

□ Cat # RP-980

Recombinant Human Thioredoxin

**Size:** □ 50 ug

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.

#### **SOURCE:**

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. Thioredoxin solution containing 20mM phosphate buffer pH 7.4.

#### **APPLICATION AND SUGGESTED DILUTIONS:**

Greater than 95.0% as determined by (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE. Users must optimize the appropriate concentration and conditions for each assay.

#### **STORAGE & STABILITY:**

Thyrodoxin human although stable at 4°C for 1 week, should be stored desiccated below -18°C. If supplied in powder then reconstitute it in 100ul water for 1mg/mL stock and store in liquid at 4oC for ~ 1week or aliquots in suitable size and store at -20oC for long term storage.

#### **USAGE:**

This item is for LABORATORY RESEARCH USE ONLY.

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