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PTPN1 (13Q3) Rabbit Monoclonal Antibody

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Catalog # AP93757

Product Information

Application	WB, IHC, IF, FC, ICC, IP
Primary Accession	P18031, P35821, P20417
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Calculated MW	49967

Additional Information

Gene ID	5770
Dilution	WB~~1:1000 IHC~~1:100~500 IF~~1:50~200 FC~~1:10~50 ICC~~N/A IP~~N/A
Storage Conditions	-20℃

Protein Information

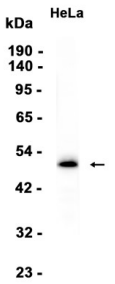
Name	PTPN1
Synonyms	PTP1B
Function	Tyrosine-protein phosphatase which acts as a regulator of endoplasmic reticulum unfolded protein response. Mediates dephosphorylation of EIF2AK3/PERK; inactivating the protein kinase activity of EIF2AK3/PERK. May play an important role in CKII- and p60c- src-induced 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

The protein encoded by this gene 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. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2013]

Images



Western blot analysis of extracts from HeLa cells using AP93757 at 1:1000.