

# TMX3 (G-5): sc-515248

## BACKGROUND

Thioredoxins comprise a family of small proteins that, by catalyzing the oxidation of disulfide bonds, participate in redox reactions throughout the cell. TMX3 (thioredoxin-related transmembrane protein 3), also known as thioredoxin domain-containing protein 10, protein disulfide-isomerase TMX3, PDIA13 or TXNDC10, is a 454 amino acid single-pass endoplasmic reticulum membrane protein that belongs to the protein disulfide isomerase family. Existing as two alternatively spliced isoforms and containing one thioredoxin domain, TMX3 likely functions as a dithiol oxidase and disulfide isomerase, which plays a role in protein folding by catalyzing disulfide bond rearrangement. Widely expressed, TMX3 is found at highest levels in eye, placenta, muscle, brain, testis, lung, uterus, kidney, stomach, prostate, bone, liver and brain, and is encoded by a gene located on human chromosome 18.

## REFERENCES

- Holmgren, A. 1985. Thioredoxin. *Annu. Rev. Biochem.* 54: 237-271.
- Eklund, H., et al. 1991. Structural and functional relations among thioredoxins of different species. *Proteins* 11: 13-28.
- Powis, G. and Montfort, W.R. 2001. Properties and biological activities of thioredoxins. *Annu. Rev. Biophys. Biomol. Struct.* 30: 421-455.
- Nakamura, H. 2005. Thioredoxin and its related molecules: update 2005. *Antioxid. Redox Signal.* 7: 823-828.
- Stefanková, P., et al. 2005. Thioredoxin-structural and functional complexity. *Gen. Physiol. Biophys.* 24: 3-11.
- Haugstetter, J., et al. 2005. Identification and characterization of a novel thioredoxin-related transmembrane protein of the endoplasmic reticulum. *J. Biol. Chem.* 280: 8371-8380.

## CHROMOSOMAL LOCATION

Genetic locus: TMX3 (human) mapping to 18q22.1; Tmx3 (mouse) mapping to 18 E4.

## SOURCE

TMX3 (G-5) is a mouse monoclonal antibody raised against amino acids 173-308 mapping within an internal region of TMX3 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TMX3 (G-5) is available conjugated to agarose (sc-515248 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515248 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515248 PE), fluorescein (sc-515248 FITC), Alexa Fluor® 488 (sc-515248 AF488), Alexa Fluor® 546 (sc-515248 AF546), Alexa Fluor® 594 (sc-515248 AF594) or Alexa Fluor® 647 (sc-515248 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515248 AF680) or Alexa Fluor® 790 (sc-515248 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

TMX3 (G-5) is recommended for detection of TMX3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for TMX3 siRNA (h): sc-76695, TMX3 shRNA Plasmid (h): sc-76695-SH and TMX3 shRNA (h) Lentiviral Particles: sc-76695-V.

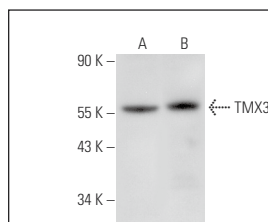
Molecular Weight of TMX3: 51 kDa.

Positive Controls: A2058 whole cell lysate: sc-364178, EOC 20 whole cell lysate: sc-364187 or MDA-MB-231 cell lysate: sc-2232.

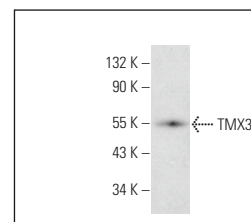
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



TMX3 (G-5): sc-515248. Western blot analysis of TMX3 expression in A2058 (A) and MDA-MB-231 (B) whole cell lysates.



TMX3 (G-5): sc-515248. Western blot analysis of TMX3 expression in EOC 20 whole cell lysate.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.