

Datasheet: MCA2183F

## **BATCH NUMBER 1808**

Description:	RAT ANTI MOUSE CD13:FITC
Specificity:	CD13
Other names:	AMINOPEPTIDASE N
Format:	FITC
Product Type:	Monoclonal Antibody
Clone:	R3-63
Isotype:	lgG2a
Quantity:	0.1 mg

# **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 <a href="www.bio-rad-antibodies.com/protocols">www.bio-rad-antibodies.com/protocols</a>.

	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 conjugate	ed to Fluorescein Isoth	niocyanate Isomer
lax Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm
	FITC	490	525
uffer Solution	supernatant  Phosphate buffered s	aline	
eservative abilisers	0.09% Sodium Azide 1% Bovine Serum	Albumin	
	170 DOVING SCIUM	Albullill	

## Concentrations

Immunogen	Mouse intestinal APN
External Database Links	UniProt:  P97449 Related reagents  Entrez Gene:  16790 Anpep Related reagents
Synonyms	Lap1, Lap-1
RRID	AB_324313
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 ( <u>Hansen <i>et al.</i> 1993</u> ).
Flow Cytometry	Use 10ul of the suggested working dilution to label 10 <sup>6</sup> 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 ( <u>BUF041A/B</u> ).
References	<ol> <li>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. <u>J Clin Oncol. 27: 2542-52.</u></li> <li>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. <u>Eur J Immunol. 23 (9): 2358-64.</u></li> <li>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. <u>J Exp Med. 184 (1): 183-9.</u></li> <li>Rangel, R. <i>et al.</i> (2007) Impaired angiogenesis in aminopeptidase N-null mice. <u>Proc Natl Acad Sci U S A. 104: 4588-93.</u></li> <li>Lahdenranta, J. <i>et al.</i> (2007) Treatment of hypoxia-induced retinopathy with targeted proapoptotic peptidomimetic in a mouse model of disease. <u>FASEB J. 21: 3272-8.</u></li> <li>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. <u>Mol Ther. 18: 921-8.</u></li> <li>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. <u>Am J Pathol.</u></li> </ol>

#### 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. <u>Trends Cardiovasc Med. 18:</u> 126-32.
- 10. Bertilaccio, M.T. *et al.* (2008) Vasculature-targeted tumor necrosis factor-alpha increases the therapeutic index of doxorubicin against prostate cancer. <u>Prostate. 68:</u> 1105-15.
- 11. Boström, M. *et al.* (2014) The hippocampal neurovascular niche during normal development and after irradiation to the juvenile mouse brain. <u>Int J Radiat Biol. 90:</u> 778-89.
- 12. Mayer-Barber, K.D. *et al.* (2011) Innate and adaptive interferons suppress IL-1α and IL-1β 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. <u>J Leukoc Biol. 88: 347-59.</u>
- 14. Ridder, D.A. *et al.* (2015) Brain endothelial TAK1 and NEMO safeguard the neurovascular unit. <u>J Exp Med. 212 (10): 1529-49.</u>
- 15. Vanlandewijck, M. *et al.* (2015) Functional Characterization of Germline Mutations in PDGFB and PDGFRB in Primary Familial Brain Calcification. <u>PLoS One. 10 (11):</u> e0143407.
- 16. Körbelin J *et al.* (2016) A brain microvasculature endothelial cell-specific viral vector with the potential to treat neurovascular and neurological diseases. <u>EMBO Mol Med. 8 (6):</u> 609-25.
- 17. Zotz, 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. <u>J Am Soc Nephrol.</u> 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. <u>Proc Natl Acad Sci U S A. 114 (17):</u> 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 β1 Causes Mural Cell Depletion From Cerebral Small Vessels. <u>Front Aging Neurosci. 12: 151.</u>

#### 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
Health And Safety Information	Material Safety Datasheet documentation #10041 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA2183F">https://www.bio-rad-antibodies.com/SDS/MCA2183F</a> 10041
Regulatory	For research purposes only

# **Related Products**

# **Recommended Negative Controls**

RAT IgG2a NEGATIVE CONTROL:FITC (MCA1212F)

## **Recommended Useful Reagents**

MOUSE SEROBLOCK FcR (BUF041A)
MOUSE SEROBLOCK FcR (BUF041B)

 North & South
 Tel: +1 800 265 7376
 Worldwide
 Tel: +44 (0)1865 852 700
 Europe
 Tel: +49 (0) 89 8090 95 21

 America
 Fax: +1 919 878 3751
 Fax: +44 (0)1865 852 739
 Fax: +49 (0) 89 8090 95 50

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets 'M366306:200529'

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