

Pmel17 (K-18): sc-15010

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 NK1-beteb, HMB-50 and HMB-45, which are used to diagnose melanomas. Therefore, gp100 is considered a potential target for immunotherapy of malignant melanoma.

REFERENCES

1. Kwon, B.S., et al. 1991. A melanocyte-specific gene, Pmel 17, maps near the silver coat color locus on mouse chromosome 10 and is in a syntenic region on human chromosome 12. *Proc. Natl. Acad. Sci. USA* 88: 9228-9232.
2. Maresh, G.A., et al. 1994. Differential processing and secretion of the melanoma-associated ME20 antigen. *Arch. Biochem. Biophys.* 311: 95-102.
3. Adema, G.J., et al. 1994. Molecular characterization of the melanocyte lineage-specific antigen gp100. *J. Biol. Chem.* 269: 20126-20133.

CHROMOSOMAL LOCATION

Genetic locus: SILV (human) mapping to 12q13.2; Si (mouse) mapping to 10 D3.

SOURCE

Pmel17 (K-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Pmel17 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-15010 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

PROTOCOLS

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

APPLICATIONS

Pmel17 (K-18) is recommended for detection of Pmel17 of mouse, rat and 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), 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).

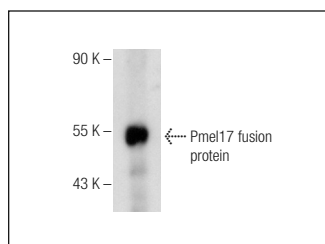
Pmel17 (K-18) is also recommended for detection of Pmel17 in additional species, including canine.

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.

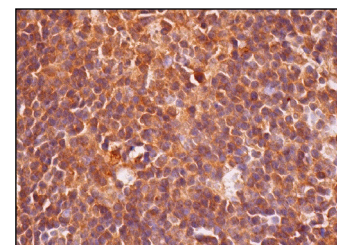
Molecular Weight of Pmel17 precursor: 100 kDa.

Molecular Weight of mature Pmel17: 76 kDa.

DATA



Pmel17 (K-18): sc-15010. Western blot analysis of human recombinant Pmel17 fusion protein.



Pmel17 (K-18): sc-15010. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing cytoplasmic staining of cells in germinal and non-germinal centers.

SELECT PRODUCT CITATIONS

1. Nakamura, K., et al. 2003. Down-regulation of melanin synthesis by a biphenyl derivative and its mechanism. *Pigment Cell Res.* 16: 494-500.
2. Lepage, S., et al. 2006. Melanosomal targeting sequences from gp100 are essential for MHC class II-restricted endogenous epitope presentation and mobilization to endosomal compartments. *Cancer Res.* 66: 2423-2432.
3. Saikali, S., et al. 2007. Expression of nine tumour antigens in a series of human glioblastoma multiforme: interest of EGFRvIII, IL-13Rα2, gp100 and TRP-2 for immunotherapy. *J. Neurooncol.* 81: 139-148.
4. Qian, X., et al. 2008. Pharmacologically enhanced expression of GPNMB increases the sensitivity of melanoma cells to the CR011-vcMMAE antibody-drug conjugate. *Mol. Oncol.* 2: 81-93.

MONOS
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Try **Pmel17 (E-7): sc-377325** or **Pmel17 (C-2): sc-393094**, our highly recommended monoclonal alternatives to Pmel17 (K-18). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **Pmel17 (E-7): sc-377325**.