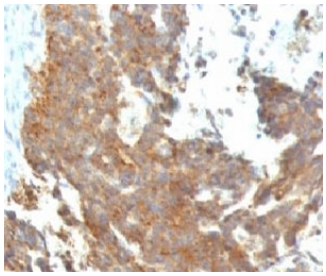
GnRH Receptor Antibody GNRHR/768 / Gonadotropin-Releasing Hormone Receptor Monoclonal Antibody [clone GNRHR/768] (V2546)

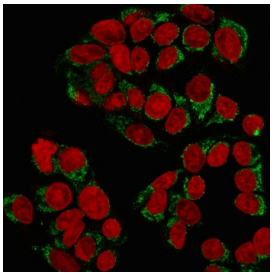
Catalog No.	Formulation	Size
V2546-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2546-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2546SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V2546IHC-7ML	Prediluted 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	GNRHR/768
Purity	Protein G affinity chromatography
UniProt	P30968
Localization	Cytoplasmic
Applications	Immunofluorescence: 1-2ug/ml Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT
Limitations	This GnRH Receptor Antibody GNRHR/768 / Gonadotropin-Releasing Hormone Receptor Monoclonal Antibody is available for research use only.



GnRH Receptor Antibody by IHC in Human Ovarian Carcinoma. Immunohistochemical staining of FFPE human ovarian carcinoma tissue using GnRH Receptor Antibody GNRHR/768. Brown immunoreactivity is observed throughout the carcinoma tissue, predominantly involving the cytoplasm of tumor cells, with blue hematoxylin nuclear counterstaining.



GnRH Receptor Antibody by IF in MCF-7 Cells. Immunofluorescence staining of methanol-fixed human MCF-7 breast cancer cells using GnRH Receptor Antibody GNRHR/768. Green immunoreactivity is visible in the cytoplasm and around portions of the cell periphery, with RedDot nuclear counterstaining shown in red.

Description

GnRH Receptor Antibody GNRHR/768 / Gonadotropin-Releasing Hormone Receptor Monoclonal Antibody targets GNRHR, a seven-transmembrane G protein-coupled receptor that mediates cellular responses to gonadotropin-releasing hormone (GnRH). Encoded by the GNRHR gene, this receptor is a central component of the hypothalamic-pituitary-gonadal axis. GnRH is synthesized by specialized hypothalamic neurons and released into the hypophyseal portal circulation, where it stimulates gonadotroph cells in the anterior pituitary. Receptor activation regulates the synthesis and secretion of luteinizing hormone (LH) and follicle-stimulating hormone (FSH), which coordinate reproductive development and endocrine activity.

GNRHR primarily couples to Gq/11 proteins, activating phospholipase C beta and promoting the hydrolysis of phosphatidylinositol 4,5-bisphosphate into inositol trisphosphate and diacylglycerol. These signaling molecules stimulate intracellular calcium release and protein kinase C activity, initiating downstream pathways that influence gonadotropin gene transcription and hormone secretion. Mitogen-activated protein kinase signaling also contributes to receptor-mediated responses, connecting GnRH stimulation with changes in cellular transcriptional activity.

A distinctive characteristic of mammalian type I GNRHR is its lack of the conventional intracellular C-terminal tail found in most GPCRs. This structural feature influences receptor regulation, including internalization and desensitization. GnRH is normally secreted in pulses, and gonadotroph responsiveness depends on stimulation frequency and duration. Different pulse frequencies influence LH and FSH synthesis, while sustained stimulation can suppress gonadotropin secretion through adaptive changes in receptor signaling and cellular responsiveness.

GNRHR function is essential for normal reproductive maturation. Inactivating mutations in the receptor can cause congenital hypogonadotropic hypogonadism, resulting in deficient gonadotropin secretion and impaired sexual development. Some disease-associated variants interfere with receptor folding or transport to the plasma membrane, whereas others alter ligand binding or intracellular signaling. Investigating these defects has helped clarify the structural requirements for functional GnRH receptor expression.

GNRHR expression has also been investigated outside the pituitary, particularly in reproductive tissues and certain hormone-associated malignancies. Studies of ovarian, endometrial, and breast cancer models have examined possible relationships between receptor expression, cell proliferation, and responses to GnRH analogs. These findings remain dependent on biological context and experimental validation. NSJ Bioreagents offers this GnRH Receptor Antibody to support investigations of receptor distribution, gonadotroph signaling, reproductive endocrine regulation, and the molecular mechanisms underlying GnRH-dependent cellular responses.

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 GnRH Receptor Antibody GNRHR/768 / Gonadotropin-Releasing Hormone Receptor Monoclonal Antibody should be determined by the researcher.

1. Staining of formalin-fixed tissues requires boiling tissue sections in 10mM Tris with 1mM EDTA, pH 9.0, for 10-20 min followed by cooling at RT for 20 min
2. 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 GnRHR protein was used as the immunogen for the GnRH Receptor antibody.

Storage

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

Alternate Names

Gonadoliberin receptor antibody, Luteinizing hormone-releasing hormone receptor antibody, LH-RH receptor antibody, GnRH-R antibody

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