

# Human FGF18 / FGF-18 Protein (His Tag)

Catalog Number: 13206-H08H



Sino Biological  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

FGF-18; ZFGF5

### Protein Construction:

A DNA sequence encoding the human FGF18 (O76093) (Met 1-Ala 207) was fused with a polyhistidine tag at the C-terminus.

**Source:** Human

**Expression Host:** HEK293 Cells

## QC Testing

**Purity:** > 92 % as determined by SDS-PAGE

### Bio Activity:

**1. Measured by its binding ability in a functional ELISA. 2. Immobilized human FGF18 (Cat: 13206-H08H) at 10 µg/mL (100 µl/well) can bind? Rat FGFR4 (Cat:80093-R02H), The EC<sub>50</sub> of Rat FGFR4 (Cat:80093-R02H) is 1.17 µg/mL.**

### Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

### Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

**Predicted N terminal:** Glu 28

### Molecular Mass:

The secreted recombinant human FGF18 comprises 191 amino acids and has a predicted molecular mass of 22.3 kDa. The apparent molecular mass of rh FGF18 is approximately 32 kDa in SDS-PAGE under reducing conditions due to glycosylation.

### Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

## Usage Guide

### Storage:

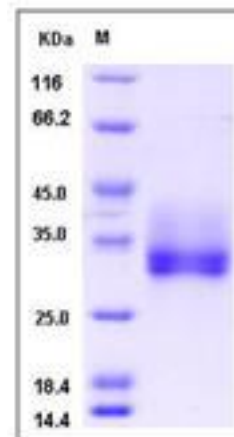
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

Fibroblast growth factor 18 (FGF18) 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. It has been shown in vitro that FGF18 is able to induce neurite outgrowth in PC12 cells. Studies of the similar proteins in mouse and chick suggested that this protein is a pleiotropic growth factor that stimulates proliferation in a number of tissues, most notably the liver and small intestine. Experiment data identified FGF18 as a selective ligand for FGFR3 in limb bud mesenchymal cells, which suppressed proliferation and promoted their differentiation and production of cartilage matrix. FGF18 appears to regulate cell proliferation and differentiation positively in osteogenesis and negatively in chondrogenesis.

## References

1.Ohbayashi N, *et al.* (2002) FGF18 is required for normal cell proliferation and differentiation during osteogenesis and chondrogenesis. *Genes Dev.* 16(7): 870-9. 2.Davidson D, *et al.* (2005) Fibroblast growth factor (FGF) 18 signals through FGF receptor 3 to promote chondrogenesis. *J Biol Chem.* 280(21): 20509-15. 3.Liu Z, *et al.* (2007) FGF18 is required for early chondrocyte proliferation, hypertrophy and vascular invasion of the growth plate. *Dev Biol.* 302(1): 80-91.

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