Influenza A H1N1 (A/Wisconsin/588/2019) / (A/Victoria/2570/2019) Neuraminidase / NA Protein (His Tag)

Catalog Number: 40785-V08B

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

NA

Protein Construction:

A DNA sequence encoding the Influenza A virus ((A/Wisconsin/588/2019) / (A/Victoria/2570/2019) (H1N1)) neuraminidase (translated amino acids of EPI1661757 & EPI1799580) (Ile30-Lys469) was expressed with a vasodilator-stimulated phosphoprotein tetramerization domain at the N-terminus and a polyhistidine tag at the C-terminus.

Source: H1N1

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE.

Bio Activity:

Measured by its ability to cleave a fluorogenic substrate, 2'-(4-Methylumbelliferyl)-α-D-N-acetylneuraminic acid.

Endotoxin:

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

Predicted N terminal: Asp

Molecular Mass:

The recombinant Influenza A virus ((A/Wisconsin/588/2019) / (A/Victoria/2570/2019) (H1N1)) NA consists of 486 amino acids and predicts a molecular mass of 54.3 kDa. It migrates as an approximately 61.8 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 20 mM Tris, 150 mM NaCl, 10 % glycerol, pH 7.5.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Stability & Storage:
Samples are stable for twelve months from date of receipt at -20℃ to -80℃.

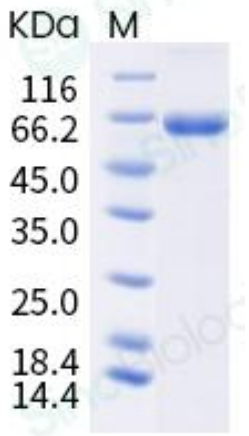
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein 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 cell surface proteins. Neuraminidase (NA) and hemagglutinin (HA) are major membrane glycoproteins found on the surface of the influenza virus. Hemagglutinin binds to the sialic acid-containing receptors on the surface of host cells during initial infection and at the end 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 that 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. The monoclonal or polyclonal antibody can be raised with protein based antigen or peptide-based antigen. Antibodies raised with protein-based antigen could have better specificity and/or binding affinity than antibodies raised with peptide based antigen, but the 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. Sino Biological has developed state-of-the-art monoclonal antibody development technology platforms: mouse monoclonal antibody and rabbit monoclonal antibody. Our rabbit monoclonal antibody platform is one of a kind and offers some unique advantages over mouse monoclonal antibodies, such as high affinity, low cross-reactivity with rabbit polyclonal antibodies.

References

1.Sardet C., *et al.*,(1989), Molecular cloning, primary structure, and expression of the human growth factor-activatable Na+/H+ antiporter. Cell 56:271-280. 2.Sardet C., *et al.*, (1990), Growth factors induce phosphorylation of the Na+/H+ antiporter, glycoprotein of 110 kD.Science 247:723-726. 3.Tse C.-M., *et al.*,(1991), Molecular cloning and expression of a cDNA encoding the rabbit ileal villus cell basolateral membrane Na+/H+ exchanger.EMBO J. 10:1957-1967.