SARS-CoV-2 Spike (N501) Neutralizing Antibody (COV2110)

Cat. No.: A02110

Overview

Specificity	The product is specific for N501 site of wild-type RBD.For specific mutant protein, the product recognizes wild-type RBD, RBD single mutant (E484K), and RBD single mutant (K417N), but not recognizes RBD single mutant (N501Y) and RBD triple mutant (K417N, E484K and N501Y), as seen in Figure 2.
Host Species	Humanized
Immunogen	Recombinant SARS-CoV-2 RBD Protein
Conjugate	Unconjugated

Applications

Working concentrations for specific applications should be determined by the investigators. The appropriate concentrations may be affected by secondary antibody affinity, antigen concentration, the sensitivity of the method of detection, temperature, the length of the incubations, and other factors. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

Application	Recommended Usage
ELISA	0.05-1 µg/ml
Surrogate Virus Neutralization Test (sVNT)	0.1-1 µg/ml

Properties

Form	Liquid
Storage Buffer	Supplied in 0.2 µm filtered PBS, pH 7.2.
Concentration	1 mg/ml
Storage Instructions	Store at -20℃. This product is stable for 1 year upon receipt, when handled and stored as instructed. Avoid repeated freezing and thawing cycles.

Purification	Affinity chromatography
Isotype	Recombinant human IgG1
Clonality	Monoclonal
Clone ID	COV2110
Note	GenScript can customize this product per customer's request including product size, buffer components, etc.

Examples

SARS-CoV-2 Spike (N501) NAb (COV2110) binds with wild-type SARS-CoV-2 S1-RBD and RBD mutants
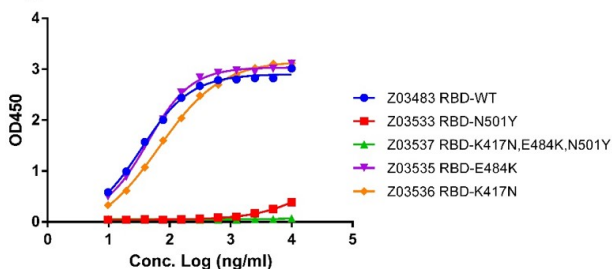
Figure 2

ELISA binding of SARS-CoV-2 Spike (N501) Neutralizing Antibody (COV2110) (GenScript, A02110) with wild-type SARS-CoV-2 S1-RBD and SARS-CoV-2 S1-RBD mutants

Coating antigen:

SARS-CoV-2 S-RBD WT (GenScript, Z03483)	2 µg/ml
SARS-CoV-2 S-RBD N501Y (GenScript, Z03533)	2 µg/ml
SARS-CoV-2 S-RBD E484K+K417N+N501Y (GenScript, Z03537)	2 µg/ml
SARS-CoV-2 S-RBD E484K (GenScript, Z03535)	2 µg/ml
SARS-CoV-2 S-RBD K417N (GenScript, Z03536)	2 µg/ml

SARS-CoV-2 Spike (N501) Neutralizing Antibody (COV2110) (GenScript, A02110) dilution start from 10 µg/ml.

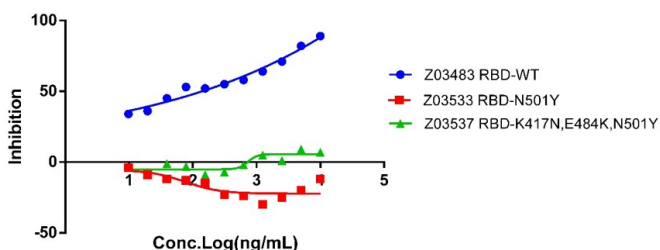Inhibition of SARS-CoV-2 Spike (N501) NAb (COV2110)

Figure 1

SARS-CoV-2 Spike (N501) Neutralizing Antibody (COV2110) (GenScript, A02110) blocks SARS-CoV-2 S1 RBD binding with Human ACE2 recombinant protein.

Coating antigen: ACE2, 2 µg/ml.

SARS-CoV-2 S-RBD final concentration:

SARS-CoV-2 S-RBD WT (GenScript, Z03483)	50 ng/ml
SARS-CoV-2 S-RBD B.1.1.7/N501Y (GenScript, Z03533)	50 ng/ml
SARS-CoV-2 S-RBD B.1.351/E484K+K417N+N501Y (GenScript, Z03537)	50 ng/ml

SARS-CoV-2 Spike (N501) Neutralizing Antibody (COV2110) (GenScript, A02110) dilution start from 10 µg/ml.

Background

Target Background : SARS-CoV-2 (Severe acute respiratory syndrome coronavirus 2), also known as 2019-nCoV, is a positive-sense single-stranded RNA virus. It caused coronavirus disease in 2019 (COVID-19). SARS-CoV-2 contains glycosylated spike (S) protein, which is composed of S1 subunit and S2 subunit. The S1 contains a receptor-binding domain (RBD) that can bind to ACE2 receptor on target cells. Lineage B.1.351 (a.k.a. 20H/501Y.V2) is a variant of SARS-CoV-2. It has multiple mutations in the RBD, including K417N, E484K, N501Y. Lineage B.1.1.7 (a.k.a. 20I/501Y.V1) is also a variant of SARS-CoV-2 and has a mutation called N501Y in the RBD.SARS-CoV-2 Spike (N501) Neutralizing Antibody (COV2110) is produced from cell culture in vitro under conditions free from animal-derived components. The product is a humanized neutralizing antibody, recognizing N501 site of wild-type RBD. When N501 is mutated to N501Y, the mutant RBD, such as RBD (B.1.1.7) and RBD (B.1.351) as seen in Figure 1, can't be recognized by the product.

Synonyms : 2019-nCoV RBD (N501) Neutralizing Antibody，SARS-CoV-2 RBD (N501) humanized antibody.

For laboratory research use only. Direct human use, including taking orally and injection and clinical use are forbidden.