

Cat. No:	MAB-94603
Size:	100µg
Clone:	GP2
Concentration:	1mg/ml
Host:	Rb
Isotype:	IgG
Immunogen:	A synthesized peptide derived from human GPX1
Reactivity:	Hu, Rt
Applications:	Western Blot: 1:500 - 1:2000
Molecular Weight:	22kDa
Purification:	Aff. Pur.
Synonyms:	GPXD; GSHPX1

Background:

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. This gene contains an in-frame GCG trinucleotide repeat in the coding region, and three alleles with 4, 5 or 6 repeats have been found in the human population. The allele with 4 GCG repeats has been significantly associated with breast cancer risk in premenopausal women. Alternatively spliced transcript variants and multiple pseudogenes of this gene have been identified.

Form:	Liquid
Buffer:	PBS with 0.02% sodium azide, 0.05% BSA, 50% glycerol, pH7.3.
Storage:	Store at -20°C. Avoid freeze / thaw cycles.

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