MAYO CLINIC LABORATORIES

Test Definition: FIBAG

Fibrinogen Antigen, Plasma

Overview

Useful For

Evaluation of fibrinogen deficiency

Measuring fibrinogen in patients with elevated plasma levels of fibrin degradation products, patients receiving heparin, and in patients with antibodies to thrombin (following surgical use of topical bovine thrombin)

Identifying afibrinogenemia, hypofibrinogenemia, and dysfibrinogenemia when ordered in combination with fibrinogen activity (FIBTP / Fibrinogen, Plasma)

Method Name

Immunoturbidimetric

NY State Available

Yes

Specimen

Specimen Type

Plasma Na Cit

Specimen Required

Supplies: Sarstedt Aliquot Tube 5 mL (T914)
Collection Container/Tube: Light-blue top (3.2% sodium citrate at 9:1 ratio)
Submission Container/Tube: Plastic vial
Specimen Volume: 1 mL plasma
Collection Instructions:
1. Centrifuge and aliquot plasma into plastic vial.
2. Send refrigerate.

Specimen Minimum Volume

Plasma: 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	Refrigerated (preferred)	14 days	
	Ambient	72 hours	
	Frozen	30 days	

Clinical & Interpretive

Clinical Information

Fibrinogen (clotting factor I) is an essential protein responsible for blood clot formation. In the final step of the coagulation cascade, thrombin converts soluble fibrinogen into insoluble fibrin strands that crosslink and form a clot.

Fibrinogen is synthesized in the liver and has a biological half-life of 3 to 5 days in the circulating plasma. Fibrinogen deficiencies can be congenital or acquired and lead to prolonged coagulation times. Isolated fibrinogen deficiency is an extremely rare inherited coagulation disorder.

Acquired fibrinogen deficiency is most commonly caused by, acute or decompensated intravascular coagulation and fibrinolysis. Other causes of fibrinogen deficiency include advanced liver disease, L-asparaginase therapy, or fibrinolytic agents (eg, streptokinase, urokinase, tissue plasminogen activator).

Reference Values

> or =18 years: 196-441 mg/dL
Reference values have not been established for patients that are less than 18 years of age.

Interpretation

This method measures the total amount of fibrinogen protein (ie, fibrinogen antigen) present in the plasma.

Adequate fibrinogen antigen levels in a context of low fibrinogen activity suggests a dysfibrinogenemia.

Fibrinogen antigen levels lower than 100 mg/dL are associated with an increased risk of bleeding.

Cautions

Differentiation of congenital from acquired defects of fibrinogen requires clinical correlation and the results of standard clotting-based fibrinogen activity (FIBTP / Fibrinogen, Plasma) testing.

Fibrinogen is an acute phase reactant; plasma levels can be increased by inflammatory illnesses, nephrotic syndrome, liver disease, pregnancy, estrogen therapy, and/or compensated intravascular coagulation.

Clinical Reference

1. de Moerloose P, Casini A, Neerman-Arbez M. Congenital fibrinogen disorders: an update. Semin Thromb Hemost. 2013;39(6):585-595
2. Mackie I, Casini A, Pieters M, Purthi R, Reilly-Stitt C, Suzuki A. International council for standardisation in haematology recommendations on fibrinogen assays, thrombin clotting time and related tests in the investigation of bleeding disorders. Int J Lab Hematol. 2024;46(1): 20-32. doi:10.1111/ijlh.14201

Performance

Method Description
The K-ASSAY Fibrinogen test analyzes the quantitative determination of fibrinogen in human plasma by immunoturbidimetric analysis. Samples and antibody reagent are automatically pipetted into individual cuvettes. Following an initial incubation and measurement of sample blank, antiserum is added to the cuvettes. The sample (antigen) solution and antiserum are then mixed in the reaction cuvettes. Insoluble antigen-antibody complexes form. The immune complexes cause an increase in light scattering, which correlates with the concentration of plasma fibrinogen. The absorbance of the solution is measured.(Package insert: K-ASSAY Fibrinogen. Kamiya Biomedical Company; 03/2023)

PDF Report
No

Day(s) Performed
Monday, Thursday

Report Available
1 to 5 days

Specimen Retention Time
7 days

Performing Laboratory Location
Mayo Clinic Laboratories - Rochester Main Campus

Fees & 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 account representative. For assistance, contact Customer Service.

Test Classification
This test has been cleared, approved, or is exempt by the US Food and Drug Administration and is used per manufacturer's instructions. Performance characteristics were verified by Mayo Clinic in a manner consistent with CLIA requirements.

CPT Code Information
85385

LOINC® Information

MAYO CLINIC LABORATORIES

Test Definition: FIBAG

Fibrinogen Antigen, Plasma

Test ID	Test Order Name	Order LOINC® Value
FIBAG	Fibrinogen Antigen, P	3256-5

Result ID	Test Result Name	Result LOINC® Value
FIBAG	Fibrinogen Antigen, P	3256-5