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Product Information

Japanese Encephalitis Virus-like Particles (JEV VLPs)

Cat. No.: **VLP-018YF**
This product is for research use only and is not intended for diagnostic use.

Recombinant Japanese Encephalitis Virus-like Particles (JEV VLPs) are produced in mammalian HEK293 human cells, assembled with pre-Membrane and Envelope proteins. VLP is mimicking the native 3D structure of viruses which can elicit strong immune responses. However, VLPs lack viral genomic material which makes them non-infectious, unable to replicate and enhance the safety during manufacture and administration. JEV VLPs can be used in the development of JEV diagnostics and in vaccine development and R&D (including use as an immunogen).

Product Specifications

Structural Proteins
pre-Membrane and Envelope proteins

Expression Systems
HEK293 (please specify if other expression system is needed)

Purity
>90%

Buffer
PBS pH7.4

Form
Liquid

Alternative Names
Japanese Encephalitis Virus-like Particles; JEV VLPs; Japanese Encephalitis Virus; JEV; VLP; Virus-like particle

Storage
Store at -80 °C long term. Avoid repeated freeze/thaw cycles.

Virus Background

Virus Family
Flaviviridae

Virus Species
Japanese Encephalitis Virus

Virus Strain
SA-14

Virus Overview

Japanese encephalitis virus (JEV) can cause brain infection called Japanese encephalitis (JE). The symptoms of this infection may include headache, fever, vomiting, confusion and seizures. While most infections result in little or no symptoms. JEV is generally spread by mosquitoes, pigs and wild birds serve as a reservoir for the virus. JEV is a virus from the family Flaviviridae, and it's closely related to the West Nile Virus and the St. Louis encephalitis virus. It's a kind of enveloped, positive sense, single-stranded RNA virus. The RNA genome is packaged in the capsid protein. The outer envelope is formed by envelope protein and is the protective antigen, which helps the entry of the virus into the host cells. This virus is also composed of several nonstructural proteins (NS1, NS2a, NS2b, NS3, N4a, NS4b, NS5). NS1 is produced as secretory form also. NS3 is a putative helicase, and NS5 is the viral polymerase. It has been noted that Japanese encephalitis infects the lumen of the endoplasmic reticulum (ER) and rapidly accumulates substantial amounts of viral proteins. Japanese encephalitis is diagnosed by commercially available tests detecting JE virus-specific IgM antibodies in serum and /or cerebrospinal fluid, for example by IgM capture ELISA.

Virus Structure

Enveloped, positive-sense, single-stranded RNA virus

Related Disease

Japanese encephalitis (JE)

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