

Product datasheet

Anti-CaMKII delta antibody [EPR13095] ab181052

KO VALIDATED Recombinant RabMAB

★★★★★ [1 Abreviews](#) [22 References](#) [8 Images](#)

Overview

| | |
|----------------------------|--|
| Product name | Anti-CaMKII delta antibody [EPR13095] |
| Description | Rabbit monoclonal [EPR13095] to CaMKII delta |
| Host species | Rabbit |
| Specificity | The mouse and rat recommendation is based on the WB results. We do not guarantee IHC-P for mouse and rat. |
| Tested applications | Suitable for: WB, IHC-P Unsuitable for: ICC/IF |
| Species reactivity | Reacts with: Mouse, Rat, Human |
| Immunogen | Synthetic peptide. This information is proprietary to Abcam and/or its suppliers. |
| Positive control | WB: HEK-293T, HAP1, SW480, A431 and HeLa whole cell lysate (ab150035); Mouse heart tissue lysate; Rat spleen tissue lysate. IHC-P: Human thyroid carcinoma, cardiac and skeletal muscle tissues. |
| General notes | <p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <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 <p>For more information see here.</p> <p>Our RabMAB[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAB[®] patents.</p> |

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 long term. Avoid freeze / thaw cycle. |
| Storage buffer | Preservative: 0.01% Sodium azide Constituents: 40% Glycerol, 59% PBS, 0.05% BSA |
| Purity | Protein A purified |
| Clonality | Monoclonal |

Clone number EPR13095
Isotype IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab181052 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 |
|-------------|-----------|---|
| WB | ★★★★★ (1) | 1/1000 - 1/2000. Detects a band of approximately 50 kDa (predicted molecular weight: 56 kDa). |
| IHC-P | | 1/50 - 1/100. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. The mouse and rat recommendation is based on the WB results. We do not guarantee IHC-P for mouse and rat. |

Application notes Is unsuitable for ICC/IF.

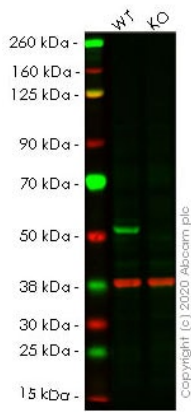
Target

Function CaM-kinase II (CAMK2) is a prominent kinase in the central nervous system that may function in long-term potentiation and neurotransmitter release.

Tissue specificity Expressed in cardiac muscle and skeletal muscle. Isoform Delta 3, isoform Delta 2, isoform Delta 8 and isoform Delta 9 are expressed in cardiac muscle. Isoform Delta 11 is expressed in skeletal muscle.

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

Images



Western blot - Anti-CaMKII delta antibody [EPR13095] (ab181052)

All lanes : Anti-CaMKII delta antibody [EPR13095] (ab181052) at 1/1000 dilution

Lane 1 : Wild-type HEK-293T cell lysate

Lane 2 : CAMK2D knockout HEK-293T cell lysate

Lysates/proteins at 20 µg per lane.

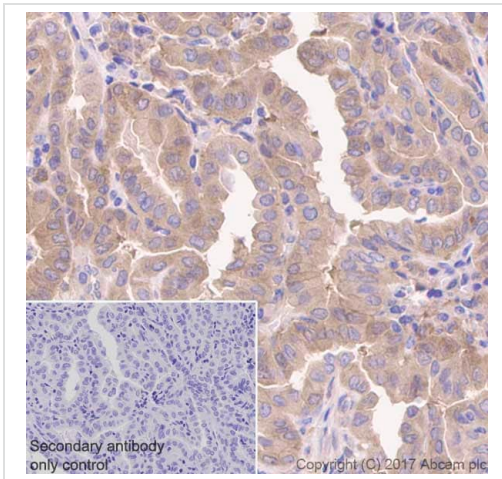
Performed under reducing conditions.

Predicted band size: 56 kDa

Observed band size: 50 kDa

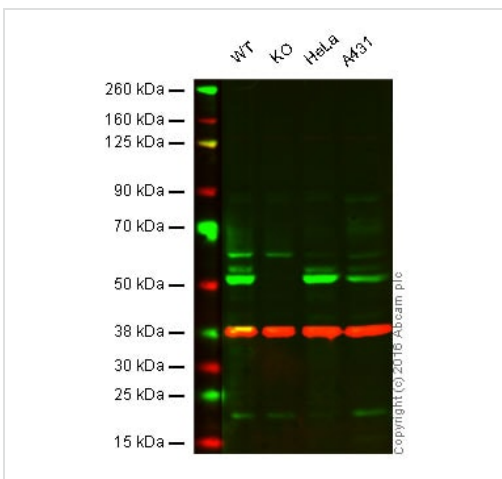
Lanes 1- 2: Merged signal (red and green). Green - ab181052 observed at 50 kDa. Red - Anti-GAPDH antibody [6C5] - Loading Control ([ab8245](#)) observed at 37 kDa.

ab181052 was shown to react with CaM-kinase II in wild-type HEK-293T cells in western blot. Loss of signal was observed when knockout cell line [ab267322](#) (knockout cell lysate [ab257376](#)) was used. Wild-type HEK-293T and CAMK2D knockout HEK-293T cell lysates were subjected to SDS-PAGE. ab181052 and Anti-GAPDH antibody [6C5] - Loading Control ([ab8245](#)) overnight at 4°C at a 1 in 1000 dilution and a 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye®800CW) preadsorbed ([ab216773](#)) and Goat anti-Mouse IgG H&L (IRDye®680RD) preadsorbed ([ab216776](#)) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CaMKII delta antibody [EPR13095] (ab181052)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human thyroid carcinoma tissue sections labeling CaMKII delta with Purified ab181052 at 1:100 dilution (1.82 µg/ml). Heat mediated antigen retrieval was performed using **ab93684** (Tris/EDTA buffer, pH 9.0). Tissue was counterstained with Hematoxylin. ImmunoHistoProbe one step HRP Polymer (ready to use) secondary antibody was used at 1:0 dilution. PBS instead of the primary antibody was used as the negative control.



Western blot - Anti-CaMKII delta antibody [EPR13095] (ab181052)

Lane 1: Wild-type HAP1 cell lysate (20 µg)

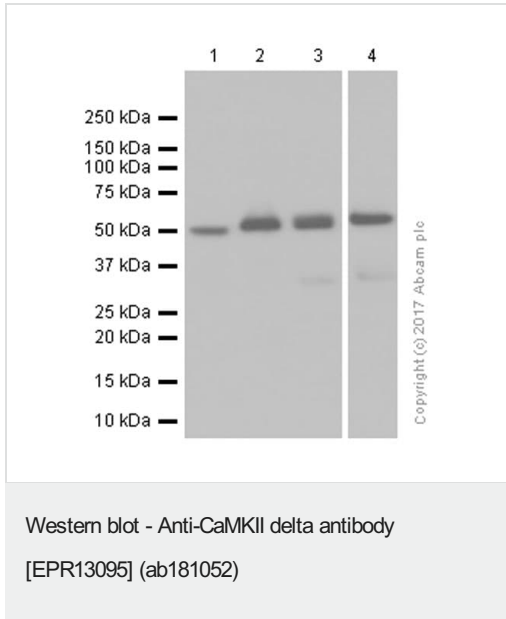
Lane 2: CaMKII delta knockout HAP1 cell lysate (20 µg)

Lane 3: HeLa cell lysate (20 µg)

Lane 4: A431 cell lysate (20 µg)

Lanes 1 - 4: Merged signal (red and green). Green - ab181052 observed at 56 kDa. Red - loading control, **ab8245**, observed at 37 kDa.

Unpurified ab181052 was shown to recognize CaMKII delta when CaMKII delta knockout samples were used, along with additional cross-reactive bands. Wild-type and CaMKII delta knockout samples were subjected to SDS-PAGE. ab181052 and **ab8245** (loading control to GAPDH) were diluted 1/1000 and 1/10000 respectively and incubated overnight at 4°C. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (**ab216776**) secondary antibodies at 1/10000 dilution for 1 h at room temperature before imaging.



Lane 1 : Anti-CaMKII delta antibody [EPR13095] (ab181052) at 1/1000 dilution

Lanes 2-4 : Anti-CaMKII delta antibody [EPR13095] (ab181052) at 1/1000 dilution (purified)

Lane 1 : HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysates at 15 µg

Lane 2 : SW480 (Human colorectal adenocarcinoma epithelial cell) whole cell lysates at 20 µg

Lane 3 : Mouse heart lysates at 20 µg

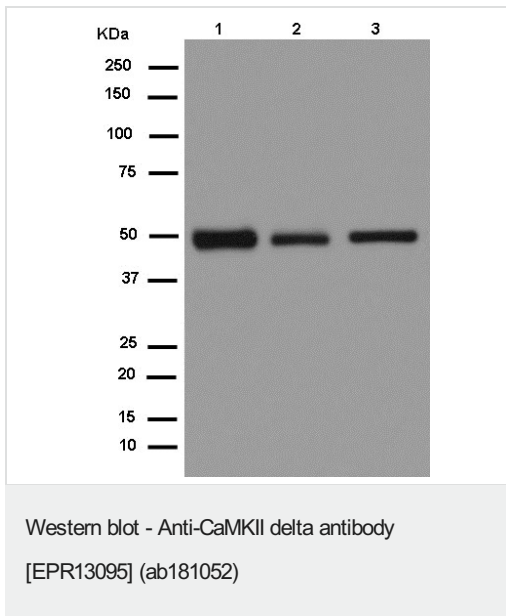
Lane 4 : Rat spleen lysates at 20 µg

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

Predicted band size: 56 kDa

Blocking and diluting buffer : 5% NFDm/TBST



All lanes : Anti-CaMKII delta antibody [EPR13095] (ab181052) at 1/2000 dilution (unpurified)

Lane 1 : SW480 whole cell lysate

Lane 2 : A431 whole cell lysate

Lane 3 : HeLa whole cell lysate

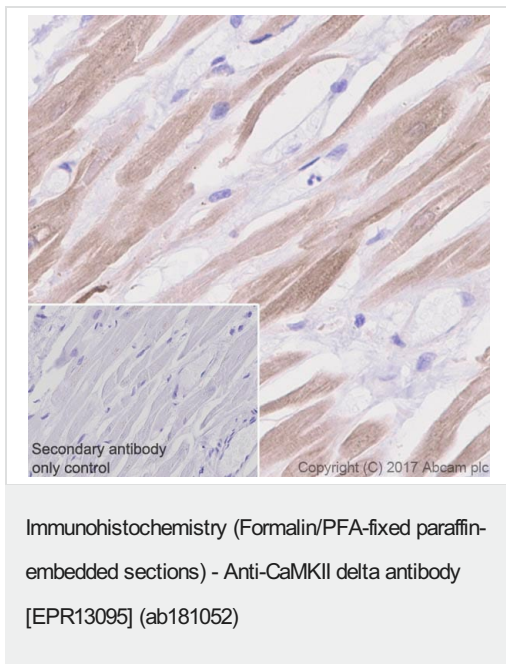
Lysates/proteins at 20 µg per lane.

Secondary

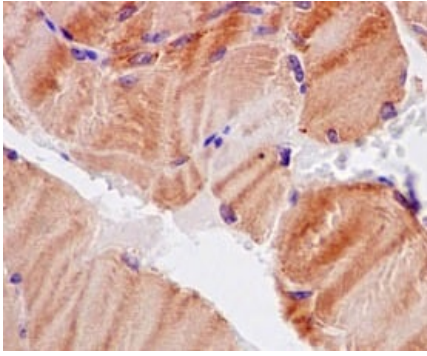
All lanes : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 56 kDa

Blocking/ Dilution buffer: 5% NFDM /TBST.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human cardiac muscle tissue sections labeling CaMKII delta with Purified ab181052 at 1:100 dilution (1.82 µg/ml). Heat mediated antigen retrieval was performed using **ab93684** (Tris/EDTA buffer, pH 9.0). Tissue was counterstained with Hematoxylin. ImmunoHistoProbe one step HRP Polymer (ready to use) secondary antibody was used at 1:0 dilution. PBS instead of the primary antibody was used as the negative control.



Immunohistochemical analysis of paraffin embedded Human skeletal muscle tissue sections labeling CaMKII delta using unpurified ab181052 at a 1/100 dilution. A ready to use HRP Polymer for Rabbit IgG was used as the secondary. Hematoxylin counterstain. Heat mediated antigen retrieval was performed citrate buffer pH 6 before commencing with IHC staining protocol.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CaMKII delta antibody [EPR13095] (ab181052)

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 delta antibody [EPR13095] (ab181052)

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

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