SANTA CRUZ BIOTECHNOLOGY, INC.

MAGE-A10 siRNA (h): sc-108015

BACKGROUND

The melanoma-associated antigen (MAGE) family consists of a number of antigens recognized by cytotoxic T lymphocytes. The MAGE genes were initially isolated from different kinds of tumors and, based on their virtually exclusive tumor-specific expression in adult tissues, they have been used as targets for cancer immunotherapy. MAGE genes encode for tumor-rejection antigens that are expressed in tumors of different histologic types and in normal testes and placenta. MAGE-A10 (melanoma antigen family A, 10), also known as MAGE10 or CT1.10 (cancer/testis antigen 1.10), is a 369 amino acid protein that contains one MAGE domain and is thought to play a role in embryonic development and tumor progression. Like other members of the MAGE family, MAGE-A10 is expressed in head and neck squamous cell carcinoma, melanoma, breast cancer and lung cancer, suggesting that MAGE-A10 plays an important role in carcinogenesis.

REFERENCES

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2. Rogner, U.C., et al. 1995. The melanoma antigen gene (MAGE) family is clustered in the chromosomal band Xq28. Genomics 29: 725-731.
3. Rimoldi, D., et al. 1999. cDNA and protein characterization of human MAGE-10. Int. J. Cancer 82: 901-907.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 300343. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Lin, J., et al. 2004. Melanoma-associated antigens in esophageal adenocarcinoma: identification of novel MAGE-A10 splice variants. Clin. Cancer Res. 10: 5708-5716.
6. Taylor, M., et al. 2007. Breast cancer is a promising target for vaccination using cancer-testis antigens known to elicit immune responses. Breast Cancer Res. 9: R46.
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CHROMOSOMAL LOCATION

Genetic locus: MAGEA10 (human) mapping to Xq28.

PRODUCT

MAGE-A10 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 MAGE-A10 shRNA Plasmid (h): sc-108015-SH and MAGE-A10 shRNA (h) Lentiviral Particles: sc-108015-V as alternate gene silencing products.

For independent verification of MAGE-A10 (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-108015A, sc-108015B and sc-108015C.

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

MAGE-A10 siRNA (h) is recommended for the inhibition of MAGE-A10 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 MAGE-A10 gene expression knockdown using RT-PCR Primer: MAGE-A10 (h)-PR: sc-108015-PR (20 µl, 414 bp). 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.