

Figure 7. Hierarchical clustering of the developmental dataset.

Normalized gene expression was hierarchically clustered by similar patterns of expression, as can be seen by the hierarchical tree on the left side of the heatmap. Double gradient colour scale of the heatmap: green, 0; black, 0.63; red: 1.71. The hierarchical tree is to be read from left to right, page by page.

Figure 8. K-means clustering of the developmental dataset.

Normalized gene expression was clustered by similar patterns of expression using K-means Euclidian distance 6-18, with 1000 iterations. Clusters are sorted by K-mean 10, followed by K-mean 11, followed by K-mean 12 and so on until K-mean 18. Heatmap's 3 colour scale of gene expression data: 0.2, red; 1, white; blue, 5. Three colour scale of cluster number: red < yellow < green, for better visualization.

Figure 10. Protein localization and function determination of the developmental dataset.

Normalized expression densities were clustered with K-mean 10. Heatmap's 3 colour scale of gene expression data: 0.2, red; 1, white; blue, 5. Three colour scale of cluster number: red < yellow < green. Data is sorted by cluster number followed by gene name. Protein localization was assessed after combining the data from the different screens performed as either in the Golgi (gol), cytoplasmic (cyt), cytoskeletal (csk), in the endoplasmic reticulum (end), extracellular including cell wall (ext), mitochondrial (mit), nuclear (nuc), peroxisomal (per), on the plasma membrane (pla) or in vesicles of secretory system (ves). Moreover, when the protein was deemed in the extracellular compartment, it was found to be either GPI-anchored (anchored), secreted, single-pass transmembrane (single-pass) or multi-pass transmembrane (multi-pass). Functional assessment was grouped in six different categories: 1) axon guidance pathway and cell adhesion; 2) synapse; 3) receptor tyrosine kinases and their ligands, and patterning; 4) neurotransmission pathway (GPCRs, ion channels, gap junctions); 5) chromatin and transcription factor activity; and 6) other (cytoskeleton, extracellular matrix, myelin, metabolic enzymes and signal transduction) and unannotated. Three colour scale of group number: red < yellow < green, for better visualization.