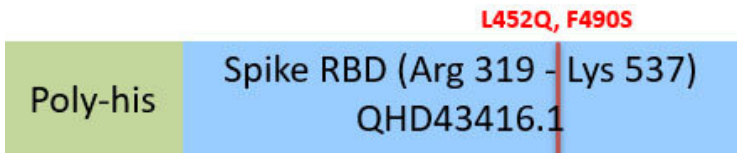
Synonym

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

Source

HRP-SARS-CoV-2 Spike RBD (L452Q, F490S), His Tag (SPD-C5275) is expressed from human 293 cells (HEK293). It contains AA Arg 319 - Lys 537 (Accession # QHD43416.1(L452Q, F490S)).
Predicted N-terminus: His

Molecular Characterization



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

The protein has a calculated MW of 67.7 kDa.

Endotoxin

Less than 1.0 EU per μg by the LAL method.

Purity

>90% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 μm filtered solution in PBS, pH7.4. Normally trehalose is added as protectant before lyophilization.

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

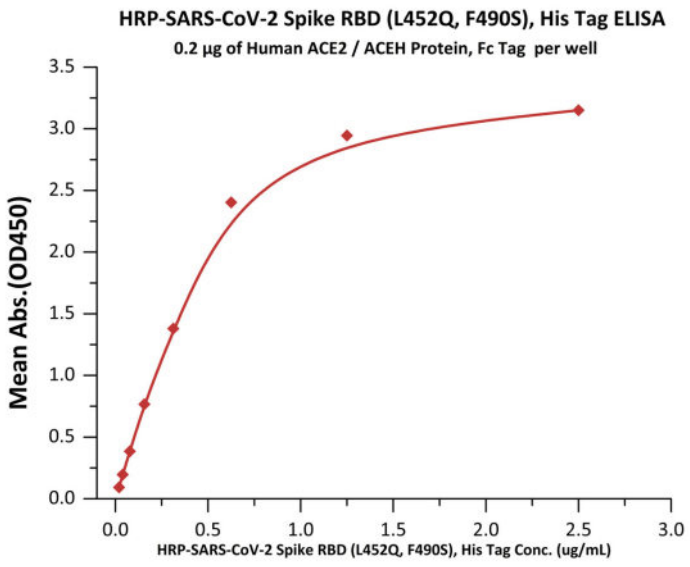
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

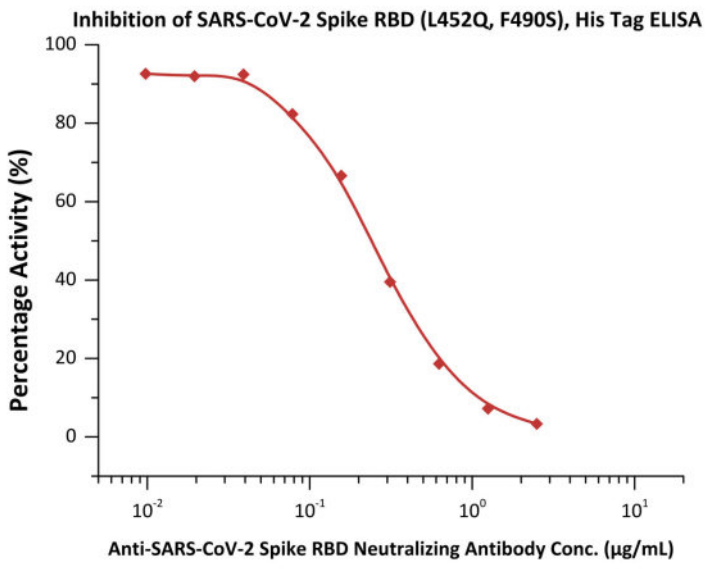
This product is stable after storage at:

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

Bioactivity-ELISA



Detection of HRP-SARS-CoV-2 Spike RBD, His Tag titer by sandwich-ELISA Assay.
Immobilized Human ACE2 / ACEH Protein, Fc Tag (Cat. No. AC2-H5257) at 1 μg/mL (100 μL/well) can bind HRP-SARS-CoV-2 Spike RBD (L452Q, F490S), His Tag (Cat. No.SPD-C5275) with a linear range of 0.02-0.625μg/mL (QC tested).



Detection of HRP-SARS-CoV-2 Spike RBD (L452Q, F490S), His Tag titer by compitive-ELISA Assay.
Serial dilutions of Anti-SARS-CoV-2 Spike RBD Neutralizing Antibody, Chimeric mAb, Human IgG1 (AM122) (Cat. No. S1N-M12A1) were added into Human ACE2 / ACEH Protein, Fc Tag (Cat. No. AC2-H5257): HRP-SARS-CoV-2 Spike RBD (L452Q, F490S), His Tag (Cat. No.SPD-C5275) binding reactions. The half maximal inhibitory concentration (IC50) is 0.257 μg/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.