SANTA CRUZ BIOTECHNOLOGY, INC.

GH (B-10): sc-515021

BACKGROUND

Pituitary growth hormone (GH), also designated somatotropin, plays a crucial role in stimulating and controlling the growth, metabolism and differentiation of many mammalian cell types by modulating the synthesis of multiple mRNA species. These effects are mediated by the binding of GH to its membrane-bound receptor, GHR, and involve a phosphorylation cascade that results in the modulation of numerous signaling pathways. GH is secreted in a pulsatile pattern which is tightly controlled by the interplay of GH-releasing hormone (GHRH) and somatostatin (SRIF). GHRH and SRIF are the primary hypothalamic factors that determine GH secretion from the somatotroph and regulate GH synthesis and secretory reserve. GH output is also highly sensitive to feedback control by GH itself, as well as by Insulin-like growth factor I. GH is synthesized by acidophilic or somatotropic cells of the anterior pituitary gland. Human growth hormone contains 191 amino acid residues with two disulfide bridges.

REFERENCES

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3. Jellinck, P.H., Quail, J.A. and Crowley, C.A. 1985. Normal and recombinant human growth hormone administered by constant infusion feminize catechol estrogen formation by rat liver microsomes. Endocrinology 117: 2274-2278.
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5. Amit, T., Bar-Am, O., Dastot, F., Youdim, M.B., Amselem, S. and Hochberg, Z. 1999. The human growth hormone (GH) receptor and its truncated isoform: sulfhydryl group inactivation in the study of receptor internalization and GH-binding protein generation. Endocrinology 140: 266-272.
6. Lincoln, D.T., Kaiser, H.E., Raju, F.P. and Waters, M.J. 2000. Growth hormone and colorectal carcinoma: localization of receptors. In Vivo 14: 41-49.
7. Baou, N., Bouras, M., Droz, J.P., Benahmed, M. and Krantic, S. 2000. Evidence for a selective loss of somatostatin receptor subtype expression in male germ cell tumors of seminoma type. Carcinogenesis 21: 805-810.
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CHROMOSOMAL LOCATION

Genetic locus: Gh (mouse) mapping to 11 E1.

SOURCE

GH (B-10) is a mouse monoclonal antibody raised against amino acids 1-104 mapping at the N-terminus of GH of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

GH (B-10) is recommended for detection of GH of mouse and rat 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 GH siRNA (m): sc-43804, GH shRNA Plasmid (m): sc-43804-SH and GH shRNA (m) Lentiviral Particles: sc-43804-V.

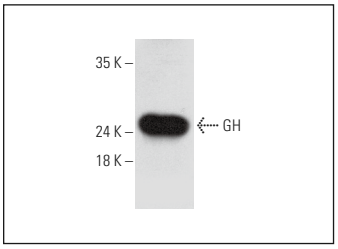
Molecular Weight of GH: 20 kDa.

Positive Controls: rat pituitary gland extract: sc-364807.

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.

DATA



GH (B-10): sc-515021. Western blot analysis of GH expression in rat pituitary tissue extract.

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.

PROTOCOLS

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