Data Sheet (Cat.No.TMPY-06935)

TargetMol

FGF-21 Protein, Human, Recombinant (Low Endotoxin)

General Information

Synonyms:	UNQ3115 / PRO10196;fibroblast growth factor 21
Protein Construction:	A DNA sequence encoding the Human FGF21 (NP_061986.1) (His29-Ser209) was expressed. Predicted N terminal: Met
Species:	Human
Expression Host:	E. coli
Accession:	NP_061986.1
Molecular Weight:	19.55 kDa (predicted); 22.4 kDa (reducing conditions)

QC Testing

Biological Activity:	Measured in a cell proliferation assay using NIH-3T3 mouse embryonic fibroblast cells. The ED50 for this effect is 0.1-0.6 μg/mL in the presence of Recombinant Mouse Klotho beta.
Purity:	≥ 95 % as determined by SDS-PAGE.
Endotoxin:	< 10 EU/mg of the protein.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstituted with sterile deionized water to 0.63 mg/mL. Reconstitution conditions may vary depending on the lot.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

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 (FGF21) is a member of the fibroblast growth factor (FGF) family. FGF family members possess broad mitogenic and cell survival activities and are involved in a variety of biological processes including embryonic development, cell growth, morphogenesis, tissue repair, tumor growth and invasion. FGF-21 has a hydrophobic amino terminus, which is a typical signal sequence, and appears to be a secreted protein. The metabolic regulator fibroblast growth factor 21 (FGF21) has antidiabetic properties in animal models of diabetes

and obesity. FGF21 is a novel adipokine associated with obesity-related metabolic complications in humans. The paradoxical increase of serum FGF21 in obese individuals, which may be explained by a compensatory response or resistance to FGF21, warrants further investigation. FGF-21, which we have identified as a novel metabolic factor, exhibits the therapeutic characteristics necessary for an effective treatment of diabetes.

Reference

Zhang X,et al.(2008) Serum FGF21 levels are increased in obesity and are independently associated with the metabolic syndrome in humans. Diabetes. 57(5): 1246-53.

Lundåsen T,et al.(2007) PPARalpha is a key regulator of hepatic FGF21. Biochem Biophys Res Commun. 360(2): 437-40.

Kharitonenkov A,et al.(2005) FGF-21 as a novel metabolic regulator. J Clin Invest. 115(6): 1627-35.

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