Recombinant H1N1 NP, His-tagged

Cat. No. NP-418H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	A DNA sequence encoding the Influenza A virus (A/California/07/09(H1N1)) nucleoprotein (ACP41106.1) (Met1-Ser498) was expressed with a C-terminal polyhistidine tag.
Species	H1N1
Source	Insect Cells
ProteinLength	Met1-Ser498
Description	Influenza (flu) is a respiratory infection in mammals and birds. This virus is divided into three main types (A, B and C). Influenza A is found in a wide variety of bird and mammal species. Influenza B is largely confined to humans and is an important cause of morbidity. Influenza C infects humans, dogs and pigs, sometimes causing both severe illness and local epidemics. Influenza A is further divided into subtypes based on differences in the membrane proteins hemagglutinin (HA) and neuraminidase (NA). The notation HhNn is used to refer to the subtype comprising the hth discovered HA protein and the nth discovered NA protein. Influenza viruses A, B and C are very similar in overall structure. 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 this RNA. The influenza A genome contains 11 genes on eight pieces of RNA, encoding for 11 proteins: Hemagglutinin (HA), Neuraminidase (NA), Nucleoprotein (NP), M1, M2,

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	NS1,NS2(NEP), PA, PB1, PB1-F2 and PB2. Influenza A virus nucleoprotein (NP) forms homo-oligomers and multiple copies of NP wrap around genomic RNA, along with a trimeric polymerase making up ribonucleoprotein (RNP) complex. 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. The RNA binding property of NP is known to involve the protruding element and the flexible basic loop between the head and body domains, both having high degree of primary sequence conservation.
Form	Lyophilized from sterile PBS, pH7.4.
Molecular Mass	The recombinant nucleoprotein of Influenza A virus (A/California/07/09(H1N1)) comprises 509 amino acids and has a predicted molecular mass of 57.4 kDa. The apparent molecular mass of the protein is approximately 53.5 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℃
Storage	Store it under sterile conditions at -70℃. 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.

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GENE INFORMATION

Gene Name	NP?nucleocapsid protein [?Influenza A virus (A/Puerto Rico/8/1934(H1N1))]
Official Symbol	NP
Synonyms	NP; nucleocapsid protein
Gene ID	956531
Protein Refseq	NP_040982
Chromosome Location	segment: segment 5
Pathway	Assembly of Viral Components at the Budding Site; Entry of Influenza Virion into Host Cell via Endocytosis; Fusion and Uncoating of the Influenza Virion

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