

Ebola virus NP/Nucleoprotein Protein (378a.a, Q5XX08, His)

Cat. No.:	HY-P75724
Synonyms:	Ebola virus EBOV (Sudan ebolavirus, strain Gulu) Nucleoprotein / NP (aa361-aa738) Protein (His)
Species:	Virus
Source:	E. coli
Accession:	Q5XX08 (R361-D738)
Gene ID:	3160777
Molecular Weight:	Approximately 44.1 kDa

PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of 50 mM Tris, 500 mM NaCl. 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	<p>Ebola virus NP/Nucleoprotein Protein plays a pivotal role in viral genome protection and replication by oligomerizing into a helical capsid that encapsidates the viral genome, shielding it from cellular nucleases and the innate immune response. The interaction with VP35 stabilizes monomeric NP, maintaining its solubility until virus replication triggers the cooperative binding of NP to viral genomic RNA, leading to the release of VP35. This encapsidated genomic RNA, forming the nucleocapsid, serves as a template for transcription and replication, featuring a helical structure with a pitch of 10.81 NP per turn and a diameter of approximately 22nm. NP binds to six nucleotides of viral genomic RNA, with three exposed to the solvent and three hidden within the nucleocapsid. Furthermore, NP recruits the host PPP2R5C phosphatase to dephosphorylate VP30, promoting viral transcription. During virion assembly, NP interacts with VP24 and potentially host STAU1, facilitating nucleocapsid assembly and genome packaging. Additionally, interactions with VP40, host NXF1, and CCDC92 further contribute to the multifaceted functions of NP in the Ebola virus life cycle.</p>
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Caution: Product has not been fully validated for medical applications. For research use only.

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