Recommended Pair - SARS-CoV-2 Nucleoprotein (NP) rabbit mAb (75G5a)

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Catalog: #2481

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For Research Use Only. Not For Use In Diagnostic Procedures.

Applications	Detection	Clonality	Isotype
ELISA	Anti-Rabbit IgG	Monoclonal	Other

Format: Unconjugated

Cross Reactivity: Highly-specific to SARS-CoV-2 nucleoprotein; does not cross-react with nucleoprotein from SARS-CoV or other coronaviruses.

Formulation: 1X PBS, 0.02% NaN3

Preparation: Protein A

Reactivity: Other

Recommended Usage: Used for specific, high-sensitivity detection of SARS-CoV-2 nucleocapsid protein (NP) in immunoassay. Can be paired with other NP-specific clones for detection in sandwich ELISA format.

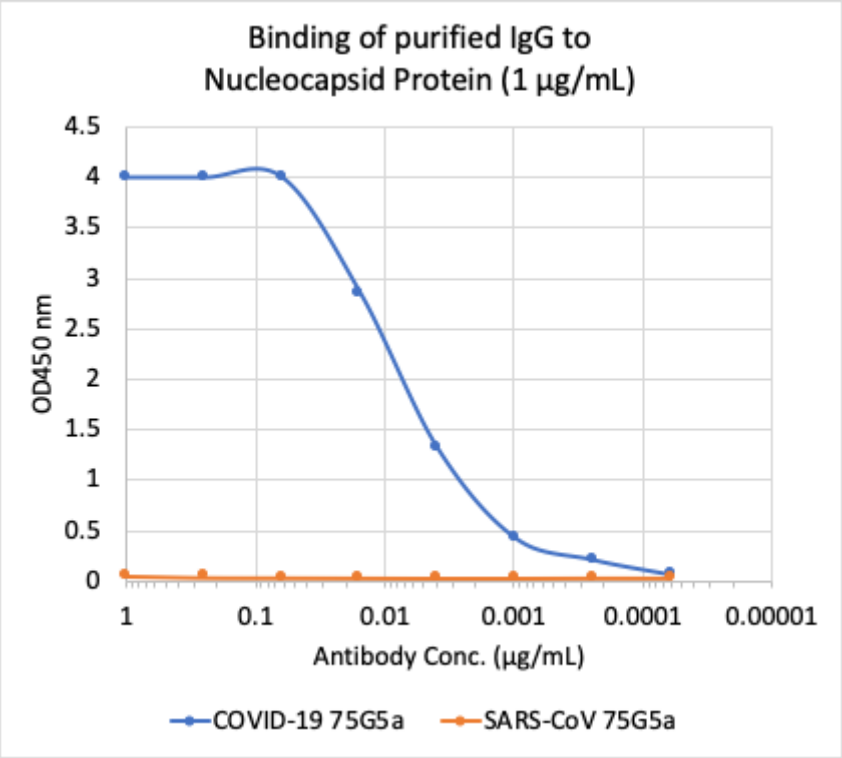
Immunogen: N/A

Description:

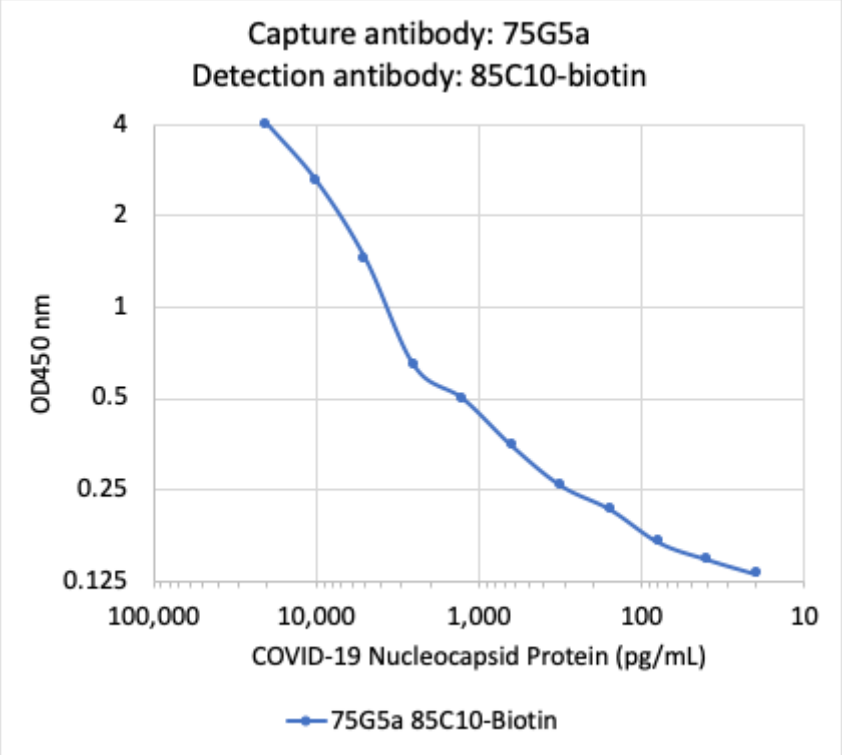
For highest sensitivity, we recommend pairing unconjugated clone 75G5a (Abwiz Cat. #2481), immobilized on the ELISA plate to capture COVID-19 NP antigen, with biotin-conjugated clone 85C10 (Abwiz Cat. #2507) for detection using high-sensitivity streptavidin-HRP (Pierce #21130). Other unconjugated and biotinylated anti-NP clones are provided as alternatives and also show high sensitivity and specificity.

We have leveraged our next-generation rabbit mAb discovery platform to develop recombinant rabbit monoclonal antibodies with extremely high sensitivity and specificity to SARS-CoV-2. These antibodies, which include clones 75G5a (Abwiz Cat. #2481), 84C4a (Abwiz Cat. #2486), 84D7 (Abwiz Cat. #2491), and 85C1 (Abwiz Cat. #2496) can be paired in sandwich detection assay and used to detect nucleoprotein (NP) antigen from SARS-CoV-2. Antibodies 75G5a, 84C4a, and 84D7 do not cross-react to the highly related SARS-CoV virus or to any other coronaviruses tested. Sandwich ELISA detection using TMB/acid developer reliably detects NP antigen in the pg/mL range, and sensitivity is expected to be even higher when using more sensitive developer strategies. This panel of antibodies can be used as raw materials for diagnostic kits and can be applied to lateral flow systems for diagnostic detection of COVID-19.

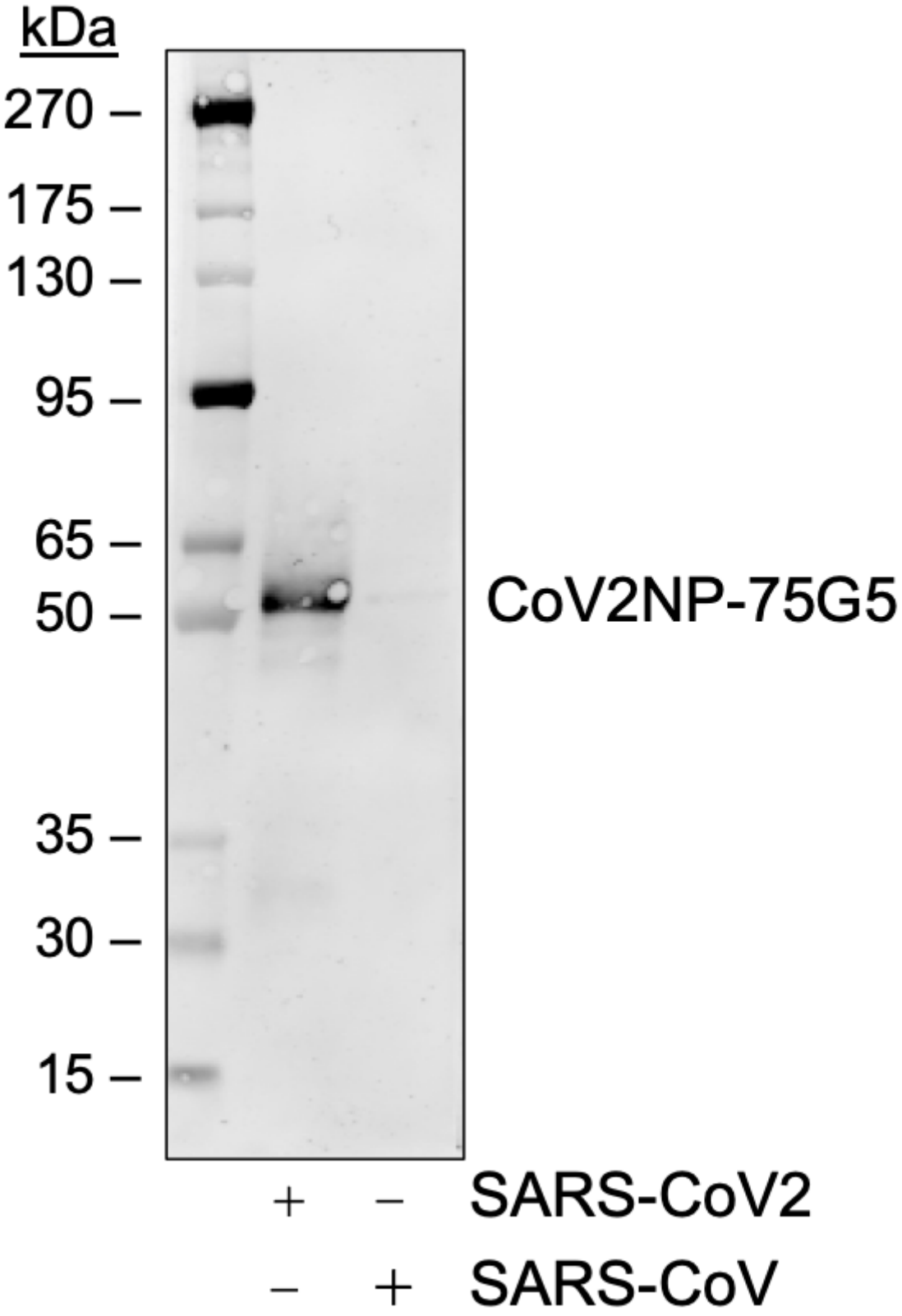
References:



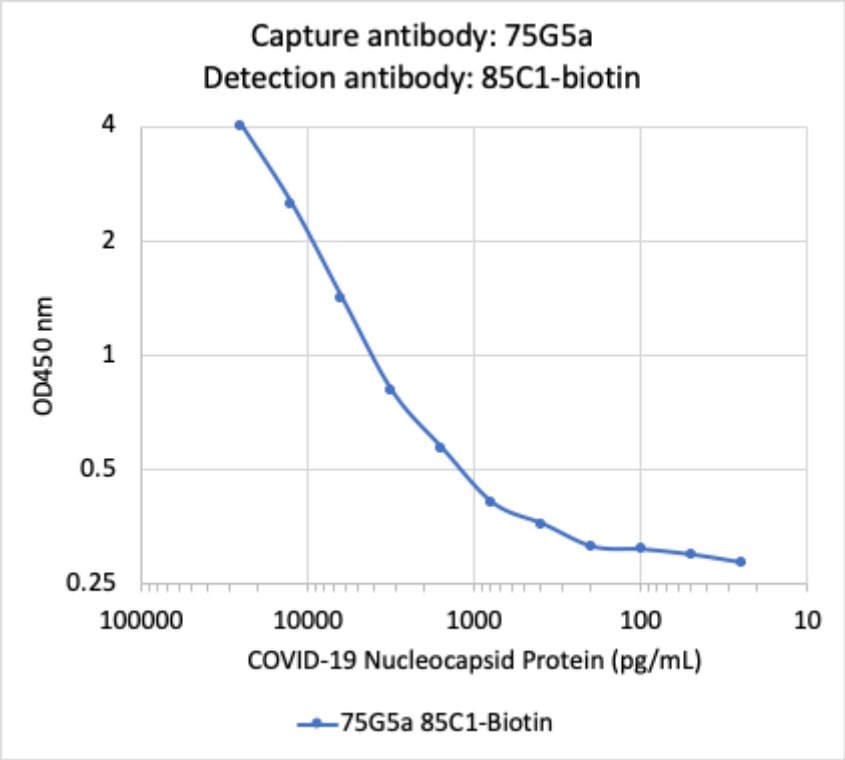
Microtiter wells were coated with SARS-CoV-2 (COVID-19) Nucleocapsid Protein (NP) and SARS-CoV NP at 1 ug/mL. Purified rabbit monoclonal antibody 75G5a (Cat# 2481) was serially diluted 1:2 starting at 1 ug/mL, and shows very strong and specific binding to



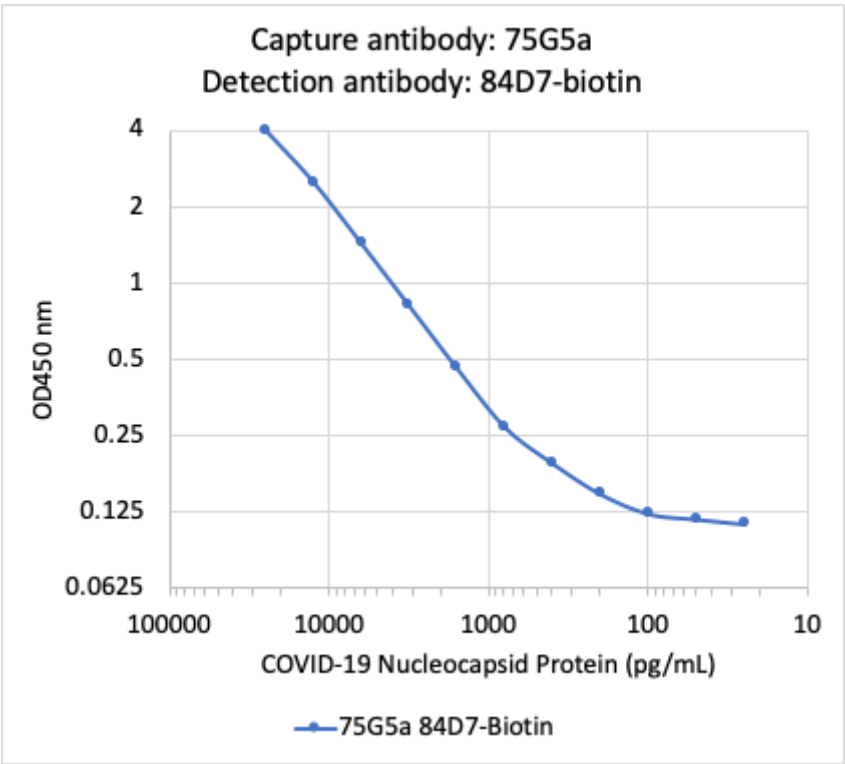
A sandwich ELISA was performed using SARS-CoV-2 (COVID-19) Nucleocapsid Protein (NP) specific rabbit monoclonal antibodies: 75G5a (Cat# 2481) as a capture antibody and 85C10-biotin (Cat# 2507) as a detection antibody. COVID-19 NP was serially diluted 1:2



Western blot analysis of SARS-CoV2 and SARS-CoV nucleocapsid protein (50 ng) probed with 1 ug/mL CoV2NP rabbit monoclonal Antibody (75G5a), CoV2NP-75G5. Cat. #2481.



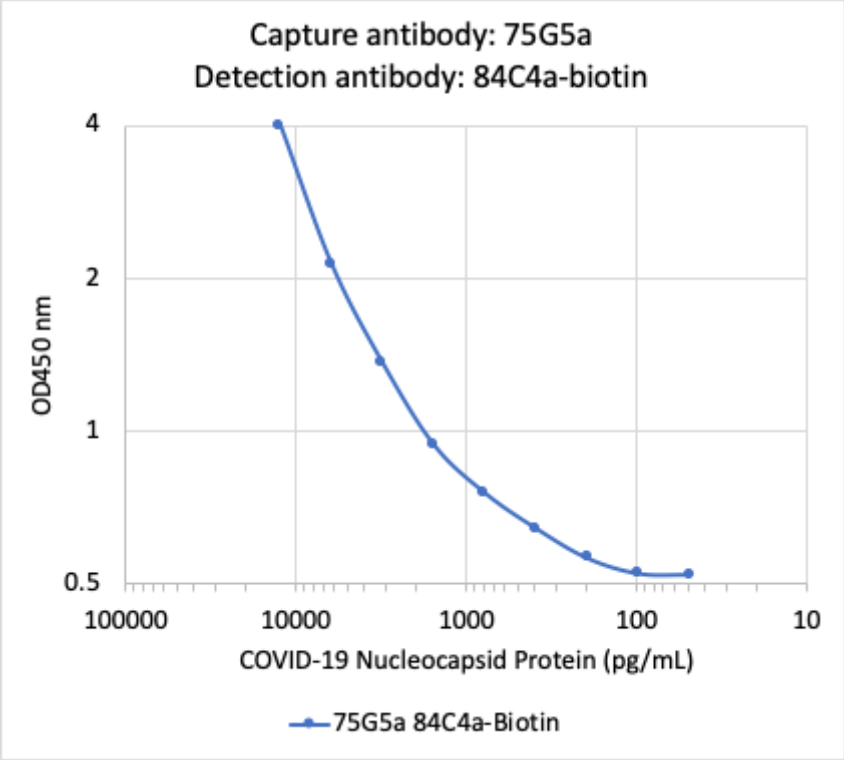
A sandwich ELISA was performed using SARS-CoV-2 (COVID-19) Nucleocapsid Protein (NP) specific rabbit monoclonal antibodies: 75G5a (Cat# 2481) as a capture antibody and 85C1-biotin (Cat# 2497) as a detection antibody. COVID-19 NP was serially diluted 1:2 s



A sandwich ELISA was performed using SARS-CoV-2 (COVID-19) Nucleocapsid Protein (NP) specific rabbit monoclonal antibodies: 75G5a (Cat# 2481) as a capture antibody and 84D7-biotin (Cat# 2492) as a detection antibody. COVID-19 NP was serially diluted 1:2 s

Clone	K_D (M)	K_{on} (1/Ms)	K_{Off} (1/s)
75Ga	$8.25x10^{-11}$	$1.36x10^{5}$	$1.12x10^{-5}$
84C4a	$9.38x10^{-11}$	$1.53x10^{5}$	$1.43x10^{-5}$
84D7	$2.23x10^{-10}$	$7.43x10^{4}$	$1.66x10^{-5}$

Affinity measurement of SARS-CoV-2 (75Ga) antibody.



A sandwich ELISA was performed using SARS-CoV-2 (COVID-19) Nucleocapsid Protein (NP) specific rabbit monoclonal antibodies: 75G5a (Cat# 2481) as a capture antibody and 84C4a-biotin (Cat# 2487) as a detection antibody. COVID-19 NP was serially diluted 1:2