

The NYSDOH Wadsworth Center's Assay for SARS-CoV-2 IgG



Department of Health

The Wadsworth Center (WC), the public health laboratory of the New York State Department of Health (NYSDOH), has developed an antibody test for the virus that causes Coronavirus 2019 (COVID-19) disease. Below are several questions and answers that will address concerns you may have.

What is SARS-CoV-2?

SARS-CoV-2 stands for Severe Acute Respiratory Syndrome Coronavirus Type 2, which is the name of the virus causing the current COVID-19 pandemic.

What is the Wadsworth Center's antibody test for SARS-CoV-2?

WC has developed a test for detecting IgG antibodies to SARS-CoV-2, the virus that causes COVID-19. The test is a microsphere immunoassay (MIA) which can detect IgG antibodies in blood. The blood can be collected using a dried-blood spot card. Dried-blood spot specimens can be collected by pricking the finger and collecting drops of blood onto a paper card. The cards are dried and then shipped to the WC for testing.

What is an IgG antibody?

Antibodies develop when the immune system responds to a germ, usually a virus or a bacterium. With other diseases, IgG is one type of antibody that usually develops 3 to 4 weeks after infection with the germ and lasts for a long time. Once you have IgG antibodies, your immune system may recognize the germ and be able to fight it the next time you are exposed to it. Infection with the SARS-CoV-2 virus does seem to result in the production of IgG antibodies, though it isn't known exactly when that happens and if it happens to everybody.

What test results will be reported?

The results for this test are reported as reactive, nonreactive, or indeterminate. It is important to understand that this is a novel virus and we continue to advance in our understanding of COVID-19. Discuss any concerns or questions you may have about COVID-19 with your medical provider.

What does a reactive result mean?

A reactive result on this test indicates that IgG antibodies to SARS-CoV-2 were present in the blood specimen. A reactive result can mean you had infection with SARS-CoV-2 in the past or it can mean you are currently infected. If you did not test positive for SARS-CoV-2 already, another test may be needed to see if you are currently infected*

**Note: A reactive result may be due to past or present infection with non-SARS-CoV-2 strains. However, specificity for the Wadsworth Center (WC) SARS-CoV-2 IgG test has been determined to be 93 to 100%. Therefore, significant cross-reactivity to other known respiratory viruses is not expected.*

What does a nonreactive result mean?

A nonreactive result on this test means that IgG antibodies to SARS-CoV-2 were not present in the blood. However, you may still be infected with SARS-CoV-2. An additional test would be needed to determine if you are infected or not. This test is called a molecular diagnostic test and can be done with a swab of your nose or throat or a test of your spit.

What does an indeterminate result mean?

An indeterminate result means that the test did not produce a clear nonreactive or reactive result. This could happen if the test reacted with other antibodies in the blood or if you do have SARS-CoV-2 IgG antibodies, but the levels are still too low to be reported as reactive.

Is a person with a reactive result on the WC SARS-CoV-2 IgG test immune to COVID-19?

This won't be known until people who have IgG levels are exposed again to SARS-CoV-2 and we can study whether any of them are infected again. It is also not known how long the IgG antibodies will last. It will take time to find these answers. In the meantime, this test is the best we can do to indicate some sort of immunity.

Can a health care worker who has a reactive SARS-CoV-2 IgG test return to work?

It is not known whether having IgG antibodies means that you are still infected or are immune. Therefore, you need to follow the NYSDOH guidelines for returning to work. They can be found at <https://coronavirus.health.ny.gov/information-healthcare-providers>.

It is recommended that health care workers continue to follow the current COVID-19 infection control precautions, including continuing to wear PPE. This test is not required to return to work.

Who should be tested for SARS-CoV-2 IgG?

SARS-CoV-2 IgG can provide information about your immune status. However, IgG antibodies are usually produced weeks after the initial infection. Therefore, this test should not be conducted until at least 21 days have passed since you had a positive viral (molecular diagnostic) test or the symptoms of COVID-19 started.

If you were already tested and the results were negative, or you have never been tested and you have been exposed to the virus at work or at home, you can also be tested using the dried-blood spot test.

Any questions may be directed to: NYS.COVID19.AntibodyTestingSystem@health.ny.gov

For more information on COVID-19 in NYS go to: <https://health.ny.gov/coronavirus>