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Mouse Camk2a Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP14780b

Product Information

Application	WB, E
Primary Accession	P11798
Other Accession	P11275, Q9UQM7, NP_803126.1, NP_033922.1
Reactivity	Mouse
Predicted	Human, Rat, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB35395
Calculated MW	54115
Antigen Region	322-349

Additional Information

Gene ID	12322
Other Names	Calcium/calmodulin-dependent protein kinase type II subunit alpha, CaM kinase II subunit alpha, CaMK-II subunit alpha, Camk2a
Target/Specificity	This Mouse Camk2a antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 322-349 amino acids from the C-terminal region of mouse Camk2a.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Mouse Camk2a Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Camk2a
Function	Calcium/calmodulin-dependent protein kinase that functions autonomously after Ca(2+)/calmodulin-binding and autophosphorylation, and is involved in

	various processes, such as synaptic plasticity, neurotransmitter release and long-term potentiation (By similarity). 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 (By similarity). Also regulates the migration of developing neurons (By similarity). Phosphorylates the transcription factor FOXO3 to activate its transcriptional activity (PubMed:23805378). Phosphorylates the transcription factor ETS1 in response to calcium signaling, thereby decreasing ETS1 affinity for DNA (PubMed:15994560). In response to interferon-gamma (IFN-gamma) stimulation, catalyzes phosphorylation of STAT1, stimulating the JAK- STAT signaling pathway (By similarity). In response to interferon-beta (IFN-beta) stimulation, stimulates the JAK-STAT signaling pathway (By similarity). In response to interferon-gamma (IFN-gamma) stimulation, catalyzes phosphorylation of PSAT1, inhibiting ferroptosis by promoting GPX4 hydroxylation and stability (By similarity). Acts as a negative regulator of 2-arachidonoylglycerol (2-AG)-mediated synaptic signaling via modulation of DAGLA activity (PubMed:23502535).
Cellular Location	[Isoform Alpha KAP]: Cytoplasm
Tissue Location	[Isoform Alpha CaMKII]: Expressed in brain.

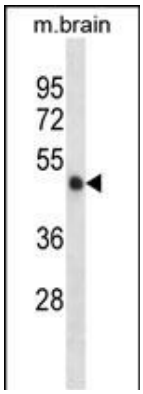
Background

CaM-kinase II (CAMK2) is a prominent kinase in the central nervous system that may function in long-term potentiation and neurotransmitter release. Member of the NMDAR signaling complex in excitatory synapses it may regulate NMDAR-dependent potentiation of the AMPAR and synaptic plasticity (By similarity).

References

Hund, T.J., et al. J. Clin. Invest. 120(10):3508-3519(2010)
Xu, L., et al. Circ. Res. 107(3):398-407(2010)
Guetg, N., et al. Proc. Natl. Acad. Sci. U.S.A. 107(31):13924-13929(2010)
Blaich, A., et al. Proc. Natl. Acad. Sci. U.S.A. 107(22):10285-10289(2010)
Jenkins, M.A., et al. J. Neurosci. 30(15):5125-5135(2010)

Images



Mouse Camk2a Antibody (C-term) (Cat. #AP14780b) western blot analysis in mouse brain tissue lysates (35ug/lane).This demonstrates the Camk2a antibody detected the Camk2a protein (arrow).

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