

GnRH II (D-9): sc-25344

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), luteinizing hormone releasing hormone (LHRH), luteinizing hormone releasing hormone (LHRH), 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.

CHROMOSOMAL LOCATION

Genetic locus: GNRH2 (human) mapping to 20p13; GnRH1 (mouse) mapping to 14 D1.

SOURCE

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

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GnRH II (D-9) is available conjugated to agarose (sc-25344 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-25344 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-25344 PE), fluorescein (sc-25344 FITC), Alexa Fluor® 488 (sc-25344 AF488), Alexa Fluor® 546 (sc-25344 AF546), Alexa Fluor® 594 (sc-25344 AF594) or Alexa Fluor® 647 (sc-25344 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-25344 AF680) or Alexa Fluor® 790 (sc-25344 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

GnRH II (D-9) is recommended for detection of GnRH II of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1,000), 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), immunohistochemistry (including paraffin-embedded sections) (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.

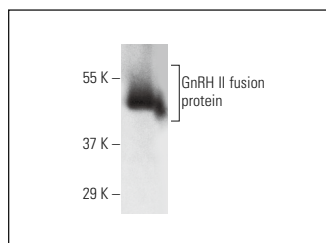
Positive Controls: mouse kidney extract: sc-2255 or rat hypothalamus extract: sc-395022.

RECOMMENDED SUPPORT REAGENTS

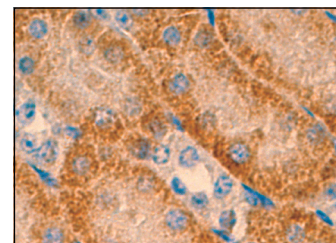
To ensure optimal results, the following support reagents are recommended:

- 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, UltraCruz® 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). 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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



GnRH II (D-9): sc-25344. Western blot analysis of human recombinant GnRH II fusion protein.



GnRH II (D-9): sc-25344. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse kidney tissue showing extracellular localization.

SELECT PRODUCT CITATIONS

1. Pazaitou-Panayiotou, K., et al. 2013. Gonadotropin-releasing hormone neuropeptides and receptor in human breast cancer: correlation to poor prognosis parameters. *Peptides* 42: 15-24.

RESEARCH USE

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