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# Peroxiredoxin 1 Antibody (9D2)

**Mouse Monoclonal Antibody**
**Catalog # ABV11151**

## Specification

### Peroxiredoxin 1 Antibody (9D2) - Product Information

| | |
|---|---|
| Application | **WB, ICC, IP** |
| Primary Accession | Q06830 |
| Reactivity | **Human** |
| Host | **Mouse** |
| Clonality | **Monoclonal** |
| Isotype | **Mouse IgG 1** |
| Calculated MW | **22110** |

### Peroxiredoxin 1 Antibody (9D2) - Additional Information

**Gene ID** 5052

| | |
|---|---|
| Positive Control | **IP analysis : HeLa cell lysate. IHC staining : HeLa cells** |
| Application & Usage | **Western blot: 2-4 µl/ml, IP: 1-2 µl, ICC: 20 µl/ml.** |

**Other Names**
Peroxiredoxin 1, MSP23, NKEFA, PAG, PAGA, PAGB, PRX1, PRXI, TDPX2, Thioredoxin peroxidase 2.

**Target/Specificity**
Peroxiredoxin 1

**Antibody Form**
Liquid

**Appearance**
Colorless liquid

**Formulation**
100 µl of antibody in HEPES with 0.15 M NaCl, 0.01 % BSA, 0.03 % sodium azide, and 50 % glycerol

**Handling**
The antibody solution should be gently mixed before use.

**Reconstitution & Storage**
-20 °C

**Background Descriptions**

**Precautions**
Peroxiredoxin 1 Antibody (9D2) is for research use only and not for use in diagnostic or therapeutic procedures.

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## Peroxiredoxin 1 Antibody (9D2) - 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(2)O(2) (PubMed:<a href="http://www.uniprot.org/citations/9497357" target="_blank">9497357</a>). 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

## Peroxiredoxin 1 Antibody (9D2) - 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

## Peroxiredoxin 1 Antibody (9D2) - Images

## Peroxiredoxin 1 Antibody (9D2) - Background

Peroxiredoxin (Prx) is a growing peroxidase family, whose mammalian members have been known to connect with cell proliferation, differentiation, and apoptosis. Many isoforms (about 50 proteins), collected in accordance to the amino acid sequence homology, particularly amino-terminal region containing active site cysteine residue, and the thiol-specific antioxidant activity, distribute throughout all the kingdoms. Among them, mammalian Prx consists of 6 different members grouped into typical 2-Cys, atypical 2-Cys Prx, and 1-Cys Prx. Except Prx VI belonging to 1-Cys Prx subgroup, the other five 2-Cys Prx isotypes have the thioredoxin-dependent peroxidase (TPx) activity utilizing thioredoxin, thioredoxin reductase, and NADPH as a reducing system. Mammalian Prxs are 20 – 30 kDa in molecular size and vary in subcellular localization: Prx I, II, and VI in cytosol, Prx III in mitochondria, Prx IV in ER and secretion, Prx V showing complicated distribution including peroxisome, mitochondria and cytosol. Prx I is involved in redox regulation of the cell. Reduces peroxides with reducing equivalents provided through the thioredoxin system but not from glutaredoxin. May play an important role in eliminating peroxides generated during metabolism. Might participate in the signaling cascades of growth factors and tumor necrosis factor alpha by regulating the intracellular concentrations of H2O2. Reduces an intramolecular disulfide bond in GDPD5 that gates the ability to GDPD5 to drive post mitotic motor neuron differentiation.