Fibroblast Growth Factor 23 Human, Rabbit Polyclonal Antibody

Product Data Sheet

Source of Antigen: *E. coli*
Host: Rabbit

Cat. No.:
RD181109100-01 (0.1 mg)

Other names: Phosphatonin, Tumor-derived hypophosphatemia-inducing factor, FGF23, HYPF, UNQ3027/PRO9828

Research topic

Renal disease

Preparation

The antibody was raised in rabbits by immunization with the recombinant Human FGF-23.

Amino Acid Sequence

The immunization antigen (27 kDa) is a protein containing 227 AA of recombinant Human FGF-23 and 16 additional amino acid residues - HisTag (highlighted).

MRGSHHHHHH GMASHMYPNA SPLLGSSWGG LIHLYTATAR NSYHLQIHKN GHVDGAPHQT IYSALMIRSE DAGFVVITGV
MSRRYLCMDF RGNIFGSHYF DPENCRFQHQ TLENGYDVYH SPQYHFLVSL GRAKRAFLPG MNPPPYSQFL SRRNEIPLIH
FNTPIPRRHT RSAEDDSERD PLNVLKPRAR MTPAPASCSQ ELPSAEDNSP MASDPLGVVR GGRVNTHAGG TGPEGCRPFA KFI

Species Reactivity

Human
Not yet tested in other species.

Purification Method

Immunoaffinity chromatography on a column with immobilized **recombinant Human FGF-23 C-terminal peptide**.

Antibody Content

0.1 mg (determined by BCA method, BSA was used as a standard)

Formulation

The antibody is lyophilized in 0.05 M phosphate buffer, 0.1 M NaCl, pH 7.2. **AZIDE FREE**.

Reconstitution

Add 0.1 ml of deionized water and let the lyophilized pellet dissolve completely. Slight turbidity may occur after reconstitution, which does not affect activity of the antibody. In this case clarify the solution by centrifugation.

Shipping

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

Storage/Stability

The lyophilized antibody remains stable and fully active until the expiry date when stored at -20°C. Aliquot the product after reconstitution to avoid repeated freezing/thawing cycles and store frozen at -80°C. Reconstituted antibody can be stored at 4°C for a limited period of time; it does not show decline in activity after one week at 4°C.

Expiration

See vial label.

Lot Number

See vial label.

Quality Control Test

Indirect ELISA - to determine titer of the antibody
SDS PAGE - to determine purity of the antibody

Applications

Western blotting

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.

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