



TEST: Prolactin

PRINCIPLE:

Prolactin is released from the anterior pituitary under the inhibitory control of dopamine, which is secreted from the hypothalamus. When isolated from pituitary tissue, blood or amniotic fluid, prolactin has been found to exist in a number of molecular weight forms and has some structural similarities with human growth hormone. Prolactin plays a major role in the initiation and maintenance of lactation, where there is a physiological elevation of circulating concentrations. Pathological hyperprolactinemia occurs in hypothyroidism and renal failure. Hyperprolactinemia is also known to impair gonadal function in both sexes. Women may present with amenorrhea while men may suffer from impotence.

SPECIMEN REQUIREMENTS:

2 ml serum from blood collected in red top tube without additive or in a serum separator tube with gel barrier. Separate the serum from the clot to avoid hemolysis: red top tube – transfer serum into plastic transport vial, gel tube – spin. Transport to the lab at room temperature. Store at room temperature for up to 8h, refrigerate for up to 48h. Store frozen at -20°C or below for up to 30 days. Avoid repeated freeze-thaw cycles.

METHOD:

Enhanced Chemiluminescence.

REFERENCES:

1. Frantz AG. Physiology in Medicine: Prolactin. *New Eng J Biol Sci.* 298: 201-207; 1978
2. Falconer IR. Aspects of Biochemistry, Physiology and Endocrinology Lactation. *Aust J Biol Sci.* 33: 71-84;1983
3. Rees LH. Prolactin-Recent Advances in Clinical Biochemistry. In Albert KG, Price P (eds). *Recent Advances in Clinical Biochemistry.* 153-167; 1981.

Normal Range:

Female Premenopausal (<50 years of age): 3.34-26.72 ng/ml

Female Postmenopausal (=>50 years of age): 2.74-19.64 ng/ml

Male: 2.64-13.13 ng/ml

Turnaround time: 3 days