

Sample, Report

Date Of Birth: 09/20/1980 (40 yrs)
 Gender: Male
 Patient Id: 522-5A
 Patient Location: Dental Demo

Ordering Provider

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Sample Information

Specimen#: 5465460010
 Accession#: 202107-17093
 Specimen: Oral Rinse
 Collected: 08/09/2021
 Received: 08/10/2021 08:37
 Reported: 08/10/2021 15:32

Reason for Testing: Suspicion of exposure to COVID-19 (infection)

Related info: Not Provided

MOLECULAR DETECTION NEUTRALIZING ANTIBODIES FOR SARS-COV-2

Test Results

Negative

for Neutralizing Antibodies

Antibody	Value	Reference Interval	Flag
IgM	18 ng/mL	Negative < 50 Positive ≥50	
IgA ₂	22 ng/mL	Negative < 47 Positive ≥47	
IgG	17 ng/mL	Negative < 40 Positive ≥40	

Interpretation:

The submitted sample is negative for the presence of neutralizing antibodies against the SARS-CoV-2 RBD (receptor binding domain) and the NTD (N-terminal domain) of the S1 spike protein.

It is undetermined what level of antibody to SARS-CoV-2 spike protein correlates to immunity against developing symptomatic SARS-CoV-2 disease. Studies are underway to measure the quantitative levels of specific SARS-CoV-2 antibodies following vaccination, which may provide valuable insights into the correlation between protection from vaccination and antibody levels.

Guidance from the Centers for Disease Control and Prevention:

- General information about SARS-CoV-2 antibodies:

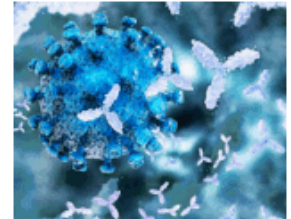
- <https://www.cdc.gov/coronavirus/2019-ncov/testing/serology-overview.html>

- Information on testing for SARS-CoV-2:

- <https://www.cdc.gov/coronavirus/2019-ncov/lab/resources/antibody-tests.html>

- Guidance for Healthcare Providers:

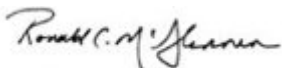
- <https://www.cdc.gov/coronavirus/2019-ncov/lab/resources/antibody-tests-guidelines.html>



Antibodies bound to SARS-CoV-2

Methodology:

Detection of neutralizing antibodies in the saline oral rinse involves first cleaning using microbeads coated with differing protein conjugates to remove component proteins and heterophilic antibodies from saliva. Next, the sample is enriched for the 3 dominant classes of antibodies; Immunoglobulin M (IgM), immunoglobulin A subclass 2 (IgA₂) and immunoglobulin G (IgG) using capture microbeads coated with components of the viral spike proteins, RBD and NTD from wild-type and variant strains of SARS-CoV-2. The reacted capture beads are then washed repeatedly to remove any contaminants. Capture beads are then resuspended in a conjugate solution consisting of 3 different fluorophores attached to rabbit anti-human IgM, IgG, and IgA. The bound and conjugated antibodies are then eluted from the bead and then imaged on a fluorescent plate reader. The amount of fluorescence is interpolated against a series of calibration samples and the antibodies quantified in units of ng/mL.



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