

## Recombinant Mouse Gpx1 Protein, His&GST-tagged

**Cat. No.** Gpx1-1584M    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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| <b>Product Overview</b> | Recombinant Mouse Gpx1 Protein (Gly48-Ser201) with N-His&GST tag was expressed in E. coli.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Species</b>          | Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>ProteinLength</b>    | Gly48-Ser201                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Description</b>      | <p>The protein encoded by this gene belongs to the glutathione peroxidase family, members of which catalyze the reduction of organic hydroperoxides and hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>) by glutathione, and thereby protect cells against oxidative damage. Knockout mice lacking this gene are highly sensitive to oxidants, and develop mature cataracts due to damage to the eye lens nucleus. Other studies indicate that H<sub>2</sub>O<sub>2</sub> is also essential for growth-factor mediated signal transduction, mitochondrial function, and maintenance of thiol redox-balance; therefore, by limiting H<sub>2</sub>O<sub>2</sub> accumulation, glutathione peroxidases are also involved in modulating these processes. Several isozymes of this gene family exist in vertebrates, which vary in cellular location and substrate specificity. This isozyme is the most abundant, is ubiquitously expressed and localized in the cytoplasm, and whose preferred substrate is hydrogen peroxide. It 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</p> |

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for the recognition of UGA as a Sec codon, rather than as a stop signal. Alternatively spliced transcript variants have been found for this gene.

|                       |                                                                                                                                                                                                                                                                                                                                              |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Form</b>           | Freeze-dried powder                                                                                                                                                                                                                                                                                                                          |
| <b>Molecular Mass</b> | Predicted Molecular Mass: 47.5 kDa<br>Accurate Molecular Mass: 48 kDa                                                                                                                                                                                                                                                                        |
| <b>Purity</b>         | > 90%                                                                                                                                                                                                                                                                                                                                        |
| <b>Applications</b>   | Positive Control; Immunogen; SDS-PAGE; WB.                                                                                                                                                                                                                                                                                                   |
| <b>Stability</b>      | The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37 centigrade for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition. |
| <b>Storage</b>        | Avoid repeated freeze/thaw cycles. Store at 2-8 centigrade for one month. Aliquot and store at -80 centigrade for 12 months.                                                                                                                                                                                                                 |
| <b>Storage Buffer</b> | 20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300.                                                                                                                                                                                                                                          |
| <b>Reconstitution</b> | Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.                                                                                                                                                                                                                                            |

## GENE INFORMATION

|                        |                                                              |
|------------------------|--------------------------------------------------------------|
| <b>Gene Name</b>       | Gpx1 glutathione peroxidase 1 [ Mus musculus (house mouse) ] |
| <b>Official Symbol</b> | Gpx1                                                         |

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|-----------------------|-----------------------------------------------------------------------------------------------------------------|
| <b>Synonyms</b>       | GPX1; glutathione peroxidase 1; cellular glutathione peroxidase; Gpx; CGPx; GPx-1; GSHPx-1; AI195024; AL033363; |
| <b>Gene ID</b>        | <a href="#">14775</a>                                                                                           |
| <b>mRNA Refseq</b>    | <a href="#">NM_008160</a>                                                                                       |
| <b>Protein Refseq</b> | <a href="#">NP_032186</a>                                                                                       |
| <b>UniProt ID</b>     | <a href="#">P11352</a>                                                                                          |

