

PRODUCT INFORMATION



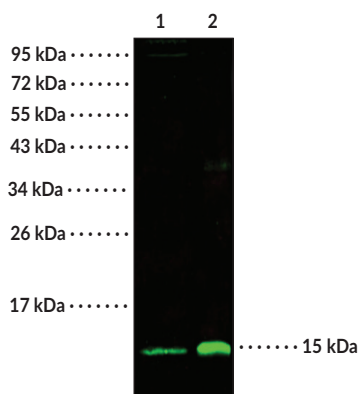
Thioredoxin 2 Rabbit Monoclonal Antibody (Clone 001)

Item No. 37074

Overview and Properties

Contents:	50 or 100 µl of protein A-affinity purified monoclonal antibody.
Synonyms:	Mitochondrial Thioredoxin, mtTrx, Trx2, Txn2
Immunogen:	Recombinant human Trx2
Cross Reactivity:	(+) Human
Species Reactivity:	(+) Trx2
Uniprot No.:	Q99757
Form:	Liquid
Storage:	-80°C (as supplied)
Stability:	≥1 year
Storage Buffer:	0.2 µm filtered solution in PBS
Clone:	001
Host:	Rabbit
Isotype:	IgG
Applications:	Western blot (WB) and ELISA; the recommended starting concentration is 1:500-1:2,000 for WB and 1:5,000-1:10,000 for ELISA. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Image



Thioredoxin 2 Rabbit Monoclonal Antibody (Clone 001) at a 1:500 dilution.

Lane 1: HeLa whole cell lysates (30 µg)
Lane 2: 293 whole cell lysates (30 µg)

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
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Description

Thioredoxin 2 (Trx2) is a thiol-disulfide oxidoreductase and part of the antioxidant thioredoxin system that is involved in the maintenance of cellular redox homeostasis.¹ It is ubiquitously expressed, with the highest levels of expression in metabolically active tissues such as the heart, skeletal muscle, testis, kidney, adrenal gland, and brain, and is localized to the mitochondria.^{2,3} Trx2 contains two active site cysteine residues, but lacks the additional structural cysteines present in Trx1 that participate in dimerization.⁴ During the catalytic cycle, the active site cysteines are oxidized to a disulfide upon reduction of oxidized protein disulfide substrates and are subsequently restored to their reduced state by thioredoxin reductase (TrxR) and NADPH.¹ Trx2 is upregulated by TNF- α and reactive oxygen species (ROS), inhibits TNF- α -induced NF- κ B activation, and inhibits apoptosis through redox-sensitive binding and regulation of apoptosis signal-regulating kinase 1 (ASK1).^{5,6} Homozygous disruption of the gene encoding Trx2, *Txn2*, causes exencephaly and is embryonic lethal in mice.⁷ Trx2 deficiency is associated with premature neurodegeneration.⁸ Cayman's Thioredoxin 2 Rabbit Monoclonal Antibody (Clone 001) can be used for ELISA and Western blot (WB) applications.

References

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