

Product datasheet for RR210732

Gpx1 (NM_030826) Rat Tagged ORF Clone

Product data:

OriGene Technologies, Inc.

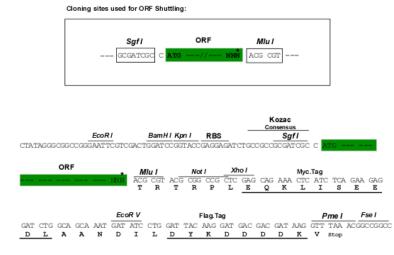
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Product Type:	Expression Plasmids
Product Name:	Gpx1 (NM_030826) Rat Tagged ORF Clone
Symbol:	Gpx1
Synonyms:	GSHPx; GSHPx-1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	<pre>>RR210732 representing NM_030826 Red=Cloning site Blue=ORF Green=Tags(s)</pre>
	TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC GCC <mark>GCGATCGC</mark> C
	ATGTCTGCTGCTCGGCTCTCCGCGGTGGCACAGTCCACCGTGTATGCCTTCTCCGCGCGCCCGCTGGCGG GCGGGGAGCCCGTGAGCCTGGGCTCCCTGCGGGGCAAGGTGCTGCTCATTGAGAATGTCGCGTCCCTCTG AGGCACCACGACCCGGGACTACACCGAAATGAATGATCGCAGAAGCGTCTGGGGCCTCGTGGCCTGGTG GTGCTCGGTTTCCCGTGCAATCAGTTCGGACATCAGGAGAATGGCAAGAATGAAGAGATTCTGAATTCCC TCAAGTATGTCCGACCCGGTGGTGGGTTCGAGCCCAACTTTACATTGTTTGAGAAGTGCGAGGTGAATGG TGAGAAGGCTCACCCGGTCTTTACCTTCCTGCGGAATGCCTTGCCAGCACCCAGTGACGATCCCACTGCG CTCATGACCGACCCCAAGTACATCATTTGTTCGGACCCCAGTGACCGACC
	ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT ACAAGGATGACGACGATAAG GTTTAA
Protein Sequence:	>RR210732 representing NM_030826 <mark>Red</mark> =Cloning site Green=Tags(s)
	MSAARLSAVAQSTVYAFSARPLAGGEPVSLGSLRGKVLLIENVASL*GTTTRDYTEMNDLQKRLGPRGLV VLGFPCNQFGHQENGKNEEILNSLKYVRPGGGFEPNFTLFEKCEVNGEKAHPLFTFLRNALPAPSDDPTA LMTDPKYIIWSPVCRNDISWNFEKFLVGPDGVPVRRYSRRFRTIDIEPDIEALLSKQPSNP
	TRTRPLEQKLISEEDLAANDILDYKDDDDKV
Restriction Sites:	Sgfl-Mlul



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Cloning Scheme:



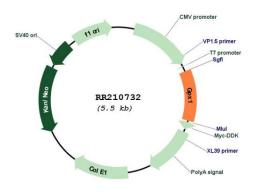
* The last codon before the Stop codon of the ORF

ACCN:	NM_030826
ORF Size:	603 bp
OTI Disclaimer:	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. <u>More info</u> The expression of this clone is not guaranteed due to the nature of selenoproteins.
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:	 Centrifuge at 5,000xg for 5min. Carefully open the tube and add 100ul of sterile water to dissolve the DNA. Close the tube and incubate for 10 minutes at room temperature. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom. 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.
RefSeq:	<u>NM 030826.4</u>
RefSeq Size:	898 bp
RefSeq ORF:	606 bp
Locus ID:	24404

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	Gpx1 (NM_030826) Rat Tagged ORF Clone – RR210732
UniProt ID:	<u>P04041</u>
Cytogenetics:	8q32
MW:	22.3 kDa
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. 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. [provided by RefSeq, Jul 2016]

Product images:



Circular map for RR210732

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