

domain	term	term name	term.size(T)	query.size(Q)	overlap.size(Q&T)	adjusted.p-value	Q(T)/T	Q(T)/Q	local.hierarchy.depth	participated.genes
hp	HP001713	Mucositis	111	267	19	0.0028	0.037	0.09	1	H2-AB1,CYBB,H2-E1,C1RA,NCF1,C151,ACPS,IKZF1,NCF4,NCF2
hp	HP0011990	Abnormality of neutrophil physiology	7	267	6	0.0034	0.015	0.571	1	CYBB,RAC2,NCF1,NCF2
hp	HP0000230	Gingivitis	26	267	6	0.00476	0.022	0.231	1	CYBB,ITGB2,NCF1,CTSC,NCF4,NCF2
hp	HP0002087	Abnormality of the upper respiratory tract	312	453	22	0.0448	0.049	0.071	1	CYBB,H2-E1,IL2RG,TAP1,C1RA,IL21R,NCF1,TRPV4,IRF1,NCF4,STAT1,BLNK,NCF2,PRKCD,SERPINC1,TREM2,TAP2,SH3BP2,ANG,SIC2,ZA1B,DIS3,PDIM
hp	HP0002571	Achalasia	10	20	2	0.0482	0.1	0.2	1	H2-AB1,H2-AA
hp	HP0001871	Abnormality of blood and blood-forming tissues	905	357	45	0.00016	0.126	0.05	1	CYBB,H2-E1
hp	HP0045027	Abnormality of the thoracic cavity	20	284	7	0.0000599	0.025	0.35	1	E1,CD4,IL2RG,IL12RB1,PSMB8,B2M,C4B,C1RA,ITGB2,RAC2,CSF3R,NCF1,PTPRC,FCGR3,WAS,SP110,ACPS,FERM3,TNFRSF1B,IKZF1,NCF4,FAS,STAT1,PLCG2,BLNK,NCF2,PRKCD,BTK,TMEM173,PSTPIP1
hp	HP0045026	Abnormality of the mediastinum	20	284	7	0.0000599	0.025	0.35	1	FAM111A,BTK,CEBPA,TMEM173,PSTPIP1
hp	HP0000245	Abnormality of the paranasal sinuses	63	322	14	0.000125	0.043	0.151	1	CYBB,H2-E1,NCF1,NCF4,NCF2,PTPN22,BIRC3
hp	HP0011212	Abnormality of skin physiology	313	357	28	0.00000534	0.078	0.089	1	H2-AB1,CYBB,H2-E1,IL2RG,IL12RB1,PSMB8,B2M,C4B,C1RA,NCF1,PTPRC,WAS,IL10RA,TNFRSF1B,CTSC,NCF4,FAS,STAT1,BLNK,NCF2,PTPN22,CARD9,BTK,OSMR,ECM1,TMEM173,PSTPIP1
hp	HP0011450	Chis infection	85	322	14	0.0000072	0.043	0.165	1	CYBB,H2-E1,IL2RG,IL12RB1,PSMB8,B2M,C4B,C1RA,NCF1,PTPRC,WAS,IL10RA,TNFRSF1B,CTSC,NCF4,FAS,STAT1,BLNK,NCF2,PTPN22,CARD9,BTK,OSMR,ECM1,TMEM173,PSTPIP1
hp	HP0000600	Abnormality of the pharynx	129	305	12	0.0148	0.039	0.093	1	FCGR4,IL2RG,TAP1,C1RA,IL21R,ACPS,NCF4,STAT1,PRKCD,SERPINC1,PTPN22,TAP2
hp	HP0002715	Abnormality of the immune system	1260	357	60	0.00000265	0.168	0.048	1	C3,FCGR4,H2-AB1,CYBB,H2-E1,IL2RG,IL12RB1,PSMB8,B2M,C4B,C1RA,NCF1,PTPRC,WAS,IL10RA,TNFRSF1B,CTSC,NCF4,FAS,STAT1,BLNK,NCF2,PTPN22,CARD9,BTK,OSMR,ECM1,TMEM173,PSTPIP1
hp	HP0100763	Abnormality of the lymphatic system	437	357	26	0.0108	0.073	0.059	2	BIRC3,FAM111A,BTK,TMEM173,PSTPIP1
hp	HP0002733	Abnormality of the lymph nodes	139	357	19	0.00000517	0.053	0.137	3	CYBB,H2-E1,IL2RG,PSMB8,B2M,C4B,CSF3R,NCF1,PTPRC,WAS,SP110,ACPS,FERM3,TNFRSF1B,NCF4,FAS,STAT1,NCF2,PRKCD,PTPN22,BIRC3,FAM111A,BTK,TMEM173,PSTPIP1
hp	HP0002716	Lymphadenopathy	125	357	17	0.00000532	0.048	0.136	4	CYBB,H2-E1,IL2RG,PSMB8,B2M,C4B,NCF1,PTPRC,ACPS,TNFRSF1B,NCF4,FAS,NCF2,PRKCD,PTPN22,BIRC3,TMEM173,PSTPIP1
hp	HP0100721	Mediastinal lymphadenopathy	18	284	7	0.0000254	0.025	0.389	5	CYBB,H2-E1,NCF1,NCF4,NCF2,PTPN22,BIRC3
hp	HP0010978	Abnormality of immune system physiology	983	230	40	8.85E-09	0.174	0.041	2	C3,FCGR4,H2-AB1,CYBB,H2-E1,IL2RG,IL12RB1,PSMB8,B2M,C4B,C1RA,NCF1,PTPRC,WAS,IL10RA,TNFRSF1B,CTSC,NCF4,FAS,STAT1,BLNK,NCF2,PTPN22,CARD9,BTK,OSMR,ECM1,TMEM173,PSTPIP1
hp	HP0100806	Sepsis	87	322	14	0.0172	0.028	0.134	3	CYBB,H2-E1,IL2RG,IL12RB1,PSMB8,B2M,C4B,C1RA,NCF1,PTPRC,WAS,IL10RA,TNFRSF1B,CTSC,NCF4,FAS,STAT1,BLNK,NCF2,PTPN22,CARD9,BTK,OSMR,ECM1,TMEM173,PSTPIP1
hp	HP0005368	Abnormality of humoral immunity	167	433	24	1.05E-08	0.055	0.144	3	PTPIP1,COL1A1,CFB,ICOS
hp	HP0005339	Abnormality of complement system	27	177	7	0.0000111	0.04	0.259	4	C3,C4B,C1RA,C1QA,C1QB,C1QC
hp	HP0004431	Immunodeficiency	23	177	6	0.000135	0.034	0.261	5	C3,C4B,C1RA,C1QA,C1QB,C1QC
hp	HP0005356	Decreased serum complement factor	4	177	3	0.00092	0.017	0.75	6	C1QA,C1QB,C1QC
hp	HP0002719	Recurrent infections	568	389	40	0.00000703	0.103	0.07	3	C3,FCGR4,H2-AB1,CYBB,H2-E1,IL2RG,IL12RB1,PSMB8,B2M,C4B,C1RA,NCF1,PTPRC,WAS,IL10RA,TNFRSF1B,CTSC,NCF4,FAS,STAT1,BLNK,NCF2,PTPN22,CARD9,BTK,OSMR,ECM1,TMEM173,PSTPIP1
hp	HP0002841	Recurrent bacterial infections	41	283	7	0.0117	0.024	0.171	4	FCGR4,IL2RG,TAP1,C1RA,IL21R,ACPS,NCF4,STAT1,PRKCD,SERPINC1,PTPN22,TAP2
hp	HP0002724	Recurrent Aspergillus infections	5	267	4	0.000498	0.015	0.8	5	CYBB,NCF1,STAT1,NCF2
hp	HP0002718	Recurrent bacterial infections	95	433	17	0.00000514	0.039	0.179	4	C3,CYBB,IL12RB1,ITGB2,NCF1,WAS,IL10RA,FERM3,CTSC,STAT1,BLNK,NCF2,BTK,SGS15,PSTPIP1,CFB,ICOS
hp	HP0011274	Recurrent mycobacterial infections	9	330	4	0.0376	0.012	0.444	5	CYBB,IL12RB1,STAT1,SGS15
hp	HP0002489	Recurrent staphylococcal infections	8	267	4	0.0067	0.015	0.7	5	CYBB,ITGB2,NCF1,NCF2
hp	HP0005420	Recurrent gram-negative bacterial infections	13	389	5	0.015	0.013	0.385	5	CYBB,ITGB2,NCF1,NCF2,CFB
hp	HP0002741	Recurrent Serratia marcescens infections	4	267	3	0.0237	0.011	0.75	6	CYBB,NCF1,NCF2
hp	HP0002740	Recurrent E. coli infections	4	267	3	0.0237	0.011	0.75	6	CYBB,NCF1,NCF2
hp	HP0002843	Recurrent Burkholderia cepacia infections	4	267	3	0.0237	0.011	0.75	6	CYBB,NCF1,NCF2
hp	HP0002742	Recurrent Klebsiella infections	4	267	3	0.0237	0.011	0.75	6	CYBB,NCF1,NCF2
hp	HP0002722	Recurrent abscess formation	19	322	8	0.00000353	0.025	0.421	4	CYBB,ITGB2,NCF1,IL10RA,CTSC,NCF4,NCF2,BTK
hp	HP0005224	Rectal abscess	9	267	4	0.0119	0.015	0.444	5	CYBB,ITGB2,NCF1,NCF2
hp	HP0100323	Recurrent abscess	5	267	5	0.00000991	0.017	0.833	6	CYBB,NCF1,CTSC,NCF4,NCF2
hp	HP0002958	Immune dysregulation	5	229	3	0.0387	0.013	0.8	3	ACPS,STAT1,PLCG2
hp	HP0012647	Abnormal inflammatory response	611	389	47	2.17E-10	0.121	0.077	3	C3,FCGR4,H2-AB1,CYBB,H2-E1,IL2RG,IL12RB1,PSMB8,B2M,C4B,C1RA,NCF1,PTPRC,WAS,IL10RA,TNFRSF1B,CTSC,NCF4,FAS,STAT1,BLNK,NCF2,PTPN22,CARD9,BTK,OSMR,ECM1,TMEM173,PSTPIP1
hp	HP0012649	Increased inflammatory response	611	389	47	2.17E-10	0.121	0.077	4	C3,FCGR4,H2-AB1,CYBB,H2-E1,IL2RG,IL12RB1,PSMB8,B2M,C4B,C1RA,NCF1,PTPRC,WAS,IL10RA,TNFRSF1B,CTSC,NCF4,FAS,STAT1,BLNK,NCF2,PTPN22,CARD9,BTK,OSMR,ECM1,TMEM173,PSTPIP1
hp	HP0011123	Inflammatory abnormality of the skin	270	357	26	0.00000534	0.073	0.096	5	H2-AB1,CYBB,H2-E1,IL2RG,IL12RB1,PSMB8,B2M,C4B,C1RA,NCF1,PTPRC,WAS,IL10RA,TNFRSF1B,CTSC,NCF4,FAS,STAT1,BLNK,NCF2,PTPN22,CARD9,BTK,OSMR,ECM1,TMEM173,PSTPIP1
hp	HP0005881	Recurrent skin infections	72	357	11	0.00111	0.031	0.153	6	TK,ECM1,TMEM173,PSTPIP1
hp	HP0005406	Recurrent bacterial skin infections	20	357	7	0.000299	0.02	0.35	7	CYBB,NCF1,IL10RA,CTSC,NCF2,BTK,PSTPIP1
hp	HP0000999	Pyoderma	3	357	3	0.0166	0.008	1	8	IL10RA,PTPIP1
hp	HP0000988	Skin vasculitis	74	322	13	0.00000634	0.034	0.176	6	CYBB,H2-E1,IL2RG,IL2RG,PSMB8,B2M,C1RA,NCF1,TNFRSF1B,IL2RG,NCF2,PTPN22,BTK
hp	HP0007412	Diabetic lupus rash	6	267	4	0.00147	0.015	0.667	7	CYBB,C1RA,NCF1,NCF2
hp	HP0000964	Ecema	90	267	10	0.000309	0.037	0.111	6	H2-AB1,CYBB,H2-E1,NCF1,PTPRC,WAS,TNFRSF1B,NCF4,STAT1,NCF2
hp	HP0002046	Sinusitis	79	322	14	0.00000136	0.043	0.177	5	FCGR4,CYBB,IL2RG,TAP1,IL21R,NCF1,WAS,ACPS,NCF4,STAT1,PRKCD,PTPN22,TAP2,BTK
hp	HP0002840	Lymphadenitis	4	267	3	0.0237	0.011	0.75	5	CYBB,NCF1,NCF2
hp	HP0010333	Inflammatory abnormality of the eye	162	284	14	0.0002	0.049	0.086	5	CYBB,H2-E1,PSMB8,B2M,C4B,NCF1,WAS,IKZF1,NCF4,FAS,ILK,NCF2,PTPN22,BIRC3
hp	HP0000213	Nephritis	23	268	8	0.00000312	0.03	0.348	5	C3,C4B,C1RA,IL2RG,IL2RG,NCF1,NCF2,PTPN22,BIRC3
hp	HP0000099	Glomerulonephritis	11	268	6	0.000013	0.022	0.545	6	C3,C4B,C1QA,C1QB,C1QC,PRKCD
hp	HP0000793	Membranoproliferative glomerulonephritis	6	177	4	0.000229	0.023	0.667	7	C3,C1QA,C1QB,C1QC
hp	HP001287	Meningitis	71	322	12	0.000441	0.037	0.169	5	CYBB,H2-E1,C4B,NCF1,WAS,NCF4,FAS,BLNK,NCF2,PTPN22,CARD9,BTK
hp	HP0002960	Autoimmunity	108	474	26	1E-14	0.095	0.241	3	H2-AB1,H2-E1,IL2RG,IL12RB1,PSMB8,B2M,C4B,C1RA,NCF1,PTPRC,WAS,IL10RA,TNFRSF1B,CTSC,NCF4,FAS,STAT1,PLCG2,PRKCD,SERPINC1,PTPN22,CARD9,BTK,OSMR,ECM1,TMEM173,PSTPIP1
hp	HP0003957	Autoimmune antibody positivity	25	464	9	0.00328	0.017	0.32	4	K,RTK,IKK5,MM2,CD247,C2
hp	HP0003454	Platelet antibody positivity	4	225	3	0.014	0.013	0.75	5	IL12RB1,FCGR3,FCGR2B,FAS,STAT1,PTPN22,MM2,CD247
hp	HP0002725	Systemic lupus erythematosus	13	474	7	0.000285	0.015	0.538	4	FCGR3,FCGR2B,FAS
hp	HP0002721	Immunodeficiency	187	464	25	4.75E-08	0.054	0.134	3	C4B,C1QA,C151,C1QB,C1QC,SERPINC1,C2
hp	HP0014000	Hepatic abscesses due to immunodeficiency	4	267	3	0.0237	0.011	0.75	4	FCGR4,CYBB,IL2RG,TAP1,C1RA,IL21R,NCF1,PTPRC,WAS,SP110,ACPS,TNFRSF1B,DOCK2,STAT1,BLNK,NCF2,PRKCD,CARD9,LCK,BTK,SGS15,ICOS,ICD5,CD247
hp	HP0002755	Osteomyelitis due to immunodeficiency	6	267	4	0.01047	0.015	0.667	4	CYBB,NCF1,NCF2
hp	HP0010987	Abnormality of cellular immune system	416	369	33	0.000000838	0.089	0.079	2	CYBB,H2-E1
hp	HP0001881	Abnormality of leukocytes	416	369	33	0.000000838	0.089	0.079	3	E1,CD4,IL2RG,IL12RB1,PSMB8,B2M,ITGB2,RAC2,NCF1,PTPRC,WAS,SP110,ACPS,FERM3,TNFRSF1B,IKZF1,NCF4,FAS,STAT1,PLCG2,BLNK,NCF2,PRKCD,CAPN3,PTPN22,TREM2,TYROBP,BTK,CEBPA,TMEM173,PSTPIP1,COL1A1
hp	HP0011893	Abnormal leukocyte count	143	272	12	0.00807	0.044	0.084	4	H2-E1,IL2RG,ITGB2,RAC2,PTPRC,WAS,ACPS,FERM3,FAS,STAT1,PRKCD,CAPN3
hp	HP0001974	Leukocytosis	49	272	7	0.0258	0.026	0.143	5	H2-E1,IL2RG,ITGB2,RAC2,FERM3,FAS,STAT1
hp	HP0004332	Abnormality of lymphocytes	200	477	23	0.0000125	0.048	0.115	4	H2
hp	HP0002846	Abnormality of B cells	145	433	17	0.000376	0.039	0.117	5	E1,CD4,IL2RG,IL12RB1,PSMB8,B2M,PTPRC,WAS,SP110,ACPS,TNFRSF1B,FAS,STAT1,PLCG2,BLNK,NCF2,PRKCD,BTK,TMEM173,PSTPIP1,COL1A1,ICOS
hp	HP0005372	Abnormality of B cell physiology	143	433	16	0.00166	0.037	0.112	6	IL2RG,IL12RB1,PSMB8,B2M,WAS,SP110,TNFRSF1B,FAS,PLCG2,BLNK,NCF2,PRKCD,BTK,TMEM173,PSTPIP1,COL1A1,ICOS
hp	HP0010701	Abnormal immunoglobulin level	140	433	16	0.00124	0.037	0.114	7	IL2RG,IL12RB1,PSMB8,B2M,WAS,SP110,TNFRSF1B,FAS,PLCG2,BLNK,NCF2,PRKCD,BTK,TMEM173,PSTPIP1,COL1A1,ICOS
hp	HP0040488	Abnormal lymphocyte count	33	464	9	0.00347	0.017	0.242	5	H2-E1,IL2RG,PTPRC,ACPS,FAS,STAT1,ICOS,CD247
hp	HP0010974	Abnormality of myeloid leukocytes	208	381	14	0.0029	0.05	0.067	4	CYBB,H2-E1,IL2RG,RAC2,NCF1,WAS,IKZF1,NCF4,FAS,ILK,NCF2,PTPN22,BIRC3
hp	HP0010977	Abnormality of phagocytes	4	267	3	0.0237	0.011	0.75	5	CYBB,NCF1,NCF2
hp	HP0002723	Absence of bactericidal oxidative "respiratory burst" in phagocytes	4	267	3	0.0237	0.011	0.75	6	CYBB,NCF1,NCF2
hp	HP0001911	Abnormality of granulocytes	150	272	13	0.0301	0.048	0.068	5	CYBB,IL2RG,TAP1,C1RA,IL21R,NCF1,WAS,ACPS,IKZF1,CTSC,NCF4,STAT1,PLCG2,BLNK,NCF2,PRKCD,PTPN22,BIRC3,TAP2,LCK,BTK,ECM1,TMEM173
hp	HP0011947	Respiratory tract infection	412	340	24	0.0312	0.071	0.058	1	FCGR4,CYBB,IL2RG,TAP1,C1RA,IL21R,NCF1,WAS,ACPS,IKZF1,CTSC,NCF4,STAT1,PLCG2,BLNK,NCF2,PRKCD,PTPN22,BIRC3,TAP2,LCK,BTK,ECM1,TMEM173
hp	HP0002005	Recurrent respiratory infections	389	340	23	0.038	0.068	0.059	2	FCGR4,CYBB,IL2RG,TAP1,C1RA,IL21R,NCF1,WAS,ACPS,IKZF1,CTSC,NCF4,STAT1,PLCG2,BLNK,NCF2,PRKCD,PTPN22,BIRC3,TAP2,LCK,BTK,ECM1,TMEM173
hp	HP0002090	Pneumonia	85	433	11	0.0211	0.025	0.129	2	CYBB,IL2RG,IL21R,NCF1,ACPS,BLNK,NCF2,PRKCD,BTK,CFB,ICOS
hp	HP0003032	Abnormal T cell morphology	26	225	5	0.0355	0.022	0.192	1	H2-E1,IL2RG,PTPRC,ACPS,FAS
hp	HP0011839	Abnormality of T cell count	26	225	5	0.0355	0.022	0.192	2	H2-E1,IL2RG,PTPRC,ACPS,FAS
hp	HP0010958	Cellulitis	29	369	7	0.00079	0.019	0.241	1	CYBB,NCF1,PLCG2,BLNK,NCF2,BTK,COL1A1
hp	HP0003553	Cellulitis due to immunodeficiency	4	267	3	0.0237	0.011	0.75	2	CYBB,NCF1,NCF2