PRODUCT INFORMATION

SARS-CoV-2 Spike Glycoprotein S1 Subunit Rabbit Monoclonal Antibody (Clone 007)

Item No. 31995

Overview and Properties

Contents:	This vial contains 50 or 100 µl of protein A-affinity purified recombinant monoclonal antibody.
Synonyms:	SARS-CoV Surface Glycoprotein S1 Subunit, Severe Acute Respiratory Syndrome Coronavirus Spike Glycoprotein S1 Subunit
Immunogen:	Recombinant SARS-CoV spike glycoprotein S1 subunit (C-terminal His-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:	007
Host:	Rabbit
Isotype:	IgG
Application:	ELISA; the recommended starting dilution is 1:5,000-1:10,000. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

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Reactivity

Cross Reactivity: (+) SARS-CoV spike glycoprotein RBD,
SARS-CoV-2 spike glycoprotein RBD,
SARS-CoV-2 Omicron (XBB) spike glycoprotein RBD,
SARS-CoV-2 Omicron (BQ.1.1) spike glycoprotein S1+S2 trimer,
SARS-CoV-2 Omicron (BQ.1.1) spike glycoprotein RBD,
SARS-CoV-2 Omicron (BF.7) spike glycoprotein S1+S2 trimer,
SARS-CoV-2 Omicron (BA.4.6/BF.7) spike glycoprotein RBD,
SARS-CoV-2 (BA.4.6) spike glycoprotein S1+S2 trimer,
SARS-CoV-2 (BA.2.75) spike glycoprotein RBD,
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.2.75.2) spike glycoprotein RBD,
SARS-CoV-2 (BA.2.3.20) spike glycoprotein RBD,
SARS-CoV-2 Omicron (BA.1.1) spike glycoprotein S1+S2 trimer,
SARS-CoV-2 Omicron (BA.1.1) spike glycoprotein RBD,
SARS-CoV-2 Omicron (BA.1.1.529) spike glycoprotein S1+S2 trimer,
SARS-CoV-2 Omicron (BA.1.1.529) spike glycoprotein RBD,
SARS-CoV-2 Omicron (BA.2) spike glycoprotein S1+S2 trimer,
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 XD (BA.1 x AY.4) spike glycoprotein S1+S2 trimer,
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 RBD,
SARS-CoV-2 Omicron (BA.5) spike glycoprotein RBD;

(-) 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,
SARS-CoV-2,
SARS-CoV-2 Omicron (B.1.1.529),
SARS-CoV-2 Omicron (BA.2),
SARS-CoV-2 Delta (B.1.617.2);

(-) 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 encoded by the *S* gene in SARS-CoV RNA.[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] The spike protein of SARS-CoV and the related viruses SARS-CoV-2 and Middle East respiratory syndrome coronavirus (MERS-CoV) is a transmembrane glycoprotein that assembles into homotrimers on the virus surface and is comprised 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.[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 Spike Glycoprotein S1 Subunit Rabbit Monoclonal Antibody (Clone 007) can be used for ELISA. The antibody recognizes the S1 subunit from SARS-CoV and SARS-CoV-2.

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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