SANTA CRUZ BIOTECHNOLOGY, INC.

MAGE-D4 siRNA (h): sc-106191

BACKGROUND

MAGE-D4 (Melanoma-associated antigen D4, MAGE-E1 antigen) and MAGE-D4B (Melanoma-associated antigen D4B) are 741 amino acid proteins encoded by the human gene MAGED4 and MAGED4B, respectively. Genes of the MAGE family direct the expression of tumor antigens that are recognized on human melanomas by autologous cytolytic T lymphocytes. MAGE-D4/MAGE-D4B are believed to be glioma-specific members of MAGE family. Among cancer cells, only in glioma cells are both isoforms of MAGE-D4/MAGE-D4B specifically expressed. Among normal tissues, MAGE-D4/MAGE-D4B are expressed only in brain and ovary. Although MAGE-D4/MAGE-D4B are expressed at high levels in malignant tumors as compared to normal tissue, MAGE-D4/MAGE-D4B protein expression is not considered to be of prognostic significance.

REFERENCES

1. Sasaki, M., et al. 2001. MAGE-E1, a new member of the melanoma-associated antigen gene family and its expression in human glioma. Cancer Res. 61: 4809-4814.
2. Kawano, Y., et al. 2001. Structural characterization and chromosomal localization of the MAGE-E1 gene. Gene 277: 129-137.
3. Wang, L., et al. 2004. Cloning of human testicular carcinoma antigen MAGE-E1 gene and its expression in E.coli. Xi Bao Yu Fen Zi Mian Yi Xue Za Zhi 19: 148-149.
4. Lurquin, C., et al. 2005. Contrasting frequencies of antitumor and anti-vaccine T cells in metastases of a melanoma patient vaccinated with a MAGE tumor antigen. J. Exp. Med. 201: 249-257.
5. Krämer, B.F., et al. 2005. MAGED4-expression in renal cell carcinoma and identification of an HLA-A*25-restricted MHC class I ligand from solid tumor tissue. Cancer Biol. Ther. 4: 943-948.

CHROMOSOMAL LOCATION

Genetic locus: MAGED4 (human) mapping to Xp11.22.

PRODUCT

MAGE-D4 siRNA (h) is a target-specific 19-25 nt siRNA 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-D4 shRNA Plasmid (h): sc-106191-SH and MAGE-D4 shRNA (h) Lentiviral Particles: sc-106191-V as alternate gene silencing products.

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-D4 siRNA (h) is recommended for the inhibition of MAGE-D4 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-D4/MAGE-D4B (E-7): sc-393203 is recommended as a control antibody for monitoring of MAGE-D4 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).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor MAGE-D4 gene expression knockdown using RT-PCR Primer: MAGE-D4 (h)-PR: sc-106191-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.