

Datasheet: MCA1270PET

Description:	MOUSE ANTI HUMAN CD13:RPE
Specificity:	CD13
Other names:	AMINOPEPTIDASE N
Format:	RPE
Product Type:	Monoclonal Antibody
Clone:	WM15
Isotype:	IgG1
Quantity:	25 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 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.		
Product Form	Purified IgG conjugated to R. Phycoerythrin (RPE) - lyophilized		
Reconstitution	Reconstitute in 0.25 ml distilled water		
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	RPE 488nm laser	496	578
Preparation	Purified IgG prepared by affinity chromatography on Protein A		
Buffer Solution	Phosphate buffered saline		
Preservative	0.09% Sodium Azide		
Stabilisers	1% Bovine Serum Albumin 5% Sucrose		
Immunogen	Human AML cells.		

**External Database
Links**

UniProt:

[P15144](#) [Related reagents](#)

Entrez Gene:

[290](#) ANPEP [Related reagents](#)

Synonyms

APN, CD13, PEPN

Fusion Partners

Spleen cells from immunised BALB/c mice where fused with cells of the mouse NS1 myeloma cell line.

Specificity

Mouse anti Human CD13 antibody, clone WM15 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 ([Bradstock et al. 1985](#)). CD13 acts as a major cell surface receptor for group 1 coronaviruses ([Breslin et al. 2003](#)) which bind to a critical sequence encompassing amino acid residues 288-295 ([Kolb et al. 1997](#)).

CD13 functions as an [aminopeptidase](#) enzyme, a metalloprotease present as both a membrane bound form and also a soluble aminopeptidase N.

Mouse anti Human CD13, clone WM15 inhibits infection of cells by human coronavirus ([Lachance et al. 1998](#)) but not hepatitis C virus ([Koutsoudakis et al. 2006](#)) and inhibits aminopeptidase N activity of the CD13 molecule ([Asmun et al. 1992](#))

Flow Cytometry

Use 10ul of the suggested working dilution to label 10⁶ cells or 100ul whole blood

References

1. Bradstock, K.F. *et al.* (1985) Human myeloid differentiation antigens identified by monoclonal antibodies: expression on leukemic cells. [Pathology. 17 \(3\): 392-9.](#)
2. Bradstock, K.F. *et al.* (1985) Myeloid progenitor surface antigen identified by monoclonal antibody. [Br J Haematol. 61 \(1\): 11-20.](#)
3. Favaloro, E.J. *et al.* (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. [Br J Haematol. 69 \(2\): 163-71.](#)
4. Favaloro, E.J. (1991) CD-13 (gp150; aminopeptidase-N): co-expression on endothelial and haemopoietic cells with conservation of functional activity. [Immunol Cell Biol. 69 \(Pt 4\): 253-60.](#)
5. 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.](#)
6. 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.](#)
7. 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.](#)
8. Gredmark, S. *et al.* (2004) Human Cytomegalovirus Induces Inhibition of Macrophage Differentiation by Binding to Human Aminopeptidase N/CD13 [J Immunol. 173: 4897-907](#)
9. Grzywacz, B. *et al.* (2011) Natural killer-cell differentiation by myeloid progenitors. [Blood. 117: 3548-58.](#)
10. 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.](#)
11. 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.](#)
12. 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.](#)
13. 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.](#)
14. 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.](#)
15. McCormack, E. *et al.* (2013) Multiplexed mAbs: a new strategy in preclinical time-domain imaging of acute myeloid leukemia. [Blood. 121 \(7\): e34-42.](#)
16. Fiddler, C.A. *et al.* (2016) The Aminopeptidase CD13 Induces Homotypic Aggregation in Neutrophils and Impairs Collagen Invasion. [PLoS One. 11 \(7\): e0160108.](#)

Storage	<p>Prior to reconstitution store at +4°C. Following reconstitution store at +4°C.</p> <p>DO NOT FREEZE.</p> <p>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.</p>
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Shelf Life	12 months from date of reconstitution.
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Health And Safety Information	Material Safety Datasheet documentation #10075 available at: 10075: https://www.bio-rad-antibodies.com/uploads/MSDS/10075.pdf
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Regulatory	For research purposes only
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Related Products

Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:RPE \(MCA928PE\)](#)

Recommended Useful Reagents

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

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

North & South America	<p>Tel: +1 800 265 7376</p> <p>Fax: +1 919 878 3751</p> <p>Email: antibody_sales_us@bio-rad.com</p>	Worldwide	<p>Tel: +44 (0)1865 852 700</p> <p>Fax: +44 (0)1865 852 739</p> <p>Email: antibody_sales_uk@bio-rad.com</p>	Europe	<p>Tel: +49 (0) 89 8090 95 21</p> <p>Fax: +49 (0) 89 8090 95 50</p> <p>Email: antibody_sales_de@bio-rad.com</p>
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Printed on 06 Dec 2018