

Mouse FGF18 / FGF-18 Protein (His Tag)

Catalog Number: 50177-M08H



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

Fgf18, RP23-413O19.3, 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: Human 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 EC50 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 °C

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 and mannitol are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

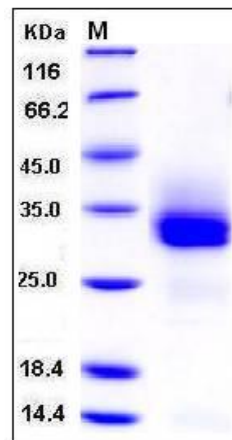
Usage Guide

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.

SDS-PAGE:



Reconstitution:

Detailed reconstitution instructions are sent along with the products.

Protein Description

Fibroblast growth factor 18, also known as FGF-18, and FGF18, is a secreted protein which belongs to the fibroblast growth factors (FGFs) family. FGFs and their high-affinity receptors contribute to the autocrine growth stimulation in several malignancies. FGF18 is abundantly expressed in mouse embryonic lungs. It plays roles in lung alveolar development during late embryonic lung development stages. The cell proliferation during the terminal saccular stage stimulated by FGF18 might play roles in the remodeling of the distal lung. FGF18 expression is up-regulated in colorectal tumours and is progressively enhanced during colon carcinogenesis reaching very high levels in carcinoma. FGF18 affects both tumour cells and tumour microenvironment in a pro-tumorigenic and pro-metastatic way. FGF18 is almost generally over-expressed in colon cancer and exerts pro-tumorigenic effects both in the epithelial and the stromal compartments by stimulating growth and survival of tumour cells, migration of fibroblasts and neovascularization. FGF18 has been shown to regulate chondrocyte proliferation and differentiation by signaling through FGF receptor 3 (FGFR3) and to regulate osteogenesis by signaling through other FGFRs. FGF18 regulates skeletal vascularization and subsequent recruitment of osteoblasts / osteoclasts through regulation of early stages of chondrogenesis and VEGF expression. FGF18 coordinates neovascularization of the growth plate with chondrocyte and osteoblast growth and differentiation.

References

1. Ohbayashi, N. et al., 2002, Genes Dev. 16 (7): 870-9.
2. Usui, H. et al., 2004, Biochem Biophys Res Commun. 322 (3): 887-92.
3. Liu, Z. et al., 2007, Dev Biol. 302 (1): 80-91.
4. Reinhold, M. et al., 2007, J Biol Chem. 282 (6): 3653-63.
5. Sonvilla, G. et al., 2008, Carcinogenesis. 29 (1): 15-24.

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