

Supplementary Table S1. List of 1787 inflammatory response-associated genes from MSigDB.

Gene Symbol
CEBPB
SERPINA3
CNR1
REG3G
CRP
EDNRB
AHSG
A2M
EPO
F2
F8
FN1
APOL2
MRGPRX1
HFE
HP
APCS
IL1A
IL1B
IL6
IL6R
INS
ITIH4
LBP
MBL2
ASS1
ORM1
ORM2
IL22
REG3A
SERPINA1
SERPINF2
PLSCR1
UGT1A1
PTGER3
PTGS2
SIGIRR
SAA1
SAA2
SAA4
TFR2
TFRC
TNF
TRPV1

TNFSF11
TNFRSF11A
CD163
PTGES
MIR302E
PARK7
CCR7
IL31RA
NLRP6
ELANE
EXT1
FCER1A
FCGR1A
FCGR2B
FCGR3A
FUT7
PLA2G2D
HLA-E
IGHG1
CXCR2
NPY5R
IL20RB
SELENOS
SPN
BTK
C3
ZP3
CD6
RASGRP1
MIR6869
PLK2
CYSLTR1
TREX1
MAPK14
FGR
KDM6B
FOSL2
MKRN2
FYN
IL36RN
IL36B
IL37
IL36A
GPR17
GPX1
HCK
HLA-DRB1
HMGB1

HMGB2
RBPJ
IL1RN
IL2RA
IL5RA
IL10
IL12B
KARS1
RAB44
LTA
LYN
MIR105-1
MIR19A
MIR19B1
NOTCH1
NOTCH2
FURIN
PLCG1
TREM2
IL36G
PSMA1
PSMB4
NOD2
IL25
SRC
SYK
YES1
RHBDF2
IL1F10
PNMA1
CD28
CD68
CD81
ADAM8
TNIP1
CEBPA
CTSC
NLRP3
LRRK2
ADORA2B
C2CD4A
DDT
DHX9
AGT
AGTR1
ETS1
FABP4
NAPEPLD

NLRP1
IL17RA
ALOX5AP
DEFB114
STAP1
NUPR1
PDCD4
GPR4
NEAT1
TAF3
FFAR3
FFAR2
GRN
PYCARD
NLRP10
IFI35
IFNG
APP
LILRA5
IL2
IL6ST
IL15
IL16
IL18
IDO1
C2CD4B
LDLR
LGALS1
LGALS2
LPL
MIR126
MIR128-1
MIR142
MIR144
MIR181B1
MIR206
MIR21
MIR22
MIR92A1
MDK
MEFV
MGST2
MMP8
ABCC1
NAIP
NFKBIA
NINJ1
NKG7

OSM
PLA2G3
SERPINE1
TLR7
PDE2A
IL23A
GPRC5B
PIK3CG
PLA2G2A
PLCG2
SETD4
TLR9
CAMK2N1
FEM1A
MAPK13
SUCNR1
PTGER4
NLRC4
IL21
TRPV4
RPS19
S100A8
S100A9
S100A12
CCL1
CCL3
CCL24
CX3CL1
GPSM3
NFKBIZ
SNCA
STAT5B
VAMP7
TGFB1
TLR2
TLR3
TLR4
TNFRSF1A
TNFSF4
CCR2
WNT5A
PLA2G7
GSDMD
ZBP1
CASP1
CASP4
TTBK1
CREB3L3

TSLP
VAMP8
HYAL2
TRADD
SNX4
RIPK1
CCN4
TNFSF18
IL33
NMI
NLRP12
IL1RL1
OSMR
AIM2
CLOCK
CD47
ADA
MIR920
CDH5
MIR4286
MIR3909
NR1H3
LPCAT3
DUSP10
CHRNA7
C1QTNF3
IL22RA2
CD200R1
ADORA1
ADORA2A
SIRPA
LRFN5
PYDC2
CYLD
CYP19A1
AHR
NLRC3
ELF4
TRIM65
EXTL3
FOXF1
SYT11
FPR2
ALOX5
GATA3
GBA1
GHSR
SMPDL3B

RABGEF1
METRNL
CXCL17
GP1R
GP3R
GP2R
GIT1
GSTP1
HGF
AOAH
APOA1
FFAR4
IRGM
IGF1
APOE
IL4
IL10RA
IL13
IL17A
ISL1
KRT1
C1QTNF12
ARNT
MIRLET7G
MIR138-1
MIR141
MIR145
MIR146A
MIR149
MIR15A
MIR15B
MIR16-1
MIR181A2
MIR181C
MIR187
MIR195
MIR199A1
MIR20A
MIR204
MIR205
MIR221
MIR222
MIR223
MIR26A1
MIR30C2
MIR31
SMAD3
CD200

MVK
NFKB1
CCN3
NT5E
FOXP3
ENPP3
GHRL
ACP5
PPARA
PPARD
PPARG
VPS35
PRKCD
ASH1L
PBK
MAPK7
PROC
MMP26
SLAMF8
PTGIS
MIR488
PTPN2
PTPN6
HAMP
PTPRC
WFDC1
IL22RA1
RB1
RORA
BCR
SLC39A8
FNDC4
SOD1
STAT3
MIR590
TEK
TNFAIP3
TNFAIP6
TNFRSF1B
TYRO3
ACOD1
ZFP36
MIR766
TNFAIP8L2
NLRX1
TRIM45
NDFIP1
FXR1

SHARPIN
PLA2G10
CST7
IER3
SIGLEC10
PGLYRP1
SOCS3
OTULIN
MACIR
MFHAS1
KLF4
ADIPOQ
NR1D1
SOCS5
NR1H4
NR1D2
C6
ICAM1
ITGB2
CXCL8
C7
ITGA4
KNG1
VCAM1
ITGAL
SELPLG
C5
ITGB1
SELP
ABCA1
ABI1
ACVR1B
ACVR2A
ADM
ADRM1
APLNR
AQP9
ATP2A2
ATP2B1
ATP2C1
AXL
BDKRB1
BEST1
BST2
BTG2
C3AR1
C5AR1
CALCRL

CCL17
CCL2
CCL20
CCL22
CCL5
CCL7
CCRL2
CD14
CD40
CD48
CD55
CD69
CD70
CD82
CDKN1A
CHST2
CLEC5A
CMKLR1
CSF1
CSF3
CSF3R
CXCL10
CXCL11
CXCL6
CXCL9
CXCR6
CYBB
DCBLD2
EBI3
EDN1
EIF2AK2
EMP3
ADGRE1
EREG
F3
FPR1
FZD5
GABBR1
GCH1
GNA15
GNAI3
GP1BA
GPC3
GPR132
GPR183
HAS2
HBEGF
HIF1A

HPN
HRH1
ICAM4
ICOSLG
IFITM1
IFNAR1
IFNGR2
IL15RA
IL18R1
IL18RAP
IL1R1
IL2RB
IL4R
IL7R
INHBA
IRAK2
IRF1
IRF7
ITGA5
ITGB3
ITGB8
KCNA3
KCNJ2
KCNMB2
KIF1B
KLF6
LAMP3
LCK
LCP2
LIF
LPAR1
LY6E
MARCO
MEP1A
MET
MMP14
MSR1
MXD1
MYC
NAMPT
NDP
NMUR1
NPFFR2
OLR1
OPRK1
P2RX4
P2RX7
P2RY2

PCDH7
PDE4B
PDPN
PIK3R5
PLAUR
PROK2
PSEN1
PTAFR
PTGER2
PTGIR
PTPRE
PVR
RAF1
RELA
RGS1
RGS16
RHOG
RIPK2
RNF144B
ROS1
RTP4
SCARF1
SCN1B
SELE
SELL
SEMA4D
SGMS2
SLAMF1
SLC11A2
SLC1A2
SLC28A2
SLC31A1
SLC31A2
SLC4A4
SLC7A1
SLC7A2
SPHK1
SRI
STAB1
TACR1
TACR3
TAPBP
TIMP1
TLR1
TNFRSF9
TNFSF10
TNFSF15
TNFSF9

TPBG
VIP
RNU7-1
RNU4ATAC
TOM1
ABCC9
IL18BP
ARPC1B
NOTCH2NLC
BCAP31
AASS
SLC25A13
SLC25A15
IL12A-AS1
PRG4
GPHN
CDKN1B
STUB1
APC2
ADAR
CCNO
TCIRG1
IKZF1
TFG
CITED2
IRF9
CDSN
SEC23B
FBLN5
CIB1
DEAF1
HYOU1
IPO8
CEBPE
RNASEH2A
PERCC1
AGR2
AGPAT2
SPTLC1
SLC35A1
RBCK1
IVNS1ABP
EBP
STAG2
RAI1
MASP2
GIPC1
TRAF3IP2

CFTR
GJB6
SDCCAG8
CPLX1
CEACAM3
SRCAP
MALT1
EDAR
SLC27A4
SPINK5
TLK2
POLR3A
KPTN
CORO1A
SLC6A14
IL17F
LYST
ADAT3
CHST14
TMC6
KIF12
CTRC
BUD23
MYSM1
SLC26A9
LRRC56
TNFRSF13C
ODAD3
ERCC8
AP2S1
CLCN7
CLCNKB
CLN3
SDR9C7
KRT74
CCR1
DNAAF1
CYP4F22
KDF1
B3GALT6
GJB4
COL2A1
COL3A1
EDARADD
COL4A3
COL4A4
COL4A5
COL4A6

COL5A1
COL5A2
COL7A1
COL11A1
COL11A2
AP1S3
COL17A1
COMT
COPA
NADK2
DNAJC21
LSM11
CPA1
TMEM270
MPLKIP
CR2
CREBBP
DNAAF6
CSF2RA
CSF2RB
A2ML1
LACC1
CARMIL2
CFAP52
TMC8
CCBE1
CST6
CSTA
TICAM1
NKX2-5
CTBP1
IL23R
CTLA4
CTNNB1
CTSB
ASPRV1
NEK10
CYBA
METTL27
VPS37D
CYP7A1
CYP11B1
AARS1
DNAAF4
AP1B1
DBT
DDB1
DDB2

AEBP1
RNF168
TIMM8A
GLIS3
ASXL1
DHCR7
DKC1
DLG1
DLX4
AGA
DNAH5
DNAH9
DNASE1
DNASE1L3
DNASE2
DNMT1
DNMT3B
DOCK2
ATN1
DSG1
ECM1
EDA
EDNRA
EGFR
ARID2
DZIP1L
CFAP221
ELN
UNC13D
EMP2
EN1
LGI3
EP300
EPB42
ANO5
AK2
CERS3
EPHB4
C2orf69
ERCC1
ERCC2
AKT1
ERCC3
ERCC4
ERCC5
ERCC6
ERF
ESR1

ABCA3
ABCD1
F5
F13A1
F13B
BPTF
FANCF
MPEG1
FBN1
ATOH7
MS4A2
JMJD1C
FCGR2A
RSPH9
FCGR3B
JAZF1
FECH
ALDH3A2
FGA
FGF3
FGF8
FGF10
FGFR1
FGFR3
FGFR2
FH
RRAS2
CLCA4
IKZF3
COBLL1
DOLK
MORC2
CARD8
CCT5
PLCH1
FOXJ1
FOXC2
IQSEC2
TBC1D2B
TNRC6B
FLG
PLXND1
FLI1
FLII
FCHO1
CIC
FLNA
NUP205

LPIN1
GANAB
FLT4
NUP160
FMO3
FMR1
NCSTN
SIK3
SF3B1
BRD4
TGDS
TNFRSF13B
DAAM2
POFUT1
TNPO3
PIGN
LEMD3
ORC6
AMACR
CD2AP
DNAAF11
SHPK
ALOX12B
GAS2L2
KDSR
FZD2
G6PC1
SLC37A4
CFAP45
NIPBL
GALNS
RTTN
ATL3
SAMHD1
SIN3A
KANK2
MMACHC
DNAH1
TKFC
SETBP1
AUTS2
GAPVD1
LRRC32
ABCA12
IFT172
GAS1
PTPN22
GAS8

PHGDH
GATA1
GATA2
BLOC1S6
GATA4
GATA6
VPS33B
TINF2
GCGR
BSCL2
TBL2
RNU12
GFI1
GGT1
B4GALT1
OPLAH
NBEA
GJA1
DNAI1
FOXD3
LAT
GJB2
GJB3
FOXP1
GK
AFF4
STK36
GLB1
GCLC
GLI2
GLRA1
GLRA2
GLRB
GNA11
GNAQ
GNAS
GNB2
GNS
GP1BB
PGM2L1
MYO1H
KANSL1
CAVIN1
KCTD1
ANGPT2
DLL1
SH3PXD2B
PNPLA1

GPR35
ANK1
NSMCE2
CRB2
TRAC
GRB10
OSTM1
FLVCR1
SETD2
NR3C1
ANKRD11
GSN
GSTM3
GTF2E2
GTF2I
BLNK
CARD10
GUCY2C
ICOS
ALG5
SNX10
GUSB
DSE
SLC25A24
LRP12
EFEMP2
SH3KBP1
H3-3B
HBA1
HBA2
HBB
NCKAP1L
HGD
HLA-A
HLA-B
HLA-C
MNX1
HLA-DPA1
HLA-DPB1
HLA-DQA1
HLA-DQB1
HLCS
HMGCL
HMOX1
HNRNPA2B1
HOXA13
APC
HPGD

HPS1
AIRE
BIRC3
XIAP
HSPA9
IGSF3
HYAL1
IARS1
UBAC2
GPIHBP1
IRF8
CCDC39
SLC6A19
STING1
HEPHL1
IDH1
IDS
IDUA
CFI
SP110
APOC2
MCIDAS
RSPH4A
IFNGR1
IGBP1
IGF2R
NIPAL4
IGHG2
IGHM
IGKC
DNAAF3
RILPL1
IPLL1
FAS
IKBKB
FASLG
IL2RG
IL7
IL10RB
IL11RA
IL12A
IL12RB1
IRF2BP2
IRAK1
ITGA6
IRF4
IRF5
IRF6

AR
ITGA7
ABCC6
ITGAM
ITGB4
ACADVL
ITK
JAK1
JAK2
JAK3
FAM111B
DNAJB13
ZNF699
MIA3
KCNJ6
KCNN4
NHLRC1
KIT
KIF11
KRT5
KRT10
KRT14
KRT17
KRT18
RTL1
CCDC103
FLG2
LAMA2
LAMA3
LAMB3
LAMC2
LBR
LDHA
LEP
LETM1
ARHGDIA
LHCGR
LIG1
LIG4
LIMK1
RHOH
LMNA
LMNB1
LMX1B
GTF2H5
LSS
LTBP1
LTBP3

SH2D1A
LYZ
EPCAM
MAB21L1
MAF
ARSB
MAN2B1
MDM4
MECP2
ARVCF
MEIS2
MEN1
MGP
CIITA
ASAH1
MID1
MIF
KMT2A
MME
MMP1
MPV17
MSN
MST1
MSX1
MTAP
MT-CO1
MT-CO2
MT-CO3
MTHFD1
MTM1
MT-ND1
MT-ND4
MT-ND5
MT-ND6
MTTP
MT-TF
MT-TH
MT-TL1
MT-TQ
MT-TS1
MT-TS2
MT-TW
MMUT
MYCN
MYD88
MYH6
MYH9
MYH11

MYL2
MYO1E
CEACAM6
NBN
NCF2
NCF4
NDUFA6
ATM
NDUFS3
NF1
NFE2L2
NFIX
NFKB2
TONSL
NGF
NODAL
NOS1
PNP
NPHS1
NPM1
NTRK1
ROR2
DDR2
NUMA1
OCRL
PAFAH1B1
SMARCAL1
PAH
IL21R
DEF6
PARN
PAX1
PAX2
PAX6
CDON
PDE11A
PCCA
PCCB
ATL1
MLXIPL
KMT5B
SBDS
DCTN4
PLCE1
PCYT1A
TLR8
NME8
PDCD1

ZBTB7A
MBTPS2
ZMYND10
POMP
DDX41
DCDC2
ANKFY1
PDGFRA
PDGFRL
PDHA1
ENPP1
DNAJB11
RTEL1
ERAP1
MAP3K20
ADA2
PEPD
ATP8B1
PGM1
PGM3
ABCB1
ABCB4
ATP6V1B2
PIGA
PIK3CA
PIK3CD
PIK3R1
PI4KA
PKD1
PKD2
PKHD1
PKP1
PLCD1
PLEC
PLG
ATP6V0A1
PLOD1
PML
PMM2
ATP7A
ATP7B
POLA1
POLE
POLG
POLH
SOX18
WNT4
SASH3

ANLN
RIN2
RETREG1
PRMT7
TMCO1
POU2AF1
ATRX
P4HTM
HYDIN
TET2
TRPM4
BNC2
SAMD9
ARHGEF38
PIGG
BCOR
TBC1D8B
NSUN2
PXK
FOCAD
DNAAF5
RNF125
TTC12
PHIP
BANK1
CCDC40
PTCD3
ODAD2
WRAP53
DNAAF2
SMG8
KIRREL1
FBXW7
SLC29A3
MNS1
SLC35C1
MEG3
NOP10
PRF1
FERMT1
SLC39A4
CHD7
NHP2
PRKACA
IARS2
SLF2
PRKAR1A
NAXD

NUP133
PRKAR1B
INAVA
LMBRD1
LRIF1
PSENE1
HDAC8
PRKDC
MAPK1
SMG9
NSMCE3
DNAH7
BTNL2
LRRC8A
PRSS1
PRSS2
PRTN3
CFAP298
B2M
SMARCA1
PSMB8
PSMB9
POGLUT1
PSMG2
PSMB10
KIF15
CCDC47
TBX20
PNPLA2
CYSLTR2
NUP107
SLURP1
GJC2
ZNF1
PSMD12
SELENON
TTC7A
PSPH
PTCH1
PTEN
CLTRN
TBC1D24
ARID1B
COG6
WDR35
TAOK1
RIC1
MRTFA

DIP2B
ZFAT
EPG5
WDR19
GRHL3
ACTA1
PTPRO
PURA
NECTIN1
ALDH18A1
RAC1
RAC2
RAD21
RAG1
RAG2
RANBP2
RARA
BCKDHA
PRDM12
ALOXE3
BCKDHB
RBP4
RECQL
REL
RELB
DPF2
RET
REV3L
RFC2
RFX5
RFXAP
RIT1
RMRP
RNF2
BACH2
TRAPPC11
RORC
RPGR
RPL11
BCS1L
RREB1
RYR1
CFB
SAT1
MSMO1
SCN9A
SCNN1A
SCNN1B

SCNN1G
SDHA
VIPAS39
SDHB
SDHC
SDHD
CIDEC
XPNPEP3
TRAPPC2
BLK
CDH23
MCCC2
BLM
XYLT1
IFIH1
CARD9
SRSF2
NSD1
LIPN
NXN
SFTPB
SFTPC
DCLRE1C
INF2
DNAI2
SGCG
CLEC7A
ANAPC1
SHH
SIAH1
LMF1
DCLRE1B
NABP1
RFX7
STIL
BCL11B
SIX3
SKIC2
VPS33A
BMP4
SLC4A1
NCF1
SLC9A3
SLC11A1
SLC12A3
SLCO2A1
SMARCA2
SMARCA4

SMARCB1
SMARCC2
SMARCD1
SMARCD2
SMARCE1
SOX4
SOX11
SPAG1
SPI1
SPIB
SPINK1
SPP1
SPTA1
SPTB
SPTBN1
AKR1D1
BRCA1
SREBF1
SRP19
SRP54
BRAF
SRY
ST14
STAT1
STAT2
STAT4
ELOVL4
STK4
STX1A
STXBP1
STXBP2
SULT2B1
SUOX
BTD
ADAM17
TAF1
MAP3K7
TAP1
TAP2
TARS1
TBX1
TBCD
TBX2
TCF4
TCF3
ZEB1
MLX
TDGF1

ACTC1
TERC
TERT
TFE3
TG
TGFB2
TGFB3
TGFBR1
TGFBR2
TGIF1
TGM1
NKX2-1
TK2
TKT
TLL1
C1QA
C1QB
C1QC
C1R
TOP3A
TP53
C1S
TP73
TPM2
TPM3
TPP2
TPR
TRAF6
ACTG2
C4A
C4B
TRPC6
CAPN5
HIRA
TYMS
UBB
UBA1
UBE2A
UBE2L3
UFD1
UMOD
UNG
UQCRH
UROD
UROS
KDM6A
WAS
WIPF1

EIF4H
CLIP2
NSD2
NELFA
WT1
XDH
XPA
XPC
ZAP70
ZIC2
CFAP410
ZBTB16
RNF113A
CACNA1C
SLC30A2
NPHS2
ALMS1
CXCR4
RAB7A
NUP37
ALG12
CARD14
GNPTAB
SLC39A7
MMEL1
CYBC1
EPM2A
CDC73
RNASEH2B
EFL1
FAT4
SRD5A3
USB1
TBL1XR1
ANKRD55
ZNF750
ALG9
ARMC5
CSPP1
NUP85
SPEF2
KIAA0319L
COQ8B
KAT6A
PANK2
BICC1
CTC1
WDR26

HSD3B7
SHOC2
KMT2D
ACTN4
SLC2A10
CALR
CFHR5
CLPB
CAMK2B
TRIM8
FIP1L1
DOCK8
MED25
CLTCL1
SMC1A
CAPN3
NAA10
LAGE3
ARID1A
KLRC4
AXIN1
BAP1
CDC45
CARS1
ARHGAP24
ODAD4
DNAL1
GPR101
H4C3
H4C5
FERMT3
ITCH
NME5
USP26
RSPH3
PLA2G6
OBSCN
MAGT1
CASP8
RNASEH2C
GTF2IRD2
USP48
LTBP4
DNAJC30
CASP10
COG8
CARD11
MEGF10

JAGN1
FOXN1
CASR
FKBP6
CAT
COX4I2
OFD1
IL17RC
LMNB2
HAVCR2
ORAI1
ATAD1
ZNF341
DISP1
PIGY
CFAP300
IKBKG
DGKE
SHANK3
APOL1
CFAP74
AP3B1
FCN3
CCDC65
CDK10
CAV1
RUNX2
SLC25A12
RUNX1
RFXANK
TP63
ABCB11
SOCS1
CBL
STX16
STX11
DNAH11
SERPINH1
TNFSF12
CBS
DLK1
NAE1
CACNA1G
BCL10
FOXH1
KYNU
P4HA2
RSPH1

BAZ1B
KNSTRN
AIP
PSTPIP1
NFS1
SLC7A7
PAPSS2
CLDN1
UNC119
TBX19
USP8
DPP9
SMC3
CD3D
SLC6A5
CD3E
CD3G
NEK9
ARHGEF2
CD247
CD4
HACD1
GORAB
CRLF1
G6PC3
DRC1
BCL7B
MARS2
CD19
MS4A1
ODAD1
TGM5
SNAP29
LONP1
TBCK
CD27
ARHGAP29
CYP7B1
TBX4
ADAMTS3
ADAMTS2
SPTLC2
MPDU1
H6PD
GTF2IRD1
CDC42BPB
CD40LG
SEC24C

FNIP1
SKIC3
LPIN2
NUP93
PRORP
ADAMTSL2
CD79A
CD79B
IFT140
HDAC4
CD151
PIEZO1
KIAA0586
GINS1
ZEB2
ZBTB24
PLEKHM1
MAGI2
LRBA
FIG4
RBM8A
WDR1
MED12
CDH1
COL1A1
COL1A2
IL5
LAMA5
LAMB1
LAMB2
LAMC1
THBS1
THBS3
VTN
CD80
CD86
CXCL13
MGLL
TIRAP
CCR5
AGER
AIF1
ABCF1
FOS
ALOX15
CXCL1
CXCL2
ANXA1

AOX1
IL1RAP
IL9
LY75
NFATC4
PTX3
BCL6
BDKRB2
CCL4
CCL8
CCL11
CCL13
CCL18
CCL19
CCL21
CCL23
CXCL5
CXCL12
TPST1
AOC3
LY86
CXCL14
MIR675
TLR6
LILRB4
ADCY7
GBP5
PLD4
NLRP7
EPHB2
EZH2
ABCD2
KPNA6
PLD3
APPL1
IL17B
H19
APOD
TICAM2
MIR125A
MIR129-1
MIR135A1
MIR136
MIR140
MIR17
MIR197
MIR203A
MIR93

MIR98
MIR324
MIR338
NOS2
MIR378A
PER1
IL17D
APPL2
MAPK9
PSG9
CHID1
IL1R2
CUEDC2
ZC3H12A
SPINK7

Supplementary Table S2. Primers and RNA sequences used in this study.

gene	Forward primer Sequence (5'->3')	Reverse primer Sequence (5'->3')
FOXP3	TCCAGAGTTCCTCCACAAC	ATTGAGTGTCCGCTGCTTCT
C5AR1	CGCTTTCTGCTGGTGTTT	TTTGTCGTGGCTGTAGTCC
LIF	ATCACCCCTGTCAACGCCAC	AGCTTGTCCAGGTTGTTGGG
GAPDH	AGAAGGCTGGGGCTCATTTG	AGGGGCCATCCACAGTCTTC

Supplementary Table S3. Top 15 genes ranked by MCC, degree, and betweenness centrality algorithms in the PPI network

Top 15 Ranked by MCC		
Rank	Name	Score
1	IL1A	2360
2	CXCL1	2334
3	CXCR2	2292
4	CXCL5	2286
5	CCL18	2160
6	CXCL6	1560
7	CCL22	1458
8	FOXP3	745
9	CCL13	720
10	MMP1	151
11	LIF	33
12	IL23A	32
13	C5AR1	20
14	C3	19
15	TNFSF4	17
Top 15 Ranked by Degree		
Rank	Name	Score
1	IL1A	22
2	CXCL1	14
2	FOXP3	14
4	CXCR2	11
5	CXCL5	10
5	C3	10
5	CCL22	10
8	MMP1	9
9	CXCL6	8
9	C5AR1	8
9	LIF	8
9	CCL18	8
9	GATA1	8
14	TNFSF4	6
14	IL23A	6
Top 15 Ranked by Betweenness		
Rank	Name	Score
1	IL1A	1578.6925940072997
3	FOXP3	1021.9831508360922
4	C3	980.1734827264243
5	GATA1	572.518767507003
6	LIF	563.9100331041506
7	C5AR1	545.9401493930906
8	ANK1	537.7142857142857
9	TNFSF4	507.8816993464053

10	GATA4	498.05985060690955
11	LYZ	448.44014939309045
12	SLC4A4	433.3285714285711
13	PDPN	412.82936932348696
14	CXCL1	355.9180205415499
15	SLC26A9	281.726517273576

Supplementary Table S4. The top 10 small-molecule compounds ranked by CMap scores.

Name	Score	Type	ID	Description
bicuculline	-96.32	cp	BRD-A09495397	GABA receptor antagonist
vemurafenib	-95.2	cp	BRD-K56343971	RAF inhibitor
PD-158780	-93.14	cp	BRD-K48735772	EGFR inhibitor
indirubin	-92.92	cp	BRD-K53959060	CDK inhibitor
PD-173074	-90.98	cp	BRD-K97764662	FGFR inhibitor
ZM-323881	-89.56	cp	BRD-K67831364	VEGFR inhibitor
TPCA-1	-89.15	cp	BRD-K51575138	IKK inhibitor
1-monopalmitin	-88.24	cp	BRD-A80928489	P-glycoprotein inhibitor
flubendazole	-87.89	cp	BRD-K86003836	Tubulin inhibitor
ABT-737	-83.89	cp	BRD-K56301217	BCL inhibitor