

## Anti-Peroxiredoxin 3/PRDX3 Antibody Picoband®

Catalog Number: PB9349

### About PRDX3

PRDX3 (peroxiredoxin 3) also known as AOP-1, MER5, SP-22 or PRX3, is localized exclusively in mitochondria. The deduced 256-amino acid human AOP1 protein shares 86% amino acid sequence similarity with mouse Aop1, and significant similarity with both the human proliferation-associated gene A product and the mouse stress-induced peritoneal macrophage protein Msp23. The PRDX3 gene is mapped on 10q26.11. Expression of PRDX3 is induced by MYC and is reduced in c-myc  $-/-$  cells. Chromatin immunoprecipitation analysis spanning the entire PRDX3 genomic sequence revealed that MYC binds preferentially to a 930-bp region surrounding exon 1. Results using mitochondria-specific fluorescent probes demonstrated that PRDX3 is essential for maintaining mitochondrial mass and membrane potential in transformed rat and human cells. These data provided evidence that PRDX3 is a MYC target gene that is required to maintain normal mitochondrial function.

### Overview

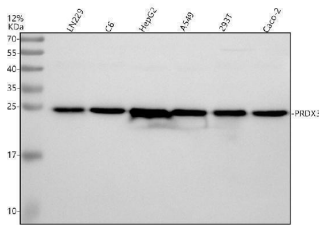
Product Name	Anti-Peroxiredoxin 3/PRDX3 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Peroxiredoxin 3/PRDX3 Antibody Picoband® catalog # PB9349. Tested in Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	Flow Cytometry, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains antibody formulated with stabilizing components, 0.9 mg NaCl, 0.2 mg Na <sub>2</sub> HPO <sub>4</sub> , and 0.05 mg NaN <sub>3</sub> . *This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required.
Storage Instructions	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.
Host	Rabbit
Uniprot ID	P30048

### Technical Details

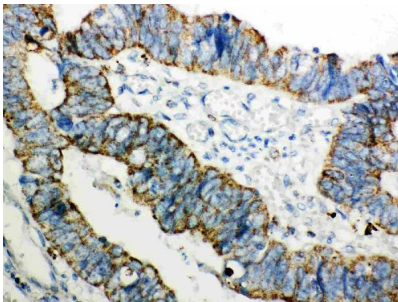
Immunogen	E.coli-derived human Peroxiredoxin 3 recombinant protein (Position: T110-Q256). Human Peroxiredoxin 3 shares 93% amino acid (aa) sequence identity with both mouse and rat Peroxiredoxin 3.
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Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) and ICC.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml Immunocytochemistry/Immunofluorescence, 2ug/ml Flow Cytometry (Fixed), 1-3ug/1x10 <sup>6</sup> cells

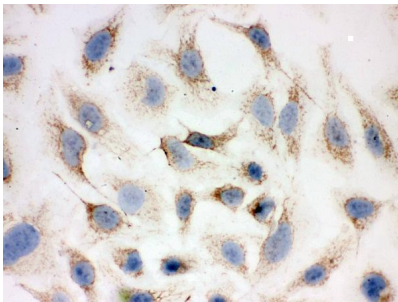
## Anti-Peroxiredoxin 3/PRDX3 Antibody Picoband® (PB9349) Images



Western blot analysis of PRDX3 using anti-PRDX3 antibody (PB9349). Electrophoresis was performed on a 12% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human LN229 whole cell lysates, Lane 2: rat C6 whole cell lysates, Lane 3: human HepG2 whole cell lysates, Lane 4: human A549 whole cell lysates, Lane 5: human 293T whole cell lysates, Lane 6: human CACO-2 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-PRDX3 antigen affinity purified polyclonal antibody (PB9349) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody (Catalog # BA1054) at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for PRDX3 at approximately 25 kDa. The expected band size for PRDX3 is at 28 kDa.

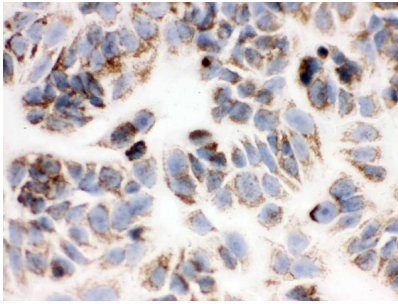


IHC analysis of Peroxiredoxin 3 using anti-Peroxiredoxin 3 antibody (PB9349). Peroxiredoxin 3 was detected in paraffin-embedded section of Human Intestinal Cancer Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-Peroxiredoxin 3 Antibody (PB9349) overnight at 4°C. Biotinylated goat anti-rabbit 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 # SA1022) with DAB as the chromogen.

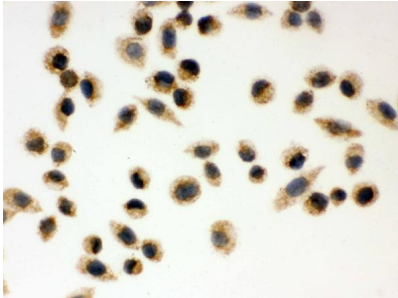


IHC analysis of Peroxiredoxin 3 using anti-Peroxiredoxin 3 antibody (PB9349). Peroxiredoxin 3 was detected in immunocytochemical section of Hela cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 1ug/ml rabbit anti-Peroxiredoxin 3 Antibody (PB9349) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

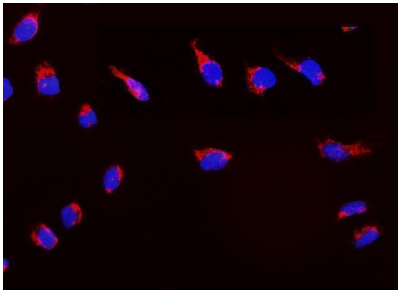
IHC analysis of Peroxiredoxin 3 using anti-Peroxiredoxin 3 antibody (PB9349). Peroxiredoxin 3 was detected in immunocytochemical section of MCF-7 cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval



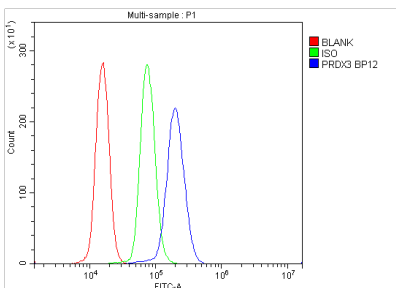
reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 1ug/ml rabbit anti-Peroxiredoxin 3 Antibody (PB9349) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.



IHC analysis of Peroxiredoxin 3 using anti-Peroxiredoxin 3 antibody (PB9349). Peroxiredoxin 3 was detected in immunocytochemical section of SMMC-7721 cell. 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 1ug/ml rabbit anti-Peroxiredoxin 3 Antibody (PB9349) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.



IF analysis of Peroxiredoxin 3 using anti-Peroxiredoxin 3 antibody (PB9349). Peroxiredoxin 3 was detected in immunocytochemical section of U20S cells. 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 2ug/mL rabbit anti-Peroxiredoxin 3 Antibody (PB9349) overnight at 4°C. DyLight®594 Conjugated Goat Anti-Rabbit IgG (BA1142) 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.



Flow Cytometry analysis of U937 cells using anti-Peroxiredoxin 3 antibody (PB9349). Overlay histogram showing U937 cells stained with PB9349 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Peroxiredoxin 3 Antibody (PB9349, 1ug/1x10<sup>6</sup> cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10<sup>6</sup> cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10<sup>6</sup>) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

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### Anti-Peroxiredoxin 3/PRDX3 Antibody

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