

1 TNIP2

Homo sapiens TNFAIP3 interacting protein 2 (TNIP2), transcript variant 2 gene encodes a protein which acts as an inhibitor of NFkappaB activation. The encoded protein is also involved in MAP/ERK signaling pathway in specific cell types. It may be involved in apoptosis of endothelial cells. Alternative splicing results in multiple transcript variants. A pseudogene related to this gene is located on the X chromosome. TNIP2 inhibits NF-kappa-B activation by blocking the interaction of RIPK1 with its downstream effector NEMO/IKBKG. Forms a ternary complex with NFkB1 and MAP3K8 but appears to function upstream of MAP3K8 in the TLR4 signaling pathway that regulates MAP3K8 activation. Involved in activation of the MEK/ERK signaling pathway during innate immune response; this function seems to be stimulus- and cell type specific. Required for stability of MAP3K8. Involved in regulation of apoptosis in endothelial cells; promotes TEK agonist-stimulated endothelial survival. May act as transcriptional coactivator when translocated to the nucleus. Enhances CHUK-mediated NF-kappa-B activation involving NF-kappa-B p50-p65 and p50-c-Rel complexes.

The hg19 samples show expression with transcripts in each intron, whereas rae samples are minor expressed. The hg19 intron MOCK expressions show an upregulation as of 7h, while intronic ebola and marburg infected sample expressions are upregulated from the starting timepoint. After 23h only the transcripts for marburg infected RAE were decreased. Regarding the exonic transcripts increased for all hg19 samples from 3 to 7h. Later MOCK and Marburg infected RAE transcripts decrease, while the ebola infected still rise. From RAE gene expression analysis we observe a downregulation for MOCK and Ebola from 3 to 7h and a two fold upregulation for Marburg infected samples. After 23h all samples show an upregulation in comparison to the 7h sequencing and read mapping results. For ebola the increase is even 3 fold.

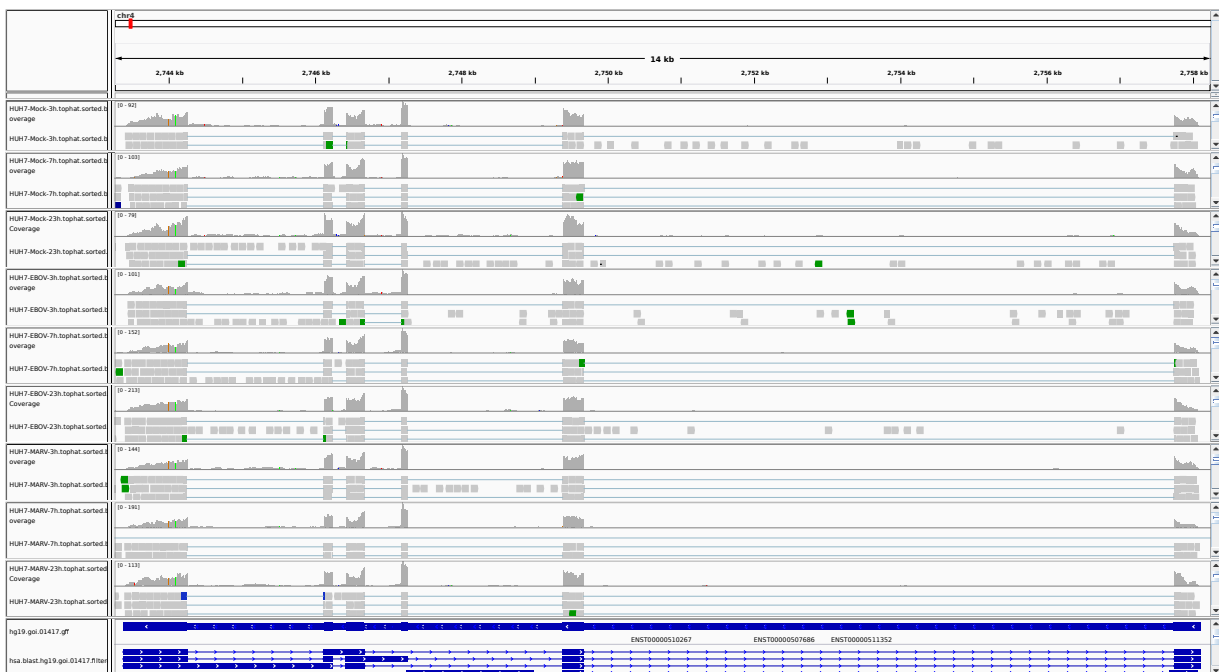


Figure 1: IGV Genome Browser screenshot of gene TNIP2.

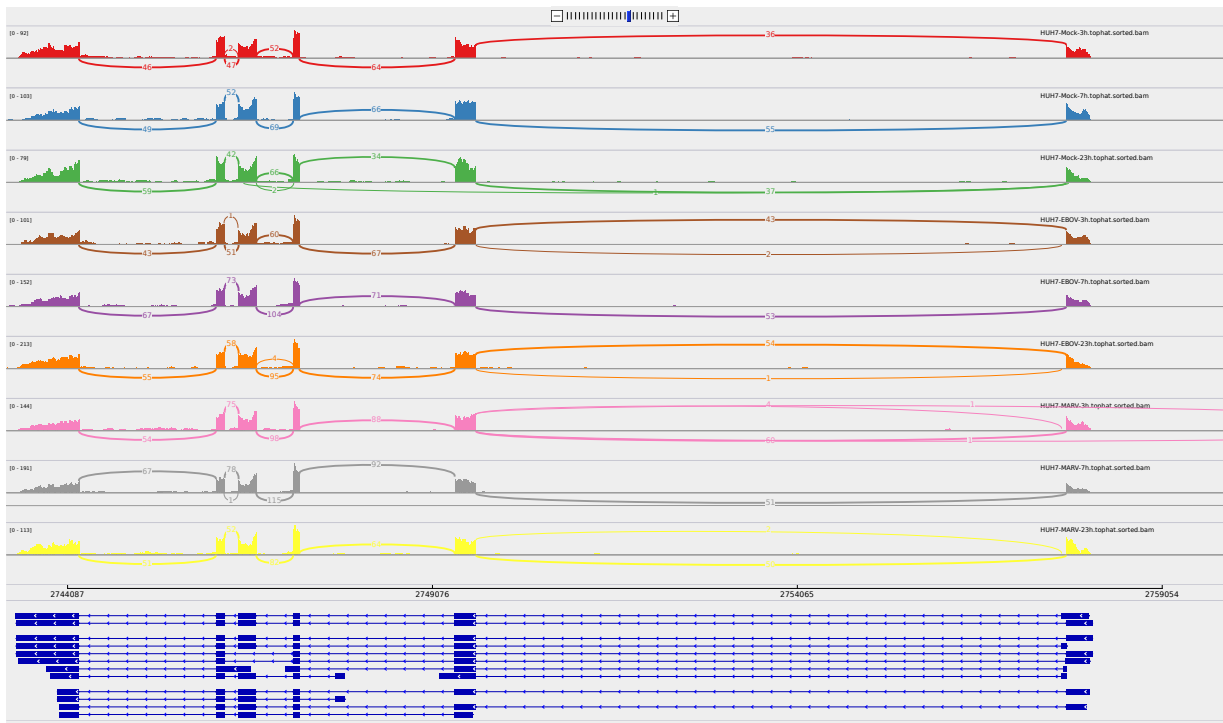


Figure 2: Sashimi plot of gene TNIP2.

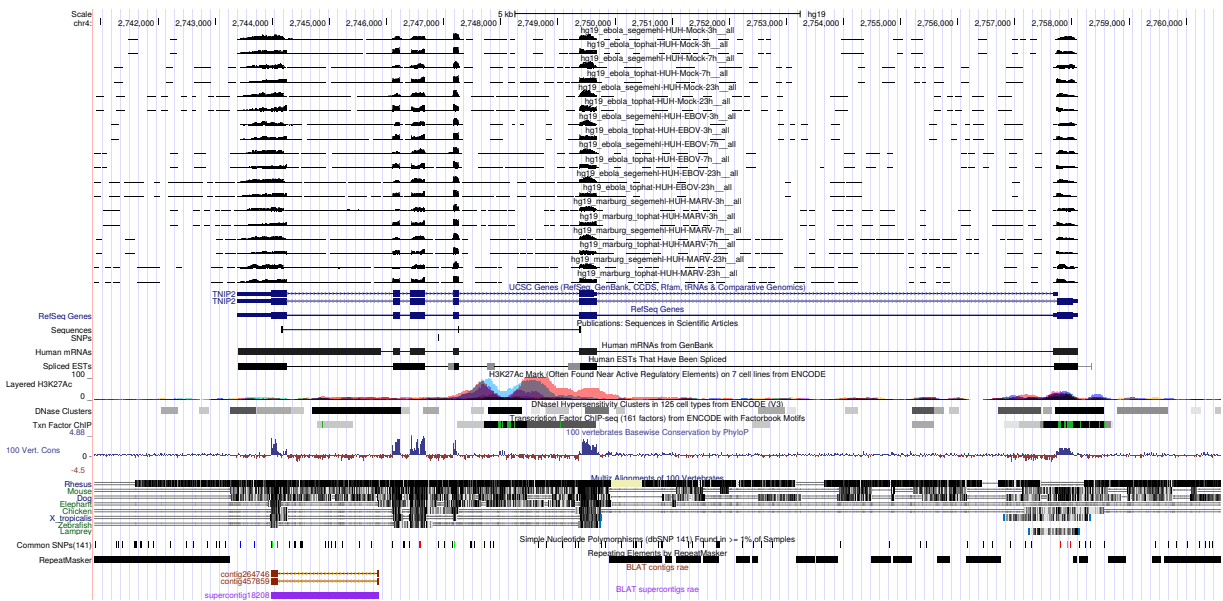


Figure 3: UCSC Genome Browser screenshot of gene TNIP2.