

**Product Specification Sheet**

Anti-Rec. Japanese Encephalitis Virus (JEV) envelop protein E (JEV-EP) Antibodies

**Cat #** JEV12-S

Anti- Rec. Japanese Encephalitis Virus (JEV) envelop protein E (JEV-EP) antiserum

**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**

<b>Antigen</b>	Recombinant JEV Envelope protein.
<b>Ab Host/type</b>	Rabbit, polyclonal, (Cat# <b>JEV12-S</b> ) supplied in supplied in 0.05% azide as preservative.
<b>2-Ab</b>	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
<b>-ve</b>	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as –ve control

JEV envelop protein was expressed in *E. coli* as his-tag protein and purified (>95%, Mol wt ~55 kda). and injected into rabbits to generate antibodies

**Form & Storage of Antibodies/Peptide Control**

**Antiserum**

100 ul  solution  lyophilized powder

Buffer: PBS+0.05% azide

**Reconstitute powder** 100 ul of PBS.

**Storage**

**Short-term:** unopened, undiluted vials for less than a week at 4oC.

**Long-term:** at –20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

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

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

**Recommended Usage**

**Western Blotting:** An initial dilution of 1:500-2K is recommended for Western. Users must optimize antibody dilution depending upon the nature of samples and other technical conditions.

**ELISA (1:10-50K;** using 50-100 ng antigen/well).

**Histochemistry & Immunofluorescence:** not tested.

**Specificity:** JEV E protein is highly conserved in various isolates of JEV (99-100%). Antibody #JEV12-M reacts an epitope on the E protein of Japanese Encephalitis Virus. Does not cross react 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**

JEV11-S	Mouse 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) Supr.
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 (JEV-EP) Ig's ELISA kit	Mouse Anti-Japanese encephalitis virus envelop Protein
910-110-JWM (JEV-EP) Ig's WB kit, 12 tests	Mouse Anti-Japanese encephalitis virus envelop Protein
910-120-JEM (JEV-EP) IgG specific ELISA kit, 96 tests	Mouse Anti-Japanese encephalitis virus envelop Protein
910-130-JEM (JEV-EP) IgM specific ELISA kit, 96 tests	Mouse Anti-Japanese encephalitis virusenvelop Protein (JEV-EP)
910-140-JEM (JEV-EP) IgG specific ELISA kit, 96 tests	Rabbit Anti-Japanese encephalitis virus envelop Protein
910-150-JEM (JEV-EP) IgM specific ELISA kit, 96 tests	Rabbit Anti-Japanese encephalitis virus envelop Protein
910-160-JEM (JEV-EP) IgG specific ELISA kit 96 tests	Human Anti-Japanese encephalitis virus envelop Protein
910-170-JEM (JEV-EP) IgM specific ELISA kit 96 tests	Human Anti-Japanese encephalitis envelop Protein (JEV-EP)
JEV12-S	140804P