

Product datasheet

Anti-CaMKII antibody [EP1829Y] ab52476

Recombinant RabMAb

★★★★★ 7 Abreviews 99 References 7 Images

Overview

Product name	Anti-CaMKII antibody [EP1829Y]
Description	Rabbit monoclonal [EP1829Y] to CaMKII
Host species	Rabbit
Specificity	The peptide immunogen is highly conserved between CaMKII alpha, beta, gamma, and delta.
Tested applications	Suitable for: ICC/IF, WB, IHC-P Unsuitable for: Flow Cyt or IP
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Synthetic peptide within Human CaMKII aa 200-300. The exact sequence is proprietary. (Peptide available as ab199551)
Positive control	WB: Mouse brain, rat brain and human fetal brain tissue lysates. IHC-P: Human hepatocellular carcinoma tissue. ICC/IF: U87-MG and PC12 cells.
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information see here . Our RabMAb [®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents .

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol, 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal

Clone number EP1829Y

Isotype IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab52476 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF		1/250.
WB	★★★★★ (7)	1/1000 - 1/5000. Detects a band of approximately 45, 70 kDa (predicted molecular weight: 54 kDa). For unpurified use at 1/20000.
IHC-P		1/500. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Application notes Is unsuitable for Flow Cyt or IP.

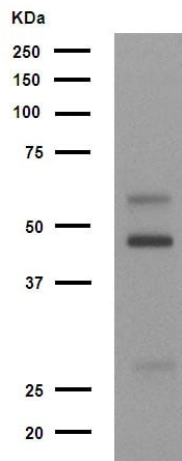
Target

Function CaM-kinase II (CAMK2) is 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 it may regulate NMDAR-dependent potentiation of the AMPAR and synaptic plasticity.

Sequence similarities Belongs to the protein kinase superfamily. CAMK Ser/Thr protein kinase family. CaMK subfamily. Contains 1 protein kinase domain.

Cellular localization Cell junction > synapse > presynaptic cell membrane. Cell junction > synapse. Postsynaptic lipid rafts.

Images



Western blot - Anti-CaMKII antibody [EP1829Y]
(ab52476)

Anti-CaMKII antibody [EP1829Y] (ab52476) at 1/5000 dilution
(purified) + Human fetal brain tissue lysate at 20 µg

Secondary

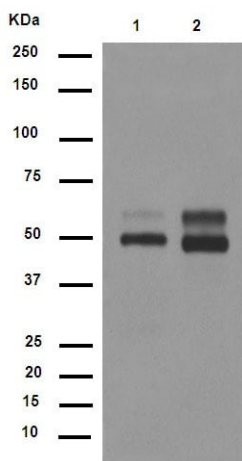
HRP-conjugated anti-rabbit IgG, specific to the non-reduced form of IgG at 1/1000 dilution

Predicted band size: 54 kDa

Observed band size: 45,70 kDa

Blocking buffer and concentration: 5% NFDM/TBST.

Diluting buffer and concentration: 5% NFDM /TBST.



Western blot - Anti-CaMKII antibody [EP1829Y]
(ab52476)

All lanes : Anti-CaMKII antibody [EP1829Y] (ab52476) at 1/1000 dilution (purified)

Lane 1 : Mouse brain tissue lysate

Lane 2 : Rat brain tissue lysate

Lysates/proteins at 20 µg per lane.

Secondary

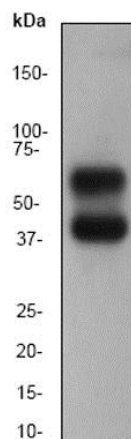
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Observed band size: 45,70 kDa

Blocking buffer and concentration: 5% NFDM/TBST.

Diluting buffer and concentration: 5% NFDM /TBST.



Western blot - Anti-CaMKII antibody [EP1829Y]
(ab52476)

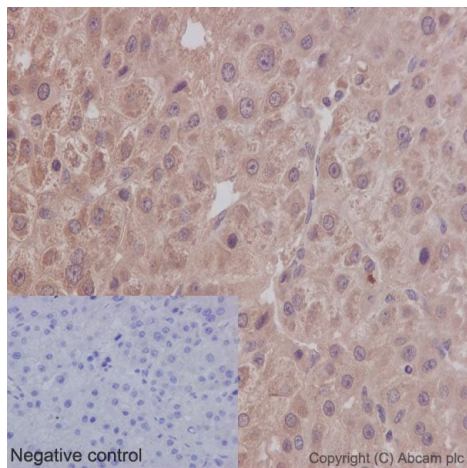
Anti-CaMKII antibody [EP1829Y] (ab52476) at 1/20000 dilution
(unpurified) + Mouse brain lysate at 10 µg

Secondary

Goat anti-rabbit HRP labeled at 1/2000 dilution

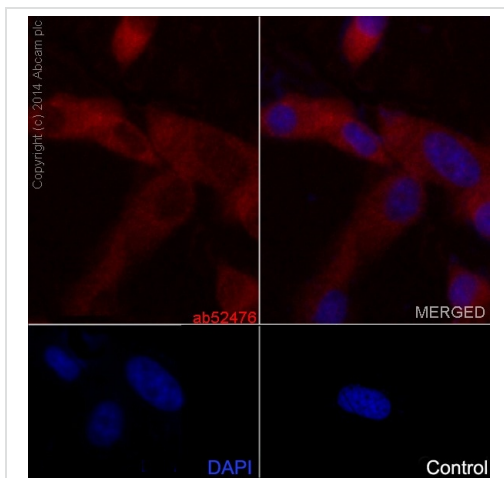
Predicted band size: 54 kDa

Observed band size: 45,70 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-
embedded sections) - Anti-CaMKII antibody
[EP1829Y] (ab52476)

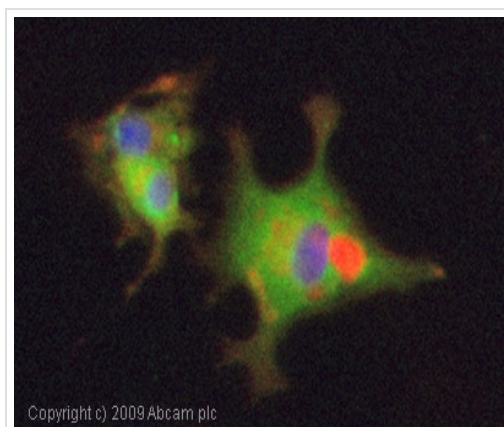
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human hepatocellular carcinoma tissue labelling CaMKII with purified ab52476 at 1/500. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. A prediluted HRP-polymer conjugated anti-rabbit IgG was used as the secondary antibody. Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.



Immunocytochemistry/ Immunofluorescence - Anti-CaMKII antibody [EP1829Y] (ab52476)

Immunocytochemistry/Immunofluorescence analysis of U87-MG cells labelling CaMKII with purified ab52476 at 1/250. Cells were fixed with 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. An Alexa Fluor[®] 555-conjugated goat anti-rabbit IgG (1/500) was used as the secondary antibody. DAPI (blue) was used as the nuclear counterstain.

Control: primary antibody (1/250) and secondary antibody, **ab150113**, an Alexa Fluor[®] 488-conjugated goat anti-mouse IgG (1/500).



Immunocytochemistry/ Immunofluorescence - Anti-CaMKII antibody [EP1829Y] (ab52476)

ICC/IF image of unpurified ab52476 stained PC12 cells. The cells were 4% PFA fixed (10 min) and then incubated in 1% BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab52476, 1µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor[®] 488 goat anti-rabbit IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor[®] 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.

Why choose a recombinant antibody?



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Anti-CaMKII antibody [EP1829Y] (ab52476)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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