Technical Data Sheet

Purified Rat Anti-Mouse CD49d

Product Information

Material Number:	**553314**
Alternate Name:	Integrin α4 chain
Size:	0.5 mg
Concentration:	0.5 mg/ml
Clone:	9C10(MFR4.B)
Immunogen:	Mouse (C57BL/6xA/J)F[1] Fetal Liver Mast MC/9
Isotype:	Rat (LEW) IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The 9C10 (MFR4.B) antibody reacts with the integrin α4 chain (CD49d), which is expressed as a heterodimer with either of two β chains, β1 or β7. The α4β1 integrin (VLA-4, CD49d/CD29) is expressed on most peripheral lymphocytes, thymocytes, and monocytes; while the α4β7 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 α4β7 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.

Application Notes

Application

Flow cytometry	Routinely Tested
Immunohistochemistry-frozen	Tested During Development

Suggested Companion Products

Catalog Number	Name	Size	Clone
553153	Purified NA/LE Rat Anti-Mouse CD49d	0.5 mg	R1-2
553927	Purified Rat IgG2a, κ 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. An isotype control should be used at the same concentration as the antibody of interest.
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. Please refer to 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. (Biology: Blocking, Functional assay)

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

Springer TA. Traffic signals for lymphocyte recirculation and leukocyte emigration: the multistep paradigm. *Cell.* 1994; 76(2):301-314. (Biology)

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