

# GnRHR2 (T-15): sc-162889

## 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). GnRHR2 (Gonadotropin-releasing hormone (type 2) receptor 2), also known as GnRH-II-R, is a 379 amino acid multi-pass membrane protein that is expressed in a variety of tissues, where it functions as a G protein coupled receptor for GnRH. Localized to the cell membrane, GnRHR2 mediates its own receptor activity via association with G proteins, thereby activating a phosphatidylinositol-calcium second messenger system that regulates GnRHR2 function. GnRHR2 is thought to have potent antiproliferative effects on ovarian and endometrial cancer cells, suggesting a possible role in tumor suppression. Due to alternative splicing events, GnRHR2 is expressed as two isoforms.

## REFERENCES

1. Neill, J.D., Duck, L.W., Sellers, J.C. and Musgrove, L.C. 2001. A Gonadotropin-releasing hormone (GnRH) receptor specific for GnRH II in primates. *Biochem. Biophys. Res. Commun.* 282: 1012-1018.
2. Faurholm, B., Millar, R.P. and Katz, A.A. 2001. The genes encoding the type II Gonadotropin-releasing hormone receptor and the ribonucleoprotein RBM8A in humans overlap in two genomic loci. *Genomics* 78: 15-18.
3. van Biljon, W., Wykes, S., Scherer, S., Krawetz, S.A. and Hapgood, J. 2002. Type II Gonadotropin-releasing hormone receptor transcripts in human sperm. *Biol. Reprod.* 67: 1741-1749.
4. Neill, J.D. 2002. GnRH and GnRH receptor genes in the human genome. *Endocrinology* 143: 737-743.
5. Gründker, C., Günthert, A.R., Millar, R.P. and Emons, G. 2002. Expression of Gonadotropin-releasing hormone II (GnRH2) receptor in human endometrial and ovarian cancer cells and effects of GnRH2 on tumor cell proliferation. *J. Clin. Endocrinol. Metab.* 87: 1427-1430.
6. Morgan, K., Conklin, D., Pawson, A.J., Sellar, R., Ott, T.R. and Millar, R.P. 2003. A transcriptionally active human type II Gonadotropin-releasing hormone receptor gene homolog overlaps two genes in the antisense orientation on chromosome 1q21.1. *Endocrinology* 144: 423-436.
7. Eicke, N., Günthert, A.R., Viereck, V., Siebold, D., Béhé, M., Becker, T., Emons, G. and Gründker, C. 2005. GnRH2 receptor-like antigenicity in human placenta and in cancers of the human reproductive organs. *Eur. J. Endocrinol.* 153: 605-612.

## CHROMOSOMAL LOCATION

Genetic locus: GNRHR2 (human) mapping to 1q21.1.

## SOURCE

GnRHR2 (T-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal cytoplasmic domain of GnRHR2 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-162889 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

GnRHR2 (T-15) is recommended for detection of GnRHR2 of 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); non cross-reactive with GnRHR.

Suitable for use as control antibody for GnRHR2 siRNA (h): sc-108007, GnRHR2 shRNA Plasmid (h): sc-108007-SH and GnRHR2 shRNA (h) Lentiviral Particles: sc-108007-V.

## 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. Desaulniers, A.T., Cederberg, R.A., Mills, G.A., Ford, J.J., Lents, C.A. and White B.R. 2015. LH-Independent testosterone secretion is mediated by the interaction between GNRH2 and its receptor within porcine testes. *Biol. Reprod.* 93: 1-9.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **GnRHR2 (67-R): sc-100301**, our highly recommended monoclonal alternative to GnRHR2 (T-15).