MAYO CLINIC
Mayo Medical Laboratories

NEW TEST ANNOUNCEMENT
MML NEW ENGLAND
NOTIFICATION DATE: August 24, 2010
EFFECTIVE DATE: September 23, 2010

CAH 21-HYDROXYLASE PROFILE
#500049

NOTE: The testing and reporting is equivalent to Rochester test CAH 21-Hydroxylase Profile #87815.

Profile Information:

Unit Code	Reporting Name	Available Separately	Always Performed
500052	Cortisol, S, LC-MS/MS	Yes	Yes
500051	Androstenedione, S	Yes	Yes
500050	17-Hydroxyprogesterone, S	Yes	Yes

USEFUL FOR:

- Preferred screening test for congenital adrenal hyperplasia (CAH) that is caused by 21-hydroxylase deficiency
- Also useful as part of a battery of tests to evaluate females with hirsutism or infertility, which can result from adult-onset CAH

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

REFERENCE VALUES:

CORTISOL
5-25 mcg/dL (a.m.)
2-14 mcg/dL (p.m.)

ANDROSTENEDIONE

PEDIATRICS*
Premature infants
26-28 weeks, day 4: 92-282 ng/dL
31-35 weeks, day 4: 80-446 ng/dL
Full-term infants
1-7 days: 20-290 ng/dL
1 month-1 year: <69 ng/dL
MALES*

Tanner Stages	Age (years)	Reference Range (ng/dL)
Stage I (prepubertal)	<9.8	<51
Stage II	9.8-14.5	31-65
Stage III	10.7-15.4	50-100
Stage IV	11.8-16.2	48-140
Stage V	12.8-17.3	65-210

FEMALES*

Tanner Stages	Age (years)	Reference Range (ng/dL)
Stage I (prepubertal)	<9.2	<51
Stage II	9.2-13.7	42-100
Stage III	10.0-14.4	80-190
Stage IV	10.7-15.6	77-225
Stage V	11.8-18.6	80-240

*Source: Androstenedione. In Pediatric Reference Ranges 4th Edition. Edited by SJ Soldin, C Brugnara, EC Wong. Washington DC, AACC Press, 2003, pp 32-34

ADULTS
Males: 40-150 ng/dL
Females: 30-200 ng/dL

17-HYDROXYPROGESTERONE

CHILDREN
Preterm infants: Preterm infants may exceed 630 ng/dL, however, it is uncommon to see levels reach 1,000 ng/dL.
Term infants:
0-28 days: <630 ng/dL
Levels fall from newborn (<630 ng/dL) to prepubertal gradually within 6 months.
Prepubertal males: <110 ng/dL
Prepubertal females: <100 ng/dL

ADULTS
Males: <220 ng/dL
Females:
Follicular: <80 ng/dL
Luteal: <285 ng/dL
Postmenopausal: <51 ng/dL

SPECIMEN REQUIREMENTS:
Container/Tube: Plain, red-top tube(s)
Specimen Volume: 0.6 mL of serum
Collection Instructions: Morning (8 a.m.) and afternoon (4 p.m.) specimens are preferred.
Note: 1. Include time of draw.
2. If multiple specimens are drawn, send separate order for each specimen.

CAUTIONS:

- Androstenedione and, to a lesser degree, dehydroepiandrosterone sulfate supplements can result in elevations of serum androstenedione level. With large androstenedione doses of 300 mg/day to 400 mg/day, serum androstenedione levels can almost double in some patients. Testosterone levels and, particularly in men, estrone and estradiol levels may also increase, but to a much lesser degree.
- This test provides merely supplementary information and should, therefore, never be employed as the sole diagnostic tool.

LIST FEE: $262.30

CPT CODE: 82157-Androstenedione
82533-Cortisol; total
83498-Hydroxyprogesterone, 17-d

ANALYTIC TIME: 1 day

DAY(S) SET UP: MON-FRI, 1ST SHIFT

QUESTIONS: Contact your Mayo Medical Laboratories' Regional Manager
Mary Erath, Mayo Medical Laboratories' Technologist Support
Telephone: 800-533-1710