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Product datasheet for MC207295

Gpx1 (NM_008160) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Gpx1 (NM_008160) Mouse Untagged Clone
Symbol:	Gpx1
Synonyms:	AI195024; AL033363; CGP; CGPx; Gp; Gpx; GPx-; GPx-1; GSHPx; GSHPx-1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>MC207295 representing NM_008160 Red=Cloning site Blue=ORF Orange=Stop codon TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC GCCGCGATCGCC ATGTGTGCTGCTCGGCTCTCCGCGGCGGCACAGTCCACCGTGTATGCCTTCTCCGCGCGCCCGCTGACGG GCGGGGAGCCTGTGAGCCTGGGCTCCCTGCGGGGCAAGGTGCTGCTCATTGAGAATGTCGCGTCTCTCTG AGGCACCACGATCCGGGACTACACCGAGATGAACGATCTGCAGAAGCGTCTGGGACCTCGTGGACTGGTG GTGCTCGGTTTCCCGTGCAATCAGTTCGGACACCAGGAGAATGGCAAGAATGAAGAGATTCTGAATTCCC TCAAGTACGTCCGACCTGGTGGCGGGTTCGAGCCCAATTTTACATTGTTTGAGAAGTGCGAAGTGAATGG TGAGAAGGCTCACCCGCTCTTTACCTTCCTGCGGAATGCCTTGCCAACACCCAGTGACGACCCCACTGCG CTCATGACCGACCCCAAGTACATCATTTGGTCTCCGGTGTGCCGCAACGACATTGCCTGGAACTTTGAGA AGTTCCTGGTGGGCCCCGACGGTGTTCCCGTGCGCAGGTACAGCCGCCGCTTTCGTACCATCGACATCGA ACCTGACATAGAAACCCTGCTGTCCCAGCAGTCTGGCAACTCCTAA ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT ACAAGGATGACGACGATAAGGTTTAA
Restriction Sites:	SgfI-MluI
ACCN:	NM_008160
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP). The expression of this clone is not guaranteed due to the nature of selenoproteins.

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OTI Annotation:	This clone encodes a selenoprotein containing the rare amino acid selenocysteine (Sec). Sec is encoded by UGA codon, which normally signals translational termination. Expression of this clone is not guaranteed due to the nature of selenoproteins.
Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
Reconstitution Method:	1. Centrifuge at 5,000xg for 5min. 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA. 3. Close the tube and incubate for 10 minutes at room temperature. 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom. 5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_008160.6, NP_032186.2
RefSeq Size:	1066 bp
RefSeq ORF:	606 bp
Locus ID:	14775
UniProt ID:	P11352
Cytogenetics:	9 59.24 cM
Gene 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. Knockout mice lacking this gene are highly sensitive to oxidants, and develop mature cataracts due to damage to the eye lens nucleus. 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. Alternatively spliced transcript variants have been found for this gene. [provided by RefSeq, Jul 2016] Transcript Variant: This variant (1) encodes the longest isoform (1).

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