MAYO CLINIC
Mayo Medical Laboratories

Test Definition: FCAH1

CAH Pediatric Profile 1, 21-OH Deficiency Screen (Androstenedione, Cortisol, DHEA, 17-OH-Progesterone, Testosterone)

Reporting Title: CAH Profile 1
Performing Location: Esoterix Endocrinology

Specimen Requirements:

Draw blood in a plain, red-top tube(s) or serum gel tube(s). Separate within one hour of draw and send 2 mL of serum frozen in plastic vial on dry ice. Specimens drawn in serum gel tube(s) must be poured off into a plastic screw cap vial before freezing.

Specimen Type	Temperature	Time
Serum	Frozen	30 days

Result Codes:

Result ID	Reporting Name	Type	Unit	LOINC®
Z1884	Cortisol	Alphanumeric	ug/dL	In Process
Z1888	Dehydroepiandrosterone (DHEA)	Alphanumeric	ng/dL	In Process
Z1895	17-Alpha-Hydroxyprogesterone	Alphanumeric	ng/dL	In Process
Z1899	Androstenedione **Also used by tests: FPAP2**	Alphanumeric	ng/dL	In Process
Z1903	Testosterone, Serum (Total)	Alphanumeric	ng/dL	In Process

Components:

Test ID	Reporting Name	CPT Units	CPT Code	Always Performed	Orderable Separately
Billing only	Testosterone	1	84403		
Billing only	17-OH-Progesterone	1	83498		
Billing only	DHEA	1	82626		
Billing only	Cortisol	1	82533		
Billing only	Androstenedione	1	82157		

Reference Values:

Androstenedione, Mass Spec
Units: ng/dL

Age	Range
Premature (26-28w) Day 4	63-935
Premature (31-35w) Day 4	50-449
Full Term (1-7 days)	<10-279

Levels decrease rapidly to <52 ng/dL after one week.

1m-11m	<10-37

Androstenedione gradually decreases during the first six months to prepubertal levels.

Prepubertal Children	<10-17
Adult Males	44-186
Adult Females	28-230
Females Postmenopausal	<10-93

Females

Tanner Stages	Age (years)	Range
1	<9.2	<10-17
2	9.2-13.7	<10-72
3	10.0-14.4	50-170
4	10.7-15.6	47-208
5	11.8-18.6	50-224

Males

Tanner Stages	Age (years)	Range
1	<9.8	<10-17
2	9.8-14.5	<10-33
3	10.7-15.4	17-72
4	11.8-16.2	15-115
5	12.8-17.3	33-192

Cortisol, Serum or Plasma
Units: ug/dL

Age	Range
Premature (26-28w) Day 4	1.0 - 11
Premature (31-35w) Day 4	2.5 - 9.1
Full Term Day 3	1.7 - 14
Full Term Day 7	2.0 - 11
31d - 11m	2.8 - 23
12m - 15y (8:00 AM)	3.0 - 21

Adults

8:00 AM	8.0 - 19
4:00 PM	4.0 - 11

Dehydroepiandrosterone (DHEA), Serum
Units: ng/dL

Age	Range
1-5 yrs	<68
6-7 yrs	<111
8-10 yrs	<186
11-12 yrs	<202
13-14 yrs	<319
15-16 yrs	39-481
17-19 yrs	40-491
20-49 yrs	31-701
> or = 50 yrs	21-402

17-Alpha-Hydroxyprogesterone, Serum
Units: ng/dL

Age	Range
Premature (26-28w) Day 4	124 - 841
Premature (31-35w) Day 4	26 - 568
Full-Term Day 3	<78

Males: Levels increase after the first week to peak values ranging from 40 - 200 between 30 and 60 days. Values then decline to a prepubertal value of <91 before one year.

Prepubertal	<91
Adult Males	27 - 199
Females	
1 - 11m	13 - 106
Prepubertal	<91
Adult Females	
Follicular	15 - 70
Luteal	35 - 290

Females

Tanner Stages	Age (years)	Range
1	<9.2	<83
2	9.2-13.7	11-98
3	10.0-14.4	11-155
4	10.7-15.6	18-230
5	11.8-18.6	20-265

Males

Tanner Stages	Age (years)	Range
1	<9.8	<91
2	9.8-14.5	<116
3	10.7-15.4	10-138
4	11.8-16.2	29-180
5	12.8-17.3	24-175

Testosterone, Serum (Total)
Units: ng/dL

Age	Range
Males	
Premature (26-28w) Day 4	59 - 125
Premature (31-35w) Day 4	37 - 198
Newborns	75 - 400

1 - 7m: Levels decrease rapidly the first week to 20 - 50, then increase to 60 - 400 between 20 - 60 days. Levels then decline to prepubertal range levels of <2.5 - 10 by seven months.

Females	
Premature (26 - 28w) Day 4	5 - 16
Premature (31 - 35w) Day 4	5 - 22
Newborns	20 - 64

1 - 7m: Levels decrease during the first month to less than 10 and remain there until puberty.

Prepubertal Males and Females	<2.5 - 10
Adult Males >18 years	348 - 1197
Adult Females	
Premenopausal:	10 - 55
Postmenopausal:	7 - 40

Males

Tanner Stage	Age (years)	Male
1	<9.8	<2.5 - 10
2	9.8 - 14.5	18 - 150
3	10.7 - 15.4	100 - 320
4	11.8 - 16.2	200 - 620
5	12.8 - 17.3	350 - 970

Females

Tanner Stage	Age (years)	Female
1	<9.2	<2.5 - 10
2	9.2 - 13.7	7 - 28
3	10.0 - 14.4	15 - 35
4	10.7 - 15.6	13 - 32
5	11.8 - 18.6	20 - 38

Test Performed by: Esoterix Endocrinology
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