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CAMK2A Antibody (monoclonal) (M03)

Mouse monoclonal antibody raised against a partial recombinant CAMK2A.
Catalog # AT1376a

Product Information

Application	WB, IF, E
Primary Accession	Q9UQM7
Other Accession	BC040457
Reactivity	Human
Host	mouse
Clonality	monoclonal
Isotype	IgG2b Kappa
Clone Names	2C12
Calculated MW	54088

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	CAMK2A (AAH40457, 305 a.a. ~ 410 a.a) partial recombinant protein with GST tag. MW of the GST tag alone is 26 KDa.
Dilution	WB~~1:500~1000 IF~~1:50~200 E~~N/A
Format	Clear, colorless solution in phosphate buffered saline, pH 7.2 .
Storage	Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.
Precautions	CAMK2A Antibody (monoclonal) (M03) is for research use only and not for use in diagnostic or therapeutic procedures.

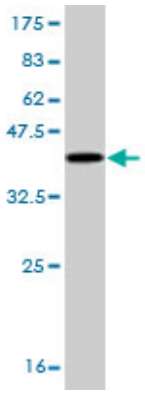
Background

The product of this gene 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 this gene 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. Two transcript variants encoding distinct isoforms have been identified for this gene.

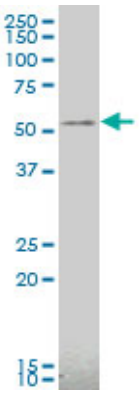
References

Personalized smoking cessation: interactions between nicotine dose, dependence and quit-success genotype score. Rose JE, et al. Mol Med, 2010 Jul-Aug. PMID 20379614.Ca2+/calmodulin-dependent protein kinase II alpha is required for the initiation and maintenance of opioid-induced hyperalgesia. Chen Y, et al. J Neurosci, 2010 Jan 6. PMID 20053885.Regulation of the proteasome by neuronal activity and calcium/calmodulin-dependent protein kinase II. Djakovic SN, et al. J Biol Chem, 2009 Sep 25. PMID 19638347.Phosphorylation status of the NR2B subunit of NMDA receptor regulates its interaction with calcium/calmodulin-dependent protein kinase II. Raveendran R, et al. J Neurochem, 2009 Jul. PMID 19453375.Case-control association study of 65 candidate genes revealed a possible association of a SNP of HTR5A to be a factor susceptible to bipolar disease in Bulgarian population. Yosifova A, et al. J Affect Disord, 2009 Sep. PMID 19328558.

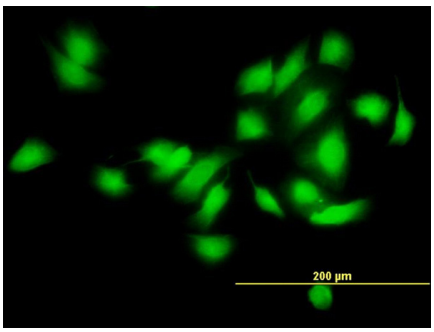
Images



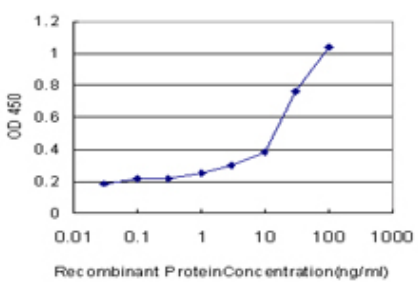
Antibody Reactive Against Recombinant Protein.Western Blot detection against Immunogen (37.29 KDa) .



CAMK2A monoclonal antibody (M03), clone 2C12 Western Blot analysis of CAMK2A expression in LNCaP ((Cat # AT1376a)



Immunofluorescence of monoclonal antibody to CAMK2A on HeLa cell. [antibody concentration 10 ug/ml]



Detection limit for recombinant GST tagged CAMK2A is approximately 0.3ng/ml as a capture antibody.

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