

### Anti-PKC antibody [EPR17368] ab181558

リコンビナント **RabMAb**

**3 References**    **画像数 16**

#### 製品の概要

製品名	Anti-PKC antibody [EPR17368]
製品の詳細	Rabbit monoclonal [EPR17368] to PKC
由来種	Rabbit
アプリケーション	<b>適用あり:</b> IHC-P, WB, ICC/IF, IP, Flow Cyt (Intra)
種交差性	<b>交差種:</b> Mouse, Rat, Human
免疫原	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
ポジティブ・コントロール	WB: Active human PKC beta 2, PKC alpha, PKC zeta and PKC iota full length proteins; A431, HeLa, 293T, C6, NIH/3T3, RAW 264.7 and PC-12 whole cell lysates; Human fetal kidney and fetal brain lysates; Mouse spleen, pancreas and lung lysates; Rat spleen and pancreas lysates. IHC-P: Human kidney, Human gastric adenocarcinoma, mouse testis and rat kidney tissues. ICC/IF: A431 cells. Flow Cyt (intra): NIH/3T3 cells. IP: A431 whole cell extract.

#### 特記事項

Recombinant PKC isoforms were tested for reactivity by western blot, and are marked as positive (+) or negative (-).

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<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to [RabMAb<sup>®</sup> patents](#).

#### 製品の特性

製品の状態	Liquid
保存方法	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.

バッファー	Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol, 0.05% BSA
精製度	Protein A purified
ポリ/モノ	モノクローナル
クローン名	EPR17368
アイソタイプ	IgG

## アプリケーション

**The Abpromise guarantee** Abpromise保証は、 次のテスト済みアプリケーションにおけるab181558の使用に適用されます  
アプリケーションノートには、推奨の開始希釈率がありますが、適切な希釈率につきましてはご検討ください。

アプリケーション	Abreviews	特記事項
IHC-P		1/1000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
WB		1/2000. Detects a band of approximately 75 kDa (predicted molecular weight: 68 kDa).
ICC/IF		1/500.
IP		1/100.
Flow Cyt (Intra)		1/410.

## ターゲット情報

機能	Calcium-activated, phospholipid- and diacylglycerol (DAG)-dependent serine/threonine-protein kinase that is involved in positive and negative regulation of cell proliferation, apoptosis, differentiation, migration and adhesion, tumorigenesis, cardiac hypertrophy, angiogenesis, platelet function and inflammation, by directly phosphorylating targets such as RAF1, BCL2, CSPG4, TNNT2/CTNT, or activating signaling cascade involving MAPK1/3 (ERK1/2) and RAP1GAP. Involved in cell proliferation and cell growth arrest by positive and negative regulation of the cell cycle. Can promote cell growth by phosphorylating and activating RAF1, which mediates the activation of the MAPK/ERK signaling cascade, and/or by up-regulating CDKN1A, which facilitates active cyclin-dependent kinase (CDK) complex formation in glioma cells. In intestinal cells stimulated by the phorbol ester PMA, can trigger a cell cycle arrest program which is associated with the accumulation of the hyper-phosphorylated growth-suppressive form of RB1 and induction of the CDK inhibitors CDKN1A and CDKN1B. Exhibits anti-apoptotic function in glioma cells and protects them from apoptosis by suppressing the p53/TP53-mediated activation of IGFBP3, and in leukemia cells mediates anti-apoptotic action by phosphorylating BCL2. During macrophage differentiation induced by macrophage colony-stimulating factor (CSF1), is translocated to the nucleus and is associated with macrophage development. After wounding, translocates from focal contacts to lamellipodia and participates in the modulation of desmosomal adhesion. Plays a role in cell motility by phosphorylating CSPG4, which induces association of CSPG4 with extensive lamellipodia at the cell periphery and polarization of the cell accompanied by increases in cell motility. Is highly expressed in a number of cancer cells where it can act as a
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tumor promoter and is implicated in malignant phenotypes of several tumors such as gliomas and breast cancers. Negatively regulates myocardial contractility and positively regulates angiogenesis, platelet aggregation and thrombus formation in arteries. Mediates hypertrophic growth of neonatal cardiomyocytes, in part through a MAPK1/3 (ERK1/2)-dependent signaling pathway, and upon PMA treatment, is required to induce cardiomyocyte hypertrophy up to heart failure and death, by increasing protein synthesis, protein-DNA ratio and cell surface area. Regulates cardiomyocyte function by phosphorylating cardiac troponin T (TNNT2/CTNT), which induces significant reduction in actomyosin ATPase activity, myofilament calcium sensitivity and myocardial contractility. In angiogenesis, is required for full endothelial cell migration, adhesion to vitronectin (VTN), and vascular endothelial growth factor A (VEGFA)-dependent regulation of kinase activation and vascular tube formation. Involved in the stabilization of VEGFA mRNA at post-transcriptional level and mediates VEGFA-induced cell proliferation. In the regulation of calcium-induced platelet aggregation, mediates signals from the CD36/GP4 receptor for granule release, and activates the integrin heterodimer ITGA2B-ITGB3 through the RAP1GAP pathway for adhesion. During response to lipopolysaccharides (LPS), may regulate selective LPS-induced macrophage functions involved in host defense and inflammation. But in some inflammatory responses, may negatively regulate NF-kappa-B-induced genes, through IL1A-dependent induction of NF-kappa-B inhibitor alpha (NFKBIA/IKBA). Upon stimulation with 12-O-tetradecanoylphorbol-13-acetate (TPA), phosphorylates EIF4G1, which modulates EIF4G1 binding to MKNK1 and may be involved in the regulation of EIF4E phosphorylation. Phosphorylates KIT, leading to inhibition of KIT activity. Phosphorylates ATF2 which promotes cooperation between ATF2 and JUN, activating transcription.

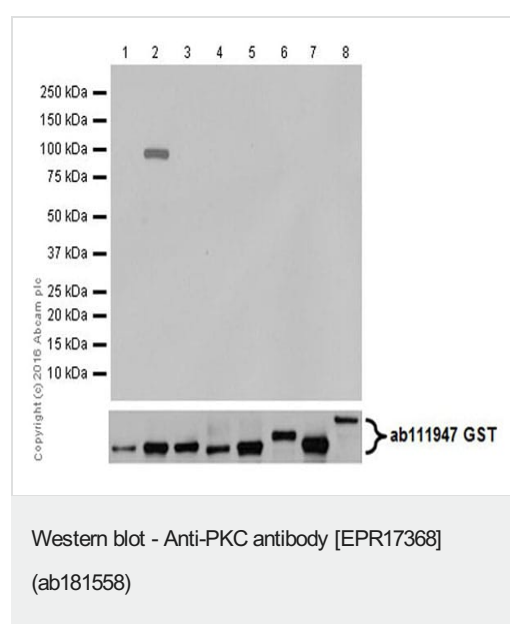
#### 配列類似性

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.

#### 細胞内局在

Cytoplasm. Cell membrane. Mitochondrion membrane. Nucleus.

#### 画像



**All lanes** : Anti-PKC antibody [EPR17368] (ab181558) at 1/2000 dilution

**Lane 1** : Active human PKC beta 1 full length protein

**Lane 2** : Active human PKC beta 2 full length protein

**Lane 3** : Active human PKC gamma full length protein

**Lane 4** : Active human PKC delta full length protein

**Lane 5** : Active human PKC eta full length protein

**Lane 6** : Active human PKC epsilon full length protein

**Lane 7** : Active human PKC theta full length protein

**Lane 8** : 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

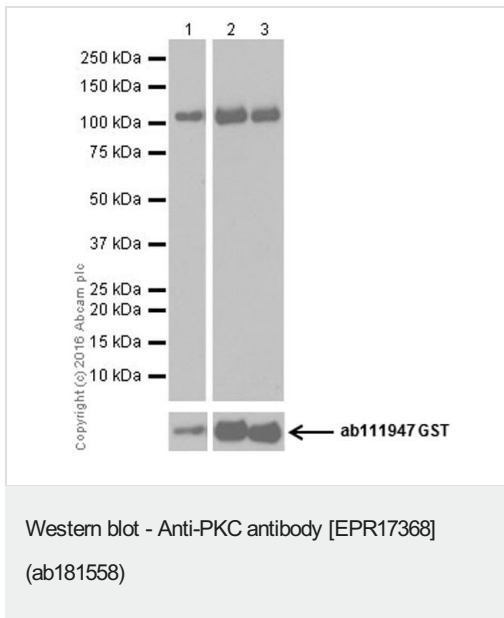
**Predicted band size:** 68 kDa

**Exposure time:** 2 seconds

Blocking/Dilution buffer: 5% NFDM/TBST.

Exposure time: 2 seconds

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



**All lanes :** Anti-PKC antibody [EPR17368] (ab181558) at 1/2000 dilution

**Lane 1 :** Active human PKC alpha full length protein

**Lane 2 :** Active human PKC zeta full length protein

**Lane 3 :** Active human PKC iota 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:** 68 kDa

Blocking/Dilution buffer: 5% NFDM/TBST.

Exposure times: Lane 1: 10 seconds; Lane 2 and 3: 3 seconds.

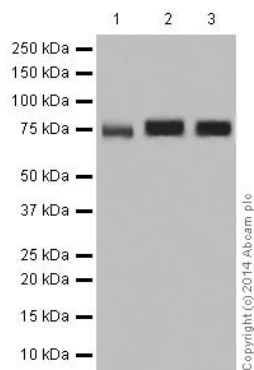
Active human PKC alpha full length protein (Catalog#[ab55672](#))

contains aa1-672 with GST-tag; Active human PKC zeta full length protein (Catalog# [ab60848](#)) contains aa1-592 with GST-tag; Active human PKC iota full length protein (Catalog# [ab60850](#)) contains aa1-596 with GST-tag.

PKC alpha	+
PKC beta I	-
PKC beta II	+
PKC gamma	-
PKC delta	-
PKC epsilon	-
PKC eta	-
PKC mu	-
PKC theta	-
PKC iota	+
PKC zeta	+

Recombinant PKC isoforms were tested for reactivity by western blot, and are marked as positive (+) or negative (-).

Western blot - Anti-PKC antibody [EPR17368]  
(ab181558)



Western blot - Anti-PKC antibody [EPR17368]  
(ab181558)

**All lanes** : Anti-PKC antibody [EPR17368] (ab181558) at 1/2000 dilution

**Lane 1** : A431 (Human epidermoid carcinoma cell line) whole cell lysate

**Lane 2** : HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate

**Lane 3** : 293T (Human epithelial cell line from embryonic kidney) whole cell lysate

Lysates/proteins at 20 µg per lane.

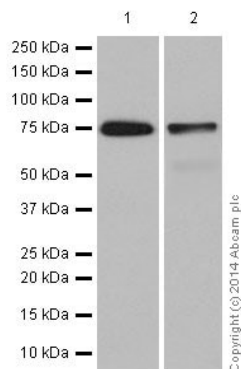
### Secondary

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

**Predicted band size:** 68 kDa

**Observed band size:** 75 kDa

Blocking/Dilution buffer: 5% NFDM/TBST.



Western blot - Anti-PKC antibody [EPR17368]  
(ab181558)

**All lanes :** Anti-PKC antibody [EPR17368] (ab181558) at 1/10000 dilution

**Lane 1 :** Human fetal kidney lysate

**Lane 2 :** Human fetal brain lysate

Lysates/proteins at 10 µg per lane.

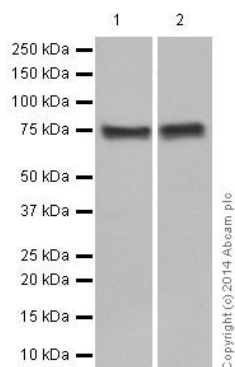
#### Secondary

**All lanes :** Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1000 dilution

**Predicted band size:** 68 kDa

**Observed band size:** 75 kDa

Blocking/Dilution buffer: 5% NFDM/TBST.



Western blot - Anti-PKC antibody [EPR17368]  
(ab181558)

**All lanes :** Anti-PKC antibody [EPR17368] (ab181558) at 1/10000 dilution

**Lane 1 :** Mouse spleen lysate

**Lane 2 :** Rat spleen lysate

Lysates/proteins at 10 µg per lane.

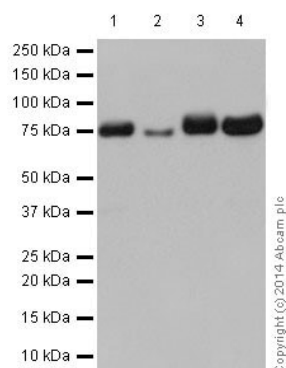
#### Secondary

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

**Predicted band size:** 68 kDa

**Observed band size:** 75 kDa

Blocking/Dilution buffer: 5% NFDM/TBST.



Western blot - Anti-PKC antibody [EPR17368]  
(ab181558)

**All lanes** : Anti-PKC antibody [EPR17368] (ab181558) at 1/2000 dilution

**Lane 1** : C6 (Rat glial tumor cell line) whole cell lysate

**Lane 2** : RAW 264.7 (Mouse macrophage cell line transformed with Abelson murine leukemia virus) whole cell lysate

**Lane 3** : PC-12 (Rat adrenal gland pheochromocytoma cell line) whole cell lysate

**Lane 4** : NIH/3T3 (Mouse embryonic fibroblast cell line) whole cell lysate

Lysates/proteins at 10 µg per lane.

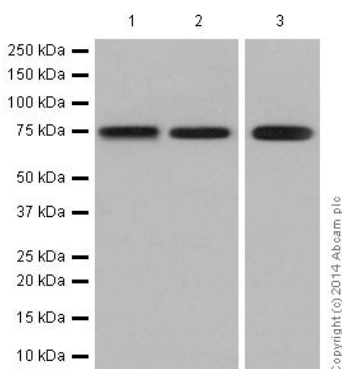
#### Secondary

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

**Predicted band size:** 68 kDa

**Observed band size:** 75 kDa

Blocking/Dilution buffer: 5% NFDm/TBST.



Western blot - Anti-PKC antibody [EPR17368]  
(ab181558)

**All lanes** : Anti-PKC antibody [EPR17368] (ab181558) at 1/50000 dilution

**Lane 1** : Rat pancreas lysate

**Lane 2** : Mouse pancreas lysate

**Lane 3** : Mouse lung lysate

Lysates/proteins at 10 µg per lane.

#### Secondary

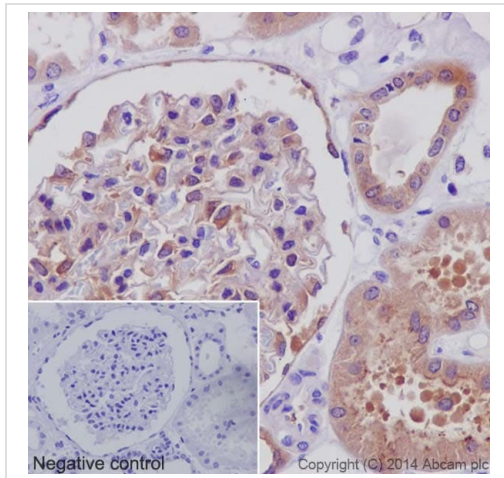
**All lanes** : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

**Predicted band size:** 68 kDa

**Observed band size:** 75 kDa



Blocking/Dilution buffer: 5% NFDM/TBST.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PKC antibody [EPR17368] (ab181558)

Immunohistochemical analysis of paraffin-embedded Human kidney tissue labeling PKC (various isoforms) with ab181558 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

Cytoplasmic and weak nuclear staining on glomerular and renal tubule is observed.

Reference:

1: Y Mizukam, T Hirata, et al. (1997) Nuclear translocation of PKC zeta during ischemia and its inhibition by wortmannin, an inhibitor of phosphatidylinositol

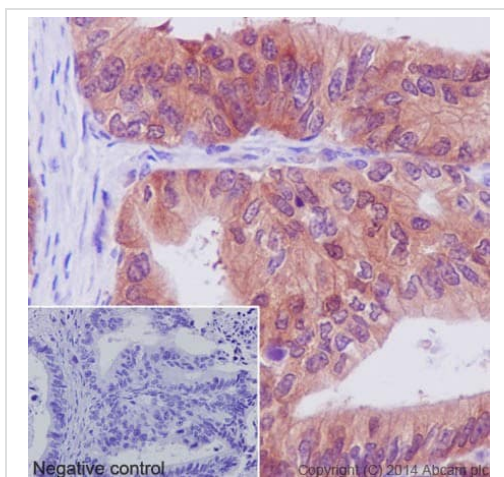
2: Jose A. Crespo, Petra Stockl, et al. (2012) Activation of PKCzeta and PKMzeta in the Nucleus Accumbens Core Is Necessary for the Retrieval, Consolidation and Reconsolidation of Drug Memory. Plos One 7(2):e30502.

3-kinase. FEBS Lett 401 (2-3): 247-251.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is **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 antibody [EPR17368] (ab181558)

Immunohistochemical analysis of paraffin-embedded Human gastric adenocarcinoma tissue labeling PKC (various isoforms) with ab181558 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

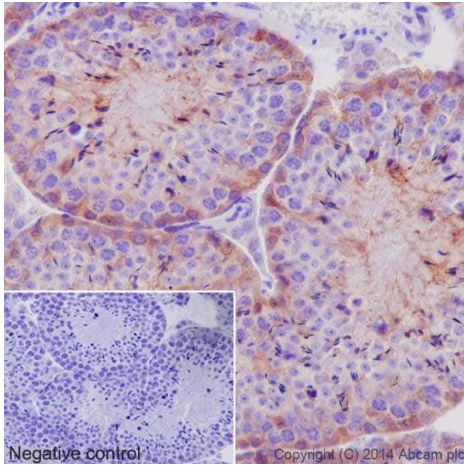
Cytoplasmic and weak nuclear staining on Human gastric adenocarcinoma is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is **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 antibody [EPR17368] (ab181558)

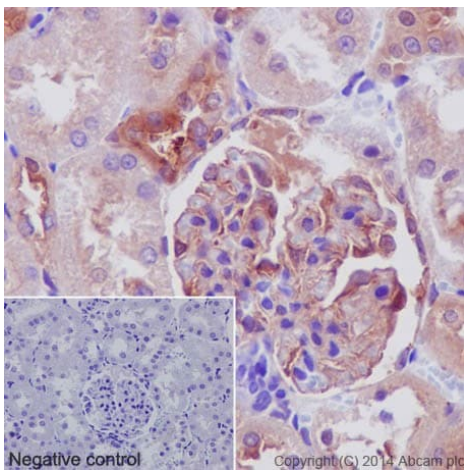
Immunohistochemical analysis of paraffin-embedded Mouse testis tissue labeling PKC (various isoforms) with ab181558 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/500 dilution.

Cytoplasmic staining on testis seminiferous tubule is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is [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 antibody [EPR17368] (ab181558)

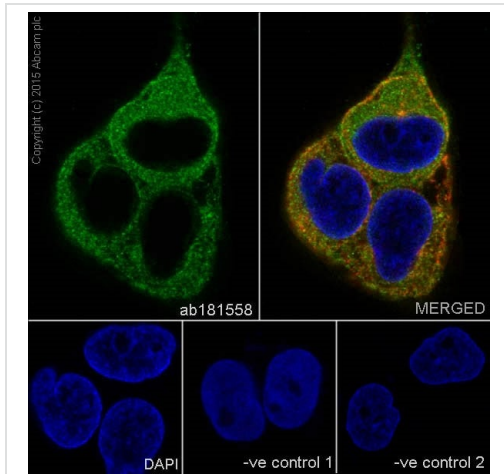
Immunohistochemical analysis of paraffin-embedded Rat kidney tissue labeling PKC (various isoforms) with ab181558 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/500 dilution.

Cytoplasmic and weak nuclear staining on glomerular and renal tubule is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is [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 antibody [EPR17368] (ab181558)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized A431 (Human epidermoid carcinoma cell line) cells labeling PKC (various isoforms) with ab181558 at 1/500 dilution, followed by Goat Anti-Rabbit IgG (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/400 dilution (green).

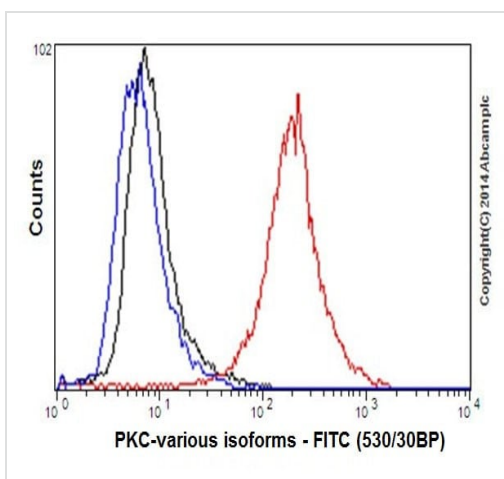
Confocal image showing cytoplasm staining on A431 cell line. The nuclear counter stain is DAPI (blue).

Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Loading Control (**ab7291**) at 1/1000 dilution and Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) preadsorbed (**ab150120**) at 1/1000 dilution (red).

The negative controls are as follows:

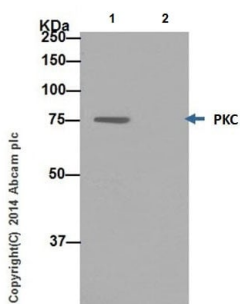
-ve control 1: ab181558 at 1/500 dilution followed by **ab150120** at 1/500 dilution.

-ve control 2: **ab7291** at 1/500 dilution followed by **ab150077** at 1/400 dilution.



Flow Cytometry (Intracellular) - Anti-PKC antibody [EPR17368] (ab181558)

Intracellular flow cytometric analysis of 2% paraformaldehyde-fixed NIH/3T3 (Mouse embryonic fibroblast cell line) cells labeling PKC (various isoforms) with ab181558 at 1/410 dilution (red) compared with a Rabbit IgG, monoclonal [EPR25A]-Isotype control (**ab172730**) (black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat anti Rabbit IgG (FITC) at 1/150 dilution was used as the secondary antibody.



Immunoprecipitation - Anti-PKC antibody  
[EPR17368] (ab181558)

PKC was immunoprecipitated from 1 mg of A431 (Human epidermoid carcinoma cell line) whole cell extract with ab181558 at 1/100 dilution. Western blot was performed from the immunoprecipitate using ab181558 at 1/5000 dilution. Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG was used as secondary antibody at 1/1500 dilution.

Lane 1: A431 whole cell extract.

Lane 2: PBS.

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

### 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-PKC antibody [EPR17368] (ab181558)

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