

## Anti-Thioredoxin 2 Polyclonal Antibody

### Product Details

Ig Type:	IgG
Reactivity:	Human,Mouse,Rat (predicted:Dog,Pig,Cow,Rabbit)
Molecular Weight:	Theoretical: 12 kDa. Actual: 12 kDa.
Purification:	Protein A purified

### Applications

Verified Activity:	<p>1. Paraformaldehyde-fixed, paraffin embedded (rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30 min; Antibody incubation with (Thioredoxin 2) Polyclonal Antibody, Unconjugated (TMAB-13507) at 1: 200 overnight at 4°C, followed by operating according to SP Kit (Rabbit) instructions and DAB staining.</p> <p>2. Sample:</p> <p>Lane 1: Mouse Kidney tissue lysates Lane 2: Mouse Small intestine tissue lysates Lane 3: Rat Cerebrum tissue lysates Lane 4: Rat Spleen tissue lysates Lane 5: Human K562 cell lysates Lane 6: Human HepG2 cell lysates Lane 7: Human 293T cell lysates Lane 8: Human Jurkat cell lysates Lane 9: Human HeLa cell lysates</p> <p>Primary: Anti-Thioredoxin 2 (TMAB-13507) at 1/1000 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 12 kDa Observed band size: 12 kDa</p>
Application:	WB,IHC-P,IHC-Fr,IF
Recommended	WB: 1:500-2000; IHC-P: 1:100-500; IHC-Fr: 1:100-500; IF: 1:100-500

### Properties

Stability & Storage:	Store at 2°C-8°C for 1 month. Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.
Shipping:	Shipping with blue ice.

### Antigen Details

Immunogen: KLH conjugated synthetic peptide: human Thioredoxin 2  
Antigen Species: Human  
Gene ID: 25828  
Uniprot ID: Q99757

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### Research Background

Thioredoxins (Trx) are small, multi-functional proteins with oxidoreductase activity and are ubiquitous in essentially all living cells. Trx contains a redox-active disulfide/dithiol group within the conserved Cys-Gly-Pro-Cys active site. The two cysteine residues in the conserved active centers can be oxidized to form intramolecular disulfide bonds. Reduction of the active site disulfide in oxidized Trx is catalyzed by Trx reductase with NADPH as the electron donor. The reduced Trx is a hydrogen donor for ribonucleotide reductase, the essential enzyme for DNA synthesis, and a potent general protein disulfide reductase with numerous functions in growth and redox regulations. Specific protein disulfide targets for reduction by Trx include protein disulfide isomerase(PDI) and a number of transcription factors such as p53, NF- $\kappa$ B and AP-1. Trx is also capable of removing H<sub>2</sub>O<sub>2</sub>, particularly when it is coupled with either methionine sulfoxide reductase or several isoforms of peroxiredoxins.

**Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins**

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