SANTA CRUZ BIOTECHNOLOGY, INC.

GHS-R1 (E-7): sc-374515

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

GHS-R1 (growth hormone secretagogue receptor type 1) is a G protein-coupled receptor. GHS-R1 binds synthetic peptidyl and nonpeptidyl growth hormone secretagogues (GHS), which stimulate growth hormone (GH) release. The binding of GHS to GHS-R1 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-R1 is distinct from GH regulation via GHRH and somatostatin and there exists a natural growth hormone regulator specific for GHS-R. GHS-R1 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-R1 (E-7) is a mouse monoclonal antibody raised against amino acids 186-265 mapping within an internal region of GHS-R1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GHS-R1 (E-7) is available conjugated to agarose (sc-374515 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-374515 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374515 PE), fluorescein (sc-374515 FITC), Alexa Fluor® 488 (sc-374515 AF488), Alexa Fluor® 546 (sc-374515 AF546), Alexa Fluor® 594 (sc-374515 AF594) or Alexa Fluor® 647 (sc-374515 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374515 AF680) or Alexa Fluor® 790 (sc-374515 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

GHS-R1 (E-7) is recommended for detection of GHS-R1a and GHS-R1b of mouse, rat and 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 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-R1: 44 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or Neuro-2A whole cell lysate: sc-364185.

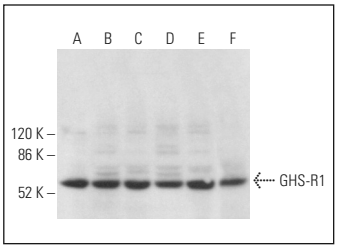
STORAGE

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.

DATA



GHS-R1 (E-7): sc-374515. Western blot analysis of GHS-R1 expression in HeLa (**A**), Jurkat (**B**), AT3B-1 (**C**), SUP-T1 (**D**), Neuro-2A (**E**) and L6 (**F**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Berrout, L. and Isokawa, M. 2018. Ghrelin upregulates the phosphorylation of the GluN2B subunit of the NMDA receptor by activating GHSR1a and Fyn in the rat hippocampus. Brain Res. 1678: 20-26.
2. Lin, T.C., et al. 2019. Ghrelin upregulates oncogenic aurora a to promote renal cell carcinoma invasion. Cancers 11: 303.
3. Saito, K., et al. 2020. Dentin matrix protein 1 compensates for lack of osteopontin in regulating odontoblastlike cell differentiation after tooth injury in mice. J. Endod. 46: 89-96.
4. Meleine, M., et al. 2020. Ghrelin inhibits autonomic response to gastric distension in rats by acting on vagal pathway. Sci. Rep. 10: 9986.
5. Cervone, D.T., et al. 2020. Unacylated ghrelin stimulates fatty acid oxidation to protect skeletal muscle against palmitate-induced impairment of Insulin action in lean but not high-fat fed rats. Metabol. Open 5: 100026.
6. Sales da Silva, E., et al. 2020. Brain and kidney GHS-R1a underexpression is associated with changes in renal function and hemodynamics during neurogenic hypertension. Mol. Cell. Endocrinol. 518: 110984.
7. Karimi, M., et al. 2021. The relation between the ghrelin receptor and FOXP3 in bladder cancer. Biotech. Histochem. 96: 287-295.
8. Russo, C., et al. 2021. Ghrelin peptide improves glial conditioned medium effects on neuronal differentiation of human adipose mesenchymal stem cells. Histochem. Cell Biol. 156: 35-46.
9. Stoyanova, I.I., et al. 2022. Ghrelin regulates expression of the transcription factor Pax6 in hypoxic brain progenitor cells and neurons. Cells 11: 782.
10. Lovell, A.J., et al. 2022. The effects of diet and chronic exercise on skeletal muscle ghrelin response. Metabol. Open 14: 100182.

PROTOCOLS

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