



Rabbit Anti-phospho-MARK1 (Thr215) antibody

SL18680R

Product Name:	phospho-MARK1 (Thr215)
Chinese Name:	磷酸化丝氨酸/苏氨酸蛋白激酶MARK1抗体
Alias:	MARK1 (phospho T215); MARK 1 (phospho T215); p-MARK1 (phospho T215); 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
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Pig,Cow,Horse,
Applications:	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.
Molecular weight:	89kDa
Cellular localization:	cytoplasmicThe cell membrane
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthesised phosphopeptide derived from human MARK1 around the phosphorylation site of Thr215:LD(p-T)FC
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 癆 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癆. 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 癆.
PubMed:	PubMed

Product Detail:

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:

Cell membrane; Peripheral membrane protein. Cytoplasm ?cytoskeleton

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. SNF1 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.