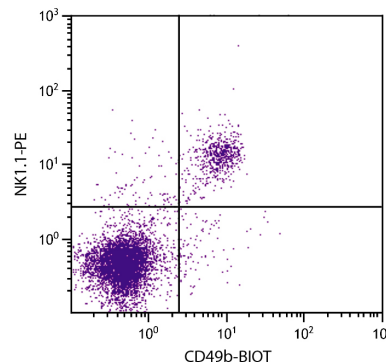




Rat Anti-Mouse CD49b

Cat. No.	Format	Size
1806-01	Purified (UNLB)	0.5 mg
1806-02	Fluorescein (FITC)	0.5 mg
1806-08	Biotin (BIOT)	0.5 mg
1806-09	R-phycoerythrin (PE)	0.1 mg
1806-09L	R-phycoerythrin (PE)	0.2 mg
1806-11	Allophycocyanin (APC)	0.1 mg
1806-14	Low Endotoxin, Azide-Free (LE/AF)	0.5 mg
1806-19	Allophycocyanin-Cyanine 7 (APC/CY7)	0.1 mg
1806-30	Alexa Fluor® 488 (AF488)	0.1 mg
1806-31	Alexa Fluor® 647 (AF647)	0.1 mg



C57BL/6 mouse splenocytes were stained with Rat Anti-Mouse CD49b-BIOT (SB Cat. 1806-08) and Mouse Anti-Mouse NK1.1-PE (SB Cat. No. 1805-09) followed by Streptavidin-FITC (SB Cat. No. 7100-02).

Overview

Clone	DX5
Isotype	Rat (Lewis) IgMκ
Immunogen	NK cells isolated from C57BL/6 mice
Specificity	Mouse CD49b; Mr 160 kDa
Alternate Name(s)	α_2 integrin, VLA-2 α , very late antigen-2, pan NK

Description

The monoclonal antibody DX5 reacts with CD49b, also known as very late antigen-2 (VLA-2) and α_2 integrin. The antibody stains the majority of NK cells and a small subpopulation of T cells in all mouse strains tested (e.g., A/J, AKR, BALB/c, C3H/HeJ, C57BL/6, C57BL/10, C57BR, C58, CBA/Ca, CBA/J, DBA/1, DBA/2, SJL, SWR). Three-color flow cytometry analysis has revealed that most cells that express NK-1.1 (NKR-P1C) also express CD49b. However, small subsets of DX5⁺NK-1.1⁻ and DX5⁺NK-1.1⁺ cells can be found, especially among the CD3⁺ population of T lymphocytes. NK cells cultured in the presence of IL-2 progressively lose reactivity with DX5 as a consequence of cellular proliferation. Therefore, DX5 can be used to define functionally distinct subsets of murine NK cells. The monoclonal antibody DX5 has not been demonstrated to have activating or blocking activity.

Applications

FC – Quality tested ^{1,4-8}
 IHC-PS – Reported in literature ²
 IHC-FS – Reported in literature ³

Working Dilutions

Flow Cytometry	FITC, BIOT, and AF488 conjugates	$\leq 1 \mu\text{g}/10^6$ cells
	PE, APC, APC/CY7, and AF647 conjugates	$\leq 0.2 \mu\text{g}/10^6$ cells
	For flow cytometry, the suggested use of these reagents is in a final volume of 100 μL	
Other Applications	Since applications vary, you should determine the optimum working dilution for the product that is appropriate for your specific need.	

For Research Use Only. Not for Diagnostic or Therapeutic Use.

Handling and Storage

- The purified (UNLB) antibody is supplied as 0.5 mg of purified immunoglobulin in 1.0 mL of borate buffered saline, pH 8.2. *No preservatives or amine-containing buffer salts added.* Store at 2-8°C.
- The fluorescein (FITC) conjugate is supplied as 0.5 mg in 1.0 mL of PBS/NaN₃. Store at 2-8°C.
- The biotin (BIOT) conjugate is supplied as 0.5 mg in 1.0 mL of PBS/NaN₃. Store at 2-8°C.
- The R-phycoerythrin (PE) conjugate is supplied as 0.1 mg in 1.0 mL or 0.2 mg in 2.0 mL of PBS/NaN₃ and a stabilizing agent. Store at 2-8°C. **Do not freeze!**
- The allophycocyanin (APC) conjugate is supplied as 0.1 mg in 1.0 mL of PBS/NaN₃ and a stabilizing agent. Store at 2-8°C. **Do not freeze!**
- The low endotoxin, azide-free (LE/AF) antibody is supplied as 0.5 mg purified immunoglobulin in 1.0 mL of PBS. Contains no preservative; handle under aseptic conditions. Store at 2-8°C or aliquot into smaller volumes and store at -20°C. Avoid multiple freeze / thaw cycles.
- The allophycocyanin-Cyanine 7 (APC/CY7) conjugate is supplied as 0.1 mg in 1.0 mL of PBS/NaN₃ and a stabilizing agent. Store at 2-8°C. **Do not freeze!**
- The Alexa Fluor® 488 (AF488) and Alexa Fluor® 647 (AF647) conjugates are supplied as 0.1 mg in 0.2 mL of PBS/NaN₃. Store at 2-8°C.
- Protect fluorochrome-conjugated forms from light. Reagents are stable for the period shown on the label if stored as directed.

Warning

Some reagents contain sodium azide. Please refer to product specific SDS.

References

1. Arase H, Saito T, Phillips JH, Lanier LL. Cutting edge: the mouse NK cell-associated antigen recognized by DX5 monoclonal antibody is CD49b (α_2 integrin, very late antigen-2). *J Immunol.* 2001;167:1141-4. (Immunogen, FC)
2. Oertelt S, Lian Z, Cheng C, Chuang Y, Padgett KA, He X, et al. Anti-mitochondrial antibodies and primary biliary cirrhosis in TGF- β receptor II dominant-negative mice. *J Immunol.* 2006;177:1655-60. (IHC-PS)
3. de Vries MR, Seghers L, van Bergen J, Peters HA, de Jong RC, Hamming JF, et al. C57BL/6 NK cell gene complex is crucially involved in vascular remodeling. *J Mol Cell Cardiol.* 2013;64:51-8. (IHC-FS)
4. Pan P, Gu P, Li Q, Xu D, Weber K, Chen S. Regulation of dendritic cell function by NK cells: mechanisms underlying the synergism in the combination therapy of IL-12 and 4-1BB activation. *J Immunol.* 2004;172:4779-89. (FC)
5. López MC, Duckett NS, Baron SD, Metzger DW. Early activation of NK cells after lung infection with the intracellular bacterium, *Francisella tularensis* LVS. *Cell Immunol.* 2004;232:75-85. (FC)
6. Lin Y, Zhong Y, Saito S, Chen Y, Shen W, Di J, et al. Characterization of natural killer cells in nonobese diabetic/severely compromised immunodeficient mice during pregnancy. *Fertil Steril.* 2009;91:2676-86. (FC)
7. Adhikari AS, Agarwal N, Wood BM, Porretta C, Ruiz B, Pochampally RR, et al. CD117 and Stro-1 identify osteosarcoma tumor-initiating cells associated with metastasis and drug resistance. *Cancer Res.* 2010;70:4602-12. (FC)
8. Bartemes KR, Iijima K, Kobayashi T, Kephart GM, McKenzie AN, Kita H. IL-33-responsive lineage- CD25⁺ CD44^{hi} lymphoid cells mediate innate type-2 immunity and allergic inflammation in the lungs. *J Immunol.* 2012;188:1503-13. (FC)

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