

GeDiPNet Cluster 12 -- 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: 2026-10-08 03:30:07. · Rows: 15 · Generated: 2026-10-08 03:12:02

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	26	COL3A1, COL1A1, COL5A1, COL5A2, COL1A2, COL2A1, PLOD1, COL11A1, COL11A2, COL9A1, COL9A2, COL9A3	67	476	9.79	1.084e-19	7.205e-17
Assembly of collagen fibrils and other multimeric structures	Reactome	22	MMP13, COL3A1, MMP9, COL1A1, COL5A1, COL5A2, COL1A2, COL2A1, COL11A1, COL11A2, COL9A1, COL9A2	51	476	10.88	4.790e-18	2.498e-15
Collagen chain trimerization	Reactome	20	COL3A1, COL1A1, COL5A1, COL5A2, COL1A2, COL2A1, COL11A1, COL11A2, COL9A1, COL9A2, COL9A3, COL12A1	44	476	11.47	4.505e-17	1.908e-14
Collagen degradation	Reactome	21	MMP1, MMP13, COL3A1, MMP9, MMP14, MMP2, COL1A1, COL5A1, COL5A2, COL1A2, COL2A1, COL11A1	52	476	10.19	1.442e-16	5.695e-14
Non-integrin membrane-ECM interactions	Reactome	14	COL3A1, COL1A1, COL5A1, COL5A2, COL1A2, COL2A1, COL11A1, COL11A2, DDR2, HSPG2, COL4A1, COL4A3	24	476	14.72	2.667e-14	7.165e-12
ECM proteoglycans	Reactome	18	COL3A1, COL1A1, COL5A1, COL5A2, TNXB, COL1A2, COL2A1, BGN, COL9A1, COL9A2, COL9A3, COMP	51	476	8.91	3.524e-13	7.713e-11
NCAM1 interactions	Reactome	12	COL3A1, COL5A1, COL5A2, COL2A1, COL9A1, COL9A2, COL9A3, COL4A1, COL4A3, COL5A3, COL6A1, COL4A4	21	476	14.42	2.784e-12	5.236e-10
Integrin cell surface interactions	Reactome	21	FBN1, COL3A1, COL1A1, COL5A1, COL5A2, COL1A2, COL2A1, COL9A1, COL9A2, COL9A3, COMP, HSPG2	81	476	6.54	3.514e-12	6.493e-10
Protein digestion and absorption	KEGG	23	COL3A1, ELN, ACE2, COL1A1, COL5A1, COL5A2, COL1A2, COL2A1, COL11A1, COL11A2, COL9A1, COL9A2	103	476	5.63	9.473e-12	1.630e-9
Extracellular matrix organization	Reactome	10	COL3A1, COL1A1, COL5A1, COL5A2, COL1A2, COL2A1, COL4A1, COL4A3, COL5A3, COL4A4	15	476	16.82	2.190e-11	3.487e-9
MET activates PTK2 signaling	Reactome	13	COL3A1, COL1A1, COL5A1, COL5A2, COL1A2, COL2A1, COL11A1, COL11A2, COL5A3, HGF, LAMC1, LAMA2	30	476	10.93	3.273e-11	5.038e-9
AGE-RAGE signaling pathway in diabetic complications	KEGG	22	IL6, PLCE1, SMAD3, AGT, COL3A1, TGFB2, TGFB1, TGFB2, AGTR1, MMP2, COL1A1, COL1A2	101	476	5.50	4.546e-11	6.708e-9
Signaling by PDGF	Reactome	13	COL3A1, COL5A1, COL5A2, COL2A1, COL9A1, COL9A2, COL9A3, THBS2, COL4A1, COL4A3, COL5A3, COL6A1	33	476	9.94	1.404e-10	1.859e-8
Molecules associated with elastic fibres	Reactome	13	FBN1, EFEMP2, ELN, TGFB2, FBN2, MFAP5, EFEMP1, EMILIN1, LTBP3, TGFB3, BMP7, LTBP2	38	476	8.63	1.106e-9	1.174e-7
Focal adhesion	KEGG	28	FLNA, MYLK, COL1A1, TNXB, COL1A2, COL2A1, COL9A1, COL9A2, COL9A3, COMP, FLNB, THBS2	203	476	3.48	7.659e-9	6.687e-7