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Product datasheet for MG201805

Gpx2 (NM_030677) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Gpx2 (NM_030677) Mouse Tagged ORF Clone
Symbol:	Gpx2
Synonyms:	GI-G; GI-GPx; GPx-; GPx-GI; GSHPx-2; GSHPx-GI
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

ORF Nucleotide Sequence:

>MG201805 representing NM_030677
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCTTACATTGCCAAGTCGTTCTACGATCTCAGTGCCGTTGGCCTGGATGGGGAGAAGATAGACTTCA
ATACGTTCAGAGGCAGGGCTGTGCTGATTGAGAATGTGGCGTCACTCTGAGGAACAACTACCCGGGACTA
CAACCAGCTCAATGAGCTGCAATGTCGCTTTCCCAGGCGCCTGGTAGTTCTCGGCTTCCCTTGCAACCAG
TTCGGACATCAGGAGAACTGTCAGAACGAGGAGATCCTGAACAGCCTCAAGTATGTCCGACCTGGGGGTG
GGTACCAGCCCACCTTTAGTCTTACCCAAAAGTGTGACGTCAATGGGCAGAACGAGCATCCTGTCTTTGC
CTACCTGAAAGACAAGCTGCCCTACCCTTATGATGACCCGTTCTCCCTCATGACCGATCCCAAGCTCATC
ATATGGAGTCCCGTGCGCCGCTCAGACGTGTCCTGGAACTTTGAGAAGTTCCTCATAGGGCCAGAAGGGG
AGCCCTTCCGTCGCTACAGCCGCAGCTTCCAGACCATCAACATCGAGCCTGACATCAAACGGCTCCTCAA
AGTTGCCATC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>MG201805 representing NM_030677
Red=Cloning site Green=Tags(s)

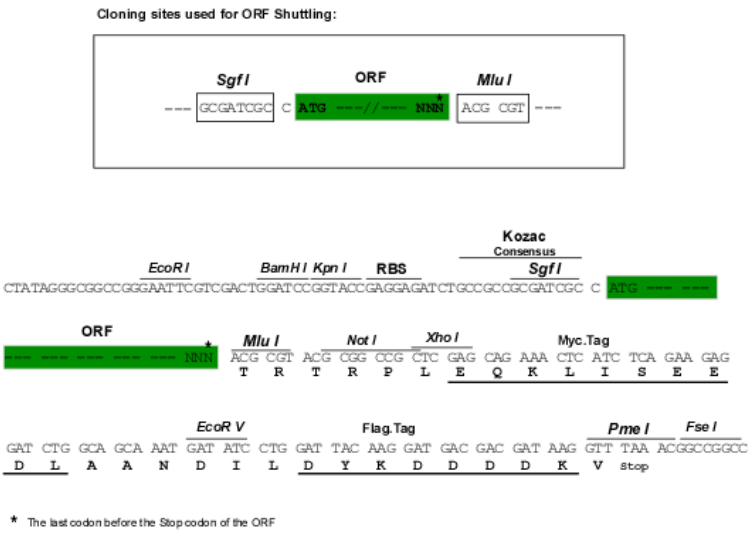
MAYIAKSFYDLSAVGLDGEKIDFNTFRGRAVLIENVASL*GTTTRDYNQLNELQCRFPRRLVVLGFPCNQ
FGHQENCQNEEILNSLKYVRPGGGYQPTFSLTQKCDVNGQNEHPVFAYLKDKLPYPYDDPFSLMTDPKLI
IWSPVRRSDVSWNFEKFLIGPEGEPFRRYSRSFQTINIEPDIKRLLKVAI

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

View online »

Cloning Scheme:



ACCN: NM_030677

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. More info 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:
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_030677.2, NP_109602.2

RefSeq Size: 1071 bp

RefSeq ORF: 573 bp

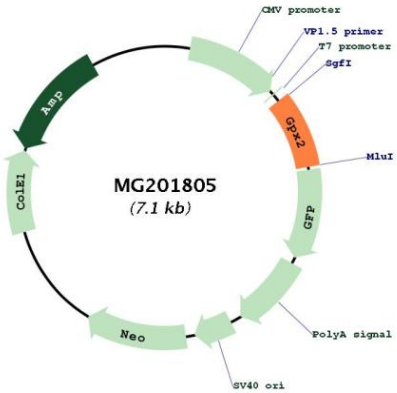
Locus ID: 14776

UniProt ID: Q9JHC0

Cytogenetics: 12 33.73 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. Several isozymes of this gene family exist in vertebrates, which vary in cellular location and substrate specificity. This isozyme is predominantly expressed in the gastrointestinal tract in rodents, is localized in the cytoplasm, and whose preferred substrate is hydrogen peroxide. Knockout studies in mice lacking this gene suggest a role for this isozyme in intestinal inflammation and colon cancer development. 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. A pseudogene of this locus has been identified on chromosome 7. [provided by RefSeq, Aug 2017]

Product images:



Circular map for MG201805