

## 32-5161: Recombinant Human Thioredoxin

**Alternative Name :** Thioredoxin, ATL-derived factor, ADF, Surface-associated sulphhydryl protein, SASP, TXN, TRDX, TRX, TRX1, MGC61975, DKFZp686B1993.

### Description

Source : Escherichia Coli. Thioredoxin Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 105 amino acids and having a molecular mass of 11.7 kDa. 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

**Amount :** 50 µg  
**Purification :** Greater than 95.0% as determined by SDS-PAGE.  
**Content :** Thioredoxin solution containing 1mg/ml solution containing 1xPBS pH 7.4.  
**Storage condition :** Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.  
**Amino Acid :** MVKQIESKTA FQEALDAAGD KLVVDFSAT WCGPCKMIKP FFHSLSEKYS NVIFLEVDVD DCQDVASECE VKCMPTFQFFKKGQKVGFEFS GANKEKLEAT INELV.

### Application Note

Specific activity is 7-10 A650/min/mg, 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.

