FGF-1 (FGF-acidic) Rat, E. coli Recombinant Protein

Product Data Sheet

Cat. No.:	A30750010	A30750050	A30751000
Size:	10 µg	50 µg	1 mg

Description

Our bioactive *FGF-1 (FGF-acidic) Rat, E. coli Recombinant Protein*, also known as Fibroblast Growth Factor 1, is a single, non-glycosylated, polypeptide chain that contains 141 amino acids and has a 15.9 kDa molecular mass. The FGF-1 is purified by proprietary chromatographic techniques.

Summary

FGF-acidic, a member of the fibroblast growth factor (FGF) family, is a non-glycosylated heparin binding growth factor encoded by the FGF1 gene. FGF-acidic plays an important role in the regulation of cell survival, cell division, angiogenesis, cell differentiation and cell migration. Functions as potent mitogen in vitro. Acts as a ligand for FGFR1 and integrins. Binds to FGFR1 in the presence of heparin leading to FGFR1 dimerization and activation via sequential autophosphorylation on tyrosine residues which act as docking sites for interacting proteins, leading to the activation of several signaling cascades. Binds to integrins. Its binding to integrins and subsequent ternary complex formation with integrins and FGFR1 are essential for FGF1 signaling.

Other Names

Fibroblast Growth Factor-1, FGF1, FGF-1, FGF acidic, FGF-a, Acidic fibroblast growth factor, aFGF, Heparin-binding growth factor 1, HBGF-1, UniProtKB# P61149.

Amino Acid Sequence

MFNLPLGNYK KPKLLYCSNG GHFLRILPDG TVDGTRDRSD QHIQLQLSAE SAGEVYIKGT ETGQYLAMDT EGLLYGSQTP NEECLFLERL EENHYNTYTS KKHAEKNWFV GLKKNGSCKR GPRTHYGQKA ILFLPLPVSS D.

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Source

E. coli

Formulation

Sterile filtered white lyophilized (freeze-dried) powder. The protein was lyophilized at a concentration of 1 mg/ml in 5mM Na_2PO_4, pH-7.5 and 50mM NaCl.

Purity

Purity greater than 98.0% as determined by SDS-PAGE.

Biological 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 $5x10^6$ IU/mg.

Reconstitution

It is recommended to reconstitute the lyophilized FGF-1 in sterile 18MΩ-cm H2O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Shipping

Ships at ambient temperature. Upon receipt, store the product at the temperature recommended below.

Storage/Expiration

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

Usage

This product is intended for **Laboratory Research Use Only**. Not for use in diagnostic or therapeutic procedures. This product may not be used as a pharmaceutical or veterinary drug, agricultural product, or food additive.

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