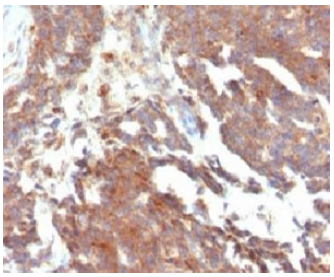
GNRHR Antibody LCHR37 / Gonadotropin-Releasing Hormone Receptor Monoclonal Antibody [clone LCHR37] (V7098)

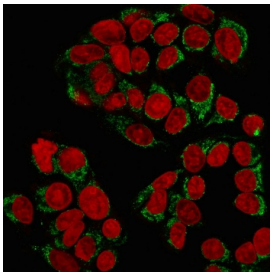
Catalog No.	Formulation	Size
V7098-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7098-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7098SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V7098IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	LCHR37
Purity	Protein G affinity chromatography
UniProt	P30968
Localization	Cytoplasmic
Applications	Immunofluorescence: 1-2ug/ml Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT (1) Prediluted IHC only format: incubate for 30 min at RT (2)
Limitations	This GNRHR Antibody LCHR37 / Gonadotropin-Releasing Hormone Receptor Monoclonal Antibody is available for research use only.



GNRHR Antibody by IHC in Human Ovarian Carcinoma. Immunohistochemical staining of FFPE human ovarian carcinoma tissue using GNRHR Antibody LCHR37. Brown immunoreactivity is observed throughout much of the carcinoma tissue, involving the cytoplasm of numerous tumor cells.



GNRHR Antibody by IF in MCF-7 Cells. Immunofluorescence staining of methanol-fixed human MCF-7 breast cancer cells using GNRHR Antibody LCHR37. Green immunoreactivity is visible in the cytoplasm and around portions of the cell periphery, with RedDot nuclear counterstaining shown in red.

Description

GNRHR Antibody LCHR37 / Gonadotropin-Releasing Hormone Receptor Monoclonal Antibody recognizes the gonadotropin-releasing hormone receptor, a member of the rhodopsin-like G protein-coupled receptor family. Encoded by the GNRHR gene, this receptor mediates the biological effects of gonadotropin-releasing hormone (GnRH), a hypothalamic peptide essential for reproductive endocrine regulation. GNRHR is predominantly associated with gonadotroph cells of the anterior pituitary, where receptor activation controls the production and secretion of luteinizing hormone (LH) and follicle-stimulating hormone (FSH).

GnRH is released from specialized hypothalamic neurons into the hypophyseal portal circulation. Upon reaching the anterior pituitary, it binds GNRHR and activates intracellular signaling pathways primarily involving Gq/11 proteins. These proteins stimulate phospholipase C beta, leading to the generation of inositol trisphosphate and diacylglycerol. The resulting mobilization of intracellular calcium and activation of protein kinase C contribute to gonadotropin synthesis and secretion. Additional signaling through mitogen-activated protein kinases influences transcriptional responses and cellular adaptation to hormonal stimulation.

A defining structural characteristic of the mammalian type I GnRH receptor is the absence of the conventional intracellular C-terminal tail found in most GPCRs. This unusual organization contributes to distinctive patterns of receptor regulation, internalization, and desensitization. The receptor's physiological activity is closely linked to the pulsatile nature of GnRH secretion. Changes in stimulation frequency influence the relative production of LH and FSH, allowing the hypothalamus to coordinate pituitary activity throughout reproductive development and adult endocrine function.

GNRHR is also important in understanding disorders of reproductive maturation. Inactivating variants in the receptor gene can cause congenital hypogonadotropic hypogonadism, a condition characterized by insufficient gonadotropin secretion and impaired reproductive development. Functional investigations have identified mutations that interfere with receptor folding, cell-surface trafficking, ligand binding, or downstream signaling. These findings have helped establish relationships between receptor structure, intracellular localization, and hormonal responsiveness.

Outside the pituitary, GNRHR expression has been investigated in reproductive tissues and certain hormone-associated cancers. Studies have examined potential roles for GnRH receptor signaling in cellular proliferation, differentiation, and responses to hormonal stimulation, although these effects depend on biological context. NSJ Bioreagents offers this GNRHR Antibody for investigating receptor expression and distribution, hypothalamic-pituitary communication, calcium-dependent signaling, and the molecular regulation of reproductive endocrine function.

For additional GNRHR research, explore our GnRH Receptor Antibody F1G4, a monoclonal antibody associated with

published studies investigating GnRH receptor expression and signaling.

Application Notes

Optimal dilution of the GNRHR Antibody LCHR37 / Gonadotropin-Releasing Hormone Receptor Monoclonal Antibody should be determined by the researcher.

1. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

Recombinant full-length human protein was used as the immunogen for the GnRHR antibody.

Storage

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

Alternate Names

Gonadotropin-releasing hormone receptor antibody, Gonadoliberin receptor antibody, Luteinizing hormone-releasing hormone receptor antibody, LH-RH receptor antibody

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