Product datasheet for RG225029

Glutaredoxin 1 (GLRX) (NM_001118890) Human Tagged ORF Clone

Product data:

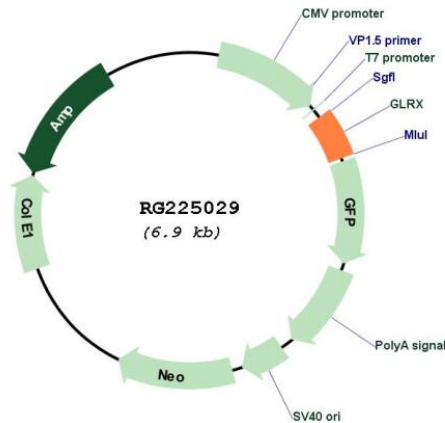|	
Product Type:	Expression Plasmids
Product Name:	Glutaredoxin 1 (GLRX) (NM_001118890) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	GLRX
Synonyms:	GRX; GRX1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG225029 representing NM_001118890 Red=Cloning site Blue=ORF Green=Tags(s) TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC GCCGCGATCGCC ATGGCTCAAGAGTTTGTGAACTGCAAAATCCAGCCTGGGAAGGTGGTTGTGTTCATCAAGCCCACCTGCC CGTACTGCAGGAGGGCCCAAGAGATCCTCAGTCAATTGCCCATCAAACAAGGGCTTCTGGAATTTGTCGA TATCACAGCCACCAACCACACTAACGAGATTCAAGATTATTTGCAACAGCTCACGGGAGCAAGAACGGTG CCTCGAGTCTTTATTGGTAAAGATTGTATAGGCGGATGCAGTGATCTAGTCTCTTTGCAACAGAGTGGGG AACTGCTGACGCGGCTAAAGCAGATTGGAGCTCTGCAG ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA
Protein Sequence:	>RG225029 representing NM_001118890 Red=Cloning site Green=Tags(s) MAQEFVNCKIQPGKVVVFIKPTCPYCRRAQEILSQLPIKQGLLEFVDITATNHTNEIQDYLQQLTGARTV PRVFIGKDCIGGCSDLVSLQQSGELLTRLKQIGALQ TRTRPLE – GFP Tag – V
Restriction Sites:	SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:

```
        Sgf I              ORF              Mlu I
--- GCGATCGC C ATG ----//---- NNN  ACG CGT ---
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                                        Kozac
                                      Consensus
          EcoR I        BamH I Kpn I    RBS          Sgf I      Asc I
CTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCCGGCGCGCCAGATCT

   Hind III    Nhe I  Rsr II   Mlu I        Not I   Xho I         GFP Tag
CAAGCTTAACTAGCTAGCGGACCG ACG CGT ACG CGG CCG CTC GAG ATG GAG AGC GAC --- --- ---
                          T   R   T   R   P   L   E   M   E   S   D   -   -   -

                        Pme I      Fse I
--- --- GAA GAA AGA GTT TAA ACGGCCGGCCGCGGAGCT
 -   -   E   E   R   V  Stop
```

Plasmid Map:

ACCN:	NM_001118890
ORF Size:	318 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_001118890.2
RefSeq Size:	1093 bp
RefSeq ORF:	321 bp
Locus ID:	2745
UniProt ID:	P35754
Cytogenetics:	5q15
Protein Families:	Druggable Genome
Gene Summary:	This gene encodes a member of the glutaredoxin family. The encoded protein is a cytoplasmic enzyme catalyzing the reversible reduction of glutathione-protein mixed disulfides. This enzyme highly contributes to the antioxidant defense system. It is crucial for several signalling pathways by controlling the S-glutathionylation status of signalling mediators. It is involved in beta-amyloid toxicity and Alzheimer's disease. Multiple alternatively spliced transcript variants encoding the same protein have been identified. [provided by RefSeq, Aug 2011]