

Recombinant Human Acidic Fibroblast Growth Factor

Product Information

Cat

CGF-053

Product Name

Recombinant Human Acidic Fibroblast Growth Factor

Synonyms

FGF-1, ECGF, HBGF-1

GenelD

2246

Source

Escherichia coli.

Molecular Weight

Approximately 16.0 kDa, a single non-glycosylated polypeptide chain containing 141 amino acids.

AA Sequence

MFNLPPGNYK KPKLLYCSNG GHFLRILPDG TVDGTRDRSD QHIQLQLSAE SVGEVYIKST ETGQYLAMDT
DGLLYGSQTP NEECLFLERL EENHYNTYIS KKHAENWFV GLKKNNGSCKR GPRTHYGQKA ILFLPLPVSS D

Purity

> 95 % by SDS-PAGE and HPLC analyses.

Biological Activity

Fully biologically active when compared to standard. The ED50 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 $> 2.0 \times 10^6$ IU/mg in the presence of 10 µg/ml of heparin.

Physical Appearance

Recombinant Human Acidic Fibroblast Growth Factor

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation

Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.

Endotoxin

Less than 1 EU/µg of rHuaFGF 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.

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.

Usage

This material is offered by Creative Biomart for research, For research and further manufacturing use only.

background

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

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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.
