

GeDiPNet Cluster 64 -- 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 16:53:17

Pathway	Source	Overlap Genes	Overlap Gene Names	Pathway Gene Count	Cluster Gene Count	Fold Enrichment	P-value	FDR Q-value
Relaxin signaling pathway	KEGG	8	COL1A1, TGFB1, TGFB2, MMP2, MMP9, COL3A1, GNG2, MMP1	130	82	9.01	2.764e-6	1.161e-4
AGE-RAGE signaling pathway in diabetic complications	KEGG	7	AGT, COL1A1, SMAD3, TGFB1, TGFB2, MMP2, COL3A1	101	82	10.15	5.473e-6	2.043e-4
SMAD2/3 Phosphorylation Motif Mutants in Cancer	Reactome	3	SMAD3, TGFB1, TGFB2	6	82	73.23	6.046e-6	2.204e-4
TGFB1 KD Mutants in Cancer	Reactome	3	SMAD3, TGFB1, TGFB2	6	82	73.23	6.046e-6	2.204e-4
Collagen degradation	Reactome	5	COL1A1, MMP2, MMP9, COL3A1, MMP1	52	82	14.08	2.651e-5	7.509e-4
TGF-beta receptor signaling activates SMADs	Reactome	3	SMAD3, TGFB1, TGFB2	12	82	36.62	6.456e-5	1.570e-3
Activation of Matrix Metalloproteinases	Reactome	4	MMP2, MMP9, TIMP1, MMP1	33	82	17.75	7.104e-5	1.697e-3
Diabetic cardiomyopathy	KEGG	8	AGT, COL1A1, SMAD3, TGFB1, TGFB2, MMP2, MMP9, COL3A1	205	82	5.72	7.592e-5	1.791e-3
TGF-beta signaling pathway	KEGG	6	SMAD3, TGFB1, TGFB2, FBN1, SMAD6, SKI	108	82	8.14	9.252e-5	2.106e-3
Degradation of the extracellular matrix	Reactome	5	FBN1, MMP2, MMP9, ELN, MMP1	70	82	10.46	1.121e-4	2.461e-3
Molecules associated with elastic fibres	Reactome	4	FBN1, EFEMP2, EMILIN1, ELN	38	82	15.42	1.249e-4	2.681e-3
TGFB2 Kinase Domain Mutants in Cancer	Reactome	2	TGFB1, TGFB2	3	82	97.64	1.375e-4	2.901e-3
Downregulation of TGF-beta receptor signaling	Reactome	3	SMAD3, TGFB1, TGFB2	16	82	27.46	1.611e-4	3.294e-3
Integrin cell surface interactions	Reactome	5	COL1A1, FBN1, COL3A1, COL16A1, TNC	81	82	9.04	2.239e-4	4.281e-3
Elastic fibre formation	Reactome	3	FBN1, LOX, ELN	18	82	24.41	2.325e-4	4.402e-3