

**Goat Anti-TXNDC1 / TMX Antibody**  
Peptide-affinity purified goat antibody  
Catalog # AF2125a

### Specification

#### Goat Anti-TXNDC1 / TMX Antibody - Product Information

Application	WB, IHC, E
Primary Accession	<a href="#">Q9H3N1</a>
Other Accession	<a href="#">NP_110382</a> , <a href="#">81542</a>
Reactivity	Human
Host	Goat
Clonality	Polyclonal
Concentration	100ug/200ul
Isotype	IgG
Calculated MW	31791

#### Goat Anti-TXNDC1 / TMX Antibody - Additional Information

##### Gene ID 81542

##### Other Names

Thioredoxin-related transmembrane protein 1, Thioredoxin domain-containing protein 1, Transmembrane Trx-related protein, TMX1, TMX, TXNDC, TXNDC1

##### Dilution

WB~~1:1000  
IHC~~1:100~500  
E~~N/A

##### Format

0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

##### 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

Goat Anti-TXNDC1 / TMX Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

#### Goat Anti-TXNDC1 / TMX Antibody - Protein Information

Name TMX1 {ECO:0000303|PubMed:37648867, ECO:0000312|HGNC:HGNC:15487}

##### Function

Thioredoxin domain-containing protein that participates in various redox reactions through the

reversible oxidation of its active center dithiol to a disulfide and catalyze dithiol-disulfide exchange reactions (PubMed:<a href="http://www.uniprot.org/citations/11152479" target="\_blank">11152479</a>, PubMed:<a href="http://www.uniprot.org/citations/37648867" target="\_blank">37648867</a>). Acts as a key inhibitor of the alternative triglyceride biosynthesis pathway by inhibiting the activity of TMEM68/DIESL at the endoplasmic reticulum, thereby restricting accumulation of triacylglycerol (PubMed:<a href="http://www.uniprot.org/citations/37648867" target="\_blank">37648867</a>). The alternative triglyceride biosynthesis pathway mediates formation of triacylglycerol from diacylglycerol and membrane phospholipids (PubMed:<a href="http://www.uniprot.org/citations/37648867" target="\_blank">37648867</a>). Acts as a protein disulfide isomerase by catalyzing formation or reduction of disulfide bonds (PubMed:<a href="http://www.uniprot.org/citations/22228764" target="\_blank">22228764</a>, PubMed:<a href="http://www.uniprot.org/citations/29932915" target="\_blank">29932915</a>). Specifically mediates formation of disulfide bonds of transmembrane proteins at the endoplasmic reticulum membrane (PubMed:<a href="http://www.uniprot.org/citations/22228764" target="\_blank">22228764</a>). Involved in endoplasmic reticulum-associated degradation (ERAD) via its protein disulfide isomerase activity by acting on folding-defective polypeptides at the endoplasmic reticulum membrane (PubMed:<a href="http://www.uniprot.org/citations/29932915" target="\_blank">29932915</a>). Acts as a negative regulator of platelet aggregation following secretion in the extracellular space (PubMed:<a href="http://www.uniprot.org/citations/30425049" target="\_blank">30425049</a>). Acts as a regulator of endoplasmic reticulum- mitochondria contact sites via its ability to regulate redox signals (PubMed:<a href="http://www.uniprot.org/citations/27502484" target="\_blank">27502484</a>, PubMed:<a href="http://www.uniprot.org/citations/31304984" target="\_blank">31304984</a>). Regulates endoplasmic reticulum- mitochondria Ca(2+) flux (PubMed:<a href="http://www.uniprot.org/citations/27502484" target="\_blank">27502484</a>).

### **Cellular Location**

Endoplasmic reticulum membrane; Single-pass type I membrane protein. Mitochondrion membrane; Single-pass type I membrane protein. Secreted. Note=Predominantly found in the endoplasmic reticulum (PubMed:11152479). Secreted in the extracellular space following thrombin stimulation (PubMed:30425049). Localizes to mitochondria-associated endoplasmic reticulum membrane (MAM); palmitoylation is required for MAM localization (PubMed:22045338, PubMed:27502484, PubMed:31304984).

### **Tissue Location**

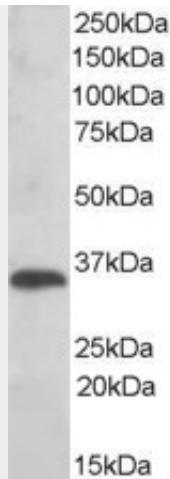
Ubiquitous (PubMed:11152479). Highly expressed in kidney, liver, placenta and lung (PubMed:11152479)

### **Goat Anti-TXNDC1 / TMX Antibody - Protocols**

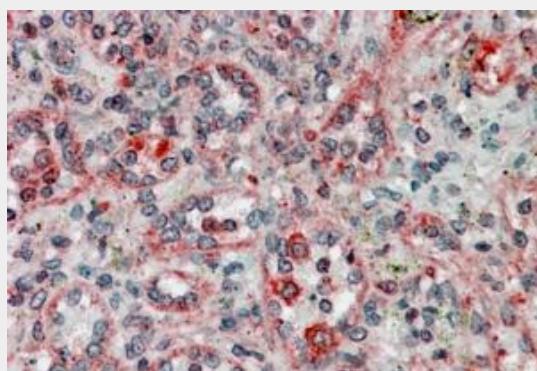
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### **Goat Anti-TXNDC1 / TMX Antibody - Images**



AF2125a (0.01 µg/ml) staining of human liver lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.



AF2125a (3.8 µg/ml) staining of paraffin embedded Human Spleen Steamed antigen retrieval with citrate buffer pH 6, AP-staining.

#### Goat Anti-TXNDC1 / TMX Antibody - Background

TXNDC1 is a thioredoxin (TXN; see MIM 187700)-related protein with disulfide reductase activity (Matsuo et al., 2001 [PubMed 11152479]).

#### Goat Anti-TXNDC1 / TMX Antibody - References

Physical and functional interaction of transmembrane thioredoxin-related protein with major histocompatibility complex class I heavy chain: redox-based protein quality control and its potential relevance to immune responses. Matsuo Y, et al. Mol Biol Cell, 2009 Nov. PMID 19741092.  
Toward a confocal subcellular atlas of the human proteome. Barbe L, et al. Mol Cell Proteomics, 2008 Mar. PMID 18029348.

Global, *in vivo*, and site-specific phosphorylation dynamics in signaling networks. Olsen JV, et al. Cell, 2006 Nov 3. PMID 17081983.

Diversification of transcriptional modulation: large-scale identification and characterization of putative alternative promoters of human genes. Kimura K, et al. Genome Res, 2006 Jan. PMID 16344560.

Signal sequence and keyword trap *in silico* for selection of full-length human cDNAs encoding secretion or membrane proteins from oligo-capped cDNA libraries. Otsuki T, et al. DNA Res, 2005. PMID 16303743.