



## Fibroblast Growth Factor (FGF-2), basic, rat recombinant (rrFGF-2)

**Catalog No:** 08557  
**Lot No:** XXXXX  
**Source:** *E. coli*  
**Synonyms:** HBGH-2, HBGF-2, Prostatropin, FGF-2, FGB-b, Fibroblast Growth Factor-basic, Basic fibroblast growth factor, bFGF, Heparin-binding growth factor 2

### 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) rat recombinant, produced in *E. coli*, is a single, non-glycosylated, polypeptide chain containing 145 amino acids and having a molecular mass of 16.3 kDa. bFGF2 is purified by proprietary chromatographic techniques.

### Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

### Formulation

FGF-b was lyophilized from 1 mg/ml solution after extensive dialysis against 20 mM phosphate buffer, pH 7.4 and 150 mM NaCl.

### Solubility

It is recommended to reconstitute the lyophilized FGF-b in sterile 18 M $\Omega$ -cm H<sub>2</sub>O not less than 100  $\mu$ g/ml, which can then be further diluted to other aqueous solutions.

### Stability

Lyophilized bFGF, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution Rat FGF-2 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 97.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

### Amino Acid Sequence

PALPEDGGGA FPPGHFKDPK RLYCKNGGFF LRIHPDGRVD GVREKSDPHV KLQLQAEERG VVSIKGVCAN RYLAMKEDGR  
LLASKCVTEE CFFFERLESN NYNTYRSRKY SSWYVALKRT GQYKLGSKTG PGQKAILFLP MSAKS

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#### **Activity**

The ED50 range as determined by the dose-dependant proliferation of BALB/3T3 cells was found to be less than 0.2 ng/ml, corresponding to a specific activity of 5,000,000 IU/mg.

#### **Usage**

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