Recombinant Human Thioredoxin-2/TXN2 Protein (His

Tag)

Catalog Number: PKSH030817



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

Description

Synonyms Thioredoxin Mitochondrial;MTRX;Mt-Trx;Thioredoxin-2;TXN2;TRX2

SpeciesHumanExpression HostE.coli

Sequence Thr 60-Gly 166

AccessionQ99757Calculated Molecular Weight13.4 kDaObserved molecular weight13 kDaTagN-His

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 5-8 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 $< -20^{\circ}$ C for 3 months.

Shipping This product is provided as lyophilized powder which is shipped with ice packs.

Formulation Lyophilized from sterile PBS, pH 8.3

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-2; also known as TXN2; MTRX and TRX2; is a member of the thioredoxin family. Tryparedoxins (TXN) are thioredoxin-related proteins which; as trypanothione:peroxiredoxin oxidoreductases; constitute the trypanothione-dependent antioxidant defense and may also serve as substrates for ribonucleotide reductase in trypanosomatids. Thioredoxin-2 / TXN2 contains onethioredoxin domain. It is widely expressed in adult (at protein level) and fetal tissues. Human Thioredoxin-2 / TXN2 is a small redox protein important in cellular antioxidant defenses; as well as in the

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regulation of apoptosis. Thioredoxin-2 / TXN2 has an anti-apoptotic function and plays an important role in the regulation of mitochondrial membrane potential. Thioredoxin-2 / TXN2 could be involved in the resistance to anti-tumor agents. It possesses a dithiol-reducing activity. Thioredoxin-2 / TXN2 plays an important role in protecting the mitochondria against oxidative stress and in sensitizing the cells to ROS-induced apoptosis. Mammalian Thioredoxin-2 / TXN2 is a mitochondrial isoform of highly evolutionary conserved thioredoxins. Thioredoxins are small ubiquitous protein-disulfide oxidoreductases implicated in a large variety of biological functions.

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