

Product datasheet for **RN217002**

Txnrd3 (NM_001106609) Rat Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Txnrd3 (NM_001106609) Rat Untagged Clone
Tag:	Tag Free
Symbol:	Txnrd3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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Fully Sequenced ORF: >RN217002 representing NM_001106609
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGC**

ATGTCGTCGCCACCCGGCCGCGCCCGCCTGACGTCCCCGGGACCAGCCGCCGCCGCTGAGGTCC
 GCGAGGAGGTGCGGCGCCGCTGCGGGATCTCATCGAGGGCAACAGGGTTATGATCTTCAGCAAGAGTTA
 CTGTCCACACAGCTCGCGGGTTAAGGAACCTTTTTCATCCTTGGGAGTGAACATTACATCCTGGAACCT
 GATCAAGTTGATGATGGGGCCAATGTTCAAGGAAGTGTGACAGAAATCAGTAACCAGAAAACGGTCCCCA
 ATATTTTTGTGAATAAAGTGCACGTGGGTGGATGTGACCGGATTTCCAGGCACATCAGAATGGTTTACT
 GCAGAAGCTCCTTCAGGATGACTCAACTCATGATTATGATCTCATCGTCATCGGCGGGGGCTCTGGCGGC
 CTCTCTTGTCGAAGGAAGCTGCCAACTGGGAAAGAAGGTATGGTGTAGACTTTGTGGTTCCTCGC
 CTCAGGGCACGTCTGGGGCCTTGGCGGCACCTGTGTGAATGTAGGCTGTATCCCTAAGAAGCTGATGCA
 TCAGGCAGCCCTCTGGGGCATGCTCTGAAGATGCGAGGAAATATGGCTGGGATTATAACCAGCAGGTG
 AAGCACAACCTGGGAGACCATGAGGGAAGCGATCCAGAACCACATTGGCTCCTTGAAGTGGGGCTACAGGG
 TAACTCTTCGGGAGAAAGCGTGACCTATGTCAACTCCTTCGGGGAGTTTGTGGAAGTGCATAAAATAAA
 GGCAACCAATAAGAAAGGGCAGGAACTTTTTACACCGCTTCGAAGTTTGTATAGCAACAGGGGAAAGG
 CCGCGTACTTGGGAATCCAGGGAGATAAAGAGTACTGTATTACCAGCGACGACCTGTTCTCTGCCAT
 ACTGCCAGGGAACACATTAATCGTTGGCGCCTCGTATGTTGGTCTGGAGTGTGCAGGCTTTTGGCTGG
 CTTGGGGCTAGATGTGACAGTCATGGTACGCTCTGTCTTCTTCGTGGCTTTGATCAAGAAATGGCAGAG
 AAAGTGGGATCCTACCTGGAACAACAAGCGTCAAGTTCCAAAGGAAATCACCCCCATTTGGTTCAAC
 AGTTGGAGAAAGCTTACCCGGAAGATTGAAAGTCGTGGCTAAGTCCACTGAAGGACCAGAGACAGTAGA
 AGGGACATACAACACGGTTTTGTTAGCAATTGGTCGTGACTCCTGTACAAGGAAAATAGGGCTGGAGAAG
 ATCGGGGTCAAAATCAATGAGAAGAATGGCAAAATACAGTAAATGATGTGGAACAGACCAATGTGCCTC
 ATGTTTATGCTATTGGGGACGTACTGGAGGGCAAACCAGAGCTCACACCTGTTGCCATACAGGCAGGCAA
 GCTGCTAGCTCGAAGACTCTTTGGGATCTCTTAGAAAAGTGTGATTACATTAACGTCCCAACAACGGTG
 TTCACACCTCTGGAATACGGCTGTTGTGGACTGTCTGAAGAGAAAGCCATTGAAATGTATACGAAGGAGA
 ATCTGGAAGTGTATCACACCTTCTTTGGCCTCTTGAGTGGACAGTTGCTGGCAGAGACAACAACACCTG
 TTATGCAAAGATAATCTGCAACAAATTTGACAATGACCGTGTGATAGGATTTACCTCCTGGGGCCAAAT
 GCTGGTGAAGTACACAGGGTTTGCAGCTGCAATGAAATGTGGGCTTACGAAGCAGCTACTGGATGACA
 CCATTGGAATCCACCCACCTGTGGTGAAGTATTTACAACCATGGAATCACAAGTCTCAGGGCTGGA
 CATTACTCAGAAAGGCTGCTGAGGCT**AG**

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI

ACCN: NM_001106609

Insert Size: 1848 bp

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).

OTI Annotation: Clone contains native stop codon, and expresses the complete ORF without any c-terminal tag.

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:	<u>NM_001106609.2, NP_001100079.2</u>
RefSeq Size:	2799 bp
RefSeq ORF:	1848 bp
Locus ID:	297437
Cytogenetics:	4q34
Gene Summary:	<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 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. There is evidence for two 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]</p> <p>Transcript Variant: This variant (1) contains two in-frame translation initiation codons: an upstream non-AUG (CUG) and a downstream AUG codon. The isoform (2) represented in this RefSeq results from the use of the AUG start codon. It has a shorter N-terminus compared to isoform 1. Sequence Note: This RefSeq record was created from transcript and genomic sequence data because no single transcript was available for the full length of the gene. The extent of this transcript and the encoded protein are supported by orthologous mouse data.</p>