Test Definition: CRITH
DNA Double-Stranded (dsDNA) Antibodies by Crithidia luciliae IFA, IgG, Serum

Overview

Useful For
Confirmation testing for dsDNA IgG antibodies in patients with clinical features of systemic lupus erythematosus or at-risk for disease

This test may not be used independently for monitoring treatment response or establishing remission.

Testing Algorithm
See Connective Tissue Disease Cascade (CTDC) in Special Instructions

Special Instructions
- Connective Tissue Disease Cascade (CTDC)

Method Name
Only orderable as reflex. For more information see ADNAR / DNA Double-Stranded (dsDNA) Antibodies with Reflex, IgG, Serum.

Indirect Immunofluorescence

NY State Available
Yes

Specimen

Specimen Type
Serum

Specimen Required
Only orderable as reflex. For more information see ADNAR / DNA Double-Stranded (dsDNA) Antibodies with Reflex, IgG, Serum.

Specimen Minimum Volume
0.2 mL

Specimen Stability Information

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Clinical & Interpretive

Clinical Information

Double-stranded DNA (dsDNA) antibodies are systemic lupus erythematosus (SLE)-specific antibodies and are part of the immunology domain of the 2019 European League Against Rheumatism (EULAR)/American College of Rheumatology (ACR) classification criteria for SLE (1) as well as a previous guidance on SLE diagnosis.(2) The *Crithidia luciliae* indirect immunofluorescence test (CLIFT) is widely used as a confirmatory test following a positive dsDNA IgG result obtained by a solid-phase immunoassay due to its structural or analytical specificity.(3-5)

The CLIFT (dsDNA) test is indicated in patients who are positive for anti-cellular antibody (also known as antinuclear antibody [ANA]) homogeneous pattern (6) using HEp-2 substrate by indirect immunofluorescence assay (IFA) following a positive result for dsDNA IgG using a solid-phase immunoassay (eg, enzyme-linked immunosorbent assay or multiplex bead assay).(3,4) A positive CLIFT result is usually associated with the presence of moderate-to-high affinity dsDNA IgG antibodies. The CLIFT result may be negative and the immunoassay positive for dsDNA IgG in SLE patients with inactive (remission) disease or in patients with early disease.(3,4,7) Discordant results between CLIFT and solid-phase immunoassays may also be due to differences in the structural specificities of DNA analytes as well as the absence of reliable reagents to harmonize available clinical tests.(3,5,8)

A minority of SLE patients may test negative using HEp-2 by IFA for nuclear antibodies.(9) Testing antibodies associated with the HEp-2 IFA cytoplasmic pattern such as ribosomal P IgG autoantibodies may be useful if features of neuropsychiatric disease are present.(9) Alternatively, patients may be tested for Smith, ribonuclear protein (RNP), sulfosalicylic acid (SSA)-52 and SSA-60 antibodies.(6,9)

Reference Values

Only orderable as reflex. For more information see ADNAR / DNA Double-Stranded (dsDNA) Antibodies with Reflex, IgG, Serum.

Negative

Interpretation

A positive result for double-stranded DNA (dsDNA) IgG antibodies in the appropriate clinical context is highly suggestive of systemic lupus erythematosus (SLE). The presence of dsDNA IgG antibodies detected using the *Crithidia luciliae* indirect immunofluorescence test is highly specific for SLE with moderate sensitivity. A negative result does not rule out a diagnosis of SLE.

Cautions

IgG antibodies to double-stranded DNA (dsDNA) by *Crithidia luciliae* indirect immunofluorescence test (CLIFT) is reported qualitatively (positive or negative). For semiquantitative assessment of IgG antibodies to dsDNA, see results from ADNA / Double-stranded Antibodies, IgG, Serum.

A weak positive result dsDNA IgG by enzyme-linked immunosorbent assay with a CLIFT negative result may be suggestive of early disease, inactive disease, or a false positive result.
A positive result for IgG antibodies to dsDNA by *Crithidia luciliae* may occur in patients with diseases other than systemic lupus erythematosus (SLE).

A negative result does not exclude a diagnosis of SLE.

**Clinical Reference**


**Performance**

**Method Description**

Autoantibodies in the test specimen bind to the kinetoplast of *Crithidia luciliae*, a flagellate parasite which is bound to the slide. The kinetoplast is a complex network of interlocking circular double-stranded DNA (dsDNA) molecules and is the substrate of this test. Washing removes excess serum from the substrate. Fluorescein conjugated (FITC) antiserum added to the substrate attaches to the bound autoantibody. After a second washing step to remove excess conjugate, the substrate is cover slipped and viewed for fluorescent patterns with a fluorescent microscope. Observation of specific fluorescent patterns on the substrate indicates the presence of autoantibodies in the test sample. (Package insert:...
Test Definition: CRITH
DNA Double-Stranded (dsDNA) Antibodies by Crithidia luciliae IFA, IgG, Serum

Bio-Rad Kallestad Crithidia luciliae Substrate. Bio-Rad Laboratories; 06/2015

PDF Report
No

Day(s) Performed
Monday through Friday

Report Available
2 to 3 days

Specimen Retention Time
14 days

Performing Laboratory Location
Rochester

Fees & Codes

Fees
- Authorized users can sign in to Test Prices for detailed fee information.
- Clients without access to Test Prices can contact Customer Service 24 hours a day, seven days a week.
- Prospective clients should contact their Regional Manager. For assistance, contact Customer Service.

Test Classification
This test has been cleared, approved, or is exempt by the US Food and Drug Administration and is used per manufacturer's instructions. Performance characteristics were verified by Mayo Clinic in a manner consistent with CLIA requirements.

CPT Code Information
86255

LOINC® Information

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