

## GH Human, Plant

**Description:** GH human Recombinant produced in *Nicotiana benthamiana* plant is a single chain containing 205 amino acids (molecular formula C<sub>1025</sub>H<sub>1570</sub>N<sub>280</sub>O<sub>306</sub>S<sub>7</sub>) and 6-His-tag at the N-terminal having the total molecular mass of 22.9kDa.

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

**Source:** *Nicotiana benthamiana* plant

**Physical Appearance:** Sterile Filtered White lyophilized (freeze-dried) powder.

**Amino Acid Sequence:** HHHHHHPTI PLSRPFDNAM LRAHRLHQLA FDTYQEFEEA  
YIPKEQKYSF LQNPQTSLCF SESIPTPSNR EETQKSNLE LLRISLLLIQ SWLEPVQFLR  
SVFANSLVYG ASDSNVYDLL KDL EEGIQT L MGRLEDGSPR TGQIFKQTYS KFD TNSHNDD  
ALLKNYGLLY CFRKDMDKVE TFLRIVQCRS VEGSCGFAG

**Purity:** Greater than 97.0% as determined by Analysis by SDS-PAGE.

**Formulation:**

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

**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.

**Usage:**

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

**Solubility:**

It is recommended to reconstitute the lyophilized GH in sterile 18M-cm H<sub>2</sub>O not less than 100

**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 Nb2-11 cells. ED<sub>50</sub> < 0.04-0.1 ng/mL.

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