SARS-CoV-2 ORF3a Antibody

Recombinant Monoclonal Rabbit IgG Clone # 2819D

Catalog Number: MAB107061

DESCRIPTION

Species Reactivity	SARS-CoV-2
Specificity	Detects SARS-CoV-2 ORF3a in Western blots.
Source	Recombinant Monoclonal Rabbit IgG Clone # 2819D
Purification	Protein A or G purified from cell culture supernatant
Immunogen	SARS-CoV-2 ORF3a peptide
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

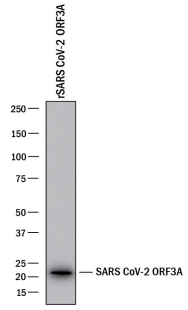
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	Recombinant SARS-CoV-2 ORF3a peptide
Immunocytochemistry	3-25 µg/mL	Immersion fixed HEK293 human embryonic kidney cell line transfected with SARS-CoV-2
Immunohistochemistry	0.3-25 µg/mL	Immersion fixed paraffin-embedded sections of human spleen

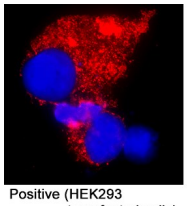
DATA

Western Blot

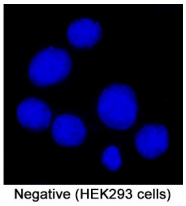


Detection of SARS-CoV-2 ORF3a by Western Blot. Western blot shows recombinant SARS-CoV-2 ORF3a peptide. PVDF membrane was probed with 1 µg/mL of Rabbit Anti-SARS-CoV-2 ORF3a Monoclonal Antibody (Catalog # MAB107061) followed by HRP-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # HAF008). A specific band was detected for ORF3a at approximately 22 kDa (as indicated). This experiment was conducted under reducing conditions and using Western Blot Buffer Group 1.

Immunocytochemistry



Positive (HEK293 transfected cells)



Negative (HEK293 cells)

ORF3a in HEK293 Human Cell Line Transfected with SARS-CoV-2. ORF3a was detected in immersion fixed HEK293 human embryonic kidney cell line transfected with SARS-CoV-2 (positive staining) and HEK293 human embryonic kidney cell line (non-transfected, negative staining) using Rabbit Anti-SARS-CoV-2 ORF3a Monoclonal Antibody (Catalog # MAB107061) at 3 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Rabbit IgG Secondary Antibody (red; Catalog # NL004) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. Staining was performed using our protocol for Fluorescent ICC Staining of Non-adherent Cells.

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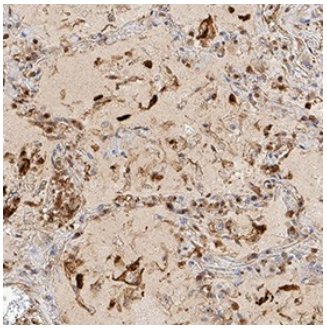
Immunohistochemistry



ORF3a in Human Spleen. ORF3a was detected in immersion fixed paraffin-embedded sections of human spleen infected with SARS-CoV-2 using Rabbit Anti-SARS-CoV-2 ORF3a Monoclonal Antibody (Catalog # MAB107061) at 0.3 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Rabbit IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC003). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to immunoreactive profiles scattered throughout the tissue. Staining was performed using our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

ORF3a is an open reading frame coronavirus protein involved in virus replication in release. Analysis of ORF3a nucleotide and protein sequences can predict their ability to alter viral cycle and provides insight into the biology of coronaviruses. ORF3a has been characterized in both SARS-CoV which caused the SARS outbreak and in SARS-CoV-2 which caused the COVID-19 pandemic. ORF3a is a high priority target that is amenable to drug treatment for COVID-19 post viral syndrome. Mutations in ORF3a can help understand viral virulence and design suitable therapeutics.

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