Recombinant Human Gonadotropin-releasing Hormone 1

Cat. No. GNRH1-134H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human Lutenizing Hormone Releasing Hormone produced in*Saccharomyces cerevisiae*is a heterodimeric, glycosylated, polypeptide chain consisting of two non-covalently linked subunits a and b of 92 and 121 amino acids respectively. The carobhydrate chain attachment to the LHRH protein core accurs via N- but not O-linkage. The N-glycosilation sites are Asn-52 and Asn-78 for the a subunit and Asn-30 for the b subunit. The b chain has an N-glycosilation site and its structure and glycosilation pattern are very similar to that of pituitary LHRH. The LHRH is purified by proprietary chromatographic techniques.
Species	Human
Source	S.Cerevisiae
Description	Gonadotropin-releasing hormone 1 (GNRH1), also known as Luteinising-hormone releasing hormone (LHRH), is a peptide hormone responsible for the release of FSH and LH from the anterior pituitary. GNRH1 is synthesized and released by the hypothalamus. At the pituitary, GNRH1 stimulates the synthesis and secretion of the gonadotropins follicle-stimulating hormone (FSH) and luteinizing hormone (LH). These processes are controlled by the size and frequency of GNRH1 pulses, as well as by feedback from androgens and estrogens. Low requency GNRH1 pulses lead to FSH release, whereas high frequency GNRH1 pulses stimulate LH release. There are differences in GNRH1 secretion between males and females. In males, GNRH1 is secreted in pulses at a constant frequency, but in females the frequency of the pulses varies during the menstrual cycle and there is a large surge of GNRH1 just before

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	ovulation. GNRH1 secretion is pulsatile in all vertebrates, and is necessary for correct reproductive function. Thus, a single hormone, GNRH1, controls a complex process of follicular growth, ovulation, and corpus luteum maintenance in the female, and spermatogenesis in the male.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Form	Each 165IU LHRH was lyophilized from with 98 mg sucrose, 1.66 mg phosphate dibasic, 0.1 mg phosphate monobasic, 0.1 mg tween 20 and 0.2 mg L-methionine.
Purity	Greater than 99.0% as determined by RP-HPLC.
Biological Activity	The biological activity is determind by using the Van Hell Bioasssay described in the British Pharmacopeia.
Stability	Lyophilized LHRH although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution LNRH should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

GENE INFORMATION

Gene Name	GNRH1 gonadotropin-releasing hormone 1 (luteinizing-releasing hormone) [Homo sapiens]
Synonyms	GNRH1; gonadotropin-releasing hormone 1 (luteinizing-releasing hormone); GRH; GNRH; LHRH; LNRH; gonadotropin-releasing hormone 1; gonadotropin-releasing hormone 1 (lutienizing hormone-releasing hormone); Progonadoliberin I; Progonadoliberin-1; Gonadoliberin-1; Gonadoliberin I; Luteinizing hormone-releasing hormone I; LH-RH I; Gonadotropin-releasing hormone I; GnRH-I; Luliberin I; Gonadorelin; GnRH-associated peptide 1; GnRH-associated peptide I

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Gene ID	2796
mRNA Refseq	NM_000825
Protein Refseq	NP_000816
MIM	152760
UniProt ID	P01148
Chromosome Location	8p21-p11.2
Pathway	GnRH signaling pathway; Neuroactive ligand-receptor interaction
Function	gonadotropin hormone-releasing hormone activity

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