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## Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

## Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand


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SANTA CRUZ BIOTECHNOLOGY, INC.

# GH siRNA (m): sc-43804

## 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


1. Niall, H.D., et al. 1971. Sequence of pituitary and placental lactogenic and growth hormones: evolution from a primordial peptide by gene reduplication. Proc. Natl. Acad. Sci. USA 68: 866-869.
2. Harper, M.E., et al. 1982. Chromosomal localization of the human placental lactogen-growth hormone gene cluster to 17q22-q24. Am. J. Hum. Genet. 34: 227-234.
3. Jellinck, P.H., et al. 1985. Normal and recombinant human growth hormone administered by constant infusion feminize catechol estrogen formation by rat liver microsomes. Endocrinology 117: 2274-2278.
4. Campbell, R.M., et al. 1992. Evolution of the growth hormone-releasing factor (GRF) family of peptides. Growth Regul. 2: 175-191.
5. Amit, T., et al. 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., et al. 2000. Growth hormone and colorectal carcinoma: localization of receptors. In Vivo 14: 41-49.
7. Robinson, I.C. 2000. Control of growth hormone (GH) release by GH secretagogues. Novartis Found. Symp. 227: 206-224.


## CHROMOSOMAL LOCATION

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

## PRODUCT

GH siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see GH shRNA Plasmid (m): sc-43804-SH and GH shRNA (m) Lentiviral Particles: sc-43804-V as alternate gene silencing products.

For independent verification of GH (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-43804A, sc-43804B and sc-43804C.

## STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

GH siRNA (m) is recommended for the inhibition of GH expression in mouse cells.

## SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

## GENE EXPRESSION MONITORING

GH (C-3): sc-166696 is recommended as a control antibody for monitoring of GH gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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) 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.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor GH gene expression knockdown using RT-PCR Primer: GH (m)-PR: sc-43804-PR (20 µl, 495 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## 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.