abcam

Product datasheet

Anti-PKC beta 2 antibody [Y125] ab32026

Recombinant RabMAb

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Overview

Product name	Anti-PKC beta 2 antibody [Y125]
Description	Rabbit monoclonal [Y125] to PKC beta 2
Host species	Rabbit
Specificity	This antibody recognises PKC beta 2, it does not cross react with human PKC beta 1. Immunogen's homology with PKC alpha is 77.8%. Cross-reactivity with PKC alpha has not been tested.
Tested applications	**Suitable for:** WB, IHC-P, ICC/IF, Flow Cyt (Intra)
Species reactivity	**Reacts with:** Mouse, Rat, Human, Recombinant fragment **Predicted to work with:** Cow, Pig
Immunogen	Synthetic peptide within Human PKC beta 2 aa 600-700 (C terminal). The exact sequence is proprietary.
Epitope	ab32026 reacts with an epitope located in the region near the C terminus of PKC beta 2.
Positive control	WB: K-562 (Human chronic myelogenous leukemia lymphoblast) whole cell lysate unboiled, Mouse brain lysate unboiled, Rat brain lysate unboiled, Active GST-tagged human PKC beta 2 full length protein. IHC-P: human gastric carcinoma, mouse cerebrum, rat cerebrum. ICC/IF: HeLa (Human cervix adenocarcinoma epithelial cell) Flow cyto(intra): K-562 (Human chronic myelogenous leukemia lymphoblast) 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. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.

Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 49% PBS, 50% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	Y125
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab32026 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	★★★★★ (4)	1/1000 - 1/10000. Detects a band of approximately 77 kDa (predicted molecular weight: 77 kDa).
IHC-P	★★★★☆ (1)	Use at an assay dependent concentration. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
ICC/IF		1/250 - 1/500.
Flow Cyt (Intra)		1/50. **ab172730** - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

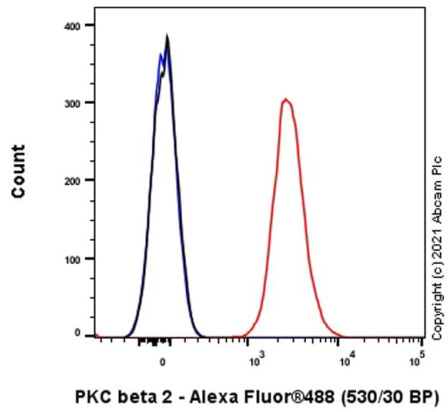
Target

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.

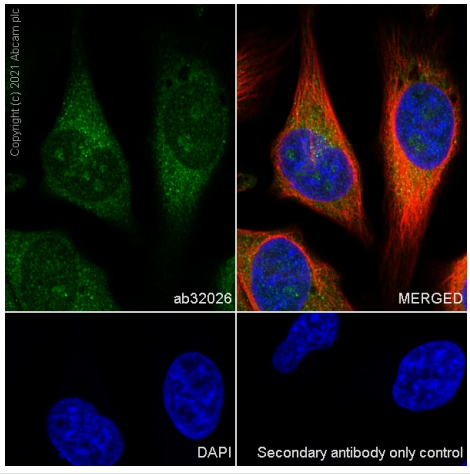
	Contains 1 protein kinase domain.
Post-translational modifications	Phosphorylation on Thr-500 within the activation loop renders it competent to autophosphorylate. Subsequent autophosphorylation of Thr-642 maintains catalytic competence, and autophosphorylation on Ser-661 appears to release the kinase 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.

Images



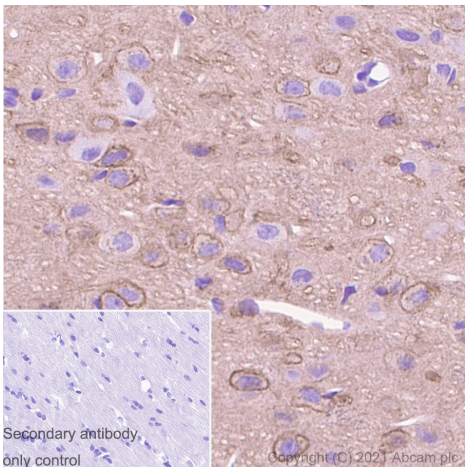
Flow Cytometry (Intracellular) - Anti-PKC beta 2 antibody [Y125] (ab32026)

Intracellular Flow Cytometry analysis of K-562 (Human chronic myelogenous leukemia lymphoblast) cells labeling PKC beta 2 with purified ab32026 at 1/20 dilution (5 ug/ml) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, **ab150081**) (1/2000 dilution) was used as the secondary antibody. Rabbit monoclonal IgG (Black) was used as a isotype control. Cell without incubation with primary antibody and secondary antibody (Blue) were used as unlabeled control.



Immunocytochemistry/ Immunofluorescence - Anti-PKC beta 2 antibody [Y125] (ab32026)

Immunocytochemistry/ Immunofluorescence analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling PKC beta 2 using ab32026. The cells were fixed with 4% paraformaldehyde then permeabilized with 0.1% Triton X-100. The cells were then incubated with ab32026 at 1:50 dilution followed by a further incubation with a Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) at 2 µg/ml (shown in green). Nuclear DNA was labelled in blue with DAPI. Cells were counterstained using **ab195889** Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) at 1:200 dilution (shown in red). Secondary antibody only control: PBS instead of the primary antibody.

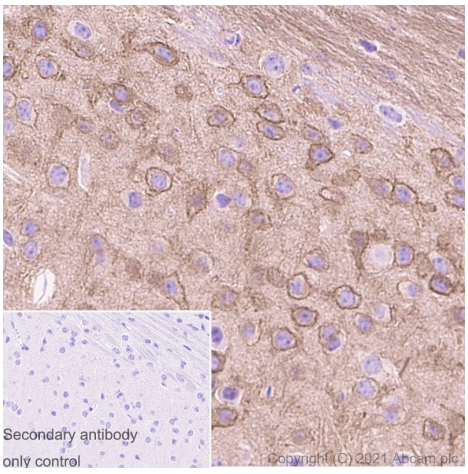


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PKC beta 2 antibody [Y125] (ab32026)

Immunohistochemical analysis of Paraffin-embedded sections rat cerebrum tissue labelling PKC beta 2 with ab32026 at 1/1000 dilution, followed by a ready to use secondary Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Staining on rat cerebrum tissue is observed. Counter stained with Haematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0).

The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

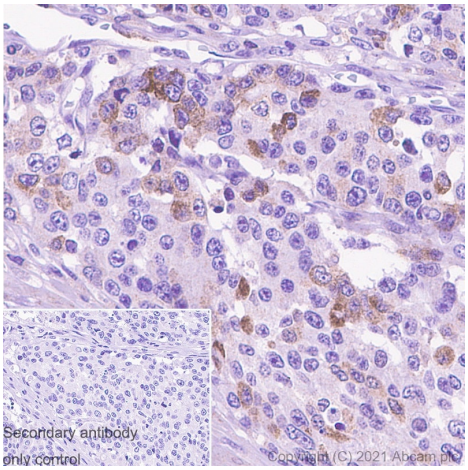


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PKC beta 2 antibody [Y125] (ab32026)

Immunohistochemical analysis of Paraffin-embedded sections mouse cerebrum tissue labelling PKC beta 2 with ab32026 at 1/1000 dilution, followed by a ready to use secondary Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Staining on mouse cerebrum tissue is observed. Counter stained with Haematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0).

The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

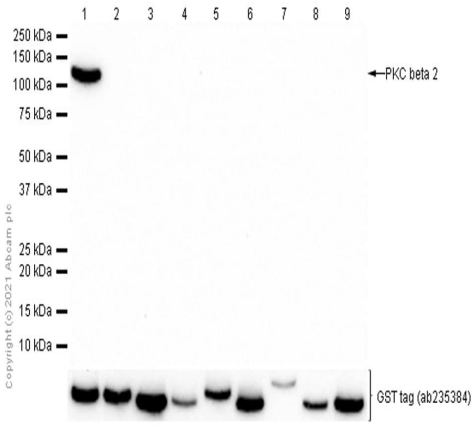


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PKC beta 2 antibody [Y125] (ab32026)

Immunohistochemical analysis of Paraffin-embedded sections human gastric carcinoma tissue labelling PKC beta 2 with ab32026 at 1/300 dilution, followed by a ready to use secondary Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Staining on human gastric carcinoma tissue is observed. Counter stained with Haematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0).

The immunostaining was performed on a Leica Biosystems BOND® RX instrument.



Western blot - Anti-PKC beta 2 antibody [Y125] (ab32026)

All lanes : Anti-PKC beta 2 antibody [Y125] (ab32026) at 1/1000 dilution

Lane 1 : Recombinant human PKC beta 2 protein (**ab60841**)
Lane 2 : Recombinant human PKC beta 1 protein (**ab60840**)
Lane 3 : Recombinant human PKC delta protein (**ab60844**)
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 alpha protein (Active) (**ab55672**)
Lane 9 : Recombinant human PKC gamma protein (**ab60842**)

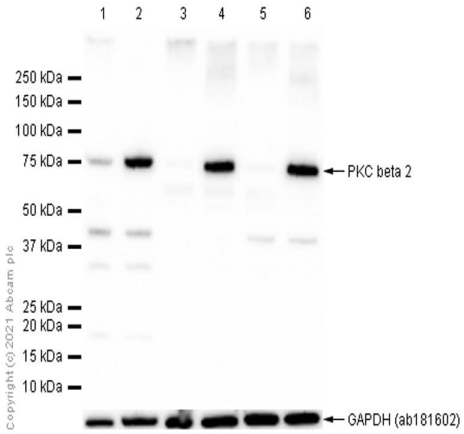
Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

Predicted band size: 77 kDa

Observed band size: 100 kDa

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

ab235384 was used to detect GST tag.



Western blot - Anti-PKC beta 2 antibody [Y125] (ab32026)

All lanes : Anti-PKC beta 2 antibody [Y125] (ab32026) at 1/1000 dilution

Lane 1 : K-562 (Human chronic myelogenous leukemia lymphoblast) whole cell lysate boiled
Lane 2 : K-562 (Human chronic myelogenous leukemia lymphoblast) whole cell lysate unboiled
Lane 3 : Mouse brain lysate boiled
Lane 4 : Mouse brain lysate unboiled
Lane 5 : Rat brain lysate boiled
Lane 6 : Rat brain lysate unboiled

Lysates/proteins at 20 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: 77 kDa

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

ab181602 was used as GAPDH loading control.

We recommend not to boil samples when loading lysate.

Anti-PKC beta 2 antibody [Y125] (ab32026)

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