

RayBiotech, Inc.

3607 Parkway Lane suite 200
Norcross, GA 30092
Tel: 770-729-2992, 1-888-494-8555
Fax: 770-206-2393
Website: www.raybiotech.com
Email: info@raybiotech.com

Certificate of Analysis and Data Sheet

Recombinant Bovine Fibroblast Growth Factor Basic (FGF-2 Bovine)

Catalog No.
228-10451

Source
Escherichia Coli

Synonyms

HBGH-2, HBGF-2, Prostatropin, FGF-2, FGB-b.

Introduction

FGF-basic is a member of the fibroblast growth factor (FGF) family. FGF family members bind heparin and possess broad mitogenic and angiogenic activities. This protein has been implicated in diverse biological processes, such as limb and nervous system development, wound healing, and tumor growth. The mRNA for this gene contains multiple polyadenylation sites, and is alternatively translated from AUG and non-AUG (CUG) initiation codons resulting in five different isoforms with distinct properties. The CUG-initiated isoforms are localized in the nucleus and are responsible for the intracrine effect, whereas, the AUG-initiated form is mostly cytosolic and is responsible for the paracrine and autocrine effects of this FGF.

The heparin-binding growth factors are angiogenic agents in vivo and are potent mitogens for a variety of cell types in vitro. there are differences in the tissue distribution and concentration of these 2 growth factors.

Description

FGF-2 Bovine Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 155 amino acids and having a molecular mass of 17250 Dalton. The Fibroblast Growth Factor 2 is purified by proprietary chromatographic techniques.

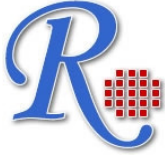
Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation

The FGF-b Bovine was lyophilized from a concentrated (1mg/ml) sterile solution containing 1%HSA.

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



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Solubility

It is recommended to reconstitute the lyophilized Fibroblast Growth Factor-2 Bovine Recombinant in sterile 18M Ω -cm H₂O not less than 100 μ g/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized Fibroblast Growth Factor 2 Bovine although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution FGF-b Bovine Recombinant should be stored at 4°C between 2-7 days and for future use below -18°C.

Please prevent freeze-thaw cycles.

Purity

Greater than 97.0% 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-Ala-Ala-Gly-Ser.

Biological Activity

The ED₅₀, measured in a mitogenic assay using quiescent NR6R-3T3 fibroblasts was found to be <0.1 ng/ml, corresponding to a specific activity of 10MUnits/mg.

Protein content

Protein quantitation was carried out by two independent methods:

1. UV spectroscopy at 280 nm using the absorbency value of 0.85 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 FGF-2 Bovine as a Reference Standard.

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