

Recombinant Rat FGF-21

Information

Gene ID	170580
Accession #	Q8VI80
Alternate Names	
Source	<i>Escherichia coli</i> .
M.Wt	Approximately 19.7 kDa, a single non-glycosylated polypeptide chain containing 180 amino acids.
AA Sequence	AYPISDSSPL LQFGGQVRQR YLYTDDDDQDT EAHLEIREDG TVVGTahrSP ESLLELKALK PGVIQILGVK ASRFLCQQPD GTLYGSPHFD PEACSFRELL LKDGYNVYQS EAHGLPLRLP QKDSQDPATR GPVRFPLMPG LPHEPQECPG VLPPEPPDVG SSDPLSMVEP LQGRSPSYAS
Appearance	White lyophilized powder.
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.
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, 500 mM NaCl, pH 7.4.
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.
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.
Shipping Condition	Gel pack.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Components and Storage

Components	5 µg	100 µg	500 µg
Recombinant Rat FGF-21	5 µg	100 µg	500 µg

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Quality Control

Purity	> 95 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/μg of rRtFGF-21 as determined by LAL method.

Description

Fibroblast growth factor 21 (FGF-21) encoded by the FGF-21 gene belongs to the large FGF family and it is specifically induced by HMGCS2 activity. In mice, brown adipose tissue becomes a source of systemic FGF-21 after cold exposure. 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. Recombinant rat FGF-21 contains 180 amino acids residues and show limited binding to heparin. In addition, rat FGF-21 respectively shows 81 % and 92 % a.a. identity to human and murine FGF-21, and it show activity on murine and human cells.

Reference

1. Nishimura T, Nakatake Y, Konishi M, et al. 2000. Biochim Biophys Acta. 1492:203-6.
2. Kharitononkov A, Shiyanova TL, Koester A, et al. 2005. J Clin Invest. 115:1627-35.
3. Kurosu H, Choi M, Ogawa Y, et al. 2007. J Biol Chem. 282:26687-95

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