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Product Information

Fibroblast Growth Factor-Basic, cGMP Grade
human, recombinant,
expressed in *E. coli*

Catalog Number **F4180**
Storage Temperature –20 °C

CAS RN 106096-93-9
Synonyms: bFGF; FGF2; FGF-b; FGF-basic

Product Description

Fibroblast growth factor-basic (bFGF) is a potent mitogenic agent for a wide variety of mesoderm-derived cells including BALB/c 3T3 fibroblasts, capillary and endocardial endothelial cells, myoblasts, vascular smooth muscle cells, mesothelial cells, glial and astroglial cells, and adrenal cortex cells.[1,2] bFGF and Fibroblast growth factor-acidic (aFGF) share a 55% homology in amino acid sequence,[3] and act upon the same cellular receptors with differing specific activities, depending on the cell type.[4] These two mitogens may play important roles *in vivo* in cell proliferation and differentiation associated with embryogenesis, tissue regeneration, CNS development, wound healing, angiogenesis, and tumor progression.[2,5-8] bFGF is found in a variety of organs. It acts on a wide range of cell types and has multifunctional actions. bFGF has numerous synonyms, including heparin-binding growth factor (class II or b), eye-derived growth factor I, cartilage-derived growth factor, and astroglial growth factor II.[9] Purified bovine and human bFGF differ by only three amino acids in sequence[3] and are biologically and immunologically cross-reactive.

Recombinant, human Fibroblast Growth Factor-Basic, produced in *E. coli*, is a single, non-glycosylated, polypeptide chain containing 154 amino acids and having a molecular mass of 17.2 kDa. This product is manufactured using a cGMP manufacturing process and is supplied lyophilized from a sterile filtered solution containing 5 mM Tris, pH 7.6, and 150 mM NaCl.

Purity: ≥95% (SDS-PAGE)

Activity: Exerts its biological activity in the range of 0.1–10 ng/ml. Full biological activity when compared to standards.

The ED_{50} determined by the dose-dependent stimulation of thymidine uptake by NIH 3T3 cells expressing FDF receptors is <0.33 ng/ml. The ED_{50} is defined as the effective concentration of FGF-basic at which the activity is 50% of the maximum response in a cell based assay.

Endotoxin: <0.1 ng per µg of FGF-basic

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

After a quick spin, reconstitute in 0.1 M phosphate buffer, pH 6.8, to a concentration of 0.1–1.0 mg/ml.

Storage/Stability

Store the product at –20 °C.

Following reconstitution, avoid repeated freezing and thawing.

References

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