

Product datasheet for **SC108586**

Glutathione Reductase (GSR) (NM_000637) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Glutathione Reductase (GSR) (NM_000637) Human Untagged Clone
Tag:	Tag Free
Symbol:	Glutathione Reductase
Synonyms:	GR; GSRD; HEL-75; HEL-S-122m
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF: >NCBI ORF sequence for NM_000637, the custom clone sequence may differ by one or more nucleotides

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ATGGCCCTGCTGCCCGAGCCCTGAGCGCCGGCGGGACCGAGCTGGCGGGGGCGGCGCGCCCTTCC
GAGGCTTCTGCTGCTTCTGCCGAGCCCGCGGCCCTCACGCGCGCCCTCTCCCGTGCCATGGCCTGCAG
GCAGGAGCCGCAGCCGCAGGGCCCGCCCGCTGCTGGCGCCGTGGCCTCTATGACTACCTGGTGATC
GGGGGCGGCTCGGGCGGGCTGGCCAGCGCGCGCAGGGCGGCCAGCTGGGTGCCAGGGCCCGCTGGTGG
AGAGCCACAAGCTGGGTGGCACTTGCCTGAATGTTGGATGTGTACCCAAAAAGGTAATGTGGAACACAGC
TGTCCACTCTGAATTCATGCATGATCATGCTGATTATGGCTTTCAGGTTGTGAGGGTAAATTCAATTGG
CGTGTTATTAAGGAAAAGCGGGATGCCTATGTGAGCCGCCTGAATGCCATCTATCAAAACAATCTCACCA
AGTCCCATATAGAAATCATCCGTGGCCATGCAGCCTTACAGAGTATCCCAAGCCACAATAGAGGTCAG
TGGGAAAAAGTACACCGCCACACATCCTGATCGCCACAGTGGTATGCCCTCCACCCCTCATGAGAGC
CAGATCCCGGTGCCAGCTTAGGAATAACCAGCGATGGATTTTTTCAGCTGGAAGAATTGCCCGGCCGA
GCGTCATTGTTGGTGCAGTTACATTGCTGTGGAGATGGCAGGGATCCTGTCAGCCCTGGGTTCTAAGAC
ATCACTGATGATACGGCATGATAAGGTACTTAGAAGTTTTGATTCAATGATCAGCACCAACTGCACGGAG
GAGCTGGAGAACGCTGGCGTGGAGGTGCTGAAGTCTCCAGGTCAAGGAGGTTAAAAAGACTTTGTCCGG
GCTTGGAGTCAGCATGGTACTGCAGTCCCGGTAGGCTACCAGTCATGACCATGATTCCAGATGTTGA
CTGCCTGCTCTGGGCCATTGGGCGGGTCCCGAATACCAAGGACCTGAGTTTAAACAAACTGGGGATTCAA
ACCGATGACAAGGGTCATATCATCGTAGACGAATCCAGAATACCAACGTCAAAGGCATCTATGCAGTTG
GGGATGTATGTGAAAAGCTCTTCTTACTCCAGTTGCAATAGCTGCTGGCCGAAAAGTGGCCATCGACT
TTTTGAATATAAGGAAGATTCCAAATTAGATTATAACAACATCCCAACTGTGGTCTTCCAGCCACCCCT
ATTGGACAGTGGGACTCACGGAAGATGAAGCCATTCAATAATGGAATAGAAAATGGAAGACCTATT
CAACGAGCTTTACCCCGATGTATCACGCAGTTACCAAAAGGAAAACAAAATGTGTGATGAAAATGGTCTG
TGCTAACAAAGGAAGAAAAGGTGGTGGGATCCATATGCAGGGACTTGGGTGTGATGAAATGCTGCAGGGT
TTTGCTGTTGCAGTGAAGATGGGAGCAACGAAGGCAGACTTTGACAACACAGTCGCCATTACCCTACCT
CTTCAGAAAGAGCTGGTCACACTTCGTTGA
    
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5' Read Nucleotide Sequence:

>OriGene 5' read for NM_000637 unedited

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GATTTTGTAAACGACTTACTATAGGGCGCCGGAATTCGGCACCCAGGCGGCGCGCC
TTCCGAGGCTTCTGCTGCTTCTGCCGAGCCCGCGGCCCTCACGCGCGCCCTCTCCCGT
GCCATGGCCTGCAGGCAGGAGCCGCAGCCGCAGGGCCCGCCCGCTGCTGGCGCCGTG
GCCTCCTATGACTACCTGGTGTATCGGGGGCGGCTCGGGCGGGCTGGCCAGCGCGCGCAGG
GCGGCCGAGCTGGGTGCCAGGGCCCGCTGGTGGAGAGCCACAAGCTGGGTGGCACTTGC
GTGAATGTTGGATGTGTACCCAAAAAGGTAATGTGGAACACAGCTGTCCACTCTGAATTC
ATGATGATCATGCTGATTATGGCTTTCAGGTTGTGAGGGTAAATTCAATTGGCGTGTT
ATTAAGGAAAAGCGGGATGCCTATGTGAGCCGCCTGAATGCCATCTATCAAAACAATCTC
ACCAAGTCCCATATAGAAATCATCCGTGGCCATGCAGCCTTACAGAGTATCCCAAGCCC
ACAATAGAGGTCAGTGGGAAAAGTACACCGCCACACATCCTGATCGCCACAGGTGGT
ATGCCCTCCACCCCTCATGAGAGCCAGATCCCGGTGCCAGCTTAGGAATAACCAGCGAT
GGATTTTTTCAGCTGGAAGAATTGCCCGGCCGACGCTCATTGTTGGTGCANGTTACATT
GCTGTGGAGATGGCAGGNATCCTGTCAGCCCTGNGTCTAAGACATCACTGATGATACCG
CATGATAAGGTACTTTAGAGTTTTGATTANTGATCAGCACCAACTGCACGNGAGAGCTG
GAGAACGCNNTGCGTGNAGTGTGAAGTCTNCCAGGTCAAGGAGGTA AAAAAGACTTGT
CGNCTTNGAAGTCANCATGGNTACTGCAGTTTCCGGGTAGCTACCAAGTCATGACCCATG
ATCCCAGTGTTGACTGCCTGCTCTGGGCCATTGGCGGNTC
    
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3' Read Nucleotide Sequence:	>OriGene 3' read for NM_000637 unedited GCCCATTTAGNACGCGCCGATTANGATCGGTTTTTTTTTTTTTTTTTTTGTAAAGTCAAT GTGATTATTTGTTTCATTTACAGAAGATCTATGGGTCCCACTGCCCGCCACACGTGTCTCC TGGTTCTCAACGAAGTGTGACCAGCTCTCTGAAGAGGTAGGGTGAATGGCGACTGTGTT GTCAAAGTCTGCCTTCGTTGCTCCCATCTTCACTGCAACAGCAAAACCCTGCAGCATTTT ATCACACCCAAGTCCCTGCATATGGATCCCAACCACCTTTTCTCCTTGTAGCACAGAC CATTTTCATCACACATTTTGTTCCTTTTGGTAACTGCGTGATACATCGGGGTAAGCT CGTTGAATAGGTCTTACATTTTCTATTCATATTTATGAATGGCTTCATCTTCCGTGAG TCCCACTGCCAATAGGGGGTGGCTGAAGACCACAGTTGGGATGTTGTATAATCTAA TTTGGAATCTTCTTATATTCAAAAAGTCGATGGGCAAGTTTTCGGCCAGCAGCTATTGC AACTGGAGTAAGAAGAGCTTTTCCACATACATCCCAACTGCATAGATGCCTTTGACGTT GGTATTCTGGAATTCGTCTACGATGATATGACCCTTGTGCATCGGTTTGAATCCCCAGTTT GTTTAAACTCANGTCCTTGGTATTCGGGACCCGCCAATGGCCCAGAGCANGCAGTCAAC ATCTGGAATCATGGTCATGACTGGTAGCCTACCGGGAAGTGCAGTAACCATGCTGACTTC CNAGCCCGACAAAAGTCTTTAAACTCCTTGACCTGGGAGAACTTCAGCACCTCCACGCC AGCGTTCTCCAGCTCCTNCGTGCAGTTGGTGTGATCATTGAAC
Restriction Sites:	NotI-NotI
ACCN:	NM_000637
Insert Size:	1900 bp
OTI Disclaimer:	Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.
	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
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:	<ol style="list-style-type: none"> 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_000637.1 , NP_000628.1
RefSeq Size:	3174 bp
RefSeq ORF:	3174 bp

Locus ID:	2936
UniProt ID:	P00390
Cytogenetics:	8p12
Domains:	pyr_redox, pyr_redox_dim
Protein Families:	Druggable Genome
Protein Pathways:	Glutathione metabolism
Gene Summary:	<p>This gene encodes a member of the class-I pyridine nucleotide-disulfide oxidoreductase family. This enzyme is a homodimeric flavoprotein. It is a central enzyme of cellular antioxidant defense, and reduces oxidized glutathione disulfide (GSSG) to the sulfhydryl form GSH, which is an important cellular antioxidant. Rare mutations in this gene result in hereditary glutathione reductase deficiency. Multiple alternatively spliced transcript variants encoding different isoforms have been found. [provided by RefSeq, Aug 2010]</p> <p>Transcript Variant: This variant (1) encodes the longest isoform (1). Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.</p>