

## Datasheet: MCA1270T

<b>Description:</b>	MOUSE ANTI HUMAN CD13
<b>Specificity:</b>	CD13
<b>Other names:</b>	AMINOPEPTIDASE N
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	WM15
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	25 µg

## 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](http://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		▪		

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.

<b>Target Species</b>	Human
<b>Species Cross Reactivity</b>	Reacts with: Rhesus Monkey <b>N.B.</b> Antibody reactivity and working conditions may vary between species.
<b>Product Form</b>	Purified IgG - liquid
<b>Preparation</b>	Purified IgG prepared by ion exchange chromatography.
<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative Stabilisers</b>	0.09% Sodium Azide (NaN <sub>3</sub> )
<b>Carrier Free</b>	Yes
<b>Approx. Protein Concentrations</b>	IgG concentration 1.0 mg/ml

<b>Immunogen</b>	Human AML cells.
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">P15144</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">290</a>    ANPEP    <a href="#">Related reagents</a></p>
<b>Synonyms</b>	APN, CD13, PEPN
<b>Fusion Partners</b>	Spleen cells from immunised BALB/c mice where fused with cells of the mouse NS1 myeloma cell line.
<b>Specificity</b>	<p><b>Mouse anti Human CD13 antibody, clone WM15</b> 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 (<a href="#">Bradstock et al. 1985</a>). CD13 acts as a major cell surface receptor for group 1 coronaviruses (<a href="#">Breslin et al. 2003</a>) which bind to a critical sequence encompassing amino acid residues 288-295 (<a href="#">Kolb et al. 1997</a>).</p> <p>CD13 functions as an <a href="#">aminopeptidase</a> 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 (<a href="#">Lachance et al. 1998</a>) but not hepatitis C virus (<a href="#">Koutsoudakis et al. 2006</a>) and inhibits aminopeptidase N activity of the CD13 molecule (<a href="#">Asmun et al. 1992</a>)</p>
<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label 10 <sup>6</sup> cells or 100ul whole blood
<b>References</b>	<ol style="list-style-type: none"> <li>Bradstock, K.F. <i>et al.</i> (1985) Human myeloid differentiation antigens identified by monoclonal antibodies: expression on leukemic cells. <a href="#">Pathology. 17 (3): 392-9.</a></li> <li>Bradstock, K.F. <i>et al.</i> (1985) Myeloid progenitor surface antigen identified by monoclonal antibody. <a href="#">Br J Haematol. 61 (1): 11-20.</a></li> <li>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. <a href="#">Br J Haematol. 69 (2): 163-71.</a></li> <li>Favaloro, E.J. (1991) CD-13 (gp150; aminopeptidase-N): co-expression on endothelial and haemopoietic cells with conservation of functional activity. <a href="#">Immunol Cell Biol. 69 ( Pt 4): 253-60.</a></li> <li>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. <a href="#">Clin Chim Acta. 220 (1): 81-90.</a></li> <li>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. <a href="#">Exp Hematol. 21 (13): 1695-701.</a></li> <li>Tavoosidana, G. <i>et al.</i> (2011) Multiple recognition assay reveals prostasomes as promising plasma biomarkers for prostate cancer. <a href="#">Proc Natl Acad Sci U S A. 108: 8809-14.</a></li> <li>Gredmark, S. <i>et al.</i> (2004) Human Cytomegalovirus Induces Inhibition of Macrophage Differentiation by Binding to Human Aminopeptidase N/CD13 <a href="#">J Immunol. 173: 4897-907</a></li> <li>Grzywacz, B. <i>et al.</i> (2011) Natural killer-cell differentiation by myeloid progenitors. <a href="#">Blood. 117: 3548-58.</a></li> <li>Stolzing, A. <i>et al.</i> (2008) Age-related changes in human bone marrow-derived mesenchymal</li> </ol>

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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.](#)
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  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.](#)

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#### Storage

Store at +4°C or at -20°C if preferred.

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.

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#### Shelf Life

18 months from date of despatch.

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#### Health And Safety Information

Material Safety Datasheet documentation #10040 available at: 10040: <https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf>

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#### Regulatory

For research purposes only

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## Related Products

### Recommended Secondary Antibodies

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

### Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL \(MCA928\)](#)

'M331354:180911'

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