SANTA CRUZ BIOTECHNOLOGY, INC.

Mlip siRNA (m): sc-108704

BACKGROUND

Nuclear Lamins are critical to maintaining the integrity of the nuclear envelope and cellular morphology as components of the nuclear lamina, a fibrous layer on the nucleoplasmic side of the inner nuclear membrane. The nuclear lamina is thought to provide a framework for the nuclear envelope and may also interact with chromatin. Mlip (muscular-enriched A-type laminin-interacting protein), also known as 2310046A06Rik, is a 269 amino acid protein that is ubiquitously expressed with high expression in heart, skeletal and smooth muscle. In brain, Mlip is expressed by a subpopulation of cells within the hippocampus and cortex. Mlip associates directly and co-localizes with Lamin A and C in the nuclear envelope. Down-regulation of Mlip is suggested to lead to mesenchymal phenotypes of laminopathies. Mlip exists as two alternatively spliced isoforms and is encoded by a gene located on mouse chromosome 9 D.

REFERENCES

1. McKeon, F.D., et al. 1986. Homologies in both primary and secondary structure between nuclear envelope and intermediate filament proteins. Nature 319: 463-468.
2. Fisher, D.Z., et al. 1986. cDNA sequencing of nuclear Lamins A and C reveals primary and secondary structure homology to intermediate filament proteins. Proc. Natl. Acad. Sci. USA 83: 6450-6454.
3. Moir, R.D., et al. 1995. The dynamic properties and possible functions of nuclear lamins. Int. Rev. Cytol. 162B: 141-182.
4. Rao, L., et al. 1996. Lamin proteolysis facilitates nuclear events during apoptosis. J. Cell Biol. 135: 1441-1455.
5. Genschel, J., et al. 2000. Mutations in the LMNA gene encoding Lamin A/C. Hum. Mutat. 16: 451-459.

CHROMOSOMAL LOCATION

Genetic locus: Mlip (mouse) mapping to 9 D.

PRODUCT

Mlip siRNA (m) 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 Mlip shRNA Plasmid (m): sc-108704-SH and Mlip shRNA (m) Lentiviral Particles: sc-108704-V as alternate gene silencing products.

For independent verification of Mlip (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-108704A, sc-108704B and sc-108704C.

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

Mlip siRNA (m) is recommended for the inhibition of Mlip expression in mouse 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 Mlip gene expression knockdown using RT-PCR Primer: Mlip (m)-PR: sc-108704-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.