

## Recombinant Fibroblast Growth Factor-21 with His-tag (Human)

|                     |               |                  |        |
|---------------------|---------------|------------------|--------|
| <b>Type:</b>        | Recombinant   | <b>Cat. No.:</b> | 41184  |
| <b>Tag:</b>         | His           | <b>Size:</b>     | 0.1 mg |
| <b>Source:</b>      | <i>E.Coli</i> | <b>Purity:</b>   | >95%   |
| <b>Other names:</b> | FGF21         | <b>Species:</b>  | Human  |

### 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  $\beta$ -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 mediated 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 206AA Mw: 22.5kDa (calculated). N-terminal His-tag and TEV cleavage site, 25extra AA (highlighted).

### Amino Acid Sequence

```
MSYYHHHHHH  DYDIPTTENL  YFQGA  HP  IPDSSPLLQF  GGQVRQRYLY
TDDAQQTEAH  LEIREDGTVG  GAADQSPESL  LQLKALKPGV  IQILGVKTSR
FLCQRPDGAL  YGSLHFDPEA  CSFRELLLED  GYNVYQSEAH  GLPLHLPGNK
SPHRDPAPRG  PARFLPLPGL  PPALPEPPGI  LAPQPPDVGS  SDPLSMVGPS
QGRSPSYAS
```

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

## Applications

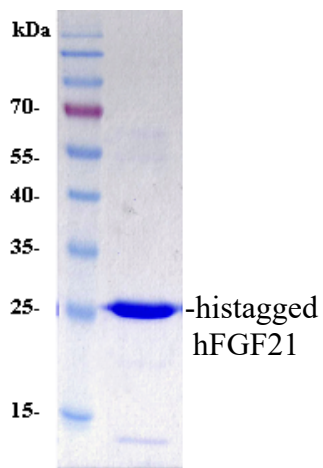
ELISA and Western blotting.

## Quality Control Test

BCA to determine quantity of the protein.

SDS PAGE to determine purity of the protein.

## SDS-PAGE Gel



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