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Anti-Peroxiredoxin 3 Antibody

Catalog # ABO11144

Product Information

Application	WB, IHC-P
Primary Accession	P20108
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 in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	11757
Other Names	Thioredoxin-dependent peroxide reductase, mitochondrial, 1.11.1.15, Antioxidant protein 1, AOP-1, PRX III, Perioredoxin-3, Protein MER5, Prdx3, Aop1, Mer5
Calculated MW	28127
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml, Human, Rat, Mouse, By Heat Western blot, 0.1-0.5 □g/ml, Human, Rat, Mouse
Subcellular Localization	Mitochondrion .
Tissue Specificity	Housekeeping-type gene preferentially expressed in murine erythroleukemia (MEL) cells.
Source	Eukaryota
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 mouse Peroxiredoxin 3(240-257aa TIKPSPTASKEYFEKVHQ), identical to the related rat sequence, and different from the related human sequence by three amino acids.

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.

Protein Information

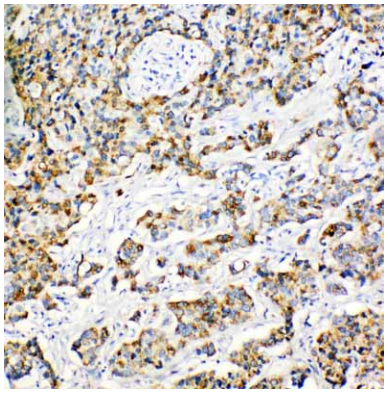
Name	Prdx3
Synonyms	Aop1, Mer5
Function	Thiol-specific peroxidase that catalyzes the reduction of hydrogen peroxide and organic hydroperoxides to water and alcohols, respectively. Plays a role in cell protection against oxidative stress by detoxifying peroxides. Acts synergistically with MAP3K13 to regulate the activation of NF-kappa-B in the cytosol (By similarity). Required for the maintenance of physical strength (PubMed:27037278).
Cellular Location	Mitochondrion. Cytoplasm {ECO:0000250|UniProtKB:P30048}. Early endosome {ECO:0000250|UniProtKB:P30048}. Note=Localizes to early endosomes in a RPS6KC1-dependent manner. {ECO:0000250|UniProtKB:P30048}
Tissue Location	Housekeeping-type gene preferentially expressed in murine erythroleukemia (MEL) cells

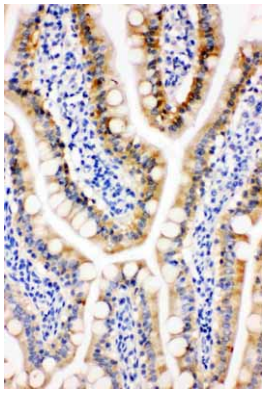
Background

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.

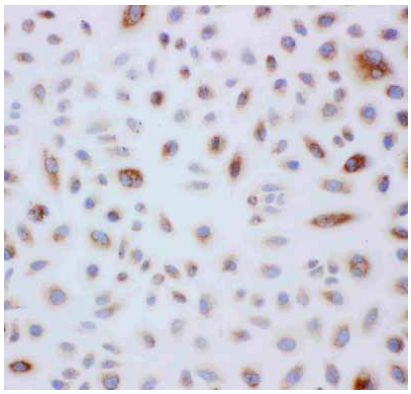
Images

Anti-Peroxiredoxin 3 antibody, ABO11144, IHC(P)IHC(P): Human Mammary Cancer Tissue

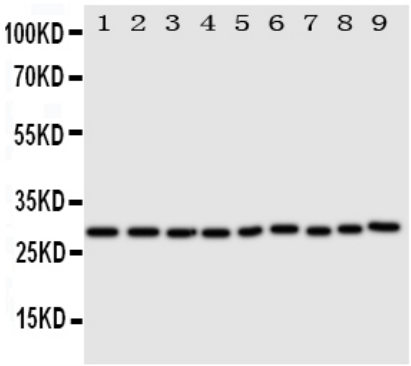




Anti-Peroxiredoxin 3 antibody, ABO11144, IHC(P)IHC(P): Rat Intestine Tissue



Anti-Peroxiredoxin 3 antibody, ABO11144, IHC(P)IHC(P): Rat Intestine Tissue



Anti-Peroxiredoxin 3 antibody, ABO11144, Western blottingAll lanes: Anti Peroxiredoxin 3 (ABO11144) at 0.5ug/mlLane 1: Rat Brain Tissue Lysate at 50ugLane 2: Rat Lung Tissue Lysate at 50ugLane 3: Rat Kidney Tissue Lysate at 50ugLane 4: HELA Whole Cell Lysate at 40ugLane 5: JURKAT Whole Cell Lysate at 40ugLane 6: 293T Whole Cell Lysate at 40ugLane 7: MCF-7 Whole Cell Lysate at 40ugLane 8: A549 Whole Cell Lysate at 40ugLane 9: U20S Whole Cell Lysate at 40ugPredicted bind size: 28KDObserved bind size: 28KD