Product name: Anti-CaMKII alpha antibody [EPR1828] ab92332

Description: Rabbit monoclonal [EPR1828] to CaMKII alpha

Host species: Rabbit

Specificity: The peptide immunogen shares a 100% homology with CaMKII beta, gamma and delta therefore we believe cross-reactivity is highly likely but this has not been experimentally assessed.

Tested applications: Suitable for: WB, IP, IHC (PFA fixed), Flow Cyt

Species reactivity: Reacts with: Mouse, Rat, Human

Immunogen: Synthetic peptide within Human CaMKII alpha aa 1-100 (N terminal). The exact sequence is proprietary.
(Peptide available as ab175459)

Positive control: Rat brain lysate, SH SY5Y cell lysate, Neuro 2a cell lysate

General notes: Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents

This product is a recombinant rabbit monoclonal antibody.

Form: Liquid

Storage instructions: Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.

Storage buffer: pH: 7.20
Preservative: 0.05% Sodium azide
Constituents: 0.1% BSA, 40% Glycerol, 9.85% Tris glycine, 50% Tissue culture supernatant

Purity: Tissue culture supernatant

Clonality: Monoclonal

Clone number: EPR1828
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**

**Applications**

Our Abpromise guarantee covers the use of ab92332 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>WB</td>
<td>1/10000 - 1/50000. Predicted molecular weight: 54 kDa.</td>
<td></td>
</tr>
<tr>
<td>IP</td>
<td>1/10 - 1/100.</td>
<td></td>
</tr>
<tr>
<td>IHC (PFA fixed)</td>
<td>Use at an assay dependent concentration. PubMed: 24866701</td>
<td></td>
</tr>
<tr>
<td>Flow Cyt</td>
<td>1/1000. ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.</td>
<td></td>
</tr>
</tbody>
</table>

**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.

**Images**
Overlay histogram showing SH-SY5Y cells stained with ab92332 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab92332, 1/1000 dilution) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-rabbit IgG (H+L) (ab96899) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (0.1μg/1x10⁶ cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter. This antibody gave a positive signal in SH-SY5Y cells fixed with 80% methanol (5 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.

All lanes : Anti-CaMKII alpha antibody [EPR1828] (ab92332)

Lane 1 : Rat brain lysate
Lane 2 : SH SY5Y cell lysate
Lane 3 : Neuro 2a cell lysate

Lysates/proteins at 10 µg per lane.

Secondary

All lanes : HRP labelled goat anti-rabbit at 1/2000 dilution

Predicted band size: 54 kDa

Please note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"

Our Abpromise to you: Quality guaranteed and expert technical support
- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours

- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit https://www.abcam.com/abpromise or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors