

Datasheet for ABIN6658151
anti-CAMK2A antibody



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2 Images

Overview

Quantity:	100 µg
Target:	CAMK2A
Reactivity:	Rat
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This CAMK2A antibody is un-conjugated
Application:	Western Blotting (WB), ELISA, Immunohistochemistry (IHC), Immunoprecipitation (IP), Immunofluorescence (IF), Fluorescence Microscopy (FM)

Product Details

Purpose:	CaMKII Antibody
Immunogen:	CaMKII Antibody was produced in mice by repeated immunizations with a partially purified rat CaMKII.
Clone:	6G9
Isotype:	IgG1
Cross-Reactivity (Details):	A BLAST analysis was used to suggest cross-reactivity with CaMKII from mouse, rat, and bovine based on 100 % homology with the immunizing sequence.
Purification:	Anti-CaMKII Antibody was purified by Protein G chromatography.
Sterility:	Sterile filtered

Target Details

Target:	CAMK2A
Alternative Name:	Camk2a (CAMK2A Products)
Background:	<p>Synonyms: CamK2, CamK2A, CamK2B, CamK2D, CamK2G, CAMKA, Calcium/calmodulin-dependent protein kinase type II subunit alpha, CaM kinase II subunit alpha</p> <p>Background: CaMKII is an important member of calcium/calmodulin- activated protein kinase family, functioning in neural synaptic stimulation and T-cell receptor signaling. CaMKII is expressed in many different tissues but is specifically found in the neurons of the forebrain and its mRNA is found within the dendrites and the soma of the neuron. The CaMKII that is found in the neurons consist of two subunits of 52 (termed alpha genes) and 60 kDa (beta genes).</p> <p>CaMKII has catalytic and regulatory domains, as well as an ATP-binding domain, and a consensus phosphorylation site. The binding of Ca²⁺ auto inhibitory effect and activates the kinase . This kinase activation results in autophosphorylation at threonine 286. The threonine phosphorylation state of CaMKII can be regulated through PP1/PKA. Whereas PP1 (protein phosphatase 1) dephosphorylates phospho-CaMKII at Thr286, PKA (protein kinase A) prevents this dephosphorylation. Autophosphorylation also enables CaMKII to attain an enhanced affinity for NMDA receptors in postsynaptic densities.</p> <p>Gene Name: Camk2a</p>
Gene ID:	25400
NCBI Accession:	NP_037052
UniProt:	P11275
Pathways:	WNT Signaling , Interferon-gamma Pathway , Myometrial Relaxation and Contraction

Application Details

Application Notes:	<p>Immunoprecipitation_Dilution: User Optimized</p> <p>ELISA_Dilution: 1:200</p> <p>Immunohistochemistry_Dilution: 1:2000</p> <p>IF_Microscopy_Dilution: 1:50</p> <p>Western_Blot_Dilution: 0.1 µg/mL (1:10,000)</p>
Comment:	<p>Anti-CaMKII Antibody has been tested in IF, IP, WB, IHC and RIA/ELISA. Antibody is provided in PBS pH 7.4. Expect a band approximately ~50-60kDa protein, corresponding to the molecular mass of CaMKII α-subunit on SDS page immunoblots. Recognizes both phosphorylated and non-phosphorylated forms. Specific conditions for reactivity should be optimized by the end user.</p>

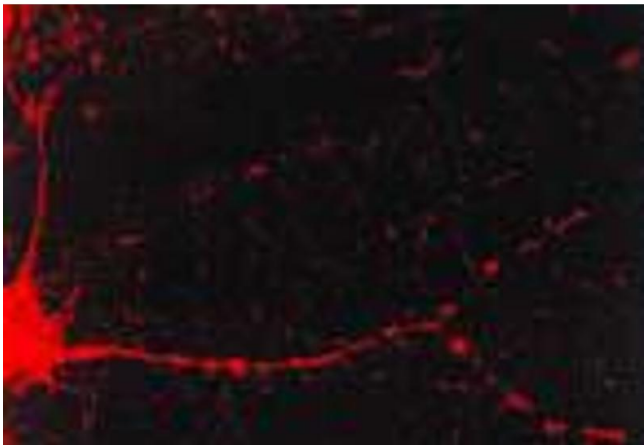
Application Details

Restrictions: For Research Use only

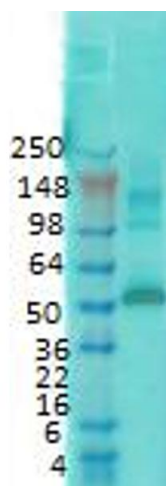
Handling

Format:	Liquid
Buffer:	Buffer: See application note. Stabilizer: 50 % (v/v) Glycerol Preservative: 0.09 % (w/v) Sodium Azide
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:	4 °C,-20 °C
Storage Comment:	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.
Expiry Date:	12 months

Images



Immunofluorescence			
Image	1.	CaMKII	Immunofluorescence.
Immunofluorescence Microscopy of mouse anti-CaMKII antibody. Tissue: Hippocampal neurons. Fixation: N/A. Primary antibody: anti-CaMKII for 1h at RT. Secondary antibody: Fluorescein mouse secondary antibody at 1:10,000 for 45 min at RT. Localization: Cytoplasm. Staining: CaMKII as precipitated ed signal.			



Western Blotting

Image 2. CaMKII Western Blot. Western Blot of mouse anti-CaMKII antibody. Lane 1: Rat membrane. Load: 10ug. Primary antibody: CaMKII at 1:1000 overnight at 4°C. Secondary antibody: Goat anti-mouse IgG HRP at 1:40,000 for 45 min at RT. Blocked: 5% Biotin overnight at 4°C. Predicated/observed size: 54kDa, ~54 kDa for CaMKII.