

Recombinant Porcine Growth Hormone

Cat. No. GH-37P Lot. No. (See product label)

SPECIFICATION

Product Overview Recombinant Porcine Somatotropin produced in *E. Coli* is a single, non-glycosylated, polypeptide chain containing 190 amino acids and having a molecular mass of 21730 Dalton. Growth Hormone is purified by proprietary chromatographic techniques.

Species Pig

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.

Amino Acid Sequence The sequence of the first five N-terminal amino acids was determined and was found to be Phe-Pro-Ala-Met-Pro.

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 Growth-hormone (1mg/ml) was lyophilized after extensive dialyses against 0.34 mg sodium phosphate buffer (0.02 mg sodium phosphate monobasic & 0.32 mg sodium phosphate dibasic).
Solubility	It is recommended to reconstitute the lyophilized pST in sterile 18MΩ-cm H ₂ O not less than 100 g/ml, which can then be further diluted to other aqueous solutions.
Specific Activity	Somatotropin contains 3 units/mg.
Protein Content	Protein quantitation was carried out by two independent methods: 1. UV spectroscopy at 280 nm using the absorbency value of 0.74 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 as a Reference Standard.
Stability	Lyophilized GH although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution Somatotropin 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.

GENE INFORMATION

Gene Name	GH growth hormone [<i>Sus scrofa</i>]
Synonyms	GH; growth hormone
Gene ID	396884

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mRNA Refseq	NM_213869
Protein Refseq	NP_999034
UniProt ID	P01248
Chromosome Location	12p14
Pathway	Cytokine-cytokine receptor interaction; Jak-STAT signaling pathway; Neuroactive ligand-receptor interaction

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