

What is the implication of investigating antibodies of COVID-19?

What are the 'antibodies' you hear a lot recently? We will tell you about the significance of investigating antibodies in infectious diseases and their challenges.

What is an antibody?

An antibody is a substance made in our body to protect it from, for example, viruses that have entered our body. As a result of these viral infections, antibodies may remain in our body for a long time. They are also used as a sign for various infectious disease surveys that tells you if you have been infected in the past.

However, the standard method for examining antibodies of COVID-19 has not been established yet.

What can be useful for examining antibodies for infectious diseases?

Examining the antibodies for infectious diseases has two implications:

- 1) Proof of infection

- 2) Confirmation of the presence or absence of an immunity against the disease

For proof of infection, **many cases do not immediately result in antibodies appearing after infection or the onset of the symptoms.**

Therefore, it is necessary to wait a while after the onset of the symptoms or repeating the test after a certain period.

It is not easy to confirm the presence or absence of an immunity to prevent the disease. Many types of antibodies are created after an infection.

However, **some work to prevent infections, while others are not directly related to prevention.** Therefore, if you do not know which antibodies you are investigating, you will not be able to judge whether 'immunity for prevention' is present.

What is the relationship between having antibodies and vaccination?

From newborn babies to early childhood, immunity to infectious diseases is not strong. Therefore, it is essential to have antibodies through vaccination to create immunity and reduce risks for infectious diseases. *

However, as an adult, we may have the antibodies that we acquired naturally and may not have the antibodies that others have acquired by vaccination. Therefore, public health interventions may take blood, perform an 'antibody test' for infectious diseases such as measles, rubella, and so on that can be prevented by vaccinations. The results inform if a person requires a vaccination.

<Caution>

* The Japan Pediatric Society calls for **not delaying the health checkups and vaccinations.**

Limiting infant health checkups and vaccinations 'to prevent exposures to COVID-19' exposes your children to the risk of other critical illnesses. Infants need to undergo medical examinations and vaccinations to be properly taken at certain months and ages. Please note that the implementation of medical examinations and vaccinations

may be changed depending on the area. Please check with the public health centre or health centre in your area.

(["About Q & A on the new coronavirus infection,"](#) 1 May 2010) (In Japanese)

The antibodies of COVID-19

What about **the antibodies of COVID-19**? It may be possible that a person will not be infected with COVID-19 for a certain period if there are antibodies of COVID-19 based on conventional wisdom about infectious diseases.

However, **it is not yet known** if someone cannot be reinfected if they have the antibodies of COVID-19. **It is not clear how long the antibodies last.**

You may want to check whether you have COVID-19 antibodies. But at the moment, **it is difficult to use the presence or absence of antibodies to prove exposure or resistance to COVID-19.**

Is there a nationally approved antibody test kit?

At present, there is **no officially approved antibody test kit in Japan.**

Currently, antibody test kits developed for research are sold by multiple manufacturers. However, we know that different manufacturers have different levels of accuracy. Therefore, it is thought that they have not reached the level where they can be widely used in medical and public health fields.

In Summary of antibody tests for COVID-19 at present:

- Standard methods for examining antibodies have not been established yet.
- It is unknown if there is reinfection or not while some have antibodies.

- It is difficult to use the presence or absence of antibodies for proving exposure or resistance to COVID-19.
- There is no antibody test kit yet approved by the Japanese government.
- Full-scale introduction to medical and public health sites is a bit far for introducing antibody tests.

Lastly

Making some judgment only by the result of the antibody test kits is dangerous .

Other nationally approved "antibody test kits" for infectious diseases always **do not give 100% correct results**. Even if you have been infected in the past, you may not always be able to find antibodies. On the other hand, it is possible for a person who has not got COVID-19 to give the result accidentally that found to have antibodies. Therefore, doctors have been treating with various other information to supplement the limitations of the antibody test kits.

What kind of tests are used at what timing? And how to introduce it to medical and public health sites? Before starting a testing strategy, it is necessary to consider these points thoroughly. Studies will continue, so please stay calm and wait.

In the next article, we will tell you in more details about the current status of COVID-19, surveys and the development of antibody test kits.

<Reference>

- National Institute of Infectious Diseases [“Evaluation of anti-SARS-CoV-2 antibody in blood by rapid and simple detection method \(immunochromatography method\)”](#) (1 April) (In Japanese)
- Japan Society of Laboratory Medicine [“COVID-19 antibody test Basic Ideas ”](#) (17 April) (In Japanese)
- The Japanese Association for Infectious Diseases [" Preliminary study on the performance of four test kits based on the detection of anti-new coronavirus antibody "](#) (17 April) (In Japanese)
- COVID-19 Expert Meeting in Japan Medical Association [“Development of antibody test for COVID-19 infection control”](#) (4 May) (In Japanese)

- COVID-19 Antibody Testing Machine User Council of Tokyo Metropolitan Government [“Reference”](#) (15 May) (In Japanese)
- [There is no negative certificate of COVID-19!](#) (29 April, the Note article by Public Advisory Group of Experts)

If you have any questions about the content of the article, please use the form below to [send us your opinions and comments](#).

Where to contact

[The New Coronavirus Multilanguage Consultation Center](#) (AMDA Medical Information Center) available in English, Chinese, Korean, Thai, Vietnamese, Portuguese, Tagalog, and Spanish.

[Tokyo Coronavirus Support Center for Foreign Residents \(TOCOS\)](#) (Bureau of Citizens and Cultural Affairs, Tokyo Metropolitan Government) available in easy Japanese, English, Chinese (中文), Korean (한국), Vietnamese (Tiếng việt), Nepalese (नेपाली), Bahasa Indonesia, Tagalog, Thai (ภาษาไทย), Portugues (Português), Spanish (Español), French (Le français), Khmer, and Burmese.

[Useful phrases during hospital visits for COVID-19 testing](#)

[Returnees/ Contacts Consultation Center \(COVID-19 Consultation Counseling Service\)](#) (in Japanese)

Returnees/Contact Consultation Centre (COVID-19 Consultation Counselling Service) at Public Health Centres in Kumamoto (in Japanese)

※After hours, we will respond by call forwarding		
Location	Phone	Opening hours (weekdays, weekends and holidays)※
Ariake Public Health Centre	0968-72-2184	9 am- 7 pm
Yamaga Public Health Centre	0968-44-4121	9 am- 7 pm
Kikuchi Public Health Centre	0968-25-4138	9 am- 7 pm
Aso Public Health Centre	0967-24-9030	9 am- 7 pm
Mifune Public Health Centre	096-282-0016	9 am- 7 pm
Uki Public Health Centre	0964-32-1207	9 am- 7 pm
Yatsushiro Public Health Centre	0965-33-3229	9 am- 7 pm
Minamata Public Health Centre	0966-63-4104	9 am- 7 pm

Hitoyoshi Public Health Centre	0966-22-3107	9 am- 7 pm
Amakusa Public Health Centre	0969-23-0172	9 am- 7 pm
Kumamoto City Public Health Centre	096-372-0705 096-364-3222	24 hours

Consultation Centers

The "Consultation Centers" listed below are facilities where foreign residents of Japan can consult with professionals regarding issues they may have whilst living in Japan. From daily life to legal problems, these centres can offer assistance or help find assistance in foreign languages, regarding problems residents may come across.

<http://www.clair.or.jp/e/multiculture/tagengo/consultation-centers.html?fbclid=IwAR2Qpe0dK1DvhnDh5I01WbIYdICoE2fgnLbScjivrgzm6ukFfRYUTpYdPvs>

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