

West Nile Virus NS1 Protein (HEK293, His)

Cat. No.:	HY-P74464
Synonyms:	West Nile Virus (WNV) (lineage 1, strain NY99) NS1 Protein
Species:	Virus
Source:	HEK293
Accession:	YP_001527881 (D1-A352)
Gene ID:	5714902
Molecular Weight:	Approximately 42.1 kDa

PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	West Nile Virus NS1 (WNV NS1) is a glycoprotein among the flavivirus genus. It is found in both membrane-associated and soluble secreted forms. WNV NS1 has an unusual structure-function because it is glycosylated and forms different structures to facilitate different roles intracellularly and extracellularly, including roles in the replication complex, assisting in virus assembly, and complement antagonism. It also plays a role in protective immunity through antibody-mediated cellular cytotoxicity, and anti-NS1 antibodies elicit passive protection in animal models against a virus challenge. WNV NS1 may inhibit the activation of the IFN-β promoter and nuclear factor κB (NF-κB) promoter by inhibiting IRF3 and NF-κB nuclear translocation by influencing the Toll-like receptor 3 (TLR3) signaling pathway. In addition, it targets RIG-I and MDA5 by interacting directly with them and causing them to be degraded, leading, in turn, to the inhibition of both the activation of IRF3 and the expression of IFN-β. NS1 is used as a diagnostic marker for the flavivirus infection due to its complement fixing properties and specificity ^{[1][2]} .
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Caution: Product has not been fully validated for medical applications. For research use only.

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