

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human LH β in direct ELISAs and Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human LH β Ser21-Leu141 Accession # P01229
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide
*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.	

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

LH β (Luteinizing Hormone subunit beta; also LSH-B and lutropin beta chain) is a 17-19 kDa member of the glycoprotein hormone subunit beta family, cysteine knot superfamily of proteins. It is synthesized by gonadotrophs in the anterior pituitary, and noncovalently heterodimerizes with the 21-23 kDa common glycoprotein alpha chain, forming 40-42 kDa LH. LH has effects on at least three organ systems. In the ovary, LH induces the synthesis of testosterone, which is quickly converted to estradiol. Estradiol subsequently induces a bolus release of LH from the pituitary, resulting in ovulation. LH now drives the formation of the corpus luteum (or yellow body, from luteus meaning yellow) with the production of progesterone. In the testis, LH induces Leydig cell production of testosterone that activates genes in Sertoli cells drives sperm formation. And in the adrenal, LH appears to induce secretion of sulfated DHEA, a precursor to androgens. Mature human LH β is 121 amino acids (aa) in length (aa 21-141). It contains three intrachain disulfide bonds that form a cysteine knot, plus one utilized N-linked glycosylation site at Asn50 that incorporates both fucose and sulfate on galactose. The presence of carbohydrate is necessary for bioactivity. Multiple isoforms of LH exist, and likely represent variations in carbohydrate structure. Full-length human LH β shares 82% and 72% aa sequence identity between human chorionic gonadotrophin/CG β and mouse LH β subunits, respectively.

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