SANTA CRUZ BIOTECHNOLOGY, INC.

Pmel17 (E-7): sc-377325

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Cytotoxic T lymphocytes (CTLs) recognize melanoma-associated antigens, which belong to three main groups. These groups include tumor-associated testis-specific antigens, melanocyte differentiation antigens and mutated or aberrantly expressed antigens, which are routinely used as markers to identify melanomas based on their binding to specific monoclonal antibodies. Gp100, also designated ME20-M, ME20-S and PMEL 17, is classified as a melanocyte differentiation antigen and is expressed at low levels in normal cell lines and tissues, but is upregulated in melanocytes. Gp100 is a highly glycosylated protein. It is also the product of proteolytic cleavage, which results in a secreted protein. Gp100 is recognized by several monoclonal antibodies, including NKI-beteb, HMB-50 and HMB-45, which are used to diagnose melanomas. Therefore, gp100 is considered a potential target for immunotherapy of malignant melanoma.

CHROMOSOMAL LOCATION

Genetic locus: PMEL (human) mapping to 12q13.2.

SOURCE

Pmel17 (E-7) is a mouse monoclonal antibody raised against amino acids 25-324 mapping within an N-terminal extracellular domain of Pmel17 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Pmel17 (E-7) is available conjugated to agarose (sc-377325 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-377325 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377325 PE), fluorescein (sc-377325 FITC), Alexa Fluor® 488 (sc-377325 AF488), Alexa Fluor® 546 (sc-377325 AF546), Alexa Fluor® 594 (sc-377325 AF594) or Alexa Fluor® 647 (sc-377325 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377325 AF680) or Alexa Fluor® 790 (sc-377325 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Pmel17 (E-7) is recommended for detection of Pmel17 of 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 Pmel17 siRNA (h): sc-40644, Pmel17 shRNA Plasmid (h): sc-40644-SH and Pmel17 shRNA (h) Lentiviral Particles: sc-40644-V.

Molecular Weight of Pmel17 precursor: 100 kDa.

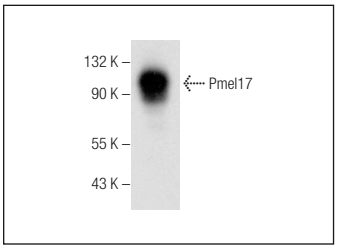
Molecular Weight of mature Pmel17: 76 kDa.

Positive Controls: SK-MEL-28 cell lysate: sc-2236.

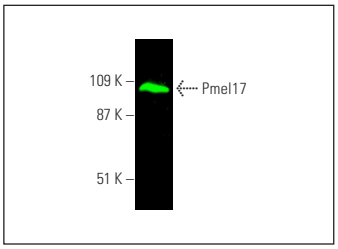
STORAGE

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

DATA



Pmel17 (E-7): sc-377325. Western blot analysis of Pmel17 expression in SK-MEL-28 whole cell lysate.



Pmel17 (E-7): sc-377325. Near-infrared western blot analysis of Pmel17 expression in SK-MEL-28 whole cell lysate. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.

SELECT PRODUCT CITATIONS

1. Hee, J.S., et al. 2017. Melanosomal formation of PMEL core amyloid is driven by aromatic residues. Sci. Rep. 7: 44064.
2. Ivanova, I.A., et al. 2019. Targeting FER kinase inhibits melanoma growth and metastasis. Cancers 11: 419.
3. Graham, M., et al. 2019. Repeat domain-associated O-glycans govern PMEL fibrillar sheet architecture. Sci. Rep. 9: 6101.
4. Tura, A., et al. 2020. Lower levels of adiponectin and its receptor AdipoR1 in the uveal melanomas with monosomy-3. Invest. Ophthalmol. Vis. Sci. 61: 12.
5. Adelmann, C.H., et al. 2020. MFSD12 mediates the import of cysteine into melanosomes and lysosomes. Nature 588: 699-704.
6. Rok, J., et al. 2021. Molecular and biochemical basis of minocycline-induced hyperpigmentation-the study on normal human melanocytes exposed to UVA and UVB radiation. Int. J. Mol. Sci. 22: 3755.
7. Allouche, J., et al. 2021. NNT mediates redox-dependent pigmentation via a UVB- and MITF-independent mechanism. Cell 184: 4268-4283.e20.
8. Matsumoto, A., et al. 2021. Phosphatidylserine-deficient small extracellular vesicle is a major somatic cell-derived sEV subpopulation in blood. iScience 24: 102839.
9. Hu, S.H., et al. 2022. sPmel17 secreted by ultraviolet B-exposed melanocytes alters the intercellular adhesion of keratinocytes. Oxid. Med. Cell. Longev. 2022: 1856830.
10. Vitiello, M., et al. 2023. A network of microRNAs and mRNAs involved in melanosome maturation and trafficking defines the lower response of pigmentable melanoma cells to targeted therapy. Cancers 15: 894.

RESEARCH USE

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