

SARS Coronavirus Spike Glycoprotein Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6000a

Specification

SARS Coronavirus Spike Glycoprotein Antibody - Product Information

Application	WB,E
Primary Accession	P59594
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit Ig
Antigen Region	13-42

SARS Coronavirus Spike Glycoprotein Antibody - Additional Information

Gene ID 1489668

Other Names

Spike glycoprotein, S glycoprotein, E2, Peplomer protein, Spike protein S1, Spike protein S2, S

Target/Specificity

This SARS virus Sn antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 13-42 amino acids from the N-terminus of SARS CoV Spike protein.

Dilution

WB~1:1000

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

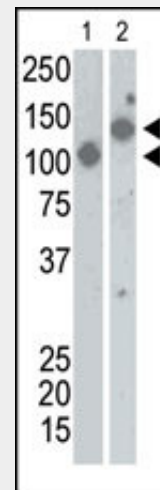
Precautions

SARS Coronavirus Spike Glycoprotein Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

SARS Coronavirus Spike Glycoprotein Antibody - Protein Information

Name S

{ECO:0000255|HAMAP-Rule:MF_04099}



The anti-SARS-Sn Pab (Cat. #AP6000a) is used in Western blot to detect recombinant Spike proteins, aa17-537 (Lane 1) and aa17-756 (Lane 2).

SARS Coronavirus Spike Glycoprotein Antibody - Background

An outbreak of atypical pneumonia, referred to as severe acute respiratory syndrome (SARS) and first identified in Guangdong Province, China, has spread to several countries. The severity of this disease is such that the mortality rate appears to be ~3 to 6%. A number of laboratories worldwide have undertaken the identification of the causative agent. The National Microbiology Laboratory in Canada obtained the Tor2 isolate from a patient in Toronto, and succeeded in growing a coronavirus-like agent in African Green Monkey Kidney (Vero E6) cells. This coronavirus has been named publicly by the World Health Organization and member laboratories as ?SARS virus? The SARS membrane proteins, including the major proteins S (Spike) and M (Membrane), are inserted into the endoplasmic reticulum Golgi intermediate compartment (ERGIC) while full length replicated RNA (+ strands) assemble with the N (nucleocapsid) protein. The virus then migrates through the Golgi complex and eventually exits the cell, likely by exocytosis. The site of viral attachment to the host cell resides within the S protein. Oligomeric spike (S) glycoproteins extend from SARS membranes. These integral membrane proteins assemble

Function

[Spike protein S1]: attaches the virion to the cell membrane by interacting with host receptor, initiating the infection (By similarity). Binding to human ACE2 and CLEC4M/DC-SIGNR receptors and internalization of the virus into the endosomes of the host cell induces conformational changes in the S glycoprotein. Proteolysis by cathepsin CTSL may unmask the fusion peptide of S2 and activate membranes fusion within endosomes.

Cellular Location

Virion membrane

{ECO:0000255|HAMAP-Rule:MF_04099, ECO:0000269|PubMed:15831954};

Single-pass type I membrane protein

{ECO:0000255|HAMAP-Rule:MF_04099, ECO:0000269|PubMed:15831954}. Host

endoplasmic reticulum-Golgi intermediate compartment membrane

{ECO:0000255|HAMAP-Rule:MF_04099, ECO:0000269|PubMed:20861307}; Single-

pass type I membrane protein

{ECO:0000255|HAMAP-Rule:MF_04099, ECO:0000269|PubMed:15831954}. Host cell

membrane {ECO:0000255|HAMAP-Rule:MF_04099,

ECO:0000269|PubMed:15831954};

Single-pass type I membrane protein

{ECO:0000255|HAMAP-Rule:MF_04099, ECO:0000269|PubMed:15831954}.

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 (PubMed:20861307). Some S oligomers are transported to the host plasma membrane, where they may mediate cell-cell fusion.

{ECO:0000255|HAMAP-Rule:MF_04099, ECO:0000269|PubMed:20861307}

within the endoplasmic reticulum of infected cells and are subsequently endoproteolyzed in the Golgi, generating noncovalently associated S1 and S2 fragments. Once on the surface of infected cells and virions, peripheral S1 fragments bind carcinoembryonic antigen-related cell adhesion molecule (CEACAM) receptors, and this triggers membrane fusion reactions mediated by integral membrane S2 fragments.

SARS Coronavirus Spike Glycoprotein Antibody - References

He, R., et al., Biochem. Biophys. Res. Commun. 316(2):476-483 (2004). Snijder, E.J., et al., J. Mol. Biol. 331(5):991-1004 (2003). Marra, M.A., et al., Science 300(5624):1399-1404 (2003). Krokhn, O., et al., Mol Cell Proteomics 2(5):346-356 (2003).

SARS Coronavirus Spike Glycoprotein Antibody - 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 Coronavirus Spike Glycoprotein Antibody - Citations

- [Chimeric coronavirus-like particles carrying severe acute respiratory syndrome coronavirus \(SCoV\) S protein protect mice against challenge with SCoV.](#)
- [Coronaviral hypothetical and structural proteins were found in the intestinal surface enterocytes and pneumocytes of severe acute respiratory syndrome \(SARS\).](#)
- [Severe acute respiratory syndrome \(SARS\) S protein production in plants: development of recombinant vaccine.](#)
- [A single immunization with a rhabdovirus-based vector expressing severe acute respiratory syndrome coronavirus \(SARS-CoV\) S protein results in the production of high levels of](#)

[SARS-CoV-neutralizing antibodies.](#)