Recombinant Human Fibroblast Growth Factor 21

#R00116

Size: 5 μg/100 μg/500 μg

Stability & Storage

Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

Background

Fibroblast growth factor-21 (FGF-21) belongs to the large FGF family which is encoded by the FGF-21 gene and it is specifically induced by HMGCS2 activity. All FGF family members are heparin binding growth factors with a core 120 amino acid (a.a.) FGF domain that allows for a common tertiary structure and they are involved in a variety of biological processes including embryonic development, cell growth, morphogenesis, tissue repair, tumor growth and invasion. FGF-21 stimulates glucose uptake in differentiated adipocytes via the induction of glucose transporter SLC2A1/GLUT1 expression (but not SLC2A4/GLUT4 expression) and the activity depends on the presence of KLB. FGF-21 contains a 28 a.a. signal sequence and a 181 a.a. mature region but show limited binding to heparin. In addition, Mature human FGF-21 respectively shows 81 % a.a. identity to murine and rat FGF-21, and is known to be active on murine cells.

AA Sequence

HPIPDSSPLLQFGGQVRQRYLYTDDAQQTEAHLEIRE
DGTVGGAADQSPESLLQLKALKPGVIQILGVKTSRFL
CQRPDGALYGSLHFDPEACSFRELLLEDGYNVYQSE
AHGLPLHLPGNKSPHRDPAPRGPARFLPLPGLPPALP
EPPGILAPQPPDVGSSDPLSMVGPSQGRSPSYAS

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.

Product Specification

Accession	Q9NSA1
GeneID	26291
Species	Human
Source	Escherichia coli.
Molecular Weight	Approximately 19.4 kDa, a single non-glycosylated polypeptide chain containing 181 amino acids.
Purity	> 96 % by SDS-PAGE and HPLC analyses.
Biological Activity	Fully biologically active when compared to standard. The ED_{50} as determined by thymidine uptake assay using FGF-receptors transfected BaF3 cells is less than 0.5 μg/ml, corresponding to a specific activity of > 2.0×10^3 IU/mg in

	the presence of 5 μg/ml of rMuKlotho-β and 10 μg/ml of heparin.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation	Lyophilized from a 0.2 μm filtered concentrated solution in PBS, pH 7.4.
Endotoxin	Less than 1 EU/μg of rHuFGF-21 as determined by LAL method.