

Product datasheet for **SC202934**

Glutathione Peroxidase 4 (GPX4) (NM_002085) Human 3' UTR Clone

Product data:

Product Type:	3' UTR Clones
Product Name:	Glutathione Peroxidase 4 (GPX4) (NM_002085) Human 3' UTR Clone
Vector:	pMirTarget (PS100062)
Symbol:	GPX4
Synonyms:	GPx-4; GSHPx-4; MCSP; PHGPx; SMD5; snGPx; snPHGPx
ACCN:	NM_002085
Insert Size:	237 bp
Insert Sequence:	>SC202934 3'UTR clone of NM_002085 The sequence shown below is from the reference sequence of NM_002085. The complete sequence of this clone may contain minor differences, such as SNPs. Blue =Stop Codon Red =Cloning site GGCAAGTTGGACGCCCGCAAGATCCGCGAGATTCTCATTAAAGCCAAGAAGGGCGGAAAGATCGCCGTG TAACAATTGGCAGAGCTCAGAATTCAAGCGATCGCC ATAGAGAAGGACCTGCCCACTATTTCTAGCTCCACAAGTGTGTGGCCCCGCCGAGCCCCGCCCCAGC CCCTTGGAGCCTTCCACCGCACTCATGACGGCCTGCCTGCAAACCTGCTGGTGGGGCAGACCCGAAAA TCCAGCGTGCACCCCGCCGGAGGAAGGTCCCATGGCCTGCTGGGCTTGGCTCGGCCCCCCACCCCTGG CTACCTTGTGGGAATAAACAGACAAATTAG ACGCGT AAGCGGCCGCGCATCTAGATTGAAAGAAATGACCGACCAAGCGACGCCCAACCTGCCATCA CGAGATTCGATTCCACCGCCGCTTCTATGAAAGG
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_002085.5</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 hydrogen peroxide, organic hydroperoxides and lipid hydroperoxides, 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 has a high preference for lipid hydroperoxides and protects cells against membrane lipid peroxidation and cell death. It is also required for normal sperm development; thus, it has been identified as a 'moonlighting' protein because of its ability to serve dual functions as a peroxidase, as well as a structural protein in mature spermatozoa. Mutations in this gene are associated with Sedaghatian type of spondylometaphyseal dysplasia (SMDS). 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. Transcript variants resulting from alternative splicing or use of alternate promoters have been described to encode isoforms with different subcellular localization. [provided by RefSeq, Dec 2018]

Locus ID:

2879

MW:

8.4