

Recombinant Human Thioredoxin reductase 1 Protein, His-tagged

Cat. No. TXNRD1-32H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human TXNRD1 protein with a His-tag was expressed in HEK293
Species	Human
Source	HEK293
Description	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.
Molecular Mass	The protein has a calculated MW of 72 kDa.
AA Sequence	HHHHHHHHMGCAEGKAVAAAAPTELQTKGKNGDGRRRSKDHHPGKTLPENPAG

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FTSTATADSRALLQAYIDGHSVIFSRSTCTRCTEVKKLFKSLCVPYFVLELDQTEDG
 RALEGTLSELAETDLPVVFVKQRKIGGHGPTLKAYQEGRLQKLLKMNGPEDLPKSY
 DYDLIIIGGGSGGLAAAKEAAQYGKKVMVLDFVTPTPLGTRWGLGGTCVNVGCIPKK
 LMHQAALLGQALQDSRNYGWKVEETVKHDWDRMIEAVQNHIGSLNWGYRVALREK
 KVVYENAYGQFIGPHRIKATNNKGKEKIYSAERFLIATGERPRYLGIPGDKEYCISDD
 LFSLPYCPGKTLVVGASYVALECAGFLAGIGLDVTVMVRSILLRGFDQDMANKIGE
 MEEHGIKFIRQFVPIKVEQIEAGTPGRLRVVAQSTNSEEIIEGEYNTVMLAIGRDACTR
 KIGLETGVKINEKTGKIPVTDEEQTNVPYIYAIGDILEDKVELTPVAIQAGRLLAQRLY
 AGSTVKCDYENVPTTVFTPLEYGACGLSEEKAVEKFGEENIEVYHSYFWPLEWTIPS
 RDNNKCYAKIICNTKDNERVVG FHLGPNAGEVTQGFAAALKCGLTKKQLDSTIGIH
 PVCAEVFTTLSVTKRSGASILQAGCCG

Purity >90% by SDS-PAGE

Storage Store it under sterile conditions at -20 to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.

Concentration 3.71 mg/mL

Storage Buffer 20 mM Tris +150 mM NaCl, pH8.4

GENE INFORMATION

Gene Name TXNRD1 thioredoxin reductase 1 [Homo sapiens (human)]

Official Symbol TXNRD1

Synonyms TXNRD1; thioredoxin reductase 1; thioredoxin reductase 1, cytoplasmic; GRIM 12; Trxr1; TXNR; oxidoreductase; thioredoxin reductase TR1; thioredoxin reductase GRIM-12; KM-102-derived reductase-like factor; gene associated with retinoic and IFN-induced mortality 12 protein; gene associated with retinoic and interferon-induced

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mortality 12 protein; TR; TR1; TRXR1; GRIM-12; MGC9145;

Gene ID 7296

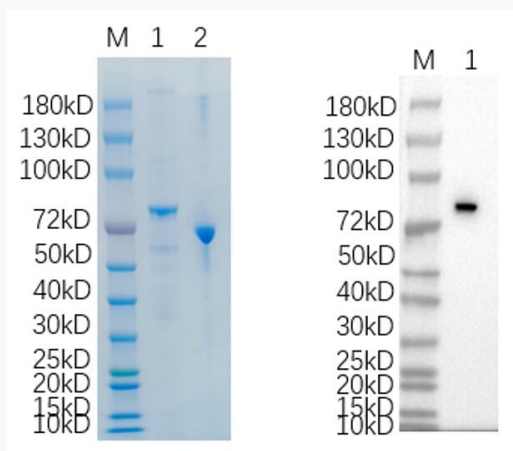
mRNA Refseq NM_001093771

Protein Refseq NP_001087240

MIM 601112

UniProt ID Q16881

SDS-PAGE:



Reducing 12% SDS-PAGE and WB analysis profile of purified TXNRD1

1. TXNRD1

2. BSA

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