

# Recombinant Japanese Encephalitis Virus Envelope Protein, His-tagged

**Cat. No.** JAP-471    **Lot. No.** (See product label)

## SPECIFICATION

### Product Overview

Recombinant JEV Envelope protein produced in HEK293 cells and purified from culture supernatant. Protein contains a C-terminal 6x His-tag. The NAC Japanese Encephalitis Virus Envelope protein has been manufactured in response to a need for a highly purified, concentrated protein for use in vaccine research and serological based diagnostic products. The antigen is in its native folding state, and possesses all post-translational modifications. This advanced approach results in a product which delivers optimal antigenicity due to its human origin.

### Tag

His

### Background

The Japanese encephalitis virus (JEV) is a flavivirus and is related to the West Nile Virus. JEV is the main cause of viral encephalitis in many countries of Asia with an estimated 68 000 clinical cases every year. Although symptomatic Japanese encephalitis (JE) is rare, the case-fatality rate among those with encephalitis can be as high as 30%. Permanent neurologic or psychiatric sequelae can occur in 30%–50% of those with encephalitis.

Flaviviruses are positive-stranded RNA viruses with a 9-12- kb genome that is translated as a single polyprotein and then cleaved by host and viral proteases into structural capsid (C), premembrane (prM), envelope (E) proteins and seven nonstructural proteins. Capsid binds to viral RNA to form a nucleocapsid that is enveloped by an endoplasmic reticulum-derived membrane containing E and prM. E proteins are responsible for cellular attachment and possess a hydrophobic loop that mediates fusion of viral and host membrane. The E protein is therefore the primary

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|                         |                                                                                                                                                                                                                                                  |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                         | target of neutralizing antibodies.                                                                                                                                                                                                               |
| <b>Purity</b>           | Greater than 95% purity                                                                                                                                                                                                                          |
| <b>Sequence Strain</b>  | SA-14, NCBI accession number P27395.1, AA295-694                                                                                                                                                                                                 |
| <b>Formulation</b>      | 20mM Tris-HCl pH 7.8, 50mM NaCl                                                                                                                                                                                                                  |
| <b>Freezing</b>         | Can be frozen, but avoid multiple freeze/thaw cycles.                                                                                                                                                                                            |
| <b>Applications</b>     | Suitable for immunoassay development.                                                                                                                                                                                                            |
| <b>Storage</b>          | Short Term Storage: +2 centigrade to +8 centigrade<br>Long Term Storage: -80 centigrade                                                                                                                                                          |
| <b>Concentration</b>    | 0.7 mg/mL                                                                                                                                                                                                                                        |
| <b>Notes</b>            | This product is intended for research and manufacturing uses only. It is not a diagnostic device. The user assumes all responsibility for care, custody and control of the material, including its disposal, in accordance with all regulations. |
| <b>Type</b>             | Recombinant                                                                                                                                                                                                                                      |
| <b>ClassID 1</b>        | Infectious Disease                                                                                                                                                                                                                               |
| <b>GENE INFORMATION</b> |                                                                                                                                                                                                                                                  |
| <b>Synonyms</b>         | Japanese Encephalitis Virus Envelope                                                                                                                                                                                                             |