Datasheet: MCA1270A700T

Description:	MOUSE ANTI HUMAN CD13:Alexa Fluor® 700
Specificity:	CD13
Other names:	AMINOPEPTIDASE N
Format:	ALEXA FLUOR® 700
Product Type:	Monoclonal Antibody
Clone:	WM15
Isotype:	IgG1
Quantity:	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.

	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 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 Alexa Fluor® 700 - liquid

Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
Alexa Fluor®700	702	723

Preparation

Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant

Buffer Solution

Phosphate buffered saline

Preservative Stabilisers

0.09% Sodium Azide
1% Bovine Serum Albumin

Approx. Protein Concentrations

IgG concentration 0.05 mg/ml

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 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 *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 10^6 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	Store at +4°C or at -20°C if preferred. This product should be stored undiluted. 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.
Shelf Life	18 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
Health And Safety Information	Material Safety Datasheet documentation #10041 available at: 10041: https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf
Regulatory	For research purposes only

Related Products

Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL:Alexa Fluor® 700 (MCA928A700)

Recommended Useful Reagents

HUMAN SEROBLOCK (BUF070A)
HUMAN SEROBLOCK (BUF070B)

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