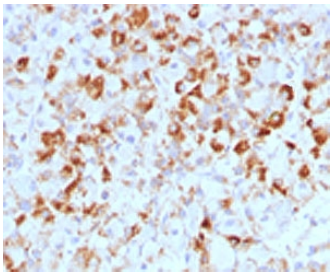
LHB Antibody CCGD1 / Luteinizing Hormone beta Monoclonal Antibody [clone CCGD1] (V7106)

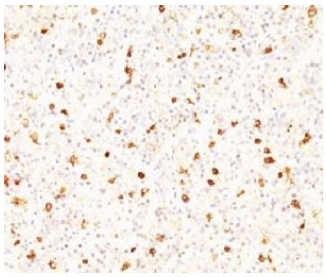
Catalog No.	Formulation	Size
V7106-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7106-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7106SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	CCGD1
Purity	Protein G affinity chromatography
UniProt	P01229
Localization	Cytoplasmic, secreted
Applications	Immunohistochemistry (FFPE): 1-2ug/ml for 30 min RT (1)
Limitations	This LHB Antibody CCGD1 / Luteinizing Hormone beta Monoclonal Antibody is available for research use only.



LHB Antibody by IHC in human pituitary. Immunohistochemical staining of FFPE human pituitary tissue using LHB Antibody CCGD1. Brown cytoplasmic immunoreactivity is visible in a subset of anterior pituitary cells, consistent with luteinizing hormone-producing gonadotrophs. Heat-induced epitope retrieval was performed using citrate buffer, pH 6.0.



LHB Antibody by IHC in human pituitary. Immunohistochemical staining of FFPE human pituitary tissue using LHB Antibody CCGD1. Scattered cells exhibit brown cytoplasmic staining against a predominantly negative background, illustrating the distribution of LHB-positive cells within the pituitary tissue. Heat-induced epitope retrieval was performed using citrate buffer, pH 6.0.

Description

LHB Antibody CCGD1 / Luteinizing Hormone beta Monoclonal Antibody recognizes the beta subunit of luteinizing hormone (LH), a glycoprotein hormone synthesized by gonadotroph cells of the anterior pituitary gland. Encoded by the LHB gene, this subunit associates with the common glycoprotein hormone alpha subunit to form biologically active LH. The beta subunit contributes to the hormone's biological specificity, distinguishing it from related pituitary hormones such as follicle-stimulating hormone and thyroid-stimulating hormone. LH also shares structural and functional characteristics with chorionic gonadotropin, which activates the same receptor.

Luteinizing hormone is an essential component of the hypothalamic-pituitary-gonadal axis, which coordinates reproductive endocrine activity. Hypothalamic gonadotropin-releasing hormone stimulates LH synthesis and secretion through pulsatile signaling to anterior pituitary gonadotrophs. Circulating LH subsequently binds 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 biosynthesis and reproductive function.

In females, LH acts on ovarian theca cells to promote androgen production, providing substrates for estrogen synthesis by granulosa cells. The midcycle LH surge triggers ovulation and initiates luteinization, leading to formation of the corpus luteum. This temporary endocrine structure produces progesterone, which supports the uterine environment during the luteal phase. Coordinated regulation of LH and follicle-stimulating hormone is therefore necessary for normal follicular development, ovulation, and reproductive cyclicity.

In males, LH stimulates testosterone synthesis by Leydig cells within the testes. Testosterone supports reproductive development, androgen-dependent physiological functions, and the hormonal environment required for spermatogenesis. Alterations in LH production or receptor responsiveness can contribute to hypogonadism, infertility, and other reproductive endocrine disorders. Regulation of LHB gene expression is consequently important for understanding pituitary function and the endocrine mechanisms governing gonadal steroidogenesis.

Within the pituitary gland, LHB expression is associated with gonadotroph differentiation and hormone production. It is also relevant to studies examining pituitary neuroendocrine tumors, particularly those exhibiting gonadotroph lineage characteristics. NSJ Bioreagents offers this LHB Antibody for investigating gonadotropin expression, pituitary cell differentiation, and the relationship between endocrine signaling and reproductive physiology.

Explore our Luteinizing Hormone beta Antibody SPM103 for additional research tools targeting LHB and investigating pituitary gonadotroph differentiation and reproductive endocrine function.

Application Notes

Optimal dilution of the LHB Antibody CCGD1 / Luteinizing Hormone beta Monoclonal Antibody should be determined by the researcher.

1. Staining of formalin-fixed tissues requires boiling tissue sections in 10mM Citrate buffer, pH 6.0, 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 LHB antibody.

Storage

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

Alternate Names

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

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