

SARS-CoV-2 (COVID-19) Spike RBD Recombinant Antibody | SARS-CoV-2 recombinant antibody

SARS-CoV-2 (COVID-19) Spike RBD Single Domain Antibody [T5P8-F9]

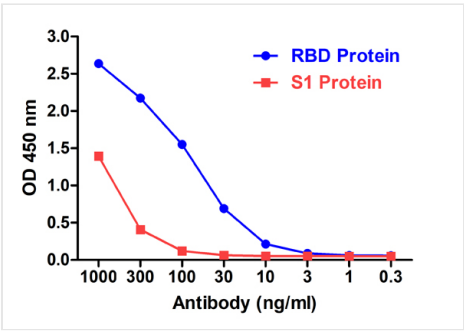
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA40981	Llama	Virus	ELISA

PRODUCT SYNONYMS

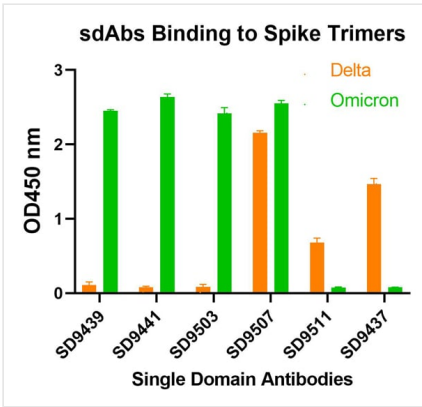
SARS-CoV-2 (COVID-19) Spike RBD; Monoclonal Recombinant Antibody; SARS-CoV-2 (COVID-19) Spike RBD Single Domain Antibody [T5P8-F9]; SARS-CoV-2 (COVID-19) Spike S1 Antibody; Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2); Surface Glycoprotein; Spike protein; surface glycoprotein; SARS-CoV-2 recombinant antibody

PRODUCT SPECIFICATIONS

Host	Llama
Reactivity	Virus
Clonality	Monoclonal
Clone Number	T5P8-F9
Purity/Purification	SARS-CoV-2 (COVID-19) S1 RBD Antibody [T5P8-F9] is affinity chromatography purified via Nickel column. Antibody is supplied as a His-tagged purified protein. It also contains a myc-tag for detection.
Form/Format	Liquid; SARS-CoV-2 (COVID-19) S1 RBD Antibody [T5P8-F9] Antibody is supplied in PBS.
Applicable Applications for SARS-CoV-2 recombinant antibody	ELISA
Immunogen	SARS-CoV-2 S protein RBD containing C-terminal His Tag. The protein was expressed in human 293 cells (HEK293). It contains amino acids Arg 319 - Lys 537.
Research Area	Infectious Disease, COVID-19
NCBI Organism	SARS-CoV-2
Preparation and Storage	SARS-CoV-2 (COVID-19) Spike RBD antibody should be stored in working aliquots at -20 degree 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.



ELISA
Figure 2 ELISA Validation with SARS-CoV-2 (COVID-19) Spike RBD and S1 Proteins Antibodies: SARS-CoV-2 (COVID-19) Spike RBD Antibody, AAA40981. A direct ELISA was performed using SARS-CoV-2 Spike recombinant proteins (RBD, 10-303; S1, 97-087) as coating antigen at 1ug/mL and the anti-SARS-CoV-2 (COVID-19) Spike RBD antibody (AAA40981) as the capture antibody, following by anti-cMyc-tag antibody (PM-7669) at 1ug/mL. Secondary: Goat anti-mouse IgG HRP conjugate at 1:5000 dilution. Detection range is from 0.3 ng/mL to 1000 ng/mL. SARS-CoV-2 (COVID-19) Spike RBD Antibody, AAA40981 can detect spike RBD protein at 10 ng/mL and can weakly detect spike S1 protein at 200 ng/mL.



ELISA
Figure 1 ELISA Validation with SARS-CoV-2 (COVID-19) Spike Trimer Proteins of Omicron and Delta Variants Antibodies: SARS-CoV-2 (COVID-19) Spike S1 RBD Antibodies. A direct ELISA was performed using SARS-CoV-2 Spike Trimer recombinant proteins of Omicron and Delta variants as coating antigen at 1ug/mL and each of the 6 anti-SARS-CoV-2 (COVID-19) Spike S1 RBD antibodies as the capture antibody, following by anti-cMyc-tag antibody (PM-7669) at 1ug/mL. Secondary: Goat anti-mouse IgG HRP conjugate at 1:5,000 dilution. Detection range is from 0.3 ng/mL to 1000 ng/mL. SD9439, SD9441, and AAA40981 bind spike proteins of omicron variant, but not delta variant; SD9511 and SD9437 bind spike proteins of delta variant, but not omicron variant; SD9507 binds spike proteins of delta and omicron variants.

ADDITIONAL INFORMATION

Related Product Information for SARS-CoV-2 recombinant antibody	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).
Product Categories/Family for SARS-CoV-2 recombinant antibody	Primary Antibodies
References	Gorbalenya. bioRxiv: 2020. Hui et al. Int J Infect Dis. 2020;91:264-266. Belouzard et al. Viruses. 2012;4(6):1011-33. Lee et al. J Virol. 2006;80(8):4079-87. Wan et al. J Virol. 2020. Wrapp et al. Science. 2020.

NCBI AND UNIPROT INFORMATION

NCBI GI #	1791269090
NCBI GeneID	43740568

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.