

Thioredoxin 1 Antibody



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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	M R	Endogenous	12	Rabbit	#P10599	7295
Product Usage Information	Application					Dilution
	Western Blotting					1:1000
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.					
Specificity/Sensitivity	Thioredoxin 1 Antibody 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	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 that 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, because 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).					
Background References	1. Watson, W.H. et al. (2004) <i>Toxicol Sci</i> 78, 3-14. 2. Burke-Gaffney, A. et al. (2005) <i>Trends Pharmacol Sci</i> 26, 398-404. 3. Saitoh, M. et al. (1998) <i>EMBO J</i> 17, 2596-606. 4. Callister, M.E. et al. (2007) <i>Intensive Care Med</i> 33, 364-7. 5. Callister, M.E. et al. (2006) <i>Thorax</i> 61, 521-7.					

Species Reactivity	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
Western Blot Buffer	IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.
Applications Key	W: Western Blotting
Cross-Reactivity Key	M: Mouse R: Rat
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