OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for MC200967

Camk1 (NM_133926) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Camk1 (NM_133926) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Camk1
Synonyms:	AI505105; CaMKIalpha; D6Ertd263e
Mammalian Cell Selection:	Neomycin
Vector:	PCMV6-Kan/Neo (PCMV6KN)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>BC014825 sequence for NM_133926 GGCAAACTGACCAGGCTCAGACGCGGCGGGAGCTCCGCACCAGCCACCTCGGCCCTCGCAGCCAGCCCCG AGGCGGGGCAGCCGCAGGAGCCCTGGCTGTGGCTGGGGGGCAGTGGGCCATGCCAGGGGCAGTGGAAGGC CCCAGGTGGAAGCAGGCGGAAGACATTAGGGATATTTATGACTTCAGAGATGTTCTGGGCACGGGTGCCT TCTCAGAAGTGATCCTGGCAGAGGACAAGAGGACTCAGAAACTGGTGGCCATCAAATGCATTGCCAAGAA AGCCCTGGAGGGCAAAGAAGGCAGCATGGAGAACGAGATTGCCGTCTTACACAAGATCAAGCACCCCAAC ATTGTAGCCCTGGATGACATCTATGAGAGTGGGGGCCACCTCTACCTCATCATGCAGCTGGTTTCAGGTG GAGAGCTGTTTGACCGAATTGTGGAGAAAGGATTCTACACGGAACGGGATGCCAGCCGCCTCATCTTCCA GGTGCTGGATGCTGTCAAGTACCTGCACGACCTGGGCATTGTGCACCGGGATCTCAAGCCAGAGAACCTG CTGTACTACAGTCTGGATGAAGACTCCAAAATCATGATCTCTGACTTTGGCCTCTCCAAGATGGAGGACC CAGGCAGTGTGCTCTCCACAGCCTGTGGGACTCCAGGATATGTGGCCCCTGAGGTCCTGGCCCAGAAGCC CTACAGCAAGGCTGTGGATTGCTGGTCCATAGGAGTCATTGCCTATATACTGCTCTGTGGCTACCCACCC TTTTATGATGAAAATGATGCCAAACTCTTTGAACAGATTTTGAAGGCAGAGTATGAGTTTGACTCTCCTT ATTGGGACGACATCTCTGACTCTGCCAAAGATTTCATACGACATTTGATGGAGAAAGACCCGGAGAAGAG GTTTACCTGTGAGCAGGCCTTGCAGCACCCATGGATTGCAGGAGATACAGCTCTGGATAAGAATATCCAC CAGTCAGTGAGCGAGCAGATCAAGAAGAACTTTGCCAAGAGCAAGTGGAAGCAAGCTTTCAATGCCACTG CTGTGGTTCGGCACATGAGGAAGCTGCAGCTGGGAACCAGTCAGGAGGGGCAGGGGCAGACTGGCAGCCA CGGGGAGCTGCTGACACCAACAGCTGGTGGGCCAGCAGCTGGCTGCTGCTGCCGAGACTGCTGTGTGGAA CCAGGCTCGGAACTGCCCCCTGCACCACCCCCAAGCTCTAGGGCCATGGATTGAACATCAAGGAAGTCAG GGTTTCTTTCATGAGAGGGGTTGGAGGCAGCCTGCTTCCTCCTCACTCCAGATCTGGGGCGTTTCTGACC CCACACCTCTTCACCCCTCCCCTCTCACTCTTCACTGCGTTTTCCATACAAATGTTTCTATTTTATTGTT CCTTCTTGTAATAAAGGGAAGATAAAACAAGACAAAAAAAAAAAAAAA
Restriction Sites:	RsrII-NotI
ACCN:	NM_133926
Insert Size:	1125 bp

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OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
Reconstitution Method:	1. Centrifuge at 5,000xg for 5min. 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA. 3. Close the tube and incubate for 10 minutes at room temperature. 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom. 5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
RefSeq:	BC014825, AAH14825
RefSeq Size:	1448 bp
RefSeq ORF:	1125 bp
Locus ID:	52163
UniProt ID:	Q91YS8
Cytogenetics:	6 52.75 cM
Gene Summary:	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-673', 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. 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 (By similarity).[UniProtKB/Swiss-Prot Function]