Test Definition: F_11

Coag Factor XI Assay, P

Overview

Useful For

Diagnosing deficiency of coagulation factor XI

Investigation of prolonged 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

Ordering Guidance

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

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

Specimen Type: Platelet-poor plasma

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

Submission Container/Tube: Plastic vial

Specimen Volume: 1 mL

Collection Instructions:

1. Specimen must be collected prior to factor replacement therapy

2. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions.

3. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again.

4. Aliquot plasma into a plastic vial, leaving 0.25 mL in the bottom of centrifuged vial.

5. 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

0.5 mL

Reject Due To

Gross hemolysis	Reject
Gross lipemia	Reject
Gross icterus	Reject

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

Clinical and Interpretive

Clinical Information

Factor XI is synthesized in the liver. Its biological half-life is 60 to 80 hours. Factor XI is a component of intrinsic coagulation pathway which, when activated, activates factor IX to IXa.

Factor XI deficiency may cause prolonged partial thromboplastin time. Deficiency associated with mild bleeding diathesis, but there is poor correlation between activity level and clinical bleeding. A relatively high incidence of congenital deficiency occurs among Ashkenazi Jewish descent (hemophilia C).

Reference Values

Adults: 55-150%

Normal, full-term newborn infants or healthy premature infants may have decreased levels (> or =10%) which may not reach adult levels for > or =180 days postnatal.*

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

Interpretation

Acquired deficiency is associated with liver disease and rarely inhibitors.

Patients that are homozygous: <20% activity

Patient that are heterozygous: 20% to 60% activity

Cautions

Decreased plasma levels of factor XI do not correlate well with bleeding risk.

Clinical Reference

1. He R, Chen D, He S: Factor XI: hemostasis, thrombosis, and antithrombosis. Thromb Res. 2012 May;129(5):541-550

2. Martin-Salces M, Jimenez-Yuste V, Alvarez MT, et al: Review: Factor XI deficiency: review and management in pregnant women. Clin Appl Thromb Hemost. 2010;16(2):209-213

3. Seligsohn U: Factor XI in haemostasis and thrombosis: past, present and future. Thromb Haemost. 2007;98(1):84-89

4. Santoro R, Prejano S, Iannaccaro P: Factor XI deficiency: a description of 34 cases and literature review. Blood Coagul Fibrinolysis. 2011Jul;22(5):431-435

Performance

Method Description

The factor XI assay is performed on the Instrumentation Laboratory ACL TOP using the activated partial thromboplastin time (APTT) method and a factor-deficient substrate. Patient plasma is combined and incubated with a factor XI-deficient substrate (normal plasma depleted of factor XI by immunoadsorption) and an APTT reagent. After a specified incubation time, calcium is added to trigger the coagulation process in the mixture. Then the time to clot formation is measured optically at a wavelength of 671 nm.(Owen CA Jr, Bowie EJW, Thompson JH Jr: Diagnosis of Bleeding Disorders. 2nd ed. Little, Brown and Company; 1975; Meijer P, Verbruggen HW, Spannagi M: Clotting factors and inhibitors: Assays and interpretation. In: Kottke-Marchant K, ed. Laboratory Hematology Practice. Wiley Blackwell Publishing; 2012:435-446)

PDF Report

No

Day(s) Performed

Monday through Saturday

Report Available

1 to 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 US Food and Drug Administration.

CPT Code Information

85270

LOINC® Information

Test ID	Test Order Name	Order LOINC Value
F_11	Coag Factor XI Assay, P	3226-8

Result ID	Test Result Name	Result LOINC Value
F_11	Coag Factor XI Assay, P	3226-8