

Mouse Thioredoxin / TXN / SASP Protein

Catalog Number: 50822-MNAE



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

Txn; Txn1

Protein Construction:

A DNA sequence encoding the mouse Txn (P10639) (Met1-Val105) was expressed and purified.

Source: Mouse

Expression Host: E. coli

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio Activity:

Measured by its ability to catalyze the reduction of insulin. The reaction leads to precipitation, which can be measured by absorbance at 650 nm. The specific activity is >4 A650/min/mg.

Endotoxin:

Please contact us for more information.

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Met

Molecular Mass:

The recombinant mouse Txn consists of 105 amino acids and predicts a molecular mass of 11.7 KDa. It migrates as an approximately 15 KDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

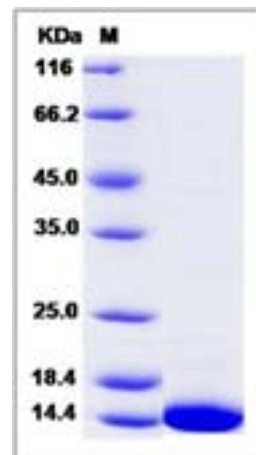
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Thioredoxin, also known as ATL-derived factor, Surface-associated sulphydryl protein, SASP and TXN, is a nucleus, cytoplasm and secreted protein which belongs to the thioredoxin family. Thioredoxins are proteins that act as antioxidants by facilitating the reduction of other proteins by cysteine thiol-disulfide exchange. Thioredoxins are found in nearly all known organisms and are essential for life in mammals. Thioredoxin / TXN participates in various redox reactions through the reversible oxidation of its active center dithiol to a disulfide and catalyzes dithiol-disulfide exchange reactions. Thioredoxin / TXN plays a role in the reversible S-nitrosylation of cysteine residues in target proteins, and thereby contributes to the response to intracellular nitric oxide. Thioredoxin / TXN nitrosylates the active site Cys of CASP3 in response to nitric oxide (NO), and thereby inhibits caspase-3 activity. Thioredoxin / TXN induces the FOS/JUN AP-1 DNA-binding activity in ionizing radiation (IR) cells through its oxidation/reduction status and stimulates AP-1 transcriptional activity.

References

1. Holmgren A, et al., 1989, J Biol Chem 264 (24): 13963-6. 2. Nordberg J, et al., 2001, Free Radic Biol Med 31 (11): 1287-312. 3. Mustacich D, et al., 2000, Biochem J 346 (Pt 1): 1-8.

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