

## FSH Protein, Human (HEK293, Flag-His)

<b>Cat. No.:</b>	HY-P70237
<b>Synonyms:</b>	rHuFollicle-stimulating hormone/FSH, Flag-His; Follicle-stimulating hormone; FSH; FSH alpha/beta
<b>Species:</b>	Human
<b>Source:</b>	HEK293
<b>Accession:</b>	P01215 (A25-S116)&P01225 (N19-E129)
<b>Gene ID:</b>	1081&2488
<b>Molecular Weight:</b>	Approximately 19-30 kDa due to the glycosylation

### PROPERTIES

<b>AA Sequence</b>	<pre> A P D V Q D C P E C   T L Q E N P F F S Q   P G A P I L Q C M G   C C F S R A Y P T P L R S K K T M L V Q   K N V T S E S T C C   V A K S Y N R V T V   M G G F K V E N H T A C H C S T C Y Y H   K S &amp; N S C E L T N   I T I A I E K E E C   R F C I S I N T T W C A G Y C Y T R D L   V Y K D P A R P K I   Q K T C T F K E L V   Y E T V R V P G C A H H A D S L Y T Y P   V A T Q C H C G K C   D S D S T D C T V R   G L G P S Y C S F G E M K E </pre>
<b>Biological Activity</b>	Measured in a cell proliferation assay using SK-OV-3 cells. The ED <sub>50</sub> for this effect is 0.048 ng/mL, corresponding to a specific activity is 2.083×10 <sup>7</sup> units/mg.
<b>Appearance</b>	Lyophilized powder
<b>Formulation</b>	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4.
<b>Endotoxin Level</b>	<1 EU/μg, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH <sub>2</sub> O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
<b>Storage &amp; Stability</b>	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

<b>Background</b>	FSH Protein (Human) is a glycoprotein dimer with α and β subunits. The β subunit is unique to FSH, while the α subunit is shared as same as in thyroid stimulating hormone (TSH), choriogonadotropin (CG) and luteinizing hormone (LH) <sup>[1]</sup> . Follicle growth is directly dependent on FSH Protein (Human) stimulation. Granulosa cells from small follicles express FSH
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Protein (Human) receptors and respond to FSH Protein (Human) stimulation by synthesizing aromatase<sup>[1]</sup>. FSH Protein (Human) release is stimulated by gonadotropin-releasing hormone (GnRH): The hypothalamus produces GnRH, and it is released into the hypophyseal portal circulation to act on G-protein-coupled receptors at gonadotropic cells of the anterior pituitary. Gonadotropic cells produce FSH and luteinizing hormone (LH) and release them into the peripheral circulation<sup>[4]</sup>.

FSH Protein (Human) regulates the development, growth, pubertal maturation and reproductive processes of the human body. FSH Protein (Human) is used commonly in infertility therapy, mainly for ovarian hyperstimulation. In some cases, it is used in ovulation induction for reversal of anovulation as well<sup>[5]</sup>.

FSH Protein (Human) secretion is inhibited by negative feedback from estrogen levels in women and FSH Protein (Human) secretion is inhibited by levels of inhibin B (secreted by the Sertoli cells) via negative feedback in men<sup>[5,6]</sup>.

FSH Protein (Human) Levels are associated with various diseases, such as Polycystic Ovarian Syndrome, male infertility, hypogonadotropic hypogonadism, Kallman Syndrome, Turner Syndrome, pituitary adenomas, and more<sup>[1,7,8,9]</sup>.

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## REFERENCES

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