Datasheet: MCA2059PE

BATCH NUMBER 171904

Description:	MOUSE ANTI HUMAN CD88:RPE
Specificity:	CD88
Other names:	C5aR
Format:	RPE
Product Type:	Monoclonal Antibody
Clone:	P12/1
Isotype:	IgG2a
Quantity:	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.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			Neat

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 R. Phycoerythrin (RPE) - lyophilized

Reconstitution

Reconstitute with 1.0 ml distilled water

Care should be taken during reconstitution as the protein may appear as a film at the bottom of the vial. Bio-Rad recommend that the vial is gently mixed after reconstitution.

Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
RPE 488nm laser	496	578

Preparation	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_3) 1% bovine serum albumin 5% sucrose
Immunogen	C5aR - peptide: Met_1 - Asn_{31}
External Database Links	**UniProt:** P21730 Related reagents **Entrez Gene:** 728 C5AR1 Related reagents
Synonyms	C5AR, C5R1
Fusion Partners	Spleen cells from immunized BALB/c mice were fused with cells of the mouse X63 - Ag8 myeloma cell line.
Specificity	**Mouse anti Human CD88 antibody, clone P12/1** 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. 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 (Werfel *et al*. 1996 and Weinman *et al*. 2003)
Flow Cytometry	Use 10µl of the suggested working dilution to label 10^6 cells or 100µl whole blood
References	1. Werfel, T. *et al*. (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. 2. Oppermann, M. (1995) Cluster report: (C5a receptor). In: Schlossman, S.F. (ed.) Leucocyte Typing V. OUP: 953-4. 3. Opperman, M. *et al*. (1995) Antibodies from the myeloid panel that react with the C5a receptor and anatagonize C5a biological activity. In: Schlossman, S.F. (ed.) Leucocyte Typing V. OUP: 955-6. 4. 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. 5. 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. 6. Hüttenrauch, F. *et al.* (2005) G protein-coupled receptor kinases promote 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. Pollok-Kopp B *et al.* (2007) Dynamics of protein kinase C-mediated phosphorylation of the complement C5a receptor on serine 334. J Biol Chem. 282 (7): 4345-53.
9. 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.
10. Morris, A.C. *et al.* (2011) C5a-mediated neutrophil dysfunction is RhoA-dependent and predicts infection in critically ill patients. Blood. 117: 5178-88.
11. Visser T *et al.* (2012) Homology in systemic neutrophil response induced by human experimental endotoxemia and by trauma. Shock. 37 (2): 145-51.
12. 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.
13. 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.
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. Patzelt, J. *et al.* (2015) Expression of anaphylatoxin receptors on platelets in patients with coronary heart disease. Atherosclerosis. 238 (2): 289-95.
16. 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.
17. Hodille, E. *et al.* (2020) Staphylococcal Panton–Valentine Leucocidin and Gamma Haemolysin Target and Lyse Mature Bone Marrow Leucocytes. Toxins. 12 (11): 725.
18. 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.
19. Imamura, R. *et al.* (2021) Prostate cancer C5a receptor expression and augmentation of cancer cell proliferation, invasion, and PD-L1 expression by C5a. Prostate. 81 (3): 147-156.
20. Newman, J. *et al.* (2024) Chorioamnionitis accelerates granule cell and oligodendrocyte maturation in the cerebellum of preterm nonhuman primates. J Neuroinflammation. 21 (1): 16.

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 NH2-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.

Storage

This product is shipped at ambient temperature.
Prior to reconstitution store at +4°C.
After reconstitution store at +4°C.
DO NOT FREEZE.
This product should be stored undiluted. This product is photosensitive and should be protected from light.

Guarantee

12 months from date of despatch

Health And Safety Information	Material Safety Datasheet documentation #20487 available at: https://www.bio-rad-antibodies.com/SDS/MCA2059PE
Regulatory	For research purposes only

Related Products

Recommended Negative Controls

MOUSE IgG2a NEGATIVE CONTROL:RPE (MCA929PE)

Recommended Useful Reagents

HUMAN SEROBLOCK (BUF070A)
HUMAN SEROBLOCK (BUF070B)

Product inquiries: www.bio-rad-antibodies.com/technical-support

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets
'M446290:251103'

Printed on 24 Apr 2026