Overview

Useful For
Confirming or excluding the presence of a lupus-like circulating anticoagulant inhibitor (LA), in conjunction with other appropriate coagulation tests

Differentiating between deficiencies or inhibitors of specific coagulation factors and LA inhibitors

Evaluating a prolonged activated partial thromboplastin time resulting from inhibition

Method Name
Only orderable as part of a reflex. For more information see:

ALUPP / Lupus Anticoagulant Profile, Plasma
ALBLD / Bleeding Diathesis Profile, Limited, Plasma
AATHR / Thrombophilia Profile, Plasma
APROL / Prolonged Clot Time Profile, Plasma
ADIC / Disseminated Intravascular Coagulation/Intravascular Coagulation and Fibrinolysis (DIC/ICF) Profile, Plasma

NY State Available
Yes

Specimen

Specimen Type
Plasma Na Cit

Specimen Required
Only orderable as part of a reflex. For more information see:

ALUPP / Lupus Anticoagulant Profile, Plasma
ALBLD / Bleeding Diathesis Profile, Limited, Plasma
AATHR / Thrombophilia Profile, Plasma
APROL / Prolonged Clot Time Profile, Plasma
ADIC / Disseminated Intravascular Coagulation/Intravascular Coagulation and Fibrinolysis (DIC/ICF) Profile, Plasma

Reject Due To

<table>
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<th>Condition</th>
<th>Action</th>
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<tr>
<td>Gross hemolysis</td>
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<tr>
<td>Gross lipemia</td>
<td>Reject</td>
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<tr>
<td>Gross icterus</td>
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Specimen Stability Information

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<tr>
<th>Specimen Type</th>
<th>Temperature</th>
<th>Time</th>
<th>Special Container</th>
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<tbody>
<tr>
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Clinical and Interpretive

Clinical Information

Lupus anticoagulant (LA) is one of several antibodies referred to as antiphospholipid antibodies (APA). Lupus anticoagulants are immunoglobulins (IgG, IgM, IgA, or a combination of these) that interfere with specific coagulation factor-phospholipid interactions, typically causing prolongation of one or more phospholipid-dependent clotting time tests (eg, activated partial thromboplastin time: APTT; dilute Russell viper venom time: DRVVT due to inhibition). The characteristic in vitro inhibition caused by the presence of LA inhibitors can be overcome by additional phospholipid, which can be used to confirm the presence of LA.

The Staclot LA assay system enhances the sensitivity and specificity of APTT-based LA detection by employing:

1. A partial thromboplastin that is more sensitive to LA than many other reagents.

Although LA causes prolonged clotting times in vitro, there is a strong association with thrombosis risk.

Reference Values

Only orderable as part of a reflex. For more information see:

- ALUPP / Lupus Anticoagulant Profile, Plasma
- ALBLD / Bleeding Diathesis Profile, Limited, Plasma
- AATHR / Thrombophilia Profile, Plasma
- APROL / Prolonged Clot Time Profile, Plasma
- ADIC / Disseminated Intravascular Coagulation/Intravascular Coagulation and Fibrinolysis (DIC/ICF) Profile, Plasma

Staclot delta:

< or =8 seconds

Interpretation

The diagnosis of a lupus anticoagulant (LA) requires performance and interpretation of complex coagulation testing, as well as correlation with available clinical information. Because of the heterogeneous nature of LA antibodies, no single coagulation test can identify or exclude all LAs. Consequently, a combination or panel of coagulation tests are performed, including the activated partial thromboplastin time (APTT) and the dilute Russell viper venom time (DRVVT). If the APTT and/or DRVVT are prolonged, additional testing may include mixing tests with normal plasma.
Interpretation of Staclot LA testing is complex, and must be done within the context of several additional laboratory tests (eg, APTT with reflexive APTT mixing study and platelet neutralization procedure: PNP; and DRVVT with reflexive mixing study and confirmatory procedure). The Staclot LA test is based on the comparison between the hexagonal phase phospholipid APTT (Staclot APTT + HEX) and the buffer control APTT (Staclot APTT). Both test specimens include a 1:1 mixture of patient and normal plasma. Plasma containing a LA will demonstrate: 1) a prolonged buffer control APTT (Staclot APTT); 2) a shortened APTT with addition of hexagonal phase phospholipid (Staclot APTT + HEX) relative to the buffer control APTT (Staclot delta). A positive Staclot LA test result is one in which the added hexagonal phase phospholipid (excess phospholipid) shortens the prolonged APTT by at least 8 seconds.

The Staclot LA test is highly specific for a LA even in the presence of therapeutic anticoagulation. In evaluation of patient specimens and based on established laboratory procedures and clinical diagnosis, we found that the sensitivity is 96% and the specificity is 88%. However, the overall sensitivity of the Staclot LA test is likely somewhat lower (70%-80%).

**Cautions**

No significant cautionary statements

**Clinical Reference**


**Performance**

The Staclot LA test is performed on the Instrumentation Laboratory ACL TOP instrument. The procedure is based on the following principle: the test plasma that is suspected to contain a lupus anticoagulant (LA) is mixed with either hexagonal phase phospholipid (tube 2) or with buffer (tube 1). Normal plasma (1 part normal plasma + 1 part test plasma) is added to each tube to correct for any prolongation of the clotting time due to factor deficiencies that may be present. Next, an activated partial thromboplastin time (APTT) is performed on both tubes using a LA-sensitive partial thromboplastin reagent. If LA is present in the test plasma, the LA would typically be neutralized by the hexagonal phase phospholipid in tube 2 but not by the buffer in tube 1, resulting in a significant shortening of the clotting time of tube 2 compared with that of tube 1. By comparing the difference between the 2 clotting times, the presence of LA antibodies (anti-protein/phospholipid) in the test plasma can be identified. (Triplett DA, Barna LK, Unger GA: A hexagonal II phase phospholipid neutralization assay for lupus anticoagulant identification. Thromb Haemost 1993;70[5]:787-793)

The incorporation of a heparin inhibitor (polybrene) in the Staclot LA assay system allows testing when heparin is in the sample. Accurate results can be expected in samples containing up to 1 U/mL of heparin. The Staclot LA method also includes the addition of normal plasma to correct for coagulation factor deficiencies that may result in a prolonged APTT. This enables testing of specimens from patients receiving oral anticoagulant therapy, as well as those with other congenital or acquired coagulation factor deficiencies, as a cause of the prolonged APTT.
PDF Report
No

Day(s) and Time(s) Test Performed
Monday through Friday

Analytic Time
Same day/1 day

Maximum Laboratory Time
3 days

Specimen Retention Time
7 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 modified from the manufacturer’s instructions. Its performance characteristics were determined by Mayo Clinic in a manner consistent with CLIA requirements. This test has not been cleared or approved by the U.S. Food and Drug Administration.

CPT Code Information
85598

LOINC® Information

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