

PRODUCT INFORMATION

SARS-CoV Spike Glycoprotein S1 Subunit Monoclonal Antibody (Clone 02) Item No. 31431

Overview and Properties

Contents:	This vial contains 50 or 100 µl of protein A-purified monoclonal antibody.
Synonyms:	SARS-CoV Surface Glycoprotein S1 Subunit, Severe Acute Respiratory Syndrome Coronavirus Spike Glycoprotein S1 Subunit
Immunogen:	Recombinant SARS-CoV surface glycoprotein S1 subunit
Species Reactivity:	(+) SARS-CoV; (-) SARS-CoV-2, MERS-CoV, HCoV-HKU1 (Isolate N1), HCoV-HKU1 (Isolate N5), HCoV-229E, HCoV-OC43, HCoV-NL63
Uniprot No.:	P59594
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	0.2 µm filtered solution in PBS
Clone:	02
Host:	Mouse
Isotype:	IgG1
Applications:	ELISA; the recommended starting dilution is 1:1,000-1:2,000. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Description

Severe acute respiratory syndrome coronavirus (SARS-CoV) surface glycoprotein, also known as the spike 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 Surface Glycoprotein S1 Subunit Monoclonal Antibody (Clone 02) can be used for ELISA. The antibody recognizes the S1 subunit to detect the SARS-CoV surface glycoprotein.

References

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2. Lu, R., Zhao, X., Li, J., et al. *Lancet* **395**(10224), 565-574 (2020).
3. Meo, S.A., Alhowikan, A.M., Al-Khlaiwi, T., et al. *Eur. Rev. Med. Pharmacol. Sci.* **24**(4), 2012-2019 (2020).
4. Liu, Z., Xiao, X., Wei, X., et al. *J. Med. Virol.* **92**(6), 595-601 (2020).
5. He, Y., Zhou, Y., Liu, S., et al. *Biochem. Biophys. Res. Commun.* **324**(2), 773-781 (2004).
6. Walls, A.C., Park, Y.-J., Tortorici, M.A., et al. *Cell* **181**(2), 281-292 (2020).
7. Tian, X., Li, C., Huang, A., et al. *Emerg. Microbes Infect.* **9**(1), 382-385 (2020).

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.

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