

SARS-CoV-2 (COVID-19) ORF7a Antibody
Infectious Disease, COVID-19
Catalog # ASC12222**Specification**

SARS-CoV-2 (COVID-19) ORF7a Antibody - Product Information

Application	IHC, E
Primary Accession	PODTC7.1
Other Accession	PODTC7.1
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Application Notes	IHC: 1 µg/mL Antibody validated: Immunohistochemistry in human samples. SARS-CoV-2 (COVID-19) ORF7a antibody can detect 2 ng of free peptide at 1 µg/mL in ELISA. All other applications and species not yet tested.

SARS-CoV-2 (COVID-19) ORF7a Antibody - Additional Information

Gene ID	43740573
Other Names	
ORF7a protein, Accessory protein 7a, Protein U122, Protein X4, ORF7a	

Reconstitution & Storage

SARS-CoV-2 (COVID-19) ORF7a 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) ORF7a Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

SARS-CoV-2 (COVID-19) ORF7a Antibody - Protein Information**SARS-CoV-2 (COVID-19) ORF7a 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) ORF7a Antibody - Images

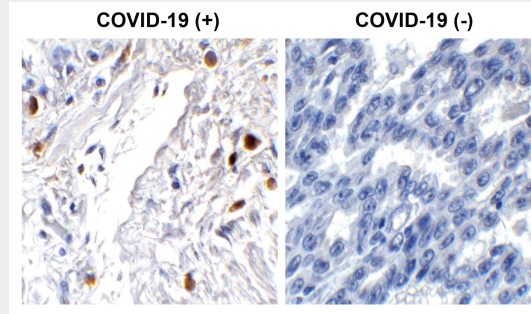


Figure 1 Immunohistochemistry Validation of SARS-CoV-2 (COVID-19) ORF7a in COVID-19 Patient Lung

Immunohistochemical analysis of paraffin-embedded COVID-19 patient lung tissue using anti-SARS-CoV-2 (COVID-19) ORF7a antibody (9285, 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 ORF7a protein was observed in macrophages of COVID-19 patient lung, but not in non-COVID-19 patient lung.

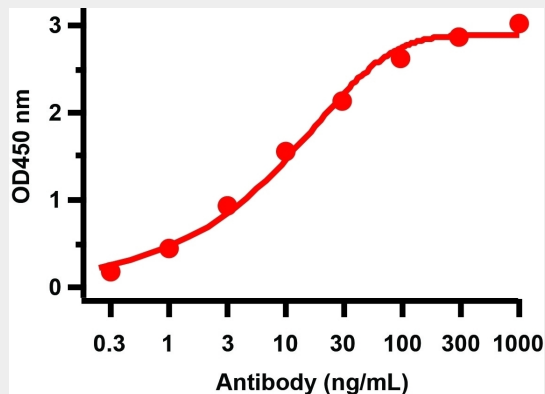


Figure 2 ELISA Validation

Antibodies: SARS-CoV-2 (COVID-19) ORF7a Antibody, 9285. A direct ELISA was performed using SARS-CoV-2 ORF7a immunogen peptide (9285P) as coating antigen and the anti-SARS-CoV-2 (COVID-19) ORF7a antibody as the capture antibody. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:20000 dilution. Detection range is from 0.3 ng/mL to 1000 ng/mL

SARS-CoV-2 (COVID-19) ORF7a 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, ORF7a and ORF7a.

ORF7a plays a role as antagonist of host tetherin (BST2), disrupting its antiviral effect. It acts by binding to BST2 thereby interfering with its glycosylation. It may suppress small interfering RNA

(siRNA) and may bind to host ITGAL, thereby playing a role in attachment or modulation of leukocytes (3).

SARS-CoV-2 (COVID-19) ORF7a Antibody - References

Gorbalenya. bioRxiv: 2020.;Hui et al. Int J Infect Dis. 2020;91:264-266.;Taylor et al. J. Virol. 2015; 89:11820-11833.