

Technical Data Sheet

FITC Mouse Anti-Rat CD49d

Product Information

Material Number:	557457
Alternate Name:	Integrin $\alpha 4$ chain
Size:	0.1 mg
Concentration:	0.5 mg/ml
Clone:	MR α 4-1
Immunogen:	RBL-2H3 rat basophilic leukemia cell line
Isotype:	Mouse (BALB/c) IgG2a, κ
Reactivity:	QC Testing: Rat
Storage Buffer:	Aqueous buffered solution containing $\leq 0.09\%$ sodium azide.

Description

The MR α 4-1 antibody reacts with the integrin $\alpha 4$ chain, which is expressed as a heterodimer with either of two β chains, $\beta 1$ or $\beta 7$. The $\alpha 4\beta 1$ integrin (VLA-4, CD49d/CD29) is expressed on peripheral T and B lymphocytes, thymocytes, and monocytes; while the $\alpha 4\beta 7$ integrin (LPAM-1) is expressed on peripheral lymphocytes. These integrins mediate a variety of cell-cell and cell-matrix interactions, recognizing the ligands CD106 (VCAM-1), MAdCAM-1, and fibronectin. It has been reported that soluble mAb MR α 4-1 partially inhibits *in vitro* binding of VCAM-1 and mast cells to fibronectin and inhibits the enhanced degranulation of IgE-sensitized RBL-2H3 basophilic leukemia cell line induced on fibronectin-coated plates. Furthermore, plate-bound MR α 4-1 antibody enhances the degranulation of IgE-sensitized RBL-2H3 cells; and subcutaneous injection of MR α 4-1 mAb, along with anti-CD49e and anti-CD61 antibodies, inhibits experimentally induced passive cutaneous anaphylaxis.

Preparation and Storage

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

The antibody was conjugated with FITC under optimum conditions, and unreacted FITC was removed.

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

Application Notes

Application

Flow cytometry	Routinely Tested
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Suggested Companion Products

Catalog Number	Name	Size	Clone
553456	FITC Mouse IgG2a, κ Isotype Control	0.25 mg	G155-178

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 for technical protocols.
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.

References

Springer TA. Traffic signals for lymphocyte recirculation and leukocyte emigration: the multistep paradigm. *Cell*. 1994; 76(2):301-314.(Biology)
 Yasuda M, Hasunuma Y, Adachi H, et al. Expression and function of fibronectin binding integrins on rat mast cells. *Int Immunol*. 1995; 7(2):251-258.(Immunogen)

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