

Product Specification Sheet

Monoclonal Anti-Rec. Japanese Encephalitis Virus (JEV) Antibodies

Cat # JEV14-M Monoclonal Anti-Rec. Japanese Encephalitis Virus (JEV) envelop protein E (JEV-EP) IgG

SIZE: 100 ul

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. 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. Based on the envelope gene there are five genotypes (I–V). The Muar strain, isolated from patient in Malaya in 1952, is the prototype strain of genotype V. Genotype IV appears to be the ancestral strain and the virus appears to have evolved in the Indonesian–Malaysian region.

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.

Source of Antigen and Antibodies

Antigen	JEV, Nakayama strain
Ab Host/type	mouse, monoclonal IgG1, (Cat # JEV14-M) supplied in PBS, pH 7.4 and 0.05% azide
2-Ab	Goat Anti-mouse IgG-HRP conjugate Cat # 40320 (AP, biotin, FITC conjugates also available)
-ve	Cat # 20008-1, Mouse (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as –ve control

Isotype Controls

Catalog#	Product Description
20102-101	Mouse IgG1 isotype control, purified
20102-101-1	Mouse IgG1 isotype control, purified
20102-101-APC	Mouse IgG1-APC conjugate (isotype control)
20102-101-B	Mouse IgG1-Biotin conjugate (isotype control)
20102-101-F	Mouse IgG1-FITC conjugate (isotype control)

20102-101-FP	Mouse IgG1-FITC-PE conjugate
20102-101-HP	Mouse IgG1-HRP conjugate (isotype control)
20102-101-PC5	Mouse IgG1-PE-Cy5 conjugate
20102-101-PE	Mouse IgG1-PE conjugate (isotype control)

Form & Storage

100 ul solution lyophilized powder
Buffer: PBS pH 7.4, and 0.05% azide
Reconstitute powder in 100 ul water

Stability: 6-12 months at –20oC or below.

Suggested Use:

ELISA: use at 1:1000-1:5000
Western Blot: 1:500-1:2000
IF: 1:200-1:1000

Specificity

Antibody #JEV13-M reacts an epitope (designated as E-8) on the E protein of Japanese Encephalitis Virus (Nakayama). Does not crossreact with Yellow Fever or Dengue Virus.

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#	ProdDescription
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
JEV14-M	140506A

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