

CaMKII α/δ (phospho Thr286) Polyclonal Antibody

Catalog No :	YP0042
Reactivity :	Human;Mouse;Rat;Pig
Applications :	WB;IHC;IF;ELISA
Target :	CaMK2
Fields :	>>ErbB signaling pathway;>>Calcium signaling pathway;>>cAMP signaling pathway;>>HIF-1 signaling pathway;>>Oocyte meiosis;>>Necroptosis;>>Adrenergic signaling in cardiomyocytes;>>Wnt signaling pathway;>>Axon guidance;>>Circadian entrainment;>>Long-term potentiation;>>Neurotrophin signaling pathway;>>Cholinergic synapse;>>Dopaminergic synapse;>>Olfactory transduction;>>Inflammatory mediator regulation of TRP channels;>>Insulin secretion;>>GnRH signaling pathway;>>Melanogenesis;>>Oxytocin signaling pathway;>>Glucagon signaling pathway;>>Aldosterone synthesis and secretion;>>Cushing syndrome;>>Gastric acid secretion;>>Parkinson disease;>>Pathways of neurodegeneration - multiple diseases;>>Amphetamine addiction;>>Tuberculosis;>>Pathways in cancer;>>Proteoglycans in cancer;>>Glioma;>>Diabetic cardiomyopathy;>>Lipid and atherosclerosis
Gene Name :	CAMK2A/CAMK2D
Protein Name :	Calcium/calmodulin-dependent protein kinase type II subunit alpha/delta
Human Gene Id :	815/817
Human Swiss Prot No :	Q9UQM7/Q13557
Mouse Gene Id :	12322/108058
Rat Gene Id :	25400/24246
Rat Swiss Prot No :	P11275/P15791
Immunogen :	The antiserum was produced against synthesized peptide derived from human CaMK2 around the phosphorylation site of Thr286. AA range:256-305

Specificity :	Phospho-CaMKII α/δ (T286) Polyclonal Antibody detects endogenous levels of CaMKII α/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
Dilution :	WB 1:500 - 1:2000. IHC 1:100 - 1:300. IF 1:200 - 1:1000. ELISA: 1:10000. Not yet tested in other applications.
Purification :	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Concentration :	1 mg/ml
Storage Stability :	-15°C to -25°C/1 year(Do not lower than -25°C)
Observed Band :	54kD
Cell Pathway :	ErbB_HER;Calcium;Oocyte meiosis;WNT;WNT-T CELLLong-term potentiation;Neurotrophin;Olfactory transduction;GnRH;Melanogenesis;Glioma;
Background :	<p>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],</p>
Function :	<p>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</p>

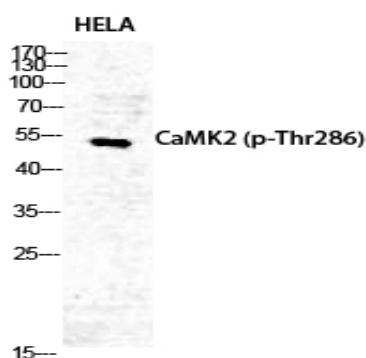
Subcellular Location :

Cell junction, synapse . Cell junction, synapse, postsynaptic density . Cell projection, dendritic spine . Cell projection, dendrite . Postsynaptic lipid rafts. .

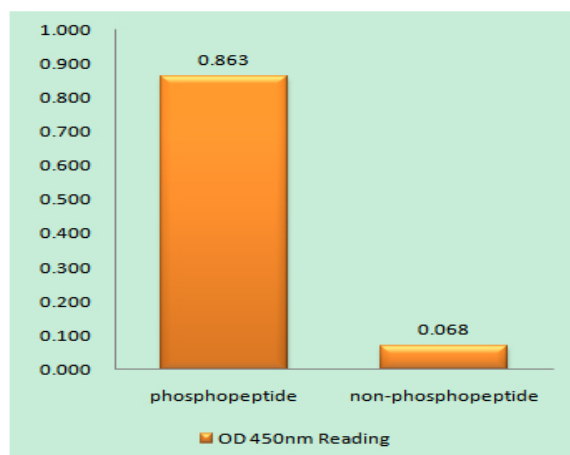
Expression :

Brain,

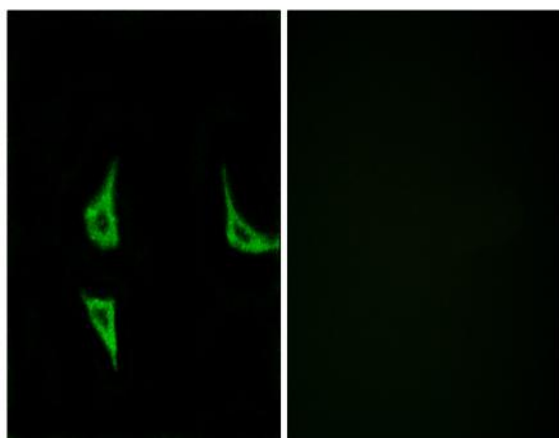
Products Images



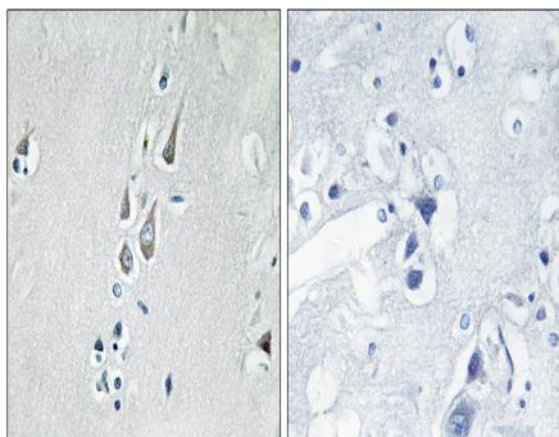
Western Blot analysis of HELA cells using Phospho-CaMKIIα/δ (T286) Polyclonal Antibody diluted at 1:500



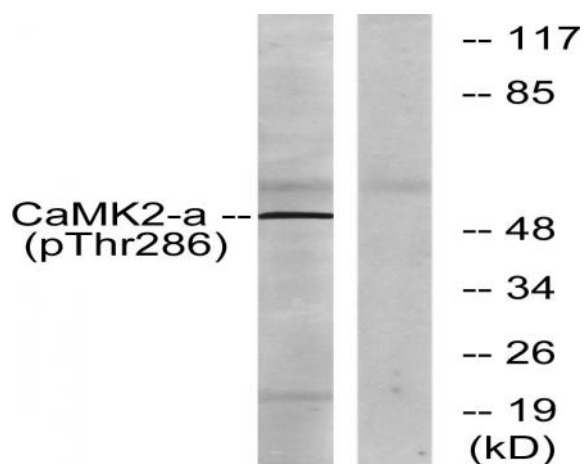
Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right), using CaMK2 (Phospho-Thr286) Antibody



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.