

Human Gonadotropin-releasing Hormone 1 (Luteinizing-releasing Hormone)

Cat. No. GNRH1-306H **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Luteinizing Hormone Releasing Hormone Human Synthetic is a single, non-glycosylated, polypeptide chain containing 10 amino acids and having a molecular mass of 1182.3 Dalton. The molecular formula is C₅₅H₇₅N₁₇O₁₃. The CAS Number is 71447-49-9.

Source

Human

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 frequency 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 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.

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Form	The LHRH was lyophilized from a concentrated (1 mg/ml) solution with no additives.
Purity	Greater than 98.0% as determined by RP-HPLC.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Solubility	It is recommended to reconstitute the lyophilized LHRH in sterile 18M μ -cm H ₂ O not less than 100g/ml, which can then be further diluted to other aqueous solutions. The LHRH is also soluble in a 1% glacial acetic acid.
Amino acid sequence	Pyr-His-Trp-Ser-Tyr-Gly-Leu-Arg-Pro-Gly-NH ₂ .
Storage	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.
Pathways	GnRH signaling pathway; Neuroactive ligand-receptor interaction

GENE INFORMATION

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

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Gonadorelin; GnRH-associated peptide 1; GnRH-associated peptide I

Gene ID 2796

mRNA Refseq NM_000825

Protein Refseq NP_000816

MIM 152760

UniProt ID P01148

Chromosome Location 8p21-p11.2

Function gonadotropin hormone-releasing hormone activity

fromPDB 1YY1

