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Anti-Peroxiredoxin 1 Picoband Antibody

Catalog # ABO12039

Product Information

Application	WB, IHC-P, ICC
Primary Accession	Q06830
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.

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
Application Details	Immunocytochemistry , 0.5-1 □g/ml, Human, - Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml, Human, Mouse, Rat, By Heat Western blot, 0.1-0.5 □g/ml, Human, Mouse, Rat
Subcellular Localization	Cytoplasm . Melanosome . Identified by mass spectrometry in melanosome fractions from stage I to stage IV.
Source	Eukaryota
Protein Name	Peroxiredoxin-1
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
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.
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.

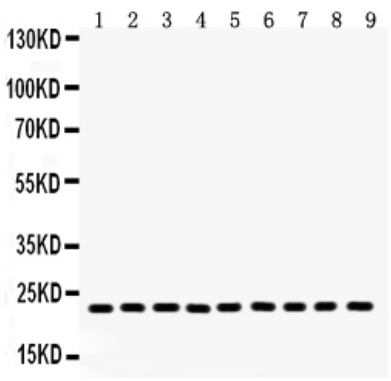
Protein Information

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: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

Background

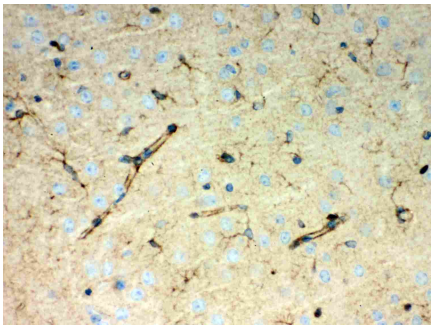
PRDX1(Peroxiredoxin 1), also called PRX1, PAGA or NKEFA, is a thiol reductase that plays critical roles in oxidative and thermal stress defense mechanisms through its abilities to metabolize H2O2 and act as a molecular chaperone, respectively. This gene encodes a member of the peroxiredoxin family of 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.

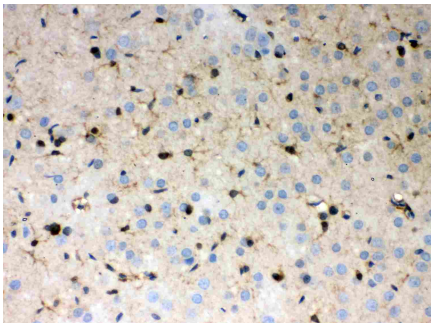
Images



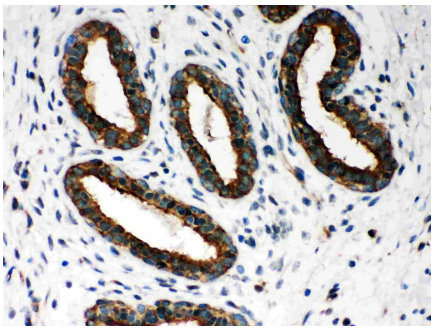
Anti- Peroxiredoxin 1 Picoband antibody, ABO12039, Western blottingAll lanes: Anti Peroxiredoxin 1 (ABO12039) at 0.5ug/mlLane 1: Rat Brain Tissue Lysate at 50ugLane 2: Mouse Brain Tissue Lysate at 50ugLane 3: U87 Whole Cell Lysate at 40ugLane 4: NEURO Whole Cell Lysate at 40ugLane 5: A375 Whole Cell 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

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

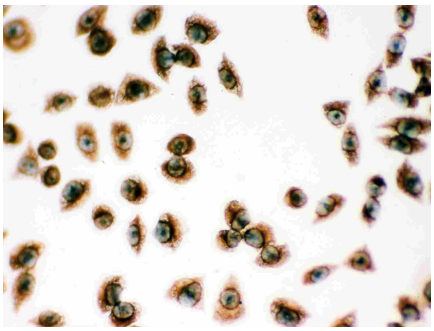




Anti- Peroxiredoxin 1 Picoband antibody, ABO12039, IHC(P)IHC(P): Rat Brain Tissue



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



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