OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for MG208008

Txnrd1 (NM_015762) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Txnrd1 (NM_015762) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Txnrd1
Synonyms:	T; TR; TR1; Trx; TrxR1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

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ORF Nucleotide Sequence:

>MG208008 representing NM_015762
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGAATGGCTCCAAAGATCCCCCTGGGTCCTATGACTTCGACCTGATTATCATTGGAGGAGGCTCAGGAG
GACTGGCAGCAGCTAAGGAGGCAGCCAAATTTGACAAGAAAGTGCTGGTCTTGGATTTTGTCACACCGAC
TCCTCTTGGGACCAGATGGGGTCTCGGAGGAACGTGTGTGAATGTGGGTTGCATACCTAAGAAGCTGATG
CACCAGGCAGCTTTGCTCGGACAAGCTCTGAAAGACTCGCGCAACTATGGCTGGAAAGTCGAAGACACAG
TGAAGCATGACTGGGAGAAAATGACGGAATCTGTGCAGAGTCACATCGGCTCGCTGAACTGGGGCTACCG
CGTAGCTCTCCGGGAGAAAAAGGTCGTCTATGAGAATGCTTACGGGAGGTTCATTGGTCCTCACAGGATT
GTGGCGACAAATAACAAAGGTAAAGAAAAAATCTATTCAGCAGAGCGGTTCCTCATCGCCACAGGTGAGA
GGCCCCGCTACCTGGGCATCCCTGGAGACAAAGAGTACTGCATCAGCAGTGATGATCTTTTCTCCTTGCC
TTACTGCCCGGGGAAGACCCTAGTAGTTGGTGCATCCTATGTCGCCTTGGAATGTGCAGGATTTCTGGCT
GGTATCGGCTTAGACGTCACTGTAATGGTGCGGTCCATTCTCCTTAGAGGATTTGACCAAGACATGGCCA
ACAAAATCGGTGAACACATGGAAGAACATGGTATCAAGTTTATAAGGCAGTTCGTCCCAACGAAAATTGA
ACAGATCGAAGCAGGAACACCAGGCCGACTCAGGGTGACTGCTCAATCCACAAACAGCGAGGAGACCATA
GAGGGCGAATTTAACACAGTGTTGCTGGCGGTAGGAAGAGATTCTTGTACGAGAACTATTGGCTTAGAGA
CCGTGGGCGTGAAGATAAACGAAAAAACCGGAAAGATACCCGTCACGGATGAAGAGCAGACCAATGTGCC
TTACATCTACGCCATCGGTGACATCCTGGAGGGGAAGCTAGAGCTGACTCCCGTAGCCATCCAGGCGGGG
AGATTGCTGGCTCAGAGGCTGTACGGAGGCTCCAATGTCAAATGTGACTATGACAATGTCCCAACGACTG
TATTTACTCCTTTGGAATATGGCTGTTGTGGCCTCTCTGAAGAAAAAGCCGTAGAGAAATTTGGGGAAGA
AAATATTGAAGTTTACCATAGTTTCTTTTGGCCATTGGAATGGACAGTCCCATCCCGGGATAACAACAAA
TGTTATGCAAAAATAATCTGCAACCTTAAAGACGATGAACGTGTCGTGGGCTTCCACGTGCTGGGTCCAA
ACGCTGGAGAGGTGACGCAGGGCTTTGCGGCTGCGCTCAAGTGTGGGCTGACTAAGCAGCAGCTGGACAG
CACCATCGGCATCCACCCGGTCTGTGCAGAGATATTCACAACGTTGTCAGTGACGAAGCGCTCTGGGGGA
GACATCCTCCAGTCTGGCTGC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

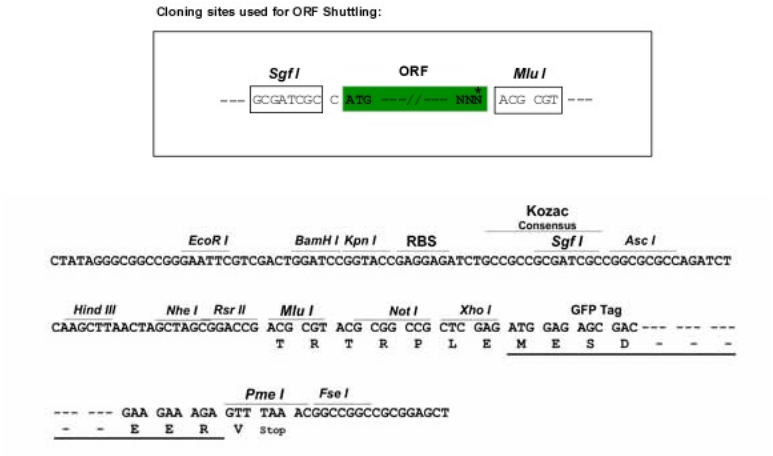
>MG208008 representing NM_015762
Red=Cloning site Green=Tags(s)

MNGSKDPPGSYDFDLIIIGGGSGGLAAAKEAAKFDKKVLVLDFVTPTPLGTRWGLGGTCVNVGCIPKKLM
HQAALLGQALKDSRNYGWKVEDTVKHDWEKMTESVQSHIGSLNWGYRVALREKKVVYENAYGRFIGPHRI
VATNNKGKEKIYSAERFLIATGERPRYLGIPGDKEYCISSDDLFSLPYCPGKTLVVGASYVALECAGFLA
GIGLDVTVMVRSILLRGFDQDMANKIGEHMEEHGIKFIRQFVPTKIEQIEAGTPGRLRVTAQSTNSEETI
EGEFNTVLLAVGRDSCTRTIGLETVGVKINEKTGKIPVTDEEQTNVPYIYAIGDILEGKLELTPVAIQAG
RLLAQRLYGGSNVKCDYDNVPTTVFTPLEYGCCGLSEEKAVEKFGEENIEVYHSFFWPLEWTVPSRDNNK
CYAKIICNLKDDERVVGFHVLGPNAGEVTQGFAAALKCGLTKQQLDSTIGIHPVCAEIFTTLSVTKRSGG
DILQSGC

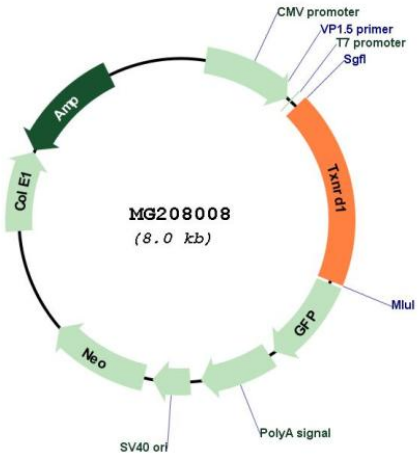
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN:	NM_015762
ORF Size:	1500 bp
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
OTI Annotation:	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
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_015762.2, NP_056577.2
RefSeq Size:	3310 bp
RefSeq ORF:	1500 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 homoeostasis. 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]