

# Datasheet: MCA620R

**BATCH NUMBER 170165**

|                      |                       |
|----------------------|-----------------------|
| <b>Description:</b>  | MOUSE ANTI RAT CD172a |
| <b>Specificity:</b>  | CD172a                |
| <b>Other names:</b>  | SIRP ALPHA            |
| <b>Format:</b>       | Purified              |
| <b>Product Type:</b> | Monoclonal Antibody   |
| <b>Clone:</b>        | ED9                   |
| <b>Isotype:</b>      | IgG1                  |
| <b>Quantity:</b>     | 0.25 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               | ▪   |    |                | 1/10 - 1/50        |
| Immunohistology - Frozen (1) | ▪   |    |                | 1/100 - 1/1000     |
| Immunohistology - Paraffin   |     | ▪  |                |                    |
| Immunohistology - Resin      |     | ▪  |                |                    |
| 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.

**(1)The epitope recognised by this antibody is reported to be sensitive to formaldehyde fixation and tissue processing. Bio-Rad recommends the use of acetone fixation for frozen sections.**

|                       |                                                                                               |
|-----------------------|-----------------------------------------------------------------------------------------------|
| <b>Target Species</b> | Rat                                                                                           |
| <b>Product Form</b>   | Purified IgG - liquid                                                                         |
| <b>Preparation</b>    | 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> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Carrier Free                   | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Approx. Protein Concentrations | IgG concentration 1.0 mg/ml                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Immunogen                      | Spleen cell homogenate.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| External Database Links        | <p><b>UniProt:</b><br/> <a href="#">P97710</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b><br/> <a href="#">25528</a>    Sirpa    <a href="#">Related reagents</a></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Synonyms                       | Bit, Mfr, Ptpns1, Shps1, Sirp                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| RRID                           | AB_323093                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Fusion Partners                | Spleen cells from immunised mice were fused with cells of the Sp2/0 Ag-14 myeloma cell line.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Specificity                    | <p><b>Mouse anti Rat CD172a antibody, clone ED9</b> recognizes rat Tyrosine-protein phosphatase non-receptor type substrate 1, also known as CD172a, Signal-regulatory protein alpha-1, SIRPα -1, SHP substrate 1, Macrophage membrane protein MFP150 or Macrophage fusion receptor. CD172a is a 509 amino acid ~56 kDa single pass type 1 transmembrane glycoprotein expressed selectively by myeloid cells and by neurons (<a href="#">UniProt: P97710</a>). Mouse anti Rat CD172a antibody, clone ED9 has been reported to bind to an alternative epitope to another anti CD172 antibody, clone OX-41 (<a href="#">Adams <i>et al.</i> 1998</a>) and has been reported to block the interaction of CD172a - CD47 (<a href="#">de Vries <i>et al.</i> 2002</a>).</p>                                                                                                                                                                                                  |
| Flow Cytometry                 | Use 10ul of the suggested working dilution to label 10 <sup>6</sup> cells in 100ul.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| References                     | <ol style="list-style-type: none"> <li>1. Damoiseaux, J.G. <i>et al.</i> (1989) Rat bone marrow and monocyte cultures: influence of culture time and lymphokines on the expression of macrophage differentiation antigens. <a href="#">J Leukoc Biol. 46 (3): 246-53.</a></li> <li>2. Damoiseaux, J.G. <i>et al.</i> (1989) Heterogeneity of macrophages in the rat evidenced by variability in determinants: two new anti-rat macrophage antibodies against a heterodimer of 160 and 95 kd (CD11/CD18). <a href="#">J Leukoc Biol. 46 (6): 556-64.</a></li> <li>3. Adams, S. <i>et al.</i> (1998) Signal-regulatory protein is selectively expressed by myeloid and neuronal cells. <a href="#">J Immunol. 161 (4): 1853-9.</a></li> <li>4. DeVries, H.E. <i>et al.</i> (2002) Signal-regulatory protein alpha-CD47 interactions are required for the transmigration of monocytes across cerebral endothelium. <a href="#">J Immunol. 168 (11): 5832-9.</a></li> </ol> |

5. Blackbeard, J. *et al.* (2007) Quantification of the rat spinal microglial response to peripheral nerve injury as revealed by immunohistochemical image analysis and flow cytometry. [J Neurosci Methods. 164 \(2\): 207-17.](#)
6. Bode, U. *et al.* (2008) Dendritic cell subsets in lymph nodes are characterized by the specific draining area and influence the phenotype and fate of primed T cells. [Immunology. 123 \(4\): 480-90.](#)
7. Chang, J.C. *et al.* (2019) Early Immune Response to Acute Gastric Fluid Aspiration in a Rat Model of Lung Transplantation. [Exp Clin Transplant. 17 \(1\): 84-92.](#)
8. Holler, J. *et al.* (2008) Neuropeptide Y is expressed by rat mononuclear blood leukocytes and strongly down-regulated during inflammation. [J Immunol. 181 \(10\): 6906-12.](#)
9. Schmiedl, A. *et al.* (2021) Lung development and immune status under chronic LPS exposure in rat pups with and without CD26/DPP4 deficiency. [Cell Tissue Res. Oct 04 \[Epub ahead of print\].](#)
10. Guiteras, J. *et al.* (2021) Dual and Opposite Costimulatory Targeting with a Novel Human Fusion Recombinant Protein Effectively Prevents Renal Warm Ischemia Reperfusion Injury and Allograft Rejection in Murine Models. [Int J Mol Sci. 22 \(3\): 1216.](#)

|                                      |                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <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.</p> |
| <b>Guarantee</b>                     | 12 months from date of despatch                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Health And Safety Information</b> | <p>Material Safety Datasheet documentation #10040 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA620R">https://www.bio-rad-antibodies.com/SDS/MCA620R</a></p> <p>10040</p>                                                                                                                                                                                                        |
| <b>Regulatory</b>                    | For research purposes only                                                                                                                                                                                                                                                                                                                                                                          |

## Related Products

### Recommended Secondary Antibodies

|                                         |                                                                                                                                                                                                                               |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rabbit Anti Mouse IgG (STAR12...)       | <a href="#">RPE</a>                                                                                                                                                                                                           |
| Goat Anti Mouse IgG IgA IgM (STAR87...) | <a href="#">HRP</a>                                                                                                                                                                                                           |
| Goat Anti Mouse IgG (STAR76...)         | <a href="#">RPE</a>                                                                                                                                                                                                           |
| Goat Anti Mouse IgG (STAR70...)         | <a href="#">FITC</a>                                                                                                                                                                                                          |
| Goat Anti Mouse IgG (H/L) (STAR117...)  | <a href="#">Alk. Phos.</a> , <a href="#">DyLight®488</a> , <a href="#">DyLight®550</a> , <a href="#">DyLight®650</a> , <a href="#">DyLight®680</a> , <a href="#">DyLight®800</a> , <a href="#">FITC</a> , <a href="#">HRP</a> |
| Rabbit Anti Mouse IgG (STAR9...)        | <a href="#">FITC</a>                                                                                                                                                                                                          |
| Rabbit Anti Mouse IgG (STAR13...)       | <a href="#">HRP</a>                                                                                                                                                                                                           |
| Goat Anti Mouse IgG (Fc) (STAR120...)   | <a href="#">FITC</a> , <a href="#">HRP</a>                                                                                                                                                                                    |
| Goat Anti Mouse IgG (STAR77...)         | <a href="#">HRP</a>                                                                                                                                                                                                           |

## Recommended Negative Controls

### MOUSE IgG1 NEGATIVE CONTROL (MCA1209)

|                                  |                                                                                                                                         |                  |                                                                                                                                                 |               |                                                                                                                                                     |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>North &amp; South America</b> | Tel: +1 800 265 7376<br>Fax: +1 919 878 3751<br>Email: <a href="mailto:antibody_sales_us@bio-rad.com">antibody_sales_us@bio-rad.com</a> | <b>Worldwide</b> | Tel: +44 (0)1865 852 700<br>Fax: +44 (0)1865 852 739<br>Email: <a href="mailto:antibody_sales_uk@bio-rad.com">antibody_sales_uk@bio-rad.com</a> | <b>Europe</b> | Tel: +49 (0) 89 8090 95 21<br>Fax: +49 (0) 89 8090 95 50<br>Email: <a href="mailto:antibody_sales_de@bio-rad.com">antibody_sales_de@bio-rad.com</a> |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|

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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