Recombinant E.coli Thioredoxin Reductase

Cat. No. trxB-2366E **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant E.coli TRXB protein was expressed in*E.coli*and purified by using conventional chromatography techniques. 34.6 kDa (321aa).
Species	E.coli
Source	E.coli
Description	TRXB(Thioredoxin reductase) is a ubiquitous enzyme which is involved in many cellular processes such as cell growth, p53 activity, and protection against oxidation stress. The mammalian Thioredoxin reductase reduces thioredoxins as well as non-disulfide substrates such as selenite, lipoic acids, lipid hydroperoxides, and hydrogen peroxide.
Form	Liquid. In 20 mM Tris-HCl buffer (pH8.0) containing 1mM DTT, 10% glycerol.
Purity	> 90% by SDS - PAGE.
Concentration	1 mg/ml (determined by Bradford assay).
Sequences Of Amino Acids	MGTTKHSKLL ILGSGPAGYT AAVYAARANL QPVLITGMEK GGQLTTTTEV EN WP GDPNDL TGPLLMERMH EHATKFETEI IFDHINKVDL QNRPFRLNGD NG YET CDA LI IATGASARYL GLPSEEAFKG RGVSACATCD GFFYRNQKVA VIGGGNTAVE EAL YLS NIAS EVHLIHRRDG FRAEKILIKR LMDKVENGNI ILHTNRTLEE VT GDQ MG VT G VRLRDTQNSD NIESLDVAGL FVAIGHSPNT AIFEGQLELE NGYIKVQSGI HG NATQTSIP GVFAAGDVMD HIYRQAITSA GTGCMAALDA ERYLDGLADA K.

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Biological activity	Specific activity is 4-5 units/ml, and was measured in a coupled assay with DTNB and NADPH. The amount of TNB generated by NADPH was measured in absorbance at 412 nm.
Activity Assay	1.Prepare a 0.7ml reaction mixture into a suitable container: The final concentrations are 100mM potassium phosphate, 10mM EDTA, 0.2mM beta-NADPH, 0.05% BSA, 0.014% (w/v) thioredoxin, 5mM DTNB, 5ug, E.coli TRXB.2.Equilibrate to 25°C and monitor the A412nm until the value is constant using a spectrophotometer. 3.Add 35ul of 100mM DTNB into reaction mixture and mix immediately. 4.Record the increase in A412nm for 2 minutes.
Storage	Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.

GENE INFORMATION

Gene Name	trxB thioredoxin reductase [Escherichia coli B str. REL606]
Synonyms	thioredoxin reductase; trxB; ECB_00892
Gene ID	8175702
Protein Refseq	YP_003044110
Pathway	Pyrimidine metabolism

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