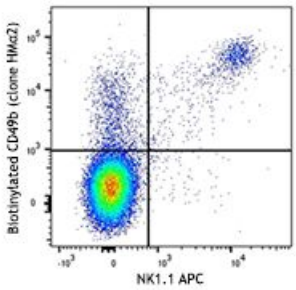
SONY

Product Data Sheet

Biotin anti-mouse CD49b

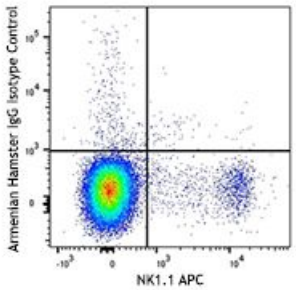
Catalog # / Size:	1117610 / 500 µg 1117605 / 50 µg
Clone:	HMα2
Isotype:	Hamster IgG
Immunogen:	Mouse colon carcinoma cell line Colon26
Reactivity:	Mouse
Preparation:	The antibody was purified by affinity chromatography and conjugated with biotin under optimal conditions.
Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Workshop Number:	750 under optimal conditions.
Concentration:	0.5



C57BL/6 splenocytes were stained with NK1.1 APC and biotinylated CD49b (clone HMα2) (top), or biotinylated Armenian Hamster IgG isotype control (bottom), followed by SAV-PE.

Applications:

Applications:	Flow Cytometry
Recommended Usage:	Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is ≤0.125 µg per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes:	Additional reported applications (for the relevant formats) include: immunoprecipitation1, immunofluorescence on frozen sections4, and blocking of cell adhesion[1-3]. The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays.



Application References:

1. Miyake S, *et al.* 1994. *Eur. J. Immunol.* 24:2000. (Block, IP)
2. Noto K, *et al.* 1995. *Int. Immunol.* 7:835. (Block)
3. Arase H, *et al.* 2001. *J. Immunol.* 167:1141. (Block)
4. Zhang Z, *et al.* 2008. *Blood* 111:1980. (IF)

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Description: CD49b is a 150 kD glycoprotein, also known as α_2 integrin, VLA-2 α chain, Integrin α_2 chain, and HMα2. It is a member of the integrin family, expressed on NK cells, a subset of splenic $CD4^+$ T cells, NK-T cells, intestinal intraepithelial and lamina propria lymphocytes, epithelial cells, and platelets. By associating with CD29 (integrin β_1 subunit), CD49b forms the VLA-2 (integrin $\alpha_2\beta_1$) complex. It plays a critical role in both adhesion and lymphocyte activation. The primary ligands for CD49b are collagen, laminin, and fibronectin. The HMα2 antibody has been shown to be useful for partially blocking CD49b mediated interactions with collagen. Additionally, this antibody blocks staining of splenic NK cells by the monoclonal antibody DX5.

Antigen References:

1. Barclay AN, *et al.* 1997. The Leukocyte Antigen FactsBook Academic Press.
2. Sasaki K, *et al.* 2003. *Int. Immunol.* 15:701.
3. Inoue O, *et al.* 2003. *J. Cell Biol.* 160:769.

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