

PRAMEF12 siRNA (h): sc-76221

BACKGROUND

Several tumor-associated antigen families, such as MAGE, GAGE, PRAME and BAGE, are of particular 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, since their expression in human melanoma cells is common and highly specific. PRAMEF12 (preferentially expressed antigen of melanoma family member 12) is a 483 amino acid protein containing three LRR (leucine-rich) repeats and is a member of the PRAME family. PRAMEF12 has homology to a melanoma-associated protein, PRAME. PRAME is a melanoma antigen recognized by cytotoxic T cells (CTLs) and is expressed in a variety of cancer cells, including leukemic cells. The PRAME gene is expressed at a high level in a very large fraction of tumors, such as melanomas, non small-cell lung carcinomas, sarcomas, head and neck tumors and renal carcinomas.

REFERENCES

1. Li, J., Yang, Y., Fujie, T., Baba, K., Ueo, H., Mori, M. and Akiyoshi, T. 1996. Expression of BAGE, GAGE, and MAGE genes in human gastric carcinoma. *Clin. Cancer Res.* 2: 1619-1625.
2. Dalerba, P., Ricci, A., Russo, V., Rigatti, D., Nicotra, M.R., Mottolese, M., Bordignon, C., Natali, P.G. and Traversari, C. 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.
3. van Baren, N., Chambost, H., Ferrant, A., Michaux, L., Ikeda, H., Millard, I., Olive, D., Boon, T. and Coulie, P.G. 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.
4. Pold, M., Zhou, J., Chen, G.L., Hall, J.M., Vescio, R.A. and Berenson, J.R. 1999. Identification of a new, unorthodox member of the MAGE gene family. *Genomics* 59: 161-167.

CHROMOSOMAL LOCATION

Genetic locus: PRAMEF12 (human) mapping to 1p36.21.

PRODUCT

PRAMEF12 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 PRAMEF12 shRNA Plasmid (h): sc-76221-SH and PRAMEF12 shRNA (h) Lentiviral Particles: sc-76221-V as alternate gene silencing products.

For independent verification of PRAMEF12 (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-76221A, sc-76221B and sc-76221C.

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

PRAMEF12 siRNA (h) is recommended for the inhibition of PRAMEF12 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor PRAMEF12 gene expression knockdown using RT-PCR Primer: PRAMEF12 (h)-PR: sc-76221-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.