

Recombinant Human FGF10

Accession #	O15520
Alternate Names	FGF10; FGF-10; fibroblast growth factor 10; Keratinocyte growth factor 2; KGF2; KGF-2
Source	Human embryonic kidney cell, HEK293-derived human FGF-10 protein
Protein sequence	Cys37-Ser208 & Gly41-Ser208
M.Wt	19.3 kDa
Appearance	Solution protein.
Stability & Storage	Avoid repeated freeze-thaw cycles. It is recommended that the protein be aliquoted for optimal storage. 3 years from date of receipt, -20 to -70 °C as supplied.
Concentration	0.2 mg/mL
Formulation	Dissolved in sterile PBS buffer.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. This solution can be diluted into other aqueous buffers.
Biological Activity	Measured in a cell proliferation assay using 4MBr-5 rhesus monkey epithelial cells. The EC50 for this effect is 1-8 ng/mL.
Shipping Condition	Shipping with dry ice.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Quality Control

Purity	> 95%, determined by SDS-PAGE.
Endotoxin	<0.010 EU per 1 ug of the protein by the LAL method.

Description

Fibroblast Growth Factor 10 (FGF-10) are heparin binding glycoproteins that exert a variety of biological activities toward cells of mesenchymal, neuronal, and epithelial origin. FGF-10 belongs to the subgroup of FGFs that also includes FGF-3, -7, and -22 [1]. Mature human FGF-10 is an approximately 20 kDa protein that contains a serine-rich region near its N-terminus [2, 3]. It shares 93% and 96% amino acid sequence identity with mouse and rat FGF-10, respectively. FGF-10 is secreted by mesenchymal cells and associates with extracellular FGF-BP [1, 4]. It preferentially binds and activates epithelial cell FGF R2 (IIIb) and interacts more weakly with FGF R1 (IIIb) [5]. The mitogenic and chemotactic properties of FGF-10 are critical in many tissues during embryogenesis. This includes limb bud initiation [6], palate development [7], branching morphogenesis and directional outgrowth of lung buds [8, 9], formation of the otic vesicle and cochlea [10], adipogenesis [11], and the development of

prostate, mammary, lacrimal, and submandibular salivary glands ^[12-14]. FGF R2 (IIIb) signaling in these responsive tissues is similarly important during embryogenesis ^[7, 10, 13-14]. The expression and function of FGF-10 are negatively regulated by Shh and BMP-4 in the developing lung ^[8, 9]. Overlapping expression patterns and activities with FGF-3, -7, and -8 suggest at least a partial redundancy in FGF-10 biology ^[7, 10, 14].

Reference

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