

Technical Data Sheet

BUV737 Rat Anti-Mouse CD146

Product Information

Material Number:	741899
Size:	50 µg
Clone:	ME-9F1
Alternative Name:	S-endo 1; S-endo; Muc18; Mcam; Gicerin
Reactivity:	Mouse (Tested in Development)
Isotype:	Rat IgG2a, κ
Immunogen:	CBA/J Mouse lymph node Cell Line
Application:	Flow cytometry (Qualified)
Concentration:	0.2 mg/ml
Entrez Gene ID:	84004
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.
Regulatory Status:	RUO

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.

The antibody was conjugated to BD Horizon™ BUV737 which is part of the BD Horizon Brilliant™ Ultraviolet family of dyes. This dye is a tandem fluorochrome of BD Horizon BUV395 with an Ex Max of 348-nm and an acceptor dye with an Em Max at 737-nm. BD Horizon Brilliant BUV737 can be excited by the ultraviolet laser (355 nm) and detected with a 740/35 filter. Due to the excitation of the acceptor dye by other laser lines, there may be significant spillover into channels detecting Alexa Fluor® 700-like dyes (eg, 712/20-nm filter).

Due to spectral differences between labeled cells and beads, using BD™ CompBeads can result in incorrect spillover values when used with BD Horizon BUV737 reagents. Therefore, the use of BD CompBeads or BD CompBeads Plus to determine spillover values for these reagents is not recommended. Different BUV737 reagents (eg, CD4 vs. CD45) can have slightly different fluorescence spillover therefore, it may also be necessary to use clone specific compensation controls when using these reagents.

Preparation and Storage Section

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 BUV737 under optimal conditions that minimize unconjugated dye and antibody.

Recommended Assay Procedure

For optimal and reproducible results, BD Horizon Brilliant Stain Buffer should be used anytime two or more BD Horizon Brilliant dyes (including BD OptiBuild Brilliant reagents) are used in the same experiment. Fluorescent dye interactions may cause staining artifacts which may affect data interpretation. The BD Horizon Brilliant Stain Buffer was designed to minimize these interactions. More information can be found in the Technical Data Sheet of the BD Horizon Brilliant Stain Buffer (Cat. No. 563794).

Suggested Companion Products

Catalog Number	Name	Size	Clone
612760	BUV737 Rat IgG2a, κ Isotype Control R35-95 RUO	50 µg	
554656	Stain Buffer (FBS) RUO	500 mL	
554657	Stain Buffer (BSA) RUO	500 mL	

563794	Brilliant Stain Buffer RUO	100 Tests
555899	Lysing Buffer RUO	100 mL
553141	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™) 2.4G2 RUO	0.1 mg

Product Notices

1. This antibody was developed for use in flow cytometry.
2. The production process underwent stringent testing and validation to assure that it generates a high-quality conjugate with consistent performance and specific binding activity. However, verification testing has not been performed on all conjugate lots.
3. Researchers should determine the optimal concentration of this reagent for their individual applications.
4. An isotype control should be used at the same concentration as the antibody of interest.
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 wwwbdbiosciences.com/colors.
7. Please refer to wwwbdbiosciences.com/us/s/resources for technical protocols.
8. BD Horizon Brilliant Stain Buffer is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,575,303; 8,354,239.
9. BD Horizon Brilliant Ultraviolet 737 is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,227,187; 8,575,303; 8,354,239.
10. Alexa Fluor® is a registered trademark of Life Technologies Corporation.

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: Flow cytometry).
- 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: Flow cytometry).
- 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).
- 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: Flow cytometry).

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