Name of the test
SARS-CoV-2 IgM and IgG antibodies

What is this test used for?
These tests are used to detect SARS-CoV-2 IgM and IgG antibodies in the blood.
SARS-CoV-2 is a new coronavirus, which causes COVID-19. The virus is mainly transmitted through respiratory droplets.[1] Incubation period lasts around 2-14 days, before the symptoms appear.[2] The main symptoms of COVID-19 include coughing, fever, difficulty breathing, myalgia and fatigue, loss of appetite.[3,4]

In around 80% of infected individuals, COVID-19 causes a mild disease and sometimes it can be even asymptomatic.[5,6]
On the other hand, some people might require hospitalization. Chances of a more severe disease is increased in smokers and people of old age or with chronic diseases.

About 1-2 weeks after becoming infected, human body starts producing antibodies. Usually, IgM antibodies are produced first and later IgG antibodies also appear in the blood. However, in some cases described in scientific literature, IgM and IgG antibodies could be detected in blood as early as 4 days later after the symptom onset.[7]

Level of IgM antibodies remain elevated for about more than a month and then they decrease. On the other hand, IgG antibodies stay elevated for a longer period and protect the individual from SARS-CoV-2 reinfection.[8,9] However, it should be noted, that there is not enough information yet about the possibility of reinfection and durability of immunity for COVID-19.[10]

When is the test ordered?
This test is used to detect SARS-Coronavirus-2 (SARS-CoV-2) IgG and IgM antibodies in the blood. These antibody tests cannot detect the virus itself, so they are not useful to confirm COVID-19 diagnosis at the earlier stages of the disease.

SARS-CoV-2 does not always cause a severe illness and some patients are even asymptomatic. This test provides information even about recently recovered patients, who may have had only a mild or asymptomatic COVID-19. For this reason, the antibody test can be ordered to confirm previous COVID-19 infection. If antibodies against SARS-CoV-2 are detected, then this indicates that the patient was already exposed to the virus in the past.

As a result, testing is important not only for an individual patient, but it is essential from an epidemiological perspective as well – in order to effectively control epidemics, identify transmission chains and clusters.[11]

How is this test performed?
A blood sample is taken from a vein.

How to prepare for the test
No special preparation is needed.

Interpretation of results
The test results should be interpreted by a doctor, considering information from other clinical and laboratory findings.

Positive test results indicate that the person was previously infected with SARS-CoV-2 and as a result, the body has produced antibodies.
Negative test results indicate that the person has not been exposed to SARS-CoV-2 yet. However, it is important to note, that during the first week of COVID-19, IgG antibody test may be negative, as these antibodies appear later. On the other hand, IgG antibody test may show slightly elevated results, if the person had been infected with another coronavirus in the past.

Besides early stages of COVID-19, test results might be negative in immunodeficient patients and those receiving immunosuppressive medications. High titers of rheumatoid factor may also affect the test results.

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