

## Recombinant H7N9 NP, His-tagged

Cat. No. NP-457H Lot. No. (See product label)

### SPECIFICATION

**Product Overview** A DNA sequence encoding the Influenza A virus (A/Anhui/1/2013(H7N9)) (ADK98484.1) nucleoprotein protein (Met1-Asn498) was expressed with a C-terminal polyhistidine tag.

**Species** H7N9

**Source** Insect Cells

**ProteinLength** Met1-Asn498

**Description** H7N9 is a subtype of Influenza virus A. On April 1, 2013, the World Health Organization (WHO) first reported 3 human infections with a new influenza A (H7N9) virus in China. Since then, additional cases have been reported. This new H7N9 virus is an avian (bird) influenza (flu) virus. Influenza (flu) is a respiratory infection in mammals and birds. The virus is divided into three main types (Influenza A, Influenza B, and Influenza C). 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 homo-oligomers and multiple copies of NP wrap around genomic RNA, along with a trimeric polymerase making up ribonucleoprotein (RNP) complex. Nucleoprotein (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. Nucleoprotein (NP) oligomerization is mediated by the insertion of the non-polymorphic and structurally conserved tail loop of one NP molecule to a groove of

 Tel: 1-631-559-9269 1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

another NP. The different form of Nucleoprotein (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 protein of Influenza A virus (A/Anhui/1/2013(H7N9)) comprises 509 amino acids and has a predicted molecular mass of 57.8 kDa. The apparent molecular mass of the protein is approximately 55 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

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

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