

## Recombinant H3N2 NP, His-tagged

Cat. No. NP-428H Lot. No. (See product label)

### SPECIFICATION

**Product Overview** A DNA sequence encoding the Influenza A virus (A/Aichi/2/1968(H3N2)) nucleoprotein (AEM60019.1) (Met1-Asn498) was expressed with a C-terminal polyhistidine tag.

**Species** H3N2

**Source** Insect Cells

**ProteinLength** Met1-Asn498

### Description

The viral particles of all influenza viruses are similar in composition. These are made of a viral envelope containing two main types of glycoproteins, wrapped around a central core. The central core contains the viral RNA genome and other viral proteins that package and protect it from nucleases. The influenza A genome contains 11 genes on eight pieces of RNA, encoding for 11 proteins: Hemagglutinin (HA), Neuraminidase (NA), Nucleoprotein (NP), M1, M2, NS1, NS2(NEP), PA, PB1, PB1-F2 and PB2. Influenza A virus nucleoprotein (NP) forms homooligomers and wrap around genomic RNA, along with a trimeric polymerase making up ribonucleoprotein (RNP) complex which serves as template for transcription and replication. NP is composed of a head and a body domain and a tail loop/ linker region. The head domain is more conserved than the body domain. NP oligomerization is mediated by the insertion of the non-polymorphic and structurally conserved tail loop of one NP molecule to a groove of another NP. The different form of NP oligomers is due to the flexibility of the polymorphic linkers that join the tail loop to the rest of the protein. NP

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comprises at least 2 nuclear localization signals and is responsible of the active RNP import into the nucleus through the cellular importin alpha/beta pathway. Viral proteins NEP, M1, M2 may be involved in the process of nucleus export of RNP in the infection cycle.

**Form** Lyophilized from sterile PBS, pH7.4.

**Molecular Mass** The recombinant nucleoprotein of Influenza A virus (A/Aichi/2/1968 (H3N2)) comprises 509 amino acids and has a predicted molecular mass of 57.6 kDa. The apparent molecular mass of the protein is approximately 54.4 kDa in SDS-PAGE under reducing conditions.

**Endotoxin** < 1.0 eu per µg of the protein as determined by the LAL method.

**Purity** >95 % as determined by SDS-PAGE

**Stability** Samples are stable for up to twelve months from date of receipt at -70°C

**Storage** Store it under sterile conditions at -70°C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.

**Reconstitution** Hardcopy of COA with reconstitution instruction is sent along with the products.

## GENE INFORMATION

**Gene Name** NP?nucleocapsid protein [?Influenza A virus (A/New York/392/2004(H3N2))]

**Official Symbol** NP

**Synonyms** NP; nucleocapsid protein

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<b>Gene ID</b>	3655155
<b>Protein Refseq</b>	YP_308843
<b>Chromosome Location</b>	segment: segment 5

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