10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Phospho-MYT1(T495) Antibody

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP3173a

Product Information

Application	DB, WB, IHC-P, E
Primary Accession	Q99640
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	54521

Additional Information

Gene ID	9088
Other Names	Membrane-associated tyrosine- and threonine-specific cdc2-inhibitory kinase, Myt1 kinase, PKMYT1, MYT1
Target/Specificity	This MYT1 Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding T495 of human MYT1.
Dilution	DB~~1:500 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 purified through a protein A column, followed by peptide affinity purification.
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	Phospho-MYT1(T495) Antibody 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

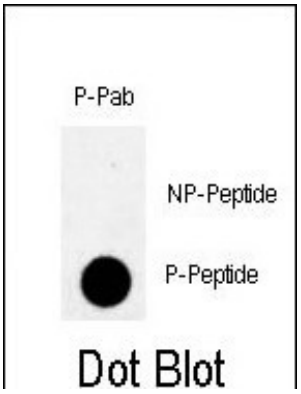
Background

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.

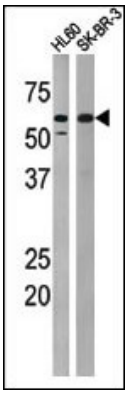
References

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

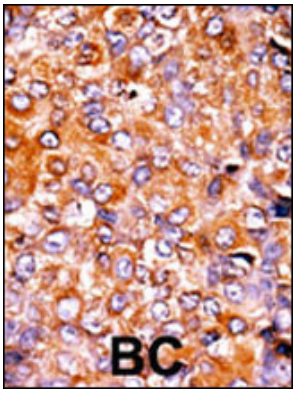


Dot blot analysis of anti-Phospho-MYT1-T495 Antibody (Cat. #AP3173a) on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were adsorbed. Antibody working concentrations are 0.5ug per ml.



The anti-Phospho-MYT1-T495 Antibody (Cat. #AP3173a) is used in Western blot to detect Phospho-MYT1-T495 in HL60 (left) and SK-BR-3 (right) tissue lysates.

Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use



of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

Citations

- Polo-like kinase-1 is activated by aurora A to promote checkpoint recovery.