

# #105400 AMYOTROPHIC LATERAL SCLEROSIS 1; ALS1

| OMIM Gene ID | HGNC  | UniProtAC |
|--------------|-------|-----------|
| 147450       | SOD1  | P00441    |
| 162230       | NEFH  | P12036    |
| 170710       | PRPH  | P41219    |
| 601143       | DCTN1 | Q14203    |

Table 1: OMIM - UniProtAC mapping

## Legend

- N1: #input proteins associated to the significant GO term
- N2: #proteins associated to the significant GO term
- P-value: Bonferroni-corrected p-value of Fisher's exact test
- *red*: go terms not related to the input proteins
- *blue*: go terms related to the input proteins (enriched uniquely by network-based method)
- *green*: go terms ancestors of terms enriched with the standard method (enriched uniquely by network-based method)

## 1 Standard enrichment

| GO Term    | N1 | N2   | P-value     | Description                                     |
|------------|----|------|-------------|-------------------------------------------------|
| GO:0045104 | 3  | 47   | 2.85674e-06 | intermediate filament cytoskeleton organization |
| GO:0045103 | 3  | 50   | 3.4529e-06  | intermediate filament-based process             |
| GO:0060052 | 2  | 16   | 0.0003991   | neurofilament cytoskeleton organization         |
| GO:1902589 | 4  | 2159 | 0.00421817  | single-organism organelle organization          |
| GO:0006996 | 4  | 2908 | 0.0138932   | organelle organization                          |
| GO:0007017 | 3  | 992  | 0.0280403   | microtubule-based process                       |
| GO:0007010 | 3  | 1074 | 0.0355335   | cytoskeleton organization                       |
| GO:0008219 | 3  | 1106 | 0.0387832   | cell death                                      |
| GO:0016265 | 3  | 1117 | 0.039944    | death                                           |
| GO:0010970 | 2  | 164  | 0.044221    | microtubule-based transport                     |
| GO:0030705 | 2  | 173  | 0.0492079   | cytoskeleton-dependent intracellular transport  |

Table 2: Overrepresented GO terms with the standard enrichment

## 2 Network-based enrichment

| GO Term                    | N1 | N2   | P-value   | Description                           |
|----------------------------|----|------|-----------|---------------------------------------|
| <a href="#">GO:0008089</a> | 2  | 57   | 0.0120356 | anterograde axon cargo transport      |
| <a href="#">GO:0031175</a> | 3  | 614  | 0.01718   | neuron projection development         |
| <a href="#">GO:0030030</a> | 4  | 2507 | 0.0223653 | cell projection organization          |
| <a href="#">GO:0000226</a> | 3  | 828  | 0.0419788 | microtubule cytoskeleton organization |
| <a href="#">GO:0030031</a> | 3  | 845  | 0.0446037 | cell projection assembly              |
| <a href="#">GO:0008088</a> | 2  | 111  | 0.0459389 | axon cargo transport                  |

Table 3: Overrepresented terms with the network-based enrichment. Only terms not detected with the standard method.