

PRAM-1 siRNA (h): sc-61393

BACKGROUND

Complete remission of acute promyelocytic leukemia can be achieved by treating patients with retinoic acid, and PML-RAR- α (promyelocytic leukemia-retinoic acid receptor α fusion protein) plays a major role in mediating retinoic acid effects in leukemia cells. The retinoic acid-induced gene, PRAM-1 (PML-RAR- α target gene encoding an adaptor molecule 1) encodes an adaptor protein which is expressed and modulated during normal human myelopoiesis. PRAM-1 expression is hindered by expression of PML-RAR- α . The 718 amino acid PRAM-1 protein contains eight N-terminal proline-rich repeats and several proline residues that are clustered as type I or type II SH3 recognition motifs. PRAM-1 demonstrates expression in hematopoietic tissues and lung.

REFERENCES

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2. Online Mendelian Inheritance in Man, OMIM[™]. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 606466. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Clemens, R.A., et al. 2004. PRAM-1 is required for optimal integrin-dependent neutrophil function. *Mol. Cell. Biol.* 24: 10923-10932.
4. Denis, F.M., et al. 2005. PRAM-1 potentiates arsenic trioxide-induced JNK activation. *J. Biol. Chem.* 280: 9043-9048.
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6. Susic, D., et al. 2006. Cardiovascular effects of nonproteolytic activation of prorenin. *Hypertension* 48: e113.
7. Ghaffari, S.H., et al. 2006. Real-time PCR analysis of PML-RAR α in newly diagnosed acute promyelocytic leukaemia patients treated with arsenic trioxide as a front-line therapy. *Ann. Oncol.* 17: 1553-1559.
8. Asou, N., et al. 2007. A randomized study with or without intensified maintenance chemotherapy in patients with acute promyelocytic leukemia who have become negative for PML-RAR α transcript after consolidation therapy: the Japan adult leukemia study group (JALSG) APL97 study. *Blood* 110: 59-66.

CHROMOSOMAL LOCATION

Genetic locus: PRAM1 (human) mapping to 19p13.2.

PRODUCT

PRAM-1 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see PRAM-1 shRNA Plasmid (h): sc-61393-SH and PRAM-1 shRNA (h) Lentiviral Particles: sc-61393-V as alternate gene silencing products.

For independent verification of PRAM-1 (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-61393A, sc-61393B and sc-61393C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

PRAM-1 siRNA (h) is recommended for the inhibition of PRAM-1 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 μ M in 66 μ l. 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

PRAM-1 (D-11): sc-166267 is recommended as a control antibody for monitoring of PRAM-1 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).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor PRAM-1 gene expression knockdown using RT-PCR Primer: PRAM-1 (h)-PR: sc-61393-PR (20 μ l). 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.