Cytokines

Human Recombinant FGF-8B, ACF

Fibroblast growth factor 8B, animal component-free

Catalog #	78204	25 µg
	78204.1	100 µg
	78204.2	1000 µg

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Product Description

Fibroblast growth factor 8B (FGF-8B) is a member of the fibroblast growth factor (FGF) family and is an isoform of FGF-8. Cytokines in the FGF family possess broad mitogenic and cell survival activities (Folkman & Klagsbrun; Kimelman & Kirschner) and are involved in a variety of biological processes, including cell proliferation, differentiation, survival, and apoptosis (Folkman & Klagsbrun; Klagsbrun; Rifkin & Moscatelli). FGF-8B signals through FGF receptors (FGFRs) to activate PI3K and MAPK pathways. FGF-8B regulates gastrulation, epithelial-mesenchymal transition, and mesenchymal to epithelial differentiation during embryonic development. FGF-8B has also been found in peripheral blood leukocytes and healthy bone marrow samples (Mattila & Härkönen). FGF-8B has mitogenic effects on somatic cells in the germinal epithelium and is expressed in adult mouse ovarian cells and tissues, which suggests that it regulates maturation of oocytes and seminiferous epithelium in testes (Valve et al.). This product is animal component-free.

Product Information

Alternative Names:	AIGF, Androgen-induced growth factor, FGF-8, Fibroblast growth factor-8B, HBGF-8, Heparin-binding growth factor-8
Accession Number:	P55075
Amino Acid Sequence:	MQVTVQSSPN FTQHVREQSL VTDQLSRRLI RTYQLYSRTS GKHVQVLANK RINAMAEDGD PFAKLIVETD TFGSRVRVRG AETGLYICMN KKGKLIAKSN GKGKDCVFTE IVLENNYTAL QNAKYEGWYM AFTRKGRPRK GSKTRQHQRE VHFMKRLPRG HHTTEQSLRF EFLNYPPFTR SLRGSQRTWA PEPR
Predicted Molecular Mass:	22.5 kDa
Species:	Human
Cross Reactivity:	Mouse
Formulation:	Lyophilized from a sterile-filtered solution containing sodium phosphate and sodium chloride, pH 7.5.
Source:	E. coli

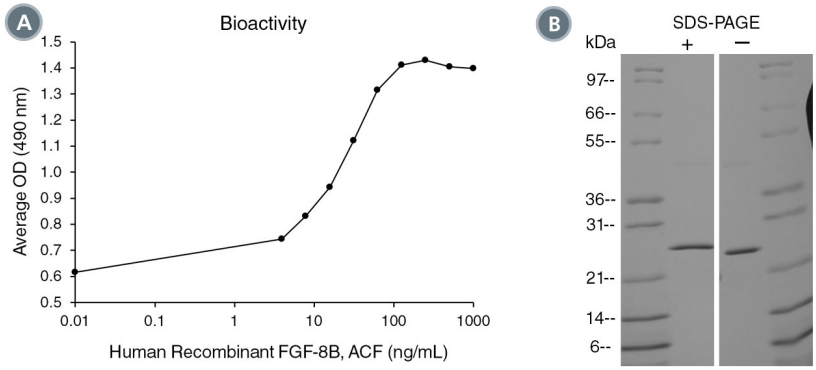
Specifications

Activity:	The specific activity is ≥ 6.7 x 10^3 units/mg (EC50 ≤ 150 ng/mL) as determined by a cell proliferation assay using BALB/c 3T3 cells.
Purity:	≥ 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. Bring vial and sterile water to room temperature (15 - 25°C). 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. Let solution sit for 1 minute at room temperature (15 - 25°C). If precipitate is observed, centrifuge at 16,000 x g for 1 minute. Remove supernatant and transfer to a new tube, taking care not to disturb the pellet. Discard the pellet. A 10% overfill has been added to compensate for any loss of protein in the precipitate. 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-8B, ACF was tested by its ability to promote the proliferation of BALB/c 3T3 cells in the presence of heparin. Cell proliferation was measured using a fluorometric assay method. The EC50 is defined as the effective concentration of the growth factor at which cell proliferation is at 50% of maximum. The EC50 in the example above is 19 ng/mL.
(B) 1 µg of Human Recombinant FGF-8B, ACF was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining. Human Recombinant FGF-8B, ACF has a predicted molecular mass of 22.5 kDa.

Related Products

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References

Folkman J & Klagsbrun M. (1987) Angiogenic factors. Science 235(4787): 442–7.
Kimelman D & Kirschner M. (1987) Synergistic induction of mesoderm by FGF and TGF-beta and the identification of an mRNA coding for FGF in the early Xenopus embryo. Cell 51(5): 869–77.
Klagsbrun M. (1989) The fibroblast growth factor family: structural and biological properties. Prog Growth Factor Res 1(4): 207–35.
Mattila MM & Härkönen PL. Role of fibroblast growth factor 8 in growth and progression of hormonal cancer. Cytokine Growth Factor Rev 18(3–4): 257–66.
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Valve E et al. (1997) FGF-8 is expressed during specific phases of rodent oocyte and spermatogonium development. Biochem Biophys Res Commun 232(1): 173–7.