abcam

Product datasheet

Anti-PKC beta 1 antibody [EPR18512] ab195039

Recombinant RabMAb

6 References 13 Images

Overview

Product name	Anti-PKC beta 1 antibody [EPR18512]
Description	Rabbit monoclonal [EPR18512] to PKC beta 1
Host species	Rabbit
Tested applications	**Suitable for:** Flow Cyt (Intra), WB, IHC-P, 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: Active human PKC beta 1 full length protein; Human fetal brain whole cell lysate; L-929, C2C12, U-87 MG, HeLa, C6 and NIH/3T3 cell lysates; Mouse brain and rat brain lysates. IHC-P: Human colon, Human colon cancer, mouse kidney and rat spleen tissues. ICC/IF: HeLa and K562 cells. Flow Cyt (intra): K562 cells.
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: - 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 long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol, 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR18512

Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab195039 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
Flow Cyt (Intra)		1/200.
WB		1/2000. Detects a band of approximately 77, 40 kDa (predicted molecular weight: 77 kDa).
IHC-P		1/100. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
ICC/IF		1/100.

Target

Function	Calcium-activated and phospholipid-dependent serine/threonine-protein kinase involved in various processes such as regulation of the B-cell receptor (BCR) signalosome, apoptosis and transcription regulation. Plays a key role in B-cell activation and function by regulating BCR-induced NF-kappa-B activation and B-cell suvival. Required for recruitment and activation of the IKK kinase to lipid rafts and mediates phosphorylation of CARD11/CARMA1 at 'Ser-559', 'Ser-644' and 'Ser-652', leading to activate the NF-kappa-B signaling. Involved in apoptosis following oxidative damage: in case of oxidative conditions, specifically phosphorylates 'Ser-36' of isoform p66Shc of SHC1, leading to mitochondrial accumulation of p66Shc, where p66Shc acts as a reactive oxygen species producer. Acts as a coactivator of androgen receptor (ANDR)-dependent transcription, by being recruited to ANDR target genes and specifically mediating phosphorylation of 'Thr-6' of histone H3 (H3T6ph), a specific tag for epigenetic transcriptional activation that prevents demethylation of histone H3 'Lys-4' (H3K4me) by LSD1/KDM1A. Also involved in triglyceride homeostasis. Serves as the receptor for phorbol esters, a class of tumor promoters.
Sequence similarities	Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family. PKC subfamily. Contains 1 AGC-kinase C-terminal domain. Contains 1 C2 domain. Contains 2 phorbol-ester/DAG-type zinc fingers. Contains 1 protein kinase domain.
Post-translational modifications	Phosphorylation on Thr-500 within the activation loop renders it competent to autophosphorylate. Subsequent autophosphorylation of Thr-642 maintains catalytic competence, and autophosphorylation on Ser-661 appears to release the kinase into the cytosol. Autophosphorylation on other sites i.e. in the N-terminal and hinge regions have no effect on enzyme activity.
Cellular localization	Cytoplasm. Nucleus. Membrane.

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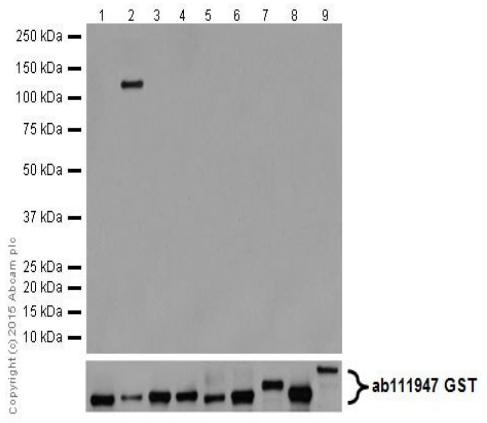
Images



Western blot - Anti-PKC beta 1 antibody [EPR18512] (ab195039)

All lanes : Anti-PKC beta 1 antibody [EPR18512] (ab195039) at 1/2000 dilution

Lane 1 : Active human PKC alpha full length protein
Lane 2 : Active human PKC beta 1 full length protein
Lane 3 : Active human PKC beta 2 full length protein
Lane 4 : Active human PKC gamma full length protein
Lane 5 : Active human PKC delta full length protein
Lane 6 : Active human PKC eta full length protein
Lane 7 : Active human PKC epsilon full length protein
Lane 8 : Active human PKC theta full length protein
Lane 9 : Active human PKC mu full length protein

Lysates/proteins at 0.02 µg per lane.

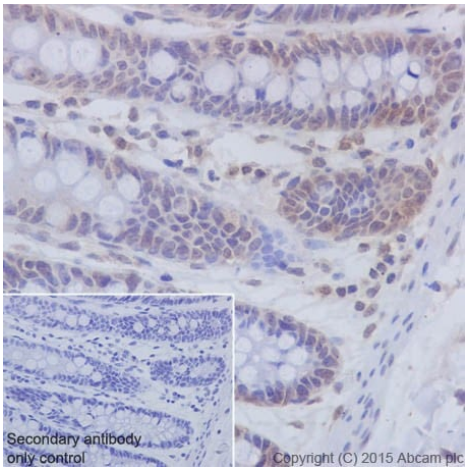
Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/50000 dilution

Predicted band size: 77 kDa
Observed band size: 103 kDa

Exposure time: 1 second

Blocking/Dilution buffer: 5% NFDM/TBST.

Active human PKC alpha full length protein (**ab55672**) contains aa1-672 with GST-tag; Active human PKC beta 1 full length protein (**ab60840**) contains aa1-671 with GST-tag; Active human PKC beta 2 full length protein (**ab60841**) contains aa1-673 with GST-tag; Active human PKC gamma full length protein (**ab60842**) contains aa1-677 with GST-tag; Active human PKC delta full length protein (**ab60844**) contains aa1-676 with GST-tag; Active human PKC eta full length protein (**ab60849**) contains aa1-683 with GST-tag; Active human PKC epsilon full length protein (**ab60847**) contains aa1-737 with GST-tag; Active human PKC theta full length protein (**ab56641**) contains aa1-706 with GST-tag; Active human PKC mu full length protein (**ab60873**) contains aa1-912 with GST-tag.

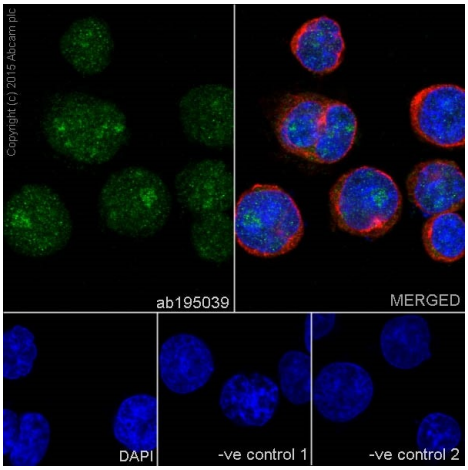


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PKC beta 1 antibody [EPR18512] (ab195039)

Immunohistochemical analysis of paraffin-embedded human colon tissue labeling PKC beta 1 with ab195039 at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution. Nucleus and weak cytoplasm staining on epithelial cells of Human colon is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

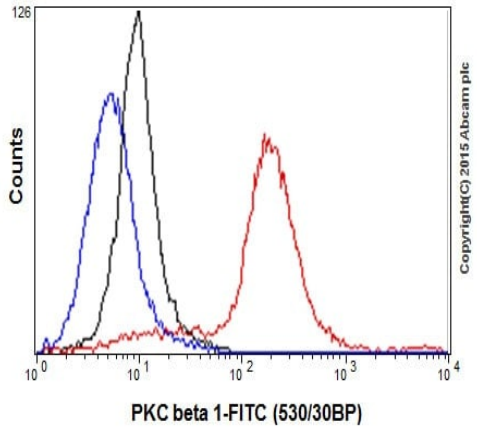
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-PKC beta 1 antibody [EPR18512] (ab195039)

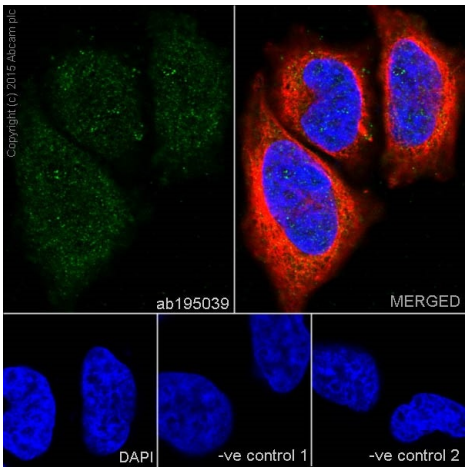
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized K562 (Human chronic myelogenous leukemia cells from bone marrow) cells labeling PKC beta 1 with ab195039 at 1/100 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/1000 dilution (green). Confocal image showing nuclear and cytoplasm staining on K562 cell line. The nuclear counter stain is DAPI (blue). Tubulin is detected with **ab7291** (anti-Tubulin mouse mAb) at 1/1000 dilution and **ab150120** (AlexaFluor®594 Goat anti-Mouse secondary) at 1/1000 dilution (red).

The negative controls are as follows:
-ve control 1: ab195039 at 1/100 dilution followed by **ab150120** (AlexaFluor®594 Goat anti-Mouse secondary) at 1/1000 dilution.
-ve control 2: **ab7291** (anti-Tubulin mouse mAb) at 1/1000 dilution followed by **ab150077** (Alexa Fluor®488 Goat Anti-Rabbit IgG H&L) at 1/1000 dilution.



Flow Cytometry (Intracellular) - Anti-PKC beta 1 antibody [EPR18512] (ab195039)

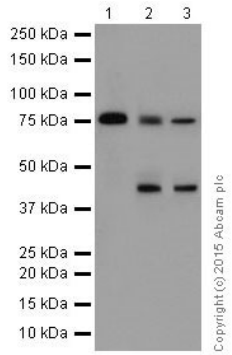
Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed K562 (Human chronic myelogenous leukemia cells from bone marrow) cells labeling PKC beta 1 with ab195039 at 1/200 dilution (red) compared with a rabbit monoclonal IgG isotype control (**ab172730**; black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody; blue). Goat anti rabbit IgG (FITC) at 1/500 dilution was used as the secondary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-PKC beta 1 antibody [EPR18512] (ab195039)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (Human epithelial cells from cervix adenocarcinoma) cells labeling PKC beta 1 with ab195039 at 1/100 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/1000 dilution (green). Confocal image showing nuclear and cytoplasm staining on HeLa cell line. The nuclear counter stain is DAPI (blue). Tubulin is detected with **ab7291** (anti-Tubulin mouse mAb) at 1/1000 dilution and **ab150120** (AlexaFluor®594 Goat anti-Mouse secondary) at 1/1000 dilution (red).

The negative controls are as follows:
-ve control 1: ab195039 at 1/100 dilution followed by **ab150120** (AlexaFluor®594 Goat anti-Mouse secondary) at 1/1000 dilution.
-ve control 2: **ab7291** (anti-Tubulin mouse mAb) at 1/1000 dilution followed by **ab150077** (Alexa Fluor®488 Goat Anti-Rabbit IgG H&L) at 1/1000 dilution.



Western blot - Anti-PKC beta 1 antibody [EPR18512] (ab195039)

All lanes : Anti-PKC beta 1 antibody [EPR18512] (ab195039) at 1/10000 dilution

Lane 1 : Human fetal brain whole cell lysate
Lane 2 : L-929 (Mouse connective tissue fibroblast cells) whole cell lysate
Lane 3 : C2C12 (Mouse myoblast cell line) whole cell lysate

Lysates/proteins at 10 µg per lane.

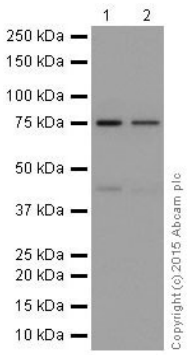
Secondary
All lanes : Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/50000 dilution

Predicted band size: 77 kDa
Observed band size: 40,77 kDa

Exposure time: 3 minutes

Blocking/Dilution buffer: 5% NFDM/TBST.

The peptide immunogen corresponds to the C terminal region of human PKC beta 1. The antibody recognizes the full length (~77KD) and the catalytic domain (~40KD) of PKC beta 1 (Geraldes P and King GL, 2010. Circ Res. 106, 1319-1331.



Western blot - Anti-PKC beta 1 antibody [EPR18512] (ab195039)

All lanes : Anti-PKC beta 1 antibody [EPR18512] (ab195039) at 1/10000 dilution

Lane 1 : U-87 MG (Human glioblastoma-astrocytoma epithelial cell line) whole cell lysate
Lane 2 : HeLa (Human epithelial cells from cervix adenocarcinoma) whole cell lysate

Lysates/proteins at 10 µg per lane.

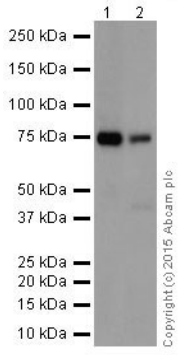
Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/50000 dilution

Predicted band size: 77 kDa
Observed band size: 40,77 kDa

Exposure time: 30 seconds

Blocking/Dilution buffer: 5% NFDM/TBST.

The peptide immunogen corresponds to the C terminal region of human PKC beta 1. The antibody recognizes the full length (~77KD) and the catalytic domain (~40KD) of PKC beta 1 (Geraldes P and King GL, 2010. Circ Res. 106, 1319-1331.



Western blot - Anti-PKC beta 1 antibody [EPR18512] (ab195039)

All lanes : Anti-PKC beta 1 antibody [EPR18512] (ab195039) at 1/2000 dilution

Lane 1 : Mouse brain lysate
Lane 2 : Rat brain lysate

Lysates/proteins at 10 µg per lane.

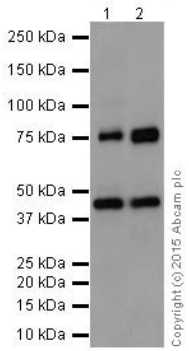
Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/50000 dilution

Predicted band size: 77 kDa
Observed band size: 40,77 kDa

Exposure time: 15 seconds

Blocking/Dilution buffer: 5% NFDM/TBST.

The peptide immunogen corresponds to the C terminal region of human PKC beta 1. The antibody recognizes the full length (~77KD) and the catalytic domain (~40KD) of PKC beta 1 (Geraldes P and King GL, 2010. Circ Res. 106, 1319-1331.



Western blot - Anti-PKC beta 1 antibody [EPR18512] (ab195039)

All lanes : Anti-PKC beta 1 antibody [EPR18512] (ab195039) at 1/2000 dilution

Lane 1 : C6 (Rat glial tumor cells) whole cell lysate
Lane 2 : NIH/3T3 (Mouse embyro fibroblast cells) whole cell lysate

Lysates/proteins at 10 µg per lane.

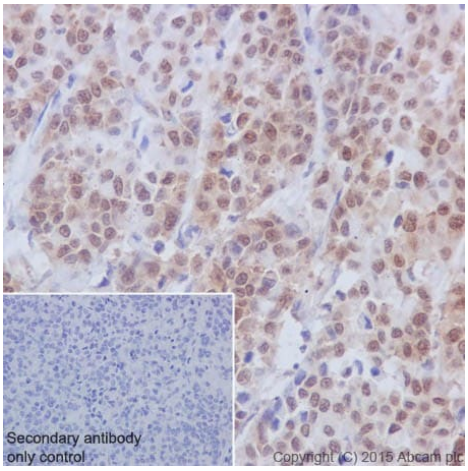
Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/50000 dilution

Predicted band size: 77 kDa
Observed band size: 40,77 kDa

Exposure time: 3 minutes

Blocking/Dilution buffer: 5% NFDM/TBST.

The peptide immunogen corresponds to the C terminal region of human PKC beta 1. The antibody recognizes the full length (~77KD) and the catalytic domain (~40KD) of PKC beta 1 (Geraldes P and King GL, 2010. Circ Res. 106, 1319-1331.

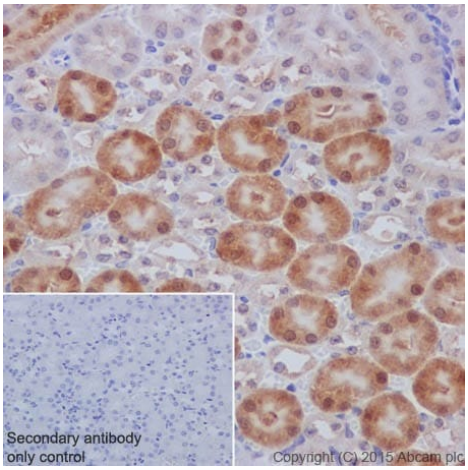


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PKC beta 1 antibody [EPR18512] (ab195039)

Immunohistochemical analysis of paraffin-embedded human colon cancer tissue labeling PKC beta 1 with ab195039 at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution. Nucleus and cytoplasm staining on cancer cells of colon cancer is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

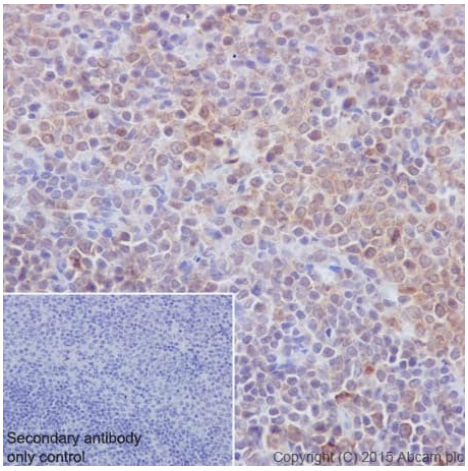


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PKC beta 1 antibody [EPR18512] (ab195039)

Immunohistochemical analysis of paraffin-embedded mouse kidney tissue labeling PKC beta 1 with ab195039 at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution. Nucleus and cytoplasm staining on epithelial cells of mouse kidney is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

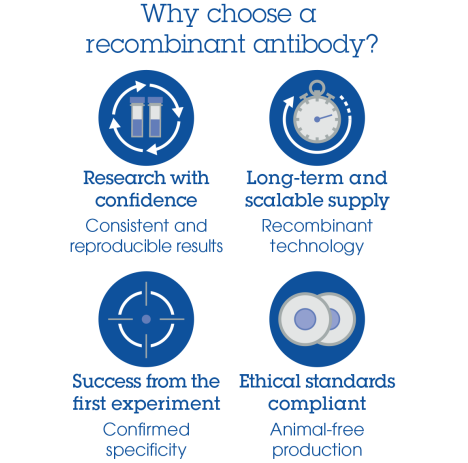


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PKC beta 1 antibody [EPR18512] (ab195039)

Immunohistochemical analysis of paraffin-embedded rat spleen tissue labeling PKC beta 1 with ab195039 at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution. Nucleus and cytoplasm staining on lymphocytes of rat spleen is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Anti-PKC beta 1 antibody [EPR18512] (ab195039)

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