

PHEX (H-176): sc-98996

BACKGROUND

The PHEX (phosphate regulating gene with homologies to endopeptidases on the X chromosome) gene encodes a 749 amino acid protein that putatively consists of an intracellular, transmembrane and extracellular domain. PHEX mutations have been observed in 60-80% of hypophosphatemic rickets patients. The PHEX protein, which is a single-pass membrane protein, is also designated HYP, X-linked hypophosphatemia protein or metalloendopeptidase homolog PEX. PHEX plays an active role in bone and dentin mineralization and renal phosphate reabsorption. X-linked hypophosphatemic rickets, also designated HYP, is an X-linked dominant disorder characterized by impaired phosphate uptake in the kidney, which is likely to be caused by abnormal regulation of sodium phosphate cotransport in the proximal tubules. Clinical manifestations include skeletal deformities, growth failure, craniosynostosis, paravertebral calcifications, pseudofractures in lower extremities and muscular hypotonia with onset in early childhood.

REFERENCES

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- Sato, K., et al. 2000. Three novel PHEX gene mutations in Japanese patients with X-linked hypophosphatemic rickets. *Pediatr. Res.* 48: 536-540.
- Tynnismaa, H., et al. 2000. Identification of fifteen novel PHEX gene mutations in Finnish patients with hypophosphatemic rickets. *Hum. Mutat.* 15: 383-384.
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CHROMOSOMAL LOCATION

Genetic locus: PHEX (human) mapping to Xp22.11; Phex (mouse) mapping to X F4.

SOURCE

PHEX (H-176) is a rabbit polyclonal antibody raised against amino acids 151-326 mapping within an extracellular domain of PHEX of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PHEX (H-176) is recommended for detection of PHEX of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

PHEX (H-176) is also recommended for detection of PHEX in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PHEX siRNA (h): sc-61334, PHEX siRNA (m): sc-61335, PHEX shRNA Plasmid (h): sc-61334-SH, PHEX shRNA Plasmid (m): sc-61335-SH, PHEX shRNA (h) Lentiviral Particles: sc-61334-V and PHEX shRNA (m) Lentiviral Particles: sc-61335-V.

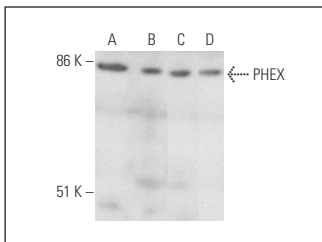
Molecular Weight of PHEX: 97 kDa.

Positive Controls: MOLT-4 cell lysate: sc-2233, HeLa whole cell lysate: sc-2200 or Caki-1 cell lysate: sc-2224.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



PHEX (H-176): sc-98996. Western blot analysis of PHEX expression in MOLT-4 (A), HeLa (B), Caki-1 (C) and HT-1080 (D) whole cell lysates.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.