

GeDiPNet Cluster 444 -- Enriched Pathways

Pathway enrichment: KEGG + Reactome, upper-tail hypergeometric test, Benjamini-Hochberg FDR-corrected. Fold enrichment = (overlap / cluster gene count) / (pathway gene count / universe size). Top 15 pathways per cluster by q-value. See [scripts/build_cluster_enrichment.php](scripts/build_cluster_enrichment.php) on gedipnet.bicnirrh.res.in. Data as of: 2026-10-20 03:30:09. · Rows: 15 · Generated: 2026-10-20 00:03:17

Pathway	Source	Overlap Genes	Overlap Gene Names	Pathway Gene Count	Cluster Gene Count	Fold Enrichment	P-value	FDR Q-value
Autoimmune thyroid disease	KEGG	24	TSHR, CD40, CD40LG, CTLA4, HLA-B, HLA-DPA1, HLA-DQA1, HLA-DQB1, HLA-DRB1, HLA-DRB3, IL10, IL2	54	259	20.61	2.766e-26	5.530e-23
Allograft rejection	KEGG	21	CD40, CD40LG, HLA-B, HLA-DPA1, HLA-DQA1, HLA-DQB1, HLA-DRB1, HLA-DRB3, IFNG, IL10, IL2, IL4	39	259	24.97	1.995e-25	3.450e-22
Inflammatory bowel disease	KEGG	25	HLA-DPA1, HLA-DQA1, HLA-DQB1, HLA-DRB1, HLA-DRB3, IFNG, IL10, IL13, IL17A, IL1B, IL2, IL23R	66	259	17.56	3.297e-25	5.550e-22
Type I diabetes mellitus	KEGG	20	HLA-B, HLA-DPA1, HLA-DQA1, HLA-DQB1, HLA-DRB1, HLA-DRB3, IFNG, IL1B, IL2, LTA, TNF, HLA-C	44	259	21.08	2.518e-22	2.837e-19
Graft-versus-host disease	KEGG	20	HLA-B, HLA-DPA1, HLA-DQA1, HLA-DQB1, HLA-DRB1, HLA-DRB3, IFNG, IL1B, IL2, IL6, TNF, HLA-C	45	259	20.61	4.446e-22	4.780e-19
Rheumatoid arthritis	KEGG	25	CTLA4, HLA-DPA1, HLA-DQA1, HLA-DQB1, HLA-DRB1, HLA-DRB3, ICAM1, IFNG, IL17A, IL1B, IL6, TGFB1	95	259	12.20	1.007e-20	8.475e-18
Asthma	KEGG	15	CD40, CD40LG, HLA-DPA1, HLA-DQA1, HLA-DQB1, HLA-DRB1, HLA-DRB3, IL10, IL13, IL3, IL4, TNF	32	259	21.74	2.762e-17	1.309e-14
Th17 cell differentiation	KEGG	23	CD4, HLA-DPA1, HLA-DQA1, HLA-DQB1, HLA-DRB1, HLA-DRB3, IFNG, IL17A, IL1B, IL2, IL23R, IL2RA	109	259	9.78	7.914e-17	3.378e-14
Intestinal immune network for IgA production	KEGG	17	CD40, CD40LG, HLA-DPA1, HLA-DQA1, HLA-DQB1, HLA-DRB1, HLA-DRB3, ICOS, IL10, IL2, IL4, IL6	50	259	15.77	1.456e-16	5.878e-14
Interleukin-4 and Interleukin-13 signaling	Reactome	20	ICAM1, IL10, IL13, IL17A, IL1B, IL23R, IL4, IL6, IL6R, TGFB1, TNF, TP53	108	259	8.59	1.228e-13	2.831e-11
Herpes simplex virus 1 infection	KEGG	25	HLA-B, HLA-DPA1, HLA-DQA1, HLA-DQB1, HLA-DRB1, HLA-DRB3, IFIH1, IFNG, IL1B, IL6, LTA, TNF	182	259	6.37	1.255e-13	2.867e-11
Phosphorylation of CD3 and TCR zeta chains	Reactome	11	CD4, HLA-DPA1, HLA-DQA1, HLA-DQB1, HLA-DRB1, HLA-DRB3, PTPN22, HLA-DPB1, HLA-DRA, HLA-DRB5, PTPRC	22	259	23.19	2.172e-13	4.719e-11
Hematopoietic cell lineage	KEGG	19	CD4, HLA-DPA1, HLA-DQA1, HLA-DQB1, HLA-DRB1, HLA-DRB3, IL1B, IL2RA, IL3, IL4, IL6, IL6R	100	259	8.81	3.158e-13	6.591e-11
Leishmaniasis	KEGG	17	HLA-DPA1, HLA-DQA1, HLA-DQB1, HLA-DRB1, HLA-DRB3, IFNG, IL10, IL1B, IL4, TGFB1, TNF, HLA-DPB1	78	259	10.11	5.410e-13	1.095e-10
Translocation of ZAP-70 to Immunological synapse	Reactome	10	CD4, HLA-DPA1, HLA-DQA1, HLA-DQB1, HLA-DRB1, HLA-DRB3, PTPN22, HLA-DPB1, HLA-DRA, HLA-DRB5	19	259	24.41	1.425e-12	2.617e-10