

Human FSH (glycosylated)

Synonyms: Folliculin subunit beta, Follicle-stimulating hormone beta subunit, FSH-beta, FSH-B, Folliculin beta chain, FSH.

PLEASE NOTE: ALWAYS CENTRIFUGE VIAL BEFORE OPENING

Size	Order#	Lot#	Expiry Date
2 µg	2260.955.002		
10 µg	2260.955.010		
1 mg	2260.955.199		

Please enquire for bulk quantities and other vial sizes.

Description

Recombinant human Follicle stimulating hormone (FSH) derived from HEK-293 cells is a heterodimeric, glycosylated protein 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) with an approximate MW of 25 kDa. 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.

- **Biological Activity** See below
- **Source** HEK
- **Purity** ≥ 95 % (SDS-PAGE)
- **Endotoxin Level** ≤ 0.1 ng/µg (≤ 1 EU/µg)
- **Stabilizer** None
- **Buffer** PBS (ph 7.4)*
- **Physical State** Sterile filtered, lyophilized

Biological Activity

The ED₅₀ of 80-450 pg/ml was determined by cAMP accumulation in human FSH Receptor transfected Chinese Hamster Ovary cells. It corresponds to a specific activity of 0.22 x 10⁷ - 1.25 x 10⁷ units/mg.

Reconstitution

We recommend a quick spin followed by reconstitution in water or an aqueous buffer to a concentration of at least 100 g/ml, which can be further diluted. **Do not vortex.** This solution can be stored at 2 to 8°C for up to 1 week or in working aliquots at -20°C to -80°C. Working aliquots should be at the highest practical concentration. For long term storage it is recommended to add a carrier protein (0.1 % HSA, order number: [2835.955.xyz](#) or [2835.958.xyz](#), or BSA, order number: [2835.919.xyz](#)). **Please avoid repeated freeze-thaw cycles.**

Stability

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. **Please avoid repeated freeze-thaw cycles.**

*The Buffer may vary depending on the Lot #. Please contact our technical support if you have specific requirements.

Amino Acid Sequence

FSH subunit alpha: APDVQDCPEC TLOENPFFSQ PGAPILOCMG CCFSRAYPTP LRSKKTMLVQ
KNVTSESTCC VAKSYNRVTV MGGFKVENHT AHCSTCYH KS

FSH subunit beta: NSCELTNITI AIEKEECRFC ISINTTWCAG YCYTRDLVYK DPARPKIQKT
CTFKELVYET VRVPGCAHHA DSLYTYPVAT QCHCGKCDSD STDCTVRGLG PSYCSFGEMK E

Usage: For research use only. Not for use in diagnostic or therapeutic procedures. Not for human use.

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