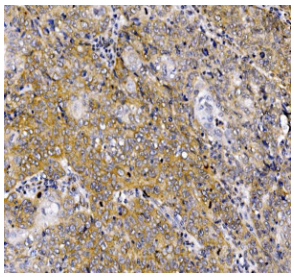
PHEX Antibody / Phosphate Regulating Endopeptidase Antibody (RQ5999)

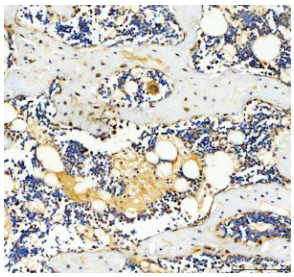
Catalog No.	Formulation	Size
RQ5999	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

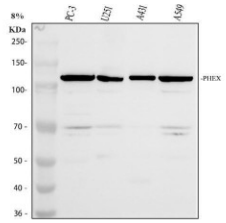
Availability	1-3 business days
Species Reactivity	Human, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P78562
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry: 2-5ug/ml Flow cytometry: 1-3ug/million cells Direct ELISA: 0.1-0.5ug/ml
Limitations	This PHEX Antibody / Phosphate Regulating Endopeptidase Antibody is available for research use only.



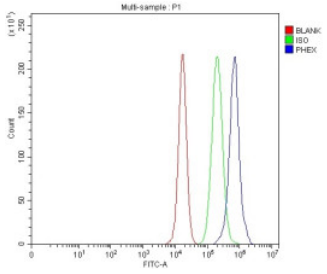
PHEX Antibody Human Lung Cancer IHC. Immunohistochemical staining of FFPE human lung cancer tissue using PHEX Antibody / Phosphate Regulating Endopeptidase Antibody. Heat-induced epitope retrieval was performed in pH 8.0 EDTA buffer before incubation with PHEX Antibody at 2 ug/ml, followed by an HRP-conjugated goat anti-rabbit secondary antibody with DAB chromogen for visualization. PHEX exhibits predominantly membranous and cytoplasmic staining in tumor cells, consistent with its localization as a membrane-associated metalloprotease involved in phosphate homeostasis and FGF23 regulation. This PHEX Antibody, also called Phosphate Regulating Endopeptidase Antibody, is suitable for studies of phosphate metabolism, bone mineralization, and X-linked hypophosphatemia.



PHEX Antibody Rat Knee Joint IHC. Immunohistochemical staining of FFPE rat knee joint tissue using PHEX Antibody / Phosphate Regulating Endopeptidase Antibody. Heat-induced epitope retrieval was performed in pH 8.0 EDTA buffer before incubation with PHEX Antibody at 2 ug/ml, followed by an HRP-conjugated goat anti-rabbit secondary antibody with DAB chromogen for visualization. PHEX staining is observed in cells associated with mineralized skeletal tissue, consistent with its established role in regulating phosphate homeostasis, FGF23 signaling, and bone mineralization. This PHEX Antibody, also called Phosphate Regulating Endopeptidase Antibody, is suitable for studies of skeletal biology, phosphate metabolism, and X-linked hypophosphatemia.



PHEX Antibody Human Cancer Cell WB. Western blot analysis of human PC-3 (lane 1), U251 (lane 2), A431 (lane 3), and A549 (lane 4) whole cell lysates using PHEX Antibody / Phosphate Regulating Endopeptidase Antibody at 0.5 ug/ml. A prominent band is detected at approximately 100-110 kDa in all samples, which is consistent with the extensively glycosylated mature form of PHEX. Although the calculated molecular weight is approximately 86 kDa, glycosylation is known to produce an apparent molecular weight shift into the 95-110 kDa range. This PHEX Antibody, also called Phosphate Regulating Endopeptidase Antibody, is suitable for studies of phosphate homeostasis, FGF23 signaling, bone mineralization, and X-linked hypophosphatemia.



PHEX Antibody Human PC-3 Cell FACS. Flow cytometry analysis of fixed human PC-3 cells stained with PHEX Antibody / Phosphate Regulating Endopeptidase Antibody (blue). Cells were blocked with normal goat serum and incubated with PHEX Antibody at 1 ug/10^6 cells, followed by a Fluoro488-conjugated goat anti-rabbit secondary antibody. Unstained cells (red) and an isotype control (green) were included to assess background staining. The pronounced rightward shift of the PHEX-positive population demonstrates specific detection of PHEX expression. This PHEX Antibody, also called Phosphate Regulating Endopeptidase Antibody, is suitable for flow cytometric analysis of PHEX expression and studies of phosphate homeostasis, FGF23 signaling, and bone mineralization.

Description

PHEX Antibody / Phosphate Regulating Endopeptidase Antibody recognizes PHEX, a membrane-bound zinc-dependent metalloprotease that plays a central role in phosphate homeostasis and skeletal mineralization. PHEX is expressed predominantly by osteoblasts, osteocytes, and odontoblasts, where it regulates extracellular phosphate metabolism and contributes to the maintenance of healthy bone and tooth development. Although the precise physiological substrates of PHEX remain under investigation, the protein is known to regulate fibroblast growth factor 23 (FGF23) activity and phosphate balance, making it an essential component of mineral ion metabolism. Through these functions, PHEX helps maintain normal bone formation, skeletal integrity, and calcium-phosphate homeostasis.

PHEX belongs to the M13 family of zinc metallopeptidases and is localized primarily to the plasma membrane, where its extracellular catalytic domain participates in the processing or regulation of proteins involved in mineral metabolism. Loss of PHEX activity results in excessive circulating FGF23, reduced renal phosphate reabsorption, and impaired vitamin D metabolism, ultimately leading to defective mineralization of bone. Consequently, PHEX serves as a critical regulator of the signaling pathways that coordinate communication between bone and kidney to maintain systemic phosphate balance.

Mutations in PHEX are the primary cause of X-linked hypophosphatemia (XLH), the most common inherited form of phosphate-wasting rickets. Patients with XLH develop hypophosphatemia, impaired bone mineralization, skeletal deformities, growth abnormalities, osteomalacia, and dental defects. Beyond inherited metabolic bone disease, altered PHEX expression has also been investigated in osteosarcoma, prostate cancer, breast cancer, and other malignancies, where changes in phosphate metabolism and extracellular matrix remodeling may contribute to tumor biology. Ongoing

research continues to define the broader roles of PHEX in skeletal development, tissue remodeling, and disease pathogenesis.

An PHEX Antibody is a valuable tool for investigating phosphate homeostasis, bone mineralization, and FGF23-mediated signaling in normal and diseased tissues. Researchers frequently use Phosphate Regulating Endopeptidase Antibody reagents to study skeletal biology, renal phosphate handling, extracellular proteolysis, inherited metabolic bone disorders, and cancer-associated mineral metabolism.

Explore our Cancer Marker Antibodies page for additional proteins involved in tumor progression, extracellular signaling, and cancer-associated tissue remodeling.

Application Notes

Optimal dilution of the PHEX Antibody / Phosphate Regulating Endopeptidase Antibody should be determined by the researcher.

Immunogen

Recombinant human protein (amino acids E145-N718) was used as the immunogen for the PHEX antibody.

Storage

After reconstitution, the PHEX antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

PHEX Antibody, Phosphate Regulating Endopeptidase Antibody, Phosphate Regulating Endopeptidase X-Linked Antibody, X-Linked Hypophosphatemia Protein Antibody

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