

Product Datasheet

SARS-CoV-2 (COVID-19) Spike RBD Antibody (orb1239994)

Catalog Number	orb1239994
Category	Antibodies
Description	SARS-CoV-2 (COVID-19) Spike RBD Antibody
Target	S
Clonality	Polyclonal
Species/Host	Rabbit
Isotype	IgG
Conjugation	Unconjugated
Reactivity	Virus
Form/Appearance	Liquid
Concentration	1 mg/mL
Buffer/Preservatives	SARS-CoV-2 (COVID-19) Spike RBD antibody is supplied in PBS containing 0.02% sodium azide.
Purification	SARS-CoV-2 (COVID-19) Spike RBD antibody is affinity chromatography purified via peptide column.
Immunogen	Anti-SARS-CoV-2 (COVID-19) Spike RBD antibody (orb1239994) was raised against a peptide corresponding to 19 amino acids near the carboxy terminus of SARS-CoV-2 (COVID-19) Spike glycoprotein RBD. The immunogen is located within the last 50 amino acids of SARS-CoV-2 (COVID-19) Spike protein RBD.

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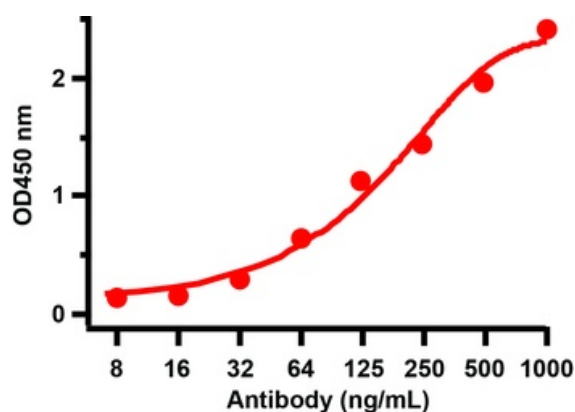
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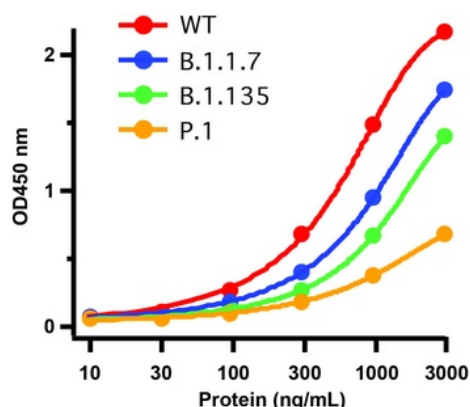
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UniProt ID	P0DTC2
Tested applications	ELISA, IF, IHC, WB
Antibody Type	Primary Antibody
Modifications	None
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.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



ELISA Validation with SARS-CoV-2 (COVID-19) Spike RBD Recombinant Protein. Antibodies: SARS-CoV-2 (COVID-19) Spike RBD antibody, orb1239994 (1 µg/mL). A direct ELISA was performed using SARS-CoV-2 (COVID-19) Spike RBD recombinant protein (orb1231588) as coating antigen and the anti-SARS-CoV-2 (COVID-19) Spike RBD antibody as the capture.



Detection of SARS-CoV-2 Variant Proteins with Spike RBD Antibodies by Direct ELISA. Coating Antigen: SARS-CoV-2 full length spike proteins, including WT, UK variant (B.1.1.7), SA variant (B.1.135) and Brazil (P.1). Dilution: 10-3000 ng/mL. Incubate at 4 °C overnight. Detection Antibodies: SARS-CoV-2 Spike RBD Antibody, orb1239994, 2 µg/mL, incubate at RT for 1 hr. Secondary Antibodies: Goat anti-rabbit HRP at 1:20000, incubate at RT for 1 hr. Immunogen region of antibody (orb1239994) includes site 501N that was mutated in all three variants. orb1239994 has low binding affinity for all three variants as compared to WT.

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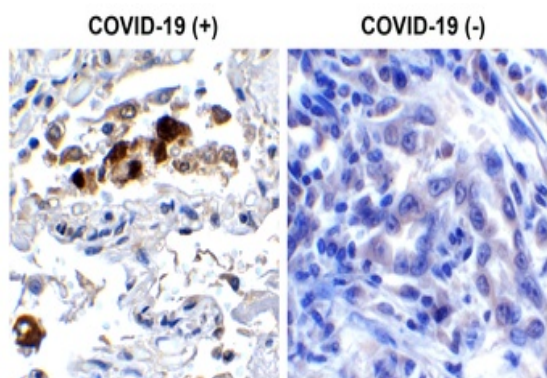
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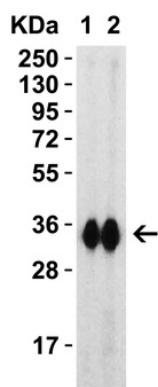
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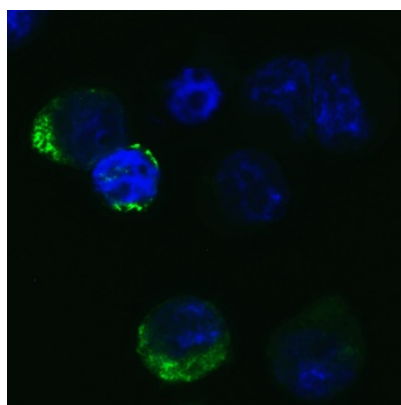
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Immunohistochemistry Validation of SARS-CoV-2 (COVID-19) Spike RBD in COVID-19 Patient Lung. Immunohistochemical analysis of paraffin-embedded COVID-19 patient lung tissue using anti-SARS-CoV-2 (COVID-19) Spike RBD antibody (orb1239994, 0.5 $\mu\text{g}/\text{mL}$). 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 $^{\circ}\text{C}$. 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 RBD protein was observed in macrophage of COVID-19 patient lung, but not in non-COVID-19 patient lung.



Western Blot Validation with SARS-CoV-2 (COVID-19) Spike RBD Recombinant Protein. Loading: 30 ng per lane of SARS-CoV-2 (COVID-19) Spike RBD recombinant protein, orb1231588. Antibodies: SARS-CoV-2 (COVID-19) Spike RBD, orb1239994, 1 h incubation at RT in 5% NFDN/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution. Lane 1: 1 $\mu\text{g}/\text{mL}$ and Lane 2: 2 $\mu\text{g}/\text{mL}$.



Immunofluorescence Validation of SARS-CoV-2 (COVID-19) Spike RBD in 293 Transfected Cells. Immunofluorescent analysis of 4% paraformaldehyde-fixed Spike transfected 293 cells labeling SARS-CoV-2 (COVID-19) Spike RBD with orb1239994 at 20 $\mu\text{g}/\text{mL}$, followed by goat anti-rabbit IgG secondary antibody at 1/500 dilution (green) and DAPI staining (blue).

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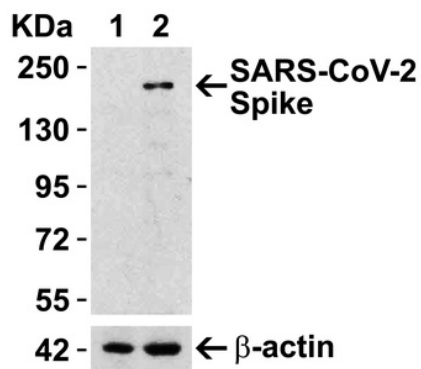
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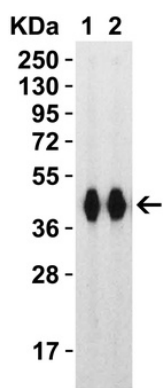
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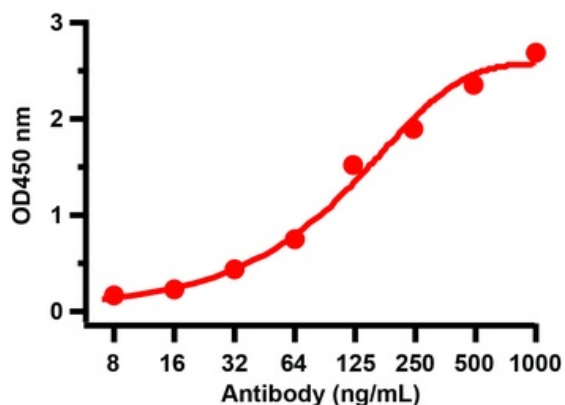
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Overexpression Validation in Spike Transfected 293 Cells. Loading: 10 µg per lane of 293 cell lysate. Antibodies: SARS-CoV-2 (COVID-19) Spike RBD, orb1239994 (4 µg/mL), 1 h incubation at RT in 5% NFDN/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution. Lane 1: WT 293 cells and Lane 2: SARS-CoV-2 Spike overexpressed 293 cells.



Western Blot Validation with SARS-CoV-2 (COVID-19) Spike RBD+SD1 Recombinant Protein. Loading: 30 ng per lane of SARS-CoV-2 (COVID-19) Spike RBD+SD1 recombinant protein, orb1231587. Antibodies: SARS-CoV-2 (COVID-19) Spike RBD, orb1239994, 1 h 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.



ELISA Validation with SARS-CoV-2 (COVID-19) Spike RBD+SD1 Recombinant Protein. Antibodies: SARS-CoV-2 (COVID-19) Spike RBD antibody, orb1239994 (1 µg/mL). A direct ELISA was performed using SARS-CoV-2 (COVID-19) Spike RBD+SD1 recombinant protein (orb1231587) as coating antigen and the anti-SARS-CoV-2 (COVID-19) Spike RBD 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.

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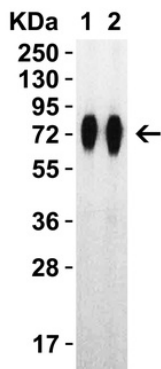
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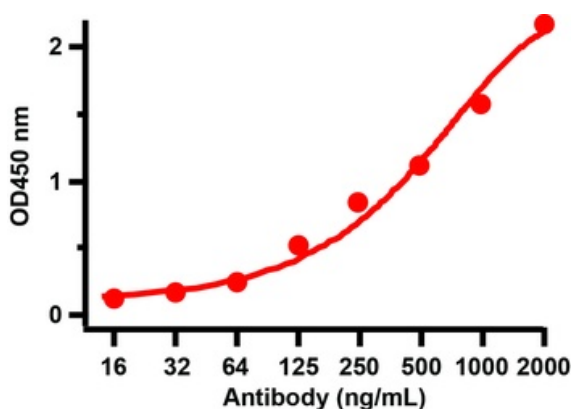
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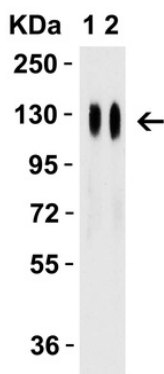
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Western Blot Validation with SARS-CoV-2 (COVID-19) Spike RBD+SD1+SD2 Recombinant Protein. Loading: 30 ng per lane of SARS-CoV-2 (COVID-19) Spike RBD+SD1+SD2 recombinant protein, orb1231586. Antibodies: SARS-CoV-2 (COVID-19) Spike RBD, orb1239994, 1 h incubation at RT in 5% NFD/MTBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution. Lane 1: 1 µg/mL and Lane 2: 2 µg/mL.



ELISA Validation with SARS-CoV-2 (COVID-19) Spike Recombinant Protein. Antibodies: SARS-CoV-2 (COVID-19) Spike antibody, orb1239994 (1 µg/mL). A direct ELISA was performed using SARS-CoV-2 (COVID-19) Spike S1 recombinant protein (orb1227612) as coating antigen and the anti-SARS-CoV-2 (COVID-19) Spike RBD antibody as the capture antibody. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:20000 dilution. Detection range is from 16 ng/mL to 2000ng/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 (orb1227612). Antibodies: SARS-CoV-2 (COVID-19) Spike RBD, orb1239994, 1 h incubation at RT in 5% NFD/MTBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution. Lane 1: 2.5 µg/mL and Lane 2: 5 µg/mL.

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