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# Anti-PRDX6 Antibody Picoband™ (monoclonal, 6I8)

Catalog # ABO14925

## Product Information

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| **Application** | WB, IHC, IF, ICC, FC |
| **Primary Accession** | P30041 |
| **Host** | Mouse |
| **Isotype** | Mouse IgG2b |
| **Reactivity** | Rat, Human, Mouse |
| **Clonality** | Monoclonal |
| **Format** | Lyophilized |
| **Description** | Anti-PRDX6 Antibody Picoband™ (monoclonal, 6I8) . Tested in Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human, Mouse, Rat. |
| **Reconstitution** | Add 0.2ml of distilled water will yield a concentration of 500 □g/ml. |

## Additional Information

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| **Gene ID** | 9588 |
| **Other Names** | Peroxiredoxin-6, 1.11.1.27, 1-Cys peroxiredoxin, 1-Cys PRX, 24 kDa protein, Acidic calcium-independent phospholipase A2, aiPLA2, 3.1.1.4, Antioxidant protein 2, Glutathione-dependent peroxiredoxin, Liver 2D page spot 40, Lysophosphatidylcholine acyltransferase 5, LPC acyltransferase 5, LPCAT-5, Lyso-PC acyltransferase 5, 2.3.1.23, Non-selenium glutathione peroxidase, NSGPx, Red blood cells page spot 12, PRDX6, AOP2, KIAA0106 |
| **Calculated MW** | 25035 |
| **Application Details** | Western blot, 0.25-0.5 □g/ml, Human, Rat<br>Immunohistochemistry (Paraffin-embedded Section), 0.5-1 □g/ml, Human<br>Immunocytochemistry/Immunofluorescence, 2 □g/ml, Human<br>Flow Cytometry, 1-3 □g/1x10^6 cells, Human |
| **Subcellular Localization** | Cytoplasm. Lysosome. Cytoplasmic vesicle. Also found in lung secretory organelles. |
| **Source** | Eukaryota |
| **Protein Name** | Peroxiredoxin-6 |
| **Contents** | Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3. |
| **Clone Names** | Clone: 6I8 |
| **Immunogen** | E.coli-derived human Peroxiredoxin 6 recombinant protein (Position: |

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| | E15-P224). Human Peroxiredoxin 6 shares 90% and 91% amino acid (aa) sequence identity with mouse and rat Peroxiredoxin 6, respectively. |
| **Purification** | Immunogen affinity purified. |
| **Cross Reactivity** | No cross-reactivity with other proteins. |
| **Storage** | Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles. |

## Protein Information

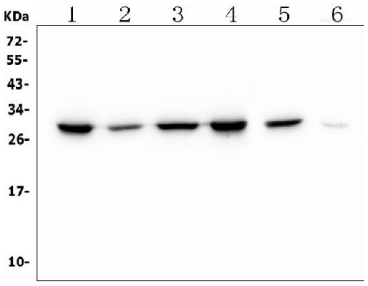
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|---|---|
| **Name** | PRDX6 |
| **Synonyms** | AOP2, KIAA0106 |
| **Function** | Thiol-specific peroxidase that catalyzes the reduction of hydrogen peroxide and organic hydroperoxides to water and alcohols, respectively (PubMed:10893423, PubMed:9497358). Can reduce H(2)O(2) and short chain organic, fatty acid, and phospholipid hydroperoxides (PubMed:10893423). Also has phospholipase activity, can therefore either reduce the oxidized sn-2 fatty acyl group of phospholipids (peroxidase activity) or hydrolyze the sn-2 ester bond of phospholipids (phospholipase activity) (PubMed:10893423, PubMed:26830860). These activities are dependent on binding to phospholipids at acidic pH and to oxidized phospholipds at cytosolic pH (PubMed:10893423). Plays a role in cell protection against oxidative stress by detoxifying peroxides and in phospholipid homeostasis (PubMed:10893423). Exhibits acyl-CoA-dependent lysophospholipid acyltransferase which mediates the conversion of lysophosphatidylcholine (1-acyl-sn-glycero-3-phosphocholine or LPC) into phosphatidylcholine (1,2-diacyl-sn-glycero-3-phosphocholine or PC) (PubMed:26830860). Shows a clear preference for LPC as the lysophospholipid and for palmitoyl CoA as the fatty acyl substrate (PubMed:26830860). |
| **Cellular Location** | Cytoplasm. Lysosome {ECO:0000250\|UniProtKB:O35244}. Note=Also found in lung secretory organelles (lamellar bodies). {ECO:0000250\|UniProtKB:O35244} |

## Background

PRDX6 is also known as PRX, p29 or AOP2. The protein encoded by this gene is a member of the thiol-specific antioxidant protein family. This protein is a bifunctional enzyme with two distinct active sites. It is involved in redox regulation of the cell; it can reduce H (2)O (2) and short chain organic, fatty acid, and phospholipid hydroperoxides. It may play a role in the regulation of phospholipid turnover as well as in protection against oxidative injury.

## Images

Figure 1. Western blot analysis of PRDX6 using anti-PRDX6 antibody (M01847-1).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours.
The sample well of each lane was loaded with 50ug of sample under reducing conditions.
Lane 1: human Hela tissue lysates,




Lane 2: human Jurkat whole cell lysates,
Lane 3: human HEK293 whole cell lysates,
Lane 4: human K562 whole cell lysates,
Lane 5: human SW620 whole cell lysates.
Lane 6: rat RH35 whole cell lysates.
After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-PRDX6 ntigen affinity purified polyclonal antibody (Catalog # M01847-1) at 0.5 µg/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for PRDX6 at approximately 29KD.The expected band size for PRDX6 is at 25KD.

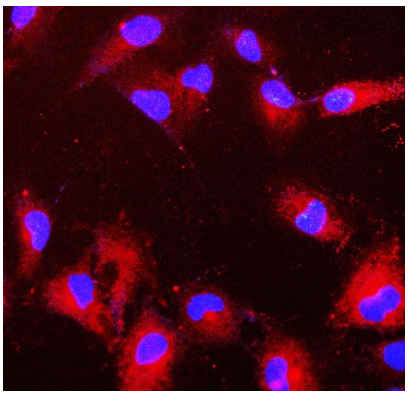


Figure 2. IF analysis of PRDX6 using anti-PRDX6 antibody (M01847-1).
PRDX6 was detected in immunocytochemical section of A549. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 2 µg/mL mouse anti-PRDX6 Antibody (M01847-1) overnight at 4°C. Cy3 Conjugated Goat Anti-Mouse IgG (BA1031) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

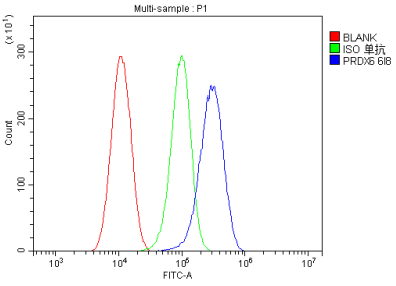



Figure 3.Flow Cytometry analysis of Hela cells using anti-PRDX6 antibody (M01847-1).
Overlay histogram showing Hela cells stained with M01847-1 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-PRDX6 Antibody (M01847-1, 1 µg/1x$10^6$ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10 µg/1x$10^6$ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1 µg/1x$10^6$) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

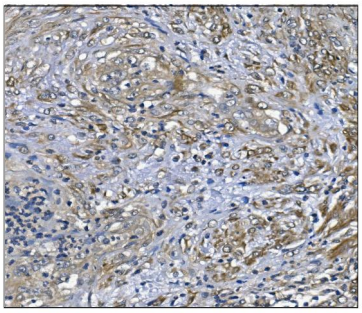


Figure 4. IHC analysis of PRDX6 using anti-PRDX6 antibody (M01847-1).
PRDX6 was detected in paraffin-embedded section of human endometrial carcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 µg/ml mouse anti-PRDX6 Antibody (M01847-1) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)

(Catalog # SA1021) with DAB as the chromogen.

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