Thioredoxin (Trx) is a redox protein that is found in several species, such as bacteria, plants and mammals, and contains a conserved active site, consisting of Trp-Cys-Gly-Pro-Cys. Trx has several biological functions. It acts as a hydrogen donor for ribonucleotide reductase, which is critical for DNA synthesis, and modulates the DNA-binding activity of several transcription factors, including NFkB, AP-1, p53, TFIIC and glucocorticoid receptor. Trx also stimulates cell growth, is an inhibitor of apoptosis and plays a role in the protection against oxidative stress. Drugs that inhibit Trx have antitumor activity, suggesting that Trx is involved in a variety of human diseases, including cancer.

TrxR is a ubiquitously expressed flavoprotein that catalyzes the NADPH-dependent reduction of Trx as well as several other oxidized cellular components.

REFERENCES

CHROMOSOMAL LOCATION
Genetic locus: TXN (human) mapping to 9q31; Txn1 (mouse) mapping to 4 B3.

SOURCE
Trx (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Trx of human origin.

PRODUCT
Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-18215 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE
Store at 4° C. **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS
Trx (N-20) is recommended for detection of Trx of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1–2 µg per 100–500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Trx siRNA (h): sc-106984, Trx siRNA (m): sc-36749, Trx shRNA Plasmid (h): sc-106984-SH, Trx shRNA Plasmid (m): sc-36749-SH, Trx shRNA (h) Lentiviral Particles: sc-106984-V and Trx shRNA (m) Lentiviral Particles: sc-36749-V.

Molecular Weight of Trx: 12 kDa.

Positive Controls: AML-193 whole cell lysate, HeLa whole cell lysate: sc-2200 or BJAB whole cell lysate: sc-2207.

DATA

SELECT PRODUCT CITATIONS

RESEARCH USE
For research use only, not for use in diagnostic procedures.