

Product datasheet for **RN204828**

Gpx2 (NM_183403) Rat Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: Gpx2 (NM_183403) Rat Untagged Clone
Symbol: Gpx2
Synonyms: GPX-GI; GSHPx-2; GSHPx-GI
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
Fully Sequenced ORF: >RN204828 representing NM_183403
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGGCTTACATCGCCAAGTCTTTTTACGATCTCAGTGCCATCGGCCTGGATGGGGAGAAGATAGACTTCA
ACACGTTCCGAGGCAGGCGCTGCTGATTGAGAATGTGGCCTCGCTCTGAGGAACAACACTACCCGGGACTA
CACCCAGCTCAATGAGTTGCAGTGCCGCTTTCCAGGCGCTAGTGGTTCTCGGTTCCCTTGCAACCAG
TTCGGACATCAGGAGAACTGTCAGAATGAGGAGATCCTGAACAGCCTCAAGTATGTCGGCCCTGGGGGTG
GGTTCCAGCCACCTTCAGTCTTACCCAAAAGTGTGATGTCAATGGGCAGAATCAGCATCTGTCTTTGC
CTACCTGAAAGACAAGCTGCCCTACCCTTATGACGACCCATTCTCCCTCATGACCGATCCCAAGCTCATC
ATATGGAGTCCGGTGCGCCGCTCAGATGTGCTCCTGGAACTTTGAGAAGTCTCTCATAGGGCCAGAAGGGG
AGCCTTTCCGTCGCTACAGCCGACCTTCAGACCATCAACATCGAGCCTGACATCAAACGTCTCTCAA
AGTTGCCATCTAA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI
ACCN: NM_183403
Insert Size: 573 bp
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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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_183403.2](#), [NP_899653.2](#)

RefSeq Size: 1028 bp

RefSeq ORF: 573 bp

Locus ID: 29326

Cytogenetics: 6q24

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. Pseudogenes of this locus have been identified on chromosomes 2 and X. [provided by RefSeq, Aug 2017]