
Lab Dept: Chemistry

Test Name: CORTISOL

General Information

Lab Order Codes: CORTI

Synonyms: N/A

CPT Codes: 82533 – Cortisol; total

Test Includes: Serum cortisol measured in mcg/dL.

Logistics

Test Indications: Useful for patients who are not, or are not suspected to be, taking exogenous glucocorticoids, namely: fludrocortisones, prednisolone, or prednisone. Cortisol is the primary adrenal glucocorticoid steroid hormone and is normally under feedback control by pituitary ACTH and the hypothalamus. Due to circadian variation, random single samples are of little value diagnostically. Reference values for 5 – 11 AM are published with results at Children's Hospitals and Clinics, and 5 – 11 PM reference values are appended as a comment. Cortisol is elevated in Cushing's Syndrome, hypoglycemia, stress and pregnancy.

Lab Testing Sections: Chemistry- Performed on the Minneapolis Campus

Phone Numbers: MIN Lab: 612-813-6280

STP Lab: 651-220-6550

Test Availability: Daily, 24 hours

Turnaround Time: Performed daily

Special Instructions: N/A

Specimen

Specimen Type: Blood

Container: SST (Gold, marble or red)
Alternate: Green (LiHep or NaHep), Lavender (EDTA)

Draw Volume: 1.2 mL (Minimum: 0.6 mL) blood

Processed Volume: 0.4 mL (Minimum: 0.2 mL) serum
Note: Minimum does not allow for repeat analysis.

Collection: Routine blood collection

Special Processing: Lab Staff: Centrifuge specimen, remove serum/plasma into aliquot tube. Store at refrigerated temperatures if testing is delayed. Ship at refrigerated temperatures.

Patient Preparation: None

Sample Rejection: Mislabeled or unlabeled specimen; gross hemolysis

Interpretive

Reference Range:

AM Specimens Reference Ranges (5 – 11 AM):	
Age:	Range (mcg/dL)
0 – 24 months:	0.8 – 28.6 mcg/dL
2 – 10 years:	0.8 – 27.7 mcg/dL
11 – 18 years:	0.8 – 23.5 mcg/dL
>18 years:	4.2 – 21.0 mcg/dL
PM Specimen Reference Ranges (5 – 11 PM)	
0 – 24 months:	0.8 – 25.2 mcg/dL
2 – 11 years:	0.8 – 20.2 mcg/dL
11 – 18 years:	0.8 – 18.5 mcg/dL
>18 years:	2.5 – 13.4 mcg/dL

Critical Values: N/A

Limitations: N/A

Methodology: Chemiluminescent MicroParticle Immunoassay (CMIA)

References: Abbott Architect Cortisol Reagent Package Insert, Abbott Laboratories, Abbott Park, IL. Revised November 2015

Tietz (1999) Textbook of Clinical Chemistry, 3rd edition, Philadelphia, WB Saunders Co, pp 1543 - 1546

Jacobs & DeeMott (2001) Laboratory Test Handbook, 5th edition, Lexi-Comp Inc, Hudson, Ohio, pp 154-155

CALIPER Reference Range Study on Abbott Architect. Accessed 4/20/2018

Updates:

2/9/2016: Update container types

5/15/2018: New test method, reference ranges