

Product datasheet for **MG205430**

Txnrd2 (BC013688) Mouse Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Txnrd2 (BC013688) Mouse Tagged ORF Clone
Symbol: Txnrd2
Synonyms: Trxrd2, TrxR2, AA118373, TR3
Mammalian Cell Selection: Neomycin
Vector: pCMV6-AC-GFP (PS100010)
E. coli Selection: Ampicillin (100 ug/mL)
ORF Nucleotide Sequence: >MG205430 representing BC013688
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCCGATCGCC

ATGGTGGCGGCGATGGTGGCGGCGCTGCGTGGACCCAGCAGGCGCTTCCGGCCGCGGACACGGGCTCTGA
CACGCGGGACAAGGGGCGCGGAGTGCAGCGGGAGGGCAGCAGAGCTTTGATCTCTTGGTGATCCGGTGG
GGGATCCGGTGGCCTAGCTTGTGCCAAGGAAGCTGCTCAGCTGGGAAAGAAGGTGGCTGTGGCTGACTAT
GTGGAACCTTCTCCCGAGGCACCAAGTGGGGCCTTGGTGGCACCTGTGTCAACGTGGGTTGCATACCCA
AGAAGCTGATGCATCAGGCTGCACTGCTGGGGGCATGATCAGAGATGCTCACCCTATGGCTGGGAGGT
GGCCAGCCTGTCCAACACAACCTGGAAGACAATGGCAGAAGCCGTGCAAAACCATGTGAAATCCTTGAAC
TGGGGTCATCGCGTCCAACCTGCAGGACAGGAAAGTCAAGTACTTTAACATCAAAGCCAGCTTTGTGGATG
AGCACACAGTTTCGCGGTGTGGACAAAGGCGGGAAGGCGACTCTGCTTTCAGCTGAGCACATTGTCAATTGC
TACAGGAGGACGGCCAAGGTACCCACACAAGTCAAAGGAGCCCTGGAATATGGAATCACAAGTGACGAC
ATCTTCTGGTGAAGGAGTCCCCTGGGAAAACGTTGGTGGTTGGAGCCAGCTATGTGGCCCTAGAGTGTG
CTGGCTTCTCACTGGAATTGGACTGGATACCACTGTCATGATGCGCAGCATCCCTCTCCGAGGCTTTGA
CCAGCAAATGTCATCTTTGGTACAGAGCATGGAGTCTCATGGCACCCAGTTCCTGAAAGGCTGTGTC
CCCTCCCACATCAAAAACTCCCAACTAACCAAGCTGCAGGTCAGTCACTGGGAGGATCATGCTTCTGGCAAGG
AAGACACAGGCACCTTTGACACTGTCTGTGGCCATAGGTAAGGATGCGGCGAGCCACACGGACACTGT
CTCTAGCTCAAGGAAACCATATTTCTTGGGAAGAGGGTCTTCGCCTTCTTCCCATCACCTCTGGATC
CTCCATTCTGCTGGCTCC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >MG205430 representing BC013688
Red=Cloning site Green=Tags(s)

MVAAMVAALRGPSRRFRPRTRAL TRGTRGAASAAGGQQSFDLLVIGGGSGGLACAKEAAQLGKKVAVADY
 VEPSRGTWKWGLGGTCVNVGCI PKKLMHQ AALLGGMIRDAHHYGWEVAQP VQHNWKTMAEAVQNHVKS LN
 WGHRVQLQDRKVKYFN I KASFVDEHTVRGV DKGGKATLLSAEHIV IATGGRPRYP TQVKGALEYGITSD D
 IFWLKESPGKTLVVGASVVALECA GFLTGIGLDTTVMRSIPLRGFDQQMSSLVTEHMESHGTQFLKGC V
 PSHIKKLP TNQLQVTWEDHASGKEDTGT FDTVLWAI GKDAASHTDTVSSSRKPYFLGRRVFAFLPITSWI
 LHSAGS

TRTRPLE - GFP Tag - V

Chromatograms: https://cdn.origene.com/chromatograms/ja3113_e04.zip

Restriction Sites: Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

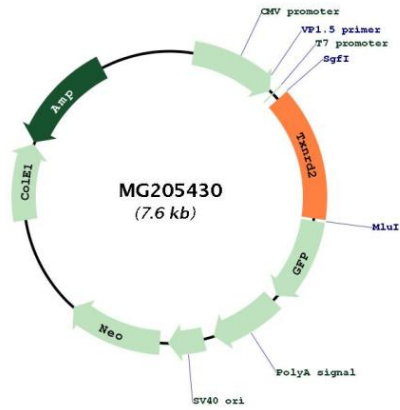
ACCN: BC013688

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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 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:	<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:	BC013688 , AAH13688
RefSeq Size:	1256 bp
RefSeq ORF:	1070 bp
Locus ID:	26462
Cytogenetics:	16 11.41 cM
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 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]</p>

Product images:



Circular map for MG205430