Recombinant Viral Zika Virus (MR 766) NS1

Catalog Number: 9445-ZK

DESCRIPTION

Source	Human embryonic kidney cell, HEK293-derived Val792 & Ser795-Ser1144, with a C-terminal 6-His tag Accession # Q32ZE1
N-terminal Sequence Analysis	Val792 & Ser795
Predicted Molecular Mass	41 kDa

SPECIFICATIONS

SDS-PAGE	41-55 kDa, reducing conditions
Activity	Bioassay data are not available.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 3 months, -20 to -70 °C under sterile conditions after reconstitution.

DATA

Bioactivity not tested

The Innovator Series. R&D Systems proteins are almost always sold with a bioassay to indicate activity. However, we recognize that sometimes proteins might be novel, and their bioactivity may not be well understood. In addition, some researchers may wish to use polypeptides to make antibodies. To facilitate the advancement of new science, we now offer our Innovator Series of proteins.

BACKGROUND

Zika Virus non-structural protein 1 (ZIKV NS1) is an approximately 48 kDa viral glycoprotein (1). Zika Virus is a mosquito-borne flavivirus and has been implicated an association with neonatal microcephaly and neurological disorders such as Guillain-Barré syndrome (2). ZIKV strain MR 766 was isolated from monkey host. ZIKV NS1 is a multifunctional virulence factor. The glycosylated NS1 exists as a membrane-associated dimer after translocation into the endoplasmic reticulum lumen, where it is essential for viral genome replication (1, 2). Infected cells secrete NS1 as a lipoprotein, which is involved in immune evasion and pathogenesis via interaction with components of the innate and adaptive immune systems (1, 2). Mature ZIKV NS1 contains 352 amino acids (aa) and has a hexameric conformation consisting of three dimers to form a symmetric barrel shape (1). It has high structural similarity to other flavivirus NS1 proteins, such as DENV and WNV (2, 3). Mature NS1 of ZIKV strain MR 766 shares 98% aa sequence identity with NS1 of ZIKV strain H/PF/2013 that was isolated from human host.

References:

1. Song, H. *et al.* (2016) Nat. Struct. and Mol. Biol. **23**:456.
2. Brown, WC. *et al.* (2016) Nat. Struct. and Mol. Biol. **23**: 865.
3. Baronti, C. *et al.* (2014) Genome Announc. **2**: e00500

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