



# MAGE-E2 siRNA (h): sc-75738

## 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

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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  $\alpha$ -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 (human) mapping to Xq13.3.

## PRODUCT

MAGE-E2 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see MAGE-E2 shRNA Plasmid (h): sc-75738-SH and MAGE-E2 shRNA (h) Lentiviral Particles: sc-75738-V as alternate gene silencing products.

For independent verification of MAGE-E2 (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-75738A, sc-75738B and sc-75738C.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

MAGE-E2 siRNA (h) is recommended for the inhibition of MAGE-E2 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  $\mu$ M in 66  $\mu$ 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 MAGE-E2 gene expression knockdown using RT-PCR Primer: MAGE-E2 (h)-PR: sc-75738-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.