SANTA CRUZ BIOTECHNOLOGY, INC.

MAGE-D2 (FW.6): sc-130443

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 that are expressed in tumors of different histologic types and in normal testis and placenta. MAGE-D2 (melanoma-associated antigen D2), also known as BCG1 (breast cancer-associated gene 1), 11B6, HCA10 or JCL-1, is a 606 amino acid protein that contains one MAGE domain. Expressed throughout the body, MAGE-D2 is thought to function as a negative regulator of p53 (a potent tumor suppressor), possibly contributing to tumor formation and metastasis. Multiple isoforms of MAGE-D2 exist due to alternative splicing events.

REFERENCES

1. Lucas, S., Brasseur, F. and Boon, T. 1999. A new MAGE gene with ubiquitous expression does not code for known MAGE antigens recognized by T cells. Cancer Res. 59: 4100-4103.
2. Langnaese, K., Kloos, D.U., Wehnert, M., Seidel, B. and Wieacker, P. 2001. Expression pattern and further characterization of human MAGE-D2 and identification of rodent orthologues. Cytogenet. Cell Genet. 94: 233-240.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 300470. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Harper, R., Xu, C., Di, P., Chen, Y., Privalsky, M. and Wu, R. 2004. Identification of a novel MAGE-D2 antisense RNA transcript in human tissues. Biochem. Biophys. Res. Commun. 324: 199-204.
5. Bertrand, M., Huijbers, I., Chomez, P. and De Backer, O. 2004. Comparative expression analysis of the MAGED genes during embryogenesis and brain development. Dev. Dyn. 230: 325-334.
6. Kidd, M., Modlin, I.M., Mane, S.M., Camp, R.L., Eick, G. and Latich, I. 2006. The role of genetic markers—NAP1L1, MAGE-D2, and MTA1—in defining small-intestinal carcinoid neoplasia. Ann. Surg. Oncol. 13: 253-262.
7. Papageorgio, C., Brachmann, R., Zeng, J., Culverhouse, R., Zhang, W. and McLeod, H. 2007. MAGE-D2: a novel p53-dissociator. Int. J. Oncol. 31: 1205-1211.

CHROMOSOMAL LOCATION

Genetic locus: MAGED2 (human) mapping to Xp11.21.

SOURCE

MAGE-D2 (FW.6) is a mouse monoclonal antibody raised against recombinant MAGE-D2 of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

MAGE-D2 (FW.6) is recommended for detection of MAGE-D2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for MAGE-D2 siRNA (h): sc-62581, MAGE-D2 shRNA Plasmid (h): sc-62581-SH and MAGE-D2 shRNA (h) Lentiviral Particles: sc-62581-V.

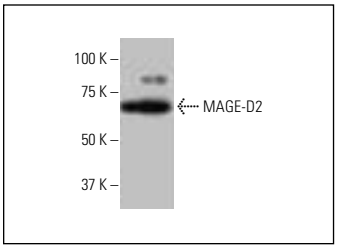
Molecular Weight of MAGE-D2: 65 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206 or HeLa whole cell lysate: sc-2200.

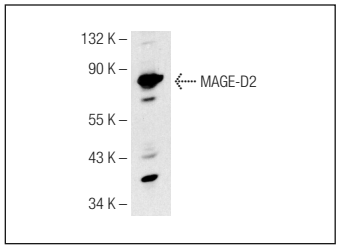
RECOMMENDED SUPPORT REAGENTS

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).

DATA



MAGE-D2 (FW.6): sc-130443. Western blot analysis of MAGE-D2 expression in MCF7 whole cell lysate.



MAGE-D2 (FW.6): sc-130443. Western blot analysis of MAGE-D2 expression in HeLa whole cell lysate.

SELECT PRODUCT CITATIONS

1. Yan, J., Li, S., Lenahan, C., Chen, H., Wen, J., Huang, Q., Jiang, Q., Guo, F., Deng, T. and Mo, L. 2022. Expression and prognostic value of melanoma-associated antigen D2 in gliomas. Brain Sci. 12: 986.
2. Thakur, C., Qiu, Y., Zhang, Q., Carruthers, N.J., Yu, M., Bi, Z., Fu, Y., Wadgaonkar, P., Almutairy, B., Seno, A., Stemmer, P.M. and Chen, F. 2022. Deletion of mdig enhances H3K36me3 and metastatic potential of the triple negative breast cancer cells. iScience 25: 105057.

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.