

Thioredoxin 1 Blocking Peptide



✓ 100 µg

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For Research Use Only. Not For Use In Diagnostic Procedures.

Description: This peptide is used to block Thioredoxin 1 (C63C6) Rabbit mAb #2429 reactivity in peptide dot blot protocols.

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, 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).

Quality Control: The quality of the peptide was evaluated by reversed-phase HPLC and by mass spectrometry. The peptide blocks Thioredoxin 1 (C63C6) Rabbit mAb #2429 signal in peptide dot blot.

Directions for Use: Use as a blocking reagent to evaluate the specificity of antibody reactivity in peptide dot blot protocols. Recommended antibody dilutions can be found on the product data sheet.

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.

Entrez Gene ID #7295
UniProt ID #P10599

Storage: Supplied in 20 mM potassium phosphate (pH 7.0), 50 mM NaCl, 0.1 mM EDTA, 1 mg/ml BSA and 5% glycerol. 1% DMSO. Store at -20°C.

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

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