Calcium/Calmodulin Dependent Protein Kinase II Alpha (CAMK2alpha) ELISA Kit for Donkey

PRODUCT OVERVIEW

Product Name	Calcium/Calmodulin Dependent Protein Kinase II Alpha (CAMK2alpha), ELISA Kit
Full Product Name	Donkey Calcium/Calmodulin Dependent Protein Kinase II Alpha ELISA Kit
Product Gene Name	CAMK2alpha elisa kit
Species Reactivity	Donkey
Preparation and Storage	Store all reagents at 2-8 degree C
Molecular Weight	54,088 Da
OMIM	114078
3D Structure	ModBase 3D Structure for Q9UQM7
Related Product Information for CAMK2alpha elisa kit	MBS074635 is a ready-to-use microwell, strip-or-full plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the Calcium/Calmodulin Dependent Protein Kinase II Alpha (CAMK2alpha) ELISA Kit target analytes in biological samples. The concentration gradients of the kit standards or positive controls render a theoretical kit detection range in biological research samples containing CAMK2alpha. The ELISA analytical biochemical technique of the MBS074635 kit is based on CAMK2alpha antibody-CAMK2alpha antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect CAMK2alpha antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, CAMK2alpha. Appropriate sample types may include undiluted body fluids and/or tissue homogenates, secretions. Quality control assays assessing reproducibility identified the intra-assay CV (%) and inter-assay CV(%).
Other Notes	Small volumes of CAMK2alpha elisa kit 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.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CAMK2alpha. It may not necessarily be applicable to this product.

NCBI GI #	25952118
NCBI GeneID	815
NCBI Accession #	NP_741960.1
UniProt Primary Accession #	Q9UQM7
UniProt Secondary Accession #	Q9UL21; Q9Y2H4; Q9Y352
UniProt Related Accession #	Q9UQM7
GenBank Nucleotide #	NM_171825.2
NCBI Official Full Name	calcium/calmodulin-dependent protein kinase type II subunit alpha isoform 2
NCBI Official Synonym Full Names	calcium/calmodulin-dependent protein kinase II alpha
NCBI Official Symbol	CAMK2A
NCBI Official Synonym Symbols	CAMKA
UniProt Protein Name	Calcium/calmodulin-dependent protein kinase type II subunit alpha

UniProt Gene Name	CAMK2A
UniProt Synonym Gene Names	CAMKA; KIAA0968; CaM kinase II subunit alpha
UniProt Entry Name	KCC2A_HUMAN
NCBI Protein Information	calcium/calmodulin-dependent protein kinase type II subunit alpha; CaMKIINalpha; CaMK-II alpha subunit; caMK-II subunit alpha; CaM-kinase II alpha chain; CaM kinase II alpha subunit; caM kinase II subunit alpha; calcium/calmodulin-dependent protein kinase II alpha-B subunit; calcium/calmodulin-dependent protein kinase type II alpha chain; calcium/calmodulin-dependent protein kinase (CaM kinase) II alpha
NCBI Summary for CAMK2alpha	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. [provided by RefSeq, Nov 2008]
UniProt Comments for CAMK2alpha	CAMK2A: a protein kinase of the CAMK2 family. 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 that may regulate NMDAR-dependent potentiation of the AMPAR and synaptic plasticity. The holoenzyme is composed of four different chains: alpha, beta, gamma, and delta. The different chains assemble into homo- or heteromultimeric holoenzymes composed of 8 to 12 subunits. May interact with BAALC, MPDZ, SYN1 and synGAP. 2 isoforms of the human protein are produced by alternative splicing. Protein type: Kinase, protein; EC 2.7.11.17; Protein kinase, CAMK; Protein kinase, Ser/Thr (non-receptor); CAMK group; CAMK2 family Chromosomal Location of Human Ortholog: 5q32 Cellular Component: nucleoplasm; presynaptic membrane; mitochondrion; plasma membrane; cell junction; cytosol; nucleus Molecular Function: calmodulin binding; protein serine/threonine kinase activity; glutamate receptor binding; protein binding; protein homodimerization activity; calmodulin-dependent protein kinase activity; kinase activity; ATP binding Biological Process: synaptic transmission; peptidyl-serine phosphorylation; cytokine and chemokine mediated signaling pathway; protein amino acid autophosphorylation; calcium ion transport; regulation of neurotransmitter secretion; positive regulation of calcium ion transport; protein amino acid phosphorylation; regulation of neuronal synaptic plasticity; G1/S transition of mitotic cell cycle; activation of NF-kappaB transcription factor
Research Articles on CAMK2alpha	**1.** results suggest that the CAMK2A gene may influence spatial and non-SWM performance in humans without any corresponding gross changes in frontal cortex or hippocampal anatomy.
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