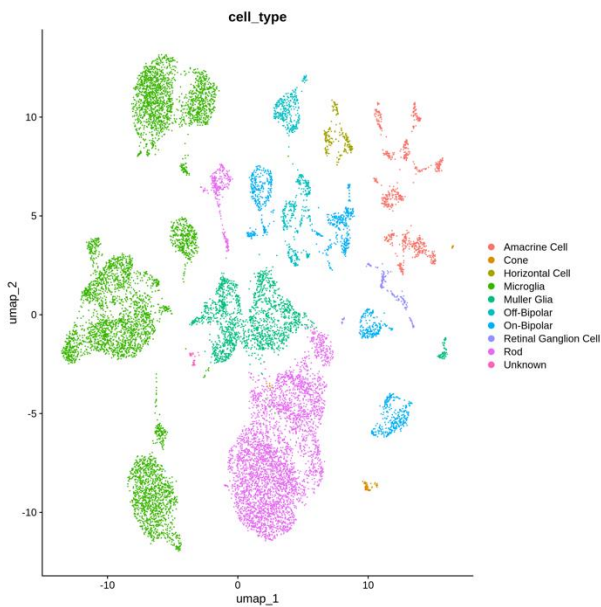
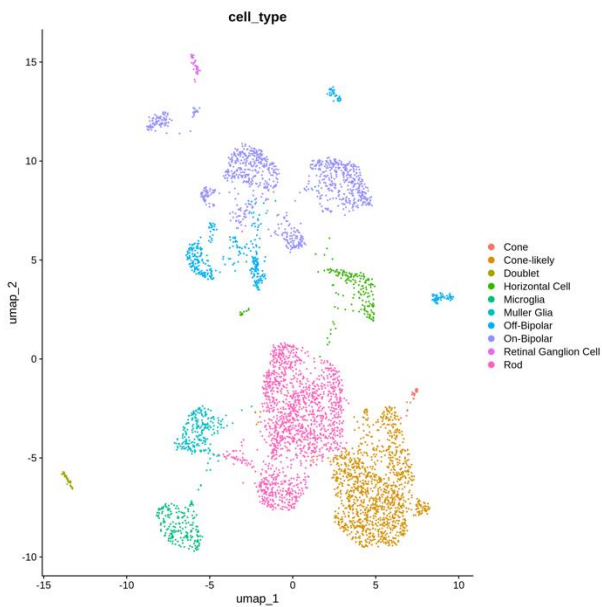


Supplementary Figure 1.- Cell types clustering after scRNA seq

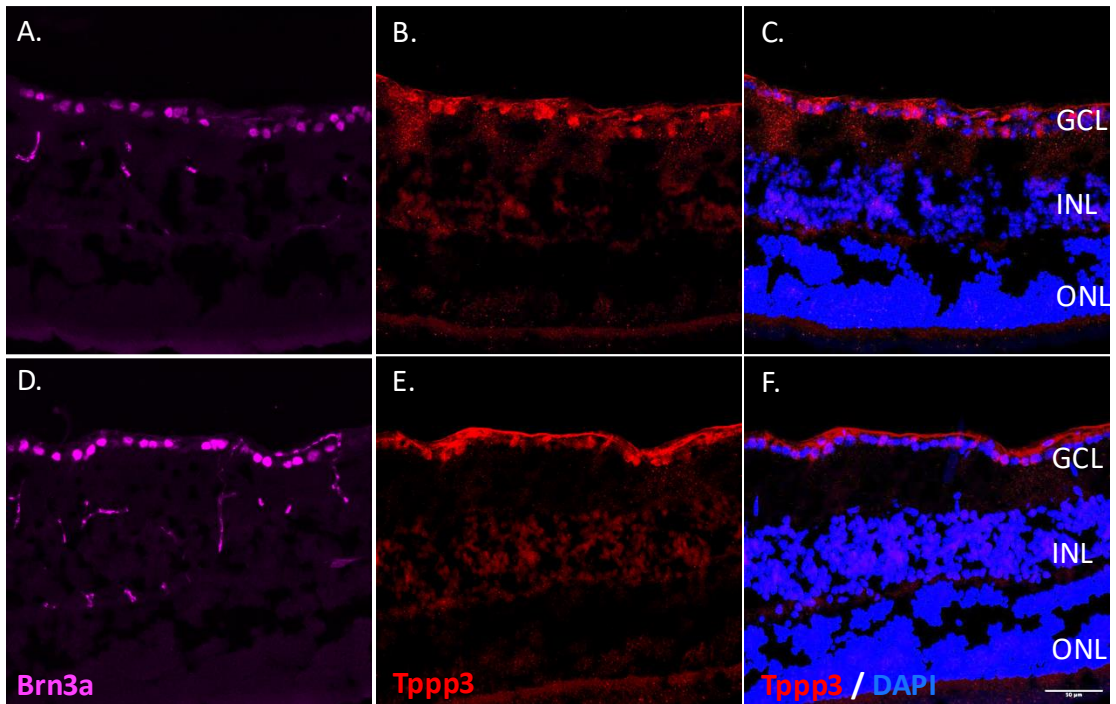
Macaque



Human

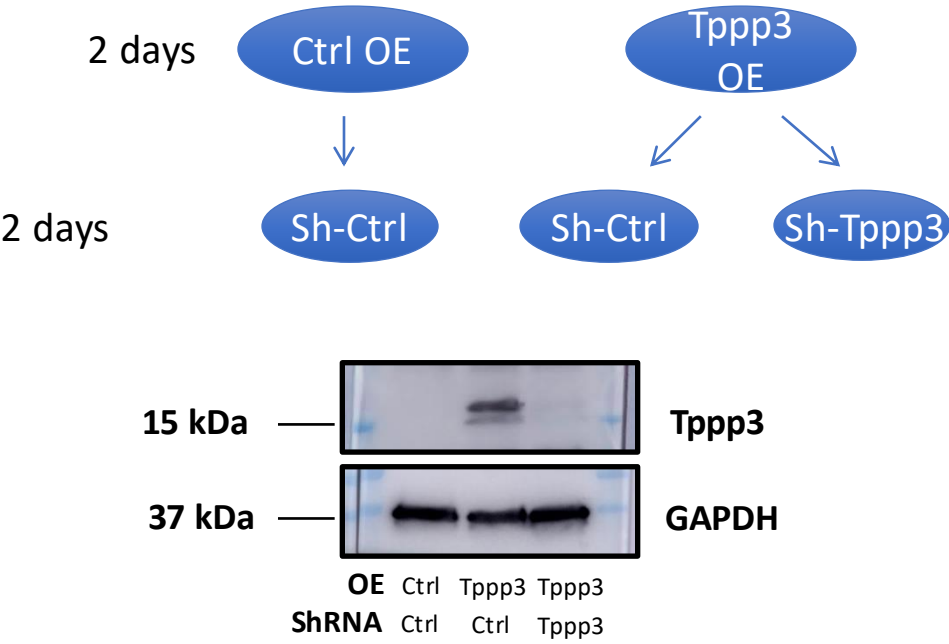


Supplementary Figure 2.- Expression of Tppp3 in retinal sections.



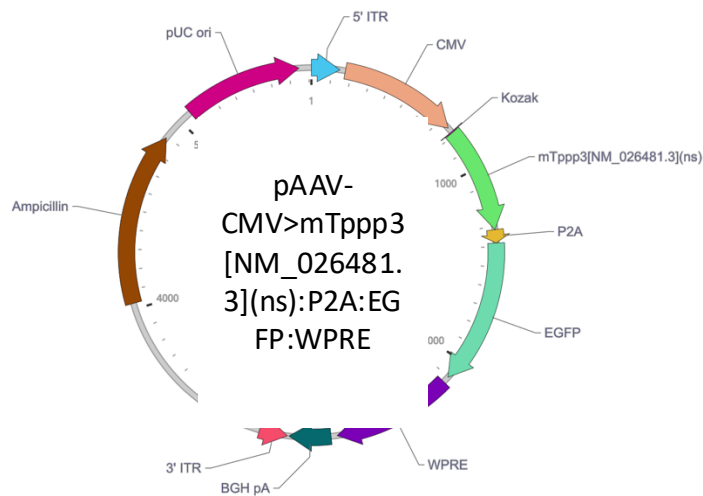
Mouse retinal sections were stained for Brn3a, a marker of RGCs that is expressed within the soma (**A, D**), and Tppp3 (**B, E**). The merged images with DAPI staining (**C, F**) confirm Tppp3 expression within the RNFL, which is anatomically located above the ganglion cell layer (GCL) as marked by DAPI. These findings complement the Western blot analysis showing Tppp3 expression in the optic nerve (Figure 3F).

Supplementary Figure 3.- Validation of Tppp3 shRNA effectiveness.

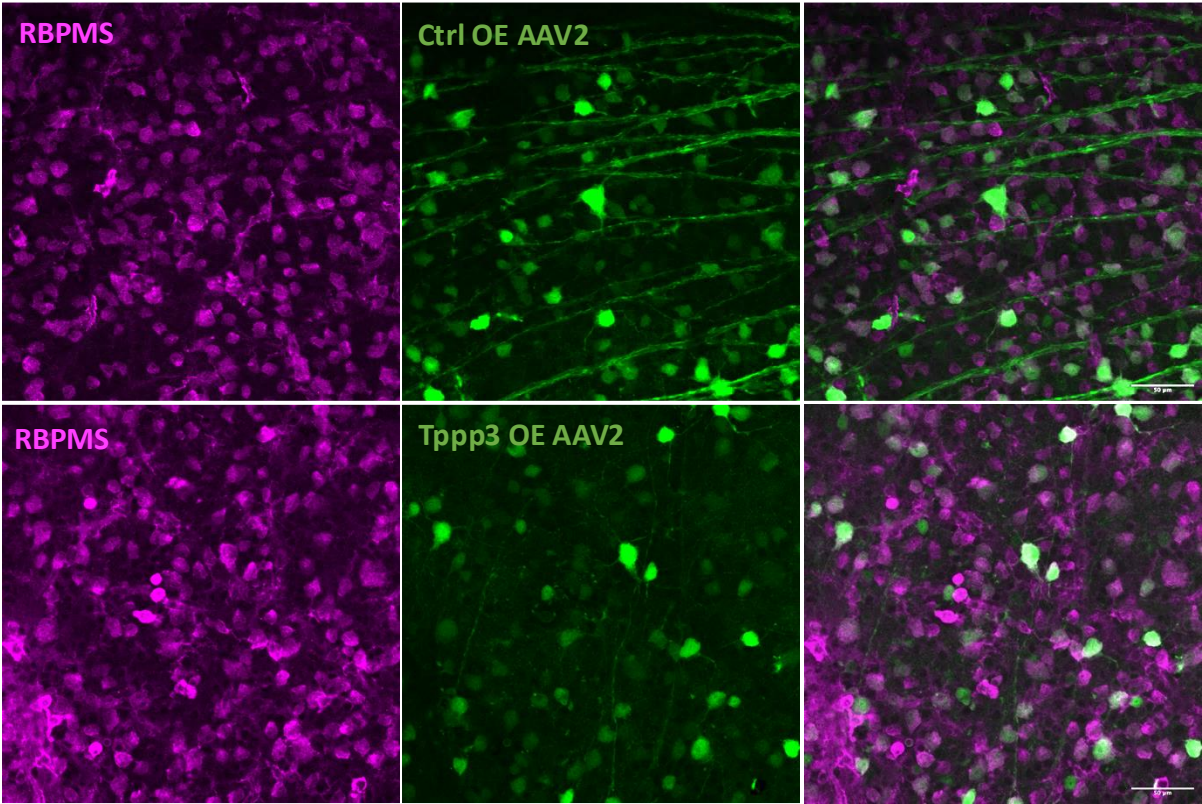


HeLa cells were treated with control or Tppp3 overexpression AAV2 viruses for two days, followed by transduction with either control shRNA or Tppp3 shRNA for an additional two days. Protein analysis demonstrated that Tppp3 shRNA significantly reduced Tppp3 expression levels, confirming its effectiveness.

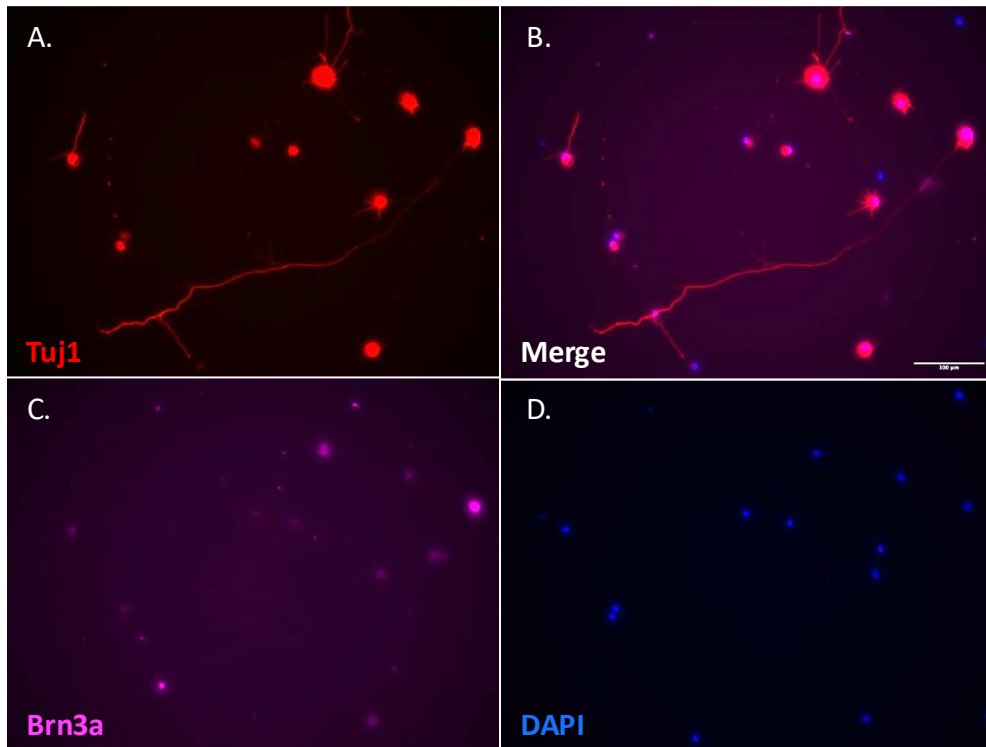
Supplementary Figure 4.- Tppp3 OE AAV2 expression in retina flatmount



AAV2 Tppp3 OE



Supplementary Figure 5.- Representative images of primary RGCs isolated using the immunopanning method



Primary RGC cells obtained from P2 pups are stained with **(A)** Tuj1 (neuronal marker), **(C)** Brn3a (RGC-specific marker), and **(D)** DAPI (nuclear stain). These images demonstrate that the majority of cells after immunopanning are RGCs.