

Synonym

Spike,S2 protein,Spike glycoprotein Subunit2,S glycoprotein Subunit2,Spike protein S2

Source

SARS-CoV-2 S2 protein (T716I, S982A, D1118H), His Tag (S2N-C52Hd) is expressed from human 293 cells (HEK293). It contains AA Ser 686 - Pro 1213 (Accession # [QHD43416.1](#)). The recombinant protein is expressed from human 293 cells (HEK293) with T4 fibrin trimerization motif and a polyhistidine tag at the C-terminus. Proline substitutions (F817P/ A892P/ A899P/ A942P/ K986P/ V987P) are introduced to stabilize the trimeric prefusion state of SARS-CoV-2 S protein. The T716I/ S982A/ D1118H mutations were identified in the SARS-CoV-2 Alpha variant (Pango lineage: B.1.1.7; other names: 20I/501Y.V1 or VOC 202012/01).

Predicted N-terminus: Ser 686

Molecular Characterization

This protein carries a polyhistidine tag at the C-terminus

The protein has a calculated MW of 59.6 kDa. The protein migrates as 70-100 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per µg by the LAL method.

Purity

>95% as determined by SDS-PAGE.

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.

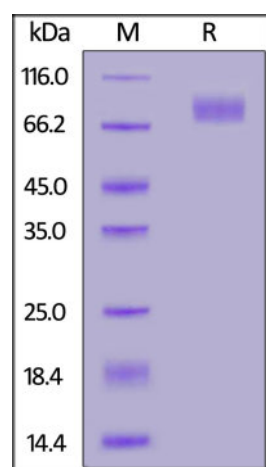
Storage

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

Please avoid repeated freeze-thaw cycles.

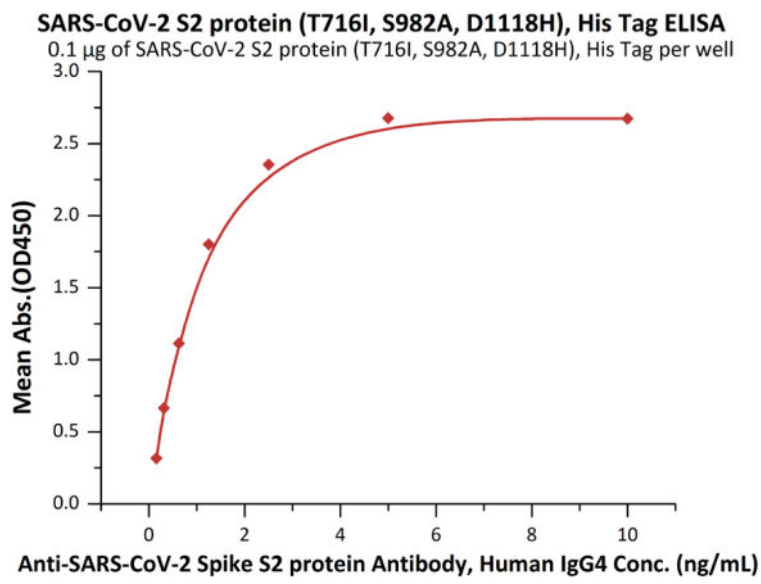
This product is stable after storage at:

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

SDS-PAGE

SARS-CoV-2 S2 protein (T716I, S982A, D1118H), 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%.

Bioactivity-ELISA



Immobilized SARS-CoV-2 S2 protein (T716I, S982A, D1118H), His Tag (Cat. No. S2N-C52Hd) at 1 µg/mL (100 µL/well) can bind Anti-SARS-CoV-2 Spike S2 protein Antibody, Human IgG4 (Cat. No. S2N-S86) with a linear range of 0.2-1 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.

Clinical and Translational Updates

Please contact us via TechSupport@acrobiosystems.com if you have any question on this product.