

Product datasheet for **RG231274**

Glutathione Reductase (GSR) (NM_001195102) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Glutathione Reductase (GSR) (NM_001195102) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Glutathione Reductase
Synonyms:	GR; GSRD; HEL-75; HEL-S-122m
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG231274 representing NM_001195102
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCCCTGCTGCCCGAGCCCTGAGCGCCGGCGCGGACCGAGCTGGCGCGGGCGCGCGCCCTTCC
 GAGGCTTCTGCTGCTTCTGCCGAGCCCGCGCCCTCACGCGGCCCTCTCCCGTGCCATGGCCTGCAG
 GCAGGAGCCGAGCCGCAGGGCCCGCGCCGCTGCTGGCGCCGTGGCCTCCTATGACTACCTGGTGATC
 GGGGGCGGCTCGGGCGGCTGGCCAGCGCGCGCAGGGCGGCCGAGCTGGGTGCCAGGGCCCGCTGGTGG
 AGAGCCACAAGCTGGGTGGCACTTGCCTGAATGTTGGATGTGTACCCAAAAAGGTAATGTGGAACACAGC
 TGTCCACTCTGAATTCATGCATGATCATGCTGATTATGGCTTCCAAGTTGTGAGGGTAAATTCAATTGG
 CGTGTATTAAAGAAAAGCGGGATGCCTATGTGAGCCGCTGAATGCCATCTATCAAACAATCTCACCA
 AGTCCCATATAGAAATCATCCGTGGCCATGCAGCCTTACGAGTATCCCAAGCCACAATAGAGGTCAG
 TGGGAAAAAGTACACCGCCACACATCCTGATGCCACAGGTGGTATGCCCTCCACCCCTCATGAGAGC
 CAGATCCCGGTGCCAGCTTAGGAATAACCAGCGATGGATTTTTTCAGCTGGAAGAATTGCCCGGCCGA
 CGGTCATTGTTGGTGCAGGTTACATTGCTGTGGAGATGGCAGGGATCCTGTGAGCCCTGGGTTCTAAGAC
 ATCACTGATGATACGGCATGATAAGGTCAAGGAGGTTAAAAAGACTTTGTGGGCTTGAAGTCAGCATG
 GTTACTGCAGTCCCGGTAGGCTACCAGTCATGACCATGATTCCAGATGTTGACTGCCTGCTCTGGGCCA
 TTGGGCGGGTCCCGAATACCAAGGACCTGAGTTTAAACAACTGGGGATTCAAACCGATGACAAGGGTCA
 TATCATCGTAGACGAATCCAGAATACCAACGTCAAAGGCATCTATGCAGTTGGGGATGTATGTGGAAAA
 GCTCTTCTACTCCAGTTGCAATAGCTGCTGGCCGAAAACCTGCCATCGACTTTTTGAATATAAGGAAG
 ATTCCAAATTAGATTATAACAACATCCCAACTGTGGTCTTCAGCCACCCCTATTGGGACAGTGGGACT
 CACGGAAGATGAAGCCATTCATAAATATGGAATAGAAAAATGTGAAGACCTATTCAACGAGCTTTACCCCG
 ATGTATCACGCAGTTACCAAAAGGAAAAAAAATGTGTGATGAAAATGGTCTGTGCTAACAGGAAGAAA
 AGGTGGTGGGATCCATATGCAGGGACTTGGGTGTGATGAAATGCTGCAGGGTTTTGCTGTTGCAGTGAA
 GATGGGAGCAACGAAGGCAGACTTTGACAACACAGTCGCCATTACCCTACCTCTTCAGAAGAGCTGGTC
 ACACTTCGT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG231274 representing NM_001195102
 Red=Cloning site Green=Tags(s)

MALLPRALSAGAGPSWRRARAARFRGFLLLLPEPAALTRALSRAMACRQEPQPQGGPPPAAGAVASYDYDLVI
 GGGSGGLASARRAAELGARAAVVESHKLGTCVNVGCVPKVMWNTAVHSEFMHDHADYGFPSCEGKFNW
 RVIKEKRDAYVSRNLNAIYQNNLTKSHIEIIRGHAAFTSDPKPTIEVSGKKTAPHILIAITGGMPSTPHES
 QIPGASLGITSDGFFQLEELPGRSVIVGAGYIAVEMAGILSALGSKTSLMIRHDKVKEVKKTLISGLEVSM
 VTAVPGRLPVMTMIPDVDCLLWAIGRVPNTKDLNLKLGITQDDKGHIIVDEFQNTNVKGIYAVGDVCGK
 ALLTPVAIAAGRKLHRLFEYKEDSKLDYNNIPTVVFVSHPPIGTVGLTEDEAIHKYGIENKTYSTSFPT
 MYHAVTKRKTCKVMKVCANKEEKVVGIIHQGLGCEMLQGFVAVKMGATKADFNTVAIHPTSSEELV
 TLR

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_001195102

ORF Size: 1479 bp

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](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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_001195102.2](#)

RefSeq Size: 3087 bp

RefSeq ORF: 1482 bp

Locus ID: 2936

UniProt ID: [P00390](#)

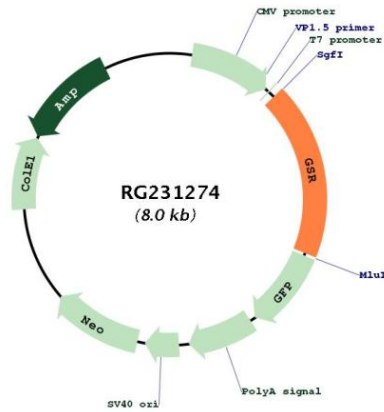
Cytogenetics: 8p12

Protein Families: Druggable Genome

Protein Pathways: Glutathione metabolism

Gene Summary: 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]

Product images:



Circular map for RG231274