

Anti-PHPT1 Antibody (2C534)

Product Details

Ig Type:	Rabbit IgG
Reactivity:	Human
Conjugation:	Unconjugated
Clone:	2C534
Purification:	Protein A

Applications

Verified Activity:	1. Immunochemical staining of human PHPT1 in human skeletal muscle with rabbit monoclonal antibody (1:5000, formalin-fixed paraffin embedded sections).
	2. Flow cytometric analysis of Human PHPT1 expression on THP1 cells. The cells were treated according to manufacturer's manual (BD Pharmingen™ Cat. No. 554714), stained with purified anti-Human PHPT1, then a FITC-conjugated second step antibody. The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of intact cells.
	3. Immunofluorescence staining of Human PHPT1 in Hela cells. Cells were fixed with 4% PFA, permeabilized with 0.3% Triton X-100 in PBS, blocked with 10% serum, and incubated with rabbit anti-Human PHPT1 monoclonal antibody (1:60) 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.
Application:	FCM,ICC/IF,IHC-P
Recommended	IHC-P: 1:2500-1:10000; ICC-IF: 1:20-1:100; FCM: 1:25-1:100

Properties

Stability & Storage:	Store at 2°C-8°C for 1 month. Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles. Preservative-Free.
Shipping:	Shipping with blue ice.

Antigen Details

Immunogen:	Recombinant Protein: Human PHPT1 protein (TMPY-02002)
Antigen Species:	Human
Synonyms:	CGI-202;HSPC141;HEL-S-132P;phosphohistidine phosphatase 1;PHP14

Research Background

PHPT1, also known as 14 kDa phosphohistidine phosphatase, phosphohistidine phosphatase 1, protein janus-A homolog, PHP14, is a cytoplasm protein which belongs to the janus family. PHPT1 / PHP14 is expressed abundantly in heart and skeletal muscle. Phosphatases are a diverse group of enzymes that regulate numerous cellular processes. Much of what is known relates to the tyrosine, threonine, and serine phosphatases, whereas the histidine phosphatases have not been studied as much. Protein histidine phosphorylation exists widely in vertebrates, and it plays important roles in signal transduction and other cellular functions. Protein histidine phosphorylation accounts for about 6% of the total protein phosphorylation in eukaryotic cells. The knowledge about eukaryotic PHPT (protein

histidine phosphatase) is still very limited. To date, only one vertebrate PHPT has been discovered, and two crystal structures of human PHPT1 have been solved. PHPT1 / PHP14 can dephosphorylate a variety of proteins (e.g. ATP-citrate lyase and the beta-subunit of G proteins). A putative active site has been identified by its electrostatic character, ion binding, and conserved protein residues.

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