

# GHRH-R (M-16): sc-54202

## BACKGROUND

GHRH-R (growth hormone-releasing hormone receptor) is a seven transmembrane domain protein that localizes to the somatotroph of the pituitary. GHRH-R plays an important role in growth and acts as a high-affinity receptor for GHRH. Binding of GHRH leads to the coupling of GHRH-R to G-protein which stimulates increased adenylyl cyclase activity and the accumulation of cAMP leading to the synthesis and release of growth hormone and somatotroph proliferation. In addition, this signaling pathway may have direct action in fetal/placental development, reproduction and immune function. GHRH and GHRH-R may also play a role in the regulation of non-rapid eye movement sleep (NREMS). The expression of GHRH-R is dependent on the presence of the POU domain factor Pit-1. Mutations in the gene encoding this protein can result in isolated growth hormone deficiency (IGHD), also known as Dwarfism of Sindh, and anterior pituitary hypoplasia (APH).

## REFERENCES

- Salvatori, R., et al. 2001. Three new mutations in the gene for the growth hormone (GH)-releasing hormone receptor in familial isolated GH deficiency type IB. *J. Clin. Endocrinol. Metab.* 86: 273-279.
- Salvatori, R., et al. 2002. Decreased expression of the GHRH receptor gene due to a mutation in a Pit-1 binding site. *Mol. Endocrinol.* 16: 450-458.
- Ikushima, H., et al. 2003. Cutting edge: Requirement for growth hormone-releasing hormone in the development of experimental autoimmune encephalomyelitis. *J. Immunol.* 171: 2769-2772.
- Wajnrajch, M.P., et al. 2003. Haplotype analysis of the growth hormone releasing hormone receptor locus in three apparently unrelated kindreds from the indian subcontinent with the identical mutation in the GHRH receptor. *Am. J. Med. Genet. A* 120A: 77-83.
- Espigares, R., et al. 2004. Phenotypic analysis and growth response to different growth hormone treatment schedules in two siblings with an inactivating mutation in the growth hormone-releasing hormone receptor gene. *J. Pediatr. Endocrinol. Metab.* 17: 793-800.
- Alba, M. and Salvatori, R. 2004. Familial growth hormone deficiency and mutations in the GHRH receptor gene. *Vitam. Horm.* 69: 209-220.
- Alba, M., et al. 2004. Variability in anterior pituitary size within members of a family with GH deficiency due to a new splice mutation in the GHRH receptor gene. *Clin. Endocrinol.* 60: 470-475.
- Wang, C.Y., et al. 2006. Expression profiles of growth hormone-releasing hormone and growth hormone-releasing hormone receptor during chicken embryonic pituitary development. *Poult. Sci.* 85: 569-576.

## CHROMOSOMAL LOCATION

Genetic locus: *Ghrhr* (mouse) mapping to 6 B3.

## SOURCE

GHRH-R (M-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of GHRH-R of mouse 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-54202 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

GHRH-R (M-16) is recommended for detection of GHRH receptor of 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 GHRH-R siRNA (m): sc-72354, GHRH-R shRNA Plasmid (m): sc-72354-SH and GHRH-R shRNA (m) Lentiviral Particles: sc-72354-V.

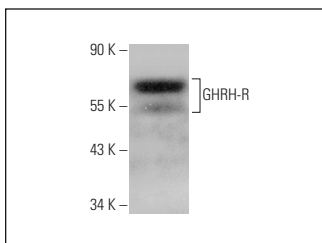
Molecular Weight of GHRH-R: 55 kDa.

Positive Controls: AtT-20/D16vF2 whole cell lysate: sc-364367.

## 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



GHRH-R (M-16): sc-54202. Western blot analysis of GHRH-R expression in AtT-20/D16vF2 whole cell lysate.

## 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.