

Datasheet: MCA2183PE

Description:	RAT ANTI MOUSE CD13:RPE
Specificity:	CD13
Other names:	AMINOPEPTIDASE N
Format:	RPE
Product Type:	Monoclonal Antibody
Clone:	R3-63
Isotype:	IgG2a
Quantity:	100 TESTS

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	■			Neat

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the antibody for use in their system using appropriate negative/positive controls.

Target Species	Mouse						
Product Form	Purified IgG conjugated to R. Phycoerythrin (RPE) - lyophilized						
Reconstitution	Reconstitute with 1.0 ml distilled water						
Max Ex/Em	<table border="1"> <thead> <tr> <th>Fluorophore</th> <th>Excitation Max (nm)</th> <th>Emission Max (nm)</th> </tr> </thead> <tbody> <tr> <td>RPE 488nm laser</td> <td>496</td> <td>578</td> </tr> </tbody> </table>	Fluorophore	Excitation Max (nm)	Emission Max (nm)	RPE 488nm laser	496	578
Fluorophore	Excitation Max (nm)	Emission Max (nm)					
RPE 488nm laser	496	578					
Preparation	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant						
Buffer Solution	Phosphate buffered saline						
Preservative	0.09% Sodium Azide						
Stabilisers	1% Bovine Serum Albumin 5% Sucrose						
Immunogen	Mouse intestinal APN						
External Database Links	UniProt: P97449 Related reagents						

Entrez Gene:

[16790](#) Anpep [Related reagents](#)

Synonyms	Lap1, Lap-1
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Fusion Partners	Spleen cells from immunized mice were fused with cells of the IR983F rat myeloma cell line.
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Specificity	<p>Rat anti Mouse CD13 antibody, clone R3-63 recognizes mouse aminopeptidase N (APN), a cell surface protein homologous with human CD13. In the mouse, CD13 is a non-covalently linked homodimer of approximately 150 kDa subunits expressed by a variety of cells including monocytes, macrophages, dendritic cell and veiled cells.</p> <p>Rat anti Mouse CD13 antibody, clone R3-63 has been reported to block mouse APN enzyme activity (Hansen <i>et al.</i> 1993).</p>
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Flow Cytometry	<p>Use 10ul of the suggested working dilution to label 10⁶ cells in 100ul.</p> <p>The Fc region of monoclonal antibodies may bind non-specifically to cells expressing low affinity fc receptors. This may be reduced by using SeroBlock FcR (BUF041A/B).</p>
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References	<ol style="list-style-type: none">1. Kamoun, W.S. <i>et al.</i> (2009) Edema control by cediranib, a vascular endothelial growth factor receptor-targeted kinase inhibitor, prolongs survival despite persistent brain tumor growth in mice. J Clin Oncol. 27: 2542-52.2. Hansen, A.S. <i>et al.</i> (1993) A mouse aminopeptidase N is a marker for antigen-presenting cells and appears to be co-expressed with major histocompatibility complex class II molecules. Eur J Immunol. 23 (9): 2358-64.3. Larsen, S.L. <i>et al.</i> (1996) T cell responses affected by aminopeptidase N (CD13)-mediated trimming of major histocompatibility complex class II-bound peptides. J Exp Med. 184 (1): 183-9.4. Rangel, R. <i>et al.</i> (2007) Impaired angiogenesis in aminopeptidase N-null mice. Proc Natl Acad Sci U S A. 104: 4588-93.5. Lahdenranta, J. <i>et al.</i> (2007) Treatment of hypoxia-induced retinopathy with targeted proapoptotic peptidomimetic in a mouse model of disease. FASEB J. 21: 3272-8.6. Li, P. <i>et al.</i> (2010) Use of adenoviral vectors to target chemotherapy to tumor vascular endothelial cells suppresses growth of breast cancer and melanoma. Mol Ther. 18: 921-8.7. van Deventer, H.W. <i>et al.</i> (2008) C-C chemokine receptor 5 on pulmonary fibrocytes facilitates migration and promotes metastasis via matrix metalloproteinase 9. Am J Pathol. 173: 253-64.8. Gabrilovac, J. <i>et al.</i> (2011) Expression, regulation and functional activities of aminopeptidase N (EC 3.4.11.2; APN; CD13) on murine macrophage J774 cell line. Immunobiology. 216: 132-44.9. Ozawa, M.G. <i>et al.</i> (2008) Beyond receptor expression levels: the relevance of target accessibility in ligand-directed pharmacodelivery systems. Trends Cardiovasc Med. 18: 126-32.10. Bertilaccio, M.T. <i>et al.</i> (2008) Vasculature-targeted tumor necrosis factor-alpha increases the therapeutic index of doxorubicin against prostate cancer. Prostate. 68: 1105-15.11. Boström, M. <i>et al.</i> (2014) The hippocampal neurovascular niche during normal development and after irradiation to the juvenile mouse brain. Int J Radiat Biol. 90: 778-89.12. Mayer-Barber, K.D. <i>et al.</i> (2011) Innate and adaptive interferons suppress IL-1α and IL-1β production by distinct pulmonary myeloid subsets during <i>Mycobacterium tuberculosis</i> infection. Immunity. 35: 1023-34.13. Winnicka, B. <i>et al.</i> (2010) CD13 is dispensable for normal hematopoiesis and myeloid cell functions in the mouse. J Leukoc Biol. 88: 347-59.14. Ridder, D.A. <i>et al.</i> (2015) Brain endothelial TAK1 and NEMO safeguard the neurovascular unit. J Exp Med. 212 (10): 1529-49.15. Vanlandewijck, M. <i>et al.</i> (2015) Functional Characterization of Germline Mutations in PDGFB
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16. Körbelin J *et al.* (2016) A brain microvasculature endothelial cell-specific viral vector with the potential to treat neurovascular and neurological diseases. [EMBO Mol Med. Apr 22. pii: e201506078. \[Epub ahead of print\]](#)
17. Zotz, J.S. *et al.* (2016) CD13/aminopeptidase N is a negative regulator of mast cell activation. [FASEB J. Mar 2. pii: fj.201600278. \[Epub ahead of print\]](#)
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19. Yanagida, K. *et al.* (2017) Size-selective opening of the blood-brain barrier by targeting endothelial sphingosine 1-phosphate receptor 1. [Proc Natl Acad Sci U S A. 114 \(17\): 4531-6.](#)

Storage

Prior to reconstitution store at +4°C. Following reconstitution store at +4°C.

DO NOT FREEZE.

This product should be stored undiluted. This product is photosensitive and should be protected from light. Should this product contain a precipitate we recommend microcentrifugation before use.

Shelf Life

12 months from date of reconstitution.

Health And Safety Information

Material Safety Datasheet documentation #10075 available at:
10075: <https://www.bio-rad-antibodies.com/uploads/MSDS/10075.pdf>

Regulatory

For research purposes only

Related Products

Recommended Negative Controls

[RAT IgG2a NEGATIVE CONTROL:RPE \(MCA1212PE\)](#)

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