Biotinylated MERS Spike Trimer Protein, His,Avitag™ (MALS verified)

Catalog # SPN-M82E3

Synonym

Spike,S protein,Spike glycoprotein,S glycoprotein

Source

Biotinylated MERS Spike Trimer Protein, His,Avitag(SPN-M82E3) is expressed from human 293 cells (HEK293). It contains AA Tyr 18 - Trp 1295 (Accession # K9N5Q8-1 (R748A, R751A, V1060P, L1061P, K1284Q)).
Predicted N-terminus: Tyr 18

Molecular Characterization

This protein carries a polyhistidine tag at the C-terminus, followed by an Avi tag (Avitag™).

The protein has a calculated MW of 147.6 kDa. The protein migrates as 180-210 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Labeling

Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.

Protein Ratio

Passed as determined by the HABA assay / binding ELISA.

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

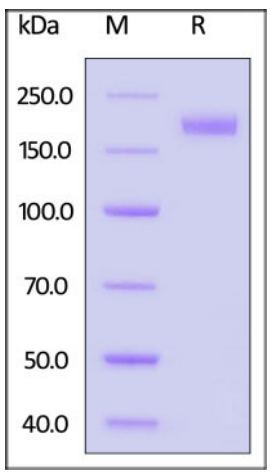
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

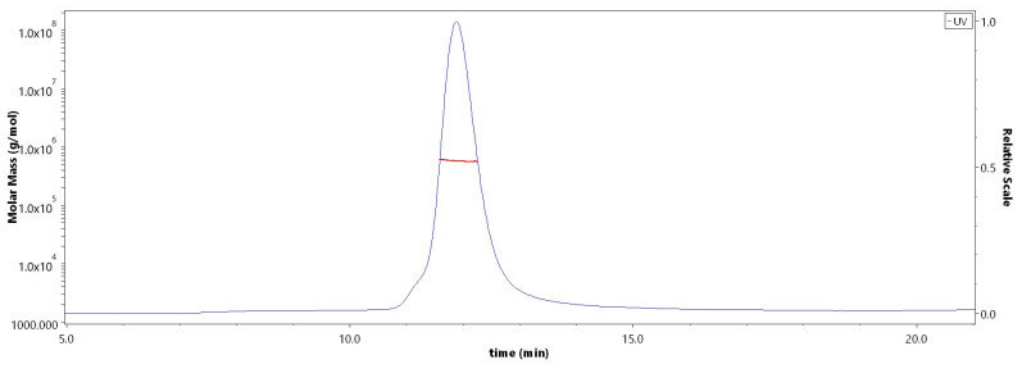
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



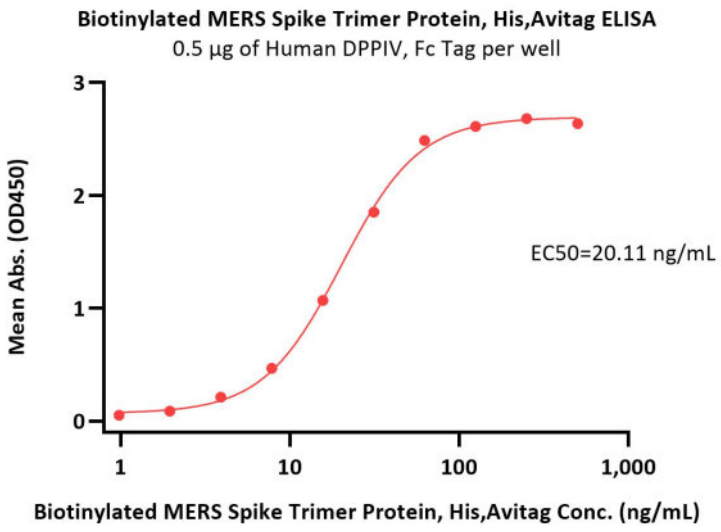
Biotinylated MERS Spike Trimer Protein, His,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90%.

SEC-MALS

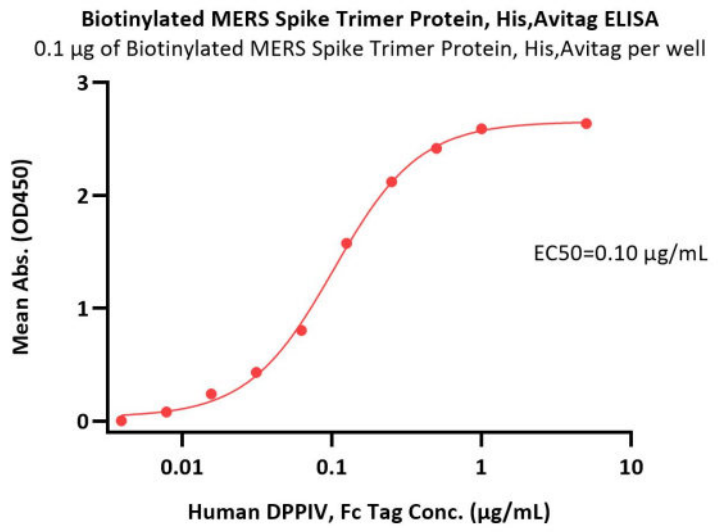


The purity of Biotinylated MERS Spike Trimer Protein, His,Avitag (Cat. No. SPN-M82E3) is more than 90% and the molecular weight of this protein is around 550-600 kDa verified by SEC-MALS.
Report

Bioactivity-ELISA



Immobilized Human DPPIV, Fc Tag (Cat. No. DP4-H5266) at 5 μg/mL (100 μL/well) can bind Biotinylated MERS Spike Trimer Protein, His,Avitag (Cat. No. SPN-M82E3) with a linear range of 1-63 ng/mL (QC tested).



Immobilized Biotinylated MERS Spike Trimer Protein, His,Avitag (Cat. No. SPN-M82E3) at 1 μg/mL (100 μL/well) on streptavidin (Cat. No. STN-N5116) precoated (0.5 μg/well) plate can bind Human DPPIV, Fc Tag (Cat. No. DP4-H5266) with a linear range of 0.004-0.25 μg/mL (Routinely tested).

Background

The MERS or Middle East Respiratory Syndrome Coronavirus, is a member of the coronavirus family and is known to cause severe respiratory illness in humans. The MERS protein is a type I transmembrane protein that plays a vital role in the virus's ability to infect host cells. It is composed of three main domains: the extracellular domain, the transmembrane domain, and the cytoplasmic domain. The extracellular domain, further divided into S1 and S2 subunits, is responsible for receptor recognition and binding. The S1 subunit contains the Receptor Binding Domain (RBD), which is crucial for the virus's attachment to and entry into host cells. The RBD specifically interacts with the host cell receptor, facilitating the initial step of infection. The S2 subunit, on the other hand, is responsible for membrane fusion. It contains a fusion peptide that inserts into the host cell membrane, initiating the fusion process. This fusion allows the virus's genetic material to be released into the host cell, initiating the infection process.

Clinical and Translational Updates