

# Non-biotinylated SARS-COV-2 Spike S1 Protein, Ultra Low Endotoxin



Cat. No. COV-VM5S1-UL

## Description

<b>Source</b>	Recombinant SARS-COV-2 Spike S1 Protein is expressed from HEK293 with hFc (IgG1) tag and Avi tag at the C-Terminus. It contains Gln14-Arg683.
<b>Accession</b>	QHD43416.1
<b>Molecular Weight</b>	The protein has a predicted MW of 102.6 kDa. Due to glycosylation, the protein migrates to 130-140 kDa based on Bis-Tris PAGE result.
<b>Endotoxin</b>	Less than 0.01 EU per µg by the LAL method.
<b>Purity</b>	> 95% as determined by Bis-Tris PAGE > 90% as determined by HPLC

## Formulation and Storage

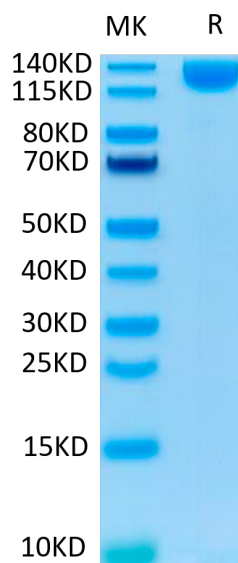
<b>Formulation</b>	Lyophilized from 0.22µm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.
<b>Reconstitution</b>	Dissolve the lyophilized protein in distilled water. Please refer to the Certificate of Analysis for detailed instructions.
<b>Storage</b>	-20 to -80°C for 12 months as supplied from date of receipt. -80°C for 3 months after reconstitution. Recommend to aliquot the protein into smaller quantities for optimal storage. Please minimize freeze-thaw cycles.

## Background

The spike protein (S) of coronavirus (CoV) attaches the virus to its cellular receptor, angiotensin-converting enzyme 2 (ACE2). A defined receptor-binding domain (RBD) on S mediates this interaction. The S protein plays key parts in the induction of neutralizing-antibody and T-cell responses, as well as protective immunity.

## Assay Data

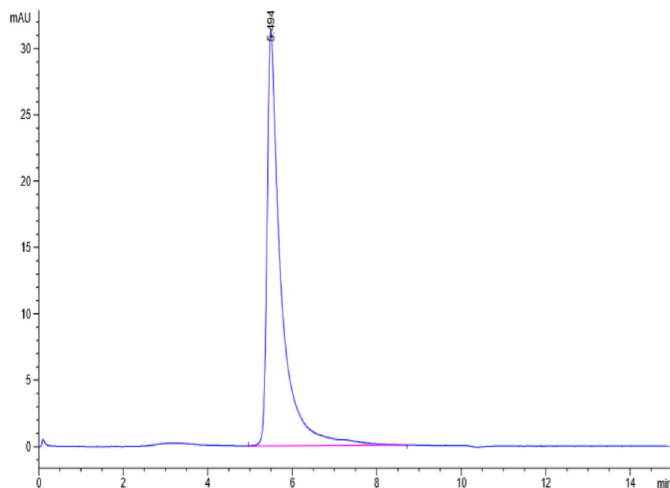
### Bis-Tris PAGE



SARS-COV-2 Spike S1 on Bis-Tris PAGE under reduced condition. The purity is greater than 95%.

### SEC-HPLC

**Assay Data**

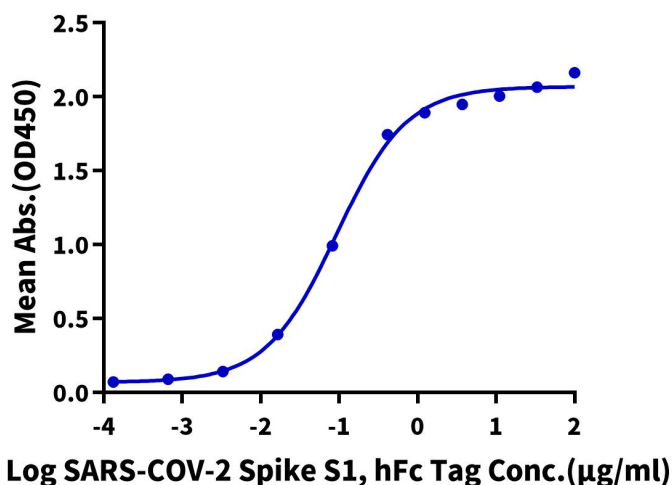


The purity of SARS-COV-2 Spike S1 is greater than 90% as determined by SEC-HPLC.

**ELISA Data**

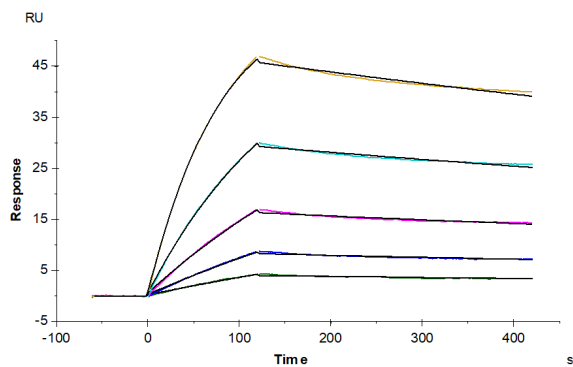
**SARS-COV-2 Spike S1, hFc Tag ELISA**

0.5µg Human ACE2, His Tag Per Well



Immobilized Human ACE2, His Tag at 5µg/ml (100µl/well) on the plate. Dose response curve for SARS-COV-2 Spike S1, hFc Tag with the EC50 of 92.3ng/ml determined by ELISA (QC Test).

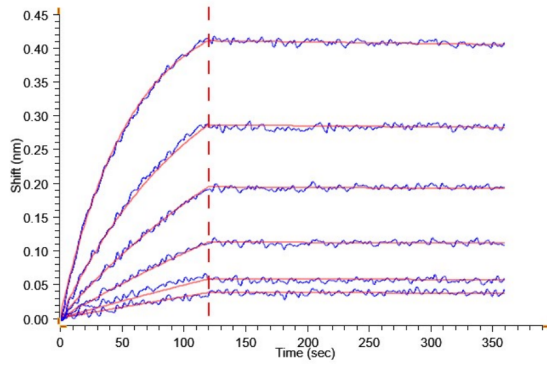
**SPR Data**



SARS-COV-2 Spike S1, hFc Tag captured on CM5 Chip via Protein A can bind Human ACE2, His Tag with an affinity constant of 3.80 nM as determined in SPR assay (Biacore T200).

**BLI Data**

Assay Data



Loaded SARS-COV-2 Spike S1, hFc Tag on ProA-Biosensor can bind Non-biotinylated Human ACE2, His Tag with an affinity constant of 0.66 nM as determined in BLI assay .