Obín Science

Equine Encephalitis Viruses

Venezuelan(VEEV), Eastern(EEEV), and **Western(WEEV)**equine encephalitis viruses are mosquito-borne zoonotic alphaviruses known to cause severe encephalitis in both equids and humans. With mortality rates of <1% for VEEV, 30–70% for EEEV, and 3–7% for WEEV, these viruses represent significant health threats. Currently, no approved therapeutics exist for treating infections caused by these viruses. The receptors facilitating viral entry differ among the three viruses: **LDLRAD3** for VEEV, **VLDLR** for EEEV, and **PCDH10** for WEEV.



Fig 1.Structure of the alphaviruses(viralzone)

Equine encephalitis viruses are **enveloped**, **positive-sense**, **single-stranded RNA viruses** with genomes approximately 12 kb in length. The first ORF encodes **four nonstructural proteins (nsP1, nsP2, nsP3, nsP4)**, and the second encodes **five structural proteins (Capsid, E1, E2, E3, 6K)**. These proteins are critical for viral replication and infection, making them key targets for therapeutic and diagnostic research.



Fig.2 Genome organization of the alphaviruses(viralzone)

Protein	
Catalog No.	Product Name
VK634032	Recombinant WEEV Spike glycoprotein E2 Protein, N-His
VK634022	Recombinant WEEV Spike glycoprotein E1 Protein, N-His
VK634012	Recombinant EEEV Spike glycoprotein E2 Protein, N-His
VK634042	Recombinant EEEV Spike glycoprotein E1 Protein, N-His
VK634011	Recombinant WEEV Spike glycoprotein E1 Protein, C-His
Polyclonal Antibody	
Catalog No.	Product Name
VK634014	Anti-EEEV Spike glycoprotein E2 Polyclonal Antibody
VK634024	Anti-WEEV Spike glycoprotein E1 Polyclonal Antibody
VK634034	Anti-WEEV Spike glycoprotein E1 Polyclonal Antibody
VK634044	Anti-EEEV Spike glycoprotein E1 Polyclonal Antibody
Kit	
Catalog No.	Product Name
VK634018	WEEV Spike glycoprotein E2 ELISA Kit
VK634028	WEEV Spike glycoprotein E1 ELISA Kit
VK634038	EEEV Spike glycoprotein E2 ELISA Kit
VK634048	EEEV Spike glycoprotein E1 ELISA Kit

All products are for research use only

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