Recombinant FGF-21 with His-tag (Mouse)

Type:	Recombinant	**Cat. No.:**	42184
Tag:	His	**Size:**	0.1 mg
Source:	E.Coli	**Purity:**	>95%
Other names:	FGF21	**Species:**	Mouse

Introduction to the Molecule

FGF21, a polypeptide with 210 amino acid residues produced mostly from the liver tissue.[1] Mouse FGF21 shares 75% identity as human FGF21. Recent animal studies indicate it possesses potent beneficial effects on glucose and lipid metabolism and insulin sensitivity.[2] Increasing data shows FGF21 can significantly stimulate glucose uptake in mature adipocytes. And The lowered LDL-cholesterol and increased HDL-cholesterol can also be observed.[2,3] FGF21 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 FGF21 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, FGF21 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 207AA Mw: 23kDa (calculated). N-terminal His-tag and TEV cleavage site, 25 extra AA (highlighted).

Amino Acid Sequence

MSYYHHHHHH DYDIPTTENL YFQGA 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.

Reconstitution

Add 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.

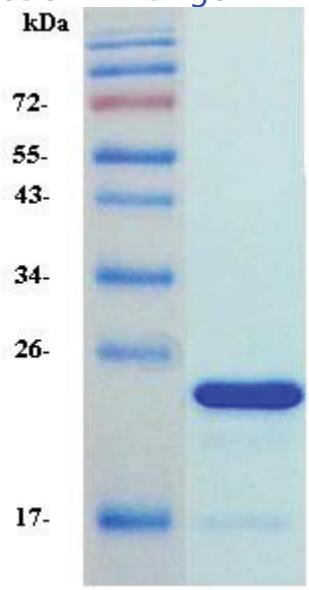
Quality Control Test

BCA to determine quantity of the protein.
SDS PAGE to determine purity of the protein.

Applications

ELISA and Western blotting.

SDS - PAGE gel



-Mouse FGF21

Reference:

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[4] Hiroshi Kurosu et al. Tissue-specific Expression of βKlotho and Fibroblast Growth Factor (FGF) Receptor Isoforms Determines Metabolic Activity of FGF19 and FGF21. *J Biol Chem*. 282(37): 26687–26695. 2007

[5] Ogawas Y et al. BetaKlotho is required for metabolic activity of fibroblast growth factor 21 *Proc Natl Acad Sci USA* 104: 7432-7437, 2007.

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[7]Rosa Carballada et al. Phosphatidylinositol-3 kinase acts in parallel to the ERK MAP kinase in the FGF pathway during Xenopus mesoderm induction. *Development* 128, 35-44 (2001)

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