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MARK4 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7145b

Product Information

Application	WB, E
Primary Accession	Q96L34
Reactivity	Human
Predicted	Mouse, Rat, Bovine, Canine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB5447
Calculated MW	82520
Antigen Region	611-641

Additional Information

Gene ID	57787
Other Names	MAP/microtubule affinity-regulating kinase 4, MAP/microtubule affinity-regulating kinase-like 1, MARK4, KIAA1860, MARKL1
Target/Specificity	This MARK4 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 611-641 amino acids from the C-terminal region of human MARK4.
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	MARK4 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

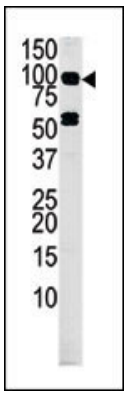
Name	MARK4 {ECO:0000303|PubMed:14594945, ECO:0000312|HGNC:HGNC:13538}
Function	Serine/threonine-protein kinase (PubMed: 14594945, PubMed:15009667, PubMed:23184942, PubMed:23666762). Phosphorylates the

	microtubule-associated protein MAPT/TAU (PubMed:14594945, PubMed:23666762). Also phosphorylates the microtubule-associated proteins MAP2 and MAP4 (PubMed:14594945). Involved in regulation of the microtubule network, causing reorganization of microtubules into bundles (PubMed:14594945, PubMed:25123532). Required for the initiation of axoneme extension during cilium assembly (PubMed:23400999). Regulates the centrosomal location of ODF2 and phosphorylates ODF2 in vitro (PubMed:23400999). Plays a role in cell cycle progression, specifically in the G1/S checkpoint (PubMed:25123532). Reduces neuronal cell survival (PubMed:15009667). Plays a role in energy homeostasis by regulating satiety and metabolic rate (By similarity). Promotes adipogenesis by activating JNK1 and inhibiting the p38MAPK pathway, and triggers apoptosis by activating the JNK1 pathway (By similarity). Phosphorylates mTORC1 complex member RPTOR and acts as a negative regulator of the mTORC1 complex, probably due to disruption of the interaction between phosphorylated RPTOR and the RRAGA/RRAGC heterodimer which is required for mTORC1 activation (PubMed:23184942). Involved in NLRP3 positioning along microtubules by mediating NLRP3 recruitment to microtubule organizing center (MTOC) upon inflammasome activation (PubMed:28656979).
Cellular Location	Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cytoskeleton, microtubule organizing center. Cytoplasm, cytoskeleton, cilium basal body Cytoplasm, cytoskeleton, cilium axoneme Cytoplasm Cell projection, dendrite. Note=Localized at the tips of neurite-like processes in differentiated neuroblast cells. Detected in the cytoplasm and neuropil of the hippocampus
Tissue Location	Ubiquitous. Isoform 2 is brain-specific (PubMed:11326310). Expressed at highest levels in brain and testis Also expressed in heart, lung, liver, muscle, kidney and spleen (PubMed:14594945).

Background

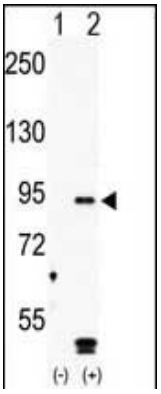
MARK4 contains an N-terminal serine/threonine kinase domain, a central ubiquitin-associated domain, and a C-terminal KA1-associated kinase domain. RT-PCR analysis detects upregulated expression of the gene for MARK4 in nearly all clinical hepatocellular carcinoma cells. Northern blot analysis reveals ubiquitous expression of a 3.6-kb transcript, with highest expression in testis. Immunofluorescence microscopy demonstrates homogeneous cytoplasmic expression. Colony-forming assays show that MARK4 antisense reduces the growth of SNU475 cells. It has been suggested that MARK4 provides a growth advantage to cells.

Images



Western blot analysis of anti-MARK4 Pab (Cat.#AP7145b) in mouse liver tissue lysate (35ug/lane). MARK4(arrow) was detected using the purified Pab.

Western blot analysis of MARK4 (arrow) using rabbit polyclonal hMARK4-R626 Antibody (Cat.#AP7145b).293



cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the MARK4 gene (Lane 2) (Origene Technologies).

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