

**CAMK2A / CaMKII Alpha Antibody (Internal)**  
**Goat Polyclonal Antibody**  
**Catalog # ALS13371****Specification**

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**CAMK2A / CaMKII Alpha Antibody (Internal) - Product Information**

Application	WB, IHC
Primary Accession	<a href="#">O9UQM7</a>
Reactivity	Human, Mouse, Rat, Rabbit, Monkey, Pig, Horse, Bovine, Dog
Host	Goat
Clonality	Polyclonal
Calculated MW	54kDa KDa

**CAMK2A / CaMKII Alpha Antibody (Internal) - Additional Information****Gene ID** 815**Other Names**

Calcium/calmodulin-dependent protein kinase type II subunit alpha, CaM kinase II subunit alpha, CaMK-II subunit alpha, 2.7.11.17, CAMK2A, CAMKA, KIAA0968

**Target/Specificity**

Human CAMK2A. This antibody is expected to recognize both reported isoforms (NP\_057065.2; NP\_741960.1).

**Reconstitution & Storage**

Store at -20°C. Minimize freezing and thawing.

**Precautions**

CAMK2A / CaMKII Alpha Antibody (Internal) is for research use only and not for use in diagnostic or therapeutic procedures.

**CAMK2A / CaMKII Alpha Antibody (Internal) - 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:&lt;a href="http://www.uniprot.org/citations/14722083" target="\_blank"&gt;14722083&lt;/a&gt;). 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:&lt;a href="http://www.uniprot.org/citations/28130356" target="\_blank"&gt;28130356&lt;/a&gt;). Also regulates the migration of developing neurons (PubMed:&lt;a

<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}

### CAMK2A / CaMKII Alpha Antibody (Internal) - Protocols

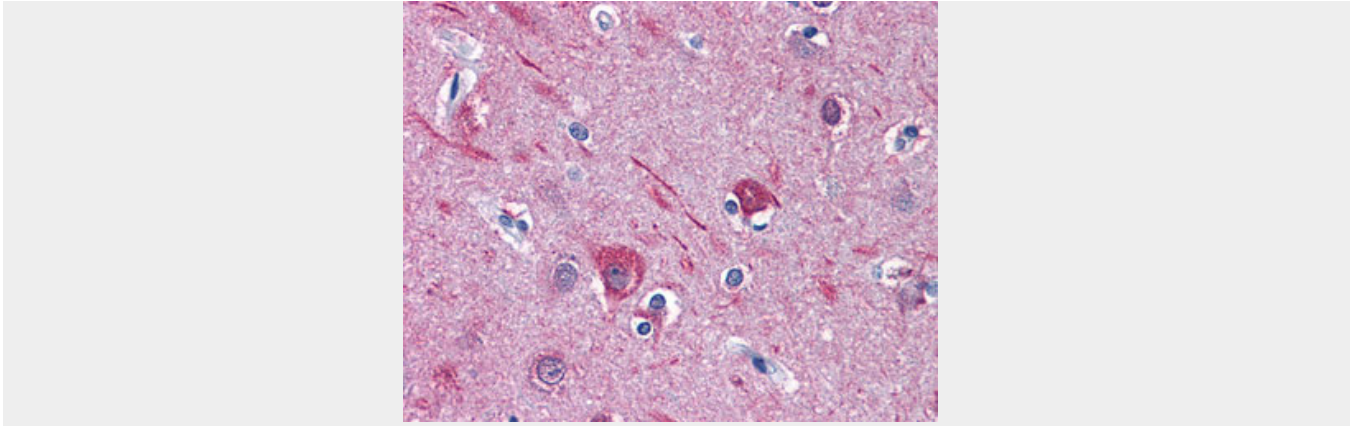
Provided below are standard protocols that you may find useful for product applications.

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

### CAMK2A / CaMKII Alpha Antibody (Internal) - Images



Antibody (0.1 ug/ml) staining of Mouse Brain lysate (35 ug protein in RIPA buffer).



Anti-CAMK2A antibody IHC of human brain, cortex.

### **CAMK2A / CaMKII Alpha Antibody (Internal) - Background**

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 (By similarity).

### **CAMK2A / CaMKII Alpha Antibody (Internal) - References**

- Li G.Y.,et al.Submitted (APR-1999) to the EMBL/GenBank/DDBJ databases.
- Nagase T.,et al.DNA Res. 6:63-70(1999).
- Schmutz J.,et al.Nature 431:268-274(2004).
- Krapivinsky G.,et al.Neuron 43:563-574(2004).