
Lab Dept: Chemistry

Test Name: ACTH

General Information

Lab Order Codes: ADCT

Synonyms: Adrenocorticotrophic Hormone (ACTH), Plasma; Corticotropin; Cushing's Disease

CPT Codes: 82024 – Adrenocorticotrophic hormone (ACTH)

Test Includes: ACTH level reported in pg/mL.

Logistics

Test Indications: Useful for determining the cause of hypercortisolism and hypocortisolism states.

Lab Testing Sections: Chemistry – St. Paul Campus

Phone Numbers: MIN Lab: 612-813-6280

STP Lab: 651-220-6550

Test Availability: Daily, 24 hours

Turnaround Time: Stat : Within 12 hours
Routine: Performed daily

Special Instructions: See [Collection](#)

Specimen

Specimen Type: Blood

Container: Lavender top (EDTA) tube (MUST be ice cooled)

Draw Volume: 3 mL (Minimum: 1.5 mL) blood

Processed Volume: 1 mL (Minimum: 0.5 mL) plasma

Note: 2 mL of plasma is the maximum amount to freeze to minimize thawing time.

Collection: Morning (6 am – 10 am) specimens are desirable. Draw in an ice-cooled, lavender top (EDTA) tube. Mix 8-10 times and immediately place tube in packed wet ice.

Special Processing: Lab Staff: Centrifuge specimen in a refrigerated centrifuge. Transfer plasma aliquot sample into a screw-capped round bottom plastic vial. Store and ship at frozen (-20 degrees C) temperatures.

For STAT samples, place aliquoted sample on packed wet ice and transport immediately.

Sample stability: Sample must be stored and transported frozen.

Note: When a refrigerated centrifuge is not available, it is preferable to spin the sample immediately and cool the sample afterward.

Patient Preparation: None

Sample Rejection: Specimens other than EDTA plasma; warm specimens; mislabeled or unlabeled specimens; gross hemolysis; specimens stored in glass tubes

Interpretive

Reference Range:

Pediatrics:	Pediatric reference values are the same as adults, as confirmed by peer reviewed literature.
Adults:	10 – 60 pg/mL (am draws)
No established reference values for pm draws	

Critical Values: N/A

Limitations: In very rare circumstances of the ectopic ACTH syndrome, the elevated ACTH may be biologically active but not detected by the immunometric assay.

ACTH levels should be interpreted in relationship to cortisol levels.

Hemolysis and a traumatic draw will falsely increase ACTH levels.

Methodology: Automated Chemiluminescent Immunometric Assay

References: Burtis, CA, Ashwood, ER, Bruns, DE, editors (2006) Tietz Textbook of Clinical Chemistry and Molecular Diagnostics, 4th Edition, Philadelphia: WB Saunders

Jacobs and DeMott Laboratory Test Handbook (2001), 5th Edition, Lexi-Comp, Inc.

Siemens Immulite 2000 ACTH Product Insert, PIL2KAC-15,
(7/29/2008)

Siemens Immulite ACTH Control Modul Product Insert, PILACCM-23,
(8/24/2009)

Updates:

8/16/2010: Minimum draw volume update.

7/21/2015: Vista update