Mouse FGF18 / FGF-18 Protein (His Tag)

Catalog Number: **50177-M08H**

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

D130055P09Rik; FGF-18

Protein Construction:

A DNA sequence encoding the mouse FGF18 (NP_032031.1) (Met 1-Gly 207) was fused with a polyhistidine tag at the C-terminus.

Source: Mouse

Expression Host: HEK293 Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio Activity:

1. Measured by its binding ability in a functional ELISA. 2. Immobilized mouse FGF18 (Cat:50177-M08H) at 10 μg/mL (100 μl/well) can bind? Rat FGFR4 (Cat:80093-R02H), The EC_{50} of Rat FGFR4 (Cat:80093-R02H) is 0.44 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 ℃

Predicted N terminal: Glu 28

Molecular Mass:

The secreted recombinant mouse FGF18 comprises 191 amino acids and has a predicted molecular mass of 22.5 kDa. As a result of glycosylation, it migrates as an approximately 30-35 kDa band in SDS-PAGE under reducing conditions.

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:

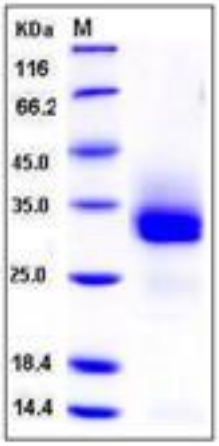
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

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 datas 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.