abcam

ab187660

Anti-PRK3+PRK2+PRK1 (phospho T718 + T774 + T816) antibody [EPR1044(2)]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR1044(2)
Purification technique	Affinity purification Protein A
Concentration	1.474 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/280
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/50 - 1/100
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information PKN3 pT718

Function	Contributes to invasiveness in malignant prostate cancer.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
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 batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Protein Kinase C-related kinases (PRK1 PRK2 and PRK3) are serine/threonine kinases involved in signal transduction. PRK1 also referred to as PKN1 has a molecular mass of approximately 98 kDa. These kinases are generally expressed in tissues like the brain heart and skeletal muscle. PRK2 also known as PKN2 and PRK3 sometimes referred to as PKN3 share similar structural features having conserved regions like the catalytic and regulatory domains. All three kinases play roles in cytoskeletal dynamics and cellular signaling.

Biological function summary	PRK1 PRK2 and PRK3 act as downstream effectors of Rho GTPases which also suggests they can be involved in a complex. These kinases regulate actin cytoskeleton organization affecting cell shape and motility. PRK1 participates in processes like cell cycle progression and differentiation while PRK2 influences membrane trafficking and protein translation. PRK3 although less studied is similar in structure suggesting potential overlapping roles in cellular functions.
Pathways	PRK1 PRK2 and PRK3 integrate into the RhoA signaling pathway playing a part in actin remodeling. In particular PRK2 links closely to the mTOR pathway associated with cell growth and protein synthesis regulation. Through these pathways these kinases interact with other proteins such as Rho GTPases and mTORC1 coordinating a variety of critical cellular tasks and signaling events.
Associated diseases and disorders	Aberrant regulation of PRK1 PRK2 and PRK3 can connect to cancer and cardiovascular diseases. Overexpression or mutations of these kinases associate with various cancers promoting uncontrolled growth and metastasis. PRK2 particularly shows a relation to cardiac hypertrophy due to its role in heart muscle regulation. These kinases interact with key proteins like Akt and RhoA which further links them to oncogenic signaling and heart disease pathways.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

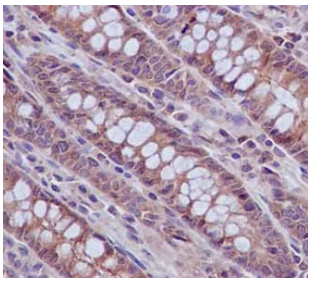
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

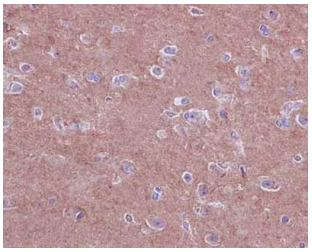
4 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PRK3+PRK2+PRK1 (phospho T718 + T774 + T816) antibody [EPR1044(2)] (ab187660)

PRK3+PRK2+PRK1 (phospho T718 + T774 + T816) Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PRK3+PRK2+PRK1 (phospho T718 + T774 + T816) antibody

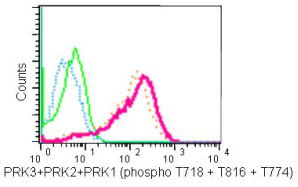
Immunohistochemical analysis of paraffin-embedded Human colon tissue labeling PRK3+PRK2+PRK1 (phospho T718 + T816 + T774) with ab187660 at 1/100 dilution followed by prediluted HRP Polymer for Rabbit IgG. Counter stained with Hematoxylin.
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PRK3+PRK2+PRK1 (phospho T718 + T774 + T816) antibody [EPR1044(2)] (ab187660)

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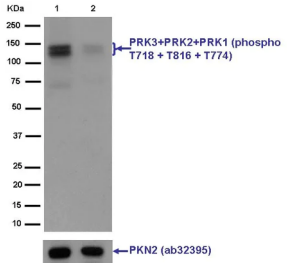
Immunohistochemical analysis of paraffin-embedded Human astrocytoma tissue labeling PRK3+PRK2+PRK1 (phospho T718 + T816 + T774) with ab187660 at 1/100 dilution followed by prediluted HRP Polymer for Rabbit IgG. Counter stained with Hematoxylin.
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-PRK3+PRK2+PRK1 (phospho T718 + T774 + T816) antibody [EPR1044(2)] (ab187660)

PRK3+PRK2+PRK1 (phospho T718 + T774 + T816) Flow Cytometry (Intracellular) staining using rabbit Anti-PRK3+PRK2+PRK1 (phospho T718 + T774 + T816) antibody

Intracellular flow cytometric analysis ofpermeabilized HeLa cells, untreated (green) or Okadaic acid + Calyculin A-treated (red) using ab187660 at 1/280 dilution, and Okadaic acid + Calyculin A-treated HeLa cells using ab187660preincubated with phospho-PRK3+PRK2+PRK1 (phospho T718 + T816 + T774) peptide (blue) or non-phospho-PRK3+PRK2+PRK1 (phospho T718 + T816 + T774) peptide (orange). Cells were fixed with 2% paraformaldehyde. Secondary antibody was aGoat anti IgG (FITC) at 1/150 dilution.



Western blot - Anti-PRK3+PRK2+PRK1 (phospho T718 + T774 + T816) antibody [EPR1044(2)] (ab187660)

Based on the sequence analysis, ab187660 recognizes three proteins with the predicted MWs of 99KDa, 112KDa and 104KDa, respectively.
All lanes:
Western blot - Anti-PRK3+PRK2+PRK1 (phospho T718 + T774 + T816) antibody [EPR1044(2)] (ab187660) at 1/10000 dilution

Lane 1:
HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate treated with Okadaic acid + Calyculin A at 10 µg

Lane 2:
HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate, untreated at 10 µg

Secondary

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

Predicted band size: 1 kDa, 112 kDa, 99 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.