

## Anti-Mouse CD49b Antibody, Clone DX5



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## Antibodies

Rat monoclonal IgM antibody against  
mouse CD49b (integrin  $\alpha 2$ ),  
unconjugated

Catalog #60020

500  $\mu$ g 0.5 mg/mL

FOR RESEARCH USE ONLY. NOT INTENDED FOR HUMAN OR ANIMAL DIAGNOSTIC OR THERAPEUTIC USES.

## 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 NK-T 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:	Unconjugated

## Applications

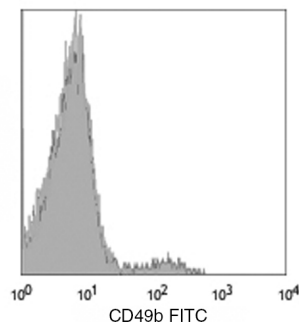
Verified:	FC
Reported:	FC, IHC
Special Applications:	This antibody clone has been verified for purity assessments of cells isolated with EasySep™ Mouse NK Cell Enrichment Kit (Catalog #19755).

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FC: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IP: Immunoprecipitation; WB: Western blotting

## Properties

Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide
Purification:	The antibody is at > 85% purity.
Stability and Storage:	Product stable at 2 - 8°C when stored undiluted. Do not freeze. For product expiry date, please request a lot-specific Certificate of Analysis from <a href="mailto:techsupport@stemcell.com">techsupport@stemcell.com</a> .
Directions for Use:	For flow cytometry the suggested use of this antibody is $\leq 0.25 \mu$ g per $1 \times 10^6$ cells in 100 $\mu$ L volume. It is recommended that the antibody be titrated for optimal performance for each application.

## Data



Flow cytometry analysis of C57BL/6 mouse splenocytes labeled with Anti-Mouse CD49b Antibody, Clone DX5, followed by anti-rat IgG, FITC (filled histogram) or a rat IgGM, kappa isotype control antibody followed by anti-rat IgG, FITC (histogram obscured; no positive staining observed).

## Related Products

PRODUCT NAME	CATALOG #	SIZE
Anti-Mouse CD49b Antibody, Clone DX5	60020	500 µg
Anti-Mouse CD49b Antibody, Clone DX5, PE	60020PE	200 µg
Anti-Mouse CD49b Antibody, Clone DX5, PE	60020PE.1	50 µg
Anti-Mouse CD49b Antibody, Clone DX5, Alexa Fluor® 488	60020AD	25 µg

## References

1. Barclay AN, et al. Eds. The Leukocyte Antigens Facts Book, 2nd Edition, CD49b. Academic Press, New York, pp. 257-59, 1997
2. Arase H, et al. 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): 1141-44, 2001 (FC)
3. Hussell T, Openshaw PJ. 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, 1998
4. Vos Q, et al. 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, 1998
5. Norian LA, Allen PM. No intrinsic deficiencies in CD8+ T cell-mediated antitumor immunity with aging. J Immunol 173(2): 835-44, 2004 (FC)
6. Oertelt S, et al. Anti-mitochondrial antibodies and primary biliary cirrhosis in TGF-beta receptor II dominant-negative mice. J Immunol 177(3): 1655-60, 2006 (IHC)
7. Charles N, et al. Basophils and the T helper 2 environment can promote the development of lupus nephritis. Nat Med 16(6): 701-07, 2010 (FC)
8. Qui Q, et al. CD155 is involved in negative selection and is required to retain terminally maturing CD8 T cells in thymus. J Immunol 184(4): 1681-89, 2010 (FC)
9. Busche A, et al. Genetic labeling reveals altered turnover and stability of innate lymphocytes in latent mouse cytomegalovirus infection. J Immunol 186(5): 2918-25, 2011
10. Kim HR, et al. Reduction of natural killer and natural killer T cells is not protective in cisplatin-induced acute renal failure in mice. Nephrology 16(6): 545-51, 2011 (IHC)

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