

Datasheet for ABIN7138830  
**anti-CAMK2A antibody (pThr305)**[Go to Product page](#)

## 2 Images

## Overview

Quantity:	100 µL
Target:	CAMK2A
Binding Specificity:	pThr305
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This CAMK2A antibody is un-conjugated
Application:	Western Blotting (WB), ELISA, Immunohistochemistry (IHC)

## Product Details

Immunogen:	Peptide sequence around phosphorylation site of threonine 305 (I-L-T(p)-T-M) derived from Human CaMK2 alpha/beta/delta.
Isotype:	IgG
Cross-Reactivity:	Human, Mouse, Rat
Purification:	Antibodies were produced by immunizing rabbits with synthetic phosphopeptide and KLH conjugates. Antibodies were purified by affinity-chromatography using epitope-specific phosphopeptide. Non-phospho specific antibodies were removed by chromatography using

## Target Details

Target:	CAMK2A
Alternative Name:	CAMK2A ( <a href="#">CAMK2A Products</a> )

## Target Details

Background:	<p>Background: Calcium/calmodulin-dependent protein kinase that functions autonomously after Ca<sup>2+</sup>/calmodulin-binding and autophosphorylation, and is involved in dendritic spine and synapse formation, neuronal plasticity and regulation of sarcoplasmic reticulum Ca<sup>2+</sup> transport in skeletal muscle. In neurons, plays an essential structural role in the reorganization of the actin cytoskeleton during plasticity by binding and bundling actin filaments in a kinase-independent manner. This structural function is required for correct targeting of CaMK2A, which acts downstream of NMDAR to promote dendritic spine and synapse formation and maintain synaptic plasticity which enables long-term potentiation (LTP) and hippocampus-dependent learning. In developing hippocampal neurons, promotes arborization of the dendritic tree and in mature neurons, promotes dendritic remodeling. Participates in the modulation of skeletal muscle function in response to exercise. In slow-twitch muscles, is involved in regulation of sarcoplasmic reticulum (SR) Ca<sup>2+</sup> transport and in fast-twitch muscle participates in the control of Ca<sup>2+</sup> release from the SR through phosphorylation of triadin, a ryanodine receptor-coupling factor, and phospholamban (PLN/PLB), an endogenous inhibitor of SERCA2A/ATP2A2. Carl W. Tong, J. Physiol., Aug 2004, 558: 927 - 941. Pierre R, J. Biol. Chem., Sep 1997, 272: 24133. Daliang Wang, PNAS, Jun 1998, 95: 7133.</p> <p>Aliases: Calcium/calmodulin dependent protein kinase II alpha antibody, Calcium/calmodulin dependent protein kinase II beta antibody, Calcium/calmodulin dependent protein kinase II delta antibody, Calcium/calmodulin dependent protein kinase II gamma antibody, Calcium/calmodulin-dependent protein kinase type II subunit alpha antibody, CaM kinase II alpha antibody, CaM kinase II antibody, CaM kinase II beta antibody, CaM kinase II delta antibody, CaM kinase II gamma antibody, CaM kinase II subunit alpha antibody, CaMK-II subunit alpha antibody, CAMK2 antibody, Camk2a antibody, CAMK2B antibody, CAMK2D antibody, CAMK2G antibody, CAMKA antibody, KCC2A_HUMAN antibody</p>
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UniProt:	<a href="#">Q9UQM7</a>
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Pathways:	<a href="#">WNT Signaling</a> , <a href="#">Interferon-gamma Pathway</a> , <a href="#">Myometrial Relaxation and Contraction</a>
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## Application Details

Application Notes:	WB:1:500-1:1000, IHC:1:50-1:100,
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Restrictions:	For Research Use only
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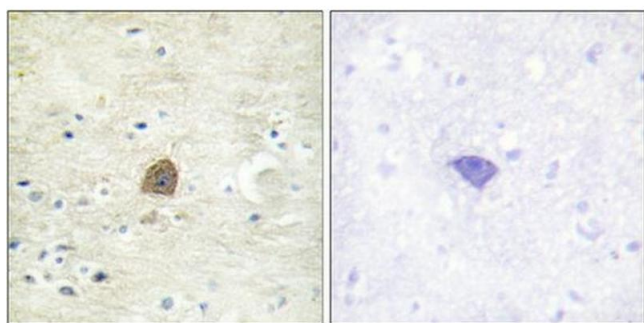
## Handling

Format:	Liquid
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## Handling

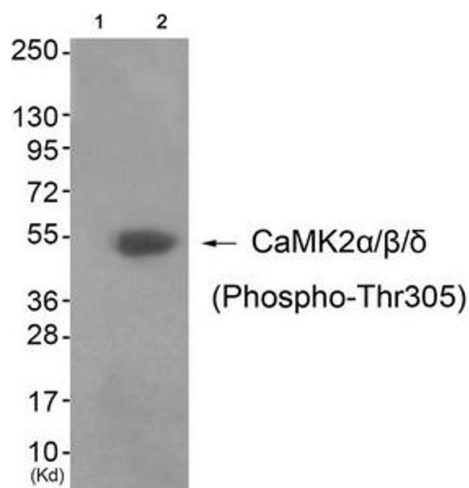
Buffer:	Rabbit IgG in phosphate buffered saline (without Mg <sup>2+</sup> and Ca <sup>2+</sup> ), pH 7.4, 150 mM NaCl, 0.02 % sodium azide and 50 % glycerol.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C, -80 °C
Storage Comment:	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.

## Images



### Immunohistochemistry

**Image 1.** Immunohistochemical analysis of paraffin-embedded human brain tissue using CaMKII (Phospho-Thr305) antibody (left) or the same antibody preincubated with blocking peptide (right).



### Western Blotting

**Image 2.** Western blot analysis of extracts from 3T3 cells (Lane 2), using CaMK2α/β/δ (Phospho-Thr305) Antibody. The lane on the left is treated with antigen-specific peptide.