

**SARS-CoV-2 (COVID-19) ORF8 Antibody**  
**Infectious Disease, COVID-19**  
**Catalog # ASC12223****Specification****SARS-CoV-2 (COVID-19) ORF8 Antibody - Product Information**

Application	WB, IHC, E
Primary Accession	<a href="#">P0DTC8</a>
Other Accession	<a href="#">P0DTC8</a>
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Application Notes	WB: 1 µg/mL; IHC: 0.1 µg/mL Antibody validated: Immunohistochemistry in human samples. SARS-CoV-2 (COVID-19) ORF8 antibody can detect 2 ng of free peptide at 1 µg/mL in ELISA. It can detect SARS-CoV-2 ORF8 recombinant protein by ELISA and WB. All other applications and species not yet tested.

**SARS-CoV-2 (COVID-19) ORF8 Antibody - Additional Information**Gene ID **43740577****Other Names**

ORF8 protein, ns8, ORF8, Non-structural protein 8

**Target/Specificity**

ORF8 Antibody is predicted to not cross-react with other coronavirus family members.

**Reconstitution & Storage**

SARS-CoV-2 (COVID-19) ORF8 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

**Precautions**

SARS-CoV-2 (COVID-19) ORF8 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**SARS-CoV-2 (COVID-19) ORF8 Antibody - Protein Information****Name 8****Function**

Plays a role in modulating the host immune response (PubMed:<a href="http://www.uniprot.org/citations/31986261" target="\_blank">31986261</a>, PubMed:<a href="http://www.uniprot.org/citations/35343786" target="\_blank">35343786</a>, PubMed:<a href="http://www.uniprot.org/citations/36689483" target="\_blank">36689483</a>). May act as a

secreted virokin by mimicking interleukin-17A (IL17A), and thereby binding to the IL17RA receptor, leading to activation of the IL17 pathway and increased secretion of pro-inflammatory factors (PubMed:<a href="http://www.uniprot.org/citations/35343786" target="\_blank">35343786</a>, PubMed:<a href="http://www.uniprot.org/citations/36689483" target="\_blank">36689483</a>). Contributes to the cytokine storm during SARS-CoV-2 infection when secreted by unconventional pathway (PubMed:<a href="http://www.uniprot.org/citations/33723527" target="\_blank">33723527</a>, PubMed:<a href="http://www.uniprot.org/citations/36689483" target="\_blank">36689483</a>). May act by down-regulating major histocompatibility complex class I (MHC-I) at cell surface (PubMed:<a href="http://www.uniprot.org/citations/34021074" target="\_blank">34021074</a>, PubMed:<a href="http://www.uniprot.org/citations/35157849" target="\_blank">35157849</a>). May inhibit expression of some members of the IFN-stimulated gene (ISG) family including hosts IGF2BP1/ZBP1, MX1 and MX2, and DHX58 (PubMed:<a href="http://www.uniprot.org/citations/34177923" target="\_blank">34177923</a>).

### Cellular Location

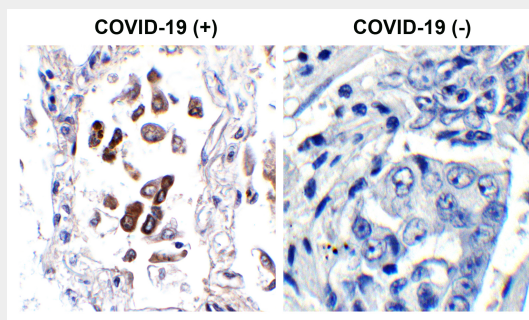
Secreted. Note=Is secreted during a normal viral infection by unconventional pathway (PubMed:35157849, PubMed:36689483) Its mRNA is expressed in cytoplasm and not spliced during a viral infection, but is spliced when expressed from cDNA in nucleus (PubMed:35157849). Splicing changes localization to host endosome and/or cytoplasm (PubMed:33060197, PubMed:34177923). May also localize in nucleus when fused with GFP (PubMed:34177923)

## SARS-CoV-2 (COVID-19) ORF8 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

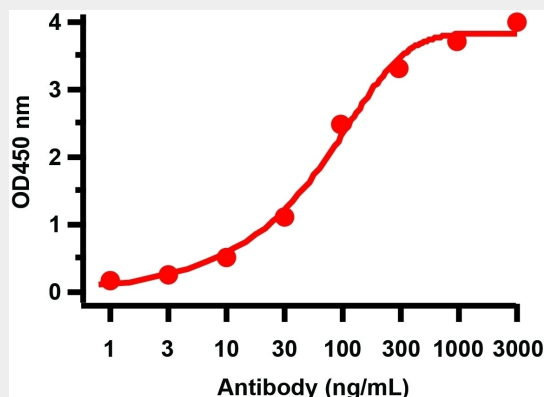
## SARS-CoV-2 (COVID-19) ORF8 Antibody - Images



**Figure 1 Immunohistochemistry Validation of SARS-CoV-2 (COVID-19) ORF8 in COVID-19 Patient Lung**

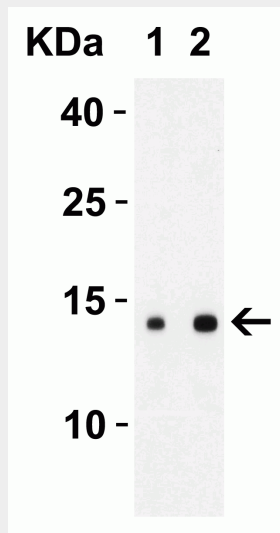
Immunohistochemical analysis of paraffin-embedded COVID-19 patient lung tissue using anti-SARS-CoV-2 (COVID-19) ORF8 antibody (9287, 0.1 µg/mL). Tissue was fixed with formaldehyde and blocked with 10% serum for 1 h at RT; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody overnight at 4°C. A goat anti-rabbit

IgG H&L (HRP) at 1/250 was used as secondary. Counter stained with Hematoxylin. Strong signal of SARS-CoV-2 ORF8 protein was observed in macrophages of COVID-19 patient lung, but not in non-COVID-19 patient lung.



**Figure 2 ELISA Validation with SARS-CoV-2 (COVID-19) ORF8 Protein**

Antibodies: SARS-CoV-2 (COVID-19) ORF8 Antibody, 9287. A direct ELISA was performed using SARS-CoV-2 ORF8 recombinant protein (10-436) as coating antigen and the anti-SARS-CoV-2 (COVID-19) ORF8 antibody as the capture antibody. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:20000 dilution. Detection range is from 1 ng/mL to 3000 ng/mL



**Figure 3 Western Blot Validation with SARS-CoV-2 (COVID-19) ORF8 Protein**

Loading: 30 ng per lane of SARS-CoV-2 (COVID-19) ORF8 recombinant protein (10-436). Antibodies: SARS-CoV-2 (COVID-19) ORF8, 9287, 1h incubation at RT in 5% NFDM/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution. Lane 1: 1 µg/mL and Lane 2: 2 µg/mL

### SARS-CoV-2 (COVID-19) ORF8 Antibody - Background

Coronavirus disease 2019 (COVID-19), formerly known as 2019-nCoV acute respiratory disease, is an infectious disease caused by SARS-CoV-2, a virus closely related to the SARS virus (1). The disease is the cause of the 2019-20 coronavirus outbreak (2). SARS-CoV-2 virus proteins include structural proteins, non-structural proteins and accessory factors. The structure of SARS-CoV-2 consists of the following: a spike protein (S), hemagglutinin-esterase dimer (HE), a membrane glycoprotein (M), an envelope protein (E) a nucleocapsid protein (N) and RNA. SARS-CoV-2 non-structural protein is ORF1ab that consists of 16 proteins (nsp1-nsp16), while accessory factors include ORF3a, ORF3b, ORF6, ORF7a, ORF7b, ORF8, ORF9b, ORF9c and ORF10. ORF8 may play a role in modulating host immune response (Probable). May play a role in blocking

host IL17 cytokine by its interaction with host IL17RA (3).

#### **SARS-CoV-2 (COVID-19) ORF8 Antibody - References**

Gorbalenya. bioRxiv: 2020.;Hui et al. Int J Infect Dis. 2020;91:264-266.;Chan et al. Lancet. 2020; 395:514-523.