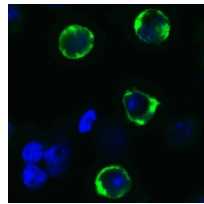


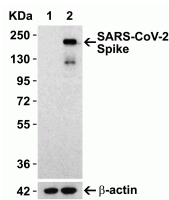


# SARS-CoV-2 (COVID-19) Spike Antibody (cleavage site)

Cat. No.: 9091

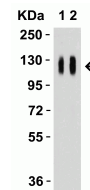


SARS-CoV-2 (COVID-19) Spike Antibody (cleavage site)



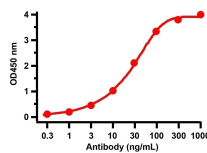
**Figure 2 Overexpression Validation in Spike Transfected 293 Cells**

Loading: 10 µg per lane of 293 cell lysate. Antibodies: SARS-CoV-2 (COVID-19) Spike (cleavage site), 9091 (0.5 µg/mL), 1h incubation at RT in 5% NFD/MTBST. 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



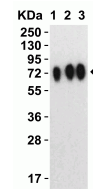
**Figure 3 Western Blot Validation with SARS-CoV-2 (COVID-19) Spike S1 Recombinant Protein**

Loading: 50 ng per lane of SARS-CoV-2 (COVID-19) Spike S1 recombinant protein (97-087). Antibodies: SARS-CoV-2 (COVID-19) Spike (cleavage site), 9091, 1h 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.



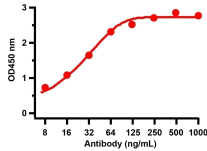
**Figure 4 ELISA Validation with SARS-CoV-2 (COVID-19) Spike S1 Recombinant Protein**

Antibodies: SARS-CoV-2 (COVID-19) Spike antibody (cleavage site), 9091 (1 µg/mL). A direct ELISA was performed using SARS-CoV-2 (COVID-19) Spike S1 recombinant protein (97-087) as coating antigen and the anti-SARS-CoV-2 (COVID-19) Spike antibody (cleavage site) as the capture antibody. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:20000 dilution. Detection range is from 0.3 ng/mL to 1000ng/mL.



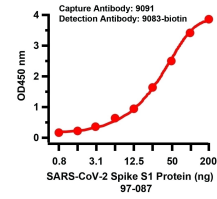
**Figure 5 Western Blot Validation with SARS-CoV-2 (COVID-19) Spike Recombinant Protein**

Loading: 30 ng per lane of SARS-CoV-2 (COVID-19) Spike RBD+SD1+SD2 recombinant protein, 10-305. Antibodies: SARS-CoV-2 (COVID-19) Spike (cleavage site), 9091, 1h incubation at RT in 5% NFD/MTBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution. Lane 1: 1 µg/mL, Lane 2: 2 µg/mL and Lane 3: 4 µg/mL.



**Figure 6 ELISA Validation with SARS-CoV-2 (COVID-19) Spike Recombinant Protein**

Antibodies: SARS-CoV-2 (COVID-19) Spike antibody (cleavage site), 9091. A direct ELISA was performed using SARS-CoV-2 (COVID-19) Spike RBD+SD1+SD2 recombinant protein, 10-305, as coating antigen and the anti-SARS-CoV-2 (COVID-19) Spike antibody (cleavage site) as the capture antibody. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:20000 dilution. Detection range is from 8 ng/mL to 1000ng/mL.



**Figure 7 ELISA Validation of SARS-CoV-2 Spike Antibody Pair**

A sandwich ELISA was performed using the anti-SARS-CoV-2 Spike S1 antibodies 9091 (10 µg/mL) as the capture antibody. Biotin-labeled anti-SARS-CoV-2 Spike S1 antibodies 9083-biotin (1 µg/mL) and streptavidin-HRP (0.1 µg/mL) were used for detection. Detection range is from 0.8 ng to 200 ng (SARS-CoV-2 Spike S1 Protein, 97-087).

## Ψ Specifications

<b>HOST SPECIES:</b>	Rabbit
<b>SPECIES REACTIVITY:</b>	Virus
<b>HOMOLOGY:</b>	Predicted reactivity based on immunogen sequence: SARS-CoV Spike proteins: (25%)
<b>IMMUNOGEN:</b>	Anti-SARS-CoV-2 (COVID-19) Spike Antibody (cleavage site) ( <b>9091</b> ) was raised against a peptide corresponding to 12 amino acids near the center of SARS-CoV-2 (COVID-19) Spike glycoprotein.  The immunogen is located within 650-700 amino acids of SARS-CoV-2 (COVID-19) Spike protein.
<b>TESTED APPLICATIONS:</b>	ELISA, IF, WB
<b>APPLICATIONS:</b>	WB: 0.5-4 µg/mL; IF: 20 µg/mL.  Antibody validated: Western Blot in human samples; Immunofluorescence in human samples. SARS-CoV-2 (COVID-19) Spike Antibody (cleavage site) can be used for the detection of SARS-CoV-2 (COVID-19) Spike protein in ELISA. It will detect 4 ng of free peptide at 1 µg/mL. Antibody can also be used for as capture antibody in Sandwich Elisa at 10 µg/mL. All other applications and species not yet tested.

## Ψ Properties

<b>PURIFICATION:</b>	SARS-CoV-2 (COVID-19) Spike Antibody (cleavage site) is affinity chromatography purified via peptide column.
<b>CLONALITY:</b>	Polyclonal
<b>ISOTYPE:</b>	IgG
<b>CONJUGATE:</b>	Unconjugated

<b>PHYSICAL STATE:</b>	Liquid
<b>BUFFER:</b>	SARS-CoV-2 (COVID-19) Spike Antibody (cleavage site) is supplied in PBS containing 0.02% sodium azide.
<b>CONCENTRATION:</b>	1 mg/mL
<b>STORAGE CONDITIONS:</b>	SARS-CoV-2 (COVID-19) Spike antibody (cleavage site) 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.

## Additional Info

<b>OFFICIAL SYMBOL:</b>	S
<b>ALTERNATE NAMES:</b>	SARS-CoV-2 (COVID-19) Spike Antibody (cleavage site): Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), Surface Glycoprotein, Spike protein
<b>ACCESSION NO.:</b>	QHD43416
<b>PROTEIN GI NO.:</b>	1791269090
<b>GENE ID:</b>	43740568
<b>USER NOTE:</b>	Optimal dilutions for each application to be determined by the researcher.

## Background and References

<b>BACKGROUND:</b>	<p>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). The structure of 2019-nCoV 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. Coronavirus invades cells through Spike (S) glycoproteins, a class I fusion protein. It is the major viral surface protein that coronavirus uses to bind to the human cell surface receptor. It also mediates the fusion of host and viral cell membrane, allowing the virus to enter human cells and begin infection (3). The spike protein is the major target for neutralizing antibodies and vaccine development (4). The protein modeling suggests that there is strong interaction between Spike protein receptor-binding domain and its host receptor angiotensin-converting enzyme 2 (ACE2), which regulate both the cross-species and human-to-human transmissions of COVID-19 (5). The recent study has shown that the SARS-CoV-2 spike protein binds ACE2 with higher affinity than SARS-CoV spike protein (6).</p>
<b>REFERENCES:</b>	<p>1) Gorbalenya. bioRxiv. 2020.</p> <p>2) Hui et al. Int J Infect Dis. 2020;91:264-266.</p> <p>3) Belouzard et al. Viruses. 2012;4(6):1011-33.</p> <p>4) Lee et al. J Virol. 2006;80(8):4079-87.</p> <p>5) Wan et al. J Virol. 2020.</p> <p>6) Wrapp et al. Science. 2020.</p>

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