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KD-Validated Anti-MARK2 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody

Catalog # AGI1618

Specification

KD-Validated Anti-MARK2 Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC, ICC**
Primary Accession	Q7KZI7
Reactivity	**Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 88 kDa , observed , 74 kDa KDa**
Gene Name	**MARK2**
Aliases	**Microtubule Affinity Regulating Kinase 2; Par1b; MAP/Microtubule Affinity-Regulating Kinase 2; ELKL Motif Kinase 1; PAR-1B; PAR-1; EMK1; Serine/Threonine-Protein Kinase MARK2; Ser/Thr Protein Kinase PAR-1B; PAR1 Homolog B; EC 2.7.11.1; EMK-1; Serine/Threonine Protein Kinase EMK; Testicular Tissue Protein Li 117; Protein-Serine/Threonine Kinase; Serine/Threonine Kinase; ELKL Motif Kinase; PAR1 Homolog; EC 2.7.11.26; EC 2.7.11; Par-1b**
Immunogen	**A synthesized peptide derived from human MARK2**

KD-Validated Anti-MARK2 Rabbit Monoclonal Antibody - 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

KD-Validated Anti-MARK2 Rabbit Monoclonal Antibody - 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:<a

href="http://www.uniprot.org/citations/23666762" target="_blank">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

KD-Validated Anti-MARK2 Rabbit Monoclonal Antibody - 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

KD-Validated Anti-MARK2 Rabbit Monoclonal Antibody - Images

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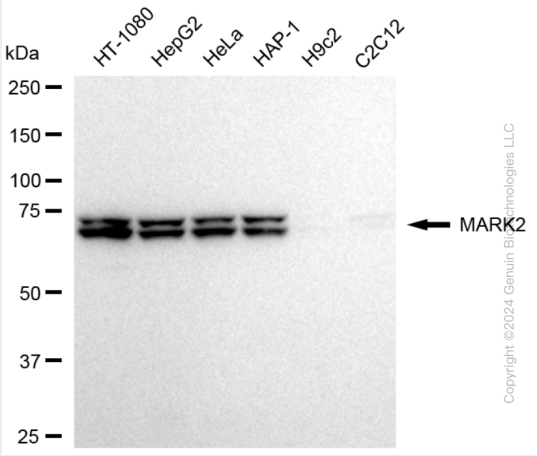
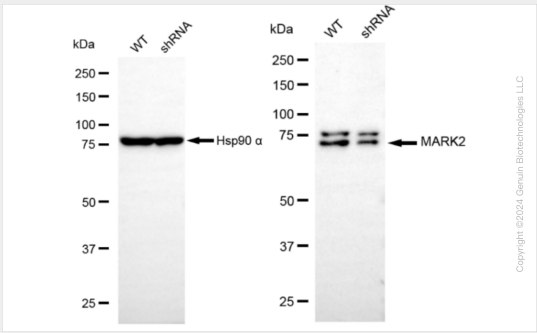
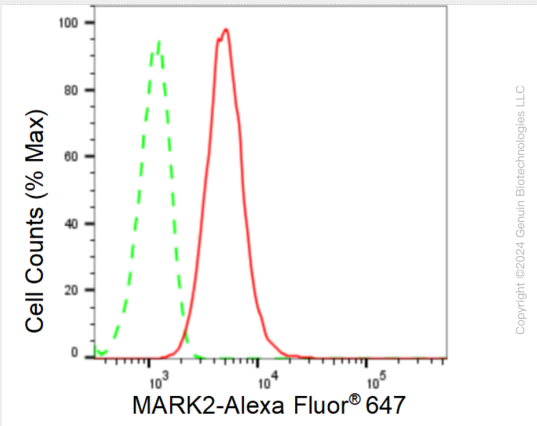


Western blotting analysis using anti-MARK2 antibody (Cat#AGI1618). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-MARK2 antibody (Cat#AGI1618, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-MARK2 antibody (Cat#AGI1618). MARK2 expression in wild type (WT) and MARK2 shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with anti-MARK2 antibody (Cat#AGI1618, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of MARK2 expression in HT-1080 cells using MARK2 antibody (Cat#AGI1618, 1:2,000). Green, isotype control; red, MARK2.

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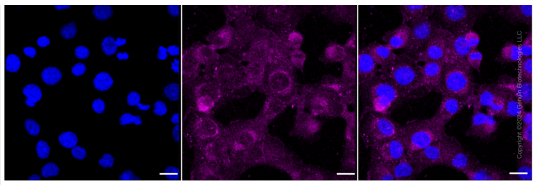

Immunocytochemical staining of HT-1080 cells with anti-MARK2 antibody (Cat#AGI1618, 1:1,000). Nuclei were stained blue with DAPI; MARK2 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 µm.