

Thioredoxin 2 Antibody (4C5)
Mouse Monoclonal Antibody
Catalog # ABV11160**Specification**

Thioredoxin 2 Antibody (4C5) - Product Information

Application	WB, IP
Primary Accession	Q86VQ3
Reactivity	Human, Mouse, Rat
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse IgG 1
Calculated MW	60404

Thioredoxin 2 Antibody (4C5) - Additional Information**Gene ID** 84203**Positive Control**
Application & Usage
Other Names
MTRX, TRX2, MT-TRX.**IP analysis:** 293T cell lysates
Western blot: 1 µg/ml, IP: 2 µg.**Target/Specificity**
Thioredoxin 2**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 2 Antibody (4C5) is for research use only and not for use in diagnostic or therapeutic procedures.

Thioredoxin 2 Antibody (4C5) - Protein Information

Name TXNDC2

Synonyms SPTRX, SPTRX1

Function

Probably plays a regulatory role in sperm development. May participate in regulation of fibrous sheath (FS) assembly by supporting the formation of disulfide bonds during sperm tail morphogenesis. May also be required to rectify incorrect disulfide pairing and generate suitable pairs between the FS constituents. Can reduce disulfide bonds in vitro in the presence of NADP and thioredoxin reductase.

Cellular Location

Cytoplasm. Note=In ejaculated spermatozoa, it localizes in the caudal region of the head to the end of the principal piece

Tissue Location

Testis-specific. Only expressed during spermiogenesis, prominently in round and elongating spermatids

Thioredoxin 2 Antibody (4C5) - 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 2 Antibody (4C5) - Images

Thioredoxin 2 Antibody (4C5) - 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. Trx 2 Has an anti-apoptotic function and plays an important role in the regulation of mitochondrial membrane potential. Could be involved in the resistance to anti-tumor agents. Possesses a dithiol-reducing activity.