abcam

Product datasheet

Anti-PKC alpha antibody [133] ab11723

KO VALIDATED Recombinant

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Overview

Product name	Anti-PKC alpha antibody [133]
Description	Mouse monoclonal [133] to PKC alpha
Host species	Mouse
Specificity	ab11723 recognises the alpha isoform of PKC.
Tested applications	**Suitable for:** WB, IHC-P **Unsuitable for:** ICC or ICC/IF
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers. (Peptide available as **ab55672**)
Positive control	WB: HAP1, K562, C6, HeLa, NIH/3T3 and HEK-293 cell lysate. Human kidney tissue lysate. Mouse and rat brain and spleen tissue lysate. Recombinant human PKC alpha protein (Active) (**ab55672**). IHC-P: Human, mouse and rat retina tissue.
General notes	This product has switched from a hybridoma to recombinant production method on 25th July 2021. This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact **orders@abcam.com**. 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**.

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. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide

	Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	133
Myeloma	Sp2/0
Isotype	IgG1

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab11723 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)**	1/500 - 1/1000. Predicted molecular weight: 76 kDa.Can be blocked with **Recombinant human PKC alpha protein (Active) (ab55672)**.
IHC-P		1/1 - 1/500. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Application notes Is unsuitable for ICC or ICC/IF.

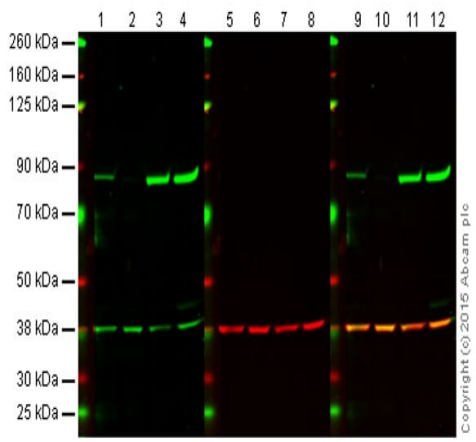
Target

Function This is a calcium-activated, phospholipid-dependent, serine- and threonine-specific enzyme. May play a role in cell motility by phosphorylating CSPG4.
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.

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.

Cellular localization Cytoplasm. Cell membrane. Nucleus.

Images

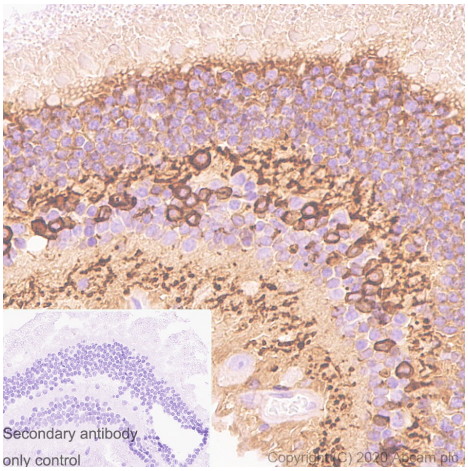


Western blot - Anti-PKC alpha antibody [133] (ab11723)

This image was generated from the hybridoma version of the product.

Lanes 1, 5 and 9: Wild-type HAP1 cell lysate (20 µg)
Lanes 2, 6 and 10: PKC alpha knockout HAP1 cell lysate (20 µg)
Lanes 3, 7 and 11: K562 cell lysate (20 µg)
Lanes 4, 8 and 12: HEK293 cell lysate (20 µg)
Lanes 1, 2, 3 and 4: Green signal from target – ab11723 observed at 77 kDa
Lanes 5, 6, 7 and 8: Red signal from loading control – **ab8245** observed at 37 kDa
Lanes 9, 10, 11 and 12: Merged (red and green) signal

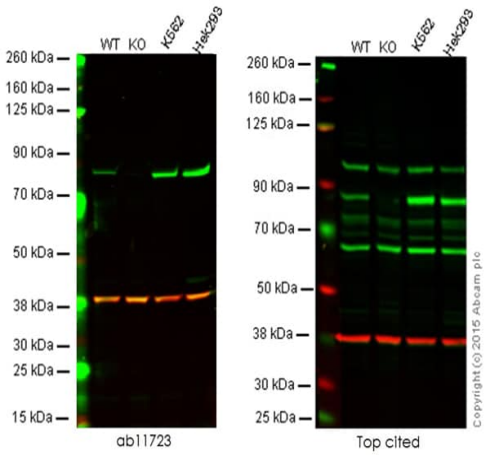
ab11723 was shown to specifically react with PKC alpha in wild-type HAP1 cells. No band was observed when PKC alpha knockout samples were examined. Wild-type and PKC alpha knockout samples were subjected to SDS-PAGE. ab11723 and **ab8245** (loading control to GAPDH) were diluted 1/500 and 1/2000 respectively and incubated overnight at 4ºC. Blots were developed with Goat anti-Mouse IgG H&L (IRDye® 800CW) preadsorbed (**ab216772**) and Goat Anti-Rabbit IgG H&L (IRDye® 680RD) preadsorbed (**ab216777**) secondary antibodies at 1/10,000 dilution for 1 hour at room temperature before imaging.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PKC alpha antibody [133] (ab11723)

Immunohistochemical analysis of Paraffin-embedded human retina tissue labelling PKC alpha with ab11723 at 1/500 dilution, followed by ready to use secondary antibody Goat Anti-Mouse IgG H&L (HRP polymer) (**ab214879**). Positive staining on human retina is observed. Counter stained with Hematoxylin. Heat mediated antigen retrieval was performed using **ab93684** (Tris/EDTA buffer, pH 9.0).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is ready to use Goat Anti-Mouse IgG H&L (HRP polymer) **ab214879**.



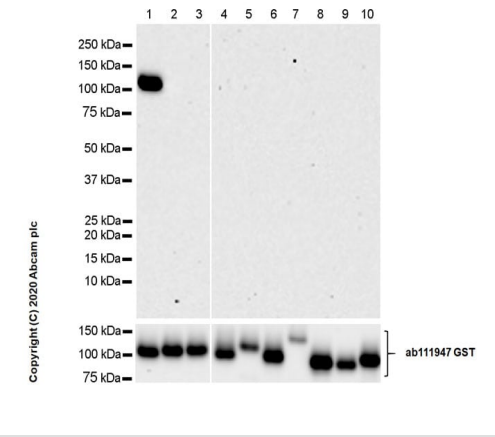
Western blot - Anti-PKC alpha antibody [133] (ab11723)

This image was generated from the hybridoma version of the product.

Lane 1: Wild-type HAP1 cell lysate (20 µg)
Lane 2: PKC alpha knockout HAP1 cell lysate (20 µg)
Lane 3: K562 cell lysate (20 µg)
Lane 4: HEK293 cell lysate (20 µg)

Lanes 1 - 4: Merged signal (red and green). Green - ab11723 observed at 77 kDa. Red - loading control, **ab8245**, observed at 37 kDa.

This western blot image is a comparison between ab11723 and a competitor's top cited rabbit polyclonal antibody.



Western blot - Anti-PKC alpha antibody [133] (ab11723)

All lanes : Anti-PKC alpha antibody [133] (ab11723) at 1/1000 dilution

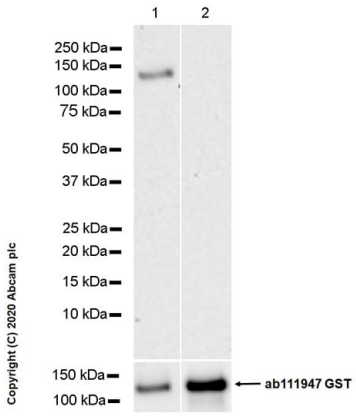
Lane 1 : Recombinant human PKC alpha protein (Active) (**ab55672**)
Lane 2 : Recombinant human PKC beta 1 protein (**ab60840**)
Lane 3 : Recombinant human PKC beta 2 protein (**ab60841**)
Lane 4 : Recombinant human PKC eta protein (**ab60849**)
Lane 5 : Recombinant human PKC epsilon protein (**ab60847**)
Lane 6 : Recombinant human PKC theta/PRKCQ protein (**ab56641**)
Lane 7 : Recombinant human PKC mu/PKD protein (**ab60873**)
Lane 8 : Recombinant human PKC zeta protein (**ab60848**)
Lane 9 : Recombinant human PKC iota protein (**ab60850**)
Lane 10 : Recombinant human PKC gamma protein (**ab60842**)

Secondary
All lanes : Peroxidase-Conjugated Goat anti-Mouse IgG (H+L) at 1/5000 dilution

Predicted band size: 76 kDa

5% NFDM/TBST

All positive controls 10 ng



Western blot - Anti-PKC alpha antibody [133] (ab11723)

All lanes : Anti-PKC alpha antibody [133] (ab11723) at 1/1000 dilution

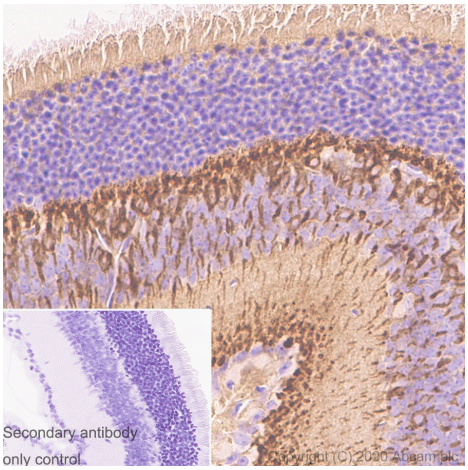
Lane 1 : Recombinant human PKC alpha protein (Active) (**ab55672**)
Lane 2 : Recombinant human PKC delta protein (**ab60844**)

Secondary
All lanes : Peroxidase-Conjugated Goat anti-Mouse IgG (H+L) at 1/5000 dilution

Predicted band size: 76 kDa

Exposure time: 180 seconds

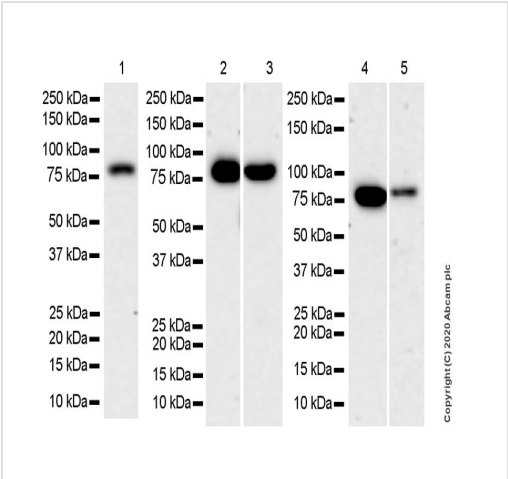
5% NFDM/TBST



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PKC alpha antibody [133] (ab11723)

Immunohistochemical analysis of paraffin-embedded mouse retina tissue labelling PKC alpha with ab11723 at 1/500 dilution, followed by ready to use secondary antibody Goat Anti-Mouse IgG H&L (HRP polymer) (**ab214879**). Positive staining on mouse retina is observed. Counter stained with Hematoxylin. Heat mediated antigen retrieval was performed using **ab93684** (Tris/EDTA buffer, pH 9.0).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is ready to use Goat Anti-Mouse IgG H&L (HRP polymer) **ab214879**.



Western blot - Anti-PKC alpha antibody [133] (ab11723)

All lanes : Anti-PKC alpha antibody [133] (ab11723) at 1/1000 dilution

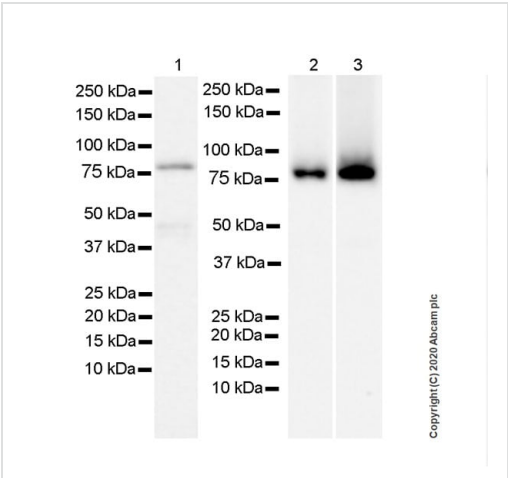
Lane 1 : Human kidney tissue lysate 20 ug
Lane 2 : Mouse brain tissue lysate 20 ug
Lane 3 : Mouse spleen tissue lysate 20 ug
Lane 4 : Rat brain tissue lysate 20 ug
Lane 5 : Rat spleen tissue lysate 20 ug

Secondary
All lanes : Peroxidase-Conjugated Goat anti-Mouse IgG (H+L) at 1/5000 dilution

Predicted band size: 76 kDa

Exposure time: 180 seconds

5% NFDM/TBST



Western blot - Anti-PKC alpha antibody [133] (ab11723)

All lanes : Anti-PKC alpha antibody [133] (ab11723) at 1/1000 dilution

Lane 1 : C6 (rat glial tumor glial cell), whole cell lysate 20 µg
Lane 2 : HeLa (human cervix adenocarcinoma epithelial cell), whole cell lysate 20 µg
Lane 3 : NIH/3T3 (mouse embryonic fibroblast), whole cell lysate 20 µg

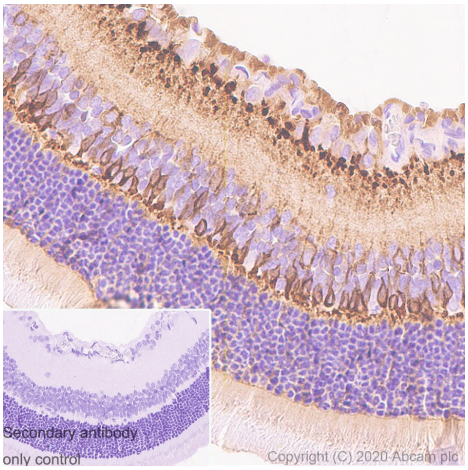
Secondary
All lanes : Peroxidase-Conjugated Goat anti-Mouse IgG (H+L) at 1/5000 dilution

Predicted band size: 76 kDa

Exposure time

Lane 1: 136 seconds
Lane 2 and 3: 15 seconds

Fresh lysates were used in lane 2 and 3.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PKC alpha antibody [133] (ab11723)

Immunohistochemical analysis of paraffin-embedded rat retina tissue labelling PKC alpha with ab11723 at 1/500 dilution, followed by ready to use secondary antibody Goat Anti-Mouse IgG H&L (HRP polymer) (**ab214879**). Positive staining on rat retina is observed. Counter stained with Hematoxylin. Heat mediated antigen retrieval was performed using **ab93684** (Tris/EDTA buffer, pH 9.0)

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is ready to use Goat Anti-Mouse IgG H&L (HRP polymer) **ab214879**.