

### General Information

Synonyms	FGF10; FGF-10; fibroblast growth factor 10; Keratinocyte growth factor 2; KGF2; KGF-2
Accession #	O15520
Source	Human embryonic kidney cell, HEK293-derived human FGF-10 protein Cys37-Ser208 & Gly41-Ser208
Predicted Molecular weight	19.3 kDa

### Components and Storage

Formulation	Solution protein. Dissolved in sterile PBS buffer. This solution can be diluted into other aqueous buffers. Centrifuge the vial prior to opening.
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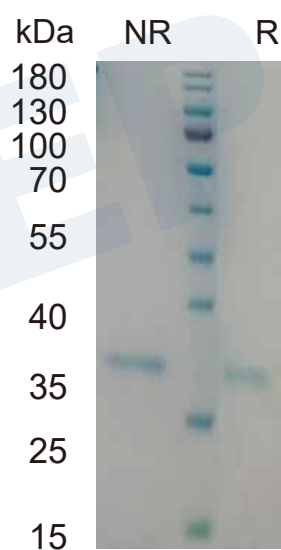
Storage and Stability	Avoid repeated freeze-thaw cycles. It is recommended that the protein be aliquoted for optimal storage. 12 months from date of receipt, -20 to -70 ° C as supplied.
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Shipping	Shipping with dry ice
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### Quality

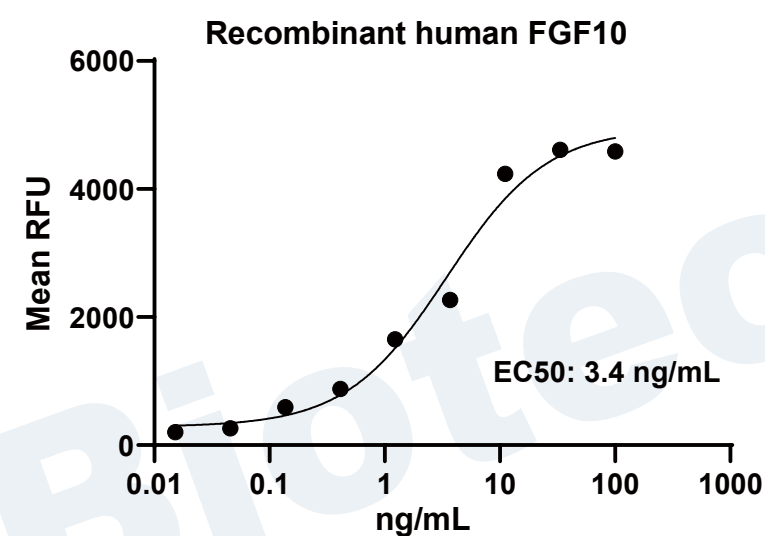
Purity	> 95%, determined by SDS-PAGE
Endotoxin Level	<0.010 EU per 1 ug of the protein by the LAL method
Activity	Measured in a cell proliferation assay using 4MBr-5 rhesus monkey epithelial cells. The EC50 for this effect is 1-8 ng/mL.

### SDS-PAGE



2 ug/lane protein was resolved with SDS-PAGE under non-reducing (NR) and reducing (R) conditions and visualized by Coomassie Blue staining.

### Bioactivity



Recombinant human FGF-10 (Catalog # HF-2026) stimulates cell proliferation of the 4MBr-5 rhesus monkey epithelial cells.

### Background

**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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