Lab Dept:	**Chemistry**
Test Name:	**11-DESOXYCORTISONE, SERUM**

General Information

Lab Order Codes:	DOCS
Synonyms:	Desoxycortisol, 11
CPT Codes:	82633 – Desoxycorticosterone, 11
Test Includes:	11-Desoxycortisone level reported in ng/dL.

Logistics

Test Indications:	Diagnosis of suspected 11-hydroxylase deficiency, including the differential diagnosis of 11 beta-hydroxylase 1 (CYP11B1) versus 11 beta-hydroxlyase 2 (CYP11B2) deficiency. Diagnosis of glucocorticoid-responsive hyperaldosteronism. Evaluating congenital adrenal hyperplasia newborn screen-positive children, when elevations of 17-hydroxyprogesterone are only moderate, suggesting possible 11-hydroxylase deficiency.
Lab Testing Sections:	Chemistry - Sendouts
Referred to:	Mayo Clinic Laboratories (Mayo test: DOCS)
Phone Numbers:	MIN Lab: 612-813-6280 STP Lab: 651-220-6550
Test Availability:	Daily, 24 hours
Turnaround Time:	4 - 7 days – performed Wednesday or Saturday
Special Instructions:	See Patient Preparation

Specimen

Specimen Type:	Blood
Container:	Preferred: Red NO GEL Alternate: SST (Gold or marble)
Draw Volume:	1.5 mL (Minimum: 1.2 mL) blood

Processed Volume: 0.5 mL (Minimum: 0.3 mL) serum

Collection: Routine blood collection

Special Processing: Lab Staff: Centrifuge specimen. Remove serum aliquot into a screw-capped round bottom plastic vial. Store and ship refrigerated. Forward promptly.

Patient Preparation: Morning (8 AM) specimen is preferred.

Sample Rejection: Gross hemolysis; mislabeled or unlabeled specimens

Interpretive

Reference Range:

Age:	Range (ng/dL)
≤18 years:	<30 ng/dL
>18 years:	<10 ng/dL

Critical Values: N/A

Limitations: At birth, the hypothalamic-pituitary-adrenal axis and the hypothalamic-pituitary-adrenal axis and the hypothalamic-pituitary-gonadal axis are activated and all adrenal steroids are high, including mineral corticoids and sex steroids and their precursors. In preterm infants, elevations can be even more pronounced due to illness and stress. In doubtful cases, when the initial test was performed on a just-born baby, repeat testing a few days or weeks later is advised.

Adrenocorticotrophic hormone (ACTH)1-24 testing has a low, but definite risk of drug and allergic reactions and should, therefore, only be performed under the supervision of a physician in an environment that guarantees the patient's safety, typically an endocrine, or other centralized, testing center.

Interpretation of ACTH1-24 testing in the context of diagnosis of congenital adrenal hyperplasia (CAH) requires considerable experience, in particular for the less common variants of CAH, such as 11-hydroxylaase deficiency or 3-beta-hydroxysteroid dehydrogenase (3beta-HSD deficiency), for which very few, if any, reliable normative data exist. For the even enzyme defects, such as deficiencies of StAR (steroidogenic acute regulatory protein), 20.22 desmolase, 17a-hydroxylase/17-lyase, and 17-beta-hydroxysteroid dehydrogenase (17beta-HSD), there are only case reports. Expert opinion from a pediatric endocrinologist with experience in CAH should, therefore, be sought.

Methodology: Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS)

References: Mayo Clinic Laboratories (August 2021)

Update: 9/29/2009: Method update
11/6/2017: Updated Turnaround time