

Recombinant Rat Fibroblast Growth Factor 18

#R00323

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

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 significant roles 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 acid sequence identity with human.

AA Sequence

EENVDFRIHVENQTRARDDVSRKQLRLYQLYSRTSG
KHIQVLGRRISARGEDGDKYAQLLVETDTFGSQVRIK

GKETEFYLCMNRKGKLVGKPDGTSKECVFIEKVLEN
NYTALMSAKYSGWYVGFTKKGRPRKGPKTRENQQD
VHFMKRYPKGQTELQKPFKYTTVTKRSRRIRPTHGP

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	O88182
GeneID	29369
Species	Rat
Source	Escherichia coli.
Molecular Weight	Approximately 21.0 kDa, a single non-glycosylated polypeptide chain containing 180 amino acids.
Purity	> 95 % 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 ng/ml, corresponding to a specific activity of > 2.0 × 10 ⁶ IU/mg.

Physical	Sterile Filtered White lyophilized
Appearance	(freeze-dried) powder.
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4, 500 mM NaCl.
Endotoxin	Less than 1 EU/µg of rRtFGF-18 as determined by LAL method.