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SANTA CRUZ BIOTECHNOLOGY, INC.

# γ2-Syntrophin siRNA (h): sc-43443

## 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. γ2-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. γ2-Syntrophin, which is localized to the sarcolemma cell membrane, is widely expressed and contains one PH domain and one PDZ domain. γ2-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, γ2-Syntrophin is implicated in inherited muscular dystrophy and in the development of autism.

## REFERENCES


1. 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.
2. 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.
3. 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.
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5. 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.

## PRODUCT

γ2-Syntrophin siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see γ2-Syntrophin shRNA Plasmid (h): sc-43443-SH and γ2-Syntrophin shRNA (h) Lentiviral Particles: sc-43443-V as alternate gene silencing products.

For independent verification of γ2-Syntrophin (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-43443A, sc-43443B and sc-43443C.

## STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

γ2-Syntrophin siRNA (h) is recommended for the inhibition of γ2-Syntrophin expression in human cells.

## SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor γ2-Syntrophin gene expression knockdown using RT-PCR Primer: γ2-Syntrophin (h)-PR: sc-43443-PR (20 µl, 484 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## 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.