



ZooMAb® Recombinant Monoclonal Antibodies Detecting SARS-CoV-1 and SARS-CoV-2

Our Highest Performance Antibodies for Research of the Highest Importance

Current State of Coronavirus (SARS-CoV-2) Research

SARS-CoV-2 has been shown to belong to the B lineage of the beta-coronaviruses and is closely related to the 2012 SARS-CoV virus^{1,2}. The mature SARS-CoV-2 contains 4 structural proteins: Envelope (E), Membrane (M), Nucleocapsid (N), and the Spike protein (S). The E and M proteins assist in viral assembly, and the N protein is required for RNA synthesis³.

The S protein is responsible for virus binding and entry into host cells. Furthermore, the S precursor protein of SARS-CoV-2 is cleaved into S1 (685 amino acids) and S2 (588 amino acids) subunits⁴. The S1 subunit contains the receptor binding domain (RBD) that mediates entry of this virus into cells through the peptidase domain of host ACE2 protein with high affinity ($K_d = 15\text{nM}$)⁵. The S2 protein, which is reported to be well-conserved and shows 99% identity with bat coronavirus, is responsible for membrane fusion. Proteolytic cleavage of the S glycoprotein is also considered an important event that can determine whether the virus can cross species⁶. This cleavage step may present a target for blocking zoonotic coronavirus transmission.

At the time of this printing, there are no known vaccines or treatments to address the COVID-19 pandemic. The scientific community is unified and vigilant in its pursuit of a deeper understanding of this virus.

Immunocytochemistry Analysis:

Immunofluorescent analyses of Vero E6 cells infected with SARS-CoV-2 were performed using 1 µg/mL of Cat. No. ZMS1075, Anti-SARS-CoV-1/2 NP, clone 1C7 C7 ZooMAb® Mouse Monoclonal antibody, and visualized with an Anti-Mouse secondary antibody conjugated to Alexa Fluor® 488. Actin filaments have been labeled with phalloidin (Red). Nucleus is stained with DAPI (Blue). This antibody positively stains the nucleus (Courtesy of Dr Ana Fernandez-Sesma Laboratory, Icahn School of Medicine at Mount Sinai (ISMMS), New York). For Research Use Only. Not For Use In Diagnostic Procedures.



How Do ZooMAb® Recombinant Monoclonal Antibodies Help in SARS-CoV-2 Research?

The current global situation has presented researchers with rising demand for research-derived solutions to COVID-19 while simultaneously limiting the amount of time spent in the lab and research facilities. Our new ZooMAb® antibodies detecting both SARS-CoV-1 and SARS-CoV-2 provide a wealth of benefits to help you make the most of your time

- **Recombinant Production:** Defined sequences mean more control, more reproducible data, and fewer repeated experiments. All ZooMAb® antibodies are produced with our award-winning proprietary recombinant expression system.
- **Robust Performance:** Our ZooMAb® recombinant antibodies come with our highest specificity and affinity, reducing your reagent use
- **Lyophilized Format:** Our heat-acceleration testing model predicts 8+ year stability, and lyophilization

allows for ambient shipping. Use what you need today and store the rest for tomorrow or next year.

- **Three-Application Minimum:** Do more with your antibody. All ZooMAb® recombinant antibodies are tested in at least three applications allowing for more data variety per vial.
- **Pure Final Product:** Less additives, more assay freedom. All ZooMAb® recombinant antibodies are biocide-free, preservative-free, and come free of animal products in the finished material.
- **Greener Alternative:** Reduce waste in your schedule and in your laboratory. Aligning with guidance from the American Chemical Society's 12 Principles of Green Chemistry, ZooMAb® recombinant antibodies provide reduction in toxicity, energy efficiency, and a smaller carbon footprint.

Featured Available ZooMAb® Antibodies Detecting SARS-CoV-1 and SARS-CoV-2

SKU	Description
ZMS1075	Anti-SARS-CoV-1/2 NP Antibody, clone 1C7C7 ZooMAb® Mouse Monoclonal
ZMS1076	Anti-SARS-CoV-1/2 S Protein Antibody, clone 2B3E5 ZooMAb® Mouse Monoclonal
ZHU1076	Anti-SARS-CoV-1/2 S Protein Antibody, clone hu2B3E5 ZooMAb® Chimeric Monoclonal

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Data presented is the available current product information and provided as-is. This product has not been tested or verified in any additional applications, sample types, including any clinical use. Experimental conditions must be empirically derived by the user. Our Antibody Guarantee only covers tested applications stated herein and conditions presented in our product information and is not extended to publications.

References:

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