

KO Validated Anti-CAMK1 Rabbit Monoclonal Antibody
Rabbit monoclonal antibody
Catalog # AGI2414

Specification

KO Validated Anti-CAMK1 Rabbit Monoclonal Antibody - Product Information

Application	WB, FC
Primary Accession	Q14012
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Isotype	Rabbit IgG
Calculated MW	Predicted, 41 kDa, observed, 41 kDa KDa
Gene Name	CAMK1
Aliases	CAMK1; Calcium/Calmodulin Dependent Protein Kinase I 2; CaMKI-Alpha; CaMKI ; Calcium/Calmodulin-Dependent Protein Kinase Type 1; CaM Kinase I Alpha; EC 2.7.11.17; CaM-KI; CaM Kinase I; EC 2.7.11 A synthesized peptide derived from human CaMKI
Immunogen	

KO Validated Anti-CAMK1 Rabbit Monoclonal Antibody - Additional Information

Gene ID **8536**

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

KO Validated Anti-CAMK1 Rabbit Monoclonal Antibody - 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

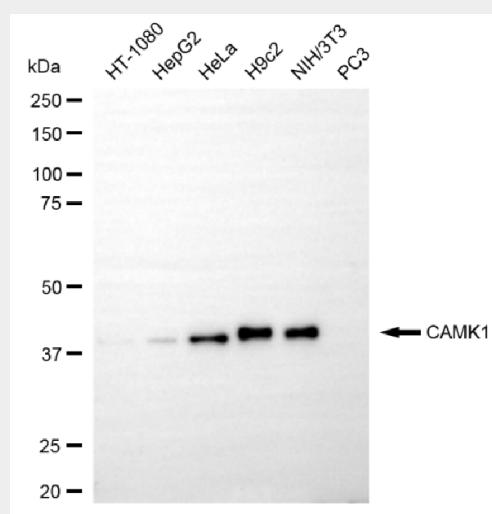
Widely expressed. Expressed in cells of the zona glomerulosa of the adrenal cortex.

KO Validated Anti-CAMK1 Rabbit Monoclonal Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

KO Validated Anti-CAMK1 Rabbit Monoclonal Antibody - Images



Copyright ©2025 Geniun Biotechnologies LLC

Western blotting analysis using anti-CAMK1 antibody (Cat#AGI2414). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-CAMK1 antibody (Cat#AGI2414, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.

