abcam

Product datasheet

Anti-Peroxiredoxin 1/PAG antibody [EPR5433] ab109498

KO VALIDATED Recombinant RabMAb

6 References 6 Images

Overview

Product name	Anti-Peroxiredoxin 1/PAG antibody [EPR5433]
Description	Rabbit monoclonal [EPR5433] to Peroxiredoxin 1/PAG
Host species	Rabbit
Tested applications	**Suitable for:** WB, IHC-P **Unsuitable for:** IP
Species reactivity	**Reacts with:** Mouse, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: HEK293T, Jurkat, HAP1, A431, MCF-7, NIH/3T3, K562 and Mouse brain cell lysates. IHC-P: Kidney tissue and Thyroid carcinoma tissue.
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**. Rat: We have preliminary internal testing data to indicate this antibody may not react with this species. Please contact us for more information.

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. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.20 Preservative: 0.05% Sodium azide Constituents: 0.1% BSA, 40% Glycerol (glycerin, glycerine), 9.85% Tris glycine, 50% Tissue culture supernatant
Purity	Protein A purified

Clonality	Monoclonal
Clone number	EPR5433
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab109498 in the following tested applications.

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

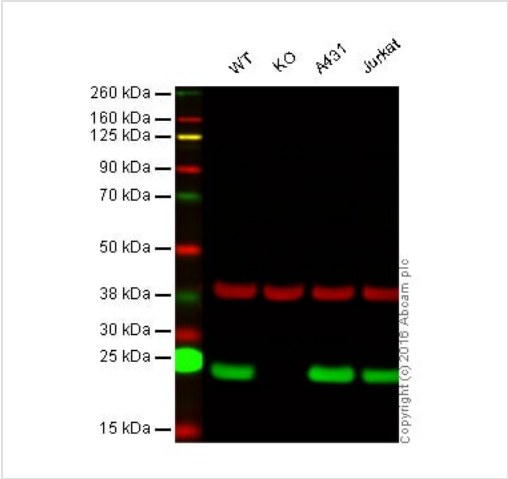
Application	Abreviews	Notes
WB		1/10000 - 1/50000. Detects a band of approximately 22 kDa (predicted molecular weight: 22 kDa).
IHC-P		1/1000 - 1/4000. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. Perform antigen retrieval

Application notes Is unsuitable for IP.

Target

Function	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.
Sequence similarities	Belongs to the ahpC/TSA family. Contains 1 thioredoxin domain.
Post-translational modifications	Phosphorylated on Thr-90 during the M-phase, which leads to a more than 80% decrease in enzymatic activity.
Cellular localization	Cytoplasm. Melanosome. Identified by mass spectrometry in melanosome fractions from stage I to stage IV.

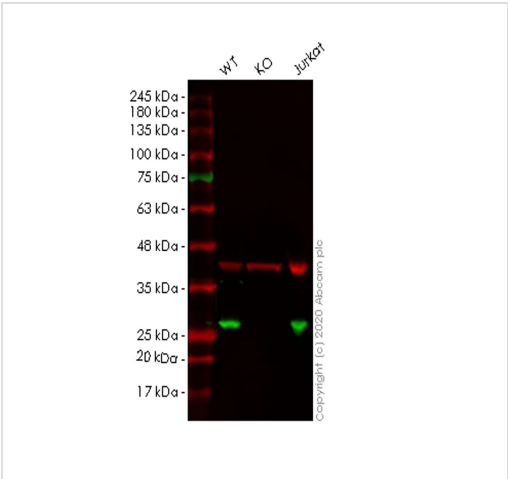
Images



Western blot - Anti-Peroxiredoxin 1/PAG antibody [EPR5433] (ab109498)

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 - ab109498 observed at 23 kDa. Red - loading control, **ab8245**, observed at 37 kDa.

ab109498 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. ab109498 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 [EPR5433] (ab109498)

All lanes : Anti-Peroxiredoxin 1/PAG antibody [EPR5433] (ab109498) at 1/1000 dilution

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

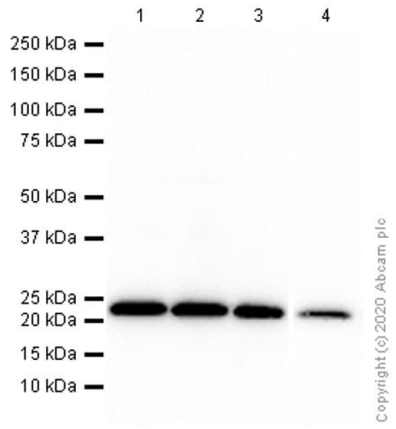
Lysates/proteins at 20 µg per lane.

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 - ab109498 observed at 26 kDa. Red - loading control **ab8245** observed at 36 kDa.

ab109498 Anti-Peroxiredoxin 1/PAG antibody [EPR5433] 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. ab109498 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.



Western blot - Anti-Peroxiredoxin 1/PAG antibody [EPR5433] (ab109498)

All lanes : Anti-Peroxiredoxin 1/PAG antibody [EPR5433] (ab109498) at 1/10000 dilution

Lane 1 : MCF7 (Human breast adenocarcinoma epithelial cell) whole cell lysate
Lane 2 : K-562 (Human chronic myelogenous leukemia lymphoblast) whole cell lysate
Lane 3 : NIH/3T3 (Mouse embryonic fibroblast) whole cell lysate
Lane 4 : Mouse brain lysate

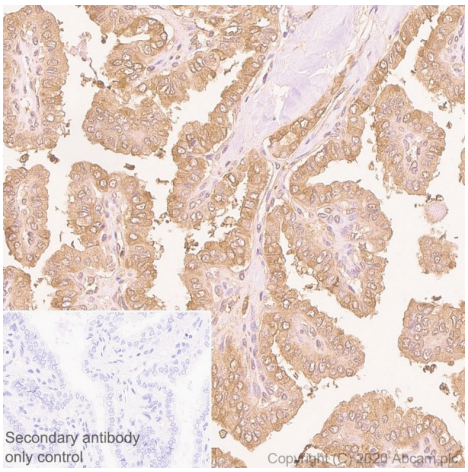
Lysates/proteins at 20 µg per lane.

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

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

Exposure time: 10 seconds

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



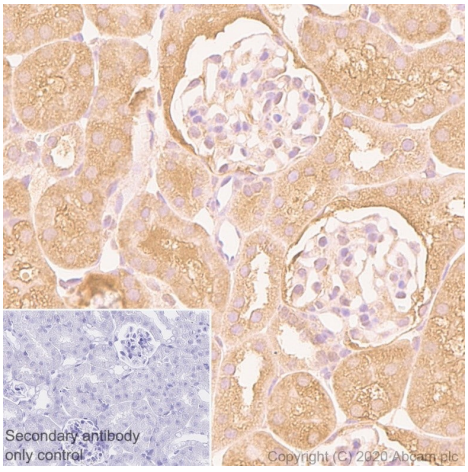
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Peroxiredoxin 1/PAG antibody [EPR5433] (ab109498)

Immunohistochemical analysis of paraffin-embedded Human thyroid cancer tissue labeling Peroxiredoxin 1/PAG with ab109498 at 1/1000 (0.155 ug/ml) dilution. The section was incubated with ab109498 for 30 mins at room temperature and followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Counterstained with Hematoxylin.

Positive staining on the human thyroid cancer, performed on a Leica Biosystems BOND® RX instrument.

Secondary antibody only control: Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**)

Heat mediated antigen retrieval with Citrate buffer (pH 6.0, epitope retrieval solution 1) for 20 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Peroxiredoxin 1/PAG antibody [EPR5433] (ab109498)

Immunohistochemical analysis of paraffin-embedded Mouse kidney tissue labeling Peroxiredoxin 1/PAG with ab109498 at 1/4000 (0.038 ug/ml) dilution. The section was incubated with ab109498 for 30 mins at room temperature and followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Counterstained with Hematoxylin.

Positive staining on the mouse kidney, performed on a Leica Biosystems BOND® RX instrument.

Secondary antibody only control: Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**)

Heat mediated antigen retrieval with Citrate buffer (pH 6.0, epitope retrieval solution 1) for 20 mins.

Anti-Peroxiredoxin 1/PAG antibody [EPR5433]

(ab109498)

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