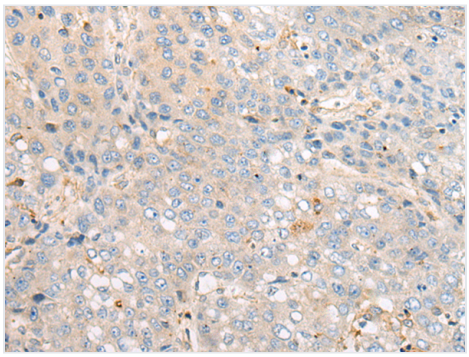
CAMK2A Antibody – Rabbit Polyclonal

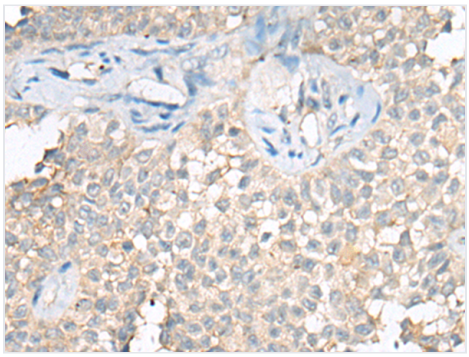
PRODUCT OVERVIEW

Product Name	CAMK2A, Polyclonal Antibody
Full Product Name	CAMK2A Polyclonal Antibody
Product Gene Name	anti-CAMK2A antibody
Product Synonym Names	Alpha CaMKII; Calcium calmodulin dependent protein kinase II; 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; Calcium/calmodulin-dependent protein kinase II alpha; Calcium/calmodulin-dependent protein kinase II-alpha; Calcium/calmodulin-dependent protein kinase type II subunit alpha; Calcium/calmodulin-dependent protein kinase type IIA; CaM kinase II alpha chain; CaM kinase II alpha subunit; CaM kinase II subunit alpha; CaMK II alpha subunit; CaMK-II subunit alpha; Camk2a; CAMKA; CaMKII; CaMKIINalpha; EC 2.7.11.17; KCC2A; KIAA0968; MGC123320; MGC139375; MGC155201; MKIAA0968; PK2CDD; PKCCD; R74975; Zgc:112538; Zgc:123320
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Form/Format	PBS with 0.05% NaN3 and 40% Glycerol, pH7.4
Purity/Purification	Antigen Affinity Purification
Concentration	0.4mg/mL (lot specific)
Preparation and Storage	Store at -20 degree C. Avoid freeze/thaw cycles.
OMIM	114078
3D Structure	ModBase 3D Structure for Q9UQM7
Immunogen	Synthetic peptide of human CAMK2A
Conjugation	Unconjugated
Product Categories/Family for anti-CAMK2A antibody	Cancer; Cardiovascular; Metabolism; Neuroscience; Signal transduction
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-CAMK2A antibody	Immunohistochemistry (IHC), ELISA (EIA)
Application Notes for anti-CAMK2A antibody	IHC: 1:25-1:100 ELISA: 1:5000-1:10000
Related Product Information for anti-CAMK2A antibody	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.

Other Notes	Small volumes of anti-CAMK2A antibody 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 CAMK2A purchase	MBS2559653 is an antibody targeting CAMK2A. Also known as CAMK2A Polyclonal Antibody. Reactive in Human, Mouse, Rat. Host: Rabbit.



Immunohistochemistry (IHC) of anti-CAMK2A antibody
Immunohistochemistry of paraffin-embedded Human liver cancer tissue using CAMK2A Polyclonal Antibody at dilution of 1:30(×200)



Immunohistochemistry (IHC) of anti-CAMK2A antibody
Immunohistochemistry of paraffin-embedded Human ovarian cancer tissue using CAMK2A Polyclonal Antibody at dilution of 1:30(×200)

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CAMK2A. 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 Related Accession #	Q9UQM7
GenBank Nucleotide #	NP_741960.1
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; MRD53; MRT63; CaMKIIalpha; CaMKIINalpha
UniProt Protein Name	Calcium/calmodulin-dependent protein kinase type II subunit alpha
Protein Family	Calcium/calmodulin-dependent protein kinase
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
NCBI Summary for CAMK2A	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. Several transcript variants encoding distinct isoforms have been identified for this gene. [provided by RefSeq, Jun 2018]

UniProt Comments for CAMK2A	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; Protein kinase, CAMK; EC 2.7.11.17; Protein kinase, Ser/Thr (non-receptor); CAMK group; CAMK2 family Chromosomal Location of Human Ortholog: 5q32 Cellular Component: nucleoplasm; presynaptic membrane; mitochondrion; plasma membrane; cytosol; cell junction; 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; protein amino acid autophosphorylation; calcium ion transport; cytokine and chemokine mediated signaling pathway; 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 CAMK2A	**1.** Together, these data demonstrate that a recessive germline mutation in CAMK2A leads to neurodevelopmental defects in humans and suggest that dysfunctional CAMK2 paralogs may contribute to other neurological disorders.
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