Technical Data Sheet

Purified Mouse Anti- Human MCAM

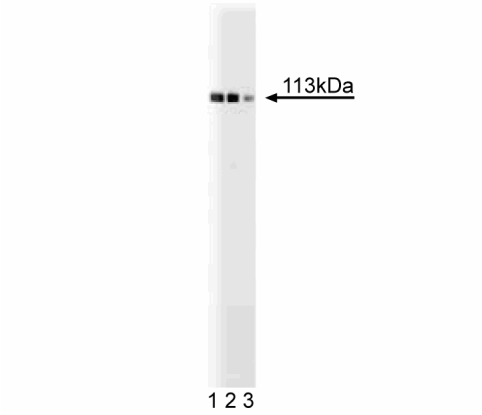
Product Information

Material Number:	**611208**
Size:	50 µg
Concentration:	250 µg/ml
Clone:	1/MCAM
Immunogen:	Human MCAM aa. 104-305
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human
Target MW:	113 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

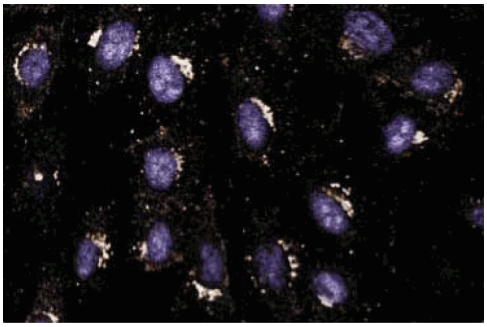
Description

Tumor metastasis is determined by the metastatic capacity of subpopulations of tumor cells. The presence of cell adhesion molecules (CAMs) is a property of tumor cells that is essential for metastasis. MCAM (MUC18 or **M**el-**CAM**) was identified on melanoma cells and is one of several CAMs that belong to the immunoglobulin superfamily. MCAM is an integral membrane glycoprotein that consists of five immunoglobulin-like domains, a transmembrane region, and a short cytoplasmic domain. The presence of several protein kinase recognition motifs in the cytoplasmic domain suggest a role for MCAM in signal transduction. MCAM is capable of both homotypic and heterotypic adhesion between cells, but its heterotypic ligand remains to be identified. It is sparsely expressed on benign melanocytic nevi and thin primary melanomas. However, MCAM expression increases with tumor thickness. It is expressed on 70-80% of advanced primary and metastatic tumors. Additionally, S-Endo-1 antigen (CD146), present on human endothelial cells, is identical to MCAM. Thus, MCAM may play an important role in the development of metastatic tumors and possibly represents a prime target for therapeutic treatment.

This antibody is routinely tested by western blot analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.



Western blot analysis of MCAM on a human endothelial cell lysate. *Lane 1: 1:1000, lane 2: 1:2000, lane 3: 1:4000 dilution of the anti- MCAM antibody.*



Immunofluorescent staining of human endothelial cells.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at -20° C.

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Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development

Suggested Companion Products

Catalog Number	Name	Size	Clone
611450	Human Endothelial Cell Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Igs	1.0 ml	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Anfosso F, Bardin N, Frances V, et al. Activation of human endothelial cells via S-endo-1 antigen (CD146) stimulates the tyrosine phosphorylation of focal adhesion kinase p125(FAK). *J Biol Chem.* 1998; 273(41):26852-26856.(Biology)

Jean D, Gershenwald JE, Huang S, et al. Loss of AP-2 results in up-regulation of MCAM/MUC18 and an increase in tumor growth and metastasis of human melanoma cells. *J Biol Chem.* 1998; 273(26):16501-16508.(Biology)

Lehmann JM, Riethmuller G, Johnson JP. MUC18, 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 U S A.* 1989; 86(24):9891-9895.(Biology)

Xie S, Luca M, Huang S, et al. Expression of MCAM/MUC18 by human melanoma cells leads to increased tumor growth and metastasis. *Cancer Res.* 1997; 57(11):2295-2303.(Biology)