

Triadin (R-17): sc-33392

BACKGROUND

Triadin is a junctional terminal cisternae protein found mainly in human skeletal muscle. The gene TRDN which encodes for the protein maps to chromosome 6q22-q23. Triadin, a type II membrane protein, is involved in anchoring calsequestrin to the sarcoplasmic reticulum, allowing its coupling with the ryanodine receptor (RyR). Triadin inhibits the calcium channel activity of ryanodine receptor in skeletal muscle. It co-localizes with RyR in the junctional sarcoplasmic reticulum membrane.

REFERENCES

- Caswell, A.H., Brandt, N.R., Brunschwig, J.P. and Purkerson, S. 1991. Localization and partial characterization of the oligomeric disulfide-linked molecular weight 95 kDa protein (Triadin) which binds the ryanodine and dihydropyridine receptors in skeletal muscle triadic vesicles. *Biochemistry* 30: 7507-7513.
- Flucher, B.E., Andrews, S.B., Fleischer, S., Marks, A.R., Caswell, A. and Powell, J.A. 1993. Triad formation: organization and function of the sarcoplasmic reticulum calcium release channel and Triadin in normal and dysgenic muscle *in vitro*. *J. Cell Biol.* 123: 1161-1174.
- Knudson, C.M., Stang, K.K., Jorgensen, A.O. and Campbell, K.P. 1993. Biochemical characterization of ultrastructural localization of a major junctional sarcoplasmic reticulum glycoprotein (Triadin). *J. Biol. Chem.* 268: 12637-12645.
- Knudson, C.M., Stang, K.K., Moomaw, C.R., Slaughter, C.A. and Campbell, K.P. 1993. Primary structure and topological analysis of a skeletal muscle-specific junctional sarcoplasmic reticulum glycoprotein (Triadin). *J. Biol. Chem.* 268: 12646-12654.
- Brandt, N.R., Caswell, A.H., Carl, S.A., Ferguson, D.G., Brandt, T., Brunschwig, J.P. and Bassett, A.L. 1993. Detection and localization of Triadin in rat ventricular muscle. *J. Membr. Biol.* 131: 219-228.
- Taske, N.L., Eyre, H.J., O'Brien, R.O., Sutherland, G.R., Denborough, M.A. and Foster, P.S. 1995. Molecular cloning of the cDNA encoding human skeletal muscle Triadin and its localisation to chromosome 6q22-6q23. *Eur. J. Biochem.* 233: 258-265.
- Ohkura, M., Furukawa, K., Fujimori, H., Kuruma, A., Kawano, S., Hiraoka, M., Kuniyasu, A., Nakayama, H. and Ohizumi, Y. 1998. Dual regulation of the skeletal muscle ryanodine receptor by Triadin and calsequestrin. *Biochemistry* 37: 12987-12993.

CHROMOSOMAL LOCATION

Genetic locus: Trdn (mouse) mapping to 10 A4.

SOURCE

Triadin (R-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Triadin of rat 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 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-33392 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Triadin (R-17) is recommended for detection of Triadin of rat and, to a lesser extent, mouse 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 Triadin siRNA (m): sc-44414, Triadin shRNA Plasmid (m): sc-44414-SH and Triadin shRNA (m) Lentiviral Particles: sc-44414-V.

Molecular Weight of cardiac Triadin: 40 kDa.

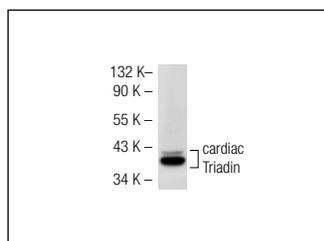
Molecular Weight of skeletal muscle Triadin: 95 kDa.

Positive Controls: rat skeletal muscle extract: sc-364810.

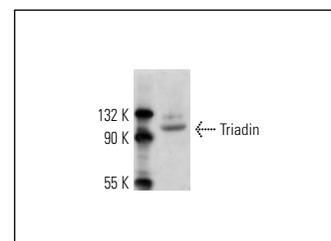
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



Triadin (R-17): sc-33392. Western blot analysis of Triadin expression in mouse heart tissue extract.



Triadin (R-17): sc-33392. Western blot analysis of Triadin expression in rat skeletal muscle tissue extract.

RESEARCH USE

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