

DESCRIPTION

Source	Chinese Hamster Ovary cell line, CHO-derived	
	Human FSH α Ala25-Ser116 Accession # P01215	
	Human FSH β Cys21-Glu129 Accession # P01225	
	N-terminus	C-terminus

N-terminal Sequence Analysis Ala25 (FSH α) & Cys21 (FSH β)

Structure / Form Noncovalently-linked heterodimer

Predicted Molecular Mass 10.2 kDa (FSH α) & 12.4 kDa (FSH β)

SPECIFICATIONS

SDS-PAGE 22-26 kDa, reducing conditions

Activity Measured by its ability to induce cAMP accumulation in HEK293 human embryonic kidney cells transfected with human FSH R. The ED₅₀ for this effect is 25-200 pg/mL.

Endotoxin Level <0.10 EU per 1 μ g of the protein by the LAL method.

Purity >95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.

Formulation Lyophilized from a 0.2 μ m filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

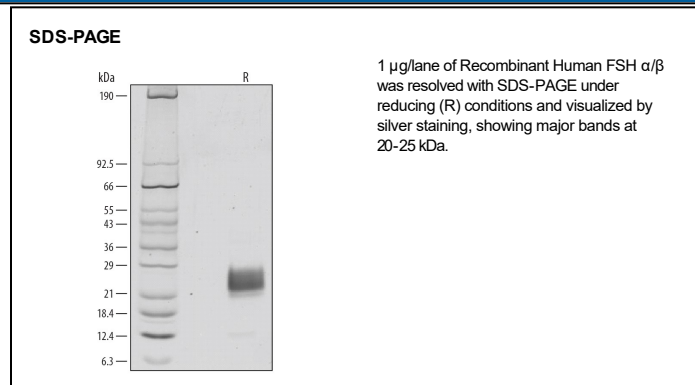
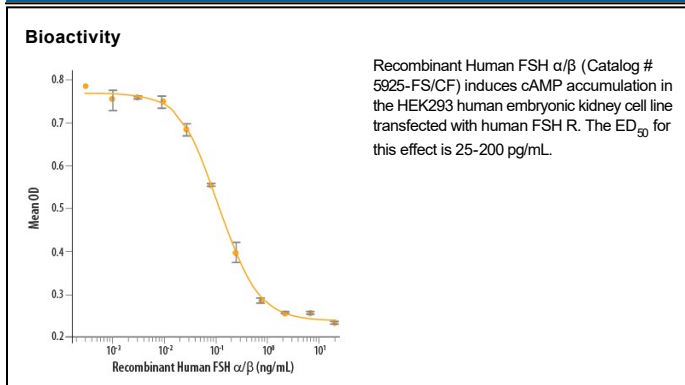
Reconstitution Reconstitute at 100 μ g/mL in PBS.

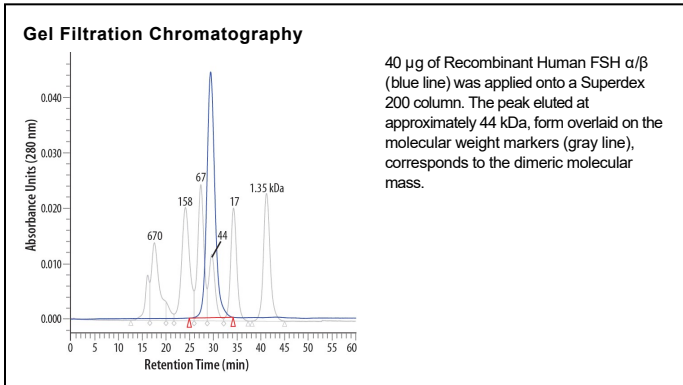
Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

DATA





BACKGROUND

Follicle-Stimulating Hormone (FSH) is a 33 kDa heterodimer belonging to the glycoprotein hormone family. It is composed of noncovalently linked glycosylated α and β chains. The α subunit is also a component of Luteinizing Hormone (LH), Thyroid-Stimulating Hormone, and Chorionic Gonadotropin. The unique β subunit confers the protein's specific biological action and is responsible for the interaction with the FSH Receptor (1-3). The approximately 20 kDa α subunit of human FSH shares 73% and 72% aa sequence identity with the mouse and rat orthologs, respectively. The approximately 21 kDa human FSH β 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 (4-6). FSH works in concert with LH to regulate female reproduction; FSH stimulates follicular growth and LH induces ovulation (7). FSH can also regulate estrogen formation by inducing the aromatase enzyme that converts androgen to estradiol (7, 8). In addition, it has been suggested to have a role in postmenopausal bone loss and in the neovascularization surrounding malignant tumors (9-11). In males, FSH is critical for sperm production (12). Mutations in the human *FSH* and *FSHR* genes are associated with reduced reproductive functioning in females (2, 11). Additionally, increased production of autoantibodies directed against FSH β has been suggested to contribute to certain types of female infertility (2). Assisted reproductive technology commonly uses recombinant FSH to induce follicle growth (7).

References:

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