

Product datasheet for **SC202736**

Glutathione Peroxidase 1 (GPX1) (NM_000581) Human 3' UTR Clone

Product data:

Product Type:	3' UTR Clones
Product Name:	Glutathione Peroxidase 1 (GPX1) (NM_000581) Human 3' UTR Clone
Vector:	pMirTarget (PS100062)
Symbol:	GPX1
Synonyms:	GPXD; GSHPX1
ACCN:	NM_000581
Insert Size:	242 bp
Insert Sequence:	>SC202736 3'UTR clone of NM_000581 The sequence shown below is from the reference sequence of NM_000581. The complete sequence of this clone may contain minor differences, such as SNPs. Blue =Stop Codon Red =Cloning site GGCAAGTTGGACGCCCGCAAGATCCGCGAGATTCTCATTAAAGCCAAGAAGGGCGGAAAGATCGCCGTG TAACAATTGGCAGAGCTCAGAATTCA ACGATCGCC CTGCTGTCTCAAGGGCCAGCTGTGCC AGGGCGCCCTCCTACCCGGCTGCTTGGCAGTTGCAGTGC TGCTGTCTCGGGGGGTTTTTCATCTATGAGGGTGTTCCTCTAAACCTACGAGGGAGGAACACCTGATC TTACAGAAAATACCACCTCGAGATGGGTGCTGGTCTGTTGATCCAGTCTCTGCCAGACCAAGGGCAG TTTCCCCTAATAAAAGTGCCGGGTGTCAGCAGAA ACGCGT AAGCGGCCGCGCATCTAGATTCTGAAGAAAATGACCGACCAAGCGACGCCCAACCTGCCATCA CGAGATTCGATTCCACCGCCCTTCTATGAAAGG
Restriction Sites:	SgfI-MluI
OTI Disclaimer:	Our molecular clone sequence data has been matched to the sequence identifier above as a point of reference. Note that the complete sequence of this clone is largely the same as the reference sequence but may contain minor differences, e.g., single nucleotide polymorphisms (SNPs).
Components:	The cDNA clone is shipped in a 2-D bar-coded Matrix tube as 10 ug dried plasmid DNA. The package also includes 100 pmols of both the corresponding 5' and 3' vector primers in separate vials.
RefSeq:	<u>NM_000581.4</u>



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Summary:

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 have been found for this gene. Pseudogenes of this locus have been identified on chromosomes X and 21. [provided by RefSeq, Aug 2017]

Locus ID: 2876

MW: 8.6