

## Recombinant Murine Acidic Fibroblast Growth Factor

#R00252

Size: 10 µg/100 µg/500 µg

### Stability & Storage

Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.



**Warning:** This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

### Background

Murine aFGF, encoded by the FGF1 gene, is a member of the fibroblast growth factor (FGF) family. Fibroblast growth factor was found in pituitary extracts in 1973 and then tested in a bioassay that caused fibroblasts to proliferate. After further fractionating the extract using acidic and basic pH, two different forms have isolated that named "acidic fibroblast growth factor" (FGF-1) and "basic fibroblast growth factor" (FGF-2). Murine aFGF shares 52 % amino acid sequence identity with bFGF. Murine aFGF shares 96 % amino acid sequence identity with human aFGF, so it exhibits considerable species crossreactivity between murine and human aFGF. In mammalian FGF receptor family has 4 members, FGFR1, FGFR2, FGFR3, and FGFR4, and 1, 2, 3 have 2 sub-types "b", "c". aFGF can bind and activate all 7 different FGFRs. Affinity between aFGF and its receptors can be increased by heparin or heparan sulfate proteoglycan. aFGF plays an important

role in the regulation of cell survival, cell division, angiogenesis, cell differentiation and cell migration. aFGF are also involved in a variety of biological processes, including embryonic development, morphogenesis, tissue repair, tumor growth and invasion.

### AA Sequence

FNLPLGNYKKPKLLYCSNGGHFLRILPDGTVDGTRDR  
SDQHIQLQLSAESAGEVYIKGTETGQYLAMDEGLLY  
GSQTPNEECLFLERLEENHYNTYTSKKHAEKNWFGV  
LKKNGSCKRGPRTHYGQKAILFLPLPVSSD

### 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.

## Product Specification

|                            |                                                                                                                                                                                                                                             |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Synonyms</b>            | FGF-1, HBGF-1                                                                                                                                                                                                                               |
| <b>Accession</b>           | P61148                                                                                                                                                                                                                                      |
| <b>GeneID</b>              | 14164                                                                                                                                                                                                                                       |
| <b>Species</b>             | Murine                                                                                                                                                                                                                                      |
| <b>Source</b>              | Escherichia coli.                                                                                                                                                                                                                           |
| <b>Molecular Weight</b>    | Approximately 15.8 kDa, a single non-glycosylated polypeptide chain containing 140 amino acid residues.                                                                                                                                     |
| <b>Purity</b>              | > 96 % by SDS-PAGE and HPLC analyses.                                                                                                                                                                                                       |
| <b>Biological Activity</b> | Fully biologically active when compared to standard. The ED <sub>50</sub> as determined by a cell proliferation assay using murine balb/c 3T3 cells is less than 0.2 ng/ml, corresponding to a specific activity of > 5.0 × 10 <sup>6</sup> |

|                            |                                                                                                                             |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------|
|                            | IU/mg in the presence of 10 µg/ml of heparin.                                                                               |
| <b>Physical Appearance</b> | Sterile Filtered White lyophilized (freeze-dried) powder.                                                                   |
| <b>Formulation</b>         | Lyophilized from a 0.2 µm filtered concentrated solution in 1×PBS, pH7.0, 5%Trehalose, 0.02%Tween-80, 0.5mM DTT, 0.5mM EDTA |
| <b>Endotoxin</b>           | Less than 1 EU/µg of rMuaFGF as determined by LAL method.                                                                   |