

Anti-Thioredoxin 1 Antibody

Catalog # AP52017

Product Information

Application	WB, IF/IC
Primary Accession	P10599
Reactivity	Human, Mouse, Rat, Rabbit, Pig, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	11737

Additional Information

Gene ID	7295
Other Names	TRDX; TRX; TRX1; Thioredoxin; Trx; ATL-derived factor; ADF; Surface-associated sulphydryl protein; SASP
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human Thioredoxin 1. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000) IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

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: 17182577 , PubMed: 19032234 , PubMed: 2176490). 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: 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: 11118054 , PubMed: 9108029).
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).

References

Wollman E.E.,et al.J. Biol. Chem. 263:15506-15512(1988).

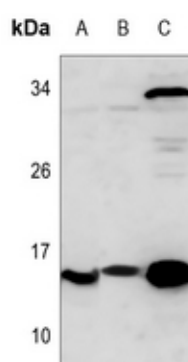
Tagaya Y.,et al.EMBO J. 8:757-764(1989).

Tonissen K.F.,et al.Gene 102:221-228(1991).

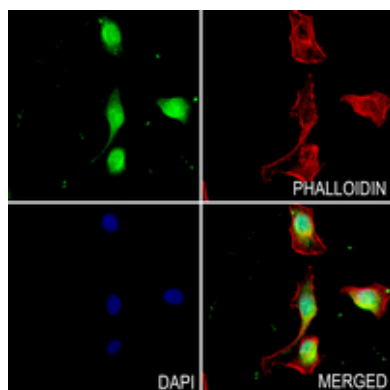
Reddy P.G.,et al.Submitted (JUN-2000) to the EMBL/GenBank/DDBJ databases.

Liu A.,et al.Submitted (JUL-2000) to the EMBL/GenBank/DDBJ databases.

Images



Western blot analysis of Thioredoxin 1 expression in mouse kidney (A), mouse testis (B), rat kidney (C) whole cell lysates. (Predicted band size: 11 kD; Observed band size: 12 kD)



Immunofluorescent analysis of Thioredoxin 1 staining in HepG2 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AF594 was used to stain Actin filaments (red). DAPI was used to stain the cell nuclei (blue).

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