

# PRODUCT DATA SHEET



Bioworld Technology, Inc.

## Recombinant FGF-21, Human

Catalog Number: BK0040-1mg

Source: Escherichia coli.

Quantity: 1mg

### Description:

Fibroblast Growth Factor-21 (FGF-21) is a metabolic cytokine belonging to the heparin-binding FGF family. Along with FGF-19/15 and FGF-23, FGF-21 is categorized as a member of the atypical FGF subfamily, as it must be complexed to the Klotho co-receptor in order to bind to the FGF receptors and activate the downstream signaling pathway. In vivo FGF-21 is expressed in liver, pancreas, adipose tissue, and skeletal muscle, and it plays a central role in the energy metabolism. The expression of FGF-21 is stimulated by free fatty acids and insulin resistant states and is correlated with whole-body insulin resistance. FGF-21 activates glucose uptake in adipocytes and increases insulin sensitivity, implicating it as a novel target with potential anti-diabetic properties. Recombinant human Fibroblast Growth Factor-21 (rhFGF-21) produced in E.coli is a single non-glycosylated polypeptide chain containing 182 amino acids. A fully biologically active molecule, rhFGF-21 has a molecular mass of 19.5 kDa analyzed by reducing SDS-PAGE and is obtained by proprietary chromatographic techniques at GenScript.

### Molecular Weight:

19.5 kDa, observed by reducing SDS-PAGE.

### Purity:

> 95% as analyzed by SDS-PAGE and HPLC.

### Biological Activity:

ED50 < 0.5 µg/mL, measured by a cell proliferation assay using NIH-3T3 cells in the presence of 1.25 µg/mL mouse Klotho and 10 µg/mL heparin, corresponding to a specific activity of > 2 × 10<sup>3</sup> units/mg.

### Physical Appearance:

Sterile Filtered White lyophilized (freeze-dried) powder.

### Formulation:

Lyophilized after extensive dialysis against PBS.

### AA Sequence:

GHPIPDSSPLLQFGGQVRQRY-  
LYTDDAQQTEAHLEIREDTVG-  
GAADQSPESLLQLKALPGVI-  
QILGVKTSRFLCQRPDGYLSLHFDPEACSFRE  
LLEDGYNVYQSEAHGLPLHLPGNKSPHRD-  
PAPRGPAPFLPLPGLPPALPEPPGI-  
LAPQPPDVGSSDPLSMVGPSQGRSPSYAS

### Endotoxin:

< 0.2 EU/µg, determined by LAL method.

### Reconstitution:

Reconstituted in ddH<sub>2</sub>O at 100 µg/mL.

### Storage:

Lyophilized recombinant human Fibroblast Growth Factor-21 (rhFGF-21) remains stable up to 6 months at -80 °C from date of receipt. Upon reconstitution, rhFGF-21 remains stable up to 2 weeks at 4 °C or up to 3 months at -20 °C.

### Usage:

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