



Follicle Stimulating Hormone (FSH) Human, HEK293 Recombinant

Product Data Sheet

Cat. No.: A2253010 A22531MG

Size: 10 µg 1 mg

Description

Follicle Stimulating Hormone (FSH) Human, HEK293 Recombinant, is a heterodimeric, glycosylated, polypeptide chain transfected with two expression plasmids encoding the human FSH-alpha chain (Accession # P01215) (Ala25-Ser116) and human FSH-beta chain (Asn19-Glu129) (Accession # P01225). It has an approximate molecular weight of 25 kDa. The recombinant protein is purified by proprietary chromatographic techniques.

Summary

Follicle stimulating hormone (FSH) is a hormone synthesized and secreted by gonadotropes in the anterior pituitary gland. FSH and luteinizing hormone (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.

Type: Recombinant Protein

Source: HEK293 cells

Purity

Greater than 95.0% as determined by SDS-PAGE.

update.: 2023.09

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Amino Acid Sequence

FSH subunit alpha: APDVQDCPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLR
SKKTMLVQKNVTSESTCCVAKSYNRVTVMGGFKVENHTACHCSTCYHKS.

FSH subunit beta: NSCELTNITIAIEKEECRFCISINTTWCAGYCYTRDLVYKDP
ARPKIQKTCTFKELVYETVRVPGCAHHADSLYTPVATQCHCGKCDSDSTDCTVRGLGPSYCSFGEMKE.

Formulation

Sterile-filtered white lyophilized (freeze-dried) powder. The recombinant FSH was lyophilized from 0.2 µm filtered solution containing PBS, pH 7.4.

Reconstitution

It is recommended to reconstitute the lyophilized Follicle Stimulating Hormone in sterile 18MΩ -cm H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Biological Activity

The ED₅₀ as determined by cAMP accumulation in human FSH Receptor transfected Chinese Hamster Ovary cells was found to be 80-450 pg/ml.

Shipping

Ships at ambient temperature. Upon receipt, store the product at the temperature recommended below.

Storage/Expiration

Lyophilized recombinant FSH, although stable at room temperature for 3 weeks, should be stored desiccated below -18° C. Upon reconstitution, FSH 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.**

Usage

This product is intended for **Laboratory Research Use Only**. Not for use in diagnostic or therapeutic procedures. This product may not be used as a pharmaceutical or veterinary drug, agricultural product, or food additive.

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