BACKGROUND

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 NFκB, 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


SOURCE

Trx (Trx1) is a mouse monoclonal antibody raised against purified E. coli Trx.

PRODUCT

Each vial contains 200 µg IgG1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Trx (Trx1) is available conjugated to agarose (sc-13526 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-13526 HRP), 200 µg/ml, for WB, IHC (P) and ELISA; to either phycoerythrin (sc-13526 PE), fluorescein (sc-13526 FITC), Alexa Fluor® 488 (sc-13526 AF488), Alexa Fluor® 546 (sc-13526 AF546), Alexa Fluor® 594 (sc-13526 AF594) or Alexa Fluor® 647 (sc-13526 AF647), 200 µg/ml, for WB (RGB), IF, IHC (P) and FCM; and to either Alexa Fluor® 680 (sc-13526 AF680) or Alexa Fluor® 790 (sc-13526 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Trx (Trx1) is recommended for detection of Trx and Trx fusion proteins of E. coli 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30:1:3000).

Molecular Weight of Trx: 12 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGx BP-HRP: sc-516102 or m-IgGx BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA

SELECT PRODUCT CITATIONS


STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

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