

# SARS-CoV-2 Ab ELISA

## Leading in performance - proven by multiple studies

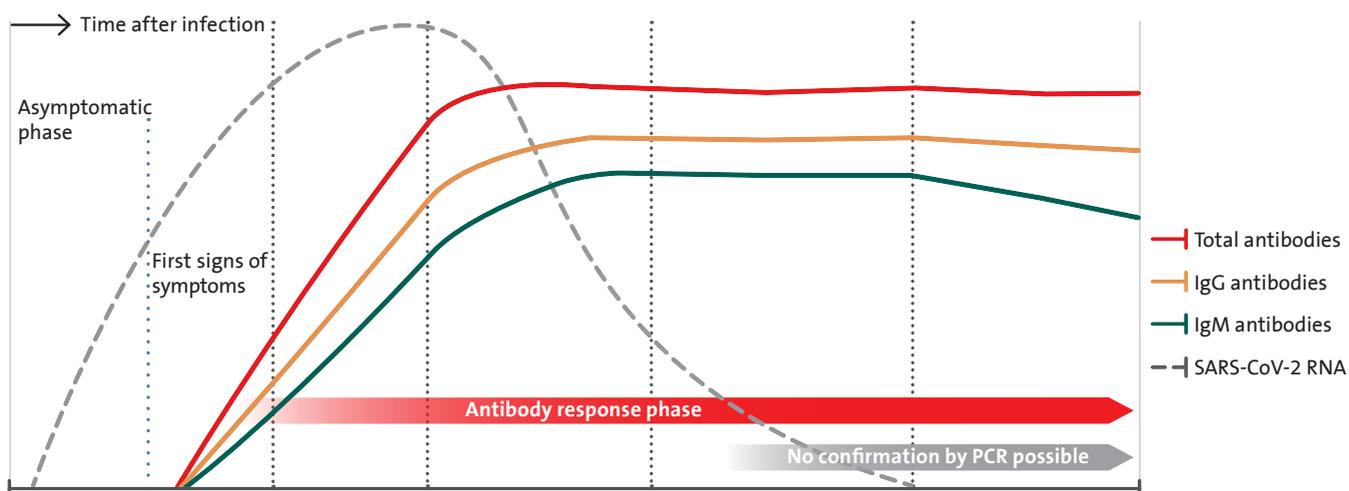
Total Ab ELISA for qualitative detection of total antibodies to SARS-CoV-2 virus in human serum or plasma specimens.

Total Ab covers IgM, IgG and IgA antibodies.

### COVID-19

The novel coronavirus SARS-CoV-2 is spreading rapidly worldwide. It is mainly transmitted via respiratory droplets and close contact. As a novel virus, there is no pre-existing immunity against it. It is important to identify both, acute infected people by molecular test and then in a second phase the antibody response of individuals in order to reduce the risk of spreading the virus and get an overview on seroprevalence and immune status of a patient.

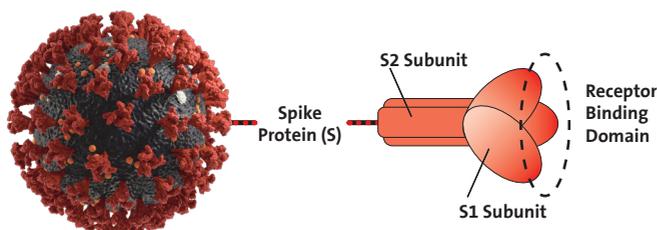
As shown in the graph below, there is a detection window for molecular methods that overlaps with the antibody response. Furthermore, in the case of SARS-CoV-2 there seems to be an atypical response of IgM and IgG antibodies, which both seem to be generated rather simultaneously.<sup>1</sup> It is shown that highest sensitivities are reached with a total antibody test compared to separate tests for IgM and IgG. IgM and IgG, both are summing up on the total Ab-line, hence contributing both in total Ab response with a high sensitivity at a wide time range.<sup>2</sup>



Window period	Early phase	Active phase	Late phase*	Recovery phase**
Total Ab	-	+	+	+
PCR	+	+	+	-

\* Result pattern also in case patient is in a recurrent phase \*\* Result pattern also in patients with past infections

Graphics for illustration purposes only



### S1 RBD labeling antigen

The SARS-CoV-2 Ab ELISA detects antibodies to the S1 domain of the spike protein. This S1 subunit contains the immunologically important receptor binding domain (RBD). Studies have shown that antibodies against the RBD are neutralizing in vitro, indicating that they may be an effective measure of immunity.<sup>2</sup>

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## “Sandwich” ELISA - for high-throughput screening

### Your advantages at a glance

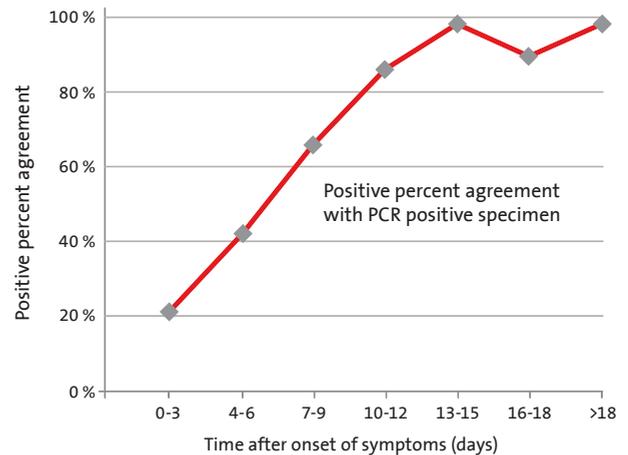
- > High sensitivity and specificity
- > Use of single strips possible
- > Mentioned as one of the best ELISA tests in several publications
- > Detection of antibodies to the S1 domain of the spike protein (containing the RBD)
- > Application with serum or plasma, no naso-pharyngeal smears needed
- > Fully automated processing and result reading possible



### Exclusively distributed by HUMAN in over 150 countries worldwide



### Clinical Performance



### SARS-CoV-2 Ab ELISA REF: WS-1096\*

- > Sensitivity: 94.36%, Specificity: 100%
- > Sample material: serum or plasma
- > Kit size: 96 tests (up to 91 specimen)
- > Storage: 2...8°C
- > Shelf life: 12 months
- > CE-IVD marked according to Directive 98/79/EC

For more information:

<https://www.human.de/covid-19/>

### Literature

1. Herroelen P.H. et al. (2020): Kinetics of the humoral immune response to SARS-CoV-2: comparative analytical performance of seven commercial serology tests. medRxiv. <https://doi.org/10.1101/2020.06.09.20124719>
2. Sundararaj SJ et al. (2020): Interpreting Diagnostic Tests for SARS-CoV-2; JAMA. 2020;323(22):2249–2251. doi:10.1001/jama.2020.8259
3. Lassaunière R. et al. (2020): Evaluation of nine commercial SARS-CoV-2 immunoassays. medRxiv. <https://doi.org/10.1101/2020.04.09.20056325>
4. Jin Y, Wang M, Zuo Z, et al. (2020): Diagnostic value and dynamic variance of serum antibody in coronavirus disease 2019. Int J Infect Dis. doi:10.1016/j.ijid.2020.03.065
5. Long, Q., Liu, B., Deng, H. et al. (2020): Antibody responses to SARS-CoV-2 in patients with COVID-19. Nat Med 26, 845–848. <https://doi.org/10.1038/s41591-020-0897-1>

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