

RayBiotech, Inc.

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Certificate of Analysis and Data Sheet

Recombinant Bovine Growth Hormone

Catalog No.
228-10528

Source
Escherichia Coli.

Synonyms

BGH, BST, rBGH, rBST, Bovine Somatotropin, Bovine GH, Growth hormone, GH1.

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

Growth Hormone Bovine Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 191 amino acids and having a molecular mass of 21.8 kDa.
The GH Bovine Recombinant is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation

The Bovine Growth Hormone protein was lyophilized from a concentrated (1mg/ml) solution with 0.0045mM NaHCO₃ adjusted to pH-8.

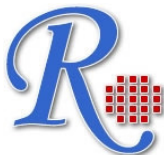
Purity

Greater than 98.0% as determined by(a) Analysis by RP-HPLC.
(b) Analysis by SDS-PAGE.

Solubility

It is recommended to reconstitute the lyophilized Bovine Growth Hormone 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 Bovine Growth Hormone although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution GH Bovine 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.

Amino acid sequence

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

Biological Activity

The activity as determined by the PDFP13B9 cells stably transfected with rabbit GH receptors. Bovine GH is also capable of forming a 1:2 complex with the recombinant ovine growth hormone receptor extracellular domain (ECD).

Protein content

Protein quantitation was carried out by two independent methods

1. UV spectroscopy at 280 nm using the absorbency value of 0.68 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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