

FGF-1

Acidic Fibroblast Growth Factor human, recombinant, Sf9 insect cells

Cat. No.	Amount
PR-809	5 µg

For *in vitro* use only
Quality guaranteed for 12 months
Store at -80°C

Avoid freeze / thaw cycles

Form

Liquid. Supplied in 20 mM Tris-HCl pH 8.0, 100 mM KCl, 0.2 mM EDTA, 1 mM DTT and 20% glycerol.

Activity

20 ng are sufficient in cell culture experiments.

Application

FGF-1 has been applied in cell culture experiments.

Molecular Weight

23 kDa

Purity

> 95% by SDS-PAGE

Description

Acidic Fibroblast Growth Factor (FGF-1) and Basic Fibroblast Growth Factor (FGF-2) are ubiquitous cytokines found in many tissues. They have effects on multiple cell types derived from mesoderm and neuroectoderm, including endothelial cells. FGF proteins are small peptides of 155 to 268 amino acid residues. The degree of sequence identity between different family members is 30-60% in a "central domain" of 120 amino acids. This domain confers to FGFs a common tertiary structure and the ability to bind to heparin. Secreted FGFs signal to target cells by binding and activating cell-surface tyrosine kinase FGF Receptors (FGFRs). The function of FGFs and FGFRs during embryonic development and adult physiology has been addressed by gain- and loss-of-function experiments in several animal model organisms. These studies have shown that FGFs act as key regulators of developmental events. Recombinant FGF-1 was expressed in a baculovirus system and purified by an affinity column in combination with FPLC chromatography.

Selected References:

- Slavin (1995) Fibroblast growth factors: at the heart of angiogenesis. *Cell Biol. Int.* **5**:431.
- Cuevas *et al.* (1995) Acidic fibroblast growth factor prevents death of spinal cord motoneurons in newborn rats after nerve section. *Neurol. Res.* **17**:396.
- De Moerlooze *et al.* (2000) An important role for the IIIb isoform of fibroblast growth factor receptor 2 (FGFR2) in mesenchymal-epithelial signalling during mouse organogenesis. *Development* **127**:483.
- Hebert *et al.* (1990) Isolation of cDNAs encoding four mouse FGF family members and characterization of their expression patterns during embryogenesis. *Dev. Biol.* **138**:454.
- Faham *et al.* (1996) Heparin structure and interactions with basic fibroblast growth factor. *Science* **271**:1116.
- Dionne *et al.* (1990) Cloning and expression of two distinct high-affinity receptors cross-reacting with acidic and basic fibroblast growth factors. *EMBO J.* **9**:2685.
- Johnson *et al.* (1993) Structural and functional diversity in the FGF receptor multigene family. *Adv. Cancer Res.* **60**:1.
- Arman *et al.* (1998) Targeted disruption of fibroblast growth factor (FGF) receptor 2 suggests a role for FGF signaling in pregastrulation mammalian development. *Proc. Natl. Acad. Sci. USA* **95**:5082.
- Gage (2000) Mammalian neural stem cells. *Science* **287**:1433.