

## Ultra-LEAF™ Purified anti-SARS-CoV-2 S Protein RBD Antibody

<b>Catalog# / Size</b>	944803 / 100 µg 944804 / 1 mg
<b>Clone</b>	A201001
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	S1 RBD, Spike Protein RBD, S1 Receptor-binding Domain, Spike Receptor-binding Domain
<b>Isotype</b>	Mouse IgG2a, κ
<b>Description</b>	<p>SARS-CoV-2 is a respiratory virus which causes coronavirus disease 2019 (COVID-19). The corona virus spike (S) glycoprotein is a class I viral fusion protein on the outer envelope of the virion that plays a critical role in viral infection by recognizing host cell receptors and mediating fusion of the viral and cellular membranes. The S glycoprotein is synthesized as a precursor protein consisting of ~1,300 amino acids that is then cleaved into an amino (N)-terminal S1 subunit (~700 amino acids) and a carboxyl (C)-terminal S2 subunit (~600 amino acids). Three S1/S2 heterodimers assemble to form a trimer spike protruding from the viral envelope. The S1 subunit contains a receptor-binding domain (RBD) that can specifically bind to angiotensin converting enzyme 2 (ACE2), the receptor on target cells. Triggered by receptor binding, proteolytic processing and/or acidic pH in the cellular compartments, the class I viral fusion protein undergoes a transition from a metastable pre-fusion state to a stable post-fusion state during infection, in which the receptor-binding subunit is cleaved, and the fusion subunit undergoes large-scale conformational rearrangements to expose the hydrophobic fusion peptide, induce the formation of a six-helix bundle, and bring the viral and cellular membranes close for fusion. The trimeric SARS coronavirus (SARS-CoV-2) S glycoprotein consisting of three S1-S2 heterodimers binds the cellular receptor angiotensin-converting enzyme 2 (ACE2) and mediates fusion of the viral and cellular membranes through a pre- to post-fusion conformation transition.</p>

### Product Details

---

<b>Verified Reactivity</b>	SARS-CoV-2
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Immunogen</b>	SARS-CoV-2
<b>Formulation</b>	0.2 µm filtered in phosphate-buffered solution, pH 7.2, containing no preservative. Endotoxin level is < 0.01 EU/µg of the protein (< 0.001 ng/µg of the protein) as determined by the LAL test.
<b>Concentration</b>	The antibody is bottled at the concentration indicated on the vial, typically between 2 mg/mL and 3 mg/mL. Older lots may have also been bottled at 1 mg/mL. To obtain lot-specific concentration, please enter the lot number in our <a href="#">Concentration and Expiration Lookup</a> or <a href="#">Certificate of Analysis</a> online tools.
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C. This Ultra-LEAF™ solution contains no preservative; handle under aseptic conditions.
<b>Application</b>	<a href="#">Block - Quality tested</a>
<b>Recommended Usage</b>	Each lot of this antibody is quality control tested by blocking the binding of 0.5 µg/mL recombinant human ACE2 (Cat. No. 792002) to 1 µg/mL immobilized recombinant SARS-CoV-2 S protein RBD-Fc chimera (Cat. No. 793104). ND <sub>50</sub> range: 0.05 - 0.25 µg/mL. It is recommended that the reagent be titrated for optimal performance for each application.
<b>RRID</b>	AB_2892509 (BioLegend Cat. No. 944803) AB_2892509 (BioLegend Cat. No. 944804)

### Antigen Details

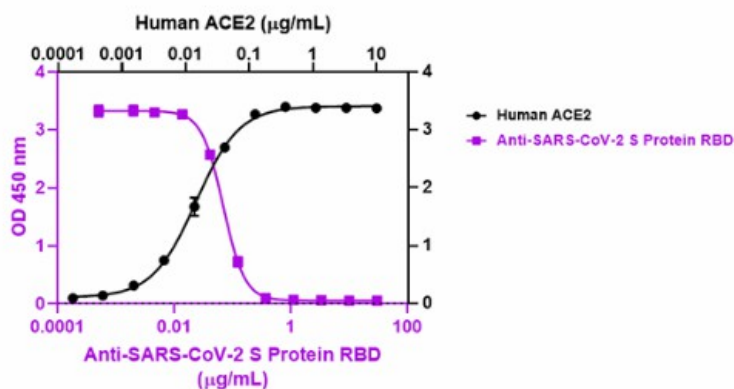
---

<b>Structure</b>	Disulfide linked homodimer
<b>Distribution</b>	SARS-CoV-2
<b>Function</b>	Attaches the virion to the cell membrane by interacting with host receptor, initiating the infection
<b>Interaction</b>	Lung cells
<b>Ligand/Receptor</b>	ACE2
<b>Biology Area</b>	COVID-19
<b>Antigen References</b>	<ol style="list-style-type: none"> <li>1. Lu R, <i>et al.</i> 2020. <i>Lancet</i>. 395:565-574.</li> <li>2. Li F. 2016. <i>Annu Rev Virol</i>. 29:237-261.</li> <li>3. Belouzard S, <i>et al.</i> 2012. <i>Viruses</i>. 4:1011-33.</li> <li>4. Song W, <i>et al.</i> 2018. <i>PLoS Pathog</i>. 14(8).</li> <li>5. Li F, <i>et al.</i> 2020. <i>Nature</i>. 581:221-224.</li> </ol>
<b>Gene ID</b>	NA

## Other Formats

Ultra-LEAF™ Purified anti-SARS-CoV-2 S Protein RBD

## Product Data



Recombinant human ACE2 (Cat. No. 792002) (black circles) binds to immobilized recombinant SARS-CoV-2 S protein RBD-Fc chimera (Cat. No. 793104) in a dose-dependent manner. Purified anti-SARS-CoV-2 S protein RBD antibody (clone A201001) (purple squares) inhibits the binding in a dose-dependent manner. This antibody blocks the binding of 0.5 µg/mL recombinant human ACE2 to 1.0 µg/mL immobilized recombinant SARS-CoV-2 S protein RBD-Fc chimera. ND50 range: 0.05 - 0.25 µg/mL.

For research use only. Not for diagnostic use. Not for resale. BioLegend will not be held responsible for patent infringement or other violations that may occur with the use of our products.

\*These products may be covered by one or more Limited Use Label Licenses (see the BioLegend Catalog or our website, [www.biolegend.com/ordering#license](http://www.biolegend.com/ordering#license)). BioLegend products may not be transferred to third parties, resold, modified for resale, or used to manufacture commercial products, reverse engineer functionally similar materials, or to provide a service to third parties without written approval of BioLegend. By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.

BioLegend Inc., 8999 BioLegend Way, San Diego, CA 92121 [www.biolegend.com](http://www.biolegend.com)  
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587