# Human LHβ Alexa Fluor® 750-conjugated Antibody

Antigen Affinity-purified Polyclonal Sheep IgG
Catalog Number: AF8016S
100 µg

## DESCRIPTION

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| **Species Reactivity** | Human |
| **Specificity** | Detects human LHβ in direct ELISAs and Western blots. |
| **Source** | Polyclonal Sheep IgG |
| **Purification** | Antigen Affinity-purified |
| **Immunogen** | *E. coli*-derived recombinant human LHβ<br>Ser21-Leu141<br>Accession # P01229 |
| **Conjugate** | Alexa Fluor 750<br>Excitation Wavelength: 749 nm<br>Emission Wavelength: 775 nm |
| **Formulation** | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*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.*

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

## PREPARATION AND STORAGE

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| **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

LHβ (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 LHβ 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 LHβ shares 82% and 72% aa sequence identity between human chorionic gonadotrophin/CGβ and mouse LHβ subunits, respectively.

## PRODUCT SPECIFIC NOTICES





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