

TXNDC4 (E-6): sc-393687

BACKGROUND

TXNDC4 (thioredoxin domain containing 4), also known as ERP44, is a 406 amino acid protein that contains one thioredoxin domain, a motif that participates in various redox reactions throughout the cell. Localized to the lumen of the endoplasmic reticulum (ER), TXNDC4 functions to inhibit the activity of IP3R-1 (inositol 1,4,5-triphosphate receptor, type 1) within calcium channels. In addition, TXNDC4 is thought to regulate oxidative protein folding within the ER and may be involved in retaining proteins, such as Ero1-L β and Ero1-L α , in the ER. TXNDC4 expression is induced by ER stress, further suggesting an important role for TXNDC4 in the maintenance of intraluminal conditions. TXNDC4 contains an N-terminal ER targeting sequence, as well as a C-terminal ER retention signal (RDEL), both of which keep TXNDC4 within the ER.

CHROMOSOMAL LOCATION

Genetic locus: ERP44 (human) mapping to 9q31.1; Erp44 (mouse) mapping to 4 B1.

SOURCE

TXNDC4 (E-6) is a mouse monoclonal antibody raised against amino acids 107-406 mapping at the C-terminus of TXNDC4 of human origin.

PRODUCT

Each vial contains 200 μ g IgG $_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TXNDC4 (E-6) is available conjugated to agarose (sc-393687 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393687 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393687 PE), fluorescein (sc-393687 FITC), Alexa Fluor[®] 488 (sc-393687 AF488), Alexa Fluor[®] 546 (sc-393687 AF546), Alexa Fluor[®] 594 (sc-393687 AF594) or Alexa Fluor[®] 647 (sc-393687 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-393687 AF680) or Alexa Fluor[®] 790 (sc-393687 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

TXNDC4 (E-6) is recommended for detection of TXNDC4 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 TXNDC4 siRNA (h): sc-92957, TXNDC4 siRNA (m): sc-154823, TXNDC4 shRNA Plasmid (h): sc-92957-SH, TXNDC4 shRNA Plasmid (m): sc-154823-SH, TXNDC4 shRNA (h) Lentiviral Particles: sc-92957-V and TXNDC4 shRNA (m) Lentiviral Particles: sc-154823-V.

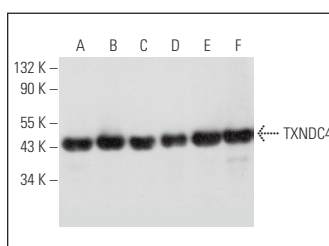
Molecular Weight of TXNDC4: 44 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, Raji whole cell lysate: sc-364236 or A-431 whole cell lysate: sc-2201.

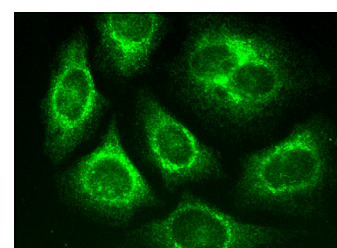
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



TXNDC4 (E-6): sc-393687. Western blot analysis of TXNDC4 expression in HeLa (A), K-562 (B), Raji (C), A-431 (D) and MCF7 (E) whole cell lysates and human liver tissue extract (F).



TXNDC4 (E-6): sc-393687. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Fu, L., et al. 2024. Depleting inositol pyrophosphate 5-InsP7 protected the heart against ischaemia-reperfusion injury by elevating plasma adiponectin. *Cardiovasc. Res.* 120: 954-970.
- Law, M.E., et al. 2024. DR5 disulfide bonding as a sensor and effector of protein folding stress. *bioRxiv*. E-published.

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 for detailed protocols and support products.

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