Activated Partial Thromboplastin Time (aPTT)

Alternate Name(s): aPTT, PTT

The aPTT is a clot-based screening test of several coagulation factors, performed by mechanical clot endpoint detection.

The time to in vitro clot formation is determined after mixing patient plasma with a source of activated partial thromboplastin (a negatively charged contact activation material, such as ground glass), phospholipid and calcium.

Specimen Requirement(s):
- Collection Tube: Light Blue Top Tube with Citrate
- Handling: Freeze
- TAT: Daily (M-F)
- Mnemonic: APTT

CPT Code(s): 85730
Unit Code: 100520
Fee: $15.00

Activated Protein C Resistance (Factor V Deficient Plasma Method)

Alternate Name(s): APC Resistance Ratio, APCR

A clot-based assay to determine if the in vitro clotting time (using an aPTT assay) of patient plasma is appropriately prolonged after exogenous addition of the anticoagulant Activated Protein C (APC). Absence of appropriate aPTT prolongation suggests the presence of the Factor V Leiden mutation, other mutations affecting Factor V, or an acquired cause of the APC resistance phenotype.

The use of Factor V deficient plasma as an assay reagent allows performance of the assay in the presence of warfarin.

Specimen Requirement(s):
- Collection Tube: Light Blue Top Tube with Citrate
- Handling: Freeze
- TAT: Weekly
- Mnemonic: APCR

CPT Code(s): 85307
Unit Code: 102770
Fee: $75.00
Anti-Beta 2 Glycoprotein I (IgG, IgM)

Alternate Name(s): Anti β₂ GPI, Anti B2GPI

Specimen Requirement(s): 2.0 ml Serum
Collection Tube: Red Top Tube
Handling: Freeze
TAT: Weekly
Mnemonic: ANTI GPI

CPT Code(s): 86146 (x2)
Unit Code: 101641
Fee: $130.00

Anti-Cardiolipin Antibody (IgG, IgM, IgA)

Alternate Name(s): Anti CL

Specimen Requirement(s): 2.0 ml Serum
Collection Tube: Red Top Tube
Handling: Freeze
TAT: Weekly
Mnemonic: ANTI CL

CPT Code(s): 86147 (x3)
Unit Code: 300100
Fee: $105.00

Anti-Platelet Factor 4 (PF4) (previously Platelet Factor 4 Heparin)

Alternate Name(s): PF4 Heparin

Specimen Requirement(s): 2.0 ml Plasma
Collection Tube: Red Top Tube
Handling: Freeze
TAT: M, W, F
Mnemonic: PF4

CPT Code(s): 86022
Unit Code: 102970
Fee: $137.50
## Anti-Xa (Low Molecular Weight Heparin)

**Alternate Name(s):** Heparin Xa Inhibition, Anti Xa LMWH

This chromogenic assay measures the anticoagulant effect of LMWH in patient plasma. An established therapeutic range can serve as a guide to therapy in selected patients.

**Specimen Requirement(s):**
- **Collection Tube:** Light Blue Top Tube with Citrate
- **Handling:** Freeze
- **TAT:** Daily (M-F)
- **Mnemonic:** AXA LMW

**CPT Code(s):** 85520
**Unit Code:** 101050
**Fee:** $70.00

## Anti-Xa (Standard Heparin)

**Alternate Name(s):** Unfractionated Heparin Xa Inhibition

This chromogenic assay measures the anticoagulant effect of standard heparin in patient plasma. An established therapeutic range can serve as a guide to therapy in selected patients for whom the aPTT therapeutic range is not satisfactory.

**Specimen Requirement(s):**
- **Collection Tube:** Light Blue Top Tube with Citrate
- **Handling:** Freeze
- **TAT:** Daily (M-F)
- **Mnemonic:** AXA STD

**CPT Code(s):** 85520
**Unit Code:** 101040
**Fee:** $70.00

## Antiplasmin Activity

**Alternate Name(s):**

Functional assay of antiplasmin activity, employing a chromogenic substrate.

Antiplasmin is the principle, naturally occurring inhibitor of plasmin. Reduced functional activity of antiplasmin can be associated with an acquired or congenital deficiency.

**Specimen Requirement(s):**
- **Collection Tube:** Light Blue Top Tube with Citrate
- **Handling:** Freeze
- **TAT:** Weekly
- **Mnemonic:** ANTI PLAS

**CPT Code(s):** 85410
**Unit Code:** 100630
**Fee:** $82.00
Antithrombin Activity

Alternate Name(s): Antithrombin III, ATIII, AT

Functional assay of antithrombin activity employing a chromogenic substrate.
Antithrombin is the principle naturally occurring inhibitor of thrombin. Reduced functional activity of antithrombin can be associated with an acquired or congenital deficiency.

Note: Antithrombin activity should not be determined after the initiation of heparin therapy. Antithrombin activity is not affected by warfarin.

Specimen Requirement(s):
- 2.0 ml Plasma
- Collection Tube: Light Blue Top Tube with Citrate
- Handling: Freeze
- TAT: Weekly (T)
- Mnemonic: ANTI THR

CPT Code(s): 85300
Unit Code: 100600
Fee: $70.00

Antithrombin Antigen

Alternate Name(s): Antithrombin III, ATIII, AT

Antithrombin antigen level determined by an Enzyme Linked Immunosorbant Assay (ELISA).

Determination of Antithrombin antigen level is normally performed after a reduced functional activity has been identified. The antigen level is used in the classification of Antithrombin deficiency (e.g. Type I, Type II, etc.).

Note: Antithrombin antigen should not be determined after the initiation of heparin therapy. Antithrombin antigen is not affected by warfarin.

Specimen Requirement(s):
- 2.0 ml Plasma
- Collection Tube: Light Blue Top Tube with Citrate
- Handling: Freeze
- TAT: Weekly
- Mnemonic: AT AG

CPT Code(s): 85301
Unit Code: 102860
Fee: $90.00
CYP2C9/VKORCl Panel

**Alternate Name(s):** Warfarin Genotype Panel

DNA based assay used to evaluate the G-1639A mutation of the Vitamin K epoxide reductase gene and to evaluate mutations C430T (*2), A1075C (*3), C1080G (*5), 818delA (*6), and C1003T (*11) of the CYP2C9 (Cytochrome P450, family 2, subfamily C, polypeptide 9) gene. These results may be useful in evaluating patients taking warfarin.

**Specimen Requirement(s):**
- **Collection Tube:** 5.0 ml whole blood
- **Handling:** Blue (Citrate) or Purple (EDTA)
- **TAT:** Refrigerate or Room Temp
- **Mnemonic:** WARF SNP

**CPT Code(s):**
- 83891, 83896 (x6), 83898, 83900, 83907, 83912, 83914

**Unit Code:** 103010

**Fee:** $295.00

D-Dimer Quantitative

**Alternate Name(s):** D-Dimer ELISA

Quantitative measurement of fragment D-Dimer by latex immunoassay (LIA).

D-Dimer is a degradation product of cross-linked fibrin. This test is used in the evaluation of fibrinolysis.

**Specimen Requirement(s):**
- **Collection Tube:** 2.0 ml Plasma
- **Handling:** Light Blue Top Tube with Citrate
- **TAT:** Freeze
- **Mnemonic:** D DIMER QNT

**CPT Code(s):** 85379

**Unit Code:** 102830

**Fee:** $90.00

Dilute Russell Viper Venom Test

**Alternate Name(s):** DRVV, DRVVT

aPTT based clotting assay using reagent with low levels of phospholipid and Russell viper venom as activator. The venom protease activates the common pathway of coagulation directly through Factor X. Used in the evaluation of the antiphospholipid syndrome.

**Specimen Requirement(s):**
- **Collection Tube:** 2.0 ml Plasma
- **Handling:** Light Blue Top Tube with Citrate
- **TAT:** Freeze
- **Mnemonic:** DRVV

**CPT Code(s):** 85613

**Unit Code:** 100890

**Fee:** $60.00
Factor II Activity

**Alternate Name(s):** FII, Prothrombin

The activity of patient FII as compared to normal is measured using a PT-based methodology. Prothrombin levels are decreased in congenital deficiencies of FII, liver disease, and with warfarin anticoagulant therapy.

**Specimen Requirement(s):**
- **Collection Tube:** 2.0 ml Plasma
- **Handling:** Light Blue Top Tube with Citrate
- **TAT:** Freeze
- **Mnemonic:** Weekly
- **CPT Code(s):** 85210
- **Unit Code:** 100750
- **Fee:** $80.00

Factor V Activity

**Alternate Name(s):** FV

The activity of patient FV as compared to normal is measured using an aPTT-based methodology.

Factor V is susceptible to time and temperature dependent degradation. Therefore, specimens should be processed and transported with care.

**Specimen Requirement(s):**
- **Collection Tube:** 2.0 ml Plasma
- **Handling:** Light Blue Top Tube with Citrate
- **TAT:** Freeze
- **Mnemonic:** Weekly
- **CPT Code(s):** 85220
- **Unit Code:** 100760
- **Fee:** $80.00

Factor V Inhibitor (Bethesda Units)

**Alternate Name(s):** FV Inhibitor, Bethesda Titer

Assay used to titer and quantitate in Bethesda Units (BU) an antibody inhibitor specifically directed against Factor V.

**Specimen Requirement(s):**
- **Collection Tube:** 3.0 ml Plasma
- **Handling:** Light Blue Top Tube with Citrate
- **TAT:** Freeze
- **Mnemonic:** Daily (M-F)
- **CPT Code(s):** 85220, 85335, 85610, 85611, 85730
- **Unit Code:** 101350
- **Fee:** $279.00
Factor V Leiden Mutation

Alternate Name(s): FV Leiden

Molecular assay to determine heterozygosity or homozygosity for the Factor V Leiden polymorphism (G1691A - Arg506Gln). Patients with this polymorphism are at an increased risk for venous thrombosis.

Specimen Requirement(s): 5.0 ml Whole Blood
Collection Tube: Light Blue Top Tube with Citrate
Handling: Refrigerate or Room temp (<24hrs)
TAT: Weekly
Mnemonic: F5 LEIDEN
CPT Code(s): 83891, 83896 (x2), 83898, 83907, 83912, 83914
Unit Code: 102980
Fee: $176.00

Factor V Leiden Mutation and PT 20210 Mutation

Alternate Name(s):
This is a combined assay for both the Factor V Leiden and Prothrombin G20210A polymorphism status. Either heterozygous or homozygous polymorphisms for either of these genes is associated with increased susceptibility to thrombosis.

Specimen Requirement(s): 5.0 ml whole blood
Collection Tube: Blue (Citrate) or Purple (EDTA)
Handling: Refrigerate or Room Temp
TAT: Weekly
Mnemonic: FVLPT
CPT Code(s): 83891, 83896 (x4), 83900, 83907, 83912 (x2), 83914
Unit Code: 103000
Fee: $240.00

Factor VII Activity

Alternate Name(s): FVII

The activity of patient FVII as compared to normal is measured using a PT-based methodology. FVII levels are decreased in congenital deficiencies of FVII, liver disease, and with warfarin anticoagulant therapy.

Specimen Requirement(s): 2.0 ml Plasma
Collection Tube: Light Blue Top Tube with Citrate
Handling: Freeze
TAT: Weekly
Mnemonic: F7
CPT Code(s): 85230
Unit Code: 100770
Fee: $80.00
Factor VIII Activity

Alternate Name(s): FVIII, Antihemophilic Factor, Hemophilia A

The activity of patient FVIII as compared to normal is measured using an aPTT-based methodology. FVIII levels are decreased in congenital deficiencies of FVIII, in von Willebrand Disease and in the presence of antibody inhibitors directed against Factor VIII. Factor VIII is susceptible to time and temperature dependent degradation. Therefore, specimens should be processed and transported with care.

Specimen Requirement(s):
- Collection Tube: 2.0 ml Plasma
- Handling: Light Blue Top Tube with Citrate Freeze
- TAT: Daily (M-F)
- Mnemonic: F8

CPT Code(s): 85240
Unit Code: 100780
Fee: $80.00

Factor VIII Inhibitor (Bethesda Units) Human

Alternate Name(s): FVIII Inhibitor, Bethesda Titer

Assay used to titer or quantitate in Bethesda Units (BU) the amount of inhibitor (alloantibody or autoantibody) specifically directed against human FVIII.

Specimen Requirement(s):
- Collection Tube: 3.0 ml Plasma
- Handling: Light Blue Top Tube with Citrate Freeze
- TAT: Daily (M-F)
- Mnemonic: F8 INH

CPT Code(s): 85240, 85335, 85730, 85732 (x3)
Unit Code: 101360
Fee: $195.00

Factor IX Activity

Alternate Name: FIX, Hemophilia B

The activity of patient FIX as compared to Normal is measured using an aPTT-based Methodology. FIX levels are decreased in congenital deficiencies of FIX, specific antibody inhibitors to FIX, liver disease, and with warfarin anticoagulant therapy.

Specimen Requirement(s):
- Collection Tube: 2.0 ml Plasma
- Handling: Light Blue Top Tube with Citrate Freeze
- TAT: Daily
- Mnemonic: F9

CPT Code(s): 85250
Unit Code: 100830
Fee: $80.00
Factor IX Inhibitor (Bethesda Units)

Alternate Name(s): FIX Inhibitor, Bethesda Titer

Assay used to titer or quantitate in Bethesda Units (BU) the amount of antibody inhibitor specifically directed against FIX.

Specimen Requirement(s):
- Collection Tube: 3.0 ml Plasma
- Handling: Light Blue Top Tube with Citrate Freeze
- TAT: Daily (M-F)
- Mnemonic: F9 INH

CPT Code(s): 85250, 85335, 85730, 85732 (x3)
- Unit Code: 101320
- Fee: $195.00

Factor X Activity (Clot Based)

Alternate Name(s): FX

The activity of patient FX as compared to normal is measured using a PT-based methodology. FX levels are decreased in congenital deficiencies of FX, liver disease, and with warfarin anticoagulant therapy.

Specimen Requirement(s):
- Collection Tube: 2.0 ml Plasma
- Handling: Light Blue Top Tube with Citrate Freeze
- TAT: Weekly
- Mnemonic: F10

CPT Code(s): 85260
- Unit Code: 100840
- Fee: $80.00

Factor X (Chromogenic)

Alternate Name(s): FX Chromogenic

Assay measures FX activity by a chromogenic versus traditional clot-based method.

This test can be used to monitor warfarin therapy in patients with the Lupus Anticoagulant or who demonstrate a prolonged baseline PT, making PT/INR determination unreliable.

Specimen Requirement(s):
- Collection Tube: 2.0 ml Plasma
- Handling: Light Blue Top Tube with Citrate Freeze
- TAT: Daily (M-F)
- Mnemonic: F10 CHROM

CPT Code(s): 85130
- Unit Code: 101430
- Fee: $90.00
Factor XI Activity

**Alternate Name(s):** FXI, Christmas Disease  

The activity of patient FXI as compared to normal is measured using an APTT-based methodology. FXI levels are decreased in congenital deficiencies of FXI (in individuals of Ashkenazi Jewish decent), specific antibodies to FXI, and in other acquired conditions.

**Specimen Requirement(s):**
- **Collection Tube:** 2.0 ml Plasma Light Blue Top Tube with Citrate
- **Handling:** Freeze
- **TAT:** Weekly
- **Mnemonic:** F11

**CPT Code(s):** 85270  
**Unit Code:** 100850  
**Fee:** $80.00

Factor XI Inhibitor (Bethesda Units)

**Alternate Name(s):** FXI Inhibitor, Bethesda, Titer  

Assay used to titer or quantitate in Bethesda Units (BU) the amount of inhibitor (alloantibody) specifically directed against FXI.

**Specimen Requirement(s):**
- **Collection Tube:** 3.0 ml Plasma Light Blue Top Tube with Citrate
- **Handling:** Freeze  
- **TAT:** Daily (M-F)  
- **Mnemonic:** F11 INH

**CPT Code(s):** 85270, 85335, 85730, 85732 (x3)  
**Unit Code:** 101370  
**Fee:** $195.00

Factor XII Activity

**Alternate Name(s):** FXII, Hageman Factor  

The activity of patient FXII as compared to normal is measured using an aPTT-based methodology. FXII levels are decreased in congenital deficiencies of FXII and in other acquired conditions.

**Specimen Requirement(s):**
- **Collection Tube:** 3.0 ml Plasma Light Blue Top Tube with Citrate
- **Handling:** Freeze
- **TAT:** Weekly
- **Mnemonic:** F11 INH

**CPT Code(s):** 85280  
**Unit Code:** 100870  
**Fee:** $80.00
# Factor XIII Qualitative

**Alternate Name(s):** FXIII Screen, Urea Solubility

FXIII cross-links fibrin and stabilizes a clot. This screening assay assesses clot stability in the presence of 5M Urea. This assay detects severe deficiency of Factor XIII. Stability is noted if greater than 1% FXIII is present.

<table>
<thead>
<tr>
<th>Specimen Requirement(s):</th>
<th>3.0 ml Plasma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection Tube:</td>
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<tr>
<td>Handling:</td>
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<tr>
<td>TAT:</td>
<td>Weekly</td>
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<td>Fee:</td>
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</tbody>
</table>

# Fibrinogen Activity

**Alternate Name(s):** Fibrinogen, Factor I

Fibrinogen is measured functionally as thrombin clottable protein using a modified thrombin time assay (Clauss fibrinogen assay).

<table>
<thead>
<tr>
<th>Specimen Requirement(s):</th>
<th>2.0 ml Plasma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection Tube:</td>
<td>Light Blue Top Tube with Citrate</td>
</tr>
<tr>
<td>Handling:</td>
<td>Freeze</td>
</tr>
<tr>
<td>TAT:</td>
<td>Daily (M-F)</td>
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<td>Fee:</td>
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</tbody>
</table>

# Fibrinogen Antigen

**Alternate Name(s):** Immunologic Fibrinogen

Test performed by ELISA method.

Immunologic assessment of fibrinogen quantifies the amount of immunoprecipitable fibrinogen. Patients with afibrinogenemia or hypofibrinogenemia have antigenic levels comparable to functional values. In dysfibrinogenemia, antigenic and functional levels are disparate.

<table>
<thead>
<tr>
<th>Specimen Requirement(s):</th>
<th>2.0 ml Plasma</th>
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</thead>
<tbody>
<tr>
<td>Collection Tube:</td>
<td>Light Blue Top Tube with Citrate</td>
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<tr>
<td>Handling:</td>
<td>Freeze</td>
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<tr>
<td>TAT:</td>
<td>Weekly</td>
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<td>CPT Code(s):</td>
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<td>Unit Code:</td>
<td>100740</td>
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<tr>
<td>Fee:</td>
<td>$120.00</td>
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</tbody>
</table>
Functional Plasminogen Activator Inhibitor-1 (previously Plasminogen Activator Inhibitor 1 Activity)

Alternate Name(s): PAI-1

PAI-1 is the naturally occurring inhibitor of tPA and negatively regulates fibrinolysis. Increased levels of PAI-1 are associated with venous and arterial thrombosis.

Functional PAI-1 is measured as ability to bind to its substrate, tissue plasminogen activator.

Specimen Requirement(s): 2.0 ml Plasma
Collection Tube: Light Blue Top Tube with Citrate
Handling: Freeze
TAT: Weekly
Mnemonic: PAI

CPT Code(s): 85415
Unit Code: 100660
Fee: $125.00

INR

Alternate Name(s): PT-INR

The International Normalized Ratio standardizes Prothrombin Times in order to account for different thromboplastin reagents used by different manufacturers. The INR is used to monitor patients receiving warfarin anticoagulant therapy.

Specimen Requirement(s): 2.0 ml Plasma
Collection Tube: Light Blue Top Tube with Citrate
Handling: Freeze
TAT: Daily (M-F)
Mnemonic: PT INR

CPT Code(s): 85610
Unit Code: 100580
Fee: $15.00

Lupus Anticoagulant Panel

Alternate Name(s): Lupus Anticoagulant

May Include some or all of the following: Thrombin Time, Heparin Screen, PT, PT mixing study, APTT, PTT-LA, PTT-LA Mixing Study, Hexagonal Phospholipid, DRVVT, DRVVT mixing study, DRVVT phospholipid confirm

Specimen Requirement(s): 3.0 ml Plasma
Collection Tube: Light Blue Top Tube with Citrate
Handling: Freeze
TAT: (M-W-F)
Mnemonic: LUPUS ANT

CPT Code(s): 85597, 85610, 85613, 85670, 85730, 85732
Unit Code: 100950
Fee: $203.50
Reporting Criteria:

Negative: none of two primary phospholipid-dependent screening tests is negative

Equivocal: only one of three phospholipid-dependent screening tests is positive

Positive: two phospholipid-dependent tests are positive

**MTHFR C677T Mutation**

Alternate Name(s): Methylene tetra-hydrofolate Reductase

A DNA-based assay used to determine heterozygosity or homozygosity for the MTHFR C677T mutation. This mutation is associated with elevated blood homocysteine. Patients homozygous for this mutation are at an increased risk for venous or arterial thrombosis.

**Specimen Requirement(s):**
- 5.0 ml Whole Blood

**Collection Tube:** Light Blue Top Tube with Citrate

**Handling:** Refrigerate or Room temp (<24 hr)

**TAT:** Weekly (F)

**Mnemonic:** MTHFR

**CPT Code(s):** 83891, 83907, 83908 (x2), 83912, 83914

**Unit Code:** 101651

**Fee:** $176.00

**Plasminogen Activity**

Alternate Name(s):

Functional activity of plasminogen is measured using a chromogenic assay. Plasminogen levels are decreased in liver disease, DIC, during thrombolytic therapy, and rarely in instances of congenital deficiency.

**Specimen Requirement(s):**
- 2.0 ml Plasma

**Collection Tube:** Light Blue Top Tube with Citrate

**Handling:** Freeze

**TAT:** Weekly

**Mnemonic:** PLAS

**CPT Code(s):** 85420

**Unit Code:** 100620

**Fee:** $72.00
Protein C Activity

Alternate Name(s): Ptn C

Functional activity of patient Protein C as compared to normal is measured using an aPTT-based methodology. Acquired PC deficiencies are seen in liver disease and warfarin anticoagulant therapy.

Specimen Requirement(s):
- Collection Tube: Light Blue Top Tube with Citrate
- Handling: Freeze
- TAT: Weekly
- Mnemonic: PROTC AS

CPT Code(s): 85303
Unit Code: 100680
Fee: $90.00

Protein C Antigen

Alternate Name(s): Ptn C Ag

Antigenic levels of Protein C are measured by an ELISA methodology. Determination of Protein C antigen levels are normally performed to classify congenital Protein C deficiency.

Specimen Requirement(s):
- Collection Tube: Light Blue Top Tube with Citrate
- Handling: Freeze
- TAT: Weekly
- Mnemonic: PROTC ANT

CPT Code(s): 85302
Unit Code: 100670
Fee: $110.00

Protein S Activity

Alternate Name(s): Ptn S

The activity of patient Protein S (PS) as compared to normal is measured using an aPTT-based methodology. Acquired PS deficiencies are seen in liver disease, with warfarin anticoagulant therapy, during pregnancy, and in inflammatory states.

Specimen Requirement(s):
- Collection Tube: Light Blue Top Tube with Citrate
- Handling: Freeze
- TAT: Weekly
- Mnemonic: PROTS FUN

CPT Code(s): 85306
Unit Code: 100710
Fee: $105.00
Protein S Free Antigen

**Alternate Name(s):**
The “free” form of PS antigen (that not bound to the complement protein, C4b-BP) is quantitatively determined by ELISA. Only the free form functions as the cofactor to activated PC. Antigenic Free Protein S levels can be reduced in patients receiving oral anticoagulant therapy.

**Specimen Requirement(s):**
<table>
<thead>
<tr>
<th>Collection Tube:</th>
<th>2.0 ml Plasma</th>
</tr>
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<tbody>
<tr>
<td>Handling:</td>
<td>Light Blue Top Tube with Citrate</td>
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<td>Freeze</td>
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</table>

**CPT Code(s):**
- 85306

**Unit Code:**
- 100690

**Fee:**
- $105.00

Protein S Total Antigen

**Alternate Name(s):**
Total Protein S antigen is measured by a Latex Immunoassay (LIA). Total PS reflects PS that is complexed to C4b-Binding Protein (C4b-BP) and that which is not bound or termed Free PS.

**Specimen Requirement(s):**
<table>
<thead>
<tr>
<th>Collection Tube:</th>
<th>2.0 ml Plasma</th>
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<tbody>
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<td>Freeze</td>
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</table>

**CPT Code(s):**
- 85305

**Unit Code:**
- 100700

**Fee:**
- $80.00

Prothrombin 20210 (PT20210) Mutation (previously Prothrombin 20210 FRET)

**Alternate Name(s):**
PT 20210, Prothrombin Gene Mutation

A polymorphism in the 3’ untranslated region of the prothrombin gene (G20210A mutation) is associated with increased levels of circulating Factor II. The PT20210 mutation (heterozygous or homozygous) is a risk factor for susceptibility to thrombosis.

**Specimen Requirement(s):**
<table>
<thead>
<tr>
<th>Collection Tube:</th>
<th>5.0 ml Whole Blood</th>
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<tr>
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<tr>
<td>TAT:</td>
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**CPT Code(s):**
- 83891, 83896 (x2), 83898, 83907, 83912, 83914

**Unit Code:**
- 102940

**Fee:**
- $176.00
Prothrombin Fragment F1 + 2 (PF 1 + 2) Antigen

Alternate Name(s): F1.2

In the conversion of prothrombin to thrombin, prothrombin fragment F1+2 is released and therefore is an indicator of thrombin generation. Elevated values are found in patients with thrombosis, pulmonary embolism, DIC, and sepsis. F1+2 levels are below reference values in patients receiving warfarin anticoagulant therapy.

Specimen Requirement(s):
- Collection Tube: 2.0 ml Plasma
- Handling: Light Blue Top Tube w/ Citrate
- TAT: Freeze
- Mnemonic: Weekly

CPT Code(s): 85999
Unit Code: 100570
Fee: $90.00

Prothrombin Time (PT)

Alternate Name(s): PT, Protime

The PT is a clot-based screening test of several coagulation factors, performed by mechanical clot endpoint detection. The time to in vitro clot formation is determined after mixing patient plasma with a source of tissue factor (tissue thromboplastin) in addition to phospholipid and calcium.

Specimen Requirement(s):
- Collection Tube: 2.0 ml Plasma
- Handling: Light Blue Top Tube with Citrate
- TAT: Freeze
- Mnemonic: PT

CPT Code(s): 85610
Unit Code: 100510
Fee: $15.00

PT Mixing Study (previously known as Inhibitor – PT)

Alternate Name(s): PT Mixing Study, PT inhibitor screen

The patient PT is determined before and after mixing with 1:1 with pooled normal plasma [PNP]. Correction to the normal range is interpreted as a deficiency of coagulation factors. Incomplete correction to the normal range suggests the presence of inhibitor.

Specimen Requirement(s):
- Collection Tube: 3.0 ml Plasma
- Handling: Light Blue Top Tube with Citrate
- TAT: Freeze
- Mnemonic: INH PT

CPT Code(s): 85611 (x2)
Unit Code: 100960
Fee: $70.00
PTT Mixing Study With Incubation (previously known as Inhibitor – APTT)

Alternate Name(s): aPTT Mixing Study, Circulating Anticoagulant

The patient aPTT is determined before and after mixing with 1:1 with pooled normal plasma [PNP]. Correction to the normal range is interpreted as most consistent with a deficiency of coagulation factors.

Assay conditions are established to determine whether or not an inhibitor effect is time and temperature dependent.

Used in the evaluation of a prolonged aPTT and as a screening test for coagulation inhibitors.

Reptilase Time

Alternate Name(s): Reptilase is a snake venom protease that cleaves fibrinogen, forming fibrin.

A prolonged Reptilase time suggests a qualitative or quantitative disorder of fibrinogen (dysfibrinogenemia)

Reptilase is not affected by heparin.
Ristocetin Cofactor Activity

**Alternate Name(s):** RCoF, VWF

**Function**
The activity of patient Von Willebrand Factor (compared to normal) is determined by measuring agglutination of formalin fixed platelets. Ristocetin promotes the binding activity of von Willebrand Factor towards platelets. VWF activity is decreased in Von Willebrand Disease.

**Specimen Requirement(s):**
- **Collection Tube:** 2.0 ml Plasma
- **Handling:** Light Blue Top Tube with Citrate Freeze
- **TAT:** Weekly (Th)
- **Mnemonic:** RISTOC

**CPT Code(s):** 85245
- **Unit Code:** 100800
- **Fee:** $85.00

Ristocetin Induced Platelet Aggregation (RIPA)

**Alternate Name(s):** (RIPA)

**Used in differential diagnosis of Von Willebrand disease.**

**Agonists employed:**
- Ristocetin High dose (1mg/ml)
- Ristocetin Low dose (0.25mg/ml)

**Specimen Requirement(s):**
- **Collection Tube:** 2 Tubes (Whole Blood)
- **Handling:** Light Blue Top Tube with Citrate Room Temp (<2 hours)
- **TAT:** Daily (morning)
- **Mnemonic:** RIPA

**CPT Code(s):** 85576 (x2)
- **Unit Code:** 103020
- **Fee:** $104.00

Thrombin Time

**Alternate Name(s):** Thrombin Clotting Time

**The Thrombin Time measures the ability of exogenous thrombin to form a fibrin clot in patient plasma. The test is prolonged in the presence of heparin and fibrin degradation products, and in hypofibrinogenemia or afibrinogenemia.**

**Specimen Requirement(s):**
- **Collection Tube:** 2.0 ml Plasma
- **Handling:** Light Blue Top Tube with Citrate Freeze
- **TAT:** Daily (M-F)
- **Mnemonic:** TT

**CPT Code(s):** 85670
- **Unit Code:** 100540
- **Fee:** $24.00
Pathology Specialty Services

SPECIAL COAGULATION LABORATORY

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Tissue Plasminogen Activator Antigen (TPA) - (previously Plasminogen Activator – Tissue Antigen)

Alternate Name(s): tPA, Tissue Plasminogen Activator

Specimen Requirement(s): 2.0 ml Plasma
Collection Tube: Light Blue Top Tube with Citrate
Handling: Freeze
TAT: Weekly (Th)
Mnemonic: PLAS ACT
CPT Code(s): 85415
Unit Code: 100640
Fee: $125.00

The physiological role of tPA is to convert plasminogen to plasmin.

Von Willebrand Factor Antigen (VWF Antigen)

Alternate Name(s): VWF Antigen, VWF:Ag

Specimen Requirement(s): 2.0 ml Plasma
Collection Tube: Light Blue Top Tube with Citrate
Handling: Freeze
TAT: Weekly (Th)
Mnemonic: VWF AG
CPT Code(s): 85246
Unit Code: 100790
Fee: $85.00

Von Willebrand Factor antigen is quantitatively determined by either a latex immunoassay (LIA) or by ELISA (if LIA values are less than 0.10 U/ml). VWF antigen is decreased in Von Willebrand Disease. The acute phase response, pregnancy, or other stress can cause elevations in vWF.

WB Platelet Aggregation and ATP Release (previously Platelet Aggregation – Whole Blood)

Alternate Name(s):

Agonists Used:
Arachidonic Acid
Collagen
ADP
Thrombin (ATP release only)
Ristocetin—High Dose
Ristocetin—Low Dose

Specimen Requirement(s): 15.0 ml Whole Blood
Collection Tube: Light Blue Top Tube with Citrate
Handling: Room Temperature (<2 hrs)
TAT: Daily (M-F)
Mnemonic: WB AGG
CPT Code(s): 85576 (x6)
Unit Code: 102850
Fee: $312.00
VWF Multimer Analysis by Electrophoresis

**Alternate Name(s):** VWF Multimers

Plasma VWF protein structure is determined following electrophoresis in an SDS-agarose gel followed by Western blotting to PVDF. VWF multimer size distribution and multimer pattern are evaluated.

**Specimen Requirement(s):**
- **Collection Tube:** Light Blue Top Tube with Citrate
- **Handling:** Freeze
- **TAT:** Weekly
- **Mnemonic:** VWF MULT

**CPT Code(s):**
- 84182, 85247

**Unit Code:** 100810

**Fee:** $176.00