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## Product Data Sheet

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Product Name: PRDX1 Mouse  
 Cat. No.: GP22151  
 Batch No.: 1

### Product Data

Purity	>98%	Source	Sf9, Baculovirus cells.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Peroxiredoxin-1; Macrophage 23 kDa stress protein; Osteoblast-specific factor 3; OSF-3; Thioredoxin peroxidase 2; Thioredoxin-dependent peroxidoreductase 2.		
Amino Acid Sequence	MSSGNAKIGY PAPNFKATAV MPDGQFKDIS LSEYKGKYVV FFFYPLDFTFVCPTEIIAFS DRADEFKRLN CQVIGASVDS HFCHLAWINT PKKQGGLGPM NIPLISDPKR TIAQDYGVKKADEGISFRGL FIIDDKGILR QITINDLPVG RSVDEIIRLV QAFQFTDKHG EVCPAGWKPGSDTIKPDVVK SKEYFSKQKL EHHHHHHH.		
Formulation	PRDX1 protein solution (0.5mg/ml) containing Phosphate Buffered Saline (pH 7.4) and 10% glycerol.		

### Introduction

PRDX1 is part of the peroxiredoxin family of antioxidant enzymes, which reduce hydrogen peroxide and alkyl hydroperoxides. PRDX1 is an important protector of red blood cells against reactive oxygen species and in tumor prevention. PRDX1 is antioxidant protective in cells, and contributes to the antiviral activity of CD8(+) T-cells. PRDX1 has a proliferative effect and is involved in cancer development or progression. Peroxiredoxin-1 plays a role in redox regulation of the cell. Peroxiredoxin decreases peroxides with reducing equivalents provided through the thioredoxin system but not from glutaredoxin. Peroxiredoxin is involved in eliminating peroxides generated during metabolism. Peroxiredoxin participates in the signaling cascades of growth factors and TNF-alpha by regulating the intracellular concentrations of  $H_2O_2$ .

### Biological Activity

Specific activity is >2,500 pmol/min/ug. Enzymatic activity is defined as the amount of

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hydroperoxide that 1ug of enzyme can reduce at 25°C for minute.

### Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

### Background

PRDX1 Mouse Recombinant produced in Sf9 Baculovirus cells is a single, glycosylated polypeptide chain containing 207 amino acids (1-199a.a.) and having a molecular mass of 23.2kDa (Molecular size on SDS-PAGE will appear at approximately 18-28kDa). PRDX1 is expressed with an 8 amino acid His tag at C-Terminus and purified by proprietary chromatographic techniques.

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