

Rabbit Anti-SARS spike glycoprotein/Cy5.5 Conjugated antibody

SL17239R-Cy5. 5

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| Product Name | Anti-SARS spike glycoprotein/Cy5.5 |
| Chinese Name | Cy5.5 标记的冠状病毒刺突 glycoprotein 抗体 |
| Alias | E2; E2 glycoprotein; Human coronavirus spike glycoprotein; Peplomer protein; S; S glycoprotein; SPIKE_CVHSA; Severe acute respiratory syndrome spike glycoprotein; Severe acute respiratory syndrome virus spike glycoprotein; Spike glycoprotein; VGL2. |
| Research Area | Cell biology Bacteria and viruses |
| Immunogen Species | Rabbit |
| Clonality | Polyclonal |
| React Species | (predicted:SARS-CoV) ICC/IF=1:50-200,IF=1:100-500 |
| Applications | not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user. |
| Molecular weight | 138kDa |
| Form | Lyophilized or Liquid |
| Concentration | 1mg/ml |
| immunogen | KLH conjugated synthetic peptide derived from human SARS spike glycoprotein |
| Lsotype | IgG |
| Purification | affinity purified by Protein A |
| Storage Buffer | 1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 1M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C. |
| Storage | |
| Product Detail | background: A novel coronavirus has been identified as the causative agent of SARS (Severe Acute Respiratory Syndrome). Coronaviruses are a major cause of |

upper respiratory diseases in humans. The genomes of these viruses are positive stranded RNA approximately 27 to 31kb in length. SARS infection can be mediated by the binding of the viral spike protein, a glycosylated 139 kDa protein and the major surface antigen of the virus, to the angiotensin converting enzyme 2 (ACE2) on target cells. This binding can be blocked by a soluble form of ACE2.

Function:

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

S2 is a class I viral fusion protein. 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 viral and target cell membrane fusion, the coiled coil regions (heptad repeats) assume a trimer-of-hairpins structure, positioning the fusion peptide in close proximity to the C-terminal region of the ectodomain. The formation of this structure appears to drive apposition and subsequent fusion of viral and target cell membranes.

Subunit:

Homotrimer. Binds to human and palm civet ACE2 and human CLEC4M/DC-SIGNR. Interacts with the accessory proteins 3a and 7a. {ECO:0000269|PubMed:14647384, ECO:0000269|PubMed:14670965, ECO:0000269|PubMed:15194747, ECO:0000269|PubMed:15496474, ECO:0000269|PubMed:16166518, ECO:0000269|PubMed:16840309}.

Subcellular Location:

Virion membrane {ECO:0000269|PubMed:15831954}; Single-pass type I membrane protein {ECO:0000269|PubMed:15831954}. Host endoplasmic reticulum-Golgi intermediate compartment membrane {ECO:0000250}; Single-pass type I membrane protein {ECO:0000250}. Host cell membrane {ECO:0000269|PubMed:15831954}; Single-pass type I membrane protein {ECO:0000269|PubMed:15831954}. Note=Accumulates in the endoplasmic reticulum-Golgi intermediate compartment, where it participates in virus particle assembly (By similarity). Some S oligomers are transported to the plasma membrane, where they may mediate cell-cell fusion. {ECO:0000250}.

Post-translational modifications:

The cytoplasmic Cys-rich domain is palmitoylated. Spike glycoprotein is

digested by cathepsin CTSL within endosomes.
{ECO:0000269|PubMed:17134730}.

Similarity:

Belongs to the coronaviruses spike protein family. {ECO:0000305}.

Database links:

UniProtKB/Swiss-Prot: P59594.1

Important Note:

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