

Product datasheet for **MR221844**

Txnrd3 (NM_001178058) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Txnrd3 (NM_001178058) Mouse Tagged ORF Clone
Symbol:	Txnrd3
Synonyms:	AI196535; Tg; TGR; TR; TR2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>MR221844 representing NM_001178058
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGC**

ATGTCGTCGCCACCCGGCCGCCGCCGCTGGCCTCCCCTGGGACCAGCCGCCGTCTTCTGAGGCC
 GCGAGGAGCTGCGGCCGCCGCTGCGGGACCTCATCGAGGGCAACAGGGTGATGATCTTCAGCAAGAGTTA
 CTGTCCACACAGCACGCGGGTTAAGGAACCTTTTTCGTCCTTGGGAGTGGTCTATAACATCCTGGAACCT
 GATCAAGTTGATGACGGGGCAGTGTTCAAGGAAGTGCTGACAGAAATCAGTAACCAGAAAACGGTGCCCA
 ATATTTTTGTGAATAAAGTGACGTGGGTGGATGTGACCGAACTTCCAGGCACATCAGAATGGTTTACT
 GCAGAAGCTCCTCAAGATGACTCGGCTCATGATTACGACCTCATCATCATCGCGGGGGTCTGGCGGC
 CTCTCTTGTCGAAGGAAGCTGCCAACTGGGAAAGAAGGTCATGGTGCTAGACTTTGTGGTCCCATCGC
 CTCAGGGCAGACCTGGGGCCTTGGCGGCACCTGTGTGAACGTAGGCTGTATTCAAAGAAGCTGATGCA
 TCAGGCAGCCCTCCTGGGGCATGCTTTGAAGATGCCAAGAAATATGGCTGGGAGTATAACCAGCAGGTG
 AAGCACAACCTGGGAGGCCATGACAGAAGCTATCCAGAGCCACATTGGCTCCTTGAAGTGGGGCTACAGGG
 TAACCCCTTCGGGAGAAAGCGTGACCTATGTCAACTCCTTCGGGGAGTTTGTGGACCTGCATAAAATAAA
 GGCAACCAATAAGAAAGGGCAGGAAACGTTTTACACGGCTTCGAAGTTTGTATAGCAACAGGTGAAAGG
 CCTCGGTAAGTTGGGAATCCAGGGAGATAAAGAGTACTGTATTACGAGTGACGACCTGTTCTCTGCCAT
 ACTGCCCGGGATGTACATTAGTCGTAGGCGCTTCTTATGTTGGTCTGGAGTGTGCGGGCTTTTGGCTGG
 TTTGGGGTTAGATGTGACAGTCATGGTACGCTCCGTCCTTCTTCGTGGCTTTGATCAAGAAATGGCAGAG
 AAAGTGGGATCCTACCTGGAACAACAAGGTGTCAAGTTCCAAAGGAAATTCACCCCATTTTGGTTCAAC
 AGTTGGAGAAAGTTTACCAGGAAAATTGAAAGTCGTGGCTAAGTCCACCGAAGGACCGGAAACAGTAGA
 AGGGATATACAACACGGTTTTGTTAGCAATTGGTGGTACTCCTGTACAAGGAAAATAGGGCTGGAGAAG
 ATCGGGGTCAAAATCAATGAGAAGAATGGCAAAATACCAAGTAAACGATGTGGAGCAGACCAACGTGCCTC
 ATGTTTATGCTATTGGGGACATACTGGACGGCAAACAGAGCTCACCCCGTTGCCATACAGGCAGGCAA
 GCTGCTAGCTCGAAGACTCTTGGGGTCTCTTAGAAAAGTGTGATTATTAACATCCCAACAACGGTG
 TTCACACCTCTGGAATATGGCTGTTGTGGACTGTGGAAGAGAAAGCCATCGAAATGTATAAAAAAGAGA
 ATCTGGAAGTGTATCACACCTTGTTTGGCCTCTCGAGTGGACAGTTGCTGGCAGAGACAACAACACCTG
 TTATGCAAAGATAATCTGCAACAAATTCGACAACGAACGTGTGGTGGGATTTACCTTCTGGGGCCAAAT
 GCTGGTGAATCACGCAGGGATTTGAGCTGCAATGAAATGTGGGCTCACGAAGCAGCTACTGGATGATA
 CCATTGGAATCCACCCACCTGTGGTGAAGTATTCACAACATTGGAATCACAAGTCTCAGGGCTGGA
 CATTACTCAGAAAGGCTGC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR221844 representing NM_001178058
 Red=Cloning site Green=Tags(s)

MSSPPGRRARLASPGTSRPSSEAREELRRRLRDLIEGNRVMIFSKSYCPHSTRVKELFSSLGVVYNILEL
 DQVDDGASVQEVLTETISNQKTPVNIQVNVHVGCDRTFQAHQNGLLQKLLQDDSAHDYDLIIIGGSGG
 LSCAKEAANLGGKVMVLDVFPVSPQGTWGLGGTCVNVGCIKKLMHQAALLGHALQDAKKYGWEYNQQV
 KHNWEAMTEAIQSHIGSLNWGYRVTLREKGVTVYNSFGEFVDLHKIKATNKKGQETFTYASKFVIATGER
 PRYLGIQGDKEYCITSDDLFLPYCPGCTLVVGASYVVGLEAGFLAGLDVTVMVRVLLRGFDQEMAE
 KVGSYLEQQGVKFQRFKTPILVQLEKGLPGKLKVVAKSTEGPETVEGIYNTVLLAIGRDSCTRKIGLEK
 IGVKINEKNGKIPVNDVEQTNVPHVYAIGDILDGKPELTPVAIQAGKLLARRLFGVSLEKCDYINIPPTV
 FTPLEYGCCGLSEEKAIEMYKKENLEVYHTLFWPLEWTVAGRDNNTCYAKIICNKFDFNERVVGFFHLLGPN
 AGEITQGFAAAMKGLTKQLDDITIGIHPTCGEVFTTLEITKSSGLDITQKGC

TRTRPLE**QKL**ISEEDLAANDILDYKDDDDK**V**

Restriction Sites:

Sgfl-MluI

Cloning Scheme:



ACCN: NM_001178058

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 Size: 2836 bp

RefSeq ORF: 1959 bp

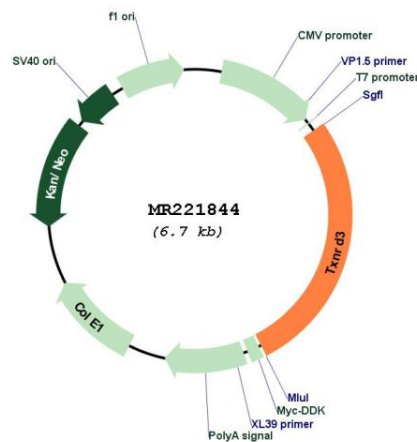
Locus ID: 232223

UniProt ID: [Q99MD6](#)

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 MR221844