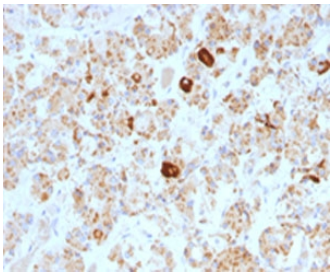
Luteinizing Hormone beta Antibody SPM103 / LH beta Monoclonal Antibody [clone SPM103] (V2685)

Catalog No.	Formulation	Size
V2685-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2685-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2685SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

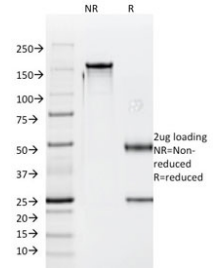
Citations (3)

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	SPM103
Purity	Protein G affinity chromatography
UniProt	P01229
Localization	Cytoplasmic, secreted
Applications	Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT
Limitations	This Luteinizing Hormone beta Antibody SPM103 / LH beta Monoclonal Antibody is available for research use only.



Luteinizing Hormone beta Antibody by IHC in human pituitary. Immunohistochemical staining of FFPE human pituitary tissue using Luteinizing Hormone beta Antibody SPM103. Brown cytoplasmic immunoreactivity is observed in a subset of anterior pituitary cells, consistent with the expected distribution of luteinizing hormone-producing gonadotrophs. Heat-induced epitope retrieval was performed in 10 mM Tris with 1 mM EDTA, pH 9.



Luteinizing Hormone beta Monoclonal Antibody Purity by SDS-PAGE. SDS-PAGE analysis of purified, BSA-free Luteinizing Hormone beta Antibody SPM103 under non-reducing (NR) and reducing (R) conditions, with 2 ug of antibody loaded per lane. The gel shows intact antibody under non-reducing conditions and separated heavy and light chains under reducing conditions.

Description

Luteinizing Hormone beta Antibody SPM103 / LH beta Monoclonal Antibody recognizes the beta subunit of luteinizing hormone (LH), a glycoprotein hormone produced by gonadotroph cells in the anterior pituitary gland. Encoded by the LHB gene, this subunit combines with a common alpha subunit to form biologically active luteinizing hormone. The alpha subunit is shared with follicle-stimulating hormone (FSH), thyroid-stimulating hormone (TSH), and chorionic gonadotropin (hCG), while the beta subunit contributes to hormone-specific receptor recognition and biological activity.

Luteinizing hormone is a central regulator of reproductive physiology through its interaction with the luteinizing hormone/choriogonadotropin receptor (LHCGR), a G protein-coupled receptor expressed primarily in gonadal tissues. Receptor activation stimulates cyclic AMP-dependent signaling pathways that regulate steroid hormone production and reproductive function. LH secretion is controlled by hypothalamic gonadotropin-releasing hormone (GnRH) and is influenced by feedback mechanisms involving gonadal steroids and other reproductive hormones.

In females, luteinizing hormone supports ovarian follicular development and stimulates steroidogenesis in theca cells. The midcycle LH surge triggers ovulation and promotes the transformation of the ruptured follicle into the corpus luteum, which produces progesterone to support the reproductive cycle. In males, LH acts primarily on Leydig cells in the testes, stimulating testosterone synthesis. This activity is essential for maintaining androgen-dependent reproductive functions and supporting normal spermatogenesis through interactions with other endocrine signals.

The beta subunit is important for distinguishing luteinizing hormone from related pituitary glycoprotein hormones. Although LH and hCG activate the same receptor, differences in their beta subunit structures and glycosylation contribute to distinct circulating half-lives and signaling characteristics. Changes in LH synthesis, secretion, or receptor responsiveness can disrupt reproductive endocrine regulation. Consequently, LHB expression and gonadotroph function are relevant to investigations of infertility, hypogonadism, and disorders affecting the hypothalamic-pituitary-gonadal axis.

Luteinizing hormone beta is also an established marker of gonadotroph differentiation in pituitary research. Its expression can help characterize hormone-producing cell populations and investigate pituitary adenomas with gonadotroph lineage features. NSJ Bioreagents offers this Luteinizing Hormone beta Antibody for research examining pituitary endocrine function, gonadotropin expression, reproductive hormone regulation, and the cellular mechanisms governing gonadal physiology.

Explore our Developmental Biology Antibodies for additional research tools targeting proteins involved in reproductive development, endocrine signaling, and cellular differentiation.

Application Notes

Optimal dilution of the Luteinizing Hormone beta Antibody SPM103 / LH beta Monoclonal Antibody should be determined by the researcher.

1. Staining of formalin-fixed tissues requires boiling tissue sections in pH 9 10mM Tris with 1mM EDTA for 10-20 min followed by cooling at RT for 20 min

Immunogen

Recombinant beta sub-unit of human LH was used as the immunogen for the Luteinizing Hormone beta antibody.

Storage

Store the Luteinizing Hormone beta antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

LH beta antibody, LHB antibody, Lutropin beta antibody, Luteinizing hormone subunit beta antibody, Interstitial cell-stimulating hormone beta antibody

Ordering: Phone: 858.663.9055 | Fax: 1.267.821.0800 | Email: info@nsjbio.com
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