BioVision

Thioredoxin 1 (3A1) Monoclonal Antibody

ALTERNATE NAMES:	TXN, TRX, TRX1.
CATALOG #:	6166-100
AMOUNT:	100 µl
HOST:	Mouse
ISOTYPE:	lgG1
IMMUNOGEN:	Recombinant human protein purified from E.coli
PURIFICATION:	Protein G purified
FORM:	Liquid
FORMULATION:	100 μI of antibody in HEPES with 0.15 M NaCl, 0.01 % BSA, 0.03 % sodium azide, and 50 % glycerol
SPECIES REACTIVITY:	Human
STORAGE CONDITIONS:	Store for 1 year at -20°C from date of shipment. Avoid repeated freeze/thaw cvcles.

DESCRIPTION: The mammalian thioredoxin reductases (TrxRs) are a family of selenocysteine containing pyridine nucleotide-disulfide oxido-reductases. All the mammalian TrxRs are homologous to glutathione reductase with respect to primary structure including the conserved redox catalytic site (-Cys-Val-Asn-Val-Gly-Cys-) but distinctively with a C-terminal extension containing a catalytically active penultimate seleno-cysteine (SeCys) residue in the conserved sequence(-Gly-Cys-SeCys-Gly). TrxR is homodimeric protein in which each monomer includes an FAD prosthetic group, a NADPH binding site and a redox catalytic site. Electrons are transferred from NADPH via FAD and the active-site disulfide to C-terminal SeCys-containing redox center, which then reduces the substrate like thioredoxin. The members of TrxR family are 55 - 58 kDa in molecular size and composed of three isoforms including cytosolic TrxR1, mitochondrial TrxR2, and TrxR3, known as Trx and GSSG reductase (TGR). TrxR plays a key role in protection of cells against oxidative stress and redox-regulatory mechanism of transcription factors and various biological phenomena. Trx 1 participates in various redox reactions through the reversible oxidation of its active center dithiol to a disulfide and catalyzes dithiol-disulfide exchange reactions. Plays a role in the reversible S-nitrosylation of cysteine residues in target proteins, and thereby contributes to the response to intracellular nitric oxide. Nitrosylates the active site Cys of CASP3 in response to nitric oxide (NO), and thereby inhibits caspase-3 activity.

APPLICATION: Western blot: 1 µg/ml, IP: 2 µg, IHC-P.

Note: This information is only intended as a guide. The optimal dilutions must be determined by the user.



Western Blot analysis of anti-Thioredoxin 1 in HeLa (1) and Jurkat (2) cell lysate. Thioredoxin 1 was detected using the purified antibody.

RELATED PRODUCTS:

- Thioredoxin Reductase 1 (19A1) Monoclonal Antibody (Cat. No. 6164-100)
- Thioredoxin Reductase 2 (7B2) Monoclonal Antibody (Cat. No. 6165-100)
- Thioredoxin 2 (4C5) Monoclonal Antibody (Cat. No. 6167-100)
- Thioredoxin Reductase Assay kit (Cat. No. K763-100)
- Human Recombinant Thioredoxin 1 (Cat. No. 6305-100)
- Human Recombinant Thioredoxin 2 (Cat. No. 6318-100)
- E. Coli Recombinant Thioredoxin 1 (Cat. No. 6329-50)
- E. Coli Recombinant TRXB (Cat. No. 6331-100)

FOR RESEARCH USE ONLY! Not to be used on humans.

