

Product datasheet for **MG221635**

Txnrd3 (NM_001178059) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Txnrd3 (NM_001178059) Mouse Tagged ORF Clone
Symbol:	Txnrd3
Synonyms:	AI196535; Tg; TGR; TR; TR2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG221635 representing NM_001178059
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

CTGGAGAAGCCACCGTCCCCGCCGCCCTCTCGGGCGCAGACCTCGCCGGGCTGGGAAGGTTGGAG
 TCCTCCCCAACCGCCGCTGGGTGCTGTCGTTGGCGGCTCATGTGTCGCCACCCGGCCGCCGCCG
 CCTGGCCTCCCTGGGACCAGCCGCCGCTTCTGAGGCCCGCAGGAGCTGCGGCGCGCCTGCGGGAC
 CTCATCGAGGGCAACAGGGTGATGATCTTCAGCAAGAGTTACTGTCCACACAGCACGCGGGTTAAGGAAC
 TCTTTTCGTCCTGGGAGTGGTCTATAACATCCTGGAACCTTGATCAAGTTGATGACGGGGCAGTGTTC
 GGAAGTGTGACAGAAATCAGTAACCAGAAAACGGTGCCCAATATTTTGTGAATAAAGTGCACGTGGGT
 GGATGTGACCGAACTTTCCAGGCACATCAGAATGGTTTACTGCAGAAGCTCCTCAAGATGACTCGGCTC
 ATGATTACGACCTCATCATCGGCGGGGTTCTGGCGGCTCTCTTGTGCCAAGGAAGCTGCCAACTT
 GGGAAAGAAGGTATGGTCTAGACTTTGTGGTCCCATCGCCTCAGGGCACGACCTGGGGCCTTGGCGGC
 ACCTGTGTGAACGTAGGCTGTATTCCAAAGAAGCTGATGCATCAGGCAGCCCTCTGGGGCATGCTTTGC
 AAGATGCCAAGAAATATGGCTGGGAGTATAACCAGCAGGTGAAGCACAACTGGGAGGCCATGACAGAAGC
 TATCCAGAGCCACATTGGCTCCTTGAACCTGGGGCTACAGGTAACCCCTTCGGGAGAAAGCGTGACCTAT
 GTCAACTCCTTCGGGGAGTTTGTGGACCTGCATAAAATAAAGGTTCAACAGTTGGAGAAAGGTTTACCAG
 GAAATTTGAAAGTCGTGGCTAAGTCCACCGAAGGACCGGAAACAGTAGAAGGGATATACAACACGGTTTT
 GTTAGCAATTGGTCGTGACTCCTGTACAAGGAAATAGGGCTGGAGAAGATCGGGGTCAAATCAATGAG
 AAGAATGGCAAAATACCAGTAAACGATGTGGAGCAGACCAACGTGCCTCATGTTTATGCTATTGGGGACA
 TACTGGACGGCAAACAGAGCTCACCCCGTTGCCATACAGGCAGGCAAGCTGCTAGCTCGAAGACTCTT
 TGGGGTCTCTTTAGAAAAGTGTGATTATATTAACATCCCAACAACGGTGTTCACACCTCTGGAATATGGC
 GTTGTGGACTGTGGAAGAGAAAGCCATCGAAATGTATAAAAAAGAGAATCTGGAAGTGTATCACACCT
 GTTTTTGGCCTCTCGAGTGGACAGTTGCTGGCAGAGACAACAACACCTGTATGCAAAGATAATCTGCAA
 CAAATTCGACAACGAACGTGTGGTGGGATTTACCTTCTGGGGCCAAATGCTGGTGAAATCACGCAGGGA
 TTTGCAGCTGCAATGAAATGTGGGCTCACGAAGCAGCTACTGGATGATACCATTGGAATCCACCCACCT
 GTGGTGAGGTATTCACAACATTGGAATCACAAAGTCTCAGGGCTGGACATTACTCAGAAAGGCTGCTG
 AGGC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>MG221635 representing NM_001178059
 Red=Cloning site Green=Tags(s)

LEKPPSPPPPPRAQTSPLGKVGVLNRRRLGAVRGGLMSSPPGRRARLASPGTSRPSSEAREELRRRLRD
 LIEGNRMVIFSKSYCPHSTRVKELFSSLGVVYNILELDQVDDGASVQEVLTETISNQKTPVNIFFVNVKVVHG
 GCDRTFQAHQNGLLQKLLQDDSAHDYDLIIIGGSGGLSCAKEAANLGGKVMVLDVVPVSPQGTWGLGG
 TCVNVGCIIPKLMHQAALLGHALQDAKKYQWEYNQVKNWEAMTEAIQSHIGSLNWGYRVTLEKGVTY
 VNSFGEFVDLHKIKVQLEKGLPGKLKVVAKSTEGPETVEGIYNTVLLAIGRDSCTRKIGLEKIGVKINE
 KNGKIPVNDVEQTNVPHVYIAIGDILDGKPELTPVAIQAGKLLARRLFVGSLEKCDYINIPPTVFTPLEYG
 CCGLSEEKAIEMYKKENLEVYHTLFWPLEWTVAGRDNNTCYAKIICNKFDFNERVVGFFHLLGPNAGEITQG
 FAAMKCGLTQKLLDDTIGIHPCTGCEVFTTLEITKSSGLDITQKGC*G

TRTRPLE – GFP Tag – V

Restriction Sites:

SgfI-MluI

Cloning Scheme:



ACCN: NM_001178059

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](#) The expression of this clone is not guaranteed due to the nature of selenoproteins.

OTI Annotation: This clone encodes a selenoprotein containing the rare amino acid selenocysteine (Sec). Sec is encoded by UGA codon, which normally signals translational termination. Expression of this clone is not guaranteed due to the nature of selenoproteins.

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_001178059.1](#), [NP_001171530.1](#)

RefSeq Size: 2494 bp

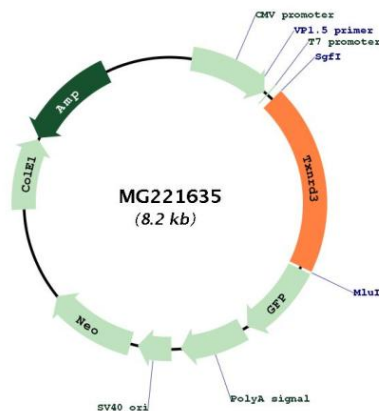
RefSeq ORF: 1617 bp

Locus ID: 232223

Cytogenetics: 6 D1

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 the third TrxR, which unlike the other two isozymes, contains an additional N-terminal glutaredoxin (Grx) domain, and shows highest expression in testis. The Grx domain allows this isozyme to participate in both Trx and glutathione systems. 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 have been found for this gene. There is evidence for additional isoforms resulting from the use of a non-AUG (CUG), and an in-frame downstream AUG as translation initiation codons (PMID:20018845). [provided by RefSeq, Aug 2017]

Product images:



Circular map for MG221635