Synonym

Spike,S1 protein,Spike glycoprotein Subunit1,S glycoprotein Subunit1,Spike protein S1

Source

SARS S1 protein, His Tag(S1N-S52H5) is expressed from human 293 cells (HEK293). It contains AA Ser 14 - Arg 667 (Accession # AAP13567.1).
Predicted N-terminus: Ser 14

Molecular Characterization

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

The protein has a calculated MW of 74.9 kDa. The protein migrates as 90-116 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per μg by the LAL method / rFC method.

Purity

>95% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 μm filtered solution in PBS, 0.2 M Sodium citrate, pH5.3 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

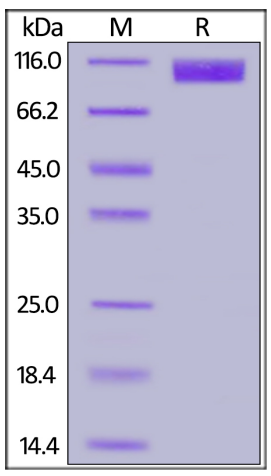
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

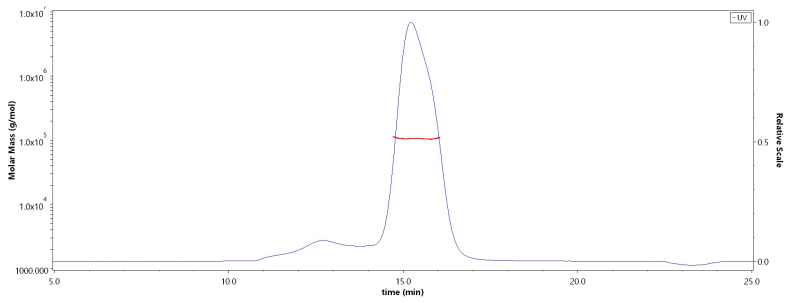
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



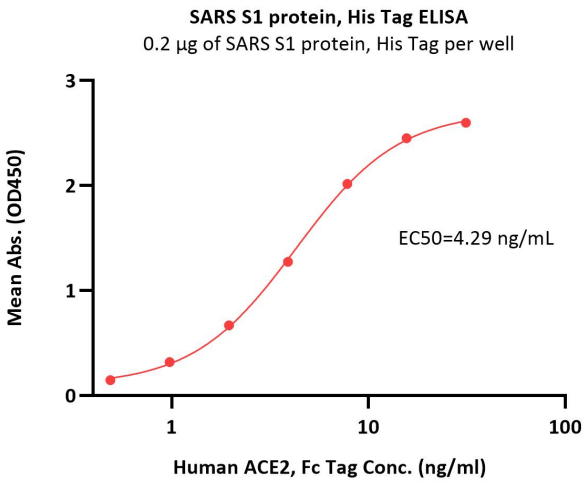
SARS S1 protein, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

SEC-MALS

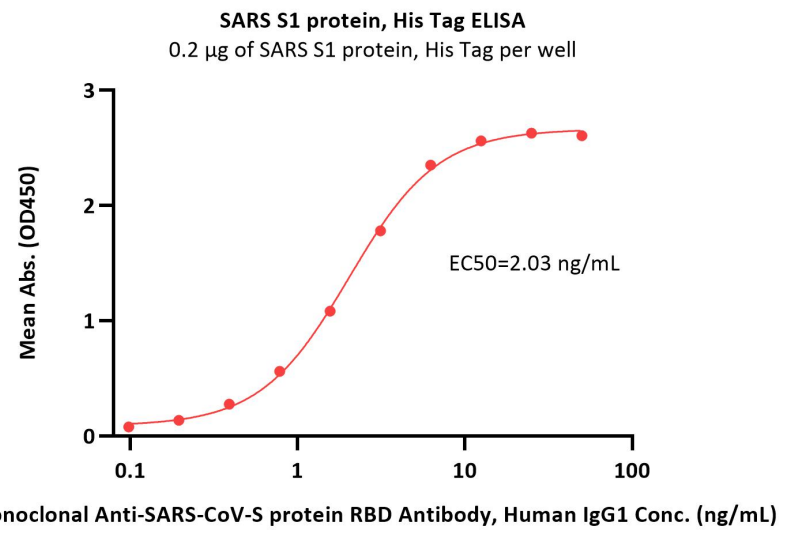


The purity of SARS S1 protein, His Tag (Cat. No. S1N-S52H5) is more than 80% and the molecular weight of this protein is around 95-115 kDa verified by SEC-MALS.
Report

Bioactivity-ELISA

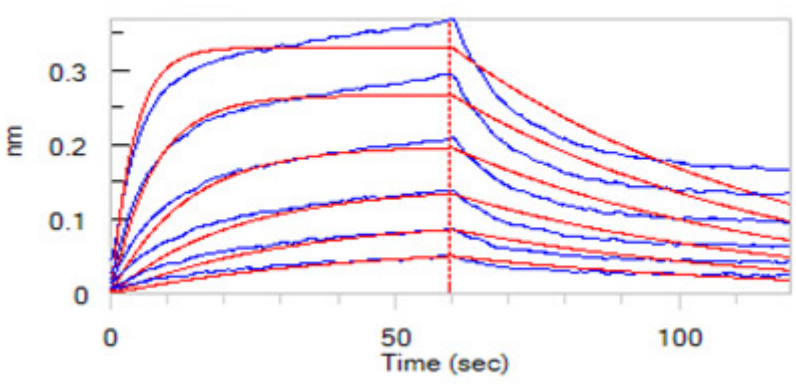


Immobilized SARS S1 protein, His Tag (Cat. No. S1N-S52H5) at 2 μg/mL (100 μL/well) can bind Human ACE2, Fc Tag (Cat. No. AC2-H5257) with a linear range of 0.4-8 ng/mL (QC tested).



Immobilized SARS S1 protein, His Tag (Cat. No. S1N-S52H5) at 2 μg/mL (100 μL/well) can bind Monoclonal Anti-SARS-CoV-S protein RBD Antibody, Human IgG1 with a linear range of 0.1-6 ng/mL (Routinely tested).

Bioactivity-BLI



Loaded Human ACE2, Fc Tag (Cat. No. AC2-H5257) on Protein A Biosensor, can bind SARS S1 protein, His Tag (Cat. No. S1N-S52H5) with an affinity constant of 36.2 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

Background

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.