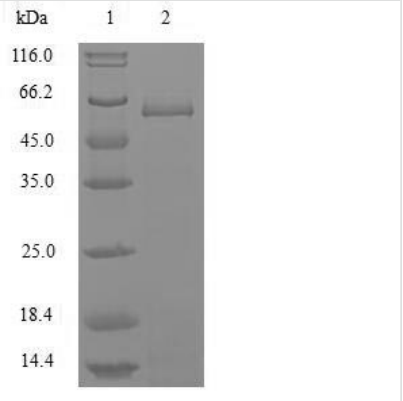
Recombinant Influenza B virus Nucleoprotein (NP)

Product Code	CSB-BP361330IJK
Relevance	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, nclear 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.
Abbreviation	Recombinant Influenza B virus NP protein
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	P04665
Product Type	Recombinant Protein
Immunogen Species	Influenza B virus (strain B/Lee/1940)
Purity	Greater than 85% as determined by SDS-PAGE.
Sequence	MSNMDIDSINTGTIDKTPEELTPGTSGATRPIIKPATLAPPSNKRTRNPSPERTT TSSETDIGRKIQKKQTPTEIKKSVYKMVVKLGEFYNQMMVKAGLNDDMERNLI QNAQAVERILLAATDDKKTEYQKKRNARDVKEGKEEIDHNKTGGTFYKMVRD DKTIYFSPIKITFLKEEVKTMYKTTMGSDGFSGLNHIMIGHSQMNDVCFQRSKG LKRVGLDPSLISTFAGSTLPRRSGTTGVAIKGGGTLVDEAIRFIGRAMADRGLL RDIKAKTAYEKILLNLKNKCSAPQQKALVDQVIGSRNPGIADIEDLTLLARSMVV VRPSVASKVVLPISIYAKIPQLGFNTEEYSMVGYEAMALYNMATPVSILRMGDD AKDKSQLFFMSCFGAAYEDLRVLSALTGTEFKPRSALKCKGFHVPAKEQVEG MGAALMSIKLQFWAPMTRSGGNEVSGEGGSGQISCSPVFAVERPIALSKQAV RRMLSMNVEGRDADVKGNLLKMMNDSMAKKTSGNAFIGKKMFQISDKNKVN PIEIPIKQTIPNFFFGRDTAEDYDDLDY
Research Area	Microbiology
Source	Baculovirus
Target Names	NP
Protein Names	Nucleocapsid protein
Expression Region	1-560aa

Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 10xHis-tagged
Mol. Weight	64.3kDa
Protein Length	Full Length

Image



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

Intact influenza B virus nucleoprotein (NP) cDNA (1-560aa) with an N-terminal 10xHis-tag was expressed in the Baculovirus cells. The forming protein is the recombinant full-length influenza B virus NP protein. The purity of this protein is greater than 85% determined by SDS-PAGE. Under reducing conditions, the gel showed a molecular weight band of about 65 kDa. In-stock influenza B virus NP proteins are offered now. In addition to producing specific antibodies, this recombinant influenza B virus NP protein may be used in the studies of microbiology.

Nucleoprotein (NP) is the predominant component of the influenza virus ribonucleoprotein. It is highly conserved among each type of influenza viruses. Alice Labaronne etc. demonstrated that the NP of influenza B virus has a long N-terminal tail of 70 residues with intrinsic flexibility. This tail contains the Nuclear Location Signal (NLS). And NP is imported into the nucleus by the importin-α/β pathway via direct interaction with importin-α isoforms. In addition, NP is the potential target for a universal influenza vaccine.

Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.
Shelf Life	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.