

**Anti-Peroxiredoxin 1 Picoband Antibody**  
**Catalog # ABO12039****Specification****Anti-Peroxiredoxin 1 Picoband Antibody - Product Information**

Application	WB, IHC, ICC
Primary Accession	<a href="#">Q06830</a>
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

**Description**

Rabbit IgG polyclonal antibody for Peroxiredoxin-1 (PRDX1) 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 1 Picoband Antibody - Additional Information**

**Gene ID** 5052

**Other Names**

Peroxiredoxin-1, 1.11.1.15, Natural killer cell-enhancing factor A, NKEF-A, Proliferation-associated gene protein, PAG, Thioredoxin peroxidase 2, Thioredoxin-dependent peroxide reductase 2, PRDX1, PAGA, PAGB, TDPX2

**Calculated MW**

22110 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 . Melanosome . Identified by mass spectrometry in melanosome fractions from stage I to stage IV.

**Protein Name**

Peroxiredoxin-1

**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 in the middle region of human Peroxiredoxin 1 (100-128aa MNIPLVSDPKRTIAQDYGV LKADEGISFR), different from the related mouse sequence by one amino acid, and identical to the related rat sequence.

**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 1 Picoband Antibody - Protein Information**

**Name** PRDX1

**Synonyms** PAGA, PAGB, TDPX2

**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. Might participate in the signaling cascades of growth factors and tumor necrosis factor-alpha by regulating the intracellular concentrations of H<sub>2</sub>O<sub>2</sub> (PubMed: [9497357](http://www.uniprot.org/citations/9497357)). Reduces an intramolecular disulfide bond in GDPD5 that gates the ability to GDPD5 to drive postmitotic motor neuron differentiation (By similarity).

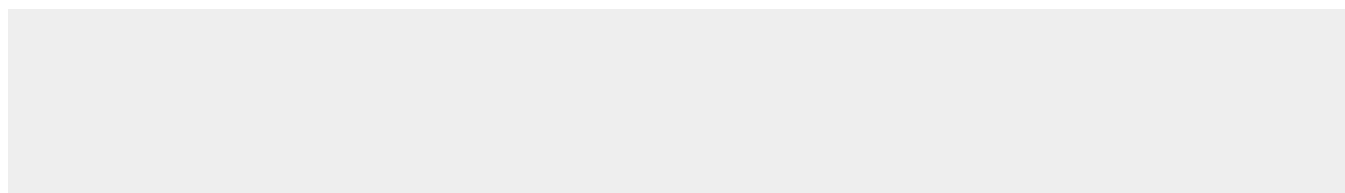
**Cellular Location**

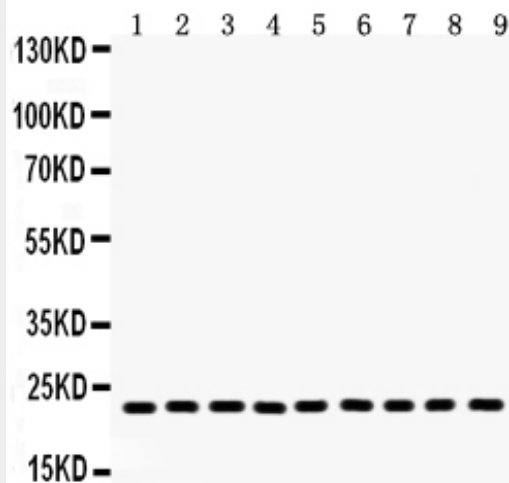
Cytoplasm. Melanosome Note=Identified by mass spectrometry in melanosome fractions from stage I to stage IV

**Anti-Peroxiredoxin 1 Picoband Antibody - Protocols**

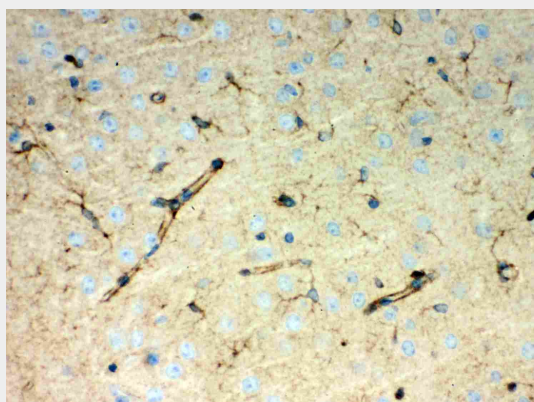
Provided below are standard protocols that you may find useful for product applications.

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

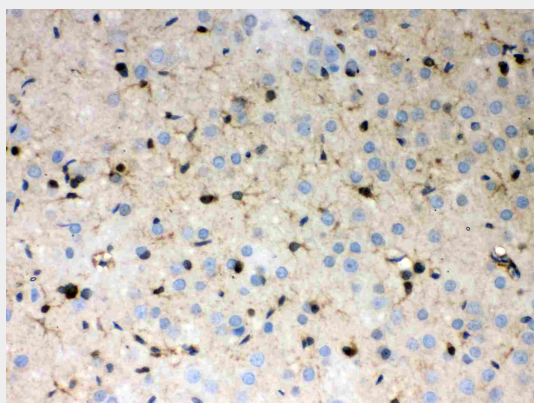
**Anti-Peroxiredoxin 1 Picoband Antibody - Images**



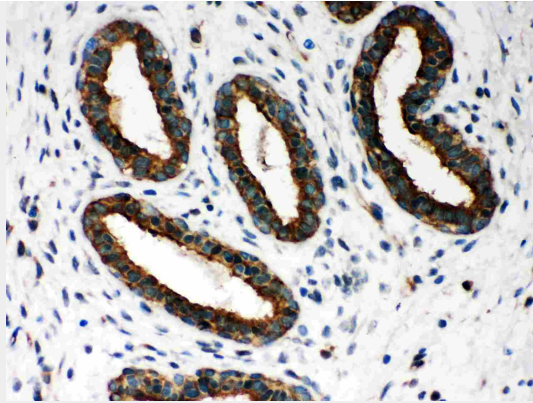
Anti- Peroxiredoxin 1 Picoband antibody, ABO12039, Western blotting All lanes: Anti Peroxiredoxin 1 (ABO12039) at 0.5ug/ml  
Lane 1: Rat Brain Tissue Lysate at 50ug  
Lane 2: Mouse Brain Tissue Lysate at 50ug  
Lane 3: U87 Whole Cell Lysate at 40ug  
Lane 4: NEURO Whole Cell Lysate at 40ug  
Lane 5: A375 Whole Cell Lysate at 40ug  
Lane 6: 293T Whole Cell Lysate at 40ug  
Lane 7: SMMC Whole Cell Lysate at 40ug  
Lane 8: A549 Whole Cell Lysate at 40ug  
Lane 9: RH35 Whole Cell Lysate at 40ug  
Predicted bind size: 22KD  
Observed bind size: 22KD



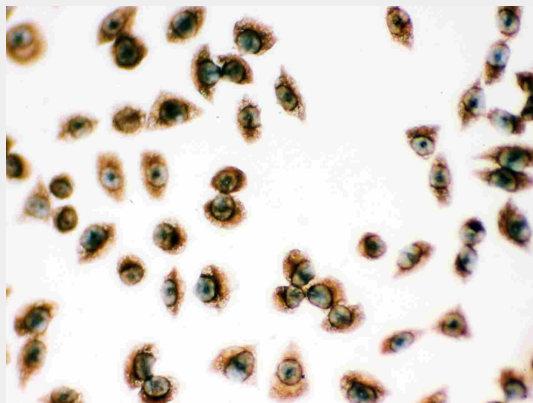
Anti- Peroxiredoxin 1 Picoband antibody, ABO12039, IHC(P) IHC(P): Mouse Brain Tissue



Anti- Peroxiredoxin 1 Picoband antibody, ABO12039, IHC(P) IHC(P): Rat Brain Tissue



Anti- Peroxiredoxin 1 Picoband antibody, ABO12039, IHC(P)IHC(P): Huma Mammary Cancer Tissue



Anti- Peroxiredoxin 1 Picoband antibody, ABO12039, ICCICC: SMMC-7721 Cell

#### **Anti-Peroxiredoxin 1 Picoband Antibody - Background**

PRDX1(Peroxiredoxin 1), also called PRX1, PAGA or NKEFA, is a thiol reductase that plays critical roles in oxidative and thermal stress defense mechanisms through its abilities to metabolize H<sub>2</sub>O<sub>2</sub> and act as a molecular chaperone, respectively. This gene encodes a member of the peroxiredoxin family of antioxidant enzymes, which reduce hydrogen peroxide and alkyl hydroperoxides. The PRDX1 gene is mapped on 1p34.1. Prdx1 was expressed in differentiating motor neuron cells in developing embryonic chicken and mouse spinal cords. Immunoprecipitation analysis showed that GDE2 interacted directly with PRDX1 in embryonic chicken spinal cord extracts and in transfected HEK293T cells. This protein may have a proliferative effect and play a role in cancer development or progression. In differentiating spinal cord, Prdx1 was required to activate Gde2 by reducing an intramolecular cystine bridge between the Gde2 N- and C-terminal domains. An intramolecular disulfide bond between the GDE2 N- and C-terminal domains inhibits GDE2 function, and that reduction of this cystine by PRDX1 activates GDE2 for the induction of motor neuron differentiation.