Data Sheet (Cat.No.TMAY-03613)

Anti-Coronavirus (HCoV-NL63, HCoV-229E) Spike Antibody (8R67)

Product Details

Ig Type:	Mouse IgG1
Conjugation:	Unconjugated
Clone:	8R67
Purification:	Protein A

Applications

Verified Activity:	Anti-Coronavirus (HCoV-NL63, HCoV-229E) mouse monoclonal antibody at 1:1000 dilution. -Sample: Recombinant Protein 10 ng -Lane 1: SARS-CoV-2 Spike S1-His -Lane 2: SARS-CoV-2 Spike S1 NTD-Fc & AVI -Lane 3: SARS-CoV-2 Spike S1 NTD-His & AVI -Lane 4: SARS-CoV-2 Spike RBD-His -Lane 5: SARS-CoV-2 Spike S2 ECD-His -Lane 6: SARS-CoV-2 Spike S1+S2 ECD-His -Lane 7: SARS-CoV Spike S1+S2 ECD-His -Lane 8: MERS-CoV Spike S1+S2 ECD-His -Lane 9: HCoV-NL63 Spike S1+S2 ECD-His -Lane 10: HCoV-229E Spike S1+S2 ECD-His -Lane 11: HCoV-HKU1 (isolate N5) Spike S1+S2 ECD-His -Lane 12: HCoV-OC43 Spike S1+S2 ECD-His -Secondary -Goat Anti-Mouse IgG (H+L)/HRP at 1/10000 dilution. -Developed using the ECL technique. -Performed under reducing conditions.
Application:	ELISA,WB
Recommended	WB: 1:1000-1:5000; ELISA: 1:1000-1:2000

Properties

Stability & Storage:	Store at 2°C-8°C for 1 month. Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles. Preservative-Free.
Shipping:	Shipping with blue ice.

Antigen Details

Immunogen: 0

Antigen Species: other

Research Background

The spike (S) glycoprotein of coronaviruses contains protrusions that will only bind to certain receptors on the host cell. Known receptors bind S1 are ACE2 (angiotensin-converting enzyme 2), DPP4 (dipeptidyl peptidase-4), APN (aminopeptidase N), CEACAM (carcinoembryonic antigen-related cell adhesion molecule), Sia (sialic acid), O-ac Sia (O-acetylated sialic acid). The spike is essential for both host specificity and viral infectivity. The term 'peplomer' is typically used to refer to a grouping of heterologous proteins on the virus surface that function together. The spike (S) glycoprotein of coronaviruses is known to be essential in the binding of the virus to the host cell at the advent of the infection process. It's been reported that SARS-CoV-2 (COVID-19 coronavirus, 2019-nCoV) can infect the human respiratory epithelial cells through interaction with the human ACE2 receptor. The spike protein is a large type I transmembrane protein containing two subunits, S1 and S2. S1 mainly contains a receptor binding domain (RBD), which is responsible for recognizing the cell surface receptor. S2 contains basic elements needed for the membrane fusion. The S protein plays key parts in the induction of neutralizing-antibody and T-cell responses, as well as protective immunity. The main functions for the Spike protein are summarized as: Mediate receptor binding and membrane fusion; Defines the range of the hosts and specificity of the virus; Main component to bind with the neutralizing antibody; Key target for vaccine design; Can be transmitted between different hosts through gene recombination or mutation of the receptor binding domain (RBD), leading to a higher mortality rate.

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