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MYT1 (PKMYT1) Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7196b

Product Information

Application	WB, E
Primary Accession	Q99640
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB09867
Calculated MW	54521
Antigen Region	452-482

Additional Information

Gene ID	9088
Other Names	Membrane-associated tyrosine- and threonine-specific cdc2-inhibitory kinase, Myt1 kinase, PKMYT1, MYT1
Target/Specificity	This MYT1 (PKMYT1) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 452-482 amino acids from the C-terminal region of human MYT1 (PKMYT1).
Dilution	WB~~1:1000 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	MYT1 (PKMYT1) Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PKMYT1
Synonyms	MYT1
Function	Acts as a negative regulator of entry into mitosis (G2 to M transition) by phosphorylation of the CDK1 kinase specifically when CDK1 is complexed to

	cyclins (PubMed:10373560, PubMed:10504341, PubMed:9001210, PubMed:9268380). Mediates phosphorylation of CDK1 predominantly on 'Thr-14'. Also involved in Golgi fragmentation (PubMed:9001210, PubMed:9268380). May be involved in phosphorylation of CDK1 on 'Tyr-15' to a lesser degree, however tyrosine kinase activity is unclear and may be indirect (PubMed:9001210, PubMed:9268380).
Cellular Location	Endoplasmic reticulum membrane; Peripheral membrane protein. Golgi apparatus membrane; Peripheral membrane protein

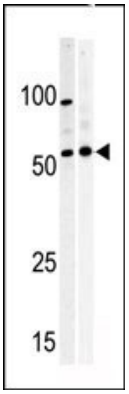
Background

The protein encoded by this gene is a member of the serine/threonine protein kinase family. This kinase preferentially phosphorylates and inactivates cell division cycle 2 protein (CDC2), and thus negatively regulates cell cycle G2/M transition. This kinase is associated with the membrane throughout the cell cycle. Its activity is highly regulated during the cell cycle. Protein kinases AKT1/PKB and PLK (Polo-like kinase) have been shown to phosphorylate and regulate the activity of this kinase. Alternatively spliced transcript variants encoding distinct isoforms have been reported. Transcript Variant: This variant (1) encodes the longer isoform (1).

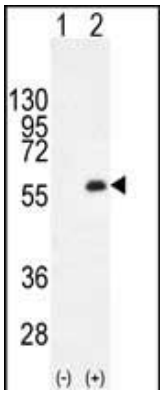
References

Dai, X., et al., J. Invest. Dermatol. 122(6):1356-1364 (2004).
Nakajima, H., et al., J. Biol. Chem. 278(28):25277-25280 (2003).
Passer, B.J., et al., Proc. Natl. Acad. Sci. U.S.A. 100(5):2284-2289 (2003).
Okumura, E., et al., Nat. Cell Biol. 4(2):111-116 (2002).
Booher, R.N., et al., J. Biol. Chem. 272(35):22300-22306 (1997).

Images



Western blot analysis of anti-PKMYT1 Pabin A375(left) and Y79 (right)cell line lysate. PKMYT1(arrow) was detected using the purified Pab.



Western blot analysis of PKMYT1 (arrow) using rabbit polyclonal PKMYT1 C-term (Cat. #AP7196b). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the PKMYT1 gene.