

SARS-CoV-2 Spike S1 Rabbit mAb [1469]

Cat NO. :A35414

Information:

Applications	Reactivity:	UniProt ID:	MW(kDa)	Host	Isotype	Size
WB	SARS-CoV-2	P0DTC2	140kda	Rabbit	IgG	50ul,100ul,200ul

Applications detail:

Application	Dilution
WB	1:1000-2000
The optimal dilutions should be determined by the end user	

Conjugate:

UnConjugate

Form:

Liquid

sensitivity:

Endogenous

Purification:

Protein A purification

Specificity:

Antibody is produced by immunizing animals with a synthetic peptide of SARS-CoV-2 Spike S1.

Storage buffer and conditions:

Antibody store in 10 mM PBS, 0.5mg/ml BSA, 50% glycerol (buffer) .

Shipped at 4°C. Store at -20°C or -80°C.

Products are valid for one natural year of receipt. Avoid repeated freeze / thaw cycles.

Tissue specificity:

Subcellular location:

Virion membrane, Host endoplasmic reticulum-Golgi intermediate compartment membrane , Host cell membrane

Function:

Spike protein S1:

Attaches the virion to the cell membrane by interacting with host receptor, initiating the infection. The major receptor is host ACE2 (PubMed:32142651, PubMed:33607086, PubMed:32155444).

When S2/S2' has been cleaved, binding to the receptor triggers direct fusion at the cell membrane (PubMed:34561887).

Introduction: **WB:** Western Blot **IP:** Immunoprecipitation **IHC:** Immunohistochemistry **ChIP:** Chromatin Immunoprecipitation **ICC/IF:** Immunocytochemistry/Immunofluorescence **F:** Flow Cytometry

Cross Reactivity: **H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Ml:** mink **C:** chicken **Dm** D. melanogaster **X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Hr:** horse

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When S2/s2' has not been cleaved, binding to the receptor results in internalization of the virus by endocytosis leading to fusion of the virion membrane with the host endosomal membrane (PubMed:32221306, PubMed:32075877).

Alternatively, may use NRP1/NRP2 (PubMed:33082294, PubMed:33082293) and integrin as entry receptors (PubMed:35150743).

The use of NRP1/NRP2 receptors may explain the tropism of the virus in human olfactory epithelial cells, which express these molecules at high levels but ACE2 at low levels (PubMed:33082293).

The stalk domain of S contains three hinges, giving the head unexpected orientational freedom (PubMed:32817270). Spike protein S2:

Precursor of the fusion protein processed in the biosynthesis of the S protein and the formation of virus particle. Mediates fusion of the virion and cellular membranes by functioning as a class I viral fusion protein. Contains two viral fusion peptides that are unmasked after cleavage. The S2/S2' cleavage occurs during virus entry at the cell membrane by host TMPRSS2 (PubMed:32142651) or during endocytosis by host CSTL (PubMed:32703818, PubMed:34159616).

In either case, this triggers an extensive and irreversible conformational change leading to fusion of the viral envelope with the cellular cytoplasmic membrane, releasing viral genomic RNA into the host cell cytoplasm (PubMed:34561887).

Under the current model, the protein has at least three conformational states: pre-fusion native state, pre-hairpin intermediate state, and post-fusion hairpin state. During fusion of the viral and target cell membranes, the coiled coil regions (heptad repeats) adopt a trimer-of-hairpins structure and position the fusion peptide in close proximity to the C-terminal region of the ectodomain. Formation of this structure appears to promote apposition and subsequent fusion of viral and target cell membranes. Spike protein S2':

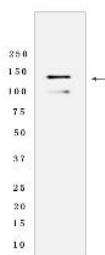
Subunit of the fusion protein that is processed upon entry into the host cell. Mediates fusion of the virion and cellular membranes by functioning as a class I viral fusion protein. Contains a viral fusion peptide that is unmasked after S2 cleavage. This cleavage can occur at the cell membrane by host TMPRSS2 or during endocytosis by host CSTL (PubMed:32703818, PubMed:34159616).

In either case, this triggers an extensive and irreversible conformational change that leads to fusion of the viral envelope with the cellular cytoplasmic membrane, releasing viral genomic RNA into the host cell cytoplasm (PubMed:34561887).

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Validation Data:

SARS-CoV-2 Spike S1 Rabbit mAb [1469] Images



Western blot (SDS PAGE) analysis of extracts from Recombinant SARS-CoV-2 Spike S1. Using SARS-CoV-2 Spike S1 Rabbit mAb [1469] at dilution of 1:1000

blots, incubate membrane with diluted primary antibody in 1% w/v Milk, 1X TBST at 4°C overnight. tion on <http://naturebios.com>