SANTA CRUZ BIOTECHNOLOGY, INC.

Muskelin siRNA (h): sc-89673

BACKGROUND

Muskelin, also designated MKLN1 or TWA2, is a 735 amino acid nuclear and cytoplasmic protein that mediates cytoskeletal responses and cell spreading to Thrombospondin 1, an extracellular matrix glycoprotein. Forming a CTLH complex with RMND5A, Ran BP-M and TWA1, Muskelin exists as two alternatively spliced isoforms. Muskelin is implicated as an isoform-specific anchoring protein for the prostaglandin EP3 receptor, and contains one LisH domain, a CTLH domain, six Kelch repeats and an N-terminal discoidin-like domain through which it self-associates via a head-to-tail mechanism. Human and mouse Muskelin share 98% amino acid seqeuence homology and are encoded by genes located on chromosomes 7q32.3 and 6 A3.3, respectively.

REFERENCES

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4. Umeda, M., et al. 2003. A novel nuclear protein, Twa1, and Muskelin comprise a complex with RanBPM. Gene 303: 47-54.
5. Prag, S., et al. 2004. Molecular analysis of Muskelin identifies a conserved discoidin-like domain that contributes to protein self-association. Biochem. J. 381: 547-559.
6. Kobayashi, N., et al. 2007. RanBPM, Muskelin, p48EMLP, p44CTLH, and the armadillo-repeat proteins ARMC8α and ARMC8β are components of the CTLH complex. Gene 396: 236-247.
7. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 605623. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
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CHROMOSOMAL LOCATION

Genetic locus: MKLN1 (human) mapping to 7q32.3.

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.

PRODUCT

Muskelin 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 Muskelin shRNA Plasmid (h): sc-89673-SH and Muskelin shRNA (h) Lentiviral Particles: sc-89673-V as alternate gene silencing products.

For independent verification of Muskelin (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-89673A, sc-89673B and sc-89673C.

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

Muskelin siRNA (h) is recommended for the inhibition of Muskelin 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.

GENE EXPRESSION MONITORING

Muskelin (C-12): sc-398956 is recommended as a control antibody for monitoring of Muskelin gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Muskelin gene expression knockdown using RT-PCR Primer: Muskelin (h)-PR: sc-89673-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.