
Lab Dept: Chemistry

Test Name: ANDROSTENEDIONE

General Information

Lab Order Codes: ADRO

Synonyms: N/A

CPT Codes: 82157 - Androstenedione

Test Includes: Androstenedione level reported in ng/dL.

Logistics

Test Indications: Evaluate androgen production in hirsute females; less useful in evaluation of other aspects of virilization. Greatly elevated in the most common type of congenital adrenal hyperplasia due to C21-hydroxylase deficiency, in which in infancy elevated 17-hydroxyprogesterone, progesterone, urinary 17-ketosteroids, renin, and ACTH with low serum cortisol are anticipated. Prenatal diagnosis of congenital adrenal hyperplasia due to 21- hydroxylase deficiency is possible. Laboratory investigation includes measurement of 17-hydroxyprogesterone, androstenedione, testosterone, 21-deoxycortisol and HLA typing. Early diagnosis can now be made with molecular genetic studies from chorionic villus sampling.

Lab Testing Sections: Chemistry - Sendouts

Referred to: Esoterix, Inc. (Test# 500030)

Phone Numbers: MIN Lab: 612-813-6280

STP Lab: 651-220-6550

Test Availability: Daily, 24 hours

Turnaround Time: 3 - 6 days, Test set up Monday, Tuesday, Thursday

Special Instructions: N/A

Specimen

Specimen Type: Blood

Container: Red top NO GEL tube
Alternate tube: Lavender top (EDTA) tube

Draw Volume: 1.5 mL (Minimum: 0.6 mL) blood

Processed Volume: 0.5 mL (Minimum: 0.2 mL) serum/plasma

Note: Submission of the minimum does not permit repeat analysis.

Collection: Routine venipuncture

Special Processing: Lab Staff: Centrifuge specimen, remove serum/plasma aliquot into a screw-capped round bottom plastic vial. Store and ship frozen in plastic vial. Separate within 1 hour of draw. Forward promptly.

Patient Preparation: Fasting morning specimen is preferred. Collect 1 week before or after menstrual period.

Sample Rejection: Recently administered radioisotopes; mislabeled or unlabeled specimens

Interpretive

Reference Range:

Premature Infants

26-28 weeks, day 4		63 - 935 ng/dL		
31-35 weeks, day 4		50 - 449 ng/dL		
Full-Term Infants				
1 - 7 days		<10 - 279 ng/dL		
Levels decrease rapidly to a range of <52 ng/dL after 1 week.				
1 - 11 months		<10 - 37 ng/dL Levels gradually decrease during the first 6 months to prepubertal levels.		
Prepubertal Children				
1-10 years		<10 - 17 ng/dL		
Tanner Stage	Puberty	Male	Female	
	Age (years)	Range (ng/dL)	Age (years)	Range (ng/dL)
1	< 9.8	<10 - 17	< 9.2	<10 - 17
2	9.8 – 14.5	<10 - 33	9.2 – 13.7	<10 - 72
3	10.7 – 15.4	17 - 72	10.0 – 14.4	50 - 170
4	11.8 – 16.2	15 - 115	10.7 – 15.6	47 - 208
5	12.8 – 17.3	33 - 192	11.8 – 18.6	50 - 224
Adults (18-40 years)				
Males		44 - 186 ng/dL		
Females (entire cycle)		28 - 230 ng/dL		
Females (postmenopausal)		<10 - 93 ng/dL		

Critical Values: N/A

Limitations: N/A

Methodology:

HPLC Tandem Mass Spectrometry

References:

Levine LS and Pang S (1994) "Prenatal Diagnosis and Treatment of Congenital Adrenal Hyperplasia," J Pediatr Endocrinol, 7(3): 193-200

Forest MG, David M and Morel Y (1993) "Prenatal Diagnosis and Treatment of 21-Hydroxylase Deficiency," J Steroid Biochem Mol Biol, 45(1-3):75-82

[Esoterix, Inc Web Page](#) April 2012

Esoterix, Inc. "Expected Value and S.I. Unit Conversion Table" Fifth Edition

Updates:

4/17/2012: Updated reference ranges.

4/26/2017: Tube type update.