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Anti-CAMKK2 Antibody

Catalog # ABO10816

Product Information

Application	WB, IHC-P, ICC
Primary Accession	Q96RR4
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Calcium/calmodulin-dependent protein kinase kinase 2(CAMKK2) detection. Tested with WB, IHC-P, ICC in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	10645
Other Names	Calcium/calmodulin-dependent protein kinase kinase 2, CaM-KK 2, CaM-kinase kinase 2, CaMKK 2, 2.7.11.17, Calcium/calmodulin-dependent protein kinase kinase beta, CaM-KK beta, CaM-kinase kinase beta, CaMKK beta, CAMKK2, CAMKKB, KIAA0787
Calculated MW	64746
Application Details	Immunocytochemistry , 0.5-1 □g/ml, Human, Mouse, Rat Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml, Mouse, Human, Rat, By Heat Western blot, 0.1-0.5 □g/ml, Human, Mouse, Rat
Subcellular Localization	Nucleus . Cytoplasm . Cell projection . Predominantly nuclear in unstimulated cells (By similarity). Found in the cytoplasm and neurites after forskolin induction. .
Tissue Specificity	Ubiquitously expressed with higher levels in the brain. Intermediate levels are detected in spleen, prostate, thyroid and leukocytes. The lowest level is in lung. .
Source	Eukaryota
Protein Name	Calcium/calmodulin-dependent protein kinase kinase 2(CaM-KK 2/CaM-kinase kinase 2/CaMKK 2)
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.

Immunogen	A synthetic peptide corresponding to a sequence in the middle region of human CAMKK2(180-194aa KLAYNENDNTYYAMK), identical to the related rat and mouse sequences.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.
Sequence Similarities	Belongs to the protein kinase superfamily. Ser/Thr protein kinase family.

Protein Information

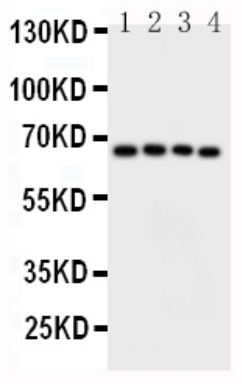
Name	CAMKK2
Synonyms	CAMKKB, KIAA0787
Function	Calcium/calmodulin-dependent protein kinase belonging to a proposed calcium-triggered signaling cascade involved in a number of cellular processes. Isoform 1, isoform 2 and isoform 3 phosphorylate CAMK1 and CAMK4. Isoform 3 phosphorylates CAMK1D. Isoform 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

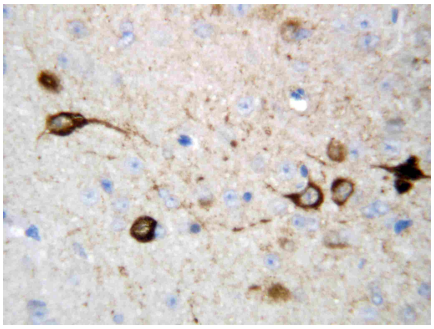
CAMKK2, Calcium/calmodulin-dependent protein kinase kinase 2, is an enzyme that in humans is encoded by the CAMKK2 gene. The product of this gene belongs to the serine/threonine-specific protein kinase family, and to the Ca++/calmodulin-dependent protein kinase subfamily. This protein plays a role in the calcium/calmodulin-dependent(CaM) kinase cascade by phosphorylating the downstream kinases CaMK1 and CaMK4. CaMKK2 regulates production of the appetite stimulating hormone neuropeptide Y and functions as an AMPK kinase in the hypothalamus. It also has an important role in the development of hyperalgesia and tolerance to opioid analgesic drugs, through reduction in downstream signalling pathways and mu opioid receptor downregulation. Inhibition of CaMKK2 in mice reduces appetite and promotes weight loss.

Images

Anti-CAMKK2 antibody, ABO10816, Western blottingLane 1: Rat Brain Tissue LysateLane 2: Rat Brain Tissue



LysateLane 3: Mouse Brain Tissue LysateLane 4: Mouse Brain Tissue Lysate



Anti-CAMKK2 antibody, ABO10816, IHC(P)IHC(P): Rat Brain Tissue