

Product datasheet for **MR230257**

Txnrd1 (NM_001042513) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Txnrd1 (NM_001042513) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Txnrd1
Synonyms:	T; TR; TR1; Trx; TrxR1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>MR230257 representing NM_001042513
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGAATGGCTCCAAAGATCCCCCTGGTCTATGACTTCGACCTGATCATCATTGGAGGAGCTCAGGAG
 GACTGGCAGCAGCTAAGGAGGCAGCCAAATTTGACAAGAAAGTGCTGGTCTTGGATTTTGTACACCCGAC
 TCCTCTTGGGACCAGATGGGGTCTCGGAGGAACGTGTGTGAATGTGGGTTGCATACCTAAGAAGCTGATG
 CACCAGGCAGCTTTGCTCGGACAAGCTCTGAAAGACTCGCGCAACTATGGCTGGAAGTGAAGACACAG
 TGAAGCATGACTGGGAGAAAATGACGGAATCTGTGCAGAGTCACATCGGCTCGCTGAACTGGGGCTACCG
 CGTAGCTCTCCGGGAGAAAAAGTCTGTATGAGAATGCTTACGGGAGGTTTCATTGGTCTCACAGGATT
 GTGGCGACAAATAACAAAGGTAAGAAAAAATCTATTCAGCAGAGCGGTTCTCATCGCCACAGGTGAGA
 GGCCCCGCTACCTGGGCATCCCTGGAGACAAAGAGTACTGCATCAGCAGTATGATCTTTTCTCCTTGCC
 TTAGTCCCGGGGAAGACCCTAGTAGTTGGTGCATCCTATGTCGCCTTGGATGTGCAGGATTTCTGGCT
 GGTATCGGCTTAGACGCTACTGTAATGGTGCAGTCCATTCTCCTTAGAGGATTTGACCAAGACATGGCCA
 ACAAAATCGGTGAACACATGGAAGAACATGGTATCAAGTTTATAAGGCAGTTCGTCCTCAACGAAAATTGA
 ACAGATCGAAGCAGGAACACCAGGCCGACTCAGGGTACTGCTCAATCCACAAACAGCGAGGAGACCATA
 GAGGGCGAATTTAACACAGTGTGCTGGCGGTAGGAAGAGATTCTGTACGAGAATTTGGCTTAGAGA
 CCGTGGCGTGAAGATAAACGAAAAACCGGAAAGATACCCGTCACGGATGAAGAGCAGACCAATGTGCC
 TTACATCTACGCCATCGGTGACATCCTGGAGGGGAAGCTAGAGCTGACTCCCGTAGCCATCCAGGCGGGG
 AGATTGCTGGCTCAGAGGCTGTATGGAGGCTCCAATGTCAAATGTGACTATGACAATGTCCCAACGACTG
 TATTTACTCCTTTGGAATATGGTGTGTTGGCCCTCTGGAAGAAAAAGCCGTAGAGAAATTTGGGAAGA
 AAATATTGAAGTTTACCATAGTTCTTTTGGCCATTGGAATGGACAGTCCCATCCCGGGATAACAACAAA
 TGTTATGCAAAAATAATCTGCAACCTTAAAGACGATGAACGTGTGCTGGGCTTCCACGTGCTGGGTCCAA
 ACGCTGGAGAGGTGACGCAGGGCTTGGCGCTGCGCTCAAGTGTGGGCTGACTAAGCAGCAGCTGGACAG
 CACCATCGGCATCCACCCGGTCTGTGCAGAGATATTCACAACGTTGTCAGTGACGAAGCGCTCTGGGGGA
 GACATCTCCAGTCTGGCTGCTGAGGT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR230257 representing NM_001042513
 Red=Cloning site Green=Tags(s)

MNGSKDPPGSYDFDLIIIGGSGGLAAAKEAAKFDKKVLVDFVTPPLGTRWGLGGTCVNVGCIIPKKLM
 HQAALLGQALKDSRNYGWKVEDTVKHDWEKMTESVQSHIGSLNWGYRVALREKKVYENAYGRFIGPHRI
 VATNNGKKEKIYSAERFLIATGERPRYLGI PGDKEYCISDDL FSLPYCPGKTLVVGASYVALECAFLA
 GIGLDVTVMVRSILLRGFDQDMANKIGEHEEHGKIFIRQFVPTKIEQIEAGTPGRLRVTAQSTNSEETI
 EGEFNTVLLAVGRDSTRITIGLETGVKINEKTGKIPVTDEEQTNVPIYAIIGDILEGKLELTPVAIQAG
 RLLAQRLYGGSNVKCDYDNVPTTVFTPLEYGCCGLSEEKAVEKFGEENIEVYHSFFWPLEWTVPSRDNNK
 CYAKIICNLKDDERVVGFHVLGPNAGEVTQGF AAALKCGLTKQQLDSTIGIHPVCAEIFTTL SVTKRSGG
 DILQSGC*G

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:


ACCN: NM_001042513

ORF Size: 1497 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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).

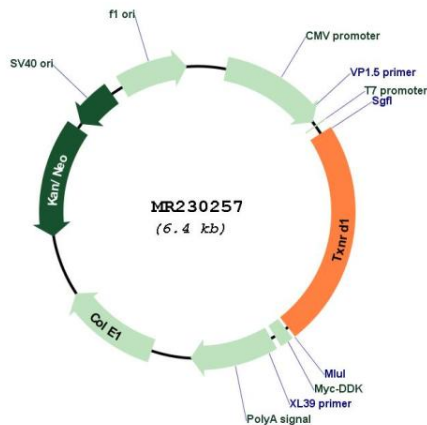
- Reconstitution Method:**
1. Centrifuge at 5,000xg for 5min.
 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
 3. Close the tube and incubate for 10 minutes at room temperature.
 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the 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_001042513.1](#), [NP_001035978.1](#)

RefSeq Size: 3417 bp
 RefSeq ORF: 1500 bp
 Locus ID: 50493
 UniProt ID: [Q9JMH6](#)
 Cytogenetics: 10 C1
 MW: 54.5 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 an ubiquitously expressed, cytosolic form of TrxR, which 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. Alternative splicing, primarily at the 5' end, results in transcript variants encoding same or different isoforms. [provided by RefSeq, May 2017]

Product images:



Circular map for MR230257