

# Mel-CAM (H-62): sc-28667

## BACKGROUND

The tumorigenic and metastatic phenotype of melanoma cells correlates well with an increased expression of cell-cell and cell-matrix adhesion receptors. The human Mel-CAM gene maps to chromosome 11q23.3 and encodes a transmembrane glycoprotein, also designated MCAM, MUC 18 or CD146, that belongs to the immunoglobulin superfamily and functions as a Ca<sup>2+</sup>-independent cell adhesion molecule. The deduced human sequence of 603 amino acids consists of a signal peptide, five immunoglobulin-like domains, a transmembrane region and a short cytoplasmic tail. Mel-CAM expression is restricted to advanced primary and metastatic melanomas and to cell lines of the neuroectodermal lineage, but not normal melanocytes. Mel-CAM is found on 80% of advanced primary human melanomas and correlates well with development of metastatic disease. Mel-CAM activation initiates an outside-in signaling pathway that involves the protein tyrosine kinases Fyn, FAK and paxillin. Mel-CAM influences the dynamics of actin cytoskeleton rearrangement and is essential for the maintenance of thymic architecture and function.

## REFERENCES

1. Lehmann, J.M., et al. 1989. MUC 18, a marker of tumor progression in human melanoma, shows sequence similarity to the neural cell adhesion molecules of the immunoglobulin superfamily. *Proc. Natl. Acad. Sci. USA* 86: 9891-9895.
2. Kuzu, I., et al. 1993. Expression of adhesion molecules on the endothelium of normal tissue vessels and vascular tumors. *Lab. Invest.* 69: 322-328.
3. Sers, C., et al. 1993. Genomic organization of the melanoma-associated glycoprotein MUC 18: implications for the evolution of the immunoglobulin domains. *Proc. Natl. Acad. Sci. USA* 90: 8514-8518.
4. Vainio, O., et al. 1996. HEMCAM, an adhesion molecules expressed by c-Kit<sup>+</sup> hemopoietic progenitors. *J. Cell Biol.* 135: 1655-1668.

## CHROMOSOMAL LOCATION

Genetic locus: MCAM (human) mapping to 11q23.3; Mcam (mouse) mapping to 9 A5.1.

## SOURCE

Mel-CAM (H-62) is a rabbit polyclonal antibody raised against amino acids 585-646 mapping within a C-terminal cytoplasmic domain of Mel-CAM 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.

## 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

Mel-CAM (H-62) is recommended for detection of Mel-CAM 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

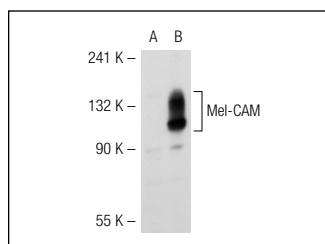
Mel-CAM (H-62) is also recommended for detection of Mel-CAM in additional species, including equine, canine and bovine.

Suitable for use as control antibody for Mel-CAM siRNA (h): sc-35918, Mel-CAM siRNA (m): sc-35919, Mel-CAM shRNA Plasmid (h): sc-35918-SH, Mel-CAM shRNA Plasmid (m): sc-35919-SH, Mel-CAM shRNA (h) Lentiviral Particles: sc-35918-V and Mel-CAM shRNA (m) Lentiviral Particles: sc-35919-V.

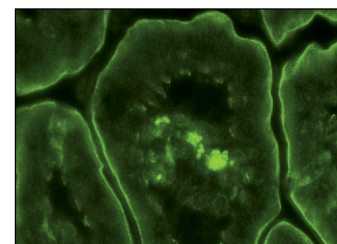
Molecular Weight of highly glycosylated Mel-CAM: 130 kDa.

Positive Controls: Mel-CAM (m): 293T Lysate: sc-121599, SK-MEL-24 cell lysate or HeLa whole cell lysate: sc-2200.

## DATA



Mel-CAM (H-62): sc-28667. Western blot analysis of Mel-CAM expression in non-transfected: sc-117752 (A) and mouse Mel-CAM transfected: sc-121599 (B) 293T whole cell lysates.



Mel-CAM (H-62): sc-28667. Immunofluorescence staining of normal mouse intestine frozen section showing membrane staining.

## SELECT PRODUCT CITATIONS

1. Visigalli, D., et al. 2010. Hind limb unloading of mice modulates gene expression at the protein and mRNA level in mesenchymal bone cells. *BMC Musculoskelet. Disord.* 11: 147.
2. Saglam, O., et al. 2015. IL-6 originated from breast cancer tissue- derived mesenchymal stromal cells may contribute to carcinogenesis. *Tumour Biol.* 36: 5667-5677

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **Mel-CAM (P1H12): sc-18837** or **Mel-CAM (A-9): sc-374556**, our highly recommended monoclonal alternatives to Mel-CAM (H-62). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **Mel-CAM (P1H12): sc-18837**.