

Tafazzin (C-15): sc-49759

BACKGROUND

Tafazzin protein is a single-pass membrane protein that is abundant in cardiac and skeletal muscle, where it influences mitochondrial structure. There are various isoforms associated with Tafazzin, most of which are ubiquitous. Isoforms with hydrophobic N-terminal domains are membrane anchored, whereas the short isoforms that lack a hydrophobic leader sequence may exist as cytoplasmic proteins. The isoforms that lack the N-terminal domain are not found in cardiac or skeletal muscle, rather they are located in fibroblasts and leukocytes. Mutations in the Tafazzin gene are associated with various diseases, including dilated cardiomyopathy (DCM), hypertrophic DCM, endocardial fibroelastosis, left ventricular noncompaction (LVNC) and Barth syndrome (BTHS), a severe inherited disorder marked by neutropenia, cardiac and skeletal myopathy and short stature.

REFERENCES

- Gu, Z., Valianpour, F., Chen, S., Vaz, F.M., Hakkaart, G.A., Wanders, R.J. and Greenberg, M.L. 2003. Aberrant cardiolipin metabolism in the yeast taz1 mutant: a model for Barth syndrome. *Mol. Microbiol.* 51: 149-158.
- Schlame, M., Kelley, R.I., Feigenbaum, A., Towbin, J.A., Heerdt, P.M., Schieble, T., Wanders, R.J., DiMauro, S. and Blanck, T.J. 2003. Phospholipid abnormalities in children with Barth syndrome. *J. Am. Coll. Cardiol.* 42: 1994-1999.
- Lu, B., Kelher, M.R., Lee, D.P., Lewin, T.M., Coleman, R.A., Choy, P.C. and Hatch, G.M. 2004. Complex expression pattern of the Barth syndrome gene product Tafazzin in human cell lines and murine tissues. *Biochem. Cell Biol.* 82: 569-576.
- Testet, E., Laroche-Traineau, J., Noubhani, A., Coulon, D., Bunoust, O., Camougrand, N., Manon, S., Lessire, R. and Bessoule, J.J. 2005. Ypr140wp, "the yeast tafazzin", displays a mitochondrial lysophosphatidylcholine (lyso-PC) acyltransferase activity related to triacylglycerol and mitochondrial lipid synthesis. *Biochem. J.* 387: 617-626.
- Xu, Y., Sutachan, J.J., Plesken, H., Kelley, R.I. and Schlame, M. 2005. Characterization of lymphoblast mitochondria from patients with Barth syndrome. *Lab. Invest.* 85: 823-830.
- Brandner, K., Mick, D.U., Frazier, A.E., Taylor, R.D., Meisinger, C. and Rehling, P. 2005. Taz1, an outer mitochondrial membrane protein, affects stability and assembly of inner membrane protein complexes: implications for Barth syndrome. *Mol. Biol. Cell* 16: 5202-5214.

CHROMOSOMAL LOCATION

Genetic locus: TAZ (human) mapping to Xq28; Taz (mouse) mapping to X A7.3.

SOURCE

Tafazzin (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Tafazzin of human origin.

STORAGE

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

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-49759 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Tafazzin (C-15) is recommended for detection of all isoforms of Tafazzin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Tafazzin (C-15) is also recommended for detection of all isoforms of Tafazzin in additional species, including canine.

Suitable for use as control antibody for Tafazzin siRNA (h): sc-61637, Tafazzin siRNA (m): sc-61638, Tafazzin shRNA Plasmid (h): sc-61637-SH, Tafazzin shRNA Plasmid (m): sc-61638-SH, Tafazzin shRNA (h) Lentiviral Particles: sc-61637-V and Tafazzin shRNA (m) Lentiviral Particles: sc-61638-V.

Molecular Weight of Tafazzin: 33.5 kDa.

Positive Controls: SW-13 cell lysate: sc-24778.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

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