SANTA CRUZ BIOTECHNOLOGY, INC.

ω-Sarcoglycan (A-12): sc-98118

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The Power to Question

BACKGROUND

The sarcoglycan transmembrane proteins are members of the dystrophin complex. Sarcoglycans cluster together to form a complex, which is localized in the cell membrane of skeletal, cardiac, and smooth muscle fibers. Four sarcoglycan subunit proteins, designated α-, β-, γ- and δ-sarcoglycan, form a complex on the skeletal muscle cell surface membrane. A genetic defect in any one of these proteins causes the loss or marked decrease of the whole sarcoglycan complex, which is observed in the autosomal recessive muscular dystrophy and sarcoglycanopathy. An additional sarcogylcan, ω-Sarcoglycan, a 299 amino acid transmembrane protein, is a component of the vascular smooth muscle sarcoglycan complex. In muscular dystrophy, expression of ω-Sarcoglycan is reduced at the membrane, leading to membrane instability. This suggests that ω-Sarcoglycan may play a critical role in the pathogenesis of muscular dystrophy. There are two isoforms of ω-Sarcoglycan that are produced as a result of alternative splicing events.

REFERENCES

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2. Hack, A.A., et al. 2000. Sarcoglycans in muscular dystrophy. Microsc. Res. Tech. 48: 167-180.
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6. Shiga, K., et al. 2006. ω-sarcoglycan is a functional homologue of γ-sarcoglycan in the formation of the sarcoglycan complex. Exp. Cell Res. 312: 2083-2092.
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8. Anastasi, G., et al. 2007. Sarcoglycan subcomplex expression in normal human smooth muscle. J. Histochem. Cytochem. 55: 831-843.
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CHROMOSOMAL LOCATION

Genetic locus: SGCZ (human) mapping to 8p22; Sgcz (mouse) mapping to 8 A4.

SOURCE

ω-Sarcoglycan (A-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of ω-Sarcoglycan of human origin.

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-98118 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ω-Sarcoglycan (A-12) is recommended for detection of ω-Sarcoglycan 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).

ω-Sarcoglycan (A-12) is also recommended for detection of ω-Sarcoglycan in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ω-Sarcoglycan siRNA (h): sc-77454, ω-Sarcoglycan siRNA (m): sc-155981, ω-Sarcoglycan shRNA Plasmid (h): sc-77454-SH, ω-Sarcoglycan shRNA Plasmid (m): sc-155981-SH, ω-Sarcoglycan shRNA (h) Lentiviral Particles: sc-77454-V and ω-Sarcoglycan shRNA (m) Lentiviral Particles: sc-155981-V.

Molecular Weight of ω-Sarcoglycan: 33 kDa.

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.

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 or our catalog for detailed protocols and support products.