abcam

Product datasheet

Anti-PKC delta (phospho Y311) antibody [EPR2609Y] ab76181

Recombinant RabMAb

2 Abreviews 7 References 6 Images

Overview

Product name	Anti-PKC delta (phospho Y311) antibody [EPR2609Y]
Description	Rabbit monoclonal [EPR2609Y] to PKC delta (phospho Y311)
Host species	Rabbit
Tested applications	**Suitable for:** Dot blot, WB, IP, IHC-P **Unsuitable for:** Flow Cyt or ICC/IF
Species reactivity	**Reacts with:** Human **Predicted to work with:** Mouse
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: HeLa cell lysate treated with Phorbol-12-myristate-13-acetate and U937 cell lysate treated with TPA. IHC-P: Human urinary bladder carcinoma tissue. IP: HeLa treated with 10mM H2O2 for 1 hour whole cell lysate.
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**. Rat: We have preliminary internal testing data to indicate this antibody may not react with this species. Please contact us for more information.

Properties

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: 0.01% Sodium azide

	Constituents: 9% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA, 50% Tissue culture supernatant
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR2609Y
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab76181 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
Dot blot		1/1000.
WB	★★★☆☆ (2)	1/2500 - 1/5000. Predicted molecular weight: 77 kDa.
IP		1/40.
IHC-P		1/100. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

Application notes Is unsuitable for Flow Cyt or ICC/IF.

Target

Function This is calcium-independent, phospholipid-dependent, serine- and threonine-specific enzyme. PKC is activated by diacylglycerol which in turn phosphorylates a range of cellular proteins. PKC also serves as the receptor for phorbol esters, a class of tumor promoters. May play a role in antigen-dependent control of B-cell function. Phosphorylates MUC1 in the C-terminal and regulates the interaction between MUC1 and beta-catenin.

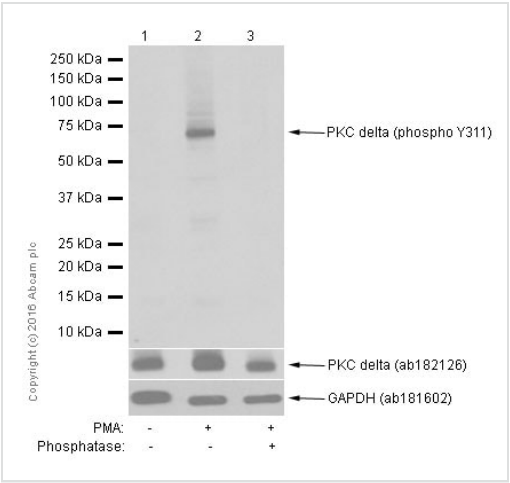
Sequence similarities Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family. PKC subfamily.
Contains 1 AGC-kinase C-terminal domain.
Contains 1 C2 domain.
Contains 2 phorbol-ester/DAG-type zinc fingers.
Contains 1 protein kinase domain.

Domain The C1 domain, containing the phorbol ester/DAG-type region 1 (C1A) and 2 (C1B), is the diacylglycerol sensor.
The C2 domain is a non-calcium binding domain. It binds proteins containing phosphotyrosine in a sequence-specific manner.

Post-translational modifications Phosphorylated on Thr-507, within the activation loop. Autophosphorylated and/or phosphorylated. Although the Thr-507 phosphorylation occurs it is not a prerequisite for enzymatic activity.

Cellular localization Cytoplasm. Membrane.

Images



Western blot - Anti-PKC delta (phospho Y311) antibody [EPR2609Y] (ab76181)

All lanes : Anti-PKC delta (phospho Y311) antibody [EPR2609Y] (ab76181) at 1/500 dilution

Lane 1 : HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysates
Lane 2 : HeLa (Human cervix adenocarcinoma epithelial cell) treated with Phorbol-12-myristate-13-acetate at 200nM for 20 minutes. Whole cell lysates
Lane 3 : HeLa (Human cervix adenocarcinoma epithelial cell) treated with Phorbol-12-myristate-13-acetate at 200nM for 20 minutes. Whole cell lysates. Then the membrane was incubated with phosphatase.

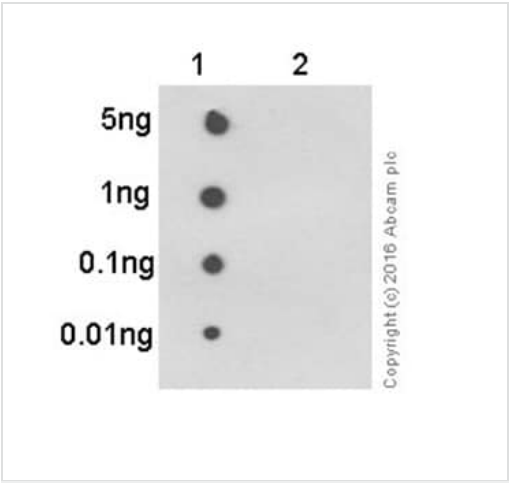
Lysates/proteins at 15 µg per lane.

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

Predicted band size: 77 kDa
Observed band size: 78 kDa

Exposure time: 3 minutes

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

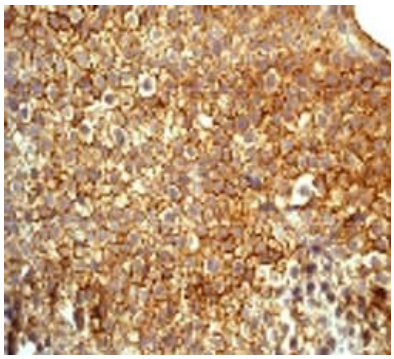


Dot Blot - Anti-PKC delta (phospho Y311) antibody [EPR2609Y] (ab76181)

Dot blot analysis of PKC delta (pY311) phospho peptide (Lane 1) and PKC delta non-phospho peptide (Lane 2) using ab76181 at 1/1000 dilution followed by Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (**ab97051**) at 1/100000 dilution.

Blocking and Diluting buffer and concentration: 5% NFDM /TBST.

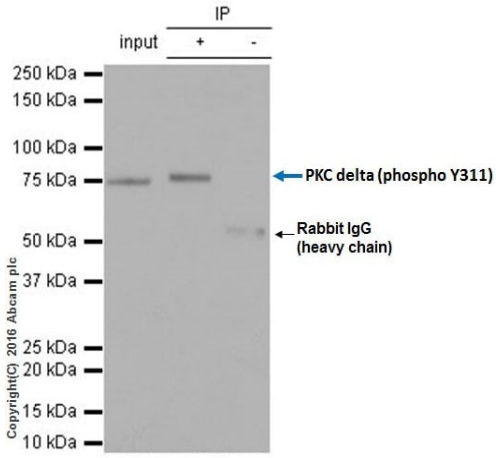
Exposure time: 3 minutes.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PKC delta (phospho Y311) antibody [EPR2609Y] (ab76181)

Immunohistochemical analysis of paraffin-embedded human urinary bladder carcinoma with ab76181 at 1/100 dilution.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



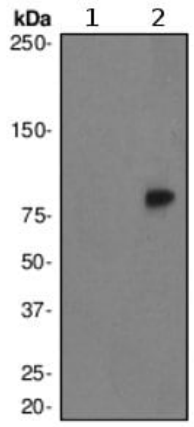
Immunoprecipitation - Anti-PKC delta (phospho Y311) antibody [EPR2609Y] (ab76181)

ab76181 at 1/20 immunoprecipitating PKC delta (phospho Y311) in HeLa treated with 10mM H_2O_2 for 1 hour whole cell lysate.

Lane 1 (input): HeLa treated with 10mM H_2O_2 for 1 hour whole cell lysate (10µg)
Lane 2 (+): ab76181 + HeLa treated with 10mM H_2O_2 for 1 hour whole cell lysate.
Lane 3 (-): Rabbit monoclonal IgG (**ab172730**) instead of ab76181 in HeLa treated with 10mM H_2O_2 for 1 hour whole cell lysate.

For western blotting, ab76181 was used as a dilution of 1/200 followed by **ab131366** VeriBlot for IP (HRP) at a dilution of 1/1000.

Blocking buffer and concentration: 5% NFDM/TBST.
Diluting buffer and concentration: 5% NFDM /TBST.



Western blot - Anti-PKC delta (phospho Y311) antibody [EPR2609Y] (ab76181)

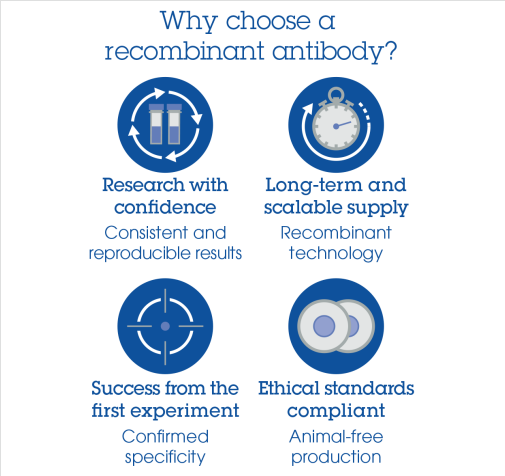
All lanes : Anti-PKC delta (phospho Y311) antibody [EPR2609Y] (ab76181) at 1/5000 dilution

Lane 1 : U937 cell lysate
Lane 2 : U937 cell lysate treated with TPA

Lysates/proteins at 10 µg per lane.

Secondary
All lanes : Goat anti-rabbit-HRP at 1/2000 dilution

Predicted band size: 77 kDa
Observed band size: 78 kDa



Anti-PKC delta (phospho Y311) antibody

[EPR2609Y] (ab76181)

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