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Datasheet for 600-401-873

CaM Kinase II Antibody

Overview

Description:	Anti-CaM Kinase II (RABBIT) Antibody - 600-401-873
Item No.:	600-401-873
Size:	100 µg
Applications:	ELISA, WB
Reactivity:	Mouse
Host Species:	Rabbit

Product Details

Background:	CaM Kinase II (also known as CAMK2 and calcium/calmodulin-dependent protein kinase type II alpha chain) is a prominent kinase in the central nervous system that may function in the long-term potentiation of neurotransmitter release. CaM Kinase II autophosphorylates itself at Thr-286 which allows the kinase to switch from a calmodulin-dependent to a calmodulin-independent state. CaM Kinase II is composed of four different chains: alpha, beta, gamma, and delta. The different isoforms assemble into homo- or heteromultimeric holoenzymes composed of 8 to 12 subunits. This kinase is expressed in brain tissue. Alternative splicing occurs for this gene product.
Synonyms:	rabbit anti-CaM Kinase II Antibody, Calcium/calmodulin dependent protein kinase II alpha antibody, CaM kinase II alpha antibody, CaM kinase II α chain antibody, CaM kinase II alpha subunit antibody, CAMK2A, CAMKA
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	CAMK2A
Reactivity:	Mouse
Immunogen Type:	Conjugated Peptide

Immunogen:	This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to an N-terminus region of Human CaM Kinase II protein.
Purity/Specificity:	This affinity purified antibody is directed against human CaM Kinase II protein. The product was affinity purified from monospecific antiserum by immunoaffinity purification. A BLAST analysis was used to suggest reactivity with this protein from human, mouse, rat, and orangutan based on 100% homology for the immunogen sequence. Cross reactivity with CaM Kinase II protein from zebrafish and rabbit may occur as this sequence only varies by one amino acid residue (94% homology). Cross reactivity with CaM Kinase II homologues from other sources has not been determined.
Relevant Links:	• NCBI - NP_741960.1 • UniProtKB - Q9UQM7 • GeneID - 815

Application Details

Tested Applications:	ELISA, WB
Application Note:	This affinity purified antibody has been tested for use in ELISA and western blot. Specific conditions for reactivity should be optimized by the end user. Expect a band ~ 54 kDa in size corresponding to CaM Kinase II by western blotting in the appropriate cell lysate or extract.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:4,000 - 1:20,000
WB:	1:1,000 - 1:3,000

Formulation

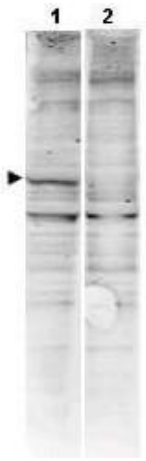
Physical State:	Liquid (sterile filtered)
Concentration:	1.57 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

Shipping Condition:	Dry Ice

Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



Western Blot
Western blot using Rockland's Affinity Purified anti-CaM Kinase II antibody shows detection of a band ~54 kDa corresponding to human alpha CaM Kinase II (arrowhead lane 1). Specific reactivity with this band is blocked when the antibody is pre-incubated with the immunizing peptide (lane 2). Approximately 35 µg of a mouse brain whole cell lysate (p/n W10-000-T004) was separated by 4-20% SDS-PAGE and transferred onto nitrocellulose. CaM Kinase II was similarly detected on lysates from rat brain (not shown). After blocking the membrane was probed with the primary antibody diluted to 1:1,500 for 2h at room temperature followed by washes and reaction with a 1:10,000 dilution of IRDye™800 conjugated Gt-a-Rabbit IgG [H&L] MX (p/n 611-132-122) for 45 min at room temperature. IRDye™800 fluorescence image was captured using the Odyssey® Infrared Imaging System developed by LI-COR. IRDye is a trademark of LI-COR, Inc. Other detection systems will yield similar results.

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