

## Product datasheet for **KN407758**

### Glutathione Peroxidase 3 (GPX3) Human Gene Knockout Kit (CRISPR)

#### Product data:

Product Type:	Knockout Kits (CRISPR)
Format:	2 gRNA vectors, 1 linear donor
Donor DNA:	EF1a-GFP-P2A-Puro
Symbol:	Glutathione Peroxidase 3
Locus ID:	2878
Components:	<p><b>KN407758G1</b>, Glutathione Peroxidase 3 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002)</p> <p><b>KN407758G2</b>, Glutathione Peroxidase 3 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002)</p> <p><b>KN407758D</b>, Linear donor DNA containing LoxP-EF1A-tGFP-P2A-Puro-LoxP: The sequence below is cassette sequence only. The linear donor DNA also contains proprietary target sequence.</p>

LoxP-EF1A-tGFP-P2A-Puro-LoxP (2739 bp)

ATAACTTCGT ATAATGTATG CTATACGAAG TTATCGTGAG GCTCCGGTGC CCGTCAGTGG GCAGAGCGCA  
 CATCGCCAC AGTCCCGAG AAGTTGGGG GAGGGTTCGG CAATTGAACC GGTGCCTAGA GAAGGTGGCG  
 CGGGGTAAAC TGGGAAAGTG ATGTCGTGTA CTGGCTCCG CTTTTCCCG AGGGTGGGG AGAACCCTAT  
 ATAAGTGAC TAGTCGCCG GAACGTTCT TTTCCGAACG GGTTCGCCG CAGAACACAG GTAAGTGCCG  
 TGTGTGGTTC CCGCGGGCCT GGCCTCTTA CGGGTTATGG CCCTTGCGTG CCTTGAATA CTCCACCTG  
 GCTGCAGTAC GTGATTCTG ATCCCGAGCT TCGGGTTGGA AGTGGGTGGG AGAGTCCGAG GCCTTGCCGT  
 TAAGGAGCCC CTCGCCTCG TGCTTGAGTT GAGGCCTGGC CTGGGCGCTG GGGCCCGCCG GTGCGAATCT  
 GGTGGCACCT TCGCGCCTGT CTCGCTGCT TCGATAAGTC TCTAGCCATT TAAAATTTTT GATGACCTGC  
 TGCGACGCTT TTTTCTGGC AAGATAGTCT TGTAATGCG GGCCAAGATC TGCACACTGG TATTTTCGTT  
 TTTGGGGCG CGGGCGGCGA CGGGGCCCGT GCGTCCCAGC GCACATGTTC GCGGAGGCGG GGCCTGCGAG  
 CGCGGCCACC GAGAATCGGA CGGGGTAGT CTCAAGCTGG CCGGCCTGCT CTGGTGCCTG GCCTCGCGCC  
 GCCGTGTATC GCCCGCCCT GGGCGGCAAG GCTGGCCCG TCGGCACCAG TTGCGTGAGC GGAAAGATGG  
 CCGCTTCCG GCCCTGCTG AGGGAGCTCA AAATGGAGGA CGCGGCCTC GGGAGAGCGG GCGGGTGAGT  
 CACCCACACA AAGGAAAAG GCCTTCCGT CTCAGCCGT CGTTCATGT GACTCCAGG AGTACCGGGC  
 GCCGTCCAG CACCTCGATT AGTTCTCGAG CTTTTGAGT ACGTCTGCT TAGGTTGGGG GGAGGGGTTT  
 TATGCGATGG AGTTTCCCA CACTGAGTGG GTGGAGACTG AAGTTAGGCC AGCTTGCCAC TTGATGTAAT  
 TCTCCTTGA ATTTGCCCT TTTGAGTTG GATCTTGGT CATTCTCAAG CCTCAGACAG TGGTTCAAAG  
 TTTTTTCTT CCATTTCAAG TGTCGTGAAT GGAGAGCGAC GAGAGCGGCC TGCCCGCCAT GGAGATCGAG  
 TGCCGCATCA CCGGCACCCT GAACGGCGTG GAGTTCGAGC TGGTGGGCGG CGGAGAGGGC ACCCCGAGC  
 AGGGCCGCAT GACCAACAAG ATGAAGAGCA CCAAAGGCGC CCTGACCTTC AGCCCTACC TGCTGAGCCA  
 CGTGATGGG TACGGCTTCT ACCACTTCG CACCTACCC AGCGGCTACG AGAACCCCTT CCTGCACGCC  
 ATCAACAACG GCGGCTACAC CAACACCCG ATCGAGAAGT ACGAGGACGG CGGCGTGCT CACGTGAGCT  
 TCAGTACCG CTACGAGGCC GGCCCGTGTA TCGGCGACTT CAAGGTGATG GGCACCGGCT TCCCGGAGGA  
 CAGCGTGATC TTCACCGACA AGATCATCCG CAGCAACGCC ACCGTGGAGC ACCTGCACCC CATGGGCGAT



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AACGATCTGG ATGGCAGCTT CACCCGCACC TTCAGCCTGC GCGACGGCGG CTACTACAGC TCCGTGGTGG
ACAGCCACAT GCACTTCAAG AGCGCCATCC ACCCCAGCAT CCTGCAGAAC GGGGGCCCCA TGTTGCCTT
CCGCCCGGTG GAGGAGGATC ACAGCAACAC CGAGCTGGGC ATCGTGGAGT ACCAGCACGC CTTCAAGACC
CCGGATGCAG ATGCCGGTGA AGAAAGAGGA AGCGGAGCTA CTAACCTCAG CCTGCTGAAG CAGGCTGGAG
ACGTGGAGGA GAACCTGGA CCTATGACCG AGTACAAGCC CACGGTGCGC CTCGCCACCC GCGACGACGT
CCCCAGGGCC GTACGCACCC TCGCCGCCGC GTTCGCCGAC TACCCCGCCA CGCGCCACAC CGTCGATCCG
GACCCGCCACA TCGAGCGGGT CACCGAGCTG CAAGAACTCT TCCTCACGCG CGTCGGGCTC GATCCTGGCA
AGGTGTGGGT CGCGGACGAC GCGGCCGCGG TGGCGGTCTG GACCACGCCG GAGAGCGTCG AAGCGGGGGC
GGTGTTCGCC GAGATCGGCC CGCGCATGGC CGAGTTGAGC GGTTCCTGGC TGGCCCGCA GCAACAGATG
GAAGGCCTCC TGGCGCCGCA CCGGCCAAG GAGCCCGCT GTTCTCTGGC CACCGTCGGC GTCTCGCCCG
ACCACCAGGG CAAGGTCTG GGCAGCGCCG TCGTGTCTCC CGGAGTGGAG GCGGCCGAGC GCGCCGGGT
GCCCGCTTC CTGGAGACCT CCGCGCCCG CAACCTCCC TTCTACGAGC GGCTCGGCTT CACCGTCACC
GCCGACGTCG AGGTGCCGA AGGACCGCG ACCTGGTGA TGACCCGAA GCCCGGTGCC TGAAACTTGT
TTATTGCAGC TTATAATGGT TACAAATAAA GCAATAGCAT CACAAATTC ACAAAATAAG CATTTTTTTC
ACTGCATTCT AGTTGTGGTT TGTCCAACT CATCAATGA TCTTAATAAC TTCGTATAAT GTATGCTATA CGAAGTTAT

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**Disclaimer:**

These products are manufactured and supplied by OriGene under license from ERS. The kit is designed based on the best knowledge of CRISPR technology. The system has been functionally validated for knocking-in the cassette downstream the native promoter. The efficiency of the knock-out varies due to the nature of the biology and the complexity of the experimental process.

**RefSeq:**

[NM\\_001329790](#), [NM\\_002084](#)

**UniProt ID:**

[P22352](#)

**Synonyms:**

GPx-P; GSHPx-3; GSHPx-P

**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 abundantly found in plasma. Downregulation of expression of this gene by promoter hypermethylation has been observed in a wide spectrum of human malignancies, including thyroid cancer, hepatocellular carcinoma and chronic myeloid leukemia. 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, Jul 2016]

Product images:

