

## Product datasheet for **MC219721**

### **Txnrd1 (NM\_001042523) Mouse Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Txnrd1 (NM_001042523) Mouse Untagged Clone
Symbol:	Txnrd1
Synonyms:	T; TR; TR1; Trx; TrxR1
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**Fully Sequenced ORF:** >MC219721 representing NM\_001042523  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGCCAGTTGATGACTGTGGCTGACTTCCCAGCTTCTCGAGGTAGAACCTTTGTGCAGACTGTCTGGG  
 TGGCACCCACTTGCCCAACTGTTGCTGGTTCCAGGTTTTCTCCCTCCAGTCCCCCGGCCACCACATGT  
 GCCCGTGTGCTGCTGAGGGGCCCTCGTGGGGCTGTGCTTCTCGTTCACGTCCCTCCAAGACACTCCCC  
 TCCTCATCCCAGACGCCCTGTCTACTGACCCCTGTATCTGCCCTCCACCCTCCACACCTGATAGTAGGC  
 AGGAAAAAATACGCAATCTGAGCTGCCGAACAAAAAGGCCAACTTCAAAGCTGCCAACAAATGAATGG  
 CTCAAAGATCCCCCTGGGTCTATGACTTCGACCTGATCATCATTGGAGGAGGCTCAGGAGGACTGGCA  
 GCAGCTAAGGAGGCAGCCAAATTTGACAAGAAAGTGTGGTCTTGGATTTTGTACACCGACTCCTCTTG  
 GGACCAGATGGGGTCTCGGAGGAACGTGTGTAATGTGGGTTGCATACCTAAGAAGCTGATGCACCAGGC  
 AGCTTTGCTCGACAAGCTCTGAAAGACTCGCGCAACTATGGCTGAAAGTGAAGACACAGTGAAGCAT  
 GACTGGGAGAAAAATGACGGAATCTGTGCAGAGTACATCGGCTCGCTGAACTGGGGCTACCGCGTAGCTC  
 TCCGGGAGAAAAAGTGCCTATGAGAATGCTTACGGGAGGTTTATTGGTCTCACAGGATTGTGGCGAC  
 AAATAACAAAGGTAAGAAAAAATCTATTCAGCAGAGCGGTTCTCATCGCCACAGGTGAGAGGCCCCGC  
 TACCTGGGCATCCCTGGAGACAAAGAGTACTGCATCAGCAGTGTATGATCTTTTCTCTTGCCTTACTGCC  
 CGGGGAAGACCCTAGTAGTTGGTGCATCCTATGTCGCCTTGAATGTGCAGGATTTCTGGCTGGTATCGG  
 CTTAGACGTCACTGTAATGGTGGGTCCATTCTCCTTAGAGGATTTGACCAAGACATGGCCAACAAAATC  
 GGTGAACACATGGAAGAACATGGTATCAAGTTTATAAGGCAGTTCGTCCCAACGAAAATGAACAGATCG  
 AAGCAGGAACACCAGGCCGACTCAGGGTACTGCTCAATCCACAACAGCGAGGAGACCATAGAGGGCGA  
 ATTTAACACAGTGTGGTGGCGGTAGGAAGAGATTCTTGTACGAGAATTTGGCTTAGAGACCGTGGGC  
 GTGAAGATAAACGAAAAAACCGAAAGATACCCGTCACGGATGAAGAGCAGACCAATGTGCCTTACATCT  
 ACGCCATCGGTGACATCCTGGAGGGGAAGCTAGAGCTGACTCCCGTAGCCATCCAGGCGGGGAGATTGCT  
 GGCTCAGAGGCTGTATGGAGGCTCCAATGTCAAATGTGACTATGACAATGTCCCAACGACTGTATTTACT  
 CCTTTGGAATATGGCTGTGTGGCTCTCTGAAGAAAAAGCCGTAGAGAAATTTGGGGAAGAAAATATTG  
 AAGTTTACCATAGTTTCTTTGGCCATTGGAATGGACAGTCCCATCCCGGATAACAACAAATGTTATGC  
 AAAATAATCTGCAACCTTAAAGACGATGAACGTGTCGTTGGGCTCCACGTGCTGGTCCAAACGCTGGA  
 GAGGTGACGCAGGGCTTTGCGGCTGCGCTCAAGTGTGGGCTGACTAAGCAGCAGTGGACAGCACCATCG  
 GCATCCACCCGGTCTGTGCAGAGATATCAACGTTGTCAGTGACGAAGCGCTCTGGGGGAGACATCCT  
 CCAGTCTGGCTGCTGAGGT**TAA**

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:** SgfI-MluI

**ACCN:** NM\_001042523

**OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP). 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.

<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<u><a href="#">NM_001042523.1</a></u> , <u><a href="#">NP_001035988.1</a></u>
<b>RefSeq Size:</b>	3634 bp
<b>RefSeq ORF:</b>	1842 bp
<b>Locus ID:</b>	50493
<b>UniProt ID:</b>	<u><a href="#">Q9JMH6</a></u>
<b>Cytogenetics:</b>	10 C1
<b>Gene Summary:</b>	<p>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]</p> <p>Transcript Variant: This variant (4) represents the use of an alternate upstream promoter, and contains 2 novel exons compared to variant 1. The encoded isoform (2) has a longer and distinct N-terminus, resulting from translation initiation at an alternate in-frame start codon, compared to isoform 1.</p>