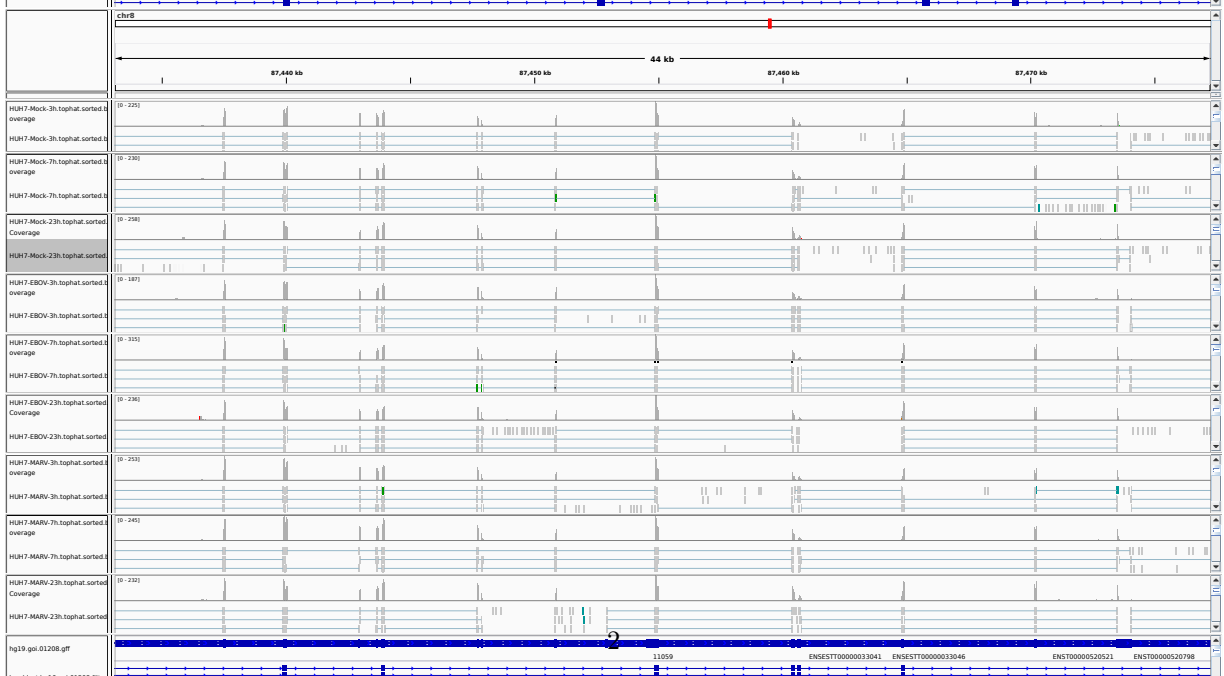
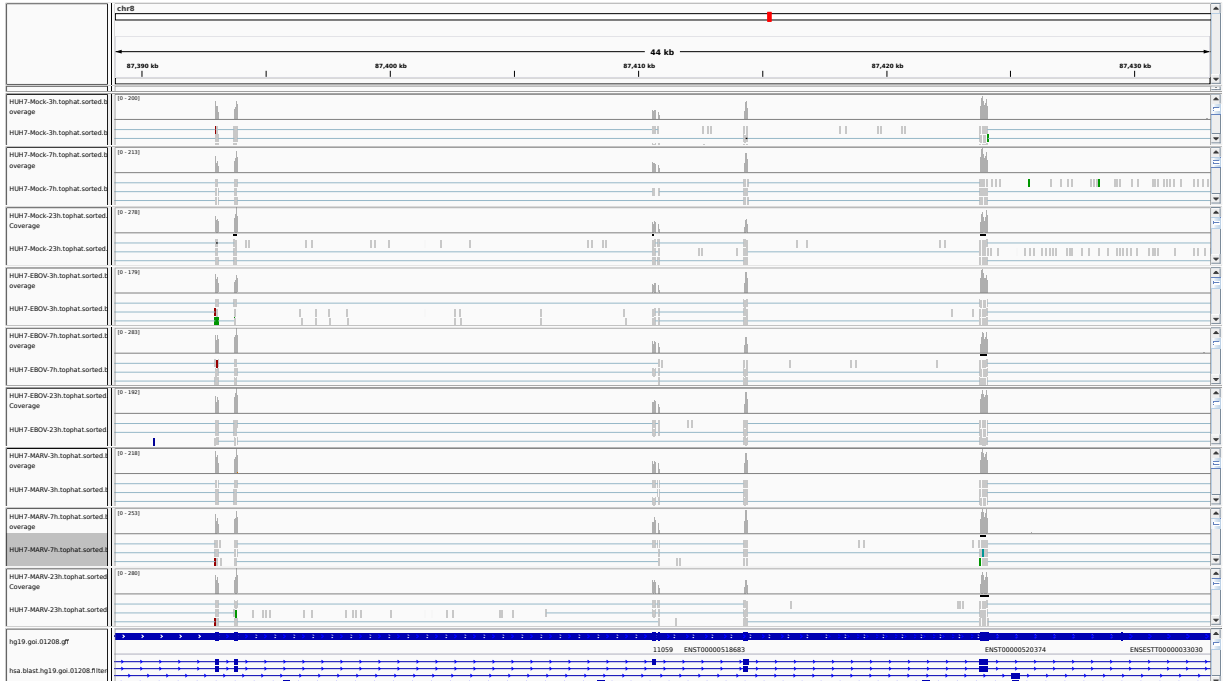
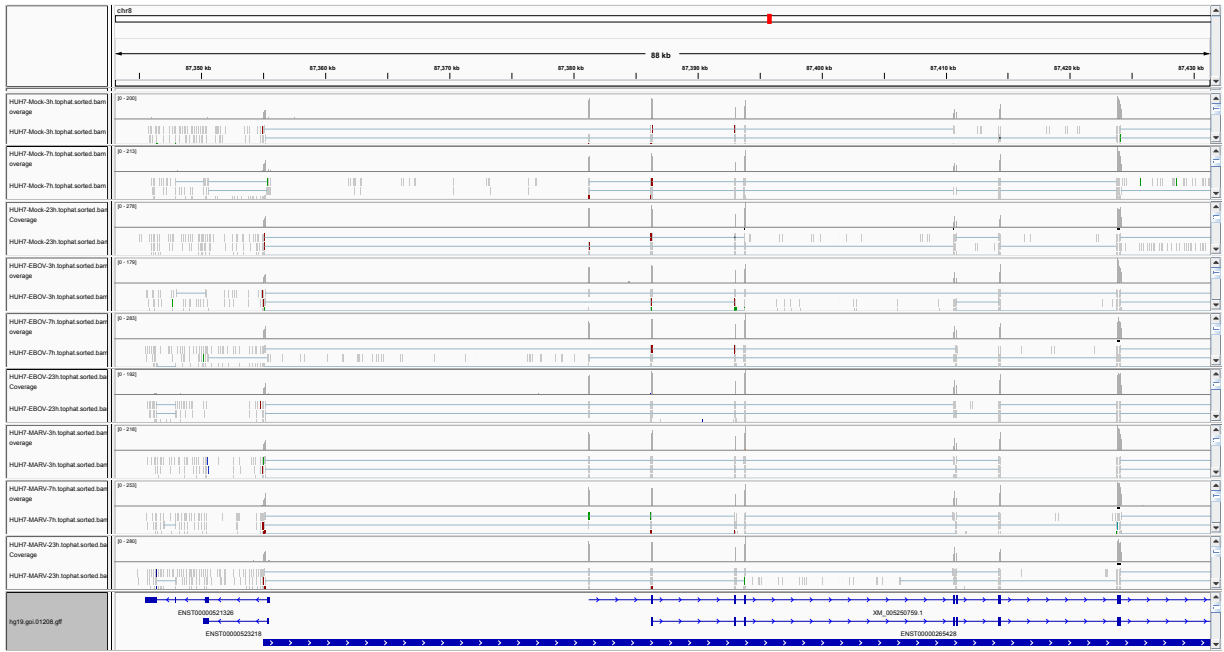
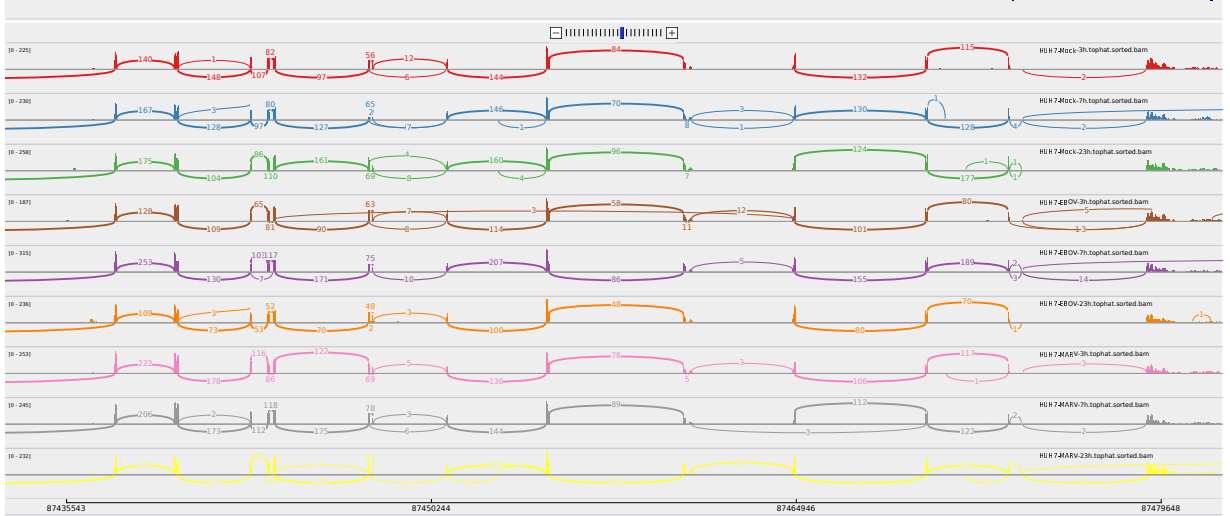
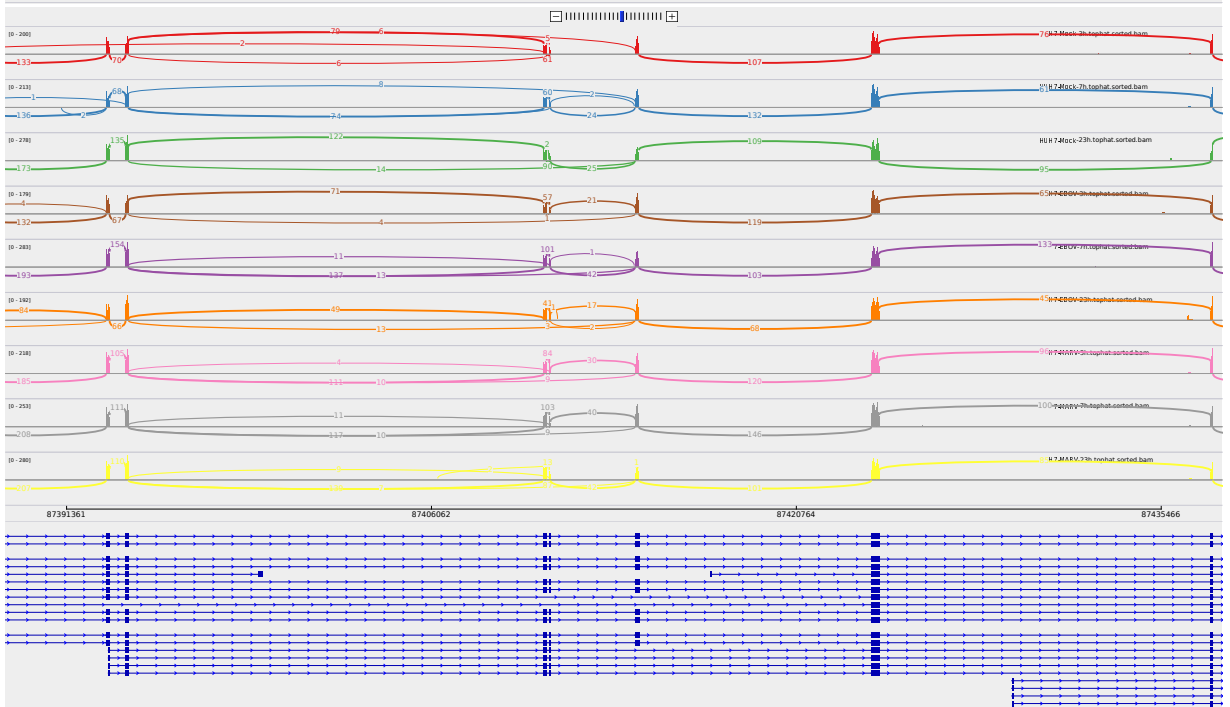
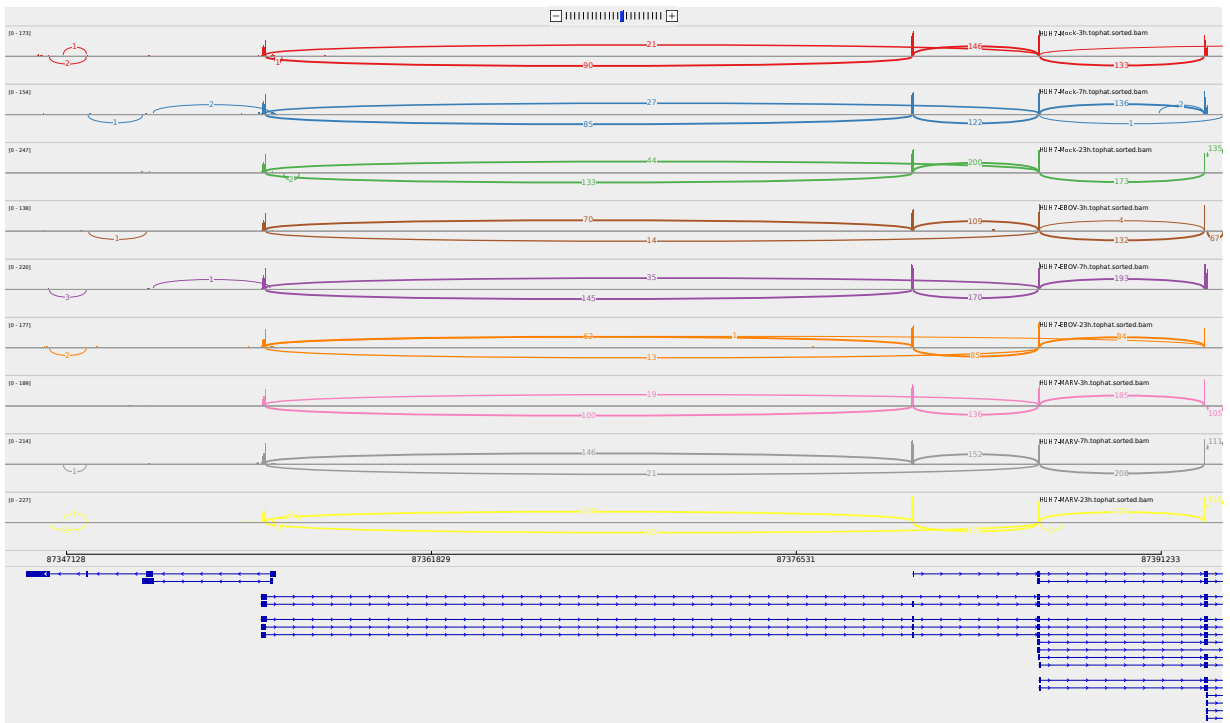


1 WWP1

Homo sapiens WW domain containing E3 ubiquitin protein ligase 1 (WWP1) are WW domain-containing proteins are found in all eukaryotes and play an important role in the regulation of a wide variety of cellular functions such as protein degradation, transcription, and RNA splicing. This gene encodes a protein which contains 4 tandem WW domains and a HECT (homologous to the E6-associated protein carboxyl terminus) domain. The encoded protein belongs to a family of NEDD4-like proteins, which are E3 ubiquitin-ligase molecules and regulate key trafficking decisions, including targeting of proteins to proteosomes or lysosomes. Alternative splicing of this gene generates at least 6 transcript variants; however, the full length nature of these transcripts has not been defined. This gene is an E3 ubiquitin-protein ligase which accepts ubiquitin from an E2 ubiquitin-conjugating enzyme in the form of a thioester and then directly transfers the ubiquitin to targeted substrates. Ubiquitinates ERBB4 isoforms JM-A CYT-1 and JM-B CYT-1, KLF2, KLF5 and TP63 and promotes their proteasomal degradation. Ubiquitinates RNF11 without targeting it for degradation. Ubiquitinates and promotes degradation of TGFBR1; the ubiquitination is enhanced by SMAD7. Ubiquitinates SMAD6 and SMAD7. Ubiquitinates and promotes degradation of SMAD2 in response to TGF-beta signaling, which requires interaction with TGIF.

The WWP1 gene shows a minor upregulation in human without infection and in the Marburg samples. Instead the Ebola infected human tissue shows a two fold upregulation, followed by a downregulation after 7 h. The mapping results to the homolog annotation in bat transcriptome does not show any differential expression in-between the 3-7-23 h samples. The mapping results also shows a 5000 nt too long annotation at 3' end. The included exon is already the first on which belongs to the downstream located RMDN1 gene.





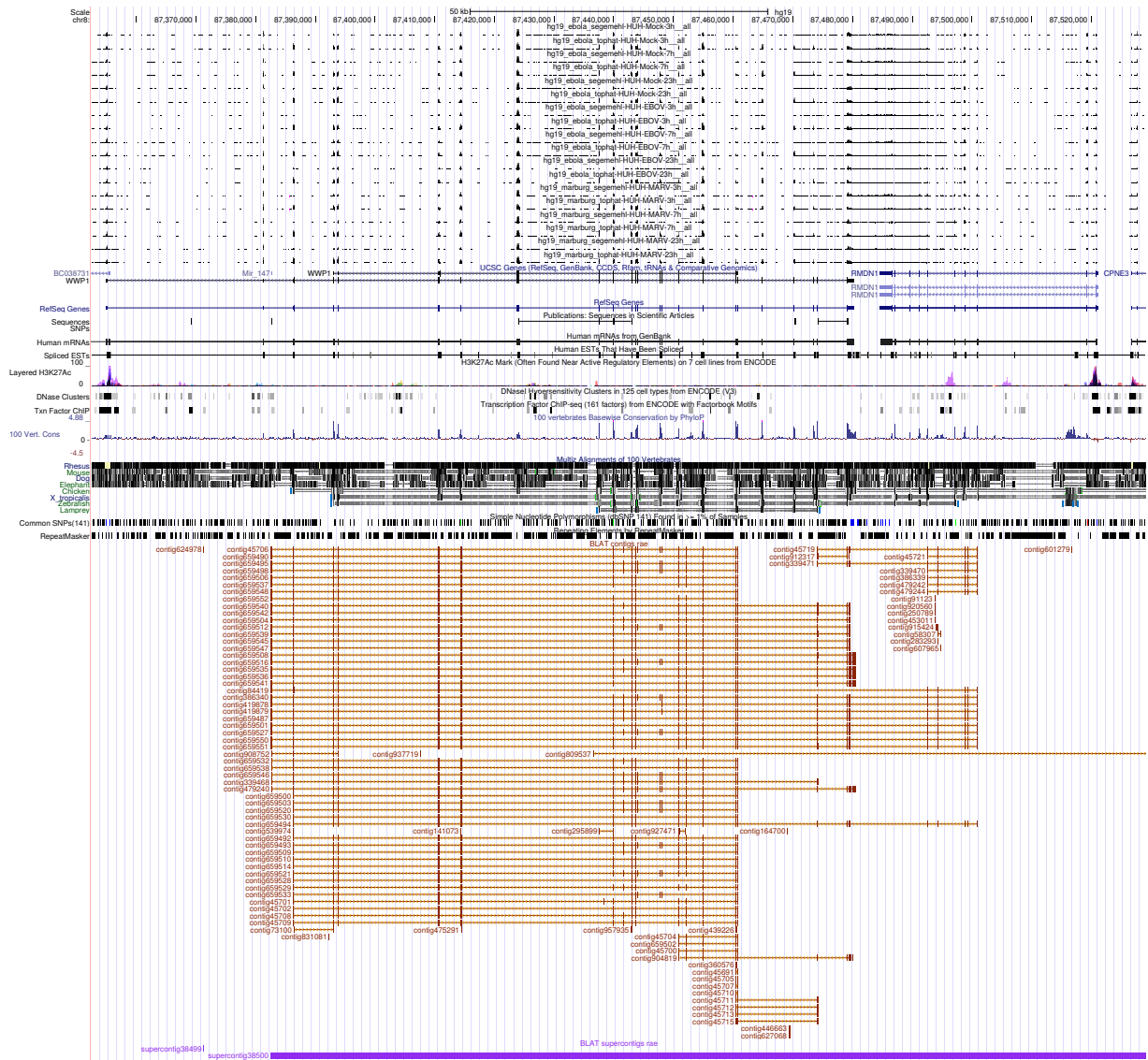


Figure 3: UCSC Genome Browser screenshot of gene WWP1.