SANTA CRUZ BIOTECHNOLOGY, INC.

ε-sarcoglycan (C-17): sc-14194

SANTA CRUZ BIOTECHNOLOGY

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, 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

1. Barresi, R., et al. 2000. Expression of γ-sarcoglycan in smooth muscle and its interaction with the smooth muscle sarcoglycan-sarcospan complex. J. Biol. Chem. 275: 38554-38560.
2. 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.
3. Ueda, H., et al. 2001. δ- and γ-sarcoglycan localization in the sarcoplasmic reticulum of skeletal muscle. J. Histochem. Cytochem. 49: 529-538.
4. 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.
5. Politano, L., et al. 2001. Evaluation of cardiac and respiratory involvement in sarcoglycanopathies. Neuromuscul. Disord. 11: 178-185.

CHROMOSOMAL LOCATION

Genetic locus: SGCE (human) mapping to 7q21.3; Sgce (mouse) mapping to 6 A1.

SOURCE

ε-sarcoglycan (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of ε-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-14194 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

ε-sarcoglycan (C-17) is recommended for detection of ε-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).

ε-sarcoglycan (C-17) is also recommended for detection of ε-sarcoglycan in additional species, including canine and bovine.

Suitable for use as control antibody for ε-sarcoglycan siRNA (h): sc-43422, ε-sarcoglycan siRNA (m): sc-43423, ε-sarcoglycan shRNA Plasmid (h): sc-43422-SH, ε-sarcoglycan shRNA Plasmid (m): sc-43423-SH, ε-sarcoglycan shRNA (h) Lentiviral Particles: sc-43422-V and ε-sarcoglycan shRNA (m) Lentiviral Particles: sc-43423-V.

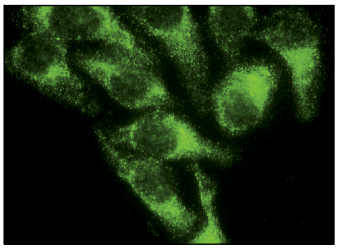
Molecular Weight of ε-sarcoglycan: 44 kDa.

Positive Controls: Mouse brain extract: sc-2253, A549 cell lysate: sc-2413 or mouse heart extract: sc-2254.

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.

DATA



ε-sarcoglycan (C-17): sc-14194. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Ramirez-Sanchez, I., et al. 2004. Expression analysis of the SG-SSPN complex in smooth muscle and endothelial cells of human umbilical cord vessels. J. Vasc. Res. 42: 1-7.
2. Sharma, P., et al. 2008. Expression of the dystrophin-glycoprotein complex is a marker for human airway smooth muscle phenotype maturation. Am. J. Physiol. Lung Cell. Mol. Physiol. 294: L57-L68 .