



CaMKIIα/δ Polyclonal Antibody

Catalog No	YP-Ab-14685
Isotype	IgG
Reactivity	Human;Mouse;Rat
Applications	WB;IHC;IF;ELISA
Gene Name	CAMK2A/CAMK2D
Protein Name	Calcium/calmodulin-dependent protein kinase type II subunit alpha/delta
Immunogen	The antiserum was produced against synthesized peptide derived from human CaMK2 alpha/delta. AA range:256-305
Specificity	CaMKIIα/δ Polyclonal Antibody detects endogenous levels of CaMKIIα/δ protein.
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source	Polyclonal, Rabbit,IgG
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Dilution	Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. Immunofluorescence: 1/200 - 1/1000. ELISA: 1/10000. Not yet tested in other applications.
Concentration	1 mg/ml
Purity	≥90%
Storage Stability	-20°C/1 year
Synonyms	CAMK2A; CAMKA; KIAA0968; Calcium/calmodulin-dependent protein kinase type II subunit alpha; CaM kinase II subunit alpha; CaMK-II subunit alpha; CAMK2D; CAMKD; Calcium/calmodulin-dependent protein kinase type II subunit delta; CaM kinase II
Observed Band	54kD
Cell Pathway	Cell junction, synapse . Cell junction, synapse, postsynaptic density . Cell projection, dendritic spine . Cell projection, dendrite . Postsynaptic lipid rafts. .
Tissue Specificity	Brain,
Function	catalytic activity:ATP + a protein = ADP + a phosphoprotein.,enzyme regulation:Autophosphorylation of Thr-286 allows the kinase to switch from a calmodulin-dependent to a calmodulin-independent state.,function:CaM-kinase II (CAMK2) is a prominent kinase in the central nervous system that may function in long-term potentiation and neurotransmitter release. Member of the NMDAR signaling complex in excitatory synapses it may regulate NMDAR-dependent potentiation of the AMPAR and synaptic plasticity.,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:Postsynaptic lipid rafts.,subunit:CAMK2 is



composed of four different chains: alpha, beta, gamma, and delta. The different isoforms assemble into homo- or heteromultimeric

Background

The product of this gene belongs to the serine/threonine protein kinases family, and to the Ca(2+)/calmodulin-dependent protein kinases subfamily. Calcium signaling is crucial for several aspects of plasticity at glutamatergic synapses. This calcium calmodulin-dependent protein kinase is composed of four different chains: alpha, beta, gamma, and delta. The alpha chain encoded by this gene is required for hippocampal long-term potentiation (LTP) and spatial learning. In addition to its calcium-calmodulin (CaM)-dependent activity, this protein can undergo autophosphorylation, resulting in CaM-independent activity. Two transcript variants encoding distinct isoforms have been identified for this gene. [provided by RefSeq, Nov 2008],

matters needing attention

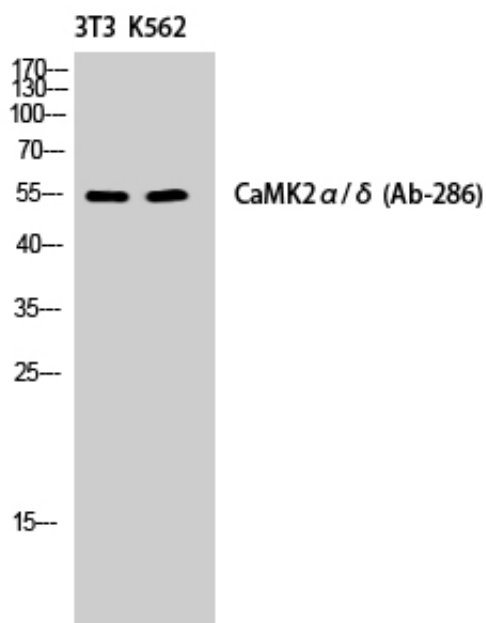
Avoid repeated freezing and thawing!

Usage suggestions

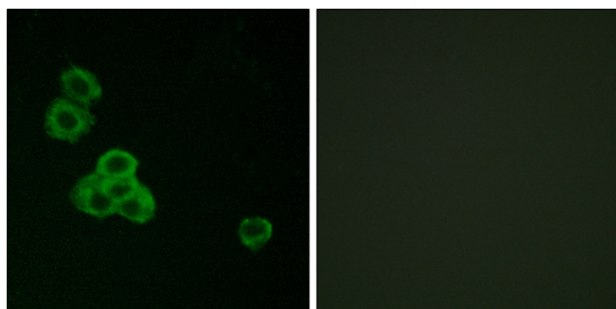
This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.



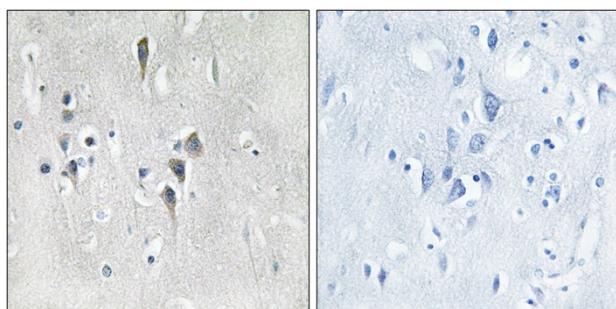
Products Images



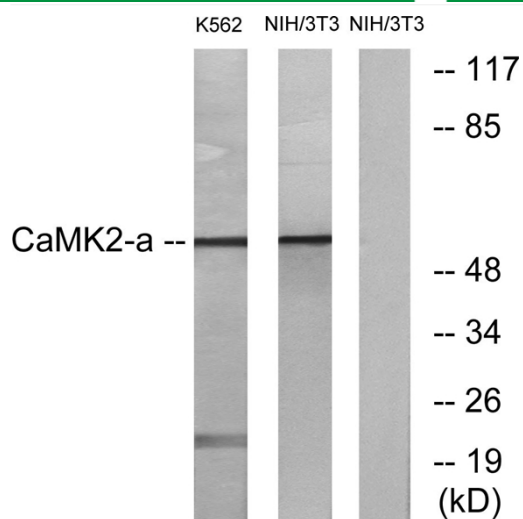
Western Blot analysis of NIH-3T3/K562 cells using CaMKII α/δ Polyclonal Antibody diluted at 1:500



Immunofluorescence analysis of MCF7 cells, using CaMK2 alpha/delta Antibody. The picture on the right is blocked with the synthesized peptide.



Immunohistochemistry analysis of paraffin-embedded human brain tissue, using CaMK2 alpha/delta Antibody. The picture on the right is blocked with the synthesized peptide.



Western blot analysis of lysates from NIH/3T3 and K562 cells, using CaMK2 alpha/delta Antibody. The lane on the right is blocked with the synthesized peptide.