Fibroblast Growth Factor 23 C-terminal Peptide Human E. coli

Product Data Sheet

Type: Recombinant
Source: E. coli
Species: Human
Other names: Phosphatonin, Tumor-derived hypophosphatemia-inducing factor, FGF23, HYPF, UNQ3027/PRO9828

Cat. No.:
RD172241100 (0.1 mg)

Description

Total 81 AA. MW: 8.67 kDa (calculated). N-Terminal His-tag, 9 extra AA (highlighted).

Introduction to the Molecule

FGF-23 is a secreted, nonglycosylated monomeric protein belonging to the FGF family. Full-lenght FGF-23 is a phosphaturic hormone which blocks neural phosphate reabsorbtion. Upon processing, biologically inactive N- and C- terminal fragments are generated. Defects in FGF-23 is associated with autosomal dominant hypophosphatemic rickets. The FGF-23 gene encodes a member of the fibroblast growth factor family that is mutant in autosomal dominant hypophosphatemic rickets (ADHR). Tumor-induced osteomalacia is one of the paraneoplastic disorders characterized by hypophosphatemia caused by renal phosphate wasting. The fact that removal of responsible tumors normalizes phosphate metabolism is evidence that a humoral phosphaturic factor, sometimes called phosphatonin, is the basis of tumor-induced osteomalacia. Thus, overproduction of FGF-23 causes tumor-induced osteomalacia, whereas mutations in the FGF-23 gene result in autosomal hypophosphatemic rickets possibly by preventing proteolytic cleavage, which enhances the biologic activity of FGF-23. The mutations in FGF-23 found in ADHR lie within 3 nucleotides of each other in the proprotein convertase cleavage site. Jonsson et al. (2003) showed that FGF-23 is readily detectable in the plasma or serum of healthy persons and can be markedly elevated in those with oncogenic osteomalacia or X-linked hypophosphatemia, suggesting that this growth factor has a role in phosphate homeostasis.

Research topic

Renal disease

Amino Acid Sequence

MKHHHHHHAS AED-DSERDPL NVLKPRARMT PAPASCSQEL PSAEDNSPMA SDPLGVVRGG RVNTHAGGTG PEGCRPFAKF I

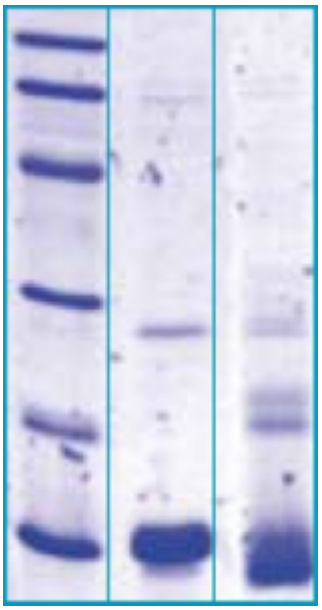
Source

E. coli

Purity

Purity as determined by densitometric image analysis: >90%

SDS-PAGE gel



14% SDS-PAGE separation of Human FGF23 C-terminal peptide
1. M.W. marker - 14, 21, 31, 45, 66, 97 kDa
2. reduced and boiled sample, 5µg/lane
3. non-reduced and non-boiled sample, 5µg/lane

Endotoxin

<1.0 EU/µg

Formulation

Filtered (0.4 µm) and lyophilized in 0.5 mg/mL in 20mM TRIS, 50mM NaCl, pH 7.5

Reconstitution

Add deionized water to prepare a working stock solution of 0.5 mg/mL and let the lyophilized pellet dissolve completely.
Product is not sterile! Please filter the product by an appropriate sterile filter before using it in the cell culture.

Shipping

At ambient temperature. Upon receipt, store the product at the temperature recommended below.

Storage, Stability/Shelf Life

Store lyophilized protein at -80°C. Lyophilized protein remains stable until the expiry date when stored at -80°C. Aliquot reconstituted protein to avoid repeated freezing/thawing cycles and store at -80°C for long term storage. Reconstituted protein can be stored at 4°C for a week.

Quality Control Test

BCA to determine quantity of the protein.
SDS PAGE to determine purity of the protein.
LAL TEST to determine quantity of endotoxin.

Applications

Western blotting

Note

This product is intended for research use only.

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