

Product datasheet for **SC328978**

TXNRD3 (NM_001173513) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	TXNRD3 (NM_001173513) Human Untagged Clone
Symbol:	TXNRD3
Synonyms:	TGR; TR2; TR2IT1; TRXR3; TXNRD3IT1; TXNRD3NB; TXNRD3NT1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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Fully Sequenced ORF: >NCBI ORF sequence for NM_001173513, the custom clone sequence may differ by one or more nucleotides

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CTGGAGCGGTGCGCCGCCGAGTCGCCCGGGCCGGGAAAGCGGGCGATGCCCCAACCGCCGCTCGGGCC
ATGTCCGAGGGGCGCGCTGTTGTCGCCCGCGGGGCGCCGTGCCCGCCTGTCGTCCCCGGGGCCAGCCG
CTCGTCCGAGGCCCGAGGAGCTGCGCCGCCACCTCGTGGGCCATCGAGCGCAGCCGGGTGGTGATC
TTCAGCAAGAGCTACTGTCCCCATAGTACTCGGGTGAAAGAACTCTTTCTTCTTTGGGAGTCGAATGTA
ATGTCTTGAACTTGATCAAGTTGATGATGGGGCCAGGGTTCAAGAAAGTCTGTGAGAAATCACTAATCA
GAAACTGTGCCAATATTTTCGTGAATAAAGTGCATGTAGGTGGATGTGACCAACTTTCCAGGCATAT
CAGAGTGGTTTGTACAGAAGCTCCTTCAGGAAGATTTGGCATATGATTATGATCTCATCATCATCGGTG
GTGGTTCTGGAGGCTTTTCATGTGCGAAGGAAGCTGCCATTTGGGAAAGAAAGTTATGGTGCTAGACTT
TGTTGTCCCGTCACCTCAGGGCACATCCTGGGGTCTTGGTGGCACTTGTGTAATGTAGGTTGTATTCTT
AAGAAATTGATGCATCAGGCTGCCCTTTTGGGGCAGGCATTATGTGACTCAAGGAAATTTGGCTGGGAAT
ATAATCAACAAGTGAGGCACAACCTGGGAGACAATGACAAAAGCGATTGAGAACCATCAGCTCTCTAAA
CTGGGGCTACAGGTTGTCTCTGAGGGAAAAGGCTGTGGCCTATGTCAATTCCTATGGAGAATTTGTTGAA
CATCATAAATAAAGGAACCAATAAAAAAGGACAGGAGACTTATTATACTGCTGCACAGTTTGTATAG
CAACGGGTGAAAGGCCACGGTATTTAGGAATCCAAGGAGATAAAGAATACTGTATTACTAGTGATGACCT
TTTTTCTCTGCCTTATTGCCCTGGCAAAACATTAGTGGTGGGTGCCTCTTATGTTGCCCTGGAGTGTGCA
GGGTTTCTGGCTGGCTTTGGCCTAGATGTCACAGTTATGGTACGCTCAATCCTTCTCCGTGGCTTCGACC
AAGAAATGGCAGAAAAAGTGGGTTCTACATGGAGCAGCATGGTGTGAAGTTCTACGGAAATTCATACC
TGTGATGGTTCAACAGTTGGAGAAAGGTTACCTGGAAAGCTGAAAGTGTGGCTAAATCCACTGAAGGA
ACAGAAACAATTGAAGGAGTCTATAACACAGTTTGTAGCTATTGGTCGTGACTCCTGTACAAGGAAAA
TAGGCTTGGAGAAGATTGGTGTCAAAATTAATGAGAAGAGTGGAATAATACCTGTAATGATGTGGAACA
GACCAATGTGCCATATGTCTATGCTGTTGGTGATTTTTGGAGGATAAGCCAGAGCTCACTCCTGTGCGC
ATACAGTCAGGCAAGCTGCTAGCTCAGAGACTTTTGGGGCTCTTTAGAAAAGATATATCATACTTTGT
TCTGGCCTCTTGAATGGACAGTAGCTGGCAGAGAGAACAACACTTGTACGCAAAGATAATCTGCAATAA
ATTCGACCATGATCGGGTATAGGATTTTCATATTCTTGGACCAACGCCGGTGAGGTTACCCAAGGATTT
GCAGCTGCAATGAAATGTGGCTCACAAAACAGCTACTTGATGACACCATTGGAATTCACCCACATGTG
GGGAGGTGTTACGACTTTGAAATCACAAAGTCGTGAGGACTAGACATCACTCAGAAAGGCTGCTGAGG
CTAG
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Restriction Sites: SgfI-MluI

ACCN: NM_001173513

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.

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_001173513.1](#), [NP_001166984.1](#)

RefSeq Size: 2811 bp

Locus ID: 114112

UniProt ID: [Q86VQ6](#)

Cytogenetics: 3q21.3

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 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. Alternatively spliced transcript variants have been found for this gene. Experimental evidence suggests the use of a non-AUG (CUG) codon as a translation initiation codon (PMID:20018845). [provided by RefSeq, Aug 2017]

Transcript Variant: This variant (2) lacks an in-frame coding exon compared to variant 1, which results in a shorter isoform (2) missing an internal protein segment compared to isoform 1. A non-AUG (CUG) codon is used as translation initiation codon.