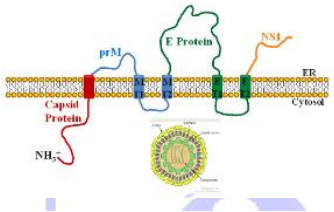
Japanese Encephalitis Virus (JEV) Vaccines Antibody ELISA Kits, Recombinant Proteins, and Antibodies

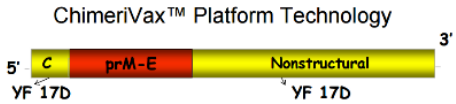
Japanese encephalitis—previously known as Japanese B encephalitis to distinguish it from von Economo's A encephalitis—is a disease caused by the mosquito-borne Japanese encephalitis virus (**JEV**). The Japanese encephalitis virus is a virus from the family Flaviviridae. Domestic **pigs and wild birds** 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. JEV 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. Mental retardation developed from this disease usually leads to coma. Mortality of this disease varies but is generally much higher in children. 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.



The causative agent Japanese encephalitis virus is an enveloped virus of the genus flavivirus and is closely related to the West Nile virus and St. Louis encephalitis virus. The positive sense ssRNA genome is packaged in the **capsid** which is formed by the capsid protein. The outer envelope is formed by envelope (**E**) protein and is the protective antigen. It aids in entry of the virus to the inside of the cell. The genome also encodes several nonstructural proteins also (NS1-5). NS1 is produced as secretory form also. NS3 is a putative helicase, and NS5 is the viral polymerase.

All current **vaccines** are based on the genotype III virus. Infection with JEV confers life-long immunity. Two kinds of JEV vaccines were made available. One of them was an **inactivated mouse brain-derived vaccine** (the Nakayama and/or Beijing-1 strain), made by BIKEN and marketed by Sanofi Pasteur as **JE-VAX**, until production ceased in 2005. The other was an inactivated vaccine cultivated on primary

hamster kidney cells (the Beijing-3 strain). A purified, **formalin-inactivated, whole virus vaccine** known as IC51 (marketed in Australia and New Zealand as JESPECT and elsewhere as **IXIARO**) was licensed for use in the United States, Australia, and Europe during the spring of 2009. It is based on a SA14-14-2 strain and cultivated in Vero cells. The live, attenuated yellow fever virus (**YFV) strain 17D vaccine** has been used safely and effectively in over 500 million individuals over the past 70 years.



Demand for yellow vaccine for preventive campaigns has increased from about 5 million doses per year to a projected 62 million per year by 2014. Another vaccine, a live-attenuated yellow fever-Japanese encephalitis chimeric vaccine known as **ChimeriVax-JE** (marketed as **IMOJEV**) was licensed for use in Australia in August 2010. ChimeriVax™ platform encoding two structural proteins (**prM and E**) of yellow fever 17D vaccine virus replaced by corresponding genes from attenuated **JE strain** (SA14-14-2). Recombinant envelop protein-based vaccines are also being developed. This vaccine may also be suitable for DIVA testing as the presence of JEV-NS1 antibodies will only be present in naturally infected individuals.

About ADI JEV Vaccine ELISA Kits-ADI's JEV vaccine ELISA utilizes highly purified recombinant JEV virus Env, prM, and NS1 as antigens to detect anti-JEV Ig's. These kits will also help determine the efficacy of various existing vaccines and test new vaccines. Antibody ELISA kits for species or subtype not listed here can also be made available.

JEV Vaccine Related ELISA kits

(See Details at the website) http://4adi.com/commerce/catalog/spcategory.jsp?category_id=2778

Items Description	Species	IgG Cat#	IgM Cat#
JEV **Envelop** Protein/E Antibody ELISA kits, 96 tests, quantitative	Mouse	910-100-JEG	910-105-JEM
	Human	910-110-JEG	910-115-JEM
	Monkey	910-120-JEG	910-125-JEM
JEV **prM** Antibody ELISA kits, 96 tests, quantitative	Mouse	910-130-JEG	910-135-JEM
	Human	910-140-JEG	910-145-JEM
	Monkey	910-150-JEG	910-155-JEM
JEV **NS1** Antibody ELISA kits, 96 tests, quantitative	Mouse	910-160-JEG	910-165-JEM
	Human	910-170-JEG	910-175-JEM
	Monkey	910-180-JEG	910-185-JEM

JEV Recombinant protein & Antibodies kits

Catalog#		Product Description	Product Type
JEV-Env	JEV11-C	Recom. JEV envelop protein E protein control for Western blot	Western control
	JEV11-S	Mouse Anti-Rec. Japanese Encephalitis Virus (JEV) envelop protein E (JEV-EP) antiserum	Antibodies
	JEV12-S	Anti-Rec. Japanese Encephalitis Virus (JEV) envelop protein E (JEV-EP) antiserum	Antiserum
	JEV14-M	Monoclonal Anti-Rec. Japanese Encephalitis Virus (JEV) envelop protein E (JEV-EP) Supt.	Antibodies
	JEV15-R-10	Recomb. JEV envelop protein E (JEV-EP, full length), purified (>95%)	Recom. Protein
	JEV16-R	Recombinant (E. coli) Japanese Encephalitis Virus (JEV) Envelop (50 kda >95%)	Recom. Protein
JEV-prM	JEV13-C	Recombinant (E. coli) Japanese Encephalitis Virus (JEV) prM protein control for Western blot	
	JEV13-M	Monoclonal Anti-Rec. Japanese Encephalitis Virus (JEV) prM protein IgG	Antibodies
	JEV17-R	Recombinant (E. coli) Japanese Encephalitis Virus (JEV) prM protein (50 kda >95%)	Recom. Protein
JEV-NS1	JEV18-R	Recomb. (HEK) JEV NS1 protein (50 kda >95%, V5 tag, ~46 kda)	Recom. Protein
	JEV15-M	Mouse Monoclonal Anti-Japanese Encephalitis Virus (JEV) NS1 protein E (JEV-NS1) IgG.	Antibodies

JEV_Vaccine_Flr 160612A

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