

GeDiPNet Cluster 609 -- 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: 2026-10-20 03:30:09. · Rows: 15 · Generated: 2026-10-20 00:02:40

| Pathway                                                | Source   | Overlap Genes | Overlap Gene Names | Pathway Gene Count | Cluster Gene Count | Fold Enrichment | P-value  | FDR Q-value |
|--------------------------------------------------------|----------|---------------|--------------------|--------------------|--------------------|-----------------|----------|-------------|
| Presynaptic depolarization and calcium channel opening | Reactome | 1             | CACNA2D1           | 12                 | 5                  | 200.17          | 4.987e-3 | 3.635e-2    |
| Class B/2 (Secretin family receptors)                  | Reactome | 1             | UCN                | 18                 | 5                  | 133.44          | 7.473e-3 | 4.730e-2    |
| Synthesis, secretion, and deacylation of Ghrelin       | Reactome | 1             | UCN                | 19                 | 5                  | 126.42          | 7.886e-3 | 4.917e-2    |
| Phase 2 - plateau phase                                | Reactome | 1             | CACNA2D1           | 25                 | 5                  | 96.08           | 1.037e-2 | 5.824e-2    |
| Phase 0 - rapid depolarisation                         | Reactome | 1             | CACNA2D1           | 44                 | 5                  | 54.59           | 1.819e-2 | 8.116e-2    |
| Peroxisomal protein import                             | Reactome | 1             | MPV17              | 63                 | 5                  | 38.13           | 2.596e-2 | 9.965e-2    |
| Peroxisome                                             | KEGG     | 1             | MPV17              | 83                 | 5                  | 28.94           | 3.409e-2 | 1.164e-1    |
| Arrhythmogenic right ventricular cardiomyopathy        | KEGG     | 1             | CACNA2D1           | 86                 | 5                  | 27.93           | 3.530e-2 | 1.185e-1    |
| Cardiac muscle contraction                             | KEGG     | 1             | CACNA2D1           | 87                 | 5                  | 27.61           | 3.570e-2 | 1.193e-1    |
| Hypertrophic cardiomyopathy                            | KEGG     | 1             | CACNA2D1           | 99                 | 5                  | 24.26           | 4.055e-2 | 1.282e-1    |
| Dilated cardiomyopathy                                 | KEGG     | 1             | CACNA2D1           | 105                | 5                  | 22.88           | 4.296e-2 | 1.328e-1    |
| Adrenergic signaling in cardiomyocytes                 | KEGG     | 1             | CACNA2D1           | 154                | 5                  | 15.60           | 6.250e-2 | 1.644e-1    |
| Oxytocin signaling pathway                             | KEGG     | 1             | CACNA2D1           | 154                | 5                  | 15.60           | 6.250e-2 | 1.644e-1    |
| Hormone signaling                                      | KEGG     | 1             | UCN                | 219                | 5                  | 10.97           | 8.792e-2 | 2.004e-1    |
| Cytoskeleton in muscle cells                           | KEGG     | 1             | TRIM54             | 232                | 5                  | 10.35           | 9.294e-2 | 2.071e-1    |