

SARS-CoV-2 (COVID-19) Spike S2 Recombinant Antibody | SARS-CoV-2 recombinant antibody

SARS-CoV-2 (COVID-19) Spike S2 Single Domain Antibody [P1G5]

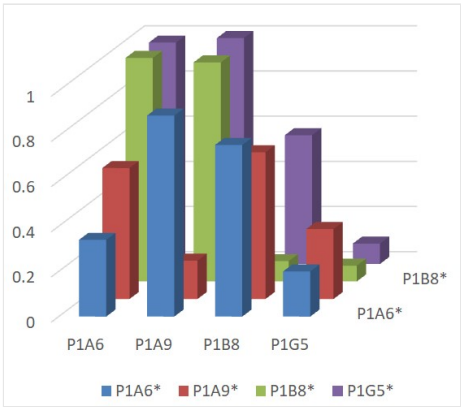
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA40986	Llama	Virus	ELISA

PRODUCT SYNONYMS

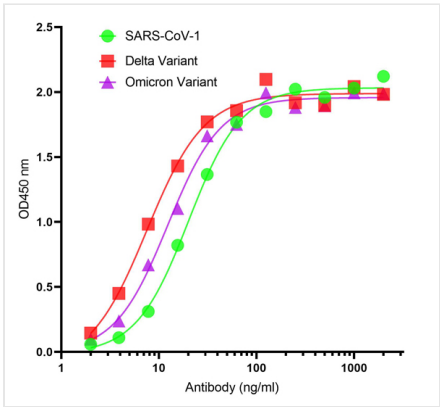
SARS-CoV-2 (COVID-19) Spike S2; Monoclonal Recombinant Antibody; SARS-CoV-2 (COVID-19) Spike S2 Single Domain Antibody [P1G5]; SARS-CoV-2 (COVID-19) Spike S2 Antibody; Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2); Surface Glycoprotein; Spike protein; surface glycoprotein; SARS-CoV-2 recombinant antibody

PRODUCT SPECIFICATIONS

Host	Llama
Reactivity	Virus
Clonality	Monoclonal
Clone Number	P1G5
Purity/Purification	SARS-CoV-2 (COVID-19) Spike S2 Antibody 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) Spike S2 Antibody is supplied in PBS.
Applicable Applications for SARS-CoV-2 recombinant antibody	ELISA
Immunogen	SARS-CoV-2 Spike S2 protein containing C-terminal His Tag. The protein was expressed in human 293 cells (HEK293). It contains amino acids Ser 686 - Pro 1213.
Research Area	Infectious Disease, COVID-19
NCBI Organism	SARS-CoV-2
Preparation and Storage	SARS-CoV-2 (COVID-19) Spike S2 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 Epitope Mapping of four Spike S2 Antibodies by Direct Competitive ELISA A direct competitive ELISA was developed for the epitope mapping using Spike trimer proteins of SARS-CoV-2 Delta variant at 1ug/ml as the coating antigen and biotinylated Spike S2 single domain antibodies (sdAbs) as the competitive antibodies. The sdAb mixtures (biotinylated and unconjugated sdAbs) were added to ELISA plate and streptavidin-HRP was used to detect the captured biotinylated sdAbs. The assay suggests the antibodies bind to different epitopes of the Spike trimer.



ELISA
Figure 1 ELISA Validation with Spike Trimer Proteins of SARS-CoV-2 Variants and SARS-CoV-1 Antibodies: SARS-CoV-2 (COVID-19) Spike S2 Antibody, AAA40986. A direct ELISA was performed using Spike trimer protein of SARS-CoV-2 Variants (Delta and Omicron) and SARS-CoV-1 as coating antigens at 1ug/mL and the anti-SARS-CoV-2 (COVID-19) Spike S2 antibody (AAA40986) 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 16 ng/mL to 2000 ng/mL.

ADDITIONAL INFORMATION

Related Product Information for SARS-CoV-2 recombinant antibody	As SARS-CoV-2 Spike S2 protein is more conserved among coronaviruses than Spike S1 protein, antibodies against spike S2 protein may react with more Coronaviruses, serving as a pan-coronavirus antibody. The functional characteristics analysis revealed that P1G5 has excellent binding activity to spike trimer of SARS-CoV-1, and SARS-CoV-2 variants (delta and omicron). Biotinylated P1G5 can still bind spike trimer of SARS-CoV-2. In addition, P1G5 and another three spike S2 sdAbs (P1A6, P1A9, and P1B8) belong to different families based on their sequence alignment, and epitope mapping experiment indicated that they may bind to different epitopes with different affinity to the different strains in the binding ELISA. Our data showed that these spike S2 sdAbs bind spike trimer of both SARS-CoV-2 and SARS-CoV-1, suggesting that these spike S2 sdAbs have potentials as a novel and efficient tool suitable for pan-coronavirus studies as well as for identification of various coronaviruses and their variants from clinical samples.
Product Categories/Family for SARS-CoV-2 recombinant antibody	Primary Antibodies

NCBI AND UNIPROT INFORMATION

NCBI GI #	1791269090
NCBI GeneID	43740568
NCBI Official Full Name	Spike glycoprotein

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.