SANTA CRUZ BIOTECHNOLOGY, INC.

TXNDC9 (39-R): sc-100599

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 icthyosis, 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

1. Holmgren, A. 1985. Thioredoxin. Annu. Rev. Biochem. 54: 237-271.
2. Holmgren, A. 1989. Thioredoxin and glutaredoxin systems. J. Biol. Chem. 264: 13963-13966.

CHROMOSOMAL LOCATION

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

SOURCE

TXNDC9 (39-R) is a mouse monoclonal antibody raised against recombinant TXNDC9 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

TXNDC9 (39-R) is recommended for detection of TXNDC9 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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.

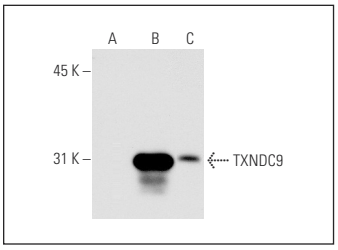
Molecular Weight of TXNDC9: 27 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, HeLa whole cell lysate: sc-2200 or TXNDC9 (m2): 293T Lysate: sc-124386.

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 (39-R): sc-100599. Western blot analysis of TXNDC9 expression in non-transfected 293T: sc-117752 (**A**), mouse TXNDC9 transfected 293T: sc-124386 (**B**) and K-562 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Erkizan, H.V., et al. 2011. Novel peptide binds EWS-FLI1 and reduces the oncogenic potential in Ewing tumors. Cell Cycle 10: 3397-3408.

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.