

# Recombinant Human FGF7

Catalog Number: 923-FG7



**OrganRegen, INC.**

*Creating Solutions for Organoid Cultures*

## DESCRIPTION

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### Background:

FGF-7 (fibroblast growth factor-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]. FGF-7 promotes cell migration and invasion, and mediates melanocyte transfer to keratinocytes upon UVB radiation [2]. It has been used ectopically to avoid chemotherapy-induced oral mucositis in patients with hematological malignancies. Deletion of FGF-7 affects kidney development, producing abnormally small ureteric buds and fewer nephrons [3]. It also impedes hair follicle differentiation [4]. The 194 amino acid (aa) FGF-7 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.

### Source:

*Chinese Hamster Ovary cell line*

### Protein Construction:

A DNA sequence encoding the amino acids (Cys32-Thr194) of human FGF-7 (Accession Number: P21781) was expressed.

### Synonyms:

HBGF-7; Heparin-binding growth factor 7; keratinocyte growth factor; KGF.

## SPECIFICATIONS

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### Purity:

≥ 95%, by SDS-PAGE visualized with quantitative densitometry by Coomassie® Blue Staining.

### Biological Activity:

Measured in CellTiter-Glo 3D Cell Viability Assay using human bronchoalveolar organoids. The ED50 for this effect is 5-10 ng/ml.

### Endotoxin Level:

<0.10 EU per 1 µg of the protein by the LAL method

### Calculated Molecular Weight:

19 kDa

### SDS-PAGE:

22 kDa, reducing conditions

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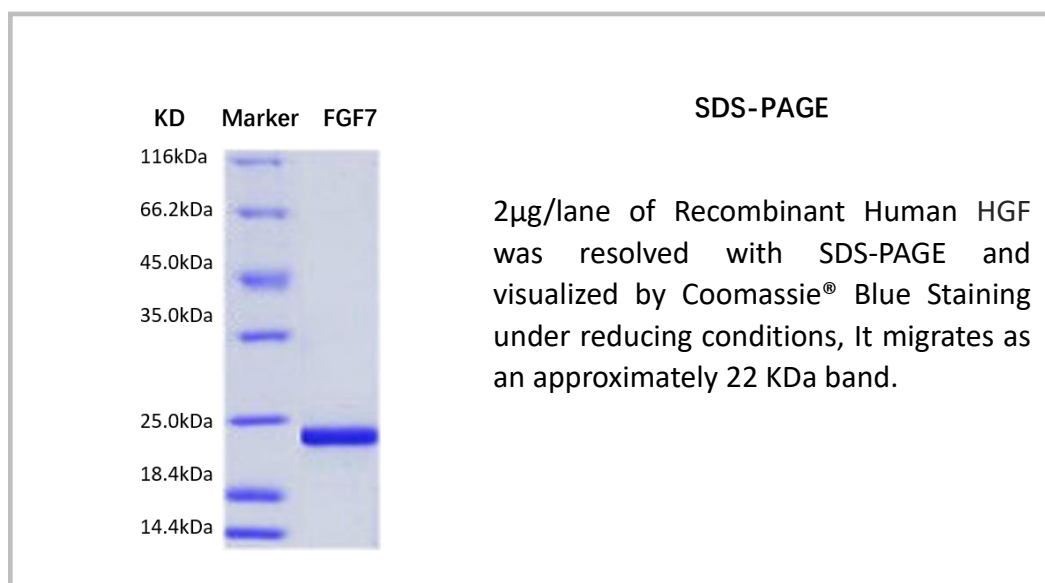


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## DATA

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## FORMULATION AND STORAGE

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### Formulation:

The product is Lyophilized from a 0.22 µm filtered solution in PBS.

### Shipping:

The product is shipped on ice. Upon receipt, store it immediately as methods recommended below.

### Reconstitution:

Reconstitute in sterile PBS buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL.

### Stability & Storage:

24 months, -20 to -70 °C, under powder state;

12 months, -20 to -70 °C, under sterile conditions after reconstitution;

2 month, 2 to 8 °C under sterile conditions after reconstitution;

avoid repeated freeze-thaw cycles.

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## References:

1. Finch, P.W. and J.S. Rubin, Keratinocyte growth factor expression and activity in cancer: implications for use in patients with solid tumors. *J Natl Cancer Inst*, 2006. **98**(12)
2. Niu, J., et al., Keratinocyte growth factor/fibroblast growth factor-7-regulated cell migration and invasion through activation of NF-kappaB transcription factors. *J Biol Chem*, 2007. **282**(9)
3. Qiao, J., et al., FGF-7 modulates ureteric bud growth and nephron number in the developing kidney. *Development*, 1999. **126**(3)
4. Guo, L., L. Degenstein, and E. Fuchs, Keratinocyte growth factor is required for hair development but not for wound healing. *Genes Dev*, 1996. **10**(2):