Recombinant Influenza A Virus H12N1 HA1

Catalog Number: **40029-V08H1**

Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

HA1

Protein Construction:

A DNA sequence encoding the N-terminal segment (Met 1-Arg 342) of theinfluenza hemagglutin (A/mallard duck/Alberta/342/1983(H12N1)) （ABB88099.1）, termed as HA1, was fused with a polyhistidine tag at the C-terminus.

Source: Influenza A Virus

Expression Host: Human Cells

QC Testing

Purity: > 97 % as determined by SDS-PAGE.

Endotoxin:

<1.0 EU per μg 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:

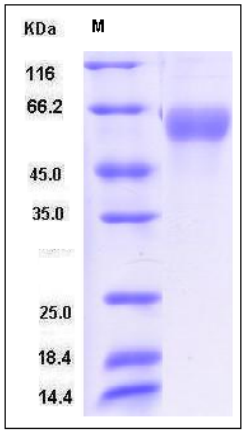
The secreted recombinant HA1 subunit of influenza A H12N1 HA (A/mallard duck/Alberta/342/1983(H12N1)) comprises 336 amino acids and has a predicted molecular mass of 38.3 kDa. As a result of glycosylation, it migrates as an approximately 55 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS , pH 7.4

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

SDS-PAGE:



Usage Guide

Storage:

Store it under sterile conditions at -70℃ 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.

Protein Description

Hemagglutinin (HA) is a single-pass type I integral membrane glycoprotein from the influenza virus, and comprises over 80% of the envelope proteins present in the virus particle. The HA is a trimer with a receptor binding pocket on the globular head of each monomer. In natural infection, inactive HA is matured into HA1 and HA2 outside the cell by one or more trypsin-like, arginine-specific endoprotease secreted by the bronchial epithelial cells. Binding of HA to sialic acid-containing receptors on the surface of its target cell brings about the attachment of the virus particle to the cell and forms a endosome. Low pH in endosomes induce an irreversible conformational change in HA2, releasing the hydrophobic portion "fusion peptide". After which, virus penetrates the cell and pours its contents including the RNA genome into the cytoplasm mediated by fusion of the endocytosed virus particle's own membrane and the endosomal membrane. Hemagglutinin plays a major role in the determination of host range restriction and virulence.

References

1. Barman S. et al., 2000, J Virol. 74: 6538-45.
2. Suzuki T. et al., 2005, J Virol. 79: 11705-15.
3. Shinya K. et al., 2006, Nature. 440 (7083): 435-6.
4. Marjuki H. et al., 2006, J Biol Chem. 281: 16707-15.
5. Christophe F. et al., 2009, Science. 324: 1557-61.
6. Von Itzstein M. 2007, Nat Rev Drug Discov. 6: 967-74.