

Product datasheet for **MR208008**

Txnrd1 (NM_001042514) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Txnrd1 (NM_001042514) Mouse Tagged ORF Clone
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:

>MR208008 representing NM_001042514
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGAATGGCTCCAAAGATCCCCCTGGTCTATGACTTCGACCTGATCATCATTGGAGGAGCTCAGGAG
 GACTGGCAGCAGCTAAGGAGGCAGCCAAATTTGACAAGAAAGTGCTGGTCTTGGATTTTGTACACCGAC
 TCCTCTTGGGACCAGATGGGGTCTCGGAGGAACGTGTGTGAATGTGGTTGCATACCTAAGAAGCTGATG
 CACCAGGCAGCTTTGCTCGGACAAGCTCTGAAAGACTCGCGCAACTATGGCTGAAAAGTCGAAGACACAG
 TGAAGCATGACTGGGAGAAAATGACGGAATCTGTGCAGAGTCACATCGGCTCGCTGAACTGGGGCTACCG
 CGTAGCTCTCCGGGAGAAAAAGTCTGTATGAGAATGCTTACGGGAGGTTTCATTGGTCTCACAGGATT
 GTGGCGACAAATAACAAAGGTAAGAAAAAATCTATTCAGCAGAGCGGTTCTCATCGCCACAGGTGAGA
 GGCCCCGCTACCTGGGCATCCCTGGAGACAAAGAGTACTGCATCAGCAGTGATGATCTTTTCTCCTTGCC
 TTAGTCCCGGGGAAGACCCTAGTAGTTGGTGCATCCTATGTCGCCTTGGATGTGCAGGATTTCTGGCT
 GGTATCGGCTTAGACGCTACTGTAATGGTGCAGTCCATTCTCCTTAGAGGATTTGACCAAGACATGGCCA
 ACAAAATCGGTGAACACATGGAAGAACATGGTATCAAGTTTATAAGGCAGTTCGTCCTCAACGAAAATTGA
 ACAGATCGAAGCAGGAACACCAGGCCGACTCAGGGTACTGCTCAATCCACAAACAGCGAGGAGACCATA
 GAGGGCGAATTTAACACAGTGTGCTGGCGGTAGGAAGAGATTCTGTACGAGAATTTGGCTTAGAGA
 CCGTGGCGTGAAGATAAACGAAAAACCGAAAGATACCCGTCACGGATGAAGAGCAGACCAATGTGCC
 TTACATCTACGCCATCGGTGACATCCTGGAGGGGAAGCTAGAGCTGACTCCCGTAGCCATCCAGGCGGGG
 AGATTGCTGGCTCAGAGGCTGTATGGAGGCTCCAATGTCAAATGTGACTATGACAATGTCCCAACGACTG
 TATTTACTCCTTTGGAATATGGCTGTTGTGGCCTCTCTGAAGAAAAGCCGTAGAGAAATTTGGGGAAGA
 AAATATTGAAGTTTACCATAGTTCTTTTGGCCATTGGAATGGACAGTCCCATCCCGGGATAACAACAAA
 TGTTATGCAAAAATAATCTGCAACCTTAAAGACGATGAACGTGTGCTGGGCTTCCACGTGCTGGGTCCAA
 ACGCTGGAGAGGTGACGCAGGGCTTGGCGCTGCGCTCAAGTGTGGGCTGACTAAGCAGCAGCTGGACAG
 CACCATCGGCATCCACCCGGTCTGTGCAGAGATATTCACAACGTTGTCAGTGACGAAGCGCTCTGGGGGA
 GACATCTCCAGTCTGGCTGCTGAGGT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR208008 representing NM_001042514
 Red=Cloning site Green=Tags(s)

MNGSKDPPGSYDFDLIIIGGSGGLAAAKEAAKFDKVLVDFVTPPLGTRWGLGGTCVNVGCIPKMLM
 HQAALLGQALKDSRNYGWKVEDTVKHDWEKMTESVQSHIGSLNWGYRVALREKKVYENAYGRFIGPHRI
 VATNNKGKEKIYSAERFLIATGERPRYLGI PGDKEYCISDDLFSLPYCPGKTLVVGASYVALECAGFLA
 GIGLDVTVMVRSILLRFGDQDMANKIGEHEEHGKIFIRQFVPTKIEQIEAGTPGRLRVTAQSTNSEETI
 EGEFNTVLLAVGRDSCRTIGLETGVKINEKTGKIPVTDEEQTNVPIYIYAGDILEGKLELTPVAIQAG
 RLLAQRLYGGSNVKCDYDNVPTTVFTPLEYGCCGLSEEKAVEKFEENIEVYHSFFWPLEWTVPSRDNNK
 CYAKIICNLKDDERVVGFHVLGPNAGEVTQGFAAALKCGLTKQQLDSTIGIHPVCAEIFTTLSVTKRSGG
 DILQSGC*G

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mm9039_b11.zip

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_001042514

ORF Size: 1497 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](#) 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.

RefSeq: [NM_001042514.1](#), [NP_001035979.1](#)

RefSeq Size: 3505 bp

RefSeq ORF: 1500 bp

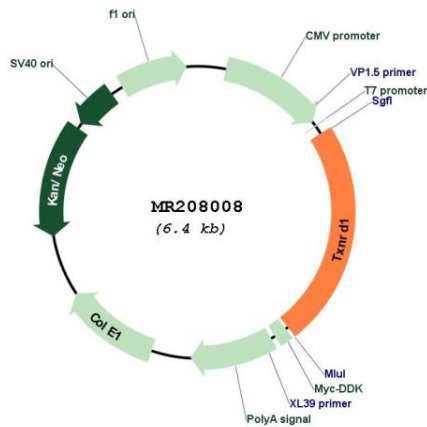
Locus ID: 50493

UniProt ID: [Q9JMH6](#)

Cytogenetics: 10 C1

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 MR208008