

## Neutralizing antibody responses following vaccination and correlation with commercial serologic tests

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SARS-CoV-2 has caused a global pandemic with millions infected and numerous fatalities. A better understanding of the relationship between functionally neutralizing antibodies and binding antibodies is needed in order to address protective immunity post-infection or vaccination.

In this study, we investigate the humoral immune response and the seroprevalence of neutralizing antibodies following vaccination with adenovirus-based vector in 177 serum samples. Micro-neutralization (MN) assay was used as a reference method to assess whether neutralizing antibody titers correlated with a positive signal in two commercially available serological tests, a rapid lateral flow immune-chromatographic assay (LFIA) and an Enzyme-linked fluorescence assay (ELFA). Neutralizing antibodies were detected in majority of serum samples (84%). COVID-19 convalescents individuals had higher antibody titers and higher neutralizing activity.

Spearman correlation coefficients between serological and neutralization results ranged from 0.8 to 0.9 indicating moderate to strong correlation between commercial immunoassays test results (LFIA and ELFA) and virus neutralization.

**Keywords:** SARS-CoV-2; Serology; Neutralizing Antibody; COVID-19; Vaccination

### Biography

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