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

Thioredoxin Reductase 1 Antibody (19A1)

Mouse Monoclonal Antibody
Catalog # ABV11157

Specification

Thioredoxin Reductase 1 Antibody (19A1) - Product Information

Application	**WB, E**
Primary Accession	Q16881
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**Mouse IgG 1**
Calculated MW	**70906**

Thioredoxin Reductase 1 Antibody (19A1) - Additional Information

Gene ID 7296

Positive Control	**WB analysis of HeLa and Jurkat cell lysates.**
Application & Usage	**Western blot: 1:1000, IP: 1-2 µl, ELISA.**

Other Names
Thioredoxin Reductase, GRIM-12, MGC9145, TR, TR1, TRXR1, TXNR.

Target/Specificity
Thioredoxin Reductase 1

Antibody Form
Liquid

Appearance
Colorless liquid

Formulation
100 µl of antibody in HEPES with 0.15 M NaCl, 0.01 % BSA, 0.03 % sodium azide, and 50 % glycerol

Handling
The antibody solution should be gently mixed before use.

Reconstitution & Storage
-20 °C

Background Descriptions

Precautions
Thioredoxin Reductase 1 Antibody (19A1) is for research use only and not for use in diagnostic or therapeutic procedures.

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Thioredoxin Reductase 1 Antibody (19A1) - Protein Information

Name TXNRD1 (HGNC:12437)

Synonyms GRIM12, KDRF

Function
Reduces disulfideprotein thioredoxin (Trx) to its dithiol- containing form (PubMed:8577704). Homodimeric flavoprotein involved in the regulation of cellular redox reactions, growth and differentiation. Contains a selenocysteine residue at the C-terminal active site that is essential for catalysis (Probable). Also has reductase activity on hydrogen peroxide (H2O2) (PubMed:10849437).

Cellular Location
[Isoform 1]: Cytoplasm [Isoform 5]: Cytoplasm

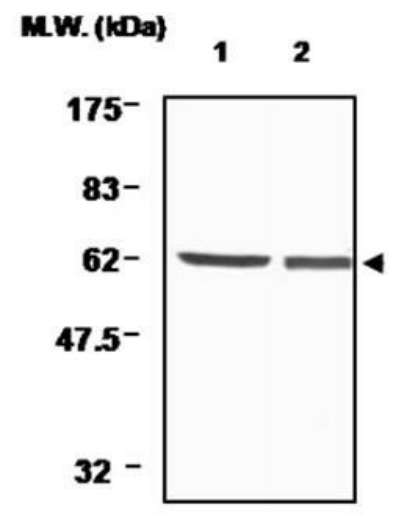
Tissue Location
[Isoform 1]: Expressed predominantly in Leydig cells (at protein level). Also expressed in ovary, spleen, heart, liver, kidney and pancreas and in a number of cancer cell lines

Thioredoxin Reductase 1 Antibody (19A1) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Thioredoxin Reductase 1 Antibody (19A1) - Images



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WB analysis of cell lysates. Lane 1: HeLa cells. Lane 2: Jurkat cells.

Thioredoxin Reductase 1 Antibody (19A1) - Background

The mammalian thioredoxin reductases (TrxRs) are a family of seleno-cysteine 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. TrxR1 plays a central role as a glucosyl donor in cellular metabolic pathways.