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# MARK2 Antibody

Rabbit mAb
Catalog # AP92014

## Product Information

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|---|---|
| **Application** | WB, FC |
| **Primary Accession** | Q7KZI7 |
| **Reactivity** | Rat, Human, Mouse |
| **Clonality** | Monoclonal |
| **Other Names** | EMK1; Mark2; PAR 1; Par1b; |
| **Isotype** | Rabbit IgG |
| **Host** | Rabbit |
| **Calculated MW** | 87911 |

## Additional Information

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|---|---|
| **Dilution** | WB 1:500~1:2000 FC 1:100 |
| **Purification** | Affinity-chromatography |
| **Immunogen** | A synthesized peptide derived from human MARK2 |
| **Description** | Role in epithelial morphogenesis. 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. |
| **Storage Condition and Buffer** | Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle. |

## Protein Information

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|---|---|
| **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 disheveled 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. Phosphorylates UBAC2 at 'Ser-223' during ER stress or starvation-induced autophagy, promoting UBAC2 dimerization and interaction with GABARAP to mediate ER-phagy (PubMed:39284914).

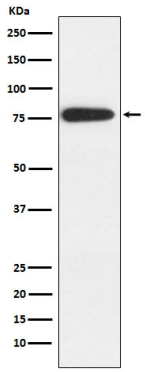
**Cellular Location**

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

## Images




Western blot analysis of MARK2 expression in Neuro-2a cell lysate.

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