

## Recombinant Human TXNRD2 Protein

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

### SPECIFICATION

<b>Product Overview</b>	Recombinant Human Thioredoxin Reductase 2 (Non-tagged; No signal peptide; 488 residues)
<b>Species</b>	Human
<b>Description</b>	<p>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.</p>
<b>Purity</b>	≥ 95% as judged by gel analysis
<b>Unit Definition</b>	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](mailto:info@creative-biomart.com)  Fax: 1-631-938-8127

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

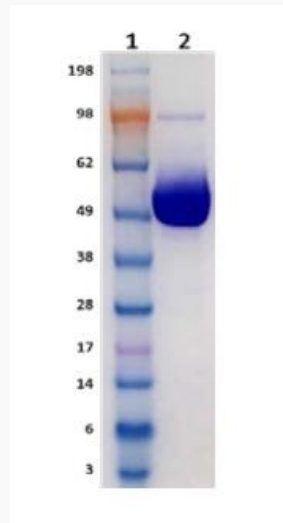
<b>Applications</b>	DTNB assay; Insulin-coupled Thioredoxin assay; Inhibitor screening; etc.
<b>Notes</b>	Centrifuge the tube briefly before opening the lid
<b>Storage</b>	Store at -20 centigrade upon delivery.
<b>Concentration</b>	1 mg/mL
<b>Storage Buffer</b>	TE buffer with 50% glycerol.
<b>Shipping</b>	Shipped in cold pack by courier service.
<b>GENE INFORMATION</b>	
<b>Gene Name</b>	TXNRD2 thioredoxin reductase 2 [ Homo sapiens (human) ]
<b>Official Symbol</b>	TXNRD2
<b>Synonyms</b>	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
<b>Gene ID</b>	10587
<b>mRNA Refseq</b>	NM_006440
<b>Protein Refseq</b>	NP_006431
<b>MIM</b>	606448
<b>UniProt ID</b>	Q9NNW7

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

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)  Fax: 1-631-938-8127

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

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



Lane 1: Molecular weight marker

Lane 2: HTRXR2

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

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)  Fax: 1-631-938-8127

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