

## Anti-Mouse CD49b Antibody, Clone DX5, Pacific Blue™



Scientists Helping Scientists™ | [WWW.STEMCELL.COM](http://WWW.STEMCELL.COM)

TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713

[INFO@STEMCELL.COM](mailto:INFO@STEMCELL.COM) • [TECHSUPPORT@STEMCELL.COM](mailto:TECHSUPPORT@STEMCELL.COM)

FOR GLOBAL CONTACT DETAILS VISIT OUR WEBSITE

## Antibodies

Rat monoclonal IgM antibody against mouse CD49b (integrin  $\alpha 2$ ), Pacific Blue™-conjugated

Catalog #60020PB	100 $\mu$ g	0.5 mg/mL
#60020PB.1	25 $\mu$ g	0.5 mg/mL

## Product Description

The DX5 antibody reacts with murine CD49b (integrin  $\alpha 2$ ), an ~150 kDa type 1 transmembrane glycoprotein that associates non-covalently with CD29 (integrin  $\beta 1$ ) to form the heterodimeric CD49b/CD29 complex known as VLA-2, a receptor for extracellular matrix proteins such as collagen, E-cadherin, fibronectin, and laminin. CD49b is highly expressed by platelets and is found on a majority of NK cells, on NKT cells, and on a small subset of CD8+ T cells; the latter population increases substantially following viral infection. CD49b is also expressed by several tissues, including intestine, kidney, mammary gland, and lung. The DX5 antibody is particularly useful for identifying NK cells in mice lacking the NK1.1 antigen. Binding of the DX5 antibody has not been observed to affect the function of the VLA-2 integrin. DX5 binding is, however, blocked by the clone HMa2 antibody.

Target Antigen Name:	CD49b (integrin $\alpha 2$ )
Alternative Names:	$\alpha 2$ integrin, Integrin $\alpha 2$ chain, VLA-2 $\alpha$ chain
Gene ID:	16398
Species Reactivity:	Mouse
Host Species:	Rat (LEW)
Clonality:	Monoclonal
Clone:	DX5
Isotype:	IgM, kappa
Immunogen:	IL-2-propagated NK1.1+ cells from C57BL/6 mice
Conjugate:	Pacific Blue™

## Applications

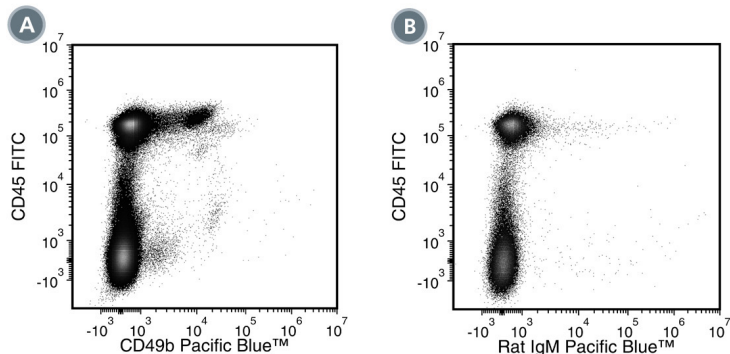
Verified:	FC
Reported:	FC
Special Applications:	This antibody clone has been verified for purity assessments of cells isolated with EasySep™ Mouse NK Cell Isolation Kit (Catalog #19855).

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FACS: Fluorescence-activated cell sorting; FC: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IP: Immunoprecipitation; RIA: Radioimmunoassay; WB: Western blotting

## Properties

Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide
Purification:	The antibody was purified by affinity chromatography and conjugated with Pacific Blue™ under optimal conditions. The solution is free of unconjugated Pacific Blue™.
Stability and Storage:	Product stable at 2 - 8°C when stored undiluted. Do not freeze. Protect product from prolonged exposure to light. For product expiry date, please contact <a href="mailto:techsupport@stemcell.com">techsupport@stemcell.com</a> .
Directions for Use:	For flow cytometry, the suggested use of this antibody is $\leq 1 \mu$ g per $1 \times 10^6$ cells in 100 $\mu$ L or per 100 $\mu$ L of whole blood. It is recommended that the antibody be titrated for optimal performance for each application.

## Data



(A) Flow cytometry analysis of C57BL/6 mouse splenocytes labeled with Anti-Mouse CD49b Antibody, Clone DX5, Pacific Blue™ and Anti-Mouse CD45 Antibody, Clone 30-F11, FITC (Catalog #60030FI).

(B) Flow cytometry analysis of C57BL/6 mouse splenocytes labeled with a rat IgM, kappa Pacific Blue™ isotype control antibody and Anti-Mouse CD45 Antibody, Clone 30-F11, FITC.

## Related Products

For a complete list of antibodies, including other conjugates, sizes and clones, as well as related products available from STEMCELL Technologies, please visit our website at [www.stemcell.com/antibodies](http://www.stemcell.com/antibodies) or contact us at [techsupport@stemcell.com](mailto:techsupport@stemcell.com).

## References

1. Deady LE et al. (2014) L-plastin is essential for alveolar macrophage production and control of pulmonary pneumococcal infection. *Infect Immun* 82(5): 1982–93. (FC)
2. Busche A et al. (2011) Genetic labeling reveals altered turnover and stability of innate lymphocytes in latent mouse cytomegalovirus infection. *J Immunol* 186(5): 2918–25.
3. Kim H-R et al. (2011) Reduction of natural killer and natural killer T cells is not protective in cisplatin-induced acute renal failure in mice. *Nephrology (Carlton)* 16(6): 545–51. (IHC)
4. Charles N et al. (2010) Basophils and the T helper 2 environment can promote the development of lupus nephritis. *Nat Med* 16(6): 701–7. (FC)
5. Qiu Q et al. (2010) CD155 is involved in negative selection and is required to retain terminally maturing CD8 T cells in thymus. *J Immunol* 184(4): 1681–9.
6. Oertelt S et al. (2006) Anti-mitochondrial antibodies and primary biliary cirrhosis in TGF-beta receptor II dominant-negative mice. *J Immunol* 177(3): 1655–60. (IHC)
7. Norian LA & Allen PM. (2004) No intrinsic deficiencies in CD8+ T cell-mediated antitumor immunity with aging. *J Immunol* 173(2): 835–44. (FC)
8. Arase H et al. (2001) Cutting edge: the mouse NK cell-associated antigen recognized by DX5 monoclonal antibody is CD49b (alpha 2 integrin, very late antigen-2). *J Immunol* 167(3): 1141–4. (FC)
9. Hussell T & Openshaw PJ. (1998) Intracellular IFN-gamma expression in natural killer cells precedes lung CD8+ T cell recruitment during respiratory syncytial virus infection. *J Gen Virol* 79 (11): 2593–601.
10. Vos Q et al. (1998) Phenotypic and functional characterization of a panel of cytotoxic murine NK cell clones that are heterogeneous in their enhancement of Ig secretion in vitro. *Int Immunol* 10(8): 1093–101.
11. Barclay AN et al. (Eds.). (1997) CD49b. In: *The Leucocyte Antigen Factsbook*, Second Edition (pp. 257–9). New York: Academic Press.

STEMCELL TECHNOLOGIES INC.'S QUALITY MANAGEMENT SYSTEM IS CERTIFIED TO ISO 13485. PRODUCTS ARE FOR RESEARCH USE ONLY AND NOT INTENDED FOR HUMAN OR ANIMAL DIAGNOSTIC OR THERAPEUTIC USES UNLESS OTHERWISE STATED.

Copyright © 2017 by STEMCELL Technologies Inc. All rights reserved including graphics and images. STEMCELL Technologies & Design, STEMCELL Shield Design, Scientists Helping Scientists, and EasySep are trademarks of STEMCELL Technologies Canada Inc. All other trademarks are the property of their respective holders. Alexa Fluor® and Pacific Blue™ are trademarks of Life Technologies Corporation. Antibodies conjugated to Alexa Fluor® or Pacific Blue™ are licensed for internal research use only and sale is expressly conditioned on the buyer not using the antibody for manufacturing, performing a service or medical test, or otherwise generating revenue. For use other than research, contact Life Technologies Corporation, 5791 Van Allen Way, Carlsbad, CA 92008 USA or [outlicensing@lifetech.com](mailto:outlicensing@lifetech.com). While STEMCELL has made all reasonable efforts to ensure that the information provided by STEMCELL and its suppliers is correct, it makes no warranties or representations as to the accuracy or completeness of such information.