invitrogen™ | MOLECULAR PROBES®

PRODUCT INSERT

RAT anti-MOUSE CD2

Product Code	Form	Volume	Antibody*	Excitation (nm)	Peak Emission (nm)	Matching Isotype Controls	
RM7800	Purified	1.0 ml	200 µg	N/A	N/A	Rat IgG2b Purified	Code R2b00
RM7828	Pacific Blue™	1.0 ml	100 µg	405	455	Rat IgG2b Pacific Blue™	Code R2b28
RM7801	FITC	1.0 ml	100 µg	488	525	Rat IgG2b FITC	Code R2b01
RM7801-3	FITC	3.0 ml	300 µg				
RM7804	R-PE	0.5 ml	50 µg	488	575	Rat IgG2b R-PE	Code R2b04
RM7804-3	R-PE	3.0 ml	300 µg				
RM7815	Biotin	1.0 ml	100 µg	N/A	N/A	Rat IgG2b Biotin	Code R2b15
RM7815-3	Biotin	3.0 ml	300 µg				

PRODUCT DESCRIPTION

Rat monoclonal antibody to mouse CD2

Clone: RM2-5

Isotype: Rat IgG2b

Immunogen: BALB/c thymocytes[1]

Lot No.: See label **Expiration:** See label

Buffer: Phosphate Buffered Saline (PBS)

Preservative: 0.1% ***sodium azide.*** Sodium azide is an extremely toxic and dangerous compound particularly when combined with acids or metals. Solutions containing sodium azide should be disposed of properly.

Stabilizer: For conjugated products only, a highly purified grade of BSA has been added as a stabilizing protein.

STORAGE & HANDLING

Store reagents at 2-8°C. Light exposure should be avoided with fluorochrome conjugated reagents. Use dim light during handling, incubation with cells and prior to analysis. If the reagent is being diluted, it is recommended that only the quantity to be used within one week be diluted.

Using formalin to fix cells following immunofluorescent staining may cause the degradation of tandem fluorochromes. Cells stained with TRI-COLOR®, PE-Cy7, PE-TR or APC-Cy7 should be analyzed by flow cytometry within 18 hours following fixation.

PRODUCT CHARACTERIZATION

Antigen Specificity: The RM2-5 monoclonal antibody (mAb) reacts with CD2 (LFA-2) which is expressed on mouse T cells, B cells, and NK cells[1,2,3]. CD2 mediates T-cell adhesion upon binding to its ligand CD48[2]. It is likely that the CD2-ligand complex is involved in T-cell activation by bringing together the plasma membranes of the T cell and antigen presenting cells for optimal TCR-MHC/peptide interactions[4,5]. The RM2-5 mAb can be used for blocking of CD2-mediated cell-cell adhesion and immunostaining for flow cytometry.

PRODUCT QUALITY CONTROL

Every lot is tested by flow cytometry using freshly harvested mouse splenocytes. From this testing it is recommended that between 0.1 and 0.25µg of antibody be used per 1 x 10^6 cells in a 100µl staining volume. Because conditions may vary, it is recommended that each investigator determine the optimal amount of antibody to be used for their application.

REFERENCES

1. Yagita, H., T. Nakamura, H. Karasuyama, and K. Okumura. 1989. Monoclonal antibodies specific for murine CD2 reveal its presence on B as well as T cells. *Proc. Natl.Acd. Sci.* USA 86: 645-649.
2. Nakamura, T., K. Takahashi, T. Fukazawa, M. Koyanagi, A. Yokoyama, H. Kato, H. Yagita, and K. Okumura. 1990. Relative contribution of CD2 and LFA-1 to murine T and natural killer cell functions. *J. Immunol.* 145: 3628-3634.
3. Yagita, H., T. Nakamura, J. I. Aakawa, H. Matsuda, S. Tansyo, Y. Iigo, and K. Okumura. 1989. CD2 expression in murine B cell lineage. *Int. Immunol.* 1: 94-98.
4. Kato, K., M. Koyanagi, H. Okada, T. Takanashi, Y. W. Wong, A. F. Williams, K. Okumura, and H. Yagita. 1992. CD48 is a counter-receptor for mouse CD2 and is involved in T cell activation. *J. Exp. Med.* 176: 1241-1249.
5. Davis, S. J., and P. A. van der Merwe. 1996. The structure and ligand interactions of CD2: Implications for T-cell function. *Immunol. Today* 17: 177-187.

* The amount of antibody is determined by measuring the optical density using a spectrophotometer. The antibody titer is verified by immunofluorescent staining and flow cytometric analysis.

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