Recombinant Mouse Fibroblast Growth Factor-21 (mFGF-21) without Tag

Type:	Recombinant	**Cat. No.:**	42189
Tag:	None (his-tag removed)	**Size:**	100 µg
Source:	*E.Coli*	**Purity:**	>95%
Other names:	FGF21	**Species:**	Mouse

Introduction to the Molecule

FGF-21, a polypeptide with 210 amino acid residues produced mostly from the liver tissue.[1] Mouse FGF-21 shares 75% identity as human FGF-21. Recent animal studies indicate it possesses potent beneficial effects on glucose and lipid metabolism and insulin sensitivity.[2] Increasing data shows FGF-21 can significantly stimulate glucose uptake in mature adipocytes. And The lowered LDL-cholesterol and increased HDL-cholesterol can also be observed.[2,3] FGF-21 exerts its bioactivity through interaction with membrane bound FGF receptors (FGFRs) which requires β-Klotho as a co-factor to bind and activate FGFR signaling.[4,5] The activation of FGF-21 can induce the stimulation of diverse downstream pathways medicated by MAPK,FRS-2, SHP-2, PI3K, raf, stat and other signaling molecules.[6-9] In sum, FGF-21 induces a variety of significant beneficial metabolic changes without apparent adverse effects which makes this factor a hot candidate to treat some metabolic diseases.[10]

Description

Total 184 AA Mw: 20kDa (calculated). N-terminal His-tag removed, 2 extra AA left (highlighted).

Amino Acid Sequence

GA AY PIPDSSPLLQ FGGQVRQRYL YTDDDQDTEA HLEIREDGTV VGAAHRSPES LLELKALKPG VIQILGVKAS RFLCQQPDGA LYGSPHFDPE ACSFRELLLE DGYNVYQSEA HGLPLRLPQK DSPNQDATSW GPVRFLPMPG LLHEPQDQAG FLPPEPPDVG SSDPLSMVEP LQGRSPSYAS

Formulation

Lyophilized in 1 mg/mL in PBS.

Endotoxin Level

<0.2 EU/ug.

Reconstitution

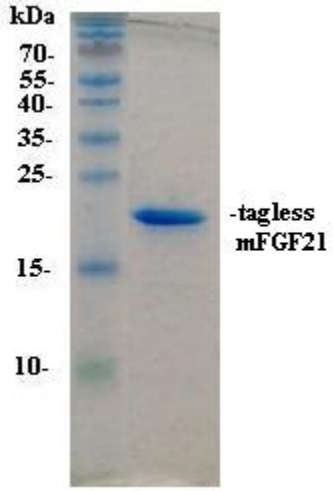
Add sterile deionized water to prepare a working stock solution of approximately 1 mg/mL and let the lyophilized pellet dissolve completely.

Storage
Store lyophilized protein at –20°C. Aliquot reconstituted protein and store at –80°C. Avoid repeated freezing /thawing cycles.

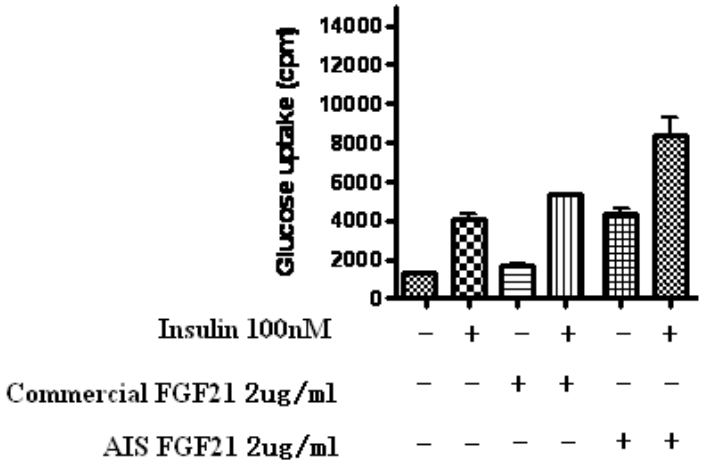
Quality Control Test
BCA to determine quantity of the protein.
SDS PAGE to determine purity of the protein.

Applications
Cell culture, animal studies, ELISA and Western blotting.

SDS-PAGE Gel



Glucose uptake assay



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Publications cited this product:

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[2] So WY, Cheng Q, et al. High Glucose Represses β-Klotho Expression and Impairs Fibroblast Growth Factor 21 Action in Mouse Pancreatic Islets: Involvement of Peroxisome Proliferator-Activated Receptor γ Signaling. *Diabetes.* 2013 Nov;62(11):3751-9.
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