

Product name:	PRX I Rabbit Polyclonal Antibody
Cat number:	ABN16568
Conjugate:	Unconjugated
Size:	100µL
Clone:	Polyclonal
Concentration:	1mg/ml
Host:	Rabbit
Isotype:	IgG
Immunogen:	The antiserum was produced against synthesized peptide derived from the Internal region of human PRDX1. AA range:31-80
Reactivity:	Human,Mouse,Rat
Applications:	WB 1:500-1:2000,IHC 1:100-1:300,ICC/IF 1:50-1:200,ELISA 1:10000-1:20000
Molecular Weight:	21kDa
Purification:	Affinity purification
Form:	Liquid
Buffer:	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Storage:	Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles.

Background:

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], catalytic activity: $2 \text{ R}'\text{-SH} + \text{ROOH} = \text{R}'\text{-S-S-R}' + \text{H}_2\text{O} + \text{ROH}$, function: 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_2O_2 , induction: Constitutively expressed in most human cells; is induced to higher levels upon serum stimulation in untransformed and transformed cells, miscellaneous: Inactivated upon oxidative stress by overoxidation of Cys-52 to Cys-SO(2)H and Cys-SO(3)H. Cys-SO(2)H is retroreduced to Cys-SOH after removal of H_2O_2 , while Cys-SO(3)H may be irreversibly oxidized, miscellaneous: The active site is the redox-active Cys-52 oxidized to Cys-SOH. Cys-SOH rapidly reacts with Cys-173-SH of the other subunit to form an intermolecular disulfide with a concomitant homodimer formation. The enzyme may be subsequently regenerated by reduction of the disulfide by thioredoxin, PTM: Phosphorylated on Thr-90 during the M-phase, which leads to a more than 80% decrease in enzymatic activity, similarity: Belongs to the ahpC/TSA family, similarity: Contains 1 thioredoxin domain, subcellular location: Identified by mass spectrometry in melanosome fractions from stage I to stage IV, subunit: Homodimer; disulfide-linked, upon oxidation (By similarity). May form heterodimers with AOP2.