

GeDiPNet Cluster 308 -- 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 10:43:07

Pathway	Source	Overlap Genes	Overlap Gene Names	Pathway Gene Count	Cluster Gene Count	Fold Enrichment	P-value	FDR Q-value
Collagen biosynthesis and modifying enzymes	Reactome	10	COL11A1, COL9A1, COL9A2, COL9A3, COL1A1, COL2A1, COL11A2, P3H2, PLOD3, COL4A3	67	27	66.39	1.134e-16	5.070e-14
Collagen chain trimerization	Reactome	8	COL11A1, COL9A1, COL9A2, COL9A3, COL1A1, COL2A1, COL11A2, COL4A3	44	27	80.88	3.492e-14	9.714e-12
Assembly of collagen fibrils and other multimeric structures	Reactome	8	COL11A1, COL9A1, COL9A2, COL9A3, COL1A1, COL2A1, COL11A2, COL4A3	51	27	69.77	1.242e-13	3.104e-11
ECM proteoglycans	Reactome	8	COL9A1, COL9A2, COL9A3, COMP, COL1A1, MATN3, COL2A1, VCAN	51	27	69.77	1.242e-13	3.104e-11
Protein digestion and absorption	KEGG	9	COL11A1, COL9A1, COL9A2, COL9A3, COL1A1, COL2A1, COL11A2, KCNJ13, COL4A3	103	27	38.87	7.251e-13	1.621e-10
Integrin cell surface interactions	Reactome	7	COL9A1, COL9A2, COL9A3, COMP, COL1A1, COL2A1, COL4A3	81	27	38.44	3.882e-10	4.856e-8
ECM-receptor interaction	KEGG	7	COL9A1, COL9A2, COL9A3, COMP, COL1A1, COL2A1, COL4A3	89	27	34.99	7.603e-10	8.765e-8
NCAM1 interactions	Reactome	5	COL9A1, COL9A2, COL9A3, COL2A1, COL4A3	21	27	105.91	7.705e-10	8.865e-8
Cytoskeleton in muscle cells	KEGG	9	COL11A1, COL9A1, COL9A2, COL9A3, COMP, COL1A1, COL11A2, VCAN, COL4A3	232	27	17.26	1.111e-9	1.236e-7
Non-integrin membrane-ECM interactions	Reactome	5	COL11A1, COL1A1, COL2A1, COL11A2, COL4A3	24	27	92.67	1.602e-9	1.693e-7
Signaling by PDGF	Reactome	5	COL9A1, COL9A2, COL9A3, COL2A1, COL4A3	33	27	67.40	8.823e-9	7.840e-7
Collagen degradation	Reactome	5	COL11A1, COL1A1, COL2A1, COL11A2, COL4A3	52	27	42.77	9.385e-8	6.199e-6
Focal adhesion	KEGG	7	COL9A1, COL9A2, COL9A3, COMP, COL1A1, COL2A1, COL4A3	203	27	15.34	2.369e-7	1.385e-5
MET activates PTK2 signaling	Reactome	4	COL11A1, COL1A1, COL2A1, COL11A2	30	27	59.31	5.334e-7	2.835e-5
Extracellular matrix organization	Reactome	3	COL1A1, COL2A1, COL4A3	15	27	88.96	4.528e-6	1.754e-4