SANTA CRUZ BIOTECHNOLOGY, INC.

PRAM-1 siRNA (m): sc-61394

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 alpha 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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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.
5. Heuer, K., et al. 2006. Lipid-binding HSH3 domains in immune cell adapter proteins. J. Mol. Biol. 361: 94-104.
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. Kitareewan, S., et al. 2007. Lysosomes and trivalent arsenic treatment in acute promyelocytic leukemia. J. Natl. Cancer Inst. 99: 41-52.

CHROMOSOMAL LOCATION

Genetic locus: Pram1 (mouse) mapping to 17 B1.

PRODUCT

PRAM-1 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 PRAM-1 shRNA Plasmid (m): sc-61394-SH and PRAM-1 shRNA (m) Lentiviral Particles: sc-61394-V as alternate gene silencing products.

For independent verification of PRAM-1 (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-61394A, sc-61394B and sc-61394C.

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

PRAM-1 siRNA (m) is recommended for the inhibition of PRAM-1 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.

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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 (m)-PR: sc-61394-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.