

# Melan-A (D-1): sc-271432

## 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

- 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.
- 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.
- Van den Eynde, B.J., et al. 1997. Tumor antigens recognized by T lymphocytes. *Int. J. Clin. Lab. Res.* 27: 81-86.
- Kirkin, A.F., et al. 1998. Melanoma-associated antigens recognized by cytotoxic T lymphocytes. *APMIS* 106: 665-679.
- Loftus, D.J., et al. 1998. Peptides derived from self-proteins as partial agonists and antagonists of human CD8<sup>+</sup> T-cell clones reactive to melanoma/melanocyte epitope MART1 (27-35). *Cancer Res.* 58: 2433-2439.

## CHROMOSOMAL LOCATION

Genetic locus: MLANA (human) mapping to 9p24.1; Mlana (mouse) mapping to 19 C1.

## SOURCE

Melan-A (D-1) is a mouse monoclonal antibody raised against amino acids 1-118 representing full length Melan-A of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of 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.

## RESEARCH USE

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

## APPLICATIONS

Melan-A (D-1) is recommended for detection of Melan-A of mouse, rat and 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).

Suitable for use as control antibody for Melan-A siRNA (h): sc-35920, Melan-A siRNA (m): sc-35921, Melan-A shRNA Plasmid (h): sc-35920-SH, Melan-A shRNA Plasmid (m): sc-35921-SH, Melan-A shRNA (h) Lentiviral Particles: sc-35920-V and Melan-A shRNA (m) Lentiviral Particles: sc-35921-V.

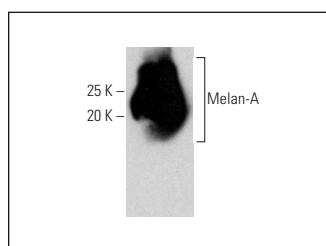
Molecular Weight of acylated Melan-A: 20-24 kDa.

Positive Controls: B16-F0 cell lysate: sc-2298, SK-MEL-28 cell lysate: sc-2236 or SK-MEL-24 whole cell lysate: sc-364259.

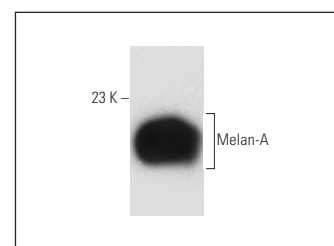
## RECOMMENDED SUPPORT REAGENTS

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



Melan-A (D-1): sc-271432. Western blot analysis of Melan-A expression in B16-F0 whole cell lysate.



Melan-A (D-1): sc-271432. Western blot analysis of Melan-A expression in SK-MEL-28 whole cell lysate.

## SELECT PRODUCT CITATIONS

- Liu, W., et al. 2016. Hepatic epithelioid angiomyolipoma is a rare and potentially severe but treatable tumor: a report of three cases and review of the literature. *Oncol. Lett.* 11: 3669-3675.



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.