

Supplementary Table 1

MCODE

SLAMF8	91	54.33879781
FCGR3A	90	54.33879781
CXCL9	90	54.33879781
ICAM1	89	54.33879781
HAPLN3	89	54.33879781
HAVCR2	88	54.33879781
STAT1	87	54.33879781
IL4I1	87	54.33879781
FCGR1A	87	54.33879781
CXCL10	87	54.33879781
CD300LF	87	54.33879781
SNX10	86	54.33879781
LILRB4	86	54.33879781
IL2RA	86	54.33879781
IL18BP	86	54.33879781
HK3	86	54.33879781
GBP5	86	54.33879781
UBD	85	54.33879781
PLA2G7	85	54.33879781
IFNG	84	54.33879781
FCGR1B	84	54.33879781
TYMP	83	54.33879781
FPR3	83	54.33879781
IFI30	82	54.33879781
GBP4	82	54.33879781
ZNF683	81	54.33879781
WARS	81	54.33879781
IGSF6	81	54.33879781
FCGR2A	81	54.33879781
CXCL11	81	54.33879781

CLEC6A	81	54.33879781
CD84	81	54.33879781
FCGR1CP	80	54.33879781
CCR8	80	54.33879781
TNFRSF9	79	54.33879781
FOXP3	79	54.33879781
DNAJC5B	79	54.33879781
CD80	79	54.33879781
ADGRE2	79	54.33879781
TFEC	78	54.33879781
DLGAP1-AS5	78	54.33879781
MSR1	77	54.33879781
PARP14	76	52.63392857
OAS2	76	52.49423077
TDRD6	75	54.33879781
OSCAR	75	54.33879781
LGALS17A	74	53.00052882
ITGAX	73	53.48135593
EPSTI1	73	52.63392857
IDO1	72	51.82284506
HTRA4	72	54.33879781
CCL18	72	53.48135593
DCSTAMP	71	54
NLRC5	69	49.63442623
BATF2	69	51.89098532
SIRPB1	68	54
CD274	67	52.66071429
LOC101927571	66	51.6961039
LAMP3	66	52.9719725
TREM2	64	52.96430976
EOMES	64	53.14331042
MMP12	62	51.17942724

IFI44L	62	50.63571429
IL27	61	53
CHIT1	61	50.07597896
XAF1	60	50.85744235
SMTNL1	60	51.60902256
ACOD1	60	49.81857765
KIR2DS4	59	51.49667272
OLR1	58	49.48051948
RUFY4	57	50.85744235
LOC101928227	57	49.75541579
MS4A14	55	48
SDS	54	48.81523379
MMP9	54	48.58909853
CLDN14	54	45.88265306
IFI44	51	44.87511563
HS3ST2	50	48
HAMP	47	43.83718779
TMSB15B	46	45

MM&GS

nodeName	MMtan	p.GS.Grade
SLAMF8	0.906465509	0.0000197
HAVCR2	0.889278345	0.000000111
FCGR3A	0.866868783	0.00000755
CD300LF	0.863145212	0.00000575
LILRB4	0.84626432	0.00000511
PLA2G7	0.833520628	0.0000157
FCGR1A	0.826527937	0.000239358
FPR3	0.816612853	0.0000042
CXCL9	0.812254793	0.0000239
IL2RA	0.808635365	0.00000302
HK3	0.79657641	0.017681365
ICAM1	0.795220129	0.001345528

IGSF6	0.782222422	2.31E-08
CD84	0.778132466	8.3E-09
FCGR1B	0.769586209	0.0000222
SNX10	0.754547316	0.072290805
FCGR2A	0.745490713	0.000151679
HAPLN3	0.739805485	0.0000201
DNAJC5B	0.738094531	0.000000824
CXCL10	0.736303117	0.001707143
IL4I1	0.732728968	0.009472785
STAT1	0.732014926	0.000248161
GBP5	0.718112318	0.000429012
IL18BP	0.71291269	0.000000199
CD80	0.707259398	0.005682945
IFNG	0.703319865	0.001695725
CLEC6A	0.691326081	0.002789977
ADGRE2	0.689046172	0.038329212
UBD	0.686036489	0.008310197
CCR8	0.685105162	0.0000421
WARS	0.68498134	0.000604813
MSR1	0.684916435	0.0000321
TYMP	0.669607356	0.003131868
GBP4	0.665203842	0.0000437
FCGR1CP	0.66113018	0.016067346
IFI30	0.656213928	0.066924119
ITGAX	0.654826251	0.025594209
OSCAR	0.654460092	0.012421102
TNFRSF9	0.650102222	0.000144146
TFEC	0.642280059	0.00000165
CXCL11	0.641524149	0.013727357
FOXP3	0.640375948	0.00000769
TDRD6	0.633766678	0.000496643
PARP14	0.623984598	0.005106615

HTRA4	0.622138561	0.0000947
EPSTI1	0.61290388	0.139962359
OAS2	0.612845576	0.013551329
DCSTAMP	0.590037864	0.01468131
CCL18	0.578437726	0.011333105
TREM2	0.574381897	0.000329739
ZNF683	0.574068562	0.0000309
BATF2	0.56692237	0.135166167
NLRC5	0.546526971	0.001255842
LAMP3	0.538452775	0.000296328
IL27	0.531509089	0.006308726
SIRPB1	0.528543048	0.293279151
ACOD1	0.52613712	0.00886873
IDO1	0.525609775	0.00062071
DLGAP1-AS5	0.523677568	0.05339065
EOMES	0.516059715	8.85E-11
OLR1	0.513313837	0.019236989
LOC101928227	0.504259802	0.936394945
MMP12	0.504060334	0.934618911
LGALS17A	0.496402151	0.011156026
MS4A14	0.496308442	0.0000759
SDS	0.49157739	0.000147566
RIPK2	0.478552295	0.122128012
MB21D1	0.4656244	0.003158568
OAS3	0.465250734	0.354899047
IFITM1	0.456122998	0.102472357
LOC101927571	0.452411131	0.125531842
SMTNL1	0.447747419	0.000423476
XAF1	0.439058685	0.100320669
CD274	0.433334038	0.369987678
MMP9	0.428970812	0.593577271
IFI44L	0.41632674	0.020038016

MICB	0.405723219	0.048709913
HSD3B7	0.395702077	0.770552343
IFI44	0.3936427	0.081925892
RUFY4	0.393274006	0.081505041
DLEU7	0.380371709	0.649395751
P2RY6	0.365195663	0.13663111
KIR2DS4	0.363378239	0.003957461
HAMP	0.360260643	0.017696545
MIR3191	0.359323943	0.092525475
CLDN14	0.356312929	0.16234039
TMSB15B	0.353865319	0.001788907
LOC653786	0.347971191	0.002404971
CHIT1	0.343288381	0.076092891
ISG15	0.33915619	0.127760872
HS3ST2	0.335997597	0.036658111
PLEKHS1	0.333400297	0.522540429
SLC6A14	0.300997044	0.346073701

Supplementary Table 2

Type	Description	Gene Number	P-Value	FD R	
Biological processes	immune response	8	1.10 E-05	1.50 E-02	OAS2,CCR8,CXCL10,CXCL11,CXCL9,CD274,TNFRSF9,IL2RA
Biological processes	inflammatory response	7	8.70 E-05	1.20 E-01	CXCL10,CXCL11,CXCL9,TNFRSF9,IL23A,IL27,OLR1
Biological processes	defense response to virus	6	8.90 E-05	1.20 E-01	OAS2,CXCL10,CXCL9,ISG15,MB21D1,IFNG
Biological processes	positive regulation of cAMP metabolic process	3	9.10 E-05	1.20 E-01	CXCL10,CXCL11,CXCL9,TNFRSF9,IDO1

Bio log ical pro ces s	response to lipopolysac charide	5	1.90 E-04	2.60 E- 01	CXCL10,CXCL11,CXCL9
Bio log ical pro ces s	positive regulation of cAMP- mediated signaling	3	3.20 E-04	4.30 E- 01	CXCL10,CXCL11,CXCL9,TNFRSF9,I DO1
Bio log ical pro ces s	negative regulation of interleukin- 10 production	3	4.20 E-04	5.70 E- 01	CXCL10,CXCL11,CXCL9
Bio log ical pro ces s	myeloid dendritic cell differentiati on	3	6.80 E-04	9.20 E- 01	BATF2,DCSTAMP,UBD
Bio log ical pro ces s	positive regulation of leukocyte chemotaxis	3	1.20 E-03	1.60 E+0 0	CXCL10,CXCL11,CXCL9
Bio log	negative regulation	3	1.60 E-03	2.10 E+0	CD274,FOXP3,HAVCR2

ical pro ces s	of interferon- gamma production			0	
Bio log ical pro ces s	negative regulation of T cell proliferatio n	3	1.60 E-03	2.10 E+0 0	FOXP3,HAVCR2,IL2RA
Bio log ical pro ces s	defense response to bacterium	4	2.00 E-03	2.60 E+0 0	FCGR1A,ISG15,HAMP,IFNG
Bio log ical pro ces s	positive regulation of release of sequestered calcium ion into cytosol	3	2.00 E-03	2.70 E+0 0	CXCL10,CXCL11,CXCL9
Bio log ical pro ces s	chemokine- mediated signaling pathway	3	9.30 E-03	1.20 E+0 1	CXCL10,CXCL11,CXCL9
Bio log ical pro	regulation of cell proliferatio n	4	1.20 E-02	1.50 E+0 1	CXCL10,CXCL11,CXCL9,TNFRSF9

ces s					
Bio log ical pro ces s	antigen processing and presentatio n of exogenous peptide antigen via MHC class I	2	1.20 E-02	1.50 E+0 1	FCGR1A,IFI30
Bio log ical pro ces s	cellular response to lipopolysac charide	3	1.50 E-02	1.80 E+0 1	FOXP3,HAVCR2,IL2RA
Bio log ical pro ces s	T cell chemotaxis	2	1.60 E-02	1.90 E+0 1	CXCL10,CXCL11
Bio log ical pro ces s	positive regulation of T cell apoptotic process	2	2.00 E-02	2.40 E+0 1	CD274,IDO1
Bio log ical	negative regulation of activated	2	2.70 E-02	3.10 E+0 1	FOXP3,IFNG

processes	T cell proliferation				
Biological processes	negative regulation of interleukin-17 production	2	2.70 E-02	3.10 E+01	FOXP3,IFNG
Biological processes	negative regulation of interleukin-2 production	2	3.10 E-02	3.50 E+01	FOXP3,HAVCR2
Biological processes	cellular amino acid metabolic process	2	3.50 E-02	3.80 E+01	SDS,SLC6A14
Biological processes	defense response to protozoan	2	4.30 E-02	4.50 E+01	BATF2,IFNG
Cellular component	external side of plasma membrane	8	8.30 E-07	7.70 E-04	CXCL10,CXCL9,CD274,FCGR1A,TNFRSF9,ICAM1,IFNG,IL2RA

one nt					
Cel lul ar co mp one nt	extracellular space	11	1.50 E-03	1.40 E+0 0	CXCL10,CXCL11,CXCL9,TNFRSF9, CHIT1,HAMP,ICAM1,IFNG,IL18BP, IL27,MMP9
Cel lul ar co mp one nt	cell	3	2.50 E-02	2.10 E+0 1	CCR8,HAMP,HK3
Cel lul ar co mp one nt	integral component of membrane	24	4.00 E-02	3.20 E+0 1	CCR8,CD274,CD300LF,CD80,C80,C D84,FCGR1A,SLAMF8,TNFRSF9,CL DN14,HS3ST2,HAVCR2,IGSF6,ICA M1,IFITM1,IL2RA,LAMP3,MSR1,MS 4A14,OSCAR,OLR1,P2RY6,SLC6A14 ,TREM2
Mo lec ula r fun ctio n	chemokine activity	3	8.40 E-03	8.70 E+0 0	CXCL10,CXCL11,CXCL9

Supplementary Table 3

Type	Description	Gene Number	P-Value	FD R	GENEs
KEGG_PATHWAY	Cytokine-cytokine receptor interaction	7	6.80E-04	7.40E-01	CCR8,CXCL10,CXCL11,CXCL9,TNFRSR9,IFNG,IL2RA
KEGG_PATHWAY	Toll-like receptor signaling pathway	5	1.50E-03	1.60E+00	CXCL10,CXCL11,CXCL9,CD80,STAT1
KEGG_PATHWAY	Osteoclast differentiation	5	4.10E-03	4.40E+00	FCGR1A,IFNG,OSCAR,STAT1,TREM2
KEGG_PATHWAY	Influenza A	5	9.10E-03	9.50E+00	OAS2,CXCL10,ICAM1,IFNG,STAT1
KEGG_PATHWAY	Chemokine signaling pathway	5	1.00E-02	1.10E+01	CCR8,CXCL10,CXCL11,CXCL9,STAT1
KEGG_PATHWAY	African trypanosomiasis	3	1.20E-02	1.30E+01	IDO1,ICAM1,IFNG
KEGG_PATHWAY	Measles	4	2.70E-02	2.60E+01	OAS2,IFNG,IL2RA,STAT1,
KEGG_PATHWAY	Cell adhesion molecules (CAMs)	4	3.40E-02	3.10E+01	CD274,CD80,CLDN14,ICAM1

KEGG_PATHWAY	Inflammatory bowel disease (IBD)	3	3.70E-02	3.40E+01	FOXP3,IFNG,STAT1
KEGG_PATHWAY	Leishmaniasis	3	3.80E-02	3.40E+01	FCGR1A,IFNG,STAT1