

1 DUSP1

The expression of DUSP1 gene is induced in human skin fibroblasts by oxidative/heat stress and growth factors. It specifies a protein with structural features similar to members of the non-receptor-type protein-tyrosine phosphatase family, and which has significant amino-acid sequence similarity to a Tyr/Ser-protein phosphatase encoded by the late gene H1 of vaccinia virus. The bacterially expressed and purified DUSP1 protein has intrinsic phosphatase activity, and specifically inactivates mitogen-activated protein (MAP) kinase in vitro by the concomitant dephosphorylation of both its phosphothreonine and phosphotyrosine residues. Furthermore, it suppresses the activation of MAP kinase by oncogenic ras in extracts of *Xenopus* oocytes. Thus, DUSP1 may play an important role in the human cellular response to environmental stress as well as in the negative regulation of cellular proliferation.

In human it is highly upregulated after 23 h of infection and also upregulated in bat after 23 h of infection with Marburg virus and Ebola virus.



Figure 1: IGV Genome Browser screenshot of gene DUSP1.

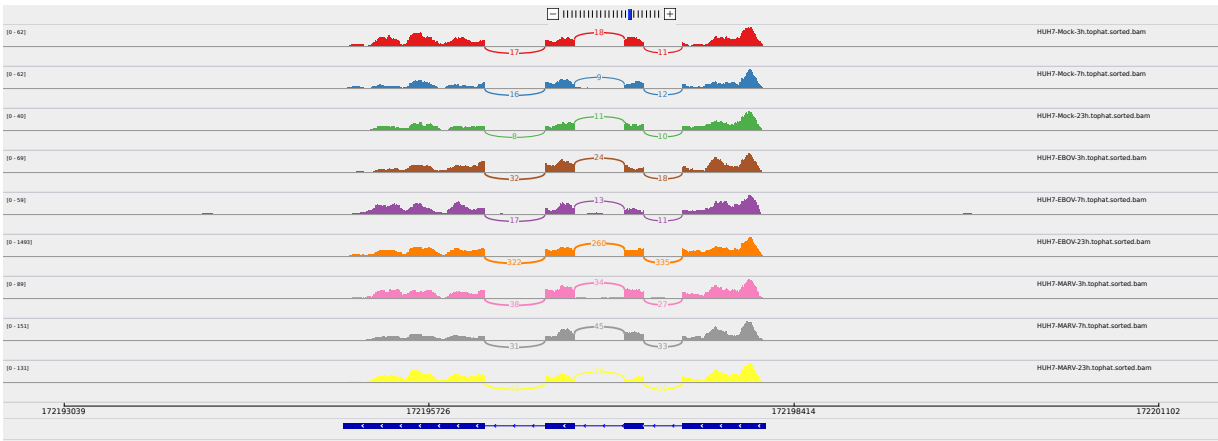


Figure 2: Sashimi plot of gene DUSP1.

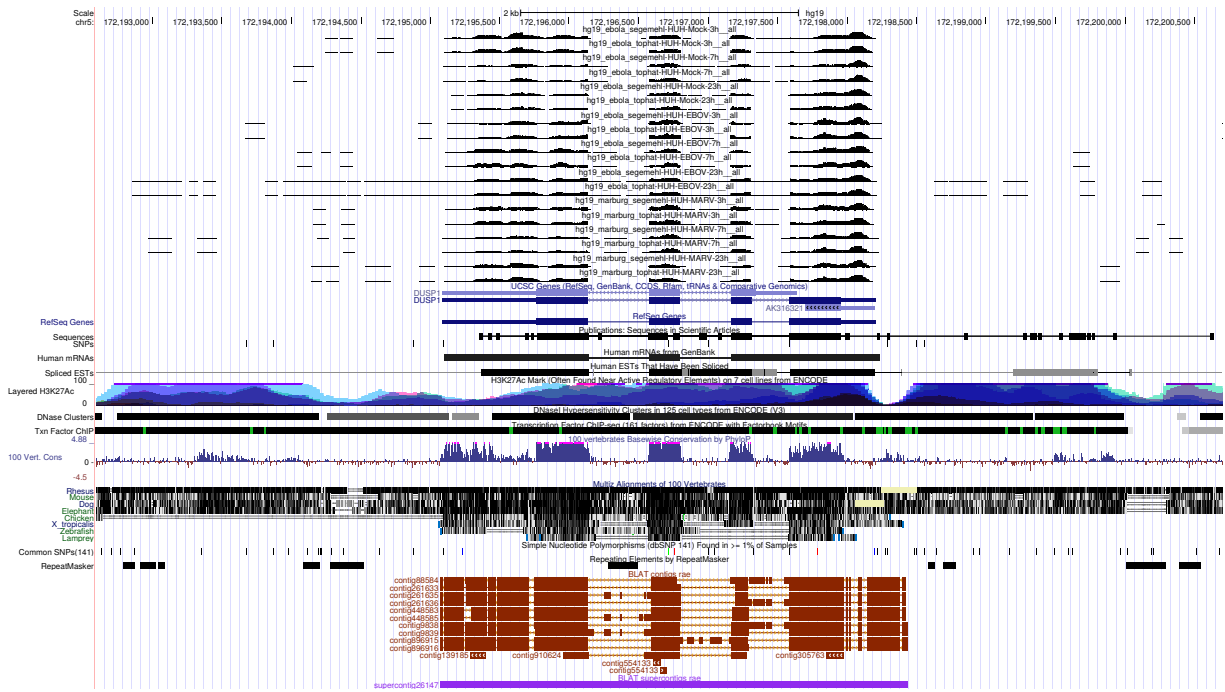


Figure 3: UCSC Genome Browser screenshot of gene *DUSP1*.