

DESCRIPTION

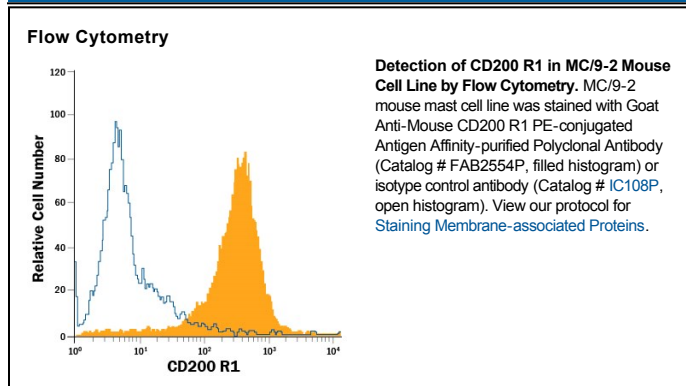
Species Reactivity	Mouse
Specificity	Detects mouse CD200 R1 in direct ELISAs and Western blots. In direct ELISAs and Western blots, less than 5% cross-reactivity with recombinant human CD200 R is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse CD200 R1 Thr26-Pro238 Accession # BAE42266
Conjugate	Phycoerythrin Excitation Wavelength: 488 nm Emission Wavelength: 565-605 nm
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Flow Cytometry	10 μ L/10 ⁶ cells	See Below

DATA



PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. <ul style="list-style-type: none"> ● 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

CD200 R1, also known as OX-2 receptor, is a 90 kDa, type I transmembrane protein that belongs to the immunoglobulin superfamily. CD200 R1 is important in the regulation of myeloid cell activity (1-3). The mouse CD200 R1 cDNA encodes a 326 aa precursor that includes a 25 aa signal sequence, a 213 aa extracellular domain (ECD), a 21 aa transmembrane segment, and a 67 aa cytoplasmic domain. The ECD is composed of one Ig-like V-type domain and one Ig-like C2-type domain (4). Within the ECD, mouse CD200 R1 shares 56% and 70% aa sequence identity with human and rat CD200 R1, respectively. The ECD of mouse CD200 R1 shares 69%, 38%, 79%, and 83% aa sequence identity with the ECD of CD200 R2, 3, 4, and a CD200 R-like molecule, respectively. CD200 R1 is expressed primarily on mast cells, basophils, macrophages, and dendritic cells, (5-7) while its ligand, CD200, is widely distributed (8). Disruption of this receptor-ligand pair by knockout of the CD200 gene leads to increased macrophage number and activation, plus a predisposition to autoimmune disorders (9). Association of CD200 with CD200 R1 takes place between their respective N-terminal Ig-like domains (10). The CD200 R-like molecules may interact differently with CD200 (11, 12). The cytoplasmic domain of CD200 R1 contains two non-ITIM tyrosine residues which are required for propagating its inhibitory signals (13-15). CD200 R-like molecules, in contrast, are potentially activating receptors by means of their association with DAP12 (4, 16).

References:

1. Rosenblum, M.D. *et al.* (2006) *J. Dermatol. Sci.* **41**:165.
2. Gorczynski, R.M. (2005) *Curr. Opin. Invest. Drugs* **6**:483.
3. Barclay, A.N. *et al.* (2002) *Trends Immunol.* **23**:285.
4. Wright, G.J. *et al.* (2003) *J. Immunol.* **171**:3034.
5. Shiratori, I. *et al.* (2005) *J. Immunol.* **175**:4441.
6. Cherwinski, H.M. *et al.* (2005) *J. Immunol.* **174**:1348.
7. Fallarino, F. *et al.* (2004) *J. Immunol.* **173**:3748.
8. Wright, G.J. *et al.* (2001) *Immunology* **102**:173.
9. Hoek, R.M. *et al.* (2000) *Science* **290**:1768.
10. Hatherley, D. and A.N. Barclay (2004) *Eur. J. Immunol.* **34**:1688.
11. Hatherley, D. *et al.* (2005) *J. Immunol.* **175**:2469.
12. Gorczynski, R. *et al.* (2004) *J. Immunol.* **172**:7744.
13. Zhang, S. and J.H. Phillips (2006) *J. Leukoc. Biol.* **79**:363.
14. Zhang, S. *et al.* (2004) *J. Immunol.* **173**:6786.
15. Jenmalm, M.C. *et al.* (2006) *J. Immunol.* **176**:191.
16. Voehringer, D. *et al.* (2004) *J. Biol. Chem.* **279**:54117.