

Datasheet: MCA2183A647

BATCH NUMBER 1607

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:	100 TESTS/1ml

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	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 Stabilisers	0.09% Sodium Azide		
	1% Bovine Serum Albumin		
Approx. Protein	IgG concentration 0.05 mg/ml		

Concentrations

Immunogen Mouse intestinal APN

External Database Links

UniProt:

[P97449](#)

[Related reagents](#)

Entrez Gene:

[16790](#)

Anpep

[Related reagents](#)

Synonyms Lap1, Lap-1

RRID AB_324883

Fusion Partners Spleen cells from immunized mice were fused with cells of the IR983F rat myeloma cell line.

Specificity **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.

Rat anti Mouse CD13 antibody, clone R3-63 has been reported to block mouse APN enzyme activity ([Hansen *et al.* 1993](#)).

Flow Cytometry Use 10ul of the suggested working dilution to label 10^6 cells in 100ul.

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](#)).

References

1. Kamoun, W.S. *et al.* (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. *et al.* (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. *et al.* (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. *et al.* (2007) Impaired angiogenesis in aminopeptidase N-null mice. [Proc Natl Acad Sci U S A. 104: 4588-93.](#)
5. Lahdenranta, J. *et al.* (2007) Treatment of hypoxia-induced retinopathy with targeted proapoptotic peptidomimetic in a mouse model of disease. [FASEB J. 21: 3272-8.](#)
6. Li, P. *et al.* (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. *et al.* (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. *et al.* (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. *et al.* (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. *et al.* (2008) Vasculature-targeted tumor necrosis factor- α increases the therapeutic index of doxorubicin against prostate cancer. [Prostate. 68: 1105-15.](#)
11. Boström, M. *et al.* (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. *et al.* (2011) Innate and adaptive interferons suppress IL-1 α and IL-1 β production by distinct pulmonary myeloid subsets during *Mycobacterium tuberculosis* infection. [Immunity. 35: 1023-34.](#)
13. Winnicka, B. *et al.* (2010) CD13 is dispensable for normal hematopoiesis and myeloid cell functions in the mouse. [J Leukoc Biol. 88: 347-59.](#)
14. Ridder, D.A. *et al.* (2015) Brain endothelial TAK1 and NEMO safeguard the neurovascular unit. [J Exp Med. 212 \(10\): 1529-49.](#)
15. Vanlandewijck, M. *et al.* (2015) Functional Characterization of Germline Mutations in PDGFB and PDGFRB in Primary Familial Brain Calcification. [PLoS One. 10 \(11\): e0143407.](#)
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. 8 \(6\): 609-25.](#)
17. Zötz, J.S. *et al.* (2016) CD13/aminopeptidase N is a negative regulator of mast cell activation. [FASEB J. 30 \(6\): 2225-35.](#)
18. Sung, S.J. *et al.* (2017) Proximal Tubule CD73 Is Critical in Renal Ischemia-Reperfusion Injury Protection. [J Am Soc Nephrol. 28 \(3\): 888-902.](#)
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.](#)
20. Elabi, O. *et al.* (2021) Human α -synuclein overexpression in a mouse model of Parkinson's disease leads to vascular pathology, blood brain barrier leakage and pericyte activation. [Sci Rep. 11 \(1\): 1120.](#)
21. Kato, T. *et al.* (2020) Excessive Production of Transforming Growth Factor β 1 Causes Mural Cell Depletion From Cerebral Small Vessels. [Front Aging Neurosci. 12: 151.](#)

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.

Guarantee	12 months from date of despatch
Acknowledgements	This product is provided under an intellectual property licence from Life Technologies Corporation. The transfer of this product is contingent on the buyer using the purchase product solely in research, excluding contract research or any fee for service research, and the buyer must not sell or otherwise transfer this product or its components for (a) diagnostic, therapeutic or prophylactic purposes; (b) testing, analysis or screening services, or information in return for compensation on a per-test basis; (c) manufacturing or quality assurance or quality control, or (d) resale, whether or not resold for use in research. For information on purchasing a license to this product for purposes other than as described above, contact Life Technologies Corporation, 5791 Van Allen Way, Carlsbad CA 92008 USA or outlicensing@thermofisher.com
Health And Safety Information	Material Safety Datasheet documentation #10041 available at: https://www.bio-rad-antibodies.com/SDS/MCA2183A647 10041
Regulatory	For research purposes only

Related Products

Recommended Negative Controls

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

Recommended Useful Reagents

[MOUSE SEROBLOCK FcR \(BUF041A\)](#)

[MOUSE SEROBLOCK FcR \(BUF041B\)](#)

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
----------------------------------	---	------------------	---	---------------	---

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets
'M366303:200529'

Printed on 19 Jan 2024