

**Anti-Peroxiredoxin 3 Antibody**  
**Catalog # ABO11143****Specification**

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**Anti-Peroxiredoxin 3 Antibody - Product Information**

Application	WB, IHC-P, ICC
Primary Accession	<a href="#">P30048</a>
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 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**

Immunocytochemistry , 0.5-1 µg/ml, Human, -<br>Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By Heat<br>Western blot, 0.1-0.5 µg/ml, Human, Rat, Mouse<br>

**Subcellular Localization**

Mitochondrion.

**Protein Name**

Thioredoxin-dependent peroxide reductase, mitochondrial

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Thimerosal, 0.05mg Na<sub>3</sub>N.

**Immunogen**

A synthetic peptide corresponding to a sequence at the C-terminus of human Peroxiredoxin 3(239-256aa TIKPSAASKEYFQKVNQ), different from the related mouse and rat sequences by three amino acids.

**Purification**

Immunogen affinity purified.

**Cross Reactivity**

No cross reactivity with other proteins

**Storage**

**At -20°C for one year. After reconstitution, 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 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](http://www.uniprot.org/citations/17707404) target="\_blank">17707404</a>, PubMed: [29438714](http://www.uniprot.org/citations/29438714) target="\_blank">29438714</a>, PubMed: [33889951](http://www.uniprot.org/citations/33889951) target="\_blank">33889951</a>, PubMed: [7733872](http://www.uniprot.org/citations/7733872) target="\_blank">7733872</a>). Acts synergistically with MAP3K13 to regulate the activation of NF-kappa-B in the cytosol (PubMed: [12492477](http://www.uniprot.org/citations/12492477) target="\_blank">12492477</a>). Required for the maintenance of physical strength (By similarity).

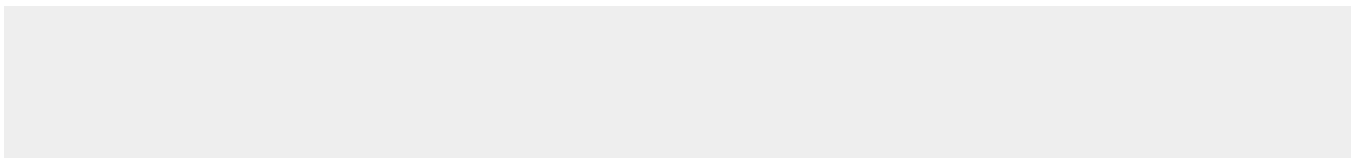
**Cellular Location**

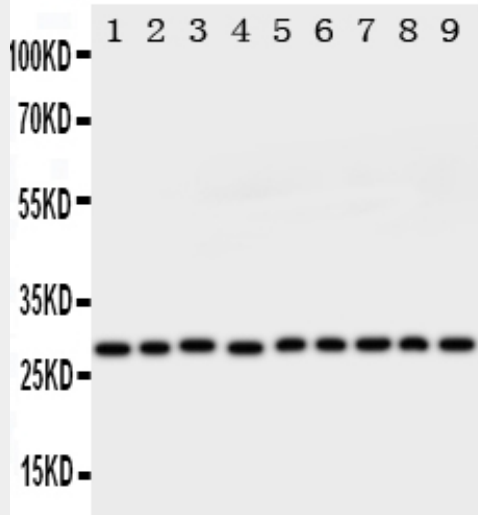
Mitochondrion. Cytoplasm. Early endosome. Note=Localizes to early endosomes in a RPS6KC1-dependent manner.

**Anti-Peroxiredoxin 3 Antibody - Protocols**

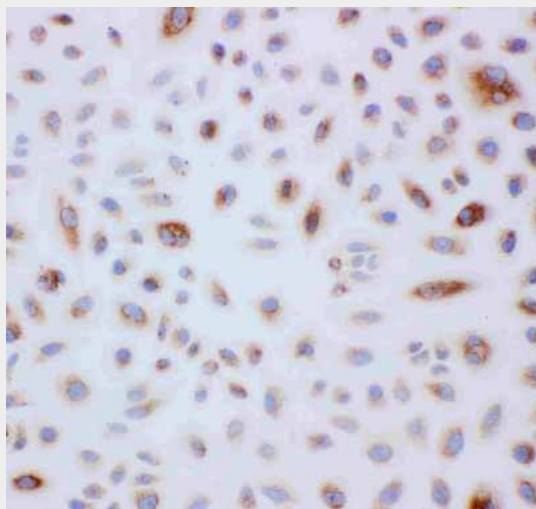
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

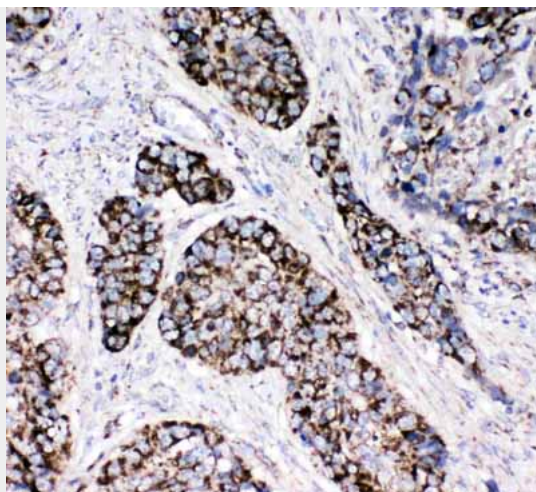
**Anti-Peroxiredoxin 3 Antibody - Images**



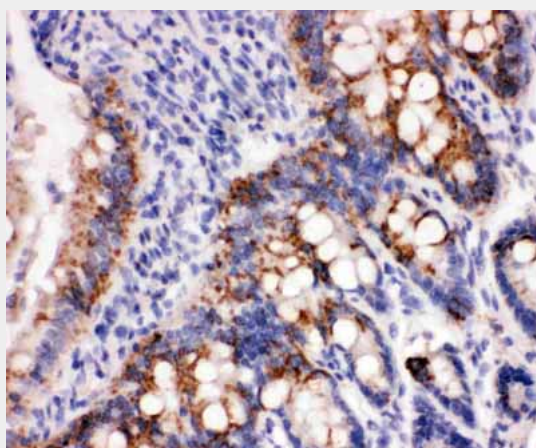
Anti-Peroxiredoxin 3 antibody, ABO11143, Western blotting All lanes: Anti Peroxiredoxin 3 (ABO11143) at 0.5ug/ml  
Lane 1: Rat Brain Tissue Lysate at 50ug  
Lane 2: Rat Lung Tissue Lysate at 50ug  
Lane 3: Rat Liver Tissue Lysate at 50ug  
Lane 4: Rat Kidney Tissue Lysate at 50ug  
Lane 5: HELA Whole Cell Lysate at 40ug  
Lane 6: JURKAT Whole Cell Lysate at 40ug  
Lane 7: 293T Whole Cell Lysate at 40ug  
Lane 8: MCF-7 Whole Cell Lysate at 40ug  
Lane 9: A549 Whole Cell Lysate at 40ug  
Predicted bind size: 28KD  
Observed bind size: 28KD



Anti-Peroxiredoxin 3 antibody, ABO11143, ICC/ICC: A549 Cell



Anti-Peroxiredoxin 3 antibody, ABO11143, IHC(P)IHC(P): Human Lung Cancer Tissue



Anti-Peroxiredoxin 3 antibody, ABO11143, IHC(P)IHC(P): Rat Intestine Tissue

### **Anti-Peroxiredoxin 3 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.