Product Name: CaMKIα Rabbit Polyclonal Antibody
Catalog #: APRab07893

Summary

Production Name	CaMKIα Rabbit Polyclonal Antibody
Description	Rabbit Polyclonal Antibody
Host	Rabbit
Application	WB,IHC-P,IF-P,IF-F,ICC/IF,ELISA
Reactivity	Human,Mouse,Rat

Performance

Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Purification	Affinity purification

Immunogen

Gene Name	CAMK1
Alternative Names	CAMK1; Calcium/calmodulin-dependent protein kinase type 1; CaM kinase I; CaM-KI; CaM kinase I alpha; CaMKI-alpha
Gene ID	8536.0
SwissProt ID	Q14012.The antiserum was produced against synthesized peptide derived from human CaMK1-alpha. AA range:143-192

Application

Dilution Ratio	WB 1:500-1:2000, IHC-P 1:100-1:300, ELISA 1:20000, IF-P/IF-F/ICC/IF 1:50-200
Molecular Weight	45kDa

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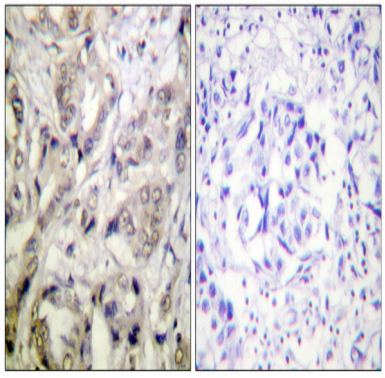
Background

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 releaves 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.,

Research Area

Image Data



Immunohistochemistry analysis of paraffin-embedded human breast carcinoma tissue, using CaMK1-alpha Antibody. The picture on the right is blocked with the synthesized peptide.

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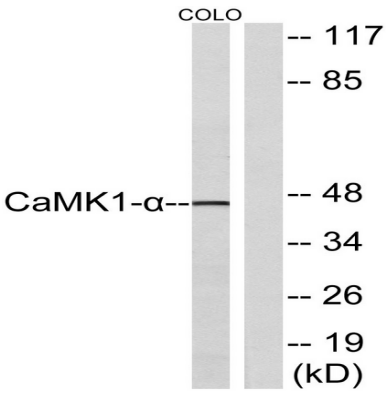

Western blot analysis of lysates from COLO cells, using CaMK1-alpha Antibody. The lane on the right is blocked with the synthesized peptide.

Note

For research use only.