

## **CaMKIIα/β/δ Polyclonal Antibody**

Catalog No: YT0622

**Reactivity:** Human; Mouse; Rat

**Applications:** IHC;IF;WB;ELISA

Target: CaMKIIα/β/δ

**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;>>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

**Protein Name:** Calcium/calmodulin-dependent protein kinase type II subunit alpha

**Human Gene Id:** 815/816/817

**Human Swiss Prot** 

Q9UQM7/Q13554/Q13557

No:

Mouse Gene ld: 12322/12323/108058

**Rat Gene Id:** 25400/24245/24246

Rat Swiss Prot No: P11275/P08413/P15791

**Immunogen:** The antiserum was produced against synthesized peptide derived from human

CaMK2 alpha/beta/delta. AA range:271-320



Specificity: CaMKIIα/β/δ Polyclonal Antibody detects endogenous levels of CaMKIIα/β/δ

protein.

**Formulation:** Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Source: Polyclonal, Rabbit, IgG

**Dilution:** WB 1:500-2000 IHC 1:100 - 1:300. ELISA: 1:5000.. IF 1:50-200

**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)

Molecularweight: 54kD

**Cell Pathway:** ErbB\_HER;Calcium;Oocyte meiosis;WNT;WNT-T CELLLong-term

potentiation; Neurotrophin; Olfactory transduction; GnRH; Melanogenesis; Glioma;

**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],

**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

**Subcellular** Cell junction, synapse. Cell junction, synapse, postsynaptic density. Cell

2/3



**Location :** projection, dendritic spine . Cell projection, dendrite . Postsynaptic lipid rafts. .

**Expression :** Brain,

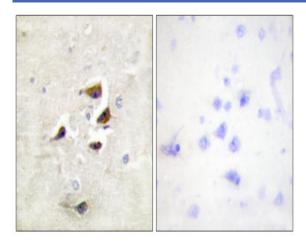
**Sort :** 3090

**No4:** 1

Host: Rabbit

**Modifications:** Unmodified

## **Products Images**



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