

Product datasheet for **RG232789**

TXNRD1 (NM_001261446) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	TXNRD1 (NM_001261446) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	TXNRD1
Synonyms:	GRIM-12; TR; TR1; TRXR1; TXNR
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG232789 representing NM_001261446
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGTCCTGGACTTTGTCACTCCCACCCTCTTGGAACTAGATGGGGTCTCGGAGGAACATGTGTGAATG
 TGGTTGCATACCTAAAAACTGATGCATCAAGCAGCTTTGTTAGGACAAGCCCTGCAAGACTCTCGAAA
 TTATGGATGGAAGTTCGAGGAGACAGTTAAGCATGATTGGGACAGAATGATAGAAGCTGTACAGAATCAC
 ATTGGCTCTTTGAATTGGGGCTACCGAGTAGCTCTGCGGGAGAAAAAGTCGTCTATGAGAATGCTTATG
 GGCAATTTATTGGTCTCACAGGATTAAGGCAACAAATAAAGGCAAAGAAAAATTTATTCAGCAGA
 GAGATTTCTCATTGCCACTGGTAAAGACCACGTTACTTGGGCATCCCTGGTGACAAAGAATACTGCATC
 AGCAGTGATGATCTTTCTCCTTGCTTACTGCCCGGTAAAGCCCTGGTTGTTGGAGCATCCTATGTGC
 CTTTGGAGTGCCTGGATTTCTGCTGGTATTGGTTTAGACGTCCTGTTATGGTTAGGTCATTCTTCT
 TAGAGGATTTGACCAGGACATGGCCAACAAAATGGTGAACACATGGAAGAACATGGCATCAAGTTTATA
 AGACAGTTCGTACCAATTAAGTTGAACAAATGAAGCAGGGACACCAGGCCGACTCAGAGTAGTAGCTC
 AGTCCACCAATAGTGAGGAAATCATTGAAGGAGAAATAAATACGGTGATGCTGGCAATAGGAAGAGATGC
 TTGCACAAGAAAAATGGCTTAGAAACCGTAGGGTGAAGATAAATGAAAAGACTGGAAAAATACCTGTC
 ACAGATGAAGAACAGACCAATGTGCCTTACATCTATGCCATTGGCGATATATTGGAGGATAAGGTGGAGC
 TCACCCAGTTGCAATCCAGGCAGGAAGATTGCTGGCTCAGAGGCTCTATGCAGTTCCACTGTCAAGTG
 TGACTATGAAAATGTTCCAACCACTGTATTTACTCCTTTGGAATATGGTGTCTGTGGCCTTTCTGAGGAG
 AAAGCTGTGGAGAAGTTGGGGAAGAAAAATTTAGAGTTTACCATAGTTACTTTTGGCCATTGGAATGGA
 CGATTCGTCAGAGATAACAACAAATGTTATGCAAAAAATAATCTGTAATACTAAAGACAATGAACGTGT
 TGTGGGCTTTCAGTACTGGGTCCAAATGCTGGAGAAGTTACACAAGGCTTTGCAGCTGCCTCAATGT
 GGACTGACAAAAAGCAGCTGGACAGCACAATTGGAATCCACCCTGTCTGTGCAGAGGTATTCACACAT
 TGCTGTGACCAAGCGCTCTGGGCAAGCATCCTCCAGGCTGGCTGCTGAGGT

ACCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG232789 representing NM_001261446
 Red=Cloning site Green=Tags(s)

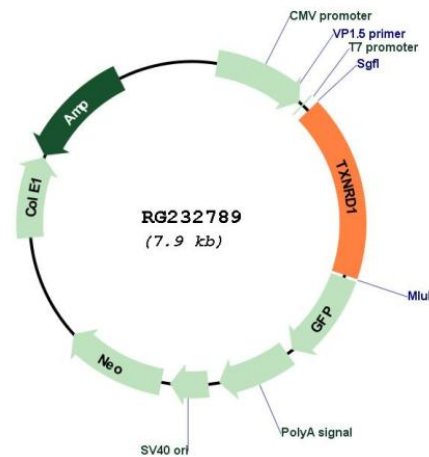
MVLDVFTPTPLGTRWGLGGTCVNVGCIIPKLMHQALLGQALQDSRNYGKWVEETVKHDWRMIEAVQNH
 IGSLNWGYRVALREKKVYENAYGQFIGPHRIKATNNGKEKIYSAERFLIATGERPRYLGIKPGDKEYCI
 SSDDLFSLPYCPGKTLVVGASYVALECAAGFLAGIGLDVTVMVRSILLRQFDQDMANKIGEHEEHGKFI
 RQFVPIKVEQIEAGTPGRLRVVAQSTNSEEIIIEGEYNTVMLAIGRDACTRKIGLETGKINEKTGKIPV
 TDEEQTNVPIIYIGDILEDKVELTPVAIQAGRLLAQRLYAGSTVKCDYENVPTTFTPLEYGACGLSEE
 KAVEKFGREENIEVYHSYFPLEWTIPSRDNKCYAKIICNTKDNERRVVGHVLPNAGEVTQGFAAALKC
 GLTKKQLDSTIGIHPVCAEVFTTSLVTKRSGASILQAGC*G

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:

Plasmid Map:


ACCN: NM_001261446

ORF Size: 1383 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:	<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:	NM_001261446.2
RefSeq Size:	3846 bp
RefSeq ORF:	1386 bp
Locus ID:	7296
UniProt ID:	Q16881
Cytogenetics:	12q23.3
Protein Families:	Druggable Genome
Protein Pathways:	Pyrimidine metabolism
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 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, including a glutaredoxin-containing isoform that is predominantly expressed in testis. [provided by RefSeq, May 2017]</p>