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Product datasheet for MG221636

Txnrd3 (NM_001178060) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Txnrd3 (NM_001178060) Mouse Tagged ORF Clone
Symbol:	Txnrd3
Synonyms:	AI196535; Tg; TGR; TR; TR2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

View online »

ORF Nucleotide Sequence:

>MG221636 representing NM_001178060
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGTCGTCGCCACCCGGCCGCCGCGCCCGCCTGGCCTCCCCTGGGACCAGCCGCCCGTCTTCTGAGGCCC
GCGAGGAGCTGCGGCGCCGCCTGCGGGACCTCATCGAGGGCAACAGGGTGATGATCTTCAGCAAGAGTTA
CTGTCCACACAGCACGCGGGTTAAGGAACTCTTTTCGTCCTTGGGAGTGGTCTATAACATCCTGGAACTT
GATCAAGTTGATGACGGGGCCAGTGTTCAGGAAGTGCTGACAGAAATCAGTAACCAGAAAACGGTGCCCA
ATATTTTTGTGAATAAAGTGCACGTGGGTGGATGTGACCGAACTTTCCAGGCACATCAGAATGGTTTACT
GCAGAAGCTCCTCCAAGATGACTCGGCTCATGATTACGACCTCATCATCATCGGCGGGGGTTCTGGCGGC
CTCTCTTGTGCCAAGGAAGCTGCCAACTTGGGAAAGAAGGTCATGGTGCTAGACTTTGTGGTCCCATCGC
CTCAGGGCACGACCTGGGGCCTTGGCGGCACCTGTGTGAACGTAGGCTGTATTCCAAAGAAGCTGATGCA
TCAGGCAGCCCTCCTGGGGCATGCTTTGCAAGATGCCAAGAAATATGGCTGGGAGTATAACCAGCAGGTG
AAGCACAACTGGGAGGCCATGACAGAAGCTATCCAGAGCCACATTGGCTCCTTGAACTGGGGCTACAGGG
TAACCCTTCGGGAGAAAGGCGTGACCTATGTCAACTCCTTCGGGGAGTTTGTGGACCTGCATAAAATAAA
GGTTCAACAGTTGGAGAAAGGTTTACCAGGAAAATTGAAAGTCGTGGCTAAGTCCACCGAAGGACCGGAA
ACAGTAGAAGGGATATACAACACGGTTTTGTTAGCAATTGGTCGTGACTCCTGTACAAGGAAAATAGGGC
TGGAGAAGATCGGGGTCAAAATCAATGAGAAGAATGGCAAAATACCAGTAAACGATGTGGAGCAGACCAA
CGTGCCTCATGTTTATGCTATTGGGGACATACTGGACGGCAAACCAGAGCTCACCCCCGTTGCCATACAG
GCAGGCAAGCTGCTAGCTCGAAGACTCTTTGGGGTCTCTTTAGAAAAGTGTGATTATATTAACATCCCAA
CAACGGTGTTCACACCTCTGGAATATGGCTGTTGTGGACTGTCGGAAGAGAAAGCCATCGAAATGTATAA
AAAAGAGAATCTGGAAGTGTATCACACCTTGTTTTGGCCTCTCGAGTGGACAGTTGCTGGCAGAGACAAC
AACACCTGTTATGCAAAGATAATCTGCAACAAATTCGACAACGAACGTGTGGTGGGATTTCACCTTCTGG
GGCCAAATGCTGGTGAAATCACGCAGGGATTTGCAGCTGCAATGAAATGTGGGCTCACGAAGCAGCTACT
GGATGATACCATTGGAATCCACCCCACCTGTGGTGAGGTATTCACAACATTGGAAATCACAAAGTCCTCA
GGGCTGGACATTACTCAGAAAGGCTGCTGAGGC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

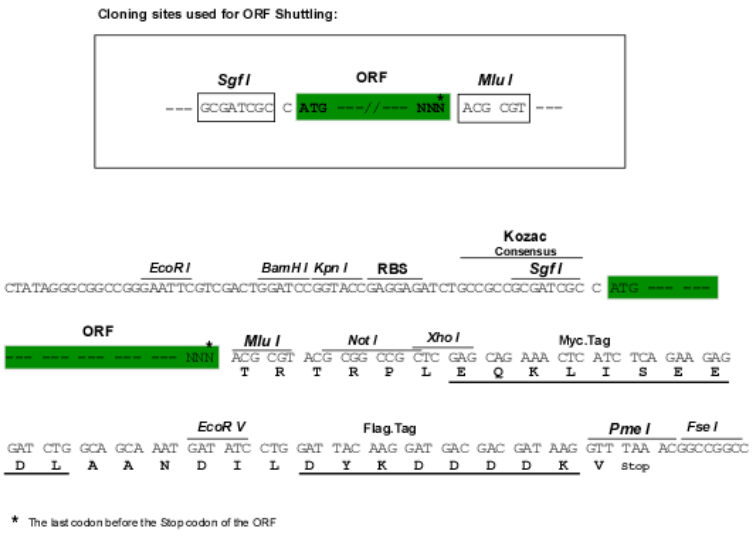
>MG221636 representing NM_001178060
Red=Cloning site Green=Tags(s)

MSSPPGRRARLASPGTSRPSSEAREELRRRLRDLIEGNRVMIFSKSYCPHSTRVKELFSSLGVVYNILEL
DQVDDGASVQEVLTEISNQKTVPNIFVNKVHVGGCDRTFQAHQNGLLQKLLQDDSAHDYDLIIIGGGSGG
LSCAKEAANLGKKVMVLDFVVPSPQGTTWGLGGTCVNVGCIPKKLMHQAALLGHALQDAKKYGWEYNQQV
KHNWEAMTEAIQSHIGSLNWGYRVTLREKGVTYVNSFGEFVDLHKIKVQQLEKGLPGKLKVVAKSTEGPE
TVEGIYNTVLLAIGRDSCTRKIGLEKIGVKINEKNGKIPVNDVEQTNVPHVYAIGDILDGKPELTPVAIQ
AGKLLARRLFGVSLEKCDYINIPTTVFTPLEYGCCGLSEEKAIEMYKKENLEVYHTLFWPLEWTVAGRDN
NTCYAKIICNKFDNERVVGFHLLGPNAGEITQGFAAAMKCGLTKQLLDDTIGIHPTCGEVFTTLEITKSS
GLDITQKGC*G

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001178060

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_001178060.1, NP_001171531.1

RefSeq Size: 2494 bp

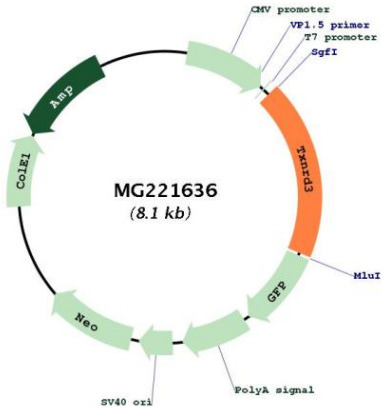
RefSeq ORF: 1506 bp

Locus ID: 232223

Cytogenetics: 6 D1

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 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 encoding different isoforms have been found for this gene. There is evidence for additional 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]

Product images:



Circular map for MG221636