

Product Specification Sheet  
**Thioredoxin (fusion protein) Antibodies**

**Cat #** THRX15-R

Purified Thioredoxin (E. Coli) Protein for ELISA

**SIZE:** 100 ug

Recombinant DNA technology allows the addition of short pieces of well-defined tags, "peptides" or proteins at the amino or c-terminus of target genes, which can provide 'affinity handles' designed to bind specific matrices. Therefore, tags enable a selective identification and purification of the protein of interest. Eukaryotic genes are often cloned into E. coli thioredoxin gene, resulting in the expression of a desired protein as a fusion hybrid with thioredoxin (1). Thioredoxin is a small electron transport protein that serves as hydrogen donor in the enzymatic reduction of ribonucleotides to deoxyribonucleotides (1). Thioredoxin from E. coli consists of a single polypeptide of 108 aa (~11.7 kDa). The gene encoding Thioredoxin has been clones into several plasmids and serves as a fusion partner for the expression of other clones genes. The system often produces high expression of soluble fusion proteins in the E. coli cytoplasm. The fusion proteins may also fold correctly with biological activity. Anti-Thioredoxin antibodies allow a simple isolation of fusion proteins directly from the crude bacterial lysate, using immunoaffinity chromatography (1) or used in immunoprecipitation. Anti- thioredoxin can also be used for the immunocytochemical detection of thioredoxin in cells and tissues that express transfected bacterial thioredoxin gene (1). Ant-thioredoxin may be used in various immunoassays to identify the expression of thioredoxin fusion protein.

**Source of Antigen and Antibodies**

Thioredoxin is a ubiquitous protein, having two redox-active half-cysteine residues, that functions as a general disulfide reductant. It Inhibits apoptosis in Jurkat T cells and human PBL. Thioredoxin is a single polypeptide chain of ~11.7 kDa. It is purified from E. coli (>95% by HPLC). Biological activity: ≥0.8 insulin reduction units/mg/minute. Insulin reduction units are calculated by measuring the change in absorbance at 650 nm with 330 mM DTT as the reductant at 23 °C, pH 7.0. Purity: ≥90% by HPLC. Supplied in liquid at 1 mg/ml in PBS and 3 mM EDTA or in powder form. Reconstitute powder in PBS/EDTA at 0.1-1 mg/ml.

For ELISA, (**Cat # THRX15-R**) is supplied in PBS, pH 7.4. Coat at 1-10 ug/ml. Store in suitable aliquots at -20oC.

**Form & Storage of Antibodies/Peptide Control**

**Storage**

**Short-term:** unopened, undiluted vials for less than a week at 4oC.

**Long-term:** at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

**Stability:** 6-12 months at -20oC or below.

**Shipping:** 4oC for solutions and room temp for powder.

**Recommended Usage**

Western Blotting (1:1K-2K using Chemiluminescence technique). Antibodies react with native and denatured THR<sub>x</sub>-tag containing proteins.

**ELISA** (1:10-50K; using 50-100 ng control antigen/well).

**Histochemistry & Immunofluorescence:** not tested. We recommend the use of affinity pure antibody at 10-50 ug/ml.

**General References:** Narayanan, S., J. Chromatogr., 658, 237 (1994), Casey, J., et al., J. Immunol. Meth., 179, 105 (1995), Uhlen, M., and Moks, T., Meth. Enzymol., 185, 129 (1990), Skerra, A., et al., Bio/Technology, 9, 273 (1991), Holmgren A (1985) Ann Rev. Biochem. 54, 237; Rosen A et al (1995) Int. Immunol. 7, 625

\*This product is for In vitro research use only.

**Other Fusion tag antibodies available from ADI**

Catalog#	ProdDescription
<b>THRX11-A</b>	Anti-Thioredoxin (THR <sub>x</sub> ) (fusion protein) IgG
<b>THRX11-AS</b>	Anti-Thioredoxin (THR <sub>x</sub> , E. coli) IgG-Agarose
<b>THRX11-C</b>	E. Coli Thioredoxin (THR <sub>x</sub> ) (fusion protein) for WB +ve control
<b>THRX11-S</b>	Anti-Thioredoxin (THR <sub>x</sub> ) (fusion protein) antiserum
<b>THRX15-R</b>	Purified Recombinant Thioredoxin (THR <sub>x</sub> ) (fusion protein) for ELISA

Anti-MBP, Poly-His, GST, beta-Gal, VSV-G, Flag, HA-tag, and c-myc

THRX15-R 71216A

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