MERS Spike protein trimer (R748A, R751A, V1060P, L1061P), His Tag (MALS verified)

Catalog # SPN-M52H4

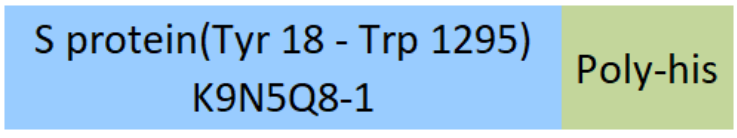
Synonym

Spike,S protein,Spike glycoprotein,S glycoprotein

Source

MERS Spike protein trimer, His Tag (SPN-M52H4) is expressed from human 293 cells (HEK293). It contains AA Tyr 18 - Trp 1295 (Accession # K9N5Q8-1). The recombinant protein has a T4 fibritin trimerization motif. Proline substitutions (V1060P, L1061P) and alanine substitutions (R748A, R751A) are introduced to stabilize the trimeric prefusion state of MERS-CoV Spike protein and abolish the furin cleavage site, respectively.
Predicted N-terminus: Tyr 18

Molecular Characterization



This protein carries a polyhistidine tag at the C-terminus

The protein has a calculated MW of 145.9 kDa. The protein migrates as 150 kDa and 175-200 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

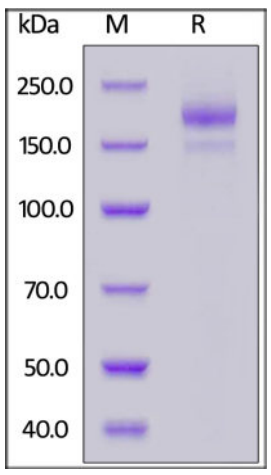
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

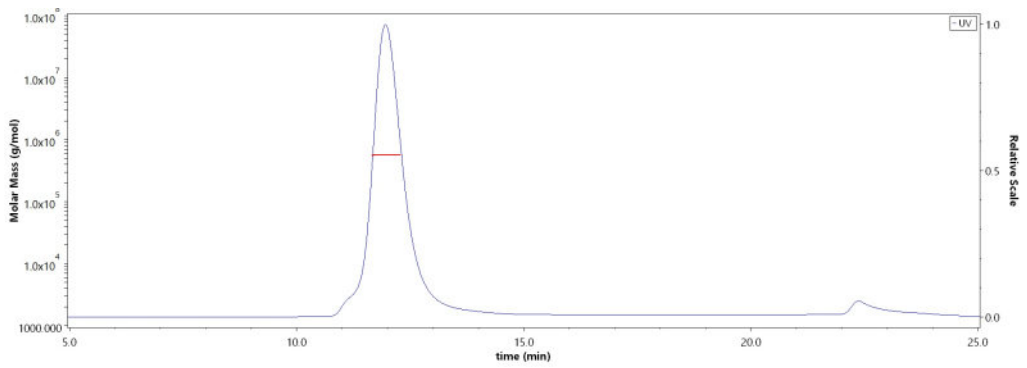
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



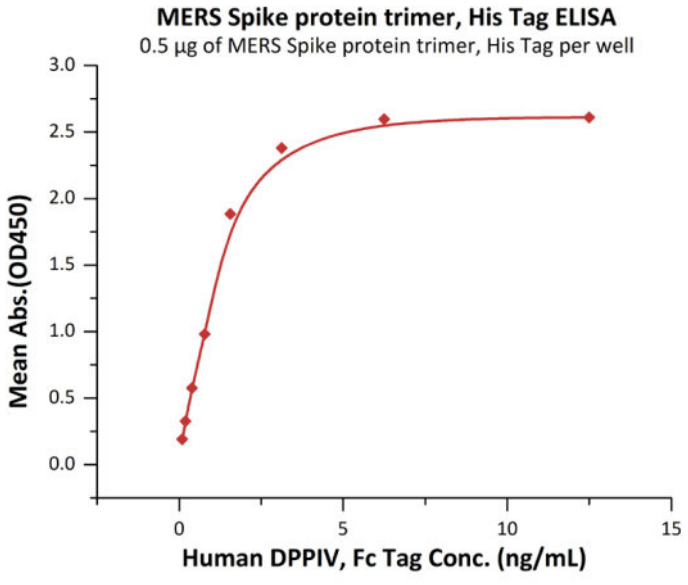
MERS Spike protein trimer, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 90%.

SEC-MALS

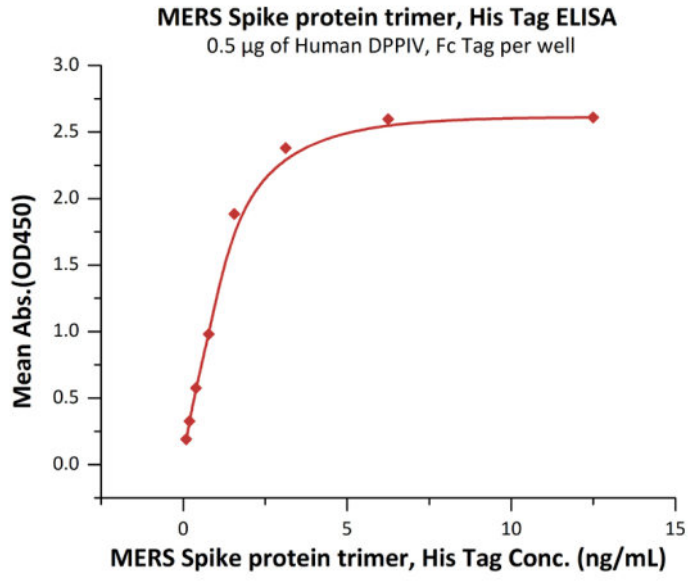


The purity of MERS Spike protein trimer, His Tag (Cat. No. SPN-M52H4) is more than 90% and the molecular weight of this protein is around 540-580 kDa verified by SEC-MALS.
Report

Bioactivity-ELISA



Immobilized MERS Spike protein trimer, His Tag (Cat. No. SPN-M52H4) at 5 μg/mL (100 μL/well) can bind Human DPPIV, Fc Tag (Cat. No. DP4-H5266) with a linear range of 0.1-2 ng/mL (QC tested).



Immobilized Human DPPIV, Fc Tag (Cat. No. DP4-H5266) at 5 μg/mL (100 μL/well) can bind MERS Spike protein trimer, His Tag (Cat. No. SPN-M52H4) with a linear range of 0.1-3 ng/mL (Routinely tested).

Background

Its been reported that SARS-CoV-2 can infect the human respiratory epithelial cells through interaction with the human ACE2 receptor. The spike protein is a large type I transmembrane protein containing two subunits, S1 and S2. S1 mainly contains a receptor binding domain (RBD), which is responsible for recognizing the cell surface receptor. S2 contains basic elements needed for the membrane fusion.The S protein plays key parts in the induction of neutralizing-antibody and T-cell responses, as well as protective immunity.

Clinical and Translational Updates

Please contact us via TechSupport@acrobiosystems.com if you have any question on this product.