



# Antigen testing 101

*Everything you need to know about testing  
with the SARS-CoV-2 Antigen Self Test Nasal*



# What is antigen testing?

**An antigen test** can detect if SARS-CoV-2 is present. The SARS-CoV-2 virus causes coronavirus disease (COVID-19). If your test sample contains the virus, then

you might be infectious to others, which is why self-isolation might be needed. If you have symptoms, appropriate medical care should be received.

## Symptoms of COVID-19

**The course of SARS-CoV-2 infections** can vary widely. Some people do not have any symptoms, others experience mild symptoms such as fever, a cough, loss of taste or smell, or diarrhea. But it can also cause more serious symptoms such as difficulty in breathing<sup>1</sup>.

Usually, it takes 5 – 6 days for symptoms to develop after an exposure to SARS-CoV-2. However, the number of days to symptom onset can vary in some cases<sup>2</sup>.



e.g. **cough**  
and **shortness of breath**



e.g. **sore throat**  
and **muscle pain**



e.g. **fever**  
and **headache**

# Testing for SARS-CoV-2



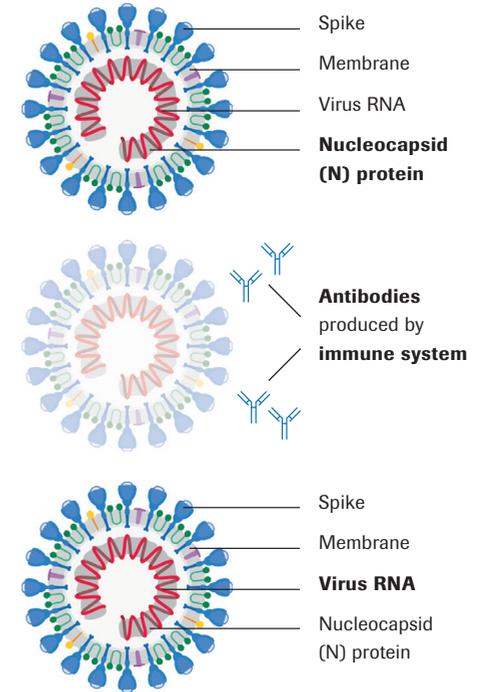
**An antigen test** detects the structural protein N that is present in the virus.



**An antibody test** detects the body's reaction to the virus – the production of antibodies. It cannot detect a current infection, but it can determine if a patient has been infected in the previous months.



**A PCR test** detects genetic material from the virus (RNA), which is a very sensitive method of testing. For a PCR (polymerase chain reaction) test a laboratory analyser is needed, and it often takes a few days to get the results.



## Why don't all tests have the same accuracy?

The more virus material present in the body, the easier it is for tests to detect it. During the course of an infection the amount of virus, the so-called viral load, varies. A PCR test can pick up even a very small amount of virus, because with this test method, the existing virus material in the sample gets amplified. The test can even detect quantities of the virus material so small that they are insufficient to be infectious.

An antigen test needs a certain level of virus material in order to properly detect it, because within the test device the protein from the virus nucleocapsid (which is the envelope of the RNA strand) binds with a substance to cause a reaction<sup>3</sup>.

<sup>1</sup> WHO. <https://www.who.int/publications-detail-redirect/diagnostic-testing-for-sars-cov-2>. Accessed 6 Jan 2021.

<sup>2</sup> Centers for Disease Control and Prevention. <https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html>. Accessed 6 Jan 2021.

<sup>3</sup> Cevik et al. [doi.org/10.1016/S2666-5247\(20\)30172-5](https://doi.org/10.1016/S2666-5247(20)30172-5) and Mina et al. [DOI: 10.1056/NEJMp2025631](https://doi.org/10.1056/NEJMp2025631)

# The benefits of testing



## How does antigen testing help in the fight against COVID-19

Testing is critical to diagnose and contain the spread of SARS-CoV-2. If people know they are infectious, they can self-isolate to keep others safe.

Now that we can take Self Tests at home, this offers even more benefits for us and also for society as a whole.



**Safer socialising**  
Test yourself before meeting your loved ones.



**Reliable results anywhere**  
Self-testing does not require medical assistance.



**Testing without appointment**  
This also relieves our health care system.



**A step towards normality**  
A safer option for opening up the economy and making travel and events possible.



**More convenient repetitive testing**

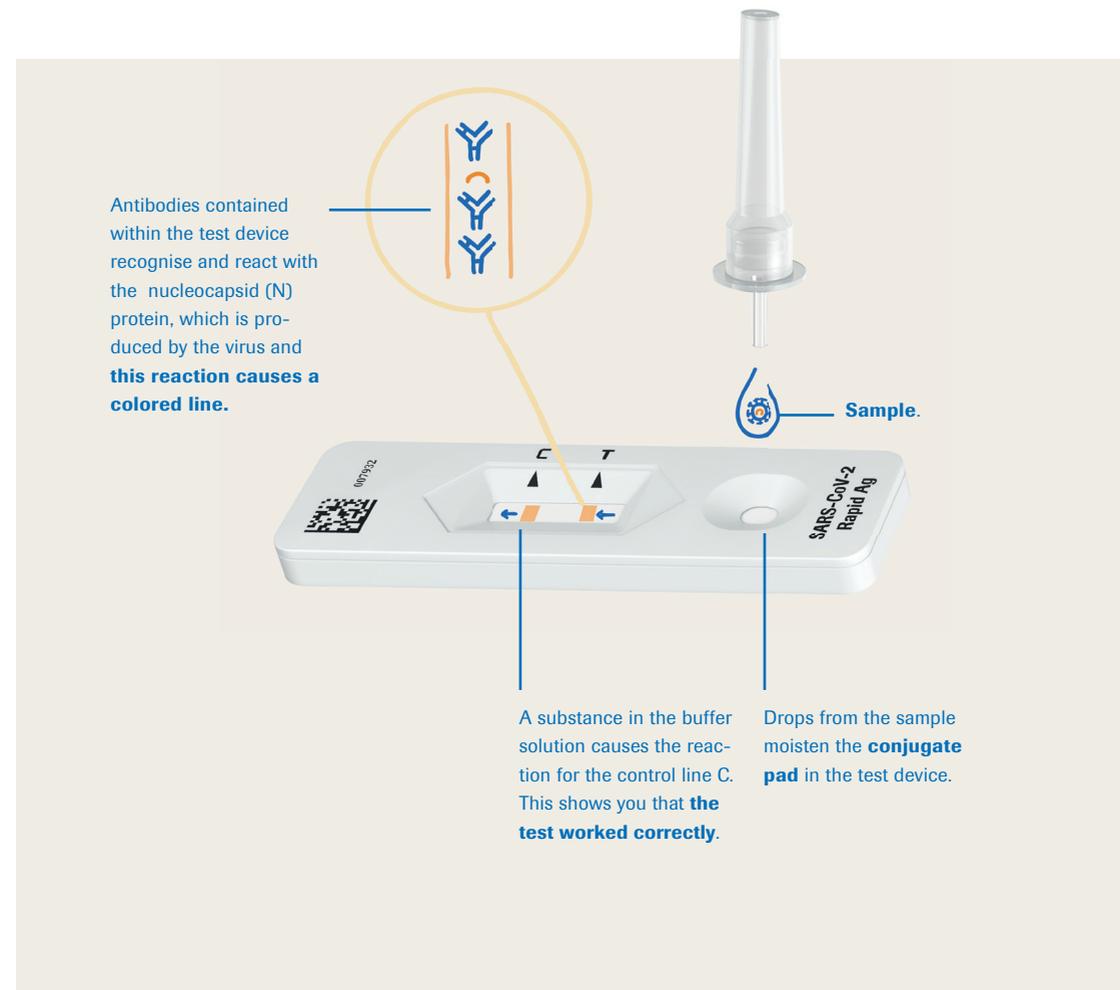


**Peace of mind**  
Store some tests at home to have them at your disposal whenever needed.

# How does a rapid antigen test work?

A rapid antigen test checks for the presence of the nucleocapsid (N) protein produced by the SARS-CoV-2 virus. If the protein is present in the sample,

it causes a reaction that forms a colored line where the sample window is marked with a T.



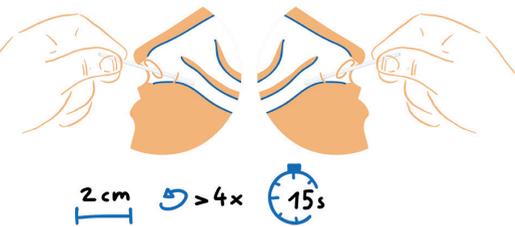
# Testing essentials

There are critical steps which need to be done correctly when performing a test, in order to ensure a proper result.

**NOTE:** How to use a test is explained in detail in the Quick Reference Guide and the Instructions for Use, that are contained in the test packaging.

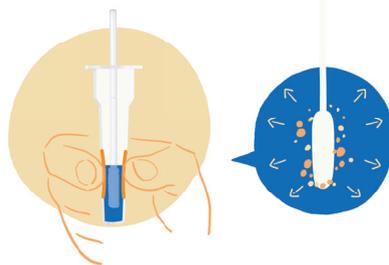


Pay attention to these steps:



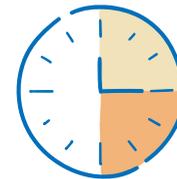
## Collecting the sample

To ensure a reliable result the sample needs to be collected thoroughly. To collect a nasal sample, slowly slide the swab into both nostrils for at least 15 seconds each, while rotating it against the nasal wall of each nostril. This step makes sure that a sufficient amount of sample is collected.



## Diluting the sample

The sample material from the swab needs to be well extracted and added to the buffer solution. Therefore, it is important to rotate the swab at least ten times while it soaks in the liquid, squeezing the tube at the bottom. When taking out the swab, the sides of the tube need to be squeezed together to squeeze out the liquid from the swab.



Wait

Readout time

## Pay attention to the time

The readout time frame for test results is 15 – 30 minutes after applying the sample drops to the test device. Don't read the results before or after this time, as this may provide a false result.

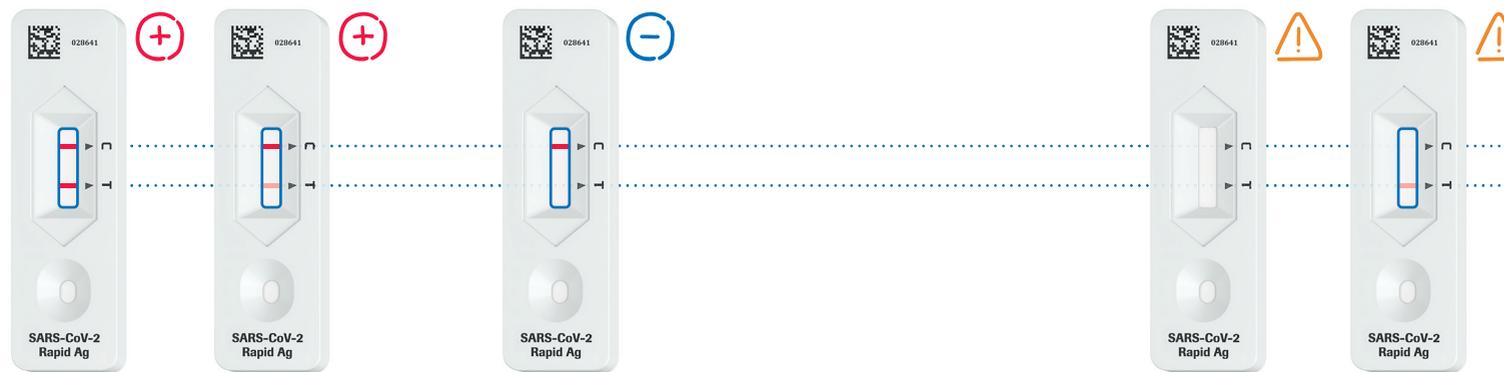


For more information on self-testing and a step-by-step handling video scan here:



<https://www.diagnostics.roche.com/covidqr-patients>

# How do I interpret the results?



**Control line C:** Confirms test is working correctly

**Test line T:** Visible if SARS-CoV-2 antigen was detected

## Positive test result

If both the colored lines **C** and **T** are visible, the test result is positive. This means the test detected the virus protein in the sample. The tested person is likely infected with SARS-CoV-2.

### What now?



You should **self-isolate** immediately.



Contact your doctor and...



... you may be required to undergo a **PCR test** to confirm the test result.

## Negative test result

A visible control line **C** alone means the test worked correctly. The test result is negative. No virus protein could be detected in the sample.

### What now?



There is a very **low chance** you are currently infectious to others.



Note that this **result is only valid for a limited period of time.**



Continue to **follow the hygiene guidelines.**

## Invalid test result

If there is **no line visible**, or only the line marked with a **T**, the test did not work correctly and needs to be repeated with another test device.

### What now?



To get a valid result you will have to do a **new test** (with new test material and new sample).



Make sure to **follow the instructions** carefully.

### Tips for a reliable result:

- **Store all the test components** according to the instructions.
- **Don't open** the test device or swab packaging until you are ready to test
- **Read test results** only within the time frame specified in the instructions. A result read before or after the specified time frame may not be correct.
- **Don't reuse** test devices or other components.
- **Don't use expired tests** or test components that are damaged or discolored.

### Remember:

- **Even a faint line is valid**, you should consider it present when interpreting the results.

A negative test result is no guarantee that you don't have COVID-19; you could be infected, but have a very low quantity of virus in your body. Always follow your local guidelines to stay safe.

**Even with a negative result you should still follow hygiene and proactive measures like keeping a distance and/or wearing a mask, based on your local guidelines.**

If you have or develop symptoms, take another test or arrange a PCR test, depending on your local guidelines. For further questions contact your local authority or doctor.

# NAVIFY® Pass – a digital solution

With NAVIFY Pass, you can easily share your test result after performing a SARS-CoV-2 Antigen Self Test Nasal.



NAVIFY® Pass can be used to easily share personal COVID-19 related health data via mobile device. This way, individuals can safely enter their workplace or even gain access to events or travel, while reducing the risk of infecting others. This, of course, relies heavily on local guidelines.



## NAVIFY Pass step-by-step

1. Download NAVIFY Pass in your phone's app store
2. Register
3. Perform your Self Test
4. Scan the individual data matrix on the test device
5. Fill out the questionnaire and submit the test result
6. Now you are ready to share your COVID-19 health-data where ever needed

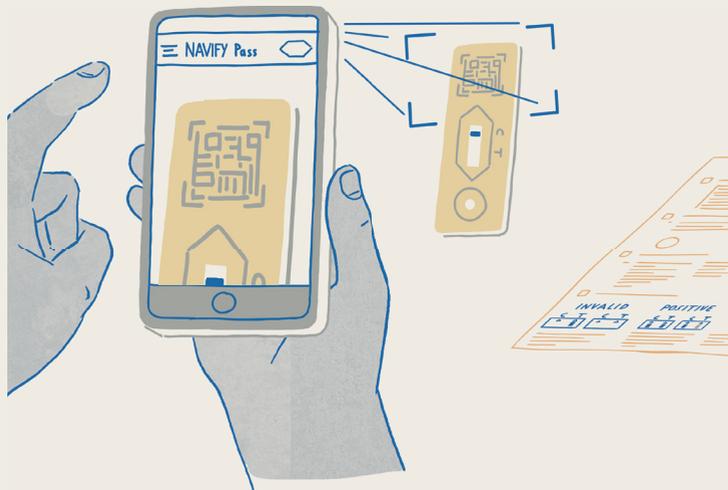
**The test result is valid for a defined period of time.**



## NAVIFY Pass and self-testing

First of all, you will need to download NAVIFY Pass from your app store and register. After performing a Self Test, you read out the test result, comparing the lines on the test device to the illustrations in the Quick Reference Guide (as shown on the previous pages).

You then scan the individual data matrix on the test device, and upload the test result to your profile. Now you can easily display your COVID-19 health status to others via NAVIFY Pass.



## Why would I want to share my test result?

There are many cases where sharing a test result with someone other than your doctor makes sense. It might be that a negative test result is required for travel or entering a certain building, event, or space. Sharing a negative test result might be especially useful in scenarios where a large number of people gather together.



© 2021 Roche Diagnostics Limited. All rights reserved,

COBAS and NAVIFY are trademarks of Roche. All other product names or trademarks are the property of their respective owners.

**Roche Diagnostics Limited**

Charles Avenue, Burgess Hill, West Sussex, RH15 9RY.

Company registration number: 571546.

Date of preparation: June 2021.

Document number: MC-UK-00913.

For healthcare professional use only in the UK and Ireland. Not for distribution.

[diagnostics.roche.com](https://diagnostics.roche.com)