SANTA CRUZ BIOTECHNOLOGY, INC.

MLF1IP siRNA (h): sc-61057

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Myeloid leukemia factor (MLF) proteins are most highly expressed in testis, ovary, skeletal muscle, heart, kidney and colon. Their function is to play a role in normal hemopoietic differentiation as well as in erythroid/myeloid lineage switching. MLF proteins have low levels of expression in spleen, thymus, and peripheral blood leukocytes. The MLF1-interacting protein (MLF1IP), also designated KSHV latent nuclear antigen interacting protein 1, associates with MLF and also plays a role in red cell maturation suppression. MLF1IP may also be downregulated, along with MLF1, in the genesis of erythroleukemias. It contains two bipartite and two classical nuclear localization signals, two leucine zippers, two nuclear receptor-binding motifs (LXXLL), two PEST residues and several possible phosphorylation sites. MLF1IP is expressed in a wide variety of tissues including fetal liver, bone marrow, thymus and testis, with expression confined exclusively to the CFU-E erythroid precursor cells, but not mature erythrocytes.

REFERENCES

1. Zhang, Y.J., et al. 2001. Reverse transcription slippage over the mRNA secondary structure of the LIP1 gene. BioTechniques 31: 1286, 1288, 1290, passim.
2. Pan, H.Y., et al. 2003. Identification of a novel cellular transcriptional repressor interacting with the latent nuclear antigen of Kaposi's sarcoma-associated herpesvirus. J. Virol. 77: 9758-9768.
3. Hanissian, S.H., et al. 2004. cDNA cloning and characterization of a novel gene encoding the MLF1-interacting protein MLF1IP. Oncogene 23: 3700-3707.
4. Minoshima, Y., et al. 2005. The constitutive centromere component CENP-50 is required for recovery from spindle damage. Mol. Cell. Biol. 25: 10315-10328.
5. Hanissian, S.H., et al. 2005. Regulation of myeloid leukemia factor-1 interacting protein (MLF1IP) expression in glioblastoma. Brain Res. 1047: 56-64.
6. Vallee, M., et al. 2005. Identification of novel and known oocyte-specific genes using complementary DNA subtraction and microarray analysis in three different species. Biol. Reprod. 73: 63-71.

CHROMOSOMAL LOCATION

Genetic locus: CENPU (human) mapping to 4q35.1.

PRODUCT

MLF1IP 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 MLF1IP shRNA Plasmid (h): sc-61057-SH and MLF1IP shRNA (h) Lentiviral Particles: sc-61057-V as alternate gene silencing products.

For independent verification of MLF1IP (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-61057A, sc-61057B and sc-61057C.

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

MLF1IP siRNA (h) is recommended for the inhibition of MLF1IP 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 MLF1IP gene expression knockdown using RT-PCR Primer: MLF1IP (h)-PR: sc-61057-PR (20 µl). 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.