

SARS-CoV-2 (COVID-19, 2019-nCoV) Spike Protein S1+S2 Extracellular Domain Antibody

Catalog ab-131-291

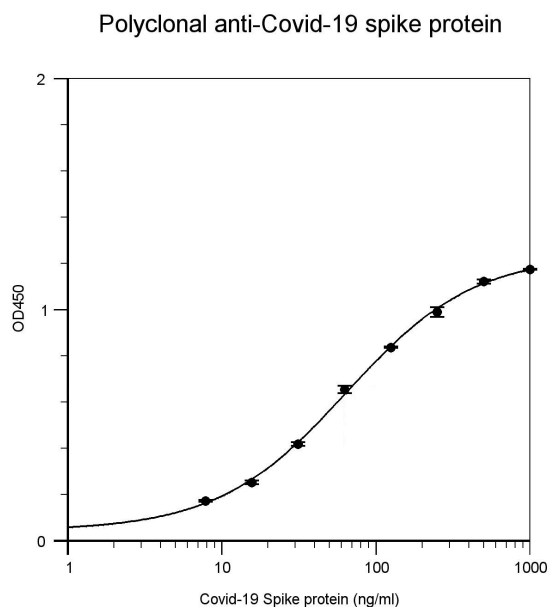


Figure 1 ELISA test of chicken anti- COVID-19 spike protein.

Antibodies: SARS-CoV-2 (COVID-19, 2019-nCoV) Spike (S1+S2) antibody (1 µg/mL). A direct ELISA was performed using purified COVID-19 Spike protein (S1+S2) as coating antigen and the anti-SARS-CoV-2 (COVID-19, 2019-nCoV) Spike (S1+S2) antibody as the primary antibody. Secondary: Rabbit anti-chicken IgY Fc HRP conjugate at 65ng/ml.

SPECIFICATIONS

HOST SPECIES:	Chicken
SPECIES REACTIVITY:	Virus
HOMOLOGY:	Predicted reactivity based on immunogen sequence: SARS-CoV Spike protein (S1+S2): (100%)
IMMUNOGEN:	Anti-SARS-CoV-2 (COVID-19, 2019-nCoV) Spike antibody was raised against recombinant SARS-CoV-2 (2019-nCoV) spike protein (S1+S2) extracellular domain. The immunogen is the full length extracellular spike proteins (1209 amino acids) produced using insect cell line expression and purified by polyhistidine tag at the C terminus. The mass of the immunogen is 134.4 kDa.

	Immunogen has been tested for activity and can bind with human ACE2 in functional ELISA assay.
TESTED APPLICATIONS:	ELISA
APPLICATIONS:	SARS-CoV-2 (COVID-19, 2019-nCoV) Spike antibody can be used for the detection of full length extracellular SARS-CoV-2 (COVID-19, 2019-nCoV) Spike protein (S1+S2) by ELISA.

PROPERTIES

CLONALITY:	Polyclonal
ISOTYPE:	IgY (IgG)
CONJUGATE:	Unconjugated
PHYSICAL STATE:	Liquid
BUFFER:	SARS-CoV-2 (COVID-19, 2019-nCoV) Spike Antibody is supplied in PBS containing 0.02% sodium azide.
CONCENTRATION:	1 mg/mL
VOLUME	200µl
STORAGE CONDITIONS:	SARS-CoV-2 (COVID-19, 2019-nCoV) Spike antibody 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 INFORMATION

ALTERNATE NAMES:	SARS-CoV-2 (COVID-19, 2019-nCoV) Spike Antibody: Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), Surface Glycoprotein, Spike protein
ACCESSION NO.:	QHD43416
PROTEIN GI NO.:	1791269090

GENE ID:	43740568
BACKGROUND AND REFERENCES	
BACKGROUND:	<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, originated from the Wuhan region of Hubei province in China late in 2019 (1). Coronavirus invades cells through spike protein mediated binding human airway epithelial cell surface receptor Angiotensin converting enzyme 2 (ACE2). Spike protein also mediates fusion of host and viral cell membrane to begin infection (2). Spike protein is the major target for neutralizing antibodies and vaccine development (3).</p> <p>The spike protein is a large type I transmembrane protein containing two subunits, S1 and S2. S1 mainly contains a receptor binding domain, which is responsible for recognizing the cell surface receptor. S2 contains basic elements needed for the membrane fusion.</p> <p>Protein modeling suggests that there is a 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 (4). A recent study has shown that the SARS-CoV-2 spike protein binds ACE2 with higher affinity than SARS-CoV spike protein (5).</p>
REFERENCES:	<ol style="list-style-type: none"> 1) Gorbalenya. bioRxiv: 2020. 2) Belouzard et al. Viruses. 2012;4(6):1011-33. 3) Lee et al. J Virol. 2006;80(8):4079-87. 4) Wan et al. J Virol. 2020. 5) Wrapp et al. Science. 2020.