abcam

ab284054

Anti-SARS-CoV-2 orf3d antibody [EPR25045-51] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR25045-51
Purification technique	Affinity purification Protein A

Reactivity data

Flow Cyt (Intra)

Tested

Species	Transfected cell line - SARS-CoV-2
Dilution info	-
Notes	-

Predicted

Species	SARS-CoV-2
Dilution info	-
Notes	-

Not recommended

Species	Synthetic peptide - SARS-CoV-2
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Transfected cell line - SARS-CoV-2
Dilution info	-
Notes	-

Predicted

Species	SARS-CoV-2
Dilution info	-
Notes	-

Not recommended

Species	Synthetic peptide - SARS-CoV-2
Dilution info	-
Notes	-

I-ELISA

Tested

Species	Synthetic peptide - SARS-CoV-2

Dilution info	-
Notes	-

Predicted

Species	SARS-CoV-2
Dilution info	-
Notes	-

Not recommended

Species	Transfected cell line - SARS-CoV-2
Dilution info	-
Notes	-

WB

Tested

Species	Synthetic peptide - SARS-CoV-2
Dilution info	-
Notes	-

Predicted

Species	SARS-CoV-2
Dilution info	-
Notes	-

Not recommended

Species	Transfected cell line - SARS-CoV-2
Dilution info	-
Notes	-

Target data

See full target information SARS-CoV-2 orf3d

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

ab284054 is the carrier free version of ab284040

Patented technology

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?

This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	The SARS-CoV-2 orf3d protein also referred to as "Orf3d" in literature serves a unique function in the virus's life cycle. This viral protein has a mass of approximately 12 kDa and is expressed mainly in the cytoplasm of the infected host cells. The Orf3d protein contributes to the virus's ability to manipulate host cellular mechanisms although its detailed mechanical roles are not yet fully understood. Researchers have recently identified it as an open reading frame within the SARS-CoV-2 genome highlighting its importance in viral function.
Biological function summary	The SARS-CoV-2 orf3d protein affects the virus's replication and interaction with host defenses. While not part of any known larger protein complex it has shown effects in viral pathogenicity aiding the virus in evading host immune responses. The protein's activity potentially disrupts normal cellular processes within infected cells assisting the virus in maintaining an environment favorable for its replication.
Pathways	SARS-CoV-2 orf3d plays a part in both the viral replication and immune evasion pathways. It interacts with elements of host cell immune signaling to promote viral survival and replication. The protein is associated with pathways involving the virus's replication machinery potentially interacting with other proteins such as those encoded by SARS-CoV-2 like orf3a which similarly assist in viral infection processes.
Associated diseases and disorders	SARS-CoV-2 orf3d has implications in COVID-19 pathogenesis. It may contribute to the severity and progression of symptoms observed in infected individuals. Its role in regulating immune response mechanisms shows connections to other viral proteins such as the SARS-CoV-2 nucleocapsid protein which also have implications in viral infection severity. Understanding Orf3d’s interactions could provide insights valuable for therapeutic developments targeting COVID-19.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

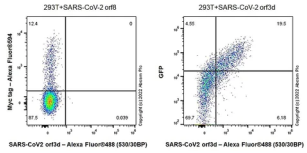
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

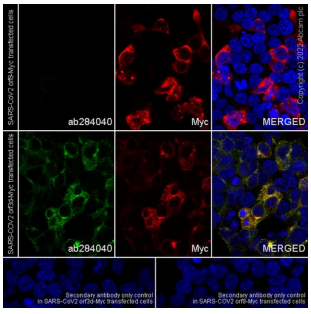
4 product images



Flow Cytometry (Intracellular) - Anti-SARS-CoV-2 orf3d antibody [EPR25045-51] - BSA and Azide free (ab284054)

SARS-CoV-2 orf3d Flow Cytometry (Intracellular) staining of HEK-293T cells transfected with a SARS-CoV2 orf3d expression vector containing GFP tag. using rabbit Anti-SARS-CoV-2 orf3d antibody

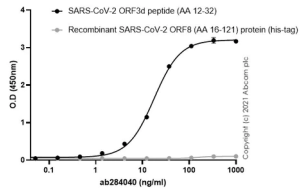
Intracellular Flow Cytometry analysis of HEK-293T (Human embryonic kidney epithelial cell) cells transfected with a SARS-CoV-2 orf8 (Left) expression vector containing a myc tag or SARS-CoV2 orf3d (Right) expression vector containing GFP tag labeling SARS-CoV-2 orf3d with ab284040 at 1/500 dilution (Left and Right). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 647, ab150083) secondary antibody was used at 1/5000 dilution.
This data was developed using ab284040, the same antibody clone in a different buffer formulation.



Immunocytochemistry/ Immunofluorescence - Anti-SARS-CoV-2 orf3d antibody [EPR25045-51] - BSA and Azide free (ab284054)

SARS-CoV-2 orf3d Immunocytochemistry/ Immunofluorescence staining of HEK-293T cells transfected with a SARS-CoV2 orf3d expression vector containing a myc tag using rabbit Anti-SARS-CoV-2 orf3d antibody

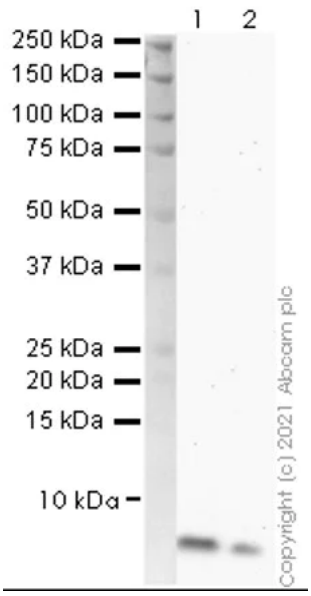
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HEK-293T (Human epithelial cell line from embryonic kidney transformed with large T antigen) cells labelling SARS-CoV-2 orf3d with primary antibody anti-SARS-CoV-2 orf3d (ab284040) at 1/100 dilution, followed by Goat Anti-Rabbit (Alexa Fluor® 594) (ab150089) (green) secondary antibody at 1/1000 dilution. Confocal image showing cytoplasmic staining in HEK-293T cells transfected with a SARS-CoV2 orf3d expression vector containing a myc tag, no staining in HEK-293T cells transfected with a SARS-CoV2 orf8 expression vector containing a myc tag. Myc-Tag Mouse mab (Alexa Fluor® 647) (red) was used to counterstain cells at 1/100 dilution. The nuclear counter stain is DAPI (blue).
This data was developed using ab284040, the same antibody clone in a different buffer formulation.



Indirect ELISA - Anti-SARS-CoV-2 orf3d antibody [EPR25045-51] - BSA and Azide free (ab284054)

This data was developed using ab284040, the same antibody clone in a different buffer formulation.
Indirect ELISA showing primary antibody ab284040 binding to SARS-CoV2 ORF3d peptide (aa 12-32) . Plates were coated with SARS-CoV2 ORF3d peptide (aa 12-32) and recombinant SARS-CoV2 ORF8 (aa 16-121) protein (His tag) at 1000 ng/ml. Binding of ab284040 was assessed in a serial dilution range 0.016- 1000 ng/mL (a 3-fold serial dilution).

Binding was detected using pre-adsorbed secondary antibody, goat anti-rabbit IgG H&L (HRP, ab97080) at 1/2000 dilution.



Western blot - Anti-SARS-CoV-2 orf3d antibody [EPR25045-51] - BSA and Azide free (ab284054)

This data was developed using ab284040, the same antibody clone in a different buffer formulation.
ab284040 was shown to bind specifically to SARS-CoV2 Orf3d peptide in Western blot. Samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 5 % BSA in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged.

Blocking buffer: 5% BSA in TBS-0.1% Tween® 20 (TBS-T)

All lanes:
Western blot - Anti-SARS-CoV-2 orf3d antibody [EPR25045-51] (ab284040) at 1/1000 dilution

Lane 1:
Orf3d peptide (aa12-32) at 0.5 µg

Lane 2:
Orf3d peptide (aa12-32) at 0.2 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) preadsorbed (ab97080) at 1/20000 dilution

Observed band size: 6 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.