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## Product Data Sheet

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Product Name: PRDX3 Human

Cat. No.: GP22155

Batch No.: 1

**Product Data**

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	AOP1; MER5; AOP-1; SP-22; PRO1748; MGC24293; MGC104387; PRDX3; Thioredoxin-dependent peroxide reductase mitochondrial; Peroxiredoxin-3; PRX III; Antioxidant protein 1; Protein MER5 homolog; HBC189.		
Amino Acid Sequence	MPAVTQHAPY FKGTAVVNGE FKDLSLDDFK GKYLVLFFYP LDFTFVCPT IVAFSDKANE FHDVNCEVVA VSVDSHFSL AWINTPRKNG GLGHMNIALL SDLTKQISR D YGVLLEGSG L ALRGLFIIDP NGVIKHL SVN DLPVGRSVEE TLRLVKAFQY VETHGEVCPA NWTPDSPTIK PSPAASKEYF QKVNQ.		
Formulation	The PRDX3 solution contains 20mM Tris-HCl pH-8, & 10% glycerol.		

**Introduction**

PRDX3 is part of the peroxiredoxin family of antioxidant enzymes, that reduces hydrogen peroxide and alkyl hydroperoxides. PRDX3 is particularly located in the mitochondria and involved in the regulation of cellular redox status by serving as a primary line of defense against H<sub>2</sub>O<sub>2</sub> produced during respiration. PRDX3 is a significant regulator of the abundance of mitochondrial H<sub>2</sub>O<sub>2</sub>, which itself promotes apoptosis in cooperation with other mediators of apoptotic signaling. PRDX3 mitochondrial protein is significantly decreased in Alzheimer Disease and Down Syndrome.

**Biological Activity**

The specific activity was found to be approximately 82-83 pmole/min/?g. The enzymatic activity was confirmed by measuring the remaining peroxide after incubation of PRDX3 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.

**Stability**

**Caution: Product has not been fully validated for medical applications. For research use only.**

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Address: 10292 Central Ave. #205, Montclair, CA, USA

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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

PRDX3 Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 195 amino acids (63-256 a.a.) and having a molecular mass of 21.5 kDa. The PRDX3 is purified by proprietary chromatographic techniques.

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