

Sarcospan (H-50): sc-50447

BACKGROUND

The dystrophin-glycoprotein complex (DGC) is a multisubunit protein complex that spans the sarcolemma and forms a link between the subsarcolemmal cytoskeleton and the extracellular matrix. Defects in components of the DGC cause muscular dystrophy, indicating that the DGC plays important roles in muscular function and viability. Sarcospan (also designated K-Ras oncogene-associated protein and Kirstein-Ras-associated protein), a member of this complex, contains four transmembrane spanning helices with intracellular N- and C-terminal domains. The expression of Sarcospan is reduced in muscle from patients with Duchenne muscular dystrophy. Sarcospan mRNAs are expressed in a range of cell lines, tumors, and normal tissue, with very high expression levels in muscle. Two isoforms of Sarcospan, SPN1 and SPN2, are produced by alternative splicing. SPN1 is expressed in heart and skeletal muscle, whereas SPN2 is expressed in heart, skeletal muscle, thymus, prostate, testis, ovary, small intestine, colon and spleen. The sarcoglycan complex in striated muscle is a heterotetrameric unit integrally associated with Sarcospan in the dystrophin-glycoprotein complex and it is also linked to the signaling protein, neural nitric oxide synthase, through α -Syntrophin that associated with dystrobrevin.

REFERENCES

1. Heighway, J., Betticher, D.C., Hoban, P.R., Altermatt, H.J. and Cowen, R. 1996. Coamplification in tumors of KRAS2, type 2 inositol 1, 4, 5 triphosphate receptor gene, and a novel human gene, KRAG. *Genomics* 35: 207-214.
2. Crosbie, R.H., Heighway, J., Venzke, D.P., Lee, J.C. and Campbell, K.P. 1997. Sarcospan, the 25 kDa transmembrane component of the dystrophin-glycoprotein complex. *J. Biol. Chem.* 272: 31221-31224.
3. Grady, R.M., Zhou, H., Cunningham, J.M., Henry, M.D., Campbell, K.P. and Sanes, J.R. 2000. Maturation and maintenance of the neuromuscular synapse: genetic evidence for roles of the dystrophin-glycoprotein complex. *Neuron* 25: 279-293.
4. Lebakken, C.S., Venzke, D.P., Hrstka, R.F., Consolino, C.M., Faulkner, J.A., Williamson, R.A. and Campbell, K.P. 2000. Sarcospan-deficient mice maintain normal muscle function. *Mol. Cell. Biol.* 20: 1669-1677.
5. Barresi, R., Moore, S.A., Stolle, C.A., Mendell, J.R. and Campbell, K.P. 2000. Expression of γ -Sarcoglycan in smooth muscle and its interaction with the smooth muscle Sarcoglycan-Sarcospan complex. *J. Biol. Chem.* 275: 38554-38560.

CHROMOSOMAL LOCATION

Genetic locus: SSPN (human) mapping to 12p12.1; Sspn (mouse) mapping to 6 G3.

SOURCE

Sarcospan (H-50) is a rabbit polyclonal antibody raised against amino acids 119-168 mapping within an extracellular domain of Sarcospan of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Sarcospan (H-50) is recommended for detection of Sarcospan of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

Sarcospan (H-50) is also recommended for detection of Sarcospan in additional species, including canine and bovine.

Suitable for use as control antibody for Sarcospan siRNA (h): sc-43426, Sarcospan siRNA (m): sc-43427, Sarcospan shRNA Plasmid (h): sc-43426-SH, Sarcospan shRNA Plasmid (m): sc-43427-SH, Sarcospan shRNA (h) Lentiviral Particles: sc-43426-V and Sarcospan shRNA (m) Lentiviral Particles: sc-43427-V.

Molecular Weight of Sarcospan: 25 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (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.


 MONOS
 Satisfaction
 Guaranteed

Try **Sarcospan (E-2): sc-393187**, our highly recommended monoclonal alternative to Sarcospan (H-50).