

## Recombinant Human Acidic Fibroblast Growth Factor

### Information

<b>Gene ID</b>	2246
<b>Accession #</b>	P05230
<b>Alternate Names</b>	FGF-1, ECGF, HBGF-1
<b>Source</b>	Escherichia coli.
<b>M.Wt</b>	Approximately 16.0 kDa, a single non-glycosylated polypeptide chain containing 141 amino acids.
<b>AA Sequence</b>	MFNLPPGNYK KPKLLYCSNG GHFLRILPDG TVDGTDRDRSD QHIQLQLSAE SVGEVYIKST ETGQYLAMDT DGLLYGSQTP NEECLFLERL EENHYNTYIS KKHAEKNWFV GLKKNNGSCKR GPRTHYGQKA ILFLPLPVSS D
<b>Appearance</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Stability &amp; Storage</b>	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
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.
<b>Reconstitution</b>	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.
<b>Biological Activity</b>	Fully biologically active when compared to standard. The ED as determined by a cell proliferation assay using murine balb/c 3T3 cells is less than 0.5 ng/ml, corresponding to a specific activity of > 2.0 × 10 IU/mg in the presence of 10 µg/ml of heparin.
<b>Shipping Condition</b>	Gel pack.
<b>Handling</b>	Centrifuge the vial prior to opening.
<b>Usage</b>	For Research Use Only! Not to be used in humans.

### Components and Storage

Components	10µg	100µg	500µg
Recombinant Human Acidic Fibroblast Growth Factor	10µg	100µg	500µg

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- 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

## Quality Control

Purity	> 95 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/μg of rHuaFGF as determined by LAL method.

## Description

Human 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). Human aFGF shares 54 % amino acid sequence identity with bFGF. 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.

## Reference

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