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MARK3 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7230b

Product Information

Application	IHC-P, WB, E
Primary Accession	P27448
Other Accession	Q8VHF0, Q03141
Reactivity	Human
Predicted	Mouse, Rat, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB2525
Calculated MW	84429
Antigen Region	570-601

Additional Information

Gene ID	4140
Other Names	MAP/microtubule affinity-regulating kinase 3, C-TAK1, cTAK1, Cdc25C-associated protein kinase 1, ELKL motif kinase 2, EMK-2, Protein kinase STK10, Ser/Thr protein kinase PAR-1, Par-1a, Serine/threonine-protein kinase p78, MARK3, CTAK1, EMK2
Target/Specificity	This MARK3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 570-601 amino acids from the C-terminal region of human MARK3.
Dilution	IHC-P~~1:100~500 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 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	MARK3 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MARK3

Synonyms	CTAK1, EMK2
Function	Serine/threonine-protein kinase (PubMed: 16822840, PubMed:16980613, PubMed:23666762). Involved in the specific phosphorylation of microtubule-associated proteins for MAP2 and MAP4. Phosphorylates the microtubule-associated protein MAPT/TAU (PubMed:23666762). Phosphorylates CDC25C on 'Ser-216' (PubMed:12941695). Regulates localization and activity of some histone deacetylases by mediating phosphorylation of HDAC7, promoting subsequent interaction between HDAC7 and 14-3-3 and export from the nucleus (PubMed:16980613). Regulates localization and activity of MITF by mediating its phosphorylation, promoting subsequent interaction between MITF and 14-3-3 and retention in the cytosol (PubMed:16822840). Negatively regulates the Hippo signaling pathway and antagonizes the phosphorylation of LATS1. Cooperates with DLG5 to inhibit the kinase activity of STK3/MST2 toward LATS1 (PubMed:28087714). Phosphorylates PKP2 and KSR1 (PubMed:12941695).
Cellular Location	Cell membrane; Peripheral membrane protein. Cell projection, dendrite. Cytoplasm
Tissue Location	Ubiquitous.

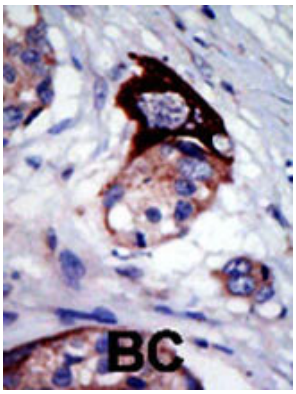
Background

MARK proteins are involved in the specific phosphorylation of microtubule-associated proteins for tau, MAP2, and MAP4. MARK3 was originally identified as a marker that was induced by treatment with DNA damaging agents, and loss of MARK3 was found with carcinogenesis in the pancreas. MARK3 may be involved in cell cycle regulation, and alterations in the MARK3 gene may lead to carcinogenesis.

References

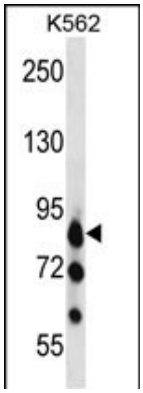
Strausberg, R.L., et al., Proc. Natl. Acad. Sci. U.S.A. 99(26):16899-16903 (2002).
Sun, T.Q., et al., Nat. Cell Biol. 3(7):628-636 (2001).
Peng, C.Y., et al., Cell Growth Differ. 9(3):197-208 (1998).

Images



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.

MARK3 Antibody (S569) (Cat. #AP7230b) western blot analysis in K562 cell line lysates (35ug/lane).This demonstrates the MARK3 antibody detected the MARK3 protein (arrow).



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