



RayBiotech, Inc.

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Certificate of Analysis and Data Sheet

Recombinant Human Fibroblast Growth Factor-23

Catalog No.
228-10462

Source:
Escherichia Coli.

Synonyms

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

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 FGF23 have also been shown to cause familial tumoral calcinosis with hyperphosphatemia.

Description

Fibroblast Growth Factor-23 Human Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain expressed with a -6xHis tag containing a total of 257 amino acids (251 a.a. FGF23 + 6 a.a. His tag) and having a molecular mass of 28629.5 Dalton. The FGF-23 is and purified by chromatographic techniques.

Physical Appearance

Sterile Filtered white lyophilized powder.

Formulation

The protein (0.5mg/ml) was lyophilized from 25mM Tris pH7.5 and 0.6M NaCl solution.

Solubility

It is recommended to reconstitute the lyophilized Fibroblast Growth Factor-23 in sterile 18MΩ-cm H₂O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.

Stability

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). **Avoid multiple freeze-thaw cycles.**

The products are furnished for LABORATORY RESEARCH USE ONLY.
Not for diagnostic or therapeutic use.



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Purity

Greater than 90.0% as determined by

(a) Analysis by RP-HPLC.

(b) Analysis by SDS-PAGE.

Amino acid sequence

MLGARLRLWVCALCSVCSMSVLRAYPNASPLLGSSWGGLIHLYTATARN
SYHLQIHKNGHVDGAPHQTIYSALMIRSEDAGFVVITGVMSRRYLCMDFR
GNIFGSHYFDPENCRFQHQTLNGYDVYHSPQYHFLVSLGRAKRAFLPG
MNPPPYSQLSRNEIPLIHFNTPIPRRHTRSAEDDSERDPLNVLKPRAR
MTPAPASCSQELPSAEDNSPMASDPLGVVRGGRVNTHAGGTGPEGCRP
FAKFIHHHHHH.

Biological Activity

Treatment with rhFGF23 has been shown to induce FGFR mediated Erk phosphorylation, reduce plasma PTH levels in rats and to reduce blood phosphate levels.

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