

Product datasheet for **MR226607**

Txnrd1 (NM_001042523) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Txnrd1 (NM_001042523) Mouse Tagged ORF 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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ORF Nucleotide Sequence:

>MR226607 representing NM_001042523
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGCCAGTTGATGACTGTGGCTGACTTCCCAGCTTCTCGAGGTAGAACCTTTGTGCAGACTGTCTGGG
 TGGCACCCACTTGCCCAACTGTTGCTGGTTTCCAGTTTTCTCCCTCCAGTCCCCCGGCCACCACATGT
 GCCCGTGTGCTGCTGAGGGGCCCTCGTGGGGCTGTGCTTCTGCTTACGTCCCTCCAAGACACTCCCC
 TCCTCATCCCAGACGCCCTGTCTACTGACCCCTGTATCTGCCCTCCACCCTCCACACCTGATAGTAGGC
 AGGAAAAAATACGCAATCTGAGCTGCCGAACAAAAAGGCCAACTTCAAAGCTGCCAACAAATGAATGG
 CTCAAAGATCCCCCTGGGTCTATGACTTCGACCTGATCATCATTGGAGGAGGCTCAGGAGGACTGGCA
 GCAGCTAAGGAGGCAGCCAAATTTGACAAGAAAGTGTGGTCTTGGATTTTGTACACCGACTCCTCTTG
 GGACCAGATGGGGTCTCGGAGGAACGTGTGTAATGTGGGTGCATACCTAAGAAGCTGATGCACCAGGC
 AGCTTTGCTCGGACAAGCTCTGAAAGACTCGCGCAACTATGGCTGAAAGTCAAGACACAGTGAAGCAT
 GACTGGGAGAAAAATGACGGAATCTGTGCAGAGTACATCGGCTCGCTGAACTGGGGCTACCGCGTAGCTC
 TCCGGGAGAAAAAGTCTGTATGAGAATGCTTACGGGAGGTTTATTGGTCTCACAGGATTGTGGCGAC
 AAATAACAAAGGTAAGAAAAATCTATTACGACAGAGCGGTTCTCATCGCCACAGGTGAGAGGCCCCGC
 TACCTGGGCATCCCTGGAGACAAAGAGTACTGCATCAGCAGTGTATCTTTTCTCTTGCCTTACTGCC
 CGGGGAAGACCCTAGTAGTTGGTGCATCCTATGTCGCCTTGAATGTGCAGGATTTCTGGCTGGTATCGG
 CTTAGACGTCACTGTAATGGTGGGTCCATTCTCCTTAGAGGATTTGACCAAGACATGGCCAACAAAATC
 GGTGAACACATGGAAGAACATGGTATCAAGTTTATAAGGCAGTTCGTCCAACGAAAAATGAACAGATCG
 AAGCAGGAACACCAGGCCGACTCAGGGTACTGCTCAATCCACAACAGCAGGAGACCATAGAGGGCGCA
 ATTTAACACAGTGTGCTGGCGGTAGGAAGAGATTCTTGTACGAGAATTTGGCTTAGAGACCGTGGGC
 GTGAAGATAAACGAAAAAACCGGAAAGATACCCGTCACGGATGAAGAGCAGACCAATGTGCCTTACATCT
 ACGCCATCGGTGACATCCTGGAGGGGAAGCTAGAGCTGACTCCCGTAGCCATCCAGGCGGGGAGATTGCT
 GGCTCAGAGGCTGTATGGAGGCTCCAATGTCAAATGTGACTATGACAATGTCCAACGACTGTATTTACT
 CCTTTGGAATATGGCTGTGTGGCTCTCTGAAGAAAAGCCGTAGAGAAATTTGGGGAAGAAAATATTG
 AAGTTTACCATAGTTTCTTTGGCCATTGGAATGGACAGTCCCATCCCGGATAACAACAAATGTTATGC
 AAAATAATCTGCAACCTTAAAGACGATGAACGTGTCGTTGGCTTCCACGTGCTGGTCCAACGCTGGA
 GAGGTGACGCAGGGCTTTGCGGCTGCGCTCAAGTGTGGGCTGACTAAGCAGCAGCTGGACAGCACCATCG
 GCATCCACCCGGTCTGTGCAGAGATATCAACGTTGTAGTGCAGGAAGCGCTCTGGGGGAGACATCCT
 CCAGTCTGGCTGCTGAGGT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR226607 representing NM_001042523
 Red=Cloning site Green=Tags(s)

MPVDDCWLYFPASRGRTFVQTVWVAPTCPNCCWFPGLPPVPRPPHVPRVLLRGPRGAVLPASRPSKTLP
 SSSQTPCPTDPCICPPPSTPDSRQEKNTQSELPNKKGQLQKLPMTMNGSKDPPGSYDFDLIIIGGSGGLA
 AAKEAAKFDKKVLDVDFVPTPLGTRWGLGGTCVNVGCIKPKLMHQAALLGQALKDSRNYGWKVEDTVKH
 DWEKMTESVQSHIGSLNWGYRVALREKKVYENAYGRFIGPHRIVATNNGKKEKIYSAERFLIATGERPR
 YLGIPGDKEYCISDDLFSLPYCPGKTLVVGASYVALECAAGFLAGIGLDVTVMVRSILLRQDFQDMANKI
 GEHMEEHGKIFIRQFVPTKIEQIEAGTPGRLRVTAQSTNSEETIEGEFNTVLLAVGRDSCRTIGLETVG
 VKINEKTKIPVTDEEQTNVPIYIAGDILEGKLELTPVAIQAGRLLAQRLYGGSNVKCDYDNVPTTVFT
 PLEYGCCGLSEEKAVEKFGEENIEVYHFFWPLEWTVPSRDNNKYAKIICNLKDDERVVGFHVLGPNAG
 EVTQGFAAALKKGLTKQLDSTIGIHPVCAEIFTTLSVTKRSGGDILQSGC*G

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

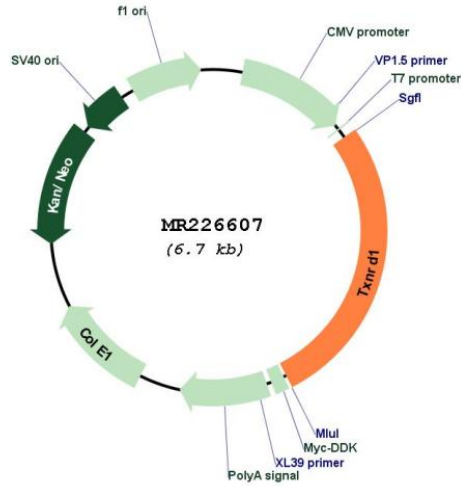
Cloning Scheme:

Cloning sites used for ORF Shutting:



* The last codon before the Stop codon of the ORF

Plasmid Map:



ACCN:

NM_001042523

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:	<ol style="list-style-type: none">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_001042523.1 , NP_001035988.1
RefSeq Size:	3634 bp
RefSeq ORF:	1842 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]