

## DATASHEET

Version 20181206

# FGF-23, Human

**Cat. No.:** Z02891-1

**Size:** 1.0 mg

**Synonyms:** FGF-23 Human;

### Description:

Fibroblast growth factor-23 (FGF-23) belongs to the large FGF family which has at least 23 members. All FGF family members are heparin binding growth factors with a core 120 amino acid (a.a.) FGF domain that allows for a common tertiary structure. FGFs are expressed during embryonic development and in restricted adult tissues. Four distinct but related classes of FGF receptors, FGF R1, 2, 3, and 4, exist. FGF-23 is produced by osteocytes and osteoblasts in response to high circulating phosphate levels, elevated parathyroid hormone, and circulatory volume loading. It functions as an endocrine phosphatonin by suppressing circulating phosphate levels. FGF-23 interaction with renal proximal tubular epithelium decreases the renal resorption of phosphate by down regulating phosphate transporters and by suppressing vitamin D production. It also decreases the intestinal absorption of phosphate.

### Amino Acid Sequence:

```
00001 YPNASPLLGS SWGGLIHLTY ATARNSYHLQ IHKNGHVDGA
00041 PHQTIYSALM IRSEDAGFVV ITGVMSRRYL CMDFRGNIFG
00081 SHYFDPENCR FQHQTLENGY DVYHSPQYHF LVSLGRAKRA
00121 FLPGMNPPPY SQFLSRRNEI PLIHFNTPIP RRHTRSAEDD
00161 SERDPLNLK PRARMTAPA SCSQELPSAE DNSPMASDPL
00201 GVVRGGRVNT HAGGTGEGC RPAKFI
```

**Source:** *E. coli*

**Species:** Human

**Biological Activity:** Fully biologically active when compared to standard. The ED<sub>50</sub> 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<sup>3</sup> IU/mg in the presence of 0.3 µg/ml of rMuKlotho and 10 µg/ml of heparin.

**Molecular Weight:** Approximately 25.3 kDa, a single non-glycosylated polypeptide chain containing 227 amino acids.

**Formulation:** Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.

**Appearance:** Sterile Filtered White lyophilized (freeze-dried) powder.

**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.

**Purity:** > 95 % by SDS-PAGE and HPLC analyses.

**Endotoxin Level:** Less than 1 EU/µg of rHuFGF-23 as determined by LAL method.

**Storage:** This lyophilized preparation is stable at 2-8 °C, but should be kept at -20 °C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8 °C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20 °C to -70 °C. Avoid repeated freeze/thaw cycles.