



## Rabbit Anti-MARK1 antibody

SL18679R

<b>Product Name:</b>	MARK1
<b>Chinese Name:</b>	丝氨酸/苏氨酸蛋白激酶MARK1抗体
<b>Alias:</b>	KIAA1477; MAP/microtubule affinity regulating kinase 1; MAP/microtubule affinity-regulating kinase 1; MARK 1; MARK; Mark1; MARK1_HUMAN; MGC126512; MGC126513; Serine/threonine protein kinase MARK1; Serine/threonine-protein kinase MARK1.
<b>Organism Species:</b>	Rabbit
<b>Clonality:</b>	Polyclonal
<b>React Species:</b>	Human,Mouse,Rat,Pig,Cow,Rabbit,
<b>Applications:</b>	ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
<b>Molecular weight:</b>	89kDa
<b>Cellular localization:</b>	cytoplasmic
<b>Form:</b>	Lyophilized or Liquid
<b>Concentration:</b>	1mg/ml
<b>immunogen:</b>	KLH conjugated synthetic peptide derived from human MARK1:101-200/795
<b>Lsotype:</b>	IgG
<b>Purification:</b>	affinity purified by Protein A
<b>Storage Buffer:</b>	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
<b>Storage:</b>	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
<b>PubMed:</b>	<a href="#">PubMed</a>
<b>Product Detail:</b>	MARK1 is thought to play a role in the stability of the microtubule matrix of the cytoskeleton. MARK1 is activated by phosphorylation of Thr215 by LKB1 in complex with STRAD and MO25. Localized to the cytoskeleton, MARK1 contains one kinase-associated (KA1) domain, one protein kinase domain and one UBA domain. Expressed

as three isoforms produced by alternative splicing, MARK1 is found with highest levels in brain, skeletal muscle and heart.

**Function:**

Serine/threonine-protein kinase involved in cell polarity and microtubule dynamics regulation. Phosphorylates DCX, MAP2, MAP4 and MAPT/TAU. 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).

**Subcellular Location:**

Cytoplasm > cytoskeleton. Appears to localize to an intracellular network.

**Tissue Specificity:**

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

**Post-translational modifications:**

Phosphorylation at Thr-613 by PRKCZ/aPKC in polarized epithelial cells inhibits the kinase activity. By similarity. Phosphorylated at Thr-215 by STK11/LKB1 in complex with STE20-related adapter-alpha (STRADA) pseudo kinase and CAB39.

Phosphorylation at Thr-215 by TAOK1 activates the kinase activity, leading to phosphorylation and detachment of MAPT/TAU from microtubules. Phosphorylation at Ser-219 by GSK3-beta (GSK3B) inhibits the kinase activity.

**DISEASE:**

Genetic variations in MARK1 may be associated with susceptibility to autism. MARK1 is overexpressed in the prefrontal cortex of patients with autism and causes changes in the function of cortical dendrites.

**Similarity:**

Belongs to the protein kinase superfamily.  
CAMK Ser/Thr protein kinase family. MARK subfamily.  
Contains 1 KA1 (kinase-associated) domain.  
Contains 1 protein kinase domain.  
Contains 1 UBA domain.

**SWISS:**

Q9POL2

**Gene ID:**

4139

**Database links:**

[Entrez Gene: 4139](#) Human

[Entrez Gene: 226778](#) Mouse

[Entrez Gene: 117016](#) Rat

[Omim: 606511](#) Human

[SwissProt: Q9P0L2](#) Human

[SwissProt: Q8VHJ5](#) Mouse

[SwissProt: O08678](#) Rat

[Unigene: 497806](#) Human

[Unigene: 7445](#) Mouse

[Unigene: 21430](#) Rat

**Important Note:**

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

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