SANTA CRUZ BIOTECHNOLOGY, INC.

Pramel siRNA (m): sc-143796

BACKGROUND

Several tumor-associated antigen families, such as MAGE, GAGE, PRAME and BAGE, are of interest in tumor immunology because their expression, with exception of testis and fetal tissues, seems to be restricted to tumor cells. The MAGE, BAGE and GAGE genes code for distinct antigens that are recognized by autologous cytolytic T lymphocytes. Many of these antigens represent suitable targets for tumor immunotherapy because their expression in human melanoma cells is common and highly specific. PRAMEL (preferentially expressed antigen in melanoma-like), also known as leucine-rich repeat-containing protein PRAME-like, is a 520 amino acid protein that belongs to the PRAME family. Existing as two alternatively spliced isoforms, PRAMEL contains three leucine-rich repeats and is encoded by a gene that maps to human chromosome 22.

REFERENCES

1. Li, J., et al. 1996. Expression of BAGE, GAGE, and MAGE genes in human gastric carcinoma. Clin. Cancer Res. 2: 1619-1625.
2. van Baren, N., et al. 1998. PRAME, a gene encoding an antigen recognized on a human melanoma by cytolytic T cells, is expressed in acute leukaemia cells. Br. J. Haematol. 102: 1376-1379.
3. Dalerba, P., et al. 1998. High homogeneity of MAGE, BAGE, GAGE, tyrosinase and Melan-A/MART-1 gene expression in clusters of multiple simultaneous metastases of human melanoma: implications for protocol design of therapeutic antigen-specific vaccination strategies. Int. J. Cancer 77: 200-204.
4. Pellat-Deceunynck, C., et al. 2000. The cancer germ-line genes MAGE-1, MAGE-3 and PRAME are commonly expressed by human myeloma cells. Eur. J. Immunol. 30: 803-809.
5. Matsushita, M., et al. 2001. Quantitative monitoring of the PRAME gene for the detection of minimal residual disease in leukaemia. Br. J. Haematol. 112: 916-926.
6. Birtle, Z., et al. 2005. Duplication and positive selection among hominin-specific PRAME genes. BMC Genomics 6: 120.
7. Facucho-Oliveira, J.M., et al. 2007. Mitochondrial DNA replication during differentiation of murine embryonic stem cells. J. Cell Sci. 120: 4025-4034.
8. Wadelin, F., et al. 2010. Leucine-rich repeat protein PRAME: expression, potential functions and clinical implications for leukaemia. Mol. Cancer 9: 226.

CHROMOSOMAL LOCATION

Genetic locus: Pramel (mouse) mapping to X F1.

PRODUCT

Pramel siRNA (m) is a target-specific 19-25 nt siRNA 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 Pramel shRNA Plasmid (m): sc-143796-SH and Pramel shRNA (m) Lentiviral Particles: sc-143796-V as alternate gene silencing 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

Pramel siRNA (m) is recommended for the inhibition of Pramel 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 Pramel gene expression knockdown using RT-PCR Primer: Pramel (m)-PR: sc-143796-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.