

Datasheet: MCA2113PE

Description:	MOUSE ANTI HUMAN CD46:RPE
Specificity:	CD46
Other names:	MEMBRANE CO-FACTOR PROTEIN
Format:	RPE
Product Type:	Monoclonal Antibody
Clone:	MEM-258
Isotype:	IgG1
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 antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.

Target Species	Human						
Product Form	Purified IgG conjugated to R. Phycoerythrin (RPE) - lyophilized						
Reconstitution	Reconstitute with 1 ml distilled water						
Max Ex/Em	<table border="1"> <thead> <tr> <th>Fluorophore</th> <th>Excitation Max (nm)</th> <th>Emission Max (nm)</th> </tr> </thead> <tbody> <tr> <td>RPE 488nm laser</td> <td>496</td> <td>578</td> </tr> </tbody> </table>	Fluorophore	Excitation Max (nm)	Emission Max (nm)	RPE 488nm laser	496	578
Fluorophore	Excitation Max (nm)	Emission Max (nm)					
RPE 488nm laser	496	578					
Preparation	Purified IgG prepared by affinity chromatography on Protein A						
Buffer Solution	Phosphate buffered saline						
Preservative	0.09% Sodium Azide						
Stabilisers	1% Bovine Serum Albumin						
Immunogen	HPB-ALL cell line.						

External Database Links

UniProt:

[P15529](#) [Related reagents](#)

Entrez Gene:

[4179](#) CD46 [Related reagents](#)

Synonyms	MCP, MIC10
RRID	AB_324204
Specificity	<p>Mouse anti Human CD46 antibody, clone MEM-258 recognizes the human CD46 cell surface antigen, also known as membrane co-factor protein (MCP), Trophoblast leukocyte common antigen or TLX. CD46 is a 392 amino acid (including a 34 aa signal peptide) ~43-60 kDa single pass type 1 transmembrane glycoprotein expressed by all cell types with the exception of erythrocytes.</p> <p>CD46 functions as areceptor for complement and inhibitor of complement activation, limiting the formation and activity of C3 convertases. CD46 is expressed by all nucleated cells, often as multiple isoforms (Seya <i>et al.</i> 1993) on the same cells. The molecule is also expressed by sperm and may be important in the process of fertilisation (Carver-Ward <i>et al.</i> 1996).</p>
Flow Cytometry	Use 10ul of the suggested working dilution to label 10 ⁶ or 100ul whole blood.
References	<ol style="list-style-type: none"> 1. Sirena D <i>et al.</i> (2004) The human membrane cofactor CD46 is a receptor for species B adenovirus serotype 3. J Virol. 78 (9): 4454-62. 2. Fremeaux-Bacchi, V. <i>et al.</i> (2006) Genetic and functional analyses of membrane cofactor protein (CD46) mutations in atypical hemolytic uremic syndrome. J Am Soc Nephrol. 17 (7): 2017-25. 3. Fleischli, C. <i>et al.</i> (2005) The distal short consensus repeats 1 and 2 of the membrane cofactor protein CD46 and their distance from the cell membrane determine productive entry of species B adenovirus serotype 35. J Virol. 79:10013-22. 4. Sweigard, J.H. <i>et al.</i> (2010) Adenovirus vectors targeting distinct cell types in the retina. Invest Ophthalmol Vis Sci. 51:2219-28. 5. Yang, P. <i>et al.</i> (2009) Expression and modulation of RPE cell membrane complement regulatory proteins. Invest Ophthalmol Vis Sci. 50: 3473-81. 6. Bahat, A. and Eisenbach, M. (2010) Human sperm thermotaxis is mediated by phospholipase C and inositol trisphosphate receptor Ca²⁺ channel. Biol Reprod. 82: 606-16. 7. Bienaime, F. <i>et al.</i> (2010) Mutations in components of complement influence the outcome of Factor I-associated atypical hemolytic uremic syndrome. Kidney Int. 77: 339-49. 8. Wang, H. <i>et al.</i> (2008) <i>In vitro</i> and <i>in vivo</i> properties of adenovirus vectors with increased affinity to CD46. J Virol. 82: 10567-79. 9. Hara, H. <i>et al.</i> (2011) Initial <i>in vitro</i> investigation of the human immune response to corneal cells from genetically engineered pigs. Invest Ophthalmol Vis Sci. 52: 5278-86. 10. El Karoui, K. <i>et al.</i> (2012) A clinicopathologic study of thrombotic microangiopathy in IgA nephropathy. J Am Soc Nephrol. 23 (1): 137-48. 11. Bach, P. <i>et al.</i> (2013) Specific elimination of CD133+ tumor cells with targeted oncolytic measles virus. Cancer Res. 73 (2): 865-74. 12. Leaderer, D. <i>et al.</i> (2015) Adeno-associated virus mediated delivery of an engineered protein that combines the complement inhibitory properties of CD46, CD55 and CD59. J Gene Med. 17 (6-7): 101-15. 13. Tuve, S. <i>et al.</i> (2006) A new group B adenovirus receptor is expressed at high levels on human stem and tumor cells. J Virol. 80 (24): 12109-20. 14. Hara, H. <i>et al.</i> (2008) <i>In vitro</i> investigation of pig cells for resistance to human antibody-mediated rejection. Transpl Int. 21 (12): 1163-74. 15. Loré, K. <i>et al.</i> (2007) Myeloid and plasmacytoid dendritic cells are susceptible to recombinant adenovirus vectors and stimulate polyfunctional memory T cell responses. J Immunol. 179 (3): 1721-9. 16. Fremeaux-Bacchi, V. <i>et al.</i> (2007) Unusual clinical severity of complement membrane cofactor protein-associated hemolytic-uremic syndrome and uniparental isodisomy. Am J Kidney Dis. 49 (2): 323-9.

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20. Iguchi, K. *et al.* (2012) Efficient antitumor effects of carrier cells loaded with a fiber-substituted conditionally replicating adenovirus on CAR-negative tumor cells. [Cancer Gene Ther. 19 \(2\): 118-25.](#)
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24. Tuve, S. *et al.* (2008) Role of cellular heparan sulfate proteoglycans in infection of human adenovirus serotype 3 and 35. [PLoS Pathog. 4 \(10\): e1000189.](#)
25. Iwase, H. *et al.* (2014) Regulation of human platelet aggregation by genetically modified pig endothelial cells and thrombin inhibition. [Xenotransplantation. 21 \(1\): 72-83.](#)
26. Sweigard, J.H. *et al.* (2011) Adenovirus-mediated delivery of CD46 attenuates the alternative complement pathway on RPE: implications for age-related macular degeneration. [Gene Ther. 18 \(6\): 613-21.](#)

Storage

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.

Guarantee

12 months from date of despatch

Health And Safety Information

Material Safety Datasheet documentation #10338 available at: 10338: <https://www.bio-rad-antibodies.com/uploads/MSDS/10338.pdf>

Regulatory

For research purposes only

Related Products

Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:RPE \(MCA928PE\)](#)

Recommended Useful Reagents

[HUMAN SEROBLOCK \(BUF070A\)](#)

[HUMAN SEROBLOCK \(BUF070B\)](#)

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