Cytokines

Human Recombinant FGF-7, ACF

Fibroblast growth factor 7, animal component-free

Catalog #	78186	10 µg
	78186.1	100 µg
	78186.2	1000 µg

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Product Description

Fibroblast growth factor 7 (FGF-7) is a member of the FGF family, and acts exclusively through a subset of FGF receptor isoforms expressed predominantly by epithelial cells (Finch & Rubin). FGF-7 seems to act specifically on epithelial cells and stimulates proliferation, migration, and differentiation of these cells, and also participates in epithelial protection and repair both in vitro and in vivo (Finch & Rubin; Werner). In contrast, FGF-7 is produced solely by cells of mesenchymal origin, and functions as a paracrine mediator of mesenchymal-epithelial communication (Rubin et al.). FGF-7 has also been shown to supplement several wound-healing properties of bioengineered skin (Erdag et al.) and to induce autophagy in human keratinocytes (Belleudi et al.). Additionally, FGF-7 has a role in the differentiation of pluripotent stem cell to endodermal pancreatic-like insulin-producing cells and thymic epithelial cells (Inami et al.; Niu et al.). This product is animal component-free.

Product Information

Alternative Names:	Fibroblast growth factor 7, HBGF-7, Heparin-binding growth factor 7, Keratinocyte growth factor, KGF
Accession Number:	P21781
Amino Acid Sequence:	MCNDMTPEQM ATNVNCSSPE RHTRSYDYME GGDIRVRRLF CRTQWYLRID KRGKVKGTQE MKNNYNIMEI RTVAVGIVAI KGVESEFYLA MNKEGKLYAK KECNEDCNFK ELILENHYNT YASAKWTHNG GEMFVALNQK GIPVRGKKTK KEQKTAHFLP MAIT
Predicted Molecular Mass:	19.0 kDa
Species:	Human
Cross Reactivity:	Reported to be species-specific
Formulation:	Lyophilized from a sterile-filtered solution containing sodium phosphate and sodium chloride, pH 7.5.
Source:	E. coli

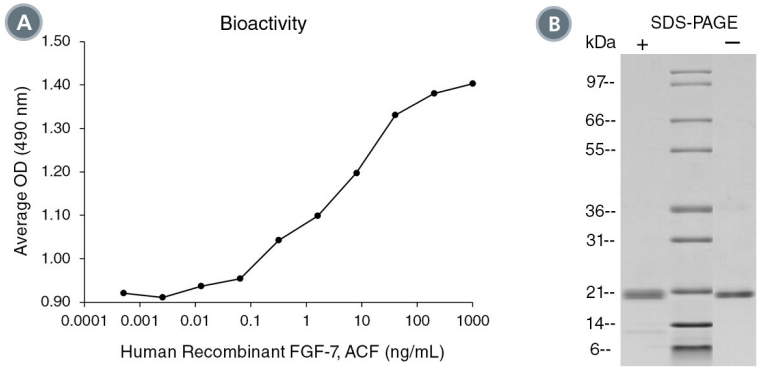
Specifications

Activity:	The specific activity is ≥ 1.7 x 10^4 units/mg (EC50 ≤ 60 ng/mL) as determined by a cell proliferation assay using 4MBr-5 cells.
Purity:	≥ 90%
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-7, ACF was tested by its ability to promote proliferation of 4MBr-5 cells. 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 2.5 ng/mL.
(B) 1 µg of Human Recombinant FGF-7, ACF was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining. Human Recombinant FGF-7, ACF has a predicted molecular mass of 19.0 kDa.

Related Products

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References

Belleudi F et al. (2014) FGF7/KGF regulates autophagy in keratinocytes: A novel dual role in the induction of both assembly and turnover of autophagosomes. Autophagy 10(5): 803–21.
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