

#2298 Store at -20C

# Thioredoxin 1 Antibody



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

| Applications: | Reactivity: | Sensitivity: | MW (kDa): | Source: | UniProt ID: | Entrez-Gene Id: |
|---------------|-------------|--------------|-----------|---------|-------------|-----------------|
| WB            | M R         | Endogenous   | 12        | Rabbit  | #P10599     | 7295            |

|                                  |   |                           |
|----------------------------------|---|---------------------------|
| <b>Product Usage Information</b> | <b>Application</b><br>Western Blotting  | <b>Dilution</b><br>1:1000 |
| <b>Storage</b>                   | 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.  |                           |
| <b>Specificity / Sensitivity</b> | Thioredoxin 1 Antibody detects endogenous levels of total mouse and rat thioredoxin 1 protein.  |                           |
| <b>Source / Purification</b>     | 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.   |                           |
| <b>Background</b>                | 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). |                           |
| <b>Background References</b>     | <ol style="list-style-type: none"> <li>1. Watson, W.H. et al. (2004) <i>Toxicol Sci</i> 78, 3-14.</li> <li>2. Burke-Gaffney, A. et al. (2005) <i>Trends Pharmacol Sci</i> 26, 398-404.</li> <li>3. Saitoh, M. et al. (1998) <i>EMBO J</i> 17, 2596-606.</li> <li>4. Callister, M.E. et al. (2007) <i>Intensive Care Med</i> 33, 364-7.</li> <li>5. Callister, M.E. et al. (2006) <i>Thorax</i> 61, 521-7.</li> </ol>  |                           |

|                               |   |
|-------------------------------|---|
| <b>Species Reactivity</b>     | Species reactivity is determined by testing in at least one approved application (e.g., western blot).  |
| <b>Western Blot Buffer</b>    | 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.  |
| <b>Applications Key</b>       | <b>WB:</b> Western Blotting   |
| <b>Cross-Reactivity Key</b>   | <b>H:</b> human <b>M:</b> mouse <b>R:</b> rat <b>Hm:</b> hamster <b>Mk:</b> monkey <b>Vir:</b> virus <b>Mi:</b> mink <b>C:</b> chicken <b>Dm:</b> D. melanogaster <b>X:</b> Xenopus <b>Z:</b> zebrafish <b>B:</b> bovine <b>Dg:</b> dog <b>Pg:</b> pig <b>Sc:</b> S. cerevisiae <b>Ce:</b> C. elegans <b>Hr:</b> horse <b>GP:</b> Guinea Pig <b>Rab:</b> rabbit <b>All:</b> all species expected  |
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