

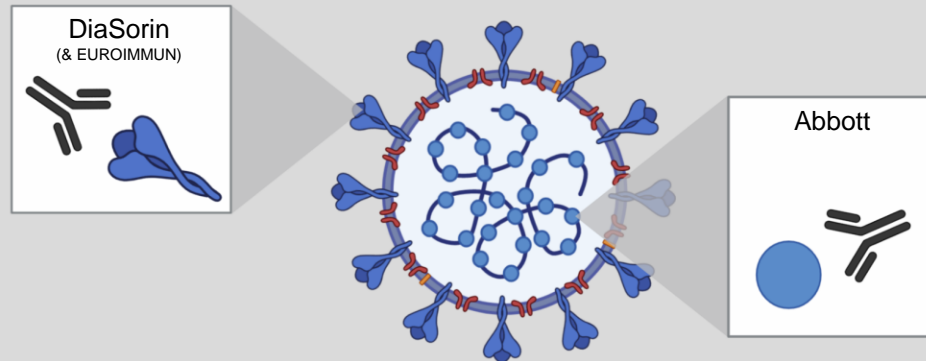
Comparison of the Abbott SARS-CoV-2 IgG and DiaSorin LIASON SARS-CoV-2 S1/S2 IgG Antibody Assays

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Background

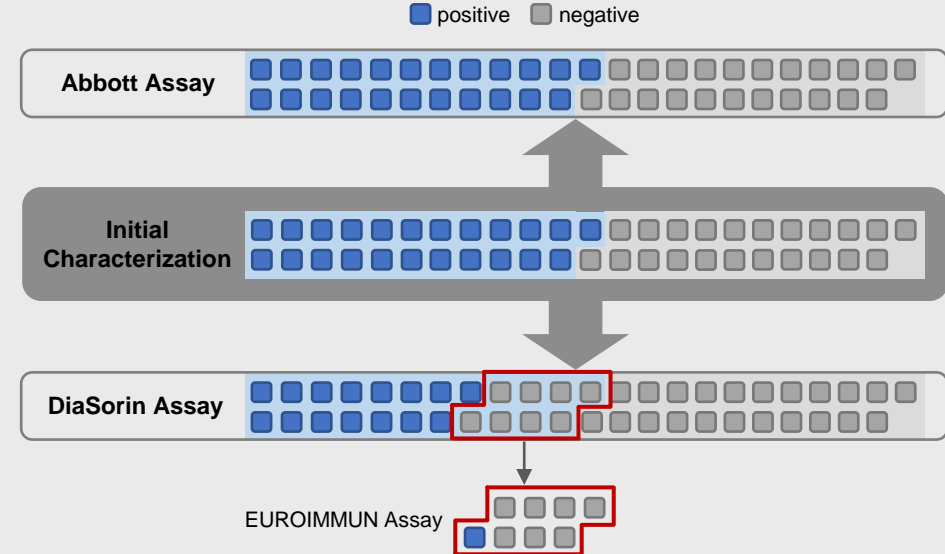
The Abbott Laboratories SARS-CoV-2 IgG assay and the DiaSorin LIASON SARS-CoV-2 S1/S2 IgG assay are both chemiluminescent immunoassays that qualitatively detect IgG antibodies against SARS-CoV-2 antigens. The Abbott assay detects IgG against the viral nucleocapsid (N) protein, while the DiaSorin assay uses antigen derived from the viral spike (S) protein. Here we evaluate the performance of these two assays at our institution.



Methods

45 patient samples (serum or plasma) were tested for anti-SARS-CoV-2 IgG by both the Abbott and DiaSorin assays. The samples were previously characterized at a national reference laboratory using the Abbott assay or by an in-house PCR-based test for SARS-CoV-2 RNA. Samples yielding discordant results across platforms were further tested using the EUROIMMUN Anti-SARS-CoV-2 ELISA (IgG) assay at the reference laboratory.

Results



Abbott assay performance

- 100% negative agreement
- 100% positive agreement

DiaSorin assay performance

- | Before discrepancy resolution | After discrepancy resolution |
|-------------------------------|------------------------------|
| • 100% negative agreement | • 100% negative agreement |
| • 65% positive agreement | • 70% positive agreement |

These findings highlight the performance differences among various SARS-CoV-2 antibody assays, and providers should be aware of the specific antigenic target(s) in each test.

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