RayBiotech, Inc.

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Certificate of Analysis and Data Sheet

Recombinant Human Thioredoxin-2

Catalog No.	**Source:**
228-11578	*Escherichia Coli*

Synonyms

Thioredoxin mitochondrial, Thioredoxin-2, TXN2, MTRX, TRX2, MT-TRX, TRX-2, TXN-2.

Introduction

Thioredoxin-2 is a low molecular weight redox protein. TRX2 contains a redox active disulfide/dithiol group within the conserved Cys-Gly-Pro-Cys active site. The TXN2 is involved in the regulation of the mitochondrial membrane potential and in protection against oxidant-induced apoptosis. Upon stimulation of Fas, TXN2 mediates denitrosylation of mitochondria-associated caspase-3, a process required for caspase-3 activation, and promoted apoptosis.
TRX2 is important at low oxidative stress conditions.
MTRX is involved in the regulation of the mitochondrial membrane potential and cell death.
Mitochondrial thioredoxin plays an important role in protection against oxidant-induced apoptosis.
Thioredoxin1 and thioredoxin2 have opposed regulatory functions on hypoxia-inducible factor-1alpha.

Description

MTRX Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 108 amino acids and having a molecular mass of 11 kDa.

Physical Appearance

Sterile Filtered colorless solution.

Formulation

TXN2 protein solution contains 1x PBS pH-7.4.

Purity

Greater than 95.0% as determined by
(a) Analysis by RP-HPLC
(b) Analysis by SDS-PAGE

Stability

TRX2 although stable 4°C for 4 weeks, should be stored desiccated below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).
Please prevent freeze-thaw cycles.

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Amino acid sequence

MTTFNIQDGP DFQDRVVNSE TPVVVDFHAQ WCGPCKILGP RLEKMVAKQH GKVVMAKVDI DDHTDLAIEY EVSAVPTVLA MKNGDVVDKF VGIKDEDQLE AFLKKLIG.

Biological Activity

Specific activity is 3-4 A650/min/mg, obtained by measuring the increase of insulin precipitation in absorbance at 650 nm resulting from the reduction of insulin.