



CaMKIIα/δ (phospho Thr286) Polyclonal Antibody

Catalog No	YP-Ab-14301
Isotype	IgG
Reactivity	Human;Mouse;Rat;Pig
Applications	WB;IHC;IF;ELISA
Gene Name	CAMK2A/CAMK2D
Immunogen	The antiserum was produced against synthesized peptide derived from human CaMK2 around the phosphorylation site of Thr286. AA range:256-305
Specificity	Phospho-CaMKIIα/δ (T286) Polyclonal Antibody detects endogenous levels of CaMKIIα/δ protein only when phosphorylated at T286.
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;Calcium/calmodulin-dependent protein kinase type II subunit alpha; CAMK2;CAMKA;CaMK-II subunit alpha;CAMK2A/CAMK2D;Calcium/calmodulin-dependent protein kinase type II subunit alpha/delta;KIAA0968;CaM kinase II subunit alpha;CAMK2D;CAMKD;Calcium/calmodulin-dependent protein kinase type II subunit delta;CaM kinase II
Observed Band	54kD
Calculated Molecular Weight	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

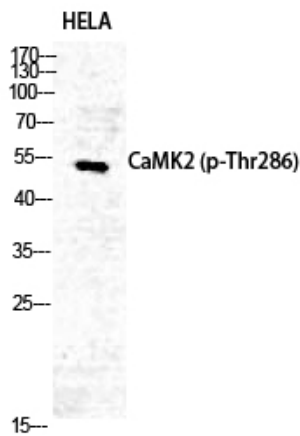
Avoid repeated freezing and thawing!

Usage suggestions

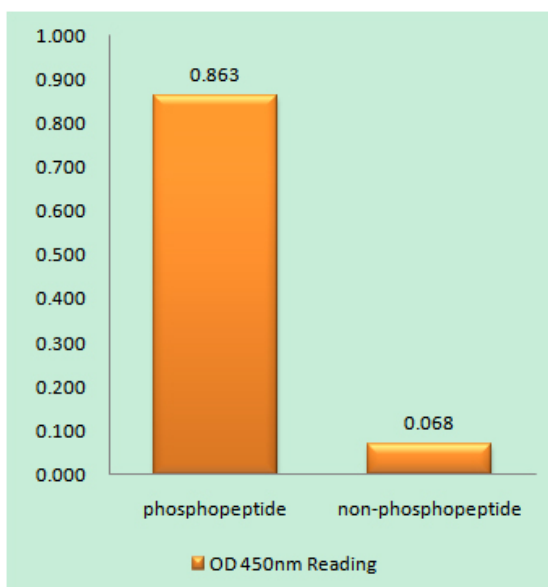
This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.



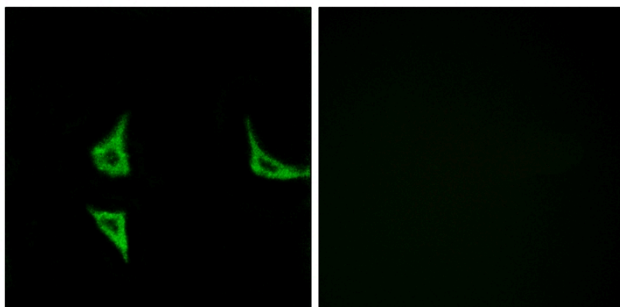
Products Images



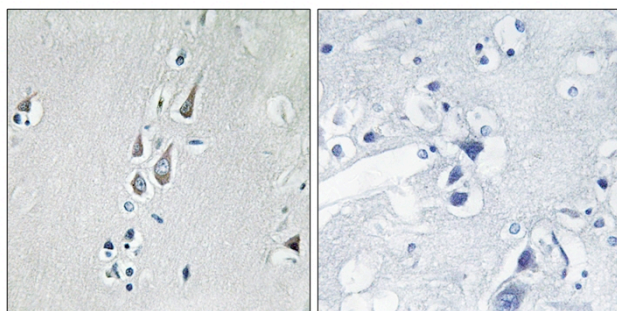
Western Blot analysis of HELA cells using Phospho-CaMKIIα/δ (T286) Polyclonal Antibody diluted at 1:500



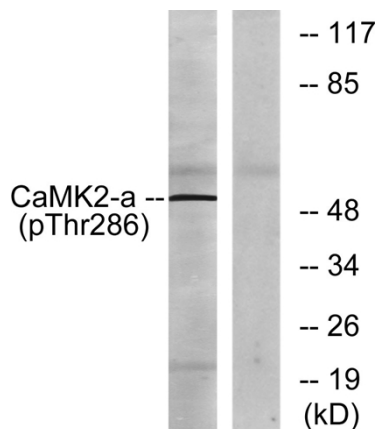
Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right), using CaMK2 (Phospho-Thr286) Antibody



Immunofluorescence analysis of COS7 cells, using CaMK2 (Phospho-Thr286) Antibody. The picture on the right is blocked with the phospho peptide.



Immunohistochemistry analysis of paraffin-embedded human brain, using CaMK2 (Phospho-Thr286) Antibody. The picture on the right is blocked with the phospho peptide.



Western blot analysis of lysates from K562 cells, using CaMK2 (Phospho-Thr286) Antibody. The lane on the right is blocked with the phospho peptide.