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CAMK2A Antibody (C-term E370) Blocking Peptide

Synthetic peptide
Catalog # BP7418b

Specification

CAMK2A Antibody (C-term E370) Blocking Peptide - Product Information

Primary Accession O9UQM7

CAMK2A Antibody (C-term E370) Blocking Peptide - Additional Information

Gene ID 815

Other Names
Calcium/calmodulin-dependent protein kinase type II subunit alpha, CaM kinase II subunit alpha, CaMK-II subunit alpha, CAMK2A, CAMKA, KIAA0968

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP7418b was selected from the C-term region of human CAMK2A. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

CAMK2A Antibody (C-term E370) Blocking Peptide - Protein Information

Name CAMK2A

CAMK2A Antibody (C-term E370) Blocking Peptide - Background

CAMK2A belongs to the serine/threonine protein kinases family, and to the Ca(2+)/calmodulin-dependent protein kinases subfamily. Calcium signaling is crucial for several aspects of plasticity at glutamatergic synapses. This calcium calmodulin-dependent protein kinase is composed of four different chains: alpha, beta, gamma, and delta. The alpha chain encoded by the gene for CAMK2A is required for hippocampal long-term potentiation (LTP) and spatial learning. In addition to its calcium-calmodulin (CaM)-dependent activity, this protein can undergo autophosphorylation, resulting in CaM-independent activity.

CAMK2A Antibody (C-term E370) Blocking Peptide - References

Lee,C.W., Mol. Pharmacol. 73 (5), 1454-1464 (2008)Yuan,K., Lab. Invest. 87 (9), 938-950 (2007)

Synonyms CAMKA, KIAA0968

Function
Calcium/calmodulin-dependent protein kinase that functions autonomously after Ca(2+)/calmodulin-binding and autophosphorylation, and is involved in synaptic plasticity, neurotransmitter release and long-term potentiation. Member of the NMDAR signaling complex in excitatory synapses, it regulates NMDAR-dependent potentiation of the AMPAR and therefore excitatory synaptic transmission (By similarity). Regulates dendritic spine development (PubMed:28130356). Also regulates the migration of developing neurons (PubMed:29100089). Phosphorylates the transcription factor FOXO3 to activate its transcriptional activity (PubMed:23805378). Acts as a negative regulator of 2-arachidonoylglycerol (2-AG)-mediated synaptic signaling via modulation of DAGLA activity (By similarity).

Cellular Location
Cell junction, synapse {ECO:0000250|UniProtKB:P11275}. Cell junction, synapse, postsynaptic density {ECO:0000250|UniProtKB:P11275}. Cell projection, dendritic spine. Cell projection, dendrite. Note=Postsynaptic lipid rafts {ECO:0000250|UniProtKB:P11275}

CAMK2A Antibody (C-term E370) Blocking Peptide - Protocols

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

- Blocking Peptides