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 which 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, as 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).

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.

Recommended Antibody Dilutions:
Western blotting 1:1000
Immunohistochemistry (Paraffin) 1:400†

†Optimal IHC dilutions determined using SignalStain® Boost IHC Detection Reagent.

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

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