abcam

ab276060

Anti-PHPT1 antibody [001] - BSA and Azide free

Recombinant

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Fragment Protein within Human PHPT1 aa 1-150. The exact immunogen used to generate this antibody is proprietary information. Database link Q9NRX4
Carrier free	Yes
Clone number	001
Purification technique	Affinity purification Protein A

Reactivity data

ICC

Tested

Species	Human
Dilution info	1/20 - 1/100
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/2500 - 1/10000
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/25 - 1/100
Notes	-

Target data

See full target information PHPT1

Function	Exhibits phosphohistidine phosphatase activity.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Supplementary info

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

Activity summary	The target protein PHPT1 also known as phosphohistidine phosphatase 1 plays a mechanical role by removing phosphate groups from phosphohistidine residues in proteins. This dephosphorylation activity is essential for its function and interaction with other proteins. PHPT1 has a molecular mass of approximately 14 kDa. Scientists have observed that it is expressed in several tissues including the liver kidney and skeletal muscle indicating its importance in varied physiological contexts.

Biological function summary	This protein modulates signal transduction pathways by dephosphorylating proteins which can affect cellular signals and functions. Although not part of a larger protein complex PHPT1 acts by influencing histidine phosphorylation status therefore impacting cellular communication. The regulation of phosphorylation states by PHPT1 affects processes like growth differentiation and metabolism underlining its significance in cellular functions.
Pathways	PHPT1 engages in histidine phosphorylation pathways a lesser-known aspect compared to serine threonine and tyrosine phosphorylations. It plays a significant role in cellular signaling networks where related proteins include kinases that add phosphate groups to histidine residues. By modifying the phosphorylation state of certain proteins PHPT1 influences important pathways such as those involving signaling cascades that regulate cell growth and apoptosis.
Associated diseases and disorders	Research links PHPT1 to cancer and metabolic disorders. In cancer altered activity or expression of PHPT1 can disrupt normal signaling pathways leading to unregulated cell growth. It connects to proteins such as histidine kinases which modify activation states of proteins involved in cell proliferation. In metabolic disorders PHPT1 dysfunction may contribute to impaired metabolic regulation through inappropriate signaling influencing pathways related to energy balance and storage.

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

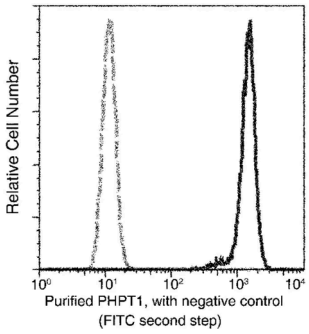
We do not recommend this combination. It is not covered by our product promise.

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.

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Terms & Conditions.

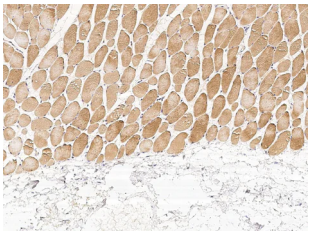
3 product images



Flow Cytometry (Intracellular) - Anti-PHPT1 antibody [001] - BSA and Azide free (ab276060)

PHPT1 Flow Cytometry (Intracellular) staining using rabbit Anti-PHPT1 antibody

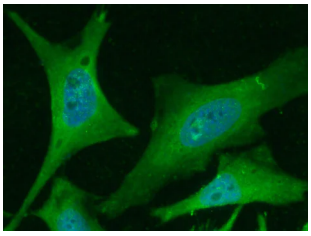
Intracellular flow cytometric analysis of Human PHPT1 expression on THP1 cells. The cells were treated according to manufacturers manuall, stained with ab276060, then a FITC-conjugated secondary antibody (black line) compared with a negative control (grey line). The Fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of intact cells.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PHPT1 antibody [001] - BSA and Azide free (ab276060)

PHPT1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PHPT1 antibody

Immunochemical staining of human PHPT1 in human skeletal muscle with ab276060 at 1/5000 dilution, formalin-fixed paraffin embedded sections.



Immunocytochemistry - Anti-PHPT1 antibody [001] - BSA and Azide free (ab276060)

PHPT1 Immunocytochemistry staining using rabbit Anti-PHPT1 antibody

Immunofluorescence staining of Human PHPT1 in HeLa cells. Cells were fixed with 4% PFA, permeabilzed with 0.3% Triton X-100 in PBS, blocked with 10% serum, and incubated with ab276060 at 1/60 dilution at 37°C 1 hour. Then cells were stained with the Alexa Fluor® 488-conjugated Goat Anti-rabbit IgG secondary antibody (green) and counterstained with DAPI (blue). Positive staining was localized to cytoplasm.

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