

**Product Name: CaMKII $\alpha$ / $\delta$  (phospho Thr286) Rabbit Polyclonal Antibody**  
**Catalog #: APRab04355**



## Summary

<b>Production Name</b>	CaMKII $\alpha$ / $\delta$ (phospho Thr286) Rabbit Polyclonal Antibody
<b>Description</b>	Rabbit Polyclonal Antibody
<b>Host</b>	Rabbit
<b>Application</b>	WB,IHC-P,IF-P,IF-F,ICC/IF,ELISA
<b>Reactivity</b>	Human,Mouse,Rat,Pig

## Performance

<b>Conjugation</b>	Unconjugated
<b>Modification</b>	Phospho Antibody
<b>Isotype</b>	IgG
<b>Clonality</b>	Polyclonal
<b>Form</b>	Liquid
<b>Storage</b>	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
<b>Buffer</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
<b>Purification</b>	Affinity purification

## Immunogen

<b>Gene Name</b>	CAMK2A/CAMK2D 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>Alternative Names</b>	
<b>Gene ID</b>	815/817
<b>SwissProt ID</b>	Q9UQM7/Q13557.The antiserum was produced against synthesized peptide derived from human CaMK2 around the phosphorylation site of Thr286. AA range:256-305

## Application

<b>Dilution Ratio</b>	WB 1:500-1:2000, IHC-P 1:100-1:300, IF-P/IF-F/ICC/IF 1:200-1:1000, ELISA 1:10000.Not
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yet tested in other applications.

**Molecular Weight** 54kDa

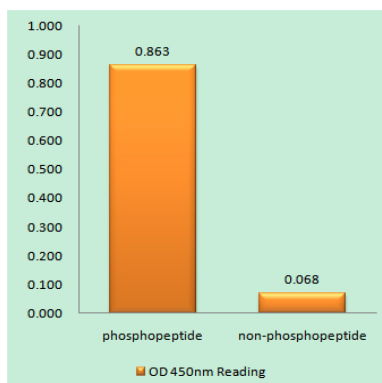
## Background

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],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 holoenzymes composed of 8 to 12 subunits. Interacts with BAALC, MPDZ, SYN1, CAMK2N2 and SYNGAP1.,

## Research Area

ErbB\_HER;Calcium;Oocyte meiosis;WNT;WNT-T CELLLong-term potentiation;Neurotrophin;Olfactory transduction;GnRH;Melanogenesis;Glioma;

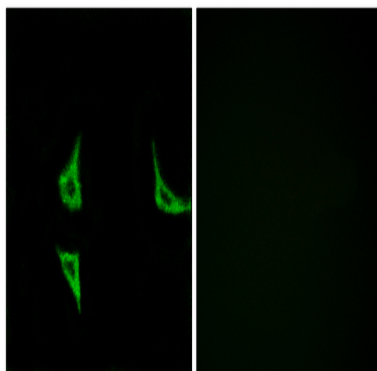
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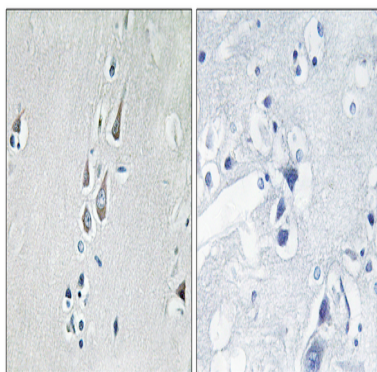
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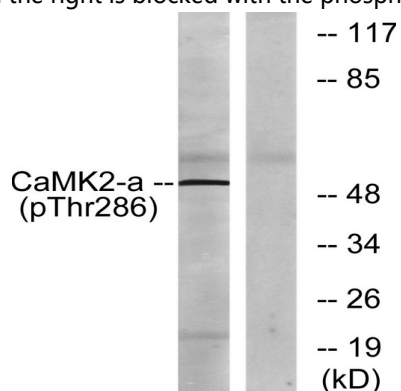
Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right) , using CaMK2 (Phospho-Thr286) Antibody



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



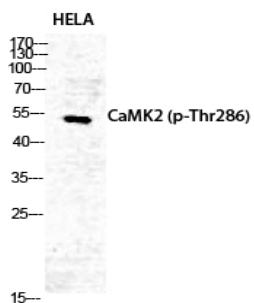
Immunohistochemistry analysis of paraffin-embedded human brain, using CaMK2 (Phospho-Thr286) Antibody. The picture on the right is blocked with the phospho peptide.



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

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Western Blot analysis of HELA cells using Phospho-CaMKII $\alpha$ / $\delta$  (T286) Polyclonal Antibody diluted at 1: 500

### **Note**

For research use only.