APC/Fire™ 750 anti-mouse CD49b (pan-NK cells) Antibody

Catalog# / Size	108925 / 25 µg 108926 / 100 µg
Clone	DX5
Regulatory Status	RUO
Other Names	α2 integrin, VLA-2 α chain, DX5, Integrin α2 chain, ITGA2
Isotype	Rat IgM, κ
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.

Product Details

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	IL-2-propagated NK1.1$^+$ cells from C57BL/6 mice
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide
Preparation	The antibody was purified by affinity chromatography and conjugated with APC/Fire™ 750 under optimal conditions.
Concentration	0.2 mg/mL
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. **Do not freeze**.
Application	FC - *Quality tested*
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 ≤ 1.0 µg per million cells in 100 µL volume. It is recommended that the reagent be titrated for optimal performance for each application. * APC/Fire™ 750 has a maximum excitation of 650 nm and a maximum emission of 787 nm.
Excitation Laser	Red Laser (633 nm)
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 cytotoxicity[2] and immunohistochemical staining[5] 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 HMa2 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.
14. Huang HN, *et al.* 2013. *Biomaterials.* 34:10151. PubMed

Product Citations

1. Markov SD, *et al.* 2021. Mol Cancer Ther. 20:2457. PubMed

RRID

AB_2876423 (BioLegend Cat. No. 108925)
AB_2876423 (BioLegend Cat. No. 108926)

Antigen Details

Structure	Integrin α chain, 150 kD
Distribution	NK cells, subset of T cells
Function	Adhesion
Ligand/Receptor	Collagen, laminin
Cell Type	NK cells, T cells
Biology Area	Cell Adhesion, Cell Biology, Immunology, Innate Immunity
Molecular Family	Adhesion Molecules, CD Molecules
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.
Gene ID	16398

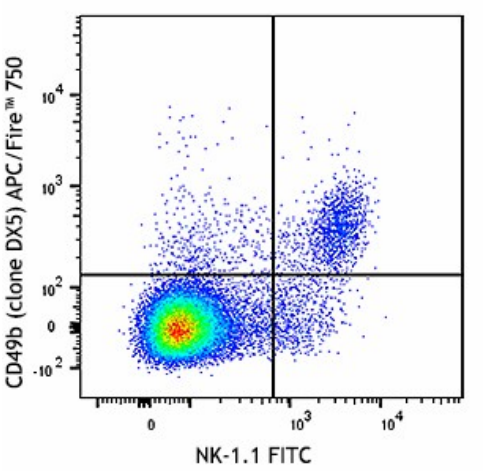
Related Protocols

Cell Surface Flow Cytometry Staining Protocol

Other Formats

APC anti-mouse CD49b (pan-NK cells), Biotin anti-mouse CD49b (pan-NK cells), FITC anti-mouse CD49b (pan-NK cells), PE anti-mouse CD49b (pan-NK cells), Purified anti-mouse CD49b (pan-NK cells), Alexa Fluor® 488 anti-mouse CD49b (pan-NK cells), Alexa Fluor® 647 anti-mouse CD49b (pan-NK cells), PerCP/Cyanine5.5 anti-mouse CD49b (pan-NK cells), Pacific Blue™ anti-mouse CD49b (pan-NK cells), APC/Cyanine7 anti-mouse CD49b (pan-NK cells), PE/Cyanine7 anti-mouse CD49b (pan-NK cells), PE/Dazzle™ 594 anti-mouse CD49b (pan-NK cells), APC/Fire™ 750 anti-mouse CD49b (pan-NK cells)

Product Data



C57BL/6 splenocytes were stained with anti-mouse NK-1.1 FITC and anti-mouse CD49b (pan-NK cells) (clone DX5) APC/Fire™ 750.

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