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Product Data Sheet

PerCP/Cyanine5.5 anti-mouse CD49b (pan-NK cells)

Catalog # / Size: 1144575 / 25 µg
1144580 / 100 µg

Clone: DX5

Isotype: Rat IgM, κ

Immunogen: IL-2-propagated NK1.1+ cells from C57BL/6 mice

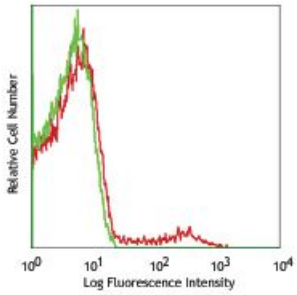
Reactivity: Mouse

Preparation: The antibody was purified by affinity chromatography, and conjugated with PerCP/Cy5.5 under optimal conditions.

Formulation: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.

Workshop Number: 750 under optimal conditions.

Concentration: 0.2



C57BL/6 splenocytes stained with DX5 PerCP/Cy5.5

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 ≤ 0.25 µg per 10^6 cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application.

Application Notes: The DX5 clone detects cells expressing relatively high levels of CD49b and may not be useful for the detection of cells expressing low levels of CD49b. DX5 does not block NK cell killing or binding to collagen *in vitro.* Additional reported applications (for the relevant formats) include: complement-mediated cytotoxicity2 and immunohistochemical staining5 of formalin-fixed and paraffin-embedded tissue sections as well as immunohistochemical staining of acetone-fixed frozen sections[10]. The binding of DX5 antibody to splenic NK cells can be blocked by HMα2 antibody.

Application References:

1. Arase H, *et al.* 2001. *J. Immunol.* 167:1141. (FC)
2. Sepulveda H, *et al.* 1999. *J. Immunol.* 163:1133.
3. Norian LA and Allen PM. 2004. *J. Immunol.* 173:835. (FC)
4. Andoniou CE, *et al.* 2005. *Nature Immunology* 6:1011.
5. Oertelt S, *et al.* 2006. *J. Immunol.* 177:1655. (IHC) PubMed
6. Bourdeau A, *et al.* 2007. *Blood* doi:10.1182/blood-2006-08-044370.
7. Charles N, *et al.* 2010. *Nat. Med.* 16:701. (FC) PubMed
8. Qui Q, *et al.* 2010. *J. Immunol.* 184:1681. (FC) PubMed
9. Busche A, *et al.* 2011. *J. Immunol.* 186:2918. PubMed
10. Kim HR, *et al.* 2011. *Nephrology* 16:545. (IHC) PubMed
11. Seyoum B, *et al.* 2011. *Vaccine.* 29:8002. PubMed
12. Younos IH, *et al.* 2012. *Int Immunopharmacol.* 13:245. PubMed.
13. Honjo K, *et al.* 2012. *PNAS.* PubMed.

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Description: DX5 antigen has been recently characterized as CD49b. It is a 150 kD integrin α chain also known as α_2 integrin, VLA-2 α chain, and integrin α_2 chain. CD49b non-covalently associates with CD29 (β_1 integrin) to form the CD49b/CD29 complex known as VLA-2, a receptor for collagen and laminin. CD49b is expressed on platelets, the majority of NK cells, NKT cells, and a small subset of CD8+ T cells (this population can be significantly increased following viral infection). DX5 is used for the identification and isolation of NK cells, and is especially useful for identifying NK cells in mice lacking the NK1.1 antigen.

Antigen References:

1. Arase H, *et al.* 2001. *J. Immunol.* 167:1141.
2. Barclay AN, *et al.* 1997. The Leukocyte Antigen FactsBook Academic Press.
3. Sasaki K, *et al.* 2003. *Int. Immunol.* 15:701.
4. Inoue O, *et al.* 2003. *J. Cell Biol.* 160:769.

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