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Product datasheet for RC220848

TXNRD2 (NM_006440) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	TXNRD2 (NM_006440) Human Tagged ORF Clone
Symbol:	TXNRD2
Synonyms:	GCCD5; SELZ; TR; TR-BETA; TR3; TRXR2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

View online »

ORF Nucleotide Sequence:

>RC220848 representing NM_006440
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCGGCAATGGCGGTGGCGCTGCGGGGATTAGGAGGGCGCTTCCGGTGGCGGACGCAGGCCGTGGCGG
GCGGGGTGCGGGGCGCGGCGCGGGGCGCAGCAGCAGGTCAGCGGGACTATGATCTCCTGGTGGTCGGCGG
GGGATCTGGTGGCCTGGCTTGTGCCAAGGAGGCCGCCCAGCTGGGAAGGAAGGTGGCCGTGGTGGACTAC
GTGGAACCTTCTCCCCAAGGCACCCGGTGGGGCCTCGGCGGCACCTGCGTCAACGTGGGCTGCATCCCCA
AGAAGCTGATGCACCAGGCGGCACTGCTGGGAGGCCTGATCCAAGATGCCCCCAACTATGGCTGGGAGGT
GGCCCAGCCCGTGCCGCATGACTGGAGGAAGATGGCAGAAGCTGTTCAAAATCACGTGAAATCCTTGAAC
TGGGGCCACCGTGTCCAGCTTCAGGACAGAAAAGTCAAGTACTTTAACATCAAAGCCAGCTTTGTTGACG
AGCACACGGTTTGCGGCGTTGCCAAAGGTGGGAAAGAGATTCTGCTGTCAGCCGATCACATCATCATTGC
TACTGGAGGGCGGCCGAGATACCCCACGCACATCGAAGGTGCCTTGGAATATGGAATCACAAGTGATGAC
ATCTTCTGGCTGAAGGAATCCCCTGGAAAAACGTTGGTGGTCGGGGCCAGCTATGTGGCCCTGGAGTGTG
CTGGCTTCCTCACCGGGATTGGGCTGGACACCACCATCATGATGCGCAGCATCCCCCTCCGCGGCTTCGA
CCAGCAAATGTCCTCCATGGTCATAGAGCACATGGCATCTCATGGCACCCGGTTCCTGAGGGGCTGTGCC
CCCTCGCGGGTCAGGAGGCTCCCTGATGGCCAGCTGCAGGTCACCTGGGAGGACAGCACCACCGGCAAGG
AGGACACGGGCACCTTTGACACCGTCCTGTGGGCCATAGGTCGAGTCCCAGACACCAGAAGTCTGAATTT
GGAGAAGGCTGGGGTAGATACTAGCCCCGACACTCAGAAGATCCTGGTGGACTCCCGGGAAGCCACCTCT
GTGCCCCACATCTACGCCATTGGTGACGTGGTGGAGGGGCGGCCTGAGCTGACACCCATAGCGATCATGG
CCGGGAGGCTCCTGGTGCAGCGGCTCTTCGGCGGGTCCTCAGATCTGATGGACTACGACAATGTTCCCAC
GACCGTCTTCACCCCGCTGGAGTATGGCTGTGTGGGGCTGTCCGAGGAGGAGGCAGTGGCTCGCCACGGG
CAGGAGCATGTTGAGGTCTATCACGCCCATTATAAACCACTGGAGTTCACGGTGGCTGGACGAGATGCAT
CCCAGTGTTATGTAAAGATGGTGTGCCTGAGGGAGCCCCCACAGCTGGTGCTGGGCCTGCATTTCCTTGG
CCCCAACGCAGGCGAAGTTACTCAAGGATTTGCTCTGGGGATCAAGTGTGGGGCTTCCTATGCGCAGGTG
ATGCGGACCGTGGGTATCCATCCCACATGCTCTGAGGAGGTAGTCAAGCTGCGCATCTCCAAGCGCTCAG
GCCTGGACCCCACGGTGACAGGCTGCTGAGGG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC220848 representing NM_006440
Red=Cloning site Green=Tags(s)

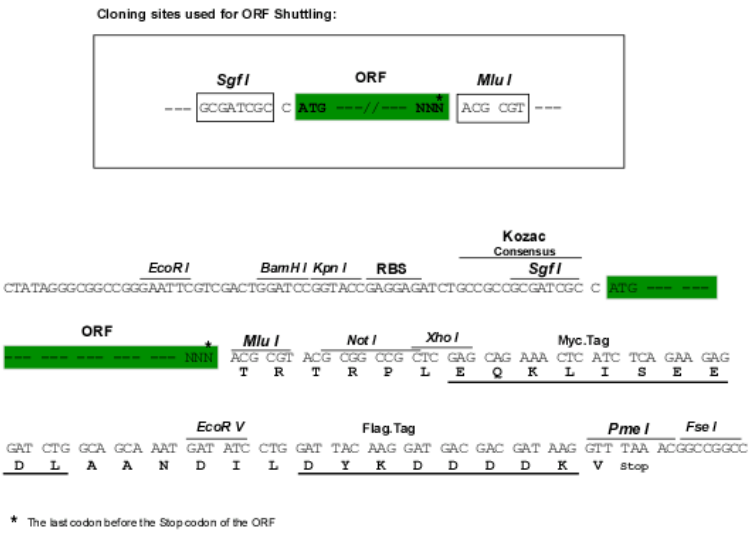
MAAMAVALRGLGGRFRWRTQAVAGGVRGAARGAAAGQRDYDLLVVGGGSGGLACAKEAAQLGRKVAVVDY
VEPSPQGTRWGLGGTCVNVGCIPKKLMHQAALLGGLIQDAPNYGWEVAQPVPHDWRKMAEAVQNHVKSLN
WGHRVQLQDRKVKYFNIKASFVDEHTVCGVAKGGKEILLSADHIIIATGGRPRYPTHIEGALEYGITSDD
IFWLKESPGKTLVVGASYVALECAGFLTGIGLDTTIMMRSIPLRGFDQQMSSMVIEHMASHGTRFLRGCA
PSRVRRLPDGQLQVTWEDSTTGKEDTGTFDTVLWAIGRVPDTRSLNLEKAGVDTSPDTQKILVDSREATS
VPHIYAIGDVVEGRPELTPIAIMAGRLLVQRLFGGSSDLMDYDNVPTTVFTPLEYGCVGLSEEEAVARHG
QEHVEVYHAHYKPLEFTVAGRDASQCYVKMVCLREPPQLVLGLHFLGPNAGEVTQGFALGIKCGASYAQV
MRTVGIHPTCSEEVVKLRISKRSGLDPTVTGC*G

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk8120_f02.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_006440

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_006440.5

RefSeq Size: 2127 bp

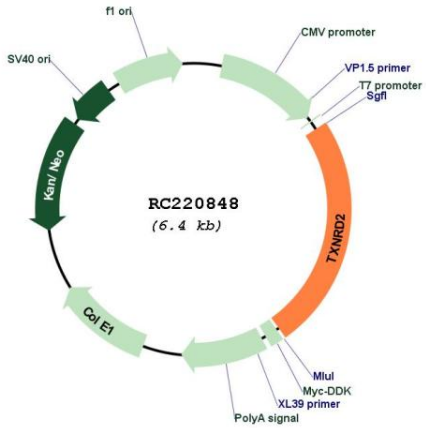
RefSeq ORF: 1575 bp

Locus ID: 10587

UniProt ID: Q9NNW7

Cytogenetics:	22q11.21
Domains:	pyr_redox, pyr_redox_dim
Protein Families:	Druggable Genome
Protein Pathways:	Pyrimidine metabolism
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 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, including a few localized in the cytosol and some lacking the C-terminal Sec residue, have been found for this gene. [provided by RefSeq, Jun 2017]

Product images:



Circular map for RC220848