

# Product information

## TRXB, 1-321aa

*E.coli*, Recombinant, *E.coli*

Cat. No. IBATGP0540

**Full name:** Thioredoxin reductase

**NCBI Accession No.:** YP\_003044110

**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. Recombinant *E.coli* TRXB protein was expressed in *E.coli* and purified by using conventional chromatography techniques.

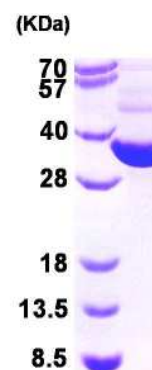
**Form:** Liquid. In 20 mM Tris-HCl buffer (pH8.0) containing 1mM DTT,10% glycerol.

**Molecular Weight:** 34.6kDa (321 aa) confirmed by MALDI-TOF

**Purity:** > 90% by SDS – PAGE.

**Concentration:** 1mg/ml (determined by Bradford assay )

**Biological activity:** Specific activity is > 10 units/mg, and was measured in a coupled assay with DTNB and NADPH. The amount of TNB generated by NADPH was measured in absorbance at 412nm.



15% SDS-PAGE (3ug)

### Sequences of amino acids:

MGTTKHSKLL ILGSGPAGYT AAVYAARANL QPVLITGMEK GGQLTTTTEV ENWPGDPNDL TGPLLMERMH EHATKFETE I IFDHINKVDL  
QNRPFRLNGD NGEYTCDALI IATGASARYL GLPSEEAFCG RGVSAACATCD GFFYRNQKVA VIGGGNTAVE EALYLSNIAS EVHLIHRDGD  
FRAEKILIKR LMDKVENGI ILHTNRTLEE VTGDQMGVTG VRLRDTQNSD NIESLDVAGL FVAIGHSPNT AIFEGQLELE NGYIKVQSGI  
HGNATQTSIP GVFAAGDVMD HIYRQAITS A GTGCMAALDA ERYLDGLADA K

### General references:

Faulkner MJ., *et al.* (2008) *Proc Natl Acad Sci U S A.* 105(18):6735-40.

Takahata M., *et al.* (2008) *J Biochem.* 143(4):467-73.

Thelander, L. (1967) *Journal of Biological Chemistry*, 242, 852-859.

Moore, E. C., and Reichard, P., and thelander, L. (1964) *Journal of Biological Chemistry*, 239, 3445-3452.

**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.

**For research use only. This product is not intended or approved for human, diagnostics or veterinary use.**