Lab Dept: Chemistry

Test Name: 17-OH PREGNENOLONE, SERUM

General Information

Order Code: 17OH

Synonyms: 17-Hydroxypregnenolone

CPT Codes: 84143 – 17- hydroxypregnenolone

Test Includes: 17-OH Pregenenolone level reported in ng/dL.

Logistics

Test Indications: As an ancillary test for congenital adrenal hyperplasia (CAH), particularly in situations in which diagnosis of 21-hydroxylase and 11-hydroxylase deficiency have been ruled out. Confirming a diagnosis of 3-beta-hydroxy dehydrogenase (3-beta-HSD) deficiency. Analysis for 17-hydroxypregnenolone is also useful as part of a battery of tests to evaluate females with hirsutism or infertility; both can result from adult onset CAH.

Lab Testing Sections: Chemistry - Sendouts

Referred to: Mayo Clinic Laboratories (Mayo test: 17OHP)

Phone Numbers: MIN Lab: 612-813-6280

STP Lab: 651-220-6550

Test Availability: Daily, 24 hours

Turnaround Time: 2 - 6 days, performed Monday, Tuesday, Thursday

Special Instructions: N/A

Specimen

Specimen Type: Blood

Container: Preferred: Red NO GEL
Alternate: SST (Gold or marble)

Draw Volume: 3 mL (Minimum: 1.5 mL) blood

Processed Volume: 1 mL (Minimum: 0.5 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 at frozen temperatures. Forward promptly.

Patient Preparation: None

Sample Rejection: Mislabeled or unlabeled specimens

Interpretive

Reference Range:

Premature Infants:		
Age	**Male (ng/dL)**	**Female (ng/dL)**
26 - 28 weeks	1219 - 9799	1219 - 9799
29 – 36 weeks	346 - 8911	346 - 8911
Full Term (1-5 months):	229 - 3104	229 - 3104
6 months – 1 year	221 -1981	221 -1981
1 -2 years	35 - 712	35 - 712
3 – 6 years	<277	<277
7 – 9 years	<188	<213
10 – 12 years	<393	<399
13 – 15 years	35 - 465	<408
16 – 17 years	32 - 478	<424
Tanner Stages:	**Male**	**Female**
Stage I	<209	<236
Stage II	<356	<368
Stage III	<451	<431
Stage IV-V	35 - 478	<413

Adults:	Male	Female
≥18 years	55 - 455	31 - 455

Critical Values: N/A

Limitations: At birth, the hypothalamic-pituitary-adrenal axis and the hypothalamic-pituitary gonadal axis are activated and adrenal and sex steroid levels are high. In preterm infants, the elevations can be more pronounced due to illness and stress. As a result, preterm infants may occasionally have 17-hydroxypregnenolone levels of up to 9,799 ng/dL. Term infants (0-28 days) will have levels <3,104 ng/dL. These then fall over the following 2 years to prepubertal levels of <277 ng/dL.

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

References: Mayo Clinic Laboratories (August 2021)

Updates: 9/29/2009: Method, reference range update
8/23/2021: Moved from ESL to Mayo