

Affinity-purified Polyclonal Antibody against SARS-CoV-2 Spike Protein

Catalog Number: 41A251

Size: 100µg

Host: Rabbit

Introduction: The SARS-CoV-2 glycosylated spike (S) protein highly exposed on the viral surface is a major determinant for virus binding and invasion into host cells, which is a main target for neutralization antibody. The receptor-binding domain (RBD) in SARS-CoV-2 S protein is responsible for binding to human and bat angiotensin-converting enzyme 2 (ACE2) receptors.

Immunogen: Mammalian cell-expressed recombinant SARS-CoV-2 S1RBD.

Purification:

Affinity purification with recombinant SARS-CoV-2 S1RBD as an affinity ligand.

Isotype: Mainly IgG

Formulation and Storage: 100 µg in PBS with 0.02% azide. Store at -20°C. For long-term storage, aliquot and freeze at -80°C. Avoid repeated freeze/thaw cycles. Spin the tube briefly before opening the tube.

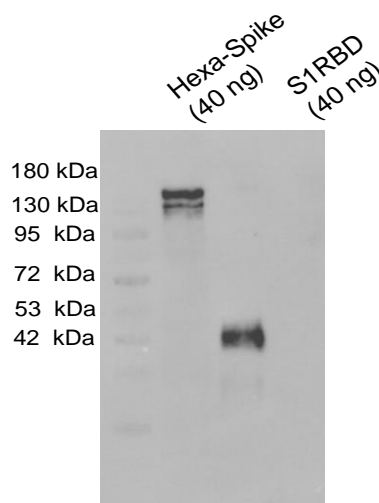
Application/Usage:

ELISA: This antibody can be used at 1-3 µg/ml with appropriate secondary detection antibody to detect SARS-CoV-2 S or S1RBD.

	Spike protein	S1 RBD
Blank	0.16	0.138
COVID-19 patients (1:100 dilution)	6.371	6.082
	6.468	6.284
	6.691	6.188

The value each column is OD₄₅₀

Western blot: This antibody can be used at 1-2 µg/ml followed by HRP-conjugated Anti-Rabbit IgG Secondary Antibody to detect SARS-CoV-2 S protein or S1RBD.



Note: Optimal dilutions should be determined by each laboratory for each application.

Neutralizing assay: The microplate coated with 2 µg/ml S1RBD was incubated with various concentration of anti-S1RBD polyclonal antibody, followed by incubation of HRP-conjugated human ACE2 (Cat. No. 41A249R) to determine the ability of anti-S1RBD polyclonal antibody to suppress the interaction between S1RBD and its receptor ACE2.

Antibody Concentration	Inhibition (%)
20 ug/ml	86.58
10 ug/ml	86.01
5 ug/ml	81.54
2.5 ug/ml	76.57
1.25 ug/ml	64.57

Reference

1. Shajahan A, *et al.* (2020) Deducing the N- and O-glycosylation profile of the spike protein of novel coronavirus SARS-CoV-2. bioRxiv, <https://doi.org/10.1101/2020.04.01.020966>.
2. Walls, A C, *et al.* (2020) Structure, Function, and Antigenicity of the SARS-CoV-2 Spike Glycoprotein. Cell, 181(2), 281-292.e6. <https://doi.org/10.1016/j.cell.2020.02.058>.