

# GnRH I (C-14): sc-21140

## BACKGROUND

Human reproduction is controlled by the hypothalamic-pituitary gonadal axis laid down early in fetal development. Luteinizing hormone releasing hormone (LHRH), also known as gonadotropin releasing hormone (GnRH), luteal phase releasing hormone (LPH) or GnRH-associated peptide, 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.

## 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., et al. 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., et al. 1998. Second gene for gonadotropin-releasing hormone in humans. *Proc. Natl. Acad. Sci. USA* 95: 305-309.
4. Goto, T., et al. 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.

## CHROMOSOMAL LOCATION

Genetic locus: GNRH1 (human) mapping to 8p21.2; Gnrh1 (mouse) mapping to 14 D1.

## SOURCE

GnRH I (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of GnRH I 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-21140 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.

## APPLICATIONS

GnRH I (C-14) is recommended for detection of Progonadoliberin I and GnRH-associated peptide of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, 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 I siRNA (h): sc-39542, GnRH I siRNA (m): sc-39543, GnRH I shRNA Plasmid (h): sc-39542-SH, GnRH I shRNA Plasmid (m): sc-39543-SH, GnRH I shRNA (h) Lentiviral Particles: sc-39542-V and GnRH I shRNA (m) Lentiviral Particles: sc-39543-V.

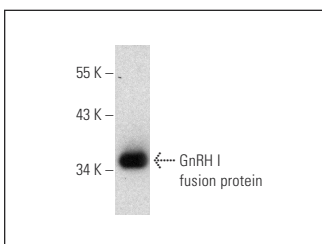
Molecular Weight of GnRH I pre-proform: 10 kDa.

Molecular Weight of GnRH I proform: 7.6 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



GnRH I (C-14): sc-21140. Western blot analysis of human recombinant GnRH I fusion protein.

## SELECT PRODUCT CITATIONS

1. Peng, S., et al. 2011. Effects of Wnt5a protein on proliferation and apoptosis in JAR choriocarcinoma cells. *Mol. Med. Rep.* 4: 99-104.



Try **GnRH I (A-4): sc-271918** or **GnRH I (C-9): sc-373690**, our highly recommended monoclonal alternatives to GnRH I (C-14). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **GnRH I (A-4): sc-271918**.