abcam

Product datasheet

Anti-Peroxiredoxin 2/PRP antibody [EPR5155] ab133481

KO VALIDATED Recombinant RabMAb

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Overview

Product name	Anti-Peroxiredoxin 2/PRP antibody [EPR5155]
Description	Rabbit monoclonal [EPR5155] to Peroxiredoxin 2/PRP
Host species	Rabbit
Tested applications	**Suitable for:** Flow Cyt (Intra), WB, ICC/IF **Unsuitable for:** IHC-P
Species reactivity	**Reacts with:** Mouse, Human **Predicted to work with:** Rat
Immunogen	Synthetic peptide within Human Peroxiredoxin 2/PRP aa 150 to the C-terminus. The exact sequence is proprietary. Database link: **P32119**
Positive control	WB: 293T, HepG2, LnCaP and U937 cell lysates. ICC/IF: HeLa cells. Flow Cyt (intra): HeLa cells.
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**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	pH: 7.2 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	EPR5155
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab133481 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
Flow Cyt (Intra)		1/100 - 1/1000. **ab172730** - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
WB	★★★★★ **(2)**	1/50000 - 1/200000. Predicted molecular weight: 22 kDa.
ICC/IF	★★★☆☆ **(1)**	1/100 - 1/250.

Application notes Is unsuitable for IHC-P.

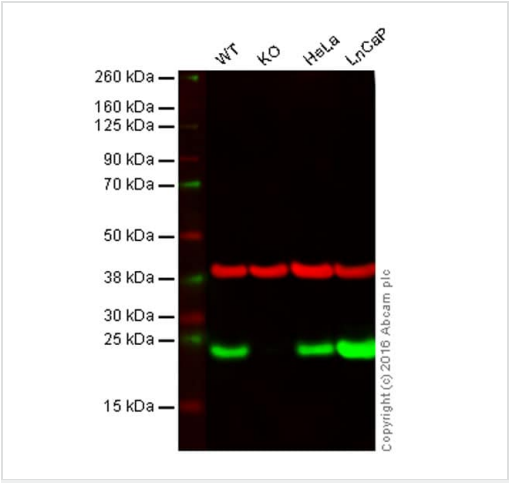
Target

Function Involved in redox regulation of the cell. Reduces peroxides with reducing equivalents provided through the thioredoxin system. It is not able to receive electrons 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).

Sequence similarities Belongs to the ahpC/TSA family.
Contains 1 thioredoxin domain.

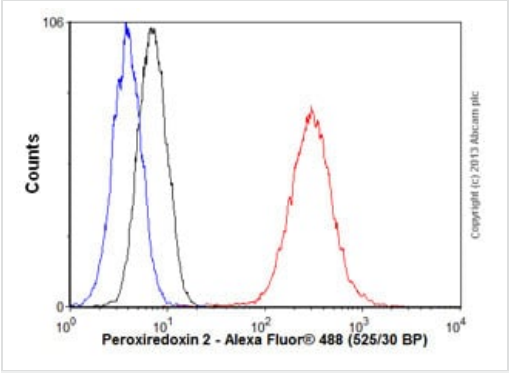
Cellular localization Cytoplasm.

Images



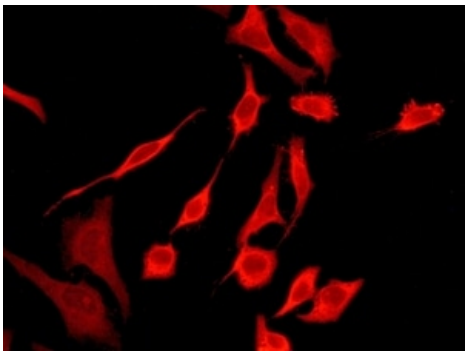
Western blot - Anti-Peroxiredoxin 2/PRP antibody [EPR5155] (ab133481)

Lane 1: Wild-type HAP1 cell lysate (20 µg)
Lane 2: Peroxiredoxin 2/PRP knockout HAP1 cell lysate (20 µg)
Lane 3: HeLa cell lysate (20 µg)
Lane 4: LnCaP cell lysate (20 µg)
Lanes 1 - 4: Merged signal (red and green). Green - ab133481 observed at 24 kDa. Red - loading control, **ab8245**, observed at 37 kDa.
ab133481 was shown to specifically react with Peroxiredoxin 2/PRP when Peroxiredoxin 2/PRP knockout samples were used. Wild-type and Peroxiredoxin 2/PRP knockout samples were subjected to SDS-PAGE. ab133481 and **ab8245** (loading control to GAPDH) were diluted 1/50 000 and 1/10 000 respectively 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 1/10000 dilution for 1 h at room temperature before imaging.



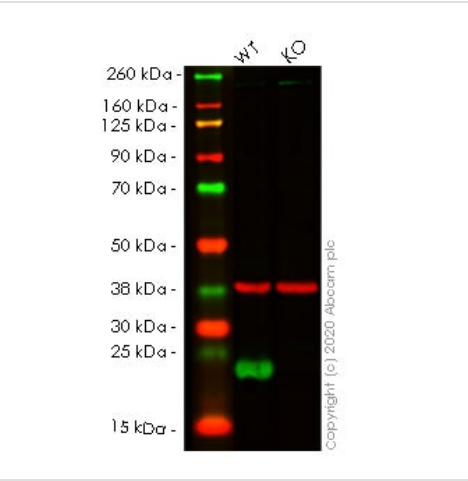
Flow Cytometry (Intracellular) - Anti-Peroxiredoxin 2/PRP antibody [EPR5155] (ab133481)

Overlay histogram showing HeLa cells stained with ab133481 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab133481, 1/1000 dilution) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-rabbit IgG (H&L) (**ab150077**) at 1/2000 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (0.1µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter.



Immunocytochemistry/ Immunofluorescence - Anti-Peroxiredoxin 2/PRP antibody [EPR5155] (ab133481)

Immunofluorescence analysis of HeLa cells labelling Peroxiredoxin 2/PRP with ab133481 at 1/100 dilution.



Western blot - Anti-Peroxiredoxin 2/PRP antibody [EPR5155] (ab133481)

All lanes : Anti-Peroxiredoxin 2/PRP antibody [EPR5155] (ab133481) at 1/5000 dilution

Lane 1 : Wild-type HEK-293T cell lysate
Lane 2 : PRDX2 knockout HEK-293T cell lysate

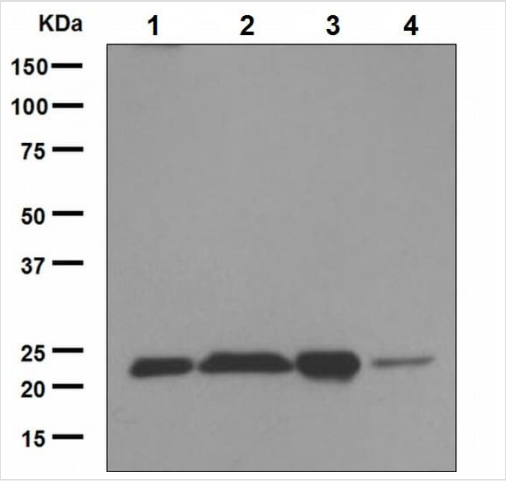
Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

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

Lanes 1- 2: Merged signal (red and green). Green - ab133481 observed at 22 kDa. Red - Anti-GAPDH antibody [6C5] - Loading Control (**ab8245**) observed at 37 kDa.

ab133481 was shown to react with Peroxiredoxin 2/PRP in wild-type HEK-293T cells in western blot. Loss of signal was observed when knockout cell line **ab266392** (knockout cell lysate **ab257041**) was used. Wild-type HEK-293T and PRDX2 knockout HEK-293T cell lysates were subjected to SDS-PAGE. Membrane was blocked for 1 hour at room temperature in 0.1% TBST with 3% non-fat dried milk. ab133481 and Anti-GAPDH antibody [6C5] - Loading Control (**ab8245**) overnight at 4°C at a 1 in 5000 dilution and a 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 2/PRP antibody [EPR5155] (ab133481)

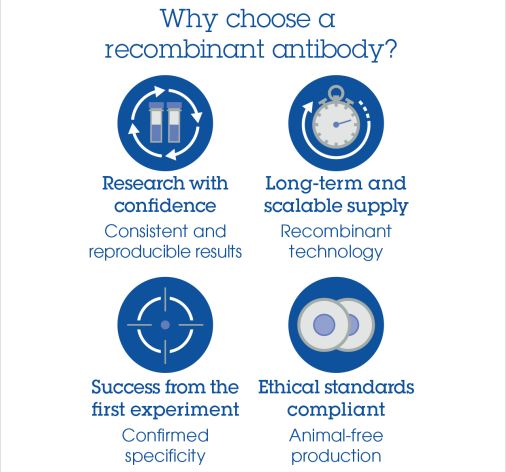
All lanes : Anti-Peroxiredoxin 2/PRP antibody [EPR5155] (ab133481) at 1/50000 dilution

Lane 1 : 293T cell lysate
Lane 2 : HepG2 cell lysate
Lane 3 : LnCaP cell lysate
Lane 4 : U937 cell lysate

Lysates/proteins at 10 µg per lane.

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

Predicted band size: 22 kDa



Anti-Peroxiredoxin 2/PRP antibody [EPR5155] (ab133481)

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