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PTP1B Antibody (C-term C324)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8411a

Product Information

Application	WB, IHC-P, E
Primary Accession	P18031
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB0353-0354
Calculated MW	49967
Antigen Region	310-341

Additional Information

Gene ID	5770
Other Names	Tyrosine-protein phosphatase non-receptor type 1, Protein-tyrosine phosphatase 1B, PTP-1B, PTPN1, PTP1B
Target/Specificity	This PTP1B antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 310-341 amino acids from the C-terminal region of human PTP1B.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	PTP1B Antibody (C-term C324) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PTPN1
Synonyms	PTP1B
Function	Tyrosine-protein phosphatase which acts as a regulator of endoplasmic reticulum unfolded protein response. Mediates dephosphorylation of

	EIF2AK3/PERK; inactivating the protein kinase activity of EIF2AK3/PERK. May play an important role in CKII- and p60c- src-induced signal transduction cascades. May regulate the EFNA5-EPHA3 signaling pathway which modulates cell reorganization and cell-cell repulsion. May also regulate the hepatocyte growth factor receptor signaling pathway through dephosphorylation of MET.
Cellular Location	Endoplasmic reticulum membrane; Peripheral membrane protein; Cytoplasmic side Note=Interacts with EPHA3 at the cell membrane
Tissue Location	Expressed in keratinocytes (at protein level).

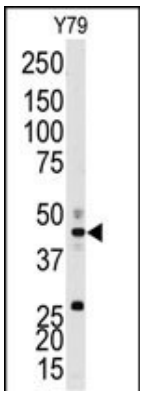
Background

PTP1B is the founding member of the protein tyrosine phosphatase (PTP) family, which was isolated and identified based on its enzymatic activity and amino acid sequence. PTPs catalyze the hydrolysis of the phosphate monoesters specifically on tyrosine residues. Members of the PTP family share a highly conserved catalytic motif, which is essential for the catalytic activity. PTPs are known to be signaling molecules that regulate a variety of cellular processes including cell growth, differentiation, mitotic cycle, and oncogenic transformation. This PTP has been shown to act as a negative regulator of insulin signaling by dephosphorylating the phosphotryosine residues of insulin receptor kinase. This PTP was also reported to dephosphorylate epidermal growth factor receptor kinase, as well as JAK2 and TYK2 kinases, which implicated the role of this PTP in cell growth control, and cell response to interferon stimulation.

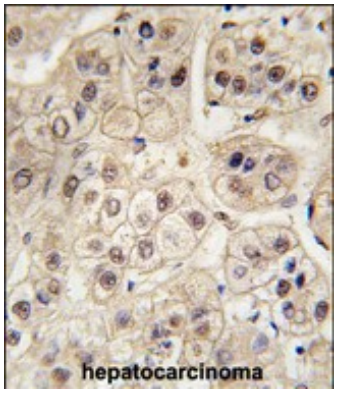
References

Ragab, A., et al., J. Biol. Chem. 278(42):40923-40932 (2003). Sun, J.P., et al., J. Biol. Chem. 278(14):12406-12414 (2003). Boute, N., et al., EMBO Rep. 4(3):313-319 (2003). Li, S., et al., Arch. Biochem. Biophys. 410(2):269-279 (2003). Yigzaw, Y., et al., J. Biol. Chem. 278(1):284-288 (2003).

Images



Western blot analysis of anti-PTP1B Antibody (C-term C324) (Cat.#AP8411a) in Y79 cell line lysates (35ug/lane). PTP1B (arrow) was detected using the purified Pab.



Formalin-fixed and paraffin-embedded human hepatocarcinoma tissue reacted with PTP1B antibody (C-term C324) (Cat.#AP8411a), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

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