Recombinant Human Glutathione Peroxidase 1, His-tagged

Cat. No. GPX1-1273H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human GPX1(U49C) protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography techniques.
Species	Human
Source	E. coli
Description	GPX1 belongs to the glutathione peroxidase family, consisting of eight known glutathione peroxidases (Gpx1-8) in humans. GPX1 functions in the detoxification of hydrogen peroxide, and is one of the most important antioxidant enzymes in humans. The GPX1 is part of the enzymatic antioxidant defence, preventing oxidative damage to DNA, proteins and lipids by detoxifying hydrogen and lipid peroxides that may contribute to prostate cancer development. This protein is one of only a few proteins known in higher vertebrates to contain selenocysteine, which occurs at the active site of glutathione peroxidase and is coded by the nonsense (stop) codon TGA.
Form	Liquid. In 20mM Tris-HCl buffer (pH 8.0) containing 2mM DTT, 30% glycerol, 100mM NaCl
Molecular Weight	24.2kDa (223aa), confirmed by MALDI-TOF
Purity	> 90% by SDS - PAGE
Concentration	0.5mg/ml (determined by Bradford assay)

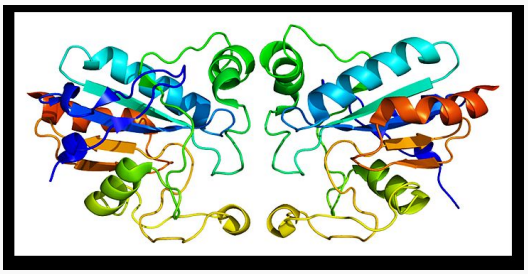
Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

Sequences of amino acids	MGSSHHHHHH SSGLVPRGSH MCAARLAAAA AAAQSVYAFS ARPLAGGEPV SLGSLRGKVL LIENVASLCG TTVRDYTQMN ELQRRLGPRG LVVLGFPCNQ FGHQENAKNE EILNSLKYVR PGGGFEPNFM LFEKCEVNGA GAHPLFAFLR EALPAPSDDA TALMTDPKLI TWSPVCRNDV AWNFEKFLVG PDGVPLRRYS RRFQTIDIEP DIEALLSQGP SCA
Storage	Can be stored at +4C short term (1-2 weeks). For long term storage, aliquot and store at -20C or -70C. Avoid repeated freezing and thawing cycles.
Pathways	Amyotrophic lateral sclerosis (ALS); Arachidonic acid metabolism; Direct p53 effectors; Folate Metabolism; Glutathione metabolism; Huntington"s disease; Metabolism of nucleotides; Oxidative Stress; Purine catabolism; Selenium Metabolism and Selenoproteins; Selenium Pathway; glutathione redox reactions I

GENE INFORMATION

Gene Name	GPX1 glutathione peroxidase 1 [Homo sapiens]
Official Symbol	GPX1
Synonyms	GPX1; glutathione peroxidase 1; GSHPX1; MGC14399; MGC88245; GPX1; Cellular glutathione peroxidase; MGC14399; GPx-1; MGC88245; GSHPx-1; OTTHUMP00000210766; OTTHUMP00000210765; EC 1.11.1.9; EC 1.11.1
Gene ID	2876
mRNA Refseq	NM_000581
Protein Refseq	NP_000572
MIM	138320

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UniProt ID	P07203
Chromosome Location	3p21.3
Function	SH3 domain binding; endopeptidase inhibitor activity; glutathione peroxidase activity; oxidoreductase activity
PDB rendering based on2f8a.	

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