



Recombinant Protein Technical Manual

Recombinant Human Thioredoxin-2/TXN2 Protein (His Tag)(Active) RPES2513

Product Data:

Product SKU: RPES2513

Size: 20µg

Species: Human

Expression host: E. coli

Uniprot: Q99757

Protein Information:

Molecular Mass: 13.4 kDa

AP Molecular Mass: 13 kDa

Tag: N-His

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 5-8 A650/min/mg.

Purity: > 97 % as determined by reducing SDS-PAGE.

Endotoxin: Please contact us for more information.

Storage: 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 8.3

Reconstitution: Please refer to the printed manual for detailed information.

Application:

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

Immunogen Information:

Sequence: Thr 60-Gly 166

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 one thioredoxin 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 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.