

β-sarcoglycan (F-6): sc-393679

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

- 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.
- 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.
- Enigk, R.E., et al. 2001. Cellular and molecular properties of α -dystrobrevin in skeletal muscle. *Front. Biosci.* 6: D53-D64.
- Politano, L., et al. 2001. Evaluation of cardiac and respiratory involvement in sarcoglycanopathies. *Neuromuscul. Disord.* 11: 178-185.
- Ueda, H., et al. 2001. δ - and γ -sarcoglycan localization in the sarcoplasmic reticulum of skeletal muscle. *J. Histochem. Cytochem.* 49: 529-538.

CHROMOSOMAL LOCATION

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

SOURCE

β-sarcoglycan (F-6) is a mouse monoclonal antibody raised against amino acids 221-318 mapping within an extracellular domain of β-sarcoglycan of human origin.

PRODUCT

Each vial contains 200 μg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

β-sarcoglycan (F-6) is available conjugated to agarose (sc-393679 AC), 500 μg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393679 HRP), 200 μg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393679 PE), fluorescein (sc-393679 FITC), Alexa Fluor® 488 (sc-393679 AF488), Alexa Fluor® 546 (sc-393679 AF546), Alexa Fluor® 594 (sc-393679 AF594) or Alexa Fluor® 647 (sc-393679 AF647), 200 μg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393679 AF680) or Alexa Fluor® 790 (sc-393679 AF790), 200 μg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

β-sarcoglycan (F-6) is recommended for detection of β-sarcoglycan of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 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, A549 cell lysate: sc-2413 or human heart extract: sc-363763.

RECOMMENDED SUPPORT REAGENTS

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



β-sarcoglycan (F-6): sc-393679. Western blot analysis of β-sarcoglycan expression in MCF7 (A) and A549 (B) whole cell lysates and human heart tissue extract (C). β-sarcoglycan (F-6): sc-393679. Western blot analysis of β-sarcoglycan expression in MCF7 (A), A-673 (B) and A-431 (C) whole cell lysates.

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 for detailed protocols and support products.