

#2429 Store at -20°C

## Thioredoxin 1 (C63C6) Rabbit mAb



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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IHC-P	H M R	Endogenous	12	Rabbit IgG	#P10599	7295

### Product Usage Information

#### Application

Western Blotting  
Immunohistochemistry (Paraffin)

#### Dilution

1:1000  
1:400

### Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

### Specificity / Sensitivity

Thioredoxin 1 (C63C6) Rabbit mAb detects endogenous levels of total thioredoxin 1 protein.

### Source / Purification

Thioredoxin 1 (C63C6) Rabbit mAb is produced by immunizing rabbits with a synthetic peptide corresponding to residues surrounding Ala9 of human thioredoxin 1.

### 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) *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, 2596-606.
4. Callister, M.E. et al. (2007) *Intensive Care Med* 33, 364-7.
5. Callister, M.E. et al. (2006) *Thorax* 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

**WB:** Western Blotting **IHC-P:** Immunohistochemistry (Paraffin)

### Cross-Reactivity Key

**H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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  
**GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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