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# Product datasheet for RG215566

## Glutaredoxin 2 (GLRX2) (NM_016066) Human Tagged ORF Clone

### Product data:

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|---|---|
| **Product Type:** | Expression Plasmids |
| **Product Name:** | Glutaredoxin 2 (GLRX2) (NM_016066) Human Tagged ORF Clone |
| **Tag:** | TurboGFP |
| **Symbol:** | GLRX2 |
| **Synonyms:** | CGI-133; GRX2 |
| **Mammalian Cell Selection:** | Neomycin |
| **Vector:** | pCMV6-AC-GFP (PS100010) |
| **E. coli Selection:** | Ampicillin (100 ug/mL) |

**ORF Nucleotide Sequence:**

>RG215566 representing NM_016066
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGAACCCTCGAGATAAGCAAGTGAGCCGCTTCTCCCCTCTAAAGGATGTTTACACGTGGGTGGCACTCG
CTGGAATCCAGCGCTCGGGCAGCCCTGGGAGGACGCGCTCAGCTGCGAGGAGGATGGAGAGCAATACATC
ATCATCTTTGGAGAATTTAGCGACGGCGCCTGTGAACCAGATCCAAGAAACAATTTCTGATAATTGTGTG
GTGATTTTCTCAAAAACATCCTGTTCTTACTGTACAATGGCAAAAAAGCTTTTCCATGACATGAATGTTA
ACTATAAAGTGGTGGAACTGGACCTGCTTGAATATGGAAACCAGTTCCAAGATGCTCTTTACAAAATGAC
TGGTGAAAGAACTGTTCCAAGAATATTTGTCAATGGTACTTTTATTGGAGGTGCAACTGACACTCATAGG
CTTCACAAAGAAGGAAAATTGCTCCCACTAGTTCATCAGTGTTATTTAAAAAAAAGTAAGAGGAAAGAAT
TTCAG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

>RG215566 representing NM_016066
Red=Cloning site Green=Tags(s)

MNPRDKQVSRFSPLKDVYTWVALAGIQRSGSPGRTRSAARRMESNTSSSLENLATAPVNQIQETISDNCV
VIFSKTSCSYCTMAKKLFHDMNVNYKVVELDLLEYGNQFQDALYKMTGERTVPRIFVNGTFIGGATDTHR
LHKEGKLLPLVHQCYLKKSKRKEFQ

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

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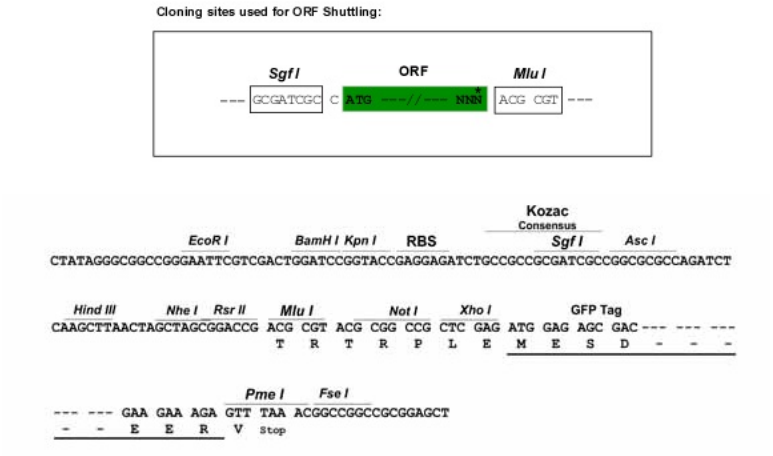
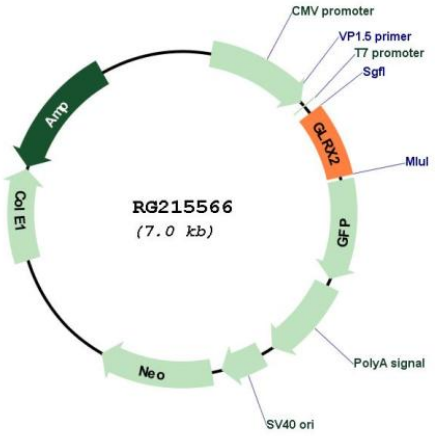
**Cloning Scheme:**




**Plasmid Map:**

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| **ACCN:** | NM_016066 |
| **ORF Size:** | 495 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. |

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| **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.<br>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.<br>3. Close the tube and incubate for 10 minutes at room temperature.<br>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.<br>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_016066.4, NP_057150.2 |
| **RefSeq Size:** | 1170 bp |
| **RefSeq ORF:** | 498 bp |
| **Locus ID:** | 51022 |
| **UniProt ID:** | Q9NS18 |
| **Cytogenetics:** | 1q31.2 |
| **Protein Families:** | 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] |