

## Product datasheet for **SC128092**

### Glutaredoxin 2 (GLRX2) (NM\_197962) Human Untagged Clone

#### Product data:

|                           |   |
|---------------------------|---|
| Product Type:             | Expression Plasmids   |
| Product Name:             | Glutaredoxin 2 (GLRX2) (NM_197962) Human Untagged Clone   |
| Tag:                      | Tag Free  |
| Symbol:                   | Glutaredoxin 2  |
| Synonyms:                 | CGI-133; GRX2   |
| Mammalian Cell Selection: | None  |
| Vector:                   | <u>pCMV6-XL4</u>  |
| E. coli Selection:        | Ampicillin (100 ug/mL)  |
| Fully Sequenced ORF:      | >OriGene ORF within SC128092 sequence for NM_197962 edited (data generated by NextGen Sequencing) |

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ATGATTTGGCGCCGCGCGCTGGCGGGACGCGGCTGGTTTGGAGCAGGAGCGGCTCG
GCAGGCTGGCTTGACAGGGCGGGAGCTGCGGGAGCTGCGGCAGCTGCGGCCTCTGGG
ATGGAGAGCAATACATCATCATCTTTGGAGAATTTAGCGACGGCGCCTGTGAACCAGATC
CAAGAAACAATTTCTGATAATTGTGTGGTGATTTTCTCAAAAACATCCTGTTCTTACTGT
ACAATGGCAAAAAGCTTTCCATGACATGAATGTAACTATAAAGTGGTGAACTGGAC
CTGCTTGAATATGGAAACCAGTCCAAGATGCTCTTTACAAAATGACTGGTGAAAGAACT
GTTCCAAGAATATTTGTCAATGGTACTTTTATTGGAGGTGCAACTGACTCATAGGCTT
CACAAAGAAGAAAATTGCTCCCACTAGTTCATCAGTGTATTTAAAAAAAAGTAAGAGG
AAAGAATTCAGTGA
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Clone variation with respect to NM\_197962.2



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|                                     |  |
|-------------------------------------|--|
| <b>5' Read Nucleotide Sequence:</b> | >OriGene 5' read for NM_197962 unedited<br>NGGAGTTCAAATTTGTATACGACTCACTATAGGGCGGCCGGAATCCCGGNAATCGTCCG<br>ACCCACGCGTCCGCGCCGCGCGCTGGCGGGGACGCGGCTGGTTTGGAGCAGGAGCGG<br>CTCGGCAGGCTGGCTTGACAGGGCGGCCGGAATCCCGGACCATGATTTGGCGCCGCGC<br>GGCCTGGCGGGACGCGGCTGGTTTGGAGCAGGAGCGGCTCGGCAGGCTGGCTTGACAG<br>GGCGCGGGGAGCTGCGGGAGCTGCGGCAGCTGCGGCCTCTGGGATGGAGAGCAATACATC<br>ATCATCTTTGGAGAATTTAGCGACGGCGCCTGTGAACCATCAAGAAACAATTTCTGA<br>TAATTGTGGTGAATTTCTCAAAAACATCCTGTTCTTACTGTACAATGGCAAAAAGCT<br>TTTCCATGACATGAATGTTAACTATAAAGTGGTGAACCTGGACCTGCTTGAATATGGAAA<br>CCAGTTCCAAGATGCTCTTTACAAAATGACTGGTAAAAGAACTGTTCCAAGAATATTTGT<br>CAATGGTACTTTTATTGGAGGTGCAACTGACACTCATAGGCTTCACAAAGAAGGAAAATT<br>GCTCCCACTAGTTCATCAGTGTTATTTAAAAAAGTAAGAGGAAAGAATTTCAAGTATG<br>TTTATACTAATAAGTTTCTAGTACAGTGTCAGTTATTTAAAGTGGTAATGCCCGATAAT<br>GTCTTTTAAATGTTTGANGATGTTTAAATACATGCATTGTCTTACGAAGAAAGATGTA<br>AAAATATGAACAATANATTGCGGTGAAACCTCTTAAAAAAGGGCGGCCCGC<br>GGTTCATAGCTGTTTCTGAACAGATCCCGGTGGCATCCCTGTGACCCCTCCCAGC |
| <b>Restriction Sites:</b>           | NotI-NotI  |
| <b>ACCN:</b>                        | NM_197962  |
| <b>Insert Size:</b>                 | 700 bp   |
| <b>OTI Disclaimer:</b>              | 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).   |
| <b>Components:</b>                  | 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).   |
| <b>Reconstitution Method:</b>       | <ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol>  |
| <b>RefSeq:</b>                      | <a href="#">NM_197962.1</a> , <a href="#">NP_932066.1</a>  |
| <b>RefSeq Size:</b>                 | 735 bp   |
| <b>RefSeq ORF:</b>                  | 495 bp   |
| <b>Locus ID:</b>                    | 51022  |
| <b>UniProt ID:</b>                  | <a href="#">Q9NS18</a>   |
| <b>Cytogenetics:</b>                | 1q31.2   |
| <b>Protein Families:</b>            | Transcription Factors  |

**Gene Summary:**

The protein encoded by this gene is a member of the glutaredoxin family of proteins, which maintain cellular thiol homeostasis. These proteins are thiol-disulfide oxidoreductases that use a glutathione-binding site and one or two active cysteines in their active site. This gene undergoes alternative splicing to produce multiple isoforms, one of which is ubiquitously expressed and localizes to mitochondria, where it functions in mitochondrial redox homeostasis and is important for the protection against and recovery from oxidative stress. Other isoforms, which have more restrictive expression patterns, show cytosolic and nuclear localization, and are thought to function in cellular differentiation and transformation, possibly with a role in tumor progression. [provided by RefSeq, Aug 2011]

Transcript Variant: This variant (2) uses an alternate 5' exon and thus differs in the 5' UTR and 5' coding region, compared to variant 1. The encoded isoform (2, also known as Grx2a or mitochondrial Grx2) has a distinct N-terminus and is shorter than isoform 1.