

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

Anti-Peroxiredoxin 3 Antibody - Product Information

Application	WB, ICC, IHC
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 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, -
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By Heat
Western blot, 0.1-0.5 µg/ml, Human, Rat, Mouse

Subcellular Localization

Mitochondrion.

Protein Name

Thioredoxin-dependent peroxide reductase, mitochondrial

Contents

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

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, PubMed: [29438714](http://www.uniprot.org/citations/29438714) target="_blank">29438714, PubMed: [33889951](http://www.uniprot.org/citations/33889951) target="_blank">33889951, PubMed: [7733872](http://www.uniprot.org/citations/7733872) target="_blank">7733872). 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). Required for the maintenance of physical strength (By similarity).

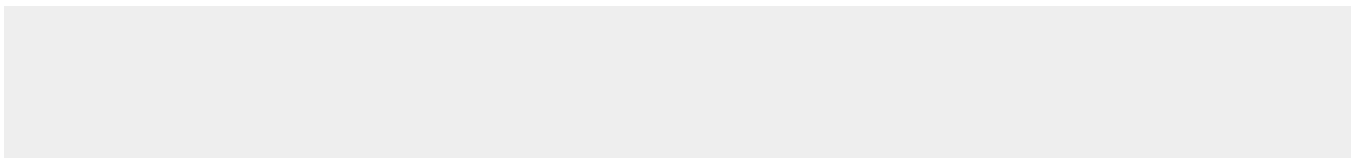
Cellular Location

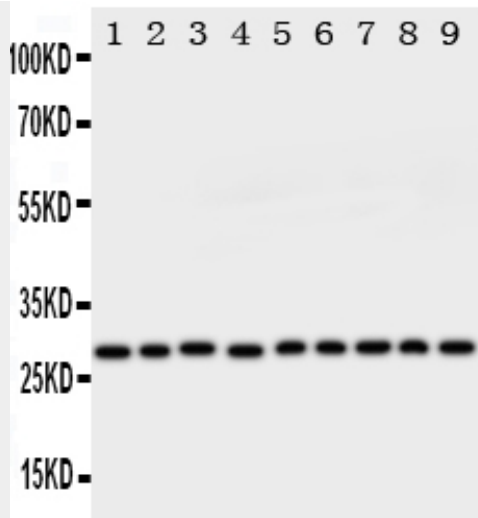
Mitochondrion. Cytoplasm. Early endosome. Note=Localizes to early endosomes in a RPS6KC1-dependent manner.

Anti-Peroxiredoxin 3 Antibody - Protocols

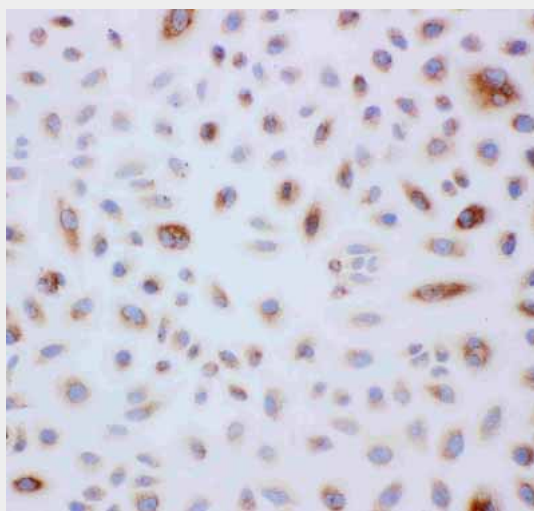
Provided below are standard protocols that you may find useful for product applications.

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

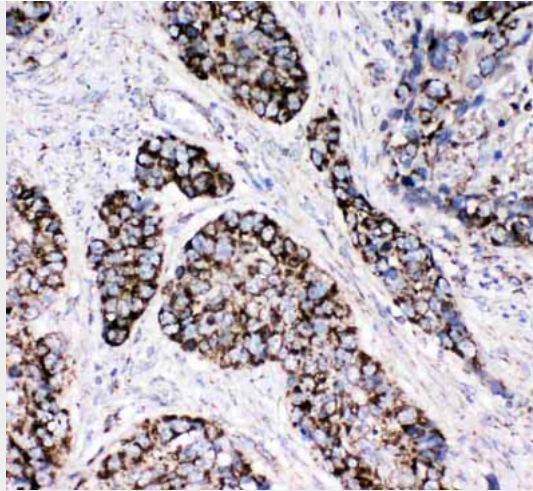
Anti-Peroxiredoxin 3 Antibody - Images



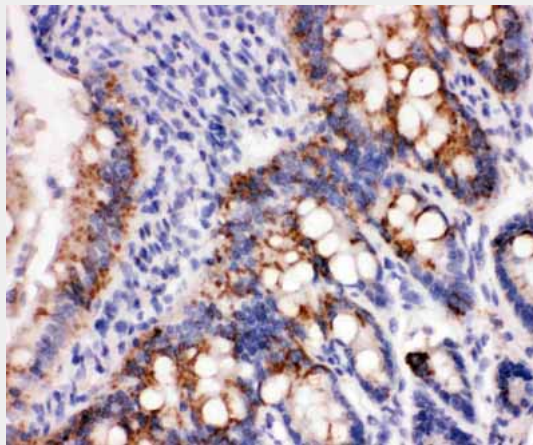
Anti-Peroxiredoxin 3 antibody, ABO11143, Western blotting All lanes: Anti Peroxiredoxin 3 (ABO11143) at 0.5ug/ml
Lane 1: Rat Brain Tissue Lysate at 50ug
Lane 2: Rat Lung Tissue Lysate at 50ug
Lane 3: Rat Liver Tissue Lysate at 50ug
Lane 4: Rat Kidney Tissue Lysate at 50ug
Lane 5: HELA Whole Cell Lysate 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.