Technical Data Sheet

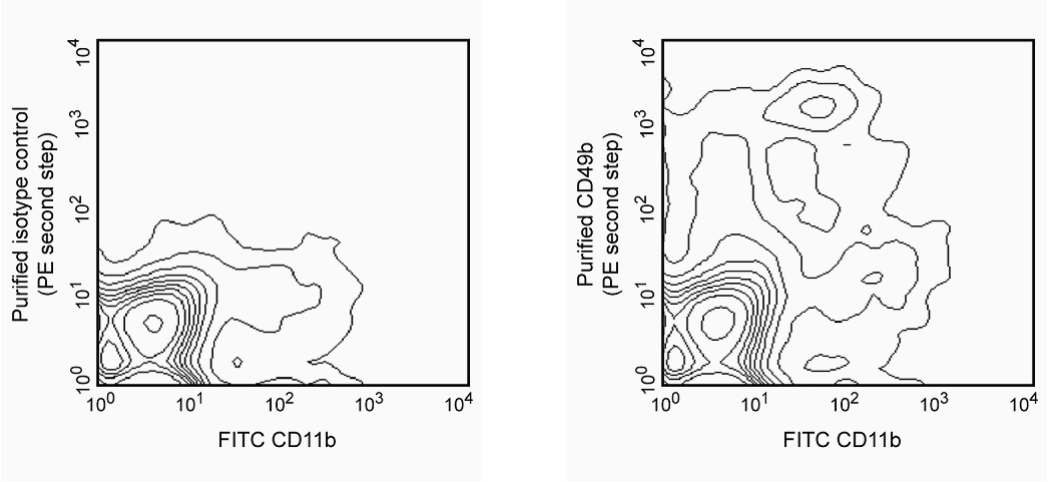
Purified Hamster Anti-Mouse CD49b

Product Information

Material Number:	**553819**
Alternate Name:	Integrin α2 chain
Size:	0.5 mg
Concentration:	0.5 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 spleen leukocytes. *C57BL/6 splenocytes were simultaneously stained with FITC-conjugated mAb M1/70 (anti-mouse CD11b, Cat. No. 557396/553310, both panels) and either purified hamster IgG1, κ isotype control mAb A19-3 (Cat. No. 553969, left panel) or purified HMα2 mAb (right panel), followed by PE-conjugated anti-hamster IgG mAb cocktail (Cat. No. 554056, 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.
Store undiluted at 4° C.

Application Notes

Application

Flow cytometry	Routinely Tested
Immunoprecipitation	Reported
Blocking	Reported

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Recommended Assay Procedure:
For immunohistochemical staining, we recommend the use of purified anti-rat CD49b mAb Ha1/29, which cross-reacts with mouse, Cat. No. 559987/554998.

Suggested Companion Products

Catalog Number	Name	Size	Clone
553969	Purified Hamster IgG1, κ Isotype Control	0.5 mg	A19-3
554011	FITC Mouse Anti-Armenian and Syrian Hamster IgG Cocktail	0.5 mg	(none)

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. 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/pharmingen/hamster_chart_11x17.pdf.
4. Sodium azide is a reversible inhibitor of oxidative metabolism; therefore, antibody preparations containing this preservative agent must not be used in cell cultures nor injected into animals. Sodium azide may be removed by washing stained cells or plate-bound antibody or dialyzing soluble antibody in sodium azide-free buffer. Since endotoxin may also affect the results of functional studies, we recommend the NA/LE (No Azide/Low Endotoxin) antibody format, if available, for in vitro and in vivo use.
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: Blocking, Immunoprecipitation)

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)

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