10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-Peroxiredoxin 4 Picoband Antibody

Catalog # ABO12074

Specification

Anti-Peroxiredoxin 4 Picoband Antibody - Product Information

Application	**WB, IHC-P, ICC**
Primary Accession	Q13162
Host	**Rabbit**
Reactivity	**Human, Mouse, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Peroxiredoxin-4(PRDX4) 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 4 Picoband Antibody - Additional Information

Gene ID 10549

Other Names
Peroxiredoxin-4, 1.11.1.15, Antioxidant enzyme AOE372, AOE37-2, Peroxiredoxin IV, Prx-IV, Thioredoxin peroxidase AO372, Thioredoxin-dependent peroxide reductase A0372, PRDX4

Calculated MW
30540 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, Mouse, Rat

Subcellular Localization
Cytoplasm . Secreted .

Protein Name
Peroxiredoxin-4

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

Immunogen
A synthetic peptide corresponding to a sequence at the C-terminus of human Peroxiredoxin 4 (178-2081aa SDLTHQISKDYGVYLEDSGHTLRGLFIIDDK), different from the related mouse and rat sequences by one amino acid.

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 4 Picoband Antibody - Protein Information

Name PRDX4

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 and as sensor of hydrogen peroxide-mediated signaling events. Regulates the activation of NF-kappa-B in the cytosol by a modulation of I-kappa-B-alpha phosphorylation.

Cellular Location
Cytoplasm. Endoplasmic reticulum. Note=Cotranslationally translocated to and retained within the endoplasmic reticulum. A small fraction of the protein is cytoplasmic.

Anti-Peroxiredoxin 4 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 4 Picoband Antibody - Images

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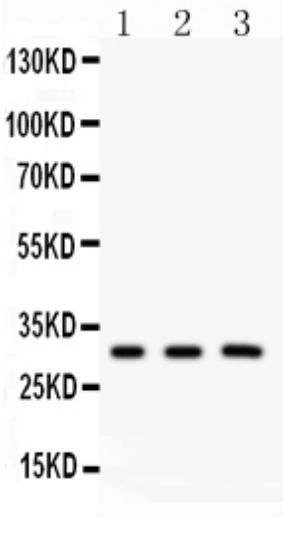
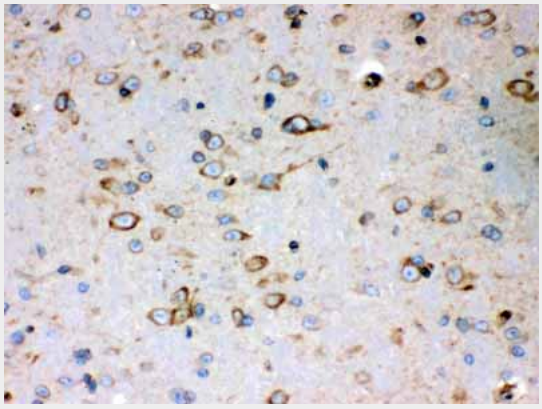
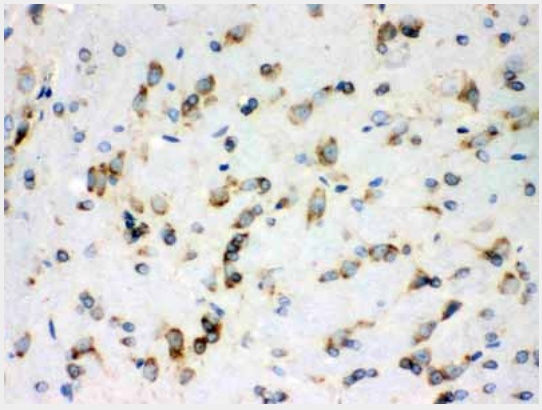


Anti- Peroxiredoxin 4 Picoband antibody, ABO12074, Western blottingAll lanes: Anti Peroxiredoxin 4 (ABO12074) at 0.5ug/mlLane 1: Rat Brain Tissue Lysate at 50ugLane 2: Mouse Brain Tissue Lysate at 50ugLane 3: HELA Whole Cell Lysate at 40ugPredicted bind size: 31KDObserved bind size: 31KD



Anti- Peroxiredoxin 4 Picoband antibody, ABO12074, IHC(P)IHC(P): Mouse Brain Tissue



Anti- Peroxiredoxin 4 Picoband antibody, ABO12074, IHC(P)IHC(P): Rat Brain Tissue

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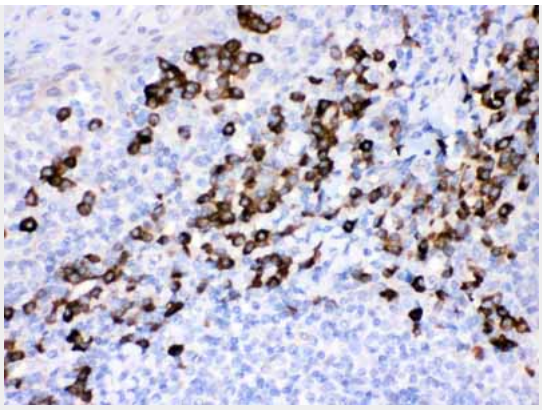
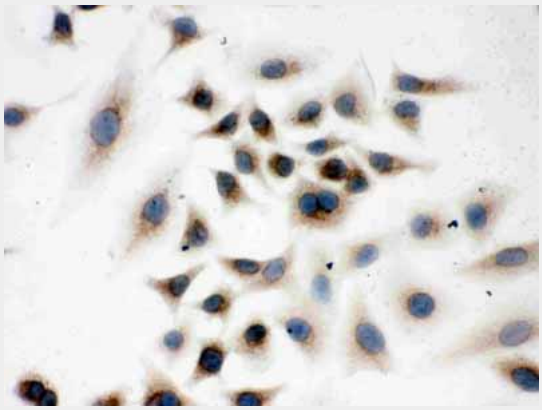


Anti- Peroxiredoxin 4 Picoband antibody, ABO12074, IHC(P)IHC(P): Human Tonsil Tissue



Anti- Peroxiredoxin 4 Picoband antibody, ABO12074, ICCICC: A549 Cell

Anti-Peroxiredoxin 4 Picoband Antibody - Background

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.