

## Product datasheet for RC215566

### Glutaredoxin 2 (GLRX2) (NM\_016066) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Glutaredoxin 2 (GLRX2) (NM_016066) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Glutaredoxin 2
Synonyms:	CGI-133; GRX2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC215566 representing NM_016066 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGAACCTCGAGATAAGCAAGTGAGCCGCTTCTCCCCTCTAAAGGATGTTTACACGTGGTGCCACTCG  
CTGGAATCCAGCGCTCGGCAGCCCTGGGAGGACGCGCTCAGCTGCGAGGAGGATGGAGAGCAATACATC  
ATCATCTTTGGAGAATTTAGCGACGGCGCTGTGAACCAGATCCAAGAAACAATTTCTGATAATTGTGTG  
GTGATTTCTCAAAAACATCCTGTTCTTACTGTACAATGGCAAAAAGCTTTCCATGACATGAATGTTA  
ACTATAAAGTGGTGAAGTGGACCTGCTGAATATGAAAACAGTCCAAGATGCTCTTTACAAAATGAC  
TGGTGAAGAAGTGTCCAAGAATATTTGTCAATGGTACTTTTATTGGAGGTGCAACTGACACTCATAGG  
CTTCACAAAGAAGGAAAATTGCTCCCACTAGTTCATCAGTGTTATTTAAAAAAGTAAGAGGAAAGAAT  
TTCAG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:	>RC215566 representing NM_016066 Red=Cloning site Green=Tags(s)
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MNPRDKQVSRFSPLKDVTWVALAGIQRSGSPGRTRSAARRMESNTSSSLENLATAPVNQIQETISDNVC  
VIFSKTSCSYCTMAKFLHDMNVNYKVVVELDLLEYGNQFDALYKMTGERTVPRIFVNGTFIGGATDTHR  
LHKEGKLLPLVHQCYLKSKRKEFQ

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

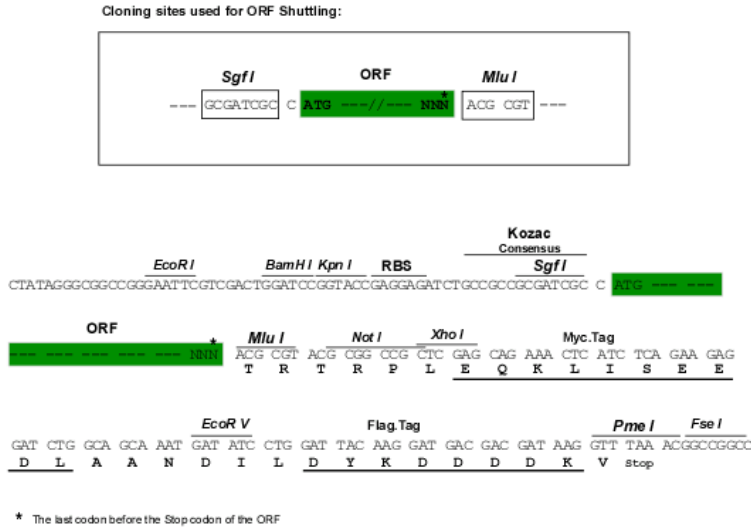
Chromatograms:	<a href="https://cdn.origene.com/chromatograms/mk8028_f02.zip">https://cdn.origene.com/chromatograms/mk8028_f02.zip</a>
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Restriction Sites: SgfI-MluI

Cloning Scheme:



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.

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\\_016066.4](#), [NP\\_057150.2](#)

RefSeq Size: 1170 bp

RefSeq ORF: 498 bp

Locus ID: 51022

UniProt ID: [Q9NS18](#)

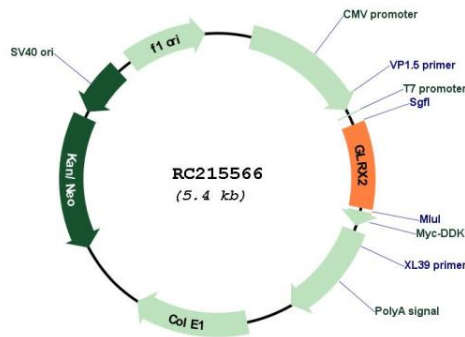
**Cytogenetics:** 1q31.2

**Protein Families:** Transcription Factors

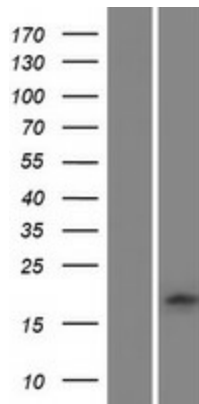
**MW:** 18.5 kDa

**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]

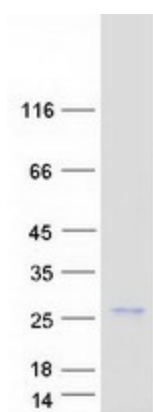
**Product images:**



Circular map for RC215566



Western blot validation of overexpression lysate (Cat# [LY414214]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC215566 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified GLRX2 protein (Cat# [TP315566]). The protein was produced from HEK293T cells transfected with GLRX2 cDNA clone (Cat# RC215566) using MegaTran 2.0 (Cat# [TT210002]).