10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

SARS-CoV-2 (2019-nCoV) Spike Neutralizing Mouse mAb

SARS-CoV-2 (2019-nCoV) Spike Neutralizing Mouse mAb
Catalog # AP94777

Product Information

Application	E
Host	Rabbit
Clonality	Monoclonal
Calculated MW	140 KDa
Physical State	Liquid
Immunogen	Recombinant SARS-CoV-2 Spike S1 Protein
Epitope Specificity	14-685/1213
Isotype	IgG1
Purity	affinity purified by Protein A
Buffer	0.01M PBS (pH7.4).
SUBCELLULAR LOCATION	Virion membrane ; Single-pass type I membrane protein ; Host endoplasmic reticulum-Golgi intermediate compartment membrane ; Single-pass type I membrane protein ; Host cell membrane ; Single-pass type I membrane protein ;Note: Accumulates in the endoplasmic reticulum-Golgi intermediate compartment, where it participates in virus particle assembly. Colocalizes with S in the host endoplasmic reticulum-Golgi intermediate compartment. Some S oligomers are transported to the host plasma membrane, where they may mediate cell-cell fusion.
SUBUNIT	Spike glycoprotein: Homotrimer; each monomer consists of a S1 and a S2 subunit (PubMed:32155444, PubMed:32075877). The resulting peplomers protrude from the virus surface as spikes (By similarity). Interacts with the accessory proteins 3a and 7a.Spike protein S1: Binds to human ACE2.
Post-translational modifications	The cytoplasmic Cys-rich domain is palmitoylated. Spike glycoprotein is digested within host endosomes.Specific enzymatic cleavages in vivo yield mature proteins. The precurssor is processed into S1 and S2 by host cell furin or another cellular protease to yield the mature S1 and S2 proteins (PubMed:32155444). Additionally, a second cleavage leads to the release of a fusion peptide after viral attachment to host cell receptor (By similarity). The presence of a furin polybasic cleavage site sets SARS-CoV-2 S apart from SARS-CoV S that possesses a monobasic S1/S2 cleavage site processed upon entry of target cells (PubMed:32155444).Highly decorated by heterogeneous N-linked glycans protruding from the trimer surface.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The SARS-CoV-2 spike (S) protein is the target of vaccine design efforts to end the COVID-19 pandemic. Despite a low mutation rate, isolates with the D614G substitution in the S protein appeared early during the pandemic, and are now the dominant form worldwide. Here, we analyze the D614G mutation in the context of a soluble S ectodomain construct.

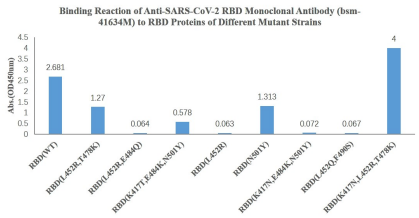
Additional Information

Target/Specificity	The cytoplasmic Cys-rich domain is palmitoylated. Spike glycoprotein is digested within host endosomes.Specific enzymatic cleavages in vivo yield mature proteins. The precurssor is processed into S1 and S2 by host cell furin or another cellular protease to yield the mature S1 and S2 proteins (PubMed:32155444). Additionally, a second cleavage leads to the release of a fusion peptide after viral attachment to host cell receptor (By similarity). The presence of a furin polybasic cleavage site sets SARS-CoV-2 S apart from SARS-CoV S that possesses a monobasic S1/S2 cleavage site processed upon entry of target cells (PubMed:32155444).Highly decorated by heterogeneous N-linked glycans protruding from the trimer surface.
Dilution	ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

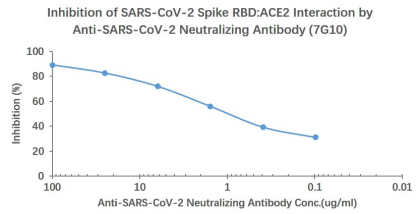
Background

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Images



Direct ELISA was used to detect the binding ability of anti-RBD monoclonal antibody to RBD domain proteins of different SARS-CoV-2 Mutant Strains. Immobilized SARS-CoV-2 RBD proteins, at 2 μg/ml (100ul/Well) can bind Anti-RBD monoclonal antibody-HRP at 1ug/ml (100ul/Well).



The ACE2-coated plate is incubated with SARS-CoV-2 Spike RBD-HRP (WT) and Anti-SARS-CoV-2 Spike RBD Neutralizing antibody. Percent inhibition is calculated based on the OD value by inhibiting RBD: ACE2 interaction.