9853 Pacific Heights Blvd.
Suite D. San Diego,
CA 92121, USA
Tel: 858-263-4982
Email: info@abeomics.com

35-1882: SARS-CoV-2 (2019-nCoV) Spike Antibody, Rabbit mAb

Clonality :	Monoclonal
Application :	ELISA
Alternative Name :	Anti-coronavirus spike Antibody; Anti-cov spike Antibody; Anti-ncov RBD Antibody; Anti-ncov s1 Antibody; Anti-ncov s2 Antibody; Anti-ncov spike Antibody; Anti-NCP-CoV RBD Antibody; Anti-NCP-CoV s1 Antibody; Anti-NCP-CoV s2 Antibody; Anti-NCP-CoV Spike Antibody; Anti-novel coronavirus RBD Antibody; Anti-novel coronavirus s1 Antibody; Anti-novel coronavirus s2 Antibody; Anti-novel coronavirus spike Antibody; Anti-RBD Antibody; Anti-S1 Antibody; Anti-S2 Antibody; Anti-Spike RBD Antibody
Isotype :	Rabbit IgG

Description

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 1; 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 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.

Product Info

Amount :	50 µl / 100 µl
Purification :	Protein A
Content :	0.2 um filtered solution in PBS. (1 mg/ml)
Storage condition :	This antibody can be stored at 2°C-8°C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20°C to -80°C. Preservative-Free. Avoid repeated freeze-thaw cycles.

Application Note

ELISA 1:5000-1:10000 Specificity: 2019-nCoV CoV spike/S Has cross-reactivity in ELISA with SARS Coronavirus Spike Protein (S1 Subunit), SARS Coronavirus Spike RBD

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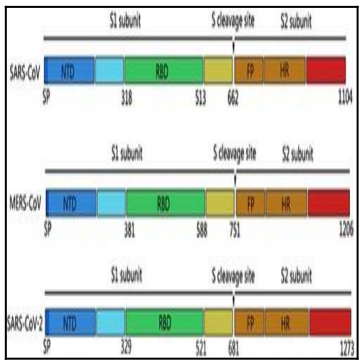

Structural diagrams of spike glycoproteins of SARS-CoV, MERS-CoV, and SARS-CoV-2. All spike proteins of coronaviruses contain S1 subunit and S2 subunit, which were divided by the S cleavage sites. FP, fusion peptide; HR, heptad repeat 1 and heptad repeat 2; RBD, receptor-binding domain, contains core binding motif in the external subdomain; SP, signal peptide. Adapted from Composition and divergence of coronavirus spike proteins and host ACE2 receptors predict potential intermediate hosts of SARS-CoV-2. Liu Z, et al. J Med Virol. 2020 Feb 26. doi: 10.1002/jmv.25726.