Product Name: CaMKK2 Rabbit Polyclonal Antibody
Catalog #: APRab07896

Summary

Production Name	CaMKK2 Rabbit Polyclonal Antibody
Description	Rabbit Polyclonal Antibody
Host	Rabbit
Application	WB,IHC-P,IF-P,IF-F,ICC/IF,ELISA
Reactivity	Human,Mouse,Rat

Performance

Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Liquid in PBS containing 50% glycerol, 0.5% protective protein and 0.02% New type preservative N.
Purification	Affinity purification

Immunogen

Gene Name	CAMKK2
Alternative Names	CAMKK2; CAMKKB; KIAA0787; 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
Gene ID	10645.0
SwissProt ID	Q96RR4.The antiserum was produced against synthesized peptide derived from human CAMKK2. AA range:381-430

Application

Dilution Ratio	WB 1:500-1:2000, IHC-P 1:100-1:300, ELISA 1:10000, IF-P/IF-F/ICC/IF 1:50-200
Molecular Weight	65kDa

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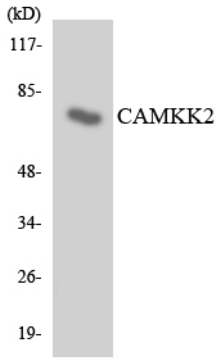
Background

The product of this gene belongs to the Serine/Threonine protein kinase family, and to the Ca(2+)/calmodulin-dependent protein kinase subfamily. The major isoform of this gene plays a role in the calcium/calmodulin-dependent (CaM) kinase cascade by phosphorylating the downstream kinases CaMK1 and CaMK4. Protein products of this gene also phosphorylate AMP-activated protein kinase (AMPK). This gene has its strongest expression in the brain and influences signalling cascades involved with learning and memory, neuronal differentiation and migration, neurite outgrowth, and synapse formation. Alternative splicing results in multiple transcript variants encoding distinct isoforms. The identified isoforms differ in their ability to undergo autophosphorylation and to phosphorylate downstream kinases. [provided by RefSeq, Jul 2012],catalytic activity:ATP + a protein = ADP + a phosphoprotein.,domain:The autoinhibitory domain overlaps with the calmodulin binding region and may be involved in intrasteric autoinhibition.,domain:The RP domain (arginine/proline-rich) is involved in the recognition of CAMKI and CAMK4 as substrates.,enzyme regulation:Activated by Ca(2+)/calmodulin. Binding of calmodulin may releave intrasteric autoinhibition. Autophosphorylation does not alter activity or regulation by Ca(2+)/calmodulin. In part, activity is independent on Ca(2+)/calmodulin.,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. Seems to be involved in hippocampal activation of CREB1.,PTM:Autophosphorylated.,sequence caution:Intron retention.,similarity:Belongs to the protein kinase superfamily. Ser/Thr protein kinase family.,similarity:Contains 1 protein kinase domain.,subunit:Interacts with calmodulin.,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.,

Research Area

AMPK

Image Data



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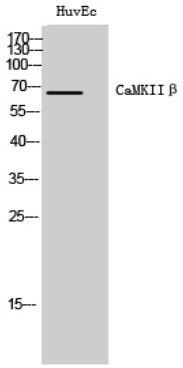
Western blot analysis of the lysates from HeLa cells using CAMKK2 antibody.



Western Blot analysis of HuvEc cells using CaMKIIβ Polyclonal Antibody

Note

For research use only.