 INHBE
GNGT1 CX3CL1 GNGT2 XCL1 CXCL5 ADCY3 CXCL11 GNG2 ADCY2
PIK3CG PIK3R1 OCRL PIK3R2 CALML6 PI4KA
GRIK2 GRIK3 GRIA4 GRID1 GRID2 MC1R TSPO S1PR5 MC3R
CDK1 ESPL1 ANAPC10 RAD21 BUB1B ANAPC11 RB1 SKP2 CUL1
ANAPC11 MAP2K1 ADCY4 RPS6KA2 RPS6KA3 CUL1 PPP1CC PPP1CB PPP1CA

PIAS4 AIRE FBXO4 CBLC UBE2A CDC27 HUWE1 UBE2B CDC34

ATP6V0C GALC GNPTG NEU1 M6PR GUSB AP3S2 GLA GGA3
PDGFRA AGAP1 DNMT3 AGAP2 ARFGAP1 ARAP1 CHMP4B CBLC ACAP2

PECR	ACSL1	PEX11A	ACOX1	ECI2	CROT	ACSL3	ACSL4	
PIK3CB	FAS	DFFA	CYCS	DFFB	PIK3CD	LOC65161C	PRKAR1A	FASLG
COX4I2	COX7A2L	COX5A	CACNG5	CACNG4	UQCRHL	CYC1	MYH7	MYH6
CACNA1D	PLA2G4A	PRKCQ	PLA2G5	PLA2G12B	MAP2K1	CACNA1C	ARHGEF12	MYLK2
DAAM1	CHD8	FRAT1	CACYBP	CCND2	NFATC2	NFATC1	CCND3	PLCB2
E2F5	BMP2	ACVR1C	E2F4	SP1	BMP7	BMP8B	ZFYVE9	BMP5
SEMA4D	SEMA4B	PAK2	SEMA4F	RHOA	CXCR4	EPHB1	EPHA8	EPHB3
NFATC1	PIK3CG	PIK3R1	CDC42	PIK3R2	CHP			
PPP1CC	PPP1CB	ACTG1	ITGA10	HRAS	ITGA8	CTNNB1	MYL12B	ACTB
SV2B	TNC	COL11A1	LAMC3	COL11A2	HMMR	SDC2	SDC4	COL5A3
MADCAM1	SDC2	SDC4	SDC1	OCLN	PVR	HLA-DRB1	PVRL2	CDH1
ACTN2	PVRL2	CDH1	ACTN3	PVRL1				
CLDN8	CLDN2	CGN	CLDN6	MYL9	TJP2	CLDN5	CLDN1	RHOA
TUBA4A	ADCY2	ADCY1	TUBA1C	TJP1	TUBB1	SRC	PDGFA	PDGFB
HSP90AA1	NFYA	NFYB	HLA-F	CTSB	HLA-E	CALR	HLA-DPA1	HLA-DPB1
IFNA16	MAPK3	RAC1	MAPK1	IRF3	IKBKG	MAPK8	IFNB1	IFNAR1
RNF125								
IL7R	IL12RB1	IL12B	IL13	IL12RB2	IL11RA	IL12A	IRF9	IFNA17
CD2	CD3D	CD3E	CD38	CD3G	CD1B	ANPEP	CD1C	CD1D
MAP2K2	KIR2DS5	RAC3	KIR3DL1	KIR3DL2	MAP2K1	IFNA17	CASP3	IFNA21
MAP2K1	MAP2K7	GRAP2	GRB2	MAPK3	IL10	PTPRC	SOS1	MAPK1
LYN	VAV3	PIK3R1	PIK3R2	CHP				
PLA2G12A	IL4	FYN	IL5	PIK3CG	VAV3	LYN	PIK3R1	PIK3R2
PTPRC	MAPK1	MARCKSL1	GSN	GAB2	SPHK2	LAT	PPAP2B	LIMK2
ESAM	ACTN4	PRKCG	ACTN1	MYLPP	F11R	NOX1	CLDN19	RAC2
PRKCD	MAPK9	MAPK10	MAGED1	MAPK11	MAP2K2	MAPK13	MAP2K1	BAX
OR7D2	OR56B4	OR13F1	OR13C4	OR13C3	OR2T11	OR13C8	OR2T4	OR52B6
FGF16	FGF10	FGF11	IQGAP1	FGF12	PPP1CC	FGF13	PPP1CB	ACTG1
MTOR	MKNK1	SOCS2	FASN	PHKG1	BAD	INS	PHKG2	PRKCI
CACNA1D	PLA2G4A	MAP2K3	PLA2G5	MAPK13	PLA2G12B	MAP2K1	CACNA1C	MAP2K7
GNAI3	HSP90AB1	CDC27	PIK3CA	PIK3CB	CDC25B	CDC25C	CCNB2	PIK3CD
MAP2K1	KIT	FZD3	DVL1	ADCY4	TYRP1	WNT4	WNT10A	MAPK3

CALM3	NDUFA4L2	NCSTN	CASP9	PLCB2	COX8A	CASP8	COX7C	CASP7
COX6C	UBE2J1	ATP5B	COX6B1	ATP5C1	LOC64431C	UBB	COX7B2	PARK2
ATP5A1	SLC25A5	SLC25A4	ATP5J	RCOR1	CYCS	TGM2	SDHA	DCTN1
HLA-DRB1	HLA-DRA							
TGFB2	TRAF5	TRAF3	TGFB1	TRAF2	RBX1	TGFBR2	TRAF1	TGFBR1
PDGFB	TCF7L1	FOXO1	PDGFRA	CDK2	HSP90AB1	TP53	E2F3	E2F2
CDH1								
PIK3CG	PIK3R1	PIK3R2						
TP53	E2F3	E2F2	PIK3CA	PIK3CB	CCNE2	CYCS	CDK6	PIK3CD
HIST1H4K	H2AFY2	HIST1H4F	H2AFV	HIST1H4C	HIST1H4J	HIST1H4B	HLA-DMB	HIST1H4H
PRKAA1	TTN	ACTB	ITGA6	TGFB3	ITGA2	ITGA1	CACNG5	CACNG4
TCF7L1	DSP	DES	CTNNA3	ACTN2	ACTN3			
TNNT2	MYL2	TGFB1	ADCY3	ADCY2	ADCY1	ITGB8	TTN	ACTB
MYH10	HLA-DRB1	HLA-DRA						

UQCRB	ATP6V0D1	COX6A2	COX6A1	UQCRH	UQCRFS1	UQCRC2	UQCRC1	NDUFB3
POLD2	POLE	PDE6B	PDE7A	PRPS1	POLR1E	PAICS	NT5C1A	POLR2B
DPYS	DPYD	TYMP	UMPS	UCK2	POLR3GL	TK1	NT5E	TK2

RPS9 RSL24D1 RPS23 RPS8 RPS21 RPS7 RPL10L RPL7 RPL6

DHX8 HSPA6 DHX38 ISY1 XAB2 SNRPG SNRPE SNRPF SNRPD2

MAP2K2 PLA2G4A MAP2K3 MECOM PLA2G5 MAPK13 MAP2K1 FGFR2 MAP2K7
GAB1 PLCG1 PLCG2 SHC2 HBEGF PIK3CG PIK3R1 PIK3R2
SLC25A5 CALML3 SLC25A4 GNAL ATP2B2 ATP2B3 ATP2B4 PLCG1 PLCG2
PLEKHO2 CXCL10 MPL CCL27 INHBB INHBC IL28RA INHBA KITLG
CXCL6 ADCY1 CCR9 CCR2 CCL25 PXN CXCR3 CSK CCL4L1

MC2R GABRR2 GRIA3 TRPV1 GRIA2 GRIA1 MTNR1A LEPR MTNR1B
SMAD3 SMAD4 ANAPC2 TFDP2 PRKDC MAD2L1 ANAPC4 SMAD2 YWHAQ
CPEB1 MAPK3 ANAPC2 MAD2L1 ANAPC4 MAPK1 RPS6KA1 YWHAQ CDC23

UBE2D1 UBA3 UBE2E1 UBE2E2 UBE2D2 CDC20 UBE2D3 ITCH UBE2Q1

ATP6V0A2 FUCA1 NPC2 ATP6V0D1 ENTPD4 SGSH AP1M2 CD68 CD63
VPS25 RAB22A EHD1 PLD1 PLD2 ITCH CDC42 SH3GLB2 PARD6A

PRKAR2A ATP1B4	PRKAR1B	EXO G	PIK3CG	AIFM1	NTRK1	PIK3R1	PIK3R2	CHP
CACNA1F PLCB1	CACNA1S CSNK1A1L	ADCY4 PRKCB	PPP1CC PLCB3	PPP1CA PRKCA	PPP1CB PLCB4	GUCY1B3 WIF1	MAPK3 PRICKLE2	GUCY1A3 PORCN
BMP6 EPHB2	ZFYVE16 EFNA4	THBS3 EFNA3	INHBE RAC2	THBS2 EFNB1	DCN EFNA5	THBS1 EFNB3	RAC3	EFNB2
ROCK2 THBS3 HLA-DRA	PTEN COL6A6 PVRL1	RAP1A THBS2 HLA-DOA	PIK3R3 SDC1 HLA-DOB	RAP1B THBS1 CLDN10	TNC ICAM2	CAV2 ICAM3	CAV1 CLDN8	CAV3 CLDN2
MPDZ PDGFRA	PRKCI PRKACA	ACTN4 PRKACB	PRKCG GNAQ	ACTN1 PRKACG	PRKCH GNAS	MYLPF GNAI3	PRKCD TUBB6	F11R TUBB
HLA-DQA1	PDIA3	HLA-DQA2	HLA-DQB1	PSME1	PSME2	HSP90AB1	B2M	HLA-DRB1
IFNAR2	TICAM2	IL1B	IRAK1	CD40	PIK3R3	TBK1	PIK3CA	CXCL9
PIAS2 CD1E IFNA6 HRAS	IFNA21 CD1A IFNA7 IKBKG	IFNA6 IL4 IFNA8 TEC	LEPR IL4R TYROBP GSK3B	IFNA7 IL5 IFNA10 CBLB	IFNA8 IL5RA IFNA13 CBL	IFNA10 IL6 IFNA14 ITK	IFNA13 HLA-DRB1 GRB2 LAT	GRB2 HLA-DRA IFNA16 IFNG
LIMK1 MAPK11	SYK LOC646821	LOC653888 MAPK13	PLA2G4D CLDN15	PIK3R3 CD99	PIK3CA CLDN22	PPAP2A ARHGAP35	PIK3CB ACTG1	PPAP2C RAC1
MAP2K7	MAP2K5	RPS6KA2	RAPGEF1	RPS6KA3	GRB2	MAPK3	RPS6KA4	MAPK7
OR3A1	OR2AT4	OR3A2	OR4F15	OR4F6	OR1C1	OR4C15	OR1A2	OR4N4
ITGA10 GYS1 CACNA1F CDC25A TCF7	HRAS GYS2 MAP2K6 MAD2L2 MAPK1	ITGA8 INPP5D CACNA1S CCNB1 TCF7L2	PFN3 MAPK9 ADCY4 PIK3CG HRAS	FGF23 HK3 GRB2 PIK3R1 WNT1	LIMK2 MAPK10 MAPK3 CCNB3 EP300	LIMK1 MAP2K2 MAPK7 PIK3R2 GSK3B	FGF18 PTPRF SOS1 WNT7A	MYL12B MAP2K1 PLA2G1B WNT7B

PLCB1 PLCB3 PLCB4 TNF LOC642502 RYR3 FADD SDHD SDHB
CASP3 UQCRB COX6A2 COX6A1 UQCRH UQCRFS1 UQCRC2 UQCRC1 NDUFB3

POLR2B DNAL1 POLR2A NDUFA4L2 POLR2D POLR2C DNAL4 SLC25A31 CASP9

HSP90B1 MET TGFB3 RALB RALA FOXO1 CSF3R BIRC2 APC

PIK3CA PIK3CB CCNE2 PIK3CD KLK3 ATF4 PIK3CG CCNE1 PIK3R1

PIK3CG CCNE1 PIK3R1 CKS1B PIK3R2

HLA-DMA ACTN4 HIST1H4L HIST1H2BJ ACTN1 HIST1H4E HIST1H4G H2BFWT HIST2H2BE

PRKAG1 DES MYH7 MYH6 ACE IL6

ITGA6 TGFB3 ITGA2 ITGA1 CACNG5 CACNG4 PRKACA PRKACB PRKACG

NDUFB1	NDUFB2	NDUFA10	NDUFAB1	ATP6V0E2	ND6	NDUFA9	ND5	NDUFA7
POLR3A	PDE6H	POLR2A	PDE6G	POLR2D	DCK	POLR2C	ADCY8	ADCY9
UPP1	ENTPD6	ENTPD5	ENTPD3	ENTPD1	NT5C1B	NT5C	NME7	AK3

SNRPD3 SART1 SYF2 CRNKL1 U2SURP HNRNPA1 PRPF3 AQR PRPF4

RASA2 MAPK8IP2 RASGRF1 MAP2K5 RASGRF2 FGFR4 MAP2K6 MAPK8IP3 MAP3K6

PLCZ1 AGTR1 ATP2B1 CALM3 PTK2B TRPC1 SLC25A31 PLCB2 GRM5
TNFRSF19 CXCR4 IL1R2 KIT CD70 TNFRSF11B LEPR CXCR6 RELT
FOXO3 PRKACA BCAR1 PRKACB GNB5 PRKACG PAK1 GNAI3 CRK

LEP MC4R GABRD MC5R GABRE GABRG1 GABRG2 GABRG3 GABRP
CHEK2 CDC23 EP300 GSK3B CDKN2A CDKN1C CDKN1B CDKN1A CDKN2D
ITPR1 ITPR2 AURKA PPP2CB SMC3 PPP2CA PPP2R1A AR PPP2R1B

ANAPC10 RCHY1 UBE2W WWP1 PPIL2 TCEB1 UBE3C UBE2J1 ANAPC11

GLB1 CTSF MANBA MAN2B1 PSAP CTNS LIPA AP1S2 AP1M1
CHMP6 VTA1 RNF41 DNAJC6 ARF6 CHMP1B PSD2 USP8 PSD4

ACTG2	PRKG1	PLA2G1B	MAPK1	ADORA2A	RAMP3	RAMP1	ACTA2	RAMP2
RHOA	FRAT2	PRKCG	MAPK9	MAPK10	WNT3A	DVL3	RAC2	DVL2
ARHGEF12	ABLIM2	SRGAP1	EFNA2	RASA1	EFNA1	DPYSL5	SEMA3A	UNC5C
COL5A3	TLN1	VAV3	COL6A2	COL6A3	COL5A2	COL6A1	LAMA1	ITGA9
CLDN6	CLDN5	CLDN1	ICAM1	NEO1	HLA-C	HLA-B	ESAM	HLA-DMB
PRKCE	CLDN19	LOC646821	PRKCQ	CLDN15	PRKCZ	CLDN22	ACTG1	RAB13
MAP3K2	TUBA3E							
HLA-DRA								
PIK3CB	PIK3CD	TLR3	TLR4	TAB1	TLR1	FOS	TLR2	IRF5
IFNA14	LEP	IFNA16	IL26	IL19	IL10	IL10RA	SOS1	IL10RB
MAPK3	KIR2DL5A	RAC1	SOS1	MAPK1	KIR2DL1	HRAS	KIR2DS4	CD48
IL2	CD40LG	PIK3R3	CDK4	PPP3CB	DLG1	PPP3CA	PIK3CA	PIK3CB
PIK3CD	ARPC1A	NCF1	PIK3CG	ASAP1	LYN	VAV3	PIK3R1	PIK3R2
ITK	CTNNA2	RASSF5	CTNNB1	CLDN11	CLDN7	MYL12B	CLDN4	CLDN3
KIDINS220	RAC1	SOS1	MAPK1	RPS6KA1	YWHAQ	HRAS	MAPK8	PRDM4
OR56B1	OR2A1	OR5I1	OR2A12	OR7D4	OR9A4	OR5C1	OR4K14	OR1L6
PIP4K2A	ACTB	LOC65388	ROCK2	MOS	PIK3R3	TMSB4Y	GIT1	MSN
PRKAG3	RPTOR	PPP1R3C	RAPGEF1	PPP1R3A	RPS6KB1	RPS6KB2	PRKCZ	TSC1
MAPK1	HRAS	MAPK8	ITPR1	EGFR	ITPR2	MMP14	SRC	FSHB
WNT8A	WNT8B	WNT2	WNT3	WNT5A	CTNNB1	WNT6	FZD10	CREB3L2

SDHC COX7B BAD COX7A1 COX7A2 COX6C ATP5B GRIN1 GRIN2A
NDUFB1 NDUFB2 NDUFA10 NDUFAB1 ND6 NDUFA9 ND5 NDUFA7 NDUFA8

PLCB2 COX8A GRM5 CASP8 COX7C PLCB1 PLCB3 PLCB4 DNAI2

SUFU PIAS4 LAMC3 CBLC WNT16 PLCG1 PLCG2 PLD1 BCR

PIK3R2

GRIN2A GRIN2B TROVE2 TRIM21 HIST1H3D HIST1H3A HIST2H2BF HIST1H3G HIST1H3I

GNAS DES MYH7 MYH6

NDUFA8 UQCR11 NDUFA6 NDUFV3 ATP6V1E2 ND4 ND4L LOC727947ND2
ADCY6 AK7 ADCY7 ADCY5 GMPS ADCY10 POLR3K POLR1B PNP
ZNRD1

LSM3 SF3B4 PPIH LOC653884 SLU7 BUD31 PHF5A SRSF10 SRSF6

CASP3 MAP3K12 FGFR3 FGFR1 RASA1 FGF14 RPS6KA2 RPS6KA3 FGF17

ADCY8 RYR1 PLCB1 ADCY9 PLCD1 PRKCB ADCY7 PRKCA PLCB3
LEP IL19 LTA IL17A IL18 TNFRSF9 OSM GDF5 IL15RA
CXCL12 CCR10 GNB1 CRKL CCL4L2 XCR1 PTK2B CDC42 PLCB2

GABRR1 GABRB3 ADORA1 GABRB2 ADORA2A GABRB1 FPR3 FPR2 FPR1
CCNA1 CDKN2B CDKN2C FZR1 SMC3 ANAPC13 PCNA TTK PKMYT1
ANAPC13 MOS PKMYT1 CDK2 CDC26 PPP3CB PPP3CA PPP2R5A CCNE2

TCEB2 SAE1 UBA2 RHOBTB2 CUL5 KEAP1 SYVN1 PARK2 SKP2

LAPTM4B NAPSA HEXB AP3S1 SUMF1 MCOLN1 AP1S1 HEXA NPC1
WWP1 HLA-C CXCR4 HLA-B PRKCI CXCR2 SH3GL3 CXCR1 TSG101

ITPR1	ADORA2B	ITPR2	ARAF	CYP4A22	NPR2	AVPR1A	AVPR1B	ROCK2
RAC3	FZD3	DKK1	CXXC4	DVL1	FOSL1	CUL1	WNT10A	WNT4
NRP1	MAPK3	RAC1	MAPK1	SEMA5B	HRAS	SEMA3B	GSK3B	SEMA3E
CHAD	PAK4	ITGA4	ITGA3	ITGA2B	ITGA7	ITGA5	COL5A1	COL4A6
HLA-DMA	HLA-A	F11R	PDCD1	CLDN19	PTPRF	CLDN15	CD226	CD99
HRAS	CTNNA2	PARD6G	TJAP1	SPTAN1	PPP2R2A	CTNNB1	PPP2R2B	RRAS
PIK3CG	IL6	PIK3R1	IRF7	PIK3R2				
EPOR	IL11	IL3RA	IL3	EP300	IL2RG	IL2RB	CBLB	OSM
KIR2DS3	IFNGR2	LAT	KIR2DL4	ULBP1	KIR2DS1	ULBP2	KIR2DL2	KIR2DL3
PIK3CD	BCL10	IL4	FYN	IL5	FOS	PIK3CG	VAV3	PIK3R1
ACTB	ROCK2	RAP1A	PIK3R3	RAP1B	CLDN14	PIK3CA	CLDN9	MSN
MAPKAPK2	GSK3B	PSEN1	NTF4	IRAK2	NTF3	IRAK1	RAP1A	PIK3R3
OR4L1	OR2M3	OR2T12	OR14C36	OR11H6	OR2T34	OR2T10	OR2T8	OR2T3
ARPC1A	BAIAP2	IQGAP2	NCKAP1	VAV3	ABI2	F2	F2R	ARHGEF6
GRB2	PPP1CC	PPP1CA	PPP1CB	MAPK3	PKLR	INSR	SOS1	RPS6
LHB	PLA2G2C	ATF4	CALML6					
FZD5	TCF7L1	MITF	FZD2	CALML6				

GRIN2B COX6B1 CACNA1D BID ATP5C1 GRIN2C GRIN2D LOC644310 CACNA1C
UQCR11 HTRA2 NDUFA6 NDUFV3 ND4 ND4L LOC727947 ND2 COX6B2

LOC642502 IFT57 CREB3L4 PPID SDHD SDHB SDHC TFAM HAP1

PAX8 CASP9 MAX CASP8 RARB FGF9 RARA FGF8 FGF7

HIST1H3E HIST1H3C HIST1H4A IL10 HIST1H3B SSB HIST1H3H HIST2H3A HIST1H3J

COX6B2	PPA1	ND3	COX4I2	ND1	ATP5L	ATP6V0E1	NDUFA11	NDUFB10
RRM2B	PDE1A	POLR2J2	HPRT1	GART	PAPSS1	PAPSS2	NT5M	ADCY4

SNRPA RBM8A SRSF7 SNRPA1 HNRNPM SNRPB TRA2B SNRPB2 PUF60

FGF16 FGF10 GRB2 FGF11 FGF12 FGF13 PLA2G1B RPS6KA1 MAPKAPK3

PLCB4 TNNC2 RYR2 RYR3 GRM1 PPID PHKG1 PHKG2 PRKCG
IL15 CXCL13 LTB TNFRSF25 LTBR IL22RA1 CD40LG CD40 PPBPL1
SOS2 ADCY8 CXCL10 PLCB1 ADCY9 ADCY6 CHUK RAF1 PRKCB

ADORA2B HTR4 HTR5A HTR6 HTR7 HTR2A GALR3 HTR1F HTR2C
CDK2 CDC26 E2F5 CDK4 WEE1 E2F4 E2F3 TP53 E2F2
CCNB2 PPP2R5E MAD2L2 PPP2R5D PPP2R5C PPP2R5B CHP CALML6

PIAS2 CUL7 CUL1 FBXW7 CUL2 CUL3 UBE3B CUL4A CUL4B

SLC17A5 SCARB2 HYAL1 CLN5 CTSA TPP1 CLTA CLTB CLN3
HLA-A ERBB4 HSPA1L HSPA1B ERBB3 HSPA2 RAB11FIP4 SH3GL1 EPS15

NPR1	ADRA1D	ADRA1B	ADRA1A	KCNMB4	PLA2G2C	ARHGEF1	MYLK3	CALML6
SMAD3	TCF7	SMAD4	RAC1	TCF7L2	SMAD2	WNT1	MAPK8	EP300
DPYSL2	LIMK2	LIMK1	ABLIM1	ROCK2	SEMA7A	EPHA1	NTN4	EPHA5
PDGFRB	COL2A1	COL3A1	COL4A1	PARVB	COL4A2	BRAF	COL4A4	VAV1
CLDN22	CNTNAP2	MPZ	MPZL1	PTPRC	PVRL3	ITGA8	NCAM2	NCAM1
CLDN11	PPP2CB	PPP2CA	PPP2R1A	CLDN7	MYL12B	PPP2R1B	MRAS	CLDN4
CBL	IL15RA	IFNGR2	IL15	IFNG	IFNGR1	IFNB1	IFNAR1	IFNAR2
TNFRSF10A	IFNG	IFNGR1	TNFRSF10C	SYK	IFNB1	MICB	ARAF	TNFRSF10B
PIK3R2	CHP							
PIK3CB	PIK3CD	NCF1	CTNNA3	NOX3	RAPGEF4	CYBA	PIK3CG	VAV3
RAP1B	IRAK3	TP53	PIK3CA	PIK3CB	PIK3CD	GAB1	FASLG	SHC2
OR2W3	OR6V1	OR6Q1	OR9I1	OR13C2	OR1G1	OR3A3	OR1Q1	OR13A1
ITGA9	ITGAL	ITGAM	ITGAD	ITGAE	PAK4	ITGA4	ITGA3	ITGA2B
PPP1R3D	MAPK1	HRAS	MAPK8	PCK2	PCK1	GSK3B	CBLB	CBL

NOS1	CACNA1F	CACNA1S	COX7B2	CASP3	TNFRSF1A	UQCRB	COX6A2	MAPK3
ND3	COX4I2	ND1	SNCA	NDUFB10	NDUFS8	NDUFC1	NDUFC2	NDUFS1

COX7B	COX7A1	COX7A2	COX6C	POLR2J2	ATP5B	GRIN1	SOD1	GRIN2B
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FGF6	FGF5	MTOR	FGF3	FGF4	KITLG	FGF1	PTCH2	FGF2
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H2BFM	H2AFB1	H3F3C	HIST2H2AC	HIST1H2BG	H2AFB2	H2AFJ	SNRPD3	HIST1H2AP
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NDUFS8	NDUFC1	NDUFC2	NDUFS1	NDUFV2	NDUFB6	NDUFS4	NDUFB7	NDUFV1
IMPDH1	IMPDH2	POLR3H	POLR2J3	POLR1A	POLR3B	GUCY1B3	PKLR	GUCY2C

SRSF5 SNRNP70 PCBP1 PPIL1 SF3B14 SRSF4 SRSF3 SNRPD1 THOC2

IKBKG HRAS CACNG2 FGF23 CACNG3 MKNK2 FGF18 STK4 STK3

PDE1A ERBB4 CACNA1A GRIN1 GRIN2A ERBB2 ERBB3 CHRNA7 NOS3
GHR IL18RAP CXCL9 IL17RA GH1 LIF GH2 LIFR IL18R1
ADCY7 CXCL1 SHC1 PLCB3 PLCB4 ADCY5 CXCR5 CCL27 WAS

OPRL1 GIPR HTR2B OPRM1 GALR2 OPRD1 OPRK1 GABRA5 GABRA6
ORC1 ORC2 CCNE2 CDK6 ORC4 CCNB2 CDK7 MAD2L2 ORC5

ANAPC2 FANCL ANAPC4 SMURF2 CDC23 CBLB CBL LOC652346 NEDD4

CLTC ACP2 GAA ACP5 NAGA NAGLU
DNM1L HSPA1A TFRC SH3GL2 SMAP1 RAB11FIP2 FGFR2 KDR KIT

WNT7A	GSK3B	WNT7B	PSEN1	WNT8A	WNT8B	WNT2	WNT3	WNT5A
EPHA7	EPHA3	EPHA2	EPHA4	SEMA4G	PPP3CB	FES	PPP3CA	CDK5
PDPK1	ITGB3	ITGB4	VASP	ITGB5	SHC4	ITGB6	DOCK1	ITGB7
CD58	NEGR1	CLDN11	LOC652614	SDC3	CLDN7	CLDN4	PTPRM	CLDN3
EXOC4	CLDN3	RAB3B	ACTB	TJP1	SRC	PTEN	MYH7B	HCLS1
IL21	IL20RB	IL2RA	IL22RA1	IL20RA	IL2	IL6R	PIK3R3	CRLF2
IFNAR1	TNFRSF10C	IFNAR2	MICA	PIK3R3	NCR3	CD244	PPP3CB	PPP3CA
CYBB	PIK3R1	PIK3R2						
ATF4	IRS1	ZNF274	NTRK2	PIK3CG	IRS4	NTRK1	PIK3R1	PIK3R2
GUCY2D	OR5H6	OR6F1	OR2M5	OR8D2	OR4C16	OR4C11	GUCA1C	OR1E1
APC2	ITGA7	ITGA5	MYH14	PDGFRB	PIP4K2B	WASF2	BRAF	SLC9A1
EIF4E1B	FBP2	LIPE	MKNK2	EIF4E2	ARAF	TRIP10	PPP1R3B	PIK3R3

COX6A1 UQCRH UQCRFS1 UQCRC2 UQCRC1 MAPK1 NDUFB3 NDUFB1 NDUFB2
NDUFV2 NDUFB6 NDUF54 NDUFB7 NDUFV1 NDUFB8 NDUF56 NDUFB9 NDUF55

COX6B1 SOD2 ATP5C1 LOC64431C BAX COX7B2 CASP3 REST UQCRB

FGF21 BAD MAPK9 MAPK10 WNT3A MAP2K2 MECOM NOS2 BAX

IFNG HIST1H2BL HIST1H2BI HIST1H2BH HIST1H2BC HIST1H2BC HIST1H2BN HIST1H2BN HIST1H2BE

NDUFB8	NDUFS6	NDUFB9	NDUFS5	NDUFS2	NDUFB4	NDUFS3	NDUFB5	CYC1
ENTPD4	PKM2	GUCY1A3	GUK1	GUCY2F	ADK	ITPA	POLR1C	PRHOXNB

SNRPC PPIE SRSF2 SRSF1

MAPK8IP1 MOS RAP1A MAPT RAP1B PPP3CB PPP3CA CACNA1H CACNA1G

CACNA1D GRIN2C CACNA1E GRIN2D CHRM5 CACNA1B NOS2 CACNA1C NOS1
TNFSF4 TNFRSF4 CX3CR1 CCL3L3 PDGFRB EDA CXCL14 IL1A EDAR
PREX1 RHOA CXCR4 CXCR2 GNG8 CXCR1 CCL28 PRKCD HCK

AVPR2 GABRA3 GABRA4 AVPR1A GABRA1 AVPR1B GABRA2 HRH2 PTGDR
HDAC1 HDAC2 CCNH CCNB3

TRIM32 FZR1 TRIP12 UBE2F ANAPC13 FBXO2 HERC4 WWP2 UBE2C

FGFR4 GIT2 DNM1 FGFR3 LDLRAP1 RET CCR5 PRKCZ PSD3

WNT6	CTNNB1	PPP2CB	PPP2CA	PPP2R1A	TBL1X	PPP2R1B	ROCK2	NKD1
RGS3	FYN	EPHA6	NTN3	CHP				
ITGAV	ITGB1	AKT3	VAV2	SPP1	COL1A1	COL1A2	TLN2	PDGFC
ITGA6	CNTN2	CD40LG	CNTNAP1	CD40	GLG1	CDH15	CLDN14	NLGN4X
CDK4	AMOTL1	CLDN14	CLDN9	PPP2R2C	CTNNA3	EPB41L2	EPB41L1	EPB41
IFNK	SPRY2	IL6ST	SPRY1	IL7	STAM2	GHR	IL28B	IL29
PIK3CA	PIK3CB	FAS	PIK3CD	SHC2	FASLG	FYN	PIK3CG	VAV3
CALML6	NTRK3							
OR1E2	OR1D4	OR1D5	OR1A1	OR5F1	OR5AP2	OR10H4	OR8D1	OR4C46
DIAPH3	VAV1	WASF1	ITGB3	PIKFYVE	ITGB4	ITGB5	DOCK1	ITGB6
SOCS4	PIK3CA	PIK3CB	PIK3CD	SHC2	G6PC	SREBF1	IRS1	PIK3CG

ITPR1 NDUFA10 ITPR2 NDUFAB1 PSEN2 GSK3B PSEN1 NDUFA9 NDUFA7
NDUFS2 NDUFB4 NDUFS3 NDUFB5 PARK7 CYC1 GPR37 SLC6A3 LRRK2

POLR2J3 COX6A2 CREB5 COX6A1 UQCRH UQCRFS1 UQCRC2 UQCRC1 SIN3A

MAP2K1 FGFR2 FZD3 KIT RB1 CASP3 FGFR3 PIAS2 FGFR1

HIST1H2BF CD40LG CD40 SNRPB HIST1H2AI HIST2H3D HIST2H2AA HIST1H2AN SNRPD1

COX11	COX15								
POLE4	RRM1	POLR3D	RRM2	NT5C3	PDE8B	POLR3GL	NT5E	NPR2	

CACNA1I	ATF4	TAB1	FOS	TAOK2	RPS6KA6	PPP3R2	CACNG8	PPP5C
MYLK2	CACNA1F	CACNA1S	ADCY4	TNNC1	PLCD4	P2RX2	ITPKA	ADORA2A
IL24	CNTF	CNTFR	LOC652799	TNFSF13B	PDGFC	VEGFA	VEGFC	VEGFB
IL8	RAC2	WASL	RASGRP2	MAP2K1	ADCY4	CCR3	CCR4	CXCR6
GABBR1	ADRA1D	ADRA1B	ADRA1A	GHR	FSHB	LPAR3	GHRHR	PTAFR
CDC26	HERC3	BIRC6	ERCC8	MID1				
ASAP3	HSPA6	RAB5C	DAB2	SMURF2	HRAS	CHMP3	VPS37A	EGFR

FZD10 FZD5 NKD2 TCF7L1 RUVBL1 PPARD PPP3CB TP53 PPP3CA

VCL SHC3 VEGFA VEGFC ITGB8 VEGFB PXN PAK7 CCND1

CLDN9

PARD3

SOCS4 PIK3CA PIK3CB PIM1 IL28A PIK3CD LIF GH1 GH2

PIK3R1 SH2D1A PIK3R2 CHP

OR4C6 CLCA2 OR4S2 OR6B2 OR5D18 OR5L1 OR5D14 OR8U1 OR6C6

PIP5K1A ITGB7 PIP5K1B ITGAV ITGB1 ITGAX VAV2 ITGB2 FGF20
IRS4 PIK3R1 PIK3R2 CALML6

NDUFA8 UQCR11 NDUFA6 NDUFV3 LOC727947 COX6B2 COX4I2 IL1B SNCA
NDUFB3 NDUFB1 DLG4 TBPL2 NDUFB2 EP300 ITPR1 NDUFA10 NDUFAB1
FGF14 FGF17 FGF16 FGF10 CUL2 GRB2 FGF11 FGF12 WNT10A

HIST1H2AB LOC64495C HIST1H2AC HIST1H2AL HIST1H2AJ HIST1H2BA HIST1H2AK

NPR1 PDE10A ENTPD6 ENTPD2 ENTPD5 ENTPD3 NUDT5 ENTPD1 PFAS

PPP3CC	CACNG6	PPP3R1	CACNG7	MAP2K4	ATF2	PDGFRB	JMJD7-PLA	MAP4K3
ITPKB	EGFR	ADORA2B	ITPR1	ITPR2	HTR4	SPHK2	HTR5A	HTR6
CCR9	NGFR	IL22RA2	PDGFA	ACVRL1	PDGFB	CCL4L1	ACVR2B	PDGFRA
CCR5	PRKCZ	CCR6	CCR7	CCR8	GRB2	MAPK3	CXCL16	RAC1
GHSR	MLNR	LHB	FSHR	LHCGR	GH1	GH2	ADORA3	GRIN3A
IL2RG	VPS37B	IL2RB	CBLB	CBL	PSD	NEDD4	EGF	PARD6G

PPP2R5A PPP2R5E PPP2R5D PPP2R5C PPP2R5B FZD2 SFRP5 SFRP4 CHP

PDGFA BCL2 PDGFB PDGFRA ARHGAP5 BCAR1 PAK1 FIGF CRK

IFNW1 LIFR TSLP IL4 IL4R SPRY3 IL5 PIK3CG SOCS7

OR4B1 OR4X2 OR8D4 OR4X1 GNAL OR6C65 OR6C68 OR8B4 OR52E2

PFN4 GNA12 PDGFC VCL GNA13 CHRM1 CHRM2 CYFIP1 CHRM4

MAPT NDUFB10 NDUFS8 NDUF1C NDUF2C NDUFS1 NDUFV2 NDUFB6 NDUFS4

NDUFA9 NDUFA7 NDUFA8 DNAH3 UQCR11 NDUFA6 NDUFV3 LOC727947COX6B2

FGF13 WNT4 SMAD3 ETS1 SMAD4 SMAD2 RUNX1 IKBKG HRAS

NT5C1B APRT PRPS1L1 PPAT NME7 NT5C ALLC ZNRD1

PLA2G6	PLA2G2E	PLA2G10	MAP4K4	RPS6KA5	BRAF	IKBKB	PLA2G4B	MAP3K11
HTR7	HTR2A	HTR2C	HTR2B	P2RX6	SLC8A2	AVPR1A	AVPR1B	HRH2
ACVR2A	ACVR1B	ACVR1	FIGF	TNFRSF13B	IL25	TNFSF15	EPO	IL9R
SOS1	MAPK1	IKBKG	HRAS	GSK3B	CCR1	GSK3A	XCL2	ITK
HRH1	GRIN3B	MAS1	F2	F2R	GCGR	CRHR2	P2RY10	GLRA2
SH3KBP1	LOC652614	ARFGAP2	RAB5B	RAB4A	EHD4	RAB5A	AP2S1	EHD2

CRKL CCND2 CDC42 ACTN2 CCND3 ACTN3 SOS2 PAK3 PRKCB

IL5RA PIK3R1 IL6 PIK3R2

OR52J3 OR5D16 OR4K1 OR4D6 OR5A1 OR5D13 OR5A2 OR2A4 OR52K2

CHRM3 ITGB8 RDX PXN CYFIP2 PAK7 PDGFA FGF22 PDGFB

NDUFB7 NDUFV1 NDUFB8 NDUF56 NDUFB9 NDUF55 NDUF52 PPP3CB NDUFB4

COX4I2 GPX1 TBP AP2S1 AP2M1 CREB3L2 NDUF58 NDUFB10 NDUFC1

WNT1 RUNX1T1 WNT7A CBLB WNT7B CBL WNT8A LOC652346 WNT8B

CACNA2D2	IL1A	PLA2G2F	DAXX	AKT3	GADD45G	FGF20	RELB	MAPKAPK5
ADRA1D	ADRA1B	ADRA1A	GRPR	CD38	PPP3CB	PTAFR	PPP3CA	CACNA1H
CXCL1	TNF	CXCR5	IFNA5	IFNA4	IFNA2	TNFRSF6B	IFNA1	CXCR2
CCL1	CXCL13	GNG12	ROCK2	RAP1A	PIK3R3	RAP1B	TIAM2	PF4
OXTR	GLRA1	GLP1R	GLP2R	CRHR1	GPR50	P2RX4	P2RX5	P2RX1
IL2RA	EHD3	AP2M1	SNF8	SRC	VPS4B	STAM2	CHMP2A	GIT1

RAF1 PRKCA SHC1 PAK2 MYL9 RHOA PRKCG MYLPF ERBB2

OR4D11 OR52M1 OR2A5 OR8K5 OR6B3 OR51A7 OR51T1 OR51A4 OR51A2

PDGFRA TMSB4X BCAR1 PAK1 CRK EZR CRKL CDC42 ACTN2

NDUFS3 PPP3CA APP NDUFB5 CDK5 FAS CYC1 CHP CALML6

NDUFC2 NDUFV2 NDUFS1 NDUFS4 NDUFB6 NDUFV1 NDUFB7 NDUFS6 NDUFB8

WNT2 CTNNA2 FGF23 WNT3 RASSF5 WNT5A WNT6 CTNNB1 CCNA1

MAPK12	RELA	GNA12	HSPA8	HSPB1	PTPRR	LAMTOR3	GADD45A	NGF
CACNA1G	CACNA1I	CYSLTR2	LHCGR	TBXA2R	MYLK3	HRH1	CHP	CALML6
CXCR1	IL9	CCL28	IL7R	IL8	IL12RB1	IL12B	IL13	IL12RB2
PPBPL1	CXCL2	CXCL3	PF4V1	GRK6	PIK3CA	PIK3CB	CXCL9	PIK3CD
GLRB	P2RX3	PPYR1	CCKAR	BRS3	F2RL1	TAAR1	CCKBR	MCHR2
GRK6	RABEP1	VPS45	RAB11FIP3	CLTA	CLTB	CLTC	CHMP4C	GRK4

RAC2 RAC3 KDR MYLK2 PPP1CA MAPK3 ARHGAP35 RAC1 SOS1

OR8A1 OR51L1 OR5AS1 OR1B1 OR1J1 OR10G7 OR10G4 OR5M1 OR5M10

ACTN3 SOS2 PAK3 RAF1 PAK2 MYL9 RHOA TMSL3 INS

NDUFS5 NDUFB9 PPARG NDUFS2 TP53 NDUFB4 NDUFS3 NDUFB5 CYC1

FGF18 STK4 STK36 FZD10 FZD5 PTEN PIK3R3 TCF7L1 RALGDS

DDIT3 MAP3K14 TAOK1 PDGFA FGF22 PDGFB NLK PDGFRA PRKACA

IL11RA IL12A KDR TNFRSF1B IFNA17 TNFRSF1A IFNA21 TNFRSF18 IFNA6
NCF1 ELMO1 SHC2 PPBP GRK4 PARD3 GRK5 PIK3CG PIK3R1

F2RL2 NTSR1 NMBR TAAR9 LPAR6 P2RY4 P2RY6 S1PR1 P2RY11

PARD3 GRK5 ASAP1 NTRK1 EPN1

MAPK1 MAPK8 EGFR GSK3B TNFR EGF LAMA3 TNXB LAMA2

OR6M1 OR6X1 OR8G5 OR12D3 OR5M9 OR5B17 OR1L8 OR10Q1 OR1N2

MYLPF RAC2 WASL CHRM5 RAC3 MYLK2 SSH3 PPP1CA MAPK3

CLTA CLTB CLTC HDAC1 HDAC2 TBPL1 HTT

PTCH1 MITF CTNNA3 FOS LAMA1 PIAS3 NKX3-1 ITGA3 APC2

PRKACB	PAK1	PRKACG	CRK	CDC25B	CRKL	MAP3K13	PLA2G2D	CDC42
CCR3	TNFRSF12A	IFNA7	CCR4	IFNA8	CCR5	IFNA10	CCR6	IFNA13
VAV3	LYN	PIK3R2						
LPAR1	S1PR3	RXFP2	EDNRA	HTR1D	P2RY1	HTR1B	P2RX7	HTR1E

ITGA6 ITGA2 SRC ITGA1 PIK3CA PIK3CB PIK3CD SHC2 COL6A6

OR1N1 OR8J1 OR51V1 OR1S2 OR1S1 OR9Q1 OR5R1 OR9Q2 OR8B12

ARHGAP35 INSR ARPC2 FGF19 RAC1 SOS1 MAPK1 GSN EGFR

ITGA2B CREBBP COL4A6 PDGFRB MMP2 BRCA2 COL4A1 MMP1 BRAF

RASGRP1	CACNA2D1	CACNB1	SRF	CACNB2	SOS2	CACNB3	CACNB4	CHUK
CCR7	IFNA14	CCR8	IFNA16	IL26	CXCL16	IL10	EDA2R	IL10RA
CTSG	P2RY2	HTR1A	GZMA	EDNRB	CHRM1	CHRNA10	CHRM2	CHRM4

MYLK3 FYN PIK3CG PIK3R1 PIK3R2

OR8K3 OR8K1 OR6T1 OR10S1 OR1K1 OR4D5 OR2A2 OR8H2 OR8H3
EGF SSH1 NCKAP1L RRAS ARAF GNG12 MRAS ITGA6 DIAPH2

COL4A2 MMP9 MLH1 COL4A4 SPI1 IKBKB MDM2 ARNT2 ITGAV

CACNG1	PRKCB	RAF1	PRKCA	TNF	PAK2	MKNK1	PLA2G3	PRKCG
IL10RB	EPOR	IL11	IL3RA	IL3	IL2RG	EGFR	IL2RB	CCR1
CHRM3	LTB4R2	TAAR8	CNR2	CNR1	CYSLTR1	CALCR	GNRHR	GABBR2

OR10G9	OR5T1	OR5T3	OR5T2	OR56A4	OR5B21	OR56A1	OR8H1	OR51F1
ITGA2	ITGA1	TIAM2	PIK3CA	PIK3CB	PIK3CD	ARHGEF1	MYLK3	PIK3CG

ITGB1 AKT3 LOC652671 EGLN2 DAPK3 EGLN3 DAPK1 PIAS1 FGF20

PTPN7	RAPGEF2	HSPA1L	CACNA1A	HSPA1B	RAC2	HSPA2	CACNA1D	CACNA1E
XCL2	IFNGR2	EGF	CCL1	TNFRSF10A	IFNG	IFNGR1	TNFRSF10C	IFNB1
TAAR5	LPAR2	VIPR2	VIPR1	GPR156	TAAR2	GRM4	GRM5	GRM2

OR10G8 CALML6 OR52N1 OR5M8 OR5M3 OR5M11 OR5K2 OR51B4 OR13D1

PIK3R1 PIK3R2

LOC652795 RELA APPL1 FH VEGFA HSP90AA1 VEGFC VEGFB WNT5B

RAC3	CACNA1B	HSPA1A	PLA2G12B	CACNA1C	DUSP8	CACNA1F	CACNA1S	MAP4K1
TNFRSF11A	TNFRSF10E	IFNAR1	TNFRSF10C	IFNAR2	IL1RAP	IL1B	AMHR2	IL1R1
KISS1R	GRM3	GRM8	CHRNG	CHRNE	GRM6	CHRND	HRH3	GRM7

OR52A5 OR51M1 OR4D9 OR51B6 OR4D10 OR5AN1 OR4F17 OR51G2 OR5AR1

CCND1 TRAF4 BCL2 PDGFA FGF22 PDGFB BCL2L1 PDGFRA MSH2

TNFRSF1A	DUSP9	PPM1A	PPM1B	MAPK3	RPS6KA4	CACNA2D4	HSPA6	MAPK7
AMH	IL2RA	IL20RB	IL21	TNFSF18	IL2	IL20RA	BMPR2	BMPR1A
GRM1	CHRNA9	F2RL3	CHRNA6	CHRNA5	GRIK5	CHRNA4	GRIN1	GRIN2A

OR2AE1 OR51E2 OR4F16 OR51Q1 OR51G1 OR2Z1 OR51I1 OR51I2 OR52D1

VHL

FIGF

RALBP1

HSP90AB1 MSH3

CRK

CYCS

CRKL

CCNE1

FGF19	RAC1	SOS1	MAPK1	DUSP14	MAP4K2	MAPK8	EGFR	MAPKAPK2
IL6R	BMPR1B	CRLF2	IL6ST	IFNK	IL7	PF4	CXCL2	CXCL3
CHRNA7	GRIN2B	CHRNA1	GRIN2C	CHRM5	GRIN2D	CHRNA3	CHRNA2	NR3C1

OR52H1 OR5V1 OR2B2 CLCA1 OR1I1 OR52E4 PRKX OR52N2 OR52E6

DCC CDC42 CDH1 SOS2 E2F1 CHUK ZBTB16 RAF1 PRKCB

EGF	RRAS	TAOK3	GNG12	NTF4	IL1B	MRAS	NTF3	IL1R1
BMP2	PF4V1	BMP7	IL28B	IL29	TNFRSF21	FAS	IL28A	FASLG
S1PR2	LTB4R	GRIK4	P2RY8	CHRNA1	CHRNA2	CHRNA3	CHRNA4	P2RX2

OR52N5 OR2J3 OR2B3 OR52N4 OR10J3 OR52E8 OR9G1 OR13J1 OR8J3

PRKCA SLC2A1 CEBPA FADD RHOA RAD51 TCEB1 PRKCG TCEB2

TP53	FAS	NR4A1	PLA2G2C	FASLG	NTRK2	NTRK1	CHP	
IFNW1	PPBP	TSLP	IL4	IL4R	IL5	IL5RA	IL6	
S1PR4	P2RY13	SCTR	P2RX6	P2RY14	NPFFR1	GRPR	GLRA3	CYSLTR2

OR5B12 OR56A3 OR56A5 OR51B2 OR5AK2 OR52L1 OR2AG2 OR52B4 OR2W1

IL8

RAC2

DVL3

ERBB2

DVL2

BID

TGFA

RAC3

RXRB

TBXA2R PARD3 HCRTR1 HCRTR2

OR10T2 OR2T1 OR6N2 OR10X1 OR6K2 OR10Z1 OR5AC2 OR2T5 OR14I1

RXRG

RXRA

RASSF1

DVL1

SKP2

RET

MAPK3

TCF7

DAPK2

OR2T2 OR10A6 OR1L4 OR10A5 OR2AG1 OR6K6 OR6N1 OR10C1 OR14J1

FGF19 RAC1 SOS1 TCF7L2 MAPK1 MAPK8 EGFR EP300 EPAS1

OR4A16 OR2G3 OR1M1 OR7G1 OR2A25 OR4K5 OR4A5 OR5H2 OR2T27

GSK3B CDKN2A CDKN1B CDKN1A EGF LAMA3 LAMA2 CDKN2B ARAF

OR4C45 OR2G2 OR2C3 OR4A47 OR13C9 OR11H1 OR4A15 OR7A5 OR7C2

AR ITGA6 ITGA2 GLI1 EGLN1 CDK2 BMP4 CDK4 BMP2

OR10R2 OR7C1 OR51E1 OR52I2 OR2H2 OR4S1 OR2T6 OR4C13 OR4C12

GLI2

PPARG

GLI3

PPARD

TP53

E2F3

E2F2

PIK3CA

PIK3CB

OR6C74 OR6C3 OR10A7 OR14A16 OR10G2 OR10H3 OR2T29 OR10G3 OR10H2

CCNE2 CDK6 FAS KLK3 PIK3CD FASLG FZD2 HDAC1 HDAC2

OR10H1 OR4C3 OR1L1 OR11A1 ADCY3 CALML5 OR1L3 PDE1C CNGA3

PIK3CG CKS1B IL6 NTRK1 PIK3R1 PIK3R2

CNGA4 OR8S1 OR52B2 OR4E2 OR5L2 OR5K1 OR2L13 OR4D1 PRKACA

PRKACB PRKACG OR1J2 OR10J1 OR4F3 OR2A42 OR2V2 OR4F4 CNGB1

OR7A17 OR13G1 OR2Y1 OR6S1 OR9A2 OR2B6 OR2F1 OR4M1 OR12D2

OR2B11 OR8G2 OR8B8 OR8G1 OR4D2 OR4Q3 OR10A3 PRKG1 OR1J4

PRKG2 OR6A2 OR2M4 OR2S2 OR10P1 OR10K2 OR10K1 OR2A14 OR2K2

OR2F2 OR2L2 OR6B1 OR2A7 OR6C4 OR6C2 OR7E24 OR2G6 OR6K3

OR6Y1 OR10AD1 OR8U8 OR4K15