Source

Anti-SARS-CoV-2 Spike RBD Antibody, Human IgG1 (AS113) (Omicron Specific) is a chimeric monoclonal antibody recombinantly expressed from HEK293 cells, which combines the variable region of a mouse monoclonal antibody with human IgG1 constant domain. The mouse monoclonal antibody is produced from a hybridoma resulting from fusion of SP2/0 myeloma and B-lymphocytes obtained from a mouse immunized with omicron Spike RBD. The antibody is specific against the Omicron (B.1.1.529/BA.1) variant of SARS-CoV-2, and has no binding with the spike RBD of the wild type virus and other viral lineages.

Clone

AS113

Isotype

Human IgG1 | Human Kappa

Conjugate

Unconjugated

Antibody Type

Recombinant Monoclonal

Reactivity

Virus

Immunogen

Recombinant SARS-CoV-2 Spike RBD (B.1.1.529/Omicron) erived from human 293 cells.

Specificity

This product is a specific antibody against SARS-CoV-2 Spike protein RBD domain. Cross-reactivity with Spike protein RBD domain of other coronaviruses, including SARS-CoV, MERS-CoV, HCoV-229E, HCoV-NL63, HCoV-OC43 and HCoV-HKU1, has not been tested.

Application

Application	Recommended Usage
ELISA	0.1-100 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

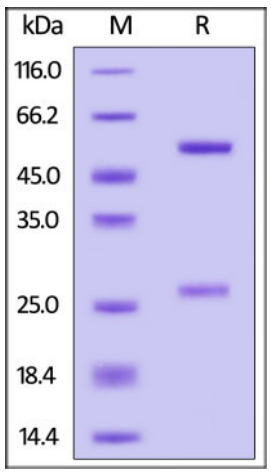
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

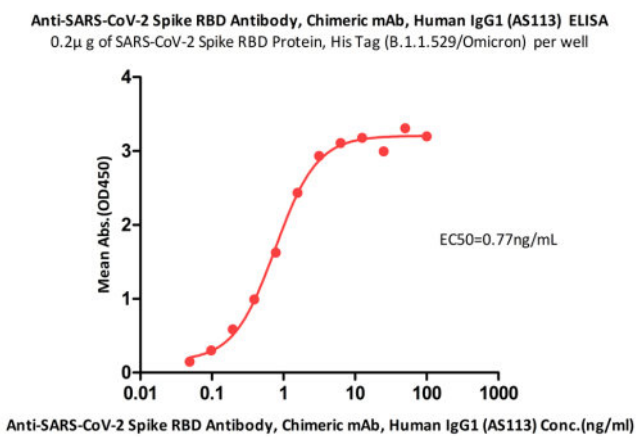
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE

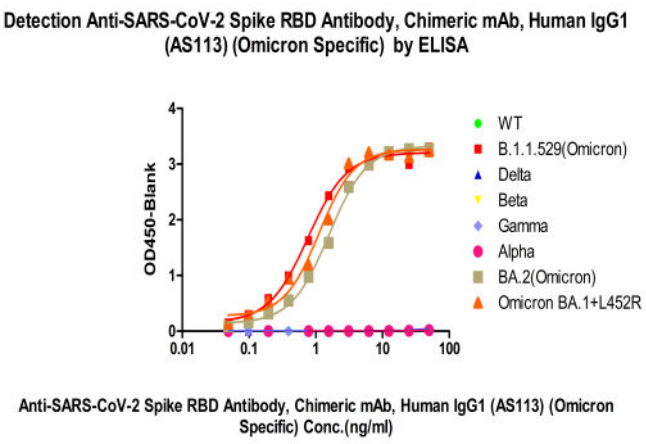


Anti-SARS-CoV-2 Spike RBD Antibody, Human IgG1 (AS113) (Omicron Specific) on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

Bioactivity-ELISA



Immobilized SARS-CoV-2 Spike RBD, His Tag (B.1.1.529/Omicron) (Cat. No.SPD-C522e) at 2μg/mL (100μL/well) can bind Anti-SARS-CoV-2 Spike RBD Antibody, Human IgG1 (AS113) (Omicron Specific) (Cat. No. SPD-M415) with a linear range of 0.05-1.56 ng/mL (QC tested).



Immobilized SARS-CoV-2 Spike RBD, His Tag (B.1.1.529/Omicron) (Cat. No.SPD-C522e) and SARS-CoV-2 Spike RBD, His Tag (BA.2/Omicron) (Cat. No. SPD-C522g) and SARS-CoV-2 Spike RBD, His Tag (BA.1+L452R/Omicron) (Cat. No. SPD-C522k) can bind Anti-SARS-CoV-2 Spike RBD Antibody, Human IgG1 (AS113) (Omicron Specific) (Cat. No. SPD-M415) with a linear range of 0.049-3.125 ng/mL. The antibody does not bind SARS-CoV-2 Spike RBD WT (Cat. No. SPD-C52H3), Delta (Cat. No. SPD-C52Hh), Beta (Cat. No. SPD-C52Hp), Gamma (Cat. No. SPD-C52Hr), Alpha (Cat. No. SPD-C52Hn) (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