Technical Data Sheet

BV510 Mouse Anti-Human CD146

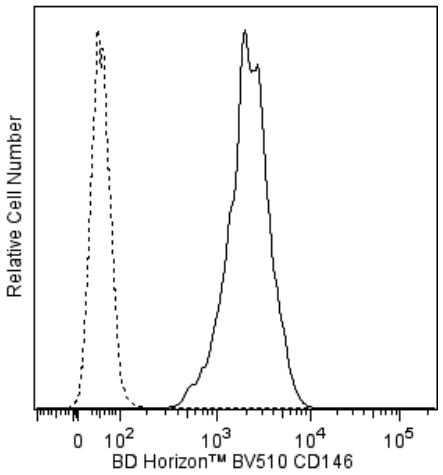
Product Information

Material Number:	**563255**
Alternate Name:	MCAM; MELCAM; MUC18; Gicerin; Melanoma cell adhesion molecule
Size:	50 tests
Vol. per Test:	5 µl
Clone:	P1H12
Immunogen:	Human Umbilical Vein Cells
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human
Workshop:	VIII
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The P1H12 monoclonal antibody specifically binds to CD146. CD146 is a 118 kDa transmembrane glycoprotein also known as MCAM, MUC18, or Mel-CAM. CD146 is a member of the immunoglobulin superfamily and is expressed by angioblasts and mesenchymal stems cells and is strongly expressed by blood vessel endothelium and smooth muscle. CD146 is also expressed by melanoma cells, intermediate trophoblasts and a subpopulation of activated T cells. The P1H12 monoclonal antibody has been reported to block endothelial cell adhesion that is observed very early in embryogenesis. It can be useful in the study of embryologic vasculogenesis. This antibody is suitable for immunohistochemical staining of acetone-fixed frozen tissue sections, immunoprecipitation and ELISA.

The antibody was conjugated to BD Horizon™ BV510 which is part of the BD Horizon™ Brilliant Violet™ family of dyes. With an Ex Max of 405-nm and Em Max at 510-nm, BD Horizon™ BV510 can be excited by the violet laser and detected in the BD Horizon™ V500 (525/50-nm) filter set. BD Horizon™ BV510 conjugates are useful for the detection of dim markers off the violet laser.



Flow cytometric analysis of CD146 expressed on HeLa cells. *HeLa cells (Human Cervical Epitheloid Carcinoma Cell Line; ATCC CCL-2) were stained with either BD Horizon™ BV510 Mouse Anti-Human CD146 antibody (Cat. No. 563255, solid line histogram) or a BD Horizon™ BV510 mIgG1, κ Isotype Control (Cat. No. 562946; dashed line histogram). Flow cytometric fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of viable cells. Flow cytometric analysis was performed using a BD LSRFortessa™ Cell Analyzer System.*

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with BD Horizon™ BV510 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV510 were removed.

Application Notes

Application

Flow cytometry	Routinely Tested

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Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 ml	(none)
562946	BV510 Mouse IgG1, k Isotype Control	50 µg	X40

Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1 × 10^6 cells in a 100-µl experimental sample (a test).
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. An isotype control should be used at the same concentration as the antibody of interest.
4. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
5. 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.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
7. Brilliant Violet™ 510 is a trademark of Sirigen.
8. All other brands are trademarks of their respective owners.

References

Elshal MF, Khan SS, Takahashi Y, Solomon MA, McCoy JP, Jr. CD146 (Mel-CAM), an adhesion marker of endothelial cells, is a novel marker of lymphocyte subset activation in normal peripheral blood. *Blood.* 2005; 106(8):2923-2924. (Clone-specific: Flow cytometry)

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Sers C, Kirsch K, Rothbächer U, Riethmüller G, Johnson JP. Genomic organization of the melanoma-associated glycoprotein MUC18: implications for the evolution of the immunoglobulin domains. *Proc Natl Acad Sci U S A.* 1993; 90(18):8514-8518. (Biology)

Shih IM. The role of CD146 (Mel-CAM) in biology and pathology. *J Pathol.* 1999; 189(1):4-11. (Biology)

Shih IM, Elder DE, Hsu MY, Herlyn M. Regulation of Mel-CAM/MUC18 expression on melanocytes of different stages of tumor progression by normal keratinocytes. *Am J Pathol.* 1994; 145(4):837-845. (Biology)

Solovey A, Lin Y, Browne P, Choong S, Wayner E, Hebbel R P. Circulating activated endothelial cells in sickle cell anemia. *N Engl J Med.* 1997; 337(22):1584-1590. (Immunogen: Cell separation, Fluorescence microscopy, Immunofluorescence)

Solovey AN, Gui L, Chang L, Enenstein J, Browne PV, Hebbel RP. Identification and functional assessment of endothelial P1H12. *J Lab Clin Med.* 2001; 138(5):322-331. (Clone-specific: Activation, Functional assay, Inhibition, Stimulation)

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