

**Synonym**

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

**Source**

SARS-CoV-2 S1 protein, His Tag(S1N-C52H3) is expressed from human 293 cells (HEK293). It contains AA Val 16 - Arg 685 (Accession # [QHD43416.1](#)). Predicted N-terminus: Val 16

**Molecular Characterization**

S1 protein(Val 16 - Arg 685)  
QHD43416.1 Poly-his

This protein carries a polyhistidine tag at the C-terminus

The protein has a calculated MW of 76.9 kDa. The protein migrates as 100-125 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

**Endotoxin**

Less than 1.0 EU per  $\mu\text{g}$  by the LAL method.

**Purity**

>95% as determined by SDS-PAGE.

**Formulation**

Lyophilized from 0.22  $\mu\text{m}$  filtered solution in PBS, pH7.4 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.*

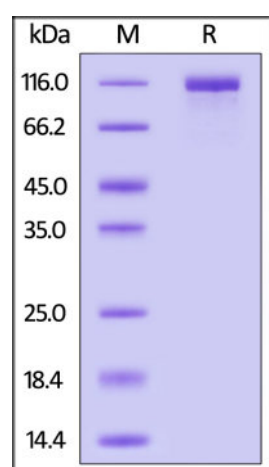
**Storage**

For long term storage, the product should be stored at lyophilized state at  $-20^{\circ}\text{C}$  or lower.

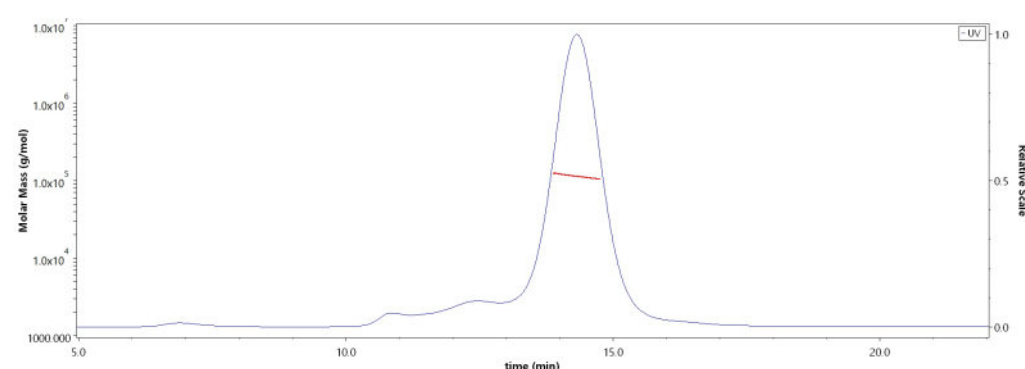
*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

- $-20^{\circ}\text{C}$  to  $-70^{\circ}\text{C}$  for 12 months in lyophilized state;
- $-70^{\circ}\text{C}$  for 3 months under sterile conditions after reconstitution.

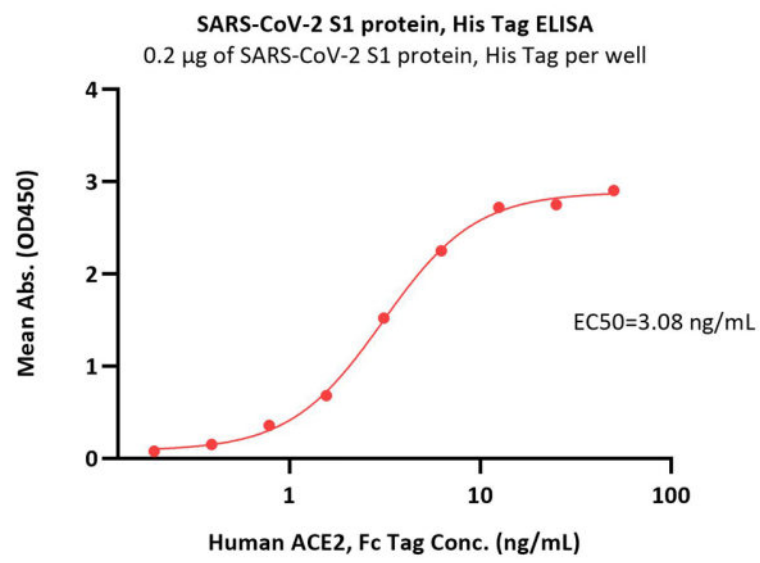
**SDS-PAGE**

SARS-CoV-2 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%.

**Bioactivity-ELISA****SEC-MALS**

The purity of SARS-CoV-2 S1 protein, His Tag (Cat. No. S1N-C52H3) is more than 85% and the molecular weight of this protein is around 101-124 kDa verified by SEC-MALS.

[Report](#)



Immobilized SARS-CoV-2 S1 protein, His Tag (Cat. No. S1N-C52H3) at 2 µg/mL (100 µL/well) can bind Human ACE2, Fc Tag (Cat. No. AC2-H5257) with a linear range of 0.2-6 ng/mL (QC tested).

### Background

It's been reported that Coronavirus 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](mailto:TechSupport@acrobiosystems.com) if you have any question on this product.