

## 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

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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.

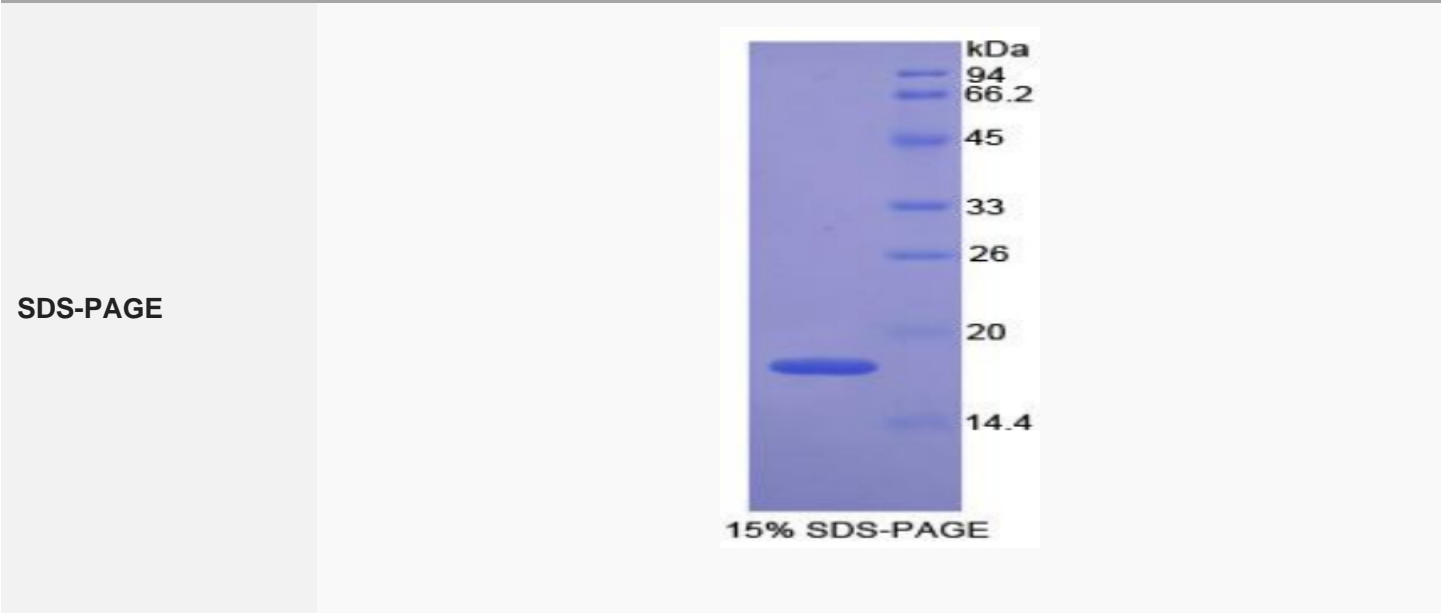
## GENE INFORMATION

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<b>Gene Name</b>	Gpx4 glutathione peroxidase 4 [ <i>Mus musculus</i> (house mouse) ]
<b>Official Symbol</b>	Gpx4
<b>Synonyms</b>	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
<b>Gene ID</b>	625249
<b>mRNA Refseq</b>	NM_001037741.3
<b>Protein Refseq</b>	NP_001032830.2
<b>UniProt ID</b>	O70325



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