

Recombinant Human Fibroblast Growth Factor-23 (rh FGF-23)

Synonyms: Tumor-derived hypophosphatemia-inducing factor, HYPF, ADHR, HPDR2, PHPTC.

Introduction: FGF-23 is a member of the fibroblast growth factor (FGF) family. FGF family members possess broad mitogenic and cell survival activities and are involved in a variety of biological processes including embryonic development, cell growth, morphogenesis, tissue repair, tumor growth and invasion. 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 of FGF-23 have also been shown to cause familial tumoral calcinosis with hyperphosphatemia.

Description: Rh Fibroblast Growth Factor-23 produced in E.Coli is a single, non-glycosylated polypeptide chain containing 228 amino acids and having a molecular mass of 22.5 kDa. The rh FGF-23 is purified by chromatographic techniques.

Source: *Escherichia Coli*.

Physical Appearance: Sterile filtered white lyophilized (freeze-dried) powder.

Formulation: Lyophilized from a 0.2µm filtered concentrated solution in PBS, pH 7.4. The samples of 1µg contain Trehalose 5% (w/vol) for better recovery

Solubility: It is recommended to reconstitute the lyophilized rh FGF-23 in sterile H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability: Lyophilized rh FGF-23, although stable at room temperature for 3 weeks, should be stored desiccated below -18° C. Upon reconstitution rh 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.

Purity: Greater than 95.0% as determined by SDS-PAGE.

Amino acid sequence: MYPNASPLLGSWGGLIHLYTATARNZYHLQIHKNGHVDGAPHQTIYSALMIRSEDAGFVITGVMSRRYLKCMDFRGNIFGSHYFDPENC RFQHQTLENG YDVYHSPQYH FLVSLGRAKR AFLPGMNPYP YSQFLSRRNE IPLIHFNTP IPRRHTRSAED DSERDPLNVL KPRARMTPAP ASCSQELPSA EDNSPMASDP LGVVRGGRVN THAGGTGPEG CRPFAKFI.

Biological Activity: Measured in a cell proliferation assay using NIH/3T3 mouse embryonic fibroblasts the ED50 is typically 0.05 - 0.5µg/ml in the presence of 5µg/ml of recombinant mouse Klotho and 10 µg/ml of heparin.

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<i>small</i>	5 µg	Cat.N°	11344890
<i>medium</i>	20 µg	Cat.N°	11344894

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