10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Thioredoxin (TRX) Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1101a

Product Information

Application	WB, E
Primary Accession	P10599
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	1H6H6
Isotype	IgG1
Calculated MW	11737
Description	Thioredoxin (TRX) is a small ubiquitous protein (MW12kDa) which is exist in a wide variety of prokaryotic and eukaryotic cells. Trx contains a redox active disulfide/dithiol group within the conserved Cys-Gly-Pro-Cys active site. This antibody is suitable for detecting fusion proteins which encode a Trx-Tag by immunoblotting and immunoprecipitation. The Monoclonal Antibody can detect a little Trx-Tag fusion proteins with negligible cross-reactivity with bacterial, insect, or mammalian lysates.
Immunogen	Purified recombinant fusion protein with Thioredoxin (TRX) tag.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	7295
Other Names	Thioredoxin, Trx, ATL-derived factor, ADF, Surface-associated sulphydryl protein, SASP, Hom s Trx, TXN, TRDX, TRX, TRX1
Dilution	WB~~1/500 - 1/2000 E~~N/A
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Thioredoxin (TRX) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

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

1. Holmgen, A. et al., Annu. Rev. Biochem. 54, 237-271 (1985). 2. Wollman, E. E. et al., J. Biol. Chem. 263, 15506-15512 (1988). 3. Sasada, T. et al., J. Toxicol. Sci. 21, 285-287 (1996).

Images

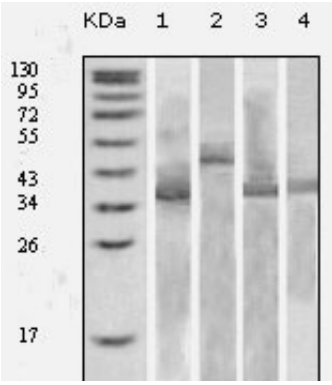

Figure 1: Western blot analysis using Trx mouse mAb against various fusion protein with Trx tag.

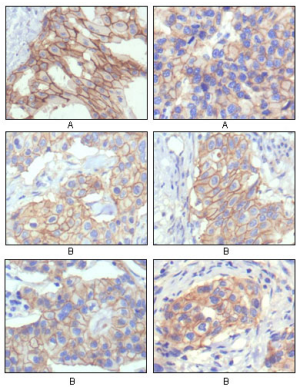

Figure 2: Immunohistochemical analysis of paraffin-embedded human breast intraductal carcinama tissue(A) and breast infiltrating ductal carcinama tissue(B) showing membrane localization using HER-2 mouse mAb with DAB staining.