Datasheet

Cat. No. P1377

Recombinant Rat Fibroblast Growth Factor 18

Information

Gene ID	29369
Accession #	O88182
Alternate Names	
Source	Escherichia coli.
M.Wt	Approximately 21.0 kDa, a single non-glycosylated polypeptide chain containing 180 amino acids.
AA Sequence	EENVDFRIHV ENQTRARDDV SRKQLRLYQL YSRTSGKHIQ VLGRRISARG EDGDKYAQLL VETDTFGSQV RIKGKETEFY LCMNRKGKLV GKPDGTSKEC VFIEKVLENN YTALMSAKYS GWYVGFTKKG RPRKGPKTRE NQQDVHFMKR YPKGQTELQK PFKYTTVTKR SRRIRPTHPG
Appearance	Sterile Filtered White lyophilized (freeze-dried) 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, pH 7.4, 500 mM NaCl.
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 as determined by thymidine uptake assay using FGF-receptors transfected BaF3 cells is less than 0.5 ng/ml, corresponding to a specific activity of > 2.0 × 10 IU/mg.
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	5μg	100μg	500μg
Recombinant Rat Fibroblast Growth Factor 18	5μg	100μg	500μg

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

Quality Control

Purity	> 95 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/μg of rRtFGF-18 as determined by LAL method.

Description

Rat FGF-18 is encoded by the FGF18 gene in rats. By phylogenetic analysis and gene location analysis, FGF-18 is divided into FGF-8 subfamily which has three members FGF-8, FGF-17 and FGF-18. Using FGF knockout mice model, the numbers of this subfamily were testified that have crucial roles of in embryo development. FGF-18 $^{-/-}$ mice have decreased expression of osteogenic markers and delayed long-bone ossification. FGF-18 also has significantroles in lung development and has an anabolic effect on cartilage formation. Additionally, it has been shown in vitro that this protein is able to induce neurite outgrowth in PC12 cells. Rat FGF-18 shares 98 % amino acidsequence identity with human.

Reference

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5. Usui H, Shibayama M, Ohbayashi N, et al. 2004. Biochem Biophys Res Commun. 322:887-92
6. Ellsworth JL, Berry J, Bukowski T, et al. 2002. Osteoarthritis Cartilage. 10:308-20
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