
Product Data Sheet

Product Name: PRDX1 Human
 Cat. No.: GP22150
 Batch No.: 1

Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Peroxiredoxin-1; EC 1.11.1.15; Thioredoxin peroxidase 2; Thioredoxin-dependent peroxide reductase 2; Proliferation-associated gene protein; Natural killer cell-enhancing factor A; NKEF-A; PRDX1; TDPX2; PRDX-1; PAG; PAGA; PRX1; PAGB; PRXI; MSP23; NKEFA.		
Amino Acid Sequence	MGSSHHHHHH SGLVPRGSH MSSGNAKIGH PPNFKATAV MPDGQFKDIS LSDYKGKYVV FFFYPLDFTF VCPTEIIAFS DRAEEFKKLN CQVIGASVDS HFCHLAWVNT PKKQGGLGPM NIPLVSDPKR TIAQDYGVLK ADEGISFRGL FIIDDKGILR QITVNDLPVG RSVDETLRLV QAFQFTDKHG EVCPAGWKPG SDTIKPDVQK SKEYFSKQK.		
Formulation	The Peroxiredoxin solution (1mg/ml) contains 20mM Tris-HCl pH-7.5 & 20% 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

The specific activity was found to be approximately 600-670 pmole/min/?d. The

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

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

Product Data Sheet

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.

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

Peroxiredoxin Human Recombinant fused with a 20 amino acid His tag at N-terminus produced in E.Coli is a single, non-glycosylated, polypeptide chain (1-199) containing 219 amino acids and having a molecular mass of 24 kDa. The Peroxiredoxin is purified by proprietary chromatographic techniques.

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

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