Product Name: CaMKIV Rabbit Polyclonal Antibody
Catalog #: APRab07892

Summary

Production Name	CaMKIV Rabbit Polyclonal Antibody
Description	Rabbit Polyclonal Antibody
Host	Rabbit
Application	IF,IHC,WB,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	CAMK4
Alternative Names	CAMK4; CAMK; CAMK-GR; CAMKIV; Calcium/calmodulin-dependent protein kinase type IV; CaMK IV; CaM kinase-GR
Gene ID	814.0
SwissProt ID	Q16566.The antiserum was produced against synthesized peptide derived from human CaMK4. AA range:166-215

Application

Dilution Ratio	WB 1:500 - 1:2000. IHC 1:100 - 1:300. IF 1:200 - 1:1000. ELISA: 1:5000. Not yet tested in other applications.
Molecular Weight	60kD

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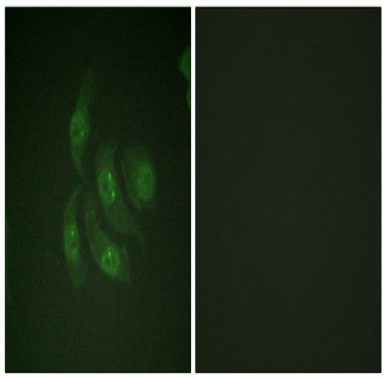
Background

The product of this gene belongs to the serine/threonine protein kinase family, and to the Ca(2+)/calmodulin-dependent protein kinase subfamily. This enzyme is a multifunctional serine/threonine protein kinase with limited tissue distribution, that has been implicated in transcriptional regulation in lymphocytes, neurons and male germ cells. [provided by RefSeq, Jul 2008],catalytic activity:ATP + a protein = ADP + a phosphoprotein.,enzyme regulation:Activated by Ca(2+)/calmodulin. Binding of calmodulin may releave intrasteric autoinhibition. Must be phosphorylated to be maximally active. Phosphorylated by CAMKK1 or CAMKK2. Autophosphorylation of the N-terminus is required for full activation. In part, activity is independent on Ca(2+)/calmodulin and autophosphorylation of Ser-336 allows to switch to a Ca(2+)/calmodulin-independent state (By similarity). Probably inactivated by serine/threonine protein phosphatase 2A.,function:Calcium/calmodulin-dependent protein kinase belonging to a proposed calcium-triggered signaling cascade. May be involved in transcriptional regulation. May be involved in regulation of microtubule dynamics. In vitro, phosphorylates CREB1, CREBBP, PRM2, MEF2A, MEF2D and STMN1/OP18. May be involved in spermatogenesis. May play a role in the consolidation/retention of hippocampus-dependent long-term memory.,PTM:Autophosphorylated and phosphorylated by CAMKK1 and CAMKK2 (By similarity). Dephosphorylated by serine/threonine protein phosphatase 2A, probably on Thr-200.,similarity:Belongs to the protein kinase superfamily. CAMK Ser/Thr protein kinase family. CaMK subfamily.,similarity:Contains 1 protein kinase domain.,subcellular location:Substantial localization in certain neuronal nuclei. In spermatids associated with chromatin and nuclear matrix.,subunit:Monomer (By similarity). Interacts with serine/threonine protein phosphatase 2A catalytic subunit, PPP2CA or PPP2CB. The interaction with PP2CA or PP2CB is mutually exclusive with binding to Ca(2+)/calmodulin.,tissue specificity:Expressed in epithelial ovarian cancer tissue.,

Research Area

Calcium;Long-term potentiation;Neurotrophin;

Image Data



Immunofluorescence analysis of HepG2 cells, using CaMK4 Antibody. The picture on the right is blocked with the synthesized peptide.

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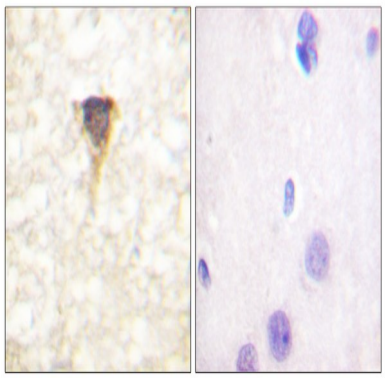
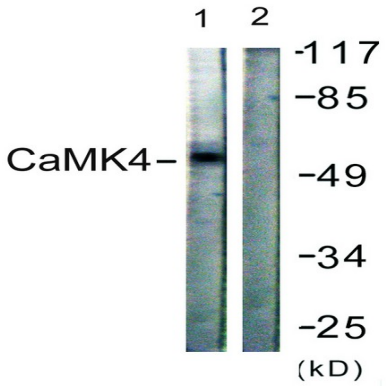


Immunohistochemistry analysis of paraffin-embedded human brain tissue, using CaMK4 Antibody. The picture on the right is blocked with the synthesized peptide.



Western blot analysis of lysates from K562 cells, treated with H2O2 100uM 30 ', using CaMK4 Antibody. The lane on the right is blocked with the synthesized peptide.

Note

For research use only.