



RayBiotech, Inc.

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Certificate of Analysis and Data Sheet Recombinant Human Growth Hormone

Catalog No.
228-10532

Source
Escherichia Coli

Synonyms:

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

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.

Description:

GH Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 192 amino acids and having a molecular mass of 22260.01 Dalton.
Growth Hormone is purified by proprietary chromatographic techniques.

Physical Appearance:

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation:

The GH (1mg/ml) was lyophilized after extensive dialyses against 8mg mannitol and 0.34mg sodium phosphate buffer (0.02 mg sodium phosphate monobasic & 0.32mg sodium phosphate dibasic).

Solubility:

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

**The products are furnished for LABORATORY RESEARCH USE ONLY.
Not for diagnostic or therapeutic use.**



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Stability:

Lyophilized GH although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution HGH 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.

Purity:

Greater than 98.0% as determined by:

- (a) Analysis by RP-HPLC
- (b) Analysis by SDS-PAGE

Amino acid sequence:

The sequence of the first five N-terminal amino acids was determined and was found to be Met-Phe-Pro-Thr-Ile.

Biological Activity:

GH 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 0.72 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.

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