Technical Data Sheet

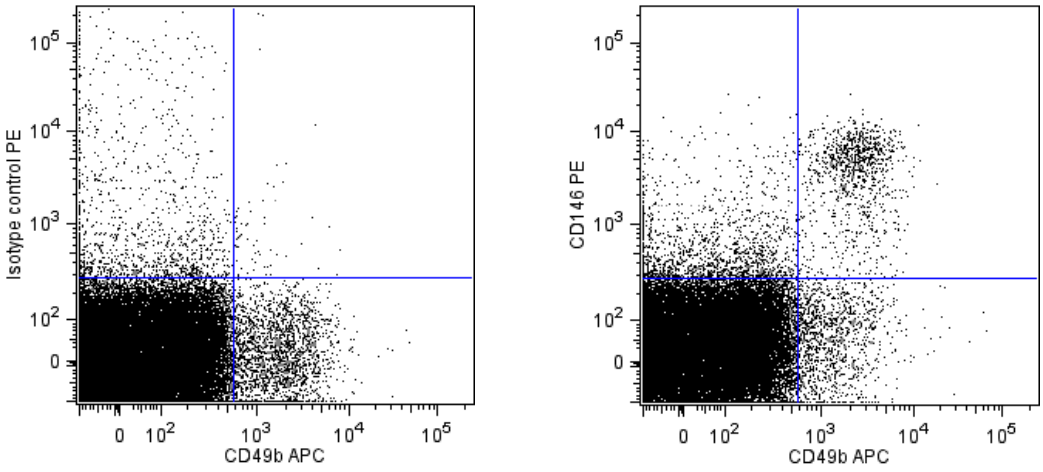
PE Rat anti-Mouse CD146

Product Information

Material Number:	**562196**
Alternate Name:	S-endo 1; S-endo; Muc18; Mcam; Gicerin
Size:	0.1 mg
Concentration:	0.2 mg/ml
Clone:	ME-9F1
Immunogen:	CBA/J Mouse lymph node Cell Line
Isotype:	Rat IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The ME-9F1 monoclonal antibody specifically binds to mouse CD146. The CD146 adhesion molecule is a type 1 transmembrane glycoprotein and member of the immunoglobulin superfamily. CD146 is expressed by blood vessel endothelial cells and may play roles in forming intercellular junctions between endothelial cells and influencing the transendothelial migration of other cell types. CD146 is also expressed by some melanoma cell lines, NK cells and neutrophils. CD146 is not detectable on mouse monocytes, dendritic cells, T cells, NKT cells, B cells and smooth muscle cells. Increased expression of CD146 is reportedly associated with NK cell maturation and may be used to characterize different functional NK cell subsets. Activated CD146-positive mouse NK cells reportedly are less cytotoxic and secrete less IFN-γ than their CD146-negative counterparts.



Multicolor flow cytometric analysis of CD146 expression on C57BL/6 splenocytes. *Spleen cells were stained with APC Rat Anti-Mouse CD49b antibody (Cat. No. 560628) and either PE Rat IgG2a, κ Isotype Control (Cat. No. 554689; Left Panel) or PE Rat Anti-Mouse CD146 antibody (Cat. No. 562196; Right Panel). Two-color flow cytometric dot plots showing the correlated expression patterns of CD49b versus CD146 (or Ig isotype control staining) were derived from gated events with the forward and side light-scatter characteristics of viable lymphocytes. Flow cytometry was performed using a BD LSR™ II Flow Cytometer 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 R-PE under optimum conditions, and unconjugated antibody and free PE were removed.

Application Notes

Application

Flow cytometry	Routinely Tested

BD Biosciences

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Suggested Companion Products

Catalog Number	Name	Size	Clone
554689	PE Rat IgG2a, κ Isotype Control	0.1 mg	R35-95
554656	Stain Buffer (FBS)	500 ml	(none)
560628	APC Rat Anti-Mouse CD49b	50 µg	DX5

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
3. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
4. 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.
5. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Alais S, Allioli N, Pujades C, et al. HEMCAM/CD146 downregulates cell surface expression of beta1 integrins. *J Cell Sci.* 2001; 114(Pt 10):1847-1859. (Biology)
Despoix N, Walzer T, Jouve N, et al. Mouse CD146/MCAM is a marker of natural killer cell maturation. *Eur J Immunol.* 2008; 38(10):2855-2864. (Biology)
Schrage A, Loddenkemper C, Erben U, et al. Murine CD146 is widely expressed on endothelial cells and is recognized by the monoclonal antibody ME-9F1. *Histochem Cell Biol.* 2008; 129(4):441-451. (Clone-specific: Flow cytometry, Immunofluorescence, Immunohistochemistry, Immunoprecipitation, Western blot)
Yang H, Wang S, Liu Z, et al. Isolation and characterization of mouse MUC18 cDNA gene, and correlation of MUC18 expression in mouse melanoma cell lines with metastatic ability. *Gene.* 2001; 265(1-2):133-145. (Biology)