

Recombinant Human Follicle-Stimulating Hormone

#R00614

Size: 5 µg/100 µg/500 µg

Stability & Storage

Please use a manual defrost freezer and avoid repeated freeze-thaw cycles.

-Lyophilized protein should be stored at ≤ -20°C, stable for 12 months after receipt.

-Reconstituted protein solution can be stored at 2-8°C for 1-2 weeks.

-Aliquots of reconstituted samples are stable at ≤ -20°C for 3 months.



Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

Background

Follicle-Stimulating Hormone (FSH) is a 33 kDa heterodimer belonging to the glycoprotein hormone family. It is composed of noncovalently linked glycosylated alpha and beta chains. The alpha subunit is also a component of Luteinizing Hormone (LH), Thyroid-Stimulating Hormone, and Chorionic Gonadotropin. The unique beta subunit confers the protein's specific biological action and is responsible for the interaction with the FSH Receptor. The approximately 20 kDa alpha subunit of human FSH shares 73% and 72% aa sequence identity with the mouse and rat orthologs, respectively. The approximately 21 kDa human FSH beta subunit shares 85% and 82% aa sequence identity with the mouse and rat orthologs, respectively. FSH is produced and secreted by the anterior pituitary gland. Its secretion is controlled by Gonadotropin-Releasing Hormone from the hypothalamus; however, FSH secretion can also be

stimulated by activins and inhibited by inhibins. FSH works in concert with LH to regulate female reproduction; FSH stimulates follicular growth and LH induces ovulation. FSH can also regulate estrogen formation by inducing the aromatase enzyme that converts androgen to estradiol. Mutations in the human FSH and FSHR genes are associated with reduced reproductive functioning in females. Assisted reproductive technology commonly uses recombinant FSH to induce follicle growth.

AA Sequence

α chain: Ala25-Ser116, Accession # P01215; β chain: Asn19-Glu129, Accession # P01225

Reconstitution

Always centrifuge tubes before opening. Do not mix by vortex or pipetting. Reconstitute in sterile distilled water to a concentration of 0.1-1.0 mg/mL. Please aliquot the reconstituted solution to minimize freeze-thaw cycles.

Product Specification

Species	Human
Source	CHO Cells
Molecular Weight	Recombinant Human FSH alpha/beta Protein, a noncovalently-linked heterodimer, subunit A containing 92 amino acid residues and subunit B 111, has a predicted molecular mass of approximately 22.7 kDa. As a result of glycosylation, the recombinant protein migrates with an apparent molecular mass of 22-26 kDa in SDS-PAGE.
Purity	> 95% by SDS-PAGE gel and HPLC analyses.
Biological	Fully biologically active when

Activity	compared to standard. The biological activity was determined by its ability to induce cAMP accumulation in HEK293 human embryonic kidney cells transfected with human FSH R. The ED ₅₀ for this effect is less than 0.2 ng/mL, corresponding to a specific activity of > 5.0 × 10 ⁶ IU/mg.		
Formulation	Lyophilized from a 0.22 μm filtered solution of in PBS. See CoA for details.		
Endotoxin	Less than 0.1 EU/μg of rHuFSH-α/β as determined by LAL test.		
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at		

the temperature listed below.