

Functional enrichment analysis uncovered the potential DEGs associated with LOT in DF treatment

Gene set	Description	Size	Overlap	Expect	Enrichmentratio	P value	FDR	User ID
KEGG								
hsa04668	TNF signaling pathway	110	30	5.037821	5.954955	5.55E-16	1.81E-13	NFKB1; NFKBIA; CASP3; IL6; BIRC2; IL1B; MMP14; RELA; CSF2; CXCL2; CASP7; IRF1; TAB2; VCAM1; FOS; CCL5; JUN; BCL3; TNFRSF1A; TNF; CEBPB; MAPK14; RPS6KA5; MAPK3; MAPK13; BIRC3; ATF6B; PIK3CD; CCL2; ICAM1
hsa04210	Apoptosis	136	30	6.228579	4.816508	2.72E-13	4.44E-11	GADD45A; NFKB1; NFKBIA; CASP3; BIRC2; CTSE; CTSL; BCL2; GADD45B; XIAP; RELA; CTSF; DDIT3; CASP7; CTSC; CAPN2; MCL1; BAX; FOS; JUN; TNFRSF1A; TNF; CASP6; TNFRSF10B; MAPK3; BCL2A1; AIFM1; BIRC3; PIK3CD; CAPN1
hsa05133	Pertussis	76	20	3.480677	5.746009	9.80E-11	1.07E-08	NFKB1; LY96; IRF8; CALML6; CASP3; IL6; IL1B; CXCL8; RELA; CASP7; IRF1; FOS; JUN; PYCARD; TNF; MAPK14; MAPK3; MAPK13; C5; CALM2
hsa04064	NF-kappa B signaling pathway	95	22	4.350846	5.056488	1.69E-10	1.37E-08	NFKB1; LY96; NFKBIA; LYN; BIRC2; BCL2; GADD45B; IL1B; CXCL8; XIAP; RELA; CXCL2; TAB2; VCAM1; TNFRSF1A; TNF; BCL2A1; RELB; CARD10; BIRC3; CCL4; ICAM1
hsa04657	IL-17 signaling pathway	93	20	4.259249	4.695663	4.68E-09	3.05E-07	NFKB1; NFKBIA; CASP3; IL6; IL1B; CXCL8; RELA; CSF2; CXCL2; TAB2; FOS; JUN; TNF; CEBPB; MAPK14; MAPK3; MAPK13; S100A8; CCL2; GSK3B
hsa05418	Fluid shear stress and atherosclerosis	138	24	6.320176	3.797363	1.19E-08	5.98E-07	PECAM1; NFKB1; CALML6; CTSL; BCL2; IL1B; RELA; CAV1; DUSP1; HMOX1; VCAM1; FOS; JUN; TNFRSF1A; TNF; MAPK14; MGST1; MAPK13; PIK3CD; CCL2; CALM2; GSTP1; GSTM4; ICAM1
hsa05134	Legionellosis	55	15	2.518911	5.954955	1.34E-08	5.98E-07	NFKB1; NFKBIA; CASP3; IL6; IL1B; CXCL8; RELA; CXCL2; CASP7; HSF1; PYCARD; TNF; RAB1A; SEC22B; BNIP3
hsa04933	AGE-RAGE signaling pathway in diabetic complications	99	20	4.534039	4.411078	1.47E-08	5.98E-07	SMAD4; NFKB1; CASP3; IL6; BCL2; IL1B; CXCL8; F3; RELA; VCAM1; BAX; JUN; TNF; MAPK14; MAPK3; MAPK13; SERPINE1; PIK3CD; CCL2; ICAM1

hsa05167	Kaposi sarcoma-associated herpesvirus infection	186	28	8.518498	3.286964	1.94E-08	7.01E-07	NFKB1; NFKBIA; CALML6; CASP3; CD86; FGF2; IL6; LYN; GNB5; EIF2AK2; CXCL8; RELA; CSF2; CXCL2; MAPKAPK2; BAX; FOS; GNB2; JUN; TNFRSF1A; MAPK14; MAPK3; MAPK13; PIK3CD; CALM2; RB1; GSK3B; ICAM1
hsa04620	Toll-like receptor signaling pathway	104	19	4.763031	3.989056	1.84E-07	5.47E-06	NFKB1; LY96; SPP1; NFKBIA; CD86; IL6; IL1B; CXCL8; RELA; TAB2; FOS; CCL5; JUN; TNF; MAPK14; MAPK3; MAPK13; PIK3CD; CCL4
hsa04625	C-type lectin receptor signaling pathway	104	19	4.763031	3.989056	1.84E-07	5.47E-06	NFKB1; NFKBIA; CALML6; IL6; IL1B; RELA; IRF1; MAPKAPK2; JUN; BCL3; PYCARD; TNF; MAPK14; MAPK3; RRAS; MAPK13; RELB; PIK3CD; CALM2
hsa04621	NOD-like receptor signaling pathway	168	24	7.694127	3.119262	5.62E-07	1.53E-05	NFKB1; NFKBIA; IL6; GBP1; BIRC2; CTSB; BCL2; IL1B; CXCL8; XIAP; RELA; CXCL2; TAB2; CCL5; JUN; PYCARD; TNF; CASP5; MAPK14; MAPK3; MAPK13; BIRC3; CCL2; ANTXR2
hsa04115	P53 signaling pathway	72	15	3.297483	4.548924	6.40E-07	1.60E-05	GADD45A; CASP3; IGFBP3; BCL2; GADD45B; CCNE1; DDB2; BAX; TNFRSF10B; SERPINE1; SESN2; THBS1; CCND3; SESN3; SESN1
hsa04218	Cellular senescence	160	23	7.32774	3.138758	8.71E-07	2.03E-05	GADD45A; NFKB1; ETS1; CALML6; IGFBP3; IL6; GADD45B; CXCL8; CCNE1; RELA; MAPKAPK2; CAPN2; ZFP36L1; MAPK14; MAPK3; RRAS; MAPK13; SERPINE1; PIK3CD; CALM2; CAPN1; RB1; CCND3
hsa05142	Chagas disease (American trypanosomiasis)	102	17	4.671434	3.639139	3.12E-06	6.79E-05	NFKB1; NFKBIA; IL6; IL1B; CXCL8; RELA; FOS; CCL5; JUN; TNFRSF1A; TNF; MAPK14; MAPK3; MAPK13; SERPINE1; PIK3CD; CCL2

hsa05222	Small cell lung cancer	92	16	4.213451	3.797363	3.44E-06	7.01E-05	GADD45A; NFKB1; NFKBIA; CASP3; BIRC2; BCL2; GADD45B; CCNE1; XIAP; DDB2; RELA; BAX; RXRA; BIRC3; PIK3CD; RB1
hsa05169	Epstein-Barr virus infection	201	25	9.205474	2.715775	4.42E-06	8.48E-05	GADD45A; NFKB1; NFKBIA; CASP3; IL6; LYN; BCL2; GADD45B; EIF2AK2; CD44; CCNE1; DDB2; RELA; TAB2; BAX; JUN; TNF; MAPK14; MAPK13; RELB; PIK3CD; RB1; ICAM1; CCND3; B2M
hsa04722	Neurotrophic signaling pathway	119	18	5.450007	3.302748	6.68E-06	1.21E-04	NFKB1; NFKBIA; CALML6; BCL2; RELA; RPS6KA2; MAPKAPK2; BAX; JUN; RPS6KA3; MAPK14; RPS6KA5; MAPK3; MAPK13; ARHGDI1; PIK3CD; CALM2; GSK3B
hsa05161	Hepatitis B	144	20	6.594966	3.032616	7.82E-06	1.34E-04	SMAD4; NFKB1; NFKBIA; CASP3; IL6; BCL2; CXCL8; CCNE1; DDB2; RELA; BAX; FOS; JUN; TNF; MAPK3; ATF6B; PIK3CD; RB1; YWHAB; YWHAQ
hsa04215	Apoptosis	32	9	1.465548	6.141047	8.76E-06	1.43E-04	CASP3; BIRC2; BCL2; XIAP; CASP7; BAX; TNFRSF1A; BIRC6; BIRC3
hsa05132	Salmonella infection	86	14	3.93866	3.554508	3.08E-05	4.76E-04	NFKB1; IL6; IL1B; CXCL8; RELA; CSF2; CXCL2; FOS; JUN; PYCARD; MAPK14; MAPK3; MAPK13; CCL4
hsa05163	Human cytomegalovirus infection	225	25	10.30463	2.426093	3.21E-05	4.76E-04	NFKB1; NFKBIA; CALML6; CASP3; IL6; GNB5; IL1B; CXCL8; RELA; BAX; CCL5; GNB2; TNFRSF1A; TNF; MAPK14; MAPK3; MAPK13; ATF6B; PIK3CD; CCL2; CALM2; RB1; CCL4; GSK3B; B2M
hsa05166	Human T-cell leukemia virus 1 infection	255	27	11.67859	2.311924	3.68E-05	5.04E-04	SMAD4; NFKB1; NFKBIA; ETS1; IL6; XIAP; RELA; CSF2; ETS2; VCAM1; BAX; FOS; JUN; WNT5A; TNFRSF1A; TNF; WNT5B; RRAS; RELB; XBP1; PIK3CD; RB1; GSK3B; PTTG1; ICAM1; CCND3; ATF3
hsa05202	Transcriptional misregulation in cancer	186	22	8.518498	2.582615	3.71E-05	5.04E-04	GADD45A; NFKB1; LYL1; CD86; IGFBP3; IL6; ETV5; GADD45B; CXCL8; DDB2; RELA; CSF2; DDIT3; BAX; CEBPE; NR4A3; SS18; CEBPB; BCL2A1; NFKBIZ; RXRA; BIRC3
hsa05120	Epithelial cell signaling in Helicobacter pylori infection	68	12	3.11429	3.853206	5.01E-05	6.51E-04	NFKB1; NFKBIA; CASP3; LYN; CXCL8; RELA; CCL5; JUN; MAPK14; MAPK13; ATP6V1G1; ATP6V1C2

hsa05323	Rheumatoid arthritis	90	14	4.121854	3.39653	5.19E-05	6.51E-04	CD86; IL6; CTSL; IL1B; CXCL8; CSF2; FOS; CCL5; JUN; TNF; ATP6V1G1; CCL2; ATP6V1C2; ICAM1
hsa01523	Antifolate resistance	31	8	1.41975	5.634796	5.56E-05	6.63E-04	NFKB1; IL6; IL1B; RELA; ABCC1; ABCC5; SHMT2; TNF
hsa04920	Adipocytokine signaling pathway	69	12	3.160088	3.797363	5.82E-05	6.63E-04	NFKB1; NFKBIA; RELA; CD36; ACSL1; ACSL5; TNFRSF1A; TNF; PCK2; RXRA; ACSL4; CPT1A
hsa05144	Malaria	49	10	2.24412	4.456089	5.90E-05	6.63E-04	PECAM1; IL6; IL1B; CXCL8; CD36; VCAM1; TNF; CCL2; THBS1; ICAM1
hsa04146	Peroxisome	83	13	3.801265	3.419914	8.93E-05	9.70E-04	SOD1; PXMP2; AMACR; ACSL1; ABCD3; ACSL5; DECR2; GSTK1; ACSL4; PRDX5; SOD2; MPV17L2; MPV17
GO-BP								
GO:0006955	Immune response	1,919	134	60.68849	2.207997	0	0	PECAM1; NFKB1; LY96; RAP2B; NFKBIA; NMI; SLC2A3; ETS1; A1BG; A2M; AGA; ACLY; DYNLT1; AGL; IRF8; SPN; GRN; AIF1; RPS6; SERPINB9; CD86; IL6; LYN; GBP1; BIRC2; CTSS; CTSL; BCL2; APEH; EIF2AK2; IL1B; CD44; CYFIP2; CXCL8; MMP8; XIAP; RELA; CSF2; EEF2; DYNLL1; LGALS9; CAV1; DAPK3; VAMP8; EMP2; TRIM13; CXCL2; CLU; IRF1; MAPKAPK2; CTSC; TAB2; MMP7; CD33; CDC37; PLAC8; IFI44; APRT; CD36; RNF125; HMOX1; ADGRE5; VCAM1; GUSB; BAX; FOS; EPRS; TIMP2; CCL5; SLC11A1; GM2A; BST1; JUN; BCL3; IFI44L; WNT5A; CD74; PYCARD; RPS6KA3; NR4A3; SHMT2; RAP2C; TNF; GATA2; MAPKAPK3; MMP12; CEBPB; MAPK14; RPS6KA5; TNFAIP6; MAPK3; MGST1; IFI27; TNFAIP8L2; VAT1; NFKBIZ; SLCO4C1; FGR; MCOLN1; MVP; BST2; DUSP10; RAB12; ANXA1; RELB; C1QBP; BMP6; SCAP; ALAD; SEMA4A; BIRC3; XBP1; RAB17; PIK3CD; C5; S100A8; EVL; CCL2; ALDOC; CAPN1; PSMB8; RAB27A; PTPRC; THBS1; VNN1; GSTP1; PDE4B; PARP9; ICAM1; SLC44A2; B2M; MT2A; PTPN2; TNIP1
GO:0006915	Apoptotic process	1,911	144	60.43549	2.382706	0	0	SON; GADD45A; SMPD1; NFKB1; LY96; NFKBIA; RRP1B; MICAL1; EEF1E1; ANKLE2; CASP3; AIF1; RPS6; SERPINB9; IGFBP3; TGM2; GDF15; IL6; LYN; SOD1; RYBP; CDC34; AIMP1; BIRC2; CTSS; CTSL; BCL2; ACTN1; GADD45B; EIF2AK2; IL1B; TRIB3;

								CD44; CYFIP2; AIMP2; SOX4; CDK19; CUL3; XIAP; F3; RELA; CSF2; TNFAIP8; AKR1B1; DYNLL1; LGALS9; CAV1; DUSP1; DAPK3; RPS6KA2; DDIT4; PIN1; DDIT3; CLU; CASP7; FXN; HSF1; IRF1; KLF4; CTSC; CAPN2; ANXA5; PLAC8; BTG2; HMOX1; MCL1; APEX1; BAX; DEDD2; CCL5; STK17A; JUN; BCL3; ATF5; WNT5A; CD74; PYCARD; RPS6KA3; NR4A3; SGPL1; CASP8AP2; TNFRSF1A; MYDGF; TNF; CASP6; CASP5; TLE1; GATA2; CEBPB; ZFP36L1; MAPK14; NNT; TNFRSF10B; MAPK3; RTKN; IFI27; TNFAIP8L2; INHBA; BCL2A1; BCAP31; BIRC6; ANXA4; ANXA1; C1QBP; BMP6; PRDX5; ARHGEF6; CARD10; SERPINE1; CHCHD10; ARHGEF7; AIFM1; BIRC3; XBP1; TIMP1; PIK3CD; BNIP2; S100A8; DNAJB6; CCL2; MRPL41; RB1; RFK; CAPN3; BLOC1S2; BMP2; UCP2; SOD2; PTPRC; THBS1; AGT; GSK3B; VNN1; PPAR; GSTP1; YWHAB; BNIP3; ICAM1; YWHAQ; ATF3; HMGCR; PTPN2; AKTIP; BCAP29
GO:0033554	Cellular response to stress	1,867	129	59.04399	2.184812	0	0	PER1; GADD45A; SIK2; NFE2L1; SLC12A6; NFKB1; SPP1; NFKBIA; ETS1; ACTL6A; LONP1; EEF1E1; PYROXD1; CASP3; AIF1; IL6; LYN; ETV5; SOD1; BCL2; GADD45B; EIF2AK2; IL1B; TRIB3; CD44; ATG10; CXCL8; BRF2; SOX4; CUL3; MMP8; XIAP; DDB2; RELA; EEF2; AKR1B1; LGALS9; CAV1; DUSP1; DDIT4; ATG13; TRIM13; DDIT3; CLU; FXN; HSF1; KLF4; MAPKAPK2; TAB2; CDC37; AMFR; CD36; BTG2; HMOX1; MCL1; APEX1; BAX; FOS; JUN; BCL3; TMEM33; GINS4; WNT5A; CD74; PYCARD; RPS6KA3; NR4A3; SUSD6; TNFRSF1A; SWSAP1; MYDGF; ATP13A2; TNF; CEBPB; ZFP36L1; MAPK14; SGTA; TNFRSF10B; MMS19; NABP2; MAPK3; MGST1; FMR1; BAG2; BCL2A1; BCAP31; SRXN1; DUSP10; RFC1; MAPK13; UPF1; ANXA1; RELB; SCAP; PRDX5; ARHGEF6; VASH1; AIFM1; AQP3; ATF6B; XBP1; TRIP12; LRRC8D; DNAJB6; CCL2; CAPN3; SESN2; BMP2; UCP2; SOD2; THBS1; AGT; GSK3B; VNN1; PPAR; GSTP1; GSR; PARP9; PTTG1; CRY1; BNIP3; ICAM1; ATF3; HMGCR; SESN3; RFC4; PTPN2; SESN1; MPV17
GO:1902531	Regulation of intracellular	1,824	124	57.68411	2.149639	0	0	SMAD4; PER1; GADD45A; SIK2; RGS2; SMPD1; PECAM1; NFKBIA; SORL1; A2M; DYNLT1; EEF1E1; AKIP1; KCTD13; CD86; IGFBP3; TGM2; FGF2; GDF15; IL6; LYN; ARHGAP22; SOD1; CDC34; GBP1; BIRC2; BCL2; GADD45B; EIF2AK2; IL1B; TRIB3;

	signal transduction							CD44; CUL3; MMP8; XIAP; F3; RELA; CSF2; AKR1B1; LGALS9; CAV1; DUSP1; DDIT4; PIK3IP1; PIN1; RGS3; TRIM13; DDIT3; CLU; HSF1; KLF4; MAPKAPK2; TAB2; CD36; RNF125; HMOX1; MCL1; RNF149; BAX; TIMP2; CCL5; BST1; JUN; BCL3; WNT5A; CD74; PYCARD; TNFRSF1A; MYDGF; ARHGAP19; TNF; TLE1; MAPKAPK3; MAPK14; SERPINE2; TNFRSF10B; AIP; ARHGAP15; MAPK3; INHBA; BCL2A1; RRAS; S100A4; BCAP31; FGR; BST2; DUSP10; TRIP10; C1QBP; BMP6; ARHGAP17; ARHGEF6; CARD10; ATP2B4; ARHGDIB; ARHGEF7; BIRC3; XBP1; PIK3CD; C5; EIF3A; S100A8; CCL2; ARHGAP18; CAPN3; SESN2; BMP2; SOD2; PTPRC; THBS1; AGT; GSK3B; VNN1; PPARD; GSTP1; PARP9; ICAM1; SLC44A2; ATF3; HMGCR; SESN3; PTPN2; SESN1; TNIP1
GO:0010941	Regulation of cell death	1,648	136	52.1181	2.609458	0	0	SMAD4; SON; GADD45A; SMPD1; NFKB1; NFKBIA; SORL1; RRP1B; MICAL1; LRPAP1; DYNLT1; EEF1E1; ANKLE2; CASP3; AIF1; RPS6; SERPINB9; IGFBP3; TGM2; FGF2; GDF15; IL6; LYN; SOD1; RYBP; CDC34; BIRC2; CTSB; BCL2; ACTN1; GADD45B; EIF2AK2; IL1B; CD44; AIMP2; SOX4; CDK19; XIAP; F3; RELA; CSF2; TNFAIP8; AKR1B1; LGALS9; CAV1; DUSP1; DAPK3; RPS6KA2; DDIT4; PIN1; TRIM13; DDIT3; CLU; FXN; HSF1; KLF4; CTSC; CAPN2; ANXA5; PLAC8; CD36; BTG2; HMOX1; MCL1; APEX1; BAX; DEDD2; FOS; CCL5; STK17A; JUN; BCL3; ATF5; WNT5A; CD74; PYCARD; RPS6KA3; NR4A3; CASP8AP2; TNFRSF1A; MYDGF; ATP13A2; TNF; CASP6; CASP5; TLE1; GATA2; CEBPB; ZFP36L1; NNT; TNFRSF10B; RTKN; IFI27; TNFAIP8L2; INHBA; BCL2A1; BCAP31; BIRC6; ANXA4; ANXA1; C1QBP; BMP6; PRDX5; ARHGEF6; CARD10; SERPINE1; CHCHD10; ARHGEF7; AIFM1; BIRC3; XBP1; TIMP1; PIK3CD; BNIP2; S100A8; DNAJB6; CCL2; CAPN3; BMP2; UCP2; SOD2; PTPRC; THBS1; AGT; GSK3B; VNN1; PPARD; GSTP1; SERPINF1; YWHAB; BNIP3; ICAM1; YWHAQ; ATF3; HMGCR; PTPN2
GO:1901700	Response to oxygen-	1,556	124	49.20859	2.519885	0	0	PER1; SIK2; RGS2; SMPD1; NFKB1; LY96; SPP1; NFKBIA; ETS1; ENY2; CD9; IRF8; CASP3; AIF1; CD86; GDF15; IL6; RGS10; LYN; PTPRE; SOD1; BIRC2; BCL2; IL1B; TRIB3; CXCL8; IGFBP7; SOX4; CDK19; RELA; CSF2; EEF2; AKR1B1; DYNLL1; LGALS9;

	containing compound							CAV1; DUSP1; DDIT4; CXCL2; CLU; ABHD2; FXN; HSF1; KLF4; MAPKAPK2; CAPN2; ANXA5; APRT; CD36; BTG2; HMOX1; VCAM1; GCGR; ACSL1; APEX1; FOS; EPRS; CEBPE; CCL5; SLC11A1; JUN; NDUFS4; SYNJ1; QDPR; GGT1; ESD; WNT5A; PYCARD; RPS6KA3; NR4A3; SHMT2; TNF; MAPKAPK3; CEBPB; WNT5B; ZFP36L1; MAPK14; PCK2; MAPK3; MGST1; INHBA; RXRA; DUSP10; MAPK13; UPF1; ANXA1; SCARB1; BMP6; SCAP; PRDX5; ATP6V1G1; ATP2B4; ALAD; SERPINE1; AIFM1; AQP3; XBP1; TIMP1; S100A8; CCL2; CPT1A; ATP2B1; ATP6V1C2; SESN2; UCP2; SOD2; THBS1; AGT; GSK3B; PPAR; RAB8B; GSTP1; PDE4B; SERPINF1; CRY1; BNIP3; ICAM1; CCND3; ZNF236; HMGCR; SESN3; PTPN2; SESN1; MPV17
GO:0048585	Negative regulation of response to stimulus	1,545	118	48.86072	2.415028	0	0	SMAD4; PER1; SIK2; RGS2; SMPD1; NFKB1; LY96; SPP1; NFKBIA; NMI; SORL1; ETS1; SNX25; A2M; LRPAP1; ENY2; CD9; KCTD13; AIF1; SERPINB9; IGFBP3; FGF2; GDF15; IL6; RGS10; LYN; PTPRE; CDC34; GBP1; BCL2; IL1B; TRIB3; CD44; CXCL8; CUL3; MMP14; RELA; CSF2; LGALS9; CAV1; DUSP1; DDIT4; PIK3IP1; PIN1; BAMB1; RGS3; DDIT3; CLU; FXN; HSF1; KLF4; ANXA5; RNF125; HMOX1; MCL1; RNF149; BAX; TIMP2; CCL5; BCL3; WNT5A; CD74; PYCARD; NR4A3; TNFRSF1A; TNF; TLE1; GATA2; MMP12; WNT5B; MAPK14; SGTA; SERPINE2; TNFRSF10B; TNFAIP6; TNFAIP8L2; BCL2A1; BARX1; BST2; DUSP10; BIRC6; ANXA1; C1QBP; ATP2B4; SERPINE1; SEMA4A; ARHGEF7; SCYL2; ATF6B; XBP1; C5; TRIP12; EIF3A; CCL2; RB1; SESN2; BMP2; UCP2; SOD2; PTPRC; THBS1; AGT; GSK3B; DHRS3; VNN1; PPAR; GSTP1; SERPINF1; YWHAB; CRY1; ICAM1; MKKS; ATF3; HMGCR; SESN3; PTPN2; SESN1; TNIP1
GO:0043067	Regulation of programmed cell death	1,530	124	48.38634	2.562707	0	0	SON; GADD45A; SMPD1; NFKB1; NFKBIA; RRP1B; MICAL1; EEF1E1; ANKLE2; CASP3; AIF1; RPS6; SERPINB9; IGFBP3; TGM2; GDF15; IL6; LYN; SOD1; RYBP; CDC34; BIRC2; CTSB; BCL2; ACTN1; GADD45B; EIF2AK2; IL1B; CD44; SOX4; CDK19; XIAP; F3; RELA; CSF2; TNFAIP8; AKR1B1; LGALS9; CAV1; DUSP1; DAPK3; RPS6KA2; PIN1; DDIT3; CLU; FXN; HSF1; KLF4; CTSC; CAPN2; ANXA5; PLAC8; BTG2; HMOX1; MCL1; APEX1; BAX; DEDD2; CCL5; STK17A; JUN; BCL3; ATF5; WNT5A; CD74; PYCARD; RPS6KA3; NR4A3; CASP8AP2; TNFRSF1A; MYDGF; TNF; CASP6; CASP5; TLE1; GATA2; CEBPB;

								ZFP36L1; NNT; TNFRSF10B; RTKN; IFI27; TNFAIP8L2; INHBA; BCL2A1; BCAP31; BIRC6; ANXA4; ANXA1; C1QBP; BMP6; PRDX5; ARHGEF6; CARD10; SERPINE1; CHCHD10; ARHGEF7; AIFM1; BIRC3; XBP1; TIMP1; PIK3CD; BNIP2; S100A8; DNAJB6; CCL2; CAPN3; BMP2; UCP2; SOD2; PTPRC; THBS1; AGT; GSK3B; VNN1; PPAR; GSTP1; YWHAB; BNIP3; ICAM1; YWHAQ; ATF3; HMGCR; PTPN2
GO:0006952	Defense response	1,518	116	48.00684	2.416322	0	0	PER1; NFE2L1; NFKB1; LY96; SPP1; NFKBIA; NMI; ETS1; A2M; IRF8; SPN; AIF1; SERPINB9; TGM2; IL6; LYN; AIMP1; GBP1; BIRC2; BCL2; EIF2AK2; IL1B; CD44; CXCL8; CDK19; MMP8; XIAP; F3; RELA; LGALS9; CAV1; DAPK3; VAMP8; DDIT4; TRIM13; CXCL2; CLU; HSF1; IRF1; KLF4; MAPKAPK2; TAB2; LGALS3BP; MMP7; CDC37; PLAC8; CD36; RNF125; HMOX1; ADGRE5; VCAM1; FOS; EPRS; CEBPE; CCL5; SLC11A1; BST1; JUN; BCL3; GGT1; IFI44L; WNT5A; CD74; PYCARD; RPS6KA3; SHMT2; TNFRSF1A; TNF; MAPKAPK3; MMP12; CEBPB; MAPK14; RPS6KA5; TNFAIP6; MAPK3; IFI27; TNFAIP8L2; INHBA; NFKBIZ; FGR; BST2; DUSP10; RAB12; MAPK13; ANXA1; RELB; C1QBP; BMP6; PRDX5; SERPINE1; BIRC3; TIMP1; PIK3CD; C5; S100A8; RAB1A; EVL; CCL2; RB1; PSMB8; BMP2; RAB27A; PTPRC; THBS1; AGT; VNN1; PPAR; GSTP1; PARP9; SERPINF1; BNIP3; ICAM1; B2M; MT2A; PTPN2; TNIP1
GO:0042981	Regulation of apoptotic process	1,516	124	47.94359	2.586373	0	0	SON; GADD45A; SMPD1; NFKB1; NFKBIA; RRP1B; MICAL1; EEF1E1; ANKLE2; CASP3; AIF1; RPS6; SERPINB9; IGFBP3; TGM2; GDF15; IL6; LYN; SOD1; RYBP; CDC34; BIRC2; CTSB; BCL2; ACTN1; GADD45B; EIF2AK2; IL1B; CD44; SOX4; CDK19; XIAP; F3; RELA; CSF2; TNFAIP8; AKR1B1; LGALS9; CAV1; DUSP1; DAPK3; RPS6KA2; PIN1; DDIT3; CLU; FXN; HSF1; KLF4; CTSC; CAPN2; ANXA5; PLAC8; BTG2; HMOX1; MCL1; APEX1; BAX; DEDD2; CCL5; STK17A; JUN; BCL3; ATF5; WNT5A; CD74; PYCARD; RPS6KA3; NR4A3; CASP8AP2; TNFRSF1A; MYDGF; TNF; CASP6; CASP5; TLE1; GATA2; CEBPB; ZFP36L1; NNT; TNFRSF10B; RTKN; IFI27; TNFAIP8L2; INHBA; BCL2A1; BCAP31; BIRC6; ANXA4; ANXA1; C1QBP; BMP6; PRDX5; ARHGEF6; CARD10; SERPINE1; CHCHD10; ARHGEF7; AIFM1; BIRC3; XBP1; TIMP1; PIK3CD; BNIP2; S100A8; DNAJB6;

								CCL2; CAPN3; BMP2; UCP2; SOD2; PTPRC; THBS1; AGT; GSK3B; VNN1; PPAR; GSTP1; YWHAB; BNIP3; ICAM1; YWHAQ; ATF3; HMGCR; PTPN2
GO:0080134	Regulation of response to stress	1,361	108	43.04171	2.509194	0	0	PER1; GADD45A; NFKB1; LY96; SPP1; NFKBIA; NMI; ETS1; A2M; CD9; EEF1E1; SERPINB9; TGM2; FGF2; IL6; LYN; SOD1; BIRC2; BCL2; GADD45B; EIF2AK2; IL1B; CD44; ABCB1; CDK19; MMP8; XIAP; F3; RELA; LGALS9; CAV1; DUSP1; VAMP8; DDIT3; CLU; HSF1; IRF1; KLF4; MAPKAPK2; TAB2; CDC37; ANXA5; CD36; RNF125; MCL1; BAX; CCL5; BST1; GGT1; TMEM33; WNT5A; CD74; PYCARD; RPS6KA3; NR4A3; TNFRSF1A; TNF; MAPKAPK3; MMP12; CEBPB; MAPK14; RPS6KA5; SGTA; SERPINE2; MMS19; TNFAIP6; MAPK3; FMR1; TNFAIP8L2; BAG2; NFKBIZ; BCAP31; FGR; DUSP10; MAPK13; ANXA1; RELB; C1QBP; ATP2B4; SERPINE1; VASH1; BIRC3; ATF6B; XBP1; C5; TRIP12; S100A8; DNAJB6; RB1; CAPN3; SESN2; BMP2; SOD2; PTPRC; THBS1; AGT; GSK3B; VNN1; PPAR; GSTP1; PARP9; SERPINF1; CRY1; HMGCR; SESN3; PTPN2; SESN1; TNIP1
GO:0001775	Cell activation	1,335	105	42.21946	2.487005	0	0	SMAD4; PECAM1; NFKB1; RAP2B; SLC2A3; A1BG; AGA; ACLY; SP3; CD9; DYNLT1; AGL; LYL1; SPN; GRN; CASP3; AIF1; RPS6; CD86; IL6; LYN; SOD1; CTSB; BCL2; APEH; ACTN1; IL1B; CD44; CXCL8; SOX4; MMP14; MMP8; CSF2; EEF2; DYNLL1; LGALS9; CAV1; VAMP8; CLU; IRF1; CTSC; CD33; PLAC8; APRT; CD36; HMOX1; ADGRE5; VCAM1; GUSB; BAX; TIMP2; CCL5; SLC11A1; GM2A; BST1; JUN; BCL3; WNT5A; CD74; PYCARD; NR4A3; RAP2C; TNF; FIBP; GATA2; CEBPB; ZFP36L1; MAPK14; SERPINE2; TNFAIP6; MAPK3; MGST1; TNFAIP8L2; INHBA; VAT1; NFKBIZ; SLCO4C1; FGR; MVP; BST2; DUSP10; ANXA1; RELB; ALAD; SEMA4A; XBP1; TIMP1; PIK3CD; S100A8; MT1G; CCL2; ALDOC; CAPN1; CAPN3; RAB27A; PTPRC; THBS1; VNN1; GSTP1; SATB1; ICAM1; SLC44A2; CCND3; B2M; PTPN2
GO:0045321	Leukocyte activation	1,184	97	37.44407	2.59053	0	0	PECAM1; NFKB1; RAP2B; SLC2A3; A1BG; AGA; ACLY; SP3; DYNLT1; AGL; LYL1; SPN; GRN; CASP3; AIF1; RPS6; CD86; IL6; LYN; SOD1; CTSB; BCL2; APEH; IL1B; CD44; CXCL8; SOX4; MMP14; MMP8; CSF2; EEF2; DYNLL1; LGALS9; CAV1; VAMP8; CLU; IRF1; CTSC; CD33; PLAC8; APRT; CD36; HMOX1; ADGRE5; VCAM1; GUSB; BAX;

								TIMP2; CCL5; SLC11A1; GM2A; BST1; JUN; BCL3; WNT5A; CD74; PYCARD; NR4A3; RAP2C; TNF; GATA2; CEBPB; ZFP36L1; MAPK14; TNFAIP6; MGST1; TNFAIP8L2; INHBA; VAT1; NFKBIZ; SLCO4C1; FGR; MVP; BST2; DUSP10; ANXA1; RELB; ALAD; SEMA4A; XBP1; PIK3CD; S100A8; MT1G; CCL2; ALDOC; CAPN1; RAB27A; PTPRC; THBS1; VNN1; GSTP1; SATB1; ICAM1; SLC44A2; CCND3; B2M; PTPN2
GO:0002252	Immune effector process	1,141	93	36.08419	2.577306	0	0	PECAM1; NFKB1; RAP2B; SLC2A3; A1BG; A2M; AGA; ACLY; DYNLT1; AGL; SPN; GRN; RPS6; SERPINB9; CD86; IL6; LYN; AIMP1; GBP1; BIRC2; CTSB; BCL2; APEH; EIF2AK2; IL1B; CD44; CYFIP2; MMP8; RELA; EEF2; DYNLL1; LGALS9; VAMP8; DDIT4; EMP2; CLU; IRF1; CTSC; CD33; PLAC8; APRT; CD36; RNF125; HMOX1; ADGRE5; GUSB; TIMP2; SLC11A1; GM2A; BST1; BCL3; IFI44L; WNT5A; CD74; PYCARD; NR4A3; RAP2C; TNF; GATA2; MMP12; MAPK14; TNFAIP6; MAPK3; MGST1; IFI27; VAT1; NFKBIZ; SLCO4C1; FGR; MVP; BST2; DUSP10; ANXA1; RELB; C1QBP; ALAD; SEMA4A; BIRC3; XBP1; PIK3CD; C5; S100A8; ALDOC; CAPN1; RAB27A; PTPRC; VNN1; GSTP1; PARP9; BNIP3; ICAM1; SLC44A2; B2M
GO:0034097	Response to cytokine	1,100	92	34.78757	2.644623	0	0	SMAD4; NFKB1; NFKBIA; NMI; ETS1; IRF8; CASP3; AIF1; CD86; FGF2; IL6; SOD1; CDC34; GBP1; BIRC2; BCL2; EIF2AK2; IL1B; CD44; CXCL8; F3; RELA; CSF2; LGALS9; CAV1; DUSP1; DAPK3; CXCL2; HNRNPDL; IRF1; KLF4; MAPKAPK2; TAB2; CAPN2; CDC37; CD36; HMOX1; MCL1; VCAM1; ACSL1; FOS; EPRS; TIMP2; CCL5; SLC11A1; JUN; SYNJ1; GGT1; WNT5A; CD74; PYCARD; SHMT2; TNFRSF1A; TNF; MAPKAPK3; MMP12; CEBPB; ZFP36L1; MAPK14; RPS6KA5; AIP; MAPK3; IFI27; PLP2; ETV3; BST2; RAB12; MAPK13; UPF1; ANXA1; RELB; ACSL4; ALAD; BIRC3; XBP1; TIMP1; PIK3CD; EVL; CCL2; PSMB8; SOD2; PTPRC; THBS1; GSK3B; GSTP1; PARP9; ICAM1; MKKS; B2M; MT2A; RNMT; PTPN2
GO:1901701	Cellular response to oxygen-	1,074	91	33.96531	2.679204	0	0	SIK2; NFKB1; LY96; SPP1; NFKBIA; ETS1; ENY2; IRF8; AIF1; CD86; GDF15; IL6; RGS10; LYN; PTPRE; SOD1; IL1B; TRIB3; CXCL8; SOX4; CDK19; RELA; CSF2; AKR1B1; DYNLL1; CAV1; DDIT4; CXCL2; CLU; FXN; HSF1; KLF4; CAPN2; ANXA5; APRT; CD36; GCGR; APEX1; FOS; EPRS; CEBPE; CCL5; JUN; ESD; WNT5A; PYCARD; NR4A3;

	containing compound							SHMT2; TNF; CEBPB; WNT5B; ZFP36L1; MAPK14; PCK2; MAPK3; MGST1; INHBA; MAPK13; UPF1; ANXA1; SCARB1; BMP6; PRDX5; ATP6V1G1; ATP2B4; SERPINE1; AIFM1; XBP1; CCL2; CPT1A; ATP2B1; ATP6V1C2; SESN2; UCP2; SOD2; AGT; GSK3B; PPARD; RAB8B; GSTP1; PDE4B; SERPINF1; BNIP3; ICAM1; CCND3; ZNF236; HMGCR; SESN3; PTPN2; SESN1; MPV17
GO:0051248	Negative regulation of protein metabolic process	1,043	88	32.98494	2.667884	0	0	SMAD4; PER1; GADD45A; RGS2; SMPD1; NFKB1; NMI; SORL1; MICAL1; SNX25; A2M; PURA; CASP3; SERPINB9; IGFBP3; IL6; LYN; CSTA; RYBP; GBP1; BIRC2; GADD45B; EIF2AK2; IL1B; TRIB3; CD44; SOX4; XIAP; RELA; TNFAIP8; CAV1; DUSP1; DAPK3; DDIT4; PIN1; RGS3; CLU; KLF4; BTG2; RNF149; BAX; EPRS; TIMP2; JUN; BCL3; PYCARD; RPS6KA3; ATP13A2; TNF; ZFP36L1; SGTA; NNT; SERPINE2; FMR1; INHBA; BAG2; MVP; BST2; DUSP10; BIRC6; UPF1; PRDX5; ATP2B4; ALAD; SERPINE1; BIRC3; TIMP1; EIF4E2; C5; TRIP12; EIF3A; DNAJB6; RB1; CAPN3; SESN2; PTPRC; THBS1; AGT; GSK3B; GSTP1; SERPINF1; YWHAB; PTTG1; CRY1; ATF3; HMGCR; PTPN2; TNIP1
GO:0009607	Response to biotic stimulus	926	83	29.28481	2.834234	0	0	NFKB1; LY96; NFKBIA; RRP1B; IRF8; SPN; CASP3; SERPINB9; CD86; IL6; LYN; AIMP1; GBP1; BIRC2; BCL2; EIF2AK2; IL1B; ATG10; CXCL8; CDK19; RELA; CSF2; LGALS9; CAV1; DDIT4; CXCL2; DDIT3; CLU; HSF1; IRF1; MAPKAPK2; CAPN2; MMP7; PLAC8; IFI44; CD36; RNF125; VCAM1; FOS; CEBPE; CCL5; SLC11A1; JUN; BCL3; GGT1; IFI44L; WNT5A; PYCARD; RPS6KA3; TNFRSF1A; TNF; MAPKAPK3; MMP12; CEBPB; MAPK14; MAPK3; MGST1; FMR1; IFI27; FGR; BST2; DUSP10; UPF1; SCARB1; C1QBP; BMP6; ALAD; SERPINE1; BIRC3; XBP1; S100A8; RAB1A; CCL2; BMP2; PTPRC; GSK3B; PPARD; GSTP1; PDE4B; PARP9; BNIP3; ICAM1; B2M
GO:0043207	Response to external biotic stimulus	899	80	28.43093	2.813837	0	0	NFKB1; LY96; NFKBIA; RRP1B; IRF8; SPN; CASP3; SERPINB9; CD86; IL6; LYN; AIMP1; GBP1; BIRC2; BCL2; EIF2AK2; IL1B; CXCL8; CDK19; RELA; CSF2; LGALS9; CAV1; DDIT4; CXCL2; CLU; HSF1; IRF1; MAPKAPK2; CAPN2; MMP7; PLAC8; IFI44; CD36; RNF125; VCAM1; FOS; CEBPE; CCL5; SLC11A1; JUN; BCL3; GGT1; IFI44L; WNT5A; PYCARD; RPS6KA3; TNFRSF1A; TNF; MAPKAPK3; MMP12; CEBPB; MAPK14; MAPK3;

								MGST1; FMR1; IFI27; FGR; BST2; DUSP10; UPF1; SCARB1; C1QBP; BMP6; ALAD; SERPINE1; BIRC3; XBP1; S100A8; RAB1A; CCL2; BMP2; PTPRC; PPARD; GSTP1; PDE4B; PARP9; BNIP3; ICAM1; B2M
GO:0033993	Response to lipid	898	84	28.3993	2.957819	0	0	PER1; NFKB1; LY96; SPP1; NFKBIA; ETS1; AGL; IRF8; CASP3; AIF1; CD86; IL6; LYN; BCL2; IL1B; CXCL8; IGFBP7; CCNE1; CDK19; RELA; CSF2; EEF2; LGALS9; CAV1; DUSP1; DDIT4; CXCL2; CLU; ABHD2; HSF1; KLF4; MAPKAPK2; CAPN2; CD36; VCAM1; ACSL1; FOS; CEBPE; CCL5; SLC11A1; JUN; SYNJ1; GGT1; WNT5A; PYCARD; RPS6KA3; NR4A3; TNF; GATA2; MAPKAPK3; CEBPB; WNT5B; ZFP36L1; MAPK14; PCK2; MAPK3; MGST1; INHBA; RXRA; DUSP10; UPF1; ANXA1; SCARB1; BMP6; ALAD; SERPINE1; AIFM1; AQP3; XBP1; S100A8; CCL2; CPT1A; RB1; ATP2B1; UCP2; THBS1; AGT; PPARD; GSTP1; PDE4B; SERPINF1; CRY1; ICAM1; RNF4
GO:0051707	Response to other organism	897	80	28.36768	2.820111	0	0	NFKB1; LY96; NFKBIA; RRP1B; IRF8; SPN; CASP3; SERPINB9; CD86; IL6; LYN; AIMP1; GBP1; BIRC2; BCL2; EIF2AK2; IL1B; CXCL8; CDK19; RELA; CSF2; LGALS9; CAV1; DDIT4; CXCL2; CLU; HSF1; IRF1; MAPKAPK2; CAPN2; MMP7; PLAC8; IFI44; CD36; RNF125; VCAM1; FOS; CEBPE; CCL5; SLC11A1; JUN; BCL3; GGT1; IFI44L; WNT5A; PYCARD; RPS6KA3; TNFRSF1A; TNF; MAPKAPK3; MMP12; CEBPB; MAPK14; MAPK3; MGST1; FMR1; IFI27; FGR; BST2; DUSP10; UPF1; SCARB1; C1QBP; BMP6; ALAD; SERPINE1; BIRC3; XBP1; S100A8; RAB1A; CCL2; BMP2; PTPRC; PPARD; GSTP1; PDE4B; PARP9; BNIP3; ICAM1; B2M
GO:0006954	Inflammatory response	717	75	22.67517	3.307583	0	0	PER1; NFE2L1; NFKB1; LY96; SPP1; NFKBIA; NMI; ETS1; A2M; AIF1; TGM2; IL6; LYN; AIMP1; BIRC2; IL1B; CD44; CXCL8; CDK19; MMP8; XIAP; F3; RELA; LGALS9; VAMP8; CXCL2; CLU; KLF4; MAPKAPK2; CD36; HMOX1; ADGRE5; VCAM1; FOS; CCL5; SLC11A1; BST1; JUN; GGT1; WNT5A; PYCARD; TNFRSF1A; TNF; CEBPB; MAPK14; RPS6KA5; TNFAIP6; TNFAIP8L2; NFKBIZ; DUSP10; MAPK13; ANXA1; RELB; C1QBP; BMP6; PRDX5; SERPINE1; BIRC3; TIMP1; PIK3CD; C5; S100A8; CCL2; RB1; BMP2; PTPRC; THBS1; AGT; VNN1; PPARD; GSTP1; SERPINF1; ICAM1; PTPN2; TNIP1

GO:0010942	Positive regulation of cell death	660	76	20.87254	3.641148	0	0	GADD45A; SMPD1; RRP1B; EEF1E1; CASP3; RPS6; IGFBP3; TGM2; IL6; LYN; SOD1; RYBP; CDC34; BCL2; GADD45B; AIMP2; SOX4; CDK19; F3; TNFAIP8; LGALS9; CAV1; DUSP1; DAPK3; RPS6KA2; DDIT4; PIN1; TRIM13; DDIT3; CLU; HSF1; CTSC; CAPN2; ANXA5; CD36; HMOX1; MCL1; BAX; DEDD2; FOS; CCL5; STK17A; JUN; WNT5A; PYCARD; NR4A3; CASP8AP2; TNFRSF1A; TNF; CASP5; TNFRSF10B; IFI27; INHBA; BCAP31; ANXA1; C1QBP; ARHGEF6; CHCHD10; ARHGEF7; AIFM1; PIK3CD; S100A8; CCL2; BMP2; UCP2; SOD2; PTPRC; THBS1; AGT; GSK3B; YWHAB; BNIP3; YWHAQ; ATF3; HMGCR; PTPN2
GO:0002274	Myeloid leukocyte activation	634	67	20.05029	3.341598	0	0	PECAM1; NFKB1; RAP2B; SLC2A3; A1BG; AGA; ACLY; DYNLT1; AGL; GRN; AIF1; IL6; LYN; CTSB; APEH; CD44; CXCL8; MMP8; CSF2; EEF2; DYNLL1; LGALS9; VAMP8; CLU; CTSC; CD33; PLAC8; APRT; CD36; HMOX1; ADGRE5; GUSB; TIMP2; CCL5; SLC11A1; GM2A; BST1; JUN; WNT5A; CD74; PYCARD; NR4A3; RAP2C; TNF; GATA2; MAPK14; TNFAIP6; MGST1; VAT1; SLC04C1; FGR; MVP; BST2; RELB; ALAD; PIK3CD; S100A8; MT1G; ALDOC; CAPN1; RAB27A; PTPRC; THBS1; VNN1; GSTP1; SLC44A2; B2M
GO:0043068	Positive regulation of programmed cell death	610	69	19.29129	3.576744	0	0	GADD45A; SMPD1; RRP1B; EEF1E1; CASP3; RPS6; IGFBP3; TGM2; IL6; LYN; SOD1; RYBP; CDC34; BCL2; GADD45B; SOX4; CDK19; F3; TNFAIP8; LGALS9; CAV1; DUSP1; DAPK3; RPS6KA2; PIN1; DDIT3; HSF1; CTSC; CAPN2; ANXA5; HMOX1; MCL1; BAX; DEDD2; CCL5; STK17A; JUN; WNT5A; PYCARD; NR4A3; CASP8AP2; TNFRSF1A; TNF; CASP5; TNFRSF10B; IFI27; INHBA; BCAP31; ANXA1; C1QBP; ARHGEF6; CHCHD10; ARHGEF7; AIFM1; PIK3CD; S100A8; CCL2; BMP2; SOD2; PTPRC; THBS1; AGT; GSK3B; YWHAB; BNIP3; YWHAQ; ATF3; HMGCR; PTPN2
GO:0043065	Positive regulation of apoptotic process	606	69	19.16479	3.600353	0	0	GADD45A; SMPD1; RRP1B; EEF1E1; CASP3; RPS6; IGFBP3; TGM2; IL6; LYN; SOD1; RYBP; CDC34; BCL2; GADD45B; SOX4; CDK19; F3; TNFAIP8; LGALS9; CAV1; DUSP1; DAPK3; RPS6KA2; PIN1; DDIT3; HSF1; CTSC; CAPN2; ANXA5; HMOX1; MCL1; BAX; DEDD2; CCL5; STK17A; JUN; WNT5A; PYCARD; NR4A3; CASP8AP2; TNFRSF1A; TNF; CASP5; TNFRSF10B; IFI27; INHBA; BCAP31; ANXA1; C1QBP; ARHGEF6; CHCHD10;

								ARHGEF7; AIFM1; PIK3CD; S100A8; CCL2; BMP2; SOD2; PTPRC; THBS1; AGT; GSK3B; YWHAB; BNIP3; YWHAQ; ATF3; HMGCR; PTPN2
GO:0002237	Response to molecule of bacterial origin	330	49	10.43627	4.695164	0	0	NFKB1; LY96; NFKBIA; IRF8; CASP3; CD86; IL6; LYN; IL1B; CXCL8; CDK19; RELA; CSF2; LGALS9; CXCL2; HSF1; MAPKAPK2; CAPN2; CD36; VCAM1; FOS; CEBPE; CCL5; SLC11A1; JUN; GGT1; WNT5A; PYCARD; RPS6KA3; TNF; MAPKAPK3; CEBPB; MAPK14; MAPK3; MGST1; DUSP10; UPF1; SCARB1; BMP6; ALAD; SERPINE1; XBP1; S100A8; CCL2; PPARD; GSTP1; PDE4B; ICAM1; B2M
GO:0032496	Response to lipopolysaccharide	317	48	10.02514	4.787961	0	0	NFKB1; LY96; NFKBIA; IRF8; CASP3; CD86; IL6; LYN; IL1B; CXCL8; CDK19; RELA; CSF2; LGALS9; CXCL2; HSF1; MAPKAPK2; CAPN2; CD36; VCAM1; FOS; CEBPE; CCL5; SLC11A1; JUN; GGT1; WNT5A; PYCARD; RPS6KA3; TNF; MAPKAPK3; CEBPB; MAPK14; MAPK3; MGST1; DUSP10; UPF1; SCARB1; BMP6; ALAD; SERPINE1; XBP1; S100A8; CCL2; PPARD; GSTP1; PDE4B; ICAM1
GO:0071216	Cellular response to biotic stimulus	222	37	7.020763	5.270082	0	0	NFKB1; LY96; NFKBIA; IRF8; CD86; IL6; LYN; IL1B; ATG10; CXCL8; CDK19; RELA; CSF2; CXCL2; DDIT3; HSF1; CAPN2; CD36; CEBPE; CCL5; WNT5A; PYCARD; TNF; CEBPB; MAPK14; MAPK3; UPF1; SCARB1; BMP6; SERPINE1; XBP1; CCL2; GSK3B; PPARD; GSTP1; PDE4B; ICAM1
GO:0032269	Negative regulation of cellular protein metabolic process	982	83	31.05581	2.672608	1.11E-16	3.36E-14	SMAD4; PER1; GADD45A; RGS2; SMPD1; NFKB1; SORL1; MICAL1; SNX25; A2M; PURA; CASP3; SERPINB9; IGFBP3; LYN; CSTA; RYBP; GBP1; BIRC2; GADD45B; EIF2AK2; IL1B; TRIB3; CD44; SOX4; XIAP; RELA; TNFAIP8; CAV1; DUSP1; DAPK3; DDIT4; PIN1; RGS3; KLF4; BTG2; RNF149; BAX; EPRS; TIMP2; JUN; PYCARD; RPS6KA3; ATP13A2; TNF; ZFP36L1; SGTA; NNT; SERPINE2; FMR1; BAG2; MVP; BST2; DUSP10; BIRC6; UPF1; PRDX5; ATP2B4; ALAD; SERPINE1; BIRC3; TIMP1; EIF4E2; C5; TRIP12; EIF3A; DNAJB6; RB1; CAPN3; SESN2; PTPRC; THBS1; AGT; GSK3B; GSTP1; SERPINF1; YWHAB; PTTG1; CRY1; ATF3; HMGCR; PTPN2; TNIP1
GO-CC								
GO:0005739	Mitochondrion	1,555	99	39.06724	2.534092	0	0	PPTC7; SLC8B1; SLC9A6; RGS2; NFKB1; PGS1; ENY2; LONP1; DYNLT1; VWAB; MRPS18A; TGM2; LYN; SOD1; ACAT1; AGPAT4; BCL2; SPNS1; SOX4; MRPL58;

								FAHD1; ALDH6A1; DYNLL1; SSBP1; DDIT4; PIN1; ATG13; CLU; ABCB6; ABHD6; FXN; ACSS2; MRPS23; CAPN2; MCL1; AMACR; ACSL1; APEX1; BAX; ABCD3; MRPS21; MRPS16; ACP6; MRPL47; NDUFS4; PYCARD; SHMT2; ACSL5; CASP8AP2; TNFRSF1A; HSD17B10; MDH2; DECR1; FIBP; MRPL51; TIMMDC1; MAPK14; PCK2; REXO2; NNT; MAPK3; MGST1; IFI27; BCL2A1; VAT1; BCAP31; FGR; BDH2; ALDH18A1; GSTK1; ANXA1; C1QBP; BLOC1S1; ACSL4; PRDX5; CHCHD10; AIFM1; ALAS1; GSTZ1; CPT1A; CAPN1; MRPL41; SESN2; BLOC1S2; UCP2; SOD2; MRPS17; GSK3B; GSTP1; GSR; PARP9; YWHAB; SAMM50; CRY1; BNIP3; YWHAQ; MPV17L2; TOMM70; MPV17
GO:0044433	Cytoplasmic vesicle part	1,462	89	36.73075	2.423038	2.33E-15	1.26E-12	SLC9A6; PECAM1; NFKB1; LY96; RAP2B; SNX24; SLC2A3; SORL1; A1BG; SNX25; A2M; AGA; LRPAP1; ACLY; CD9; DYNLT1; AGL; COMMD1; GRN; CTSC; CTSL; APEH; ACTN1; CD44; MMP8; EEF2; DYNLL1; CAV1; VAMP8; CLU; ABCB6; CTSC; TAB2; LGALS3BP; CD33; PLAC8; APRT; CD36; ADGRE5; GUSB; APPL2; TIMP2; SLC11A1; GM2A; BST1; WNT5A; CD74; PYCARD; RAP2C; ATP13A2; WNT5B; MAPK14; SGTA; TNFAIP6; MGST1; VAT1; SLCO4C1; FGR; MCOLN1; MVP; BST2; APPBP2; RAB12; ANXA1; SCARB1; SCAP; SNX2; ALAD; SERPINE1; RAB11FIP4; SCYL2; TIMP1; RAB17; S100A8; RAB1A; ALDOC; ANTXR2; CAPN1; SNX16; SEC22B; RAB27A; PTPRC; THBS1; VNN1; RAB8B; GSTP1; TGFBRAP1; SLC44A2; B2M
GO:0030141	Secretory granule	831	63	20.87774	3.017569	3.22E-15	1.26E-12	SMPD1; PECAM1; NFKB1; RAP2B; SLC2A3; A1BG; A2M; AGA; ACLY; CD9; DYNLT1; AGL; GRN; SOD1; CTSC; APEH; ACTN1; IL1B; CD44; MMP8; EEF2; DYNLL1; CAV1; VAMP8; CLU; ABHD2; CTSC; LGALS3BP; CD33; PLAC8; APRT; CD36; ADGRE5; GUSB; TIMP2; SLC11A1; GM2A; BST1; PYCARD; RAP2C; MAPK14; ANXA11; SERPINE2; TNFAIP6; MGST1; VAT1; SLCO4C1; FGR; MVP; BST2; ALAD; SERPINE1; TIMP1; S100A8; ALDOC; CAPN1; RAB27A; PTPRC; THBS1; VNN1; GSTP1; SLC44A2; B2M
GO:0099503	Secretory vesicle	976	69	24.52066	2.813953	4.44E-15	1.30E-12	SMPD1; PECAM1; NFKB1; RAP2B; SLC2A3; A1BG; A2M; AGA; SEPT6; ACLY; CD9; DYNLT1; AGL; GRN; SOD1; CTSC; APEH; ACTN1; IL1B; CD44; MMP8; EEF2; DYNLL1; CAV1; VAMP8; CLU; ABHD2; CTSC; LGALS3BP; CD33; PLAC8; APRT; CD36; ADGRE5; GUSB; TIMP2; SLC11A1; GM2A; BST1; PYCARD; RAP2C; MAPK14; ANXA11; SGTA;

								SERPINE2; TNFAIP6; MGST1; VAT1; SLCO4C1; RABAC1; FGR; MVP; BST2; ALAD; SERPINE1; TIMP1; S100A8; ALDOC; CAPN1; SEC22B; RAB27A; PTPRC; THBS1; VNN1; RAB8B; GSTP1; PDE4B; SLC44A2; B2M
GO:0098805	Whole membrane	1,630	94	40.95151	2.295397	9.21E-15	2.17E-12	SLC9A6; PECAM1; LY96; RAP2B; SLC2A3; SORL1; SNX25; CD9; COMMD1; CASP3; LYN; AGPAT4; BIRC2; BCL2; CD44; SPNS1; PXMP2; EEF2; DYNLL1; CAV1; DAPK3; VAMP8; EMP2; ABCB6; ABCC1; ACP2; TAB2; CAPN2; CD33; CD36; HMOX1; MCL1; ADGRE5; ACSL1; BAX; APPL2; ABCD3; SLC11A1; GNB2; BST1; WNT5A; CD74; ABCC6; ACSL5; TNFRSF1A; RAP2C; ATP13A2; TNF; DECR2; WNT5B; SGTA; MAPK3; MGST1; IFI27; BCL2A1; VAT1; SLCO4C1; MCOLN1; BST2; RAB12; ANXA1; SCARB1; SCAP; BLOC1S1; ACSL4; ATP6V1G1; ATP2B4; SNX2; SLC15A3; RAB11FIP4; SCYL2; BIRC3; RAB17; RAB1A; CPT1A; ANTXR2; ATP2B1; ATP6V1C2; SNX16; SEC22B; BLOC1S2; RAB27A; PTPRC; VNN1; RAB8B; RDH14; SAMM50; BNIP3; ICAM1; SLC44A2; HMGCR; B2M; TOMM70; MPV17
GO:0044429	Mitochondrial part	1,015	65	25.50048	2.548971	2.82E-12	5.52E-10	SLC8B1; PGS1; LONP1; MRPS18A; LYN; SOD1; ACAT1; AGPAT4; BCL2; SPNS1; MRPL58; FAHD1; ALDH6A1; SSBP1; CLU; ABCB6; FXN; ACSS2; MRPS23; CAPN2; MCL1; ACSL1; BAX; MRPS21; MRPS16; ACP6; MRPL47; NDUFS4; SHMT2; ACSL5; HSD17B10; MDH2; DECR1; MRPL51; TIMMDC1; PCK2; REXO2; NNT; MGST1; IFI27; BCL2A1; VAT1; FGR; ALDH18A1; GSTK1; ANXA1; C1QBP; BLOC1S1; ACSL4; PRDX5; CHCHD10; AIFM1; ALAS1; GSTZ1; CPT1A; MRPL41; UCP2; SOD2; MRPS17; GSR; SAMM50; BNIP3; MPV17L2; TOMM70; MPV17
GO:0005764	Lysosome	669	50	16.80771	2.974826	5.19E-12	8.06E-10	SMPD1; TMEM150A; AGA; ACLY; GRN; LYN; SOD1; IL4I1; CTSB; CTSL; IL1B; SPNS1; CTSE; AKR1B1; VAMP8; ACP2; CTSC; CAPN2; PLAC8; GUSB; SLC11A1; GM2A; GNB2; CD74; PYCARD; NR4A3; ATP13A2; ANXA11; MGST1; VAT1; SLCO4C1; MCOLN1; BST2; RAB12; ANXA1; TRIP10; SCARB1; BLOC1S1; ATP6V1G1; SNX2; SLC15A3; PIK3CD; CAPN1; ATP6V1C2; SNX16; BLOC1S2; RAB27A; VNN1; RDH14; SLC44A2
GO:0000323	Lytic vacuole	670	50	16.83283	2.970386	5.49E-12	8.06E-10	SMPD1; TMEM150A; AGA; ACLY; GRN; LYN; SOD1; IL4I1; CTSB; CTSL; IL1B; SPNS1; CTSE; AKR1B1; VAMP8; ACP2; CTSC; CAPN2; PLAC8; GUSB; SLC11A1; GM2A; GNB2;

								CD74; PYCARD; NR4A3; ATP13A2; ANXA11; MGST1; VAT1; SLCO4C1; MCOLN1; BST2; RAB12; ANXA1; TRIP10; SCARB1; BLOC1S1; ATP6V1G1; SNX2; SLC15A3; PIK3CD; CAPN1; ATP6V1C2; SNX16; BLOC1S2; RAB27A; VNN1; RDH14; SLC44A2
GO:0034774	Secretory granule lumen	320	33	8.039561	4.104702	6.45E-12	8.42E-10	NFKB1; A1BG; A2M; AGA; ACLY; DYNLT1; AGL; GRN; ACTN1; MMP8; EEF2; CLU; CTSC; LGALS3BP; PLAC8; APRT; GUSB; TIMP2; GM2A; PYCARD; MAPK14; VAT1; FGR; MVP; ALAD; SERPINE1; TIMP1; S100A8; ALDOC; RAB27A; THBS1; GSTP1; B2M
GO:0005773	Vacuole	760	53	19.09396	2.775747	1.59E-11	1.87E-09	SMPD1; TMEM150A; AGA; ACLY; GRN; LYN; SOD1; IL4I1; CTSB; CTSL; IL1B; SPNS1; CTSF; AKR1B1; VAMP8; ABCC1; ACP2; CTSC; CAPN2; PLAC8; GUSB; SLC11A1; GM2A; GNB2; CD74; PYCARD; ABCC6; NR4A3; ATP13A2; ANXA11; MGST1; VAT1; SLCO4C1; MCOLN1; BST2; RAB12; ANXA1; TRIP10; SCARB1; BLOC1S1; ATP6V1G1; SNX2; SLC15A3; ARHGEF7; PIK3CD; CAPN1; ATP6V1C2; SNX16; BLOC1S2; RAB27A; VNN1; RDH14; SLC44A2
GO:0060205	Cytoplasmic vesicle lumen	336	33	8.441539	3.90924	2.43E-11	2.57E-09	NFKB1; A1BG; A2M; AGA; ACLY; DYNLT1; AGL; GRN; ACTN1; MMP8; EEF2; CLU; CTSC; LGALS3BP; PLAC8; APRT; GUSB; TIMP2; GM2A; PYCARD; MAPK14; VAT1; FGR; MVP; ALAD; SERPINE1; TIMP1; S100A8; ALDOC; RAB27A; THBS1; GSTP1; B2M
GO:0031983	Vesicle lumen	337	33	8.466663	3.89764	2.63E-11	2.57E-09	NFKB1; A1BG; A2M; AGA; ACLY; DYNLT1; AGL; GRN; ACTN1; MMP8; EEF2; CLU; CTSC; LGALS3BP; PLAC8; APRT; GUSB; TIMP2; GM2A; PYCARD; MAPK14; VAT1; FGR; MVP; ALAD; SERPINE1; TIMP1; S100A8; ALDOC; RAB27A; THBS1; GSTP1; B2M
GO:0005740	Mitochondrial envelope	722	46	18.13926	2.535936	6.88E-09	6.22E-07	SLC8B1; PGS1; MRPS18A; LYN; SOD1; AGPAT4; BCL2; SPNS1; MRPL58; CLU; ABCB6; MRPS23; CAPN2; MCL1; ACSL1; BAX; MRPS21; MRPS16; MRPL47; NDUFS4; SHMT2; ACSL5; MRPL51; TIMMDC1; REXO2; NNT; MGST1; IFI27; BCL2A1; VAT1; FGR; ALDH18A1; ANXA1; BLOC1S1; ACSL4; CHCHD10; AIFM1; CPT1A; MRPL41; UCP2; MRPS17; SAMM50; BNIP3; MPV17L2; TOMM70; MPV17
GO:0048471	Perinuclear region of cytoplasm	684	44	17.18456	2.560438	1.13E-08	9.47E-07	SPP1; CALN1; AIF1; RPS6; LYN; CTSB; EIF2AK2; CYFIP2; S100A6; AKR1B1; CAV1; VAMP8; TRIM13; CLU; HSF1; CAPN2; FBXL5; AMFR; HMOX1; APEX1; GNB2; SYNJ1; BCL3; FMR1; INHBA; S100A4; BCAP31; MVP; ANXA4; TRIP10; PRDX5; RAB11FIP4;

								AIFM1; SCYL2; MT1E; BNIP2; MT1G; DNAJB6; MT1F; RAB8B; SERPINF1; YWHAB; ARF5; MT2A
GO:0044432	Endoplasmic reticulum part	1,332	68	33.46467	2.031994	1.45E-08	1.07E-06	RAB2B; SLC9A6; NFE2L1; PTDSS1; SPP1; LRPAP1; ANKLE2; IGFBP3; IL6; AGPAT3; CYP2A6; AGPAT4; BCL2; IGFBP7; ATP2A3; CAV1; ATG13; TRIM13; CLU; ABCB6; CTSC; CYP2R1; CAPN2; ABHD4; AMFR; RNF125; HMOX1; ACSL1; BAX; SEC11A; COL22A1; H6PD; ATP13A1; TMEM33; ESD; WNT5A; CD74; ABCC6; SGPL1; ACSL5; MYDGF; RTN1; WNT5B; MGST1; IFI27; SEC22C; PLP2; BCAP31; RDH10; RAB12; RDH11; SCAP; ACSL4; ATF6B; XBP1; TIMP1; LRRC8D; RAB1A; ANTXR2; SEC22B; ALG13; THBS1; DHRS3; RDH14; PTDSS2; HMGCR; B2M; BCAP29
GO:0005783	Endoplasmic reticulum	1,861	86	46.75507	1.839373	1.45E-08	1.07E-06	RAB2B; SLC9A6; NFE2L1; PTDSS1; PGS1; SPP1; SORL1; AGA; LRPAP1; AGL; GRN; KCNJ2; ANKLE2; RPS6; IGFBP3; TGM2; IL6; AGPAT3; CYP2A6; AIMP1; AGPAT4; BCL2; RPS23; IGFBP7; ATP2A3; CAV1; ATG13; TRIM13; CLU; ABCB6; CTSC; CYP2R1; CAPN2; ABHD4; AMFR; RNF125; HMOX1; VCAM1; ACSL1; APEX1; BAX; FOS; SEC11A; COL22A1; H6PD; ATP13A1; TMEM33; ESD; WNT5A; CD74; PYCARD; ABCC6; SGPL1; ACSL5; MYDGF; RTN1; WNT5B; PLIN2; MGST1; IFI27; SEC22C; PLP2; BCAP31; RDH10; RAB12; RDH11; SCAP; ACSL4; VASH1; ATF6B; XBP1; TIMP1; LRRC8D; RAB1A; ANTXR2; SEC22B; ALG13; THBS1; DHRS3; RDH14; BNIP3; PTDSS2; HMGCR; B2M; PTPN2; BCAP29
GO:0031966	Mitochondrial membrane	680	42	17.08407	2.458431	7.75E-08	5.07E-06	SLC8B1; PGS1; MRPS18A; LYN; AGPAT4; BCL2; SPNS1; MRPL58; CLU; ABCB6; MRPS23; MCL1; ACSL1; BAX; MRPS21; MRPS16; MRPL47; NDUFS4; SHMT2; ACSL5; MRPL51; TIMMDC1; NNT; MGST1; IFI27; BCL2A1; VAT1; FGR; ALDH18A1; ANXA1; ACSL4; CHCHD10; AIFM1; CPT1A; MRPL41; UCP2; MRPS17; SAMM50; BNIP3; MPV17L2; TOMM70; MPV17
GO:1904813	Ficolin-1-rich granule lumen	123	16	3.090206	5.177648	7.76E-08	5.07E-06	A1BG; ACLY; DYNLT1; AGL; CTSB; APEH; EEF2; GUSB; TIMP2; MAPK14; TNFAIP6; MVP; ALAD; ALDOC; CAPN1; GSTP1
GO:0031967	Organelle envelope	1,156	59	29.04291	2.031477	1.51E-07	8.89E-06	SLC8B1; PGS1; SORL1; ENY2; MRPS18A; LYN; SOD1; AGPAT3; AGPAT4; BCL2; APEH; SPNS1; MRPL58; ATP2A3; S100A6; CLU; ABCB6; MRPS23; CAPN2; MCL1; ACSL1;

								BAX; MRPS21; MRPS16; MRPL47; NDUFS4; TMEM33; SHMT2; ACSL5; MRPL51; TIMMDC1; REXO2; ANXA11; NNT; MAPK3; MGST1; IFI27; BCL2A1; VAT1; FGR; MVP; ALDH18A1; ANXA4; ANXA1; BLOC1S1; ACSL4; CHCHD10; AIFM1; BNIP2; CPT1A; MRPL41; XPO7; UCP2; MRPS17; SAMM50; BNIP3; MPV17L2; TOMM70; MPV17
GO:0031975	Envelope	1,156	59	29.04291	2.031477	1.51E-07	8.89E-06	SLC8B1; PGS1; SORL1; ENY2; MRPS18A; LYN; SOD1; AGPAT3; AGPAT4; BCL2; APEH; SPNS1; MRPL58; ATP2A3; S100A6; CLU; ABCB6; MRPS23; CAPN2; MCL1; ACSL1; BAX; MRPS21; MRPS16; MRPL47; NDUFS4; TMEM33; SHMT2; ACSL5; MRPL51; TIMMDC1; REXO2; ANXA11; NNT; MAPK3; MGST1; IFI27; BCL2A1; VAT1; FGR; MVP; ALDH18A1; ANXA4; ANXA1; BLOC1S1; ACSL4; CHCHD10; AIFM1; BNIP2; CPT1A; MRPL41; XPO7; UCP2; MRPS17; SAMM50; BNIP3; MPV17L2; TOMM70; MPV17
GO:0101002	Ficolin-1-rich granule	183	19	4.597624	4.132569	1.87E-07	1.00E-05	SLC2A3; A1BG; ACLY; DYNLT1; AGL; CTSB; APEH; EEF2; DYNLL1; GUSB; TIMP2; SLC11A1; MAPK14; TNFAIP6; MVP; ALAD; ALDOC; CAPN1; GSTP1
GO:0062023	Collagen-containing extracellular matrix	366	28	9.195248	3.045051	1.88E-07	1.00E-05	A1BG; A2M; SERPINB9; TGM2; GDF15; CTSB; IGFBP7; MMP8; F3; S100A6; CLU; CTSC; LGALS3BP; ANXA5; TIMP2; WNT5A; WNT5B; ANXA11; SERPINE2; TGFB1; ANXA4; ANXA1; SERPINE1; TIMP1; S100A8; THBS1; SERPINF1; ICAM1
GO:0005759	Mitochondrial matrix	462	32	11.60712	2.756929	2.42E-07	1.24E-05	LONP1; MRPS18A; SOD1; ACAT1; MRPL58; FAHD1; ALDH6A1; SSBP1; FXN; ACSS2; MRPS21; MRPS16; ACP6; MRPL47; SHMT2; HSD17B10; MDH2; DECR1; MRPL51; PCK2; REXO2; GSTK1; C1QBP; BLOC1S1; PRDX5; ALAS1; GSTZ1; MRPL41; SOD2; MRPS17; GSR; MPV17L2
GO:0031012	Extracellular matrix	496	33	12.46132	2.648195	3.92E-07	1.92E-05	A1BG; A2M; SERPINB9; TGM2; GDF15; CTSB; IGFBP7; MMP14; MMP8; F3; S100A6; CLU; CTSC; LGALS3BP; MMP7; ANXA5; TIMP2; COL22A1; WNT5A; MMP12; WNT5B; ANXA11; SERPINE2; TGFB1; ANXA4; ANXA1; SERPINE1; TIMP1; S100A8; THBS1; MMP10; SERPINF1; ICAM1
GO:0044437	Vacuolar part	552	35	13.86824	2.523752	5.38E-07	2.53E-05	SMPD1; AGA; ACLY; GRN; CTSB; CTSL; SPNS1; CTSF; VAMP8; ABCC1; ACP2; CTSC; PLAC8; GUSB; GM2A; GNB2; CD74; PYCARD; ABCC6; ATP13A2; MGST1; VAT1;

								SLCO4C1; MCOLN1; BST2; RAB12; SCARB1; BLOC1S1; ATP6V1G1; SLC15A3; ATP6V1C2; BLOC1S2; VNN1; RDH14; SLC44A2
GO:0009986	Cell surface	782	43	19.64668	2.188665	1.27E-06	5.76E-05	PECAM1; SPA17; LY6G5C; LRPAP1; CD9; SPN; CD86; AIMP1; CD44; ABCB1; F3; EMP2; LRFN3; CLU; CAPN2; MMP7; CD33; ANXA5; CD36; VCAM1; TIMP2; WNT5A; CD74; LRFN5; TNFRSF1A; TNF; WNT5B; SERPINE2; TNFRSF10B; BST2; CLDND1; ANXA4; ANXA1; SCARB1; C1QBP; PLXNB2; ANTXR2; BMP2; PTPRC; THBS1; GSR; ICAM1; B2M
GO:0044438	Microbody part	101	13	2.537487	5.12318	1.46E-06	6.13E-05	LONP2; PXMP2; AMACR; ACSL1; ABCD3; DECR2; MGST1; GSTK1; ACSL4; PRDX5; RAB8B; HMGCR; MPV17
GO:0044439	Peroxisomal part	101	13	2.537487	5.12318	1.46E-06	6.13E-05	LONP2; PXMP2; AMACR; ACSL1; ABCD3; DECR2; MGST1; GSTK1; ACSL4; PRDX5; RAB8B; HMGCR; MPV17
GO:0005925	Focal adhesion	404	27	10.14995	2.660113	4.20E-06	1.70E-04	TES; CD9; TGM2; ARHGAP22; ACTN1; CD44; MMP14; CAV1; CAPN2; ANXA5; ADGRE5; GNB2; REXO2; MAPK3; RPLP2; RRAS; FLII; ANXA1; RPS5; ARHGEF7; EVL; CAPN1; PTPRC; YWHAB; ICAM1; YWHAQ; B2M
GO:0005789	Endoplasmic reticulum membrane	1,049	51	26.35469	1.93514	4.65E-06	1.81E-04	RAB2B; SLC9A6; NFE2L1; PTDSS1; ANKLE2; AGPAT3; CYP2A6; AGPAT4; BCL2; ATP2A3; CAV1; ATG13; TRIM13; ABCB6; CYP2R1; ABHD4; AMFR; RNF125; HMOX1; ACSL1; BAX; SEC11A; ATP13A1; TMEM33; CD74; ABCC6; SGPL1; ACSL5; RTN1; MGST1; IFI27; SEC22C; PLP2; BCAP31; RDH10; RAB12; RDH11; SCAP; ACSL4; ATF6B; XBP1; LRRC8D; RAB1A; ANTXR2; SEC22B; ALG13; DHRS3; RDH14; PTDSS2; HMGCR; BCAP29
GO-MF								
GO:0042802	Identical protein binding	1,696	100	51.38469	1.946105	3.81E-11	7.15E-08	SMAD4; GADD45A; SLC8B1; PECAM1; NFKB1; NFKBIA; NMI; ETS1; LY6G5C; DYNLT1; COMMD1; KCTD13; KCNJ2; GDF15; GLRX3; SOD1; AIMP1; GBP1; ACAT1; BIRC2; DCXR; BCL2; APEH; ACTN1; EIF2AK2; CRYL1; CUL3; XIAP; RELA; S100A6; DYNLL1; CAV1; DAPK3; DDIT3; HSF1; ACYP2; CTSC; AMFR; HMOX1; MCL1; BAX; ABCD3; EPRS; CEBPE; CCL5; SLC11A1; JUN; QDPR; ESD; CD74; PYCARD; NR4A3; SHMT2; TNF; CASP6; TLE1; CEBPB; SGTA; MAPK3; MGST1; FMR1; IFI27; INHBA; BAG2;

								BCL2A1; DYNLL2; S100A4; RABAC1; MVP; BST2; ALDH18A1; ANXA4; ANXA1; BLMH; TRIP10; SCARB1; RELB; SNX2; ALAD; RAB11FIP4; ALAS1; HOXA1; GSTZ1; CPT1A; SAT1; RB1; SNX16; SOD2; PTPRC; THBS1; GSTM4; DAAM1; YWHAB; BNIP3; YWHAQ; RNF4; ATF3; HMGCR; B2M; TNIP1
GO:0030234	Enzyme regulator activity	1,017	67	30.81263	2.174433	1.38E-09	1.30E-06	RGS2; A2M; CALML6; ANKLE2; CASP3; SERPINB9; IGFBP3; RGS10; ARHGAP22; GNB5; CSTA; SOD1; BIRC2; EIF2AK2; TRIB3; TBCD; CCNE1; XIAP; TNFAIP8; DYNLL1; CAV1; ATG13; RGS3; KLF4; CTSC; CDC37; ANXA5; TIMP2; CCL5; GM2A; JUN; PYCARD; RPS6KA3; CASP8AP2; ARHGAP19; SERPINE2; ARHGAP15; RTKN; BAG2; PPP1R3C; BST2; BIRC6; RFC1; ANXA4; ANXA1; TRIP10; ARHGAP17; PRDX5; ARHGFEF6; ATP2B4; ARHGDIB; SERPINE1; BIRC3; TIMP1; C5; BNIP2; DNAJB6; ARHGAP18; CAPN3; SESN2; BMP2; AGT; GSTP1; PARP9; SERPINF1; PTTG1; CCND3
GO:0061134	Peptidase regulator activity	211	24	6.392789	3.75423	2.71E-08	1.70E-05	A2M; CASP3; SERPINB9; CSTA; BIRC2; XIAP; TNFAIP8; CAV1; CTSC; TIMP2; PYCARD; RPS6KA3; CASP8AP2; SERPINE2; BST2; BIRC6; PRDX5; SERPINE1; BIRC3; TIMP1; C5; AGT; SERPINF1; PTTG1
GO:0016491	Oxidoreductase activity	731	49	22.14753	2.212437	1.62E-07	7.61E-05	SH3BGRL3; MICAL1; PYROXD1; GLRX3; SOD1; IL4I1; CYP2A6; DCXR; CRYL1; AKR1A1; ALDH6A1; AKR1B1; AKR7A2; FXN; CYP2R1; PYROXD2; HMOX1; VCAM1; APEX1; H6PD; NDUFS4; QDPR; HSD17B10; MDH2; DECR1; DECR2; NNT; MGST1; MDH1; VAT1; RDH10; SRXN1; BDH2; ALDH18A1; GSTK1; RDH11; PRDX5; AIFM1; GSTZ1; SESN2; BMP2; SOD2; DHRS3; GSTP1; GSR; RDH14; HMGCR; SESN3; SESN1
GO:0043028	Cysteine-type endopeptidase regulator activity involved in apoptotic process	41	10	1.242201	8.050229	2.87E-07	1.08E-04	CASP3; SERPINB9; BIRC2; XIAP; TNFAIP8; PYCARD; RPS6KA3; CASP8AP2; PRDX5; BIRC3
GO:0016616	Oxidoreductase activity, acting	119	16	3.605412	4.437774	6.04E-07	1.86E-04	DCXR; CRYL1; AKR1A1; AKR1B1; AKR7A2; H6PD; HSD17B10; MDH2; MDH1; RDH10; BDH2; RDH11; BMP2; DHRS3; RDH14; HMGCR

	on the CH-OH group of donors, NAD or NADP as acceptor							
GO:0004866	Endopeptidase inhibitor activity	166	19	5.029398	3.777788	6.95E-07	1.86E-04	A2M; SERPINB9; CSTA; BIRC2; XIAP; TNFAIP8; TIMP2; RPS6KA3; SERPINE2; BST2; BIRC6; PRDX5; SERPINE1; BIRC3; TIMP1; C5; AGT; SERPINF1; PTTG1
GO:0030414	Peptidase inhibitor activity	173	19	5.241481	3.62493	1.31E-06	2.73E-04	A2M; SERPINB9; CSTA; BIRC2; XIAP; TNFAIP8; TIMP2; RPS6KA3; SERPINE2; BST2; BIRC6; PRDX5; SERPINE1; BIRC3; TIMP1; C5; AGT; SERPINF1; PTTG1
GO:0061135	Endopeptidase regulator activity	173	19	5.241481	3.62493	1.31E-06	2.73E-04	A2M; SERPINB9; CSTA; BIRC2; XIAP; TNFAIP8; TIMP2; RPS6KA3; SERPINE2; BST2; BIRC6; PRDX5; SERPINE1; BIRC3; TIMP1; C5; AGT; SERPINF1; PTTG1
GO:0016614	Oxidoreductase activity, acting on CH-OH group of donors	130	16	3.938685	4.06227	2.01E-06	3.38E-04	DCXR; CRYL1; AKR1A1; AKR1B1; AKR7A2; H6PD; HSD17B10; MDH2; MDH1; RDH10; BDH2; RDH11; BMP2; DHRS3; RDH14; HMGCR
GO:0016817	Hydrolase activity, acting on acid anhydrides	893	53	27.05574	1.958919	2.16E-06	3.38E-04	RAB2B; RAP2B; SEPT6; LONP2; LONP1; DYNLT1; VWA8; GNB5; GBP1; ABCB1; ATP2A3; EEF2; DYNLL1; PIN1; CLU; ABCB6; ACYP1; ABCC1; ACYP2; ANXA5; ABCD3; GNB2; ABCC5; ATP13A1; GINS4; ABCC6; SWSAP1; RAP2C; ATP13A2; DYNLL2; MCM5; CHD1; RRAS; BTAF1; APPBP2; RFC1; RAB12; UPF1; ANXA1; ATP6V1G1; ATP2B4; ARHGDI1; ARL4D; RAB17; BNIP2; RAB1A; ATP2B1; ATP6V1C2; RAB27A; RAB8B; TUBB2A; ARF5; RFC4
GO:0016818	Hydrolase activity, acting on acid anhydrides, in phosphorus-containing anhydrides	893	53	27.05574	1.958919	2.16E-06	3.38E-04	RAB2B; RAP2B; SEPT6; LONP2; LONP1; DYNLT1; VWA8; GNB5; GBP1; ABCB1; ATP2A3; EEF2; DYNLL1; PIN1; CLU; ABCB6; ACYP1; ABCC1; ACYP2; ANXA5; ABCD3; GNB2; ABCC5; ATP13A1; GINS4; ABCC6; SWSAP1; RAP2C; ATP13A2; DYNLL2; MCM5; CHD1; RRAS; BTAF1; APPBP2; RFC1; RAB12; UPF1; ANXA1; ATP6V1G1; ATP2B4; ARHGDI1; ARL4D; RAB17; BNIP2; RAB1A; ATP2B1; ATP6V1C2; RAB27A; RAB8B; TUBB2A; ARF5; RFC4

GO:0008106	Alcohol dehydrogenase (NADP+) activity	22	7	0.666547	10.50189	2.58E-06	3.73E-04	AKR1A1; AKR1B1; AKR7A2; RDH10; RDH11; DHRS3; RDH14
GO:0004197	Cysteine-type endopeptidase activity	118	15	3.575114	4.19567	2.78E-06	3.73E-04	CASP3; CTSB; CTSL; CTSF; CASP7; CTSC; CAPN2; PYCARD; CASP6; CASP5; BLMH; CAPN1; CAPN3; CAPN15; CAPNS1
GO:0043027	Cysteine-type endopeptidase inhibitor activity involved in apoptotic process	23	7	0.696844	10.04529	3.61E-06	4.35E-04	SERPINB9; BIRC2; XIAP; TNFAIP8; RPS6KA3; PRDX5; BIRC3
GO:0005102	Signaling receptor binding	1,538	78	46.59767	1.673903	3.78E-06	4.35E-04	LY96; SPP1; SNX25; A2M; LRPAP1; LONP2; CD9; GRN; CASP3; FGF2; GDF15; IL6; LYN; AIMP1; ACTN1; IL1B; CXCL8; CCNE1; CUL3; MMP14; CSF2; CAV1; EMP2; BAMBI; ETS2; CXCL2; CLU; ANXA5; CD36; VCAM1; AMACR; GUSB; TIMP2; CCL5; WNT5A; CD74; PYCARD; NR4A3; CASP8AP2; TNF; DECR2; CEBPB; WNT5B; SERPINE2; MMS19; AIP; INHBA; S100A4; BCAP31; FGR; TGFBI; RXRA; GSTK1; ANXA1; C1QBP; BMP6; PRDX5; SNX2; SERPINE1; SEMA4A; SCYL2; TIMP1; C5; TRIP12; EIF3A; S100A8; CCL2; RB1; BMP2; PTPRC; THBS1; AGT; RAB8B; CRY1; TGFBRAP1; ICAM1; RNF4; PTPN2
GO:0017111	Nucleoside-triphosphatase activity	840	50	25.44996	1.964639	3.94E-06	4.35E-04	RAB2B; RAP2B; SEPT6; LONP2; LONP1; DYNLT1; VWA8; GNB5; GBP1; ABCB1; ATP2A3; EEF2; DYNLL1; PIN1; CLU; ABCB6; ABCC1; ANXA5; ABCD3; GNB2; ABCC5; ATP13A1; GINS4; ABCC6; SWSAP1; RAP2C; ATP13A2; DYNLL2; MCM5; CHD1; RRAS; BTAF1; APPBP2; RFC1; RAB12; UPF1; ANXA1; ATP6V1G1; ATP2B4; ARHGDI1; ARL4D; RAB17; RAB1A; ATP2B1; ATP6V1C2; RAB27A; RAB8B; TUBB2A; ARF5; RFC4

GO:0098772	Molecular function regulator	1,843	89	55.83843	1.593884	5.19E-06	5.41E-04	RGS2; SPP1; A2M; LRPAP1; GRN; CALML6; ANKLE2; CASP3; SERPINB9; IGFBP3; FGF2; GDF15; IL6; RGS10; ARHGAP22; GNB5; CSTA; SOD1; AIMP1; BIRC2; BCL2; EIF2AK2; IL1B; TRIB3; CXCL8; TBCD; CCNE1; XIAP; CSF2; TNFAIP8; DYNLL1; CAV1; VAMP8; ATG13; RGS3; CXCL2; KLF4; CTSC; CDC37; ANXA5; GCGR; TIMP2; CCL5; GM2A; GNB2; JUN; WNT5A; PYCARD; RPS6KA3; CASP8AP2; ARHGAP19; TNF; SERPINE2; ARHGAP15; RTKN; INHBA; BAG2; PPP1R3C; BST2; BIRC6; RFC1; ANXA4; ANXA1; TRIP10; BMP6; ARHGAP17; PRDX5; ARHGEF6; ATP2B4; ARHGDIB; SERPINE1; SEMA4A; ARHGEF7; BIRC3; TIMP1; C5; BNIP2; DNAJB6; CCL2; ARHGAP18; CAPN3; SESN2; BMP2; AGT; GSTP1; PARP9; SERPINF1; PTTG1; CCND3
GO:0004869	Cysteine-type endopeptidase inhibitor activity	56	10	1.696664	5.893918	6.07E-06	6.00E-04	SERPINB9; CSTA; BIRC2; XIAP; TNFAIP8; RPS6KA3; BIRC6; PRDX5; BIRC3; PTTG1
GO:0042626	Atpase activity, coupled to transmembrane movement of substances	114	14	3.453924	4.053361	8.94E-06	8.37E-04	ABCB1; ATP2A3; ABCB6; ABCC1; ANXA5; ABCD3; ABCC5; ATP13A1; ABCC6; ATP13A2; ATP6V1G1; ATP2B4; ATP2B1; ATP6V1C2
GO:0016462	Pyrophosphatase activity	891	51	26.99514	1.889229	9.37E-06	8.37E-04	RAB2B; RAP2B; SEPT6; LONP2; LONP1; DYNLT1; VWA8; GNB5; GBP1; ABCB1; ATP2A3; EEF2; DYNLL1; PIN1; CLU; ABCB6; ABCC1; ANXA5; ABCD3; GNB2; ABCC5; ATP13A1; GINS4; ABCC6; SWSAP1; RAP2C; ATP13A2; DYNLL2; MCM5; CHD1; RRAS; BTAF1; APPBP2; RFC1; RAB12; UPF1; ANXA1; ATP6V1G1; ATP2B4; ARHGDIB; ARL4D; RAB17; BNIP2; RAB1A; ATP2B1; ATP6V1C2; RAB27A; RAB8B; TUBB2A; ARF5; RFC4
GO:0004857	Enzyme inhibitor activity	360	27	10.90713	2.475446	1.51E-05	0.001249	A2M; CASP3; SERPINB9; CSTA; BIRC2; TRIB3; XIAP; TNFAIP8; ANXA5; TIMP2; RPS6KA3; SERPINE2; RTKN; BST2; BIRC6; ANXA4; ANXA1; PRDX5; ATP2B4; SERPINE1; BIRC3; TIMP1; C5; AGT; PARP9; SERPINF1; PTTG1

GO:0004033	Aldo-keto reductase (NADP) activity	28	7	0.848332	8.251485	1.53E-05	0.001249	AKR1A1; AKR1B1; AKR7A2; RDH10; RDH11; DHRS3; RDH14
GO:0015405	P-P-bond-hydrolysis-driven transmembrane transporter activity	121	14	3.666007	3.818869	1.79E-05	0.001396	ABCB1; ATP2A3; ABCB6; ABCC1; ANXA5; ABCD3; ABCC5; ATP13A1; ABCC6; ATP13A2; ATP6V1G1; ATP2B4; ATP2B1; ATP6V1C2
GO:0042803	Protein homodimerization activity	841	48	25.48026	1.883811	1.87E-05	0.001406	SMAD4; GADD45A; SLC8B1; PECAM1; NFKB1; COMMD1; GDF15; SOD1; AIMP1; GBP1; ACAT1; BCL2; ACTN1; CRYL1; CUL3; RELA; S100A6; DYNLL1; DAPK3; DDIT3; HMOX1; MCL1; BAX; ABCD3; EPRS; CEBPE; CCL5; SLC11A1; JUN; QDPR; PYCARD; NR4A3; CEBPB; MGST1; FMR1; BCL2A1; DYNLL2; BST2; ANXA1; SCARB1; SNX2; RAB11FIP4; GSTZ1; PTPRC; GSTM4; BNIP3; ATF3; HMGCR
GO:0015399	Primary active transmembrane transporter activity	122	14	3.696304	3.787567	1.96E-05	0.001416	ABCB1; ATP2A3; ABCB6; ABCC1; ANXA5; ABCD3; ABCC5; ATP13A1; ABCC6; ATP13A2; ATP6V1G1; ATP2B4; ATP2B1; ATP6V1C2
GO:0002020	Protease binding	124	14	3.756899	3.726477	2.36E-05	0.001641	A2M; LONP2; CASP3; SERPINB9; CSTA; BCL2; F3; AMFR; TIMP2; PYCARD; TNF; SERPINE1; TIMP1; GSK3B
GO:0016830	Carbon-carbon lyase activity	53	9	1.605772	5.604782	2.71E-05	0.001816	ACAT1; FAHD1; CSAD; SGPL1; SHMT2; AMD1; PCK2; ALDOC; CRY1
GO:0019900	Kinase binding	711	42	21.54158	1.949718	2.89E-05	0.00182	PER1; GADD45A; MICAL1; RPS6; GLRX3; TRIB3; CCNE1; RELA; EEF2; CAV1; DUSP1; EMP2; PIK3IP1; PIN1; ATG13; HSF1; MAPKAPK2; CDC37; ANXA5; ATF5; RPS6KA3; NR4A3; CEP152; MAPKAPK3; CEBPB; MAPK14; FGR; MVP; DUSP10; RELB; C1QBP; ATP2B4; ARHGEF7; EIF3A; RB1; PTPRC; GSK3B; GSTP1; CRY1; CCND3; PTPN2; TNIP1

GO:0001012	RNA polymerase II regulatory region DNA binding	735	43	22.26872	1.93096	2.91E-05	0.00182	SMAD4; PER1; SMAD5; GADD45A; NFE2L1; NFKB1; ETS1; ACTL6A; SP3; PURA; IRF8; LYL1; ETV5; SOX4; RELA; ETS2; DDIT3; HSF1; IRF1; KLF4; ARX; FOS; SSBP3; CEBPE; JUN; ATF5; NR4A3; RFX3; TNF; GATA2; CEBPB; ETV3; RXRA; BARX1; RELB; SSBP2; ATF6B; XBP1; RB1; PPARD; SATB1; CRY1; ATF3
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DEG, differentially expressed gene; DF, diabetic foot; LOT, local oxygen therapy; FDR, false discovery rate.