**Supplemental Table II. g:Profiler pathway analysis** of up- and downregulated transcripts in BERKO left or right primary motor cortices compared to WT. Pathways were considered significantly enriched if -Log10 p >1.30.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|   | **Enriched pathway** |  | **Type** |  | **-Log10 p-value** |  | **Gene names** |
| **Left up** | Actin cytoskeleton |  | Cellular component |  | 2.25 |  | *Myh11, Arc, Ivns1abp, Myo1f, Tpm2, Cap1, Actg1, Wipf1* |
| **Right up** | Myelin sheath |  | Cellular component |  | 1.79 |  | *Cox5a, Cnp, Plp1, Cldn11, Mbp, Gapdh* |
| Extracellular exosome |   | Cellular component |   | 1.44 |   | *Cox5a, Icam2, Cnp, Hyal1, Atp2b1, Gpt, Igfbp6, Cpne3, Mgp, Cpne9, Rims2, Cldn11, Lat2, Osbpl1a, Nqo2, Gapdh, Rhog, Pcdhgc3* |
| **Left down** | N/A |  | N/A |  |  |  |  |
| **Right down** | N/A |  | N/A |  |  |  |  |
| **Left up or down** | N/A |  | N/A |  |  |  |  |
| **Right up or down** |  Secretion by cell |  | Biological process |  | 1.76 |  | *Mef2c, Cd34, Scamp1, Cpt1a, Rims2, Vgf, Lat2, Mbp, Gpr68, Syngr2, Gapdh, Nrxn3* |
|  Cell adhesion molecules (CAMs) |   | Kegg pathway database |   | 1.303 |   | *Icam2, Cd34, Cldn11, Nrxn3* |