Product Name: CaMKIV (phospho Thr200) Rabbit Polyclonal Antibody
Catalog #: APRab04357

Summary

Production Name	CaMKIV (phospho Thr200) 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	Phospho Antibody
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 around the phosphorylation site of Thr196/200. AA range:166-215

Application

Dilution Ratio	WB 1:500-1:2000, IHC-P 1:100-1:300, IF-P/IF-F/ICC/IF 1:200-1:1000, ELISA 1:40000.Not yet tested in other applications.

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Molecular Weight 60kDa

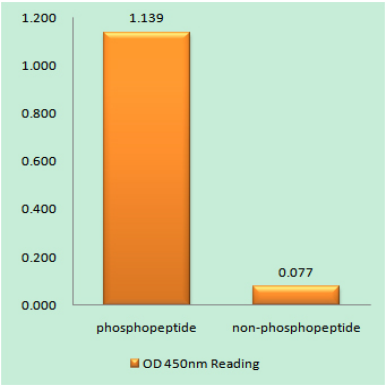
Background

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



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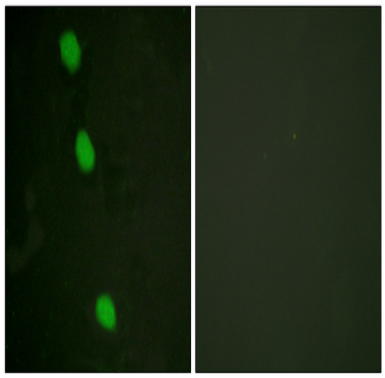
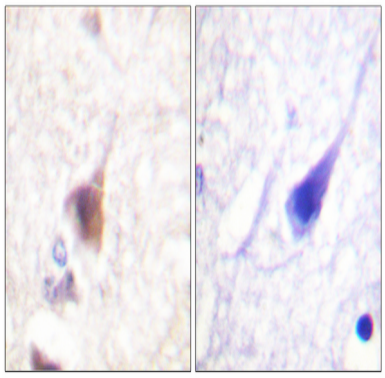
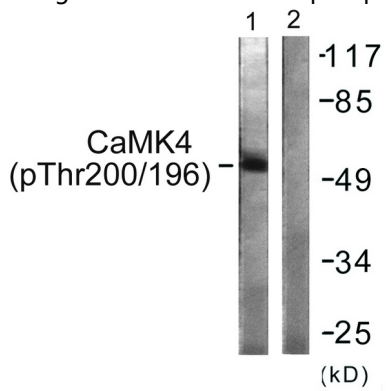
Enzyme-Linked Immunosorbent Assay （Phospho-ELISA） for Immunogen Phosphopeptide （Phospho-left） and Non-Phosphopeptide （Phospho-right）, using CaMK4 （Phospho-Thr196/200） Antibody



Immunofluorescence analysis of HeLa cells, using CaMK4 （Phospho-Thr196/200） Antibody. The picture on the right is blocked with the phospho peptide.



Immunohistochemistry analysis of paraffin-embedded human brain, using CaMK4 （Phospho-Thr196/200） Antibody. The picture on the right is blocked with the phospho peptide.



Western blot analysis of lysates from K562 cells treated with H2O2 100uM 30 ', using CaMK4 （Phospho-Thr196/200） Antibody. The lane on the right is blocked with the phospho peptide.

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Note

For research use only.