



Product Datasheet

Product Name	Fibroblast Growth Factor-21 Human Recombinant, His Tag
Cata No	CB500183
Source	<i>Escherichia Coli</i> .
Synonyms	Fibroblast growth factor 21, FGF-21.

Description

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 β cells leads to diabetes in mice, which thus implies that proper FGF signaling is required for normal β 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 acid synthesis.

FGF-19, has been shown to cause resistance to diet-induced obesity and insulin desensitization and to improve insulin, 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.

Fibroblast Growth Factor -21 Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 202 amino acids (29-209) and having a molecular mass of 21.6 kDa. The FGF-21 is fused to 20 amino acid His Tga at N-terminus and purified by proprietary chromatographic techniques.

Physical Appearance

Sterile Filtered colorless clear solution.

Purity

Greater than 90.0% as determined by SDS-PAGE.

Formulation

The FGF-21 His tag protein solution in 20mM Tris-HCL buffer pH-8 and 10% glycerol.

Stability

Store at 4°C if entire vial will be used within 2-4 weeks.

Store, frozen at -20°C for longer periods of time.

Please avoid freeze thaw cycles.

Sequence

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MGSSHHHHH SSGLVPRGSH MHPIPDSSPL
LQFGGQVRQR YLYTDDAQQT EAHLEIREDG
TVGGAADQSP ESSLQKALK
PGVIQILGVKTSRFLCQRPD GALYGSLHFD

Product Data Sheet
PEACSFRELL LEDGYM
GNKSPHRDPA PRGPARFLPL PGLPPAPPEP
PGILAPQPPD VGSSDPLSMV GPSQGRSPSY AS.

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