Recombinant Rat Gpx1 Protein, His-tagged

Cat. No. Gpx1-1585R **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Rat Gpx1 Protein (Gly48-Pro201) with N-His tag was expressed in E. coli.
Species	Rat
Source	E.coli
ProteinLength	Gly48-Pro201
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. Other studies indicate that H2O2 is also essential for growth-factor mediated signal transduction, mitochondrial function, and maintenance of thiol redox-balance; therefore, by limiting H2O2 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 for the recognition of UGA as a Sec codon, rather than as a stop signal.

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Form	Freeze-dried powder
Molecular Mass	Predicted Molecular Mass: 21.2 kDa Accurate Molecular Mass: 21 kDa
Purity	> 90%
Applications	Positive Control; Immunogen; SDS-PAGE; WB.
Stability	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.
Storage	Avoid repeated freeze/thaw cycles. Store at 2-8 centigrade for one month. Aliquot and store at -80 centigrade for 12 months.
Storage Buffer	20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300.
Reconstitution	Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

GENE INFORMATION

Gene Name	Gpx1 glutathione peroxidase 1 [Rattus norvegicus (Norway rat)]
Official Symbol	Gpx1
Synonyms	GPX1; glutathione peroxidase 1; GPx-1; cellular glutathione peroxidase; GSHPx; GSHPx-1;

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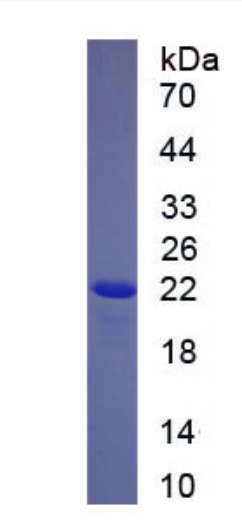
Gene ID	24404
mRNA Refseq	NM_030826
Protein Refseq	NP_110453
UniProt ID	P04041



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