

Active Recombinant Full Length Human Thioredoxin

Cat. No. TXN-97H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human thioredoxin-1 was overexpressed in E. coli and purified by using conventional chromatography techniques (105 aa, 11.7 kDa).
Species	Human
Source	E.coli
ProteinLength	1-105 a.a.
Description	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. It is involved in the first unique step in DNA synthesis. Trx also provides control over a number of transcription factors affecting cell proliferation and death through a mechanism referred to as redox regulation.
Formulation	Liquid. In PBS (pH 7.4).
Molecular Weight	11.7 kDa (105 aa).
Purity	> 95% by SDS – PAGE.
Concentration	1 mg/ml (determined by Bradford assay).
Amino acid Sequence	MVKQIESKTA FQEALDAAGD KLVVVD FSAT WCGPCKMIKP FFHSLSEKYS NVIFLEVDVD DCQDVASECE VKCMPTFQFF KKGQKVG EFS GANKEKLEAT INELV

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Biological activity	Specific activity is 7-10 A650/min/mg and was obtained by measuring the increase of insulin precipitation in absorbance at 650 nm resulting from the reduction of insulin. Please refer to our activity assay protocol.
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 thioredoxin 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.
GENE INFORMATION	
Gene Name	TXN thioredoxin [Homo sapiens]
Synonyms	TXN; MGC61975; TRX; ADF; DKFZp686B1993; MGC61975; OTTHUMP00000021892; SASP; TRDX; TRX1; Trx; thioredoxin; ATL-derived factor; Surface-associated sulphydryl protein.
Gene ID	7295
mRNA Refseq	NM_003329
Protein Refseq	NP_003320
MIM	187700
UniProt ID	P10599
Chromosome	9q31

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Location	
Pathway	Nucleotide metabolism.
Function	protein binding.

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