



TEST: LUTEINIZING HORMONE (LH)

PRINCIPLE:

LH is a dimeric glycoprotein hormone secreted by the anterior pituitary in response to hypothalamic gonadotrophin releasing hormone. The α -subunit is common to other glycoprotein hormones, while the β -subunit, which confers biological activity, has some homology with that of human chorionic gonadotrophin. During the menstrual cycle, follicle stimulating hormone (FSH) stimulates growth of the ovarian follicle which, when mature, ovulates in response to a surge of LH and, to a lesser extent, of FSH. Ovarian steroids are the primary negative feedback control for LH secretion. At menopause, reduced ovarian negative feedback results in elevated LH concentrations. LH concentrations also tend to be elevated in women of pre-menopausal age who experience ovarian failure, or whose ovaries failed to mature during puberty.

SPECIMEN REQUIREMENTS:

2ml collected in a serum separator tube (gel barrier). Separate serum from cells ASAP or within 2 hours of collection by centrifugation. Stability after separation from cells: Ambient: 8 Hours; Refrigerated: 48 Hours; Frozen: 6 Months (avoid repeated freeze/thaw cycles).

REJECTION CRITERIA:

Plasma or other body fluids. Gross hemolysis

METHOD:

Enhanced Chemiluminescence.

REFERENCES:

1. Carlsen RB et al. Human chorionic gonadotrophin. Linear amino acid sequence of the beta subunit. *J Biol Chem.* 248: 6810-6827; 1973.
2. Short RV. The control of menstruation. *Br J Hosp Med.* 7: 552-555; 1972.
3. Hillier SG. Current Concepts of the Roles of Follicle-Stimulating and Luteinizing Hormone in Folliculogenesis. *Human Reproduction.* 9:188-191; 1994.

Normal Range:

Normal Female Mid Follicular Phase:	2.12-10.89 mIU/ml
Normal Female Mid Cycle Peak:	19.18-103.03 mIU/ml
Normal Mid Luteal Phase:	1.20-12.86 mIU/ml
Postmenopausal Female:	10.87-58.64 mIU/ml
Normal Male:	1.24-8.62 mIU/ml

Turnaround Time: 3 business days