

# Basic Fibroblast Growth Factor (156Aa), bovine (bbFGF)

recombinant (*E. coli*)

Lyophilized, before lyophilization filtered through 0.2 µm pore size membrane

Cat. No. 11 104 616 001 10 µg

 **Version 5.0**  
Content version: January 2011

Store at -15 to -25°C

## Product overview

### Formulation

lyophilized, salt-free; before lyophilization filtered through 0.2 µm pore size membrane

### Preparation

Recombinant, bovine basic fibroblast growth factor (bbFGF) is produced in *E. coli* and purified by standard chromatographic techniques.

### Primary structure

The primary structure of recombinant, bbFGF is identical to that of natural, bbFGF (one polypeptide chain, 146 amino acids) but recombinant bbFGF has 10 additional amino acids at the amino-terminus (1-3).

### Molecular weight

18,000 Da

### Purity

The recombinant bbFGF is >95% pure as determined by SDS-PAGE. Endotoxin level: <0.1 EU/µg (LAL-test)

### Specific activity/EC<sub>50</sub>

<1 ng/ml, at least the same specific activity (EC<sub>50</sub>) compared to the indicated standard is guaranteed.

### EC<sub>50</sub> definition/Unit definition

The concentration of bbFGF that is required to support half-maximal stimulation of cell proliferation (MTT cleavage) with 3T3 (NR6) cells.

### Species specificity

Bovine bFGF is effective on mouse, bovine and human cells.

### Reconstitution

In sterile PBS (final concentration 100 µg/ml), further dilution with PBS or medium containing BSA, 1 mg/ml or serum, 1 - 10%. Recommended concentration for Serum-free cell culture is 1 - 20 ng/ml.

Ⓢ It is recommended to store the reconstituted undiluted solution in aliquots at -15 to -25°C.

### Stability

The lyophilisate is stable at -15 to -25°C until the expiration date printed on the label.

⚠ The reconstituted undiluted solution is stable at is stable at -15 to -25°C. Repeated freezing and thawing should be avoided.

### Description

Two homologous forms of fibroblast growth factor (FGFs), acidic FGF (aFGF) and basic FGF (bFGF) have been purified and characterized (1, 2, 4 - 8).

FGFs have been purified from a variety of tissue sources. This has led to a multitude of alternative names for aFGF (endothelial cell growth factor, heparin-binding growth factor-α, eye-derived growth factor II, retina-derived growth factor, astroglial growth factor I, brain-derived growth factor and prostatin) and bFGF (heparinbinding growth factor β, eye-derived growth factor I, astroglial growth factor 2, chondrosarcoma-derived growth factor and cartilage-derived growth factor).

The complete amino acid sequences of both bovine aFGF and bFGF have been determined and found to be closely related with about 55% amino acid sequence identify (1, 2, 4-8).

### Application

bFGF is a potent mitogen for a wide variety of mesoderm- and neuroectoderm-derived research material including fibroblasts, vascular and corneal endothelial cells, myoblasts, chondrocytes, osteoblasts, smooth muscle cells and glial cells. All cell types that respond to FGFs bear specific FGF cell surface receptors. In addition, bFGF induces blood vessel growth and wound healing *in vivo*. Other *in vivo* effects of bFGF are mesodermal induction in early embryos, limb and lens regeneration (9-12).

### References

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### Changes to Previous Version

- Replacement of the wording "sterile filtered"
- Editorial changes.

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