

Store at -20°C
#2298

Thioredoxin 1 Antibody (Mouse/Rat Preferred)

100 µl
 (10 western blots)



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rev. 09/01/10

This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Entrez-Gene ID # 7295
Swiss-Prot Acc. # P10599

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W	M, R	12 kDa	Rabbit**
Endogenous			

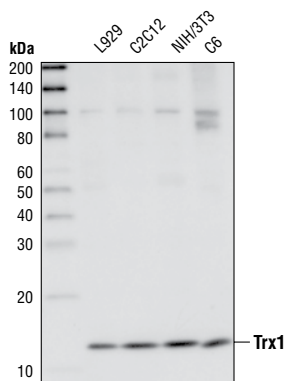
Background: Thioredoxin is a small redox protein found in many eukaryotes and prokaryotes. A pair of cysteines within a highly conserved, active site sequence can be oxidized to form a disulfide bond which is then reduced by thioredoxin reductase (1). Multiple forms of thioredoxin have been identified, including cytosolic thioredoxin 1 (Trx1) and mitochondrial thioredoxin 2 (Trx2). Thioredoxin participates in many cellular processes including redox signaling, response to oxidative stress and protein reduction (1). A potential role of thioredoxin in human disorders such as cancer, aging and heart disease is currently under investigation (2). Thioredoxin can play a key role in cancer progression, as it acts as a negative regulator of the proapoptotic kinase ASK1 (3). Changes in thioredoxin expression have been associated with meningococcal septic shock and acute lung injury (4,5).

Specificity/Sensitivity: Thioredoxin 1 Antibody (Mouse/Rat Preferred) detects endogenous levels of total mouse and rat thioredoxin 1 protein.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to the sequence of mouse thioredoxin 1. Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

- (1) Watson, W.H. et al. (2004) *Toxicol. Sci.* 78, 3-14.
- (2) Burke-Gaffney, A. et al. (2005) *Trends Pharmacol. Sci.* 26, 398-404.
- (3) Saitoh, M. et al. (1998) *EMBO J.* 17, 2596-2606.
- (4) Callister, M.E. et al. (2007) *Intensive Care Med.* 33, 364-367.
- (5) Callister, M.E. et al. (2006) *Thorax* 61, 521-527.



Western blot analysis of extracts from various cell lines, using Thioredoxin 1 Antibody (Mouse/Rat Preferred).

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting 1:1000

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine
 Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.