FGF23
Recombinant Human Fibroblast Growth Factor-23

Catalog No.	CS272A	**Quantity:**	5 µg
	CS272B		20 µg
	CS272C		1 mg

Alternate Names: Tumor-derived hypophosphatemia-inducing factor, HYPF, ADHR, HPDR2, PHPTC, FGF23, FGF-23, Fibroblast Growth Factor-23.

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.

Physical Appearance: Sterile Filtered white lyophilized powder.

Gene ID: 8074

Source: *E. coli*

Molecular Weight: 22.5 kDa

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

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

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

Biological Activity: Fully biologically active when compared to standard. The ED_{50} determined by a cell proliferation assay using murine NIH/3T3 cells is less than 300 ng/ml.

Specific Activity: $\geq 3.3 \times 10^3$ IU/mg in the presence of 5 µg/ml of rMuKlotho and 10 µg/ml of heparin.

Amino Acid Sequence: MYPNASPLLG SSWGGLIHLY TATARNSYHL QIHKNGHVDG APHQTIYSAL MIRSEDAGFV VITGVMSRRY LCMDFRGNIF GSHYFDPENC RFQHQTLENG YDVYHSPQYH FLVSLGRAKR AFLPGMNPPP YSQFLSRRNE IPLIHFNTPI PRRHTRSAED DSERDPLNVL KPRARMTPAP ASCSQELPSA EDNSPMASDP LGVVRGGRVN THAGGTGPEG CRPFAKFI.

Reconstitution: **Centrifuge vial prior to opening.** Add sterile distilled water or aqueous buffer to a concentration of 0.1-1.0 mg/ml. Further dilutions should be made in appropriate buffered solutions.

Storage & Stability: This lyophilized preparation is stable at 2-4°C, but should be kept desiccated at -20°C for long term storage. Upon reconstitution, the preparation is stable for up to one week at 2 -4°C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20°C to -80°C. **Avoid repeated freeze/thaw cycles.**

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