MAYO CLINIC LABORATORIES

NEW TEST

Notification Date: April 23, 2024
Effective Date: May 23, 2024

ADAMTS13 Activity Assay, Plasma

Test ID: ADAMS

Useful for:

Assisting with the diagnosis and monitoring of congenital, immune, or acquired thrombotic thrombocytopenic purpura.

Methods:

Fluorescence Resonance Energy Transfer (FRET)

Reference Values:

> or =70%
Although not verified, the pediatric (<1 years old) reference range could be similar to or lower than that of adults.

Specimen Requirements:

Patient Preparation:	Fasting preferred
Collection Container/Tube:	Light-blue top (3.2% sodium citrate)
Submission Container/Tube:	Plastic vials
Specimen Volume:	2 mL in 2 plastic vials each containing 1 mL
Collection Instructions:	1. Specimen must be collected prior to replacement therapy. 2. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing 3. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 4. Aliquot plasma (1 mL per aliquot) into 2 separate plastic vials, 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, below -40 degrees C.
Minimum Volume:	2 mL

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.

Specimen Stability information: Frozen 2 years

Specimen Stability Information:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	

Cautions:

This ADAMTS13 activity assay is an in vitro assay using a synthetic substrate peptide in a static liquid environment. The measure ADAMTS13 activity may not reflect the true in vivo biological ADAMT13 activity.

Not all patients with a clinical diagnosis of idiopathic thrombotic thrombocytopenic purpura (TTP) have a severe ADAMTS13 deficiency. Conversely, patients with other non-TTP conditions may have a severe ADAMTS13 deficiency (< or =10%). These conditions include hemolytic uremic syndrome, hematopoietic stem cell and solid organ transplantation, liver disease, disseminated intravascular coagulation, sepsis, pregnancy, and certain medication. Therefore, TTP remains a clinical diagnosis.

Interferences of the ADAMTS13 activity assay include high levels of endogenous von Willebrand factor, hyperlipidemia, hyperbilirubinemia (bilirubin concentration >30 mg/dL), and cleavage by other proteases.

Samples collected in EDTA instead of 3.2% sodium citrate will result in artificially reduced ADAMTS13 activity.

Recent plasma exchange or plasma transfusion may falsely normalize ADAMTS13 levels, thus potentially masking the diagnosis of TTP.

The impact of ADAMTS13 levels and presence of inhibitors on overall survival, ultimate clinical outcome, responsiveness to plasma exchange, and relapse are still controversial. Therefore, clinical correlation is recommended.

CPT Code:

85397

Day(s) Performed: Monday through Friday, Sunday **Report Available:** 1 to 3 days

Questions

Contact Bonnie Meyers, Laboratory Resource Coordinator at 800-533-1710.