

# GnRH II (B-9): sc-55459

## BACKGROUND

Human reproduction is controlled by the hypothalamic-pituitary gonadal axis laid down early in fetal development. Gonadotropin releasing hormone (GnRH), also known as GnRH-associated peptide, luteinizing hormone releasing hormone (LHRH), luliberin or gonadorelin, is a decapeptide that is an important molecule in the hypothalamic-pituitary-gonadal axis control circuit. GnRH is produced by hypothalamic neurons and secreted in a pulsatile manner into the capillary plexus of the median eminence. GnRH affects the release of luteinizing hormone and follicle stimulating hormone from gonadotropic cells in the anterior pituitary. In addition to hypothalamic GnRH (GnRH I), a second GnRH form (GnRH II) functions primarily in the midbrain. GnRH is expressed in the acrosomal region of human sperm and in the anterior pituitary tissue and cancer cells. Unlike GnRH I, GnRH II is highly expressed outside the brain, particularly in the kidney, bone marrow and prostate, suggesting that it may have multiple functions. GnRH binds to a specific G protein-coupled receptor in the pituitary to regulate synthesis and secretion of gonadotropins. GnRH II is encoded by a gene located on human chromosome 20p13. It is suggested that the GnRH II gene is silenced in mouse and rat.

## REFERENCES

1. Seeburg, P.H. and Adelman, J.P. 1984. Characterization of cDNA for precursor of human luteinizing hormone releasing hormone. *Nature* 311: 666-668.
2. Grosse, R., Schoneberg, T., Schultz, G. and Gudermann, T. 1997. Inhibition of gonadotropin-releasing hormone receptor signaling by expression of a splice variant of the human receptor. *Mol. Endocrinol.* 11: 1305-1318.
3. White, R.B., Eisen, J.A., Kasten, T.L. and Fernald, R.D. 1998. Second gene for gonadotropin-releasing hormone in humans. *Proc. Natl. Acad. Sci. USA* 95: 305-309.
4. Goto, T., Endo, T., Henmi, H., Kitajima, Y., Kiya, T., Nishikawa, A., Manase, K., Sato, H. and Kudo, R. 1999. Gonadotropin-releasing hormone agonist has the ability to induce increased matrix metalloproteinase (MMP)-2 and membrane type 1-MMP expression in corpora lutea, and structural luteolysis in rats. *J. Endocrinol.* 161: 393-402.
5. Lee, C.Y., Ho, J., Chow, S.N., Yasojima, K., Schwab, C. and McGeer, P.L. 2000. Immunoidentification of gonadotropin releasing hormone receptor in human sperm, pituitary and cancer cells. *Am. J. Reprod. Immunol.* 44: 170-177.

## CHROMOSOMAL LOCATION

Genetic locus: GNRH2 (human) mapping to 20p13.

## SOURCE

GnRH II (B-9) is a mouse monoclonal antibody raised against amino acids 1-120 representing full length GnRH II of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

GnRH II (B-9) is recommended for detection of GnRH II of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

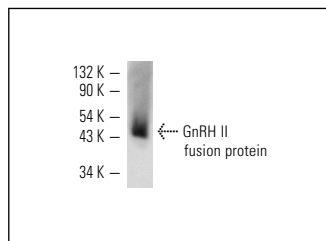
Suitable for use as control antibody for GnRH II siRNA (h): sc-39544, GnRH II shRNA Plasmid (h): sc-39544-SH and GnRH II shRNA (h) Lentiviral Particles: sc-39544-V.

Molecular Weight of GnRH II: 13 kDa.

## 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™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048.  
 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).  
 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



GnRH II (B-9): sc-55459. Western blot analysis of human recombinant GnRH II fusion protein.

## 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) for detailed protocols and support products.