

SARS-CoV-2 (2019-nCoV) Spike antibody, Chimeric MAb



Sino Biological
Biological Solution Specialist

Catalog Number: 40150-D001

GENERAL INFORMATION	
Immunogen:	Recombinant SARS-CoV Spike RBD Protein (Catalog#40150-V08B2)
Preparation	It 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 Spike RBD Protein. The antibody was produced using recombinant antibody technology.
Ig Type:	mouse (variable region) / human (kappa / IgG1 constant) chimeric antibody
Clone ID	D001
Neutralization	The neutralization activity is measured by microneutralization assay in vitro. The virus microneutralization (MN) test was performed on 293T-ACE2 cells infected with SARS-CoV-2 Spike Pseudovirus (WT, Cat# PSV001), or SARS-CoV-2 Spike Omicron (B.1.1.529) Pseudovirus (Cat# PSV016), or SARS-CoV-2 Delta (B.1.617.2) variant Spike Pseudovirus (Cat# PSV011), under treatment of serial dilutions of neutralizing antibody. The infection was neutralized by increasing concentrations of Anti-SARS-CoV-2 Neutralizing Antibody (Catalog# 40150-D001). Rate of inhibition was determined by comparing the Relative Light Unit (RLU) of Luciferase reporter in different antibody concentrations. $IC_{50}(WT)$ is 0.1-5 μg/mL. $IC_{50}(\Delta)$ is 0.05-3 μg/mL. No neutralization activity to SARS-CoV-2 Spike Omicron (B.1.1.529) Pseudovirus (Cat# PSV016).
Formulation:	50mM Hepes, 100mM NaCl, pH 8.0
Storage:	This antibody can be stored at 2°C-8°C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20°C to -80°C. Preservative-Free. Avoid repeated freeze-thaw cycles.
APPLICATIONS	
Applications:	ELISA, FCM, ICC/IF, Neutralization
	(Antibody's applications have not been validated with corresponding viruses. Optimal concentrations/dilutions should be determined by the end user.)
RECOMMENDED CONCENTRATION	
ELISA	ELISA: 1:5000-1:10000
FCM	FCM: 1:25-1:100
ICC/IF	IF: 1:20-1:100

Please Note: Optimal concentrations/dilutions should be determined by the end user.

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Specificity:	SARS-CoV Spike RBD Protein Has cross-reactivity in ELISA with SARS-CoV-2 Omicron (B.1.1.529) S1+S2 trimer Protein (Cat# 40589-V08H26) SARS-CoV-2 Omicron (B.1.1.529) Spike RBD Protein (Cat# 40592-V08H121) SARS-CoV-2 Delta (B.1.617.2) Spike S1+S2 trimer Protein (Cat# 40589-V08H10) SARS-CoV-2 Delta (B.1.617.2) Spike S1 Protein (Cat# 40591-V08H23) SARS-CoV-2 Spike S1 NTD-Fc & AVI (Cat# 40591-V41H) SARS-CoV-2 Spike S1 Protein (Cat# 40591-V08H) SARS-CoV-2 Spike RBD Protein (Cat# 40592-V08B) SARS-CoV Spike S1 Protein (Cat# 40150-V08B1) Minimal cross-reactivity in ELISA with SARS-CoV-2 (BA.4.6) Spike S1+S2 trimer Protein (Cat# 40589-V08H37) No cross-reactivity in ELISA with SARS-CoV-2 Omicron (XBB.1.16) Spike S1+S2 trimer Protein (Cat# 40589-V08H48) SARS-CoV-2 Omicron (XBB.1.5) Spike RBD Protein (Cat# 40592-V08H146) SARS-CoV-2 Omicron (XBB.1.5) Spike S1+S2 trimer Protein (Cat# 40589-V08H45) SARS-CoV-2 Omicron (XBB.1) Spike S1+S2 trimer Protein (Cat# 40589-V08H42) SARS-CoV-2 Omicron (XBB) Spike RBD Protein (Cat# 40592-V08H144) SARS-CoV-2 Omicron (BQ.1.1) Spike S1+S2 trimer Protein (Cat# 40589-V08H41) SARS-CoV-2 Omicron (BQ.1.1) Spike RBD Protein (Cat# 40592-V08H143) SARS-CoV-2 Omicron (BF.7) Spike S1+S2 trimer Protein (Cat# 40589-V08H39) SARS-CoV-2 Omicron (BA.4.6/BF.7) Spike RBD Protein (Cat# 40592-V08H140) SARS-CoV-2 Omicron (BA.2.75) Spike RBD Protein (Cat# 40592-V08H135) SARS-CoV-2 Omicron (BA.2.75) Spike S1+S2 trimer Protein (Cat# 40589-V08H36) SARS-CoV-2 Omicron (BA.2.75.2) Spike RBD Protein (Cat# 40592-V08H141) SARS-CoV-2 Omicron (BA.2.75.2) Spike S1+S2 trimer Protein (Cat# 40589-V08H38) SARS-CoV-2 Omicron (BA.2.3.20) Spike RBD Protein (Cat# 40592-V08H142) SARS-CoV-2 Omicron (BA.1.1) Spike S1+S2 trimer Protein (Cat# 40589-V08H29) SARS-CoV-2 Omicron (BA.1.1) Spike RBD Protein (Cat# 40592-V08H129) SARS-CoV-2 Omicron (BA.2) Spike S1+S2 trimer Protein (Cat# 40589-V08H28) SARS-CoV-2 Omicron (BA.2) Spike S1 Protein (Cat# 40591-V08H43) SARS-CoV-2 Omicron (BA.2) Spike RBD Protein (Cat# 40592-V08H123) SARS-CoV-2 Omicron (BA.2) Spike S1-NTD Protein (Cat# 40591-V08H44) SARS-CoV-2 Omicron (BA.2.12.1) Spike RBD Protein (Cat# 40592-V08H132) SARS-CoV-2 Omicron (BA.4/BA.5/BA.5.2) Spike RBD Protein (Cat# 40592-V08H130) SARS-CoV-2 Omicron (BA.5) Spike RBD Protein (Cat# 40592-V08H131) SARS-CoV-2 XD(BA.1 x AY.4) Spike S1+S2 trimer Protein (Cat# 40589-V08H30) SARS-CoV-2 Delta (B.1.617.2) Spike S1 NTD Protein (Cat# 40591-V08H36) SARS-CoV-2 Delta (B.1.617.2) Spike RBD Protein (Cat# 40592-V08H90) MERS-CoV Spike S1 Protein (Cat# 40069-V08B1) HCoV-HKU1 (isolate N1) Spike S1 Protein (Cat# 40021-V08H) HCoV-HKU1 (isolate N5) Spike S1 Protein (Cat# 40602-V08H) HCoV-NL63 Spike S1 Protein (Cat# 40600-V08H) HCoV-229E Spike S1 Protein (Cat# 40601-V08H) HCoV-OC43 Spike S1+S2 ECD Protein (Cat# 40607-V08B)
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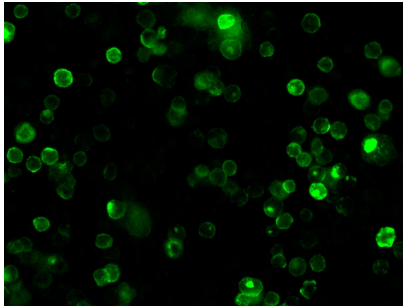
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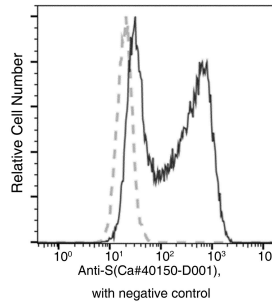
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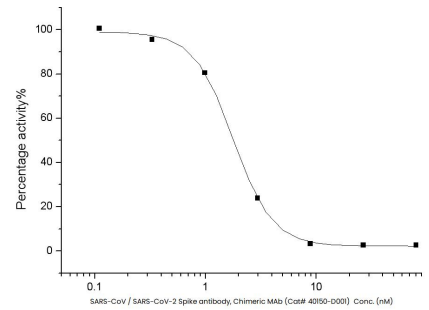
Immunofluorescence analysis of SARS-CoV-2 Spike overexpressed HEK293 Cells were stained with purified anti-SARS Spike Chimera Mab, then a FITC-conjugated second step antibody.

(Validation Experiment)

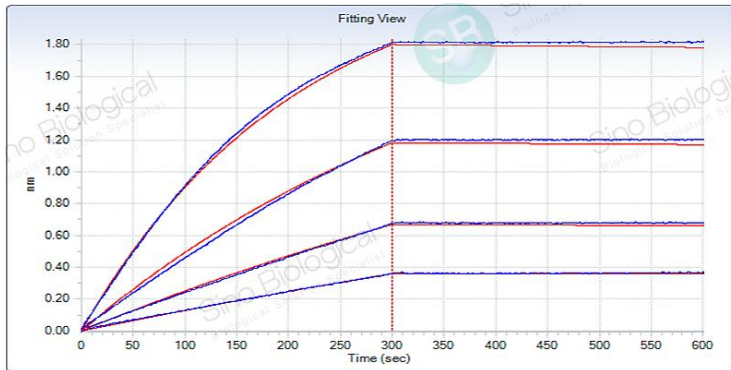


Flow cytometric analysis of SARS-CoV-2 Spike overexpressed HEK293 cells. Cells were stained with purified anti-SARS-CoV-2 Spike Chimera Mab, then a FITC-conjugated second step antibody. The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of intact cells.

(Validation Experiment)



Serial dilutions of Anti-SARS-CoV-2 Neutralizing Antibody (Catalog# 40150-D001) was detected by SARS-CoV-2 (2019-nCoV) Inhibitor Screening ELISA Kit (Catalog# KIT001). The IC_{50} is typically 0.5-5 nM.



Loaded SARS-CoV-2 (2019-nCoV) Spike RBD-His Recombinant Protein, Biotinylated (Cat.No.40592-V08B-B) on SA Biosensor, can bind SARS-CoV/SARS-CoV-2 Spike S1 antibody, Chimeric MAb (Cat.No. 40150-D001) with an affinity constant of 0.12 nM as determined by Octet RED System.

(Validation Experiment)

WT		Delta	
Conc. (µg/mL)	Inhibition%	Conc. (µg/mL)	Inhibition%
100	100.00%	100	100.00%
20	99.76%	20	98.64%
4	89.67%	4	58.63%
0.8	52.24%	0.8	47.95%
0.16	44.08%	0.16	20.35%
0.032	29.16%	0.032	19.19%

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No neutralization activity to SARS-CoV-2 Spike Omicron (B.1.1.529) Pseudovirus (Cat# PSV016).

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