Datasheet

Cat. No. PH2039

# Recombinant Human KGF/FGF7

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| Accession # | P21781 |
| Alternate Names | FGF7; FGF-7; fibroblast growth factor 7HBGF-7; HBGF7; HBGF-7; Heparin-binding growth factor 7; |
| Source | Human embryonic kidney cell, HEK293-derived human FGF-7 protein |
| Protein sequence | Cys32-Thr194 |
| M.Wt | 18.9 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 2-20 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

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

## Description

Fibroblast growth factor-7(FGF-7) is one of 22 known members of the mouse FGF family of secreted proteins that plays a key role in development, morphogenesis, angiogenesis, wound healing, and tumorigenesis [1-4]. KGF expression is restricted to cells of mesenchymal origin. When secreted, it acts as a paracrine growth factor for nearby epithelial cells [1]. KGF speeds wound healing by being dramatically upregulated in response to damage to skin or internal structures that results in high local concentrations of inflammatory mediators such as IL-1 and TNF-alpha [2, 5]. KGF promotes cell mig -ration and invasion, and mediates melanocyte transfer to keratinocytes upon UVB radiation [6, 7]. It has been used ectopically to avoid chemotherapy -induced oral mucositis in patients with hematological malignancies [1]. Deletion of KGF affects kidney development, producing abnormally small ureteric buds and fewer nephrons [8]. It also impedes hair follicle differentiation [9]. The 194 amino acid (aa)

KGF precursor contains a 31 aa signal sequence and, like all other FGFs, an ~120 aa beta -trefoil scaffold that includes receptor- and heparin-binding sites. KGF signals only through the IIIb splice form of the tyrosine kinase receptor, FGF R2 (FGF R2-IIIb/KGF R) [10]. Receptor dimerization requires an octameric or larger heparin or heparin sulfate proteoglycan [11]. FGF-10, also called KGF2, shares 51% aa identity and similar function to KGF, but shows more limited expression than KGF and uses an additional receptor, FGF R2-IIIc [12]. Following receptor engagement, KGF is typically degraded, while FGF-10 is recycled [12]. Mature human KGF, which is active across species, shares 98% aa sequence identity with bovine, equine, ovine and canine, 96% with mouse and porcine, and 92% with rat KGF, respectively.

## Reference


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