Product Specification Sheet

Recombinant JEV NS1 (JEV- NS1) protein

Cat# JEV18-R Recombinant (E.Coli) Japanese Encephalitis Virus (JEV) NS1 protein (~46 kda) **SIZE**: 10 ug

Japanese encephalitis—previously known as Japanese B encephalitis to distinguish it from von Economo's A encephalitis—is a disease caused by the mosquito-borne Japanese encephalitis virus. The Japanese encephalitis virus is a virus from the family Flaviviridae. Domestic pigs and wild birds are reservoirs of the virus; transmission to humans may cause severe symptoms. One of the most important vectors of this disease is the mosquito Culex tritaeniorhynchus. This disease is most prevalent in Southeast Asia and the Far East. Japanese encephalitis has an incubation period of 5 to 15 days and the vast majority of infections are asymptomatic: only 1 in 250 infections develop into encephalitis. Severe rigors mark the onset of this disease in humans. Fever, headache and malaise are other non-specific symptoms of this disease which may last for a period of between 1 and 6 days. Signs which develop during the acute encephalitic stage include neck rigidity, cachexia, hemiparesis, convulsions and a raised body temperature between 38 and 41 degrees Celsius. Mental retardation developed from this disease usually leads to coma. Mortality of this disease varies but is generally much higher in children. The causative agent Japanese encephalitis virus is an enveloped virus of the genus flavivirus; it is closely related to the West Nile virus and St. Louis encephalitis virus. Positive sense single stranded RNA genome is packaged in the capsid, formed by the capsid protein. The outer envelope is formed by envelope (E) protein and is the protective antigen. Japanese Encephalitis is diagnosed by detection of antibodies in serum and CSF (cerebrospinal fluid) by ELISA. The genome also encodes several nonstructural proteins also (NS1, NS2a, NS2b, NS3, NS4a, NS4b, and NS5). NS1 is produced as secretory form also. NS3 is a putative helicase, and NS5 is the viral polymerase.

JEV Envelope protein E binding to host cell surface receptor is followed by virus internalization through clathrin-mediated endocytosis. Envelope protein E is subsequently involved in membrane fusion between virion and host late endosomes. Synthesized as a homodimer with prM which acts as a chaperone for envelope protein E. After cleavage of prM, envelope protein E dissociate from small envelope protein M and homodimerize. Japanese Encephalitis is diagnosed by detection of antibodies in serum and CSF (cerebrospinal fluid) by IgM capture ELISA. Viral antigen can also be shown in tissues by indirect fluorescent antibody staining.

Form & Storage



JEV NS1 protein (Genebank No. NC_001437, was expressed in HEK293 cell as his-tag protein and purified (>95%, Mol wt ~46 kda). It is supplied in PBS 0.1% azide (lot sp. conc on the vial).

Specificity: JEV NS1 protein is highly conserved in various isolates of JEV (99-100%).

Store at -20oC or below for at least 6-months.

Stability: ~12 months at -20oC.

Shipping: 4oC for solutions and room temp for powder.

Recommended Usage

ELISA: Coat at 0.1-1.0 ug/ml

Western blot: Load 50-200 ng/well and detect with appropriate antibodies.

References: Hasegawa H (1992) Virology 191, 158-1665; Wu SC (1997) Virus Res. 51, 173-191;

*This product is for In vitro research use only.

Related material available from ADI

Catalog# Prod Description

JEV11-S Mouse Anti-Rec. Japanese Encephalitis Virus (JEV) envelop protein E (JEV-EP) antiserum
JEV12-S Anti-Rec. Japanese Encephalitis Virus (JEV) envelop protein E (JEV-EP) antiserum
JEV13-M Monoclonal Anti-Rec. Japanese Encephalitis Virus (JEV) PreM protein IgG
JEV14-M Monoclonal Anti-Rec. Japanese Encephalitis Virus (JEV) envelop protein E (JEV-EP) Supt.
JEV15-R-10 Recombinant Japanese Encephalitis Virus (JEV) envelop protein E (JEV-EP, full length), purified (>95%)
JEV16-R Recombinant Japanese Encephalitis Virus (JEV) gE immunodominant regions

910-000-JEV Anti-Japanese encephalitis virus antibody rapid test card (10 tests/kit)

910-100-JEM Mouse Anti-Japanese encephalitis virus envelop Protein (JEV-EP) Ig's ELISA kit

910-110-JWM Mouse Anti-Japanese encephalitis virus envelop Protein (JEV-EP) Ig's WB kit, 12 tests

910-120-JEM Mouse Anti-Japanese encephalitis virus envelop Protein (JEV-EP) IgG specific ELISA kit, 96 tests

910-130-JEM Mouse Anti-Japanese encephalitis virusenvelop Protein (JEV-EP) IgM specific ELISA kit, 96 tests

910-140-JEM Rabbit Anti-Japanese encephalitis virus envelop Protein (JEV-EP) IgG specific ELISA kit, 96 tests

910-150-JEM Rabbit Anti-Japanese encephalitis virus envelop Protein (JEV-EP) IgM specific ELISA kit, 96 tests

910-160-JEM Human Anti-Japanese encephalitis virus envelop Protein (JEV-EP) IgG specific ELISA kit 96 tests

910-170-JEM Human Anti-Japanese encephalitis envelop Protein (JEV-EP) IgM specific ELISA kit 96 tests

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