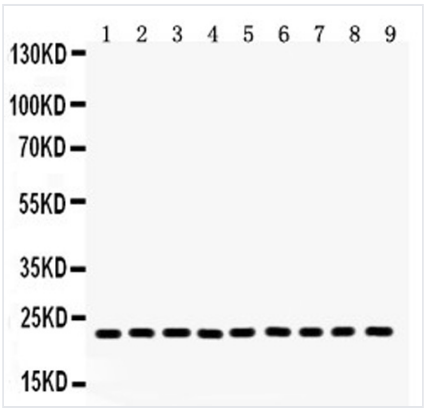
Peroxiredoxin 1 (PRDX1) Antibody – Rabbit Polyclonal

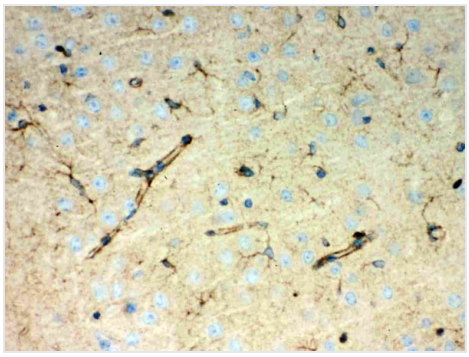
PRODUCT OVERVIEW

Product Name	Peroxiredoxin 1 (PRDX1), Polyclonal Antibody
Full Product Name	Anti-Peroxiredoxin 1 Antibody
Product Gene Name	anti-PRDX1 antibody
Product Synonym Names	Peroxiredoxin-1; Hbp23; Heme binding 23 kDa protein; Macrophage 23 Kd stress protein; Macrophage 23kDa stress protein; Macrophase stress protein 22kDa; Macrophase stress protein 23 kd; MSP23; Natural killer cell enhancing factor A; Natural killer cell-enhancing factor A; Natural killer enhancing factor A; NKEF A; NKEF-A; NkefA; OSF3; Osteoblast specific factor 3; PAG; Paga; PAGB; Peroxiredoxin-1; Prdx 1; Prdx1; PRDX1_HUMAN; Proliferation associated gene A; Proliferation associated protein PAG; Proliferation-associated gene protein; PrxI; Tdpx 2; Tdpx2; TDX2; Thioredoxin dependent peroxide reductase 2; Thioredoxin peroxidase 2; Thioredoxin-dependent peroxide reductase 2; TPxA; Trx dependent peroxide reductase 2; peroxiredoxin 1
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Form/Format	Lyophilized. Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na_2HPO_4, 0.05mg NaN_3.
Purity/Purification	Immunogen Affinity Purified
Preparation and Storage	At -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquoted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.
OMIM	176763
3D Structure	ModBase 3D Structure for Q06830
Immunogen	A synthetic peptide corresponding to a sequence in the middle region of human Peroxiredoxin 1 (100-128aa MNIPLVSDPKRTIAQDYGVLKADEGISFR), different from the related mouse sequence by one amino acid, and identical to the related rat sequence.
Ig Type	Rabbit IgG
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Applications Tested/Suitable for anti-PRDX1 antibody	Western Blot (WB), Immunohistochemistry (IHC) Paraffin, Immunocytochemistry (ICC)

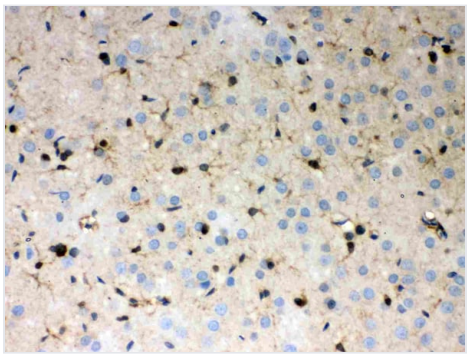
Application Notes for anti-PRDX1 antibody	**Western Blot (WB):** Concentration: 0.1-0.5 ug/ml; Tested Species: Human, Mouse, Rat **Immunohistochemistry (Paraffin-embedded Section):** Concentration: 0.5-1 ug/ml; Tested Species: Human, Mouse, Rat; Antigen Retrieval: By heat **Immunocytochemistry:** Concentration: 0.5-1 ug/ml; Tested Species: Human **Immunocytochemistry/Immunofluorescence:** Concentration: 2 ug/ml; Tested Species: Human **Flow Cytometry (Fixed):** Concentration: 1-3 ug/1x10^6 cells WB: The detection limit for Peroxiredoxin 1 is approximately 0.1 ng/lane under reducing conditions. By Heat: Boiling the paraffin sections in 10 mM citrate buffer, pH 6.0, for 20 min is required for the staining of formalin/paraffin sections Optimal dilutions should be determined by the end user.
Related Product Information for anti-PRDX1 antibody	Description: Rabbit IgG polyclonal antibody for Peroxiredoxin-1(PRDX1) detection. Tested with WB, IHC-P, ICC in Human;Mouse;Rat. 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 H2O2 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. mmunoprecipitation 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.
Product References and Citations for anti-PRDX1 antibody	1. Neumann, C. A., Krause, D. S., Carman, C. V., Das, S., Dubey, D. P., Abraham, J. L., Bronson, R. T., Fujiwara, Y., Orkin, S. H., Van Etten, R. A.Essential role for the peroxiredoxin Prdx1 in erythrocyte antioxidant defence and tumour suppression. Nature 424: 561-565, 2003. 2. Prosperi, M.-T., Apiou, F., Dutrillaux, B., Goubin, G. Organization and chromosomal assignment of two human PAG gene loci: PAGA encoding a functional gene and PAGB a processed pseudogene. Genomics 19: 236-241, 1994. 3. Yan, Y., Sabharwal, P., Rao, M., Sockanathan, S. The antioxidant enzyme Prdx1 controls neuronal differentiation by thiol-redox-dependent activation of GDE2. Cell 138: 1209-1221, 2009.
Other Notes	Small volumes of anti-PRDX1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for PRDX1 purchase	MBS178327 is an antibody targeting PRDX1. Also known as Anti-Peroxiredoxin 1 Antibody. Reactive in Human, Mouse, Rat. Host: Rabbit.



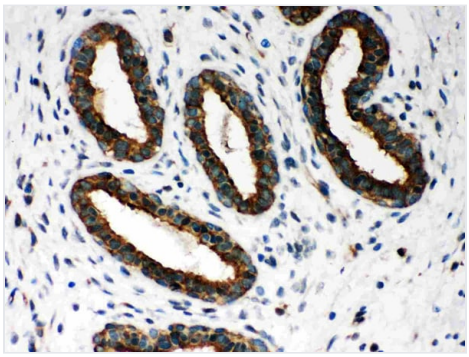
Western Blot (WB) of anti-PRDX1 antibody
Anti- Peroxiredoxin 1 Picoband antibody, MBS178327, Western blottingAll lanes: Anti Peroxiredoxin 1 (MBS178327) at 0.5ug/mlLane 1: Rat Brain Tissue Lysate at 50ugLane 2: Mouse Brain Tissue Lysate at 50ugLane 3: U87 Whole Cell Lysate at 40ugLane 4: NEURO Whole Cell Lysate at 40ugLane 5: A375 Whole Cell Lysate at 40ugLane 6: 293T Whole Cell Lysate at 40ugLane 7: SMMC Whole Cell Lysate at 40ugLane 8: A549 Whole Cell Lysate at 40ugLane 9: RH35 Whole Cell Lysate at 40ugPredicted bind size: 22KDObserved bind size: 22KD



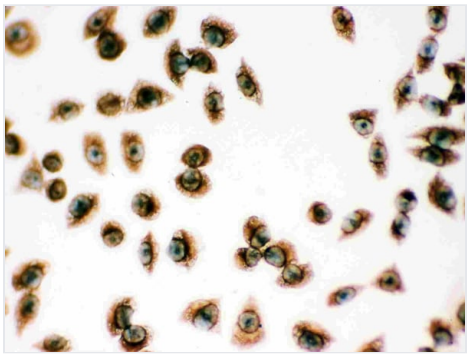
Immunohistochemistry (IHC) of anti-PRDX1 antibody
Anti- Peroxiredoxin 1 Picoband antibody, MBS178327, IHC(P)IHC(P): Mouse Brain Tissue



Immunohistochemistry (IHC) of anti-PRDX1 antibody
Anti- Peroxiredoxin 1 Picoband antibody, MBS178327, IHC(P)IHC(P): Rat Brain Tissue



Immunohistochemistry (IHC) of anti-PRDX1 antibody
Anti- Peroxiredoxin 1 Picoband antibody, MBS178327, IHC(P)IHC(P): Huma Mammary Cancer Tissue



Immunocytochemistry (ICC) of anti-PRDX1 antibody
Anti- Peroxiredoxin 1 Picoband antibody, MBS178327, ICCICC: SMMC-7721 Cell

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for PRDX1. It may not necessarily be applicable to this product.

NCBI GI #	320461711
NCBI GeneID	5052
NCBI Accession #	NP_001189360.1
UniProt Primary Accession #	Q06830

UniProt Secondary Accession #	P35703; Q2V576; Q5T154; Q5T155; B5BU26; D3DPZ8
UniProt Related Accession #	Q06830
GenBank Nucleotide #	NM_001202431.1
NCBI Official Full Name	peroxiredoxin-1
NCBI Official Synonym Full Names	peroxiredoxin 1
NCBI Official Symbol	PRDX1
NCBI Official Synonym Symbols	PAG; PAGA; PAGB; PRX1; PRXI; MSP23; NKEFA; TDPX2; NKEF-A
UniProt Protein Name	Peroxiredoxin-1
UniProt Synonym Protein Names	Natural killer cell-enhancing factor A; NKEF-A; Proliferation-associated gene protein; PAG; Thioredoxin peroxidase 2; Thioredoxin-dependent peroxide reductase 2
Protein Family	Peroxiredoxin
UniProt Gene Name	PRDX1
UniProt Synonym Gene Names	PAGA; PAGB; TDPX2; NKEF-A; PAG
UniProt Entry Name	PRDX1_HUMAN
NCBI Protein Information	peroxiredoxin-1
NCBI Summary for PRDX1	This gene encodes a member of the peroxiredoxin family of antioxidant enzymes, which reduce hydrogen peroxide and alkyl hydroperoxides. The encoded protein may play an antioxidant protective role in cells, and may contribute to the antiviral activity of CD8(+) T-cells. This protein may have a proliferative effect and play a role in cancer development or progression. Four transcript variants encoding the same protein have been identified for this gene. [provided by RefSeq, Jan 2011]
UniProt Comments for PRDX1	PRDX1: a member of the peroxiredoxin family of antioxidant enzymes, which reduce hydrogen peroxide and alkyl hydroperoxides. 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 H(2)O(2). May have a proliferative effect and play a role in cancer development or progression. Protein type: Oxidoreductase; Nuclear receptor co-regulator; EC 1.11.1.15 Chromosomal Location of Human Ortholog: 1p34.1 Cellular Component: cytoplasm; cytosol; extracellular space; melanosome; mitochondrion; myelin sheath; nucleus Molecular Function: identical protein binding; peroxidase activity; protein binding; thioredoxin peroxidase activity Biological Process: cell proliferation; erythrocyte homeostasis; hydrogen peroxide catabolic process; natural killer cell mediated cytotoxicity; regulation of NF-kappaB import into nucleus; regulation of stress-activated MAPK cascade; removal of superoxide radicals; response to reactive oxygen species; retinal homeostasis; skeletal development
Research Articles on PRDX1	**1.** PRDX1 was overexpressed in the tumor tissues of liver cancer and served as an independent poor prognostic factor for overall survival. PRDX1 can be modified by small ubiquitin-like modifier to play specific roles in hepatocarcinogenesis.
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