

## Recombinant *C. elegans* TXNRD1 Protein

**Cat. No.** TXNRD1-24C    **Lot. No.** (See product label)

### SPECIFICATION

**Product Overview**      Recombinant *C. elegans* Thioredoxin Reductase 1 (Non-tagged, 667 residues)

**Species**                      *C.elegans*

**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.

**Purity**                              ≥ 95% as judged by gel analysis

**Unit Definition**                1 U of enzyme reduces 1 μmol DTNB per min in 0.5 mL standard DTNB assay containing 2.5 mM DTNB and 0.3 mM NADPH in TE buffer (50 mM Tris-HCl, 2 mM EDTA, pH 7.5)

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<b>Applications</b>	DTNB assay; Insulin-coupled Thioredoxin assay; Inhibitor screening; etc.
<b>Notes</b>	Centrifuge the tube briefly before opening the lid
<b>Storage</b>	Store at -20 centigrade upon delivery.
<b>Concentration</b>	1 mg/mL
<b>Storage Buffer</b>	TE buffer with 50% glycerol.
<b>Shipping</b>	Shipped in cold pack by courier service.

## GENE INFORMATION

<b>Official Symbol</b>	TXNRD1
<b>Synonyms</b>	TXNRD1; thioredoxin reductase 1; TR; TR1; TXNR; TRXR1; GRIM-12; thioredoxin reductase 1, cytoplasmic; KM-102-derived reductase-like factor; gene associated with retinoic and IFN-induced mortality 12 protein; gene associated with retinoic and interferon-induced mortality 12 protein; oxidoreductase; peroxidase TXNRD1; selenoprotein TXNRD1; testis tissue sperm-binding protein Li 46a; thioredoxin reductase GRIM-12; thioredoxin reductase TR1; EC 1.11.1.2; EC 1.8.1.9
<b>Coomassie stained SDS PAGE analysis of 10 µg CeTRXR1 product</b>	<p>Lane 1: Molecular weight marker</p> <p>Lane 2: CeTRXR1</p>

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