

Recombinant Human Thioredoxin/TXN Protein

Catalog Number:PKSH030450



Note: Centrifuge before opening to ensure complete recovery of vial contents.

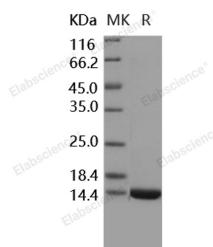
Description

Synonyms	Thioredoxin;Trx;ATL-Derived Factor;ADF;Surface-Associated Sulphydryl Protein;SASP;TXN;TRDX;TRX;TRX1
Species	Human
Expression Host	E.coli
Sequence	Met 1-Val 105
Accession	P10599
Calculated Molecular Weight	11.7 kDa
Observed molecular weight	14 kDa
Tag	None
Bioactivity	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 5-10 A650/min/mg.

Properties

Purity	> 97 % as determined by reducing SDS-PAGE.
Endotoxin	Please contact us for more information.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile PBS, pH 7.5 Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



> 97 % as determined by reducing SDS-PAGE.

Background

Thioredoxin; also known as ATL-derived factor; Surface-associated sulphhydryl 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

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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.

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