

# Recombinant H7N9(A/Anhui/1/2013) Neuraminidase Protein(Active)

Cat. No. NA-492H Lot. No. (See product label)

## SPECIFICATION

### Product Overview

Recombinant H7N9(A/Anhui/1/2013) Neuraminidase (AGI60300.1) (His36-Leu465) was expressed , the cell lysates are collected, and bio-activity was tested.

### Species

H7N9

### Source

HEK293

### ProteinLength

His36-Leu465

### Description

Neuraminidases are enzymes that cleave sialic acid groups from glycoproteins. Influenza neuraminidase is a type of neuraminidase found on the surface of influenza viruses that enables the virus to be released from the host cell.

Influenza neuraminidase is composed of four identical subunits arranged in a square. It is normally attached to the virus surface through a long protein stalk. The active sites are in a deep depression on the upper surface. They bind to polysaccharide chains and clip off the sugars at the end. The surface of neuraminidase is decorated with several polysaccharide chains that are similar to the polysaccharide chains that decorate our own cell surface proteins.

Neuraminidase (NA) and hemagglutinin (HA) are major membrane glycoproteins found on the surface of influenza virus. Hemagglutinin binds to the sialic acid-containing receptors on the surface of host cells during initial infection and at the end

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of an infectious cycle. Neuraminidase, on the other hand, cleaves the HA-sialic acid bondage from the newly formed virions and the host cell receptors during budding. Neuraminidase thus is described as a receptor-destroying enzyme which facilitates virus release and efficient spread of the progeny virus from cell to cell.

Influenza antibody and influenza antibodies are very important research tools for influenza diagnosis, influenza vaccine development, and anti-influenza virus therapy development. Monoclonal or polyclonal antibody can be raised with protein based antigen or peptide based antigen. Antibody raised with protein based antigen could have better specificity and/or binding affinity than antibody raised with peptide based antigen, but cost associated with the recombinant protein antigen is usually higher. Anti influenza virus hemagglutinin (HA) monoclonal antibody or polyclonal antibody can be used for ELISA assay, western blotting detection, Immunohistochemistry (IHC), flow cytometry, neutralization assay, hemagglutinin inhibition assay, and early diagnosis of influenza viral infection.

**Form**

Lyophilized from sterile PBS, 0.6% Triton-100, 6% trehalose 5.3% mannitol PH 7.4. Normally 5 %- 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.

**Bio-activity**

Measured by its ability to cleave a fluorogenic substrate, 2'-(4-Methylumbelliferyl)- $\alpha$ -D-N-acetylneuraminic acid. The specific activity is > 100 U. One unit is defined as the amount of enzyme required to cleave 1 nmole of 2'-(4-Methylumbelliferyl)- $\alpha$ -D-N-acetylneuraminic acid per minute at pH 7.5 at 37 centigrade.

**Molecular Mass**

The influenza H7N9 virus Neuraminidase comprises 448 amino acids

**Endotoxin**

< 1.0 EU per  $\mu$ g protein as determined by the LAL method.

**Storage**

Samples are stable for up to twelve months from date of receipt at -70 centigrade.

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Store it under sterile conditions at -20 centigrade to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.

**Reconstitution**

It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 ug/ul. Centrifuge the vial at 4°C before opening to recover the entire contents.


**GENE INFORMATION**

**Official Symbol**


NA

**Synonyms**

Neuraminidase; NA

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