

## Datasheet: MCA715PE

**BATCH NUMBER 151681**

<b>Description:</b>	RAT ANTI HUMAN CD59:RPE
<b>Specificity:</b>	CD59
<b>Format:</b>	RPE
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	YTH53.1
<b>Isotype:</b>	IgG2b
<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 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>Product Form</b>	Purified IgG conjugated to R. Phycoerythrin (RPE) - lyophilized		
<b>Reconstitution</b>	Reconstitute with 1 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 ion exchange chromatography		
<b>Buffer Solution</b>	Phosphate buffered saline		
<b>Preservative</b>	0.09% Sodium Azide		
<b>Stabilisers</b>	1%	Bovine Serum Albumin	
	5%	Sucrose	

<b>Immunogen</b>	Human Peripheral Blood T cells.
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">P13987</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">966</a>    CD59    <a href="#">Related reagents</a></p>
<b>Synonyms</b>	MIC11, MIN1, MIN2, MIN3, MSK21
<b>RRID</b>	AB_321513
<b>Fusion Partners</b>	Spleen cells from an immunised DA rat were fused with cells of the Y3/Ag1.2.3 rat myeloma cell line.
<b>Specificity</b>	<p><b>Rat anti Human CD59 antibody, clone YTH53.1</b> recognizes the human CD59 cell surface antigen, also known as MAC-inhibitory protein, 1F5 antigen, 20 kDa homologous restriction factor, MEM43 antigen, membrane attack complex inhibition factor, membrane inhibitor of reactive lysis or protectin. CD59 is produced as a 103 amino acid proprotein, further processed to produce an 18-20 kDa GPI linked glycoprotein broadly expressed by human leucocytes and erythrocytes.</p> <p>Mutation of the CD59 gene can result in the presentation of Hemolytic anemia, CD59-mediated, with or without polyneuropathy (<a href="#">HACD59</a>) a disease characterized by infantile onset of a relapsing-remitting polyneuropathy manifest as limb muscle weakness, and hyporeflexia.</p> <p>Rat anti Human CD59 antibody, clone YTH53.1 blocks the normal function of CD59 (<a href="#">Walsh et al. 1991</a>).</p>
<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label 10 <sup>6</sup> cells in 100ul. We do not recommend using this antibody in lysed whole blood techniques due to inhibition of staining caused by CD59 expression on erythrocytes.
<b>References</b>	<ol style="list-style-type: none"> <li>Davies, A. <i>et al.</i> (1989) CD59, an LY-6-like protein expressed in human lymphoid cells, regulates the action of the complement membrane attack complex on homologous cells. <a href="#">J Exp Med. 170 (3): 637-54.</a></li> <li>Walsh, L.A. <i>et al.</i> (1991) Transfection of human CD59 complementary DNA into rat cells confers resistance to human complement. <a href="#">Eur J Immunol. 21 (3): 847-50.</a></li> <li>Davies, A. <i>et al.</i> (1995) Identification of MIC 11 antigen as an epitope of the CD59 molecule. <a href="#">Immunology. 85 (2): 220-7.</a></li> <li>Ellison BS <i>et al.</i> (2007) Complement susceptibility in glutamine deprived breast cancer cells. <a href="#">Cell Div. 2: 20.</a></li> <li>Ajona, D. <i>et al.</i> (2007) Down-regulation of human complement factor H sensitizes non-small cell lung cancer cells to complement attack and reduces in vivo tumor growth. <a href="#">J Immunol. 178 (9): 5991-8.</a></li> <li>Yang, P. <i>et al.</i> (2009) Expression and modulation of RPE cell membrane complement</li> </ol>

regulatory proteins. [Invest Ophthalmol Vis Sci. 50: 3473-81.](#)

7. Hosokawa, M. *et al.* (2004) Human oligodendroglial cells express low levels of C1 inhibitor and membrane cofactor protein mRNAs. [J Neuroinflammation. 1: 17.](#)

8. Koch, N. *et al.* (2009) IL-10 protects monocytes and macrophages from complement-mediated lysis. [J Leukoc Biol. 86: 155-66.](#)

9. Zhu, C. *et al.* (2020) Isatuximab Acts Through Fc-Dependent, Independent, and Direct Pathways to Kill Multiple Myeloma Cells. [Front Immunol. 11: 1771.](#)

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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 despatch

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**Health And Safety Information** Material Safety Datasheet documentation #20487 available at: <https://www.bio-rad-antibodies.com/SDS/MCA715PE>  
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**Regulatory** For research purposes only

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## Related Products

### Recommended Negative Controls

[RAT IgG2b NEGATIVE CONTROL:RPE \(MCA6006PE\)](#)

### 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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