Recombinant COVID-19 Spike S1 protein, Fc-tagged

Cat. No. Spike-236V **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant COVID-19 Spike S1 protein (Val16-Arg685) was fused to human IgG1 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 Tris with Glycine, Arginine and NaCl, pH7.5, 10% trehalose.
Molecular Mass	The protein has a calculated MW of 101.5 kDa. The protein migrates as 116-130 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

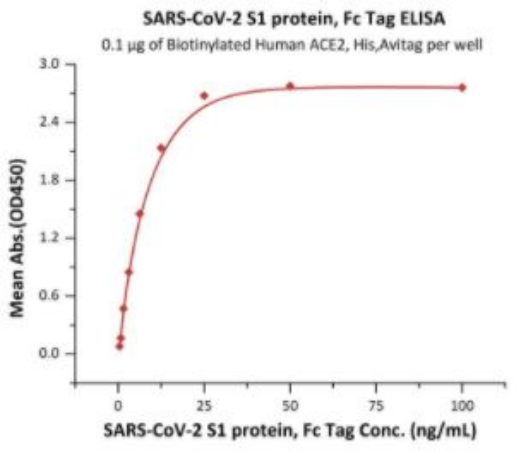
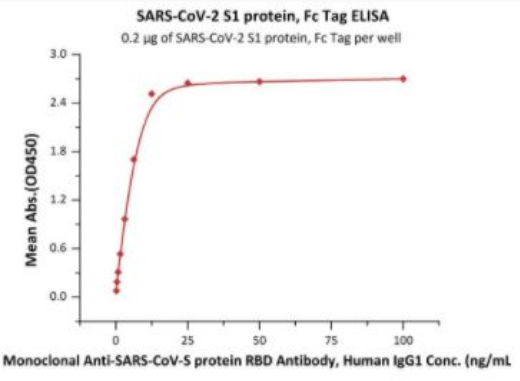
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Email: info@creative-biomart.com Fax: 1-631-938-8127
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Endotoxin	Less than 1.0 EU per μg by the LAL method.
Purity	>95% as determined by SDS-PAGE.
Storage	For long term storage, the product should 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 mg/ml. Centrifuge the vial at 4°C before opening to recover the entire contents.
Shipping	Powder,RT

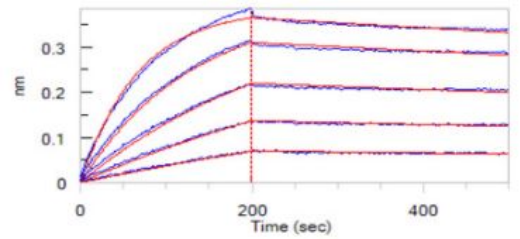
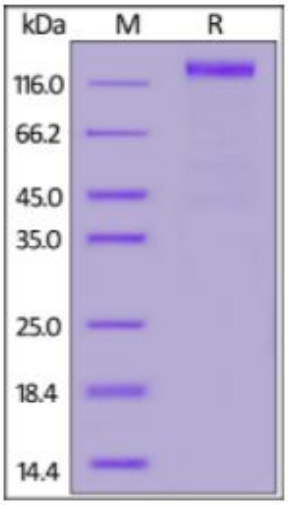
GENE INFORMATION

Gene Name	S
Official Symbol	S
Synonyms	spike glycoprotein
Gene ID	43740568
Protein Refseq	YP_009724390.1
UniProt ID	P0DTC2

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Bioactivity-ELISA of Spike-236V	 Immobilized Biotinylated Human ACE2, His,Avitag at 1 μg/mL (100 μL/well) on Streptavidin precoated (0.5 μg/well) plate, can bind COVID-19 S1 protein, Fc Tag with a linear range of 0.4-13 ng/mL (QC tested).
Bioactivity-ELISA of Spike-236V	 Immobilized COVID-19 S1 protein, Fc Tag at 2 μg/mL (100 μL/well) can bind Monoclonal Anti-COVID-19 protein RBD Antibody, Human IgG1 with a linear range of 0.2-13 ng/mL (Routinely tested).

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Bioactivity-BLI of Spike-236V	 Loaded COVID-19 S1 protein, Fc Tag on Protein A Biosensor, can bind Human ACE2, His Tag with an affinity constant of 2.68 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).
SDS-PAGE of Spike-236V	 COVID-19 S1 protein, 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%.

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