

Thioredoxin Reductase 1 Antibody (19A1)
Mouse Monoclonal Antibody
Catalog # ABV11157**Specification**

Thioredoxin Reductase 1 Antibody (19A1) - Product Information

Application	WB
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.

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

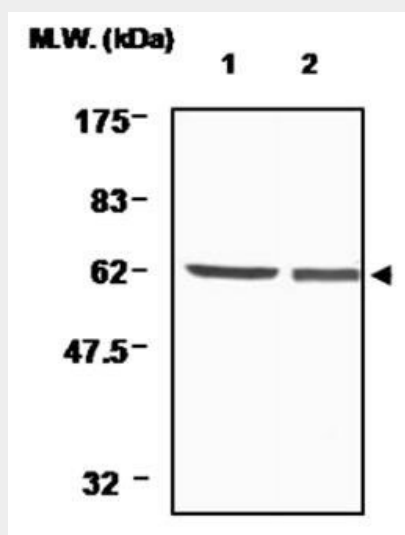
[Isoform 1]: Expressed predominantly in Leydig cells (at protein level). Also expressed in ovary, spleen, heart, liver, kidney and pancreas and in a number of cancer cell lines

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 Cytometry](#)
- [Cell Culture](#)

Thioredoxin Reductase 1 Antibody (19A1) - Images



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.