

Product datasheet

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

Recombinant RabMAb

★★★★☆ 2 Abreviews 4 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
Specificity	ab76181 only detects PKC delta phosphorylated on Tyrosine 311.
Tested applications	Suitable for: Dot blot, WB, IP, IHC-P Unsuitable for: Flow Cyt or ICC/IF
Species reactivity	Reacts with: Mouse, Human
Immunogen	A synthetic phospho-peptide from residues surrounding Tyrosine 311 of human PKC delta.
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 H ₂ O ₂ for 1 hour whole cell lysate.
General notes	A trial size is available to purchase for this antibody. Rat: We have preliminary internal testing data to indicate this antibody may not react with this species. Please contact us for more information. 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 .

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, 0.05% BSA, 50% Tissue culture supernatant
Purity	Tissue culture supernatant

Clonality	Monoclonal
Clone number	EPR2609Y
Isotype	IgG

Applications

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	★ ★ ★ ★ ★	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.

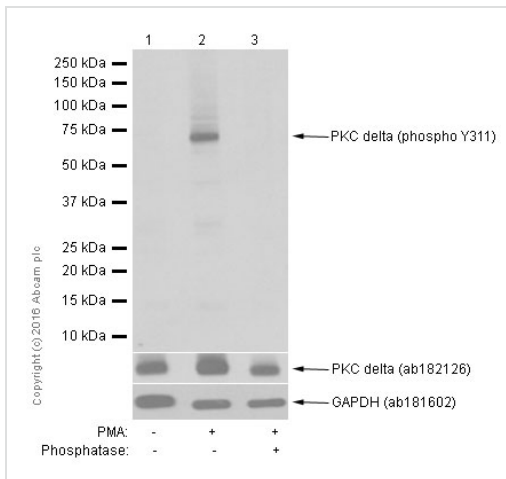
Sequence similarities Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family. PKC subfamily. Contains 1 AGC-kinase C-terminal domain. Contains 1 C2 domain. Contains 2 phorbol-ester/DAG-type zinc fingers. Contains 1 protein kinase domain.

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

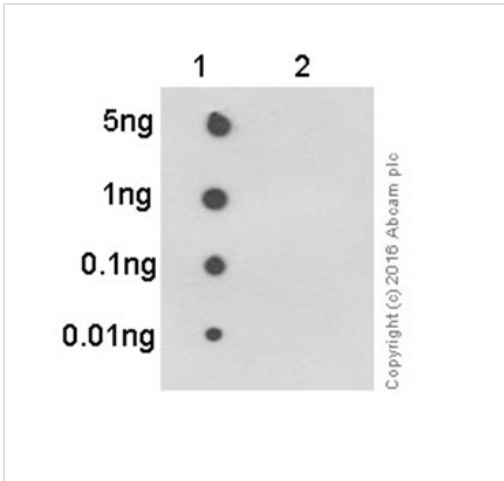
Predicted band size: 77 kDa

Observed band size: 78 kDa

[why is the actual band size different from the predicted?](#)

Exposure time: 3 minutes

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

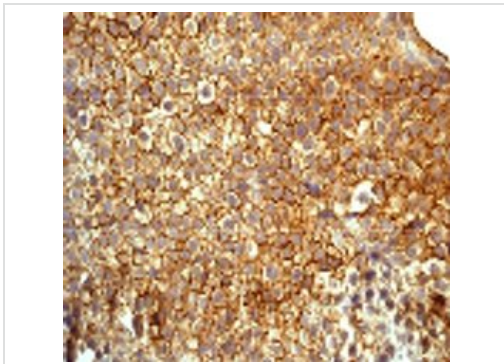


Dot Blot - Anti-PKC delta (phospho Y311) antibody [EPR2609Y] (ab76181)

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% NFDN /TBST.

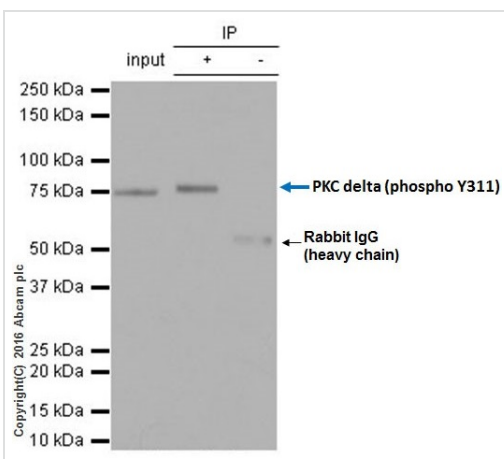
Exposure time: 3 minutes.



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 H₂O₂ for 1 hour whole cell lysate.

Lane 1 (input): HeLa treated with 10mM H₂O₂ for 1 hour whole cell lysate (10µg)

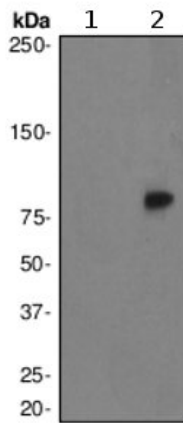
Lane 2 (+): ab76181 + HeLa treated with 10mM H₂O₂ for 1 hour whole cell lysate.

Lane 3 (-): Rabbit monoclonal IgG (ab172730) instead of ab76181 in HeLa treated with 10mM H₂O₂ 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% NFDN/TBST.

Diluting buffer and concentration: 5% NFDN /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

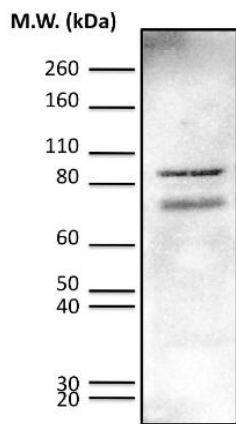
Lysates/proteins at 10 µg per lane.

Secondary

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

Predicted band size: 77 kDa

Observed band size: 78 kDa [why is the actual band size different from the predicted?](#)



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

This image is courtesy of an abreview submitted by Bryan Niedenberger Tomar Ghansah

Anti-PKC delta (phospho Y311) antibody [EPR2609Y] (ab76181) at 1/2500 dilution + C57BL/6 Mouse splenocytes whole cell lysate at 40 µg

Secondary

Goat Anti-rabbit IgG (H&L) HRP conjugated polyclonal antibody at 1/10000 dilution

Performed under reducing conditions.

Predicted band size: 77 kDa

Observed band size: 77 kDa

Exposure time: 10 seconds

Blocking- 5% Milk for 1 hour at 25°C.

A non-specific band was observed at 80 kDa.

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