

Product datasheet

Anti-PTP1B antibody [EP1841Y] α b75856

KO VALIDATED Recombinant RabMAb

[4 References](#) [6 Images](#)

Overview

Product name	Anti-PTP1B antibody [EP1841Y]
Description	Rabbit monoclonal [EP1841Y] to PTP1B
Host species	Rabbit
Specificity	ab75856 detects both phosphorylated and nonphosphorylated PTP1B.
Tested applications	Suitable for: Flow Cyt (Intra), WB, IHC-P, ICC/IF Unsuitable for: IP
Species reactivity	Reacts with: Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: HeLa, HepG2 or Jurkat whole cell lysate (ab7899). IHC-P: Human tonsil tissue. Flow Cyt (intra): Jurkat cells. ICC/IF: HeLa cells
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p> <p>We are constantly working hard to ensure we provide our customers with best in class antibodies. As a result of this work we are pleased to now offer this antibody in purified format. We are in the process of updating our datasheets. The purified format is designated 'PUR' on our product labels. If you have any questions regarding this update, please contact our Scientific Support team.</p> <p>Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C.

Stable for 12 months at -20°C.

Storage buffer

pH: 7.20

Preservative: 0.01% Sodium azide

Constituents: 9% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA, 50% Tissue culture supernatant

Purity

Protein A purified

Clonality

Monoclonal

Clone number

EP1841Y

Isotype

IgG

Applications

The Abpromise guarantee

Our [Abpromise guarantee](#) covers the use of ab75856 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt (Intra)		1/20. ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
WB		1/1000 - 1/2000. Detects a band of approximately 50 kDa (predicted molecular weight: 50 kDa).
IHC-P		1/50 - 1/100. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.
ICC/IF		1/500.

Application notes

Is unsuitable for IP.

Target

Function

May play an important role in CKII- and p60c-src-induced signal transduction cascades.

Sequence similarities

Belongs to the protein-tyrosine phosphatase family. Non-receptor class 1 subfamily. Contains 1 tyrosine-protein phosphatase domain.

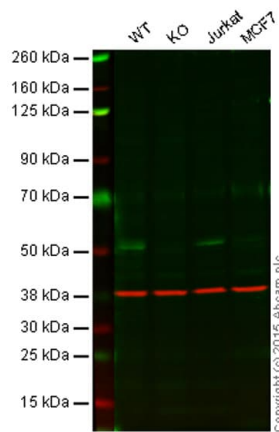
Post-translational modifications

Oxidized on Cys-215; the Cys-SOH formed in response to redox signaling reacts with the alpha-amido of the following residue to form a 4-amino-3-isothiazolidinone serine cross-link, triggering a conformational change that inhibits substrate binding and activity. The active site can be restored by reduction.

Cellular localization

Endoplasmic reticulum membrane.

Images



Western blot - Anti-PTP1B antibody [EP1841Y] (ab75856)

Lane 1: Wild-type HAP1 cell lysate (20 µg)

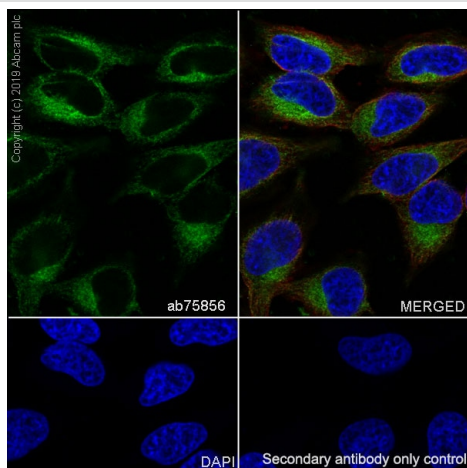
Lane 2: PTP1B knockout HAP1 cell lysate (20 µg)

Lane 3: Jurkat cell lysate (20 µg)

Lane 4: MCF7 cell lysate (20 µg)

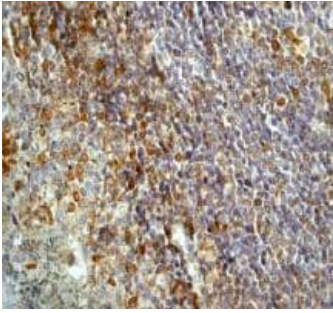
Lanes 1 - 4: Merged signal (red and green). Green - ab75856 observed at 54 kDa. Red - loading control, ab8245, observed at 37 kDa.

ab75856 was shown to specifically react with PTP1B when PTP1B knockout samples were used. Wild-type and ProteinX knockout samples were subjected to SDS-PAGE. ab75856 and ab8245 (loading control to GAPDH) were diluted 1/1000 and 1/2000 respectively and incubated overnight at 4°C. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (ab216776) secondary antibodies at 1/10 000 dilution for 1 h at room temperature before imaging.



Immunocytochemistry/ Immunofluorescence - Anti-PTP1B antibody [EP1841Y] (ab75856)

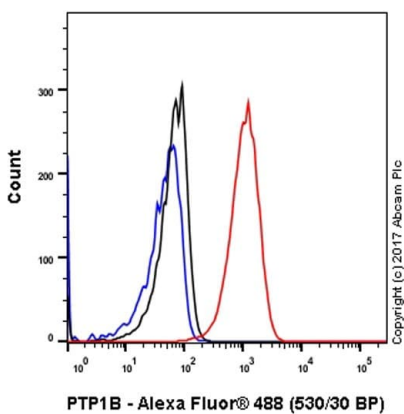
Immunocytochemistry/ Immunofluorescence analysis of HeLa (human cervix adenocarcinoma epithelial cell) cells labeling PTP1B with purified ab75856 at 1/500 dilution (5.3 µg/mL). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1/200 (2.5 µg/mL). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1/1000 (2 µg/mL) dilution. DAPI (blue) was used as nuclear counterstain. ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1/200 (2.5 µg/mL) was used as the secondary antibody only control.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PTP1B antibody [EP1841Y] (ab75856)

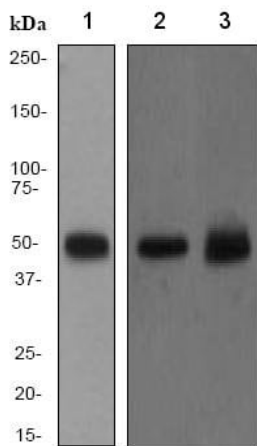
ab75856, at 1/50 dilution, staining PTP1B in human tonsil, by Immunohistochemistry using formalin-fixed, paraffin-embedded tissue.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-PTP1B antibody [EP1841Y] (ab75856)

Intracellular Flow Cytometry analysis of Jurkat cells labelling PTP1B with ab75856 at 1/2000 (red). Cells were fixed with 90% methanol. ab150077, Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/2000) was used as the secondary antibody. Black - Isotype control, rabbit monoclonal IgG (ab172730). Blue - Unlabelled control, cells without incubation with primary and secondary antibodies.



Western blot - Anti-PTP1B antibody [EP1841Y] (ab75856)

All lanes : Anti-PTP1B antibody [EP1841Y] (ab75856) at 1/2000 dilution

Lane 1 : HeLa cell lysate

Lane 2 : HepG2 cell lysate

Lane 3 : Jurkat cell lysate

Lysates/proteins at 10 µg per lane.





Secondary

All lanes : Goat anti-rabbit HRP at 1/1000 dilution

Predicted band size: 50 kDa

Observed band size: 50 kDa

Why choose a recombinant antibody?

 <p>Research with confidence Consistent and reproducible results</p>	 <p>Long-term and scalable supply Recombinant technology</p>
 <p>Success from the first experiment Confirmed specificity</p>	 <p>Ethical standards compliant Animal-free production</p>

Anti-PTP1B antibody [EP1841Y] (ab75856)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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