

ANNOUNCEMENT

Date: April 12, 2011

Dear Valued Clients:

Foundation Laboratory is pleased to announce that effective January 3, 2011 Sex Hormone Binding Globulin (SHBG) will be performed in-house.

SHBG is a carrier protein that has an important role in regulating the amount of unbound steroids which include 5-alpha-Dihydrotestosterone (DHT), Testosterone, Androstenediol, Estradiol, Estrone, Dehydroepiandrosterone (DHEA), and Progesterone in the blood given that free steroids readily enter cells and are physiologically active. SHBG, also known as testosterone-estrogen binding globulin (TeBG), sex steroid binding globulin (SSBG), or sex steroid binding protein (SBP), specifically binds 17 beta-hydroxysteroids in a 1:1 ration. Although the precise role of SHBG and other hormone carriers in steroid regulation and metabolism is not fully known, several theories propose that the proteins function as hormone reservoirs to modulate fluctuations in steroid concentrations.

SHBG is synthesized by the liver cells and has a 7 day half-life in circulation. In both sexes, the SHBG concentration sharply increases after birth and gradually decline until puberty. Male and female children have similar SHBG levels until the onset of puberty, when SHBG levels decrease more rapidly in males than females. The circulating androgen concentration affects SHBG synthesis. Elevated testosterone causes SHBG synthesis to decrease, while high estrogen stimulates SHBG production.

SHBG levels are increased in Anorexia nervosa, Hyperthyroidism, Hypogonadism (males), Androgen insensitivity/deficiency, Alcoholic hepatic cirrhosis (males), Primary biliary cirrhosis (females) and suppressed in Obesity, Hypothyroidism, Hirsutism (females), Acne vulgaris, Polycystic ovarian disease, Acromegaly, and Androgen-secreting ovarian tumors.

Specimen Requirements:

- Minimum of 1 ml serum specimen
- Blood should be collected in SST (Serum Separation Tubes)
- Separated Serum specimen need to be shipped refrigerated
- Rejection criteria: Hemolysis

Turn Around Time:

- 72 hours

For supplies and other needs please contact your Foundation Laboratory representative.

Sincerely,

Reza M. assoumi, Ph.D
Laboratory Manager