

Recombinant Mouse Gpx4 protein, His & T7-tagged

Cat. No. Gpx4-8204M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Mouse Gpx4 aa. (Gly74~Leu197 (Accession # O70325)) fused with N-terminal His & T7 tag was produced in E. coli cells.
Species	Mouse
Source	E.coli
ProteinLength	Gly74~Leu197
Description	The protein encoded by this gene belongs to the glutathione peroxidase family, members of which catalyze the reduction of hydrogen peroxide, organic hydroperoxides and lipid hydroperoxides, and thereby protect cells against oxidative damage. Several isozymes of this gene family exist in vertebrates, which vary in cellular location and substrate specificity. This isozyme has a high preference for lipid hydroperoxides and protects cells against membrane lipid peroxidation and cell death. It is also required for normal sperm development; thus, it has been identified as a 'moonlighting' protein because of its ability to serve dual functions as a peroxidase, as well as a structural protein in mature spermatozoa. Disruption of this gene in mouse spermatocytes is associated with male infertility. This isozyme is also a selenoprotein, containing the rare amino acid selenocysteine (Sec) at its active site. Sec is encoded by the UGA codon, which normally signals translation termination. The 3' UTRs of selenoprotein mRNAs contain a conserved stem-loop structure, designated the Sec insertion sequence (SECIS) element, that is necessary for the recognition of UGA as a Sec codon, rather than as a stop signal. Alternatively spliced

 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

	transcript variants have been found for this gene. Two pseudogenes of this gene have been defined on chromosomes 10 and 17.
Form	Freeze-dried powder
Molecular Mass	Predicted Molecular Mass: 18.1kDa.
Endotoxin	<1.0EU per 1ug (determined by the LAL method)
Purity	>95%
Characteristic	The isoelectric point is 8.8.
Applications	SDS-PAGE; WB; ELISA; IP.
Stability	The thermal stability is described by the loss rate of the target protein. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. (Referring from China Biological Products Standard, which was calculated by the Arrhenius equation.) The loss of this protein is less than 5% within the expiration date under appropriate storage condition.
Storage	Avoid repeated freeze/thaw cycles. Store at 2-8°C for one month. Aliquot and store at -80°C for 12 months.
Storage Buffer	Supplied as lyophilized form in PBS, pH7.4, containing 5% sucrose, 0.01% sarcosyl.
Reconstitution	Reconstitute in sterile PBS, pH7.2-pH7.4.

GENE INFORMATION

 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

Gene Name	Gpx4 glutathione peroxidase 4 [Mus musculus (house mouse)]
Official Symbol	Gpx4
Synonyms	Gpx4; glutathione peroxidase 4; GPx-4; PHGPx; snGPx; GSHPx-4; mtPHGPx; phospholipid hydroperoxide glutathione peroxidase, nuclear; phospholipid hydroperoxide glutathione peroxidase, mitochondrial; sperm nuclei glutathione peroxidase
Gene ID	625249
mRNA Refseq	NM_001037741.3
Protein Refseq	NP_001032830.2
UniProt ID	O70325
SDS-PAGE	