MAYO CLINIC LABORATORIES

Test Definition: FFTAC

Thrombin-Antithrombin Complex

Overview

Method Name
Enzyme Immunoassay

NY State Available
Yes

Specimen

Specimen Type
Plasma Na Cit

Specimen Required
Specimen Type: Citrated plasma
Collection Container/Tube: Light-blue top (citrate)
Specimen Volume: 2 mL
Collection Instructions: Draw blood in a light blue-top (Sodium citrate) tube(s). Spin down and send 2 mL citrated plasma frozen in a plastic vial.

Note: Separate specimens must be submitted when multiple tests are ordered.

Specimen Minimum Volume
1 mL

Reject Due To

Thawing**	Cold reject; Warm reject
Other/Tissue/Swab	Specimens other than Plasma; Anticoagulants other than Sodium citrate

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	180 days	

Clinical & Interpretive

Clinical Information
Thrombin-antithrombin complexes (TAT) form covalently following thrombin generation and have a plasma half-life of

10 to 15 minutes. The presence of TAT indicates ongoing thrombin formation and the consumption of antithrombin. Upon activation of coagulation, antithrombin complexes with thrombin as well as other serine proteases. Complex formation is greatly enhanced by the presence of heparin or other glycosaminoglycans. The reaction initially is reversible, but becomes irreversible following the formation of a covalent bond between antithrombin and thrombin. This binding results in complete inhibition of thrombin's activity. Elevated levels of TAT may be associated with advancing age, pregnancy, septicemia, disseminated intravascular coagulation, multiple traumas, acute pancreatitis, acute and chronic leukemia, preëclampsia, acute and chronic liver disease, and other predisposing causes of thrombosis. Increased levels are also reported during heparin and fibrinolytic therapy. TAT levels are markedly reduced in the first 24 hours after receiving oral anticoagulants. The TAT assay can detect the intravascular generation of thrombin and provides valuable information in the diagnosis of thrombotic events. Decreasing TAT levels can also indicate the resolution of a thrombotic event. A normal TAT level in the presence of an elevated D-dimer may indicate an old thrombus. Elevated TAT measurements may be accompanied by increased levels of prothrombin fragment 1+2, fibrinpeptide A, fibrin(ogen)degradation products, and D-dimer. D-dimer has greater sensitivity for detection of deep venous thrombosis.

Reference Values

<4.3 ng/mL

Pre-analytical conditions such as a difficult draw may spuriously increase test results.

Performance

Method Description

TAT is measured by enzyme immunoassay using a sandwich technique. The patient sample containing TAT is incubated with antibodies against thrombin, and the unbound constituents are removed by washing. Enzyme conjugated antibodies to antithrombin are then added to the reaction, and the excess antibodies are removed by washing. The remaining (bound) enzymatic activity acts upon a chromophore and color development is proportional to the TAT in the sample.

PDF Report

No

Day(s) Performed

Monday, Thursday

Report Available

4 to 13 days

Performing Laboratory Location

Esoterix Coagulation

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.

CPT Code Information

83520

LOINC® Information

Test ID	Test Order Name	Order LOINC® Value
FFTAC	Thrombin Antithrombin Complex	14182-0

Result ID	Test Result Name	Result LOINC® Value
FFTAC	Thrombin Antithrombin Complex	14182-0