

Product Specification Sheet

Human Luteinizing Hormone (LH) Antibodies

Cat # LHA14-M Monoclonal Anti-Human Luteinizing Hormone (LH), alpha chain IgG, aff pure **SIZE:** 100 ug

Luteinizing hormone (LH, or lutropin) is a hormone produced by gonadotroph cells in the anterior pituitary gland. In females, an acute rise of LH ("LH surge") triggers ovulation and development of the corpus luteum. In males, where LH had also been called interstitial cell-stimulating hormone (ICSH), it stimulates Leydig cell production of testosterone.[3] It acts synergistically with FSH. LH is a heterodimeric glycoprotein. Each monomeric unit is a glycoprotein molecule; one alpha and one beta subunit make the full, functional protein. Its structure is similar to that of the other glycoprotein hormones, follicle-stimulating hormone (FSH), thyroid-stimulating hormone (TSH), and human chorionic gonadotropin (hCG). The protein dimer contains alpha and beta subunits, that are non-covalently associated. The alpha subunits of LH, FSH, TSH, and hCG are identical, and contain 92 amino acids in human but 96 amino acids in almost all other vertebrate species (glycoprotein hormones do not exist in invertebrates). The beta subunits vary. LH has a beta subunit of 120 amino acids (LHB) that confers its specific biologic action and is responsible for the specificity of the interaction with the LH receptor. The different composition of these oligosaccharides affects bioactivity and speed of degradation. The biologic half-life of LH is 20 minutes, shorter than that of FSH (3–4 hours) and hCG (24 hours).

The detection of a surge in release of luteinizing hormone indicates impending ovulation. LH can be detected by urinary ovulation predictor kits (OPK, also LH-kit) that are performed, typically daily, around the time ovulation may be expected.[16] A conversion from a negative to a positive reading would suggest that ovulation is about to occur within 24–48 hours, giving women two days to engage in sexual intercourse or artificial insemination with the intentions of conceiving.

Source of Antigen and Antibodies

Antigen	Human LH protein
Ab Host/type	Mouse, Monoclonal , IgG1, Aff pure IgG (cat # LHA14-M) in PBS, pH 7.5 containing 0.05% azide,
2-ab	Goat Anti-mouse IgG-HRP conjugate Cat # 40320 (AP, biotin, FITC conjugates also available)
-ve control IgG	Cat # 20008-1, Mouse (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as –ve control

Form & Storage

Aff pure IgG

100ul solution lyophilized powder

Buffer: PBS contains 0.05% sodium azide

Reconstitute powder 100 ul of water

Storage

Short-term: unopened, undiluted vials for less than a week at 4oC.

Long-term: at –20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 12 months at –20oC or below.

Shipping: 4oC for solutions and room temp for powder.

Specificity and crossreactivity

Mab #LHA14-M recognizes human LH-alpha and other peptide hormones of this group TSH, HCG, and FSH (<0.1%). Antibodies crossreactivity with LH from other species (mouse, rat etc) have not been studies.

Recommended Usage

ELISA

LSH11-M suitable for coating or tracer in ELISA or rapid tests with suitable LH-beta antibodies pair (#LH11-13-M).

Western Blotting (1:1K-5K) using Chemiluminescence substrates.

Histochemistry & Immunofluorescence: We recommend using perfusion-fixed rat brain (4% paraformaldehyde, 0.2% glutaraldehyde) tissues. We recommend an initial testing at 5-10 ug/ml. Users must optimize antibody dilution based upon their specific requirement.

General References: Jiang X (2013) Mol Cell. Endocrinol. 382, 425-451; Stoleru S (1993) Psyconeuroendocrinology DOI: 10.1016/0306-4530(93)90005-6; Ujihara M (1991) Glycobiol. 2, 225-231

*This product is for In vitro research use only.

Related material available from ADI

Catalog# Product Description
0100 Human Luteinizing Hormone (LH) ELISA Kit, 96 tests, Quantitative

LH11-M Mouse Monoclonal Anti-Human Luteinizing Hormone (LH), Beta chain IgG #1 (capture), aff pure

LH12-M Mouse Monoclonal Anti-Human Luteinizing Hormone (LH), Beta chain IgG #2 (detection), aff pure

LH13-M Mouse Monoclonal Anti-Human Luteinizing Hormone (LH), alpha chain IgG, aff pure

LHA14-M Monoclonal Anti-Human Luteinizing Hormone (LH), alpha chain IgG, aff pure

SP-52267-1 Luteinizing Hormone Releasing Hormone LH-RH
SP-52267-5 Luteinizing Hormone Releasing Hormone (AA: Pyr-His-Trp-Ser-Tyr-Gly-Leu-Arg-Pro-Gly-NH2) (MW: 1182.4)
SP-68569-5 Luteinizing Hormone-Releasing Hormone, free acid, human; LH-RH, free acid, human (AA: Glp-His-Trp-Ser-Tyr-Gly-Leu-Arg-Pro-Gly-Cys) (MW: 1304.45)

LHA14-M

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