

Recombinant H4N6(A/mallard/Ohio/657/2002) Neuraminidase Protein(Active)

Cat. No. NA-487H Lot. No. (See product label)

SPECIFICATION

Product Overview

Recombinant H4N6(A/mallard/Ohio/657/2002) neuraminidase (ABI47998.1) (Met1-Lys470) was expressed, the cell lysates are collected, and bio-activity was tested.

Species

H4N6

Source

HEK293

ProteinLength

Met1-Lys470

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, 1% Triton X-100 pH 7.4, 5% Trehalose, 5% mannitol, 0.01% Tween-80. 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)- α -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)- α -D-N-acetylneuraminic acid per minute at pH 7.5 at 37 centigrade.

Molecular Mass

The recombinant influenza A virus neuraminidase comprises 435 amino acids and has a predicted molecular mass of 48.1 kDa.

Endotoxin

< 1.0 EU per μ g protein as determined by the LAL method.

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Storage

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