

Supplementary Table S1. Signature genes list

Signature	Positive regulation of cytokine production														
Genes	ABCC8	ABL1	ADAM17	ADAM8	ADCYAP1	ADIPOQ	ADORA2B								
	ADRA2A	AFAP1L2	AGER	AGPAT1	AGPAT2	AGTAIF1	AIM2	AIRE							
	AKAP12	AKIRIN2	ALOX15B	ANXA1	APOA2	APPAPPL1	ARFGEF2								
	ARHGEF2	ARID5A	ARNT	ARRDC4	ATF2	ATF4	ATP6AP2	AZU1							
	B2MBATF	BCL10	BCL3	BMPR1A	BRCA1	BTK	BTN3A1	BTN3A2							
	C1QTNF3	C1QTNF4	C3	C3AR1	C5	C5AR1	CADM1	CAMK4							
	CARD11	CARD8	CARD9	CASP1	CASP8	CCBE1	CCDC88B	CCL1							
	CCL19	CCL3	CCR2	CCR7	CD14	CD160	CD2CD200	CD226							
	CD244	CD274	CD276	CD28	CD34	CD36	CD3E	CD4CD40							
	CD40LG	CD46	CD55	CD58	CD6CD74	CD80	CD81	CD83							
	CD84	CD86	CEACAM20	CEBPB	CEBPG	CGAS	CHI3L1	CHIA							
	CHUK	CLEC4E	CLEC5A	CLEC6A	CLEC7A	CLEC9A	CLECL1P	CLNK							
	CLUCRLF2	CRTAM	CSF1R	CSF2	CX3CL1	CXCL17	CYBA	CYBB							
	CYP1B1	CYRIB	DDIT3	DDTDDX1	DDX21	DDX3X	DEFA5	DEFB124							
	DENND1B	DHX33	DHX36	DHX58	DHX9	DRD2	EBI3	EGR1							
	EIF2AK2	EIF2AK3	ELANE	EPHB2	EPXEREG	F2R	F2RL1	F3	FADD						
	FCER1G	FCGR3A	FCN1	FERMT1	FFAR2	FFAR3	FGR	FLOT1	FLT4						
	FOXP1	FOXP3	FRMD8	FZD5	G3BP1	GAPDH	GARIN5A	GATA3							
	GATA4	GATA6	GBP5	GDF2	GLMN	GPRC5B	GPSM3	GSDMD	H19						
	HAVCR2	HDAC2	HEG1	HGF	HLA2	HIF1A	HILPDA	HK1	HLA-A						
	HLA-DPA1	HLA-DPB1	HLA-E	HLA-F	HLA-G	HMGB1	HMGB2	HMHB1							
	HMOX1	HPSE	HRAS	HSP90AA1	HSPA1A	HSPA1B	HSPB1	HSPD1							
	HTR2B	HYAL2	IDO1	IFI16	IFIH1	IFNG	IFNGR1	IFNL1	IGHD						
	IKBKE	IL10	IL12A	IL12B	IL12RB1	IL12RB2	IL13	IL15	IL16	IL17A	IL17B				
	IL17D	IL17F	IL17RA	IL17RC	IL18	IL18R1	IL1A	IL1B	IL1R1						
	IL1RL1	IL1RL2	IL2	IL20RB	IL21	IL23A	IL23R	IL26	IL27	IL27RA	IL33				
	IL36A	IL4	IL4R	IL6	IL6R	IL6ST	IL7	IL9	INAVA	INS	IRAK1				
	IRAK3	IRF1	IRF3	IRF4	IRF5	IRF7	IRF8	ISG15	ISL1						
	ITK	JAK2	KAT2A	KCNQ1OT1	KIR2DL4	KIT	KLRC4	KLRK1	KLRF2						
	KLRK1	KPNA6	LACC1	LAMTOR5	LAPTM5	LBP	LEP	LGALS9	LILRA2						
	LILRA5	LILRB1	LILRB2	LPL	LRRK2	LTA	LTB	LUM	LURAP1	LY9	LY96				
	MALT1	MAP3K7	MAPK11	MAPK13	MAPK14	MAPK9	MAPKAPK2	MAVS							
	MBP	MCOLN2	MDK	MEFV	MIF	MIR132	MIR144	MIR145	MIR149						
	MIR17	MIR182	MIR206	MIR21	MIR27B	MIR324	MIR657	MIR675							
	MIR92A1	MMP12	MMP8	MYB	MYD88	NAIP	NFAM1	NFATC4	NLRC4						
	NLRP1	NLRP10	NLRP12	NLRP2	NLRP3	NLRP9	NMB	NMBR	NOD1						
	NOD2	NODAL	NOS2	NOX1	NOX5	NR1H4	NR4A3	OAS1	OAS2						
	OAS3	ORM1	ORM2	OSM	P2RX7	PAEP	PANX1	PANX2	PANX3						
	PARK7	PDE4B	PDE4D	PELI1	PF4	PHB1	PIBF1	PIK3CD	PIK3CG						
	PIK3R1	PLA2G1B	PLA2G3	PLA2R1	PLCB1	PLCG2	PNPP	POLR3A							
	POLR3B	POLR3C	POLR3D	POLR3F	POLR3G	POSTN	POU2AF1	POU2F2							
	PQBP1	PRG2	PRG3	PRKCQ	PRKCZ	PRKD2	PSEN1	PTAFR							

PTGER4 PTGS2 PTPN11 PTPN22 PTPRC PTPRJ PYCARDPYDC1 RAB1A
RAB2B RAB7B RAD21 RAET1G RARA RASGRP1 RBM47 RELA
RFTN1 RGCC RIGIRIOK3 RIPK1 RIPK2 RNF135 ROCK2 RORA
RPS3 RSAD2 RUNX1 S100A13SAA1 SASH3 SCAMP5SCIMP SCRIB
SELENOK SEMA7ASERPINB7 SERPINE1 SERPINF2 SETD2 SETD4
SIGLEC16 SIRT1 SLAMF1 SLAMF6 SLC11A1 SLC7A5 SMAD3 SOD1
SORL1 SPHK1 SPHK2 SPNSPON2 SPTBN1 SRC STAT1 STAT3
STAT5B STING1 STMP1 STOML2 SULF1 SULF2 SYKTANK TBK1
TBX21 TGFB1 THBS1 TICAM1 TICAM2 TIGIT TIRAP TLR1 TLR2
TLR3 TLR4 TLR5 TLR6 TLR7 TLR8 TLR9 TMED10
TMEM106A TMF1 TMIGD2 TNFTNFRSF14 TNFRSF8 TNFSF4 TNXB
TOMM70TRAF2 TRAF3 TRAF3IP3 TRAF6 TREM2 TRIM15 TRIM16
TRIM27 TRIM32 TRIM56 TRIM6 TRIM65 TRPV4 TSLP TUSC2
TWIST1 TXKTYK2 TYROBPUCN UNC93B1 USP50 VTCN1 WNT11
WNT3A WNT5A XBP1 XCL1 XIAP ZBTB20 ZBTB7B ZC3HAV1
ZCCHC3 ZFPM1 ZNF580 ZP3

Source <https://www.gsea-msigdb.org/gsea/msigdb/human/geneset>
