abcam

Product datasheet

Anti-Peroxiredoxin 1/PAG antibody [EPR5434] ab109506

KO 評価済 リコンビナント RabMAb

3 References 画像数 10

製品の概要

製品名	Anti-Peroxiredoxin 1/PAG antibody [EPR5434]
製品の詳細	Rabbit monoclonal [EPR5434] to Peroxiredoxin 1/PAG
由来種	Rabbit
特異性	Corresponding to residues in Human Peroxiredoxin 1/PAG
アプリケーション	**適用あり:** Flow Cyt (Intra), WB, IP, ICC/IF **適用なし:** IHC-P
種交差性	**交差種:** Human **交差が予測される動物種:** Mouse, Rat
免疫原	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
ポジティブ・コントロール	WB: U-2 OS, Jurkat, 293T, K562 or U87-MG cell lysate. ICC/IF: HEK293T, HeLa and U-2 OS cells. IP: U-2 OS cell lysate.
特記事項	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**.

製品の特性

製品の状態	Liquid
保存方法	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
バッファー	pH: 7.20 Preservative: 0.05% Sodium azide Constituents: 0.1% BSA, 40% Glycerol (glycerin, glycerine), 9.85% Tris glycine, 50% Tissue culture supernatant
精製度	Protein A purified

ポリ/モノ	モノクローナル
クローン名	EPR5434
アイソタイプ	IgG

アプリケーション

The Abpromise guarantee Abpromise保証は、次のテスト済みアプリケーションにおけるab109506の使用に適用されます

アプリケーションノートには、推奨の開始希釈率がありますが、適切な希釈率につきましてはご検討ください。

アプリケーション	Abreviews	特記事項
Flow Cyt (Intra)		Use at an assay dependent concentration.
WB		1/10000 - 1/50000. Predicted molecular weight: 22 kDa.
IP		Use at an assay dependent concentration.
ICC/IF		1/100.

追加情報 Is unsuitable for IHC-P.

ターゲット情報

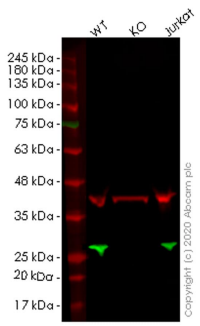
機能 Involved in redox regulation of the cell. Reduces peroxides with reducing equivalents provided through the thioredoxin system but not from glutaredoxin. May play an important role in eliminating peroxides generated during metabolism. Might participate in the signaling cascades of growth factors and tumor necrosis factor-alpha by regulating the intracellular concentrations of H(2)O(2). Reduces an intramolecular disulfide bond in GDPD5 that gates the ability to GDPD5 to drive postmitotic motor neuron differentiation.

配列類似性 Belongs to the ahpC/TSA family.
Contains 1 thioredoxin domain.

翻訳後修飾 Phosphorylated on Thr-90 during the M-phase, which leads to a more than 80% decrease in enzymatic activity.

細胞内局在 Cytoplasm. Melanosome. Identified by mass spectrometry in melanosome fractions from stage I to stage IV.

画像



Western blot - Anti-Peroxiredoxin 1/PAG antibody [EPR5434] (ab109506)

All lanes : Anti-Peroxiredoxin 1/PAG antibody [EPR5434] (ab109506) at 1/1000 dilution

Lane 1 : Wild-type HEK293T cell lysate
Lane 2 : PRDX1 knockout HEK293T cell lysate
Lane 3 : Jurkat cell lysate

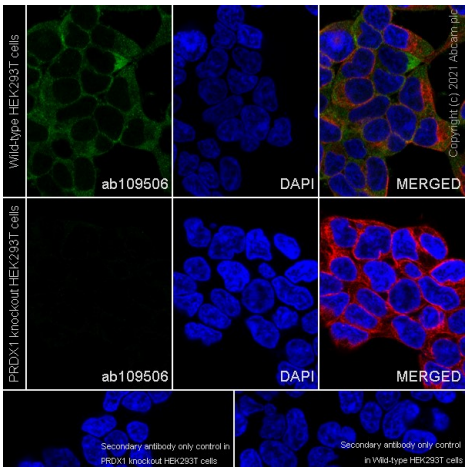
Lysates/proteins at 20 µg per lane.

Secondary
All lanes : Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) at 1/10000 dilution

Predicted band size: 22 kDa
Observed band size: 26 kDa

Lanes 1-3: Merged signal (red and green). Green - ab109506 observed at 26 kDa. Red - loading control **ab8245** observed at 36 kDa.

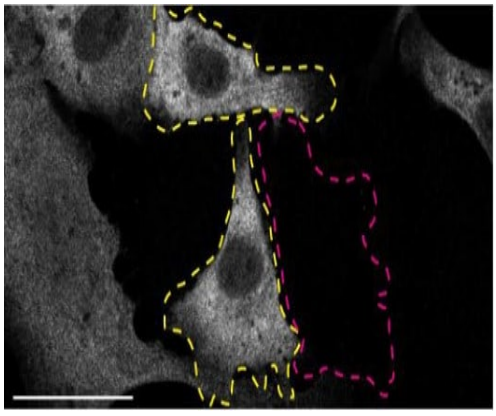
ab109506 Anti-Peroxiredoxin 1/PAG antibody [EPR5434] was shown to specifically react with Peroxiredoxin 1/PAG in wild-type HEK293T cells. Loss of signal was observed when knockout cell line **ab266842** (knockout cell lysate **ab257040**) was used. Wild-type and Peroxiredoxin 1/PAG knockout samples were subjected to SDS-PAGE. ab109506 and Anti-GAPDH antibody [6C5] - Loading Control (**ab8245**) were incubated overnight at 4°C at 1 in 1000 dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (**ab216776**) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



Immunocytochemistry/ Immunofluorescence - Anti-Peroxiredoxin 1/PAG antibody [EPR5434] (ab109506)

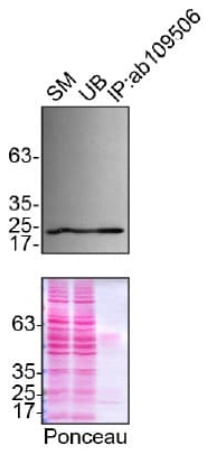
Peroxiredoxin 1/PAG (PRDX1) staining observed in wild-type HEK293T cells and PRDX1 knockout HEK293T cells (**ab266842**). The cells were fixed with 100% methanol then permeabilized with 0.1% Triton X-100. The cells were then incubated with ab109506 at 1/50 dilution and followed by secondary antibody **ab150077** AlexaFluor®488 Goat anti-Rabbit secondary at 1/1000 dilution (shown in green). **ab195889** Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) was used to counterstain at 1/200 dilution (shown in red). Nuclear DNA was labelled in blue with DAPI.

Confocal image showing cytoplasmic staining in wild-type HEK-293Tcell line, and no staining in PRDX1 knockout HEK-293T cell line.



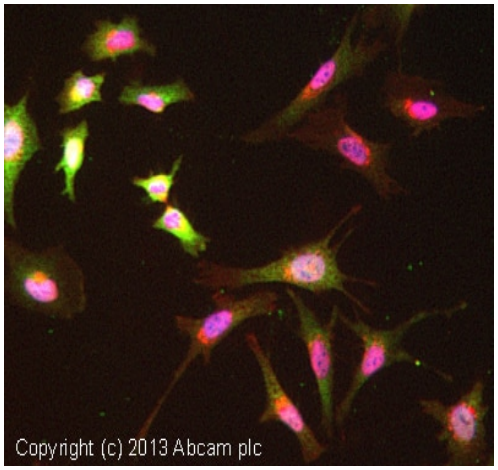
Immunocytochemistry/ Immunofluorescence - Anti-Peroxiredoxin 1/PAG antibody [EPR5434] (ab109506)

ab109506 was shown to react with PRDX1 in wild-type U-2 OS cells in Immunocytochemistry with loss of signal observed in a PRDX1 knockout cell line. Wild-type and knockout cells were mixed and pelleted at a 1:1 ratio on coverslips. The cells were fixed with then permeabilized with and then blocked with 1/10000. The cells were then incubated with ab109506 at 1/250. 1/5000 would be better dilution overnight at 4°C followed by a further incubation at room temperature for 1h with a secondary antibody to (Alexa Fluor® 555) at 0.5 µg/ml. Acquisition of the green (wild-type), red (antibody staining) and far-red (knockout) channels was performed. Representative grayscale images of the red channel are shown. Wild-type and knockout cells are outlined with yellow and magenta dashed line, respectively. Schematic representation of the mosaic strategy used is shown on the bottom-right panel. Image was acquired with a Zeiss(LSM-880). These data were provided by YCharOS Inc., an open science company with the mission of characterizing commercially available antibody reagents for all human proteins. Abcam and YCharOS are working together to help address the reproducibility crisis by enabling the life science community to better evaluate commercially available antibodies.



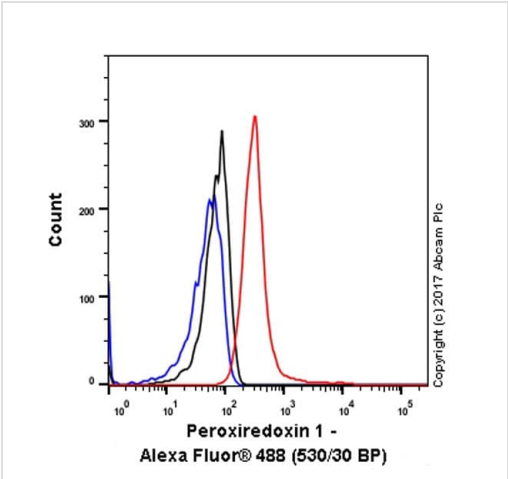
Immunoprecipitation - Anti-Peroxiredoxin 1/PAG antibody [EPR5434] (ab109506)

Immunoprecipitation of PRDX1 in U-2 OS cells. Lysates were prepared and immunoprecipitation was performed using 1.0 µg of ab109506 pre-coupled to prot.A-Sepharose beads. Samples were washed and processed for western blot with Peroxiredoxin 1 Antibody at 1/10000. SM=10% starting material; UB=10% unbound fraction; IP=immunoprecipitate. These data were provided by YCharOS Inc., an open science company with the mission of characterizing commercially available antibody reagents for all human proteins. Abcam and YCharOS are working together to help address the reproducibility crisis by enabling the life science community to better evaluate commercially available antibodies.



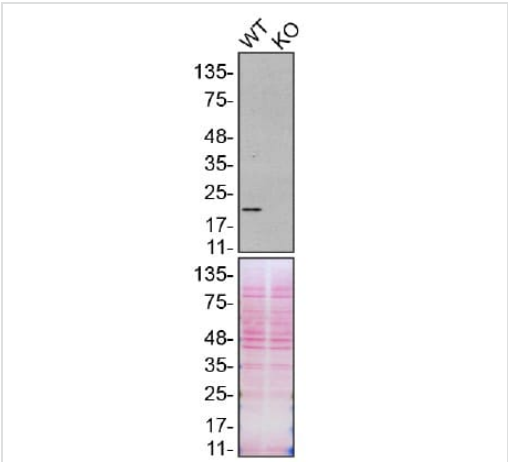
Immunocytochemistry/ Immunofluorescence - Anti-Peroxiredoxin 1/PAG antibody [EPR5434] (ab109506)

ICC/IF image of ab109506 stained HeLa cells. The cells were 4% formaldehyde fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab109506, 1/100 dilution) overnight at +4°C. The secondary antibody (green) was **ab96899**, DyLight® 488 goat anti-rabbit IgG (H+L) used at a 1/250 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.



Flow Cytometry (Intracellular) - Anti-Peroxiredoxin 1/PAG antibody [EPR5434] (ab109506)

Intracellular Flow Cytometry analysis of HeLa (human cervix adenocarcinoma) cells labeling Peroxiredoxin 1/PAG with unpurified ab109506 at 1/20 dilution (10ug/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. A Goat anti rabbit IgG (Alexa Fluorr® 488) (1/2000 dilution) was used as the secondary antibody. Rabbit monoclonal IgG (Black) was used as the isotype control, cells without incubation with primary antibody and secondary antibody (Blue) were used as the unlabeled control.



Western blot - Anti-Peroxiredoxin 1/PAG antibody [EPR5434] (ab109506)

All lanes : Anti-Peroxiredoxin 1/PAG antibody [EPR5434] (ab109506) at 1/5000 dilution

Lane 1 : Wild-type U-2 OS cell lysate
Lane 2 : PRDX1 knockout U-2 OS cell lysate

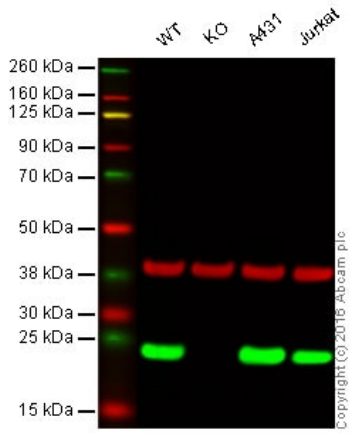
Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

Predicted band size: 22 kDa

ab109506 was shown to react with PRDX1 in wild-type U-2 OS cells in Western blot with loss of signal observed in a PRDX1 knockout cell line. Wild-type U-2 OS and PRDX1 knockout cell lysates were subjected to SDS-PAGE. Membranes were blocked in 5% milk in TBST for 1 hr before incubation with ab109506 overnight at 4 °C at a 1/5000 dilution. Blots were incubated with goat anti-rabbit HRP secondary antibodies at 0.2ug/mL before imaging.

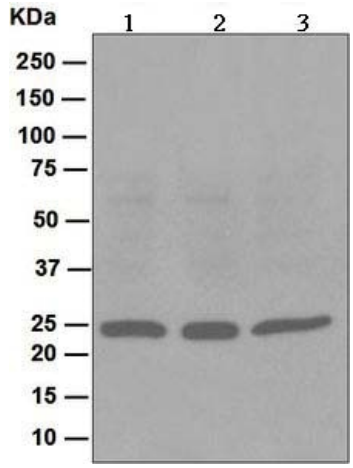
These data were provided by YCharOS Inc., an open science company with the mission of characterizing commercially available antibody reagents for all human proteins. Abcam and YCharOS are working together to help address the reproducibility crisis by enabling the life science community to better evaluate commercially available antibodies.



Western blot - Anti-Peroxiredoxin 1/PAG antibody [EPR5434] (ab109506)

Lane 1: Wild-type HAP1 cell lysate (20 µg)
Lane 2: Peroxiredoxin 1/PAG knockout HAP1 cell lysate (20 µg)
Lane 3: A431 cell lysate (20 µg)
Lane 4: Jurkat cell lysate (20 µg)
Lanes 1 - 4: Merged signal (red and green). Green - ab109506 observed at 23 kDa. Red - loading control, **ab8245**, observed at 37 kDa.

ab109506 was shown to specifically react with Peroxiredoxin 1/PAG when Peroxiredoxin 1/PAG knockout samples were used. Wild-type and Peroxiredoxin 1/PAG knockout samples were subjected to SDS-PAGE. ab109506 and **ab8245** (loading control to GAPDH) were both diluted 1/10 000 and incubated overnight at 4°C. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (**ab216776**) secondary antibodies at 1/10 000 dilution for 1 h at room temperature before imaging.



Western blot - Anti-Peroxiredoxin 1/PAG antibody [EPR5434] (ab109506)

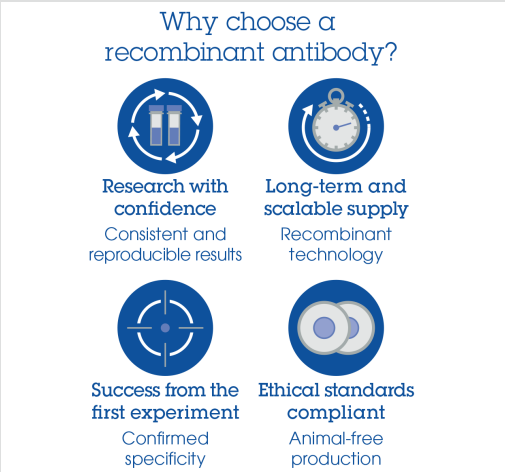
All lanes : Anti-Peroxiredoxin 1/PAG antibody [EPR5434] (ab109506) at 1/10000 dilution

Lane 1 : 293T cell lysate
Lane 2 : K562 cell lysate
Lane 3 : U87-MG cell lysate

Lysates/proteins at 10 µg per lane.

Secondary
All lanes : Standard HRP labelled goat anti-rabbit at 1/2000 dilution

Predicted band size: 22 kDa



Anti-Peroxiredoxin 1/PAG antibody [EPR5434]

(ab109506)

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