

Technical Data Sheet

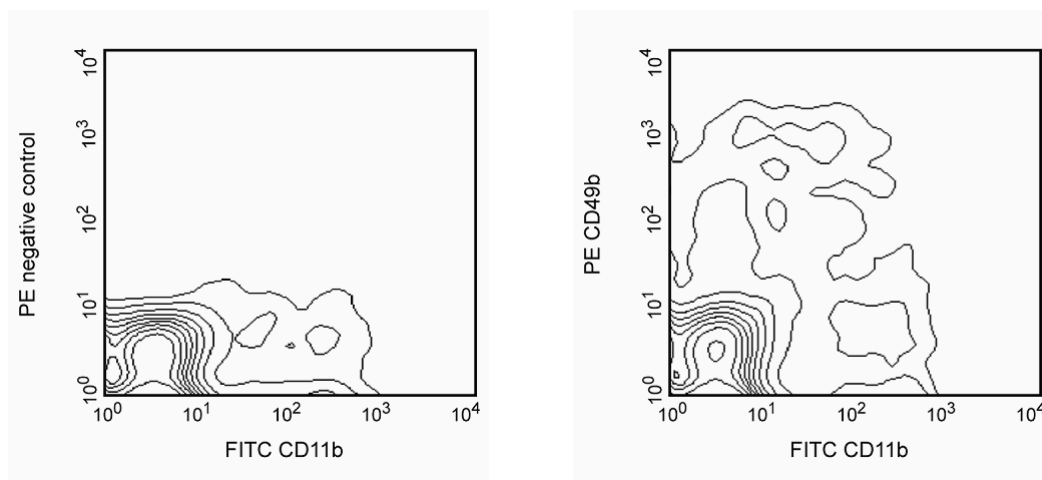
PE Hamster Anti-Mouse CD49b

Product Information

Material Number:	558759
Alternate Name:	Integrin $\alpha 2$ chain
Size:	0.1 mg
Concentration:	0.2 mg/ml
Clone:	HM $\alpha 2$
Immunogen:	Mouse colon carcinoma cell line Colon26
Isotype:	Armenian Hamster IgG1, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing $\leq 0.09\%$ sodium azide.

Description

The HM $\alpha 2$ antibody reacts with integrin $\alpha 2$ chain (CD49b), the 150-kDa transmembrane glycoprotein that non-covalently associates with the integrin $\beta 1$ subunit (CD29) to form the integrin $\alpha 2\beta 1$ complex known as VLA-2. VLA-2, a receptor for collagen and laminin, is expressed on some splenic CD4+ T lymphocytes and NK-T cells, intestinal intraepithelial and lamina propria lymphocytes, splenic NK cells, epithelial cells, and platelets; but it is not on thymocytes or Peyer's-patch or lymphnode lymphocytes. The expression of VLA-2 is upregulated on lymphocytes in response to mitogens. The HM $\alpha 2$ antibody has been reported to partially block the interaction of T-cell blasts, but not NK cells, with collagen. Purified HM $\alpha 2$ mAb blocks the staining of splenic NK cells by the anti-CD49b/Pan-NK Cells mAb DX5 (Cat. No. 553858, for the PE conjugate). Therefore, mAb HM $\alpha 2$ may be used like the DX5 mAb for identification of NK cells.



Two-color analysis of CD49b expression on spleen leukocytes. BALB/c splenocytes were simultaneously stained with PE-conjugated mAb HM $\alpha 2$ mAb (right panel) and FITC-conjugated mAb M1/70 (anti-mouse CD11b, Cat. No. 557396/553310, both panels). Flow cytometry was performed on a BD FACScan™ Flow Cytometry System.

Preparation and Storage

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.

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

Application Notes

Application

Flow cytometry

Routinely Tested

BD Biosciences

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Suggested Companion Products

<u>Catalog Number</u>	<u>Name</u>	<u>Size</u>	<u>Clone</u>
557396	FITC Rat Anti-Mouse CD11b	0.1 mg	M1/70
553972	PE Hamster IgG1 κ Isotype Control	0.1 mg	A19-3

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharminggen/protocols for technical protocols.
3. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/pharminggen/colors.
4. Although hamster immunoglobulin isotypes have not been well defined, BD Biosciences Pharmingen has grouped Armenian and Syrian hamster IgG monoclonal antibodies according to their reactivity with a panel of mouse anti-hamster IgG mAbs. A table of the hamster IgG groups, Reactivity of Mouse Anti-Hamster Ig mAbs, may be viewed at http://www.bdbiosciences.com/pharminggen/hamster_chart_11x17.pdf.
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.

References

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- Miyake S, Sakurai T, Okumura K, Yagita H. Identification of collagen and laminin receptor integrins on murine T lymphocytes. *Eur J Immunol.* 1994; 24(9):2000-2005.(Immunogen)
- Noto K, Kato K, Okumura K, Yagita H. Identification and functional characterization of mouse CD29 with a mAb. *Int Immunol.* 1995; 7(5):835-842.(Biology)
- Tanaka T, Ohtsuka Y, Yagita H, Shiratori Y, Omata M, Okumura K. Involvement of alpha 1 and alpha 4 integrins in gut mucosal injury of graft-versus-host disease. *Int Immunol.* 1995; 7(8):1183-1189.(Biology)