

Luteinizing Hormone (LH) Active Protein | LH active protein

Active Luteinizing Hormone (LH)

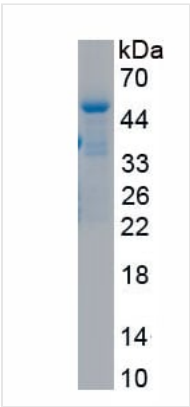
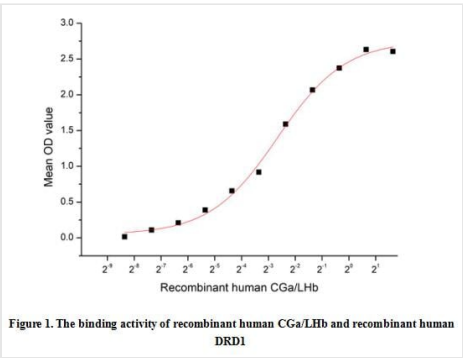
CATALOG # AAA161734	HOST E Coli	APPLICATIONS Activity Assay, Cell Culture
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PRODUCT SYNONYMS

Luteinizing Hormone (LH); Active Luteinizing Hormone (LH); Luteinizing Hormone; ICSH; Lutropin; Interstitial Cell Stimulating Hormone⁴; LH active protein

PRODUCT SPECIFICATIONS

Host	E Coli
Purity/Purification	Greater than 80% by SDS-PAGE
Form/Format	Freeze-dried powder; PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
Sequence	Ala25~Ser1 16+GGGGS*3 +Ser21~Leu 141
Applicable Applications for LH active protein	Activity Assay, Cell Culture
Species	Human
Expression System	Prokaryotic expression
Tag	N-terminal His and GST Tag
Endotoxin Level	<1.0EU per 1ug (determined by the LAL method)
Isoelectric Point	8
Research Area	Endocrinology, Reproductive science, Hormone metabolism
Preparation and Storage	Store at 2-8 degree C for one month, -80 degree C for 12 months



Bioactivity

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. 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. A functional binding ELISA assay was conducted to detect the interaction of recombinant human CGa/LHb and recombinant human Dopamine Receptor D1 (DRD1). Briefly, biotin-linked CGa/LHb were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 ul were then transferred to DRD1-coated microtiter wells and incubated for 1h at 37 degree C. Wells were washed with PBST 3 times and incubation with Streptavidin-HRP for 30min, then wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 degree C. Finally, add 50 ul stop solution to the wells and read at 450 nm immediately. The binding activity of CGa/LHb and DRD1 was shown in Figure 1, the EC50 for this effect is 0.644 ug/mL.

SDS-PAGE

Figure. SDS-PAGE

ADDITIONAL INFORMATION

Product Categories/Family for LH active protein	Active proteins
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NCBI AND UNIPROT INFORMATION

NCBI GI #	546845
NCBI GeneID	1081
UniProt Accession #	P01215; P01229
Molecular Weight	13,075 Da
NCBI Official Full Name	thyroid-stimulating hormone alpha subunit
NCBI Official Synonym Full Names	glycoprotein hormones, alpha polypeptide
NCBI Official Symbol	CGA
NCBI Official Synonym Symbols	HCG; LHA; FSHA; GPHA; TSHA; GPHA1; CG-ALPHA
NCBI Protein Information	glycoprotein hormones alpha chain; FSH-alpha; LSH-alpha; TSH-alpha; lutropin alpha chain; follitropin alpha chain; thyrotropin alpha chain; choriogonadotropin alpha chain; luteinizing hormone alpha chain; chorionic gonadotrophin subunit alpha; thyroid-sti
UniProt Protein Name	Glycoprotein hormones alpha chain
UniProt Gene Name	CGA
UniProt Synonym Gene Names	CG-alpha; FSH-alpha; LSH-alpha; TSH-alpha
UniProt Entry Name	GLHA_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/e-coli-active-protein/luteinizing-hormone-lh/161734>