

Recombinant Yeast Thioredoxin Reductase (NADPH)

Cat. No. TrxR-77Y Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Yeast Thioredoxin Reductase (NADPH) produced in E.Coli is a single, non-glycosylated, polypeptide chain having a molecular mass of 36 kDa. Thioredoxin Reductase is purified by proprietary chromatographic techniques.
Species	Yeast
Source	E.coli
Introduction	Thioredoxin reductase (TrxR/NTR), an enzyme belonging to the flavoprotein family of pyridine nucleotide-disulfide oxidoreductases. Thioredoxin reductase (TrxR), a component of the thioredoxin system, including thioredoxin (Trx) and NADPH, catalyzes the transfer of electrons from NADPH to Trx, acts as a reductant of disulfide-containing proteins and participates in the defense system against oxidative stresses.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Purity	Greater than 98.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.
Formulation	Each mg of protein contains 20 mM phosphate buffer pH 7.4 and 0.15 M sodium chloride.
Solubility	It is recommended to reconstitute the lyophilized NTR in sterile 18 MΩ-cm H ₂ O.

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Biological Activity	The specific activity was found to be 5 IU/mg.
Unit Definition	One unit equals the change in absorbance at 412 nm per minute at 25°C using 0.2 mM NADPH containing 5 mM DTNB (pH 7.0)
Stability	NTR although stable at 4°C for 3 weeks, should be stored desiccated below -18°C. Please prevent freeze thaw cycles.
GENE INFORMATION	
Synonyms	Thioredoxin Reductase (NADPH); NTR; TrxR; EC 1.8.1.9; GRIM-12; KDRF; MGC9145; TR; TR1; TRXR1; TXNR; Trxr1; oxidoreductase; Gene associated with retinoid-IFN-induced mortality 12 protein; KM-102-derived reductase-like factor; Thioredoxin reductase TR1; thioredoxin reductase 1; thioredoxin reductase GRIM-12; thioredoxin-disulfide reductase; NADP-thioredoxin reductase; NADPH-thioredoxin reductase; thioredoxin reductase (NADPH); NADPH2:oxidized thioredoxin oxidoreductase; thioredoxin:NADP+ oxidoreductase.

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