

Datasheet: MCA2183A647T

Description:	RAT ANTI MOUSE CD13:Alexa Fluor® 647
Specificity:	CD13
Other names:	AMINOPEPTIDASE N
Format:	ALEXA FLUOR® 647
Product Type:	Monoclonal Antibody
Clone:	R3-63
Isotype:	IgG2a
Quantity:	25 TESTS/0.25ml

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 - 1/5

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 Alexa Fluor® 647 - liquid						
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>Alexa Fluor®647</td> <td>650</td> <td>665</td> </tr> </tbody> </table>	Fluorophore	Excitation Max (nm)	Emission Max (nm)	Alexa Fluor®647	650	665
Fluorophore	Excitation Max (nm)	Emission Max (nm)					
Alexa Fluor®647	650	665					
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						
Approx. Protein Concentrations	IgG concentration 0.05 mg/ml						
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. \[Epub ahead of print\]](#)
18. Sung, S.J. *et al.* (2016) Proximal Tubule CD73 Is Critical in Renal Ischemia-Reperfusion Injury Protection. [J Am Soc Nephrol. Sep 14. pii: ASN.2016020229. \[Epub ahead of print\]](#)
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 Store at +4°C or at -20°C if preferred.

This product should be stored undiluted.

Storage in frost-free freezers is not recommended. This product is photosensitive and should be protected from light.

Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

Shelf Life 18 months from date of despatch.

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Health And Safety Information Material Safety Datasheet documentation #10041 available at: 10041: <https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf>

Regulatory For research purposes only

Related Products

Recommended Negative Controls

[RAT IgG2a NEGATIVE CONTROL:Alexa Fluor® 647 \(MCA1212A647\)](#)

North & South America	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: antibody_sales_us@bio-rad.com	Worldwide	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: antibody_sales_uk@bio-rad.com	Europe	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: antibody_sales_de@bio-rad.com
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