

Active Recombinant Human TXN

Cat. No. TXN-98H Lot. No. (See product label)

SPECIFICATION

Species	Human
Description	The protein encoded by this gene acts as a homodimer and is involved in many redox reactions. The encoded protein is active in the reversible S-nitrosylation of cysteines in certain proteins, which is part of the response to intracellular nitric oxide. This protein is found in the cytoplasm. Two transcript variants encoding different isoforms have been found for this gene.
Form	Lyophilized from 34 µ50 mM tris-Cl, pH 7.5, 1 mM EDTA.
Bio-activity	Activity can be measured with the thioredoxin-dependent reduction of insulin using recombinant rat thioredoxin reductase. The test mixture should contain 160 µM insulin and 0.2 mM NADPH in 0.1 M potassium phosphate, pH 7.0, containing 2 mM EDTA. In the presence of 5 µM human thioredoxin, 7 nM mammalian thioredoxin reductase will give an absorbance decrease of 0.10/min at 340 nm.
Notes	Make sure to reconstitute all of the lyophilized protein in the ampoule. After adding buffer, close the screw-cap again, shake vigorously, then centrifuge shortly, in order to recover liquid from tube cap and walls.
Stability	6 months
Storage	Keep at 4 centigrade or alternatively reconstituted protein in aliquots at -20 centigrade.

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Reconstitution

Reconstitute with 100 μ H₂O. This gives a solution of 210 μ M thioredoxin. The protein is oxidized (two disulfides) and can be reactivated by addition of a 5-fold molar excess of DTT. Alternately incubate with NADPH and TrxR.

GENE INFORMATION

Gene Name

TXN thioredoxin [*Homo sapiens* (human)]

Official Symbol

TXN

Synonyms

TRX; TRDX; TRX1; thioredoxin; ADF; ATL-derived factor; SASP; TXN delta 3; surface-associated sulphhydryl protein; thioredoxin delta 3

Gene ID

7295

mRNA Refseq

NM_001244938

Protein Refseq

NP_001231867

MIM

187700

UniProt ID

P10599

Chromosome Location

9q31

Pathway

Cellular Senescence, organism-specific biosystem; Folic Acid Network, organism-specific biosystem; Metabolism, organism-specific biosystem

Function

oxidoreductase activity, acting on a sulfur group of donors, disulfide as acceptor; peptide disulfide oxidoreductase activity; poly(A) RNA binding

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