

α -sarcoglycan (C-12): sc-515255

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, sarcoglycanopathy. In smooth muscle, β - and δ -sarcoglycans are associated with ϵ -sarcoglycan, a glycoprotein homologous to α -sarcoglycan. Additionally, a complete deficiency in δ -sarcoglycan is the cause of the Syrian hamster BIO.14 cardiomyopathy.

REFERENCES

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- Hack, A.A., et al. 2000. Differential requirement for individual sarcoglycans and dystrophin in the assembly and function of the dystrophin-glycoprotein complex. *J. Cell Sci.* 113: 2535-2544.
- Ueda, H., et al. 2001. δ - and γ -sarcoglycan localization in the sarcoplasmic reticulum of skeletal muscle. *J. Histochem. Cytochem.* 49: 529-538.
- Wakabayashi-Takai, E., et al. 2001. Identification of myogenesis-dependent transcriptional enhancers in promoter region of mouse γ -sarcoglycan gene. *Eur. J. Biochem.* 268: 948-957.
- Politano, L., et al. 2001. Evaluation of cardiac and respiratory involvement in sarcoglycanopathies. *Neuromuscul. Disord.* 11: 178-185.
- Enigk, R.E., et al. 2001. Cellular and molecular properties of α -dystrobrevin in skeletal muscle. *Front. Biosci.* 6: D53-D64.

CHROMOSOMAL LOCATION

Genetic locus: SGCA (human) mapping to 17q21.33; Sgca (mouse) mapping to 11 D.

SOURCE

α -sarcoglycan (C-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 363-382 at the C-terminus of α -sarcoglycan of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-515255 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

α -sarcoglycan (C-12) is recommended for detection of α -sarcoglycan of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 α -sarcoglycan siRNA (h): sc-43416, α -sarcoglycan siRNA (m): sc-43417, α -sarcoglycan shRNA Plasmid (h): sc-43416-SH, α -sarcoglycan shRNA Plasmid (m): sc-43417-SH, α -sarcoglycan shRNA (h) Lentiviral Particles: sc-43416-V and α -sarcoglycan shRNA (m) Lentiviral Particles: sc-43417-V.

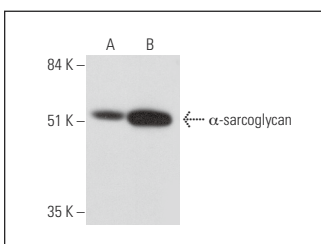
Molecular Weight of α -sarcoglycan: 50 kDa.

Positive Controls: rat skeletal muscle extract: sc-364810 or human skeletal muscle extract: sc-363776.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



α -sarcoglycan (C-12): sc-515255. Western blot analysis of α -sarcoglycan expression in rat skeletal muscle (A) and human skeletal muscle (B) tissue extracts.

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.