

32-2023: FSH Recombinant Protein

Alternative Name : Follitropin subunit beta, Follicle-stimulating hormone beta subunit, FSH-beta, FSH-B, Follitropin beta chain, FSH.

Description

Source : HEK293 FSH Human Recombinant produced in HEK-293 cells is 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) having a total Mw of 38kDa. FSH human recombinant is purified by proprietary chromatographic techniques. 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.

Product Info

Amount : 10 µg
Purification : Greater than 95% as determined by SDS-PAGE.
Content : The recombinant FSH was lyophilized from a concentrated (1mg/ml) solution containing PBS.
Storage condition : 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.
Amino Acid : FSH subunit alpha:
APDVQDCPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTCCVAKSYNRVTVMGG
FKVENHTACHCSTCYHKS. FSH subunit beta:
NSCELTNITIAIEKEECRFISINTTWCAGYCYTRDLVYKDPARPKIQKTCTFKELVYETVRVPGCAHHADSLYTYP
VATQCHCGKCDSDSTDCTVRGLGPSYCSFGEMKE.

Application Note

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

