

## Product datasheet for **TP760704**

### **TXNRD1 (NM\_003330) Human Recombinant Protein**

#### **Product data:**

<b>Product Type:</b>	Recombinant Proteins
<b>Description:</b>	Purified recombinant protein of Human thioredoxin reductase 1 (TXNRD1), transcript variant 1, (Note, selenocysteine protein, internal stop codon, see reference data summary), full length, with N-terminal HIS tag, expressed in E.Coli, 50ug
<b>Species:</b>	Human
<b>Expression Host:</b>	E. coli
<b>Expression cDNA Clone or AA Sequence:</b>	A DNA sequence encoding human full-length TXNRD1
<b>Tag:</b>	N-His
<b>Predicted MW:</b>	60.2 kDa
<b>Concentration:</b>	>0.05 µg/µL as determined by microplate BCA method
<b>Purity:</b>	> 80% as determined by SDS-PAGE and Coomassie blue staining
<b>Buffer:</b>	25 mM Tris-HCl, pH 8.0, 150 mM NaCl, 1% sarkosyl, 10% glycerol
<b>Note:</b>	For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process.
<b>Storage:</b>	Store at -80°C.
<b>Stability:</b>	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
<b>RefSeq:</b>	<a href="#">NP_003321</a>
<b>Locus ID:</b>	7296
<b>UniProt ID:</b>	<a href="#">Q16881</a>
<b>RefSeq Size:</b>	4206
<b>Cytogenetics:</b>	12q23.3
<b>RefSeq ORF:</b>	1497
<b>Synonyms:</b>	GRIM-12; TR; TR1; TRXR1; TXNR



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**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 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]

**Protein Families:**

Druggable Genome

**Protein Pathways:**

Pyrimidine metabolism

**Product images:**