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Anti-Peroxiredoxin 3 Picoband Antibody

Catalog # ABO12040

Specification

Anti-Peroxiredoxin 3 Picoband Antibody - Product Information

Application	**WB, IHC-P, ICC**
Primary Accession	P30048
Host	**Rabbit**
Reactivity	**Human, Mouse, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Thioredoxin-dependent peroxide reductase, mitochondrial(PRDX3) detection. Tested with WB, IHC-P, ICC in Human;Mouse;Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-Peroxiredoxin 3 Picoband Antibody - Additional Information

Gene ID 10935

Other Names
Thioredoxin-dependent peroxide reductase, mitochondrial, 1.11.1.15, Antioxidant protein 1, AOP-1, HBC189, Peroxiredoxin III, Prx-III, Peroxiredoxin-3, Protein MER5 homolog, PRDX3, AOP1

Calculated MW
27693 MW KDa

Application Details
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, By Heat
Immunocytochemistry, 0.5-1 µg/ml
Western blot, 0.1-0.5 µg/ml

Subcellular Localization
Mitochondrion.

Protein Name
Thioredoxin-dependent peroxide reductase, mitochondrial

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

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.

Purification
Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins.

Storage

At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

Sequence Similarities
Belongs to the AhpC/TSA family.

Anti-Peroxiredoxin 3 Picoband Antibody - Protein Information

Name PRDX3

Synonyms AOP1

Function
Thiol-specific peroxidase that catalyzes the reduction of hydrogen peroxide and organic hydroperoxides to water and alcohols, respectively. Plays a role in cell protection against oxidative stress by detoxifying peroxides (PubMed:17707404, PubMed:29438714, PubMed:33889951, PubMed:7733872). Acts synergistically with MAP3K13 to regulate the activation of NF-kappa-B in the cytosol (PubMed:12492477). Required for the maintenance of physical strength (By similarity).

Cellular Location
Mitochondrion. Cytoplasm. Early endosome. Note=Localizes to early endosomes in a RPS6KC1-dependent manner.

Anti-Peroxiredoxin 3 Picoband Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-Peroxiredoxin 3 Picoband Antibody - Images

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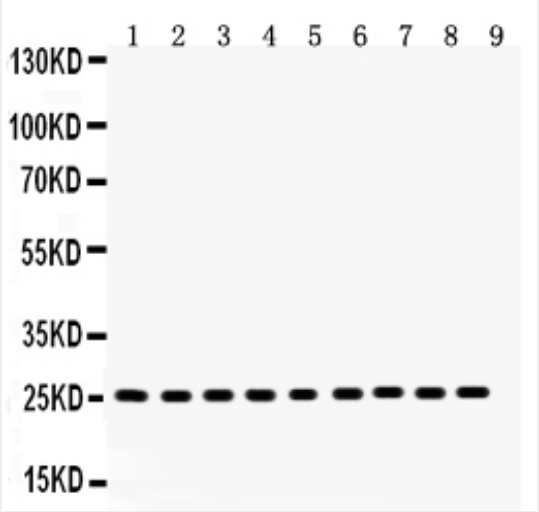

Figure 1. Western blot analysis of Peroxiredoxin 3 using anti-Peroxiredoxin 3 antibody (ABO12040). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: Rat Brain Tissue Lysate,Lane 2: Mouse Brain Tissue Lysate,Lane 3: Rat Skeletal Muscle Tissue Lysate,Lane 4: Mouse Skeletal Muscle Tissue Lysate,Lane 5: U20S Whole Cell Lysate,Lane 6: HELA Whole Cell Lysate,Lane 7: SMMC Whole Cell Lysate,Lane 8: RH35 Whole Cell Lysate,Lane 9: A549 Whole Cell Lysate. 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 rabbit anti-Peroxiredoxin 3 antigen affinity purified polyclonal antibody (Catalog # ABO12040) at 0.5 Î¼g/mL overnight at 4Â°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 at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for Peroxiredoxin 3 at approximately 25KD. The expected band size for Peroxiredoxin 3 is at 25KD.

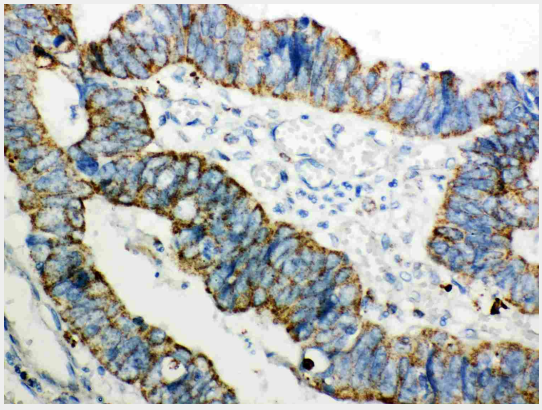

Figure 2. IHC analysis of Peroxiredoxin 3 using anti-Peroxiredoxin 3 antibody (ABO12040).Peroxiredoxin 3 was detected in paraffin-embedded section of Human Intestinal Cancer Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1Î¼g/ml rabbit anti-Peroxiredoxin 3 Antibody (ABO12040) overnight at 4Â°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37Â°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

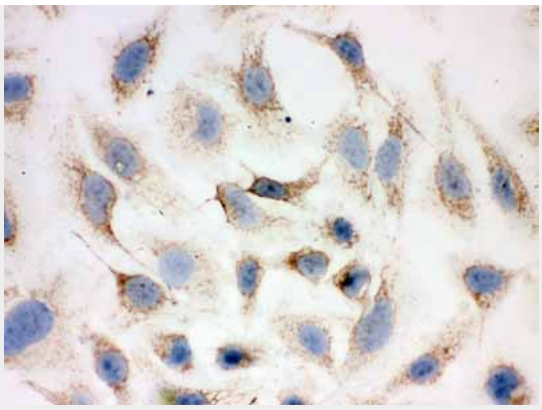

Figure 3. IHC analysis of Peroxiredoxin 3 using anti-Peroxiredoxin 3 antibody (ABO12040).Peroxiredoxin 3 was detected in immunocytochemical section of Hela cell. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1Î¼g/ml rabbit anti-Peroxiredoxin 3 Antibody (ABO12040) overnight at 4Â°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37Â°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

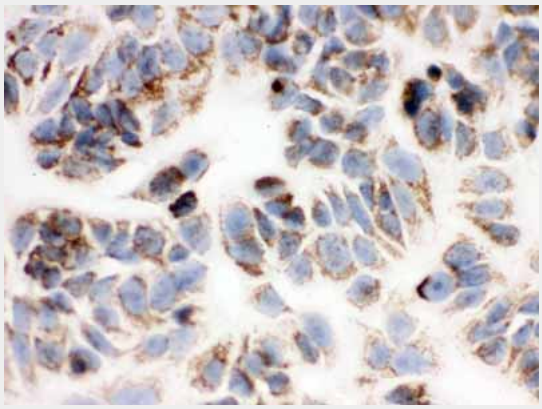

Figure 4. IHC analysis of Peroxiredoxin 3 using anti-Peroxiredoxin 3 antibody (ABO12040).Peroxiredoxin 3 was detected in immunocytochemical section of MCF-7 cell. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1Î¼g/ml rabbit anti-Peroxiredoxin 3 Antibody (ABO12040) overnight at 4Â°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37Â°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

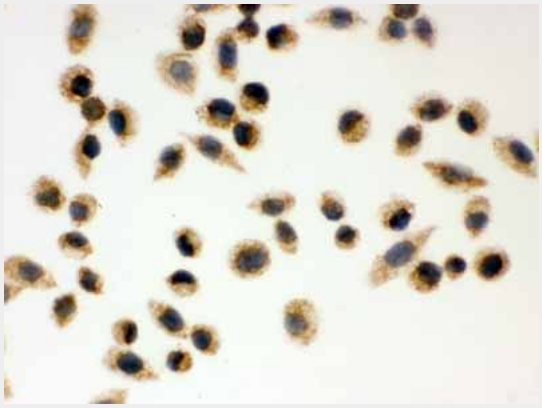

Figure 5. IHC analysis of Peroxiredoxin 3 using anti-Peroxiredoxin 3 antibody (ABO12040).Peroxiredoxin 3 was detected in immunocytochemical section of SMMC-7721 cell. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1Î¼g/ml rabbit anti-Peroxiredoxin 3 Antibody (ABO12040) overnight at 4Â°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37Â°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

Anti-Peroxiredoxin 3 Picoband Antibody - Background

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.