

PRODUCT INFORMATION

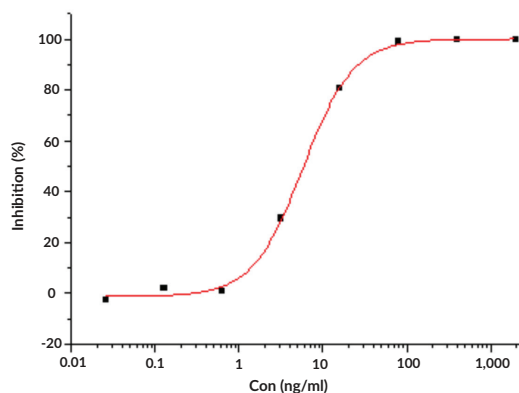
MERS-CoV Spike Glycoprotein Rabbit Monoclonal Antibody (Clone 723)

Item No. 38105

Overview and Properties

Contents:	This vial contains 200 or 500 µg of protein A-affinity purified monoclonal antibody.
Synonym:	Middle East Respiratory Syndrome Coronavirus Spike Glycoprotein
Immunogen:	Recombinant MERS-CoV spike glycoprotein
Cross Reactivity:	(+) MERS-CoV spike glycoprotein, MERS-CoV spike glycoprotein S1, MERS-CoV spike glycoprotein RBD; (-) MERS-CoV spike glycoprotein S2
Species Reactivity:	(+) MERS-CoV
Form:	Liquid
Storage:	-80°C (as supplied)
Stability:	≥1 year
Storage Buffer:	0.2 µm filtered solution in PBS
Clone:	723
Host:	Rabbit
Isotype:	IgG
Application:	Microneutralization; the optimal working concentration/dilution should be determined empirically.

Image



Measured by its ability to inhibit infection of Caco-2 cells induced by MERS-CoV pseudovirus. The EC₅₀ value for this effect is 2.5-11 ng/ml.

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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Description

Middle East respiratory syndrome coronavirus (MERS-CoV) is an enveloped positive-stranded RNA virus and a member of the *Betacoronavirus* genus and causative agent of MERS, an acute respiratory disease that often leads to pneumonia and renal failure.^{1,3} The MERS-CoV spike glycoprotein mediates viral attachment to host cells and virus-cell-mediated membrane fusion during infection.¹ It is composed of an S1 subunit, which contains the receptor-binding domain (RBD) that binds to dipeptidyl peptidase-4 (DPP-4), and an S2 subunit containing heptad repeat regions 1 and 2, which are responsible for membrane fusion, as well as a transmembrane domain and a cytoplasmic tail. MERS-CoV is activated by cleavage of the spike glycoprotein into S1 and S2 subunits by various proteases, including TMPRSS2, cathepsin B, cathepsin L, and proprotein convertases, and blockage of this cleavage by protease inhibitors reduces MERS-CoV viral entry into target cells.^{1,2} Cayman's MERS-CoV Spike Glycoprotein Rabbit Monoclonal Antibody (Clone 723) can be used for microneutralization (MN) assays.

References

1. Du, L., Yang, Y., Zhou, Y., *et al.* MERS-CoV spike protein: A key target for antivirals. *Expert Opin. Ther. Targets* **21**(2), 131-143 (2017).
2. Zhou, N., Pan, T., Zhang, J., *et al.* Glycopeptide antibiotics potently inhibit cathepsin L in the late endosome/lysosome and block the entry of Ebola virus, Middle East respiratory syndrome coronavirus (MERS-CoV), and severe acute respiratory syndrome coronavirus (SARS-CoV). *J. Biol. Chem.* **291**(17), 9218-9232 (2020).
3. Rabaan, A.A., Al-Ahmed, S.H., Haque, S., *et al.* SARS-CoV-2, SARS-CoV, and MERS-COV: A comparative overview. *Infez. Med.* **28**(2), 174-184 (2020).

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