Recombinant Thioredoxin

Cat. No. TRX-262 **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant E.Coli Thioredoxin produced in E.Coli contains a single disulfide active site and has a molecular mass of 11.9 kDa. The pI of the TRX is 4.67.
Source	E.coli
Description	Thioredoxins are small disulphide-containing redox proteins that have been found in all the kingdoms of living organisms. Thioredoxin contains a single disulfide active site and serves as a general protein disulphide oxidoreductase. It interacts with a broad range of proteins by a redox mechanism based on reversible oxidation of two cysteine thiol groups to a disulphide, accompanied by the transfer of two electrons and two protons. The net result is the covalent interconversion of a disulphide and a dithiol. It has been suggested that thioredoxin may catalyze the formation of correct disulfides during protein folding because of its ability to act as an efficient oxidoreductant. This could be especially useful in refolding proteins expressed in E. coli. To this end, thioredoxin has been shown to act as a protein disulfide isomerase.
Amino Acid Sequence	HMSDKIIHL TDDSFDTDVLKADGAIL VDFW AEWCGPCKMIAPILDEI GKLTVAKLNI DQNPGTAPKYGIRGIPTLLLFKNGEVAATKVGAL DANLA.
Physical Appearance	Sterile Lyophilized Powder.
Formulation	Each mg of protein contains 20mM phosphate buffer pH 7.4.
Purity	Greater than 90.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by reducing and non-reducing SDS-PAGE.

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Endotoxin	Less than 0.1 ng/μg (IEU/μg) of rTRX.
Biological Activity	rTRX activity is assayed by measuring the change in absorbance at 650 nm at 25°C using 0.13μM bovine insulin containing 0.33mM DTT (pH 6.5). The specific activity was found to be 3IU/mg.
Stability	rTRX although stable at 4°C for 3 weeks, should be stored desiccated below -18°C. Please prevent freeze thaw cycles.

GENE INFORMATION

Synonyms	TXN; MGC61975; TRX; ADF; DKFZp686B1993; MGC61975; OTTHUMP00000021892; SASP; TRDX; TRX1; Trx; thioredoxin; ATL-derived factor; Surface-associated sulphydryl protein.

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