

Product datasheet for **RG231233**

Glutathione Reductase (GSR) (NM_001195104) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Glutathione Reductase (GSR) (NM_001195104) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	GSR
Synonyms:	GR; GSRD; HEL-75; HEL-S-122m
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG231233 representing NM_001195104 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCCCTGCTGCCCGAGCCCTGAGCGCCGGCGGGACCGAGCTGGCGCGGGCGGCCGCGCCTTCC
GAGGCTTCTGCTGCTTCTGCCGAGCCCGCGGCCCTCACGCGGCCCTCTCCGTGCCATGGCCTGCAG
GCAGGAGCCGAGCCGAGGGCCCGCCCGCTGCTGGCGCCGTGGCCTCTATGACTACCTGGTGATC
GGGGCGGCTCGGGCGGCTGGCCAGCGCGCCAGGGCGCCGAGCTGGGTGCCAGGGCCCGGTGGTGG
AGAGCCACAAGCTGGGTGGCACTTGCCTGAATGTTGGATGTGTACCCAAAAGGTAATGTGGAACACAGC
TGTCCACTCTGAATTCATGCATGATCATGCTGATTATGGCTTTCCAAGTGTGAGGGTAAATTCAATTGG
CGTGTATTAAAGGAAAAGCGGGATGCCTATGTGAGCCGCCTGAATGCCATCTATCAAACAATCTCACCA
AGTCCCATATAGAAATCATCCGTGGCCATGCAGCCTTCACGAGTGATCCCAAGCCACAATAGAGGTCAG
TGGGAAAAGTACACCGCCACACATCCTGATCGCCACAGGTGGTATGCCCTCCACCCCTCATGAGAGC
CAGATCCCGGTGCCAGCTTAGGAATAACCAGCGATGGATTTTTTCAGCTGGAAGAATTGCCCGGCCGA
GCGTCATTGTTGGTGCAGGTTACATTGCTGTGGAGATGGCAGGGATCCTGTCAGCCCTGGGTTCTAAGAC
ATCACTGATGATACGGCATGATAAGGGGATTCAAACCGATGACAAGGGTCATATCATCGTAGACGAATTC
CAGAATACCAACGTCAAAGGCATCTATGCAGTTGGGGATGTATGTGAAAAGCTTCTTACTCCAGTTG
CAATAGCTGCTGGCCGAAAACCTTGCCCATCGACTTTTTGAATATAAGGAAGATTCCAAATTAGATTATAA
CAACATCCCAACTGTGGTCTTCAGCCACCCCTATTGGGACAGTGGGACTCACGGAAGATGAAGCCATT
CATAAATATGGAATAGAAAATGTGAAGACCTATTCAACGAGCTTTACCCGATGTATCACGCAGTTACCA
AAAGGAAAACAAAATGTGTGATGAAAATGGTCTGTGCTAACAAAGGAAGAAAAGGTGGTGGGATCCATAT
GCAGGGACTTGGGTGTGATGAAATGCTGCAGGGTTTTGCTGTTGCAGTGAAGATGGGAGCAACGAAGGCA
GACTTTGACAACACAGTCGCCATTCACCCTACCTTTCAGAAGAGCTGGTCACACTTCGT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG231233 representing NM_001195104
 Red=Cloning site Green=Tags(s)

MALLPRALSAGAGPSWRRRAARAFRGFLLLLPEPAALTRALSRAMACRQEPQPQPPPAAGAVASYDYLV
 GGGSSGLASARRAAELGARAAVVESHKLGTCVNVGCVPKVMWNTAVHSEFMHDHADYGFPSCEGKFNW
 RVIKEKRDAYVSRNLNAIYQNNLTKSHIEIIRGHAFTSDPKPTIEVSGKKTAPHIL IATGGMPSTPHES
 QIPGASLGITSDGFFQLEELPGRSVIVGAGYIAVEMAGILSALGSKTSLMIRHDKGIQTDDKGHIIVDEF
 QNTNVKGIYAVGDVCGKALLTPVAIAAGRKLAHRLFEYKEDSKLDYNNIPTVVF SHPPIGTVGLTEDEAI
 HKYGIENVKTYSTSTPTMYHAVTKRKTCKVMKVMCANKEEKVVVGIHMQGLGCDEMLQGF AVAVKMGATKA
 DFDNTVAIHPTSSEELVTLR

TRTRPLE - GFP Tag - V

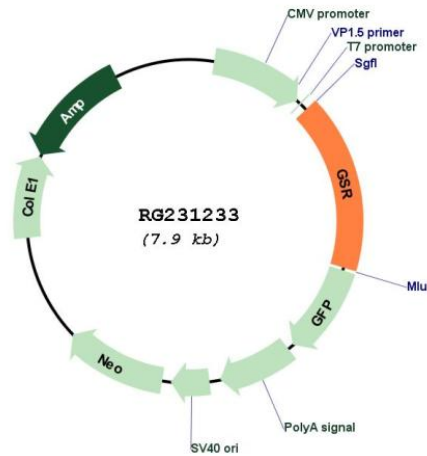
Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001195104

ORF Size:	1320 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:	<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_001195104.2
RefSeq Size:	2928 bp
RefSeq ORF:	1323 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]