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TMX1 Blocking Peptide (C-term)

Synthetic peptide
Catalog # BP20365b

Specification

TMX1 Blocking Peptide (C-term) - Product Information

Primary Accession Q9H3N1

TMX1 Blocking Peptide (C-term) - 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

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

TMX1 Blocking Peptide (C-term) - Protein Information

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

Function
Thiredoxin 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:11152479, PubMed:37648867). 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:37648867). The alternative triglyceride biosynthesis pathway mediates formation of triacylglycerol from diacylglycerol and membrane phospholipids (PubMed:37648867). Acts as a protein disulfide isomerase by catalyzing formation or reduction of disulfide bonds (PubMed:22228764, PubMed:29932915). Specifically mediates formation of disulfide bonds of transmembrane proteins at the endoplasmic reticulum membrane (PubMed:22228764). 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:29932915). Acts as a negative regulator of platelet aggregation following secretion in the extracellular space (PubMed:30425049). Acts as a regulator of endoplasmic reticulum- mitochondria contact sites via its ability to regulate redox signals (PubMed:27502484, PubMed:31304984). Regulates endoplasmic reticulum- mitochondria Ca(2+) flux (PubMed:27502484).

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)

TMX1 Blocking Peptide (C-term) - Protocols

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

- Blocking Peptides

TMX1 Blocking Peptide (C-term) - Images

TMX1 Blocking Peptide (C-term) - Background

May participate in various redox reactions through the reversible oxidation of its active center dithiol to a disulfide and catalyze dithiol-disulfide exchange reactions.