

Datasheet: MCA2281A488

Description:	RAT ANTI MOUSE CD200R:Alexa Fluor® 488
Specificity:	CD200R
Other names:	OX2R
Format:	ALEXA FLUOR® 488
Product Type:	Monoclonal Antibody
Clone:	OX-110
Isotype:	lgG2a
Quantity:	100 TESTS/1ml

## **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 - 1/2

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 Alexa Fluor® 488	8 - liquid
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nn
	Alexa Fluor®488	495	519
Preparation  Buffer Solution	Purified IgG prepared supernatant  Phosphate buffered sa		raphy on Protein G
Preservative Stabilisers	0.09% sodium azide (I	NaN <sub>3</sub> )	
Stabilisers	1% bovine serum albu	0,	

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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 566613

#### **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 (Simelyte *et al.* 2008).

#### 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</u>/<u>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*. <u>Infect Immun</u>. 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. Mol Immunol. 45: 1126-35.
- 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. Int Immunopharmacol. 11 (7): 794-801.
- 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 Immunol. 189 (6): 2995-3006.</u>
- 18. Liu, J.Q. *et al.* (2016) A Critical Role for CD200R Signaling in Limiting the Growth and Metastasis of CD200+ Melanoma. <u>J Immunol. Jul 6. pii: 1600052</u>. [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.

#### **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. This product is photosensitive and should be protected from light.

#### Guarantee

12 months from date of despatch

#### **Acknowledgements**

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# Health And Safety Information

Material Safety Datasheet documentation #10041 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA2281A488">https://www.bio-rad-antibodies.com/SDS/MCA2281A488</a>

**Regulatory** For research purposes only

# **Related Products**

# **Recommended Negative Controls**

RAT IgG2a NEGATIVE CONTROL:Alexa Fluor® 488 (MCA1212A488)

# **Recommended Useful Reagents**

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

North & South Tel: +1 800 265 7376

America Fax: +1 919 878 3751

Worldwide

Tel: +44 (0)1865 852 700

Europe

Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50

Fax: +1 919 878 3751 Email: antibody\_sales\_us@bio-rad.com Fax: +44 (0)1865 852 739

Email: antibody\_sales\_uk@bio-rad.com

Email: antibody\_sales\_de@bio-rad.com

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets 'M413942:221129'

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