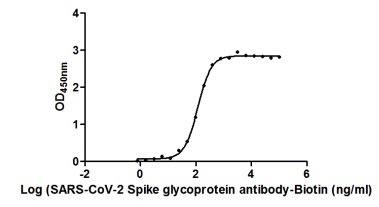
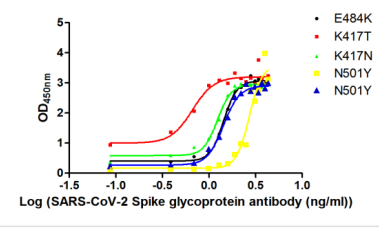
S Recombinant Monoclonal Antibody, Biotin conjugated

Product Code	CSB-RA33245D1GMY
Abbreviation	S
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P0DTC2
Immunogen	Recombinant Human Novel Coronavirus Spike glycoprotein (S) (16-685aa)
Species Reactivity	Human Novel Coronavirus (SARS-CoV-2/ 2019-nCoV)
Tested Applications	ELISA
Form	Liquid
Conjugate	Biotin
Storage Buffer	Preservative: 0.03% Proclin 300 Constituents: 50% Glycerol, 0.01M PBS, pH 7.4
Purification Method	Affinity-chromatography
Isotype	Mouse scFv fusion with human IgG1 Fc
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Human Novel Coronavirus (SARS-CoV-2/ 2019-nCoV)
Research Area	Microbiology
Clone No.	H6

Image



The Binding Activity of SARS-CoV-2-S Antibody, Biotin conjugated with SARS-CoV-2-S1-RBD Activity: Measured by its binding ability in a functional ELISA. Immobilized SARS-CoV-2-S1-RBD (CSB-MP3324GMY1) at 2 μg/ml can bind SARS-CoV-2-S Antibody, Biotin conjugated, the EC50 is 118.7 ng/ml.



The Binding Activity of S protein with S Recombinant Antibody. Activity: Measured by its binding ability in a functional ELISA. Immobilized S at 2 μg/ml can bind S Recombinant Antibody, the EC50 of S Recombinant Antibody.

Protein Code	Variants	EC50(ng/mL)
CSB-MP3324GMY1(M8)h8	E484K	21.54-26.77
CSB-MP3324GMY1(M9)	K417T	3.040-6.204
CSB-MP3324GMY1(M7)h8	K417N	10.74-13.83
CSB-MP3324GMY1(M6)k2	N501Y	230.5-614.7
CSB-MP3324GMY1(M6)	N501Y	24.48-32.47

The Binding Activity of S protein with S Recombinant Antibody. Activity: Measured by its binding ability in a functional ELISA. Immobilized S at 2 μg/ml can bind S Recombinant Antibody, the EC50 of S Recombinant Antibody.

Description

The production of the recombinant S monoclonal antibody involves the following steps:

1. Isolation of mouse scFv: Mice are immunized with human SARS-CoV-2 S (16-685aa) to stimulate an immune response. Splenocytes are obtained and RNA is isolated, followed by reverse transcription to obtain cDNA.
2. Generation of scFv: The variable regions of the mouse antibody's heavy and light chains are amplified from the cDNA using PCR. These regions are then combined to construct the scFv.
3. Cloning of scFv into an expression vector: The DNA sequence encoding the scFv is inserted into an expression vector. The vector contains the DNA sequence encoding the human IgG1 Fc region downstream of the scFv. Additionally, a DNA sequence encoding Biotin is introduced downstream of the Fc region to create the scFv-Fc-Biotin fusion construct.
4. Transfection and expression: The recombinant expression vector is transfected into a host cell line to enable the expression of the scFv-Fc-Biotin fusion protein.
5. Antibody purification: The cell culture supernatant, containing the recombinant S monoclonal antibody, is collected. The antibody is then purified using affinity chromatography.
6. Characterization and validation: The binding specificity of the recombinant S monoclonal antibody, conjugated with Biotin, is confirmed by testing its ability to recognize the human SARS-CoV-2 S protein using ELISA.