Overview

Useful For
Evaluating patients with signs and symptoms compatible with a connective tissue disease, especially those patients with muscle pain and limb weakness, concomitant pulmonary signs and symptoms, Raynaud phenomenon, and arthritis.

Testing for antibodies to Jo 1 is not useful in patients with a negative test for antinuclear antibodies.

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

Special Instructions
- Connective Tissue Disease Cascade (CTDC)

Method Name
MultiplexFlowImmunoassay

NY State Available
Yes

Specimen

Specimen Type
Serum

Specimen Required

Container/Tube:

Preferred: Serum gel
Acceptable: Red top

Specimen Volume: 0.5 mL

Specimen Minimum Volume
0.35 mL

Reject Due To

<table>
<thead>
<tr>
<th>Gross hemolysis</th>
<th>Reject</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross lipemia</td>
<td>Reject</td>
</tr>
<tr>
<td>Gross icterus</td>
<td>OK</td>
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</table>

Specimen Stability Information

<table>
<thead>
<tr>
<th>Specimen Type</th>
<th>Temperature</th>
<th>Time</th>
<th>Special Container</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serum</td>
<td>Refrigerated (preferred)</td>
<td>21 days</td>
<td></td>
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Clinical and Interpretive

Clinical Information

Jo 1 (histidyl tRNA synthetase) is a member of the amino acyl-tRNA synthetase family of enzymes found in all nucleated cells. Jo 1 antibodies in patients with polymyositis bind to conformational epitopes of the enzyme protein and inhibit its catalytic activity in vitro.(1)

Jo 1 antibodies are a marker for the disease polymyositis, and occur most commonly in myositis patients who also have interstitial lung disease. The antibodies occur in up to 50% of patients with interstitial pulmonary fibrosis and symmetrical polyarthritis.(2)

See Connective Tissue Disease Cascade (CTDC) in Special Instructions.

Reference Values

<1.0 U (negative)

> =1.0 U (positive)

Reference values apply to all ages.

Interpretation

A positive result for Jo 1 antibodies is consistent with the diagnosis of polymyositis and suggests an increased risk of pulmonary involvement with fibrosis in such patients.

Cautions

A negative test for Jo 1 antibodies does not exclude the diagnosis of polymyositis or dermatomyositis.

Clinical Reference


Performance

Method Description

Recombinant Jo 1 antigen is coupled covalently to polystyrene microspheres, which are impregnated with fluorescent dyes to create a unique fluorescent signature. Jo 1 antibodies, if present in diluted serum, bind to the Jo 1 antigen on the microspheres. The microspheres are washed to remove extraneous serum proteins. Phycoerythrin (PE)-conjugated antihuman IgG antibody is then added to detect IgG anti-Jo 1 bound to the microspheres. The microspheres are washed to remove unbound conjugate, and bound conjugate is detected by laser photometry. A primary laser reveals the fluorescent signature of each microsphere to distinguish it from microspheres that are labeled with other antigens, and a secondary laser reveals the level of PE fluorescence associated with each microsphere. Results are calculated by comparing the median fluorescence response for Jo 1 microspheres to a
Test Definition: JO1
Jo 1 Ab, IgG, S

4-point calibration curve. (Package insert: Bioplex 2200 ANA Screen. Bio-Rad Laboratories, Hercules, CA 03/2012)

PDF Report
No

Day(s) and Time(s) Test Performed
Monday through Saturday; 4 p.m.

Analytic Time
1 day

Maximum Laboratory Time
2 days

Specimen Retention Time
14 days

Performing Laboratory Location
Rochester

Fees and 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 or approved by the U.S. 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
86235

LOINC® Information

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<th>Test Order Name</th>
<th>Order LOINC Value</th>
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<tbody>
<tr>
<td>JO1</td>
<td>Jo 1 Ab, IgG, S</td>
<td>33571-1</td>
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<table>
<thead>
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<th>Test Result Name</th>
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<tbody>
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<td>Jo 1 Ab, IgG, S</td>
<td>33571-1</td>
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