SANTA CRUZ BIOTECHNOLOGY, INC.

MAGE-A11 siRNA (h): sc-108016

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 and are expressed in tumors of different histologic types and in normal testis and placenta. MAGE-A11 (melanoma antigen family A, 11), also known as MAGE11, MAGE-11, MAGEA-11 or CT1.11 (cancer/testis antigen 1.11), is a 429 amino acid protein that localizes to both the nucleus and the cytoplasm and contains one MAGE domain. Expressed in a variety of tumors, including melanoma, breast cancer and lung cancer, MAGE-A11 functions as an androgen receptor (AR) co-regulator that modulates the interdomain of AR, thereby increasing its activity. Through its regulation of AR, MAGE-A11 is thought to play an important role in embryonic development and tumor progression/transformation. Two isoforms of MAGE-A11 exist due to alternative splicing events.

REFERENCES

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2. Rogner, U.C., Wilke, K., Steck, E., Korn, B. and Poustka, A. 1995. The melanoma antigen gene (MAGE) family is clustered in the chromosomal band Xq28. Genomics 29: 725-731.
3. Jurk, M., Kremmer, E., Schwarz, U., Förster, R. and Winnacker, E.L. 1998. MAGE-11 protein is highly conserved in higher organisms and located predominantly in the nucleus. Int. J. Cancer 75: 762-766.
4. Irvine, R.A. and Coetzee, G.A. 1999. Additional upstream coding sequences of MAGE-11. Immunogenetics 49: 585.
5. Serrano, A., Lethé, B., Delroisse, J.M., Lurquin, C., De Plaen, E., Brasseur, F., Rimoldi, D. and Boon, T. 1999. Quantitative evaluation of the expression of MAGE genes in tumors by limiting dilution of cDNA libraries. Int. J. Cancer 83: 664-669.

CHROMOSOMAL LOCATION

Genetic locus: MAGEA11 (human) mapping to Xq28.

PRODUCT

MAGE-A11 siRNA (h) is a pool of 2 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-A11 shRNA Plasmid (h): sc-108016-SH and MAGE-A11 shRNA (h) Lentiviral Particles: sc-108016-V as alternate gene silencing products.

For independent verification of MAGE-A11 (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-108016A and sc-108016B.

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-A11 siRNA (h) is recommended for the inhibition of MAGE-A11 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.

GENE EXPRESSION MONITORING

MAGE-A11 (YN-2): sc-101222 is recommended as a control antibody for monitoring of MAGE-A11 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).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor MAGE-A11 gene expression knockdown using RT-PCR Primer: MAGE-A11 (h)-PR: sc-108016-PR (20 µl, 415 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.