Overview

Useful For
Detection and quantitation of inhibitor to factor II

This test is not useful for the detection of a lupus-like circulating anticoagulant inhibitor, a nonspecific circulating anticoagulant, or other inhibitors that are not specific for coagulation factors.

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>F_2</td>
<td>Coag Factor II Assay, P</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>F2_IS</td>
<td>Factor II Inhib Scrn</td>
<td>No</td>
<td>Yes</td>
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Reflex Tests

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<th>Reporting Name</th>
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<tbody>
<tr>
<td>IBETH</td>
<td>Bethesda Units</td>
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<td>No</td>
</tr>
<tr>
<td>CCCR</td>
<td>Special Coagulation</td>
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<td>No</td>
</tr>
<tr>
<td></td>
<td>Interpretation</td>
<td></td>
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</tr>
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</table>

Testing Algorithm

Testing begins with coagulation factor II activity assay with dilutions to evaluate assay inhibition; if the factor II activity assay is normal or increased, the inhibitor screen will be cancelled. If the factor II activity assay is decreased, an inhibitor screen will be performed to look for specific factor II inhibition. If specific inhibition is apparent, the titer of the inhibitor will be determined.

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
This test is for factor II only. If the presence or type of inhibitor is unknown, order ALUPP / Lupus Anticoagulant
Profile first, except for screening studies in patients with known hemophilia A or B.

**Shipping Instructions**
Send all vials in the same shipping container.

**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.

**Patient Preparation:** Fasting preferred

**Collection Container/Tube:** Light-blue top (3.2% sodium citrate)

**Submission Container/Tube:** Plastic vials

**Specimen Volume:** 3 mL in 3 plastic vials each containing 1 mL

**Collection Instructions:**
1. Specimen must be collected prior to factor replacement therapy.
2. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again.
3. Aliquot plasma into 3 separate plastic vials (1 mL in each) leaving 0.25 mL in the bottom of centrifuged vial.
4. Freeze plasma immediately (no longer than 4 hours after collection) at -20 degrees C or, ideally, < 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**
2 mL in 2 plastic vials, 1 mL each

**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>
</tr>
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**Specimen Stability Information**
Clinical and Interpretive

Clinical Information

Coagulation factor inhibitors arise in patients who are congenitally deficient in a specific factor in response to factor replacement therapy or can either occur spontaneously without known cause or in response to a variety of medical conditions including the postpartum state, immunologic disorders, certain antibiotic therapies, some malignancies, and in geriatric patients.

Inhibitors of factor VIII coagulant activity are the most commonly occurring of the specific factor inhibitors.

Reference Values

FACTOR II ACTIVITY ASSAY

Adults: 75-145%

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

*See Pediatric Hemostasis References section in Coagulation Guidelines for Specimen Handling and Processing in Special Instructions.

FACTOR II INHIBITOR SCREEN

Negative Interpretation

Normally, there is no inhibitor, ie, negative result.

If the screening assays indicate the presence of an inhibitor, it will be quantitated and reported in Bethesda (or equivalent) units.

Cautions

Occasionally, a potent lupus-like anticoagulant may cause false-positive testing for a specific factor inhibitor (eg, factor VIII or IX); see Advisory Information.

Clinical Reference


Performance
Method Description

Screening for inhibitors of specific coagulation factors is represented by the inhibitor assay for factor II. This assay consists of measuring the difference in factor II activity (prothrombin time assay) before and after incubation of a mixture of normal plasma and patient's plasma for 1 hour at 37 degrees C. For optimal sensitivity, the factor II value of the normal plasma is adjusted to approximately 20%, because the factor II assay is more sensitive in this area of the curve. In addition, an excess of patient's plasma will make the test more sensitive to small amounts of inhibitors. (Owen CA Jr, Bowie EJW, Thompson JH Jr: The Diagnosis of Bleeding Disorders. Second edition. Little, Brown and Company, Boston, MA, 1975, pp 143-145; Meijer P, Verbruggen and Spannagi M: Chapter 33: Clotting factors and inhibitors: Assays and Interpretation. In Laboratory Hematology Practice. Edited by K Kottke-Marchant. Wiley Blackwell Publishing, 2012, pp 435-446)

If the inhibitor screen is positive for an inhibitor of factor II, the inhibitor will be quantitated by the "Bethesda assay." In the Bethesda procedure, inhibitors are quantified by mixing equal volumes of serially diluted plasma with normal plasma. This mixture is incubated 2 hours at 37 degrees C, and its factor II activity is measured and compared to a control run at the same time. The difference between the factor II activity of the patient's incubation mixture and that of the control is used to calculate the titer. The residual factor II activity is converted to "Bethesda units": 50% residual factor II is equal to 1 Bethesda unit. (Kasper CK, Aldedort LM, Counts RB, et al: A more uniform measurement of factor VIII inhibitors. Thromb Diath Haemorrh 1975;34:869-872; Meijer P, Verbruggen and Spannagi M: Chapter 33: Clotting factors and inhibitors: Assays and Interpretation. In Laboratory Hematology Practice. Edited by K Kottke-Marchant. Wiley Blackwell Publishing, 2012, pp 435-446)

PDF Report
No

Day(s) and Time(s) Test Performed
Monday through Friday; Varies a.m.

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
See Individual Test IDs

CPT Code Information
Test Definition: F2IS
Coag Factor II Inhibitor Scrn, P

85210-Factor II
85335-Factor inhibitor
85335-Bethesda units (if appropriate)

**LOINC® Information**

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<th>Test Order Name</th>
<th>Order LOINC Value</th>
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<td>Coag Factor II Inhibitor Scrn, P</td>
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