Technical Data Sheet

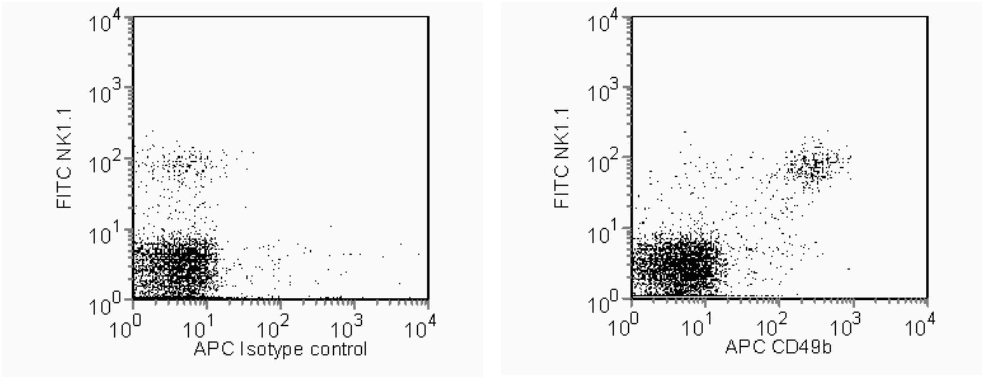
APC Rat Anti-Mouse CD49b

Product Information

Material Number:	**560628**
Alternate Name:	itga2; Integrin alpha-2; DX5; Pan NK cell marker; VLAA2; VLA-2 alpha chain
Size:	50 µg
Concentration:	0.2 mg/ml
Clone:	DX5
Immunogen:	Mouse (C57BL/6) NK1.1+ cells propagated with rIL-2
Isotype:	Rat (LEW) IgM, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing protein stabilizer and ≤0.09% sodium azide.

Description

The rat anti-mouse CD49b monoclonal antibody (clone DX5) specifically binds to the integrin α2 chain (CD49b). CD49b is a 150 kDa transmembrane glycoprotein that non-covalently associates with CD29 (integrin β1) to form the integrin α2β1 complex known as VLA-2. The rat anti-mouse CD49b antibody (clone DX5) has been reported to identify the majority of NK cells and a small T-cell subpopulation in most mouse strains (e.g., A/J, AKR, BALB/c, C3H/HeJ, C57BL/6, C57BL/10, C57BR, C58, CBA/Ca, DBA/1, DBA/2, SJL, SWR, 129/J, but not NOD). The DX5 antibody also recognizes platelets that express high levels of CD49b. Multiparameter flow cytometric analysis has demonstrated that most lymphocytes which express NK-1.1 (NKR-P1B and NKR-P1C), as detectable by mouse anti-mouse NK-1.1 antibody (clone PK136), also express the DX5 antigen. Small DX5+ NK-1.1- and DX5- NK-1.1+ cell subsets are found, especially among the CD3-positive cell population. Some CD49b+ NK cells have been reported to gradually lose reactivity with the rat anti-mouse CD49b antibody (clone DX5) when cultured in the presence of recombinant human IL-2. The resulting DX5-negative cells have weakened cytotoxic activity when compared to the remaining DX5+ cells. This indicates that the DX5 antibody distinguishes functional subsets of NK cells. No activation or blocking activity of the rat anti-mouse antibody (clone DX5) has been observed. Staining of splenic NK cells with this antibody reportedly can be blocked by hamster anti-mouse CD49b antibody (clone HMα2).



Flow cytometric analysis of CD49b on mouse splenocytes. *Splenocytes from C57BL/6 mice were stained with a FITC Mouse Anti-Mouse NK1.1 antibody (clone PK136) and either with a APC Rat IgM, κ isotype control (left panel) or with the APC Rat Anti-Mouse CD49b antibody (right panel). Dot plots were derived from gated events based on light scattering characteristics for splenocytes. Flow cytometry was performed on a BD™ LSR II flow cytometry system.*

Preparation and Storage

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

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.

Application Notes

Application

Flow cytometry	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
551486	APC Rat IgM, κ Isotype Control	0.1 mg	R4-22
553164	FITC Mouse Anti-Mouse NK-1.1	0.5 mg	PK136

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Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
3. This APC-conjugated reagent can be used in any flow cytometer equipped with a dye, HeNe, or red diode laser.
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. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
6. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

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