
Lab Dept: Coagulation

Test Name: FACTOR XII ASSAY

General Information

Lab Order Codes: F12

Synonyms: Hageman Factor; XIIa; Factor XII Activity, Factor 12

CPT Codes: 85280 - Clotting factor XII (Hageman)

Test Includes: Factor XII level reported as a %.

Logistics

Test Indications: Useful for the detection of a single factor congenital homozygous or heterozygous deficiency.

Lab Testing Sections: Coagulation

Phone Numbers: MIN Lab: 612-813-6280

STP Lab: 651-220-6550

Test Availability: Daily, 24 hours

Turnaround Time: 4 hours

Special Instructions: Patient should not be receiving heparin. If so, this should be noted on the request form. Heparin therapy can affect certain coagulation factors or assays, preclude their performance, or cause spurious results. Indicate when specimen is drawn from a line or a heparin lock. Deliver immediately to the laboratory.

Specimen

Specimen Type: Whole blood

Container: Light Blue top (Buffered Na Citrate 3.2%) tube

Draw Volume: 2.7 mL blood

Processed Volume: 0.9 mL plasma

Collection:

- A clean venipuncture is essential, avoid foaming.
- Entire sample must be collected with single collection, pooling of

sample is unacceptable.

- Capillary collection is unacceptable.
- Patient's with a hematocrit level >55% must have a special tube made to adjust for the hematocrit; contact lab for a special tube.
- Mix thoroughly by gentle inversion. Deliver immediately to the laboratory at room temperature via courier or pneumatic tube.

Off campus collections:

- Must be tested within 4 hours.
- Do not refrigerate.
- If not received in our lab within 4 hours of collection, sample must be centrifuged and *platelet-poor plasma removed from cells and transferred to an aliquot tube being careful not to disturb the cell layer. Centrifuge the plasma a second time and transfer into a clean aliquot tube being careful not to include any residual platelets on the bottom of the tube. Freeze at -20°C and deliver to the lab on dry ice within 2 weeks.

***Validation of your lab's centrifuge for platelet poor plasma is required.**

Special Processing:

Lab Staff: Spin sample collected in blue top tube(s) for 5 minutes on the Stat Spin centrifuge, remove plasma and transfer to a 4 mL BCS sample cup(s), spin remaining plasma again for 5 minutes in the Stat Spin Centrifuge. Transfer plasma to new BCS sample cup(s) for analysis (as specifically stated in each procedure) leaving approximately 200 mcL in the bottom of the original cup to discard.

Patient Preparation:

Avoid heparin therapy for two days prior to the test.

Sample Rejection:

Improper tube; clotted samples; underfilled tubes; mislabeled or unlabeled specimens

Interpretive

Reference Range:

Age	Range
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0 – 1 day:	33 – 73%
2 – 5 days	29 – 65%
6 – 30 days:	33 – 65%
31 – 90 days	46 – 88%
91 – 180 days:	58 – 96%
6 months – 5 years:	64 – 129%
6 – 10 years:	60 – 140%
11 – 16 years:	34 – 137%
>16 years:	52 – 164%

Critical Values:

N/A

Limitations:

Interpretation of the results may be limited if patient is receiving anticoagulant therapy or if test is done more than 2 hours after collection.

Methodology:

Thromboplastin clotting time correction of Factor 12 deficient plasma. Patient dilutions are compared to a known set of standard dilutions and a percentage is determined.

Contraindications:

Patient on anticoagulant therapy.

References:

Harmening DH (1997) Clinical Hematology and Fundamentals of Hemostasis

Andrew M et al (1987) Development of the Human Coagulation System in the Healthy Full-Term Infant, Blood 70:165-72

Andrew M et al (1988) Development of the Human Coagulation System in the Healthy Premature Infant, Blood 72:1651-57

Andrew M et al (1992) Development of the Human Coagulation System During Childhood, Blood 80:1998-2005

Updates:

5/24/2010: Tubing of patient specimens is no longer prohibited.

12/15/2010: Processing information updated.

9/15/2014: Add Off Campus collection info.