

## 32-5263: Recombinant Yeast Thioredoxin

**Alternative Name :** Thioredoxin-1,Thioredoxin I,TR-I,Thioredoxin-2,TRX1,TRX2,YLR043C.

### Description

Source : Escherichia Coli. Thioredoxin Yeast Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain having a molecular mass of 12.6kDa. 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.

### Product Info

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|----------------------------|---|
| <b>Amount :</b>            | 20 µg   |
| <b>Purification :</b>      | Greater than 95.0% as determined by SDS-PAGE.   |
| <b>Content :</b>           | Each mg of protein contains 20mM phosphate buffer pH 7.4.   |
| <b>Storage condition :</b> | TRX although stable at 4°C for 3 weeks, should be stored desiccated below -18°C. Please prevent freeze thaw cycles. |

### Application Note

It is recommended to reconstitute the lyophilized TRX in sterile 18MΩ-cm H<sub>2</sub>O. TRX 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 5.8units/mg.

