

Cytokines

Human Recombinant FGF-acidic, ACF

Fibroblast growth factor-acidic, animal component-free



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Catalog # 78188
78188.1
78188.2

10 µg
100 µg
1000 µg

Product Description

Fibroblast growth factor acidic (FGF-acidic), also known as FGF-1, is a potent activator of DNA synthesis, cell proliferation, and chemotaxis and is known to play numerous roles in development, regeneration, and angiogenesis (Jaye et al.; Galzie et al.; Presta et al.). FGF-acidic is produced by multiple cell types and is capable of activating all cells of mesodermal origin and many cells of neuroectodermal, ectodermal, and endodermal origin. It is found in large quantities in the brain, but is also expressed in hepatocytes, vascular smooth muscle cells, neurons of the CNS, skeletal muscle cells, fibroblasts, keratinocytes, endothelial cells, intestinal columnar epithelial cells, and pituitary basophils and acidophils. FGF-acidic is secreted as a disulfide-linked homodimer and is stored in complex with heparan sulfate, a requirement for its interaction with FGF receptors (Guerrini et al.; Mohammadi et al.). Internalized FGF-acidic signals through protein kinase C and promotes cell survival by inhibiting p53 and proapoptotic signaling (Bouleau et al.). This product is animal component-free.

Product Information

Alternative Names: Acidic fibroblast growth factor, aFGF, ECGF, Endothelial cell growth factor, FGF-1, FGF-alpha, Fibroblast growth factor 1, GLIO703, HBGF-1, Heparin-binding growth factor 1

Accession Number: P05230

Amino Acid Sequence: MFNLPPGNYK KPKLLYCSNG GHFLRILPDG TVDGTRDRSD QHIQLQLSAE SVGEVYIKST ETGQYLAMDT DGLLYGSQTP NEECLFLERL EENHYNTYIS KKHA EKNWFV GLKKNGSCKR GPRTHYGQKA ILFLPLPVSS D

Predicted Molecular Mass: 16.0 kDa

Species: Human

Cross Reactivity: Reported to be species-specific

Formulation: Lyophilized from a sterile-filtered solution containing sodium phosphate and sodium sulfate, pH 7.5.

Source: E. coli

Specifications

Activity: The specific activity is $\geq 5.0 \times 10^5$ units/mg ($EC_{50} \leq 2$ ng/mL) as determined by a cell proliferation assay using NR6R-3T3 cells in the presence of 10 µg/mL heparin.

Purity: $\geq 95\%$

Endotoxin Level: Measured by kinetic Limulus amebocyte lysate (LAL) analysis and is ≤ 1 EU/µg protein.

Preparation and Storage

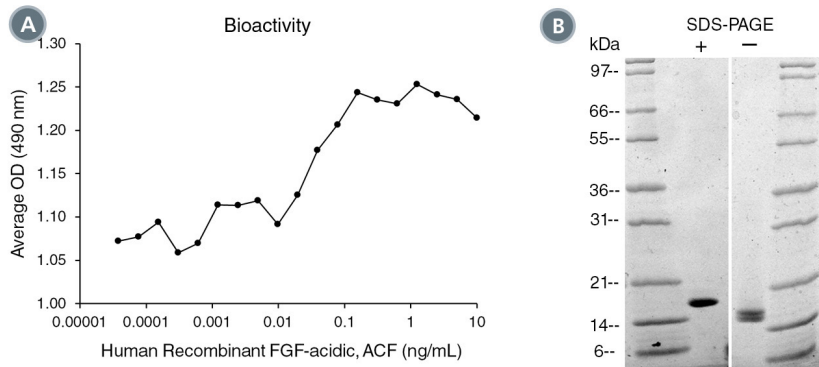
Storage: Store at -20°C to -80°C.

Stability: Stable as supplied for 12 months from date of receipt.

Preparation: Centrifuge vial before opening. Reconstitute the product in sterile water to at least 0.1 mg/mL by pipetting the solution down the sides of the vial. Do not vortex.

OPTIONAL: After reconstitution, if product will not be used immediately, dilute with concentrated bovine serum albumin (BSA) to a final BSA concentration of 0.1%. The effect of storage of stock solution on product performance should be tested for each application. As a general guide, do not store at 2 - 8°C for more than 1 month or at -80°C for more than 3 months. Avoid repeated freeze-thaw cycles.

Data



(A) The biological activity of Human Recombinant FGF-acidic, ACF was tested by its ability to promote proliferation of NR6R-3T3 cells in the presence of 10 $\mu\text{g/mL}$ heparin. Cell proliferation was measured using a fluorometric assay method. The EC_{50} is defined as the effective concentration of the growth factor at which cell proliferation is at 50% of maximum. The EC_{50} in the example above is 0.0277 ng/mL.

(B) 1 μg of Human Recombinant FGF-acidic, ACF was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining. Human Recombinant FGF-acidic, ACF has a predicted molecular mass of 16.0 kDa.

Related Products

For a complete list of cytokines, as well as related products available from STEMCELL Technologies, visit www.stemcell.com/cytokines or contact us at techsupport@stemcell.com.

References

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