SANTA CRUZ BIOTECHNOLOGY, INC.

β-sarcoglycan (H-98): sc-28279

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. Enigk, R.E., et al. 2001. Cellular and molecular properties of α-dystrobrevin in skeletal muscle. Front. Biosci. 6: D53-D64.
4. Politano, L., et al. 2001. Evaluation of cardiac and respiratory involvement in sarcoglycanopathies. Neuromuscul. Disord. 11: 178-185.
5. Ueda, H., et al. 2001. δ- and γ-sarcoglycan localization in the sarcoplasmic reticulum of skeletal muscle. J. Histochem. Cytochem. 49: 529-538.
6. 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.
7. Anastasi, G., et al. 2004. Sarcoglycan and integrin localization in normal human skeletal muscle: a confocal laser scanning microscope study. Eur. J. Histochem. 48: 245-252.
8. Lapidos, K.A., et al. 2004. Transplanted hematopoietic stem cells demonstrate impaired sarcoglycan expression after engraftment into cardiac and skeletal muscle. J. Clin. Invest. 114: 1577-1585.
9. Chan, P., et al. 2005. Epsilon-sarcoglycan immunoreactivity and mRNA expression in mouse brain. J. Comp. Neurol. 482: 50-73.

CHROMOSOMAL LOCATION

Genetic locus: SGCB (human) mapping to 4q12; Sgcb (mouse) mapping to 5 C3.3.

SOURCE

β-sarcoglycan (H-98) is a rabbit polyclonal antibody raised against amino acids 221-318 mapping within an extracellular domain of β-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.

APPLICATIONS

β-sarcoglycan (H-98) is recommended for detection of β-sarcoglycan of mouse, rat and human 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

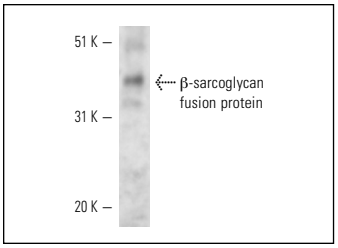
β-sarcoglycan (H-98) is also recommended for detection of β-sarcoglycan in additional species, including equine, canine and porcine.

Suitable for use as control antibody for β-sarcoglycan siRNA (h): sc-43418, β-sarcoglycan siRNA (m): sc-43419, β-sarcoglycan shRNA Plasmid (h): sc-43418-SH, β-sarcoglycan shRNA Plasmid (m): sc-43419-SH, β-sarcoglycan shRNA (h) Lentiviral Particles: sc-43418-V and β-sarcoglycan shRNA (m) Lentiviral Particles: sc-43419-V.

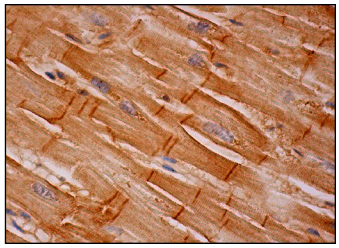
Molecular Weight of β-sarcoglycan: 43 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206.

DATA



β-sarcoglycan (H-98): sc-28279. Western blot analysis of human recombinant β-sarcoglycan fusion protein.



β-sarcoglycan (H-98): sc-28279. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing cytoplasmic and membrane staining of myocytes.

SELECT PRODUCT CITATIONS

1. Kakarla, S.K., et al. 2010. Possible molecular mechanisms underlying age-related cardiomyocyte apoptosis in the F344XBN rat heart. J. Gerontol. A Biol. Sci. Med. Sci. 65: 147-155.

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.