

## Product datasheet for **MR216026**

### **Glrx2 (NM\_023505) Mouse Tagged ORF Clone**

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Glrx2 (NM_023505) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Glrx2
Synonyms:	1700010P22Rik; AI645710; Grx2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR216026 representing NM_023505 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGGGAAACAGCACATCGTCGTTTTGGGGGAAGTCTACAACACTCCTGTGAACCAGATCCAAGAAACAA  
 TTTCTAACAAATTGTGGTGATCTTCTCAAAACATCCTGCTCTTACTGTTCCATGGCCAAGAAGATTTT  
 CCATGACATGAATGTCAACTACAAGGCTGTGGAGTTGGATATGCTGGAATATGGCAACCAGTTTCAAGAT  
 GCGCTTCACAAGATGACTGGGAAAGAACCCTCCAGGATATTTGTCAATGGACGATTTATTGGAGGCG  
 CAGCGGACACTCACAGGCTTCACAAAGAAGGAAATTGCTGCCTCTGTTTCATCAGTGTTATTTAAAAAA  
 AAAACAAGAGGAAAGACAT

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:	>MR216026 representing NM_023505 Red=Cloning site Green=Tags(s)
	MGNSTSSFVGKSTTTPVNQIQETISNNCVVIFSKTSCSYCSMAKKIFHDMNVNYKAVELDMLEYGNQFQD ALHKMTGERTVPRIFVNGRFIGGAADTHRLHKEGKLLPLVHQCYLKKKQEERH

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:	<a href="https://cdn.origene.com/chromatograms/mm9042_b06.zip">https://cdn.origene.com/chromatograms/mm9042_b06.zip</a>
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Restriction Sites:	Sgfl-MluI
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## Cloning Scheme:



ACCN: NM\_023505

ORF Size: 369 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM\\_023505.2](#), [NP\\_075994.2](#)

RefSeq Size: 3482 bp

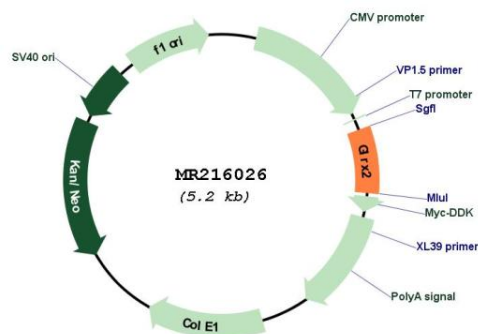
RefSeq ORF: 372 bp

Locus ID: 69367  
 UniProt ID: [Q923X4](#)  
 Cytogenetics: 1 62.53 cM

MW: 14.5 kDa

**Gene Summary:** Glutathione-dependent oxidoreductase that facilitates the maintenance of mitochondrial redox homeostasis upon induction of apoptosis by oxidative stress. Involved in response to hydrogen peroxide and regulation of apoptosis caused by oxidative stress. Acts as a very efficient catalyst of monothiol reactions because of its high affinity for protein glutathione-mixed disulfides. Can receive electrons not only from glutathione (GSH), but also from thioredoxin reductase supporting both monothiol and dithiol reactions. Efficiently catalyzes both glutathionylation and deglutathionylation of mitochondrial complex I, which in turn regulates the superoxide production by the complex. Overexpression decreases the susceptibility to apoptosis and prevents loss of cardiolipin and cytochrome c release. [UniProtKB/Swiss-Prot Function]

## Product images:



Circular map for MR216026