

Thioredoxin 2 Antibody



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Applications: W	Reactivity: H M R Mk	Sensitivity: Endogenous	MW (kDa): 13	Source/Isotype: Rabbit	UniProt ID: #Q99757	Entrez-Gene Id: 25828
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Product Usage Information

Application

Western Blotting

Dilution

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 2 Antibody recognizes endogenous levels of total thioredoxin 2 protein. This antibody may cross-react with unidentified proteins from 60 kDa to 140 kDa.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human thioredoxin 2 protein. 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) *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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

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