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Product datasheet for AR09480PU-L

Thioredoxin reductase 1 / TXNRD1 (161-647, His-tag) Human Protein

Product data:

Product Type:	Recombinant Proteins
Description:	Thioredoxin reductase 1 / TXNRD1 (161-647, His-tag) human recombinant protein, 0.5 mg
Species:	Human
Expression Host:	E. coli
Expression cDNA Clone or AA Sequence:	MGSSHHHHHH SSGLVPRGSH MYDYDLIIIG GGSGGLAAAK EAAQYGKKVM VLDFVTPTPL GTRWGLGGTC VNVGCIPKKL MHQAALLGQA LQDSRNYGWK VEETVKHDWD RMIEAVQNHI GSLNWGYRVA LREKKVVYEN AYGQFIGPHR IKATNNKGKE KIYSAERFLI ATGERPRYLG IPGDKEYCIS SDDLFSLPYC PGKTLVVGAS YVALECAGFL AGIGLDVTVM VRSILLRGFD QDMANKIGEH MEEHGIKFIR QFVPIKVEQI EAGTPGRLRV VAQSTNSEEI IEGEYNTVML AIGRDACTRK IGLETVGVKI NEKTGKIPVT DEEQTNVPYI YAIGDILEDK VELTPVAIQA GRLLAQRLYA GSTVKCDYEN VPTTVFTPLE YGACGLSEEK AVEKFGEENI EVYHSYFWPL EWTIPSRDNN KCYAKIICNT KDNERVVGFH VLGPNAGEVT QGFAAALKCG LTKKQLDSTI GIHPVCAEVF TTLSVTKRSG ASILQAGC
Tag:	His-tag
Predicted MW:	55.7 kDa
Concentration:	lot specific
Purity:	>90% by SDS - PAGE
Buffer:	Presentation State: Purified State: Liquid purified protein Buffer System: PBS, pH 7.4, containing 10% glycerol

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Bioactivity:	Biological: Specific activity is > 15 units/mg, and was measured in a coupled assay with 5,5' - Dithiobis (2-nitrobenzoic acid) (DTNB) and NADPH. The amount of TNB generated by NADPH was measured in absorbance at 412 nm. Activity Assay 1. Prepare a 0.7 ml reaction mixture into a suitable container: The final concentrations are 100mM potassium phosphate, 10mM EDTA, 0.2mM beta-NADPH, 0.05% BSA, 0.014% (w/v) thioredoxin, 5mM DTNB, 5ug, human TRXNRD1. 2. Equilibrate to 25°C and monitor the A412nm until the value is constant using a spectrophotometer. 3. Add 35 ul of 100 mM DTNB into reaction mixture and mix immediately. 4. Record the increase in A412nm for 2 minutes.
Preparation:	Liquid purified protein
Protein Description:	Recombinant human TXNRD1 protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography techniques.
Storage:	Store undiluted at 2-8°C for up to two weeks or (in aliquots) at -20°C or -70°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
RefSeq:	NP_001087240
Locus ID:	7296
UniProt ID:	Q16881
Cytogenetics:	12q23.3
Synonyms:	GRIM-12; TR; TR1; TRXR1; TXNR
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, including a glutaredoxin-containing isoform that is predominantly expressed in testis. [provided by RefSeq, May 2017]
Protein Families:	Druggable Genome
Protein Pathways:	Pyrimidine metabolism

Product images: