

Mouse Mark4 Antibody (C-term) Blocking Peptide
Synthetic peptide
Catalog # BP16077b**Specification**

Mouse Mark4 Antibody (C-term) Blocking Peptide - Product Information

Primary Accession [O8CIP4](#)
Other Accession [NP_758483.1](#)

Mouse Mark4 Antibody (C-term) Blocking Peptide - Additional Information

Gene ID 232944

Other Names

MAP/microtubule affinity-regulating kinase 4, Mark4, Kiaa1860

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.

Mouse Mark4 Antibody (C-term) Blocking Peptide - Protein Information

Name Mark4 {ECO:0000303|PubMed:16973293, ECO:0000312|MGI:MGI:1920955}

Function

Serine/threonine-protein kinase (By similarity). Phosphorylates the microtubule-associated protein MAPT/TAU (By similarity). Also phosphorylates the microtubule-associated proteins MAP2 and MAP4 (By similarity). Involved in regulation of the microtubule network, causing reorganization of microtubules into bundles (By similarity). Required for the initiation of axoneme extension during cilium assembly (By similarity). Regulates the centrosomal location of ODF2 and phosphorylates ODF2 in vitro (By similarity). Plays a role in cell cycle progression, specifically in the G1/S checkpoint (By similarity). Reduces neuronal cell survival (By similarity). Plays a role in energy homeostasis by regulating satiety and metabolic rate (PubMed:22992738). Promotes adipogenesis by activating JNK1 and inhibiting the p38MAPK pathway, and triggers apoptosis by activating the JNK1 pathway (PubMed:24989893). 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 (By similarity). 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 {ECO:0000250|UniProtKB:Q96L34}. Cytoplasm, cytoskeleton, microtubule organizing center. Cytoplasm, cytoskeleton, cilium axoneme {ECO:0000250|UniProtKB:Q96L34}. Cytoplasm, cytoskeleton, cilium basal body {ECO:0000250|UniProtKB:Q96L34}. Cytoplasm {ECO:0000250|UniProtKB:Q96L34}. Cell projection, dendrite {ECO:0000250|UniProtKB:Q96L34}. Note=Localized at the tips of neurite- like processes in differentiated neuroblast cells. Detected in the cytoplasm and neuropil of the hippocampus {ECO:0000250|UniProtKB:Q96L34}

Tissue Location

Isoform 1 and isoform 2 show similar expression patterns in the central nervous system and are present in the same subsets of neurons including pyramidal and non-pyramidal neurons in the cerebral cortex and hippocampus, cerebellar Purkinje cells, and interneurons and motor neurons in the spinal cord but not in glial cells (at protein level) (PubMed:16973293). Isoform 2 is the major isoform in brain and cerebellum (PubMed:16973293, PubMed:15009667) Also expressed in spleen, liver, small intestine, colon, kidney, tongue, testis and lung (PubMed:16973293, PubMed:15009667). Isoform 1 and isoform 2 are expressed at similar levels in heart (PubMed:16973293).

Mouse Mark4 Antibody (C-term) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

Mouse Mark4 Antibody (C-term) Blocking Peptide - Images**Mouse Mark4 Antibody (C-term) Blocking Peptide - References**

Schneider, A., et al. J. Neurochem. 88(5):1114-1126(2004)Zambrowicz, B.P., et al. Proc. Natl. Acad. Sci. U.S.A. 100(24):14109-14114(2003)Okazaki, N., et al. DNA Res. 10(1):35-48(2003)Stryke, D., et al. Nucleic Acids Res. 31(1):278-281(2003)Lee, Y.J., et al. FEBS Lett. 472 (2-3), 230-234 (2000) :