abcam

ab175223

Anti-Pyrophosphatase 1 antibody [EPR11281]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR11281
Purification technique	Affinity purification Protein A
Concentration	0.242 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/10 - 1/100
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000 - 1/5000
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/10 - 1/100
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information PPA1

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Pyrophosphatase 1 also known as iPPase or inorganic pyrophosphatase 1 is an enzyme responsible for the hydrolysis of inorganic pyrophosphate (PPi) into two phosphate ions. This reaction is energetically favorable and provides the driving force for many biosynthetic processes. Pyrophosphatase 1 is a soluble cytosolic enzyme with a molecular mass of about 33 kDa. It is expressed in various tissues especially high in metabolically active cells like those found in the liver and kidney.
Biological function summary	Pyrophosphate hydrolysis by pyrophosphatase 1 plays a critical role in energy metabolism and phosphate recycling within cells. This enzyme functions independently and is not part of a larger complex. Its activity maintains the balance of phosphate compounds in the cytosol. This balance is important for cellular functions like DNA and RNA synthesis where the removal of PPi is necessary to drive these reactions forward.
Pathways	Pyrophosphatase 1 influences several key metabolic routes such as nucleotide and protein biosynthesis. The enzyme ensures the continuation of these pathways by keeping PPi concentrations low which is important for reactions like aminoacyl-tRNA synthetase activity. Pyrophosphatase 1 connects with enzymes like polymerases and ligases through these pathways facilitating a range of anabolic processes by removing inhibitory PPi byproducts.
Associated diseases and disorders	The dysregulation of pyrophosphatase 1 can impact conditions like hypophosphatasia and some forms of arthritis. In hypophosphatasia defective function of alkaline phosphatase leads to inadequate pyrophosphate breakdown affecting bone mineralization. Pyrophosphatase 1 by regulating PPi indirectly influences the symptoms when phosphate balance is disrupted. Furthermore its role in phosphate metabolism associates pyrophosphatase 1 with pathways involving matrix proteins that are implicated in mineralization disorders.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

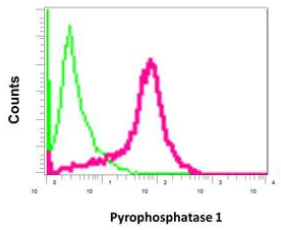
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

---

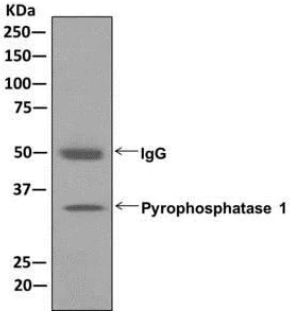
3 product images



Flow Cytometry (Intracellular) - Anti-Pyrophosphatase 1 antibody [EPR11281] (ab175223)

Pyrophosphatase 1 Flow Cytometry (Intracellular) staining using rabbit Anti-Pyrophosphatase 1 antibody

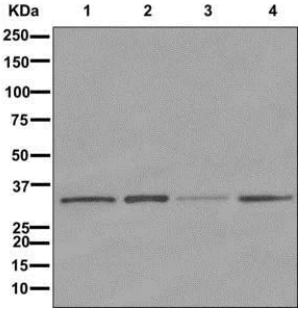
Intracellular flow cytometric analysis of permeabilized 293T cells labeling Pyrophosphatase 1 with ab175223 at 1/10 dilution (red) compared to a rabbit IgG negative control (green).



Immunoprecipitation - Anti-Pyrophosphatase 1 antibody [EPR11281] (ab175223)

Western blot analysis on immunoprecipitation pellet from HepG2 cell lysate using ab175223.
All lanes:
Immunoprecipitation - Anti-Pyrophosphatase 1 antibody [EPR11281] (ab175223)

Predicted band size: 33 kDa



Western blot - Anti-Pyrophosphatase 1 antibody [EPR11281] (ab175223)

All lanes:
Western blot - Anti-Pyrophosphatase 1 antibody [EPR11281] (ab175223) at 1/1000 dilution

Lane 1:
Hela cell lysate at 10 µg

Lane 2:
HepG2 cell lysate at 10 µg

Lane 3:
A431 cell lysate at 10 µg

Lane 4:
293T (Human embryonic kidney epithelial cell) cell lysate at 10 µg

Predicted band size: 33 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.