

Recombinant Human Peroxiredoxin 3

Cat. No. PRDX3-371H Lot. No. (See product label)

SPECIFICATION

Product Overview Recombinant Human PRDX3 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.

Species Human

Source E.coli

ProteinLength 63-256 a.a.

Description 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 H₂O₂ produced during respiration. PRDX3 is a significant regulator of the abundance of mitochondrial H₂O₂, which itself promotes apoptosis in cooperation with other mediators of apoptotic signaling. PRDX3 mitochondrial protein is significantly decreased in Alzheimer Disease and Down Syndrome.

Amino Acid Sequence
 MPAVTQHAPY FKGTAVVNGE FKDSLDDDFK GKYLVLFFYP LDFTFVCPT
 IVAFSDKANE FHDVNCEVVA VSVDSHFSL AWINTPRKNG GLGHMNIALL
 SDLTKQISR D YGVLLEGSGL ALRGLFIIDP NGVIKHLNVN DLPVGRSVEE
 TLRLVKAFQY VETHGEVCPA NWTPDSPTIK PSPAASKEYF QKVNQ.

Physical Appearance Sterile Filtered colorless solution.

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| Formulation | The PRDX3 solution contains 20mM Tris pH-8, & 10% glycerol. |
| Purity | Greater than 95% as determined by SDS-PAGE. |
| Stability | PRDX3 although stable 4°C for 4 weeks, should be stored desiccated below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles. |

GENE INFORMATION

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|----------------------------|---|
| Gene Name | PRDX3 peroxiredoxin 3 [Homo sapiens] |
| Synonyms | PRDX3; peroxiredoxin 3; AOP1; MER5; AOP-1; SP-22; PRO1748; MGC24293; MGC104387; antioxidant protein 1; EC 1.11.1.15; thioredoxin-dependent peroxide reductase |
| Gene ID | 10935 |
| mRNA Refseq | NM_006793 |
| Protein Refseq | NP_006784 |
| MIM | 604769 |
| UniProt ID | P30048 |
| Chromosome Location | 10q25-q26 |
| Function | alkyl hydroperoxide reductase activity; caspase inhibitor activity; identical protein binding; oxidoreductase activity; protein C-terminus binding; protein kinase binding; |

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peroxiredoxin activity

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