

Results:

Table S1: Genotype and time point gene expression comparison. Only genes with known symbols are represented.

GLY 3 months X GLY 6 months comparison			ARG 3 months X ARG 6 months comparison			All genotypes/time points
Uniquely Up-regulated in GLY 6 months	Uniquely Up-regulated in GLY 3 months	Commonly Up-regulated	Uniquely Up-regulated in ARG 6 months	Uniquely Up-regulated in ARG 3 months	Commonly Up-regulated	Commonly Up-regulated
A4galt	Aass	Abca1	A4galt	Aars	Abhd2	Acta2
Abca8a	Ablim2	Acp5	Aacs	Abra	Acp5	Ang
Abca9	Acer2	Acta2	Abca1	Acox2	Acta2	Anxa1
Abcb1b	Adamts12	Adrbk2	Abca8a	Adamts4	Adamts2	Apoe
Abcc3	Adrb2	Ang	Abca9	Adamts9	Agap1	Armxc3
Abhd2	Aldh1b1	Anxa1	Abcc3	Adap2	Akap2	Aspn
Abi1	Alpk2	Ap3s1	Abi1	Adrbk2	Alcam	Atp10a
Abi3bp	Amy1	Apoe	Abi2	Alg10b	Aldh18a1	Atrnl1
Acaca	Amy2a1	Aqp4	Abi3bp	Alg8	Aldh1a2	Bmp2
Ace	Amy2a5	Armxc3	Acaca	Amigo2	Ammecr1	C1qb
Acp2	Angptl1	Aspn	Acap2	Amy1	Ang	C1s
Acs14	Arl11	Atp10a	Acbd3	Ap1g2	Anxa1	C3
Acs15	Arntl	Atrnl1	Ace	Aqp4	Anxa2	C4b
Actn1	Arsa	Bmp2	Acot9	Arntl	Anxa4	C7
Actn4	Atg4a	C1qb	Acp2	Atf4	Apobec1	Ccl6
Adam15	B3gnt1	C1r	Acs14	Atf5	Apod	Ccl9
Adam8	Bhlhe40	C1s	Acs15	Atg4a	Apoe	Cd109
Adam9	Ccnd3	C3	Actb	Atp8b4	Arhgdig	Cd24a
Adamts10	Ccrn4l	C4b	Actg1	B4galt7	Armxc3	Cd53
Adamts2	Cdkn1a	C6	Actn1	Bcl3	Armet	Col3a1
Adamts20	Cdkn2c	C7	Actn4	Bloc1s3	Arpc1b	Creld2
Adamts5	Cdv3	Cbr2	Actr3	Bves	Arpc3	Csf1r
Adamts12	Cfl1	Ccl6	Acvr1	Car2	Arpc4	Ctss
Adamts13	Cml1	Ccl9	Acvr1	Cars	Arrb1	Dct
Adcy7	Corin	Cd109	Adam10	Ccnd3	Aspn	Disp1
Adora2b	Cuzd1	Cd24a	Adam19	Ccr2	Atp10a	Emr1
Aebp1	Cxcl1	Cd53	Adam8	Cdca7	Atrnl1	Fcgr2b
Aff2	Cyb5r4	Cdh22	Adam9	Cdh22	Axl	Fgl2
Aff3	Cyp2d10	Cdo1	Adamts10	Cdkn1a	Azin1	Fhl1
Agfg2	Defa5	Cenpf	Adamts12	Cdo1	B4galt5	Gda
Ahnak2	Dkk1	Cep192	Adamts20	Cenpf	Baspl	Gfpt2
Ahsg	Dock8	Col3a1	Adamts5	Cenpl	Bcat1	Gpr133
Akap13	Dppa5a	Creld2	Adamts12	Ch25h	Bmp2	Gpr65
Akap2	Dsg1b	Csf1r	Adamts13	Clea1	C1qa	Gpx1
Akna	Ear6	Csf2ra	Adar	Clec5a	C1qb	Gpx3
Akr1b8	Egln3	Ctnnal1	Adcy3	Cops3	C1qtnf6	Grin2c
Alcam	Elk1	Ctss	Adcy7	Cst9	C1s	Grk5
Aldh18a1	Ephx3	Dct	Adss	Ctnnal1	C3	Hexb
Aldh1a1	Eppk1	Disp1	Adssl1	Ctsl	C4a	Hsp90aa1
Aldh1a2	Erich1	Dpp6	Aebp1	Diap3	C4b	Iah1
Alox5ap	F8	Dusp5	Aff2	Dkk1	C5ar1	Ifi205
Alpk1	Fam122b	Ecm1	Aff3	Dph5	C7	Il6ra
Ammecr1	Fam124a	Emr1	Agfg2	Dyrk2	Cab39l	Itga11
Angptl7	Fam178b	Ero1lb	Ahnak2	Eef1e1	Camkk1	Itgb2
Ankfy1	Fam46a	Fam102b	Ahsg	Efs	Camkk2	Lilrb3
Ankrd1	Fam50b	Fam168a	Aida	Elfn1	Cand1	Lipa
Ankrd13a	Fbxo8	Fcgr2b	Aif1	Enkur	Capg	Lyz1
Ankrd27	Fgf11	Fgl2	Akap13	Fam117b	Car13	Lyz2
Ano6	Fstl4	Fhl1	Akna	Fam178b	Cask	Maged2
Anpep	Furin	Ftl1	Akr1b8	Fcf1	Ccdc80	Man1a
Antxr1	Gabrg3	Ftl2	Akt3	Fgf18	Ccdc88a	Mfap5
Anxa2	Galns	Gda	Aldh1a1	Fgfr3	Ccl6	Mmp12
Anxa3	Galnt2	Gfpt2	Aldh1a7	Filip11	Ccl9	Mpeg1
Anxa4	Gas1	Gm2a	Aldh3b1	Fkbp5	Ccr11	Mrc1
Anxa5	Gats12	Gpr133	Alg14	Fstl4	Cd109	Ms4a6c
Anxa8	Gene	Gpr65	Alox5ap	Fuz	Cd24a	Mt2
Aoah	Gm628	Gpx1	Alpk1	Galnt2	Cd44	Myh7
Aoc3	Gnpnat1	Gpx3	Angptl7	Gats12	Cd47	Nubp1
Ap1s2	Golga4	Grin2c	Ankfy1	Glt8d3	Cd48	Nupr1
Ap2b1	Gpr158	Grk5	Ankrd1	Gnpnat1	Cd53	Olfml2b

Ap3b1	Gpx2	H2-Eb1	Ankrd13a	Golga4	Cd55	Osmr
Apaf1	Gpx8	H2-T10	Ankrd27	Gpatch4	Cd68	P2ry6
Apba1	H2-Ea	Hal	Anln	Gpr158	Cd84	Pam
Apbb1ip	Hand2	Hcn1	Ano6	Grm1	Cdv3	Pde3b
Apcdd1	Hhipl1	Hexb	Anp32b	Grpel2	Cebpg	Pfkip
Aph1b	Hist1h1c	Hfe	Anpep	Hal	Cenpt	Phka1
Apobec1	Hist1h2ao	Hpse	Antxr1	Hand2	Cercam	Pira2
Apod	Hist1h2bc	Hsp90aa1	Anxa3	Hcfc2	Cfl1	Plcb4
App	Hist1h3d	Iah1	Anxa5	Hecw2	Chpf	Prss23
Arap1	Hlx	Ifi205	Anxa7	Hist1h2ao	Clcn5	Ptprj
Arf3	Hras1	Ifi2711	Anxa8	Hist1h2bc	Clec12a	Rab3ip
Arf4	Ifnb1	I10ra	Aoah	Hist1h3d	Clec3b	Rabgap11
Arf6	Inhbb	I16ra	Aoc3	Hmcn2	Clec4d	Rad5111
Arfgap3	Inmt	Irak3	Ap2b1	Hpcal1	Cmklr1	Rtn4
Arfip1	Itfg3	Itga11	Ap3b1	Hspa2	Col14a1	Serpina3h
Arhgap1	Krt80	Itgb2	Ap3s1	Hsph1	Col16a1	Serpina3n
Arhgap11a	Lad1	Lgals3bp	Apaf1	Hyal2	Col1a1	Serpine2
Arhgap25	Lman11	Lilrb3	Apba1	Inhbb	Col1a2	Sh3d19
Arhgap30	Lpar3	Lipa	Apbb1ip	Ins1	Col3a1	Stxbp2
Arhgef12	Lrp2bp	Lpcat2	Apc	Irf8	Col4a1	Sulf2
Arhgef2	Lrrc52	Ly6a	Apcdd1	Klhl2	Col4a2	Tbxas1
Arid5b	Mab2112	Lyz1	Aph1b	Lad1	Col5a1	Timp2
Arl13b	Map1lc3a	Lyz2	Apobec3	Lair1	Col6a2	Tmed3
Arl4c	Mapk10	Mafb	App	Lcn2	Col6a3	Tmem100
Arl8a	Mapk4	Maged2	App11	Lcp2	Cpne8	Tmem176a
Armxc2	Mapkapk2	Man1a	Ar	Lpin3	Creld2	Tspo
Armet	Max	Mfap5	Arap1	Lrrc52	Csf1r	Tyrobp
Arpc1b	Mctp1	Mif	Arf3	Mak10	Ctsh	Uap1
Arpc3	Mea1	Mmp12	Arf4	Map3k6	Ctss	Vsig4
Arrb1	Mgat1	Mpeg1	Arf6	Mapk4	Cx3cr1	Wdr32
Arrb2	Mrpl19	Mrc1	Arfgap3	Max	Cxcl16	
Arrdc4	Mrpl20	Ms4a6c	Arfip1	Mctp1	Cyb561	
Arsb	Mstn	Mt2	Arhgap1	Mgat4b	Cyb5r3	
Asah1	Mt1	Myh7	Arhgap11a	Mrm1	Cybb	
Asl	N4bp211	Naaa	Arhgap22	Ms4a4d	Cyp1b1	
Asns	Napepld	Ncf4	Arhgap25	Mt1	Cyth4	
Ass1	Neil2	Ndrg4	Arhgap30	Myd116	Dab2	
Atf4	Ninj1	Nfil3	Arhgdia	N4bp211	Dagla	
Atl3	Nle1	Nubp1	Arhgdib	Ncf4	Dap	
Atp1b3	Nr2f6	Nupr1	Arhgef2	Nid2	Dbn1	
Atp2b4	Nudt4	Olfml2b	Arhgef5	Nme5	Dct	
Atp6ap2	Nup62	Osmr	Arid5b	Nr2f6	Ddr2	
Atp6v0a4	Osr1	P2ry6	Arih1	Nudcd1	Dennd4a	
Atp6v0b	Pacrg	Pam	Arl13b	Nudt4	Derl3	
Atp6v1a	Pcgf5	Pde3b	Arl4c	Nup62	Disp1	
Atp6v1h	Pctp	Pfkip	Arl5a	Nxt1	Dock2	
Atp7a	Pde1c	Pgam1	Arl8a	Opalin	Dock8	
Atp8b1	Pde3a	Phka1	Armxc2	Pacrg	Dok5	
Atp8b2	Pdzd2	Phlda3	Arrb2	Pdpk1	Dtx4	
Axl	Pgrmc1	Pira2	Arsa	Pdzd2	Dzip3	
B2m	Phkg1	Plcb4	Arsb	Peli3	Edem1	
B4galnt1	Pigq	Pnp2	Asah1	Pgf	Efemp2	
B4galt5	Pipox	Prss23	Asah2	Pgrmc1	Eid1	
Bace2	Pla2g5	Ptprj	Ascc3	Phyhip	Eln	
Baiap2	Ppcs	Rab3ip	Asl	Pnp2	Elov11	
Baz1a	Ppp1r14b	Rabgap11	Asns	Ppap2a	Emr1	
Bcr	Ppp2r5b	Rad5111	Aspser1	Ppil6	Entpd1	
Bgn	Pramel5	Rtn4	Ass1	Ptgr1	Entpd2	
Bicc1	Prex1	Sec11c	Atad2	Ptprd	Eps8	
Bin3	Prps2	Serpina3c	Atg7	Qprt	Fads1	
Birc3	Ptp4a3	Serpina3h	Athl1	Rab13	Fam105a	
Bmp1	Ptprd	Serpina3n	Atl3	Rab27a	Fam122b	
Bmp2k	Ras110a	Serpine2	Atoh1	Rap2a	Fam46a	
Bmper	Rdh7	Serpig1	Atp13a3	Rasgef1b	Fbln1	
Bnc2	Rfx2	Sh3d19	Atp1b3	Rfxank	Fbln2	
Boc	Rgma	Sh3gl2	Atp2b4	Rgs2	Fbn1	
C1qa	Rgnef	Shroom3	Atp6ap2	Rp1	Fcer1g	
C1qc	Rgs2	Slc25a5	Atp6v0a4	Rtn4r11	Fcgr1	
C1qtnf6	Rgs6	Slc37a2	Atp6v0d2	S1pr1	Fcgr2b	

C3ar1	Rilp12	Slc9a9	Atp6v1a	Scn2a1	Fgd2	
C4a	Rnu7	Slco2b1	Atp6v1h	Sec22b	Fgl2	
C5ar1	Rock2	Slit3	Atp7a	Sema3f	Fhl1	
Cab39l	Rp1	Stxbp2	Atp8b1	Sema4a	Fn1	
Cachd1	Rpp25	Sulf2	Atp8b2	Sema6b	Fstl1	
Cacna1a	Rps4y2	Tbxas1	Atxn10	Sema7a	Fyb	
Cadm3	S1pr1	Timp2	Atxn21	Serpinh1	Gadd45g	
Calr	Sap30	Tmed3	B2m	Sh3gl2	Galc	
Camk1d	Sbpl	Tmem100	B3galnt1	Slc10a6	Galns	
Camk2n1	Sh3bgrl2	Tmem176a	B4galnt1	Slc16a14	Gars	
Camkk2	Siah2	Tnfaip6	B4galnt6	Slc16a7	Gatm	
Cap1	Sidt2	Tnfrsf1b	Bace2	Slc25a30	Gcnt2	
Capg	Slc10a6	Tnxb	Baiap2	Slc25a5	Gda	
Capn2	Slc16a7	Tspo	Baz1a	Slc38a3	Gfpt2	
Capza1	Slc17a7	Tyk2	Bcl2	Slc39a14	Gmfg	
Car13	Slc35e4	Tyrobp	Bcr	Slitrk4	Golim4	
Car5b	Slc35f1	Uap1	Bdh2	Smarca1	Gp49a	
Carhsp1	Slc38a3	Vsig4	Bend4	Socs3	Gpm6b	
Casp12	Slc4a4	Wdr32	Bend6	Ssr2	Gpnmb	
Casp3	Slitrk4	Zeb2	Best3	St3gal1	Gpr133	
Casp4	Snrpn		Bgn	St3gal5	Gpr137b-ps	
Cblb	Socs7		Bhlhe40	Stk39	Gpr65	
Ccdc136	Sstr4		Bicc1	Stxbp6	Gprc5b	
Ccdc68	St3gal5		Bin1	Syt12	Gpx1	
Ccdc80	Stk39		Bin3	Tac1	Gpx3	
Ccdc88a	Suox		Birc3	Taldo1	Gpx8	
Ccl19	Syt12		Bmp1	Tctex1d2	Grin2c	
Ccl21a	Tac1		Bmp2k	Tfrc	Grk5	
Ccl8	Tbx5		Bmp4	Thop1	Grn	
Ccr1	Tfrc		Bmp6	Tiparp	Gsta1	
Cd14	Tmem22		Bmper	Tlr7	Gsta2	
Cd163	Tmem35		Bmx	Tm2d2	Hck	
Cd209a	Tmprss13		Bnc2	Tnfrsf11a	Hcls1	
Cd248	Tnfrsf23		Boc	Trappc6b	Hexb	
Cd302	Tpmt		Bre	Trdn	Hhip11	
Cd33	Trak2		Brsk1	Trp53i13	Hmgn3	
Cd34	Trav7d-2		Bzw1	Tubb2c	Hmox1	
Cd37	Trem2		C1qc	Zbtb16	Hsp90aa1	
Cd44	Trp53inp2		C1qtnf2	Zbtb8b	Hsp90b1	
Cd47	Tubb2c		C1qtnf7	Zcchc5	Hspa11	
Cd48	Tubb6		C1r	Zfp133	Iah1	
Cd55	Txndc2		C3ar1	Zfp826	Ifi205	
Cd63	Vav1		C6		Ifi30	
Cd68	Zcchc5		Cachd1		Ifitm2	
Cd74	Zfp367		Cacnb1		Ifngr1	
Cd80	Zfp462		Cacnb3		Ifrd1	
Cd84			Cadm3		Igf1	
Cd86			Cadps		Igf2bp2	
Cd9			Calcr1		Igfbp6	
Cdc42se1			Cald1		Igsf6	
Cdh11			Calhm2		Il17ra	
Cdk5rap2			Calr		Il1r1	
Cdk8			Calu		Il4ra	
Cdr2			Camk1d		Il6ra	
Cebpa			Camk2n1		Inpp5d	
Cebpd			Camsap111		Ints3	
Cebpg			Camta1		Iqgap1	
Cep170			Cap1		Irf5	
Cfb			Capn2		Itga11	
Cfh			Capza1		Itgb2	
Cfi			Car5b		Kcnn3	
Cflar			Carhsp1		Kcnq5	
Cfp			Casc4		Klhl13	
Chd3			Casp12		Krt80	
Chi311			Casp3		Lame1	
Chrd11			Casp4		Laptm5	
Chst12			Cbara1		Lbp	
Cilp			Cbl		Lcp1	
Ckap4			Cbr2		Ldlr	

Ckmt1			Cbx5		Leprel1	
Clcn5			Ccdc136		Lgals3	
Clec11a			Ccdc34		Lilrb3	
Clec2d			Ccdc41		Lipa	
Clec4a1			Ccdc50		Lox	
Clec4a3			Ccdc68		Lox11	
Clec4d			Ccl21a		Lox12	
Clec4n			Ccl8		Lox14	
Clic1			Ccnb1		Lpp	
Clip3			Ccnb2		Lrp8	
Cmah			Ccnc		Lsm6	
Cmklr1			Ccnd1		Ly86	
Cndp2			Ccnd2		Lyz1	
Cnn3			Ccnyl1		Lyz2	
Cnot6			Ccr1		Maged2	
Cnpy4			Cd14		Malt1	
Col12a1			Cd200		Man1a	
Col14a1			Cd248		Man2a1	
Col15a1			Cd276		Matn2	
Col16a1			Cd302		Mertk	
Col18a1			Cd33		Mfap5	
Col1a1			Cd34		Mfsd1	
Col1a2			Cd37		Mmp12	
Col4a2			Cd52		Mmp14	
Col4a4			Cd63		Mmp19	
Col4a5			Cd80		Mmp3	
Col5a1			Cd82		Mmm1	
Col5a2			Cd86		Mpeg1	
Col6a1			Cd9		Mrc1	
Col6a2			Cdc16		Ms4a6b	
Col6a3			Cdc20		Ms4a6c	
Col8a1			Cdc25b		Ms4a7	
Colec12			Cdc27		Msn	
Comp			Cdc42se1		Mt2	
Coro1a			Cdh11		Mtap1b	
Cotl1			Cdk5rap2		Mtmr11	
Cp			Cdk6		Myh7	
Cpeb1			Cdk8		Myo1f	
Cpne2			Cdkn2c		Myo7a	
Cpne8			Cdr2		Myof	
Cpt1c			Cdr2l		Napepld	
Cpxm1			Cebpa		Nckap11	
Cpxm2			Cebpd		Nfkb2	
Creb3l1			Cenpo		Nid1	
Creb3l2			Cep164		Nsg1	
Crispld1			Cep170		Nubp1	
Crispld2			Cep192		Nudt5	
Crlf1			Cerkl		Nupr1	
Crtap			Ces2		Olfml2b	
Csf2rb			Cfb		Osmr	
Csf2rb2			Cfh		P2ry6	
Csgalnact1			Cfi		Pabpc1	
Cspp1			Cfp		Pak1	
Csprs			Chad		Pak3	
Csrp1			Chd9		Pam	
Csrp2			Chi3l1		Pcdhb7	
Cst3			Chn2		Pcolce	
Ctdspl			Chrd11		Pde3b	
Ctgf			Chst12		Pde8a	
Ctla2a			Chst14		Pdia4	
Ctps2			Chsy1		Pdlim3	
Ctsb			Cilp		Pdlim5	
Ctsc			Ckap4		Pdpn	
Ctsh			Ckmt1		Peli1	
Ctsk			Cks1b		Pfkip	
Ctsz			Clec11a		Phka1	
Cttn			Clec2d		Pi16	
Cttntp2nl			Clec4a1		Picalm	
Cx3cl1			Clec4a3		Pira2	

Cxcl14			Clec4n		Pkd1	
Cxcl16			Clic1		Plat	
Cxcr4			Clip3		Plcb4	
Cyb5			Cltb		Plek	
Cyb561			Cltc		Plekha3	
Cyb5r3			Cmah		Plod3	
Cyba			Cmtm3		Ppm1e	
Cybb			Cndp2		Ppp1r14b	
Cyld			Cnn2		Pros1	
Cyp1b1			Cnn3		Prr13	
Cyp20a1			Cnot6		Prss23	
Cyp27a1			Cnpy4		Ptgs2	
Cyp39a1			Cnrip1		Ptpn6	
Cyp3a44			Cntln		Ptpn9	
Cyp7b1			Col12a1		Ptprc	
Cyslrl			Col15a1		Ptprj	
Cyth4			Col18a1		Rab23	
Cytl1			Col4a4		Rab3ip	
Dab2			Col4a5		Rabgap11	
Dact1			Col5a2		Rac2	
Dap			Col5a3		Rad5111	
Dbn1			Col6a1		Rarres2	
Dbnl			Col8a1		Rars	
Dcbld2			Colec12		Rassf2	
Dclk1			Commd4		Rassf4	
Dclre1c			Commd7		Rcan1	
Dcn			Comp		Rcn3	
Ddr2			Copb1		Rexo2	
Ddx26b			Copg		Rhoc	
Ddx58			Coro1a		Rock2	
Dennd1c			Coro1c		Rtn4	
Dennd4a			Coro7		S100a10	
Derl3			Cotl1		S100a11	
Des			Cp		S100a6	
Dio2			Cpeb1		Scpep1	
Dkk3			Cpne2		Sdf211	
Dnaja1			Cpt1c		Sec61a1	
Dnajb11			Cpxm1		Selplg	
Dnajc3			Cpxm2		Serpina3h	
Dnm1			Creb311		Serpina3n	
Dnm3os			Creb312		Serpine2	
Dnmt1			Creb5		Sfrp1	
Dock1			Crip1		Sfxn3	
Dock10			Crispld1		Sh3d19	
Dock11			Crispld2		Sh3gl1	
Dock2			Crlf1		Sla	
Dock7			Crtap		Slc11a1	
Dok1			Csf1		Slc16a3	
Dok5			Csf2ra		Slc35b4	
Dopey2			Csf2rb		Slc35e4	
Dpep1			Csf2rb2		Slc39a13	
Dpm2			Csgalnact1		Slc6a9	
Dpp3			Csgalnact2		Slc7a5	
Dpp7			Csk		Slc7a7	
Dpt			Csnk1g3		Slc9a7	
Dpy19l1			Cspg4		Slnf2	
Dpysl2			Cspp1		Smc4	
Dpysl3			Csrp1		Socs2	
Dse			Csrp2		Sorbs3	
Dsel			Cst3		Sparc	
Dstn			Cstb		Stab1	
Dynl1			Ctbs		Stx11	
Dzip3			Ctdspl		Stxbp2	
Ebf2			Ctgf		Sulf2	
Ebp			Cthrc1		Taok3	
Ece2			Ctla2a		Tbxas1	
Ecm2			Ctnnd1		Tctn2	
Edem1			Ctps2		Timp1	
Eef1a1			Ctsb		Timp2	

Efemp2			Ctsc		Tm6sf1	
Efhd1			Ctsk		Tmed3	
Efhd2			Ctsz		Tmem100	
Egfr			Cttm		Tmem106a	
Egr2			Ctnbnp2nl		Tmem176a	
Eid3			Cul2		Tmem39a	
Elmo1			Cul4b		Tmem43	
Eln			Cx3cl1		Tnc	
Elov11			Cxcr4		Tnfrsf23	
Emb			Cyb5r1		Tns3	
Emilin1			Cyba		Trak2	
Emilin2			Cyfip1		Tram2	
Emp1			Cygb		Trem2	
Emp3			Cyld		Trf	
Enah			Cyp20a1		Trib3	
Eno1			Cyp27a1		Trpv4	
Eno2			Cyp39a1		Tspo	
Enpp1			Cyp7b1		Tubb5	
Entpd1			Cyslrl		Twf1	
Entpd2			Cyth3		Tyropb	
Epb4.112			Cytl1		Uap1	
Ephx1			Dact1		Uchl1	
Eps15			Daglb		Uck2	
Eps8			Dbnl		Ucp2	
Esd			Dcbld2		Ugt1a9	
Etv1			Dchs1		Unc93b1	
Etv5			Dclk1		Vav1	
Etv6			Dclre1c		Vim	
Evc			Dcn		Vsig4	
Evc2			Dctn5		Wdr32	
F13a1			Dcun1d3		Wipf1	
Fads1			Ddah1		Zdhhc2	
Faf2			Ddah2		Zfp462	
Fam105a			Ddef2			
Fam114a1			Ddost			
Fam129a			Ddx26b			
Fam129b			Ddx41			
Fam13b			Ddx58			
Fam149a			Dennd2a			
Fam3c			Dennd5a			
Fam70b			Depdc5			
Far1			Des			
Farpl			Dhcr24			
Fasn			Dhx9			
Fat1			Diap1			
Fbln1			Dio2			
Fbln2			Dkk3			
Fbln5			Dlg5			
Fbn1			Dnajb11			
Fbx116			Dnajc10			
Fcer1g			Dnajc14			
Fcgr1			Dnajc3			
Fchsd2			Dnm1			
Fcr1s			Dnm3os			
Fermt3			Dnmt1			
Fgf7			Dock1			
Fgfr1			Dock10			
Fibin			Dock11			
Figf			Dock6			
Filip11			Dock7			
Fkbp14			Dok1			
Fkbp7			Dopey2			
Flna			Dpep2			
Flnb			Dpp3			
Flrt2			Dpp7			
Flt3l			Dpt			
Flt4			Dpy19l1			
Fmnl2			Dpysl2			
Fmod			Dpysl3			

Fn1			Dse		
Fndc1			Dse1		
Fndc3a			Dstn		
Fndc3b			Dtx3		
Folr2			Dusp4		
Foxp1			Dync1i2		
Foxp2			Dync1li1		
Frm4b			Dync2h1		
Frzb			Dynl1		
Fstl1			Dzip1		
Fuca1			Ebf1		
Fut11			Ebf2		
Fxyd5			Ece2		
Fxyd6			Ecm1		
Fyb			Ecm2		
Fzd1			Ect2		
Fzd7			Edem2		
G6pdx			Eef1a1		
Gab2			Efha1		
Gadd45g			Efhd1		
Galc			Efhd2		
Galnt11			Egfr		
Gars			Egr2		
Gas2l3			Ehd3		
Gas5			Ehd4		
Gas6			Ehmt2		
Gas7			Eid3		
Gatm			Eif1a		
Gba			Eif2ak3		
Gclm			Eif3a		
Gcnt2			Eif4a1		
Gdap2			Eif5a2		
Gdf15			Eif6		
Ggh			Elmo1		
Gla			Elmo2		
Glcci1			Elov16		
Gli3			Elp2		
Glipr2			Emb		
Glis2			Emilin1		
Glt8d4			Eml4		
Gltp			Emp1		
Gmfb			Emp3		
Gmfg			Enah		
Gmip			Endod1		
Gna13			Eno1		
Gnai2			Eno2		
Gnai3			Enpp1		
Gnao1			Enpp3		
Gnb4			Epb4.112		
Golim4			Epha7		
Golt1b			Ephx1		
Gp49a			Eprs		
Gpbar1			Eps15		
Gpc4			Erb2ip		
Gpc6			Ergic1		
Gpm6b			Ergic3		
Gpnmb			Erlin1		
Gpr124			Ero11		
Gpr137b			Ero11b		
Gpr137b-ps			Esd		
Gpr153			Etv1		
Gpr161			Etv5		
Gpr177			Etv6		
Gpr64			Evc		
Gprc5b			Evc2		
Gria3			Evi2a		
Grina			Evi5		
Grn			Exoc5		
Gsn			Exoc6b		

Gsta1			F13a1		
Gsta2			F2r		
Gtf2h1			Fads2		
Gusb			Fam102b		
H2-Aa			Fam105b		
H2-Ab1			Fam114a1		
H2-D1			Fam115a		
H2-DMa			Fam124a		
Hck			Fam126b		
Hcls1			Fam129a		
Hdac1			Fam129b		
Heatr7a			Fam13b		
Hectd1			Fam13c		
Hectd2			Fam149a		
Heg1			Fam162a		
Herc5			Fam164a		
Hexa			Fam168a		
Hgf			Fam20a		
Hip1			Fam20c		
Hmcn2			Fam26e		
Hmha1			Fam38b		
Hmox1			Fam38b2		
Hn11			Fam3a		
Hnrnpa3			Fam3c		
Hnrnpf			Fam48a		
Hnrnp2			Fam50a		
Hp			Fam70b		
Hps3			Far1		
Hsp90b1			Farp1		
Hspa13			Fasn		
Hspa1a			Fat1		
Hspa8			Fbln5		
Hspb1			Fbln7		
Hsph1			Fbn2		
Htr2b			Fbxl16		
Htra3			Fbxw17		
Htra4			Fchsd2		
Hyou1			Fcr1s		
Iars			Fdps		
Id2			Fermt3		
Ifi202b			Fez2		
Ifi204			Fgf7		
Ifi2712a			Fgfr1		
Ifi30			Fibin		
Ifi47			Figf		
Ifih1			Fkbp10		
Ifit1			Fkbp14		
Ifitm1			Fkbp7		
Ifitm2			Fkbp9		
Ifitm3			Flna		
Ifngr1			Flnc		
Ifit122			Flrt2		
Ifit80			Flt31		
Igf1			Flt4		
Igf1r			Fmnl2		
Igf2bp2			Fmod		
Igfbp4			Fmr1		
Igfbp5			Fndc1		
Igfbp6			Fndc3a		
Igfbp7			Fndc3b		
Igsf10			Folr2		
Igsf6			Fosl2		
Ikbke			Foxp1		
Il16			Foxp2		
Il17ra			Frem1		
Il17rd			Frm4b		
Il1r1			Frzb		
Il33			Fstl3		
Il4ra			Ftl1		

Il6st			Ftl2		
Il7r			Fuca1		
Ildr2			Fut11		
Ilk			Fxyd5		
Inpp5d			Fxyd6		
Inpp5f			Fzd1		
Ints3			Fzd2		
Invs			Fzd7		
Iqgap1			G6pdx		
Irak4			Gab2		
Irf7			Galntl1		
Irf9			Gan		
Islr			Gas1		
Itga2			Gas211		
Itga5			Gas213		
Itgam			Gas5		
Itgav			Gas6		
Itgb1bp3			Gas7		
Itgb5			Gba		
Itgb8			Gbe1		
Itgb11			Gbgt1		
Itih2			Gclc		
Itih5			Gclm		
Itm2c			Gdap2		
Itpk1			Gdf15		
Itpripl2			Gdf6		
Its1			Gfpt1		
Jag1			Ggh		
Jak2			Gla		
Kalrn			Glb1		
Kcne4			Glb11		
Kcnk6			Glecc1		
Kcnn3			Gli2		
Kcnt2			Gli3		
Kdelc2			Glipr2		
Kdelr3			Glis2		
Kif3b			Glt8d1		
Kif5b			Glt8d4		
Kirrel			Gltp		
Klc1			Gm2a		
Klf10			Gm885		
Klhl29			Gmfb		
Klraq1			Gmip		
Kmo			Gmppa		
Krt18			Gna13		
Ktelc1			Gnai2		
Lamc1			Gnai3		
Lamp2			Gnao1		
Laptm5			Gnb1		
Lass6			Gng12		
Lats1			Gng8		
Layn			Golgb1		
Lbp			Golt1b		
Lcp1			Gosr2		
Ldlr			Gpc4		
Leprel1			Gpc6		
Leprel2			Gpr124		
Leprot			Gpr137b		
Lgals3			Gpr153		
Lgals9			Gpr161		
Lgmn			Gpr177		
Lhfp			Gpr52		
Lig1			Gpr64		
Lilrb4			Gria3		
Litaf			Grip1		
Lmna			Gsn		
Lox			Gss		
Lox11			Gtf2h1		
Lox12			Gtpbp4		

Loxl3			Gucy1a3		
Loxl4			Gucy1b3		
Lpar1			Gulp1		
Lpin2			Gusb		
Lpp			Gyg		
Lrp1			H2-Aa		
Lrrc16a			H2-Eb1		
Lrrc33			H2-T10		
Lrrk1			H3f3b		
Lrrn4cl			Hbegf		
Lsm14a			Hdac1		
Lsm6			Hdgfrp3		
Lsp1			Heatr5a		
Ltbp2			Hectd1		
Ltbp3			Hectd2		
Ltbp4			Heg1		
Lum			Hexa		
Ly6c1			Hfe		
Ly86			Hgf		
Lyst			Hgs		
Maf			Hiat1l		
Mafk			Hif1a		
Maml1d1			Hip1		
Man1a2			Hivep1		
Man2a1			Hltf		
Man2b1			Hmgcr		
Man2b2			Hmha1		
Maoa			Hn1		
Map3k12			Hn1l		
Map3k14			Hnrnpa3		
Mapre1			Hnrnpf		
Marcks			Hps3		
Mark1			Hpse		
Matn2			Hr		
Mbc2			Hs2st1		
Mcm3			Hsd17b12		
Mdfic			Hsd17b7		
Med15			Hspa13		
Meg3			Hspa1a		
Meox1			Hspb1		
Mertk			Hspbap1		
Mfap2			Htra3		
Mfap4			Htra4		
Mfge8			Hvcn1		
Mfsd1			Hyal1		
Mfsd6			Hyou1		
Mgat2			Icam1		
Mgl1			Id2		
Mgl2			Id4		
Mgp			Idi1		
Mical1			Iffo1		
Mical2			Ifi202b		
Mlec			Ifi204		
Mmp14			Ifi2711		
Mmp16			Ifi2712a		
Mmp19			Ifih1		
Mmp2			Ifitm3		
Mmp23			Ifit122		
Mmrn1			Ifit80		
Mobk11b			Igflr		
Mobk12a			Igfbp4		
Morc3			Igfbp5		
Morf4l2			Igfbp7		
Mpp1			Igsf10		
Mras			Igsf3		
Mrc2			Ikbke		
Ms4a14			Il10ra		
Ms4a4a			Il16		
Ms4a6b			Il17rc		

Ms4a6d			Il17rd		
Ms4a7			Il1rl2		
Msn			Il21r		
Msr1			Il33		
Mtap1a			Il6st		
Mtap1b			Illdr2		
Mtap4			Ilk		
Mtap6			Inpp5f		
Mtap7d3			Ints2		
Mthfd2			Invs		
Mtmr11			Ipo4		
Mtmr6			Ipo7		
Mtpn			Ipo9		
Mustn1			Iqgap3		
Mxra7			Irak3		
Mxra8			Irak4		
Myb11			Irf9		
Myc			Islr		
Mycbp2			Ism1		
Myh10			Itga1		
Myh9			Itga5		
Myo1d			Itga9		
Myo1e			Itgam		
Myo1f			Itgav		
Myo1g			Itgb1		
Myo5a			Itgb1bp3		
Myo7a			Itgb3bp		
Myo9a			Itgb5		
Myoc			Itgb8		
Myof			Itgb11		
Naalad2			Itih2		
Nab1			Itih4		
Nalcn			Itih5		
Nans			Itm2a		
Nap111			Itm2c		
Nars			Itpk1		
Nat13			Itpr12		
Nav1			Itsn1		
Nbl1			Jag1		
Ncam1			Jak2		
Ncapg2			Kalrn		
Ncf1			Kbtbd11		
Ncf2			Kcnab2		
Nckap11			Kcne4		
Ncoa7			Kcnk6		
Ndn			Kcnma1		
Ndst2			Kcnt2		
Nek6			Kctd10		
Neur3			Kctd17		
Nfatc4			Kdelc2		
Nfkb1			Kdelr3		
Nfkb2			Kif13b		
Nfkbiz			Kif1a		
Nfya			Kif21b		
Ngef			Kif3a		
Ngf			Kif3b		
Nhlrc3			Kif3c		
Nid1			Kif5b		
Nipsnap3a			Kif5c		
Nkd2			Kirrel		
Nlgn2			Klc1		
Nlrc4			Klhl29		
Nme1			Klraq1		
Nmt2			Kpnb1		
Nono			Krt18		
Notch2			Ktelc1		
Nox4			Lamp2		
Npc2			Lass2		
Npdc1			Lass5		

Npl			Lass6		
Npm1			Lats1		
Nppa			Layn		
Nptn			Ldlrad3		
Nr4a3			Lepre1		
Nsdhl			Lepre2		
Nsg1			Leprot		
Nt5c			Lgals1		
Nuak2			Lgals3bp		
Nucb2			Lgals9		
Numbl			Lgi2		
Nxf1			Lgmn		
Oas2			Lhfp		
Oasl2			Lhfp2		
Obfc2a			Lig1		
Odz3			Lilrb4		
Ogn			Litaf		
Olfml1			Lmcd1		
Olfml3			Lmna		
Os9			Lmo4		
Ostc			Lonrf3		
Otub2			Lox13		
P2rx4			Lpar1		
P2rx7			Lpar4		
P4ha1			Lpcat2		
P4hb			Lpin2		
Pabpc1			Lrig3		
Pafah1b2			Lrp1		
Pak1			Lrp5		
Pak3			Lrrc16a		
Pamr1			Lrrc25		
Panx1			Lrrc40		
Papd4			Lrrc49		
Papss2			Lrrc51		
Parp3			Lrrc59		
Parp9			Lrrk1		
Parvg			Lrrm4cl		
Pbx3			Lsp1		
Pcdh9			Ltbp2		
Pcdhb16			Ltbp3		
Pcdhb7			Ltbp4		
Pcolce			Lum		
Pcolce2			Lxn		
Pcyox1			Ly6a		
Pdcd4			Ly9		
Pde1a			Lypd1		
Pde7b			Lyplal1		
Pde8a			Lyst		
Pde9a			Lztr1		
Pdgcfc			Maf		
Pdgfra			Mafk		
Pdgfrl			Mak16		
Pdia3			Mamdc2		
Pdia4			Maml2		
Pdia6			Maml1		
Pdk3			Man1a2		
Pdlim3			Man2b1		
Pdlim5			Man2b2		
Pdlim7			Maoa		
Pdpn			Map3k12		
Pdzd11			Map3k14		
Pea15a			Map3k3		
Pfkfb3			Map3k8		
Pftk1			Mapk7		
Pgcp			Mapre1		
Pgd			Marcks		
Pgk1			Mark1		
Pgm1			Mast4		
Phf21a			Mbc2		

Phtf1			Mbtps1		
Pi16			Mcam		
Pj4k2a			Mcm2		
Picalm			Mcm3		
Pik3cg			Mcm6		
Pion			Mcm7		
Pip4k2a			Mdfic		
Pira3			Mdk		
Pisd-ps1			Me2		
Pitpna			Med10		
Pkd1			Med15		
Pkd2			Meg3		
Pla1a			Megf10		
Pla2g2d			Megf8		
Pla2g4a			Meox1		
Pla2g7			Mfap2		
Plaa			Mfap3		
Plat			Mfap4		
Plcg2			Mfge8		
Pld3			Mfsd10		
Pld4			Mfsd6		
Plek			Mgat2		
Plekha4			Mgl1		
Plekho1			Mgl2		
Plk2			Mgp		
Plod3			Mib1		
Plp2			Mical1		
Pls3			Mical2		
Pltp			Mif		
Plvap			Mlec		
Plxdc2			Milk1		
Plxnb2			Mllt11		
Plxnc1			Mmgt2		
Pmepa1			Mmp2		
Pmp22			Mmp23		
Pnp1			Mobk11b		
Pole2			Mobk12a		
Polr3e			Morc3		
Pon2			Morf412		
Postn			Mpp1		
Ppap2b			Mpz11		
Ppap2c			Mras		
Ppapdc1b			Mrc2		
Ppia			Ms4a14		
Ppib			Ms4a4a		
Ppm1e			Ms4a6d		
Pqlc3			Msr1		
Praf2			Mtap1a		
Prdx4			Mtap4		
Preld1			Mtap6		
Prelp			Mtap7d3		
Prg4			Mthfd2		
Prkcb			Mtmr12		
Prkcd			Mtmr6		
Prkd3			Mtpn		
Pros1			Muc15		
Prpmp5			Mum111		
Prr13			Mvp		
Prrx2			Mxra7		
Ptbp1			Mxra8		
Ptger4			Mybl1		
Ptges3			Myc		
Ptgfr			Mycbp2		
Ptgfrn			Myh10		
Ptgis			Myh9		
Ptgs2			Myh12b		
Ptk2b			Myh9		
Ptms			Myo1c		
Ptn			Myo1d		

Ptpn1			Myo1e		
Ptpn12			Myo1g		
Ptpn6			Myo5a		
Ptprc			Myo9a		
Ptprf			Myo9b		
Ptprz1			Myoc		
Pvrl3			Myrip		
Pvt1			Naaa		
Qpct			Naalad2		
Qsox1			Naaladl2		
Rab23			Nab1		
Rab31			Nagk		
Rab3d			Naglu		
Rab3il1			Nalcn		
Rab4b			Nans		
Rab71l			Nap1l1		
Rab8a			Nars		
Rab8b			Nav1		
Rac2			Nbl1		
Rai14			Ncam1		
Rangap1			Ncapg2		
Rap1b			Ncf1		
Rarres2			Ncf2		
Rasa3			Nckap1		
Rasgrp4			Ncoa7		
Rassf2			Ndn		
Rbl1			Ndrg4		
Rbm7			Necap2		
Rbms3			Nedd9		
Rbp1			Negr1		
Rbpj			Nek6		
Rcan1			Nelf		
Rcn3			Neur13		
Reck			Nfat5		
Renbp			Nfatc4		
Rexo2			Nfil3		
Rexo4			Nfkb1		
Rhog			Nfkbie		
Rhoj			Nfkbiz		
Rhou			Nfx11		
Ripk1			Nfya		
Rnasel			Ngef		
Rnf141			Ngf		
Rnf145			Nin		
Rnf19b			Nipsnap3a		
Rnf213			Nkd2		
Rnh1			Nktr		
Robo1			Nlgn2		
Rock1			Nme1		
Rpgrip11			Nmt2		
Rpl23a			Nol3		
Rpl3			Nop58		
Rpn2			Notch2		
Rps6ka1			Nox4		
Rps6ka3			Npc2		
Rras			Npdc1		
Rrbp1			Npl		
Rrm1			Npm1		
Runx1			Nppa		
Rusc2			Nppb		
Rxfp1			Npr3		
S100a10			Nr6a1		
S100a11			Nrg1		
S100a6			Nsdhl		
Samhd1			Nt5c		
Sat1			Nt5e		
Sbno2			Nuak1		
Sc4mol			Nuak2		
Scara3			Nucb1		

Scd1			Nucb2		
Scn1b			Numbl		
Scn7a			Nup205		
Scpep1			Nup93		
Scrn1			Oaf		
Sdc2			Oas2		
Sdc3			Oasl2		
Sdf211			Obscn		
Sec16b			Odz3		
Sec23b			Ogn		
Sec31a			Olfm1		
Sec61a1			Olfml1		
Sel11			Olfml3		
Sele			Omd		
Selp			Ophn1		
Selplg			Orc2l		
Sema3c			Os9		
Sema4a			Osbpl5		
Senp2			Osbpl9		
Sepn1			Ostc		
Sepp1			Otub2		
Serinc2			P2rx4		
Serp1			P2rx7		
Serpina3f			P4ha1		
Serpinb1a			P4ha3		
Serpinb9			P4hb		
Serpine1			Pacs2		
Serpinf1			Paf1		
Sertad4			Pafah1b2		
Sfpi1			Pak2		
Sfrp1			Pamr1		
Sfrp2			Panx1		
Sfxn3			Papd4		
Sgce			Papss2		
Sgms2			Pard3b		
Sgpl1			Parn		
Sh3bgrl			Parp3		
Sh3bgrl3			Parp9		
Sh3bp2			Parva		
Sh3pxd2b			Parvg		
Sh3rf3			Pbx3		
Shisa4			Pcdh9		
Shisa5			Pcdhb13		
Siglec1			Pcdhb16		
Siglece			Pcnp		
Sigmar1			Pcnx13		
Sirpa			Pcolce2		
Skap2			Pesk5		
Ski			Pcyox1		
Skil			Pdcd4		
Sla			Pdcd6ip		
Slc11a1			Pde10a		
Slc15a3			Pde1a		
Slc1a5			Pde5a		
Slc22a4			Pde7b		
Slc25a24			Pdgfc		
Slc25a45			Pdgfra		
Slc29a3			Pdgfrb		
Slc2a1			Pdgfrl		
Slc30a4			Pdia3		
Slc35b4			Pdia6		
Slc38a1			Pdk3		
Slc39a1			Pdlim7		
Slc39a6			Pdzd11		
Slc3a2			Pea15a		
Slc41a2			Peg10		
Slc44a1			Pemt		
Slc6a9			Pes1		
Slc7a11			Pfkfb3		

Slc7a5			Pfkfb4		
Slc7a7			Pfkf1		
Slc7a8			Pgam1		
Slc9a3			Pgcp		
Slc9a7			Pgd		
Slco2a1			Pgm1		
Slit2			Pgm3		
Smad1			Phf21a		
Smc2			Phgdh		
Smc4			Phlda3		
Snai1			Phldb2		
Sneg			Phtf1		
Sntb2			Pi15		
Snx1			Pi4k2a		
Snx10			Pias3		
Snx7			Pjgb		
Snx8			Pigt		
Soat1			Pik3ap1		
Socs2			Pik3c2a		
Sod3			Pik3cg		
Sox5			Pik3r5		
Sp140			Pikfyve		
Spare			Pip4k2a		
Spata6			Pisd-ps1		
Sprr1a			Pkd2		
Sptlc2			Pknox2		
Srd5a3			Pla1a		
Srpx			Pla2g15		
Srpx2			Pla2g4a		
Srxn1			Pla2g7		
Ssfa2			Pla2r1		
Ssh3			Plaa		
Ssr2			Plac9		
St6gal1			Plag1		
Stab1			Plcb1		
Stat3			Plce1		
Stim2			Plcg2		
Stk17b			Pld1		
Stk32b			Pld3		
Stk38			Pld4		
Stk38l			Pldn		
Strn			Plekha4		
Stt3a			Plekhg2		
Stx11			Plekho1		
Stx2			Plekho2		
Stxbp1			Plk2		
Stxbp4			Plod2		
Sulf1			Plp2		
Supt16h			Pls3		
Susd2			Pltp		
Svep1			Plvap		
Syk			Plxdc2		
Synj1			Plxna3		
Synm			Plxna4		
Synpo			Plxnb2		
Syt11			Plxnc1		
Tagln2			Pmepa1		
Tanc2			Pml		
Taok3			Pmm1		
Tapbp			Pmp22		
Tbc1d14			Podn		
Tbc1d19			Pola1		
Tbc1d8b			Pold4		
Tbc1d9			Pole3		
Tbx15			Polr3e		
Tbx20			Pon2		
Tcf12			Pon3		
Tcf21			Postn		
Tcirg1			Ppap2b		

Tcn2			Ppap2c		
Tctn2			Ppapdc1b		
Tep1			Ppfia1		
Tgfb2			Ppfbp1		
Tgfb3			Ppia		
Tgfb1			Ppib		
Tgibr1			Ppic		
Tgibr2			Ppm1m		
Tgif1			Ppp1r3c		
Tgm2			Ppp1r9b		
Thbs2			Pqlc3		
Thbs3			Praf2		
Thbs4			Prc1		
Thsd7a			Prdx4		
Tiam1			Preli1		
Tifab			Prelp		
Timp1			Prex1		
Tjp2			Prg4		
Tle3			Prh1		
Tlr2			Prim1		
Tlr3			Prim2		
Tlr8			Prkab2		
Tm6sf1			Prkar1a		
Tmbim1			Prkca		
Tmem106a			Prkcb		
Tmem119			Prkcd		
Tmem167			Prkcdbp		
Tmem173			Prkci		
Tmem176b			Prkcsh		
Tmem183a			Prkd3		
Tmem184c			Prmt2		
Tmem195			Prrg3		
Tmem2			Prrx2		
Tmem209			Prune2		
Tmem39a			Psm8		
Tmem43			Ptbp1		
Tmem45a			Ptger4		
Tmem50a			Ptges		
Tmem97			Ptgfrn		
Tmsb10			Ptgis		
Tnc			Ptgs1		
Tnfrsf1a			Ptgs2		
Tnfrsf13b			Pth1r		
Tnip1			Ptk2b		
Tnip2			Ptms		
Tns3			Ptn		
Tpcn2			Ptplad2		
Tpd52			Ptpn1		
Tpm3			Ptpn12		
Tpm4			Ptpn13		
Tpp1			Ptpn23		
Tpx2			Ptpra		
Tram1			Ptprf		
Tram2			Ptrh1		
Trf			Pvrl1		
Trim21			Pvrl3		
Trim30			Pvt1		
Trim41			Pycr1		
Trim47			Qpct		
Trps1			Qser1		
Trpv2			Qsox1		
Trpv4			R3hcc1		
Tspan17			Rab31		
Tspan5			Rab34		
Tsr1			Rab3d		
Tssc1			Rab3gap2		
Ttc26			Rab3il1		
Ttc37			Rab43		
Ttc8			Rab4b		

Ttl12			Rab5c		
Ttl3			Rab711		
Ttl7			Rab8a		
Tuba1a			Rab8b		
Tuba1b			Rab15		
Tuba1c			Rad18		
Tubb2a			Rad50		
Tubb5			Rad9		
Tubgcp4			Rag1ap1		
Twf1			Rai14		
Txndc5			Rangap1		
Txnip			Rap1b		
Txnrd1			Raph1		
Uap111			Rasa3		
Ubxn4			Rasgef1a		
Uchl1			Rasl11b		
Uck2			Rb11		
Ucp2			Rbm3		
Ufm1			Rbm47		
Ufsp2			Rbm7		
Ugcgl2			Rbms3		
Ugdh			Rbp1		
Ugp2			Rbpj		
Unc13b			Rcn1		
Unc93b1			Rdh11		
Uprt			Reck		
Uso1			Recql		
Usp16			Relb		
Ust			Renbp		
Uvrag			Reps2		
Vat1			Rftn2		
Vcam1			Rgs10		
Vcan			Rgs11		
Vgll2			Rgs19		
Vim			Rhbdf1		
Vit			Rhog		
Vkorc1			Rhoj		
Vwa5a			Rhou		
Vwf			Ric3		
Wdfy4			Rnasel		
Wdr19			Rnd1		
Wdr44			Rnf141		
Wipf1			Rnf145		
Wisp2			Rnf149		
Xylt1			Rnf19b		
Yipf5			Rnf2		
Ywhah			Rnf213		
Zc3hav1			Rnft1		
Zcchc7			Rnh1		
Zdhhc2			Robo1		
Zdhhc20			Rock1		
Zdhhc23			Rod1		
Zfc3h1			Rp2h		
Zfp3612			Rpe		
Zfp423			Rpl23a		
Zfp521			Rpl3		
Zyx			Rpl39		
			Rpn2		
			Rps12		
			Rps6ka3		
			Rras		
			Rrbp1		
			Rrm1		
			Rrm2		
			Rrp12		
			Rsu1		
			Rtp4		
			Runx1		
			Runx2		

			Rusc2		
			Ryr3		
			Samd4		
			Samd4b		
			Sardh		
			Sars		
			Sash1		
			Sat1		
			Sbno2		
			Sc4mol		
			Scara3		
			Scarf2		
			Scd1		
			Scd2		
			Scn1b		
			Scn7a		
			Scrn1		
			Sdc1		
			Sdc2		
			Sdc3		
			Sdc4		
			Sec11a		
			Sec11c		
			Sec16b		
			Sec23b		
			Sec24d		
			Sel11		
			Selp		
			Sema3b		
			Sema3c		
			Sema3d		
			Senp2		
			Sepp1		
			Serf2		
			Serinc2		
			Serp1		
			Serpinb1a		
			Serpinb1c		
			Serpinb6a		
			Serpine1		
			Serpinf1		
			Serping1		
			Sertad4		
			Setbp1		
			Sfpi1		
			Sfrp2		
			Sfrp4		
			Sfxn1		
			Sgce		
			Sgms2		
			Sgp11		
			Sgsh		
			Sh3bgr1		
			Sh3bgr13		
			Sh3bp2		
			Sh3kbp1		
			Sh3pxd2b		
			Sh3rf3		
			Shc1		
			Shc2		
			Shisa3		
			Shisa4		
			Shisa5		
			Shkbp1		
			Shroom3		
			Siglec1		
			Siglece		
			Sigmar1		

			Sipa111			
			Sirpa			
			Skap2			
			Ski			
			Skil			
			Slamf9			
			Slc10a7			
			Slc13a4			
			Slc15a3			
			Slc16a2			
			Slc16a6			
			Slc17a5			
			Slc1a1			
			Slc1a2			
			Slc1a3			
			Slc1a5			
			Slc20a1			
			Slc22a4			
			Slc25a1			
			Slc25a17			
			Slc25a24			
			Slc25a45			
			Slc29a3			
			Slc2a1			
			Slc2a10			
			Slc2a13			
			Slc30a4			
			Slc35d2			
			Slc36a4			
			Slc37a2			
			Slc38a1			
			Slc39a1			
			Slc39a6			
			Slc3a2			
			Slc41a2			
			Slc43a2			
			Slc44a1			
			Slc5a3			
			Slc6a6			
			Slc7a11			
			Slc7a2			
			Slc7a8			
			Slc9a3			
			Slc9a9			
			Slco2a1			
			Slit2			
			Slit3			
			Smad1			
			Smap1			
			Smc2			
			Smo			
			Smoc1			
			Smurf2			
			Snai1			
			Snhg1			
			Sntb2			
			Snx1			
			Snx10			
			Snx29			
			Snx6			
			Snx7			
			Snx9			
			Soat1			
			Sod3			
			Sorbs2			
			Sox5			
			Sox9			
			Sp140			
			Spata6			

			Spats2			
			Spes3			
			Spg21			
			Sphk1			
			Spire1			
			Spna2			
			Spns2			
			Spon1			
			Spon2			
			Spred1			
			Sprr1a			
			Spry1			
			Sptlc2			
			Sqle			
			Sqstm1			
			Srbd1			
			Srd5a3			
			Srebf2			
			Srgap2			
			Srgap3			
			Sri			
			Srpx			
			Srpx2			
			Srxn1			
			Ssfa2			
			Ssh3			
			Ssu72			
			St3gal2			
			St6gal1			
			Stam2			
			Star			
			Stard5			
			Stim2			
			Stk3			
			Stk32b			
			Stk38l			
			Ston1			
			Strn			
			Stt3a			
			Stt3b			
			Stx2			
			Stxbp1			
			Sugt1			
			Sulf1			
			Sumf1			
			Supt5h			
			Susd2			
			Svep1			
			Syk			
			Synj1			
			Synm			
			Synpo			
			Syt11			
			Tacc3			
			Taf1			
			Tagln2			
			Tanc2			
			Tapbp			
			Tax1bp3			
			Tbc1d14			
			Tbc1d19			
			Tbc1d2b			
			Tbc1d8b			
			Tbcd			
			Tbcel			
			Tbl1x			
			Tbx15			
			Tbx20			
			Tc2n			

			Tcea1			
			Tceb3			
			Tcf12			
			Tcf21			
			Tcf3			
			Tcfe3			
			Tcirg1			
			Tcn2			
			Tep1			
			Tgfb1			
			Tgfb1i1			
			Tgfb2			
			Tgfb3			
			Tgfb1			
			Tgibr1			
			Tgibr2			
			Tgif1			
			Tgm2			
			Thbs1			
			Thbs2			
			Thbs3			
			Thbs4			
			Thsd7a			
			Tiam1			
			Tiam2			
			Tifab			
			Tjp2			
			Tle3			
			Tln1			
			Tlr13			
			Tlr2			
			Tlr4			
			Tlr8			
			Tm7sf3			
			Tm9sf3			
			Tmbim1			
			Tmed10			
			Tmem104			
			Tmem119			
			Tmem123			
			Tmem138			
			Tmem144			
			Tmem167			
			Tmem173			
			Tmem176b			
			Tmem183a			
			Tmem184b			
			Tmem184c			
			Tmem195			
			Tmem2			
			Tmem209			
			Tmem219			
			Tmem45a			
			Tmem49			
			Tmem50a			
			Tmem62			
			Tmem97			
			Tmsb10			
			Tmsb4x			
			Tnfaip3			
			Tnfaip6			
			Tnfrsf12a			
			Tnfrsf1a			
			Tnfrsf1b			
			Tnfp1			
			Tnxb			
			Topbp1			
			Tor3a			
			Tpcn2			

			Tpd52			
			Tpm3			
			Tpm4			
			Tpx2			
			Traf3			
			Traf7			
			Tram1			
			Trerf1			
			Trim2			
			Trim30			
			Trim37			
			Trim41			
			Trim44			
			Trim47			
			Trip13			
			Trove2			
			Trp53			
			Trps1			
			Trpv2			
			Tspan17			
			Tspan5			
			Tspan6			
			Tspan9			
			Tsr1			
			Tssc1			
			Tssc4			
			Ttbk2			
			Ttc37			
			Ttc8			
			Ttc9			
			Ttl12			
			Ttl7			
			Ttyh3			
			Tuba1a			
			Tuba1b			
			Tuba1c			
			Tubb2a			
			Tubb2b			
			Tubb6			
			Tubgcp4			
			Tulp3			
			Tulp4			
			Txndc16			
			Txndc5			
			Txnrd1			
			Tyk2			
			Tyms			
			Uap111			
			Ube2e2			
			Ube2l6			
			Ubt2			
			Ubxn4			
			Ufm1			
			Ufsp2			
			Ugcgl2			
			Ugdh			
			Uhrf1			
			Uhrf1bp11			
			Ulk3			
			Unc13b			
			Unc5b			
			Uprt			
			Uso1			
			Usp16			
			Usp47			
			Usp6nl			
			Ust			
			Uvrag			
			Vamp7			

			Vat1			
			Vav3			
			Vcam1			
			Vcan			
			Vegfc			
			Vgll2			
			Vgll3			
			Vit			
			Vkorc1			
			Vrk2			
			Vwa5a			
			Vwf			
			Wbp5			
			Wdfy1			
			Wdfy4			
			Wdr19			
			Wdr44			
			Wdr47			
			Wdr67			
			Wisp2			
			Wwp2			
			Wwtr1			
			Xirp2			
			Xpot			
			Xylt1			
			Yars			
			Yipf1			
			Yipf5			
			Ywhab			
			Ywhah			
			Zbtb7c			
			Zc3h7a			
			Zc3hav1			
			Zc4h2			
			Zcche24			
			Zcche7			
			Zdhhc20			
			Zdhhc24			
			Zeb2			
			Zfc3h1			
			Zfhx3			
			Zfp260			
			Zfp354c			
			Zfp3612			
			Zfp423			
			Zfp521			
			Zmiz1			
			Zswim4			
			Zyx			

GLY 3 months X GLY 6 months comparison			ARG 3 months X ARG 6 months comparison			All genotypes/time points
Uniquely Down-regulated in GLY 6 months	Uniquely Down-regulated in GLY 3 months	Commonly Down-regulated	Uniquely Down-regulated in ARG 6 months	Uniquely Down-regulated in ARG 3 months	Commonly Down-regulated	Commonly Down-regulated
Aadacl1	Abcc1	A2bp1	Aadacl1	Abat	A2bp1	A2bp1
Aamp	Acta1	Abcd2	Aamp	Abcc1	Abca6	Abcd2
Aarsd1	Adam24	Abhd1	Aarsd1	Acta1	Abcc8	Abhd1
Aasdhppt	Adamts6	Acadm	Aarsd1	Adamts6	Abcd2	Acadm
Abca12	Agpat2	Acat1	Aasdhppt	Akap5	Abhd1	Acat1
Abca6	Agxt2l2	Acot1	Abca12	Amph	Acaa2	Acot1
Abcb10	Akap11	Acot2	Abca3	Aplp2	Acad8	Acsf2
Abcb8	Akap5	Acsf2	Abcb10	Apol10b	Acadm	Actr3b
Abcb9	Akr1c14	Actr3b	Abcb4	Arap2	Acadv1	Adhfe1
Abcc8	Akr1c19	Adhfe1	Abcb8	Arl6ip6	Acat1	Adk
Abcc9	Aldh7a1	Adk	Abcb9	Asap3	Acot1	Adra1a
Abcd3	Aldh9a1	Adra1a	Abcc9	Atf7ip	Acsf2	Agpat9
Abhd10	Ankrd10	Agpat9	Abcd1	Atm	Acs11	Agtr1a

Ablim1	Ankrd12	Agtr1a	Abcd3	B3gnt3	Actr3b	Aldh2
Acaa2	Ano4	Aldh2	Abhd10	Bat2l	Acy3	Art3
Acacb	Ap1p2	Ankrd33b	Abhd11	Bhlhe41	Adhfe1	Asb5
Acads	Arap2	Art3	Abhd5	Cacna2d1	Adi1	Atp8a1
Acadv1	Arhgef9	Asb5	Abhd6	Camk2d	Adk	B3galt2
Acot7	Atf7ip	Atp8a1	Abhd8	Ccdc28a	Adra1a	Bcat2
Acp6	Atr	B3galt2	Ablim1	Cd300e	Agpat2	Bckdha
Acsf3	Bach2	Bcap29	Ablim2	Cd59a	Agpat9	Bcl9
Acs11	Bbs2	Bcat2	Abtb1	Cdc42ep2	Agtr1a	Calcoco1
Acsm5	Bmp4	Bckdha	Acacb	Cdc42ep3	Akr1b3	Cand2
Acss1	Cacna1g	Bcl9	Acad11	Cdh13	Alad	Capn3
Acy1	Cacna2d1	Calcoco1	Acad9	Cenpp	Aldh2	Casq1
Acy3	Camk2d	Camta1	Acadl	Chmp4c	Aldh4a1	Ccdc21
Acyp2	Car3	Cand2	Acads	Clasp1	Aldh6a1	Cdkl1
Adam1b	Carf	Capn3	Aco2	Colq	Angpt1	Cecr2
Adamts3	Cd1d1	Casq1	Acot11	Comt1	Ankrd32	Ces3
Adamts7	Cd274	Ccdc21	Acot13	Crot	Ano4	Cirbp
Adck1	Cdh13	Cdk11	Acot2	Cry2	Ano5	Clen3
Adcy6	Cenpp	Cecr2	Acot7	Cyb5d2	Aqp7	Coro6
Adi1	Chmp4c	Ces3	Acox1	Dach1	Arhgap20	Cxadr
Adprhl1	Cldn12	Cirbp	Acp6	Dbp	Arhgap26	Dci
Adra1d	Clpx	Clen3	Acsf3	Dcpp3	Armc2	Ddo
Adsl	Cluap1	Coro6	Acs16	Ddah1	Armet1	Dennd4b
Agpat3	Cnksr3	Cxadr	Acsm5	Dip2b	Art1	Dhrs4
Aifm1	Colq	D2hgdh	Acss1	Dmpk	Art3	Dhtkd1
Aig1	Comt1	Dci	Acy1	Dusp16	As3mt	Dip2c
Ak1	Crot	Ddo	Acyp2	Dusp27	Asb10	Doc2g
Ak311	Cry2	Def8	Adam11	Efcab4b	Asb14	Ech1
Akap1	Cutc	Dennd4b	Adamts3	Eif3m	Asb15	Echdc2
Akr1b3	Dach1	Dhrs4	Adamts7	Eml2	Asb2	Echdc3
Akt2	Dbp	Dhtkd1	Adck1	Evi1	Asb5	Eepd1
Alad	Dcp1a	Dip2c	Adcy6	Extl2	Atg10	Entpd6
Alas1	Dcpp3	Dnmt3a	Adipor2	Fam100a	Atp1a2	Ephb3
Aldh4a1	Ddah1	Doc2g	Adprhl1	Fanc1	Atp8a1	Ephx2
Aldh5a1	Dgke	Dtd1	Adra1b	Fgf1	Atpaf1	Erc1
Aldh6a1	Dip2b	Ech1	Adsl	Frag1	Auh	Fam65b
Aldob	Dusp16	Echdc2	Aes	Frm8	B3galt2	Fbp2
Alkbh5	Dusp27	Echdc3	Afg311	Fzd8	Bbs2	Fgf16
Alox12	Efnal	Eepd1	Agl	Gbp3	Bcat2	Frem2
Alpk2	Egr2	Entpd6	Agpat3	Ggct	Bckdha	Fyco1
Amacr	Ehmt1	Ephb3	Agtpbp1	Gpatch8	Bcl7a	Gab1
Amd1	Eif3m	Ephx2	Aifm1	Gramd1b	Bcl9	Gcom1
Amtn	Eif4e	Erc1	Ak1	Grit	Bhlhb9	Gdap10
Amz2	Eml5	Esrrb	Akap1	Gsta4	Cabc1	Gene
Anapc13	Ercc4	Fam116b	Akt1s1	Guk1	Cacna1s	Gm889
Ankrd32	Etv3	Fam65b	Akt2	Gzme	Calcoco1	Gmpr
Ankrd52	Fam178a	Fbp2	Alas1	Hcfc1r1	Cand2	Gnb3
Anks1	Fam69a	Fbxl22	Alas2	Hmgbl	Capn3	Hadh
Ano5	Fap	Fgf16	Aldh5a1	Igsf1	Casq1	Herc3
Anxa11	Fblim1	Fkbp3	Aldh9a1	Il13ra1	Ccb12	Hlf
Apbb1	Fgf1	Frem2	Aldob	Imp2l	Ccdc21	Hmcn1
Apex2	Fnip2	Frm8	Alkbh7	Irf9	Ccdc69	Hmgn2
Apip	Gart	Fyco1	Amacr	Jup	Cdkl1	Hrasls
Arfgef2	Gas5	Gab1	Amd1	Kcnb1	Cecr2	Hsd12
Arhgap20	Gcnt1	Gcom1	Amtn	Kcnf1	Celsr1	Idh2
Arhgap26	Gene	Gdap10	Amy1	Kdm6a	Celsr2	Intu
Arhgef10l	Ggct	Gm428	Amy2a1	Kif26b	Ces3	Ipo13
Arhgef15	Gipc2	Gm826	Amy2a5	Lmo2	Cirbp	Itga7
Arl2	Gpd11	Gm889	Anapc13	Lrrc55	Clen1	Itgb6
Arl3	Gpr112	Gmpr	Angptl3	Lrrc61	Clen3	Ivd
Armc2	Gramd1b	Gnb3	Ank	Lysmd4	Clpb	Jph1
Armet1	Grit	Hadh	Ank2	Med4	Cmb1	Kcnip2
Art1	Gtlf3a	Hcn4	Ankrd33b	Mef2c	Coro6	Kcnj11
As3mt	Guk1	Herc3	Ankrd9	Meig1	Cpeb3	Klhdc1
Asb10	Gypc	Hlf	Anks1	Meis2	Cpt2	Krt222
Asb11	Haus2	Hmcn1	Ap4s1	Mterfd2	Crat	Lama5
Asb14	Hbegf	Hmgn2	Apbb1	Mtss1	Cutc	Lbh
Asb15	Hes1	Hrasls	Apex2	Myo5b	Cxadr	Lclat1
Asb18	Hist2h2aa1	Hs3st5	Apip	Myo9a	Cyfip2	Lgals4

Asb2	Hmgb2	Hsd12	Apoo-ps	Myom2	Daam1	Lgi1
Asrg11	Hnrnp3	Idh2	App12	N6amt1	Dbt	Limch1
Atg10	Hspb3	Ift81	Arfgap2	Nfe2l3	Dci	Lrrc39
Atg2a	Htr1b	Insig1	Arfgef1	Nmnat3	Ddo	Lrrc4b
Atg4d	Igsf1	Intu	Arfrp1	Npr2	Decr1	Lzic
Atp1a2	Il13ra1	Ipo13	Arhgef15	Nqo1	Dennd4b	Mboat2
Atp5e	Imm2l	Itga7	Arhgef9	Nrap	Dgat2	Mccc1
Atp5f1	Ing5	Itgb6	Arl3	Nudt16l1	Dhrs4	Mccc2
Atp5g1	Ino80	Ivd	Arl5b	Nudt2	Dhrs7c	Med12l
Atp5g2	Irx3	Jph1	Asb11	Nup54	Dhtkd1	Mgst3
Atp5k	Itga9	Kcnp2	Asb12	Otud1	Dip2c	Mitf
Atp5l	Jam3	Kcnj11	Asb18	Pak6	Dnajc28	Mlf1
Atp5o	Jarid2	Klf9	Asrg11	Parp8	Doc2g	Mut
Atp5sl	Kbtbd7	Klhdc1	Atg2a	Per3	Ech1	Myh7b
Atp6v1g1	Kdm6a	Klra10	Atg4d	Pisd	Echdc2	Nampt
Atpaf1	Klf12	Krt222	Atl2	Plekha6	Echdc3	Nnt
Auh	Lmo2	Ky	Atp5c1	Pnet-ps	Echs1	Nr3c2
Bag1	Lonrf1	Lama5	Atp5d	Polr2e	Eepd1	Nt5c3
Bag4	Lsm3	Larp4	Atp5e	Ppm1d	Egf	Ogdhl
Bcam	Lysmd4	Larp7	Atp5f1	Ppm2c	Eif4e	Oplah
Bche	Med4	Lbh	Atp5g1	Ppp1r3b	Entpd6	Pah
Bckdhb	Mef2a	Lclat1	Atp5g2	Prss3	Epb4.115	Paqr9
Bcl11a	Meis2	Lepr	Atp5g3	Psmc1	Ephb3	Pccb
Bcl11b	Mier3	Lgals4	Atp5h	Ptpn4	Ephx2	Pctk3
Bcl2l12	Mov10	Lgi1	Atp5j2	Pygb	Erb4	Pde11a
Bcl2l13	Mrpl52	Limch1	Atp5k	Rad54l2	Erc1	Pet112l
Bdh1	Msto1	Lrrc39	Atp5l	Rad9b	Etfb	Pik3c2b
Bend5	Mthfd1	Lrrc4b	Atp5o	Rassf9	Fabp3	Pik3ip1
Bex1	Mtp	Lrrc55	Atp5sl	Rbbp6	Fah	Pkia
Blcap	Myef2	Lzic	Atp6v1g1	Rbl2	Fam113b	Ppif
Bsg	Myo5b	Mboat2	Atpaf2	Rcor2	Fam65b	Ppmlj
Btc	Myo9a	Mccc1	Atpgd1	Rfwd3	Fam78a	Ptpn3
Btnl9	Myom2	Mccc2	Aurkaip1	Rhobtb2	Fblim1	Ptpm
Bzw2	N6amt1	Med12l	Avpr1a	Rnase9	Fbp2	Pts
Cabc1	Nes	Mgst3	Bach2	Rpp40	Fbxo21	Pxmp2
Cacna1s	Nln	Mitf	Bag1	Runx1t1	Fbxo3	Rhd
Cadm4	Nod1	Mlf1	Bag3	Sema4d	Fgf13	Rnf207
Car14	Nqo1	Mmd	Bak1	Shmt2	Fgf16	Scd4
Car8	Nr3c1	Mut	Bcam	Slc40a1	Fgf9	Scgb1c1
Cars2	Nrap	Myh7b	Bcap29	Slc44a2	Fkbp4	Scn4a
Casz1	Odc1	Nampt	Bckdhb	Slc9a10	Foxo3	Sh3rf2
Cav2	Pde7a	Necab1	Bckdk	Snora34	Frem2	Slc25a34
Cbfa2t3	Pdhh	Nnt	Bcl11a	Sntb1	Fyco1	Slc25a38
Cbr4	Pdr3	Nr1d2	Bcl11b	Sox4	Gab1	Slc27a1
Cbwd1	Per3	Nr3c2	Bcl2l11	Sp4	Galm	Slc36a2
Ccbl2	Plcl2	Nt5c3	Bcl2l13	Spe24	Gbas	Symbol
Ccdc12	Pnet-ps	Ogdhl	Bcl6b	St6galnac3	Gca	Synj2
Ccdc44	Pnmal2	Oplah	Bdh1	Taf7	Gcdh	Tef
Ccl11	Ppm1d	Pah	Bend5	Tanc1	Gcnt1	Tmem205
Ccni	Ppm2c	Paqr9	Bex1	Tecpr1	Gcom1	Tmod4
Cenk	Ppp1r14c	Pccb	Bloc1s1	Tet1	Gdap10	Trim54
Cdh4	Prpf4	Pcdh7	Bola3	Tgtp	Gm129	Vldlr
Cdk5rap1	Prpsap2	Pctk3	Brp44	Tjp1	Gm889	Xpo4
Cdkl5	Rapgef5	Pde11a	Brp44l	Tmem196	Gmpr	Zswim7
Cecr5	Rbak	Pet112l	Bsg	Trim13	Gnb3	
Celsr2	Rbbp6	Pex7	Btnl9	Tspan13	Gpd11	
Cenpv	Rev1	Pick1	Bzw2	Ttc39b	Grec10	
Cep68	Rfc1	Pik3c2b	C1qbp	V1rc25	Gstk1	
Chchd2	Rhobtb2	Pik3ip1	Cacna1c	Vamp5	Gstz1	
Chd7	Rpp40	Pkia	Cacna1g	Wdr36	H2-Ke2	
Chpt1	Rps10	Plscr2	Cacnb2	Wif1	H2afv	
Chure1	Rrm2b	Ppif	Cadm4	Zcche17	Hadh	
Ciao1	Rtf1	Ppmlj	Camk2a	Zfp30	Hadha	
Cisd1	Safb	Prepl	Camta1	Zkscan3	Hdac4	
Ckm	Scaper	Ptpn3	Car14		Helz	
Ckmt2	Scnm1	Ptpn4	Car4		Herc3	
Clcn1	Sep2	Ptpm	Car8		Hibadh	
Clpb	Sema4d	Pts	Card6		Hlf	
Clpp	Senp7	Pxmp2	Cars2		Hmcn1	

Cmtm8	Sfrs14	Rasd2	Casz1		Hmgn2	
Cobl11	Sfrs3	Rcor2	Cbfa2t3		Hopx	
Cog6	Sft2d3	Rhd	Cbr4		Hrasls	
Coq10a	Sipa112	Rnf207	Ceb11		Hrc	
Coq2	Six4	Rrp9	Ccdc12		Hsd17b10	
Coq6	Slc25a28	Scd4	Ccdc44		Hsd12	
Coq7	Slc25a33	Scgb1c1	Ccdc47		Idh2	
Coq9	Slc35a4	Scn4a	Ccdc90a		Il10rb	
Cox10	Slc44a2	Sh3rf2	Ccl11		Il15	
Cox5a	Smndc1	Shmt2	Ccl24		Inpp5e	
Cox6a2	Smoc2	Slc25a34	Ccnh		Intu	
Cox6b1	Snapc1	Slc25a38	Ccnk		Ipo13	
Cox6c	Snapin	Slc27a1	Ccrl2		Iqgap2	
Cox7a1	Snord53	Slc36a2	Cd1d2		Irx4	
Cox7b	Snrpg	St6galnac3	Cd36		Itga7	
Cox7b2	Sntb1	Synj2	Cdc3711		Itgb6	
Cox7c	Sp110	Tef	Cdc40		Ivd	
Cox8b	Sp4	Tmem205	Cdh23		Jarid2	
Cpeb2	Symbol	Tmod4	Cdh4		Jph1	
Cpeb3	Synpo21	Trim54	Cdk5rap1		Kbtbd3	
Cpox	Taf1a	Ube2o	Cdk15		Kcnd2	
Cpt1b	Tmem50b	Vldlr	Cdkn1c		Kcnip2	
Cpt2	Tmem87a	Xpo4	Cds1		Kcnj11	
Crat	Tmem93	Zfand1	Cecr5		Kcnv2	
Creg1	Tra2b	Zswim7	Cenpv		Kctd9	
Crhr2	Trdmt1		Cep68		Klhdc1	
Crygb	Trib1		Cep70		Klhdc8a	
Csdc2	Trim16		Chac2		Klk1b26	
Csnk2a1-rs2	Trmt12		Chchd2		Krt222	
Cth	Ttc39b		Chchd3		Lama5	
Ctla4	Txnip		Chchd7		Lars2	
Ctnna3	Txnrd3		Chd7		Lbh	
Cyc1	Usp10		Chkb		Lclat1	
Cyfp2	Usp21		Chpt1		Ldhd	
Cyp2b10	Usp22		Chure1		Lgals4	
Cyp2b9	Wdfy1		Ciao1		Lgi1	
Cyp4b1	Wdr36		Cidea		Limch1	
Daam1	Wdr53		Cisd1		Llgl2	
Dbt	Wipi1		Ckm		Lonrf1	
Dcps	Xlr		Ckmt2		Lphn2	
Dcun1d2	Yeats2		Clpp		Lrrc39	
Ddt	Zbtb10		Clpx		Lrrc4b	
Deb1	Zfp1		Clyb1		Lrtm1	
Decr1	Zfp30		Cmtm8		Lzic	
Defb34	Zfp46		Cmya5		M6prbp1	
Dexi	Zfp509		Cnga3		Macrodl	
Dgat2	Zfp518		Cnksr3		Magi2	
Dgcr2	Zfp799		Cnot10		Magix	
Dguok	Zfp93		Cobl11		Mboat2	
Dhrs11	Zxdc		Cog5		Mccc1	
Dhrs7c			Cog6		Mccc2	
Dll4			Cops6		Me3	
Dlst			Coq10a		Med12l	
Dnaja3			Coq2		Med16	
Dnajc15			Coq3		Mef2a	
Dnajc28			Coq4		Mgmt	
Dnajc30			Coq5		Mgst3	
Dok4			Coq6		Mid1ip1	
Dot11			Coq7		Mitf	
Dpf3			Coq9		Mlf1	
Dpysl4			Cox10		Mlxipl	
Drap1			Cox15		Mrgprh	
Dsc2			Cox4i1		Mrps25	
Dsg1c			Cox5a		Mtap7	
Dsg2			Cox5b		Mut	
Dtna			Cox6a2		Myadml2	
Dtwd2			Cox6b1		Myh7b	
Dub1			Cox6c		Myl3	
Dusp10			Cox7a1		Mylk4	

Dusp23			Cox7a2		Myo18a	
Dusp7			Cox7b		N6amt2	
Dusp8			Cox7c		Nampt	
Dut			Cox8b		Ndufa3	
Echs1			Cpeb2		Neo1	
Ecsit			Cpox		Nfyc	
Eef1d			Cpt1b		Nnt	
Efna5			Creg1		Nr3c2	
Efnb3			Crhr2		Nt5c3	
Egf			Crip2		Oat	
Ehhadh			Cryba4		Ociad2	
Eif2b4			Crybb1		Ogdhl	
Endog			Crygb		Oma1	
Epha4			Cs		Oplah	
Epm2aip1			Csdc2		Osbp2	
Eral1			Csnk2a1-rs2		P2ry1	
Erb3			Ctage5		Pacsin3	
Erb4			Cth		Pah	
Esrra			Ctla4		Pank1	
Esrrg			Ctnna3		Paqr9	
Etfb			Cul5		Pcca	
Etfdh			Cux2		Pccb	
Ethel			Cxcr7		Pctk3	
Etl4			Cxx1b		Pde11a	
Extl1			Cyc1		Pde7a	
F2rl3			Cycs		Pdk2	
Fabp3			Cyp2b10		Pet112l	
Fah			Cyp2b9		Pfkfb1	
Fam160a1			Cyp2u1		Pfkm	
Fam46b			Cyp4b1		Phf7	
Fam46c			Cyth1		Pik3c2b	
Fam59a			Cyyl1		Pik3ip1	
Fam73a			Dap3		Pink1	
Fam73b			Dars2		Pitpnc1	
Farp2			Dbld1		Pkia	
Fars2			Dctpp1		Pla2g4e	
Fastk			Dcun1d2		Plxnb1	
Fastkd1			Ddt		Pm20d1	
Fbrs			Ddx59		Polq	
Fbxo21			Deb1		Ppapdc3	
Fbxo25			Def8		Ppfibp2	
Fbxo31			Dennd2c		Ppif	
Fdft1			Dennd3		Ppm1j	
Fech			Dgcr2		Ppm1k	
Fgd4			Dgcr6		Ppp1r14c	
Fh1			Dguok		Prdx5	
Fhl2			Dhodh		Prkcq	
Fhod3			Dhrs11		Prox1	
Fign			Diablo		Ptcd3	
Fitm1			Dixdc1		Ptchd3	
Fitm2			Dkc1		Ptpn3	
Fkbp4			Dlat		Ptprm	
Fmc1			Dld		Pts	
Fn3k			Dll4		Pxmp2	
Fndc5			Dlst		Pxmp4	
Foxo4			Dmxl2		Qsox2	
Fry			Dnaja3		Rbm20	
Fv1			Dnajc15		Retsat	
Fzr1			Dnajc16		Rhd	
Gal3st3			Dnajc19		Ric8b	
Galm			Dnajc30		Rnf207	
Galnt11			Dnalc4		Rnf34	
Galt			Dnmt3a		Rorc	
Garnl4			Dpf3		Rps6ka2	
Gba2			Dpyd		Rrm2b	
Gbas			Dpysl4		Rtn2	
Gca			Drap1		Scd4	
Gcat			Dsc2		Scgb1c1	
Gcdh			Dsg1c		Scn4a	

Gck		Dsg2	Sesn1
Gcsh		Dtd1	Sgol2
Gdpd5		Dtna	Sh2d4a
Gfm1		Dtnbp1	Sh3rf2
Gfm2		Dtwd2	Sipa1l2
Gfra4		Dub1	Sirt5
Ggnbp1		Dus4l	Slc20a2
Gjb3		Dusp10	Slc22a5
Glo1		Dusp23	Slc25a13
Glud1		Dusp7	Slc25a20
Gm129		Dusp8	Slc25a34
Gm216		Dut	Slc25a38
Gm561		Dynll2	Slc25a42
Gm949		Dyrk1b	Slc27a1
Gmfg		Ecsit	Slc36a2
Gna12		Eef1a2	Slc41a1
Gnpat		Eef1d	Slc46a3
Got1		Efcab2	Slc47a1
Got2		Efemp1	Slc9a2
Gpbp111		Efna5	Sobp
Gpc1		Efnb3	Srpk3
Gpr157		Egln1	Stom
Gpr22		Egr1	Suclg2
Gpr84		Ehhadh	Synj2
Gpt		Eif2b4	Tcap
Gpt2		Elf2	Tcea3
Grb14		Elmod3	Tef
Grcc10		Endog	Thrsp
Grip2		Eno3	Tmc7
Grpel1		Entpd4	Tmem141
Gsdmc2		Epb4.1	Tmem182
Gsk3a		Epb4.114a	Tmem205
Gstk1		Epha4	Tmem50b
Gstm7		Epm2aip1	Tmem82
Gstp1		Epn1	Tmod4
Gtf3c1		Epn3	Trim54
Gtpbp10		Eps1511	Trim63
Gtpbp5		Eral1	Trpm4
Gzmc		Erbp3	Tuba4a
Gzmf		Esrra	Txnrd3
H2-Ke2		Esrrg	Ulk1
H2-Ke6		Etfp	Unc45b
H2-T24		Etfhdh	Usp54
H2afv		Ethel	Vldlr
Hadha		Etl4	Wdr42a
Hadhb		Etv3	Wnk4
Hcn2		Extl1	Xk
Hdac11		F11r	Xpo4
Hdac4		Fahd1	Yipf7
Hdac5		Fahd2a	Zswim7
Hdac9		Fam116b	
Hemk1		Fam158a	
Herpud1		Fam160a1	
Hfe2		Fam174b	
Hhatl		Fam46c	
Higd1a		Fam59a	
Hint2		Fam73a	
Hisppd1		Fam73b	
Hmgcl		Fam82b	
Hnmt		Farp2	
Homer2		Fars2	
Hook1		Fastk	
Hopx		Fastkd1	
Hrc		Fastkd2	
Hsd11b1		Fbxl22	
Hsd17b10		Fbxo25	
Hsd17b11		Fbxo31	
Htra1		Fbxw7	
Ifngr2		Fdft1	

Ifrd2			Fdx1		
Igh			Fech		
Igk-V21-2			Fem1a		
Ikbkap			Ferd3l		
Ii10rb			Fgd4		
Ii11ra1			Fgfr1op		
Ii15			Fh1		
Ii28b			Fhl2		
Impa2			Fhod3		
Inadl			Fig4		
Inpp5e			Figf		
Insr			Filip1l		
Irx4			Fitm1		
Isca1			Fitm2		
Isoc1			Fkbp3		
Isoc2b			Flad1		
Itgb1bp2			Fmc1		
Itpkb			Fn3k		
Jag2			Fndc5		
Jmjd4			Fnip1		
Jph2			Foxn3		
Kbtbd4			Foxo4		
Kcnd3			Foxred1		
Kcng2			Frap1		
Kcnh2			Fry		
Kcnj12			Fsd2		
Kcnj3			Fstl4		
Kcnj4			Fto		
Kcnk3			Fv1		
Kcnn2			Gabpa		
Kcnv2			Gabbr2		
Kdm6b			Gal3st3		
Klhdc6			Galnt11		
Klhl21			Galt		
Klhl23			Garnl4		
Klhl3			Gata6		
Klhl30			Gba2		
Klhl31			Gcat		
Klhl34			Gck		
Klhl7			Gcsh		
Klk1b26			Gdpd1		
Klk1b9			Gdpd5		
Krba1			Gfm1		
L2hgdh			Gfm2		
Lace1			Gfod1		
Larp2			Ggnbp1		
Lars2			Ghr		
Lass4			Gja3		
Lcmt2			Glo1		
Ldb3			Glrx5		
Ldhb			Gm166		
Ldhd			Gm216		
Leng9			Gm561		
Llg12			Gm826		
Lmf1			Gml		
Lmo7			Gmnn		
Lmod2			Gna12		
Lmod3			Gnas		
Lpcat3			Gnmt		
Lphn2			Gnpat		
Lpin1			Got1		
Lpl			Got2		
Lrba			Gpam		
Lrpprc			Gpbp111		
Lrre20			Gpc1		
Lrre48			Gpn3		
Lrre68			Gpr116		
Lrtm1			Gpr155		
Lsm14b			Gpr157		

Lsmd1			Gpr173		
Lynx1			Gpr22		
M6prbp1			Gpsn2		
Macrodl			Gpt		
Mad211bp			Gpt2		
Magi3			Grb14		
Magix			Grip2		
Maob			Grm1		
Map3k5			Grpel1		
Map4k2			Gsk3a		
Mapt			Gstm7		
Mars2			Gstp1		
Mast2			Gtf2i		
Mblac2			Gtf3c1		
Mcat			Gtpbp10		
Mcee			Gtpbp2		
Mcpt1			Gtpbp5		
Me3			Gys1		
Mepce			Gzf1		
Metap1			H2-Ke6		
Metap11			H2-T24		
Metrn			Hadhb		
Mett11b			Hand2		
Mfhas1			Hars2		
Mfsd7c			Hbb-b1		
Mgmt			Hccs		
Mif4gd			Hcn2		
Mipep			Hcn4		
Mllt6			Hdac11		
Mlxipl			Hdac5		
Mlycd			Hdac9		
Mmab			Hdhd2		
Mmadhc			Hemk1		
Mme			Herpud1		
Mmp15			Hfe2		
Mospd1			Hhat1		
Mpnd			Hibch		
Mpped2			Hint2		
Mpst			Hisppd1		
Mrgprh			Hk2		
Mrpl1			Hmbs		
Mrpl12			Hmgb3		
Mrpl15			Hmgcl		
Mrpl23			Hnmt		
Mrpl27			Homer1		
Mrpl28			Homer2		
Mrpl37			Hook1		
Mrpl38			Hs3st5		
Mrpl41			Hsd11b1		
Mrpl45			Hsd17b4		
Mrpl46			Hspd1		
Mrpl48			Htra1		
Mrpl54			Hus1		
Mrps12			Idh1		
Mrps16			Idh3a		
Mrps18a			Idh3b		
Mrps24			Idh3g		
Mrps25			Ifngr2		
Mrps28			Ifrd2		
Mrps30			Ift81		
Mrps31			Igk-V21-2		
Mrps35			Il15ra		
Mrps7			Immt		
Mrps9			Impa2		
Mrrf			Inadl		
Mrs2			Insr		
Ms4a2			Iqsec1		
Mtap7			Iqwd1		
Mtap7d1			Irx3		

Mtg1			Isca1		
Mtif2			Iscu		
Mtx1			Isoc1		
Mul1			Isyna1		
Murc			Itgb1bp2		
Myadml2			Itpkb		
Mybpc2			Itrp2		
Myl2			Ivns1abp		
Myl3			Jag2		
Mylk4			Jam2		
Myo10			Jhdm1d		
Myo18a			Jmjd4		
Myo18b			Jmy		
Myo5c			Josd1		
Myocd			Jph2		
Myog			Kbtbd4		
Myot			Kcnd3		
N6amt2			Kcng2		
Narfl			Kcnh2		
Nav2			Kcnj12		
Ncapd3			Kcnj2		
Nerna00153			Kcnj3		
Ndufa11			Kcnj5		
Ndufa13			Kcnk3		
Ndufa2			Kcnn2		
Ndufa4			Kcnq1		
Ndufa5			Kdm6b		
Ndufa6			Khdrbs3		
Ndufa7			Khk		
Ndufa8			Kif16b		
Ndufab1			Kif1b		
Ndufb10			Kitl		
Ndufb11			Klf15		
Ndufb4			Klf9		
Ndufb5			Klhdc3		
Ndufb7			Klhdc6		
Ndufb8			Klh121		
Ndufb9			Klh123		
Ndufc2			Klh124		
Ndufs3			Klh13		
Ndufs4			Klh130		
Ndufs7			Klh131		
Ndufv1			Klh138		
Neo1			Klh17		
Neur12			Klh19		
Neur14			Klk1b9		
Nfs1			Klra10		
Nit2			Kpna2		
Nme2			Kptn		
Nme3			Kti12		
Nmnat1			Ky		
Nmur1			L2hgdh		
Notch1			Lace1		
Npc1			Lancl3		
Npepl1			Larp2		
Nr1d1			Larp4		
Nsmaf			Lass4		
Nsmce1			Lcmt2		
Nt5c1a			Ldb3		
Nt5dc2			Ldhh		
Nt5dc3			Leng1		
Ntf3			Lepr		
Nudt15			Letm1		
Nudt6			Lifr		
Nudt7			Lims1		
Nudt8			Lin52		
Nutf2			Lin9		
Oaz2			Lipe		
Obscn			Lman2l		

Obsl1			Lmbr1		
Oma1			Lmf1		
Optn			Lmo7		
Osbp2			Lmod3		
Osbpl3			Lmtk2		
Osgep			Lpcat3		
Osgep11			Lpin1		
P2ry1			Lpl		
Pacsin3			Lrg1		
Palm2-akap2			Lrpprc		
Pank1			Lrrc20		
Pank4			Lrrc68		
Pcca			Lsm14b		
Pcnt			Ltbp1		
Pcyt2			Ly75		
Pde3a			Lyrm5		
Pdha1			Maf1		
Pdk2			Magi3		
Pebp1			Maob		
Peci			Map11c3a		
Peo1			Map2k6		
Perp			Map3k5		
Pex10			Map4k2		
Pex11a			Mapt		
Pex16			Mars2		
Pex19			Mast2		
Pex6			Mat2b		
Pfkfb1			Mavs		
Pgpep1			Mblac2		
Phb			Mcat		
Phb2			Mcee		
Phf7			Mdh1		
Phlpp			Mdh2		
Phpt1			Mecr		
Pigo			Mepce		
Pink1			Metap1		
Pitpnc1			Metap11		
Pitpnm2			Mett11d1		
Pkd2l2			Mett11b		
Pla2g16			Mfhas1		
Pla2g4e			Mfn1		
Plag1			Mfsd7c		
Plekhh3			Mfsd8		
Plekhm2			Mgll		
Plxnb1			Mgrn1		
Pm20d1			Mif4gd		
Pm20d2			Mipep		
Pnpla2			Mkks		
Poldip2			Mknk2		
Polg			Mllt6		
Polq			Mlycd		
Polr1a			Mmaa		
Polr1b			Mmab		
Polr2f			Mmachc		
Polrmt			Mmadhc		
Ppa2			Mme		
Ppapdc3			Mmgt1		
Ppara			Mmp15		
Ppfibp2			Mospd1		
Ppil1			Mov10l1		
Ppm1k			Mpi		
Ppm1l			Mpped2		
Ppp1r3d			Mpst		
Ppp5c			Mpv17		
Pptc7			Mreg		
Prdm11			Mrpl1		
Prdm16			Mrpl11		
Prdx5			Mrpl12		
Prickle3			Mrpl14		

Prkab1			Mrpl15		
Prkag1			Mrpl18		
Prkcq			Mrpl19		
Pr17a2			Mrpl2		
Pr17b1			Mrpl23		
Prlr			Mrpl27		
Prodh			Mrpl28		
Prox1			Mrpl3		
Prpf19			Mrpl30		
Prrg1			Mrpl35		
Prune			Mrpl36		
Psmg1			Mrpl37		
Psors1c2			Mrpl38		
Ptchd3			Mrpl39		
Ptgds			Mrpl4		
Ptov1			Mrpl41		
Pxmp4			Mrpl44		
Pycl			Mrpl45		
Qrs1l			Mrpl46		
Rab11b			Mrpl47		
Rab3a			Mrpl48		
Rabac1			Mrpl50		
Raf1			Mrpl51		
Rai2			Mrpl55		
Rangrf			Mrpl9		
Rbm20			Mrps18a		
Rbmx			Mrps18c		
Rbx1			Mrps23		
Rcsd1			Mrps24		
Rdm1			Mrps27		
Reep5			Mrps28		
Retsat			Mrps30		
Ric8b			Mrps31		
Rilp			Mrps33		
Rilpl1			Mrps35		
Rmnd1			Mrps36		
Rnaseh2a			Mrps7		
Rnf122			Mrps9		
Rnf166			Mrrf		
Rnf187			Mrs2		
Rnf34			Msh2		
Rnu2			Msh3		
Romo1			Msrb2		
Rpl36			Mtap7d1		
Rpl3l			Mtch2		
Rps17			Mtfr1		
Rps6ka2			Mtg1		
Rpusd3			Mtif2		
Rpusd4			Mtif3		
Rragd			Mtl5		
Rreb1			Mto1		
Rsad1			Mtrf1		
Rtn2			Mtrf11		
Rwdd4a			Mtus1		
Rxrg			Mtx1		
Samm50			Mtx2		
Saps2			Mul1		
Sar1b			Murc		
Sars2			Mybpc2		
Sbk1			Myh6		
Sbpl			Myl2		
Scn4b			Myo10		
Scube1			Myo18b		
Sdhb			Myo5c		
Sdhc			Myocd		
Sdhd			Myot		
Sec31b			Myst1		
Selenbp1			N4bp2		
Selenbp2			Nap114		

Sephs2			Naprt1		
Serac1			Narf1		
Serpina1d			Nars2		
Sertad1			Nav2		
Sertad2			Nbn		
Sesn1			Ncapd3		
Setd1b			Ncrna00153		
Sfrs12ip1			Ndufa1		
Sgca			Ndufa10		
Sgcg			Ndufa12		
Sgo12			Ndufa13		
Sh2d4a			Ndufa2		
Shank3			Ndufa4		
Sil1			Ndufa5		
Sirt3			Ndufa6		
Sirt5			Ndufa7		
Siva1			Ndufa8		
Slc12a7			Ndufa9		
Slc16a10			Ndufab1		
Slc20a2			Ndufaf1		
Slc22a23			Ndufaf4		
Slc22a3			Ndufb10		
Slc22a5			Ndufb11		
Slc25a13			Ndufb2		
Slc25a15			Ndufb4		
Slc25a20			Ndufb5		
Slc25a22			Ndufb6		
Slc25a26			Ndufb7		
Slc25a42			Ndufb8		
Slc26a10			Ndufb9		
Slc2a12			Ndufc1		
Slc2a4			Ndufc2		
Slc35e1			Ndufs1		
Slc37a4			Ndufs2		
Slc41a1			Ndufs3		
Slc46a3			Ndufs4		
Slc4a3			Ndufs5		
Slc9a2			Ndufs6		
Slc9a3r2			Ndufs7		
Slc9a6			Ndufs8		
Smarcd1			Ndufv1		
Smcr7			Ndufv2		
Smpd2			Necab1		
Smyd1			Neurl2		
Snord32a			Neurl4		
Snx16			Nfs1		
Sobp			Nhs11		
Sod2			Nipal3		
Sord			Nit2		
Sox6			Nme2		
Spag7			Nmnat1		
Spc24			Npc1		
Speer4a			Npep11		
Speg			Nr0b2		
Spg7			Nr1d2		
Spnb1			Nsmaf		
Spryd4			Nsmce1		
Srpk3			Nsun4		
St3gal3			Nt5c1a		
Stard7			Nt5dc2		
Stat5a			Nt5dc3		
Stfa1			Ntf3		
Stfa211			Nudc		
Stom			Nudt12		
Sucla2			Nudt15		
Suclg1			Nudt3		
Suclg2			Nudt6		
Sunc1			Nudt7		
Supv311			Nudt8		

Svip			Nutf2		
Syt7			Oaz1		
Tacstd2			Oaz2		
Taf4b			Obscn		
Tarsl2			Obsl1		
Tbc1d16			Ogdh		
Tbc1d4			Olfr1262		
Tbl3			Olfr459		
Tbrg4			Olfr67		
Tcap			Opa1		
Tcea3			Optn		
Tcf15			Osbp		
Tcp1l12			Osbpl3		
Tecpr1			Osbpl6		
Tesc			Osgep		
Tfam			Osgep11		
Tfb1m			Oxa11		
Tfdp2			Oxct1		
Tfpt			Oxnad1		
Tgif2			Pank4		
Thap6			Parl		
Thoc6			Parp1		
Thoc7			Pcdh7		
Thra			Pcmd2		
Thrsp			Pent		
Thtpa			Pcp4l1		
Tiaf2			Pcyt2		
Tmc7			Pded5		
Tmc8			Pde3a		
Tmco7			Pde4a		
Tmeff1			Pde4c		
Tmem109			Pdha1		
Tmem117			Pdhb		
Tmem120b			Pdrg1		
Tmem135			Pdss2		
Tmem143			Pebp1		
Tmem150			Peci		
Tmem159			Pecr		
Tmem161b			Penk		
Tmem182			Peo1		
Tmem201			Perp		
Tmem22			Pex10		
Tmem25			Pex11a		
Tmem38b			Pex16		
Tmem63b			Pex19		
Tmem65			Pex6		
Tmem66			Pex7		
Tmem70			Pfkfb2		
Tmem82			Pgf		
Tmem86a			Pgpep1		
Tnfaip8			Phb		
Tnnc1			Phb2		
Tnni3			Phf2011		
Tnni3k			Phlpp		
Tomm401			Phospho1		
Tra2a			Phpt1		
Trappc21			Phtf2		
Trappc5			Phyh		
Trdn			Phyhd1		
Trim55			Pick1		
Trim63			Pigo		
Trim7			Pigy		
Trim72			Pik3r1		
Trmt2b			Pim3		
Trmt1			Pkd212		
Trpc1			Pkdrej		
Trpm4			Pkp4		
Try10			Pla2g16		
Tsc22d4			Pla2g5		

Tsfm			Plag1		
Ttc19			Plbd1		
Ttc30a2			Plekhf1		
Ttc38			Plekh3		
Ttn			Plekhn2		
Tuba4a			Plscr2		
Tuba8			Plxna2		
Tufm			Pm20d2		
Tusc4			Pmpcb		
Twf2			Pnkd		
U2af114			Pnpla2		
Ubc1			Pnpo		
Ube2d1			Pnpt1		
Ube3b			Poldip2		
Ubxn2a			Polg		
Ugt2b38			Poln		
Ugt2b5			Polr1a		
Ulkl			Polr1b		
Unc84b			Polr2f		
Uqcr			Polrmt		
Uqcrc1			Ppa2		
Uqcrfs1			Ppara		
Uqcrh			Ppcs		
Uros			Ppil1		
Ushbp1			Ppm1l		
Usp2			Ppp1r3a		
Usp20			Ppp1r3d		
Usp28			Ppp1r9a		
Uxt			Ppp5c		
V1rh9			Pptc7		
Vamp5			Prdm16		
Vdac1			Prdx3		
Vegfb			Prei4		
Vmn2r33			Prepl		
Vmn2r56			Prickle1		
Vmn2r74			Prickle3		
Vps36			Prkaa2		
Wdr18			Prkab1		
Wdr21			Prkag1		
Wdr23			Prkce		
Wdr40b			Prlr		
Wdr5			Prodh		
Wdr5b			Prpf19		
Wfdc6a			Prpf4		
Whrn			Prps2		
Wnk2			Prrg1		
Wnk4			Psemb2		
Wscd1			Psemb5		
Xk			Psemb7		
Ybx2			Psme1		
Yipf7			Psmg1		
Zadh2			Pstpip2		
Zbtb37			Ptcd1		
Zc3h7b			Ptcd2		
Zfand5			Ptdss2		
Zfp354b			Ptgds		
Zfp422			Ptges2		
Zfp612			Ptgr2		
Zfp827			Ptov1		
Zfyve21			Ptp4a3		
Zh2c2			Pygm		
Zim1			Qdpr		
Zscan20			Qrs1l		
			Rab11b		
			Rab12		
			Rab3a		
			Rabgta		
			Raf1		
			Rai2		

			Ranbp6			
			Rangrf			
			Rapgef2			
			Rapgef3			
			Rapgef4			
			Rapsn			
			Rasd2			
			Rasgrp2			
			Rbbp7			
			Rbm24			
			Rbm38			
			Rdh13			
			Rdh14			
			Rdm1			
			Reep1			
			Reep5			
			Rgs7bp			
			Rhbdd3			
			Rhbdl3			
			Rhobtb3			
			Rhot2			
			Rilp			
			Rilpl1			
			Rit1			
			Rmnd1			
			Rmnd5a			
			Rnaseh2a			
			Rnf114			
			Rnf122			
			Rnf123			
			Rnf128			
			Rnf166			
			Rnf187			
			Rnls			
			Rnmtl1			
			Rom1			
			Romo1			
			Rpa3			
			Rpl36			
			Rpl3l			
			Rprd1a			
			Rps17			
			Rps6ka5			
			Rpusd3			
			Rpusd4			
			Rragd			
			Rreb1			
			Rsbnl1			
			Rtbdn			
			Rtf1			
			Rtn4ip1			
			Rtn4r			
			Rufy1			
			Rwdd4a			
			Rxrg			
			Ryr2			
			S100a1			
			S3-12			
			Samm50			
			Saps2			
			Sar1b			
			Sars2			
			Sbk1			
			Sbk2			
			Sbpl			
			Scmh1			
			Scn10a			
			Scn4b			
			Sco1			

			Scrn3			
			Sdha			
			Sdhb			
			Sdhc			
			Sdhd			
			Sdpr			
			Sdr39u1			
			Sec31b			
			Sec61a2			
			Selenbp1			
			Selenbp2			
			Sema3a			
			Sema4b			
			Serac1			
			Serpina1d			
			Sertad2			
			Setd1b			
			Sfrs12ip1			
			Sfrs14			
			Sgca			
			Sgcb			
			Sgcg			
			Shank3			
			Sirt3			
			Siva1			
			Six4			
			Slc12a7			
			Slc16a10			
			Slc22a23			
			Slc22a3			
			Slc25a11			
			Slc25a12			
			Slc25a15			
			Slc25a19			
			Slc25a22			
			Slc25a26			
			Slc25a3			
			Slc25a33			
			Slc25a4			
			Slc26a10			
			Slc26a6			
			Slc2a12			
			Slc2a4			
			Slc35e1			
			Slc35f5			
			Slc37a4			
			Slc38a3			
			Slc38a4			
			Slc4a3			
			Slc5a6			
			Slc9a3r2			
			Slc9a6			
			Slco5a1			
			Smap2			
			Smarcd1			
			Smc7			
			Smpd1			
			Smpd2			
			Smyd1			
			Smyd2			
			Snrpd3			
			Snrpn			
			Snx15			
			Snx16			
			Sod1			
			Sod2			
			Sord			
			Sox12			
			Spag7			

			Spg7			
			Spna1			
			Spnb1			
			Spryd4			
			Srfbp1			
			Srl			
			Sssca1			
			St3gal3			
			St6galnac6			
			Stard3			
			Stard7			
			Stard8			
			Stat5a			
			Stat5b			
			Stfa1			
			Stradb			
			Sucla2			
			Suclg1			
			Sunc1			
			Suox			
			Supv311			
			Svip			
			Syde2			
			Syp12			
			Syt7			
			Tacc2			
			Taf4a			
			Taf6			
			Tarbp2			
			Tars2			
			Tars12			
			Tbc1d16			
			Tbc1d24			
			Tbc1d4			
			Tbrg4			
			Tcf15			
			Tcp1112			
			Tesc			
			Tfam			
			Tfb1m			
			Tfb2m			
			Tfdp2			
			Tfpt			
			Tgfr3			
			Thap4			
			Thap6			
			Thrb			
			Tiaf2			
			Timm23			
			Timm44			
			Timm8b			
			Timp4			
			Tmc8			
			Tmcc1			
			Tmed4			
			Tmeff1			
			Tmem106b			
			Tmem116			
			Tmem117			
			Tmem120b			
			Tmem135			
			Tmem143			
			Tmem147			
			Tmem150			
			Tmem159			
			Tmem160			
			Tmem161a			
			Tmem170			
			Tmem170b			

			Tmem201		
			Tmem22		
			Tmem223		
			Tmem25		
			Tmem38b		
			Tmem63b		
			Tmem65		
			Tmem66		
			Tmem86a		
			Tnfaip8		
			Tnip3		
			Tnnc1		
			Tnni3		
			Tnni3k		
			Tnnt2		
			Tomm40l		
			Tomm7		
			Top1mt		
			Trap1		
			Trappc21		
			Trappc5		
			Trdn		
			Trim55		
			Trim7		
			Trim72		
			Trip10		
			Trmt2b		
			Trmt5		
			Try10		
			Tsfm		
			Ttc19		
			Ttc21b		
			Ttc30a2		
			Ttc30b		
			Ttc32		
			Ttc38		
			Ttn		
			Tuba8		
			Tufm		
			Tusc4		
			Twf2		
			Txlnb		
			Txnrd2		
			Tysnd1		
			U2af114		
			Ubac1		
			Ube2b		
			Ube2d1		
			Ube2e3		
			Ube2o		
			Ube3b		
			Ubl3		
			Ubl7		
			Ubr2		
			Ubr3		
			Ubxn2a		
			Ucp3		
			Unc84b		
			Ung		
			Uqcc		
			Uqcr		
			Uqcrb		
			Uqcrc1		
			Uqcrc2		
			Uqcrfs1		
			Uqcrh		
			Uqcrq		
			Uros		
			Ushbp1		

			Usmg5			
			Usp2			
			Usp28			
			Uxt			
			Vdac1			
			Vdac3			
			Vegfa			
			Vegfb			
			Vmn2r120			
			Vwa3a			
			Wbscr16			
			Wdr18			
			Wdr21			
			Wdr23			
			Wdr40b			
			Wdr5			
			Wdte1			
			Wfdc1			
			Wfdc6a			
			Whrn			
			Wnk2			
			Wnt5a			
			Wmip1			
			Yars2			
			Ybx2			
			Yipf4			
			Zadh2			
			Zc3h7b			
			Zdhhc7			
			Zfand1			
			Zfand5			
			Zfp191			
			Zfp358			
			Zfp422			
			Zfp606			
			Zfp612			
			Zfp715			
			Zfp759			
			Zfp771			
			Zfyve21			
			Zh2c2			
			Zhx2			
			Zim1			
			Zmynd8			
			Zscan20			
			Zyg11b			
			rp9			

Up-regulated ARG X GLY comparison						
Uniquely Regulated ARG 3 months X GLY 3 months	Uniquely Regulated GLY 3 months X ARG 3 months	Commonly Regulated ARG 3 months X GLY 3 months	Uniquely Regulated ARG 6 months X GLY 6 months	Uniquely Regulated GLY 6 months X ARG 6 months	Commonly Regulate ARG 6 X GLY 6	Commonly Regulated (Uniquely Regulated ARG 3 X GLY3) X GLY 6
Aars	Aass	Acp5	Aacs	Abcb1b	A4galt	Abhd2
Abhd2	Abca1	Acta2	Abi2	Adam15	Abca1	Adams2
Abra	Ablim2	Adrbk2	Acap2	Adora2b	Abca8a	Akap2
Acox2	Acer2	Amy1	Acbd3	Adrbk2	Abca9	Alcam
Adams2	Adams12	Ang	Acot9	Ap1s2	Abcc3	Aldh18a1
Adams4	Adrb2	Anxa1	Actb	Aqp4	Abhd2	Aldh1a2
Adams9	Aldh1b1	Apoe	Actg1	Arhgef12	Abi1	Ammecr1
Adap2	Alpk2	Aqp4	Actr3	Arrdc4	Abi3bp	Anxa2
Agap1	Amy2a1	Armxc3	Acvr1	Atf4	Acaca	Anxa4
Akap2	Amy2a5	Arntl	Acvr1l	Atp6v0b	Ace	Apobec1

Alcam	Angptl1	Aspn	Adam10	Cacna1a	Acp2	Apod
Aldh18a1	Ap3s1	Atg4a	Adam19	Cblb	Acp5	Armet
Aldh1a2	Arl11	Atp10a	Adamts12	Ccl19	Acs14	Arpc1b
Alg10b	Arsa	Atrn11	Adar	Cd163	Acs15	Arpc3
Alg8	B3gnt1	Bmp2	Adecy3	Cd209a	Acta2	Arrb1
Amigo2	Bhlhe40	C1qb	Adss	Cd74	Actn1	Atf4
Ammecr1	C1r	C1s	Adssl1	Cdh22	Actn4	Axl
Anxa2	C6	C3	Agap1	Cdo1	Adam8	B4galt5
Anxa4	Cbr2	C4b	Aida	Cenpf	Adam9	C1qa
Ap1g2	Ccrn4l	C7	Aif1	Cflar	Adamts10	C1qtnf6
Apobec1	Cd300lb	Ccl6	Akt3	Chd3	Adamts2	C4a
Apod	Cdkn2c	Ccl9	Aldh1a7	Csprs	Adamts20	C5ar1
Arhgdig	Cep192	Ccnd3	Aldh3b1	Ctnnal1	Adamts5	Cab39l
Armet	Cml1	Cd109	Alg14	Cxcl14	Adamts12	Camkk2
Arpc1b	Corin	Cd24a	Anln	Cyb5	Adamts13	Capg
Arpc3	Csf2ra	Cd53	Anp32b	Cyp3a44	Adecy7	Car13
Arpc4	Cuzd1	Cdh22	Anxa7	Dennd1c	Aebp1	Ccdc80
Arrb1	Cxcl1	Cdkn1a	Apc	Dnaja1	Aff2	Ccdc88a
Atf4	Cyb5r4	Cdo1	Apobec3	Dpep1	Aff3	Cd44
Atf5	Cyp2d10	Cdv3	App11	Dpm2	Agfg2	Cd47
Atp8b4	Defa5	Cenpf	Ar	Dpp6	Ahnak2	Cd48
Axl	Dpp6	Cfl1	Arhgap22	Dusp5	Ahsg	Cd55
Azin1	Dppa5a	Col3a1	Arhgdia	Ebp	Akap13	Cd68
B4galt5	Dsg1b	Creld2	Arhgdib	Emilin2	Akap2	Cd84
B4galt7	Dusp5	Csf1r	Arhgdig	Faf2	Akna	Cebpg
Basp1	Ear6	Ctnnal1	Arhgef5	Filip11	Akr1b8	Clcn5
Bcat1	Ecm1	Ctss	Arih1	Flnb	Alcam	Clec4d
Bcl3	Egn3	Det	Arl5a	Gnb4	Aldh18a1	Cmklr1
Bloc1s3	Elk1	Disp1	Arpc4	Gpbar1	Aldh1a1	Col14a1
Bves	Ephx3	Dkk11	Arsa	Grina	Aldh1a2	Col16a1
C1qa	Eppk1	Dock8	Asah2	H2-Ab1	Alox5ap	Col1a1
C1qtnf6	Erich1	Emr1	Ascc3	H2-D1	Alpk1	Col1a2
C4a	Ero11b	Fam122b	Aspser1	H2-DMa	Ammecr1	Col4a2
C5ar1	F8	Fam178b	Atad2	Hal	Ang	Col5a1
Cab39l	Fam102b	Fam46a	Atg7	Hcn1	Angptl7	Col6a2
Camkk1	Fam124a	Fcgr2b	Ath11	Heatr7a	Ankfy1	Col6a3
Camkk2	Fam168a	Fgl2	Atoh1	Herc5	Ankrd1	Cpne8
Cand1	Fam50b	Fhl1	Atp13a3	Hmcn2	Ankrd13a	Ctsh
Capg	Fbxo8	Fstl4	Atp6v0d2	Hnrnph2	Ankrd27	Cxcl16
Car13	Fgf11	Galns	Atxn10	Hp	Ano6	Cyb561
Car2	Ftl1	Galnt2	Atxn21	Hspa8	Anpep	Cyb5r3
Cars	Ftl2	Gatsl2	Azin1	Hsph1	Antxr1	Cybb
Cask	Furin	Gda	B3galnt1	Htr2b	Anxa1	Cyp1b1
Ccdc80	Gabrg3	Gfpt2	B4galt6	Iars	Anxa2	Cyth4
Ccdc88a	Gas1	Gnpnat1	Basp1	Ifi47	Anxa3	Dab2
Ccr2	Gm2a	Golga4	Bcat1	Ifit1	Anxa4	Dap
Ccrl1	Gm628	Gpr133	Bcl2	Ifitm1	Anxa5	Dbn1
Cd44	Gpx2	Gpr158	Bdh2	Il7r	Anxa8	Ddr2
Cd47	H2-Ea	Gpr65	Bend4	Irf7	Aoah	Dennd4a
Cd48	H2-Eb1	Gpx1	Bend6	Itga2	Aoc3	Derl3
Cd55	H2-T10	Gpx3	Best3	Klf10	Ap2b1	Dock2
Cd68	Hcn1	Gpx8	Bhlhe40	Kmo	Ap3b1	Dok5
Cd84	Hfe	Grin2c	Bin1	Lrrc33	Ap3s1	Dzip3
Cdca7	Hist1h1c	Grk5	Bmp4	Lsm14a	Apaf1	Edem1
Cebpg	Hlx	Hal	Bmp6	Ly6c1	Apba1	Efemp2
Cenpl	Hpse	Hand2	Bmx	Mafb	Apbb1ip	Eln
Cenpt	Hras1	Hexb	Bre	Mmp16	Apedd1	Elov11
Cercam	Ifi2711	Hhip11	Brsk1	Mustn1	Aph1b	Entpd1
Ch25h	Ifnb1	Hist1h2ao	Bzw1	Nat13	Apobec1	Entpd2
Chpf	Il10ra	Hist1h2bc	C1qtnf2	Ncf4	Apod	Eps8
Cleal	Inmt	Hist1h3d	C1qtnf7	Ndst2	Apoe	Fads1
Clcn5	Irak3	Hsp90aa1	Cacnb1	Nhlrc3	App	Fam105a
Clec12a	Itfg3	Iah1	Cacnb3	Nlrc4	Arap1	Fbln1
Clec3b	Klk1b11	Ifi205	Cadps	Nono	Arf3	Fbln2
Clec4d	Lgals3bp	Il6ra	Calcr1	Nptn	Arf4	Fbn1
Clec5a	Lman11	Inhbb	Cald1	Nr4a3	Arf6	Fcer1g
Cmklr1	Lpar3	Itga11	Calhm2	Nxf1	Arfgap3	Fcgr1
Col14a1	Lpcat2	Itgb2	Calu	Obfc2a	Arfip1	Filip11
Col16a1	Lrp2bp	Krt80	Camkk1	Pde9a	Arhgap1	Fn1

Col1a1	Ly6a	Lad1	Camsap111	Pgk1	Arhgap11a	Fstl1
Col1a2	Mab2112	Lilrb3	Camta1	Pion	Arhgap25	Fyb
Col4a1	Mafb	Lipa	Cand1	Pira3	Arhgap30	Gadd45g
Col4a2	Map11c3a	Lrrc52	Casc4	Pitpna	Arhgef2	Galc
Col5a1	Mapk10	Lyz1	Cask	Pla2g2d	Arid5b	Gars
Col6a2	Mapkapk2	Lyz2	Cbara1	Pnp1	Arl13b	Gatm
Col6a3	Mea1	Maged2	Cbl	Pnp2	Arl4c	Gcnt2
Cops3	Mgat1	Man1a	Cbx5	Pole2	Arl8a	Gmfg
Cpne8	Mif	Mapk4	Ccdc34	Prpmp5	Armex2	Golim4
Cst9	Mrpl19	Max	Ccdc41	Ptges3	Armex3	Gp49a
Ctsh	Mrpl20	Mctp1	Ccdc50	Ptgfr	Armet	Gpm6b
Ctsl	Mstn	Mfap5	Ccnb1	Ptprz1	Arpc1b	Gpnm
Cx3cr1	Naaa	Mmp12	Ccnb2	Rasgrp4	Arpc3	Gpr137b-ps
Cxcl16	Ndrg4	Mpeg1	Ccnc	Rexo4	Arrb1	Gprc5b
Cyb561	Neil2	Mrc1	Ccnd1	Ripk1	Arrb2	Grn
Cyb5r3	Nfil3	Ms4a6c	Ccnd2	Rpgrip11	Arsb	Gsta1
Cybb	Ninj1	Mt1	Ccny11	Rps6ka1	Asah1	Gsta2
Cyp1b1	Nle1	Mt2	Ccrl1	Rxfp1	Asl	Hck
Cyth4	Osr1	Myh7	Cd200	Samhd1	Asns	Hcls1
Dab2	Pcgf5	N4bp211	Cd276	Sec31a	Aspn	Hmcn2
Dagla	Pctp	Napepld	Cd52	Sele	Ass1	Hmox1
Dap	Pde1c	Ncf4	Cd82	Sema4a	At13	Hsp90b1
Dbn1	Pde3a	Nr2f6	Cde16	Serpina3c	Atp10a	Hsph1
Ddr2	Pgam1	Nubp1	Cdc20	Serpina3f	Atp1b3	Ifi30
Dennd4a	Phkg1	Nudt4	Cdc25b	Serpib9	Atp2b4	Ifitm2
Derl3	Phlda3	Nup62	Cdc27	Sh3gl2	Atp6ap2	Ifngr1
Diap3	Pigq	Nupr1	Cdk6	Slc25a5	Atp6v0a4	Igf1
Dock2	Pipox	Olfml2b	Cdkn2c	Slco2b1	Atp6v1a	Igf2bp2
Dok5	Pla2g5	Osmr	Cdr2l	Sncg	Atp6v1h	Igfbp6
Dph5	Ppcs	P2ry6	Cdv3	Snx8	Atp7a	Igsf6
Dtx4	Ppp2r5b	Pacrg	Cenpo	Ssr2	Atp8b1	Il17ra
Dyrk2	Pramel5	Pam	Cenpt	Stat3	Atp8b2	Il1r1
Dzip3	Prex1	Pde3b	Cep164	Stk17b	Atrn1	Il4ra
Edem1	Prps2	Pdzd2	Cercam	Stk38	Axl	Inpp5d
Eef1e1	Ptp4a3	Pfkl	Cerkl	Stxbp4	B2m	Ints3
Efemp2	Ras110a	Pgrmc1	Ces2	Supt16h	B4galnt1	Iqgap1
Efs	Rdh7	Phka1	Cfl1	Tbc1d9	B4galnt5	Kcnn3
Eid1	Rfx2	Pira2	Chad	Tlr3	Bace2	Lamc1
Elfn1	Rgma	Plcb4	Chd9	Tnfsf13b	Baiap2	Laptm5
Eln	Rgnef	Pnp2	Chn2	Tnip2	Baz1a	Lbp
Elov11	Rgs6	Ppp1r14b	Chpf	Tpp1	Bcr	Lcp1
Enkur	Rilpl2	Prss23	Chst14	Trim21	Bgn	Ldlr
Entpd1	Rnu7	Ptprd	Chsy1	Ttc26	Bicc1	Leprel1
Entpd2	Rpp25	Ptprj	Cks1b	Ttl3	Bin3	Lgals3
Eps8	Rps4y2	Rab3ip	Clec12a	Txnip	Birc3	Lox
Fads1	Sap30	Rabgap11	Clec3b	Ugp2	Bmp1	Lox11
Fam105a	Sbpl	Rad5111	Cltb	Zdhhc23	Bmp2	Lox12
Fam117b	Sec11c	Rgs2	Cltc		Bmp2k	Lox14
Fbln1	Serpina3c	Rock2	Cmtm3		Bmper	Lpp
Fbln2	Serping1	Rp1	Cnn2		Bnc2	Lsm6
Fbn1	Sh3bgr12	Rtn4	Cnrip1		Boc	Ly86
Fcer1g	Shroom3	S1pr1	Cntln		C1qa	Man2a1
Fcf1	Siah2	Serpina3h	Col4a1		C1qb	Matn2
Fcgr1	Sid2	Serpina3n	Col5a3		C1qc	Mertk
Fgd2	Slc17a7	Serpine2	Comm4		C1qtnf6	Mfsd1
Fgf18	Slc35f1	Sh3d19	Comm4		C1r	Mmp14
Fgfr3	Slc37a2	Sh3gl2	Copb1		C1s	Mmp19
Filip11	Slc4a4	Slc10a6	Copg		C3	Mmrn1
Fkbp5	Slc9a9	Slc16a7	Coro1c		C3ar1	Ms4a6b
Fnl	Slco2b1	Slc25a5	Coro7		C4a	Ms4a7
Fstl1	Slit3	Slc35e4	Creb5		C4b	Msn
Fuz	Snrpn	Slc38a3	Crip1		C5ar1	Mtap1b
Fyb	Socs7	Slitrk4	Csf1		C6	Mtmr11
Gadd45g	Sstr4	St3gal5	Csgalnact2		C7	Myo1f
Galc	Suox	Stk39	Csk		Cab39l	Myo7a
Gars	Tbx5	Stxbp2	Csnk1g3		Cachd1	Myof
Gatm	Tmem22	Sulf2	Cspg4		Cadm3	Nckap11
Gcnt2	Tmem35	Syt12	Cstb		Calr	Nfkb2
Glt8d3	Tmprss13	Tac1	Ctbs		Camk1d	Nid1

Gmfg	Tnfaip6	Tbxas1	Cthrc1		Camk2n1	Nsg1
Golim4	Tnfrsf1b	Tfrc	Ctnnd1		Camkk2	Pabpc1
Gp49a	Tnxb	Timp2	Cul2		Cap1	Pak1
Gpatch4	Tpmt	Tmed3	Cul4b		Capg	Pak3
Gpm6b	Trav7d-2	Tmem100	Cx3cr1		Capn2	Pcdhb7
Gpnmb	Trp53inp2	Tmem176a	Cyb5r1		Capz1	Pcolce
Gpr137b-ps	Tubb6	Tnfrsf23	Cyfp1		Car13	Pde8a
Gprc5b	Txndc2	Trak2	Cygb		Car5b	Pdia4
Grm1	Tyk2	Trem2	Cyth3		Carhsp1	Pdlim3
Grn	Zeb2	Tspo	Dagla		Casp12	Pdlim5
Grpel2	Zfp367	Tubb2c	Daglb		Casp3	Pdpn
Gsta1		Tyrobp	Dchs1		Casp4	Pi16
Gsta2		Uap1	Dctn5		Cbr2	Picalm
Hcfc2		Vav1	Dcun1d3		Ccdc136	Pkd1
Hck		Vsig4	Ddah1		Ccdc68	Plat
Hcls1		Wdr32	Ddah2		Ccdc80	Plek
Hecw2		Zcchc5	Ddef2		Ccdc88a	Plod3
Hmcn2		Zfp462	Ddost		Ccl21a	Ppml e
Hmgn3			Ddx41		Ccl6	Pros1
Hmox1			Dennd2a		Ccl8	Prr13
Hpcal1			Dennd5a		Ccl9	Ptpn6
Hsp90b1			Depdc5		Ccr1	Ptprc
Hspa11			Dhcr24		Cd109	Rab23
Hspa2			Dhx9		Cd14	Rac2
Hsph1			Diap1		Cd248	Rarres2
Hyal2			Dlg5		Cd24a	Rassf2
Ifi30			Dnajc10		Cd302	Rcan1
Ifitm2			Dnajc14		Cd33	Rcn3
Ifngr1			Dock6		Cd34	Rexo2
Ifrd1			Dock8		Cd37	S100a10
Igf1			Dpep2		Cd44	S100a11
Igf2bp2			Dtx3		Cd47	S100a6
Igfbp6			Dtx4		Cd48	Scepe1
Igsf6			Dusp4		Cd53	Sdf211
Il17ra			Dync1i2		Cd55	Sec61a1
Il1r1			Dync1i1		Cd63	Selplg
Il4ra			Dync2h1		Cd68	Sema4a
Inpp5d			Dzip1		Cd80	Sfrp1
Ins1			Ebf1		Cd84	Sfxn3
Ints3			Ect2		Cd86	Sla
Iqgap1			Edem2		Cd9	Slc11a1
Irf5			Efha1		Cdc42se1	Slc35b4
Irf8			Ehd3		Cdh11	Slc6a9
Kcnn3			Ehd4		Cdk5rap2	Slc7a5
Kcnq5			Ehmt2		Cdk8	Slc7a7
Klhl13			Eid1		Cdr2	Slc9a7
Klhl2			Eif1a		Cebpa	Smc4
Lair1			Eif2ak3		Cebpd	Socs2
Lamc1			Eif3a		Cebpg	Sparc
Laptm5			Eif4a1		Cep170	Ssr2
Lbp			Eif5a2		Cep192	Stab1
Lcn2			Eif6		Cfb	Stx11
Lcp1			Elmo2		Cfh	Taok3
Lcp2			Elovl6		Cfi	Tctn2
Ldlr			Elp2		Cfp	Timp1
Lepre11			Eml4		Chi311	Tm6sf1
Lgals3			Endod1		Chrd11	Tmem106a
Lox			Enpp3		Chst12	Tmem39a
Lox11			Epha7		Cilp	Tmem43
Lox12			Eprs		Ckap4	Tnc
Lox14			Erbb2ip		Ckmt1	Tns3
Lpin3			Ergic1		Clcn5	Tram2
Lpp			Ergic3		Clec11a	Trf
Lrp8			Erlin1		Clec2d	Trpv4
Lsm6			Ero11		Clec4a1	Tubb5
Ly86			Evi2a		Clec4a3	Twf1
Mak10			Evi5		Clec4d	Uchl1
Malt1			Exoc5		Clec4n	Uck2
Man2a1			Exoc6b		Clic1	Ucp2

Map3k6			F2r		Clip3	Unc93b1
Matn2			Fads2		Cmah	Vim
Mertk			Fam105b		Cmklr1	Wipf1
Mfsd1			Fam115a		Cndp2	Zdhhc2
Mgat4b			Fam122b		Cnn3	
Mmp14			Fam124a		Cnot6	
Mmp19			Fam126b		Cnpy4	
Mmp3			Fam13c		Col12a1	
Mmm1			Fam162a		Col14a1	
Mrm1			Fam164a		Col15a1	
Ms4a4d			Fam20a		Col16a1	
Ms4a6b			Fam20c		Col18a1	
Ms4a7			Fam26e		Col1a1	
Msn			Fam38b		Col1a2	
Mtap1b			Fam38b2		Col3a1	
Mtmr11			Fam3a		Col4a2	
Myd116			Fam46a		Col4a4	
Myolf			Fam48a		Col4a5	
Myo7a			Fam50a		Col5a1	
Myof			Fbln7		Col5a2	
Nckap11			Fbn2		Col6a1	
Nfkb2			Fbxw17		Col6a2	
Nid1			Fdps		Col6a3	
Nid2			Fez2		Col8a1	
Nme5			Fgd2		Colec12	
Nsg1			Fkbp10		Comp	
Nudcd1			Fkbp9		Coro1a	
Nudt5			Flnc		Cotl1	
Nxt1			Fmr1		Cp	
Opalin			Fosl2		Cpeb1	
Pabpc1			Frem1		Cpne2	
Pak1			Fstl3		Cpne8	
Pak3			Fzd2		Cpt1c	
Pcdhb7			Galns		Cpxm1	
Pcolce			Gan		Cpxm2	
Pde8a			Gas1		Creb3l1	
Pdia4			Gas2l1		Creb3l2	
Pdlim3			Gbe1		Creld2	
Pdlim5			Gbgt1		Crispld1	
Pdpc1			Gclc		Crispld2	
Pdpcn			Gdf6		Crlf1	
Peli1			Gfpt1		Crtap	
Peli3			Glb1		Csf1r	
Pgf			Glb1l		Csf2ra	
Phyhip			Gli2		Csf2rb	
Pi16			Glt8d1		Csf2rb2	
Picalm			Gmppa		Csgalnact1	
Pkd1			Gnb1		Cspp1	
Plat			Gng12		Csrp1	
Plek			Gng8		Csrp2	
Plekha3			Golgb1		Cst3	
Plod3			Gosr2		Ctdspl	
Ppap2a			Gpr52		Ctgf	
Ppil6			Gpx8		Ctla2a	
Ppm1e			Grip1		Ctps2	
Pros1			Gss		Ctsb	
Prr13			Gtpbp4		Ctsc	
Ptgs2			Gucy1a3		Ctsh	
Ptgr1			Gucy1b3		Ctsk	
Ptpn6			Gulp1		Ctss	
Ptpn9			Gyg		Ctsz	
Ptprc			H3f3b		Ctnn	
Qprt			Hbegf		Ctnnbp2nl	
Rab13			Hdgfrp3		Cx3cl1	
Rab23			Heatr5a		Cxcl16	
Rab27a			Hgs		Cxcr4	
Rac2			Hhipl1		Cyb561	
Rap2a			Hiatl1		Cyb5r3	
Rarres2			Hif1a		Cyba	

Rars		Hivep1	Cybb
Rasgef1b		Hltf	Cyld
Rassf2		Hmgcr	Cyp1b1
Rassf4		Hmgcn3	Cyp20a1
Rcan1		Hn1	Cyp27a1
Rcn3		Hr	Cyp39a1
Rexo2		Hs2st1	Cyp7b1
Rfxank		Hsd17b12	Cysltr1
Rhoc		Hsd17b7	Cyth4
Rtn4rl1		Hspa11	Cyt11
S100a10		Hspbap1	Dab2
S100a11		Hvcn1	Dact1
S100a6		Hyal1	Dap
Scn2a1		Icam1	Dbn1
Scpep1		Id4	Dbn1
Sdf211		Idi1	Dcbld2
Sec22b		Iffo1	Dclk1
Sec61a1		Ifrd1	Dclre1c
Selplg		Igsf3	Dcn
Sema3f		Il17rc	Dct
Sema4a		Il1rl2	Ddr2
Sema6b		Il21r	Ddx26b
Sema7a		Ints2	Ddx58
Serpinh1		Ipo4	Dennd4a
Sfrp1		Ipo7	Derl3
Sfxn3		Ipo9	Des
Sh3gl1		Iqgap3	Dio2
Sla		Irf5	Disp1
Slc11a1		Ism1	Dkk3
Slc16a14		Itga1	Dnajb11
Slc16a3		Itga9	Dnajc3
Slc25a30		Itgb1	Dnm1
Slc35b4		Itgb3bp	Dnm3os
Slc39a13		Itih4	Dnmt1
Slc39a14		Itm2a	Dock1
Slc6a9		Kbtbd11	Dock10
Slc7a5		Kcnab2	Dock11
Slc7a7		Kcnma1	Dock2
Slc9a7		Kcnq5	Dock7
Slfn2		Kctd10	Dok1
Smarca1		Kctd17	Dok5
Smc4		Kif13b	Dopey2
Socs2		Kif1a	Dpp3
Socs3		Kif21b	Dpp7
Sorbs3		Kif3a	Dpt
Sparc		Kif3c	Dpy19l1
Ssr2		Kif5c	Dpysl2
St3gal1		Klhl13	Dpysl3
Stab1		Kpnb1	Dse
Stx11		Krt80	Dsel
Stxbp6		Lass2	Dstn
Taldo1		Lass5	Dynll1
Taok3		Ldlrad3	Dzip3
Tctex1d2		Lepre1	Ebf2
Tctn2		Lgals1	Ece2
Thop1		Lgi2	Ecm1
Timp1		Lhfp12	Ecm2
Tiparp		Lmcd1	Edem1
Tlr7		Lmo4	Eef1a1
Tm2d2		Lonrf3	Efemp2
Tm6sf1		Lpar4	Efhd1
Tmem106a		Lrig3	Efhd2
Tmem39a		Lrp5	Egfr
Tmem43		Lrp8	Egr2
Tnc		Lrrc25	Eid3
Tnfrsf11a		Lrrc40	Elmo1
Tns3		Lrrc49	Eln
Tram2		Lrrc51	Elov11
Trappc6b		Lrrc59	Emb

Trdn			Lxn		Emilin1	
Trf			Ly9		Emp1	
Trib3			Lypd1		Emp3	
Trp53i13			Lyplal1		Emr1	
Trpv4			Lztr1		Enah	
Tubb5			Mak16		Eno1	
Twf1			Malt1		Eno2	
Uchl1			Mamdc2		Enpp1	
Uck2			Maml2		Entpd1	
Ucp2			Map3k3		Entpd2	
Ugt1a9			Map3k8		Epb4.112	
Unc93b1			Mapk7		Ephx1	
Vim			Mast4		Eps15	
Wipf1			Mbtps1		Eps8	
Zbtb16			Mcam		Ero11b	
Zbtb8b			Mcm2		Esd	
Zdhhc2			Mcm6		Etv1	
Zfp133			Mcm7		Etv5	
Zfp826			Mdk		Etv6	
			Me2		Evc	
			Med10		Evc2	
			Megf10		Fads1	
			Megf8		Fam102b	
			Mfap3		Fam105a	
			Mfsd10		Fam114a1	
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			Mik1		Fam129b	
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			Mmgt2		Fam149a	
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			Mvp		Fasn	
			Myl12b		Fat1	
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			Myo9b		Fbln5	
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			Naglu		Fcgr1	
			Napepld		Fcgr2b	
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			Nppb		Flrt2	
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			Nr6a1		Flt4	
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			Nup205		Fndc3b	
			Nup93		Folr2	
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			Obscn		Foxp2	
			Olfm1		Frmd4b	

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		Orc2l	Ftl1
		Osdbl5	Ftl2
		Osdbl9	Fuca1
		P4ha3	Fut11
		Pacs2	Fxyd5
		Paf1	Fxyd6
		Pak2	Fyb
		Pard3b	Fzd1
		Parn	Fzd7
		Parva	G6pdx
		Pcdhb13	Gab2
		Pcnp	Gadd45g
		Pcnxl3	Galc
		Pcsk5	Galntl1
		Pdcd6ip	Gars
		Pde10a	Gas2l3
		Pde5a	Gas5
		Pdgfrb	Gas6
		Peg10	Gas7
		Peli1	Gatm
		Pemt	Gba
		Pes1	Gclm
		Pfkfb4	Gcnt2
		Pgm3	Gda
		Phgdh	Gdap2
		Phldb2	Gdf15
		Pi15	Gfpt2
		Pias3	Ggh
		Pigb	Gla
		Pigt	Glecc1
		Pik3ap1	Gli3
		Pik3c2a	Glipr2
		Pik3r5	Glis2
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		Pknox2	Gltp
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		Pla2r1	Gm885
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		Plagl1	Gmfg
		Plcb1	Gmip
		Plce1	Gna13
		Pld1	Gnai2
		Pldn	Gnai3
		Plekha3	Gnao1
		Plekhg2	Golim4
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		Pmm1	Gpnm6
		Podn	Gpr124
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		Pold4	Gpr137b
		Pole3	Gpr137b-ps
		Pon3	Gpr153
		Ppfial	Gpr161
		Ppfibp1	Gpr177
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		Ppmlm	Gpr65
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		Ppp1r9b	Gpx3
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		Prh1	Grk5
		Prim1	Grn

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			Prkar1a		Gsta2	
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			Prkcdbp		Gusb	
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			Prkcsh		H2-Eb1	
			Prmt2		H2-T10	
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			Ptplad2		Hexb	
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			Ptpn23		Hgf	
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			Rad9		Htra4	
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			Rassf4		Ifi205	
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			Rcn1		Ifi30	
			Rdh11		Ifih1	
			Recql		Ifitm2	
			Relb		Ifitm3	
			Reps2		Ifngr1	
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			Rgs10		Ift80	
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			Rgs19		Igf1r	
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			Rhoc		Igfbp4	
			Ric3		Igfbp5	
			Rnd1		Igfbp6	
			Rnf149		Igfbp7	
			Rnf2		Igsf10	
			Rnft1		Igsf6	
			Rock2		Ikbke	
			Rod1		Ii10ra	
			Rp2h		Ii16	
			Rpe		Ii17ra	
			Rpl39		Ii17rd	
			Rps12		Ii1r1	
			Rrm2		Ii33	
			Rrp12		Ii4ra	
			Rsu1		Ii6ra	
			Rtp4		Ii6st	
			Runx2		Ildr2	
			Ryr3		Iik	

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			Samd4b		Inpp5f	
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			Sars		Invs	
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			Scarf2		Irak3	
			Scd2		Irak4	
			Sdc1		Irf9	
			Sdc4		Islr	
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			Sec24d		Itga5	
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			Sema3d		Itgav	
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			Setbp1		Itgb8	
			Sfrp4		Itgb11	
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			She2		Itsn1	
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			Shkbp1		Jak2	
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			Slc13a4		Kcnn3	
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			Slc16a3		Kdelc2	
			Slc16a6		Kdelr3	
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			Slc1a1		Kif5b	
			Slc1a2		Kirrel	
			Slc1a3		Klc1	
			Slc20a1		Klhl29	
			Slc25a1		Klraq1	
			Slc25a17		Krt18	
			Slc2a10		Ktelc1	
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			Slc35e4		Laptm5	
			Slc36a4		Lass6	
			Slc39a13		Lats1	
			Slc43a2		Layn	
			Slc5a3		Lbp	
			Slc6a6		Lcp1	
			Slc7a2		Ldlr	
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			Smo		Leprot	
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			Smurf2		Lgals3bp	
			Snhg1		Lgals9	
			Snx29		Lgmn	
			Snx6		Lhfp	
			Snx9		Lig1	
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			Sorbs3		Lilrb4	
			Sox9		Lipa	
			Spats2		Litaf	
			Spcs3		Lmna	
			Spg21		Lox	
			Sphk1		Lox11	
			Spire1		Lox12	
			Spna2		Lox13	
			Spns2		Lox14	

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		Spon2	Lpcat2
		Spred1	Lpin2
		Spry1	Lpp
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		Sqstm1	Lrrc16a
		Srbd1	Lrrk1
		Srebf2	Lrm4cl
		Srgap2	Lsm6
		Srgap3	Lsp1
		Sri	Ltbp2
		Ssu72	Ltbp3
		St3gal2	Ltbp4
		Stam2	Lum
		Star	Ly6a
		Stard5	Ly86
		Stk3	Lyst
		Ston1	Lyz1
		Stt3b	Lyz2
		Sugt1	Maf
		Sumf1	Mafk
		Supt5h	Maged2
		Tacc3	Mamld1
		Taf1	Man1a
		Tax1bp3	Man1a2
		Tbc1d2b	Man2a1
		Tbcd	Man2b1
		Tbcel	Man2b2
		Tbl1x	Maoa
		Tc2n	Map3k12
		Tceal	Map3k14
		Tceb3	Mapre1
		Tcf3	Marcks
		Tcfe3	Mark1
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		Tgfb1i1	Mbc2
		Thbs1	Mcm3
		Tiam2	Mdfic
		Tln1	Med15
		Tlr13	Meg3
		Tlr4	Meox1
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		Tm9sf3	Mfap2
		Tmed10	Mfap4
		Tmem104	Mfap5
		Tmem123	Mfge8
		Tmem138	Mfsd1
		Tmem144	Mfsd6
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		Tmem219	Mgl1
		Tmem49	Mgl2
		Tmem62	Mgp
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		Tnfaip3	Mical2
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		Tnfrsf23	Mlec
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		Tor3a	Mmp14
		Traf3	Mmp19
		Traf7	Mmp2
		Trak2	Mmp23
		Trem2	Mmrn1
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		Trib3	Mobkl2a
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		Trim37	Morf412
		Trim44	Mpeg1
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		Trove2	Mras

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			Ttc9		Ms4a6c	
			Ttyh3		Ms4a6d	
			Tubb2b		Ms4a7	
			Tubb6		Msn	
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			Tulp4		Mt2	
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			Ube2l6		Mtap6	
			Ubd2		Mtap7d3	
			Ugt1a9		Mthfd2	
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			Uhrf1bp11		Mtmr6	
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			Unc5b		Mxra7	
			Usp47		Mxra8	
			Usp6nl		Myb11	
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			Vav3		Myh10	
			Vegfc		Myh7	
			Vgl13		Myh9	
			Vrk2		Myo1d	
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			Wdfy1		Myo1f	
			Wdr47		Myo1g	
			Wdr67		Myo5a	
			Wwp2		Myo7a	
			Wwtr1		Myo9a	
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			Xpot		Myof	
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					Tmbim1	
					Tmed3	
					Tmem100	
					Tmem106a	
					Tmem119	
					Tmem167	
					Tmem173	
					Tmem176a	
					Tmem176b	
					Tmem183a	
					Tmem184c	
					Tmem195	
					Tmem2	
					Tmem209	
					Tmem39a	
					Tmem43	
					Tmem45a	
					Tmem50a	
					Tmem97	
					Tmsb10	
					Tnc	
					Tnfaip6	
					Tnfrsf1a	
					Tnfrsf1b	
					Tnip1	
					Tns3	
					Tnxb	
					Tpcn2	
					Tpd52	
					Tpm3	
					Tpm4	
					Tpx2	
					Tram1	
					Tram2	
					Trf	
					Trim30	
					Trim41	
					Trim47	
					Trps1	
					Trpv2	
					Trpv4	
					Tspan17	
					Tspan5	
					Tspo	
					Tsr1	
					Tssc1	

					Ttc37	
					Ttc8	
					Ttl112	
					Ttl7	
					Tuba1a	
					Tuba1b	
					Tuba1c	
					Tubb2a	
					Tubb5	
					Tubgcp4	
					Twf1	
					Txndc5	
					Txnrd1	
					Tyk2	
					Tyrobp	
					Uap1	
					Uap111	
					Ubxn4	
					Uchl1	
					Uck2	
					Ucp2	
					Ufm1	
					Ufsp2	
					Ugcgl2	
					Ugdh	
					Unc13b	
					Unc93b1	
					Uprt	
					Uso1	
					Usp16	
					Ust	
					Uvrag	
					Vat1	
					Vcam1	
					Vcan	
					Vgll2	
					Vim	
					Vit	
					Vkorc1	
					Vsig4	
					Vwa5a	
					Vwf	
					Wdfy4	
					Wdr19	
					Wdr32	
					Wdr44	
					Wipf1	
					Wisp2	
					Xylt1	
					Yipf5	
					Ywhah	
					Zc3hav1	
					Zcchc7	
					Zdhhc2	
					Zdhhc20	
					Zeb2	
					Zfc3h1	
					Zfp3612	
					Zfp423	
					Zfp521	
					Zyx	

Down-regulated ARG X GLY comparison						
Uniquely Regulated ARG 3 months X GLY 3 months	Uniquely Regulated GLY 3 months X ARG 3 months	Commonly Regulated ARG 3 months X GLY 3 months	Uniquely Regulated ARG 6 months X GLY 6 months	Uniquely Regulated GLY 6 months X ARG 6 months	Commonly Regulate ARG 6 X GLY 6	Commonly Regulated (Uniquely Regulated ARG 3 X GLY3) X GLY

						6
Abat	Acot2	A2bp1	Aars2	Adam1b	A2bp1	Abca6
Abca6	Adam24	Abcc1	Abca3	Adra1d	Aadacl1	Abcc8
Abcc8	Agxt2l2	Abcd2	Abcb4	Aig1	Aamp	Acaa2
Acaa2	Akap11	Abhd1	Abcd1	Ak3l1	Aarsd1	Acadv1
Acad8	Akr1c14	Acadm	Abhd11	Alkbh5	Aasdhppt	Acs11
Acadv1	Akr1c19	Acata1	Abhd5	Alox12	Abca12	Acy3
Acs11	Aldh7a1	Acot1	Abhd6	Alpk2	Abcb10	Adi1
Acy3	Aldh9a1	Acsf2	Abhd8	Amz2	Abcb8	Akr1b3
Adi1	Ankrd10	Acta1	Ablim2	Ankrd52	Abcb9	Alad
Akr1b3	Ankrd12	Actr3b	Abtb1	Anxa11	Abcb8	Aldh4a1
Alad	Ankrd33b	Adamts6	Acad11	Arfgef2	Abcc8	Aldh6a1
Aldh4a1	Arhgef9	Adhfe1	Acad8	Arhgef10l	Abcc9	Ankrd32
Aldh6a1	Atr	Adk	Acad9	Arl2	Abcd2	Ano5
Amph	Bach2	Adra1a	Acadl	Bag4	Abcd3	Arhgap20
Angpt1	Bcap29	Agpat2	Aco2	Bche	Abhd1	Arhgap26
Ankrd32	Bmp4	Agpat9	Acot11	Bcl2l12	Abhd10	Armc2
Ano5	Cacna1g	Agtr1a	Acot13	Bicap	Ablim1	Armet1
Apol10b	Camta1	Akap5	Acox1	Btc	Acaa2	Art1
Aqp7	Car3	Aldh2	Acs16	Cav2	Acacb	As3mt
Arhgap20	Carf	Ano4	Adam11	Cbwd1	Acadm	Asb10
Arhgap26	Cd1d1	Aplp2	Adipor2	Ccni	Acads	Asb14
Arl6ip6	Cd274	Arap2	Adra1b	Cox7b2	Acadv1	Asb15
Armc2	Cldn12	Art3	Aes	Dcps	Acad1	Asb2
Armet1	Clpx	Asb5	Afg3l1	Defb34	Acot1	Atg10
Art1	Cluap1	Atf7ip	Agl	Dexi	Acot2	Atp1a2
As3mt	Cnksr3	Atp8a1	Agpat2	Dok4	Acot7	Atpaf1
Asap3	D0H4S114	B3gal2	Agtpbp1	Dot11	Acp6	Auh
Asb10	D2hgdh	Bbs2	Akt1s1	EG215895	Acsf2	Cabc1
Asb14	Dcp1a	Beat2	Alas2	EG384589	Acsf3	Cacna1s
Asb15	Def8	Bekdha	Aldh9a1	EG546944	Acs11	Ccb12
Asb2	Dgke	Bcl9	Alkbh7	EG668786	Acsm5	Celsr2
Atg10	Dnmt3a	Cacna2d1	Amy1	Esrrb	Acss1	Clcn1
Atm	Dtd1	Calcoco1	Amy2a1	F2rl3	Actr3b	Clpb
Atp1a2	Efnal	Camk2d	Amy2a5	Fam46b	Acy1	Cpeb3
Atpaf1	Egr2	Cand2	Angpt1	Fbrs	Acy3	Cpt2
Auh	Ehmt1	Capn3	Angptl3	Frmd6	Acyp2	Crat
B3gnt3	Eml5	Casq1	Ank	Fzr1	Adamts3	Cyfp2
Bat2l	Ercc4	Ccdc21	Ank2	Gfra4	Adamts7	Daam1
Bcl7a	Esrrb	Cdh13	Ankrd9	Gjb3	Adck1	Dbt
Bhlhb9	Etv3	Cdk11	Ano4	Glud1	Adecy6	Decr1
Bhlhe41	Fam116b	Cecr2	Ap4s1	Gm428	Adhfe1	Dgat2
Cabc1	Fam178a	Cenpp	Apoo-ps	Gm949	Adi1	Dhrs7c
Cacna1s	Fam69a	Ces3	App12	Gmfg	Adk	Dnajc28
Ccb12	Fap	Chmp4c	Aqp7	Gpr84	Adprhl1	Echs1
Ccdc28a	Fbx122	Cirbp	Arfgap2	Gsdmc2	Adra1a	Egf
Ccdc69	Fkbp3	Clcn3	Arfgef1	Gzmc	Adsl	Erbp4
Cd300e	Fnip2	Colq	Arfrp1	Gzmf	Agpat3	Etfb
Cd59a	Frmd6	Comt1	Arhgef9	Higd1a	Agpat9	Fabp3
Cdc42ep2	Gart	Coro6	Arl5b	Hsd17b11	Agtr1a	Fah
Cdc42ep3	Gas5	Crot	Asb12	Igh	Aifm1	Fbxo21
Celsr1	Gipc2	Cry2	Atl2	Ikbkap	Ak1	Fkbp4
Celsr2	Gm428	Cutc	Atp5c1	Il11ra1	Akap1	Galm
Clasp1	Gm826	Cxadr	Atp5d	Il28b	Akr1b3	Gbas
Clcn1	Gpr112	Dach1	Atp5g3	Insig1	Akt2	Gca
Clpb	Gtlf3a	Dbp	Atp5h	Isoc2b	Alad	Gcdh
Cmb1	Gypc	Dei	Atp5j2	Kcnj4	Alas1	Gm129
Cpeb3	Haus2	Dcpp3	Atpaf2	Klhl34	Aldh2	Grc10
Cpt2	Hbegf	Ddah1	Atpgd1	Krba1	Aldh4a1	Gstk1
Crat	Hcn4	Ddo	Aurkaip1	Larp7	Aldh5a1	H2-Ke2
Cyb5d2	Hes1	Dennd4b	Avpr1a	Leng9	Aldh6a1	H2afv
Cyfp2	Hist2h2aa1	Dhrs4	Bach2	Lmod2	Aldob	Hadha
Daam1	Hmgb2	Dhtkd1	Bag3	Lrba	Amacr	Hdac4
Dbt	Hnrnp3	Dip2b	Bak1	Lrre48	Amd1	Hopx
Decr1	Hs3st5	Dip2c	Bbs2	Lrre55	Amtn	Hrc
Dgat2	Hspb3	Doc2g	Bckdk	Lsmd1	Anapc13	Hsd17b10
Dhrs7c	Htr1b	Dusp16	Bcl2111	Lynx1	Ankrd32	Il10rb
Dmpk	Ift81	Dusp27	Bcl6b	Mad2l1bp	Ankrd33b	Il15
Dnajc28	Ing5	Ech1	Bcl7a	Mcpt1	Anks1	Inpp5e

Echs1	Ino80	Echdc2	Bhlhb9	Metrn	Ano5	Irx4
Efcab4b	Insig1	Echdc3	Bloc1s1	Mmd	Apbb1	Kcnv2
Egf	Irx3	Eepd1	Bola3	Mpnd	Apex2	Klk1b26
Eml2	Itga9	Eif3m	Brp44	Mrpl54	Apip	Lars2
Epb4.115	Jam3	Eif4e	Brp44l	Mrps12	Arhgap20	Ldhd
Erb4	Kbtbd7	Entpd6	C1qbp	Mrps16	Arhgap26	Llg12
Etfb	Klf12	Ephb3	Cacna1c	Ms4a2	Arhgef15	Lphn2
Evl1	Klf9	Ephx2	Cacna1g	Myog	Arl3	Lrtm1
Extl2	Klra10	Erc1	Cacnb2	Ndufa11	Armc2	M6prbp1
Fabp3	Ky	Fam65b	Camk2a	Nme3	Armet1	Macrodl
Fah	Larp4	Fblim1	Car4	Nmur1	Art1	Magix
Fam100a	Larp7	Fbp2	Card6	Notch1	Art3	Me3
Fam113b	Lepr	Fgf1	Ccbl1	Nr1d1	As3mt	Mgmt
Fam78a	Lsm3	Fgf16	Ccdc47	Palm2-akap2	Asb10	Mlxipl
Fanc1	Mier3	Frem2	Ccdc69	Pitpnm2	Asb11	Mrgprh
Fbxo21	Mmd	Fyco1	Ccdc90a	Prdm11	Asb14	Mrps25
Fbxo3	Mov10	Gab1	Ccl24	Pr17a2	Asb15	Mtap7
Fgf13	Mrpl52	Gcnt1	Ccnh	Pr17b1	Asb18	Myadml2
Fgf9	Msto1	Gcom1	Ccrl2	Prune	Asb2	Myl3
Fkbp4	Mthfd1	Gdap10	Cd1d2	Psors1c2	Asb5	Mylk4
Foxo3	Mttp	Ggct	Cd36	Ptpn4	Asrgl1	Myo18a
Frag1	Myef2	Gm889	Cdc3711	Pycl1	Atg10	N6amt2
Frm48	Necab1	Gmpr	Cdc40	Rabac1	Atg2a	Neo1
Fzd8	Nes	Gnb3	Cdh23	RbmX	Atg4d	Oma1
Galm	Nln	Gpd11	Cdkn1c	Rbx1	Atp1a2	Osbp2
Gbas	Nod1	Gramd1b	Cds1	Rcor2	Atp5e	P2ry1
Gbp3	Nr1d2	Grit	Celsr1	Rcsd1	Atp5f1	Pacsin3
Gca	Nr3c1	Guk1	Cep70	Rnu2	Atp5g1	Pank1
Gcdh	Odc1	Hadh	Chac2	Rrp9	Atp5g2	Pcca
Gm129	Pcdh7	Herc3	Chchd3	Rsad1	Atp5k	Pdk2
Gpatch8	Pdhh	Hlf	Chchd7	Scube1	Atp5l	Pfkfb1
Grcc10	Pdrg1	Hmcn1	Chkb	Sephs2	Atp5o	Phf7
Gsta4	Pex7	Hmgn2	Cidea	Sertad1	Atp5sl	Pink1
Gstk1	Pick1	Hrasl3	Clpx	Shmt2	Atp6v1g1	Pitpnc1
Gstz1	Plcl2	Hsdl2	Clybl	Sil1	Atp8a1	Pla2g4e
Gzme	Plscr2	Idh2	Cmb1	Snord32a	Atpaf1	Plxnb1
H2-Ke2	Pnmal2	Igsf1	Cmya5	Sox6	Auh	Pm20d1
H2afv	Prepl	Il13ra1	Cnga3	Spe24	Bag1	Polq
Hadha	Prpf4	Immp2l	Cnksr3	Speer4a	Bcam	Ppapdc3
Hcfc1r1	Prpsap2	Intu	Cnot10	Speg	Bcap29	Ppfibp2
Hdac4	Rapgef5	Ipo13	Cog5	St6galnac3	Bcat2	Ppm1k
Helz	Rasd2	Itga7	Cops6	Stfa2l1	Bckdha	Prdx5
Hibadh	Rbak	Itgb6	Coq3	Tacstd2	Bckdhh	Prkcq
Hmgb1	Rev1	Ivd	Coq4	Taf4b	Bcl11a	Prox1
Hopx	Rfc1	Jarid2	Coq5	Tbl3	Bcl11b	Ptchd3
Hrc	Rps10	Jph1	Cox15	Tecpr1	Bcl2l13	Pxmp4
Hsd17b10	Rrp9	Kcnip2	Cox4i1	Tgif2	Bcl9	Rbm20
Il10rb	Rtf1	Kcnj11	Cox5b	Thoc6	Bdh1	Retsat
Il15	Safb	Kdm6a	Cox7a2	Thoc7	Bend5	Ric8b
Inpp5e	Scaper	Klhdc1	Crip2	Thra	Bex1	Rnf34
Iqgap2	Scnm1	Krt222	Cryba4	Thtpa	Bsg	Rps6ka2
Irf9	Sep2	Lama5	Crybb1	Tmco7	Btnl9	Rtn2
Irx4	Senp7	Lbh	Cs	Tmem109	Bzw2	Sesn1
Jup	Sfrs14	Lclat1	Ctage5	Tmem161b	Cabc1	Sgol2
Kbtbd3	Sfrs3	Lgals4	Cul5	Tmem70	Cacna1s	Sh2d4a
Kcnb1	Sft2d3	Lgi1	Cutc	Tra2a	Cadm4	Sirt5
Kcnd2	Six4	Limch1	Cux2	Trmt1	Calcoco1	Slc20a2
Kcnf1	Slc25a28	Lmo2	Cxcr7	Trpc1	Camta1	Slc22a5
Kcnv2	Slc25a33	Lonrf1	Cxx1b	Tsc22d4	Cand2	Slc25a13
Kctd9	Slc35a4	Lrrc39	Cycs	Ugt2b38	Capn3	Slc25a20
Kif26b	Smndc1	Lrrc4b	Cyp2u1	Ugt2b5	Car14	Slc25a42
Klhdc8a	Smoc2	Lrrc55	Cyth1	Usp20	Car8	Slc41a1
Klk1b26	Snape1	Lysmd4	Cyrr1	V1rh9	Cars2	Slc46a3
Lars2	Snapi1	Lzic	Dap3	Vamp5	Casq1	Slc9a2
Ldhd	Snord53	Mboat2	Dars2	Vmn2r33	Casz1	Sobp
Llg12	Snrpg	Mccc1	Dcbld1	Vmn2r56	Cbfa2t3	Spca24
Lphn2	Sp110	Mccc2	Dctpp1	Vmn2r74	Cbr4	Srp3
Lrrc61	Synpo21	Med12l	Ddx59	Vps36	Ccbl2	Stom
Lrtm1	Taf1a	Med4	Dennd2c	Wdr5b	Ccdc12	Suc1g2

M6prbp1	Tmem87a	Mef2a	Dennd3	Wscd1	Ccdc21	Tcap
Macrodl	Tmem93	Meis2	Dgcr6	Zbtb37	Ccdc44	Tcea3
Magi2	Tra2b	Mgst3	Dhodh	Zfp354b	Ccl11	Tecpr1
Magix	Trdmt1	Mitf	Diablo	Zfp827	Ccnk	Thrsp
Me3	Trib1	Mlf1	Dixdc1		Cdh4	Tmc7
Med16	Trim16	Mut	Dkc1		Cdk5rap1	Tmem182
Mef2c	Trmt12	Myh7b	Dlat		Cdk11	Tmem82
Meig1	Txnip	Myo5b	Dld		Cdk15	Trim63
Mgmt	Ube2o	Myo9a	Dmxl2		Cecr2	Trpm4
Mid1ip1	Usp10	Myom2	Dnaje16		Cecr5	Tuba4a
Mlxipl	Usp21	N6amt1	Dnaje19		Celsr2	Ulk1
Mrgprh	Usp22	Nampt	Dnalc4		Cenpv	Vamp5
Mrsps25	Wdfy1	Nnt	Dpyd		Cep68	Wnk4
Mtap7	Wdr53	Nqo1	Dtnbp1		Ces3	Xk
Mterfd2	Wipi1	Nr3c2	Dus4l		Chchd2	Yipf7
Mtss1	X99384	Nrap	Dynll2		Chd7	
Myadml2	Xlr	Nt5c3	Dyrk1b		Chpt1	
Myl3	Yeats2	Ogdhl	Eef1a2		Churc1	
Mylk4	Zbtb10	Oplah	Efcab2		Ciao1	
Myo18a	Zfand1	Pah	Efemp1		Cirbp	
N6amt2	Zfp1	Paqr9	Egln1		Cisd1	
Ndufa3	Zfp46	Pccb	Egr1		Ckm	
Neo1	Zfp509	Pctk3	Eif4e		Ckmt2	
Nfe2l3	Zfp518	Pde11a	Elf2		Clcn1	
Nfyc	Zfp799	Pde7a	Elmod3		Clcn3	
Nmnat3	Zfp93	Per3	Eno3		Clpb	
Npr2	Zxdc	Pet112l	Entpd4		Clpp	
Nudt16l1	Zyg11b	Pik3c2b	Epb4.1		Cmtm8	
Nudt2		Pik3ip1	Epb4.114a		Cobl1	
Nup54		Pkia	Epb4.115		Cog6	
Oat		Pnet-ps	Epn1		Coq10a	
Ociad2		Ppif	Epn3		Coq2	
Oma1		Ppml d	Eps1511		Coq6	
Osbp2		Ppmlj	Etfa		Coq7	
Otud1		Ppm2c	Etv3		Coq9	
P2ry1		Ppp1r14c	F11r		Coro6	
Pacsin3		Ptpn3	Fahd1		Cox10	
Pak6		Ptpn4	Fahd2a		Cox5a	
Pank1		Ptpm	Fam113b		Cox6a2	
Parp8		Pts	Fam158a		Cox6b1	
Pcca		Pxmp2	Fam174b		Cox6c	
Pdk2		Rbbp6	Fam78a		Cox7a1	
Pfkfb1		Rcor2	Fam82b		Cox7b	
Pfkm		Rhd	Fastkd2		Cox7c	
Phf7		Rhobtb2	Fblim1		Cox8b	
Pink1		Rnf207	Fbxo3		Cpeb2	
Pisd		Rpp40	Fbxw7		Cpeb3	
Pitpnc1		Rrm2b	Fdx1		Cpox	
Pla2g4e		Scd4	Fem1a		Cpt1b	
Plekha6		Scgb1c1	Ferd3l		Cpt2	
Plxnb1		Scn4a	Fgf13		Crat	
Pm20d1		Sema4d	Fgf9		Creg1	
Polq		Sh3rf2	Fgfr1op		Crhr2	
Polr2e		Shmt2	Fig4		Crygb	
Ppapdc3		Sipa1l2	Filip1l		Csdc2	
Ppfbp2		Slc25a34	Flad1		Csnk2a1-rs2	
Ppm1k		Slc25a38	Fnipl		Cth	
Ppp1r3b		Slc27a1	Foxn3		Ctla4	
Prdx5		Slc36a2	Foxo3		Ctnna3	
Prkcq		Slc44a2	Foxred1		Cxadr	
Prox1		Sntb1	Frap1		Cyc1	
Prss3		Sp4	Fsd2		Cyfp2	
Psmc1		St6galnac3	Fstl4		Cyp2b10	
Ptcd3		Synj2	Fto		Cyp2b9	
Ptchd3		Tef	Gabpa		Cyp4b1	
Pxmp4		Tmem205	Gabbr2		Daam1	
Pygb		Tmem50b	Gata6		Dbt	
Qsox2		Tmod4	Gcnt1		Dci	
Rad54l2		Trim54	Gdpd1		Dcun1d2	

Rad9b		Ttc39b	Gfod1		Ddo	
Rassf9		Txnrd3	Ghr		Ddt	
Rbl2		Vldlr	Gja3		Deb1	
Rbm20		Wdr36	Glrx5		Decr1	
Retsat		Xpo4	Gm166		Def8	
Rfwd3		Zfp30	Gml		Dennd4b	
Ric8b		Zswim7	Gmnn		Dgat2	
Rnase9			Gnas		Dgcr2	
Rnf34			Gnmt		Dguok	
Rorc			Gpam		Dhrs11	
Rps6ka2			Gpd11		Dhrs4	
Rtn2			Gpn3		Dhrs7c	
Runx1t1			Gpr116		Dhtkd1	
Sesn1			Gpr155		Dip2c	
Sgol2			Gpr173		Dll4	
Sh2d4a			Gpsn2		Dlst	
Sirt5			Grm1		Dnaja3	
Slc20a2			Gstz1		Dnajc15	
Slc22a5			Gtf2i		Dnajc28	
Slc25a13			Gtpbbp2		Dnajc30	
Slc25a20			Gys1		Dnmt3a	
Slc25a42			Gzf1		Doc2g	
Slc40a1			Hand2		Dpf3	
Slc41a1			Hars2		Dpysl4	
Slc46a3			Hbb-b1		Drap1	
Slc47a1			Hccs		Dsc2	
Slc9a10			Hdhd2		Dsg1c	
Slc9a2			Helz		Dsg2	
Snora34			Hibadh		Dtd1	
Sobp			Hibch		Dtna	
Sox4			Hk2		Dtwd2	
Spc24			Hmbs		Dub1	
Srpk3			Hmgb3		Dusp10	
Stom			Homer1		Dusp23	
Suclg2			Hsd17b4		Dusp7	
Taf7			Hspd1		Dusp8	
Tanc1			Hus1		Dut	
Tcap			Idh1		Ech1	
Tcea3			Idh3a		Echdc2	
Tecpr1			Idh3b		Echdc3	
Tet1			Idh3g		Echs1	
Tgtp			Il15ra		Ecsit	
Thrsp			Immt		Eef1d	
Tjp1			Iqgap2		Eepd1	
Tmc7			Iqsec1		Efna5	
Tmem141			Iqwd1		Efnb3	
Tmem182			Irx3		Egf	
Tmem196			Iscu		Ehhadh	
Tmem82			Isyna1		Eif2b4	
Trim13			Itpr2		Endog	
Trim63			Ivns1abp		Entpd6	
Trpm4			Jam2		Epha4	
Tspan13			Jarid2		Ephb3	
Tuba4a			Jhdm1d		Ephx2	
Ulk1			Jmy		Epm2aip1	
Unc45b			Josd1		Eral1	
Usp54			Kbtbd3		Erbp3	
V1rc25			Kcnd2		Erbp4	
Vamp5			Kcnj2		Erc1	
Wdr42a			Kcnj5		Esrra	
Wif1			Kcnq1		Esrrg	
Wnk4			Kctd9		Etfb	
Xk			Khdrbs3		Etfhdh	
Yipf7			Khk		Ethe1	
Zcche17			Kif16b		Etl4	
Zkscan3			Kif1b		Extl1	
			Kitl		Fabp3	
			Klf15		Fah	
			Klhdc3		Fam116b	

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			Klh124		Fam46c	
			Klh138		Fam59a	
			Klh19		Fam65b	
			Kpna2		Fam73a	
			Kptn		Fam73b	
			Kti12		Farp2	
			Lancl3		Fars2	
			Leng1		Fastk	
			Letm1		Fastkd1	
			Lifr		Fbp2	
			Lims1		Fbx122	
			Lin52		Fbxo21	
			Lin9		Fbxo25	
			Lipe		Fbxo31	
			Lman2l		Fdft1	
			Lmbr1		Fech	
			Lmtk2		Fgd4	
			Lonrf1		Fgf16	
			Lrg1		Fh1	
			Ltbp1		Fhl2	
			Ly75		Fhod3	
			Lym5		Figl	
			Maf1		Fitm1	
			Magi2		Fitm2	
			Map1lc3a		Fkbp3	
			Map2k6		Fkbp4	
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			Mgrn1		Galnt11	
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			Mov10l1		Gcdh	
			Mpi		Gck	
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			Mreg		Gcsh	
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			Mrpl18		Gfm1	
			Mrpl19		Gfm2	
			Mrpl2		Ggnbp1	
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			Mrpl30		Gm129	
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			Mrpl36		Gm561	
			Mrpl39		Gm826	
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			Mrpl47		Gna12	
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			Mrpl51		Gnpat	
			Mrpl55		Got1	
			Mrpl9		Got2	
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			Mrps23		Gpc1	
			Mrps27		Gpr157	

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			Msh3		Grb14	
			Msrb2		Grcc10	
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			Mtfr1		Grpel1	
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			Mto1		Gstm7	
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			Mtrf11		Gtf3c1	
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			Mtx2		Gtpbp5	
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			Myst1		H2-Ke6	
			N4bp2		H2-T24	
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			Nars2		Hadha	
			Nbn		Hadhb	
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			Ndufa10		Hcn4	
			Ndufa12		Hdac11	
			Ndufa3		Hdac4	
			Ndufa9		Hdac5	
			Ndufaf1		Hdac9	
			Ndufaf4		Hemk1	
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			Ndufb6		Herpud1	
			Ndufc1		Hfe2	
			Ndufs1		Hhat1	
			Ndufs2		Hint2	
			Ndufs5		Hisppd1	
			Ndufs6		Hlf	
			Ndufs8		Hmcn1	
			Ndufv2		Hmgcl	
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			Nhsl1		Hnmt	
			Nipal3		Homer2	
			Nr0b2		Hook1	
			Nsun4		Hopx	
			Nudc		Hrasls	
			Nudt12		Hrc	
			Nudt3		Hs3st5	
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			Ociad2		Hsd12	
			Ogdh		Htra1	
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			Ptcd2		Lbh	
			Ptcd3		Lclat1	
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			Ptges2		Ldb3	
			Ptgr2		Ldhh	
			Ptp4a3		Ldhd	
			Pygm		Lepr	
			Qdpr		Lgals4	
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			Rabgta		Llgl2	
			Ranbp6		Lmf1	
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			Rapgef3		Lmod3	
			Rapgef4		Lpcat3	
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			Rbm24		Lrppre	
			Rbm38		Lrrc20	
			Rdh13		Lrrc39	
			Rdh14		Lrrc4b	
			Reep1		Lrrc68	
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			Rhobtb3		M6prbp1	
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			Rit1		Magi3	
			Rmnd5a		Magix	
			Rnf114		Maob	

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		Rnf128	Map4k2
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		Rom1	Mast2
		Rorc	Mblac2
		Rpa3	Mboat2
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		Rps6ka5	Mccc1
		Rrm2b	Mccc2
		Rsb1l1	Mcee
		Rtbdn	Me3
		Rtf1	Med12l
		Rtn4ip1	Mepece
		Rtn4r	Metap1
		Rufy1	Metap11
		Ryr2	Metl11b
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		S3-12	Mfsd7c
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		Scmh1	Mgst3
		Scn10a	Mif4gd
		Sco1	Mipep
		Scrn3	Mitf
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		Sdpr	Mllt6
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		Sema4b	Mmadhc
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		Slc25a4	Mrpl23
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		Slc35f5	Mrpl28
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		Slc47a1	Mrpl41
		Slc5a6	Mrpl45
		Slco5a1	Mrpl46
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		Smyd2	Mrps24
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		Snrpn	Mrps28
		Snx15	Mrps30
		Sod1	Mrps31
		Sox12	Mrps35
		Spna1	Mrps7
		Srfbp1	Mrps9
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		Sssca1	Mrs2
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		Sypl2	Mut
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			Thap4		Myo18b	
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			Ttc32		Ndufs4	
			Txlnb		Ndufs7	
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			Txnrd3		Necab1	
			Tysnd1		Neo1	
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			Ube2e3		Neurl4	
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			Ubl7		Nit2	
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			Uqcrb		Nr3c2	
			Uqcrc2		Nsmaf	
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			Wfdc1		Nutf2	
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			Yars2		Obsl1	
			Yipf4		Ogdhl	
			Zdhhc7		Oma1	
			Zfp191		Oplah	
			Zfp358		Optn	
			Zfp606		Osbp2	

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		Zfp759		Osgep	
		Zfp771		Osgepl1	
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				Pde3a	
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				Pebpl	
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				Phf7	
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					Srpk3	
					St3gal3	
					Stard7	
					Stat5a	
					Stfa1	
					Stom	
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					Suc1g1	

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					Sunc1	
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					Svip	
					Synj2	
					Syt7	
					Tarsl2	
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					Wfdc6a	
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					Xpo4	
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					Zfand5	
					Zfp422	
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					Zh2c2	
					Zim1	
					Zscan20	
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Table S2: Ingenuity Pathway analysis. Biological function of genes regulated in 6 month old Arg and Gly transgenic models was subjected to Ingenuity Pathway analysis and is described in the table.

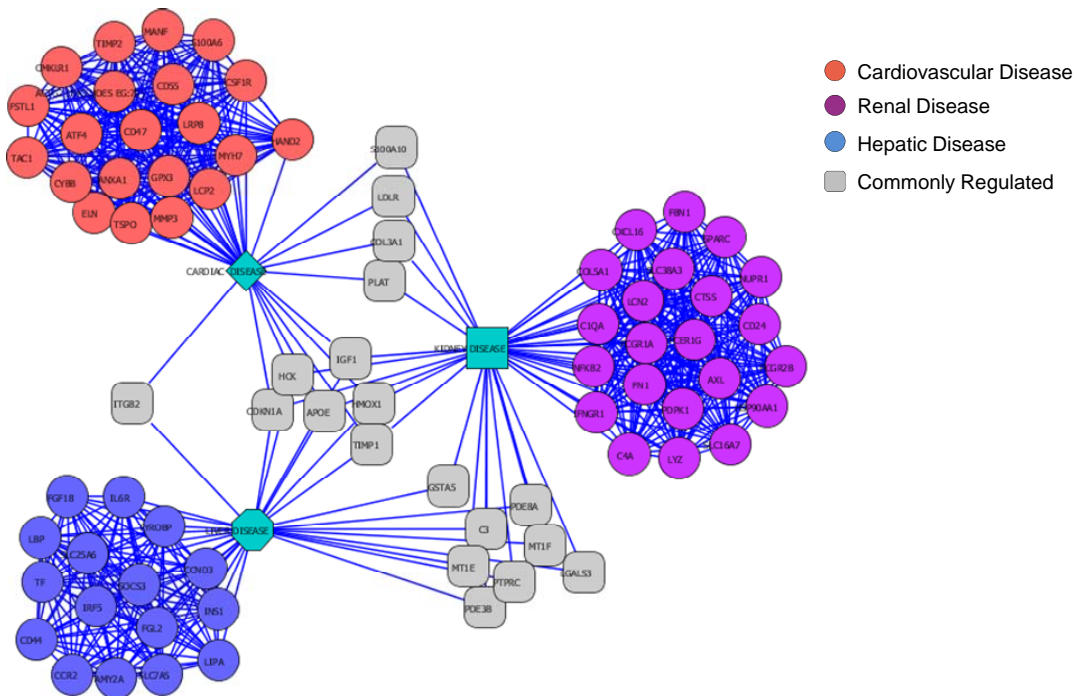
Gene Annotation	Down-Reg Arg	Down-Reg Gly	Up-Reg Arg	Up-Reg Gly
Metabolic Diseases	385	248	442	334
Cellular Growth and Proliferation	46	16	568	442
Lipid Metabolism (including fatty acid)	171	110	188	116
Gene Expression	27	32	88	64
Molecular Transport	167	95	138	154
Cell Signaling	6	20	120	122
Cardiovascular Disease	291	200	438	319
Inflammatory Disease	42	35	537	418
Inflammatory Response	4	4	347	306
Apoptosis	58	5	431	336

Table S3: Ingenuity Pathway analysis. Biological function of genes regulated in 3 month old Arg and Gly transgenic models was subjected to Ingenuity Pathway analysis and is described in the table.

Gene Annotation	Down-Reg Arg	Down-Reg Gly	Up-Reg Arg	Up-Reg Gly
Metabolic Diseases	129	89	12	18
Cellular Growth and Proliferation	5	26	182	93
Lipid Metabolism (including fatty acid)	52	37	7	42
Gene Expression	19	53	9	63
Molecular Transport	60	29	58	42
Cell Signaling	4	3	81	44
Cardiovascular Disease	107	80	48	73
Inflammatory Disease	8	14	177	99
Inflammatory Response	5	2	134	66
Apoptosis		3	133	70

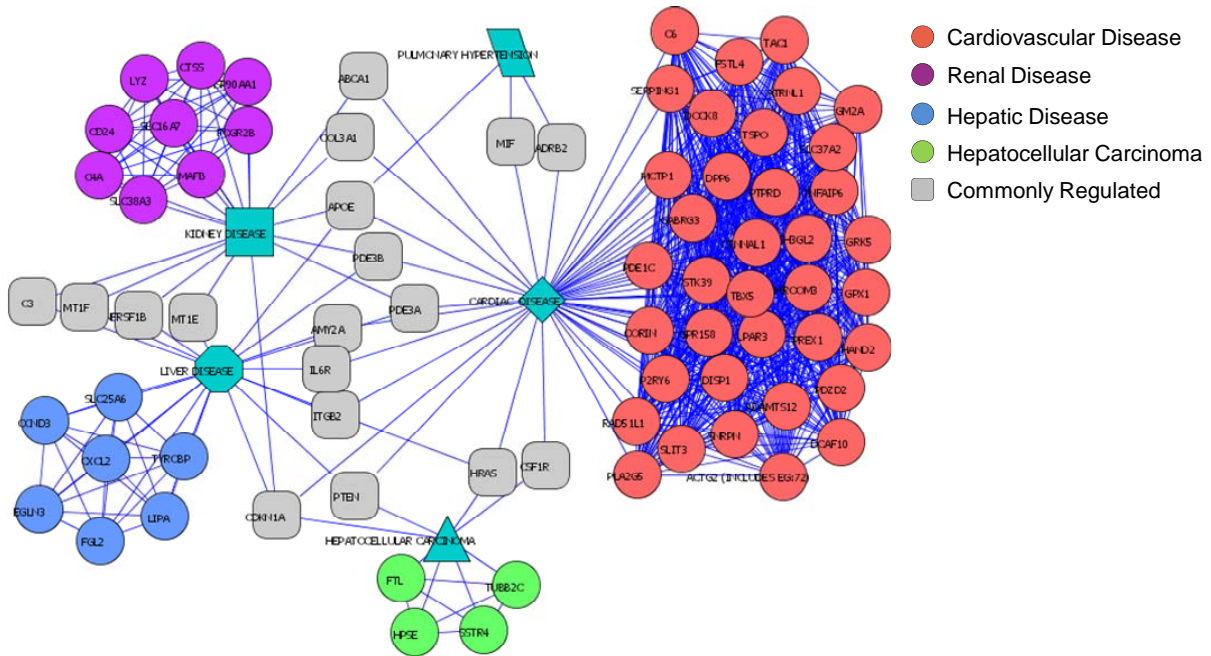
Table S4: Ingenuity Pathway analysis. Biological function of genes regulated in all transgenic models was subjected to Ingenuity Pathway analysis and is described in the table.

Gene Annotation	Down-Reg - All	Up-Reg - All
Metabolic Diseases	7	38
Cellular Growth and Proliferation	35	4
Lipid Metabolism (including fatty acid)	21	17
Gene Expression	7	1
Molecular Transport	20	22
Cell Signaling	4	19
Cardiovascular Disease	33	15
Inflammatory Disease	4	39
Inflammatory Response	1	30
Apoptosis	1	26



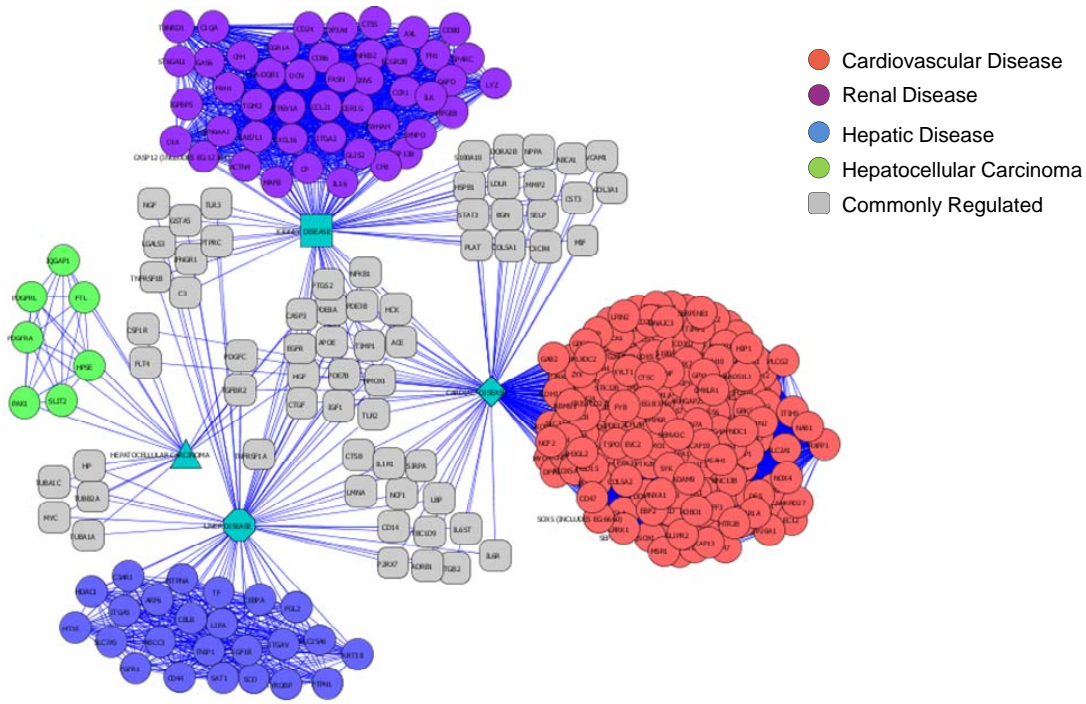
A

3 months β_1 Arg389 up-regulated genes



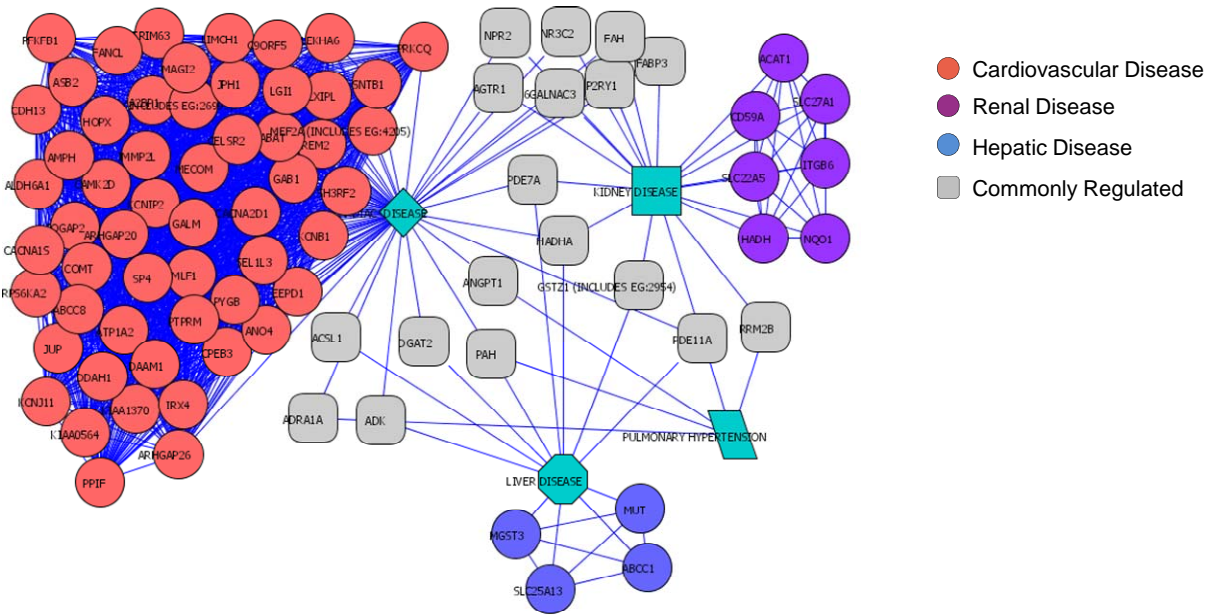
B

3 months β_1 Gly389 up-regulated genes



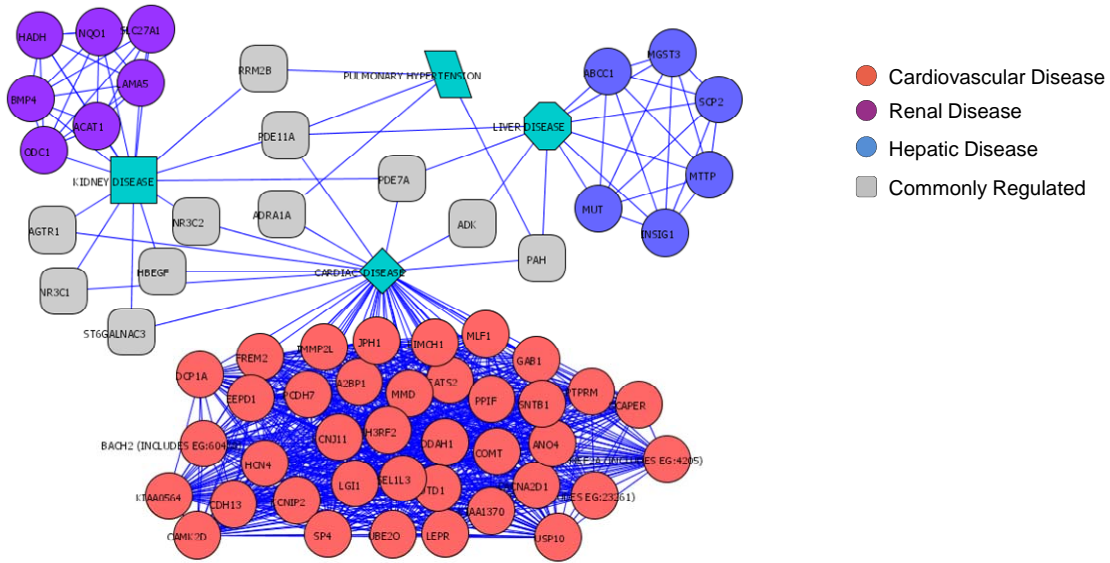
C

6 months β_1 Gly389 up-regulated genes

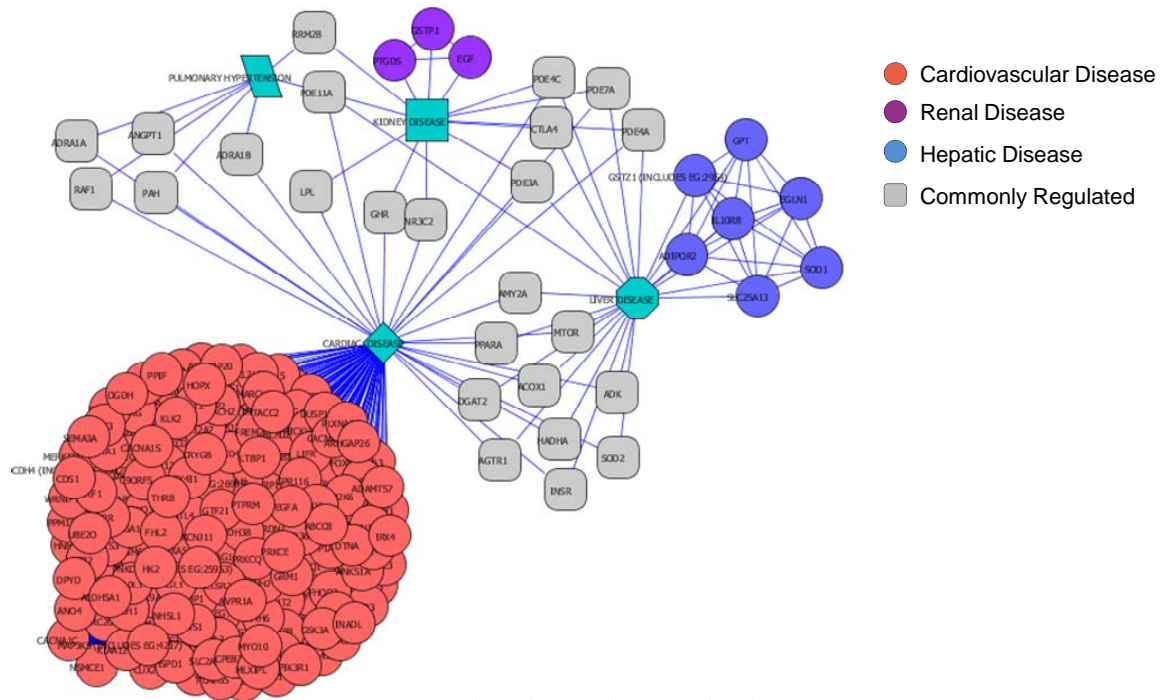


D

3 months β_1 Arg389 down-regulated genes



E 3 months β_1 Gly389 down-regulated genes



F 6 months β_1 Arg389 down-regulated genes

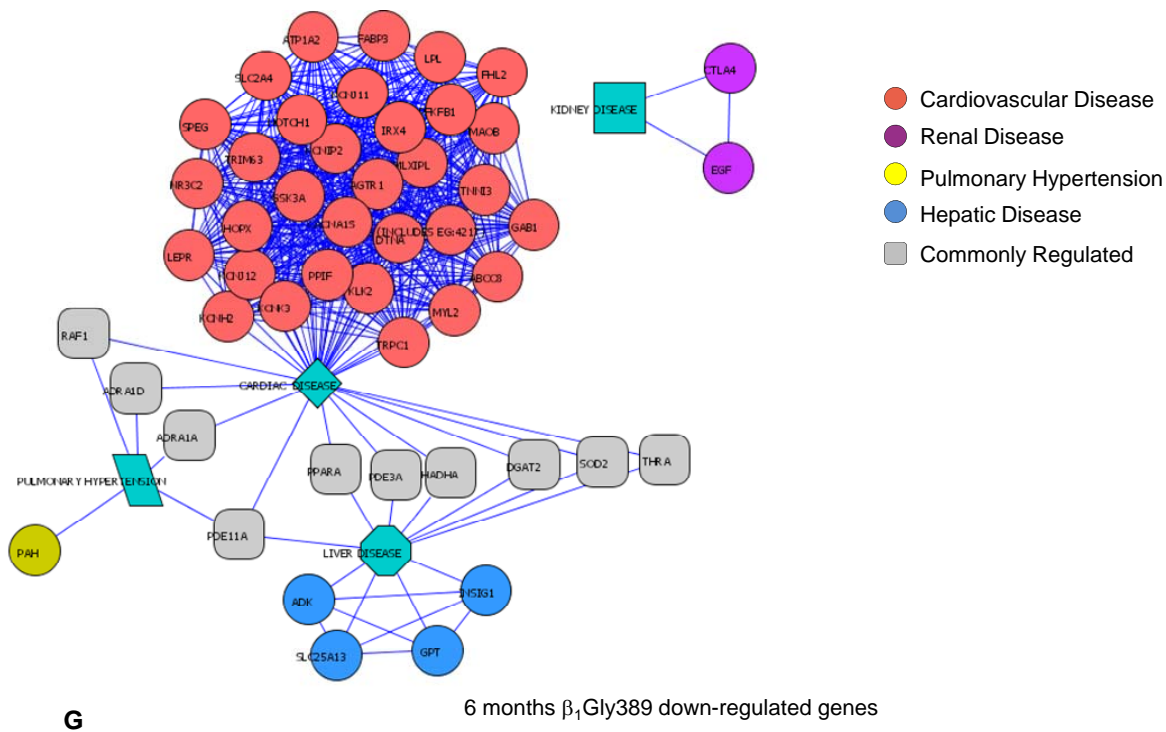


Figure S1: Network of Disease analysis of differentially regulated genes. Genes up- or down-regulated in β_1 -Arg389 or β_1 -Gly389 transgenic animals were subjected to Ingenuity Pathway analysis. Based on the toxicology function results, a Network of Diseases was generated. (A) 3 months β_1 Arg389 up-regulated genes, (B) pathways 3 months β_1 Gly389 up-regulated genes, (C) 6 months β_1 Gly389 up-regulated genes, (D) 3 months β_1 Arg389 down-regulated genes, (E) 3 months β_1 Gly389 down-regulated genes, (F) 6 months β_1 Arg389 down-regulated genes, (G) 6 months β_1 Gly389 down-regulated genes. Diseases are color coded according and genes commonly regulated in multiples diseases are linked by a line.

Table S5: Network of Diseases and representative genes. Colors and geometrical symbols are represented on Figures 4 and S1.

3 months β_1 Arg389 up-regulated				
Gene Symbol	Disease - General	Geometrical symbol	Color	Disease - Specified
ACTG2	Cardiovascular disease	circle	pink	Cardiovascular Infarction
CD47	Cardiovascular disease	circle	pink	Cardiovascular Infarction
CD55	Cardiovascular disease	circle	pink	Cardiovascular Infarction
CSF1R	Cardiovascular disease	circle	pink	Cardiovascular Infarction
CYBB	Cardiovascular disease	circle	pink	Cardiovascular Infarction
FSTL1	Cardiovascular disease	circle	pink	Cardiovascular Infarction,Cardiovascular Necrosis/Cell Death
LRP8	Cardiovascular disease	circle	pink	Cardiovascular Infarction
TSPO	Cardiovascular disease	circle	pink	Cardiovascular Infarction
LCP2	Cardiovascular disease	circle	pink	Tachycardia
TAC1	Cardiovascular disease	circle	pink	Tachycardia
MANF	Cardiovascular disease	circle	pink	Cardiovascular Necrosis/Cell Death
TIMP2	Cardiovascular disease	circle	pink	Cardiovascular Necrosis/Cell Death,Cardiovascular Stenosis
ANXA1	Cardiovascular disease	circle	pink	Cardiovascular Damage
ATF4	Cardiovascular disease	circle	pink	Cardiovascular Damage
MYH7	Cardiovascular disease	circle	pink	Cardiovascular Damage
ELN	Cardiovascular disease	circle	pink	Cardiovascular Stenosis
MMP3	Cardiovascular disease	circle	pink	Cardiovascular Stenosis
HAND2	Cardiovascular disease	circle	pink	Cardiovascular Proliferation
CMKLR1	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
GPX3	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
S100A6	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
COL3A1	complex	Rounded square	gray	Renal Tubule Injury,Cardiovascular Infarction
GSTA5	complex	Rounded square	gray	Renal Tubule Injury,Hepatic Hyperbilirubinemia
IGF1	complex	Rounded square	gray	Renal Tubule Injury,Hepatic Necrosis/Cell Death,Hepatic Proliferation,Renal Damage,Renal Proliferation,Renal Necrosis/Cell Death,Cardiovascular Damage,Cardiovascular Proliferation,Cardiovascular Hypertrophy
LGALS3	complex	Rounded square	gray	Renal Tubule Injury,Hepatic Proliferation,Glomerular Injury
S100A10	complex	Rounded square	gray	Renal Tubule Injury,Cardiovascular Hypertrophy
TIMP1	complex	Rounded square	gray	Renal Tubule Injury,Hepatic Necrosis/Cell Death,Hepatic Hyperplasia/Hyperproliferation,Cardiovascular Stenosis,Cardiovascular Hypertrophy
MT1E	complex	Rounded square	gray	Hepatic Necrosis/Cell Death,Renal Enlargement,Hepatic Hemorrhaging,Hepatic Damage
MT1F	complex	Rounded square	gray	Hepatic Necrosis/Cell Death,Renal Enlargement,Hepatic Hemorrhaging,Renal Necrosis/Cell Death,Hepatic Damage
APOE	complex	Rounded square	gray	Cardiovascular Infarction,Hepatic Necrosis/Cell Death,Glomerular Injury,Renal Proliferation,Renal Necrosis/Cell Death,Hepatic Steatosis
C3	complex	Rounded square	gray	Hepatic Proliferation,Hepatic Hyperplasia/Hyperproliferation,Glomerular Injury,Renal Damage,Hepatic Damage
HCK	complex	Rounded square	gray	Renal Damage,Hepatic Damage,Cardiovascular Hypertrophy

PLAT	complex	Rounded square	gray	Cardiovascular Infarction, Renal Damage
CDKN1A	complex	Rounded square	gray	Hepatic Necrosis/Cell Death, Hepatic Proliferation, Renal Nephritis, Cardiovascular Necrosis/Cell Death, Renal Necrosis/Cell Death, Hepatic Damage, Renal Failure
PTPRC	complex	Rounded square	gray	Hepatic Necrosis/Cell Death, Renal Nephritis
PDE3B	complex	Rounded square	gray	Renal Nephritis, Renal Failure, Hepatic Steatosis
PDE8A	complex	Rounded square	gray	Renal Nephritis, Renal Failure, Hepatic Steatosis
LDLR	complex	Rounded square	gray	Cardiovascular Stenosis, Renal Failure
HMOX1	complex	Rounded square	gray	Hepatic Necrosis/Cell Death, Cardiovascular Damage, Renal Failure, Hepatic Hyperbilirubinemia
ITGB2	complex	Rounded square	gray	Cardiovascular Infarction, Hepatic Necrosis/Cell Death, Hepatic Damage, Cardiovascular Damage, Cardiovascular Proliferation
CD24	Renal disease	circle	purple	Renal Tubule Injury
COL5A1	Renal disease	circle	purple	Renal Tubule Injury
CTSS	Renal disease	circle	purple	Renal Tubule Injury
FBN1	Renal disease	circle	purple	Renal Tubule Injury
FN1	Renal disease	circle	purple	Renal Tubule Injury, Glomerular Injury
HSP90AA1	Renal disease	circle	purple	Renal Tubule Injury
LYZ	Renal disease	circle	purple	Renal Tubule Injury
SLC16A7	Renal disease	circle	purple	Renal Tubule Injury
SLC38A3	Renal disease	circle	purple	Renal Tubule Injury
FCER1G	Renal disease	circle	purple	Glomerular Injury, Renal Proliferation, Renal Failure
SPARC	Renal disease	circle	purple	Glomerular Injury, Renal Proliferation
C1QA	Renal disease	circle	purple	Renal Damage, Renal Nephritis
C4A	Renal disease	circle	purple	Renal Damage, Renal Nephritis
FCGR1A	Renal disease	circle	purple	Renal Damage
FCGR2B	Renal disease	circle	purple	Renal Nephritis
IFNGR1	Renal disease	circle	purple	Renal Nephritis
NFKB2	Renal disease	circle	purple	Renal Nephritis
AXL	Renal disease	circle	purple	Renal Proliferation
LCN2	Renal disease	circle	purple	Renal Proliferation, Renal Necrosis/Cell Death, Renal Failure
CXCL16	Renal disease	circle	purple	Renal Nephritis
NUPR1	Renal disease	circle	purple	Renal Hypertrophy
PDPK1	Renal disease	circle	purple	Renal Hypertrophy
CCR2	Hepatic disease	circle	blue	Hepatic Necrosis/Cell Death, Hepatic Steatosis
FGL2	Hepatic disease	circle	blue	Hepatic Necrosis/Cell Death
SOCS3	Hepatic disease	circle	blue	Hepatic Necrosis/Cell Death, Hepatic Proliferation
CCND3	Hepatic disease	circle	blue	Hepatic Proliferation
FGF18	Hepatic disease	circle	blue	Hepatic Proliferation
INS1	Hepatic disease	circle	blue	Hepatic Proliferation
SLC7A5	Hepatic disease	circle	blue	Hepatic Proliferation
TF	Hepatic disease	circle	blue	Hepatic Proliferation
IRF5	Hepatic disease	circle	blue	Hepatic Necrosis/Cell Death
SLC25A6	Hepatic disease	circle	blue	Hepatic Necrosis/Cell Death
CD44	Hepatic disease	circle	blue	Hepatic Damage
IL6R	Hepatic disease	circle	blue	Hepatic Damage
TYROBP	Hepatic disease	circle	blue	Hepatic Necrosis/Cell Death
AMY2A	Hepatic disease	circle	blue	Hepatic Steatosis
LBP	Hepatic disease	circle	blue	Hepatic Steatosis
LIPA	Hepatic disease	circle	blue	Hepatic Steatosis

3 months β_1 Gly389 up-regulated				
Gene Symbol	Disease - General	Geometrical symbol	Color	Disease - Specified
ACTG2	Cardiovascular disease	circle	pink	Cardiovascular Infarction, Cardiovascular Hypertrophy
C6	Cardiovascular disease	circle	pink	Cardiovascular Infarction, Cardiovascular Arteriopathy
TSPO	Cardiovascular disease	circle	pink	Cardiovascular Infarction
GPX1	Cardiovascular disease	circle	pink	Cardiovascular Fibrosis
TAC1	Cardiovascular disease	circle	pink	Tachycardia

SERPING1	Cardiovascular disease	circle	pink	Cardiovascular Damage
HAND2	Cardiovascular disease	circle	pink	Cardiovascular Proliferation
TBX5	Cardiovascular disease	circle	pink	Cardiovascular Proliferation
ADAMTS12	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ATRNL1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CTNNAL1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
DCAF10	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
DISP1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
DOCK8	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
DPP6	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
FSTL4	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
GABRG3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
GM2A	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
GPR158	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
GRK5	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
LPAR3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
MCTP1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
P2RY6	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PDE1C	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PDZD2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PLA2G5	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PREX1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PTPRD	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
RAD51L1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SH3GL2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SHROOM3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SLC37A2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SLIT3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SNRPN	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
STK39	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
TNFAIP6	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CORIN	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
ADRB1	complex	Rounded square	gray	Cardiovascular Infarction,Cardiovascular Fibrosis,Tachycardia,Pulmonary Hypertension,Cardiovascular Arrhythmia,Heart Failure,Cardiovascular Congestive Cardiovascular Failure
ADRB2	complex	Rounded square	gray	Cardiovascular Infarction,Cardiovascular Fibrosis,Tachycardia,Pulmonary Hypertension,Heart Failure,Cardiovascular Hypertrophy,Cardiovascular Thrombosis,Cardiovascular Congestive Cardiovascular Failure
APOE	complex	Rounded	gray	Cardiovascular Infarction,Hepatic Necrosis/Cell Death,Hepatic Steatosis,Renal

		square		Necrosis/Cell Death,Pulmonary Hypertension,Cardiovascular Arteriopathy
COL3A1	complex	Rounded square	gray	Cardiovascular Infarction,Renal Tubule Injury
CSF1R	complex	Rounded square	gray	Cardiovascular Infarction,Hepatocellular Carcinoma
ITGB2	complex	Rounded square	gray	Cardiovascular Infarction,Hepatic Necrosis/Cell Death,Hepatic Damage,Cardiovascular Arteriopathy,Cardiovascular Proliferation,Cardiovascular Arteriopathy,Hepatic Inflammation
HRAS	complex	Rounded square	gray	Hepatic Necrosis/Cell Death,Cardiovascular Fibrosis,Hepatic Proliferation,Hepatocellular Carcinoma,Cardiovascular Arrhythmia
ABCA1	complex	Rounded square	gray	Cardiovascular Arteriopathy,Renal Nephritis
AMY2A	complex	Rounded square	gray	Hepatic Steatosis,Cardiovascular Arteriopathy
PDE3A	complex	Rounded square	gray	Hepatic Steatosis,Heart Failure,Cardiovascular Arteriopathy,Renal Nephritis,Renal Failure,Hepatic Hepatitis,Hepatic Steatohepatitis,Cardiovascular Congestive Cardiovascular Failure
PDE3B	complex	Rounded square	gray	Hepatic Steatosis,Heart Failure,Cardiovascular Arteriopathy,Renal Nephritis,Renal Failure,Hepatic Hepatitis,Hepatic Steatohepatitis,Cardiovascular Congestive Cardiovascular Failure
CDKN1A	complex	Rounded square	gray	Hepatic Necrosis/Cell Death,Hepatic Damage,Renal Necrosis/Cell Death,Hepatic Proliferation,Hepatocellular Carcinoma,Renal Nephritis,Cardiovascular Hypertrophy,Renal Failure
MIF	complex	Rounded square	gray	Pulmonary Hypertension,Cardiovascular Hypertrophy
PTEN	complex	Rounded square	gray	Hepatic Hyperplasia/Hyperproliferation,Hepatic Steatosis,Hepatocellular Carcinoma,Cardiovascular Hypertrophy,Hepatic Hepatitis,Hepatic Steatohepatitis
IL6R	complex	Rounded square	gray	Hepatic Damage,Cardiovascular Hypertrophy
C3	complex	Rounded square	gray	Hepatic Hyperplasia/Hyperproliferation,Hepatic Damage,Hepatic Proliferation,Renal Damage,Renal Dysfunction
MT1E	complex	Rounded square	gray	Renal Enlargement,Hepatic Hemorrhaging,Hepatic Necrosis/Cell Death,Hepatic Damage
MT1F	complex	Rounded square	gray	Renal Enlargement,Hepatic Hemorrhaging,Hepatic Necrosis/Cell Death,Hepatic Damage,Renal Necrosis/Cell Death,Renal Degeneration
TNFRSF1B	complex	Rounded square	gray	Hepatic Necrosis/Cell Death,Hepatic Damage,Renal Necrosis/Cell Death,Hepatic Proliferation,Hepatic Inflammation,Hepatic Hepatitis,Renal Dysfunction
FTL	Hepatocellular Carcinoma	circle	green	Hepatocellular Carcinoma
HPSE	Hepatocellular Carcinoma	circle	green	Hepatocellular Carcinoma
SSTR4	Hepatocellular Carcinoma	circle	green	Hepatocellular Carcinoma
TUBB2C	Hepatocellular Carcinoma	circle	green	Hepatocellular Carcinoma
CD24	Renal disease	circle	purple	Renal Tubule Injury
CTSS	Renal disease	circle	purple	Renal Tubule Injury
HSP90AA1	Renal disease	circle	purple	Renal Tubule Injury
LYZ	Renal disease	circle	purple	Renal Tubule Injury
SLC16A7	Renal disease	circle	purple	Renal Tubule Injury
SLC38A3	Renal disease	circle	purple	Renal Tubule Injury
MAFB	Renal disease	circle	purple	Renal Necrosis/Cell Death
C4A	Renal disease	circle	purple	Renal Nephritis
FCGR2B	Renal disease	circle	purple	Renal Nephritis
FGL2	Hepatic disease	circle	blue	Hepatic Necrosis/Cell Death
EGLN3	Hepatic disease	circle	blue	Hepatic Steatosis
LIPA	Hepatic disease	circle	blue	Hepatic Steatosis
TYROBP	Hepatic disease	circle	blue	Hepatic Necrosis/Cell Death,Hepatic Hepatitis
CCND3	Hepatic disease	circle	blue	Hepatic Proliferation
SLC25A6	Hepatic disease	circle	blue	Hepatic Necrosis/Cell Death
CXCL2	Hepatic disease	circle	blue	Hepatic Inflammation

6 months β_1 Arg389 up-regulated				
Gene Symbol	Disease - General	Geometrical symbol	Color	Disease - Specified
ACTG2	Cardiovascular disease	circle	pink	Cardiovascular Infarction,Cardiovascular Hypertrophy
C6	Cardiovascular disease	circle	pink	Cardiovascular Infarction,Cardiovascular Arteriopathy

CD47	Cardiovascular disease	circle	pink	Cardiovascular Infarction,Cardiovascular Arteriopathy
CD55	Cardiovascular disease	circle	pink	Cardiovascular Infarction,Cardiovascular Arteriopathy
CYBA	Cardiovascular disease	circle	pink	Cardiovascular Infarction
CYBB	Cardiovascular disease	circle	pink	Cardiovascular Infarction
FSTL1	Cardiovascular disease	circle	pink	Cardiovascular Infarction,Cardiovascular Necrosis/Cell Death
GUCY1A3	Cardiovascular disease	circle	pink	Cardiovascular Infarction,Cardiovascular Arteriopathy,Cardiovascular Hypertrophy
GUCY1B3	Cardiovascular disease	circle	pink	Cardiovascular Infarction,Cardiovascular Arteriopathy
ITGAM	Cardiovascular disease	circle	pink	Cardiovascular Infarction,Cardiovascular Arteriopathy
LRP1	Cardiovascular disease	circle	pink	Cardiovascular Infarction,Cardiovascular Arteriopathy
LRP8	Cardiovascular disease	circle	pink	Cardiovascular Infarction
NCF2	Cardiovascular disease	circle	pink	Cardiovascular Infarction
POSTN	Cardiovascular disease	circle	pink	Cardiovascular Infarction,Cardiovascular Arteriopathy,Cardiovascular Hypertrophy,Cardiovascular Damage
TSPO	Cardiovascular disease	circle	pink	Cardiovascular Infarction
VKORC1	Cardiovascular disease	circle	pink	Cardiovascular Infarction,Cardiovascular Pulmonary Embolism
ABI2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ACBD3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ADAM9	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ADAM19	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy,Cardiovascular Stenosis
ADAMTS2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ADAMTS12	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
AFF3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
AKAP13	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ALDH18A1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ALDH1A1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ALG14	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ALOX5AP	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ANKRD27	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ANO6	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ANXA4	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ARHGAP25	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ARSB	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ASAH1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ASAM	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ATP6V0D2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ATP6V1H	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ATRNL1	Cardiovascular	circle	pink	Cardiovascular Arteriopathy

	disease			
BCAT1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
BDH2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
BEND6	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
BIN1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
BMPER	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
C14orf49	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
C9orf25	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CADPS	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CAMKK1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CAMTA1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CCDC50	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CD302	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CDK14	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CDR2L	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CERKL	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CHN2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
COL12A1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
COL4A1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
COL4A2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
COL5A2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
COLEC12	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CORO7	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CREB5	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CRISPLD2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CTSH	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CX3CR1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CYP20A1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CYP39A1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
DCAF10	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
DDAH1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
DDR2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
DISP1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
DOCK1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
DOCK2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
DOCK8	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy

DPP3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
DYNC2H1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
EBF2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
EFHA1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ELMO1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
EPHA7	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
EVC2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
F2R	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy,Cardiovascular Dilatation,Cardiovascular Hypertrophy
FAM114A1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
FAM129B	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
FAM13C	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
FBN2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
FNDC1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
FOXP1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
FRMD4B	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
FXYD6	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
FYB	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
GAS7	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
GBE1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
GLI3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
GLIPR2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
GM2A	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
GOSR2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
GPC6	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
GRK5	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
HDGFRP3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
HIP1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
HSD17B12	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
IKBIP	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
IL33	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy,Cardiovascular Hypertrophy
IL17RA	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ITIH5	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ITPK1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
KCNMA1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
KCNN3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
KCNQ5	Cardiovascular	circle	pink	Cardiovascular Arteriopathy

	disease			
LASS6	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
LGMN	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
LPIN2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
LRRK1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
MAMDC2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
MAML2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
MAN2A1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
MAP4	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
MATN2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
MED15	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
MICAL2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
MSR1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
MYH10	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
MYO1D	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
MYRIP	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
NCOA7	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
NRG1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy,Cardiovascular Necrosis/Cell Death
P2RY6	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PAMR1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PAR3B	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PARVA	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PBX3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy,Cardiovascular Hypertrophy
PDE10A	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PDE1A	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PEAK1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PGCP	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PHGDH	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PLA2G7	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PLCB1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy,Cardiovascular Hypertrophy
PLCG2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PLD1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PLXDC2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PMEPA1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PON2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PPFIBP1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy

PREX1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
QSOX1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
RAD51L1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
RAPH1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
RBM47	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
RBMS3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ROBO1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
RYR3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SAMD4A	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SCN7A	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SEMA3C	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SEPN1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SERPINE1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy,Cardiovascular Dilatation,Cardiovascular Hypertrophy,Cardiovascular Dysfunction,Cardiovascular Fibrosis,Heart Failure,Cardiovascular Damage
SETBP1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SHROOM3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SLC1A1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SLC1A2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SLC2A13	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SLC37A2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SLIT3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SNX7	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SNX29	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SOX5	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SPATS2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SPON1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SRBD1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SRGAP3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
STK32B	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SYK	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
TNFAIP6	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
TNS3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
TPCN2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
TRIM44	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
TSPAN9	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
TTC9	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy

UHRF1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
UNC13B	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
VAV3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
XYLT1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ZMIZ1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ELN	Cardiovascular disease	circle	pink	Cardiovascular Stenosis,Cardiovascular Hypertrophy
LRP5	Cardiovascular disease	circle	pink	Cardiovascular Stenosis
MMP3	Cardiovascular disease	circle	pink	Cardiovascular Stenosis
RUNX2	Cardiovascular disease	circle	pink	Cardiovascular Stenosis
SOX9	Cardiovascular disease	circle	pink	Cardiovascular Stenosis
TIMP2	Cardiovascular disease	circle	pink	Cardiovascular Stenosis,Cardiovascular Necrosis/Cell Death
GAB2	Cardiovascular disease	circle	pink	Cardiovascular Dilation
GPX1	Cardiovascular disease	circle	pink	Cardiovascular Dilation
PTGES	Cardiovascular disease	circle	pink	Cardiovascular Dilation,Cardiovascular Hypertrophy
SLC2A1	Cardiovascular disease	circle	pink	Cardiovascular Dilation
CSK	Cardiovascular disease	circle	pink	Cardiovascular Necrosis/Cell Death
GSN	Cardiovascular disease	circle	pink	Cardiovascular Necrosis/Cell Death
MANF	Cardiovascular disease	circle	pink	Cardiovascular Necrosis/Cell Death
MAOA	Cardiovascular disease	circle	pink	Cardiovascular Necrosis/Cell Death
MTPN	Cardiovascular disease	circle	pink	Cardiovascular Necrosis/Cell Death,Cardiovascular Hypertrophy
NOL3	Cardiovascular disease	circle	pink	Cardiovascular Necrosis/Cell Death
PRKCB	Cardiovascular disease	circle	pink	Cardiovascular Necrosis/Cell Death,Cardiovascular Hypertrophy,Cardiovascular Fibrosis
PTH1R	Cardiovascular disease	circle	pink	Cardiovascular Necrosis/Cell Death
PTK2B	Cardiovascular disease	circle	pink	Cardiovascular Necrosis/Cell Death
PTN	Cardiovascular disease	circle	pink	Cardiovascular Necrosis/Cell Death
SPRR1A	Cardiovascular disease	circle	pink	Cardiovascular Necrosis/Cell Death
TNFAIP3	Cardiovascular disease	circle	pink	Cardiovascular Necrosis/Cell Death,Cardiovascular Hypertrophy
ZYX	Cardiovascular disease	circle	pink	Cardiovascular Necrosis/Cell Death
BMX	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
MYH7	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
PLA2G4A	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
RCAN1	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
DES	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
GLA	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
GNAI2	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
HSPA1A	Cardiovascular	circle	pink	Cardiovascular Hypertrophy

	disease			
MAPK7	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
NAB1	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
NFATC4	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
PIK3CG	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
PRKCD	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
CMKLR1	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
CTSC	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
DNAJC3	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
GPX3	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
S100A6	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
SHC1	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
VWF	Cardiovascular disease	circle	pink	Heart Failure
SERPING1	Cardiovascular disease	circle	pink	Cardiovascular Damage
ACE	complex	Rounded square	gray	Cardiovascular Infarction,Cardiovascular Arteriopathy,Renal Nephritis,Renal Damage,Cardiovascular Hypertrophy,Renal Failure,Hepatic Cirrhosis
ADRB1	complex	Rounded square	gray	Cardiovascular Infarction,Cardiovascular Necrosis/Cell Death,Pulmonary Hypertension,Cardiovascular Hypertrophy,Cardiovascular Dysfunction,Hepatic Cirrhosis
APOE	complex	Rounded square	gray	Cardiovascular Infarction,Renal Tubule Injury,Cardiovascular Arteriopathy,Renal Necrosis/Cell Death,Renal Damage,Hepatic Necrosis/Cell Death,Glomerular Injury,Pulmonary Hypertension,Renal Proliferation,Cardiovascular Hypertrophy,Hepatic Steatosis
CD14	complex	Rounded square	gray	Cardiovascular Infarction,Cardiovascular Arteriopathy,Hepatic Hepatitis,Hepatic Steatosis,Hepatic Steatohepatitis
COL3A1	complex	Rounded square	gray	Cardiovascular Infarction,Renal Tubule Injury
CSF1	complex	Rounded square	gray	Cardiovascular Infarction,Renal Tubule Injury,Renal Damage,Cardiovascular Dysfunction
CSF1R	complex	Rounded square	gray	Cardiovascular Infarction,Hepatocellular Carcinoma
CXCR4	complex	Rounded square	gray	Cardiovascular Infarction,Renal Tubule Injury
HGF	complex	Rounded square	gray	Cardiovascular Infarction,Renal Tubule Injury,Cardiovascular Arteriopathy,Renal Necrosis/Cell Death,Renal Damage,Hepatic Proliferation,Hepatic Regeneration,Cardiovascular Necrosis/Cell Death,Renal Inflammation,Renal Proliferation,Hepatocellular Carcinoma,Hepatic Hepatitis,Hepatic Hyperplasia/Hyperproliferation
HMGCR	complex	Rounded square	gray	Cardiovascular Infarction,Cardiovascular Arteriopathy,Cardiovascular Stenosis,Pulmonary Hypertension,Hepatic Hepatitis,Hepatic Cirrhosis
ITGB2	complex	Rounded square	gray	Cardiovascular Infarction,Cardiovascular Arteriopathy,Hepatic Necrosis/Cell Death,Hepatic Damage,Cardiovascular Damage
NPPB	complex	Rounded square	gray	Cardiovascular Infarction,Pulmonary Hypertension,Cardiovascular Pulmonary Embolism
PLAT	complex	Rounded square	gray	Cardiovascular Infarction,Renal Damage,Cardiovascular Pulmonary Embolism
SELP	complex	Rounded square	gray	Cardiovascular Infarction,Cardiovascular Arteriopathy,Renal Nephritis,Renal Damage
TLR2	complex	Rounded square	gray	Cardiovascular Infarction,Renal Tubule Injury,Renal Nephritis,Renal Necrosis/Cell Death,Renal Damage,Renal Inflammation,Hepatic Damage,Renal Thrombosis
ABCA1	complex	Rounded square	gray	Cardiovascular Arteriopathy,Renal Nephritis
BCL2	complex	Rounded square	gray	Cardiovascular Arteriopathy,Renal Nephritis,Renal Necrosis/Cell Death,Hepatic Necrosis/Cell Death,Hepatic Proliferation,Cardiovascular Necrosis/Cell Death,Cardiovascular Hypertrophy,Hepatocellular Carcinoma
COL5A1	complex	Rounded square	gray	Renal Tubule Injury,Cardiovascular Arteriopathy
EGFR	complex	Rounded	gray	Cardiovascular Arteriopathy,Hepatic Necrosis/Cell Death,Renal

		square		Proliferation,Cardiovascular Hypertrophy,Hepatocellular Carcinoma
HBEGF	complex	Rounded square	gray	Renal Tubule Injury,Cardiovascular Arteriopathy,Renal Nephritis,Renal Damage,Glomerular Injury,Cardiovascular Dilatation,Cardiovascular Hypertrophy
ICAM1	complex	Rounded square	gray	Renal Tubule Injury,Cardiovascular Arteriopathy,Renal Nephritis,Renal Necrosis/Cell Death,Renal Damage,Cardiovascular Stenosis
IL1R1	complex	Rounded square	gray	Cardiovascular Arteriopathy,Hepatic Damage
LBP	complex	Rounded square	gray	Cardiovascular Arteriopathy,Hepatic Steatosis
LDLR	complex	Rounded square	gray	Cardiovascular Arteriopathy,Cardiovascular Stenosis,Renal Failure
NOX4	complex	Rounded square	gray	Cardiovascular Arteriopathy,Renal Hypertrophy
NPR3	complex	Rounded square	gray	Cardiovascular Arteriopathy,Renal Failure
P2RX7	complex	Rounded square	gray	Cardiovascular Arteriopathy,Hepatic Damage
PDE3B	complex	Rounded square	gray	Cardiovascular Arteriopathy,Renal Nephritis,Nephrosis,Renal Failure,Hepatic Hepatitis,Hepatic Steatosis,Hepatic Steatohepatitis
PDE5A	complex	Rounded square	gray	Cardiovascular Arteriopathy,Renal Nephritis,Nephrosis,Pulmonary Hypertension,Renal Failure,Hepatic Hepatitis,Hepatic Steatosis,Hepatic Steatohepatitis
PDE7B	complex	Rounded square	gray	Cardiovascular Arteriopathy,Renal Nephritis,Nephrosis,Renal Failure,Hepatic Hepatitis,Hepatic Steatosis,Hepatic Steatohepatitis
PDE8A	complex	Rounded square	gray	Cardiovascular Arteriopathy,Renal Nephritis,Nephrosis,Renal Failure,Hepatic Hepatitis,Hepatic Steatosis,Hepatic Steatohepatitis
SIRPA	complex	Rounded square	gray	Cardiovascular Arteriopathy,Hepatic Steatosis
TGFB1	complex	Rounded square	gray	Cardiovascular Arteriopathy,Renal Nephritis,Renal Necrosis/Cell Death,Renal Damage,Hepatic Necrosis/Cell Death,Hepatic Proliferation,Glomerular Injury,Hepatic Cirrhosis,Renal Hypertrophy
THBS1	complex	Rounded square	gray	Renal Tubule Injury,Cardiovascular Arteriopathy,Renal Damage,Renal Failure
TLR4	complex	Rounded square	gray	Renal Tubule Injury,Cardiovascular Arteriopathy,Renal Nephritis,Renal Necrosis/Cell Death,Renal Damage,Hepatic Necrosis/Cell Death,Hepatic Regeneration,Cardiovascular Necrosis/Cell Death,Renal Failure,Hepatic Damage,Hepatic Hepatitis,Hepatic Cirrhosis,Hepatic Steatosis,Hepatic Steatohepatitis
MMP2	complex	Rounded square	gray	Cardiovascular Stenosis,Cardiovascular Necrosis/Cell Death,Renal Failure
NPPA	complex	Rounded square	gray	Renal Tubule Injury,Renal Necrosis/Cell Death,Renal Damage,Cardiovascular Stenosis,Cardiovascular Necrosis/Cell Death,Cardiovascular Hypertrophy
TIMP1	complex	Rounded square	gray	Renal Tubule Injury,Hepatic Necrosis/Cell Death,Cardiovascular Stenosis,Cardiovascular Dilatation,Cardiovascular Hypertrophy,Cardiovascular Dysfunction,Cardiovascular Fibrosis,Hepatic Hepatitis,Hepatic Hyperplasia/Hyperproliferation
VCAM1	complex	Rounded square	gray	Renal Nephritis,Cardiovascular Stenosis
BGN	complex	Rounded square	gray	Renal Necrosis/Cell Death,Cardiovascular Dilatation,Renal Proliferation,Cardiovascular Damage
LMNA	complex	Rounded square	gray	Cardiovascular Dilatation,Hepatic Steatosis
NCF1	complex	Rounded square	gray	Hepatic Necrosis/Cell Death,Cardiovascular Dilatation,Cardiovascular Hypertrophy,Hepatic Damage,Cardiovascular Dysfunction,Cardiovascular Fibrosis
PLCE1	complex	Rounded square	gray	Cardiovascular Stenosis,Nephrosis,Cardiovascular Dilatation
TGFBR2	complex	Rounded square	gray	Hepatic Proliferation,Cardiovascular Dilatation,Hepatocellular Carcinoma,Cardiovascular Dysfunction
CASP3	complex	Rounded square	gray	Renal Necrosis/Cell Death,Hepatic Necrosis/Cell Death,Cardiovascular Necrosis/Cell Death,Hepatocellular Carcinoma,Hepatic Hepatitis
HSPB1	complex	Rounded square	gray	Renal Tubule Injury,Cardiovascular Necrosis/Cell Death
IGF1	complex	Rounded square	gray	Renal Tubule Injury,Renal Necrosis/Cell Death,Renal Damage,Hepatic Necrosis/Cell Death,Hepatic Proliferation,Cardiovascular Necrosis/Cell Death,Renal Inflammation,Renal Proliferation,Cardiovascular Hypertrophy,Cardiovascular Damage
IL6ST	complex	Rounded square	gray	Hepatic Necrosis/Cell Death,Cardiovascular Necrosis/Cell Death
MDK	complex	Rounded square	gray	Renal Tubule Injury,Renal Damage,Cardiovascular Necrosis/Cell Death
TP53	complex	Rounded square	gray	Renal Nephritis,Hepatic Necrosis/Cell Death,Hepatic Proliferation,Cardiovascular Necrosis/Cell Death,Hepatocellular Carcinoma

HIF1A	complex	Rounded square	gray	Cardiovascular Hypertrophy,Hepatocellular Carcinoma
PTGS2	complex	Rounded square	gray	Renal Necrosis/Cell Death,Hepatic Necrosis/Cell Death,Hepatic Regeneration,Cardiovascular Hypertrophy,Renal Failure,Hepatic Damage,Hepatocellular Carcinoma,Cardiovascular Pulmonary Embolism
HMOX1	complex	Rounded square	gray	Hepatic Necrosis/Cell Death,Cardiovascular Hypertrophy,Renal Failure
MIF	complex	Rounded square	gray	Renal Damage,Pulmonary Hypertension,Cardiovascular Hypertrophy
NT5E	complex	Rounded square	gray	Cardiovascular Hypertrophy,Hepatic Damage
PDGFC	complex	Rounded square	gray	Cardiovascular Hypertrophy,Hepatocellular Carcinoma,Hepatic Steatosis
CTSB	complex	Rounded square	gray	Hepatic Necrosis/Cell Death,Cardiovascular Hypertrophy,Hepatic Damage
HCK	complex	Rounded square	gray	Renal Damage,Cardiovascular Hypertrophy,Hepatic Damage
S100A10	complex	Rounded square	gray	Renal Tubule Injury,Cardiovascular Hypertrophy
ITGB1	complex	Rounded square	gray	Renal Necrosis/Cell Death,Renal Damage,Nephrosis,Cardiovascular Fibrosis
NFKB1	complex	Rounded square	gray	Renal Inflammation,Cardiovascular Fibrosis
PTGS1	complex	Rounded square	gray	Hepatic Regeneration,Hepatocellular Carcinoma,Cardiovascular Pulmonary Embolism
LGALS1	complex	Rounded square	gray	Renal Tubule Injury,Hepatic Proliferation
LGALS3	complex	Rounded square	gray	Renal Tubule Injury,Hepatic Proliferation,Glomerular Injury
NGF	complex	Rounded square	gray	Renal Tubule Injury,Hepatic Necrosis/Cell Death
IFNGR1	complex	Rounded square	gray	Renal Nephritis,Hepatic Cirrhosis
PTPRC	complex	Rounded square	gray	Renal Nephritis,Hepatic Necrosis/Cell Death,Hepatic Hepatitis
TNFRSF1A	complex	Rounded square	gray	Renal Nephritis,Hepatic Necrosis/Cell Death,Hepatic Proliferation,Renal Inflammation,Hepatic Damage,Hepatic Hepatitis,Hepatic Cirrhosis,Hepatic Steatosis,Hepatic Steatohepatitis
CTGF	complex	Rounded square	gray	Renal Necrosis/Cell Death,Hepatic Adhesion
TNFRSF1B	complex	Rounded square	gray	Renal Necrosis/Cell Death,Hepatic Necrosis/Cell Death,Hepatic Proliferation,Hepatic Damage,Hepatic Hepatitis
C3	complex	Rounded square	gray	Renal Damage,Hepatic Proliferation,Hepatic Regeneration,Glomerular Injury,Hepatic Damage,Hepatic Hyperplasia/Hyperproliferation
PDGFRB	complex	Rounded square	gray	Glomerular Injury,Pulmonary Hypertension,Renal Proliferation,Hepatocellular Carcinoma
MYC	complex	Rounded square	gray	Hepatic Necrosis/Cell Death,Hepatic Proliferation,Hepatocellular Carcinoma,Hepatic Hyperplasia/Hyperproliferation
PML	complex	Rounded square	gray	Hepatic Proliferation,Hepatocellular Carcinoma
TUBA1A	complex	Rounded square	gray	Hepatocellular Carcinoma,Hepatic Cirrhosis
TUBA1C	complex	Rounded square	gray	Hepatocellular Carcinoma,Hepatic Cirrhosis
TUBB2A	complex	Rounded square	gray	Hepatocellular Carcinoma,Hepatic Cirrhosis
POLA1	complex	Rounded square	gray	Hepatocellular Carcinoma,Hepatic Hepatitis
FLT4	complex	Rounded square	gray	Pulmonary Hypertension,Hepatocellular Carcinoma
PDGFRA	complex	Rounded square	gray	Pulmonary Hypertension,Hepatocellular Carcinoma
ACTG1	Hepatocellular Carcinoma	circle	green	Hepatocellular Carcinoma
FTL	Hepatocellular Carcinoma	circle	green	Hepatocellular Carcinoma
HPSE	Hepatocellular Carcinoma	circle	green	Hepatocellular Carcinoma
IQGAP1	Hepatocellular Carcinoma	circle	green	Hepatocellular Carcinoma
PAK1	Hepatocellular	circle	green	Hepatocellular Carcinoma

	Carcinoma			
PDGFRL	Hepatocellular Carcinoma	circle	green	Hepatocellular Carcinoma
SLIT2	Hepatocellular Carcinoma	circle	green	Hepatocellular Carcinoma
TYMS	Hepatocellular Carcinoma	circle	green	Hepatocellular Carcinoma
BCR	Hypertension	circle	olive	Pulmonary Hypertension
RRM2	Hypertension	circle	olive	Pulmonary Hypertension
BMP4	Renal disease	circle	purple	Renal Tubule Injury
CD24	Renal disease	circle	purple	Renal Tubule Injury
CP	Renal disease	circle	purple	Renal Tubule Injury
CTSS	Renal disease	circle	purple	Renal Tubule Injury
FASN	Renal disease	circle	purple	Renal Tubule Injury
FBN1	Renal disease	circle	purple	Renal Tubule Injury
FN1	Renal disease	circle	purple	Renal Tubule Injury,Glomerular Injury
G6PD	Renal disease	circle	purple	Renal Tubule Injury
GSS	Renal disease	circle	purple	Renal Tubule Injury
GSTA5	Renal disease	circle	purple	Renal Tubule Injury
HSP90AA1	Renal disease	circle	purple	Renal Tubule Injury
IGFBP5	Renal disease	circle	purple	Renal Tubule Injury
LYZ	Renal disease	circle	purple	Renal Tubule Injury
RAB7L1	Renal disease	circle	purple	Renal Tubule Injury
ST6GAL1	Renal disease	circle	purple	Renal Tubule Injury
TMSB4X	Renal disease	circle	purple	Renal Tubule Injury
TXNRD1	Renal disease	circle	purple	Renal Tubule Injury
YWHAH	Renal disease	circle	purple	Renal Tubule Injury
ACTN4	Renal disease	circle	purple	Renal Nephritis,Glomerular Injury
C1QA	Renal disease	circle	purple	Renal Nephritis,Renal Damage,Renal Thrombosis
C4A	Renal disease	circle	purple	Renal Nephritis,Renal Damage
CCR1	Renal disease	circle	purple	Renal Nephritis
CD80	Renal disease	circle	purple	Renal Nephritis
CD86	Renal disease	circle	purple	Renal Nephritis
CFH	Renal disease	circle	purple	Renal Nephritis,Renal Damage
CXCL16	Renal disease	circle	purple	Renal Nephritis
FCGR2B	Renal disease	circle	purple	Renal Nephritis
IL16	Renal disease	circle	purple	Renal Nephritis
MFGE8	Renal disease	circle	purple	Renal Nephritis
NFKB2	Renal disease	circle	purple	Renal Nephritis
TGM2	Renal disease	circle	purple	Renal Nephritis
CASP12	Renal disease	circle	purple	Renal Necrosis/Cell Death
DCN	Renal disease	circle	purple	Renal Necrosis/Cell Death
ILK	Renal disease	circle	purple	Renal Necrosis/Cell Death,Renal Failure
CFB	Renal disease	circle	purple	Renal Damage,Renal Inflammation,Renal Failure,Renal Thrombosis
FCGR1A	Renal disease	circle	purple	Renal Damage
ATP6V1A	Renal disease	circle	purple	Nephrosis
CLTC	Renal disease	circle	purple	Nephrosis
CST3	Renal disease	circle	purple	Nephrosis
GLIS2	Renal disease	circle	purple	Nephrosis
INVS	Renal disease	circle	purple	Nephrosis
ITGA1	Renal disease	circle	purple	Nephrosis,Glomerular Injury
SYNPO	Renal disease	circle	purple	Nephrosis
FCER1G	Renal disease	circle	purple	Glomerular Injury,Renal Proliferation
GAS6	Renal disease	circle	purple	Glomerular Injury,Renal Proliferation
SPARC	Renal disease	circle	purple	Glomerular Injury,Renal Proliferation
AXL	Renal disease	circle	purple	Renal Proliferation
CCL21	Renal disease	circle	purple	Renal Proliferation
KIF3A	Renal disease	circle	purple	Renal Failure
AR	Renal disease	circle	purple	Renal Failure
RELB	Renal disease	circle	purple	Renal Inflammation
ARF6	Hepatic disease	circle	blue	Hepatic Necrosis/Cell Death
ASAH2	Hepatic disease	circle	blue	Hepatic Necrosis/Cell Death
CCND1	Hepatic disease	circle	blue	Hepatic Necrosis/Cell Death,Hepatic Proliferation,Hepatic Steatosis
FGL2	Hepatic disease	circle	blue	Hepatic Necrosis/Cell Death
IRF5	Hepatic disease	circle	blue	Hepatic Necrosis/Cell Death
ITGAV	Hepatic disease	circle	blue	Hepatic Necrosis/Cell Death,Hepatic Proliferation
PTPN1	Hepatic disease	circle	blue	Hepatic Necrosis/Cell Death,Hepatic Damage
TNIP1	Hepatic disease	circle	blue	Hepatic Necrosis/Cell Death
C3AR1	Hepatic disease	circle	blue	Hepatic Proliferation,Hepatic Regeneration

CEBPA	Hepatic disease	circle	blue	Hepatic Proliferation
IGF1R	Hepatic disease	circle	blue	Hepatic Proliferation,Hepatic Hepatitis
SLC7A5	Hepatic disease	circle	blue	Hepatic Proliferation
TF	Hepatic disease	circle	blue	Hepatic Proliferation,Hepatic Cirrhosis
TNFRSF12A	Hepatic disease	circle	blue	Hepatic Proliferation
SAT1	Hepatic disease	circle	blue	Hepatic Proliferation,Hepatic Regeneration
CD44	Hepatic disease	circle	blue	Hepatic Damage,Hepatic Hepatitis
GCLC	Hepatic disease	circle	blue	Hepatic Damage
IL6R	Hepatic disease	circle	blue	Hepatic Damage
KRT18	Hepatic disease	circle	blue	Hepatic Damage,Hepatic Cirrhosis
MT1E	Hepatic disease	circle	blue	Hepatic Damage
SDC4	Hepatic disease	circle	blue	Hepatic Damage
ABCC3	Hepatic disease	circle	blue	Hepatic Cirrhosis
LIPA	Hepatic disease	circle	blue	Hepatic Steatosis
PEMT	Hepatic disease	circle	blue	Hepatic Hepatitis,Hepatic Steatosis,Hepatic Steatohepatitis
SCD	Hepatic disease	circle	blue	Hepatic Steatosis
SLC17A5	Hepatic disease	circle	blue	Hepatic Steatosis
ITGA5	Hepatic disease	circle	blue	Hepatic Adhesion
HDAC1	Hepatic disease	circle	blue	Hepatic Proliferation
TYROBP	Hepatic disease	circle	blue	Hepatic Hepatitis

6 months β_1 Gly389 up-regulated				
Gene Symbol	Disease - General	Geometrical symbol	Color	Disease - Specified
ACTG2	Cardiovascular disease	circle	pink	Cardiovascular Infarction,Cardiovascular Hypertrophy
C6	Cardiovascular disease	circle	pink	Cardiovascular Infarction,Cardiovascular Arteriopathy
CD47	Cardiovascular disease	circle	pink	Cardiovascular Infarction,Cardiovascular Arteriopathy
CD55	Cardiovascular disease	circle	pink	Cardiovascular Infarction,Cardiovascular Arteriopathy
CD163	Cardiovascular disease	circle	pink	Cardiovascular Infarction,Cardiovascular Arteriopathy
CYBA	Cardiovascular disease	circle	pink	Cardiovascular Infarction
CYBB	Cardiovascular disease	circle	pink	Cardiovascular Infarction
FSTL1	Cardiovascular disease	circle	pink	Cardiovascular Infarction,Cardiovascular Necrosis/Cell Death
ITGAM	Cardiovascular disease	circle	pink	Cardiovascular Infarction,Cardiovascular Arteriopathy
LRP1	Cardiovascular disease	circle	pink	Cardiovascular Infarction,Cardiovascular Arteriopathy
NCF2	Cardiovascular disease	circle	pink	Cardiovascular Infarction
POSTN	Cardiovascular disease	circle	pink	Cardiovascular Infarction,Cardiovascular Hypertrophy,Cardiovascular Arteriopathy,Cardiovascular Damage
TSPO	Cardiovascular disease	circle	pink	Cardiovascular Infarction
VKORC1	Cardiovascular disease	circle	pink	Cardiovascular Infarction
GSN	Cardiovascular disease	circle	pink	Cardiovascular Necrosis/Cell Death
HTR2B	Cardiovascular disease	circle	pink	Cardiovascular Necrosis/Cell Death,Cardiovascular Hypertrophy,Heart Failure
MANF	Cardiovascular disease	circle	pink	Cardiovascular Necrosis/Cell Death
MAOA	Cardiovascular disease	circle	pink	Cardiovascular Necrosis/Cell Death
MTPN	Cardiovascular disease	circle	pink	Cardiovascular Necrosis/Cell Death,Cardiovascular Hypertrophy,Heart Failure
PRKCB	Cardiovascular disease	circle	pink	Cardiovascular Necrosis/Cell Death,Cardiovascular Hypertrophy,Heart Failure,Cardiovascular Fibrosis
PTK2B	Cardiovascular disease	circle	pink	Cardiovascular Necrosis/Cell Death
PTN	Cardiovascular disease	circle	pink	Cardiovascular Necrosis/Cell Death

SPRR1A	Cardiovascular disease	circle	pink	Cardiovascular Necrosis/Cell Death
TIMP2	Cardiovascular disease	circle	pink	Cardiovascular Necrosis/Cell Death,Cardiovascular Stenosis
TXNIP	Cardiovascular disease	circle	pink	Cardiovascular Necrosis/Cell Death
ZYX	Cardiovascular disease	circle	pink	Cardiovascular Necrosis/Cell Death
DES	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
ELN	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy,Cardiovascular Stenosis
GLA	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
GNAI2	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
HSPA1A	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
NAB1	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
NFATC4	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
PIK3CG	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy,Heart Failure
PRKCD	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
RCAN1	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
ADAM9	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ADAMTS2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
AFF3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
AKAP13	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ALDH18A1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ALDH1A1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ALOX5AP	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ANKRD27	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ANO6	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ANXA4	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ARHGAP25	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ARSB	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ASAH1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ASAM	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ATP6V1H	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ATRNL1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
BMPER	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CD209	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CD302	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CDK14	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
COL12A1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
COL4A2	Cardiovascular	circle	pink	Cardiovascular Arteriopathy

	disease			
COL5A2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
COLEC12	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CRISPLD2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CTNNAL1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CTSH	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CYB5A	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CYP20A1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CYP39A1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
DCAF10	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
DDR2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
DISP1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
DOCK1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
DOCK2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
DPP3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
DPP6	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
EBF2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ELMO1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
EVC2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
FAM114A1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
FAM129B	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
FNDC1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
FOXP1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
FRMD4B	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
FXYP6	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
FYB	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
GAS7	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
GLI3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
GLIPR2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
GM2A	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
GPC6	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
GRK5	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
HIP1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
IL33	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy,Cardiovascular Arteriopathy
IL17RA	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ITIH5	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy

ITPK1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
KCNN3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
LASS6	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
LGMN	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
LPIN2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
LRRK1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
MAN2A1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
MAP4	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
MATN2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
MED15	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
MICAL2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
MSR1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
MYH10	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
MYO1D	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
NCOA7	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
NOX4	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
P2RY6	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PAMR1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PBX3	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy,Cardiovascular Arteriopathy
PDE1A	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PGCP	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PLA2G7	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PLCG2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PLXDC2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PMEPA1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PON2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
QSOX1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
RAD51L1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
RBMS3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ROBO1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SCN7A	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SELE	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy,Cardiovascular Stenosis
SEMA3C	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SEPN1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SERPINE1	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy,Cardiovascular Arteriopathy,Cardiovascular Damage,Cardiovascular Dilatation,Heart Failure,Cardiovascular Dysfunction,Cardiovascular Fibrosis

SH3GL2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SHROOM3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SLC37A2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SLIT3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SNX7	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SOX5	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
STK32B	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SYK	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
TNFAIP6	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
TNS3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
TPCN2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
UNC13B	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
XYLT1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SERPING1	Cardiovascular disease	circle	pink	Cardiovascular Damage
GAB2	Cardiovascular disease	circle	pink	Cardiovascular Dilatation,Heart Failure
GPX1	Cardiovascular disease	circle	pink	Cardiovascular Dilatation
SLC2A1	Cardiovascular disease	circle	pink	Cardiovascular Dilatation
MYH7	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy,Cardiovascular Damage,Heart Failure
PLA2G4A	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
VWF	Cardiovascular disease	circle	pink	Heart Failure
CALR	Cardiovascular disease	circle	pink	Bradycardia
TRIM21	Cardiovascular disease	circle	pink	Bradycardia
ANXA1	Cardiovascular disease	circle	pink	Cardiovascular Damage
ATF4	Cardiovascular disease	circle	pink	Cardiovascular Damage
CMKLR1	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
CTSC	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
DNAJC3	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
GPX3	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
S100A6	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
CFLAR	Cardiovascular disease	circle	pink	Heart Failure
PTGER4	Cardiovascular disease	circle	pink	Heart Failure
RXFP1	Cardiovascular disease	circle	pink	Heart Failure
ACE	complex	Rounded square	gray	Cardiovascular Infarction,Renal Nephritis,Renal Damage,Hepatic Cirrhosis,Cardiovascular Hypertrophy,Cardiovascular Arteriopathy,Heart Failure,Renal Failure
ADORA2B	complex	Rounded square	gray	Cardiovascular Infarction,Renal Inflammation,Cardiovascular Arteriopathy
ADRB1	complex	Rounded square	gray	Cardiovascular Infarction,Cardiovascular Necrosis/Cell Death,Hepatic Cirrhosis,Cardiovascular Hypertrophy,Heart Failure,Cardiovascular Dysfunction

APOE	complex	Rounded square	gray	Cardiovascular Infarction, Renal Necrosis/Cell Death, Renal Proliferation, Hepatic Necrosis/Cell Death, Glomerular Injury, Cardiovascular Hypertrophy, Cardiovascular Arteriopathy, Hepatic Steatosis
CD14	complex	Rounded square	gray	Cardiovascular Infarction, Cardiovascular Arteriopathy, Hepatic Inflammation, Hepatic Steatosis, Hepatic Hepatitis
COL3A1	complex	Rounded square	gray	Cardiovascular Infarction, Renal Tubule Injury
CSF1R	complex	Rounded square	gray	Cardiovascular Infarction, Hepatocellular Carcinoma
CXCR4	complex	Rounded square	gray	Cardiovascular Infarction, Renal Tubule Injury
HGF	complex	Rounded square	gray	Cardiovascular Infarction, Renal Necrosis/Cell Death, Renal Proliferation, Renal Inflammation, Cardiovascular Necrosis/Cell Death, Cardiovascular Arteriopathy, Hepatic Regeneration, Hepatic Proliferation, Hepatic Hyperplasia/Hyperproliferation, Hepatocellular Carcinoma, Hepatic Hepatitis
ITGB2	complex	Rounded square	gray	Cardiovascular Infarction, Hepatic Necrosis/Cell Death, Hepatic Damage, Cardiovascular Arteriopathy, Cardiovascular Damage, Hepatic Inflammation
PLAT	complex	Rounded square	gray	Cardiovascular Infarction, Renal Damage
SELP	complex	Rounded square	gray	Cardiovascular Infarction, Renal Nephritis, Renal Damage, Cardiovascular Arteriopathy
TLR2	complex	Rounded square	gray	Cardiovascular Infarction, Renal Nephritis, Renal Necrosis/Cell Death, Renal Damage, Renal Inflammation, Hepatic Damage, Renal Thrombosis
CASP3	complex	Rounded square	gray	Renal Necrosis/Cell Death, Hepatic Necrosis/Cell Death, Cardiovascular Necrosis/Cell Death, Hepatocellular Carcinoma, Hepatic Hepatitis
HSPB1	complex	Rounded square	gray	Renal Tubule Injury, Cardiovascular Necrosis/Cell Death
IGF1	complex	Rounded square	gray	Renal Tubule Injury, Renal Necrosis/Cell Death, Renal Proliferation, Renal Damage, Hepatic Necrosis/Cell Death, Renal Inflammation, Cardiovascular Necrosis/Cell Death, Cardiovascular Hypertrophy, Cardiovascular Damage, Hepatic Proliferation
IL6ST	complex	Rounded square	gray	Hepatic Necrosis/Cell Death, Cardiovascular Necrosis/Cell Death
MMP2	complex	Rounded square	gray	Cardiovascular Necrosis/Cell Death, Cardiovascular Stenosis, Renal Failure
NPPA	complex	Rounded square	gray	Renal Necrosis/Cell Death, Cardiovascular Necrosis/Cell Death, Cardiovascular Hypertrophy, Heart Failure, Cardiovascular Stenosis
EGFR	complex	Rounded square	gray	Renal Proliferation, Hepatic Necrosis/Cell Death, Cardiovascular Hypertrophy, Cardiovascular Arteriopathy, Hepatocellular Carcinoma
HMOX1	complex	Rounded square	gray	Hepatic Necrosis/Cell Death, Cardiovascular Hypertrophy, Cardiovascular Damage, Renal Failure, Hepatic Hyperbilirubinemia
MIF	complex	Rounded square	gray	Renal Damage, Cardiovascular Hypertrophy
PDGFC	complex	Rounded square	gray	Cardiovascular Hypertrophy, Hepatocellular Carcinoma, Hepatic Fibrosis, Hepatic Steatosis
IL6R	complex	Rounded square	gray	Hepatic Damage, Cardiovascular Hypertrophy
NFKB1	complex	Rounded square	gray	Renal Inflammation, Cardiovascular Hypertrophy, Heart Failure, Hepatic Inflammation, Cardiovascular Fibrosis, Hepatic Fibrosis
STAT3	complex	Rounded square	gray	Renal Proliferation, Cardiovascular Hypertrophy, Cardiovascular Damage
ABCA1	complex	Rounded square	gray	Renal Nephritis, Cardiovascular Arteriopathy
COL5A1	complex	Rounded square	gray	Renal Tubule Injury, Cardiovascular Arteriopathy
IL1R1	complex	Rounded square	gray	Hepatic Damage, Cardiovascular Arteriopathy, Hepatic Inflammation
LBP	complex	Rounded square	gray	Cardiovascular Arteriopathy, Hepatic Steatosis
LDLR	complex	Rounded square	gray	Cardiovascular Arteriopathy, Cardiovascular Stenosis, Renal Failure
P2RX7	complex	Rounded square	gray	Hepatic Damage, Cardiovascular Arteriopathy
PDE3B	complex	Rounded square	gray	Renal Nephritis, Cardiovascular Arteriopathy, Nephrosis, Heart Failure, Renal Failure, Hepatic Steatosis, Hepatic Hepatitis
PDE7B	complex	Rounded square	gray	Renal Nephritis, Cardiovascular Arteriopathy, Nephrosis, Heart Failure, Renal Failure, Hepatic Steatosis, Hepatic Hepatitis
PDE8A	complex	Rounded square	gray	Renal Nephritis, Cardiovascular Arteriopathy, Nephrosis, Heart Failure, Renal Failure, Hepatic Steatosis, Hepatic Hepatitis
SIRPA	complex	Rounded square	gray	Cardiovascular Arteriopathy, Hepatic Steatosis

TBC1D9	complex	Rounded square	gray	Hepatic Cirrhosis,Cardiovascular Arteriopathy
BGN	complex	Rounded square	gray	Renal Necrosis/Cell Death,Renal Proliferation,Cardiovascular Damage,Cardiovascular Dilaton
LMNA	complex	Rounded square	gray	Cardiovascular Dilaton,Hepatic Steatosis
TGFB2	complex	Rounded square	gray	Cardiovascular Dilaton,Hepatic Proliferation,Cardiovascular Dysfunction,Hepatoellular Carcinoma,Hepatic Fibrosis
TIMP1	complex	Rounded square	gray	Renal Tubule Injury,Hepatic Necrosis/Cell Death,Cardiovascular Hypertrophy,Cardiovascular Dilaton,Heart Failure,Hepatic Hyperplasia/Hyperproliferation,Cardiovascular Dysfunction,Cardiovascular Fibrosis,Cardiovascular Stenosis,Hepatic Hepatitis
PTGS2	complex	Rounded square	gray	Renal Necrosis/Cell Death,Hepatic Necrosis/Cell Death,Hepatic Damage,Cardiovascular Hypertrophy,Hepatic Regeneration,Heart Failure,Hepatoellular Carcinoma,Renal Failure
NCF1	complex	Rounded square	gray	Hepatic Necrosis/Cell Death,Hepatic Damage,Cardiovascular Hypertrophy,Cardiovascular Dilaton,Cardiovascular Dysfunction,Cardiovascular Fibrosis,Hepatic Fibrosis
VCAM1	complex	Rounded square	gray	Renal Nephritis,Cardiovascular Stenosis
CTSB	complex	Rounded square	gray	Hepatic Necrosis/Cell Death,Hepatic Damage,Cardiovascular Hypertrophy
HCK	complex	Rounded square	gray	Renal Damage,Hepatic Damage,Cardiovascular Hypertrophy
S100A10	complex	Rounded square	gray	Renal Tubule Injury,Cardiovascular Hypertrophy
FLT4	complex	Rounded square	gray	Heart Failure,Hepatoellular Carcinoma
CST3	complex	Rounded square	gray	Nephrosis,Heart Failure
CTGF	complex	Rounded square	gray	Renal Necrosis/Cell Death,Heart Failure,Hepatic Adhesion
GSTA5	complex	Rounded square	gray	Renal Tubule Injury,Hepatic Hyperbilirubinemia
LGALS3	complex	Rounded square	gray	Renal Tubule Injury,Glomerular Injury,Hepatic Proliferation
NGF	complex	Rounded square	gray	Renal Tubule Injury,Hepatic Necrosis/Cell Death
IFNGR1	complex	Rounded square	gray	Renal Nephritis,Hepatic Cirrhosis
PTPRC	complex	Rounded square	gray	Renal Nephritis,Hepatic Necrosis/Cell Death,Hepatic Hepatitis
TLR3	complex	Rounded square	gray	Renal Nephritis,Hepatic Damage,Hepatic Cirrhosis,Hepatic Hepatitis
TNFRSF1A	complex	Rounded square	gray	Renal Nephritis,Hepatic Necrosis/Cell Death,Renal Inflammation,Hepatic Damage,Hepatic Cirrhosis,Hepatic Proliferation,Hepatic Inflammation,Hepatic Steatosis,Hepatic Hepatitis
TNFRSF1B	complex	Rounded square	gray	Renal Necrosis/Cell Death,Hepatic Necrosis/Cell Death,Hepatic Damage,Hepatic Proliferation,Hepatic Inflammation,Hepatic Hepatitis
C3	complex	Rounded square	gray	Renal Damage,Hepatic Damage,Glomerular Injury,Hepatic Regeneration,Hepatic Proliferation,Hepatic Hyperplasia/Hyperproliferation
MYC	complex	Rounded square	gray	Hepatic Necrosis/Cell Death,Hepatic Proliferation,Hepatic Hyperplasia/Hyperproliferation,Hepatoellular Carcinoma
TUBA1A	complex	Rounded square	gray	Hepatic Cirrhosis,Hepatoellular Carcinoma
TUBA1C	complex	Rounded square	gray	Hepatic Cirrhosis,Hepatoellular Carcinoma
TUBB2A	complex	Rounded square	gray	Hepatic Cirrhosis,Hepatoellular Carcinoma
HP	complex	Rounded square	gray	Hepatic Inflammation,Hepatoellular Carcinoma,Hepatic Fibrosis
FTL	Hepatoellular Carcinoma	circle	green	Hepatoellular Carcinoma
HPSE	Hepatoellular Carcinoma	circle	green	Hepatoellular Carcinoma
IQGAP1	Hepatoellular Carcinoma	circle	green	Hepatoellular Carcinoma
PAK1	Hepatoellular Carcinoma	circle	green	Hepatoellular Carcinoma
PDGFRA	Hepatoellular Carcinoma	circle	green	Hepatoellular Carcinoma

PDGFRL	Hepatocellular Carcinoma	circle	green	Hepatocellular Carcinoma
SLIT2	Hepatocellular Carcinoma	circle	green	Hepatocellular Carcinoma
CD24	Renal disease	circle	purple	Renal Tubule Injury
CP	Renal disease	circle	purple	Renal Tubule Injury
CTSS	Renal disease	circle	purple	Renal Tubule Injury
FASN	Renal disease	circle	purple	Renal Tubule Injury
FBN1	Renal disease	circle	purple	Renal Tubule Injury
FN1	Renal disease	circle	purple	Renal Tubule Injury,Glomerular Injury
G6PD	Renal disease	circle	purple	Renal Tubule Injury
HSP90AA1	Renal disease	circle	purple	Renal Tubule Injury
IGFBP5	Renal disease	circle	purple	Renal Tubule Injury
LYZ	Renal disease	circle	purple	Renal Tubule Injury
RAB7L1	Renal disease	circle	purple	Renal Tubule Injury
ST6GAL1	Renal disease	circle	purple	Renal Tubule Injury
TXNRD1	Renal disease	circle	purple	Renal Tubule Injury
YWHAH	Renal disease	circle	purple	Renal Tubule Injury
ACTN4	Renal disease	circle	purple	Renal Nephritis,Glomerular Injury
C1QA	Renal disease	circle	purple	Renal Nephritis,Renal Damage,Renal Thrombosis
C4A	Renal disease	circle	purple	Renal Nephritis,Renal Damage
CCR1	Renal disease	circle	purple	Renal Nephritis
CD80	Renal disease	circle	purple	Renal Nephritis
CD86	Renal disease	circle	purple	Renal Nephritis
CFH	Renal disease	circle	purple	Renal Nephritis,Renal Damage
CXCL16	Renal disease	circle	purple	Renal Nephritis
FCGR2B	Renal disease	circle	purple	Renal Nephritis
HLA-DQB1	Renal disease	circle	purple	Renal Nephritis
IL16	Renal disease	circle	purple	Renal Nephritis
MFGE8	Renal disease	circle	purple	Renal Nephritis
NFKB2	Renal disease	circle	purple	Renal Nephritis
TGM2	Renal disease	circle	purple	Renal Nephritis
TNFSF13B	Renal disease	circle	purple	Renal Nephritis
CASP12	Renal disease	circle	purple	Renal Necrosis/Cell Death
DCN	Renal disease	circle	purple	Renal Necrosis/Cell Death
ILK	Renal disease	circle	purple	Renal Necrosis/Cell Death,Renal Failure
MAFB	Renal disease	circle	purple	Renal Necrosis/Cell Death
AXL	Renal disease	circle	purple	Renal Proliferation
CCL21	Renal disease	circle	purple	Renal Proliferation
FCER1G	Renal disease	circle	purple	Renal Proliferation,Glomerular Injury
GAS6	Renal disease	circle	purple	Renal Proliferation,Glomerular Injury
SPARC	Renal disease	circle	purple	Renal Proliferation,Glomerular Injury
CFB	Renal disease	circle	purple	Renal Damage,Renal Inflammation,Renal Thrombosis,Renal Failure
FCGR1A	Renal disease	circle	purple	Renal Damage
ATP6V1A	Renal disease	circle	purple	Nephrosis
GLIS2	Renal disease	circle	purple	Nephrosis
INVS	Renal disease	circle	purple	Nephrosis
ITGA2	Renal disease	circle	purple	Nephrosis
SYNPO	Renal disease	circle	purple	Nephrosis
CYP3A4	Renal disease	circle	purple	Renal Failure
ARF6	Hepatic disease	circle	blue	Hepatic Necrosis/Cell Death
FGL2	Hepatic disease	circle	blue	Hepatic Necrosis/Cell Death
ITGAV	Hepatic disease	circle	blue	Hepatic Necrosis/Cell Death,Hepatic Proliferation
PTPN1	Hepatic disease	circle	blue	Hepatic Necrosis/Cell Death,Hepatic Damage
SLC25A6	Hepatic disease	circle	blue	Hepatic Necrosis/Cell Death
TNIP1	Hepatic disease	circle	blue	Hepatic Necrosis/Cell Death
CBLB	Hepatic disease	circle	blue	Hepatic Damage
CD44	Hepatic disease	circle	blue	Hepatic Damage,Hepatic Hepatitis
KRT18	Hepatic disease	circle	blue	Hepatic Damage,Hepatic Cirrhosis
MT1E	Hepatic disease	circle	blue	Hepatic Damage
ABCC3	Hepatic disease	circle	blue	Hepatic Cirrhosis,Hepatic Hyperbilirubinemia
TF	Hepatic disease	circle	blue	Hepatic Cirrhosis,Hepatic Proliferation
C3AR1	Hepatic disease	circle	blue	Hepatic Regeneration,Hepatic Proliferation
SAT1	Hepatic disease	circle	blue	Hepatic Regeneration,Hepatic Proliferation
CEBPA	Hepatic disease	circle	blue	Hepatic Proliferation
IGF1R	Hepatic disease	circle	blue	Hepatic Proliferation,Hepatic Hepatitis
SLC7A5	Hepatic disease	circle	blue	Hepatic Proliferation
ITGA5	Hepatic disease	circle	blue	Hepatic Adhesion
HDAC1	Hepatic disease	circle	blue	Hepatic Proliferation

FGFR1	Hepatic disease	circle	blue	Hepatic Fibrosis
LIPA	Hepatic disease	circle	blue	Hepatic Steatosis
PITPNA	Hepatic disease	circle	blue	Hepatic Steatosis
SCD	Hepatic disease	circle	blue	Hepatic Steatosis
TYROBP	Hepatic disease	circle	blue	Hepatic Hepatitis

3 months β_1 Arg389 down-regulated				
Gene Symbol	Disease - General	Geometrical symbol	Color	Disease - Specified
JUP	Cardiovascular disease	circle	pink	Tachycardia
SP4	Cardiovascular disease	circle	pink	Tachycardia
ABCC8	Cardiovascular disease	circle	pink	Cardiovascular Stenosis
KCNJ11	Cardiovascular disease	circle	pink	Cardiovascular Stenosis,Cardiovascular Arrhythmia
MLXIPL	Cardiovascular disease	circle	pink	Cardiovascular Stenosis
PPIF	Cardiovascular disease	circle	pink	Cardiovascular Necrosis/Cell Death,Heart Failure
A2BP1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ABAT	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ALDH6A1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
AMPH	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ANO4	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ARHGAP20	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ARHGAP26	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ASB2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
C9ORF5	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CACNA2D1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy,Heart Failure
CAMK2D	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CDH13	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CELSR2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
COMT	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CPEB3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CYFIP2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
DAAM1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
DDAH1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
EEPD1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
FANCL	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
FREM2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
GALM	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
IMMP2L	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
IQGAP2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy

JPH1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
KCNB1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
KIAA0564	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
KIAA1370	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
LGI1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
LIMCH1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
MAGI2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
MECOM	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
MEF2A	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
MLF1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PLEKHA6	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PRKCQ	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PTPRM	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PYGB	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
RPS6KA2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SEL1L3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SH3RF2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SNTB1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
HOPX	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy,Cardiovascular Fibrosis
IRX4	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
PFKFB1	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
TRIM63	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
ATP1A2	Cardiovascular disease	circle	pink	Heart Failure,Cardiovascular Arrhythmia
CACNA1S	Cardiovascular disease	circle	pink	Heart Failure,Cardiovascular Congestive Cardiovascular Failure
GAB1	Cardiovascular disease	circle	pink	Heart Failure
KCNIP2	Cardiovascular disease	circle	pink	Cardiovascular Arrhythmia
ADRA1A	complex	Rounded square	gray	Cardiovascular Necrosis/Cell Death,Pulmonary Hypertension,Heart Failure,Cardiovascular Congestive Cardiovascular Failure,Cardiovascular Arrhythmia
HADHA	complex	Rounded square	gray	Cardiovascular Necrosis/Cell Death,Renal Tubule Injury,Hepatic Steatosis
ACSL1	complex	Rounded square	gray	Cardiovascular Arteriopathy,Hepatic Cholestasis
ADK	complex	Rounded square	gray	Cardiovascular Arteriopathy,Hepatic Steatosis
FAH	complex	Rounded square	gray	Cardiovascular Arteriopathy,Renal Damage
NPR2	complex	Rounded square	gray	Cardiovascular Stenosis,Cardiovascular Arteriopathy,Heart Failure,Cardiovascular Hypertrophy,Cardiovascular Congestive Cardiovascular Failure,Renal Failure
NR3C2	complex	Rounded square	gray	Cardiovascular Arteriopathy,Heart Failure,Cardiovascular Hypertrophy,Cardiovascular Congestive Cardiovascular Failure,Renal Failure,Cardiovascular Fibrosis
P2RY1	complex	Rounded square	gray	Cardiovascular Arteriopathy,Renal Fibrosis
PAH	complex	Rounded square	gray	Pulmonary Hypertension,Cardiovascular Arteriopathy,Hepatic Cholestasis

PDE11A	complex	Rounded square	gray	Pulmonary Hypertension,Cardiovascular Arteriopathy,Heart Failure,Hepatic Steatosis,Renal Failure
PDE7A	complex	Rounded square	gray	Cardiovascular Arteriopathy,Heart Failure,Cardiovascular Congestive Cardiovascular Failure,Hepatic Steatosis,Renal Failure
ST6GALNAC3	complex	Rounded square	gray	Cardiovascular Arteriopathy,Renal Tubule Injury
AGTR1	complex	Rounded square	gray	Heart Failure,Cardiovascular Hypertrophy,Cardiovascular Congestive Cardiovascular Failure,Renal Fibrosis,Cardiovascular Arrhythmia,Renal Damage,Cardiovascular Fibrosis
DGAT2	complex	Rounded square	gray	Heart Failure,Hepatic Steatosis
ANGPT1	complex	Rounded square	gray	Pulmonary Hypertension,Cardiovascular Hypertrophy
FABP3	complex	Rounded square	gray	Cardiovascular Hypertrophy,Renal Tubule Injury
RRM2B	complex	Rounded square	gray	Pulmonary Hypertension,Renal Failure
GSTZ1	complex	Rounded square	gray	Hepatic Steatosis,Renal Damage
ACAT1	Renal disease	circle	purple	Renal Tubule Injury
HADH	Renal disease	circle	purple	Renal Tubule Injury
NQO1	Renal disease	circle	purple	Renal Tubule Injury
SLC22A5	Renal disease	circle	purple	Renal Tubule Injury
SLC27A1	Renal disease	circle	purple	Renal Tubule Injury
CD59A	Renal disease	circle	purple	Renal Fibrosis
ITGB6	Renal disease	circle	purple	Renal Damage
SLC25A13	Hepatic disease	circle	blue	Hepatic Steatosis,Hepatic Cholestasis
MGST3	Hepatic disease	circle	blue	Hepatic Cholestasis
MUT	Hepatic disease	circle	blue	Hepatic Cholestasis
ABCC1	Hepatic disease	circle	blue	Hepatic Cholestasis

3 months β_1 Gly389 down-regulated				
Gene Symbol	Disease - General	Geometrical symbol	Color	Disease - Specified
A2BP1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ANO4	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
BACH2 (includes EG:60468)	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CACNA2D1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy,Heart Failure
CAMK2D	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy,Cardiovascular Dilatation
CAMTA1 (includes EG:23261)	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CDH13	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
COMT	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
DCP1A	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
DDAH1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
DTD1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
EEPD1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
FREM2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
IMMP2L	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
JPH1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
KIAA0564	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
KIAA1370	Cardiovascular	circle	pink	Cardiovascular Arteriopathy

	disease			
LEPR	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
LGI1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
LIMCH1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
MEF2A (includes EG:4205)	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy,Cardiovascular Dilation
MLF1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
MMD	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PCDH7	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PTPRM	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SCAPER	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SEL1L3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SH3RF2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SNTB1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
UBE2O	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
USP10	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
YEATS2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
HCN4	Cardiovascular disease	circle	pink	Bradycardia
SP4	Cardiovascular disease	circle	pink	Bradycardia,Tachycardia
GAB1	Cardiovascular disease	circle	pink	Cardiovascular Dilation,Heart Failure
PPIF	Cardiovascular disease	circle	pink	Heart Failure,Cardiovascular Necrosis/Cell Death
KCNIP2	Cardiovascular disease	circle	pink	Cardiovascular Arrythmia
KCNJ11	Cardiovascular disease	circle	pink	Cardiovascular Arrythmia
ST6GALNAC3	complex	Rounded square	gray	Renal Tubule Injury,Cardiovascular Arteriopathy
NR3C1	complex	Rounded square	gray	Cardiovascular Arteriopathy,Heart Failure,Cardiovascular Congestive Cardiovascular Failure,Renal Failure
NR3C2	complex	Rounded square	gray	Cardiovascular Arteriopathy,Heart Failure,Cardiovascular Congestive Cardiovascular Failure,Renal Failure
PDE11A	complex	Rounded square	gray	Pulmonary Hypertension,Cardiovascular Arteriopathy,Heart Failure,Renal Failure,Hepatic Steatosis
PDE7A	complex	Rounded square	gray	Cardiovascular Arteriopathy,Heart Failure,Cardiovascular Congestive Cardiovascular Failure,Renal Failure,Hepatic Steatosis
RRM2B	complex	Rounded square	gray	Pulmonary Hypertension,Renal Failure
AGTR1	complex	Rounded square	gray	Bradycardia,Heart Failure,Cardiovascular Congestive Cardiovascular Failure,Cardiovascular Arrythmia,Renal Atrophy,Cardiovascular Hyperplasia/Hyperproliferation
HBEGF	complex	Rounded square	gray	Cardiovascular Arteriopathy,Cardiovascular Dilation,Cardiovascular Enlargement,Renal Nephritis
ADRA1A	complex	Rounded square	gray	Pulmonary Hypertension,Heart Failure,Cardiovascular Congestive Cardiovascular Failure,Cardiovascular Necrosis/Cell Death,Cardiovascular Arrythmia
PAH	complex	Rounded square	gray	Pulmonary Hypertension,Cardiovascular Arteriopathy,Hepatic Cholestasis
ADK	complex	Rounded square	gray	Cardiovascular Arteriopathy,Hepatic Steatosis
ACAT1	Renal disease	circle	purple	Renal Tubule Injury
BMP4	Renal disease	circle	purple	Renal Tubule Injury
HADH	Renal disease	circle	purple	Renal Tubule Injury
NQO1	Renal disease	circle	purple	Renal Tubule Injury

ODC1	Renal disease	circle	purple	Renal Tubule Injury
SLC27A1	Renal disease	circle	purple	Renal Tubule Injury
LAMA5	Renal disease	circle	purple	Renal Degradation
ABCC1	Hepatic disease	circle	blue	Hepatic Cholestasis
MGST3	Hepatic disease	circle	blue	Hepatic Cholestasis
MTTP	Hepatic disease	circle	blue	Hepatic Cholestasis,Hepatic Steatosis
MUT	Hepatic disease	circle	blue	Hepatic Cholestasis
SCP2	Hepatic disease	circle	blue	Hepatic Cholestasis
INSIG1	Hepatic disease	circle	blue	Hepatic Steatosis

6 months β_1 Arg389 down-regulated				
Gene Symbol	Disease - General	Geometrical symbol	Color	Disease - Specified
AVPR1A	Cardiovascular disease	circle	pink	Cardiovascular Congestive Cardiovascular Failure,Heart Failure
CACNA1C	Cardiovascular disease	circle	pink	Cardiovascular Congestive Cardiovascular Failure,Heart Failure,Cardiovascular Arrhythmia,Tachycardia,Cardiovascular Hypertrophy,Cardiovascular Arteriopathy
CACNA1S	Cardiovascular disease	circle	pink	Cardiovascular Congestive Cardiovascular Failure,Heart Failure
KCNJ2	Cardiovascular disease	circle	pink	Cardiovascular Congestive Cardiovascular Failure,Heart Failure,Cardiovascular Arrhythmia,Tachycardia
KCNJ5	Cardiovascular disease	circle	pink	Cardiovascular Congestive Cardiovascular Failure,Heart Failure,Cardiovascular Arrhythmia,Cardiovascular Stenosis,Tachycardia
KCNJ12	Cardiovascular disease	circle	pink	Cardiovascular Congestive Cardiovascular Failure,Heart Failure,Cardiovascular Arrhythmia, Tachycardia
KCNK3	Cardiovascular disease	circle	pink	Cardiovascular Congestive Cardiovascular Failure,Heart Failure,Cardiovascular Arrhythmia, Tachycardia
THRB	Cardiovascular disease	circle	pink	Cardiovascular Congestive Cardiovascular Failure,Heart Failure,Cardiovascular Arrhythmia, Tachycardia,Cardiovascular Arteriopathy
TNNT2	Cardiovascular disease	circle	pink	Cardiovascular Congestive Cardiovascular Failure,Heart Failure,Cardiovascular Arrhythmia, Tachycardia,Cardiovascular Arteriopathy
ATP1A2	Cardiovascular disease	circle	pink	Heart Failure,Cardiovascular Arrhythmia
KCNH2	Cardiovascular disease	circle	pink	Cardiovascular Arrhythmia, Tachycardia
KCNIP2	Cardiovascular disease	circle	pink	Cardiovascular Arrhythmia
KCNJ11	Cardiovascular disease	circle	pink	Cardiovascular Arrhythmia,Cardiovascular Stenosis
KCNQ1	Cardiovascular disease	circle	pink	Cardiovascular Arrhythmia,Cardiovascular Arteriopathy
MAOB	Cardiovascular disease	circle	pink	Cardiovascular Arrhythmia, Tachycardia
GNAS	Cardiovascular disease	circle	pink	Cardiovascular Dilation
IRX4	Cardiovascular disease	circle	pink	Cardiovascular Dilation,Cardiovascular Hypertrophy
KLK2	Cardiovascular disease	circle	pink	Cardiovascular Dilation
MAP3K5	Cardiovascular disease	circle	pink	Cardiovascular Dilation,Cardiovascular Dysfunction,Cardiovascular Fibrosis,Cardiovascular Necrosis/Cell Death,Cardiovascular Hypertrophy
TNNI3	Cardiovascular disease	circle	pink	Heart Failure,Cardiovascular Dilation,Cardiovascular Dysfunction
ABCC8	Cardiovascular disease	circle	pink	Cardiovascular Stenosis
GTF2I	Cardiovascular disease	circle	pink	Cardiovascular Stenosis
MLXIPL	Cardiovascular disease	circle	pink	Cardiovascular Stenosis
CACNB2	Cardiovascular disease	circle	pink	Heart Failure,Cardiovascular Dysfunction,Cardiovascular Necrosis/Cell Death,Cardiovascular Arteriopathy
CDS1	Cardiovascular disease	circle	pink	Heart Failure
GAB1	Cardiovascular disease	circle	pink	Heart Failure
LIMS1	Cardiovascular disease	circle	pink	Heart Failure,Cardiovascular Fibrosis
MYL2	Cardiovascular disease	circle	pink	Heart Failure

PPIF	Cardiovascular disease	circle	pink	Heart Failure,Cardiovascular Necrosis/Cell Death
RAPGEF3	Cardiovascular disease	circle	pink	Heart Failure
RYR2	Cardiovascular disease	circle	pink	Heart Failure,Tachycardia
KITLG	Cardiovascular disease	circle	pink	Tachycardia,Cardiovascular Output
CD36	Cardiovascular disease	circle	pink	Cardiovascular Dysfunction,Cardiovascular Output,Cardiovascular Arteriopathy
GSK3A	Cardiovascular disease	circle	pink	Cardiovascular Dysfunction,Cardiovascular Necrosis/Cell Death
HOPX	Cardiovascular disease	circle	pink	Cardiovascular Fibrosis,Cardiovascular Hypertrophy
KLF15	Cardiovascular disease	circle	pink	Cardiovascular Fibrosis
PNKD	Cardiovascular disease	circle	pink	Cardiovascular Fibrosis,Cardiovascular Hypertrophy,Cardiovascular Arteriopathy
MLYCD	Cardiovascular disease	circle	pink	Cardiovascular Output
FABP3	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
FHL2	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
LEPR	Cardiovascular disease	circle	pink	Cardiovascular Necrosis/Cell Death,Cardiovascular Hypertrophy,Cardiovascular Arteriopathy
MAP2K6	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
PARP1	Cardiovascular disease	circle	pink	Cardiovascular Necrosis/Cell Death,Cardiovascular Hypertrophy
PFKFB1	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
PIK3R1	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
PRKCE	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy,Cardiovascular Arteriopathy
SLC2A4	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
TRIM63	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
MOV10L1	Cardiovascular disease	circle	pink	Cardiovascular Hyperplasia/Hyperproliferation
A2BP1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ABCA12	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ACSL1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ADAMTS3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ADAMTS7	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ALDH5A1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ALDH6A1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ANKS1A	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ANO4	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ARHGAP20	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ARHGAP26	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ASB2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ASRGL1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
BACH2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
BZW2	Cardiovascular	circle	pink	Cardiovascular Arteriopathy

	disease			
C9orf5	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
C9orf68	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CAMTA1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CBFA2T3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CDH4	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CELSR2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
COQ6	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
COX4I1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CPEB3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CRYGB	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CTNNA3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CUX2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
CYFIP2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
DAAM1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
DFNB31	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
DPF3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
DPYD	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
DTD1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
DTNA	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
DUSP10	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
EEPD1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
EPB41L4A	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ESRRG	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
FAH	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
FHOD3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
FOXN3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
FOXO3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
FREM2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
FSTL4	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
GALM	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
GFOD1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
GPR116	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
GRM1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
HDAC9	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
HNMT	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy

IDH3B	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
INADL	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
IQGAP2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ISCA1L	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
ITPR2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
JPH1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
KIAA0564	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
KIAA1217	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
LGI1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
LIFR	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
LIMCH1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
LRRC20	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
LTBP1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
MAGI2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
MAGI3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
6-Mar	Cardiovascular disease	circle	pink	null
MEF2A	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
MLF1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
MRPS7	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
MYH6	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
MYO10	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
MYO18B	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
NCAPD3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
NHSL1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
NSMCE1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
OGDH	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
OSBPL3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
P2RY1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PCDH7	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PLA2G5	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PLK1S1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PLXNA2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PPA2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PPM1L	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PPP1R9A	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PRICKLE1	Cardiovascular	circle	pink	Cardiovascular Arteriopathy

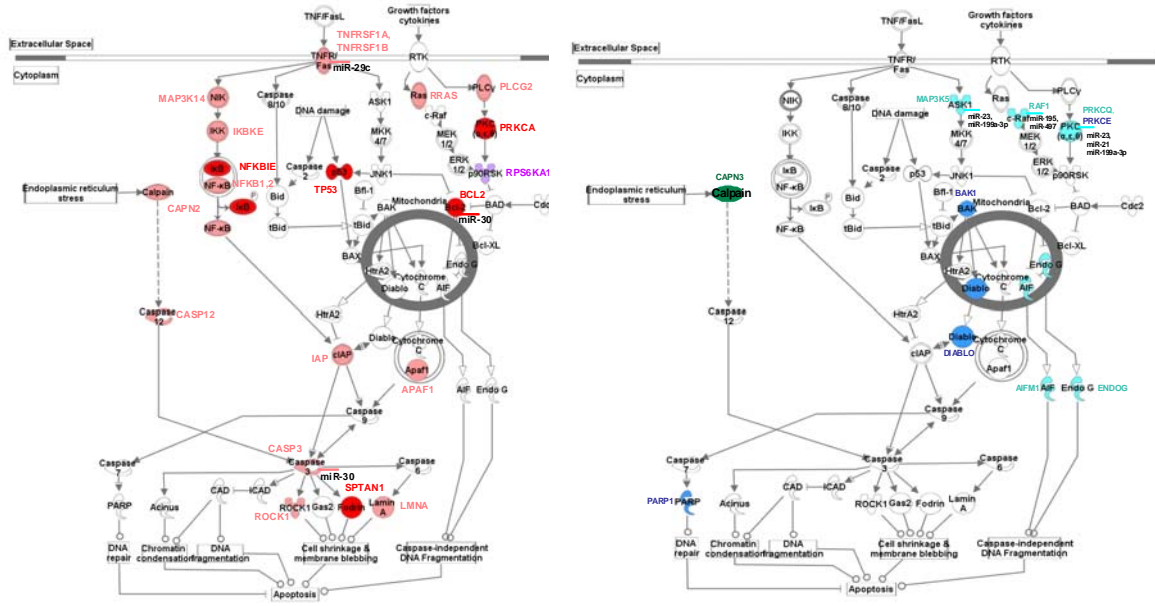
	disease			
PRKCQ	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
PTPRM	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
RPS6KA2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
RPS6KA5	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SEMA3A	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SH3RF2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SLC12A7	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SLC22A3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SMAP2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SNRPN	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
SUPV3L1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
TACC2	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
TBC1D4	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
TMED4	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
TNIP3	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
TRDN	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
TUBA8	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
UBE2O	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
VEGFA	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
WRNIP1	Cardiovascular disease	circle	pink	Cardiovascular Arteriopathy
BAG1	Cardiovascular disease	circle	pink	Cardiovascular Necrosis/Cell Death
BCL2L11	Cardiovascular disease	circle	pink	Cardiovascular Necrosis/Cell Death
HK2	Cardiovascular disease	circle	pink	Cardiovascular Necrosis/Cell Death
HSPD1	Cardiovascular disease	circle	pink	Cardiovascular Necrosis/Cell Death
NAMPT	Cardiovascular disease	circle	pink	Cardiovascular Necrosis/Cell Death
NMNAT1	Cardiovascular disease	circle	pink	Cardiovascular Necrosis/Cell Death
S100A1	Cardiovascular disease	circle	pink	Cardiovascular Necrosis/Cell Death
ADRA1A	complex	Rounded square	gray	Cardiovascular Congestive Cardiovascular Failure,Heart Failure,Cardiovascular Arrhythmia,Tachycardia,Cardiovascular Output,Cardiovascular Necrosis/Cell Death,Pulmonary Hypertension
ADRA1B	complex	Rounded square	gray	Cardiovascular Congestive Cardiovascular Failure,Heart Failure,Cardiovascular Arrhythmia,Tachycardia,Cardiovascular Output,Pulmonary Hypertension
AGTR1	complex	Rounded square	gray	Cardiovascular Congestive Cardiovascular Failure,Heart Failure,Cardiovascular Arrhythmia,Hepatic Hepatitis,Cardiovascular Fibrosis,Cardiovascular Hypertrophy,Cardiovascular Hyperplasia/Hyperproliferation
NR3C2	complex	Rounded square	gray	Cardiovascular Congestive Cardiovascular Failure,Heart Failure,Cardiovascular Fibrosis,Renal Failure,Cardiovascular Hypertrophy,Cardiovascular Arteriopathy
PDE3A	complex	Rounded square	gray	Cardiovascular Congestive Cardiovascular Failure,Heart Failure,Hepatic Hepatitis,Hepatic Steatohepatitis,Hepatic Steatosis,Renal Failure,Cardiovascular Arteriopathy
PDE4A	complex	Rounded square	gray	Cardiovascular Congestive Cardiovascular Failure,Heart Failure,Hepatic Hepatitis,Hepatic Steatohepatitis,Hepatic Steatosis,Renal Failure
PDE4C	complex	Rounded	gray	Cardiovascular Congestive Cardiovascular Failure,Heart Failure,Hepatic

		square		Hepatitis,Hepatic Steatohepatitis,Hepatic Steatosis,Renal Failure,Cardiovascular Arteriopathy
PDE7A	complex	Rounded square	gray	Cardiovascular Congestive Cardiovascular Failure,Heart Failure,Hepatic Hepatitis,Hepatic Steatohepatitis,Hepatic Steatosis,Renal Failure,Cardiovascular Arteriopathy
LPL	complex	Rounded square	gray	Cardiovascular Dilation,Cardiovascular Dysfunction,Renal Failure,Cardiovascular Arteriopathy
RAF1	complex	Rounded square	gray	Heart Failure,Cardiovascular Dilation,Cardiovascular Dysfunction,Cardiovascular Fibrosis,Cardiovascular Necrosis/Cell Death,Pulmonary Hypertension
SOD2	complex	Rounded square	gray	Cardiovascular Dilation,Hepatic Hepatitis,Hepatic Steatohepatitis,Hepatic Steatosis,Cardiovascular Necrosis/Cell Death
DGAT2	complex	Rounded square	gray	Heart Failure,Hepatic Steatosis
GHR	complex	Rounded square	gray	Heart Failure,Renal Failure
PDE11A	complex	Rounded square	gray	Heart Failure,Hepatic Hepatitis,Hepatic Steatohepatitis,Hepatic Steatosis,Renal Failure,Pulmonary Hypertension,Cardiovascular Arteriopathy
PPARA	complex	Rounded square	gray	Hepatic Hepatitis,Hepatic Steatohepatitis,Hepatic Steatosis,Cardiovascular Dysfunction,Cardiovascular Arteriopathy
INSR	complex	Rounded square	gray	Hepatic Hepatitis,Cardiovascular Output
HADHA	complex	Rounded square	gray	Hepatic Steatosis,Cardiovascular Necrosis/Cell Death
ANGPT1	complex	Rounded square	gray	Cardiovascular Hypertrophy,Pulmonary Hypertension
ACOX1	complex	Rounded square	gray	Hepatic Hepatitis,Hepatic Steatohepatitis,Hepatic Steatosis,Cardiovascular Arteriopathy
ADK	complex	Rounded square	gray	Hepatic Steatosis,Cardiovascular Arteriopathy
AMY2A	complex	Rounded square	gray	Hepatic Steatosis,Cardiovascular Arteriopathy
MTOR	complex	Rounded square	gray	Hepatic Hepatitis,Cardiovascular Arteriopathy
PAH	complex	Rounded square	gray	Pulmonary Hypertension,Cardiovascular Arteriopathy
CTLA4	complex	Rounded square	gray	Hepatic Hepatitis,Renal Atrophy
RRM2B	complex	Rounded square	gray	Renal Failure,Pulmonary Hypertension
GSTP1	Renal disease	circle	purple	Renal Failure
PTGDS	Renal disease	circle	purple	Renal Failure
EGF	Renal disease	circle	purple	Renal Atrophy
ADIPOR2	Hepatic disease	circle	blue	Hepatic Hepatitis,Hepatic Steatohepatitis,Hepatic Steatosis
GPT	Hepatic disease	circle	blue	Hepatic Hepatitis,Hepatic Steatohepatitis,Hepatic Steatosis
SOD1	Hepatic disease	circle	blue	Hepatic Hepatitis,Hepatic Steatohepatitis,Hepatic Steatosis
EGLN1	Hepatic disease	circle	blue	Hepatic Steatosis
GSTZ1	Hepatic disease	circle	blue	Hepatic Hepatitis,Hepatic Steatosis
SLC25A13	Hepatic disease	circle	blue	Hepatic Steatosis
IL10RB	Hepatic disease	circle	blue	Hepatic Hepatitis

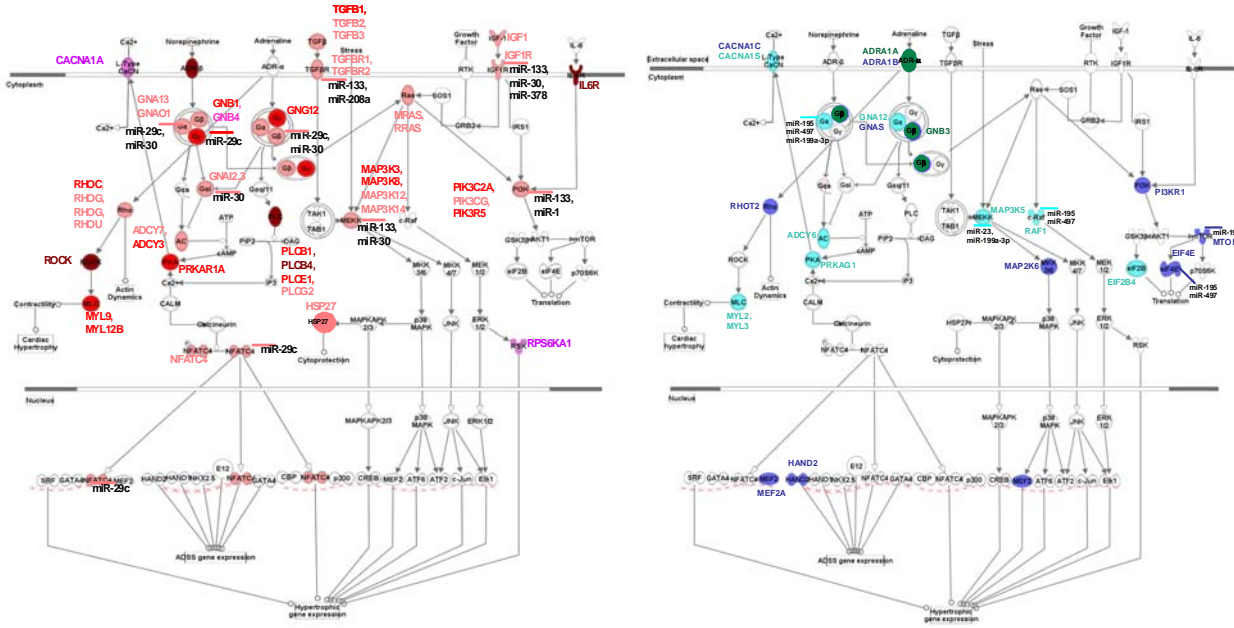
6 months β_1 Gly389 down-regulated				
Gene Symbol	Disease - General	Geometrical symbol	Color	Disease - Specified
IRX4	Cardiovascular disease	circle	pink	Cardiovascular Dilation,Cardiovascular Hypertrophy
KLK2	Cardiovascular disease	circle	pink	Cardiovascular Dilation
LPL	Cardiovascular disease	circle	pink	Cardiovascular Dilation,Cardiovascular Dysfunction
MAP3K5	Cardiovascular disease	circle	pink	Cardiovascular Dilation,Cardiovascular Dysfunction,Cardiovascular Hypertrophy,Cardiovascular Fibrosis
TNNI3	Cardiovascular disease	circle	pink	Cardiovascular Dilation,Cardiovascular Dysfunction,Heart Failure
AGTR1	Cardiovascular disease	circle	pink	Cardiovascular Arrhythmia,Cardiovascular Congestive Cardiovascular Failure,Heart Failure,Cardiovascular Hypertrophy,Cardiovascular Fibrosis
ATP1A2	Cardiovascular disease	circle	pink	Cardiovascular Arrhythmia,Heart Failure
KCNH2	Cardiovascular disease	circle	pink	Cardiovascular Arrhythmia,Tachycardia

KCNIP2	Cardiovascular disease	circle	pink	Cardiovascular Arrhythmia
KCNJ11	Cardiovascular disease	circle	pink	Cardiovascular Arrhythmia,Cardiovascular Stenosis
KCNJ12	Cardiovascular disease	circle	pink	Cardiovascular Arrhythmia,Tachycardia,Cardiovascular Congestive Cardiovascular Failure,Heart Failure
KCNK3	Cardiovascular disease	circle	pink	Cardiovascular Arrhythmia,Tachycardia,Cardiovascular Congestive Cardiovascular Failure,Heart Failure
MAOB	Cardiovascular disease	circle	pink	Cardiovascular Arrhythmia,Tachycardia
GSK3A	Cardiovascular disease	circle	pink	Cardiovascular Dysfunction
SPEG	Cardiovascular disease	circle	pink	Cardiovascular Enlargement
ABCC8	Cardiovascular disease	circle	pink	Cardiovascular Stenosis
MLXIPL	Cardiovascular disease	circle	pink	Cardiovascular Stenosis
CACNA1S	Cardiovascular disease	circle	pink	Cardiovascular Congestive Cardiovascular Failure,Heart Failure
NR3C2	Cardiovascular disease	circle	pink	Cardiovascular Congestive Cardiovascular Failure,Heart Failure,Cardiovascular Hypertrophy,Cardiovascular Fibrosis
DTNA	Cardiovascular disease	circle	pink	Congenital Heart Anomaly
NOTCH1	Cardiovascular disease	circle	pink	Congenital Heart Anomaly
PPIF	Cardiovascular disease	circle	pink	Heart Failure,Cardiovascular Necrosis/Cell Death
FABP3	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
FHL2	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
HOPX	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy,Cardiovascular Fibrosis
LEPR	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
PFKFB1	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
SLC2A4	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
TRIM63	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
TRPC1	Cardiovascular disease	circle	pink	Cardiovascular Hypertrophy
GAB1	Cardiovascular disease	circle	pink	Heart Failure
MYL2	Cardiovascular disease	circle	pink	Heart Failure
RAF1	complex	Rounded square	gray	Cardiovascular Dilatation,Cardiovascular Dysfunction,Heart Failure,Cardiovascular Fibrosis,Pulmonary Hypertension
SOD2	complex	Rounded square	gray	Cardiovascular Dilatation,Cardiovascular Enlargement,Hepatic Steatosis,Hepatic Hepatitis,Hepatic Steatohepatitis
ADRA1A	complex	Rounded square	gray	Cardiovascular Arrhythmia,Tachycardia,Cardiovascular Congestive Cardiovascular Failure,Heart Failure,Congenital Heart Anomaly,Cardiovascular Necrosis/Cell Death,Pulmonary Hypertension
ADRA1D	complex	Rounded square	gray	Cardiovascular Arrhythmia,Tachycardia,Cardiovascular Congestive Cardiovascular Failure,Heart Failure,Congenital Heart Anomaly,Pulmonary Hypertension
THRA	complex	Rounded square	gray	Cardiovascular Arrhythmia,Tachycardia,Cardiovascular Congestive Cardiovascular Failure,Heart Failure,Hepatic Steatosis
PPARA	complex	Rounded square	gray	Cardiovascular Dysfunction,Hepatic Steatosis,Hepatic Hepatitis,Hepatic Steatohepatitis
PDE3A	complex	Rounded square	gray	Cardiovascular Congestive Cardiovascular Failure,Heart Failure,Hepatic Steatosis,Hepatic Hepatitis,Hepatic Steatohepatitis
HADHA	complex	Rounded square	gray	Cardiovascular Necrosis/Cell Death,Hepatic Steatosis
DGAT2	complex	Rounded square	gray	Heart Failure,Hepatic Steatosis
PDE11A	complex	Rounded square	gray	Heart Failure,Hepatic Steatosis,Pulmonary Hypertension,Hepatic Hepatitis,Hepatic Steatohepatitis
PAH	Hypertension	circle	olive	Pulmonary Hypertension
CTLA4	Renal disease	circle	purple	Renal Atrophy

EGF	Renal disease	circle	purple	Renal Atrophy
ADK	Hepatic disease	circle	blue	Hepatic Steatosis
GPT	Hepatic disease	circle	blue	Hepatic Steatosis,Hepatic Hepatitis,Hepatic Steatohepatitis
INSIG1	Hepatic disease	circle	blue	Hepatic Steatosis
SLC25A13	Hepatic disease	circle	blue	Hepatic Steatosis



A ■ Up-regulated in Arg and Gly ■ Up-regulated in Arg only ■ Up-regulated in Gly only ■ Down-regulated in Arg only ■ Down-regulated in Arg and Gly ■ Down-regulated in Arg and Gly 3 and 6 months



■ Up-regulated in Arg and Gly ■ Up-regulated in Arg only ■ Up-regulated in Gly only ■ Up-regulated in Arg and Gly 3 and 6 months ■ Down-regulated in Arg only ■ Down-regulated in Arg and Gly ■ Down-regulated in Arg and Gly 3 and 6 months

B

Figure S2: Canonical pathway analysis of differentially regulated genes. Genes up- or down-regulated in β_1 -Arg389 or β_1 -Gly389 transgenic animals were subjected to Ingenuity Pathway analysis. The apoptosis (A) and cardiac hypertrophy (B) pathways are shown. Genes are color coded according to regulation in Arg or Gly only, in both animals at 6-8 months old or in all ages and genotypes. miRNAs that can potentially regulate specific genes are annotated in the Figure.

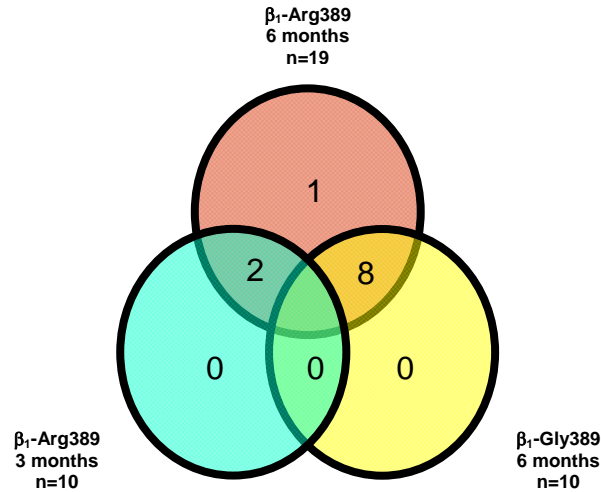


Figure S3: Distribution of collagen genes differentially regulated in 3 and 6 months β_1 -Arg389 and 6 months β_1 -Gly389 transgenic animals. No collagen genes are up-regulated in 3 months β_1 -Gly389 animals and this time point is not represented in the diagram. Numbers in each partition represent the number of commonly or uniquely regulated genes in each animal model. The size of each partition is not to scale. The total number of regulated genes is defined on the left and right side of the diagrams.

Table S6: Ingenuity Pathway analysis. Biological function of potential miRNAs-target mRNAs regulated in each transgenic model was subjected to Ingenuity Pathway analysis and is described in the table.

Gene Annotation	Down-Reg Arg	Down-Reg Gly	Up-Reg Arg	Up-Reg Gly
Metabolic Diseases	10	7	102	77
Cellular Growth and Proliferation	34	7	108	74
Lipid Metabolism (including fatty acid)	16	13	6	10
Gene Expression	36	12	26	1
Molecular Transport	20	15	5	17
Cell Signaling	2	6	15	20
Cardiovascular Disease	44	29	91	20
Inflammatory Disease	19	28	98	70
Inflammatory Response	4	4	20	20
Apoptosis	26	2	90	62

Table S7: Putative mRNA targets for regulated miRNAs – 3 months

ARG 3 months		GLY 3 months		ARG 3 months	
Up-regulated mRNAs	Down-regulated miRNAs	Up-regulated mRNAs	Down-regulated miRNAs	Down-regulated mRNAs	Up-regulated miRNAs
EDEM1	mir-133a , mir-133b	PTPRD	mir-133a , mir-133b	ARHGAP26 , KIAA0621	mir-449a
ADRB1	let-7b , let-7f	FAM46A	mir-133a , mir-133b	DAAM1 , KIAA0666	mir-449a
COL1A2	let-7b , let-7f	PREX1	mir-133a , mir-133b	FRAG1 , DKFZp434C192 , PGAP2	mir-449a
BCAT1	let-7b , let-7f	FURIN	mir-133a , mir-133b	PTPRM	mir-449a
MMP14	mir-133a , mir-133b	NLE1	mir-133a , mir-133b	ZCCHC17	mir-449a
EIF4A1	mir-133a , mir-133b	DUSP5	mir-133a , mir-133b	LG11	mir-449a
CDKN1A	let-7b , let-7f			IGSF1	mir-449a
TRAM2	mir-133a , mir-133b			AK023401 , LRRC55	mir-449a
SORBS3	mir-133a , mir-133b			DKFZp666A071 , SLC44A2	mir-449a
GALNT2	let-7b , let-7f			ACSL1	mir-449a
CD47	mir-133a , mir-133b			SOX4	mir-449a
FBN1	mir-133a , mir-133b			ATP1A2 , KIAA0778	mir-449a
GLT8D3	let-7b , let-7f , mir-133a , mir-133b			RIC8B	mir-449a
CLCN5	let-7b , let-7f			PKIA	mir-449a
MSN , MSN/ALK fusion	mir-133a , mir-133b				
CDV3	let-7b , let-7f				
CERCAM	let-7b , let-7f				
COL4A1	let-7b , let-7f				
GATM	let-7b , let-7f				
COL1A1	let-7b , let-7f , mir-133a , mir-133b				
MYO1F variant protein , MYO1F	let-7b , let-7f				
DKFZp761M1816 , STXBP6	mir-133a , mir-133b				
p62 , IGF2BP2	let-7b , let-7f				
ATP8B4 , KIAA1939	let-7b , let-7f				
DTX4	let-7b , let-7f				
GRPEL2	let-7b , let-7f				
LOXL4	let-7b , let-7f , mir-133a , mir-133b				
OSMR	let-7b , let-7f				
NID2	let-7b , let-7f				
GALC	let-7b , let-7f				
GOLGA4	let-7b , let-7f				
COL4A2	let-7b , let-7f				
RTN4RL1	mir-133a , mir-133b				
PGRMC1	let-7b , let-7f				
PTPRD	let-7b , let-7f , mir-133a , mir-133b				
COL3A1	let-7b , let-7f				
DAGLA	let-7b , let-7f				
FAM46A	mir-133a , mir-133b				
SLC16A14	let-7b , let-7f				
DYRK2	let-7b , let-7f				
ADRBK2	let-7b , let-7f				

Table S7: Putative mRNA targets for down-regulated miRNAs – 6 months

Arg 6 months		GLY 6 months	
Up-regulated mRNAs	Down-regulated miRNAs	Up-regulated mRNAs	Down-regulated miRNAs
MYH10 , MYH10 variant protein	mir-208a , mir-30b , mir-30e	MYH10 , MYH10 variant protein	mir-208b , mir-208a , mir-30b , mir-30e
SKI	mir-29c	SKI	mir-29c
SNX1	mir-133a , mir-30b , mir-133b , mir-30e	SNX1	mir-133a , mir-30b , mir-133b , mir-30e
TBC1D2B	mir-30b , mir-30e	DKFZp686A01127 , BNC2	mir-208b , mir-208a , mir-30b , mir-30e
DKFZp686A01127 , BNC2	mir-208a , mir-30b , mir-30e	HNRNPF	mir-29c
HNRNPF	mir-29c	SHISA5 , DKFZp566M051	mir-133a , mir-133b
SHISA5 , DKFZp566M051	mir-133a , mir-133b	LCP1	mir-30b , mir-30e
LCP1	mir-30b , mir-30e	ADRB1	mir-30b , mir-30e
PIAS3 , DKFZp727A051	mir-1	SMAD1 , BC069804	mir-30b , mir-30e
ADRB1	mir-30b , mir-30e	RAB23 , hRAB-23	mir-30b , mir-30e
SMAD1 , BC069804	mir-30b , mir-30e	HIP1	mir-29c
RAB23 , hRAB-23	mir-30b , mir-30e	CACHD1	mir-30b , mir-30e
TTYH3	mir-133a , mir-133b	SGMS2	mir-133a , mir-133b
RAPH1	mir-133a , mir-30b , mir-29c , mir-133b , mir-30e	GALNTL1	mir-133a , mir-133b
HIP1	mir-29c	MMP14	mir-133a , mir-133b
TRIM37	mir-29c	MAF	mir-30b , mir-30e
CACHD1	mir-30b , mir-30e	CNN3	mir-1
SGMS2	mir-133a , mir-133b	HCN1	mir-1
EPHA7	mir-133a , mir-133b	DKFZp564B0982 , CEP170	mir-30b , mir-30e
GALNTL1	mir-133a , mir-133b	HSP90B1	mir-1
DCUN1D3	mir-30b , mir-30e	ZFP36L2	mir-1
MMP14	mir-133a , mir-133b	NID1	mir-30b , mir-29c , mir-30e
MAF	mir-30b , mir-30e	EIF4A1	mir-133a , mir-133b
CNN3	mir-1	PICALM variant protein , PICALM	mir-30b , mir-1 , mir-30e
CORO1C	mir-133a , mir-1 , mir-133b	FAM3C	mir-29c
DKFZp564B0982 , CEP170	mir-30b , mir-30e	RAB8A	mir-30b , mir-30e
CTHRC1	mir-30b , mir-30e	RBMS3	mir-378
HSP90B1	mir-1	MARK1 , KIAA1477	mir-30b , mir-30e
CD276	mir-29c	TRAM2	mir-133a , mir-30b , mir-29c , mir-133b , mir-30e
NFAT5 , KIAA0827	mir-133a , mir-30b , mir-29c , mir-1 , mir-133b , mir-30e	ADAM9	mir-30b , mir-30e
ZFP36L2	mir-1	TNS3	mir-1
NID1	mir-30b , mir-29c , mir-30e	MAFB	mir-29c
EIF4A1	mir-133a , mir-133b	BAIAP2	mir-29c , mir-1
PICALM variant protein , PICALM	mir-30b , mir-1 , mir-30e	CD47	mir-133a , mir-133b
FAM3C	mir-29c	SLC6A9	mir-30b , mir-30e
hGli2 , GLI2 , Gli2	mir-30b , mir-30e	PTPN1	mir-29c , mir-1
RAB8A	mir-30b , mir-30e	CPNE8	mir-30b , mir-30e
RBMS3	mir-378	DOCK7 , KIAA1771	mir-30b , mir-30e
MARK1 , KIAA1477	mir-30b , mir-30e	FBN1	mir-133a , mir-29c , mir-133b
TRAM2	mir-133a , mir-30b , mir-29c , mir-133b , mir-30e	PGAM1	mir-1
ADAM9	mir-30b , mir-30e	CAMK1D	mir-29c
RUNX2	mir-30b , mir-30e	TRPS1	mir-30b , mir-1 , mir-30e
TNS3	mir-1	FYB	mir-1
SNX29	mir-30b , mir-30e	DSEL	mir-30b , mir-30e
BAIAP2	mir-29c , mir-1	ELN	mir-29c
CD47	mir-133a , mir-133b	GAS7	mir-29c
SLC6A9	mir-30b , mir-30e	MMP2	mir-29c
KIAA1550 , PLXNA4	mir-29c , mir-1	AQP4	mir-29c
PTPN1	mir-29c , mir-1	AK124386 , TMEM110	mir-133a , mir-133b
CPNE8	mir-30b , mir-30e	ANXA4	mir-1
PGM3 , HsAGM1	mir-30b , mir-30e	RAP1B , LOC643752	mir-30b , mir-30e
COL5A3	mir-133a , mir-29c , mir-133b	MSN , MSN/ALK fusion	mir-133a , mir-133b
DOCK7 , KIAA1771	mir-30b , mir-30e	SOX5 , L-SOX5	mir-208b , mir-208a
FBN1	mir-133a , mir-29c , mir-133b	HNRNPA3	mir-30b , mir-1 , mir-30e
SLC43A2	mir-29c	NAB1	mir-1
PGAM1	mir-1	TWF1	mir-30b , mir-1 , mir-30e
CAMK1D	mir-29c	COL5A1	mir-29c

TRPS1	mir-30b , mir-1 , mir-30e	SERP1	mir-1
CSGALNACT2	mir-29c	FZD7	mir-1
H3F3B	mir-208a , mir-378 , mir-1	SUPT16H	mir-133a , mir-133b
FYB	mir-1	LASS6	mir-30b , mir-30e
DSEL	mir-30b , mir-30e	PDGFC	mir-29c
ELN	mir-29c	FAF2	mir-133a , mir-30b , mir-1 , mir-133b , mir-30e
GAS7	mir-29c	ADAMTS10	mir-29c
THBS1	mir-1	C1QTNF6 , CTRP6	mir-29c
MMP2	mir-29c	DUSP5	mir-133a , mir-133b
ANXA4	mir-1	ZNF230 , RNF141	mir-29c , mir-1
RAP1B , LOC643752	mir-30b , mir-30e	SLC30A4	mir-30b , mir-30e
ZC3H7A	mir-133a , mir-133b	IFI30	mir-29c
MSN , MSN/ALK fusion	mir-133a , mir-133b	TCF12 , DKFZp451F163	mir-208b , mir-208a
SOX5 , L-SOX5	mir-208a	MRAS	mir-1
HNRNPA3	mir-30b , mir-1 , mir-30e	CAP1	mir-133a , mir-1 , mir-133b
NAB1	mir-1	CAMK2N1 , CaMKIINalpha	mir-30b , mir-30e
TWF1	mir-30b , mir-1 , mir-30e	ABCA1	mir-1
COL5A1	mir-29c	TBETAR1 , TGFBR1	mir-208b , mir-208a , mir-133a , mir-133b
COL4A1	mir-29c	PIP4K2A	mir-30b , mir-30e
CBL	mir-378 , mir-1	KIF5B	mir-208b , mir-208a
SERP1	mir-1	RRBP1 , KIAA1398	mir-1
FZD7	mir-1	MYR12 , MYO5A	mir-30b , mir-30e
LASS6	mir-30b , mir-30e	PGM1	mir-30b , mir-30e
SPRY1	mir-29c	LEPR , LEPROT	mir-30b , mir-30e
SLC1A2	mir-30b , mir-29c , mir-30e	ELMO1	mir-133a , mir-30b , mir-133b , mir-30e
PDGFC	mir-29c	NFATC4	mir-29c
VAV3 , VAV-3	mir-208a , mir-30b , mir-30e	MORF4L2	mir-29c
SLC2A13 , Hmit	mir-1	ACACA	mir-29c
M25785 , PDGFRB , NIN/PDGFRB fusion	mir-30b , mir-29c , mir-30e	KIRREL	mir-29c
ADAMTS10	mir-29c	LPP	mir-30b , mir-30e
C1QTNF6 , CTRP6	mir-29c	DKFZp686D23123 , COL6A3	mir-29c
QSER1	mir-378	CNOT6	mir-30b , mir-29c , mir-30e
RIC3	mir-29c	ATP6V1A	mir-29c , mir-1
ZNF230 , RNF141	mir-29c , mir-1	BICC1	mir-133a , mir-133b
SLC30A4	mir-30b , mir-30e	PALM2	mir-30b , mir-29c , mir-30e
FAM105B	mir-29c	MAN1A2	mir-133a , mir-30b , mir-133b , mir-30e
PDE5A	mir-30b , mir-30e	DIO2	mir-30b , mir-29c , mir-30e
IFI30	mir-29c	TSPAN17	mir-378
TCF12 , DKFZp451F163	mir-208a	PPAPDC1B	mir-30b , mir-30e
MRAS	mir-1	JK , TAOK3	mir-1
CAP1	mir-133a , mir-1 , mir-133b	SNAI1	mir-30b , mir-30e
CAMK2N1 , CaMKIINalpha	mir-30b , mir-30e	GPR124 , KIAA1531	mir-30b , mir-30e
ABCA1	mir-1	IGnT2 , GCNT2	mir-30b , mir-30e
HIVEP1	mir-30b , mir-30e	GMFB	mir-29c , mir-1
TBETAR1 , TGFBR1	mir-208a , mir-133a , mir-133b	PRELP	mir-29c
PIP4K2A	mir-30b , mir-30e	GNB4	mir-133a , mir-29c , mir-133b
KIF5B	mir-208a	BMP2	mir-378
RRBP1 , KIAA1398	mir-1	GTF2H1	mir-30b , mir-30e
MYR12 , MYO5A	mir-30b , mir-30e	PGD	mir-1
PGM1	mir-30b , mir-30e	KIAA0877 , AJ011981 , DPY19L1	mir-30b , mir-30e
LEPR , LEPROT	mir-30b , mir-30e	CYLD	mir-133a , mir-133b
ELMO1	mir-133a , mir-30b , mir-133b , mir-30e	COL4A2	mir-29c
DTX4	mir-29c	PFTK1 , KIAA0834	mir-208b , mir-208a , mir-1
NFATC4	mir-29c	TIMP2	mir-30b , mir-30e
ZMIZ1	mir-29c	AKAP13 , c-lbc	mir-29c
MORF4L2	mir-29c	DAP	mir-1
PVRL1	mir-29c	FNDC3A , KIAA0970	mir-208b , mir-208a , mir-30b , mir-1 , mir-30e
ACACA	mir-29c	Nbla10230/alpha-L-fucosidase , FUCA1	mir-30b , mir-30e
KIRREL	mir-29c	CTGF	mir-133a , mir-133b
MLLT11	mir-29c	CR618817 , SNTB2	mir-30b , mir-29c , mir-30e
LPP	mir-30b , mir-30e	MAPRE1	mir-29c

GNG12	mir-29c	NOTCH2 , N2 , NOTCH2NL	mir-29c
SOX9	mir-30b , mir-1 , mir-30e	NAV1	mir-30b , mir-29c , mir-30e
DKFZp686D23123 , COL6A3	mir-29c	COL4A4	mir-29c
AZIN1	mir-30b , mir-1 , mir-30e	IGFBP5	mir-1
TSPAN9	mir-29c , mir-1	ANXA2	mir-1
HMGCR	mir-1	KIAA0569 , ZEB2	mir-208b , mir-208a , mir-30b , mir-30e
EVI5	mir-30b , mir-30e	ARL4C	mir-30b , mir-30e
AR	mir-30b , mir-30e	ATP8B1	mir-30b , mir-30e
CNOT6	mir-30b , mir-29c , mir-30e	HTRA3	mir-30b , mir-30e
ATP6V1A	mir-29c , mir-1	THBS2	mir-30b , mir-30e
CCND1	mir-1	ITSN1 , DKFZp686J17173 , ITSN	mir-30b , mir-30e
BICC1	mir-133a , mir-133b	DKFZp564O0582 , ATP6AP2	mir-133a , mir-133b
PALM2	mir-30b , mir-29c , mir-30e	SLC38A1	mir-378
SLC5A3	mir-30b , mir-1 , mir-30e	ADRBK2	mir-1
MAN1A2	mir-133a , mir-30b , mir-133b , mir-30e	CAPZA1	mir-30b , mir-30e
DIO2	mir-30b , mir-29c , mir-30e	U48725 , U48729 , EGFR	mir-133a , mir-133b
TSPAN17	mir-378	RAH14 , KIAA1334	mir-30b , mir-30e
PPAPDC1B	mir-30b , mir-30e	GFPT2	mir-30b , mir-30e
JK1 , TAOK3	mir-1	ITPK1	mir-30b , mir-30e
SNAI1	mir-30b , mir-30e	UNC13B variant protein , UNC13B	mir-29c
EIF5A2	mir-30b , mir-30e	ABI1	mir-208b , mir-208a
CALU	mir-30b , mir-30e	COL5A2	mir-29c
MTMR12	mir-1	WIPF1	mir-30b , mir-30e
GPR124 , KIAA1531	mir-30b , mir-30e	ATP8B2	mir-30b , mir-30e
AKT3 , BC019085	mir-29c	TLL7	mir-30b , mir-30e
KIAA0517 , TRIM2	mir-1	KTELC1	mir-30b , mir-30e
DLG5 , KIAA0583	mir-30b , mir-30e	OTUB2	mir-29c
POLE3	mir-29c	TXNDC5	mir-133a , mir-30b , mir-133b , mir-30e
KIAA0308 , CHD9	mir-208a	LOC647099 , RPL23A	mir-378
IGNT2 , GCNT2	mir-30b , mir-30e	EDEM1	mir-133a , mir-133b
GMBF	mir-29c , mir-1	TIAM1	mir-29c
LHFPL2	mir-30b , mir-30e	AML1 , RUNX1 , AML1/AMP19 fusion	mir-30b , mir-30e
PRELP	mir-29c	PDCD4	mir-208b , mir-208a , mir-1
PLEKHG2	mir-378	robo1 , ROBO1	mir-29c
ZCCHC24	mir-30b , mir-30e	ARID5B	mir-30b , mir-30e
hNedd5 , SEPT2	mir-1	ARRDC4	mir-29c
MIB1	mir-30b , mir-29c , mir-30e	KCNN3	mir-208b , mir-208a
BMP2	mir-378	COL1A2	mir-29c
GTF2H1	mir-30b , mir-30e	STX2	mir-30b , mir-30e
NT5E	mir-30b , mir-30e	ITGA11	mir-29c
PGD	mir-1	SNX10	mir-30b , mir-30e
KIAA0877 , AJ011981 , DPY19L1	mir-30b , mir-30e	LYST	mir-30b , mir-30e
CYLD	mir-133a , mir-133b	PFKFB3 , IPFK-2	mir-133a , mir-133b
COL4A2	mir-29c	ACTN1	mir-30b , mir-30e
SLC16A3	mir-1	DKFZp727A181 , SRXN1	mir-1
RASSF4 , DKFZp667E1116	mir-30b , mir-30e	NR4A3	mir-1
PFTK1 , KIAA0834	mir-208a , mir-1	CRISPLD1	mir-29c
TIMP2	mir-30b , mir-30e	ATP2B4	mir-29c
AKAP13 , c-lbc	mir-29c	DNAJB11	mir-29c
PLEKHO2	mir-30b , mir-1 , mir-30e	GLIS2	mir-29c , mir-1
SMAP1	mir-30b , mir-1 , mir-30e	SLC44A1	mir-1
DAP	mir-1	MICAL1	mir-30b , mir-30e
FNDC3A , KIAA0970	mir-208a , mir-30b , mir-1 , mir-30e	FSTL1	mir-29c
Nbla10230/alpha-L-fucosidase , FUCA1	mir-30b , mir-30e	SH3RF3	mir-29c
ACVR1	mir-30b , mir-30e	CKAP4	mir-133a , mir-133b
DDEF2	mir-29c	ABHD2	mir-30b , mir-1 , mir-30e
CTGF	mir-133a , mir-133b	NMT2	mir-1
CR618817 , SNTB2	mir-30b , mir-29c , mir-30e	KIAA1258 , GDA	mir-30b , mir-30e
SFXN1	mir-30b , mir-30e	WDR44	mir-30b , mir-30e
MAPRE1	mir-29c	VAT1	mir-133a , mir-30b , mir-1 , mir-133b , mir-30e

NOTCH2 , N2 , NOTCH2NL	mir-29c	CDC42SE1	mir-1
NAV1	mir-30b , mir-29c , mir-30e	hFKHLB , FOXP1	mir-133a , mir-1 , mir-133b
COL4A4	mir-29c	SPARC	mir-29c
IGFBP5	mir-1	ITGA5	mir-30b , mir-30e
RAB5C	mir-208a , mir-133a , mir-133b	RBPJ	mir-133a , mir-133b
HBEGF	mir-29c	CX3CL1	mir-29c
FAM46A	mir-133a , mir-30b , mir-133b , mir-30e	LDLR	mir-30b , mir-30e
ANXA2	mir-1	KLF10	mir-30b , mir-30e
KIAA0569 , ZEB2	mir-208a , mir-30b , mir-30e	CLCN5	mir-29c
ARL4C	mir-30b , mir-30e	KIAA0709 , MRC2	mir-133a , mir-133b
ATP8B1	mir-30b , mir-30e	DKFZp434I0916 , SULF1 , KIAA1077	mir-378 , mir-1
HTRA3	mir-30b , mir-30e	SEC23B	mir-1
THBS2	mir-30b , mir-30e	SLC7A11	mir-30b , mir-30e
SRGAP3 , KIAA0411	mir-133a , mir-30b , mir-133b , mir-30e	MFAP2	mir-29c
SRI	mir-1	PMP22	mir-29c
ITSN1 , DKFZp686J17173 , ITSN	mir-30b , mir-30e	SEL-OB , SVEP1	mir-29c
DKFZp564O0582 , ATP6AP2	mir-133a , mir-133b	ARF3	mir-1
SLC38A1	mir-378	GATM	mir-30b , mir-30e
CLTC	mir-1	GAB2	mir-29c
CAPZA1	mir-30b , mir-30e	COL1A1	mir-133a , mir-29c , mir-133b
BCL2	mir-30b , mir-30e	B4GALT5	mir-30b , mir-30e
U48725 , U48729 , EGFR	mir-133a , mir-133b	AFF2	mir-29c
PIK3C2A	mir-133a , mir-1 , mir-133b	ADAMTS5	mir-133a , mir-30b , mir-29c , mir-133b , mir-30e
PI15	mir-29c	KIAA1072 , PPM1E	mir-29c
RAI14 , KIAA1334	mir-30b , mir-30e	ABI3BP	mir-30b , mir-30e
GFPT2	mir-30b , mir-30e	ODZ3	mir-30b , mir-30e
ITPK1	mir-30b , mir-30e	PHF21A , KIAA1696	mir-29c
UNC13B variant protein , UNC13B	mir-29c	ape , CCDC88A , KIAA1212	mir-29c
RAB34	mir-133a , mir-133b	EPS15	mir-133a , mir-29c , mir-133b
ABII	mir-208a	VKORC1	mir-133a , mir-133b
MFAP3	mir-29c	COL16A1	mir-29c
HN1 , ARM2	mir-29c	TMEM183B , TMEM183A , CR591805	mir-29c
MAP3K3	mir-133a , mir-133b	PON2	mir-30b , mir-30e
COL5A2	mir-29c	SH3BGRL3	mir-1
WIPF1	mir-30b , mir-30e	TUBB2A	mir-29c
ATP8B2	mir-30b , mir-30e	COL4A5	mir-29c
TTLL7	mir-30b , mir-30e	KIAA0746	mir-30b , mir-30e
CR601042 , ARHGDI1A	mir-133a , mir-133b	LHFP	mir-133a , mir-133b
KIAA1160 , RAB43 , ISY1	mir-1	GLT8D4	mir-29c
KTELC1	mir-30b , mir-30e	LOXL2	mir-29c
CUL2	mir-30b , mir-30e	LOXL4	mir-133a , mir-29c , mir-133b
OTUB2	mir-29c	NCAM1	mir-30b , mir-30e
ADAM19	mir-30b , mir-29c , mir-30e	STXBP1	mir-30b , mir-30e
USP6NL	mir-29c	MAP3K12	mir-30b , mir-30e
TXNDC5	mir-133a , mir-30b , mir-133b , mir-30e	SPTLC2	mir-133a , mir-30b , mir-29c , mir-133b , mir-30e
LOC647099 , RPL23A	mir-378	CPEB1	mir-1
EDEM1	mir-133a , mir-133b	RPS6KA3	mir-29c
TIAM1	mir-29c	MYH9	mir-133a , mir-133b
AML1 , RUNX1 , AML1/AMP19 fusion	mir-30b , mir-30e	DACT1	mir-378 , mir-30b , mir-30e
PDCD4	mir-208a , mir-1	FGFR1 , MST123	mir-133a , mir-133b
robo1 , ROBO1	mir-29c	DKFZp313F1012 , SEC61A1	mir-1
ARID5B	mir-30b , mir-30e	P4HA1	mir-30b , mir-30e
KCNN3	mir-208a	GNA13	mir-30b , mir-29c , mir-30e
COL1A2	mir-29c	TTC8 , DKFZp434K1118	mir-30b , mir-30e
STX2	mir-30b , mir-30e	FARP1	mir-133a , mir-133b
ITGA11	mir-29c	EMP1	mir-29c
RASGEF1A	mir-30b , mir-30e	ETV6	mir-29c
SNX10	mir-30b , mir-30e	PIK3R2	mir-30b , mir-30e
LYST	mir-30b , mir-30e	CBLB , Nbla00127	mir-30b , mir-30e
PFKFB3 , IPFK-2	mir-133a , mir-133b	TNFRSF1A	mir-29c
ACTN1	mir-30b , mir-30e	GLCCI1	mir-30b , mir-1 , mir-30e

NKTR , DKFZp686J06106 , DKFZp686N24126	mir-30b , mir-29c , mir-30e	FNDC3B , fad104	mir-30b , mir-1 , mir-30e
PKNOX2	mir-30b , mir-29c , mir-30e	IGF1R	mir-133a , mir-378 , mir-30b , mir-133b , mir-30e
DKFZp727A181 , SRXN1	mir-1	KIAA1482 , STIM2	mir-30b , mir-30e
CRISPLD1	mir-29c	SLC41A2	mir-30b , mir-30e
ATP2B4	mir-29c	CAMKK2	mir-30b , mir-29c , mir-30e
DNAJB11	mir-29c	LAMC1	mir-29c
GLIS2	mir-29c , mir-1	XYLT1	mir-133a , mir-133b
SLC44A1	mir-1	AP3S1	mir-30b , mir-30e
MICAL1	mir-30b , mir-30e	YEA4 , SLC35B4	mir-30b , mir-1 , mir-30e
PEL1 , AK026714	mir-30b , mir-30e	SH3PXD2B	mir-133a , mir-29c , mir-1 , mir-133b
FSTL1	mir-29c	AK095546 , TPM4	mir-133a , mir-133b
SH3RF3	mir-29c	ENAH	mir-208b , mir-208a , mir-378 , mir-30b , mir-29c , mir-30e
SORBS3	mir-133a , mir-133b	KIAA0534 , ATRNL1	mir-30b , mir-30e
GAN	mir-30b , mir-1 , mir-30e	RNF213 , KIAA1554	mir-1
CKAP4	mir-133a , mir-133b	COL15A1	mir-29c
ABHD2	mir-30b , mir-1 , mir-30e	SERPINE1 , BX649164 , BC005927	mir-30b , mir-30e
NMT2	mir-1	PIIB	mir-1
NEGR1	mir-30b , mir-29c , mir-30e	COL3A1	mir-29c
TM9SF3	mir-133a , mir-133b	GNAI2 , WUGSC:H_LUCA15.1	mir-30b , mir-30e
KIAA1258 , GDA	mir-30b , mir-30e	ATP7A	mir-29c
KIAA0449 , KIF21B	mir-30b , mir-30e	SCRN1	mir-208b , mir-208a
WDR44	mir-30b , mir-30e	MARCKS	mir-30b , mir-1 , mir-30e
VAT1	mir-133a , mir-30b , mir-1 , mir-133b , mir-30e	PTBP1	mir-133a , mir-1 , mir-133b
CDC42SE1	mir-1	SLC7A8 , hLAT2	mir-133a , mir-133b
HMG3	mir-29c	DBNL , CMAP	mir-133a , mir-133b
hFKHLB , FOXP1	mir-133a , mir-1 , mir-133b	CYB561	mir-30b , mir-30e
SPARC	mir-29c	EEF1A1L14 , EEF1A1	mir-133a , mir-133b
ITGA5	mir-30b , mir-30e	SFRP1	mir-1
DDAH1	mir-30b , mir-30e	TAGLN2	mir-133a , mir-1 , mir-133b
RBPJ	mir-133a , mir-133b	AX747733 , CTTNBP2NL , DKFZp547A023	mir-1
CX3CL1	mir-29c	AMMECR1	mir-29c
LDLR	mir-30b , mir-30e	ARSB	mir-29c
CLCN5	mir-29c	CASP3	mir-30b , mir-30e
FLJ00147 , USP47	mir-30b , mir-30e	DPYSL2	mir-30b , mir-29c , mir-30e
KIAA0709 , MRC2	mir-133a , mir-133b	STK38L , KIAA0965	mir-29c
DKFZp434I0916 , SULF1 , KIAA1077	mir-378 , mir-1	PTGFRN	mir-30b , mir-30e
SEC23B	mir-1	UST	mir-30b , mir-1 , mir-30e
SLC7A11	mir-30b , mir-30e	IL17RD	mir-29c
MFAP2	mir-29c	NAPIL1	mir-208b , mir-208a
CCND2	mir-29c , mir-1	PITPNA	mir-29c
PMP22	mir-29c	SLC39A1	mir-133a , mir-133b
SEL-OB , SVEP1	mir-29c	AFF3 , CR596530	mir-30b , mir-30e
HS2ST1	mir-133a , mir-133b	KIF3B	mir-29c
KIF3C	mir-133a , mir-30b , mir-133b , mir-30e	PTPRZ1	mir-133a , mir-133b
SPRED1	mir-1	FRZB	mir-30b , mir-30e
REPS2	mir-29c	RAB4B	mir-30b , mir-30e
ARF3	mir-1		
GATM	mir-30b , mir-30e		
GAB2	mir-29c		
COL1A1	mir-133a , mir-29c , mir-133b		
EML4	mir-208a , mir-30b , mir-29c , mir-1 , mir-30e		
PRKAR1A	mir-30b , mir-30e		
B4GALT5	mir-30b , mir-30e		
AFF2	mir-29c		
CNN2	mir-133a , mir-133b		
B4GALT6	mir-30b , mir-30e		
PTPN13	mir-30b , mir-30e		
ADAMTS5	mir-133a , mir-30b , mir-29c , mir-133b , mir-30e		

LG12	mir-29c		
KIAA1072 , PPM1E	mir-29c		
ABI3BP	mir-30b , mir-30e		
LASS2	mir-133a , mir-1 , mir-133b		
CHSY1	mir-29c		
B3GALNT1	mir-133a , mir-133b		
ODZ3	mir-30b , mir-30e		
PHF21A , KIAA1696	mir-29c		
CSNK1G3	mir-133a , mir-133b		
ape , CCDC88A , KIAA1212	mir-29c		
ERLIN1	mir-30b , mir-30e		
EPS15	mir-133a , mir-29c , mir-133b		
VKORC1	mir-133a , mir-133b		
DKFZp566F223 , TUBB2B	mir-29c		
KIF3A	mir-30b , mir-30e		
TBL1X	mir-133a , mir-30b , mir-133b , mir-30e		
COL16A1	mir-29c		
TMEM183B , TMEM183A , CR591805	mir-29c		
PON2	mir-30b , mir-30e		
SH3BGRL3	mir-1		
ROD1	mir-133a , mir-30b , mir-29c , mir-133b , mir-30e		
TUBB2A	mir-29c		
COL4A5	mir-29c		
MYO9B variant protein , MYO9B	mir-133a , mir-133b		
KIAA0746	mir-30b , mir-30e		
LHFP	mir-133a , mir-133b		
PPP1R9B	mir-133a , mir-133b		
NAALADL2	mir-30b , mir-1 , mir-30e		
GLT8D4	mir-29c		
HLTF	mir-133a , mir-133b		
SNX6	mir-30b , mir-30e		
CDK6	mir-29c , mir-1		
TULP4	mir-133a , mir-30b , mir-133b , mir-30e		
LOXL2	mir-29c		
RAG1AP1	mir-133a , mir-133b		
NUAK1	mir-30b , mir-30e		
WDFY1	mir-29c		
LOXL4	mir-133a , mir-29c , mir-133b		
ANP32B	mir-1		
NCAM1	mir-30b , mir-30e		
STXBP1	mir-30b , mir-30e		
MST023 , KIAA0833 , CAMTA1	mir-30b , mir-29c , mir-30e		
MAP3K12	mir-30b , mir-30e		
PP187 , FBN2	mir-133a , mir-133b		
SPTLC2	mir-133a , mir-30b , mir-29c , mir-133b , mir-30e		
CPEB1	mir-1		
RPS6KA3	mir-29c		
MYH9	mir-133a , mir-133b		
DACT1	mir-378 , mir-30b , mir-30e		
FGFR1 , MST123	mir-133a , mir-133b		
DKFZp313F1012 , SEC61A1	mir-1		
P4HA1	mir-30b , mir-30e		
GNA13	mir-30b , mir-29c , mir-30e		
TTC8 , DKFZp434K1118	mir-30b , mir-30e		
FARP1	mir-133a , mir-133b		
CREB5	mir-133a , mir-29c , mir-1 , mir- 133b		
OK/SW-cl.14 , CALD1	mir-30b , mir-30e		
TNFAIP3	mir-29c		
NEUROD1	mir-378 , mir-30b , mir-30e		
PML	mir-133a , mir-133b		
EMP1	mir-29c		
KCTD10	mir-1		

ETV6	mir-29c		
PIK3R2	mir-30b , mir-30e		
TNFRSF1A	mir-29c		
CTNND1	mir-29c		
TTC9	mir-29c		
GLCC11	mir-30b , mir-1 , mir-30e		
SETBP1	mir-1		
FNDC3B , fad104	mir-30b , mir-1 , mir-30e		
IGF1R	mir-133a , mir-378 , mir-30b , mir-133b , mir-30e		
TMEM49 , DJ087819	mir-1		
KIAA1482 , STIM2	mir-30b , mir-30e		
SLC41A2	mir-30b , mir-30e		
CAMKK2	mir-30b , mir-29c , mir-30e		
LAMC1	mir-29c		
XYLT1	mir-133a , mir-133b		
SLC7A2	mir-133a , mir-1 , mir-133b		
TMEM123	mir-133a , mir-133b		
INTS2	mir-30b , mir-30e		
HIATL1	mir-29c		
AP3S1	mir-30b , mir-30e		
YEA4 , SLC35B4	mir-30b , mir-1 , mir-30e		
SH3PX2B	mir-133a , mir-29c , mir-1 , mir- 133b		
AK095546 , TPM4	mir-133a , mir-133b		
PRKAB2	mir-29c		
ENAH	mir-208a , mir-378 , mir-30b , mir-29c , mir-30e		
ID4	mir-133a , mir-133b		
ELMO2	mir-29c		
xpct , SLC16A2	mir-29c		
KIAA0534 , ATRNL1	mir-30b , mir-30e		
RNF213 , KIAA1554	mir-1		
SH3GL1	mir-1		
COL15A1	mir-29c		
ITGB1	mir-29c		
SERPINE1 , BX649164 , BC005927	mir-30b , mir-30e		
IPO9	mir-378 , mir-1		
PPIB	mir-1		
COL3A1	mir-29c		
PPIC	mir-29c		
GNAI2 , WUGSC:H_LUCA15.1	mir-30b , mir-30e		
POLA1	mir-1		
DAGLA	mir-30b , mir-30e		
ATP7A	mir-29c		
SCRN1	mir-208a		
ADAR	mir-1		
MARCKS	mir-30b , mir-1 , mir-30e		
PTBP1	mir-133a , mir-1 , mir-133b		
SLC7A8 , hLAT2	mir-133a , mir-133b		
DBNL , CMAP	mir-133a , mir-133b		
CYB561	mir-30b , mir-30e		
EEF1A1L14 , EEF1A1	mir-133a , mir-133b		
SFRP1	mir-1		
TAGLN2	mir-133a , mir-1 , mir-133b		
PACS2	mir-208a		
SRGAP2	mir-29c , mir-1		
KCNMA1 , SAKCA	mir-29c		
AX747733 , CTTNBP2NL , DKFZp547A023	mir-1		
AMMECR1	mir-29c		
ARSB	mir-29c		
CASP3	mir-30b , mir-30e		
DPYSL2	mir-30b , mir-29c , mir-30e		
SLC10A7 , DKFZp566M114	mir-208a , mir-1		
STK38L , KIAA0965	mir-29c		
PTGFRN	mir-30b , mir-30e		
UST	mir-30b , mir-1 , mir-30e		

IL17RD	mir-29c		
ABI2 , argBPIB	mir-1		
ORC2L	mir-30b , mir-30e		
NAP1L1	mir-208a		
GAS2L1	mir-1		
UBTD2	mir-29c		
SLC39A1	mir-133a , mir-133b		
AFF3 , CR596530	mir-30b , mir-30e		
KIF3B	mir-29c		
GCLC	mir-133a , mir-30b , mir-1 , mir-133b , mir-30e		
FRZB	mir-30b , mir-30e		
RAB4B	mir-30b , mir-30e		

Table S7: Putative mRNA targets for up-regulated miRNAs - 6 months

Arg 6 months		GLY 6 months	
Down-regulated mRNAs	Up-regulated miRNAs	Down-regulated mRNAs	Up-regulated miRNAs
PPMIK	mir-23b , mir-23a	PPMIK	mir-23b , mir-23a
214K23.2 , FRY , DKFZp686K08123	mir-195 , mir-497	214K23.2 , FRY , DKFZp686K08123	mir-195 , mir-497
MARS2	mir-199a-3p	MARS2	mir-199a-3p
IDH3A , DKFZp761L1216	mir-195 , mir-497	PLAG1	mir-199a-3p , mir-195 , mir-497 , mir-21
SEMA4B	mir-23b , mir-23a	TGIF2	mir-199a-3p , mir-195 , mir-497
PLAG1	mir-199a-3p , mir-195 , mir-497 , mir-21	MED12L	mir-199a-3p
GHR	mir-195 , mir-497	TRPM4B , TRPM4	mir-199a-5p
KIAA1061 , FSTL4	mir-199a-5p	MRPS25	mir-199a-5p
MED12L	mir-199a-3p	SOBP	mir-195 , mir-497
TRPM4B , TRPM4	mir-199a-5p	PPIF	mir-23b , mir-23a , mir-195 , mir-497
PIK3R1	mir-199a-3p , mir-195 , mir-497 , mir-21	KIAA1284 , INTU	mir-23b , mir-23a
pim-3 , PIM3	mir-195 , mir-497	CLCN3	mir-23b , mir-23a
ACOX1	mir-199a-3p , mir-195 , mir-497	ABCD2	mir-21
VEGF41 , VEGFA	mir-199a-5p , mir-195 , mir-497	PTPN3	mir-199a-3p , mir-195 , mir-497
MIRK , DYRK1B	mir-195 , mir-497	SLC35E1	mir-199a-5p
MRPS25	mir-199a-5p	TMEM38B	mir-23b , mir-23a
SEMA3A	mir-199a-3p , mir-195 , mir-497	PKIA	mir-23b , mir-23a
PPP1R9A	mir-199a-5p , mir-199a-3p	SNX16	mir-195 , mir-497
TACC2	mir-199a-3p	KY	mir-195 , mir-497
SOBP	mir-195 , mir-497	RREB1 , Zep-1	mir-23b , mir-199a-3p , mir-23a
PPIF	mir-23b , mir-23a , mir-195 , mir-497	RAF1	mir-195 , mir-497
KIAA1284 , INTU	mir-23b , mir-23a	UBE2D1	mir-23b , mir-23a
CLCN3	mir-23b , mir-23a	ATG4D , APG4-D	mir-199a-5p
ABCD2	mir-21	PANK1	mir-195 , mir-497
PTPN3	mir-199a-3p , mir-195 , mir-497	HMCN1 , FIBL-6	mir-199a-5p
SLC35E1	mir-199a-5p	JPH1	mir-21
DKFZp451C023 , SRL	mir-199a-5p , mir-21	KIAA1734 , UBE2O	mir-23b , mir-23a
TMEM38B	mir-23b , mir-23a	ASRGL1	mir-199a-5p
PKIA	mir-23b , mir-23a	SPAG7	mir-195 , mir-497
SNX16	mir-195 , mir-497	KIAA0977 , COBLL1	mir-195 , mir-497
KY	mir-195 , mir-497	BCL11A	mir-21
CDKN1C	mir-199a-5p	MFHAS1	mir-199a-5p , mir-23b , mir-23a
MSH2	mir-21	TFAM	mir-199a-3p
RREB1 , Zep-1	mir-23b , mir-199a-3p , mir-23a	MYO10	mir-199a-3p
RAF1	mir-195 , mir-497	ARHGAP20	mir-23b , mir-199a-3p , mir-23a , mir-195 , mir-497
PLXNA2	mir-199a-5p , mir-195 , mir-497	SLC9A6	mir-195 , mir-497
UBE2D1	mir-23b , mir-23a	ADD3	mir-199a-5p
ATG4D , APG4-D	mir-199a-5p	FAM59A	mir-195 , mir-497
PANK1	mir-195 , mir-497	GPBP1L1	mir-199a-3p
UBL3	mir-199a-5p , mir-23b , mir-23a , mir-195 , mir-497	EPHA4	mir-21
HMCN1 , FIBL-6	mir-199a-5p	ATPAF1	mir-21
JPH1	mir-21	CSDC2	mir-199a-5p
CTAGE5	mir-23b , mir-23a	ZADH2	mir-195 , mir-497 , mir-21
KIAA1734 , UBE2O	mir-23b , mir-23a	HIGD1A	mir-195 , mir-497
ASRGL1	mir-199a-5p	FOXO4	mir-23b , mir-23a
SPAG7	mir-195 , mir-497	TBC1D4 , KIAA0603	mir-199a-3p
KIAA0977 , COBLL1	mir-195 , mir-497	DUSP8	mir-21
CS	mir-23b , mir-23a	HLF	mir-199a-5p
FBXW7	mir-195 , mir-497	B3GALT2	mir-23b , mir-23a
DIXDC1 , KIAA1735	mir-195 , mir-497	TMEM66 , foap-7	mir-199a-5p
BCL11A	mir-21	DHTKD1	mir-195 , mir-497
MFHAS1	mir-199a-5p , mir-23b , mir-23a	PAQR9 , AK093381	mir-199a-5p , mir-23b , mir-23a
ELF2	mir-23b , mir-23a , mir-21	MMD	mir-195 , mir-497
STAT5B	mir-23b , mir-23a	DNMT3A	mir-199a-3p
TBR III , TGFB3	mir-23b , mir-23a , mir-195 , mir-497	KIAA1416 , CHD7	mir-23b , mir-23a , mir-195 , mir-497 , mir-21
SMPD1	mir-195 , mir-497	ARL2	mir-195 , mir-497
TFAM	mir-199a-3p	FBXO21	mir-195 , mir-497

MYO10	mir-199a-3p	GNA12	mir-199a-3p , mir-195 , mir-497
ARHGAP20	mir-23b , mir-199a-3p , mir-23a , mir-195 , mir-497	CPEB2	mir-23b , mir-23a , mir-195 , mir-497
SLC9A6	mir-195 , mir-497	BCL11B	mir-208b , mir-21
RBM24	mir-199a-5p , mir-195 , mir-497	XPO4	mir-195 , mir-497
ADD3	mir-199a-5p	SMARCD1	mir-199a-5p , mir-21
RAPGEF2	mir-23b , mir-23a , mir-195 , mir-497	ESRRG	mir-23b , mir-23a , mir-195 , mir-497
TARBP2	mir-195 , mir-497	AL832481 , MLLT6	mir-199a-3p , mir-195 , mir-497
FAM59A	mir-195 , mir-497	TMEM135	mir-199a-5p
GPBP1L1	mir-199a-3p	HNMT	mir-199a-3p
EPHA4	mir-21	ISOC1	mir-195 , mir-497
ATPAF1	mir-21	AK3L1	mir-195 , mir-497
CSDC2	mir-199a-5p	MITF , MITF-C	mir-23b , mir-23a
ARFGAP2 , Nbla10535	mir-195 , mir-497	CELSR2	mir-199a-3p
ZADH2	mir-195 , mir-497 , mir-21	SESN1	mir-195 , mir-497
CDC40	mir-23b , mir-23a	STEERIN2 , KIAA1419 , NAV2	mir-208b
IQGAP2	mir-199a-3p	LPHN2 , KIAA0786	mir-23b , mir-23a , mir-195 , mir-497
FOXO4	mir-23b , mir-23a	MYO5C	mir-23b , mir-23a
TBC1D4 , KIAA0603	mir-199a-3p	AK022285 , CASZ1	mir-195 , mir-497
DUSP8	mir-21	MMAB	mir-199a-3p
DLG	mir-23b , mir-23a	SLC20A2	mir-199a-3p , mir-195 , mir-497
HLF	mir-199a-5p	AUH	mir-23b , mir-23a
B3GALT2	mir-23b , mir-23a	KLHL3 , KIAA1129	mir-199a-5p , mir-199a-3p
TMEM66 , foap-7	mir-199a-5p	KCNK3	mir-23b , mir-23a
DHTKD1	mir-195 , mir-497	CAV2	mir-199a-3p
PAQR9 , AK093381	mir-199a-5p , mir-23b , mir-23a	PDE11A	mir-199a-3p
PRKCE	mir-23b , mir-199a-3p , mir-23a , mir-21	AKAP1	mir-199a-5p
DNMT3A	mir-199a-3p	HMG2	mir-23b , mir-23a
TRIP10 , STP	mir-195 , mir-497	ESRRA	mir-195 , mir-497
KIAA1416 , CHD7	mir-23b , mir-23a , mir-195 , mir-497 , mir-21	BLCAP	mir-199a-5p , mir-23b , mir-23a
PKP4	mir-23b , mir-23a	NTF3	mir-21
FBXO21	mir-195 , mir-497	MYLK4	mir-195 , mir-497
GNA12	mir-199a-3p , mir-195 , mir-497	SLC41A1	mir-208b
PRDX3	mir-23b , mir-23a	ZYG11B	mir-23b , mir-23a , mir-21
CPEB2	mir-23b , mir-23a , mir-195 , mir-497	ALOX12	mir-195 , mir-497
BCL11B	mir-21	ASB15	mir-23b , mir-23a
XPO4	mir-195 , mir-497	nifS , NFS1	mir-195 , mir-497
SMARCD1	mir-199a-5p , mir-21	INSR	mir-195 , mir-497
DNAJC16 , KIAA0962	mir-195 , mir-497 , mir-21	SCN4A	mir-208b
BACH2	mir-23b , mir-23a , mir-195 , mir-497	LMO7 , AK123459 , KIAA0858	mir-195 , mir-497
KCNJ2	mir-195 , mir-497	DLL4	mir-195 , mir-497
ESRRG	mir-23b , mir-23a , mir-195 , mir-497	LLGL2	mir-199a-3p
GABPA	mir-195 , mir-497	USP2	mir-195 , mir-497
AL832481 , MLLT6	mir-199a-3p , mir-195 , mir-497	GLUD1	mir-195 , mir-497
TMEM135	mir-199a-5p	TRIM63	mir-23b , mir-23a
CDC37L1	mir-195 , mir-497	DKFZp547K152 , TMEM63B , DKFZp434P0531	mir-199a-5p
HNMT	mir-199a-3p	MST023 , KIAA0833 , CAMTA1	mir-23b , mir-23a
ISOC1	mir-195 , mir-497	KIAA1675 , PRDM16	mir-199a-5p
MITF , MITF-C	mir-23b , mir-23a	KIAA0366 , ADAMTS3	mir-199a-3p
EIF4E	mir-195 , mir-497	ERBB4	mir-199a-5p , mir-23b , mir-199a-3p , mir-23a
THRB	mir-23b , mir-199a-3p , mir-23a , mir-21	DEF8	mir-195 , mir-497
CELSR2	mir-199a-3p	SCN4B	mir-195 , mir-497
SESN1	mir-195 , mir-497	DKFZp434N1217 , SOX6	mir-208b
LPHN2 , KIAA0786	mir-23b , mir-23a , mir-195 , mir-497	FAM73A	mir-195 , mir-497
RMND5A	mir-21	LMOD3	mir-23b , mir-23a
MYO5C	mir-23b , mir-23a	CEP68 , KIAA0582	mir-195 , mir-497
AK022285 , CASZ1	mir-195 , mir-497	CPEB3	mir-195 , mir-497 , mir-21
WDR42A	mir-195 , mir-497	PPARA	mir-21

MMAB	mir-199a-3p	TMEM109	mir-23b , mir-23a
SLC20A2	mir-199a-3p , mir-195 , mir-497	MAP3K5	mir-23b , mir-199a-3p , mir-23a
AUH	mir-23b , mir-23a	AGPAT3	mir-195 , mir-497
KIAA0424 , ARHGEF9	mir-195 , mir-497	DIP2C , AK093390 , KIAA0934	mir-23b , mir-23a
KIAA0591 , KIF1B	mir-195 , mir-497	GC1 , SLC25A22	mir-195 , mir-497
KLHL3 , KIAA1129	mir-199a-5p , mir-199a-3p	LARP4	mir-199a-5p
KCNK3	mir-23b , mir-23a	AGPAT9	mir-23b , mir-23a
PDE11A	mir-199a-3p	CBFA2T3	mir-23b , mir-199a-3p , mir-23a , mir-195 , mir-497
AKAP1	mir-199a-5p	AAACL1	mir-199a-5p
HMG2	mir-23b , mir-23a	ARL3	mir-195 , mir-497
ESRRA	mir-195 , mir-497	PRRG1 , PRGP1	mir-23b , mir-23a
UBR3 , KIAA2024	mir-195 , mir-497		
TMEM170B	mir-23b , mir-199a-3p , mir-23a , mir-195 , mir-497		
NTF3	mir-21		
MYLK4	mir-195 , mir-497		
LMBR1 , DIF14 , DKFZp547F222	mir-21		
ZYG11B	mir-23b , mir-23a , mir-21		
NDUFA3	mir-23b , mir-23a		
ASB15	mir-23b , mir-23a		
SIPA1L2	mir-195 , mir-497		
nifS , NFS1	mir-195 , mir-497		
INSR	mir-195 , mir-497		
LMO7 , AK123459 , KIAA0858	mir-195 , mir-497		
DLL4	mir-195 , mir-497		
FRAP1	mir-199a-3p		
REEP1	mir-23b , mir-23a		
TMCC1	mir-195 , mir-497		
SYDE2	mir-195 , mir-497		
LLGL2	mir-199a-3p		
USP2	mir-195 , mir-497		
RGS7BP	mir-21		
TRIM63	mir-23b , mir-23a		
DKFZp547K152 , TMEM63B , DKFZp434P0531	mir-199a-5p		
CACNB2	mir-199a-5p		
MST023 , KIAA0833 , CAMTA1	mir-23b , mir-23a		
KIAA1675 , PRDM16	mir-199a-5p		
KIAA0366 , ADAMTS3	mir-199a-3p		
WDTC1 , KIAA1037	mir-199a-5p , mir-195 , mir-497		
ERBB4	mir-199a-5p , mir-23b , mir-199a-3p , mir-23a		
DEF8	mir-195 , mir-497		
SCN4B	mir-195 , mir-497		
BCL7A	mir-195 , mir-497 , mir-21		
UQCRB	mir-199a-3p , mir-21		
LMAN2L	mir-195 , mir-497		
FAM73A	mir-195 , mir-497		
LMOD3	mir-23b , mir-23a		
RTF1	mir-23b , mir-23a , mir-195 , mir-497		
CEP68 , KIAA0582	mir-195 , mir-497		
CPEB3	mir-195 , mir-497 , mir-21		
PPARA	mir-21		
ZHX2	mir-199a-3p		
SLC25A4	mir-23b , mir-23a		
CELSR1	mir-199a-5p		
EGR1	mir-199a-3p		
LIPE	mir-195 , mir-497		
MAP3K5	mir-23b , mir-199a-3p , mir-23a		
CCNH	mir-23b , mir-23a		
AGPAT3	mir-195 , mir-497		
SIX4	mir-23b , mir-23a , mir-195 , mir-497		
JHDM1D , KIAA1718	mir-23b , mir-23a , mir-21		
HELZ	mir-23b , mir-23a , mir-195 , mir-497		

UNG	mir-195 , mir-497		
JARID2	mir-23b , mir-23a , mir-195 , mir-497		
DIP2C , AK093390 , KIAA0934	mir-23b , mir-23a		
GC1 , SLC25A22	mir-195 , mir-497		
TRMT5	mir-23b , mir-23a , mir-21		
LARP4	mir-199a-5p		
AGPAT9	mir-23b , mir-23a		
CBFA2T3	mir-23b , mir-199a-3p , mir-23a , mir-195 , mir-497		
FNIP1	mir-23b , mir-23a		
AADACL1	mir-199a-5p		
LIFR	mir-21		
ARL3	mir-195 , mir-497		
PRRG1 , PRGP1	mir-23b , mir-23a		