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MARK2 Antibody (aa10-59)
Rabbit Polyclonal Antibody
Catalog # ALS14996

Specification

MARK2 Antibody (aa10-59) - Product Information

Application	**WB, IHC-P, IF, E**
Primary Accession	Q7KZI7
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**88kDa KDa**
Dilution	**WB~~1:1000** **IHC-P~~N/A** **IF~~1:50~200** **E~~N/A**

MARK2 Antibody (aa10-59) - Additional Information

Gene ID 2011

Other Names
Serine/threonine-protein kinase MARK2, 2.7.11.1, 2.7.11.26, ELKL motif kinase 1, EMK-1, MAP/microtubule affinity-regulating kinase 2, PAR1 homolog, PAR1 homolog b, Par-1b, Par1b, MARK2 {ECO:0000312|EMBL:AAH08771.2}, EMK1

Target/Specificity
MARK2 Antibody detects endogenous levels of total MARK2 protein.

Reconstitution & Storage
Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles.

Precautions
MARK2 Antibody (aa10-59) is for research use only and not for use in diagnostic or therapeutic procedures.

MARK2 Antibody (aa10-59) - Protein Information

Name MARK2 {ECO:0000312|EMBL:AAH08771.2}

Synonyms EMK1

Function
Serine/threonine-protein kinase (PubMed:23666762). Involved in cell polarity and microtubule dynamics regulation. Phosphorylates CRTC2/TORC2, DCX, HDAC7, KIF13B, MAP2, MAP4 and RAB11FIP2. Phosphorylates the microtubule-associated protein MAPT/TAU (PubMed:23666762). Plays a key

role in cell polarity by phosphorylating the microtubule-associated proteins MAP2, MAP4 and MAPT/TAU at KXGS motifs, causing detachment from microtubules, and their disassembly. Regulates epithelial cell polarity by phosphorylating RAB11FIP2. Involved in the regulation of neuronal migration through its dual activities in regulating cellular polarity and microtubule dynamics, possibly by phosphorylating and regulating DCX. Regulates axogenesis by phosphorylating KIF13B, promoting interaction between KIF13B and 14-3-3 and inhibiting microtubule-dependent accumulation of KIF13B. Also required for neurite outgrowth and establishment of neuronal polarity. 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. Also acts as a positive regulator of the Wnt signaling pathway, probably by mediating phosphorylation of dishevelled proteins (DVL1, DVL2 and/or DVL3). Modulates the developmental decision to build a columnar versus a hepatic epithelial cell apparently by promoting a switch from a direct to a transcytotic mode of apical protein delivery. Essential for the asymmetric development of membrane domains of polarized epithelial cells.

Cellular Location
Cell membrane; Peripheral membrane protein. Cytoplasm. Lateral cell membrane. Cytoplasm, cytoskeleton. Cell projection, dendrite. Cytoplasm. Note=Phosphorylation at Thr-596 by PRKCZ/aPKC and subsequent interaction with 14-3-3 protein YWHAZ promotes relocation from the cell membrane to the cytoplasm

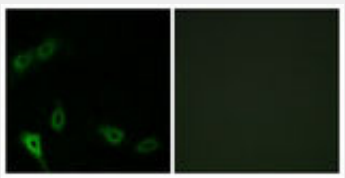
Tissue Location
High levels of expression in heart, brain, skeletal muscle and pancreas, lower levels observed in lung, liver and kidney

MARK2 Antibody (aa10-59) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

MARK2 Antibody (aa10-59) - Images



Immunofluorescence of A549 cells, using MARK2 Antibody.

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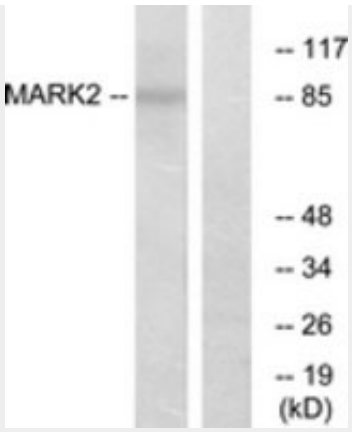
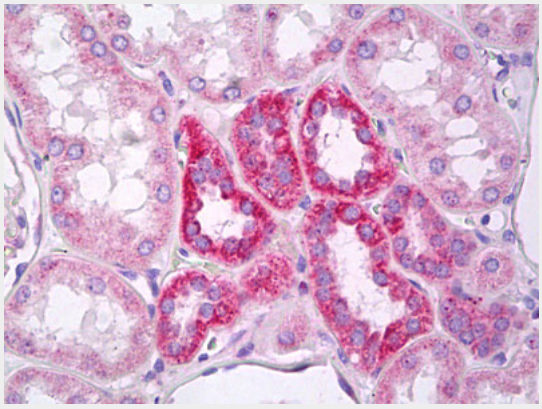


Western blot of extracts from COS7 cells, using MARK2 Antibody.



Anti-MARK2 antibody IHC of human kidney, tubules.

MARK2 Antibody (aa10-59) - Background

Serine/threonine-protein kinase involved in cell polarity and microtubule dynamics regulation. Phosphorylates CRTC2/TORC2, DCX, HDAC7, KIF13B, MAP2, MAP4, MAPT/TAU, and RAB11FIP2. Plays a key role in cell polarity by phosphorylating the microtubule-associated proteins MAP2, MAP4 and MAPT/TAU at KXGS motifs, causing detachment from microtubules, and their disassembly. Regulates epithelial cell polarity by phosphorylating RAB11FIP2. Involved in the regulation of neuronal migration through its dual activities in regulating cellular polarity and microtubule dynamics, possibly by phosphorylating and regulating DCX. Regulates axogenesis by phosphorylating KIF13B, promoting interaction between KIF13B and 14-3-3 and inhibiting microtubule- dependent accumulation of KIF13B. Also required for neurite outgrowth and establishment of neuronal polarity. 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. Also acts as a positive regulator of the Wnt signaling pathway, probably by mediating phosphorylation of dishevelled proteins (DVL1, DVL2 and/or DVL3). Modulates the developmental decision to build a columnar versus a hepatic epithelial cell apparently by promoting a switch from a direct to a transcytotic mode of apical protein delivery. Essential for the asymmetric development of membrane domains of polarized epithelial cells.

MARK2 Antibody (aa10-59) - References

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Kalnine N.,et al.Submitted (MAY-2003) to the EMBL/GenBank/DDBJ databases.
Taylor T.D.,et al.Nature 440:497-500(2006).
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