

## FGF-12, Human

**Cat. No.:** Z03129-1

**Size:** 1.0 mg

**Synonyms:** FHF1, FGF12B

### Description:

Fibroblast Growth Factor-12(FGF-12) is a heparin binding cytokine belonging to the FGF family. FGF-12 along with FGF-11, -13, and -14, form a sublineage within the FGF family: in contrast to the other members, they are all intracellular signaling proteins lacking signal peptides and containing a flanking domain beside the family conserved  $\beta$ -trefoil domain. FGF-12 is expressed in the cartilaginous skeleton and heart, suggesting a role in the development of connective tissue and heart. *In vivo*, FGF-12 binds to Islet Brain-2 and Voltage-Gated Sodium Channels (VGSC), and plays a critical role in the membrane targeting and function of VGSC. FGF-12 has been implicated in heart diseases such as cardiac arrhythmias.

Recombinant human Fibroblast Growth Factor-12 (rhFGF-12) produced in *E. coli* is a single non-glycosylated polypeptide chain containing 181 amino acids. A fully biologically active molecule, rhFGF-12 has a molecular mass of 20.4 kDa analyzed by reducing SDS-PAGE and is obtained by proprietary chromatographic techniques at GenScript.

### Amino Acid Sequence:

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00001 MESKEPQLKG IVTRLFSQQG YFLQMHPDGT IDGTDENS  
00041 YTLFNLIPVG LRVVAIQGVK ASLYVAMNGE GYLYSSDVFT  
00081 PECKFKESVF ENYYVIYSST LYRQQESGRA WFLGLNKEGQ  
00121 IMKGNRVKKT KPSSHVVPKP IEVCMYREPS LHEIGEKGQR  
00161 SRKSSGTPTM NGGKVVNQDS T
```

**Source:** *E. coli*

**Species:** Human

**Biological Activity:** ED<sub>50</sub> < 20 ng/ml, measured by its binding ability in a functional ELISA with immobilized rhFGF R4/Fc Chimera, corresponding to a specific activity of > 5×10<sup>4</sup> units/mg.

**Molecular Weight:** 20.4 kDa, observed by reducing SDS-PAGE.

**Formulation:** Lyophilized after extensive dialysis against PBS.

**Reconstitution:** Reconstituted in ddH<sub>2</sub>O or PBS 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 human Fibroblast Growth Factor-12 (rhFGF-12) remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, rhFGF-12 remains stable up to 2 weeks at 4°C or up to 3 months at -20°C.