# SANTA CRUZ BIOTECHNOLOGY, INC.

# GnRHR2 (67-R): sc-100301



# 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

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- 4. Neill, J.D. 2002. GnRH and GnRH receptor genes in the human genome. Endocrinology 143: 737-743.
- Gründker, C., et al. 2002. Expression of Gonadotropin-releasing hormone II (GnRH II) receptor in human endometrial and ovarian cancer cells and effects of GnRH II on tumor cell proliferation. J. Clin. Endocrinol. Metab. 87: 1427-1430.
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- Eicke, N., et al. 2005. GnRH II receptor-like antigenicity in human placenta and in cancers of the human reproductive organs. Eur. J. Endocrinol. 153: 605-612.
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#### CHROMOSOMAL LOCATION

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

### SOURCE

GnRHR2 (67-R) is a mouse monoclonal antibody raised against recombinant GnRHR2 of human origin.

# PRODUCT

Each vial contains 100  $\mu g$   $lgG_{2a}$  kappa light chain in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

# **APPLICATIONS**

GnRHR2 (67-R) is recommended for detection of GnRHR2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

Molecular Weight of GnRHR2 precursor: 42 kDa.

Molecular Weight of glycosylated GnRHR2: 54 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

#### **RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

# DATA



GnRHR2 (67-R): sc-100301. Western blot analysis of GnRHR2 expression in HeLa whole cell lysate.

### SELECT PRODUCT CITATIONS

 Montagnani Marelli, M., et al. 2009. Type I gonadotropin-releasing hormone receptor mediates the antiproliferative effects of GnRH-II on prostate cancer cells. J. Clin. Endocrinol. Metab. 94: 1761-1767.

#### **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.