


Anti-MARK4 antibody ab124267

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Overview

Product name	Anti-MARK4 antibody
Description	Rabbit polyclonal to MARK4
Host species	Rabbit
Tested applications	Suitable for: IHC-P, ICC/IF
Species reactivity	Reacts with: Human Predicted to work with: Mouse 
Immunogen	Synthetic peptide, corresponding to an internal region of Human MARK4, conjugated to KLH.
Positive control	Human tonsil tissue; A549 cells
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid repeated freeze / thaw cycles.
Storage buffer	<p>pH: 7.40</p> <p>Preservative: 0.02% Sodium azide</p> <p>Constituents: 0.88% Sodium chloride, 50% Glycerol (glycerin, glycerine), 49% PBS</p> <p>PBS is without Mg2+ and Ca2+</p>
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab124267 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		Use a concentration of 10 µg/ml.
ICC/IF		1/100 - 1/500.

Target

Function

Serine/threonine-protein kinase (PubMed:15009667, PubMed:14594945, PubMed:23666762, PubMed:23184942). Phosphorylates the microtubule-associated protein MAPT (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 RAGA/RRAGC heterodimer which is required for mTORC1 activation (PubMed:23184942).

Tissue specificity

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).

Sequence similarities

Belongs to the protein kinase superfamily. CAMK Ser/Thr protein kinase family. SNF1 subfamily. Contains 1 KA1 (kinase-associated) domain. Contains 1 protein kinase domain. Contains 1 UBA domain.

Developmental stage

Expressed at all stages of the mitotic cell cycle.

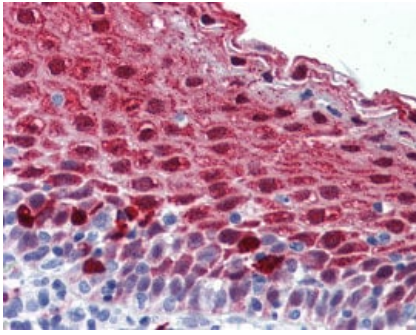
Post-translational modifications

Ubiquitinated with 'Lys-29'- and 'Lys-33'-linked polyubiquitins which appear to impede LKB1-mediated phosphorylation. Deubiquitinated by USP9X. Phosphorylated at Thr-214 by STK11/LKB1 in complex with STE20-related adapter-alpha (STRADA) pseudo kinase and CAB39 (PubMed:14976552). Phosphorylated throughout the cell cycle (PubMed:25123532).

Cellular localization

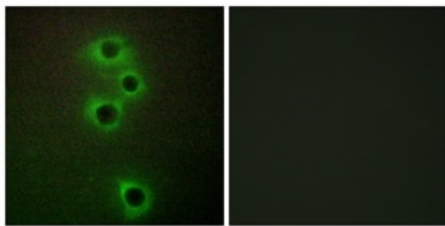
Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cytoskeleton, microtubule organizing center. Cytoplasm, cytoskeleton, cilium basal body. Cytoplasm, cytoskeleton, cilium axoneme. Cytoplasm. Localized at the tips of neurite-like processes in differentiated neuroblast cells. Detected in the cytoplasm and neuropil of the hippocampus.

Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MARK4 antibody (ab124267)

ab124267, at 10 µg/ml, staining MARK4 in formalin fixed, paraffin embedded Human tonsil tissue by immunohistochemistry.



Immunocytochemistry/ Immunofluorescence - Anti-MARK4 antibody (ab124267)

ab124267, at a 1/100 dilution, staining MARK4 in A549 cells by Immunofluorescence. The picture on the right is treated with the synthesized peptide.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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