

Product datasheet for **RR214006**

Glrx2 (NM_001013034) Rat Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
 Product Name: Glrx2 (NM_001013034) Rat Tagged ORF Clone
 Tag: Myc-DDK
 Symbol: Glrx2
 Vector: pCMV6-Entry (PS100001)
 E. coli Selection: Kanamycin (25 ug/mL)
 Cell Selection: Neomycin
 ORF Nucleotide Sequence: >RR214006 representing NM_001013034
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGC**C

ATGGGAACAGCACATCCTCGTTTTGGGGGAAGTCAGCCACTACTCCTGTGAACCAGATCCAAGAAACAA
 TTTCTAATAATTGTGTGGTGATTTCTCAAATCATCCTGCTCTTACTGTTCAATGGCCAAGAAGATTTT
 CCATGACATGAATGTCAACTATAAAGTCGTGGAGTTGGATATGGTGAATATGGTAGCCAGTTTCAAGAG
 GCTCTTTACAAGATGACTGGAGAAAGAAGTGTCCAGGATATTTGTGAATGGAATATTTATCGGAGGTG
 CGGCCGACACTCACAGGCTTACAAAGAAGGAAATTGCTGCCTCTGGTTCACCAGTGCTATTTAAACAA
 AAGCAAGAGGAAAGACGTCGAA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RR214006 representing NM_001013034
 Red=Cloning site Green=Tags(s)

MGNSTSSFWGKSATTPVNQIQETISNNCVVIFSKSSCSYCSMAKKIFHDMNVNYKVVELDMVEYGSQFQE
 ALYKMTGERTVPRI FVNGIFIGGAADTHRLHKEGKLLPLVHQCYLNKSKRKDVE

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

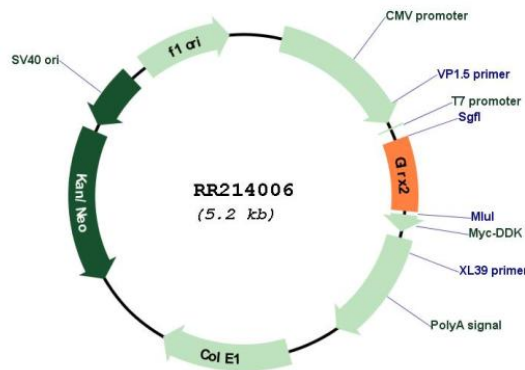


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Cloning Scheme:



Plasmid Map:



ACCN: NM_001013034

ORF Size: 372 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:	<u>NM_001013034.1, NP_001013052.1</u>
RefSeq Size:	1432 bp
RefSeq ORF:	375 bp
Locus ID:	114022
UniProt ID:	<u>Q6AXW1</u>
Cytogenetics:	13q21
MW:	14 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 (By similarity).[UniProtKB/Swiss-Prot Function]