

MAGE-A (6C1): sc-20034

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.

SOURCE

MAGE-A (6C1) is a mouse monoclonal antibody raised against a recombinant protein corresponding to full length MAGE-A of human origin.

PRODUCT

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

MAGE-A (6C1) is available conjugated to agarose (sc-20034 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-20034 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-20034 PE), fluorescein (sc-20034 FITC), Alexa Fluor[®] 488 (sc-20034 AF488), Alexa Fluor[®] 546 (sc-20034 AF546), Alexa Fluor[®] 594 (sc-20034 AF594) or Alexa Fluor[®] 647 (sc-20034 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-20034 AF680) or Alexa Fluor[®] 790 (sc-20034 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor[®] is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

MAGE-A (6C1) is recommended for detection of MAGE-A1, MAGE-A2, MAGE-A3, MAGE-A4, MAGE-A6, MAGE-A10 and MAGE-A12 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MAGE-A siRNA (h): sc-35843, MAGE-A siRNA (m): sc-35844, MAGE-A shRNA Plasmid (h): sc-35843-SH, MAGE-A shRNA Plasmid (m): sc-35844-SH, MAGE-A shRNA (h) Lentiviral Particles: sc-35843-V and MAGE-A shRNA (m) Lentiviral Particles: sc-35844-V.

Molecular Weight of MAGE-A1/MAGE-A2/MAGE-A3: 45-50 kDa.

Molecular Weight of MAGE-A4/MAGE-A6/MAGE-A12: 45-50 kDa.

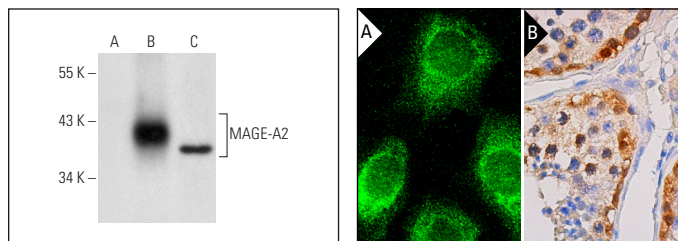
Molecular Weight of MAGE-A10: 41 kDa.

Positive Controls: MAGE-A2 (h5): 293T Lysate: sc-369093, A-375 cell lysate: sc-3811 or human liver extract: sc-363766.

STORAGE

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

DATA



MAGE-A (6C1): sc-20034. Western blot analysis of MAGE-A2 expression in non-transfected: sc-117752 (A) and human MAGE-A2 transfected: sc-369093 (B) 293T whole cell lysates and human liver tissue extract (C).

MAGE-A (6C1): sc-20034. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). MAGE-A (6C1) HRP: sc-20034 HRP. Direct immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic and nuclear staining of subset of cells in seminiferous ducts (B).

SELECT PRODUCT CITATIONS

- Cronwright, G., et al. 2005. Cancer/testis antigen expression in human mesenchymal stem cells: down-regulation of SSX impairs cell migration and matrix metalloproteinase 2 expression. *Cancer Res.* 65: 2207-2215.
- Maheswaran, E., et al. 2015. Lack of ADAM2, CALR3 and SAGE1 cancer/testis antigen expression in lung and breast cancer. *PLoS ONE* 10: e0134967.
- Wang, H., et al. 2016. MAGE-A is frequently expressed in triple negative breast cancer and associated with epithelial-mesenchymal transition. *Neoplasia* 63: 44-56.
- Lian, Y., et al. 2017. MAGE-A family is involved in gastric cancer progression and indicates poor prognosis of gastric cancer patients. *Pathol. Res. Pract.* 213: 943-948.
- Duperret, E.K., et al. 2018. A designer cross-reactive DNA immunotherapeutic vaccine that targets multiple MAGE-A family members simultaneously for cancer therapy. *Clin. Cancer Res.* 24: 6015-6027.
- Yang, G., et al. 2019. miR-34a regulates the chemosensitivity of retinoblastoma cells via modulation of MAGE-A/p53 signaling. *Int. J. Oncol.* 54: 177-187.
- Mei, A.H., et al. 2020. MAGE-A inhibit apoptosis and promote proliferation in multiple myeloma through regulation of BIM and p21^{Cip1}. *Oncotarget* 11: 727-739.
- Wormser, O., et al. 2021. Absence of SCAPER causes male infertility in humans and *Drosophila* by modulating microtubule dynamics during meiosis. *J. Med. Genet.* 58: 254-263.

RESEARCH USE

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