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Datasheet for ABIN2017922

Growth Hormone 1 Protein (GH1) (AA 27-217)

3 Publications

Overview

Quantity:	50 µg
Target:	Growth Hormone 1 (GH1)
Protein Characteristics:	AA 27-217
Origin:	Human
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Biological Activity:	Active

Product Details

Characteristics:	ED50 < 0.5 ng/mL, measured by a cell proliferation assay using Nb2-11 Cells, corresponding to a specific activity of > 2.0x 10 ⁶ units/mg.
Purity:	> 95 % by SDS-PAGE and HPLC analyses.
Endotoxin Level:	< 0.2 EU/µg, determined by LAL method.

Target Details

Target:	Growth Hormone 1 (GH1)
Alternative Name:	Growth Hormone (GH) (GH1 Products)
Background:	Growth Hormone (GH) is a member of the somatotropin/prolactin family which play an important role in growth control. The human GH cDNA encodes a 217 amino acid (aa), and the first 26 aa is a signal peptide. By alternative splicing, at least four isoforms of GH have been identified. The major role of GH in stimulating body growth is to stimulate the liver and other

Target Details

tissues to secrete IGF-1. GH stimulates both the differentiation and proliferation of myoblasts, and also stimulates amino acid uptake and protein synthesis in muscle and other tissues. Recombinant human Growth Hormone (rhGH) produced in E. coli is a single non-glycosylated polypeptide chain containing 191 amino acids. A fully biologically active molecule, rhGH has a molecular mass of 22.1 kDa analyzed by reducing SDS-PAGE.

Synonyms: GH1, GH, GHN, GH-N, hGH-N, Pituitary growth hormone, Growth hormone 1, Somatotropin

Molecular Weight: 22.1 kDa, observed by reducing SDS-PAGE.

UniProt: [P01241](#)

Pathways: [NF-kappaB Signaling](#), [JAK-STAT Signaling](#), [Intracellular Steroid Hormone Receptor Signaling Pathway](#), [Peptide Hormone Metabolism](#), [Regulation of Intracellular Steroid Hormone Receptor Signaling](#), [Regulation of Hormone Metabolic Process](#), [Response to Growth Hormone Stimulus](#), [Regulation of Hormone Biosynthetic Process](#)

Application Details

Restrictions: For Research Use only

Handling

Format: Lyophilized

Reconstitution: Reconstituted in ddH₂O at 100 µg/mL.

Buffer: Lyophilized after extensive dialysis against PBS.

Storage: -80 °C

Storage Comment: Lyophilized recombinant human Growth Hormone (rhGH) remains stable up to 6 months at -80 °C from date of receipt. Upon reconstitution, rhGH should be stable up to 2 weeks at 4 °C or up to 3 months at -20 °C.

Expiry Date: 6 months

Publications

Product cited in: Basu, Nahar, Kulkarni, Kerekes, Sattler, Hall, Neggers, Holub, Kopchick: "A novel peptide antagonist of the human growth hormone receptor." in: **The Journal of biological chemistry**, pp. 100588, (2021) ([PubMed](#)).

Qian, Basu, Mathes, Arnett, Duran-Ortiz, Funk, Brittain, Kulkarni, Terry, Davis, Singerman, Henry, List, Berryman, Kopchick: "Growth Hormone Upregulates Mediators of Melanoma Drug Efflux and Epithelial-to-Mesenchymal Transition In Vitro and In Vivo." in: **Cancers**, Vol. 12, Issue 12, (2020) ([PubMed](#)).

Basu, Baumgaertel, Wu, Kopchick: "Growth Hormone Receptor Knockdown Sensitizes Human Melanoma Cells to Chemotherapy by Attenuating Expression of ABC Drug Efflux Pumps." in: **Hormones & cancer**, Vol. 8, Issue 3, pp. 143-156, (2018) ([PubMed](#)).