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California Bioscience

Product Datasheet

Product Name	Thioredoxin Yeast Recombinant
Cata No	CB500954
Source	*Escherichia Coli.*
Synonyms	Thioredoxin-1, Thioredoxin I, TR-I, Thioredoxin-2, TRX1, TRX2, YLR043C.

Description

Thioredoxins are small disulphide-containing redox proteins (within the conserved Cys-Gly-Pro-Cys active site) 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. Thioredoxins are involved in the first unique step in DNA synthesis. 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. Trx also provides control over a number of transcription factors affecting cell proliferation and death through a mechanism referred to as redox regulation. Thioredoxin Yeast Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain having a molecular mass of 12.6kDa.

Physical Appearance

Sterile Lyophilized Powder.

Biological Activity

TRX activity is assayed by measuring the change in absorbance at 650 nm at 25℃ using 0.13μM bovine insulin containing 0.33mM DTT (pH 6.5).
The specific activity was found to be 3IU/mg.

Purity

Greater than 95.0% as determined by:
(a) Analysis by RP-HPLC.
(b) Analysis by SDS-PAGE.

Formulation

Each mg of protein contains 20mM phosphate buffer pH 7.4.

Reconstitution

It is recommended to reconstitute the lyophilized TRX in sterile 18MΩ-cm H2O.

Stability

TRX although stable at 4℃ for 3 weeks, should be stored desiccated below -18℃.
Please prevent freeze thaw cycles.