

GeDiPNet Shared-Gene Disease Pairs

Similarity: Jaccard index on shared curated genes (disease\_gdp). Significance: upper-tail hypergeometric test ( $P(X \geq k)$ ), Benjamini-Hochberg FDR-corrected across all tested pairs. Corroborated Shared Genes: count of shared genes backed by  $\geq 2$  distinct disease\_gdp.main\_source values combined across both diseases (e.g. GWAS-backed for one, ClinVar-backed for the other still counts); Shared Gene Names lists each gene's own source count in parentheses. Overlap Coefficient: shared genes / MIN(each disease's own total gene count) -- complements the Jaccard-based Similarity Score by showing how much of the SMALLER disease's entire known gene-set is covered by this pair, which Jaccard (dividing by the union) can understate. Shared Cluster: cluster id if both diseases fall in the same label-propagation cluster (scripts/build\_disease\_clusters.php), blank otherwise. See scripts/build\_related.php on gedipnet.bicnirrh.res.in. Data as of: 2026-10-10 03:00:13. Filters applied: disease name contains "immunodeficiency 73c with defective neutrophil chemotaxis and hypogammaglobulinemia" (5 matching pairs). · Rows: 5 · Generated: 2026-10-10 01:40:56

| Disease A                                                                           | Disease B                                                                           | Shared Genes | Corroborated Shared Genes | Shared Gene Names | Similarity Score | Overlap Coefficient | P-value  | FDR Q-value | Shared Cluster |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------|---------------------------|-------------------|------------------|---------------------|----------|-------------|----------------|
| Heart disease                                                                       | immunodeficiency 73c with defective neutrophil chemotaxis and hypogammaglobulinemia | 1            | 1                         | RAC2 (3)          | 0.00680          | 1.00000             | 9.482e-3 | 1.078e-2    |                |
| Immunodeficiency                                                                    | immunodeficiency 73c with defective neutrophil chemotaxis and hypogammaglobulinemia | 1            | 1                         | RAC2 (6)          | 0.00714          | 1.00000             | 9.027e-3 | 1.034e-2    |                |
| immunodeficiency 73c with defective neutrophil chemotaxis and hypogammaglobulinemia | Lymphoma                                                                            | 1            | 1                         | RAC2 (2)          | 0.01852          | 1.00000             | 3.442e-3 | 4.448e-3    |                |
| immunodeficiency 73b with defective neutrophil chemotaxis and lymphopenia           | immunodeficiency 73c with defective neutrophil chemotaxis and hypogammaglobulinemia | 1            | 0                         | RAC2 (1)          | 0.50000          | 1.00000             | 6.494e-5 | 2.331e-4    |                |
| immunodeficiency 73c with defective neutrophil chemotaxis and hypogammaglobulinemia | neutrophil immunodeficiency syndrome                                                | 1            | 0                         | RAC2 (1)          | 0.50000          | 1.00000             | 6.494e-5 | 2.331e-4    |                |