

Synonym

Spike,S protein RBD,Spike glycoprotein Receptor-binding domain,S glycoprotein RBD,Spike protein RBD

Source

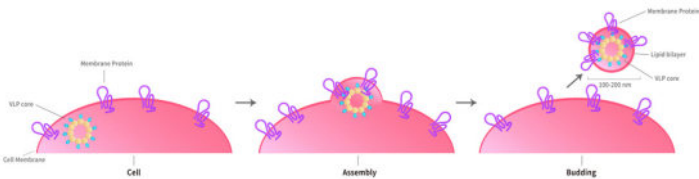
SARS-CoV-2 S protein RBD-VLP (SPD-C52M6) is expressed from human 293 cells (HEK293). It contains AA Arg 319 - Asn 532 (Accession # [QHD43416.1](#)). Predicted N-terminus: Val

Molecular Characterization

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

The protein has a calculated MW of 96.6 kDa. The protein migrates as 70 kDa and 100 kDa under reducing (R) condition (SDS-PAGE).

Virus-like particles(VLPs) are formed by self-assembly of envelop/capsid proteins from viruses. Membrane Proteins can be constituted in-situ with VLPs produced from HEK293 cell cultures. These VLPs concentrate conformationally intact membrane proteins directly on the cell surface and produce soluble, high-concentration proteins perfect for immunization and antibody screening.



The VLPs provide the display of properly folded membrane proteins in their native cellular membrane in a compact size of 100~300 nm diameter (similar to the size of most viruses) making it optimal targets for dendritic cells in vivo and surface attachment for phage display.

Endotoxin

Less than 0.5 EU per µg by the LAL method.

Purity

>95% as determined by SDS-PAGE.

Formulation

Supplied as 0.2 µm filtered solution in Glycine, sodium citrate, pH 8.0, PBS with trehalose as protectant.

The VLPs are highly immunogenic, so the immunization strategy should be optimized (antigen dose, regimen and adjuvant).

Contact us for customized product form or formulation.

Storage

Please avoid repeated freeze-thaw cycles.

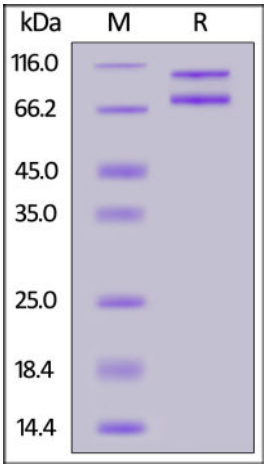
This product is stable after storage at:

- The product MUST be stored at -70°C or lower upon receipt;
- -70°C for 3 months under sterile conditions.

Shipping

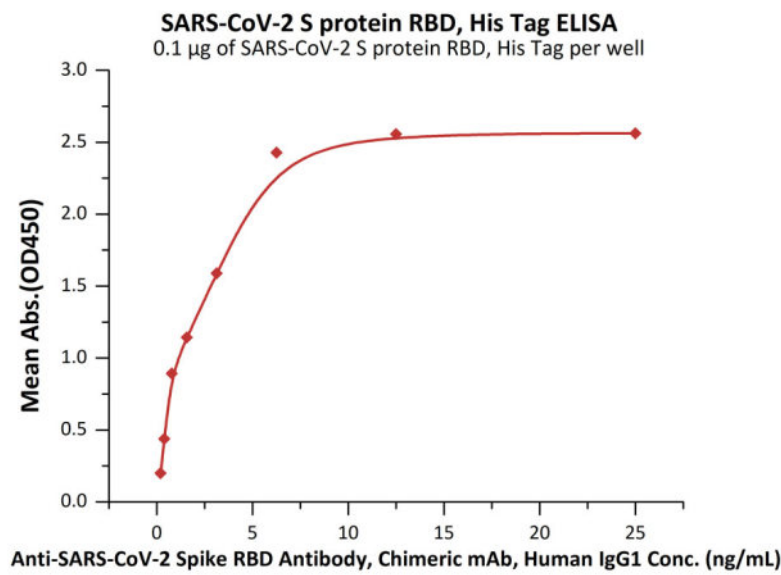
This product is supplied and shipped as sterile liquid solution with dry ice, please inquire the shipping cost.

SDS-PAGE

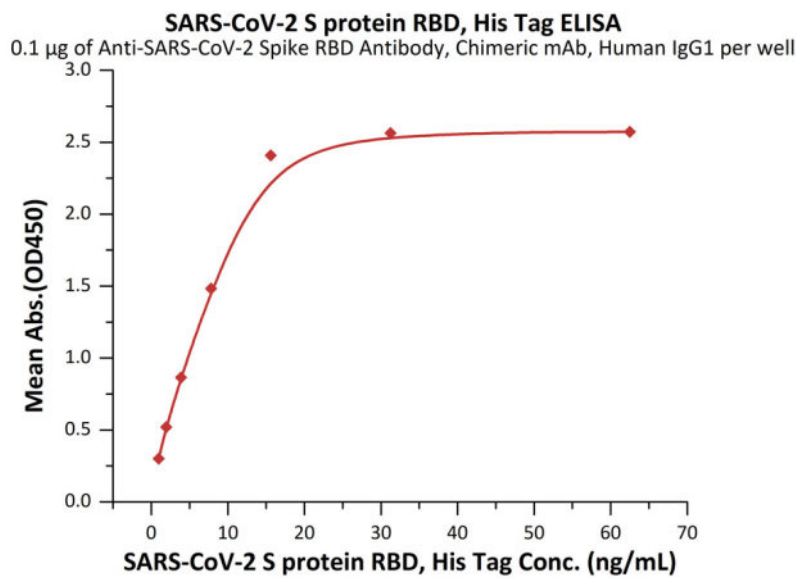


SARS-CoV-2 S protein RBD-VLP on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

Bioactivity-ELISA



Immobilized SARS-CoV-2 S protein RBD, His Tag (Cat. No. [SPD-C52M6](#)) at 1 µg/mL (100 µL/well) can bind Anti-SARS-CoV-2 Spike RBD Antibody, Chimeric mAb, Human IgG1 (Cat. No. [S1N-M122](#)) with a linear range of 0.2-6 ng/mL (QC tested).



Immobilized Anti-SARS-CoV-2 Spike RBD Antibody, Chimeric mAb, Human IgG1 (Cat. No. [S1N-M122](#)) at 1 µg/mL (100 µL/well) can bind SARS-CoV-2 S protein RBD, His Tag (Cat. No. [SPD-C52M](#)) with a linear range of 1-16 ng/mL (Routinely 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 if you have any question on this product.