
Product Data Sheet

Product Name: GH Human, Plant

Cat. No.: GP20329

Batch No.: 1

Product Data

Purity >98% Source Nicotiana benthamiana plant

Physical Appearance solid Shipping Condition Shipped at Room temp.

Synonyms GH1; GH; GHN; GH-N; hGH-N; Pituitary growth hormone; Growth hormone 1; Somatotropin.

Amino Acid Sequence
 HHHHHHFPTI PLSRPFDNAM LRAHRLHQLA FDTYQEFEEA YIPKEQKYSF
 LQNPQTSLCF SESIPTPSNR EETQQKSNLE LLRISLLLIQ SWLEPVQFLR
 SVFANSLVYG ASDSNVYDLL KDLEEGIQTL MGRLEDGSPR TGQIFKQTYS
 KFDTNSHNDD ALLKNYGLLY CFRKDMDKVE TFLRIVQCRS VEGSCGFAG

Solubility It is recommended to reconstitute the lyophilized GH in sterile 18M-cm H₂O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

Formulation Lyophilized from 1mg/ml solution in PBS 0.05M buffer at pH 7.5.

Introduction

GH is a member of the somatotropin/prolactin family of hormones which play an important role in growth control. The gene, along with four other related genes, is located at the growth hormone locus on chromosome 17 where they are interspersed in the same transcriptional orientation; an arrangement which is thought to have evolved by a series of gene duplications. The five genes share a remarkably high degree of sequence identity. Alternative splicing generates additional isoforms of each of the five growth hormones, leading to further diversity and potential for specialization. This particular family member is expressed in the pituitary but not in placental tissue as is the case for the other four genes in the growth hormone locus. Mutations in or deletions of the gene lead to growth hormone deficiency and short stature.

Biological Activity

The biological activity of human Growth Hormone is measured by cell proliferation using

Caution: Product has not been fully validated for medical applications. For research use only.

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Nb2-11 cells. ED50 < 0.04-0.1 ng/mL.

Stability

Lyophilized GH although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution GH should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Background

GH human Recombinant produced in *Nicotiana benthamiana* plant is a single chain containing 205 amino acids (molecular formula C₁₀₂₅H₁₅₇₀N₂₈₀O₃₀₆S₇) and 6-His-tag at the N-terminal having the total molecular mass of 22.9kDa.

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