Cytokines

Human Recombinant FGF-6, ACF

Fibroblast growth factor 6, animal component-free

Catalog #	78185	25 µg
	78185.1	100 µg
	78185.2	1000 µg

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Product Description

Fibroblast growth factor 6 (FGF-6) is a heparin-binding member of the FGF family, which are regulators of cell proliferation, differentiation, and function. FGF-6 binds and signals through the FGF receptors 1c, 2c, and 4 (Ornitz et al.). FGF-6 is a potent mitogen for fibroblasts, vascular endothelial cells, and prostate carcinoma cells (Asada et al.; Pizette et al.; Ropiquet et al.). FGF-6 is primarily expressed in epithelial and mesenchymal cell lineages. In development, FGF-6 is expressed in skeletal muscle, consistent with its role in muscle differentiation and regeneration (Floss et al.). FGF-6 has also been shown to promote chondrogenesis in embryonic somites in conjunction with transforming growth factor beta 2 (TGF-β2; Grass et al.). This product is animal component-free.

Product Information

Alternative Names:	Fibroblast growth factor 6, HBGF-6, Heparin-binding growth factor 6, Heparin secretory-transforming protein 2, HST-2, HSTF-2
Accession Number:	P10767
Amino Acid Sequence:	MGTRANNTLL DSRGWGTLLS RSRAGLAGEI AGVNWESGYL VGIKRQRRLY CNVGIGFHLQ VLPDGRISGT HEENPYSLLE ISTVERGVVS LFGVRSALFV AMNSKGRLYA TPSFQEECKF RETLLPNNYN AYESDLYQGT YIALSKYGRV KRGSKVSPIM TVTHFLPRI
Predicted Molecular Mass:	18.9 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

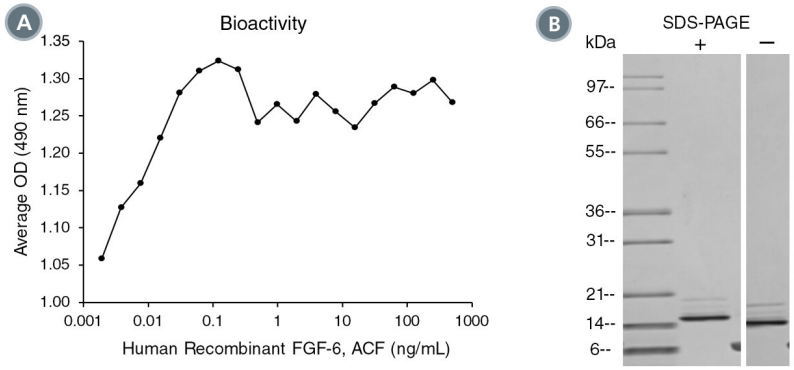
Specifications

Activity:	The specific activity is ≥ 1.0 x 10^6 units/mg (EC50 ≤ 1 ng/mL) as determined by a cell proliferation assay using NR6R-3T3 cells in the presence of 1 µg heparin.
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-6, ACF was tested by its ability to promote proliferation of NR6R-3T3 cells in the presence of 1 µg 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 0.00442 ng/mL. (B) 1 µg of Human Recombinant FGF-6, ACF was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining. Human Recombinant FGF-6, ACF has a predicted molecular mass of 18.9 kDa.

Related Products

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References

Asada M et al. (1999) Characterization of fibroblast growth factor-6 expressed by Chinese hamster ovary cells as a glycosylated mitogen for human vascular endothelial cells. Growth Factors 16(4): 293–303.
Floss T et al. (1997) A role for FGF-6 in skeletal muscle regeneration. Genes Dev 11(16): 2040–51.
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Ornitz DM et al. (1996) Receptor specificity of the fibroblast growth factor family. J Biol Chem 271(25): 15292–7.
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