

**CAMK2A (CAMK2 alpha) Antibody (C-term)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP7206b****Specification**

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**CAMK2A (CAMK2 alpha) Antibody (C-term) - Product Information**

Application	WB, IHC-P,E
Primary Accession	<a href="#">O9UQM7</a>
Other Accession	<a href="#">P11275</a> , <a href="#">P11798</a>
Reactivity	Human
Predicted	Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	446-478

**CAMK2A (CAMK2 alpha) Antibody (C-term) - 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, CAMK2A, CAMKA, KIAA0968

**Target/Specificity**

This CAMK2A (CAMK2 alpha) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 446-478 amino acids from the C-terminal region of human CAMK2A (CAMK2 alpha).

**Dilution**

WB~~1:1000

IHC-P~~1:50~100

E~~Use at an assay dependent concentration.

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

CAMK2A (CAMK2 alpha) Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**CAMK2A (CAMK2 alpha) Antibody (C-term) - 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:[14722083](#)). 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:[28130356](#)). Also regulates the migration of developing neurons (PubMed:[29100089](#)). Phosphorylates the transcription factor FOXO3 to activate its transcriptional activity (PubMed:[23805378](#)). 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:[11972023](#)). In response to interferon- beta (IFN-beta) stimulation, stimulates the JAK-STAT signaling pathway (PubMed:[35568036](#)). Acts as a negative regulator of 2- arachidonoylglycerol (2-AG)-mediated synaptic signaling via modulation of DAGLA activity (By similarity).

**Cellular Location**

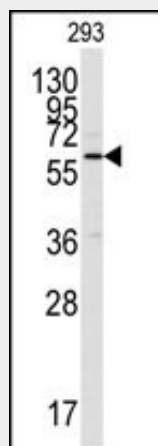
Synapse {ECO:0000250|UniProtKB:P11275}. Postsynaptic density {ECO:0000250|UniProtKB:P11275}. Cell projection, dendritic spine. Cell projection, dendrite. Note=Postsynaptic lipid rafts {ECO:0000250|UniProtKB:P11275}

**CAMK2A (CAMK2 alpha) Antibody (C-term) - Protocols**

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

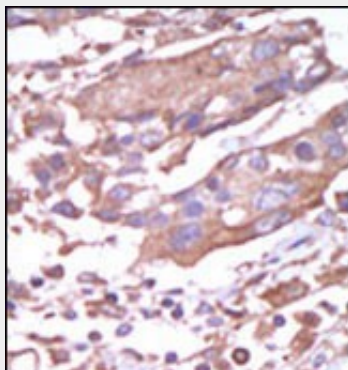
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**CAMK2A (CAMK2 alpha) Antibody (C-term) - Images**

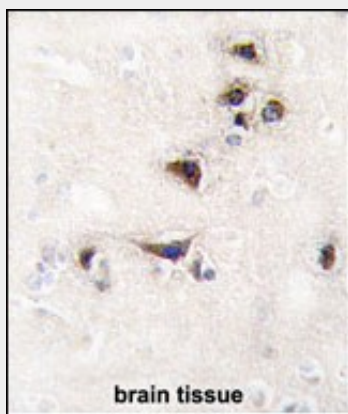


Western blot analysis of anti-CAMK2 alpha C-term Pab (Cat. #AP7206b) in 293 cell lysate. CAMK2

alpha (arrow) was detected using purified Pab. Secondary HRP-anti-rabbit was used for signal visualization with chemiluminescence.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.



Formalin-fixed and paraffin-embedded human brain tissue reacted with CAMK2 alpha Antibody (C-term) (Cat.#AP7206b), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

#### **CAMK2A (CAMK2 alpha) Antibody (C-term) - Background**

CaM-kinase II (CAMK2) is a prominent Ser/Thr protein kinase in the central nervous system that may function in long-term potentiation and neurotransmitter release. Likely autophosphorylation of Thr-286 allows the kinase to switch from a calmodulin-dependent to a calmodulin-independent state. 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.

#### **CAMK2A (CAMK2 alpha) Antibody (C-term) - References**

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- Cantrell D, J. Cell Sci. 2001. 114: 1439.
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- Robinson D, et al. Oncogene 2000. 19: 5548.
- Van der Ven, P, et al. Hum. Molec. Genet. 1993. 2: 1889.
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Van Weering D, et al. Recent Results Cancer Res. 1998. 154: 271.