



# CaMKII $\alpha/\delta$ Polyclonal Antibody

<b>Catalog No</b>	YP-Ab-14685
<b>Isotype</b>	IgG
<b>Reactivity</b>	Human;Mouse;Rat
<b>Applications</b>	WB;IHC;IF;ELISA
<b>Gene Name</b>	CAMK2A/CAMK2D
<b>Protein Name</b>	Calcium/calmodulin-dependent protein kinase type II subunit alpha/delta
<b>Immunogen</b>	The antiserum was produced against synthesized peptide derived from human CaMK2 alpha/delta. AA range:256-305
<b>Specificity</b>	CaMKII $\alpha/\delta$ Polyclonal Antibody detects endogenous levels of CaMKII $\alpha/\delta$ protein.
<b>Formulation</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
<b>Source</b>	Polyclonal, Rabbit,IgG
<b>Purification</b>	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
<b>Dilution</b>	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.
<b>Concentration</b>	1 mg/ml
<b>Purity</b>	$\geq 90\%$
<b>Storage Stability</b>	-20°C/1 year
<b>Synonyms</b>	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
<b>Observed Band</b>	54kD
<b>Cell Pathway</b>	Cell junction, synapse . Cell junction, synapse, postsynaptic density . Cell projection, dendritic spine . Cell projection, dendrite . Postsynaptic lipid rafts. .
<b>Tissue Specificity</b>	Brain,
<b>Function</b>	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**

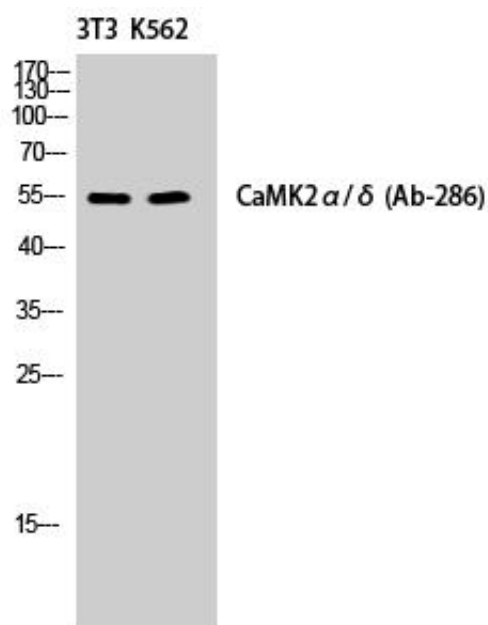
Avoid repeated freezing and thawing!

**Usage suggestions**

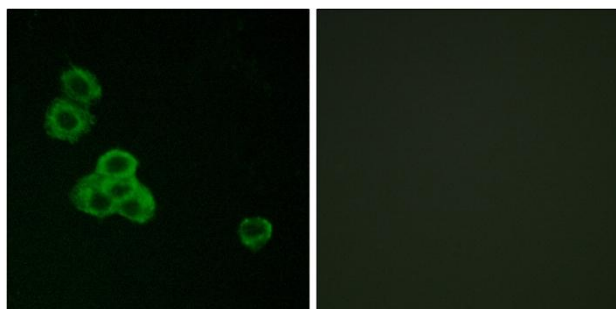
This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.



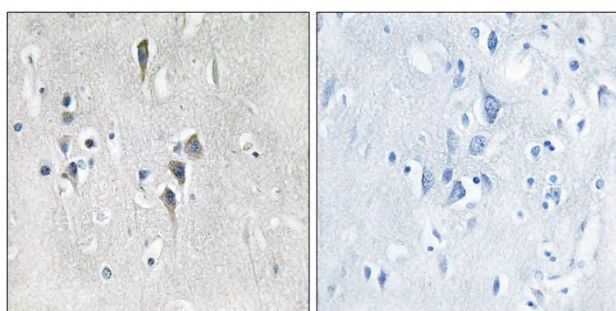
## Products Images



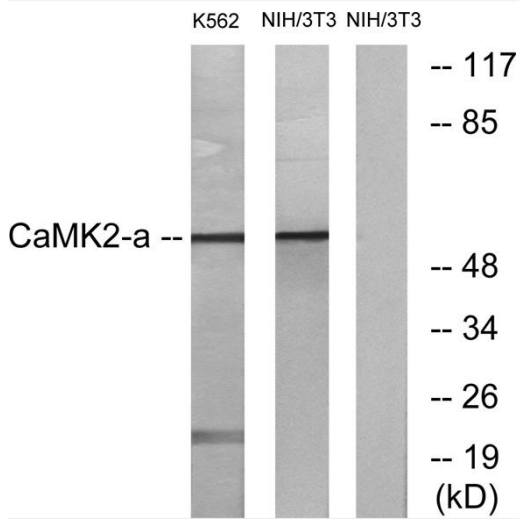
Western Blot analysis of NIH-3T3/K562 cells using CaMKII $\alpha/\delta$  Polyclonal Antibody diluted at 1:500



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.