SANTA CRUZ BIOTECHNOLOGY, INC.

CMYA5 siRNA (h): sc-91783

BACKGROUND

CMYA5 (cardiomyopathy associated 5), also known as TRIM76 (tripartite motif-containing protein 76),myospryn, dystrobrevin-binding protein 2, SPRYD2 (SPRY domain-containing protein 2) or genethonin-3, is a 4,069 amino acid cytoplasmic protein that interacts with Dysbindin, α-actinin-2 and PKA IIα reg and belongs to the TRIM (tripartite motif) superfamily. Identified as a muscle-specific protein kinase A anchoring protein and involved in vesicular trafficking, CMYA5 is downregulated in muscle cell lines of patients with Duchenne muscular dystrophy (DMD) and is a late target in the PKA-CREB signal transduction pathway. CMYA5 is expressed in skin, heart and skeletal muscle, and contains one B30.2/SPRY domain and two Fibronectin type-III domains.

REFERENCES

1. Benson, M.A., et al. 2004. Myospryn is a novel binding partner for Dysbindin in muscle. J. Biol. Chem. 279: 10450-10458.
2. Durham, J.T., et al. 2006. Myospryn is a direct transcriptional target for MEF-2A that encodes a striated muscle, α-actinin-interacting, costamere-localized protein. J. Biol. Chem. 281: 6841-6849.
3. Nakagami, H., et al. 2007. Gene polymorphism of myospryn (cardiomyopathy-associated 5) is associated with left ventricular wall thickness in patients with hypertension. Hypertens. Res. 30: 1239-1246.
4. Kouloumenta, A., et al. 2007. Proper perinuclear localization of the TRIM-like protein myospryn requires its binding partner desmin. J. Biol. Chem. 282: 35211-35221.
5. Reynolds, J.G., et al. 2008. Deregulated protein kinase A signaling and myospryn expression in muscular dystrophy. J. Biol. Chem. 283: 8070-8074.
6. Sarparanta, J. 2008. Biology of myospryn: what's known? J. Muscle Res. Cell. Motil. 29: 177-180.

CHROMOSOMAL LOCATION

Genetic locus: CMYA5 (human) mapping to 5q14.1.

PRODUCT

CMYA5 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 CMYA5 shRNA Plasmid (h): sc-91783-SH and CMYA5 shRNA (h) Lentiviral Particles: sc-91783-V as alternate gene silencing products.

For independent verification of CMYA5 (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-91783A, sc-91783B and sc-91783C.

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.

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

CMYA5 siRNA (h) is recommended for the inhibition of CMYA5 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 CMYA5 gene expression knockdown using RT-PCR Primer: CMYA5 (h)-PR: sc-91783-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.