

GeDiPNet Cluster 5 -- 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 on gedipnet.bicnirrh.res.in. Data as of: 2026-10-07 03:30:09. · Rows: 15 · Generated: 2026-10-07 01:31:55

Pathway	Source	Overlap Genes	Overlap Gene Names	Pathway Gene Count	Cluster Gene Count	Fold Enrichment	P-value	FDR Q-value
N-Glycan biosynthesis	KEGG	30	ALG11, ALG12, ALG1, ALG2, ALG3, ALG6, ALG8, ALG9, B4GALT1, ALG10, ALG13, ALG14	55	147	44.56	4.510e-44	3.832e-40
Various types of N-glycan biosynthesis	KEGG	19	ALG11, ALG12, ALG1, ALG2, ALG3, ALG9, B4GALT1, ALG13, ALG14, DDOST, MAGT1, MAN2A2	43	147	36.10	8.772e-26	1.762e-22
Biosynthesis of the N-glycan precursor (dolichol lipid-linked oligosaccharide, LLO) and transfer to a nascent protein	Reactome	11	ALG12, ALG1, ALG2, ALG3, ALG6, ALG8, ALG9, ALG13, ALG14, MPDU1, DPAGT1	11	147	81.70	6.324e-22	7.127e-19
Intra-Golgi traffic	Reactome	10	COG1, COG2, COG4, COG5, COG6, COG7, COG8, COG3, MAN2A2, STX5	44	147	18.57	9.641e-11	1.392e-8
Metabolic pathways	KEGG	48	A4GALT, ALG11, ALG12, ALG1, ALG2, ALG3, ALG6, ALG8, ALG9, B3GALT6, B4GALT1, ALG10	1563	147	2.51	4.915e-10	6.019e-8
Retrograde transport at the Trans-Golgi-Network	Reactome	8	COG1, COG2, COG4, COG5, COG6, COG7, COG8, COG3	46	147	14.21	7.328e-8	4.980e-6
Asparagine N-linked glycosylation	Reactome	5	DDOST, MAGT1, TUSC3, STT3A, RPN2	11	147	37.14	1.117e-7	7.209e-6
Biosynthesis of nucleotide sugars	KEGG	7	GFUS, PGM1, PMM2, MPI, FCSK, GFPT1, GMPPB	37	147	15.46	2.700e-7	1.558e-5
Synthesis of Dolichyl-phosphate	Reactome	4	SRD5A3, NUS1, DHDDS, DOLK	6	147	54.47	3.171e-7	1.798e-5
COPI-mediated anterograde transport	Reactome	10	COG1, COG2, COG4, COG5, COG6, COG7, COG8, COG3, STX5, TUBA1A	101	147	8.09	4.121e-7	2.263e-5
Protein processing in endoplasmic reticulum	KEGG	12	DDOST, MAGT1, SSR3, SSR4, TUSC3, STT3A, STT3B, EDEM3, MOGS, RPN2, UGGT1, MAN1B1	171	147	5.73	1.197e-6	5.709e-5
Synthesis of glycosylphosphatidylinositol (GPI)	Reactome	5	DPM2, PIGF, PIGM, PIGC, PIGW	17	147	24.03	1.410e-6	6.584e-5
Synthesis of dolichyl-phosphate mannose	Reactome	3	DPM2, DPM1, DPM3	3	147	81.70	1.797e-6	8.038e-5
Defective DPM1 causes DPM1-CDG (CDG-1e)	Reactome	3	DPM2, DPM1, DPM3	3	147	81.70	1.797e-6	8.038e-5
Defective DPM3 causes DPM3-CDG (CDG-1o)	Reactome	3	DPM2, DPM1, DPM3	3	147	81.70	1.797e-6	8.038e-5