List of upstream regulators and their targets in the dataset obtatined at 6 months after infection

© 2000-2013 Ingenuity Systems, Inc. All rights reserved.

Upstream Regulator	Fold Change	Molecule Type	Predicted Activation State	Activation z-score	Notes	p-value of overlap	Target molecules in dataset
CD40LG		cytokine	Activated	2.769		2.15E-03	AKAP2/PALM2-AKAP2,ASCC3,BCL2A1,BIRC3,BTG3,CCR1,CXCL10,DAPP1,FURIN,GRSF1,HDDC2,HSP90AA1,ICOSLG,IFNG,IPO8,MARCKS,MMP14,MSH2,NAMPT,NAP1L1,PRKDC,PSMG1,PTPN12,RAB9A,RASA1,SNX4,STAT4,TANK,TGFB2,UBD,XPO7,ZAP70,ZZZ3
gentamicin		chemical drug	Activated	2.558		5.58E-03	BTG3,CAND1,CAPZA1,CCNL1,CDO1,CHORDC1,CPSF2,CXCL10,DDX50,DPEP1,ENPP2,GHR,HSP90AA1,KLF6,NEDD4,NME1,NUPL1,PDIA4,PHAX,PNN,SSB,ZNF354A
CD24		other	Activated	2.714	bias	6.50E-03	ATP13A3,EDEM3,FXR1,HMMR,LDB1,LRPPRC,MTUS1,RANBP2,RASA1,SCAF11,SMC4,VPS13C
MMP14	-1.139	peptidase	Activated	2.000		9.05E-03	CTNNB1,JAG1,MMP14,NNT,SMARCA1
tributyrin		chemical drug	Activated	2.646	bias	3.72E-02	BCL2A1,BIRC3,CSGALNACT2,DAPP1,OCLN,OLR1,SNAPC1
miR-2277-3p (miRNAs w/seed GACAGCG)		mature microRNA	Activated	2.189	bias	3.80E-02	COPS6,DEF8,GFI1B,ICOSLG,SYS1
mono-(2-ethylhexyl)phthalate		chemical toxicant	Activated	2.534		7.23E-02	ATF2,CASP8AP2,DGAT2,EIF3J,GPD1,HADHA,KIF5B,LPL,MUT,NAMPT,OLR1,PPARD,SS18
mycophenolic acid		chemical drug	Activated	2.646		1.06E-01	BIRC3,CSGALNACT2,DAPP1,IL17A,OCLN,OLR1,SNAPC1
thapsigargin		chemical toxicant	Activated	2.441		1.12E-01	ATP2A2,BIRC3,COL1A1,CREM,CXCL10,GEMIN2,OLR1,PAX8,PDCD1,SERPINI1,TPO
Creb		group	Activated	2.213		3.56E-01	ALOX5,ARG1,ATP2A2,CGA,CREM,CXCL10,CYP51A1,FOXN3,GTF2F2,IFNG,NDUFA3,SKIL
Tnf (family)		group	Activated	2.158		3.80E-01	BIRC3,CD72,CXCL10,ENPP2,GHR,IFNG,JAG1,OLR1
tetrachlorodibenzodioxin		chemical toxicant	Activated	2.950		4.42E-01	ARNT2,CGA,ELN,HDAC7,IFNG,INSIG2,JAG1,KHDRBS1,LYST,MMP14,MNAT1,NEDD4,NME1,PLAGL1,RCOR3,S100A9,SLC4A2,TGFB2,ZNF148
tunicamycin		chemical - endogenous non-mammalian	Activated	2.010		4.44E-01	ATP2A2,BIRC3,COL1A1,ERO1L,GEMIN2,PAX8,TPO
TP63		transcription regulator	Activated	2.573		1.00E00	ATF2,CDK17,CDK18,COL4A3,DUSP10,JAG1,KLF6,PIK3CA,PRNP,PTPN12,TAGLN
estrogen receptor		group	Activated	2.550		1.00E00	CD68,CD99,COL6A2,HSP90AA1,IGF2BP3,JAG1,MAPK12,MMP14,OCLN,TGFB2
miR-381-3p (and other miRNAs w/seed AUACAAG)		mature microRNA	Inhibited	-5.787	bias	1.81E-12	AFF1,ANKRD12,APPBP2,ARAP2,ARHGAP5,ASXL2,ATP13A3,ATP2A2,ATP6V0A2,BASP1,BIVM,CASD1,CASP8AP2,CDC73,COL11A1,CPSF6,CTNNB1,CTU2,CXorf23,DCAF12,DEK,DIP2C,EPS8,ERCC4,ETF1,FAM168B,FAM208A,FMNL2,FOXO1,GIGYF2,GTF2E1,GTF2I,HIATL1,HSDL2,IER5,IGF1R,IPO7,ITCH,JAG1,KHDRBS1,KIAA1429
miR-590-3p (miRNAs w/seed AAUUUUA)		mature microRNA	Inhibited	-6.231	bias	2.21E-09	ADAM9,AEBP2,AFF1,AFF2,AKAP11,ALPK3,ANKRD12,APPBP2,AQP9,ARHGAP5,ARNT2,ATG2B,ATXN7L3B,BIVM,C5orf30,CALML4,CDC73,CEP70,CHAMP1,CHORDC1,CLCC1,CXorf23,CYP51A1,DENR,DR1,DTWD2,DYRK2,EID1,ENAH,EPC2,EWSR1,FAM177A1,FAM208A,FOXN3,G2E3,GNS,GSE1,HECA,HSDL2,INSIG2,IP6K3,KAT2B
miR-340-5p (miRNAs w/seed UAUAAAG)		mature microRNA	Inhibited	-7.393	bias	6.80E-08	ANKRD12,APBB3,API5,APPBP2,ARG1,ARHGAP5,ARL4C,ARPP19,ATAD1,ATP13A3,BRAP,C12orf75,C8orf37,CAPRIN1,CASD1,CDC73,CDK17,CEP350,CEP70,CIAO1,COG3,COX17,CRNKL1,CXorf23,DBF4,DBT,DCAF12,DDX5,DEK,DNAJC27,DR1,EDEM3,EIF2AK3,EIF3J,ENAH,ENOPH1,EPC2,EWSR1,FAM168B,FAR1,G2E3,GNPDA2,G
miR-200b-3p (and other miRNAs w/seed AAUACUG)		mature microRNA	Inhibited	-4.915	bias	9.21E-08	AEBP2,AFF1,AKAP2/PALM2-AKAP2,AMFR,ATAD2B,ATL2,ATMIN,ATP2A2,ATP6V0A2,BAG5,BASP1,C16orf72,CASD1,CCDC82,CCNYL1,CDC73,CDK17,CEP350,CLASP2,COL4A3,CSNK1G3,CXorf23,DDX3X,DHX9,EDEM3,EGLN1,EPS8,ERBB2IP,ETF1,FAM168B,FXR1,G2E3,GATA2,GEMIN2,GIT2,GPATCH8,GSE1,GTF2E1,HMGB3,IER5
miR-181a-5p (and other miRNAs w/seed ACAUUCA)		mature microRNA	Inhibited	-4.575	bias	1.61E-07	ADO,AFF1,AFTPH,AKIRIN1,ANK1,ANKRD12,AP1G1,ARID2,ARNT2,ATG2B,ATMIN,ATP2A2,BRAP,CAPRIN1,CCDC92,CD2AP,CDC73,CEP350,CLCC1,CNKSR2,COL16A1,CPSF6,CRIM1,CSNK1G3,CTDSPL,DDX3X,DDX5,DEK,DIP2C,DUSP10,DYRK2,ELN,ENAH,EPB49,EPC2,FAR1,FNDC3A,GNG2,GPBP1,GSE1,GSKIP,HECA,HEXIM1,I
miR-19b-3p (and other miRNAs w/seed GUGCAAA)		mature microRNA	Inhibited	-4.245	bias	4.19E-07	ABR,ADSS,AEBP2,AFF1,AFTPH,ANKRD12,ARAP2,ARFGEF1,ARHGAP12,ARHGAP5,ARPP19,ASXL2,ATL2,BAG5,BCL3,C5orf30,CAND1,CAPRIN1,CARD10,CCDC88A,CCNL1,CDC73,CEP350,CNKSR2,CSPP1,CYSTM1,DBT,DDX3X,DOCK10,ENPP5,EPC2,FASTK,FNDC3A,FURIN,FXR1,G2E3,GIT2,GPBP1,GRK6,GRSF1,GSKIP,HDAC7
miR-1 (and other miRNAs w/seed GGAAUGU)		mature microRNA	Inhibited	-3.039	bias	6.26E-07	AKAP11,API5,ARG2,ARID2,ASXL2,CAND1,CAPRIN1,CD2AP,CHAMP1,CLCN3,COG3,COIL,COL4A3,CREM,CRIM1,CXorf23,DDX3X,DDX5,FAM168B,FNBP1L,FNDC3A,FPGT,G2E3,GNPDA2,GNPTAB,HNRNPK,INPP5F,IQGAP3,KDM5C,KRAS,KTN1,LRCH1,MAL2,MARCKS,MBLAC2,MET,MOG,MON2,MPP5,MTHFD2,NAMPT,NR4A2,OAT,
miR-101-3p (and other miRNAs w/seed ACAGUAC)		mature microRNA	Inhibited	-4.289	bias	6.38E-07	AEBP2,ANKRD12,APPBP2,ARAP2,ARID2,ASCC3,ATAD2B,BLOC1S5,BZW1,C16orf72,CAMK2D,CDK18,CEP350,CUL4B,CXorf23,DDX3X,DIP2C,DR1,DYRK2,EDEM3,ELN,ENAH,ERBB2IP,FANCM,FOXO1,GRSF1,GSE1,IPO8,KDM6B,KIAA1432,KIF5B,KLF6,KPNA3,LPHN2,LRCH1,MARK1,MET,MGRN1,MON2,MPP5,MTOR,MYO1E,NAP1L
miR-186-5p (miRNAs w/seed AAAGAAU)		mature microRNA	Inhibited	-4.216	bias	1.00E-06	AEBP2,AFF1,AFTPH,ANKRD12,ARAP2,ARHGAP5,ATXN7L3B,BAHD1,CAMLG,CDC73,DBT,DDX3X,DEK,DNAJC27,DYNLRB1,ENAH,EPC2,FABP2,FAR1,FNDC3A,FOXO1,FXR1,G2E3,GIGYF2,IGF1R,ITCH,JAG1,KDM6B,KRR1,LMNB2,MAPK1IP1L,MBLAC2,MON2,MTMR6,NADKD1,NEDD4,NR4A2,OCLN,OTUD4,P2RX7,PAN3,PAPD7,PO
miR-23a-3p (and other miRNAs w/seed UCACAUU)		mature microRNA	Inhibited	-5.355	bias	2.22E-06	AEBP2,AFF1,AFF2,ALDH1L2,ALG6,APPBP2,ARHGAP5,ARNT2,ARPP19,ATMIN,ATXN7L3B,B3GALT2,BLOC1S5,BNIP3L,CALCRL,CAPRIN1,CASD1,CCDC82,CDC40,CDK17,CEP350,CLASP2,CLCN3,COG3,CSNK1G3,CTDSPL,DDX5,DIP2C,DYRK2,EGLN1,ENAH,ERBB2IP,FAM208A,FNBP1L,GNG2,GPBP1,HDAC7,HEXIM1,IPO8,KPNA3
let-7a-5p (and other miRNAs w/seed GAGGUAG)		mature microRNA	Inhibited	-3.143	bias	2.50E-06	AFF2,ALPK3,AMT,ANKRD12,APBB3,APPBP2,ARG2,ARPP19,ATAD2B,ATP2A2,ATXN7L3B,BAHD1,BLOC1S5,BZW1,C11orf84,C18orf21,CEP120,CLASP2,COIL,COL11A1,COL1A1,COMMD9,DAD1,DNAJC1,DYRK2,EDEM3,EIF3J,ERCC4,ERO1L,FAM208A,FNDC3A,FOXN3,GHR,GNPTAB,GNS,GTF2I,HABP4,IGF1R,IGF2BP3,IKBKAP,KIAA
miR-217-5p (and other miRNAs w/seed ACUGCAU)		mature microRNA	Inhibited	-5.274	bias	3.51E-06	ADAM9,ADSS,AEBP2,AFF2,AKAP2/PALM2-AKAP2,APPBP2,ARID2,ATG2B,CCNYL1,CSGALNACT2,CUL4B,DBT,DNAJA1,ENAH,FXR1,GRSF1,GTF2H2,IARS,INSIG2,KRAS,MORF4L2,MTERFD1,NAP1L1,NR4A2,NT5DC1,NUPL1,PANK3,PPM1A,PSMF1,RAB3IP,RAD23B,RANBP2,SEPT11,SLC38A2,TACC1,TBC1D15,TCF12,TLK1,TMEM6
miR-194-5p (miRNAs w/seed GUAACAG)		mature microRNA	Inhibited	-3.179	bias	3.58E-06	AFF1,APPBP2,ARHGAP12,ARHGAP5,ARID2,ATP6V1H,C17orf85,CEP350,CHORDC1,CTDSPL,CUL4B,ENAH,EPC2,ERGIC2,FOXO1,FXR1,GNG2,GORAB,IGF1R,ITSN1,LPHN2,MIA3,PAN3,PANK3,PDE4D,PTPN12,RALGAPB,RARA,REV3L,RHEB,RPRD1B,SDAD1,SEPT11,SGCE,SLC8A1,SS18,TMEM181,TRIP12,UBE2W,UBR3,UBR5,W
miR-17-5p (and other miRNAs w/seed AAAGUGC)		mature microRNA	Inhibited	-3.718	bias	4.95E-06	ADAM9,AEBP2,AFF1,AFF2,AKAP11,ANKRD12,ARAP2,ARHGAP12,ARL4C,ATG2B,B3GALT2,BAHD1,BECN1,BNIP3L,BTG3,C16orf72,CAPRIN1,CDC40,CEP120,COL4A3,CRIM1,CTDSPL,DAB2,DDX5,DEF8,DIP2C,DNAJC27,EGLN1,ENPP5,FAM129B,FASTK,FGL2,FNBP1L,FNDC3A,FURIN,FXR1,FYCO1,GIT2,GNB5,GNPDA2,GNS,HABP
miR-199a-5p (and other miRNAs w/seed CCAGUGU)		mature microRNA	Inhibited	-3.956	bias	4.97E-06	AFTPH,ALOX5AP,AP1G1,APPBP2,ARHGAP12,ARID2,ARRB2,BECN1,CAPRIN1,CCNL1,CDC73,CEP350,CPSF6,CRLS1,CYP51A1,DDX3X,EEF1A1,FXR1,GCFC1,GPATCH8,HEXIM1,IPO7,IPO8,ITCH,JAG1,KIT,MCTP2,MPP5,MRPL30,NFE2L1,NUPL1,PAN3,PDE4D,PHACTR4,PPM1B,RAD23B,RANBP2,RBM47,RHEB,SMARCA4,SMC4,T
miR-145-5p (and other miRNAs w/seed UCCAGUU)		mature microRNA	Inhibited	-4.429	bias	5.89E-06	ABR,AIM1,AP1G1,APPBP2,ARHGAP12,ARHGAP5,ARID2,BIVM,C16orf72,CAMK2D,CAPRIN1,CCNL1,COL4A3,COMMD9,CPSF6,CRISPLD2,DAB2,DPH5,EIF3J,FAM214A,FNDC3A,FOXO1,FXR1,GPATCH8,GPBP1,HABP4,HMGB3,IGF1R,IKBKAP,IPO7,KIAA1715,LDB1,LMNB2,MAK16,MDFIC,MED13,MPP5,NAA30,NAMPT,NAP1L1,NFE2L
miR-30c-5p (and other miRNAs w/seed GUAAACA)		mature microRNA	Inhibited	-5.052	bias	1.63E-05	ADAM9,ADO,ALPK3,ARAP2,ARL4C,ASCC3,ATAD2B,ATL2,ATP2A2,BAHD1,BECN1,BNIP3L,BRAP,CALML4,CAMK2D,CAPZA1,CD2AP,CEP350,CHORDC1,CLCC1,CNKSR2,CPSF6,DBF4,DIP2C,EDEM3,ENAH,EPC2,EPDR1,FAM168B,FAM214A,FNDC3A,FXR1,FYCO1,GIGYF2,GOLGA4,GSKIP,HMGB3,IER5,IGF1R,INSIG2,IP6K3,ITSN1,K
miR-4540 (miRNAs w/seed UAGUCCU)		mature microRNA	Inhibited	-2.333	bias	2.16E-05	CLASP2,DBF4,FNBP1L,GPAM,HSDL2,MBOAT7,NADKD1,NNT,NT5DC1,PHAX,PPARD,PTPN12,RNF149,UBLCP1
miR-16-5p (and other miRNAs w/seed AGCAGCA)		mature microRNA	Inhibited	-5.119	bias	2.23E-05	ADSS,AEBP2,AKAP11,ARHGAP5,ARPP19,ASXL2,ATP13A3,ATXN7L3B,BAG5,C16orf72,CAPRIN1,CARD10,CCNYL1,CD2AP,CD47,CDK17,CEP350,CHORDC1,CNKSR2,COBLL1,CRIM1,CTDSPL,CXCL10,DDX3X,DEF8,DPH5,DYRK1B,DYRK2,EGLN1,ENAH,EPB49,FOXO1,FURIN,G2E3,GHR,GPAM,GPATCH8,GSE1,HSDL2,IGF1R,IP6K1
miR-141-3p (and other miRNAs w/seed AACACUG)		mature microRNA	Inhibited	-4.670	bias	2.64E-05	AFF1,AKAP11,AKAP2/PALM2-AKAP2,APPBP2,ATP2A2,BAHD1,CD47,CEP120,CIAO1,CLASP2,COQ7,CSNK1G3,CTNNB1,CUL4B,DDX5,DEK,DR1,EGLN1,ENAH,ENPP5,ERBB2IP,FAM161A,FAM168B,FNBP1L,FOXA2,FOXN3,GEMIN2,GNG7,GPD1,GPHN,IGF1R,ITSN1,JAG1,KIAA1430,KIAA1715,KLF6,KPNA3,LGALSL,LGR4,MAPK1IP1L
miR-202-3p (and other miRNAs w/seed GAGGUAU)		mature microRNA	Inhibited	-4.506	bias	2.79E-05	ANKRD12,APBB3,APPBP2,ARPP19,ATP2A2,ATP6V0A2,ATXN7L3B,BAHD1,BLOC1S5,C18orf21,COIL,COL11A1,CREM,DNAJC1,DYRK2,EDEM3,ENAH,ERCC4,ERO1L,FAM208A,FNDC3A,FOXN3,GHR,GNG2,GNPTAB,GNS,GTF2I,IGF1R,IGF2BP3,IPO11,KLHDC8B,LRIG1,MAPK1IP1L,MARCH9,MON2,MTMR9,NAA30,NAP1L1,NDST2,NH
miR-142-3p (miRNAs w/seed GUAGUGU)		mature microRNA	Inhibited	-3.443	bias	3.17E-05	AFF1,AFF2,ATP2A2,CCDC88A,CD84,CEP192,CLCC1,EDEM3,FMNL2,FNDC3A,FOXO1,GHR,INPP5F,IPO7,KAT2B,KIF5B,LRRC1,MARCKS,MBD6,MON2,MORF4L2,MTMR9,MTUS1,NR2F6,NUDT11,PAPD7,RBM47,RHEB,SLC35F5,SMG1,STX12,SUCO,TAB2,TEX2,TGFB2,ZBTB10,ZNF827,ZZZ3
miR-26a-5p (and other miRNAs w/seed UCAAGUA)		mature microRNA	Inhibited	-4.279	bias	4.87E-05	ABR,ADAM9,ARID2,ARL4C,ARPP19,ATAD2B,ATF2,C17orf103,CEP350,CHORDC1,CLASP2,COL11A1,COL4A3,COMMD8,COPS6,CPSF2,DAB2,DDX3X,EHD1,EPC2,FAM208A,FGFR1OP2,FPGT,G2E3,GRSF1,HPGD,HSDL2,IPO7,JAG1,KIAA1468,KPNA3,LNX2,LRCH1,MARK1,MMP14,MOG,NAMPT,NT5DC1,NUDT11,OCLN,OTUD4,PAN3
miR-144-3p (miRNAs w/seed ACAGUAU)		mature microRNA	Inhibited	-3.027	bias	5.67E-05	AEBP2,AKAP2/PALM2-AKAP2,ALDH1L2,ANKRD12,APPBP2,ARFGEF1,ARHGAP5,ARID2,ARL4C,ATAD2B,BECN1,BLOC1S5,BZW1,CALCRL,CAMK2D,CCDC88A,CDC73,CEP350,CUL4B,CXorf23,DYRK2,ELN,ENAH,FNDC3A,FOXO1,FPGT,GNPTAB,GRSF1,IPO8,KDM6B,KIAA1033,KPNA3,LPHN2,LRPPRC,MARCKS,MED13,MET,MGRN
miR-130a-3p (and other miRNAs w/seed AGUGCAA)		mature microRNA	Inhibited	-4.429	bias	5.93E-05	ANKRD12,ARAP2,ARFGEF1,ARHGAP12,ASXL2,ATG2B,ATP13A3,BAG5,BAHD1,C12orf75,C5orf30,CASD1,CCDC88A,CD2AP,CDC73,CEP120,DIP2C,ENAH,ENPP5,EPC2,ERBB2IP,FASTK,FXR1,FYCO1,GPATCH8,GPBP1,GSE1,HABP4,HECA,KIAA1468,KIF13A,KIT,KLF11,LGALSL,LRCH1,LRIG1,MDFIC,MET,MTMR6,MTMR9,NAA30,NM
miR-539-5p (miRNAs w/seed GAGAAAU)		mature microRNA	Inhibited	-2.387	bias	6.77E-05	AEBP2,AKAP2/PALM2-AKAP2,ARPP19,ATG2B,ATL2,AZI2,BASP1,CAMK2D,CCDC88A,CHORDC1,CLASP2,CLCN3,COL4A3,CPSF2,DBT,DDX5,DYRK1B,ENAH,FAM208A,GPBP1,GPHN,HNRNPK,HYPK,IGF1R,IP6K1,KDM5C,KPNA3,LAMA4,MTUS1,NEDD4,NR4A2,PAPOLA,PDCL,PDE4D,PDK3,PHAX,PRPF4B,RAP1A,RCE1,RRAGD,SE
miR-92a-3p (and other miRNAs w/seed AUUGCAC)		mature microRNA	Inhibited	-4.355	bias	9.75E-05	ADO,AFF1,ALPK3,ARPP19,ATP2A2,AURKA,B3GALT2,C5orf30,CASD1,CD2AP,CEP350,COG3,DBT,DCAF6,DDX3X,DNAJC27,DUSP10,DYRK2,EPC2,EPS8,ERBB2IP,ERGIC2,FAR1,FOXN3,FXR1,GATA2,GCFC1,GIGYF2,GIT2,GNPDA2,GNS,GOLGA4,GPATCH8,ING2,KAT2B,KIAA1432,KIF5B,KLF6,LRCH1,LYST,MARK1,MBOAT2,MIA3,M
miR-7a-5p (and other miRNAs w/seed GGAAGAC)		mature microRNA	Inhibited	-2.979	bias	1.10E-04	ANK1,ANKRD12,APPBP2,ARID2,ARL4C,BASP1,CAMK2D,CCDC66,CHAMP1,CLASP2,CLHC1,CNPPD1,CRLS1,CTDSPL,EHD1,FAM168B,FOXN3,FPGT,FXR1,GSE1,IGF1R,IPO11,IPO7,ITCH,KDM6B,LPHN2,LRRC1,LTN1,OGT,PDE4D,PHACTR4,RRAS2,SLC38A2,SMARCA4,SMG1,TAB2,TADA2B,TCF12,U2SURP,UBLCP1,WAPAL,WDR4
TGFB1		growth factor	Inhibited	-2.808		1.35E-04	ACP5,ALOX15,ALOX5,ALOX5AP,AQP9,ARG1,ARNT2,ASUN,ATP13A3,B3GALT2,BCL3,BECN1,BGN,BNIP3L,CALML4,CAPNS1,CAPRIN1,CCR1,CCT2,CD68,CD72,CDK17,COL11A1,COL16A1,COL1A1,COL6A2,CTNNB1,CXCL10,CXCR2,DAB2,DAD1,DDX5,DNAJA1,DYRK2,EEF1A1,EGLN1,ELN,EPB49,FCER1A,FOXO1,FURIN,FXYD6,G
miR-153 (and other miRNAs w/seed UGCAUAG)		mature microRNA	Inhibited	-4.641	bias	1.65E-04	ADO,AFF1,ANK1,ARPP19,ATAD2B,ATP13A3,ATP2A2,ATXN7L3B,CEP350,ENAH,EPDR1,FABP2,FAM168B,FAM177A1,FAM214A,FOXN3,FOXO1,FURIN,FXR1,GCFC1,GNPDA2,GPHN,IARS,IGF1R,ING2,IPO7,JAG1,LRCH1,MAPK1IP1L,MON2,NPHP4,NUFIP1,NUPL1,ORC4,OTUD4,PAPD7,PDE4D,PXDN,RANBP2,RASA1,SCLT1,SEPT11
miR-203-3p (and other miRNAs w/seed UGAAAUG)		mature microRNA	Inhibited	-3.697	bias	1.86E-04	AFF2,AKIRIN1,AMFR,ARID2,BAHD1,C12orf75,CALML4,CAPRIN1,CHORDC1,CKAP2,CLASP2,CXorf23,DAB2,DNAJC27,DOCK10,DR1,ECHDC2,ENAH,EPC2,FAM208A,FGL2,GNG2,GPBP1L1,GPHN,GRSF1,GSKIP,IMPA1,IPO7,KHDRBS1,KIAA1429,LGALSL,LNX2,MAPK1IP1L,MBD6,MCTP2,MON2,MORF4L2,NAA30,NEMF,OCLN,PDE4D
miR-137-3p (and other miRNAs w/seed UAUUGCU)		mature microRNA	Inhibited	-2.844	bias	2.21E-04	ADO,AKAP2/PALM2-AKAP2,ALPK3,ANKRD12,AP1G1,ARHGAP5,AURKA,B3GALT2,BLOC1S5,C17orf103,CD2AP,CHORDC1,CISD1,CLASP2,CPSF6,CSNK1G3,CTDSPL,DDX3X,DIP2C,DR1,DUSP10,EPC2,EPS8,ERBB2IP,FMNL2,FNBP1L,FOXN3,FURIN,FXYD6,GCFC1,GIT2,GLRX3,GPAM,GPATCH8,GRK6,HYPK,ING2,KAT2B,KIAA1432
miR-344d-3p (and other miRNAs w/seed AUAUAAC)		mature microRNA	Inhibited	-2.850	bias	3.10E-04	AEBP2,AFF1,ANKRD12,APPBP2,ARHGAP5,ARID2,BTG3,C12orf75,CD47,CPSF6,DBT,DDX3X,ERO1L,ETF1,FMNL2,FNBP1L,GATA2,GORAB,HEXIM1,HSDL2,IGF1R,IP6K1,IPO7,IQCA1,ITCH,KIT,KLF6,LGALSL,LGR4,LPHN2,LRCH1,MAGI3,MMP14,NAMPT,NEMF,NR4A2,PAPD7,PDE4D,PIAS3,PPIL4,PTK2,RAD23B,RHEB,RPS6KA3,RRA
miR-4704-3p (miRNAs w/seed CAGUCAC)		mature microRNA	Inhibited	-2.415	bias	3.42E-04	ARAP2,ASXL2,C15orf57,EGLN1,GLT8D2,IFNG,INPP5F,MAK16,PTAFR,PWP1,RNF168,SLC30A5,STAT4,TMEM70
miR-421-3p (and other miRNAs w/seed UCAACAG)		mature microRNA	Inhibited	-3.944	bias	3.46E-04	APPBP2,ARHGAP5,ARL4C,ARPP19,ATAD2B,BLOC1S5,C17orf85,CAMK2D,CAPRIN1,CAPZA1,CASD1,CISD1,CRIM1,CUL4B,CXorf23,DDX3X,DNAJC27,EDEM3,ENAH,FAM214A,FAR1,FOXN3,GPBP1,GSE1,HDDC2,HMMR,INPP5F,KLF6,KRAS,MORF4L2,MTOR,NEIL2,PDE4D,PDK3,PLCL1,RPRD1B,RPS6KA3,SLC25A12,USP47,WNK1,
miR-182-5p (and other miRNAs w/seed UUGGCAA)		mature microRNA	Inhibited	-5.305	bias	4.84E-04	AEBP2,AMN1,ARL4C,ATAD2B,BCL2L12,C5orf30,C8orf37,CCDC88A,CCDC92,CD2AP,CD47,CDC73,CDK18,CHAMP1,COG3,CTDSPL,DCAF12,DENR,DLAT,DR1,DYRK2,EDEM3,EGLN1,EIF3J,ETF1,FNBP1L,FNDC3A,FOXN3,FOXO1,FXR1,FYCO1,GIT2,GPHN,HDAC7,IGF1R,IP6K1,KPNA3,KTN1,LPHN2,MAPK1IP1L,MARCKS,MBLAC2,M
miR-495-3p (and other miRNAs w/seed AACAAAC)		mature microRNA	Inhibited	-4.647	bias	6.51E-04	AEBP2,AP1G1,APPBP2,ARHGAP12,ARHGAP5,BIVM,BZW1,CALML4,CCDC88A,CCDC92,CDC73,CEP350,COQ7,CPSF6,CRIM1,CRLS1,DCAF6,DDX3X,DYRK2,EID1,ENAH,EPC2,ETF1,FGFR1OP2,FNBP1L,FOXO1,FXR1,GNG2,GPD1,GSE1,HSDL2,HSP90AA1,IGF1R,INPP5F,IP6K3,KAT2B,KIAA1033,LPHN2,LTN1,MARCKS,MBLAC2,MC
miR-543-3p (and other miRNAs w/seed AACAUUC)		mature microRNA	Inhibited	-3.783	bias	6.66E-04	ABR,ADAM9,AKAP2/PALM2-AKAP2,APPBP2,ARID2,ARNT2,ATG2B,ATL2,C16orf72,C5orf30,CAPRIN1,CEP350,CLCC1,COL16A1,CPSF6,CTDSPL,DBT,DDX3X,DGAT2,DIP2C,EEF1A1,ENAH,EPC2,EPS8,FMNL2,FURIN,FXR1,GNG2,GORAB,GPBP1,HECA,KLF6,KRAS,LNX2,MARK1,MON2,NME6,PAN3,PANK3,PDE4D,PIAS3,PRNP,PTGR
miR-499-3p (and other miRNAs w/seed ACAUCAC)		mature microRNA	Inhibited	-2.780	bias	6.73E-04	CASP8AP2,EDEM3,FOXN3,IPO8,MUT,NNT,RRAGD,SEC62,SEPT7,STIM2,TMX1
miR-378a-3p (and other miRNAs w/seed CUGGACU)		mature microRNA	Inhibited	-2.177	bias	7.16E-04	ABR,AFF1,ALPK3,C16orf72,CDC40,CHAMP1,COL6A2,CRLS1,DBT,DCAF12,DDX3X,DLAT,ENAH,GRSF1,IGF1R,KIAA1432,MAPK1IP1L,NT5DC1,NUPL1,PAPOLA,PAX8,PDIA4,RALGAPB,SDAD1,SEC63,UBE2W,YAF2
miR-499-5p (and other miRNAs w/seed UAAGACU)		mature microRNA	Inhibited	-3.680	bias	7.33E-04	AEBP2,ARID2,C16orf72,COL4A3,CPSF2,CPSF6,DCAF12,DDX3X,DDX5,DGCR8,DYRK2,ENAH,ERCC4,ERO1L,FAM168B,FNDC3A,GPBP1,KIF5B,KPNA3,LMNB2,MARCKS,MED13,NAP1L1,POGZ,SEC62,SLC25A12,TACC1,TBC1D15,TCF12,UBE2V2,UBN1,USP47,VEZT
miR-292-5p (and other miRNAs w/seed CUCAAAC)		mature microRNA	Inhibited	-3.172	bias	9.00E-04	AP1G1,ARAP2,BAG5,BAHD1,BECN1,BLOC1S5,BTG3,CALCRL,CAPRIN1,CDC73,COL1A1,DCAF12,EEF1A1,FAM168B,FGFR1OP2,FURIN,GSE1,IKBKAP,KRR1,LTN1,MAPK1IP1L,NEDD4,OCLN,PPM1A,PRPF4B,RABEP1,RAD23B,SLC31A1,SNRPD3,SRPK2,TAGLN,UBE2J1,XXYLT1,YAF2
miR-27a-3p (and other miRNAs w/seed UCACAGU)		mature microRNA	Inhibited	-4.345	bias	9.41E-04	AEBP2,AKIRIN1,ALDH1L2,ANK1,ANKRD12,APPBP2,ARFGEF1,ARID2,ARL4C,ARPP19,BAHD1,BCL3,BLOC1S5,C17orf85,CACNA1A,CACYBP,CAMK2D,CAND1,CCDC92,CCNYL1,CD2AP,CDK18,DCAF12,DNAJC27,EDEM3,EID1,ENAH,FASTKD5,FNDC3A,FOXN3,FOXO1,GATA2,GNS,GPAM,GPD1,GRSF1,GSE1,GTF2I,HINT3,HMGB3,K
miR-139-5p (miRNAs w/seed CUACAGU)		mature microRNA	Inhibited	-2.858	bias	9.42E-04	AEBP2,ANK1,ATAD1,ATL2,BLOC1S5,BTG3,CAMK2D,CLPX,DCAF12,DDX3X,DENR,DIP2C,ENAH,FOXO1,FPGT,IGF1R,KDM6B,KIAA1033,MUT,PDE4D,PRPF4B,SEPT11,SMARCA4,TCF12,TET2,U2SURP,UBR3,WDR26,WDR47,YAF2,ZBTB10,ZFAND3,ZNF148,ZNF181
miR-218-5p (and other miRNAs w/seed UGUGCUU)		mature microRNA	Inhibited	-4.116	bias	1.12E-03	ADO,AFF1,ANK1,ARHGAP5,ARPP19,BAHD1,BIVM,BRCC3,CALML4,CCDC88A,COA1,COL1A1,COMMD8,COQ7,CTDSPL,CXorf23,DDX5,DNAJC27,EIF2AK3,EPS8,FAM214A,FOXN3,FYCO1,GPAM,GSKIP,HPGD,IPO8,ITSN1,KIT,LGALSL,LGR4,LRCH1,LRIG1,MAPK1IP1L,MARCKS,MBD6,MBLAC2,NFE2L1,OLA1,PAN3,PAPOLA,PPME1,
miR-3692-3p (miRNAs w/seed UUCCACA)		mature microRNA	Inhibited	-2.853	bias	1.33E-03	ARAP2,ARG1,ARHGAP12,ATG2B,CACYBP,COX17,DDX5,ERGIC2,FGL2,FYCO1,GPATCH8,MPP5,PPM1A,RNF168,ZNF569
miR-221-3p (and other miRNAs w/seed GCUACAU)		mature microRNA	Inhibited	-4.306	bias	1.38E-03	APPBP2,ATAD2B,AZI2,BNIP3L,CAPRIN1,CCDC88A,CD2AP,CD47,CEP350,DCAF12,EIF3J,FAM214A,FNDC3A,FPGT,GPBP1,GTF2E1,HEXIM1,IPO7,KIAA1731,KIT,LGALSL,MARCKS,MIA3,MON2,NAP1L1,OLA1,PANK3,PCMTD1,PHACTR4,POGZ,PPP1R15B,PRKRA,RAB18,RANBP2,SEC62,SNX4,TCF12,UBE2J1,USP47,WDR47,ZC3H13
miR-448-3p (and other miRNAs w/seed UGCAUAU)		mature microRNA	Inhibited	-4.458	bias	1.38E-03	ADO,AEBP2,ANK1,APPBP2,ATAD2B,ATP2A2,AZI2,BTG3,C16orf93,CALCRL,CAPRIN1,CPSF2,ENAH,FAM168B,FAM177A1,FOXN3,FURIN,FXR1,GCFC1,GNPDA2,GPHN,HSDL2,IGF1R,ING2,IPO7,JAG1,KDM5C,KPNA3,KRAS,LYST,MAPK1IP1L,MARCH9,MON2,NAMPT,NEDD1,NUFIP1,ORC4,PAN3,PAPD7,PDE4D,PXDN,RAB3IP,RANBF
miR-361-5p (miRNAs w/seed UAUCAGA)		mature microRNA	Inhibited	-2.508	bias	1.47E-03	ALDH1L2,ATP6V0A2,CALCRL,CAMK2D,COMMD8,DDX3X,GIGYF2,GTF2E1,GUCY1B3,HSP90AA1,MTUS1,NFE2,NR4A2,PEX5,PHAX,RAB3GAP1,RAD23B,SLC25A12,SMPD3,SREK1,TGFB2,UBR5,XRCC4,ZBTB38,ZNF148
miR-4684-3p (miRNAs w/seed GUUGCAA)		mature microRNA	Inhibited	-2.377	bias	1.47E-03	AKIRIN1,BNIP3L,ERBB2IP,FCER1A,KIAA0586,MST4,PPP1R15B,SETD7,YAF2
miR-520a-5p (and other miRNAs w/seed UCCAGAG)		mature microRNA	Inhibited	-2.664	bias	1.52E-03	ASUN,ATF2,ATMIN,ATP6V1H,CD84,CDC73,ESF1,EXOC6,GNB5,IGF1R,IQGAP3,KIAA1033,LTN1,NUPL1,OLR1,USP47,UTP15
miR-9-5p (and other miRNAs w/seed CUUUGGU)		mature microRNA	Inhibited	-4.608	bias	2.12E-03	AEBP2,AFF1,AKAP11,ALG6,ANKRD12,APPBP2,ARL4C,ATL2,ATP13A3,BAHD1,C17orf85,C5orf30,CAPZA1,CCDC88A,CD47,CDC73,CEP350,COG3,COG6,CPSF6,CRIM1,DBT,DDX3X,DEDD2,DGCR8,DR1,DYRK1B,DYRK2,EDEM3,ENAH,ERBB2IP,FAM115A,FOXN3,FOXO1,FURIN,FXR1,FYCO1,GPAM,GPATCH8,GPBP1L1,GRSF1,GSKI
miR-96-5p (and other miRNAs w/seed UUGGCAC)		mature microRNA	Inhibited	-4.794	bias	2.25E-03	AEBP2,ARL4C,ARPP19,B3GALT2,BASP1,BCL2L12,C5orf30,CALCRL,CAPNS1,CCDC88A,CCDC92,CDK18,CLASP2,COG3,CPSF6,CTDSPL,DENR,DLAT,DYRK2,EDEM3,EGLN1,EIF3J,ERO1L,ETF1,FABP2,FOXN3,FOXO1,FXR1,FYCO1,GPHN,HDAC7,HSP90AA1,IGF1R,INSIG2,KIF5B,KPNA3,KRAS,KTN1,LNX2,LPHN2,LRIG1,MAGI3,MA
miR-496 (and other miRNAs w/seed GAGUAUU)		mature microRNA	Inhibited	-3.370	bias	2.35E-03	AEBP2,ASXL2,ATAD1,ATP2A2,CAPRIN1,CD2AP,FAM214A,ITCH,KIAA1033,MTOR,PIAS3,RNF13,TACC1,TBC1D15,ZBTB10,ZNF41
miR-125a-3p (miRNAs w/seed CAGGUGA)		mature microRNA	Inhibited	-2.551	bias	2.40E-03	AEBP2,ATAD2B,ATP6V0A2,C17orf85,CCT8,CSGALNACT2,FXR1,FYCO1,KDM5C,KLF6,MAPK1IP1L,MRPL30,MST4,NIT1,OXLD1,P2RX7,PTPN2,RAB3GAP1,RPS6KA3,RUSC1,SATL1,SEPT11,SLC31A1,SLC8A1,SMG1,TRIP12,VSIG10,ZFYVE1
miR-205-5p (and other miRNAs w/seed CCUUCAU)		mature microRNA	Inhibited	-3.471	bias	2.46E-03	AEBP2,AFF1,AKAP11,AP1G1,CALCRL,CASD1,CPSF6,CSPP1,DDX5,DGCR8,DNAJA1,FXR1,GSE1,HIATL1,HNRNPK,IPO7,KIAA1429,LRPPRC,MAGI3,MARCKS,MGRN1,MORF4L2,PPP1R15B,RAD17,RANBP2,RARA,RBM47,RPS6KA3,SEPT11,SS18,STRBP,TIAL1,TLK1,WWC2,ZBTB38,ZNF148
miR-486-5p (and other miRNAs w/seed CCUGUAC)		mature microRNA	Inhibited	-2.680	bias	2.58E-03	ARHGAP5,CAPRIN1,CEP350,CNKSR2,CRLS1,CTDSPL,CXorf23,DBF4,FOXO1,HAT1,MARK1,MTMR9,NFE2L1,NUDCD1,NUDT11,PTPN12,RCOR3,TENM2,TRAPPC6B,TRIM10,UTP15,ZNF331
miR-124-3p (and other miRNAs w/seed AAGGCAC)		mature microRNA	Inhibited	-4.285	bias	2.64E-03	ABR,ALDH1L2,ALDH9A1,AP1G1,ATAD1,ATAD2B,ATMIN,ATP6V0A2,AURKA,BAHD1,BTG3,C11orf84,C17orf103,CAPNS1,CCDC88A,CDC73,CDK18,CEP350,CSPP1,CTDSPL,DDX3X,DGAT2,DNAJC1,DYRK2,ENAH,EPS8,ETF1,FAM129B,FAM177A1,FAR1,FMNL2,FNBP1L,FOXA2,FURIN,FXR1,GIT2,GNG2,GNPDA2,GNS,GPAM,GPATCH8
miR-196a-5p (and other miRNAs w/seed AGGUAGU)		mature microRNA	Inhibited	-3.192	bias	2.66E-03	AFF2,AZI2,C11orf84,CDC73,CEP350,COL1A1,DNAJC27,EPC2,FOXO1,HABP4,IGF2BP3,KLHDC8B,LAMA4,LTN1,NAP1L1,OTUD6B,PPP1R15B,RAD23B,RANBP2,RIOK3,S100A9,SLC31A1,SLC9A6,SMARCC1,SNX4,SOCS4,TMX1,USP15,ZNF148,ZNF354A
miR-224-5p (miRNAs w/seed AAGUCAC)		mature microRNA	Inhibited	-3.612	bias	2.70E-03	AKIRIN1,ANKRD12,API5,COBLL1,CPSF6,DDX3X,DUSP11,EIF2AK3,ENAH,EPC2,FAM177A1,GIGYF2,HEBP1,IL1RN,IPO7,ITSN1,LGALSL,MARCKS,NAP1L1,OCLN,ORC4,PAPOLA,PDCL,PRPF4B,RAD23B,RPS6KA3,SETD7,SLC25A12,SUCO,TMX1,TREM1,U2SURP,UBE2J1,UBQLN2,USP3
miR-624-3p (miRNAs w/seed ACAAGGU)		mature microRNA	Inhibited	-2.420	bias	3.12E-03	ARAP2,BIVM,CD84,CHAMP1,DBF4,EPC2,ITSN1,NUDCD1,SS18
miR-219-5p (and other miRNAs w/seed GAUUGUC)		mature microRNA	Inhibited	-2.456	bias	3.86E-03	ALOX5,ARL4C,CD2AP,ENAH,FAM115A,FURIN,GATA2,GSE1,LAPTM4A,LGALSL,MAPK1IP1L,ORC4,PDE4D,PGGT1B,PHACTR4,PPM1A,PRNP,RAD23B,RALGAPB,SETD7,SLC31A1,SLC35F5,SMC4,SMPD3,SREK1,STRBP,TACC1,TBC1D15,TCF12,TENM2,TLK1,TSPAN2,ZNF148,ZNF827
miR-433-3p (and other miRNAs w/seed UCAUGAU)		mature microRNA	Inhibited	-4.571	bias	4.25E-03	ANKRD12,ATAD1,CCDC82,CDK17,ENAH,EPC2,FAM208A,FOXN3,GIGYF2,GNPTAB,GPATCH8,IMPA1,IPO7,KIAA1432,KRAS,LPHN2,MAPK1IP1L,MED13,NAA30,NR2F6,PPM1A,RIOK3,SREK1,TMX3,TRIP12,TTC13,UBR5,WAPAL,ZNF567
miR-208a-3p (and other miRNAs w/seed UAAGACG)		mature microRNA	Inhibited	-2.957	bias	4.28E-03	ARID2,C16orf72,COL4A3,DCAF12,DDX3X,DDX5,DYRK2,ENAH,FAM168B,FNDC3A,GPBP1,KIF5B,KPNA3,MED13,NAP1L1,POGZ,TACC1,TCF12,USP47
miR-33-5p (and other miRNAs w/seed UGCAUUG)		mature microRNA	Inhibited	-3.957	bias	4.56E-03	ABR,ADO,AKAP2/PALM2-AKAP2,ALPK3,APPBP2,B3GALT2,CALML4,CCNYL1,CD302,CEP350,CPSF2,DDX3X,DDX5,EEF1A1,EPC2,ERBB2IP,FOXN3,GSE1,KIAA1432,MBD6,MBOAT2,MORF4L2,MTHFD2,NAA30,PANK3,PDE4D,SEC63,SEL1L3,SETD7,SMG1,SREK1,STRBP,TBC1D15,UBE2V2,UBR5
miR-494-3p (and other miRNAs w/seed GAAACAU)		mature microRNA	Inhibited	-3.216	bias	5.53E-03	ABR,AEBP2,ARHGAP5,ARPP19,B3GALT2,C16orf72,CAMK2D,COG3,CYSTM1,ENAH,EPC2,FGL2,GPATCH8,GRINA,GTF2E1,HMGB3,IGF1R,IKBKAP,KDM5C,KLF11,LAPTM4A,LGALSL,LMNB2,MORF4L2,NNT,OCLN,PPM1B,RAD23B,SETD7,SLC35F5,SLC38A2,SPATA5,STX12,TACC1,TENM2,TMX3,UBN1,VPS13C,WDR26,WDR44,WWC
miR-374b-5p (and other miRNAs w/seed UAUAAUA)		mature microRNA	Inhibited	-2.764	bias	5.73E-03	ABR,AFF1,ANKRD12,ARHGAP5,ARID2,ATF2,ATMIN,CD47,CEP350,COG3,CRIM1,CXorf23,CYP26A1,DGAT2,DIP2C,EDEM3,FABP2,FOXO1,G2E3,KIAA1432,KIAA1468,KTN1,LPHN2,LYST,MAPK1IP1L,MBLAC2,MCTP2,MED13,MMP14,MON2,NHLRC2,NR4A2,PDE4D,PSMF1,PTPN12,RGS14,SEC63,SETD7,SMARCC1,SNX4,SOCS4,SRE
miR-3714 (miRNAs w/seed AAGGCAG)		mature microRNA	Inhibited	-2.908	bias	6.02E-03	ANKRD12,ARG2,ATMIN,ATP6V0A2,CASP6,FNBP1L,GPBP1,NUFIP1,PTPN12,SDAD1,TXNDC9,ZNF608
miR-183-5p (miRNAs w/seed AUGGCAC)		mature microRNA	Inhibited	-3.407	bias	6.04E-03	ARPP19,ATL2,ATP13A3,BNIP3L,C16orf72,CAMK2D,CLCN3,CTDSPL,DUSP10,ENAH,ERBB2IP,FOXO1,GPAM,GSE1,LTN1,MAL2,MAPK1IP1L,MED13,MON2,MTMR6,NADKD1,NFE2L1,NR4A2,OTUD4,PANK3,PDE4D,RPS6KA3,SEPT7,SMPD3,TCF12,UFM1,USP47,YAF2,ZNF148,ZNF197
miR-628 (and other miRNAs w/seed UGCUGAC)		mature microRNA	Inhibited	-2.213	bias	6.36E-03	ASCC3,ATP2A2,BNIP3L,CHAMP1,CISD1,COG6,FAM168B,GEMIN2,KTN1,STK40,ZNF148
miR-562 (miRNAs w/seed AAGUAGC)		mature microRNA	Inhibited	-2.425	bias	6.73E-03	CALCRL,CLASP2,CRNKL1,DLAT,NAP1L1,PTCD3
miR-132-3p (and other miRNAs w/seed AACAGUC)		mature microRNA	Inhibited	-3.418	bias	7.16E-03	ABR,AEBP2,AFF2,ARHGAP5,ARID2,CAPRIN1,CCDC88A,CDC40,CLASP2,CPSF6,DGCR8,DYRK2,FOXN3,FOXO1,FXR1,GATA2,GRSF1,KDM5C,MAGI3,MAPK1IP1L,MIA3,NAP1L1,NR4A2,PAN3,PAPOLA,RASA1,SDF2,SEC62,SLC31A1,SS18,TADA2B,TCF7L1,UBN1,USP38,ZFYVE1
miR-582-5p (miRNAs w/seed UACAGUU)		mature microRNA	Inhibited	-2.630	bias	8.10E-03	CDC40,EPC2,FPGT,INSIG2,NAP1L1,PGGT1B,PTPN2
miR-129-5p (miRNAs w/seed UUUUUGC)		mature microRNA	Inhibited	-3.513	bias	8.55E-03	ADO,ALG6,BECN1,CACNA1A,CACYBP,CAMK2D,CCDC88A,COL1A1,CXorf23,DDX3X,DNAJC27,DUSP10,ENAH,FOXN3,GORAB,GSE1,INSIG2,IPO7,ITSN1,MBOAT2,NR4A2,NUP43,OLA1,PHAX,PTMA,RRAGD,SMARCC1,STK40,TMX3,TSHZ1,U2SURP,USP15,USP47,VPS36,XPO7,YAF2,ZBTB10,ZC3H11A,ZDHHC23,ZFP106,ZNF608
miR-411-5p (miRNAs w/seed AGUAGAC)		mature microRNA	Inhibited	-3.550	bias	8.56E-03	ARHGAP5,ATAD2B,CALML4,FAM129B,FOXO1,GTF2I,NEMF,RANBP2,SCAF11,STIM2,TUBB2B,UBE2W,YAF2
miR-4446-5p (miRNAs w/seed UUUCCCU)		mature microRNA	Inhibited	-2.179	bias	8.73E-03	C18orf32,CALCRL,EID1,HECA,LRPPRC,PGGT1B,STIM2,TCF12,TET2,USP28,ZBTB7C,ZNF146
miR-4255 (miRNAs w/seed AGUGUUC)		mature microRNA	Inhibited	-2.224	bias	9.05E-03	CNKSR2,FAM171B,SNAP23,SUCO,TTC14
miR-376c-3p (and other miRNAs w/seed ACAUAGA)		mature microRNA	Inhibited	-2.674	bias	9.23E-03	AEBP2,AMFR,ARFGEF1,ARHGAP5,ARID2,BAG5,DUSP11,ERO1L,IGF1R,IPO7,NR4A2,OTUD4,PAPD7,RNF13,SEC62,SEC63,SETD7,SREK1,TAB2,TGFB2,TMEM38B,WBP4,WDR44,ZNF146
miR-204-5p (and other miRNAs w/seed UCCCUUU)		mature microRNA	Inhibited	-3.826	bias	9.39E-03	AKAP2/PALM2-AKAP2,ANKRD12,ARAP2,ARHGAP5,ARL4C,ATF2,BLOC1S5,C16orf72,CAMK2D,CAPRIN1,CUL4B,DBT,DEDD2,DENR,EPC2,EPS8,FAM168B,FAM177A1,GORAB,GPBP1L1,HSPH1,IGF2BP3,IPO8,KHDRBS1,MAPK1IP1L,MON2,MTMR6,NR4A2,OGT,P2RX7,PDK3,PPM1K,RANBP2,RBM15B,RPS6KA3,SEPT11,SF3B1,SHF,
miR-3913-3p (miRNAs w/seed GACAUCA)		mature microRNA	Inhibited	-2.969	bias	9.60E-03	AKIRIN1,ERGIC2,GUF1,KIAA1715,MAGI3,PNISR,PSMC6,SCIN,ZNF354A
miR-140-5p (and other miRNAs w/seed AGUGGUU)		mature microRNA	Inhibited	-2.465	bias	1.01E-02	ADAM9,AFTPH,AKAP2/PALM2-AKAP2,ANKRD12,CCNYL1,CDK17,ERBB2IP,FXR1,GUF1,HDAC7,IGF1R,IPO7,JAG1,KAT2B,KLF6,LPHN2,MARK1,MBLAC2,MED13,OGT,ORC4,PSMF1,RIOK3,RPS6KA3,SLC30A5,SLC38A2,SNX2,SYS1,UBR5,ZNF827
miR-4761-3p (miRNAs w/seed AGGGCAU)		mature microRNA	Inhibited	-2.729	bias	1.02E-02	C17orf103,CCNL1,DBT,HMGB3,LACE1,OTUD4,PRNP,SLMO2,STRBP,VPS13C,ZFP106
miR-291a-3p (and other miRNAs w/seed AAGUGCU)		mature microRNA	Inhibited	-3.060	bias	1.03E-02	ADAM9,AEBP2,AFF2,ARL4C,ASXL2,BAHD1,BNIP3L,C16orf72,CCDC88A,CDC40,CRIM1,CTDSPL,DCAF12,DNAJC27,EGLN1,FAM168B,FNDC3A,FYCO1,GNB5,GNPDA2,HABP4,HAUS8,INSIG2,IP6K1,IPO7,KAT2B,LYST,MED28,MPP5,MTUS1,NHLRC2,NR4A2,NUPL1,PAN3,PDK3,PHACTR4,PLCL1,POLK,PTPN21,RAB8A,RABEP1,RAD2
miR-4733-5p (miRNAs w/seed AUCCCAA)		mature microRNA	Inhibited	-2.047	bias	1.06E-02	C5orf30,CRLS1,CTNNB1,EGLN1,GRSF1,OLR1,RCE1,RDH14
5-N-ethylcarboxamido adenosine		chemical reagent	Inhibited	-2.172		1.09E-02	ARG1,ARG2,BCL3,CREM,DAD1,FOXA2,IFNG,KLF6,MNAT1,NR4A2,SLC30A5
miR-542-3p (miRNAs w/seed GUGACAG)		mature microRNA	Inhibited	-2.254	bias	1.16E-02	AKAP11,ASXL2,ATP6V0A2,CAPRIN1,CDC5L,CDK17,DBT,DEDD2,ENAH,FAM161A,FYCO1,GNB5,GPD1,GRSF1,HMGB3,MAPK1IP1L,MED13,PDE4D,PPP1R15B,RBM15B,STIM1,SYS1,TLK1,TUBB2B,U2SURP,ZFAND3,ZNF148
miR-921 (miRNAs w/seed UAGUGAG)		mature microRNA	Inhibited	-2.400	bias	1.16E-02	ADAM9,NEDD1,NUDT15,PTGER4,VPS36,ZNF572
miR-4797-3p (miRNAs w/seed CUCAGUA)		mature microRNA	Inhibited	-2.449	bias	1.16E-02	ABCD3,ALG6,PHAX,PTCD3,UBD,ZMYM4
miR-188-5p (miRNAs w/seed AUCCCUU)		mature microRNA	Inhibited	-2.449	bias	1.48E-02	B3GALT2,LACE1,LRRC1,PPIL4,RSAD1,SPATA5
miR-320b (and other miRNAs w/seed AAAGCUG)		mature microRNA	Inhibited	-4.571	bias	1.62E-02	AIM1,AKAP2/PALM2-AKAP2,ARHGAP5,ARPP19,ATAD2B,ATP13A3,BAHD1,BLOC1S5,C16orf58,CAPRIN1,CDC73,CISD1,CLASP2,CNKSR2,CSNK1G3,DCAF12,DIP2C,ENAH,FAM208A,FAR1,FXR1,GNS,GPBP1,HECA,IGF1R,IGF2BP3,IPO7,KIAA1715,MAPK1IP1L,MBLAC2,MGRN1,MUT,OLA1,PAN3,PDE4D,PDK3,PSMF1,QSOX2,RAD23
miR-377-3p (miRNAs w/seed UCACACA)		mature microRNA	Inhibited	-2.881	bias	1.72E-02	ALDH1L2,ATL2,BTG3,C15orf57,C16orf72,C8orf37,CHORDC1,CNPPD1,CPSF6,DCAF12,EIF4ENIF1,ENAH,EPB49,FAM208A,FNBP1L,GFI1B,GRSF1,ITCH,KDM6B,KLHDC4,LPL,LRPPRC,NEDD4,NFE2L1,OCLN,PDE4D,PDIA4,PPM1A,PTMA,RANBP2,RASA1,RBM47,RDX,RIF1,RPS6KA3,SEPT11,SFXN5,SLC30A2,STIM1,TMX1,TRIP12,U
miR-936 (miRNAs w/seed CAGUAGA)		mature microRNA	Inhibited	-2.596	bias	1.72E-02	CAMK2D,FAM115A,MTHFD2,NEMF,SCAF11,SEC62,XPO7
miR-4654 (and other miRNAs w/seed GUGGGAU)		mature microRNA	Inhibited	-2.778	bias	1.77E-02	AFF2,AP1G1,BLOC1S5,CD47,FNBP1L,GCFC1,GNG2,PCMTD1,PEX2,RNF123,ZC3H13
miR-128-3p (and other miRNAs w/seed CACAGUG)		mature microRNA	Inhibited	-3.118	bias	1.88E-02	AFF1,ALDH1L2,ANK1,APPBP2,ARFGEF1,ARHGAP12,ARID2,BAHD1,BCL3,BLOC1S5,C17orf85,CACNA1A,CCDC88A,CCDC92,CD2AP,CDK18,CTDSPL,DOCK11,EDEM3,EID1,ENAH,EPB49,FAM177A1,FOXN3,FOXO1,FURIN,GATA2,GIGYF2,GNB5,GNS,GPAM,GRSF1,HMGB3,IPO7,ITCH,JAG1,KIAA1033,KPNA3,MARCKS,MED13,MET,
miR-4771 (miRNAs w/seed GCAGACU)		mature microRNA	Inhibited	-2.177	bias	2.01E-02	C15orf57,CAPRIN1,CYB5D2,EPS8,KHDRBS1,OTUD4,PSME4,SLC31A1,TMX3,WDR47,ZZZ3
miR-4291 (and other miRNAs w/seed UCAGCAG)		mature microRNA	Inhibited	-2.354	bias	2.02E-02	AP1G1,ATP2A2,COG6,KIAA1432,LGALSL,MED23,NAA30,OTUD4,PGGT1B,SDAD1,TAB2,ZFAND3
miR-1301 (and other miRNAs w/seed UGCAGCU)		mature microRNA	Inhibited	-2.170	bias	2.07E-02	AKAP2/PALM2-AKAP2,C17orf85,CDK17,DGAT2,DIP2C,DNAJC27,MCTP2,RCOR3,RHEB,SKIL,SYS1,TEX2,YAF2,ZNF181
miR-181b-1-3p (and other miRNAs w/seed UCACUGA)		mature microRNA	Inhibited	-2.546	bias	2.24E-02	ABCD3,ATP13A3,DDX3X,ENOPH1,KIAA1715,PCMTD1,RNPC3,SMARCC1,TLK1,TWISTNB
miR-155-5p (miRNAs w/seed UAAUGCU)		mature microRNA	Inhibited	-2.934	bias	2.54E-02	ARID2,ARRB2,BAG5,CD47,CDC73,CTNNB1,CUL4B,CXorf23,CYP51A1,EHD1,FAR1,FMNL2,FXR1,G2E3,GCFC1,GRSF1,HMGB3,KIAA1715,KRAS,LNX2,LPL,MARC1,MET,MYD88,MYO1E,PTPN2,RHEB,RNF123,RNF149,RPS6KA3,SEPT11,SETD7,SLC35F5,SMARCA4,TAB2,TADA2B,TBC1D15,UBE2J1,WNK1,ZBTB38
miR-4423-3p (miRNAs w/seed UAGGCAC)		mature microRNA	Inhibited	-2.937	bias	2.54E-02	BTG3,CD84,FMNL2,HEATR2,LGR4,MST4,NNT,SLC38A2,TCF12,ZNF142,ZNF331
miR-29b-3p (and other miRNAs w/seed AGCACCA)		mature microRNA	Inhibited	-3.183	bias	2.77E-02	AIM1,AKAP2/PALM2-AKAP2,AMFR,ANK1,AP1G1,ARPP19,ATAD2B,BAHD1,C16orf72,C17orf103,CAPRIN1,CCDC88A,CCNYL1,COL11A1,COL16A1,COL1A1,COL4A3,COL6A2,DBT,DCAF12,DDX3X,DEF8,DIP2C,DTWD2,ELN,ENAH,FAM168B,FOXN3,GEMIN2,GNG2,GNS,GPAM,HIATL1,KDM5C,KDM6B,KIAA1432,KIF5B,LPL,LRCH1,MBL
miR-4693-5p (miRNAs w/seed UACUGUG)		mature microRNA	Inhibited	-2.019	bias	3.18E-02	BNIP3L,CASD1,HMMR,INPP5F,NEDD4,TACC1,TCF12
miR-4776-5p (miRNAs w/seed UGGACCA)		mature microRNA	Inhibited	-3.266	bias	3.22E-02	CTNNB1,ENAH,EXOC6,FOXO1,GPBP1,IPO11,KIAA1429,LGR4,MED13,PPM1A,RBM5
miR-4659a-5p (and other miRNAs w/seed UGCCAUG)		mature microRNA	Inhibited	-2.234	bias	3.26E-02	ATL2,BZW1,C5orf30,CCDC82,COL11A1,MRPL30,RAD23B,SEC62,SLC35F5,SMG1
miR-4503 (miRNAs w/seed UUAAGCA)		mature microRNA	Inhibited	-2.200	bias	3.42E-02	CD302,DOCK11,NEMF,RANBP2,UBLCP1
miR-4638-3p (and other miRNAs w/seed CUGGACA)		mature microRNA	Inhibited	-2.449	bias	3.48E-02	CHORDC1,CLHC1,DLAT,GRSF1,KIAA1432,MAL2,NT5DC1,NUPL1,RALGAPB,SEC63,TBC1D20,VPS13C
IL17RA		transmembrane receptor	Inhibited	-2.000	bias	3.58E-02	CCR1,CSF3R,CXCR2,S100A9
miR-3679-3p (miRNAs w/seed UUCCCCC)		mature microRNA	Inhibited	-3.477	bias	4.04E-02	B3GALT2,C18orf32,C1QBP,CD2AP,CPSF6,DDX3X,ERCC4,GPBP1L1,HEATR2,HEBP1,HECA,HSP90AA1,HYPK,ITIH3,MARC1,MBOAT2,MCTP2,MTUS1,OGT,PGGT1B,PPM1B,PTAFR,SEPT11,SMARCC1,SOCS4,TET2,TLK1,TTC13,U2SURP,UBR5,VEZT,ZNF148,ZNF263,ZNF41
miR-544-3p (and other miRNAs w/seed UUCUGCA)		mature microRNA	Inhibited	-5.031	bias	4.08E-02	ADO,AEBP2,ANKRD12,APPBP2,ARPP19,ATP2A2,ATXN7L3B,BAHD1,BLOC1S5,BRAP,CACNA1A,CLASP2,CRLS1,CUL4B,DDX5,DNAJC1,ENAH,ERCC4,FOXN3,FOXO1,GPBP1,HTATSF1,IPO8,LTN1,MCTP2,MTMR9,OGT,ORC4,PHACTR4,POLR1E,PPM1A,RAD23B,RANBP2,RBBP7,RPRD1B,SACM1L,SEPT11,SETD7,SNX4,TACC1,TLK
miR-4704-5p (miRNAs w/seed ACACUAG)		mature microRNA	Inhibited	-2.200	bias	4.20E-02	FAM208A,PPM1A,RCOR3,SLC38A2,VPS13C
miR-135a-5p (and other miRNAs w/seed AUGGCUU)		mature microRNA	Inhibited	-3.178	bias	4.47E-02	ADO,AEBP2,ALOX5AP,ATMIN,CALML4,CAMK2D,CD47,CDC40,CEP350,COL4A3,CSNK1G3,DDX3X,DIP2C,DNAJC27,DYRK1B,EDEM3,ENAH,FOXN3,FOXO1,GHR,GNG7,GSE1,KDM6B,KIAA1033,KIAA1432,KPNA3,MBD6,MTUS1,NADKD1,NAMPT,PGGT1B,PLAGL1,PPM1A,PTK2,RALGAPB,RARA,RNF43,SEC62,SETD7,SNTA1,SOCS4
ERBB3		kinase	Inhibited	-2.180		5.64E-02	ACTN3,ADAM9,BGN,CD47,COL1A1,GHR,IGF1R,LAMA4
IL21		cytokine	Inhibited	-2.311		8.24E-02	ARG1,CXCL10,IFNG,IL17A,MYD88,PDCD1,PRF1,PTPRC,STAT4
cholecalciferol		chemical - endogenous mammalian	Inhibited	-2.378		9.10E-02	ACP5,ALOX5,BECN1,COL1A1,CXCL10,RARA,SLC20A1
NFATC3		transcription regulator	Inhibited	-2.000		1.54E-01	CGA,COL1A1,FOXA2,IFNG,SFTPC
TGFB2	-4.445	growth factor	Inhibited	-2.156		1.89E-01	COL1A1,IFNG,PTAFR,TAGLN,TGFB2
prostaglandin E2		chemical - endogenous mammalian	Inhibited	-2.239		2.23E-01	ALOX15,BIRC3,CASP6,CCR1,COL1A1,CREM,CXCL10,FOXO1,IFNG,IGF1R,IL17A,IL1RN,MMP14,NR4A2,PTGER4,TREM1,UCP2
butyric acid		chemical - endogenous mammalian	Inhibited	-2.086		4.10E-01	AFF1,ALOX15,BCL2A1,CCR1,CGA,CLCN3,COL11A1,DEK,FURIN,GATA2,HIST1H1C,KIT,KRAS,NAMPT,NME1,POLR2L,PTAFR,PTGDS,SEC61B,SEPT7,TXK,ZNF148
4-phenylbutyric acid		chemical - endogenous mammalian	Inhibited	-2.000		4.11E-01	EIF2AK3,HLA-A,MOG,OLR1
Cg		complex	Inhibited	-2.165		4.69E-01	BTG3,CREM,CXCL10,CYP26A1,FGL2,GTF2E1,IFNG,IGF1R,KLHDC4,NR2F6,PDE4D,SLC20A1,SMARCA1,TGFB2,UPP1,XKR8
AGT		growth factor	Inhibited	-2.594		4.69E-01	AFF2,AGER,ALOX15,ARID2,BECN1,BGN,CGREF1,COL1A1,CREM,CXCL10,DAB2,EMR1,FOXN3,IGF1R,JAG1,NCF1,NR4A2,OCLN,OLR1,PNKD,TGFB2,UCP2
forskolin		chemical toxicant	Inhibited	-2.119		1.00E00	ACP5,ARL4C,BCL3,BNIP3L,CARD10,CGA,COL1A1,CREM,CRISPLD2,DAB2,FCER1A,HPGD,IFNG,IGF1R,MET,NAMPT,NR4A2,NR5A1,PDE4D,PLAGL1,PLCL1,PTPN21,SMARCA1,TLK1,TPO,UCP2,UPP1,ZNF331
IL17A	-1.092	cytokine	Inhibited	-2.169		1.00E00	IFNG,IL17A,JAG1,OCLN,SERPIND1
HNF4A		transcription regulator		-0.616		8.83E-08	ADSS,AMT,AQP9,ARG2,ARL4C,ASUN,ATF2,ATP6V1H,AZI2,BNIP1,BRAP,CALML4,CAMK2D,CCDC82,CCT8,CDC45,CDC5L,CIAO1,CIR1,CLPX,CMC2,COMMD9,COPB1,CTNNB1,CYP51A1,DAD1,DBP,DBT,DEDD2,DPH5,DPM2,DUSP11,DYRK1B,EDEM3,EID1,EIF4ENIF1,ELMOD3,ERO1L,EWSR1,FABP2,FBP1,FOXA2,FOXO1,FURIN,FX
camptothecin		chemical toxicant		-1.844		1.25E-05	ADO,AGER,AIM1,AKAP2/PALM2-AKAP2,API5,APPBP2,ARAP2,ARRB2,AURKA,BCL2A1,BIRC3,BNIP3L,BTG3,CCR1,CD47,CDC73,CXCR2,DUSP10,EEF1A1,FGL2,FNDC3A,FOXN3,FOXO1,GIGYF2,GIT2,GNG7,GPHN,GRINA,GSE1,HLA-A,IER5,ITSN1,LST1,MBOAT7,MED27,MNAT1,NR4A2,PIK3CA,PRKDC,PTGER4,RARA,RASA1,RDX,

miR-4301 (miRNAs w/seed CCCACUA)			mature microRNA		-1.918	bias	3.24E-05	C12orf75,CDC73,DCAF12,FAM114A2,FAM177A1,GNS,MED28,TPK1,TRAPPC6B,UBE2W,VEZT,VPS13C,ZNF146
FAS			transmembrane receptor				3.50E-05	AGER,AIM1,AKAP2/PALM2-AKAP2,API5,APPBP2,ARAP2,ARRB2,BGN,BIRC3,BTG3,CCR1,COL1A1,CXCR2,DUSP10,FGL2,FOXO1,GIT2,GNG7,IFNG,LST1,MBOAT7,MET,NR4A2,PIK3CA,PRKDC,PTGER4,RARA,RASA1,RDX,RGS14,RHEB,RRAGD,SFTPC,SKIL,TIAL1,TLK1,WNK1
AGN194204			chemical drug		0.087		8.26E-05	AEBP2,AIM1,ARL4C,AURKA,BCL2A1,BNIP3L,CAMK2D,CD6,CYP51A1,FABP2,FOXA2,FURIN,HIST1H1C,HMGB3,IL17A,KLF6,LPL,PRNP,SCIN,SMC4,STIM1
TCOF1			transporter				2.22E-04	BNIP3L,CAPRIN1,GPBP1,MBOAT2,NUP155,PPIL4,PSMC6,QRICH1,RANBP2,RASA1,THOC1,WWC2
miR-127-5p (miRNAs w/seed UGAAGCU)			mature microRNA		-1.555	bias	9.25E-04	CAND1,CNKSR2,CPSF6,FAM177A1,IQGAP3,PEF1,SMC3,SNX5
STC1			kinase				1.21E-03	MTOR,TGFB2,UCP2
TCF7			transcription regulator		-0.275		1.50E-03	CTNNB1,FOXA2,IFNG,IL17A,MET,NES,PPARD,RARA
miR-138-5p (miRNAs w/seed GCUGGUG)			mature microRNA		-0.512	bias	1.53E-03	AEBP2,AFF1,AKAP11,ANK1,APPBP2,ARL4C,ARNT2,BNIP3L,C17orf85,C7orf50,CALML4,CCNYL1,CD2AP,DEK,EID1,ELMOD3,ERCC4,GNG2,GPD1,GPHN,IP6K1,IPO8,KDM5C,KDM6B,KIAA1468,KLF11,MARCKS,MGRN1,PCMTD1,PPARD,PPM1A,PRPF4B,PSMF1,PTK2,PTPN2,RAB3GAP1,RARA,RCOR3,RNMTL1,RPRD1B,SEPT11,SL
miR-3613-5p (miRNAs w/seed GUUGUAC)			mature microRNA		-1.055	bias	1.96E-03	ARFGEF1,ATR,CDC73,GATA2,LMNB2,RRAS2,STRBP
INSIG1			other		-0.599	bias	1.97E-03	ALOX5AP,CD68,CXCL10,CYP51A1,GPAM,IFNG,LPL,MLXIPL,OLR1,PRF1,S100A9,STAT4,UCP2
LDL			complex		0.433		2.31E-03	AP1G1,ARG2,ATP2A2,BCL2A1,CASP6,CD68,CTNNB1,CXCL10,GTF2I,IFNG,IGF1R,IL1RN,MMP14,NAMPT,NCF1,NME1,NR4A2,OLR1,PTAFR,RABEP1,RARA,TANK
CD28			transmembrane receptor		-1.451		2.32E-03	ATF2,BCL2A1,BZW1,CASP6,CREM,DAD1,EWSR1,GUCY1B3,HAT1,IFNG,IGF1R,IL17A,IL7,ITCH,KIAA0020,LSP1,LTN1,NAMPT,PDE4D,PSMF1,PTGER4,PTMA,RAD23B,RANBP2,RPL6,SEC61B,SSB,STIM1,TMX3
APC/APC2			group				2.33E-03	CTNNB1,JAG1,MMP14
PIK3R2			kinase				2.36E-03	CASP6,CXCL10,FOXO1,IFNG
miR-3065-3p (miRNAs w/seed CAGCACC)			mature microRNA		-1.269	bias	2.51E-03	BIVM,BRAP,DBF4,DBT,ECHDC2,GNS,HIATL1,IGF2BP3,MLLT11,MTOR,NADKD1,NUP43,RUSC1,SMPD3,SNX4,TET2,UBAC2,XKR8,XXYLT1
NDUFAB1			enzyme				2.58E-03	DBT,DLAT
TP53			transcription regulator		0.013		2.73E-03	ALDH9A1,ALOX15,ALOX5,API5,ARHGAP5,AURKA,BCL2A1,BCL3,BIRC3,CAMLG,CAND1,CAPNS1,CASP6,CCNL1,CD47,CISD1,CKAP2,COL1A1,COL6A2,COPB1,CSF3R,CTNNB1,CYP51A1,DBF4,DBP,DPEP1,EIF2AK3,ENPP2,EPS8,FOXO1,HADHA,HMMR,HSP90AA1,HSP90AB1,HSPH1,IER5,IFNG,IGF1R,IL7,IPO7,KAT2B,LSP1,MAP2
miR-483-3p (miRNAs w/seed CACUCCU)			mature microRNA		-1.625	bias	3.02E-03	CTNNB1,DCAF6,FURIN,GTF2E1,HEATR5B,HMGB3,IER5,RAB3IP,TACC1,TVP23B,WDR44,ZBTB38,ZNF691
FGF4			growth factor				3.46E-03	CTNNB1,FOXA2,FOXO1,JAG1,MMP14
TGFBR2			kinase		-1.148		3.78E-03	ALOX5AP,BFSP1,BGN,COL1A1,CTNNB1,DYRK2,HPGD,IFNG,IL17A,KRAS,PLAGL1,SKIL,SLC12A4,TAB2,TAGLN,TCF12,TGFB2,ZNF354A
abatacept			biologic drug				3.93E-03	IFNG,IL17A,PDCD1
DGAT2		-2.080	enzyme				3.93E-03	DGAT2,GPAM,UCP2
ABCD1			transporter				3.93E-03	ABCD3,ALOX5,SLC27A2
zinostatin			biologic drug				3.93E-03	DUSP10,IGF1R,ING2
miR-4641 (miRNAs w/seed GCCCAUG)			mature microRNA		-1.505	bias	3.94E-03	AMT,CLHC1,CRLS1,DBT,GUF1,ITIH3,LAMA4,MCTP2,NR4A2,NT5DC1,OCLN,POLR3E,PTPN2,SCAF11,TBC1D9B,TEX2,USP3
INHBA			growth factor		0.090		4.19E-03	AMT,ARFGEF1,CGA,CLASP2,COIL,FOXA2,FURIN,GRSF1,IFNG,KRAS,NR4A2,NR5A1,POGZ,S100A9,STRBP,TAGLN,ZBTB10
CXCL12			cytokine		-0.492		4.34E-03	ACP5,ANKRD12,BCL3,CD33,CD47,CTNNB1,CXCL10,DAD1,MAPK12,MARCKS,MMP14,NR2F6,RAP1A,RPS6KA3,SEPT7,SORBS3
FOXO3			transcription regulator		-0.238		4.76E-03	BECN1,BNIP3L,CXCL10,FOXO1,GATA2,GTF2I,IARS,IFNG,JAG1,MTHFD2,NAMPT,PIK3CA,PRDX5,TGFB2,UCP2
miR-4502 (miRNAs w/seed CUGAUGA)			mature microRNA		-1.134	bias	4.87E-03	GORAB,IQCA1,KIAA1033,PCMTD1,TRPC5,U2SURP,UBL3
miR-4474-3p (miRNAs w/seed UGUGGCU)			mature microRNA		-1.460	bias	5.09E-03	ALOX15,BRAP,CIAO1,CYP51A1,DAB2,DENND1C,DNAJC27,FNDC3A,FOXO1,KIFAP3,SMPD3,SNAP23,SYS1,ZNF569,ZNF608
miR-1537 (miRNAs w/seed AAACCGU)			mature microRNA		-0.269	bias	5.25E-03	EIF2AK3,GIT2,GRSF1,UCK1,WDR47
miR-645 (miRNAs w/seed CUAGGCU)			mature microRNA		0.923	bias	5.37E-03	CCDC66,CREM,SCAF11,SFXN5,SLC8A1,SMARCA1,STK40,SUGP2,TBC1D20,TMX3,ZFAND3
retinol			chemical drug		-1.982		5.77E-03	CYP26A1,PPARD,RARA,TGFB2
CEBPA			transcription regulator		-0.685		5.80E-03	ALOX5AP,AMELX,ARG1,ARG2,ARL4C,BCL2A1,CCR1,COL1A1,CSF3R,DGAT2,FOXA2,FOXO1,GATA2,HPGD,IL1RN,LPL,LST1,MC1R,NR4A2,OLR1,PGD,PPARD,PTAFR,PTPRC,S100A9,SERPINI1,SFTPC,TANK,TBXAS1,TGFB2
LILRB4			other				6.05E-03	CXCL10,IFNG,IL17A
CISH			other				6.05E-03	CSF3R,CXCL10,IFNG
CLOCK			transcription regulator				6.19E-03	ARNT2,C1QBP,CYP26A1,CYP51A1,DBP,GALNT11,HSPH1,KRR1,NDUFA3,PTAFR,SLC20A1,SLC30A5,SLMO2,TSPAN4,ZZZ3
PPARG			ligand-dependent nuclear receptor		1.463		6.38E-03	ALDH9A1,ATP2A2,BECN1,COL1A1,CTNNB1,CYP26A1,DGAT2,DLAT,ERO1L,FABP2,FOXA2,GATA2,GPAM,GPD1,HADHA,IFNG,KLF6,LAPTM4A,LPL,MANBA,MMP14,MYD88,NCF1,OCLN,OLR1,PPARD,SCP2,STIM1,TBXAS1,UCK1,UCP2
PDLIM2			other				7.48E-03	IFNG,STAT4
MYBPC3			other				7.48E-03	ATP2A2,CXCL10
miR-369-3p (miRNAs w/seed AUAAUAC)			mature microRNA				7.48E-03	C8orf37,SLC35F5
CHI3L1			enzyme				7.63E-03	AKAP11,ARL4C,COL16A1,COL6A2,NAMPT
hydrogen peroxide			chemical - endogenous mammalian		-0.627		7.75E-03	ADAM9,ALOX5,ATF2,ATXN7L3B,AURKA,BCL2A1,CD68,COL1A1,CTNNB1,CYP51A1,DUSP10,EEF1A1,EID1,ELN,ENPP2,IER5,IFNG,IGF1R,KIT,KRAS,LGR4,NEDD4,PDIA4,PTGER4,PTMA,RIOK3,SLC20A1,TAGLN,TSPAN4,UCP2,WDR26,WNK1
miR-331-5p (miRNAs w/seed UAGGUAU)			mature microRNA		-1.805	bias	8.10E-03	COG6,KRAS,SLC9A6,THAP9,UBL3,USP16,ZNF605
pirinixic acid			chemical toxicant		1.771		8.15E-03	ABCD3,ALDH9A1,AQP9,CCDC92,CGA,COL1A1,DAD1,DLAT,FABP2,FBP1,FURIN,GPAM,GPD1,HADHA,HIST1H1C,HSDL2,HSP90AA1,IFNG,KLF11,LPL,MET,NAP1L1,PAICS,PCM1,PSMC6,PTAFR,PTPN21,PTPRC,SCP2,SLC27A2,TAF5,UBQLN2,UCHL5,UCP2
miR-3119 (miRNAs w/seed GGCUUUU)			mature microRNA		-1.555	bias	8.69E-03	CALML4,DNAJC27,FKBP11,FOXN3,HSDL2,MPP5,SLC20A1,ZC2HC1A
TAC4			other				8.73E-03	IFNG,IL17A,MMP14
miR-618 (miRNAs w/seed AACUCUA)			mature microRNA				8.73E-03	ARPP19,KLHL11,PLCL1
CDH13			other				8.73E-03	CTNNB1,IL17A,SETD7
miR-375-3p (and other miRNAs w/seed UUGUUCG)			mature microRNA		-0.621	bias	8.82E-03	AEBP2,ARL4C,ATG2B,C1QBP,DIP2C,ENAH,G2E3,IGF1R,INSIG2,MAL2,MED13,MPP5,PDE4D,PDK3,PIAS1,PRPF4B,RBM47,SLC31A1,SOCS4,TCF12,WWC2
KLF5			transcription regulator		-0.239		9.11E-03	ARG1,CGREF1,CTNNB1,PIAS1,S100A9,TAGLN,UCP2
TAL1			transcription regulator		-0.415		9.26E-03	ACP5,ASUN,FCER1A,GATA2,HADHA,KIT,LRBA,PRSS8,SLC4A11,TMEM180
TAZ			enzyme				9.62E-03	BASP1,ENPP2,KIT,MET,SFTPC,SNAPC1,TAGLN,UPP1
miR-758-3p (and other miRNAs w/seed UUGUGAC)			mature microRNA		-1.921	bias	9.68E-03	AKAP2/PALM2-AKAP2,DDX5,FAM161A,HMGB3,JAG1,KPNA3,KRAS,MIA3,NAMPT,NHLRC2,PLCL1,PSME4,RABEP1,RBM15B,SEC62,STK40,STRA13,TCF7L1,TET2,USP15,WWC2,WWOX,ZBTB38
miR-3915 (miRNAs w/seed UGAGGAA)			mature microRNA		-1.795	bias	1.05E-02	AZI2,CRIM1,IPO11,RNPC3,SCP2,SMARCC1,TBC1D15,TMEM180,UBL3
mir-21			microRNA		-0.647		1.06E-02	ALOX15,CD180,CSF3R,CXCL10,DBP,ELN,FGL2,ICOSLG,IFNG,JAG1,MSH2,MYD88,SIGLEC1,SMARCA4
GLIS2			transcription regulator				1.15E-02	COL1A1,CXCL10,IFNG,MMP14
CRP			other		0.017		1.16E-02	AGER,FCER1A,IFNG,IL1RN,LPL,PSMC6
miR-3674 (miRNAs w/seed UUGUAGA)			mature microRNA		-1.309	bias	1.16E-02	CCNYL1,FMNL2,GIT2,INPP5F,NIT1,SOCS4
NCF4			enzyme				1.20E-02	CCR1,IFNG,IL17A
miR-874-3p (and other miRNAs w/seed UGCCCUG)			mature microRNA		-1.061	bias	1.24E-02	ALG1,ARL4C,CNKSR2,CXorf23,DIP2C,DYRK2,EPB49,FAM63A,FOXN3,GIGYF2,GNG2,GORAB,KIAA1432,LDB1,MARCH9,MBLAC2,MLXIPL,NUPL1,PLD3,POLD4,PPM1A,PPP1R18,PTPN12,RNF43,SETD7,SLC4A11,SMG1,TARBP2,TET2,USP34,ZFYVE1
RASSF5			other		1.342		1.24E-02	BTG3,BZW1,CD99,DNAJA1,RAP1A
miR-4752 (miRNAs w/seed UGUGGAU)			mature microRNA		0.563	bias	1.28E-02	AMFR,BECN1,CAMK2D,FCF1,GLT8D2,NEDD4,PTPN21,RNF43
CD38			enzyme		0.460		1.33E-02	BNIP3L,CISD1,CLCN3,EGLN1,EPS8,ERO1L,FGL2,GCAT,GPAM,HMMR,LGALSL,RRAS2,SEMA4A,SLC16A3,TUBB2B
ELOVL5			enzyme		-1.154	bias	1.39E-02	FOXO1,GPAM,INSIG2,MLXIPL
arginase			group				1.45E-02	ARG1,OLR1
MKX			other				1.45E-02	COL1A1,TNMD
Fc receptor			group				1.45E-02	DOCK11,IFNG
GPIIB-IIIA			complex				1.45E-02	BCL3,MMP14
SNRK			kinase				1.45E-02	CACYBP,CTNNB1
tretinoin			chemical - endogenous mammalian		-1.464		1.45E-02	ACP5,ACTN3,AFF2,ALDH9A1,AMICA1,AQP9,ATP2A2,BCL2A1,BCL3,BIRC3,BNIP3L,CASP6,CCR1,CD68,CGA,COL1A1,CREM,CSF3R,CXCL10,CYP26A1,DAB2,DAD1,EEF1A1,EHD1,ELN,EMR1,ENPP2,FASTK,GATA2,GHR,HADHA,HNRNPK,IFNG,IGF1R,IL17A,KIT,LAMA4,LSP1,MARCKS,MC1R,MMP14,MNAT1,MTHFD2,NAA10,NCF1,N
miR-4312 (miRNAs w/seed GCCUUGU)			mature microRNA		-1.539	bias	1.47E-02	EPC2,ERCC4,HEATR2,HMGB3,KRAS,MBOAT2,SCIN,TRIM10,WBP11
APOA4			transporter				1.59E-02	DGAT2,FABP2,IFNG
miR-567 (miRNAs w/seed GUAUGUU)			mature microRNA				1.59E-02	ERGIC2,IMPA1,UBR3
TGFA			growth factor		0.684		1.59E-02	BIRC3,CTNNB1,CXCL10,DDX3X,DDX5,NES,NR4A2,PLAGL1,PRNP
miR-4733-3p (miRNAs w/seed CACCAGG)			mature microRNA		-0.307	bias	1.65E-02	ALPK3,AMICA1,CD47,COG6,DENND1C,HADHA,HIATL1,MGRN1,MYO1E,PHACTR4,STK40,TADA2B,TBC1D9B,ZFP106,ZZZ3
CCNK			kinase		0.640	bias	1.66E-02	ATR,BRCC3,COPS6,UCP2,UTP14A
CORT			other		0.271		1.66E-02	CCR1,CXCL10,IFNG,IL17A,SLC20A1
miR-3924 (miRNAs w/seed UAUGUAU)			mature microRNA		-0.322	bias	1.66E-02	DENR,IMPA1,PPIL4,SLC8A1,TSPAN2
DPP4			peptidase		1.109		1.67E-02	CTNNB1,IFNG,IL1RN,MMP14
TNFRSF4			transmembrane receptor		0.686		1.67E-02	BCL2A1,CXCL10,IFNG,IL17A
miR-3973 (miRNAs w/seed CAAAGUA)			mature microRNA		-1.980	bias	1.67E-02	AKIRIN1,CPSF6,FGFR1OP2,WWP1
FASN			enzyme				1.67E-02	ALOX5,FOXO1,GPAM,MET
SPI1			transcription regulator		0.135		1.73E-02	ACP5,CD180,CD68,CD72,CSF3R,DAB2,EMR1,FCER1A,GATA2,IL1RN,KIT,MCM3AP,NCF1,PTPRC,TREM1
miR-4274 (miRNAs w/seed AGCAGUC)			mature microRNA		-1.624	bias	1.99E-02	ALG1,FAM115A,HSDL2,IPO7,LRRC1,PEX5,TRIM10,ZNF41
NR1H3			ligand-dependent nuclear receptor		0.522		2.00E-02	ARG2,ARL4C,CXCL10,FBP1,GPAM,IL1RN,INSIG2,LPL,RARA
miR-4740-5p (miRNAs w/seed GGACUGA)			mature microRNA		0.485	bias	2.00E-02	AMT,ARAP2,ENOPH1,LIX1L,LST1,PDK3,STK40,UBE2W,VWA1
HGF			growth factor		0.342		2.02E-02	ATF2,AURKA,BCL2A1,BIRC3,CALCRL,CDC45,COPB1,CTNNB1,DBF4,DDX3X,FASTK,FNDC3A,FOXA2,GTF2H2,GUCY1B3,HMMR,IFNG,ITGB3BP,KRR1,LPHN2,MET,MMP14,NAMPT,NES,NR4A2,OCLN,PEX5,PPARD,PRKDC,PTAFR,PTPN2,S100A9,SKIL,SLC20A1,TGFB2
PDGFRA			kinase				2.04E-02	COL1A1,DAB2,KIT
formoterol			chemical drug				2.04E-02	CXCL10,CXCR2,PDE4D
ethylenediaminetetraacetic acid			chemical drug				2.04E-02	BCL2A1,CXCR2,IFNG
miR-4481 (and other miRNAs w/seed GAGUGGG)			mature microRNA		0.112	bias	2.05E-02	ADO,AP1G1,C17orf103,DHX34,DYNLRB1,GEMIN2,ICOSLG,KDM6B,NLRP5,PDK3,PNKD,PPP1R15B,RAB18,STIM1,TANGO2,TXK,ZC3H11A
MITF			transcription regulator		-1.001	bias	2.07E-02	ACP5,AIM1,COL1A1,GNPTAB,HPGD,KIT,LYST,MC1R,MET,MMP14,NDST2,PRF1,RRAGD,UBL3
ID1			transcription regulator		0.173		2.07E-02	CGA,GFI1B,MMP14,PTK2,SMARCC1,ZNF148
NR4A3			ligand-dependent nuclear receptor		0.152		2.07E-02	ATP5A1,BIRC3,FBP1,FOXA2,FOXO1,UCP2
GW3965			chemical reagent		-0.672		2.08E-02	ARG2,CXCL10,DGAT2,IL1RN,LPL,MLXIPL,RARA
CD3			complex		-1.159		2.12E-02	ATF2,BCL2A1,BECN1,BIRC3,BZW1,CASP6,CCR1,CREM,CXCL10,DAD1,DUSP11,EWSR1,EXOSC8,GUCY1B3,HAT1,HSP90AA1,IFNG,IL17A,ITCH,KIAA0020,LSP1,LTN1,MTHFD2,NAMPT,NIT1,NME1,PDCD1,PDE4D,PDIA4,PRF1,PSMF1,PTGER4,PTMA,PTPRC,RAB8A,RAD23B,RANBP2,RBPJ,RPL6,SDF2,SEC61B,SSB,STIM1,TMX3
miR-3173-3p (miRNAs w/seed AAGGAGG)			mature microRNA		1.053	bias	2.16E-02	AIM1,CGA,DBNDD2,FBP1,RAB8A,RUSC1,USP38,ZNF318
miR-548v (miRNAs w/seed GCUACAG)			mature microRNA		-0.730	bias	2.24E-02	CREM,LNX2,MARK1,NNT,NUFIP1,PGGT1B,PSMF1,RNF149,RPRD1B,TCF12
miR-342-3p (miRNAs w/seed CUCACAC)			mature microRNA		-1.563	bias	2.30E-02	AFF1,ARAP2,DCAF12,DDX3X,DDX50,FAM208A,HDAC7,KDM6B,KIAA1033,KIAA1715,KLF6,MAGIX,MCTP2,MTMR6,PDE4D,PTGER4,RAD23B,SEPT11,SETD7,STK40,TRAPPC6B,TXK,UBN1,UCHL5,ZNF605,ZZZ3
2-amino-1-methyl-6-phenylimidazo(4,5-b)pyridine			chemical drug		0.816		2.30E-02	CCT2,CCT8,HSP90AA1,HSPH1,PSMB2,RAP1A
TFAP2C			transcription regulator		-0.816		2.30E-02	DYRK2,HIST1H1C,JAG1,MAGI3,RASA1,TACC1
IL23R			transmembrane receptor				2.33E-02	IFNG,IL17A
SPHK2			kinase				2.33E-02	IFNG,STAT4
CXCR3			G-protein coupled receptor				2.33E-02	COL1A1,IFNG
SLAMF6			transmembrane receptor				2.33E-02	IFNG,IL17A
RTKN			other				2.33E-02	BCL2A1,BIRC3
KCNA3			ion channel				2.33E-02	IFNG,IL17A
RSU1			other				2.33E-02	ARHGAP5,RASA1
sulfamethoxazole/trimethoprim			chemical drug				2.33E-02	CXCL10,IL17A
tyrphostin 25			chemical - kinase inhibitor				2.33E-02	COL1A1,IGF1R
PRKG1			kinase				2.33E-02	ALOX15,COL1A1,CTNNB1,GUCY1B3
miR-299a-5p (and other miRNAs w/seed GGUUUAC)			mature microRNA		-1.400	bias	2.44E-02	CALCRL,CD2AP,FXR1,TSPAN2,UFM1
miR-3943 (miRNAs w/seed AGCCCCC)			mature microRNA		0.864	bias	2.45E-02	ARAP2,BAHD1,CALML4,CDK17,COMMD9,DCAF12,GRWD1,GTF2I,IP6K1,KIAA1468,MCTP2,MLXIPL,NEDD1,NR5A1,PNKD,RNF187,SEMA4A,SMG1,TAB2,TEX2,TRPC5,TSPYL2,UAP1L1,ZNF414
miR-3934-5p (miRNAs w/seed CAGGUGU)			mature microRNA		-0.308	bias	2.48E-02	AEBP2,AGER,CEP350,FXR1,SMPD3,TRAPPC6B,ZFP106
IL5			cytokine		-0.521	bias	2.48E-02	ACP5,BCL3,BNIP3L,CCR1,CISD1,EGLN1,EPS8,ERO1L,FGL2,GCAT,GPAM,HMMR,HSPH1,IFNG,NFE2,RRAS2,SEMA4A,SLC16A3,SNAP23,TUBB2B,UPP1
methotrexate			chemical drug		0.478		2.49E-02	ABCD3,BNIP3L,CXCL10,CXCR2,DGAT2,DLAT,DUSP10,FAR1,GPAM,HADHA,IFNG,IL17A,LPL,MET,NR4A2,PPARD,SDS,SFTPC,SLC27A2
miR-193a-3p (and other miRNAs w/seed ACUGGCC)			mature microRNA		-0.095	bias	2.54E-02	ALOX5,CAPRIN1,CDK17,CHRNB1,DNAJA1,FAM109B,FAM114A2,GSE1,KDM5C,KIT,KRAS,LGR4,MMP14,PRNP,PTK2,PTPN21,RNF146,RUSC1,SCP2,SNRPD3,TANGO2,TBC1D20,TGFB2,TWISTNB,ZBTB38,ZNF181
miR-4804-5p (miRNAs w/seed UGGACGG)			mature microRNA		0.889	bias	2.55E-02	ACSF3,ADO,CD84,ELN,MTUS1,NR4A2
octanoic acid			chemical - endogenous mammalian				2.55E-02	DGAT2,LPL,PPARD
IFNA17			cytokine				2.55E-02	CXCL10,IFNG,STAT4
miR-323-3p (and other miRNAs w/seed ACAUUAC)			mature microRNA				2.55E-02	CASP8AP2,KIAA1430,KRAS
miR-548d-3p (and other miRNAs w/seed AAAAACC)			mature microRNA				2.55E-02	CCNYL1,PTGR2,YBX1
miR-4424 (miRNAs w/seed GAGUUAA)			mature microRNA				2.55E-02	GNPDA2,RABEP1,WAPAL
miR-3159 (miRNAs w/seed AGGAUUA)			mature microRNA				2.55E-02	LTN1,NUDCD1,SH2D1A
DDR1			kinase				2.55E-02	COL1A1,ELN,MMP14
BHLHA15			transcription regulator				2.55E-02	FNDC3A,RAB26,SERPINI1
5-fluorouracil			chemical drug		-1.213		2.63E-02	BECN1,BNIP3L,CAPNS1,FOXO1,GTF2H2,GTF2I,HADHA,HSP90AB1,IARS,KRAS,NNT,POLR2L,PSMB2,RPL6,RPS15A,SSB,UBD,YBX1
miR-3942-5p (and other miRNAs w/seed AGCAAUA)			mature microRNA		-0.218	bias	2.70E-02	B3GALT2,DIP2C,MARCKS,PPIL4,RAP1A,TGFB2,WSB1
INSR			kinase		0.168		2.71E-02	ATP5A1,BCL2A1,CASP6,CDC45,CDC5L,DEK,FBP1,FOXN3,FURIN,HADHA,IFNG,IGF1R,KIFAP3,KIT,NAMPT,NDUFA3,OLR1,PSPC1,RAB18,RNF13,RTN2,SCP2,SLC20A1,UCP2,YBX1
miR-374c-5p (and other miRNAs w/seed UAAUACA)			mature microRNA		-1.103	bias	2.71E-02	AEBP2,C8orf37,IL7,SCAF11
ZBTB7B			transcription regulator				2.71E-02	COL1A1,IFNG,IL17A,PRF1
miR-4529-5p (miRNAs w/seed GGCCAUC)			mature microRNA		-0.693	bias	2.80E-02	AFF1,CD33,EEF1A1,EGLN1,GRK6,HEATR5B,LRCH1,MARCKS,PEF1,POLR1E,RAB3GAP1,RRAS2,SMIM5,SNX5,SPATA5,TRAPPC6B
miR-515-3p (and other miRNAs w/seed AGUGCCU)			mature microRNA		-0.508	bias	2.88E-02	ABCD3,C12orf75,COPS6,CXorf23,GPR77,HSP90AA1,PANK3,PLBD1,PTGR2,RNF43,SFT2D2
GnRH-A			chemical reagent		-1.012		2.93E-02	CD68,CGA,CREM,KLF6,MNAT1,PTGDS,SKIL,TARBP2
ATF3			transcription regulator		0.594		2.94E-02	AURKA,BIRC3,CGA,CTNNB1,FBP1,IFNG,MSH2
miR-592 (and other miRNAs w/seed UUGUGUC)			mature microRNA		-1.636	bias	3.02E-02	CLCC1,ENAH,FAM168B,FOXO1,GIGYF2,KDM6B,MARCKS,MIA3,MOG,PAX8,PDE4D,PGGT1B,RALGAPB,RPS6KA3,SETD7,TCF12,TSHZ1,VPS13D,ZNF148
AIRE			transcription regulator				3.08E-02	AMELX,FABP2,IFNG,ITIH3,NLRP5,S100A9
IL4			cytokine		0.402		3.10E-02	ACP5,ALOX15,ALOX5,ALOX5AP,ARG1,ARG2,ASCC3,BCL3,BNIP3L,CASP6,CD33,CD6,CLCN3,COL1A1,COL6A2,CSF3R,CXCL10,EGLN1,EMR1,FOXA2,GCAT,HDDC2,HPGD,ICOSLG,IFNG,IGF1R,IL17A,IL1RN,IPO8,KIT,LGALSL,LSP1,MSH2,NAP1L1,NEDD4,PDCD1,PRF1,PRKDC,PRNP,PSMG1,S100A9,SEMA4A,SNX4,STAT4,TXK,XP
miR-4778-5p (miRNAs w/seed AUUCUGU)			mature microRNA		-1.961	bias	3.13E-02	ABCD3,CD302,DBF4,DPH5
F3			transmembrane receptor				3.13E-02	ARG1,IFNG,PAPOLA,SERPINC1
IFNA10			cytokine				3.13E-02	CXCL10,IFNG,STAT4
IFNA21			cytokine				3.13E-02	CXCL10,IFNG,STAT4
IFNA5			cytokine				3.13E-02	CXCL10,IFNG,STAT4

IFNA7		cytokine				3.13E-02	CXCL10,IFNG,STAT4
C1QBP	1.078	transcription regulator				3.13E-02	C1QBP,CTNNB1,IFNG
KLF9		transcription regulator				3.13E-02	ACP5,COL1A1,GHR
LBP		transporter				3.13E-02	CXCL10,CXCR2,IL1RN
IFNA8		cytokine				3.13E-02	CXCL10,IFNG,STAT4
IFNA14		cytokine				3.13E-02	CXCL10,IFNG,STAT4
NHLH2		other				3.13E-02	CD68,EMR1,UCP2
IFNA6		cytokine				3.13E-02	CXCL10,IFNG,STAT4
2,4-dinitrofluorobenzene		chemical toxicant				3.13E-02	CXCL10,IFNG,IL17A
MYCN		transcription regulator		1.212		3.13E-02	AEBP2,BASP1,COL1A1,CRIM1,EEF1A1,FOXA2,HLA-A,HSP90AB1,NME1,PDIA4,POLR2L,PTK2,PTMA,RBBP7,RPL4,RPL6,SLC38A2,TAGLN,UBE2V2
APOE		transporter		1.093		3.14E-02	AGER,BGN,CD68,COL1A1,CTNNB1,EMR1,GPR77,HMMR,HSP90AB1,IFNG,IL17A,IL1RN,LPL,NCF1,PPARD,S100A9,STAT4
miR-3118 (and other miRNAs w/seed GUGACUG)		mature microRNA		-1.159	bias	3.17E-02	AKAP2/PALM2-AKAP2,CISD1,CLCC1,CPSF6,FAM168B,HABP4,HSP90AA1,ITSN1,KPNA3,KRAS,MAGIX,MED13,PAN3,PAX8,PTPN2,RABEP1,SEC62,STK40,TENM2,WWOX
miR-3082-5p (and other miRNAs w/seed ACAGAGU)		mature microRNA		-1.726	bias	3.18E-02	AFF2,C5orf30,C5orf45,C8orf37,GORAB,SMC3,ZNF148
miR-3675-5p (miRNAs w/seed AUGGGGC)		mature microRNA		0.900	bias	3.20E-02	AMFR,AP1G1,CLHC1,DTWD2,ELMOD3,FKBP11,IL1RN,LGALSL,P2RX7,TBC1D20,TGFB2,VSIG10,ZFAND3
thioinosine		chemical toxicant				3.38E-02	FABP2,LPL
ACPAT9		enzyme				3.38E-02	DGAT2,LPL
Presenilin		group				3.38E-02	IGLN1,PRNP
OEP6		other				3.38E-02	IFNG,IL17A
DAB2	-1.189	other				3.38E-02	CTNNB1,DAB2
OPRD1		G-protein coupled receptor				3.38E-02	IFNG,PRF1
PIM3		kinase				3.38E-02	IFNG,STAT4
Trbv13-2		other				3.38E-02	IFNG,IL17A
6,6-dimethylxanthenone-4-acetic acid		chemical drug				3.38E-02	CXCL10,IFNG
proteoglycan		chemical - other				3.38E-02	IFNG,IL17A
CEBPB		transcription regulator		-0.359		3.41E-02	ALOX5AP,AMEL,ARG1,ARPP19,ATR,BCL2A1,CDC45,CDO1,COL1A1,CSF3R,CTNNB1,DAB2,DDX5,DGAT2,DHX9,HSP90AA1,IFNG,IL1RN,IL7,MSH2,NFE2L1,PPARD,PRSS8,PTGER4,RBBP7,SLC38A2,UPP1
EGTA		chemical reagent		0.246		3.42E-02	ATP2A2,BIRC3,CGA,IFNG,NR5A1
lipoteichoic acid		chemical - endogenous non-mammalian		-1.331		3.44E-02	CCR1,CXCL10,IL17A,IL1RN,MYD88,NR4A2,PTAFR
lanespimycin		chemical drug		0.664		3.48E-02	BCL2A1,BIRC3,HAT1,HSP90AB1,IARS,IGF1R,KIT,KRAS,POLR2L,PTMA
miR-4672 (miRNAs w/seed UACACAG)		mature microRNA		-1.492	bias	3.46E-02	AEBP2,AKAP11,CEP70,EIF3J,ESF1,MTMR9,REV3L,UBR5,ZZZ3
TSC1		other		0.283		3.58E-02	CTNNB1,FOXO1,IFNG,RPL32
NCOR-LXR-Oxysterol-RXR-9 cis RA		complex		-1.000		3.58E-02	ARG2,CYP51A1,LPL,MLXIPL
miR-1208 (miRNAs w/seed CACUGUU)		mature microRNA		-1.980	bias	3.58E-02	AKIRIN1,DR1,FNDC3A,NEMF
GNAQ		enzyme				3.58E-02	ATP2A2,BNIP3L,CREM,SLC8A1
tetracycline		chemical drug		-0.788		3.62E-02	BECN1,COL1A1,ERGIC2,FXYD7,GATA2,HADHA,JAG1,TUT1
TBX2		transcription regulator		-1.134		3.62E-02	AURKA,CCNL1,CDCA3,CKAP2,DBP,GCFC1,PCGF6,TGFB2
estrogen		chemical drug		0.389		3.66E-02	ART3,AURKA,BCL3,CGA,COL1A1,COL6A2,DPEP1,FOXA2,HSPH1,IFNG,IGF1R,LPL,NAMPT,NME1,OAT,PTAFR,PTGDS,PTMA,RARA,TGFB2,TSPAN4
1,2-dithiol-3-thione		chemical reagent		1.205		3.68E-02	CHORDC1,COQ7,DAD1,DDX50,FKBP11,GHR,HSP90AA1,HSP90AB1,LPL,MORF4L2,MRPS18B,PDIA4,PSMB2,PSMC6,RBBP7,SERPIND1,UBQLN2
GATA6		transcription regulator		-0.734		3.69E-02	ALOX15,DAB2,FOXA2,SFTPC,TAGLN,TGFB2
miR-4755-3p (miRNAs w/seed GCCAGGC)		mature microRNA		0.133	bias	3.75E-02	ABR,AFF2,ALPK3,AMICA1,ATXN7L3B,C16orf58,C17orf103,CAPRIN1,CCBL2,DPH5,ERCC4,FAM129B,FAM168B,FOXO1,GF1B,GPD1,IP6K1,KIAA1430,MGRN1,NES,NIT1,OLR1,PDCD1,PHACTR4,PNKD,PPARD,PPME1,PPP1R18,PSMB2,PTAFR,PTPN22,SERINC1,SFXN5,SMARCC1,SORBS3,STK40,SYS1,TBXAS1,UBAC2,USP34,WDR
miR-216b-5p (and other miRNAs w/seed AAUCUCU)		mature microRNA		-1.878	bias	3.76E-02	BAHD1,BECN1,CEP350,CLCC1,CRLS1,DCAF12,ENAH,FNDC3A,ITCH,KRAS,LRIG1,NUDCD1,P2RX7,RBM47,RCE1,RDX,RPS6KA3,SKIL,STX12,TRPC5,UBN1,WBP11,ZNF148
monophosphoryl lipid A		chemical reagent				3.77E-02	CXCL10,IFNG,IL1RN
miR-4699-5p (miRNAs w/seed GAAGAUU)		mature microRNA				3.77E-02	AEBP2,RNF168,SLC30A5
miR-3912 (miRNAs w/seed AACGCAU)		mature microRNA				3.77E-02	SCYL2,TMEM68,UPM1
IFNA4		cytokine				3.77E-02	CXCL10,IFNG,STAT4
MST1R		kinase				3.77E-02	ARG1,CTNNB1,IFNG
TGAL copolymer		chemical drug				3.77E-02	IFNG,IL1RN,PRKX7
miR-1278 (miRNAs w/seed AGUACUG)		mature microRNA		0.600	bias	3.80E-02	APPBP2,ARG2,DOCK10,ZMYM5,ZNF146
IL10		cytokine		-0.968		3.81E-02	AGER,ALOX5AP,ARAP2,ARG1,ARG2,ARNT2,BCL2A1,BCL3,CCR1,CD68,CD72,COL1A1,CXCL10,HPGD,IFNG,IL17A,IL1RN,IL7,MYD88,PDCD1,PTAFR,PTPN2,SNAP23,STAT4,TREM1
miR-4742-5p (miRNAs w/seed CAGGCAA)		mature microRNA		-0.878	bias	3.91E-02	ALDH1L2,CSNK1G3,DDX3X,ERGIC2,MCTP2,PPM1B,TACC1,TEX2,TPO
miR-4727-3p (miRNAs w/seed UAGUGGG)		mature microRNA		-1.000	bias	3.91E-02	APPBP2,CASD1,ITSN1,LNX2,MAL2,NHLRC2,OTUD4,PLCL1,ZMYM4
miR-4772-3p (and other miRNAs w/seed CUGCAAC)		mature microRNA		-1.501	bias	4.02E-02	ADO,FOXA2,MED13,OGT,PPM1A,SACM1L
cisplatin		chemical drug		0.575		4.03E-02	AEBP2,ANK1,BAG5,BCL2A1,BIRC3,BNIP3L,CASP8,CCR1,CDO1,COL1A1,CTNNB1,CXCL10,CYP26A1,DNAJC27,EMR1,ERCC4,EXOC6,FOXN3,GHR,HADHA,IFNG,IGF1R,ING2,ITCH,MARCKS,MET,MSH2,MY01E,NCF1,OAT,OCLN,PIK3CA,PTK2,REV3L,SH2D1A,SLC31A1,UCP2,UPP1,USP3,YBX1
WT1		transcription regulator		1.154		4.04E-02	CAPRIN1,CD2AP,CTNNB1,DDX3X,EPS8,HCFC1R1,IGF1R,KRAS,MED13,NR5A1,RARA,SLC20A1
miR-605 (miRNAs w/seed AAAUCCC)		mature microRNA		-1.969	bias	4.07E-02	FAM115A,RNF168,TEX2,WDR26
PTPRC	-1.009	phosphatase				4.07E-02	BCL2A1,CCR1,CXCR2,IFNG
hyaluronic acid		chemical - endogenous mammalian		-0.820		4.15E-02	BCL3,COL6A2,CXCL10,MET,MYD88,NCF1,NR4A2,PTPRC,TGFB2
thioacetamide		chemical toxicant		-1.406		4.18E-02	ACP5,ARG2,BGN,BIRC3,COL1A1,ELMOD3,ELN,FCER1A,FXYD6,GPD1,HAT1,MET,MLXIPL,MMP14,MSH2,PAX8,TAGLN,UBLCP1,UPP1
miR-4253 (miRNAs w/seed GGGCAUG)		mature microRNA		0.780	bias	4.20E-02	AFTPH,ALOX15,C17orf103,CD84,COL4A3,CUL4B,FAM214A,GF1B,KIF5B,MARCKS,PDCD1,SLC12A4,SLC30A2,TANGO2
Pam3Cys		chemical toxicant		0.064		4.20E-02	CXCL10,ICOSLG,IFNG,IL1RN,MYD88
miR-875-5p (and other miRNAs w/seed AUACCUC)		mature microRNA		-1.639	bias	4.23E-02	APPBP2,ATP2A2,BLOC1S5,CASD1,EWSR1,FAM208A,INSIG2,PDE4D,PTGER4,PTPN12,SETD7,SRPK2,TMX1
miR-3074-5p (miRNAs w/seed UUCCUGC)		mature microRNA		0.297	bias	4.32E-02	COMMD4,CRIM1,CRLS1,DUSP11,GING2,MCTP2,MET,PDE4D,RSAD1,TET2
ADIPOQ		other		-0.479		4.41E-02	ARG1,CASP8,CXCL10,GPD1,IL17A,LPL,NCF1,PPARD,PRDX5,SLC27A2,UCP2
CTGF		growth factor		0.174		4.42E-02	BCL2A1,COL1A1,CTNNB1,DAD1,MIA3,MMP14,RAB18,WNK1
miR-210-3p (and other miRNAs w/seed UGUGCGU)		mature microRNA		-0.460	bias	4.42E-02	CASP8APZ,GIT2,IPMK3,MGRN1,PPM1K,SDF2,ZFAND3,ZNF148
mir-8		microRNA				4.47E-02	CTNNB1,GEMIN2,TGFB2
TEK		kinase				4.47E-02	IFNG,IL17A,S100A9
ZNF100		other				4.57E-02	ENPP5,MRPL30
ZNF85		transcription regulator				4.57E-02	ENPP5,MRPL30
ZNF254		other				4.57E-02	ENPP5,MRPL30
IL7Rα		transmembrane receptor				4.57E-02	IFNG,IL17A
RASSF8		other				4.57E-02	ENPP5,MRPL30
ZNF431		other				4.57E-02	ENPP5,MRPL30
ZNF708		other				4.57E-02	ENPP5,MRPL30
MGP		other				4.57E-02	JAG1,TAGLN
mir-296		microRNA				4.57E-02	CALML4,COL1A1
ZNF665		other				4.57E-02	ENPP5,MRPL30
ZNF528		other				4.57E-02	ENPP5,MRPL30
ZNF43		other				4.57E-02	ENPP5,MRPL30
ZNF429		other				4.57E-02	ENPP5,MRPL30
PIM2		kinase				4.57E-02	IFNG,STAT4
MRC1		transmembrane receptor				4.57E-02	CXCL10,IFNG
miR-4273 (miRNAs w/seed UGUUCUC)		mature microRNA		-0.130	bias	4.59E-02	AKAP2/PALM2-AKAP2,TADA2B,TRIM10,UBR5
prostaglandin D2		chemical - endogenous mammalian		-1.067		4.59E-02	ALOX15,CXCL10,IFNG,PTGDS
miR-576-3p (miRNAs w/seed AGAUGUG)		mature microRNA		-1.091	bias	4.59E-02	FGL2,GEMIN2,KIAA1033,VSIG10
miR-2355-3p (miRNAs w/seed UUGUCCU)		mature microRNA		-1.114	bias	4.63E-02	AKAP2/PALM2-AKAP2,ATP6V0A2,CACNA1A,CACYBP,LRCH1,PDK3,RABEP1
miR-21-5p (and other miRNAs w/seed AGCUUAU)		mature microRNA		-0.942	bias	4.67E-02	AIM1L,BAHD1,CLHC1,CNKSR2,EHD1,HSDL2,JAG1,KLF6,MARCKS,MBLAC2,MCTP2,MSH2,MYD88,OLR1,PAN3,PRPF4B,RASA1,RBPJ,RPS6KA3,STK40,TAGLN,TGFB2,UBR3,WWP1,XKR8
bisindolylmaleimide I		chemical - kinase inhibitor		-0.371		4.67E-02	BCL2A1,BIRC3,CGA,CTNNB1,HSP90AB1,LPL,NR5A1,OCLN,PTGDS
EIF2AK3	1.172	kinase				4.67E-02	BECN1,BIRC3,CLCN3,EIF2AK3,ERO1L,IARS,PCN2,SPATA5,UIMC1
miR-100-5p (and other miRNAs w/seed ACCCGUA)		mature microRNA		0.769	bias	4.71E-02	CTDSPL,EPDR1,IGF1R,KDM6B,MTOR,RRAGD,SMARCA4,ZNF197
CD9		transmembrane receptor		-0.755		4.74E-02	BCL3,CD72,IL17A,MAP2K2,RARA,SNRPD3
miR-4527 (and other miRNAs w/seed GGUCUGC)		mature microRNA		-1.272	bias	4.87E-02	ALPK3,ATAD2B,CD47,DAB2,DPH5,EXOC6,FXR1,HSDL2,POMT1,PSMF1,PXDN
FOLR1		transporter				4.94E-02	ATR,BASP1,BIRC3,COQ7,GPAM,LSP1,NAP1L1,RIOK3,UCHL5
XBP1		transcription regulator		1.941		6.77E-02	ATP2A2,BECN1,COG3,COG8,CORO1C,DPEP1,DAD1,DNAJC1,EIF2AK3,FKBP11,GOLGA4,PDIA4,SEC61B,SEC63,SMC3,TFF2
TP73		transcription regulator		1.941		7.01E-02	CAMLG,CTNNB1,DBP,DUSP11,FXR1,IL7,JAG1,KIT,MCM3AP,PRKDC,RAD17,UBL3,YBX1,ZNF175
SMAD7		transcription regulator		1.976		7.11E-02	BGN,CGREF1,COL1A1,CXCL10,FURIN,IFNG,MET,SFTPC,TAGLN,TGFB2
TGFB3		growth factor		-1.912		7.48E-02	COL11A1,COL1A1,ELN,OCLN,PTAFR,SKIL,TAGLN,TSPAN2
PSEN2		peptidase		-1.915		7.86E-02	27000970098rik,ATP2A2,CTNNB1,DBP,ENPP2,IGF1R,KIF5B,SLC38A2
FOXO1	1.167	transcription regulator		1.771		7.87E-02	ACP5,BCL2A1,BIRC3,CASP8,CXCL10,FABP2,FOXA2,FOXO1,GATA2,GPAM,GPD1,IFNG,IL17A,JAG1,LPL,NAMPT,RPS6KA3
E. coli B5 lipopolysaccharide		chemical - endogenous non-mammalian		-1.975		7.99E-02	BCL3,BIRC3,CCR1,CSF3R,CXCL10,CXCR2,HLA-A,ICOSLG,IL17A,IL7,MLXIPL,MYD88,NCF1,PTPN2,RDX,TGFB2,TPO,TREM1
fenofibrate		chemical drug		1.759		1.20E-01	ABCD3,CCDC92,DLAT,FABP2,GPAM,HADHA,LPL,PAICS,PCM1,PTAFR,PTPN21,PTPRC,SLC27A2,TAF5,UCP2,XRCC4
OSM		cytokine		1.780		1.26E-01	ACP5,ARG1,ARL4C,ATP1A3,CDK17,CGA,CLPX,CXCL10,FOXN3,GNS,HLA-A,IFNG,IL7,JAG1,KIF5B,KRR1,MARCKS,MLLT11,MYD88,NAMPT,NEDD4,PGGT1B,POLR2L,PTPN21,RAD17,S100A9,SLC16A3,TPO,UAP1,UBQLN2,ZNF263,ZNF330
IGF1R	-1.243	transmembrane receptor		-1.893		1.30E-01	ATP5A1,CD68,CD84,COL1A1,HADHA,IGF1R,NDUFA3,NME1,PSMC6,RAB18,RBBP7,SCP2,TPO,UBE2V2
SOX9		transcription regulator		-1.982		1.31E-01	COL1A1,CTNNB1,KIT,NR5A1,PTGDS
TNFSF11		cytokine		-1.851		1.34E-01	ACP5,AEBP2,AGPS,AURKA,BCL2A1,CCR1,CIAO1,CTNNB1,DABZ,EHD1,EMR1,IFNG,IL1RN,NME6,PTGER4,SLC20A1
8-bromo-cAMP		chemical reagent		-1.887		1.35E-01	ARG2,CGA,CREM,FOXO1,HPGD,IGF1R,NES,NR5A1,PDE4D,PPARD,TGFB2,TREM1
MGEA5		enzyme		-1.807		1.61E-01	CD302,CTNNB1,DAB2,DPEP1,FBP1,GTF2F2,IGF2BP3,LPHN2,LRIG1,MMP14,PIAS1,PIAS3,PRF1,RPS6KA3,TSPAN4
EGF		growth factor		-1.836		1.89E-01	ALOX15,ATP2A2,AURKA,CGA,CLCN3,COL1A1,CREM,DAD1,DDX5,EEF1A1,EIF2AK3,FOXA2,GATA2,GPS2,HNRNPK,IGF1R,KRAS,NCF1,NES,NR4A2,NR5A1,PLAGL1,PPARD,PRKDC,PTPN12,S100A9,SYT3
dinoprost		chemical - endogenous mammalian		-1.964		3.23E-01	ATP2A2,LPL,NR4A2,PDIA4,SCP2
homocysteine		chemical - endogenous non-mammalian		1.982		4.48E-01	CXCL10,EEF1A1,LPL,OLR1
CDKN2A		transcription regulator		-1.897		4.51E-01	BTG3,DEK,DYNLRB1,EEF1A1,EPS8,FANCL,IGF2BP3,PLAGL1,POLK,RAB9A,RBBP7
PSEN1		peptidase		-1.913		4.59E-01	27000970098rik,AGER,ATP2A2,ATP5A1,BASP1,C1QBP,CAMK2D,CTNNB1,DBP,ENPP2,GNG2,HSP90AA1,IFNG,KIF5B,MAP2K2,NME1,PRDX5,RBPJ,SLC38A2,TUBB2B
SOCS3		phosphatase		-1.969		4.57E-01	CXCL10,IFNG,IL17A,IL1RN
GH1		growth factor		1.821		4.58E-01	CTNNB1,GATA2,GHR,IGF1R,LPL,NR2F6,PTMA,RAD23B,RPL6,SMARCA4,Ubb
valproic acid		chemical drug		1.800		4.77E-01	CACYBP,CCR1,COA1,CTNNB1,CYP51A1,DPM2,FABP2,GPAM,IFNG,IGF1R,INSIG2,KIT,MARCKS,NME1,PSMB2,RARA,WWOX
TREM1	-1.392	transmembrane receptor		1.997		4.94E-01	AKAP2/PALM2-AKAP2,CXCL10,EIF2AK3,PNDC3A,IFNG,LPL,MYD88,NME7,NR4A2,SNAPC1
LIF		cytokine		1.782		5.01E-01	CXCL10,CYP26A1,FBP1,FOXA2,IFNG,IL17A,IL7,LPL,NES,SNAP23
CREB1		transcription regulator		-1.843		5.17E-01	CD68,CGA,CREM,CYP51A1,FABP2,IFNG,NR4A2,PAX8,SEC63,SRPK2,TPO,UPP1
IRF8		transcription regulator		1.945		1.00E00	CSF3R,DAB2,EMR1,IFNG
MYC		transcription regulator		1.779		1.00E00	AEBP2,ARG1,BCL2A1,C1QBP,CAPNS1,CD47,CHRNB1,COL1A1,CTNNB1,CXCL10,DDX3X,EGLN1,EXOSC8,FOXA2,GTF2F2,HLA-A,HSP90AA1,HSPH1,IPO7,KLF6,KRAS,MSH2,NAP1L1,NME1,OAT,PAICS,PPARD,PTMA,PTPRC,RARA,RBBP7,RPL32,RPL6,RPS15A,RTN2,SEMA4A,SLC16A3,TRIP12,VARS,YBX1
trichostatin A		chemical drug		1.772		1.00E00	APPBP2,ARG1,CGREF1,CREM,CSF3R,CXCL10,DPM2,EMR1,ENPP2,FPGT,GHR,IFNG,KIT,LPHN2,NES,OAT,PRNP,PSMB2,RAD23B,RARA,RBM5,SCP2,SMARCA4,SMARCC1,TAGLN,ZMYM4
SMARCA4	-1.239	transcription regulator		-1.755		1.00E00	AIM1,ARL4C,BCL2A1,CCR1,CLPX,HPGD,IFNG,KDM6B,KIT,LDB1,SFTPC,SMARCA4,TAGLN,TGFB2
doxorubicin		chemical drug		-1.860		1.00E00	ATP2A2,AURKA,BECN1,BIRC3,BNIP3L,CAMKD,CREM,EEF1A1,ITCH,JAG1,PTGDS,UPP1,YBX1
CEBPD		transcription regulator		-1.966		1.00E00	ALOX5AP,BCL2A1,CSF3R,PTAFR
EP300		transcription regulator		-1.969		1.00E00	HSP90AB1,IL17A,MSH2,OLR1,SFTPC,TBXAS1,TGFB2,TPO
EPAS1		transcription regulator		-1.982		1.00E00	BIRC3,CACNA1A,FABP2,HIST1H1C,MMP14,PIK3CA