

# Technical Data Sheet

## FITC Rat Anti-Mouse CD2

### Product Information

<b>Material Number:</b>	553111
<b>Alternate Name:</b>	LFA-2
<b>Size:</b>	0.5 mg
<b>Concentration:</b>	0.5 mg/ml
<b>Clone:</b>	RM2-5
<b>Immunogen:</b>	Mouse BALB/c Thymocytes
<b>Isotype:</b>	Rat (SD) IgG2b, $\lambda$
<b>Reactivity:</b>	QC Testing: Mouse
<b>Storage Buffer:</b>	Aqueous buffered solution containing $\leq 0.09\%$ sodium azide.

### Description

The RM2-5 antibody reacts with the immunoglobulin superfamily adhesion molecule CD2 (LFA-2), which is the major receptor for CD48 in the mouse and may be involved in T-cell activation, immunoregulation, and thymocyte maturation. In the mouse, CD2 is expressed on peripheral T lymphocytes, B lymphocytes, and NK cells, except a subpopulation of intraepithelial T lymphocytes. CD2 is present throughout mouse thymic ontogeny, except for distinct subsets of the CD4-CD8- early thymocytes. In the mouse bone marrow, CD2 is expressed on B220+ sIg+ CD43- pre-B cells, but not on CD43+ pro-B cells. RM2-5 antibody is one of a set of five anti-mouse CD2 mAbs which were classified into two groups according to their mutual competition in binding to cell surface CD2, and which block CD2-mediated cell-cell adhesion.

This antibody is routinely tested by flow cytometric analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.

### Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with FITC under optimum conditions, and unreacted FITC was removed.

Store undiluted at 4° C and protected from prolonged exposure to light. Do not freeze.

### Application Notes

#### Application

Flow cytometry	Routinely Tested
----------------	------------------

### Suggested Companion Products

Catalog Number	Name	Size	Clone
553988	FITC Rat IgG2b, $\kappa$ Isotype Control	0.25 mg	A95-1

### Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to [www.bdbiosciences.com/pharmingen/protocols](http://www.bdbiosciences.com/pharmingen/protocols) for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.

### References

- Ayrolidi E, Migliorati G, Cannarile L, Moraca R, Delfino DV, Riccardi C. CD2 rescues T cells from T-cell receptor/CD3 apoptosis: a role for the Fas/Fas-L system. *Blood*. 1997; 89(10):3717-3726.(Biology)
- Cibotti R, Punt JA, Dash KS, Sharrow SO, Singer A. Surface molecules that drive T cell development in vitro in the absence of thymic epithelium and in the absence of lineage-specific signals. *Immunity*. 1997; 6(3):245-255.(Clone-specific: Induction)
- Criado G, Feito MJ, Rojo JM. CD4-dependent and -independent association of protein tyrosine kinases to the T cell receptor/CD3 complex of CD4+ mouse T lymphocytes. *Eur J Immunol*. 1996; 26(6):1228-1234.(Clone-specific: Immunoprecipitation)
- Davis SJ, van der Merwe PA. The structure and ligand interactions of CD2: implications for T-cell function. *Immunol Today*. 1996; 17(4):177-187.(Biology)

### BD Biosciences

[bdbiosciences.com](http://bdbiosciences.com)

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	888.259.0187	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

For country-specific contact information, visit [bdbiosciences.com/how\\_to\\_order/](http://bdbiosciences.com/how_to_order/)

Conditions: The information disclosed herein is not to be construed as a recommendation to use the above product in violation of any patents. BD Biosciences will not be held responsible for patent infringement or other violations that may occur with the use of our products. Purchase does not include or carry any right to resell or transfer this product either as a stand-alone product or as a component of another product. Any use of this product other than the permitted use without the express written authorization of Becton Dickinson and Company is strictly prohibited.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Not for resale.

BD, BD Logo and all other trademarks are the property of Becton, Dickinson and Company. ©2006 BD



**BD**

**BD Biosciences**

Hayday A, Theodoridis E, Ramsburg E, Shires J. Intraepithelial lymphocytes: exploring the Third Way in immunology. *Nat Immunol.* 2001; 2(11):997-1003. (Biology)

Kato K, Koyanagi M, Okada H, et al. CD48 is a counter-receptor for mouse CD2 and is involved in T cell activation. *J Exp Med.* 1992; 176(5):1241-1249. (Biology)

Kuo S, El Guindy A, Panwala CM, Hagan PM, Camerini V. Differential appearance of T cell subsets in the large and small intestine of neonatal mice. *Pediatr Res.* 2001; 49(4):543-551. (Biology)

Masten BJ, Yates JL, Pollard Koga AM, Lipscomb MF. Characterization of accessory molecules in murine lung dendritic cell function: roles for CD80, CD86, CD54, and CD40L. *Am J Respir Cell Mol Biol.* 1997; 16(3):335-342. (Clone-specific: Blocking)

Nakamura T, Takahashi K, Fukazawa T, et al. Relative contribution of CD2 and LFA-1 to murine T and natural killer cell functions. *J Immunol.* 1990; 145(11):3628-3634. (Immunogen: Blocking, Inhibition)

Papavasiliou F, Misulovin Z, Suh H, Nussenzweig MC. The role of Ig beta in precursor B cell transition and allelic exclusion. *Science.* 1995; 268(5209):408-411. (Biology)

Rakasz E, Hagen M, Sandor M, Lynch RG. Gamma delta T cells of the murine vagina: T cell response in vivo in the absence of the expression of CD2 and CD28 molecules. *Int Immunol.* 1997; 9(1):161-167. (Biology)

Rodewald HR, Awad K, Moingeon P, et al. Fc gamma RII/III and CD2 expression mark distinct subpopulations of immature CD4-CD8- murine thymocytes: in vivo developmental kinetics and T cell receptor beta chain rearrangement status. *J Exp Med.* 1993; 177(4):1079-1092. (Biology)

Teh SJ, Killeen N, Tarakhovsky A, Littman DR, Teh HS. CD2 regulates the positive selection and function of antigen-specific CD4- CD8+ T cells. *Blood.* 1997; 89(4):1308-1318. (Biology)

Yagita H, Asakawa J, Tansyo S, Nakamura T, Habu S, Okumura K. Expression and function of CD2 during murine thymocyte ontogeny. *Eur J Immunol.* 1989; 19(12):2211-2217. (Biology)

Yagita H, Nakamura T, Asakawa J, et al. CD2 expression in murine B cell lineage. *Int Immunol.* 1989; 1(1):94-98. (Biology)

Yagita H, Nakamura T, Karasuyama H, Okumura K. Monoclonal antibodies specific for murine CD2 reveal its presence on B as well as T cells. *Proc Natl Acad Sci U S A.* 1989; 86(2):645-649. (Immunogen: Flow cytometry)