

PRODUCT INFORMATION

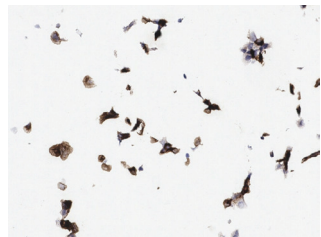
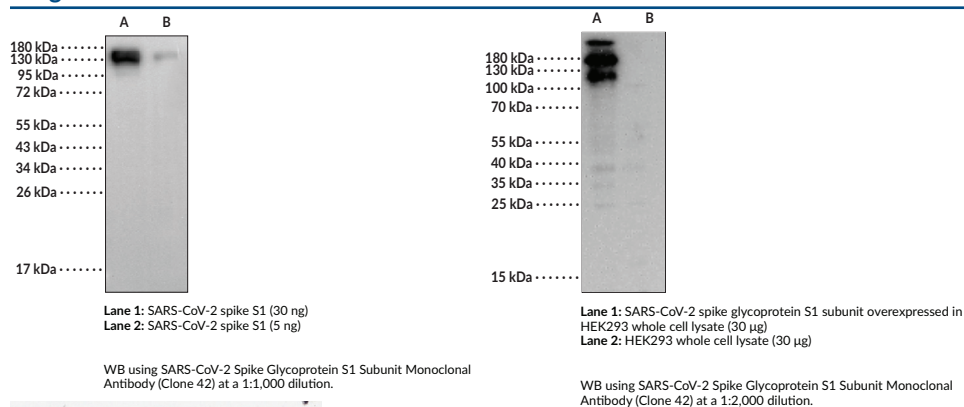
SARS-CoV-2 Spike Glycoprotein S1 Subunit Monoclonal Antibody (Clone 42)

Item No. 31994

Overview and Properties

Contents:	This vial contains 50 or 100 µl of protein A-affinity purified monoclonal antibody.
Synonyms:	2019-nCoV Surface Glycoprotein S1 Subunit, COVID-19 Surface Glycoprotein S1 Subunit, SARS-CoV-2 Surface Glycoprotein S1 Subunit, Severe Acute Respiratory Syndrome Coronavirus 2 Spike Glycoprotein S1 Subunit
Immunogen:	Recombinant SARS-CoV-2 spike glycoprotein S1 subunit (C-terminal mouse Fc-tagged)
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:	42
Host:	Mouse
Isotype:	IgG1
Applications:	ELISA, immunohistochemistry (IHC; paraffin), and Western blot (WB) applications; the recommended starting dilution is 1:1,000-1:2,000 for ELISA, 1:500-1:2,000 for IHC-P, and 1:2,000-1:5,000 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



Immunohistochemical labeling of HEK293 cells overexpressing the SARS-CoV-2 spike glycoprotein using SARS-CoV-2 Spike Glycoprotein S1 Subunit Monoclonal Antibody (Clone 42) and an HRP-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 Omicron (BA.1.1) spike glycoprotein RBD,
SARS-CoV-2 Omicron (B.1.1.529) spike glycoprotein S1+S2 trimer,
SARS-CoV-2 Omicron (B.1.1.529) spike glycoprotein RBD,
SARS-CoV-2 Omicron (BA.2) spike glycoprotein RBD,
SARS-CoV-2 Omicron (BA.2.12.1) spike glycoprotein RBD,
SARS-CoV-2 Omicron (BA.4) spike glycoprotein RBD,
SARS-CoV-2 Omicron (BA.5) spike glycoprotein RBD,
SARS-CoV-2 Delta (B.1.617.2) spike glycoprotein S1+S2,
SARS-CoV-2 Delta (B.1.617.2) spike glycoprotein RBD,
SARS-CoV-2 Delta (B.1.617.2) spike glycoprotein S1+S2 trimer,
SARS-CoV-2 Omicron (BA.1.1) spike glycoprotein S1+S2 trimer,
SARS-CoV-2 Omicron (BA.2) spike glycoprotein S1+S2 trimer,
SARS-CoV-2 XD (BA.1 x AY.4) spike glycoprotein S1+S2 trimer;

(-) SARS-CoV-2 Omicron (BA.2) spike glycoprotein S1 subunit NTD,
SARS-CoV-2 Delta (B.1.617.2) spike glycoprotein S1 subunit NTD,
HCoV-OC43 spike glycoprotein S1+S2 ECD

Species Reactivity: (+) SARS-CoV-2,
SARS-CoV-2 Omicron (B.1.1.529),
SARS-CoV-2 Delta (B.1.617.2),
SARS-CoV-2 Omicron (BA.2);

(-) SARS-CoV,
MERS-CoV,
HCoV-HKU1 (isolate N1),
HCoV-HKU1 (isolate N5),
HCoV-NL63,
HCoV-229E

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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 receptor binding domain (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-2.⁵⁻⁷ 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 Rabbit-Human Monoclonal Antibody is composed of human IgG1κ constant domains and variable regions from a rabbit immunized with purified recombinant SARS-CoV spike glycoprotein RBD. It can be used for ELISA.

References

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7. Tian, X., Li, C., Huang, A., *et al.* Potent binding of 2019 novel coronavirus spike protein by a SARS coronavirus-specific human monoclonal antibody. *Emerg. Microbes Infect.* **9(1)**, 382-385 (2020).

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