

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

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 expressed with a -6xHis tag containing 257 amino acids (251 a.a. FGF-23 + 6 a.a. His tag) and having a molecular mass of 28.6 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 25 mM Tris pH7.5 and 0.6 M NaCl solution.
The aliquotes of 1µg and 2µg 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 90.0% as determined by RP-HPLC and by SDS-PAGE.

Endotoxicity: The endotoxin level is less than 1 EU/µg determined by LAL method

Amino acid sequence: LGARLRLWVCALCSVCSMSVLRAYPNASPLLGSSWGGLIHLYTATARN
SYHLQIHKNGHVGDGAPHQTIYSALMIRSEDAGFVVITGVMSRRYLCMDFR
GNIFGSHYFDPENCRFQHQTLENGYDVYHSPQYHFLVSLGRAKRAFLPG
MNPPPYSQLSRRNEIPLIHFNTPIPRRHTRSAEDDSERDPLNVLKPRAR
MTPAPASCSQELPSAEDNSPMASDPLGVVRGGRVNT HAGGTGPEGCRP FAKFIHHHHHH.

Biological Activity: Treatment with rh FGF-23 has been shown to induce FGFR mediated Erk phosphorylation, reduce plasma PTH levels in rats and to reduce blood phosphate levels.

This material is offered for **research use only**. Not for use in human. For in vitro use only. ImmunoTools will not be held responsible for patent infringement or other violations that may occur with the use of our products.

<i>small</i>	2 µg	Cat.N°	11344352
<i>medium</i>	10 µg	Cat.N°	11344353

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