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Antibody Datasheet

Product Name:	Mouse anti-Japanese Encephalitis Virus NS1
Clone number:	CA5.D7.E9.D8
Isotype:	Mouse IgG1
Product code:	MAB12171-100
Batch Number:	18052312
Immunogen:	Recombinant Japanese Encephalitis virus NS1, from the Native Antigen Company
Amount:	100ug
Concentration:	1.0mg/ml
Buffer:	Phosphate Buffered Saline pH7.4
Preservative:	None present
Purification:	Antibody was purified by affinity chromatography on Protein G
Specificity:	This antibody is specific for the NS1 protein of Japanese Encephalitis virus, and does not cross-react with NS1 from other flaviviruses, including Dengue virus serotypes 1-4, Zika virus, Yellow Fever virus and West Nile virus. No cross-reactivity is seen with Chikungunya virus E1, E2 or C proteins.
Applications:	Direct ELISA (NS1 antigen bound to plate)

Antigen background: The NS1 protein is a major non-structural protein expressed by the Japanese Encephalitis Virus. The NS1 monomer is a glycosylated protein of approximately 45kD, which associates with lipids and forms a homodimer inside infected cells. It Is necessary for viral replication, and is also secreted into the extracellular space as a hexameric lipoprotein particle, which is involved in immune evasion and pathogenesis by interacting with components from both the innate and adaptive immune systems, as well as other host factors.

The Japanese encephalitis virus (JEV) belongs to the genus Flavivirus, of the family Flaviviridae. JEV is also a member of the Japanese encephalitis serology complex, which also includes West Nile virus, St. Louis encephalitis and Murray Valley encephalitis virus. In nature, JEV cycles primarily between water birds and mosquitoes, of the *Culex* species, but pigs can be infected and act as amplifying hosts. JEV can also be transmitted to incidental hosts including humans, horse and other mammals.

In Asia, Japanese encephalitis (JE) is the leading cause of viral encephalitis in children, with up to 70,000 cases reported annually. In most cases JEV infection causes mild symptoms but a small number of cases develop into severe life-threatening encephalitis. The symptoms of JEV infection are like those seen in other conditions that cause severe encephalitis syndrome. In cases presenting with severe encephalitis, mortality rates can be as high as 30%, with survivors developing long term neurological and behavioural complications. Currently, there is no specific antiviral therapy for JEV but safe and effective licenced vaccines are available.

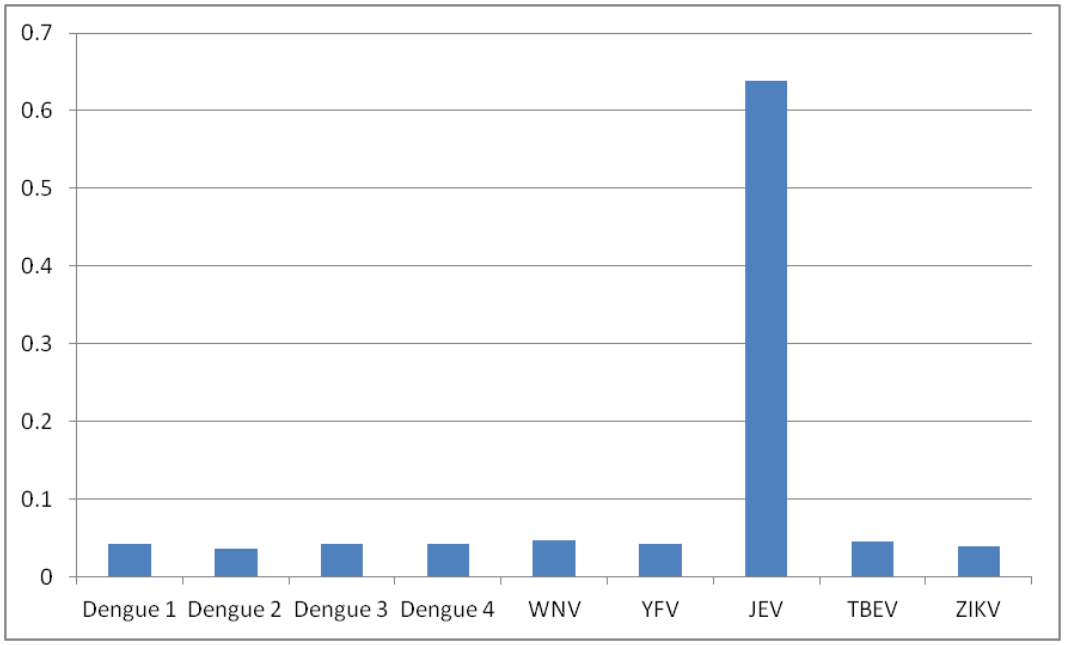
Diagnosis of JEV infection is achieved by serological testing for JEV specific IgM antibodies in the patient's cerebrospinal fluid or serum. However, cross-reactivity of JEV specific antibodies with other Flaviviruses that co-circulate with JEV, such as Dengue virus, can be a challenge and can prevent accurate diagnosis.

Results:

ELISA assay was performed using the method below, with antigens at 0.5ug/ml and antibody at 0.01ug/ml.

ELISA plates coated on bench overnight in DPBS 100ul/well, washed once in wash buffer 300ul/well (TBS + 0.1% tween 20) and blocked 2 hours in 1% BSA in D-PBS 300ul/well. Antibodies diluted to working strength in diluent (DPBS + 1% BSA + 0.05% Tween 20 + 0.2% Proclin 950). Added at 100ul/well and incubated 2 hours shaken at ambient temperature. Washed 3 x 300ul/well.

Goat anti Mouse IgG-HRP (Biorad103005) diluted 1 in 2500 in diluent, added at 100ul/well and incubated with shaking 1 hour at ambient. Plate washed 6X300ul/well. TMB (KPL Sureblue 5120-0077) added at 100ul/well. Reaction for screening assay stopped by addition of 1M HCl 100ul/well.



Storage:

Store at +4^{0}C for up to three months, or at -20^{0}C for longer periods
The antibody is shipped at ambient temperature.
Avoid repeated freeze/thaw cycles.