CELLSPECT

RUO | 1test

Product code:RCSLF011

QuaResearch COVID-19 S Protein IgG LF

Test time 15min | No measuring device needed | Made in Japan | 2℃–28℃

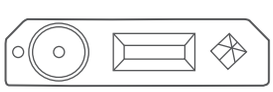
Detection of IgG antibody against S protein

Applications Survey and research on the novel coronavirus antibodies

※This product is intended for research use only. NOT for diagnostic and therapeutic purposes.

This kit is a research immunochromatographic kit for detecting the human IgG antibody (S protein IgG antibody) that recognizes the S protein of SARS-CoV-2, and can semi-quantitatively determine the production level of the S protein IgG antibody.

Kit contents



Test stick ×1

Sampler ×1

reagent ×1

Standard color chart ×1

Items needed but not supplied. Please purchase separately

Lancet (Finger prick)

Adhesive bandage

Disinfectant wipe

Hemostatic gauze

Product Specification

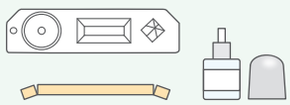
Product name	QuaResearch COVID-19 S protein IgG LF	Sample amount	10μL
Product code	RCSLF011	Measurement time	15 minutes
Measurement method	Immunochromatography	Storage temperature	2-28℃
Measurement sample	Whole blood, serum, plasma	Quality Assurance Period	6months after manufacture

- Be sure to read the instructions for use before use.
- Be sure to check the latest protocol on the following website before use.
  https://www.cellspect.com/
- This product is intended for research use (scientific studies, learning, and education). Please use it at the user's own responsibility.
- Store this product at 2～28℃, away from direct sunlight.
- Please keep this product out of reach of young children.
- Proper infection prevention should be taken by individuals.
- Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Test Protocol

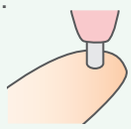
Please watch the instruction video and read the instruction manual before use.

1 Take out the contents of the kit and open it.



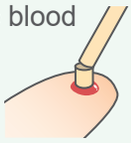
2 Puncture a washed finger with a lancet to collect blood.

※Please follow the instructions of the chosen lancet product.

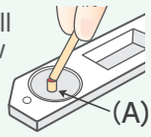


3 3 Press fingertip lightly to make a ball of rice grain-sized blood.

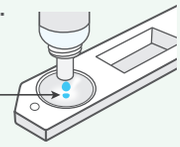
4 4 Hold the sampler vertically and collect the blood from right above the blood drop.



5 Immediately bring the sampler into contact with the sample well (A) to allow blood to soak.



6 Apply 2 drops of the reagent to the sample well (A).



7 **Let stand for 15 minutes and read the test window.**
You can use the provided standard color chart to determine antibody levels.

15 to 20 minutes after adding the reagent, compare the colors of the test line 2 [T2] on the stick with the T2 shown on the standard color chart to determine the closest color. The semi-quantitation can be determined.

※The antibody levels are reference values of our company.
※For details on how to use the color chart, please check the instruction video.

※ The pictures are sample images. The appearance of the product is subject to change without notice.

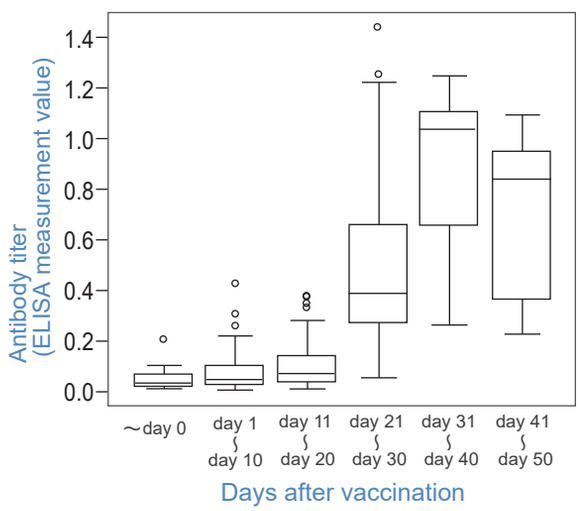
Study Example

Anti-S protein IgG antibody levels (ELISA measurement values) before and after mRNA vaccine (SARS-CoV-2 S protein) vaccination

Antibody titers after mRNA vaccination were measured by ELISA. An increase in antibody levels in blood was observed from 21 to 30 days after the first vaccination (equivalent to 1 ~ 10 days after the second vaccination). Of the samples (N=20) measured with this product, 40% were more than Lev.1 and less than Lev.2, 25% were more than Lev.2 and less than Lev.3 and 15% more than Lev.3. Moreover, from 31 to 40 days after the first vaccination (equivalent to 11 to 20 days after the second vaccination), the increase in antibody levels was stabilized. Of the samples (N=19) measured with this product, 16% were more than Lev.1 and less than Lev.2, 21% were more than Lev.2 and less than Lev.3 and 63% more than Lev.3. In the unvaccinated group, of the samples (N=20) measured with this product, 90% were less than Lev.1 and 10% were more than Lev.1 and less than Lev.2.

※ Note: It is not clear whether immunity is acquired by a temporary increase (response) in antibody levels due to vaccination, or whether immunity is reduced once the antibody response decreases over time. Therefore, the related research is still ongoing.

▼Titers before and after vaccination(anti-S protein antibodies)



※Day 0 is the day of the first vaccination.
The 2nd vaccination is given on day 20-22.

References

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2) Wanbing Liu, “Evaluation of Nucleocapsid and Spike Protein-based ELISAs for detecting antibodies against SARS‐CoV‐2” , J Clin Microbiol. 2020 Mar 30.
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5) Grzelak et al, “SARS‐CoV‐2 Serological Analysis of COVID‐19 Hospitalized Patients, Pauci-Symptomatic Individuals and Blood Donors” . (Infectious Diseases (except HIV/AIDS), 24 April 2020)
6) Liu et al, “Evaluation of Nucleocapsid and Spike Protein-Based ELISAs for Detecting Antibodies against SARS‐CoV‐2” , Journal of Clinical Microbiology, 2020, JCM.00461‐20, jcm;JCM.00461‐20v1
7) Sun et al, “Kinetics of SARS-CoV-2 Specific IgM and IgG Responses in COVID‐19 Patients” , Emerging Microbes & Infections, 9.1 (2020), 940–48
8) Imai K, Kitagawa Y, Tabata S, Kubota K, Nagura-Ikeda M, Matsuoka M, Miyoshi K, Sakai J, Ishibashi N, Tarumoto N, Takeuchi S, Ito T, Maesaki S, Tamura K, Maeda T. Antibody response patterns in COVID-19 patients with different levels of disease severity in Japan. J Med Virol. 2021 May;93(5):3211-3218. doi: 10.1002/jmv.26899. Epub 2021 Mar 9. PMID: 33620098; PMCID: PMC8014305.
9) Dai, L., Gao, G.F. Viral targets for vaccines against COVID‐19. Nat Rev Immunol 21, 73–82 (2021).
10) Edward E. Walsh et al, “RNA-Based COVID-19 Vaccine BNT162b2 Selected for a Pivotal Efficacy Study” .N Engl J Med 2020; 383:2439-2450
11) Fernando P. Polack et al, “Safety and Efficacy of the BNT162b2 mRNA Covid-19 Vaccine” .N Engl J Med 2020; 383:2603-2615

◆Manufacturer and Seller: Cellspect Co., Ltd

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※QuaResearch is the name of reagent kit of CellSpect Co., Ltd

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※We cannot offer any support other than the utilization and research of this product. As we cannot provide support for the accidental consequences of research activities (such as the detection of antibodies suspected of being infected), please consult your local government or agencies.

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