

# Recombinant Human Fibroblast Growth Factor 23

**Cat. No.** FGF23-106H    **Lot. No.** (See product label)

## SPECIFICATION

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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| <b>Product Overview</b>    | Recombinant Human Fibroblast Growth Factor-23 produced in <i>E. Coli</i> is a single, non-glycosylated polypeptide chain containing 243 amino acids and having a molecular mass of 28 kDa. The FGF-23 is purified by chromatographic techniques.                                                                                                                                                                                                                                                                                                             |
| <b>Species</b>             | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Source</b>              | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Description</b>         | FGF-23 is a member of the fibroblast growth factor (FGF) family. FGF-23 inhibits renal tubular phosphate transport. This gene was identified by its mutations associated with autosomal dominant hypophosphatemic rickets (ADHR), an inherited phosphate wasting disorder. Abnormally high level expression of FGF23 was found in oncogenic hypophosphatemic osteomalacia (OHO), a phenotypically similar disease caused by abnormal phosphate metabolism. Mutations FGF23 have also been shown to cause familial tumoral calcinosis with hyperphosphatemia. |
| <b>Amino Acid Sequence</b> | MLGARLRLW VCALCSVCSM SVLRAYPNAS PLLGSSWGG NSYHLQIHKN<br>GHVDGAPHQT IYSALMIRSE DAGFVVITGV MSRRYLCMDF RGNIFGSHYF<br>DPENCRFQHQ TLENGYDVYH SPQYHFLVS LGRAKRAFLP GMNPPPYSQF<br>LSRRNEIPLI HFNTPIPRRH TRSAEDDSER DPLNVLPRA RMT PAPASCS<br>QELPSAEDNS PMASDPLGVV RGGRVNTHAG GTGPEGCRPF AKI                                                                                                                                                                                                                                                                         |
| <b>Physical Appearance</b> | Sterile Filtered white lyophilized powder.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Purity</b>              | Greater than 90.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

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|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                          | SDS-PAGE.                                                                                                                                                                                                                                                                                                                                                    |
| <b>Formulation</b>       | The protein (0.5 mg/ml) was lyophilized from 25 mM Tris pH 7.5 and 0.6 M NaCl solution.                                                                                                                                                                                                                                                                      |
| <b>Solubility</b>        | It is recommended to reconstitute the lyophilized Fibroblast Growth Factor-23 in sterile 18 MΩ-cm H <sub>2</sub> O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.                                                                                                                                                    |
| <b>Specific Activity</b> | Treatment with hrFGF23 has been shown to induce FGFR mediated Erk phosphorylation, reduce plasma PTH levels in rats and to reduce blood phosphate levels.                                                                                                                                                                                                    |
| <b>Stability</b>         | Lyophilized Fibroblast Growth Factor 23 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution FGF-23 should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles. |

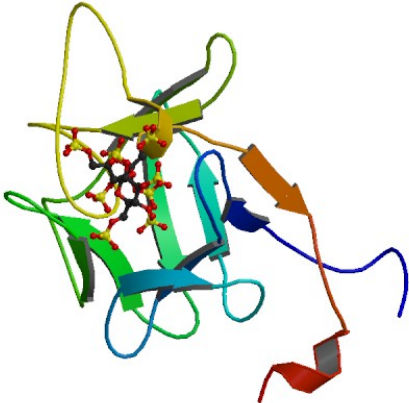
## GENE INFORMATION

|                    |                                                                                                                                                                                                                                                                                                     |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>   | FGF23 fibroblast growth factor 23 [ Homo sapiens ]                                                                                                                                                                                                                                                  |
| <b>Synonyms</b>    | FGF23; fibroblast growth factor 23; ADHR; HYPF; HPDR2; PHPTC; FGF-23; Tumor-derived hypophosphatemia-inducing factor; Phosphatonin; UNQ3027/PRO9828; Fibroblast growth factor 23 N-terminal peptide; Fibroblast growth factor 23 C-terminal peptide; tumor-derived hypophosphatemia inducing factor |
| <b>Gene ID</b>     | 8074                                                                                                                                                                                                                                                                                                |
| <b>mRNA Refseq</b> | NM_020638                                                                                                                                                                                                                                                                                           |

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|-------------------------------------|-----------------------------------------------------------------------------------------------------------|
| <b>Protein Refseq</b>               | NP_065689                                                                                                 |
| <b>MIM</b>                          | 605380                                                                                                    |
| <b>UniProt ID</b>                   | Q9GZV9                                                                                                    |
| <b>Chromosome Location</b>          | 12p13.3                                                                                                   |
| <b>Pathway</b>                      | MAPK signaling pathway; Melanoma; Pathways in cancer; Regulation of actin cytoskeleton; Signaling by FGFR |
| <b>Function</b>                     | growth factor activity                                                                                    |
| <b>PDB rendering based on 2p39.</b> |                       |