

## Recombinant Human Thioredoxin2

**Cat. No.** TXN2-133H    **Lot. No.** (See product label)

### SPECIFICATION

|                                 |                                                                                                                                                                                                                                                                                                                          |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b>         | Recombinant Thioredoxin2 was expressed in E.coli and purified by using conventional chromatography techniques, 11 kDa (108 aa).                                                                                                                                                                                          |
| <b>Species</b>                  | Human                                                                                                                                                                                                                                                                                                                    |
| <b>Source</b>                   | E.coli                                                                                                                                                                                                                                                                                                                   |
| <b>ProteinLength</b>            | 60-166 aa                                                                                                                                                                                                                                                                                                                |
| <b>Description</b>              | Thioredoxin(Trx) is a low molecular weight redox protein. Trx contains a redox active disulfide/dithiol group within the conserved Cys-Gly-Pro-Cys active site. The Thioredoxin2 may play important roles in the regulation of the mitochondrial membrane potential and in protection against oxidant-induced apoptosis. |
| <b>Sequences of amino acids</b> | MTTFNIQDGP DFQDRVVNSE TPVVVDFHAQ WCGPCKILGP RLEKMVAKQH<br>GKVVMKVDI DDHTDLAIEY EVSAVPTVLA MKNGDVVDKF VGIKDEDQLE<br>AFLKKLIG                                                                                                                                                                                              |
| <b>Formulation</b>              | Liquid. In PBS (pH 7.4)                                                                                                                                                                                                                                                                                                  |
| <b>Purity</b>                   | > 95% by SDS - PAGE                                                                                                                                                                                                                                                                                                      |
| <b>Concentration</b>            | 1 mg/ml (determined by Bradford assay)                                                                                                                                                                                                                                                                                   |
| <b>Biological activity</b>      | Specific activity is 3-4 A650/min/mg and was obtained by measuring the increase of                                                                                                                                                                                                                                       |

 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

insulin precipitation in absorbance at 650 nm resulting from the reduction of insulin.

#### Activity Assay

1. Prepare a 1ml reaction cocktail into a suitable container: The final concentrations are 5mM Tris, 63mM sodium phosphate, 1mM DTT, 0.1% (w/v) insulin, 2mM EDTA.
2. Add 4ug of recombinant thioredoxin2 into reaction cocktail and mix immediately.
3. Incubate at 25C for 20 minutes.
4. Record the increase in A650nm for 15 minutes.

#### Storage

Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.

#### GeneID

[25828](#)

## GENE INFORMATION

#### Gene Name

#### Synonyms

MT-TRX; MTRX; Mt-Trx; TRX2; Thioredoxin-2; mitochondrial thioredoxin ; thioredoxin 2; TXN2

#### mRNA Refseq

[NM\\_012473](#)

#### Protein Refseq

[NP\\_036605](#)

#### MIM

[609063](#)

#### UniProt ID

[Q99757](#)

#### Chromosome Location

22q13.1

#### Function

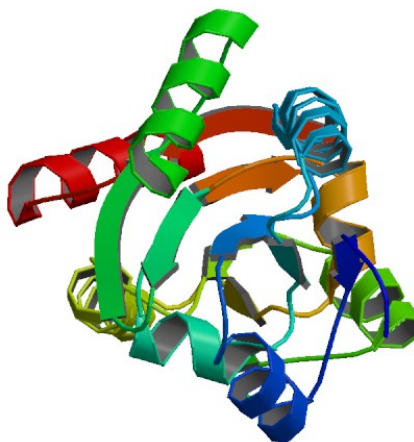
electron carrier activity; protein disulfide oxidoreductase activity

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PDBrendering based  
on 1uvz. Available  
structures:1uvz,1w4v,1v



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