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MARK1 Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP7144a

Specification

MARK1 Antibody (N-term) Blocking Peptide - Product Information

Primary Accession	Q9P0L2
Other Accession	Q2HIY1

MARK1 Antibody (N-term) Blocking Peptide - Additional Information

Gene ID 4139

Other Names
Serine/threonine-protein kinase MARK1, MAP/microtubule affinity-regulating kinase 1, PAR1 homolog c, Par-1c, Par1c, MARK1 (HGNC:6896)

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP7144a was selected from the N-term region of human MARK1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

MARK1 Antibody (N-term) Blocking Peptide - Protein Information

Name MARK1 (HGNC:6896)

Function
Serine/threonine-protein kinase (PubMed:23666762). Involved in cell polarity and microtubule dynamics regulation. Phosphorylates DCX, MAP2 and MAP4. Phosphorylates the microtubule-associated protein MAPT/TAU (PubMed:23666762). Involved in cell polarity by phosphorylating the microtubule-associated proteins MAP2, MAP4 and MAPT/TAU at KXGS motifs, causing detachment from microtubules, and their disassembly. Involved in the regulation of neuronal migration through its dual activities in regulating cellular polarity and microtubule dynamics, possibly by

phosphorylating and regulating DCX. Also acts as a positive regulator of the Wnt signaling pathway, probably by mediating phosphorylation of dishevelled proteins (DVL1, DVL2 and/or DVL3).

Cellular Location
Cell membrane; Peripheral membrane protein. Cytoplasm, cytoskeleton. Cytoplasm Cell projection, dendrite. Note=Appears to localize to an intracellular network.

Tissue Location
Highly expressed in heart, skeletal muscle, brain, fetal brain and fetal kidney.

MARK1 Antibody (N-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

MARK1 Antibody (N-term) Blocking Peptide - Images

MARK1 Antibody (N-term) Blocking Peptide - Background

MARK is a family of kinases that is known for its involvement in establishing cell polarity and in phosphorylating tau protein during Alzheimer neurodegeneration. Expression of MARK causes the phosphorylation of MAPs at their KXGS motifs, thereby detaching MAPs from the microtubules and thus facilitating the transport of particles. This occurs without impairing the intrinsic activity of motors because the velocity during active movement remains unchanged. In primary retinal ganglion cells, transfection with tau leads to the inhibition of axonal transport of mitochondria, APP vesicles, and other cell components which leads to starvation of axons and vulnerability against stress. This transport inhibition can be rescued by phosphorylating tau with MARK

MARK1 Antibody (N-term) Blocking Peptide - References

Drewes, G., et al., Cell 89(2):297-308 (1997).