

Influenza B (strain B/Lee/1940) Nucleoprotein/NP Protein (His & SUMO)

General Information

Synonyms: Nucleocapsid protein (Protein N);NP;Nucleoprotein

Protein Construction: 1-560 aa

Species: Influenza B

Expression Host: E. coli

Accession: P04665

Molecular Weight: 77.8 kDa (predicted)

AA Sequence:

MSNMDIDSINTGTIDKTPEELTPGTSGATRPIIKPATLAPPSNKRTRNPSPERTTTSSETDIGRKIQKKQTPTEIKK
SVYKMVVKLGEFYNQMMVKAGLNDDMERNLIQNAQAVERRILLAATDDKKTEYQKRNARDVKEGKEEIDH
NKTGGTFYKMRDDKTIYFSPIKITFLKEEVKTMKYTTMGSDGFSGLNHIMIGHSQMNDVCFQRSKGLKRVGL
DPSLISTFAGSTLPRRSGTTGVAIKGGGTLVDEAIRFIGRAMADRGLLRDIKAKTAYEKILLNLKNCASAPQQA
LVDQVIGSRNPGIADIEDLTLARSMVVVRPSVASKVVLPISIYAKIPQLGFNTEEYSVMVGYEAMALYNMATPV
SILRMGDDAKDKSQLFFMSCFGAAYEDLRVLSALTGTEFKPRSALKCKGFHVPKQVEGMGAALMSIKLQF
WAPMTRSGGNEVSGEGGSGQISCSPVFAVERPIALSQAVRRMLSMNVEGRDADVKGNNLLKMMNDSMAK
KTSNGNAFIGKMFQISDKNKVNPPIEPIKQTIPIPNFFFGRDTAEDYDDL

QC Testing

Biological Activity: Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.

Purity: > 90% as determined by SDS-PAGE.

Endotoxin: < 1.0 EU/μg of the protein as determined by the LAL method.

Formulation: Tris-based buffer, 50% glycerol

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Encapsidates the negative strand viral RNA, protecting it from nucleases. The encapsidated genomic RNA is termed the ribonucleoprotein (RNP) and serves as template for transcription and replication. The RNP needs to be localized in the host nucleus to start an infectious cycle, but is too large to diffuse through the nuclear pore complex. NP comprises at least 2 nuclear localization signals that are responsible for the active RNP import into the nucleus through cellular importin alpha/beta pathway. Later in the infection, nuclear export of RNPs are mediated through viral proteins NEP interacting with M1 which binds nucleoproteins. It is possible that nucleoprotein binds directly host exportin-1/XPO1 and plays an active role in RNPs nuclear export. M1 interaction with RNP seems to hide nucleoprotein's nuclear localization signals. Soon after a virion infects a new cell, M1 dissociates from the RNP under acidification of the virion driven by M2 protein. Dissociation of M1 from RNP unmasks nucleoprotein's nuclear localization signals, targeting the RNP to the nucleus.

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