

# Datasheet: MCA2045F

**BATCH NUMBER 167468**

|                      |                             |
|----------------------|-----------------------------|
| <b>Description:</b>  | MOUSE ANTI HUMAN CD177:FITC |
| <b>Specificity:</b>  | CD177                       |
| <b>Format:</b>       | FITC                        |
| <b>Product Type:</b> | Monoclonal Antibody         |
| <b>Clone:</b>        | MEM-166                     |
| <b>Isotype:</b>      | IgG1                        |
| <b>Quantity:</b>     | 0.1 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](http://www.bio-rad-antibodies.com/protocols).

|                | Yes | No | Not Determined | Suggested Dilution |
|----------------|-----|----|----------------|--------------------|
| Flow Cytometry | ▪   |    |                | Neat - 1/10        |

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

**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.

### Product Form

Purified IgG conjugated to Fluorescein Isothiocyanate Isomer 1 (FITC) - liquid.

### Max Ex/Em

| Fluorophore | Excitation Max (nm) | Emission Max (nm) |
|-------------|---------------------|-------------------|
| FITC        | 490                 | 525               |

### Preparation

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

### Buffer Solution

Phosphate buffered saline

|                                       |   |
|---------------------------------------|---|
| <b>Preservative</b>                   | 0.09% sodium azide (NaN <sub>3</sub> )  |
| <b>Stabilisers</b>                    | 1% bovine serum albumin   |
| <b>Approx. Protein Concentrations</b> | IgG concentration 0.1mg/ml  |
| <b>Immunogen</b>                      | Human granulocytes.   |
| <b>External Database Links</b>        | <p><b>UniProt:</b><br/> <a href="#">Q8N6Q3</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b><br/> <a href="#">57126</a>    CD177    <a href="#">Related reagents</a></p>   |
| <b>Synonyms</b>                       | NB1, PRV1   |
| <b>RRID</b>                           | AB_323349   |
| <b>Specificity</b>                    | <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> ).   |
| <b>Flow Cytometry</b>                 | Use 10µl of the suggested working dilution to label 10 <sup>6</sup> cells in 100µl  |
| <b>References</b>                     | <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> <li>9. Pliyev, B.K. &amp; Menshikov, M. (2012) Comparative evaluation of the role of the adhesion molecule CD177 in neutrophil interactions with platelets and endothelium. <a href="#">Eur J Haematol. 89 (3): 236-44.</a></li> </ol> |

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.](#)

|                                      |  |
|--------------------------------------|--|
| <b>Storage</b>                       | <p>This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C.</p> <p>Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended. This product is photosensitive and should be protected from light.</p> |
| <b>Guarantee</b>                     | 12 months from date of despatch  |
| <b>Health And Safety Information</b> | <p>Material Safety Datasheet documentation #10041 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA2045F">https://www.bio-rad-antibodies.com/SDS/MCA2045F</a></p> <p>10041</p>   |
| <b>Regulatory</b>                    | For research purposes only   |

## Related Products

### Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:FITC \(MCA928F\)](#)

### 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://www.bio-rad-antibodies.com/datasheets)  
'M412589:221114'

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