

Product datasheet for **RG237559**

TXNRD2 (NM_001282512) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	TXNRD2 (NM_001282512) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	TXNRD2
Synonyms:	GCCD5; SELZ; TR; TR-BETA; TR3; TRXR2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG237559 representing NM_001282512. Blue=ORF Red=Cloning site Green=Tag(s)

```
GCTCGTTTGTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCCGCATCGCC
ATGGCGGCAATGGCGGTGGCGCTGCGGGGATTAGGAGGGCGCTTCCGGTGGCGGACGCAGGCCGTGGCG
GGCGGGGTGCGGGGCGCGGCGGGGGCGCAGCAGCAGGTGAGCGGGACTATGATCTCCTGGTGGTCGGC
GGGGGATCTGGTGGCCTGGCTTGTGCCAAGGAGGCCGCCAGCTGGGAAGGAAGGTGGCCGTGGTGGAC
TACGTGGAACCTTCTCCCAAGGCACCCGGTGGGGCTCGGCGGCACCTGCGTCAACGTGGGCTGCATC
CCCAAGAAGCTGATGCACCAGCGGCACCTGCTGGGAGGCCTGATCCAAGATGCCCAACTATGGCTGG
GAGGTGGCCAGCCCGTCCGCATGACTGGAGGAAGATGGCAGAAGCTGTTCAAAATCACGTGAAATCC
TTGAACTGGGGCCACCGTGTCCAGCTTCAGGACAGAAAAGTCAAGTACTTTAACATCAAAGCCAGCTTT
GTTGACGAGCACACGGTTTGCGGCGTTGCCAAAGTGGGAAAGAGATTCTGCTGTGAGCCGATCACATC
ATCATTGCTACTGGAGGGCGGCCGAGATACCCACGCACATCGAAGGTGCCTTGGAAATGGAATCACA
AGTGATGACATCTTCTGGCTGAAGGAATCCCTGGAAAAACGTTGGTGGTCGGGGCCAGCTATGTGGCC
CTGGAGTGTGCTGGCTTCTCACCGGATTGGGCTGGACACCACCATCATGATGCGCAGCATCCCCCTC
CGCGGCTTCGACCAGCAAATGTCCTCCATGGTCATAGAGCACATGGCATCTCATGGCACCCGGTTCTCG
AGGGCTGTGCCCTCGCGGTCAGGAGGCTCCCTGATGGCCAGCTGCAGGTCACTGGGAGGACAGC
ACCACCGCAAGGAGGACACGGGCACCTTTGACACCGTCTGTGGCCATAGCACCTTGCATCTCTGGC
TGCTCTCCCAACCACCGTGGGACATGCTGAAAAAACAGAGAAGAGAC
ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAAAC
```



[View online »](#)

Protein Sequence: >Peptide sequence encoded by RG237559
 Blue=ORF Red=Cloning site Green=Tag(s)

MAAMAVALRGLGGRFRWRTQAVAGGVRGAARGAAAGQRDYDLLVGGGSGGLACAKEAAQLGRKVAVVD
 YVEPSPQGTRWGLGGTCVNVGCI PKKLMHQAALLGGLIQDAPNYGWEVAQPVPHDWRKMAEAVQNHVKS
 LNWGHRVQLQDRKVKYFNIAKSFVDEHTVCGVAKGGKEILL SADHII IATGGRPRYPHIEGALYGIT
 SDDIFWLKESPGKTLVVGASYVALECAAGFLTGIGLDTTMMRSIPLRGFDQMQSSMVIEMASHGTRFL
 RGCAPSRVRRLLPDGQLQVTWEDSTTGKEDTGTFTVLWAIAPCISACLPTTVGHAGKNQRRD
TRTRPLEMESDESGLPAMEIECRITGTLNGVEFELVGGGEGTPEQGRMTNKMSTKGALTFSPYLLSHV
 MGYGFYHFGTYPSTYENPFLHAINNGGYNTRIEKYEDGGVLHVSFSYRYEAGRVIGDFKVMGTGFPED
 SVIFTDKIIRSNATVEHLHPMGDNDLDGSFTRTFSLRDGGYSSVVD SHMHFKSAIHPSILQNGGPMFA
 FRRVEEDHSNTELGIVEYQHAFKTPDADAGEERV

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001282512

ORF Size: 1014 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).

RefSeq: [NM_001282512.3](#)

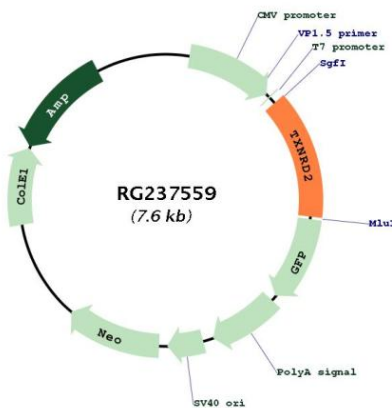
RefSeq Size: 2081 bp

RefSeq ORF: 1017 bp

Locus ID: 10587
Cytogenetics: 22q11.21
Protein Families: Druggable Genome
Protein Pathways: Pyrimidine metabolism
MW: 36.8 kDa

Gene Summary: The protein encoded by this gene belongs to the pyridine nucleotide-disulfide oxidoreductase family, and is a member of the thioredoxin (Trx) system. Three thioredoxin reductase (TrxR) isozymes are found in mammals. TrxRs are selenocysteine-containing flavoenzymes, which reduce thioredoxins, as well as other substrates, and play a key role in redox homeostasis. This gene encodes a mitochondrial form important for scavenging reactive oxygen species in mitochondria. It functions as a homodimer containing FAD, and selenocysteine (Sec) at the active site. Sec is encoded by UGA codon that normally signals translation termination. The 3' UTRs of selenoprotein mRNAs contain a conserved stem-loop structure, the Sec insertion sequence (SECIS) element, which is necessary for the recognition of UGA as a Sec codon rather than as a stop signal. Alternatively spliced transcript variants encoding different isoforms, including a few localized in the cytosol and some lacking the C-terminal Sec residue, have been found for this gene. [provided by RefSeq, Jun 2017]

Product images:



Circular map for RG237559