Revision 1

Store at -20C

#14907

Thioredoxin 2 (D1C9L) Rabbit mAb

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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	H M R Hm Mk	Endogenous	13	Rabbit IgG	#Q99757	25828

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, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Thioredoxin 2 (D1C9L) Rabbit mAb recognizes endogenous levels of total thioredoxin 2 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu100 of human thioredoxin 2 protein.

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

W: Western Blotting

Cross-Reactivity Key

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

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