

## Datasheet: MCA1143PET

<b>Description:</b>	RAT ANTI MOUSE CD40:RPE
<b>Specificity:</b>	CD40
<b>Format:</b>	RPE
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	3/23
<b>Isotype:</b>	IgG2a
<b>Quantity:</b>	25 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 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>	Mouse		
<b>Product Form</b>	Purified IgG conjugated to R. Phycoerythrin (RPE) - lyophilized		
<b>Reconstitution</b>	Reconstitute in 0.25 ml distilled water		
<b>Max Ex/Em</b>	<b>Fluorophore</b>	<b>Excitation Max (nm)</b>	<b>Emission Max (nm)</b>
	RPE 488nm laser	496	578
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant.		
<b>Buffer Solution</b>	Phosphate buffered saline		
<b>Preservative Stabilisers</b>	0.09% Sodium Azide		
	1%	Bovine Serum Albumin	
	5%	Sucrose	

<b>Immunogen</b>	Extracellular Domain of Mouse CD40 and the Fc portion of Human IgG1.
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">P27512</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">21939</a>    Cd40    <a href="#">Related reagents</a></p>
<b>Synonyms</b>	Tnfrsf5
<b>RRID</b>	AB_1102008
<b>Fusion Partners</b>	Spleen cells from immunised LOU/c rats were fused with cells of the Ag8 mouse myeloma cell line.
<b>Specificity</b>	<p><b>Rat anti Mouse CD40 antibody, clone 3/23</b> recognizes the murine CD40 cell surface glycoprotein. It does not react with normal mouse Ig or with human IgG1 and will stain most mature mouse B cells. It does not cross react with mouse T cells. The specificity of Rat anti Mouse CD40 antibody, clone 3/23 was demonstrated by ELISA and flow cytometry using BHK cells transfected with mouse CD40.</p> <p>Rat anti Mouse CD40 antibody, clone 3/23 is a powerful activator of normal B cells especially in the presence of IL-4.</p>
<b>Flow Cytometry</b>	<p>Use 10ul of the suggested working dilution to label 10<sup>6</sup> cells in 100ul.</p> <p>The Fc region of monoclonal antibodies may bind non-specifically to cells expressing low affinity fc receptors. This may be reduced by using SeroBlock FcR (<a href="#">BUF041A/B</a>).</p>
<b>References</b>	<ol style="list-style-type: none"> <li>1. Parry, S.L. <i>et al.</i> (1994) Plastic-immobilized anti-mu or anti-delta antibodies induce apoptosis in mature murine B lymphocytes. <a href="#">Eur J Immunol. 24 (4): 974-9.</a></li> <li>2. Hasbold, J. <i>et al.</i> (1994) Properties of mouse CD40: cellular distribution of CD40 and B cell activation by monoclonal anti-mouse CD40 antibodies. <a href="#">Eur J Immunol. 24 (8): 1835-42.</a></li> <li>3. Hasbold, J. &amp; Klaus, G.G. (1994) B cells from CBA/N mice do not proliferate following ligation of CD40. <a href="#">Eur J Immunol. 24 (1): 152-7.</a></li> <li>4. Bedoret, D. <i>et al.</i> (2009) Lung interstitial macrophages alter dendritic cell functions to prevent airway allergy in mice. <a href="#">J Clin Invest. 119 (12): 3723-38.</a></li> <li>5. Mohan, J. <i>et al.</i> (2005) Skin-derived dendritic cells acquire and degrade the scrapie agent following in vitro exposure. <a href="#">Immunology. 116: 122-33.</a></li> <li>6. Mukhopadhyay, S. <i>et al.</i> (2004) Activation of murine macrophages by Neisseria meningitidis and IFN-gamma in vitro: distinct roles of class A scavenger and Toll-like pattern recognition receptors in selective modulation of surface phenotype. <a href="#">J Leukoc Biol. 76: 577-84.</a></li> <li>7. Russo, S. <i>et al.</i> (2003) Platelet-activating factor mediates CD40-dependent angiogenesis and endothelial-smooth muscle cell interaction. <a href="#">J Immunol. 171: 5489-97.</a></li> <li>8. Shakib, S. <i>et al.</i> (2009) Checkpoints in the development of thymic cortical epithelial</li> </ol>

cells. [J Immunol. 182: 130-7.](#)

9. Ogasawara, K. *et al.* (2002) Profiles of cell-to-cell interaction of Mycobacterium intracellulare-induced immunosuppressive macrophages with target T cells in terms of suppressor signal transmission. [Clin Exp Immunol. 129: 272-80.](#)

10. Salomon, B. *et al.* (1998) Three populations of mouse lymph node dendritic cells with different origins and dynamics. [J Immunol. 160: 708-17.](#)

11. Yang, Y.F. *et al.* (2000) Requirement for IFN-gamma in IL-12 production induced by collaboration between v(alpha)14(+) NKT cells and antigen-presenting cells. [Int Immunol. 12: 1669-75.](#)

12. Legutko, A. *et al.* (2011) Sirtuin 1 Promotes Th2 Responses and Airway Allergy by Repressing Peroxisome Proliferator-Activated Receptor- $\gamma$  Activity in Dendritic Cells. [J Immunol. 187: 4517-29.](#)

13. Pletinckx, K. *et al.* (2015) Immature dendritic cells convert anergic nonregulatory T cells into Foxp3- IL-10+ regulatory T cells by engaging CD28 and CTLA-4. [Eur J Immunol. 45 \(2\): 480-91.](#)

14. Malada-Edelstein, Y.F. *et al.* (2017) Regulatory role of cytosolic phospholipase A<sub>2</sub> alpha in the induction of CD40 in microglia. [J Neuroinflammation. 14 \(1\): 33.](#)

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**Storage**

Prior to reconstitution store at +4°C. Following reconstitution store at +4°C.

DO NOT FREEZE.

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.

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**Guarantee**

12 months from date of reconstitution.

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**Health And Safety Information**

Material Safety Datasheet documentation #10075 available at: 10075: <https://www.bio-rad-antibodies.com/uploads/MSDS/10075.pdf>

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**Regulatory**

For research purposes only

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## Related Products

### Recommended Negative Controls

[RAT IgG2a NEGATIVE CONTROL:RPE \(MCA1212PE\)](#)

### Recommended Useful Reagents

[MOUSE SEROBLOCK FcR \(BUF041A\)](#)

[MOUSE SEROBLOCK FcR \(BUF041B\)](#)

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