

## Product Datasheet

# SARS-CoV-2 (COVID-19) Spike S1 Antibody (orb1239995)

<b>Catalog Number</b>	orb1239995
<b>Category</b>	Antibodies
<b>Description</b>	SARS-CoV-2 (COVID-19) Spike S1 Antibody
<b>Target</b>	S
<b>Clonality</b>	Polyclonal
<b>Species/Host</b>	Rabbit
<b>Isotype</b>	IgG
<b>Conjugation</b>	Unconjugated
<b>Reactivity</b>	Virus
<b>Form/Appearance</b>	Liquid
<b>Concentration</b>	1 mg/mL
<b>Buffer/Preservatives</b>	SARS-CoV-2 (COVID-19) Spike S1 antibody is supplied in PBS containing 0.02% sodium azide.
<b>Purification</b>	SARS-CoV-2 (COVID-19) Spike S1 antibody is affinity chromatography purified via peptide column.
<b>Immunogen</b>	Anti-SARS-CoV-2 (COVID-19) Spike S1 antibody (orb1239995) was raised against a peptide corresponding to 16 amino acids near the amino terminus of SARS-CoV-2 (COVID-19) Spike S1 glycoprotein. The immunogen is located within the first 50 amino acids of SARS-CoV-2 (COVID-19) Spike S1 protein.

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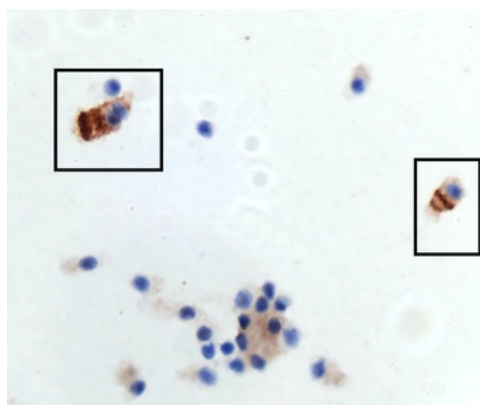
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<b>UniProt ID</b>	<b>P0DTC2</b>
<b>Tested applications</b>	ELISA, ICC, IF, IHC, WB
<b>Antibody Type</b>	Primary Antibody
<b>Modifications</b>	None
<b>Storage</b>	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
<b>Note</b>	For research use only
<b>NCBI</b>	<b>QHD43416</b>
<b>Expiration Date</b>	12 months from date of receipt.



Immunohistochemistry Validation of Spike in the Nasal Swab Sample of Omicron Variant COVID-19 Patient.

Immunohistochemical analysis of 4% paraformaldehyde-fixed patient nasal swab sample using spike S1 antibody (orb1239995) at 0.5 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 spike protein signal was observed in the nasal swab sample of the Omicron variant COVID-19 patient.

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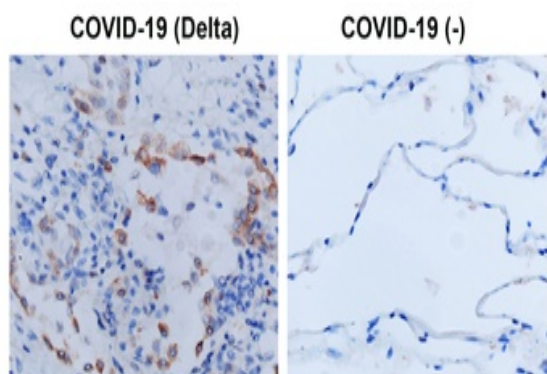
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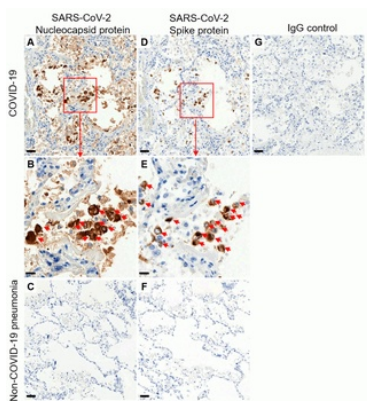
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Immunohistochemistry Validation of Spike in Delta Variant COVID-19 Patient Lung Tissue. Immunohistochemical analysis of paraffin-embedded patient lung tissue using anti-Spike S1 antibody (orb1239995) at 0.5 µg/ml. Tissue was fixed with formaldehyde 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 spike protein signal was observed in the Delta variant COVID-19 patient lung, but not in non-COVID-19 patient lung.



Immunohistochemistry Validation of SARS-CoV-2 (COVID-19) Spike S1 in Human Lung Tissue from the COVID-19 Patient (Sun et al., 2020). Detection of SARS-CoV-2 nucleocapsid protein by anti-SARS-COV-2 nucleocapsid antibodies (orb1239972, 0.02 µg/mL, A, B) or SARS-CoV-2 Spike S1 antibodies (orb1239995, 1 µg/mL D, E) in adjacent sections of autopsy lung tissue from COVID-19 deceased patient. Negative control staining on autopsy lung tissue from patient who died from non-COVID-19 pneumonia is shown for Nucleocapsid protein (C) or Spike protein (F). Negative control using normal rabbit immunoglobulin on COVID-19 autopsy tissue is presented (G). DAB chromogen and hematoxylin counterstain are used. Scale bars: 50µM in A, C, D, F, G; 20µM in B and E.

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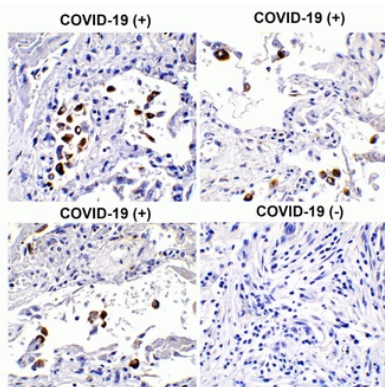
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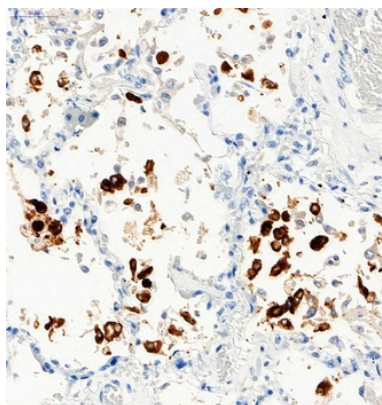
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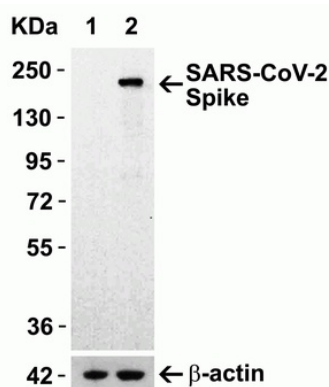
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Immunohistochemistry Validation of SARS-CoV-2 (COVID-19) Spike S1 in COVID-19 Patient Lung. Immunohistochemical analysis of paraffin-embedded COVID-19 patient lung tissue using anti-SARS-CoV-2 (COVID-19) Spike S1 antibody (orb1239995, 0.5 µg/mL). Tissue 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 spike protein was observed in macrophage of COVID-19 patient lung, but not in non-COVID-19 patient lung.



Immunohistochemistry Validation of SARS-CoV-2 (COVID-19) Spike S1 in Human Lung Tissue from the COVID-19 Patient. Immunohistochemical analysis of paraffin-embedded COVID-19 patient lung tissue using anti-SARS-CoV-2 (COVID-19) Spike S1 antibody (orb1239995, 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. (Courtesy of Hallgeir Rui, MCW) (Picture shown in 40X magnification).



Overexpression Validation in Spike Transfected 293 Cells. Loading: 10 µg per lane of 293 cell lysate. Antibodies: SARS-CoV-2 (COVID-19) Spike S1, orb1239995 (1 µg/mL), 1h incubation at RT in 5% NFDN/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution. Lane 1: WT 293 cells and Lane 2: SARS-CoV-2 Spike overexpressed 293 cells.

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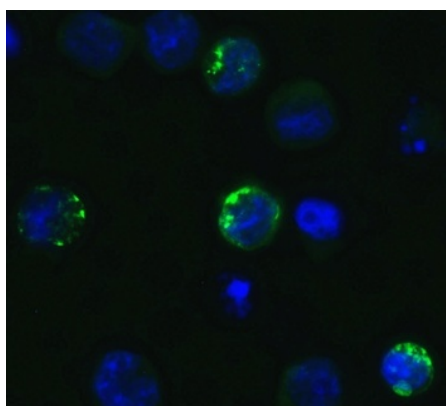
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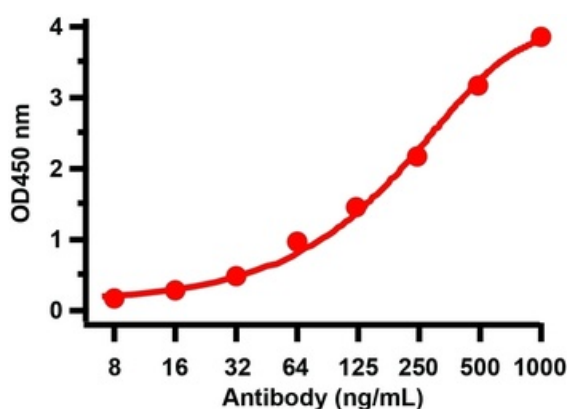
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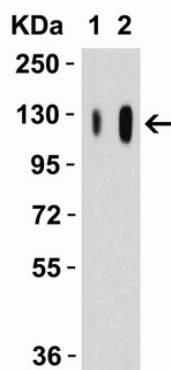
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Immunofluorescence Validation of SARS-CoV-2 (COVID-19) Spike S1 in 293 Transfected Cells. Immunofluorescent analysis of 4% paraformaldehyde-fixed Spike transfected 293 cells labeling SARS-CoV-2 (COVID-19) Spike S1 with orb1239995 at 5 ug/mL, followed by goat anti-rabbit IgG secondary antibody at 1/500 dilution (green) and DAPI staining (blue).



ELISA Validation with SARS-CoV-2 (COVID-19) Spike Recombinant Protein. Antibodies: SARS-CoV-2 (COVID-19) Spike S1 antibody, orb1239995. A direct ELISA was performed using SARS-CoV-2 (COVID-19) Spike S1 recombinant protein as coating antigen and the anti-SARS-CoV-2 (COVID-19) Spike S1 antibody as the capture antibody. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:20000 dilution. Detection range is from 8 ng/mL to 1000 ng/mL.



Western Blot Validation with SARS-CoV-2 (COVID-19) Spike Recombinant Protein. Loading: 50 ng per lane of SARS-CoV-2 (COVID-19) Spike S1 recombinant protein. Antibodies: SARS-CoV-2 (COVID-19) Spike 1, orb1239995, 1h incubation at RT in 5% NFDN/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution. Lane 1: 1 µg/mL and Lane 2: 2 µg/mL.

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