Technical Data Sheet

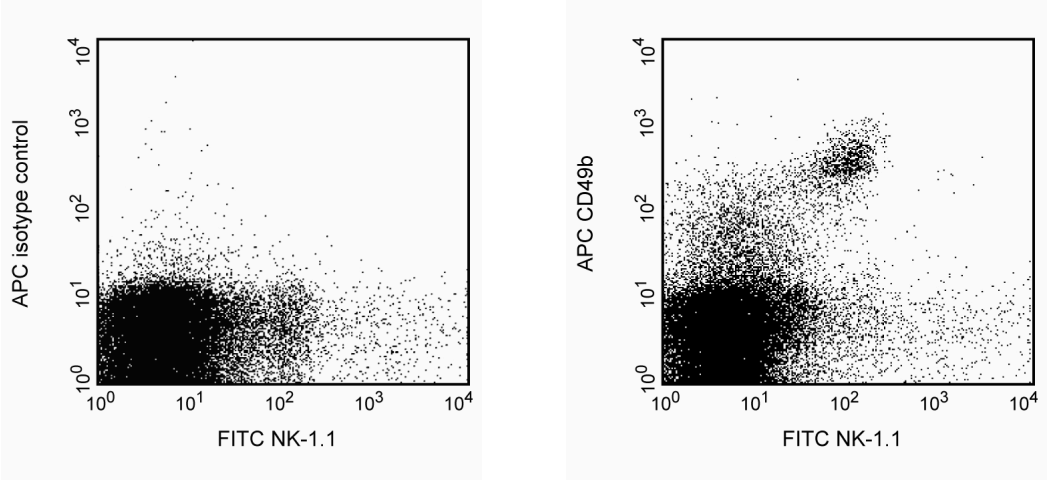
APC Hamster Anti-Mouse CD49b

Product Information

Material Number:	**558295**
Alternate Name:	Integrin α2 chain
Size:	0.1 mg
Concentration:	0.2 mg/ml
Clone:	HMα2
Immunogen:	Mouse colon carcinoma cell line Colon26
Isotype:	Armenian Hamster IgG1, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The HMα2 antibody reacts with integrin α2 chain (CD49b), the 150-kDa transmembrane glycoprotein that non-covalently associates with the integrin β1 subunit (CD29) to form the integrin α2β1 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 HMα2 antibody has been reported to partially block the interaction of T-cell blasts, but not NK cells, with collagen. Purified HMα2 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 HMα2 may be used like the DX5 mAb for identification of NK cells.



Two-color analysis of CD49b expression on splenic NK cells. *C57BL/6 splenocytes were simultaneously stained with FITC-conjugated mAb PK136 (anti-mouse NK-1.1, Cat. No. 553164, both panels) and either APC-conjugated hamster IgG1, κ isotype control mAb A19-3 (Cat. No. 553974, left panel) or APC-conjugated HMα2 mAb (right panel). Flow cytometry was performed on a BD FACSCalibur™ flow cytometry system.*

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
The antibody was conjugated to APC under optimum conditions, and unconjugated antibody and free APC were removed.
Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

Application Notes

Application

Flow cytometry	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
553974	APC Hamster IgG1, κ Isotype Control	0.1 mg	A19-3

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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. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
4. 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.
5. This APC-conjugated reagent can be used in any flow cytometer equipped with a dye, HeNe, or red diode laser.
6. 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/documents/hamster_chart_11x17.pdf.

References

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Chen H, Paul WE. A population of CD62Llow Nk1.1- CD4+ T cells that resembles NK1.1+ CD4+ T cells. *Eur J Immunol.* 1998; 28(10):3172-3182. (Biology)

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)