

## Product datasheet for **MG22219**

### Gpx3 (NM\_008161) Mouse Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Gpx3 (NM\_008161) Mouse Tagged ORF Clone  
**Symbol:** Gpx3  
**Synonyms:** AA960521; EGP; EGPx; GP; GPx; GSHPx-3; GSHPx-P  
**Vector:** pCMV6-AC-GFP (PS100010)  
**E. coli Selection:** Ampicillin (100 ug/mL)  
**Cell Selection:** Neomycin  
**ORF Nucleotide Sequence:** >MG22219 representing NM\_008161  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCCCGATCGCC

ATGGCCCGGATCCTCCGGCATCCTGCCTTCTGTCCCTGCTCCTGGCCGGGTTTGTTCGCCCGGGCCGGG  
GACAAGAGAAGTCTAAGACAGACTGCCATGGCGGTATGAGTGGTACCATCTACGAGTATGGAGCCCTCAC  
CATCGATGGGGAGGAATACATTCTTTAAGCAGTATGCAGGCAATATATCCTCTTTGTCAACGTAGCC  
AGCTACTGAGGTCTGACAGACCAATACCTTGAAGTGAATGCACTACAAGAAGAAGTGGCCATTTGGCT  
TGGTCATTCTGGGCTTCCCTTCCAACCAATTTGGCAAACAGGAGCCAGGCGAGAAGTCCGAGATACTCCC  
CAGTCTCAAGTATGTTTCGACCAGGTGGGGCTTTGTGCCTAATTTCCAGCTCTTTGAGAAAGGAGATGTG  
AACGGGGAGAAAGAGCAGAAATTCTACACTTTCCTGAAGAAGTCTGCCCTCCCACTGCAGAAGTCTGG  
GCTCACCTGGCCGCTCTTTGGGAACCCATGAAGATCCATGACATCCGCTGGAAGTTTGTGAAAGTTCT  
GGTGGGGCCAGATGGCATACCGTTATGCGCTGGTACCACCGGACCACAGTCAGCAACGTCAAGATGGAC  
ATCCTGTCTTACATGAGCGGCAGGCAGCCCTGAGCGCCAGGGGAAG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >MG22219 representing NM\_008161  
Red=Cloning site Green=Tags(s)

MARILRASCLLSLLLAGFVPPGRGQEKSKTDCHGMSGTIYEYGALTIDGEEYIPFKQYAGKYILFVNVA  
 SY\*GLTDQYLELNALQEELGPFGLVILGFPSNQFGKQEPGENSEILPSLKVYVRPGGGFVQFNQVFEKGDV  
 NGEKEQKFYTFKNSCPPTAELLGSPGRLFWPEPMKIHDRWNEKFLVGPDPGIPVMRWYHRTTVSNVKMD  
 ILSYMRQAALSARGK

TRTRPLE - GFP Tag - V

**Restriction Sites:** Sgfl-MluI

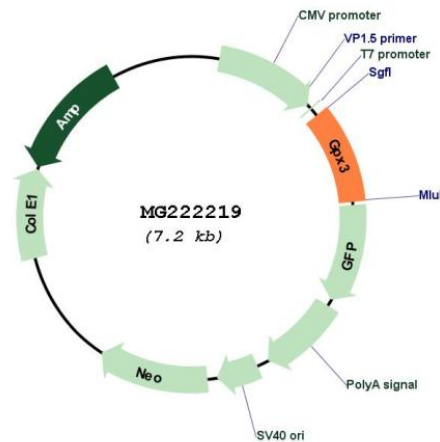


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**Cloning Scheme:**



**Plasmid Map:**



**ACCN:**

NM\_008161

**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.

**RefSeq:** [NM\\_008161.4](#)

**RefSeq Size:** 1517 bp

**RefSeq ORF:** 681 bp

**Locus ID:** 14778

**UniProt ID:** [P46412](#)

**Cytogenetics:** 11 B1.3

**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 (H<sub>2</sub>O<sub>2</sub>) 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 secreted and is highly expressed in mouse kidney, which appears to be the major source of the enzyme in plasma. It has a role in mouse organogenesis, and dysregulation of this isozyme has been associated with obesity-related metabolic complications, platelet-dependent thrombosis, colitis-associated carcinoma, and thermosensitive phenotype. 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. Alternatively spliced transcript variants have been found for this gene. [provided by RefSeq, Aug 2016]