

Recombinant Influenza A H1N1 (A/Michigan/45/2015) NA Protein (His36-Lys469), His-tagged

Cat. No. NA-778H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Influenza A H1N1 (A/Michigan/45/2015) NA (Neuraminidase) Protein (translated amino acids of EPI859651) (His36-Lys469) was produced by HEK293 Cells expression system. This protein was expressed with a polyhistidine tag at the N-terminus.
Species	H1N1
Source	HEK293
ProteinLength	His36-Lys469
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 of an infectious cycle. Neuraminidase, on the

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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. 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.

Predicted N Terminal	His
Form	Lyophilized from sterile PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.
Molecular Mass	The recombinant Influenza A virus (A/Michigan/45/2015 (H1N1pdm09)) NA consists of 453 amino acids and predicts a molecular mass of 50.2 kDa.
Endotoxin	< 1.0 EU per µg protein as determined by the LAL method.
Purity	> 90 % as determined by SDS-PAGE.

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Stability	Samples are stable for up to twelve months from date of receipt at -70 centigrade.
Storage	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 mg/ml. Centrifuge the vial at 4°C before opening to recover the entire contents.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.