

Fibroblast Growth Factor-basic

Bovine, Recombinant (rBobFGF)

Expressed in *E. coli*

Cat. No. CRP0871

Lot. No. (See product label)

PRODUCT INFORMATION

Description: bFGF is a single-chain polypeptide growth factor that plays a significant role in the process of wound healing and is a potent inducer of angiogenesis. Several different forms of the human protein exist ranging from 18-24 kDa in size due to the use of alternative start sites within the FGF-2 gene. It has a 55 percent amino acid residue identity to FGF-1 and has potent heparin-binding activity. The growth factor is an extremely potent inducer of DNA synthesis in a variety of cell types from mesoderm and neuroectoderm lineages. It was originally named basic fibroblast growth factor based upon its chemical properties and to distinguish it from acidic fibroblast growth factor. Other homologous FGF belonging to the same family are int-2 (FGF-3), FGF-5, FGF-6, K-FGF and KGF (keratinocyte growth factor =FGF-7). All factors are products of different genes, some of which are Oncogene products (FGF-3, FGF-4, FGF-5).

Amino-Acid Sequence: 163 aa, non-glycosylated

M. W. : 18,500 Da

Recombinant: Expressed in *E. coli*

Purity: >95% by SDS-PAGE and HPLC analyses.

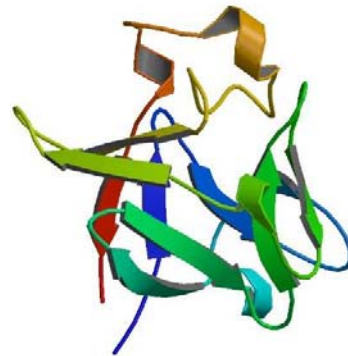
Formulation: Lyophilized from a 0.2µm filtered concentrated (1mg/ml) solution in PBS, pH 7.4.

Biological Activity: Fully biologically active when compared to standard. The ED50, calculated by the dose-dependant proliferation of BAF3 cells expressing FGF receptors (measured by 3H-thymidine uptake) is <1.0 ng/ml, corresponding to a specific activity of (1.0 x 10⁶) Units/mg.

Endotoxin: Less than 1EU/µg of rBobFGF as determined by LAL method.

Reconstitution: We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/ml. Stock solutions should be apportioned into working aliquots and stored at <-20°C. Further dilutions should be made in appropriate buffered solutions.

Storage: This lyophilized preparation is stable for several weeks at 2-8°C, but should be kept at -20°C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8°C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20°C to -70°C. Avoid repeated freeze/thaw cycles.



[PDB](#) rendering based on 1bas.

GENE INFORMATION

Gene Name: [FGF2](#)

Synonyms: BFGF; FGFB; HBGH-2; Prostatropin; fibroblast growth factor 2 (basic); Basic fibroblast growth factor; Heparin-binding growth factor 2 precursor; heparin-binding growth factor 2; basic fibroblast growth factor bFGF; fibroblast growth factor 2

mRNA Refseq: [NM_174056.3](#)

Protein Refseq: [NP_776481.1](#)

MIM: [134920](#)

GeneID: [281161](#)

Uniprot ID: [P09038](#) [human]

Chromosome Location: 6

Pathway: MAPK signaling pathway; Melanoma; Regulation of actin cytoskeleton

Function: growth factor activity, heparin binding, voltage-gated calcium channel activity

REFERENCES

1. Zhu X, Komiya H, Chirino A, et al. Three-dimensional structures of acidic and basic fibroblast growth factors. *Science*. 1991; 251 (4989): 90-93.
2. Watson R, Anthony F, Pickett M, et al. Reverse transcription with nested polymerase chain reaction shows expression of basic fibroblast growth factor transcripts in human granulosa and cumulus cells from in vitro fertilisation patients. *Biochem. Biophys. Res. Commun.* 1992; 187 (3): 1227-1231.

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