

Source

Anti-SARS-CoV-2 Spike RBD Antibody, Chimeric mAb, Human IgG1 (S1N-M130) is a chimeric monoclonal antibody combining the constant domains of the human IgG1 molecule with mouse variable regions. The variable region was obtained from a mouse immunized with purified recombinant SARS-CoV-2 Spike S1 Protein. *This antibody can broadly recognize all Variants of Concerns (VOCs), including Alpha (B.1.1.7), Beta (B.1.351), Gamma (P.1), Delta (B.1.617.2) and Omicron (B.1.1.529).*

Isotype

Human IgG1/kappa

Specificity

This product is a specific antibody against SARS-CoV-2 Spike protein RBD domain. No cross-reactivity is detected with Spike protein RBD domain of other coronaviruses, including SARS-CoV, MERS-CoV, HCoV-229E, HCoV-NL63, HCoV-OC43 and HCoV-HKU1.

Application

This antibody can be paired with other Anti-SARS-CoV-2 Spike S1 antibodies to detect SARS-CoV-2 Spike S1 protein in sandwich ELISA or LFA assay.

Purity

>95% as determined by SDS-PAGE.

Endotoxin

Less than 1.0 EU per μg by the LAL method.

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.

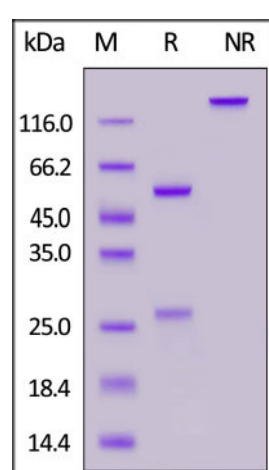
Storage

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

Please avoid repeated freeze-thaw cycles.

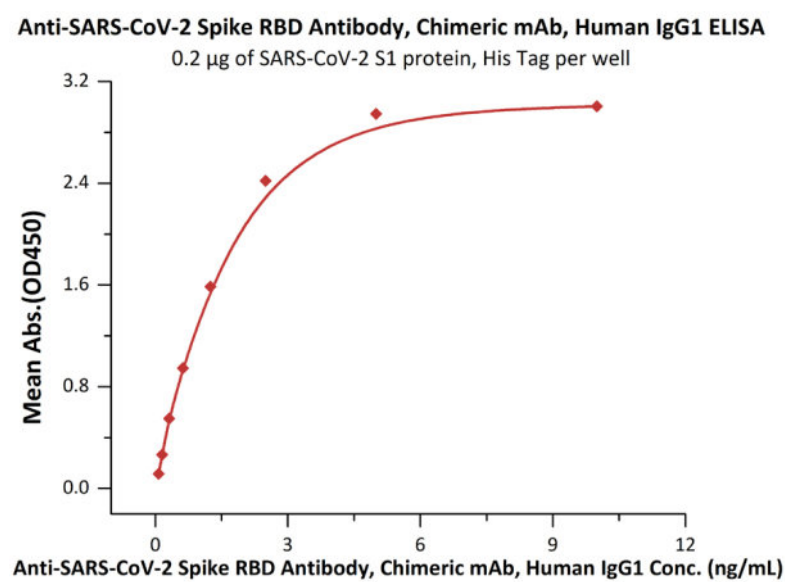
This product is stable after storage at:

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

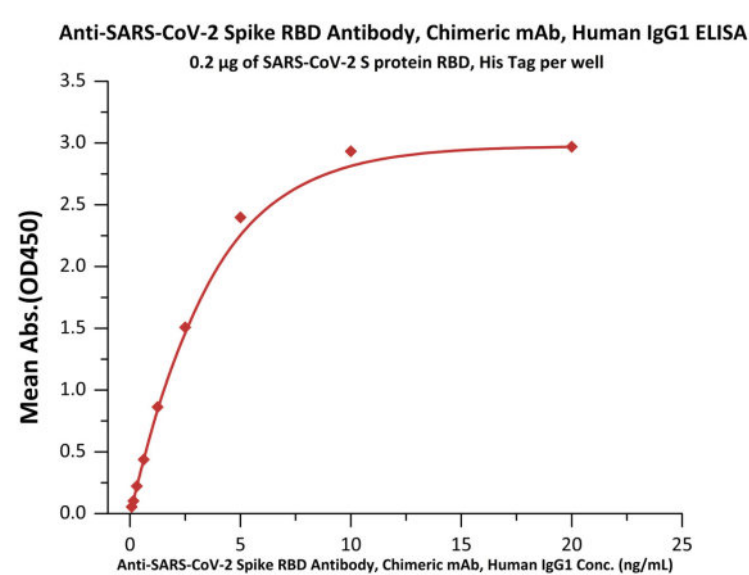
SDS-PAGE

Anti-SARS-CoV-2 Spike RBD Antibody, Chimeric mAb, Human IgG1 on SDS-PAGE under reducing (R) and non-reducing (NR) conditions. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

Bioactivity-Elisa

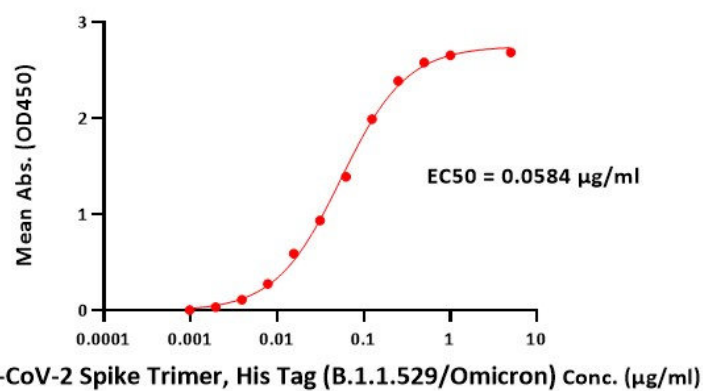


Immobilized SARS-CoV-2 S1 protein, His Tag (Cat. No. S1N-C52H2) at 2 µg/mL (100 µL/well) can bind Anti-SARS-CoV-2 Spike RBD Antibody, Chimeric mAb, Human IgG1 (Cat. No. S1N-M130) with a linear range of 0.2-3 ng/mL (QC tested).



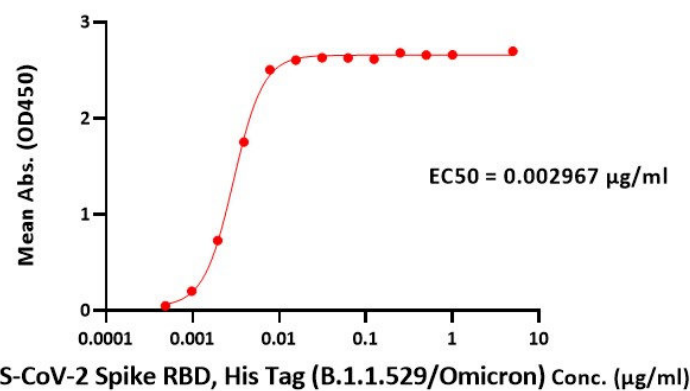
Immobilized SARS-CoV-2 S protein RBD, His Tag (Cat. No. SPD-C52H3) at 2 µg/mL (100 µL/well) can bind Anti-SARS-CoV-2 Spike RBD Antibody, Chimeric mAb, Human IgG1 (Cat. No. S1N-M130) with a linear range of 0.2-3 ng/mL (Routinely tested).

Anti-SARS-CoV-2 Spike RBD Antibody, Chimeric mAb, Human IgG1 (S1N-M130) bind to SARS-CoV-2 Spike Trimer, His Tag (B.1.1.529/Omicron) ELISA



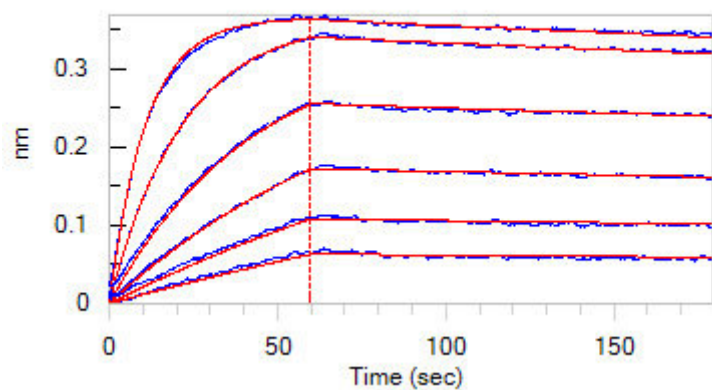
Immobilized Anti-SARS-CoV-2 Spike RBD Antibody, Chimeric mAb, Human IgG1 (S1N-M130) at 1 µg/mL (100 µL/well) can bind SARS-CoV-2 Spike Trimer, His Tag (B.1.1.529/Omicron) (Cat.No. SPN-C52Hz) with a linear range of 0.04-0.125 µg/mL (Routinely tested).

Anti-SARS-CoV-2 Spike RBD Antibody, Chimeric mAb, Human IgG1 (S1N-M130) bind to SARS-CoV-2 Spike RBD, His Tag (B.1.1.529/Omicron) ELISA

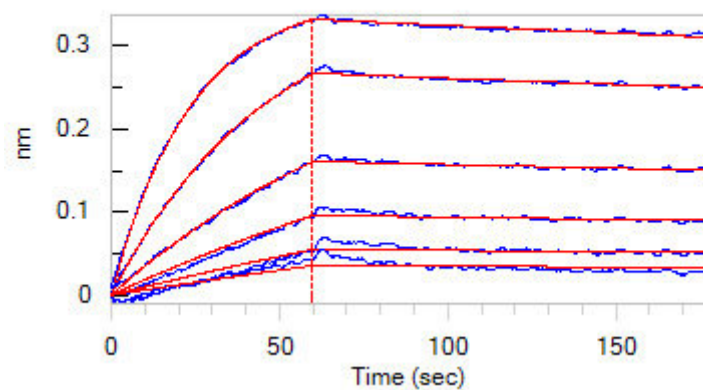


Immobilized Anti-SARS-CoV-2 Spike RBD Antibody, Chimeric mAb, Human IgG1 (S1N-M130) at 1 µg/mL (100 µL/well) can bind SARS-CoV-2 Spike RBD, His Tag (B.1.1.529/Omicron) (Cat.No. SPD-C522e) with a linear range of 0.0005-0.004 µg/mL (Routinely tested).

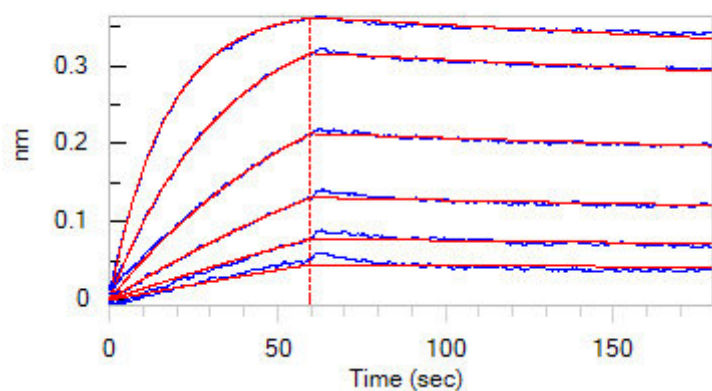
Bioactivity-BLI



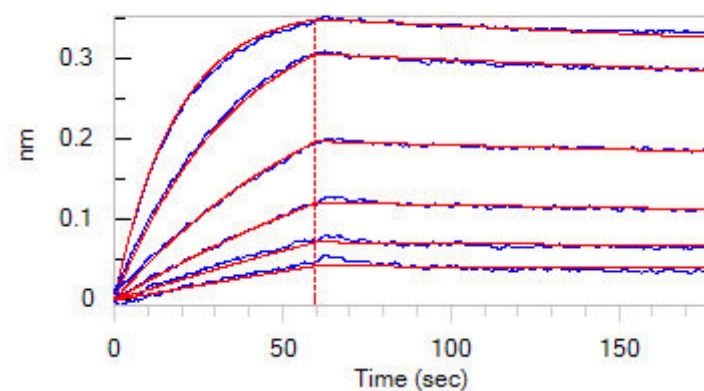
Loaded Anti-SARS-CoV-2 Spike RBD Antibody, Chimeric mAb, Human IgG1 (Cat. No. S1N-M130) on AHC Biosensor, can bind SARS-CoV-2 S protein RBD, His Tag (Cat. No. SPD-C52H3) with an affinity constant of 0.603 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).



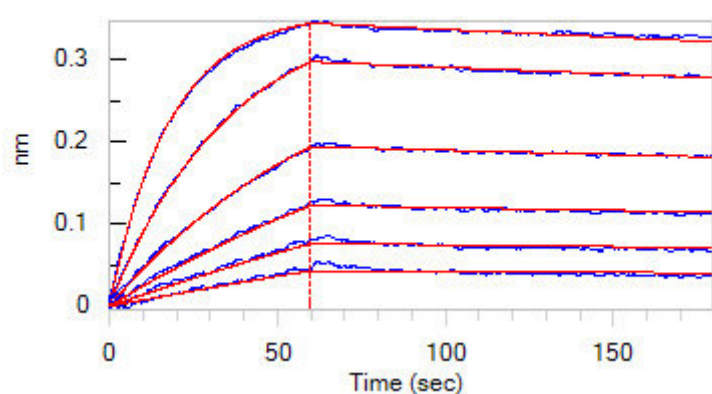
Loaded Anti-SARS-CoV-2 Spike RBD Antibody, Chimeric mAb, Human IgG1 (Cat. No. S1N-M130) on AHC Biosensor, can bind SARS-CoV-2 S protein RBD (N501Y), His Tag (Cat. No. SPD-C52Hn) with an affinity constant of 1.38 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).



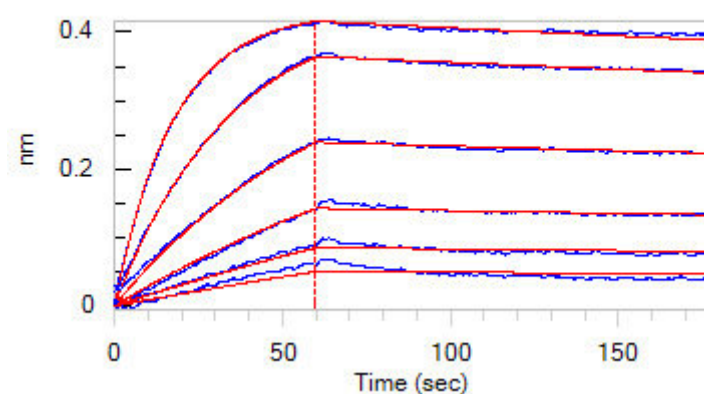
Loaded Anti-SARS-CoV-2 Spike RBD Antibody, Chimeric mAb, Human IgG1 (Cat. No. S1N-M130) on AHC Biosensor, can bind SARS-CoV-2 S protein RBD (K417N, E484K, N501Y), His Tag (Cat. No. SPD-C52Hp) with an affinity constant of 1.10 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).



Loaded Anti-SARS-CoV-2 Spike RBD Antibody, Chimeric mAb, Human IgG1 (Cat. No. S1N-M130) on AHC Biosensor, can bind SARS-CoV-2 S protein RBD (K417T, E484K, N501Y), His Tag (Cat. No. SPD-C52Hr) with an affinity constant of 1.07 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).



Loaded Anti-SARS-CoV-2 Spike RBD Antibody, Chimeric mAb, Human IgG1 (Cat. No. S1N-M130) on AHC Biosensor, can bind SARS-CoV-2 Spike RBD (L452R, T478K), His Tag (Cat. No. SPD-C52Hh) with an affinity constant of 1.03 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).



Loaded Anti-SARS-CoV-2 Spike RBD Antibody, Chimeric mAb, Human IgG1 (Cat. No. S1N-M130) on AHC Biosensor, can bind SARS-CoV-2 Spike RBD, His Tag (BA.2/Omicron) (Cat. No. SPD-C522g) with an affinity constant of 1.04 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

Background

It has 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.