Product Name: CaMKIα Rabbit Polyclonal Antibody
Catalog #: APRab07893

Summary

Production Name	CaMKIα Rabbit Polyclonal Antibody
Description	Rabbit Polyclonal Antibody
Host	Rabbit
Application	WB,IHC,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 1:100 - 1:300. ELISA: 1:20000..
Molecular Weight	45kD

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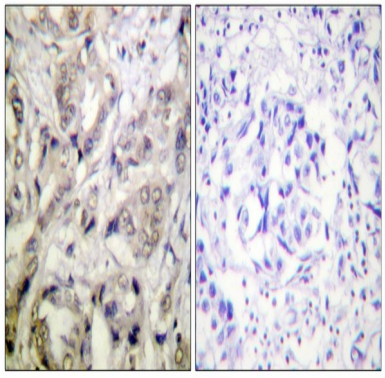
Background

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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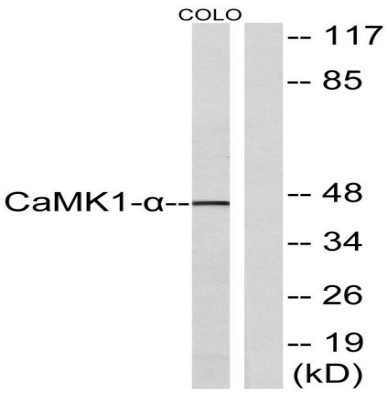

Western blot analysis of lysates from COLO cells, using CaMK1-alpha Antibody. The lane on the right is blocked with the synthesized peptide.

Note

For research use only.