

# Anti-CaMKII alpha (phospho T286) antibody [EPR1830] ab124880

Recombinant RabMAb

★★★★★ [1 Abreviews](#) [9 References](#) [6 Images](#)

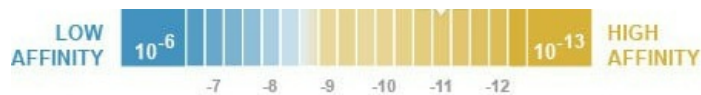
### Overview

<b>Product name</b>	Anti-CaMKII alpha (phospho T286) antibody [EPR1830]
<b>Description</b>	Rabbit monoclonal [EPR1830] to CaMKII alpha (phospho T286)
<b>Host species</b>	Rabbit
<b>Specificity</b>	Due to the homology between the immunogen peptide and other CAMKII isoforms, ab124880 may cross react with CAMKII delta (KCC2D, 93% homology) and CAMKII gamma (KCC2G, 79% homology)
<b>Tested applications</b>	<b>Suitable for:</b> WB, IHC-P <b>Unsuitable for:</b> ICC/IF or IP
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat <b>Does not react with:</b> Human
<b>Immunogen</b>	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
<b>Positive control</b>	IHC: mouse cerebellum, rat cerebellum. WB: untreated mouse brain tissue lysate, untreated rat brain tissue lysate.
<b>General notes</b>	This product is a recombinant monoclonal antibody, which offers several advantages including: <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> For more information <a href="#">see here</a> . Our RabMAb <sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a> .

### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
<b>Dissociation constant (K<sub>D</sub>)</b>	K <sub>D</sub> = 3.60 x 10 <sup>-11</sup> M





[Learn more about K<sub>D</sub>](#)

<b>Storage buffer</b>	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 0.05% BSA, 40% Glycerol (glycerin, glycerine), 59% PBS
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EPR1830
<b>Isotype</b>	IgG

## Applications

**The Abpromise guarantee** Our [Abpromise guarantee](#) covers the use of ab124880 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

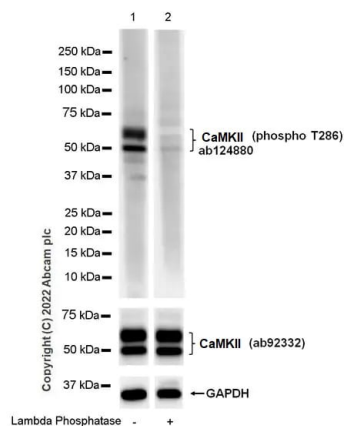
Application	Abreviews	Notes
<b>WB</b>	★★★★★ (1)	1/4000. Detects a band of approximately 45-70 kDa (predicted molecular weight: 54 kDa).
<b>IHC-P</b>		1/5000. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

**Application notes** Is unsuitable for ICC/IF or IP.

## Target

<b>Function</b>	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.
<b>Sequence similarities</b>	Belongs to the protein kinase superfamily. CAMK Ser/Thr protein kinase family. CaMK subfamily. Contains 1 protein kinase domain.
<b>Cellular localization</b>	Cell junction > synapse > presynaptic cell membrane. Cell junction > synapse. Postsynaptic lipid rafts.

## Images



Western blot - Anti-CaMKII alpha (phospho T286) antibody [EPR1830] (ab124880)

**All lanes :** Anti-CaMKII alpha (phospho T286) antibody [EPR1830] (ab124880) at 1/4000 dilution

**Lane 1 :** Rat brain tissue lysate (untreated membrane)

**Lane 2 :** Rat brain tissue lysate (Lambda phosphatase treated membrane)

Lysates/proteins at 20 µg per lane.

### Secondary

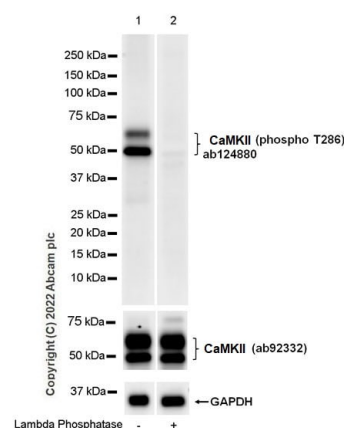
**All lanes :** Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/100000 dilution

**Predicted band size:** 54 kDa

**Observed band size:** 50,54 kDa

**Exposure time:** 92 seconds

**Blocking and diluting buffer and concentration:** 5% NFDM/TBST



Western blot - Anti-CaMKII alpha (phospho T286) antibody [EPR1830] (ab124880)

**All lanes :** Anti-Myogenin antibody [EPR4789] ([ab124800](#)) at 1/4000 dilution

**Lane 1 :** Mouse brain tissue lysate (untreated membrane)

**Lane 2 :** Mouse brain tissue lysate (Lambda phosphatase treated membrane)

Lysates/proteins at 20 µg per lane.

### Secondary

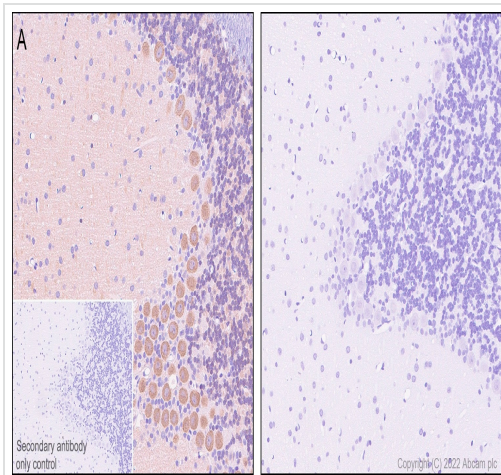
**All lanes :** Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/100000 dilution

**Predicted band size:** 54 kDa

**Observed band size:** 50,54 kDa

**Exposure time:** 15 seconds

**Blocking and diluting buffer and concentration:** 5%  
NFDM/TBST



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CaMKII alpha (phospho T286) antibody [EPR1830] (ab124880)

Immunohistochemical analysis of Paraffin-embedded sections Rat Cerebellum tissue labelling CaMKII (pT286) with ab124880 at 1/5000 dilution, followed by Rabbit specific IHC polymer detection kit HRP/DAB ([ab209101](#))(Ready to use). Rat cerebellum without Lambda Protein Phosphatase treatment staining on Rat Cerebellum is observed. Counterstained with Hematoxylin.

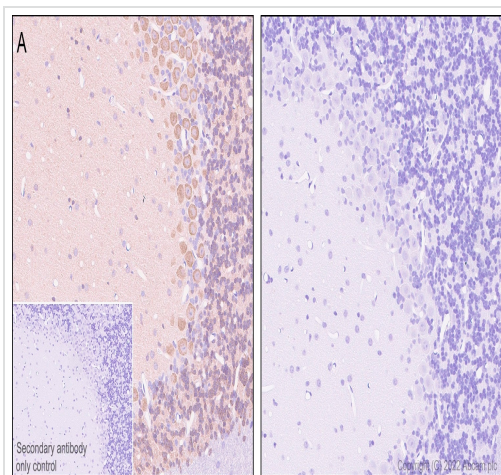
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Rabbit specific IHC polymer detection kit HRP/DAB ([ab209101](#))(Ready to use).

Positive staining on rat cerebellum without Lambda Protein Phosphatase treatment (image A); No signal was detected when tissues were treated with Lambda Protein Phosphatase (image B).

The section was incubated with ab124880 for 30 mins at room temperature.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

Heat mediated antigen retrieval with Citrate buffer (pH 6.0, Epitope Retrieval Solution 1) for 20 mins.



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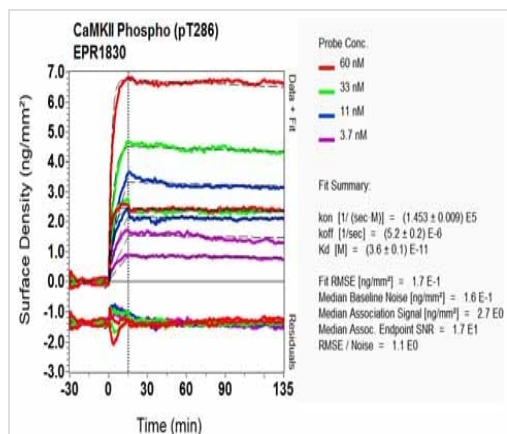
BOND® RX instrument.

Heat mediated antigen retrieval with Citrate buffer (pH 6.0, Epitope Retrieval Solution 1) for 20 mins.

Equilibrium disassociation constant ( $K_D$ )

Learn more about  $K_D$

[Click here to learn more about  \$K\_D\$](#)



SPR Scanning - Anti-CaMKII alpha + CaMKII beta  
(phospho T286) antibody [EPR1830] (ab124880)

### 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 alpha + CaMKII beta (phospho T286)  
antibody [EPR1830] (ab124880)

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

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