



Fibroblast Growth Factor basic, bovine recombinant (rbFGF-basic)

Catalog No: 87379
Lot No: XXXXX
Source: *E. coli*
Synonyms: HBGH-2, HBGF-2, Prostatopin, FGF-2, FGB-b

Background

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 (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. Fibroblast Growth Factor 2 is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

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

Solubility

It is recommended to reconstitute the lyophilized FGF-2 in sterile 18 M 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, 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.

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 3 x 10⁶ units/mg.

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