



# CaMKIIα/β/δ Polyclonal Antibody

|                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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| <b>Catalog No</b>                  | YP-Ab-14684                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Isotype</b>                     | IgG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Reactivity</b>                  | Human;Mouse;Rat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Applications</b>                | IHC;IF;WB;ELISA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Gene Name</b>                   | CAMK2A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Immunogen</b>                   | The antiserum was produced against synthesized peptide derived from human CaMK2 alpha/beta/delta. AA range:271-320                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Specificity</b>                 | CaMKIIα/β/δ Polyclonal Antibody detects endogenous levels of CaMKIIα/β/δ 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>                    | WB 1:500-2000 IHC: 1/100 - 1/300. ELISA: 1/5000.. IF 1:50-200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Concentration</b>               | 1 mg/ml                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Purity</b>                      | ≥90%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Storage Stability</b>           | -20°C/1 year                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Synonyms</b>                    | CAMK2A;Calcium/calmodulin-dependent protein kinase type II subunit alpha; CAMK2;CAMKA;CaMK-II subunit alpha;CaMKIIα/β/δ;KIAA0968;CaM kinase II subunit alpha;CAMK2B;CAM2;CAMKB;Calcium/calmodulin-dependent protein kinase type II subunit beta;Ca                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Observed Band</b>               | 54kD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Calculated Molecular Weight</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],

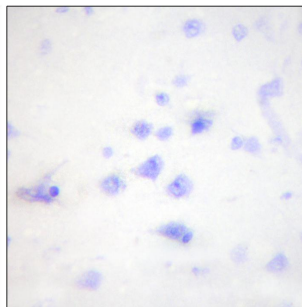
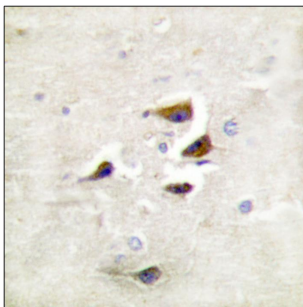
#### matters needing attention

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



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.