

**CaMKII Antibody**  
**Rabbit Polyclonal Antibody**  
**Catalog # ABV10279****Specification**

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**CaMKII Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">O9UQM7</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	54088

**CaMKII Antibody - Additional Information****Gene ID** 815**Application & Usage**

Western blotting at 1-2 µg/ml. However, the optimal concentrations should be determined individually. The anti-CaMKII antibody recognizes the 50 kDa of CamonkeyII in samples from human, mouse, and rat origins.

**Other Names**

CAMK2A , CAMKA , KIAA0968, EC 2.7.11.17

**Target/Specificity**

CaMKII

**Antibody Form**

Liquid

**Appearance**

Colorless liquid

**Formulation**

100 µg (0.5 mg/ml) purified rabbit polyclonal anti-CaMKII antibody in phosphate-buffered saline (PBS) containing 50% glycerol, 1% BSA, and 0.02% thimerosal.

**Handling**

The antibody solution should be gently mixed before use.

**Reconstitution & Storage**

-20 °C

**Background Descriptions****Precautions**

CaMKII Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## CaMKII Antibody - Protein Information

**Name** CAMK2A

**Synonyms** CAMKA, KIAA0968

### Function

Calcium/calmodulin-dependent protein kinase that functions autonomously after Ca(2+)/calmodulin-binding and autophosphorylation, and is involved in various processes, such as synaptic plasticity, neurotransmitter release and long-term potentiation (PubMed:<a href="http://www.uniprot.org/citations/14722083" target="\_blank">14722083</a>). Member of the NMDAR signaling complex in excitatory synapses, it regulates NMDAR-dependent potentiation of the AMPAR and therefore excitatory synaptic transmission (By similarity). Regulates dendritic spine development (PubMed:<a href="http://www.uniprot.org/citations/28130356" target="\_blank">28130356</a>). Also regulates the migration of developing neurons (PubMed:<a href="http://www.uniprot.org/citations/29100089" target="\_blank">29100089</a>). Phosphorylates the transcription factor FOXO3 to activate its transcriptional activity (PubMed:<a href="http://www.uniprot.org/citations/23805378" target="\_blank">23805378</a>). Phosphorylates the transcription factor ETS1 in response to calcium signaling, thereby decreasing ETS1 affinity for DNA (By similarity). In response to interferon-gamma (IFN-gamma) stimulation, catalyzes phosphorylation of STAT1, stimulating the JAK- STAT signaling pathway (PubMed:<a href="http://www.uniprot.org/citations/11972023" target="\_blank">11972023</a>). In response to interferon- beta (IFN-beta) stimulation, stimulates the JAK-STAT signaling pathway (PubMed:<a href="http://www.uniprot.org/citations/35568036" target="\_blank">35568036</a>). Acts as a negative regulator of 2- arachidonoylglycerol (2-AG)-mediated synaptic signaling via modulation of DAGLA activity (By similarity).

### Cellular Location

Synapse {ECO:0000250|UniProtKB:P11275}. Postsynaptic density {ECO:0000250|UniProtKB:P11275}. Cell projection, dendritic spine. Cell projection, dendrite. Note=Postsynaptic lipid rafts {ECO:0000250|UniProtKB:P11275}

## CaMKII Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## CaMKII Antibody - Images

## CaMKII Antibody - Background

CaMKII is a member of calcium/calmodulin-activated kinase, functioning in neural synaptic stimulation and T-cell receptor signaling. CaMKII has catalytic and regulatory domains. The binding of Ca<sup>++</sup>/calmodulin to its regulatory domain releases its autoinhibitory effect and activates the

kinase. The activated CaMKII further autophosphorylates itself at Thr286 to render the kinase constitutively active.