

## Recombinant COVID-19 S protein RBD (V367F), His-tagged

Cat. No. Spike-42V Lot. No. (See product label)

### SPECIFICATION

<b>Product Overview</b>	Recombinant COVID-19 S protein RBD (V367F)(Arg319-Phe541), fused to His-tag at the C-terminus, was expressed in human 293 cells (HEK293).
<b>Species</b>	Sars-CoV-2
<b>Source</b>	HEK293
<b>ProteinLength</b>	Arg319-Phe541
<b>Description</b>	It's been reported that COVID-19 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.
<b>Predicted N Terminal</b>	Arg319
<b>Form</b>	Lyophilized from 0.22 µm filtered solution in PBS, pH7.4, 10% trehalose.
<b>Molecular Mass</b>	The protein has a calculated MW of 27.0 kDa. The protein migrates as 33-35 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.
<b>Endotoxin</b>	Less than 1.0 EU per µg by the LAL method.

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**Purity** >95% as determined by SDS-PAGE.

**Storage** For long term storage, the product should be stored at lyophilized state at -20 centigrade or lower.  
Please avoid repeated freeze-thaw cycles.  
This product is stable after storage at:  
-20 to -70 centigrade for 12 months in lyophilized state;  
-70 centigrade for 3 months under sterile conditions after reconstitution.

**Reconstitution** It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 ug/ul. Centrifuge the vial at 4°C before opening to recover the entire contents.

## GENE INFORMATION

**Gene Name** S

**Official Symbol** S

**Synonyms** spike glycoprotein

**Gene ID** 43740568

**Protein Refseq** YP\_009724390.1

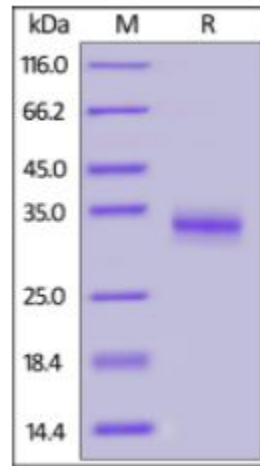
**UniProt ID** P0DTC2

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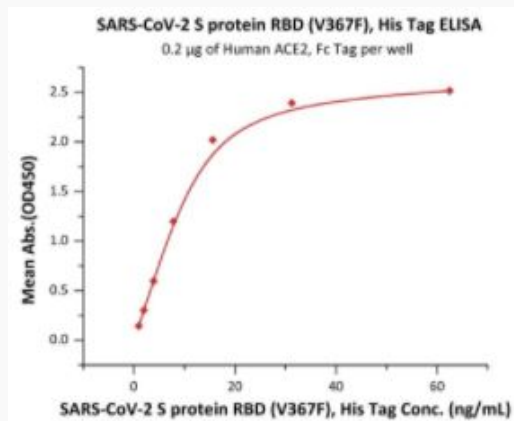
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### SDS-PAGE of Spike-42V



COVID-19 S protein RBD (V367F), His 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 of Spike-42V



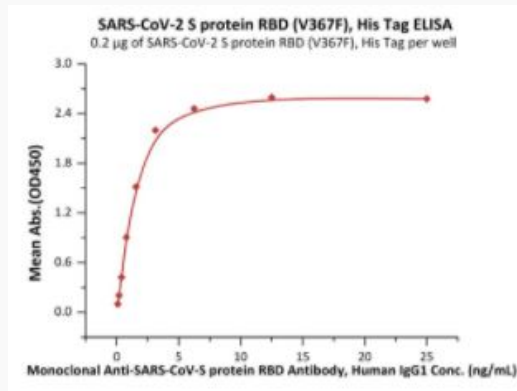
Immobilized Human ACE2, Fc Tag at 2 µg/mL (100 µL/well) can bind COVID-19 S protein RBD (V367F), His Tag with a linear range of 1-16 ng/mL (QC tested).

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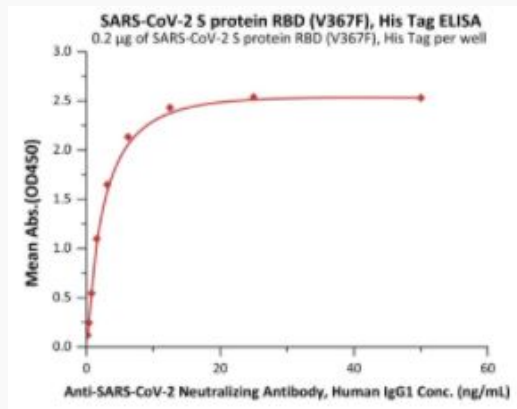
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### Bioactivity-ELISA of Spike-42V



Immobilized COVID-19 S protein RBD (V367F), His Tag at 2 µg/mL (100 µL/well) can bind Monoclonal Anti-SARS-CoV-S protein RBD Antibody, Human IgG1 with a linear range of 0.1-3 ng/mL (Routinely tested).

### Bioactivity-ELISA of Spike-42V



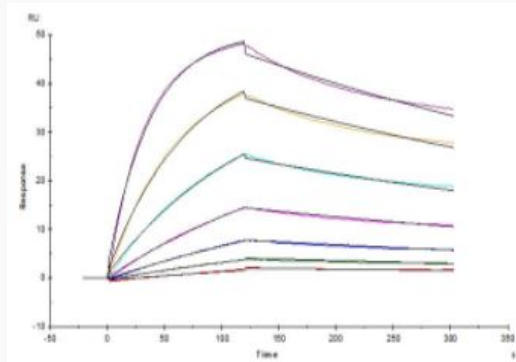
Immobilized COVID-19 S protein RBD (V367F), His Tag at 2 µg/mL (100 µL/well) can bind Anti-COVID-19 Neutralizing Antibody, Human IgG1 with a linear range of 0.195-6.25 ng/mL (Routinely tested).

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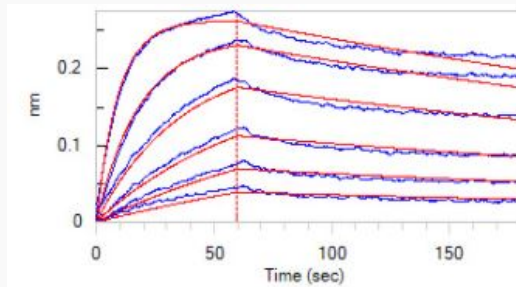
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### Bioactivity-SPR of Spike-42V



Human ACE2, Fc Tag captured on CM5 chip via anti-human IgG Fc antibodies surface can bind COVID-19 S protein RBD (V367F), His Tag with an affinity constant of 4.33 nM as determined in a SPR assay (Biacore T200) (Routinely tested).

### Bioactivity-BLI of Spike-42V



Loaded Human ACE2, Fc Tag on Protein A Biosensor, can bind COVID-19 S protein RBD (V367F), His Tag with an affinity constant of 5.5 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

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