
Product Data Sheet

Product Name: TXN1 Human, His

Cat. No.: GP24923

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	MGSSHHHHHH SGLVPRGSH MVKQIESKTA FQEALDAAGD KLVVVD FSAT WCGPCKMIKP FFHSLSEKYS NVIFLEVDVD DCQDVASECE VKCMPTFQFF KKGQKVG EFS GANKEKLEAT INELV.		
Formulation	TXN1 solution containing 1x PBS 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 7-10 A650/min/mg, obtained by measuring the increase of insulin precipitation in absorbance at 650 nm resulting from the reduction of insulin.

Stability

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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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 125 amino acids (1-105 a.a.) and having a molecular mass of 13.9 kDa (Molecular weight on SDS-PAGE will appear higher). TXN protein is fused to a 20 amino acid His-Tag at N-terminus and purified by standard chromatography.

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