

Product datasheet for **MG208458**

Txnrd2 (NM_013711) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Txnrd2 (NM_013711) Mouse Tagged ORF Clone
Symbol:	Txnrd2
Synonyms:	AA118373; ESTM57301; ESTM573010; TG; TGR; TR; Tr3; Trxr2; Trxrd2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG208458 representing NM_013711
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGCGGCGATGGTGGCGGCGATGGTGGCGGCGCTGCGTGGACCCAGCAGGCGCTCCGGCCCGGGACAC
 GGCTCTGACACGCGGGACAAGGGCGCGCAGTGCAGCGGGAGGGCAGCAGAGCTTTGATCTCTTGGT
 GATCGGTGGGGATCCGGTGGCCTAGCTTGTGCCAAGGAAGCTGCTCAGCTGGGAAAGAAGTGGCTGTG
 GCTGACTATGTGGAACCTTCTCCCCGAGGCACCAAGTGGGGCCTTGGTGGCACCTGTGTCAACGTGGGTT
 GCATACCCAAGAAGCTGATGCATCAGGCTGCACTGCTGGGGGCATGATCAGAGATGCTCACCCTATGG
 CTGGGAGTGGCCAGCCTGTCCAACACAAGTGAAGACAATGGCAGAAGCCGTGAAAACCATGTGAAA
 TCCTTGAAGTGGGTTCATCGCGTCCAAGTGCAGGACAGGAAAGTCAAGTACTTTAACATCAAAGCCAGCT
 TTGTGGATGAGCACACAGTTCGCGGTGTGGACAAAGCGGGAAGGCGACTCTGCTTTCAGCTGAGCACAT
 TGTCAATTGCTACAGGAGGACGGCAAGGTACCCACACAAGTCAAAGGAGCCCTGGAATATGGAATCACA
 AGTGACGACATCTTCTGGCTGAAGGAGTCCCCTGGGAAAACGTTGGTGGTTGGAGCCAGCTATGTGGCC
 TAGAGTGTGCTGGCTTCCCTCACTGGAATTGGACTGGATACCACTGTGATGCGCAGCATCCCTCTCCG
 AGGCTTTGACCAGCAAATGTCATCTTTGGTACAGAGCACATGGAGTCTCATGGCACCCAGTTCTGAAA
 GGCTGTGTCCCCTCCACATCAAAAACTCCCACTAACCAGCTGCAGGTCACTTGGGAGGATCATGCTT
 CTGGCAAGGAAGACACAGGCACCTTTGACACTGCTCTGTGGGCCATAGGGCGAGTTCAGAAACCAGGAC
 TTTGAATCTGGAGAAGGCTGGCATCAGTACCAACCCTAAGAATCAGAAGATTATTGTGGATGCCAGGAG
 GCTACCTCTGTTCCACATCTATGCCATTGGAGATGTTGCTGAGGGGCGCCTGAGCTGACGCCACAG
 CTATCAAGGCAGGAAAGCTTCTGGCTCAGCGGCTCTTTGGGAAATCCTCAACCTTAATGGATTACAGCAA
 TGTTCACACAAGTGTCTTTACACCACTGGAGTATGGCTGTGTGGGGCTGTCTGAGGAGGAGGCTGTGGCT
 CTCCATGGCCAGGAGCATGTAGAGGTTTACCATGCATATTATAAGCCCCTAGAGTTCACGGTGGCGGATA
 GGGATGCATCACAGTGTACATAAAGATGGTATGCATGAGGGAGCCCCACAAGTGGTGTGGGCTGCA
 CTTCTTGGCCCCAACGCTGGAGAAGTCAACCAAGGATTTGCTCTTGGGATCAAGTGTGGGGCTTCATAT
 GCACAGGTGATGCAGACAGTAGGGATCCATCCACCTGCTCTGAGGAGGTGGTCAAGCTGCACATCTCCA
 AGCGCTCCGGCTGGAGCCTACTGTGACTGGTTGCTGAGGC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>MG208458 representing NM_013711
 Red=Cloning site Green=Tags(s)

MAAMVAAMVAALRGPSRRFRPRTRALTRGTRGAASAAGGQSFDLLVIGGGSGGLACAKEAAQLGKKVAV
 ADYVEPSPRGKRWGLGGTCVNVGCIIPKLMHQAALLGGMIRDAHHYGWEVAQPVQHNNKTMAEAVQNHVK
 SLNWNWHRVQLQDRKVKYFNKASFVDEHTVRGVDKGGKATLLSAEHIVIAATGGRPRPYPTQVKGALYGIT
 SDDIFWLKESPGKTLVVGASYVALECAFLTGIGLDTTMMRSIPLRGFDQQMSSLVTEHMEHSGTQFLK
 GCVPSHIKKLPTNQLQVTWEDHASGKEDTGTFTVLWAIGRVPETRTLNLKAGISTNPKNQKIIIVDAQE
 ATSVPHIYAIGDVAEGRPELTPTAIKAGKLLAQLRFGKSTLMDYSNVPTTFTVPLEYGCVGLSEEEAVA
 LHGQEHVEVYHAYKPLEFTVADRASQCYIKMVMREPPQLVGLHFLGPNAGEVTQGFALGIKCGASY
 AQVMQTVGIHPTCSEEVVKLHISKRSGLIPTVTGC*G

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:

ACCN:

NM_013711

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_013711.3](#)
RefSeq Size:

1902 bp

RefSeq ORF:

1584 bp

Locus ID:

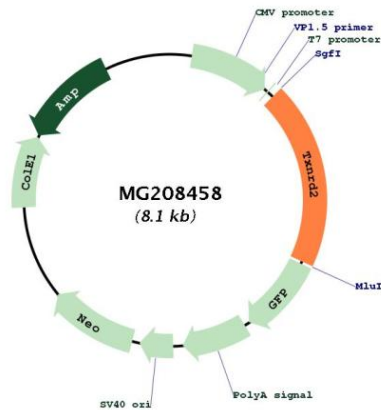
26462

UniProt ID:
[Q9JLT4](#)

Cytogenetics: 16 11.41 cM

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 a mitochondrial form important for scavenging reactive oxygen species in mitochondria. 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 encoding different isoforms have been described for this gene. [provided by RefSeq, Jun 2017]

Product images:



Circular map for MG208458