

Recombinant Mouse Gpx3 Protein

Cat. No. Gpx3-22M Lot. No. (See product label)

SPECIFICATION

Product Overview Recombinant Mouse Glutathione Peroxidase 3 (Non-tagged, signal peptide removed, 202 residues)

Species Mouse

Description The protein encoded by this gene belongs to the glutathione peroxidase family, members of which catalyze the reduction of organic hydroperoxides and hydrogen peroxide (H₂O₂) by glutathione, 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 is secreted and is highly expressed in mouse kidney, which appears to be the major source of the enzyme in plasma. It has a role in mouse organogenesis, and dysregulation of this isozyme has been associated with obesity-related metabolic complications, platelet-dependent thrombosis, colitis-associated carcinoma, and thermosensitive phenotype. 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 transcript variants have been found for this gene.

Purity ≥ 95% as judged by gel analysis

Unit Definition 1 U of enzyme consumes 1 μmol GSH per min in a Glutathione Reductase-coupled

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	GPx assay containing 1 mM GSH, 0.5 mM Cumene Hydroperoxide, 15 nM Human Glutathione Reductase and 0.5 mM NADPH in TE buffer (50 mM Tris-HCl, 2 mM EDTA, pH 7.5)
Applications	Glutathione Reductase-coupled GPx assay; Inhibitor screening; etc.
Notes	Centrifuge the tube briefly before opening the lid
Storage	Store at -20 centigrade upon delivery.
Concentration	1 mg/mL
Storage Buffer	25 mM Tris-HCl (pH 8.0) with 250 mM KCl, 2 mM 2-Mercaptoethanol and 10% glycerol.
Shipping	Shipped in cold pack by courier service.
GENE INFORMATION	
Gene Name	Gpx3 glutathione peroxidase 3 [Mus musculus (house mouse)]
Official Symbol	Gpx3
Synonyms	Gpx3; glutathione peroxidase 3; GPx; EGPx; GSHPx-3; GSHPx-P; glutathione peroxidase 3; GPx-3; GPx-P; extracellular GPx; plasma GPx; plasma glutathione peroxidase; EC 1.11.1.9
Gene ID	14778
mRNA Refseq	NM_008161

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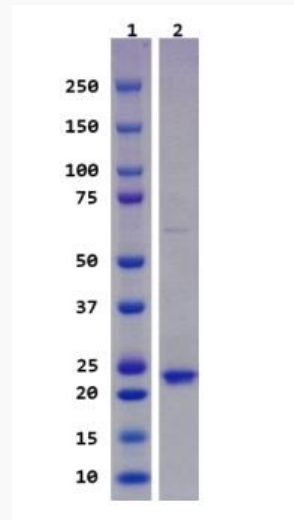
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Protein Refseq NP_032187

UniProt ID P46412

**Coomassie stained
SDS PAGE analysis
of 15 µg MGPX3
product**



Lane 1: Molecular weight marker

Lane 2: MGPX3

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