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## TRENDING

Subang, Our Health Care System Has Collapsed — Michelle Ng (https://codeblue.galencentre.org/2021/08/03/subang-our-health-care-system-has-collapsed-michelleng/)

MOH Estimates Three Undetected Covid-19 Cases For Every Reported Infection (https://codeblue.galencentre.org/2021/08/06/moh-estimates-three-undetected-covid-19-cases-for-every-reported-infection/)

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Adeeba: With Hospital Bed Shortage, Premature To Reopen Even With 100% Vaccination (https://codeblue.galencentre.org/2021/08/09/adeeba-with-hospital-bed-shortage-premature-to-reopeneven-with-100-vaccination/)

Malaysia Vaccine Breakthrough Cases Rise, 99% Mild Covid-19 (https://codeblue.galencentre.org/2021/08/04/malaysia-vaccine-breakthrough-cases-rise-99-mild-covid/)

Covid-19 Crisis States — Dr Amar-Singh HSS (https://codeblue.galencentre.org/2021/08/04/covid-19-crisis-states-dr-amar-singh-hss/)

## Antibody Test Is Not A Measure Of Immunity After Covid-19 Vaccination — Ahmad Mahfuz Gazali

By **CodeBlue** | 9 August 2021 (https://codeblue.galencentre.org/2021/08/09/antibody-test-is-not-a-measure-of-immunity-after-covid-19-vaccination/)

Despite the lack of a robust correlate of protection, all vaccines are effective against hospitalisation and severe disease.



A news report was published last week about a trio of individuals who reported a negative result from a Covid-19 antibody test. This news caused a stir as people are starting to question the effectiveness of the vaccine.

The individuals took the antibody test amid reports of people claiming to have been vaccinated with 'empty' syringes.

To their surprise, the result of the test was negative, prompting them to seek clarification from the health and science, technology and innovation ministries.

Another individual has already sent a letter to the district health office and health director-general Dr Noor Hisham Abdullah through her lawyer.

In response to these events, Vaccine Minister Khairy Jamaluddin said that the government does not recommend taking the Covid-19 antibody test to gauge the effect of vaccination. The recommendation was made because there is still no clinical guideline on the matter based on the guidelines issued by the United States' Food and Drug Administration (FDA) and Centers for Disease Control and Prevention (CDC).

So, the question remains unanswered. What is the purpose of regulatory agencies such as the FDA, European Medicines Agency (EMA), and our own National Public Health Laboratory (MKAK) approving these Covid-19 antibody test kits?

An article on the CDC website dated July 15, 2021 stated that an antibody test was approved to look for the previous infection, and not as a measure of immunity towards Covid-19.

The article argued that a negative test indicates that you may not have Covid-19 antibodies. This result could be interpreted as an absence of previous infection.

Most importantly, antibody testing is not recommended to determine if you are immune to Covid-19 following vaccination.

Since the antibody test could not be used to measure immunity to Covid-19, do we have a biomarker or correlate of protection that could be used to measure immunity against Covid-19?

Eminent virologist Dr Florian Krammer said in a commentary in *Nature Medicine* that there is an urgent need to find a biomarker as a correlate of protection for Covid-19.

Vaccine-induced immune responses are often multi-faceted, but single components such as antibody responses may correlate with the level of protection.

In fact, the antibody response is the most commonly accepted correlate of protection, because they are often much easier to measure than cellular response.

In the case of Covid-19, he argued that neutralising antibodies may be used as a correlate of protection. The neutralising antibody is defined as an antibody that is responsible for defending cells from pathogens, which are organisms that cause disease.

Neutralising antibodies differ from other antibodies, since normal antibodies bind specifically to the pathogen, but do not interfere with their activity, while neutralising antibodies can neutralise the virus.

At least two scientific studies have shown that neutralisation antibodies against SARS-CoV-2 correlates with vaccine efficacy. Despite the promise of using neutralising antibodies for protection, more work needs to be performed before

this test can be brought to the clinic.

This is because this test commonly requires live viruses to be used, and the methods used in the studies differ from each other.

Finding a robust correlate of protection against Covid-19 or a measure of immunity should be the number one priority for vaccine producers, academic researchers and regulatory agencies.

Despite the lack of a robust correlate of protection, all vaccines administered in Malaysia are effective against hospitalisation and severe disease. Let us continue to practice the 3Ws and avoid the 3Cs after receiving complete doses of the vaccine. Public health measures and vaccination will help us to win this war against the pandemic.

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■ This is the personal opinion of the writer or publication and does not necessarily represent the views of *CodeBlue*.

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