

PRODUCT INFORMATION



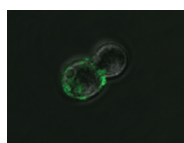
SARS-CoV/SARS-CoV-2 Spike Glycoprotein RBD Chimeric Monoclonal Antibody (Clone D003)

Item No. 31990

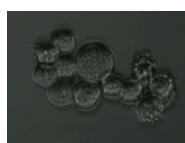
Overview and Properties

Contents:	This vial contains 50 or 100 µl of protein A-affinity purified monoclonal antibody.
Synonyms:	SARS-CoV/SARS-CoV-2 Spike RBD, SARS-CoV/SARS-CoV-2 Spike Receptor Binding Domain, SARS-CoV/SARS-CoV-2 Surface Glycoprotein RBD, SARS-CoV/SARS-CoV-2 Surface Glycoprotein Receptor Binding Domain, Severe Acute Respiratory Syndrome Coronavirus/Severe Acute Respiratory Syndrome Coronavirus 2 Spike Glycoprotein Receptor Binding Domain
Immunogen:	Recombinant C-terminal His-tagged SARS-CoV spike glycoprotein RBD
Cross Reactivity:	See page 2
Species Reactivity:	See page 2
Form:	Liquid
Storage:	-80°C (as supplied)
Stability:	≥1 year
Storage Buffer:	0.2 µm filtered solution in PBS
Clone:	D003
Host:	Chimeric monoclonal antibody combining the constant domains of human IgG1κ with variable regions from a mouse immunized with purified recombinant SARS-CoV spike glycoprotein RBD
Isotype:	Human IgG1κ
Applications:	ELISA, Flow cytometry (FC), Immunocytochemistry (ICC), and Immunofluorescence (IF); the recommended starting dilution is 1:5,000-1:10,000 for ELISA, 1:20-1:100 for ICC, and 1:25-1:100 for IF. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images

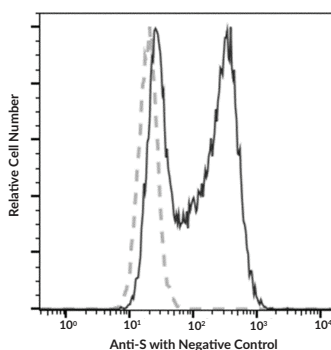


Infected

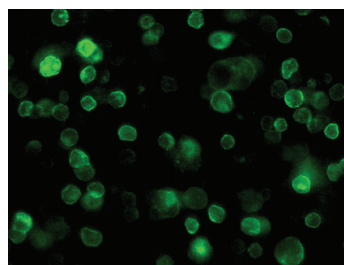


Non-infected

Immunofluorescence analysis of SARS-CoV/SARS-CoV-2 Spike Glycoprotein RBD Chimeric Monoclonal Antibody (Clone D003) in ACE2-overexpressing 293T cells infected and noninfected by 2019-nCoV-Spike pseudovirus (PSV). Cells were blocked with 10% serum, and incubated with SARS-CoV/SARS-CoV-2 Spike Glycoprotein RBD Chimeric Monoclonal Antibody (Clone D003) at a dilution of 1:60 at 37°C for one hour. Then cells were stained with a FITC-conjugated goat anti-human IgG secondary antibody (green).



Flow cytometric analysis of SARS-COV-2 spike overexpressing HEK293 cells. Cells were labeled with purified SARS-CoV/SARS-CoV-2 Spike Glycoprotein RBD Chimeric Monoclonal Antibody (Clone D003) then with a FITC-conjugated secondary step antibody. The fluorescence histogram was derived from gated events with the forward and side light-scatter characteristics of intact cells.



Immunofluorescence analysis of SARS-COV-2 spike overexpressing HEK293 cells. Cells were stained with purified SARS-CoV/SARS-CoV-2 Spike Glycoprotein RBD Chimeric Monoclonal Antibody (Clone D003) then with a FITC-conjugated secondary antibody.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Reactivity

Cross Reactivity: (+) SARS-CoV-2 Delta (B.1.617.2) spike glycoprotein S1+S2 trimer,
SARS-CoV-2 Delta (B.1.617.2) spike glycoprotein S1+S2,
SARS-CoV-2 Delta (B.1.617.2) spike glycoprotein S1 subunit,
SARS-CoV-2 (BA.2.75) spike glycoprotein S1+S2 trimer,
SARS-CoV-2 Omicron (BA.2.75.2) spike glycoprotein S1+S2 trimer,
SARS-CoV-2 Omicron (BA.1.1) spike glycoprotein S1+S2 trimer,
SARS-CoV-2 Omicron (B.1.1.529) spike glycoprotein S1+S2 trimer,
SARS-CoV-2 Omicron (B.1.1.529) spike glycoprotein S1 subunit,
SARS-CoV-2 Omicron (BA.2) spike glycoprotein S1+S2 trimer,
SARS-CoV-2 Omicron (BA.2) spike glycoprotein S1 subunit,
SARS-CoV-2 XD (BA.1 x AY.4) spike glycoprotein S1+S2 trimer,
SARS-CoV-2 (BA.4.6) spike glycoprotein S1+S2 trimer,
SARS-CoV-2 Omicron (BQ.1.1) spike glycoprotein S1+S2 trimer,
SARS-CoV-2 Omicron (BF.7) spike glycoprotein S1+S2 trimer,
SARS-CoV-2 spike glycoprotein S1 subunit,
SARS-CoV spike glycoprotein S1 subunit;

(-) SARS-CoV-2 Omicron (BA.2) spike glycoprotein S1 subunit NTD,
SARS-CoV-2 Delta (B.1.617.2) spike glycoprotein S1 subunit NTD,
MERS-CoV spike glycoprotein S1 subunit,
HCoV-HKU1 (isolate N1) spike glycoprotein S1 subunit,
HCoV-HKU1 (isolate N5) spike glycoprotein S1 subunit,
HCoV-NL63 spike glycoprotein S1 subunit,
HCoV-229E spike glycoprotein S1 subunit,
HCoV-OC43 spike glycoprotein S1+S2

Species Reactivity: (+) SARS-CoV,
SARS-CoV-2,
SARS-CoV-2 Delta (B.1.617.2),
SARS-CoV-2 Omicron (BA.1.1),
SARS-CoV-2 Omicron (B.1.1.529),
SARS-CoV-2 Omicron (BA.2),
SARS-CoV-2 Omicron (BA.2.12.1),
SARS-CoV-2 Omicron (BA.2.75.2),
SARS-CoV-2 (BA.2.3.20),
SARS-CoV-2 (BA.2.75),
SARS-CoV-2 Omicron (BA.4),
SARS-CoV-2 Omicron (BA.4.6/BF.7),
SARS-CoV-2 Omicron (BA.5),
SARS-CoV-2 Omicron (BQ.1.1),
SARS-CoV-2 Omicron (XBB)

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Description

Severe acute respiratory syndrome coronavirus (SARS-CoV) spike glycoprotein, also known as the surface glycoprotein, is a viral structural protein encoded by the S gene in SARS-CoV RNA that contains the receptor binding domain (RBD).¹ SARS-CoV is a member of the *Betacoronavirus* genus of viruses and has an approximately 79% sequence identity with SARS-CoV-2, the causative agent of COVID-19.^{2,3} SARS-CoV spike glycoprotein is a transmembrane glycoprotein that assembles into homotrimers on the virus surface and is composed of an N-terminal S1 subunit, which contains the RBD, and a C-terminal S2 subunit, which facilitates fusion between viral and host cell membranes.⁴⁻⁶ The 193-amino acid RBD of the SARS-CoV spike protein is a target for neutralizing antibodies.^{5,7} The SARS-CoV RBD, which spans amino acid residues 318 to 510, is 73% identical to that of SARS-CoV-2 and can bind to human angiotensin-converting enzyme 2 (ACE2), which is the host cell surface receptor for both SARS-CoV and SARS-CoV-2.⁴⁻⁷ SARS-CoV is the causative agent of SARS, a primarily respiratory illness characterized by fever, cough, shortness of breath, and an approximately 10% fatality rate.³ Cayman's SARS-CoV/SARS-CoV-2 Spike Glycoprotein RBD Chimeric Monoclonal Antibody (Clone D003) is composed of human IgG1k constant domains and variable regions from a mouse immunized with purified recombinant SARS-CoV spike glycoprotein RBD. It can be used for ELISA, flow cytometry (FC), immunocytochemistry (ICC), and immunofluorescence (IF) applications.

References

1. Kandeel, M., Ibrahim, A., Fayez, M., *et al.* From SARS and MERS CoVs to SARS-CoV-2: Moving toward more biased codon usage in viral structural and nonstructural genes. *J. Med. Virol.* **92(6)**, 660-666 (2020).
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