

Product datasheet

Anti-PKC theta/PRKCQ antibody [EPR22281] ab230972

Recombinant RabMAb

7 Images

Overview

Product name	Anti-PKC theta/PRKCQ antibody [EPR22281]
Description	Rabbit monoclonal [EPR22281] to PKC theta/PRKCQ
Host species	Rabbit
Tested applications	Suitable for: WB, IHC-P, Flow Cyt (Intra) Unsuitable for: ICC/IF or IP
Species reactivity	Reacts with: Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Jurkat and MOLT-4 whole cell lysates. IHC-P: Human tonsil and gastrointestinal stromal tumor tissues. Flow Cyt (intra): Jurkat and K562 cells.
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: <ul style="list-style-type: none"> - 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. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR22281

Isotype

IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab230972 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

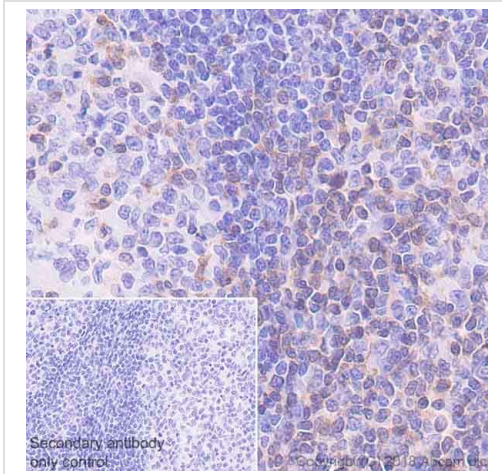
Application	Abreviews	Notes
WB		1/1000. Detects a band of approximately 75, 40 kDa (predicted molecular weight: 82 kDa).
IHC-P		1/2000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
Flow Cyt (Intra)		1/50.

Application notes Is unsuitable for ICC/IF or IP.

Target

Function	<p>This is a calcium-independent, phospholipid-dependent, serine- and threonine-specific enzyme. Essential for T-cell receptor (TCR)-mediated T-cell activation, but is dispensable during TCR-dependent thymocyte development. Links the TCR signaling complex to the activation of NF-kappa-B in mature T lymphocytes. Required for interleukin-2 (IL2) production.</p> <p>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.</p>
Tissue specificity	Skeletal muscle, megakaryoblastic cells and platelets.
Sequence similarities	<p>Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family. PKC subfamily.</p> <p>Contains 1 AGC-kinase C-terminal domain.</p> <p>Contains 1 C2 domain.</p> <p>Contains 2 phorbol-ester/DAG-type zinc fingers.</p> <p>Contains 1 protein kinase domain.</p>
Domain	The C1 domain, containing the phorbol ester/DAG-type region 1 (C1A) and 2 (C1B), is the diacylglycerol sensor and the C2 domain is a non-calcium binding domain.
Post-translational modifications	Autophosphorylation at Thr-219 is required for targeting to the TCR and cellular function of PKC upon antigen receptor ligation.

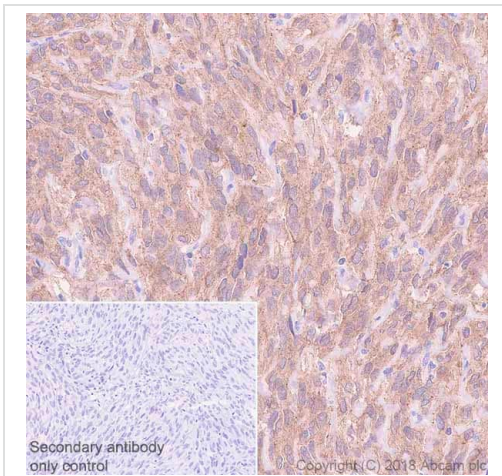
Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PKC theta/PRKCQ antibody [EPR22281] (ab230972)

Immunohistochemical analysis of paraffin-embedded human tonsil tissue labeling PKC theta/PRKCQ with ab230972 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Cytoplasmic and nuclear staining in T lymphocytes of tonsil (PMID: 27149922) is observed. Counter stained with hematoxylin. Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ready to use.

Heat mediated antigen retrieval using [ab93684](#) (Tris/EDTA buffer, pH 9.0).

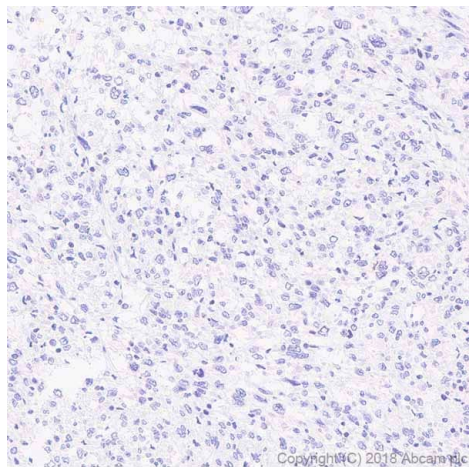


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PKC theta/PRKCQ antibody [EPR22281] (ab230972)

Immunohistochemical analysis of paraffin-embedded human gastrointestinal stromal tumor tissue labeling PKC theta/PRKCQ with ab230972 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Cytoplasmic staining in human gastrointestinal stromal tumor (PMID: 15289315) is observed. Counter stained with hematoxylin.

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

Heat mediated antigen retrieval using [ab93684](#) (Tris/EDTA buffer, pH 9.0).

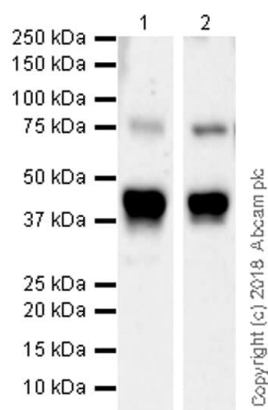


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PKC theta/PRKCQ antibody [EPR22281] (ab230972)

Immunohistochemical analysis of paraffin-embedded human leiomyosarcoma tissue labeling PKC theta/PRKCQ with ab230972 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. **Negative control:** No staining in human leiomyosarcoma (PMID: 15289315) is observed. Counter stained with hematoxylin.

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

Heat mediated antigen retrieval using [ab93684](#) (Tris/EDTA buffer, pH 9.0).



Western blot - Anti-PKC theta/PRKCQ antibody [EPR22281] (ab230972)

All lanes : Anti-PKC theta/PRKCQ antibody [EPR22281] (ab230972) at 1/1000 dilution

Lane 1 : Jurkat (human T cell leukemia cell line from peripheral blood) whole cell lysate

Lane 2 : MOLT-4 (human lymphoblastic leukemia cell line) whole cell lysate

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/100000 dilution

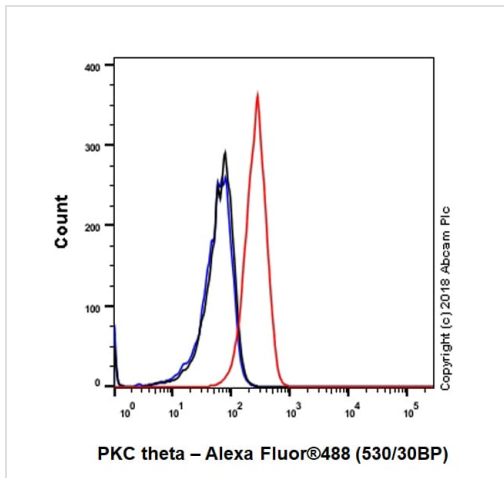
Predicted band size: 82 kDa

Observed band size: 40,75 kDa

Exposure time: 3 minutes

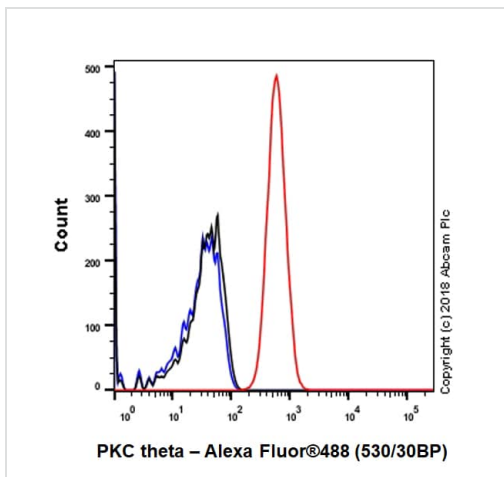
Blocking and dilution buffer: 5% NFDm/TBST.

The molecular weight observed is consistent with what has been described in the literature, the 40kDa band is a cleaved form (PMID: 9252332, PMID: 24924627).



Flow Cytometry (Intracellular) - Anti-PKC theta/PRKCQ antibody [EPR22281] (ab230972)

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol-permeabilized K562 (human chronic myelogenous leukemia cell line from bone marrow) cell line labeling PKC theta/PRKCQ with ab230972 at 1/50 (red) compared with a Rabbit IgG, monoclonal [EPR25A] - Isotype Control (**ab172730**) (black) and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat Anti-Rabbit IgG H&L (Alexa Fluorⁱ488) (**ab150077**), at 1/2000 dilution was used as the secondary antibody.



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Why choose a recombinant antibody?



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Long-term and scalable supply
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Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Anti-PKC theta/PRKCQ antibody [EPR22281]
(ab230972)

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