

## Product datasheet for **AR09077PU-L**

### Peroxiredoxin-1 / PRDX1 (1-199, His-tag) Human Protein

#### Product data:

Product Type:	Recombinant Proteins
Description:	Peroxiredoxin-1 / PRDX1 (1-199, His-tag) human recombinant protein, 0.5 mg
Species:	Human
Expression Host:	E. coli
Expression cDNA Clone or AA Sequence:	<u>MGSSHHHHHH</u> <u>SSGLVPRGSH</u> MSSGNAKIGH PAPNFKATAV MPDGQFKDIS LSDYKGKYVW FFFYPLDFTF VCPTEIIAFS DRAEEFKKLN CQVIGASVDS HFCHLAWVNT PKKQGGLGPM NIPLVSDPKR TIAQDYGVK ADEGISFRGL FIIDDKGILR QITVNDLPVG RSVDETLRLV QAFQFTDKHG EVCAPAGWKPG SDTIKPDVQK SKEYFSKQK
Tag:	His-tag
Concentration:	lot specific
Purity:	>90% by SDS PAGE
Buffer:	Presentation State: Purified State: Liquid purified protein Buffer System: 20 mM Tris-HCl buffer (pH 7.5) containing 20% Glycerol
Bioactivity:	Specific: Approximately 600-670 pmole/min/μg. Enzymatic activity was confirmed by measuring the remaining peroxide after incubation of PRDX1 and peroxide for 20 min at room temperature. Specific activity is defined as the amount of hydroperoxide that 1ug of enzyme can reduce at 25°C for 1 minute.
Preparation:	Liquid purified protein



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<b>Applications:</b>	<p>Protocol: <b>Activity Assay:</b></p> <ol style="list-style-type: none"><li>1. Prepare a 50 µl reaction mix into a suitable container : The final concentrations are 1mM DTT, 0.03X PBS, 0.5% glycerol.</li><li>2. Add 5 µl of recombinant PRDX1 solution with various concentrations (0.25 µg, 0.5 µg) in 45 µl reaction buffer.</li><li>3. Incubate at 25°C for 2 minutes.</li><li>4. Add 5 µl of 5 mM H<sub>2</sub>O<sub>2</sub> as a substrate and incubate the mixture for 20 min.</li><li>5. Add 20 µl of 26% Trichloroacetic acid (TCA) to stop the reaction.</li><li>6. Add 30 µl of Formation solution (10mM Ferrous Ammonium Sulfate (Fe(II)(NH<sub>4</sub>)<sub>2</sub>(SO<sub>4</sub>)<sub>2</sub>), 2.5M KSCN)</li><li>7. Record the increase in A475nm.</li></ol>
<b>Protein Description:</b>	Recombinant Human PRDX1, fused to <i>His-tag</i> at N-terminus, was expressed in <i>E.coli</i> and purified by conventional chromatography techniques.
<b>Storage:</b>	Store (in aliquots) at -20°C. Avoid repeated freezing and thawing.
<b>Stability:</b>	Shelf life: one year from despatch.
<b>RefSeq:</b>	<a href="#">NP_001189360</a>
<b>Locus ID:</b>	5052
<b>UniProt ID:</b>	<a href="#">Q06830</a> , <a href="#">A0A384NPQ2</a>
<b>Cytogenetics:</b>	1p34.1
<b>Synonyms:</b>	MSP23; NKEF-A; NKEFA; PAG; PAGA; PAGB; PRX1; PRXI; TDPX2
<b>Summary:</b>	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]

**Product images:**