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CAMK1 antibody - N-terminal region

Rabbit Polyclonal Antibody
Catalog # AI15023

Product Information

Application	WB
Primary Accession	Q14012
Other Accession	NM_003656, NP_003647
Reactivity	Human, Mouse, Rat, Rabbit, Zebrafish, Pig, Dog, Guinea Pig, Horse, Bovine
Predicted	Human, Mouse, Rat, Rabbit, Zebrafish, Pig, Dog, Guinea Pig, Horse, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	41337

Additional Information

Gene ID	8536
Alias Symbol	CAMKI, MGC120317, MGC120318
Other Names	Calcium/calmodulin-dependent protein kinase type 1, 2.7.11.17, CaM kinase I, CaM-KI, CaM kinase I alpha, CaMKI-alpha, CAMK1
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	Add 50 ul of distilled water. Final anti-CAMK1 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.
Precautions	CAMK1 antibody - N-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

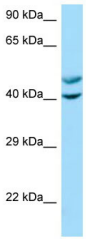
Name	CAMK1
Function	Calcium/calmodulin-dependent protein kinase that operates in the calcium-triggered CaMKK-CaMK1 signaling cascade and, upon calcium influx, regulates transcription activators activity, cell cycle, hormone production, cell differentiation, actin filament organization and neurite outgrowth. Recognizes the substrate consensus sequence [MVLIF]-x-R-x(2)-[ST]-x(3)-[MVLIF]. Regulates axonal extension and growth cone motility in hippocampal and cerebellar nerve cells. Upon NMDA receptor-mediated Ca(2+) elevation, promotes dendritic growth in hippocampal neurons and is essential in synapses for full long-term potentiation (LTP) and ERK2-dependent translational activation. Downstream of NMDA receptors, promotes the

	formation of spines and synapses in hippocampal neurons by phosphorylating ARHGEF7/BETAPIX on 'Ser-694', which results in the enhancement of ARHGEF7 activity and activation of RAC1. Promotes neuronal differentiation and neurite outgrowth by activation and phosphorylation of MARK2 on 'Ser-91', 'Ser- 92', 'Ser-93' and 'Ser-294'. Promotes nuclear export of HDAC5 and binding to 14-3-3 by phosphorylation of 'Ser-259' and 'Ser-498' in the regulation of muscle cell differentiation. Regulates NUMB-mediated endocytosis by phosphorylation of NUMB on 'Ser-276' and 'Ser-295'. Involved in the regulation of basal and estrogen-stimulated migration of medulloblastoma cells through ARHGEF7/BETAPIX phosphorylation (By similarity). Is required for proper activation of cyclin-D1/CDK4 complex during G1 progression in diploid fibroblasts. Plays a role in K(+) and ANG2-mediated regulation of the aldosterone synthase (CYP11B2) to produce aldosterone in the adrenal cortex. Phosphorylates EIF4G3/eIF4GII. In vitro phosphorylates CREB1, ATF1, CFTR, MYL9 and SYN1/synapsin I.
Cellular Location	Cytoplasm. Nucleus. Note=Predominantly cytoplasmic.
Tissue Location	Widely expressed. Expressed in cells of the zona glomerulosa of the adrenal cortex.

References

Haribabu B.,et al.EMBO J. 14:3679-3686(1995).
Gevaert K.,et al.Nat. Biotechnol. 21:566-569(2003).
Hsu L.-S.,et al.J. Biomed. Sci. 5:141-149(1998).
McKinsey T.A.,et al.Proc. Natl. Acad. Sci. U.S.A. 97:14400-14405(2000).
Hsu L.-S.,et al.J. Biol. Chem. 276:31113-31123(2001).

Images



WB Suggested Anti-CAMK1 Antibody Titration: 1.0 µg/ml
Positive Control: A549 Whole CellCAMK1 is supported by BioGPS gene expression data to be expressed in A549

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