SANTA CRUZ BIOTECHNOLOGY, INC.

Pmel17 (C-2): sc-393094

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Cytotoxic T lymphocytes (CTL's) 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; Pmel (mouse) mapping to 10 D3.

SOURCE

Pmel17 (C-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 42-69 near the N-terminus of Pmel17 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-393094 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

Pmel17 (C-2) is recommended for detection of Pmel17 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 Pmel17 siRNA (h): sc-40644, Pmel17 siRNA (m): sc-40645, Pmel17 shRNA Plasmid (h): sc-40644-SH, Pmel17 shRNA Plasmid (m): sc-40645-SH, Pmel17 shRNA (h) Lentiviral Particles: sc-40644-V and Pmel17 shRNA (m) Lentiviral Particles: sc-40645-V.

Molecular Weight of Pmel17 precursor: 100 kDa.

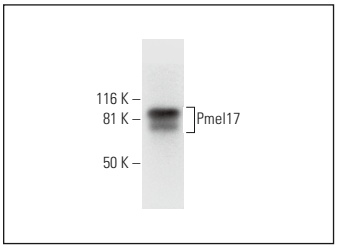
Molecular Weight of mature Pmel17: 76 kDa.

Positive Controls: 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.

DATA



Pmel17 (C-2): sc-393094. Western blot analysis of Pmel17 expression in SK-MEL-28 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Lv, J., et al. 2020. Isoliquiritigenin inhibits melanogenesis, melanocyte dendricity and melanosome transport by regulating ERK-mediated MITF degradation. Exp. Dermatol. 29: 149-157.
2. Lv, J., et al. 2020. Protoporphyrin IX stimulates melanogenesis, melanocyte dendricity, and melanosome transport through the cGMP/PKG pathway. Front. Pharmacol. 11: 569368.
3. Lv, J., et al. 2021. The inhibitory effect of curcumin derivative J147 on melanogenesis and melanosome transport by facilitating ERK-mediated MITF degradation. Front. Pharmacol. 12: 783730.
4. Militaru, I.V., et al. 2022. New panel of biomarkers to discriminate between amelanotic and melanotic metastatic melanoma. Front. Oncol. 12: 1061832.

RESEARCH USE

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

PROTOCOLS

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

CONJUGATES

See **Pmel17 (E-7): sc-377325** for Pmel17 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.