
Product Data Sheet

Product Name: FGF 21 Human
 Cat. No.: GP20245
 Batch No.: 1

Product Data

Purity	Greater than 95.0% as determined by SDS-PAGE.	Source	Escherichia Coli.
Physical Appearance	Sterile Filtered white lyophilized powder.	Shipping Condition	Shipped at Room temp.
Synonyms	Fibroblast growth factor 21; FGF-21.		
Amino Acid Sequence	GHPIPDS SPLLQFGGQV RQRYLYTDDA QQTEAHLEIR EDGTVGGAAD QSPESLLQLK ALKPGVIQIL GVKTSRFLCQ RPDGALYGSL HFDPEACSFRELLLEDGYNV YQSEAHGLPL HLPGNKSPHR DPAPRGPARGF LPLPGLPPAPPEPPGILAPQ PPDVGSSDPL SMVGPSQGRS PSYAS		
Solubility	It is recommended to reconstitute the lyophilized Fibroblast Growth Factor-21 Human Recombinant sterile 18MΩ-cm H ₂ O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.		
Formulation	Lyophilized from PBS, pH 7.4.		

Introduction

The FGFs are a family of more than 20 small (~17–26 kDa) secreted peptides. The initial characterization of these proteins focused on their ability to stimulate fibroblast proliferation. This mitogenic activity was mediated through FGF receptors (FGFRs) 1, 2, or 3. A fourth closely related tyrosine kinase receptor (FGFR4) was able to bind the FGFs but did not lead to a mitogenic response. FGFs modulate cellular activity via at least 5 distinct subfamilies of high-affinity FGF receptors (FGFRs): FGFR-1, -2, -3, and -4, all with intrinsic tyrosine kinase activity and, except for FGFR-4, multiple splice isoforms, and FGFR-5, which lacks an intracellular kinase domain. There is growing evidence that FGFRs can be important for regulation of glucose and lipid homeostasis. The overexpression of a dominant negative form of FGFR-1 in cells leads to diabetes in mice, which thus implies that proper FGF signaling is required for normal cell function and glycemia maintenance. FGFR-2 appears to be a key molecule during pancreatic development. Moreover, FGFR-4 has been implicated in cholesterol metabolism and bile

Caution: Product has not been fully validated for medical applications. For research use only.

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acid synthesis. FGF-19, has been shown to cause resistance to diet-induced obesity and desensitization and to improve glucose and lipid profiles in diabetic rodents. Since these effects, at least in part, are mediated through the observed changes in metabolic rates, FGF-19 can be considered as a regulator of energy expenditure. FGF-21 is preferentially expressed in liver, but an exact knowledge of FGF-21 bioactivity and its mode of action have been lacking to date. FGF-21 is a potent activator of glucose uptake on adipocytes, protects animals from diet-induced obesity when overexpressed in transgenic mice, and lowers blood glucose and triglyceride levels when therapeutically administered to diabetic rodents.

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 > 2.0 × 10³ units/mg.

Stability

Lyophilized FGF-21 Human Recombinant although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution Fibroblast Growth Factor 21 should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Background

FGF-21 (Human Recombinant) His29-Ser209, N-terminal, Gly, 19.5kDa

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