SANTA CRUZ BIOTECHNOLOGY, INC.

MAGE-A12 (N-17): sc-130163

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 and in normal testes and placenta. MAGE-A12 (melanoma-associated antigen 12), also known as MAGE12 or CT1.12 (cancer/testis antigen 1.12), is a 314 amino acid protein that contains one MAGE domain and is thought to play a role in tumor progression. Like other members of the MAGE family, MAGE-A12 is expressed in head and neck squamous cell carcinoma, melanoma, breast cancer and lung cancer, suggesting that MAGE-A12 plays an important role in carcinogenesis.

REFERENCES

1. De Plaen, E., et al. 1994. Structure, chromosomal localization, and expression of 12 genes of the MAGE family. Immunogenetics 40: 360-369.
2. Rogner, U.C., et al. 1995. The melanoma antigen gene (MAGE) family is clustered in the chromosomal band Xq28. Genomics 29: 725-731.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 300177. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Taylor, M., et al. 2007. Breast cancer is a promising target for vaccination using cancer-testis antigens known to elicit immune responses. Breast Cancer Res. 9: R46.
5. Wischnewski, F., et al. 2007. Methyl-CpG binding domain proteins and their involvement in the regulation of the MAGE-A1, MAGE-A2, MAGE-A3, and MAGE-A12 gene promoters. Mol. Cancer Res. 5: 749-759.
6. Ries, J., et al. 2008. Expression of melanoma-associated antigens in oral squamous cell carcinoma. J. Oral Pathol. Med. 37: 88-93.
7. Andrade, V.C., et al. 2008. Prognostic impact of cancer/testis antigen expression in advanced stage multiple myeloma patients. Cancer Immun. 8: 2.

CHROMOSOMAL LOCATION

Genetic locus: MAGEA12 (human) mapping to Xq28.

SOURCE

MAGE-A12 (N-17) is a purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of MAGE-A12 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

MAGE-A12 (N-17) is recommended for detection of MAGE-A12 of human origin by 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-A12 siRNA (h): sc-108017, MAGE-A12 shRNA Plasmid (h): sc-108017-SH and MAGE-A12 shRNA (h) Lentiviral Particles: sc-108017-V.

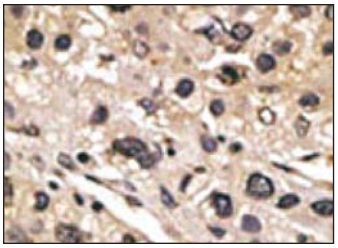
Molecular Weight of MAGE-A12: 35 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

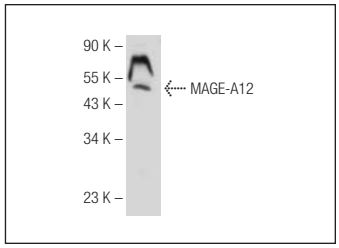
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 2) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



MAGE-A12 (N-17): sc-130163. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cancer tissue showing cytoplasmic staining.



MAGE-A12 (N-17): sc-130163. Western blot analysis of MAGE-A12 expression in Jurkat whole cell lysate.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.