

Synonym

Spike,S protein RBD,Spike glycoprotein Receptor-binding domain,S glycoprotein RBD,Spike protein RBD

Source

SARS-CoV-2 S protein RBD, Mouse IgG2a Fc Tag(SPD-C5259) is expressed from human 293 cells (HEK293). It contains AA Arg 319 - Phe 541 (Accession # [QHD43416.1](#)).
Predicted N-terminus: Arg 319

Molecular Characterization

S protein RBD(Arg 319 - Phe 541) QHD43416.1	mFc(Glu 98 - Lys 330) P01863
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This protein carries a mouse IgG2a Fc tag at the C-terminus.
The protein has a calculated MW of 52.0 kDa. The protein migrates as 60-65 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, 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.

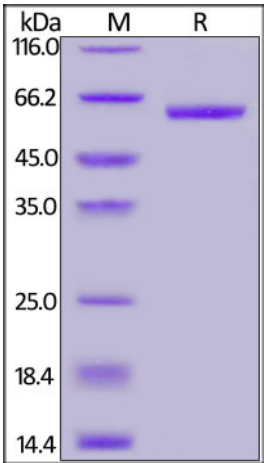
Storage

For long term storage, the product should be stored at lyophilized state at -20°C or lower.
Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

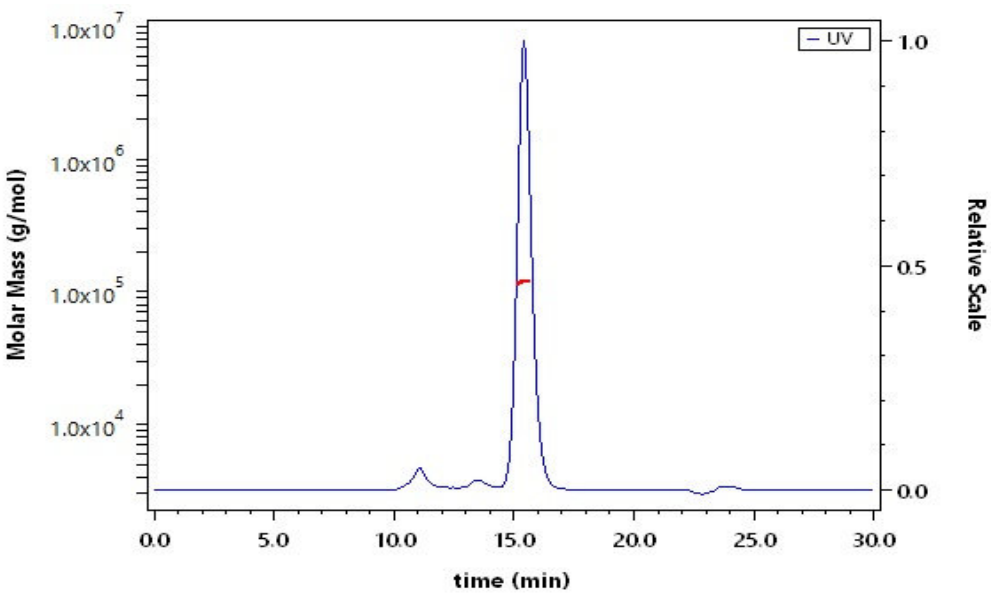
- 20°C to -70°C for 12 months in lyophilized state;
- 70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



SARS-CoV-2 S protein RBD, Mouse IgG2a Fc 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

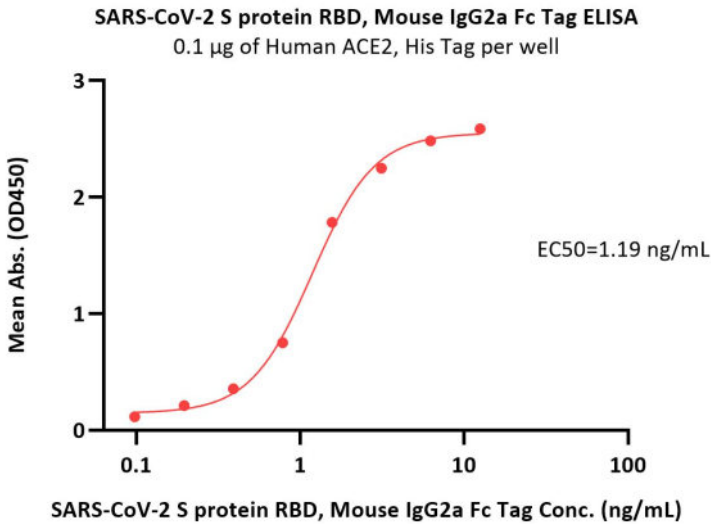


The purity of SARS-CoV-2 S protein RBD, Mouse IgG2a Fc Tag (Cat. No. SPD-C5259) is more than 85% and the molecular weight of this protein is around 105-120 kDa verified by SEC-MALS.

[Report](#)

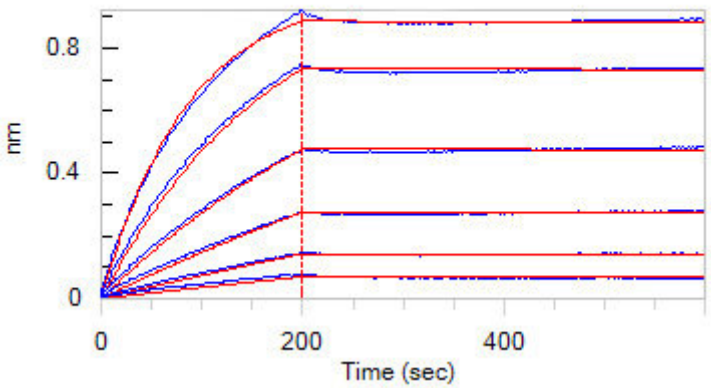
Bioactivity-ELISA





Immobilized Human ACE2, His Tag (Cat. No. AC2-H52H8) at 1 µg/mL (100 µL/well) can bind SARS-CoV-2 S protein RBD, Mouse IgG2a Fc Tag (Cat. No. SPD-C5259) with a linear range of 0.1-2 ng/mL (QC tested).

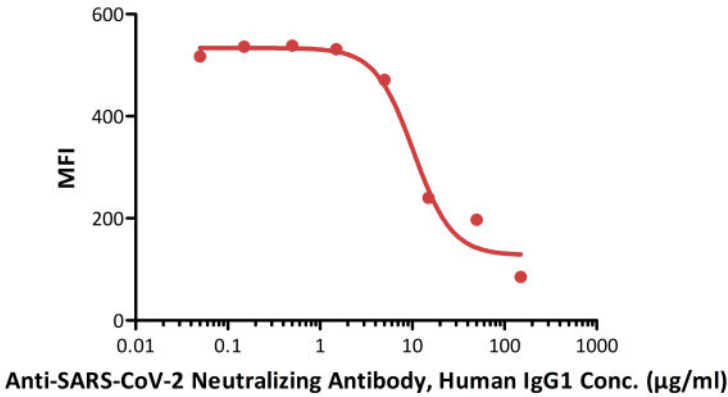
Bioactivity-BLI



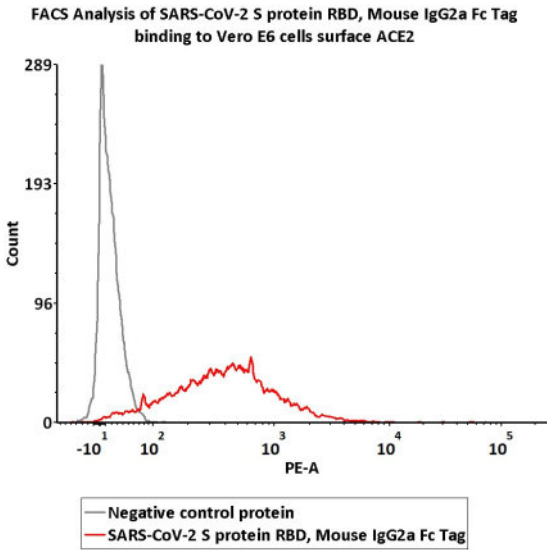
Loaded SARS-CoV-2 S protein RBD, Fc Tag (Cat. No. SPD-C5259) on Protein A Biosensor, can bind Human ACE2, His Tag (Cat. No. AC2-H52H8) with an affinity constant of 0.123nM as determined in BLI assay (ForteBio Octet Red96e)(Routinely tested).

Bioactivity-FACS

Competitive experiment of Anti-SARS-CoV-2 Neutralizing Antibody, Human IgG1



FACS analysis shows that the binding of SARS-CoV-2 S protein RBD, Mouse IgG2a Fc Tag (Cat. No. SPD-C5259) to Vero E6 cells surface ACE2 was inhibited by increasing concentration of Anti-SARS-CoV-2 Neutralizing Antibody, Human IgG1 (Cat. No. SAD-S35). The



FACS analysis shows that SARS-CoV-2 S protein RBD, Mouse IgG2a Fc Tag (Cat. No. SPD-C5259) can bind to Vero E6 cells surface ACE2. The concentration of SARS-CoV-2 S protein RBD is 5 µg/ml.





concentration of SARS-CoV-2 S protein RBD used is 5µg/ml. The IC50 is 10.33 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.

