# **PRODUCT INFORMATION**

**Expression system** E.coli

**Domain** 1-105aa

**UniProt No.** P10639

NCBI Accession No. NP\_035790

## **Alternative Names**

TRX1, TRX2, Thioredoxin-1, Thioredoxin I, TR-I, Thioredoxin-2, Thioredoxin-1, ADF, Surface associated sulphydryl protein, TXN protein, ATL derived factor, DKFZp686B1993, MGC61975, SASP, Thioredoxin, TRDX, TRX, TRX 1, TXN

## **PRODUCT SPECIFICATION**

### **Molecular Weight**

14.1 kDa (128aa) confirmed by MALDI-TOF

## Concentration

1mg/ml (determined by BCA assay)

### Formulation

Liquid in. Phosphate-Buffered Saline (pH 7.4) containing 10% glycerol

Purity
> 90% by SDS-PAGE

### **Endotoxin level**

< 1 EU per 1ug of protein (determined by LAL method)

## **Biological Activity**

Specific activity is >60 A650/cm/min/mg, obtained by measuring the increase of insulin precipitation in absorbance at 650 nm resulting from the reduction of insulin

# Tag

His-Tag

Application SDS-PAGE, Enzyme Activity

### **Storage Condition**

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.



# BACKGROUND

### Description

Thioredoxin-1 is a low molecular weight redox protein. Thioredoxin-1 contains a redox active disulfide/dithiol group within the conserved Cys-Gly-Pro-Cys active site. It is involved in the first unique step in DNA synthesis. Thioredoxin-1 also provides control over a number of transcription factors affecting cell proliferation and death through a mechanism referred to as redox regulation. Recombinant Mouse Thioredoxin-1 was expressed in E. coli and purified by using conventional chromatography techniques.

### **Amino acid Sequence**

<MGSSHHHHHH SSGLVPRGSH MGS>MVKLIES KEAFQEALAA AGDKLVVVDF SATWCGPCKM IKPFFHSLCD KYSNVVFLEV DVDDCQDVAA DCEVKCMPTF QFYKKGQKVG EFSGANKEKL EASITEYA

### **General References**

Pigiet VP., et al.(1986) Proc. Natl.Acad.Sci. uSA 83(20):7643-7. Lundstrom J., et al. (1990) J.Biol.Chem. 265(16):9114-20.

## DATA

#### SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.