

TXNDC9 (C-8): sc-514770

BACKGROUND

Thioredoxins comprise a family of small proteins that, by catalyzing the oxidation of disulfide bonds, participate in redox reactions throughout the cell. Proteins that contain thioredoxin domains do not necessarily convey the oxidative properties of thioredoxins, but generally function as disulfide isomerases that enzymatically rearrange disulfide bonds found in various proteins. TXNDC9 (thioredoxin domain-containing protein 9), also known as APACD (ATP-binding protein associated with cell differentiation), is a 226 amino acid protein that contains one thioredoxin domain and may be involved in cell differentiation events. The gene encoding TXNDC9 maps to human chromosome 2, which houses over 1,400 genes and comprises nearly 8% of the human genome. Harlequin ichthyosis, a rare and morbid skin deformity, is associated with mutations in the ABCA12 gene, while the lipid metabolic disorder sitosterolemia is associated with defects in the ABCG5 and ABCG8 genes. Additionally, an extremely rare recessive genetic disorder, Alström syndrome, is caused by mutations in the ALMS1 gene, which maps to chromosome 2.

REFERENCES

- Holmgren, A. 1985. Thioredoxin. *Annu. Rev. Biochem.* 54: 237-271.
- Holmgren, A. 1989. Thioredoxin and glutaredoxin systems. *J. Biol. Chem.* 264: 13963-13966.
- Eklund, H., et al. 1991. Structural and functional relations among thioredoxins of different species. *Proteins* 11: 13-28.
- Ijdo, J.W., et al. 1991. Origin of human chromosome 2: an ancestral telomere-telomere fusion. *Proc. Natl. Acad. Sci. USA* 88: 9051-9055.

CHROMOSOMAL LOCATION

Genetic locus: TXNDC9 (human) mapping to 2q11.2; Txndc9 (mouse) mapping to 1 B.

SOURCE

TXNDC9 (C-8) is a mouse monoclonal antibody raised against amino acids 63-178 mapping within an internal region of TXNDC9 of human origin.

PRODUCT

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

TXNDC9 (C-8) is available conjugated to agarose (sc-514770 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514770 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514770 PE), fluorescein (sc-514770 FITC), Alexa Fluor® 488 (sc-514770 AF488), Alexa Fluor® 546 (sc-514770 AF546), Alexa Fluor® 594 (sc-514770 AF594) or Alexa Fluor® 647 (sc-514770 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514770 AF680) or Alexa Fluor® 790 (sc-514770 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

TXNDC9 (C-8) is recommended for detection of TXNDC9 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 TXNDC9 siRNA (h): sc-94867, TXNDC9 siRNA (m): sc-154824, TXNDC9 shRNA Plasmid (h): sc-94867-SH, TXNDC9 shRNA Plasmid (m): sc-154824-SH, TXNDC9 shRNA (h) Lentiviral Particles: sc-94867-V and TXNDC9 shRNA (m) Lentiviral Particles: sc-154824-V.

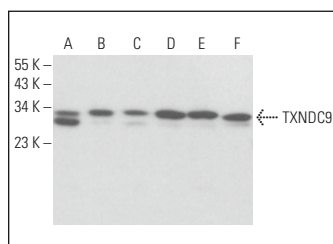
Molecular Weight of TXNDC9: 27 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, Raji whole cell lysate: sc-364236 or HeLa whole cell lysate: sc-2200.

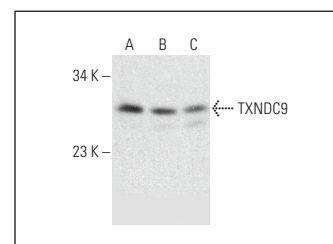
RECOMMENDED SUPPORT REAGENTS

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



TXNDC9 (C-8): sc-514770. Western blot analysis of TXNDC9 expression in NIH/3T3 (A), RAW 264.7 (B), Hep G2 (C), F9 (D), c4 (E) and A-10 (F) whole cell lysates.



TXNDC9 (C-8): sc-514770. Western blot analysis of TXNDC9 expression in K-562 (A), HeLa (B) and Raji (C) whole cell lysates.

SELECT PRODUCT CITATIONS

- Yang, Q.C., et al. 2022. High level of TXNDC9 predicts poor prognosis and contributes to the NFκB-regulated metastatic potential in gastric cancer. *Neoplasma* 69: 103-112.

RESEARCH USE

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

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