SANTA CRUZ BIOTECHNOLOGY, INC.

Melan-A (M2-7C10): sc-53536

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Melanoma-associated antigens recognized by cytotoxic T lymphocytes (CTL) have been grouped into three categories: melanocyte differentiation antigens, cancer/testis-specific antigens and mutated or aberrantly expressed antigens. Many of these antigens consist of peptides that are presented to T cells by HLA molecules; they represent potential targets for cancer immunotherapy. Melan-A (also designated MART-1) is a melanocyte differentiation antigen that is specific to melanomas, melanocyte cell lines and retina. Melan-A peptide is recognized by most HLA-A2-restricted tumor-specific tumor-infiltrating lymphocytes in patients with melanoma. Antimelanoma cytotoxic T lymphocytes can be generated with a Melan-A peptide, implicating Melan-A as a potential candidate for antigen-specific immunotherapy in melanoma patients.

REFERENCES

1. Chen, Y.T., et al. 1996. Serological analysis of Melan-A (MART-1), a melanocyte-specific protein homogeneously expressed in human melanomas. Proc. Natl. Acad. Sci. USA 93: 5915-5919.
2. Van den Eynde, B.J. and Boon, T. 1997. Tumor antigens recognized by T lymphocytes. Int. J. Clin. Lab. Res. 27: 81-86.
3. Kawakami, Y., et al. 1997. Production of recombinant MART-1 proteins and specific antiMART-1 polyclonal and monoclonal antibodies: use in the characterization of the human melanoma antigen MART-1. J. Immunol. Methods 202: 13-25.

CHROMOSOMAL LOCATION

Genetic locus: MLANA (human) mapping to 9p24.1.

SOURCE

Melan-A (M2-7C10) is a mouse monoclonal antibody raised against recombinant Melan-A 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.

APPLICATIONS

Melan-A (M2-7C10) is recommended for detection of Melan-A of 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) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Melan-A siRNA (h): sc-35920, Melan-A shRNA Plasmid (h): sc-35920-SH and Melan-A shRNA (h) Lentiviral Particles: sc-35920-V.

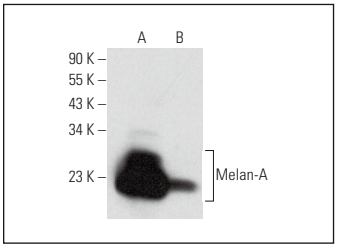
Molecular Weight of acylated Melan-A: 20-24 kDa.

Positive Controls: C32 whole cell lysate: sc-2205, SK-MEL-24 whole cell lysate: sc-364259 or SK-MEL-28 cell lysate: sc-2236.

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Melan-A (M2-7C10): sc-53536. Western blot analysis of Melan-A expression in SK-MEL-28 (**A**) and C32 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Mazzarella, T., et al. 2011. *Ex vivo* enrichment of circulating anti-tumor T cells from both cutaneous and ocular melanoma patients: clinical implications for adoptive cell transfer therapy. Cancer Immunol. Immunother. 61: 1169-1182.
2. Simbulan-Rosenthal, C.M., et al. 2019. CD133 is associated with increased melanoma cell survival after multikinase inhibition. J. Oncol. 2019: 6486173.
3. Najem, A., et al. 2021. Tyrosine-dependent phenotype switching occurs early in many primary melanoma cultures limiting their translational value. Front. Oncol. 11: 780654.

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.

CONJUGATES

See **Melan-A (A103): sc-20032** for Melan-A antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.