



<b>Catalog Number:</b>	MO22195	<b>Host:</b>	Mouse
<b>Product Type:</b>	Mouse Monoclonal IgG	<b>Species Reactivity:</b>	Not applicable
<b>Immunogen Sequence:</b>	Recombinant SARS-CoV2 S-Protein ACE2 binding domain expressed in and purified from <i>E. coli</i>	<b>Format:</b>	Purified antibody at 1mg/mL in 50% PBS, 50% glycerol plus 5mM NaN3
<b>Applications:</b>	Immunofluorescent: 1:1,000 Immunocytochemistry: 1:1,000 Western Blot: 1:1,000-2,000		

Dilutions listed as a recommendation. Optimal dilution should be determined by investigator.

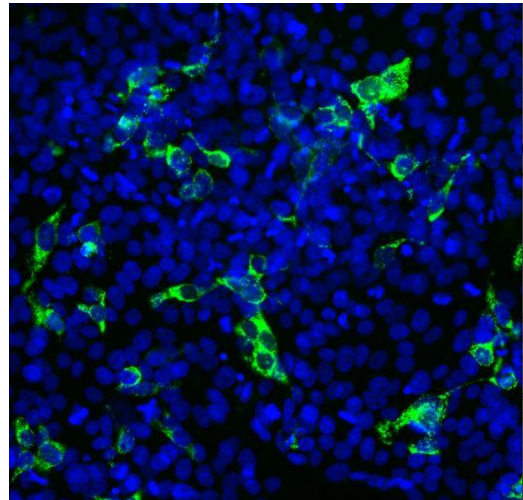
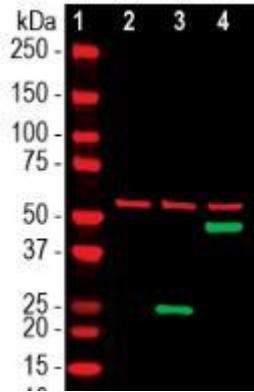
**Storage:** Antibody can also be aliquotted and stored frozen at -20° C in a manual defrost freezer for six months without detectable loss of activity. The antibody is stable at 2° - 8° C for 1 year. Avoid repeated freeze-thaw cycles.

### Application Notes

#### Description/Data:

In late 2019 a novel infectious disease was discovered in Wuhan, China which was quickly recognized to be caused by a previously unknown RNA coronavirus. The virus was very rapidly isolated, the full RNA sequence determined and put online on the 10th of January 2020. The sequence revealed that the virus was most closely related to certain bat coronaviruses and the severe acute respiratory syndrome (SARS) coronavirus. Immediately biotechnology companies and research institutes used the RNA sequence information to generate vaccine candidates. The SARS virus was known to enter and infect human cells by means of the so-called spike or S-protein which binds to the extracellular domain of the angiotensin converting enzyme 2 (ACE2) protein, which is then internalized bringing the virus into the cell. Cryoelectron microscopy and binding studies quickly determined that the S-protein of SARS-CoV2 is structurally similar to that of the SARS virus and also binds to the ACE2 receptor, albeit with higher affinity than the S-protein of SARS.

**Images: Immunofluorescence:** Cells were transfected with the DNA encoding the S-protein segment in the pCI-Neo-Mod expression vector. The MO22195 produces clean and specific staining of transfected cells. The nuclei of transfected and untransfected cells are shown in blue with DAPI DNA stain. **Western Blot:** Cells were transfected with DNA encoding the S-protein ACE2 binding site which was inserted into pCI-Neo-Mod or pCI-Neo-GFP eukaryotic expression vectors, which express either the insert only or the insert fused with GFP.



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