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# FGF-23

Catalog # PVGS1150

## Product Information

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| **Primary Accession** | Q9GZV9 |
| **Species** | Human |
| **Sequence** | Tyr25-Ile251 |
| **Purity** | > 95% as analyzed by SDS-PAGE<br>> 95% as analyzed by HPLC |
| **Endotoxin Level** | |
| **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 μg/ml, corresponding to a specific activity of > $2.0 \times 10^3$ IU/mg in the presence of 0.3 μg/ml of rMuKlotho and 10 μg/ml of heparin. |
| **Expression System** | E. coli |
| **Theoretical Molecular Weight** | 25.3 kDa |
| **Formulation** | Lyophilized from a 0.2 μm filtered solution in PBS, pH 7.4. |
| **Reconstitution** | It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/ml. |
| **Storage & Stability** | Upon receiving, this product remains stable for up to 6 months at -70°C or -20°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. Avoid repeated freeze-thaw cycles. |

## Additional Information

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| **Gene ID** | 8074 |
| **Other Names** | Fibroblast growth factor 23, FGF-23, Phosphatonin, Tumor-derived hypophosphatemia-inducing factor, Fibroblast growth factor 23 N-terminal peptide, Fibroblast growth factor 23 C-terminal peptide, FGF23, HYPF |
| **Target Background** | 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.

## Protein Information

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| **Name** | FGF23 |
| **Synonyms** | HYPF |
| **Function** | Regulator of phosphate homeostasis (PubMed: 11062477). Inhibits renal tubular phosphate transport by reducing SLC34A1 levels (PubMed:11409890). Up-regulates EGR1 expression in the presence of KL (By similarity). Acts directly on the parathyroid to decrease PTH secretion (By similarity). Regulator of vitamin-D metabolism (PubMed:15040831). Negatively regulates osteoblast differentiation and matrix mineralization (PubMed:18282132). |
| **Cellular Location** | Secreted. Note=Secretion is dependent on O-glycosylation |
| **Tissue Location** | Expressed in osteogenic cells particularly during phases of active bone remodeling. In adult trabecular bone, expressed in osteocytes and flattened bone-lining cells (inactive osteoblasts) |