Recombinant Viral Dengue Virus 3 NS1

Catalog Number: 9440-DG

DESCRIPTION

Source	Human embryonic kidney cell, HEK293-derived Asp774-Ala1125, with a C-terminal 6-His tag Accession # Q6YMS4
N-terminal Sequence Analysis	Asp774
Predicted Molecular Mass	41 kDa

SPECIFICATIONS

SDS-PAGE	40-55 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	>80%, 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

Dengue virus type 1 non-structural protein 1 (DENV3 NS1) is an approximately 50 kDa viral glycoprotein (1). Dengue viruses are mosquito-borne flaviviruses that exist in nature as four distinct serotypes (DENV1-4) (2). Dengue virus NS1 can be found associated with cell membranes, within cells and at the cell surface, or as secreted extracellular species. The secreted form of NS1 is known to be hexameric (1). Within cells, NS1 plays a significant role in virus replication and has been shown to co-localize with dsRNA and other components of viral replication complexes in viral-induced vesicle packets (1, 3). Cell surface-associated and secreted NS1 are profoundly immunogenic, and both the protein itself and the antibodies it elicits have been shown to contribute to either protection or pathogenesis and innate immune evasion (1, 3). Mature DENV3 NS1 contains 352 amino acids (aa) and consists of 2 conserved N-glycosylation sites and 12 invariant cysteine residues that form six intramolecular disulfide bonds (3). Mature DENV3 NS1 shares 80%, 74%, and 74% aa sequence identity with DENV1, DENV2, and DENV4 NS1, respectively.

References:

1. Muller, D. *et al.* (2012) J. Gen. Virol. **93**:771.
2. VanBlargan, L.A. *et al.* (2013) PLoS Pathog. **9**:e1003761.
3. Flamand, M. *et al.* (1999) J. Virol. **73**:6104.

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