

Datasheet: MCA1270PE

Description:	MOUSE ANTI HUMAN CD13:RPE
Specificity:	CD13
Other names:	AMINOPEPTIDASE N
Format:	RPE
Product Type:	Monoclonal Antibody
Clone:	WM15
lsotype:	lgG1
Quantity:	100 TESTS

Product Details

Applications	This product has been derived from testing w communications from information. For gener rad-antibodies.com/pr	ithin our labo the originator al protocol re	ratories, j rs. Please	peer-reviewed publicate refer to references in	tions or personal dicated for further
		Yes	No	Not Determined	Suggested Dilution
	Flow Cytometry	-			Neat
	Where this product ha	is not been te	ested for u	ise in a particular tech	inique this does not
	necessarily exclude its a guide only. It is reco system using appropri	mmended that	at the use	r titrates the product f	g dilutions are given as or use in their own
Target Species	Human				
Species Cross Reactivity	Reacts with: Rhesus N N.B. Antibody reactivity reactivity is derived from personal communication further information.	ty and workin om testing wit	hin our la	boratories, peer-revie	wed publications or
Product Form	Purified IgG conjugate	ed to R. Phyc	oerythrin	(RPE) - lyophilized	
Reconstitution	Reconstitute with 1 m	distilled wate	er		
Max Ex/Em	Fluorophore	Excitation N	lax (nm)	Emission Max (nm)	
	RPE 488nm laser	496	. ,	578	
Preparation	Purified IgG prepared supernatant	by affinity ch	romatogra	aphy on Protein A fron	n tissue culture

Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% sodium azide (NaN ₃) 1% bovine serum albumin 5% sucrose
Immunogen	Human AML cells.
External Database Links	UniProt: <u>P15144</u> <u>Related reagents</u> Entrez Gene: <u>290</u> ANPEP <u>Related reagents</u>
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.
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 (<u>Bradstock <i>et al.</i> 1985</u>). CD13 acts as a major cell surface receptor for group 1 coronoviruses (<u>Breslin <i>et al.</i> 2003</u>) which bind to a critical sequence encompassing amino acid residies 288-295 (<u>Kolb <i>et al.</i> 1997</u>).
	membrane bound form and also a soluble aminopeptidase N.
	Mouse anti Human CD13, clone WM15 inhibits infection of cells by human coronavirus (<u>Lachance <i>et al.</i> 1998</u>) but not hepatitis C virus (<u>Koutsoudakis <i>et al.</i> 2006</u>) and inhibits aminopeptidase N activity of the CD13 molecule (<u>Asmun <i>et al.</i> 1992</u>).
Flow Cytometry	Use 10µl of the suggested working dilution to label 10^6 cells or 100µl whole blood
References	 Bradstock, K.F. <i>et al.</i> (1985) Myeloid progenitor surface antigen identified by monoclonal antibody. <u>Br J Haematol. 61 (1): 11-20.</u> 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. <u>Br J Haematol. 69 (2): 163-71.</u> Favaloro, E.J. (1991) CD-13 (gp150; aminopeptidase-N): co-expression on endothelial and haemopoietic cells with conservation of functional activity. <u>Immunol Cell Biol. 69 (Pt 4): 253-60.</u>

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> (<u>13): 1695-701.</u>

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> <u>Commun. 321 (4): 795-801.</u>

8. Lassnig, C. *et al.* (2005) Development of a transgenic mouse model susceptible to human coronavirus 229E. <u>Proc Natl Acad Sci U S A. 102 (23): 8275-80.</u>

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. <u>Blood. 117: 3548-58.</u>

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.

 Silk, K.M. *et al.* (2012) Rapamycin conditioning of dendritic cells differentiated from human ES cells promotes a tolerogenic phenotype. <u>J Biomed Biotechnol. 2012:172420.</u>
 McCormack, E. *et al.* (2013) Multiplexed mAbs: a new strategy in preclinical time-domain imaging of acute myeloid leukemia. <u>Blood. 121 (7): e34-42.</u>

15. Fiddler, C.A. *et al.* (2016) The Aminopeptidase CD13 Induces Homotypic Aggregation in Neutrophils and Impairs Collagen Invasion. <u>PLoS One. 11 (7): e0160108.</u>

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> <u>147-55</u>.

StorageThis product is shipped at ambient temperature.
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.

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Recomm	nended Useful	Reagents		
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