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**Overview****Method Name**

Direct Radioimmunoassay (RIA)

**NY State Available**

No

**Specimen****Specimen Type**

Serum

**Specimen Required****Patient preparation:**

Patient should not be on any Steroid, ACTH, Gonadotropin, or Estrogen medications, if possible, for at least 48 hours prior to collection.

**Serum****Specimen Type:** Serum**Container/Tube:** Red top or SST**Specimen Volume:** 3 mL**Collection Instructions:** Draw blood in a plain, red-top tube(s), serum-gel tube(s) is acceptable. Separate immediately and send 3 mL of serum frozen in a plastic vial.**Reject Due To**

Hemolysis	Mild reject; Gross reject
Lipemia	Mild reject; Gross reject
Icterus	Mild reject; Gross reject
Other	Specimens other than Serum or Plasma EDTA listed.

**Specimen Minimum Volume**

1 mL

**Specimen Stability Information**

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	90 days	
	Refrigerated	7 days	

**Clinical & Interpretive****Clinical Information**

Gonadotropin-Releasing Hormone (Gn-RH), also known as Luteinizing Hormone-Releasing Hormone (LH-RH), is a decapeptide secreted pulsately from the hypothalamus. It stimulates the release of the Gonadotropins - Luteinizing Hormone and Follicle Stimulating Hormone - exerting a stronger effect on Luteinizing Hormone. Testosterone and Estradiol, whose release is stimulated by the Gonadotropins, exert a negative feedback control on LH-RH both at the hypothalamic site and by decreasing pituitary receptor binding. LH-RH levels are low in patients with hypothalamic hypogonadism differentiating them from the high levels usually found in primary hypopituitary hypogonadism. Accentuation of the LH-RH pulse occurs at the onset of puberty triggering the release of LH and FSH required in pubertal development. LH-RH is stimulated by Epinephrine and suppressed by Dopamine and opiates. LH-RH and some of its agonists are frequently used to induce ovulation.

**Reference Values**

Adult Reference Range(s):

Males: 4.0 - 8.0 pg/mL

Females: 2.0 - 10.0 pg/mL

No pediatric reference ranges available for this test.

**Clinical Reference**

1. J Schopohl, G Mehlretter, R von Zumbusch, T Eversmann, and L von Werder. Comparison of Gonadotropin-Releasing Hormone and Gonadotropin Therapy in Male Patients with Idiopathic Hypogonadism. *Fertility and Sterility* 56: 1143-1150, 1991.
2. CB Lambalk, J Schoemaker, GP van Rees, J de Koning, and HAMJ van Dielen. Exogenous versus Endogenous Pulses of Luteinizing Hormone-Releasing Hormone and Secretory Patterns of Gonadotropins. *Fertility and Sterility* 56: 446-452, 1991.

**Performance**

**PDF Report**

No

**Performing Laboratory Location**

Inter Science Institute

**Fees & Codes****Test Classification**

This test was developed and its performance characteristics determined by Inter Science Institute. It has not been cleared or approved by the US Food and Drug Administration. The FDA has determined that such clearance or approval is not necessary.

**CPT Code Information**

83727

**LOINC® Information**

Test ID	Test Order Name	Order LOINC Value
FGNRH	Gonadotropin Releasing Hormone	13660-6

Result ID	Reporting Name	LOINC®
Z0929	Gonadotropin Releasing Hormone	13660-6