

# CAMKK2 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP7117b

## Product Information

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<b>Application</b>	WB, IHC-P, E
<b>Primary Accession</b>	<a href="#">Q96RR4</a>
<b>Other Accession</b>	<a href="#">Q88831</a> , <a href="#">Q8C078</a>
<b>Reactivity</b>	Human
<b>Predicted</b>	Mouse, Rat
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	Rabbit IgG
<b>Calculated MW</b>	64746
<b>Antigen Region</b>	483-512

## Additional Information

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<b>Gene ID</b>	10645
<b>Other Names</b>	Calcium/calmodulin-dependent protein kinase kinase 2, CaM-KK 2, CaM-kinase kinase 2, CaMKK 2, Calcium/calmodulin-dependent protein kinase kinase beta, CaM-KK beta, CaM-kinase kinase beta, CaMKK beta, CAMKK2, CAMKKB, KIAA0787
<b>Target/Specificity</b>	This CAMKK2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 483-512 amino acids from the C-terminal region of human CAMKK2.
<b>Dilution</b>	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
<b>Format</b>	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.
<b>Storage</b>	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.
<b>Precautions</b>	CAMKK2 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	CAMKK2
<b>Synonyms</b>	CAMKKB, KIAA0787

<b>Function</b>	Calcium/calmodulin-dependent protein kinase belonging to a proposed calcium-triggered signaling cascade involved in a number of cellular processes. Isoform 1, isoform 2 and isoform 3 phosphorylate CAMK1 and CAMK4. Isoform 3 phosphorylates CAMK1D. Isoform 4, isoform 5 and isoform 6 lacking part of the calmodulin-binding domain are inactive. Efficiently phosphorylates 5'-AMP-activated protein kinase (AMPK) trimer, including that consisting of PRKAA1, PRKAB1 and PRKAG1. This phosphorylation is stimulated in response to Ca(2+) signals (By similarity). Seems to be involved in hippocampal activation of CREB1 (By similarity). May play a role in neurite growth. Isoform 3 may promote neurite elongation, while isoform 1 may promoter neurite branching.
<b>Cellular Location</b>	Nucleus. Cytoplasm. Cell projection, neuron projection. Note=Predominantly nuclear in unstimulated cells, relocalizes into cytoplasm and neurites after forskolin induction.
<b>Tissue Location</b>	Ubiquitously expressed with higher levels in the brain. Intermediate levels are detected in spleen, prostate, thyroid and leukocytes. The lowest level is in lung

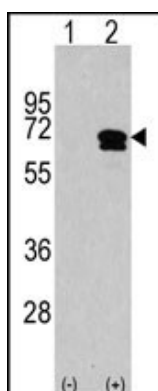
## Background

CAMKK2 belongs to the Serine/Threonine protein kinase family, and to the Ca(2+)/calmodulin-dependent protein kinase subfamily. This protein plays a role in the calcium/calmodulin-dependent (CaM) kinase cascade by phosphorylating the downstream kinases CaMK1 and CaMK4. Isoform 1, isoform 2 and isoform 3 phosphorylate CAMK1 and CAMK4. Isoform 3 phosphorylates CAMK1D. Isoform 4, isoform 5 and isoform 6 lacking part of the calmodulin-binding domain are inactive. CAMKK2 appears to be involved in hippocampal activation of CREB1.

## References

Hsu, L.S., et al., J. Biol. Chem. 276(33):31113-31123 (2001).  
Hsu, L.S., et al., J. Biomed. Sci. 5(2):141-149 (1998).  
Anderson, K.A., et al., J. Biol. Chem. 273(48):31880-31889 (1998).  
Ishikawa, Y., et al., FEBS Lett. 550 (1-3), 57-63 (2000).

## Images



Western blot analysis of CAMKK2 (arrow) using rabbit polyclonal CAMKK2 Antibody (C-term)(Cat.#AP7117b). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the CAMKK2 gene (Lane 2) (Origene Technologies).

Formalin-fixed and paraffin-embedded human brain tissue reacted with CAMKK2 antibody (C-term)(Cat.#AP711b), 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.

## Citations

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- [Ca<sup>2+</sup>/Calmodulin-Dependent Protein Kinase Kinases \(CaMKKs\) Effects on AMP-Activated Protein Kinase \(AMPK\) Regulation of Chicken Sperm Functions.](#)
- [Cyclic AMP Mimics the Anti-ageing Effects of Calorie Restriction by Up-Regulating Sirtuin.](#)
- [Differential gene expression in the bovine corpus luteum during transition from early phase to midphase and its potential role in acquisition of luteolytic sensitivity to prostaglandin F<sub>2</sub> alpha.](#)

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