

Synonym

Spike,S protein RBD,Spike glycoprotein Receptor-binding domain,S glycoprotein RBD,Spike protein RBD,COVID-19

Source

SARS-CoV-2 S protein RBD, Mouse IgG2a Fc Tag (SPD-C5251) 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 55-60 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

Delivered as bulk protein in a 0.2 µm filtered solution of 10 mM PB, Arginine, pH7.4.
Contact us for customized product form or formulation.

Storage

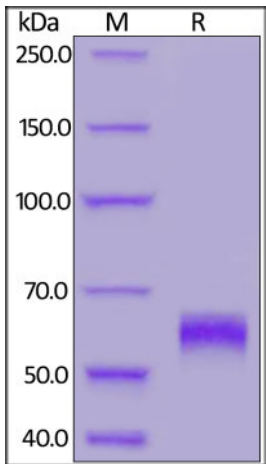
Please avoid repeated freeze-thaw cycles.
This product is stable after storage at:

- The product MUST be stored at -70°C or lower upon receipt;
- -70°C for 3 months under sterile conditions.

Shipping

This product is supplied as sterile liquid solution and shipped frozen with dry ice, please inquire the shipping cost.

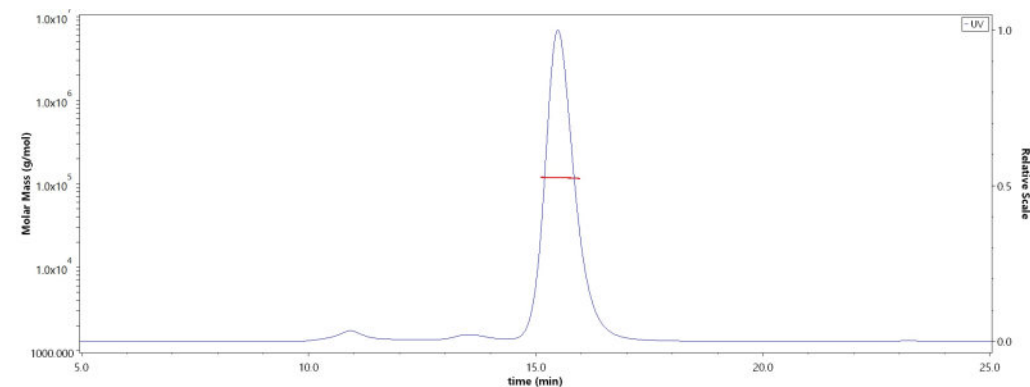
SDS-PAGE



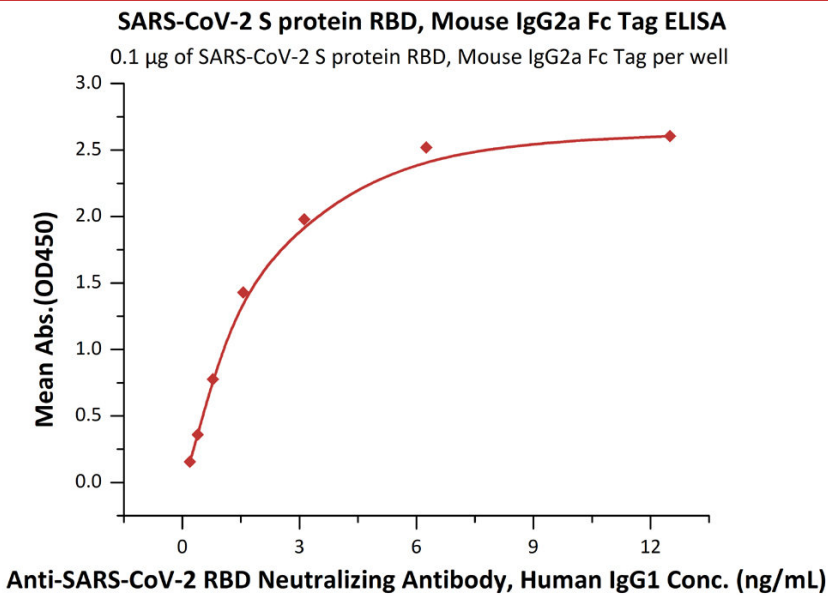
SARS-CoV-2 S protein RBD, Mouse IgG2a Fc Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

Bioactivity-ELISA

SEC-MALS



The purity of SARS-CoV-2 S protein RBD, Mouse IgG2a Fc Tag (Cat. No. SPD-C5251) was more than 90% and the molecular weight of this protein is around 110-125 kDa verified by SEC-MALS.
[Report](#)



Immobilized SARS-CoV-2 S protein RBD, Mouse IgG2a Fc Tag (Cat. No. [SPD-C5251](#)) 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 0.2-3 ng/mL (QC tested).

Background

It's been reported that SARS-CoV-2 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.

References

- (1) [Wan Y, et al. J Virol. 2020. pii: JVI.00127-20.](#)
- (2) [Benvenuto D, et al. J Med Virol. 2020.](#)
- (3) [Chang CY, et al. AMB Express. 2020. 10\(1\):20.](#)

Please contact us via TechSupport@acrobiosystems.com if you have any question on this product.