

Supplementary Table 5. Significantly enriched pathways in the GSEA of glandular tissues

Pathway name	Size	Enrichment score	Normalized enrichment score	NOM p-val	FDR q-val
HALLMARK_INTERFERON_ALPHA_RESPONSE	95	0.872	1.952	<0.0001	<0.0001
HALLMARK_INTERFERON_GAMMA_RESPONSE	198	0.826	1.880	<0.0001	<0.0001
HALLMARK_ALLOGRAFT_REJECTION	195	0.784	1.778	<0.0001	<0.0001
REACTOME_INTERFERON_ALPHA_BETA_SIGNALING	68	0.836	1.830	<0.0001	<0.0001
REACTOME_CHEMOKINE_RECEPTORS_BIND_CHEMOKINES	48	0.819	1.791	<0.0001	<0.0001
HALLMARK_IL6_JAK_STAT3_SIGNALING	87	0.718	1.611	<0.0001	<0.0001
HALLMARK_INFLAMMATORY_RESPONSE	198	0.676	1.544	<0.0001	0.001
REACTOME_PHOSPHORYLATION_OF_CD3_AND_TCR_ZETA_CHAINS	21	0.872	1.755	<0.0001	0.001
GO_RESPONSE_TO_INTERFERON_BETA	27	0.877	1.839	<0.0001	0.003
GO_CD8_POSITIVE_ALPHA_BETA_T_CELL_ACTIVATION	22	0.864	1.776	<0.0001	0.003
GO_RESPONSE_TO_TYPE_I_INTERFERON	95	0.795	1.783	<0.0001	0.004
GO_B_CELL_RECEPTOR_SIGNALING_PATHWAY	58	0.817	1.811	<0.0001	0.004
GO_DENDRITIC_CELL_MIGRATION	28	0.827	1.735	<0.0001	0.004
GO_POSITIVE_REGULATION_OF_MONOCYTE_CHEMOTAXIS	18	0.866	1.728	<0.0001	0.004
GO_POSITIVE_REGULATION_OF_ANTIGEN_RECEPTOR_MEDIATED_SIGNALING_PATHWAY	21	0.842	1.739	<0.0001	0.004
GO_NEGATIVE_REGULATION_OF_VIRAL_GENOME_REPLICATION	55	0.786	1.730	<0.0001	0.004

GO_REGULATION_OF_B_CELL_RECEPTOR_SIGNALING_PATHWAY	27	0.829	1.743	<0.0001	0.005
REACTOME_INTERFERON_GAMMA_SIGNALING	91	0.756	1.694	<0.0001	0.005
GO_REGULATION_OF_MONOCYTE_CHEMOTAXIS	24	0.855	1.751	<0.0001	0.005
REACTOME_INTERLEUKIN_10_SIGNALING	46	0.780	1.712	<0.0001	0.005
HALLMARK_COMPLEMENT	199	0.647	1.473	<0.0001	0.005
REACTOME_TRANSLOCATION_OF_ZAP_70_TO_IMMUNOLOGICAL_SYNAPSE	18	0.854	1.696	<0.0001	0.005
REACTOME_INTERFERON_SIGNALING	199	0.742	1.683	<0.0001	0.006
GO_CELLULAR_RESPONSE_TO_INTERFERON_BETA	19	0.857	1.752	<0.0001	0.006
GO_REGULATION_OF_T_CELL_MEDIATED_CYTOTOXICITY	32	0.795	1.708	<0.0001	0.006
GO_ANTIGEN_PROCESSING_AND_PRESENTATION_OF_ENDOGENOUS_ANTIGEN	22	0.827	1.707	<0.0001	0.006
GO_POSITIVE_REGULATION_OF_T_CELL_MEDIATED_IMMUNITY	48	0.778	1.705	<0.0001	0.006
GO_ALPHA_BETA_T_CELL_PROLIFERATION	30	0.799	1.709	<0.0001	0.006
GO_MATURE_B_CELL_DIFFERENTIATION	24	0.824	1.710	<0.0001	0.007
REACTOME_ANTIGEN_PRESENTATION:_FOLDING_ASSEMBLY_AND_PEPTIDE_LOADING_OF_CLASS_I_MHC	25	0.812	1.674	<0.0001	0.007
GO_POSITIVE_REGULATION_OF_LEUKOCYTE_MEDIATED_CYTOTOXICITY	48	0.781	1.710	<0.0001	0.007
REACTOME_GENERATION_OF_SECOND_MESSENGER_MOLECULES	31	0.787	1.666	<0.0001	0.007
HALLMARK_IL2_STAT5_SIGNALING	195	0.624	1.426	<0.0001	0.007

HALLMARK_KRAS_SIGNALING_UP	194	0.629	1.427	<0.0001	0.008
GO_T_CELL_MEDIATED_CYTOTOXICITY	40	0.776	1.682	<0.0001	0.009
GO_POSITIVE_REGULATION_OF_MONONUCLEAR_CELL_MIGRATION	23	0.830	1.690	<0.0001	0.009
GO_INTERFERON_ALPHA_PRODUCTION	30	0.797	1.683	<0.0001	0.009
GO_REGULATION_OF_B_CELL_PROLIFERATION	61	0.759	1.685	<0.0001	0.009
HALLMARK_TNFA_SIGNALING_VIA_NFKB	198	0.625	1.428	<0.0001	0.009
GO_DEFENSE_RESPONSE_TO_VIRUS	230	0.735	1.685	<0.0001	0.010
HALLMARK_E2F_TARGETS	193	0.612	1.400	<0.0001	0.010
GO_NEGATIVE_REGULATION_OF_LEUKOCYTE_MEDIATED_CYTOTOXICITY	18	0.830	1.670	<0.0001	0.011
GO_REGULATION_OF_T_CELL_MEDIATED_IMMUNITY	69	0.753	1.671	<0.0001	0.011
HALLMARK_ANDROGEN_RESPONSE	95	0.616	1.385	<0.0001	0.012
GO_INTERFERON_GAMMA_MEDIATED_SIGNALING_PATHWAY	87	0.745	1.664	<0.0001	0.012
GO_MONOCYTE_CHEMOTAXIS	62	0.750	1.656	<0.0001	0.013
GO_RESPONSE_TO_INTERFERON_ALPHA	20	0.828	1.664	<0.0001	0.013
GO_REGULATION_OF_ANTIGEN_RECEPTOR_MEDIATED_SIGNALING_PATHWAY	62	0.750	1.657	<0.0001	0.013
GO_ANTIGEN_PROCESSING_AND_PRESENTATION_OF_ENDOGENOUS_PEPTIDE_ANTIGEN	15	0.857	1.666	<0.0001	0.013
GO_REGULATION_OF_ANTIGEN_PROCESSING_AND_PRESENTATION	20	0.830	1.657	<0.0001	0.013

GO_LEUKOCYTE_ACTIVATION_INVOLVED_IN_INFLAMMATORY_RESPONSE	45	0.760	1.660	<0.0001	0.013
GO_T_CELL_MEDIATED_IMMUNITY	98	0.741	1.661	<0.0001	0.013
GO_REGULATION_OF_LEUKOCYTE_MEDIATED_CYTOTOXICITY	70	0.748	1.658	<0.0001	0.014
GO_POSITIVE_REGULATION_OF_CELL_KILLING	61	0.747	1.651	<0.0001	0.014
REACTOME_THE_ROLE_OF_NEF_IN_HIV_1_REPLICATION_AND_DISEASE_PATHOGENESIS	28	0.784	1.636	0.001	0.014
REACTOME_IMMUNOREGULATORY_INTERACTIONS_BETWEEN_A_LYMPHOID_AND_A_NON_LYMPHOID_CELL	124	0.724	1.638	<0.0001	0.015
GO_POSITIVE_REGULATION_OF_T_CELL_MEDIATED_CYTOTOXICITY	25	0.799	1.648	<0.0001	0.015
GO_POSITIVE_REGULATION_OF_INTERFERON_GAMMA_PRODUCTION	62	0.743	1.647	<0.0001	0.015
GO_MONONUCLEAR_CELL_MIGRATION	84	0.733	1.646	<0.0001	0.015
GO_POSITIVE_REGULATION_OF_T_CELL_CYTOKINE_PRODUCTION	19	0.814	1.633	<0.0001	0.016
GO_CHRONIC_INFLAMMATORY_RESPONSE	19	0.812	1.633	0.001	0.016
GO_LEUKOCYTE_MEDIATED_CYTOTOXICITY	102	0.727	1.634	<0.0001	0.017
GO_POSITIVE_REGULATION_OF_HUMORAL_IMMUNE_RESPONSE	16	0.830	1.627	0.001	0.017
GO_ADAPTIVE_IMMUNE_RESPONSE	397	0.708	1.634	<0.0001	0.017
HALLMARK_G2M_CHECKPOINT	189	0.600	1.362	<0.0001	0.017
GO_LYMPHOCYTE_CHEMOTAXIS	61	0.742	1.627	<0.0001	0.017
GO_B_CELL_PROLIFERATION	95	0.724	1.638	<0.0001	0.017

GO_INTERFERON_GAMMA_SECRETION	20	0.804	1.634	0.001	0.017
GO_POSITIVE_REGULATION_OF_TYPE_2_IMMUNE_RESPONSE	16	0.830	1.627	<0.0001	0.017
GO_TUMOR_NECROSIS_FACTOR_BIOSYNTHETIC_PROCESS	30	0.771	1.635	0.001	0.017
GO_REGULATION_OF_MONONUCLEAR_CELL_MIGRATION	43	0.750	1.638	<0.0001	0.017
GO_ALPHA_BETA_T_CELL_ACTIVATION	133	0.723	1.640	<0.0001	0.017
GO_POSITIVE_REGULATION_OF_LYMPHOCYTE_MEDIATED_IMMUNITY	96	0.728	1.627	<0.0001	0.018
GO_T_CELL_MIGRATION	64	0.732	1.636	<0.0001	0.018
GO_RESPONSE_TO_INTERFERON_GAMMA	194	0.718	1.628	<0.0001	0.018
GO_NEGATIVE_REGULATION_OF_INNATE_IMMUNE_RESPONSE	57	0.734	1.618	<0.0001	0.018
GO_REGULATION_OF_DEFENSE_RESPONSE_TO_VIRUS_BY_VIRUS	30	0.766	1.619	<0.0001	0.018
GO_POSITIVE_REGULATION_OF_INTERLEUKIN_12_PRODUCTION	36	0.754	1.620	0.001	0.018
GO_RESPONSE_TO_CHEMOKINE	95	0.724	1.617	<0.0001	0.018
GO_T_CELL_DIFFERENTIATION_INVOLVED_IN_IMMUNE_RESPONSE	68	0.729	1.619	<0.0001	0.018
GO_MATURE_B_CELL_DIFFERENTIATION_INVOLVED_IN_IMMUNE_RESPONSE	18	0.801	1.615	<0.0001	0.019
GO_ALPHA_BETA_T_CELL_DIFFERENTIATION	100	0.720	1.621	<0.0001	0.019
GO_NEGATIVE_REGULATION_OF_CELL_KILLING	22	0.793	1.615	<0.0001	0.019
GO_GLIAL_CELL_ACTIVATION	53	0.738	1.620	<0.0001	0.019

GO_NEGATIVE_REGULATION_OF_T_CELL_MEDIATED_IMMUNITY	19	0.794	1.614	<0.0001	0.019
GO_ADAPTIVE_IMMUNE_RESPONSE_BASED_ON_SOMATIC_RECOMBINATION_OF_IMMUNE_RECEPTORS_BUILT_FROM_IMMUNOGLOBULIN_SUPERFAMILY_DOMAINS	245	0.705	1.613	<0.0001	0.019
GO_NEGATIVE_REGULATION_OF_TYPE_I_INTERFERON_PRODUCTION	43	0.738	1.610	<0.0001	0.020
GO_RESPONSE_TO_VIRUS	310	0.703	1.610	<0.0001	0.020
GO_B_CELL_ACTIVATION	238	0.700	1.607	<0.0001	0.020
GO_T_CELL_CHEMOTAXIS	27	0.781	1.608	<0.0001	0.020
GO_POSITIVE_REGULATION_OF_INTERFERON_ALPHA_PRODUCTION	22	0.790	1.608	0.001	0.020
GO_NATURAL_KILLER_CELL_MEDIATED_IMMUNITY	61	0.720	1.605	<0.0001	0.020
GO_POSITIVE_REGULATION_OF_CYTOKINE_PRODUCTION_INVOLVED_IN_IMMUNE_RESPONSE	55	0.733	1.604	<0.0001	0.020
GO_POSITIVE_REGULATION_OF_B_CELL_PROLIFERATION	41	0.737	1.604	<0.0001	0.020
GO_REGULATION_OF_LIPOPOLYSACCHARIDE_MEDIATED_SIGNALING_PATHWAY	25	0.757	1.606	<0.0001	0.020
GO_LIPOPOLYSACCHARIDE_MEDIATED_SIGNALING_PATHWAY	58	0.723	1.606	<0.0001	0.020
GO_POSITIVE_REGULATION_OF_INTERLEUKIN_1_PRODUCTION	55	0.732	1.601	<0.0001	0.021
GO_T_HELPER_1_TYPE_IMMUNE_RESPONSE	42	0.740	1.602	<0.0001	0.021
REACTOME_PD_1_SIGNALING	22	0.787	1.618	0.002	0.021
GO_MYELOID_DENDRITIC_CELL_ACTIVATION	28	0.758	1.592	0.001	0.021
GO_POSITIVE_REGULATION_OF_B_CELL_MEDIATED_IMMUNITY	32	0.749	1.592	<0.0001	0.021

GO_REGULATION_OF_T_HELPER_1_TYPE_IMMUNE_RESPONSE	26	0.769	1.599	<0.0001	0.022
GO_NEGATIVE_REGULATION_OF_LEUKOCYTE_APOPTOTIC_PROCESS	48	0.730	1.591	<0.0001	0.022
GO_POSITIVE_REGULATION_OF_RESPONSE_TO_CYTOKINE_STIMULUS	55	0.720	1.592	<0.0001	0.022
GO_REGULATION_OF_INFLAMMATORY_RESPONSE_TO_ANTIGENIC_STIMULUS	23	0.779	1.596	0.001	0.022
GO_POSITIVE_T_CELL_SELECTION	34	0.748	1.597	<0.0001	0.022
GO_LYMPHOCYTE_MEDIATED_IMMUNITY	242	0.700	1.595	<0.0001	0.022
GO_REGULATION_OF_DEFENSE_RESPONSE_TO_VIRUS_BY_HOST	33	0.750	1.596	<0.0001	0.022
GO_INTERFERON_GAMMA_PRODUCTION	106	0.704	1.592	<0.0001	0.022
GO_REGULATION_OF_B_CELL_ACTIVATION	116	0.708	1.597	<0.0001	0.022
GO_NATURAL_KILLER_CELL_ACTIVATION	82	0.707	1.598	<0.0001	0.022
GO_POSITIVE_REGULATION_OF_TUMOR_NECROSIS_FACTOR_SUPERFAMILY_CYTOKINE_PRODUCTION	85	0.710	1.592	<0.0001	0.022
GO_CD4_POSITIVE_ALPHA_BETA_T_CELL_DIFFERENTIATION	73	0.711	1.589	<0.0001	0.022
GO_POSITIVE_REGULATION_OF_PROTEIN_AUTOPHOSPHORYLATION	25	0.766	1.593	<0.0001	0.022
GO_B_CELL_HOMEOSTASIS	28	0.759	1.593	0.001	0.022
GO_THYMIC_T_CELL_SELECTION	21	0.778	1.593	0.002	0.022
GO_NEGATIVE_REGULATION_OF_MACROPHAGE_ACTIVATION	15	0.815	1.586	0.003	0.023
GO_INTERLEUKIN_8_BIOSYNTHETIC_PROCESS	17	0.803	1.585	0.001	0.024

GO_POSITIVE_REGULATION_OF_ADAPTIVE_IMMUNE_RESPONSE	99	0.710	1.583	<0.0001	0.024
GO_REGULATION_OF_DEFENSE_RESPONSE_TO_VIRUS	65	0.716	1.585	<0.0001	0.024
GO_NEGATIVE_REGULATION_OF_LEUKOCYTE_MEDIATED_IMMUNITY	49	0.729	1.583	<0.0001	0.024
GO_NEUROINFLAMMATORY_RESPONSE	66	0.712	1.582	<0.0001	0.024
GO_TOLERANCE_INDUCTION	22	0.775	1.584	0.001	0.024
HALLMARK_APOPTOSIS	159	0.586	1.335	0.002	0.024
GO_GRANULOCYTE_MIGRATION	135	0.700	1.579	<0.0001	0.024
GO_NEGATIVE_REGULATION_OF_LEUKOCYTE_CHEMOTAXIS	16	0.807	1.581	0.003	0.024
GO_NEUTROPHIL_MIGRATION	114	0.705	1.580	<0.0001	0.024
GO_T_CELL_DIFFERENTIATION	236	0.690	1.579	<0.0001	0.024
GO_POSITIVE_REGULATION_OF_T_HELPER_1_TYPE_IMMUNE_RESPONSE	19	0.792	1.580	0.003	0.024
GO_NEGATIVE_REGULATION_OF_NATURAL_KILLER_CELL_MEDIATED_IMMUNITY	15	0.803	1.578	0.003	0.024
GO_POSITIVE_REGULATION_OF_LEUKOCYTE_MEDIATED_IMMUNITY	124	0.702	1.581	<0.0001	0.024
GO_REGULATION_OF_VIRAL_GENOME_REPLICATION	90	0.708	1.578	<0.0001	0.024
GO_POSITIVE_REGULATION_OF_NATURAL_KILLER_CELL_MEDIATED_IMMUNITY	27	0.749	1.567	<0.0001	0.025
GO_POSITIVE_REGULATION_OF_T_CELL_PROLIFERATION	94	0.702	1.570	<0.0001	0.025
GO_POSITIVE_REGULATION_OF_LYMPHOCYTE_DIFFERENTIATION	94	0.706	1.574	<0.0001	0.025

GO_LYMPHOCYTE_MIGRATION	109	0.699	1.573	<0.0001	0.025
GO_REGULATION_OF_SYNCYTIUM_FORMATION_BY_PLASMA_MEMBRANE_FUSION	27	0.749	1.573	0.002	0.025
GO_REGULATION_OF_T_CELL_CYTOKINE_PRODUCTION	31	0.745	1.568	<0.0001	0.025
GO_REGULATION_OF_T_CELL_CHEMOTAXIS	17	0.789	1.574	0.001	0.025
GO_REGULATION_OF_ADAPTIVE_IMMUNE_RESPONSE	154	0.693	1.572	<0.0001	0.025
GO_POSITIVE_REGULATION_OF_LEUKOCYTE_CELL_CELL_ADHESION	213	0.687	1.571	<0.0001	0.025
GO_REGULATION_OF_LEUKOCYTE_MEDIATED_IMMUNITY	190	0.692	1.571	<0.0001	0.025
GO_REGULATION_OF_LYMPHOCYTE_CHEMOTAXIS	26	0.756	1.575	<0.0001	0.025
REACTOME_DAP12_SIGNALING	29	0.760	1.607	<0.0001	0.025
GO_LYMPHOCYTE_DIFFERENTIATION	348	0.686	1.571	<0.0001	0.025
GO_POSITIVE_REGULATION_OF_T_CELL_MIGRATION	30	0.751	1.576	0.001	0.025
GO_POSITIVE_REGULATION_OF_ALPHA_BETA_T_CELL_PROLIFERATION	19	0.785	1.568	0.002	0.025
GO_POSITIVE_REGULATION_OF_NATURAL_KILLER_CELL_MEDIATED_CYTOTOXICITY	22	0.767	1.572	0.001	0.025
GO_B_CELL_DIFFERENTIATION	129	0.697	1.575	<0.0001	0.025
GO_NEGATIVE_REGULATION_OF_LYMPHOCYTE_MEDIATED_IMMUNITY	39	0.724	1.569	0.001	0.025
GO_IMMUNOGLOBULIN_PRODUCTION	102	0.698	1.569	<0.0001	0.025
GO_TUMOR_NECROSIS_FACTOR_SUPERFAMILY_CYTOKINE_PRODUCTION	150	0.688	1.569	<0.0001	0.025

GO_T_CELL_SELECTION	47	0.723	1.575	0.001	0.025
GO_POSITIVE_REGULATION_OF_TUMOR_NECROSIS_FACTOR_BIOSYNTHETIC_PROCESS	20	0.777	1.568	<0.0001	0.025
GO_POSITIVE_REGULATION_OF_GRANULOCYTE_CHEMOTAXIS	25	0.754	1.566	0.001	0.025
GO_REGULATION_OF_CELL_KILLING	91	0.698	1.568	<0.0001	0.025
GO_NEGATIVE_REGULATION_OF_TYPE_I_INTERFERON_MEDIATED_SIGNALING_PATHWAY	16	0.797	1.564	0.002	0.026
GO_REGULATION_OF_LYMPHOCYTE_MEDIATED_IMMUNITY	140	0.693	1.564	<0.0001	0.026
GO_NEGATIVE_REGULATION_OF_INTERLEUKIN_6_PRODUCTION	42	0.720	1.563	0.001	0.026
GO_INTERLEUKIN_8_PRODUCTION	78	0.701	1.563	<0.0001	0.026
GO_POSITIVE_REGULATION_OF_PHOSPHOPROTEIN_PHOSPHATASE_ACTIVITY	20	0.779	1.561	0.003	0.027
GO_NEGATIVE_REGULATION_OF_MYELOID_CELL_APOPTOTIC_PROCESS	15	0.788	1.548	0.004	0.027
GO_REGULATION_OF_NATURAL_KILLER_CELL_ACTIVATION	34	0.724	1.554	0.001	0.027
GO_LEUKOCYTE_CHEMOTAXIS	211	0.680	1.555	<0.0001	0.027
GO_POSITIVE_REGULATION_OF_PHAGOCYTOSIS	65	0.695	1.548	<0.0001	0.027
GO_POSITIVE_REGULATION_OF_PHOSPHATASE_ACTIVITY	33	0.732	1.551	0.001	0.027
GO_TOLL_LIKE_RECEPTOR_9_SIGNALING_PATHWAY	23	0.754	1.547	0.003	0.027
GO_REGULATION_OF_LEUKOCYTE_CHEMOTAXIS	107	0.690	1.560	<0.0001	0.027
GO_POSITIVE_REGULATION_OF_CYTOKINE_BIOSYNTHETIC_PROCESS	67	0.700	1.554	<0.0001	0.027

GO_POSITIVE_REGULATION_OF_ALPHA_BETA_T_CELL_ACTIVATION	61	0.707	1.557	<0.0001	0.027
GO_ANTIGEN_RECEPTOR_MEDIATED_SIGNALING_PATHWAY	235	0.683	1.558	<0.0001	0.027
GO_POSITIVE_REGULATION_OF_NEUTROPHIL_MIGRATION	28	0.738	1.548	0.002	0.027
GO_INTERLEUKIN_6_SECRETION	45	0.711	1.558	0.001	0.027
GO_NEGATIVE_REGULATION_OF_VIRAL_LIFE_CYCLE	77	0.702	1.555	<0.0001	0.027
GO_ANTIGEN_PROCESSING_AND_PRESENTATION_VIA_MHC_CLASS_II	16	0.791	1.549	0.002	0.027
GO_DEOXYRIBONUCLEOSIDE_TRIPHOSPHATE_METABOLIC_PROCESS	17	0.776	1.557	0.010	0.027
GO_POSITIVE_REGULATION_OF_LEUKOCYTE_PROLIFERATION	135	0.688	1.556	<0.0001	0.027
GO_POSITIVE_REGULATION_OF_LEUKOCYTE_CHEMOTAXIS	84	0.698	1.556	<0.0001	0.027
GO_ANTIGEN_PROCESSING_AND_PRESENTATION_OF_PEPTIDE_ANTIGEN_VIA_MHC_CLASS_I	96	0.696	1.559	<0.0001	0.027
GO_POSITIVE_REGULATION_OF_NATURAL_KILLER_CELL_ACTIVATION	20	0.772	1.549	0.002	0.027
GO_POSITIVE_REGULATION_OF_TISSUE_REMODELING	33	0.719	1.547	0.001	0.027
GO_REGULATION_OF_CYTOKINE_PRODUCTION_INVOLVED_IN_IMMUNE_RESPONSE	85	0.699	1.558	<0.0001	0.027
GO_ANTIGEN_PROCESSING_AND_PRESENTATION	224	0.680	1.551	<0.0001	0.027
GO_MYELOID_LEUKOCYTE_MIGRATION	198	0.680	1.551	<0.0001	0.027
GO_POSITIVE_REGULATION_OF_INTERLEUKIN_8_PRODUCTION	49	0.704	1.546	0.001	0.027
GO_NEGATIVE_REGULATION_OF_CYTOKINE_SECRETION	65	0.702	1.553	<0.0001	0.027

GO_MACROPHAGE_ACTIVATION	90	0.690	1.559	<0.0001	0.027
GO_FC_RECEPTOR_MEDIATED_STIMULATORY_SIGNALING_PATHWAY	82	0.696	1.549	<0.0001	0.027
GO_REGULATION_OF_NATURAL_KILLER_CELL_MEDIATED_IMMUNITY	41	0.717	1.547	<0.0001	0.027
GO_REGULATION_OF_T_CELL_DIFFERENTIATION	137	0.691	1.556	<0.0001	0.027
GO_POSITIVE_REGULATION_OF_INTERLEUKIN_1_SECRETION	36	0.721	1.559	<0.0001	0.027
GO_POSITIVE_REGULATION_OF_IMMUNE_EFFECTOR_PROCESS	201	0.678	1.550	<0.0001	0.027
GO_REGULATION_OF_NEUROINFLAMMATORY_RESPONSE	32	0.734	1.551	0.002	0.028
GO_REGULATION_OF_LEUKOCYTE_APOPTOTIC_PROCESS	82	0.696	1.551	<0.0001	0.028
GO_INTERLEUKIN_12_PRODUCTION	57	0.708	1.553	<0.0001	0.028
GO_REGULATION_OF_TYPE_1_INTERFERON_MEDIATED_SIGNALING_PATHWAY	36	0.717	1.549	0.003	0.028
GO_REGULATION_OF_ALPHA_BETA_T_CELL_ACTIVATION	89	0.694	1.549	<0.0001	0.028
GO_REGULATORY_T_CELL_DIFFERENTIATION	31	0.732	1.552	<0.0001	0.028
GO_ACUTE_INFLAMMATORY_RESPONSE_TO_ANTIGENIC_STIMULUS	21	0.770	1.552	0.005	0.028
GO_BONE_CELL_DEVELOPMENT	35	0.719	1.552	<0.0001	0.028
GO_INTERLEUKIN_1_BETA_PRODUCTION	87	0.687	1.545	<0.0001	0.028
GO_NEGATIVE_REGULATION_OF_B_CELL_ACTIVATION	32	0.731	1.544	0.002	0.028
GO_PRODUCTION_OF_MOLECULAR_MEDIATOR_OF_IMMUNE_RESPONSE	196	0.678	1.545	<0.0001	0.028

GO_REGULATION_OF_CD4_POSITIVE_ALPHA_BETA_T_CELL_DIFFERENTIATION	47	0.705	1.543	<0.0001	0.028
GO_POSITIVE_REGULATION_OF_CD4_POSITIVE_ALPHA_BETA_T_CELL_DIFFERENTIATION	30	0.731	1.544	0.002	0.028
GO_POSITIVE_REGULATION_OF_LEUKOCYTE_ADHESION_TO_VASCULAR_ENDOTHELIAL_CELL	15	0.784	1.542	0.008	0.029
GO_SOMATIC_DIVERSIFICATION_OF_IMMUNE_RECEPTORS	66	0.690	1.540	<0.0001	0.029
GO_POSITIVE_REGULATION_OF_LEUKOCYTE_DIFFERENTIATION	146	0.684	1.542	<0.0001	0.029
GO_POSITIVE_REGULATION_OF_B_CELL_ACTIVATION	72	0.692	1.540	<0.0001	0.029
GO_B_CELL_ACTIVATION_INVOLVED_IN_IMMUNE_RESPONSE	69	0.700	1.542	<0.0001	0.029
GO_REGULATION_OF_LYMPHOCYTE_DIFFERENTIATION	168	0.674	1.540	<0.0001	0.029
GO_ANTIGEN_PROCESSING_AND_PRESENTATION_OF_PEPTIDE_ANTIGEN	187	0.676	1.540	<0.0001	0.029
GO_CHEMOKINE_BIOSYNTHETIC_PROCESS	16	0.775	1.537	0.003	0.029
GO_DENDRITIC_CELL_DIFFERENTIATION	41	0.709	1.537	0.001	0.029
GO_INTERLEUKIN_8_SECRETION	30	0.730	1.540	<0.0001	0.029
GO_POSITIVE_REGULATION_OF_ACUTE_INFLAMMATORY_RESPONSE	29	0.734	1.540	<0.0001	0.029
REACTOME_NEGATIVE_REGULATORS_OF_DDX58_IFIH1_SIGNALING	34	0.747	1.595	0.001	0.029
GO GRANULOCYTE MACROPHAGE COLONY STIMULATING FACTOR PRODUCTION	16	0.780	1.537	0.006	0.029
GO_INTERLEUKIN_10_PRODUCTION	51	0.692	1.537	<0.0001	0.029
GO_POSITIVE_REGULATION_OF_PRODUCTION_OF_MOLECULAR_MEDIATOR_OF_IMMUNE_RESPONSE	92	0.687	1.538	<0.0001	0.029

GO_ANTIGEN_PROCESSING_AND_PRESENTATION_OF_EXOGENOUS_PEPTIDE_ANTIGEN_VIA_MHC_CLASS_I	75	0.694	1.537	<0.0001	0.029
GO_NEGATIVE_REGULATION_OF_VIRAL_PROCESS	93	0.691	1.538	<0.0001	0.029
GO_REGULATION_OF_MYOBLAST_FUSION	20	0.763	1.537	0.003	0.030
GO_NEGATIVE_REGULATION_OF_B_CELL_PROLIFERATION	16	0.790	1.538	0.002	0.030
GO_POSITIVE_REGULATION_OF_CD4_POSITIVE_ALPHA_BETA_T_CELL_ACTIVATION	36	0.712	1.536	0.001	0.030
GO_POSITIVE_REGULATION_OF_T_HELPER_CELL_DIFFERENTIATION	22	0.749	1.536	0.002	0.030
GO_B_CELL_MEDIATED_IMMUNITY	113	0.682	1.534	<0.0001	0.030
GO_REGULATION_OF_MYELOID_LEUKOCYTE_MEDIATED_IMMUNITY	52	0.701	1.533	<0.0001	0.030
GO_POSITIVE_REGULATION_OF_LYMPHOCYTE_MIGRATION	37	0.716	1.532	0.002	0.031
GO_REGULATION_OF_T_CELL_RECEPTOR_SIGNALING_PATHWAY	38	0.708	1.531	0.001	0.032
GO_NEGATIVE_REGULATION_OF_REGULATED_SECRETORY_PATHWAY	22	0.737	1.530	0.006	0.032
GO_CELLULAR_EXTRAVASATION	62	0.683	1.530	<0.0001	0.032
GO_POSITIVE_REGULATION_OF_HEMOPOIESIS	183	0.671	1.530	<0.0001	0.032
GO_REGULATION_OF_IMMUNE_EFFECTOR_PROCESS	374	0.663	1.530	<0.0001	0.032
HALLMARK_MTORC1_SIGNALING	194	0.577	1.314	<0.0001	0.032
GO_POSITIVE_REGULATION_OF_CELLULAR_EXTRAVASATION	16	0.775	1.526	0.003	0.033
GO_REGULATION_OF_TYPE_2_IMMUNE_RESPONSE	31	0.719	1.526	0.001	0.033

GO_VIRAL_GENOME_REPLICATION	116	0.679	1.527	<0.0001	0.033
GO_CELL_KILLING	160	0.670	1.527	<0.0001	0.033
GO_REGULATION_OF_PRODUCTION_OF_MOLECULAR_MEDIATOR_OF_IMMUNE_RESPONSE	136	0.675	1.526	<0.0001	0.033
GO_CYTOKINE_PRODUCTION_INVOLVED_IN_IMMUNE_RESPONSE	103	0.680	1.525	<0.0001	0.033
GO_NEGATIVE_REGULATION_OF_ADAPTIVE_IMMUNE_RESPONSE	46	0.705	1.525	<0.0001	0.033
GO_POSITIVE_REGULATION_OF_INTERFERON_BETA_PRODUCTION	30	0.721	1.526	0.001	0.033
GO_CELLULAR_DEFENSE_RESPONSE	52	0.698	1.526	<0.0001	0.033
GO_CYTOKINE_SECRETION	225	0.670	1.526	<0.0001	0.033
GO_INFLAMMATORY_CELL_APOPTOTIC_PROCESS	20	0.756	1.524	0.006	0.033
GO_PROTEIN_LOCALIZATION_TO_CHROMATIN	21	0.755	1.523	0.007	0.033
GO_REGULATION_OF_HUMORAL_IMMUNE_RESPONSE	69	0.683	1.523	<0.0001	0.033
GO_LEUKOCYTE_PROLIFERATION	291	0.666	1.523	<0.0001	0.033
GO_POSITIVE_REGULATION_OF_CELL_CELL_ADHESION	251	0.670	1.523	<0.0001	0.033
GO_CD4_POSITIVE_ALPHA_BETA_T_CELL_ACTIVATION	88	0.682	1.524	<0.0001	0.034
GO_REGULATION_OF_ALPHA_BETA_T_CELL_DIFFERENTIATION	63	0.688	1.524	<0.0001	0.034
GO_POSITIVE_REGULATION_OF_ALPHA_BETA_T_CELL_DIFFERENTIATION	47	0.697	1.522	<0.0001	0.034
GO_POSITIVE_REGULATION_OF_INTERLEUKIN_10_PRODUCTION	33	0.716	1.522	0.003	0.034

GO_REGULATION_OF_B_CELL_DIFFERENTIATION	29	0.719	1.521	0.001	0.034
GO_EOSINOPHIL_MIGRATION	25	0.732	1.521	0.006	0.034
GO_LYMPHOCYTE_ACTIVATION_INVOLVED_IN_IMMUNE_RESPONSE	176	0.669	1.521	<0.0001	0.034
GO_POSITIVE_REGULATION_OF_CYTOKINE_SECRETION	133	0.672	1.520	<0.0001	0.034
GO_NEGATIVE_REGULATION_OF_LYMPHOCYTE_APOPTOTIC_PROCESS	31	0.716	1.519	0.002	0.035
GO_REGULATION_OF_CD4_POSITIVE_ALPHA_BETA_T_CELL_ACTIVATION	58	0.689	1.518	<0.0001	0.035
REACTOME_ANTIGEN_ACTIVATES_B_CELL_RECEPTOR_BCR_LEADING_TO_GENERATION_OF_SECOND_MESSENGERS	29	0.760	1.584	<0.0001	0.035
GO_REGULATION_OF_LEUKOCYTE_PROLIFERATION	215	0.665	1.517	<0.0001	0.036
GO_NEGATIVE_REGULATION_OF_T_CELL_APOPTOTIC_PROCESS	19	0.759	1.516	0.003	0.036
REACTOME_ANTIGEN_PROCESSING_CROSS_PRESENTATION	97	0.705	1.580	<0.0001	0.036
GO_REGULATION_OF_LYMPHOCYTE_APOPTOTIC_PROCESS	54	0.695	1.516	<0.0001	0.036
GO_IMMUNE_RESPONSE_REGULATING_CELL_SURFACE_RECEPTOR_SIGNALING_PATHWAY	382	0.661	1.515	<0.0001	0.037
GO_INTERFERON_BETA_PRODUCTION	49	0.690	1.513	0.001	0.038
GO_T_CELL_ACTIVATION_INVOLVED_IN_IMMUNE_RESPONSE	106	0.673	1.513	<0.0001	0.038
GO_NEGATIVE_REGULATION_OF_MULTI_ORGANISM_PROCESS	208	0.665	1.512	<0.0001	0.038
GO_NATURAL_KILLER_CELL_DIFFERENTIATION	22	0.737	1.511	0.004	0.038
REACTOME_GPVI_MEDIATED_ACTIVATION_CASCADE	34	0.730	1.574	<0.0001	0.039

GO_INFLAMMATORY_RESPONSE_TO_ANTIGENIC_STIMULUS	47	0.686	1.509	0.001	0.039
GO_POSITIVE_REGULATION_OF_DEFENSE_RESPONSE_TO_VIRUS_BY_HOST	23	0.732	1.510	0.005	0.039
GO_INTERLEUKIN_6_BIOSYNTHETIC_PROCESS	24	0.725	1.509	0.004	0.039
GO_REGULATION_OF_B_CELL_APOPTOTIC_PROCESS	19	0.747	1.509	0.009	0.039
GO_CYTOPLASMIC_MRNA_PROCESSING_BODY_ASSEMBLY	19	0.749	1.507	0.009	0.040
GO_SOMATIC_DIVERSIFICATION_OF_IMMUNE_RECEPTORS_VIA_GERMLINE_RECOMBINATION_WITHIN_A_SINGLE_LOCUS	58	0.682	1.506	<0.0001	0.041
GO_TYPE_2_IMMUNE_RESPONSE	38	0.703	1.506	<0.0001	0.041
GO_POSITIVE_REGULATION_OF_CELL_ACTIVATION	313	0.660	1.506	<0.0001	0.041
GO_REGULATION_OF_RESPONSE_TO_BIOTIC_STIMULUS	496	0.653	1.506	<0.0001	0.041
GO_REGULATION_OF_RESPONSE_TO_CYTOKINE_STIMULUS	167	0.661	1.505	<0.0001	0.041
GO_POSITIVE_REGULATION_OF_MYELOID_LEUKOCYTE_MEDIATED_IMMUNITY	30	0.707	1.505	0.004	0.041
GO_T_CELL_ACTIVATION	455	0.654	1.504	<0.0001	0.041
GO_POSITIVE_REGULATION_OF_RELEASE_OF_SEQUESTERED_CALCIIUM_ION_INTO_CYTOSOL	40	0.699	1.504	0.002	0.041
GO_NEGATIVE_REGULATION_OF_ANTIGEN_RECEPTOR_MEDIATED_SIGNALING_PATHWAY	28	0.721	1.504	0.002	0.041
GO_REGULATION_OF_ACUTE_INFLAMMATORY_RESPONSE	43	0.691	1.503	<0.0001	0.042
GO_NITRIC_OXIDE_SYNTHASE_BIOSYNTHETIC_PROCESS	18	0.756	1.503	0.010	0.042
GO_TYPE_I_INTERFERON_PRODUCTION	122	0.665	1.502	<0.0001	0.042

GO_POSITIVE_REGULATION_OF_CHEMOTAXIS	132	0.660	1.501	<0.0001	0.042
GO_LEUKOCYTE_CELL_CELL_ADHESION	326	0.656	1.501	<0.0001	0.043
GO_CD4_POSITIVE_ALPHA_BETA_T_CELL_CYTOKINE_PRODUCTION	22	0.730	1.500	0.011	0.043
GO_POSITIVE_REGULATION_OF_LYMPHOCYTE_CHEMOTAXIS	21	0.739	1.499	0.005	0.044
GO_REGULATION_OF_TOLERANCE_INDUCION	15	0.784	1.498	0.005	0.045
GO_T_CELL_PROLIFERATION	180	0.661	1.498	<0.0001	0.045
GO_REGULATION_OF_T_HELPER_CELL_DIFFERENTIATION	35	0.704	1.498	<0.0001	0.045
GO_REGULATION_OF_GRANULOCYTE_CHEMOTAXIS	41	0.697	1.497	0.003	0.045
GO_MYELOID_CELL_APOPTOTIC_PROCESS	31	0.704	1.497	0.003	0.045
GO_POSITIVE_REGULATION_OF_MYELOID_LEUKOCYTE_CYTOKINE_PRODUCTION_INVOLVED_IN_IMMUNE_RESPONSE	19	0.753	1.496	0.007	0.045
GO_REGULATION_OF_TOLL_LIKE_RECEPTOR_SIGNALING_PATHWAY	66	0.674	1.496	<0.0001	0.045
GO_NEGATIVE_REGULATION_OF_TUMOR_NECROSIS_FACTOR_SUPERFAMILY_CYTOKINE_PRODUCTION	58	0.676	1.496	<0.0001	0.045
GO_NEGATIVE_REGULATION_OF_CYSSTEINE_TYPE_ENDOPEPTIDASE_ACTIVITY	89	0.667	1.494	<0.0001	0.046
GO_REGULATION_OF_T_CELL_MIGRATION	42	0.698	1.495	0.001	0.046
GO_REGULATION_OF_INTERLEUKIN_1_SECRETION	50	0.679	1.494	0.001	0.046
GO_REGULATION_OF_MICROGLIAL_CELL_ACTIVATION	18	0.750	1.493	0.012	0.046
GO_POSITIVE_REGULATION_OF_CYTOKINE_PRODUCTION	445	0.647	1.493	<0.0001	0.046

GO_TYROSINE_PHOSPHORYLATION_OF_STAT_PROTEIN	82	0.666	1.493	<0.0001	0.046
GO_INTERLEUKIN_1_PRODUCTION	100	0.666	1.493	<0.0001	0.046
GO_REGULATION_OF_NEUTROPHIL_CHEMOTAXIS	28	0.711	1.494	0.004	0.046
GO_T_CELL_CYTOKINE_PRODUCTION	41	0.695	1.493	0.002	0.046
GO_NEGATIVE_REGULATION_OF_IMMUNE_RESPONSE	147	0.656	1.492	<0.0001	0.047
GO_NEGATIVE_REGULATION_OF_RESPONSE_TO_BIOTIC_STIMULUS	90	0.667	1.492	<0.0001	0.047
GO_ANAPHASE_PROMOTING_COMPLEX_DEPENDENT_CATABOLIC_PROCESS	80	0.659	1.490	<0.0001	0.047
GO_MAST_CELL_ACTIVATION	56	0.674	1.491	<0.0001	0.047
GO_POSITIVE_REGULATION_OF_CHEMOKINE_PRODUCTION	55	0.674	1.491	0.002	0.047
GO_IMMUNOGLOBULIN_SECRETION	22	0.726	1.491	0.010	0.047
GO_TOLL_LIKE_RECEPTOR_SIGNALING_PATHWAY	142	0.657	1.491	<0.0001	0.047
GO_POSITIVE_REGULATION_OF_LEUKOCYTE_APOPTOTIC_PROCESS	26	0.717	1.491	0.003	0.047
GO_ANTIGEN_PROCESSING_AND_PRESENTATION_OF_PEPTIDE_OR_POLYSACCHARIDE_ANTIGEN_VIA_MHC_CLASS_II	100	0.662	1.489	<0.0001	0.047
GO_LEUKOCYTE_HOMEOSTASIS	83	0.666	1.488	<0.0001	0.048
GO_REGULATION_OF_NEUTROPHIL_MIGRATION	35	0.704	1.489	0.002	0.048
GO_IMMUNOGLOBULIN_PRODUCTION_INVOLVED_IN_IMMUNOGLOBULIN_MEDIATED_IMMUNE_RESPONSE	53	0.672	1.489	<0.0001	0.048
GO_REGULATION_OF_T_CELL_ACTIVATION	307	0.651	1.489	<0.0001	0.048

GO_POSITIVE_REGULATION_OF_RECEPTOR_SIGNALING_PATHWAY_VIA_STAT	89	0.664	1.487	<0.0001	0.048
GO_VASCULAR_ENDOTHELIAL_CELL_PROLIFERATION	21	0.737	1.487	0.005	0.048
GO_PROTEASOMAL_UBIQUITIN_INDEPENDENT_PROTEIN_CATABOLIC_PROCESS	22	0.739	1.487	0.004	0.048
REACTOME_DECTIN_2_FAMILY	26	0.739	1.551	0.002	0.048
GO_NEGATIVE_REGULATION_OF_LEUKOCYTE_MIGRATION	42	0.690	1.486	0.001	0.048
GO_HUMORAL_IMMUNE_RESPONSE_MEDIATED_BY_CIRCULATING_IMMUNOGLOBULIN	46	0.687	1.486	0.002	0.048
GO_POSITIVE_REGULATION_OF_RESPONSE_TO_BIOTIC_STIMULUS	378	0.647	1.486	<0.0001	0.048
GO_REGULATION_OF_LEUKOCYTE_DIFFERENTIATION	268	0.649	1.486	<0.0001	0.048
GO_REGULATION_OF_LEUKOCYTE_ADHESION_TO_VASCULAR_ENDOTHELIAL_CELL	21	0.722	1.485	0.010	0.049
GO_REGULATION_OF_VIRAL_LIFE_CYCLE	135	0.655	1.485	<0.0001	0.049
GO_DETECTION_OF_EXTERNAL_BIOTIC_STIMULUS	19	0.736	1.484	0.011	0.049
GO_REGULATION_OF_LYMPHOCYTE_ACTIVATION	411	0.646	1.484	<0.0001	0.049
GO_LYMPHOCYTE_HOMEOSTASIS	61	0.671	1.484	<0.0001	0.049
GO_POSITIVE_REGULATION_OF_TYROSINE_PHOSPHORYLATION_OF_STAT_PROTEIN	68	0.668	1.483	<0.0001	0.049
REACTOME_ANTIVIRAL_MECHANISM_BY_IFN_STIMULATED_GENES	80	0.695	1.552	<0.0001	0.050
REACTOME_INITIAL_TRIGGERING_OF_COMPLEMENT	21	0.761	1.554	0.002	0.050