

Different types of coronavirus tests

	Molecular Test	Antigen Test	Antibody Test
Also known as	Diagnostic test, virus test, molecular test, nucleic acid amplification test (NAAT), RT-PCR test, LAMP test	Rapid diagnostic test (Some molecular tests are also rapid tests.)	Antibody serology test Serological test, serology, blood test, serology test
Basis of the test	Reverse transcription polymerase chain reaction (RT-PCR) is a laboratory technique combining reverse transcription of RNA into DNA and amplification of specific DNA targets using polymerase chain reaction.	Antibody to specific viral antigen	Purified viral protein to detect binding antibodies IgG, IgM or both. Rely on ELISA (enzyme-linked immunosorbent assay) or CIA (chemiluminescent immunoassay) methods for antibody detection
How the sample is taken	Nasal or throat swab (most tests) Saliva (a few tests)	Nasal or throat swab	Finger stick or taking of blood
How long it takes to get results	Same day (some locations) or up to a week	One hour or less	Same day (many locations) or 1-3 days
Is another test needed?	This test is typically highly accurate and usually does not need to be repeated.	Positive results are usually highly accurate but negative results may need to be confirmed with a molecular test	Sometimes a second antibody test is needed for accurate results.
What it shows	Diagnoses active coronavirus infection i.e. presence of virus	Diagnoses active coronavirus infection i.e. presence of virus	Shows infection by coronavirus in the past
What it can't do	Show if you ever had COVID-19 or were infected with the coronavirus in the past	Definitively rule out active coronavirus infection.	Diagnose active coronavirus infection at the time of the test or exclude the possibility of COVID-19 infection
Can it be wrong?	False negative (i.e. true infection missed) rate 2%-29% False positives possible because the test can also identify residual fragments of viral RNA from past covid-19 infection	Antigen tests are more likely to miss an active coronavirus infection compared to molecular tests. Rapid antigen tests perform best in the early stages of infection with SARS-CoV-2 when viral load is highest. A molecular (PCR) test may be required if the antigen test is negative in the presence of symptoms of COVID-19.	False negative results can occur if a person is tested too early before they have detectable antibodies in their blood