1 OPTN

This gene encodes the coiled-coil containing protein optineurin. Optineurin may play a role in normal-tension glaucoma and adult-onset primary open angle glaucoma. Optineurin interacts with adenovirus E3-14.7K protein and may utilize tumor necrosis factor-alpha or Fas-ligand pathways to mediate apoptosis, inflammation or vasoconstriction. Optineurin may also function in cellular morphogenesis and membrane trafficking, vesicle trafficking, and transcription activation through its interactions with the RAB8, huntingtin, and transcription factor IIIA proteins. Alternative splicing results in multiple transcript variants encoding the same protein.

OPTN is significantly up-regulated in Ebola-infected human cells after 23h of infection and slightly upregulated in cells infected with the Marburg virus, also after 23h of infection. In the bat homolog, there is a steady up-regulation in both Ebola- and Marburg-infected cells, but not in the wild type. In addition, there is some indication of an alternate exon being expressed in few cases, which is not in the human annotation file.

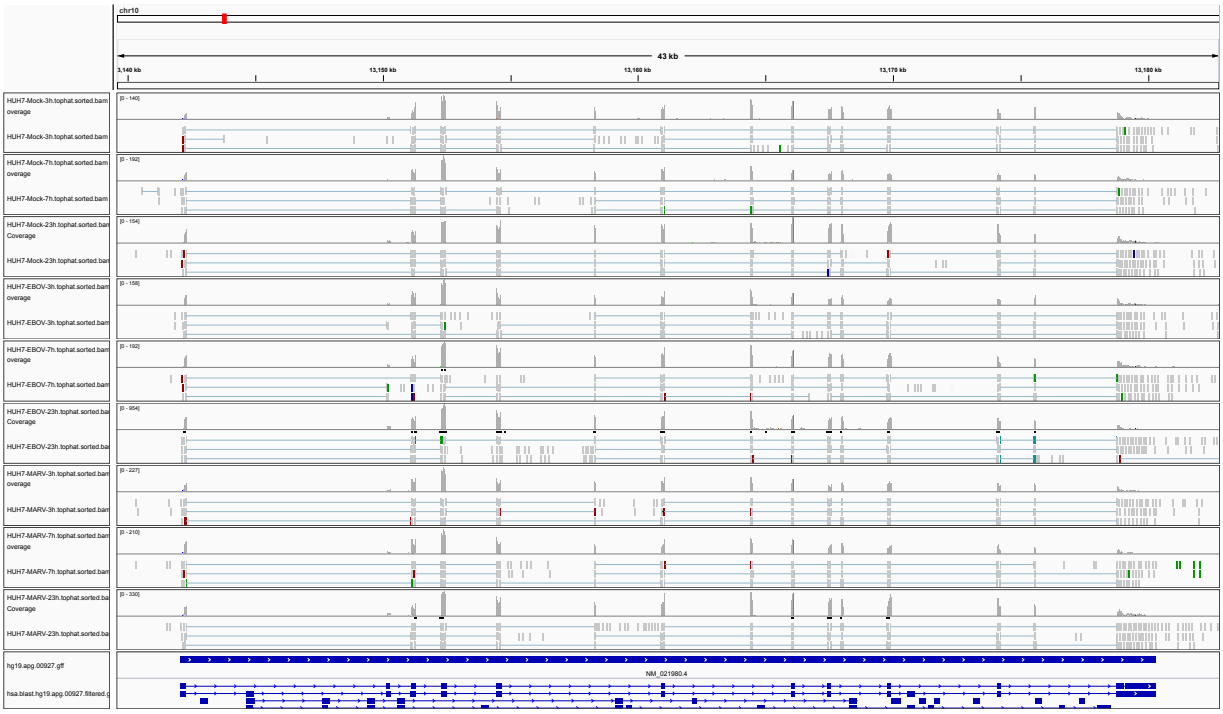

Figure 1: IGV Genome Browser screenshot of gene OPTN.

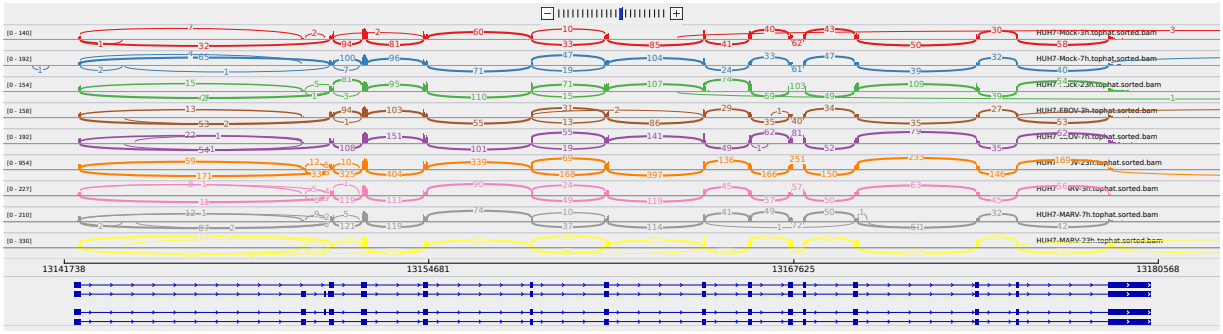

Figure 2: Sashimi plot of gene OPTN.

Figure 3: UCSC Genome Browser screenshot of gene OPTN.

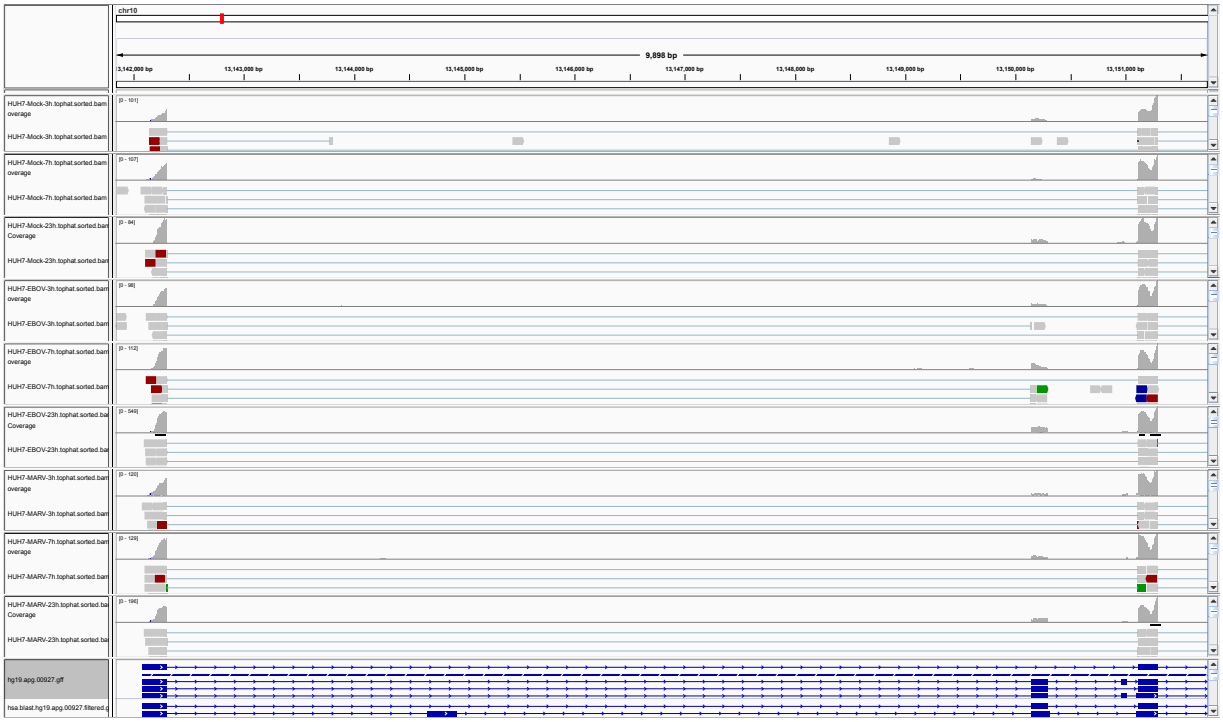

Figure 4: IGV Genome Browser screenshot of gene OPTN, zoomed into region that shows expression of a potential alternate exon between the first two annotated exons of this gene.