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**Lab Dept:** Chemistry

**Test Name:** ACTH

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***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.

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***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](#)

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***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 immerse tube in an ice slurry (water and 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 in an ice slurry 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, 4<sup>th</sup> Edition, Philadelphia: WB Saunders

Jacobs and DeMott Laboratory Test Handbook (2001), 5<sup>th</sup> 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