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Recombinant Human LH /CGA&LHB Protein

Catalog No.: RP01942 **Recombinant**

Sequence Information

Species	Gene ID	Swiss Prot
Human	1081&3972	P01215 P01229

Tags
C-Avi&His

Synonyms
CGA&LHB;Lutropin alpha chain;&Lutropin beta chain;LSH-alpha&LSH-beta; Luteinizing Hormone alpha/beta Heterodimer

Product Information

Source	Purification
HEK293 cells	≥ 95 % as determined by SDS-PAGE.

Calculated MW	Observed MW
26.04 kDa	40-45 kDa

Endotoxin
< 0.1 EU/μg of the protein by LAL method.

Formulation
Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.

Reconstitution
Centrifμge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stablizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

Contact

400-999-6126

cn.market@abclonal.com.cn

www.abclonal.com.cn

Background

Luteinizing Hormone (LH) is a 42 kDa heterodimer belonging to the glycoprotein hormone family. It is composed of noncovalently linked glycosylated alpha and beta chains. The alpha subunit (CG alpha) is also a component of Follicle-Stimulating Hormone (FSH), Thyroid-Stimulating Hormone, and Chorionic Gonadotropin. The unique beta subunit confers the protein's specific biological action and is responsible for the interaction with its receptor . The approximately 20 kDa human CG alpha subunit shares 73% and 72% amino acid (aa) sequence identity with the mouse and rat orthologs, respectively. The approximately 18 kDa human LH beta subunit shares 71% and 72% aa sequence identity with the mouse and rat orthologs, respectively. Multiple isoforms of LH exist due to differences in the post-translational glycosylation, sialylation, and sulphation modifications of its subunits . The composition, longevity, and activity of the different LH isoforms vary throughout a woman's menstrual cycle and reproductive life cycle. LH is produced and secreted by the anterior pituitary gland. Its secretion is controlled by Gonadotropin-Releasing Hormone from the hypothalamus; however, LH secretion can also be stimulated by estradiol . LH works in concert with FSH to regulate female reproduction; FSH stimulates follicular growth and LH induces ovulation. LH also drives formation of the corpus luteum by promoting progesterone production. Additionally, LH has been suggested to stimulate the adrenal gland in postmenopausal women to induce secretion of sulfated DHEA, a precursor to androgens. In the testis, LH induces Leydig cell production of testosterone. Hypersecretion of LH has been shown to occur in women with polycystic ovary syndrome and is associated with an increased risk of infertility and miscarriage). Additionally, increased serum LH levels are associated with decreased cognition and have been implicated in the development and progression of Alzheimer's disease.

Basic Information

Description
Recombinant Human LH /CGA&LHB Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Ala25-Ser116)& (Ser21-Leu141of Human LH /CGA&LHB(Accession #NP_000726.1&NP_000885.1) fused with a Avi&His tag at the C-terminus.

Bio-Activity

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

Storage
Store at -20℃. Store the lyophilized protein at -20℃ to -80℃ up to 1 year from the date of receipt.
After reconstitution, the protein solution is stable at -20℃ for 3 months, at 2-8℃ for up to 1 week.
Avoid repeated freeze/thaw cycles.

Operational Notes
For your safety and health, please wear a lab coat and disposable gloves for handling.

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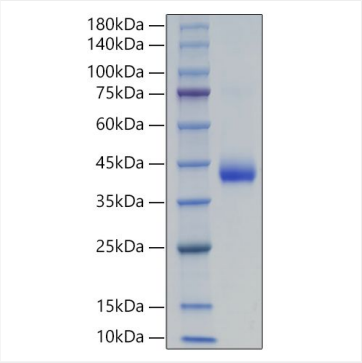
Validation Data



Recombinant Human LH /CGA&LHB Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.

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