

## **Supporting information**

### **Thyroid hormone disruptors interfere with molecular pathways of eye development and function in zebrafish**

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## 1. Cluster analysis with subsequent analysis of enriched GO classes

The list of all differentially expressed transcripts was used to perform a cluster analysis in MEV (k-means – pearson correlation), resulting in 5 clusters. These 5 clusters were further analyzed in GOrilla. The transcript list from one cluster was set as target list and compared to a background list, consisting of all transcripts included in the 5 clusters to determine how the specific cluster is distinct from the remaining clusters in terms of affected GO classes.

Each cluster and its most enriched GO classes are listed in the following.

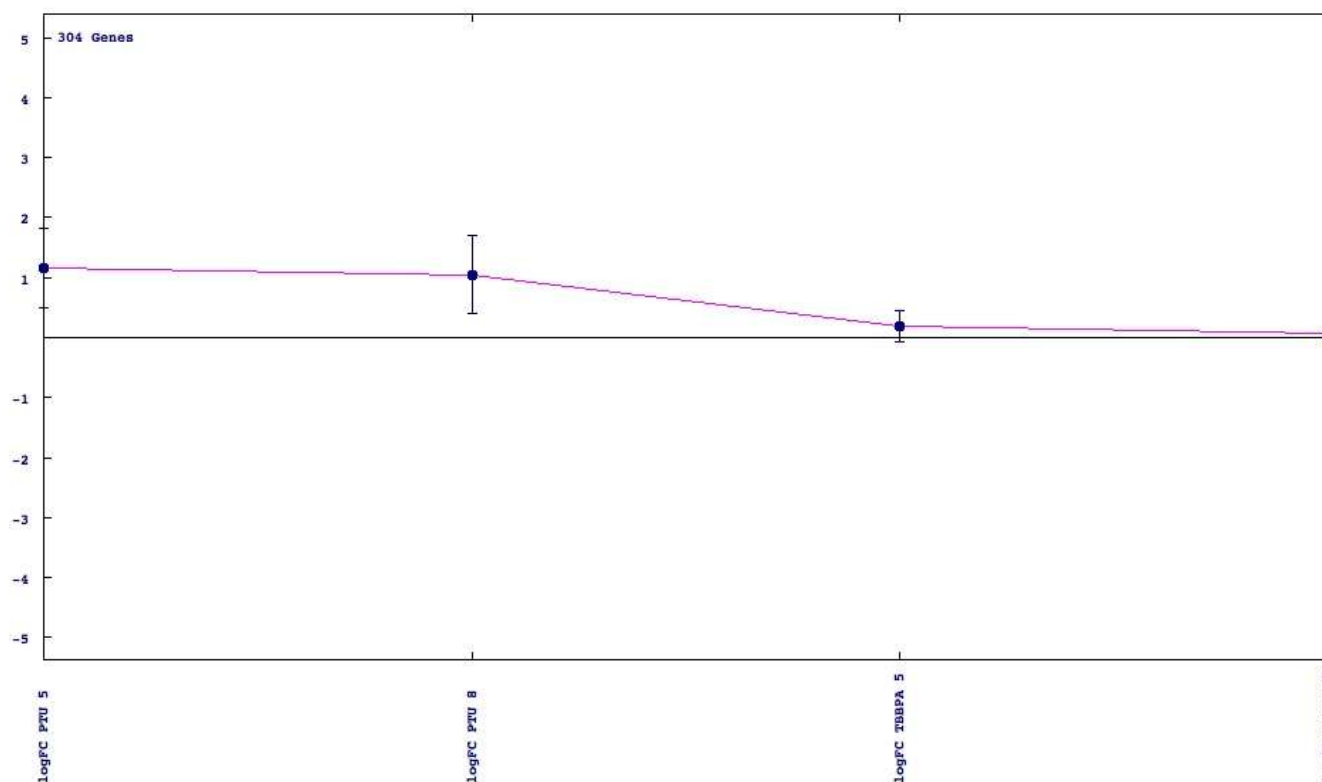


Fig. S1: cluster 1

(logFC = binary logarithm of the fold change)

*Most enriched GOs for cluster 1 vs clusters 1-5:*

- proteolysis involved in cellular protein catabolic process
- protein folding
- tissue development
- cell redox homeostasis
- regeneration
- positive regulation of cellular component organization
- positive regulation of protein complex assembly

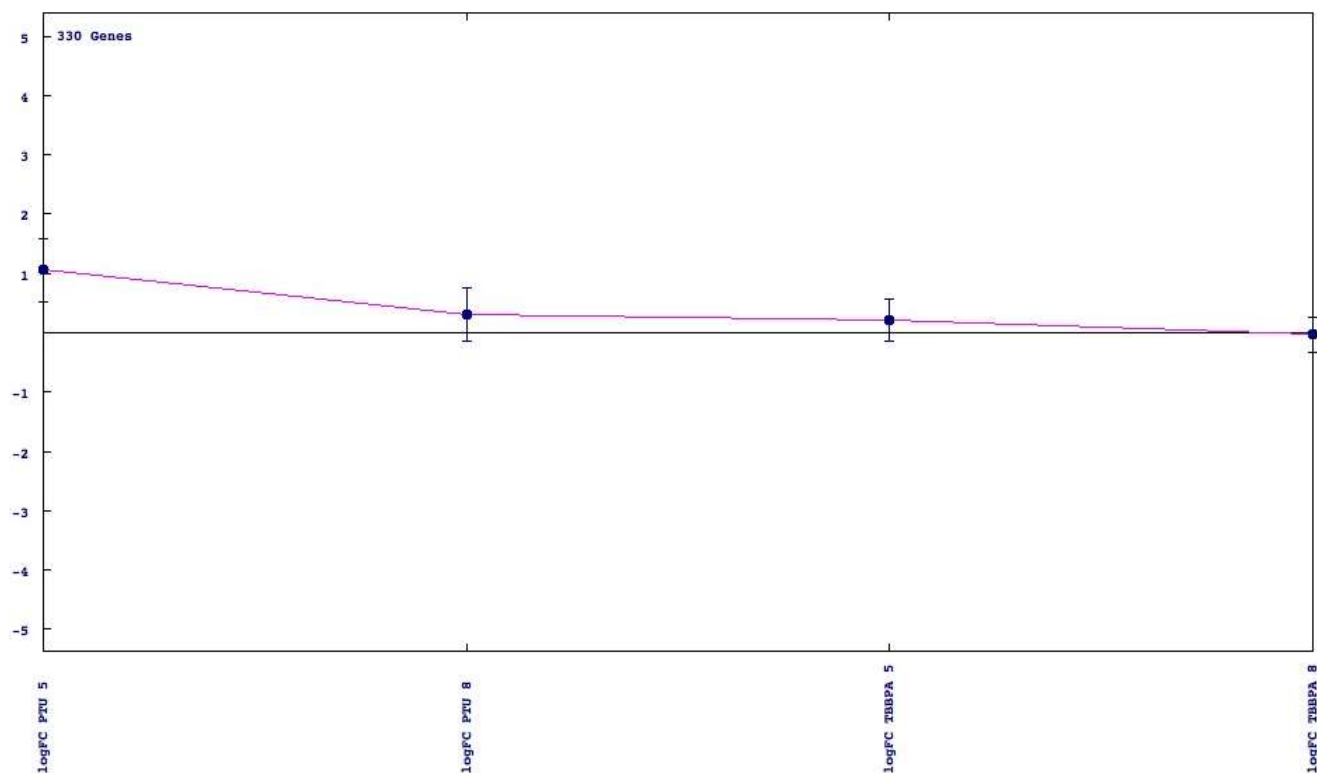


Fig. S2: cluster 2

(logFC = binary logarithm of the fold change)

*Most enriched GOs for cluster 2 vs clusters 1-5:*

- RNA metabolic process
- ncRNA metabolic process
- nucleic acid metabolic process
- tRNA metabolic process
- cellular nitrogen compound metabolic process
- regulation of metabolic process
- regulation of macromolecule metabolic process
- regulation of primary metabolic process

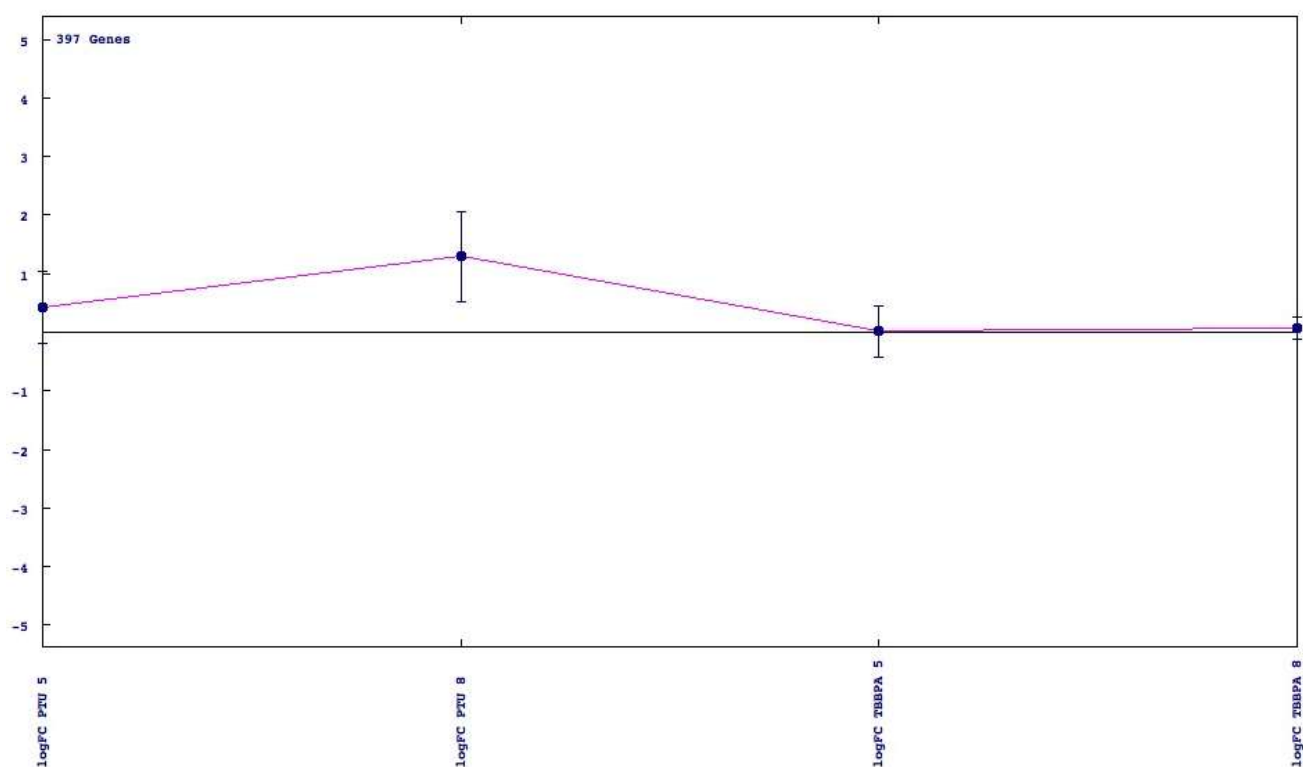


Fig. S3: cluster 3

(logFC = binary logarithm of the fold change)

*Most enriched GOs for cluster 3 vs clusters 1-5:*

proteolysis

immune system process

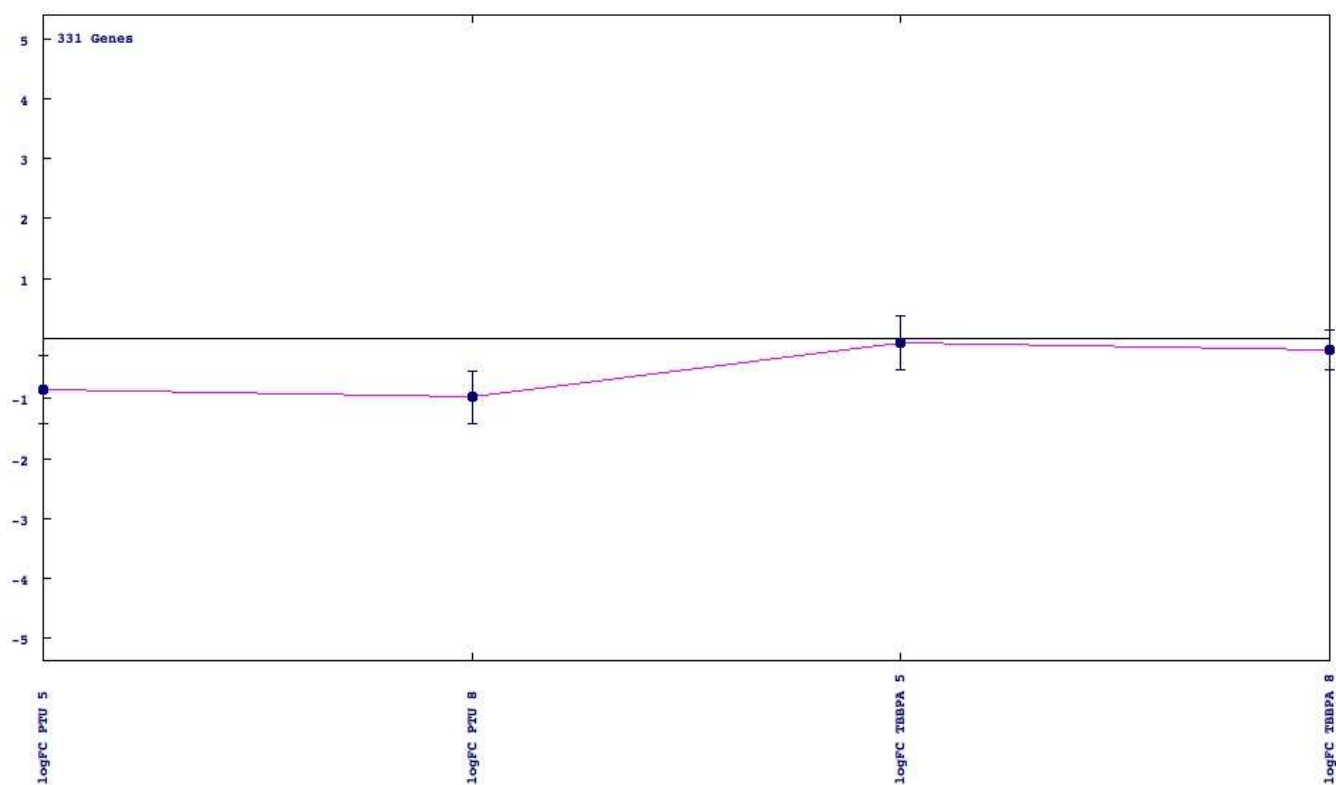


Fig. S4: cluster 4

(logFC = binary logarithm of the fold change)

*Most enriched GOs for cluster 4 vs clusters 1-5:*

hormone-mediated signaling pathway

steroid hormone mediated signaling pathway

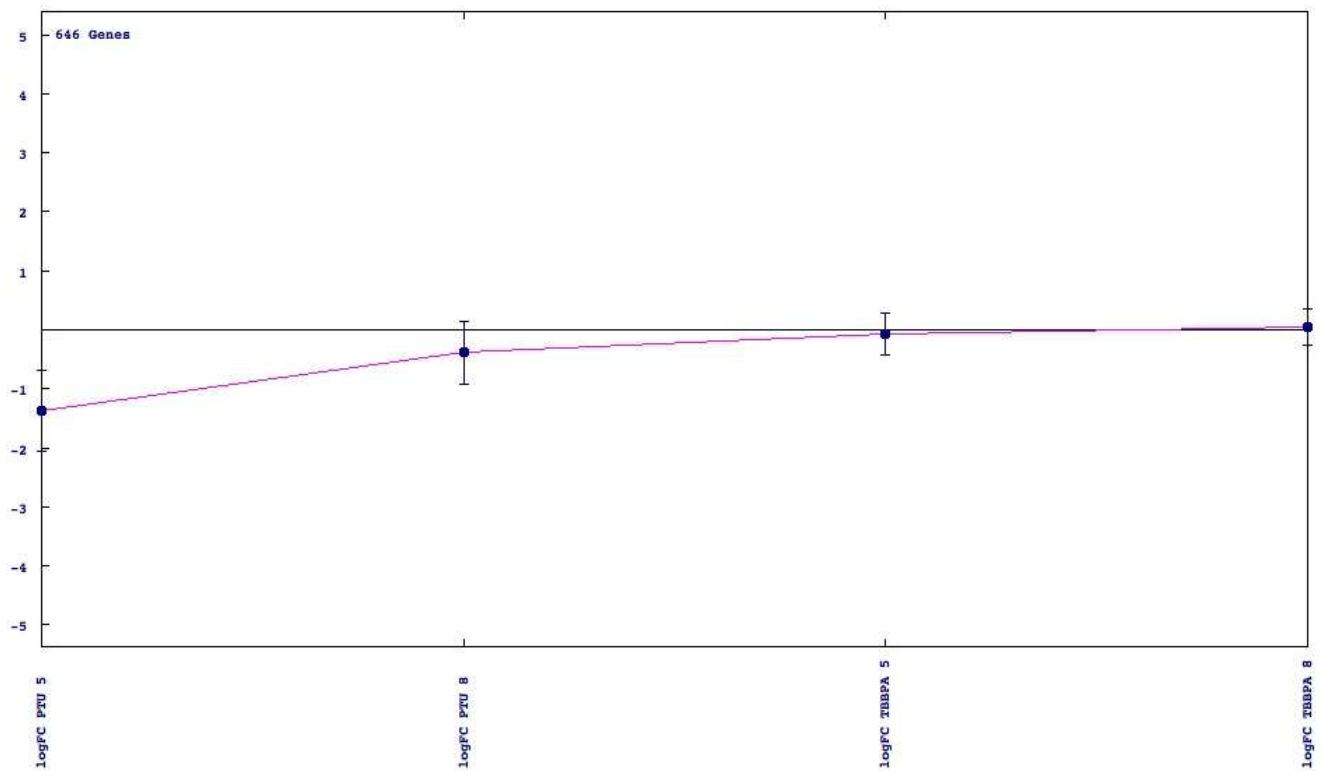


Fig. S5: cluster 5

(logFC = binary logarithm of the fold change)

*Most enriched GOs for cluster 5 vs clusters 1-5:*

- sensory perception
- neurological system process
- sensory perception of light stimulus
- visual perception
- single-organism catabolic process

## 2. Heat maps of selected GO classes resulting from cluster analysis



Fig. S6: GO class regeneration from cluster 1

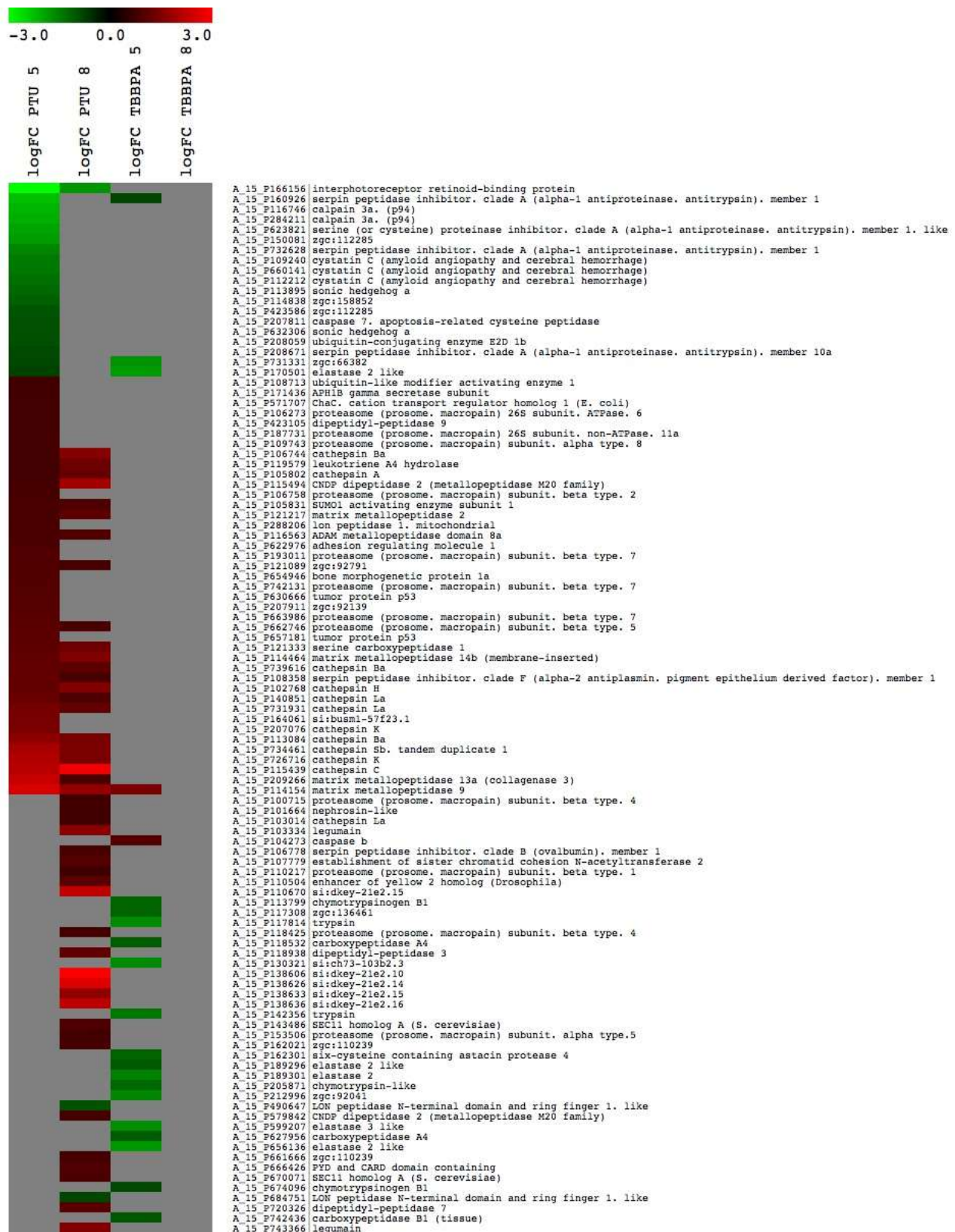


Fig. S7: GO class proteolysis from cluster 3



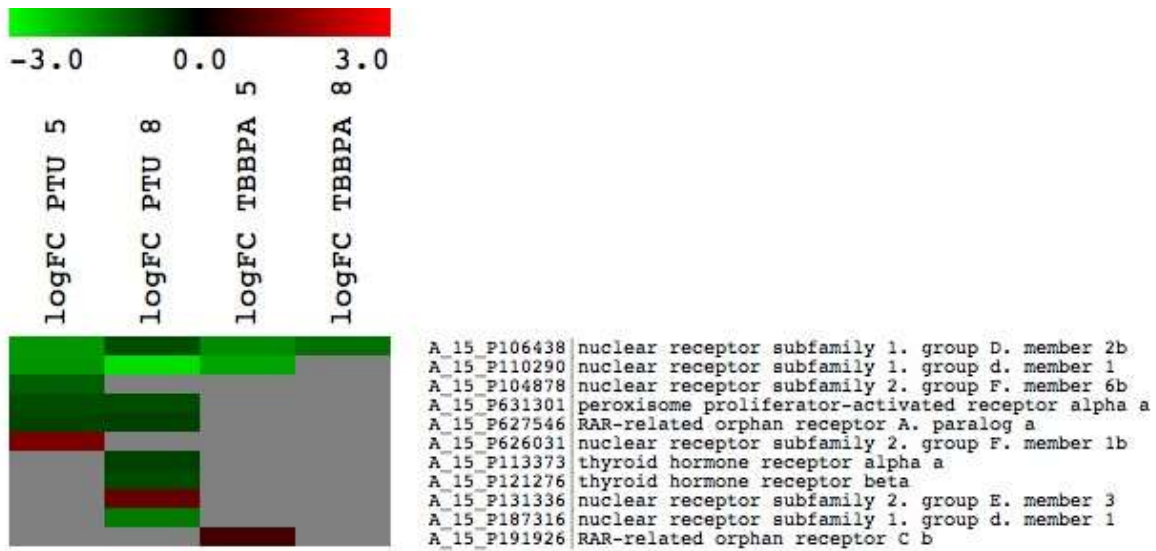


Fig. S8: GO class hormone-mediated signaling pathway from cluster 4

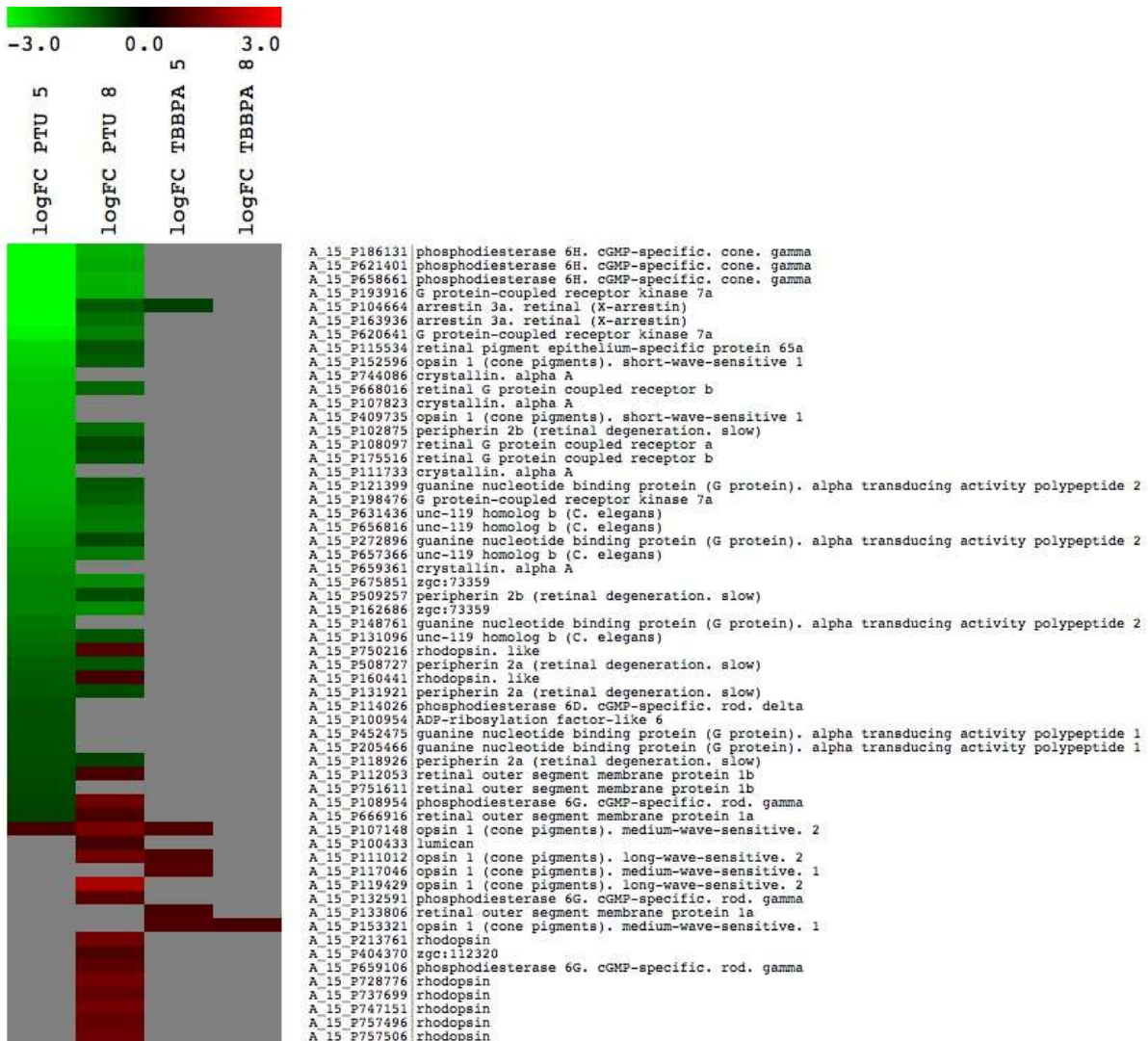


Fig. S9: GO class sensory perception from cluster 5

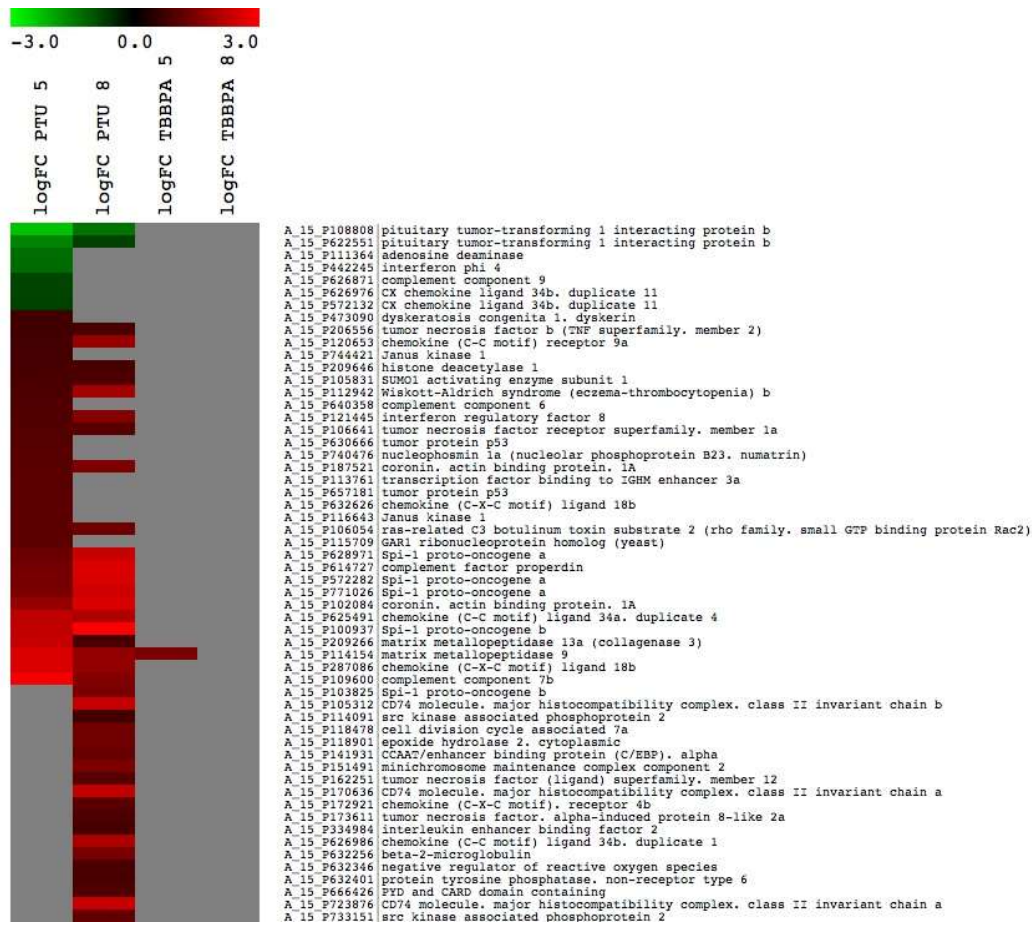


Fig. S10: GO class immune system process from cluster 3