

FGF-18, Rat

Cat. No.: Z03100-50

Size: 50.0 ug

Synonyms: Fibroblast growth factor 18, FGF-18, zFGF5, Fgf18, D130055P09Rik

Description:

Fibroblast Growth Factor 18 (FGF-18) is a pleiotropic cytokine belonging to the heparin-binding FGF family, which has 23 different members. Structurally, FGF-18 is closely related to FGF-8 and FGF-17. Like other FGFs, FGF-18 can bind to different FGF receptors *in vivo*. FGF-18 is expressed in various tissues and has multiple functions: during long bone growth, FGF-18 is expressed in perichondrium and developing joints, and regulates bone formation by inhibiting chondrocyte proliferation and differentiation; FGF-18 knock-out mice survive embryonic development, but exhibit skeletal abnormalities and die in the early neonatal period. FGF-18 also induces ectopic cartilage formation in the lung, and alters the morphology of the pulmonary mesenchyma.

Recombinant rat Fibroblast Growth Factor 18 (rrFGF-18) produced in *E. coli* is a single non-glycosylated polypeptide chain containing of 172 amino acids. A fully biologically active molecule, rrFGF-18 has a molecular mass of 20.1 kDa analyzed by non-reducing SDS-PAGE and is obtained by proprietary chromatographic techniques at GenScript.

Amino Acid Sequence:

```
00001 EENVDFRIHV ENQTRARDDV SRKQLRLYQL YSRTSGKHIQ
00041 VLGRRISARG EDGDKYAQLL VETDTFGSQV RIKGKETEFY
00081 LCMNRKGLV GKPDTGSKEC VFIEKVLNEN YALMSAKYS
00121 GWYVGFTHKG RPRKPKTRE NQQDVHFMKR YPKGQTELQK
00161 PFKYTTVTKR SR
```

Source: *E. coli*

Species: Rat

Biological Activity: ED₅₀ < 0.5 µg/mL, measured by a cell proliferation assay using 3T3 cells, corresponding to a specific activity of > 2 × 10³ units/mg.

Molecular Weight: 20.1 kDa, observed by non-reducing SDS-PAGE.

Formulation: Lyophilized after extensive dialysis against PBS.

Reconstitution: Reconstituted in ddH₂O at 100 µg/mL.

Purity: > 95% as analyzed by SDS-PAGE and HPLC.

Endotoxin Level: < 0.2 EU/µg, determined by LAL method.

Storage: Lyophilized recombinant rat Fibroblast Growth Factor 18 (rrFGF-18) remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, rrFGF-18 remains stable up to 2 weeks at 4°C or up to 3 months at -20°C.