

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human FGF-23 in direct ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human FGF-23 Tyr25-Ile251 Accession # Q9GZV9
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide
*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.	

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

Neutralization	Optimal dilution of this antibody should be experimentally determined.
Western Blot	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Fibroblast growth factor 23 (FGF-23) is a 30-32 kDa member of the FGF family, within a subfamily that also includes FGF-19 and FGF-21. FGF proteins contain a 120 amino acid (aa) core FGF domain that exhibits a β -trefoil structure (1, 2). FGF-19 subfamily members are highly diffusible molecules owing to their poor ECM/heparin sulfate binding and plasma-stabilizing intramolecular folds (2-4). Mature human FGF-23 contains an atypical (very low affinity) heparin binding site (aa 134-162), a proteolytic cleavage site (Arg179-Ser180), and multiple O-linked glycosylation sites with Thr178 being of particular importance (4-7). O-linked glycosylation at Thr178 blocks the cleavage of FGF-23, thereby preventing loss of FGF-23 activity (7, 8). Mature human FGF-23 shows 72% aa identity to mouse FGF-23 and is active on mouse cells (6). FGF-23 exerts its effects through a ternary complex that includes Klotho and an FGF receptor (FGF R4 or the "c" isoforms of FGF R1 or FGF R3). Klotho has a restricted distribution that limits FGF-23 activity (9-11). FGF-23 is produced by osteocytes and osteoblasts in response to high circulating phosphate levels, elevated parathyroid hormone, and circulatory volume loading. It functions as an endocrine phosphatonin by suppressing circulating phosphate levels (12). FGF-23 interaction with renal proximal tubular epithelium decreases the renal resorption of phosphate by downregulating phosphate transporters and by suppressing vitamin D production. It also decreases the intestinal absorption of phosphate (13).

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.