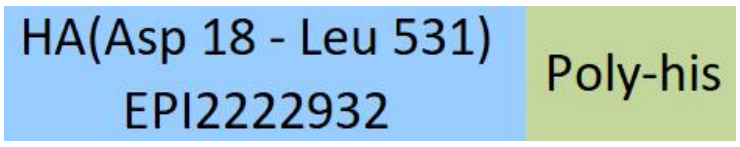
Influenza A [Sydney/5/2021 (H1N1)] Hemagglutinin (HA) Protein, His Tag (MALS verified)

Catalog # HA1-V52H4

Source

Influenza A [Sydney/5/2021 (H1N1)] HA Protein, His Tag (HA1-V52H4) is expressed from human 293 cells (HEK293). It contains AA Asp 18 - Leu 531 (Accession # EPI2222932, GISAID).
Predicted N-terminus: Asp 18

Molecular Characterization



This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 63.1 kDa. The protein migrates as 90-110 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per μg by the LAL method.

Purity

>90% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

Formulation

Lyophilized from 0.22 μm filtered solution in PBS with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage

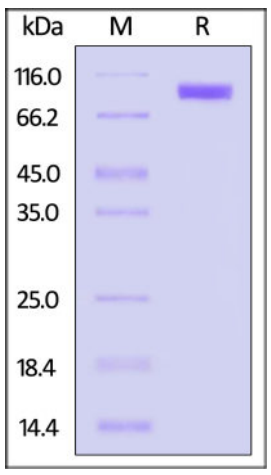
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

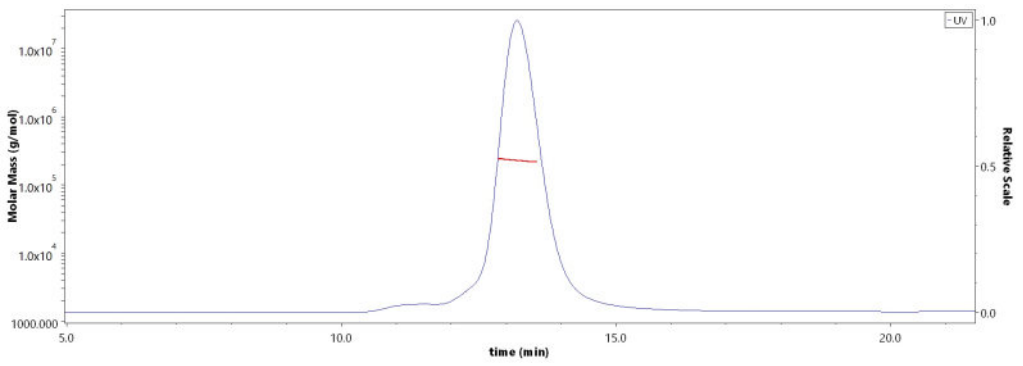
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



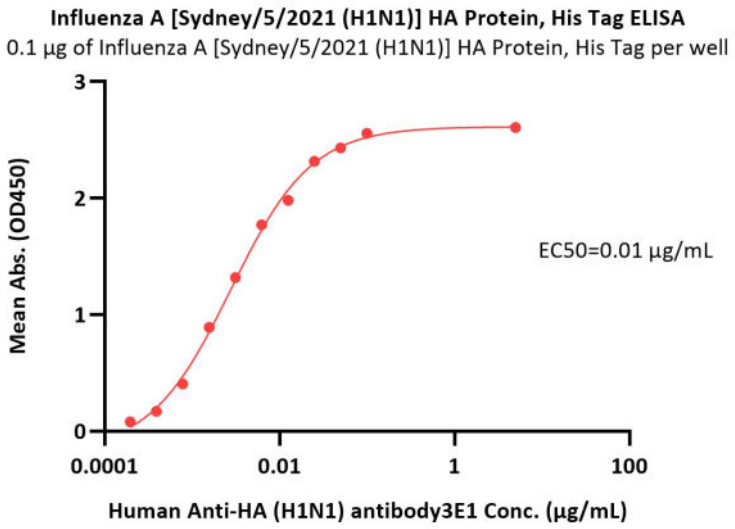
Influenza A [Sydney/5/2021 (H1N1)] HA Protein, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90%.

SEC-MALS



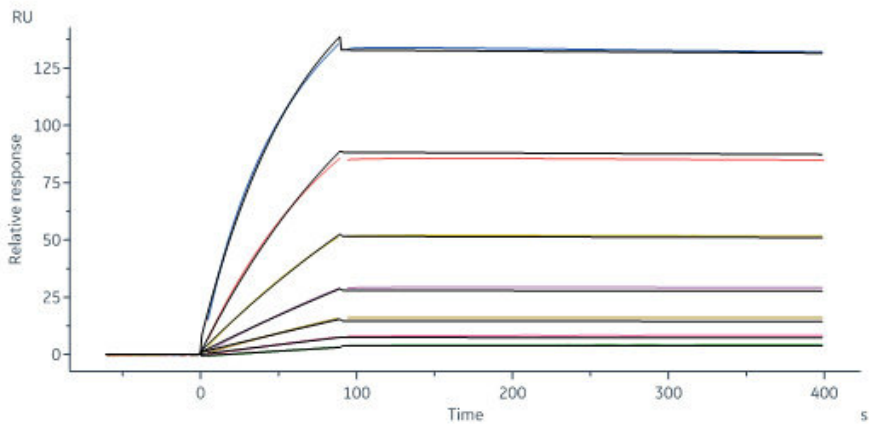
The purity of Influenza A [Sydney/5/2021 (H1N1)] HA Protein, His Tag (Cat. No. HA1-V52H4) is more than 90% and the molecular weight of this protein is around 215-245 kDa verified by SEC-MALS.
Report

Bioactivity-ELISA



Immobilized Influenza A [Sydney/5/2021 (H1N1)] HA Protein, His Tag (Cat. No. HA1-V52H4) at 1 μg/mL (100 μL/well) can bind Human Anti-HA (H1N1) antibody3E1 with a linear range of 0.001-0.025 μg/mL (QC tested).

Bioactivity-SPR



Human Anti-HA (H1N1) antibody3E1 captured on Protein A Chip can bind Influenza A [Sydney/5/2021 (H1N1)] HA Protein, His Tag (Cat. No. HA1-V52H4) with an affinity constant of 4.46 nM as determined in a SPR assay (Biacore 8K) (Routinely tested).

Background

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. Hemagglutinin also plays a major role in the determination of host range restriction and virulence. As a class I viral fusion protein, hemagglutinin is responsible for penetration of the virus into the cell cytoplasm by mediating the fusion of the membrane of the endocytosed virus particle with the endosomal membrane.

Clinical and Translational Updates