

Table S3. Results of GO enrichment

	ONTOLOGY	ID	Description	GeneRatio	BgRatio	pvalue	p.adjust	qvalue	geneID	Count
GO:0002283	BP	GO:0002283	neutrophil activation involved in	13/62	490/18866	5.44E-09	7.52E-06	5.74E-06	CXCR1/FPR1/MNDA/LILRA2/PRAM1/SELL/PTAFR/CEACAM3/FCGR2A/SLC11A1/FGR/CXCR1/FPR1/MNDA/PRAM1	13
GO:0043312	BP	GO:0043312	neutrophil degranulation	12/62	487/18866	5.12E-08	3.54E-05	2.70E-05	/SELL/PTAFR/CEACAM3/FCGR2A/SLC11A1/FGR/OLFM4/OSM/NLRP12/MNDA/LILRA2/CLEC4E/PTAFR/SLC11A1/FNCR1/PRAM1/PTAFR/LYN/FGR/SLAMF6/TLR4/RAC2	12
GO:0001819	BP	GO:0001819	positive regulation of cytokine	11/62	447/18866	2.00E-07	9.23E-05	7.04E-05	PRAM1/PTAFR/LYN/FGR/RAC2	11
GO:0002703	BP	GO:0002703	regulation of leukocyte	8/62	211/18866	4.32E-07	1.24E-04	9.47E-05	MNDA/NCR1/LILRA2/CLEC4E/LYN/FGR/SLAMF6/FFAR2/	8
GO:0043300	BP	GO:0043300	regulation of leukocyte	5/62	47/18866	4.49E-07	1.24E-04	9.47E-05	PRAM1/PTAFR/LYN/FGR/RAC2	5
GO:0045088	BP	GO:0045088	regulation of innate immune	9/62	307/18866	6.78E-07	1.56E-04	1.19E-04		9
GO:0002886	BP	GO:0002886	regulation of myeloid leukocyte mediated	5/62	58/18866	1.30E-06	2.58E-04	1.97E-04	PRAM1/PTAFR/LYN/FGR/RAC2	5
GO:0002429	BP	GO:0002429	immune response-activating cell surface receptor signaling pathway	10/62	481/18866	3.46E-06	5.32E-04	4.06E-04	FPR1/MNDA/LILRA2/PRAM1/CLEC4E/LCP2/FCGR2A/LYN/FGR/FFAR2	10
GO:0002757	BP	GO:0002757	immune response-activating signal transduction	10/62	481/18866	3.46E-06	5.32E-04	4.06E-04	FPR1/MNDA/LILRA2/PRAM1/CLEC4E/LCP2/FCGR2A/LYN/FGR/FFAR2	10
GO:0050663	BP	GO:0050663	cytokine secretion	5/62	72/18866	3.84E-06	5.32E-04	4.06E-04	NLRP12/CLEC4E/LCP2/LYN/OSM/NLRP12/MNDA/LILRA2/CLEC4E/LYN/SLAMF6/FFA	5
GO:0031349	BP	GO:0031349	positive regulation of defense	9/62	385/18866	4.36E-06	5.49E-04	4.19E-04	MNDA/LILRA2/CLEC4E/LYN/SLAMF6/FFAR2/TLR4	9
GO:0045089	BP	GO:0045089	positive regulation of innate immune	7/62	213/18866	6.15E-06	7.10E-04	5.42E-04		7

GO:0002831	BP	GO:0002831	regulation of response to biotic	9/62	409/18866	7.11E-06	7.57E-04	5.78E-04	MNDA/NCR1/LILRA2/CLEC4E/LYN/FGR/SLAMF6/FFAR2/	9
GO:0002218	BP	GO:0002218	activation of innate immune	6/62	144/18866	7.70E-06	7.62E-04	5.81E-04	MNDA/LILRA2/CLEC4E/LYN/FFAR2/TLR4	6
GO:0002699	BP	GO:0002699	positive regulation of immune effector G protein-coupled	7/62	223/18866	8.31E-06	7.67E-04	5.85E-04	PTAFR/LYN/FGR/SLAMF6/FFAR2/TLR4/RAC2	7
GO:0035589	BP	GO:0035589	purinergic nucleotide receptor signaling	3/62	14/18866	1.20E-05	1.04E-03	7.91E-04	GPR171/PTAFR/P2RY13	3
GO:0002833	BP	GO:0002833	positive regulation of response to biotic stimulus	7/62	251/18866	1.79E-05	1.46E-03	1.11E-03	MNDA/LILRA2/CLEC4E/LYN/SLAMF6/FFAR2/TLR4	7
GO:0002697	BP	GO:0002697	regulation of immune effector	9/62	470/18866	2.15E-05	1.65E-03	1.26E-03	NCR1/PRAM1/PTAFR/LYN/FGR/SLAMF6/FFAR2/TLR4/RA	9
GO:0032731	BP	GO:0032731	positive regulation of interleukin-1 beta production	4/62	53/18866	2.74E-05	2.00E-03	1.52E-03	NLRP12/MNDA/LILRA2/TLR4	4
GO:0006968	BP	GO:0006968	cellular defense	4/62	54/18866	2.96E-05	2.05E-03	1.56E-03	MNDA/NCR1/PRF1/NCF2	4
GO:0031663	BP	GO:0031663	lipopolysaccharide-mediated signaling pathway	4/62	59/18866	4.20E-05	2.64E-03	2.02E-03	LILRA2/PTAFR/LYN/TLR4	4
GO:0050707	BP	GO:0050707	regulation of cytokine secretion	4/62	59/18866	4.20E-05	2.64E-03	2.02E-03	NLRP12/CLEC4E/LYN/FGR	4
GO:0032732	BP	GO:0032732	positive regulation of interleukin-1	4/62	60/18866	4.49E-05	2.70E-03	2.06E-03	NLRP12/MNDA/LILRA2/TLR4	4
GO:0045576	BP	GO:0045576	mast cell	4/62	61/18866	4.80E-05	2.77E-03	2.11E-03	LCP2/LYN/FGR/RAC2	4
GO:0043304	BP	GO:0043304	regulation of mast cell degranulation	3/62	32/18866	1.57E-04	8.67E-03	6.61E-03	LYN/FGR/RAC2	3
GO:0033006	BP	GO:0033006	regulation of mast cell activation involved in	3/62	33/18866	1.72E-04	8.81E-03	6.72E-03	LYN/FGR/RAC2	3

GO:0035590	BP	GO:0035590	purinergic nucleotide receptor signaling	3/62	33/18866	1.72E-04	8.81E-03	6.72E-03	GPR171/PTAFR/P2RY13	3
GO:1903305	BP	GO:1903305	regulation of regulated secretory	5/62	162/18866	1.91E-04	9.46E-03	7.21E-03	PRAM1/PTAFR/LYN/FGR/RA C2	5
GO:0010543	BP	GO:0010543	regulation of platelet activation	3/62	36/18866	2.23E-04	1.07E-02	8.13E-03	LYN/PLEK/TLR4	3
GO:0045730	BP	GO:0045730	respiratory burst	3/62	37/18866	2.42E-04	1.11E-02	8.49E-03	SLC11A1/NCF2/RAC2	3
GO:0006909	BP	GO:0006909	phagocytosis	7/62	382/18866	2.49E-04	1.11E-02	8.49E-03	FCGR2A/SLC11A1/LYN/FGR/ NCF2/TLR4/RAC2	7
GO:0032660	BP	GO:0032660	regulation of interleukin-17 production	3/62	39/18866	2.84E-04	1.22E-02	9.33E-03	OSM/SLAMF6/TLR4	3
GO:0032651	BP	GO:0032651	regulation of interleukin-1 beta production	4/62	97/18866	2.91E-04	1.22E-02	9.33E-03	NLRP12/MNDA/LILRA2/TLR 4	4
GO:0034142	BP	GO:0034142	toll-like receptor 4 signaling pathway	3/62	40/18866	3.06E-04	1.25E-02	9.51E-03	LILRA2/LYN/TLR4	3
GO:0032620	BP	GO:0032620	interleukin-17 production	3/62	44/18866	4.07E-04	1.53E-02	1.17E-02	OSM/SLAMF6/TLR4	3
GO:0033003	BP	GO:0033003	regulation of mast cell activation	3/62	44/18866	4.07E-04	1.53E-02	1.17E-02	LYN/FGR/RAC2	3
GO:0032611	BP	GO:0032611	interleukin-1 beta production	4/62	106/18866	4.09E-04	1.53E-02	1.17E-02	NLRP12/MNDA/LILRA2/TLR 4	4
GO:0034122	BP	GO:0034122	negative regulation of toll- like receptor	3/62	45/18866	4.35E-04	1.56E-02	1.19E-02	LILRA2/LYN/TLR4	3
GO:0001909	BP	GO:0001909	leukocyte mediated	4/62	108/18866	4.39E-04	1.56E-02	1.19E-02	NCR1/PRF1/SLAMF7/SLAMF 6	4
GO:0032652	BP	GO:0032652	regulation of interleukin-1	4/62	111/18866	4.87E-04	1.67E-02	1.27E-02	NLRP12/MNDA/LILRA2/TLR 4	4
GO:0043303	BP	GO:0043303	mast cell	3/62	47/18866	4.94E-04	1.67E-02	1.27E-02	LYN/FGR/RAC2	3

GO:0002221	BP	GO:0002221	pattern recognition receptor signaling mast cell	5/62	201/18866	5.16E-04	1.69E-02	1.29E-02	LILRA2/CLEC4E/LYN/FFAR2 /TLR4	5
GO:0002279	BP	GO:0002279	activation	3/62	48/18866	5.26E-04	1.69E-02	1.29E-02	LYN/FGR/RAC2	3
GO:0060326	BP	GO:0060326	involved in cell chemotaxis	6/62	311/18866	5.41E-04	1.70E-02	1.30E-02	CXCR1/CSF3R/LYN/CCRL2/F	6
GO:0002448	BP	GO:0002448	mast cell mediated immunity	3/62	49/18866	5.59E-04	1.72E-02	1.31E-02	LYN/FGR/RAC2	3
GO:0002220	BP	GO:0002220	innate immune response activating cell surface receptor signaling innate immune	4/62	116/18866	5.75E-04	1.73E-02	1.32E-02	LILRA2/CLEC4E/LYN/FFAR2	4
GO:0002758	BP	GO:0002758	response- activating signal	4/62	117/18866	5.94E-04	1.75E-02	1.33E-02	LILRA2/CLEC4E/LYN/FFAR2	4
GO:0032612	BP	GO:0032612	interleukin-1 positive regulation	4/62	121/18866	6.74E-04	1.94E-02	1.48E-02	NLRP12/MNDA/LILRA2/TLR	4
GO:1903961	BP	GO:1903961	of anion transmembrane	2/62	12/18866	6.87E-04	1.94E-02	1.48E-02	ACSL5/PTAFR	2
GO:0009306	BP	GO:0009306	protein secretion	7/62	462/18866	7.76E-04	2.08E-02	1.58E-02	NLRP12/CLEC4E/LCP2/LYN/ FGR/PLEK/TLR4	7
GO:0035592	BP	GO:0035592	establishment of protein localization to	7/62	463/18866	7.86E-04	2.08E-02	1.58E-02	NLRP12/CLEC4E/LCP2/LYN/ FGR/PLEK/TLR4	7
GO:0017157	BP	GO:0017157	regulation of negative	5/62	222/18866	8.09E-04	2.08E-02	1.58E-02	PRAM1/PTAFR/LYN/FGR/RA	5
GO:0034144	BP	GO:0034144	regulation of toll- like receptor 4	2/62	13/18866	8.10E-04	2.08E-02	1.58E-02	LILRA2/LYN	2
GO:1902563	BP	GO:1902563	regulation of neutrophil	2/62	13/18866	8.10E-04	2.08E-02	1.58E-02	PRAM1/PTAFR	2
GO:0071692	BP	GO:0071692	protein localization to	7/62	470/18866	8.58E-04	2.16E-02	1.65E-02	NLRP12/CLEC4E/LCP2/LYN/ FGR/PLEK/TLR4	7

GO:1903793	BP	GO:1903793	positive regulation of anion transport	3/62	58/18866	9.17E-04	2.27E-02	1.73E-02	ACSL5/PTAFR/DBI	3
GO:0045454	BP	GO:0045454	cell redox	3/62	59/18866	9.64E-04	2.34E-02	1.79E-02	SLC11A1/NCF2/RAC2	3
GO:0030595	BP	GO:0030595	leukocyte	5/62	232/18866	9.86E-04	2.35E-02	1.79E-02	CXCR1/CSF3R/LYN/FFAR2/R	5
GO:0042267	BP	GO:0042267	natural killer cell mediated	3/62	61/18866	1.06E-03	2.49E-02	1.90E-02	NCR1/SLAMF7/SLAMF6	3
GO:0030888	BP	GO:0030888	regulation of B cell proliferation	3/62	62/18866	1.11E-03	2.50E-02	1.91E-02	MNDA/LYN/TLR4	3
GO:0032233	BP	GO:0032233	positive regulation of actin filament bundle assembly	3/62	62/18866	1.11E-03	2.50E-02	1.91E-02	GPR65/PLEK/ARHGEF10	3
GO:0072503	BP	GO:0072503	cellular divalent inorganic cation homeostasis	7/62	492/18866	1.12E-03	2.50E-02	1.91E-02	CXCR1/FPR1/GPR65/SLC11A 1/LYN/CCRL2/BNIP3	7
GO:0038093	BP	GO:0038093	Fc receptor signaling pathway	5/62	241/18866	1.17E-03	2.56E-02	1.96E-02	CLEC4E/LCP2/FCGR2A/LYN/ FGR	5
GO:0038094	BP	GO:0038094	Fc-gamma receptor signaling	4/62	142/18866	1.22E-03	2.60E-02	1.98E-02	CLEC4E/FCGR2A/LYN/FGR	4
GO:0010919	BP	GO:0010919	regulation of inositol phosphate	2/62	16/18866	1.24E-03	2.60E-02	1.98E-02	PTAFR/PLEK	2
GO:0045342	BP	GO:0045342	biosynthetic MHC class II biosynthetic	2/62	16/18866	1.24E-03	2.60E-02	1.98E-02	SLC11A1/TLR4	2
GO:0032729	BP	GO:0032729	positive regulation of interferon- gamma production	3/62	65/18866	1.28E-03	2.64E-02	2.01E-02	SLC11A1/SLAMF6/TLR4	3
GO:0002228	BP	GO:0002228	natural killer cell mediated	3/62	66/18866	1.33E-03	2.72E-02	2.07E-02	NCR1/SLAMF7/SLAMF6	3
GO:0030889	BP	GO:0030889	negative regulation of B cell	2/62	17/18866	1.40E-03	2.81E-02	2.14E-02	MNDA/LYN	2
GO:0002791	BP	GO:0002791	regulation of peptide secretion	6/62	381/18866	1.55E-03	3.06E-02	2.33E-02	NLRP12/CLEC4E/LYN/FGR/F FAR2/TLR4	6

GO:0032740	BP	GO:0032740	positive regulation of interleukin-17 production	2/62	18/18866	1.57E-03	3.06E-02	2.34E-02	OSM/SLAMF6	2
GO:0045637	BP	GO:0045637	regulation of myeloid cell	5/62	263/18866	1.72E-03	3.30E-02	2.52E-02	GPR171/CSF3R/NFE2/LYN/TLR4	5
GO:0030168	BP	GO:0030168	platelet activation	4/62	158/18866	1.81E-03	3.39E-02	2.58E-02	LCP2/LYN/PLEK/TLR4	4
GO:0050729	BP	GO:0050729	positive regulation of inflammatory regulation of toll- like receptor signaling pathway	4/62	158/18866	1.81E-03	3.39E-02	2.58E-02	OSM/NLRP12/FFAR2/TLR4	4
GO:0034121	BP	GO:0034121	lysosome	3/62	74/18866	1.86E-03	3.42E-02	2.61E-02	LILRA2/LYN/TLR4	3
GO:0032418	BP	GO:0032418	regulation of B cell apoptotic process	3/62	75/18866	1.93E-03	3.49E-02	2.66E-02	LYN/FGR/RAC2	3
GO:0002902	BP	GO:0002902	negative regulation of ERK1	2/62	20/18866	1.94E-03	3.49E-02	2.66E-02	LYN/HSH2D	2
GO:0070373	BP	GO:0070373	lymphocyte	3/62	79/18866	2.24E-03	3.97E-02	3.03E-02	NLRP12/LYN/TLR4	3
GO:0046651	BP	GO:0046651	cell killing	5/62	283/18866	2.36E-03	4.14E-02	3.16E-02	MNDA/SLC11A1/LYN/TLR4/	5
GO:0001906	BP	GO:0001906	mononuclear cell proliferation	4/62	172/18866	2.47E-03	4.15E-02	3.17E-02	NCR1/PRF1/SLAMF7/SLAMF	4
GO:0032943	BP	GO:0032943	regulation of blood coagulation	5/62	286/18866	2.47E-03	4.15E-02	3.17E-02	MNDA/SLC11A1/LYN/TLR4/	5
GO:0030193	BP	GO:0030193	regulation of alcohol	3/62	82/18866	2.49E-03	4.15E-02	3.17E-02	RAC2	3
GO:1902930	BP	GO:1902930	positive regulation of cell activation	3/62	82/18866	2.49E-03	4.15E-02	3.17E-02	LYN/PLEK/TLR4	3
GO:0050867	BP	GO:0050867	regulation of inflammatory	3/62	82/18866	2.49E-03	4.15E-02	3.17E-02	PTAFR/PLEK/MVK	3
GO:1900046	BP	GO:1900046	natural killer cell activation	6/62	421/18866	2.55E-03	4.19E-02	3.20E-02	LILRA2/PTAFR/LYN/FGR/PL EK/TLR4	6
GO:0050727	BP	GO:0050727		3/62	83/18866	2.58E-03	4.19E-02	3.20E-02	LYN/PLEK/TLR4	3
GO:0030101	BP	GO:0030101		6/62	425/18866	2.68E-03	4.31E-02	3.28E-02	OSM/NLRP12/LYN/FFAR2/TL R4/MVK	6
				3/62	85/18866	2.76E-03	4.38E-02	3.34E-02	NCR1/FGR/SLAMF7	3

GO:0034143	BP	GO:0034143	regulation of toll-like receptor 4 signaling pathway	2/62	24/18866	2.80E-03	4.40E-02	3.36E-02	LILRA2/LYN	2
GO:0043302	BP	GO:0043302	positive regulation of leukocyte positive regulation of	2/62	25/18866	3.04E-03	4.62E-02	3.53E-02	PTAFR/FGR	2
GO:0014068	BP	GO:0014068	of phosphatidylinosit regulation of	3/62	88/18866	3.04E-03	4.62E-02	3.53E-02	OSM/LYN/FGR	3
GO:0050818	BP	GO:0050818	regulation of	3/62	88/18866	3.04E-03	4.62E-02	3.53E-02	LYN/PLEK/TLR4	3
GO:0001783	BP	GO:0001783	B cell apoptotic lymphocyte activation	2/62	26/18866	3.28E-03	4.94E-02	3.77E-02	LYN/HSH2D	2
GO:0002285	BP	GO:0002285	involved in secretory granule membrane	4/62	187/18866	3.33E-03	4.96E-02	3.78E-02	CLEC4E/SLC11A1/SLAMF6/TLR4	4
GO:0030667	CC	GO:0030667	tertiary granule G protein-coupled	8/63	306/19559	6.01E-06	7.09E-04	6.26E-04	CXCR1/FPR1/SELL/PTAFR/CEACAM3/FCGR2A/SLC11A1/FPR1/PTAFR/SLC11A1/OLF	8
GO:0070820	CC	GO:0070820	purinergic nucleotide	5/63	164/19559	1.85E-04	1.09E-02	9.64E-03		5
GO:0045028	MF	GO:0045028	purinergic nucleotide	3/64	14/18352	1.43E-05	2.78E-03	2.41E-03	GPR171/PTAFR/P2RY13	3
GO:0001614	MF	GO:0001614	nucleotide	3/64	21/18352	5.14E-05	3.31E-03	2.87E-03	GPR171/PTAFR/P2RY13	3
GO:0016502	MF	GO:0016502	nucleotide receptor activity	3/64	21/18352	5.14E-05	3.31E-03	2.87E-03	GPR171/PTAFR/P2RY13	3
GO:0038187	MF	GO:0038187	pattern recognition	3/64	23/18352	6.82E-05	3.31E-03	2.87E-03	CLEC4E/PTAFR/TLR4	3
GO:0140375	MF	GO:0140375	immune receptor activity	4/64	135/18352	1.26E-03	4.91E-02	4.26E-02	CXCR1/FPR1/CSF3R/CCRL2	4