

COVID-19

The current pandemic Coronavirus disease 2019 (COVID-19) is caused by *Severe Acute Respiratory Syndrome Coronavirus 2* (SARS-CoV-2).

The virus causes mainly a respiratory illness in human whose severity is highly diverse. The symptoms include fever, fatigue, cough, shortness of breath and loss of smell and taste. Some patients progress to bilateral pneumonia, multi-organ failure and, in some cases, death. Other symptoms, though less frequent, were described and their list is constantly growing.

Our laboratory offers a complete range of tests related to COVID-19.

Diagnostic test

A diagnostic test for SARS-CoV-2 shall be carried out in case of suspicion of COVID-19 based on clinical examination or in the presence of typical symptoms, according to the recommendations from the Swiss Federal Office of Public Health and the cantonal doctor.

The test for the detection of specific viral RNA is based on the polymerase chain reaction after reverse transcription of viral RNA (RT-PCR). It can be performed on a nasopharyngeal or oropharyngeal swab or on an expectoration.

Results of the test are communicated within 24 hours following the reception of the sample.

Antibody tests (serological tests)

Antibody tests determine if a person was in contact with SARS-CoV-2 virus and has developed antibodies against the virus. According to the current knowledge, human body produces an immune response to SARS-CoV-2 following the exposure to the virus: IgM antibodies are detectable in the initial stages of infection and IgG antibodies are detectable starting from 10 to 14 days after the first appearance of symptoms. Thus, the detection of IgM antibodies shall be performed at the same time as RT-PCR testing, when the symptoms of the disease are present, whereas IgG testing is relevant at the earliest 14 days after the onset of symptoms. Current knowledge does not allow to conclude whether an infection with CoV-2-SARS confers protective immunity against future infection with the same virus.

Antibody testing is performed on the serum using rapid tests ("lateral flow") to detect IgM and IgG antibodies or by more specific tests called ELISA (Enzyme-Linked Immunosorbent Assay) for IgG antibodies.