

## Technical Data Sheet

## Purified NA/LE Rat Anti-Mouse CD49d

## Product Information

<b>Material Number:</b>	553313
<b>Alternate Name:</b>	Integrin $\alpha 4$ chain
<b>Size:</b>	0.5 mg
<b>Concentration:</b>	1.0 mg/ml
<b>Clone:</b>	9C10(MFR4.B)
<b>Immunogen:</b>	Mouse (C57BL/6xA/J)F[1] Fetal Liver Mast MC/9
<b>Isotype:</b>	Rat (LEW) IgG2a, $\kappa$
<b>Reactivity:</b>	QC Testing: Mouse
<b>Storage Buffer:</b>	No azide/low endotoxin: Aqueous buffered solution containing no preservative, 0.2 $\mu$ m sterile filtered. Endotoxin level is $\leq 0.01$ EU/ $\mu$ g ( $\leq 0.001$ ng/ $\mu$ g) of protein as determined by the LAL assay.

## Description

The 9C10 (MFR4.B) antibody reacts with the integrin  $\alpha 4$  chain (CD49d), which is expressed as a heterodimer with either of two  $\beta$  chains,  $\beta 1$  or  $\beta 7$ . The  $\alpha 4\beta 1$  integrin (VLA-4, CD49d/CD29) is expressed on most peripheral lymphocytes, thymocytes, and monocytes; while the  $\alpha 4\beta 7$  integrin (LPAM-1) is expressed on peripheral lymphocytes, but on only a small subset of thymocytes. These integrins mediate a variety of cell-cell and cell-matrix interactions, recognizing the ligands VCAM-1 (CD106) and fibronectin. Integrin  $\alpha 4\beta 7$  also preferentially binds to the mucosal vascular addressin, MAdCAM-1. Although the 9C10 (MFR4.B) antibody alone has been reported to have little function-blocking activity, it can augment the inhibitory effects of mAb R1-2 (Cat. No. 553153), resulting in almost complete inhibition of VLA-4 binding to VCAM-1.

## Preparation and Storage

Store undiluted at 4°C.

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

This preparation contains no preservatives, thus it should be handled under aseptic conditions.

## Application Notes

## Application

Flow cytometry	Routinely Tested
Blocking	Reported
Immunohistochemistry-frozen	Reported

## Suggested Companion Products

Catalog Number	Name	Size	Clone
553153	Purified NA/LE Rat Anti-Mouse CD49d	0.5 mg	R1-2
553926	Purified NA/LE Rat IgG2a $\kappa$ Isotype Control	0.5 mg	R35-95
554016	FITC Goat Anti-Rat Ig	0.5 mg	Polyclonal

## 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](http://www.bdbiosciences.com/pharmingen/protocols) for technical protocols.

## References

Halvorson MJ, Coligan JE. Enhancement of VLA integrin receptor function on thymocytes by cAMP is dependent on the maturation stage of the thymocytes. *J Immunol.* 1995; 155(10):4567-4574. (Clone-specific: Blocking)

Kinashi T, Springer TA. Adhesion molecules in hematopoietic cells. *Blood Cells.* 1994; 20(1):25-44. (Immunogen: Blocking)

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