Influenza A H1N1 (A/New York/18/2009) Hemagglutinin Protein (HA1 Subunit) (His Tag)

Catalog Number: 40009-V08H1

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General Information

Gene Name Synonym:

HA

Protein Construction:

A DNA sequence encoding the N-terminal segment (Met 1-Arg 344) of of the influenza A H1N1 (A/New York/18/2009 (H1N1)) hemagglutinin (ACU13097.1), termed as HA1, was fused with a polyhistidine tag at the C-terminus.

Source: H1N1

Expression Host: Human Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Endotoxin:

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

Stability:

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

Predicted N terminal: Asp 18

Molecular Mass:

The secreted recombinant HA1 subunit of influenza A H1N1 HA (A/New York/18/2009 (H1N1)) comprises 338 amino acids and has a predicted molecular mass of 37.7 kDa. As a result of glycosylation, the apparent molecular mass of the protein is approximately 70-80 kDa in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

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

Storage:

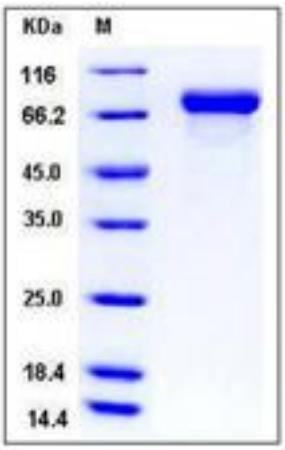
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

The influenza viral Hemagglutinin (HA) protein is a homo trimer with a receptor binding pocket on the globular head of each monomer.HA has at least 18 different antigens. These subtypes are named H1 through H18.HA has two functions. Firstly, it allows the recognition of target vertebrate cells, accomplished through the binding to these cells' sialic acid-containing receptors. Secondly, once bound it facilitates the entry of the viral genome into the target cells by causing the fusion of host endosomal membrane with the viral membrane.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 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.

References

1.White JM, Hoffman LR, Arevalo JH, et al. (1997). "Attachment and entry of influenza virus into host cells. Pivotal roles of hemagglutinin". In Chiu W, Burnett RM, Garcea RL. Structural Biology of Viruses. 2.Suzuki Y (March 2005). "Sialobiology of influenza: molecular mechanism of host range variation of influenza viruses". Biol. Pharm. Bull. 28 (3): 399–408. 3.Senne DA, Panigrahy B, Kawaoka Y, et al. (1996). "Survey of the hemagglutinin (HA) cleavage site sequence of H5 and H7 avian influenza viruses: amino acid sequence at the HA cleavage site as a marker of pathogenicity potential". Avian Dis. 40 (2): 425–37