

# Product Information

## Dengue Virus S1 Virus-like Particles (DENV S1 VLPs)

Cat. No.: **VLP-012YF**

This product is for research use only and is not intended for diagnostic use.

Recombinant Dengue Virus serotype 1 Virus-like Particle (DENV S1 VLPs) are produced in mammalian HEK293 human cells, assembled with Envelope, pre-Membrane and Membrane 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. DENV S1 VLPs can be used in the development of DENV diagnostics and in vaccine development and R&D (including use as an immunogen).

### Product Specifications

#### Structural Proteins

Capsid protein C, membrane protein M, envelope protein E

#### Expression Systems

HEK293 (please specify if other expression system is needed)

#### Purity

>95%

#### Buffer

10 mM sodium phosphate, 20 mM sodium citrate, 154 mM sodium chloride, pH 7.4

#### Form

Liquid

#### Alternative Names

Dengue Virus S1 Virus-like Particle; DENV S1 VLPs; VLPs; Virus-like Particles; DENV Serotype 1; Dengue Virus Serotype 1

#### Storage

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

### Virus Background

#### Virus Family

Flaviviridae

#### Virus Species

Dengue virus

#### Virus Overview

The DENV genome is about 11000 bases of positive-sense, single stranded RNA (ssRNA) that codes for three structural proteins (capsid protein C, membrane protein M, envelope protein E) and seven nonstructural proteins (NS1, NS2a,

NS2b, NS3, NS4a, NS4b, NS5). It also includes short noncoding regions on both the 5' and 3' ends. Dengue virus (DENV) is the cause of dengue fever. It is a mosquito-borne, single positive-stranded RNA virus of the family Flaviviridae; genus Flavivirus. Five serotypes of the virus have been found, all of which can cause the full spectrum of disease.

### **Virus Structure**

Enveloped, positive-sense, single-stranded RNA virus

### **Related Disease**

Dengue disease