Data Sheet (Cat.No.TMPS-00173)

TargetMol

FGF-21 Protein, Human, Recombinant

General Information

Synonyms:	FGF21;FGFL;fibroblast growth factor-21
Protein Construction:	His29-Ser209
Species:	Human
Expression Host:	E. coli
Accession:	Q9NSA1
Molecular Weight:	~19.5 kDa (Reducing conditions)

QC Testing

Biological Activity:	ED 50 < 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 > 2.0 × 10 3 units/mg.
Purity:	> 95% as determined by SDS-PAGE; > 95% as determined by HPLC
Endotoxin:	< 0.2 EU/μg of protein as determined by the LAL method.
Formulation:	Lyophilized from a 0.2 μm filtered solution in PBS.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in sterile deionized water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

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.