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Thioredoxin (TRX) Antibody (N-term) Blocking peptide
Synthetic peptide
Catalog # BP1337a

Specification

Thioredoxin (TRX) Antibody (N-term) Blocking peptide - Product Information

Primary Accession	P10599
Other Accession	Q5T937

Thioredoxin (TRX) Antibody (N-term) Blocking peptide - Additional Information

Gene ID 7295

Other Names
Thioredoxin, Trx, ATL-derived factor, ADF, Surface-associated sulphydryl protein, SASP, TXN, TRDX, TRX, TRX1

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP1337a was selected from the N-term region of human TrX . A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Thioredoxin (TRX) Antibody (N-term) Blocking peptide - Protein Information

Name TXN

Synonyms TRDX, TRX, TRX1

Function
Participates in various redox reactions through the reversible oxidation of its active center dithiol to a disulfide and catalyzes dithiol-disulfide exchange reactions (PubMed:2176490, PubMed:17182577, PubMed:19032234). 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 (PubMed:<a

href="http://www.uniprot.org/citations/16408020" target="_blank">16408020, PubMed:17606900). Induces the FOS/JUN AP-1 DNA-binding activity in ionizing radiation (IR) cells through its oxidation/reduction status and stimulates AP-1 transcriptional activity (PubMed:9108029, PubMed:11118054).

Cellular Location
Nucleus. Cytoplasm. Secreted Note=Translocates from the cytoplasm into the nucleus after phorbol 12- myristate 13-acetate induction (PMA) (PubMed:9108029). Predominantly in the cytoplasm in non irradiated cells (PubMed:11118054). Radiation induces translocation of TRX from the cytoplasm to the nucleus (PubMed:11118054). Secreted by a leaderless secretory pathway (PubMed:1332947).

Thioredoxin (TRX) Antibody (N-term) Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

Thioredoxin (TRX) Antibody (N-term) Blocking peptide - Images

Thioredoxin (TRX) Antibody (N-term) Blocking peptide - Background

Thioredoxins (Trx) are small, multi-functional proteins with oxidoreductase activity and are ubiquitous in essentially all living cells. Trx contains a redox active disulfide/dithiol group within the conserved Cys-Gly-Pro-Cys active site. The two cysteine residues in the conserved active centers can be oxidized to form intramolecular disulfide bonds. Reduction of the active site disulfide in oxidized Trx is catalyzed by Trx reductase with NADPH as the electron donor. The reduced Trx is a hydrogen donor for ribonucleotide reductase, the essential enzyme for DNA synthesis, and a potent general protein disulfide reductase with numerous functions in growth and redox regulations. Specific protein disulfide targets for reduction by Trx include protein disulfide isomerase(PDI) and a number of transcription factors such as p53, NF-kB and AP-1.Trx is also capable of removing H_2O_2, particularly when it is coupled with either methionine sulfoxide reductase or several isoforms of peroxiredoxins.

Thioredoxin (TRX) Antibody (N-term) Blocking peptide - References

Cell. Signal. 17 (8), 985-996 (2005)Redox Rep. 29 (3), 281-286 (2005)Blood 105 (4), 1598-1605 (2005)Oncogene 23 (55), 8868-8875 (2004)J. Biol. Chem. 279 (29), 30369-30374 (2004)