Overview

Useful For
Diagnosing a congenital deficiency (rare) of coagulation factor II

Evaluating acquired deficiencies associated with liver disease or vitamin K deficiency, oral anticoagulant therapy, and antibody-induced deficiencies (eg, in association with lupus-like anticoagulant)

Determining warfarin treatment stabilization in patients with nonspecific inhibitors (ie, lupus anticoagulant)

Determining degree of anticoagulation with warfarin to correlate with level of protein S

Investigation of prolonged prothrombin time or activated partial thromboplastin time

Special Instructions
- Coagulation Guidelines for Specimen Handling and Processing

Method Name
Optical Clot-Based

NY State Available
Yes

Specimen

Specimen Type
Plasma Na Cit

Advisory Information
Coagulation testing is highly complex, often requiring the performance of multiple assays and correlation with clinical information. For that reason we suggest ordering Coagulation Consultations.

Necessary Information
If priority specimen, mark request form, give reason, and request a call-back.

Specimen Required
See Coagulation Guidelines for Specimen Handling and Processing in Special Instructions.

Specimen Type: Platelet-poor plasma

Patient Preparation: Patient must not be receiving Coumadin or heparin therapy.

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

Submission Container/Tube: Plastic vial

Specimen Volume: 1 mL

Collection Instructions:
1. Within 4 hours of collection, centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. Aliquot plasma into separate plastic vial leaving 0.25 mL in the bottom of centrifuged vial.

2. Freeze plasma immediately at -20 degrees C, or, ideally at \(< \text{ or } = \) -40 degrees C.

**Additional Information:**

1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results.

2. Each coagulation assay requested should have its own vial.

**Forms**

If not ordering electronically, complete, print, and send a [Coagulation Test Request](#) (T753) with the specimen.

**Specimen Minimum Volume**

0.5 mL

**Reject Due To**

<table>
<thead>
<tr>
<th>Gross hemolysis</th>
<th>Reject</th>
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</thead>
<tbody>
<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>
<th>Special Container</th>
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</thead>
<tbody>
<tr>
<td>Plasma Na Cit</td>
<td>Frozen</td>
<td>14 days</td>
<td></td>
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</table>

**Clinical and Interpretive**

**Clinical Information**

Factor II (prothrombin) is a vitamin K-dependent serine protease synthesized in liver. It participates in the final common pathway of coagulation, as the substrate for the prothrombinase enzyme complex. Prothrombin is the precursor of thrombin (IIa), which converts fibrinogen to fibrin. Plasma biological half-life is about 3 days.

Deficiency of factor II may cause prolonged prothrombin time and activated partial thromboplastin time. Deficiency may result in a bleeding diathesis.

**Reference Values**

Adults: 75-145%

Normal, full-term newborn infants or healthy premature infants may have decreased levels (\(> \text{ or } = \)25%) which may remain below adult levels for \(> \text{ or } = \)180 days postnatal.*

*See Pediatric Hemostasis References section in [Coagulation Guidelines for Specimen Handling and Processing](#) in Special Instructions.

**Interpretation**
Liver disease, vitamin K deficiency, or warfarin anticoagulation can cause decreased factor II activity.

Homozygotes generally have levels of <25%

Heterozygotes generally have levels of <50%

Normal newborn infants may have levels of 25% to 50%

Cautions

Factor II is one of the last vitamin K-dependent coagulation factors to decrease after starting warfarin therapy and one of the last to return to normal when anticoagulation is discontinued. It may take 10 to 14 days for a return to baseline levels.

Clinical Reference


Performance

Method Description


PDF Report

No

Day(s) and Time(s) Test Performed

Monday through Friday

Analytic Time

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
85210

LOINC® Information

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<th>Order LOINC Value</th>
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<td>F_2</td>
<td>Coag Factor II Assay, P</td>
<td>3289-6</td>
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