10320 Camino Santa Fe, Suite A
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

CAMK1 antibody - N-terminal region
Rabbit Polyclonal Antibody
Catalog # AI15023

Specification

CAMK1 antibody - N-terminal region - Product Information

Application	**WB**
Primary Accession	Q14012
Other Accession	NM_003656, NP_003647
Reactivity	**Human, Mouse, Rat, Rabbit, Pig, Horse, Bovine, Guinea Pig, Dog**
Predicted	**Human, Mouse, Rat, Rabbit, Pig, Horse, Bovine, Guinea Pig, Dog**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**41kDa KDa**

CAMK1 antibody - N-terminal region - 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.

CAMK1 antibody - N-terminal region - 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.

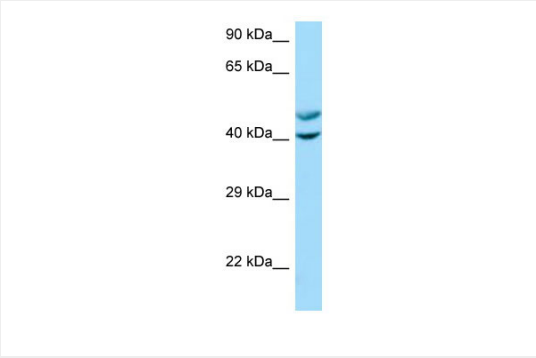
Tissue Location
Widely expressed. Expressed in cells of the zona glomerulosa of the adrenal cortex.

CAMK1 antibody - N-terminal region - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

CAMK1 antibody - N-terminal region - 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

CAMK1 antibody - N-terminal region - 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).