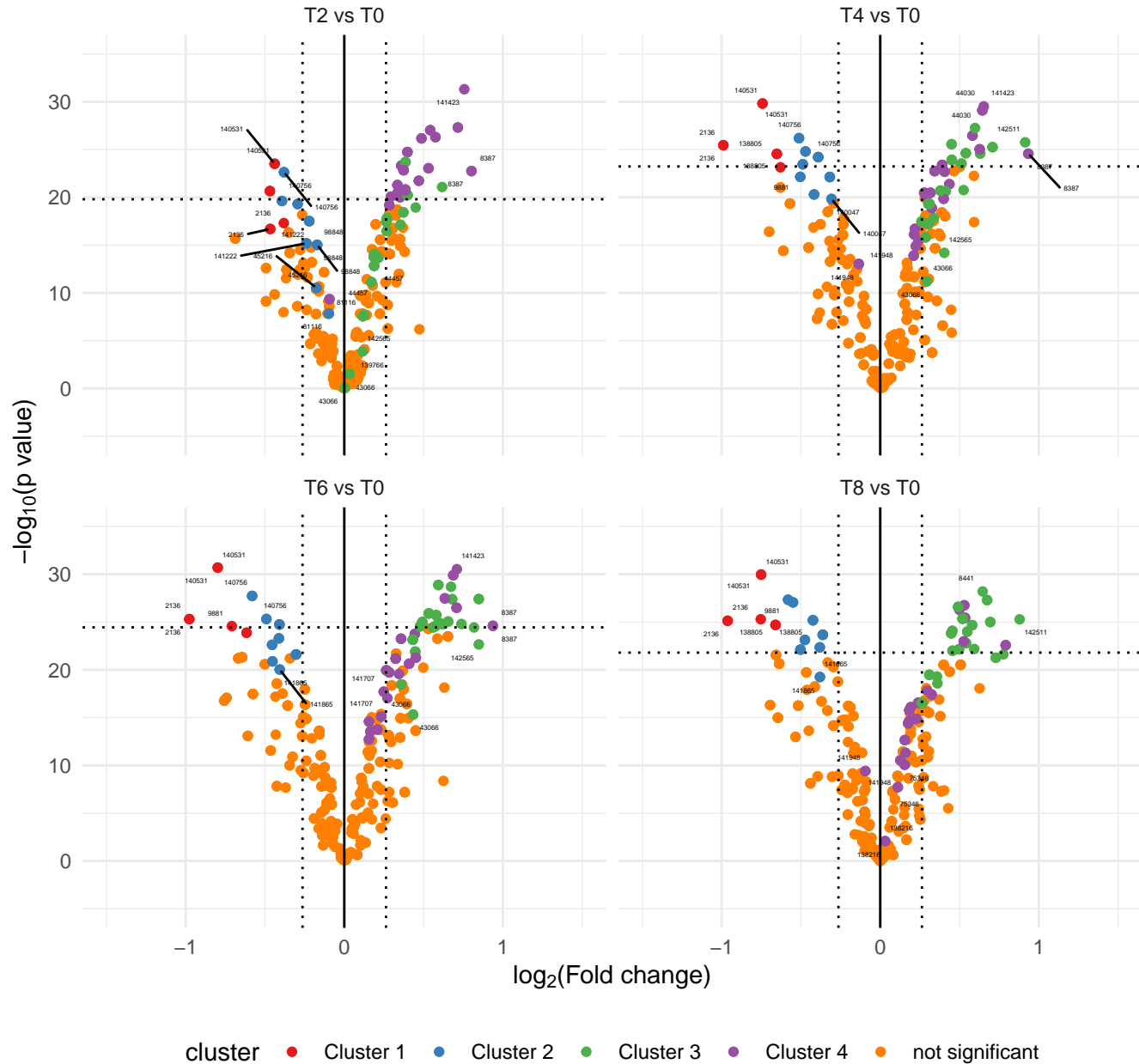
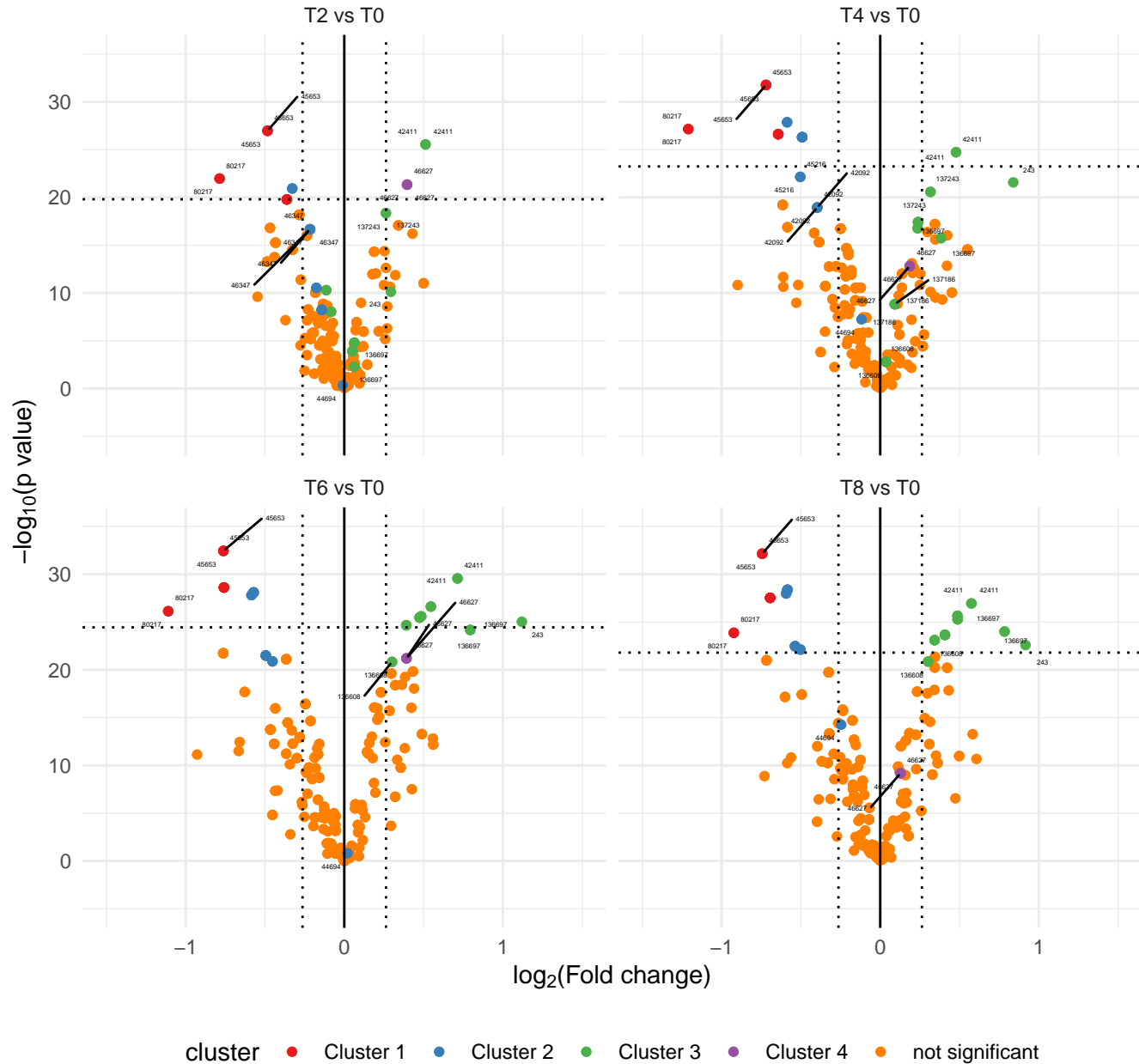


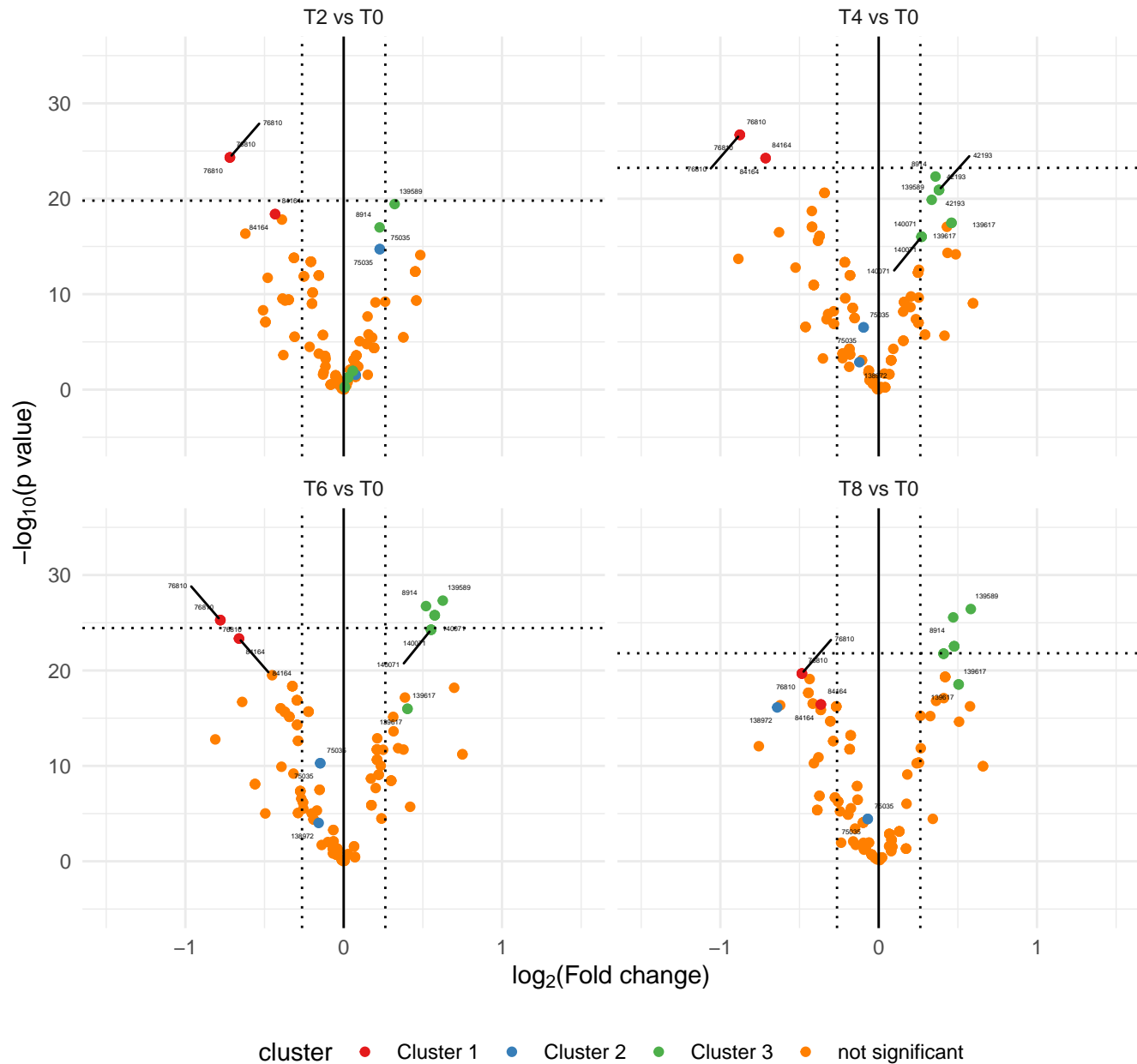
Amino acid transport and metabolism



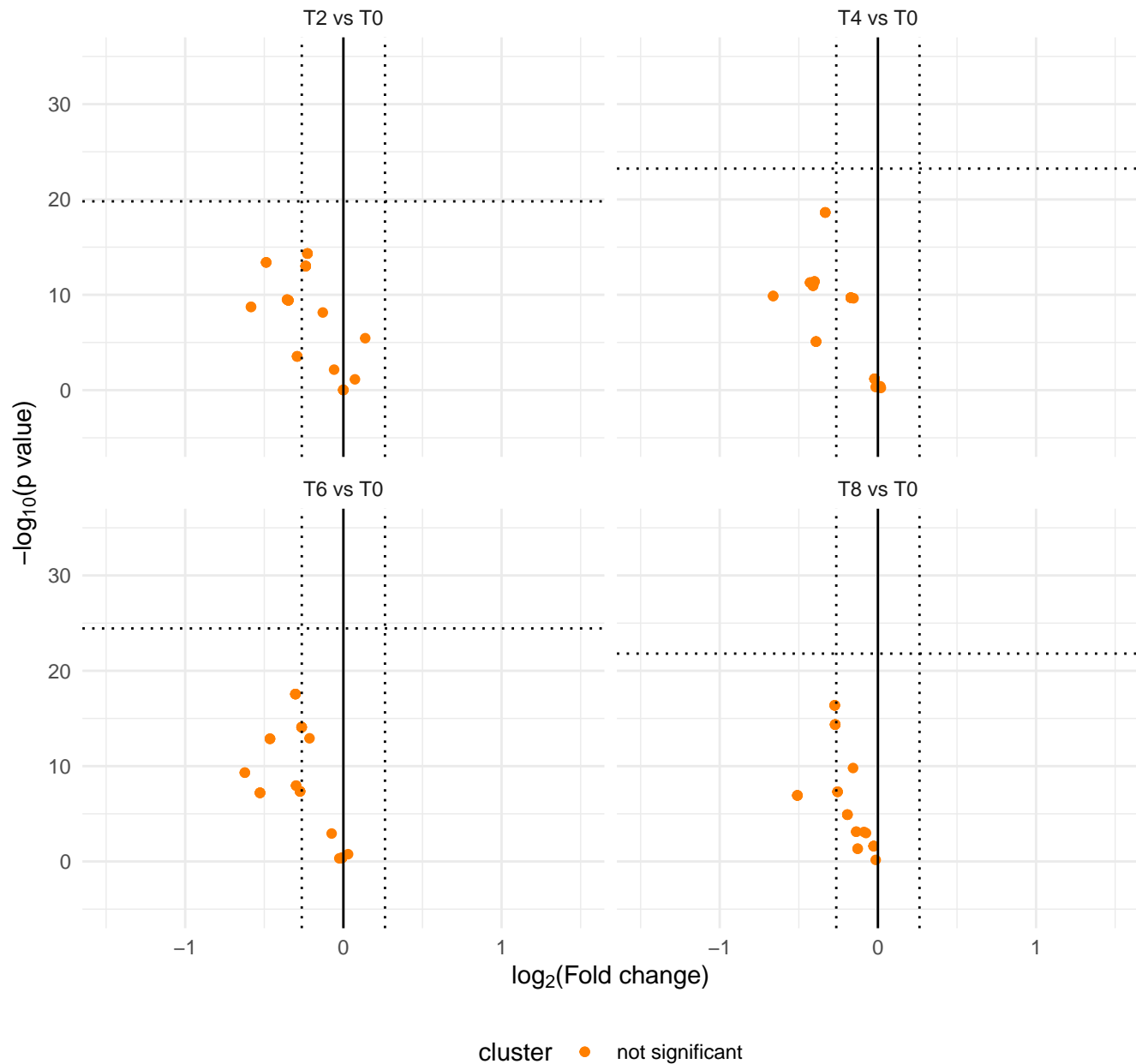
Carbohydrate transport and metabolism



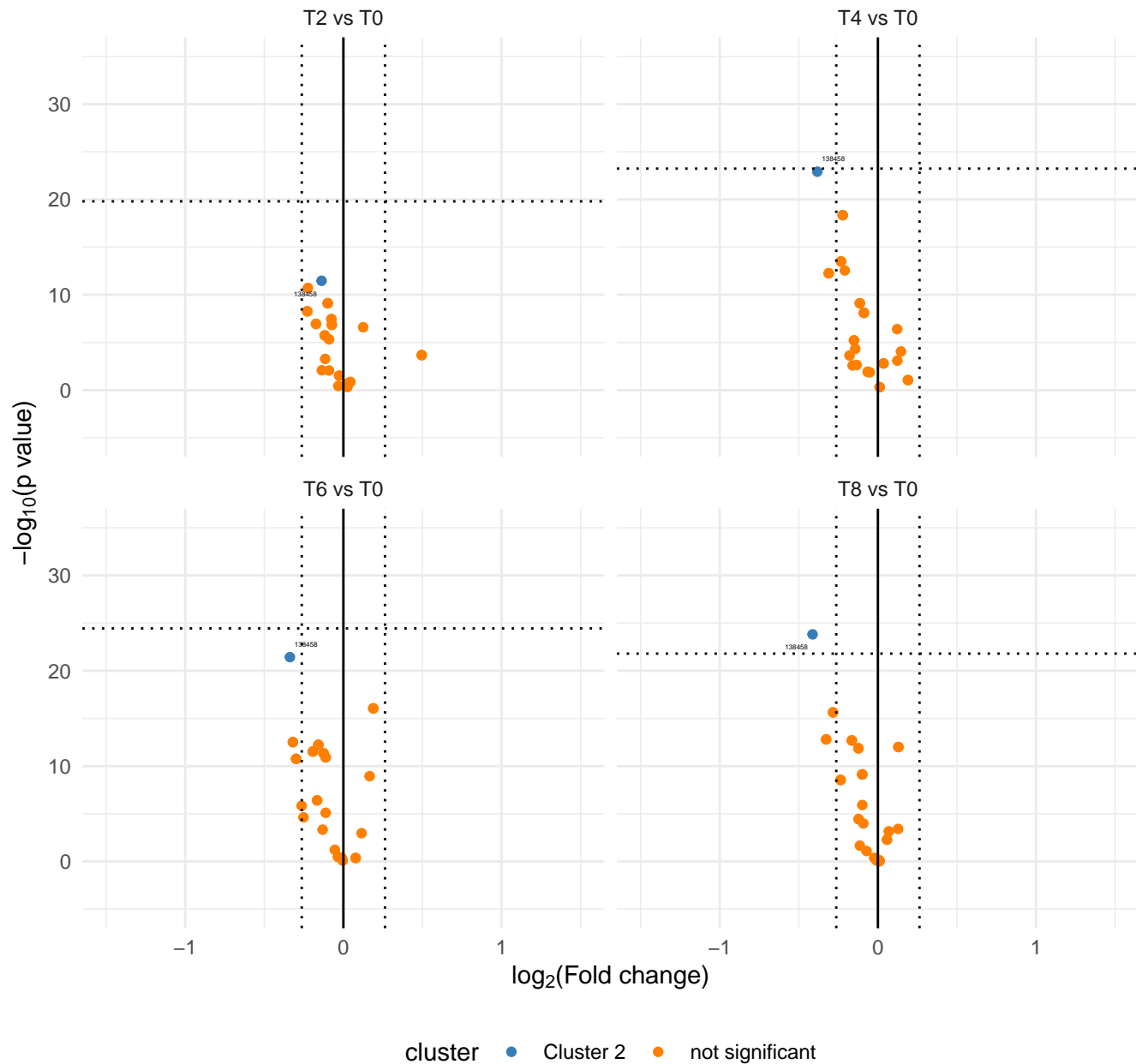
Cell cycle control, cell division, chromosome partitioning



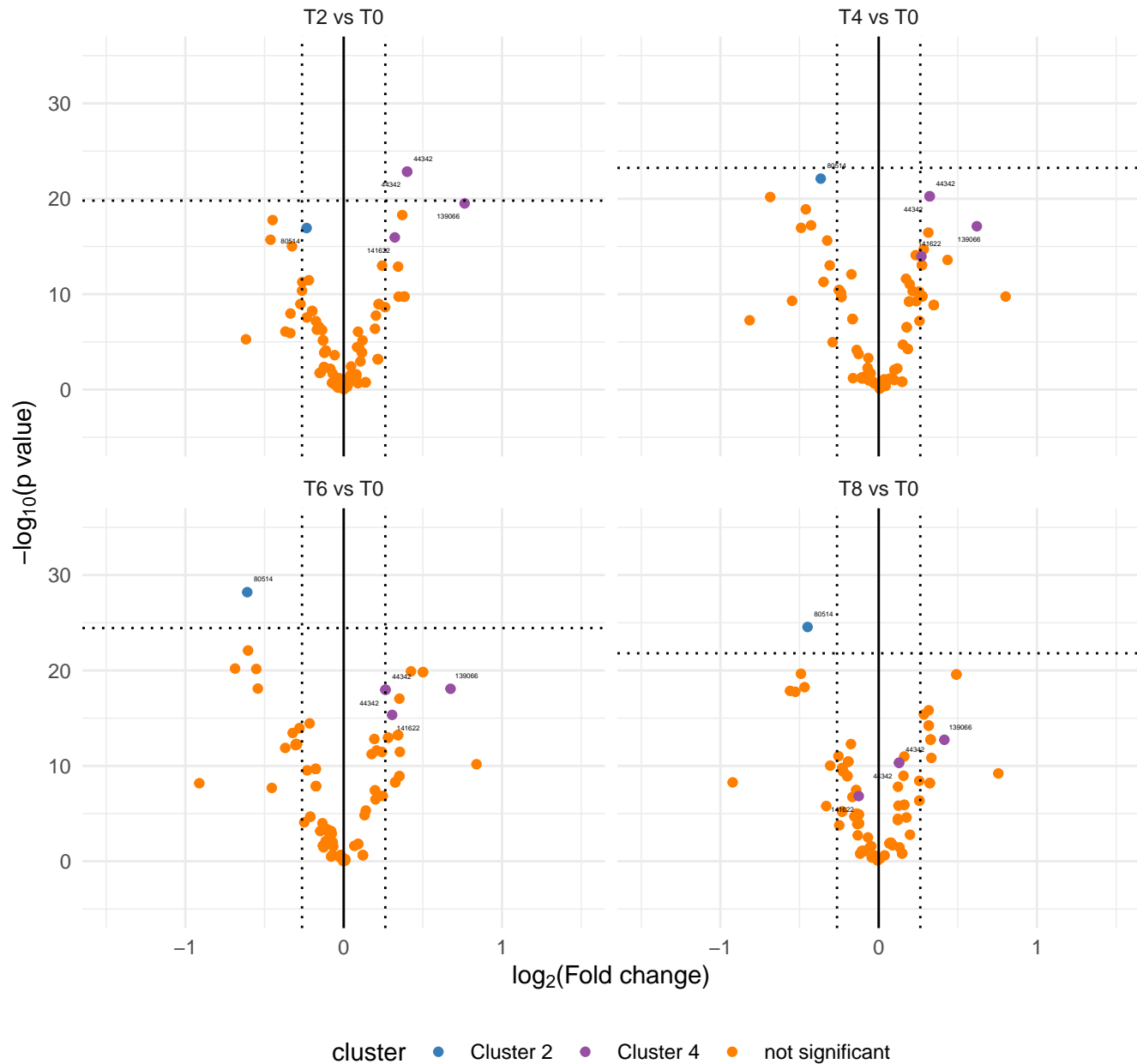
Cell motility



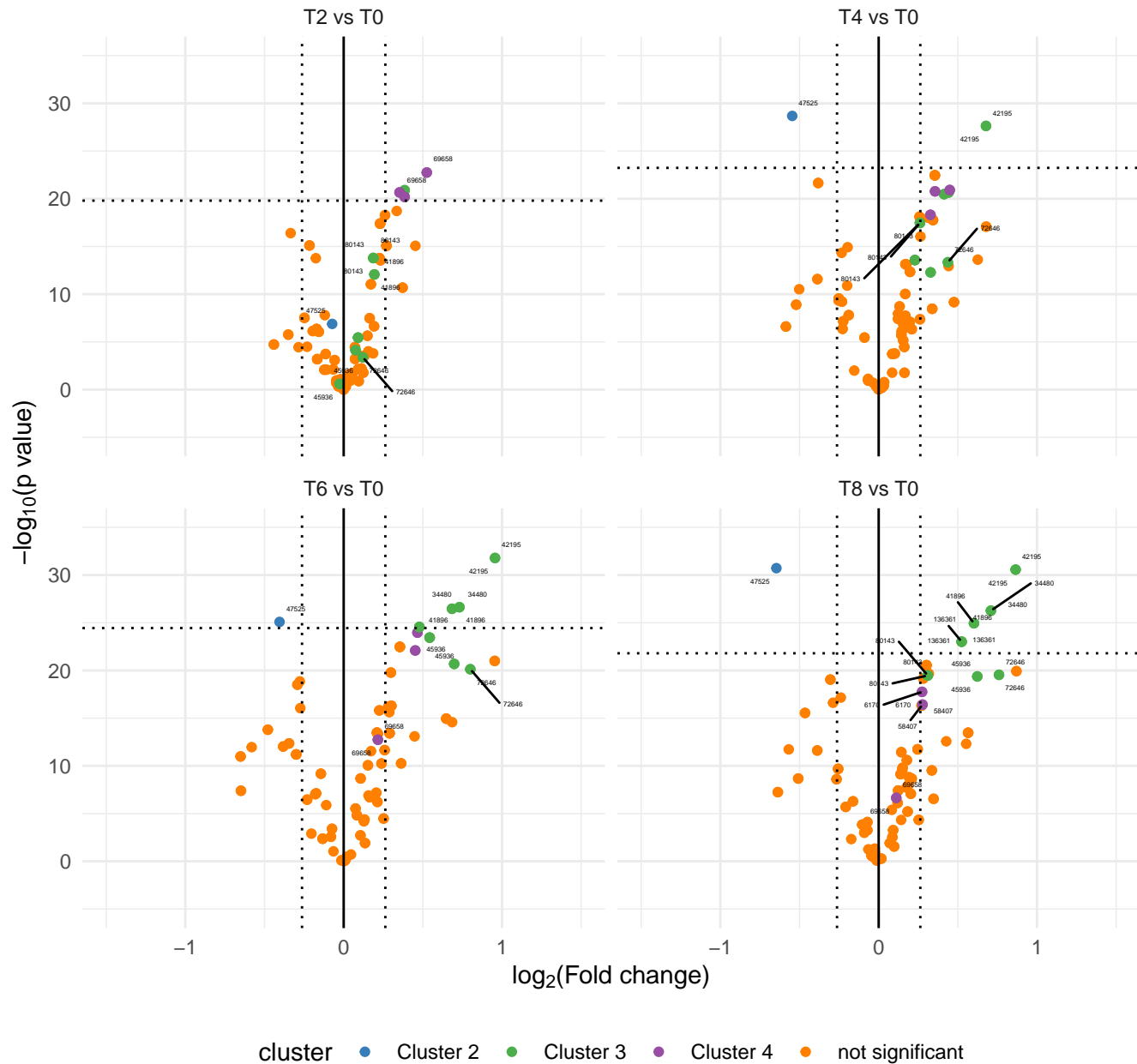
Cell wall/membrane/envelope biogenesis



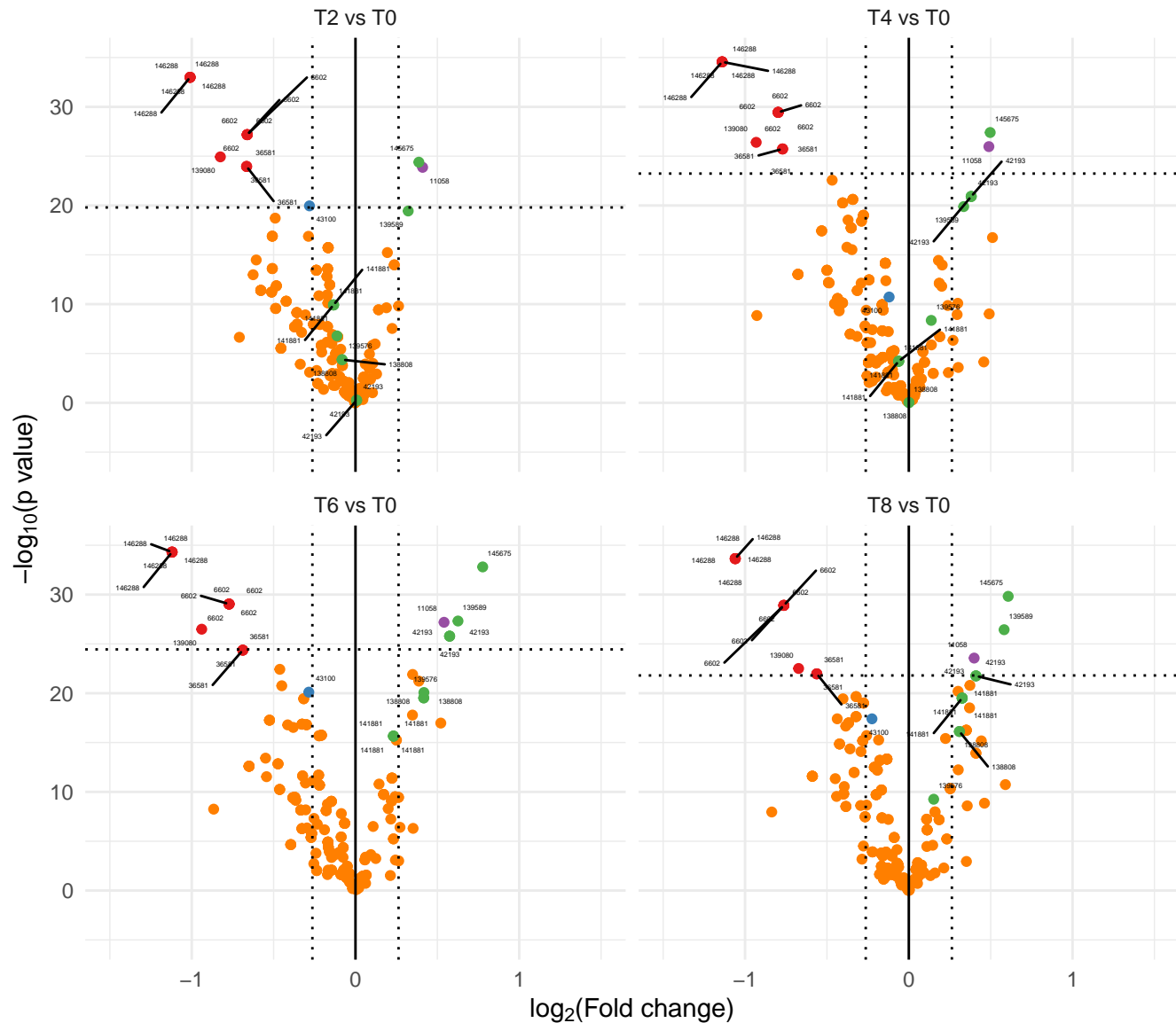
Chromatin structure and dynamics



Coenzyme transport and metabolism

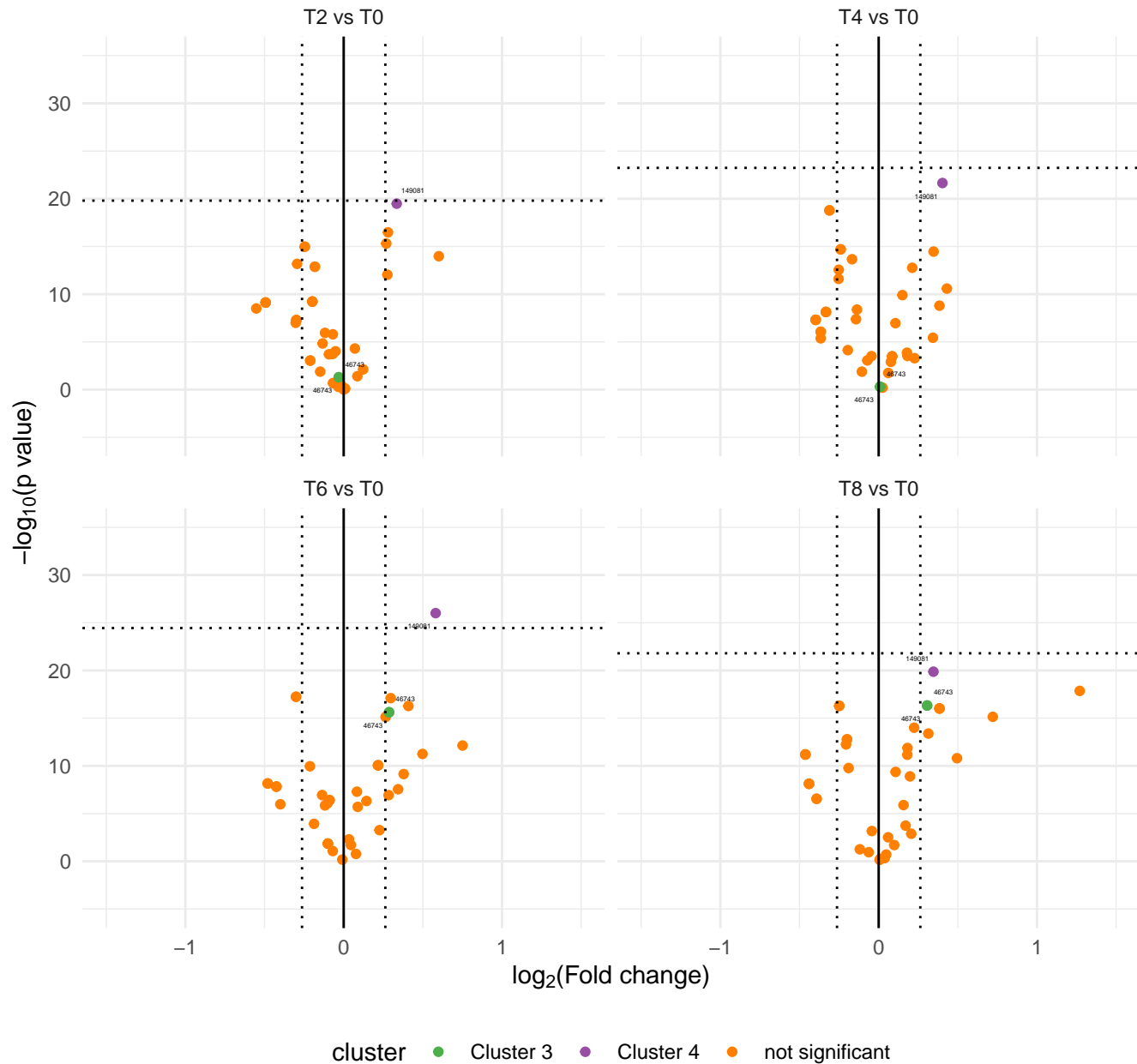


Cytoskeleton

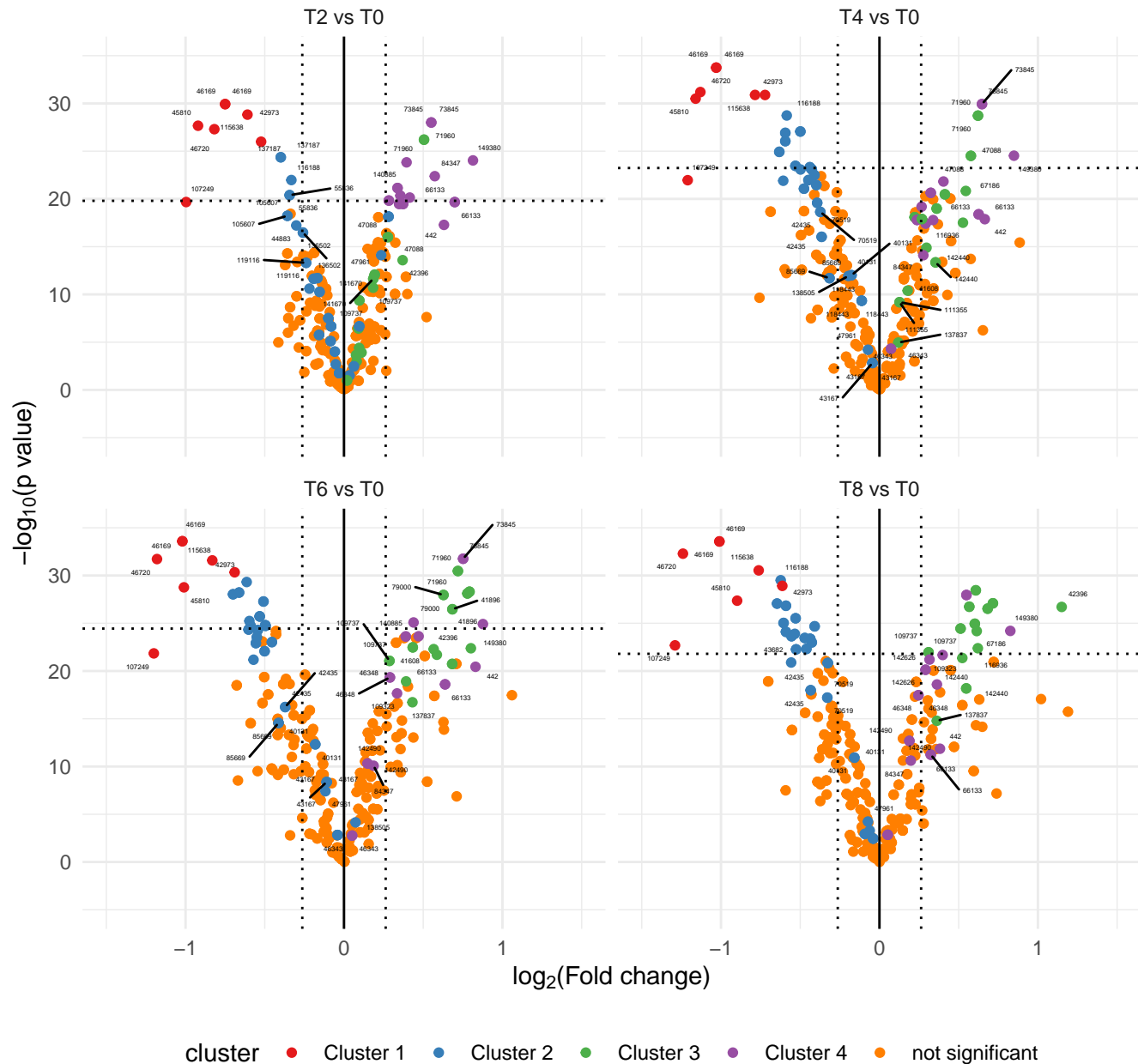


cluster ● Cluster 1 ● Cluster 2 ● Cluster 3 ● Cluster 4 ● not significant

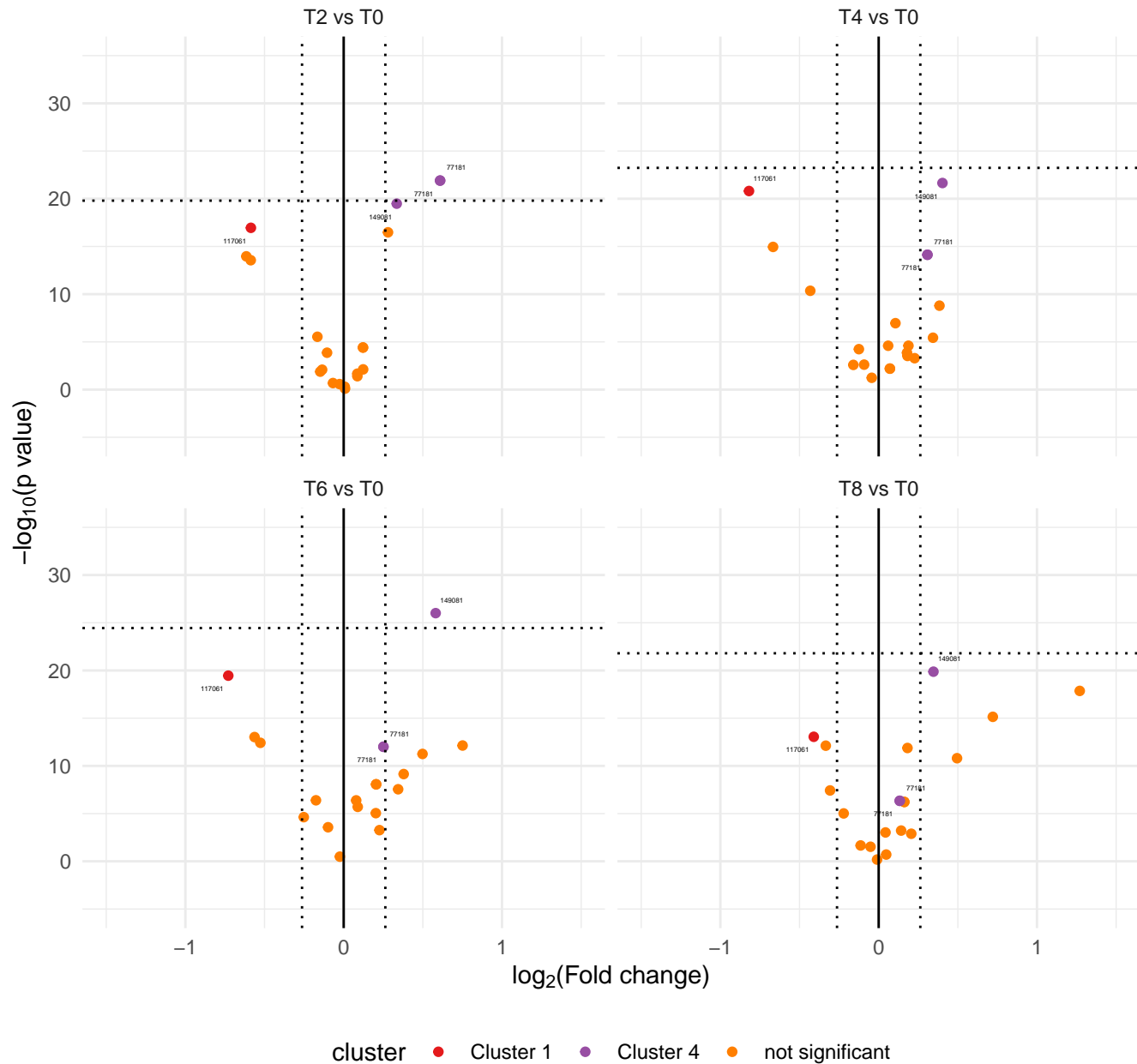
Defense mechanisms



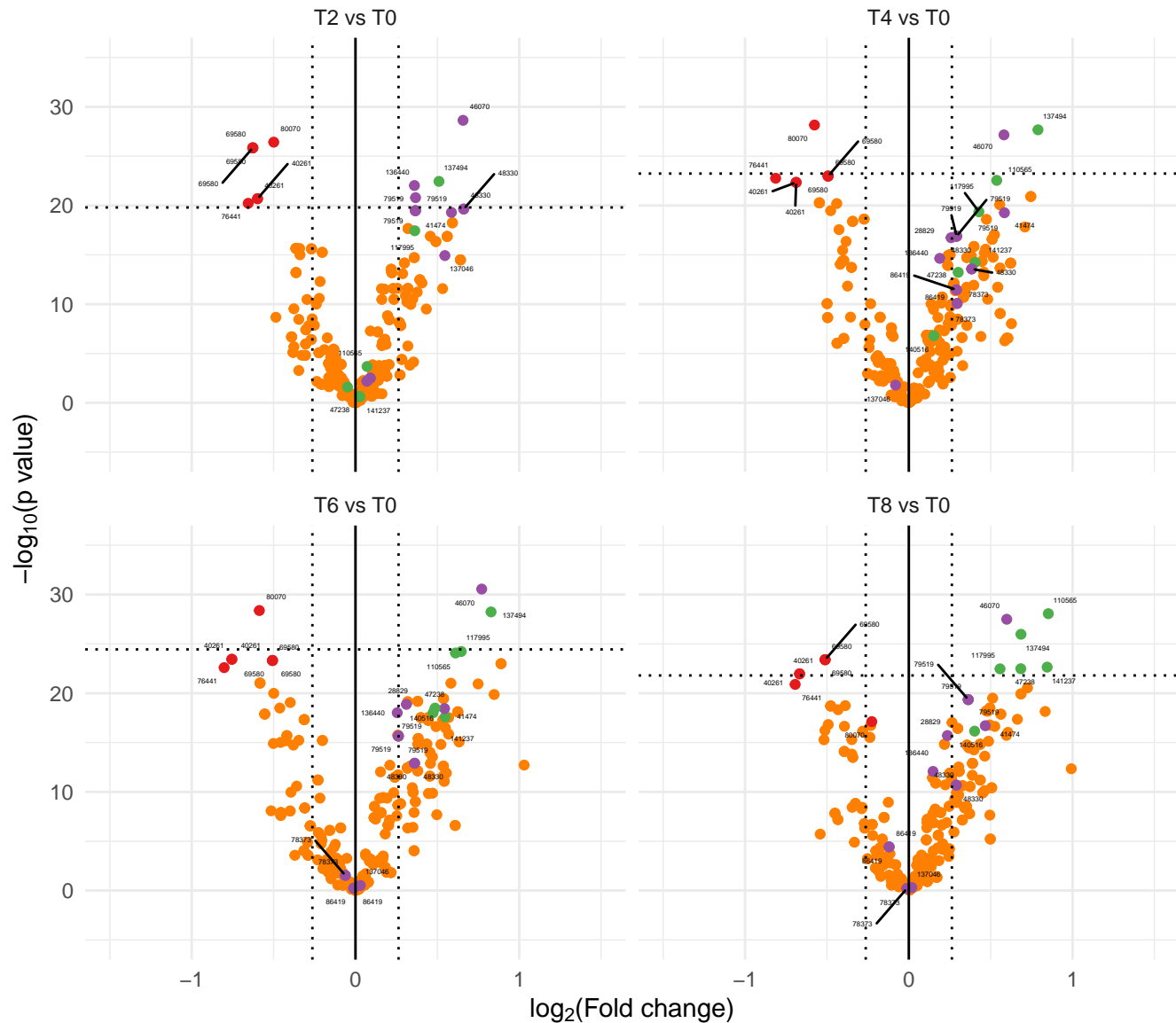
Energy production and conversion



Extracellular structures

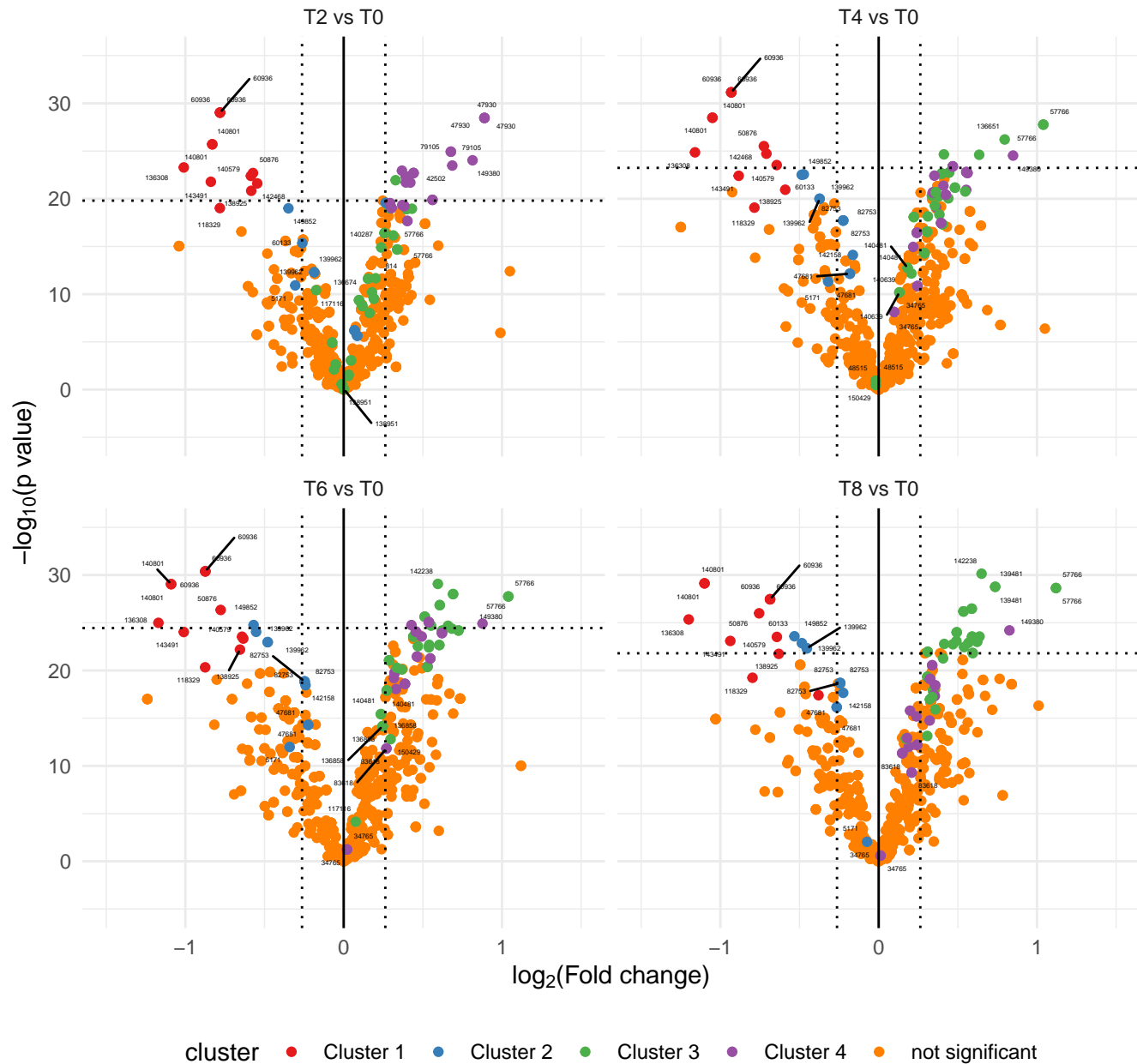


Function unknown

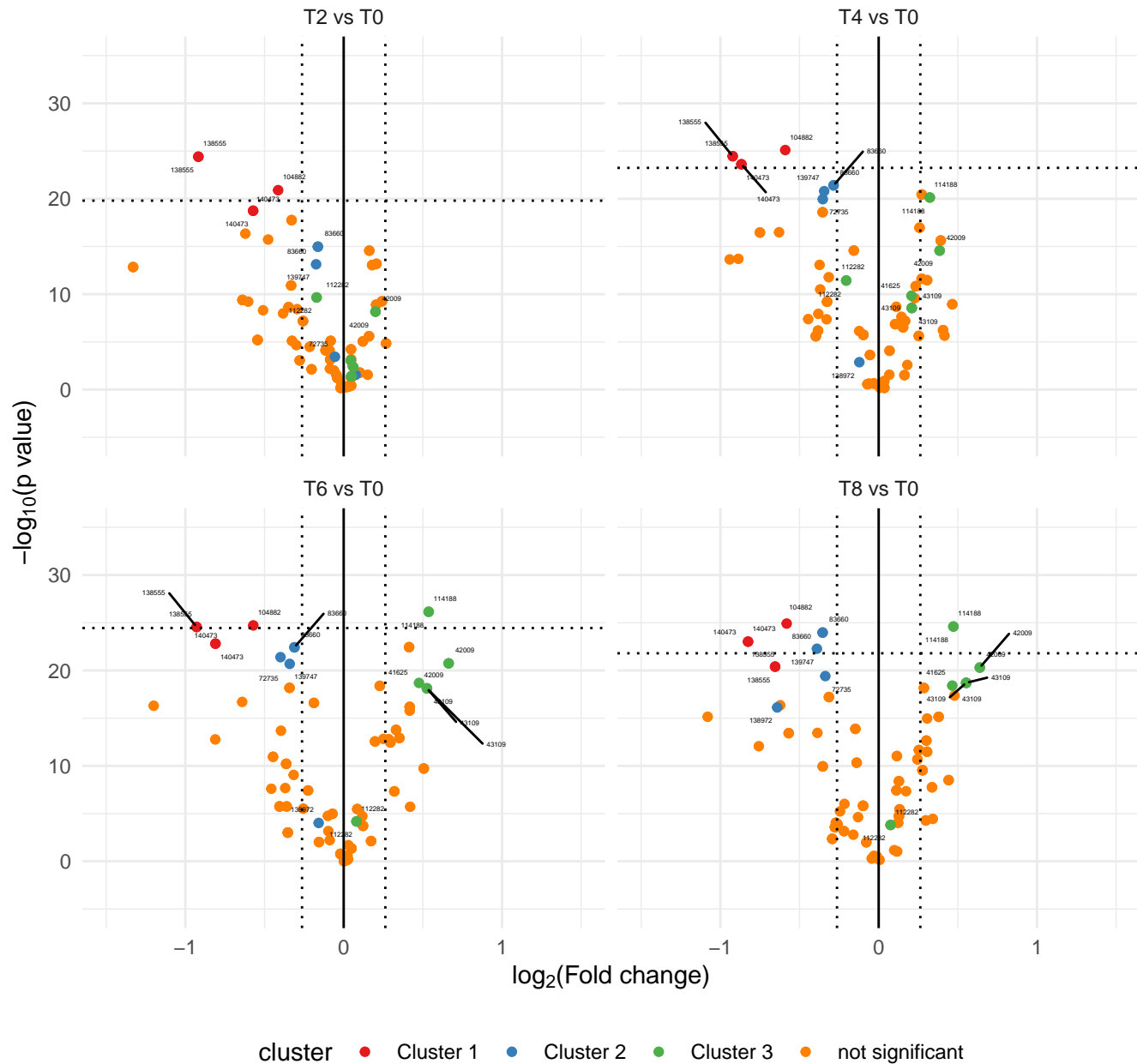


cluster ● Cluster 1 ● Cluster 3 ● Cluster 4 ● not significant

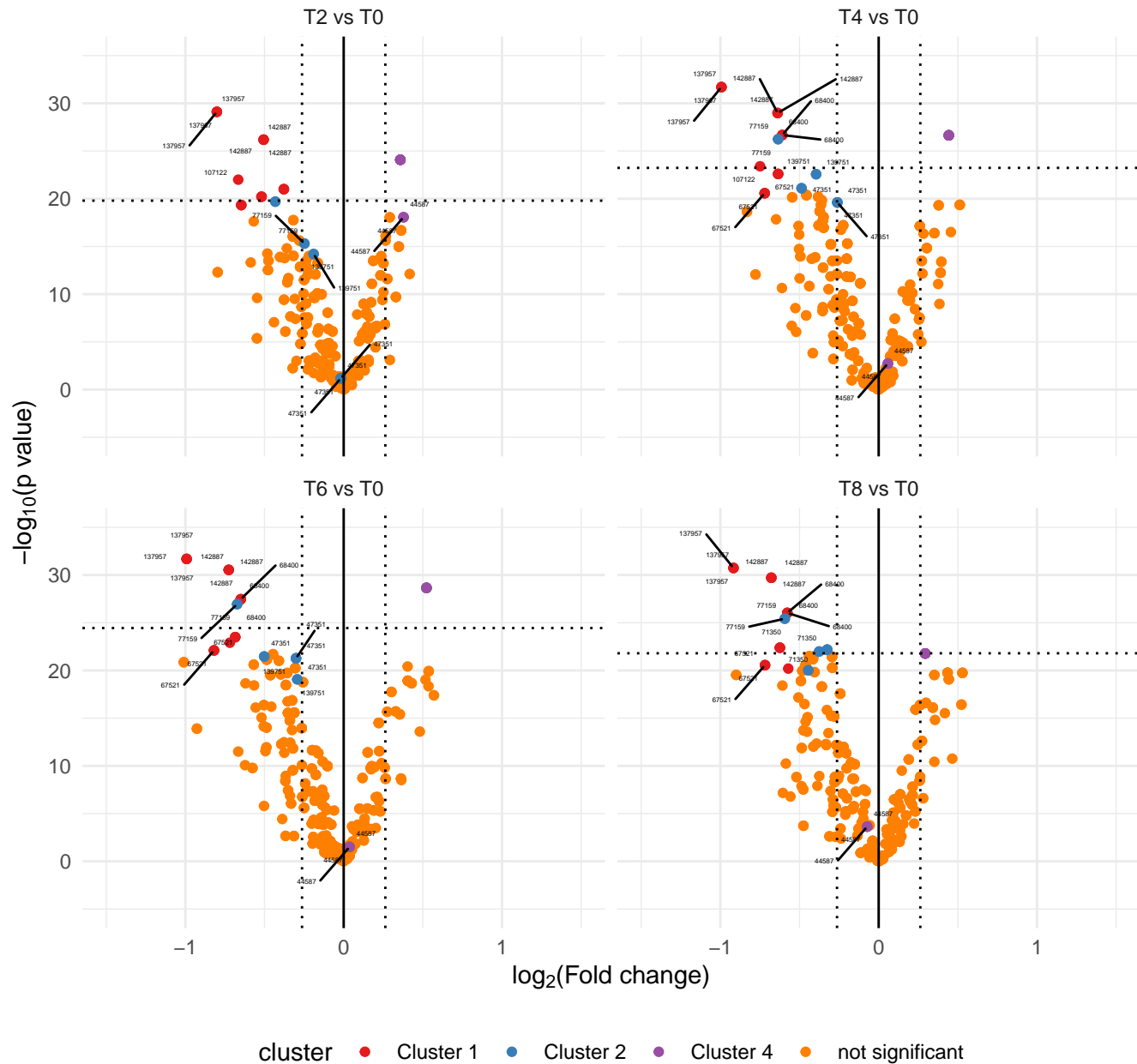
General function prediction only



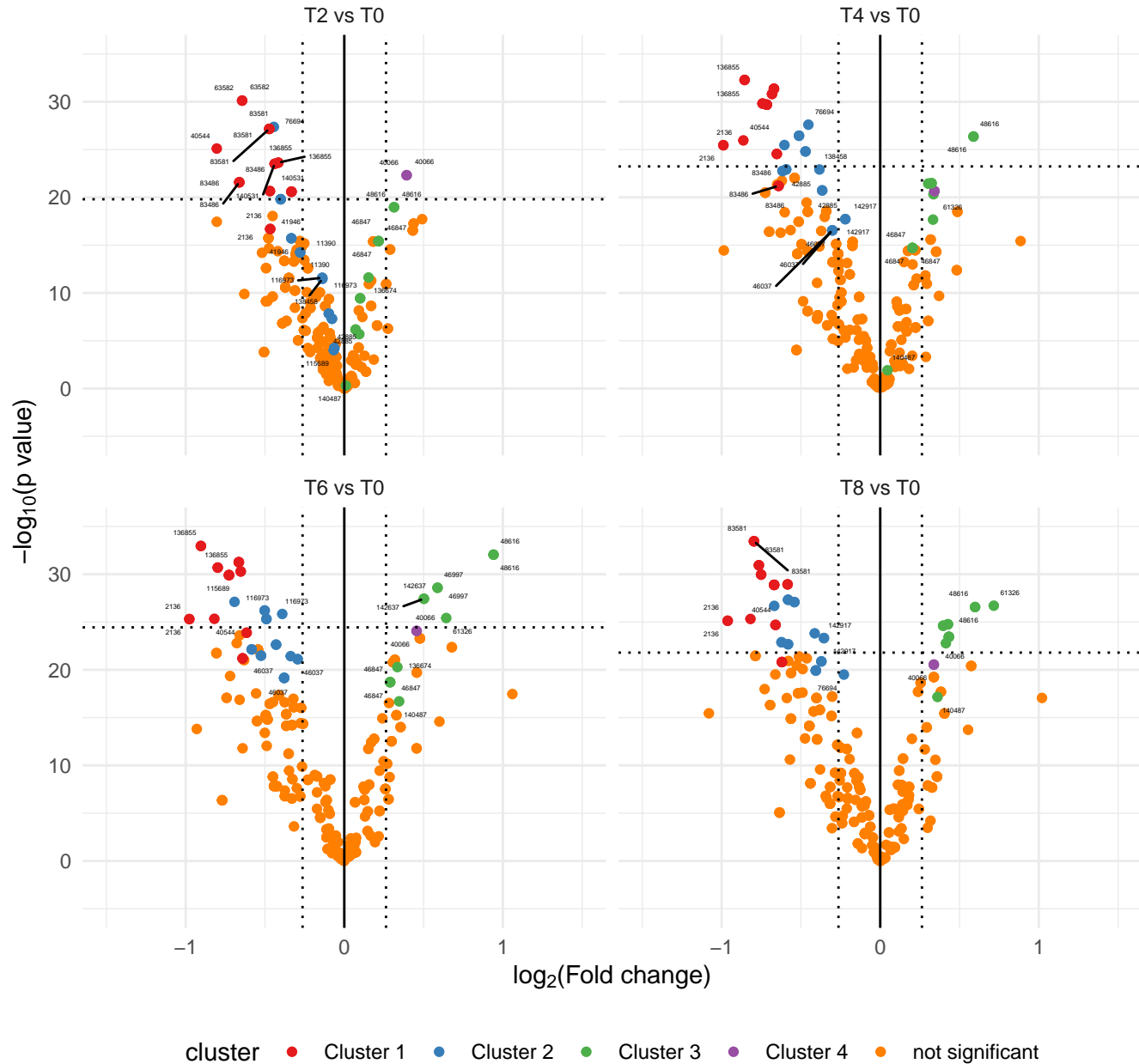
Inorganic ion transport and metabolism



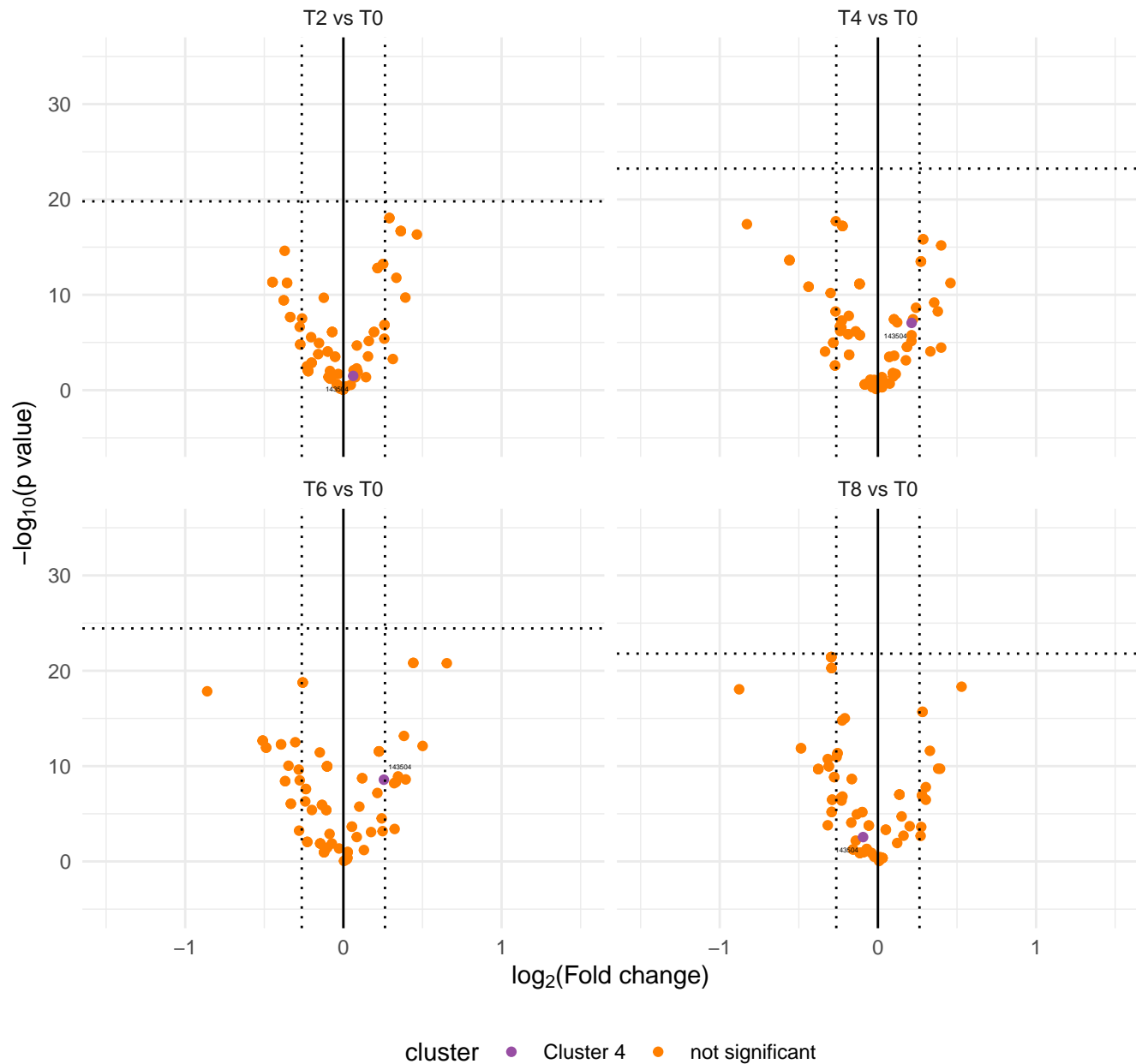
Intracellular trafficking, secretion, and vesicular transport



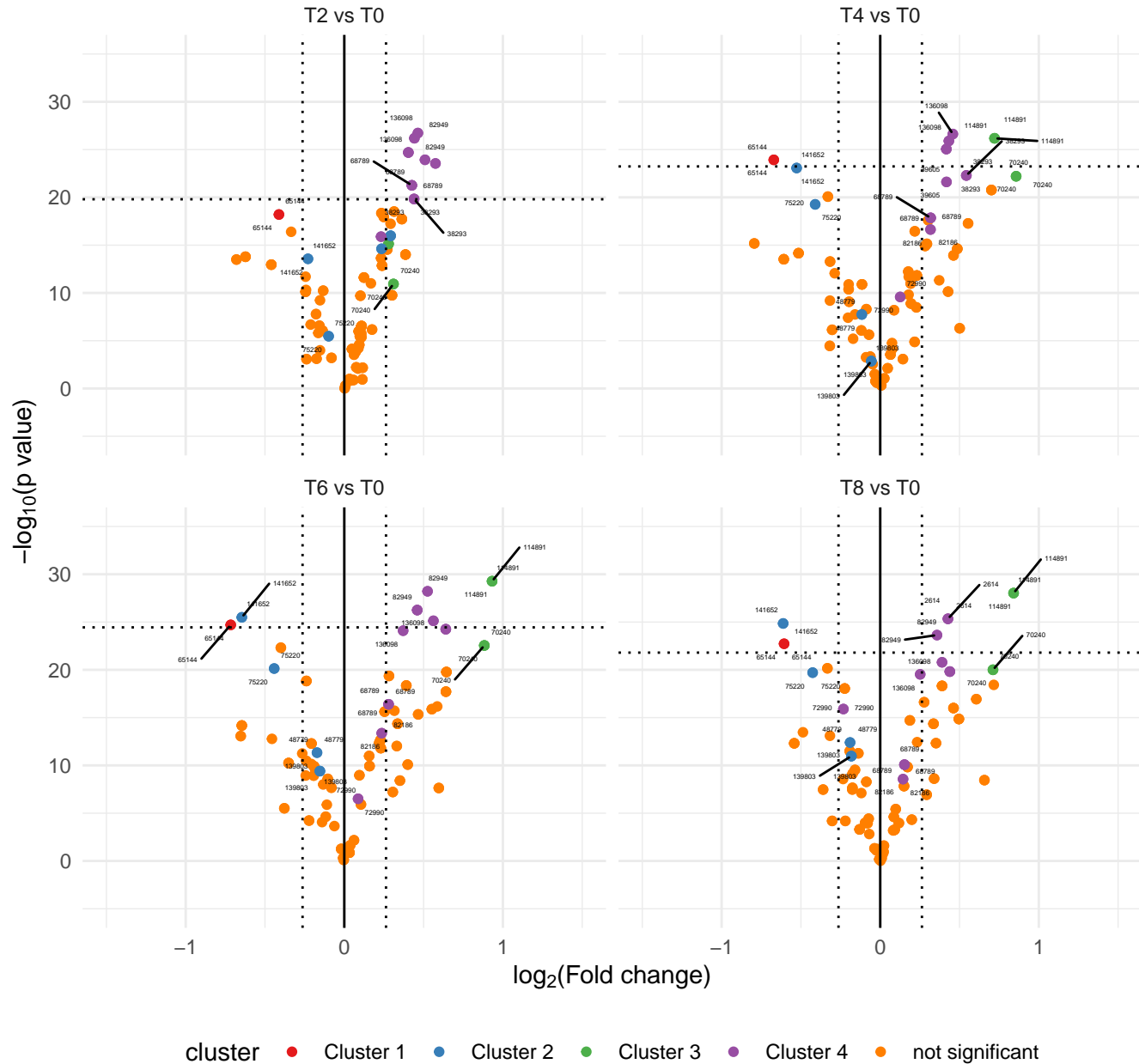
Lipid transport and metabolism



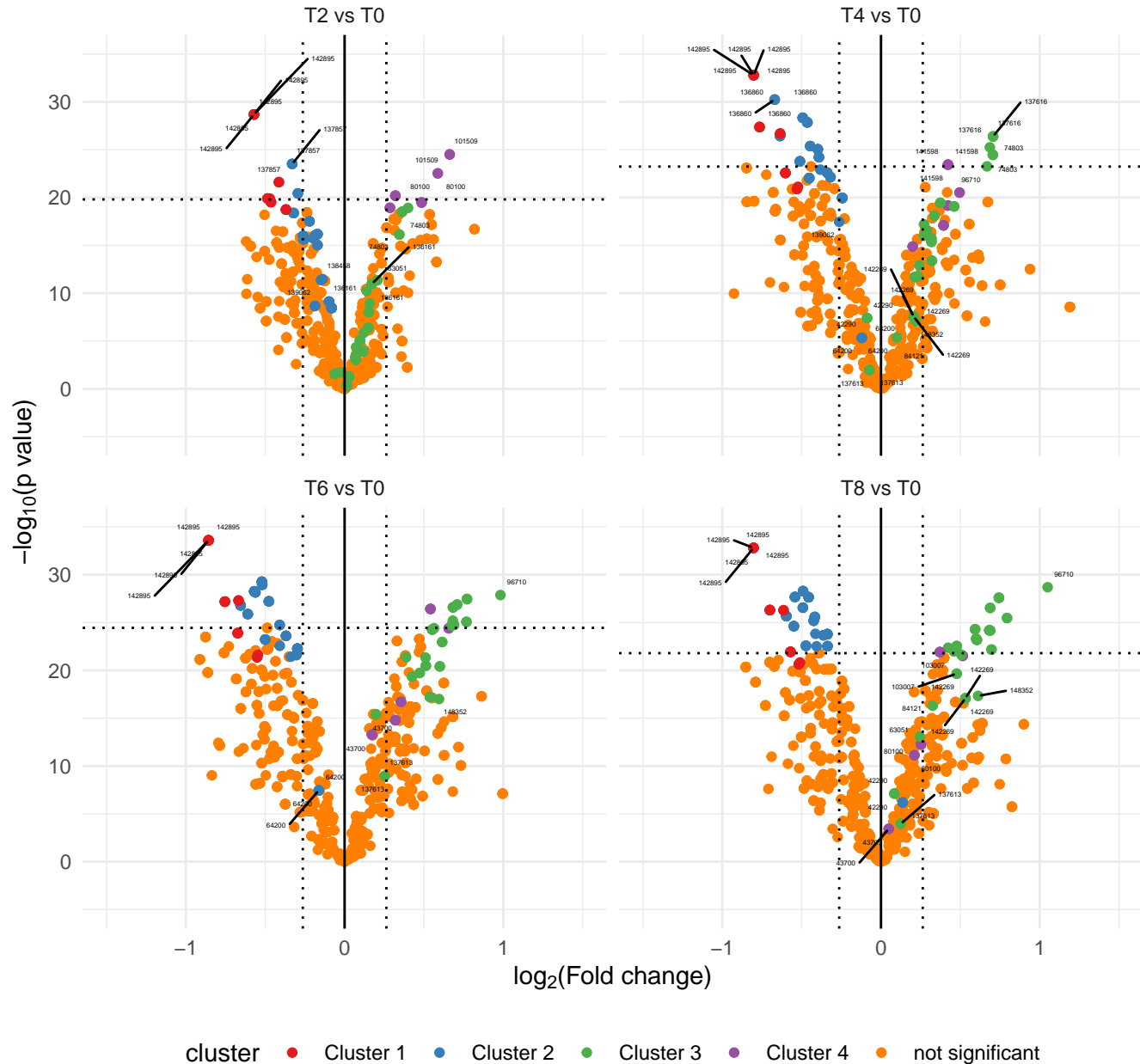
Nuclear structure



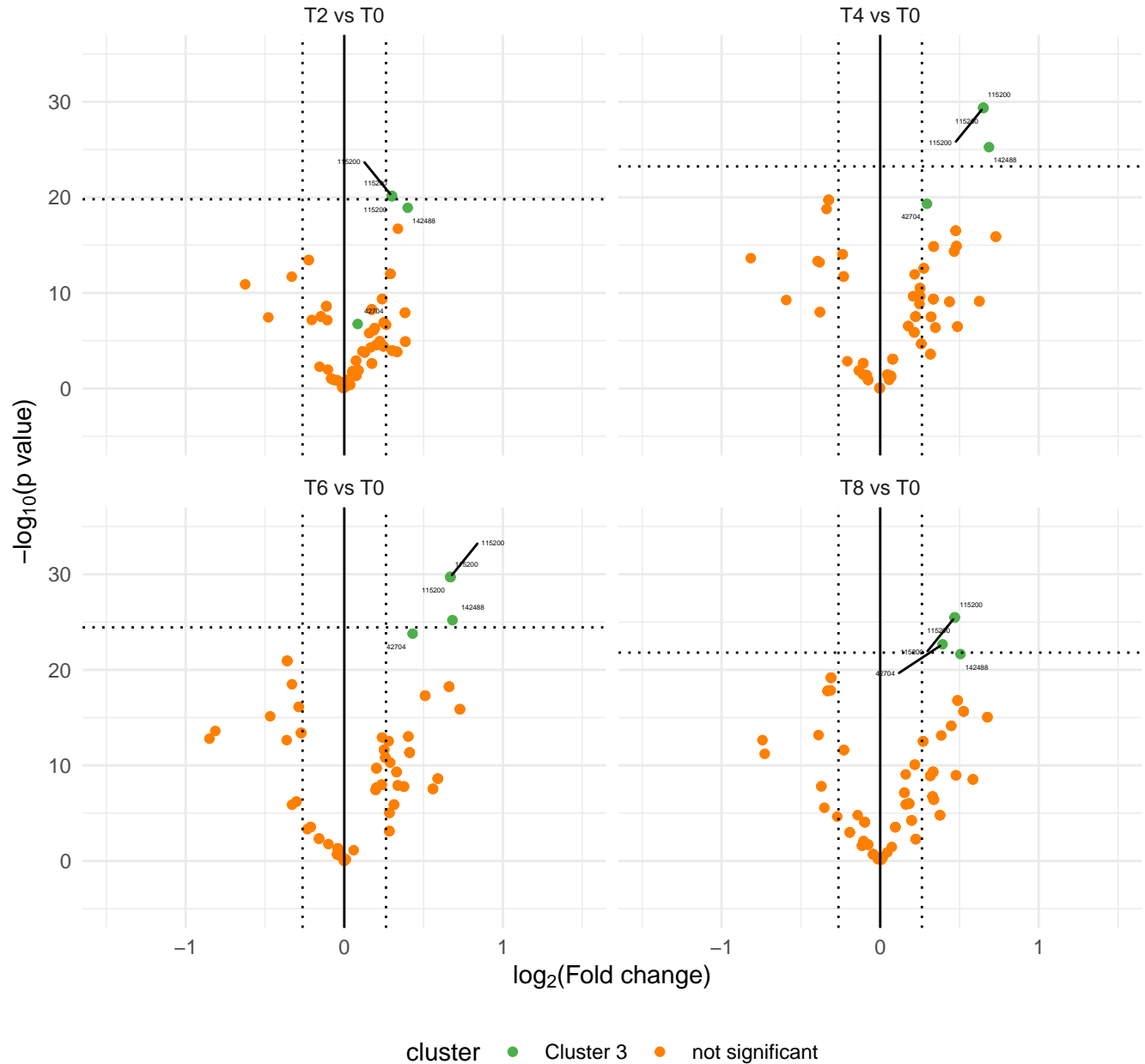
Nucleotide transport and metabolism



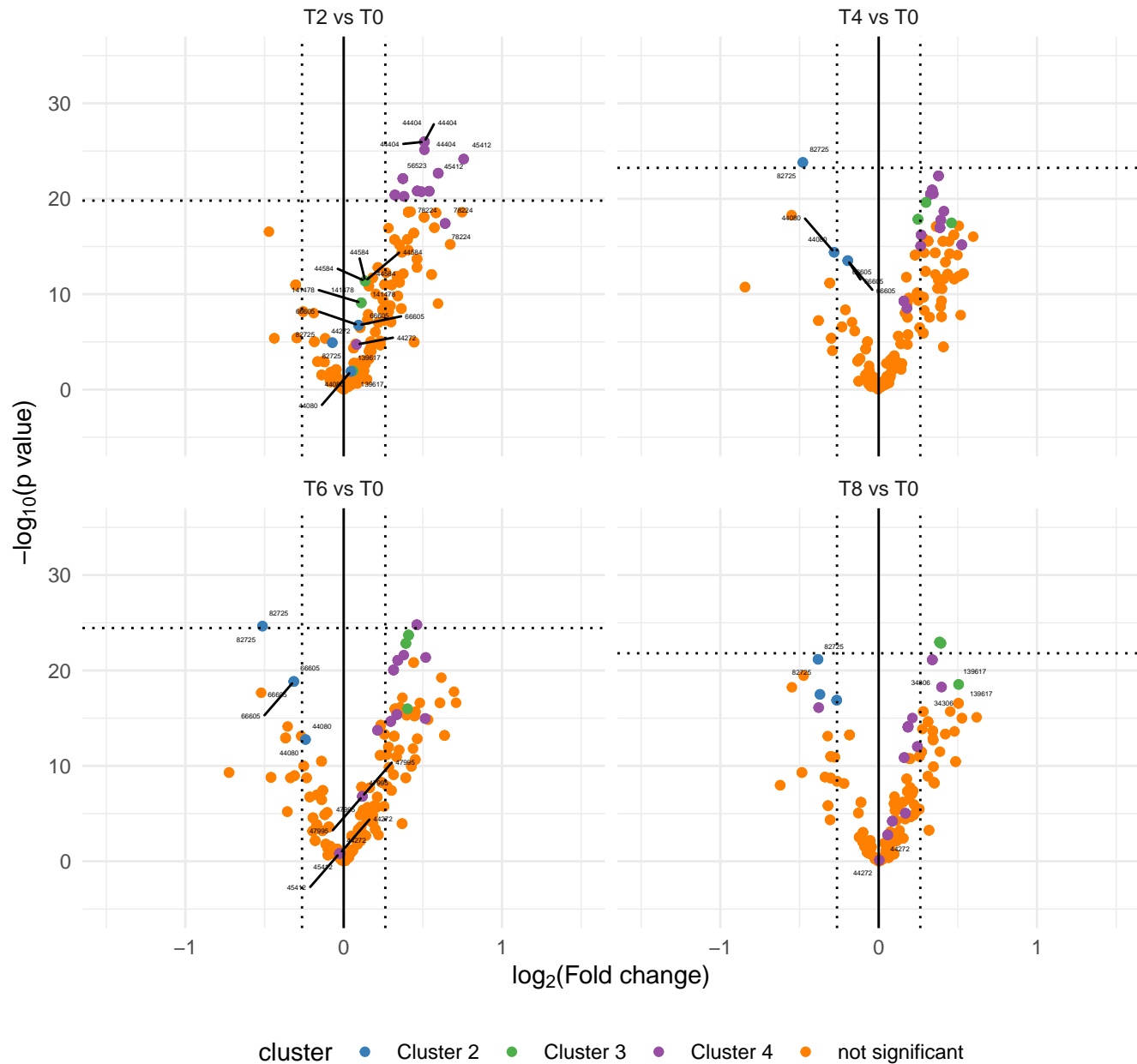
Posttranslational modification, protein turnover, chaperones



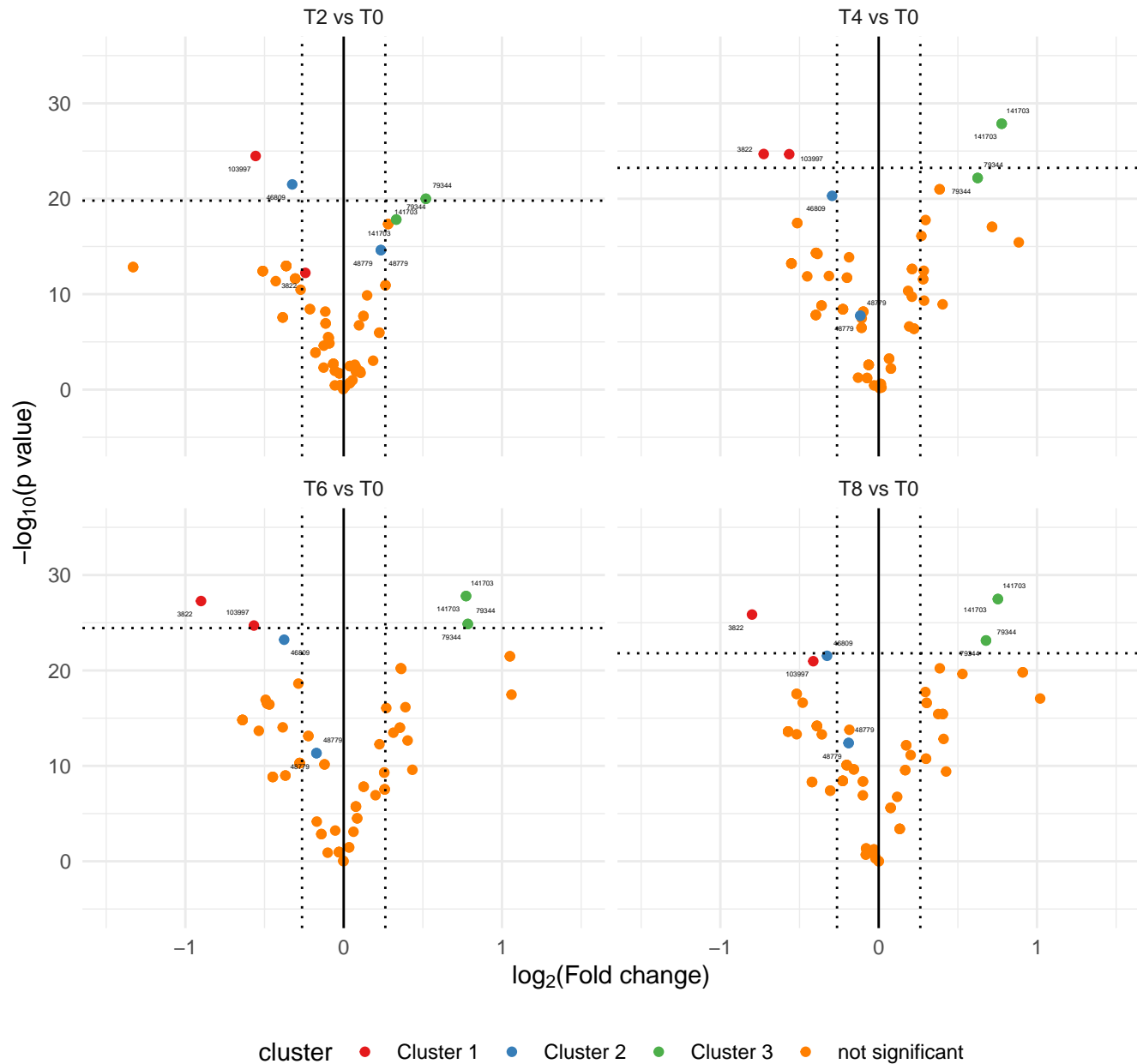
Replication, recombination and repair



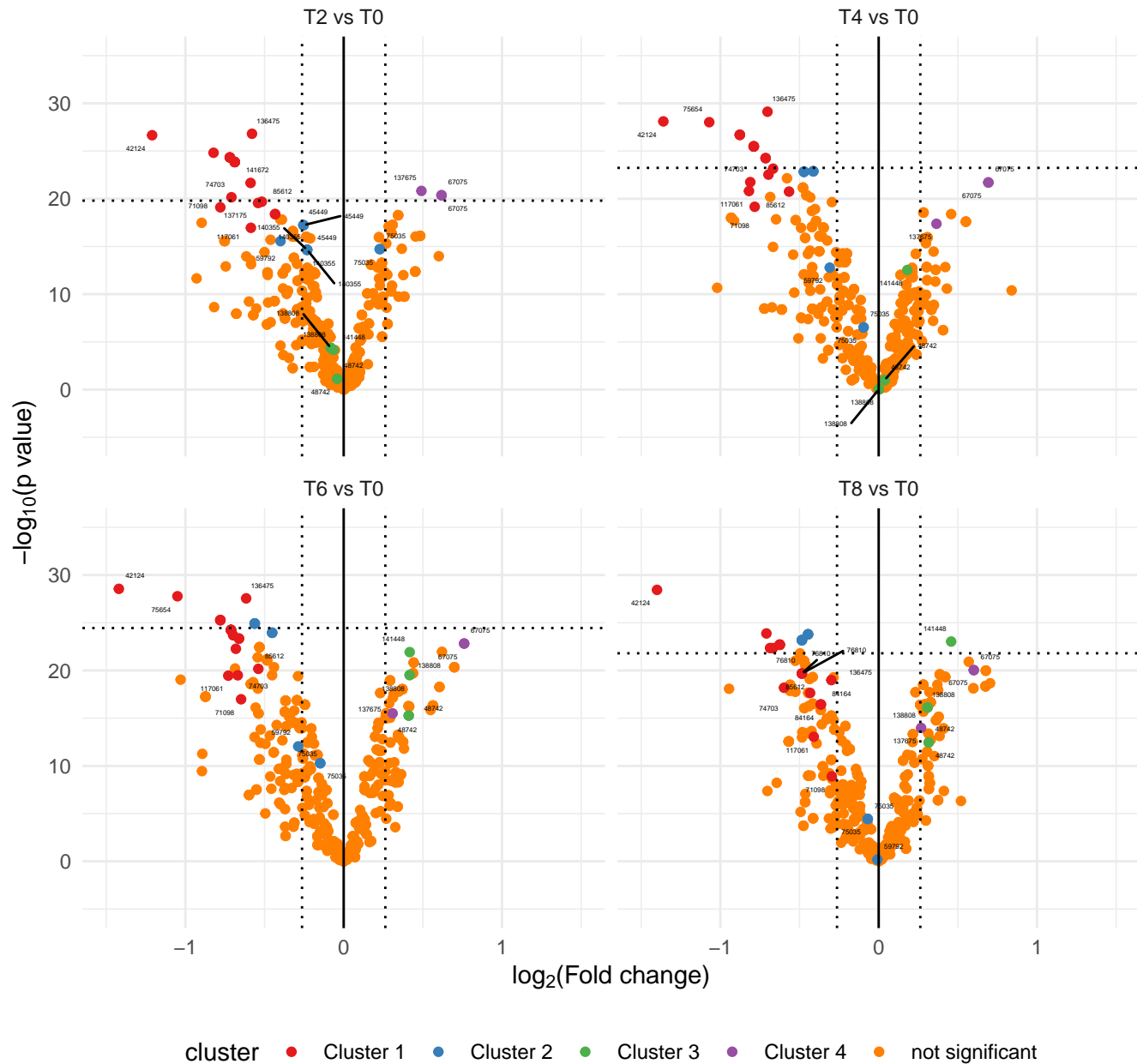
RNA processing and modification



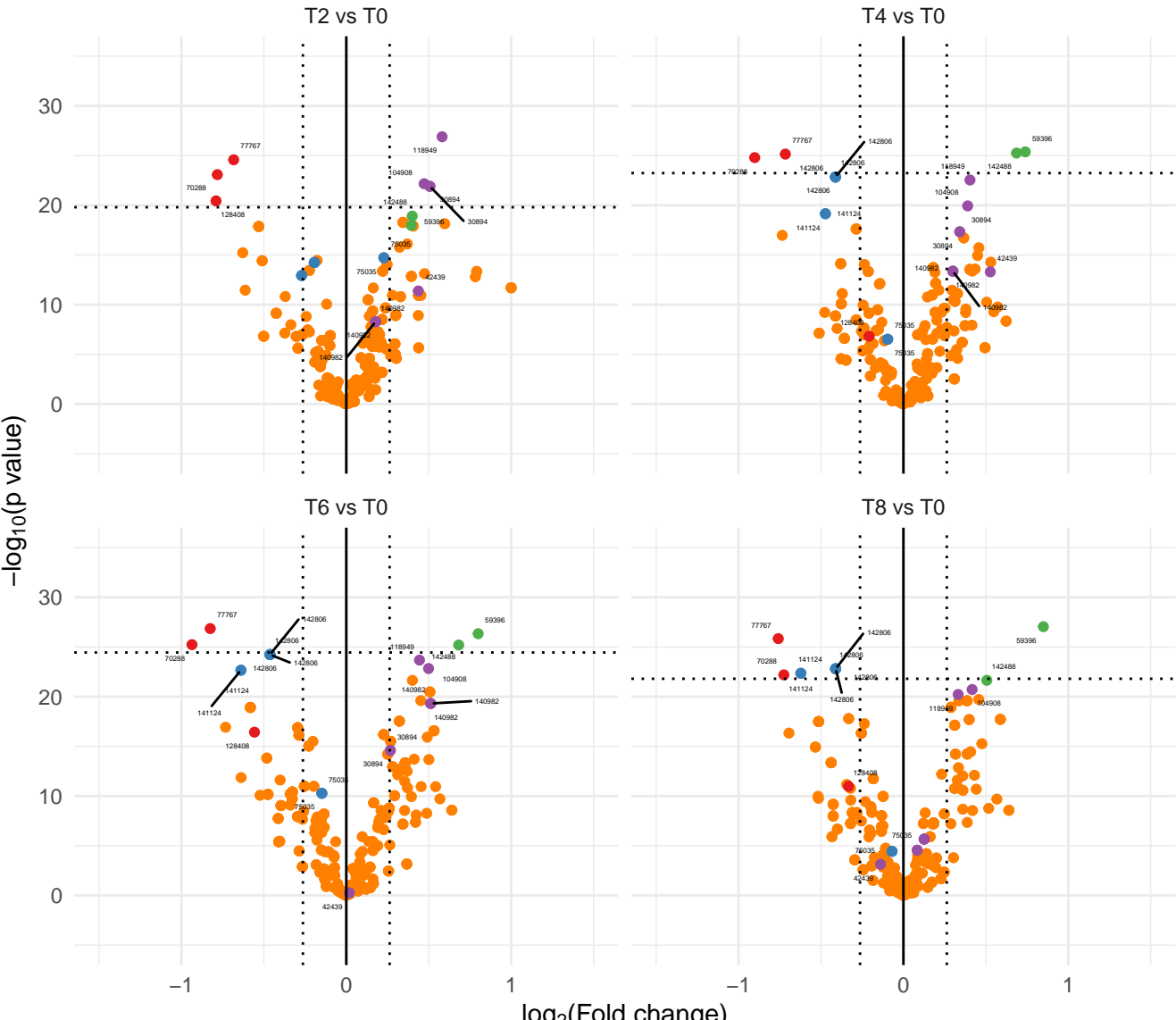
Secondary metabolites biosynthesis, transport and catabolism



Signal transduction mechanisms

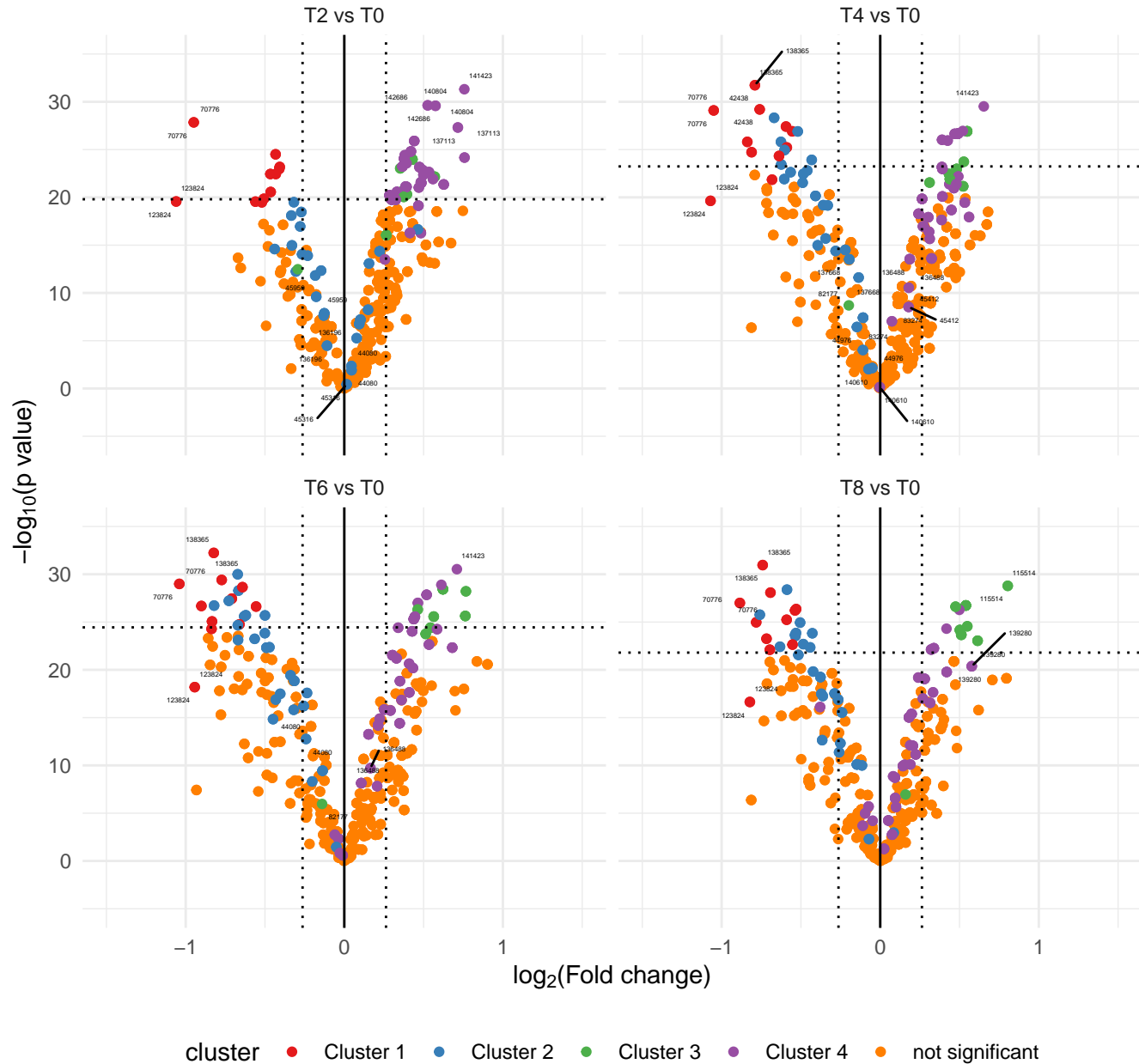


Transcription

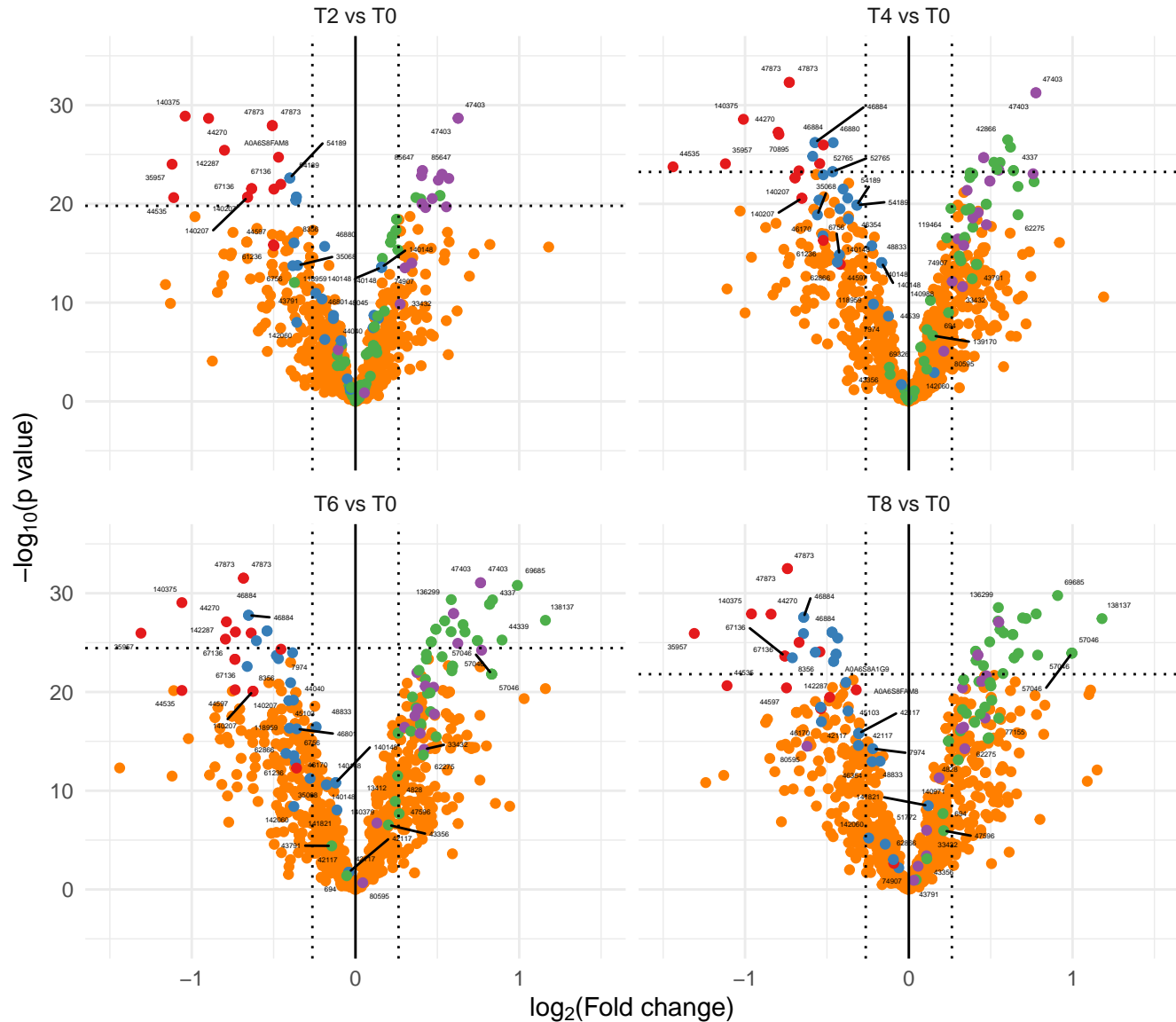


cluster ● Cluster 1 ● Cluster 2 ● Cluster 3 ● Cluster 4 ● not significant

Translation, ribosomal structure and biogenesis



Unknown kogClass



cluster ● Cluster 1 ● Cluster 2 ● Cluster 3 ● Cluster 4 ● not significant