

## Datasheet: MCA2045APC

<b>Description:</b>	MOUSE ANTI HUMAN CD177:APC
<b>Specificity:</b>	CD177
<b>Format:</b>	APC
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	MEM-166
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	100 TESTS

## 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	▪			Neat

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	Reacts with: Rhesus Monkey <b>N.B.</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.		
Product Form	Purified IgG conjugated to allophycocyanin (APC) - lyophilized		
Reconstitution	Reconstitute with 1ml distilled water		
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	APC	650	661
Preparation	Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant		

Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% sodium azide (NaN <sub>3</sub> ) 1% bovine serum albumin 5% sucrose
Approx. Protein Concentrations	IgG concentration 0.1mg/ml
Immunogen	Human granulocytes.
External Database Links	<p><b>UniProt:</b>  <a href="#">Q8N6Q3</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">57126</a>    CD177    <a href="#">Related reagents</a></p>
Synonyms	NB1, PRV1
RRID	AB_2072601
Specificity	<b>Mouse anti Human CD177 antibody, clone MEM-166</b> recognizes human CD177 (neutrophil glycoprotein NB1). The neutrophil NB1 antigen is expressed by 97% of the caucasian population. Antibodies against NB1 have been implicated in the pathology of neonatal alloimmune neutropenia ( <a href="#">Lalezari et al. 1971</a> ).
Flow Cytometry	Use 10µl of the suggested working dilution to label 10 <sup>6</sup> cells in 100µl
References	<ol style="list-style-type: none"> <li>1. Kissel, K. <i>et al.</i> (2002) Molecular basis of NB1 (HNA-2a, CD177) deficiency. <a href="#">Blood. 99 (11): 4231-3.</a></li> <li>2. Caruccio, L. <i>et al.</i> (2003) Expression of human neutrophil antigen-2a (NB1) is increased in pregnancy. <a href="#">Transfusion. 43 (3): 357-63.</a></li> <li>3. Nishimura, M. <i>et al.</i> (2007) Detection of anti-CD32 alloantibody in donor plasma implicated in development of transfusion-related acute lung injury. <a href="#">Cell Biochem Funct. 25 (2): 179-83.</a></li> <li>4. Sachs, U.J. <i>et al.</i> (2007) The neutrophil-specific antigen CD177 is a counter-receptor for platelet endothelial cell adhesion molecule-1 (CD31). <a href="#">J Biol Chem. 282: 23603-12.</a></li> <li>5. Drewniak, A. <i>et al.</i> (2008) Granulocyte concentrates: prolonged functional capacity during storage in the presence of phenotypic changes. <a href="#">Haematologica. 93:1058-67.</a></li> <li>6. Dillon, M. <i>et al.</i> (2008) Expression of the GPI-anchored receptor Prv-1 enhances thrombopoietin and IL-3-induced proliferation in hematopoietic cell lines. <a href="#">Leuk Res. 32: 811-9.</a></li> <li>7. Drewniak, A. <i>et al.</i> (2009) Changes in gene expression of granulocytes during in vivo granulocyte colony-stimulating factor/dexamethasone mobilization for transfusion purposes. <a href="#">Blood. 113: 5979-98.</a></li> <li>8. Jerke, U. <i>et al.</i> (2011) Complement receptor Mac-1 is an adaptor for NB1 (CD177)-mediated PR3-ANCA neutrophil activation. <a href="#">J Biol Chem. 286 (9): 7070-81.</a></li> </ol>

9. Pliyev, B.K. & Menshikov, M. (2012) Comparative evaluation of the role of the adhesion molecule CD177 in neutrophil interactions with platelets and endothelium. [Eur J Haematol. 89 \(3\): 236-44.](#)
10. Gabillet, J. *et al.* (2012) Proteinase 3, the autoantigen in granulomatosis with polyangiitis, associates with calreticulin on apoptotic neutrophils, impairs macrophage phagocytosis, and promotes inflammation. [J Immunol. 189: 2574-83.](#)
11. Johansson, Å.C. *et al.* (2016) Impaired phagocytosis and reactive oxygen species production in phagocytes is associated with systemic vasculitis. [Arthritis Res Ther. 18 \(1\): 92.](#)
12. Onodera, R. *et al.* (2017) Anti-human neutrophil antigen-1a, -1b, and -2 antibodies in neonates and children with immune neutropenias analyzed by extracted granulocyte antigen immunofluorescence assay. [Transfusion. 57 \(11\): 2586-94.](#)
13. Bayat, B. *et al.* (2021) Transfusion of Target Antigens to Pre-Immunized Recipients: A New Mechanism in Transfusion-Related Acute Lung Injury. [Blood Adv. bloodadvances.2020003843.](#)

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<b>Storage</b>	<p>This product is shipped at ambient temperature.</p> <p>Prior to reconstitution store at +4°C.</p> <p>After reconstitution store at +4°C.</p> <p>DO NOT FREEZE.</p> <p>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.</p>
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<b>Guarantee</b>	12 months from date of despatch
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<b>Health And Safety Information</b>	<p>Material Safety Datasheet documentation #20487 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA2045APC">https://www.bio-rad-antibodies.com/SDS/MCA2045APC</a></p> <p>20487</p>
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<b>Regulatory</b>	For research purposes only
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## Related Products

### Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:APC \(MCA928APC\)](#)

### Recommended Useful Reagents

[HUMAN SEROBLOCK \(BUF070A\)](#)

[HUMAN SEROBLOCK \(BUF070B\)](#)

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

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