SANTA CRUZ BIOTECHNOLOGY, INC.

MAGE-D4/MAGE-D4B (E-7): sc-393203

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/MAGED4B (human) mapping to Xp11.22.

SOURCE

MAGE-D4/MAGE-D4B (E-7) is a mouse monoclonal antibody raised against amino acids 23-310 mapping near the N-terminus of MAGE-D4 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MAGE-D4/MAGE-D4B (E-7) is available conjugated to agarose (sc-393203 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393203 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393203 PE), fluorescein (sc-393203 FITC), Alexa Fluor® 488 (sc-393203 AF488), Alexa Fluor® 546 (sc-393203 AF546), Alexa Fluor® 594 (sc-393203 AF594) or Alexa Fluor® 647 (sc-393203 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393203 AF680) or Alexa Fluor® 790 (sc-393203 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

MAGE-D4/MAGE-D4B (E-7) is recommended for detection of MAGE-D4 and MAGE-D4B of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

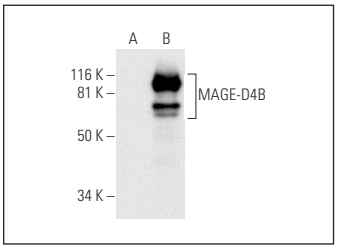
Molecular Weight of MAGE-D4/MAGE-D4B: 82 kDa.

Positive Controls: MAGE-D4B (h): 293T Lysate: sc-369074, SH-SY5Y cell lysate: sc-3812 or human lateral ventricle tissue extract.

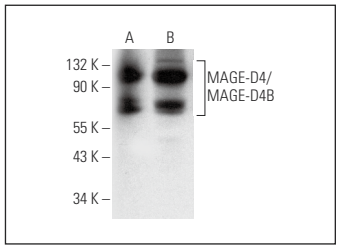
RECOMMENDED SUPPORT REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



MAGE-D4/MAGE-D4B (E-7): sc-393203. Western blot analysis of MAGE-D4B expression in non-transfected: sc-117752 (**A**) and human MAGE-D4B transfected: sc-369074 (**B**) 293T whole cell lysates.



MAGE-D4/MAGE-D4B (E-7): sc-393203. Western blot analysis of MAGE-D4/MAGE-D4B expression in human lateral ventricle tissue extract (**A**) and SH-SY5Y whole cell lysate (**B**).

SELECT PRODUCT CITATIONS

1. Yan, J., et al. 2018. Prognostic and clinicopathological value of melanoma-associated antigen D4 in patients with glioma. Oncol. Lett. 15: 4151-4160.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

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