

TXNL6 (h2): 293T Lysate: sc-371847

BACKGROUND

Thioredoxins are small redox active proteins that play a variety of roles throughout the cell. TXNL6 (thioredoxin-like 6), also known as NXNL1 (nucleoredoxin-like 1) or RDCVF (rod-derived cone viability factor), is a 212 amino acid nuclear outer membrane protein belonging to the nucleoredoxin family. Containing one thioredoxin domain, TXNL6 may work with NFκB to protect cone photoreceptor cells from photooxidative stress-induced apoptosis. Mutations in the gene encoding TXNL6 may be associated with age-related reduction of cone and rod function, which leads to rod-cone dystrophies such as retinitis pigmentosa (RP), an untreatable, inherited retinal disease that commonly results in blindness. TXNL6 is considered a potential target in developing therapeutic treatments for human retinal neurodegenerative diseases. TXNL6 is encoded by a gene located on human chromosome 19.

REFERENCES

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2. Sahel, J.A., et al. 2005. Neuroprotection of photoreceptor cells in rod-cone dystrophies: from cell therapy to cell signalling. *C. R. Biol.* 328: 163-168.
3. Hanein, S., et al. 2006. Disease-associated variants of the Rod-derived cone viability factor (RdCVF) in Leber congenital amaurosis. Rod-derived cone viability variants in LCA. *Adv. Exp. Med. Biol.* 572: 9-14.
4. Chalmel, F., et al. 2007. Rod-derived cone viability factor-2 is a novel bifunctional-thioredoxin-like protein with therapeutic potential. *BMC Mol. Biol.* 8: 74.
5. Wang, X.W., et al. 2008. Thioredoxin-like 6 protects retinal cell line from photooxidative damage by upregulating NFκB activity. *Free Radic. Biol. Med.* 45: 336-344.
6. Fridlich, R., et al. 2009. The thioredoxin-like protein Rod-derived cone viability factor (RdCVFL) interacts with TAU and inhibits its phosphorylation in the retina. *Mol. Cell. Proteomics* 8: 1206-1218.
7. Yang, Y., et al. 2009. Functional cone rescue by RdCVF protein in a dominant model of retinitis pigmentosa. *Mol. Ther.* 17: 787-795.
8. Cronin, T., et al. 2010. The disruption of the Rod-derived cone viability gene leads to photoreceptor dysfunction and susceptibility to oxidative stress. *Cell Death Differ.* 17: 1199-1210.
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CHROMOSOMAL LOCATION

Genetic locus: NXNL1 (human) mapping to 19p13.11.

PRODUCT

TXNL6 (h2): 293T Lysate represents a lysate of human TXNL6 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

RESEARCH USE

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

APPLICATIONS

TXNL6 (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive TXNL6 antibodies. Recommended use: 10-20 µl per lane.

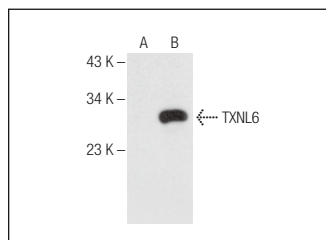
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

TXNL6 (3-RE25): sc-135593 is recommended as a positive control antibody for Western Blot analysis of enhanced human TXNL6 expression in TXNL6 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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.

DATA



TXNL6 (3-RE25): sc-135593. Western blot analysis of TXNL6 expression in non-transfected: sc-117752 (A) and human TXNL6 transfected: sc-371847 (B) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.