

|              |  |
|--------------|--|
| <b>DATE:</b> | 17 March 2025  |
| <b>TO:</b>   | AHS South, Calgary, Central Zones (when testing sent to Calgary): All Physicians, Nurses, Lab Staff  |
| <b>FROM:</b> | Clinical Biochemistry, Alberta Precision Laboratory  |
| <b>RE:</b>   | <b>Implementation of Double Stranded DNA Antibody by Crithidia Indirect Immunofluorescence Assay</b> |

---

## PLEASE POST OR DISTRIBUTE AS WIDELY AS APPROPRIATE

---

### Key Message

- Effective **March 18, 2025**, the *Double Stranded DNA Antibody by Crithidia* indirect immunofluorescence assay (IFA) will go live in the Immunochemistry Laboratory in Calgary.

### Background

- The current dsDNA antibody testing method is on a multiplex bead immunoassay (MBIA).
- The dsDNA antibody by Crithidia IFA is a highly specific test that detects patient antibodies of immunoglobulin class IgG against native dsDNA to support the diagnosis of systemic lupus erythematosus (SLE).
  - This test can confirm dsDNA antibodies presence in patients with an indeterminate anti-dsDNA result from MBIA, particularly those with clinical features of SLE or are at-risk for disease.
- University of Alberta Hospital in Edmonton will continue to perform this test and serve for the North, Edmonton, and Central Zones (sites that send testing to Edmonton).

### How this will impact you

- Indeterminate *Anti-dsDNA* MBIA results will undergo review. If required, the lab will internally add *Double Stranded DNA Antibody by Crithidia IFA* to improve specificity of the *Anti-dsDNA* MBIA result.
- Be aware of the *dsDNA antibody by Crithidia IFA* report comments:

| Anti-dsDNA by Crithidia IFA | Interpretive Comment  |
|-----------------------------|---|
| Negative                    | Testing for dsDNA antibody by Crithidia IFA was negative. Unable to confirm positive result obtained by multiplex bead immunoassay. |
| Positive                    | Testing for dsDNA antibody by Crithidia IFA was positive. Confirmed positive result obtained by multiplex bead immunoassay.         |
| Weak Positive               | Testing for dsDNA antibody by Crithidia IFA was weakly positive.  |
| Indeterminate               | Indeterminate.  |

### Action Required

- For initial lupus investigations, order “*Extractable Nuclear Antigen Antibodies*” LAB 4622. To monitor known lupus patients, order “*Anti-Double Stranded DNA*” LAB 648. Refer to the APL test directory.
- If a patient’s *Anti-dsDNA* MBIA result does not fit the clinical picture, contact the clinical biochemist on-call (368-995-5806) to request add-on for *dsDNA antibody by Crithidia IFA*.



**ALBERTA PRECISION  
LABORATORIES**

Leaders in Laboratory Medicine

**Questions/Concerns**

- Qian Wang, Clinical Biochemist, Calgary | 403-770-3219, [qian.wang@aplabs.ca](mailto:qian.wang@aplabs.ca)

**Approved by**

- Dr. Allison Venner, Clinical Biochemistry Section Chief, South Sector, APL
- Dr. Paul Klonowski, Associate Medical Director, Hub Lab, South Sector, APL
- Dr. Kate O'Connor, Medical Director, South Sector, APL