

Recombinant Human TXNRD2 Protein

Cat. No. TXNRD2-22H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human Thioredoxin Reductase 2 (Non-tagged; No signal peptide; 488 residues)
Species	Human
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 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.
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)

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

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

GENE INFORMATION

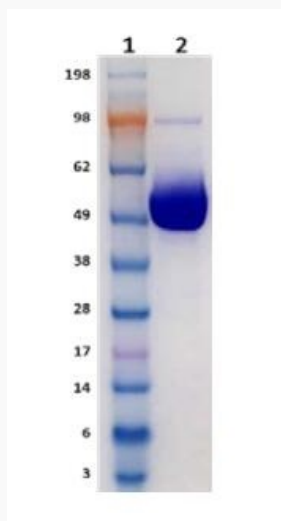
Gene Name	TXNRD2 thioredoxin reductase 2 [Homo sapiens (human)]
Official Symbol	TXNRD2
Synonyms	TXNRD2; thioredoxin reductase 2; TR; TR3; SELZ; GCCD5; TRXR2; TR-BETA; thioredoxin reductase 2, mitochondrial; selenoprotein Z; thioredoxin reductase 3; thioredoxin reductase TR3; thioredoxin reductase beta; EC 1.8.1.9
Gene ID	10587
mRNA Refseq	NM_006440
Protein Refseq	NP_006431
MIM	606448
UniProt ID	Q9NNW7

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**Coomassie stained
SDS PAGE analysis
of 10 µg HTRXR2
product**



Lane 1: Molecular weight marker

Lane 2: HTRXR2

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