SANTA CRUZ BIOTECHNOLOGY, INC.

GHS-R1a (F-16): sc-10359

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

GHS-R1 (growth hormone secretagogue receptor type 1) is a G protein-coupled receptor. Due to alternative splicing GHS-R exists in two isoforms designated GHS-R1a and GHS-R1b. GHS-R1a is the full length mature protein, and GHS-R1b has a distinct amino acid sequence between residues 266-289 and is missing residues 290-366. GHS-R1a binds synthetic peptidyl and nonpeptidyl growth hormone secretagogues (GHS), which stimulate growth hormone (GH) release. The binding of GHS to GHS-R1a is magnesium dependent, inhibited by GTP-γ-S, and not displaced by the two hypothalamic hormones, growth hormone releasing hormone (GHRH) and somatostatin. This suggests that the interaction between GHS and GHS-R1a is distinct from GH regulation via GHRH and somatostatin and there exists a natural growth hormone regulator specific for GHS-R1a. GHS-R1a is primarily expressed in the hypothalamus and pituitary, and expression has been shown to be elevated in pituitary adenoma tissue.

CHROMOSOMAL LOCATION

Genetic locus: GHSR (human) mapping to 3q26.31; Ghsr (mouse) mapping to 3 A3.

SOURCE

GHS-R1a (F-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of GHS-R1a 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-10359 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

GHS-R1a (F-16) is recommended for detection of GHS-R1a of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with GHS-R1b. GHS-R1a (F-16) is also recommended for detection of GHS-R1a in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for GHS-R1 siRNA (h): sc-40017, GHS-R1 siRNA (m): sc-40018, GHS-R1 shRNA Plasmid (h): sc-40017-SH, GHS-R1 shRNA Plasmid (m): sc-40018-SH, GHS-R1 shRNA (h) Lentiviral Particles: sc-40017-V and GHS-R1 shRNA (m) Lentiviral Particles: sc-40018-V.

Molecular Weight of GHS-R1a: 44 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) 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.

SELECT PRODUCT CITATIONS

1. Dixit, V.D., et al. 2004. Ghrelin inhibits leptin- and activation-induced pro-inflammatory cytokine expression by human monocytes and T cells. J. Clin. Invest. 114: 55-66.
2. Ekeblad, S., et al. 2007. Co-expression of ghrelin and its receptor in pancreatic endocrine tumours. Clin. Endocrinol. 66: 115-122.
3. Rak, A., et al. 2008. Expression of ghrelin receptor, GHSR-1a, and its functional role in the porcine ovarian follicles. Growth Horm. IGF Res. 19: 68-76.
4. Rucinski, M., et al. 2009. Expression of prepro-ghrelin and related receptor genes in the rat adrenal gland and evidences that ghrelin exerts a potent stimulating effect on corticosterone secretion by cultured rat adrenocortical cells. Peptides 30: 1448-1455.
5. Lee, J.Y., et al. 2010. Inhibition of apoptotic cell death by ghrelin improves functional recovery after spinal cord injury. Endocrinology 151: 3815-3826.
6. Pardo, M., et al. 2010. Peripheral leptin and ghrelin receptors are regulated in a tissue-specific manner in activity-based anorexia. Peptides 31: 1912-1919.
7. Rak-Mardyła, A., et al. 2012. Expression of ghrelin and the ghrelin receptor in different stages of porcine corpus luteum development and the inhibitory effects of ghrelin on progesterone secretion, 3β-hydroxysteroid dehydrogenase (3β-honestly significant difference (HSD)) activity and protein expression. Theriogenology 77: 1505-1512.
8. Majchrzak, K., et al. 2012. A role of ghrelin in canine mammary carcinoma cells proliferation, apoptosis and migration. BMC Vet. Res. 8: 170.
9. Kraus, D., et al. 2015. Ghrelin promotes oral tumor cell proliferation by modifying GLUT1 expression. Cell. Mol. Life Sci. E-published.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.