

## Datasheet: MCA2059T

<b>Description:</b>	MOUSE ANTI HUMAN CD88
<b>Specificity:</b>	CD88
<b>Other names:</b>	C5aR
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	P12/1
<b>Isotype:</b>	IgG2a
<b>Quantity:</b>	25 µg

## 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	▪			1/50 - 1/100
Immunohistology - Frozen	▪			
Immunohistology - Paraffin	▪			
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.

### 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 - liquid

### Preparation

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
<b>Carrier Free</b>	Yes
<b>Approx. Protein Concentrations</b>	IgG concentration 1 mg/ml
<b>Immunogen</b>	C5aR - peptide: Met <sub>1</sub> - Asn <sub>31</sub>
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">P21730</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">728</a>    C5AR1    <a href="#">Related reagents</a></p>
<b>Synonyms</b>	C5AR, C5R1
<b>RRID</b>	AB_2067168
<b>Fusion Partners</b>	Spleen cells from immunised BALB/c mice were fused with cells of the mouse X63 - Ag8 myeloma cell line.
<b>Specificity</b>	<p><b>Mouse anti Human CD88 antibody, clone P12/1</b> recognizes the C5a receptor (C5aR) also known as CD88 or C5a anaphylatoxin chemotactic receptor 1. CD88 is predominantly expressed on cells of the myeloid lineage.</p> <p>When C5aR is preincubated with C5a, Mouse anti Human CD88 antibody, clone P12/1 does not bind to the receptor, as the binding site of P12/1 is located in the C5a binding region (<a href="#">Werfel et al. 1996</a> and <a href="#">Weinman et al. 2003</a>)</p>
<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label 5 x 10 <sup>5</sup> cells in 100ul.
<b>References</b>	<ol style="list-style-type: none"> <li>1. Werfel, T. <i>et al.</i> (1996) CD88 antibodies specifically bind to C5aR on dermal CD117+ and CD14+ cells and react with a desmosomal antigen in human skin. <a href="#">J Immunol. 157: 1729-35.</a></li> <li>2. Opperman, M. <i>et al.</i> (1995) Antibodies from the myeloid panel that react with the C5a receptor and antagonize C5a biological activity. In: Schlossman, S.F. (ed.) Leucocyte Typing V. OUP: 955-6.</li> <li>3. Pollok-Kopp B <i>et al.</i> (2007) Dynamics of protein kinase C-mediated phosphorylation of the complement C5a receptor on serine 334. <a href="#">J Biol Chem. 282 (7): 4345-53.</a></li> <li>4. Werfel, T. <i>et al.</i> (1995) Binding of anti-C5a receptor (C5aR) antibodies to cells of clinically normal human skin. In: Schlossman, S.F. (ed.) Leucocyte Typing V. OUP: 957-9.</li> <li>5. Oppermann, M. (1995) Cluster report: (C5a receptor). In: Schlossman, S.F. (ed.) Leucocyte Typing V. OUP: 953-4.</li> <li>6. Hüttenrauch, F. <i>et al.</i> (2005) G protein-coupled receptor kinases promote</li> </ol>

phosphorylation and beta-arrestin-mediated internalization of CCR5 homo- and hetero-oligomers. [J Biol Chem. 280: 37503-15.](#)

7. Huber-Lang, M. *et al.* (2005) Changes in the novel orphan, C5a receptor (C5L2), during experimental sepsis and sepsis in humans. [J Immunol. 174 \(2\): 1104-10.](#)

8. Morris, A.C. *et al.* (2011) C5a-mediated neutrophil dysfunction is RhoA-dependent and predicts infection in critically ill patients. [Blood. 117: 5178-88.](#)

9. Visser T *et al.* (2012) Homology in systemic neutrophil response induced by human experimental endotoxemia and by trauma. [Shock. 37 \(2\): 145-51.](#)

10. Nitta, H. *et al.* (2013) Enhancement of human cancer cell motility and invasiveness by anaphylatoxin C5a via aberrantly expressed C5a receptor (CD88). [Clin Cancer Res. 19 \(8\): 2004-13.](#)

11. Patzelt, J. *et al.* (2015) Expression of anaphylatoxin receptors on platelets in patients with coronary heart disease. [Atherosclerosis. 238 \(2\): 289-95.](#)

12. Unnewehr H *et al.* (2013) Changes and regulation of the C5a receptor on neutrophils during septic shock in humans. [J Immunol. 190 \(8\): 4215-25.](#)

13. Visser T *et al.* (2011) Isolated blunt chest injury leads to transient activation of circulating neutrophils. [Eur J Trauma Emerg Surg. 37 \(2\): 177-84.](#)

14. Presicce, P. *et al.* (2015) Neutrophil recruitment and activation in decidua with intra-amniotic IL-1beta in the preterm rhesus macaque. [Biol Reprod. 92 \(2\): 56.](#)

15. Zannetti, C. *et al.* (2016) Characterization of the Inflammasome in Human Kupffer Cells in Response to Synthetic Agonists and Pathogens. [J Immunol. 197 \(1\): 356-67.](#)

16. Werfel, T. *et al.* (1996) The human mast cell line HMC-1 expresses C5a receptors and responds to C5a but not to C5a(desArg). [Scand J Immunol. 44 \(1\): 30-6.](#)

17. Weinmann, O. *et al.* (2003) Up-regulation of C5a receptor expression and function on human monocyte derived dendritic cells by prostaglandin E2. [Immunology. 110 \(4\): 458-65.](#)

18. Hodille, E. *et al.* (2020) Staphylococcal Pantone-Valentine Leucocidin and Gamma Haemolysin Target and Lyse Mature Bone Marrow Leucocytes. [Toxins. 12 \(11\): 725.](#)

19. Henes, J.K. *et al.* (2021) C5 Variant rs10985126 is Associated with Mortality in Patients with Symptomatic Coronary Artery Disease. [Pharmgenomics Pers Med. 14: 893-903.](#)

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**Further Reading**

1. Oppermann, M. *et al.* (1993) Probing the human receptor for C5a anaphylatoxin with site-directed antibodies. Identification of a potential ligand binding site on the NH<sub>2</sub>-terminal domain. [J Immunol. 151 \(7\): 3785-94.](#)

2. Oppermann, M. & Götze, O. (1994) Plasma clearance of the human C5a anaphylatoxin by binding to leucocyte C5a receptors. [Immunology. 82 \(4\): 516-21.](#)

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**Storage**

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.

Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.

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**Guarantee**

12 months from date of despatch

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**Health And Safety**

Material Safety Datasheet documentation #10040 available at:

**Information** 10040: <https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf>

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**Regulatory** For research purposes only

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## Related Products

### Recommended Secondary Antibodies

Goat Anti Mouse IgG (STAR77...)	<a href="#">HRP</a>
Rabbit Anti Mouse IgG (STAR12...)	<a href="#">RPE</a>
Rabbit Anti Mouse IgG (STAR8...)	<a href="#">DyLight@800</a>
Goat Anti Mouse IgG (STAR76...)	<a href="#">RPE</a>
Human Anti Mouse IgG2a (HCA037...)	<a href="#">HRP</a>
Goat Anti Mouse IgG (Fc) (STAR120...)	<a href="#">FITC</a> , <a href="#">HRP</a>
Rabbit Anti Mouse IgG (STAR13...)	<a href="#">HRP</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>
Goat Anti Mouse IgG (STAR70...)	<a href="#">FITC</a>
Rabbit Anti Mouse IgG (STAR9...)	<a href="#">FITC</a>
Goat Anti Mouse IgG IgA IgM (STAR87...)	<a href="#">Alk. Phos.</a> , <a href="#">HRP</a>

### Recommended Negative Controls

[MOUSE IgG2a NEGATIVE CONTROL \(MCA929\)](#)

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