Nucleoprotein/NP Protein, Influenza B virus (His-SUMO)

Cat. No.:	HY-P72283
Synonyms:	NPNucleoprotein; Nucleocapsid protein; Protein N
Species:	Virus
Source:	E. coli
Accession:	P04666 (M1-Y560)
Gene ID:	/
Molecular Weight:	Approximately 78.0 kDa

PROPERTIES

AA Sequence	MSNMDIDGIN TGTIDKTPEE IISGTSGATR PIIRPATLAP PSNKRTRNPS PERATTSSEA DVGRKTQKKQ TPTEIKKSVY NMVVKLGEFY NQMMVKAGLN DDMERNLIQN AHAVERILLA ATDDKKTEFQ KKKNARDVKE GKEEIDHNKT GGTFYKMVRD DKTIYFSPIR ITFLKEEVKT MYKTTMGSDG FSGLNHIMIG HSQMNDVCFQ RSKALKRVGL DPSLISTFAG STLPRRSGAT GVAIKGGGTL VAEAIRFIGR AMADRGLLRD IKAKTAYEKI LLNLKNKCSA PQQKALVDQV IGSRNPGIAD IEDLTLLARS MVVVRPSVAS KVVLPISIYA KIPQLGFNVE EYSMVGYEAM ALYNMATPVS ILRMGDDAKD KSQLFFMSCF GAAYEDLRVL SALTGTEFKP RSALKCKGFH VPAKEQVEGM GAALMSIKLQ FWAPMTRSGG NEVGGDGGSG QISCSPVFAV ERPIALSKQA VRRMLSMNIE GRDADVKGNL LKMMNDSMAK KTNGNAFIGK KMFQISDKNK TNPVEIPIKQ TIPNFFFGRD TAEDYDDLDY
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm sterile filtered PBS, 6% Trehalose, pH 7.4.
Endotoxin Level	<1.0 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
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	Nucleoprotein/NP Protein plays a pivotal role in the influenza virus life cycle by encapsidating the negative strand viral RNA, shielding it from nucleases and forming the ribonucleoprotein (RNP) complex. This RNP serves as the template for both transcription and replication processes. To initiate an infectious cycle, the RNP must be localized in the host nucleus, a task complicated by its size, preventing diffusion through the nuclear pore complex. NP possesses at least two nuclear localization signals facilitating active RNP import into the nucleus through the cellular importin alpha/beta pathway. Later in infection, nuclear export of RNPs is orchestrated by viral proteins NEP interacting with M1, which binds nucleoproteins. There is a possibility that nucleoprotein directly binds to host exportin-1/XPO1, actively participating in RNPs nuclear export. M1's interaction with RNP conceals nucleoprotein's nuclear localization signals, but upon virion acidification driven by the M2 protein, M1 dissociates from the RNP, unveiling nucleoprotein's signals and guiding the RNP to the nucleus. Nucleoprotein homomultimerizes to form the nucleocapsid and may directly bind host exportin-1/XPO1. The intricate protein-RNA contacts involve electrostatic interactions between positively charged residues and the phosphate backbone, along with planar interactions between aromatic side chains and bases.

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