



Product Data Sheet

Cat # RP-367

Recombinant Yeast Thioredoxin Reductase (NAPH)

Size: 5 ug

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.

Usage: This item is for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

RP-367 120507P

Source: *Escherichia Coli*. Thioredoxin Reductase (NADPH) Yeast Recombinant 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. Each mg of protein contains 20mM phosphate buffer pH 7.4 and 0.15M sodium chloride.

Applications and Suggested Dilutions: Greater than 98.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE. It is recommended to reconstitute the lyophilized NTR in sterile 18MΩ-cm H₂O. Users must optimize the appropriate concentration and conditions for each assay.

Storage and Stability: NTR although stable at 4°C for 3 weeks, should be stored desiccated below -18°C. **Please prevent freeze thaw cycles.** If supplied in powder then reconstitute it in 100 ul water for 1 mg/ml stock and store in liquid at 4°C for ~1 week or aliquots in suitable size and store at -20°C for long term storage.

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 0.2mM NADPH containing 5mM DTNB (pH 7.0)