γ2-Syntrophin (L-15): sc-13772



The Power to Question

BACKGROUND

The syntrophins are structurally related PDZ-domain-containing proteins that facilitate the recruitment of signaling proteins, such as NOS1, to the cell membrane. Syntrophins associate directly with dystrophin, a scaffold protein that is part of a complex which is disrupted in muscular dystrophy, and with dystrophin-related proteins. $\gamma 2\text{-Syntrophin}$, also known as SYN5 or G2SYN, is a 539 amino acid member of the syntrophin family that functions as an adaptor protein to link and organize various proteins, such as dystrophin, within the cell. $\gamma 2\text{-Syntrophin}$, which is localized to the sarcolemma cell membrane, is widely expressed and contains one PH domain and one PDZ domain. $\gamma 2\text{-Syntrophin}$ is able to recruit proteins to the membrane through its PDZ domain, which is unavailable when the protein is bound to a substrate. As a result of its interaction with various proteins, $\gamma 2\text{-Syntrophin}$ is implicated in inherited muscular dystrophy and in the development of autism.

REFERENCES

- Newey, S.E., Benson, M.A., Ponting, C.P., Davies, K.E. and Blake, D.J. 2000. Alternative splicing of dystrobrevin regulates the stoichiometry of syntrophin binding to the dystrophin protein complex. Curr. Biol. 10: 1295-1298.
- Abdelmoity, A., Padre, R.C., Burzynski, K.E., Stull, J.T. and Lau, K.S. 2000. Neuronal nitric oxide synthase localizes through multiple structural motifs to the sarcolemma in mouse myotubes. FEBS Lett. 482: 65-70.
- Ort, T., Maksimova, E., Dirkx, R., Kachinsky, A.M., Berghs, S., Froehner, S.C. and Solimena, M. 2000. The receptor tyrosine phosphatase-like protein ICA512 binds the PDZ domains of β2-Syntrophin and nNOS in pancreatic β cells. Eur. J. Cell Biol. 79: 621-630.
- Adams, M.E., Kramarcy, N., Krall, S.P., Rossi, S.G., Rotundo, R.L., Sealock, R. and Froehner, S.C. 2000. Absence of α-Syntrophin leads to structurally aberrant neuromuscular synapses deficient in utrophin. J. Cell Biol. 150: 1385-1398.
- Rocco, P., Vainzof, M., Froehner, S.C., Peters, M.F., Marie, S.K., Passos-Bueno, M.R. and Zatz, M. 2000. Brazilian family with pure autosomal dominant spastic paraplegia maps to 8q: analysis of muscle β1-Syntrophin. Am. J. Med. Genet. 92: 122-127.

CHROMOSOMAL LOCATION

Genetic locus: SNTG2 (human) mapping to 2p25.3; Sntg2 (mouse) mapping to 12 A2.

SOURCE

 γ 2-Syntrophin (L-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of γ 2-Syntrophin of human origin.

PRODUCT

Each vial contains 200 μg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-13772 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

 $\gamma 2\text{-Syntrophin}$ (L-15) is recommended for detection of $\gamma 2\text{-Syntrophin}$ 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).

 γ 2-Syntrophin (L-15) is also recommended for detection of γ 2-syntrophin in additional species, including equine, bovine and avian.

Suitable for use as control antibody for γ 2-Syntrophin siRNA (h): sc-43443, γ 2-Syntrophin siRNA (m): sc-43444, γ 2-Syntrophin shRNA Plasmid (h): sc-43443-SH, γ 2-Syntrophin shRNA Plasmid (m): sc-43444-SH, γ 2-Syntrophin shRNA (h) Lentiviral Particles: sc-43443-V and γ 2-Syntrophin shRNA (m) Lentiviral Particles: sc-43444-V.

Molecular Weight of y2-Syntrophin: 60 kDa.

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) 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.

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3800 fax 831.457.3801 **Europe** +00800 4573 8000 49 6221 4503 0 **www.scbt.com**