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## Product Data Sheet

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Product Name: TXN1 Human  
 Cat. No.: GP24921  
 Batch No.: 1

### Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Thioredoxin; ATL-derived factor; ADF; Surface-associated sulphhydryl protein; SASP; TXN; TRDX; TRX; TRX1; MGC61975; DKFZp686B1993.		
Amino Acid Sequence	MVKQIESKTA FQEALDAAGD KLVVDFSAT WCGPCKMIKP FFHSLSEKYS NVIFLEVDVD DCQDVASECE VKCMPTFQFFKKGQKVGFEFS GANKEKLEAT INELV.		
Formulation	Thioredoxin solution containing 1mg/ml solution containing 1xPBS pH 7.4.		

### Introduction

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.

### Biological Activity

Specific activity is >150 A650/min/mg, obtained by measuring the increase of insulin precipitation in absorbance at 650 nm resulting from the reduction of insulin.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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Address: 10292 Central Ave. #205, Montclair, CA, USA

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### Stability

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.

### Background

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.

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