

Datasheet: MCA1270PE

BATCH NUMBER 169070

Description:	MOUSE ANTI HUMAN CD13:RPE	
Specificity:	CD13	
Other names:	AMINOPEPTIDASE N	
Format:	RPE	
Product Type:	Monoclonal Antibody	
Clone:	WM15	
Isotype:	lgG1	
Quantity:	100 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 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: Rhesu	•	ons may vary between speci	es Cross
	reactivity is derived	from testing within our la	aboratories, peer-reviewed purs. Please refer to references	ublications or
Product Form	Purified IgG conjug	ated to R. Phycoerythrin	(RPE) - lyophilized	
Reconstitution	Reconstitute with 1	ml distilled water		
Reconstitution				
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)	

supernatant

Buffer Solution	Phosphate buffered saline
Preservative	0.09% sodium azide (NaN ₃)
Stabilisers	1% bovine serum albumin
	5% sucrose
Immunogen	Human AML cells.
External Database	UniDuct.
Links	UniProt:
	P15144 Related reagents
	Entrez Gene:
	290 ANPEP Related reagents
	Zoo All El Itolatoa reagonto
Synonyms	APN, CD13, PEPN
RRID	AB_321311
Fusion Partners	Spleen cells from immunized BALB/c mice where fused with cells of the mouse NS1 myeloma cell line.
	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 coronoviruses (Breslin et al. 2003) which bind to a critical sequence encompassing amino acid residies 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 <i>et al.</i> 1998) but not hepatitis C virus (Koutsoudakis <i>et al.</i> 2006) and inhibits
	aminopeptidase N activity of the CD13 molecule (Asmun <i>et al.</i> 1992).
	animopeptidase in activity of the CD13 molecule (<u>Asmun et al. 1992)</u> .
Flow Cytometry	
	Use 10µl of the suggested working dilution to label 10 ⁶ cells or 100µl whole blood

and haemopoietic cells with conservation of functional activity. <u>Immunol Cell Biol. 69 (Pt</u> 4): 253-60.

- 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. <u>Clin Chim Acta. 220 (1):</u> 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. <u>Exp Hematol. 21</u> (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. <u>Biochem Biophys Res</u> 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. <u>Mech Ageing Dev. 129:</u> 163-73.
- 10. Negussie, A.H. *et al.* (2010) Synthesis and in vitro evaluation of cyclic NGR peptide targeted thermally sensitive liposome. <u>J Control Release</u>. 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. <u>Proc Natl Acad Sci U S A. 108:</u> 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. <u>Blood</u>. 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. <u>Stem Cells Int. 2018: 6901761.</u>
- 17. Menon, R. *et al.* (2023) Human Induced Pluripotent Stem Cell-Derived Pericytes as Scalable and Editable Source to Study Direct Lineage Reprogramming Into Induced Neurons. <u>Cell Reprogram. 25 (5): 212-23.</u>
- 18. Karpyuk, V. *et al.* (2019) Innovation-based Approach in Reconstruction of Reduced Jaw Alveolar Ridge Bone Using Cell Regeneration Technologies <u>Archiv Euromedica 9 (2)</u> 147-55.

Storage

Prior to reconstitution store at +4°C. Following reconstitution store at +4°C. DO NOT FREEZE.

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.

 Guarantee
 12 months from date of despatch

 Health And Safety Information
 Material Safety Datasheet documentation #20487 available at: https://www.bio-rad-antibodies.com/SDS/MCA1270PE

 Regulatory
 For research purposes only

Related Products

Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL:RPE (MCA928PE)

Recommended Useful Reagents

HUMAN SEROBLOCK (BUF070A) HUMAN SEROBLOCK (BUF070B)

 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 'M419690:230616'

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