Androgens - RIA

Androstanediol Glucuronide:
A metabolite of dihydrotestosterone formed in the peripheral tissues; plasma and urinary concentrations are used to estimate peripheral androgen activity.

Androstenedione:
Produced by the testes, adrenal cortex and ovaries. Androstenedione can be converted metabolically to testosterone and other androgens.

Dehydroepiandrosterone (DHEA):
Produced primarily in the adrenal cortex, from the steroid precursor pregnenolone. It is the major precursor in females and is metabolically converted to estradiol and testosterone. It is often present in excessive amounts in body fluids of patients with adrenal virilism.

Dehydroepiandrosterone-Sulfate (DHEA-S):
DHEA circulates in the bloodstream mainly as DHEA-sulfate (DHEA-S) prolonging its half life and providing a steady state source for conversion to estrogens and androgens. DHEA-S is a weak androgen which is measured in women exhibi-ting symptoms of virilism or hirsutism. It is also in children with precocious puberty.

Estradiol,17β:
The most abundant and potent estrogen produced mainly in the ovaries, with secondary production by the adrenal glands. It is responsible for secondary female sex characteristics and prepares the uterus for implantation of the fertilized ovum.

Estriol:
produced almost exclusively during pregnancy by oxidation of estradiol and estrone. It is the major estrogen produced in the normal human fetus.

Estrone:
Produced primarily from androstenedione.In premenopausal women, more than 50% of the estrone is secreted by the ovaries. In prepubertal children, men and non-supplemented postmenopausal women the major portion of estrone is derived from peripheral metabolism of androstenedione.

Pregnenolone:
Pregnenolone (3β-hydroxypregn-5-en-20-one) is the first steroid to be derived from cholesterol in the pathway of steroidogenesis, and it is the common precursor for all of the adrenal and gonadal steroids.

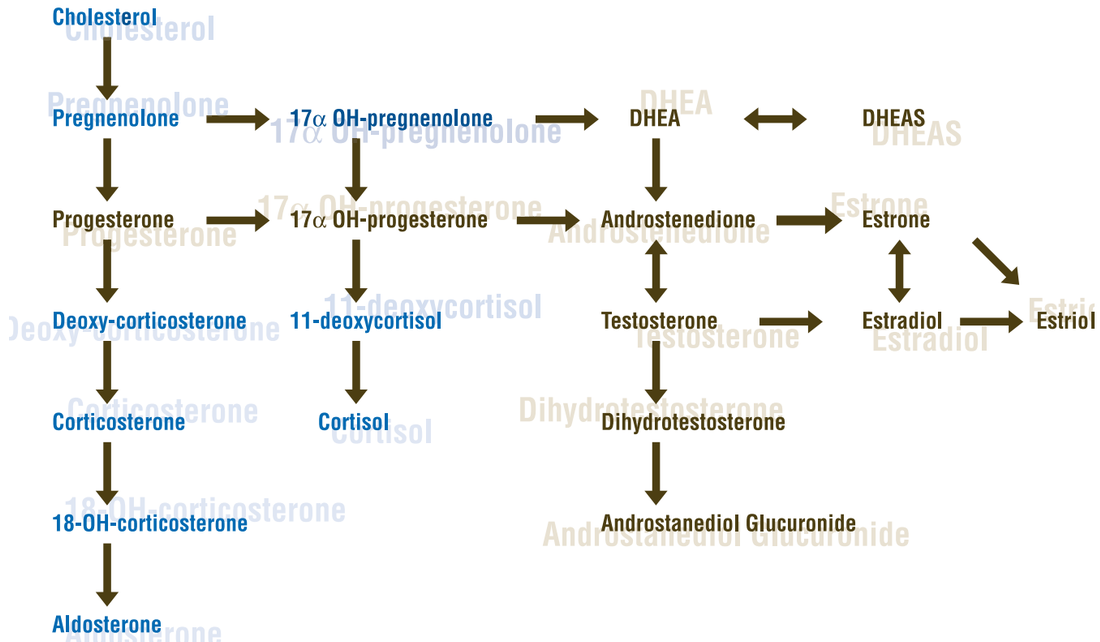
Progesterone:
Produced directly from pregnenolone and secreted by the corpus luteum and by the placenta. It is responsible for changes associated with luteal phase of the menstrual cycle, differentiation factor for mammary glands, preparing the body for pregnancy and, if pregnancy occurs, maintaining it until birth.

Progesterone, 17α Hydroxy:
An intermediate in the biosynthesis of cortisol. Deficiency of either 11b- or 21-hydroxylase activities leads to an increased concentration of 17α-hydroxyprogesterone in th e peripheral circulation.

Testosterone:
Principal androgen synthetized by the testes, produced from progesterone. Secretion increases sharply at puberty and is responsible for secondary male sex characteristics. Sperm production relies on the presence of testosterone.

5α-Dihydrotestosterone:
A metabolite of testosterone that is thought to be the more potent androgen responsible for formation of primary sex characters in males during embryogenesis, for development of most male secondary sex characters at puberty, and for adult male sexual function.

SHBG:
Sex hormone-binding globulin (SHBG) is a glycoprotein synthesized by the liver. Circulating androgen and estrogen concentrations influence SHBG synthesis. In men, 44-65% of circulating testosterone is bound to SHBG with high affinity. Alterations in SHBG concentrations may result in variations in total circulating steroid levels.



Direct Assay
High Specificity
High Sensitivity
Short Incubation Time

- Androstanediol Glucuronide (3α Diol-G)
- Androstenedione
- DHEA
- DHEA-S
- Estrone (E1)
- Estradiol, 17β (E2)
- Progesterone
- Progesterone, 17α Hydroxy
- Testosterone
- Free Testosterone
- 5α-Dihydrotestosterone
- Sex Hormone Binding Globulin (SHBG)*

** Not distributed in Belgium and Germany*

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Androstanediol Glucuronide (3α Diol-G)	Androstenedione	DHEA	DHEA-S	Estrone (E1)	Estradiol, 17β (E2)	Progesterone	17α OH Progesterone	Testosterone	Free Testosterone	5α-Dihydro-testosterone	Sex Hormone Binding Globulin (SHBG)*
Application											
• Hirsutism • Excessive adrenal androgen production	• Hirsutism • Congenital adrenal hyperplasia (CAH) • Androgen-secreting adrenal and ovarian tumor • Polycistic ovary syndrome (POCS)	• Adrenal hyperplasia • Hirsutism	• Adrenal tumor • Hirsutism / Virilism • Differentila diagnosis of Cushing's syndrome • Congenital adrenal hypoplasia (CAH) • Precocious puberty	• Fertility assesement • Amenorrhea • Ovarian malfunction • Estrogen secreting tumors • Precocious puberty in females	• Fertility assesement • Menstrual cycle irregularities • Estrogen secreting tumors • Monitoring of osteoporosis in menopause • In-vitro fertilization • Precocious puberty in females	• Disorders of the ovaries or placenta • Corpus luteum insufficiency • Tracking of ovulation Suspected ectopic or failing pregnancy • Monitoring the health of pregnancy • Infertility • Osteoporosis	• Congenital adrenal hyperplasia • Monitoring steroid replacement therapy • Prostatic cancer	• Male hypogonadism • Delayed or precocious puberty • Erectile dysfunction • Hirsutism/Virilism • Polycistic ovary syndrome (PCOS)	• Hirsutism/Virilism • Hyperthyroidism • Obesity • Hyperinsulism	• Klinefelter syndrome • Hirsutism • Begnin prostate hyperplasia (BPH) • 5α-reductase deficiency	• Hirsutism/Virilism • Polycistic ovary syndrome (PCOS) • Male hypogonadsim • Obesity
Method											
RIA CT						RIA CT				RIA	IRMA
Kit Size											
96 Tests						96 Tests					100 Tests
Catalog #											
KIP0151	KIP0451	KIP0491	KIP0481	KIPI9100	KIP0629	KIP1458	KIP1409	KIP1709	KIPI19000	KIPI9900	RVR-CC-100
Incubation Time											
2h RT	1h RT	2h RT	1h 37°C	2h RT	3h 37°C	2h 37°C	3h 37°C	3h 37°C	2h 37°C	30 min /1h/15 min. RT	1h 30 min. RT
Sample Type											
serum plasma	serum plasma	serum	serum	serum plasma	serum plasma	serum	serum plasma	serum		serum plasma	serum
Sample Size											
100 µL	25 µL	200 µL	20 µL	100 µL		50 µL	25 µL	50 µL		300 µL	20 µL (must be diluted 1/51)
Standard Range											
0.2-75 ng/mL	0.1-11 ng/mL	0.2-40 ng/mL	1.6-800 µg/dL	12.5-750 pg/mL	10-3551pg/mL	0.12-36 ng/mL	0.15-11,1 ng/mL	0.11-16.4 ng/mL	0.25-65 pg/mL	25-2500 pg/mL	10-250 nmol/L
Detection Limit											
0.05 ng/mL	0.03 ng/ml	0.1 ng/mL	0.59 µg/dL	3.2 pg/mL	2 pg/mL	0,05 ng/mL	0.02 ng/mL	0.05 ng/mL	0.13 pg/mL	20 pg/mL	0.26 nmol/L
Reference Intervals											
Female: 0,3-9,3 ng/mL Male: 1,0-23,6 ng/mL	Female: 0,5-4,7 ng/mL Male: 0,5-4,8 ng/mL	under evaluation	Female 40-44: 37-256 µg/dL Male 15-50: 81-479 µg/dL	Female: 10-300 pg/mL Male: 10-60 pg/mL	Female: 6-488 pg/mL Male: 15-47 pg/mL	Female: 0,43-17,56 ng/mL Male: 0,6-2,11 ng/mL	Female: 0,11-5 ng/mL Male: 0,6-3,44 ng/mL	Female: <0,06-0,79 ng/mL Male: 1,34-6,25 ng/mL	Female: 0,02-3,09 pg/mL Male: 8,9-42,5 pg/mL	20 pg/mL	Female: 20-85 nmol/L Male : 9-55 nmol/L
Controls											
2 levels						2 levels					1 level
Shelf Life											
10 weeks		8 weeks	10 weeks	12 weeks	10 weeks	10 weeks			8 weeks	12 weeks	8 weeks

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