

Supplemental Table 1

	GO ACCESSION	GO Term	corrected p-value
Cluster A	GO:0002443 GO:0019723 GO:0042087	leukocyte mediated immunity	0.000
	GO:0006955	immune response	0.000
	GO:0002252	immune effector process	0.000
	GO:0019724	B cell mediated immunity	0.000
	GO:0002449	lymphocyte mediated immunity	0.000
	GO:0002250	adaptive immune response	0.000
	GO:0002460	adaptive immune response based on somatic recombination of immune receptors built from immunoglobulin superfamily domains	0.000
	GO:0002376	immune system process	0.000
	GO:0016064	immunoglobulin mediated immune response	0.000
	GO:0048583	regulation of response to stimulus	0.000
	GO:0006952 GO:0002217 GO:0042829	defense response	0.000
	GO:0050776	regulation of immune response	0.000
	GO:0002274	myeloid leukocyte activation	0.000
	GO:0045576	mast cell activation	0.000
	GO:0001810	regulation of type I hypersensitivity	0.000
	GO:0006954	inflammatory response	0.001
	GO:0019864	IgG binding	0.001
	GO:0002889	regulation of immunoglobulin mediated immune response	0.002
	GO:0002712	regulation of B cell mediated immunity	0.002
	GO:0050778	positive regulation of immune response	0.002

GO:0002861	regulation of inflammatory response to antigenic stimulus	0.002
GO:0002682	regulation of immune system process	0.002
GO:0009605	response to external stimulus	0.002
GO:0007610	behavior	0.002
GO:0002883	regulation of hypersensitivity	0.002
GO:0002864	regulation of acute inflammatory response to antigenic stimulus	0.002
GO:0002673	regulation of acute inflammatory response	0.002
GO:0007626	locomotory behavior	0.003
GO:0002684	positive regulation of immune system process	0.003
GO:0048584	positive regulation of response to stimulus	0.004
GO:0006909	phagocytosis	0.004
GO:0006897 GO:0016193 GO:0016196	endocytosis	0.005
GO:0002822	regulation of adaptive immune response based on somatic recombination of immune receptors built from immunoglobulin superfamily domains	0.005
GO:0009611 GO:0002245	response to wounding	0.005
GO:0006911	phagocytosis, engulfment	0.005
GO:0002819	regulation of adaptive immune response	0.005
GO:0010324	membrane invagination	0.005
GO:0019865	immunoglobulin binding	0.007
GO:0042330	taxis	0.007
GO:0006935	chemotaxis	0.007
GO:0002526	acute inflammatory response	0.008
GO:0005515 GO:0045308	protein binding	0.012
GO:0050764	regulation of phagocytosis	0.015
GO:0050766	positive regulation of phagocytosis	0.015

GO:0001812	positive regulation of type I hypersensitivity	0.017
GO:0001805	positive regulation of type III hypersensitivity	0.017
GO:0042590	antigen processing and presentation of exogenous peptide antigen via MHC class I	0.017
GO:0001803	regulation of type III hypersensitivity	0.017
GO:0006817	phosphate transport	0.020
GO:0002478	antigen processing and presentation of exogenous peptide antigen	0.020
GO:0002886	regulation of myeloid leukocyte mediated immunity	0.028
GO:0002888	positive regulation of myeloid leukocyte mediated immunity	0.028
GO:0002892	regulation of type II hypersensitivity	0.028
GO:0002894	positive regulation of type II hypersensitivity	0.028
GO:0001798	positive regulation of type IIa hypersensitivity	0.028
GO:0001796	regulation of type IIa hypersensitivity	0.028
GO:0002703	regulation of leukocyte mediated immunity	0.028
GO:0002706	regulation of lymphocyte mediated immunity	0.028
GO:0045321	leukocyte activation	0.029
GO:0045807	positive regulation of endocytosis	0.031
GO:0019884	antigen processing and presentation of exogenous antigen	0.036
GO:0002253	activation of immune response	0.036
GO:0015698	inorganic anion transport	0.037
GO:0002885	positive regulation of hypersensitivity	0.037

GO:0002866	positive regulation of acute inflammatory response to antigenic stimulus	0.037
GO:0002863	positive regulation of inflammatory response to antigenic stimulus	0.037
GO:0002891	positive regulation of immunoglobulin mediated immune response	0.037
GO:0002675	positive regulation of acute inflammatory response	0.037
GO:0002714	positive regulation of B cell mediated immunity	0.037
GO:0048002	antigen processing and presentation of peptide antigen	0.039
GO:0002455	humoral immune response mediated by circulating immunoglobulin	0.039
GO:0006958	complement activation, classical pathway	0.039
GO:0001775	cell activation	0.040
GO:0016192 GO:0006899	vesicle-mediated transport	0.040
GO:0016044	membrane organization and biogenesis	0.040
GO:0050727	regulation of inflammatory response	0.042
GO:0002697	regulation of immune effector process	0.046
GO:0042742 GO:0042830	defense response to bacterium	0.046
GO:0030889	negative regulation of B cell proliferation	0.048
GO:0050896 GO:0051869	response to stimulus	0.055
GO:0002821	positive regulation of adaptive immune response	0.065

	GO:0002824	positive regulation of adaptive immune response based on somatic recombination of immune receptors built from immunoglobulin superfamily domains	0.065
	GO:0006820 GO:0006822	anion transport	0.068
	GO:0006950	response to stress	0.068
	GO:0032101	regulation of response to external stimulus	0.071
	GO:0009617 GO:0009618 GO:0009680	response to bacterium	0.073
	GO:0005044	scavenger receptor activity	0.076
	GO:0005576	extracellular region	0.084
	GO:0030100	regulation of endocytosis	0.087
	GO:0006956	complement activation	0.087
	GO:0002541	activation of plasma proteins during acute inflammatory response	0.087
	GO:0042379	chemokine receptor binding	0.093
	GO:0008009	chemokine activity	0.093
	GO:0016020	membrane	0.093
	GO:0051050	positive regulation of transport	0.098

Cluster B

	GO:0006955	immune response	0.000
	GO:0002376	immune system process	0.000
	GO:0009615	response to virus	0.000
	GO:0001730	2'-5'-oligoadenylate synthetase activity	0.000
	GO:0016779	nucleotidyltransferase activity	0.000
	GO:0051707 GO:0009613 GO:0042828	response to other organism	0.000
	GO:0009607	response to biotic stimulus	0.003
	GO:0051704 GO:0051706	multi-organism process	0.005

Cluster C

	GO:0022402	cell cycle process	0.000
	GO:0051301	cell division	0.000

GO:0007049	cell cycle	0.000
GO:0000279	M phase	0.000
GO:0005694	chromosome	0.000
GO:0022403	cell cycle phase	0.000
GO:0043229	intracellular organelle	0.000
GO:0043226	organelle	0.000
GO:0044424	intracellular part	0.000
GO:0043231	intracellular membrane-bounded organelle	0.000
GO:0006259	DNA metabolic process	0.000
GO:0043227	membrane-bounded organelle	0.000
GO:0005622	intracellular	0.000
GO:0005634	nucleus	0.001
GO:0007067	mitosis	0.001
GO:0000087	M phase of mitotic cell cycle	0.001
GO:0000278	mitotic cell cycle	0.001
GO:0043232	intracellular non-membrane-bounded organelle	0.001
GO:0043228	non-membrane-bounded organelle	0.001
GO:0006260	DNA replication	0.006
GO:0006139	nucleobase, nucleoside, nucleotide and nucleic acid metabolic process	0.009
GO:0007126	meiosis	0.009
GO:0051327	M phase of meiotic cell cycle	0.009
GO:0051321	meiotic cell cycle	0.010

Cluster D

GO:0006955	immune response	0.000
GO:0002376	immune system process	0.000
GO:0009615	response to virus	0.000
GO:0001730	2'-5'-oligoadenylate synthetase activity	0.000
GO:0050896 GO:0051869	response to stimulus	0.000
GO:0003924	GTPase activity	0.002
GO:0016779	nucleotidyltransferase activity	0.002
GO:0051707 GO:0009613 GO:0042828	response to other organism	0.003
