Cytokines

Human Recombinant FGF-10 (KGF-2)

Fibroblast growth factor 10

Catalog #	78037	10 µg
	78037.1	50 µg
	78037.2	500 µg
	78037.3	1000 µg

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Product Description

Fibroblast growth factor 10 (FGF-10) is a member of the fibroblast growth factor (FGF) family predominantly expressed by mesenchymal fibroblasts during embryonic development (Emoto et al.; Igarashi et al.). It binds with high affinity to fibroblast growth factor receptor 2-IIIb (FGFR2-IIIb), and also has a weaker affinity for FGFR1-IIIb (Beer et al.). FGF-10 and FGF-7 have similar receptor binding properties and target cell specificities but are differentially regulated by components of the extracellular matrix (Emoto et al.; Igarashi et al.). FGF-10 has been shown to mediate epithelial-mesenchymal interactions, which are essential to lung development (Sekine et al; Ware & Matthay). FGF-10 also has a role in mobilization and proliferation of lung-resident mesenchymal stem cells (MSCs) and protection and repair against acute lung injury (Tong et al.; Ware & Matthay) and endodermal differentiation of human pluripotent stem cells to insulin-producing pancreatic-like cells (Takeuchi et al.).

Product Information

Alternative Names:	FGFA, Fibroblast growth factor-10, Keratinocyte growth factor-2
Accession Number:	O15520
Amino Acid Sequence:	LGQDMVSPEA TNSSSSSFSS PSSAGRHVRS YNHLQGDVRW RKLFSFTKYF LKIEKNGKVS GTKKENCPYS ILEITSVEIG VVAVKAINSN YYLAMNKKGK LYGSKEFNND CKLKERIEEN GYNTYASFNW QHNGRQMYVA LNGKGAPRRG QKTRRKNTSA HFLPMVVHS
Predicted Molecular Mass:	19.3 kDa
Species:	Human
Cross Reactivity:	Mouse, Rat
Formulation:	Lyophilized after dialysis against phosphate-buffered saline.
Source:	E. coli

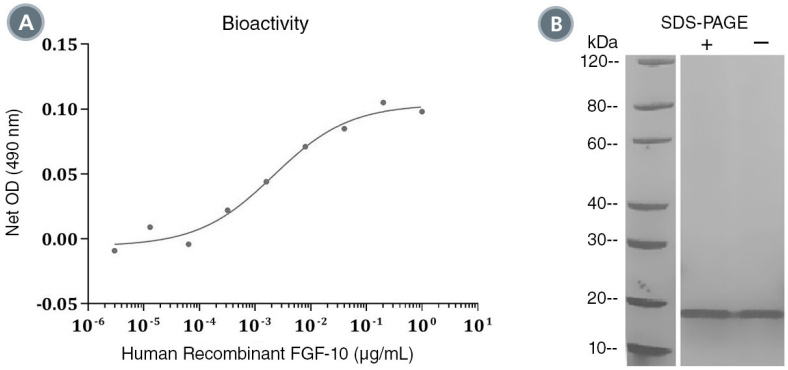
Specifications

Activity:	The specific activity is ≥ 5 x 10^4 units/mg (EC50 ≤ 20 ng/mL) as determined by a cell proliferation assay using 4MBr-5 cells.
Purity:	≥ 95 %
Endotoxin Level:	Measured by kinetic Limulus amebocyte lysate (LAL) analysis and is ≤ 0.2 EU/µg protein.

Preparation and Storage

Storage:	Store at -80°C.
Stability:	Stable as supplied for 12 months from date of receipt.
Preparation:	Centrifuge vial before opening. Resuspend 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. Store at 2 - 8°C for up to 1 week or at -20°C to -80°C for up to 3 months. Avoid repeated freeze-thaw cycles.

Data



(A) The biological activity of Human Recombinant FGF-10 (KGF-2) was tested by its ability to promote the 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 above example is less than 20 ng/mL.
(B) 2 µg of Human Recombinant FGF-10 (KGF-2) was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining. Human Recombinant FGF-10 (KGF-2) has a predicted molecular mass of 19.3 kDa.

Related Products

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References

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Ware LB & Matthay MA. (2002) Keratinocyte and hepatocyte growth factors in the lung: roles in lung development, inflammation, and repair. Am J Physiol Lung Cell Mol Physiol 282(5): L924–40.