Acetyl-CALM1 (K116) Blocking Peptide

PRODUCT OVERVIEW

Product Name	Acetyl-CALM1, Blocking Peptide
Full Product Name	Acetyl-CALM1 (K116) Blocking Peptide
Product Gene Name	CALM1 blocking peptide
Product Synonym Names	Calmodulin; CaM; CALM1; CALM; CAM; CAM1
Form/Format	Lyophilized with 100% acetonitrile and is supplied as a powder.
Specificity	The synthetic peptide sequence is selected from aa 110-121 of HUMAN CALM1
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C.
OMIM	114180
Reconstitution	Reconstitute with 0.1 ml DI water for a final concentration of 1 mg/ml.
Related Product Information for CALM1 blocking peptide	Calmodulin mediates the control of a large number of enzymes and other proteins by Ca(2+). Among the enzymes to be stimulated by the calmodulin-Ca(2+) complex are a number of protein kinases and phosphatases. Together with CEP110 and centrin, is involved in a genetic pathway that regulates the centrosome cycle and progression through cytokinesis.
Other Notes	Small volumes of CALM1 blocking peptide vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for CALM1 purchase	MBS9231544 is a blocking peptide targeting CALM1. Also known as Acetyl-CALM1 (K116) Blocking Peptide.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CALM1. It may not necessarily be applicable to this product.

NCBI GI #	4502549
NCBI GeneID	805
NCBI Accession #	NP_001734.1
NCBI Related Accession #	NP_005175.2; NP_008819.1
UniProt Primary Accession #	P62158
UniProt Related Accession #	P0DP24
GenBank Nucleotide #	NM_001743.6
NCBI Official Full Name	calmodulin-2 isoform 2
NCBI Official Synonym Full Names	calmodulin 2
NCBI Official Symbol	CALM2
NCBI Official Synonym Symbols	caM; CALM; CAM1; CAM3; CAMC; PHKD; CAMII; LQT15; PHKD2; CALML2; CAMIII
UniProt Protein Name	Calmodulin
Protein Family	Calmodulin
UniProt Gene Name	CALM1

UniProt Synonym Gene Names	CALM; CAM; CAM1; CaM
UniProt Entry Name	CALM_HUMAN
NCBI Protein Information	calmodulin-2
NCBI Summary for CALM1	This gene is a member of the calmodulin gene family. There are three distinct calmodulin genes dispersed throughout the genome that encode the identical protein, but differ at the nucleotide level. Calmodulin is a calcium binding protein that plays a role in signaling pathways, cell cycle progression and proliferation. Several infants with severe forms of long-QT syndrome (LQTS) who displayed life-threatening ventricular arrhythmias together with delayed neurodevelopment and epilepsy were found to have mutations in either this gene or another member of the calmodulin gene family (PMID:23388215). Mutations in this gene have also been identified in patients with less severe forms of LQTS (PMID:24917665), while mutations in another calmodulin gene family member have been associated with catecholaminergic polymorphic ventricular tachycardia (CPVT)(PMID:23040497), a rare disorder thought to be the cause of a significant fraction of sudden cardiac deaths in young individuals. Pseudogenes of this gene are found on chromosomes 10, 13, and 17. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Mar 2015]
UniProt Comments for CALM1	Calmodulin: a calcium-binding small regulatory protein that mediates the control of a large number of enzymes by Ca(2+). Among the enzymes to be stimulated by the calmodulin-Ca(2+) complex are a number of protein kinases and phosphatases. Has four functional calcium-binding domains. Phosphorylation and ubiquitination result in a decreased activity. Protein type: Calcium-binding Chromosomal Location of Human Ortholog: 14q32.11 Cellular Component: nucleoplasm; spindle pole; centrosome; sarcomere; growth cone; spindle microtubule; cytoplasm; plasma membrane; extracellular region; cytosol; nucleus; vesicle Molecular Function: protein domain specific binding; nitric-oxide synthase regulator activity; titin binding; calcium ion binding; calcium-dependent protein binding; protein kinase binding; protein serine/threonine kinase activator activity; protein binding; N-terminal myristoylation domain binding; phospholipase binding; thioesterase binding; type 3 metabotropic glutamate receptor binding; phosphoinositide 3-kinase binding; nitric-oxide synthase binding; adenylate cyclase binding Biological Process: positive regulation of phosphoprotein phosphatase activity; phototransduction, visible light; inositol phosphate metabolic process; nerve growth factor receptor signaling pathway; pathogenesis; signal transduction; nitric oxide metabolic process; positive regulation of protein amino acid dephosphorylation; synaptic transmission; substantia nigra development; platelet degranulation; muscle contraction; positive regulation of cyclic nucleotide metabolic process; response to corticosterone stimulus; epidermal growth factor receptor signaling pathway; mitochondrion organization and biogenesis; platelet activation; fibroblast growth factor receptor signaling pathway; glycogen catabolic process; regulation of heart rate; positive regulation of nitric-oxide synthase activity; organelle organization and biogenesis; adenylate cyclase activation; response to amphetamine; glucose metabolic process; positive regulation of protein amino acid autophosphorylation; regulation of cytokinesis; rhodopsin mediated signaling; G-protein coupled receptor protein signaling pathway; regulation of rhodopsin mediated signaling; phospholipase C activation; carbohydrate metabolic process; innate immune response; positive regulation of cyclic-nucleotide phosphodiesterase activity; detection of calcium ion; regulation of nitric-oxide synthase activity; blood coagulation; response to calcium ion; vascular endothelial growth factor receptor signaling pathway Disease: Long Qt Syndrome 14; Ventricular Tachycardia, Catecholaminergic Polymorphic, 4
Research Articles on CALM1	**1.** Impaired Ca(2+)-dependent inactivation in human cardiomyocytes as the plausible mechanism for Long QT Syndrome associated with 2 novel CaM mutations.
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