

DESCRIPTION

Source	Human embryonic kidney cell, HEK293-derived viral wnvNS1 Protein protein Asp1-Ala352, with a C-terminal 6-His tag Accession # NP_776015.1
N-terminal Sequence Analysis	Asp1
Predicted Molecular Mass	40 kDa

SPECIFICATIONS

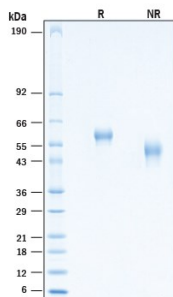
SDS-PAGE	52-62 kDa, under reducing conditions.
Activity	Bioassay data are not available.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. 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	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> • 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

SDS-PAGE



Recombinant Viral wnvNS1 His-tag Protein SDS-PAGE. 2 µg/lane of Recombinant Viral wnvNS1 His-tag Protein (Catalog # 10945-SE) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 52-62 kDa.

BACKGROUND

The West Nile Virus [WNV] is a neurotropic human pathogen. This virus belongs to the flavivirus genus which is in the Flaviviridae family along with the Dengue virus (DENV), Yellow fever virus (YFV), Japanese encephalitis virus (JEV), and Zika virus. The West Nile Virus is a mosquito-borne virus and affects many other animals besides humans, such as birds, reptiles and other mammals (1). The West Nile Virus is an enveloped virion that contains a positive single stranded RNA. The viral RNA is translated to produce 3 structural and 7 nonstructural proteins. The structural proteins are capsid (C), envelope (E), and precursor membrane proteins (prM) and the nonstructural proteins include NS1, NS2A, NS2B, NS3, NS4A, NS4B, and NS5. The structural proteins are encoded at the 5' end of the RNA strand and serve the function of virus entry and encapsulation of the genome (2). WNV NS1 protein is a glycoprotein ~50 kDa. It shares 55.7% and 54.7% homology with NS1 from DENV2 and Zika virus. NS1 exists as a monomer, dimer, and hexamer, depending on its localization (3-5). Glycosylation is critical for its functions (6). Although no known role in virion assembly, NS1 is important for virulence and viral replication (7). Intracellular NS1 is reported to interact with various host proteins, such as 60S ribosome subunit, hnRNP C1/C2 and hnRNP K to assist virus replication (8-10). TLR3 receptor is reported to mediate WNV entry into the brain (11). Secreted and cell surface associated NS1 is highly immunogenic, making it an important biomarker and vaccine target (12-14).

References:

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