SANTA CRUZ BIOTECHNOLOGY, INC.

TXNL1 (F-6): sc-515218

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Thioredoxins are small redox active proteins that play a variety of roles throughout the cell. TXNL1 (thioredoxin-like protein 1), also known as TRP32, TXL or TXL-1, is a 289 amino acid cytoplasmic protein that is thought to participate in endocytotic signaling pathways and may act as a redox sensor. Expressed throughout the body, TXNL1 functions to couple oxidative stress to endocytosis, thereby regulating the GDI:Rad5-mediated endocytic response. Additionally, overexpression of TXNL1 inhibits cell proliferation by predisposing the cell to G_0/G_1 arrest, suggesting that TXNL1 also functions as a transcriptional repressor. TXNL1 shares 99% homology with its mouse homolog and contains one thioredoxin domain.

REFERENCES

1. Miranda-Vizuete, A., et al. 1998. Molecular cloning and expression of a cDNA encoding a human thioredoxin-like protein. Biochem. Biophys. Res. Commun. 243: 284-288.
2. Lee, K.K., et al. 1998. Purification, molecular cloning, and characterization of TRP32, a novel thioredoxin-related mammalian protein of 32 kDa. J. Biol. Chem. 273: 19160-19166.
3. Jin, J., et al. 2002. Crystal structure of the catalytic domain of a human thioredoxin-like protein. Eur. J. Biochem. 269: 2060-2068.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 603049. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Kim, K.Y., et al. 2006. Expression of a thioredoxin-related protein-1 is induced by prostaglandin E_2. Int. J. Cancer 118: 1670-1679.
6. Jimenez, A., et al. 2006. Characterization of human thioredoxin-like-1: potential involvement in the cellular response against glucose deprivation. FEBS Lett. 580: 960-967.

CHROMOSOMAL LOCATION

Genetic locus: TXNL1 (human) mapping to 18q21.31; Txnl1 (mouse) mapping to 18 E1.

SOURCE

TXNL1 (F-6) is a mouse monoclonal antibody raised against amino acids 62-255 mapping within an internal region of TXNL1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TXNL1 (F-6) is available conjugated to agarose (sc-515218 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-515218 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515218 PE), fluorescein (sc-515218 FITC), Alexa Fluor® 488 (sc-515218 AF488), Alexa Fluor® 546 (sc-515218 AF546), Alexa Fluor® 594 (sc-515218 AF594) or Alexa Fluor® 647 (sc-515218 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515218 AF680) or Alexa Fluor® 790 (sc-515218 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

TXNL1 (F-6) is recommended for detection of TXNL1 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 TXNL1 siRNA (h): sc-63179, TXNL1 siRNA (m): sc-63180, TXNL1 shRNA Plasmid (h): sc-63179-SH, TXNL1 shRNA Plasmid (m): sc-63180-SH, TXNL1 shRNA (h) Lentiviral Particles: sc-63179-V and TXNL1 shRNA (m) Lentiviral Particles: sc-63180-V.

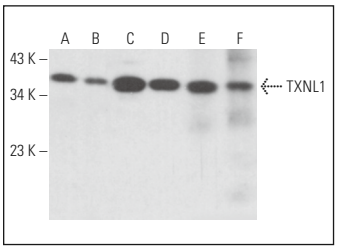
Molecular Weight of TXNL1: 32 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, HCT-116 whole cell lysate: sc-364175 or NTERA-2 cl.D1 whole cell lysate: sc-364181.

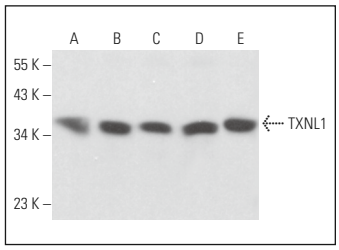
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGλ BP-HRP: sc-516132 or m-IgGλ BP-HRP (Cruz Marker): sc-516132-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-IgGλ BP-FITC: sc-516185 or m-IgGλ BP-PE: sc-516186 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



TXNL1 (F-6): sc-515218. Western blot analysis of TXNL1 expression in HL-60 (**A**), COLO 205 (**B**), NIH/3T3 (**C**) and RAW 264.7 (**D**) whole cell lysates and rat colon (**E**) and rat lung (**F**) tissue extracts.



TXNL1 (F-6): sc-515218. Western blot analysis of TXNL1 expression in NTERA-2 cl.D1 (**A**), HCT-116 (**B**), SW480 (**C**) and WI-38 (**D**) whole cell lysates and SW480 nuclear extract (**E**). Detection reagent used: m-IgGλ BP-HRP (Cruz Marker): sc-516132-CM.

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.