

Product name:	CaMKI α (phospho Thr177) Rabbit Polyclonal Antibody
Cat number:	ABN04358
Conjugate:	Unconjugated
Size:	100 μ L
Clone:	Polyclonal
Concentration:	1mg/ml
Host:	Rabbit
Isotype:	IgG
Immunogen:	The antiserum was produced against synthesized peptide derived from human CaMK1-alpha around the phosphorylation site of Thr177. AA range:143-192
Reactivity:	Human,Mouse,Rat
Applications:	WB 1:500-1:2000,IHC 1:100-1:300,ICC/IF 1:200-1:1000,ELISA 1:5000-1:10000
Molecular Weight:	41kDa
Purification:	Affinity purification
Form:	Liquid
Buffer:	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Storage:	Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles.

Background:

Calcium/calmodulin-dependent protein kinase I is expressed in many tissues and is a component of a calmodulin-dependent protein kinase cascade. Calcium/calmodulin directly activates calcium/calmodulin-dependent protein kinase I by binding to the enzyme and indirectly promotes the phosphorylation and synergistic activation of the enzyme by calcium/calmodulin-dependent protein kinase I kinase. [provided by RefSeq, Jul 2008], catalytic activity: ATP + a protein = ADP + a phosphoprotein., domain: The autoinhibitory domain overlaps with the calmodulin binding region and interacts in the inactive folded state with the catalytic domain as a pseudosubstrate., enzyme regulation: Activated by Ca(2+)/calmodulin. Binding of calmodulin results in a conformational change that generates functional binding sites for both, substrate and ATP, and thus releases intrasteric autoinhibition. Must be phosphorylated to be maximally active. Phosphorylated by CAMKK1 or CAMKK2., function: Calcium/calmodulin-dependent protein kinase belonging to a proposed calcium-triggered signaling cascade involved in a number of cellular processes like transcriptional regulation, hormone production, translational regulation, regulation of actin filament organization and neurite outgrowth. Involved in calcium-dependent activation of the ERK pathway (By similarity). Recognizes the substrate consensus sequence [MVLIF]-x-R-x(2)-[ST]-x(3)-[MVLIF]. Phosphorylates EIF4G3/eIF4GII. In vitro phosphorylates CREB1, ATF1, CTFR, MYL9, SYN1/synapsin I and SYNII/synapsin II., similarity: Belongs to the protein kinase superfamily., similarity: Belongs to the protein kinase superfamily. CAMK Ser/Thr protein kinase family. CaMK subfamily., similarity: Contains 1 protein kinase domain., subcellular location: Predominantly cytoplasmic., subunit: Monomer. Interacts with XPO1., tissue specificity: Ubiquitous.,