

## Recombinant Influenza A virus H7N9 HA, His-tagged

Cat. No. H7N9-08I Lot. No. (See product label)

### SPECIFICATION

**Product Overview** A DNA sequence encoding the Influenza A virus (A/Shanghai/1/2013(H7N9)) hemagglutinin (Met1-Val524) (cleavage between Arg339 and Gly440, HA1+HA2) was expressed with a C-terminal polyhistidine tag.

**Species** H7N9

**Source** Human Cells

**ProteinLength** 1-524 a.a.

**Description** 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), which are distinguished by differences in two major internal proteins (hemagglutinin (HA) and neuraminidase (NA)). Influenza A is further divided into subtypes based on differences in the membrane proteins hemagglutinin (HA) and neuraminidase (NA), which are the most important targets for the immune system. The notation HhNn is used to refer to the subtype comprising the hth discovered Hemagglutinin (HA) protein and the nth discovered neuraminidase (NA) protein. The influenza viral Hemagglutinin (HA) protein is a homo trimer with a receptor binding pocket on the globular head of each monomer. The influenza virus Hemagglutinin (HA) protein is translated in cells as a single protein, HA0, or hemagglutinin precursor protein. For viral activation, hemagglutinin precursor protein (HA0) must be cleaved by a trypsin-like serine endoprotease at a specific site, normally coded for by a single basic amino acid (usually arginine) between the HA1

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and HA2 domains of the protein. After cleavage, the two disulfide-bonded protein domains produce the mature form of the protein subunits as a prerequisite for the conformational change necessary for fusion and hence viral infectivity.

**Predicted N Terminal** Asp 19

**Form** Lyophilized from sterile PBS, pH 7.4.

**Molecular Mass** The recombinant hemagglutinin of Influenza A virus (A/Shanghai/1/2013 (H7N9)) comprises 517 amino acids and has a predicted molecular mass of 57.7 kDa. The apparent molecular mass of the protein is approximately 67, 43 and 30 kDa in SDS-PAGE under reducing conditions.

**AA Sequence**

```
DKICLGHHAV SNGTKVNTLT ERGVEVVNAT ETVERTNIPR ICSK GKRTVD
LGQCGLLGTI TGPPQCDQFL EFSADLIER REGSDVCYPG KFNVEEALRQ
ILRESGGIDK EAMGFTYSGI RTNGATSSCR RSGSSFYAEM KWLLSNTDNA
AFPQMTKSYK NTRKNPALIV WGIHHSGSTA EQTKLYGSGN KLVTVGSSNY
QQSFVPSPGA RTQVNGQSGR IDFWLMLNP NDTVTF SFNG AFIAPDRASF
LRGKSMGIQS GVQVDADCEG DCYYSGGTII SNLPFQNI DS RAVGKCPRYV
KQRSLLLATG MKNVPEIPKG RGLFGAIAGF IENGWEGLID GWYGFRRHQNA
QGEGTAADYK STQSAIDQIT GKLNR LIEKT NQQFELIDNE FTEVEKQIGN
VINWTRDSIT EVWSYNAELL VAMENQHTID LADSEMDKLY ERVKRQLREN
AEEDGTGCFE IFHKCDDDCM ASIRNNTYDH SKYREEAMQN RIQIDPVKLS
SGYKDVAHHH HHHHHHH
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**Endotoxin** < 1.0 eu per µg of the protein as determined by the lal

**Purity** (14.6+44.8+39.6) % as determined by SDS-PAGE

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

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**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.

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