SANTA CRUZ BIOTECHNOLOGY, INC.

MAGE-E2 siRNA (m): sc-75739

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, but not in normal tissues, with the exception of testis and placenta. Although a large number of MAGE genes have now been identified and extensively studied in tumors of various origin, their function in normal cells remains unknown. MAGE-E2 (melanoma-associated antigen E2), also known as hepatocellular carcinoma-associated protein 3, is a 523 amino acid protein that contains two MAGE domains, which are the only regions of homology shared by all members of the MAGE family.

REFERENCES

1. Zeuthen, J., et al. 1998. The immunogenic properties of human melanomas and melanoma-associated antigens recognized by cytotoxic T lymphocytes. Bratisl. Lek. Listy 99: 426-434.
2. Kirkin, A.F., et al. 1998. The immunogenic properties of melanoma-associated antigens recognized by cytotoxic T lymphocytes. Exp. Clin. Immunogenet. 15: 19-32.
3. Albrecht, D.E. and Froehner, S.C. 2004. DAMAGE, a novel α-dystrobrevin-associated MAGE protein in dystrophin complexes. J. Biol. Chem. 279: 7014-7023.
4. Xiao, J. and Chen, H.S. 2005. Biological functions of melanoma-associated antigens (MAGEs) in cell activities. Ai Zheng 24: 124-128.
5. Sjöblom, T., et al. 2006. The consensus coding sequences of human breast and colorectal cancers. Science 314: 268-274.
6. Wang, W.X., et al. 2009. Detection of tumor cells in peripheral blood of patients with gastric cancer using mRNA of MAGE genes as markers. Zhonghua Wei Chang Wai Ke Za Zhi 12: 611-614.

CHROMOSOMAL LOCATION

Genetic locus: Magee2 (mouse) mapping to X D.

PRODUCT

MAGE-E2 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 MAGE-E2 shRNA Plasmid (m): sc-75739-SH and MAGE-E2 shRNA (m) Lentiviral Particles: sc-75739-V as alternate gene silencing products.

For independent verification of MAGE-E2 (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-75739A, sc-75739B and sc-75739C.

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-E2 siRNA (m) is recommended for the inhibition of MAGE-E2 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 MAGE-E2 gene expression knockdown using RT-PCR Primer: MAGE-E2 (m)-PR: sc-75739-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.