

1 CDKN1A

Homo sapiens cyclin-dependent kinase inhibitor 1A (p21, Cip1) (CDKN1A), transcript variant 2 gene encodes a potent cyclin-dependent kinase inhibitor. The encoded protein binds to and inhibits the activity of cyclin-CDK2 or -CDK4 complexes, and thus functions as a regulator of cell cycle progression at G1. The expression of this gene is tightly controlled by the tumor suppressor protein p53, through which this protein mediates the p53-dependent cell cycle G1 phase arrest in response to a variety of stress stimuli. This protein can interact with proliferating cell nuclear antigen (PCNA), a DNA polymerase accessory factor, and plays a regulatory role in S phase DNA replication and DNA damage repair. This protein was reported to be specifically cleaved by CASP3-like caspases, which thus leads to a dramatic activation of CDK2, and may be instrumental in the execution of apoptosis following caspase activation. Multiple alternatively spliced variants have been found for this gene.

In RAE no homolog gene was found, but in hg19 (MOCK equal expressed over time) the expression is upregulated during ebola infection and even 3 fold upregulated during marburg infection.

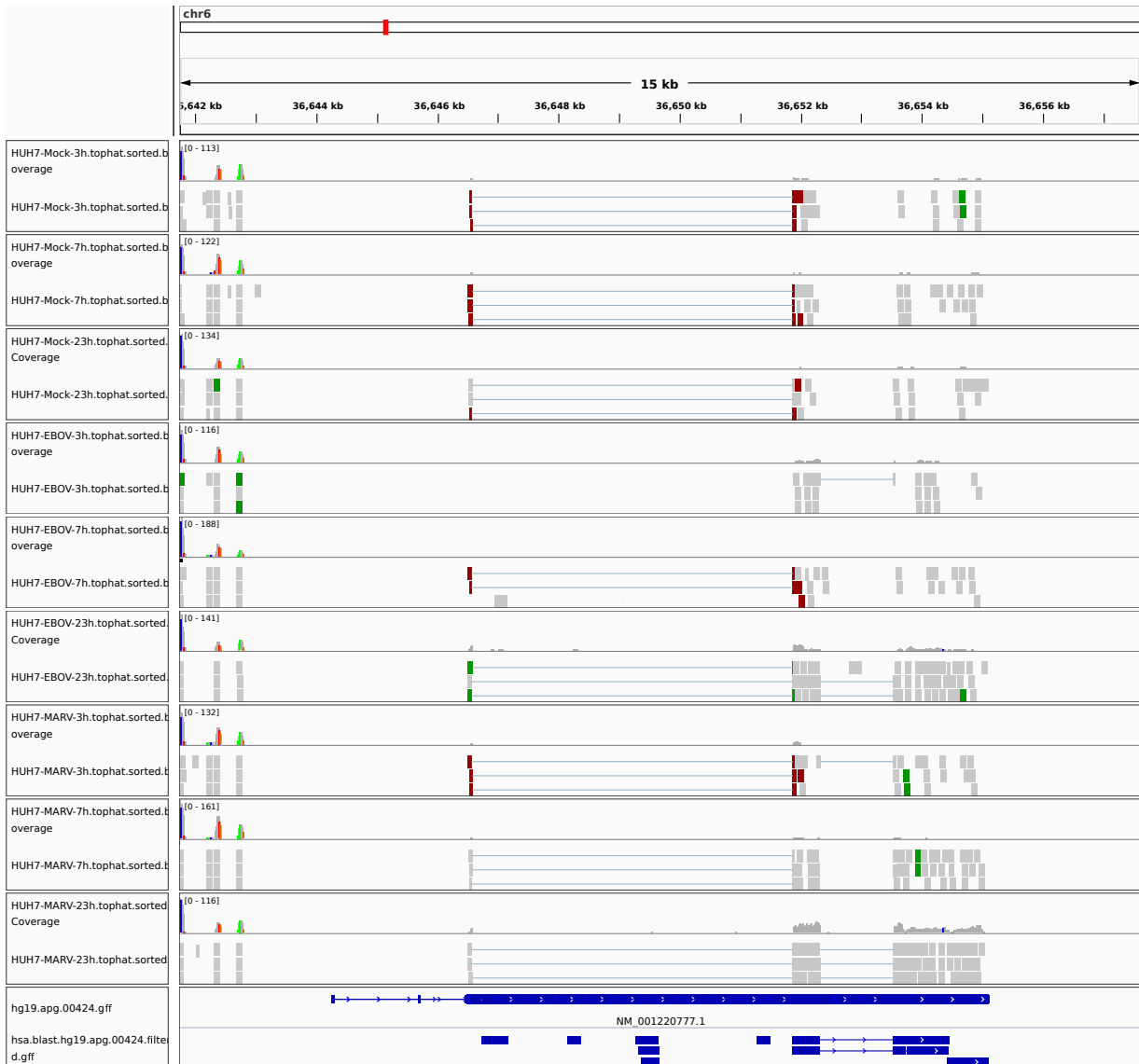


Figure 1: IGV Genome Browser screenshot of gene CDKN1A.

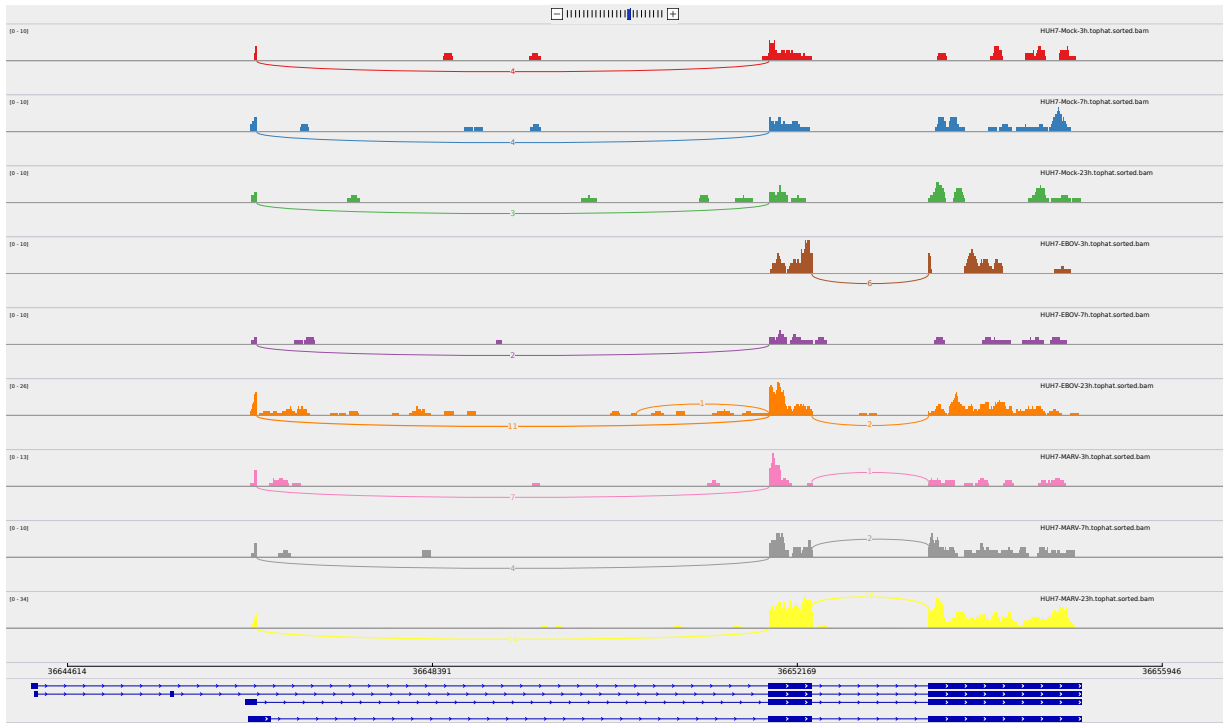


Figure 2: Sashimi plot of gene CDKN1A.

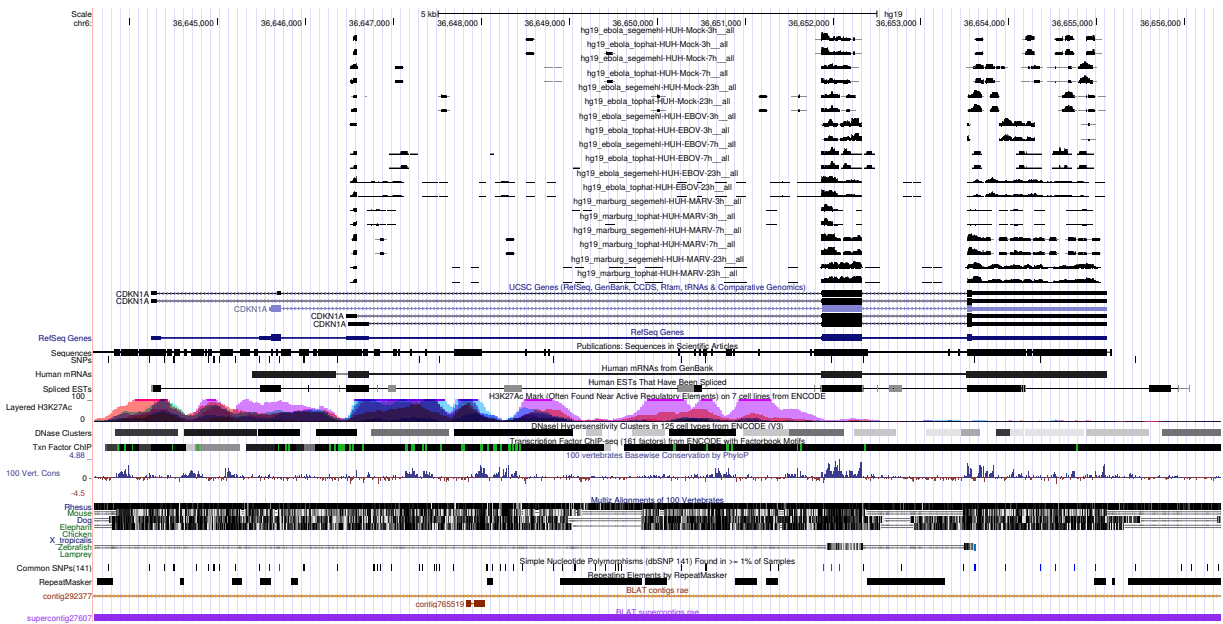


Figure 3: UCSC Genome Browser screenshot of gene CDKN1A.