SARS-CoV-2 (COVID-19) S1 protein CTD, His Tag (MALS verified)

Catalog # S1D-C52H3

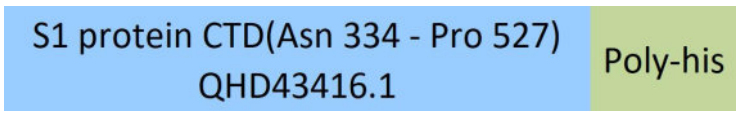
Synonym

S1 protein CTD,Spike protein S1 CTD,BetaCoV S1-CTD

Source

SARS-CoV-2 S1 protein CTD, His Tag(S1D-C52H3) is expressed from human 293 cells (HEK293). It contains AA Asn 334 - Pro 527 (Accession # QHD43416.1).
Predicted N-terminus: Asn 334

Molecular Characterization



This protein carries a polyhistidine tag at the C-terminus

The protein has a calculated MW of 23.6 kDa. The protein migrates as 28-30 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per μg by the LAL method.

Purity

>95% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

Formulation

Lyophilized from 0.22 μm filtered solution in PBS,pH7.3 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

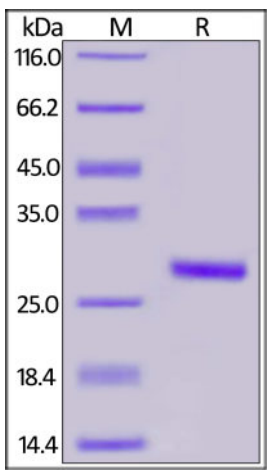
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

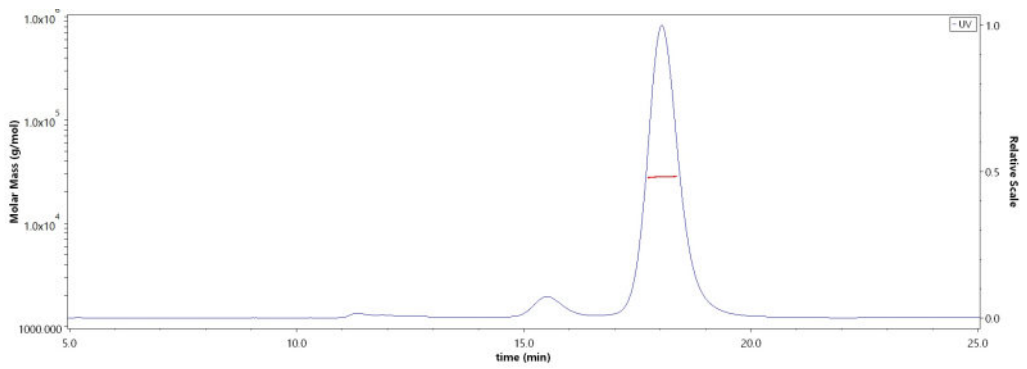
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



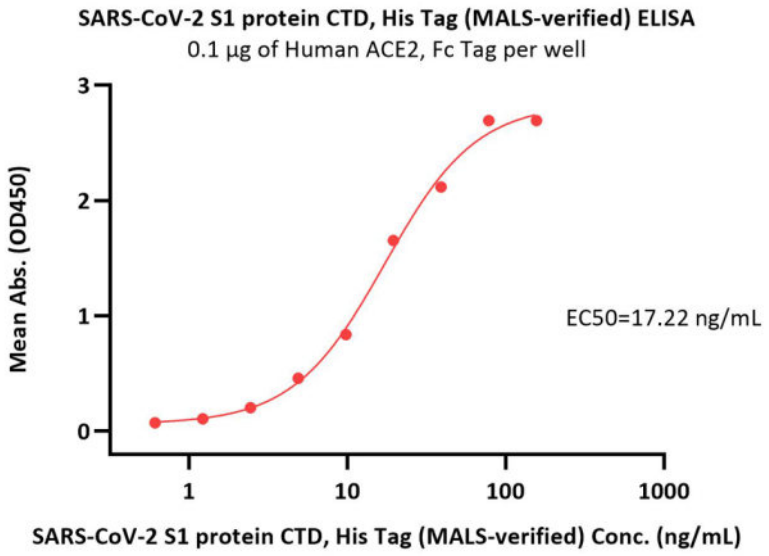
SARS-CoV-2 S1 protein CTD, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

SEC-MALS

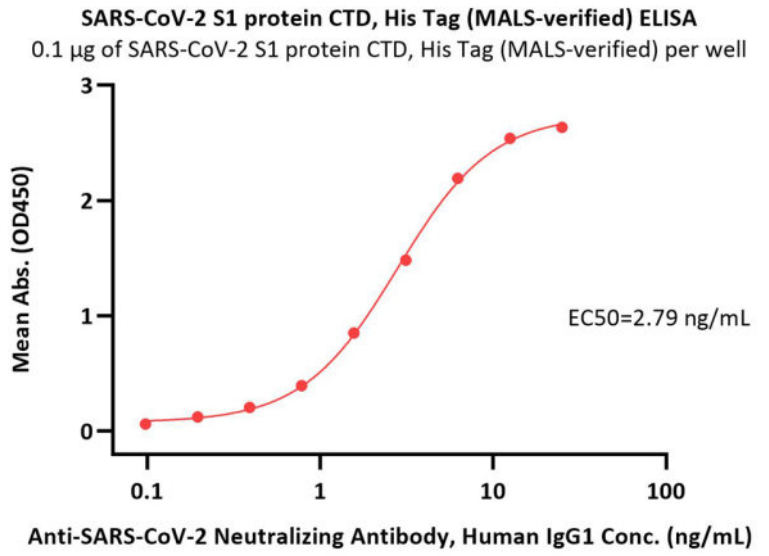


The purity of SARS-CoV-2 S1 protein CTD, His Tag (Cat. No. S1D-C52H3) is more than 90% and the molecular weight of this protein is around 23-33 kDa verified by SEC-MALS.
Report

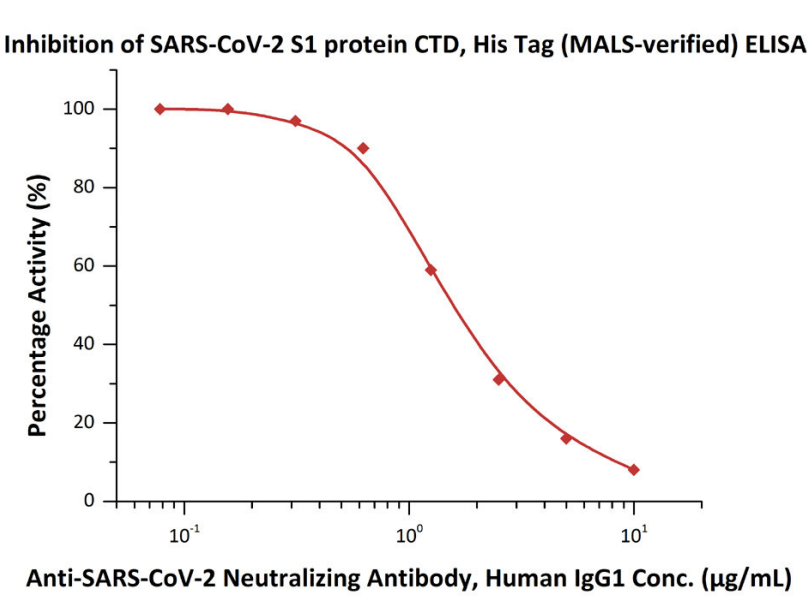
Bioactivity-ELISA



Immobilized Human ACE2, Fc Tag (Cat. No. AC2-H5257) at 1 μg/mL (100 μL/well) can bind SARS-CoV-2 S1 protein CTD, His Tag (Cat. No. S1D-C52H3) with a linear range of 0.6-20 ng/mL (QC tested).



Immobilized SARS-CoV-2 S1 protein CTD, His Tag (Cat. No. S1D-C52H3) at 1 μg/mL (100 μL/well) can bind Anti-SARS-CoV-2 Neutralizing Antibody, Human IgG1 (Cat. No. SAD-S35) with a linear range of 0.1-3 ng/mL (Routinely tested).



Serial dilutions of Anti-SARS-CoV-2 Neutralizing Antibody were added into Biotinylated Human ACE2, His,Avitag (Cat. No. AC2-H82E6): SARS-CoV-2 S1 protein CTD, His Tag (Cat. No. S1D-C52H3) binding reactions. The half maximal inhibitory concentration (IC50) is 1.47 μg/mL (Routinely 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 if you have any question on this product.