

Datasheet: MCA1270EL

Description:	MOUSE ANTI HUMAN CD13:Low Endotoxin
Specificity:	CD13
Other names:	AMINOPEPTIDASE N
Format:	Low Endotoxin
Product Type:	Monoclonal Antibody
Clone:	WM15
Isotype:	IgG1
Quantity:	0.5 mg

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	▪			1/50 - 1/100
Immunohistology - Frozen	▪			
Immunohistology - Paraffin			▪	
ELISA	▪			
Immunoprecipitation	▪			
Western Blotting		▪		
Functional Assays	▪			

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 - liquid
Preparation	Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	None present
Carrier Free	Yes
Endotoxin Level	<0.01EU/ug

Approx. Protein Concentrations	IgG concentration 1.0 mg/ml
Immunogen	Human AML cells.
External Database Links	<p>UniProt: P15144 Related reagents</p> <p>Entrez Gene: 290 ANPEP Related reagents</p>
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	<p>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).</p> <p>CD13 functions as an aminopeptidase 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 (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)</p>
Flow Cytometry	Use 10ul of the suggested working dilution to label 10 ⁶ cells or cells or 100ul whole blood.
References	<ol style="list-style-type: none"> Bradstock, K.F. <i>et al.</i> (1985) Human myeloid differentiation antigens identified by monoclonal antibodies: expression on leukemic cells. Pathology. 17 (3): 392-9. Bradstock, K.F. <i>et al.</i> (1985) Myeloid progenitor surface antigen identified by monoclonal antibody. Br J Haematol. 61 (1): 11-20. 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. Br J Haematol. 69 (2): 163-71. 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. Favaloro, E.J. <i>et al.</i> (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. Favaloro, E.J. <i>et al.</i> (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. Tavoosidana, G. <i>et al.</i> (2011) Multiple recognition assay reveals prostasomes as promising plasma biomarkers for prostate cancer. Proc Natl Acad Sci U S A. 108: 8809-14. Gredmark, S. <i>et al.</i> (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 -20°C only.

This product should be stored undiluted.

Storage in frost free freezers is not recommended. 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.

Health And Safety Information

Material Safety Datasheet documentation #10162 available at: 10162: <https://www.bio-rad-antibodies.com/uploads/MSDS/10162.pdf>

Regulatory

For research purposes only

Related Products

Recommended Secondary Antibodies

- | | |
|---|---|
| Goat Anti Mouse IgG (STAR76...) | RPE |
| Goat Anti Mouse IgG IgA IgM (STAR87...) | Alk. Phos. , HRP |
| Goat Anti Mouse IgG (H/L) (STAR117...) | Alk. Phos. , DyLight@488 , DyLight@549 ,
DyLight@649 , DyLight@680 , DyLight@800 ,
FITC , HRP |
| Rabbit Anti Mouse IgG (STAR9...) | FITC |
| Goat Anti Mouse IgG (STAR77...) | HRP |
| Rabbit Anti Mouse IgG (STAR12...) | RPE |
| Goat Anti Mouse IgG (Fc) (STAR120...) | FITC , HRP |
| Rabbit Anti Mouse IgG (STAR8...) | DyLight@800 |
| Goat Anti Mouse IgG (STAR70...) | FITC |
| Rabbit Anti Mouse IgG (STAR13...) | HRP |
| Human Anti Mouse IgG1 (HCA036...) | HRP |

Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL:Low Endotoxin (MCA928EL)

North & South Tel: +1 800 265 7376

America Fax: +1 919 878 3751

Email: antibody_sales_us@bio-rad.com

Worldwide

Tel: +44 (0)1865 852 700

Fax: +44 (0)1865 852 739

Email: antibody_sales_uk@bio-rad.com

Europe

Tel: +49 (0) 89 8090 95 21

Fax: +49 (0) 89 8090 95 50

Email: antibody_sales_de@bio-rad.com

'M315223:180503'

Printed on 19 May 2018

© 2018 Bio-Rad Laboratories Inc | [Legal](#) | [Imprint](#)