# Test Definition: LUPPR

## Lupus Anticoag Prof

### Overview

### Useful For

Confirming or excluding the presence of lupus anticoagulant (LAC), distinguishing LAC from specific coagulation factor inhibitors and nonspecific inhibitors

Investigating a prolonged activated thromboplastin time, especially when combined with other coagulation studies

### Profile Information

<table>
<thead>
<tr>
<th>Test ID</th>
<th>Reporting Name</th>
<th>Available Separately</th>
<th>Always Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTC</td>
<td>Prothrombin Time (PT), P</td>
<td>Yes, (order PTTP)</td>
<td>Yes</td>
</tr>
<tr>
<td>APTTB</td>
<td>Activated Partial Thromboplastin Time, P</td>
<td>Yes, (order APTTP)</td>
<td>Yes</td>
</tr>
<tr>
<td>DRVT</td>
<td>Dilute Russells Viper Venom Time, P</td>
<td>Yes, (Order DRVTI)</td>
<td>Yes</td>
</tr>
<tr>
<td>CCC1</td>
<td>Interpretation</td>
<td>No</td>
<td>Yes</td>
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</table>

### Reflex Tests

<table>
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<th>Test ID</th>
<th>Reporting Name</th>
<th>Available Separately</th>
<th>Always Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIRM</td>
<td>D-Dimer, P</td>
<td>Yes, (order #9290)</td>
<td>No</td>
</tr>
<tr>
<td>IBETH</td>
<td>Bethesda Units</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>F8IS</td>
<td>Coag Factor VIII Assay Inhib Scrn, P</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>FACTV</td>
<td>Coag Factor V Assay, P</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>F_7</td>
<td>Coag Factor VII Assay, P</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>TT</td>
<td>Thrombin Time (Bovine), P</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>F_9</td>
<td>Coag Factor IX Assay, P</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>F_10</td>
<td>Coag Factor X Assay, P</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>F_11</td>
<td>Coag Factor XI Assay, P</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>F_12</td>
<td>Coag Factor XII Assay, P</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>F8A</td>
<td>Coag Factor VIII Activity Assay, P</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>RPTL</td>
<td>Reptilase Time, P</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>F_2</td>
<td>Coag Factor II Assay, P</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>SFM</td>
<td>Soluble Fibrin Monomer</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>PNP</td>
<td>Platelet Neutralization Procedure</td>
<td>No</td>
<td>No</td>
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<tr>
<td>PTMX</td>
<td>PT Mix 1:1</td>
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<td>No</td>
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<tr>
<td>APTTM</td>
<td>APTT Mix 1:1</td>
<td>No</td>
<td>No</td>
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</tbody>
</table>
Testing Algorithm

Initial testing includes: prothrombin time (PT), activated partial thromboplastin time (APTT), and dilute Russell viper venom time (DRVVT).

If the PT, APTT, and DRVVT are normal, a computer-generated interpretive comment indicating no evidence of a lupus anticoagulant will be provided.

If PT is > or =14 seconds, PT mix will be performed.

If APTT is >36 seconds, APTT mix will be performed.

If APTT mix is >36 seconds with no evidence of heparin in sample, platelet neutralization procedure (PNP) will be performed.

If DRVVT ratio is > or =1.2, DRVVT mix and DRVVT confirmation will be performed.

If PT, APTT, or DRVVT are prolonged, thrombin time (TT) will be performed.

If TT is >23 seconds, reptilase will be performed.

If appropriate, coagulation factor assays, fibrinogen, D-dimer, Staclot LA, and soluble fibrin monomer will be performed to clarify a significant abnormality in the screening clotting times.

If factor VIII result is <55%, the factor VIII inhibitor screen may be performed along with the Bethesda titering assay, if indicated.

If any test results are abnormal, all results will be reviewed by a coagulation consultant and a Special Coagulation Consultant Interpretation will be provided.

See Lupus Anticoagulant Profile Testing Algorithm in Special Instructions.

Special Instructions

- Coagulation Studies
- Coagulation Patient Information
- Lupus Anticoagulant Profile Testing Algorithm

Method Name

PTC, PTMX, APTTB, DRVVT, TT, RPTL, DRVVTM, DRVTC, APTTM, PNP, STLA, F_2, FACTV, F_7, F_10, F8A, F_9, F_11, F_12, F8IS, IBETH: Optical Clot-Based
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**DIRM: Latex Immunoassay (LIA)**

**FIBC: Clauss SFM: Immunoturbidimetric**

**NY State Available**

Yes

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### Specimen

**Specimen Type**

Plasma Na Cit

**Shipping Instructions**

Send the 5 aliquots in the same shipping container.

**Specimen Required**

See [Coagulation Studies](#) in Special Instructions: Guidelines for Specimen Handling and Processing.

**Patient Preparation:** Patient should not be receiving Coumadin or heparin. If so, please note.

**Specimen Type:** Platelet-poor plasma

**Collection Container/Tube:** Light-blue top (citrate)

**Submission Container/Tube:** Plastic vials

**Specimen Volume:** 5 mL in 5 plastic vials each containing 1 mL

**Collection Instructions:**

1. Spin down, remove plasma, and spin plasma again.
2. Freeze specimens immediately at or below -40 degrees C, if possible.

**Additional Information:**

1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results.
2. If priority specimen, mark request form, give reason, and request a call-back.
3. Each coagulation assay requested should have its own vial.
4. If multiple coagulation profiles are ordered, each profile must be on a separate order.

**Forms**

1. [Coagulation Patient Information](#) (T675) in Special Instructions

2. If not ordering electronically, complete, print, and send 1 of the following forms with the specimen:
   - [General Request](#) (T239)
Specimen Minimum Volume
4 mL in 4 plastic vials each containing 1 mL

Reject Due To

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

Specimen Stability Information

<table>
<thead>
<tr>
<th>Specimen Type</th>
<th>Temperature</th>
<th>Time</th>
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</thead>
<tbody>
<tr>
<td>Plasma Na Cit</td>
<td>Frozen</td>
<td>14 days</td>
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</table>

Clinical and Interpretive

Clinical Information
Lupus anticoagulant (LAC) is an antibody to negatively charged phospholipid that interferes with phospholipid-dependent coagulation tests.

LAC is found in, but not limited to, patients with systemic lupus erythematosus; LAC is associated with other autoimmune disorders and collagen vascular disease, and occurs in response to medications or certain infections (eg, respiratory tract infections in children) and in individuals with no obvious underlying disease.

LAC has been associated with arterial and venous thrombosis and fetal loss. Individuals with thrombocytopenia or factor II deficiency associated with LAC may be at risk for bleeding.

Reference Values
PROTHROMBIN TIME (PT)
10.3-12.8 seconds

INR
0.9-1.2

The INR is used only for patients on stable oral anticoagulant therapy. It makes no significant contribution to the diagnosis or treatment of patients whose PT is prolonged for other reasons.

ACTIVATED PARTIAL THROMBOPLASTIN TIME (APTT)
Adults: 26-36 seconds

The normal full-term newborn APTT may be up to 35% longer than in adults and even longer (up to twice the adult upper limit) in healthy premature infants. Typically, the APTT is in the adult reference range by age 3 months in healthy full-term infants and by age 6 months in healthy premature infants (30-60 weeks gestation)*.
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26-36 seconds (>3-6 months)

*See Pediatric Hemostasis References in Coagulation Studies in Special Instructions.

DILUTE RUSSELL'S VIPER VENOM TIME

<1.2

Interpretation
An interpretive report will be provided when testing is complete.

Cautions
This test is not useful for the detection of antiphospholipid antibodies that do not affect coagulation tests. We recommend separate testing for serum phospholipid (cardiolipin) antibodies.

Patient should not be receiving warfarin or heparin. If the patient is currently on warfarin or heparin, this should be noted, treatment with heparin causes false-positive results of in vitro coagulation testing for lupus anticoagulant. Coumadin treatment may impair ability to detect the more subtle varieties of lupus-like anticoagulants.

Clinical Reference

Performance

Method Description
See individual Test IDs.

PDF Report
No

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

Maximum Laboratory Time
7 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
See Individual Test IDs

CPT Code Information
85610-PT
85613-DRVVT
85730-APTT
85210-Factor II (if appropriate)
85220-Factor V (if appropriate)
85230-Factor VII (if appropriate)
85240-Factor VIII (if appropriate)
85250-Factor IX (if appropriate)
85260-Factor X (if appropriate)
85270-Factor XI (if appropriate)
85280-Factor XII (if appropriate)
85335-Bethesda units (if appropriate)
85335-Factor VIII inhibitor screen (if appropriate)
85366-Soluble fibrin monomer (if appropriate)
85379-D-dimer (if appropriate)
85384-Fibrinogen (if appropriate)
85390-26-Special coagulation interpretation (if appropriate)
85597-Platelet neutralization for lupus inhibitor (if appropriate)
85598-Staclot LA (if appropriate)
85611-PT mix 1:1 (if appropriate)
85613-DRVVT mix (if appropriate)
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- 85613-DRVVT confirmation (if appropriate)
- 85635-Reptilase time (if appropriate)
- 85670-Thrombin time (if appropriate)
- 85732-APTT mix 1:1 (if appropriate)

**LOINC® Information**

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<tr>
<th>Test ID</th>
<th>Test Order Name</th>
<th>Order LOINC Value</th>
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<tbody>
<tr>
<td>LUPPR</td>
<td>Lupus Anticoag Prof</td>
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<tr>
<th>Result ID</th>
<th>Test Result Name</th>
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<tr>
<td>APTTB</td>
<td>Activated Partial Thromboplatin Time, PT</td>
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<td>7525</td>
<td>Interpretation</td>
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<td>RVVR</td>
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<td>Prothrombin Time (PT), PT</td>
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<td>INR</td>
<td>6301-6</td>
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<td>Reviewed by:</td>
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