

## Datasheet: MCA1270A647T

<b>Description:</b>	MOUSE ANTI HUMAN CD13:Alexa Fluor® 647
<b>Specificity:</b>	CD13
<b>Other names:</b>	AMINOPEPTIDASE N
<b>Format:</b>	ALEXA FLUOR® 647
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	WM15
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	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](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			Neat

Where this product 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 product for use in their own system using appropriate negative/positive controls.

#### Target Species

Human

#### Species Cross Reactivity

Reacts with: Rhesus Monkey

**N.B.** Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.

#### 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 A from tissue culture supernatant

#### Buffer Solution

Phosphate buffered saline

<b>Preservative</b>	0.09% sodium azide (NaN <sub>3</sub> )
<b>Stabilisers</b>	1% bovine serum albumin
<b>Approx. Protein Concentrations</b>	IgG concentration 0.05 mg/ml
<b>Immunogen</b>	Human AML cells.
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">P15144</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">290</a>    ANPEP    <a href="#">Related reagents</a></p>
<b>Synonyms</b>	APN, CD13, PEPN
<b>RRID</b>	AB_1100671
<b>Fusion Partners</b>	Spleen cells from immunised BALB/c mice where fused with cells of the mouse NS1 myeloma cell line.
<b>Specificity</b>	<p><b>Mouse anti Human CD13 antibody, clone WM15</b> recognizes human CD13 also known as aminopeptidase N. CD13 is a single pass type II glycosylated integral membrane protein with a predicted molecular mass of ~110 kDa and an apparent molecular mass of ~150 kDa expressed by granulocytes, monocytes, fibroblasts, endothelial cells and by myeloid leukaemia cells (<a href="#">Bradstock et al. 1985</a>). CD13 acts as a major cell surface receptor for group 1 coronaviruses (<a href="#">Breslin et al. 2003</a>) which bind to a critical sequence encompassing amino acid residues 288-295 (<a href="#">Kolb et al. 1997</a>).</p> <p>CD13 functions as an <a href="#">aminopeptidase</a> enzyme, a metalloprotease present as both a membrane bound form and also a soluble aminopeptidase N.</p> <p>Mouse anti Human CD13, clone WM15 inhibits infection of cells by human coronavirus (<a href="#">Lachance et al. 1998</a>) but not hepatitis C virus (<a href="#">Koutsoudakis et al. 2006</a>) and inhibits aminopeptidase N activity of the CD13 molecule (<a href="#">Asmun et al. 1992</a>).</p>
<b>Flow Cytometry</b>	Use 10µl of the suggested working dilution to label 10 <sup>6</sup> cells or 100µl whole blood
<b>References</b>	<ol style="list-style-type: none"> <li>Bradstock, K.F. <i>et al.</i> (1985) Myeloid progenitor surface antigen identified by monoclonal antibody. <a href="#">Br J Haematol. 61 (1): 11-20.</a></li> <li>Favaloro, E.J. <i>et al.</i> (1988) Further characterization of human myeloid antigens (gp160,95; gp150; gp67): investigation of epitopic heterogeneity and non-haemopoietic distribution using panels of monoclonal antibodies belonging to CD-11b, CD-13 and CD-33. <a href="#">Br J Haematol. 69 (2): 163-71.</a></li> <li>Favaloro, E.J. (1991) CD-13 (gp150; aminopeptidase-N): co-expression on endothelial and haemopoietic cells with conservation of functional activity. <a href="#">Immunol Cell Biol. 69 ( Pt 4): 253-60.</a></li> </ol>

4. Favaloro, E.J. *et al.* (1993) The hepatobiliary disease marker serum alanine aminopeptidase predominantly comprises an isoform of the haematological myeloid differentiation antigen and leukaemia marker CD-13/gp150. [Clin Chim Acta. 220 \(1\): 81-90.](#)
5. Favaloro, E.J. *et al.* (1993) CD13 (GP150; aminopeptidase-N): predominant functional activity in blood is localized to plasma and is not cell-surface associated. [Exp Hematol. 21 \(13\): 1695-701.](#)
6. Gredmark, S. *et al.* (2004) Human Cytomegalovirus Induces Inhibition of Macrophage Differentiation by Binding to Human Aminopeptidase N/CD13 [J Immunol. 173: 4897-907](#)
7. Thielitz, A. *et al.* (2004) Identification of extra- and intracellular alanyl aminopeptidases as new targets to modulate keratinocyte growth and differentiation. [Biochem Biophys Res Commun. 321 \(4\): 795-801.](#)
8. Lassnig, C. *et al.* (2005) Development of a transgenic mouse model susceptible to human coronavirus 229E. [Proc Natl Acad Sci U S A. 102 \(23\): 8275-80.](#)
9. Stolzing, A. *et al.* (2008) Age-related changes in human bone marrow-derived mesenchymal stem cells: consequences for cell therapies. [Mech Ageing Dev. 129: 163-73.](#)
10. Negussie, A.H. *et al.* (2010) Synthesis and in vitro evaluation of cyclic NGR peptide targeted thermally sensitive liposome. [J Control Release. 143: 265-73.](#)
11. Grzywacz, B. *et al.* (2011) Natural killer-cell differentiation by myeloid progenitors. [Blood. 117: 3548-58.](#)
12. Tavoosidana, G. *et al.* (2011) Multiple recognition assay reveals prostasomes as promising plasma biomarkers for prostate cancer. [Proc Natl Acad Sci U S A. 108: 8809-14.](#)
13. Silk, K.M. *et al.* (2012) Rapamycin conditioning of dendritic cells differentiated from human ES cells promotes a tolerogenic phenotype. [J Biomed Biotechnol. 2012:172420.](#)
14. McCormack, E. *et al.* (2013) Multiplexed mAbs: a new strategy in preclinical time-domain imaging of acute myeloid leukemia. [Blood. 121 \(7\): e34-42.](#)
15. Fiddler, C.A. *et al.* (2016) The Aminopeptidase CD13 Induces Homotypic Aggregation in Neutrophils and Impairs Collagen Invasion. [PLoS One. 11 \(7\): e0160108.](#)
16. Chaturvedi, C.P. *et al.* (2018) Altered Expression of Hematopoiesis Regulatory Molecules in Lipopolysaccharide-Induced Bone Marrow Mesenchymal Stem Cells of Patients with Aplastic Anemia. [Stem Cells Int. 2018: 6901761.](#)

---

**Storage** This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C.

Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended. This product is photosensitive and should be protected from light.

---

**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](mailto:outlicensing@thermofisher.com)

---

**Health And Safety Information**      Material Safety Datasheet documentation #10041 available at:  
<https://www.bio-rad-antibodies.com/SDS/MCA1270A647T>  
10041

---

**Regulatory**                      For research purposes only

---

## Related Products

### Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:Alexa Fluor® 647 \(MCA928A647\)](#)

### Recommended Useful Reagents

[HUMAN SEROBLOCK \(BUF070A\)](#)

[HUMAN SEROBLOCK \(BUF070B\)](#)

<b>North &amp; South America</b>	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: <a href="mailto:antibody_sales_us@bio-rad.com">antibody_sales_us@bio-rad.com</a>	<b>Worldwide</b>	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: <a href="mailto:antibody_sales_uk@bio-rad.com">antibody_sales_uk@bio-rad.com</a>	<b>Europe</b>	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: <a href="mailto:antibody_sales_de@bio-rad.com">antibody_sales_de@bio-rad.com</a>
----------------------------------	---	------------------	---	---------------	---

To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](https://bio-rad-antibodies.com/datasheets)  
'M408982:221016'

**Printed on 19 Oct 2023**

---

© 2023 Bio-Rad Laboratories Inc | [Legal](#) | [Imprint](#)