

GH (T-20): sc-10365

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 somatotrophic cells of the anterior pituitary gland. Human growth hormone contains 191 amino acid residues with 2 disulfide bridges.

CHROMOSOMAL LOCATION

Genetic locus: GH1/GH2/CSH1/CSH2 (human) mapping to 17q23.3; Gh (mouse) mapping to 11 E1.

SOURCE

GH (T-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of GH of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-10365 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.

APPLICATIONS

GH (T-20) is recommended for detection of GH-1, GH-2 and Lactogen (chorionic somatomammotropin) of human origin, and GH 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 GH siRNA (m): sc-43804, GH shRNA Plasmid (m): sc-43804-SH and GH shRNA (m) Lentiviral Particles: sc-43804-V.

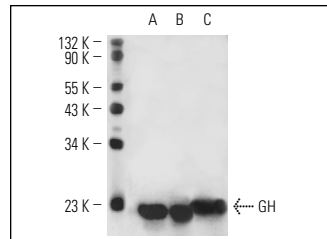
Molecular Weight of GH: 20 kDa.

Positive Controls: mouse brain extract: sc-2253, rat pituitary gland extract: sc-364807 or mouse pituitary gland extract: sc-364246.

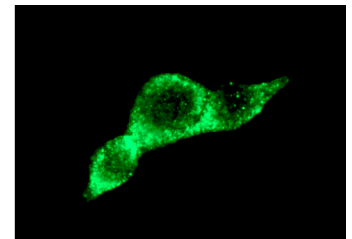
RECOMMENDED SECONDARY REAGENTS

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



GH (T-20): sc-10365. Western blot analysis of GH expression in mouse pituitary (A), mouse brain (B) and rat pituitary (C) tissue extracts.



GH (T-20): sc-10365. Immunofluorescence staining of methanol-fixed At1-20/D16vF2 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Segard, H.B., et al. 2003. Autocrine growth hormone production prevents apoptosis and inhibits differentiation in C2C12 myoblasts. *Cell. Signal.* 15: 615-623.
- Weigent, D.A. 2011. High molecular weight isoforms of growth hormone in cells of the immune system. *Cell. Immunol.* 271: 44-52.
- Sun, Y., et al. 2012. Loss-of-function mutations in IGSF1 cause an X-linked syndrome of central hypothyroidism and testicular enlargement. *Nat. Genet.* 44: 1375-1381.
- Weigent, D.A. 2013. Hypoxia and cytoplasmic alkalization upregulate growth hormone expression in lymphocytes. *Cell. Immunol.* 282: 9-16.
- Qun, Z., et al. 2013. Effects of eccentric exercise on branched-chain amino acid profiles in rat serum and skeletal muscle. *J. Anim. Physiol. Anim. Nutr.* 98: 215-222.

RESEARCH USE

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



Try **GH (E-7): sc-374266** or **GH (B-10): sc-515021**, our highly recommended monoclonal alternatives to GH (T-20).