Recombinant Human/Rat/Bovine/Porcine FGF10 Protein

Cat. No. FGF10-05H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human/rat/bovine/porcine FGF-10 protein without tag was expressed in E. coli. Carrier protein-free. Mass spectrometry: single species with expected mass. Recovery from stock vial: >95%
Species	Human
Source	E.coli
Description	The protein encoded by this gene is a member of the fibroblast growth factor (FGF) family. FGF family members possess broad mitogenic and cell survival activities, and are involved in a variety of biological processes, including embryonic development, cell growth, morphogenesis, tissue repair, tumor growth and invasion. This protein exhibits mitogenic activity for keratinizing epidermal cells, but essentially no activity for fibroblasts, which is similar to the biological activity of FGF7. Studies of the mouse homolog of suggested that this gene is required for embryonic epidermal morphogenesis including brain development, lung morphogenesis, and initiation of lim bud formation. This gene is also implicated to be a primary factor in the process of wound healing.
Molecular Mass	17 kDa
Endotoxin	<0.005 EU/μg protein (below level of detection)

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Applications	Induced pluripotent and embryonic Stem cell Differentiation and maintenance; regulated by the high-affinity inhibitor, follistatin1
Storage	Resuspend in water at >100 µg/mL, prepare single use aliquots, add carrier protein if desired and store frozen at -20 or -80 centigrade
Storage Buffer	Lyophilized from PBS

GENE INFORMATION

Gene Name	FGF10 fibroblast growth factor 10 [Homo sapiens (human)]
Official Symbol	FGF10
Synonyms	FGF10; fibroblast growth factor 10; fibroblast growth factor 10; FGF-10; keratinocyte growth factor 2; produced by fibroblasts of urinary bladder lamina propria
Gene ID	2255
mRNA Refseq	NM_004465
Protein Refseq	NP_004456
MIM	602115
UniProt ID	O15520

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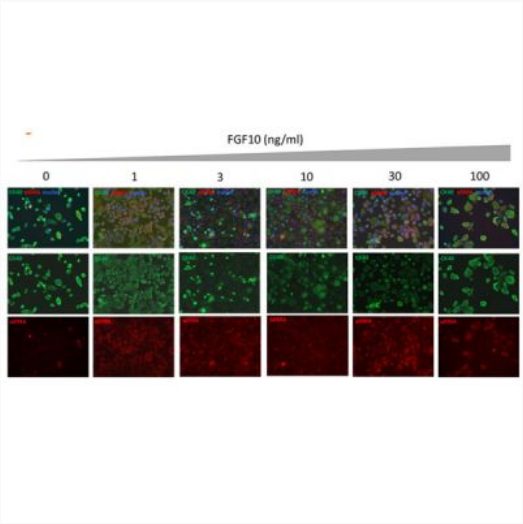
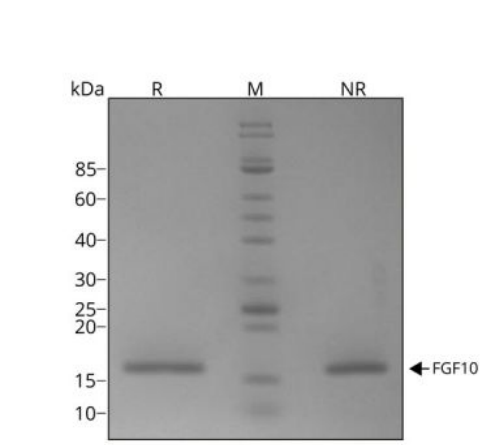
Bioactivity



FGF10 supports epithelial to mesenchymal transitionin human primary keratinocytes. Epithelial to mesenchymal transitionis a crucial morphogenetic process during development in which cells lose their epithelial characteristics and acquire migratory mesenchymal properties. Human FGF10 protein has an important role both during the embryonic EMTand on cancer cell initiation of metastasis (type III EMT). Induction of EMT in human primary keratinocytes following treatment with FGF-10. Induction of EMT was evaluated using immunofluorescence staining to determine expression of the epithelial markerand mesenchymal markerin human primary epidermal keratinocytes after 4 days treatment with FGF-10 (0-100 ng/mL).

Purity	 FGF10 migrates as a single band at 17 kDa in non-reducingconditions and upon reduction (R). No contaminating protein bands are visible. Purified recombinant human FGF10 protein was resolved using 15% w/v SDS-PAGE in reducedand non-reduced conditionsand stained with Coomassie Brilliant Blue R250.

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