abcam

ab202468

Anti-PDK1 antibody [EPR19571]

Recombinant | RabMAb | KO Validated

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	EPR19571
Purification technique	Affinity purification Protein A
Concentration	0.587 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Mouse
Dilution info	1/40
Notes	-

Expected

Species	Rat, Human
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/2000
Notes	-

Species	Rat
Dilution info	1/2000
Notes	-

Species	Human
Dilution info	1/2000
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Expected

Species	Rat, Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	1/600
Notes	-

Expected

Species	Rat, Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information PDK1

Function	Kinase that plays a key role in regulation of glucose and fatty acid metabolism and homeostasis via phosphorylation of the pyruvate dehydrogenase subunits PDHA1 and PDHA2 (PubMed:7499431, PubMed:18541534, PubMed:22195962, PubMed:26942675, PubMed:17683942). This inhibits pyruvate dehydrogenase activity, and thereby regulates metabolite flux through the tricarboxylic acid cycle, down-regulates aerobic respiration and inhibits the formation of acetyl-coenzyme A from pyruvate (PubMed:18541534, PubMed:22195962, PubMed:26942675). Plays an important role in cellular responses to hypoxia and is important for cell proliferation under hypoxia (PubMed:18541534, PubMed:22195962, PubMed:26942675).

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.

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

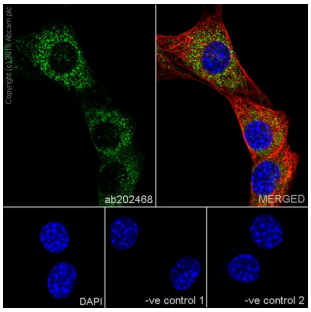
We do not recommend this combination. It is not covered by our product promise.

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.

7 product images



Immunocytochemistry/ Immunofluorescence - Anti-PDK1 antibody [EPR19571] (ab202468)

PDK1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-PDK1 antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed 0.1% Triton X-100 permeabilized NIH/3T3 (Mouse embryonic fibroblast cell line) cells labeling PDK1 with ab202468 at 1/1000 dilution followed by Goat Anti-Rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green).
Confocal image showing cytoplasmic staining on NIH/3T3 cell line.

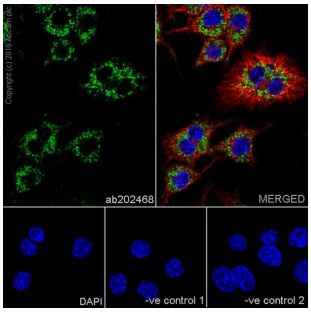
The nuclear counterstain is DAPI (blue).

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: ab202468 at 1/1000 dilution followed by ab150120 at 1/1000 dilution.

-ve control 2: ab7291 at 1/1000 dilution followed by ab150077 at 1/1000 dilution.



Immunocytochemistry/ Immunofluorescence - Anti-PDK1 antibody [EPR19571] (ab202468)

PDK1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-PDK1 antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed 0.1% Triton X-100 permeabilized RAW 264.7 (Mouse macrophage cell line transformed with Abelson murine leukemia virus) cells labeling PDK1 with ab202468 at 1/1000 dilution followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green).
Confocal image showing cytoplasmic staining on RAW 264.7 cell line.

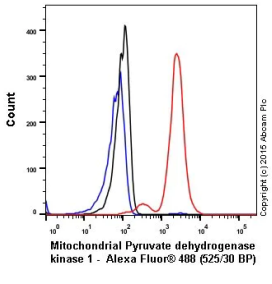
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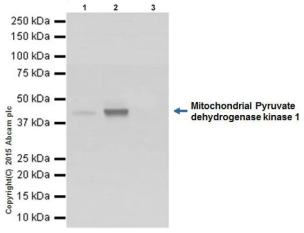


Flow Cytometry (Intracellular) - Anti-PDK1 antibody [EPR19571] (ab202468)

PDK1 Flow Cytometry (Intracellular) staining using rabbit Anti-PDK1 antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed NIH/3T3 (Mouse embryonic fibroblast cell line) cells labeling PDK1 with ab202468 at 1/600 dilution (red) compared with a RabbitIgG,monoclonal [EPR25A] - Isotype Control (ab172730) (black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat anti Rabbit IgG (Alexa Fluor® 488) at 1/500 dilution was used as the secondary antibody.

Cells were permeabilised by 90% methanol-1XPBS, -20°C, 30min.



Immunoprecipitation - Anti-PDK1 antibody [EPR19571] (ab202468)

PDK1 was immunoprecipitated from 1mg of NIH/3T3 (Mouse embryonic fibroblast cell line) whole cell lysate with ab202468 at 1/40 dilution.
Western blot was performed from the immunoprecipitate using ab202468 at 1/1000 dilution.

VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/10000 dilution.

Lane 1: NIH/3T3 whole cell lysate, 10µg (Input).

Lane 2: ab202468 IP in NIH/3T3 whole cell lysate.

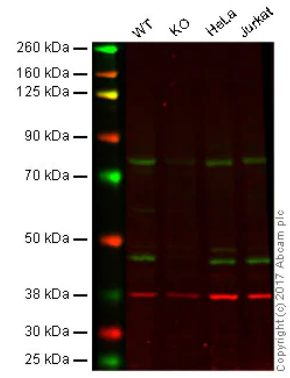
Lane 3: Rabbit IgG,monoclonal -[EPR25A] - Isotype Control (ab172730) instead of ab202468 in NIH/3T3 whole cell lysate.

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

Exposure time: 1 second.

All lanes:
Immunoprecipitation - Anti-PDK1 antibody [EPR19571] (ab202468)

Predicted band size: 49 kDa



Western blot - Anti-PDK1 antibody [EPR19571] (ab202468)

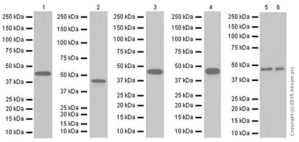
PDK1 Western blot staining using rabbit Anti-PDK1 antibody

Lane 1: Wild-type HAP1 whole cell lysate (20 µg)
Lane 2: PDK1 knockout HAP1 whole cell lysate (20 µg)
Lane 3: HeLa whole cell lysate (20 µg)
Lane 4: Jurkat whole cell lysate (20 µg)
Lanes 1 - 4: Merged signal (red and green). Green - ab202468 observed at 45 kDa. Red - loading control, ab9484, observed at 37 kDa.

ab202468 was shown to specifically react with PDK1 in wild-type cells along with additional cross reactive bands. Signal was lost in PDK1 knockout cells. Wild-type and PDK1 knockout samples were subjected to SDS-PAGE. ab202468 and ab9484 (Mouse anti-GAPDH loading control) were incubated overnight at 4°C at 1/2000 dilution and 1/20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed ab216773 and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed ab216776 secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-PDK1 antibody [EPR19571] (ab202468)

Predicted band size: 49 kDa



Western blot - Anti-PDK1 antibody [EPR19571] (ab202468)

PDK1 Western blot staining using rabbit Anti-PDK1 antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
Exposure time: Lane 1: 1 minute; Lane 3-4: 10 seconds; Lane 5/6: 8 seconds.

All lanes:
Western blot - Anti-PDK1 antibody [EPR19571] (ab202468) at 1/2000 dilution

Lane 1:
L-929 (Mouse connective tissue fibroblast cell line) whole cell lysate

Lane 2:
NIH/3T3 (Mouse embryonic fibroblast cell line) whole cell lysate

Lane 3:
F9 (Mouse embryonic testicular cancer cell line) whole cell lysate

Lane 4:
bEnd.3 (Mouse brain endothelioma cell line) whole cell lysate

Lane 5:
C6 (Rat glial tumor cell line) whole cell lysate

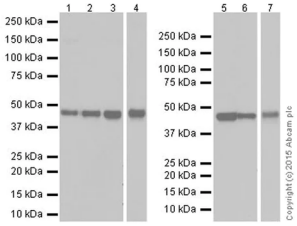
Lane 6:
PC-12 (Rat adrenal gland pheochromocytoma cell line) whole cell lysate

Secondary

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

Predicted band size: 49 kDa

Observed band size: 47 kDa



Western blot - Anti-PDK1 antibody [EPR19571] (ab202468)

Blocking/Dilution buffer: 5% NFDM/TBST.
Exposure time: Lane 1/2/3/5/6: 8 seconds; Lane 4: 3 seconds; Lane 7: 1 second.

All lanes:
Western blot - Anti-PDK1 antibody [EPR19571] (ab202468) at 1/2000 dilution

Lane 1:
Mouse brain lysate at 10 µg

Lane 2:
Mouse kidney lysate at 10 µg

Lane 3:
Mouse spleen lysate at 10 µg

Lane 4:
Mouse heart lysate at 10 µg

Lane 5:
Rat brain lysate at 10 µg

Lane 6:
Rat kidney lysate at 10 µg

Lane 7:
Rat heart lysate at 10 µg

Secondary

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

Predicted band size: 49 kDa

Observed band size: 47 kDa

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