

SARS-CoV-2 Antibody Pairs For Rapid COVID-19 Antigen Assays

In May 2020, the FDA announced the approval of the first antigen test to help in the rapid detection of the virus that causes COVID-19. The performance of a rapid antigen test is limited by the sensitivity of the antibodies used.

Meridian's antibodies are highly sensitive for the detection of SARS-CoV-2 and they are ideal for developing reliable and sensitive rapid antigen assays for the detection of active COVID-19 infections. Meridian's novel monoclonal antibody pair to trimeric SARS-CoV-2 S1 protein is capable of recognizing the spike 1 (S1) protein in saliva samples regardless of its confirmation state (e.g. "up" or "down"). The antibodies bind to a linear epitope on the S1 protein that is distinct from the RBD protein which has epitopes that are conformation-dependent. Recent studies have shown that linear epitopes on the S1 protein are able to elicit neutralizing antibodies in COVID-19 patients and have potent antigenicity, making them prime targets for diagnostic, therapeutic and vaccine targets.

Li, Y., Lai, D., Zhang, H. *et al.* Linear epitopes of SARS-CoV-2 spike protein elicit neutralizing antibodies in COVID-19 patients. *Cell Mol Immunol* (2020).

TRIMERIC SPIKE ANTIBODIES

- ✓ For use in lateral flow antigen detection COVID-19 assays
- ✓ Designed to work on saliva samples (no lysis required)
- ✓ Novel antibody pair to the trimeric form of the Spike 1 surface glycoprotein, recognizes both the G614 and D614G strains
- ✓ Recognizes a linear epitope - binding is not conformation-dependent
- ✓ Sensitivity of approx. 300 pg/mL in ELISA
- ✓ Does not cross-react with SARS-CoV, HCoV-229E, HCoV-HKU1, HCoV-NL63 and HCoV-OC43

Capture Antibody:

Cat# 9550 MAb to SARS-CoV-2 S1 (Trimeric)

Detection Antibody:

Cat# 9551 MAb to SARS-CoV-2 S1 (Trimeric)

NUCLEOCAPSID ANTIBODIES

- ✓ For use in lateral flow antigen detection COVID-19 assays
- ✓ Highly sensitive antibody pair currently used in commercial diagnostic kits worldwide (LOD: 2.87×10^3 TCID₅₀/mL, heat-inactivated culture fluid)
- ✓ Manufactured in multigram quantities weekly
- ✓ No cross-reaction with other respiratory pathogens, e.g., MERS-Coronavirus, Human Coronavirus (NL63, 229E and OC43), Influenza A, Influenza B, Respiratory Syncytial Virus (RSV) (A and B), Streptococcus A, Mycoplasma, Human Adenovirus (Types 1, 3, 5, 7, 8, 11, 18, and 23), Human Parainfluenza Virus (Types 1, 2, 3 and 4), Human Rhinovirus (Types 1, 14 and 42) and Human Metapneumovirus

Capture Antibody:

Cat# 9548 MAb to SARS-CoV-2 NP

*pairs with both detection antibodies 9547 and 9549

Detection Antibody:

Cat# 9547 MAb to SARS-CoV-2 NP

Cat# 9549 MAb to SARS-CoV-2 NP

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