SARS-CoV-2 S protein (F817P, A892P, A899P, A942P, K986P, V987P), His Tag (MALS verified)

Catalog # SPN-C52Hd

Synonym

Spike,S protein,Spike glycoprotein,S glycoprotein

Source

SARS-CoV-2 S protein, His Tag (SPN-C52Hd) is expressed from human 293 cells (HEK293). It contains AA Val 16 - Pro 1213 (Accession # QHD43416.1). Proline substitutions (F817P, A892P, A899P, A942P, K986P, V987P) are introduced to stabilize the trimeric prefusion state of SARS-CoV-2 S protein. Predicted N-terminus: Val 16

Molecular Characterization

This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 138.2 kDa. The protein is cleaved at furin site and divided into S1 (16-685) and S2 (686-1213). The protein migrates as 75-85 kDa, 90-100 kDa and 150-160 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per μg by the LAL method / rFC method.

Purity

>95% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 μm filtered solution in 0.1 M Sodium citrate, pH5.5 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

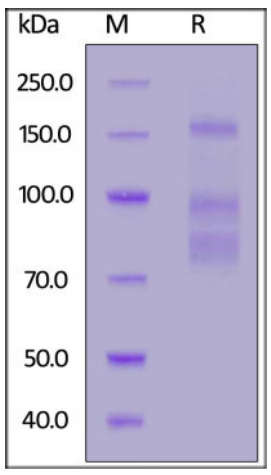
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

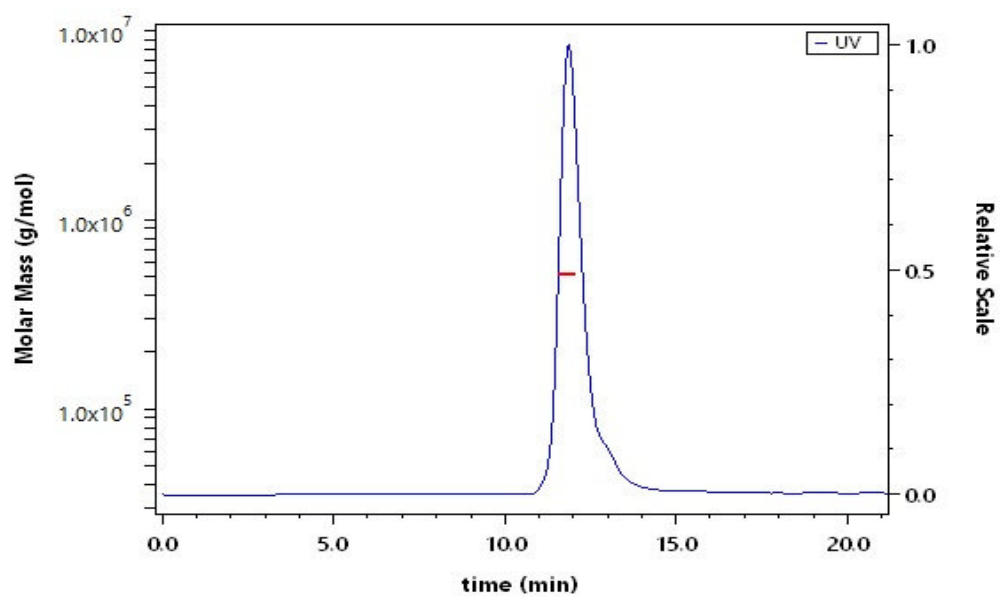
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



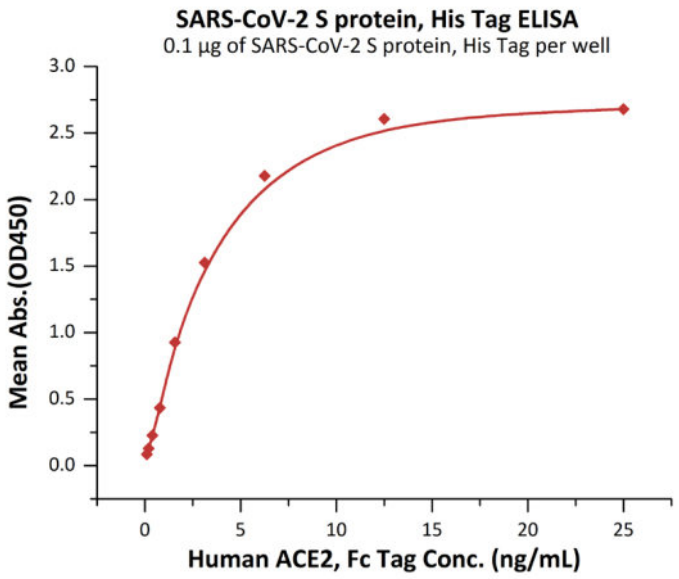
SARS-CoV-2 S protein, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

SEC-MALS



The purity of SARS-CoV-2 S protein, His Tag (Cat. No. SPN-C52Hd) is more than 85% and the molecular weight of this protein is around 530-700 kDa verified by SEC-MALS.
Report

Bioactivity-ELISA



Immobilized SARS-CoV-2 S protein, His Tag (Cat. No. SPN-C52Hd) at 1 μg/mL (100 μL/well) can bind Human ACE2, Fc Tag (Cat. No. AC2-H5257) with a linear range of 0.1-3 ng/mL (QC tested).

Background

It's been reported that SARS-CoV-2 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.