

Recombinant Rat Txnrd1 Protein

Cat. No. Txnrd1-021R **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Rat Txnrd1 protein(1021-1323) without tag was expressed in E.coli
Species	Rat
Source	E.coli
ProteinLength	1021-1323 a.a.
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.
Unit Definition	One ampoule contains 100 µof recombinant rat thioredoxin reductase 1 (TrxR1) in 50 mM Tris-HCl, 1 mM EDTA, pH 7.5 and 50 percent glycerol with a total activity of 5 units and 0.15 mg of active enzyme protein. One unit of enzyme catalyses oxidation

 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

of one micromol of NADPH per min under standard mammalian TrxR assay conditions in the presence of 5 mM DTNB.

Stability

≥ 6 months

Storage

-20 centigrade

Shipping

Room Temperature in continental US, may vary elsewhere.

GENE INFORMATION

Gene Name

[Txnrd1](#) thioredoxin reductase 1 [[Rattus norvegicus \(Norway rat\)](#)]

Official Symbol

[Txnrd1](#)

Synonyms

Txnrd1; thioredoxin reductase 1; Tr; thioredoxin reductase 1, cytoplasmic; NADPH-dependent thioredoxin reductase; selenoprotein oxidoreductase; thioredoxin reductase TR1; EC 1.8.1.9

Gene ID

[58819](#)

mRNA Refseq

[NM_001351981](#)

Protein Refseq

[NP_001338910](#)

 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