

**SARS-CoV-2 (2019-nCoV) Spike S1 Mouse mAb**  
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**Catalog # AP93968****Specification****SARS-CoV-2 (2019-nCoV) Spike S1 Mouse mAb - Product Information**

Application	WB
Host	Rabbit
Clonality	Monoclonal
Calculated MW	140 KDa
Physical State	Liquid
Immunogen	Recombinant SARS-CoV-2 Spike S1 Protein
Epitope Specificity	14-685/1273
Isotype	IgG1
<b>Purity</b>	
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 precursor 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. This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.**

#### Important Note

#### 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.

#### SARS-CoV-2 (2019-nCoV) Spike S1 Mouse mAb - 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 precursor 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

WB~1:1000

##### 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.

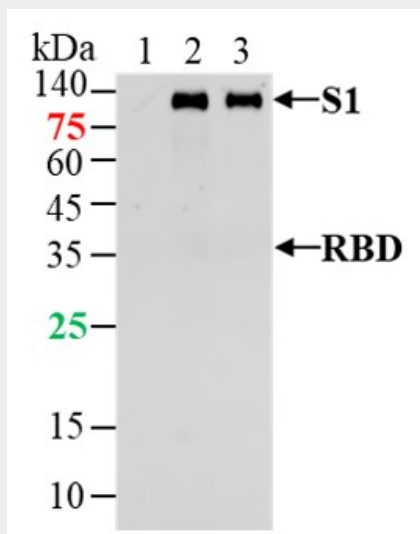
#### SARS-CoV-2 (2019-nCoV) Spike S1 Mouse mAb - Protein Information

#### SARS-CoV-2 (2019-nCoV) Spike S1 Mouse mAb - Protocols

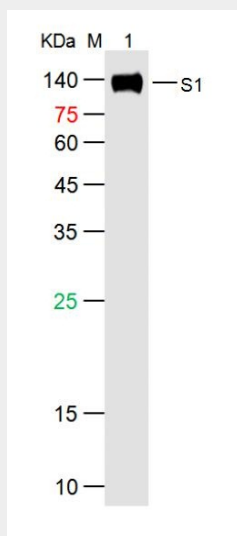
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

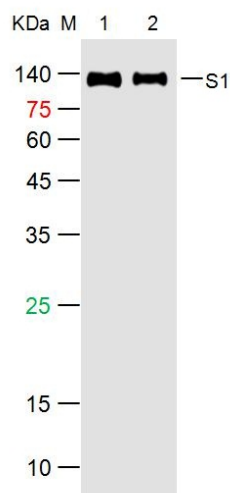
## SARS-CoV-2 (2019-nCoV) Spike S1 Mouse mAb - Images



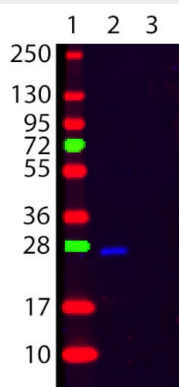
Sample: Lane 1: SARS-CoV-2 Spike RBD Protein(WT) at 500ng Lane 2: SARS-CoV-2 Spike S1 Protein(E484Q, L452R, D614G,P681R) at 500ng Lane 3: SARS-CoV-2 Spike S1 Protein (L18F,T20N,P26S,D138Y,R190S,K417T,E484K,N501Y,D614G,H655Y) at 500ng Primary: Anti-SARS-CoV-2 Spike S1 Protein at 1/1000 dilution Secondary: IRDye800CW Goat Anti-Mouse IgG at 1/20000 dilution Predicted band size: 27kDa /77.2 kDa Observed band size: 35kDa/114 kDa



Sample: Lane 1: SARS-CoV-2 S1 Protein (His-Avi,HEK293) at 500ng Primary: Mouse Anti-SARS-CoV-2 Spike S1 Protein Antibody at 1/1000 dilution Secondary: IRDye800CW Goat Anti-Mouse IgG at 1/20000 dilution Predicted band size: 78kD Observed band size: kD



Sample: Lane 1: SARS-CoV-2 S1 Protein (E484Q,L452R,D614G,P681R) at 500ng Lane 2: SARS-CoV-2 S1 Protein (L18F,T20N,P26S,D138Y,R190S,K417T,E484K,N501Y,D614G,H655Y) at 500ng Primary: Mouse Anti-SARS-CoV-2 Spike S1 Protein Antibody at 1/1000 dilution Secondary: IRDye800CW Goat Anti-Mouse IgG at 1/20000 dilution Predicted band size: 77kD Observed band size: kD



Western Blot of Goat F(ab')<sub>2</sub> anti-Human κ (Kappa chain) Fluorescein Conjugated Secondary Antibody. Lane 1: Molecular Weight Marker. Lane 2: Human κ. Lane 3: Human λ. Load: 50 ng per lane. Primary antibody: None. Secondary antibody: Fluorescein goat F(ab')<sub>2</sub> anti-human kappa secondary antibody at 1:1,000 for 60 min at RT. Block: MB-070 for 30 min at RT. Predicted/Observed size: 25 kDa, 25 kDa for Human κ. Other band(s): None

### SARS-CoV-2 (2019-nCoV) Spike S1 Mouse mAb - Background

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