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Certificate of Analysis and Data Sheet

Recombinant Mouse Fibroblast Growth Factor-basic

Catalog No.
228-10454

Source
Escherichia Coli

Synonyms

HBGH-2, HBGF-2, Prostatropin, FGF-2, FGF-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

Fibroblast Growth Factor-basic Mouse Recombinant (FGF-2) produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 146 amino acids and having a molecular mass of 16320 Dalton.

The FGF-2 is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation

FGF-b was lyophilized from 5mM Na₂PO₄, pH7.5 and 50mM NaCl.

Solubility

It is recommended to reconstitute the lyophilized Fibroblast Growth Factor basic in sterile 18M Ω -cm H₂O not less than 100 μ g/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 Fibroblast Growth Factor-2 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution FGF-basic 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 95.0% as determined by

(a) Analysis by RP-HPLC.

(b) Analysis by SDS-PAGE.

Amino acid sequence

MPALPEDGGA AFPPGHFKDP KRLYCKNGGF FLRIHPDGRV DGVREKSDPH VKLQLQAEER
GVVSIKGVCA NRYLAMKEDG RLLASKCVTE ECFFFERLES NNYNTYRSRK YSSWYVALKR
TGQYKLGSKT GPGQKAILFL PMSAKS.

Biological Activity

The activity as calculated by the dose-dependant proliferation of BALB/3T3 cells was found to be >1ng/ml, corresponding to a specific activity of 1,000,000 units/mg.

Protein content

Protein quantitation was carried out by two independent methods

1. UV spectroscopy at 280 nm using the absorbency value of 0.885 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 FGF2 as a Reference Standard.

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