

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 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	<p>Reacts with: Rhesus Monkey</p> <p>N.B. Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.</p>
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 < 0.01 EU/μg

Approx. Protein Concentrations IgG concentration 1.0 mg/ml

Immunogen Human AML cells.

External Database Links

UniProt:

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

Entrez Gene:

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

Synonyms APN, CD13, PEPN

RRID AB_2056596

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 ([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 10μl of the suggested working dilution to label 10⁶ cells or cells or 100μl whole blood

References 1. Bradstock, K.F. *et al.* (1985) Myeloid progenitor surface antigen identified by monoclonal antibody. [Br J Haematol. 61 \(1\): 11-20.](#)

2. 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.](#)
3. 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.](#)
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. [Clin Chim Acta. 220 \(1\): 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. [Exp Hematol. 21 \(13\): 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. [Biochem Biophys Res 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. [Mech Ageing Dev. 129: 163-73.](#)
10. 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.](#)
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. [Proc Natl Acad Sci U S A. 108: 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. [Blood. 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. [Stem Cells Int. 2018: 6901761.](#)
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. [Cell Reprogram. 25 \(5\): 212-23.](#)
18. Karpuyuk, V. *et al.* (2019) Innovation-based Approach in Reconstruction of Reduced Jaw Alveolar Ridge Bone Using Cell Regeneration Technologies [Archiv Euromedica 9 \(2\) 147-55.](#)

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.

Guarantee 12 months from date of despatch

Health And Safety Information Material Safety Datasheet documentation #10162 available at:
<https://www.bio-rad-antibodies.com/SDS/MCA1270EL>
10162

Regulatory For research purposes only

Related Products

Recommended Secondary Antibodies

Rabbit Anti Mouse IgG (STAR12...) [RPE](#)
Goat Anti Mouse IgG IgA IgM (STAR87...) [HRP](#)
Goat Anti Mouse IgG (STAR76...) [RPE](#)
Goat Anti Mouse IgG (STAR70...) [FITC](#)
Rabbit Anti Mouse IgG (STAR13...) [HRP](#)
Goat Anti Mouse IgG (Fc) (STAR120...) [FITC](#), [HRP](#)
Rabbit Anti Mouse IgG (STAR9...) [FITC](#)
Goat Anti Mouse IgG (STAR77...) [HRP](#)
Goat Anti Mouse IgG (H/L) (STAR117...) [Alk. Phos.](#), [DyLight@488](#), [DyLight@550](#),
[DyLight@650](#), [DyLight@680](#), [DyLight@800](#),
[FITC](#), [HRP](#)

Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:Low Endotoxin \(MCA928EL\)](#)

North & South America Tel: +1 800 265 7376

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

To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](https://www.bio-rad-antibodies.com/datasheets)

'M436933:250304'

Printed on 04 Mar 2025

© 2025 Bio-Rad Laboratories Inc | [Legal](#) | [Imprint](#)