1 GLUD1

This gene encodes glutamate dehydrogenase protein; a mitochondrial matrix enzyme that catalyzes the oxidative deamination of glutamate to alpha-ketoglutarate and ammonia. This enzyme has an important role in regulating amino acid induced insulin secretion and activating mutations in this gene are a common cause of congenital hyperinsulinism. This enzyme is allosterically activated by ADP and inhibited by GTP and ATP. The related glutamate dehydrogenase 2 gene on the human X-chromosome originated from this gene via retrotransposition and encodes a soluble form of glutamate dehydrogenase. Multiple pseudogenes of this gene are present in humans. The gene is downregulated in late EBOV and MARV infection in human. The bat homolog is only slightly downregulated, and it is also downregulated in control cells.

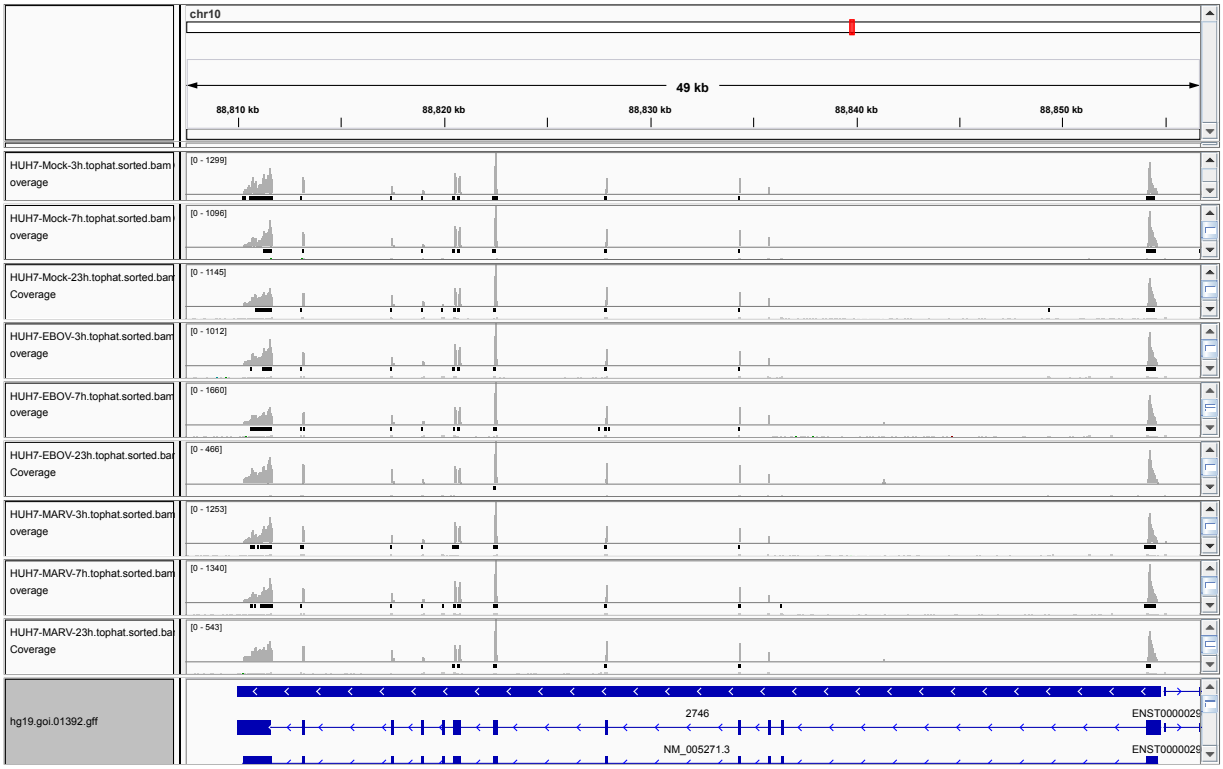

Figure 1: IGV Genome Browser screenshot of gene GLUD1.

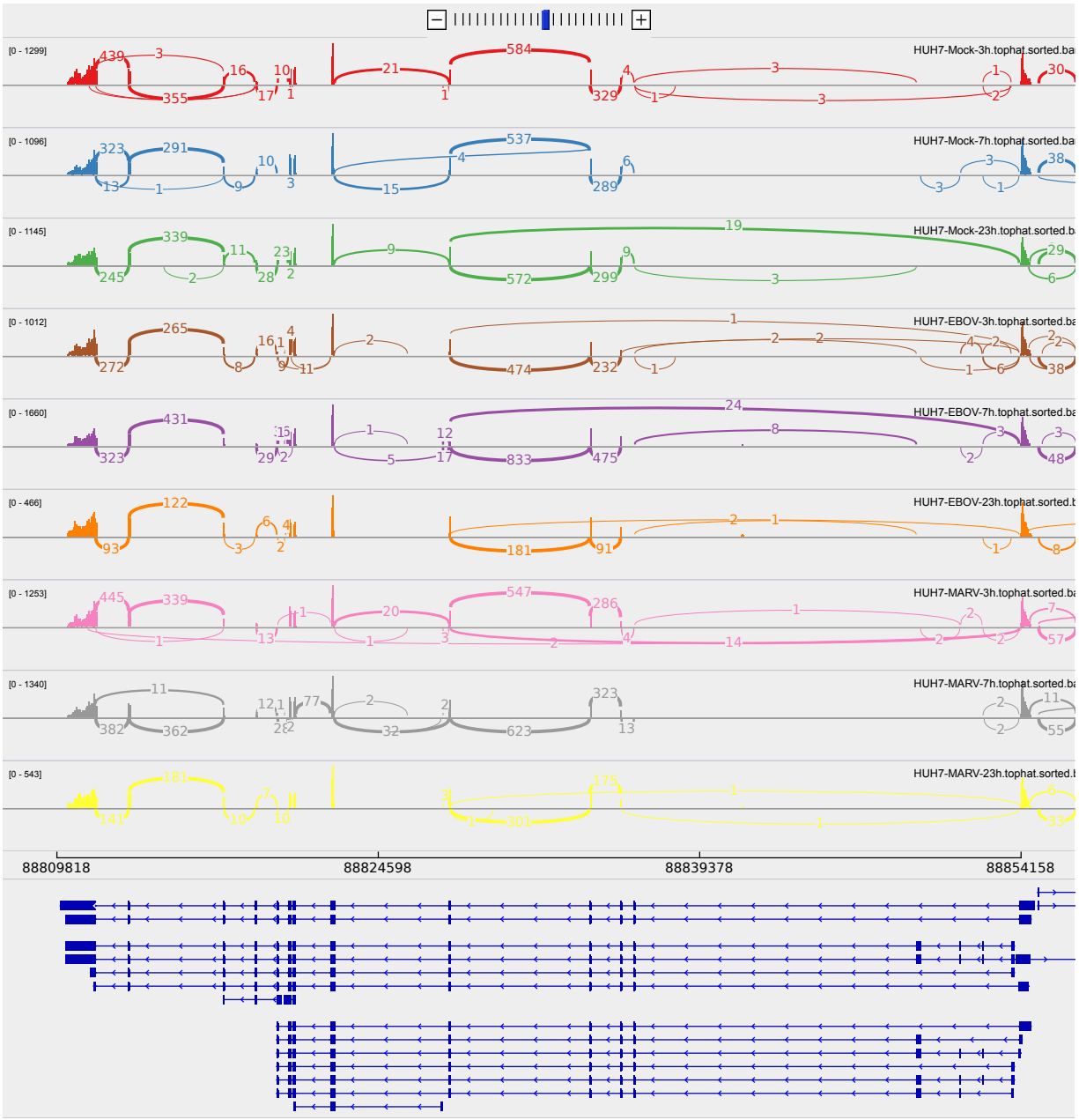

Figure 2: Sashimi plot of gene GLUD1.

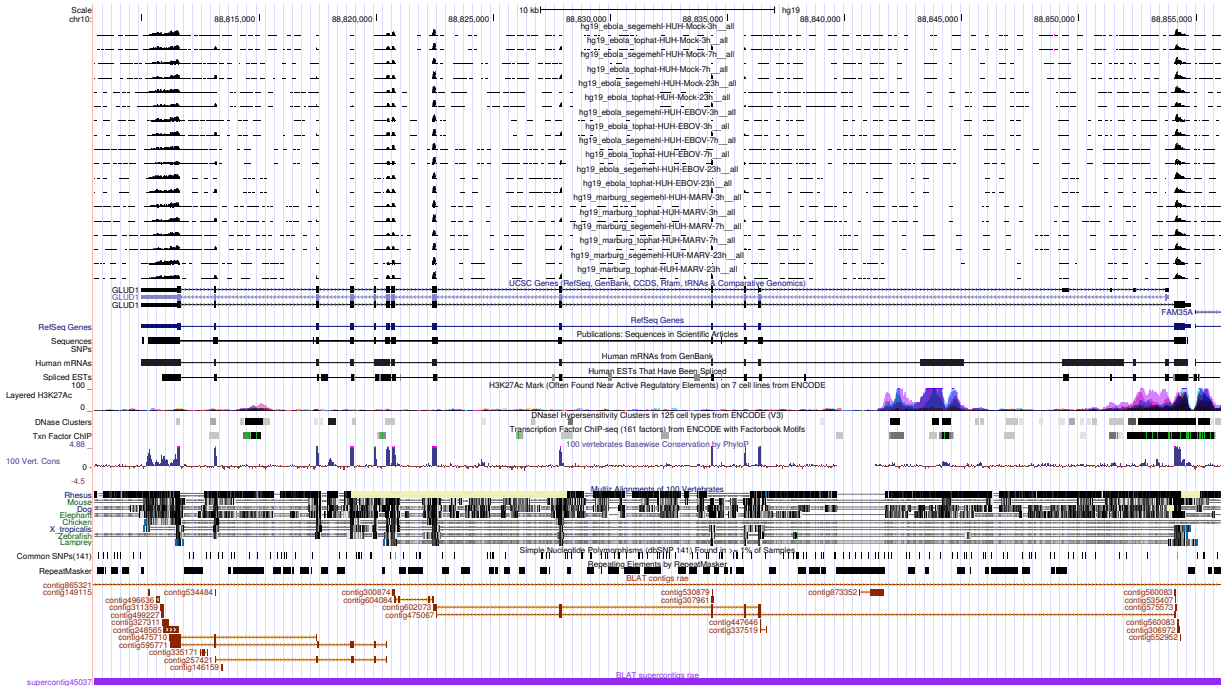

Figure 3: UCSC Genome Browser screenshot of gene GLUD1.