

Recombinant Human Follicle Stimulating Hormone, Beta Polypeptide

Cat. No. FSHB-129H **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Recombinant Human Follicle Stimulating Hormone produced in *CHO cells* is a glycoprotein having a total molecular mass of 30,000 Dalton. FSH is a heterodimeric hormone consisting of 92 amino acids a chain and 111 amino acids b chain. The FSH is purified by proprietary chromatographic techniques.

Species

Human

Source

CHO

Description

Follicle stimulating hormone (FSH) is a hormone synthesised and secreted by gonadotropes in the anterior pituitary gland. FSH and LH act synergistically in reproduction: In women, in the ovary FSH stimulates the growth of immature Graafian follicles to maturation. As the follicle grows it releases inhibin, which shuts off the FSH production. In men, FSH enhances the production of androgen-binding protein by the Sertoli cells of the testes and is critical for spermatogenesis. In both males and females, FSH stimulates the maturation of germ cells. In females, FSH initiates follicular growth, specifically affecting granulosa cells. With the concomitant rise in inhibin B FSH levels then decline in the late follicular phase. This seems to be critical in selecting only the most advanced follicle to proceed to ovulation. At the end of the luteal phase, there is a slight rise in FSH that seems to be of importance to start the next ovulatory cycle. Like its partner, LH, FSH release at the pituitary gland is controlled by pulses of gonadotropin-releasing hormone (GnRH). Those pulses, in turn, are subject to the estrogen feed-back from the gonads.

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Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Form	The recombinant FSH was lyophilized from a concentrated (1 mg/ml) solution containing 0.4 mg sucrose 14.8 g dibasic sodium phosphate and 6.42 g monobasic sodium phosphate.
Purity	Greater than 98.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.
Solubility	It is recommended to reconstitute the lyophilized Follicle Stimulating Hormone in sterile 18MΩ-cm H ₂ O not less than 100 g/ml, which can then be further diluted to other aqueous solutions.
Biological Activity	The activity was found to be 13,636 IU/mg (IRP reference preparation 70/45).
Stability	Lyophilized recombinant FSH although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution FSH-beta 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	FSHB follicle stimulating hormone, beta polypeptide [Homo sapiens]
Synonyms	FSHB; follicle stimulating hormone, beta polypeptide; follitropin, beta chain; follicle-stimulating hormone beta subunit; FSH-B; FSH-beta; Follitropin subunit beta
Gene ID	2488
mRNA Refseq	NM_000510

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Protein Refseq	NP_000501
MIM	136530
UniProt ID	P01225
Chromosome Location	11p13
Pathway	GnRH signaling pathway; Neuroactive ligand-receptor interaction
Function	protein heterodimerization activity; follicle-stimulating hormone activity
PDB rendering based on 1fl7.	