

Anti-Peroxiredoxin 4/PRDX4 Antibody Picoband™

Catalog Number: PB9383

About PRDX4

PRDX4 (peroxiredoxin 4) is also known as AOE37-2. The protein encoded by this gene is an antioxidant enzyme and belongs to the peroxiredoxin family. Functional analysis showed that PRDX4 protects glutamine synthetase from inactivation. Yeast 2-hybrid, immunoprecipitation, and immunoblot analyses indicated that PRDX4 and PRDX1 are capable of homodimerization and heterodimerization with each other but not with the mitochondrial PRDX3. Gel mobility shift and immunoblot analysis found that PRDX4 depletes NFkB binding activity together with a reduction in the amounts of p50, p65, and phosphorylated IKBA, as well as a reduction in the expression of HIV-1 viral proteins. Expression of PRDX4, alone or with PRDX1, increased the resistance of yeast cells to oxidant-induced toxicity. Jin et al. suggested PRDX4 modulates IKBA phosphorylation in the cytoplasm and thus affects a peroxiredoxin-dependent redox step.

Overview

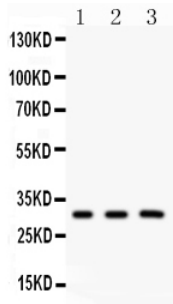
Product Name	Anti-Peroxiredoxin 4/PRDX4 Antibody Picoband™
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Peroxiredoxin 4/PRDX4 Antibody Picoband™ catalog # PB9383. Tested in Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	Flow Cytometry, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
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	Q13162

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human Peroxiredoxin 4, different from the related mouse and rat sequences by one amino acid.
Predicted Reactive Species	Bovine
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	<p>Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.</p> <p>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.</p> <p>Some PubMed article(s) citing the expression level of this target are as follows:</p> <p>Boster Bio's internal QC testing used:</p> <p>Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat</p> <p>Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Mouse, Rat, By Heat</p> <p>Immunocytochemistry , 0.5- 1ug/ml, Human, -</p> <p>Immunocytochemistry/Immunofluorescence, 2ug/ml, Human</p> <p>Flow Cytometry, 1-3ug/1x10⁶ cells, Human</p>

Anti-Peroxiredoxin 4/PRDX4 Antibody Picoband™ (PB9383) Images



Anti-Peroxiredoxin 4 Picoband antibody, PB9383, Western blotting

All lanes: Anti Peroxiredoxin 4 (PB9383) at 0.5ug/ml

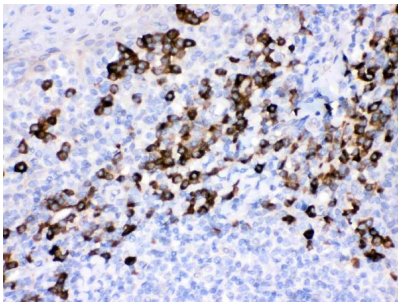
Lane 1: Rat Brain Tissue Lysate at 50ug

Lane 2: Mouse Brain Tissue Lysate at 50ug

Lane 3: HELA Whole Cell Lysate at 40ug

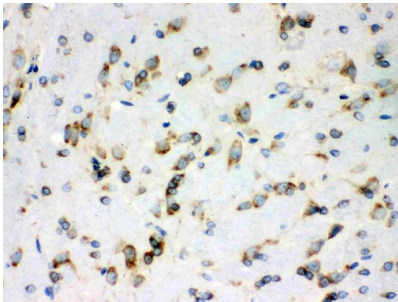
Predicted bind size: 31KD

Observed bind size: 31KD



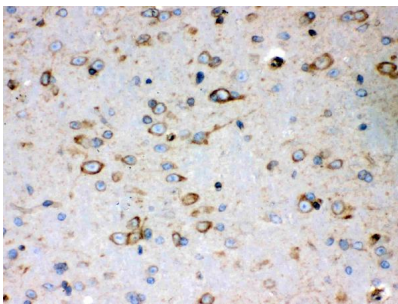
Anti-Peroxiredoxin 4 Picoband antibody, PB9383, IHC(P)

IHC(P): Human Tonsil Tissue



Anti-Peroxiredoxin 4 Picoband antibody, PB9383, IHC(P)

IHC(P): Rat Brain Tissue



Anti-Peroxiredoxin 4 Picoband antibody, PB9383, IHC(P)

IHC(P): Mouse Brain Tissue

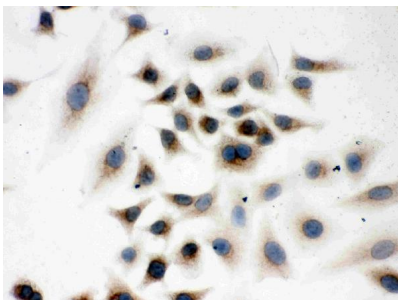


Figure 5. IHC analysis of Peroxiredoxin 4 using anti-Peroxiredoxin 4 antibody (PB9383).

Peroxiredoxin 4 was detected in immunocytochemical section of A549 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 4 Antibody (PB9383) 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.

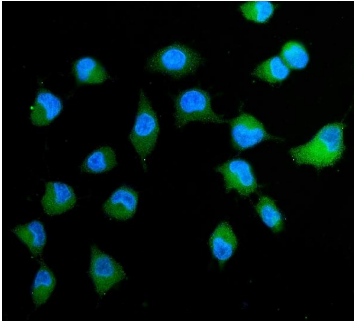


Figure 6. IF analysis of Peroxiredoxin 4 using anti-Peroxiredoxin 4 antibody (PB9383). Peroxiredoxin 4 was detected in immunocytochemical section of A549 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 2ug/mL rabbit anti-Peroxiredoxin 4 Antibody (PB9383) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) 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.

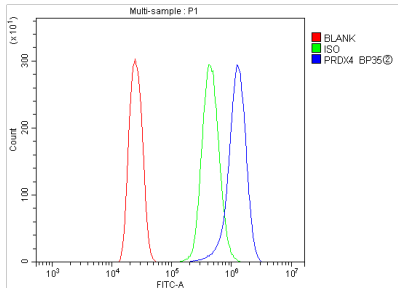


Figure 7. Flow Cytometry analysis of MCF-7 cells using anti-Peroxiredoxin 4 antibody (PB9383). Overlay histogram showing MCF-7 cells stained with PB9383 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Peroxiredoxin 4 Antibody (PB9383, 1ug/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

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Anti-Peroxiredoxin 4/PRDX4 Antibody TM