

Recombinant COVID-19 Spike protein S1, Fc-tagged

Cat. No. Spike-239V **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant COVID-19 NSP8 protein (Val16-Arg685) was fused to Mouse IgG2a Fc tag at the C-terminus and expressed in human 293 cells (HEK293).
Species	Sars-CoV-2
Source	HEK293
ProteinLength	Val16-Arg685
Description	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.
Predicted N Terminal	Val16
Form	Lyophilized from 0.22 µm filtered solution in PBS, pH7.4, 10% trehalose.
Molecular Mass	The protein has a calculated MW of 101.9 kDa. The protein migrates as 115-130 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.
Endotoxin	Less than 1.0 EU per µg by the LAL method.

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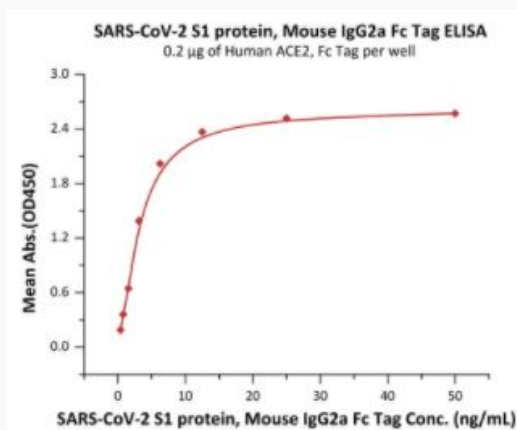
Purity	>90% as determined by SDS-PAGE.
Storage	For long term storage, the product should be stored at lyophilized state at -20°C or lower. Please avoid repeated freeze-thaw cycles. This product is stable after storage at: -20°C to -70°C for 12 months in lyophilized state; -70°C for 3 months under sterile conditions after reconstitution.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 mg/ml. 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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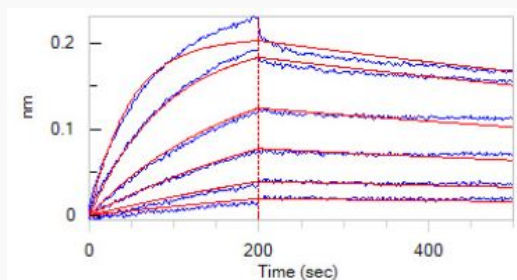
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Bioactivity-ELISA of Spike-239V



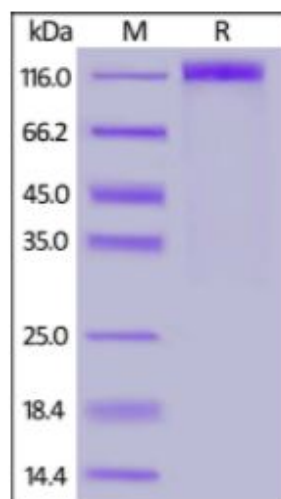
Immobilized Human ACE2, Fc Tag at 2 µg/mL (100 µL/well) can bind COVID-19 S1 protein, Mouse IgG2a Fc Tag with a linear range of 0.4-6 ng/mL (QC tested).

Bioactivity-BLI of Spike-239V



Loaded COVID-19 S1 protein, Mouse IgG2a Fc Tag on AMC Biosensor, can bind Human ACE2, His Tag with an affinity constant of 3.95 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

SDS-PAGE of Spike-239V



COVID-19 S1 protein, 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 90%.