



## Product Datasheet

<b>Product Name</b>	Thioredoxin Human Recombinant
<b>Cata No</b>	CB501181
<b>Source</b>	<i>Escherichia Coli.</i>
<b>Synonyms</b>	Thioredoxin, ATL-derived factor, ADF, Surface-associated sulphhydryl protein, SASP, TXN, TRDX, TRX, TRX1, MGC61975, DKFZp686B1993.

### 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 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.

### Physical Appearance

Sterile filtered colorless solution.

### Purity

Greater than 95.0% as determined by:

- (a) Analysis by RP-HPLC.
- (b) Analysis by SDS-PAGE.

### Formulation

Thioredoxin solution containing 20mM phosphate buffer pH 7.4.

### Stability

Thyrodoxin human although stable at 4°C for 1 week, should be stored desiccated below -18°C.

**Please prevent freeze thaw cycles.**

### Sequence

MVKQIESKTA FQEALDAAGD KLVVVDFSAT  
WCGPCKMIKP FFHSLSEKYS NVIFLEVDVD  
DCQDVASECE VKCMPTFQFFKKGQKVGFEFS  
GANKEKLEAT INELV.