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CAMKK2 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7117b

Product Information

Application	WB, IHC-P, E
Primary Accession	Q96RR4
Other Accession	O88831, Q8C078
Reactivity	Human
Predicted	Mouse, Rat, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	64746
Antigen Region	483-512

Additional Information

Gene ID	10645
Other Names	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
Target/Specificity	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.
Dilution	WB~~1:1000 IHC-P~~1:100~500 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	CAMKK2 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CAMKK2
Synonyms	CAMKKB, KIAA0787

Function	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.
Cellular Location	Nucleus. Cytoplasm. Cell projection, neuron projection. Note=Predominantly nuclear in unstimulated cells, relocalizes into cytoplasm and neurites after forskolin induction.
Tissue Location	Ubiquitously expressed with higher levels in the brain. Intermediate levels are detected in spleen, prostate, thyroid and leukocytes. The lowest level is in lung

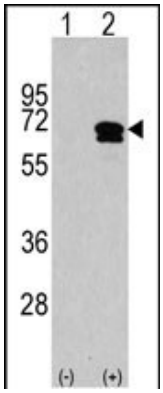
Background

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

- Ca2+/Calmodulin-Dependent Protein Kinase Kinases (CaMKKs) Effects on AMP-Activated Protein Kinase (AMPK) Regulation of Chicken Sperm Functions.
- 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 F2 alpha.
- Cyclic AMP Mimics the Anti-ageing Effects of Calorie Restriction by Up-Regulating Sirtuin.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.