

Recombinant Human Growth Hormone 2

Cat. No. GH2-67H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human Placental HGH 22kDa produced in <i>E. Colli</i> s is a single, non-glycosylated, polypeptide chain containing 192 amino acids and having a molecular mass of 22367 Dalton. Predicted pI=7.80. Placental Growth Hormone has diminished lactogenic (prolactin receptor mediated) activity characteristic to pituitary GHs. GH Placental is purified by proprietary chromatographic techniques.
Species	Human
Source	E.coli
Description	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.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.

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Purity	Greater than 98.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.
Formulation	The protein was lyophilized from a concentrated (1mg/ml) solution with 0.0045mM NaHCO ₃ previously adjusted pH 8-9.
Solubility	It is recommended to reconstitute the lyophilized Placental HGH in 0.4% NaHCO ₃ or water adjusted to pH 9, not less than 100 g/ml, which can then be further diluted to other aqueous solutions.
Amino Acid Sequence	The sequence of the first five N-terminal amino acids was determined and was found to be Ala-Phe-Pro-Thr-Ile.
Protein Content	Protein quantitation was carried out by two independent methods: 1. UV spectroscopy at 280 nm using the absorbency value of 1.18 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics). 2. Analysis by RP-HPLC, using a calibrated solution of GH-22K-pl as a Reference Standard.
Storage	Lyophilized GH placental although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution and filter sterilization HGH placental can be stored at 4°C for up to 4 weeks. For long term storage and more diluted solutions it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

GENE INFORMATION

Gene Name	GH2 growth hormone 2 [Homo sapiens]
Synonyms	GH2; growth hormone 2; GHL; GHV; GH-V; hGH-V; placenta-specific growth

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	hormone; placental-specific growth hormone; Placenta-specific growth hormone
Gene ID	2689
mRNA Refseq	NM_002059
Protein Refseq	NP_002050
MIM	139240
UniProt ID	P01242
Chromosome Location	17q24.2
Pathway	Cytokine-cytokine receptor interaction; Neuroactive ligand-receptor interaction; Jak-STAT signaling pathway
Function	hormone activity

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