

**Anti-Peroxiredoxin 4 Picoband Antibody**  
Catalog # ABO12074**Specification****Anti-Peroxiredoxin 4 Picoband Antibody - Product Information**

Application	WB, IHC, ICC
Primary Accession	<a href="#">Q13162</a>
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 A0372, Thioredoxin-dependent peroxide reductase A0372, PRDX4

**Calculated MW**

30540 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, Mouse, Rat<br>

**Subcellular Localization**

Cytoplasm . Secreted .

**Protein Name**

Peroxiredoxin-4

**Contents**

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

**Immunogen**

A synthetic peptide corresponding to a sequence at the C-terminus of human Peroxiredoxin 4 (178-2081aa SDLTHQISKDYGVYLED SGHTLRGLFIIDDK), 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 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 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.

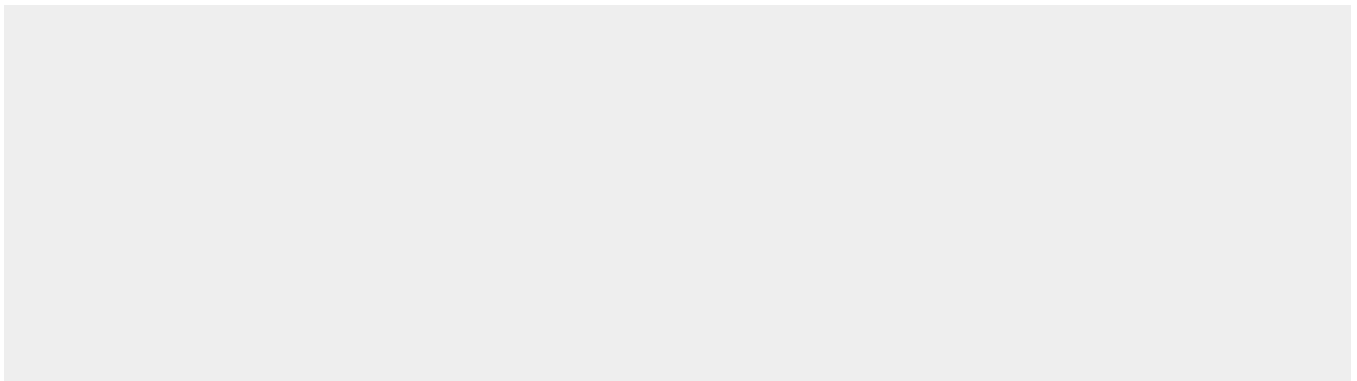
**Cellular Location**

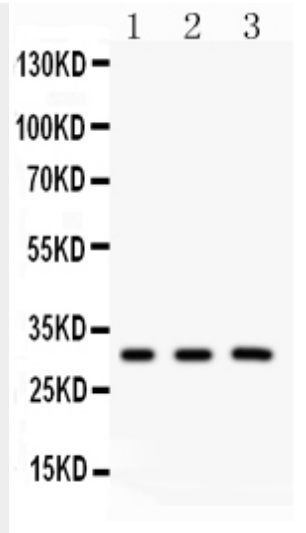
Cytoplasm. Endoplasmic reticulum. Note=Cotranslationally translocated to and retained within the endoplasmic reticulum. A small fraction of the protein is cytoplasmic.

**Anti-Peroxiredoxin 4 Picoband Antibody - Protocols**

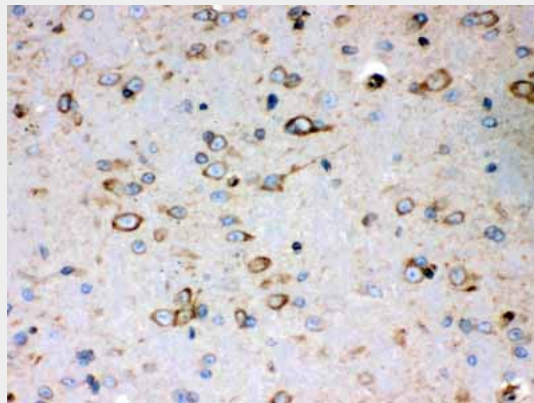
Provided below are standard protocols that you may find useful for product applications.

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

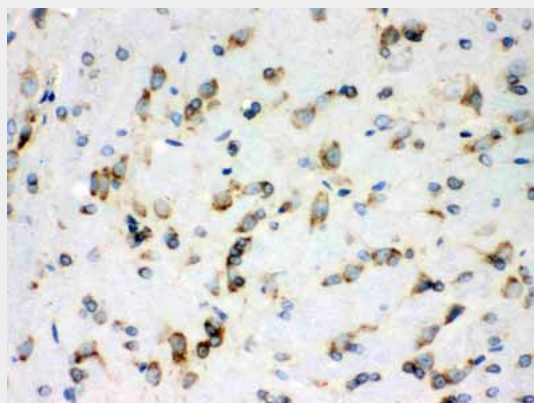
**Anti-Peroxiredoxin 4 Picoband Antibody - Images**



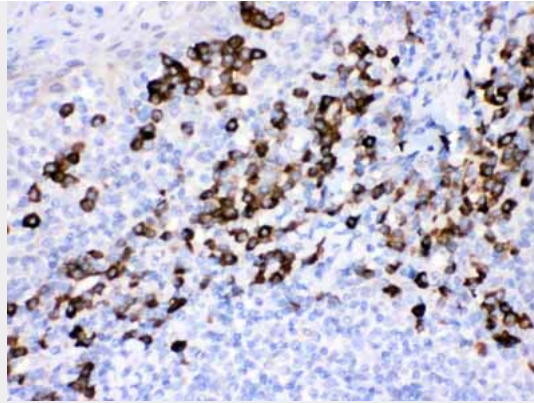
Anti- Peroxiredoxin 4 Picoband antibody, ABO12074, Western blotting All lanes: Anti Peroxiredoxin 4 (ABO12074) at 0.5ug/ml Lane 1: Rat Brain Tissue Lysate at 50ug Lane 2: Mouse Brain Tissue Lysate at 50ug Lane 3: HELA Whole Cell Lysate at 40ug Predicted bind size: 31KD Observed bind size: 31KD



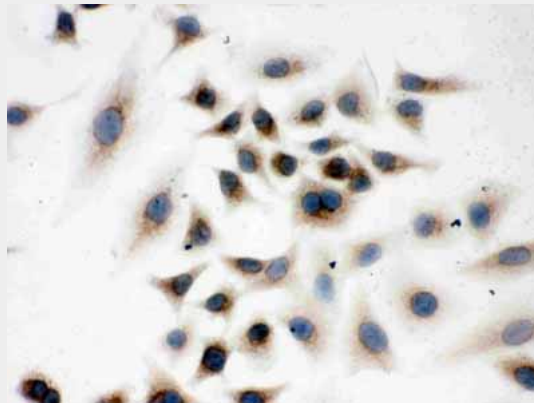
Anti- Peroxiredoxin 4 Picoband antibody, ABO12074, IHC(P) IHC(P): Mouse Brain Tissue



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



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 NF $\kappa$ B 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.