



Fibroblast Growth Factor-acidic, rat recombinant (rrFGF-acidic)

Catalog No: 97450
Lot No: XXXXX
Source: *E. coli*
Synonyms: Fibroblast growth factor 1, FGF-1, Acidic fibroblast growth factor, aFGF, Heparin-binding growth factor 1, HBGF-1, Fgf1, Fgfa, HBGF1

Background

Acidic fibroblast growth factor is a member of the fibroblast growth factor (FGF) family. FGF family members possess broad mitogenic and cell survival activities, and are involved in a variety of biological processes, including embryonic development, cell growth, morphogenesis, tissue repair, tumor growth and invasion. This protein functions as a modifier of endothelial cell migration and proliferation, as well as an angiogenic factor. It acts as a mitogen for a variety of mesoderm- and neuroectoderm-derived cells in vitro, thus is thought to be involved in organogenesis. Three alternatively spliced variants encoding different isoforms have been described. The heparin-binding growth factors are angiogenic agents in vivo and are potent mitogens for a variety of cell types in vitro. There are differences in the tissue distribution and concentration of these 2 growth factors.

Description

Fibroblast Growth Factor-acidic rat recombinant (FGF-1) produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 141 amino acids and having a molecular mass of 15.9 kDa. FGF acidic is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

Lyophilized at a concentration of 1 mg/ml in 5 mM Na₂PO₄, pH 7.5 and 50 mM NaCl.

Solubility

It is recommended to reconstitute the lyophilized FGF-acidic in sterile 18 MΩ-cm H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized Fibroblast Growth Factor-1, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution FGF-a should be stored at 4°C between 2-7 days and for future use below -18°C. Please prevent freeze-thaw cycles.

Purity

Greater than 98.0% as determined by SDS-PAGE.

Amino Acid Sequence

MFNLPPLGNYK KPKLLYCSNG GHFLRILPDG TVDGTDRSD QHIQLQLSAE SAGEVYIKGT ETGQYLAMDT EGLLYGSQTP
NEECLFLERL EENHYNTYTS KKHAENWFV GLKKNNGSCKR GPRTHYGQKA ILFLPLPVSS D

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Activity

The ED50 as determined by the dose-dependent proliferation of mouse BALB/c 3T3 cells, is less than 0.2 ng/ml corresponding to a specific activity of 5×10^6 IU/mg.

Usage

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