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**42189. Mouse Fibroblast Growth Factor-21 (mFGF-21), Tagless**

Type:	Recombinant	Cat. No.:	42189
Tag:	No Tag	Size:	100 µg
Source:	E.Coli	Purity:	>95%
Other names:	FGF21	Species:	Mouse

**Description**

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

**Introduction to the Molecule**

FGF-21, a polypeptide with 210 amino acid residues produced mostly from the liver tissue. 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. 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. FGF-21 exerts its bioactivity through interaction with membrane bound FGF receptors (FGFRs) which requires  $\beta$ -Klotho as a co-factor to bind and activate FGFR signaling. The activation of FGF-21 can induce the stimulation of diverse downstream pathways mediated by MAPK,FRS-2, SHP-2, PI3K, raf, stat and other signaling molecules. 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.

**Amino Acid Sequence**

GAAYPIPDSSPLLQFGGQVRQRYLYTDDDDQDTEAHLEIREDGTVVGAHRSPESLLELKALKPG  
VIQILGVKASRFLCQQPDGALYGSPHFDPEACSFRELLLEDGYNVYQSEAHGLPLRLPQKDSPNQ  
DATSWGVPVRFLPMPGLLHEPQDQAGFLPPEPPDVGSSDPLSMVEPLQGRSPSYAS

**Formulation:** Lyophilized in 1 mg/mL in PBS.

**Endotoxin Level:** <0.2 EU/ug.

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

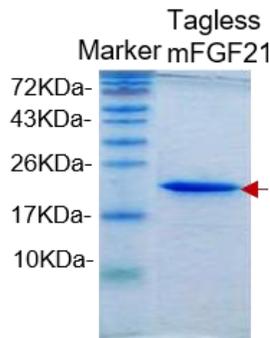
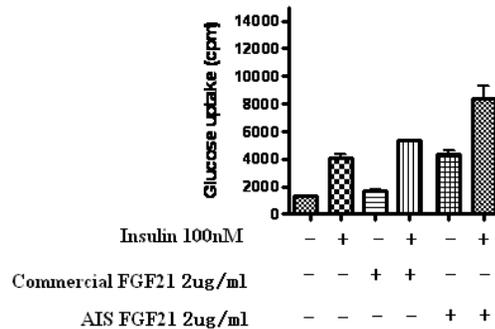
**Reconstitution:** Add sterile deionized water to prepare a working stock solution of approximately 1 mg/mL and let the lyophilized pellet dissolve completely.

**Storage:** Store lyophilized protein at  $-20^{\circ}\text{C}$ . Aliquot reconstituted protein and store at  $-80^{\circ}\text{C}$ . Avoid repeated freezing /thawing cycles.

**Quality Control Test**

BCA to determine quantity of the protein.

SDS PAGE to determine purity of the protein.

**SDS-PAGE Gel**

**Glucose Uptake**

**Publications citing this product**

1. Lin Z, Tian H, et al. Adiponectin mediates the metabolic effects of FGF21 on glucose homeostasis and insulin sensitivity in mice. *Cell Metab.* 2013 May 7;17(5):779-89
2. So WY, Cheng Q, et al. High Glucose Represses  $\beta$ -Klotho Expression and Impairs Fibroblast Growth Factor 21 Action in Mouse Pancreatic Islets: Involvement of Peroxisome Proliferator-Activated Receptor  $\gamma$  Signaling. *Diabetes.* 2013 Nov;62(11):3751-9.
3. Li H, Gao Z, et al. Sodium butyrate stimulates expression of fibroblast growth factor 21 in liver by inhibition of histone deacetylase 3. *Diabetes.* 2012 Apr;61(4):797-806.
4. Ge X, Chen C, et al. Fibroblast growth factor 21 induces glucose transporter-1 expression through activation of the serum response factor/Ets-like protein-1 in adipocytes. *J Biol Chem.* 2011 Oct 7;286(40):34533-41.