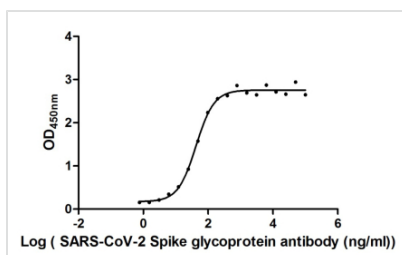




# S Recombinant Monoclonal Antibody

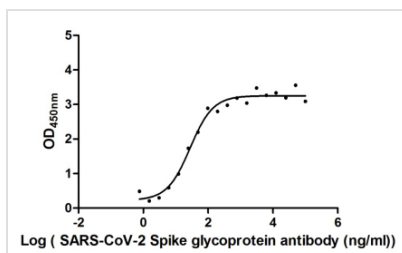
<b>Product Code</b>	CSB-RA33245A1GMY
<b>Abbreviation</b>	S
<b>Storage</b>	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
<b>Uniprot No.</b>	P0DTC2
<b>Immunogen</b>	Recombinant Human Novel Coronavirus Spike glycoprotein (S) (16-685aa) (CSB-MP3324GMY)
<b>Species Reactivity</b>	Human Novel Coronavirus (SARS-CoV-2/ 2019-nCoV)
<b>Tested Applications</b>	ELISA, GICA, Neutralising; Recommended dilution: ELISA:1:10000-1:50000, GICA:1:500-1:5000, Neutralising:1:50-1:10000
<b>Form</b>	Liquid
<b>Conjugate</b>	Non-conjugated
<b>Storage Buffer</b>	Preservative: 0.03% Proclin 300 Constituents: 50% Glycerol, 0.01M PBS, pH 7.4
<b>Purification Method</b>	Affinity-chromatography
<b>Isotype</b>	Mouse scFv fusion with human IgG1 Fc
<b>Clonality</b>	Monoclonal
<b>Product Type</b>	Recombinant Antibody
<b>Immunogen Species</b>	Human Novel Coronavirus (SARS-CoV-2/ 2019-nCoV)
<b>Research Area</b>	Microbiology
<b>Clone No.</b>	H6

## Image



The Binding Activity of SARS-CoV-2-S Antibody with SARS-CoV-2-S

Activity: Measured by its binding ability in a functional ELISA. Immobilized SARS-CoV-2-S (CSB-MP3324GMY) at 2 µg/ml can bind SARS-CoV-2-S Antibody, the EC<sub>50</sub> is 42.83 ng/ml.

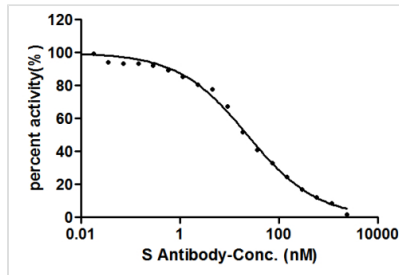


The Binding Activity of SARS-CoV-2-S Antibody with SARS-CoV-2-S1-RBD

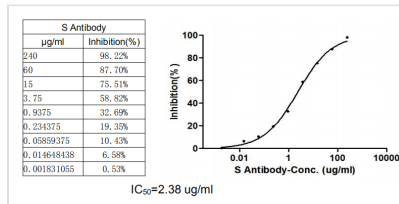
Activity: Measured by its binding ability in a functional ELISA. Immobilized SARS-CoV-2-S1-RBD (CSB-YP3324GMY1) at 2 µg/ml can bind SARS-CoV-2-S Antibody, the EC<sub>50</sub> is 29.51 ng/ml.



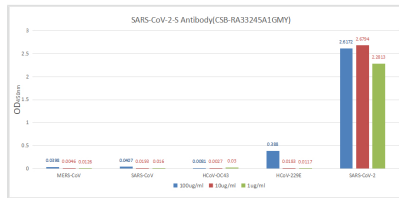
In the Colloidal Gold Immunochromatography Assay detection system, the background of antibody (CSB-RA33245A1GMY) is clean, the detection limit can be as low as 223.2ng/ml (15.625ng/0.07ml), and the sensitivity is very good.



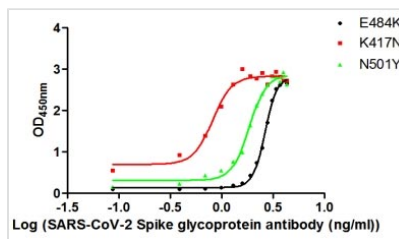
Binding signal of SARS-CoV-2-S1-RBD (CSB-YP3324GMY1) and ACE2 protein-HRP conjugate (CSB-MP866317HU) was inhibited by S Antibody (CSB-RA33245A1GMY) with the  $IC_{50}$  is 23.32 nM.



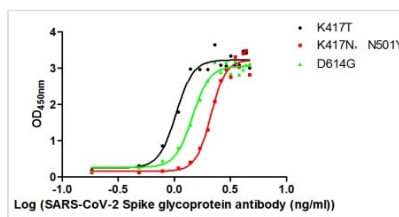
Binding signal of SARS-CoV-2-S1-RBD (CSB-YP3324GMY1) and ACE2 protein-HRP conjugate (CSB-MP866317HU) was inhibited by S Antibody (CSB-RA33245A1GMY) with the  $IC_{50}$  is 2.38  $\mu$ g/ml.



ELISA: Immobilize various types of SARS proteins at concentration of 2 $\mu$ g/ml on solid substrate, then react with SARS-CoV-2-S Antibody at concentration of 100 $\mu$ g/ml, 10 $\mu$ g/ml and 1 $\mu$ g/ml. It shows the SARS-CoV-2-S Antibody (CSB-RA33245A1GMY) is specific for SARS-CoV-2-S1-RBD protein, without any cross-reactivity with MERS-CoV, SARS-CoV, HCoV-OC43 or HCoV-229E.



The Binding Activity of S protein with S Recombinant Antibody. Activity: Measured by its binding ability in a functional ELISA. Immobilized S at 2  $\mu$ g/ml can bind S Recombinant Antibody, the  $EC_{50}$  of S Recombinant Antibody.



The Binding Activity of S protein with S Recombinant Antibody. Activity: Measured by its binding ability in a functional ELISA. Immobilized S at 2  $\mu$ g/ml can bind S Recombinant Antibody, the  $EC_{50}$  of S Recombinant Antibody.

Protein Code	Variants	$EC_{50}$ (ng/mL)
CSB-MP3324GMY1 (M8)	E484K	371.0-487.5
CSB-MP3324GMY1 (M7)	K417N	4.522-5.950
CSB-MP3324GMY1 (M6)	N501Y	47.09-86.25

The Binding Activity of S protein with S Recombinant Antibody. Activity: Measured by its binding ability in a functional ELISA. Immobilized



S at 2  $\mu\text{g/ml}$  can bind S Recombinant Antibody, the  $\text{EC}_{50}$  of S Recombinant Antibody. The Binding Activity of S protein with S Recombinant Antibody. Activity: Measured by its binding ability in a functional ELISA. Immobilized S at 2  $\mu\text{g/ml}$  can bind S.

Protein Code	Variants	EC <sub>50</sub> (ng/mL)
CSB-MP3324GMY1 (M9)	K417T	8.706-13.61
CSB-MP3324GMY1 (M10)	K417N, E404K, N501Y	97.92-169.6
CSB-MP3324GMY1 (M1)	D614G	23.19-34.02

The Binding Activity of S protein with S Recombinant Antibody. Activity: Measured by its binding ability in a functional ELISA. Immobilized S at 2  $\mu\text{g/ml}$  can bind S Recombinant Antibody, the  $\text{EC}_{50}$  of S Recombinant Antibody.

## Description

CUSABIO induced an immune response by immunizing a mouse with a human SARS-CoV-2 spike glycoprotein (S) (16-685aa). B cells were then isolated from the immunized mouse and fused with myeloma cells, resulting in the formation of hybridoma cells. From the screened hybridoma cells, a single clone that produces the desired human SARS-CoV-2 S-specific antibody was selected. RNA was extracted from the selected hybridoma cells and the variable regions of the human SARS-CoV-2 S antibody were isolated and amplified using reverse transcription PCR. Insert the DNA sequence encoding the mouse single-chain variable fragment (scFv) into an expression vector and introduce the DNA sequence encoding the human IgG1 Fc region into the same expression vector, downstream of the mouse scFv sequence, creating a fusion construct that consists of the scFv followed by the Fc region. The recombinant vector was transfected into a host cell line for expression. The S recombinant monoclonal antibodies were purified from the cell culture supernatant using affinity chromatography. The binding specificity and affinity of the S recombinant monoclonal antibody were confirmed using various applications including ELISA, GICA, and neutralizing. This antibody specifically recognizes the human SARS-CoV-2 S protein.