Overview

Useful For
Assessing disease activity in systemic lupus erythematosus (SLE)
Investigating an undetectable total complement (CH50) level

Method Name
Nephelometry

NY State Available
Yes

Specimen

Specimen Type
Serum

Specimen Required

Container/Tube:
Preferred: Serum gel
Acceptable: Red top

Specimen Volume: 1 mL
Specimen Minimum Volume
0.5 mL

Reject Due To

<table>
<thead>
<tr>
<th>Test</th>
<th>Acceptance</th>
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<tbody>
<tr>
<td>Hemolysis</td>
<td>Mild OK; Gross OK</td>
</tr>
<tr>
<td>Lipemia</td>
<td>Mild OK; Gross reject</td>
</tr>
<tr>
<td>Icterus</td>
<td>Mild OK; Gross OK</td>
</tr>
<tr>
<td>Other</td>
<td>NA</td>
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Specimen Stability Information

<table>
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<tr>
<th>Specimen Type</th>
<th>Temperature</th>
<th>Time</th>
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<tbody>
<tr>
<td>Serum</td>
<td>Refrigerated (preferred)</td>
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<tr>
<td></td>
<td>Frozen</td>
<td>28 days</td>
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<tr>
<td></td>
<td>Ambient</td>
<td>72 hours</td>
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Clinical and Interpretive

Clinical Information

The complement system is an integral part of the body's immune defenses. The primary complement pathway consists of recognition (Clq,Clr,C1s), activation (C4,C2,C3), and attack (C5,C6,C7,C8,C9) mechanisms with respect to their role in antibody-mediated cytolysis.

The complement system can be activated via immune complexes, and the alternative pathway (properdin pathway), which is activated primarily by foreign bodies such as microorganisms.

C3 activation involves cleavage by C3 convertase into C3a and C3b. When immune complexes are not involved, the alternate method of complement activation initiates the reactant sequence at C3, bypassing C1, C4, and C2.

Severe recurrent bacterial infections occur in patients with homozygous C3 deficiency and in those patients with low levels of C3 secondary to the absence of C3b activator.

Decreased C3 may be associated with acute glomerulonephritis, membranoproliferative glomerulonephritis, immune complex disease, active systemic lupus erythematosus, septic shock, and end-stage liver disease.

Reference Values
75-175 mg/dL

Interpretation
A decrease in C3 levels to the abnormal range is consistent with disease activation in systemic lupus erythematosus (SLE).

Cautions
The results are dependent on appropriate specimen transport and storage.

Clinical Reference

Performance

Method Description

PDF Report
No

Day(s) and Time(s) Test Performed
Monday through Saturday; 3 p.m.

Analytic Time
Same day/1 day
Test Definition: C3
Complement C3, S

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
86160

LOINC® Information

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<td>C3</td>
<td>Complement C3, S</td>
<td>4485-9</td>
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<table>
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