SANTA CRUZ BIOTECHNOLOGY, INC.

GnRHR (C-18): sc-8681

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Gonadotropin-releasing hormone (GnRH) is released in a pulsatile manner that varies with the reproductive cycle. This hypothalamic hormone is transported to the pituitary, where it binds to specific receptors and regulates the synthesis and release of luteinizing hormone (LH) and follicle-stimulating hormone (FSH). The GnRH receptor (GnRHR), like most G protein-coupled receptors, contains a seven transmembrane domain. However, unlike most G protein-coupled receptors, the GnRHR lacks an intracellular C-terminal domain. The GnRHR gene is thought to be regulated by GnRH and activin A, and has been shown to undergo alternative splicing.

REFERENCES

1. Tsutsumi, M., et al. 1992. Cloning and functional expression of a mouse gonadotropin-releasing hormone receptor. Mol. Endocrinol. 6: 1163-1169.
2. Chi, L., et al. 1993. Cloning and characterization of the human GnRH receptor. Mol. Cell. Endocrinol. 91: R1-R6.
3. Zhou, W., et al. 1994. Structure of the mouse gonadotropin-releasing hormone receptor gene: variant transcripts generated by alternative processing. DNA Cell Biol. 13: 605-614.
4. Kaiser, U.B., et al. 1995. A mechanism for the differential regulation of gonadotropin subunit gene expression by gonadotropin-releasing hormone. Proc. Natl. Acad. Sci. USA 92: 12280-12284.

CHROMOSOMAL LOCATION

Genetic locus: GNRHR (human) mapping to 4q13.2; Gnrhr (mouse) mapping to 5 E1.

SOURCE

GnRHR (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of GnRHR of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-8681 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

GnRHR (C-18) is recommended for detection of GnRHR of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

GnRHR (C-18) is also recommended for detection of GnRHR in additional species, including equine, canine and porcine.

Suitable for use as control antibody for GnRHR siRNA (h): sc-40012, GnRHR siRNA (m): sc-40013, GnRHR shRNA Plasmid (h): sc-40012-SH, GnRHR shRNA Plasmid (m): sc-40013-SH, GnRHR shRNA (h) Lentiviral Particles: sc-40012-V and GnRHR shRNA (m) Lentiviral Particles: sc-40013-V.

Molecular Weight of GnRHR: 68 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Keller, G., et al. 2005. Human malignant melanomas express receptors for luteinizing hormone releasing hormone allowing targeted therapy with cytotoxic luteinizing hormone releasing hormone analogue. Cancer Res. 65: 5857-5863.
2. Szabó, J., et al. 2005. Immunohistochemical demonstration of gonadotropin releasing hormone receptors in prostate carcinoma. Urol. Oncol. 23: 399-401.
3. Wilson, A.C., et al. 2006. Human neurons express type I GnRH receptor and respond to GnRH I by increasing luteinizing hormone expression. J. Endocrinol. 191: 651-663.
4. Sengupta, A., et al. 2008. Presence of immunoreactive gonadotropin releasing hormone (GnRH) and its receptor (GnRHR) in rat ovary during pregnancy. Mol. Reprod. Dev. 75: 1031-1044.
5. Su, S., et al. 2013. The compensatory expression of reproductive hormone receptors in the thymus of the male rat following active immunization against GnRH. Gen. Comp. Endocrinol. 185: 57-66.