

NS5 Protein, Dengue virus 2 (His)

Cat. No.:	HY-P75704
Synonyms:	Dengue virus DENV-2 (strain New Guinea C) NS5 (methyltransferase domain) / Nonstructural protein 5 Protein; DENV-NS5 Protein; DENV
Species:	Virus
Source:	E. coli
Accession:	AAC59275.1 (G2492-Q2787)
Gene ID:	/
Molecular Weight:	Approximately 35.5 kDa

PROPERTIES

AA Sequence	<p> GTGNIGETLG EKWKSRLNAL GKSEFQIYKK SGIQEVDRTL AKEGIKRGET DHHAVSRGSA KLRWFVERN VTPEGKVVDL GCGRGGWSYY CGGLKNVREV KGLTKGGPGH EEPIMSTYG WNLVRLQSGV DVFFTPEK DTLLCDIGES SPNPTVEAGR TLRVLNLVEN WLNNTQFCI KVLNPYMPV IEKMEALQRK YGGALVRNPL SRNSTHEMYW VSNASGNIVS SVNMISRMLI NRF TMRH KKA TYEPD VDLGS GTRNIGIESE IPNLDIIGKR IEKIKQEHET SWHYDQ </p>
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4 or 50 mM Tris-HCL, 300 mM NaCl, 200 mM arginine, pH 8.0.
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. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
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	Non-structural protein 5 (NS5) is part of the flavivirus RNA replication complex (RC) composed of viral non-structural proteins and host-cell cofactors. NS5 is the largest flavivirus protein, the most conserved, which act as two domains, the RNA-dependent RNA polymerase (RdRp) and RNA methyltransferase enzyme (MTase). The DENV-NS5 RdRp domain contributes to the viral replication stages, whereas the MTase initiates viral RNA capping and facilitates polyprotein
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translation. NS5 plays a fundamental role in viral RNA methylation, RNA polymerization, and host immune system evasion. It functions as a scaffold protein with different binding sites for the host STAT2 and ERC1 proteins, but sharing a requirement for UBR4. NS5 also interacts with hostcell proteins as hSTAT2 and contributes to the evasion of the type I interferon (IFN)-mediated innate immune response, which is the first step of host-cell defense against viral infections. NS5 is a potent antagonist of type I IFN signaling of the DENV proteins by suppressing the human JAK-STAT signaling^{[1][2][3]}.

Caution: Product has not been fully validated for medical applications. For research use only.

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