

**Synonym**

S1 protein NTD,Spike protein S1 NTD,BetaCoV S1-NTD

**Source**

Biotinylated SARS-CoV-2 Spike NTD, His,Avitag (BA.4 & BA.5/Omicron) (SPD-C82H6) is expressed from human 293 cells (HEK293). It contains AA Ser 13 - Leu 303 (Accession # [QHD43416.1](#) (T19I, LPP24-26del, A27S, HV69-70del, G142D, V213G)). The spike mutations are identified on the SARS-CoV-2 Omicron variant (Pango lineage: BA.4 and BA.5).  
 Predicted N-terminus: Ser 13

**Molecular Characterization**

This protein carries a polyhistidine tag at the C-terminus, followed by an Avi tag (Avitag™)

The protein has a calculated MW of 34.4 kDa. The protein migrates as 55-66 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

**Labeling**

*Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.*

**Protein Ratio**

Passed as determined by the HABA assay / binding ELISA.

**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**

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

**Reconstitution**

Please see Certificate of Analysis for specific instructions.

*For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.*

**Storage**

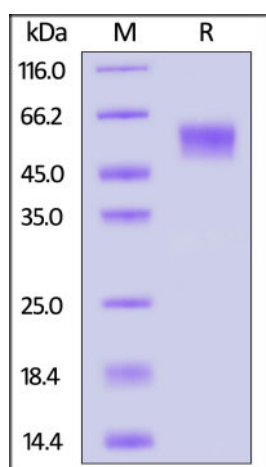
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*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.

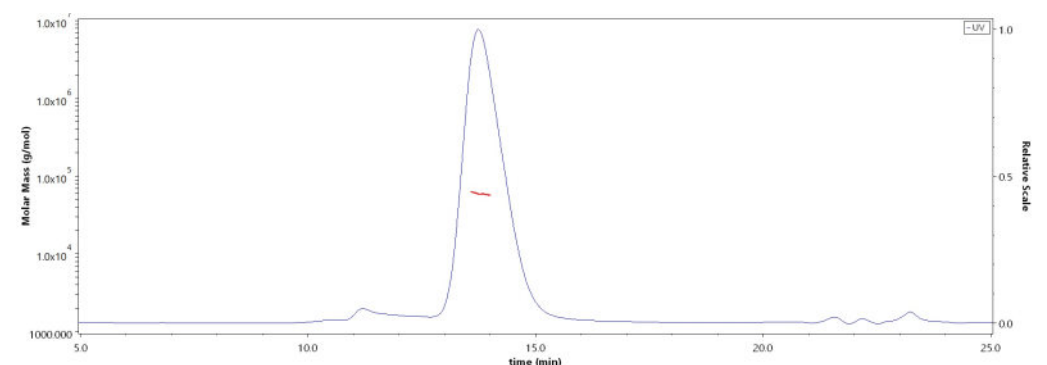
**SDS-PAGE**



Biotinylated SARS-CoV-2 Spike NTD, His,Avitag (BA.4 & BA.5/Omicron) 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**

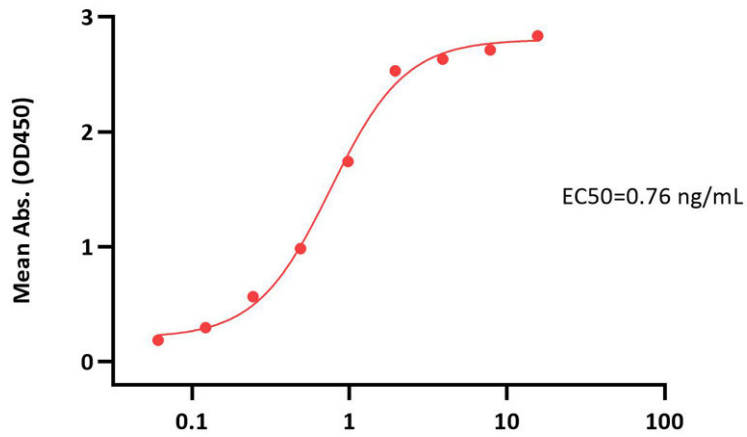
**SEC-MALS**



The purity of Biotinylated SARS-CoV-2 Spike NTD, His,Avitag (BA.4 & BA.5/Omicron) (Cat. No. SPD-C82H6) is more than 90% and the molecular weight of this protein is around 55-70 kDa verified by SEC-MALS.

[Report](#)

**Biotinylated SARS-CoV-2 Spike NTD, His,Avitag (BA.4 & BA.5/Omicron) ELISA**  
 0.1 µg of Biotinylated SARS-CoV-2 Spike NTD, His,Avitag (BA.4 & BA.5/Omicron) per well



Anti-SARS-CoV-2 Spike NTD Antibody, Chimeric mAb, Human IgG1 Conc. (ng/mL)

Immobilized Biotinylated SARS-CoV-2 Spike NTD, His,Avitag (BA.4 & BA.5/Omicron) (Cat. No. SPD-C82H6) at 1 µg/mL (100 µL/well) on streptavidin (Cat. No. STN-N5116) precoated (0.5 µg/well) plate can bind Anti-SARS-CoV-2 Spike NTD Antibody, Chimeric mAb, Human IgG1 (Cat. No. SPD-M121) with a linear range of 0.1-2 ng/mL (QC tested).

### Background

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.

### Clinical and Translational Updates

Please contact us via [TechSupport@acrobiosystems.com](mailto:TechSupport@acrobiosystems.com) if you have any question on this product.