# Datasheet

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| **Product Name** | Recombinant Influenza A virus Nucleoprotein(NP) |
| **Catalog Number** | **AAA18706** |
| **Expression host** | *E.coli* |
| **Product Info** | N-terminal 6xHis-B2M-tagged |
| **Buffer** | Lyophilized from 10 mM Tris-HCl, 1 mM EDTA, 6%Trehalose, pH 8.0.<br>The volume before lyophilization is 100μl/vial. |
| **Storage** | Store at -20℃, for extended storage, conserve at -20℃ or -80℃. |
| **Notes** | Repeated freezing and thawing is not recommended. Store working aliquots at 4℃ for up to one week. |
| **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. |
| **AA sequence** | MASQGTKRSYEQMETDGERQNATEIRASVGKMIGGIGRFYIQMCTELKLSDYE<br>GRLIQNSLTIERMVLSAFDERRNKYLEEHPSAGKDPKKTGGPIYRRVNGKWMR<br>ELILYDKEEIRRIWRQANNGDDATAGLTHMMIWHSNLNDATYQRTRALVRTG<br>MDPRMCSLMQGSTLPRRSGAAGAAVKGVGTMVMELVRMIKRGINDRNFWRG<br>ENGRKTRIAYERMCNILKGKFQTAAQKAMMDQVRESRNPGNAEFEDLTFLARS<br>ALILRGSVAHKSCLPACVYGPAVASGYDFEREGYSLVGIDPFRLLQNSQVYSLIR<br>PNENPAHKSQLVWMACHSAAFEDLRVLSFIKGTKVLPRGKLSTRGVQIASNEN<br>METMESSTLELRSRYWAIRTRSGGNTNQQRASAGQISIQPTFSVQRNLPFDRTTI<br>MAAFNGNTEGRTSDMRTEIIRMMESARPEDVSFQGRGVFELSDEKAASPIVPSF<br>DMSNEGSYFFGDNAEEYDN |
| **References** | "Structure of importin-alpha bound to a non-classical nuclear localization signal of the influenza A virus nucleoprotein."<br>Nakada R., Hirano H., Matsuura Y.<br>Sci Rep 5:15055-15055(2015) |

# Certificate of Analysis

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| **Product Info** | N-terminal 6xHis-B2M-tagged | |
| **Buffer** | Lyophilized from 10 mM Tris-HCl, 1 mM EDTA, 6%Trehalose, pH 8.0.<br>The volume before lyophilization is 100µl/vial. | |
| **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℃/-80℃. Our default final concentration of glycerol is 50%. Customers could use it as reference. | |
| **Batch Number** | DA05208b1g0 | |
| **Nature** | Influenza A virus NP-(AA 1-498)-**P03466**-Full Length | |
| **Purification** | Affinity purified using IMAC | |
| **Recommended Storage** | Short term | 2 to 8 ℃, one week from the date of receipt |
| | Long term | -20 to -80 ℃, twelve months from the date of receipt |
| **Form** | Lyophilized powder | |
| **Date of detection** | 2022.03.29 | |

| **Test Items** | **Specifications** | | **Results** |
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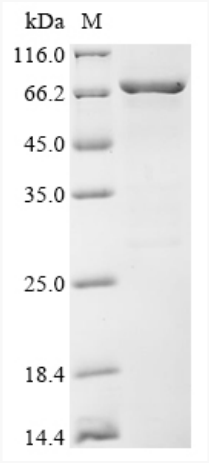
| **Purity** | ≥90%, by SDS-PAGE quantitative densitometry by Coomassie Blue Staining. |  | 90% |
| **Molecular Weight** | Predicted band size: 70.2 kDa | | Observed band size: 70 kDa |

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| **Electrophoretic parameters** | (Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel. |
| **Aseptic Processing** | Not done |
| **Endotoxin Level** | Untreated |
| **Activity** | Not tested |
| **Conclusion** | pass |