



Synonym

Spike,S protein,Spike glycoprotein,S glycoprotein

Source

SARS-CoV-2 Spike Trimer, His Tag (BA.5/Omicron) (SPN-C522j) is expressed from human 293 cells (HEK293). The spike mutations are identified on the SARS-CoV-2 Omicron variant (Pango lineage: BA.5; GISAID clade: GRA). The recombinant protein is expressed from human 293 cells (HEK293) with T4 fibritin trimerization motif and a polyhistidine tag at the C-terminus. Proline substitutions (F817P, A892P, A899P, A942P, K986P, V987P) and alanine substitutions (R683A and R685A) are introduced to stabilize the trimeric prefusion state of SARS-CoV-2 S protein and abolish the furin cleavage site, respectively.

Molecular Characterization

This protein carries a polyhistidine tag at the C-terminus.
The protein has a calculated MW of 137.8 kDa. The protein migrates as 160-190 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.
>90% as determined by SEC-MALS.

Formulation

Supplied as 0.2 µm filtered solution in 0.1 M Sodium citrate, pH5.5.
Contact us for customized product form or formulation.

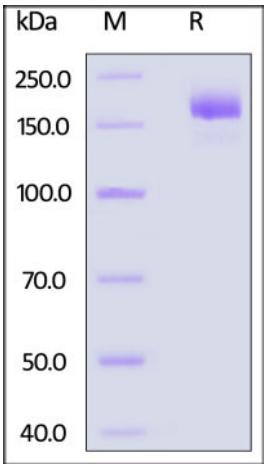
Shipping

This product is supplied and shipped with dry ice, please inquire the shipping cost.

Storage

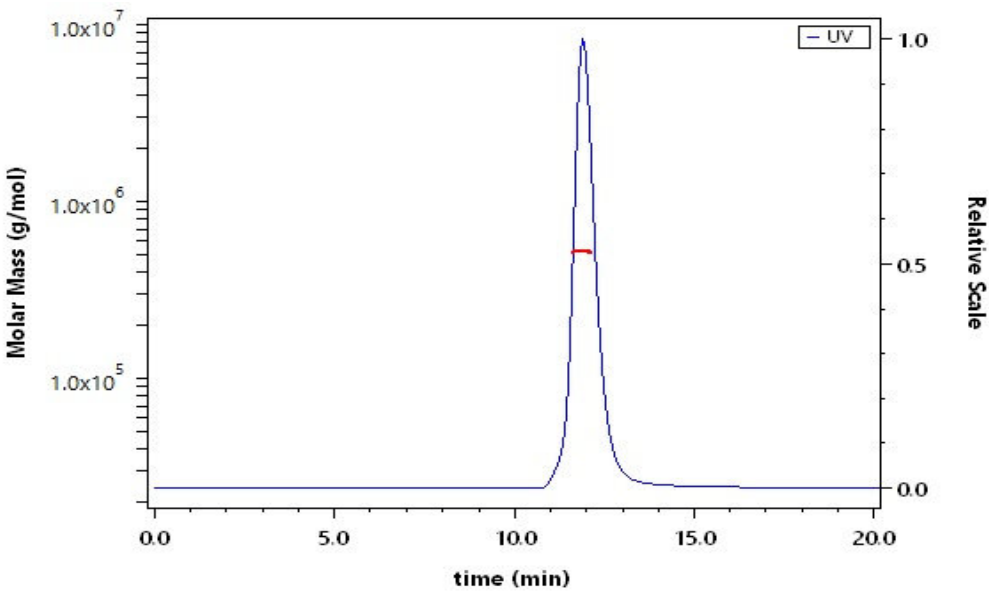
Please avoid repeated freeze-thaw cycles.
This product is stable after storage at:
• The product MUST be stored at -70°C or lower upon receipt;
• -70°C for 3 months under sterile conditions.

SDS-PAGE



SARS-CoV-2 Spike Trimer, His Tag (BA.5/Omicron) 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

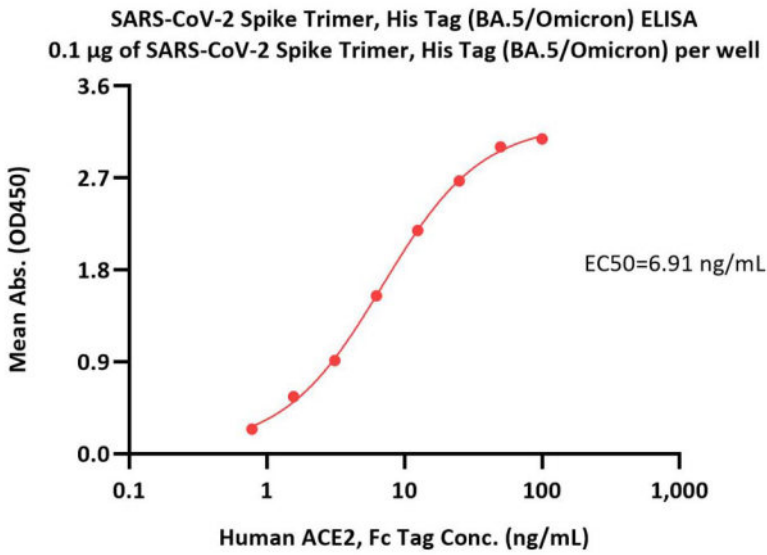


The purity of SARS-CoV-2 Spike Trimer, His Tag (BA.5/Omicron) (Cat. No. SPN-C522j) is more than 90% and the molecular weight of this protein is around 495-545 kDa verified by SEC-MALS.

[Report](#)

Bioactivity-ELISA





Immobilized SARS-CoV-2 Spike Trimer, His Tag (BA.5/Omicron) (Cat. No. SPN-C522j) at 1 µg/mL (100 µL/well) can bind Human ACE2, Fc Tag (Cat. No. AC2-H5257) with a linear range of 0.4-13 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.

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