

Datasheet: MCA2281PE

## **BATCH NUMBER 166582**

Description:	RAT ANTI MOUSE CD200R:RPE
Specificity:	CD200R
Other names:	OX2R
Format:	RPE
Product Type:	Monoclonal Antibody
Product Type: Clone:	Monoclonal Antibody OX-110
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# **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 <a href="www.bio-rad-antibodies.com/protocols">www.bio-rad-antibodies.com/protocols</a>.

	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	Mouse		
Product Form	Purified IgG conjugate	ed to R. Phycoerythrin	(RPE) - lyophilized
Reconstitution	Reconstitute with 1 m	l distilled water	
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm
RPE 48	RPE 488nm laser	496	578
Preparation	Purified IgG prepared supernatant	by affinity chromatog	raphy on Protein G
Buffer Solution	Phosphate buffered sa	aline	
Preservative	0.09% sodium azide (	NaN <sub>3</sub> )	
Stabilisers	1% bovine serum albu	ımin	

Immunogei	n
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Fusion protein mCD200RCD4d3+4

## External Database Links

### **UniProt:**

Q9ES57 Related reagents

#### **Entrez Gene:**

57781 Cd200r1 Related reagents

#### **Synonyms**

Mox2r, Ox2r

#### **RRID**

AB\_566626

### **Specificity**

Rat anti Mouse CD200R antibody, clone OX-110 recognizes mouse CD200R, a cell surface glycoprotein (also known as OX2R. Mouse CD200R is a 326 amino acid, ~48 kDa single pass type I transmembrane glycoprotein, expressed primarily by peripheral blood monocytes and neutrophils but also by other leucocytes including T-lymphocytes and mast cells (Wright et al.2003). CD200-CD200R interaction may be involved in the control of myeloid cellular function (Minas and Liversidge 2006).

Rat anti Mouse CD200R antibody, clone OX-110 has been used successfully for the immunohistochemical detection of CD200R expressing cells on acetone fixed cryosections of murine synovial tissue (<u>Simelyte et al. 2008</u>).

### **Flow Cytometry**

Use 10µl of the suggested working dilution to label 10<sup>6</sup> cells in 100µl.

The Fc region of monoclonal antibodies may bind to cells expressing low affinity Fc receptors. This may be reduced by using SeroBlock FcR (<u>BUF041A/BUF041B</u>).

### References

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- 2. Zhao, J. *et al.* (2009) Evasion by stealth: inefficient immune activation underlies poor T cell response and severe disease in SARS-CoV-infected mice. <u>PLoS Pathog. 5 (10):</u> e1000636.
- 3. Björck, P. *et al.* (2011) Plasmacytoid Dendritic Cell Dichotomy: Identification of IFN-{alpha} Producing Cells as a Phenotypically and Functionally Distinct Subset. <u>J. Immunol.</u> 186: 1477-85.
- 4. Dellacasa-Lindberg, I. *et al.* (2011) Migratory Activation of Primary Cortical Microglia upon Infection with *Toxoplasma gondii*. Infect Immun. 79: 3046-52.
- 5. Krejsek, J. *et al.* (2010) Expression of CD200/CD200R regulatory molecules on granulocytes and monocytes is modulated by cardiac surgical operation. <u>Perfusion 25:</u> 389-97.
- 6. Rijkers, E.S. *et al.* (2008) The inhibitory CD200R is differentially expressed on human and mouse T and B lymphocytes. <u>Mol Immunol. 45: 1126-35.</u>
- 7. Costello, D.A. *et al.* (2011) Long term potentiation is impaired in membrane glycoprotein CD200-deficient mice: a role for Toll-like receptor activation. <u>J Biol Chem. 286 (40):</u> 34722-32.

- 8. Simelyte, E. *et al.* (2008) CD200-Fc, a novel antiarthritic biologic agent that targets proinflammatory cytokine expression in the joints of mice with collagen-induced arthritis. Arthritis Rheum. 58: 1038-43.
- 9. Whitmore, L.C. *et al.* (2014) NOX2 protects against progressive lung injury and multiple organ dysfunction syndrome. Am J Physiol Lung Cell Mol Physiol. 307: L71-82.
- 10. Chitnis, T. *et al.* (2007) Elevated neuronal expression of CD200 protects Wlds mice from inflammation-mediated neurodegeneration. <u>Am J Pathol.</u> 170: 1695-712.
- 11. Larson, D. *et al.* (2012) Chronic helminth infection reduces basophil responsiveness in an IL-10-dependent manner. <u>J Immunol. 188: 4188-99.</u>
- 12. Torrero, M.N. *et al.* (2009) CD200R surface expression as a marker of murine basophil activation. Clin Exp Allergy. 39 (3): 361-9.
- 13. Hernangómez M *et al.* (2012) CD200-CD200R1 interaction contributes to neuroprotective effects of anandamide on experimentally induced inflammation. <u>Glia 60</u> (9): 1437-50.
- 14. Bain, C.C. & Mowat, A.M. (2012) CD200 receptor and macrophage function in the intestine. Immunobiology 217 (6): 643-51.
- 15. Seeds, R.E. *et al.* (2011) The role of myeloid receptors on murine plasmacytoid dendritic cells in induction of type I interferon. <u>Int Immunopharmacol. 11 (7): 794-801.</u>
- 16. Akkaya, M. *et al.* (2013) Dissection of agonistic and blocking effects of CD200 receptor antibodies. <u>PLoS One 8 (5): e63325.</u>
- 17. Cassard L *et al.* (2012) Fcγ receptors inhibit mouse and human basophil activation. <u>J</u> Immunol. 189 (6): 2995-3006.
- 18. Liu, J.Q. *et al.* (2016) A Critical Role for CD200R Signaling in Limiting the Growth and Metastasis of CD200+ Melanoma. J Immunol. Jul 6. pii: 1600052. [Epub ahead of print]
- 19. Toya, E.E. & Ohba, M. (2015) Improved Long-term Culture of Epidermal Stem Cells Utilizing CD200R-expressing Feeder Cells Showa Uni J Med Sci 27 (2) 83-91.
- 20. Lago, N. *et al.* (2018) CD200 modulates spinal cord injury neuroinflammation and outcome through CD200R1. <u>Brain Behav Immun. 73: 416-26.</u>
- 21. Qian, H. *et al.* (2023) Activation of the CD200/CD200R1 axis attenuates neuroinflammation and improves postoperative cognitive dysfunction via the PI3K/Akt /NF-kB signaling pathway in aged mice. Inflamm Res. 72 (12): 2127-44.

# 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 #20487 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA2281PE">https://www.bio-rad-antibodies.com/SDS/MCA2281PE</a> 20487
Regulatory	For research purposes only

## Related Products

# **Recommended Negative Controls**

RAT IgG2a NEGATIVE CONTROL:RPE (MCA1212PE)

# **Recommended Useful Reagents**

MOUSE SEROBLOCK FcR (BUF041A)
MOUSE SEROBLOCK FcR (BUF041B)

 North & South
 Tel: +1 800 265 7376
 Worldwide
 Tel: +44 (0)1865 852 700
 Europe
 Tel: +49 (0) 89 8090 95 21

 America
 Fax: +1 919 878 3751
 Fax: +44 (0)1865 852 739
 Fax: +49 (0) 89 8090 95 50

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets 'M419668:230616'

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