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 | Human Kappa

Conjugate

Unconjugated

Reactivity

Virus

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

Application	Recommended Usage
ELISA	0.2-50 ng/mL

Purity

>95% as determined by SDS-PAGE.

Purification

Protein A purified / Protein G purified

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

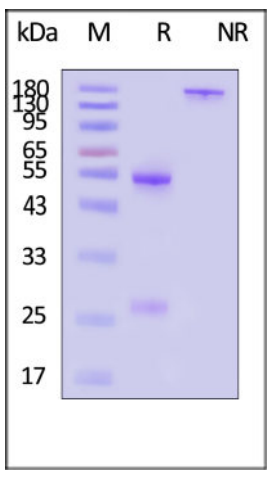
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

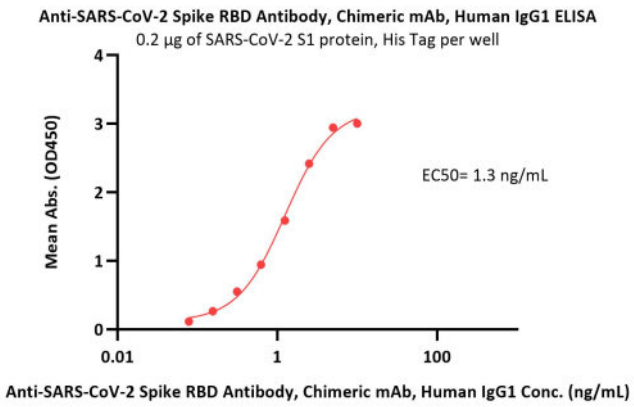
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE

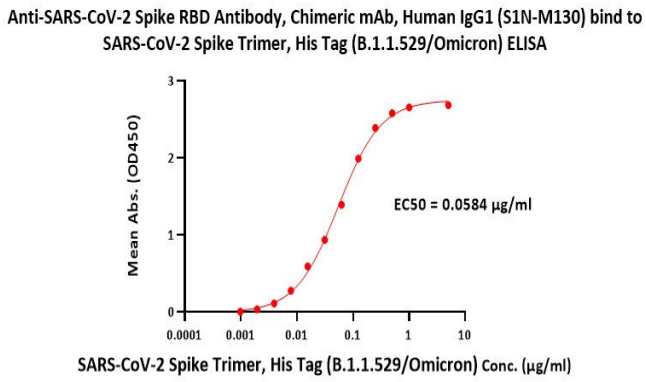


Anti-SARS-CoV-2 Spike RBD Antibody, Chimeric mAb, Human IgG1 on SDS-PAGE under reducing (R) and non-reducing (NR) conditions. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With Star Ribbon Pre-stained Protein Marker).

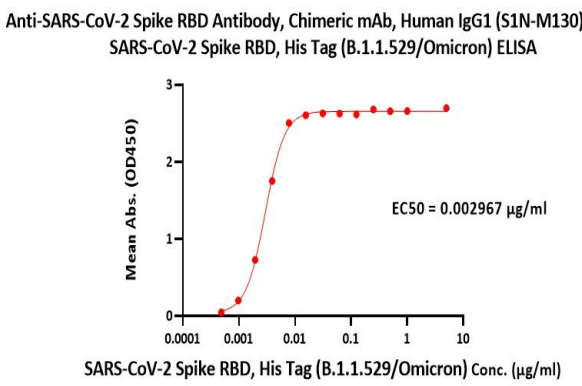
Bioactivity-ELISA



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).

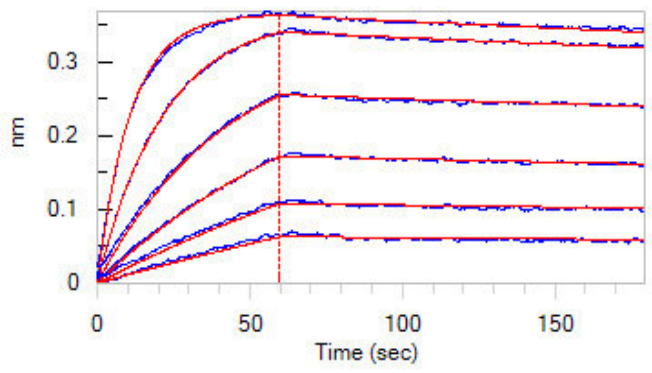


Immobilized Anti-SARS-CoV-2 Spike RBD Antibody, Chimeric mAb, Human IgG1 (S1N-M130) at 1 μg/mL (100 μL/well) can bind SARS-CoV-2 Spike Trimer, His Tag (B.1.1.529/Omicron) (Cat.No. SPN-C52Hz) with a linear range of 0.04-0.125 μg/mL (Routinely tested).

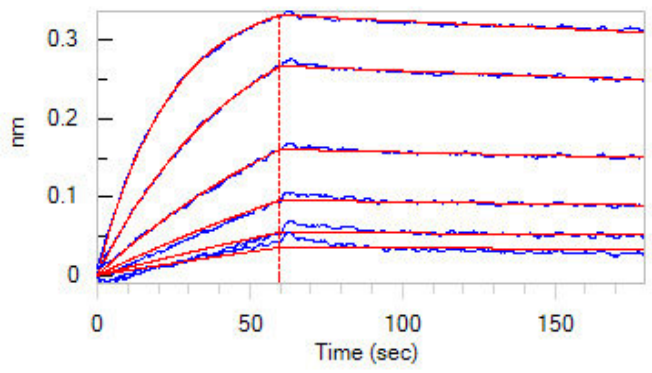


Immobilized Anti-SARS-CoV-2 Spike RBD Antibody, Chimeric mAb, Human IgG1 (S1N-M130) at 1μg/mL (100 μL/well) can bind SARS-CoV-2 Spike RBD, His Tag (B.1.1.529/Omicron) (Cat.No. SPD-C522e) with a linear range of 0.0005-0.004 μg/mL (Routinely tested).

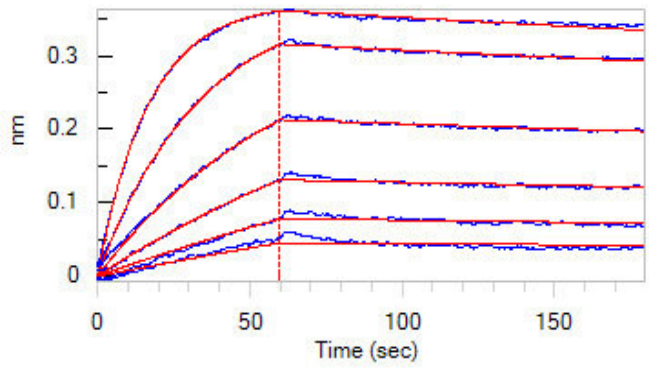
Bioactivity-BLI



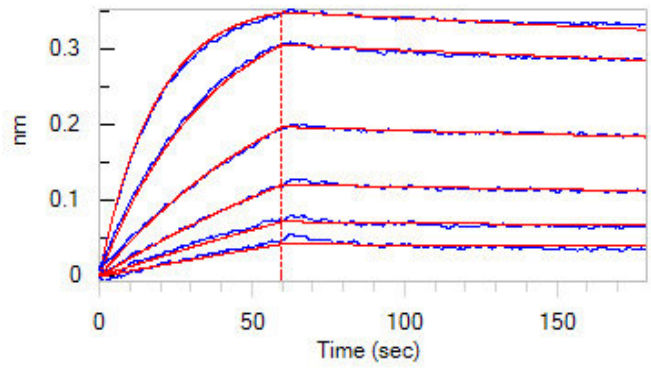
Loaded Anti-SARS-CoV-2 Spike RBD Antibody, Chimeric mAb, Human IgG1 (Cat. No. S1N-M130) on AHC Biosensor, can bind SARS-CoV-2 S protein RBD, His Tag (Cat. No. SPD-C52H3) with an affinity constant of 0.603 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).



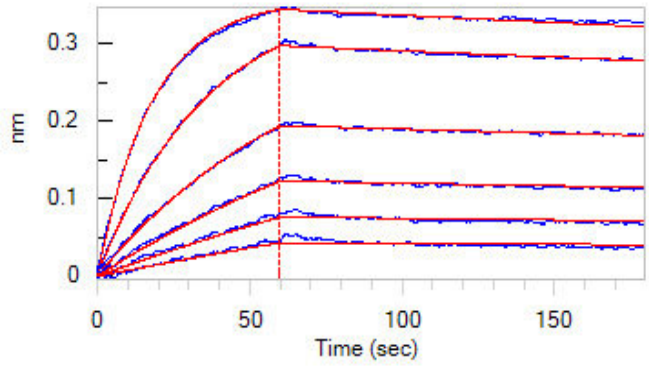
Loaded Anti-SARS-CoV-2 Spike RBD Antibody, Chimeric mAb, Human IgG1 (Cat. No. S1N-M130) on AHC Biosensor, can bind SARS-CoV-2 S protein RBD (N501Y), His Tag (Cat. No. SPD-C52Hn) with an affinity constant of 1.38 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).



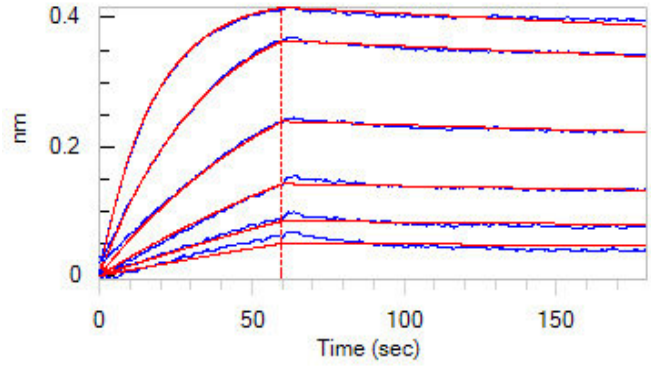
Loaded Anti-SARS-CoV-2 Spike RBD Antibody, Chimeric mAb, Human IgG1 (Cat. No. S1N-M130) on AHC Biosensor, can bind SARS-CoV-2 S protein RBD (K417N, E484K, N501Y), His Tag (Cat. No. SPD-C52Hp) with an affinity constant of 1.10 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).



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'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